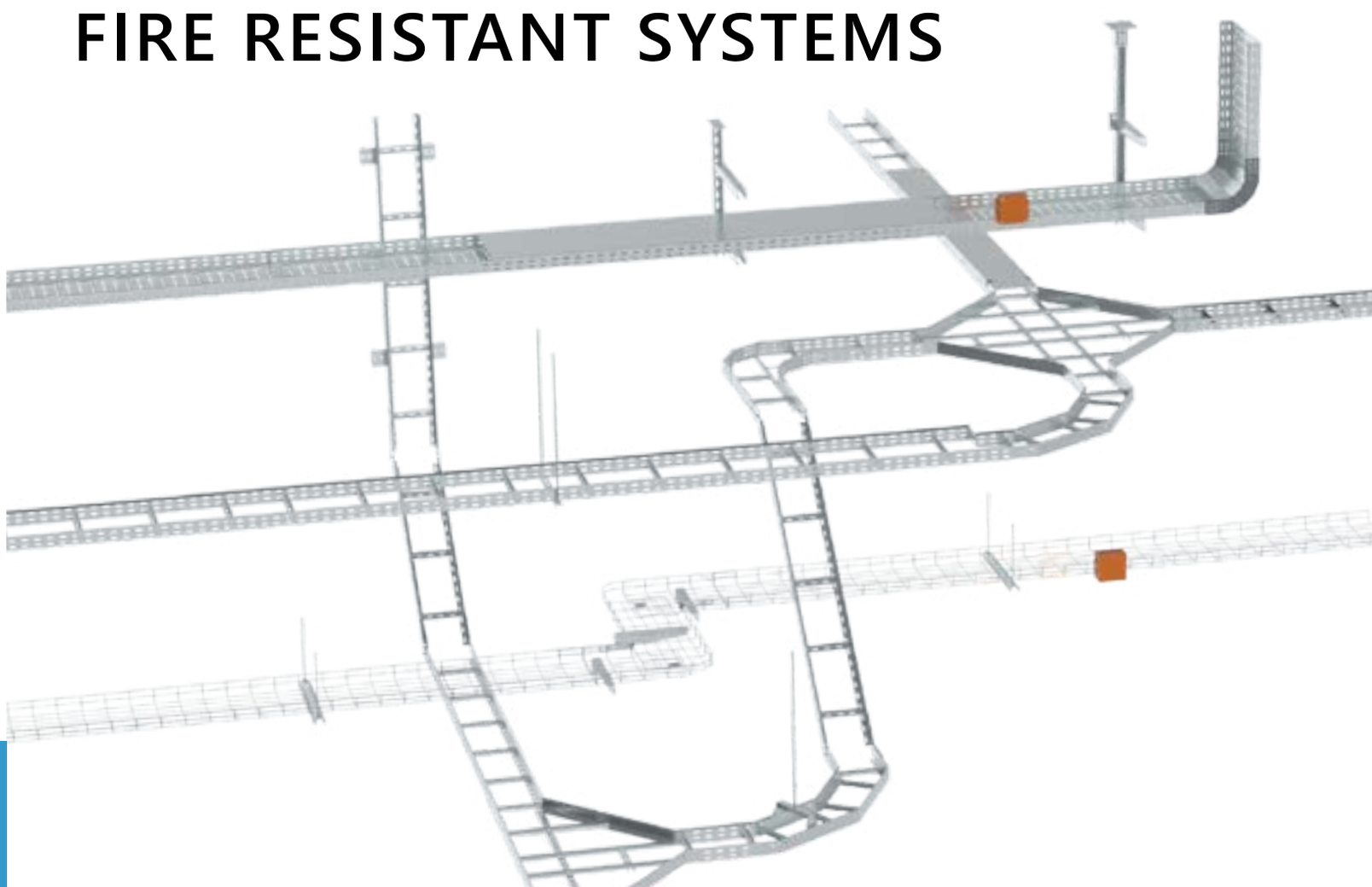
KOPOS

CABLE MANAGEMENT SYSTEMS

FIRE RESISTANT SYSTEMS



You stand for our success

New technologies guarantee the improvement and innovation of our products.
For you.

KOPOS KOLÍN a.s.

KOPOS KOLÍN a.s. is a leading Czech manufacturer of electrical installation materials with a tradition dating back **100** years.

It currently produces more than **5,000** products that cover a wide range of needs for modern electrical installations. The product range includes complete solutions for storing, routing and protecting electrical wiring - from installation boxes, rails, channels and pipes to cable support systems, fire-resistant installations and specialized elements for radiation shielding, used, for example, in the field of nuclear energy.

Products are designed with an emphasis on functionality, safety, long service life, high technical level, and above all with regard to the practical needs of customers.

Quality is the basic pillar of the company‘s philosophy, which is confirmed not only by long-term experience, but also by the trust of customers at home and abroad.
All products meet the requirements of European standards and are regularly tested in accredited electrotechnical testing laboratories.

The company has an integrated quality management system in place and is a holder of **ISO 9001, ISO 14001, ISO 50001** certifications, the Czech Quality brand and the Safe Enterprise certificate.

The use of halogen-free materials, ecological plastic compounds without lead and other environmentally friendly technologies is a matter of course.

As part of its environmental policy, KOPOS has been focusing on sustainability for a long time - for example, by installing a photovoltaic power plant, which will cover approximately **10%** of annual electricity consumption from the turn of 2023/2024.

Thanks to its own development, tool shop and a network of ten subsidiaries and sales representatives, KOPOS products are available to customers all over the world.

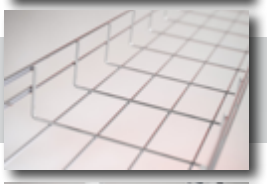



CABLE TRAYS JUPITER


CABLE TRAYS MARS


CABLE LADDERS


MOUNTING, CONNECTING AND FASTENING MATERIALS FOR CABLE TRAYS AND LADDERS


WIRE CABLE TRAYS GEMINI + FASTENING AND FIXING MATERIAL


STAINLESS STEEL SYSTEM + FASTENING AND FIXING MATERIAL

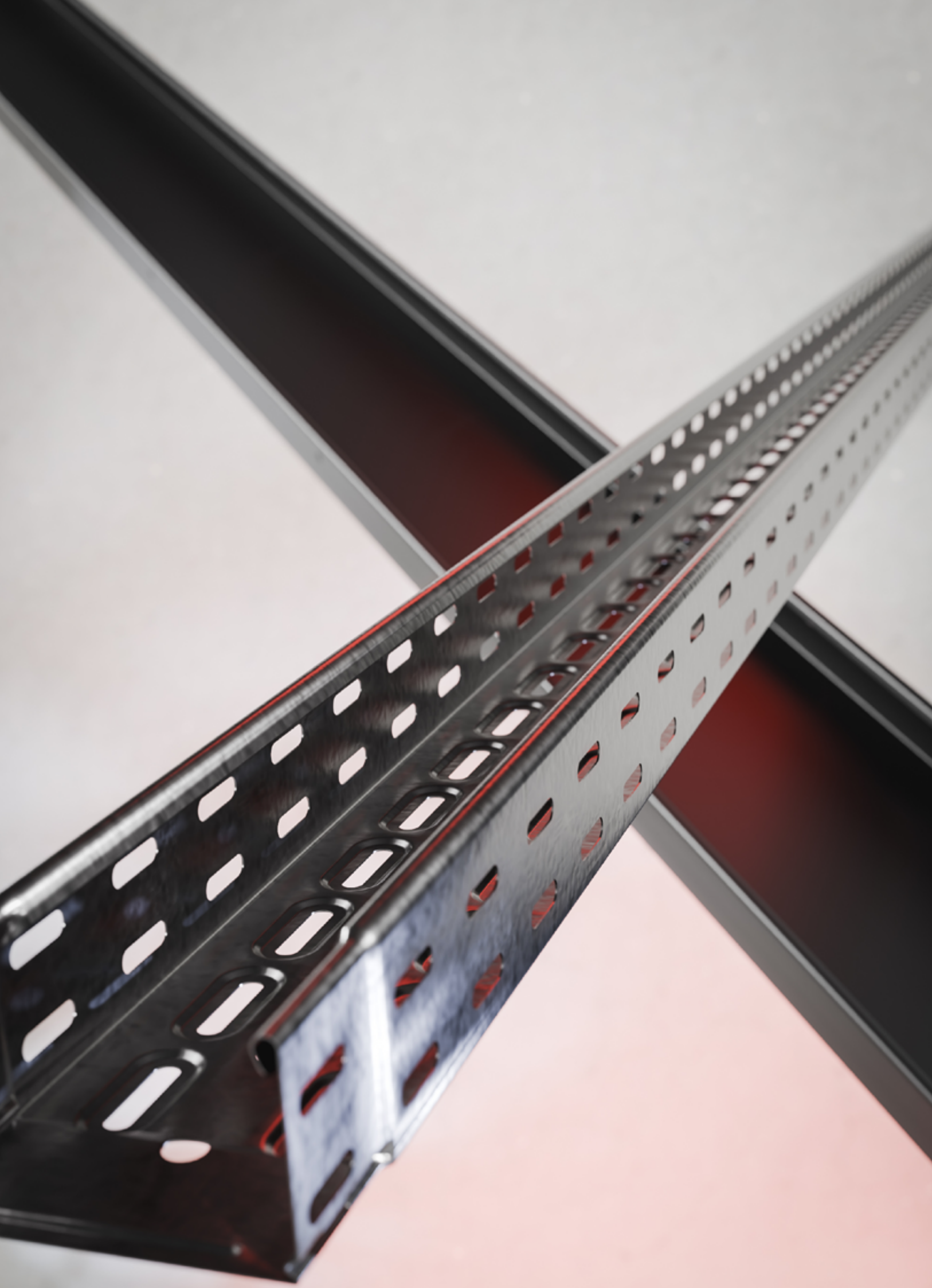

FIRE BOXES


OTHER PRODUCTS


NAILING

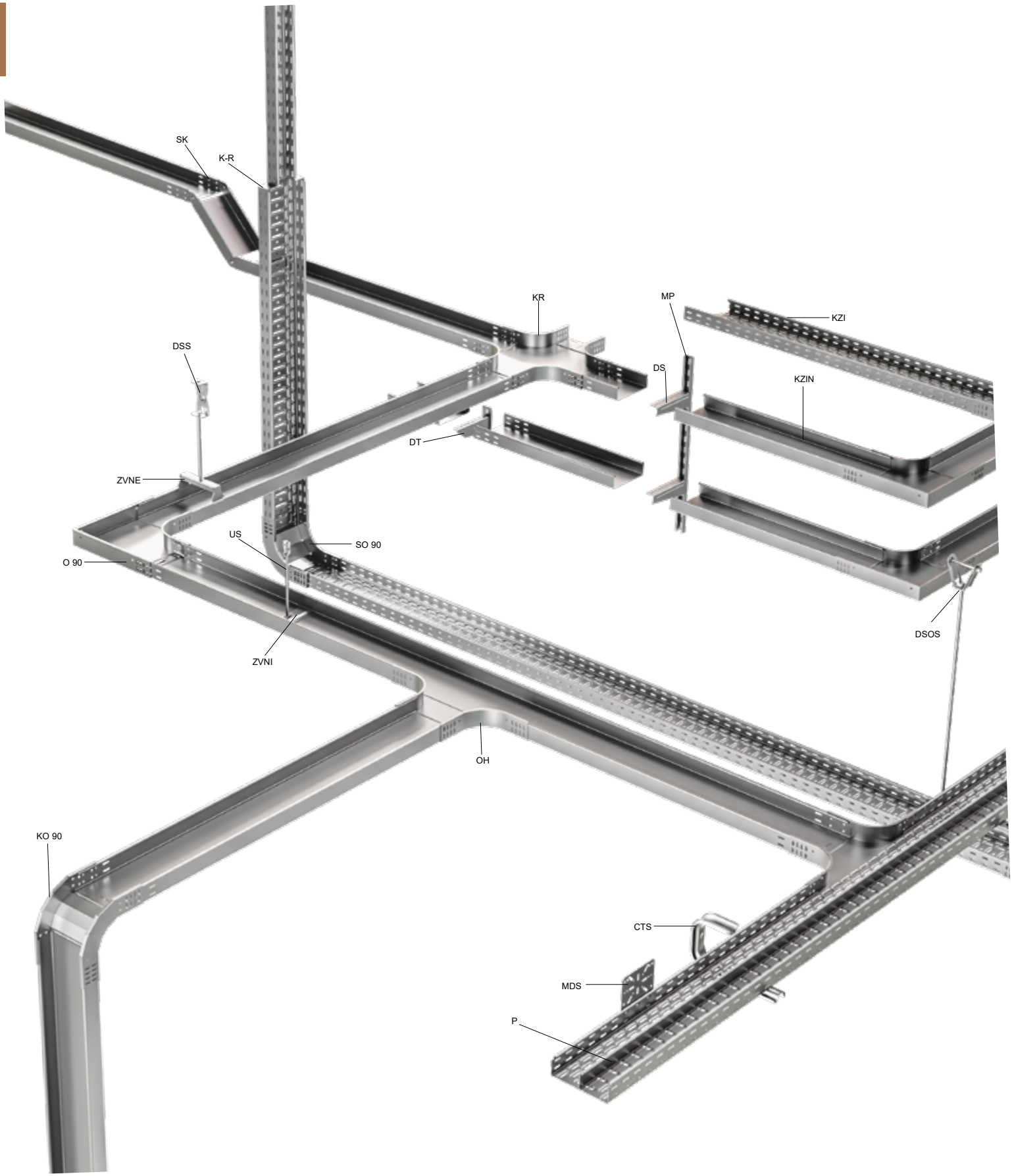

FIRE-RESISTANT SYSTEMS

TECHNICAL INFORMATION

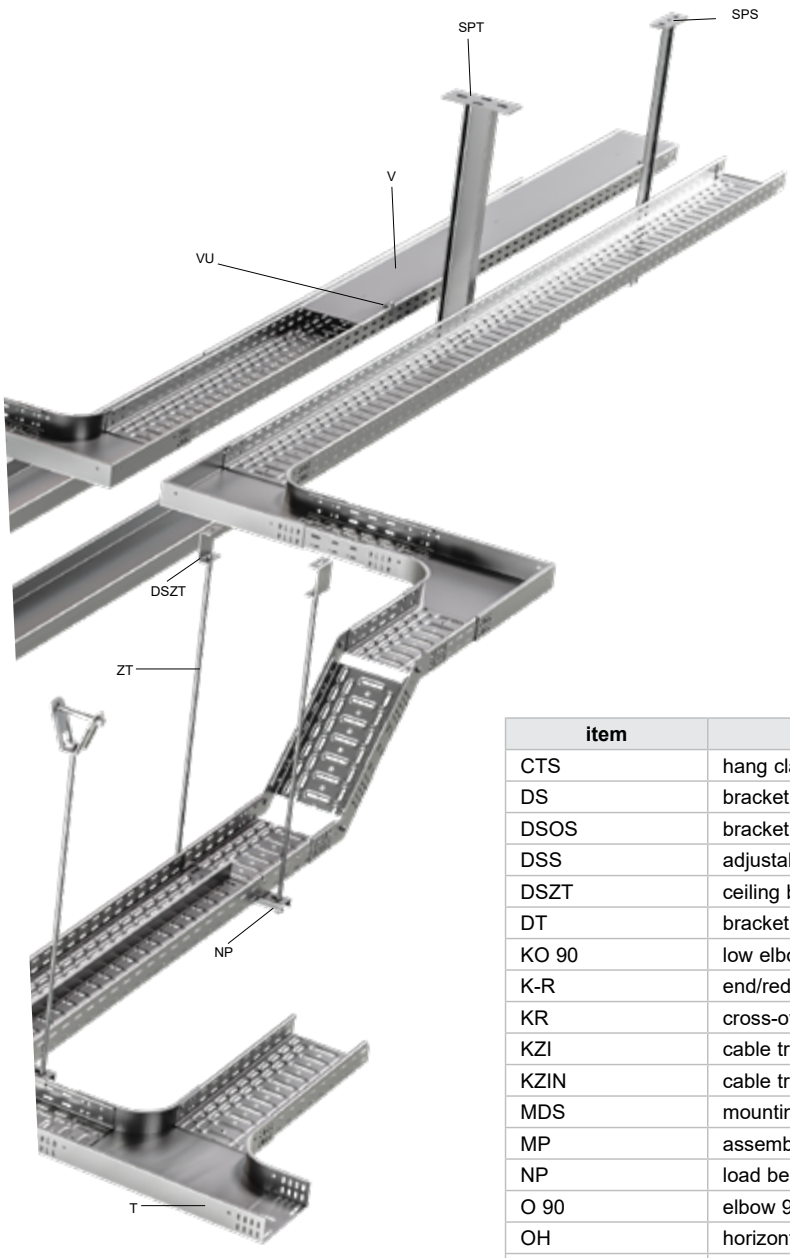


1 CABLE TRAYS JUPITER




SK
K-R
KR
MP
KZI
DSS
DS
KZIN
DT
ZVNE
US
SO 90
O 90
DSOS
ZVNI
OH
KO 90
CTS
MDS
P

OVERVIEW OF SYSTEM ELEMENTS



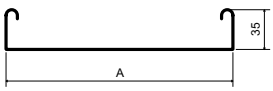
item	description	page
CTS	hang clamp	77
DS	bracket - medium	74
DSOS	bracket for trapeze ceilings	94
DSS	adjustable ceiling bracket	95
DSZT	ceiling bracket	95
DT	bracket - heavy	75
KO 90	low elbow 90°	26
K-R	end/reduction	30
KR	cross-over	22
KZI	cable tray with integrated coupling	6, 7, 9, 10, 11
KZIN	cable tray with integrated coupling non-perforated	8, 12
MDS	mounting plate	30
MP	assembly profile	87
NP	load bearing profile	87
O 90	elbow 90°	16
OH	horizontal branch	18
P	partition	29
S	coupling	31
SK	hinged joint	28
SO 90	rising elbow 90°	24
SPT	ceiling profile - heavy	79
SPS	ceiling profile - medium	79
T	T-piece	20
US	fixation clamp	94
V	cable tray cover	15
VU	cover fixture	15
ZT	threaded rod	98
ZVNE	outer hanger	83
ZVNI	inner hanger	82

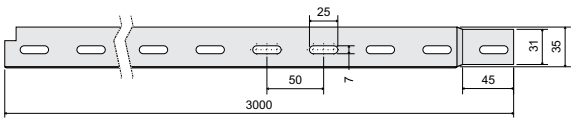
35 - cable tray with integrated coupling

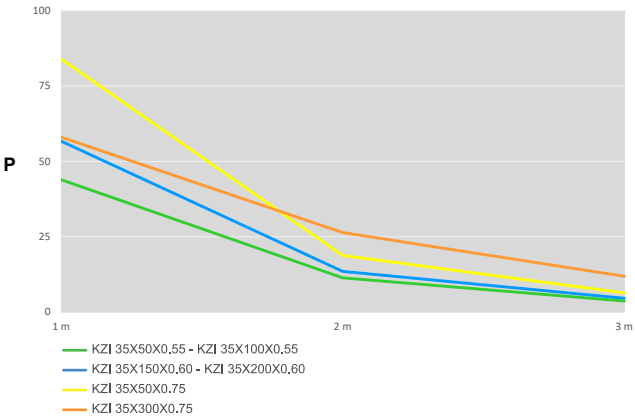


- The standard length of the cable tray is 3 m.
- For securing the connection of the trays with the integrated coupling there are used the clamps made from spring steel KSV (pg. 97) or the bolts NSM 6X10 (pg. 97).
- These items can also be ordered in a varnished version. For more information, see pg. 271.

	item	A	↕	ǂ	⫡	EAN
	KZI 35X50X0.55_S	50	0,55	0,55	2	8595568941817
	KZI 35X75X0.55_S	75	0,55	0,65	2	8595568942739
	KZI 35X100X0.55_S	100	0,55	0,76	2	8595568942708
	KZI 35X150X0.60_S	150	0,6	1,03	2	8595568942715
	KZI 35X200X0.60_S	200	0,6	1,24	3	8595568942722
	KZI 35X300X0.75_S	300	0,75	2,00	3	8595057692275
	KZI 35X50X0.75_F	50	0,75	0,92	2	8595057696518







The graph shows the maximum allowed even loading of the tray in relation to the distances of the supports.

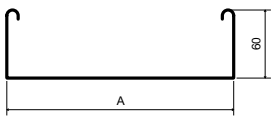
L = distance of supports (m)
P = allowed even loading (weight kg/m)

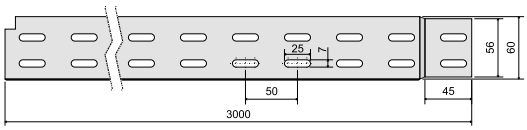
External influences are not taken into account in the permissible load and cannot be burdened by person.

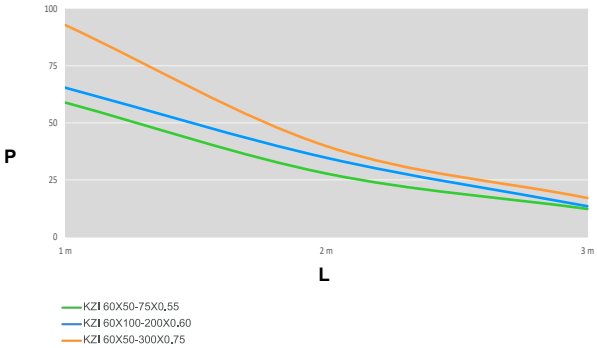
60 - cable tray with integrated coupling

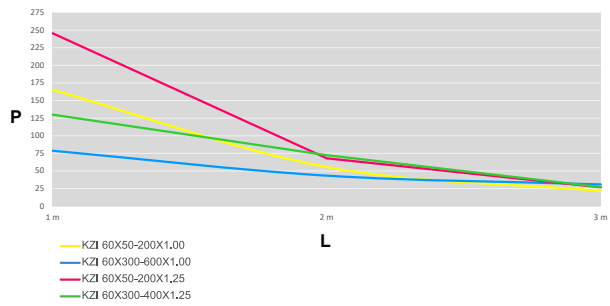


- The standard length of the cable tray is 3 m.
- For securing the connection of the trays with the integrated coupling there are used the clamps made from spring steel KSV (pg. 97) or the bolts NSM 6X10 (pg. 97).
- These items can also be ordered in a varnished version. For more information, see pg. 271.









	item	A	↕	ǂ	⊥T		EAN
	KZI 60X50X0.55_S	50	0,55	0,75	4		8595568941824
	KZI 60X50X0.75_S	50	0,75	0,99	4		8595057692312
	KZI 60X50X1.00_S	50	1,0	1,24	4		8595057692916
	KZI 60X50X1.25_S	50	1,25	1,62	4		8595568942845
	KZI 60X75X0.55_S	75	0,55	0,99	4		8595568942869
	KZI 60X75X1.00_S	75	1,0	1,27	4		8595057629585
	KZI 60X100X0.60_S	100	0,6	1,08	4		8595568941831
	KZI 60X100X0.75_S	100	0,75	1,30	4		8595057627567
	KZI 60X100X1.00_S	100	1,0	1,70	4		8595057636118
	KZI 60X100X1.25_S	100	1,25	2,10	4		8595568942746
	KZI 60X150X0.60_S	150	0,6	1,30	4		8595568942760
	KZI 60X150X0.75_S	150	0,75	1,65	4		8595057627574
	KZI 60X150X1.00_S	150	1,0	2,07	4		8595057635678
	KZI 60X150X1.25_S	150	1,25	2,49	4		8595568942777
	KZI 60X200X0.60_S	200	0,6	1,53	5		8595568941848
	KZI 60X200X0.75_S	200	0,75	1,86	5		8595057627581
	KZI 60X200X1.00_S	200	1,0	2,27	5		8595057627598
	KZI 60X200X1.25_S	200	1,25	2,84	5		8595568942791
	KZI 60X300X0.75_S	300	0,75	2,47	5		8595057630857
	KZI 60X300X1.00_S	300	1,0	3,07	5		8595057627604
	KZI 60X300X1.25_S	300	1,25	3,96	5		8595568942814
	KZI 60X400X1.00_S	400	1,0	3,75	6		8595057627611
	KZI 60X400X1.25_S	400	1,25	4,60	6		8595568942838
	KZI 60X500X1.00_S	500	1,0	4,54	6		8595057644021
	KZI 60X600X1.00_S	600	1,0	5,34	6		8595057635722
	KZI 60X50X0.75_ZM	50	0,75	0,99	4		8595568937711
	KZI 60X100X0.75_ZM	100	0,75	1,30	4		8595568937735
	KZI 60X200X0.75_ZM	200	0,75	1,86	5		8595568937759
	KZI 60X300X0.75_ZM	300	0,75	2,47	5		8595568937773
	KZI 60X400X1.00_ZM	400	1,0	3,75	6		8595568937797
	KZI 60X500X1.00_ZM	500	1,0	4,54	6		8595568937810
	KZI 60X50X0.75_F	50	0,8	1,23	4		8595057696709
	KZI 60X50X1.00_F	50	1,0	1,44	4		8595057696716
	KZI 60X50X1.25_F	50	1,25	1,85	4		8595568942852
	KZI 60X100X0.75_F	100	0,8	1,60	4		8595057696556
	KZI 60X100X1.00_F	100	1,0	1,98	4		8595057696327
	KZI 60X100X1.25_F	100	1,25	2,36	4		8595568942753
	KZI 60X150X0.75_F	150	0,8	2,02	4		8595057696570
	KZI 60X150X1.25_F	150	1,25	2,89	4		8595568942784
	KZI 60X200X0.75_F	200	0,8	2,28	5		8595057696600
	KZI 60X200X1.00_F	200	1,0	2,64	5		8595057696617
	KZI 60X200X1.25_F	200	1,25	3,39	5		8595568942807
	KZI 60X300X0.75_F	300	0,75	3,02	5		8595057696631
	KZI 60X300X1.00_F	300	1,0	3,57	5		8595057696648
	KZI 60X300X1.25_F	300	1,25	4,39	5		8595568942821
	KZI 60X400X1.00_F	400	1,0	4,37	6		8595057696662

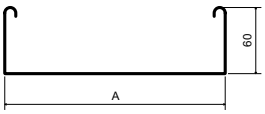
The graph shows the maximum allowed even loading of the tray in relation to the distances of the supports.

L = distance of supports (m)
P = allowed even loading (weight kg/m)

External influences are not taken into account in the permissible load and cannot be burdened by person.

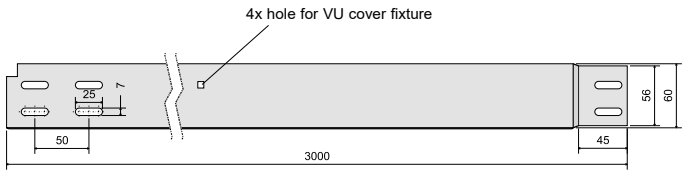
60 - cable tray with integrated coupling - non-perforated

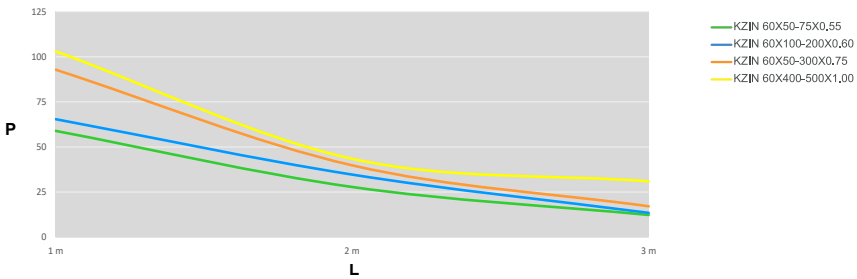




- The standard length of the cable tray is 3 m.
- For securing the connection of the trays with the integrated coupling there are used the clamps made from spring steel KSV (pg. 97) or the bolts NSM 6X10 (pg. 97).
- These items can also be ordered in a varnished version. For more information, see pg. 271.

item	A	↕	ǂ	⊥		EAN
KZIN 60X50X0.55_S	50	0,55	0,72	4	-	8595568941855
KZIN 60X50X0.75_S	50	0,75	1,09	4	🔥	8595057692459
KZIN 60X75X0.55_S	75	0,55	0,89	4	-	8595568942890
KZIN 60X100X0.60_S	100	0,6	1,23	4	-	8595568941862
KZIN 60X100X0.75_S	100	0,75	1,49	4	🔥	8595057692473
KZIN 60X150X0.60_S	150	0,6	1,49	4	-	8595568942876
KZIN 60X150X0.75_S	150	0,75	1,78	4	🔥	8595057692480
KZIN 60X200X0.60_S	200	0,6	1,74	4	-	8595568941879
KZIN 60X200X0.75_S	200	0,75	2,04	5	🔥	8595057692497
KZIN 60X300X0.75_S	300	0,75	2,60	5	🔥	8595568903037
KZIN 60X400X1.00_S	400	1,0	4,20	6	-	8595057692510
KZIN 60X500X1.00_S	500	1,0	4,60	6	-	8595568942883
KZIN 60X50X0.75_ZM	50	0,75	1,09	4	🔥	8595568937728
KZIN 60X100X0.75_ZM	100	0,75	1,49	4	🔥	8595568937742
KZIN 60X200X0.75_ZM	200	0,75	2,04	5	🔥	8595568937766
KZIN 60X300X0.75_ZM	300	0,75	2,60	5	🔥	8595568937780
KZIN 60X400X1.00_ZM	400	1,0	4,20	6	-	8595568937803
KZIN 60X500X1.00_ZM	500	1,0	4,60	6	-	8595568937827
KZIN 60X50X0.75_F	50	0,8	1,47	4	🔥	8595568902351
KZIN 60X100X0.75_F	100	0,8	1,71	4	🔥	8595568905659
KZIN 60X150X0.75_F	150	0,8	2,18	4	🔥	8595568905666
KZIN 60X200X0.75_F	200	0,8	2,50	5	🔥	8595568905673





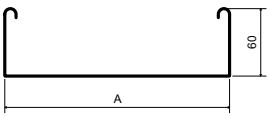
The graph shows the maximum allowed even loading of the tray in relation to the distances of the supports.

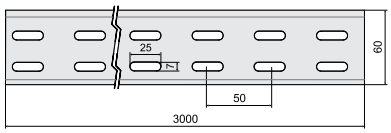
L = distance of supports (m)
P = allowed even loading (weight kg/m)

External influences are not taken into account in the permissible load and cannot be burdened by person.

60 - cable tray

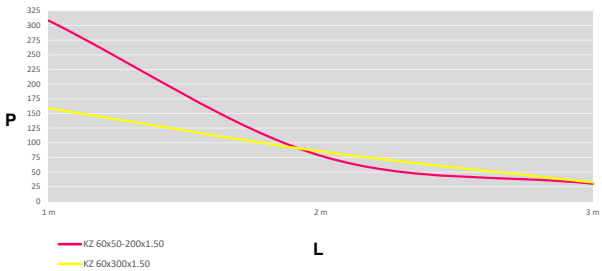






- The standard length of the cable tray is 3 m.
- The KSBS couplings and NSM 6X10 bolts are used to steady the connection of the cable trays (pg. 97).
- The cable tray does not have an integrated coupling.
- These items can also be ordered in a varnished version. For more information, see pg. 271.

	item	A	↕	ǂ	⊥T		EAN
	KZ 60X50X1.50_PO	50	1,5	1,93	16		8595057692046
	KZ 60X75X1.50_PO	75	1,5	2,17	16		8595057635838
	KZ 60X100X1.50_PO	100	1,5	2,50	16		8595057635852
	KZ 60X150X1.50_PO	150	1,5	3,20	16		8595057635883
	KZ 60X200X1.50_PO	200	1,5	3,70	24		8595057635913
	KZ 60X300X1.50_PO	300	1,5	4,55	24		8595057635951
	KZ 60X50X1.50_POF	50	1,5	2,13	16		8595057697751
	KZ 60X75X1.50_POF	75	1,5	2,39	16		8595057660694
	KZ 60X100X1.50_POF	100	1,5	2,87	16		8595057650794
	KZ 60X150X1.50_POF	150	1,5	3,40	16		8595057657960
	KZ 60X200X1.50_POF	200	1,5	4,10	24		8595057650800
	KZ 60X300X1.50_POF	300	1,5	5,02	24		8595057657953

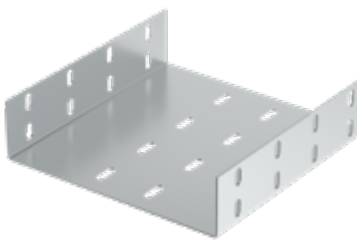


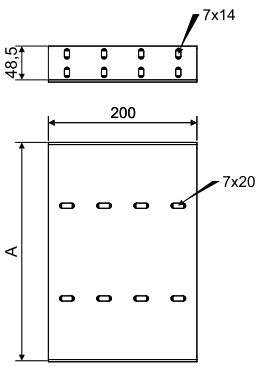
The graph shows the maximum allowed even loading of the tray in relation to the distances of the supports.

L = distance of supports (m)
P = allowed even loading (weight kg/m)

External influences are not taken into account in the permissible load and cannot be burdened by person.

coupling for cable trays



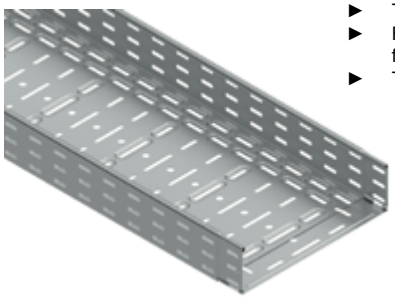




- The coupling is intended for joining KZ cable trays used in standardized supporting constructions.
- Fastening is carried out using NSM 6X10 bolts.

	item	A	↕	ǂ	⊥T		EAN
	KSBS 50_PO	50	1,5	0,33	16		8595057692022
	KSBS 75_PO	75	1,5	0,39	16		8595057649804
	KSBS 100_PO	100	1,5	0,45	16		8595057649811
	KSBS 150_PO	150	1,5	0,56	16		8595057649828
	KSBS 200_PO	200	1,5	0,69	24		8595057649835
	KSBS 300_PO	300	1,5	0,92	24		8595057649842
	KSBS 50_POZM	50	1,5	0,33	16		8595568944474
	KSBS 75_POZM	75	1,5	0,39	16		8595568944481
	KSBS 100_POZM	100	1,5	0,45	16		8595568944498
	KSBS 150_POZM	150	1,5	0,56	16		8595568944504
	KSBS 200_POZM	200	1,5	0,69	24		8595568944511
	KSBS 300_POZM	300	1,5	0,92	24		8595568944528
	KSBS 50_POF	50	1,5	0,39	16		8595057697768
	KSBS 75_POF	75	1,5	0,46	16		8595057665750
	KSBS 100_POF	100	1,5	0,53	16		8595057665767
	KSBS 150_POF	150	1,5	0,65	16		8595057665774
	KSBS 200_POF	200	1,5	0,80	24		8595057665781
	KSBS 300_POF	300	1,5	1,07	24		8595057665774

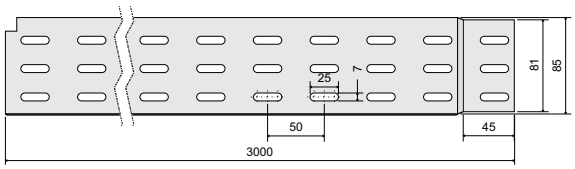
85 - cable tray with integrated coupling

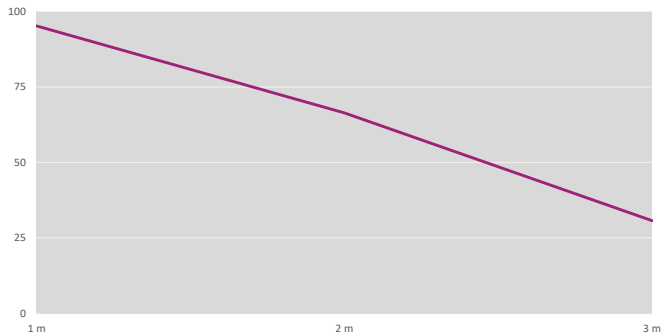


- The standard length of the cable tray is 3 m.
- For securing the connection of the trays with the integrated coupling there are used the clamps made from spring steel KSV (pg. 97) or the bolts NSM 6X10 (pg. 97).
- These items can also be ordered in a varnished version. For more information, see pg. 271.

	item	A	↕	⇕	⇊	EAN
	KZI 85X100X0.75_S	100	0,75	1,56	6	8595057692329
	KZI 85X150X0.75_S	150	0,75	1,81	6	8595057692336
	KZI 85X200X0.75_S	200	0,75	2,15	7	8595568941886
	KZI 85X300X1.00_S	300	1,0	3,10	7	8595057692350
	KZI 85X400X1.00_S	400	1,0	4,15	8	8595057692367







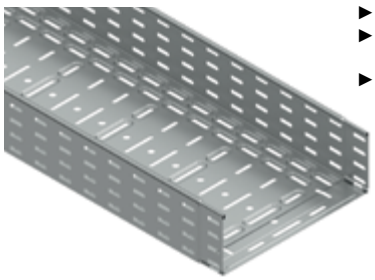
L

The graph shows the maximum allowed even loading of the tray in relation to the distances of the supports.

L = distance of supports (m)
P = allowed even loading (weight kg/m)

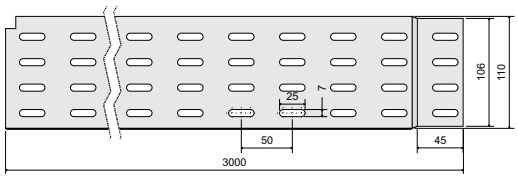
External influences are not taken into account in the permissible load and cannot be burdened by person.

110 - cable tray with integrated coupling

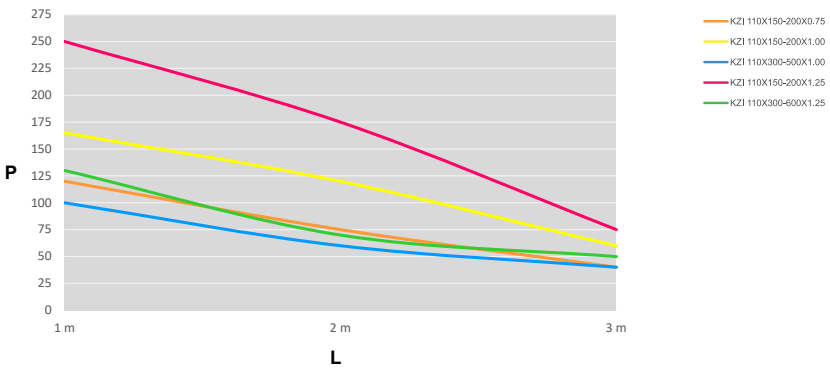


- The standard length of the cable tray is 3 m.
- For securing the connection of the trays with the integrated coupling there are used the clamps made from spring steel KSV (pg. 97) or the bolts NSM 6X10 (pg. 97).
- These items can also be ordered in a varnished version. For more information, see pg. 271.





	item	A	↕	ǂ	⊥T	EAN
	KZI 110X150X0.75_S	150	0,75	2,15	8	8595568942685
	KZI 110X150X1.00_S	150	1,0	2,61	8	8595057692398
	KZI 110X150X1.25_S	150	1,25	3,51	8	8595057696044
	KZI 110X200X0.75_S	200	0,75	2,42	9	8595568941909
	KZI 110X200X1.00_S	200	1,0	2,98	9	8595057692404
	KZI 110X200X1.25_S	200	1,25	3,72	9	8595057693708
	KZI 110X300X1.00_S	300	1,0	3,64	9	8595057692411
	KZI 110X300X1.25_S	300	1,25	4,63	9	8595057696068
	KZI 110X400X1.00_S	400	1,00	4,62	10	8595568932716
	KZI 110X400X1.25_S	400	1,25	5,70	10	8595057692428
	KZI 110X500x1.00_S	500	1,0	5,30	10	8595568942692
	KZI 110X500X1.25_S	500	1,25	6,30	10	8595057692435
	KZI 110X600X1.25_S	600	1,25	7,16	10	8595057692442
	KZI 110X200X0.75_ZM	200	0,75	2,30	9	8595568941336
	KZI 110X300X1.00_ZM	300	1,00	3,64	9	8595568941343
	KZI 110X400X1.00_ZM	400	1,00	4,62	10	8595568941350
	KZI 110X500X1.00_ZM	500	1,00	5,30	10	8595568941367
	KZI 110X150X0.75_F	150	0,8	2,58	8	8595568942685
	KZI 110X150X1.00_F	150	1,0	3,04	8	8595057696310
	KZI 110X200X1.00_F	200	1,0	3,47	9	8595057693722
	KZI 110X300X1.00_F	300	1,0	4,24	9	8595057696303
	KZI 110X400X1.00_F	400	1,00	5,32	10	8595568932747
	KZI 110X500X1.25_F	500	1,25	7,09	10	8595057696297
	KZI 110X600X1.25_F	600	1,25	8,06	10	8595568904690



The graph shows the maximum allowed even loading of the tray in relation to the distances of the supports.

L = distance of supports (m)
P = allowed even loading (weight kg/m)

External influences are not taken into account in the permissible load and cannot be burdened by person.

↕ thickness of metal sheet (mm) ǂ weight kg/m
⊥T amount of bolts for connection

ZM Magnelis®
F Hot Dip Galvanized
S Pre-Galvanized

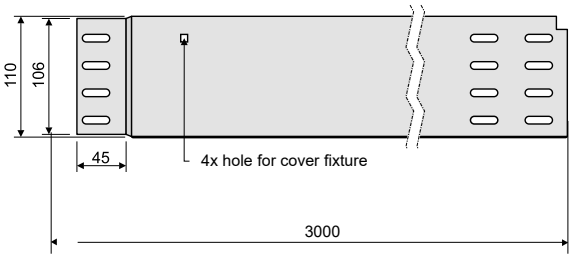
110 - cable tray with integrated coupling- non-perforated

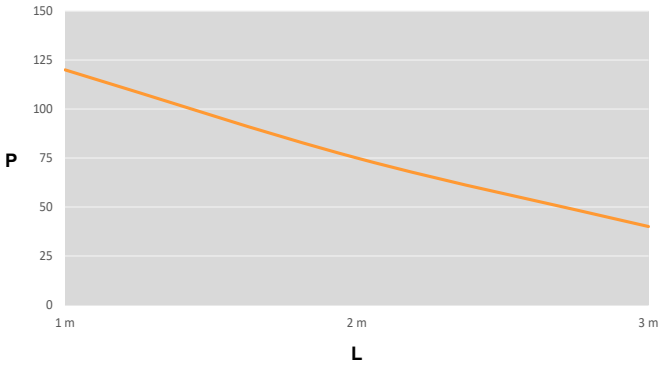


- The standard length of the cable tray is 3 m.
- For securing the connection of the trays with the integrated coupling there are used the clamps made from spring steel KSV (pg. 97) or the bolts NSM 6X10 (pg. 97).
- These items can also be ordered in a varnished version. For more information, see pg. 271.

	item	A	↕	ǂ	⫰	EAN
	KZIN 110X200X0.75_ZM	200	0,75	2,42	9	8595568941374
	KZIN 110X300X1.00_ZM	300	1,00	4,30	9	8595568941381
	KZIN 110X400X1.00_ZM	400	1,00	5,10	10	8595568941398
	KZIN 110X500X1.00_ZM	500	1,00	6,06	10	8595568941404





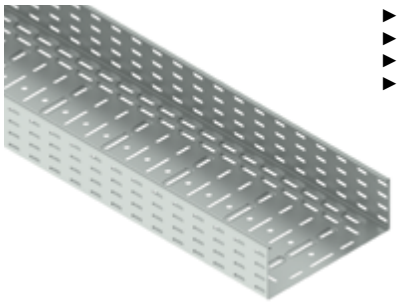


The graph shows the maximum allowed even loading of the tray in relation to the distances of the supports.

L = distance of supports (m)
P = allowed even loading (weight kg/m)

External influences are not taken into account in the permissible load and cannot be burdened by person.

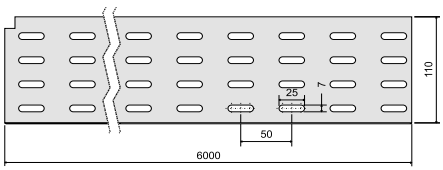
110 - cable tray - length 6 m

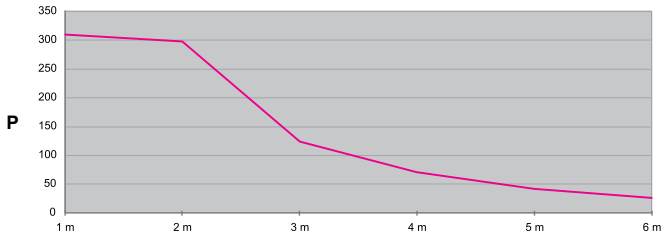


- The standard length of the cable tray is 6 m.
- The cable tray is suitable for creating a cable route with a support spacing of up to 6 meters.
- The trays are connected by 2 pcs of KDS jointing plate and 17 pcs of NSM 6X10 bolts (pg. 97).
- Jointing points can not be placed over the support.

	item	A	↕	ǂ	⊥T	EAN
	KZ 110X200X1.50_S6	200	1,50	4,80	34	8595057636194
	KZ 110X300X1.50_S6	300	1,50	5,93	34	8595568932143





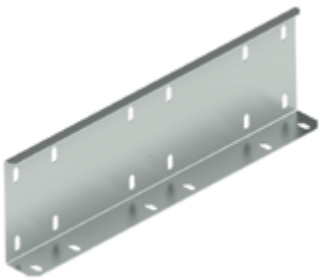


The graph shows the maximum allowed even loading of the tray in relation to the distances of the supports.

L = distance of supports (m)
P = allowed even loading (weight kg/m)

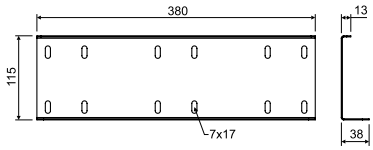
External influences are not taken into account in the permissible load and cannot be burdened by person.

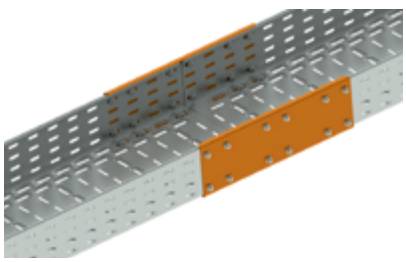
jointing plate



- The jointing plate is intended for connecting 6 m long cable trays with a side height of 110 mm.
- The connection is fixed by bolts NSM 6X10. For 1 piece of the joining plate, use 17 pcs of bolts - 12 pcs for sidewall + 5 pcs for bottom.

	item	↕	ǂ	⊥T	EAN
	KDS_S	1,50	0,69	17	8595568932150





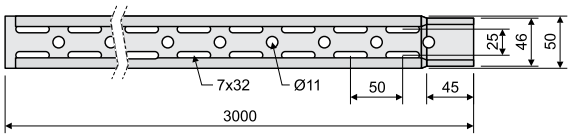
↕ thickness of metal sheet (mm) ǂ weight kg/m

⊥T amount of bolts for connection

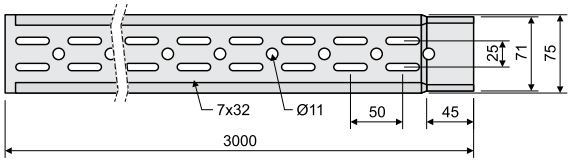
S Pre-Galvanized

perforation scheme on the bottom trays JUPITER

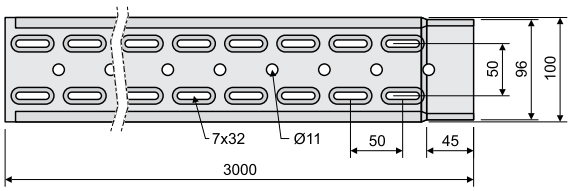
50 mm



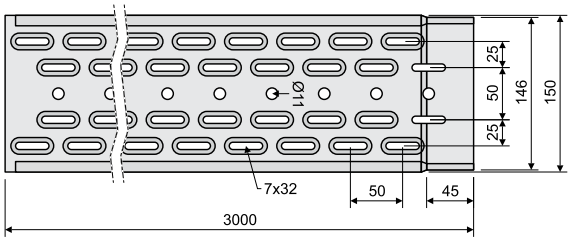
75 mm



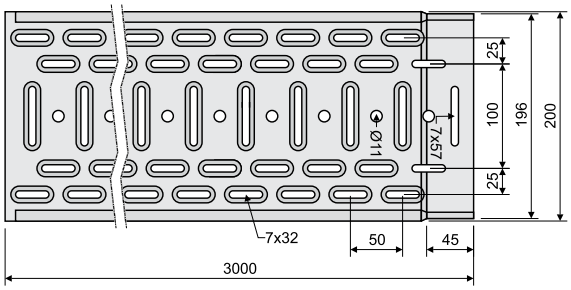
100 mm



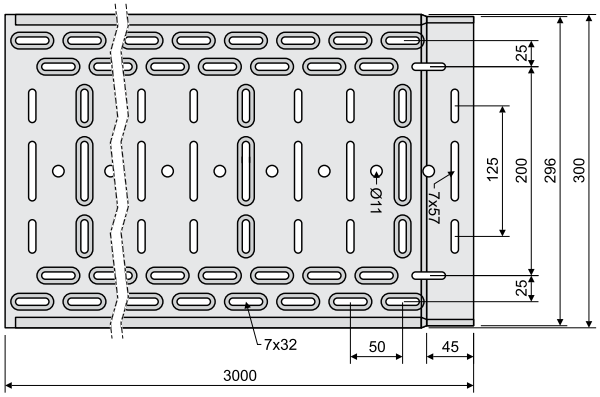
150 mm



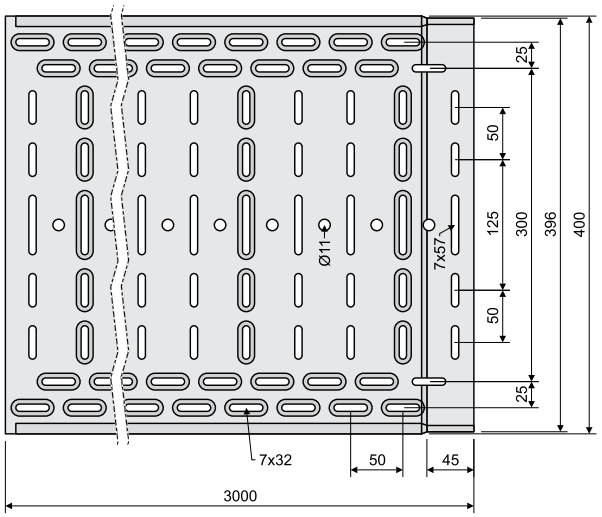
200 mm



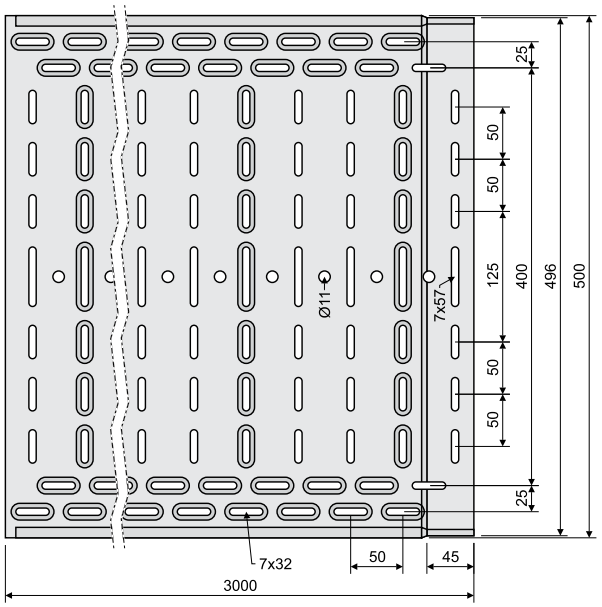
300 mm



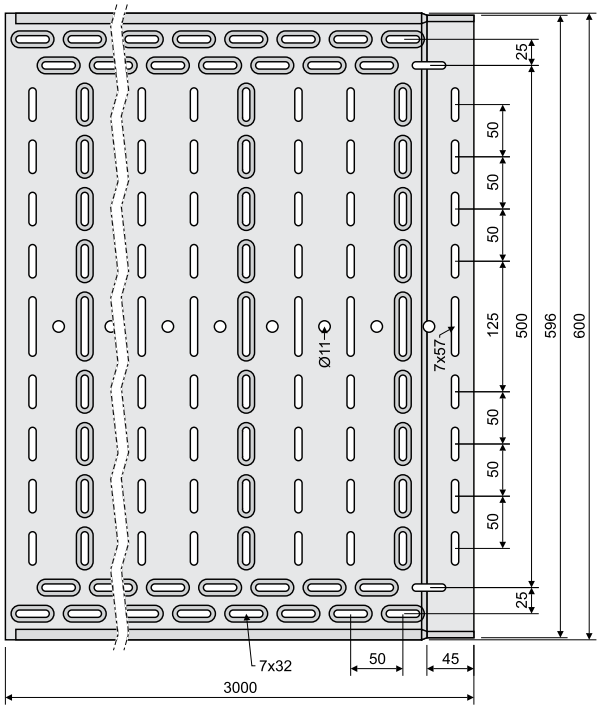
400 mm



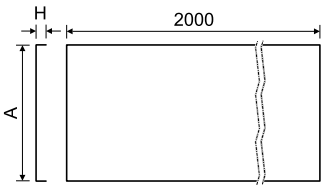
500 mm



600 mm



cable tray cover

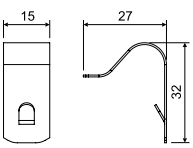


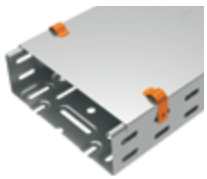
- The standard length of the cable tray cover is 2 m.
- Stated sheet metal thickness is delivered as standard. Cover with thicker sheet metal can be delivered without prior notice.
- The fixing of the cover to the tray is done using the cover fixture VU or NUV or STP 2.9X9.5 TX bolt (2 pcs per meter).
- These items can also be ordered in a varnished version. For more information, see pg. 271.

item	A	H	↕	ǂ		EAN
V 50_S	50	11	0,55	0,31		8595057629776
V 75_S	75	11	0,55	0,43		8595057629578
V 100_S	100	11	0,55	0,53		8595057629783
V 150_S	150	11	0,55	0,75		8595057629790
V 200_S	200	11	0,55	0,98		8595057629424
V 300_S	300	11	0,8	2,04		8595057629516
V 400_S	400	14	1,0	3,41		8595057629394
V 500_S	500	14	1,0	4,22		8595057633162
V 600_S	600	14	1,25	6,25		8595057636576
V 50_ZM	50	11	0,75	0,42		8595568937834
V 100_ZM	100	11	0,75	0,71		8595568937841
V 200_ZM	200	11	0,75	1,31		8595568937858
V 300_ZM	300	11	0,75	1,90		8595568937865
V 400_ZM	400	14	1,0	3,36		8595568937872
V 500_ZM	500	14	1,0	4,14		8595568937889
V 50_F	50	11	0,8	0,54		8595057656109
V 75_F	75	11	0,8	0,72		8595057658141
V 100_F	100	11	0,8	0,91		8595057656215
V 150_F	150	11	0,8	1,30		8595057657991
V 200_F	200	11	0,8	1,68		8595057656222
V 300_F	300	11	1,0	2,73		8595057656239
V 400_F	400	14	1,0	3,63		8595057656246
V 500_F	500	14	1,0	4,80		8595057657977
V 600_F	600	14	1,25	6,70		8595057659278

cover fixture





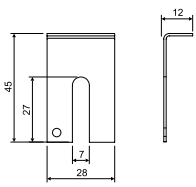


- Is used for a bolt free attachment of the cover to the tray and to the accessories.
- The cover fixture is placed to the cover and the sidewall in the place of the opening and it is slightly pressed so that the fixture lock slides into the opening
- Used for perforated and non-perforated trays, non-perforated trays have holes specially for fixtures.

item	ǂ		EAN
VU_GMT	0,01		8595057629448

cover fixture





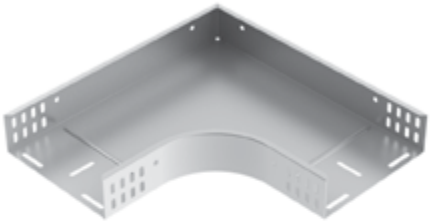


- Serves for the attaching of the cover to the tray using a bolt NSM 6X10.
- The bolt is positioned in the upper row of perforations on perforated trays, or in the square holes on non-perforated trays.
- For fastening, a bolted connection can be used either between the trays or between a tray and a fitting.
- These items can also be ordered in a varnished version. For more information, see pg. 271.

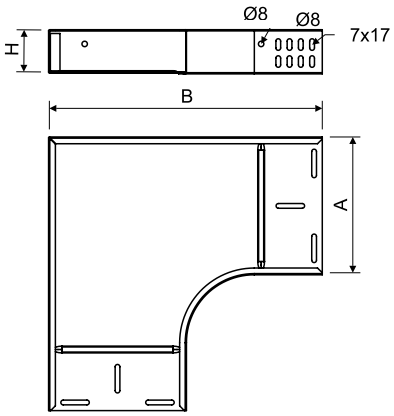
item	ǂ		EAN
NUV_S	0,01		8595057654464
NUV_ZM	0,01		8595568939234

↕ thickness of metal sheet (mm) ǂ weight kg/m; kg/pc
↓f amount of bolts for connection
fire resistance E30-E90, P15-R - P90-R, PS15-PS90
ZM Magnelis®
GMT non electrolytic plating
F Hot Dip Galvanized
S Pre-Galvanized

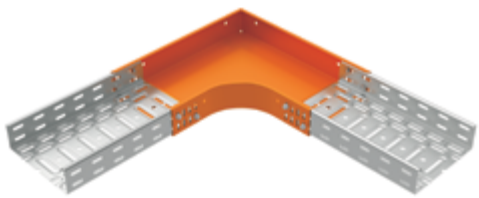
elbow 90°



- To fix the connection use the bolt NSM 6X10 (pg. 97).
- From the width of 400 mm the outer right angle of the side walls is replaced by skewed cut.
- These items can also be ordered in a varnished version. For more information, see pg. 271.



	item	A	H	B	↕	↨	⊻		EAN
	O 90X35X50_S	50	35	253	0,8	0,49	8	-	8595057627819
	O 90X35X75_S	75	35	278	0,8	0,59	8	-	8595057636583
	O 90X35X100_S	100	35	303	0,8	0,69	8	-	8595057627826
	O 90X35X150_S	150	35	353	0,8	0,93	8	-	8595057627833
	O 90X35X200_S	200	35	403	1,0	1,45	10	-	8595057627840
	O 90X35X300_S	300	35	503	1,0	2,25	10	-	8595057627857
	O 90X60X50_S	50	60	253	0,8	0,60	8	🔥	8595057627864
	O 90X60X75_S	75	60	278	0,8	0,71	8	🔥	8595057627871
	O 90X60X100_S	100	60	303	0,8	0,82	8	🔥	8595057627888
	O 90X60X150_S	150	60	353	0,8	1,07	8	🔥	8595057627895
	O 90X60X200_S	200	60	403	1,0	1,64	10	🔥	8595057627918
	O 90X60X300_S	300	60	503	1,0	2,48	10	🔥	8595057627925
	O 90X60X400_S	400	60	603	1,0	3,03	12	🔥	8595057627932
	O 90X60X500_S	500	60	703	1,0	4,01	12	🔥	8595057627949
	O 90X60X600_S	600	60	803	1,2	6,14	12	🔥	8595057627956
	O 90X85X100_S	100	85	303	0,8	1,03	16	-	8595057631281
	O 90X85X150_S	150	85	353	0,8	1,30	16	-	8595057632608
	O 90X85X200_S	200	85	403	1,0	1,91	18	-	8595057632578
	O 90X85X300_S	300	85	503	1,0	2,79	18	-	8595057630307
	O 90X85X400_S	400	85	603	1,0	3,35	20	-	8595057636675
	O 90X110X150_S	150	110	353	0,8	1,40	16	🔥	8595057633667
	O 90X110X200_S	200	110	403	1,0	2,06	18	🔥	8595057636705
	O 90X110X300_S	300	110	503	1,0	2,98	18	🔥	8595057633186
	O 90X110X400_S	400	110	603	1,0	3,55	20	🔥	8595057636729
	O 90X110X500_S	500	110	703	1,0	4,59	20	🔥	8595057633179
	O 90X110X600_S	600	110	803	1,2	6,86	20	🔥	8595057636736

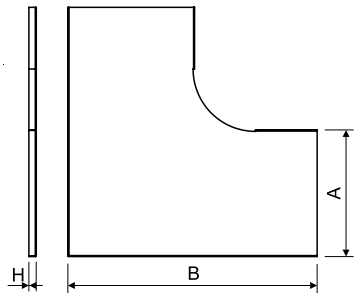


	O 90X60X50_ZM	50	60	253	0,75	0,58	8	🔥	8595568938107
	O 90X60X100_ZM	100	60	303	0,75	0,82	8	🔥	8595568938114
	O 90X60X200_ZM	200	60	403	1,0	1,41	10	🔥	8595568938121
	O 90X60X300_ZM	300	60	503	1,0	2,25	10	🔥	8595568938138
	O 90X60X400_ZM	400	60	603	1,0	2,80	12	🔥	8595568938145
	O 90X60X500_ZM	500	60	703	1,0	3,90	12	🔥	8595568943347
	O 90X110X200_ZM	200	110	403	1,0	2,06	18	🔥	8595568941411
	O 90X110X300_ZM	300	110	503	1,0	2,98	18	🔥	8595568941428
	O 90X110X400_ZM	400	110	603	1,0	3,55	20	🔥	8595568941435
	O 90X110X500_ZM	500	110	703	1,0	4,59	20	🔥	8595568941442

	O 90X35X50_F	50	35	253	0,8	0,56	8	-	8595057658691
	O 90X60X50_F	50	60	253	0,8	0,70	8	🔥	8595057658806
	O 90X60X100_F	100	60	303	0,8	0,95	8	🔥	8595057650831
	O 90X60X150_F	150	60	353	0,8	1,24	8	🔥	8595057658820
	O 90X60X200_F	200	60	403	1,0	1,90	10	🔥	8595057650848
	O 90X60X300_F	300	60	503	1,0	2,87	10	🔥	8595057658844
	O 90X60X400_F	400	60	603	1,0	3,52	12	🔥	8595057658851
	O 90X110X150_F	150	110	353	0,8	1,64	16	🔥	8595057658622
	O 90X110X200_F	200	110	403	1,0	2,41	18	🔥	8595057658639
	O 90X110X300_F	300	110	503	1,0	3,48	18	🔥	8595057658653
	O 90X110X400_F	400	110	603	1,0	4,13	20	🔥	8595057658660
	O 90X110X500_F	500	110	703	1,0	5,34	20	🔥	8595057658677
	O 90X110X600_F	600	110	803	1,2	7,98	20	🔥	8595057658684

elbow cover 90°

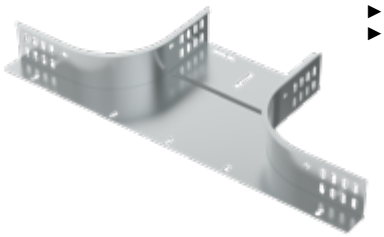




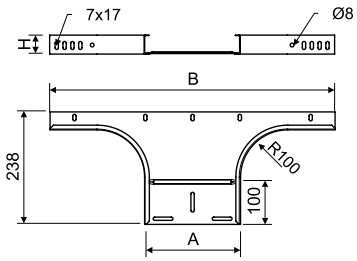
- To fix the cover use 6 pcs of cover fixutres VU (pg. 15).
- These items can also be ordered in a varnished version. For more information, see pg. 271.

	item	A	H	B	↕	ǂ		EAN
	VO 90X50_S	50	12	254	0,55	0,15		8595057630277
	VO 90X75_S	75	12	279	0,55	0,21		8595057629622
	VO 90X100_S	100	12	304	0,55	0,28		8595057629813
	VO 90X150_S	150	12	354	0,55	0,43		8595057630246
	VO 90X200_S	200	12	404	0,8	0,87		8595057629820
	VO 90X300_S	300	12	504	1,0	1,83		8595057629561
	VO 90X400_S	400	15	604	1,0	2,40		8595057630260
	VO 90X500_S	500	15	704	1,0	3,32		8595057633193
	VO 90X600_S	600	15	804	1,0	4,36		8595057637009
	VO 90X50_ZM	50	12	254	0,75	0,22		8595568938152
	VO 90X100_ZM	100	12	304	0,75	0,41		8595568938169
	VO 90X200_ZM	200	12	404	0,75	0,80		8595568938176
	VO 90X300_ZM	300	12	504	1,0	1,80		8595568938183
	VO 90X400_ZM	400	12	604	1,0	2,35		8595568938190
	VO 90X500_ZM	500	15	704	1,0	3,32		8595568941572
	VO 90X50_F	50	12	254	0,8	0,26		8595057659384
	VO 90X100_F	100	12	304	0,8	0,47		8595057650855
	VO 90X150_F	150	12	354	0,8	0,72		8595057659407
	VO 90X200_F	200	12	404	0,8	1,01		8595057650862
	VO 90X300_F	300	12	504	1,0	2,12		8595057659421
	VO 90X400_F	400	15	604	1,0	2,79		8595057659438
	VO 90X500_F	500	15	704	1,0	3,85		8595057659445
	VO 90X600_F	600	15	804	1,0	5,06		8595057659452

horizontal branch



- To fix the connection use the bolt NSM 6X10 (pg. 97).
- Horizontal branch is used for additional branching from the line.
- These items can also be ordered in a varnished version. For more information, see pg. 271.



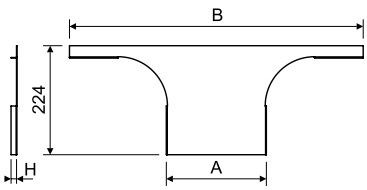


	item	A	H	B	↕	⇕	⇊		EAN
	OH 35X50_S	50	35	453	0,8	0,57	8	-	8595057628243
	OH 35X75_S	75	35	478	0,8	0,60	8	-	8595057637580
	OH 35X100_S	100	35	503	0,8	0,64	8	-	8595057628250
	OH 35X150_S	150	35	553	0,8	0,72	8	-	8595057628267
	OH 35X200_S	200	35	603	1,0	0,90	9	-	8595057628274
	OH 35X300_S	300	35	703	1,0	1,09	9	-	8595057628281
	OH 60X50_S	50	60	453	0,8	0,64	8	🔥	8595057628298
	OH 60X75_S	75	60	478	0,8	0,68	8	🔥	8595057628304
	OH 60X100_S	100	60	503	0,8	0,72	8	🔥	8595057628311
	OH 60X150_S	150	60	553	0,8	0,79	8	🔥	8595057628328
	OH 60X200_S	200	60	603	1,0	0,97	9	🔥	8595057628335
	OH 60X300_S	300	60	703	1,0	1,16	9	🔥	8595057628342
	OH 60X400_S	400	60	803	1,0	1,35	10	🔥	8595057628359
	OH 60X500_S	500	60	903	1,0	1,54	10	🔥	8595057628366
	OH 60X600_S	600	60	1003	1,2	1,98	10	🔥	8595057628373
	OH 85X100_S	100	85	503	0,8	0,95	16	-	8595057630161
	OH 85X150_S	150	85	553	0,8	1,02	16	-	8595057630178
	OH 85X200_S	200	85	603	1,0	1,20	17	-	8595057630185
	OH 85X300_S	300	85	703	1,0	1,39	17	-	8595057630208
	OH 85X400_S	400	85	803	1,0	1,58	18	-	8595057629493
	OH 110X150_S	150	110	553	0,8	1,05	16	🔥	8595057633698
	OH 110X200_S	200	110	603	1,0	1,23	17	🔥	8595057637306
	OH 110X300_S	300	110	703	1,0	1,42	17	🔥	8595057633292
	OH 110X400_S	400	110	803	1,0	1,61	18	🔥	8595057637320
	OH 110X500_S	500	110	903	1,0	1,80	18	🔥	8595057633285
	OH 110X600_S	600	110	1003	1,2	2,24	18	🔥	8595057637337
	OH 60X50_ZM	50	60	453	0,8	0,64	8	🔥	8595568943774
	OH 60X100_ZM	100	60	503	0,8	0,72	8	🔥	8595568943781
	OH 60X200_ZM	200	60	603	1,0	0,97	9	🔥	8595568943798
	OH 60X300_ZM	300	60	703	1,0	1,16	9	🔥	8595568943804
	OH 60X400_ZM	400	60	803	1,0	1,35	10	🔥	8595568943811
	OH 60X500_ZM	500	60	903	1,0	1,54	10	🔥	8595568943828
	OH 110X200_ZM	200	110	603	1,0	1,23	17	🔥	8595568943835
	OH 110X300_ZM	300	110	703	1,0	1,42	17	🔥	8595568943842
	OH 110X400_ZM	400	110	803	1,0	1,61	18	🔥	8595568943859
	OH 110X500_ZM	500	110	903	1,0	1,80	18	🔥	8595568943866
	OH 35X50_F	50	35	453	0,8	0,66	8	-	8595057658301
	OH 60X50_F	50	60	453	0,8	0,74	8	🔥	8595057658400
	OH 60X100_F	100	60	503	0,8	0,83	8	🔥	8595057658424
	OH 60X150_F	150	60	553	0,8	0,92	8	🔥	8595057658431
	OH 60X200_F	200	60	603	1,0	1,13	9	🔥	8595057658448
	OH 60X300_F	300	60	703	1,0	1,35	9	🔥	8595057658462
	OH 60X400_F	400	60	803	1,0	1,57	10	🔥	8595057658479
	OH 110X150_F	150	110	553	0,8	1,22	16	🔥	8595057658233
	OH 110X200_F	200	110	603	1,0	1,43	17	🔥	8595057658240
	OH 110X300_F	300	110	703	1,0	1,65	17	🔥	8595057658257
	OH 110X400_F	400	110	803	1,0	1,87	18	🔥	8595057658271
	OH 110X500_F	500	110	903	1,0	2,08	18	🔥	8595057658288
	OH 110X600_F	600	110	1003	1,2	2,60	18	🔥	8595057658295

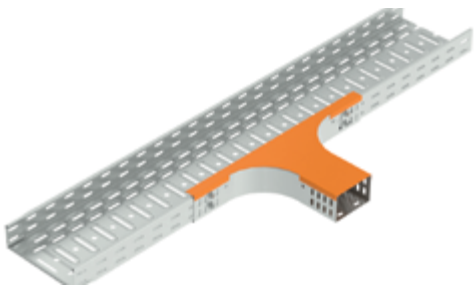
horizontal branch cover



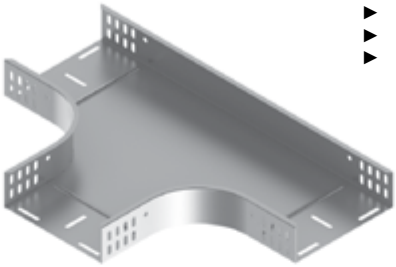
- To fix the cover use 4 pcs of cover fixutres VU (pg. 15).
- These items can also be ordered in a varnished version. For more information, see pg. 271.



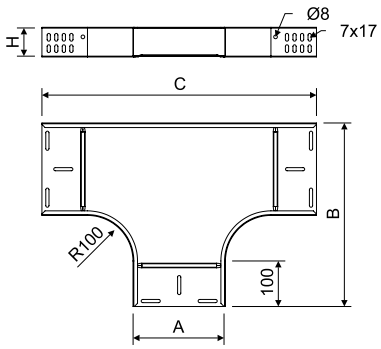
	item	A	H	B	↕	ǂ		EAN
	VOH 50_S	50	12	453	0,55	0,13		8595057637948
	VOH 75_S	75	12	478	0,55	0,16		8595057632813
	VOH 100_S	100	12	503	0,55	0,18		8595057629875
	VOH 150_S	150	12	553	0,55	0,23		8595057629882
	VOH 200_S	200	12	603	0,8	0,41		8595057629899
	VOH 300_S	300	12	703	1,0	0,69		8595057629905
	VOH 400_S	400	15	803	1,0	0,88		8595057629509
	VOH 500_S	500	15	903	1,0	1,06		8595057633308
	VOH 600_S	600	15	1003	1,0	1,23		8595057637955
	VOH 50_ZM	50	12	453	0,75	0,19		8595568938367
	VOH 100_ZM	100	12	503	0,75	0,26		8595568938374
	VOH 200_ZM	200	12	603	0,75	0,38		8595568938381
	VOH 300_ZM	300	12	703	1,0	0,67		8595568938398
	VOH 400_ZM	400	15	803	1,0	0,88		8595568943873
	VOH 500_ZM	500	15	903	1,0	1,06		8595568943880
	VOH 50_F	50	12	453	0,8	0,22		8595057659285
	VOH 100_F	100	12	503	0,8	0,31		8595057659308
	VOH 150_F	150	12	553	0,8	0,39		8595057659315
	VOH 200_F	200	12	603	0,8	0,47		8595057659322
	VOH 300_F	300	12	703	1,0	0,80		8595057659346
	VOH 400_F	400	15	803	1,0	1,01		8595057659353
	VOH 500_F	500	15	903	1,0	1,23		8595057659360
	VOH 600_F	600	15	1003	1,0	1,44		8595057659377

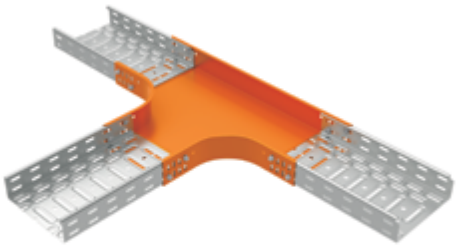


T-piece



- To fix the connection use the bolt NSM 6X10 (pg. 97).
- Use horizontal branch (pg. 18) or reduction piece SU (pg. 29) to make unequal T-piece.
- These items can also be ordered in a varnished version. For more information, see pg. 271.



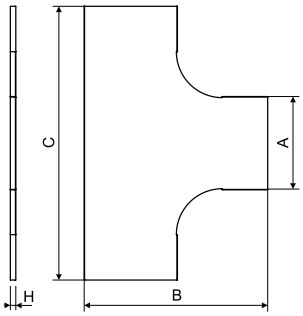


	item	A	H	B	C	↕	ǂ	⫡		EAN
	T 35X50_S	50	35	253	453	0,8	0,74	12	-	8595057637344
	T 35X75_S	75	35	278	478	0,8	0,86	12	-	8595057637351
	T 35X100_S	100	35	303	503	0,8	0,99	12	-	8595057637368
	T 35X150_S	150	35	353	553	0,8	1,27	12	-	8595057637375
	T 35X200_S	200	35	403	603	1,0	1,89	15	-	8595057637382
	T 35X300_S	300	35	503	703	1,0	2,81	15	-	8595057637405
	T 60X50_S	50	60	253	453	0,8	0,88	12	🔥	8595057637443
	T 60X75_S	75	60	278	478	0,8	1,07	12	🔥	8595057633339
	T 60X100_S	100	60	303	503	0,8	1,14	12	🔥	8595057630338
	T 60X150_S	150	60	353	553	0,8	1,43	12	🔥	8595057633575
	T 60X200_S	200	60	403	603	1,0	2,08	15	🔥	8595057631717
	T 60X300_S	300	60	503	703	1,0	3,02	15	🔥	8595057637467
	T 60X400_S	400	60	603	803	1,0	4,13	18	🔥	8595057631700
	T 60X500_S	500	60	703	903	1,0	5,34	18	🔥	8595057637474
	T 60X600_S	600	60	803	1003	1,2	8,07	18	🔥	8595057637481
	T 85X100_S	100	85	303	503	0,8	1,45	24	-	8595057633322
	T 85X150_S	150	85	353	553	0,8	1,93	24	-	8595057635456
	T 85X200_S	200	85	403	603	1,0	2,43	27	-	8595057633315
	T 85X300_S	300	85	503	703	1,0	3,39	27	-	8595057630352
	T 85X400_S	400	85	603	803	1,0	4,51	30	-	8595057637504
	T 110X150_S	150	110	353	553	0,8	1,86	24	🔥	8595057635289
	T 110X200_S	200	110	403	603	1,0	2,57	27	🔥	8595057637535
	T 110X300_S	300	110	503	703	1,0	3,55	27	🔥	8595057637559
	T 110X400_S	400	110	603	803	1,0	4,60	30	🔥	8595057637566
	T 110X500_S	500	110	703	903	1,0	5,98	30	🔥	8595057633704
	T 110X600_S	600	110	803	1003	1,2	8,71	30	🔥	8595057637573
	T 60X50_ZM	50	60	253	453	0,75	0,78	12	🔥	8595568943200
	T 60X100_ZM	100	60	303	503	0,75	1,04	12	🔥	8595568943194
	T 60X200_ZM	200	60	403	603	1,0	2,08	15	🔥	8595568943897
	T 60X300_ZM	300	60	503	703	1,0	3,02	15	🔥	8595568943903
	T 60X400_ZM	400	60	603	803	1,0	4,13	18	🔥	8595568943910
	T 60X500_ZM	500	60	703	903	1,0	5,34	18	🔥	8595568943927
	T 110X200_ZM	200	110	403	603	1,0	2,57	27	🔥	8595568943934
	T 110X300_ZM	300	110	503	703	1,0	3,55	27	🔥	8595568943941
	T 110X400_ZM	400	110	603	803	1,0	4,60	30	🔥	8595568943958
	T 110X500_ZM	500	110	703	903	1,0	5,98	30	🔥	8595568943965
	T 35X50_F	50	35	253	453	0,8	0,85	12	-	8595057663510
	T 60X50_F	50	60	253	453	0,8	1,02	12	🔥	8595057663602
	T 60X100_F	100	60	303	503	0,8	1,33	12	🔥	8595057650879
	T 60X150_F	150	60	353	553	0,8	1,66	12	🔥	8595057663626
	T 60X200_F	200	60	403	603	1,0	2,42	15	🔥	8595057650909
	T 60X300_F	300	60	503	703	1,0	3,51	15	🔥	8595057663640
	T 60X400_F	400	60	603	803	1,0	4,79	18	🔥	8595057663657
	T 110X150_F	150	110	353	553	0,8	2,15	24	🔥	8595057663459
	T 110X200_F	200	110	403	603	1,0	2,98	27	🔥	8595057663466
	T 110X300_F	300	110	503	703	1,0	4,12	27	🔥	8595057663473
	T 110X400_F	400	110	603	803	1,0	5,34	30	🔥	8595057663480
	T 110X500_F	500	110	703	903	1,0	6,94	30	🔥	8595057663497
	T 110X600_F	600	110	803	1003	1,2	10,11	30	🔥	8595057663503

T-piece cover

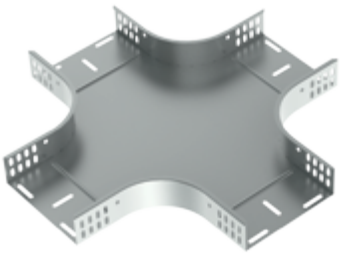


- To fix the cover use 6 pcs of cover fixutres VU (pg. 15).
- These items can also be ordered in a varnished version. For more information, see pg. 271.

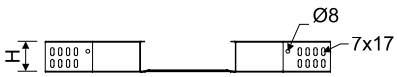


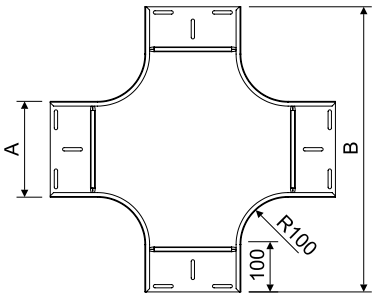
item	A	H	B	C	↕	‡		EAN
VT 50_S	50	12	254	453	0,55	0,22		8595057637962
VT 75_S	75	12	279	478	0,55	0,30		8595057633353
VT 100_S	100	12	304	503	0,55	0,39		8595057630345
VT 150_S	150	12	354	553	0,55	0,57		8595057635326
VT 200_S	200	12	404	603	0,8	1,14		8595057633346
VT 300_S	300	12	504	703	1,0	2,32		8595057630369
VT 400_S	400	15	604	803	1,0	3,40		8595057636620
VT 500_S	500	15	704	903	1,0	4,62		8595057633711
VT 600_S	600	15	804	1003	1,0	6,00		8595057637986
VT 50_ZM	50	12	254	453	0,75	0,30		8595568943224
VT 100_ZM	100	12	304	503	0,75	0,52		8595568943217
VT 200_ZM	200	12	404	603	0,75	1,05		8595568943972
VT 300_ZM	300	12	504	703	1,0	2,32		8595568943989
VT 400_ZM	400	15	604	803	1,0	3,40		8595568943996
VT 500_ZM	500	15	704	903	1,0	4,62		8595568944009
VT 50_F	50	12	254	453	0,8	0,36		8595057659742
VT 100_F	100	12	304	503	0,8	0,65		8595057650886
VT 150_F	150	12	354	553	0,8	0,97		8595057659766
VT 200_F	200	12	404	603	0,8	1,33		8595057650893
VT 300_F	300	12	504	703	1,0	2,69		8595057659780
VT 400_F	400	15	604	803	1,0	3,95		8595057659797
VT 500_F	500	15	704	903	1,0	5,36		8595057659803
VT 600_F	600	15	804	1003	1,0	6,96		8595057659810

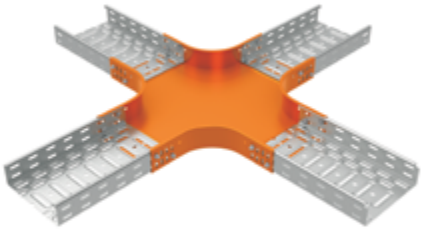
cross



- To fix the connection use the bolt NSM 6X10 (pg. 97).
- Use horizontal branch (pg. 18) or reduction piece SU (pg. 29) to make unequal cross.
- These items can also be ordered in a varnished version. For more information, see pg. 271.





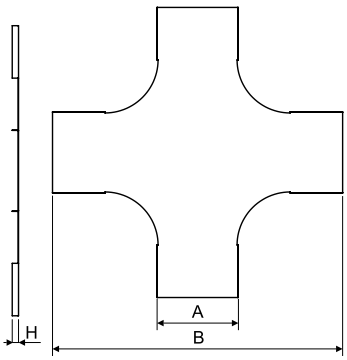


	item	A	H	B	↕	ǂ	⊥⊤		EAN
	KR 35X50_S	50	35	453	0,8	1,07	16	-	8595057637597
	KR 35X75_S	75	35	478	0,8	1,22	16	-	8595057637603
	KR 35X100_S	100	35	503	0,8	1,37	16	-	8595057637610
	KR 35X150_S	150	35	553	0,8	1,70	16	-	8595057637627
	KR 35X200_S	200	35	603	1,0	2,39	20	-	8595057637634
	KR 35X300_S	300	35	703	1,0	3,44	20	-	8595057637658
	KR 60X50_S	50	60	453	0,8	1,22	16	🔥	8595057637696
	KR 60X75_S	75	60	478	0,8	1,37	16	🔥	8595057637702
	KR 60X100_S	100	60	503	0,8	1,53	16	🔥	8595057637719
	KR 60X150_S	150	60	553	0,8	1,85	16	🔥	8595057637726
	KR 60X200_S	200	60	603	1,0	2,55	20	🔥	8595057637733
	KR 60X300_S	300	60	703	1,0	3,59	20	🔥	8595057637757
	KR 60X400_S	400	60	803	1,0	4,80	24	🔥	8595057637764
	KR 60X500_S	500	60	903	1,0	6,14	24	🔥	8595057637771
	KR 60X600_S	600	60	1003	1,2	9,02	24	🔥	8595057637788
	KR 85X100_S	100	85	503	0,8	1,99	32	-	8595057637795
	KR 85X150_S	150	85	553	0,8	2,31	32	-	8595057637801
	KR 85X200_S	200	85	603	1,0	3,01	36	-	8595057637818
	KR 85X300_S	300	85	703	1,0	4,05	36	-	8595057637832
	KR 85X400_S	400	85	803	1,0	5,26	40	-	8595057637849
	KR 110X150_S	150	110	553	0,8	2,37	32	🔥	8595057637870
	KR 110X200_S	200	110	603	1,0	3,06	36	🔥	8595057637887
	KR 110X300_S	300	110	703	1,0	4,12	36	🔥	8595057637900
	KR 110X400_S	400	110	803	1,0	5,31	40	🔥	8595057637917
	KR 110X500_S	500	110	903	1,0	6,66	40	🔥	8595057637924
	KR 110X600_S	600	110	1003	1,2	9,54	40	🔥	8595057637931
	KR 60X50_ZM	50	60	453	0,8	1,22	16	🔥	8595568944016
	KR 60X100_ZM	100	60	503	0,8	1,53	16	🔥	8595568944023
	KR 60X200_ZM	200	60	603	1,0	2,55	20	🔥	8595568944030
	KR 60X300_ZM	300	60	703	1,0	3,59	20	🔥	8595568944047
	KR 60X400_ZM	400	60	803	1,0	4,80	24	🔥	8595568944054
	KR 60X500_ZM	500	60	903	1,0	6,14	24	🔥	8595568944061
	KR 110X200_ZM	200	110	603	1,0	3,06	36	🔥	8595568944078
	KR 110X300_ZM	300	110	703	1,0	4,12	36	🔥	8595568944085
	KR 110X400_ZM	400	110	803	1,0	5,31	40	🔥	8595568944092
	KR 110X500_ZM	500	110	903	1,0	6,66	40	🔥	8595568944108
	KR 35X50_F	50	35	453	0,8	1,24	16	-	8595057662704
	KR 60X50_F	50	60	453	0,8	1,41	16	🔥	8595057661943
	KR 60X100_F	100	60	503	0,8	1,77	16	🔥	8595057650916
	KR 60X150_F	150	60	553	0,8	2,15	16	🔥	8595057661967
	KR 60X200_F	200	60	603	1,0	2,95	20	🔥	8595057650923
	KR 60X300_F	300	60	703	1,0	4,17	20	🔥	8595057661981
	KR 60X400_F	400	60	803	1,0	5,57	24	🔥	8595057661998
	KR 110X150_F	150	110	553	0,8	2,75	32	🔥	8595057662643
	KR 110X200_F	200	110	603	1,0	3,55	36	🔥	8595057662650
	KR 110X300_F	300	110	703	1,0	4,77	36	🔥	8595057662667
	KR 110X400_F	400	110	803	1,0	6,61	40	🔥	8595057662674
	KR 110X500_F	500	110	903	1,0	7,72	40	🔥	8595057662681
	KR 110X600_F	600	110	1003	1,2	11,06	40	🔥	8595057662698

cross-over cover



- To fix the cover use 8 pcs of cover fixutres VU (pg. 15).
- These items can also be ordered in a varnished version. For more information, see pg. 271.

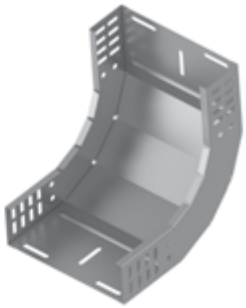


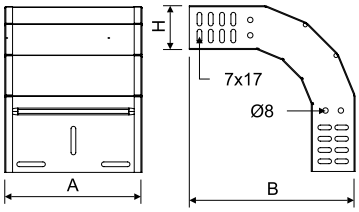
item	A	H	B	↕	ǂ		EAN
VKR 50_S	50	12	453	0,55	0,28		8595057637993
VKR 75_S	75	12	478	0,55	0,38		8595057638006
VKR 100_S	100	12	503	0,55	0,49		8595057638013
VKR 150_S	150	12	553	0,55	0,72		8595057638020
VKR 200_S	200	12	603	0,8	1,41		8595057638037
VKR 300_S	300	12	703	1,0	2,81		8595057638051
VKR 400_S	400	15	803	1,0	4,04		8595057638068
VKR 500_S	500	15	903	1,0	5,40		8595057638075
VKR 600_S	600	15	1003	1,0	6,30		8595057638082

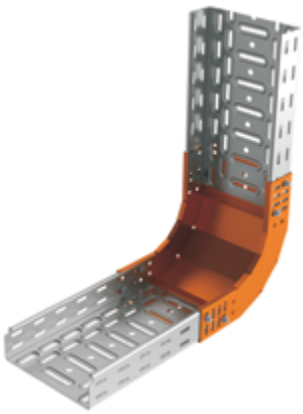
VKR 50_ZM	50	12	453	0,75	0,37		8595568944115
VKR 100_ZM	100	12	503	0,75	0,73		8595568944122
VKR 200_ZM	200	12	603	0,75	1,37		8595568944139
VKR 300_ZM	300	12	703	1,0	2,81		8595568944146
VKR 400_ZM	400	15	803	1,0	4,04		8595568944153
VKR 500_ZM	500	15	903	1,0	5,40		8595568944160

VKR 50_F	50	12	453	0,8	0,47		8595057659469
VKR 100_F	100	12	503	0,8	0,82		8595057650930
VKR 150_F	150	12	553	0,8	1,21		8595057659483
VKR 200_F	200	12	603	0,8	1,64		8595057650947
VKR 300_F	300	12	703	1,0	3,27		8595057659506
VKR 400_F	400	15	803	1,0	4,68		8595057659513
VKR 500_F	500	15	903	1,0	6,27		8595057659520
VKR 600_F	600	15	1003	1,0	7,30		8595057659537

rising elbow 90°







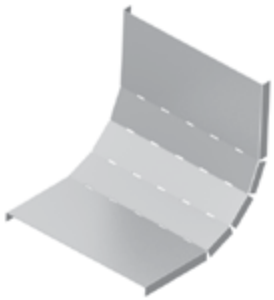
- To fix the connection use the bolt NSM 6X10 (pg. 97).
- These items can also be ordered in a varnished version. For more information, see pg. 271.

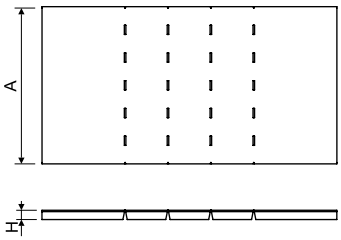
item	A	H	B	↕	⇕	⇊		EAN
SO 90X35X50_S	50	35	220	0,8	0,37	8	-	8595057628106
SO 90X35X75_S	75	35	220	0,8	0,43	8	-	8595057636743
SO 90X35X100_S	100	35	220	0,8	0,49	8	-	8595057628113
SO 90X35X150_S	150	35	220	0,8	0,59	8	-	8595057628120
SO 90X35X200_S	200	35	220	1,0	0,85	10	-	8595057628137
SO 90X35X300_S	300	35	220	1,0	1,10	10	-	8595057628144
SO 90X60X50_S	50	60	245	0,8	0,50	8	🔥	8595057628151
SO 90X60X75_S	75	60	245	0,8	0,57	8	🔥	8595057628168
SO 90X60X100_S	100	60	245	0,8	0,64	8	🔥	8595057628175
SO 90X60X150_S	150	60	245	0,8	0,77	8	🔥	8595057628182
SO 90X60X200_S	200	60	245	1,0	1,03	10	🔥	8595057628199
SO 90X60X300_S	300	60	245	1,0	1,37	10	🔥	8595057628205
SO 90X60X400_S	400	60	245	1,0	1,70	12	🔥	8595057628212
SO 90X60X500_S	500	60	245	1,0	2,03	12	🔥	8595057628229
SO 90X60X600_S	600	60	245	1,2	2,65	12	🔥	8595057628236
SO 90X85X100_S	100	85	270	0,8	0,80	16	-	8595057630321
SO 90X85X150_S	150	85	270	0,8	0,92	16	-	8595057636804
SO 90X85X200_S	200	85	270	1,0	1,23	18	-	8595057633223
SO 90X85X300_S	300	85	270	1,0	1,59	18	-	8595057630031
SO 90X85X400_S	400	85	270	1,0	1,90	20	-	8595057629455
SO 90X110X150_S	150	110	295	0,8	1,13	16	🔥	8595057633827
SO 90X110X200_S	200	110	295	1,0	1,41	18	🔥	8595057636835
SO 90X110X300_S	300	110	295	1,0	1,84	18	🔥	8595057633216
SO 90X110X400_S	400	110	295	1,0	2,18	20	🔥	8595057636859
SO 90X110X500_S	500	110	295	1,0	2,63	20	🔥	8595057633209
SO 90X110X600_S	600	110	295	1,2	3,39	20	🔥	8595057636866

SO 90X60X50_ZM	50	60	245	0,75	0,50	8	🔥	8595568938282
SO 90X60X100_ZM	100	60	245	0,75	0,64	8	🔥	8595568938299
SO 90X60X200_ZM	200	60	245	1,00	1,03	10	🔥	8595568938305
SO 90X60X300_ZM	300	60	245	1,00	1,37	10	🔥	8595568938312
SO 90X60X400_ZM	400	60	245	1,0	1,70	12	🔥	8595568943354
SO 90X60X500_ZM	500	60	245	1,0	2,03	12	🔥	8595568943361
SO 90X110X200_ZM	200	110	295	1,0	1,41	18	🔥	8595568941459
SO 90X110X300_ZM	300	110	295	1,0	1,84	18	🔥	8595568941466
SO 90X110X400_ZM	400	110	295	1,0	2,18	20	🔥	8595568941473
SO 90X110X500_ZM	500	110	295	1,0	2,63	20	🔥	8595568941480

SO 90X35X50_F	50	35	220	0,8	0,43	8	-	8595057662742
SO 90X60X50_F	50	60	245	0,8	0,58	8	🔥	8595057662827
SO 90X60X75_F	75	60	245	0,8	0,66	8	🔥	8595057662834
SO 90X60X100_F	100	60	245	0,8	0,74	8	🔥	8595057650671
SO 90X60X150_F	150	60	245	0,8	0,89	8	🔥	8595057662841
SO 90X60X200_F	200	60	245	1,0	1,19	10	🔥	8595057650695
SO 90X60X300_F	300	60	245	1,0	1,58	10	🔥	8595057662865
SO 90X60X400_F	400	60	245	1,0	1,97	12	🔥	8595057662872
SO 90X110X150_F	150	110	295	0,8	1,31	16	🔥	8595057662568
SO 90X110X200_F	200	110	295	1,0	1,63	18	🔥	8595057662575
SO 90X110X300_F	300	110	295	1,0	2,13	18	🔥	8595057662582
SO 90X110X400_F	400	110	295	1,0	2,52	20	🔥	8595057662599
SO 90X110X500_F	500	110	295	1,0	3,05	20	🔥	8595057662605
SO 90X110X600_F	600	110	295	1,2	3,93	20	🔥	8595057662612

rising elbow 90° cover





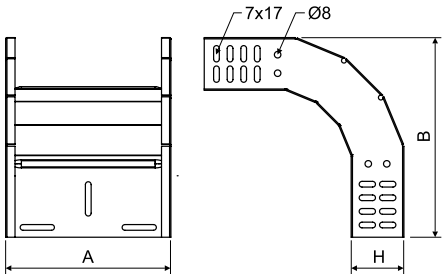
- To fix the cover use 4 pcs of cover fixutres VU (pg. 15).
- All coated covers S and coated covers F with a width of 50 - 200 mm are supplied straight.
- They are constructed from one piece of sheet metal with cut sides for shaping during assembly.
- Coated covers F with a width of 300 - 600 mm are supplied already bent in the shape of a rising elbow.
- These items can also be ordered in a varnished version. For more information, see pg. 271.

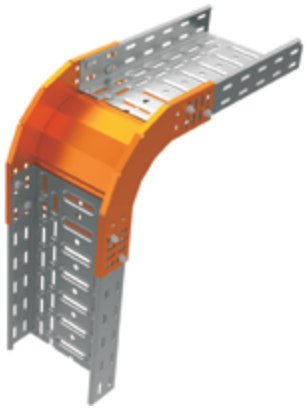
item	A	H	↕	ǂ		EAN
VSO 90X50_S	50	12	0,55	0,13		8595057637016
VSO 90X75_S	75	12	0,55	0,14		8595057629615
VSO 90X100_S	100	12	0,55	0,17		8595057629851
VSO 90X150_S	150	12	0,55	0,24		8595057630048
VSO 90X200_S	200	12	0,8	0,45		8595057629868
VSO 90X300_S	300	12	1,0	0,82		8595057629554
VSO 90X400_S	400	15	1,0	1,09		8595057629462
VSO 90X500_S	500	15	1,0	1,34		8595057633230
VSO 90X600_S	600	15	1,0	1,59		8595057637023
VSO 90X50_ZM	50	12	0,75	0,14		8595568938329
VSO 90X100_ZM	100	12	0,75	0,23		8595568938336
VSO 90X200_ZM	200	12	0,75	0,42		8595568938343
VSO 90X300_ZM	300	12	1,00	0,81		8595568938350
VSO 90X400_ZM	400	15	1,0	1,09		8595568941589
VSO 90X500_ZM	500	15	1,0	1,34		8595568941596
VSO 90X50_F	50	12	0,8	0,22		8595057659667
VSO 90X100_F	100	12	0,8	0,29		8595057650688
VSO 90X150_F	150	12	0,8	0,41		8595057659681
VSO 90X200_F	200	12	0,8	0,53		8595057650701
VSO 90X300_F	300	12	1,0	0,95		8595057659704
VSO 90X400_F	400	15	1,0	1,26		8595057659711
VSO 90X500_F	500	15	1,0	1,55		8595057659728
VSO 90X600_F	600	15	1,0	1,85		8595057659735

low elbow 90°



- To fix the connection use the bolt NSM 6X10 (pg. 97).
- These items can also be ordered in a varnished version. For more information, see pg. 271.





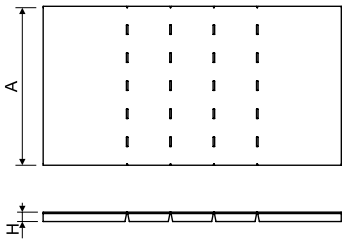
	item	A	H	B	↕	⇕	⫡		EAN
	KO 90X35X50_S	50	35	220	0,8	0,35	8	-	8595057627963
	KO 90X35X75_S	75	35	220	0,8	0,40	8	-	8595057636873
	KO 90X35X100_S	100	35	220	0,8	0,45	8	-	8595057627970
	KO 90X35X150_S	150	35	220	0,8	0,55	8	-	8595057627987
	KO 90X35X200_S	200	35	220	1,0	0,75	10	-	8595057627994
	KO 90X35X300_S	300	35	220	1,0	0,88	10	-	8595057628007
	KO 90X60X50_S	50	60	245	0,8	0,47	8	🔥	8595057628014
	KO 90X60X75_S	75	60	245	0,8	0,52	8	🔥	8595057628021
	KO 90X60X100_S	100	60	245	0,8	0,57	8	🔥	8595057628038
	KO 90X60X150_S	150	60	245	0,8	0,67	8	🔥	8595057628045
	KO 90X60X200_S	200	60	245	1,0	0,87	10	🔥	8595057628052
	KO 90X60X300_S	300	60	245	1,0	1,13	10	🔥	8595057628069
	KO 90X60X400_S	400	60	245	1,0	1,38	12	🔥	8595057628076
	KO 90X60X500_S	500	60	245	1,0	1,63	12	🔥	8595057628083
	KO 90X60X600_S	600	60	245	1,2	2,19	12	🔥	8595057628090
	KO 90X85X100_S	100	85	270	0,8	0,71	16	-	8595057630062
	KO 90X85X150_S	150	85	270	0,8	0,81	16	-	8595057630079
	KO 90X85X200_S	200	85	270	1,0	1,01	18	-	8595057630086
	KO 90X85X300_S	300	85	270	1,0	1,26	18	-	8595057630109
	KO 90X85X400_S	400	85	270	1,0	1,52	20	-	8595057629479
	KO 90X110X150_S	150	110	295	0,8	0,95	16	🔥	8595057633674
	KO 90X110X200_S	200	110	295	1,0	1,15	18	🔥	8595057636958
	KO 90X110X300_S	300	110	295	1,0	1,28	18	🔥	8595057633254
	KO 90X110X400_S	400	110	295	1,0	1,41	20	🔥	8595057636972
	KO 90X110X500_S	500	110	295	1,0	1,67	20	🔥	8595057633247
	KO 90X110X600_S	600	110	295	1,2	1,91	20	🔥	8595057636989

	KO 90X60X50_ZM	50	60	245	0,75	0,42	8	🔥	8595568938206
	KO 90X60X100_ZM	100	60	245	0,75	0,52	8	🔥	8595568938213
	KO 90X60X200_ZM	200	60	245	1,0	0,82	10	🔥	8595568938220
	KO 90X60X300_ZM	300	60	245	1,0	1,07	10	🔥	8595568938237
	KO 90X60X400_ZM	400	60	245	1,0	1,38	12	🔥	8595568943378
	KO 90X60X500_ZM	500	60	245	1,0	1,63	12	🔥	8595568943385
	KO 90X110X200_ZM	200	110	295	1,0	1,15	18	🔥	8595568941497
	KO 90X110X300_ZM	300	110	295	1,0	1,28	18	🔥	8595568941503
	KO 90X110X400_ZM	400	110	295	1,0	1,41	20	🔥	8595568941510
	KO 90X110X500_ZM	500	110	295	1,0	1,67	20	🔥	8595568941527

	KO 90X35X50_F	50	35	220	0,8	0,41	8	-	8595057663855
	KO 90X60X50_F	50	60	245	0,8	0,55	8	🔥	8595057663947
	KO 90X60X100_F	100	60	245	0,8	0,66	8	🔥	8595057650718
	KO 90X60X150_F	150	60	245	0,8	0,78	8	🔥	8595057663961
	KO 90X60X200_F	200	60	245	1,0	1,01	10	🔥	8595057650725
	KO 90X60X300_F	300	60	245	1,0	1,31	10	🔥	8595057663985
	KO 90X60X400_F	400	60	245	1,0	1,61	12	🔥	8595057663992
	KO 90X110X150_F	150	110	295	0,8	1,01	16	🔥	8595057663794
	KO 90X110X200_F	200	110	295	1,0	1,34	18	🔥	8595057663800
	KO 90X110X300_F	300	110	295	1,0	1,49	18	🔥	8595057663817
	KO 90X110X400_F	400	110	295	1,0	1,63	20	🔥	8595057663824
	KO 90X110X500_F	500	110	295	1,0	1,93	20	🔥	8595057663831
	KO 90X110X600_F	600	110	295	1,2	2,22	20	🔥	8595057663848

low elbow 90° cover





- To fix the cover use 4 pcs of cover fixutres VU (pg. 15).
- All coated covers S and coated covers F with a width of 50 - 200 mm are supplied straight.
- They are constructed from one piece of sheet metal with cut sides for shaping during assembly.
- Coated covers F with a width of 300 - 600 mm are supplied already bent in the shape of a rising elbow.
- These items can also be ordered in a varnished version. For more information, see pg. 271.

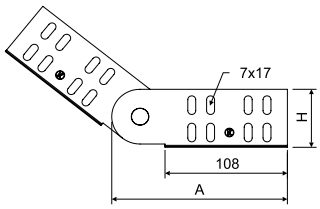
item	A	H	B	↕	⇕		EAN
VKO 90X35X50_S	50	12	220	0,55	0,12	-	8595057637030
VKO 90X35X75_S	75	12	220	0,55	0,17	-	8595057637139
VKO 90X35X100_S	100	12	220	0,55	0,21	-	8595057637146
VKO 90X35X150_S	150	12	220	0,55	0,29	-	8595057637153
VKO 90X35X200_S	200	12	220	0,8	0,55	-	8595057637160
VKO 90X35X300_S	300	12	220	1,0	0,99	-	8595057637184
VKO 90X60X50_S	50	12	245	0,55	0,14	🔥	8595057637221
VKO 90X60X75_S	75	12	245	0,55	0,18	🔥	8595057629608
VKO 90X60X100_S	100	12	245	0,55	0,23	🔥	8595057629837
VKO 90X60X150_S	150	12	245	0,55	0,32	🔥	8595057630888
VKO 90X60X200_S	200	12	245	0,8	0,60	🔥	8595057629844
VKO 90X60X300_S	300	12	245	1,0	0,87	🔥	8595057629547
VKO 90X60X400_S	400	15	245	1,0	1,45	🔥	8595057636613
VKO 90X60X500_S	500	15	245	1,0	1,78	🔥	8595057637047
VKO 90X60X600_S	600	15	245	1,0	2,17	🔥	8595057637054
VKO 90X85X100_S	100	12	270	0,55	0,25	-	8595057630116
VKO 90X85X150_S	150	12	270	0,55	0,39	-	8595057630123
VKO 90X85X200_S	200	12	270	0,8	0,66	-	8595057630130
VKO 90X85X300_S	300	12	270	1,0	1,19	-	8595057630154
VKO 90X85X400_S	400	15	270	1,0	1,58	-	8595057629486
VKO 90X110X150_S	150	12	295	0,55	0,38	🔥	8595057633681
VKO 90X110X200_S	200	12	295	0,8	0,72	🔥	8595057637085
VKO 90X110X300_S	300	12	295	1,0	1,30	🔥	8595057633278
VKO 90X110X400_S	400	15	295	1,0	1,72	🔥	8595057637108
VKO 90X110X500_S	500	15	295	1,0	2,12	🔥	8595057633261
VKO 90X110X600_S	600	15	295	1,0	2,52	🔥	8595057637115
VKO 90X60X50_ZM	50	12	245	0,75	0,20	🔥	8595568938244
VKO 90X60X100_ZM	100	12	245	0,75	0,31	🔥	8595568938251
VKO 90X60X200_ZM	200	12	245	0,75	0,55	🔥	8595568938268
VKO 90X60X300_ZM	300	12	245	1,0	1,07	🔥	8595568938275
VKO 90X60X400_ZM	400	15	245	1,0	1,45	🔥	8595568943392
VKO 90X60X500_ZM	500	15	245	1,0	1,78	🔥	8595568943408
VKO 90X110X200_ZM	200	12	295	0,8	0,72	🔥	8595568941534
VKO 90X110X300_ZM	300	12	295	1,0	1,30	🔥	8595568941541
VKO 90X110X400_ZM	400	15	295	1,0	1,72	🔥	8595568941558
VKO 90X110X500_ZM	500	15	295	1,0	2,12	🔥	8595568941565
VKO 90X35X50_F	50	12	220	0,8	0,23	-	8595057659889
VKO 90X60X75_F	75	12	245	0,8	0,31	🔥	8595057659988
VKO 90X60X100_F	100	12	245	0,8	0,39	🔥	8595057650732
VKO 90X60X150_F	150	12	245	0,8	0,54	🔥	8595057659995
VKO 90X60X200_F	200	12	245	0,8	0,70	🔥	8595057650749
VKO 90X60X300_F	300	12	245	1,0	1,01	🔥	8595057660014
VKO 90X60X400_F	400	15	245	1,0	1,68	🔥	8595057660021
VKO 90X110X150_F	150	12	295	0,8	0,65	🔥	8595057659827
VKO 90X110X200_F	200	12	295	0,8	0,83	🔥	8595057659834
VKO 90X110X300_F	300	12	295	1,0	1,51	🔥	8595057659841
VKO 90X110X400_F	400	15	295	1,0	1,99	🔥	8595057659858
VKO 90X110X500_F	500	15	295	1,0	2,46	🔥	8595057659865
VKO 90X110X600_F	600	15	295	1,0	2,92	🔥	8595057659872

↕ thickness of metal sheet (mm)
⇕ weight kg/pc
🔥 fire resistance E30-E90, P15-R - P90-R, PS15-PS90
ZM Magnelis®
F Hot Dip Galvanized
S Pre-Galvanized

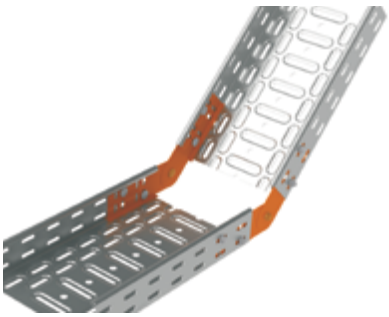
hinged joint



- For the connection of the hinged joint to the tray there are used the bolts NSM 6X10 (pg. 97).
- The joint is delivered in 1 piece per packing, 2 pcs are needed to make a bend of the line.
- These items can also be ordered in a varnished version. For more information, see pg. 271.



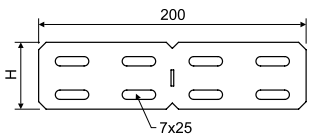
	item	H	A	↕	ǂ	⊻		EAN
	SK 35_S	28	133	0,8	0,05	4	-	8595057638136
	SK 60_S	53	155	0,8	0,10	4	🔥	8595057627772
	SK 85_S	78	178	1,2	0,24	8	-	8595057630413
	SK 110_S	103	200	1,2	0,35	8	🔥	8595057633384
	SK 35_ZM	28	133	0,75	0,04	4	-	8595568939326
	SK 60_ZM	53	155	0,75	0,10	4	🔥	8595568938060
	SK 110_ZM	103	200	1,5	0,45	8	🔥	8595568938053



angle coupling



- Angle couplings are used to create any angle, mainly for connecting in places of a slight bend in the route or for creating arcs of large radii or bypassing columns and pillars.
- The connection is performed using the bolts NSM 6X10 (pg. 97).
- These items can also be ordered in a varnished version. For more information, see pg. 271.



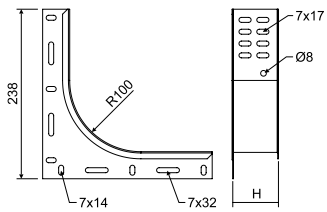
	item	H	↕	ǂ	⊻		EAN
	SSU 35_S	25	1,2	0,04	4	-	8595568936684
	SSU 60_S	50	1,5	0,10	4	🔥	8595568936691
	SSU 85_S	75	1,5	0,16	6	-	8595568936707
	SSU 110_S	100	1,5	0,20	8	🔥	8595568936714
	SSU 35_ZM	25	1,5	0,04	4	-	8595568940773
	SSU 60_ZM	50	1,5	0,10	4	🔥	8595568938084
	SSU 110_ZM	100	1,5	0,20	8	🔥	8595568938077



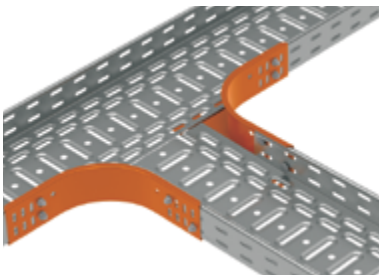
reduction piece



- It is used for making an additional branching use an unequal T-piece or cross.
- Advantage of this using is availability to choose bending tray with any width
- The reduction piece is delivered in singles, must be used 2 pieces for installation.
- The connection is performed using the bolts NSM 6X10(pg. 97).
- The cover of a horizontal VOH branch (pg. 19) can be used to cover routes with a reduction piece.
- These items can also be ordered in a varnished version. For more information, see pg. 271.



	item	H	↕	ǂ	⊥T		EAN
	SU 35_S	35	1,0	0,23	4	-	8595057638129
	SU 60_S	60	1,0	0,30	4	🔥	8595057628380
	SU 85_S	85	1,0	0,36	8	-	8595057630390
	SU 110_S	110	1,0	0,44	8	🔥	8595057633391
	SU 60_ZM	60	1,0	0,30	4	🔥	8595568938091
	SU 110_ZM	110	1,0	0,44	8	🔥	8595568941602
	SU 35_F	35	1,0	0,27	4	-	8595057658585
	SU 60_F	60	1,0	0,34	4	🔥	8595057658592
	SU 110_F	110	1,0	0,51	8	🔥	8595057658615

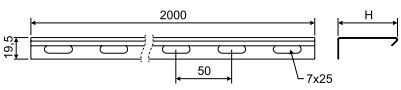


length of cut out side wall of the tray:	
KZI ...X50	250
KZI ...X100	300
KZI ...X150	350
KZI ...X200	400
KZI ...X300	500
KZI ...X400	600
KZI ...X500	700
KZI ...X600	800

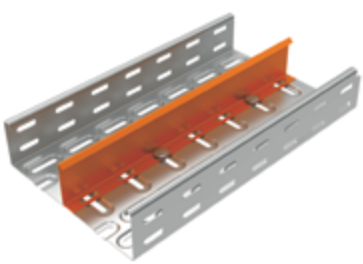
partition



- The partition is used to separate cables in cable trays. In term of electrical compatibility, it is also used for dividing several types of lines. It is recommended to use covers for this type of installation and make thecovered and shielded room.
- The standard length of the partition is 2 m.
- The connection is performed using the bolts NSM 6X10 (pg. 97), 2 pcs per 1 meter.
- These items can also be ordered in a varnished version. For more information, see pg. 271.



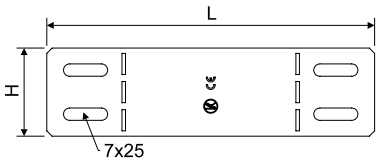
	item	H	↕	ǂ		EAN
	P 35_S	29	0,8	0,34	-	8595057639515
	P 60_S	54	0,8	0,50	🔥	8595057627734
	P 85_S	79	0,8	0,66	-	8595057633414
	P 110_S	104	0,8	0,81	-	8595057633407
	P 60_ZM	54	0,75	0,46	🔥	8595568942388
	P 110_ZM	104	0,75	0,76	-	8595568942395

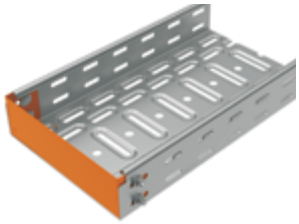


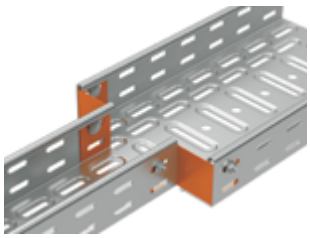
end / reduction piece



- The plate is designed to end or reduce the cable route.
- Depending on the application requirement, the plate is bent in the perforated areas into a U-shape as an end-piece or into a Z-shape as a reduction-piece.
- The end/reduction- piece is attached to the tray with NSM 6X10 bolts (pg. 97).
- These items can also be ordered in a varnished version. For more information, see pg. 271.





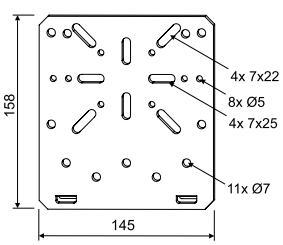


	item	H	L	↕	ǂ	⊻		EAN
	K-R 35X25_ZM	25	111	1,0	0,02	2	-	8595568938893
	K-R 35X50_ZM	25	136	1,0	0,02	2	-	8595568938923
	K-R 35X75_ZM	25	161	1,0	0,03	2	-	8595568938954
	K-R 35X100_ZM	25	186	1,0	0,03	2	-	8595568938862
	K-R 35X150_ZM	25	236	1,0	0,04	2	-	8595568938879
	K-R 35X200_ZM	25	286	1,0	0,05	2	-	8595568938886
	K-R 35X300_ZM	25	386	1,0	0,07	2	-	8595568938909
	K-R 60X25_ZM	50	111	1,0	0,04	4	🔥	8595568939005
	K-R 60X50_ZM	50	136	1,0	0,05	4	🔥	8595568939036
	K-R 60X75_ZM	50	161	1,0	0,06	4	🔥	8595568939067
	K-R 60X100_ZM	50	186	1,0	0,07	4	🔥	8595568938961
	K-R 60X125_ZM	50	211	1,0	0,08	4	🔥	8595568938978
	K-R 60X150_ZM	50	236	1,0	0,09	4	🔥	8595568938985
	K-R 60X200_ZM	50	286	1,0	0,10	4	🔥	8595568938992
	K-R 60X300_ZM	50	386	1,0	0,14	4	🔥	8595568939012
	K-R 60X400_ZM	50	486	1,0	0,18	4	🔥	8595568939029
	K-R 60X500_ZM	50	586	1,0	0,22	4	🔥	8595568939043
	K-R 60X600_ZM	50	686	1,0	0,26	4	🔥	8595568939050
	K-R 85X50_ZM	75	136	1,0	0,07	4	-	8595568939128
	K-R 85X100_ZM	75	186	1,0	0,10	4	-	8595568939074
	K-R 85X150_ZM	75	236	1,0	0,13	4	-	8595568939081
	K-R 85X200_ZM	75	286	1,0	0,14	4	-	8595568939098
	K-R 85X300_ZM	75	386	1,0	0,22	4	-	8595568939104
	K-R 85X400_ZM	75	486	1,0	0,28	4	-	8595568939111
	K-R 110X100_ZM	100	186	1,0	0,13	4	🔥	8595568938794
	K-R 110X150_ZM	100	236	1,0	0,17	4	🔥	8595568938800
	K-R 110X200_ZM	100	286	1,0	0,19	4	🔥	8595568938817
	K-R 110X300_ZM	100	386	1,0	0,29	4	🔥	8595568938824
	K-R 110X400_ZM	100	486	1,0	0,37	4	🔥	8595568938831
	K-R 110X500_ZM	100	586	1,0	0,44	4	🔥	8595568938848
	K-R 110X600_ZM	100	686	1,0	0,52	4	🔥	8595568938855

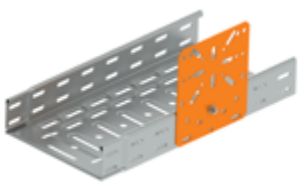
mounting plate



- For mounting distribution boxes to the cable trays to a side wall.
- It is pushed on to the side of cable trays and it is fixed by bolts NSM 6X10 (pg. 97).
- Recommended for boxes KSK 80, KSK 100, KSK 125, KSK 175; 8101; 8102; 8106; 8107; 8110; 8111; 8112; 8130; 8135; 003.CS.K; 005.CS.K; KPK 125 (see catalogue of Wiring materials).
- These items can also be ordered in a varnished version. For more information, see pg. 271.



	item	↕	ǂ		EAN
	MDS_S	1,0	0,17	🔥	8595057631762
	MDS_ZM	1,0	0,17	🔥	8595568939364





↕ thickness of metal sheet (mm) ǂ weight kg/pc ⊻ amount of bolts for connection

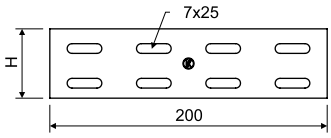
🔥 fire resistance E30-E90, P15-R - P90-R, PS15-PS90 ZM Magnelis® S Pre-Galvanized

coupling

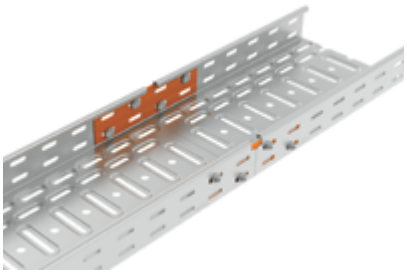


- Used to connect trays with no built-in coupling or if the coupling has been removed.
- Attached using NSM 6X10 bolts (pg. 97).
- These items can also be ordered in a varnished version. For more information, see pg. 271.

	item	H	↕	ǂ	⫡		EAN
	S 35X200_S	25	1,2	0,04	4	-	8595057630444
	S 60X200_S	50	1,5	0,09	4	🔥	8595057627796
	S 85X200_S	75	1,5	0,13	6	-	8595057629769
	S 110X200_S	100	1,5	0,18	8	🔥	8595057629752



	S 35X200_ZM	25	1,5	0,04	4	-	8595568939340
	S 60X200_ZM	50	1,5	0,09	4	🔥	8595568938046
	S 110X200_ZM	100	1,5	0,18	8	🔥	8595568938039

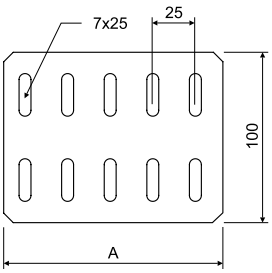


reinforcement plate



- Is used for reinforcing the tray connections without integrated coupling.
- It is fastened by the bolts NSM 6X10 (pg. 97) to the tray bottom.
- These items can also be ordered in a varnished version. For more information, see pg. 271.

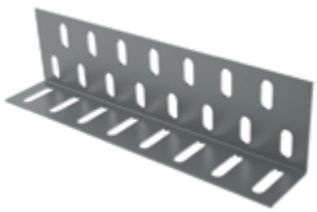
	item	A	↕	ǂ	⫡	EAN
	DV 75_S	68	1,5	0,07	4	8595057638686
	DV 100_S	75	1,5	0,08	4	8595057638693
	DV 150_S	125	1,5	0,13	4	8595057633780
	DV 200_S	175	1,5	0,18	6	8595057638709
	DV 300_S	275	1,5	0,29	6	8595057633773
	DV 400_S	375	1,5	0,39	8	8595057638723
	DV 500_S	475	1,5	0,50	8	8595057638846
	DV 600_S	575	1,5	0,60	8	8595057638853



	DV 75_ZM	68	1,5	0,07	4	8595568939401
	DV 100_ZM	75	1,5	0,08	4	8595568939418
	DV 150_ZM	125	1,5	0,13	4	8595568939425
	DV 200_ZM	175	1,5	0,18	6	8595568939432
	DV 300_ZM	275	1,5	0,29	6	8595568939449
	DV 400_ZM	375	1,5	0,39	8	8595568939456
	DV 500_ZM	475	1,5	0,50	8	8595568939463
	DV 600_ZM	575	1,5	0,60	8	8595568939470

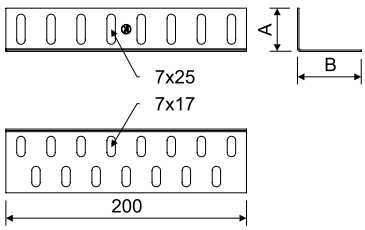


supporting corner



- Designated for the increase of the stability of the cable tray.
- It is fastened by the bolt NSM 6X10 (pg. 97).
- These items can also be ordered in a varnished version. For more information, see pg. 271.

	item	A	B	↕	⇕	⇊	EAN
	UP 35X42_S	36	28	1,2	0,10	4	8595057638099
	UP 60X85_S	36	53	1,2	0,14	6	8595057638105
	UP 110_S	36	78	1,2	0,18	8	8595057638112
	UP 35X42_ZM	36	28	1,5	0,12	4	8595568939371
	UP 60X85_ZM	36	53	1,5	0,17	6	8595568939388
	UP 110_ZM	36	78	1,5	0,22	8	8595568939395

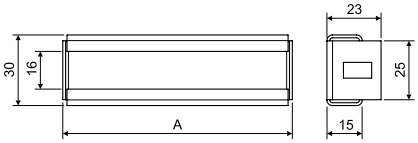




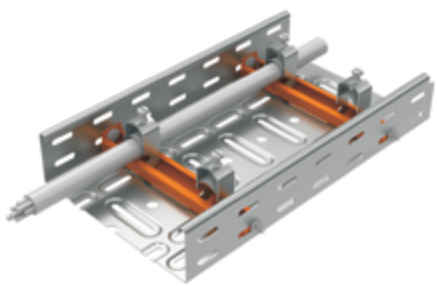
supporting profile for cable clamps



- The supporting profiles is designated for the cable trays. It is used for mounting of cable clamps and there by for the anchoring of the cables inside the tray.
- It is installed on the bottom of the cable tray and it is fixed by using two bolts NSM 6X10 (pg. 97) to the tray sidewalls.
- When using a cover it is necessary to take into account the height of the clamps.



	item	A	⇕	EAN
	NPKV 50_S	47,5	0,04	8595057693784
	NPKV 75_S	72,5	0,05	8595057693791
	NPKV 100_S	97,5	0,07	8595057693807
	NPKV 150_S	147,5	0,10	8595057693814
	NPKV 200_S	197,5	0,13	8595057693821
	NPKV 250_S	247,5	0,16	8595057690059
	NPKV 300_S	297,5	0,19	8595057693838
	NPKV 400_S	397,5	0,25	8595057693845
	NPKV 500_S	497,5	0,32	8595057690066
	NPKV 600_S	597,5	0,38	8595057693852
	NPKV 50_ZM	47,5	0,05	8595568944337
	NPKV 75_ZM	72,5	0,06	8595568944344
	NPKV 100_ZM	97,5	0,09	8595568944351
	NPKV 150_ZM	147,5	0,13	8595568944368
	NPKV 200_ZM	197,5	0,16	8595568944375
	NPKV 300_ZM	297,5	0,24	8595568944382
	NPKV 400_ZM	397,5	0,31	8595568944399
	NPKV 500_ZM	497,5	0,40	8595568944405
	NPKV 600_ZM	597,5	0,48	8595568944412
	NPKV 50_F	47,5	0,04	8595568905727
	NPKV 75_F	72,5	0,06	8595568905734
	NPKV 100_F	97,5	0,08	8595568905741
	NPKV 150_F	147,5	0,11	8595568905758
	NPKV 200_F	197,5	0,15	8595568905765
	NPKV 500_F	247,5	0,16	8595568915078
	NPKV 300_F	297,5	0,22	8595568905772
	NPKV 400_F	397,5	0,29	8595568905789
	NPKV 500_F	497,5	0,37	8595568905796
	NPKV 600_F	597,5	0,44	8595568905802



↕ thickness of metal sheet (mm) ⇕ weight kg/pc

⇊ amount of bolts for connection

ZM Magnelis®

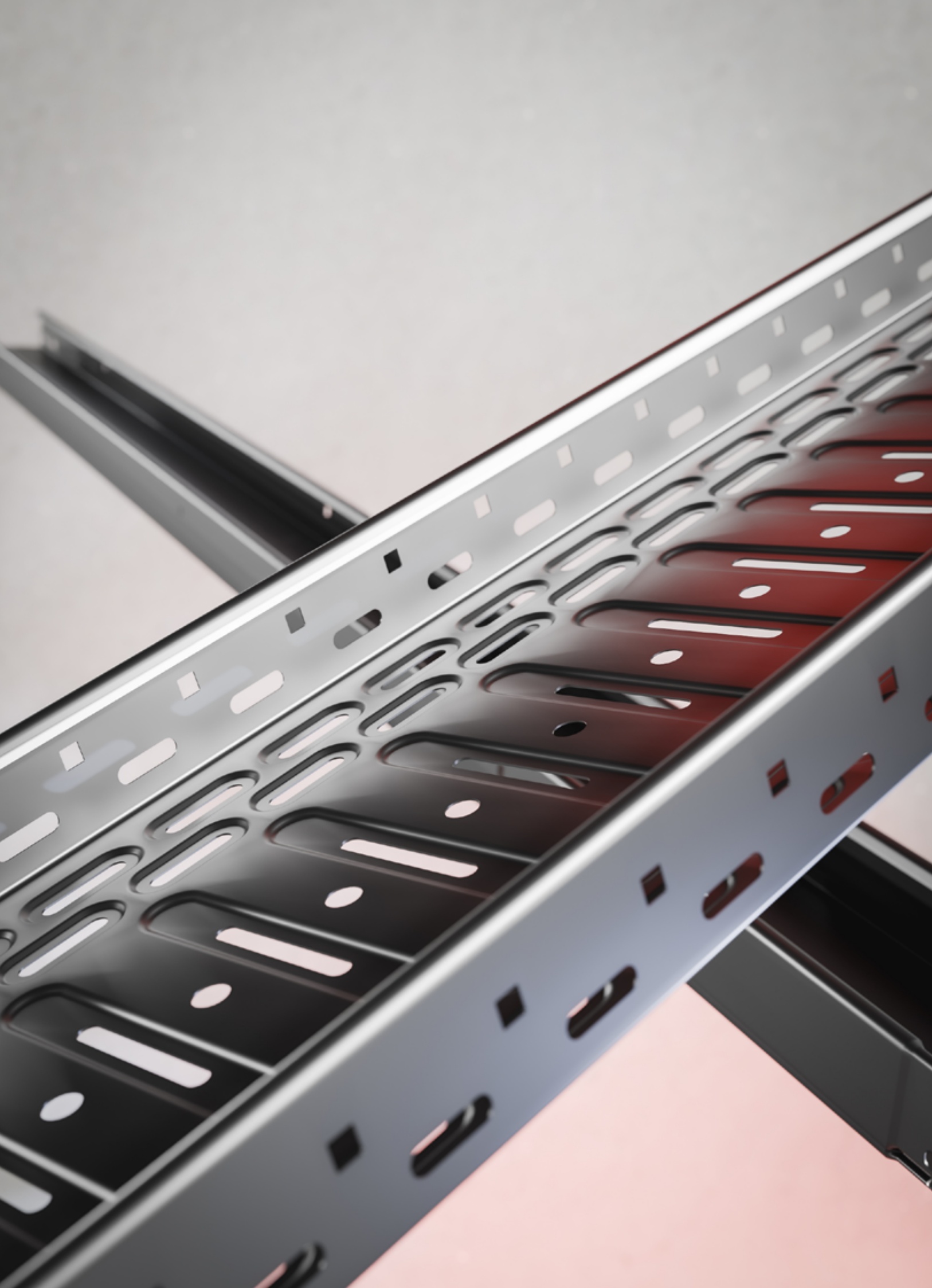
F Hot Dip Galvanized

S Pre-Galvanized

inner usable cross-section of cable trays

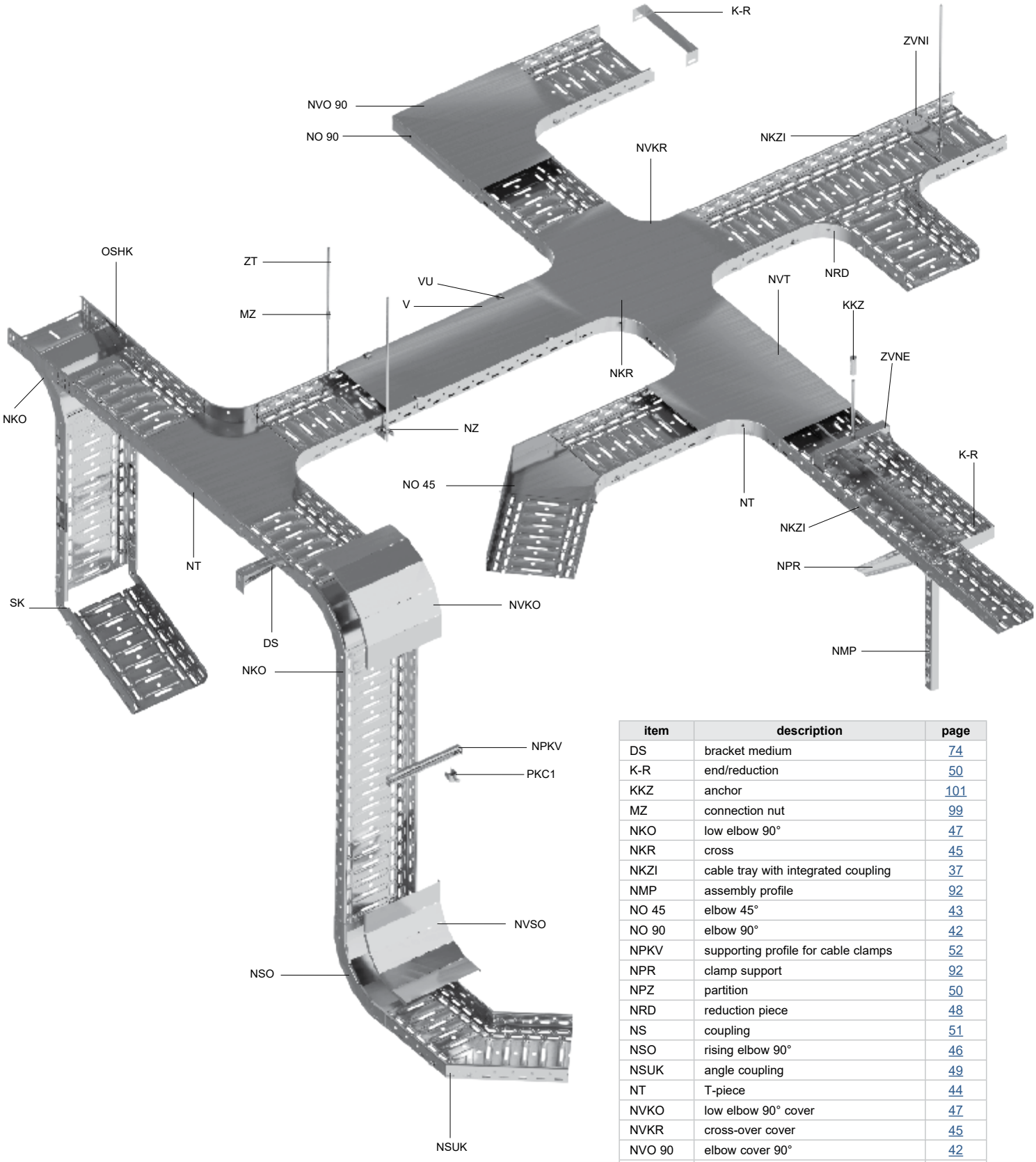
dimension of tray	cm2	utilization 60% (crosssection cm^2)	"CYKY 3X1,5"	CYKY 5X1,5	CYKY 3X2,5	CYKY 5x2,5	CYKY 3X4	CYKY 5X4	CYKY 5X6	CYKY 5X10	CYKY 5X16	CYKY 5X25	CYKY 4X35	CYKY 4X50	CYKY 3X70+50	CYKY 3X95+70	CYKY 3X120+95	CYKY 3X240+12
			Ø8,6	Ø10,1	Ø9,5	Ø11,2	Ø11,2	Ø13,8	Ø15,1	Ø18,0	Ø20,4	Ø26,1	Ø24,8	Ø31,3	Ø33,6	Ø39,3	Ø43,0	Ø56,4
KZI 35X50	17,5	10,5	18	13	14	10	10	7	5	4	3	1	2	1	1	0	0	0
KZI 35X75	26,3	15,8	27	19	22	16	16	10	8	6	4	2	3	2	1	1	1	0
KZI 35X100	35	21,0	36	26	29	21	21	14	11	8	6	3	4	2	2	1	1	0
KZI 35X150	52,5	31,5	54	39	44	31	31	21	17	12	9	5	6	4	3	2	2	1
KZI 35X200	70	42,0	72	52	59	42	42	28	23	16	12	7	8	5	4	3	2	1
KZI 35X300	105	63,0	108	78	88	63	63	42	35	24	19	11	13	8	7	5	4	2
KZI 60X50	30	18,0	31	22	25	18	18	12	10	7	5	3	3	2	2	1	1	0
KZI 60X75	45	27,0	46	33	38	27	27	18	15	10	8	5	5	3	3	2	1	1
KZI 60X100	60	36,0	62	44	50	36	36	24	20	14	11	6	7	4	4	2	2	1
KZI 60X150	90	54,0	93	67	76	54	54	36	30	21	16	10	11	7	6	4	3	2
KZI 60X200	120	72,0	124	89	101	73	73	48	40	28	22	13	14	9	8	5	4	2
KZI 60X300	180	108,0	186	134	152	109	109	72	60	42	33	20	22	14	12	8	7	4
KZI 60X400	240	144,0	248	179	203	146	146	96	80	56	44	26	29	18	16	11	9	5
KZI 60X500	300	180,0	310	224	254	182	182	120	100	70	55	33	37	23	20	14	12	7
KZI 60X600	360	216,0	372	269	304	219	219	144	120	84	66	40	44	28	24	17	14	8
KZI 85X100	85	51,0	87	63	71	51	51	34	28	20	15	9	10	6	5	4	3	2
KZI 85X150	127,5	76,5	131	95	107	77	77	51	42	30	23	14	15	9	8	6	5	3
KZI 85X200	170	102,0	175	127	143	103	103	68	56	40	31	19	21	13	11	8	7	4
KZI 85X300	255	153,0	263	191	215	155	155	102	85	60	46	28	31	19	17	12	10	6
KZI 85X400	340	204,0	351	254	287	207	207	136	113	80	62	38	42	26	23	16	14	8
KZI 110X150	165	99,0	170	123	139	100	100	66	55	38	30	18	20	12	11	8	6	3
KZI 110X200	220	132,0	227	164	186	134	134	88	73	51	40	24	27	17	14	10	9	5
KZI 110X300	330	198,0	341	247	279	201	201	132	110	77	60	37	41	25	22	16	13	7
KZI 110X400	440	264,0	454	329	372	268	268	176	147	103	80	49	54	34	29	21	18	10
KZI 110X500	550	330,0	568	412	465	335	335	220	184	129	101	61	68	42	37	27	22	13
KZI 110X600	660	396,0	682	494	558	402	402	264	221	155	121	74	82	51	44	32	27	15

The values state the number of cables with the tray at 60% full. Orientation diameters of the cables CYKY.
The values are mathematically calculated. The limit values (small tray x big cable or contrariwise) it is necessary to consider combination of the tray and diameter of the cable and used them with reference to technical conditions.



2 CABLE TRAYS MARS



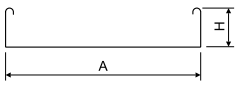


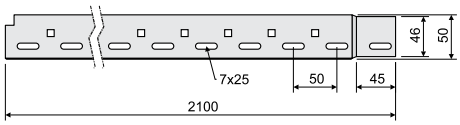
item	description	page
DS	bracket medium	74
K-R	end/reduction	50
KKZ	anchor	101
MZ	connection nut	99
NKO	low elbow 90°	47
NKR	cross	45
NKZI	cable tray with integrated coupling	37
NMP	assembly profile	92
NO 45	elbow 45°	43
NO 90	elbow 90°	42
NPKV	supporting profile for cable clamps	52
NPR	clamp support	92
NPZ	partition	50
NRD	reduction piece	48
NS	coupling	51
NSO	rising elbow 90°	46
NSUK	angle coupling	49
NT	T-piece	44
NVKO	low elbow 90° cover	47
NVKR	cross-over cover	45
NVO 90	elbow cover 90°	42
NVSO	rising elbow 90° cover	46
NVT	T-piece cover	44
NZ	suspension piece	88
PKC1	cable clamp	96
V	cable tray cover	41
VU	cover fixture	41
ZT	threaded rod	98
ZVNE	outer hanger	83
ZVNI	inner hange	82

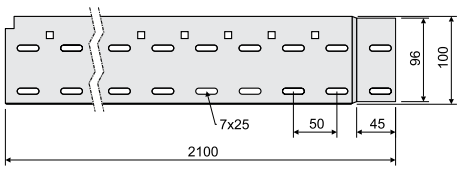
cable tray with integrated coupling





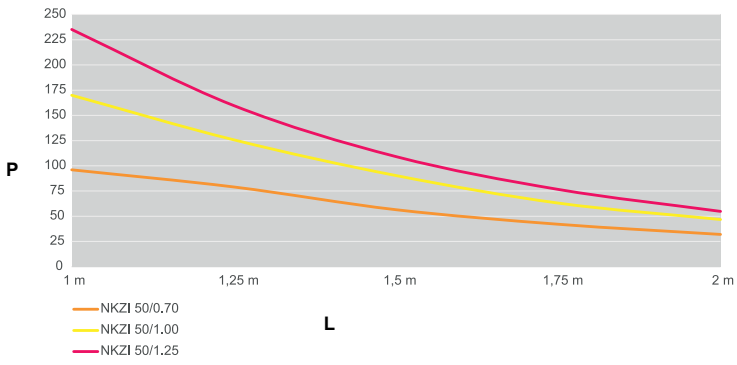






- The standard length of the cable tray is 2,1 m.
- For securing the connection of the trays with the integrated coupling there are used the clamps made from spring steel KSV (pg. 97) or the bolts NSM 6X10 (pg. 97).
- These items can also be ordered in a varnished version. For more information, see pg. 271.

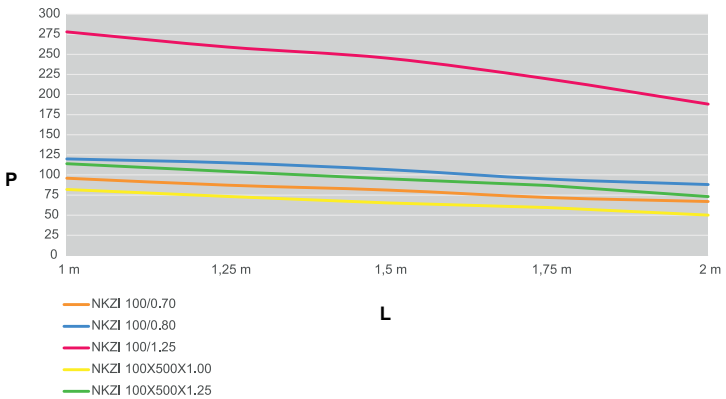
	item	A	H	↕	⇊	↨		EAN
	NKZI 50X62X0.70_S	62	50	0,7	2	0,89		8595057691902
	NKZI 50X62X1.25_S	62	50	1,25	2	1,66		8595057697447
	NKZI 50X125X0.70_S	125	50	0,7	2	1,30		8595057691919
	NKZI 50X125X1.25_S	125	50	1,25	2	2,31		8595057697454
	NKZI 50X250X0.70_S	250	50	0,7	3	1,86		8595568903396
	NKZI 50X250X1.00_S	250	50	1,00	3	2,75		8595057692008
	NKZI 50X250X1.25_S	250	50	1,25	3	3,31		8595057694538
	NKZI 100X125X0.70_S	125	100	0,7	4	1,80		8595568924414
	NKZI 100X125X1.25_S	125	100	1,25	4	3,25		8595057697515
	NKZI 100X250X0.70_S	250	100	0,7	5	2,49		8595568924476
	NKZI 100X250X1.25_S	250	100	1,25	5	4,62		8595057694552
	NKZI 100X500X1.00_S	500	100	1,0	6	5,43		8595568924537
	NKZI 100X500X1.25_S	500	100	1,25	6	6,34		8595057691940
	NKZI 50X62X0.70_F	62	50	0.8	2	1,25		8595057695764
	NKZI 50X62X1.25_F	62	50	1,25	2	1,88		8595568903273
	NKZI 50X125X0.70_F	125	50	0,8	2	1,60		8595057695740
	NKZI 50X125X1.25_F	125	50	1,25	2	2,49		8595568903280
	NKZI 50X250X1.00_F	250	50	1,00	3	2,92		8595057695757
	NKZI 50X250X1.25_F	250	50	1,25	3	3,75		8595057695856
	NKZI 100X125X0.80_F	125	100	0,8	4	2,30		8595057695719
	NKZI 100X125X1.25_F	125	100	1,25	4	3,60		8595568918741
	NKZI 100X250X0.80_F	250	100	0,8	5	3,14		8595057695726
	NKZI 100X250X1.25_F	250	100	1,25	5	4,80		8595057695849
	NKZI 100X500X1.25_F	500	100	1,25	6	7,18		8595057695733



The graph shows the maximum allowed even loading of the tray in relation to the distances of the supports.

L = distance of supports (m)
P = allowed even loading (weight kg/m)

External influences are not taken into account in the permissible load and cannot be burdened by person.



↕ thickness of metal sheet (mm) ↨ weight kg/m

⇊ amount of bolts for connection

fire resistance E30-E90, P15-R - P90-R, PS15-PS90

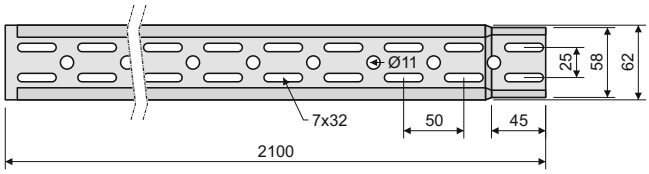
F Hot Dip Galvanized

S Pre-Galvanized

design bottom punching of MARS tray

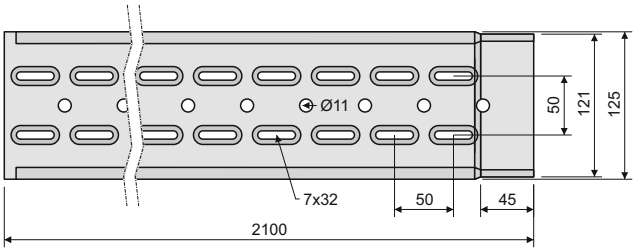
bottom width **62** mm

NKZI 50X62X...



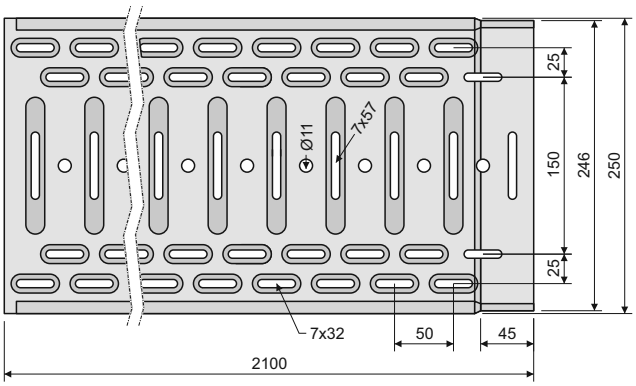
bottom width**125** mm

NKZI 50X125X...
NKZI 100X125X...



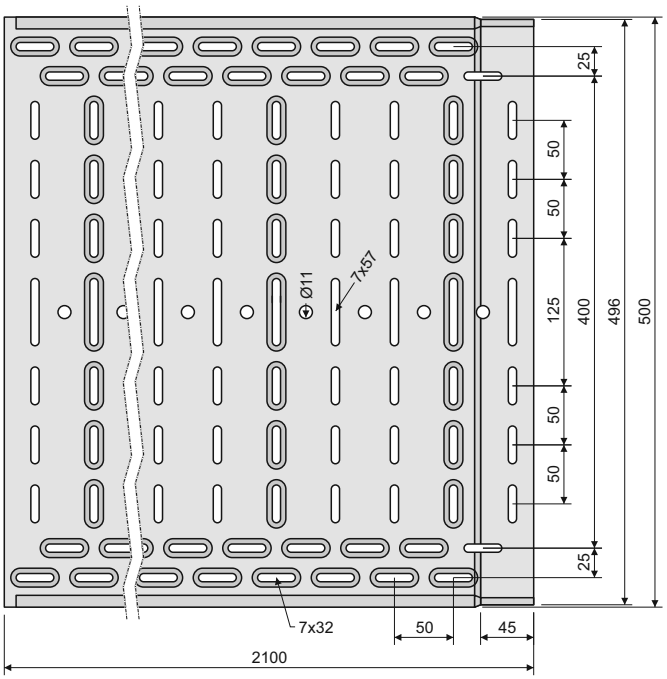
bottom width **250** mm

NKZI 50X250X...
NKZI 100X250X...



bottom width **500** mm

NKZI 100X500X...

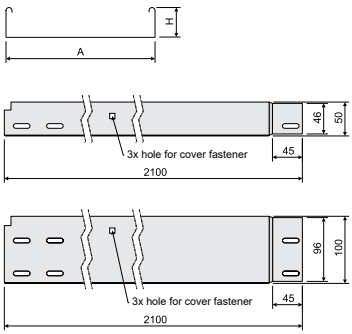


cable tray with integrated coupling - non-perforated

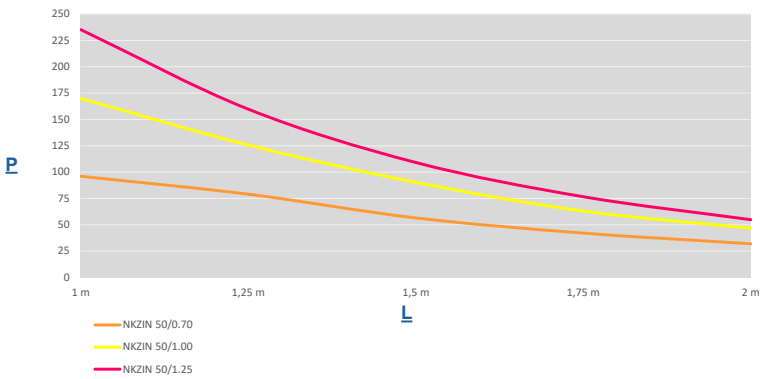




- The standard length of the cable tray is 2,1 m.
- For securing the connection of the trays with the integrated coupling there are used the clamps made from spring steel KSV (pg. 97) or NSM 6X10 bolts (pg. 97).
- These items can also be ordered in a varnished version. For more information, see pg. 271.



	item	A	H	↕	⇊	‡		EAN
	NKZIN 50X62X0.70_S	62	50	0,7	2	0,98		8595057691957
	NKZIN 50X62X1.25_S	62	50	1,25	2	1,82		8595057698789
	NKZIN 50X125X0.70_S	125	50	0,7	2	1,48		8595057691964
	NKZIN 50X125X1.25_S	125	50	1,25	2	2,45		8595057698796
	NKZIN 50X250X0.70_S	250	50	0,7	2	2,28		8595568903402
	NKZIN 50X250X1.00_S	250	50	1,0	3	3,00		8595057692015
	NKZIN 50X250X1.25_S	250	50	1,25	3	3,65		8595057694545
	NKZIN 100X125X0.70_S	125	100	0,7	4	1,98		8595568924445
	NKZIN 100X125X1.25_S	125	100	1,25	4	3,46		8595057698802
	NKZIN 100X250X0.70_S	250	100	0,7	5	2,50		8595568924506
	NKZIN 100X250X1.25_S	250	100	1,25	5	4,24		8595057694569
	NKZIN 100X500X1.00_S	500	100	1,0	6	5,89		8595568924568
	NKZIN 50X62X0.70_F	62	50	0,8	2	1,36		8595057695825
	NKZIN 50X62X1.25_F	62	50	1,25	2	2,06		8595568914156
	NKZIN 50X125X0.70_F	125	50	0,8	2	1,84		8595057693685
	NKZIN 50X250X1.00_F	250	50	1,0	3	3,50		8595057695801
	NKZIN 100X125X0.80_F	125	100	0,8	4	2,49		8595057695771
	NKZIN 100X250X0.80_F	250	100	0,8	5	3,44		8595057693678
	NKZIN 100X250X1.25_F	250	100	1,25	5	5,23		8595057695788
	NKZIN 100X500X1.25_F	500	100	1,25	6	8,04		8595057695795

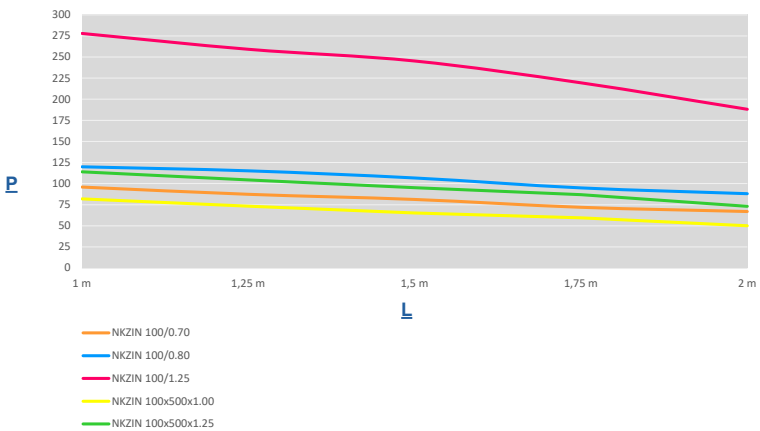


The graph shows the maximum allowed even loading of the tray in relation to the distances of the supports.

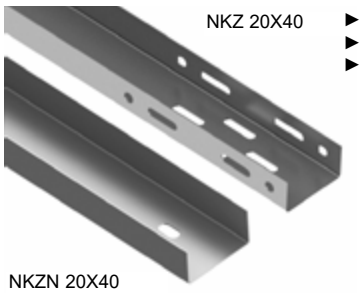
L = distance of supports (m)

P = allowed even loading (weight kg/m)

External influences are not taken into account in the permissible load P and cannot be burdened by person



cable tray perforated / cable tray non-perforated

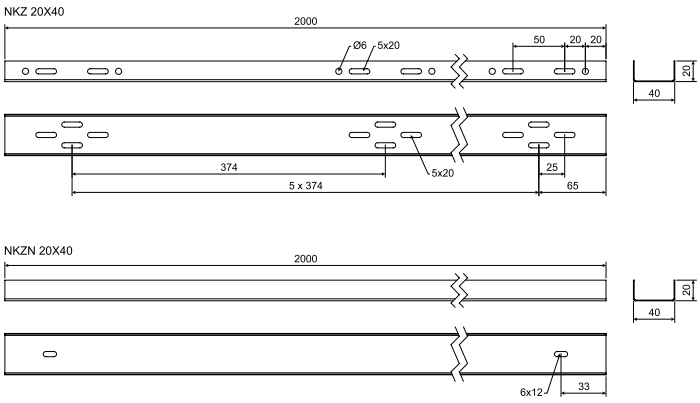


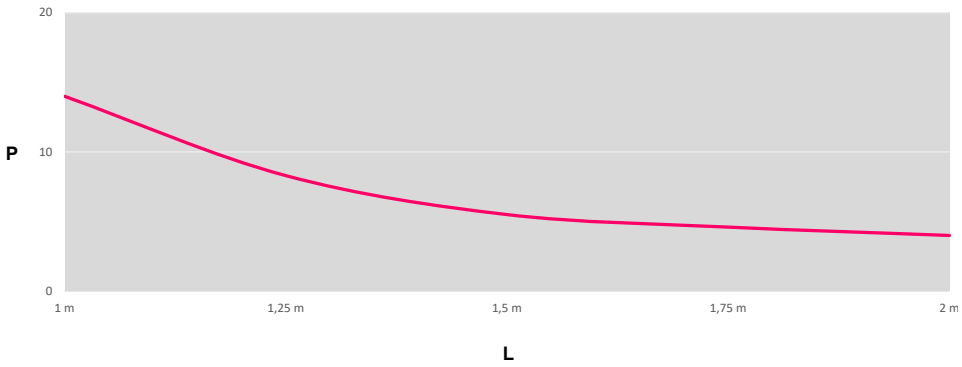
NKZ 20X40

NKZN 20X40

- The standard length of the cable tray is 2 m.
- The joining of the trays is performed using the coupling NS 40 (pg. 51) and two NSMP 5X10 (pg. 97).
- These items can also be ordered in a varnished version. For more information, see pg. 271.

	item	A	H	↕	ǂ	⊻	EAN
	NKZ 20X40_S	40	20	0,7	0,43	2	8595057677517
	NKZN 20X40_S	40	20	0,7	0,43	2	8595057687196
	NKZ 20X40_ZM	40	20	0,75	0,43	2	8595568942654
	NKZN 20X40_ZM	40	20	0,75	0,43	2	8595568942661





The graph shows the maximum allowed even loading of the tray in relation to the distances of the supports.

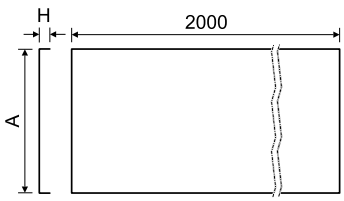
L = distance of supports (m)
P = allowed even loading (weight kg/m)

External influences are not taken into account in the permissible load and cannot be burdened by person.

cable tray cover



- Stated sheet metal thickness is delivered as standard. Cover with thicker sheet metal can be delivered without prior notice.
- Attachment of the cover to the cable tray is done by using the VU cover fixture or NUV or STP 2.9X9.5 TX bolt - pg.105 (2 pcs per meter).
- The V 40 cover may be alternatively fixed using a clamping belt.
- These items can also be ordered in a varnished version. For more information, see pg. 271.

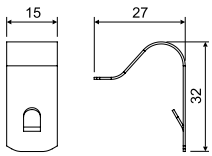


	item	A	H	↕	‡		EAN
	V 40_S	40	10	0,55	0,26	-	8595057681002
	V 62_S	62	11	0,55	0,36	🔥	8595057654778
	V 125_S	125	11	0,55	0,64	🔥	8595057654730
	V 250_S	250	11	0,55	1,20	🔥	8595057636569
	V 500_S	500	14	1,00	4,22	🔥	8595057633162
	V 40_ZM	40	10	0,75	0,35	-	8595568942678
	V 62_F	62	11	0,8	0,62	🔥	8595057669741
	V 125_F	125	11	0,8	1,10	🔥	8595057669727
	V 250_F	250	11	0,8	2,05	🔥	8595057659261
	V 500_F	500	14	1,00	4,80	🔥	8595057657977

cover fixture



- Is used for a bolt free attachment of the cover to the tray and to the accessories.
- The cover fixture is placed to the cover and the sidewall in the place of the opening and it is slightly pressed so that the fixture lock slides into the opening.
- Used for perforated and non-perforated trays; non-perforated trays have holes specially designed for these anchors.



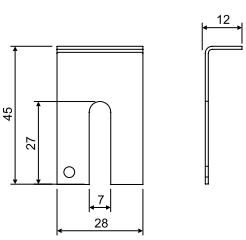


	item	‡		EAN
	VU_GMT	0,01	🔥	8595057629448

cover fixture



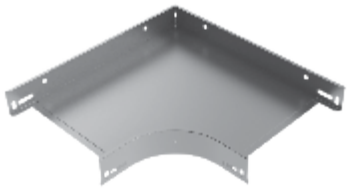
- Serves for the attaching of the cover to the tray using a bolt NSM 6X10.
- The bolt is placed in the top row of perforations on perforated trays, or in the square holes on non-perforated trays.
- For fastening, a bolted connection can be used either between the trays or between a tray and a fitting.
- For this type of installation, the NSM 6X10 bolts (pg. 97) must be ordered separately.
- These items can also be ordered in a varnished version. For more information, see pg. 271.



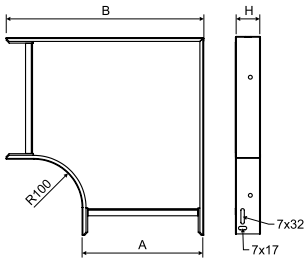


	item	‡		EAN
	NUV_S	0,01	🔥	8595057654464
	NUV_ZM	0,01	🔥	8595568939234

elbow 90°

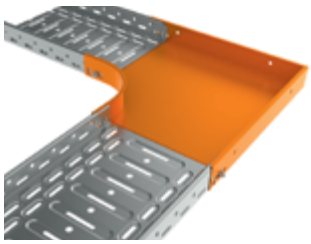


- The connection is performed by direct sliding of the cable tray into the shaped piece and subsequent securing with bolts NSM 6X10 (pg. 97).
- For the elbows NO 90X100X500 the outer right angle of the side walls is replaced by skewed cut.
- These items can also be ordered in a varnished version. For more information, see pg. 271.



	item	A	H	B	↕	⇞	⇊		EAN
	NO 90X50X62_S	62	50	222	0,7	4	0,38		8595057653900
	NO 90X50X125_S	125	50	285	0,7	4	0,57		8595057653870
	NO 90X50X250_S	250	50	410	0,7	4	1,08		8595057653894
	NO 90X100X125_S	125	100	285	0,7	8	0,80		8595057619012
	NO 90X100X250_S	250	100	410	0,7	8	1,38		8595057653887
	NO 90X100X500_S	500	100	660	0,7	8	2,59		8595057678057

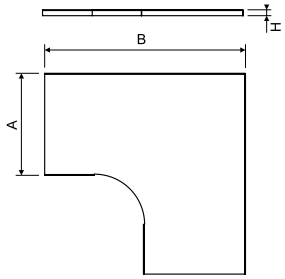
	NO 90X50X62_F	62	50	222	0,7	4	0,45		8595057669550
	NO 90X50X125_F	125	50	285	0,7	4	0,67		8595057669536
	NO 90X50X250_F	250	50	410	0,7	4	1,44		8595057669543
	NO 90X100X125_F	125	100	285	0,7	8	0,94		8595057669512
	NO 90X100X250_F	250	100	410	0,7	8	1,84		8595057669529
	NO 90X100X500_F	500	100	660	0,7	8	3,47		8595057678064



elbow cover 90°



- The cover of the NVO 90X62 and NVO 90X125 is attached using the 3 VU cover fixtures (pg. 41), the covers of the NVO 90X250 and NVO 90X500 are attached using 5 VU cover fixtures (pg. 41).
- For the elbow cover NVO 90X500 the outer right angle is replaced by skewed cut.
- These items can also be ordered in a varnished version. For more information, see pg. 271.

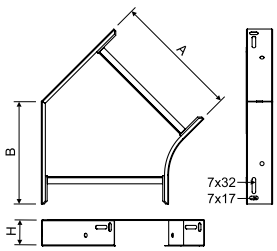


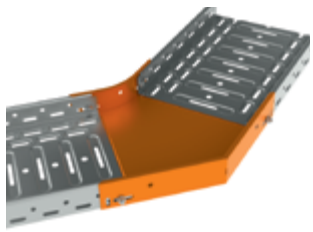
	item	A	H	B	↕	⇞		EAN
	NVO 90X62_S	62	12	222	0,55	0,14		8595057654556
	NVO 90X125_S	125	12	285	0,55	0,29		8595057654570
	NVO 90X250_S	250	12	410	0,55	0,67		8595057654594
	NVO 90X500_S	500	15	660	0,7	1,62		8595057682504

	NVO 90X62_F	62	12	222	0,6	0,18		8595057669864
	NVO 90X125_F	125	12	285	0,8	0,49		8595057669840
	NVO 90X250_F	250	12	410	0,8	1,15		8595057669857
	NVO 90X500_F	500	15	660	0,8	2,18		8595057682511

elbow 45°





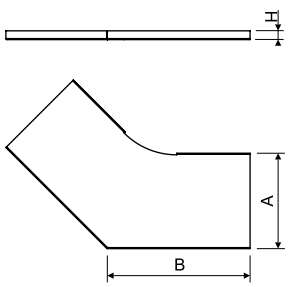


- The connection is performed by direct sliding of the cable tray into the shaped piece and subsequent securing with bolts NSM 6X10 (pg. 97).
- These items can also be ordered in a varnished version. For more information, see pg. 271.

	item	A	H	B	↕	ǂ	⇊		EAN
	NO 45X50X62_S	62	50	125	0,7	4	0,21		8595057678019
	NO 45X50X125_S	125	50	151	0,7	4	0,29		8595057677951
	NO 45X50X250_S	250	50	203	0,7	4	0,53		8595057677975
	NO 45X100X125_S	125	100	151	0,7	8	0,45		8595057677890
	NO 45X100X250_S	250	100	203	0,7	8	0,69		8595057653818
	NO 45X100X500_S	500	100	307	0,7	8	1,43		8595057677913
	NO 45X50X62_F	62	50	125	0,7	4	0,23		8595057678026
	NO 45X50X125_F	125	50	151	0,7	4	0,33		8595057677968
	NO 45X50X250_F	250	50	203	0,7	4	0,69		8595057677982
	NO 45X100X125_F	125	100	151	0,7	8	0,48		8595057677906
	NO 45X100X250_F	250	100	203	0,7	8	0,89		8595057669499
	NO 45X100X500_F	500	100	307	0,7	8	1,88		8595057677920

elbow cover 45°

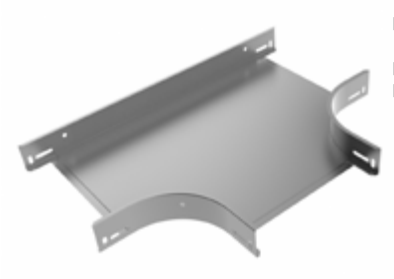




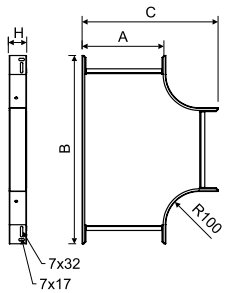
- To fix the cover use 3 pcs of cover fixutres VU (pg. 41)
- These items can also be ordered in a varnished version. For more information, see pg. 271.

	item	A	H	B	↕	ǂ		EAN
	NVO 45X62_S	62	12	125	0,55	0,08		8595057682429
	NVO 45X125_S	125	12	151	0,55	0,16		8595057654501
	NVO 45X250_S	250	12	203	0,55	0,36		8595057654518
	NVO 45X500_S	500	15	307	0,7	1,20		8595057682405
	NVO 45X62_F	62	12	125	0,6	0,11		8595057682436
	NVO 45X125_F	125	12	151	0,8	0,27		8595057669819
	NVO 45X250_F	250	12	203	0,8	0,62		8595057669826
	NVO 45X500_F	500	15	307	0,8	1,62		8595057682412

T-piece

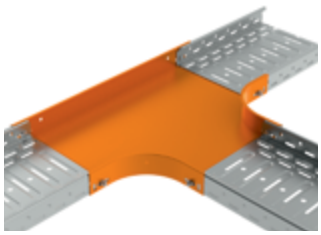


- The connection is performed by direct sliding of the cable tray into the shaped piece and subsequent securing with bolts NSM 6X10 (pg. 97).
- To create diversion of different width is possible to use reduction piece NRD (pg. 48).
- These items can also be ordered in a varnished version. For more information, see pg. 271.



	item	A	H	B	C	↕	⇟	⇊		EAN
	NT 50X62_S	62	50	379	222	0,7	0,50	6		8595057654457
	NT 50X125_S	125	50	442	285	0,7	0,71	6		8595057654396
	NT 50X250_S	250	50	567	410	0,7	1,28	6		8595057654419
	NT 100X125_S	125	100	442	285	0,7	1,00	12		8595057654389
	NT 100X250_S	250	100	567	410	0,7	1,58	12		8595057654402
	NT 100X500_S	500	100	817	660	0,7	3,25	12		8595057680128

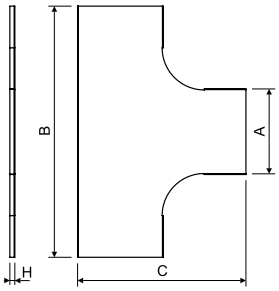
	NT 50X62_F	62	50	379	222	0,7	0,59	6		8595057669710
	NT 50X125_F	125	50	442	285	0,7	0,84	6		8595057669673
	NT 50X250_F	250	50	567	410	0,7	1,69	6		8595057669697
	NT 100X125_F	125	100	442	285	0,7	1,10	12		8595057669642
	NT 100X250_F	250	100	567	410	0,7	2,01	12		8595057669659
	NT 100X500_F	500	100	817	660	0,7	4,26	12		8595057680135



T-piece cover



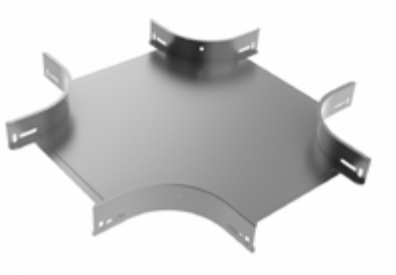
- To fix the cover use 4 pcs of cover fixutres VU (pg. 41).
- These items can also be ordered in a varnished version. For more information, see pg. 271.



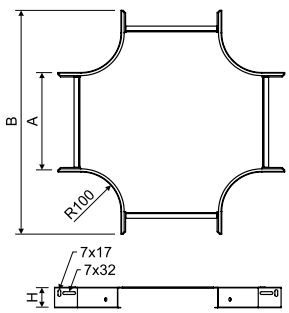
	item	A	H	B	C	↕	⇟		EAN
	NVT 62_S	62	12	379	222	0,55	0,20		8595057654846
	NVT 125_S	125	12	442	285	0,55	0,38		8595057654808
	NVT 250_S	250	12	567	410	0,55	0,85		8595057654822
	NVT 500_S	500	15	817	660	0,7	2,85		8595057683181

	NVT 62_F	62	12	379	222	0,6	0,26		8595057669925
	NVT 125_F	125	12	442	285	0,8	0,65		8595057669895
	NVT 250_F	250	12	567	410	0,8	1,45		8595057669918
	NVT 500_F	500	15	817	660	0,8	3,84		8595057683198

cross

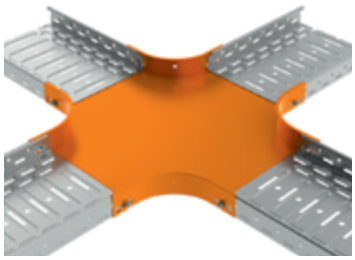


- The connection is performed by direct sliding of the cable tray into the shaped piece and subsequent securing with bolts NSM 6X10 (pg. 97).
- To create diversion of different width is possible to use reduction piece NRD (pg. 48).
- These items can also be ordered in a varnished version. For more information, see pg. 271.



	item	A	H	B	↕	⇕	⇊		EAN
	NKR 50X62_S	62	50	379	0,7	0,62	8		8595057676411
	NKR 50X125_S	125	50	442	0,7	0,85	8		8595057676312
	NKR 50X250_S	250	50	567	0,7	1,43	8		8595057676350
	NKR 100X125_S	125	100	442	0,7	1,15	16		8595057676213
	NKR 100X250_S	250	100	567	0,7	1,73	16		8595057653849
	NKR 100X500_S	500	100	817	0,7	3,41	16		8595057676251

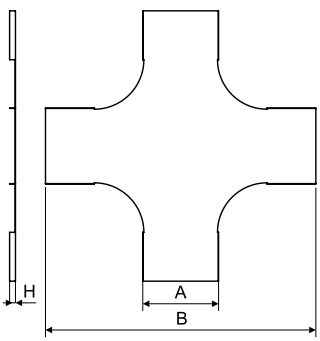
	NKR 50X62_F	62	50	379	0,7	0,73	8		8595057676428
	NKR 50X125_F	125	50	442	0,7	1,00	8		8595057676329
	NKR 50X250_F	250	50	567	0,7	1,86	8		8595057676367
	NKR 100X125_F	125	100	442	0,7	1,35	16		8595057676220
	NKR 100X250_F	250	100	567	0,7	2,21	16		8595057669437
	NKR 100X500_F	500	100	817	0,7	4,48	16		8595057676268



cross-over cover



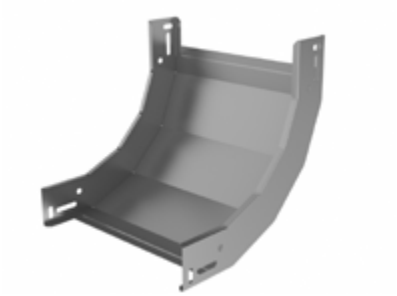
- To fix the cover use 4 pcs of cover fixutres VU (pg. 41)
- These items can also be ordered in a varnished version. For more information, see pg. 271.

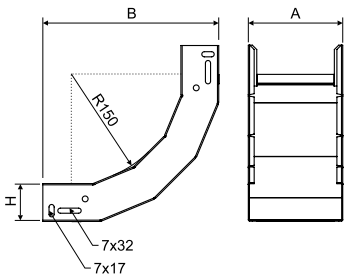


	item	A	H	B	↕	⇕		EAN
	NVKR 62_S	62	12	379	0,55	0,25		8595057681606
	NVKR 125_S	125	12	442	0,55	0,47		8595057655652
	NVKR 250_S	250	12	567	0,55	1,02		8595057681507
	NVKR 500_S	500	15	817	0,7	3,26		8595057681569

	NVKR 62_F	62	12	379	0,6	0,33		8595057681613
	NVKR 125_F	125	12	442	0,8	0,61		8595057669802
	NVKR 250_F	250	12	567	0,8	1,75		8595057681514
	NVKR 500_F	500	15	817	0,8	4,40		8595057681576

rising elbow 90°





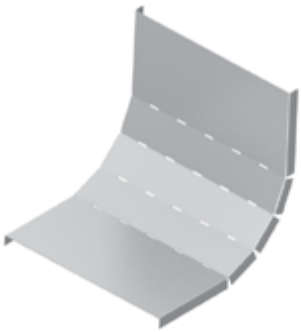


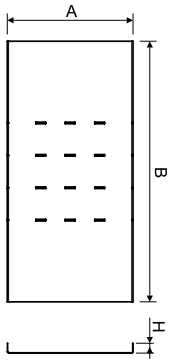
- The connection is performed by direct sliding of the cable tray into the shaped piece and subsequent securing with bolts NSM 6X10 (pg. 97).
- These items can also be ordered in a varnished version. For more information, see pg. 271.

item	A	H	B	↕	↨	⊥T		EAN
NSO 90X50X62_S	62	50	241	0,7	0,37	4		8595057679160
NSO 90X50X125_S	125	50	241	0,7	0,48	4		8595057654037
NSO 90X50X250_S	250	50	241	0,7	0,71	4		8595057654013
NSO 90X100X125_S	125	100	291	0,7	0,79	8		8595057653993
NSO 90X100X250_S	250	100	291	0,7	1,06	8		8595057654006
NSO 90X100X500_S	500	100	291	0,7	1,62	8		8595057679108

NSO 90X50X62_F	62	50	241	0,7	0,44	4		8595057679177
NSO 90X50X125_F	125	50	241	0,7	0,57	4		8595057669628
NSO 90X50X250_F	250	50	241	0,7	0,91	4		8595057669635
NSO 90X100X125_F	225	100	291	0,7	0,93	8		8595057669604
NSO 90X100X250_F	250	100	291	0,7	1,35	8		8595057669611
NSO 90X100X500_F	500	100	291	0,7	2,10	8		8595057679115

rising elbow 90° cover



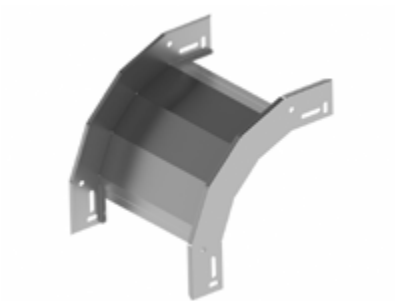


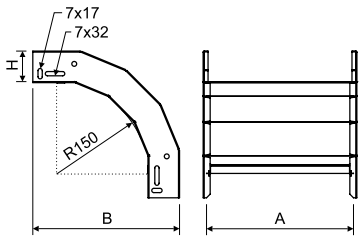
- To fix the cover use 4 pcs of cover fixutres VU (pg. 41)
- The covers are delivered straight. They are made from one piece of sheet metal with pre-cut side walls for later bending during assembly.
- These items can also be ordered in a varnished version. For more information, see pg. 271.

item	A	H	B	↕	↨		EAN
NVSO 90X62_S	62	12	316	0,55	0,12		8595057692602
NVSO 90X125_S	125	12	316	0,55	0,20		8595057692619
NVSO 90X250_S	250	12	316	0,55	0,30		8595057692626
NVSO 90X500_S	500	15	316	0,7	0,93		8595057692633

NVSO 90X62_F	62	12	316	0,6	0,15		8595057695962
NVSO 90X125_F	125	12	316	0,8	0,35		8595057695979
NVSO 90X250_F	250	12	316	0,8	0,51		8595057695986
NVSO 90X500_F	500	15	316	0,8	1,26		8595057695993

low elbow 90°







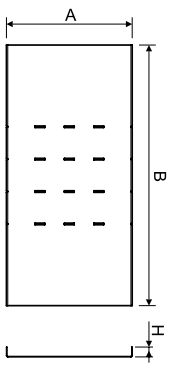
- The connection is performed by direct sliding of the cable tray into the shaped piece and subsequent securing with bolts NSM 6X10 (pg. 97).
- These items can also be ordered in a varnished version. For more information, see pg. 271.

	item	A	H	B	↕	↨	⫡		EAN
	NKO 90X50X62_S	62	50	241	0,7	0,34	4		8595057653986
	NKO 90X50X125_S	125	50	241	0,7	0,42	4		8595057653948
	NKO 90X50X250_S	250	50	241	0,7	0,59	4		8595057653962
	NKO 90X100X125_S	125	100	291	0,7	0,66	8		8595057653931
	NKO 90X100X250_S	250	100	291	0,7	0,83	8		8595057653955
	NKO 90X100X500_S	500	100	291	0,7	1,17	8		8595057675858

	NKO 90X50X62_F	62	50	241	0,7	0,40	4		8595057669420
	NKO 90X50X125_F	125	50	241	0,7	0,50	4		8595057669406
	NKO 90X50X250_F	250	50	241	0,7	0,75	4		8595057669413
	NKO 90X100X125_F	125	100	291	0,7	0,78	8		8595057669383
	NKO 90X100X250_F	250	100	291	0,7	1,03	8		8595057669390
	NKO 90X100X500_F	500	100	291	0,7	1,49	8		8595057675865

low elbow 90° cover





- To fix the cover use 4 pcs of cover fixutres VU (pg. 41)
- The covers are delivered straight. They are made from one piece of sheet metal with pre-cut side walls for later bending during assembly.
- These items can also be ordered in a varnished version. For more information, see pg. 271.

	item	A	H	B	↕	↨	⫡		EAN
	NVKO 90X50X62_S	62	12	400	0,55	0,15			8595057654662
	NVKO 90X50X125_S	125	12	400	0,55	0,26			8595057654624
	NVKO 90X50X250_S	250	12	400	0,55	0,47			8595057654648
	NVKO 90X100X125_S	125	12	479	0,55	0,31			8595057654617
	NVKO 90X100X250_S	250	12	479	0,55	0,57			8595057654631
	NVKO 90X100X500_S	500	15	479	0,7	1,42			8595057681101

	NVKO 90X50X62_F	62	12	400	0,6	0,20			8595057669796
	NVKO 90X50X125_F	125	12	400	0,8	0,45			8595057669772
	NVKO 90X50X250_F	250	12	400	0,8	0,81			8595057669789
	NVKO 90X100X125_F	125	12	479	0,8	0,53			8595057669758
	NVKO 90X100X250_F	250	12	479	0,8	0,97			8595057669765
	NVKO 90X100X500_F	500	15	479	0,8	1,91			8595057681118

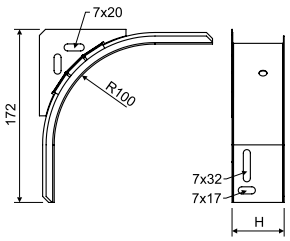
reduction piece



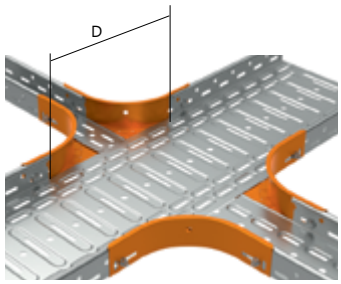
- The joining is performed using the bolts NSM 6X10 (pg. 97).
- It serves for creating of additional deviation or unequal T-piece or cross.
- Always to be used in a pair.
- These items can also be ordered in a varnished version. For more information, see pg. 271.

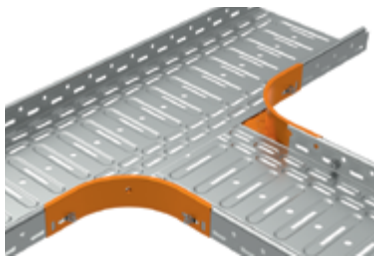
	item	H	↕	‡	⊥		EAN
	NRD 50_S	50	0,7	0,12	2		8595057667037
	NRD 100_S	100	0,7	0,47	4		8595057667044

	NRD 50_F	50	0,7	0,16	2		8595057678897
	NRD 100_F	100	0,7	0,55	4		8595057678873



length of cut out side wall of the tray	
branch to channel	**D**
NKZI 50X62	262
NKZI 50X125	325
NKZI 100X125	325
NKZI 50X250	450
NKZI 100X250	450
NKZI 100X500	700





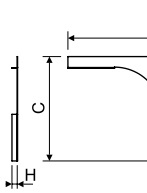
branch cover



- To fix the cover use 2 pcs of cover fixutres VU (pg. 41)
- The lid serves to cover the trase to be created by help of reducing parts.
- These items can also be ordered in a varnished version. For more information, see pg. 271.

	item	A	H	B	C	↕	‡		EAN
	VOH 62_S	62	12	182	379	0,55	0,11		8595568905253
	VOH 125_S	125	12	182	442	0,55	0,17		8595568905277
	VOH 250_S	250	12	182	567	0,7	0,34		8595057630215
	VOH 500_S	500	15	224	903	1,0	1,05		8595057633308

	VOH 62_F	62	12	182	379	0,8	0,25		8595568905260
	VOH 125_F	125	12	182	442	0,8	0,35		8595568905284
	VOH 250_F	250	12	182	567	0,8	0,56		8595057659339
	VOH 500_F	500	15	224	903	1,0	1,23		8595057659360





↕ thickness of metal sheet (mm) ‡ weight kg/pc

⊥ amount of bolts for connection

fire resistance E30-E90, P15-R - P90-R, PS15-PS90

F Hot Dip Galvanized

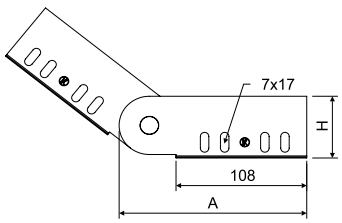
S Pre-Galvanized

hinged joint



- For the connection of the hinged joint to the tray there are used the bolts NSM 6X10 (pg. 97).
- The joint is delivered in 1 piece per packing, 2 pcs are needed to make a bend of the line.
- These items can also be ordered in a varnished version. For more information, see pg. 271.

	item	H	A	↕	↨	⊥̄		EAN
	SK 50_S	43	146	0,8	0,09	4	🔥	8595057698611
	SK 100_S	93	191	1,2	0,32	8	🔥	8595057698635
	SK 50_ZM	43	146	0,75	0,09	4	🔥	8595568939302
	SK 100_ZM	93	191	1,2	0,32	8	🔥	8595568939319



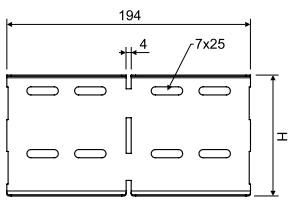


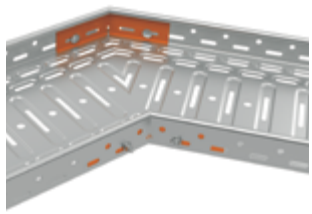
angle coupling



- The joining is performed using the bolts NSM 6X10 (pg. 97).
- Angle couplings are mostly used at places where the route is slightly bended, for large bending radiuses or for the circumvention of columns and pillars.
- These items can also be ordered in a varnished version. For more information, see pg. 271.

	item	H	↕	↨		EAN
	NSUK 50_S	47	1,0	0,07	🔥	8595057666948
	NSUK 100_S	97	1,0	0,14	🔥	8595057666962
	NSUK 50_ZM	47	1,0	0,07	🔥	8595568939289
	NSUK 100_ZM	97	1,0	0,14	🔥	8595568939296



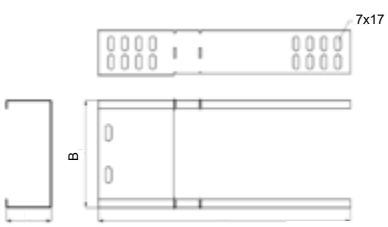


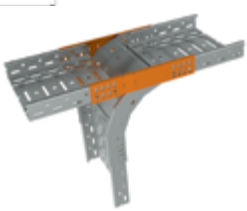
vertical branch - horizontal



- This part enables a vertical route to be switched to horizontal.
- Particularly suitable for the main cable route, e.g. to machines or other equipment.
- Used together with a downward arc.
- These items can also be ordered in a varnished version. For more information, see pg. 271.

	item	A	H	B	↕	↨	⊥̄	EAN
	OSHK 50X62_S	300	50	62	0,8	0,24	4	8595568917584
	OSHK 50X125_S	300	50	125	0,8	0,28	4	8595568917607
	OSHK 50X250_S	300	50	250	1,0	0,44	4	8595568917621
	OSHK 100X125_S	372	100	125	0,8	0,55	8	8595568917645
	OSHK 100X250_S	372	100	250	1,0	0,78	8	8595568917669
	OSHK 100X500_S	372	100	500	1,2	1,12	8	8595568917683
	OSHK 50X62_F	300	50	62	0,8	0,28	4	8595568917591
	OSHK 50X125_F	300	50	125	0,8	0,33	4	8595568917614
	OSHK 50X250_F	300	50	250	1,0	0,51	4	8595568917638
	OSHK 100X125_F	372	100	125	0,8	0,64	8	8595568917652
	OSHK 100X250_F	372	100	250	1,0	0,90	8	8595568917676
	OSHK 100X500_F	372	100	500	1,2	1,32	8	8595568917690





↕ thickness of metal sheet (mm) ↨ weight kg/pc
⊥̄ amount of bolts for connection

🔥 fire resistance E30-E90, P15-R - P90-R, PS15-PS90

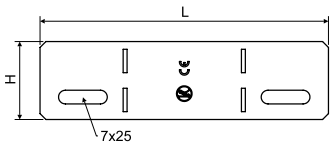
ZM Magnelis®

F Hot Dip Galvanized
S Pre-Galvanized

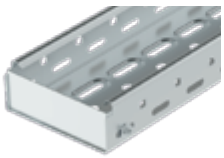
end / reduction piece



- The plate is designed to end or reduce the cable route.
- Depending on the application requirement, the plate is bent in the perforated areas into a U-shape as an end-piece or into a Z-shape as a reduction-piece.
- The end/reduction- piece is attached to the tray with NSM 6X10 bolts (pg. 97).



	item	H	L	↕	ǂ	⊥T		EAN
	K-R 50X62_ZM	40	144	1,0	0,04	2		8595568939203
	K-R 50X125_ZM	40	207	1,0	0,05	2		8595568939180
	K-R 50X250_ZM	40	335	1,0	0,75	2		8595568939197
	K-R 100X125_ZM	90	207	1,0	0,10	4		8595568939159
	K-R 100X250_ZM	90	332	1,0	0,17	4		8595568939166
	K-R 100X500_ZM	90	582	1,0	0,40	4		8595568939173



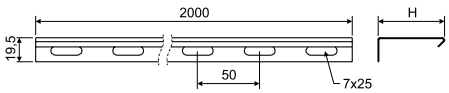


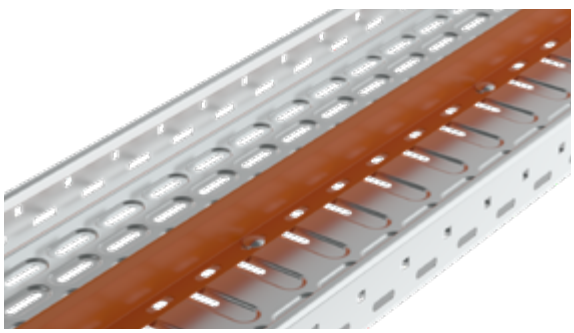
partition



- The fixing of the partition is carried out by bolts NSM 6X10 (pg. 97).
- The partition serves to spatial separation of cables and ducting of different networks and functions. As well as it serves to separation of particular kinds of ducting from the viewpoint of electric compatibility.
- These items can also be ordered in a varnished version. For more information, see pg. 271.

	item	H	↕	ǂ		EAN
	NPZ 50_S	42,5	0,8	0,45		8595057654198
	NPZ 100_S	92,5	0,8	0,75		8595057654181
	NPZ 50_ZM	42,5	0,75	0,40		8595568942401
	NPZ 100_ZM	92,5	0,75	0,69		8595568942418





↕ thickness of metal sheet (mm) ǂ weight kg/m; kg/pc ⊥T amount of bolts for connection

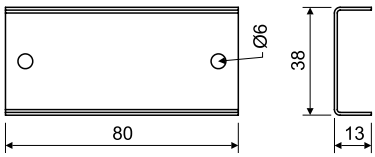
fire resistance E30-E90, P15-R - P90-R, PS15-PS90 ZM Magnelis® S Pre-Galvanized

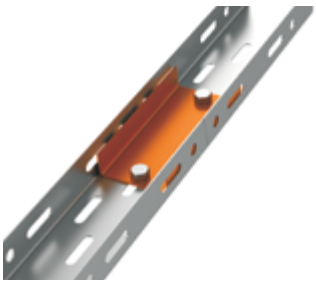
coupling



- The joining is performed using the bolts NSMP 5X10 (pg. 97).
- Lock washers shall always be used under the bolt head and under nut M5 to meet the requirement of conductive connecting according to ČSN 33 2000-4-41.
- These items can also be ordered in a varnished version. For more information, see pg. 271.

	item	↕	↨	⫫	EAN
	NS 40_S	0,8	0,04	2	8595057678941
	NS 40_ZM	0,75	0,04	2	8595568939272



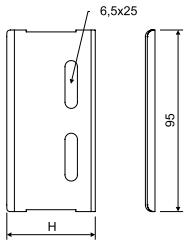


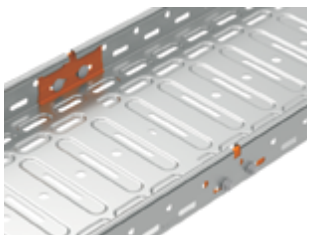
coupling



- The joining is performed using the bolts NSM 6X10 (pg. 97).
- These items can also be ordered in a varnished version. For more information, see pg. 271.

	item	H	↕	↨	⫫		EAN
	NS 50_S	47	1,0	0,04	2		8595057654365
	NS 100_S	97	1,0	0,07	4		8595057654303
	NS 50_ZM	47	1,0	0,04	2		8595568939258
	NS 100_ZM	97	1,0	0,07	4		8595568939265





↕ thickness of metal sheet (mm) ↨ weight kg/pc

⫫ amount of bolts for connection

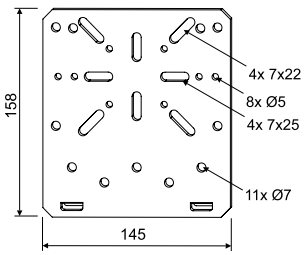
ZM Magnelis® S Pre-Galvanized

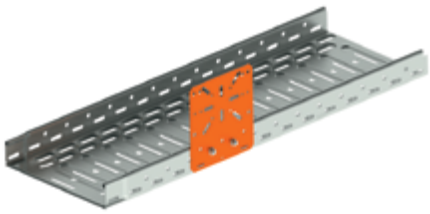
mounting plate



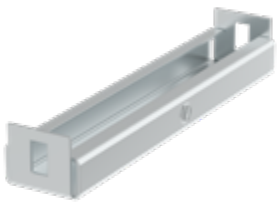
- For fastening junction boxes to the cable trays.
- It is pushed onto the side of cable trays and it is fixed by bolts NSM 6X10 (pg. 97).
- Recommended for boxes KSK 80, KSK 100, KSK 125, KSK 175; 8101; 8102; 8106; 8107; 8110; 8111; 8112; 8130; 8135; 003.CS.K; 005.CS.K; KPK 125 (see catalogue of Wiring materials).
- These items can also be ordered in a varnished version. For more information, see pg. 271.

	item	↕	ǂ		EAN
	MDS_S	1,0	0,17		8595057631762
	MDS_ZM	1,0	0,17		8595568939364

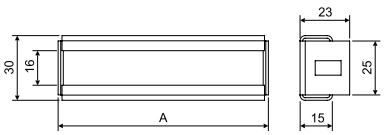




supporting profile for cable clamps



- The supporting profiles is designated for the cable trays. It is used for mounting cable clamps, thereby fixation cables inside the tray. It is particularly useful on vertical runs to relieve tension on the cables.
- It is installed on the bottom of the cable tray and it is fixed by using two bolts NSM 6X10 (pg. 97) to the tray sidewalls.
- When using a cover it is necessary to take into account the height of the clamps.

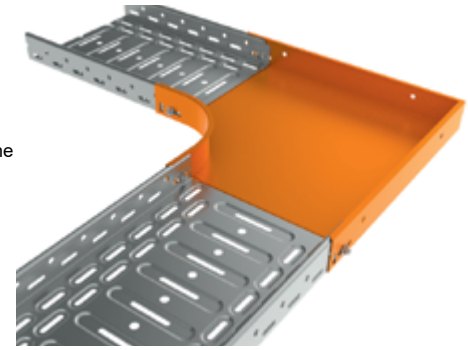


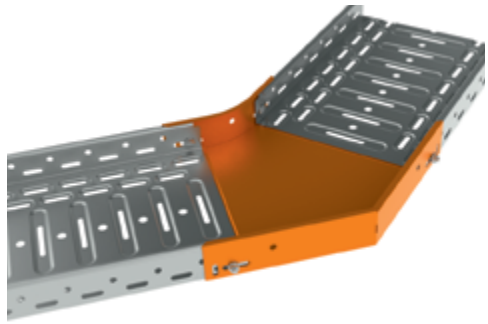
	item	A	ǂ	EAN
	NPKV 125_S	122,5	0,08	8595057690042
	NPKV 250_S	247,5	0,16	8595057690059
	NPKV 500_S	497,5	0,32	8595057690066
	NPKV 125_ZM	97,5	0,10	8595568944429
	NPKV 250_ZM	247,5	0,20	8595568944436
	NPKV 500_ZM	497,5	0,40	8595568944405
	NPKV 125_F	122,5	0,10	8595568915061
	NPKV 250_F	247,5	0,19	8595568915078
	NPKV 500_F	497,5	0,37	8595568905796

construction - flexion or evansion of the trace

For horizontal flexion we use the elbows O 90 (O 45), which ensure the horizontal flexion 90 (45).

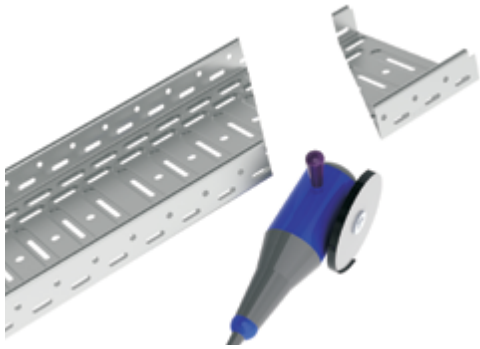
Such created flexion provides all advantages which offers the accessories to be offered to the system of cable trays. It mainly concerns of the rigidity of the connection, exactly defined angle or protection of installed cables by the skimming at the edge of the accessories.

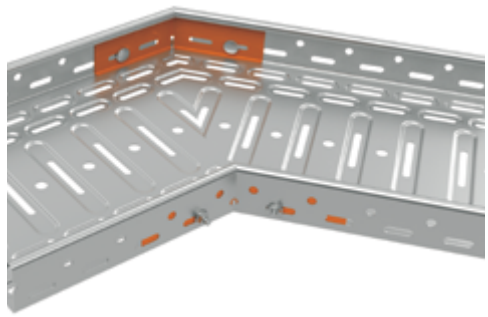




For creating of horizontal flexion of the trace there is possible to use NSUK connection.

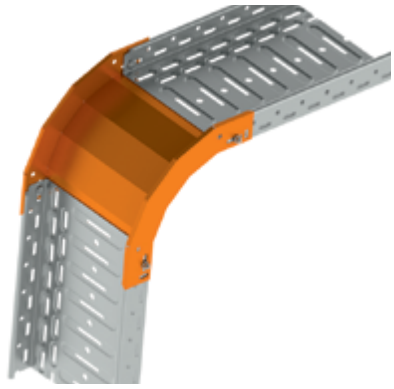
This connection enables to create the horizontal flexion of the trace according to customer requirements, by cutting the connecting conduits under the required angle. The connection is subsequently inflected and it is bolted to the trays by help of bolts.





For creating of vertical evasion of the trace there are intended the rising elbows and declining elbows. Those parts serve to the creating of the change of trace for 90° in vertical direction.

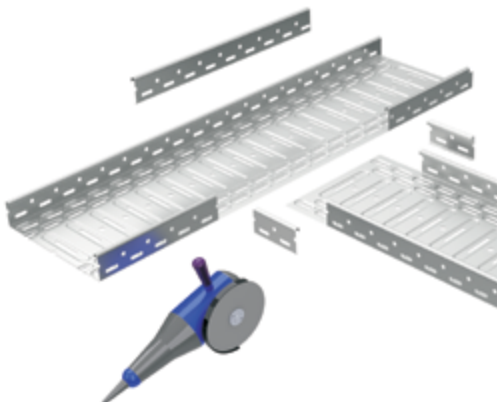


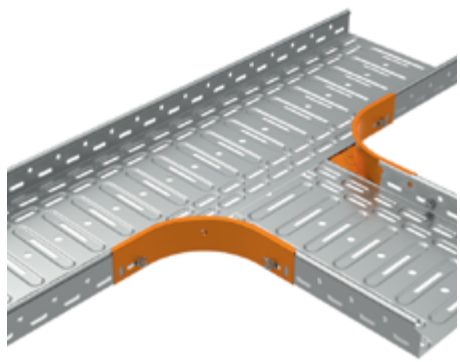


For creating of yesther angle at vertical direction serves the hinged connection. This connection enables to change the trace direction for the angle from 1° till 75°. Its use is useful for creating of smaller angles, whereas by the advantage of hinged connection there is the possibility of setting of random angle at given range.



By recommended option there is the adjustment of the trays to eliminate as much as possible the empty space at trays bottoms. It concerns especially for use of reducing part. This accessories enables to create the sufficient deviation from the trace, whereas there is possible the deviation to optional tray width.
By the first step there is the removing of the tray side from which we deviate.Further, by help of bolt, there are installed 2 pcs of reduction parts at the distance corresponding to the width of deviation tray. For the elimination of empty space at the bottom of the tray there is possible to cut the sides of the devious tray.

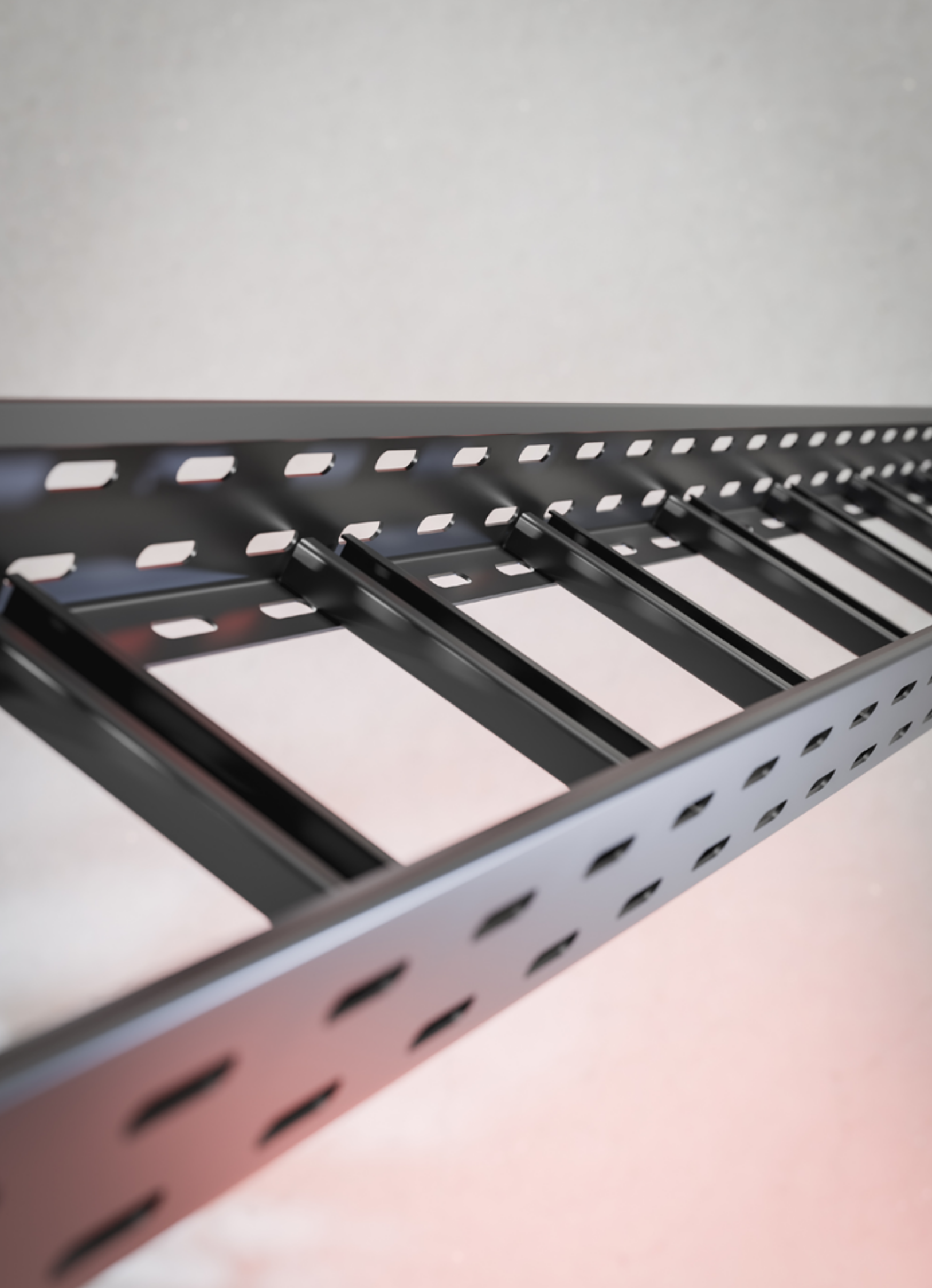




inner usable cross-section of cable trays

dimension of tray	cm2	utilization 60% (cross--section cm^2)	"CYKY 3X1,5"	CYKY 5X1,5	CYKY 3X2,5	CYKY 5x2,5	CYKY 3X4	CYKY 5X4	CYKY 5X6	CYKY 5X10	CYKY 5X16	CYKY 5X25	CYKY 4X35	CYKY 4X50	CYKY 3X70+50	CYKY 3X95+70	CYKY 3X120+95	CYKY 3X240+12
			Ø8,6	Ø10,1	Ø9,5	Ø11,2	Ø11,2	Ø13,8	Ø15,1	Ø18,0	Ø20,4	Ø26,1	Ø24,8	Ø31,3	Ø33,6	Ø39,3	Ø43,0	Ø56,4
NKZ 20X40	8	4,8	8	5	6	4	4	3	2	1	1	0	0	0	0	0	0	0
NKZI 50X62	31	18,6	32	23	26	18	18	12	10	7	5	3	3	2	2	1	1	0
NKZI 50X125	62,5	37,5	64	46	52	38	38	25	20	14	11	7	7	4	4	3	2	1
NKZI 100X125	125	75,0	129	93	105	76	76	50	41	29	22	14	15	9	8	6	5	3
NKZI 50X250	125	75,0	129	93	105	76	76	50	41	29	22	14	15	9	8	6	5	3
NKZI 100X250	250	150,0	258	187	211	152	152	100	83	58	45	28	31	19	16	12	10	6
NKZI 100X500	500	300,0	516	374	423	304	304	200	167	117	91	56	62	39	33	24	20	12

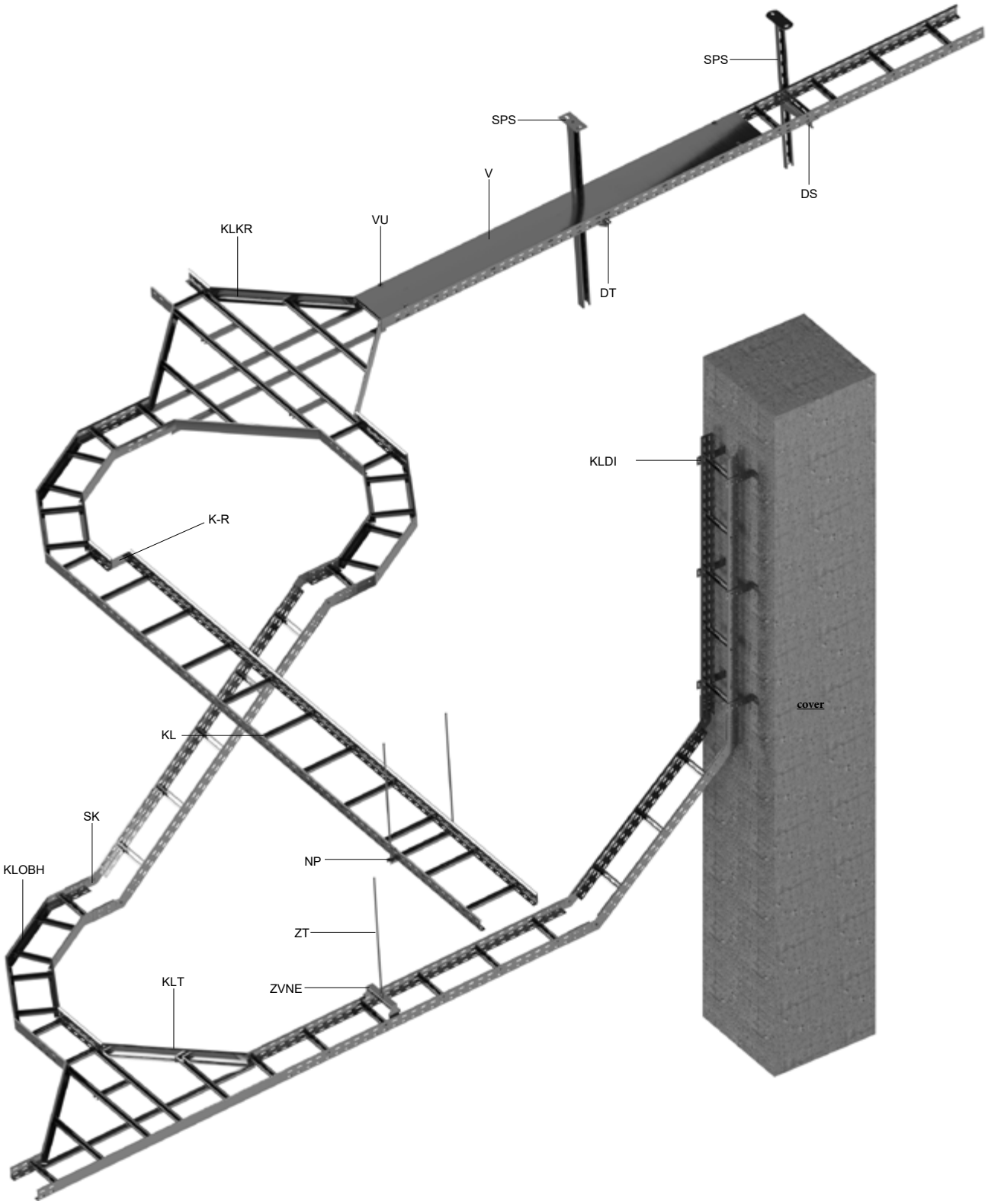
The values state the number of cables with the tray at 60% full. Orientation cable diameters result from CYKY.
The values are to be gained by mathematical calculation. At limiting values (small tray x big cable, or conversely) there is necessary to consider the combination of tray type and cables diameter and to choose them with view to their technical conditions / parameters.



3 CABLE LADDERS



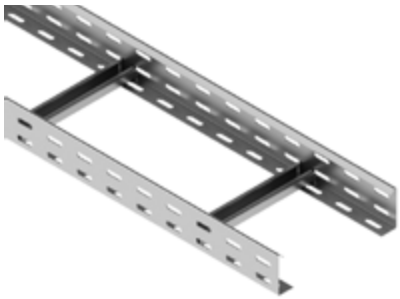
OVERVIEW OF SYSTEM ELEMENTS



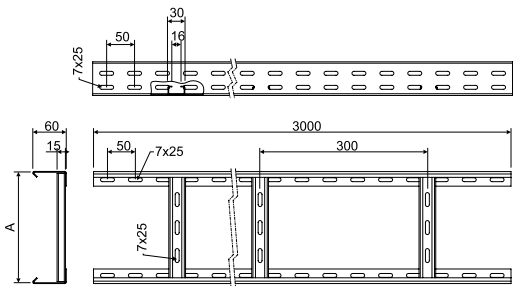
item	description	page
DS	bracket - medium	74
DT	bracket - heavy	75
KL	cable ladder	59 - 62
KLDI	distance bracket	78
KLKR	cross	66
KLOBH	horizontal bend	64
KLT	T-piece	65
NP	load bearing profile	87

item	description	page
SK	hinged joint	68
SPS	ceiling profile - medium	79
K-R	end / reduction piece	68
V	cover	63
VU	cover fixture	63
ZT	threaded rod	98
ZVNE	outer hanger	83

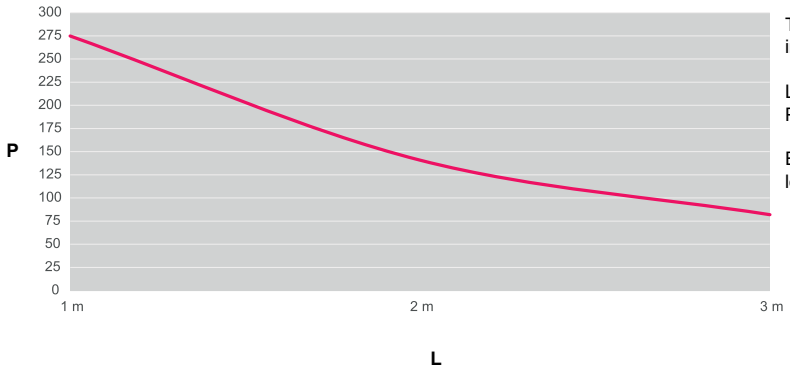
60 – Cable ladder – rung spacing 300 mm



- The standard length of the cable ladder is 3 m.
- The joining of the ladders is performed by using the couplings S 60X200 (pg. 69) and min. 4 pcs of bolts NSM 6X10 (pg. 97).
- The side walls are L-profiles with return flange. The perforated C-profile rungs are placed in the side walls by extrusion with a spacing of 300 mm, with open side of the profile facing up.
- It is possible to create on order the ladders with rung spacing of 150 and 450 mm.
- For spatial separation of cables, it is possible to use partition NPZ 50 (pg. 50). The partition is fixed every 60 cm with an NSM 6X20 bolt (pg. 97)



	item	A	↕	ǂ		EAN
	KL 60X150_S	150	1,5 / 1,2	2,23		8595057691681
	KL 60X200_S	200	1,5 / 1,2	2,37		8595057635487
	KL 60X300_S	300	1,5 / 1,2	2,60		8595057634947
	KL 60X400_S	400	1,5 / 1,2	2,80		8595057635494
	KL 60X500_S	500	1,5 / 1,2	3,10		8595057644359
	KL 60X600_S	600	1,5 / 1,2	3,24		8595057644366
	KL 60X200_ZM	200	1,5 / 1,2	2,37		8595568937940
	KL 60X300_ZM	300	1,5 / 1,2	2,60		8595568937957
	KL 60X400_ZM	400	1,5 / 1,2	2,80		8595568937964
	KL 60X500_ZM	500	1,5 / 1,2	3,10		8595568937971
	KL 60X600_ZM	600	1,5 / 1,2	3,24		8595568937988
	KL 60X150_F	150	1,5 / 1,2	2,50		8595057691698
	KL 60X200_F	200	1,5 / 1,2	2,65		8595057658073
	KL 60X300_F	300	1,5 / 1,2	2,90		8595057656345
	KL 60X400_F	400	1,5 / 1,2	3,14		8595057658066
	KL 60X500_F	500	1,5 / 1,2	3,38		8595057658042
	KL 60X600_F	600	1,5 / 1,2	3,63		8595057661219



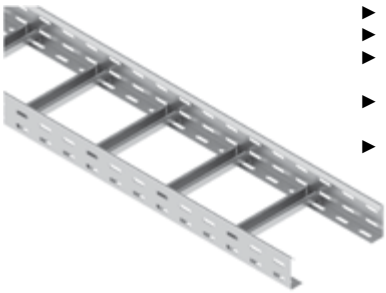
The graph shows the maximum allowed even loading of the ladder in relation to the distances of the supports.

L = distance of supports (m)
P = allowed even loading (weight kg/m)

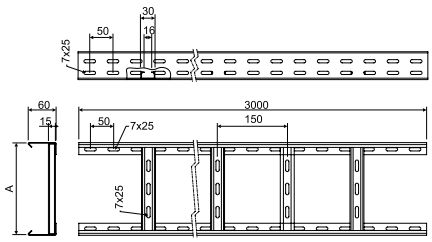
External influences are not taken into account in the permissible load and cannot be burdened by person.

↕ thickness of metal sheet (mm)
ǂ weight kg/m
fire resistance E30-E90, P15-R - P90-R, PS15-PS90
ZM Magnelis®
S Pre-Galvanized
F Hot Dip Galvanized

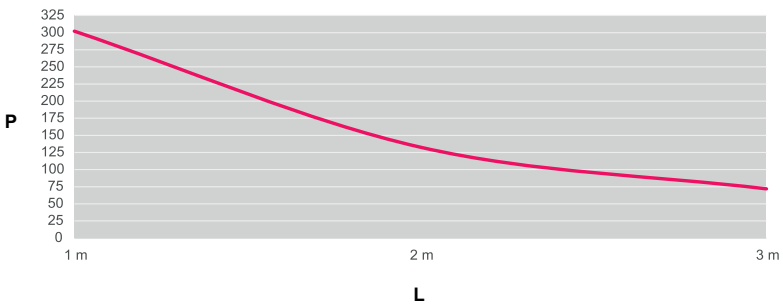
60 – Cable ladder – rung spacing 150 mm



- The cable ladder is designed for standard systems with functionality in fire.
- The standard length of the cable ladder is 3 m.
- The joining of the ladders is performed by using the couplings KPBSKL (pg. 69) min. 12 pcs of bolts NSM 6X10 (pg. 97).
- The side walls are L-profiles with return flange. The perforated C-profile rungs are placed in the side walls by extrusion with a spacing of 150 mm, with open side of the profile facing up.
- For spatial separation of cables, it is possible to use partition NPZ 50 (pg. 50). The partition is fixed every 60 cm with an NSM 6X20 bolt (pg. 97)



	item	A	↕	‡		EAN
	KL 60X150_PO	150	1,5 / 1,2	2,63		8595057691414
	KL 60X200_PO	200	1,5 / 1,2	2,90		8595057691421
	KL 60X300_PO	300	1,5 / 1,2	3,20		8595057691438
	KL 60X400_PO	400	1,5 / 1,2	3,64		8595057691445
	KL 60X200_POZM	200	1,5 / 1,2	2,90		8595568944443
	KL 60X300_POZM	300	1,5 / 1,2	3,20		8595568944450
	KL 60X400_POZM	400	1,5 / 1,2	3,64		8595568944467
	KL 60X150_POF	200	1,5 / 1,2	2,90		8595568921833
	KL 60X200_POF	300	1,5 / 1,2	3,10		8595568921840
	KL 60X300_POF	400	1,5 / 1,2	3,66		8595568921857
	KL 60X400_POF	500	1,5 / 1,2	4,00		8595568921864



The graph shows the maximum allowed even loading of the ladder in relation to the distances of the supports.
L = distance of supports (m)
P = allowed even loading (weight kg/m)

External influences are not taken into account in the permissible load and cannot be burdened by person.

↕ thickness of metal sheet (mm)

‡ weight kg/m

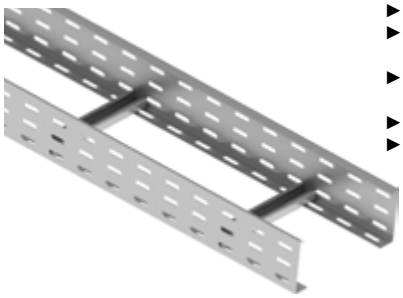
fire resistance E30-E90, P15-R - P90-R, PS15-PS90

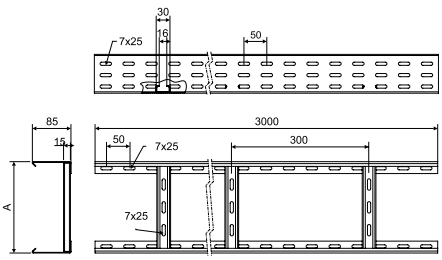
POZM Magnelis®

PO Pre-Galvanized

POF Hot Dip Galvanized

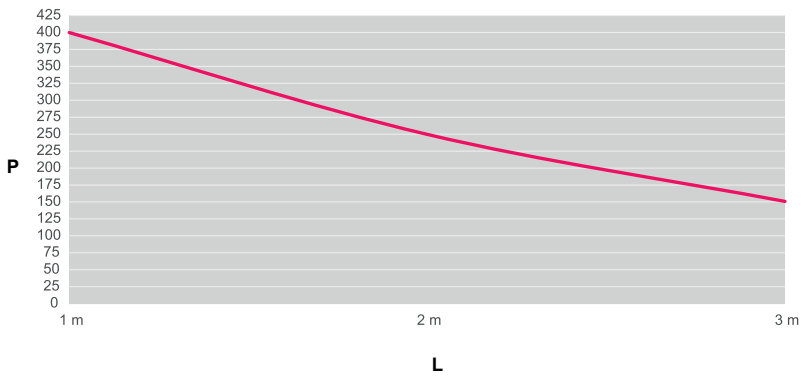
85 - cable ladder





- The standard length of the cable ladder is 3 m.
- The joining of the ladders is performed by using the couplings S 85X200 (pg. 69) and min. 6 pcs of bolts NSM 6X10 (pg. 97).
- The side walls are L-profiles with return flange. The perforated C-profile rungs are placed in the side walls by extrusion with a spacing of 300 mm, with open side of the profile facing up.
- It is possible to create on order the ladders with rung spacing of 150 and 450 mm.
- For spatial separation of cables, it is possible to use partition P 60 (pg. 29). he partition is fixed every 60 cm with an NSM 6X20 bolt (pg. 97)

	item	A	↕	ǂ	EAN
	KL 85X150_S	150	1,5 / 1,2	2,71	8595057692657
	KL 85X200_S	200	1,5 / 1,2	2,90	8595057644175
	KL 85X300_S	300	1,5 / 1,2	3,10	8595057644182
	KL 85X400_S	400	1,5 / 1,2	3,30	8595057644199
	KL 85X500_S	500	1,5 / 1,2	3,50	8595057644205
	KL 85X600_S	600	1,5 / 1,2	3,72	8595057644212
	KL 85X150_F	150	1,5 / 1,2	3,03	8595568902412
	KL 85X200_F	200	1,5 / 1,2	3,19	8595057661226
	KL 85X300_F	300	1,5 / 1,2	3,43	8595057661233
	KL 85X400_F	400	1,5 / 1,2	3,70	8595057661240
	KL 85X500_F	500	1,5 / 1,2	3,92	8595057661257
	KL 85X600_F	600	1,5 / 1,2	4,20	8595057661264



The graph shows the maximum allowed even loading of the ladder in relation to the distances of the supports.

L = distance of supports (m)
P = allowed even loading (weight kg/m)

External influences are not taken into account in the permissible load and cannot be burdened by person.

↕ thickness of metal sheet (mm)

ǂ weight kg/m

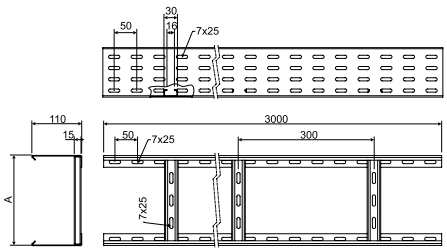
S Pre-Galvanized

F Hot Dip Galvanized

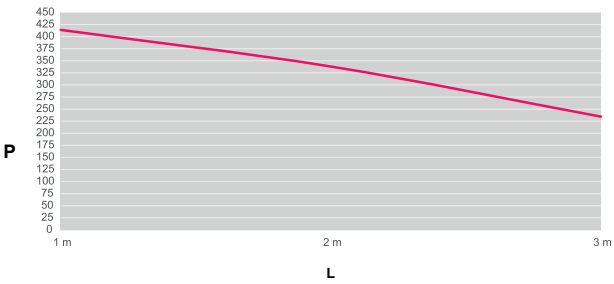
110 - cable ladder



- The standard length of the cable ladder is 3 m.
- The joining of the ladders is performed by using the couplings S 110X200 (pg. 69) and min. 8 pcs of bolts NSM 6X10 (pg. 97).
- The side walls are L-profiles with return flange. The perforated C-profile rungs are placed in the side walls by extrusion with a spacing of 300 mm, with open side of the profile facing up.
- It is possible to create on order the ladders with rung spacing of 150 and 450 mm.
- For spatial separation of cables, it is possible to use partition NPZ 100 (pg. 50). The partition is fixed every 60 cm with an NSM 6X20 bolt (pg. 97)



	item	A	↕	ǂ		EAN
	KL 110X150_S	150	1,5 / 1,2	3,18		8595057692664
	KL 110X200_S	200	1,5 / 1,2	3,31		8595057644373
	KL 110X300_S	300	1,5 / 1,2	3,53		8595057644380
	KL 110X400_S	400	1,5 / 1,2	3,75		8595057644397
	KL 110X500_S	500	1,5 / 1,2	4,00		8595057644403
	KL 110X600_S	600	1,5 / 1,2	4,20		8595057644410
	KL 110X200_ZM	200	1,5 / 1,2	3,31		8595568937896
	KL 110X300_ZM	300	1,5 / 1,2	3,53		8595568937902
	KL 110X400_ZM	400	1,5 / 1,2	3,75		8595568937919
	KL 110X500_ZM	500	1,5 / 1,2	4,00		8595568937926
	KL 110X600_ZM	600	1,5 / 1,2	4,20		8595568937933
	KL 110X150_F	150	1,5 / 1,2	3,56		8595568902368
	KL 110X200_F	200	1,5 / 1,2	3,71		8595057661028
	KL 110X300_F	300	1,5 / 1,2	3,95		8595057661172
	KL 110X400_F	400	1,5 / 1,2	4,20		8595057661189
	KL 110X500_F	500	1,5 / 1,2	4,44		8595057661196
	KL 110X600_F	600	1,5 / 1,2	4,70		8595057661202



The graph shows the maximum allowed even loading of the ladder in relation to the distances of the supports.

L = distance of supports (m)
P = allowed even loading (weight kg/m)

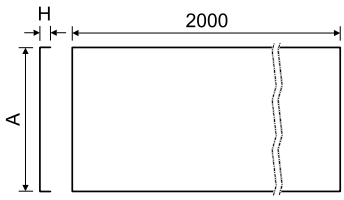
External influences are not taken into account in the permissible load and cannot be burdened by person.

↕ thickness of metal sheet (mm)
ǂ weight kg/m

fire resistance E30-E90, P15-R - P90-R, PS15-PS90 | ZM Magnelis® | S Pre-Galvanized | F Hot Dip Galvanized

cable ladder cover





- Stated sheet metal thickness is delivered as standard. Cover with thicker sheet metal can be delivere without prior notice
- The fixing of the cover to the tray is done using the cover fixture VU or NUV or with a STP 2.9X9.5 TX bolt (2 pcs per meter).

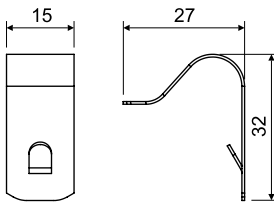
item	A	H	↕	↨		EAN
V 150_S	150	11	0,55	0,75		8595057629790
V 200_S	200	11	0,55	0,98		8595057629424
V 300_S	300	11	0,8	2,04		8595057629516
V 400_S	400	14	1,0	3,41		8595057629394
V 500_S	500	14	1,0	4,22		8595057633162
V 600_S	600	14	1,2	6,25		8595057636576
V 200_ZM	200	11	0,75	1,31		8595568937858
V 300_ZM	300	11	0,75	1,90		8595568937865
V 400_ZM	400	14	1,0	3,36		8595568937872
V 500_ZM	500	14	1,0	4,14		8595568937889
V 150_F	150	11	0,8	1,30		8595057657991
V 200_F	200	11	0,8	1,68		8595057656222
V 300_F	300	11	1,0	2,73		8595057656239
V 400_F	400	14	1,0	3,63		8595057656246
V 500_F	500	14	1,0	4,80		8595057657977
V 600_F	600	14	1,2	6,70		8595057659278

cover fixture



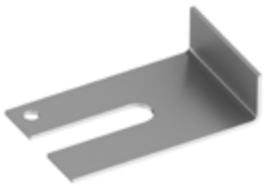
- Is used for a bolt free attachment of the cover to the tray and to the accessories.
- The cover fixture is placed to the cover and the sidewall in the place of the opening and it is slightly pressed so that the fixture lock slides into the opening.

item	↨		EAN
VU_GMT	0,01		8595057629448

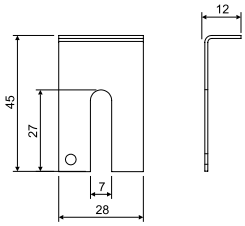




cover fixture



- Serves for the attaching of the cover to the tray using a bolt NSM 6X10.
- The bolt is positioned in the top row of perforations.
- For fastening, a bolted connection can be used either between ladders or between a ladder and a fitting.



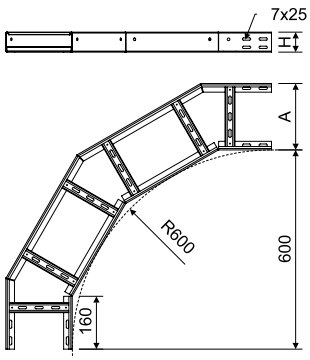
item	↨		EAN
NUV_S	0,01		8595057654464
NUV_ZM	0,01		8595568939234

↕ thickness of metal sheet (mm)
↨ weight kg/m; weight kg/pc
fire resistance E30-E90, P15-R - P90-R, PS15-PS90
ZM Magnelis®
GMT non electrolytic plating
S Pre-Galvanized
F Hot Dip Galvanized

horizontal bend

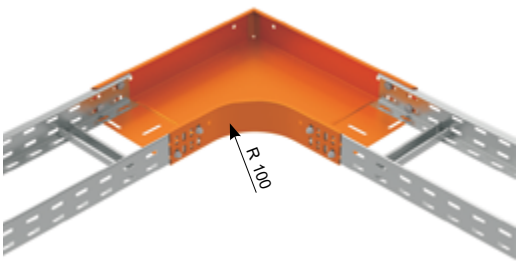


- The connection of the bend with the ladder is performed by using the couplings S ..X200 (pg. 69) and the bolts NSM 6X10 (pg. 97).
- Horizontal bend can be replaced by bend for JUPITER cable trays.
- On request, it is possible to add a lid to the fitting.



	item	A	H	↕	⫡		EAN
	KLOBH 60X150_S	150	60	1,5 / 1,2	16		8595568910011
	KLOBH 60X200_S	200	60	1,5 / 1,2	16		8595057644489
	KLOBH 60X300_S	300	60	1,5 / 1,2	16		8595057644496
	KLOBH 60X400_S	400	60	1,5 / 1,2	16		8595057644502
	KLOBH 60X500_S	500	60	1,5 / 1,2	16		8595057644519
	KLOBH 60X600_S	600	60	1,5 / 1,2	16		8595057644526
	KLOBH 85X200_S	200	85	1,5 / 1,2	24	-	8595057644533
	KLOBH 85X300_S	300	85	1,5 / 1,2	24	-	8595057644540
	KLOBH 85X400_S	400	85	1,5 / 1,2	24	-	8595057644557
	KLOBH 85X500_S	500	85	1,5 / 1,2	24	-	8595057644564
	KLOBH 85X600_S	600	85	1,5 / 1,2	24	-	8595057644571
	KLOBH 110X200_S	200	110	1,5 / 1,2	32		8595057644434
	KLOBH 110X300_S	300	110	1,5 / 1,2	32		8595057644441
	KLOBH 110X400_S	400	110	1,5 / 1,2	32		8595057644458
	KLOBH 110X500_S	500	110	1,5 / 1,2	32		8595057644465
	KLOBH 110X600_S	600	110	1,5 / 1,2	32		8595057644472
	KLOBH 60X200_ZM	200	60	1,5 / 1,2	16		8595568944566
	KLOBH 60X300_ZM	300	60	1,5 / 1,2	16		8595568944573
	KLOBH 60X400_ZM	400	60	1,5 / 1,2	16		8595568944580
	KLOBH 60X500_ZM	500	60	1,5 / 1,2	16		8595568944597
	KLOBH 60X600_ZM	600	60	1,5 / 1,2	16		8595568944603
	KLOBH 110X200_ZM	200	110	1,5 / 1,2	32		8595568944610
	KLOBH 110X300_ZM	300	110	1,5 / 1,2	32		8595568944627
	KLOBH 110X400_ZM	400	110	1,5 / 1,2	32		8595568944634
	KLOBH 110X500_ZM	500	110	1,5 / 1,2	32		8595568944641
	KLOBH 110X600_ZM	600	110	1,5 / 1,2	32		8595568944658
	KLOBH 60X150_F	150	60	1,5 / 1,2	16		8595568910028
	KLOBH 60X200_F	200	60	1,5 / 1,2	16		8595057661271
	KLOBH 60X300_F	300	60	1,5 / 1,2	16		8595057661288
	KLOBH 60X400_F	400	60	1,5 / 1,2	16		8595057661295
	KLOBH 60X500_F	500	60	1,5 / 1,2	16		8595057661301
	KLOBH 60X600_F	600	60	1,5 / 1,2	16		8595057661318
	KLOBH 85X200_F	200	85	1,5 / 1,2	24	-	8595057661325
	KLOBH 85X300_F	300	85	1,5 / 1,2	24	-	8595057661332
	KLOBH 85X400_F	400	85	1,5 / 1,2	24	-	8595057661349
	KLOBH 85X500_F	500	85	1,5 / 1,2	24	-	8595057661356
	KLOBH 85X600_F	600	85	1,5 / 1,2	24	-	8595057661363
	KLOBH 110X200_F	200	110	1,5 / 1,2	32		8595057661370
	KLOBH 110X300_F	300	110	1,5 / 1,2	32		8595057661387
	KLOBH 110X400_F	400	110	1,5 / 1,2	32		8595057661394
	KLOBH 110X500_F	500	110	1,5 / 1,2	32		8595057661400
	KLOBH 110X600_F	600	110	1,5 / 1,2	32		8595057661417

Demonstration of cable ladder bend installed together with cable tray bend (pg. 16).



↕ thickness of metal sheet (mm)

⫡ min. amount of bolts for connection

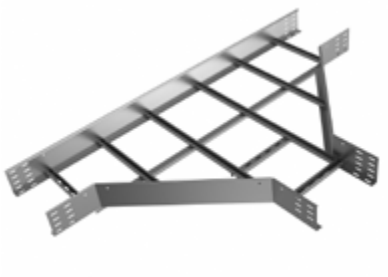
fire resistance E30-E90, P15-R - P90-R, PS15-PS90

ZM Magnelis®

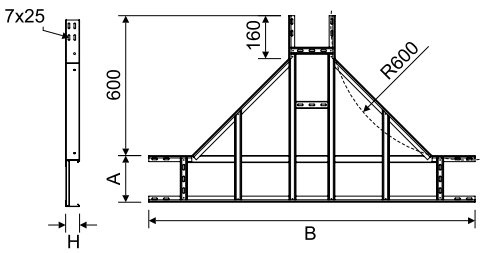
S Pre-Galvanized

F Hot Dip Galvanized

T-piece

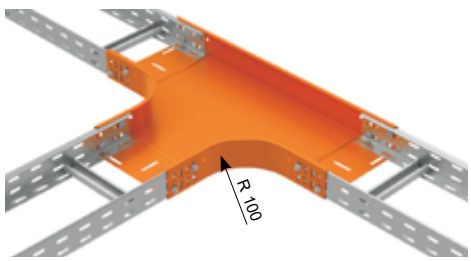


- The connection of the T-piece with the ladder is performed by using the couplings S ..X200 (pg. 69) and the bolts NSM 6X10 (pg. 97).
- T-piece can be replaced by T-piece for JUPITER cable trays.
- On request, it is possible to add a lid to the fitting.



	item	A	H	B	↕	⭳		EAN
	KLT 60X200_S	200	60	1400	1,5 / 1,2	24		8595057644632
	KLT 60X300_S	300	60	1500	1,5 / 1,2	24		8595057642256
	KLT 60X400_S	400	60	1600	1,5 / 1,2	24		8595057644649
	KLT 60X500_S	500	60	1700	1,5 / 1,2	24		8595057644656
	KLT 60X600_S	600	60	1800	1,5 / 1,2	24		8595057644663
	KLT 85X200_S	200	85	1400	1,5 / 1,2	36	-	8595057644670
	KLT 85X300_S	300	85	1500	1,5 / 1,2	36	-	8595057644687
	KLT 85X400_S	400	85	1600	1,5 / 1,2	36	-	8595057644694
	KLT 85X500_S	500	85	1700	1,5 / 1,2	36	-	8595057644700
	KLT 85X600_S	600	85	1800	1,5 / 1,2	36	-	8595057644717
	KLT 110X200_S	200	110	1400	1,5 / 1,2	48		8595057644588
	KLT 110X300_S	300	110	1500	1,5 / 1,2	48		8595057644595
	KLT 110X400_S	400	110	1600	1,5 / 1,2	48		8595057644601
	KLT 110X500_S	500	110	1700	1,5 / 1,2	48		8595057644618
	KLT 110X600_S	600	110	1800	1,5 / 1,2	48		8595057644625
	KLT 60X200_ZM	200	60	1400	1,5 / 1,2	24		8595568944665
	KLT 60X300_ZM	300	60	1500	1,5 / 1,2	24		8595568944672
	KLT 60X400_ZM	400	60	1600	1,5 / 1,2	24		8595568944689
	KLT 60X500_ZM	500	60	1700	1,5 / 1,2	24		8595568944696
	KLT 60X600_ZM	600	60	1800	1,5 / 1,2	24		8595568944702
	KLT 110X200_ZM	200	110	1400	1,5 / 1,2	48		8595568944719
	KLT 110X300_ZM	300	110	1500	1,5 / 1,2	48		8595568944726
	KLT 110X400_ZM	400	110	1600	1,5 / 1,2	48		8595568944733
	KLT 110X500_ZM	500	110	1700	1,5 / 1,2	48		8595568944740
	KLT 110X600_ZM	600	110	1800	1,5 / 1,2	48		8595568944757
	KLT 60X200_F	200	60	1400	1,5 / 1,2	24		8595057661424
	KLT 60X300_F	300	60	1500	1,5 / 1,2	24		8595057661431
	KLT 60X400_F	400	60	1600	1,5 / 1,2	24		8595057661448
	KLT 60X500_F	500	60	1700	1,5 / 1,2	24		8595057661455
	KLT 60X600_F	600	60	1800	1,5 / 1,2	24		8595057661462
	KLT 85X200_F	200	85	1400	1,5 / 1,2	36	-	8595057661479
	KLT 85X300_F	300	85	1500	1,5 / 1,2	36	-	8595057661486
	KLT 85X400_F	400	85	1600	1,5 / 1,2	36	-	8595057661493
	KLT 85X500_F	500	85	1700	1,5 / 1,2	36	-	8595057661509
	KLT 85X600_F	600	85	1800	1,5 / 1,2	36	-	8595057661516
	KLT 110X200_F	200	110	1400	1,5 / 1,2	48		8595057661523
	KLT 110X300_F	300	110	1500	1,5 / 1,2	48		8595057661530
	KLT 110X400_F	400	110	1600	1,5 / 1,2	48		8595057661547
	KLT 110X500_F	500	110	1700	1,5 / 1,2	48		8595057661554
	KLT 110X600_F	600	110	1800	1,5 / 1,2	48		8595057661561

Demonstration of cable ladder bend installed together with cable tray T-piece (pg. 20).



↕ thickness of metal sheet (mm)

⭳ min. amount of bolts for connection

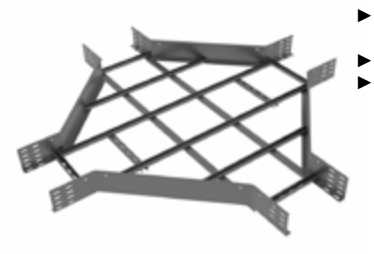
fire resistance E30-E90, P15-R - P90-R, PS15-PS90

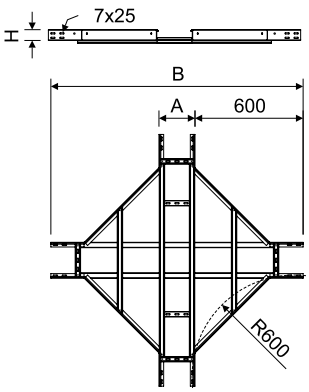
ZM Magnelis®

S Pre-Galvanized

F Hot Dip Galvanized

cross



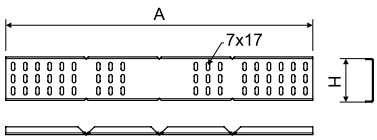


- The connection of the cross-over with the ladder is performed by using the couplings S ..X200 (pg. 69) and the bolts NSM 6X10 (pg. 97).
- Cross-over can be replaced by cross-over for JUPITER cable trays.
- On request, it is possible to add a lid to the fitting.

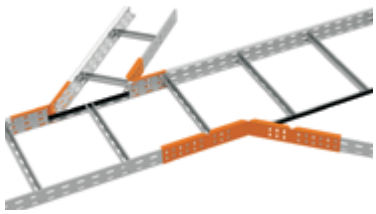
	item	A	H	B	↕	⊥T		EAN
	KLKR 60X200_S	200	60	1400	1,5 / 1,2	32	🔥	8595057644779
	KLKR 60X300_S	300	60	1500	1,5 / 1,2	32	🔥	8595057644786
	KLKR 60X400_S	400	60	1600	1,5 / 1,2	32	🔥	8595057644793
	KLKR 60X500_S	500	60	1700	1,5 / 1,2	32	🔥	8595057644809
	KLKR 60X600_S	600	60	1800	1,5 / 1,2	32	🔥	8595057644816
	KLKR 85X200_S	200	85	1400	1,5 / 1,2	48	-	8595057644823
	KLKR 85X300_S	300	85	1500	1,5 / 1,2	48	-	8595057644830
	KLKR 85X400_S	400	85	1600	1,5 / 1,2	48	-	8595057644847
	KLKR 85X500_S	500	85	1700	1,5 / 1,2	48	-	8595057644854
	KLKR 85X600_S	600	85	1800	1,5 / 1,2	48	-	8595057644861
	KLKR 110X200_S	200	110	1400	1,5 / 1,2	64	🔥	8595057644724
	KLKR 110X300_S	300	110	1500	1,5 / 1,2	64	🔥	8595057644731
	KLKR 110X400_S	400	110	1600	1,5 / 1,2	64	🔥	8595057644748
	KLKR 110X500_S	500	110	1700	1,5 / 1,2	64	🔥	8595057644755
	KLKR 110X600_S	600	110	1800	1,5 / 1,2	64	🔥	8595057644762
	KLKR 60X200_ZM	200	60	1400	1,5 / 1,2	32	🔥	8595568944764
	KLKR 60X300_ZM	300	60	1500	1,5 / 1,2	32	🔥	8595568944771
	KLKR 60X400_ZM	400	60	1600	1,5 / 1,2	32	🔥	8595568944788
	KLKR 60X500_ZM	500	60	1700	1,5 / 1,2	32	🔥	8595568944795
	KLKR 60X600_ZM	600	60	1800	1,5 / 1,2	32	🔥	8595568944801
	KLKR 110X200_ZM	200	110	1400	1,5 / 1,2	64	🔥	8595568944818
	KLKR 110X300_ZM	300	110	1500	1,5 / 1,2	64	🔥	8595568944825
	KLKR 110X400_ZM	400	110	1600	1,5 / 1,2	64	🔥	8595568944832
	KLKR 110X500_ZM	500	110	1700	1,5 / 1,2	64	🔥	8595568944849
	KLKR 110X600_ZM	600	110	1800	1,5 / 1,2	64	🔥	8595568944856
	KLKR 60X200_F	200	60	1400	1,5 / 1,2	32	🔥	8595057661578
	KLKR 60X300_F	300	60	1500	1,5 / 1,2	32	🔥	8595057661585
	KLKR 60X400_F	400	60	1600	1,5 / 1,2	32	🔥	8595057661592
	KLKR 60X500_F	500	60	1700	1,5 / 1,2	32	🔥	8595057661608
	KLKR 60X600_F	600	60	1800	1,5 / 1,2	32	🔥	8595057661615
	KLKR 85X200_F	200	85	1400	1,5 / 1,2	48	-	8595057661622
	KLKR 85X300_F	300	85	1500	1,5 / 1,2	48	-	8595057661639
	KLKR 85X400_F	400	85	1600	1,5 / 1,2	48	-	8595057661646
	KLKR 85X500_F	500	85	1700	1,5 / 1,2	48	-	8595057661653
	KLKR 85X600_F	600	85	1800	1,5 / 1,2	48	-	8595057661660
	KLKR 110X200_F	200	110	1400	1,5 / 1,2	64	🔥	8595057661677
	KLKR 110X300_F	300	110	1500	1,5 / 1,2	64	🔥	8595057661684
	KLKR 110X400_F	400	110	1600	1,5 / 1,2	64	🔥	8595057661691
	KLKR 110X500_F	500	110	1700	1,5 / 1,2	64	🔥	8595057661707
	KLKR 110X600_F	600	110	1800	1,5 / 1,2	64	🔥	8595057661714

horizontal side wall clamp









- Used to create branches in cable ladder routes or as a substitute for cable ladder fittings or to create a change in a route at different angles and different bending radiuses. Couplings are a cost-effective and versatile way of creating branches in routes in a horizontal direction.
- Cut the side wall of the cable ladder to bend off c. 15 mm above the bottom – in the bottom perforation axis.
- It is necessary to use NCH (pg. 107).
- The fastening of the joint is performed with the bolts NSM 6X10 (pg. 97).

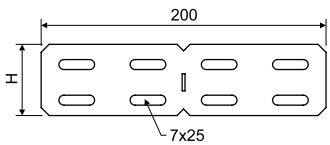
item	H	A	↕	⇟		EAN
BSKH 60 K_S	64	280	2	0,36	🔥	8595568904133
BSKH 85 K_S	89	280	2	0,45	-	8595568904157
BSKH 110 K_S	114	280	2	0,55	🔥	8595568904171
BSKH 60 D_S	64	630	2	0,83	🔥	8595568904195
BSKH 85 D_S	89	630	2	1,05	-	8595568904218
BSKH 110 D_S	114	630	2	1,28	🔥	8595568904232

BSKH 60 K_ZM	64	280	1,5	0,27	🔥	8595568938022
BSKH 110 K_ZM	114	280	1,5	0,41	🔥	8595568938008
BSKH 60 D_ZM	64	630	1,5	0,62	🔥	8595568938015
BSKH 110 D_ZM	114	630	1,5	0,96	🔥	8595568937995

BSKH 60 K_F	64	280	2	0,41	🔥	8595568904140
BSKH 85 K_F	89	280	2	0,53	-	8595568904164
BSKH 110 K_F	114	280	2	0,64	🔥	8595568904188
BSKH 60 D_F	64	630	2	0,96	🔥	8595568904201
BSKH 85 D_F	89	630	2	1,22	-	8595568904225
BSKH 110 D_F	114	630	2	1,48	🔥	8595568904249

angle coupling







- Angle couplings are used to create any angle, mainly for connecting in places of a slight bend in the routeor for creating arcs of large radii or bypassing columns and pillars.
- The connection is performed using the bolts NSM 6X10 (pg. 97).

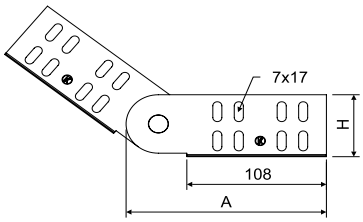
item	H	↕	⇟	⇊		EAN
SSU 60_S	50	1,5	0,10	4	🔥	8595568936691
SSU 85_S	75	1,5	0,16	6	-	8595568936707
SSU 110_S	100	1,5	0,20	8	🔥	8595568936714

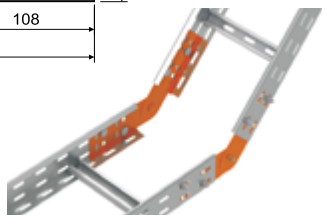
SSU 60_ZM	50	1,5	0,10	4	🔥	8595568938084
SSU 85_ZM	75	1,5	0,16	6	-	8595568940902
SSU 110_ZM	100	1,5	0,20	8	🔥	8595568938077

↕ thickness of metal sheet (mm) ⇟ weight kg/pc 🔥 fire resistance E30-E90, P15-R - P90-R, PS15-PS90 ZM Magnelis® S Pre-Galvanized
⇊ min. amount of bolts for connection F Hot Dip Galvanized

hinged joint





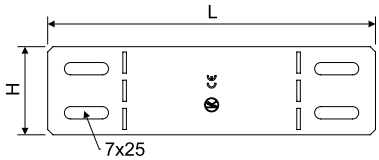


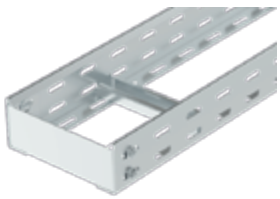
- For the connection of the hinged joint to the ladder there are used the bolts NSM 6X10 (pg. 97).
- The joint is delivered in 1 piece per packing. 2 pieces are needed to create the bend in the route.

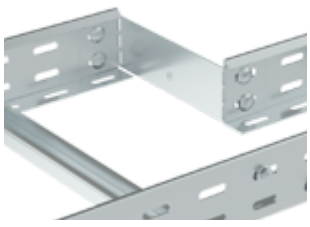
	item	H	A	↕	ǂ	⫡		EAN
	SK 60_S	53	155	0,8	0,10	4	🔥	8595057627772
	SK 85_S	78	178	1,2	0,24	8	-	8595057630413
	SK 110_S	103	200	1,2	0,35	8	🔥	8595057633384
	SK 60_ZM	53	155	0,75	0,10	4	🔥	8595568938060
	SK 85_ZM	78	178	1,5	0,30	8	-	8595568939333
	SK 110_ZM	103	200	1,5	0,45	8	🔥	8595568938053

end / reduction piece









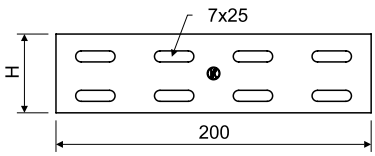
- The plate is designed to end or reduce the cable route.
- Depending on the application requirement, the plate is bent in the perforated areas into a U-shape as an end-piece or into a Z-shape as a reduction-piece
- The end/reduction- piece is attached to the ladder with NSM 6X10 bolts (pg. 97).

	item	H	L	↕	ǂ	⫡		EAN
	K-R 60X25_ZM	50	111	1,0	0,04	4	🔥	8595568939005
	K-R 60X50_ZM	50	136	1,0	0,05	4	🔥	8595568939036
	K-R 60X75_ZM	50	161	1,0	0,06	4	🔥	8595568939067
	K-R 60X100_ZM	50	186	1,0	0,07	4	🔥	8595568938961
	K-R 60X125_ZM	50	211	1,0	0,08	4	🔥	8595568938978
	K-R 60X150_ZM	50	236	1,0	0,09	4	🔥	8595568938985
	K-R 60X200_ZM	50	286	1,0	0,10	4	🔥	8595568938992
	K-R 60X300_ZM	50	386	1,0	0,14	4	🔥	8595568939012
	K-R 60X400_ZM	50	486	1,0	0,18	4	🔥	8595568939029
	K-R 60X500_ZM	50	586	1,0	0,22	4	🔥	8595568939043
	K-R 60X600_ZM	50	686	1,0	0,26	4	🔥	8595568939050
	K-R 85X50_ZM	75	136	1,0	0,05	4	-	8595568939128
	K-R 85X100_ZM	75	186	1,0	0,07	4	-	8595568939074
	K-R 85X150_ZM	75	236	1,0	0,10	4	-	8595568939081
	K-R 85X200_ZM	75	286	1,0	0,10	4	-	8595568939098
	K-R 85X300_ZM	75	386	1,0	0,16	4	-	8595568939104
	K-R 85X400_ZM	75	486	1,0	0,21	4	-	8595568939111
	K-R 85X500_ZM	75	586	1,0	0,33	4	-	8595568939135
	K-R 110X100_ZM	100	186	1,0	0,10	4	🔥	8595568938794
	K-R 110X150_ZM	100	236	1,0	0,13	4	🔥	8595568938800
	K-R 110X200_ZM	100	286	1,0	0,15	4	🔥	8595568938817
	K-R 110X300_ZM	100	386	1,0	0,22	4	🔥	8595568938824
	K-R 110X400_ZM	100	486	1,0	0,28	4	🔥	8595568938831
	K-R 110X500_ZM	100	586	1,0	0,44	4	🔥	8595568938848
	K-R 110X600_ZM	100	686	1,0	0,52	4	🔥	8595568938855

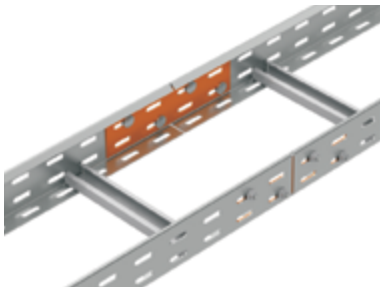
coupling



- It is designated to connect the cable ladders.
- The connection is performed using the bolts NSM 6X10 (pg. 97).

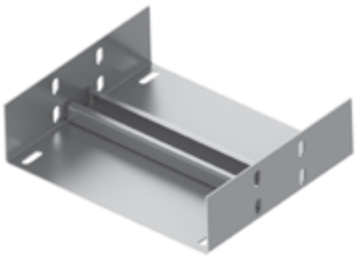


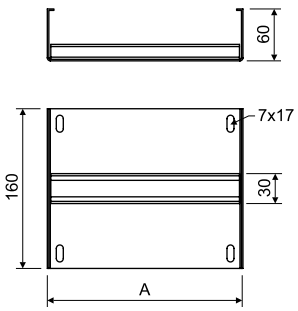
	item	H	↕	⇕	⇊		EAN
	S 60X200_S	50	1,5	0,09	4	🔥	8595057627796
	S 85X200_S	75	1,5	0,13	6	-	8595057629769
	S 110X200_S	100	1,5	0,18	8	🔥	8595057629752
	S 60X200_ZM	50	1,5	0,09	4	🔥	8595568938046
	S 85X200_ZM	75	1,5	0,13	6	-	8595568939357
	S 110X200_ZM	100	1,5	0,18	8	🔥	8595568938039



coupling for cable trayss

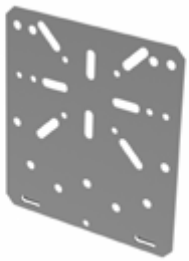
- The coupling is intended for connecting KL standardized constructions using NSM 6X10 bolts.





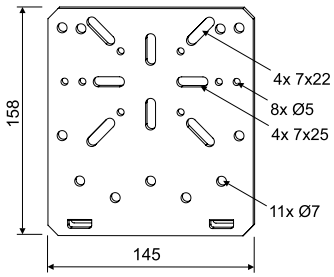
	item	A	⇊	↕	⇕		EAN
	KPBSKL 150_PO	150	12	1,5	0,54	🔥	8595057692688
	KPBSKL 200_PO	200	12	1,5	0,68	🔥	8595057650091
	KPBSKL 300_PO	300	12	1,5	0,94	🔥	8595057650107
	KPBSKL 400_PO	400	12	1,5	1,19	🔥	8595057650114
	KPBSKL 200_POZM	200	12	1,5	0,68	🔥	8595568944535
	KPBSKL 300_POZM	300	12	1,5	0,94	🔥	8595568944542
	KPBSKL 400_POZM	400	12	1,5	1,19	🔥	8595568944559
	KPBSKL 150_POF	150	12	1,5	0,63	🔥	8595568919496
	KPBSKL 200_POF	200	12	1,5	0,78	🔥	8595057665811
	KPBSKL 300_POF	300	12	1,5	1,08	🔥	8595057665828
	KPBSKL 400_POF	400	12	1,5	1,37	🔥	8595057665835

mounting plate

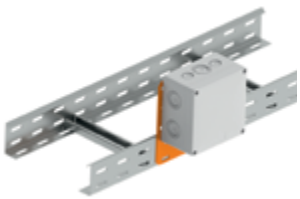


- For the mounting of distribution boxes to cable ladders.
- It is pushed onto the side of cable ladders and it is fixed by bolts NSM 6X10 (pg. 97).
- Recommended for boxes KSK 80, KSK 100, KSK 125, KSK 175; 8101; 8102; 8106; 8107; 8110; 8111; 8112; 8130; 8135; 003.CS.K; 005.CS.K; KPK 125 (see catalogue of Wiring materials).

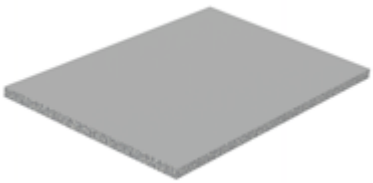
item	↕	ǂ		EAN
MDS_S	1,0	0,17		8595057631762
MDS_ZM	1,0	0,17		8595568939364







cement fiber board



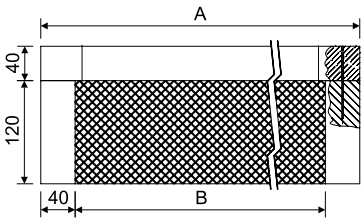
- Board for filling cable ladders. Permanent protection of electrical installations.
- Resistance to electric arc according to ČSN 332000-5-52 ed.2.
- Fire resistance - reaction to fire class A1.
- Frost resistance.
- Weather resistance.
- High strength.
- Hygienic safety.
- Items to order.

item	length	width	thickness		EAN
DCEV 6X200_PO	1250	195	6		8595568932624
DCEV 6X300_PO	1250	295	6		8595568932631
DCEV 6X400_PO	1250	395	6		8595568932648
DCEV 8X200_PO	1250	195	8		8595568932655
DCEV 8X300_PO	1250	295	8		8595568932662
DCEV 8X400_PO	1250	395	8		8595568932679
DCEV 10X200_PO	1250	195	10		8595568932686
DCEV 10X300_PO	1250	295	10		8595568932693
DCEV 10X400_PO	1250	395	10		8595568932709

cable clamps cover



- Designed to relieve cable tension in vertical installations longer than 3.5 m
- Installed trough the cable ladder partition using PKC1 cable clamps (or with PKC1 clamps on support profiles, or using separate clamps 67xx, OMEGA, DOBRMAN, or PKDZ1 clamps on wire trays).
- Attachment to the base material is done using the MS KPS mounting kit.
- After installing the cover, the entire entry surface and surrounding area must be coated with the KPS-STOP fireproof insulating compound.



item	A	B	‡		EAN
KPS 200X150_PO	280	200	3,05		8595568936059
KPS 200X200_PO	330	200	3,45		8595568936066
KPS 200X300_PO	430	200	4,25		8595568936073
KPS 200X400_PO	530	200	5,05		8595568936080
KPS 200X500_PO	630	200	5,85		8595568936097
KPS 200X600_PO	730	200	6,65		8595568936103

cable clamps cover mounting kit



- Designed for fastening the KPS cable clamps cover to the base material.
- It is always necessary to order the kit for the KPS clamps cover - 1 piece of kit for one piece of cover.
- The set contains fire-resistant anchors, threaded rods, washers, nuts and a knife for cutting thermal insulation wool.

item	‡	EAN
MS KPS_PO	1,0	8595568912527

fire protection coating



- Designed for the KPS.
- The minimum thickness of the applied putty in dry condition must be at least 1 mm.
- Packaging capacity for approx. 5 pcs KPS 200x400.

item	‡		EAN
KPS-STOP_PO	2		8595568937391



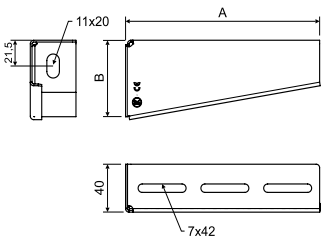
4 MOUNTING, CONNECTING AND FASTENING MATERIALS FOR CABLE TRAYS AND LADDERS



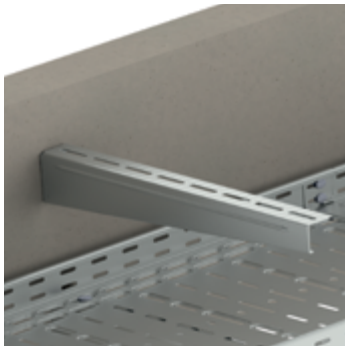
bracket - medium



- The bracket is designed for mounting to the wall or to the ceiling profile.
- Attachment to the wall is done using an Ø8 or Ø10 mm anchor.
- For installation on the SPS ceiling profile, use PM 41 M10 sliding nuts (pg. 106) together with S 10X20 bolts.
- Fix to the celling profile SPLN, SPSN or SPU using bolts S 10X20, nuts ML 10 and washer PD 10.
- NSM 6X10 bolts are used to attach a cable tray or a ladder to the DS bracket (pg. 97).



	item	A	B	⭳	‡		EAN
	DS 62_ZM	82	44	150	0,08		8595568940605
	DS 100_ZM	120	48	150	0,13		8595568940612
	DS 125_ZM	145	49	150	0,15		8595568940629
	DS 150_ZM	170	60	150	0,22		8595568940636
	DS 200_ZM	220	64	150	0,27		8595568940643
	DS 250_ZM	270	64	130	0,33		8595568940650
	DS 300_ZM	320	74	130	0,41		8595568940667
	DS 400_ZM	420	84	130	0,57		8595568940674
	DS 500_ZM	520	94	130	0,75		8595568940681
	DS 600_ZM	620	119	130	1,05		8595568940698

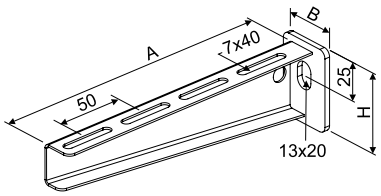




bracket - heavy



- The holder is designated to be mounted on wall or celling profile.
- Fix to the celling profile SPLN, SPSN or SPU using a bolt S 10X20, a washer PD 10 and a flanged nut ML 10.
- Fix to the celling profile SPS using sliding nut PM 41 M 10 together with the bolt S 10X20.
- Cable tray attaching to the bracket is carried out by bolts NSM 6X10.



	item	A	B	H	⭳	‡	EAN
	DTN 100_F	110	40	45	250	0,16	8595568916808
	DTN 150_F	160	40	45	250	0,20	8595568916815
	DTN 200_F	210	40	55	250	0,27	8595568916822
	DTN 250_F	260	40	55	250	0,32	8595568916839
	DTN 300_F	310	50	65	250	0,59	8595568916846
	DTN 400_F	410	50	75	250	0,79	8595568916853
	DTN 500_F	510	50	90	250	1,11	8595568916860
	DTN 600_F	610	50	90	250	1,27	8595568916877



‡ weight kg/pc

⭳ max. load (kg)

fire resistance E30-E90, P15-R - P90-R, PS15-PS90

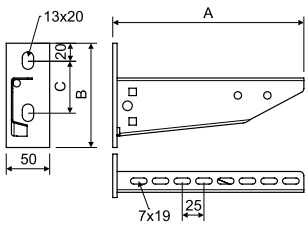
ZM Magnelis®

F Hot Dip Galvanized

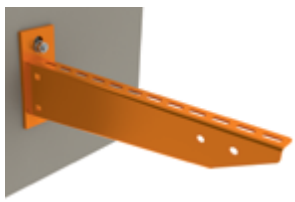
bracket - heavy



- The holder is designed to be mounted on a wall or a ceiling profile.
- Fix to the wall using 2 pcs of Ø10 mm anchors.
- For assembly to the ceiling profile SPS there are used the sliding nuts PM 41 M 10 (pg. 106) together with the bolts S 10X20 (2 pcs).
- Fix to the celling profile SPLN, SPSN or SPU using bolts S 10X20, flange washers PD 10 and flange nuts ML 10.
- Cable tray attaching to the bracket DT is carried out by bolts NSM 6X10 (pg. 97).



	item	A	B	C	⭳	‡		EAN
	DT 100_F	120	120	60	250	0,30		8595057631786
	DT 150_F	170	120	60	250	0,37		8595057632592
	DT 200_F	220	120	60	250	0,43		8595057631779
	DT 250_F	270	120	60	250	0,53		8595057636996
	DT 300_F	320	135	60	325	0,73		8595057628519
	DT 400_F	420	135	60	325	0,90		8595057628526
	DT 500_F	520	155	90	350	1,30		8595057628533
	DT 600_F	620	155	90	350	1,60		8595057628540
	DT 800_F	820	155	90	250	1,90		8595057639904
	DT 1000_F	1020	155	90	180	2,40		8595057639911

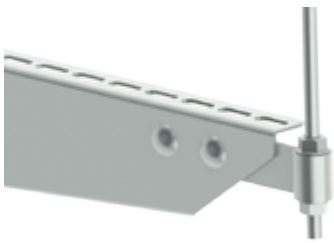




safety holder

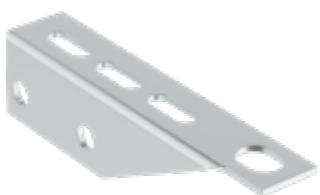


- DT OKO is used together with the DT bracket.
- Used to create standardized cable routes from cable trays or ladders.
- The DT bracket together with the DT OKO must be fastened to the wall or ceiling with ZT threaded rod (pg. 98) and nut ML (pg. 99).



	item	‡		EAN
	DT OKO_POF	0,12		8595568930774

safety holder



- DT OKO is used together with the DT bracket.
- Used to create standardized cable routes from cable trays or ladders.
- The DT OKO is attached to the DT bracket using 2 pcs NSM 6X10 bolts – must be ordered separately.
- The DT bracket together with the DT OKO must be fastened to the wall or ceiling with ZT threaded rod (pg. 98) and nut ML (pg. 99).



	item	‡		EAN
	DT OKO_PO	0,06		8595568941961

‡ weight kg/pc

⭳ max. load (kg)

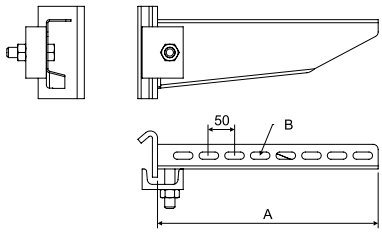
fire resistance E30-E90, P15-R - P90-R, PS15-PS90

PO Pre-Galvanized

POF/F Hot Dip Galvanized

clamp bracket - heavy





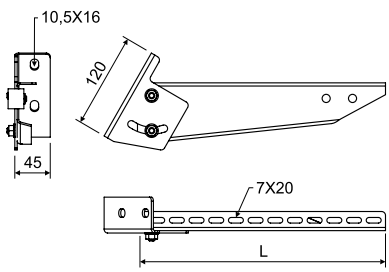


- Only for assembly onto the ceiling profile SPT or I-profil 80 mm.
- Clamp angle, nut and bolt are included.
- Cable tray attaching to the bracket is carried out by bolts NSM 6X10 (pg. 97).

	item	A	B	‡	⭳	EAN
	DRT 100_F	110	7x40	0,37	250	8595057635296
	DRT 150_F	160	7x15	0,40	250	8595057635302
	DRT 200_F	210	7x40	0,47	250	8595057639928
	DRT 300_F	310	7x40	0,77	250	8595057639942
	DRT 400_F	410	7x40	0,96	250	8595057639959
	DRT 500_F	510	7x38	1,24	250	8595057639966
	DRT 600_F	610	7x38	1,41	250	8595057639973

Bracket for sloped structures





- The bracket allows mounting cable trays or ladders on sloped structures up to an angle of 45°.
- A DT OKO safety eye must be ordered for the bracket (see pg. 75).
- NSM 6X10 bolts are used to attach the cable tray or ladder to the bracket.
- The bracket is fixed to the wall using 2 anchors Ø10 mm.

	item	L	‡		EAN
	DSU 100_PO	50-100	0,54	🔥	8595568925749
	DSU 200_PO	125-200	0,81	🔥	8595568925756
	DSU 300_PO	250-300	0,99	🔥	8595568925763

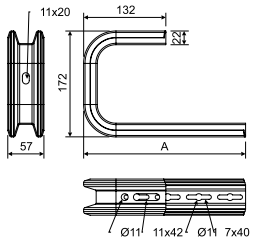
	item	L	‡		EAN
	DSU 100_POF	50-100	0,64	🔥	8595568925770
	DSU 200_POF	125-200	0,91	🔥	8595568925787
	DSU 300_POF	250-300	1,09	🔥	8595568925794

hanging bracket

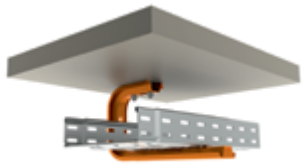


- Designated for direct mounting to the ceiling or with a threaded rod ZT 8 or ZT 10.
- The cable tray is fixed by using the bolts NSM 6X10.
- To eliminate deformation during assembly the STS reinforcement is designated.
- The installation is done by anchors KPO 10X95 or KKZ 10, bolts S 10X40 and washers PD 10.

	item	A	↧	↧ mounting with threaded rod	ǂ	EAN
	CTS 100_S	161	95	200	0,52	8595057629592
	CTS 200_S	261	70	170	0,62	8595057630222
	CTS 300_S	361	50	110	0,82	8595057630239





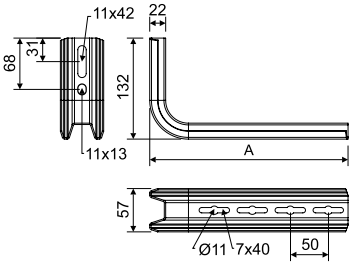


bracket

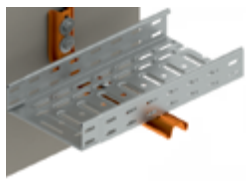


- The cable ladder is fixed by using the bolts NSM 6X10.
- LTS 100 - LTS 400 holders are used on the wall or on the ceiling profile.
- LTS 500 - LTS 600 holders are used as ceiling profiles.
- To eliminate deformation during assembly the STS reinforcement is designated.
- The installation is done by anchors KPO 10X95 or KKZ 10, bolts S 10X40 and washers PD 10.

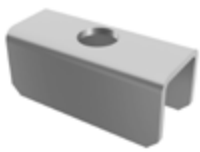
	item	A	↧	ǂ	EAN
	LTS 100_S	163	150	0,34	8595057639690
	LTS 150_S	213	120	0,40	8595057639706
	LTS 200_S	263	110	0,46	8595057639713
	LTS 300_S	363	75	0,59	8595057630840
	LTS 400_S	463	50	0,75	8595057634091
	LTS 500_S	563	-	0,82	8595057639737
	LTS 600_S	663	-	0,94	8595057639744





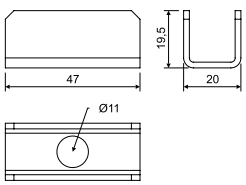


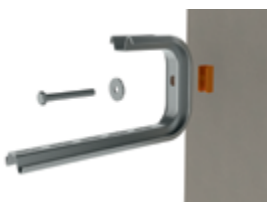
reinforcement piece for LTS and CTS profile



- The reinforcement is designed to prevent deformation of LTS and CTS brackets.
- The reinforcement is inserted at the point of attachment to the wall or ceiling, or in the case of double-sided installation, at the connection point of two brackets.
- For assembly onto a wall 1 piece, for double assembly 2 pieces back to back.

	item	ǂ		EAN
	STS_S	0,04	🔥	8595057639751







ǂ weight kg/pc

↧ max. load (kg)

🔥 fire resistance E30-E90, P15-R - P90-R, PS15-PS90

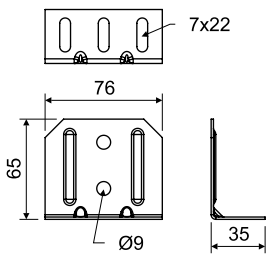
S Pre-Galvanized

wall bracket



- Designed for mounting on the wall or ceiling behind the side panel of a cable ladder or tray.
- The 8 mm anchor is used for mounting on the wall Ø8 mm.
- Use bolts NSM 6X10 (pg. 97) for installation to cable ladder.

	item	↕	↨		EAN
	KLSU_S	1,5	0,07		8595568908681
	KLSU_ZM	1,5	0,07		8595568939227



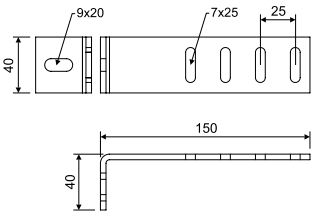


distance bracket



- Used for attachment to the sidewall of the cable ladder or tray and for subsequent fixing to the wall or ceiling.
- The distance between the cable ladder and the wall is at least 50 mm.
- The Ø8 mm anchor is used for mounting on the wall.
- Use bolts NSM 6X20 (pg. 97) for installation to cable ladder.

	item	↕	↨	EAN
	KLDI 35X110_F	4	0,21	8595057635388





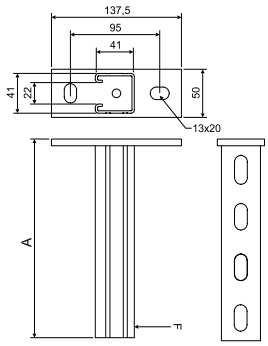
↕ thickness of metal sheet (mm)
↨ weight kg/pc
fire resistance E30-E90, P15-R - P90-R, PS15-PS90
ZM Magnelis®
F Hot Dip Galvanized
S Pre-Galvanized

ceiling profile - medium



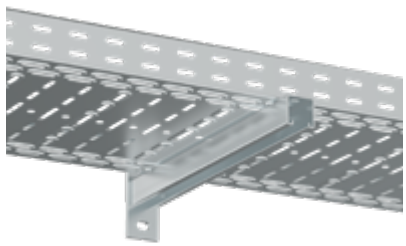


- Designated for one sided fastening of the brackets DS, DT and DTN with the use of sliding nuts PM 41 M 10 and the bolts with a hexagonal head S 10X20 (10X25, 10X30).
- For double-sided mounting, the brackets are fastened with S 10X70 bolts, M 10 nuts and PD 10 washers.
- Special surface treatment with higher corrosion resistance than hot-dip galvanizing - smooth, shiny appearance.
- OKSPS - end seal of SPS.
- The SPS ceiling profile can be used as a wall support (max. load indicated in the table) the load location is indicated in the drawing – F.





	item	A	⸸	⸸		EAN
	SPS 200_F	207	0,86	166		8595057640139
	SPS 300_F	307	1,12	110		8595057633452
	SPS 400_F	407	1,37	82		8595057628618
	SPS 450_F	457	1,50	73		8595568940964
	SPS 500_F	507	1,62	66		8595057640146
	SPS 600_F	607	1,88	54		8595057628625
	SPS 800_F	757	2,25	40		8595057628632
	SPS 1000_F	1007	2,89	28		8595057628649
	SPS 1200_F	1207	3,39	18		8595057640153
	OKSPS_DB	-	0,01	-		8595057633841

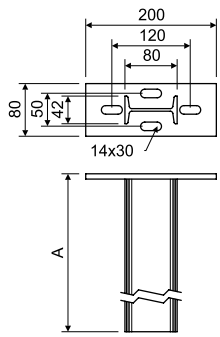


ceiling profile - heavy





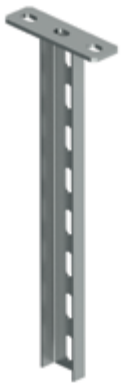
- Designated for one sided and double sided fastening of the clamp brackets DRT.
- Used as a bracket for the ceiling or the floor.
- OKSPT - end seal of SPT.





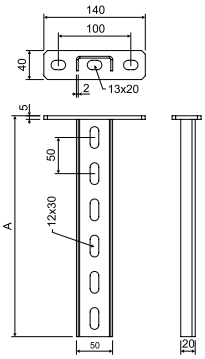
	item	A	⸸	EAN
	SPT 200_F	208	1,80	8595057640221
	SPT 400_F	408	3,05	8595057640238
	SPT 500_F	508	3,60	8595057640245
	SPT 600_F	608	4,20	8595057640252
	SPT 800_F	808	5,50	8595057640269
	SPT 1000_F	1008	6,70	8595057640276
	SPT 1200_F	1208	8,00	8595057640283
	SPT 1500_F	1508	9,90	8595057640290
	SPT 1800_F	1808	12,00	8595057640306
	SPT 2000_F	2008	13,30	8595057640313
	OKSPT_EB	-	0,02	8595057650022

ceiling profile - light





- Designated for hanging at the celling or fixing to the floor.
- DS, DT, and DTN brackets are attached to the profile using S 10X20 bolts, PD 10 washers, and ML 10 flange nuts.
- OKSPLN – end seal of SPLN.





item	A	‡	EAN
SPLN 200_F	201	0,42	8595568920256
SPLN 250_F	255	0,49	8595568920263
SPLN 300_F	301	0,55	8595568920270
SPLN 400_F	401	0,67	8595568920287
SPLN 500_F	501	0,82	8595568920294
SPLN 600_F	601	0,95	8595568920300
SPLN 700_F	705	1,09	8595568920317
SPLN 800_F	805	1,22	8595568920324
SPLN 900_F	905	1,35	8595568920331
SPLN 1000_F	1005	1,49	8595568920348
SPLN 1100_F	1105	1,62	8595568920355
SPLN 1200_F	1205	1,75	8595568920362
OKSPLN_EB	-	0,01	8595568918499

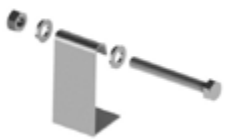
ceiling profile - medium

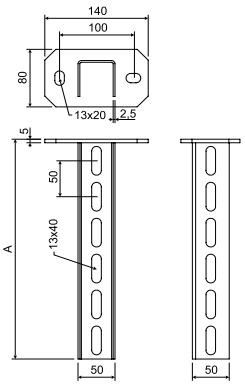




- Designated for hanging at the celling or fixing to the floor.
- Brackets DS, DT, and DTN are mounted on the profile using S 10X20 bolts, PD 10 washers, and ML 10 flange nuts.
- VSPSN – reinforcement – recommended for use, to be inserted into the profile for double-sided installation (10×80 bolt, washers, and nut included).
- OKSPSN – end seal of SPSN.

VSPSN





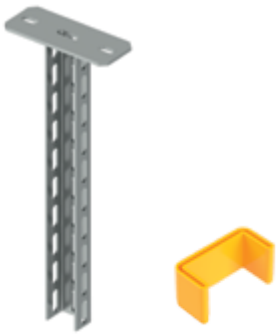


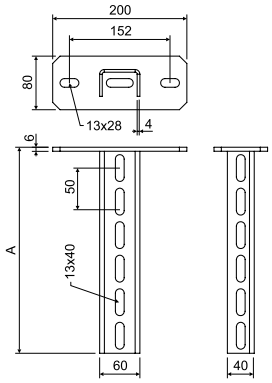
item	A	‡	EAN
SPSN 200_F	205	0,90	8595568917041
SPSN 250_F	255	1,03	8595568917058
SPSN 300_F	305	1,15	8595568917065
SPSN 400_F	405	1,38	8595568917072
SPSN 500_F	505	1,60	8595568917089
SPSN 600_F	605	1,86	8595568917096
SPSN 700_F	705	2,10	8595568917102
SPSN 800_F	805	2,33	8595568917119
SPSN 900_F	905	2,56	8595568917126
SPSN 1000_F	1005	2,80	8595568917133
SPSN 1100_F	1105	3,04	8595568917140
SPSN 1200_F	1205	3,28	8595568917157
SPSN 1500_F	1505	4,00	8595568917164
SPSN 2000_F	2005	5,17	8595568917171
VSPSN_F	-	0,17	8595568917027
OKSPSN_EB	-	0,01	8595568921963

‡ weight kg/pc

F Hot Dip Galvanized
EB PVC

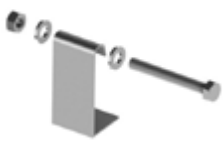
ceiling profile - heavy





- Designated for hanging at the celling or fixing to the floor.
- Using bolts S 10X20, flange nuts ML 10 and washers PD 10 fixing brackets DS, DT and DTN.
- VSPU - reinforcement – recommended for use, to be inserted into the profile for double-sided installation (bolt, washers, and nut included).
- OKSPU – end seal of SPU.

VSPU





item	A	ŧ	EAN
SPU 200_F	206	1,43	8595568916884
SPU 250_F	256	1,60	8595568916891
SPU 300_F	306	1,77	8595568916907
SPU 400_F	406	2,11	8595568916914
SPU 500_F	506	2,45	8595568916921
SPU 600_F	606	2,79	8595568916938
SPU 700_F	706	3,13	8595568916945
SPU 800_F	806	3,46	8595568916952
SPU 900_F	906	3,80	8595568916969
SPU 1000_F	1006	4,14	8595568916976
SPU 1100_F	1106	4,48	8595568916983
SPU 1200_F	1206	4,82	8595568916990
SPU 1500_F	1506	5,84	8595568917003
SPU 2000_F	2006	7,53	8595568917010
VSPU_F	-	0,19	8595568917034
OKSPU_EB	-	0,01	8595568918482

ŧ weight kg/pc

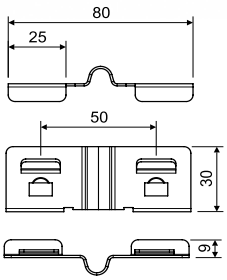
F Hot Dip Galvanized
EB PVC, PE

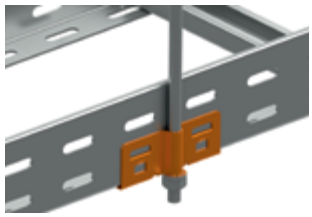
outer side hanger



- The outer side hanger is designed for hanging a cable route running through cable ladders on a ZT 8 threaded rod.
- The hanger is fixed to the route by snapping the studs on the hanger into the ladder sidewall.
- The threaded rod is fixed using a PD 8 washer and an M 8 nut.
- The hanger is designed for cable ladders or for cable trays made from 1.5 mm sheet metal
- Hangers are supplied individually. 2 hangers are needed to create one suspension point.

	item	⭳	↕		EAN
	ZVB 1.5_S	60	0,02		8595568915085

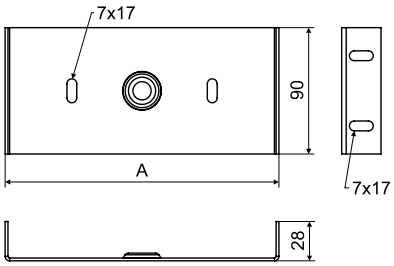




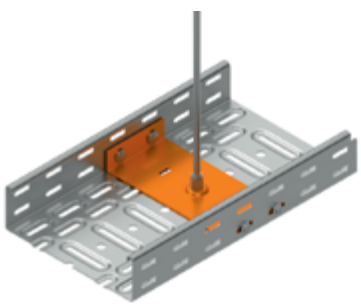
inner hanger



- The hanger is designed for suspending the cable tray from the ceiling using threaded rod ZT 8 or ZT 10.
- The inner hanger is slid into the cable tray before connecting it to the next tray.
- The hanger is fixed to the cable tray using NSM 6X10 bolts.
- The threaded rod is fixed to the hanger using a support nut MN. The nut is selected according to the diameter of the threaded rod. The nut is not included.
- The max. load is 90 kg.

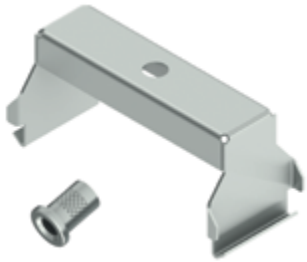


	item	A	↕	⭳T		EAN
	ZVNI 62_S	58	0,14	4		8595568927439
	ZVNI 75_S	71	0.16	4	-	8595568925305
	ZVNI 100_S	96	0,20	4	-	8595568925329
	ZVNI 125_S	121	0,20	4		8595568927453
	ZVNI 150_S	146	0,27	4	-	8595568925343
	ZVNI 200_S	196	0,34	4 - 6	-	8595568925367
	ZVNI 250_S	246	0,41	4 (6)		8595568927477
	ZVNI 300_S	296	0,48	4 - 8	-	8595568925381
	ZVNI 400_S	396	0,62	4 - 8	-	8595568925404
	ZVNI 62_F	58	0,16	4		8595568927446
	ZVNI 75_F	71	0,19	4	-	8595568925312
	ZVNI 100_F	96	0,24	4	-	8595568925336
	ZVNI 125_F	121	0,27	4		8595568927460
	ZVNI 150_F	146	0,31	4	-	8595568925350
	ZVNI 200_F	196	0,39	4 - 6	-	8595568925374
	ZVNI 250_F	246	0,47	4 (6)		8595568927484
	ZVNI 300_F	296	0,56	4 - 8	-	8595568925398
	ZVNI 400_F	396	0,72	4 - 8	-	8595568925411
	MN 8_ZNCR	-	0,01	-		8595568903594
	MN 10_ZNCR	-	0,01	-		8595568903600

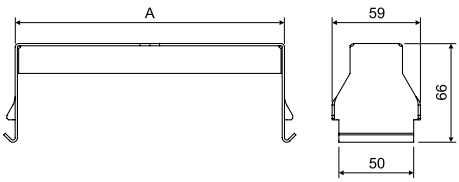


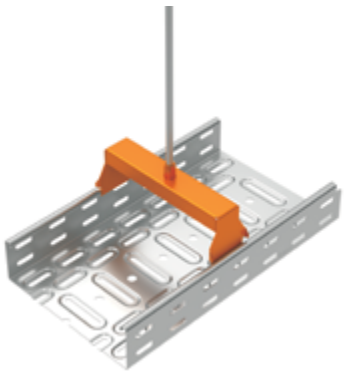
↕ thickness of metal sheet (mm) ⭳ max. load (kg)
↕ hmotnost kg/pc ⭳T amount of bolts for connection
fire resistance E30-E90, P15-R - P90-R, PS15-PS90
ZM Magnelis®
ZNCR bichromatic galvanized
F Hot Dip Galvanized
S Pre-Galvanized

outer hanger



- The hanger is designed for suspending the cable tray or cable ladder from the ceiling using threaded rod ZT 8 or ZT 10.
- The tray or ladder is suspended on the sidewall flange.
- The threaded rod is fixed to the bracket using a sliding support nut MN. The nut is selected according to the diameter of the threaded rod. The nut is not part of the hangings.
- The hanging is suitable for hang-up the trays with partition.
- The max. load is 90 kg





	item	A	‡		EAN
	ZVNE 50_S	30	0,10	-	8595057628786
	ZVNE 62_S	42	0,11	-	8595568903013
	ZVNE 75_S	55	0,12	-	8595057628793
	ZVNE 100_S	80	0,14	-	8595057628809
	ZVNE 125_S	105	0,16	-	8595568903020
	ZVNE 150_S	130	0,18	-	8595057628816
	ZVNE 200_S	180	0,22	-	8595057628823
	ZVNE 250_S	230	0,27	-	8595057639546
	ZVNE 300_S	280	0,31	-	8595057639553
	ZVNE 400_S	380	0,39	-	8595057639560
	ZVNE 50_ZM	30	0,10	-	8595568944177
	ZVNE 62_ZM	42	0,11	-	8595568944245
	ZVNE 75_ZM	55	0,12	-	8595568944184
	ZVNE 100_ZM	80	0,14	-	8595568944191
	ZVNE 125_ZM	105	0,16	-	8595568944252
	ZVNE 150_ZM	130	0,18	-	8595568944207
	ZVNE 200_ZM	180	0,22	-	8595568944214
	ZVNE 250_ZM	230	0,27	-	8595568944269
	ZVNE 300_ZM	280	0,31	-	8595568944221
	ZVNE 400_ZM	380	0,39	-	8595568944238
	ZVNE 50_F	30	0,12	-	8595057662421
	ZVNE 62_F	42	0,12	-	8595568923448
	ZVNE 75_F	55	0,14	-	8595057662438
	ZVNE 100_F	80	0,16	-	8595057662445
	ZVNE 125_F	105	0,18	-	8595568923455
	ZVNE 150_F	130	0,21	-	8595057662452
	ZVNE 200_F	180	0,24	-	8595057662469
	ZVNE 250_F	230	0,30	-	8595057662476
	ZVNE 300_F	280	0,34	-	8595057662483
	ZVNE 400_F	380	0,43	-	8595057662490
	MN 8_ZNCR	-	0,01	🔥	8595568903594
	MN 10_ZNCR	-	0,01	🔥	8595568903600

‡ weight kg/pc

amount of bolts for connection

🔥 fire resistance E30-E90, P15-R - P90-R, PS15-PS90

ZNCR bichromatic galvanized

ZM Magnelis®

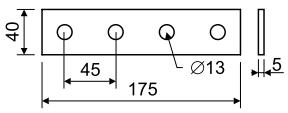
F Hot Dip Galvanized

S Pre-Galvanized

assembly accessories

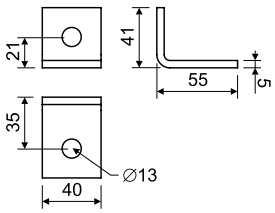
- Designed for use with mounting profiles MP 41X21 and MP 41X41, or with ceiling profiles SPS.
- Fastening is done with bolts S 10X20, S 10X25 or S 10X30 and sliding nuts PM 41 M 10.
- The Ø13 mm hole applies to products until stock is depleted. Newly supplied products are equipped with an Ø11 mm hole.

item	↕	ǂ	EAN
VS 41X03_F	5	0,26	8595057633070



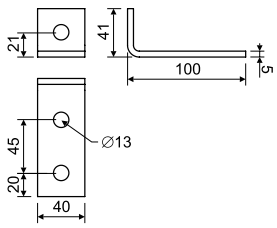


item	↕	ǂ	EAN
VS 41X05_F	5	0,13	8595057640450



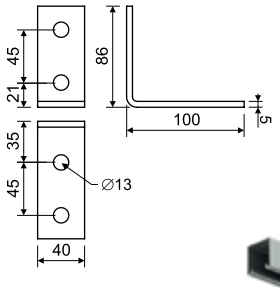


item	↕	ǂ	EAN
VS 41X06_F	5	0,19	8595057640467



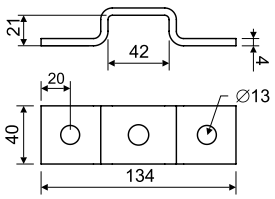


item	↕	ǂ	EAN
VS 41X08_F	5	0,26	8595057640481



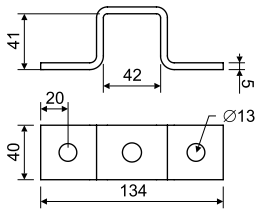


item	↕	ǂ	EAN
VS 41X12_F	4	0,26	8595057640528



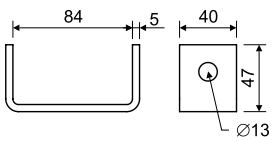


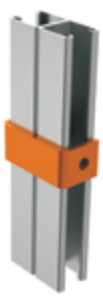
item	↕	ǂ	EAN
VS 41X13_F	5	0,32	8595057640535



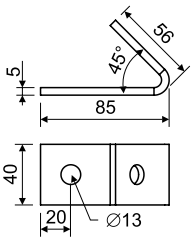


item	↕	ǂ	EAN
VS 41X16_F	5	0,27	8595057634985



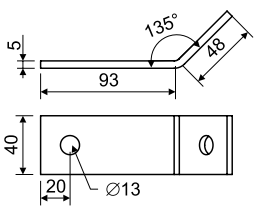


item	↕	ǂ	EAN
VS 41X17_F	5	0,24	8595057640566





item	↕	ǂ	EAN
VS 41X18_F	5	0,21	8595057640573





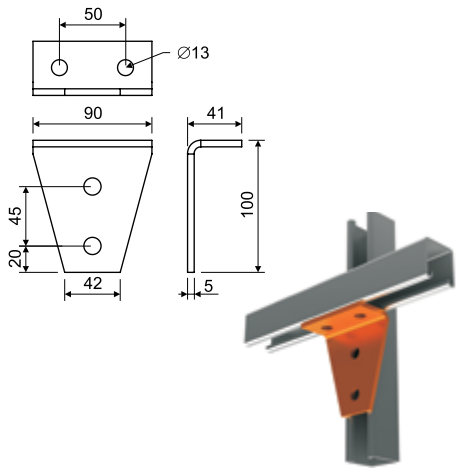
↕ thickness of metal sheet (mm)

ǂ weight kg/pc

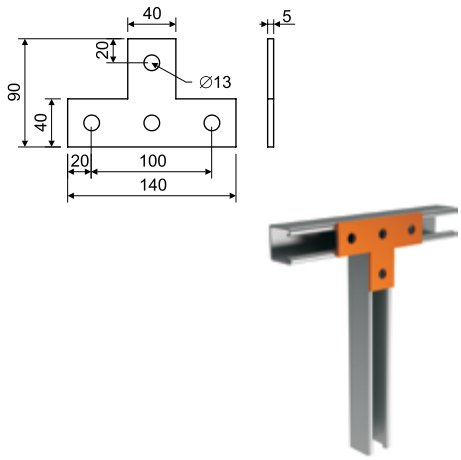
F Hot Dip Galvanized

assembly accessories

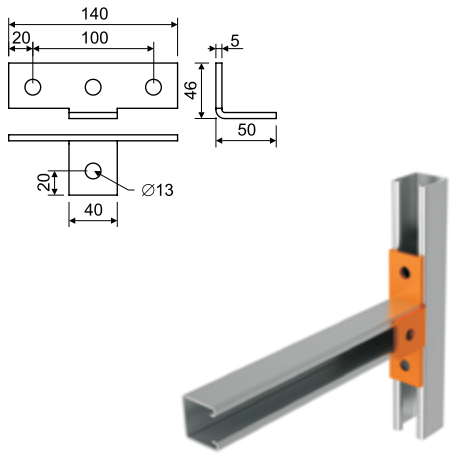
item	↕	ǂ	EAN
VS 41X20_F	5	0,35	8595057640597



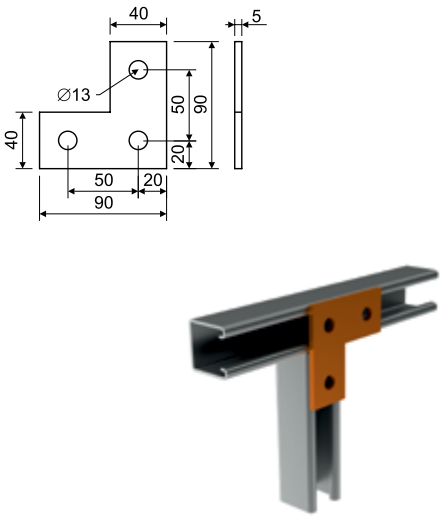
item	↕	ǂ	EAN
VS 41X27_F	5	0,29	8595057640610



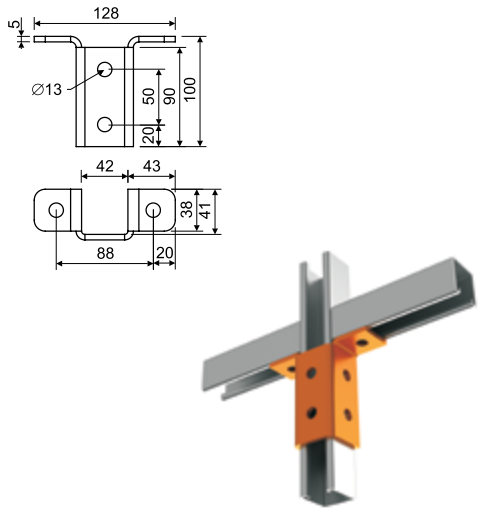
item	↕	ǂ	EAN
VS 41X31_F	5	0,34	8595057633087



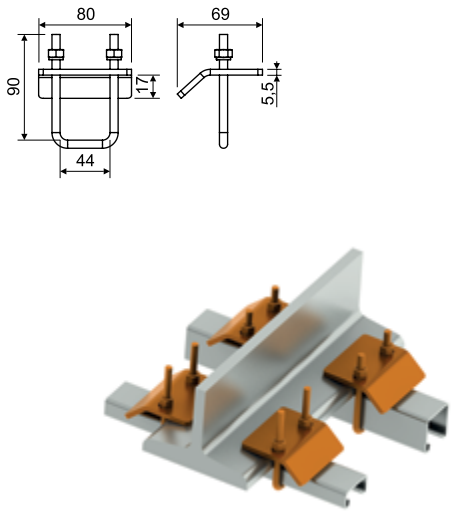
item	↕	ǂ	EAN
VS 41X36_F	5	0,21	8595057640658



item	↕	ǂ	EAN
VS 41X37_F	5	0,47	8595057640665



item	↕	ǂ	EAN
VS 41X41_F	6	0,37	8595057631519



↕ thickness of metal sheet (mm)

ǂ weight kg/pc

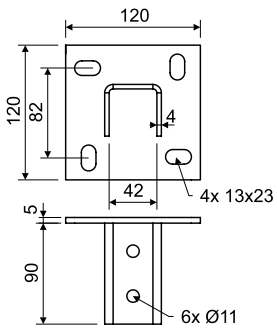
F Hot Dip Galvanized

head for mounting profiles



- The head is designed for fixing the mounting profile to the ceiling or floor.
- The mounting profile MP 41X41 is fixed into the head using S 10X70 bolts, PD 10 washers and ML 10 flange nuts.
- The mounting profile MP 41X21 is fixed into the head using S 10X50 bolts, PD 10 washers and ML 10 flange nuts.

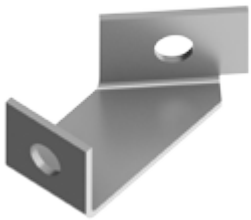
	item	↕	ǂ		EAN
	HMP 41_F	4/5	1,00		8595568932549





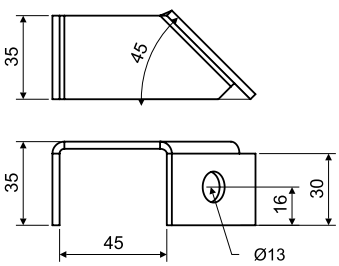


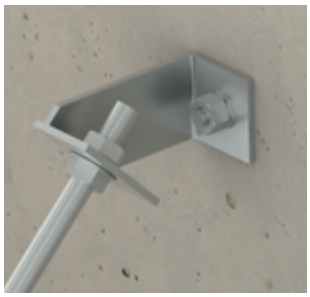
mounting angle



- The angle is designed for securing the end of the DT bracket to the wall.
- The angle is fixed to the bracket using the DT OKO safety eye; the angle is fixed to the wall using the KPO 10 anchor. Connection of the angles is made using threaded rod ZT 8 and ML 8 flange nuts.
- Ø13 mm holes apply to products until stock is depleted; new products will have Ø11 mm holes.

	item	↕	ǂ		EAN
	VS 41X45_F	5	0,10		8595057667570

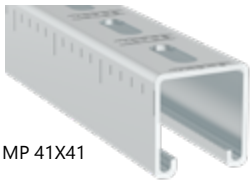


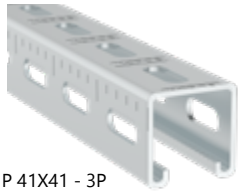




assembly profile

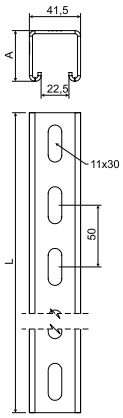

MP 41X21


MP 41X41


MP 41X41 - 3P



- Suitable for creating of beam for cable traces to be carried on thread bars or for creating of supporting structure by help of assembling accessory, see pg. 85.
- The cable tray or cable ladder is fixed to the mounting profile using NSM 6X20 bolts and PVL washers.
- Wire mesh trays are fixed to the mounting profile using the DZS coupling.
- Assembly profile MP 41X21X2.5 can be terminated with OKSPL protective cover.
- Assembly profile MP 41X41X2.5 can be terminated with OKSPS protective cover.



	item	A	L	↕		EAN
	MP 41X21X1.5_S3	21	3000	1,5		8595568943071
	MP 41X21X1.5_S2	21	2000	1,5		8595568943088
	MP 41X21X2.5_S3	21	3000	2,5		8595568943040
	MP 41X41X2.5-3P_S3	41	3000	2,5		8595568943095
	MP 41X21X2.5_ZM3	21	3000	2,5		8595568943064
	MP 41X41X2.5-3P_ZM3	41	3000	2,5		8595568943118
	MP 41X41X2.5_ZM3	41	2000	2,5		8595568943125
	MP 41X41X2.5_ZM6	41	6000	2,5		8595568943132
	MP 41X21X2.5_F3	21	3000	2,5		8595568943057
	MP 41X41X2.5-3P_F3	41	3000	2,5		8595568943101
	OKSPL_DB	-	-	-		8595057640870
	OKSPS_DB	-	-	-		8595057633841

supporting profile

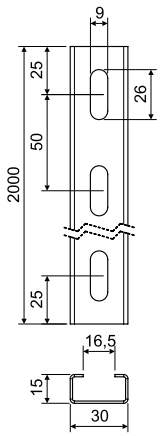


Support profile + threaded rods:

- The support profile is suspended on two threaded rods ZT 8 with ML 8 nuts.
- The cable tray or cable ladder is fixed to the support profile using NSM 6X10 bolts.
- The support profile is recommended for a maximum route width of 300 mm.
- Max. load per mounting point is 100 kg.

Support profile + cable clamps:

- Cables are fixed to the support profile using PKC cable clamps.
- The support profile is fixed using KPO 6 anchors or SB 6.3X35 concrete bolts.

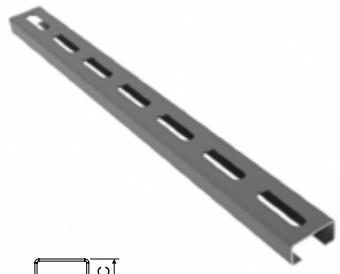


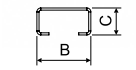
	item	↕	ǂ		EAN
	NP 30X15X1.20_S	1,2	0,58		8595568930316
	NP 30X15X1.20_ZM	1,2	0,58		8595568939609





load bearing profile





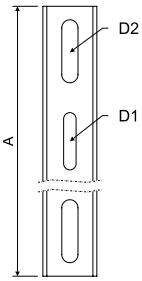
- The load bearing profile NP 100 to NP 350 is fixed by using two threaded rods ZT 8 + nut ML 8.
- The load bearing profile NP 450 to NP 650 is fixed by using two threaded rods ZT 8 or ZT 10 + nut ML 8 or ML 10.
- The size of the load bearing profile is determined according to the width of the cable tray + 50 mm, for example for a cable tray that is 100 mm wide, order NP 150.
- The cable tray or cable ladder is fixed to the profile using an NSM 6X10 bolt.

NP 100
NP 150
NP 200
NP 250
NP 350

NP 450
NP 550
NP 650

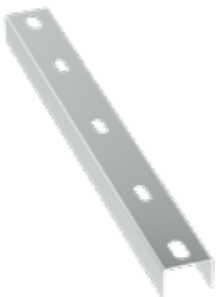


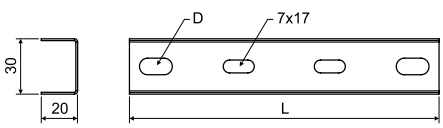




	item	A	B	C	D1 (inner)	D2 (outer)	↕	↓	↨	for KZI		EAN
	NP 100_S	100	30	15	-	Ø9 x 35	1,2	100	0,06	KZI ..X50		8595057639768
	NP 150_S	150	30	15	Ø7 x 32	Ø9 x 35	1,2	100	0,08	KZI ..X75, X100		8595057639775
	NP 200_S	200	30	15	Ø7 x 32	Ø9 x 35	1,2	100	0,11	KZI ..X150		8595057639782
	NP 250_S	250	30	15	Ø7 x 32	Ø9 x 35	1,2	100	0,14	KZI ..X200		8595057639799
	NP 350_S	350	30	15	Ø7 x 32	Ø9 x 35	1,2	100	0,20	KZI ..X300		8595057630864
	NP 450_S	450	41,5	21	Ø7 x 32	Ø11 x 35	1,5	150	0,50	KZI ..X400	-	8595057639812
	NP 550_S	550	41,5	21	Ø7 x 32	Ø11 x 35	1,5	150	0,62	KZI ..X500	-	8595057639829
	NP 650_S	650	41,5	21	Ø7 x 32	Ø11 x 35	1,5	150	0,73	KZI ..X600	-	8595057639836
	NP 100_ZM	100	30	15	-	Ø9 x 35	1,5	100	0,08	KZI ..X50		8595568939487
	NP 150_ZM	150	30	15	Ø7 x 32	Ø9 x 35	1,5	100	0,10	KZI ..X75, X100		8595568939494
	NP 200_ZM	200	30	15	Ø7 x 32	Ø9 x 35	1,5	100	0,14	KZI ..X150		8595568939500
	NP 250_ZM	250	30	15	Ø7 x 32	Ø9 x 35	1,5	100	0,17	KZI ..X200		8595568939517
	NP 350_ZM	350	30	15	Ø7 x 32	Ø9 x 35	1,5	100	0,25	KZI ..X300		8595568939524
	NP 450_ZM	450	41,5	21	Ø7 x 32	Ø11 x 35	1,5	150	0,50	KZI ..X400	-	8595568939531
	NP 550_ZM	550	41,5	21	Ø7 x 32	Ø11 x 35	1,5	150	0,62	KZI ..X500	-	8595568939548
	NP 650_ZM	650	41,5	21	Ø7 x 32	Ø11 x 35	1,5	150	0,73	KZI ..X600	-	8595568939555

hanger



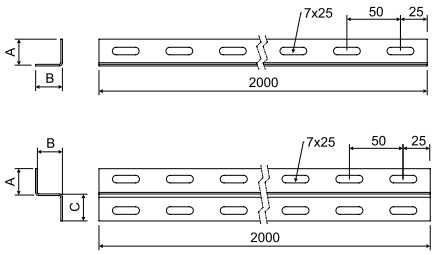


- In combination with threaded rods, the hanger is used for suspending the tray.
- The hanger is suspended on two threaded rods ZT 8 with ML 8 nuts. The NZ 500 hanger can be suspended on threaded rods ZT 10 with ML 10 nuts.
- The cable tray is fixed to the hanger using NSM 6X10 bolts.

	item	L	D	↕	↨	EAN
	NZ 62_S	107	∅ 9 x 18	1,0	0,06	8595057683839
	NZ 125_S	170	∅ 9 x 18	1,0	0,09	8595057683808
	NZ 250_S	295	∅ 9 x 18	1,0	0,16	8595057683815
	NZ 500_S	545	∅ 11 x 20	1,0	0,29	8595057683822
	NZ 62_ZM	107	∅ 9 x 18	1,0	0,06	8595568939562
	NZ 125_ZM	170	∅ 9 x 18	1,0	0,09	8595568939579
	NZ 250_ZM	295	∅ 9 x 18	1,0	0,16	8595568939586
	NZ 500_ZM	545	∅ 11 x 20	1,0	0,29	8595568939593

L-profil and Z-profil



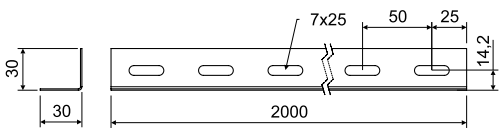


	item	A	B	C	↕	‡	EAN
	L 25X1.25_S	25	25	-	1,25	0,83	8595057631564
	L 25X50X1.25_S	25	50	-	1,25	1,29	8595057640405
	L 50X50X1.25_S	50	50	-	1,25	1,71	8595057631571
	L 50X50X1.50_S	50	50	-	1,50	2,05	8595057690301
	Z 25X1.50_S	25	25	25	1,50	1,48	8595057631557
	Z 50X1.50_S	50	50	50	1,50	3,01	8595057631540
	L 25X1.50_ZM	25	25	-	1,50	0,99	8595568944900
	L 25X50X1.50_ZM	25	50	-	1,50	1,55	8595568944917
	L 50X50X1.50_ZM	50	50	-	1,50	2,05	8595568944924
	Z 25X1.50_ZM	25	25	25	1,50	1,48	8595568944306
	Z 50X1.50_ZM	50	50	50	1,50	3,01	8595568944313
	L 25X1.25_F	25	25	-	1,25	0,97	8595057662100
	L 25X50X1.25_F	25	50	-	1,25	1,49	8595057662124
	L 50X50X1.25_F	50	50	-	1,25	1,98	8595057662148
	Z 25X1.50_F	25	25	25	1,50	1,48	8595057665293
	Z 50X1.50_F	50	50	50	1,50	3,01	8595057665309



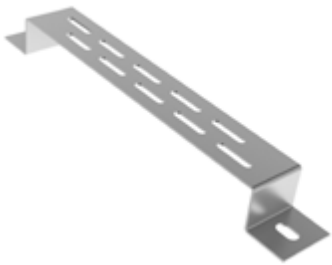
supporting corner

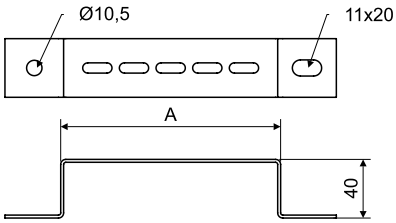


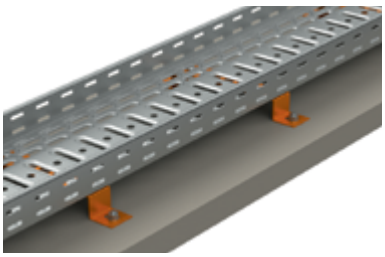


	item	↕	‡	EAN
	NU 30X30_S	1,0	0,80	8595057680944
	NU 30X30_ZM	1,0	0,80	8595568944320
	NU 30X30_F	1,0	0,93	8595057695832

floor bracket





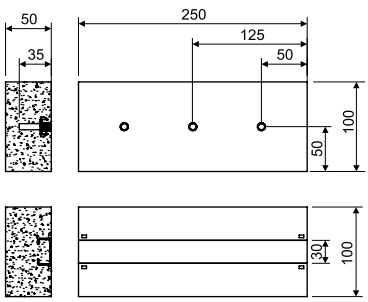


- It is used to attach a cable tray to the floor or wall.
- Attachment to the wall is carried using the Ø10 mm wall clamps.
- Cable tray is installed to VMB using the bolts NSM 6X10 (pg. 97).

	item	A	ǂ	EAN
S	**VMB 100_S**	100	0,15	8595057644281
S	**VMB 150_S**	150	0,17	8595057644298
S	**VMB 200_S**	200	0,20	8595057644304
S	**VMB 300_S**	300	0,32	8595057644311
S	**VMB 400_S**	400	0,39	8595057644328
S	**VMB 500_S**	500	0,46	8595057644335
S	**VMB 600_S**	600	0,53	8595057644342
F	**VMB 100_F**	100	0,17	8595057664777
F	**VMB 150_F**	150	0,20	8595057664784
F	**VMB 200_F**	200	0,23	8595057664791
F	**VMB 300_F**	300	0,37	8595057664807
F	**VMB 400_F**	400	0,44	8595057664814
F	**VMB 500_F**	500	0,51	8595057664821
F	**VMB 600_F**	600	0,58	8595057664838

support washer for the roof







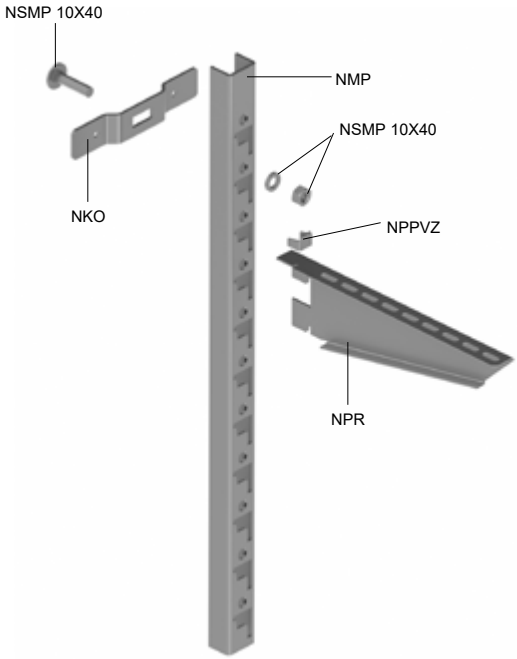
- The washers are designed to support cable trays on flat roofs.
- The washer is made of a rubber material that is UV resistant.
- On the underside of the pad there is an aluminium foil with an anti-slip treatment, which acts as an insu lating layer for direct contact with roofs made of PVC material.
- The PPS1 L30_GZM washer has a press-fit rail made of steel with a Magnelis® finish
- Installation of the cable tray is done by direct attachment with a self-drilling bolt (e.g. STP 4.2X25 TX) through the bottom of the cable tray into the pad at the location of the metal rail.
  The wire mesh tray is installed using direct fixing with a self-tapping bolt (e.g., STP 4.2X25 TX) together with a DZCZ central hanger or a 6706_PO clamp positioned under the wires in the tray bottom onto a support at the metal strip location.
- The PPS 3XM8_GMLZ washer has 3 pcs of M 8 nuts pressed in.
- The cable tray is attached to the washer with an S 8X20 bolt.
- The wire mesh tray is fixed to the support using a DZCZ central bracket and an S 8X20 bolt.
  The recommended maximum tightening torque is 2 Nm.
- The washer can also be used as a foot for attaching other support structures e.g. mounting profiles, ceiling profiles etc.

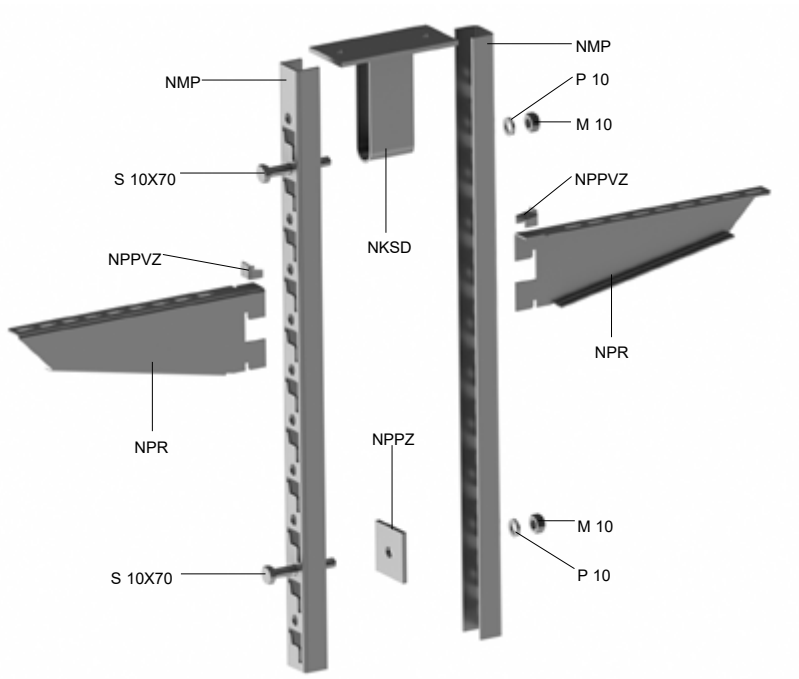
	item	ǂ	EAN
	PPS1 L30_GZM	1,15	8595568941169
	PPS1 3XM8_GMLZ	1,03	8595568941152

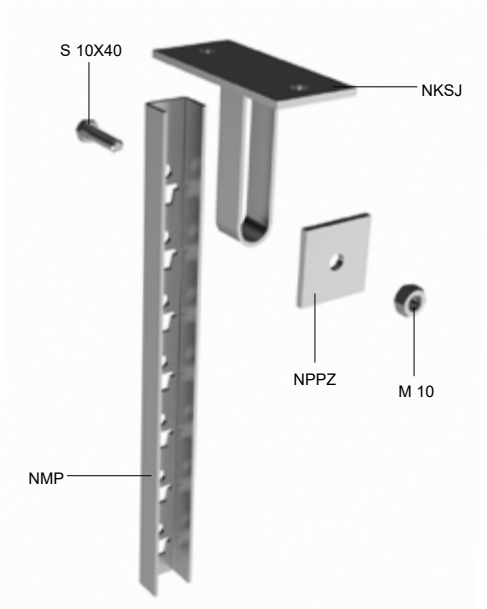
ǂ weight kg/pc

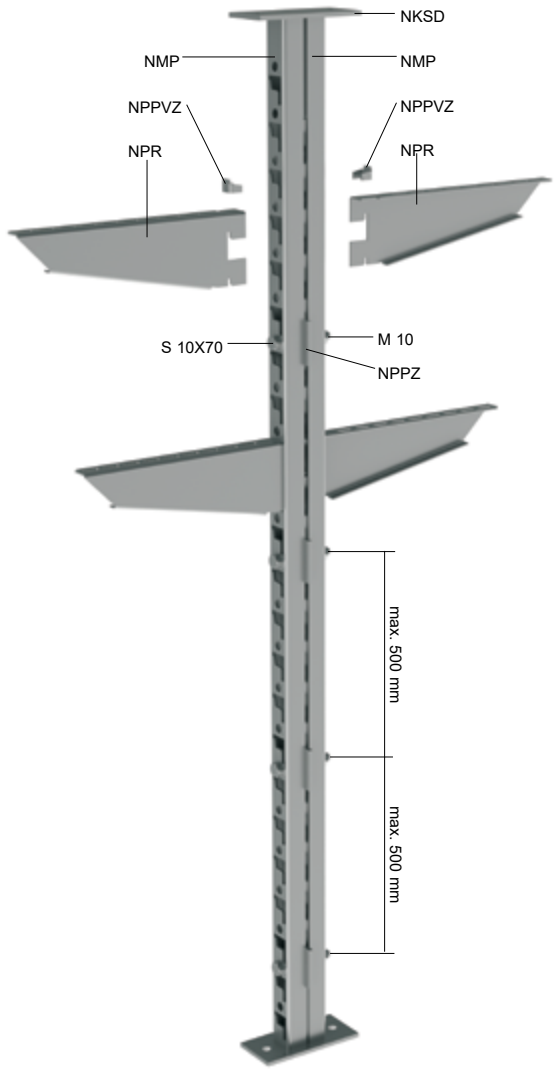
F Hot Dip Galvanized
S Pre-Galvanized

examples of assemblies - assembly profiles, supports, brackets







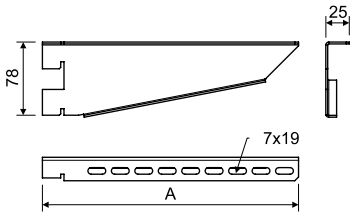


item	description	page
NKO	bracket	93
NKSD	double vertical bracket	93
NKSJ	single vertical bracket	92
NMP	assembly profile	92
NPPVZ	safety lock	92
NPPZ	washer	92
NPR	clamp support	92
NSMP 10X40	bolt + nut + washer	97
S 10X40	bolt	98
S 10X70	bolt	98
M 10	nut	99
PD 10	washer	100

The distance of suspended assembly profiles depends on the ceiling material, the load carrying capacity of fasteners and the weight of cables installed.
The brackets are attached to the ceiling and the floor in the same way.

clamp support



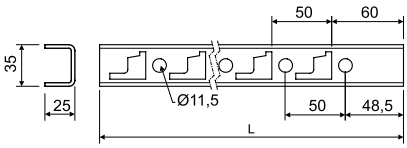


- The tray is fixed to the support using 2 pcs of NSM 6X10 bolts (pg. 97).
- When installed in an assembly profile, the support has to be steadyd by a safety lock NPPVZ (pg. 92).
- Example of assembling - see pg. 91.
- These items can also be ordered in a varnished version. For more information, see pg. 271.

item	A	↕	ǂ	EAN
NPR 125_S	148	2,0	0,17	8595057654471
NPR 250_S	273	2,0	0,35	8595057678668
NPR 500_S	523	2,0	0,69	8595057678699
NPR 125_F	148	2,0	0,20	8595057697416
NPR 250_F	273	2,0	0,40	8595057697423
NPR 500_F	523	2,0	0,80	8595057697430

assembly profile

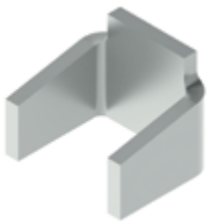


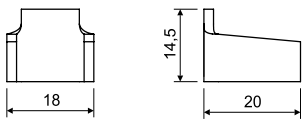


- For the attachment of the assembly profile there is used the bracket NKO (pg. 93).
- Example of assembling - see pg. 91.
- These items can also be ordered in a varnished version. For more information, see pg. 271.

item	L	ǂ	↓T	EAN
NMP 300_F	300	0,45	2	8595057654235
NMP 600_F	600	0,94	2	8595057677852
NMP 800_F	800	1,24	3	8595057677869
NMP 1200_F	1200	1,84	3	8595057677838
NMP 2000_F	2000	3,08	4	8595057677845
NMP 3000_F	3000	4,82	4	8595568935540

safety lock

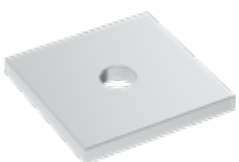


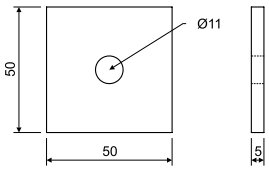


- The safety lock is used to steady clamp supports type NPR (pg. 92) in the assembly profile.
- Example of assembling - see pg. 91.

item	ǂ	EAN
NPPVZ_S	0,008	8595057654143

washer





- The fixation is made by the bolt S 10X40 for single-sided assembling or S 10X70 for both-sided assembling (pg. 98)
- Example of assembling - see pg. 91.
- These items can also be ordered in a varnished version. For more information, see pg. 271.

item	ǂ	EAN
NPPZ_F	0,09	8595057667174

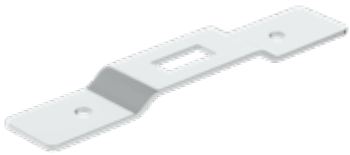
↕ thickness of metal sheet (mm) ǂ weight kg/pc

↓T amount of bolts for connection

F Hot Dip Galvanized

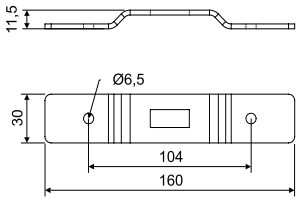
S Pre-Galvanized

bracket



- The bracket is designed for fixing the mounting profile to the wall.
- For the attachment of the assembly profile to the bracket there is used the NSMP 10X40 (pg. 97).
- Brackets may be attached to a wall by using Ø6 mm anchors, or with a nailer.
- Example of assembling - see pg. 91.
- These items can also be ordered in a varnished version. For more information, see pg. 271.

	item	↕	ǂ	EAN
	NKO_F	3,0	0,11	8595057653788

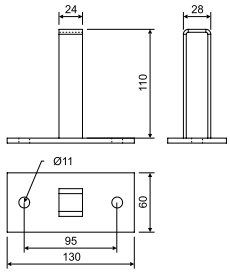


single vertical bracket



- The bracket is designed to anchor the mounting profile on the ceiling or floor.
- The fixing is carried out by the bolt S 10X40 (pg. 98).
- Example of assembling - see pg. 91.
- These items can also be ordered in a varnished version. For more information, see pg. 271.

	item	ǂ	EAN
	NKSJ_F	0,45	8595057654242

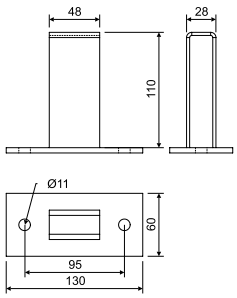


double vertical bracket



- The bracket is designed to anchor the mounting profile on the ceiling or floor.
- The fixing is carried out by the bolt S 10X70 (pg. 98).
- Example of assembling - see pg. 91.
- These items can also be ordered in a varnished version. For more information, see pg. 271.

	item	ǂ	EAN
	NKSD_F	0,58	8595057667167

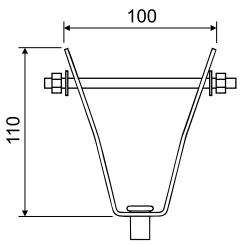


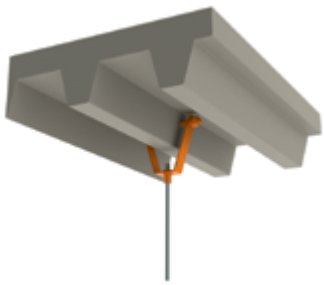
bracket for trapeze ceilings



- The DSOS holder is designed for fitting a threaded rod and attaching it to trapezoidal sheet metal.
- The DSOS comes with M 8 or M 10 adjusting nuts.
- The choice of DSOS 8 or DSOS 10 depends on which threaded rod is used, the ZT 8 or the ZT 10.
- For attachment to a trapezoidal ceiling the hinge is fitted with a transverse M8 x 120 mm pin. The pin has a washer and nut on both sides.

	item	‡	⭳		EAN
	DSOS 8_ZNCR	0,17	130	🔥	8595568923783
	DSOS 10_ZNCR	0,17	130	🔥	8595568923790





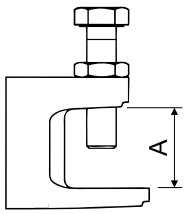
thickness metal sheet of trapeze ceiling (mm)	load (N)
0,63-0,70	630
0,70-0,80	740
0,80-1,00	850
1,00-1,20	1050
1,20-1,50	1250
>1,50	1550
The loading values mentioned in the table are valid only for constant load.	

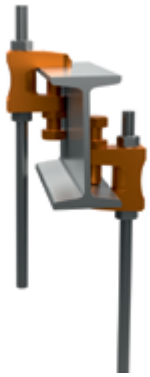
fixation clamp

- The fixation clamp is used for fixation of the threaded rod on I profile, a packing includes a fixation bolt and a lock nut.



	item	‡	used with		A	EAN
	US 1_ZNCR	0,14	ZT 8	🔥	0 - 20	8595057632691
	US 2_ZNCR	0,15	ZT 10	-	0 - 20	8595057629912



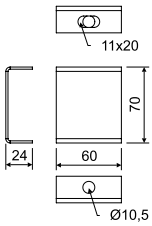


‡ weight kg/pc ⭳ max. load (kg) 🔥 fire resistance E30-E90, P15-R - P90-R, PS15-PS90 ZNCR bichromatic galvanized

↕ thickness of metal sheet (mm)

ceiling bracket



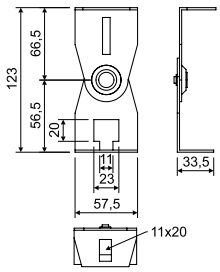


- The bracket is designed for attaching an M8 or M10 threaded rod (ZT 8 or ZT 10) to the ceiling.
- The bracket is fixed to the ceiling using an Ø10 mm anchor.

	item	‡	EAN
	DSZT_S	0,10	8595057633483
	DSZT_F	0,12	8595057662506

adjustable ceiling bracket





- Used together with a threaded rod ZT 8 or ZT 10 to a slightly inclined ceiling.
- The bracket is fixed to the ceiling using a Ø10 mm anchor.

	item	‡	⭳	EAN
	DSS_S	0,17	1	8595057633599

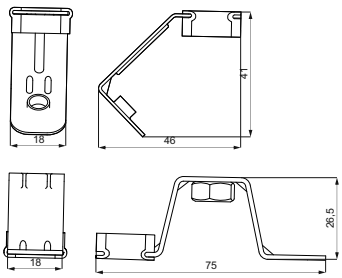
hanger for threaded rods

ZZT 6



ZZT 8





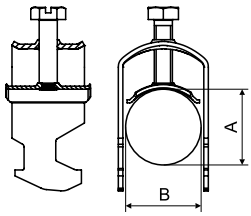
- The metal hanger is designed for anchoring threaded rods to the ceiling.
- The hangers are equipped with a plastic part, which is placed on the nose of a gas nailer, allowing one-handed installation.

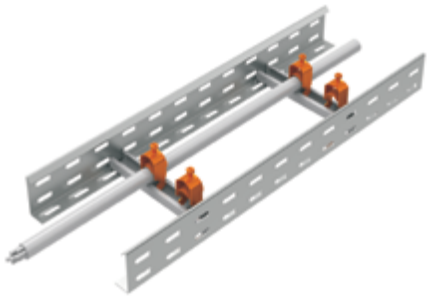
	item	‡	thread		EAN
	ZZT 6_PO	0,014	M6	🔥	8595568941107
	ZZT 8_PO	0,034	M8	🔥	8595568941114

‡ weight kg/pc
⭳ max. load (kg)
possibility of nailing
fire resistance E30-E90, 15-R - P90-R,PS15-PS90
F Hot Dip Galvanized
PO/S Pre-Galvanized

cable clamp for cable ladders / trays







- The clamps are designed to fix cables to the rungs of cable ladders, to NPKV support profiles in cable trays, or to NP 30X15 and NP 100 to NP 350 support profiles.
- A min and B indicate the minimum and maximum diameter of the cable being fastened.
- For basic orientation in choosing cable clamps, use mentioned propositions.
- The size of the cable clamp must be selected according to the cable cross-section. Each cable may vary depending on the manufacturing technology of the individual cable plants.

	item	A min	B	‡		EAN
	PKC1 1198_F	6	12	0,03		8595057644878
	PKC1 1199_F	7	16	0,03		8595057644885
	PKC1 1200_F	10	19	0,04		8595057642232
	PKC1 1201_F	14	23	0,04		8595057642249
	PKC1 1202_F	20	26	0,04		8595057635586
	PKC1 1203_F	24	30	0,06		8595057635517
	PKC1 1204_F	25	34	0,07		8595057635401
	PKC1 1205_F	29	38	0,08		8595057635524
	PKC1 1206_F	32	43	0,09		8595057644892
	PKC1 1207_F	42	46	0,10		8595057644908
	PKC1 1208_F	44	50	0,10		8595057635531
	PKC1 1209_F	50	54	0,11		8595057635593
	PKC1 1210_F	51	58	0,14		8595057644915
	PKC1 1211_F	55	63	0,16		8595057644922
	PKC1 1212_F	59	69	0,16		8595057635609

	Possibility to cover the route with a lid when using the maximum cable diameter in the cable clamp.					Maximum number of clamps side by side											
	Height of the cable tray / ladder					Height of the cable tray / ladder											
item	50	60	85	100	110	50	62	75	100	125	150	200	250	300	400	500	600
PKC1 1198_F	no	yes	yes	yes	yes	3	4	6	8	10	8	12	20	18	24	30	37
PKC1 1199_F	no	yes	yes	yes	yes	2	3	4	6	7	7	9	15	14	19	24	29
PKC1 1200_F	no	no	yes	yes	yes	2	3	3	5	6	5	7	13	11	15	19	23
PKC1 1201_F	no	no	yes	yes	yes	2	2	3	4	5	5	6	10	10	14	17	21
PKC1 1202_F	no	no	yes	yes	yes	1	2	2	3	4	4	5	9	8	11	14	17
PKC1 1203_F	no	no	yes	yes	yes	1	1	2	3	4	3	5	8	7	10	12	15
PKC1 1204_F	no	no	yes	yes	yes	1	1	2	2	3	3	4	7	6	9	11	14
PKC1 1205_F	no	no	yes	yes	yes	1	1	1	2	3	3	4	6	6	8	10	13
PKC1 1206_F	no	no	no	yes	yes	1	1	1	2	2	2	3	5	5	7	9	11
PKC1 1207_F	no	no	no	no	yes	1	1	1	2	2	2	3	5	5	7	8	10
PKC1 1208_F	no	no	no	no	yes	0	1	1	1	2	2	3	4	5	6	8	10
PKC1 1209_F	no	no	no	no	yes	0	1	1	1	2	2	3	4	4	6	7	9
PKC1 1210_F	no	no	no	no	no	0	1	1	1	2	2	2	4	4	5	7	8
PKC1 1211_F	no	no	no	no	no	0	0	1	1	1	1	2	3	4	5	6	8
PKC1 1212_F	no	no	no	no	no	0	0	1	1	1	1	2	3	3	5	6	7

carriage bolt and lock nut



- It is used to steady connections between cable trays, ladders, and accessories, or to attach them to a support.
- Conductive bonding of the cable route is ensured by a rigid connection according to ČSN EN 61537.
- The GMT surface treatment is used for cable routes in the hot dip galvanizing (F) and Magnelis® (ZM).

item	↺		EAN
NSM 6X10_ZNCR	100	🔥	8595057667129
NSM 6X20_ZNCR	100	🔥	8595568934062
NSM 6X10_GMT	100	🔥	8595057692947
NSM 6X20_GMT	100	🔥	8595568934079

bolt + nut + lock washers



- Used to ensure conductive bonding according to ČSN EN 61537 – suitable for painted trays.

item	↺	EAN
NSMP 5X10_ZNCR	100	8595568903839
NSMP 6X10_ZNCR	100	8595057679078

carriage bolt + nut + flat washer



- It is used to fasten the NMP mounting profile to the NKO console (see pg. 93).

item	↺	EAN
NSMP 10X40_ZNCR	50	8595568904096

clamp



- Is used for securing the connection of cable trays.

item	↺	EAN
KSV_GMT	100	8595057627765







mounting clamp



- For fastening the cable ladder to the bracket.
- Two pieces per bracket.

	item	‡	EAN
	SUP_S	0,02	8595057635371
	SUP_F	0,02	8595057665712





threaded rod



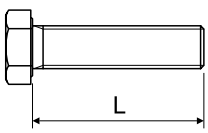
- It is used to suspend the cable route from the ceiling.
- According to the standard DIN 976.
- Strength class 4.8

	item	thread	↓	‡	length		EAN
	ZT 6_ZNCR	M6	0,85	0,17	2000		8595057633490
	ZT 8_ZNCR	M8	3,43	0,31	2000		8595057631793
	ZT 10_ZNCR	M10	5,63	0,46	2000		8595057628922
	ZT 8_ZNC1	M8	3,43	0,31	1000		8595057692848
	ZT 8_ZNC3	M8	3,43	0,31	3000		8595568925022
	ZT 10_ZNC3	M10	5,63	0,46	3000		8595568925039
	ZT 10_GMT	M10	5,63	0,46	1000		8595568928016

hexagon head bolt

- According to the standard DIN 933.





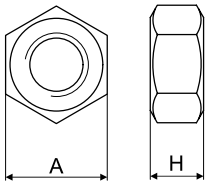
	item	L	thread	‡		EAN
	S 6X20_ZNCR	20	M6	0,006		8595057630451
	S 6X30_ZNCR	30	M6	0,008		8595057640733
	S 8X20_ZNCR	20	M8	0,012		8595057638822
	S 8X25_ZNCR	25	M8	0,014		8595568934017
	S 8X30_ZNCR	30	M8	0,016		8595057640740
	S 8X40_ZNCR	40	M8	0,019		8595057640757
	S 8X50_ZNCR	50	M8	0,022		8595057640764
	S 8X70_ZNCR	70	M8	0,028		8595057640771
	S 10X20_ZNCR	20	M10	0,021		8595057628724
	S 10X25_ZNCR	25	M10	0,024		8595568934031
	S 10X30_ZNCR	30	M10	0,026		8595057628731
	S 10X40_ZNCR	40	M10	0,031		8595057640788
	S 10X50_ZNCR	50	M10	0,036		8595057698123
	S 10X70_ZNCR	70	M10	0,046		8595057698130
	S 8X20_GMT	20	M8	0,012		8595568928696
	S 8X30_GMT	30	M8	0,020		8595568924024
	S 10X20_GMT	20	M10	0,021		8595568928702
	S 10X30_GMT	30	M10	0,026		8595568934048
	S 10X40_GMT	40	M10	0,031		8595568928719
	S 10X70_GMT	70	M10	0,085		8595568929907

‡ weight kg/m, kg/pc ↓ max. load (kg) fire resistance E30-E90, P15-R - P90-R, PS15-PS90 ZNCR bichromatic galvanized GMT non electrolytic plating

hexagonal nut

► According to the standard DIN 934.



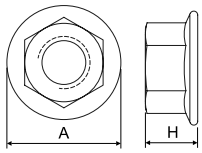


	item	A	H	thread	↺		EAN
	M 6_ZNCR	10	5	M6	100		8595057633636
	M 8_ZNCR	13	6,5	M8	100		8595057633643
	M 10_ZNCR	17	8	M10	100		8595057630406
	M 8_GMT	13	6,5	M8	100		8595568928528
	M 10_GMT	17	8	M10	100		8595568928511

hex flange nut

► According to the standard DIN 6923.

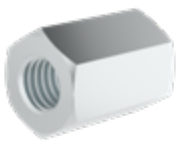


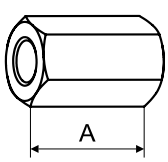


	item	A	H	thread	↺		EAN
	ML 6_ZNCR	14,2	6	M6	100		8595568941176
	ML 8_ZNCR	17,9	8	M8	100		8595568941183
	ML 10_ZNCR	21,8	10	M10	100		8595568941206
	ML 8_GMT	17,9	8	M8	100		8595568941190
	ML 10_GMT	21,8	10	M10	100		8595568941213

coupling nut

► It is used to join two threaded rods.



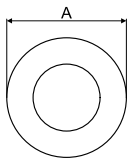


	item	thread	A	ǂ		EAN
	MZ 6_ZNCR	M6	10	0,01		8595057633506
	MZ 8_ZNCR	M8	18	0,02		8595057633513
	MZ 10_ZNCR	M10	24	0,04		8595057629929

washer

► According to the standard DIN 125.



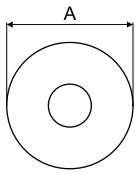


item	A	↺		EAN
PD 6_ZNCR	12	100		8595057640832
PD 8_ZNCR	16	100		8595057633438
PD 10_ZNCR	20	100		8595057633445
PD 8_GMT	16	100		8595568927996
PD 10_GMT	20	100		8595568928542

large washer

► According to the standard DIN 9021.



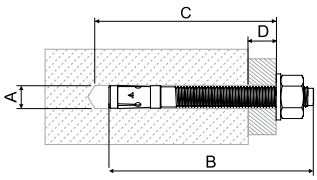


item	A	↺		EAN
PVL 6_ZNCR	18	100		8595057629523
PVL 8_ZNCR	24	100		8595057633421
PVL 10_ZNCR	30	100		8595057633797
PVL 8_GMT	24	100		8595568928726
PVL 10_GMT	30	100		8595568928733

anchor

► The anchors are suitable for suspended, push-through and distance mounting.
► Types of base material: cracked concrete, non-cracked concrete, natural stone with a dense structure.





item	approved seismicity class	drill bit diameter A [mm]	total length of anchor B [mm]	min. depth of drilled hole during through-hole mounting C [mm]	maximum usable length D [mm]	thread	spanner size		EAN
KPO 6X50_PO	-	6	65	60	10	M6	10		8595057691162
KPO 6X70_PO	-	6	65	60	10	M6	10		8595057691179
KPO 8X77_PO	C1	8	75	70	10	M8	13		8595057691100
KPO 8X97_PO	C1	8	95	85	30	M8	13		8595057691117
KPO 8X110_PO	C1/C2	8	115	105	50	M8	13		8595568931139
KPO 10X95_PO	C1/C2	10	92	85	10	M10	17		8595057691124
KPO 10X115_PO	C1/C2	10	115	105	30	M10	17		8595057691131
KPO 10X175_PO	C1/C2	10	185	175	100	M10	17		8595568931153
KPO 12X120_PO	C1/C2	12	118	110	20	M12	19		8595057691148
KPO 8X77_POGMT	-	8	80	65	10	M8	13		8595568927965
KPO 8X97_POGMT	-	8	100	90	35	M8	13		8595568929631
KPO 10X95_POGMT	-	10	95	84	15	M10	17		8595568927972
KPO 10X115_POGMT	-	10	115	104	35	M10	17		8595568929648
KPO 12X120_POGMT	-	12	120	105	25	M12	19		8595568929655

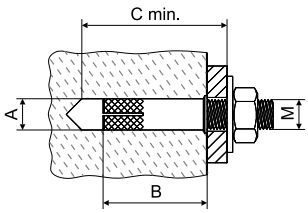
ŧ weight kg/pc
↺ package (pcs)
fire resistance E30-E90, P15-R - P90-R, PS15-PS90
ZNCR bichromatic galvanized
GMT non electrolytic plating

anchor



- The knock in anchors KKZ serve for the direct attachment of the threaded rods.
- There is a strut pin inside the anchor, which must be driven into the correct position before the assembly of a threaded rod.
- This item is suitable for fixing into concrete or natural stone.
- KKZ 8 and KKZ 10 anchors are equipped with a flange for better alignment with the surface, regardless of the hole depth.

- A - drill bit diameter
- B - total length of anchor
- C - minimum depth of the drilled hole



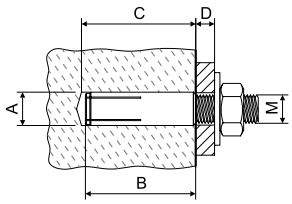
item	A	B	C	thread	tensile load concrete C20/25 (kN)	‡	EAN
KKZ 6_ZNCR	8	25	27	M6	2,50	0,01	8595057697553
KKZ 8_ZNCR	10	30	32	M8	3,00	0,01	8595057697560
KKZ 10_ZNCR	12	40	42	M10	4,75	0,02	8595057697577

brass stop anchor



- The drop-in anchors are used for direct fastening of threaded rods.
- Inside the anchor is an expansion pin, which must be set before installing the threaded rod.
- The load capacity of the anchors depends on the quality of the base material (concrete, solid masonry).
- The anchors are equipped with a flange for better alignment with the surface, regardless of hole depth.

- A - drill bit diameter
- B - total length of anchor
- C - anchoring depth
- D - maximum thickness of the fastening material



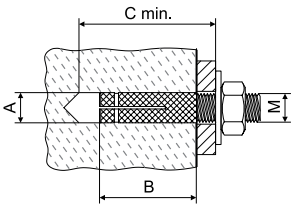
item	A	B	C	D	thread	tensile load concrete C20/25 (kN)	‡		EAN
KPOZ 6_PO	8	30	25	30	M6	0,52	0,01	🔥	8595568929938
KPOZ 8_PO	10	30	32	30	M8	1,02	0,02	🔥	8595568919304
KPOZ 10_PO	12	40	42	40	M10	1,55	0,03	🔥	8595057692855

brass stop anchor



- The knock in anchors KKZM serve for the direct attachment of the threaded rods.
- The brass anchors have an inner conical thread, which expands during the assembly of a threaded rod or bolt.
- The threaded rod (bolt) must be driven into the full length of the anchor.
- This item is suitable for fixing into concrete, natural stone, wood, chipboard and solid brick.

- A - drill bit diameter
- B - total length of anchor
- C - minimum depth of the drilled hole



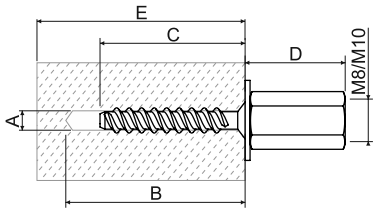
item	A	B	C	thread	concrete C20/25		‡	EAN
					tensile load (kN)	tightening torque (Nm)		
KKZM 8_XX	10	30	35	M8	1,50	6	0,01	8595568925893
KKZM 10_XX	12	35	40	M10	2,50	10	0,01	8595568925909

bolt into concrete with internal thread



- M8 / M10 combined bolt for quick and easy mounting of bolts or threaded rods.
- Designed for installation in cracked concrete C20 / 25 to C50 / 60, pre stressed cavity panels C30 / 37 to C50 / 60, into natural stone with a dense structure.

- A - hole diameter
- B - minimum hole depth
- C - bolt depth
- D - height of fixing nut
- E - minimum thickness of the anchor



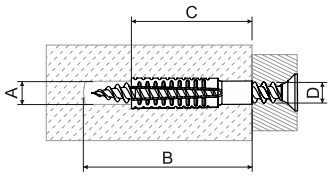
item	A	B	C	D	E	spanner size	tightening torque	ǂ	concrete C20/25 to C50/60			preloaded cavity panels				EAN
									guaranteed load		min. axial distance from the edge	concrete thickness under the cavity	permissi-ble equipment	min. axial distance from the edge		
									tensile	shearing						
							Nm		kN	kN						
KBS 6X35 M8/M10_PO	6	45	35	26,5	80	13	≤10	0,03	0,6	2,4	35	≥25	0,4	100	🔥	8595568931122
												≥30	0,8			
												≥35	1,2			
KBS 6X35 M8/M10_POF	6	40	35	23	100	13	≤15	0,03	2,5		40	≥35	1,4	150	🔥	8595568944948

metal expansion anchor



- For pre-assembled mounting in concrete, porous concrete, vertically perforated bricks, natural stone witha dense structure, solid brickwork blocks, solid sandlime bricks.
- The external teeth expand in the building material, thus ensuring a high loadbearing capacity.
- The bolt must be driven at least the full length of the plug. The internal shape of the plug guides the bolt safely to the end of tightening.
- The bolt length is calculated as: plug length + bolt diameter + thickness of the anchoring part + thickness of plaster or insulation.
- For use in systems maintaining fire performance, the plug is combined with KVD bolts or SB 6.3X35 bolts.

- A - hole diameter
- B - minimum hole depth
- C - length of screw
- D - thread diameter



item	A	B	C	D	ǂ	the recommended hole diameter for the material			guaranteed load - tension, shear, diagonal tension applies to the specified screw diameter and material				EAN
						concrete EAN C20/25	porous concrete PB4	vertically perforated bricks HLZ12	thread diameter	concrete ≥PB2, PP2 (G2	porous concrete ≥PB4, PP4 (G4)		
						mm	mm	mm	mm	kN	kN		
KHP 6X32_PO	7-9	38	32	5-6	0,01	7	6	7	-	-	-	🔥	8595568931009
KHP 8X38_PO	10-12	46	38	6-8	0,01	10	10	10	8	0,2	0,3	🔥	8595568931016
KHP 8X60_PO	10-12	68	60	6-8	0,03	12	10	10	8	0,3	0,4	🔥	8595568931023

ǂ weight kg/pc

🔥 fire resistance E30-E90, P15-R - P90-R, PS15-PS90

PO bichromatic galvanized

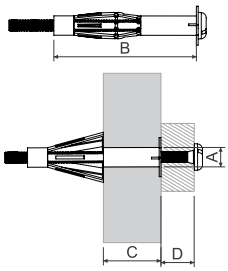
POF Hot Dip Galvanized

metal drywall anchor



- The universal metal plug is suitable for offset installation in panel building materials, e.g., drywall or particle boards.
- The plug is selected according to the thickness of the panel material to allow optimal expansion in the cavity.
- The metric internal thread allows multiple loosening and tightening of the anchored part.
- The teeth on the edge of the plug press into the material to prevent rotation of the plug.

- A - hole diameter
- B - plug length (in unexpanded state)
- C - panel thickness – base for anchoring
- D - thickness of the anchored object



item	A	B	C	D	thread	guaranteed load – tension, shear, angled tension							↺	EAN
						drywall				fiberboard		cement fibre board		
						9,5 mm	12,5 mm	19 mm (2x9,5 mm)	25 mm (2x12,5 mm)	16 mm	25 mm	8 mm		
	mm	mm	mm	mm		kN	kN	kN	kN	kN	kN	kN	pc	
KHS 4X32_ZNCR	8	32	3-13	≤15-25	M4 x 40	0,15	0,15	-	-	-	-	0,15	50	8595568931047
KHS 4X45_ZNCR	8	45	16-23	≤12-21	M4 x 52	-	-	0,25	-	0,05	-	-	50	8595568931054
KHS 5X37_ZNCR	10	37	6-15	≤8-17	M5 x 45	0,15	0,15	-	-	-	-	0,15	50	8595568931061
KHS 5X52_ZNCR	10	52	7-21	≤10-24	M5 x 58	0,15	0,15	0,25	-	0,05	-	0,15	50	8595568931078
KHS 5X65_ZNCR	10	65	20-34	≤12-26	M5 x 71	-	-	-	0,3	-	0,05	-	50	8595568931085
KHS 6X37_ZNCR	12	37	6-15	≤12-21	M6 x 45	0,15	0,15	-	-	-	-	0,25	50	8595568931092
KHS 6X52_ZNCR	12	52	7-21	≤14-28	M6 x 58	0,15	0,15	0,25	-	0,05	-	0,25	50	8595568931108
KHS 6X65_ZNCR	12	65	17-34	≤13-30	M6 x 71	-	-	0,25	0,3	-	0,05	-	50	8595568931115

fire resistant bolt



- Suitable for fastening anchoring elements to wooden structures.
- For other materials, the bolt can be used in combination with the KHP plug.
- The semi-round head with TX20 star drive provides excellent bit stability during bolting.
- The flat bearing surface of the head is ideal for fastening metal elements to wood.
- The bolt is coated with high-quality sliding wax, reducing resistance during bolting and speeding up and facilitating installation.

	item	bolt diameter	bolt length	↺		EAN
	KVD 5X16_PO	5	16	200	🔥	8595568942463
	KVD 5X20_PO	5	20	200	🔥	8595568942470
	KVD 5X25_PO	5	25	200	🔥	8595568942487
	KVD 5X30_PO	5	30	200	🔥	8595568942494
	KVD 5X40_PO	5	40	100	🔥	8595568942500
	KVD 5X50_PO	5	50	100	🔥	8595568942517
	KVD 5X60_PO	5	60	100	🔥	8595568942524
	KVD 5X70_PO	5	70	100	🔥	8595568942531
	KVD 6X40_PO	6	40	100	🔥	8595568944955
	KVD 6X50_PO	6	50	50	🔥	8595568944962
	KVD 6X60_PO	6	60	50	🔥	8595568944979

concrete bolt

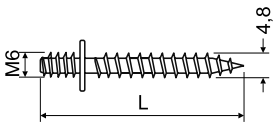


- Used to attach individual cable clamps, OMEGA type clamps and grouped holder to the base material.
- The bolt can be installed in concrete, natural stone and solid masonry.
- A hole of Ø5 mm must be drilled to install the bolt
- The bolt can be used for both indoor and outdoor applications.

	item	↺		EAN
	SB 6.3X35_POGMT	100	🔥	8595057697904
	SB 6.3X45_POGMT	100	🔥	8595568932402

bolt with external thread



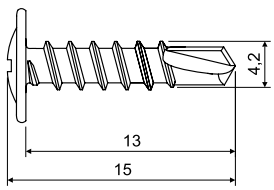


- Bolt with external thread M6 is designed for direct fastening into wood or, in combination with a KHP plug, into concrete and masonry.
- The bolt has a wood-threaded end (this part goes into the wall, ceiling, or beam) and a metric thread on the other end for a nut.
- Installation can also be carried out with a flat-head boltdriver.

item	L	↺		EAN
SVD 30_PO	37	100		8595568931207
SVD 40_PO	47	100		8595568931214

sheet metal bolt



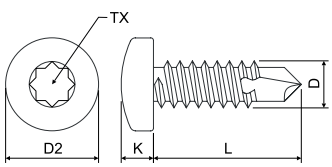


- Bolt designed for connecting two metal parts up to a sheet thickness of 2.0 mm.
- By connecting the 67xx_PO clamps and the sheet metal using the mentioned bolt, a fire-resistant connection is created (mounting on a trapezoidal ceiling).
- The wide flange head together with the thread provides a strong clamping of two metal parts.
- The self-tapping STP bolt with a flange head and drill tip at the end of the thread is designed for joining galvanized sheet metal parts up to 2 mm thick. The flange head ensures a large contact surface and high clamping force.

item	↺		EAN
STP 4.2X13_PO	100		8595568931191

self-drilling bolt to the metal plate with TORX groove



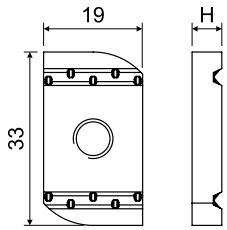


- STP 4.2X25 TX is suitable for attaching the cable tray to the PPS1 L30 support pad.
- STP 2.9X9.5 TX can be used to fix the cover firmly to the cable tray.

item	D	L	D2	K	TX	↺		EAN
STP 2.9X9.5 TX_ZNCR	2,9	9,5	5,6	2,2	TX10	100		8595568941220
STP 4.2X25 TX_ZNCR	4,2	2,5	8,2	3,05	TX20	100	-	8595568941237

sliding nut



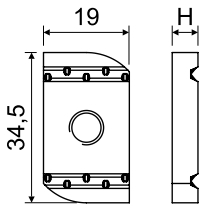


- It is used to attach the brackets to the ceiling profiles SPS or to connect the mounting profiles (MP 41X21, MP 41X41) to each other using the VS system (pg. 84 - 85).
- The bracket is fastened with bolts of 20-30 mm in length.

item	↺	H		EAN
PM 41 M 6_ZNCR	100	6		8595057631496
PM 41 M 8_ZNCR	100	6		8595057631502
PM 41 M 10_ZNCR	100	8		8595057628717
PM 41 M 10_GMT	100	8		8595568928757

sliding nut with spring





- It is used to attach the brackets to the ceiling profiles or to connect the mounting profiles MP 41X41 to each other using the VS system (pg. 84 - 85).
- The spring simplifies the fixation of the nut during assembly.
- The bracket is fastened with bolts of 20-30 mm in length.

item	↺	H		EAN
PMP 41 M 6_ZNCR	100	6		8595057640719
PMP 41 M 8_ZNCR	100	6		8595057630475
PMP 41 M 10_ZNCR	100	8		8595057630468

zinc paint / spray

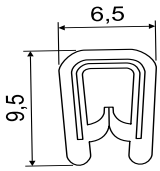


- Anticorrosive protection to be intended for service of deffective and damaged places on galvanized surface.
- Lay on the color by paintbrush, stipple technology.
- The safety data sheet is available on the e-shop.

item	⇕	EAN
WEICON 375_XX (color)	0,50	8595057621183
WEICON 750_XX (color)	1,10	8595057693609
GZS_XX (sprej)	0,45	8595057633148

edge protector

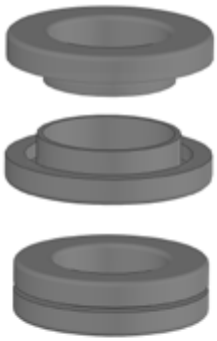


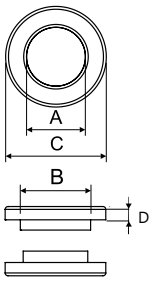


- The edge protector made from plastic with a steel insert is used to protect the edges of cable trays.
- Package = 10 m, sold in entire packs.
- The protector there is possible to install to the metal sheets of max. 2 mm thickness.
- Made of UV-resistant material.

item	ǂ	EAN
NCH_XX	0,06	8595057669932

bushing



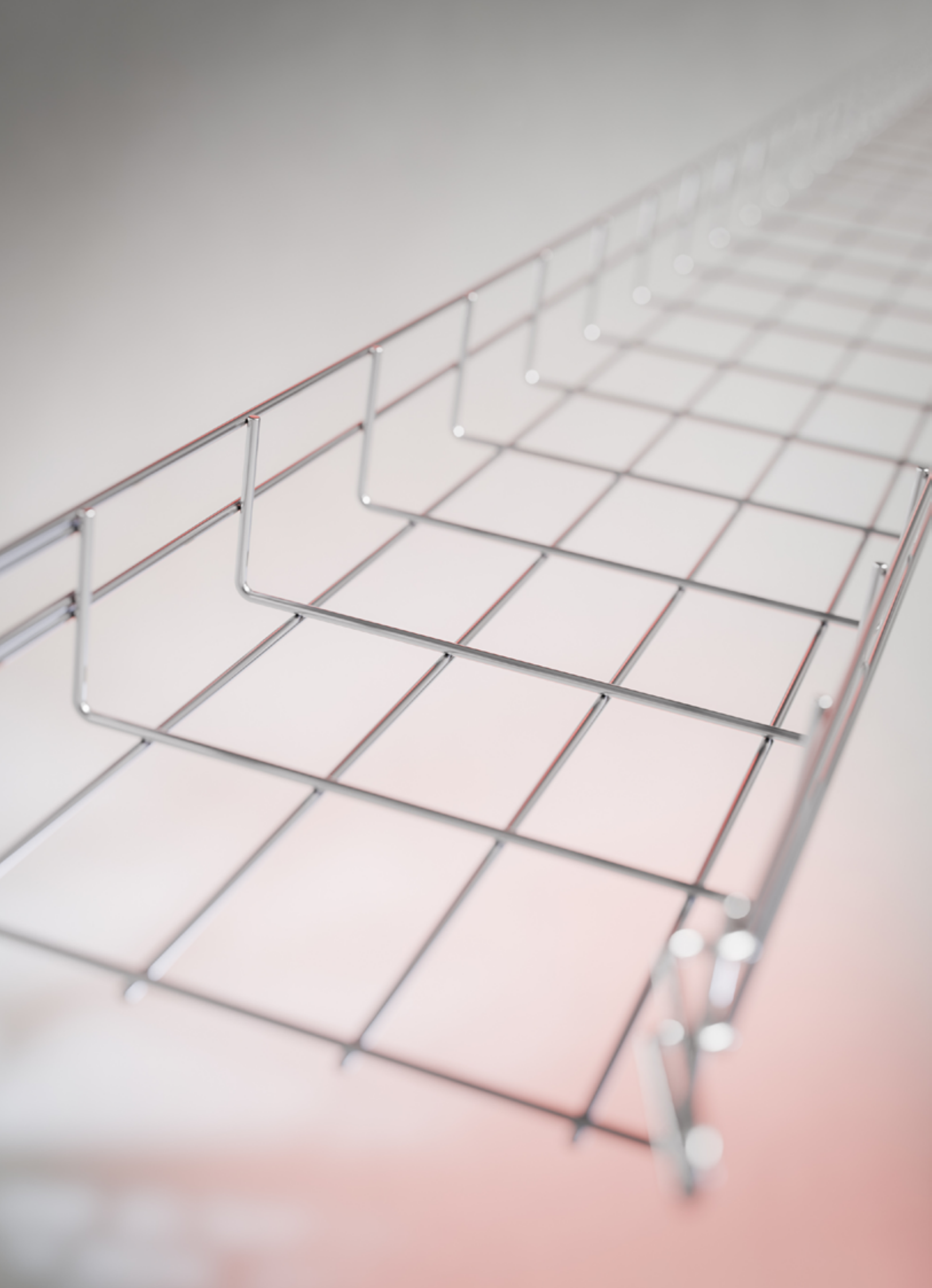


- Bushings serve for the safe passing of the cables through the sheet metal.
- One part of the bushing is inserted from one side into the created opening in the bottom or the sidewall of the tray, the second part is inserted from the second side and gentle pressure is used to press both the parts together and this connects them firmly.

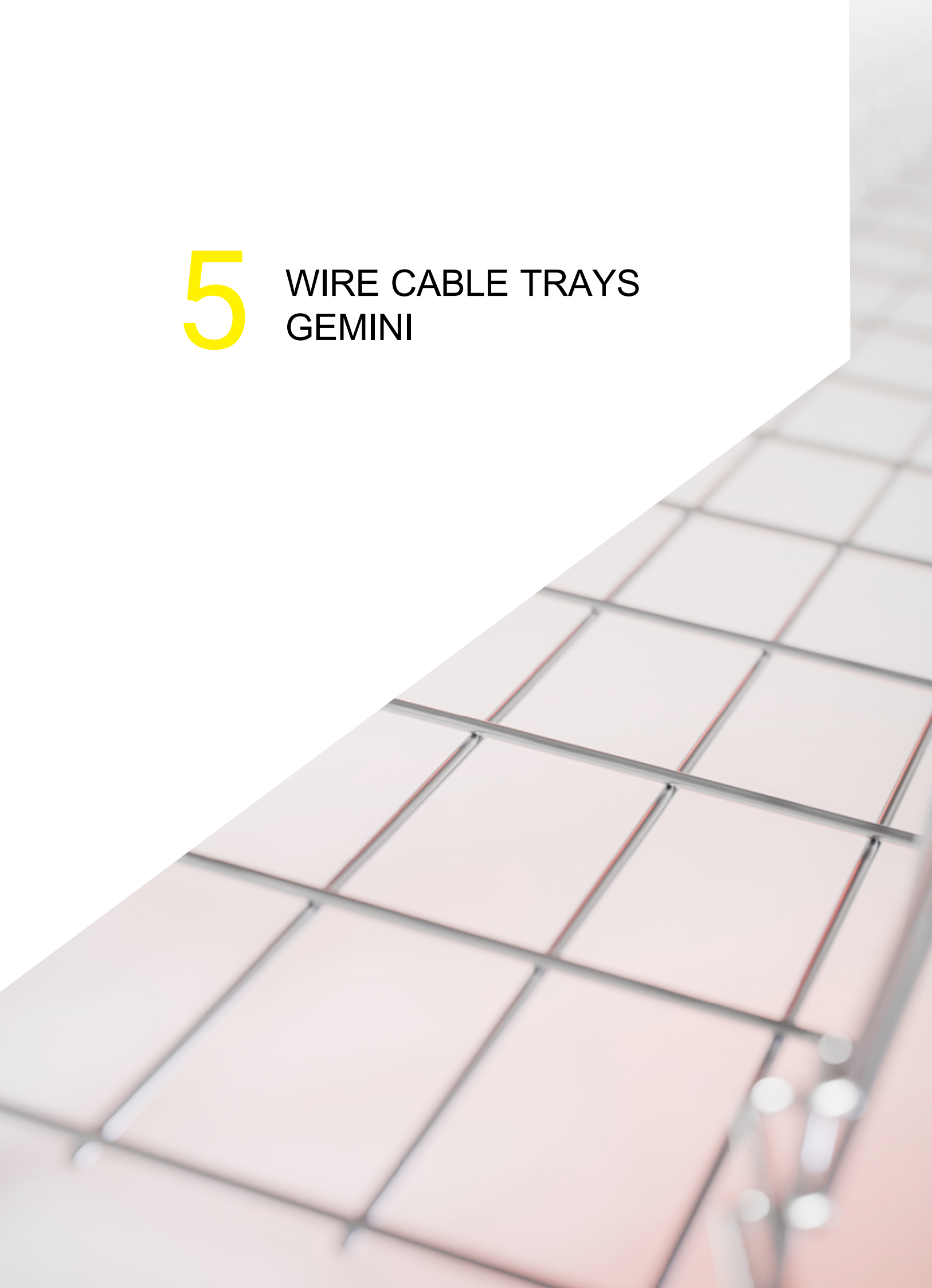
B - drilled hole diameter

item	A	B	C	D	E	ǂ	EAN
NKP 9_FB	10	**15**	24	5	0,5 - 5	0,002	8595057689466
NKP 11_FB	12	**18,5**	26	6	0,5 - 5	0,004	8595057689473
NKP 13_FB	16	**20**	31	6	0,5 - 5	0,006	8595057689480
NKP 16_FB	17	**22**	33	6	0,5 - 5	0,006	8595057689497
NKP 21_FB	24	**28**	40	7	0,5 - 5	0,010	8595057689503
NKP 29_FB	31	**37**	53	7	0,5 - 5	0,018	8595057689510

ǂ weight kg/m; kg/pc



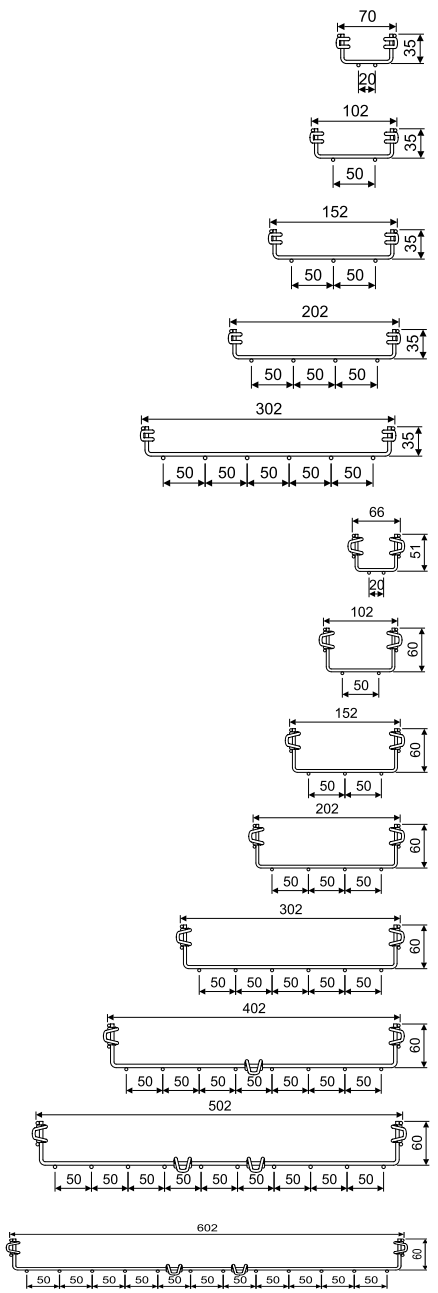
5 WIRE CABLE TRAYS GEMINI



wire cable tray with integrated coupling



- Each cable tray has integrated fixing points at one end to ensure a tight connection.
- The connection meets sufficient electrical continuity to ensure protective connecting according to EN 61537.
- The connection is made (pg. 111).
- The trays are designed for a maximum support spacing of 2 metres. The ideal place for connecting the tray is at 1/5 to ½ of the distance between the supports. A connection directly at the support is not appropriate.
- The values of the safe load are given in the table. The safe loads do not take into account external influences and it is not possible to load the tray with a man.
- The spacing of the cross wires is 100 mm.

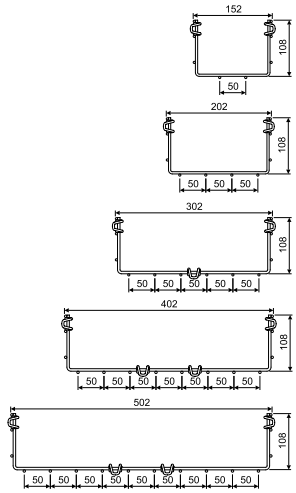


item	∅	☒	ǂ	safe load at support spacing (N/m)				EAN
				1 m	1,5 m	2 m		
DZI 35X60_VEZ	3,9	17	0,49	244	172	143	-	8595568939753
DZI 35X100_VEZ	3,9	27	0,52	253	178	148	-	8595568939760
DZI 35X150_VEZ	3,9	42	0,66	267	188	156	-	8595568939777
DZI 35X200_VEZ	3,9	58	0,81	283	199	165	-	8595568939784
DZI 35X300_VEZ	4,3	87	1,32	314	221	183	-	8595568939791
DZI 60X60_VEZ	3,9	24	0,71	441	290	204	🔥	8595568939999
DZI 60X60_VF			0,82				🔥	8595568939852
DZI 60X100_VEZ	3,9	49	0,76	407	323	234	🔥	8595568939937
DZI 60X100_VF			0,87				🔥	8595568939807
DZI 60X150_VEZ	3,9	77	0,90	446	345	248	🔥	8595568939944
DZI 60X150_VF			1,03				🔥	8595568939814
DZI 60X200_VEZ	3,9	105	1,04	487	368	264	🔥	8595568939951
DZI 60X200_VF			1,20				🔥	8595568939821
DZI 60X300_VEZ	4,3	158	1,61	567	413	295	🔥	8595568939968
DZI 60X300_VF			1,71				🔥	8595568939838
DZI 60X400_VEZ	4,3 / 4,8	212	2,10	644	457	325	🔥	8595568939975
DZI 60X400_VF			2,42				🔥	8595568939845
DZI 60X500_VEZ	4,3 / 4,8	267	2,71	722	502	355	🔥	8595568939982
DZI 60X600_VEZ	4,3 / 4,8	322	3,12	799	547	366	🔥	8595568940001

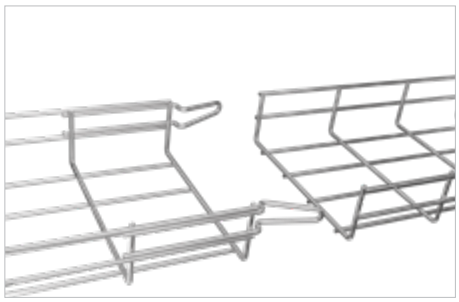
EASYCONNECT® BASKET TRAY

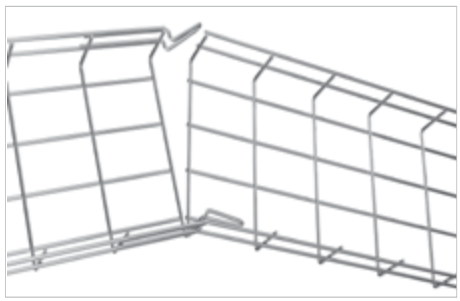
∅ wire diameter (mm)
☒ inside usable area (cm2)
ǂ weight kg/m
🔥 fire resistance E30-E90, P15-R - P90-R, PS15-PS90
VEZ electrolytically galvanized
VF Hot Dip Galvanized

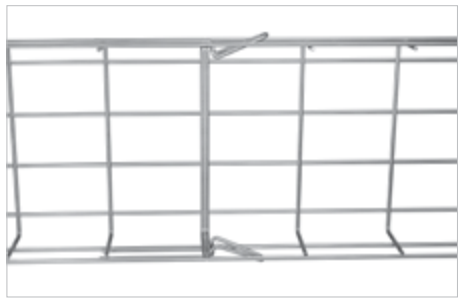
wire cable tray with integrated coupling



item	∅	☒	ŧ	safe load at support spacing (N/m)				EAN
				1 m	1,5 m	2 m		
DZI 110X150_VEZ	4,3	140	1,33	575	441	344	-	8595568939883
DZI 110X200_VEZ	4,3	192	1,61	601	462	362	-	8595568939890
DZI 110X200_VF			1,85					8595568939722
DZI 110X300_VEZ	4,3 / 4,8	293	2,10	652	504	397	-	8595568939906
DZI 110X300_VF			2,42					8595568939739
DZI 110X400_VEZ	4,3 / 4,8	396	2,71	705	546	431	-	8595568939913
DZI 110X400_VF			3,11					8595568939746
DZI 110X500_VEZ	4,3 / 4,8	499	3,12	757	588	466	-	8595568939920







∅ wire diameter (mm)
☒ inside usable area (cm2)
ŧ weight kg/m

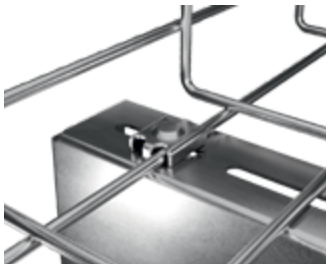
VEZ electrolytically galvanized
VF Hot Dip Galvanized

fastening bolt



- The special design of the bolt head is intended for use with wire cable trays, e.g. to attach a wire trough to a support.

	item	ǂ		EAN
	DZSU_VEZ	0,018		8595568940124
	DZSU_VNEZ	0,018		8595568940117



coupling



- The coupling is designed for joining wire mesh trays without an integrated coupling.
- The special design of the bolt head enables quick and reliable connection of the trays with all hights of sides.

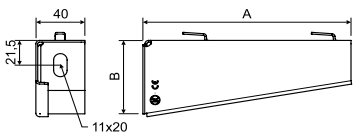
	item	ǂ		EAN
	DZS_VEZ	0,027		8595568940100
	DZS_VNEZ	0,027		8595568940094



wall bracket



- The holder is intended for fixing on the wall or on the ceiling profile.
- Fix to the wall using anchor Ø8 mm or Ø10 mm.
- For assembly to the ceiling profile SPL and SPS there are used the sliding nuts PM 41 M 10 (pg. 106) together with the bolts S 10X20 (2 pieces).
- By bending the fixing points, a quick and reliable fixing of the wire tray to the support is ensured.
- The DSDZ 150_ZM bracket is not suitable for the DZI 110X150 wire cable tray. The DS 150_ZM holder (pg. 74) can be used for the DZI 110X150 wire cable tray and the tray can be fixed to the holder using the DZSU fixing bolt.
- It is recommended to use the DZZ hanger to fix the DZI 60X60 tray to the wall.



	item	A	B	⭳	ǂ		EAN
	DSDZ 100_ZM	120	49	150	0,13		8595568940797
	DSDZ 150_ZM	170	60	150	0,22		8595568940803
	DSDZ 200_ZM	220	64	150	0,29		8595568940810
	DSDZ 300_ZM	320	74	130	0,43		8595568940827
	DSDZ 400_ZM	420	84	130	0,60		8595568940834
	DSDZ 500_ZM	520	94	130	0,78		8595568940841
	DSDZ 600_ZM	620	119	130	1,09		8595568940858

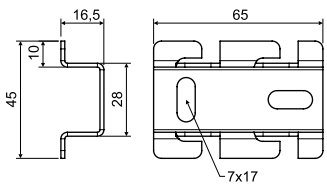


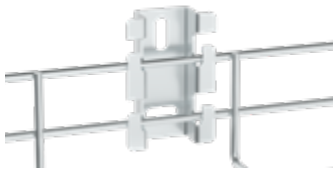
Side hanger



- The hanger is designed for fastening a wire mesh tray to the wall.
- Wall fastening is only possible for trays with dimensions 60X60 and 60X100.
- Maximum recommended load per mounting point is 10 kg.
- The hanger is fixed to the wall using Ø6 mm anchors.
- Bending the fastening lugs ensures quick and reliable fixation of the wire mesh tray to the hanger.

	item	ǂ		EAN
	DZZ_ZM	0,047		8595568943255



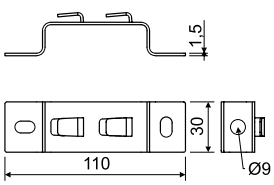


hanger



- The hanger is designed for fastening a wire mesh tray to the wall or, in combination with a Ø8 mm threaded rod, for suspension from the ceiling.
- Hanging from the ceiling using two threaded rods is intended for trays with a height of side-wall 60 mm and a width of 60-200 mm.
- The fixation to the wall there is possible just for trays of 60X60 and 60X100.
- The hanger is fixed to the wall using Ø6 mm anchors.
- Bending the fastening lugs ensures quick and reliable fixation of the wire mesh tray to the hanger.

	item	ǂ		EAN
	DZZ_VS	0,043		8595568940155





ǂ weight kg/pc

⭳ max. load (kg)

fire resistance E30-E90, P15-R - P90-R, PS15-PS90

VS Pre-Galvanized

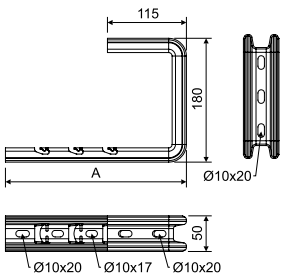
ZM Magnelis®

ceiling support



- The support is designed for hanging the wire cable tray from the ceiling or to the wall.
- The support can be installed separately directly to the ceiling or to the wall using the Ø8 mm anchor, or the installation of the support to the ceiling can be strengthened and the hole prepared at the end of the support can be supplemented with the ZT 8 threaded rod.
- The wire mesh tray is placed on the support into the prepared cutouts.
- Bending the fastening lugs ensures reliable fixation of the wire mesh tray to the support.

	item	A	↕	‡	EAN
	DZCTS 100_VS	215	2,0	0,52	8595568940162
	DZCTS 150_VS	265	2,0	0,55	8595568940483
	DZCTS 200_VS	315	2,0	0,62	8595568940179
	DZCTS 300_VS	415	2,0	0,71	8595568940186



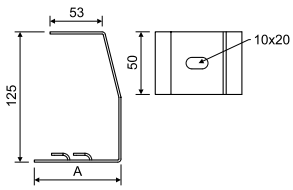


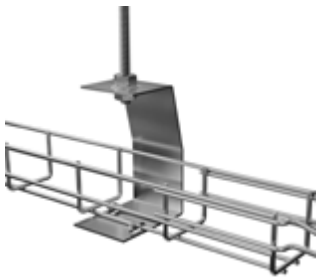
central hanger - outer



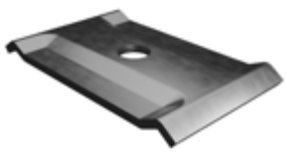
- The central hanger is designed for fastening of the wire trays from ceiling together with a threaded rod Ø8 mm and 2 nuts M 8.
- The wire cable tray is inserted into the attaching parts, the ends of the attaching parts are squeezed and the tray is fixed to the suspension.

	item	A	for cable tray width	↕	‡	EAN
	DZSZ 60_VS	83	60	2	0,19	8595568940148
	DZSZ 100_VS	104	100	2	0,21	8595568940131



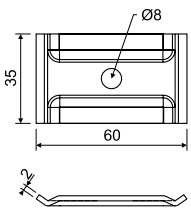


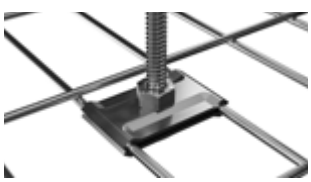
central hanger - inner



- The central hanger is designated for the hanging of the wire tray from the ceiling. For the hanging it is necessary to use two central hanger pieces (must order 2 pcs), two nuts M 8 and the threaded rod Ø8 mm.
- There is recommended for cable trays width max. 300 mm.
- The hanger is not designed for hanging cable trays of dimensions 35x60, 60X60, 35x150, 60x150.
- The hanger can also be used for fixing wires when forming curves or turning.

	item	‡	EAN
	DZCZ_VEZ	0,03	8595568939876
	DZCZ_VNEZ	0,03	8595568939869





‡ weight kg/pc

↕ thickness of metal sheet (mm)

VEZ electrolytically galvanized

VNEZ microlamellar zinc coatingsi

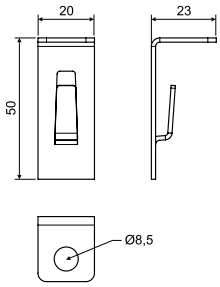
VS Pre-Galvanized

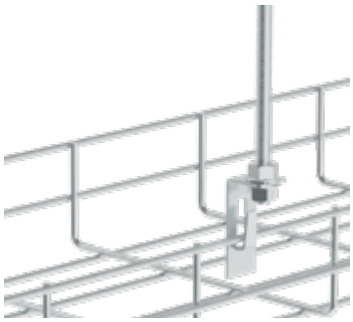
side hanger



- The side hanger is designed for suspending a wire mesh tray from the ceiling using a Ø8 mm threaded rod and two ML 8 nuts.
- The top wire of the tray side is inserted into the hook of the hanger. To steady the wire mesh tray, bend the hooks of the hanger around the inserted wire.
- The hanger is always used in pairs; suspension must be on both sides of the wire mesh tray.
- Maximum recommended load per mounting point (2 pcs DZBZ) is 15 kg

	item	‡	EAN
	DZBZ_ZM	0,01	8595568943293

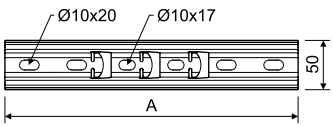




load bearing profile



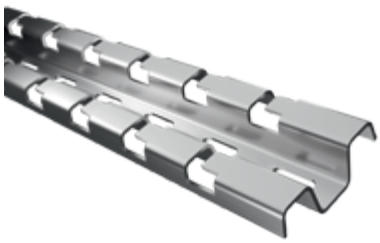
- The supporting profile is intended for hanging the wire cable tray from theceiling using two ZT 8 threaded rods, M 8 nuts.
- The wire tray is placed on the support in the prepared cutouts.
- Bending the fastening lugs ensures reliable fixation of the wire mesh tray to the profile.





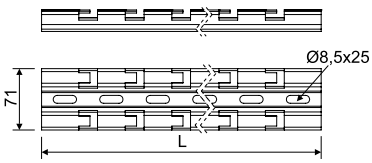
	item	A	↕	‡		EAN
	DZNP 100_VS	250	2,0	0,21		8595568935748
	DZNP 150_VS	300	2,0	0,25		8595568935755
	DZNP 200_VS	350	2,0	0,39		8595568935762
	DZNP 300_VS	450	2,0	0,50		8595568935779
	DZNP 400_VS	550	2,0	0,63		8595568935786
	DZNP 500_VS	650	2,0	0,71		8595568935793
	DZNP 600_VS	750	2,0	0,82		8595568935809

support profile for ceiling / wall



- The support profile is designed for fixing the wire cable tray to the wall or ceiling. The profile allows the mounting of multiple wire cable trays, even combinations of different sizes, on one profile.
- The profile is attached to the substrate with an Ø8 mm anchor.
- The wire cable tray is placed on the support in the prepared cut-outs.
- Bending the fastening lugs ensures reliable fixation of the wire mesh tray to the profile.

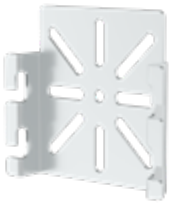
	item	L	↕	‡		EAN
	DZSSP 1000_VS	1000	2,0	1,51		8595568940193
	DZSSP 2000_VS	2000	2,0	3,03		8595568940209
	DZSSP 3000_VS	2990	2,0	4,54		8595568940216





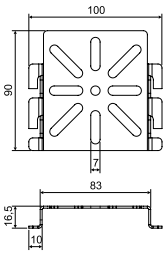
‡ weight kg/pc
↕ thickness of metal sheet (mm)
fire resistance E30-E90, P15-R - P90-R, PS15-PS90
VS Pre-Galvanized
ZM Magnelis®

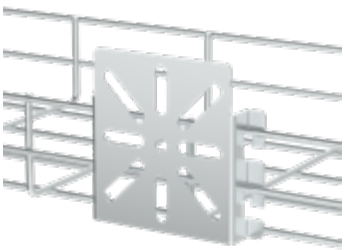
mounting plate



- Mounting plate serves to the assembling of electroinstallation boxes.
- It is fixed to the side plate of wire cable tray of side plate height of 60 and 110 mm.

	item	ǂ		EAN
	DZMD_ZM	0,11		8595568943279



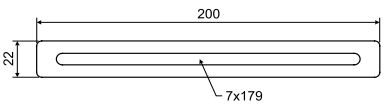


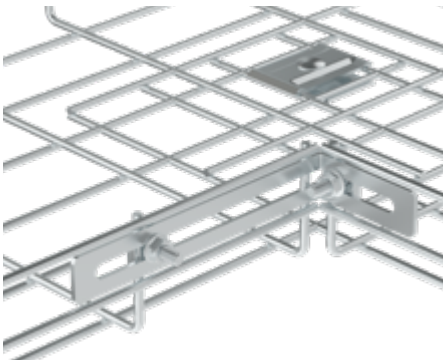
shaping strip



- The strip can be used in its flat form (e.g., for reinforcing the bottom) or bent to the required angle when creating bends and branches. The shaping strip is used as an auxiliary part to reinforce joints when forming wire mesh trays.
- The strip and the wire mesh tray can be fixed at any point using a DZSU bolt.

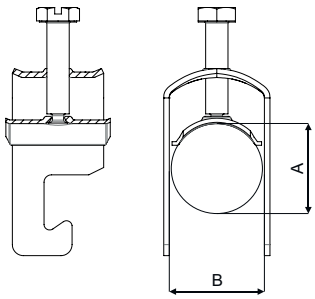
	item	ǂ		EAN
	DZTP 200_ZM	0,04		8595568943316





cable clamp for wire trays





- PKZD1 is used to attach cables to the wire tray.
- Values A and B indicate the minimum and maximum diameter of the steadyd cable.

item	A	B	ǂ		EAN
PKDZ1 12_F	6	12	0,03		8595568935885
PKDZ1 14_F	10	14	0,03		8595568935892
PKDZ1 16_F	12	16	0,03		8595568935908
PKDZ1 18_F	14	18	0,04		8595568935915
PKDZ1 22_F	18	22	0,04		8595568935922
PKDZ1 26_F	22	26	0,05		8595568935939
PKDZ1 30_F	26	30	0,05		8595568935946
PKDZ1 34_F	30	34	0,07		8595568935953
PKDZ1 38_F	34	38	0,09		8595568935960
PKDZ1 42_F	38	42	0,10		8595568935977
PKDZ1 46_F	42	46	0,11		8595568935984
PKDZ1 50_F	46	50	0,11		8595568935991
PKDZ1 54_F	50	54	0,12		8595568936011
PKDZ1 58_F	54	58	0,14		8595568936004

bolt cutter



- The cutter has jaws with an offset cut.
- It is suitable to cut the wires on the trays as close as possible to the crossing.

item	ǂ	EAN
DZDN_XX	0,75	8595057668591

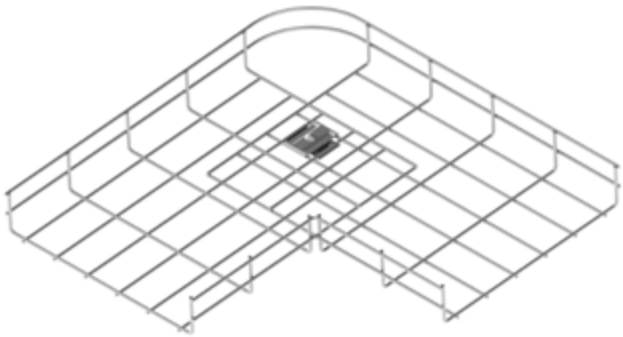
forming of wire mesh trays

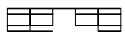
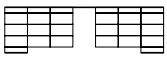
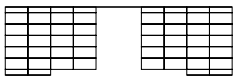
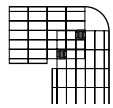
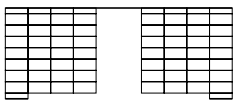
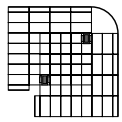
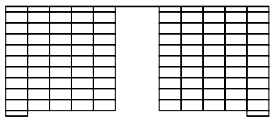
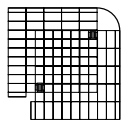
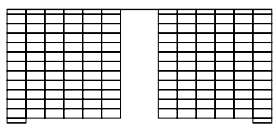
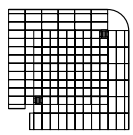
CUTTING THE WIRE

The shape of a route made from wire trays can be changed to suit your requirements. We recommend using professional cutting pliers to cut the wire mesh on trays. It is recommended that wire be cut as closely as possible to where the wires cross, to prevent damage to the cables.

BEND

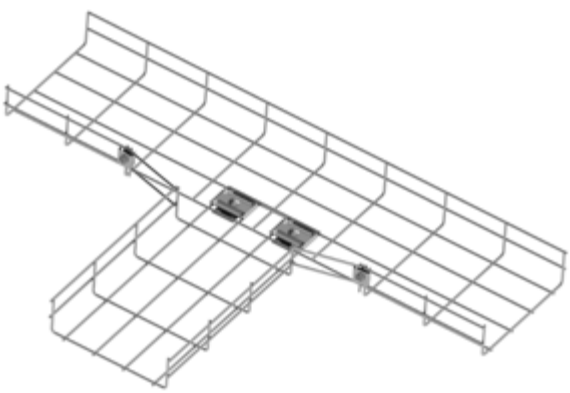
There are many different ways of creating a turning from wire cable trays, one way is presented below. To make the turning, some parts are cut out of the bottom and sides of the wire tray. The sides of the wire tray are bent into a 90° turning.
The bend is reinforced in the bottom with two pieces of DZCZ centre hanger fixed with an S 6X20 bolt and an M 6 nut. Depending on the wires in the tray, the central hangers are rotated 90° relative to each other. Increasing the number of connection points will increase the strength of the bend. For tray widths of 60 and 100 mm, the DZS coupling is used for connection.



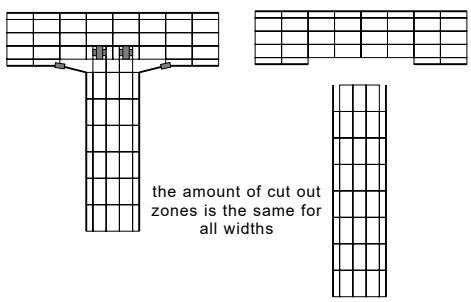
tray width	cutting out of areas	montage
60		
100		
150		
200		
300		
400		
500		
600		

T-PIECE

There are many different ways to create a T-piece from wire trays, below is one of the possible ways. The T-piece is made out of two pieces of wire trays.
In the case of a "turning" the tray, one sidewall field is cut off from the bottom; this applies for all tray widths.
The sides are cut off from the “continual” tray, the amount of zones depends on the width of the “turning” tray and it is stated in the table.
The tray bottoms are joined by two pieces of centre hangers DZCZ rotated 90° to each other and fixed with an S 6X20 bolt and an M 6 nut.
The bottoms and the sides of the trays are connected using the coupling **DZS.**
It is also possible to make the T-piece from various tray widths.



amount of cut out zones is stated in the table



the amount of cut out zones is the same for all widths

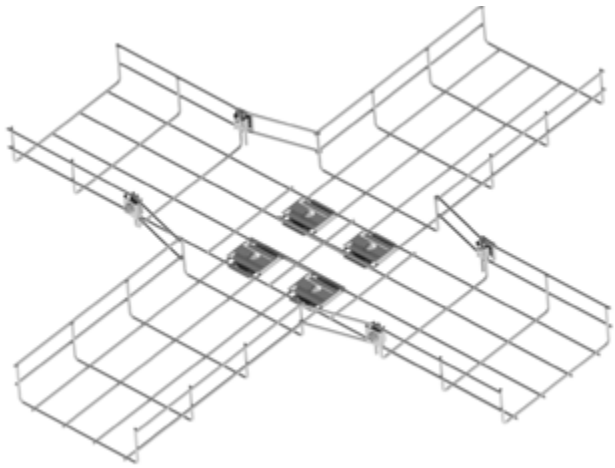
tray width	amount of zones (sides) for removal
100	2
150	3
200	4
300	5
400	6
500	7
600	8

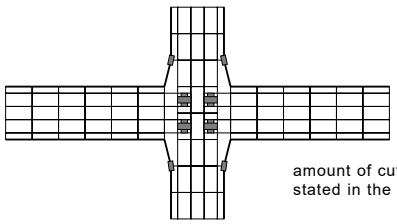
forming of wire mesh trays

ROSS-OVER

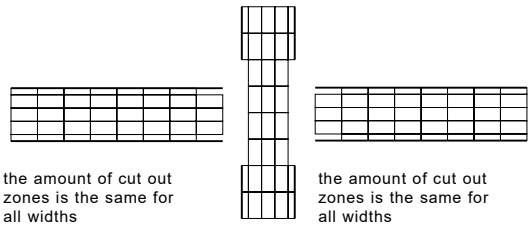
The creating of a crossover is basically the creating of two T-pieces. For the two "branching" trays, one sidewall field is cut off from the bottom; this applies for all tray widths. The sides are cut off from the continual" tray on both sides, the amount of zones depends on the width of the tray being connected and it is stated in the table. The width of the tray to be connected and is given in the table. The bottoms of the trays are joined by two pieces of centre hangers DZCZ rotated 90° to each other and fixed with an S 6X20 bolt and an M 6 nut. The side walls are joined with a DZS coupling. It is also possible to make the Cross over from various tray widths.

tray width	amount of sections (side panels) for removal
100	2 + 2
150	3 + 3
200	4 + 4
300	5 + 5
400	6 + 6
500	7 + 7
600	8 + 8





amount of cut out zones is stated in the table

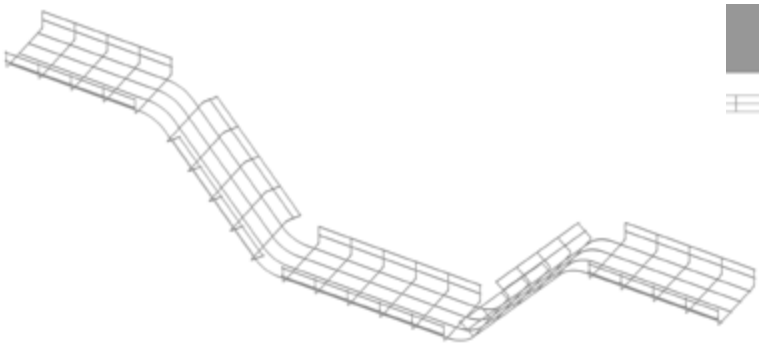


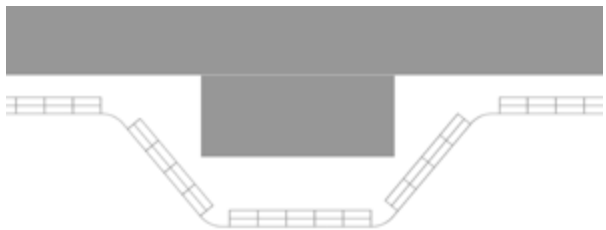
the amount of cut out zones is the same for all widths

the amount of cut out zones is the same for all widths

VARYING LEVELS

Any change in the horizontal level can be achieved by cutting off the corresponding zone and bending the wire tray in this area until the required shape is achieved.

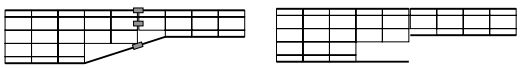


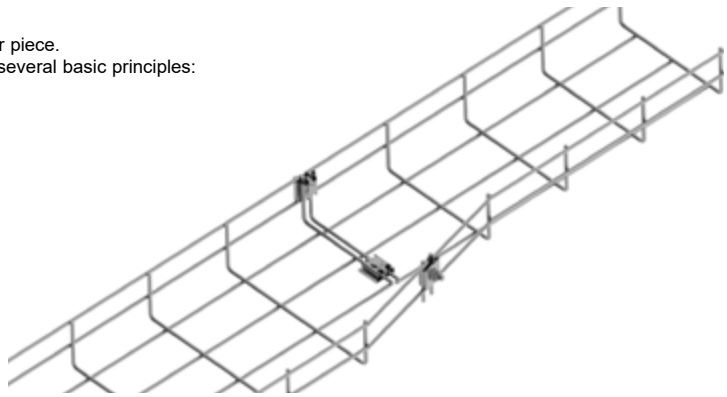


REDUCTIONS

Wire cable trays can be narrowed, so they can be connected to a narrower piece.
In order to reach the required result, all of the combinations are based on several basic principles:

- cut out the necessary zones from the bottom and the sides
- bend the side to the required width
- connect the ends using DZS couplings



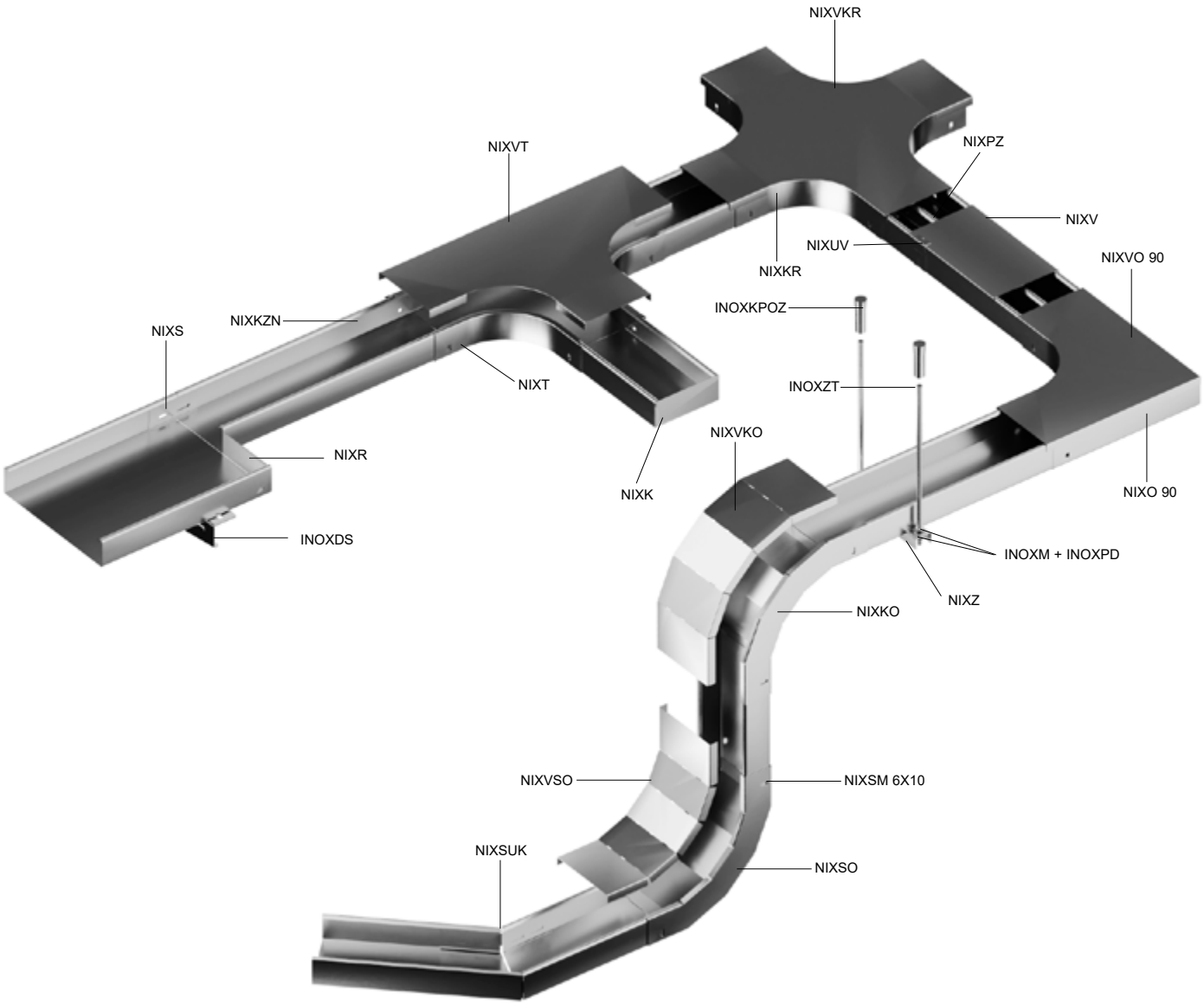




6 STAINLESS STEEL SYSTEM



OVERVIEW OF SYSTEM ELEMENTS - CABLE TRAYS MARS



item	description	page
NIXS	coupling	123
NIXSM 6X10	bolt and nut for connection trays and accessories	144
NIXSO	rising elbow 90°	128
NIXSUK	angle coupling	131
NIXT	T-piece	129
NIXUV	cover fixture	125
NIXV	cable tray cover	125
NIXVKO	low elbow 90° cover	125
NIXVKR	cross-over cover	130
NIXVO 90	elbow cover 90°	126
NIXVSO	rising elbow 90° cover	128
NIXZ	suspension piece	133

item	description	page
INOXKPOZ	anchor	146
INOXM	nut	145
INOXPD	washer	145
INOXZT	threaded rod	144
INOXDS	wall bracket	142
NIXK	end	132
NIXKO	low elbow 90°	127
NIXKR	cross	130
NIXKZN	cable tray	123, 124
NIXO 90	elbow 90°	126
NIXPZ	partition	132
NIXR	reduction	132

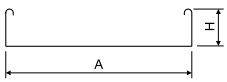
Used material: stainless steel AISI 304
Custom production: stainless steel AISI 316

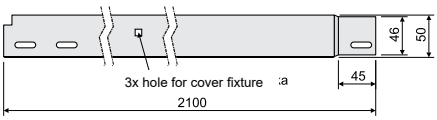
non-perforated cable tray

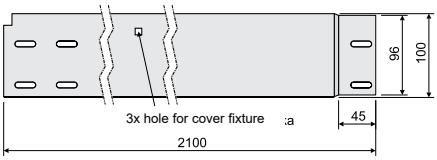


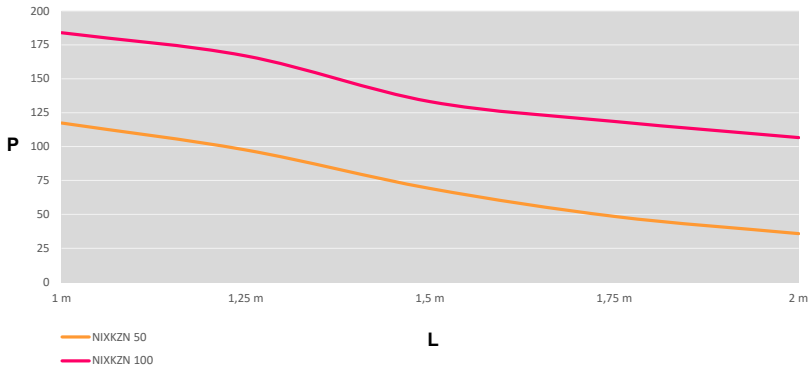
- The standard length of the cable tray is 2 m.
- The joining of the trays is performed by using of the couplings NIXS 50 / NIXS 100 (pg. 123) and the bolts NIXSM 6X10 (pg. 144).
- The connection of the tray with the accessory is direct without the use of couplings - the tray is inserted into the accessory, fixing is done with NIXSM 6X10 bolts (pg. 144).
- Perforated cable trays are available on request.

	item	A	H	↕	↨	⊥T		EAN
	NIXKZN 50X62_IX	62	50	0,8	1,13	4		8595057669451
	NIXKZN 50X125_IX	125	50	0,8	1,53	4		8595057669468
	NIXKZN 50X250_IX	250	50	0,8	2,33	4		8595057669482
	NIXKZN 100X125_IX	125	100	0,8	2,17	8		8595057669475
	NIXKZN 100X250_IX	250	100	0,8	2,97	8		8595057677463
	NIXKZN 100X500_IX	500	100	1,0	5,72	8		8595057677487









The graph shows the maximum allowed even loading of the tray in relation to the distances of the supports.

L = distance of supports (m)
P = allowed even loading (weight kg/m)

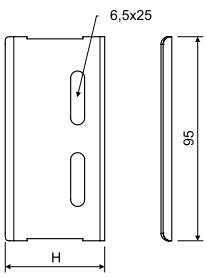
External influences are not taken into account in the permissible load and cannot be burdened by person.

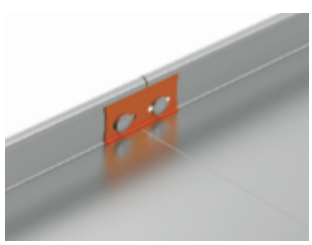
coupling

- The joining is performed using the bolts NIXSM 6X10 (pg. 144).



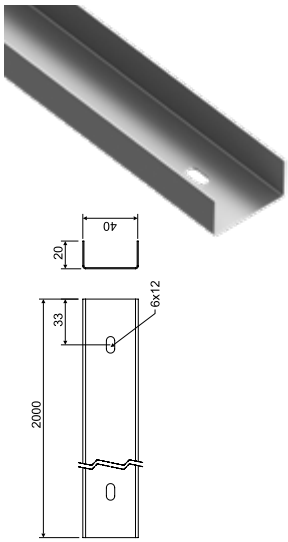
	item	H	↕	↨	⊥T		EAN
	NIXS 50_IX	47	0,8	0,04	2		8595057672109
	NIXS 100_IX	97	0,8	0,07	4		8595057672062





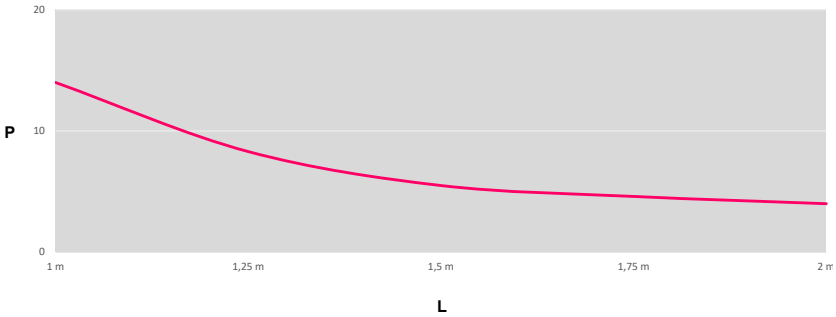
↕ thickness of metal sheet (mm) ↨ weight kg/m; kg/pc
⊥T amount of bolts for connection
fire resistance E30-E90, P15-R - P90-R, PS15-PS90
IX stainless steel

non-perforated cable tray



- The standard length of the cable tray is 2 m.
- The joining of the trays is performed by using of the coupling NIXS 40 (pg. 124) and by two bolts NIXSMP 5X10 (pg. 144).
- In the bottom, at the ends of the cable tray there is a hole Ø6x12 mm for connection.

	item	↕	ǂ	⫰	EAN
	NIXKZN 20X40_IX	0,8	0,40	2	8595057669444

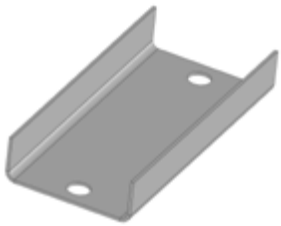


The graph shows the maximum allowed even loading of the tray in relation to the distances of the supports.

L = distance of supports (m)
P = allowed even loading (weight kg/m)

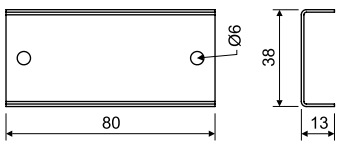
External influences are not taken into account in the permissible load and cannot be burdened by person.

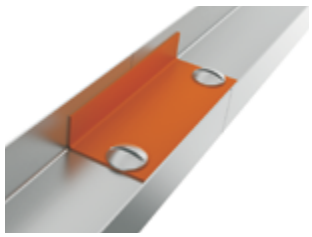
coupling



- The joining is performed using the bolts NIXSMP 5X10 (pg. 144).
- To ensure a conductive bond pursuant to ČSN 33 2000-4-41, it is essential to always use fan washers (part of the NIXSMP 5X10) under the bolt head.

	item	↕	ǂ	⫰	EAN
	NIXS 40_IX	0,8	0,04	2	8595057672093





↕ thickness of metal sheet (mm) ǂ weight kg/m; kg/pc

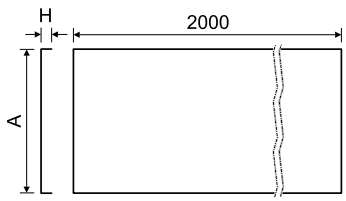
⫰ amount of bolts for connection

IX stainless steel

cable tray cover

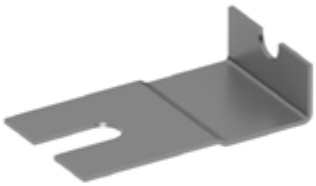


- The fixing of the cover to the tray is done by using of the cover fixture NIXUV (pg. 139).
- The NIXV 40 cover is fixed in place by bending the edges. To fix the cover more firmly to the NIXKZN 20X40 tray we recommend using an SPK 200X4.6 stainless steel tightening strap (pg. 146).



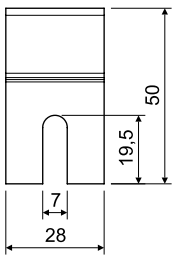
	item	A	H	↕	ǂ		EAN
	NIXV 40_IX	40	10	0,6	0,29	-	8595057673724
	NIXV 62_IX	62	14	0,6	0,43		8595057673755
	NIXV 125_IX	125	14	0,6	0,73		8595057673694
	NIXV 250_IX	250	14	0,6	1,33		8595057673717
	NIXV 500_IX	500	14	0,8	3,37		8595057673748

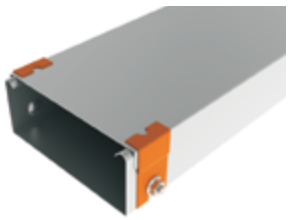
cover fixture



- Used to fasten covers to trays or fittings with a NIXSM 6X10 bolt.
- The number of anchors on the cover is the same as the number of cable tray interconnections and connections of cable trays with accessories.

	item	ǂ		EAN
	NIXUV_IX	0,01		8595057673663





↕ thickness of metal sheet (mm)

ǂ hmotnost kg/km; kg/pc

fire resistance E30-E90, P15-R - P90-R, PS15-PS90

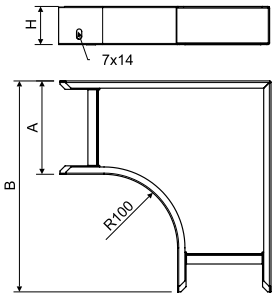
IX stainless steel

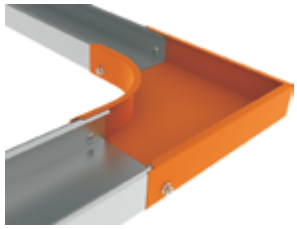
elbow 90°



- The arc is used to create a 90° branch in a horizontal direction.
- The connection is performed by direct sliding of the cable tray into the shaped piece and subsequent securing with bolts NIXSM 6X10 (pg. 144).
- On the NIXO 90X100X500 arc the outer right angle of the sides is replaced by a chamfer.

	item	A	H	B	↕	ǂ	⊥T		EAN
	NIXO 90X50X62_IX	62	50	225	0,8	0,45	4		8595057671546
	NIXO 90X50X125_IX	125	50	288	0,8	0,68	4		8595057671515
	NIXO 90X50X250_IX	250	50	413	0,8	1,30	4		8595057671522
	NIXO 90X100X125_IX	125	100	288	0,8	0,10	8		8595057671478
	NIXO 90X100X250_IX	250	100	413	0,8	1,64	8		8595057671485
	NIXO 90X100X500_IX	500	100	663	0,8	3,07	8		8595057671492



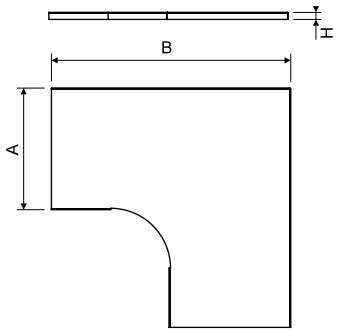


elbow cover 90°

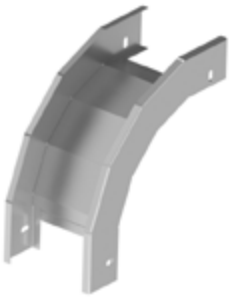
- To fix the cover use cover fixtures NIXUV (pg. 139).



	item	A	H	B	↕	ǂ		EAN
	NIXVO 90X62_IX	62	15	238	0,6	0,18		8595057674608
	NIXVO 90X125_IX	125	15	301	0,6	0,35		8595057674554
	NIXVO 90X250_IX	250	15	426	0,6	0,80		8595057674578
	NIXVO 90X500_IX	500	15	676	0,6	1,84		8595057674592

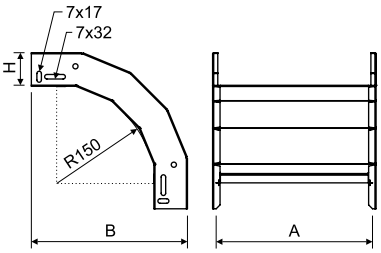


low elbow 90°



- The connection is performed by direct sliding of the cable tray into the shaped piece and subsequent securing with bolts NIXSM 6X10 (pg. 144).

	item	A	H	B	↕	ǂ	⫰		EAN
	NIXKO 90X50X62_IX	62	50	240	0,8	0,40	4		8595057670266
	NIXKO 90X50X125_IX	125	50	240	0,8	0,50	4		8595057670235
	NIXKO 90X50X250_IX	250	50	240	0,8	0,70	4		8595057670242
	NIXKO 90X100X125_IX	125	100	290	0,8	0,79	8		8595057670198
	NIXKO 90X100X250_IX	250	100	290	0,8	0,98	8		8595057670204
	NIXKO 90X100X500_IX	500	100	290	0,8	1,37	8		8595057670211



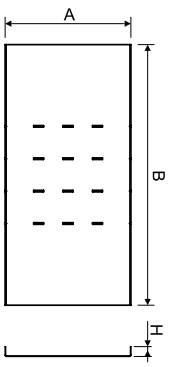


low elbow 90° cover



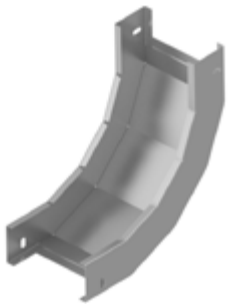
- To fix the cover use cover fixtures NIXUV (pg. 139).
- The covers are delivered straight. They are made from one piece of sheet metal with pre-cut side walls for later bending during assembly.

	item	A	H	B	↕	ǂ		EAN
	NIXVKO 90X50X62_IX	62	15	276	0,6	0,19		8595057673854
	NIXVKO 90X50X125_IX	125	15	276	0,6	0,31		8595057673823
	NIXVKO 90X50X250_IX	250	15	276	0,6	0,56		8595057673830
	NIXVKO 90X100X125_IX	125	15	326	0,6	0,37		8595057673786
	NIXVKO 90X100X250_IX	250	15	326	0,6	0,67		8595057673793
	NIXVKO 90X100X500_IX	500	15	326	0,6	1,27		8595057673809



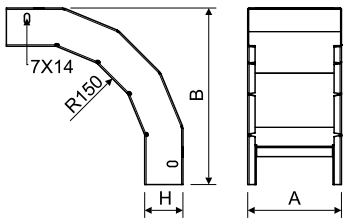


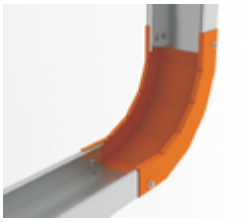
rising elbow 90°



- The connection is performed by direct sliding of the cable tray into the shaped piece and subsequent securing with bolts NIXSM 6X10 (pg. 144).

	item	A	H	B	↕	ǂ	⇊		EAN
	NIXSO 90X50X62_IX	62	50	240	0,8	0,44	4		8595057672284
	NIXSO 90X50X125_IX	125	50	240	0,8	0,57	4		8595057672253
	NIXSO 90X50X250_IX	250	50	240	0,8	0,82	4		8595057672260
	NIXSO 90X100X125_IX	125	100	290	0,8	0,92	8		8595057672215
	NIXSO 90X100X250_IX	250	100	290	0,8	1,24	8		8595057672222
	NIXSO 90X100X500_IX	500	100	290	0,8	1,88	8		8595057672239



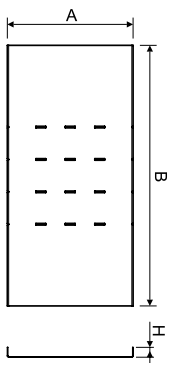


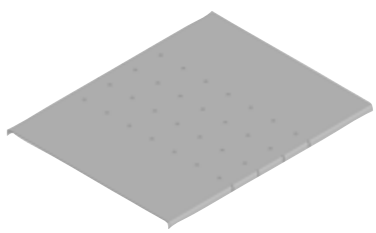
rising elbow 90° cover



- To fix the cover use cover fixtures NIXUV (pg. 139).
- The covers are delivered straight. They are made from one piece of sheet metal with pre-cut side walls for later bending during assembly.

	item	A	H	B	↕	ǂ		EAN
	NIXVSO 90X62_IX	62	15	221	0,6	0,15		8595568904713
	NIXVSO 90X125_IX	125	15	221	0,6	0,25		8595568904720
	NIXVSO 90X250_IX	250	15	221	0,6	0,45		8595568904737
	NIXVSO 90X500_IX	500	15	221	0,6	0,86		8595568904744





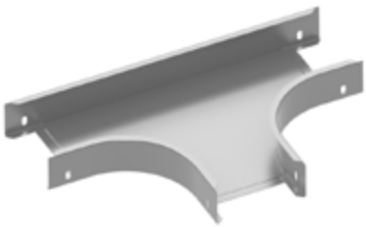
↕ thickness of metal sheet (mm) ǂ weight kg/pc

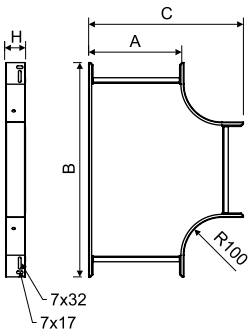
⇊ amount of bolts for connection

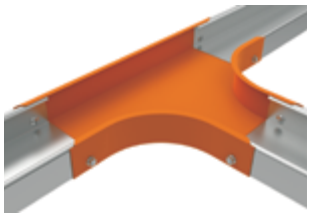
fire resistance E30-E90, P15-R - P90-R, PS15-PS90

IX stainless steel

T-piece





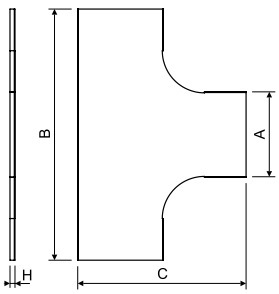


► The connection is performed by direct sliding of the cable tray into the shaped piece and subsequent securing with bolts NIXSM 6X10 (pg. 144).

item	A	H	B	C	↕	ǂ	⊥T		EAN
NIXT 50X62_IX	62	50	385	225	0,8	0,61	6		8595057672888
NIXT 50X125_IX	125	50	448	288	0,8	0,86	6		8595057672826
NIXT 50X250_IX	250	50	573	413	0,8	1,52	6		8595057672857
NIXT 100X125_IX	125	100	448	288	0,8	1,20	12		8595057672765
NIXT 100X250_IX	250	100	573	413	0,8	1,90	12		8595057672772
NIXT 100X500_IX	500	100	823	663	0,8	3,86	12		8595057672796

T-piece cover

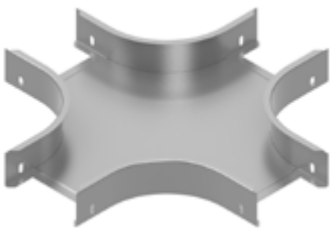




► To fix the cover use cover fixtures NIXUV (pg. 139).

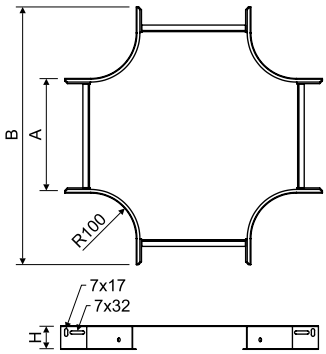
item	A	H	B	C	↕	ǂ		EAN
NIXVT 62_IX	62	15	409	238	0,6	0,25		8595057675018
NIXVT 125_IX	125	15	472	300	0,6	0,47		8595057674936
NIXVT 250_IX	250	15	597	426	0,6	1,01		8595057674967
NIXVT 500_IX	500	15	848	676	0,6	2,56		8595057674998

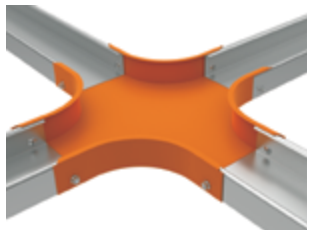
cross-over



► The connection is performed by direct sliding of the cable tray into the shaped piece and subsequent securing with bolts NIXSM 6X10 (pg. 144).

	item	A	H	B	↕	ǂ	⊥T		EAN
	NIXKR 50X62_IX	62	50	385	0,8	0,76	8		8595057670532
	NIXKR 50X125_IX	125	50	448	0,8	1,03	8		8595057670488
	NIXKR 50X250_IX	250	50	573	0,8	1,72	8		8595057670501
	NIXKR 100X125_IX	125	100	448	0,8	1,40	16		8595057670426
	NIXKR 100X250_IX	250	100	573	0,8	2,10	16		8595057670433
	NIXKR 100X500_IX	500	100	823	0,8	4,08	16		8595057670457



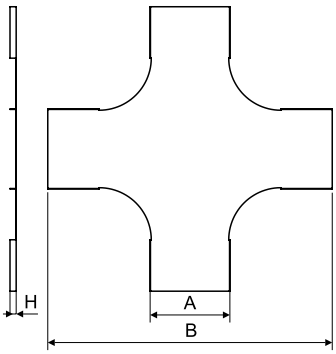


cross-over cover

► To fix the cover use cover fixtures NIXUV (pg. 139).



	item	A	H	B	↕	ǂ		EAN
	NIXVKR 62_IX	62	15	409	0,6	0,31		8595057674097
	NIXVKR 125_IX	125	15	472	0,6	0,58		8595057674011
	NIXVKR 250_IX	250	15	597	0,6	1,22		8595057674042
	NIXVKR 500_IX	500	15	848	0,6	2,95		8595057674073



↕ thickness of metal sheet (mm) ǂ weight kg/pc

⊥T amount of bolts for connection

fire resistance E30-E90, P15-R - P90-R, PS15-PS90

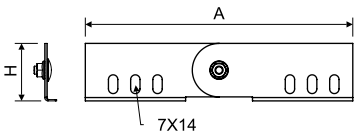
IX stainless steel

hinged joint



- For the connection of the hinged joint to the tray there are used the bolts NIXSM 6X10 (pg. 144).
- It is supplied as 1 pc; 2 pcs are required to create a bend in the route.

item	H	A	↕	ǂ	⫡		EAN
INOXSK 50_IX	43	200	1,0	0,09	2		8595568930552
INOXSK 100_IX	93	214	1,0	0,21	4		8595568930569



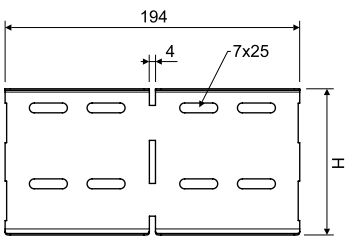


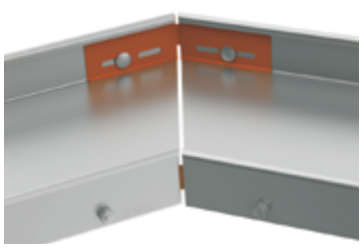
angle coupling



- The joining is performed by using the bolts NIXSM 6X10 (pg. 144).
- Angle couplings are mostly used at places where the route is slightly bended, for large bending radiuses or for the circumvention of columns and pillars.
- The advantage of the angle coupling is that it enables angled routes to be easily created at virtually any angle.

item	H	↕	ǂ		EAN
NIXSUK 50_IX	46	0,8	0,07		8595057672666
NIXSUK 100_IX	96	0,8	0,14		8595057672642



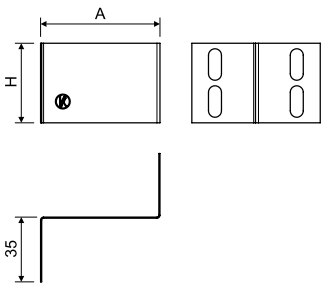


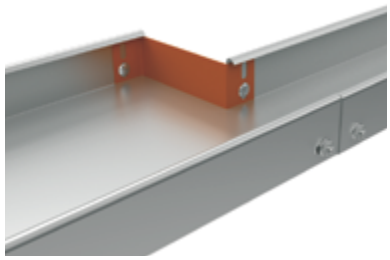
reduction



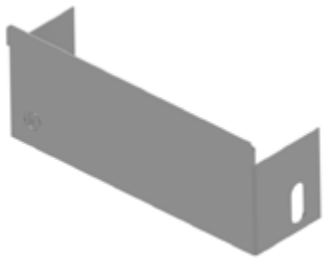
- The joining is performed by using the bolts NIXSM 6X10 (pg. 144).
- The reduction is used for the transition between various tray widths with identical height of side walls.

item	A	H	↕	↨	⊥T		EAN
NIXR 50X62_IX	65	43	0,6	0,02	2		8595057672031
NIXR 50X125_IX	127	43	0,6	0,04	2		8595057672017
NIXR 100X125_IX	127	93	0,6	0,08	4		8595057671997
NIXR 100X250_IX	250	93	0,6	0,18	4		8595057672000



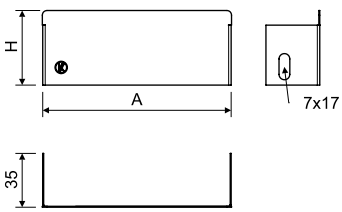


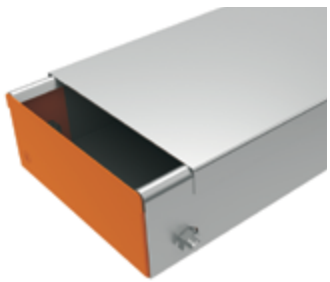
end-piece



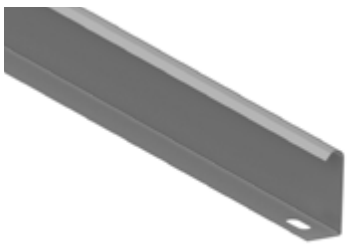
- The joining is performed by using the bolts NIXSM 6X10 (pg. 144).
- The end-piece serves for the ending off a route.

item	A	H	↕	↨	⊥T		EAN
NIXK 50X62_IX	60	50	0,6	0,03	2		8595057670020
NIXK 50X125_IX	123	50	0,6	0,04	2		8595057669994
NIXK 50X250_IX	248	50	0,6	0,07	4		8595057670006
NIXK 100X125_IX	125	100	0,6	0,08	2		8595057669956
NIXK 100X250_IX	250	100	0,6	0,14	4		8595057669963
NIXK 100X500_IX	500	100	0,6	0,34	4		8595057669970



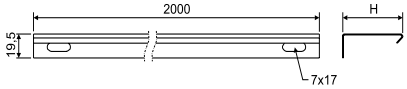


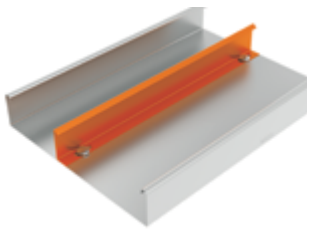
partition



- The standard length of the partition is 2 m.
- The fixing of the partition is carried out by bolts NIXSM 6X10 (pg. 144).

item	H	↕	↨		EAN
NIXPZ 50_IX	44	0,6	0,47		8595057671973
NIXPZ 100_IX	94	0,6	0,75		8595057671959





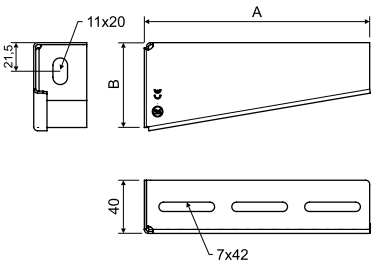
↕ thickness of metal sheet (mm) ↨ weight kg/pc; kg/m
⊥T amount of bolts for connection
fire resistance E30-E90, P15-R - P90-R, PS15-PS90 IX stainless steel

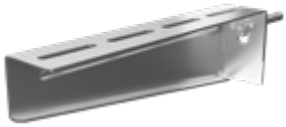
bracket - medium



- The bracket is designed for mounting to a wall or ceiling profile.
- Attachment to the wall is done using an Ø8 or 10 mm anchor.
- For mounting on the INOXSPS ceiling profile, use INOXPM sliding nuts together with INOXS bolts.
- The cable tray is attached to the bracket using an NIXSM 6X10 bolt (pg. 144).

	item	A	B	↓	↕	EAN
	INOXDS 62_IX	82	44	150	0,08	8595568940704
	INOXDS 125_IX	145	49	150	0,15	8595568940728
	INOXDS 250_IX	270	64	130	0,33	8595568940759
	INOXDS 500_IX	520	94	130	0,75	8595568940780





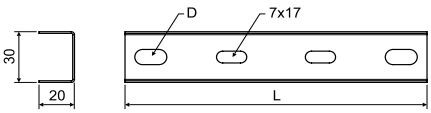


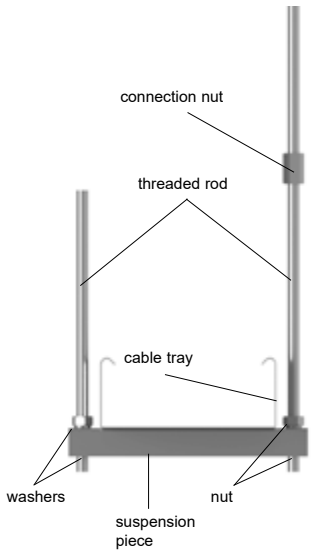
suspension piece



- It is used to suspend a cable tray in combination with threaded rods.
- The suspension piece is suspended on two threaded rods INOXZT 8 + INOXM 8 nuts.
  The NIXZ 500 suspension piece can be suspended on threaded rods INOXZT 10 + INOXM 10 nuts.
- The wire mesh tray is fastened to the hanger using NIXSM 6X10 bolts.

	item	L	D	↕	↕	EAN
	NIXZ 62_IX	107	∅9 x 18	1,0	0,05	8595057675346
	NIXZ 125_IX	170	∅9 x 18	1,0	0,09	8595057675315
	NIXZ 250_IX	295	∅9 x 18	1,0	0,13	8595057675322
	NIXZ 500_IX	545	∅11 x 20	1,0	0,28	8595057675339

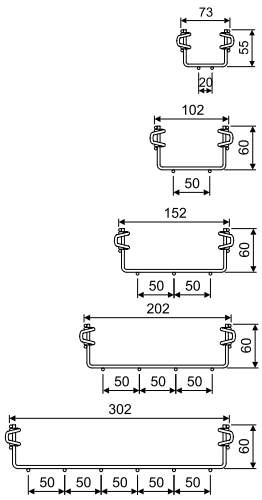




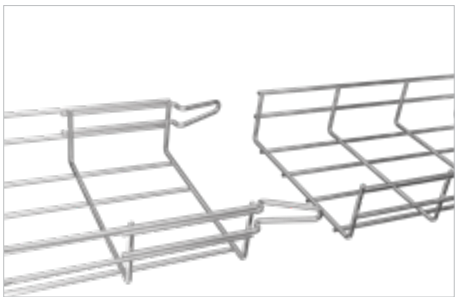
wire cable tray with integrated coupling

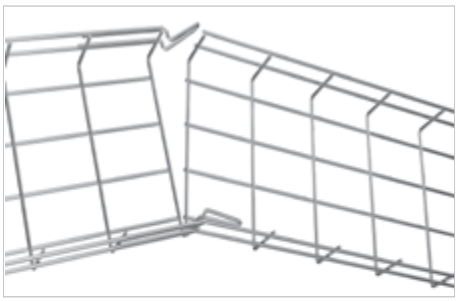


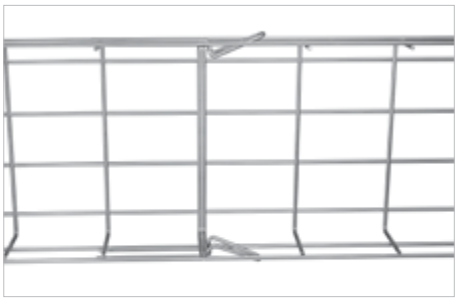
- Each cable tray has integrated fixing points at one end to ensure a tight connection.
- The connection meets sufficient electrical continuity to ensure protective connecting according to EN 61537.
- The connection is made below.
- The trays are designed for a maximum support spacing of 2 metres. The ideal place for connecting the tray is at 1/5 to ½ of the distance between the supports. A connection directly at the support is not appropriate.
- The values of the safe load are given in the table. The safe loads do not take into account external influences and it is not possible to load the tray with a man.
- The spacing of the cross wires is 100 mm.



item	∅	☒	ǂ	safe load at support spacing (N/m)			EAN
				1 m	1,5 m	2 m	
INOXDZI 60X60_VIX	4,0	29	0,77	441	290	204	8595568940278
INOXDZI 60X100_VIX	4,0	48	0,81	407	323	234	8595568940230
INOXDZI 60X150_VIX	4,0	73	0,96	446	345	248	8595568940247
INOXDZI 60X200_VIX	4,0	104	1,11	487	368	264	8595568940254
INOXDZI 60X300_VIX	4,4	158	1,71	567	413	295	8595568940261







EASYCONNECT® BASKET TRAY

∅ wire diameter (mm)

ǂ weight kg/m

VIX stainless steel

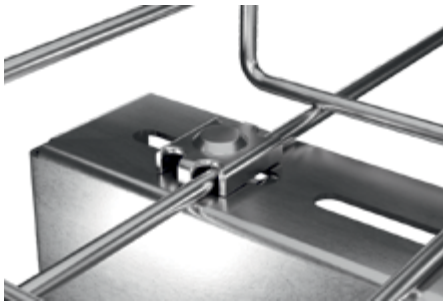
☒ inside usable area(cm2)

fastening bolt



► The special design of the bolt head enables quick and reliable connection of the wire tray, for example, to a bracket.

	item	ǂ	EAN
	INOXDZSU_VIX	0,02	8595568940308



coupling



► The coupling is designed for joining wire mesh trays.
► The special design of the bolt head enables quick and reliable connection of the trays.

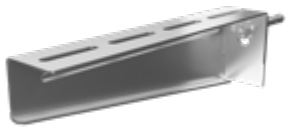
	item	ǂ	EAN
	INOXDZS_VIX	0,03	8595568940292



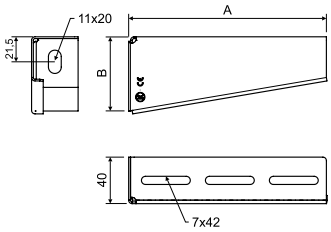
bracket - medium



- The holder is designed to be mounted on a wall or a ceiling profile.
- The hanger is fixed to the wall using Ø8 mm.
- For mounting on the INOXSPS ceiling profile, use INOXPM sliding nuts together with INOXS bolts.
- The wire tray is attached to the bracket using INOXDZSU fastening bolts.
- For attaching an INOXDZI 60X60 tray to the wall, the INOXDZZ hanger is used.







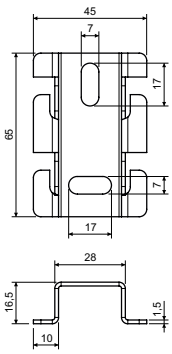
item	A	B	↓	‡	EAN
INOXDS 100_IX	120	48	150	0,11	8595568940711
INOXDS 150_IX	170	60	150	0,22	8595568940735
INOXDS 200_IX	220	64	150	0,26	8595568934185
INOXDS 300_IX	320	74	130	0,38	8595568934192

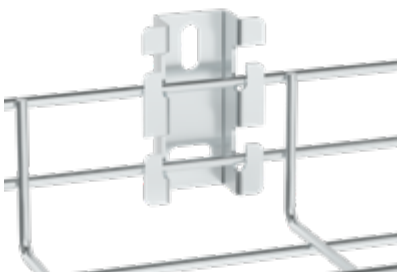
side hanger

- The hanger is designed for fastening a wire mesh tray to the wall.
- Wall fastening is only possible for trays with dimensions 60X60 and 60X100.
- Maximum recommended load per mounting point is 10 kg.



item	‡	EAN
INOXDZZ_IX	0,05	8595568943262



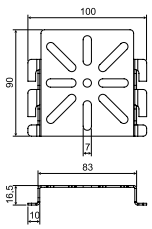


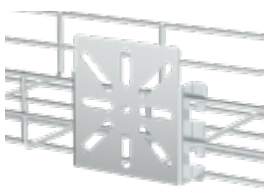
mounting plate

- Mounting plate serves to the assembling of electroinstallation boxes.
- It is attached to the side panel of the wire tray.



item	‡	EAN
INOXDZMD_IX	0,09	8595568943286



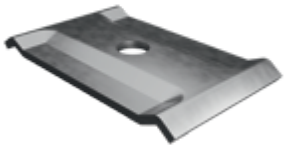


‡ weight kg/pc

↓ max. load (kg)

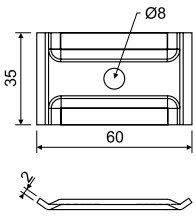
IX stainless steel

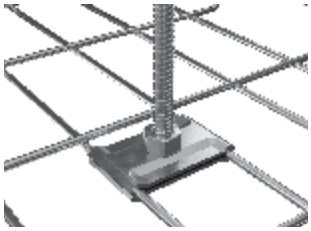
central hanger - inner



- The central hanger is designed to suspend a wire tray from the ceiling. Two central hangers are required for suspension (must order 2 pcs), along with two INOXM 8 nuts and an Ø8 mm threaded rod.
- Recommended for tray widths up to 300 mm.
- The hanger is not suitable for suspending trays with dimensions 60X60 or 60X1500.
- The hanger is also suitable for securing wires when forming curves or branches.

	item	ǂ	EAN
	INOXDZCZ_VIX	0,03	8595568940223



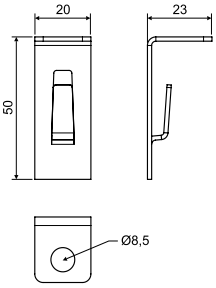


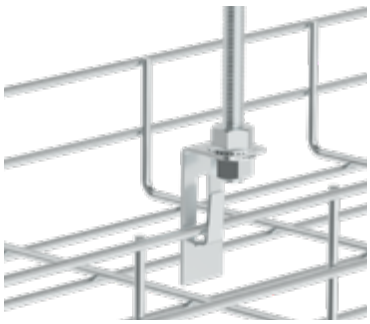
side hanger



- The side hanger is designed for suspending a wire mesh tray from the ceiling using a Ø8 mm threaded rod and two INOXM 8 nuts.
- The top wire of the tray side is inserted into the hook of the hanger. To steady the wire mesh tray, bend the hooks of the hanger around the inserted wire.
- The hanger is always used in pairs; suspension must be on both sides of the wire mesh tray.
- Maximum recommended load per mounting point (2 pcs INOXDZBZ) is 15 kg.

	item	ǂ	EAN
	INOXDZBZ_IX	0,01	8595568943309



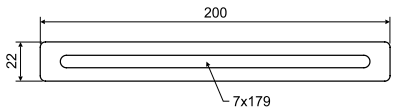


shaping strip



- The shaping strip is used as an auxiliary part to reinforce joints when shaping wire trays.
- The strip can be used in its flat form (e.g., to reinforce the bottom) or bent to the required angle when making bends and branches.
- The strip and wire tray can be fixed at any point using an INOXDZSU bolt.

	item	ǂ	EAN
	INOXDZTP 200_IX	0,04	8595568943323



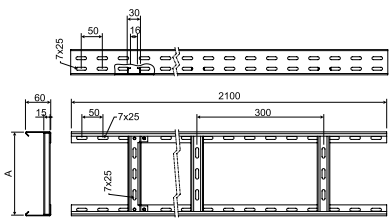


60 -stainless steel cable ladder

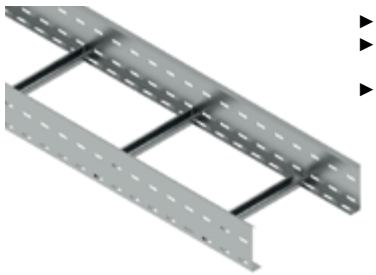


- The length of the cable ladder is 2,1 m.
- The joining of the ladders is performed by using the couplings INOXS 60 (pg. 138) and min. 4 pcs of bolts NIXSM 6X10 (pg. 144).
- The perforated sides form an L-profile with a bent edge. The perforated C-profile rungs are placed in the side walls by extrusion with a spacing of 300 mm, with open side of the profile facing up.

item	A	↕	⇟	EAN
INOXKL 60X200_IX	200	1,2	2,10	8595057641907
INOXKL 60X300_IX	300	1,2	2,30	8595057641914
INOXKL 60X400_IX	400	1,2	2,50	8595057641921

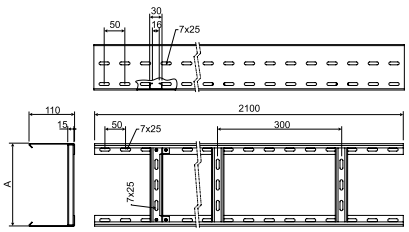


110 - stainless steel cable ladder



- The length of the cable ladder is 2,1 m.
- The joining of the ladders is performed by using the couplings INOXS 110 (pg. 138) and min. 8 pcs of bolts NIXSM 6X10 (pg. 144).
- The perforated sides form an L-profile with a bent edge. The perforated C-profile rungs are placed in the side walls by extrusion with a spacing of 300 mm, with open side of the profile facing up.

item	A	↕	⇟	EAN
INOXKL 110X200_IX	200	1,2	3,10	8595568934116
INOXKL 110X300_IX	300	1,2	3,30	8595568934123
INOXKL 110X400_IX	400	1,2	3,50	8595568934130

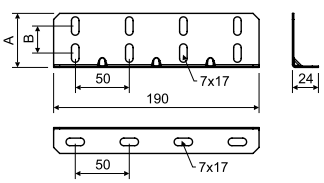


stainless steel coupling



- It is designated to connect the stainless steel cable ladders.
- The fastening of the joint is performed with the bolts NIXSM 6X10 pg. 144).

item	A	B	↕	⇟	⇊	EAN
INOXS 60_IX	50	25	1,2	0,12	4	8595568934215
INOXS 110_IX	98	50	1,2	0,20	8	8595568934147





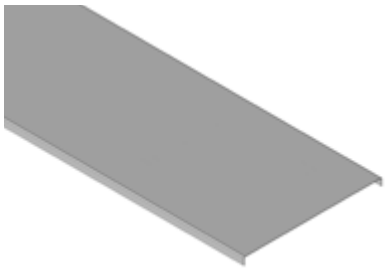
↕ thickness of metal sheet (mm)

⇟ weight kg/m; kg/pc

⇊ amount of bolts for connection

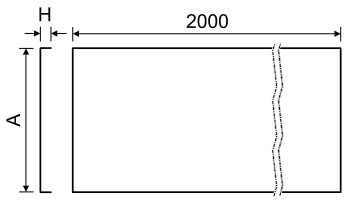
IX stainless steel

cable ladder cover



- Fixing the cover to the cable ladder is done using the INOXUV cover holder (2 pcs per meter) and the NIXSM 6X10 bolt (pg. 144).

	item	A	H	↕	ǂ	EAN
	INOXV 200_IX	200	14	0,8	1,45	8595057632271
	INOXV 300_IX	300	14	0,8	2,04	8595057641853
	INOXV 400_IX	400	14	0,8	2,73	8595057641860

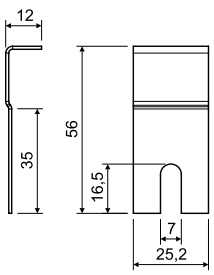


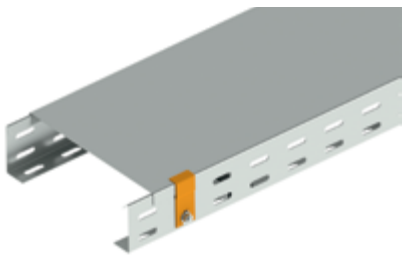
stainless cover fixture



- It is used to attach stainless steel covers to cable ladders using a NIXSM 6X10 bolt.
- The covers can be fixed directly at the joint of the cable ladders or into the longitudinal perforation of the sides of the cable ladders.

	item	↕	ǂ	EAN
	INOXUV_IX	1	0,01	8595568934239



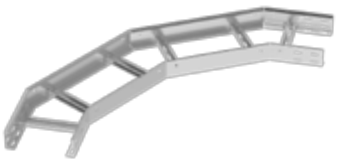


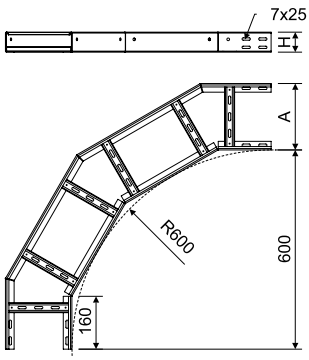
↕ thickness of metal sheet (mm)

ǂ weight kg/m; weight kg/pc

IX stainless steel

horizontal bend

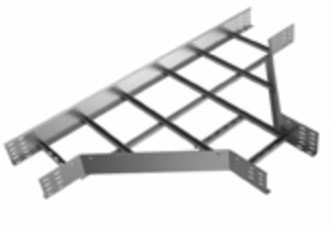


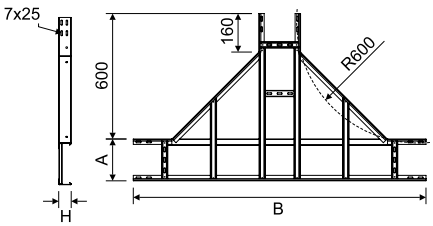


► The stainless steel bend is connected to the stainless steel ladder using INOXS couplings (pg. 18) and the bolts NIXSM 6X10 (pg. 144).

item	A	H	↕	⇊	EAN
INOXKLOBH 60X200_IX	200	60	1,2	16	8595568934345
INOXKLOBH 60X300_IX	300	60	1,2	16	8595568934352
INOXKLOBH 60X400_IX	400	60	1,2	16	8595568934369
INOXKLOBH 110X200_IX	200	110	1,2	32	8595568934376
INOXKLOBH 110X300_IX	300	110	1,2	32	8595568934383
INOXKLOBH 110X400_IX	400	110	1,2	32	8595568934390

T-piece

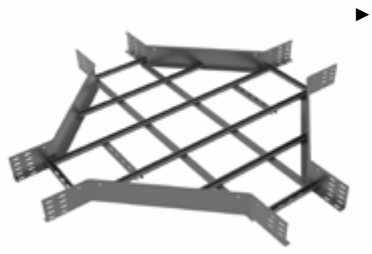


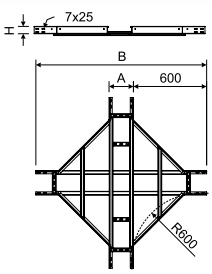


► The stainless steel T-piece is connected to the stainless steel ladder using INOXS couplings (pg. 138) and the bolts NIXSM 6X10 (pg. 144).

item	A	H	B	↕	⇊	EAN
INOXKLT 60X200_IX	200	60	1400	1,2	24	8595568934406
INOXKLT 60X300_IX	300	60	1500	1,2	24	8595568934413
INOXKLT 60X400_IX	400	60	1600	1,2	24	8595568934420
INOXKLT 110X200_IX	200	110	1400	1,2	48	8595568934437
INOXKLT 110X300_IX	300	110	1500	1,2	48	8595568934444
INOXKLT 110X400_IX	400	110	1600	1,2	48	8595568934451

cross-over

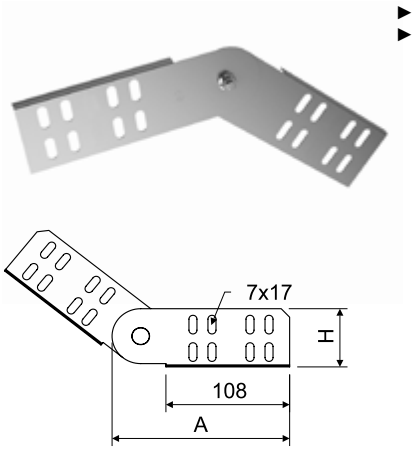


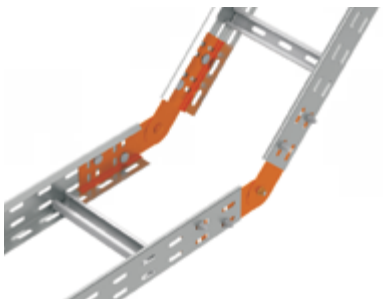


► The stainless steel cross is connected to the stainless steel ladder using INOXS couplings (pg. 138) and the bolts NIXSM 6X10 (pg. 144).

item	A	H	B	↕	⇊	EAN
INOXKLKR 60X200_IX	200	60	1400	1,2	32	8595568934468
INOXKLKR 60X300_IX	300	60	1500	1,2	32	8595568934475
INOXKLKR 60X400_IX	400	60	1600	1,2	32	8595568934482
INOXKLKR 110X200_IX	200	110	1400	1,2	64	8595568934499
INOXKLKR 110X300_IX	300	110	1500	1,2	64	8595568934505
INOXKLKR 110X400_IX	400	110	1600	1,2	64	8595568934512

hinged joint



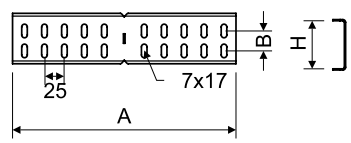


- NIXSM 6X10 bolts (pg. 144) are used to connect the articulated coupling to the ladder.
- The joint is delivered in 1 piece per packing. 2 pieces are needed to create the bend in the route.

	item	A	H	↕	ǂ	⊥̄	EAN
	INOXSK 60_IX	155	53	1,2	0,15	4	8595057631199
	INOXSK 110_IX	200	103	1,2	0,36	8	8595568934178

horizontal side wall clamp







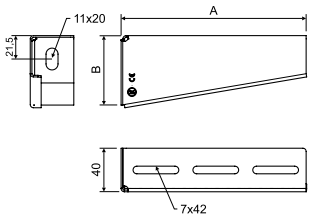


- Used to create branches in cable ladder routes or as a substitute for cable ladder fittings or to create a change in a route at different angles and different bending radiuses. Couplings are a cost-effective and versatile way of creating branches in routes in a horizontal direction.
- Cut the side wall of the cable ladder to bend off c. 15 mm above the bottom – in the bottom perforation axis.
- It is necessary to use NCH (pg. 107).
- The fastening of the joint is performed with the bolts NIXSM 6X10 (pg. 144).

	item	A	B	H	↕	ǂ	EAN
	INOXBSKH 60 K_IX	280	25	63	1,5	0,27	8595568905840
	INOXBSKH 110 K_IX	280	50	113	1,5	0,42	8595568934161
	INOXBSKH 60 D_IX	630	25	63	1,5	0,62	8595568905857
	INOXBSKH 110 D_IX	630	50	113	1,5	1,00	8595568934154

bracket - medium



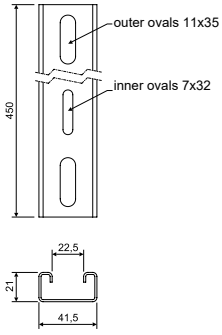


- The holder is designed to be mounted on a wall or a ceiling profile.
- The hanger is fixed to the wall using Ø8 or Ø10 mm anchors.
- INOXPM sliding nuts are used together with INOXS bolts for installation on the INOXSPS ceiling profile.
- The cable ladder is fixed to the holder with a NIXSM 6X10 bolt (pg. 144).

item	A	B	↓	‡	EAN
INOXDS 200_IX	220	64	150	0,26	8595568934185
INOXDS 300_IX	320	74	130	0,38	8595568934192
INOXDS 400_IX	420	84	130	0,54	8595568934208

load bearing profile



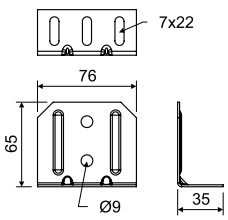


- The bearing profile is fixed with two INOXZT 8 threaded rods + INOXM 8 nuts + INOXPD 8.
- The size of the load bearing profile is determined according to the width of the cable ladder +50 mm, for example for a cable ladder that is 200 mm wide, order INOXNP 250.
- The cable ladder is attached to the supporting profile with a NIXSM 6X10 bolt (pg. 144).

item	A	B	C	D1 (internal)	D2 (external)	↕	↓	‡	for KL	EAN
INOXNP 250_IX	250	41,5	21	Ø 7x40	Ø 9x18	1,2	100	0,24	INOXKL …X200	8595568906281
INOXNP 350_IX	350	41,5	21			1,2	100	0,33	INOXKL …X300	8595568906298
INOXNP 450_IX	450	41,5	21			1,2	100	0,42	INOXKL …X400	8595568906304

cable ladder wall bracket

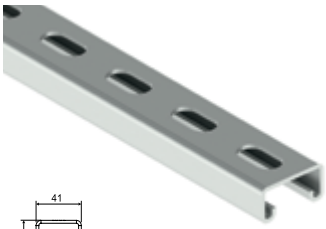


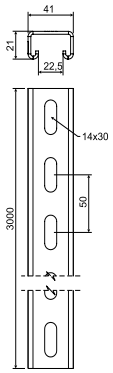


- Mounting to the ladder is done using NIXSM 6X10 bolts (pg. 144).
- The 8 mm diameter anchor is used for mounting on the wall.

item	↕	‡	EAN
INOXKLSU_IX	1,5	0,08	8595568936516

assembly profile



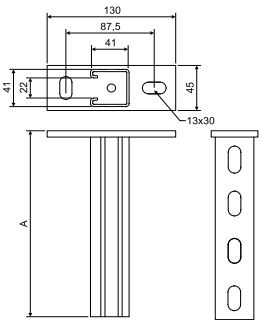


- Suitable to create support for cable trays mounted on threaded rods.
- Assembly profile can be terminated with OKSPS protective cover (pg. 87).
- Stainless steel AISI 316.

	item	↕		EAN
	INOXMP 41X21_IX	1,80		8595057630598

ceiling profile - medium



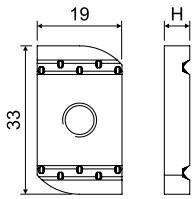


- Designed for fixing NIXDS or INOXDS brackets using INOXPM sliding nuts and INOXS hex head bolts.
- For double-sided installation, the brackets are fastened with INOXS ..X70 bolts, INOXM nuts and INOXPD washers.
- Stainless steel AISI 316.
- OKSPS - end seal from PE.

	item	A	ǂ	EAN
	INOXSPS 200_IX	208	0,85	8595568930392
	INOXSPS 300_IX	308	1,04	8595568930408
	INOXSPS 400_IX	408	1,28	8595568930415
	INOXSPS 500_IX	508	1,45	8595568930422
	INOXSPS 600_IX	608	1,78	8595568930439
	OKSPS_DB	-	0,01	8595057633841

sliding nut





- It is used to attach the brackets to the ceiling profiles INOXSPS.
- Stainless steel AISI 316.

	item	ǂ	H	EAN
	INOXPM 41 M 8_IX	0,03	6	8595057630611
	INOXPM 41 M 10_IX	0,04	8	8595057642515

threaded rod



- According to the standard DIN 976.

item	thread	length		EAN
INOXZT 8_IX	M8	2000		8595057630604
INOXZT 10_IX	M10	2000		8595057642683

connection nut



- Used for the connection of two threaded rods INOXZT 8 or INOXZT 10.

item	thread	‡	EAN
INOXMZ 8_IX	M8	0,01	8595568930217
INOXMZ 10_IX	M10	0,02	8595568930064

bolt + nut + lock washers



- It is used to fasten the connection of cable trays NIXKZN 20X40.
- A solid connection ensures a conductive connection of cable trays according to ČSN EN 61 537.

item	↺	EAN
NIXSMP 5X10_IX	100	8595568904751

bolt with round head and lock nut



- It is used to fasten the connection of cable trays and accessories or to fasten it to a support.
- A solid connection ensures a conductive connection of cable trays according to ČSN EN 61 537.
- Stainless steel AISI 316.

item	↺		EAN
NIXSM 6X10_IX	100		8595057672185

bolt with hexagonal head



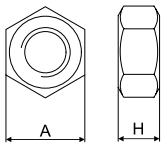


► According to the standard DIN 933.

	item	L	thread	‡	↺	EAN
	INOXS 8X20_IX	20	M8	0,012	100	8595057642546
	INOXS 8X70_IX	70	M8	0,028	100	8595568930194
	INOXS 10X20_IX	20	M10	0,021	100	8595057642560
	INOXS 10X70_IX	70	M10	0,046	100	8595568904126

hexagonal nut



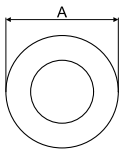


► According to the standard DIN 934.

	item	A	H	thread	↺		EAN
	INOXM 8_IX	13	6,5	M8	100	🔥	8595057630635
	INOXM 10_IX	17	8	M10	100	🔥	8595057642706

washer



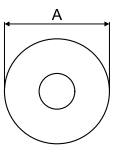


► According to the standard DIN 125.

	item	A	↺		EAN
	INOXPD 8_IX	16	100	🔥	8595057630710
	INOXPD 10_IX	20	100	🔥	8595057642720

large washer





► According to the standard DIN 9021.

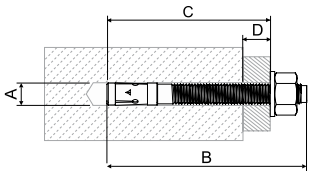
	item	A	↺		EAN
	INOXPVL 6_IX	18	100	🔥	8595057642737
	INOXPVL 8_IX	24	100	🔥	8595057642744
	INOXPVL 10_IX	30	100	🔥	8595057642751

anchor



- The anchors are suitable for suspended, push-through and distance mounting.
- Types of base material: cracked concrete, non-cracked concrete, natural stone with a dense structure.
- Stainless steel AISI 316.

- A - hole diameter
- B - total length of anchor
- C - minimum hole depth for through installation
- D - maximum usable length



	item	approved seismicity class	A	B	C	D	thread	spanner size		EAN
	INOXKPO 6X70_IX		6	67	45	10	M6x18	10		8595568944986
	INOXKPO 8X75_IX	C1	8	75	65	10	M8x38	13		8595568921987
	INOXKPO 10X95_IX	C1/C2	10	105	95	20	M10x63	17		8595568905888

stop anchor



- The clamping anchors are used to attach the threaded rods directly to the base material (concrete, brick).
- Inside the anchor, there is an expansion pin that must be driven in before installing the threaded rod.
- Stainless steel AISI 316.

- A - hole diameter
- B - total length of anchor
- C - minimum depth of the drilled hole

	item	A	B	C	thread	ǂ		EAN
	INOXKPOZ 8_IX	10	30	33	M8x14	0,02		8595568905895
	INOXKPOZ 10_IX	12	40	43	M10x17	0,03		8595568905901

tightening strip



- The tightening strip used to fixed the NIXV 40 (pg. 125) lid to the NIXKZN 20X40 tray (pg. 124).
- The connection is not detachable.

	item	ǂ	↺		EAN
	SPK 200X4.6_IX	0,002	100		8595057698116



7 FIRE BOXES

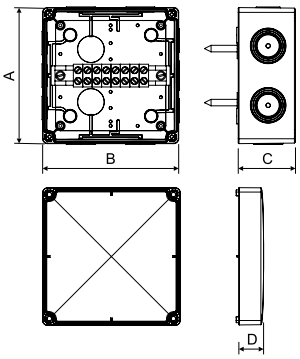


KSK fire-resistant wiring box for power cables (5 terminals)



-25 - +60 °C | A1 - F | 30 sec. | IP66

item	A	B	C	D	‡		EAN
KSK 100_PO	101	101	47,5	16	0,2		8595568919144
KSK 125_PO10	126	126	53	23	0,3		8595568922069
KSK 175_PO16	176	126	68	22	0,4		8595568924339



- The box is equipped with five ceramic terminals mounted on a metal mounting rail.
- The boxes are fixed to the concrete with the supplied fire-resistant anchors or concrete bolts (included in the package).
- Use only with power cables with proven functionality under fire conditions.
- The fire-resistant boxes are fitted with soft-material cable entries that allow easy insertion of cables into the box.
- The lid is secured with the included stainless steel screws.

KSK 100_PO: the terminals are designed for 5 conductors with a cable cross-section of 1.5 - 6 mm²

fire resistance classification: P90-R ČSN 730895
E90 DIN 4102-12
PS90 STN 920205

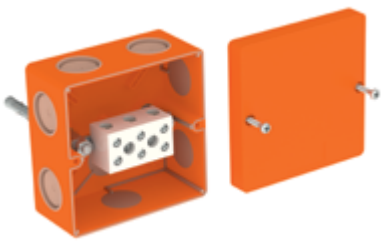
KSK 125_PO10: the terminals are designed for 5 conductors with a cable cross-section of 1.5 - 10 mm²

fire resistance classification P90-R ČSN 730895
E90 DIN 4102-12
PS90 STN 920205

KSK 175_PO16: the terminals are designed for 5 conductors with a cable cross-section of 1.5 - 16 mm²

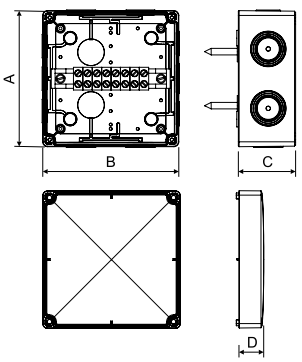
fire resistance classification: P90-R ČSN 730895
E90 DIN 4102-12
PS90 STN 920205

KSK fire-resistant wiring box for single-phase applications – one three-pole terminal



-25 - +60 °C | A1 - F | 30 sec. | IP66

item	A	B	C	D	‡		EAN
KSK 100_PO4J	101	101	47,5	16	0,2		8595568934673
KSK 100_PO6J	101	101	47,5	16	0,3		8595568934680
KSK 100_PO10J	101	101	47,5	16	0,4		8595568927620



- The box is equipped with one ceramic terminal with three poles, which is bolted onto a metal mounting rail.
- The boxes are fixed to the concrete with the supplied fire-resistant anchors (included in the package).
- Use only with power cables with proven functionality under fire conditions.
- The fire-resistant boxes are fitted with soft-material cable entries that allow easy insertion of cables into the box.
- The lid is secured with the included stainless steel screws.

KSK 100_PO4J: the terminals are designed for 3 conductors with a cable cross-section of 1.5 - 4 mm²

fire resistance classification: P90-R ČSN 730895
E90 DIN 4102-12
PS90 STN 920205

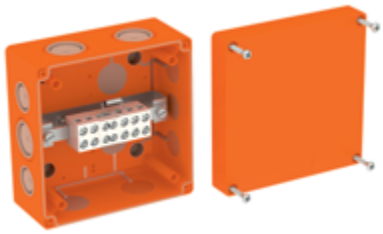
KSK 100_PO6J: the terminals are designed for 3 conductors with a cable cross-section of 1.5 - 6 mm²

fire resistance classification: P90-R ČSN 730895
E90 DIN 4102-12
PS90 STN 920205

KSK 100_PO10J: the terminals are designed for 3 conductors with a cable cross-section of 1.5 - 10 mm²

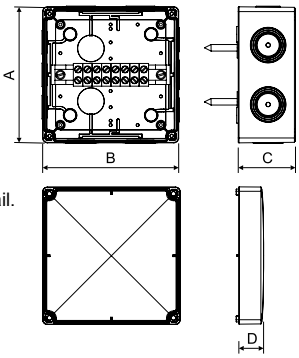
fire resistance classification: P90-R ČSN 730895
E90 DIN 4102-12
PS90 STN 920205

fire-resistant wiring box KSK with thermal fuse



-25 - +60 °C | A1 - F | 30 sec. | IP66

item	A	B	C	D	ǂ		EAN
KSK 125_PO6P	126	126	53	23	0,3		8595568924322
KSK 175_PO10P	176	126	68	22	0,4		8595568924360



- The box is equipped with five single ceramic terminals and one double ceramic terminal, mounted on a metal mounting rail.
- The boxes are fixed to the concrete with the supplied fire-resistant SB 6.3X45 bolts (included in the package).
- Use only with power cables with proven functionality under fire conditions.
- The boxes are equipped with terminals for easy connection of devices on a secondary circuit.
- These devices do not maintain functionality under fire conditions and must therefore be disconnected when their degradation could cause a fault, potentially shutting down the entire main circuit.
- A thermal fuse (TP_PO – included in the package) is used to ensure the disconnection of the secondary circuit.
- The fire-resistant boxes are fitted with soft-material cable entries that allow easy insertion of cables into the box.
- The lid is secured with the included stainless steel screws.

KSK 125_PO6P: the terminals are designed for 5 conductors with a cable cross-section of 1.5 - 6 mm²

fire resistance classification: P90-R ČSN 730895
E90 DIN 4102-12
PS90 STN 920205

KSK 175_PO10P: the terminals are designed for 5 conductors with a cable cross-section of 1.5 - 10 mm²

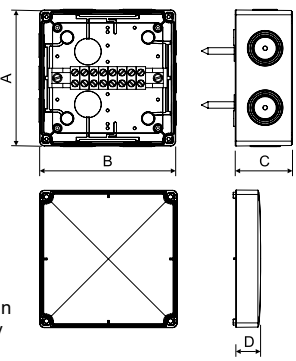
fire resistance classification: P90-R ČSN 730895
E90 DIN 4102-12
PS90 STN 920205

fire-resistant KSK wiring box with double terminals fo for three-phase applications



-25 - +60 °C | A1 - F | 30 sec. | IP66

item	A	B	C	D	ǂ		EAN
KSK 125_2PO6	126	126	53	23	0,3		8595568924315
KSK 175_2PO10	176	126	68	22	0,5		8595568924353
KSK 175_2PO16	176	126	68	22	0,7		8595568941305



- The box is equipped with five double ceramic terminals, mounted on a metal mounting rail.
- The boxes are fixed to the concrete with the supplied fire-resistant SB 6.3X45 bolts (included in the package).
- Use only with power cables with proven functionality under fire conditions.
- The boxes are equipped with terminals for easy connection of devices on a secondary circuit. These devices do not remain functional under fire conditions and must therefore be disconnected when their degradation could cause a fault, potentially shutting down the entire main circuit.
- The fire-resistant boxes are fitted with soft-material cable entries that allow easy insertion of cables into the box.
- The lid is secured with the included stainless steel screws.

KSK 125_2PO6: the terminals are designed for 5 conductors with a cable cross-section of 1.5 - 6 mm²

fire resistance classification: P90-R ČSN 730895
E90 DIN 4102-12
PS90 STN 920205

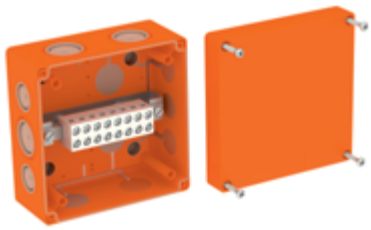
KSK 175_2PO10: the terminals are designed for 5 conductors with a cable cross-section of 1.5 - 10 mm²

fire resistance classification: P90-R ČSN 730895
E90 DIN 4102-12
PS90 STN 920205

KSK 175_2PO16: the terminals are designed for 5 conductors with a cable cross-section of 1.5 - 16 mm²

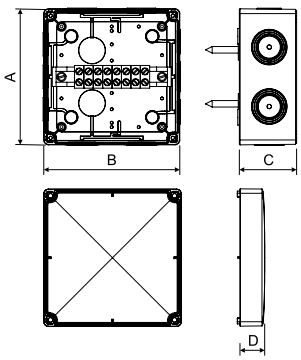
fire resistance classification: P90-R ČSN 730895
E90 DIN 4102-12
PS 90 STN 920205

KSK fire-resistant wiring box for data (communication) wiring



-25 - +60 °C | A1 - F | 30 sec. | IP66

item	A	B	C	D	‡		EAN
KSK 125_DPO	126	126	53	23	0,3		8595568924308
KSK 175_DPO	176	126	68	22	0,5		8595568924360



- The box is equipped with five ceramic data terminals, mounted on a metal mounting rail.
- The boxes are fixed to the concrete with the supplied fire-resistant anchorsor or bolts (included in the package).
- For use only with power cables with proven functionality under fire conditions.
- The fire-resistant boxes are fitted with soft-material cable entries that allow easy insertion of cables into the box.
- The lid is secured with the included stainless steel screws.

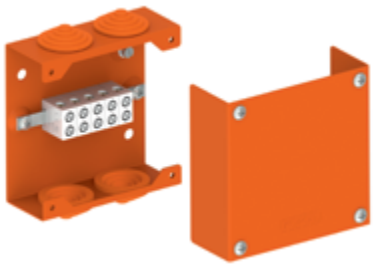
KSK 125_DPO: the terminals are designed for 8 conductors with a cable cross-section of 0,5 - 4 mm²

fire resistance classification: P90-R ČSN 730895
E90 DIN 4102-12
PS90 STN 920205

KSK 175_DPO: the terminals are designed for 14 conductors with a cable cross-section of 0,5 - 4 mm²

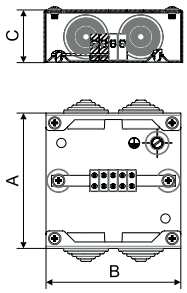
fire resistance classification: P90-R ČSN 730895
E90 DIN 4102-12
PS90 STN 920205

KPK metal fire-resistant wiring box for power distribution



-50 - +150 °C | A1 - F | IP40 | IK07

item	A	B	C	‡		EAN
KPK 125_PO6	126	126	48	0,6		8595568942197
KPK 125_PO10	126	126	48	0,9		8595568942203
KPK 125_PO16	126	126	48	1,1		8595568942227
KPK 200_PO10	190	203	75	1,4		8595568942272
KPK 200_PO16	190	203	75	2,1		8595568942289



- Metal wiring boxes with ceramic terminals for conductors with functional integrity.
- Designed for special applications such as protected and unprotected escape routes. Made of galvanized sheet metal, subsequently coated with a polyester UV-resistant paint.
- The entries are made of soft plastic material, allowing easy insertion of cables into the box.
- The boxes are fixed to the concrete with the supplied fire-resistant SB 6.3X45 bolts (included in the package).
- The lid is secured with the included stainless steel screws.

KPK 125_PO6: the terminals are designed for 5 conductors with a cable cross-section of 1,5 - 6 mm²

fire resistance classification: P90-R ČSN 730895
E90 DIN 4102-12
PS90 STN 920205

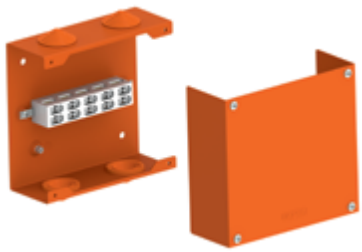
KPK 125_PO10, KPK 200_PO10: the terminals are designed for 5 conductors with a cable cross-section of 1,5 - 10 mm²

fire resistance classification: P90-R ČSN 730895
E90 DIN 4102-12
PS90 STN 920205

KPK 125_PO16, KPK 200_PO16: the terminals are designed for 5 conductors with a cable cross-section of 1,5 - 16 mm²

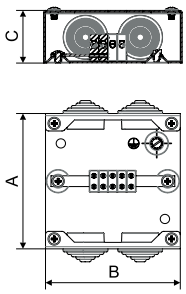
fire resistance classification: P90-R ČSN 730895
E90 DIN 4102-12
PS90 STN 920205

KPK metal fire-resistant wiring box with double terminals for power cables



-50 - +150 °C A1 - F IP40 IK07

item	A	B	C	‡		EAN
KPK 125_2PO6	126	126	48	0,6		8595568942210
KPK 200_2PO10	190	203	75	1,8		8595568942241
KPK 200_2PO16	190	203	75	2,4		8595568942319



- Metal wiring boxes with ceramic terminals for conductors with functional integrity.
- Designed for special applications such as protected and unprotected escape routes. Made of galvanized sheet metal, subsequently coated with a polyester UV-resistant paint.
- The entries are made of soft plastic material, allowing easy insertion of cables into the box.
- The boxes are fixed to the concrete with the supplied fire-resistant SB 6.3X45 bolts (included in the package).
- The lid is secured with the included stainless steel screws.

KPK 125_2PO6: the terminals are designed for 5 conductors with a cable cross-section of 1,5 - 6 mm²

fire resistance classification: P90-R ČSN 73 0895
E90 DIN 4102-12
PS90 STN 92 0205

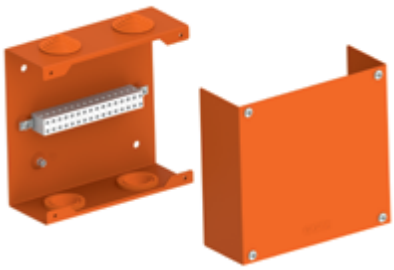
KPK 200_2PO10: the terminals are designed for 5 conductors with a cable cross-section of 1,5 - 10 mm²

fire resistance classification: P90-R ČSN 73 0895
E90 DIN 4102-12
PS90 STN 92 0205

KPK 200_2PO16: the terminals are designed for 5 conductors with a cable cross-section of 1,5 - 16 mm²

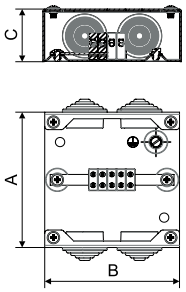
fire resistance classification: P90-R ČSN 73 0895
E90 DIN 4102-12
PS90 STN 92 0205

KPK metal fire-resistant wiring box data (communication) wiring



-50 - +150 °C A1 - F IP40 IK07

item	A	B	C	‡		EAN
KPK 125_DPO	126	126	48	0,8		8595568942234
KPK 200_DPO16	190	203	75	2,1		8595568942296
KPK 250_DPO30	223	250	75	2,9		8595568942302



- Metal wiring boxes with ceramic terminals for conductors with functional integrity.
- Designed for special applications such as protected and unprotected escape routes. Made of galvanized sheet metal, subsequently coated with a polyester UV-resistant paint.
- The entries are made of soft plastic material, allowing easy insertion of cables into the box.
- The boxes are fixed to the concrete with the supplied fire-resistant SB 6.3X45 bolts (included in the package).
- The lid is secured with the included stainless steel screws.

KPK 125_DPO: the terminals are designed for 8 conductors with a cable cross-section of 0,5 - 4 mm²

fire resistance classification: P90-R ČSN 73 0895
E90 DIN 4102-12
PS90 STN 92 0205

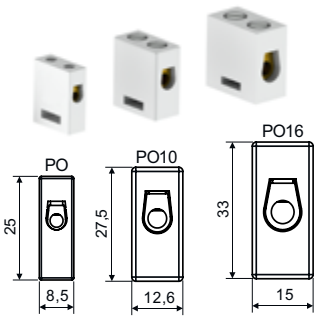
KPK 200_DPO16: the terminals are designed for 16 conductors with a cable cross-section of 0,5 - 4 mm²

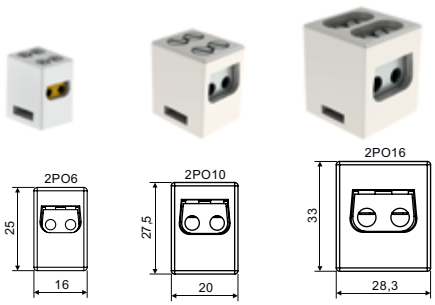
fire resistance classification: P90-R ČSN 73 0895
E90 DIN 4102-12
PS90 STN 92 0205

KPK 250_DPO30: the terminals are designed for 30 conductors with a cable cross-section of 0,5 - 4 mm²

fire resistance classification: P90-R ČSN 73 0895
E90 DIN 4102-12
PS90 STN 92 0205

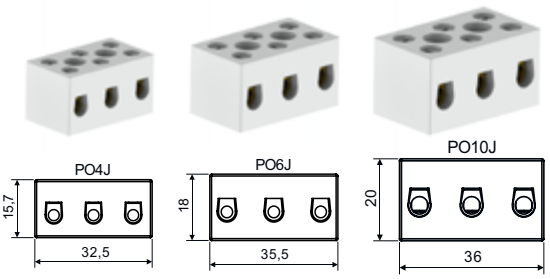
ceramic terminal

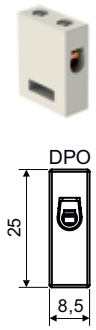




- Separate ceramic terminals serve only as a spare part for KSK and KPK boxes with functionality in the event of a fire. Single and double terminals can be interchanged, provided that the other parameters of the KSK and KPK boxes do not change.
- For KPK boxes, the existing combination of terminals can be supplemented with additional terminals up to full occupancy of the mounting rail.
- Separate ceramic terminals do not form a fire resistant route.
- DPO terminals are equipped with a metal plate for the protection of stranded conductors.

item	height (mm)	width (mm)	length (mm)	for cable cross section (mm^2)		EAN
KS_PO	25	8,5	20	up to 6		8595568932112
KS_PO10	27,5	12,6	24	up to 10		8595568932518
KS_PO16	33	15	28,5	up to 16		8595568932525
KS_2PO6	25	16	20	2 cables up to 6		8595568932129
KS_2PO10	27,5	20	24	2 cables up to 10		8595568932136
KS_2PO16	33	28,3	28,3	2 cables up to 16		8595568938787
KS_PO4J	15,7	32,5	17,8	up to 4		8595568934697
KS_PO6J	18	35,5	19	up to 6		8595568934703
KS_PO10J	20	36	21	up to 10		8595568932532
KS_DPO	25	8,5	20	up to 4		8595568941770





grounding clamp



- The grounding clamp is intended for connecting a conductor to the ground.

item	height (mm)	width (mm)	length (mm)	for cable cross section		EAN
KSPE_PO	42	16	11,5	do 25 mm^2		8595568941312

thermal fuse



- KSK and KPK boxes can be fitted with several fuses, provided that the other parameters of the tested boxes do not change.

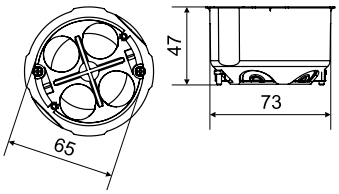
item	ǂ	↺	load			EAN
			thermal	current		
TP_PO	0,01	10	150 °C	10 A		8595568932105

wiring instrument box for fire-rated partition walls



-5 +60 °C | 850 °C | A1 - F | 30 sec. | Pb Free | IP30 | HF | EI 120

- Fire integrity and insulation up to 120 minutes (EI 15 - EI 120)
- Suitable for installation in drywall and aerated concrete constructions.
- Designed for circuits with voltages up to 400 V.
- The fire-resistant material is placed both outside and inside the box.
- The diameter of the drill for installation is 73 mm.
- The box is soundproof (sound insulation up to 69 dB).
- The mounting bolts and metal brackets are equipped with a triple-thread for quick installation.
- The box is intended primarily for buildings with an increased need for protection of people and property.
- Fire resistance classification according to: ČSN EN 1363-1, ČSN EN 1364-1, ČSN EN 1366-3, ČSN 73 0810.



Accessories:



MP3-3CH_ZNCR

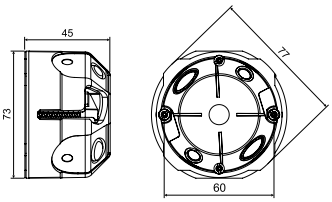
item	classification		EAN
KPZ-1_PO	EI 15 - EI 120		8595568932358

wiring instrument box for fire-rated partition walls



-5 +60 °C | 850 °C | A1 - F | 30 sec. | Pb Free | IP30 | HF | EI 90

- Ensures integrity and insulation in case of fire for up to 90 minutes (EI 15 – EI 90).
- Suitable for installation in drywall and aerated concrete constructions.
- The entry openings are made of flexible material.
- The fire-resistant material is placed on the outside of the box.
- The diameter of the drill for installation is 73 mm.
- The box is soundproof (sound insulation up to 69 dB).
- The mounting bolts feature a double-thread with plastic feet for quick installation..
- The box is intended primarily for buildings with an increased need for protection of people and property.
- Fire resistance classification according to: ČSN EN 1363-1, ČSN EN 1364-1, ČSN EN 1366-3, ČSN 73 0810.



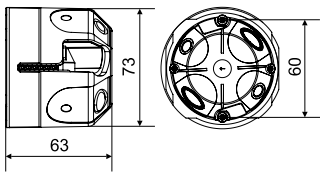
item	classification		EAN
KPZ 68-45_PO	EI 15 - EI 90		8595568937605

fireproof instrument box for fire-rated partition walls



-5 +60 °C | 850 °C | A1 - F | 30 sec. | Pb Free | IP30 | HF | EI 90

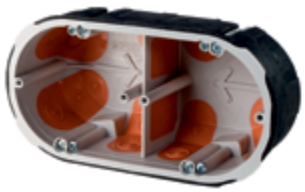
- Ensures integrity and insulation in case of fire for up to 90 minutes (EI 15 – EI 90).
- Suitable for installation in drywall and aerated concrete constructions.
- The entry openings are made of flexible material.
- The fire-resistant material is placed on the outside of the box.
- The diameter of the drill for installation is 73 mm.
- The box is soundproof (sound insulation up to 69 dB).
- The mounting bolts are equipped with a double thread and plastic feet for quick installation.
- The box is intended primarily for buildings with an increased need for protection of people and property.
- Fire resistance classification according to: ČSN EN 1363-1, ČSN EN 1364-1, ČSN EN 1366-3, ČSN 73 0810.

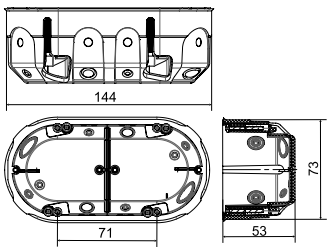


item	classification		EAN
KPZ 68-60_PO	EI 15 - EI 90		8595568937612

class of reaction to fire of the base material
temperature resistance
self-extinguishing
lead-free material
Degree of protection
halogen-free material
EI 90 - integrity and insulation 90 min.
EI120 - integrity and insulation 120 min.
fire resistance E30-E90, P15-R - P90-R, PS15-PS90
product for sound insulation walls

wiring instrument box for fire-rated partition walls



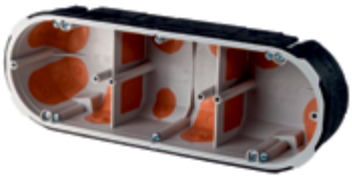


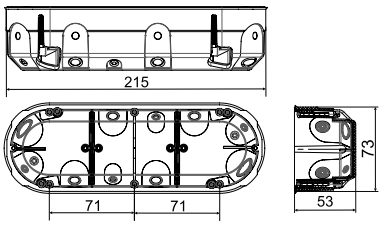
-5 +60 °C | 850 °C | A1 - F | 30 sec. | IP30

- Ensures integrity and insulation in case of fire for up to 90 minutes (EI 15 – EI 90).
- Suitable for installation in drywall and aerated concrete constructions.
- The entry openings are made of flexible material.
- The fire-resistant material is placed on the outside of the box.
- The diameter of the drill for installation is 73 mm.
- The box is soundproof (sound insulation up to 69 dB).
- The mounting bolts are equipped with a double thread and plastic feet for quick installation.
- The box is intended primarily for buildings with an increased need for protection of people and property.
- Fire resistance classification according to: ČSN EN 1363-1, ČSN EN 1364-1, ČSN EN 1366-3, ČSN 73 0810.

item	classification		EAN
KPZ 68-50/2_PO	EI 15 - EI 90		8595568937629

wiring instrument box for fire-rated partition walls





-5 +60 °C | 850 °C | A1 - F | 30 sec. | IP30

- Ensures integrity and insulation in case of fire for up to 90 minutes (EI 15 – EI 90).
- Suitable for installation in drywall and aerated concrete constructions.
- The entry openings are made of flexible material.
- The fire-resistant material is placed on the outside of the box.
- The diameter of the drill for installation is 73 mm.
- The box is soundproof (sound insulation up to 69 dB).
- The mounting bolts are equipped with a double thread and plastic feet for quick installation.
- The box is intended primarily for buildings with an increased need for protection of people and property.
- Fire resistance classification according to: ČSN EN 1363-1, ČSN EN 1364-1, ČSN EN 1366-3, ČSN 73 0810.

item	classification		EAN
KPZ 68-50/3_PO	EI 15 - EI 90		8595568937636



8 OTHER PRODUCTS

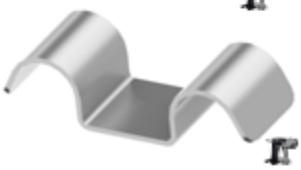


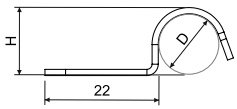
cable clamps

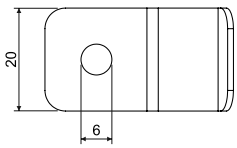












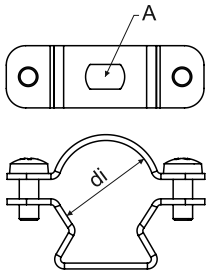
- Clamps are intended for fastening cables to the base material.
- The clamps are fixed to the concrete with the SB 6.3X35 bolts.
- The clamps are fixed to the aerated concrete with the KHP anchors in combination with KVD bolts or SB 6.3X45 bolts.
- Clamps without hole can be shot using gas nail guns with a magnetic attachment.

item	D	H	Ø cable		EAN
one-sided clamps with hole					
6706_PO	6	7,2	4-6		8595568927804
6708_PO	8	9,2	6-8		8595568909930
6710_PO	10	11,2	8-10		8595568909947
6712_PO	12	13,2	10-12		8595568909954
6714_PO	14	15,2	12-14		8595568935052
6716E_PO	16	17,2	14-16		8595057698031
6718_PO	18	19,5	16-18		8595568935083
6720_PO	20	21,5	18-20		8595568932464
6722_PO	22	23,5	20-22		8595568935113
6725_PO	25	26,5	23-25		8595568935144
6706_POGMT	6	7,2	4-6		8595568932495
6708_POGMT	8	9,2	6-8		8595568912459
6710_POGMT	10	11,2	8-10		8595568912466
6712_POGMT	12	13,2	10-12		8595568912473
6714_POGMT	14	15,2	12-14		8595568935069
6716E_POGMT	16	17,2	14-16		8595568912503
6718_POGMT	18	19,5	16-18		8595568935090
6720_POGMT	20	21,5	18-20		8595568932501
6722_POGMT	22	23,5	20-22		8595568935120
6725_POGMT	25	26,5	23-25		8595568935151
one-sided clamps without hole					
6706_POBD	6	7,2	4-6		8595568934987
6708_POBD	8	9,2	6-8		8595568934994
6710_POBD	10	11,2	8-10		8595568935007
6712_POBD	12	13,2	10-12		8595568935014
6714_POBD	14	15,2	12-14		8595568935076
6716E_POBD	16	17,2	14-16		8595568935021
6718_POBD	18	19,5	16-18		8595568935106
6720_POBD	20	21,5	18-20		8595568935038
6722_POBD	22	23,5	20-22		8595568935137
6725_POBD	25	26,5	23-25		8595568935168
two-sided clamps with hole					
6708D_PO	8	9	6-8		8595568936820
6710D_PO	10	11	8-10		8595568936837
6712D_PO	12	13,2	10-12		8595568936844
6716ED_PO	16	17,2	14-16		8595057698079
6716ED_POGMT	16	17,2	14-16		8595568912510
two-sided clamps without hole					
6708D_POBD	8	9	6-8		8595568936851
6710D_POBD	10	11	8-10		8595568936868
6712D_POBD	12	13,2	10-12		8595568936875

clamp OMEGA



- OMEGA clamps are designed for fastening pipes or cables to a base material.
  For easy installation, the clamp is provided with groove for insertion; during installation, it is not necessary to completely separate the upper part of the clamp.
- The recommended cable diameters correspond to free placement of the cable in the clamp.
- KPO 6 anchors or SB 6.3X35 concrete bolt are suitable for fastening to the base material.
- For anchoring into aerated concrete, use a KHP anchor with a KVD bolt or an SB 6.3X45 concrete bolt.
- For fastening into wood, use KVD bolts.



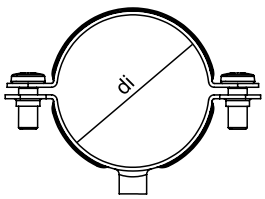
	item	Ø cabels / pipes min. - max.	di	A	ǂ		EAN
	5216E ZNM_S	14 - 17	15 - 18	6,5x10	0,012		8595057692084
	5220 ZNM_S	18 - 21	19 - 23		0,015		8595057692091
	5225 ZNM_S	22 - 25	24 - 28		0,018		8595057692107
	5232 ZNM_S	25 - 39	30 - 40		0,022		8595057692114
	5250 ZNM_S	38 - 50	39 - 52	6,5x14	0,028		8595057692138
	5263 ZNM_S	51 - 60	53 - 63		0,032		8595057692145

	5216E ZN_F	12 -14	15 - 19	6,4x10	0,014		8595568915269
	5220 ZN_F	14 - 18	19 - 24		0,015		8595568915276
	5225 ZN_F	18 - 22	24 - 29		0,018		8595568915283
	5232 ZN_F	22 - 30	29 - 38		0,022		8595568915290
	5240 ZN_F	30 - 38	38 - 47		0,025		8595568915306
	5250 ZN_F	38 - 50	47 - 55		0,028		8595568915313
	5263 ZN_F	51 - 60	55 - 63		0,032		8595568915320

clamp DOBRMAN



- DOBRMAN clamps are designed for fastening pipes or cables to a base material.
- For fastening to a base material, KPO 6 anchors or KPOZ 6 anchors in combination with a ZT 6 threaded rod are suitable.
- The recommended cable diameters correspond to free placement of the cable in the clamp.
- The clamp is equipped with a slot for insertion, so it is not necessary to completely separate the top part of the clamp during installation.
- For anchoring into aerated concrete, use a KHP anchor with an SVD bolt or a KHP anchor with a ZT 6 threaded rod.



	item	Ø cabels / pipes min. - max. (mm)	di	thread	ǂ		EAN
	5208 D_ZNCR	8 - 12	8	M6	0,010		8595568927491
	5210 D_ZNCR	10 - 14	10	M6	0,011		8595568927507
	5212 D_ZNCR	12 - 16	12	M6	0,011		8595568927514
	5216 D_ZNCR	16 - 20	16	M6	0,012		8595568927521
	5220 D_ZNCR	20 - 25	20	M6	0,013		8595568927538
	5225 D_ZNCR	25 - 32	25	M6	0,016		8595568927545
	5232 D_ZNCR	32 - 40	32	M6	0,018		8595568927552
	5240 D_ZNCR	40 - 48	40	M6	0,023		8595568927569
	5250 D_ZNCR	50 - 57	50	M6	0,030		8595568927576
	5263 D_ZNCR	63 - 70	63	M6	0,071		8595568927583

metal bracket with a metric thread

UVD 6

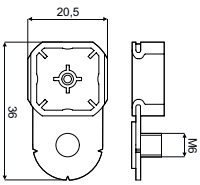


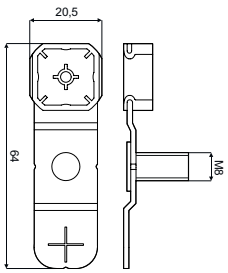
- The metal bracket is intended for fastening clamps and other components to the base material.
- The bracket with an M6 metric pin is suitable for fastening DOBRMAN clamps, or OMEGA clamps in combination with a PVL 6 washer and an M6 nut.
- Installation is carried out using a nailing technique.
- The solid construction ensures high durability.

	item	ǂ	⭳	thread		EAN
	UVD 6_PO	0,01	30	M6		8595568941084
	UVD 8_PO	0,02	50	M8		8595568941091

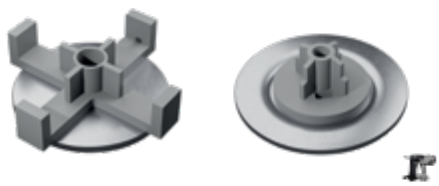
UVD 8







wsher for nailing



- The metal washer is used for fastening electrical installation channels to the wall or ceiling.
- Possibility of nailing channels made of PVC and HF material.

KPNL 15_XX - suitable for channels:
LE 60, LE 80, LE 100, LO 50, LV 40x15, LV 24X22, EKE 60X60, EKE 100X60, EKE 140X60, EKD 80X40, EKD 100X40, EKD 120X40, LH 60X40, LHD 40X20, LHD 40X40, LHD 25X15, LHD 25X20, LHD 32X15

KPNL 25_XX - suitable for channels:
LE 80, LV 40X15, EKD 80X40, EKD 120X40, LHD 40X20, LHD 40X40

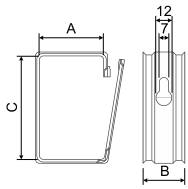


	item	ø	EAN
	KPNL 15_XX	15	8595568941121
	KPNL 25_XX	25	8595568941138

grouped cable holder







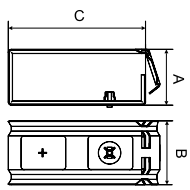
- The group holder is suitable for fastening a cable or cable bundles to a wall or ceiling.
- The holder is fastened to the base material using a concrete bolt or other suitable anchoring elements.
- The holder allows installation of cables with different diameters.
- The design of the group holders allows easy addition of extra cables to the route.
- The max. load capacity of the holder when used in fire-resistant constructions is 4.8 kg/m. In standard installations, the max. load capacity is 6 kg/m.
- For anchoring into aerated concrete, use a KHP anchor with an SB 6.3X45 concrete bolt.

item	A	B	C	max. number of inserted cables			ǂ		EAN
				Ø6	Ø8	Ø10			
SD 2_PO	49	32	79	25	19	12	0,03	🔥	8595568942173
SD 4_PO	33,5	32	57	50	38	25	0,05	🔥	8595568942180

grouped cable holder for nailing



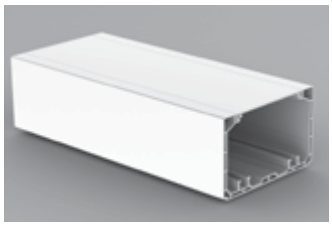




- The group holder is suitable for fastening a cable or cable bundles to a wall or ceiling.
- The holder is normally supplied in a closed position and is equipped with plastic components that allow the holder to be nailed to the base material.
- It can also be fastened using a standard concrete bolt or other suitable anchoring elements.
- The holder allows installation of cables with various diameters.
- The design of the group holders allows easy addition of extra cables to the route.
- The max. load capacity of the holder when used in fire-resistant constructions is 4.8 kg/m. In standard installations, the max. load capacity is 6 kg/m.

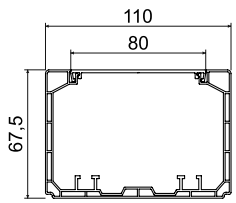
item	A	B	C	max. number of inserted cables			ǂ		EAN
				Ø6	Ø8	Ø10			
SD 1_PO	47	40	41	30	15	12	0,03	🔥	8595568940988
SD 3_PO	35	40	87	40	30	20	0,05	🔥	8595568940995

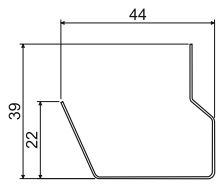
parapet channel PK 110X65 D HF



MAT | HF | -25 - +90°C | 850°C | A1 - F | 30 sec. | 1 J | 5500 mm² | IP 40 | IK07 | HF

- Without halogen components, suitable for environments with a higher concentration of people.
- For routing power and communication circuits, security wiring, and other installations.
- Electromagnetic shielding of individual circuits is achieved by inserting a shielding channel.
- For standard devices installed in the KP 80 PK HF device box.
- The load-bearing structure is based on a halogen-free PK 110X65 D HF trunking channel equipped with a PEP 60/K metal partition. The partition is attached over the trunking channel to the wall using KPO 6 anchors.



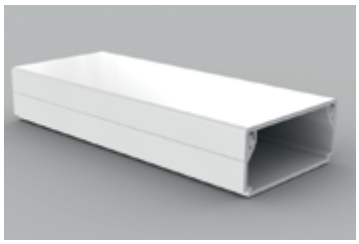


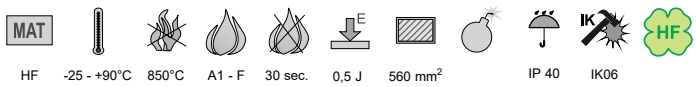
item	L (m)	↺		EAN
PK 110X65 D HF_HD	2	6		8595568924636

Accessories					
end					
	**8211HF_HB**	-	2		8595568934741
connecting					
	**8212HF_HB**	-	2		8595568934758
bending					
	**8213HF_HB**	-	2		8595568934765
branching					
	**8214HF_HB**	-	2		8595568934772
inner corner (variable ±10°)					
	**8215HF_HB**	-	2		8595568934789
outer corner (variable ±10°)					
	**8216HF_HB**	-	2		8595568934796
grommet					
	**8217HF_HB**	-	2		8595568934802
wiring boxes					
	**KP 80 PK HF_HB**	-	2		8595568934819
partition wall					
	**PEP 60/K_S**	20	20		8595568934826

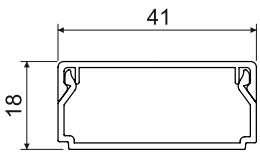
material | class of reaction to fire of the base material | temperature resistance | flaming loop test | self-extinguishing | impact strength | inside area | package | area with a risk of explosion | Degree of protection | mechanical protection | halogen-free material | fire resistance E30-E90, P15-R - P90-R, PS15-PS90 | ↺ package (m; pcs) | HD/HB color - white

wiring trunking LHD 40X20 HF





- The basis of the functional integrity construction is a halogen-free LHD 40×20 rail together with 67xx clamps (maximum clamp size – 6710_PO).
- The rail is fastened to the wall or ceiling using 67xx_PO clamps with an SB 6.3×35 concrete bolt.



item	L (m)	↺		EAN
LHD 40X20HF_HD	2	24		8595057656437

Accessories					
end					
	**8631HF_HB**	-	10		8595057655744
connecting					
	**8632HF_HB**	-	10		8595057655805
connecting					
	**8633HF_HB**	-	10		8595057655805
branching					
	**8634HF_HB**	-	10		8595057655768
inner corner					
	**8635HF_HB**	-	10		8595057655775
outer corner					
	**8636HF_HB**	-	10		8595057655782

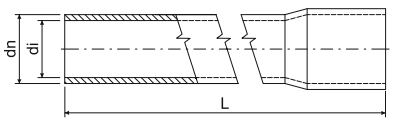
Halogen-free rigid wiring pipes - low mechanical resistanc



MAT | -45 - +90°C | A1 - F | 30 sec. | 320 N/5 cm | 22521 | E 90 | IK06 | HF | UV

PC ABS

- Halogen-free rigid pipe suitable for residential and industrial installations.
- For diameters up to 25 mm, the pipes are socketed at one end; diameters 32–63 mm are fitted with a coupling.
- From a fire safety perspective, halogen-free pipes are used in areas where human safety and property protection are emphasized, e.g., public buildings, hospitals, schools, theaters, airport halls, shopping centers, etc.
- Can be installed in areas with a risk of explosive flammable gases and vapors (Zone 2) and in areas with a risk of explosive flammable dust (Zone 22).
- **Black pipes are UV-stable.**



item		dn (mm)	di min. (mm)	L (m)	↺		EAN
1516EHF_FA	black	16	13,1	3	30		8595057626423
1516EHF_KA	light grey			3	30		8595057631854
1520HF_FA	black	20	17,1	3	30		8595057626430
1520HF_KA	light grey			3	30		8595057631861
1525HF_FA	black	25	21,6	3	30		8595057626966
1525HF_KA	light grey			3	30		8595057631885
1532HF_FA	black	32	28,4	3	30		8595057626973
1532HF_KA	light grey			3	30		8595057631885
1540HF_FA	black	40	36,0	3	30		8595057626447
1540HF_KA	light grey			3	30		8595057631892
1550HF_FA	black	50	45,6	3	30		8595057626454
1550HF_KA	light grey			3	30		8595057631908
1563HF_FA	black	63	58,4	3	15		8595057631489
1563HF_KA	light grey			3	15		8595057631915

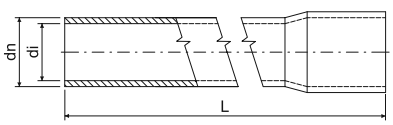
Halogen-free rigid wiring pipes - medium mechanical resistance



MAT | -45 - +90°C | A1 - F | 30 sec. | 750 N/5 cm | 33521 | E 90 | IK07 | HF | UV

PC ABS

- Halogen-free rigid pipe suitable for residential and industrial installations.
- For diameters up to 25 mm, the pipes are socketed at one end; diameters 32–40 mm are fitted with a coupling.
- From a fire safety perspective, halogen-free pipes are used in areas where human safety and property protection are emphasized, e.g., public buildings, hospitals, schools, theaters, airport halls, shopping centers, etc.
- Can be installed in areas with a risk of explosive flammable gases and vapors (Zone 2) and in areas with a risk of explosive flammable dust (Zone 22).
- Black pipes are UV-stable.



item		dn (mm)	di min. (mm)	L (m)	↺		EAN
4016EHF_FA	black	16	12,7	3	15		8595057688254
4016EHF_KA	light grey			3	15		8595057690868
4020HF_FA	black	20	16,7	3	15		8595057688261
4020HF_KA	light grey			3	15		8595057690875
4025HF_FA	black	25	21,0	3	15		8595057688278
4025HF_KA	light grey			3	15		8595057690882
4032HF_FA	black	32	28,0	3	15		8595057688285
4032HF_KA	light grey			3	15		8595057690899
4040HF_FA	black	40	35,4	3	15		8595057688292
4040HF_KA	light grey			3	15		8595057690905

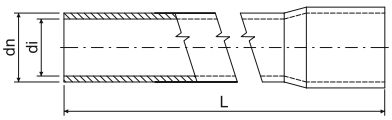
MAT material
temperature resistance
class of reaction to fire of the base material
self-extinguishing
mechanical resistance
classification code according to 61386-1
area with a risk of explosion
E 90 functionality during a fire
IK mechanical protection
halogen-free material
UV stable
color
fire resistance E30-E90, P15-R - P90-R, PS15-PS90
FA, FB color - black
KA, KB color - light grey
↺ package (pcs)

Halogen-free rigid wiring pipes - low mechanical resistanc



PC ABS | -45 - +90°C | A1 - F | 30 sec. | 1250 N/5 cm | 44521 | IK09

- Halogen-free rigid pipe suitable for residential and industrial installations.
- For diameters up to 25 mm, the pipes are socketed at one end; diameters 32–63 mm are fitted with a coupling.
- From a fire safety perspective, halogen-free pipes are used in areas where human safety and property protection are critical, e.g., public buildings, hospitals, schools, theaters, airport halls, shopping centers, etc.
- Can be installed in areas with a risk of explosive flammable gases and vapors (Zone 2) and in areas with a risk of explosive flammable dust (Zone 22).
- **Black pipes are UV-stable.**



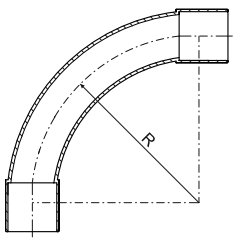
item		dn (mm)	di min. (mm)	L (m)	↺		EAN
8016EHF_FA	black	16	11,7	3	15		8595057688322
8020HF_FA	black	20	15,7	3	15		8595057688339
8025HF_FA	black	25	20,2	3	15		8595057688346
8032HF_FA	black	32	27,0	3	15		8595057688353
8040HF_FA	black	40	34,8	3	15		8595057688360
8050HF_FA	black	50	44,2	3	15		8595057688377
8063HF_FA	black	63	56,8	3	15		8595057688384

Kolena pro bezhalogenové tuhé trubky EN



PC ABS | -45 - +90°C | A1 - F | 30 sec. | IK09

- Elbows manufactured by injection molding, with double sockets, designed for a 90° bend.
- The bend radius ensures a smooth transition and allows easy pulling of conductors and cables.
- Rigid and flexible pipes can be connected using accessories for rigid pipes.
- If a different angle than 90° is required, the elbow can be replaced with a flexible pipe and couplings.
- From a fire safety perspective, halogen-free pipes are used in areas where human safety and property protection are critical, e.g., public buildings, hospitals, schools, theaters, airport halls, shopping centers, etc.
- Can be installed in areas with a risk of explosive flammable gases and vapors (Zone 2) and in areas with a risk of explosive flammable dust (Zone 22).
- Black elbows are UV-stable.



item		dn (mm)	R (mm)	↺		EAN
4116HF_FB	black	16	55	10; 480		8595057626461
4116HF_KB	light grey			10; 480		8595057629288
4120HF_FB	black	20	70	10; 240		8595057626478
4120HF_KB	light grey			10; 240		8595057629295
4125HF_FB	black	25	85	10; 120		8595057626256
4125HF_KB	light grey			10; 120		8595057629301
4132HF_FB	black	32	110	10; 60		8595057626263
4132HF_KB	black			10; 60		8595057629318
4140HF_FB	black	40	135	5; 35		8595057626485
4140HF_KB	light grey			5; 35		8595057651166
4150HF_FB	black	50	170	5; 30		8595057626492
4150HF_KB	light grey			5; 30		8595057699281

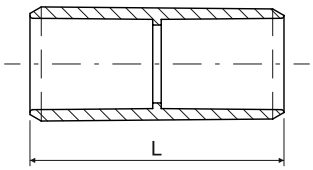
connectors for halogen-free pipes EN



MAT | -45 - +90°C | A1 - F | 30 sec. | E 90 | IK09 | HF | UV

PC ABS

- ► Connectors are intended for connecting pipes.
- ► The socketed ends of pipes and elbows reduce material consumption for installations with rigid pipes.
- ► Can be installed in areas with a risk of explosive flammable gases and vapors (Zone 2) and in areas with a risk of explosive flammable dust (Zone 22).
- ► Black connector are UV-stable.



	item		dn (mm)	L (mm)	↺		EAN
■	**0216HF_FB**	black	16	45	10; 100; 1300		8595057626508
■	**0216HF_KB**	light grey			10; 100; 1300		8595057631922
■	**0220HF_FB**	black	20	50	10; 100; 800		8595057626515
■	**0220HF_KB**	light grey			10; 100; 800		8595057631939
■	**0225HF_FB**	black	25	60	10; 480		8595057626270
■	**0225HF_KB**	light grey			10; 100; 480		8595057631946
■	**0232HF_FB**	black	32	70	10; 260		8595057626287
■	**0232HF_KB**	black			10; 260		8595057631953
■	**0240HF_FB**	black	40	80	10; 120		8595057626522
■	**0240HF_KB**	light grey			10; 120		8595057631960
■	**0250HF_FB**	black	50	88	10; 180		8595057626539
■	**0250HF_KB**	light grey			10; 180		8595057631977
■	**0263HF_FB**	black	63	105	2; 44		8595057629356
■	**0263HF_KB**	light grey			2; 44		8595057631984

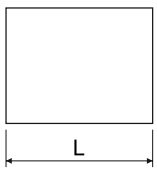
connectors for steel threaded pipes ČSN



MAT | IK10

steel

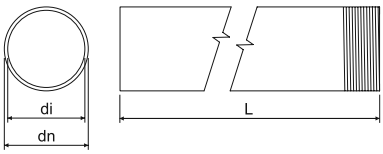
- ► They are intended for connecting steel pipes and elbows in fire-resistant routes, providing mechanical protection for conductors or cables.
- ► Aluminum connectors supplied with the pipes according to ČSN must be replaced with series 313/3 – 342/3 connectors, depending on the pipe diameter.



	item		L (mm)	ǂ		EAN
■	**313/3_PO**	P13,5	30	0,04		8595057692695
■	**316/3_PO**	P16	35	0,05		8595057692701
■	**321/3_PO**	P21	40	0,06		8595057692718
■	**329/3_PO**	P29	45	0,07		8595057692725
■	**336/3_PO**	P36	55	0,08		8595057692732
■	**342/3_PO**	P42	60	0,09		8595057692749

steel threaded pipes ČSN





MAT		F		E 90	IK
steel	-60 - +250°C	1250 N/5 cm	44561		IK10

- The pipes are suitable for mechanical protection of conductors and cables.
- Pipes are fitted with an aluminum connector on one end. For use in a fire-resistant assembly, it must be replaced with a steel connector.
- Aluminum connectors supplied with the pipes according to ČSN must be replaced with series 313/3 – 342/3 connectors, depending on the pipe diameter.
- When pipes are used together with glands 4813/P – 4842/P and 4913 – 4942, the operating temperature range is reduced to -5 to +60 °C.
- Uncoated: no corrosion resistance, intended primarily for structural purposes.
- ZNM: Sendzimir-galvanized steel, zinc layer 15–27 µm, replaces the primer, medium corrosion resis tance – class 2.
- Painted: Sendzimir-galvanized steel, surface-treated with powder coating, color black, medium corrosion resistance – class 2.
- ZN: Steel strip, welded and hot-dip galvanized, zinc layer min. 35 µm, high corrosion resistance – class 4.

item	dn (mm)	di min. (mm)			L (m)	ǂ	↺		EAN
6013 N_XX	20,4	18,2	1,1	P13,5	3	1,6	30; 1200		8595057607491
6016 N_XX	22,5	20,3	1,1	P16	3	2	30; 1200		8595057607507
6021 N_XX	28,3	25,7	1,3	P21	3	2,7	30; 750		8595057607514
6029 N_XX	37	34,4	1,3	P29	3	3,5	15; 450		8595057607521
6036 N_XX	47	44	1,5	P36	3	5,2	15; 300		8595057607538
6042 N_XX	54	51	1,5	P42	3	6	15; 225		8595057607545
6013 ZNM_S	20,4	18,2	1,1	P13,5	3	1,7	30; 1200		8595057627208
6016 ZNM_S	22,5	20,3	1,1	P16	3	1,8	30; 1200		8595057626157
6021 ZNM_S	28,3	25,7	1,3	P21	3	2,7	30; 750		8595057626164
6029 ZNM_S	37	34,4	1,3	P29	3	3,6	15; 450		8595057626171
6036 ZNM_S	47	44	1,5	P36	3	5,3	15; 300		8595057626188
6042 ZNM_S	54	51	1,5	P42	3	6,1	15; 225		8595057626195
6013_EOZ	20,4	18,2	1,1	P13,5	3	1,7	30; 1200		8595057618657
6016_EOZ	22,5	20,3	1,1	P16	3	1,8	30; 1200		8595057618664
6021_EOZ	28,3	25,7	1,3	P21	3	2,7	30; 750		8595057618671
6029_EOZ	37	34,4	1,3	P29	3	3,6	15; 450		8595057618688
6036_EOZ	47	44	1,5	P36	3	5,3	15; 300		8595057618695
6042_EOZ	54	51	1,5	P42	3	6,1	15; 225		8595057618701
6013 ZN_F	20,4	18,2	1,1	P13,5	3	1,7	30; 1200		8595057618718
6016 ZN_F	22,5	20,3	1,1	P16	3	1,8	30; 1200		8595057618725
6021 ZN_F	28,3	25,7	1,3	P21	3	2,7	30; 750		8595057618732
6029 ZN_F	37	34,4	1,3	P29	3	3,6	15; 450		8595057618749
6036 ZN_F	47	44	1,5	P36	3	5,3	15; 300		8595057618756
6042 ZN_F	54	51	1,5	P42	3	6,1	15; 225		8595057618763

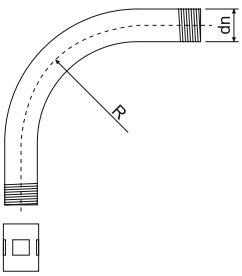
Elbows for steel threaded pipes ČSN



MAT | -60 - +250°C | 1250 N/5 cm | 44561 | E 90 | IK10

steel

► To connect elbows and pipes together, steel connectors must be ordered to replace the aluminum connectors supplied with the elbows and pipes.



item	dn (mm)		R (mm)	ǂ	↺		EAN
6113 ZNM_S	20,4	P13,5	80	0,17	1; 25		8595057627277
6116 ZNM_S	22,5	P16	100	0,22	1; 25		8595057627284
6121 ZNM_S	28,3	P21	120	0,37	1; 20		8595057627291
6129 ZNM_S	37	P29	155	0,55	1; 20		8595057627307
6136 ZNM_S	47	P36	185	1,00	1; 5		8595057627314
6142 ZNM_S	54	P42	200	1,38	1; 5		8595057627321
6113_EOZ	20,4	P13,5	80	0,17	1; 25		8595057618893
6116_EOZ	22,5	P16	100	0,22	1; 25		8595057618909
6121_EOZ	28,3	P21	120	0,37	1; 20		8595057618916
6129_EOZ	37	P29	155	0,55	1; 20		8595057618923
6136_EOZ	47	P36	185	1,00	1; 5		8595057618930
6142_EOZ	54	P42	200	1,38	1; 5		8595057618947
6113 ZN_F	20,4	P13,5	80	0,17	1; 25		8595057618954
6116 ZN_F	22,5	P16	100	0,22	1; 25		8595057618961
6121 ZN_F	28,3	P21	120	0,37	1; 20		8595057618978
6129 ZN_F	37	P29	155	0,55	1; 20		8595057618985
6136 ZN_F	47	P36	185	1,00	1; 5		8595057618992
6142 ZN_F	54	P42	200	1,38	1; 5		8595057619005

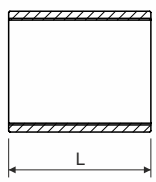
connectors for steel threaded pipes EN



MAT | E 90 | IK10

steel | -45 - +250°C

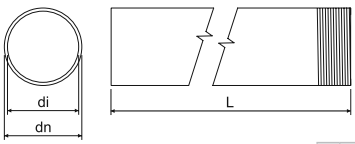
► Connectors are intended for connecting steel pipes and elbows, providing mechanical protection for conductors or cables.
► Painted ECZ: smooth steel material coated black on both sides, medium corrosion resistance – class 2.



item	dn pipe (mm)		L (mm)	ǂ		EAN
316E/1 ZN_F	16	M16x1,5	30	0,04		8595057634572
320/1 ZN_F	20	M20x1,5	30	0,05		8595057634589
325/1 ZN_F	25	M25x1,5	36	0,06		8595057634596
332/1 ZN_F	32	M32x1,5	45	0,07		8595057634602
340/1 ZN_F	40	M40x1,5	48	0,08		8595057634619
350/1 ZN_F	50	M50x1,5	70	0,10		8595057634626
363/1 ZN_F	63	M63x1,5	105	0,12		8595057634633
316E/1_ECZ	16	M16x1,5	30	0,04		8595057634640
320/1_ECZ	20	M20x1,5	30	0,05		8595057634657
325/1_ECZ	25	M25x1,5	36	0,06		8595057634664
332/1_ECZ	32	M32x1,5	45	0,07		8595057634671
340/1_ECZ	40	M40x1,5	48	0,08		8595057634688
350/1_ECZ	50	M50x1,5	70	0,10		8595057634695
363/1_ECZ	63	M63x1,5	105	0,12		8595057634701

steel threaded pipes EN





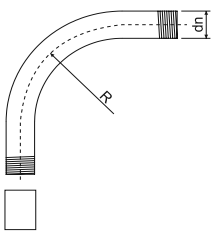
MAT | steel | -45 - +250°C | 4000 N/5 cm | 55561 | E 90 | IK | IK10

- The pipes are suitable for mechanical protection of conductors and cables and are fitted with a connector on one end.
- When used together with glands 4816E – 4863, the operating temperature range is reduced to -5 to +60 °C.
- ZNM: Sendzimir-galvanized steel, zinc layer 15–27 µm, replaces the primer, medium corrosion resistance – class 2.
- Painted ECZ: smooth steel material, coated on both sides with black paint, medium corrosion resistance – class 2.
- Painted EOZ: Sendzimir-galvanized steel, surface-treated with powder coating, medium corrosion resistance – class 2.
- ZN: Steel strip, welded and hot-dip galvanized, zinc layer min. 35 µm, high corrosion resistance – class 4.

item	dn (mm)	di min. (mm)			L (m)	ǂ	↺		EAN
6020 ZNM_S	20	15,8	1,5	M20x1,5	3	1,5	30; 1200		8595568919601
6025 ZNM_S	25	20,6	1,5	M25x1,5	3	2,3	30; 600		8595568920393
6032 ZNM_S	32	26,6	1,5	M32x1,5	3	3,0	21; 420		8595568922342
6040 ZNM_S	40	34,4	1,5	M40x1,5	3	3,8	15; 450		8595568923752
6016E ZN_F	16	12,2	1,4	M16x1,5	3	1,5	30; 1200		8595057631304
6020 ZN_F	20	15,8	1,5	M20x1,5	3	2,3	30; 1200		8595057631311
6025 ZN_F	25	20,6	1,5	M25x1,5	3	3,0	30; 600		8595057631328
6032 ZN_F	32	26,6	1,5	M32x1,5	3	3,8	21; 420		8595057631335
6040 ZN_F	40	34,4	1,5	M40x1,5	3	5,0	15; 450		8595057631342
6050 ZN_F	50	43,8	1,6	M50x1,5	3	6,0	15; 300		8595057631359
6063 ZN_F	63	58,8	1,8	M63x1,5		8,5	15; 150		8595057631595
6016E_ECZ	16	12,2	1,4	M16x1,5	3	1,5	30; 1200		8595057634152
6020_EOZ	20	15,8	1,5	M20x1,5	3	2,3	30; 1200		8595568919595
6025_EOZ	25	20,6	1,5	M25x1,5	3	3,0	30; 600		8595568920379
6032_EOZ	32	26,6	1,5	M32x1,5	3	3,8	21; 420		8595568922366
6040_EOZ	40	34,4	1,5	M40x1,5	3	5,0	15; 450		8595568923769
6050_ECZ	50	43,8	1,6	M50x1,5	3	6,0	15; 300		8595057634206
6063_ECZ	63	58,8	1,8	M63x1,5	3	8,5	15; 150		8595057634213

elbows for steel threaded pipes EN





MAT | steel | -45 - +250°C | 4000 N/5 cm | 55561 | E 90 | IK | IK10

- Elbows are fitted with a connector on one end.
- Painted: smooth steel material coated black on both sides, medium corrosion resistance – class 2.
- ZN: steel strip, welded and hot-dip galvanized, zinc layer min. 35 µm, high corrosion resistance – class 4.

item	dn pipe (mm)		R (mm)	ǂ		EAN
6116E ZN_F	16	M16x1,5	55	0,21		8595057631366
6120 ZN_F	20	M20x1,5	70	0,27		8595057631373
6125 ZN_F	25	M25x1,5	115	0,35		8595057631380
6132 ZN_F	32	M32x1,5	125	0,49		8595057631397
6140 ZN_F	40	M40x1,5	140	0,55		8595057631403
6150 ZN_F	50	M50x1,5	170	0,69		8595057631410
6163 ZN_F	63	M63x1,5	210	0,78		8595057631670
6116E_ECZ	16	M16x1,5	55	0,21		8595057634367
6120_ECZ	20	M20x1,5	70	0,27		8595057634374
6125_ECZ	25	M25x1,5	115	0,35		8595057634381
6132_ECZ	32	M32x1,5	125	0,49		8595057634398
6140_ECZ	40	M40x1,5	140	0,55		8595057634404
6150_ECZ	50	M50x1,5	170	0,69		8595057634411
6163_ECZ	63	M63x1,5	210	0,78		8595057634428

MAT material
temperature resistance
mechanical resistance
classification code according to 61386-1
E 90 functionality during a fire
IK mechanical protection
thread
wall thickness
ǂ weight kg/m
fire resistance E30-E90, P15-R - P90-R, PS15-PS90
↺ package (m)
ECZ coated black on both sides
EOZ black-painted around the circumference
S/PO Pre-Galvanized
F Hot Dip Galvanized

fire protection tape



- Graphite-based intumescent fire protection tape. It is supplied in a universal roll, allowing easy on-site installation on various types and diameters of pipes.
- The tape is intended for fire-sealing pipe penetrations in fire-resistant walls and ceilings. It can be used for plastic pipes (PVC, PE, PP, multilayer), insulated composite pipes (plastic with aluminum core), and insulated copper and steel pipes.
- Integrity and insulation: EI15–EI90.
- Can be used with Promat 701, 704, 705, and 714 constructions.

item		temperature foaming	width (mm)	‡		1 pc	EAN
POP_PO	anthracite grey	150°C	50	2,4		18 m	8595568942913

marking of fire resistant routes

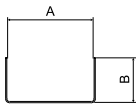


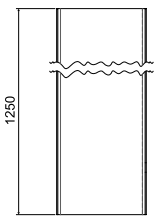
- Fire-resistant routes must be marked at least every 50 m of the fire-resistant route (both standard and non-standard).

item	language	‡	EAN
OPT_CZ	Czech	0,001	8595568927811
OPT_EN	English	0,001	8595568932044
OPT_DE	German	0,001	8595568932396

protection cable cover







MAT | -50 - +150 °C | A1 – F | IK07

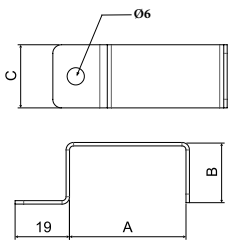
steel

- Use the cover as mechanical protection for cables.
- It is designed for both protected and unprotected escape routes.
- Electrical continuity between individual covers must be ensured by installing connecting cable PLSK_XX.

item	A	B	↕	‡			EAN
OKK 20X25_EO	25	20	0,55	0,3500	white RAL 9003		8595568943590
OKK 20X40_EO	20	40	0,55	0,4500			8595568943606
OKK 40X60_EO	60	40	0,55	0,7500			8595568943613
OKK 20X25_S	25	20	0,55	0,3500	-		8595568943415
OKK 20X40_S	20	40	0,55	0,4500			8595568943422
OKK 40X60_S	60	40	0,55	0,7500			8595568943439

clip for cable cover





MAT | -50 - +150 °C | A1 – F | IK07

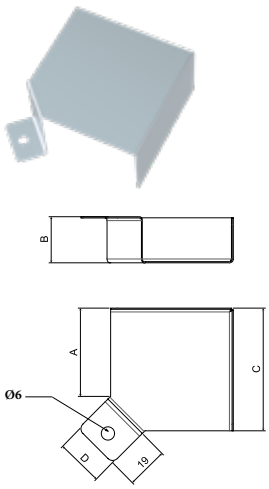
steel

- The cover clip also serves as a connector for covers placed end-to-end.

item	A	B	C	↕	‡			EAN
P-OKK 20X25_EO	25,6	21	16	1,2	0,0125	white RAL 9003		8595568943620
P-OKK 20X40_EO	40,6	21	22	1,2	0,0200			8595568943637
P-OKK 40X60_EO	60,6	41	28	1,2	0,0415			8595568943644
P-OKK 20X25_S	25,6	21	16	1,2	0,0125	-		8595568943446
P-OKK 20X40_S	40,6	21	22	1,2	0,0200			8595568943453
P-OKK 40X60_S	60,6	41	28	1,2	0,0415			8595568943460

‡ weight kg/pc; weight kg/m
color
↕ sheet thickness (mm)
temperature resistance
fire resistance E30-E90, P15-R - P90-R, PS15-PS90
class of reaction to fire of the base material
special material
mechanical protection
EO white-painted around the circumference
S Pre-Galvanized
MAT material

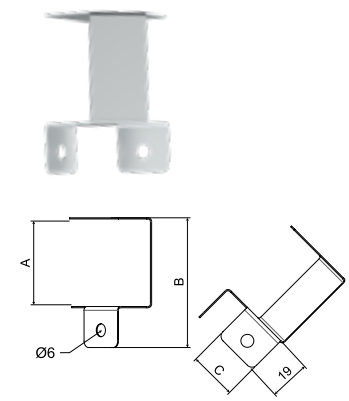
elbow 90° for cable cover



MAT steel | -50 - +150 °C | A1 – F | IK IK07

item	A	B	C	D	↕	⇳			EAN
O90-OKK 20X25_EO	25,6	20,9	36,3	16	0,55	0,0120	white RAL 9003		8595568943651
O90-OKK 20X40_EO	40,6	20,9	55,5	22	0,55	0,0250			8595568943668
O90-OKK 40X60_EO	60,6	40,9	79,8	28	0,55	0,0600			8595568943675
O90-OKK 20X25_S	25,6	20,9	36,3	16	0,55	0,0132	-		8595568943477
O90-OKK 20X40_S	40,6	20,9	55,5	22	0,55	0,0250			8595568943484
O90-OKK 40X60_S	60,6	40,9	79,8	28	0,55	0,0600			8595568943491

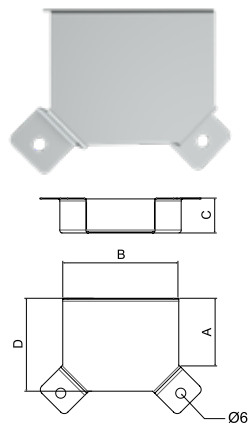
inner corner for cable cover



MAT steel | -50 - +150 °C | A1 – F | IK IK07

item	A	B	C	↕	⇳			EAN
RI-OKK 20X25_EO	25,6	45,2	16	0,55	0,0110	white RAL 9003		8595568943712
RI-OKK 20X40_EO	40,6	60,2	22	0,55	0,1600			8595568943729
RI-OKK 40X60_EO	60,6	80,2	28	0,55	0,0301			8595568943736
RI-OKK 20X25_S	25,6	45,2	16	0,55	0,0110	-		8595568943538
RI-OKK 20X40_S	40,6	60,2	22	0,55	0,0160			8595568943545
RI-OKK 40X60_S	60,6	80,2	28	0,55	0,0390			8595568943552

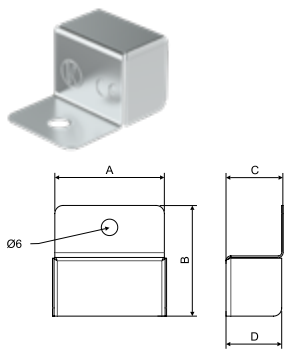
T-piece for cable cover



MAT steel | -50 - +150 °C | A1 – F | IK IK07

item	A	B	C	D	↕	⇳			EAN
T-OKK 20X25_EO	25,6	45,8	20,9	36,3	0,55	0,0160	white RAL 9003		8595568943682
T-OKK 20X40_EO	40,6	69,3	20,9	55,5	0,55	0,0280			8595568943699
T-OKK 40X60_EO	60,6	97,8	40,9	79,8	0,55	0,0620			8595568943705
T-OKK 20X25_S	25,6	45,8	20,9	36,3	0,55	0,0160	-		8595568943507
T-OKK 20X40_S	40,6	69,3	20,9	55,5	0,55	0,0280			8595568943514
T-OKK 40X60_S	60,6	97,8	40,9	79,8	0,55	0,0620			8595568943521

end-piece for cable cover



MAT steel | -50 - +150 °C | A1 – F | IK IK07

item	A	B	C	D	↕	⇳			EAN
K-OKK 20X25_EO	25	34,5	20,9	20,4	0,55	0,0080	white RAL 9003		8595568943743
K-OKK 20X40_EO	40	40,5	20,9	20,4	0,55	0,0140			8595568943750
K-OKK 40X60_EO	60	46,5	40,9	40,4	0,55	0,0310			8595568943767
K-OKK 20X25_S	25	34,5	20,9	20,4	0,55	0,0072	-		8595568943569
K-OKK 20X40_S	40	40,5	20,9	20,4	0,55	0,0132			8595568943576
K-OKK 40X60_S	60	46,5	40,9	40,4	0,55	0,0302			8595568943583

⇳ weight kg/pc; weight kg/m
color
↕ sheet thickness (mm)
temperature resistance
fire resistance E30-E90, P15-R - P90-R, PS15-PS90
class of reaction to fire of the base material
EO white-painted around the circumference
IK mechanical protection
S Pre-Galvanized
MAT material


PULSA
27E
Spit
ENERGY
LEVEL

9 NAILING



gas nailgun



- Driving fasteners of the 67XX_POBD series and designated compatible products.
- Battery capacity of up to 10,000 shots.
- Charging time: 90 minutes (fast-charging function: 25 minutes = 500 shots).
- Adjustable power output up to 95 J.
- Magazine capacity of 20 nails.
- Equipped with a safety mechanism to prevent accidental discharge.
- Gas-powered operation (up to 750 shots per single gas cartridge).
- Operating temperature range: -15 °C to 49 °C.
- Servicing of the nail gun is provided by an external company.
- Low tool weight: 3.4 kg.

certification according to standards:
EN 12549, EN 792-13 + A1 :2008E

accessories according to:
2006/42/EC
2011/65/UE
1999/5/EC
CEM 2004/108/EC

certification according to:
battery: 2006/66/EC
charger: 2006/95/EC
CEM 2004/108/EC

item	ǂ	EAN
K-PULSA_PO	3,4	8595568936936

battery for K-PULSA



- Battery for K-PULSA_PO gas-powered nail guns.

item	EAN
K-PULSA-BAT_PO	8595568942920

magnetic attachment



- Designed for firing the PO series clamps 67xx_POBD.
- For gas nailgun K-PULSA_PO.
- Strong magnet for fastening cable clamps without drilling holes.

item	EAN
MVH P800_PO	8595568935588

magnet



- Replacement part for the MVH P800_PO magnetic attachment.

item	EAN
MAGNET_PO	8595568936592

ǂ weight kg/pc

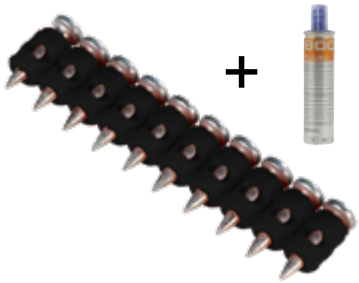
gas cartridge



- Capacity of up to 750 shots.
- For K-PULSA_PO series pistols.
- Certification according to 75/324/EC.
- Package contains 2 gas cartridges.

item	EAN
PLYN_PO	8595568935595

strip of nails - for concrete C20/25 to C30/37, solid masonry and plaster



- Suitable for firing the 67xx_POBD series clamps.
- Use for standard concrete, solid masonry and plaster.
- Galvanized surface finish.
- The PLYN_PO gas cartridge is included in the package of 500 nails.

item	nail length	ǂ	↺		EAN
KHB C6-20_PO	20	0,71	500		8595568935601
KHB C6-25_PO	25	0,78	500		8595568935618

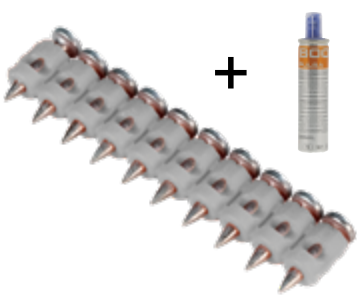
strip of nails - for concrete C20/25 to C60/70, prestressed concrete and steel



- Suitable for firing the 67xx_POBD series clamps.
- Use for high-strength concrete, prestressed concrete, steel.
- Galvanized surface finish.
- The PLYN_PO gas cartridge is included in the package of 500 nails.

item	nail length	ǂ	↺		EAN
KHO HC6-15_PO	15	0,66	500		8595568935656
KHO HC6-17_PO	17	0,71	500		8595568935663
KHO HC6-22_PO	22	0,84	500		8595568935670

strip of nails - no residue



- Suitable for firing the 67xx_POBD series clamps.
- Residual plastic does not remain under the head of the nails, when fired in steel and concrete.
- Galvanized surface finish.
- The PLYN_PO gas cartridge is included in the package of 500 nails.

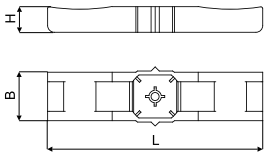
item	nail length	ǂ	↺		EAN
KHO HC6-15FH_PO	15	0,65	500		8595568935700
KHO HC6-17FH_PO	17	0,71	500		8595568935717
KHO HC6-22FH_PO	22	0,84	500		8595568935724

ǂ weight kg/pc

↺ package (pc)

nail-on base plate



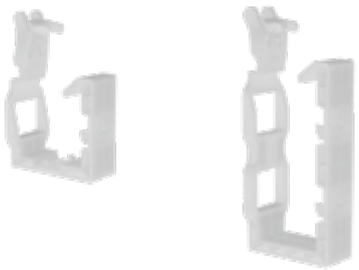


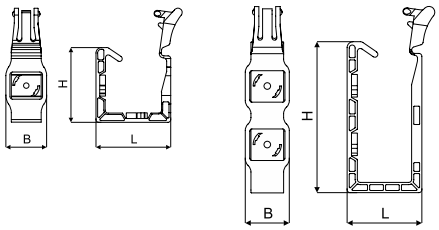
MAT | PA | 0 - +45 °C installation | -25 - +110 °C operating | HF

- Double cable base thanks to its shape, it automatically centers the cable or pipe, which is secured with a cable tie.
- Two parallel pipes are anchored at a single point.
- Alignment marks for easier centering during installation.

item	B	H	L	ǂ	↺	EAN
ZDND_FA	18	9,5	80	0,0091	100	8595568951236

nailing group cable holder





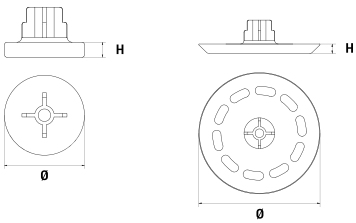
MAT | PA | 0 - +45 °C installation | -25 - +110 °C operating | HF

- Plastic cable holder for nailing installation.
- It requires significantly less space than cable or wire trays.
- It can be installed on walls or ceilings.

item	B	H	L	cable capacity Ø8	↺	EAN
SD 5_KA	30	55	55	15	50	8595568951366
SD 6_KA	30	103	51	30	25	8595568951373

nail-on plastic pad





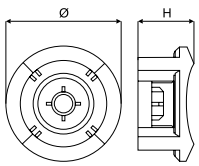
MAT | HDPE | HF

- Plastic washers for securing electrical angular trunkings.
- The washer must be inserted into the holes located at the bottom of the rail.
- The compatibility of the trunking dimensions is described in the data sheet.

item	H	Ø	ǂ	↺	EAN
PPNL 16_KA	3	16	0,0071	100	8595568951243
PPNL 30_KA	2,75	35,5	0,0015	100	8595568951250

nail-on base plate





MAT | PA | 0 - +45 °C installation | -25 - +110 °C operating | HF

- Nailing mount for cable ties up to 10 mm wide. Not included with the product.
- Two cable ties can be used at the same time.
- Allows for the installation of any type of pipe or cable of various diameters.
- Recommended installation on the ceiling.

item	H	Ø	ǂ	↺	EAN
ZDN_FA	13	27,5	0,0037	100	8595568945426
ZDN_KA	13	27,5	0,0036	100	8595568951212

nail-on cable clip

DKM_KA



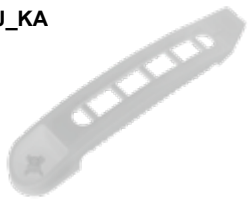


MAT PA | 0 - +45 °C installation | -25 - +110 °C operating | HF

- Flat nail-in clip with a pre-tensioned arm.
- Allows for the insertion and removal of cables after installation via the nail-in method.
- Openings in the clip allow for additional cable securing.

item	B	H	L	cable capacity 3x1.5	↺	EAN
DKM_KA	20	15	75	4	100	8595568951229
DKJ_KA	20	16,8	121	8	100	8595568945433
DKD_KA	22	16,8	222	16	50	8595568945440

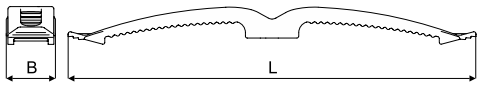
DKJ_KA





DKD_KA



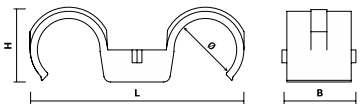


double-sided nailing clamps



MAT HDPE | 0 - +45 °C installation | -30 - +120 °C operating | HF

- Double-sided plastic clamp for nailing.
- The clamp is first attached to a pipe or a cable and then anchored to the substrate.



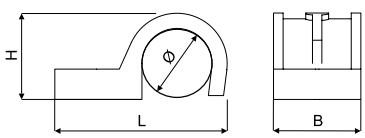
item	B	H	L	Ø inner	ǂ	↺	EAN
6716D_KB	20	19,5	59	16-19	0,0066	100	8595568951267
6720D_KB	20	23,8	68	20-23	0,0088	50	8595568951274
6725D_KB	20	29	81	25-28	0,0123	50	8595568951281

single-sided nailing clamps



MAT HDPE | 0 - +45 °C installation | -30 - +120 °C operating | HF

- Single-sided plastic clamp for nailing.
- The clamp is first attached to a pipe or cable and then anchored to the substrate.



item	B	H	L	Ø inner	ǂ	↺	EAN
6716_KB	23	18,5	41,5	14,5	0,0050	100	8595568951298
6718_KB	23	20,5	43,3	16,5	0,0053	100	8595568951304
6720_KB	23	22,5	45,5	18,5	0,0060	100	8595568951311
6722_KB	23	24,5	47,5	20,5	0,0066	100	8595568951328
6725_KB	23	27,5	50,5	23,5	0,0065	100	8595568951335
6728_KB	23	30,5	53,5	26,5	0,0074	100	8595568951342
6732_KB	23	34,5	57,5	30,5	0,0090	50	8595568951359



10 FIRE-RESISTANT SYSTEMS



Basic terms and definitions

Requirements for building structures
Cable support systems must be installed on building structures whose fire resistance is at least equal to the fire resistance of the cable support system itself and whose design is adapted to the installation of cable support routes.
The manufacturer accepts no liability if the cable support system is installed on a building structure that does not meet the requirements for fire resistance. .

Cable route
In the sense of ČSN 73 0895 cable routes are: cables and conductors for emergency circuits, high-current cables, insulated power conductors, lines for communication and communication equipment including busbars, terminal blocks, couplings, dividers, junction and installation boxes, supporting devices, holders, cable gratings, clamps, hangers, brackets, hinges, cable ladders, hooks, etc.

Cable support system
General name for supporting constructions used to store all equipment, including cables, which are related to the purpose or operation of cable routes in buildings, cable ducts, premises, shafts and bridges; the equipment material of cable ducts, shaft spaces and bridges must be made of products of reaction to fire class A1, A2 or B.

Installation cable duct
Cable duct exposed to fire from two to four sides with a defined time of fire resistance and maintaining the functionality of the cable route.

Cable route functionality
For metallic cables, it is met if no short circuit or interruption of the electric current flow occurs in the cable route during the test according to this standard. For data and optical cables, the transmission parameters must not deteriorate below the specified limit in addition.

Functional class Px-R or PHx-R
Time in minutes for which the cable route or switchboard retains its functionality in the event of a fire. The functionality class is called Px-R or PHx-R, where „x" represents the operating time in minutes. It is proved by a test according to e.g. ČSN 73 0895, STN 92 0205, DIN 4102-12.

Standardized supporting construction
Cable support and fastening construction described as standardized in individual standards.

Non-standardized supporting construction
Cable support and fastening construction, which differs in one or more parameters from the standardized construction, eg:
a) the type of material; or
b) geometric dimensions (thickness of material, width of supporting construction, side height of the cable route, cross-section of supporting elements,the distance of attachment to the building structure, etc.) or
c) the permissible mechanical load; or
d) other parameters

Accredited fire laboratory
Testing laboratory accredited for the type of fire tests that are the subject of this standard.

Temperature scenarios
The test results obtained when testing cable routes at a higher temperature also apply to cable routes stressed by a lower temperature (e.g. if a cable route is included in functionality class P, the classification also applies to functionality class PH). So you can use our manufactured systems for resistance PH 120, PH 90, PH 60 and PH 30 while maintaining other conditions.

Surface finish
The systems can be supplied in various surface treatments (painting, hot-dip galvanizing), while this surface treatment does not affect the specified time of maintaining functionality in case of fire.

Protected escape route
Permanently free communication space leading to the exit to the open space, protected against the effects of fire.

Fire safety equipment and measures
Technical and organizational measures to reduce the theoretical intensity of a possible fire and to reduce the economic risk in the assessed building or its part (eg fire alarms, automatic stable fire extinguishing equipment, fire ventilation, constant supervision of fire protection units).

Fire safety of buildings
The ability of buildings to prevent the loss of life, health and property in the event of a fire: its layout, construction and material solutions, fire safety equipment and measures.

The fire risk of a building or its part is determined by the nature of the building, its functions, technical and technological equipment, construction, layout or urban design, fire safety measures, etc. and is expressed by the calculated fire load.

Maintaining the functional resistance of electrical cable systems in fire conditions: in the event of a fire, the thermal effect of the fire will not cause a short circuit or an open circuit in the cable system for a predetermined period of time.

Laws, decrees, standards
The requirements for the properties of cable support systems with integrated preservation of functionality in the event of fire result from the laws, decrees and standards. The issue of building safety in connection to the threat to persons in the event of a fire in our country is addressed by the General Building Act together with the Fire Protection Act. Government decrees and regulations then specify and generally regulate the technical requirements for construction, fire protection and prevention. Technical standards in relation to the fire safety of persons specify the general technical implementation procedures for guaranteed fire safety and durability. In addition to the technical design of buildings, they also deal with fire safety equipment and electricity supply.

Test of functional resistance of the system in the event of a fire
Test of the support system together with the installed cables.

This catalog would like to describe in detail the assembly of individual routes, the use of accessories, assembly elements, the application of power, data and optical fire-resistant cables.



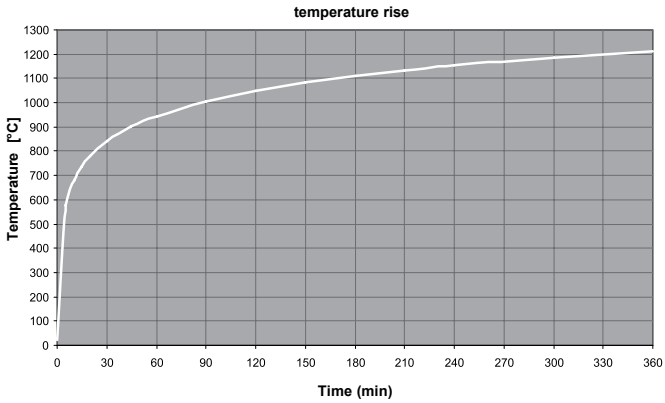
Basic terms and definitions

Criterion Px-R, PHx-R
The maintenance of functional resistance is based on meeting the criterion of functional resistance.

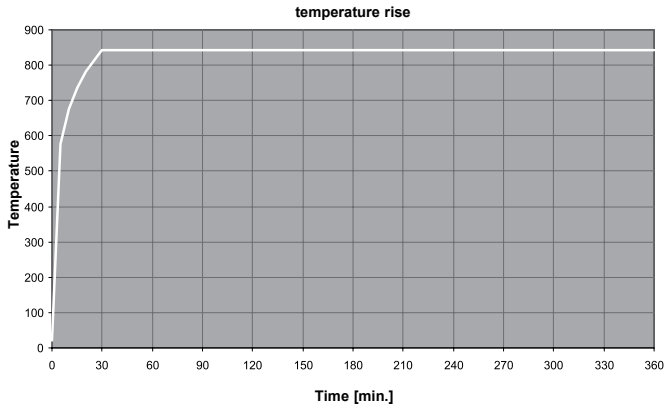
Functional resistance classes
Cable routes and switchboards are classified into the functional resistance class listed in Table 1 according to the shortest time for which the Px-R functional resistance criterion is met using the temperature standard curve (temperature-time) according to ČSN EN 1363-1. It is also possible to use the criterion with the symbol PHx-R for the constant temperature of 842 °C. In this case, the temperature rises from the start of the test to 842 °C according to the standard temperature curve (temperature-time) and then remains the same, while the time counts from the start of the test.

Class	Class	Functional resistance in minutes
P15-R	PH15-R	≥ 15
P30-R	PH30-R	≥ 30
P45-R	PH45-R	≥ 45
P60-R	PH60-R	≥ 60
P90-R	PH90-R	≥ 90
P120-R	PH120-R	≥ 120

Standard temperature-time curve according to ČSN EN 1363 and according to DIN 4102 art. 12



Constant temperature curve with rise according to ČSN 73 0895.



Classification classes of individual standards

	ČSN 73 0895		DIN 4102-12	STN 92 0205
Temperature course of the test	**Standard temperature-time curve [°C]**	**Constant temperature [°C]**	**Standard temperature-time curve [°C]**	
Designation of fire functionality classes	P15-R	PH15-R	-	PS15
	P30-R	PH30-R	E30	PS30
	P45-R	PH45-R	-	PS45
	P60-R	PH60-R	E60	PS60
	P90-R	PH90-R	E90	PS90
	P120-R	PH120-R	E90	PS120

time [min]	0	5	10	15	20	30	45	60	90	120	150	180	210	240	300	360
ČSN EN 1363*	20	576	678	738	781	842	902	945	1006	1049	1082	1110	1133	1153	1186	1214
DIN 4102-12**	0	556	658	718	761	822	892	925	986	1029	1062	1090	1113	1133	1166	1194

** total temperature T in °C including ambient temperature +20 °C*
*** temperature rise v - vo in °C*

Standard temperature-time curve:
temperatures as a function of time must be observed throughout the test according to the so-called „standard time curve“. It is an internationally used temperature profile according to ČSN EN 1363 / formula T = 345 log (8 t + 1) + 20, where T = average furnace temperature in °C and t = time in minutes / also according to DIN 4102-2 / formula v - vo = 345 log (8 t + 1), where v = fire temperature in °C, vo = temperature of the test sample at the beginning of the test in °C, t = time in minutes. The temperature curve is based on the overall course of fire temperatures. Start of fire = phase of fire formation. In a very short time, the fire will fully develop = flash-over. The moment of flash-over and the fully developed fire is shown by the standard temperature-time curve.

Constant temperature action: The constant temperature action follows the stress according to the standard temperature/time curve when the temperature reaches 842 °C.

Maintaining functional resistance

The risk of fire can never be ruled out even with the help of various regulations and measures. Electrical wiring is exposed to heavy loads in the event of a fire. Especially in gathering areas, the supply of electricity for selected electrical equipment in protected escape and emergency routes must be maintained as long as possible. By means of cable support systems functioning in the event of fire, the supply of electricity is maintained for a specified period of time. The fire-resistant cable support system, manufactured by KOPOS KOLÍN a.s., meets the requirements of the relevant standards and regulations.

Before designing cable support systems (up to 1 kV) with functional fire resistance following is required on the basis of the fire report:
- know the level of fire safety of the fire section, which is determined on the basis of the calculation of fire risk, the construction system of the building and the height of the building or floor
- characterize the fire resistance of support constructions within the fire section, which do not ensure the stability of the building and which do not support or form fire dividing structures
- know the type of protected escape route
- design and secure methods of electricity supply from two independent sources used for fire protection of buildings (e.g. fire elevator, evacuation elevator, fire water booster pump, emergency lighting) so that in case of interruption of supply from one source, supplies are fully secured for the expected time of operation of the device from the second source
- eliminate the effects of surrounding installations on the cable support system
- v select a suitable construction of the support system according to the level of required fire resistance
- select wires and cables ensuring the function and control of the equipment used for fire protection of buildings and determine their management or storage; electrical equipment that does not serve the fire safety of the building shall be fire-assessed if:

a) the wires and cables are routed freely without additional protection
b) the insulation weight of wires and cables or flammable parts of electrical wiring exceeds 0.2 kg per m3

- develop a „Protocol on the determination of external influences“ according to ČSN 33 2000-1 ed. 2 „Low-voltage electrical installations - Part 1: Basic aspects, determination of basic characteristics, definitions“, also with it‘s „Opr.1“ and change „Z1“. The members of the commission are electrical designer, fire technician, safety technician and investor. Furthermore, depending on the focus of the building, there are technologist and specialists with demands on electricity, such as air conditioning, heating, etc. Members of the commission must also be specialists in the field for which the building is being built.

Fire resistance testing of cable support system constructions for integrated maintenance of functionality
The fire resistance test is intended to check the operation of the cable support system in case of fire and to prove that vital functions in the building (fire lift, evacuation lift, fire water booster pump, emergency lighting, fire alarms, emergency exits) are maintained for a specified time.
A uniform European standard for fire resistance and its testing does not yet exist. The German DIN 4102-12: „Preservation of the functionality of cable support systems“ is considered to be the reference standard.
In the Czech Republic, fire resistance testing of cable support system constructions is specified by the harmonized standard ČSN EN 1363. The new standard ČSN 73 0895 sets out the methods and conditions for testing the resistance of cable routes in fire conditions.
Certified constructions identical in design to the parameters of the standard are called „standardized“.
KOPOS KOLÍN a. s. manufactures fire-resistant systems according to the above-mentioned standards. These are JUPITER KZ cable trays with a sheet thickness of 1.5 mm, cable ladders with ladder cross-pieces at a distance of 150 mm and separate cable clamps.

Certified constructions different in design or dimensions from the above standard are referred to as „non-standardized“.
KOPOS KOLÍN a.s. strives to meet customers in terms of price and therefore offers fire-resistant systems at more affordable price. The cost of acquiring a fire-resistant route can be reduced by using sheet metal of a thinner thickness than specified in the standard, with a lower number of supports, etc. The standard allows testing of these routes, which are then referred to as „non-standardized“.
Non-standardized routes include routes formed by cable trays MARS and JUPITER with an integrated coupling and with a sheet thickness of 0,55; 0,6;0.7;0.75;0.8; 1.0; 1.25 mm, cable ladder routes with a distance of cross-pieces of 300 mm, further metal support rails, systems with cable clamps, routes formed by steel pipes and other routes that differ in their parameters from standardized routes..

Cables for systems with maintained functionality in fire
Power and data safety cables with functional fire resistance must also pass fire resistance tests in accordance with valid regulations.

Fire resistance according to ČSN EN 1363-1: 2013
According to this standard, we have tested the KPZ-1_PO fire protection box in a non-supporting aerated concrete and plasterboard wall. The test results with a rigid standard support structure can also be applied to concrete or masonry dividers with a thickness and bulk density equal to or greater than the rigid standard support structure used in the test (mineral wool 100 kg/m3, YTONG block - bulk density 650 kg/m3).

KOPOS KOLÍN a.s. as a manufacturer recommends to follow the installation instructions in this catalog during the installation. In case of non-compliance, the manufacturer does not accept liability for any damage in case of fire.

Sample of completed marking of fire routes



The OPT marking is used for routes that maintain functionality in the event of a fire (cable trays, cable ladders, boxes, etc.), always every 50 m at least.

Certification



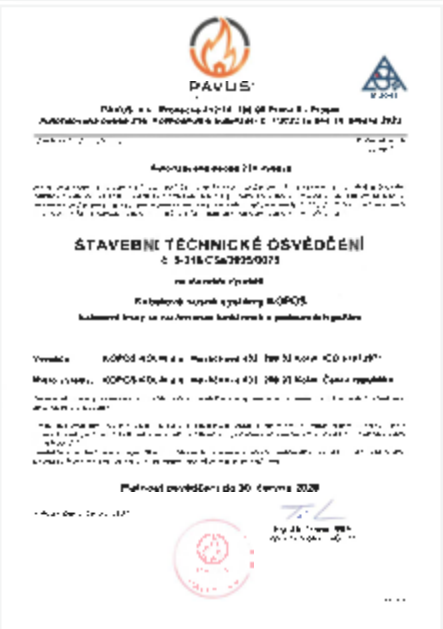
CERTIFICATE



CERTIFICATION REPORT



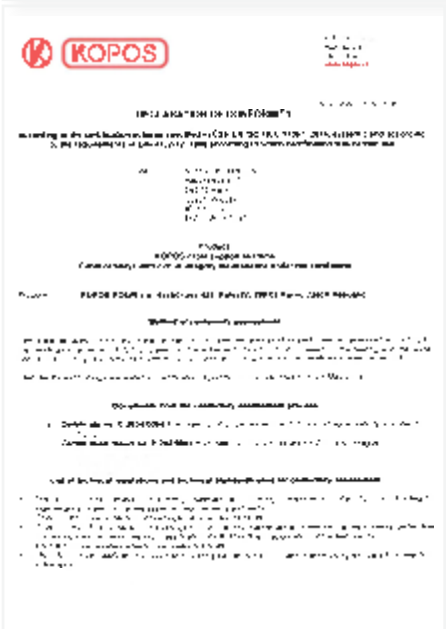
CERTIFIKÁT VÝROBKU



ŠTAVEBNĚ TECHNICKÉ OSVĚDČENÍ



PROTOKOL O CERTIFIKACI





PROHLÁŠENÍ O SHODĚ

** the protocols are illustrative only*

Standardized supporting constructions

E90

STANDARDIZED CONSTRUCTIONS

KOPOS KOLÍN a.s. manufactures fire-resistant systems in accordance with relevant standards and regulations. These are JUPITER KZ cable trays with a sheet thickness of 1.5 mm and KL cable ladders with cross-pieces at a distance of 150 mm. Furthermore, separate cable clamps and clamps of the PKC1 type.

standardized routes:
- cable trays
- cable ladders
- separate cable clamps

cable trays:
- maximum permissible width 300 mm (percentage of perforations 15 +/- 5%)
- side height 60 mm
- sheet thickness 1.5 mm
- cable weight max. 10 kg/m
- distance of supports max. 1 200 mm

cable ladders:
- maximum permissible width 400 mm
- side height 60 mm
- sheet thickness 1.5 mm
- cable weight max. 20 kg/m
- distance of cross-piece 150 mm
- distance of supports max. 1 200 mm

separate cable clamps
- width of separate cable clamp 15 +/- 5 mm
- distance of individual clamps max. 300 mm

cable clamps (PKC1) for profile rail
- fastening of the profile rail by max. 250 mm
- distance between profile rails max. 300 mm

Advantages of standardized supporting systems

It is possible to use cables with proven functionality in the event of a fire from any manufacturer.
- this feature is advantage in the implementation of the system and also in the expansion during operation. It does not restrict investors and implementation companies by taking cables from a specific manufacturer.
- more robust system and thus more secure results in proving the functionality of the cable route

Disadvantages

- higher purchase price
- higher installation time
- impossibility to use systems with a side height of 50 and 100 mm
- lower load of cable tray or ladder (max. 10 kg/m or 20kg/m)

Non-standardized supporting constructions

NON-STANDARDIZED CONSTRUCTIONS

KOPOS KOLÍN a.s. offers more cost-effective fire-resistant systems in an effort to meet customers in terms of price. The cost of a fire-resistant route can be reduced by using a sheet thinner than the standardized and by a more sophisticated cable tray shape solution and anchoring system. The standard allows testing of these routes, which are then referred to as non-standardized.

Non-standardized routes include, for example, routes formed by cable trays MARS and JUPITER with an integrated coupling and with a sheet thickness of 0,55; 0,6; 0.7; 1.0; 1.25 mm, cable ladder routes with a distance of 300 mm between cross-pieces, greater distance of supporting metal rails, routes formed by steel and plastic pipes, clamps, parapet channels, etc.

non-standardized routes:
- trays with integrated coupling and with a sheet thickness of 0,55; 0,6; 0,7; 0,75; 0,8; 1,0 a 1,25 mm
- cable trays with a side height of 50, 60 and 100 mm
- cable ladders with a side height of 60 and 110 mm
- cable ladders with cross-pieces span of 300 mm
- wire trays
- support rails
- steel and plastic pipes
- halogen-free rigid pipes
- OMEGA and DOBRMAN cable clamps
- SD 2 grouped cable holder
- separate cable clamps
- wiring box KSK
- parapet channels and trunkings

The system includes those systems that have been tested as a whole.

In the systems it is necessary to use only cables with proven functionality in the event of a fire from the manufacturer with whom the specific route was tested, e.g. PRAKAB PRAŽSKÁ KABELOVNA s.r.o., NKT s.r.o., Kablo Vrchlabí s.r.o. apod.

Advantages:
- lower price
- time saving during assembly
- greater possibilities in mounting systems
- possibility of higher load
- greater distances between supports

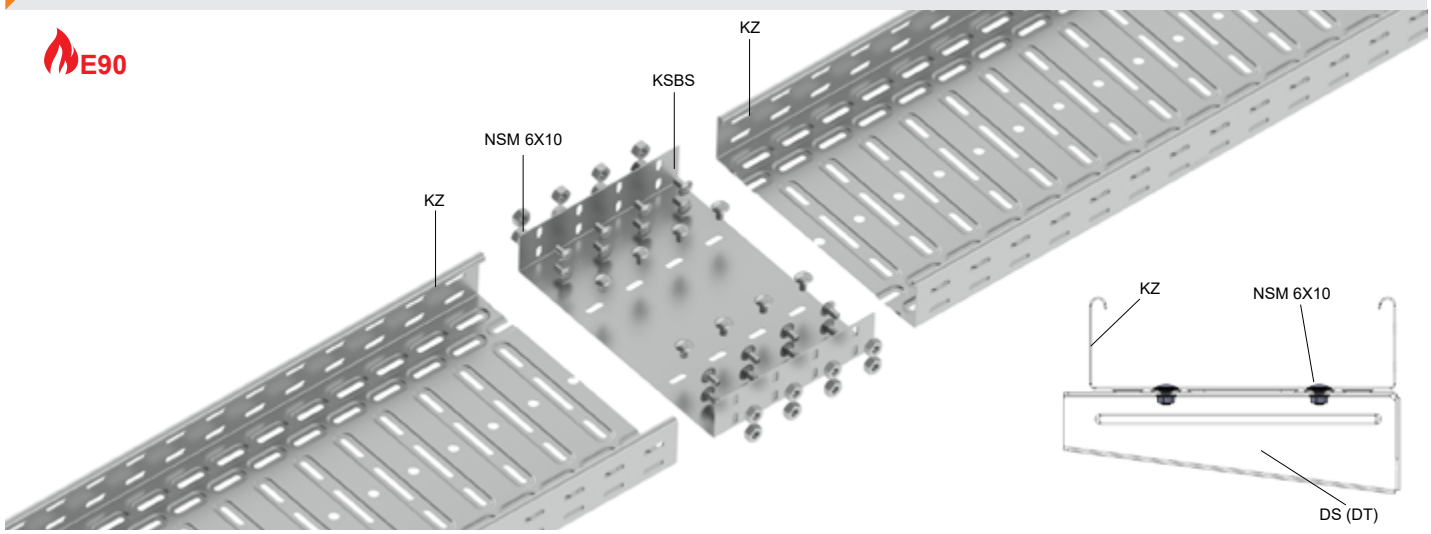
Disadvantages:
- the necessity to use only those types of cables with which the assembly has been tested

SUPPORTING CONSTRUCTIONS

JUPITER CONSTRUCTIONS

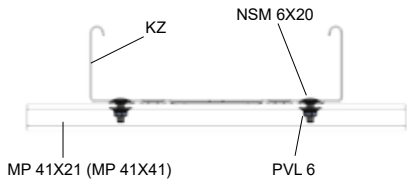
Standard supporting structure – connection and fixing of the KZ cable tray JUPITER

E90

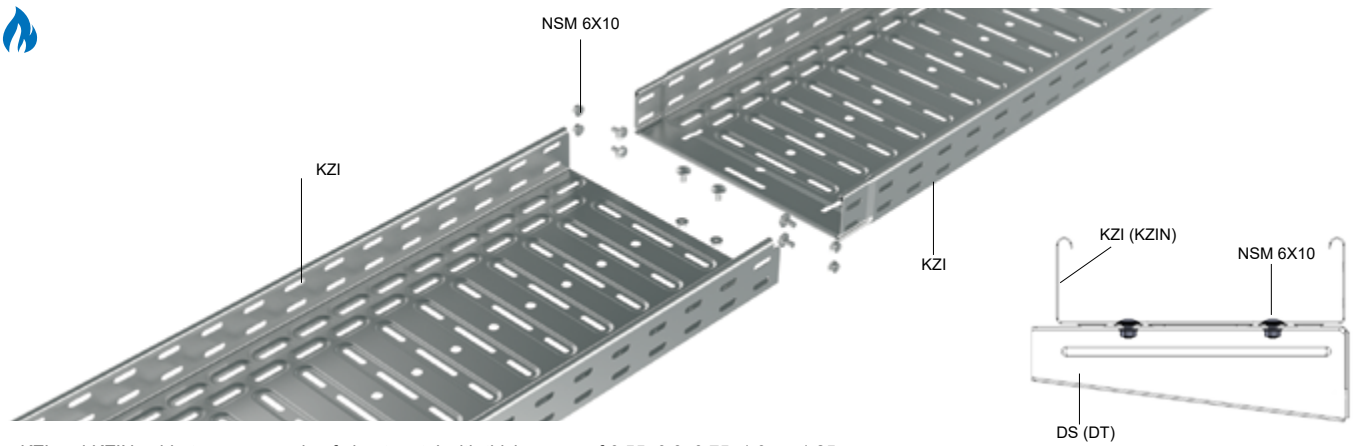


The KZ cable tray joint is made using the KSBS coupling and NSM 6X10 bolts.
The tray is fixed to the support using NSM 6X10 bolts; when attaching to a mounting profile MP, NSM 6X20 bolts and PVL 6 washers are used.
The KZ cable tray is made of 1.5 mm thick sheet metal.

tray width KZ	amount of bolts NSM 6X10 for connection	for attachment to the support		
		1 level	2 levels	3 levels
50 - 150	16	1	2	3
200 - 300	24	2	4	6

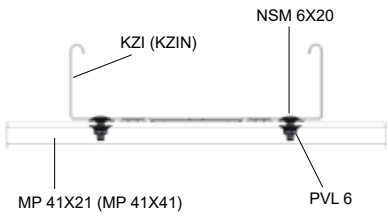


Non-standard supporting structure – connection and fixing of the KZI cable tray – JUPITER



The KZI and KZIN cable trays are made of sheet metal with thicknesses of 0.55, 0.6, 0.75, 1.0, or 1.25 mm.
The KZI cable tray joint is made using an integrated coupling, which is part of the tray, and NSM 6X10 bolts.
The tray is fixed to the support using NSM 6X10 bolts; when attaching to a mounting profile MP, NSM 6X20 bolts and PVL 6 washers are used.

tray width KZI / KZIN	amount of bolts NSM 6X10			
	for connection	for attachment to the support		
		1 level	2 levels	3 levels
50	4	1	2	3
75				
100				
150				
200	5	2	4	6
300				
400	6			
500				
600		3	6	9



E90

cable tray KZ JUPITER perforated

bracket - heavy DT ceiling profile SPS threaded rods ZT

60 mm

50 - 300 mm

1,5 mm

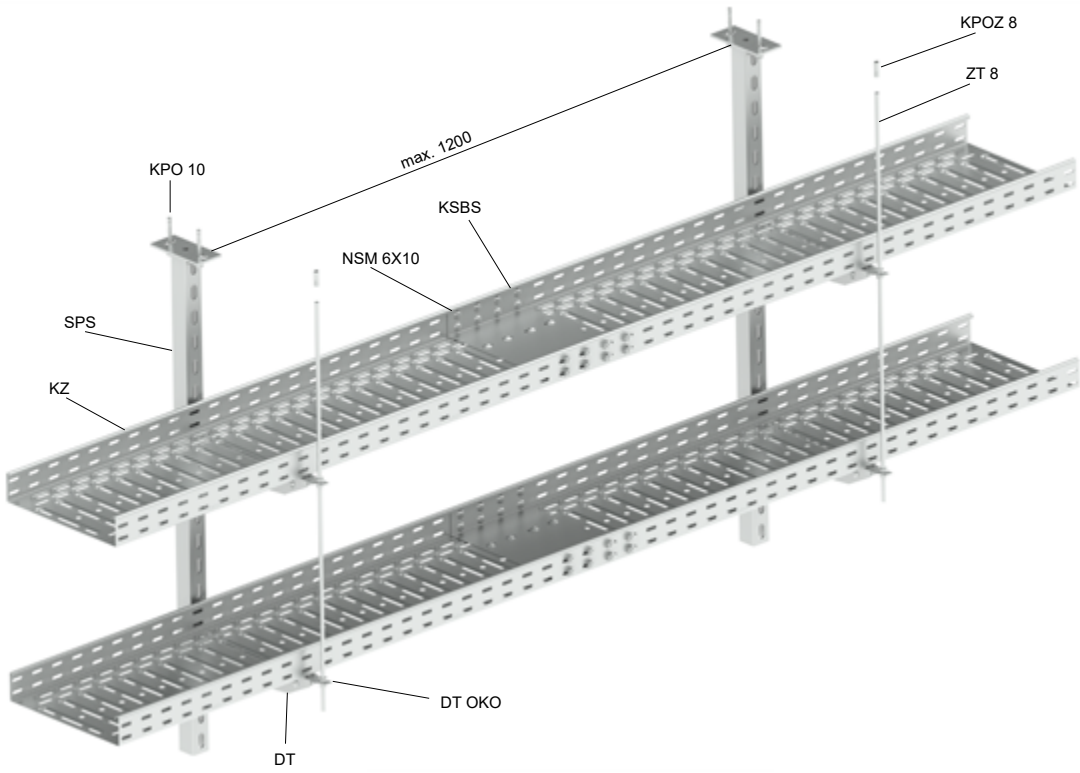
placement on ceiling

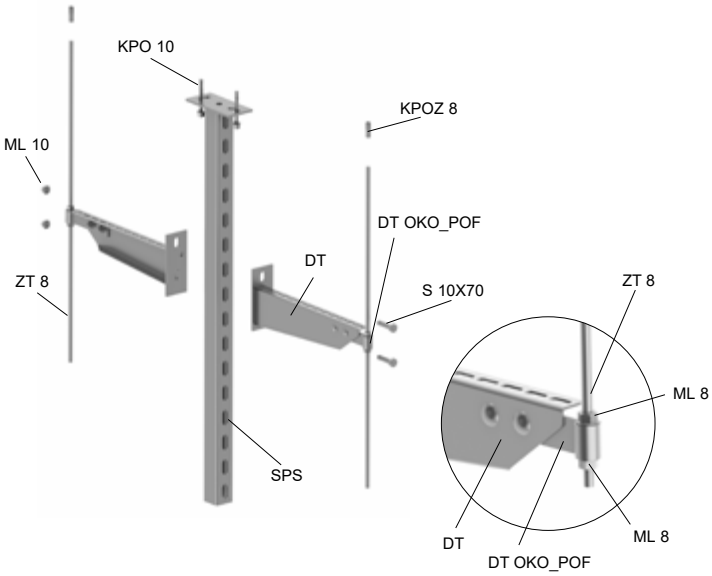
10 kg/m

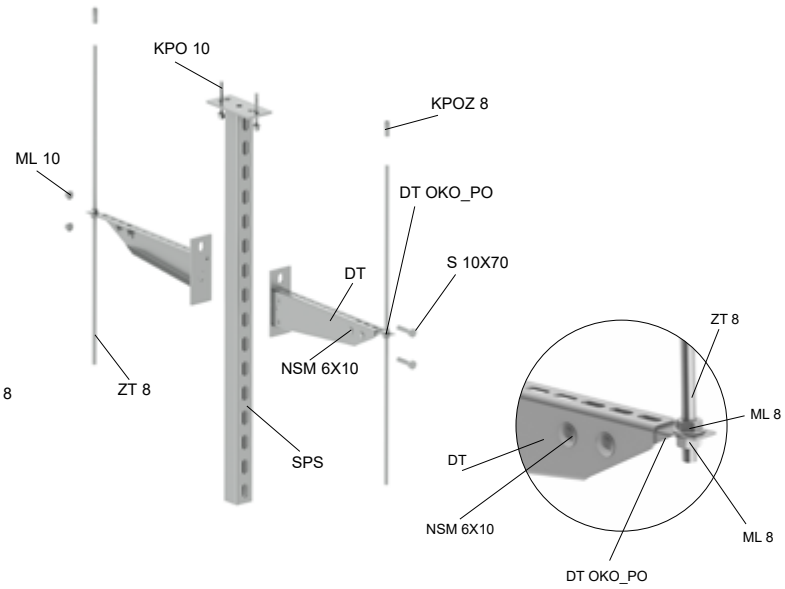
max. 1200 mm

ČSN 730895
DIN 4102-12
STN 920205

PK9-03-17-913-C-5







List of products for one mounting point					
					page
ZT 8	1	1	2	2	98
KPO 10	2	2	2	2	100
KPOZ 8	1	1	2	2	101
SPS	1	1	1	1	79
DT	1	2	2	4	75
DT OKO	1	2	2	4	75
S 10X30	2	4	-	-	98
S 10X70	-	-	2	4	98
ML 8	2	4	4	8	99
ML 10	2	4	2	4	99
NSM 6X10	see pg. 189				97
OPT	1 pc every min. 50 m of the route				172

Cable manufacturer approved:

It is possible to use cables of any manufacturer with proven functionality in the event of a fire with the standardized supporting cable constructions.

Classification (min) - power, data cables:

E90, P90-R, PS90

cable tray side height
cable tray width
thickness of metal sheet
placement
max. load
spacing of mounting points
certification according to standards
classification document number

E90

cable tray KZ JUPITER perforated

threaded rods ZT
assembly profiles MP

60 mm

50 - 300 mm

1,5 mm

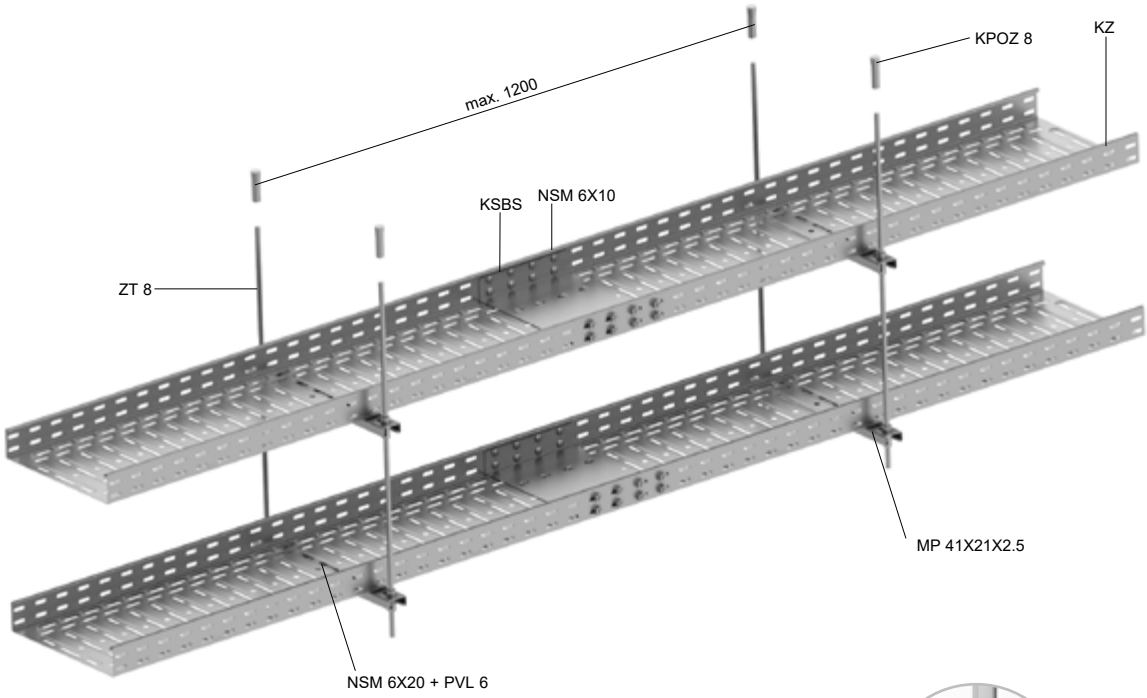
placement on ceiling

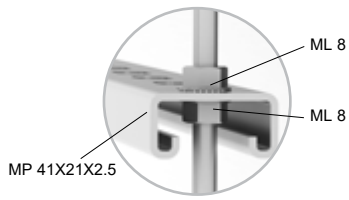
10 kg/m

max. 1200 mm

ČSN 730895
DIN 4102-12
STN 920205

PK9-03-17-913-C-5





List of products for one mounting point				
				page
ZT 8	2	2	2	98
KPOZ 8	2	2	2	101
MP 41X21X2.5	1	2	3	87
ML 8	4	8	12	99
NSM 6X20	see pg. 189			97
PVL 6				100
OPT	1 pc every min. 50 m of the route			172

Cable manufacturer approved:

It is possible to use cables of any manufacturer with proven functionality in the event of a fire with the standardized supporting cable constructions.

Classification (min) - power, data cables:

E90, P90-R, PS90

E90

cable tray KZ JUPITER perforated

bracket - heavy DT threaded rods ZT

60 mm

50 - 300 mm

1,5 mm

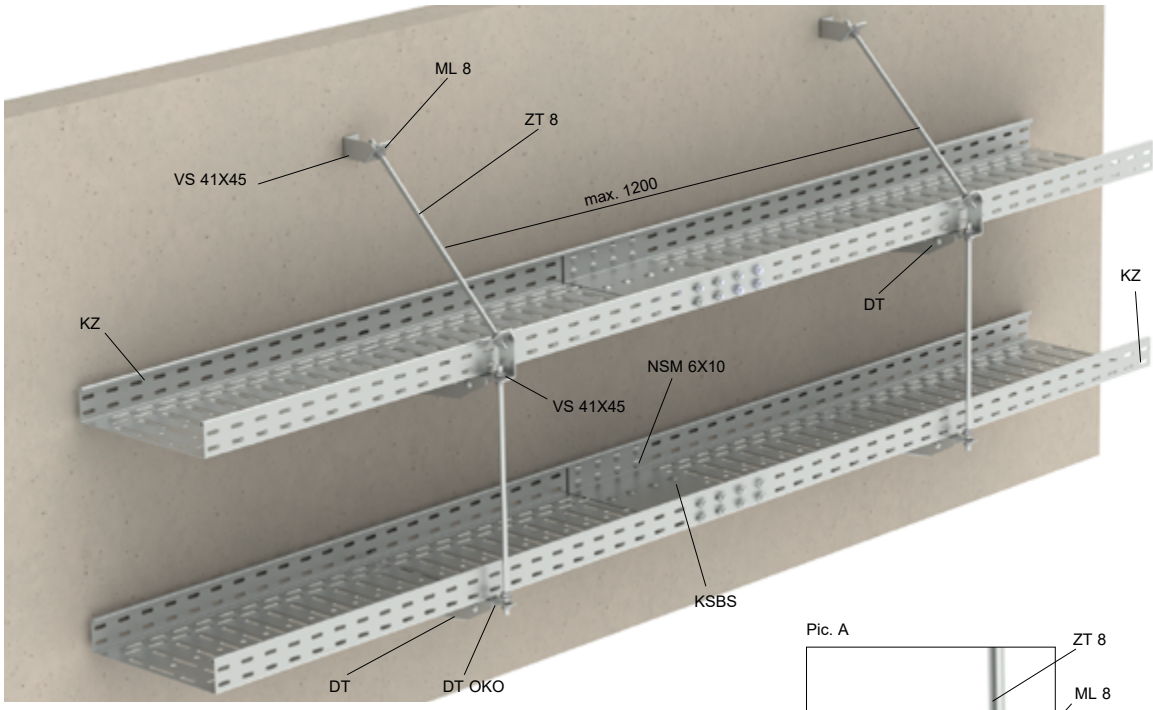
placement on the wall, or wall + ceiling

10 kg/m

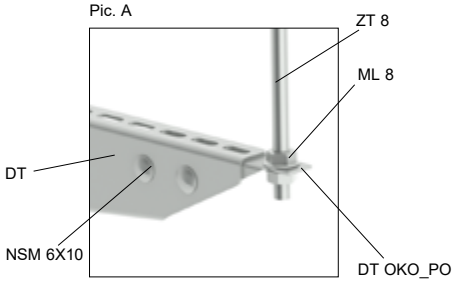
max. 1200 mm

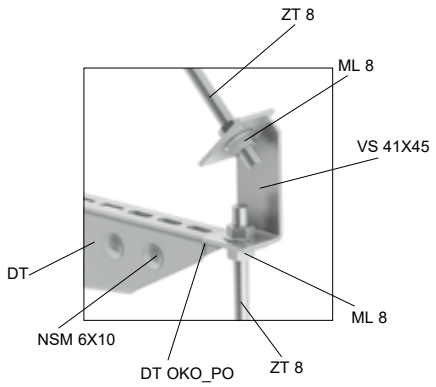
ČSN 730895
DIN 4102-12
STN 920205

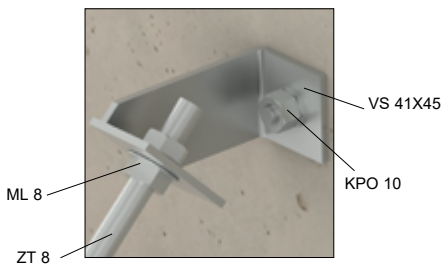
PK9-03-17-913-C-5



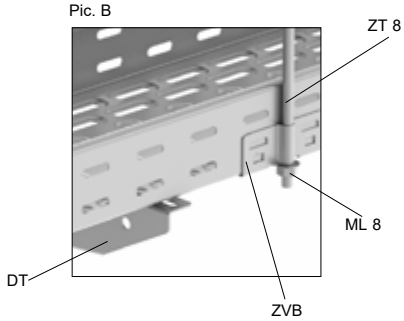
Pic. A







Pic. B



List of products for one mounting point					
					page
ZT 8	1	2	1	2	98
KPO 10	3	5	2	4	100
KPOZ 8	-	-	1	1	101
DT	1	2	1	2	75
DT OKO	1	2	1 (pic. A)	2	75
VS 41X45	2	2	-	-	86
ZVB 1.5	-	-	1 (pic. B)	2	82
S 8x20	1	-	-	-	98
ML 8	5	8	2 (pic. A) 1 (pic. B)	4 (pic. A) 2 (pic. B)	99
NSM 6X10	see pg. 189				97
OPT	1 pc every min. 50 m of the route				172

Cable manufacturer approved:

It is possible to use cables of any manufacturer with proven functionality in he event of a fire with the standardized supporting cable constructions.

Classification (min) - power, data cables:

E90, P90-R, PS90

cable tray side height
cable tray width
thickness of metal sheet
placement
max. load
spacing of mounting points
certification according to standards
classification document number

cable tray KZI
JUPITER
perforated

bracket - medium DS
ceiling profile SPS
HMP head + assembly profile MP 41X41

60 mm

50 - 600 mm

0,55 - 1,25 mm

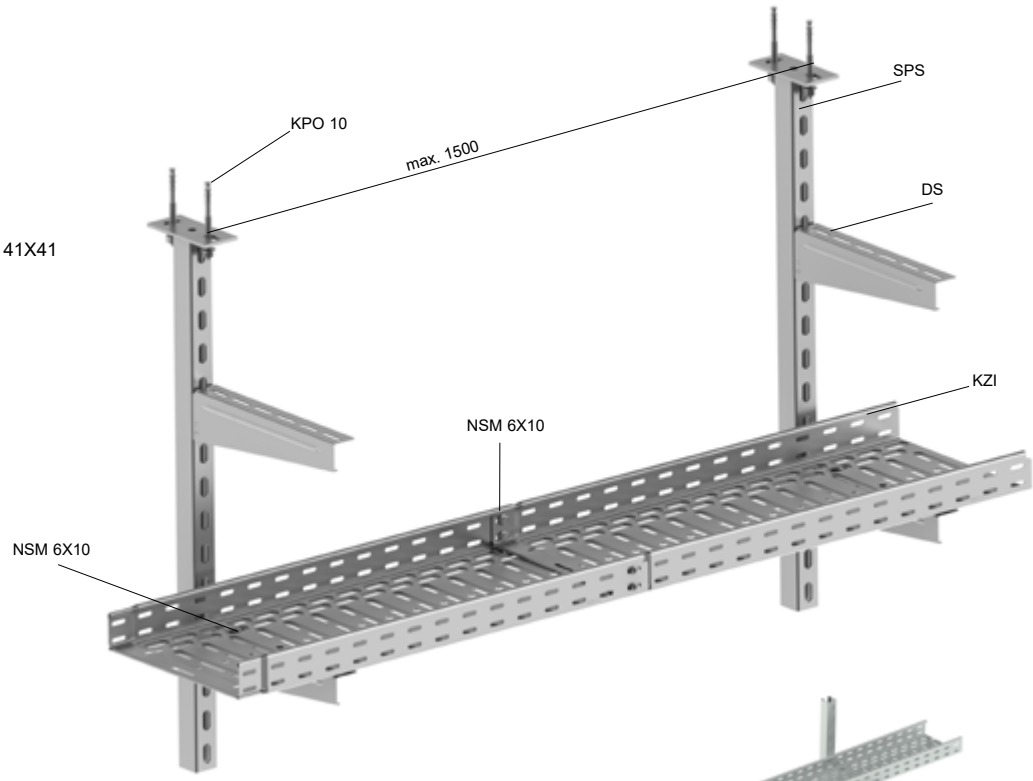
placement on the
wall, ceiling, and floor

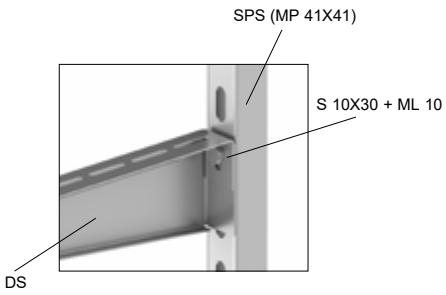
5 - 10 kg/m

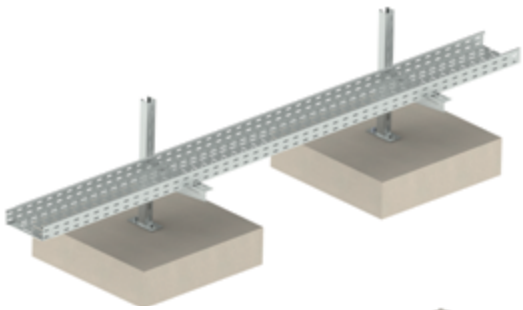
max. 1500 mm

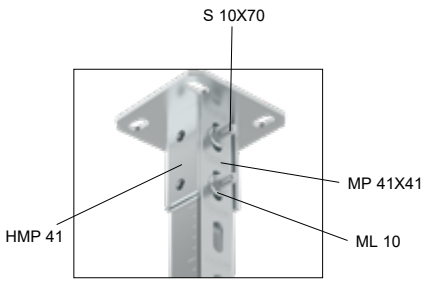
ČSN 730895
DIN 4102-12
STN 920205

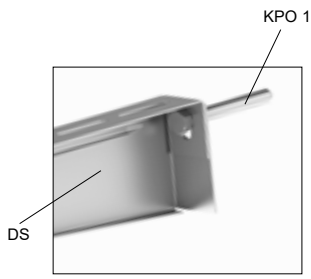
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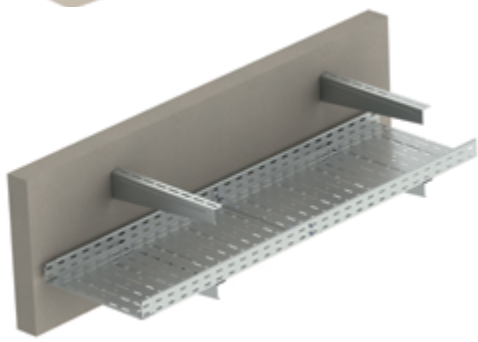












List of products for one mounting point																		page
	SPS	HMP + MP	SPS	HMP + MP	SPS	HMP + MP	SPS	HMP + MP	SPS	HMP + MP				SPS	HMP + MP	SPS	HMP + MP	
KPO 10	2	4	2	4	2	4	2	4	2	4	1	2	2	2	4	2	-	100
SPS	1	-	1	-	1	-	1	-	1	-	-	-	-	1	-	1	-	79
HMP	-	1	-	1	-	1	-	1	-	1	-	-	-	-	1	-	-	86
MP 41X41	-	1	-	1	-	1	-	1	-	1	-	-	-	-	1	-	-	87
DS	1	1	2	2	2	2	4	4	6	6	1	2	2	1	1	2	2	74
S 10X30	1	1	2	2	-	-	-	-	-	-	-	-	-	1	1	-	-	98
S 10X70	-	2	-	2	1	3	2	4	3	5	-	-	-	-	2	1	3	98
ML 10	1	3	2	4	1	3	2	4	3	5	-	-	-	1	3	1	3	99
NSM 6X10	see pg. 189																	97
OPT	1 pc every min. 50 m of the route																	172

cable tray side height
cable tray width
thickness of metal sheet
placement
max. load kg/m
max. spacing of mounting points
certification according to standards
classification document number

power cables								
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**				**note**
PRAKAB Pražská Kabelovna s.r.o	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	JR-209-25-NURS	5	50-75	0,55	1200	-
	PRAFlaDur 90	E60, P60-R, PS60	JR-209-25-NURS	5	50-75	0,55	1200	-
PRAKAB Pražská Kabelovna s.r.o	PRAFlaDur / PRAFLaDur+	E60, P60-R,PS60	JR-206-25-NURS	10	100-200	0,6	1200	-
CICM s.r.o.	1-CXKE-V	E90, P90-R, PS90	JR-206-25-NURS	10	100-200	0,6	1200	-
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E60, P60-R, PS60	JR-104-23-NURS	10	50-300	0,75; 1,00; 1,25	1500	-
	PRAFlaDur 90	E30, P30-R, PS30	JR-003-21-NURS	10	50-300	0,75; 1,00; 1,25	1500	-
	PRAFlaDur+T	E60, P60-R, PS60	JR-133-23-NURS	10	50-300	0,75; 1,00; 1,25	1200	-
NKT s.r.o.	NOPOVIC 90	E90, P90-R, PS90	JR-104-23-NURS	10	50-300	0,75; 1,00; 1,25	1500	-
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-112-22-NURS	10	50-300	0,75; 1,00; 1,25	1200	-
Kablo Vrchlabí s.r.o.	1-CXKH-V	E30, P30-R, PS30	JR-104-23-NURS	10	50-300	0,75; 1,00; 1,25	1500	-
CICM s.r.o.	1-CXKE-V	E60, P60-R, PS60	JR-055-25-NURS	10	50-300	0,75; 1,00; 1,25	1200	-
ELKOND HHK, a.s	1-CXKH-V	E60, P60-R, PS60	JR-074-23-NURS	10	50-300	0,75; 1,00; 1,25	1200	-
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur	E90, P90-R, PS90	JR-035-25-NURS	10	50-600	1,00; 1,25	1200	-
	PRAFlaDur 90	E90, P90-R, PS90	JR-003-21-NURS	10	50-400	1,00; 1,25	1200	wall-only installation
	PRAFlaDur C	E60, P60-R, PS60	JR-248-24-NURS	10	50-600	1,00; 1,25	1200	-
Kablo Vrchlabí s.r.o.	1-CXKH-V	E90, P90-R, PS90	PK9-03-17-913-C-5	10	50-400	1,00; 1,25	1500	wall-only installation
Technokabel S.A.	NHXH-J	E60, P60-R, PS60	JR-112-22-NURS	10	50-400	1,00; 1,25	1200	-

data cables								
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**				**note**
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-209-25-NURS	5	50-75	0,55	1200	-
	PRAFlaGuard F	E30, P45-R, PS45	JR-206-25-NURS	10	100-200	0,6	1200	-
CICM s.r.o.	JXFE-V	E60, P60-R, PS60	JR-206-25-NURS	10	100-200	0,6	1200	-
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-003-21-NURS	10	50-300	0,75; 1,00; 1,25	1500	-
Kablo Vrchlabí s.r.o.	JXFE-V	E30, P45-R, PS45	JR-104-23-NURS	10	50-300	0,75; 1,00; 1,25	1500	-
Kabelovna Kabex a.s.	CPDex JCXFE	E60, P60-R, PS60	JR-112-22-NURS	10	50-300	0,75; 1,00; 1,25	1200	-
CICM s.r.o.	JXFE-V	E90, P90-R, PS90	JR-055-25-NURS	10	50-300	0,75; 1,00; 1,25	1200	-
ELKOND HHK, a.s	SSKFH-V180	E30, P45-R, PS45	JR-074-23-NURS	10	50-300	0,75; 1,00; 1,25	1200	-
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-035-25-NURS	10	50-600	1,00; 1,25	1200	-
	PRAFlaGuard FTP	E60, P60-R, PS60	JR-248-24-NURS	10	50-600	1,00; 1,25	1200	-
Technokabel S.A.	HTKSH	E30, P45-R, PS45	JR-112-22-NURS	10	50-400	1,00; 1,25	1200	-
	HDGS	E90, P90-R, PS90	JR-112-22-NURS	10	50-400	1,00; 1,25	1200	-

kg max. load kg/m

thickness of metal sheet

cable tray width

max. spacing of mounting points

cable tray KZIN
JUPITER
non-perforated

bracket - medium DS
ceiling profile SPS
HMP head + assembly profile MP 41X41

60 mm

50 - 300 mm

0,75 mm

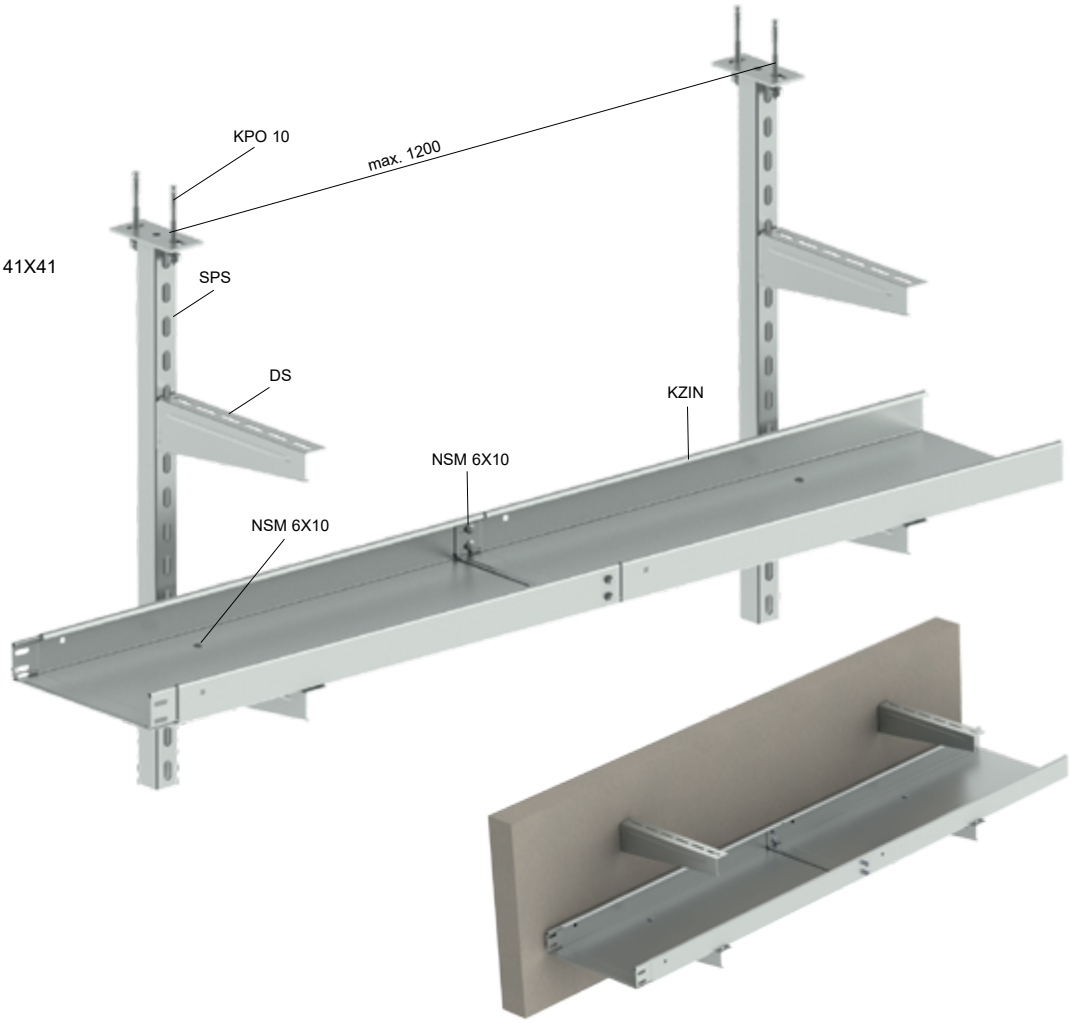
placement on the ceiling and wall

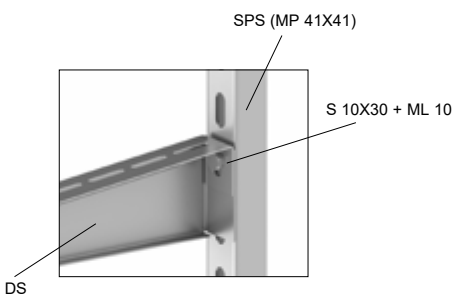
10 kg/m

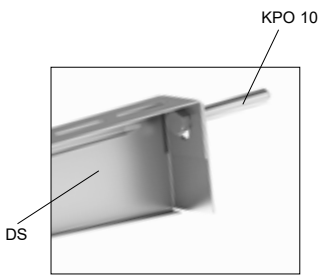
max. 1200 mm

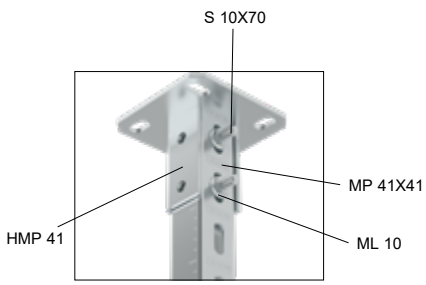
ČSN 730895
DIN 4102-12
STN 920205

PK9-03-17-913-C-5









List of products for one mounting point														
														page
	SPS	HMP + MP	SPS	HMP + MP	SPS	HMP + MP	SPS	HMP + MP	SPS	HMP + MP				
KPO 10	2	4	2	4	2	4	2	4	2	4	1	2	2	100
SPS	1	-	1	-	1	-	1	-	1	-	-	-	-	79
HMP	-	1	-	1	-	1	-	1	-	1	-	-	-	86
MP 41X41	-	1	-	1	-	1	-	1	-	1	-	-	-	87
DS	1	1	2	2	2	2	4	4	6	6	1	2	2	74
S 10X30	1	1	2	2	-	-	-	-	-	-	-	-	-	98
S 10X70	-	2	-	2	1	3	2	4	3	5	-	-	-	98
ML 10	1	3	2	4	1	3	2	4	3	5	-	-	-	99
NSM 6X10	see pg. 189													97
OPT	1 pc every min. 50 m of the route													172

power cables							
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**			
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E30, P30-R, PS30	JR-206-25-NURS	10	50-300	0,75	1200
CICM s.r.o.	1-CXKE-V	E90, P90-R, PS90	JR-055-25-NURS	10	50-300	0,75	1200

data cables							
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**			
PRAKAB Pražská Kabelovna s.r.o	PRAFlaGuard F	E30, P45-R, PS45	JR-206-25-NURS	10	50-300	0,75	1200
CICM s.r.o.	JXFE-V	E90, P90-R, PS90	JR-055-25-NURS	10	50-300	0,75	1200

cable tray KZI JUPITER perforated

threaded rods ZT
assembly profiles MP

60 mm

50 - 600 mm

0,55 - 1,25 mm

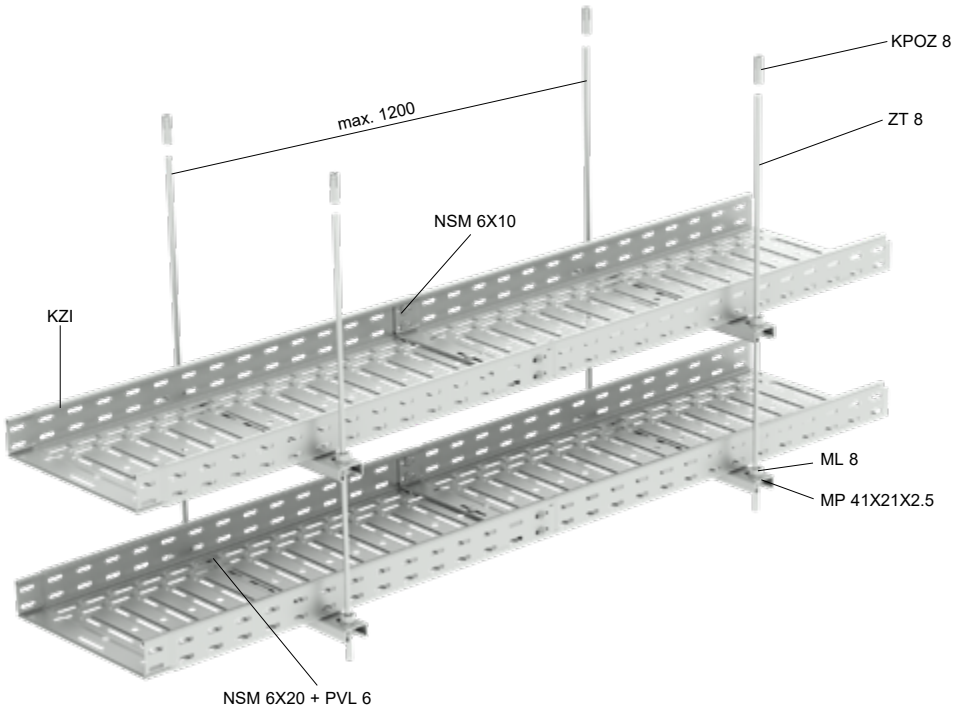
placement on ceiling

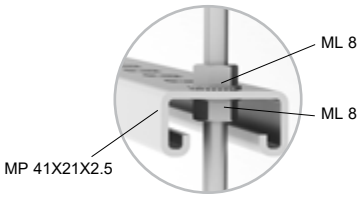
5 - 20 kg/m

max. 1200 mm

ČSN 730895
DIN 4102-12
STN 920205

PK9-03-17-913-C-5





List of products for one mounting point				
				page
ZT 8	2	2	2	98
KPOZ 8	2	2	2	101
MP 41X21X2.5	1	2	3	87
ML 8	4	8	12	99
NSM 6X20	see pg. 189			97
PVL 6				100
OPT	1 pc every min. 50 m of the route			172

power cables							
cable manufacturer	cable type	classification (min)	standpoint number	kg			
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E60, P60-R, PS60	JR-206-25-NURS	5	50-75	0,55	1200
CICM s.r.o.	1-CXKE-V	E30, P30-R, PS30	JR-206-25-NURS	5	50-75	0,55	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E30, P45-R, PS45	JR-055-25-NURS	10	100-200	0,6	1200
CICM s.r.o.	1-CXKE-V	E90, P90-R, PS90	JR-055-25-NURS	10	100-200	0,6	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E60, P60-R, PS60	JR-015-22-NURS	10	50-300	0,75; 1,00; 1,25	1200
	PRAFlaDur+T	E90, P90-R, PS90	JR-167-22-NURS	10	50-300	0,75; 1,00; 1,25	1200
NKT s.r.o.	NOPOVIC 90	E30, P45-R, PS45	JR-030-22-NURS	10	50-300	0,75; 1,00; 1,25	1200
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-127-24-NURS	10	50-300	0,75; 1,00; 1,25	1200
Kablo Vrchlabí s.r.o.	1-CXKH-V	E60, P60-R, PS60	PK9-03-17-913-C-5	10	50-300	0,75; 1,00; 1,25	1200
CICM s.r.o.	1-CXKE-V	E60, P60-R, PS60	JR-055-25-NURS	10	50-300	0,75; 1,00; 1,25	1200
ELKOND HHK, a.s.	1-CXKH-V	E90, P90-R, PS90	JR-015-22-NURS	10	50-300	0,75; 1,00; 1,25	1200
Technokabel S.A.	NHXH-J	E30, P45-R, PS45	JR-112-22-NURS	10	50-300	0,75; 1,00; 1,25	1200
Tele-Fonika Kable S.A.	FLAME-X 950	E60, P60-R, PS60	JR-149-20-NURS	10	50-300	0,75; 1,00; 1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	JR-015-22-NURS	20	50-600	1,00; 1,25	1200
	PRAFlaDur 90	E60, P60-R, PS60	JR-003-21-NURS	10	50-600	1,00; 1,25	1200
	PRAFlaDur+T	E90, P90-R, PS90	JR-167-22-NURS	20	50-600	1,00; 1,25	1200
NKT s.r.o.	NOPOVIC 90	E90, P90-R, PS90	JR-030-22-NURS	20	50-600	1,00; 1,25	1200
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-127-24-NURS	20	50-600	1,00; 1,25	1200
Technokabel S.A.	NHXH-J	E30, P45-R, PS45	JR-112-22-NURS	20	50-600	1,00; 1,25	1200
Zakłady Kablowe BITNER Sp. z o.o.	Bitflame 1000	E90, P90-R, PS90	JR-127-24-NURS	20	50-600	1,00; 1,25	1200
Klaus Faber AG	(N)HXH-J	E60, P60-R, PS60	JR-015-22-NURS	20	50-600	1,00; 1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	JR-015-22-NURS	20	50-600	1,25	1200
	PRAFlaDur 90	E90, P90-R, PS90	JR-024-22-NURS	20	50-300	1,25	1200
Kabelovna Kabex a.s.	1-CSKE-V	E30, P45-R, PS45	JR-027-22-NURS	10	50-300	1,25	1200
Kablo Vrchlabí s.r.o.	1-CXKH-V	E60, P60-R, PS60	JR-123-24-NURS	20	50-500	1,25	1200
CICM s.r.o.	1-CXKE-V	E90, P90-R, PS90	JR-041-25-NURS2	20	50-500	1,25	1200
Klaus Faber AG	(N)HXH-J	E60, P60-R, PS60	JR-015-22-NURS	20	50-600	1,25	1200

data cables							
cable manufacturer	cable type	classification (min)	standpoint number	kg			
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E30, P30-R, PS30	JR-206-25-NURS	5	50-75	0,55	1200
CICM s.r.o.	JXFE-V	E60, P60-R, PS60	JR-206-25-NURS	5	50-75	0,55	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E30, P30-R, PS30	JR-055-25-NURS	10	100-200	0,6	1200
CICM s.r.o.	JXFE-V	E30, P30-R, PS30	JR-055-25-NURS	10	100-200	0,6	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-030-22-NURS	10	50-300	0,75; 1,00; 1,25	1200
Kabelovna Kabex a.s.	CPDex JCXFE-V	E30, P45-R, PS45	JR-112-22-NURS	10	50-300	0,75; 1,00; 1,25	1200
Kablo Vrchlabí s.r.o.	JXFE-V	E90, P90-R, PS90	PK9-03-17-913-C-5	10	50-300	0,75; 1,00; 1,25	1200
CICM s.r.o.	JXFE-V	E90, P90-R, PS90	JR-055-25-NURS	10	50-300	0,75; 1,00; 1,25	1200
ELKOND HHK, a.s.	SHXKFH-V	E90, P90-R, PS90	JR-015-22-NURS	10	50-300	0,75; 1,00; 1,25	1200
	SSKFH-V180	E30, P30-R, PS30	JR-074-23-NURS	10	50-300	0,75; 1,00; 1,25	1200
Technokabel S.A.	HTKSH	E30, P30-R, PS30	JR-112-22-NURS	10	50-300	0,75; 1,00; 1,25	1200
Tele-Fonika Kable S.A.	FLAME-X 950 HDGs	E90, P90-R, PS90	JR-149-20-NURS	10	50-300	0,75; 1,00; 1,25	1200
	FLAME-X 950 HTKSH	E90, P90-R, PS90	JR-149-20-NURS	10	50-300	0,75; 1,00; 1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-127-24-NURS	20	50-600	1,00; 1,25	1200
Kabelovna Kabex a.s.	CPDex JCXFE-V	E60, P60-R, PS60	JR-127-24-NURS	20	50-600	1,00; 1,25	1200
Technokabel S.A.	HTKSH	E90, P90-R, PS90	JR-112-22-NURS	20	50-600	1,00; 1,25	1200
Zakłady Kablowe BITNER Sp. z o.o.	HTKSH	E30, P30-R, PS30	JR-127-24-NURS	20	50-600	1,00; 1,25	1200
Klaus Faber AG	JE-H(St)H	E90, P90-R, PS90	JR-015-22-NURS	20	50-600	1,00; 1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-015-22-NURS	20	50-600	1,25	1200
Kablo Vrchlabí s.r.o.	JXFE-V	E60, P60-R, PS60	JR-123-24-NURS	20	50-500	1,25	1200
CICM s.r.o.	JXFE-V	E60, P60-R, PS60	JR-041-25-NURS2	20	50-500	1,25	1200

optical cables						
cable manufacturer	cable type	classification (min)	standpoint number	kg		
Kabelovna Kabex a.s.	CPDeX® Optex® J/A-WQ(ZN)HH 12E9/125-V /h/P90-R/	P30-R	JR-150-20-NURS	10	50-100	0,75; 1,00; 1,25

kg max. load kg/m

cable tray width

thickness of metal sheet

max. spacing of mounting points

cable tray KZIN
JUPITER
non-perforated

threaded rods ZT
assembly profiles MP

60 mm

50 - 300 mm

0,75 mm

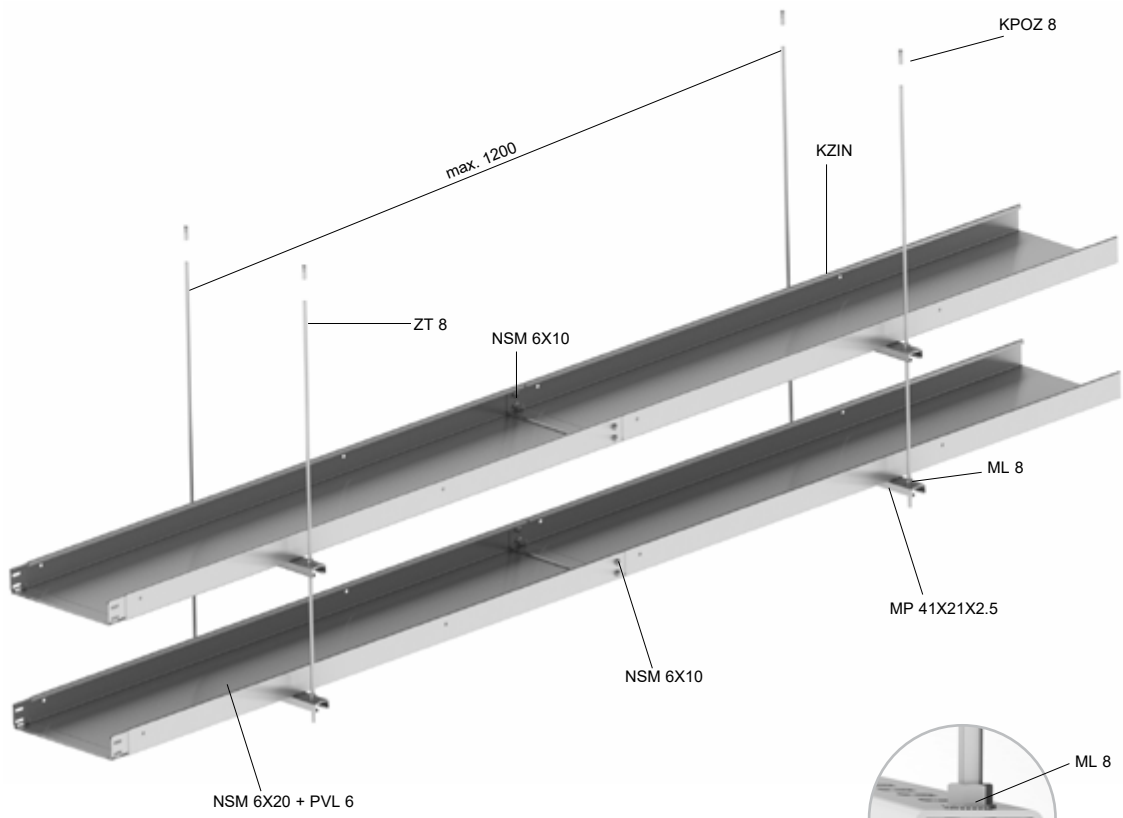
placement on ceiling

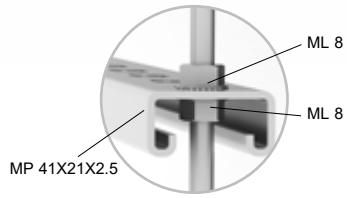
10 kg/m

max. 1200 mm

ČSN 73 0895
DIN 4102-12
STN 92 0205

PK9-03-17-913-C-5





List of products for one mounting point				
				page
ZT 8	2	2	2	98
KPOZ 8	2	2	2	101
MP 41X21X2.5	1	2	3	87
ML 8	4	8	12	99
NSM 6X20	see pg. 189			97
PVL 6				100
OPT	1 pc every min. 50 m of the route			172

power cables							
cable manufacturer	cable type	classification (min)	standpoint number	kg			
PRAKAB Pražská Kabelovna s.r.o	PRAFlaDur / PRAFLaDur+	E60, P60-R, PS60	JR-206-25-NURS	10	50-300	0,75	1200
CICM s.r.o.	1-CXKE-V	E90, P90-R, PS90	JR-055-25-NURS	10	50-300	0,75	1200

data cables							
cable manufacturer	cable type	classification (min)	standpoint number	kg			
PRAKAB Pražská Kabelovna s.r.o	PRAFlaGuard F	E30, P30-R, PS30	JR-206-25-NURS	10	50-300	0,75	1200
CICM s.r.o.	JXFE-V	E90, P90-R, PS90	JR-055-25-NURS	10	50-300	0,75	1200

cable tray KZI JUPITER perforated

assembly profiles MP

60 mm

50 - 600 mm

0,55 -1,25 mm

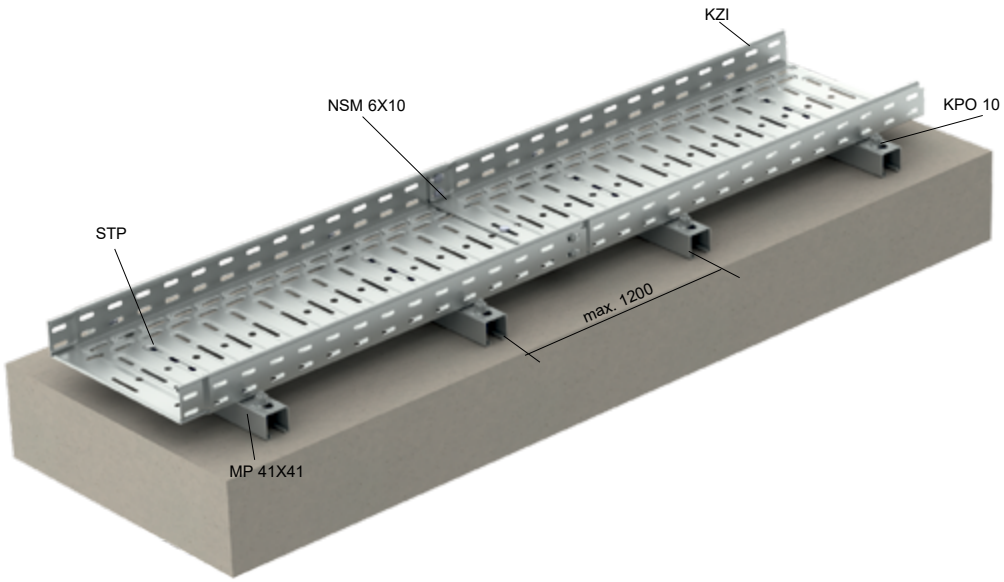
floor placement

5 - 20 kg/m

max. 1200 mm

ČSN 73 0895

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List of products for one mounting point		
		page
KPO 10	2	100
MP 41X41	1	87
NSM 6X10	see pg. 189	97
STP	2	105
OPT	1 pc every min. 50 m of the route	172

For rooftop installation, the routes are fixed to bases with fire reaction class A1/A2 and must never be attached directly to the roof structure.

power cables							
cable manufacturer	cable type	classification (min)	standpoint number	kg			
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E60, P60-R, PS60	JR-206-25-NURS	5	50-75	0,55	1200
CICM s.r.o.	1-CXKE-V	E30, P30-R, PS30	JR-206-25-NURS	5	50-75	0,55	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E30, P45-R, PS45	JR-055-25-NURS	10	100-200	0,6	1200
CICM s.r.o.	1-CXKE-V	E90, P90-R, PS90	JR-055-25-NURS	10	100-200	0,6	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E60, P60-R, PS60	JR-015-22-NURS	10	50-300	0,75; 1,00; 1,25	1200
	PRAFlaDur+T	E90, P90-R, PS90	JR-167-22-NURS	10	50-300	0,75; 1,00; 1,25	1200
NKT s.r.o.	NOPOVIC 90	E30, P45-R, PS45	JR-030-22-NURS	10	50-300	0,75; 1,00; 1,25	1200
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-127-24-NURS	10	50-300	0,75; 1,00; 1,25	1200
Kablo Vrchlabí s.r.o.	1-CXKH-V	E60, P60-R, PS60	PK9-03-17-913-C-5	10	50-300	0,75; 1,00; 1,25	1200
CICM s.r.o.	1-CXKE-V	E60, P60-R, PS60	JR-055-25-NURS	10	50-300	0,75; 1,00; 1,25	1200
ELKOND HHK, a.s.	1-CXKH-V	E90, P90-R, PS90	JR-015-22-NURS	10	50-300	0,75; 1,00; 1,25	1200
Technokabel S.A.	NHXH-J	E30, P45-R, PS45	JR-112-22-NURS	10	50-300	0,75; 1,00; 1,25	1200
Tele-Fonika Kable S.A.	FLAME-X 950	E60, P60-R, PS60	JR-149-20-NURS	10	50-300	0,75; 1,00; 1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	JR-015-22-NURS	20	50-600	1,00; 1,25	1200
	PRAFlaDur 90	E60, P60-R, PS60	JR-003-21-NURS	10	50-600	1,00; 1,25	1200
	PRAFlaDur+T	E90, P90-R, PS90	JR-167-22-NURS	20	50-600	1,00; 1,25	1200
NKT s.r.o.	NOPOVIC 90	E90, P90-R, PS90	JR-030-22-NURS	20	50-600	1,00; 1,25	1200
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-127-24-NURS	20	50-600	1,00; 1,25	1200
Technokabel S.A.	NHXH-J	E30, P45-R, PS45	JR-112-22-NURS	20	50-600	1,00; 1,25	1200
Zakłady Kablowe BITNER Sp. z o.o.	Bitflame 1000	E90, P90-R, PS90	JR-127-24-NURS	20	50-600	1,00; 1,25	1200
Klaus Faber AG	(N)HXH-J	E60, P60-R, PS60	JR-015-22-NURS	20	50-600	1,00; 1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	JR-015-22-NURS	20	50-600	1,25	1200
	PRAFlaDur 90	E90, P90-R, PS90	JR-024-22-NURS	20	50-300	1,25	1200
Kabelovna Kabex a.s.	1-CSKE-V	E30, P45-R, PS45	JR-027-22-NURS	10	50-300	1,25	1200
Kablo Vrchlabí s.r.o.	1-CXKH-V	E60, P60-R, PS60	JR-123-24-NURS	20	50-500	1,25	1200
CICM s.r.o.	1-CXKE-V	E90, P90-R, PS90	JR-041-25-NURS2	20	50-500	1,25	1200
Klaus Faber AG	(N)HXH-J	E60, P60-R, PS60	JR-015-22-NURS	20	50-600	1,25	1200

data cables							
cable manufacturer	cable type	classification (min)	standpoint number	kg			
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E30, P30-R, PS30	JR-206-25-NURS	5	50-75	0,55	1200
CICM s.r.o.	JXFE-V	E60, P60-R, PS60	JR-206-25-NURS	5	50-75	0,55	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E30, P30-R, PS30	JR-055-25-NURS	10	100-200	0,6	1200
CICM s.r.o.	JXFE-V	E30, P30-R, PS30	JR-055-25-NURS	10	100-200	0,6	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-030-22-NURS	10	50-300	0,75; 1,00; 1,25	1200
Kabelovna Kabex a.s.	CPDex JCXFE-V	E30, P45-R, PS45	JR-112-22-NURS	10	50-300	0,75; 1,00; 1,25	1200
Kablo Vrchlabí s.r.o.	JXFE-V	E90, P90-R, PS90	PK9-03-17-913-C-5	10	50-300	0,75; 1,00; 1,25	1200
CICM s.r.o.	JXFE-V	E90, P90-R, PS90	JR-055-25-NURS	10	50-300	0,75; 1,00; 1,25	1200
ELKOND HHK, a.s.	SHXKFH-V	E90, P90-R, PS90	JR-015-22-NURS	10	50-300	0,75; 1,00; 1,25	1200
	SSKFH-V180	E30, P30-R, PS30	JR-074-23-NURS	10	50-300	0,75; 1,00; 1,25	1200
Technokabel S.A.	HTKSH	E30, P30-R, PS30	JR-112-22-NURS	10	50-300	0,75; 1,00; 1,25	1200
Tele-Fonika Kable S.A.	FLAME-X 950 HDGs	E90, P90-R, PS90	JR-149-20-NURS	10	50-300	0,75; 1,00; 1,25	1200
	FLAME-X 950 HTKSH	E90, P90-R, PS90	JR-149-20-NURS	10	50-300	0,75; 1,00; 1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-127-24-NURS	20	50-600	1,00; 1,25	1200
Kabelovna Kabex a.s.	CPDex JCXFE-V	E60, P60-R, PS60	JR-127-24-NURS	20	50-600	1,00; 1,25	1200
Technokabel S.A.	HTKSH	E90, P90-R, PS90	JR-112-22-NURS	20	50-600	1,00; 1,25	1200
Zakłady Kablowe BITNER Sp. z o.o.	HTKSH	E30, P30-R, PS30	JR-127-24-NURS	20	50-600	1,00; 1,25	1200
Klaus Faber AG	JE-H(St)H	E90, P90-R, PS90	JR-015-22-NURS	20	50-600	1,00; 1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-015-22-NURS	20	50-600	1,25	1200
Kablo Vrchlabí s.r.o.	JXFE-V	E60, P60-R, PS60	JR-123-24-NURS	20	50-500	1,25	1200
CICM s.r.o.	JXFE-V	E60, P60-R, PS60	JR-041-25-NURS2	20	50-500	1,25	1200

optical cables						
cable manufacturer	cable type	classification (min)	standpoint number	kg		
Kabelovna Kabex a.s.	CPDeX® Optex® J/A-WQ(ZN)HH 12E9/125-V /h/P90-R/	P30-R	JR-150-20-NURS	10	50-100	0,75; 1,00; 1,25

kg max. load kg/m

cable tray width

thickness of metal sheet

max. spacing of mounting points

cable tray KZIN
JUPITER
non-perforated

assembly profiles MP

60 mm

50 - 300 mm

0,75 mm

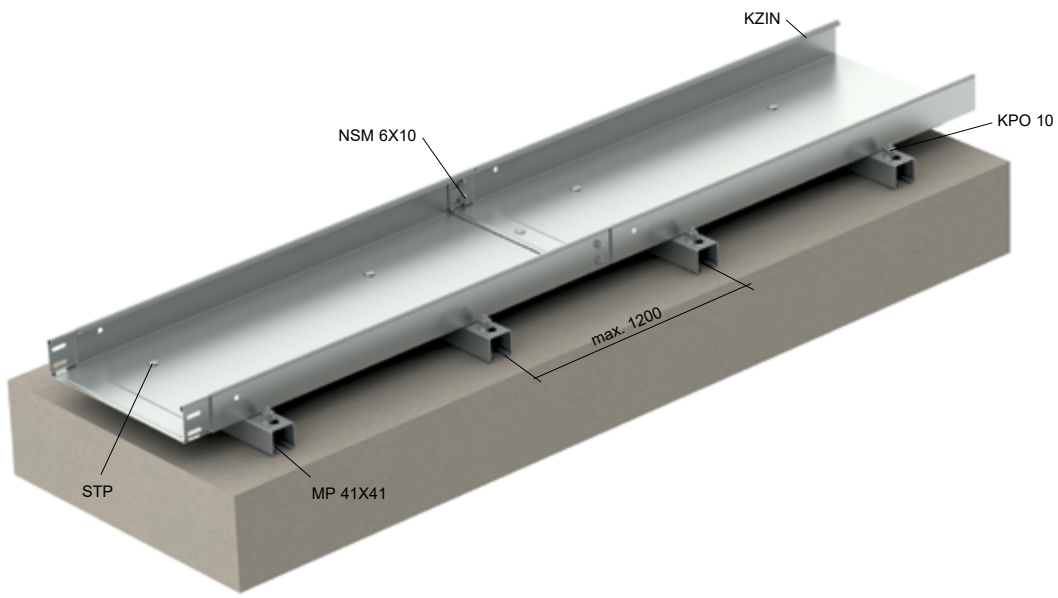
floor placement

10 kg/m

max. 1200 mm

ČSN 730895

PK9-03-17-913-C-5



List of products for one mounting point		
		page
KPO 10	2	100
MP 41X41	1	87
NSM 6X10	see pg. 189	97
STP	2	105
OPT	1 pc every min. 50 m of the route	172

For rooftop placement, the routes are fixed to bases with fire reaction class A1/A2 and must not be attached directly to the roof structure.

power cables							
cable manufacturer	cable type	classification (min)	standpoint number	kg			
PRAKAB Pražská Kabelovna s.r.o	PRAFlaDur / PRAFLaDur+	E60, P60-R, PS60	JR-206-25-NURS	10	50-300	0,75	1200
CICM s.r.o.	1-CXKE-V	E90, P90-R, PS90	JR-055-25-NURS	10	50-300	0,75	1200

data cables							
cable manufacturer	cable type	classification (min)	standpoint number	kg			
PRAKAB Pražská Kabelovna s.r.o	PRAFlaGuard F	E30, P30-R, PS30	JR-206-25-NURS	10	50-300	0,75	1200
CICM s.r.o.	JXFE-V	E90, P90-R, PS90	JR-055-25-NURS	10	50-300	0,75	1200

cable tray KZ JUPITER perforated

bracket DSU
threaded rods ZT

60 mm

50 - 300 mm

1,25 mm

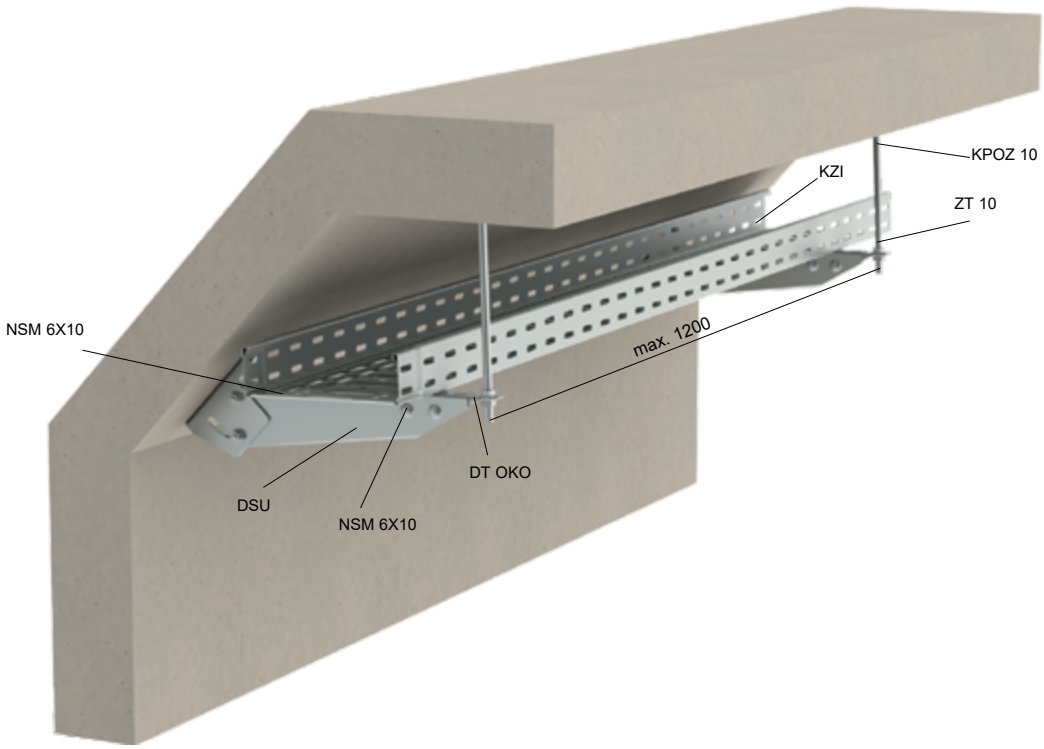
placement on an inclined wall

10 kg/m

max. 1200 mm

ČSN 730895
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STN 920205

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List of products for one mounting point		
		page
ZT 8	1	98
KPOZ 8	1	101
KPO 10	2	100
DSU	1	76
DT OKO	1	75
ML 8	2	99
NSM 6X10 (fastening DT OKO)	2	97
NSM 6X10 (for attachment to the support)	see pg. 189	97
OPT	1 pc every min. 50 m of the route	172

power cables							
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**			
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E30, P45-R, PS45	JR-123-24-NURS	10	50-300	1,25	1200

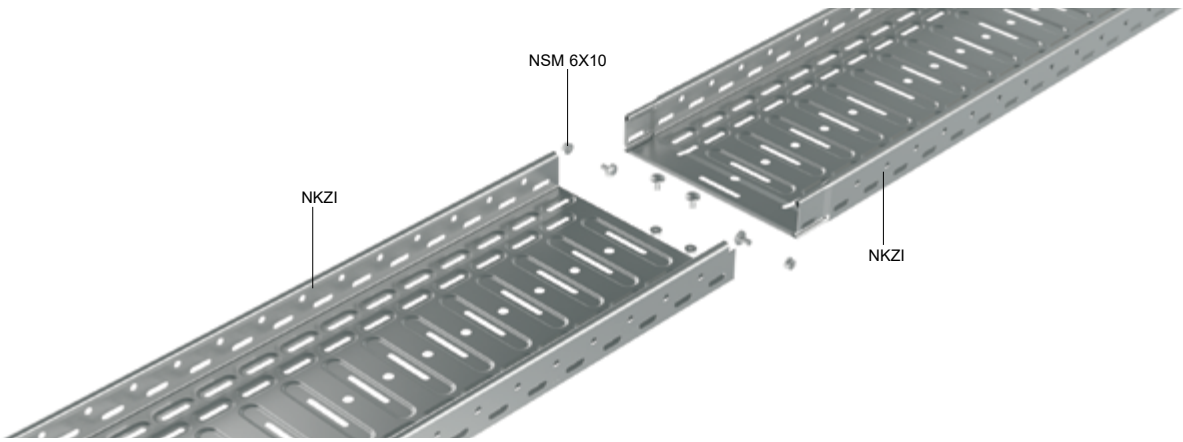
data cables							
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**			
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E30, P45-R, PS45	JR-123-24-NURS	10	50-300	1,25	1200



SUPPORTING CONSTRUCTIONS

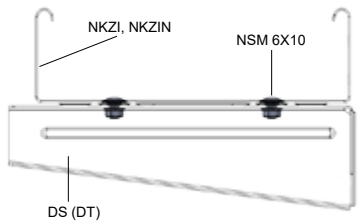
MARS CONSTRUCTIONS

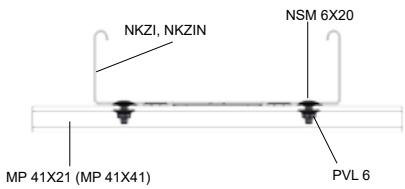
Non-standard supporting structure – connection and fixing of the NKZI and NKZIN cable trays – MARS



NKZI and NKZIN cable trays, maintaining fire performance, are made of sheet metal with thicknesses ranging from 0.7 to 1.25 mm.
The NKZI cable tray joint is made using an integrated coupling, which is part of the tray, and NSM 6X10 bolts.
The tray is fixed to the support using NSM 6X10 bolts; when attaching to the MP assembly profile, NSM 6X20 bolts and PVL 6 washers are used.
For solid (non-perforated) trays, holes for NSM 6X10 bolts must be drilled in the tray bottom.

cable tray dimension	amount of bolts NSM 6X10 (NSM 6X20)			
	for connection	for attachment to the support		
		1 level	2 levels	3 levels
50 x 62	2	1	2	3
50 x 125				
50 x 250	3	2	4	6
100 x 125	4	1	2	3
100 x 250	5	2	4	6
100 x 500	6			





cable tray NKZI MARS perforated

bracket - heavy DT

50; 100 mm

62 - 250 mm

1,25 mm

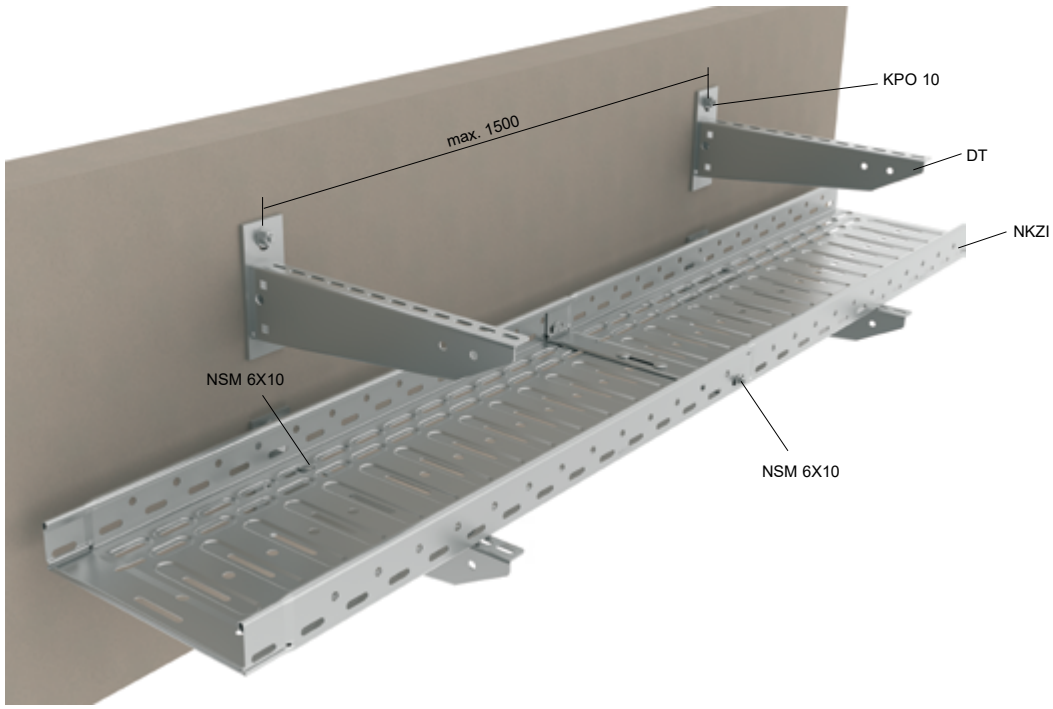
placement on the wall

10 kg/m

max. 1500 mm

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STN 920205

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List of products for one mounting point				
				page
DT	1	2	3	75
KPO 10	2	4	6	100
NSM 6X10	see pg. 205			97
OPT	1 pc every min. 50 m of the route			172

power cables								
cable manufacturer	cable type	classification (min)	standpoint number	kg				
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E60, P60-R, PS60	JR-021-22-NURS	10	50	62-250	1,25	1500
	PRAFlaDur 90	E90, P90-R, PS90	JR-024-22-NURS	10	50	62-250	1,25	1500
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	JR-021-22-NURS	10	100	125-250	1,25	1500
	PRAFlaDur 90	E60, P60-R, PS60	JR-024-22-NURS	10	100	125-250	1,25	1500
NKT s.r.o.	NOPOVIC	E60, P60-R, PS60	JR-021-22-NURS	10	100	125-250	1,25	1500
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-021-22-NURS	10	100	125-250	1,25	1500

data cables								
cable manufacturer	cable type	classification (min)	standpoint number	kg				
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-021-22-NURS	10	50	62-250	1,25	1500
	PRAFlaGuard F	E90, P90-R, PS90	JR-021-22-NURS	10	100	125-250	1,25	1500
Kabelovna Kabex a.s.	CPDex JCXFE-V	E60, P60-R, PS60	JR-021-22-NURS	10	100	125-250	1,25	1500

cable tray NKZI
MARS
perforated

bracket - medium DS
ceiling profile SPS
HMP head + assembly profile MP 41X41

50; 100 mm

62 - 500 mm

0,7 - 1,25 mm

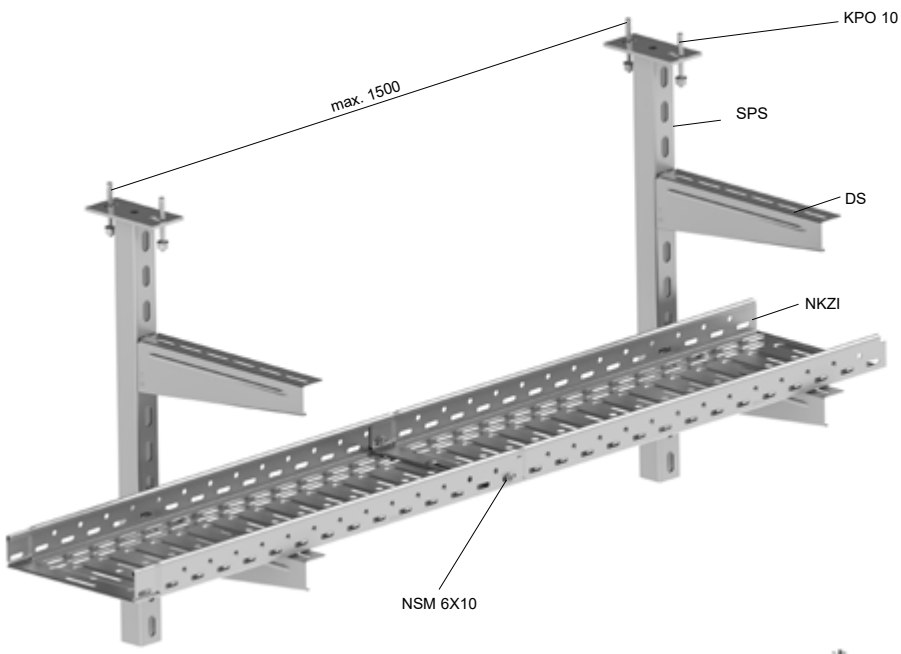
placement on the
wall, ceiling, and floor

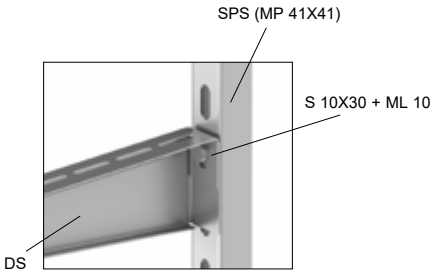
10 - 20 kg/m

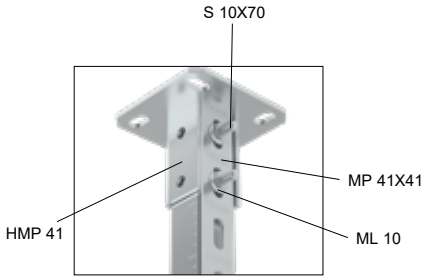
max. 1500 mm

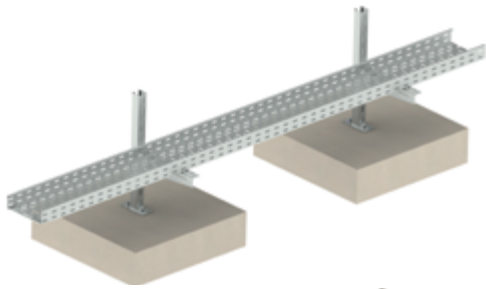
ČSN 730895
DIN 4102-12
STN 920205

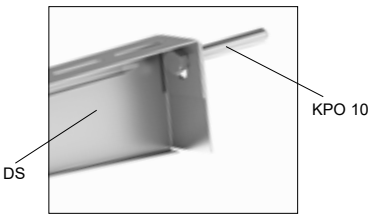
PK9-03-17-913-C-5

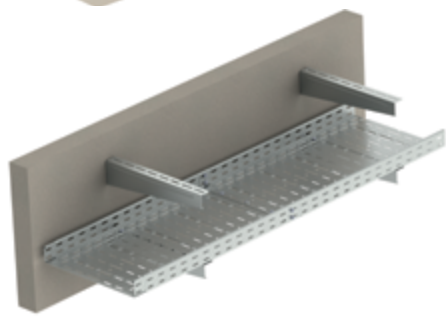












List of products for one mounting point

																		page
	SPS	HMP + MP	SPS	HMP + MP	SPS	HMP + MP	SPS	HMP + MP	SPS	HMP + MP				SPS	HMP + MP	SPS	HMP + MP	
KPO 10	2	4	2	4	2	4	2	4	2	4	1	2	3	2	4	2	4	100
SPS	1	-	1	-	1	-	1	-	1	-	-	-	-	1	-	1	-	79
HMP	-	1	-	1	-	1	-	1	-	1	-	-	-	-	1	-	1	86
MP 41X41	-	1	-	1	-	1	-	1	-	1	-	-	-	-	1	-	1	87
DS	1	1	2	2	2	2	4	4	6	6	1	2	3	1	1	2	2	74
S 10X30	1	1	2	2	-	-	-	-	-	-	-	-	-	1	1	-	-	98
S 10X70	-	2	-	-	1	3	2	4	3	5	-	-	-	-	2	1	3	98
ML 10	1	3	2	2	1	3	2	4	3	5	-	-	-	1	3	1	3	99
NSM 6X10	see pg. 205																	97
OPT	1 pc every min. 50 m of the route																	172

cable tray side height
cable tray width
thickness of metal sheet
placement
max. load kg/m
max. spacing of mounting points
certification according to standards
classification document number

power cables								
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**				
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	JR-104-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1500
	PRAFlaDur 90	E60, P60-R, PS60	JR-003-21-NURS	10	50	62-250	0,70; 1,00; 1,25	1500
	PRAFlaDur+T	E60, P60-R, PS60	JR-133-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
NKT s.r.o.	NOPOVIC	E90, P90-R, PS90	JR-104-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1500
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-112-22-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
Kablo Vrchlabí s.r.o.	1-CXKH-V	E30, P30-R, PS30	JR-104-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1500
ELKOND HHK, a.s.	1-CXKH-V	E60, P60-R, PS60	JR-074-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	JR-206-25-NURS	10	100	125-250	0,70; 1,25	1200
CICM s.r.o.	1-CXKE-V	E90, P90-R, PS90	JR-055-25-NURS	10	100	125-250	0,70; 1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E60, P60-R, PS60	JR-248-24-NURS	20	100	250-500	1,00; 1,25	1200
NKT s.r.o.	NOPOVIC	E30, P30-R, PS30	JR-035-25-NURS	20	100	250-500	1,00; 1,25	1200

data cables								
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**				
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-003-21-NURS	10	50	62-250	0,70; 1,00; 1,25	1500
Kabelovna Kabex a.s.	CPDex JCXFE-V	E30, P45-R, PS45	JR-112-22-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
Kablo Vrchlabí s.r.o.	JXFE-V	E30, P45-R, PS45	JR-104-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1500
ELKOND HHK, a.s.	SSKFH-V180	E60, P60-R, PS60	JR-074-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E30, P45-R, PS45	JR-055-25-NURS	10	100	125-250	0,70; 1,25	1200
CICM s.r.o.	JXFE-V	E90, P90-R, PS90	JR-055-25-NURS	10	100	125-250	0,70; 1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard FTP	E60, P60-R, PS60	JR-248-24-NURS	20	100	125-500	1,00; 1,25	1200

kg max. load kg/m

thickness of metal sheet

cable tray width

max. spacing of mounting points

cable tray NKZIN
MARS
non-perforated

bracket - medium DS
ceiling profile SPS
HMP head + assembly profile MP 41X41

50; 100 mm

62 - 250 mm

0,7 - 1,25 mm

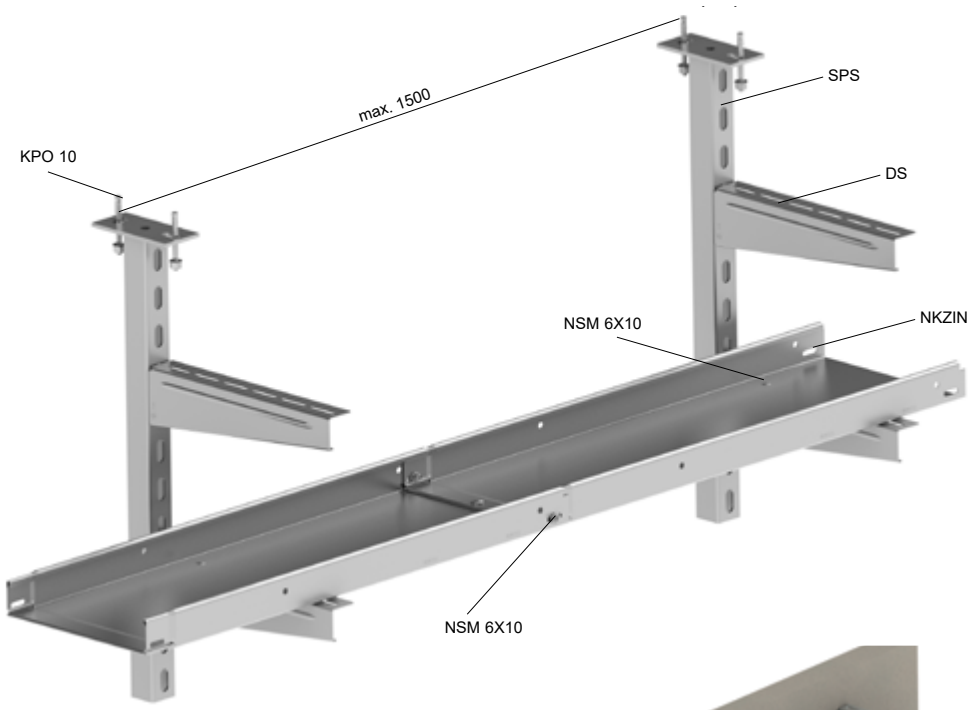
placement on the ceiling and wall

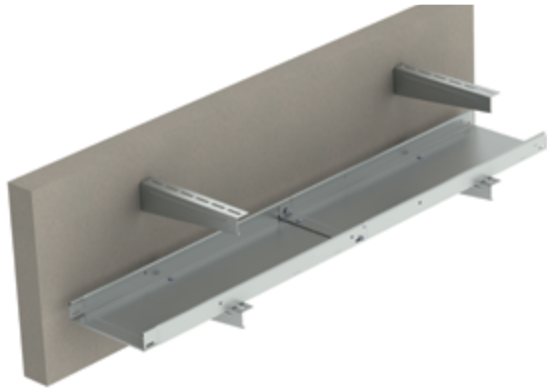
10 kg/m

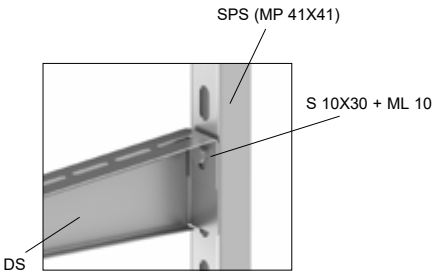
max. 1500 mm

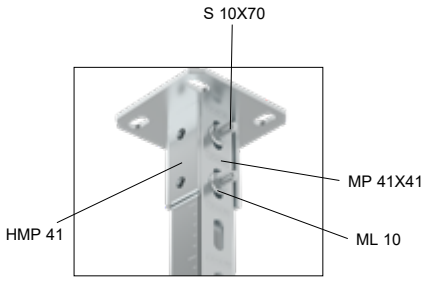
ČSN 730895
DIN 4102-12
STN 920205

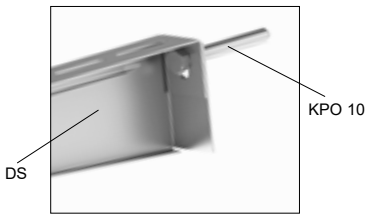
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List of products for one mounting point

														page
	SPS	HMP + MP	SPS	HMP + MP	SPS	HMP + MP	SPS	HMP + MP	SPS	HMP + MP				
KPO 10	2	4	2	4	2	4	2	4	2	4	1	2	3	100
SPS	1	-	1	-	1	-	1	-	1	-	-	-	-	79
HMP	-	1	-	1	-	1	-	1	-	1				86
MP 41X41	-	1	-	1	-	1	-	1	-	1				87
DS	1	1	2	2	2	2	4	4	6	6	1	2	3	74
S 10X30	1	1	2	2	-	-	-	-	-	-	-	-	-	98
S 10X70	-	2	-	2	1	3	2	4	3	5	-	-	-	98
ML 10	1	3	2	4	1	3	2	4	3	5	-	-	-	99
NSM 6X10	see pg. 205													97
OPT	1 pc every min. 50 m of the route													172

cable tray side height
cable tray width
thickness of metal sheet
max. load kg/m
max. spacing of mounting points

power cables								
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**				
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E30, P30-R, PS30	JR-104-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1500
	PRAFlaDur 90	E60, P60-R, PS60	JR-003-21-NURS	10	50	62-250	0,70; 1,00; 1,25	1500
	PRAFlaDur+T	E60, P60-R, PS60	JR-133-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
NKT s.r.o.	NOPOVIC	E90, P90-R, PS90	JR-104-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1500
Kablo Vrchlabí s.r.o.	1-CXKH-V	E30, P45-R, PS45	JR-104-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
CICM s.r.o.	1-CXKE-V	E30, P45-R, PS45	JR-206-25-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
ELKOND HHK, a.s.	1-CXKH-V	E30, P45-R, PS45	JR-074-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E60, P60-R, PS60	JR-055-25-NURS	10	100	125-250	0,70; 1,25	1200
CICM s.r.o.	1-CXKE-V	E60, P60-R, PS60	JR-055-25-NURS	10	100	125-250	0,70; 1,25	1200

data cables								
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**				
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E60, P60-R, PS60	JR-003-21-NURS	10	50	62-250	0,70; 1,00; 1,25	1500
Kablo Vrchlabí s.r.o.	JXFE-V	E30, P45-R, PS45	JR-104-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
CICM s.r.o.	JXFE-V	E60, P60-R, PS60	JR-206-25-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
ELKOND HHK, a.s.	SSKFH-V180	E30, P45-R, PS45	JR-074-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-055-25-NURS	10	100	125-250	0,70; 1,25	1200
CICM s.r.o.	JXFE-V	E60, P60-R, PS60	JR-055-25-NURS	10	100	125-250	0,70; 1,25	1200

kg max. load kg/m

thickness of metal sheet

cable tray width

max. spacing of mounting points

cable tray NKZIN MARS non-perforated

bracket - heavy DT
ceiling profile SPS
HMP head + assembly profile MP 41X41

50; 100 mm

62 - 250 mm

1,25 mm

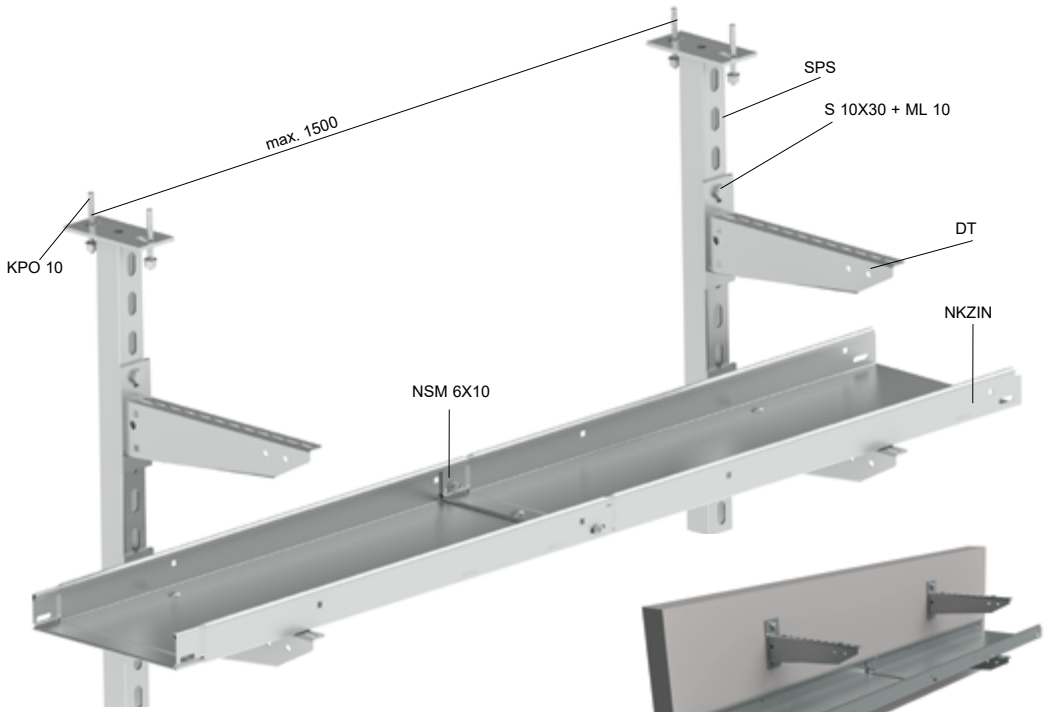
placement on the ceiling and wall

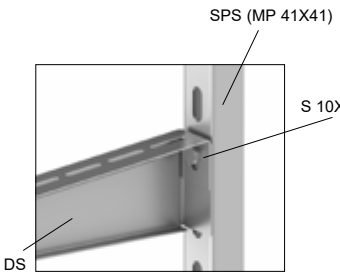
10 kg/m

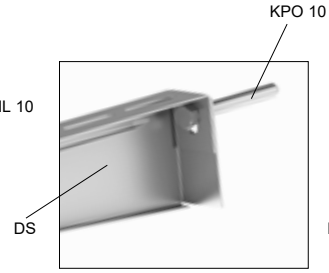
max. 1500 mm

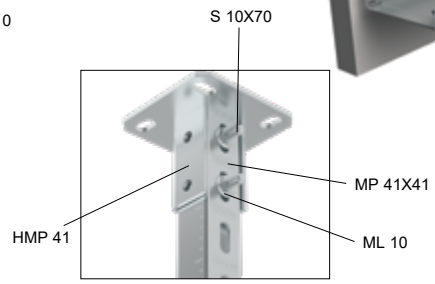
ČSN 730895
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STN 920205

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List of products for one mounting point														
														page
	SPS	HMP + MP	SPS	HMP + MP	SPS	HMP + MP	SPS	HMP + MP	SPS	HMP + MP				
KPO 10	2	4	2	4	2	4	2	4	2	4	2	4	6	100
SPS	1	-	1	-	1	-	1	-	1	-	-	-	-	79
HMP	-	1	-	1	-	1	-	1	-	1	-	-	-	86
MP 41X41	-	1	-	1	-	1	-	1	-	1	-	-	-	87
DT	1	1	2	2	2	2	4	4	6	4	1	2	3	75
S 10X30	2	2	4	4	-	-	-	-	-	-	-	-	-	98
S 10X70	-	2	-	2	2	4	4	6	6	6	-	-	-	98
ML 10	2	4	4	6	2	4	4	6	6	6	-	-	-	99
NSM 6X10	see pg. 205													97
OPT	1 pc every min. 50 m of the route													172

power cables								
cable manufacturer	cable type	classification (min)	standpoint number	kg				
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-021-22-NURS	10	50	62-250	1,25	1500
	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-021-22-NURS	10	100	125-250	1,25	1500

data cables								
cable manufacturer	cable type	classification (min)	standpoint number	kg				
Kabelovna Kabex a.s.	CPDex JCXFE-V	E30, P30-R, PS30	JR-021-22-NURS	10	50	62-250	1,25	1500
	CPDex JCXFE-V	E30, P30-R, PS30	JR-021-22-NURS	10	100	125-250	1,25	1500

cable tray side height
cable tray width
thickness of metal sheet
placement
max. load kg/m
max. spacing of mounting points
certification according to standards
classification document number

cable tray NKZI MARS perforated

threaded rods ZT
assembly profiles MP
load bearing profiles NP

50; 100 mm

62 - 500 mm

0,7 - 1,25 mm

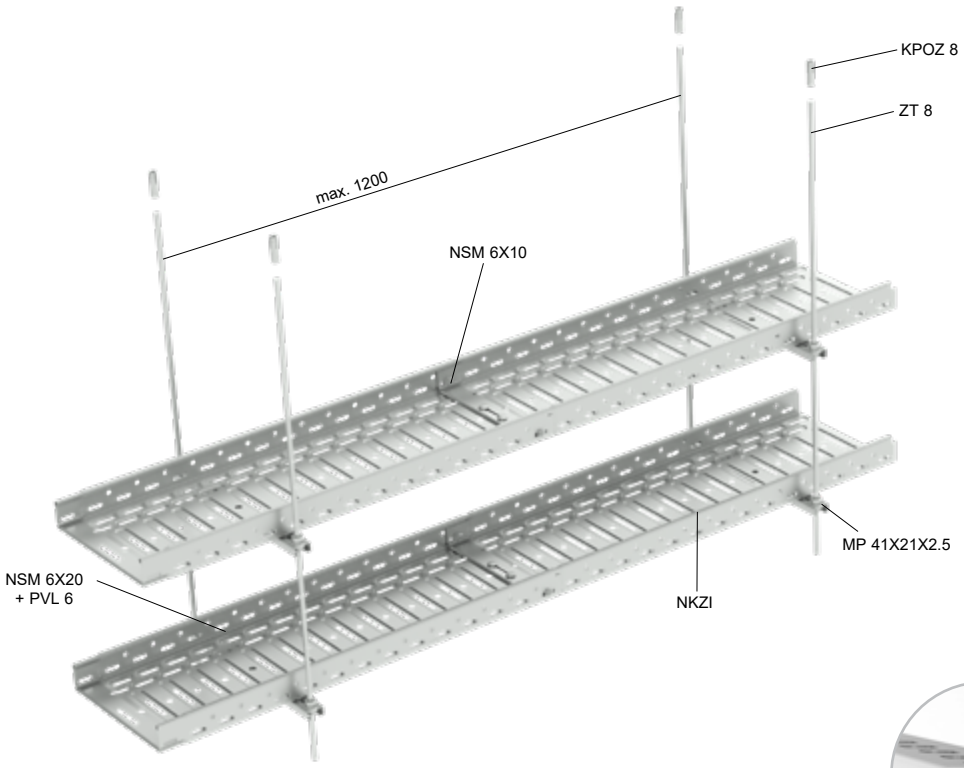
placement on ceiling

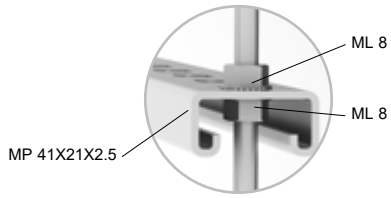
10 - 20 kg/m

max. 1200 mm

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List of products for one mounting point				
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ZT 8	2	2	2	98
KPOZ 8	2	2	2	101
MP 41X21X2.5 (NP, MP 41X41)	1	2	3	87
ML 8	4	8	12	99
NSM 6X10	see pg. 205			97
NSM 6X20				97
PVL 6				100
OPT	1 pc every min. 50 m of the route			172

power cables									
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**					**note**
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur 90	E30, P45-R, PS45	JR-003-21-NURS	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	Pr-18-2.005	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
	PRAFlaDur+T	E90, P90-R, PS90	JR-167-22-NURS	20	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
NKT s.r.o.	NOPOVIC 90	E90, P90-R, PS90	JR-104-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-127-24-NURS	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
Kablo Vrchlabí s.r.o.	1-CXKH-V	E90, P90-R, PS90	JR-095-19-NURS	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
CICM s.r.o.	1-CXKE-V	E90, P90-R, PS90	JR-041-25-NURS	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
ELKOND HHK, a.s.	1-CXKH-V	E60, P60-R, PS60	JR-074-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	JR-095-19-NURS	10	50	62-250	1,25	1200	-
	PRAFlaDur 90	E30, P45-R, PS45	JR-024-22-NURS	20	50	62-250	1,25	1200	-
Kablo Vrchlabí s.r.o.	1-CXKH-V	E90, P90-R, PS90	JR-095-19-NURS	10	50	62-250	1,25	1200	-
Prysmian Group	(N)HXHX-J	E60, P60-R, PS60	JR-027-22-NURS	10	50	62-250	1,25	1200	-
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	JR-055-25-NURS	10	100	125-250	0,70; 1,25	1200	-
CICM s.r.o.	1-CXKE-V	E60, P60-R, PS60	JR-055-25-NURS	10	100	125-250	0,70; 1,25	1200	-
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	JR-101-23-NURS	20	100	125-500	1,00; 1,25	1200	-
NKT s.r.o.	NOPOVIC 90	E90, P90-R, PS90	JR-104-23-NURS	20	100	125-500	1,00; 1,25	1200	-
	NOPOVIC 60	E60, P60-R, PS60	JR-104-23-NURS	20	100	125-500	1,00; 1,25	1200	-
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur 90	E30, P45-R, PS45	JR-003-21-NURS	20	100	125-500	1,25	1200	-
	PRAFlaDur+T	E60, P60-R, PS60	JR-133-23-NURS	20	100	125-500	1,25	1200	-
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-127-24-NURS	20	100	125-500	1,25	1200	-
Prysmian Group	(N)HXHX-J	E90, P90-R, PS90	JR-027-22-NURS	10	100	125-250	1,25	1200	-

data cables									
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**					**note**
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	Pr-18-2.005	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
Kabelovna Kabex a.s.	CPDex JCXFE-V	E30, P30-R, PS30	JR-127-24-NURS	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
Kablo Vrchlabí s.r.o.	JXFE-V	E90, P90-R, PS90	JR-095-19-NURS	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
CICM s.r.o.	JXFE-V	E90, P90-R, PS90	JR-041-25-NURS	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
ELKOND HHK, a.s.	SSKFH-V180	E30, P30-R, PS30	JR-074-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-095-19-NURS	10	50	62-250	1,25	1200	-
Kablo Vrchlabí s.r.o.	JXFE-V	E90, P90-R, PS90	JR-095-19-NURS	10	50	62-250	1,25	1200	-
Prysmian Group	JE-H(St)H	E90, P90-R, PS90	JR-027-22-NURS	10	50	62-250	1,25	1200	-
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-055-25-NURS	10	100	125-250	0,70; 1,25	1200	-
CICM s.r.o.	JXFE-V	E60, P60-R, PS60	JR-055-25-NURS	10	100	125-250	0,70; 1,25	1200	-
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E60, P60-R, PS60	JR-104-21-NURS	20	100	125-500	1,00; 1,25	1200	-
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-133-23-NURS	20	100	125-500	1,25	1200	-
Prysmian Group	JE-H(St)H	E90, P90-R, PS90	JR-027-22-NURS	10	100	125-250	1,25	1200	-

cable tray side height
cable tray width
thickness of metal sheet
max. load kg/m
max. spacing of mounting points

cable tray NKZIN
MARS
non-perforated

threaded rods ZT
assembly profiles MP
load bearing profiles NP

50; 100 mm

62 - 500 mm

0,7 - 1,25 mm

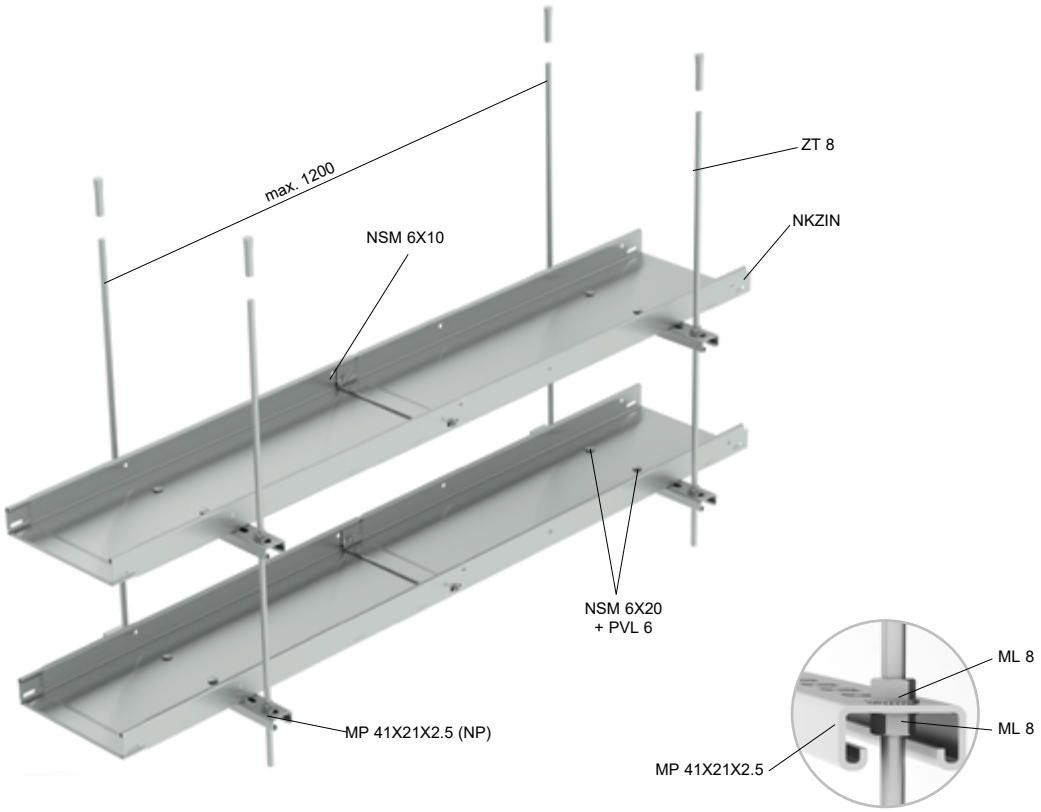
placement on ceiling

10 - 20 kg/m

max. 1200 mm

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List of products for one mounting point				
				page
ZT 8	2	2	2	98
KPOZ 8	2	2	2	101
MP 41X21X2.5 (NP, MP 41X41)	1	2	3	87
ML 8	4	8	12	99
NSM 6X10	see pg. 205			97
NSM 6X20				97
PVL 6				100
OPT	1 pc every min. 50 m of the route			172

power cables									
cable manufacturer	cable type	classification (min)	standpoint number	kg					note
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	Pr-18-2.005	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
	PRAFlaDur 90	E60, P60-R, PS60	JR-003-21-NURS	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
NKT s.r.o.	NOPOVIC 90	E90, P90-R, PS90	JR-104-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-149-20-NURS	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
Kablo Vrchlabí s.r.o.	1-CXKH-V	E60, P60-R, PS60	JR-095-19-NURS	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
CICM s.r.o.	1-CXKE-V	E90, P90-R, PS90	JR-041-25-NURS	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
ELKOND HHK, a.s.	1-CXKH-V	E30, P45-R, PS45	JR-074-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
Tele-Fonika Kable S.A.	FLAME-X 950 (N)HXH	E60, P60-R, PS60	JR-149-20-NURS	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur 90	E60, P60-R, PS60	JR-024-22-NURS	20	50	62-250	1,25	1200	-
	PRAFlaDur 90	E90, P90-R, PS90	JR-027-22-NURS	10	50	62-250	1,25	1200	-
Kabelovna Kabex a.s.	1-CSKE-V	E30, P30-R, PS30	JR-027-22-NURS	10	50	62-250	1,25	1200	-
Prysmian Group	(N)HXHX-J	E90, P90-R, PS90	JR-027-22-NURS	10	50	62-250	1,25	1200	-
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E30, P45-R, PS45	JR-055-25-NURS	10	100	125-250	0,70; 1,25	1200	-
CICM s.r.o.	1-CXKE-V	E90, P90-R, PS90	JR-055-25-NURS	10	100	125-250	0,70; 1,25	1200	-
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E60, P60-R, PS60	JR-170-24-NURS	20	100	125-500	1,00; 1,25	1200	-
NKT s.r.o.	NOPOVIC 60	E30, P30-R, PS30	JR-170-24-NURS	20	100	125-500	1,00; 1,25	1200	-

data cables									
cable manufacturer	cable type	classification (min)	standpoint number	kg					note
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	Pr-18-2.005	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
Kabelovna Kabex a.s.	CPDex JCXFE-V	E30, P30-R, PS30	JR-149-20-NURS	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
Kablo Vrchlabí s.r.o.	JXFE-V	E90, P90-R, PS90	JR-095-19-NURS	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
CICM s.r.o.	JXFE-V	E30, P45-R, PS45	JR-041-25-NURS	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
ELKOND HHK, a.s.	SSKFH-V180	E30, P30-R, PS30	JR-074-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
Tele-Fonika Kable S.A.	FLAME-X 950 HTKSH	E90, P90-R, PS90	JR-149-20-NURS	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
	FLAME-X 950 HDGs	E90, P90-R, PS90	JR-149-20-NURS	10	50	62-250	0,70; 1,00; 1,25	1200	NP may be used for 0.7 mm thickness
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E60, P60-R, PS60	JR-024-22-NURS	20	50	62-250	1,25	1200	-
	PRAFlaGuard F	E90, P90-R, PS90	JR-027-22-NURS	10	50	62-250	1,25	1200	
Prysmian Group	JE-H(St)H	E90, P90-R, PS90	JR-027-22-NURS	10	50	62-250	1,25	1200	-
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-055-25-NURS	10	100	125-250	0,70; 1,25	1200	
CICM s.r.o.	JXFE-V	E90, P90-R, PS90	JR-055-25-NURS	10	100	125-250	0,70; 1,25	1200	-
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-170-24-NURS	20	100	125-500	1,00; 1,25	1200	-

cable tray side height
cable tray width
thickness of metal sheet
max. load kg/m
max. spacing of mounting points

cable tray NKZI MARS perforated

assembly profiles MP

50; 100 mm

62 - 500 mm

0,7-1,25 mm

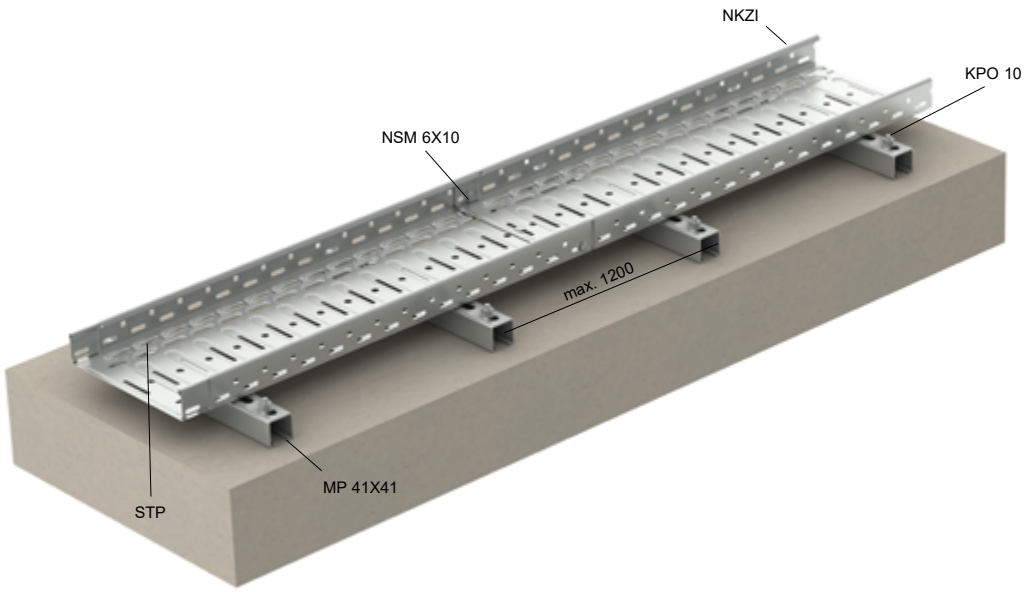
floor placement

10 - 20 kg/m

max. 1200 mm

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List of products for one mounting point		
		page
KPO 10	2	100
MP 41X41	1	87
NSM 6X10	see pg. 205	97
STP	2	105
OPT	1 pc every min. 50 m of the route	172

For roof placement, the routes are anchored to bases with fire reaction class A1/A2. They must never be anchored directly to the roof deck.

power cables								
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**				
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur 90	E30, P45-R, PS45	JR-003-21-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	Pr-18-2.005	10	50	62-250	0,70; 1,00; 1,25	1200
	PRAFlaDur+T	E90, P90-R, PS90	JR-167-22-NURS	20	50	62-250	0,70; 1,00; 1,25	1200
NKT s.r.o.	NOPOVIC 90	E90, P90-R, PS90	JR-104-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-127-24-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
Kablo Vrchlabí s.r.o.	1-CXKH-V	E90, P90-R, PS90	JR-095-19-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
CICM s.r.o.	1-CXKE-V	E90, P90-R, PS90	JR-041-25-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
ELKOND HHK, a.s.	1-CXKH-V	E60, P60-R, PS60	JR-074-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	JR-095-19-NURS	10	50	62-250	1,25	1200
	PRAFlaDur 90	E30, P45-R, PS45	JR-024-22-NURS	20	50	62-250	1,25	1200
Kablo Vrchlabí s.r.o.	1-CXKH-V	E90, P90-R, PS90	JR-095-19-NURS	10	50	62-250	1,25	1200
Prysmian Group	(N)HXHX-J	E60, P60-R, PS60	JR-027-22-NURS	10	50	62-250	1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	JR-055-25-NURS	10	100	125-250	0,70; 1,25	1200
CICM s.r.o.	1-CXKE-V	E60, P60-R, PS60	JR-055-25-NURS	10	100	125-250	0,70; 1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	JR-101-23-NURS	20	100	125-500	1,00; 1,25	1200
NKT s.r.o.	NOPOVIC 90	E90, P90-R, PS90	JR-104-23-NURS	20	100	125-500	1,00; 1,25	1200
	NOPOVIC 60	E60, P60-R, PS60	JR-104-23-NURS	20	100	125-500	1,00; 1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur 90	E30, P45-R, PS45	JR-003-21-NURS	20	100	125-500	1,25	1200
	PRAFlaDur+T	E60, P60-R, PS60	JR-133-23-NURS	20	100	125-500	1,25	1200
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-127-24-NURS	20	100	125-500	1,25	1200
Prysmian Group	(N)HXHX-J	E90, P90-R, PS90	JR-027-22-NURS	10	100	125-250	1,25	1200

data cables								
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**				
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	Pr-18-2.005	10	50	62-250	0,70; 1,00; 1,25	1200
Kabelovna Kabex a.s.	CPDex JCXFE-V	E30, P30-R, PS30	JR-127-24-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
Kablo Vrchlabí s.r.o.	JXFE-V	E90, P90-R, PS90	JR-095-19-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
CICM s.r.o.	JXFE-V	E90, P90-R, PS90	JR-041-25-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
ELKOND HHK, a.s.	SSKFH-V180	E30, P30-R, PS30	JR-074-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-095-19-NURS	10	50	62-250	1,25	1200
Kablo Vrchlabí s.r.o.	JXFE-V	E90, P90-R, PS90	JR-095-19-NURS	10	50	62-250	1,25	1200
Prysmian Group	JE-H(St)H	E90, P90-R, PS90	JR-027-22-NURS	10	50	62-250	1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-055-25-NURS	10	100	125-250	0,70; 1,25	1200
CICM s.r.o.	JXFE-V	E60, P60-R, PS60	JR-055-25-NURS	10	100	125-250	0,70; 1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E60, P60-R, PS60	JR-104-21-NURS	20	100	125-500	1,00; 1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-133-23-NURS	20	100	125-500	1,25	1200
Prysmian Group	JE-H(St)H	E90, P90-R, PS90	JR-027-22-NURS	10	100	125-250	1,25	1200

cable tray side height
cable tray width
thickness of metal sheet
max. load kg/m

cable tray NKZIN MARS non-perforated

assembly profiles MP

50; 100 mm

62 - 500 mm

0,7-1,25 mm

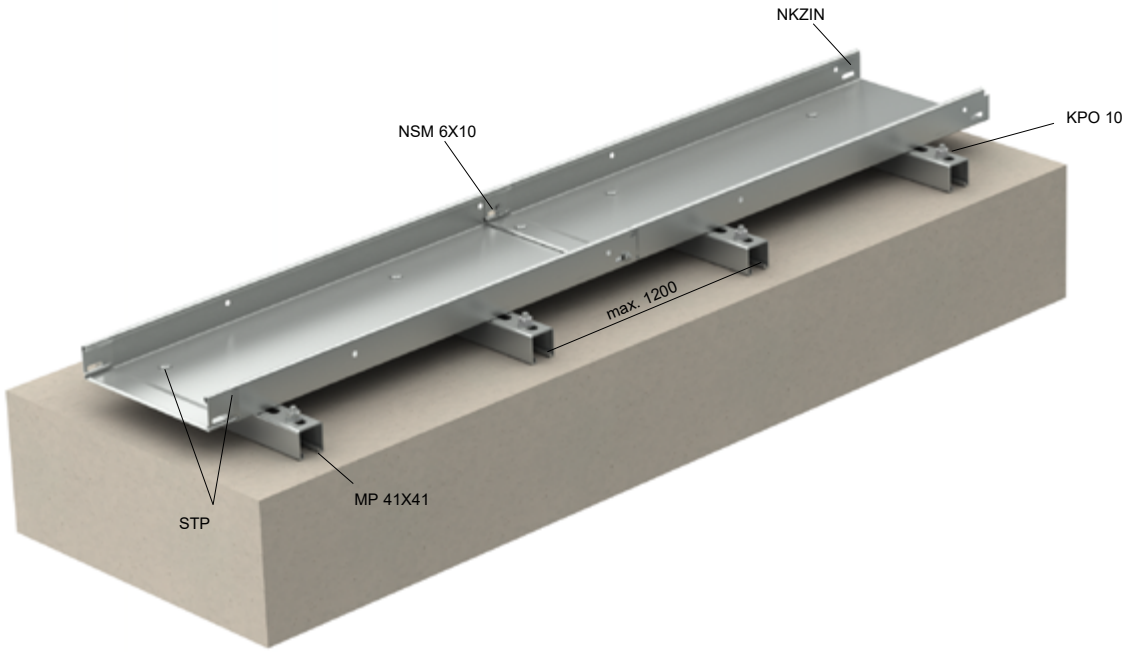
floor placement

10 - 20 kg/m

max. 1200 mm

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List of products for one mounting point		
		page
KPO 10	2	100
MP 41X41	1	87
NSM 6X10	see pg. 205	97
STP	2	105
OPT	1 pc every min. 50 m of the route	172

For roof placement, the routes are anchored to bases with fire reaction class A1/A2. They must never be anchored directly to the roof deck.

power cables								
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**				
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	Pr-18-2.005	10	50	62-250	0,70; 1,00; 1,25	1200
	PRAFlaDur 90	E60, P60-R, PS60	JR-003-21-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
NKT s.r.o.	NOPOVIC 90	E90, P90-R, PS90	JR-104-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-149-20-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
Kablo Vrchlabí s.r.o.	1-CXKH-V	E60, P60-R, PS60	JR-095-19-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
CICM s.r.o.	1-CXKE-V	E90, P90-R, PS90	JR-041-25-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
ELKOND HHK, a.s.	1-CXKH-V	E30, P45-R, PS45	JR-074-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
Tele-Fonika Kable S.A.	FLAME-X 950 (N)HXH	E60, P60-R, PS60	JR-149-20-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur 90	E60, P60-R, PS60	JR-024-22-NURS	20	50	62-250	1,25	1200
	PRAFlaDur 90	E90, P90-R, PS90	JR-027-22-NURS	10	50	62-250	1,25	1200
Kabelovna Kabex a.s.	1-CSKE-V	E30, P30-R, PS30	JR-027-22-NURS	10	50	62-250	1,25	1200
Prysmian Group	(N)HXHX-J	E90, P90-R, PS90	JR-027-22-NURS	10	50	62-250	1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E30, P45-R, PS45	JR-055-25-NURS	10	100	125-250	0,70; 1,25	1200
CICM s.r.o.	1-CXKE-V	E90, P90-R, PS90	JR-055-25-NURS	10	100	125-250	0,70; 1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E60, P60-R, PS60	JR-170-24-NURS	20	100	125-500	1,00; 1,25	1200
NKT s.r.o.	NOPOVIC 60	E30, P30-R, PS30	JR-170-24-NURS	20	100	125-500	1,00; 1,25	1200

data cables								
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**				
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	Pr-18-2.005	10	50	62-250	0,70; 1,00; 1,25	1200
Kabelovna Kabex a.s.	CPDex JCXFE-V	E30, P30-R, PS30	JR-149-20-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
Kablo Vrchlabí s.r.o.	JXFE-V	E90, P90-R, PS90	JR-095-19-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
CICM s.r.o.	JXFE-V	E30, P45-R, PS45	JR-041-25-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
ELKOND HHK, a.s.	SSKFH-V180	E30, P30-R, PS30	JR-074-23-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
Tele-Fonika Kable S.A.	FLAME-X 950 HTKSH	E90, P90-R, PS90	JR-149-20-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
	FLAME-X 950 HDGs	E90, P90-R, PS90	JR-149-20-NURS	10	50	62-250	0,70; 1,00; 1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E60, P60-R, PS60	JR-024-22-NURS	20	50	62-250	1,25	1200
	PRAFlaGuard F	E90, P90-R, PS90	JR-027-22-NURS	10	50	62-250	1,25	1200
Prysmian Group	JE-H(St)H	E90, P90-R, PS90	JR-027-22-NURS	10	50	62-250	1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-055-25-NURS	10	100	125-250	0,70; 1,25	1200
CICM s.r.o.	JXFE-V	E90, P90-R, PS90	JR-055-25-NURS	10	100	125-250	0,70; 1,25	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-170-24-NURS	20	100	125-500	1,00; 1,25	1200

cable tray side height
cable tray width
thickness of metal sheet
max. load kg/m
max. spacing of mounting points

cable tray NKZI MARS perforated

threaded rods ZT
inner hanger ZVNI

50 mm

62 - 250 mm

1,25 mm

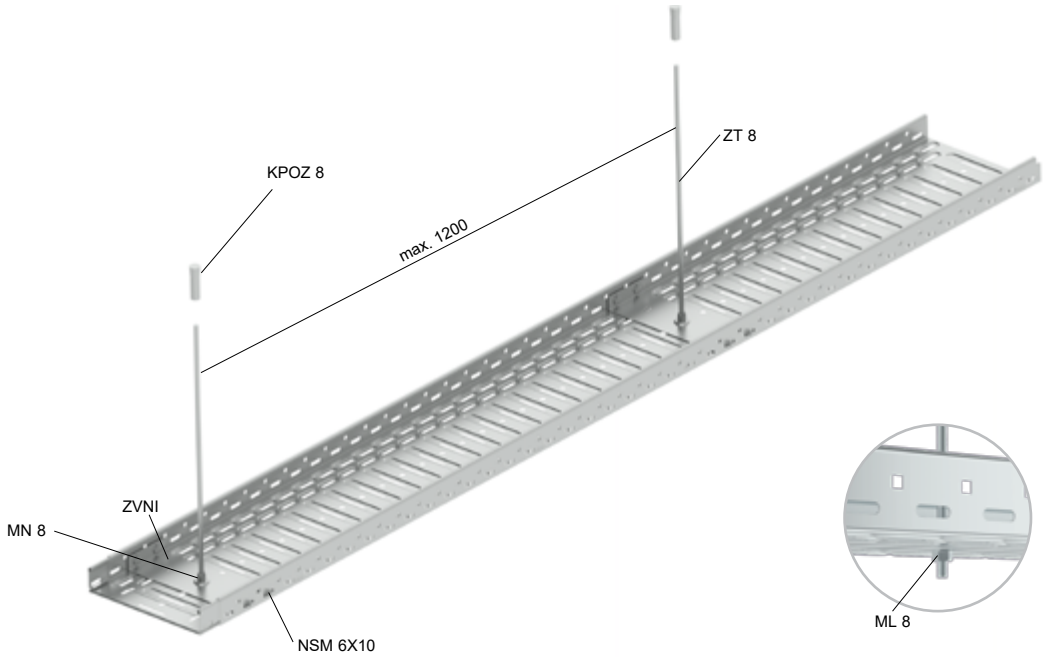
placement on ceiling

5 - 10 kg/m

max. 1200 mm

ČSN 730895
DIN 4102-12
STN 920205

PK9-03-17-913-C-5



List of products for one mounting point		
		page
ZT 8	1	98
KPOZ 8	1	101
ZVNI	1	82
MN 8	1	82
ML 8	1	99
NSM 6X10	4/6*	97
OPT	1 pc every min. 50 m of the route	172

* for dimension of **tray** 50x250

power cables									
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**					**note**
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur 90	E60, P60-R, PS60	JR-003-21-NURS	10	50	62-250	1,25	1200	-
	PRAFlaDur 90	E90, P90-R, PS90	JR-027-22-NURS	5	50	62-250	1,25	1200	max. cable cross-section 16 mm²

data cables									
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**					**note**
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E60, P60-R, PS60	JR-003-21-NURS	10	50	62-250	1,25	1200	-

stainless cable tray NIXKZN MARS non-perforated

threaded rods INOXZT
assembly profiles INOXMP

50; 100 mm

62 - 500 mm

0,8 - 1,0 mm

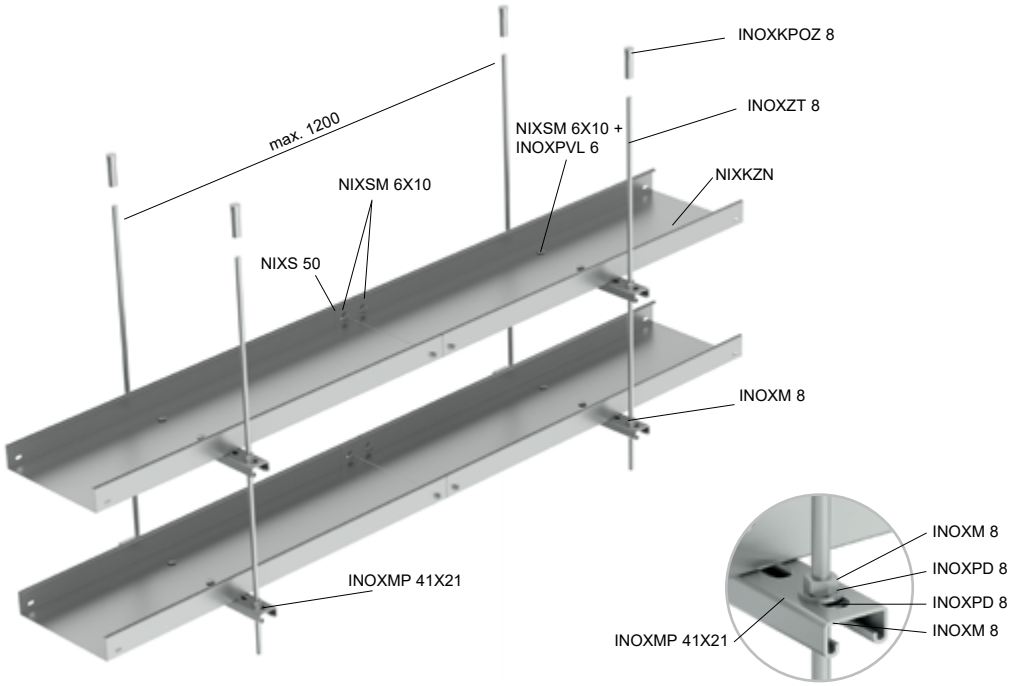
placement on ceiling

10 - 20 kg/m

max. 1200 mm

ČSN 730895
DIN 4102-12
STN 920205

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List of products for one mounting point				
				page
INOXZT 8	2	2	2	144
INOXKPOZ 8	2	2	2	146
INOXMP 41X21	1	2	3	143
INOXM 8	4	8	12	145
INOXPD 8	4	8	12	145
NIXSM 6X10	2	4	6	144
INOXPVL 6	2	4	6	145
OPT	1 pc every min. 50 m of the route			172

power cables								
cable manufacturer	cable type	classification (min)	standpoint number	kg				
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	JR-149-20-NURS	10	50	62-250	0,8	1200
NKT s.r.o.	NOPOVIC 90	E90, P90-R, PS90	JR-104-21-NURS	10	50	62-250	0,8	1200
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-149-20-NURS	10	50	62-250	0,8	1200
Kablo Vrchlabí s.r.o.	1-CXKH-V	E60, P60-R, PS60	JR-170-24-NURS	10	50	62-250	0,8	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E60, P60-R, PS60	JR-104-21-NURS	20	100	500	1	1200
	PRAFlaDur +T	E60, P60-R, PS60	JR-133-23-NURS	20	100	500	1	1200
NKT s.r.o.	NOPOVIC 90	E60, P60-R, PS60	JR-104-21-NURS	20	100	500	1	1200
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-149-20-NURS	20	100	500	1	1200
Kablo Vrchlabí s.r.o.	1-CXKH-V	E30, P45-R, PS45	JR-170-24-NURS	20	100	500	1	1200
Tele-Fonika Kable S.A.	FLAME-X 950 (N)HXH	E60, P60-R, PS60	JR-149-20-NURS	20	100	500	1	1200

data cables								
cable manufacturer	cable type	classification (min)	standpoint number	kg				
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-149-20-NURS	10	50	62-250	0,8	1200
Kabelovna Kabex a.s.	CPDex JCXFE-V	E30, P45-R, PS45	JR-149-20-NURS	10	50	62-250	0,8	1200
Kablo Vrchlabí s.r.o.	JXFE-V	E90, P90-R, PS90	JR-170-24-NURS	10	50	62-250	0,8	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E60, P60-R, PS60	JR-104-21-NURS	20	100	500	1	1200
Kabelovna Kabex a.s.	CPDex JCXFE-V	E30, P30-R, PS30	JR-149-20-NURS	20	100	500	1	1200
Kablo Vrchlabí s.r.o.	JXFE-V	E60, P60-R, PS60	JR-170-24-NURS	20	100	500	1	1200
Tele-Fonika Kable S.A.	FLAME-X 950 HTKSH	E90, P90-R, PS90	JR-149-20-NURS	20	100	500	1	1200

cable tray side height
cable tray width
thickness of metal sheet
placement
max. load kg/m
max. spacing of mounting points
certification according to standards
classification document number

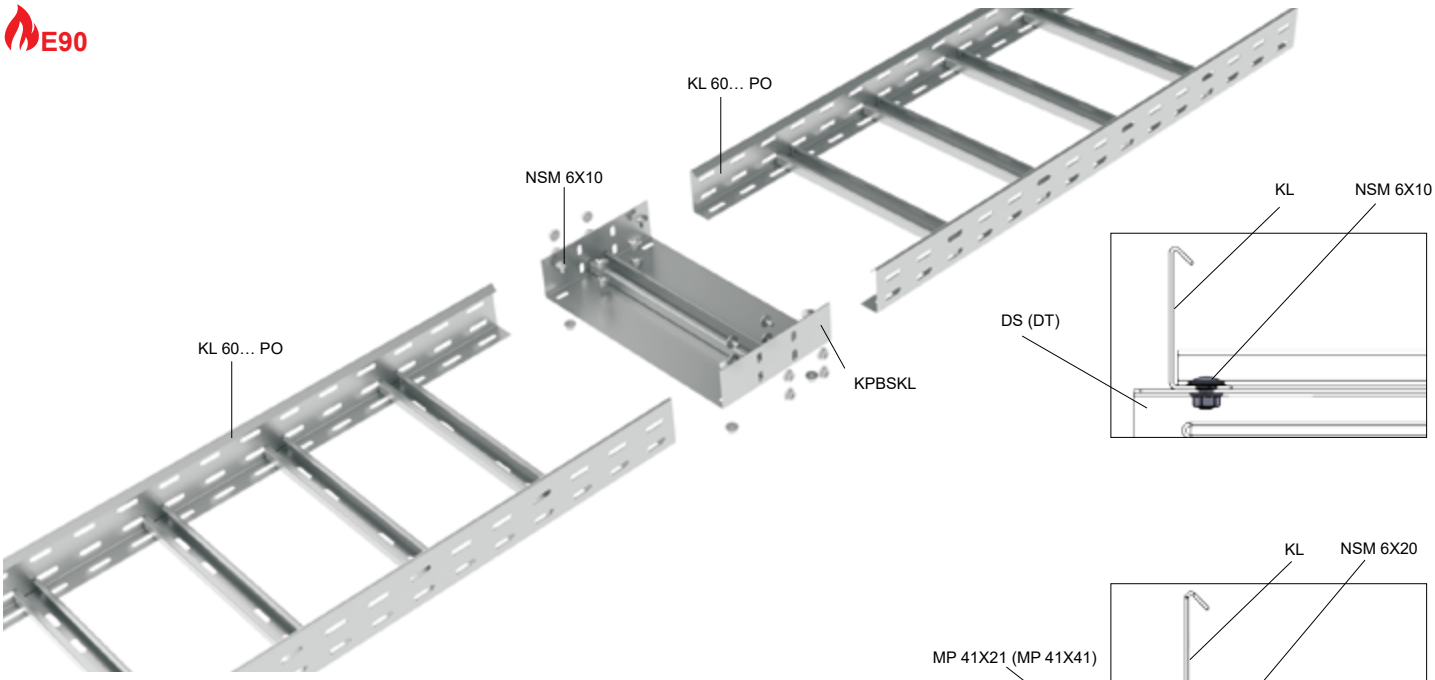
SUPPORTING CONSTRUCTIONS

CABLE LADDERS



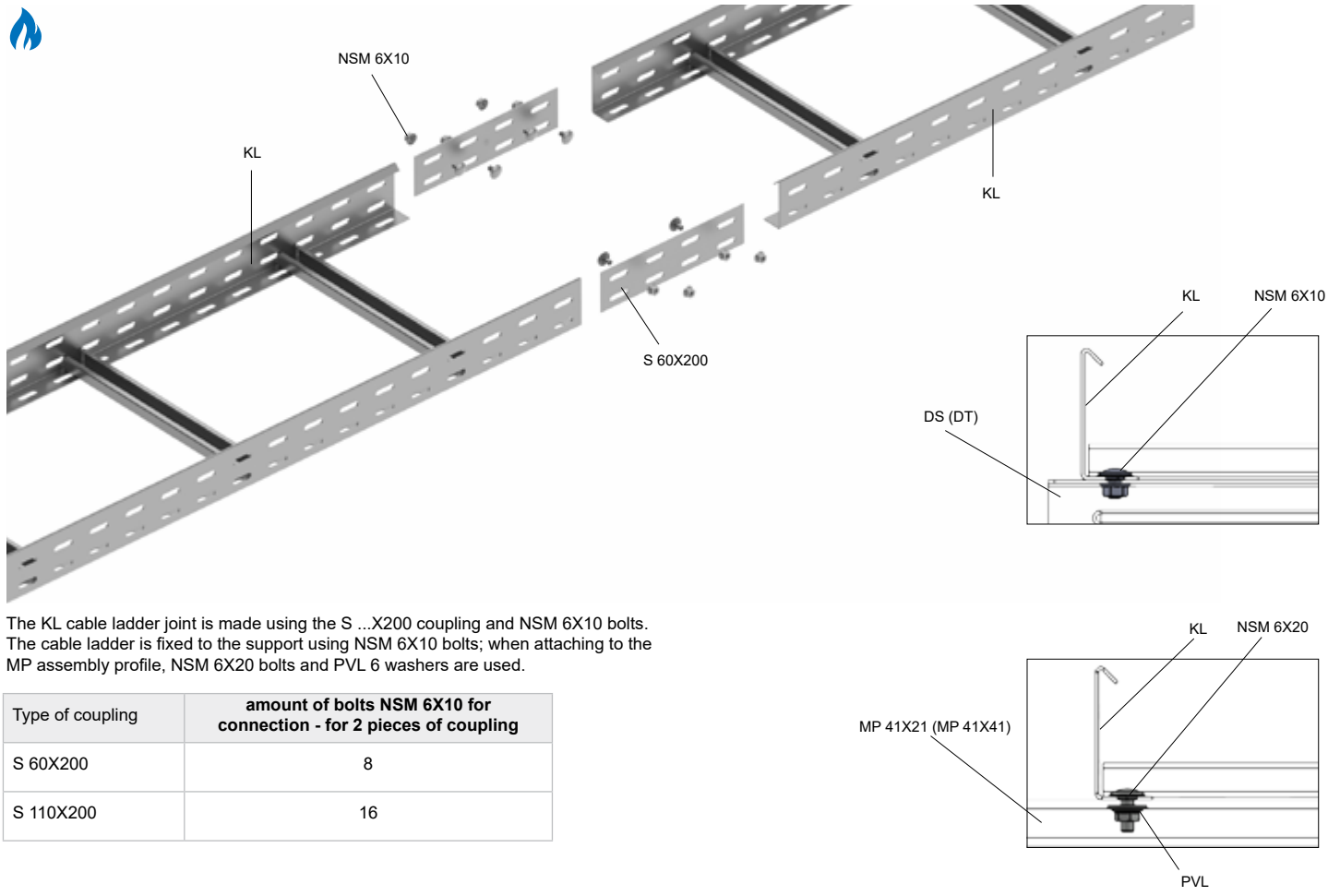
Standard supporting structure – connection of the KL_PO cable ladder

E90



The cable ladder joint is made using the KPBSKL coupling (pg. 126) and 12 NSM 6X10 bolts (pg. 148).
The cable ladder is fixed to the support using NSM 6X10 bolts; when attaching to the MP assembly profile, NSM 6X20 bolts and PVL 6 washers are used.

Non-standard supporting structure – connection of the KL cable ladder



The KL cable ladder joint is made using the S ...X200 coupling and NSM 6X10 bolts.
The cable ladder is fixed to the support using NSM 6X10 bolts; when attaching to the MP assembly profile, NSM 6X20 bolts and PVL 6 washers are used.

Type of coupling	**amount of bolts NSM 6X10 for connection - for 2 pieces of coupling**
S 60X200	8
S 110X200	16

E90

cable ladder KL

bracket - heavy DT
ceiling profile SPS
threaded rods ZT

60 mm

150 - 400 mm

150 mm

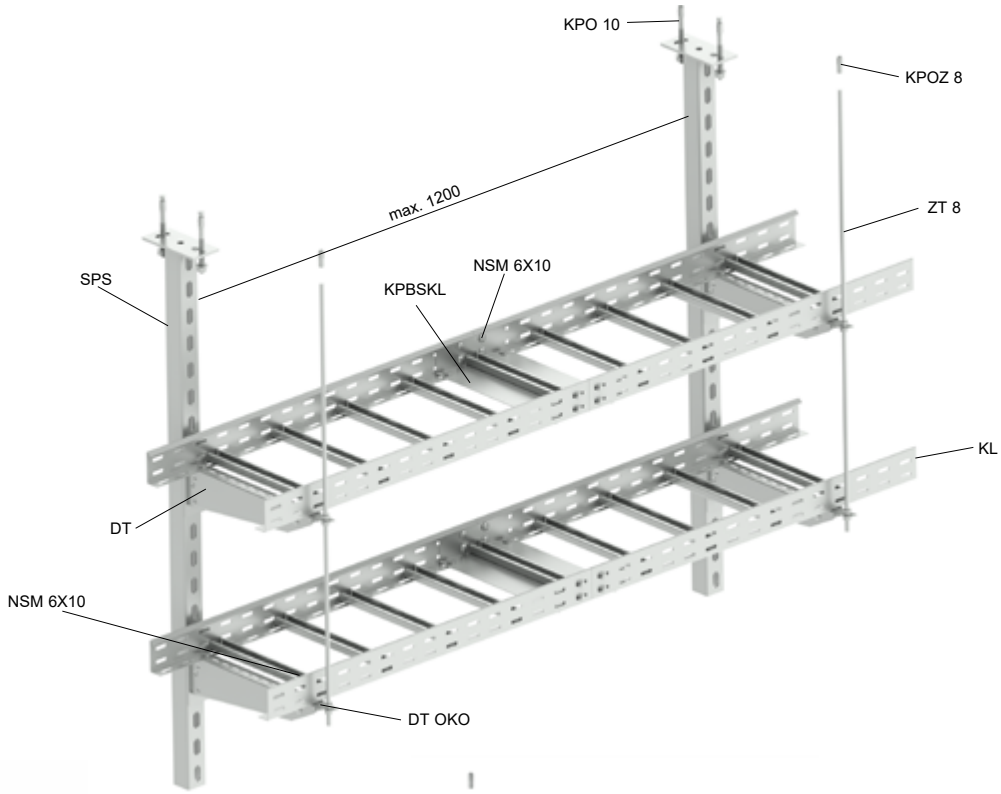
placement on ceiling

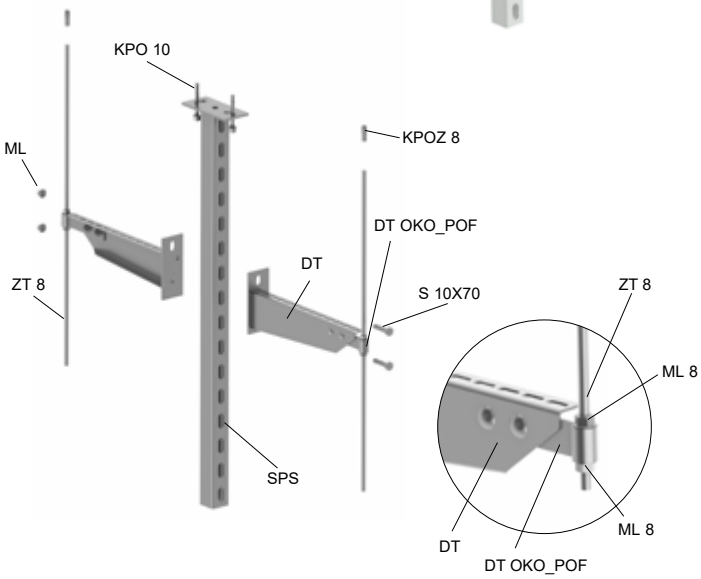
20 kg/m

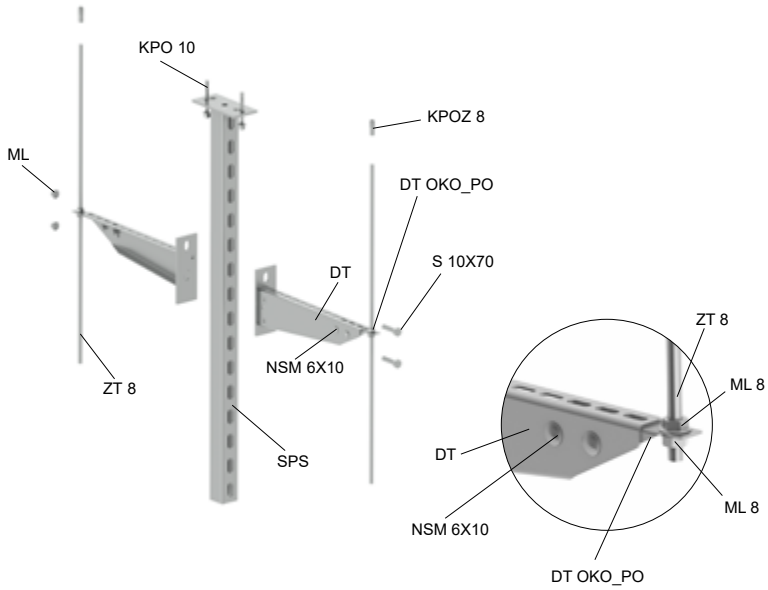
max. 1200 mm

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List of products for one mounting point					
					page
ZT 8	1	1	2	2	98
KPO 10	2	2	2	2	100
KPOZ 8	1	1	2	2	101
SPS	1	1	1	1	79
DT	1	2	2	4	75
DT OKO	1	2	2	4	75
S 10X30	2	4	-	-	98
S 10X70	-	-	2	4	98
ML 8	2	4	4	8	99
ML 10	2	4	2	4	99
NSM 6X10	4 (2*)	8 (4*)	8 (4*)	16 (8*)	97
OPT	1 pc every min. 50 m of the route				172

* in case of using the DT OKO_POF bracket

Cable manufacturer approved:

Cables from any manufacturer with proven fire performance can be used on standard-compliant cable supporting structures.

Classification (min) - power, data cables:

E90, P90-R, PS90

cable tray side height
cable tray width
spacing of dividers
placement
max. load
spacing of mounting points
certification according to standards
classification document number

E90

cable ladder KL

threaded rods ZT
assembly profiles MP

60 mm

150 - 400 mm

150 mm

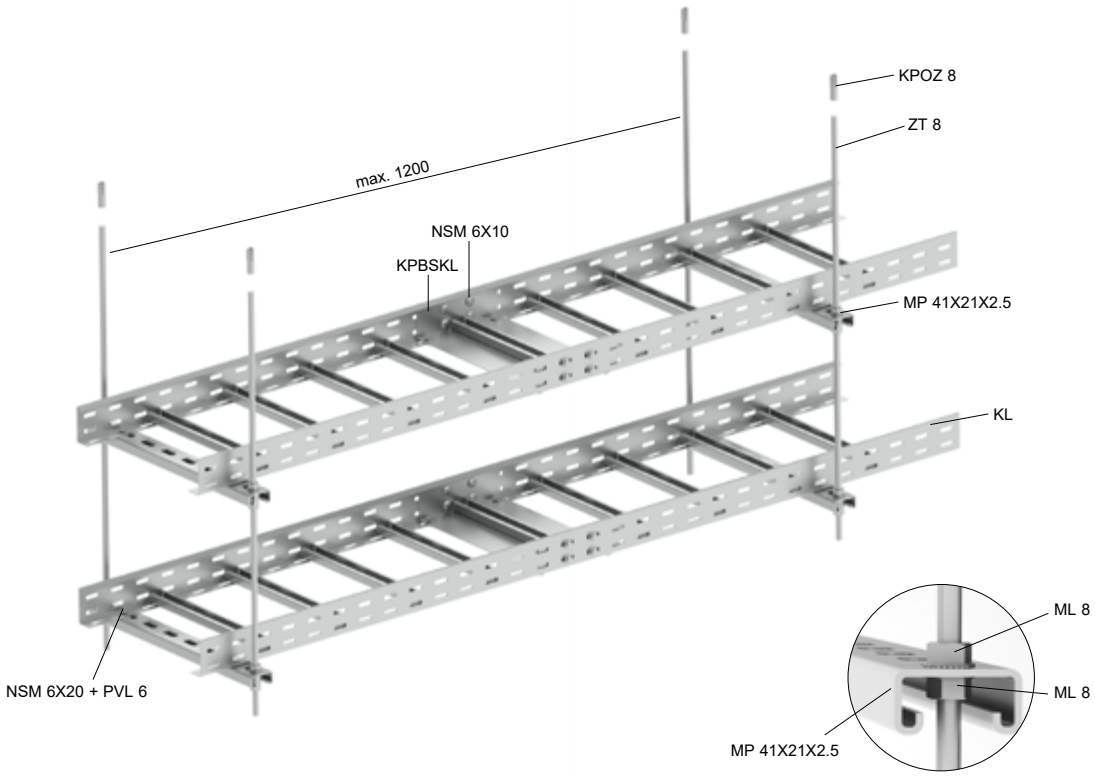
placement on ceiling

20 kg/m

max. 1200 mm

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List of products for one mounting point				
				page
ZT 8	2	2	2	98
KPOZ 8	2	2	2	101
MP 41X21X2.5	1	2	3	87
ML 8	4	8	12	99
NSM 6X20	2	4	6	97
PVL 6	2	4	6	100
OPT	1 pc every min. 50 m of the route			172

Cable manufacturer approved:

Cables from any manufacturer with proven fire performance can be used on standard-compliant cable supporting structures.

Classification (min) - power, data cables:

E90, P90-R, PS90

E90

cable ladder KL

bracket - heavy DT
threaded rods ZT

60 mm

150 - 400 mm

150 mm

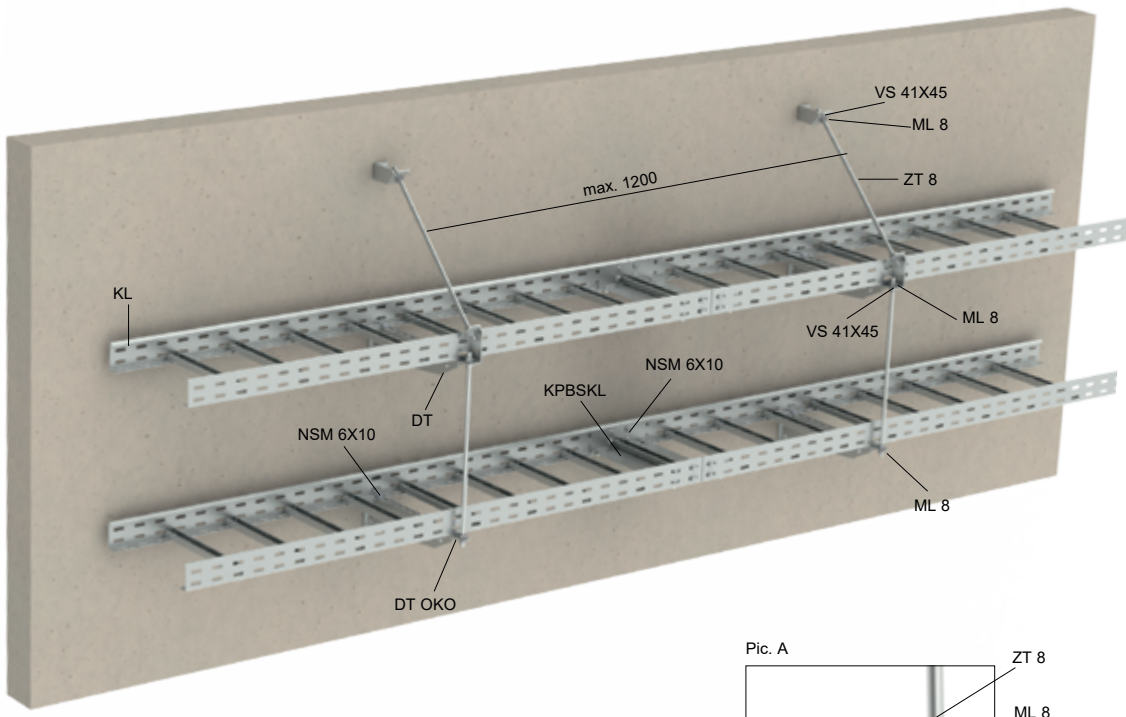
placement on the wall and ceiling

20 kg/m

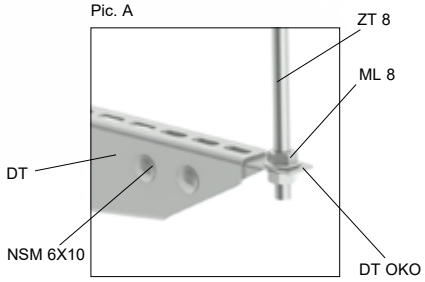
max. 1200 mm

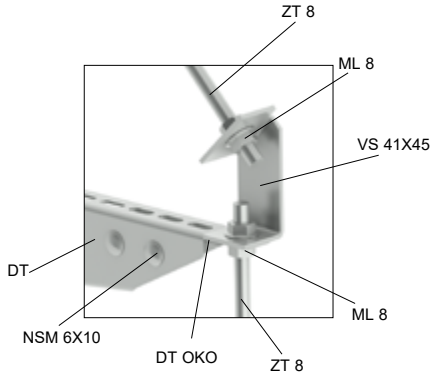
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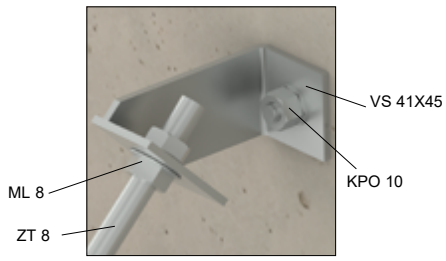
PK9-03-17-913-C-5



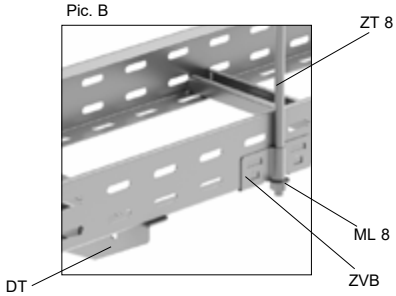
Pic. A







Pic. B



List of products for one mounting point					
					page
ZT 8	1	2	1	2	98
KPO 10	3	5	2	4	100
KPOZ 8	-	-	1	1	101
DT	1	2	1	2	75
DT OKO	1	2	1 (pic. A)	2	75
VS 41X45	2	2	-	-	86
ZVB 1.5	-	-	1 (pic. B)	2	82
S 10X50	1	-	-	-	98
ML 8	5	8	2 (pic. A) 1 (pic. B)	4 (pic. A) 2 (pic. B)	99
NSM 6X10	4 (2*)	8 (4*)	4 (2*)	8 (4*)	97
OPT	1 pc every min. 50 m of the route				172

* in case of using the DT OKO_POF bracket

Cable manufacturer approved:

Cables from any manufacturer with proven fire performance can be used on standard-compliant cable supporting structures.

Classification (min) - power, data cables:
E90, P90-R, PS90

cable tray side height
cable tray width
spacing of dividers
placement
max. load
spacing of mounting points
certification according to standards
classification document number

E90

cable ladder KL

clamps KLSU

60 mm

150 - 600 mm

150 - 300 mm

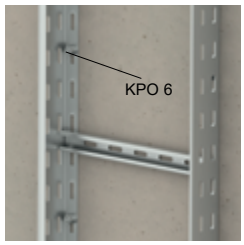
vertical installation on the wall

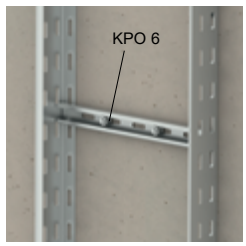
20 kg/m

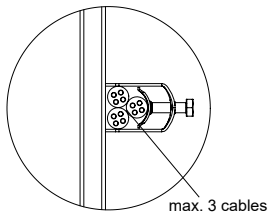
max. 1200 mm

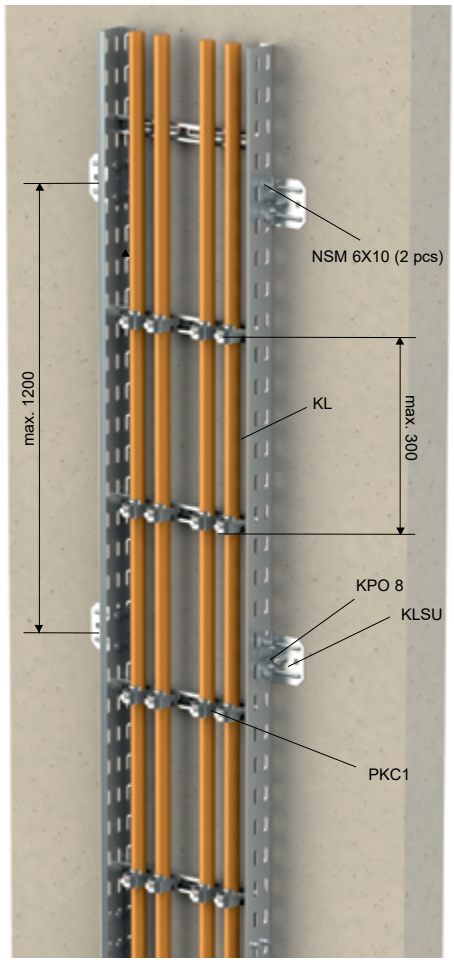
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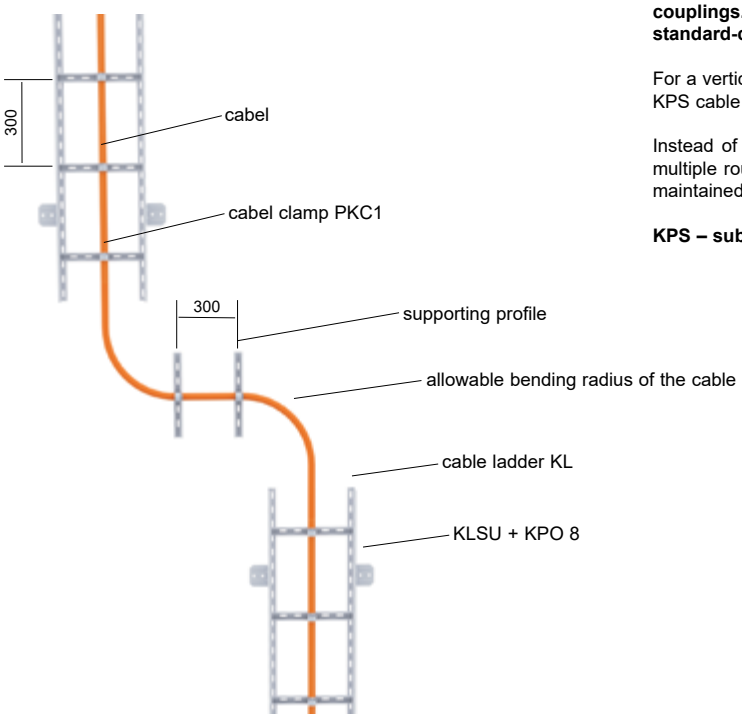






List of products for one mounting point			
			page
KLSU	2	0	78
KPO 8	2	0	100
KPO 6	0	2	100
NSM 6X10	4	0	97
PKC1	per cable quantity (up to 3 cables per PKC1)		96
OPT	1 pc every min. 50 m of the route		172

relieving elbow



Cable manufacturer approved:

Cables from any manufacturer with proven fire performance can be used on standard-compliant cable supporting structures.

Classification (min) - power, data cables:

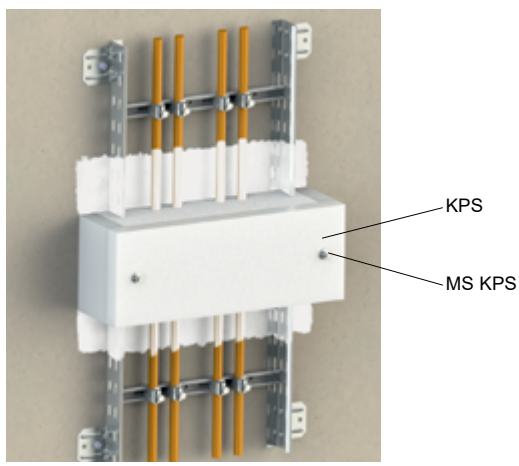
E90, P90-R, PS90

A vertical route created using the KL 60X… S (F) cable ladder is considered, according to standards, as individual cable clamps. Cable ladder joints are made using S 60X200 couplings. Fixing the cables with individual clamps at 300 mm intervals is considered a standard-compliant supporting structure.

For a vertical route longer than 3500 mm, it is necessary to create a relief bend or use the KPS cable clamp cover (pg. 71).

Instead of a relief bend, the KPS cable clamp cover (pg. 71) may be used. When placing multiple routes next to each other, a minimum spacing of 100 mm between routes must be maintained.

KPS – substitute for the relief bend



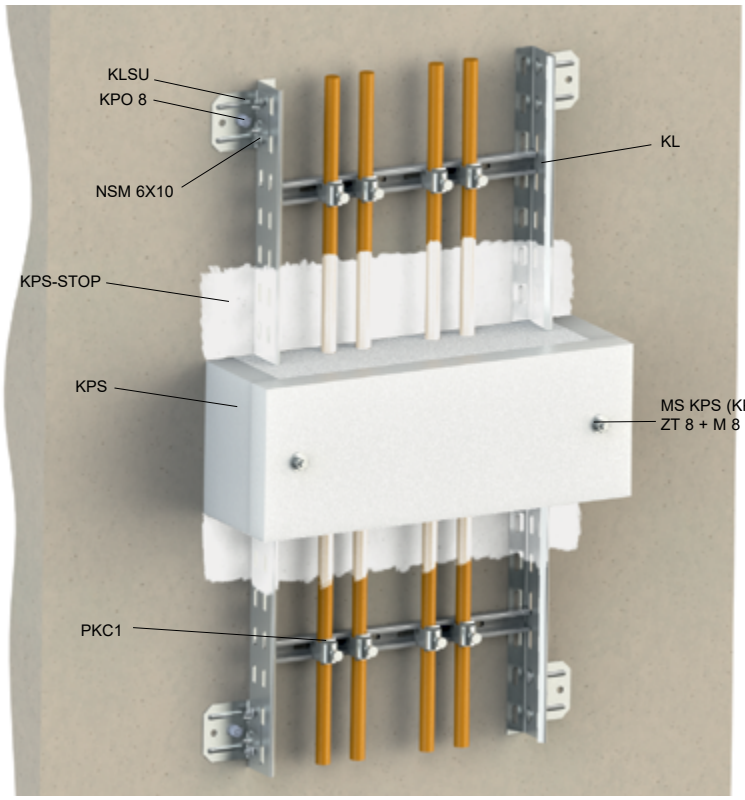
E90

Cable clamp cover KPS

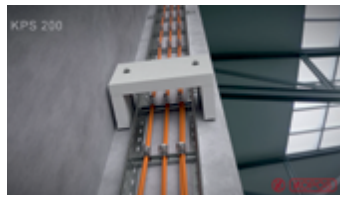
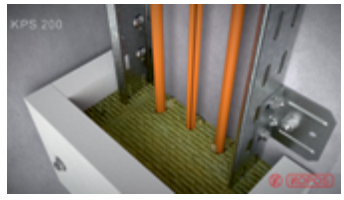
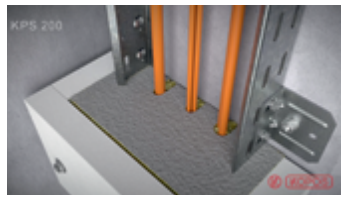
placement on the wall

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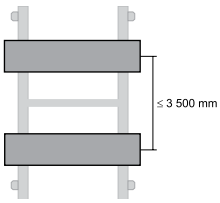




List of products for one mounting point		
		page
KPS	1	71
MS KPS	1	71
KPS-STOP	1	71
PKC1	per number of cables	96

The KPS cover can be used as a substitute for the relieving elbow.

The cover is intended for vertical routes primarily made of cable ladders with PKC1 cable clamps; it can also be used for routes composed of supporting profiles with PKC1 clamps or OMEGA, DOBRMAN, or 67XX_PO clamps.
The cover must be used for every maximum of 3.5 m of vertical route.



Type KPS
KPS 200X150
KPS 200X200
KPS 200X300
KPS 200X400
KPS 200X500
KPS 200X600



MS KPS - assemblyset
ordered separately



KPS-STOP_PO - Fire-resistant putty
ordered separately (a 2 kg package is sufficient to coat approx. 3 pcs of KPS 200X… with a 1 mm thick layer in dry state).

certification according to standards
placement
classification document number

cable ladder KL

bracket - medium DS
ceiling profile SPS
HMP head + assembly profile
MP 41X41

60 mm

150 - 400 mm

300 mm

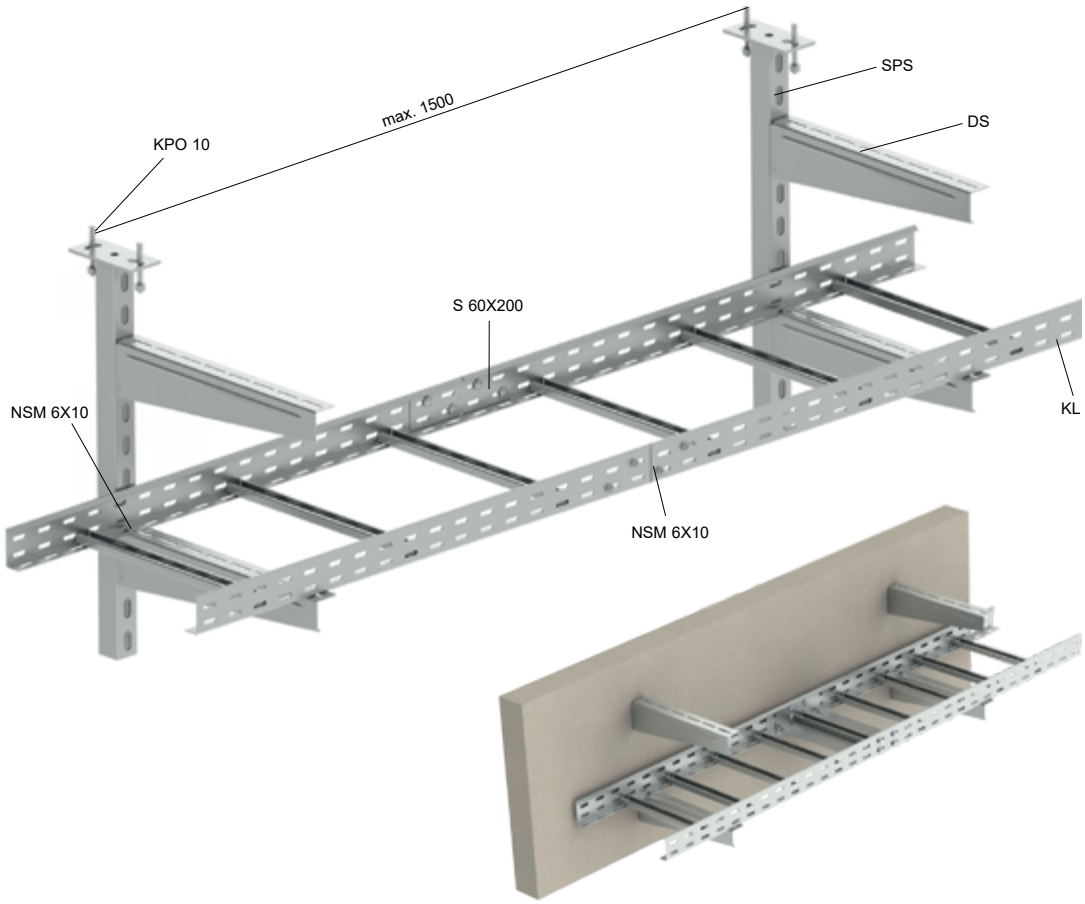
placement on the wall and ceiling

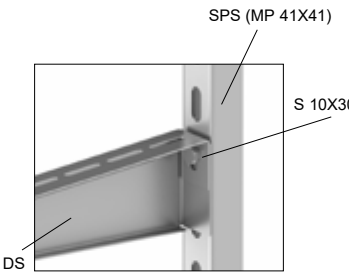
10 - 20 kg/m

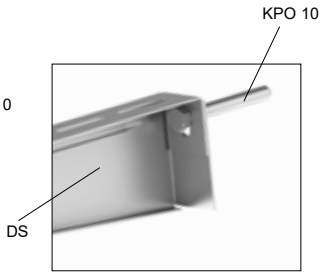
max. 1500 mm

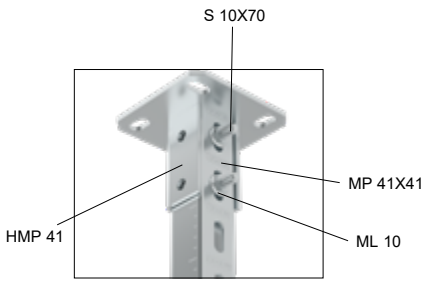
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List of products for one mounting point														
														page
	SPS	HMP + MP	SPS	HMP + MP	SPS	HMP + MP	SPS	HMP + MP	SPS	HMP + MP				
KPO 10	2	4	2	4	2	4	2	4	2	4	1	2	3	100
SPS	1	-	1	-	1	-	1	-	1	-	-	-	-	79
HMP	-	1	-	1	-	1	-	1	-	1				86
MP 41X41	-	1	-	1	-	1	-	1	-	1				87
DS	1	1	2	2	2	2	4	4	6	6	1	2	3	74
S 10X30	1	1	2	2	-	-	-	-	-	-	-	-	-	98
S 10X70	-	2	-	2	1	3	2	4	3	5	-	-	-	98
ML 10	1	3	2	4	1	3	2	4	3	5	-	-	-	99
NSM 6X10	2	2	4	4	4	4	8	8	12	12	2	4	6	97
OPT	1 pc every min. 50 m of the route													172

power cables						
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**		
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	JR-035-25-NURS	12	150-400	1200
	PRAFlaDur 90	E30, P30-R, PS30	JR-003-21-NURS	10	150-400	1500
	PRAFlaDur+T	E30, P45-R, PS45	JR-133-23-NURS	10	150-400	1200
	PRAFlaDur C	E90, P90-R, PS90	JR-248-24-NURS	20	150-400	1200
NKT s.r.o.	NOPOVIC 60	E90, P90-R, PS90	JR-035-25-NURS	12	150-400	1200
	NOPOVIC 90	E90, P90-R, PS90	JR-104-23-NURS	10	150-400	1500
Kablo Vrchlabí s.r.o.	1-CXKH-V	E60, P60-R, PS60	Pr-18-2.005	10	150-400	1500
CICM s.r.o.	1-CXKE-V	E30, P30-R, PS30	JR-055-25-NURS	10	150-400	1200
ELKOND HHK, a.s	1-CXKH-V P60-R	E60, P60-R, PS60	JR-074-23-NURS	10	150-400	1200
Technokabel S.A.	NHXH-J	E90, P90-R, PS90	JR-112-22-NURS	10	150-400	1200

data cables						
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**		
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-035-25-NURS	12	150-400	1200
	PRAFlaGuard FTP	E90, P90-R, PS90	JR-248-24-NURS	20	150-400	1200
Kablo Vrchlabí s.r.o.	JXFE-V	E90, P90-R, PS90	Pr-18-2.005	10	150-400	1500
CICM s.r.o.	JXFE-V	E60, P60-R, PS60	JR-055-25-NURS	10	150-400	1200
ELKOND HHK, a.s	SSKFH-V180	E30, P30-R, PS30	JR-074-23-NURS	10	150-400	1200
Technokabel S.A.	HTKSH	E30, P30-R, PS30	JR-112-22-NURS	10	150-400	1200
	HDGS	E30, P30-R, PS30	JR-112-22-NURS	10	150-400	1200

cable ladder KL

bracket - heavy DT
clamps KLSU

60 mm

150 - 600 mm

300 mm

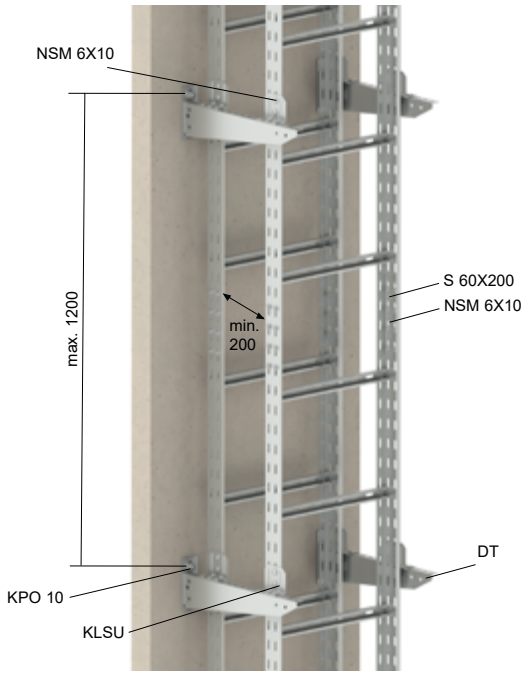
vertical installation on the wall

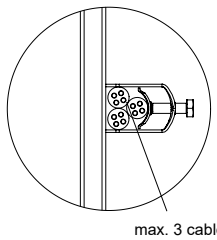
20 kg/m

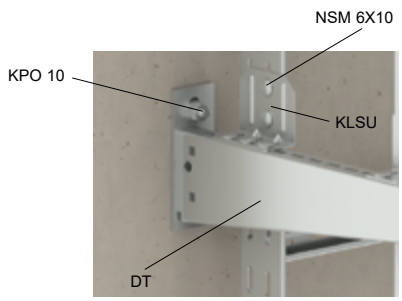
max. 1200 mm

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List of products for one mounting point		
		page
DT 300 / DT 400	2	75
KLSU	4	78
KPO 10	4	100
PKC1	based on cable diameter (max. 3 cables per PKC1)	96
NSM 6X10	8	97
OPT	1 pc every min. 50 m of the route	172

For a vertical route, a relieving elbow must be installed every 3500 mm, or tension relief provided using the KPS (pg. 71). In the case of a two-cable-ladder assembly, two KPS can be used stacked or opposite each other.

power cables						
cable manufacturer	cable type	classification (min)	classification document number	kg		
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur 90	P90-R	PK9-03-17-913-C-5	20	150-600	1200
Kabelovna Kabex a.s.	1-CSKE-V	P90-R	PK9-03-17-913-C-5	20	150-600	1200
Prysmian Group	(N)HXHX-J	P90-R	PK9-03-17-913-C-5	20	150-600	1200

data cables						
cable manufacturer	cable type	classification (min)	classification document number	kg		
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	P90-R	PK9-03-17-913-C-5	20	150-600	1200
Prysmian Group	JE-H(St)H	P90-R	PK9-03-17-913-C-5	20	150-600	1200

cable ladder KL

bracket - heavy DT

60 mm

150 - 400 mm

300 mm

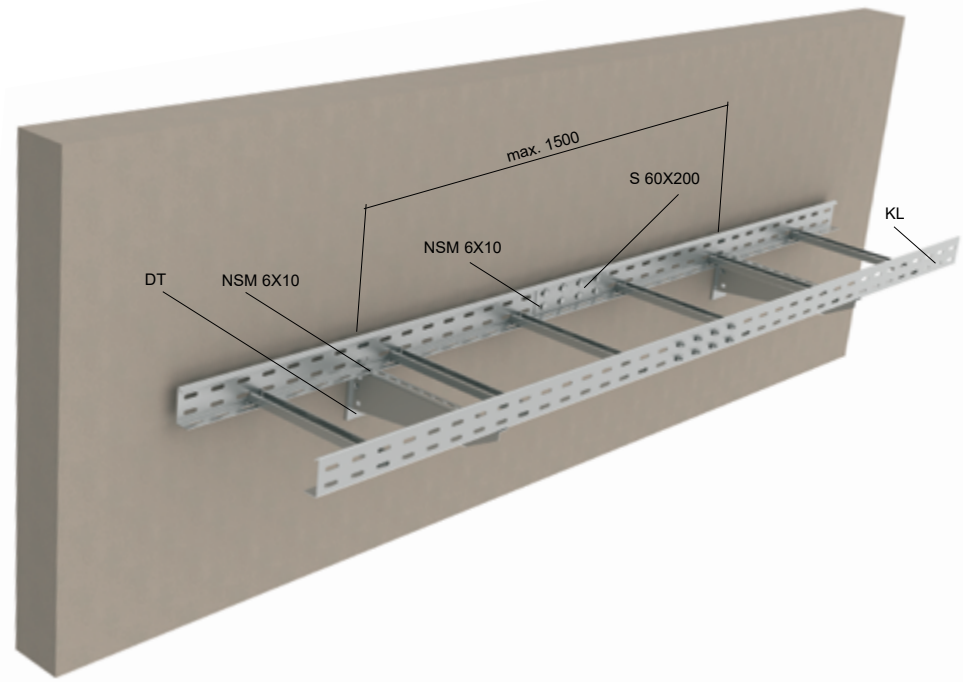
placement on the wall

10 - 20 kg/m

max. 1500 mm

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List of products for one mounting point				
				page
DT	1	2	3	75
KPO 10	2	4	6	100
NSM 6X10	2	4	6	97
OPT	1 pc every min. 50 m of the route			172

power cables						
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**		
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E30, P45-R, PS45	JR-021-22-NURS	20	150-400	1500
	PRAFlaDur 90	E90, P90-R, PS90	JR-024-22-NURS	20	150-400	1500
Kabelovna Kabex a.s.	1-CSKE-V	E60, P60-R, PS60	JR-027-22-NURS	20	150-400	1500
Kablo Vrchlabí s.r.o.	1-CXKH-V	E30, P45-R, PS45	JR-101-23-NURS	10	150-400	1500

data cables						
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**		
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E30, P45-R, PS45	JR-021-22-NURS	20	150-400	1500
Kablo Vrchlabí s.r.o.	JXFE-V	E60, P60-R, PS60	JR-101-23-NURS	10	150-400	1500

cable ladder KL

threaded rods ZT
assembly profiles MP

60, 110 mm

150 - 600 mm

300 mm

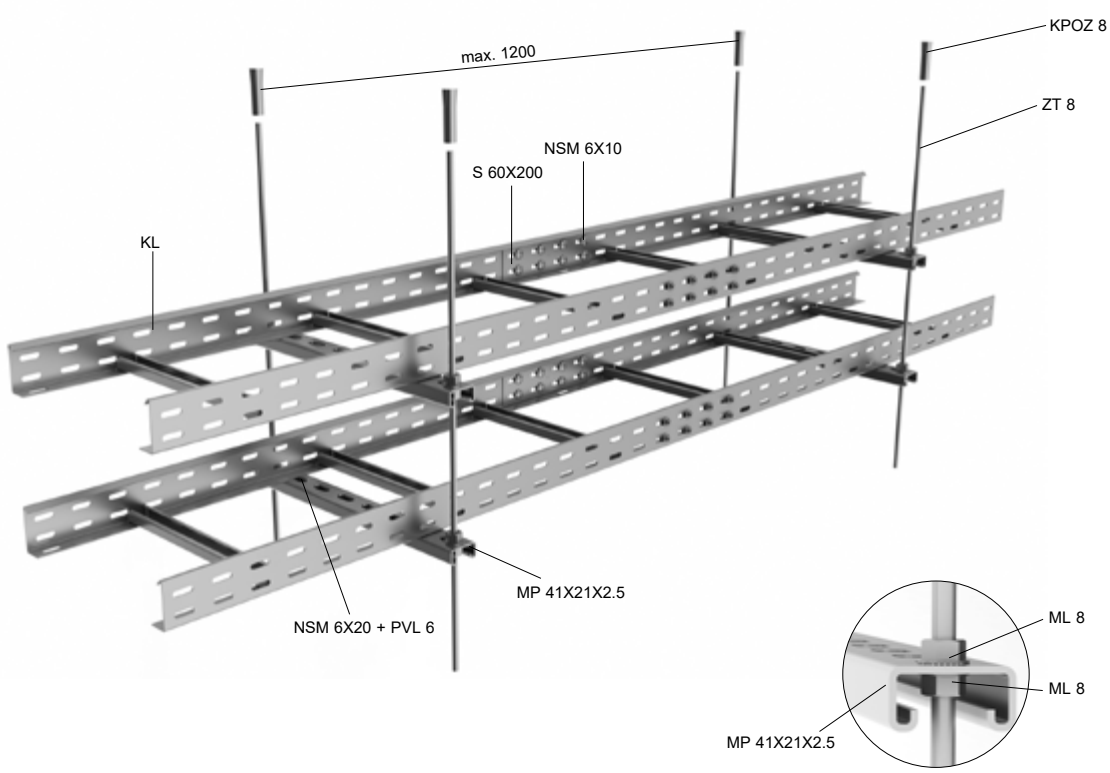
placement on ceiling

20 - 30 kg/m

max. 1200 mm

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List of products for one mounting point				
				page
ZT 8	2	2	2	98
KPOZ 8	2	2	2	101
MP 41X21X2.5	1	2	3	87
ML 8	4	8	12	99
NSM 6X20	2	4	6	97
PVL 6	2	4	6	100
OPT	1 pc every min. 50 m of the route			172

power cables							
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**			
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E60, P60-R, PS60	JR-030-22-NURS	20	60	150-600	1200
	PRAFlaDur 90	E90, P90-R, PS90	JR-024-22-NURS	20	60	150-400	1200
NKT s.r.o.	NOPOVIC 90	E60, P60-R, PS60	JR-123-24-NURS	20	60	150-600	1200
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-127-24-NURS	20	60	150-600	1200
Kablo Vrchlabí s.r.o.	1-CXKH-V	E60, P60-R, PS60	JR-123-24-NURS	20	60	150-500	1200
CICM s.r.o.	1-CXKE-V	E90, P90-R, PS90	JR-041-25-NURS	20	60	150-500	1200
ELKOND HHK, a.s.	1-CXKH-V 60	E60, P60-R, PS60	JR-074-23-NURS	20	60	150-600	1200
	1-CXKH-V 90	E60, P60-R, PS60	JR-074-23-NURS	20	60	150-600	1200
Zakłady Kablowe BITNER Sp. z o.o.	Bitflame 1000	E90, P90-R, PS90	JR-127-24-NURS	20	60	150-600	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E60, P60-R, PS60	JR-149-20-NURS	30	110	150-600	1200
	PRAFlaDur+T	E90, P90-R, PS90	JR-170-24-NURS	20	110	150-600	1200
	PRAFlaDur C	E60, P60-R, PS60	JR-248-24-NURS	20	110	150-600	1200
NKT s.r.o.	NOPOVIC 60	E30, P30-R, PS30	JR-170-24-NURS	20	110	150-600	1200
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-149-20-NURS	30	110	150-600	1200
Kablo Vrchlabí s.r.o.	1-CXKH-V	E60, P60-R, PS60	JR-170-24-NURS	20	110	150-600	1200

data cables							
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**			
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-024-22-NURS	20	60	150-400	1200
Kablo Vrchlabí s.r.o.	JXFE-V	E90, P90-R, PS90	JR-123-24-NURS	20	60	150-500	1200
CICM s.r.o.	JXFE-V	E60, P60-R, PS60	JR-041-25-NURS	20	60	150-500	1200
ELKOND HHK, a.s.	SSKFH-V180	E30, P30-R, PS30	JR-074-23-NURS	20	60	150-600	1200
Zakłady Kablowe BITNER Sp. z o.o.	HTKSH	E90, P90-R, PS90	JR-127-24-NURS	20	60	150-600	1200
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E30, P45-R, PS45	JR-170-24-NURS	20	110	150-600	1200
Kabelovna Kabex a.s.	CPDex JCXFE-V	E30, P30-R, PS30	JR-149-20-NURS	30	110	150-600	1200
Kablo Vrchlabí s.r.o.	JXFE-V	E90, P90-R, PS90	JR-170-24-NURS	20	110	150-600	1200

cable tray side height

cable tray width

max. load

spacing of mounting points

cable ladder KL

clamps KLSU

60 mm

150 - 600 mm

300 mm

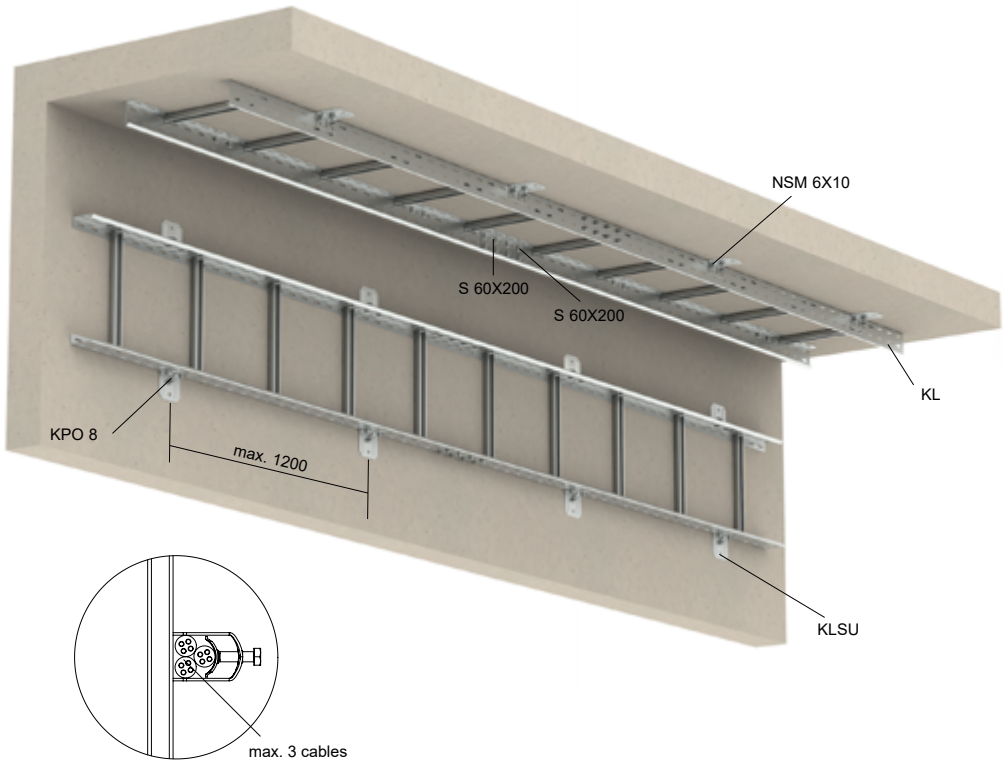
placement on the wall and ceiling

20 kg/m

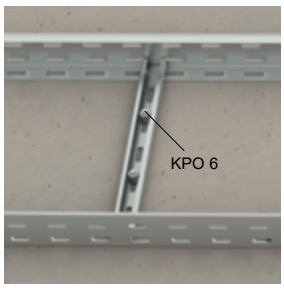
max. 1200 mm

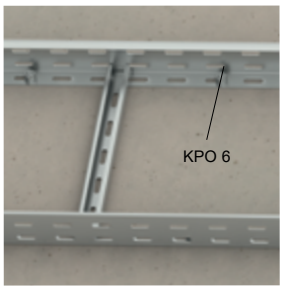
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List of products for one mounting point			
			page
KLSU	2	-	78
KPO 8	2	-	100
KPO 6	-	2	100
NSM 6X10	4	-	97
PKC1	per number of cables (max. 3 pcs cables for 1 pc PKC1)		96
OPT	1 pc every min. 50 m of the route		172





power cables						
cable manufacturer	cable type	classification (min)	standpoint number	kg		
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E60, P60-R, PS60	JR-104-21-NURS	20	150-600	1200
	PRAFlaDur 90	E90, P90-R, PS90	JR-024-22-NURS	20	150-400	1200
	PRAFlaDur+T	E90, P90-R, PS90	JR-133-23-NURS	20	150-600	1200
NKT s.r.o.	NOPOVIC 90	E90, P90-R, PS90	JR-104-21-NURS	20	150-600	1200
Kabelovna Kabex a.s.	1-CSKE-V	E60, P60-R, PS60	JR-027-22-NURS	20	150-400	1200
	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-112-22-NURS	20	150-600	1200
CICM s.r.o.	1-CXKE-V	E60, P60-R, PS60	JR-041-25-NURS	20	150-400	1200
ELKOND HHK, a.s	1-CXKH-V P60-R	E90, P90-R, PS90	JR-074-23-NURS	20	150-600	1200
	1-CXKH-V P90-R	E90, P90-R, PS90	JR-074-23-NURS	20	150-600	1200
Technokabel S.A.	NHXH-J	E60, P60-R, PS60	JR-112-22-NURS	20	150-600	1200

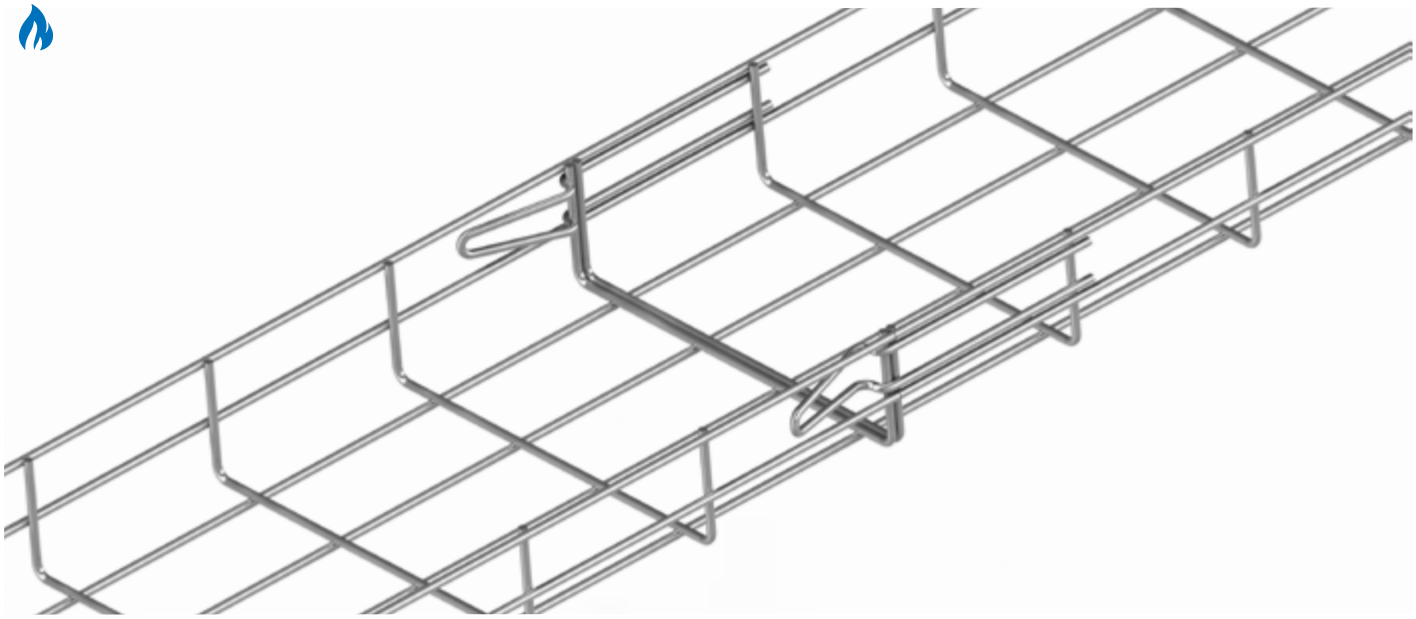
data cables						
cable manufacturer	cable type	classification (min)	standpoint number	kg		
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-133-23-NURS	20	150-600	1200
Kabelovna Kabex a.s.	CPDex JCXFE	E30, P45-R, PS45	JR-112-22-NURS	20	150-600	1200
CICM s.r.o.	JXFE-V	E30, P45-R, PS45	JR-041-25-NURS	20	150-400	1200
ELKOND HHK, a.s	SSKFH-V180	E30, P45-R, PS45	JR-074-23-NURS	20	150-600	1200
Technokabel S.A.	HTKSH	E60, P60-R, PS60	JR-112-22-NURS	20	150-600	1200
	HDGS	E30, P45-R, PS45	JR-112-22-NURS	20	150-600	1200



SUPPORTING CONSTRUCTIONS

WIRE CABLE TRAYS GEMINI

Non-standard supporting structure – connection of the DZI wire tray



The connection of the DZI wire trough is carried out using an integrated coupler.

wire cable tray DZI

wall bracket DSDZ
ceiling profile SPS
HMP head + assembly profile MP 41X41

60 mm

60 - 400 mm

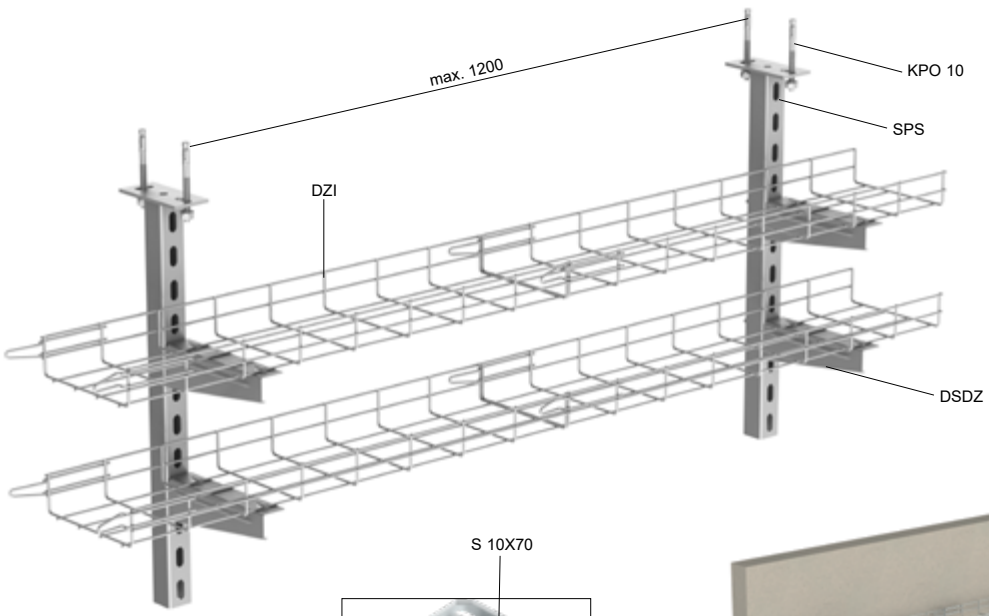
placement on the wall and ceiling

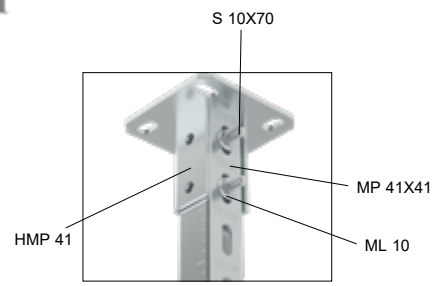
10 kg/m

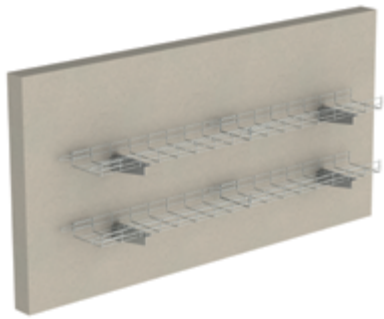
max. 1200 mm

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List of products for one mounting point

	SPS	HMP + MP	SPS	HMP + MP	SPS	HMP + MP	SPS	HMP + MP	SPS	HMP + MP				page
KPO 10	2	4	2	4	2	4	2	4	2	4	1	2	3	100
SPS	1	-	1	-	1	-	1	-	1	-	-	-	-	79
HMP	-	1	-	1	-	1	-	1	-	1	-	-	-	86
MP 41X41	-	1	-	1	-	1	-	1	-	1	-	-	-	87
DSDZ	1	1	2	2	2	2	4	4	6	6	1	2	3	113
S 10X30	1	1	2	2	-	-	-	-	-	-	-	-	-	98
S 10X70	-	2	-	2	1	3	2	4	3	5	-	-	-	98
ML 10	1	3	2	4	1	3	2	4	3	5	-	-	-	99
OPT	1 pc every min. 50 m of the route													172

power cables

cable manufacturer	cable type	classification (min)	standpoint number	kg			note
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E60, P60-R, PS60	JR-206-25-NURS	10	60-400	1200	-
	PRAFlaDur+T	E90, P90-R, PS90	JR-095-24-NURS	10	60-400	1200	-
	PRAFlaDur C	E30, P30-R, PS30	JR-248-24-NURS	10	60-400	1200	-
NKT s.r.o.	NOPOVIC 90	E90, P90-R, PS90	JR-084-24-NURS	10	60-300	1000	wall-only installation
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-095-24-NURS	10	60-400	1200	-
CICM s.r.o.	1-CXKE-V	E90, P90-R, PS90	JR-206-25-NURS	10	60-400	1200	
ELKOND HHK, a.s	1-CXKH-V P60-R	E60, P60-R, PS60	JR-095-24-NURS	10	60-400	1200	-

data cables

cable manufacturer	cable type	classification (min)	standpoint number	kg			note
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-206-25-NURS	10	60-400	1200	-
	PRAFlaGuard FTP	E90, P90-R, PS90	JR-248-24-NURS	10	60-400	1200	-
Kabelovna Kabex a.s.	CPDex JCXFE-V	E90, P90-R, PS90	JR-095-24-NURS	10	60-400	1200	-
CICM s.r.o.	JXFE-V	E30, P30-R, PS30	JR-206-25-NURS	10	60-400	1200	
ELKOND HHK, a.s	SSKFH-V180	E30, P30-R, PS30	JR-095-24-NURS	10	60-400	1200	-

cable route height
cable tray width
placement
max. load
spacing of mounting points
certification according to standards
classification document number

wire cable tray DZI

hanger DZZ

60 mm

60 - 100 mm

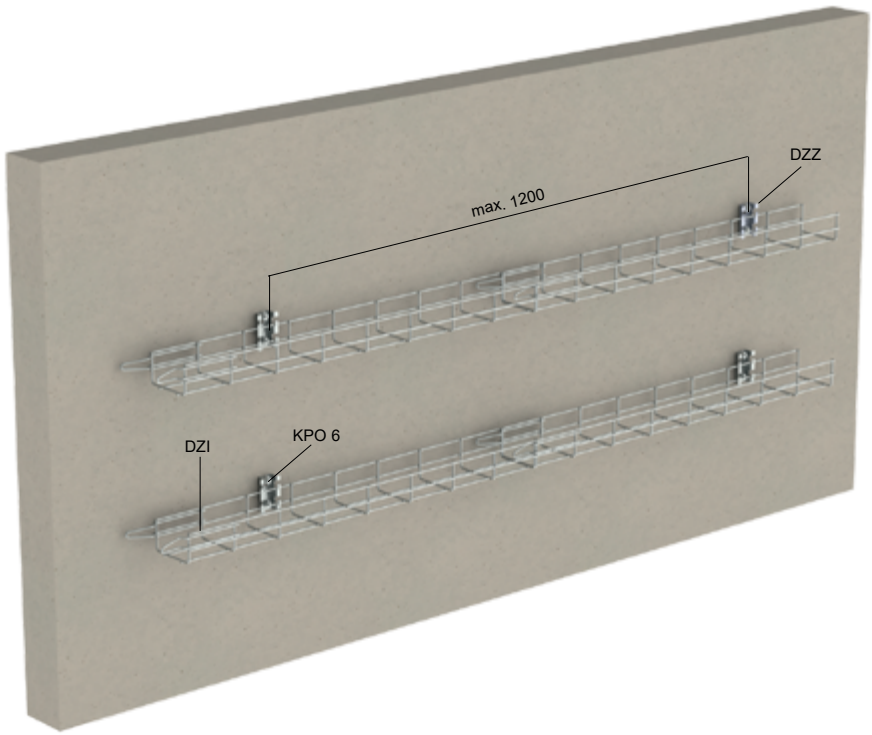
placement on the wall

max. 6 kg/m

max. 1200 mm

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List of products for one mounting point				
				page
DZZ	1	2	3	113
KPO 6	2	4	6	100
OPT	1 pc every min. 50 m of the route			172

power cables							
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**			**note**
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E60, P60-R, PS60	JR-035-25-NURS	6	60-100	1200	for conductor cross-section up to 16 mm²
	PRAFlaDur 90	E60, P60-R, PS60	JR-084-24-NURS	6	60-100	1000	-
NKT s.r.o.	NOPOVIC 60	E90, P90-R, PS90	JR-035-25-NURS	6	60-100	1200	for conductor cross-section up to 10 mm²
	NOPOVIC 90	E90, P90-R, PS90	JR-030-22-NURS	5	60-100	1200	for conductor cross-section up to 10 mm²
Kablo Vrchlabí s.r.o.	1-CXKH-V	E60, P60-R, PS60	Pr-18-2.005	6	60-100	1200	for conductor cross-section up to16 mm²
CICM s.r.o.	1-CXKE-V	E90, P90-R, PS90	JR-055-25-NURS	6	60-100	1200	for conductor cross-section up to 10 mm²

data cables							
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**			**note**
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-206-25-NURS	6	60-100	1200	-
Kablo Vrchlabí s.r.o.	JXFE-V	E90, P90-R, PS90	Pr-18-2.005	6	60-100	1200	-
CICM s.r.o.	JXFE-V	E60, P60-R, PS60	JR-055-25-NURS	6	60-100	1200	-

wire cable tray DZI

threaded rods ZT
assembly profiles MP

60 mm

60 - 600 mm

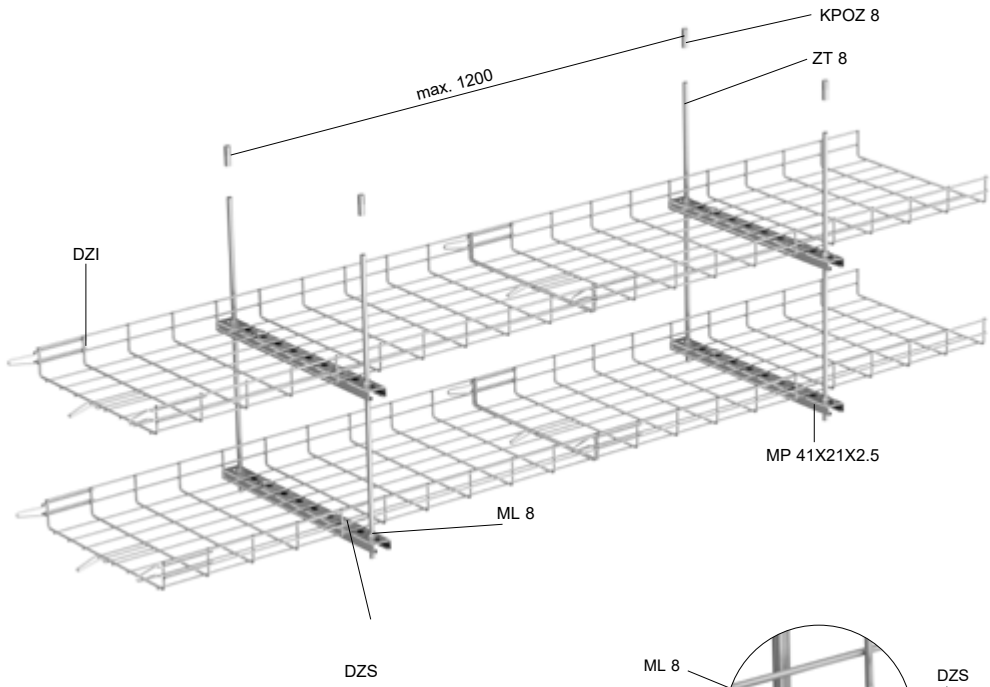
placement on ceiling

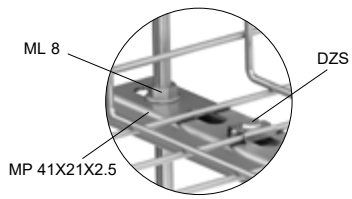
10 - 20 kg/m

max. 1200 mm

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List of products for one mounting point				
				page
ZT 8	2	2	2	98
KPOZ 8	2	2	2	101
MP 41X21X2.5	1	2	3	87
ML 8	4	8	12	99
DZS	2	4	6	112
OPT	1 pc every min. 50 m of the route			172

power cables						
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**		
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	JR-185-19-NURS	20	60-600	1200
	PRAFlaDur 90	E30, P30-R, PS30	JR-084-24-NURS	10	60-300	1000
	PRAFlaDur+T	E90, P90-R, PS90	JR-095-24-NURS	20	60-600	1200
NKT s.r.o.	NOPOVIC 60	E30, P45-R, PS45	JR-095-24-NURS	20	60-600	1200
	NOPOVIC 90	E90, P90-R, PS90	JR-030-22-NURS	10	60-400	1200
	NOPOVIC 90	E60, P60-R, PS60	JR-095-24-NURS	20	60-600	1200
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-095-24-NURS	20	60-600	1200
Kablo Vrchlabí s.r.o.	1-CXKH-V	E60, P60-R, PS60	Pr-18-2.005	10	60-400	1200
CICM s.r.o.	1-CXKE-V	E90, P90-R, PS90	JR-055-25-NURS	10	60-400	1200
ELKOND HHK, a.s.	1-CXKH-V	E90, P90-R, PS90	JR-015-22-NURS	10	60-400	1200
	NHXH-J	E30, P45-R, PS45	JR-015-22-NURS	10	60-400	1200
Zakłady Kablowe BITNER Sp. z o.o.	Bitflame 1000	E90, P90-R, PS90	JR-185-19-NURS	20	60-600	1200

data cables						
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**		
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-095-24-NURS	20	60-600	1200
Kabelovna Kabex a.s.	CPDex JCXFE-V	E90, P90-R, PS90	JR-095-24-NURS	20	60-600	1200
Kablo Vrchlabí s.r.o.	JXFE-V	E90, P90-R, PS90	Pr-18-2.005	10	60-400	1200
CICM s.r.o.	JXFE-V	E60, P60-R, PS60	JR-055-25-NURS	10	60-400	1200
ELKOND HHK, a.s.	SHXKFH-V	E60, P60-R, PS60	JR-015-22-NURS	10	60-400	1200
	SSKFH-V180	E60, P60-R, PS60	JR-015-22-NURS	10	60-400	1200
Zakłady Kablowe BITNER Sp. z o.o.	HTKSH	E90, P90-R, PS90	JR-185-19-NURS	20	60-600	1200

cable route height
cable tray width
placement
max. load
spacing of mounting points
certification according to standards
classification document number

wire cable tray DZI

threaded rods ZT
load bearing profiles DZNP

60 mm

100- 600 mm

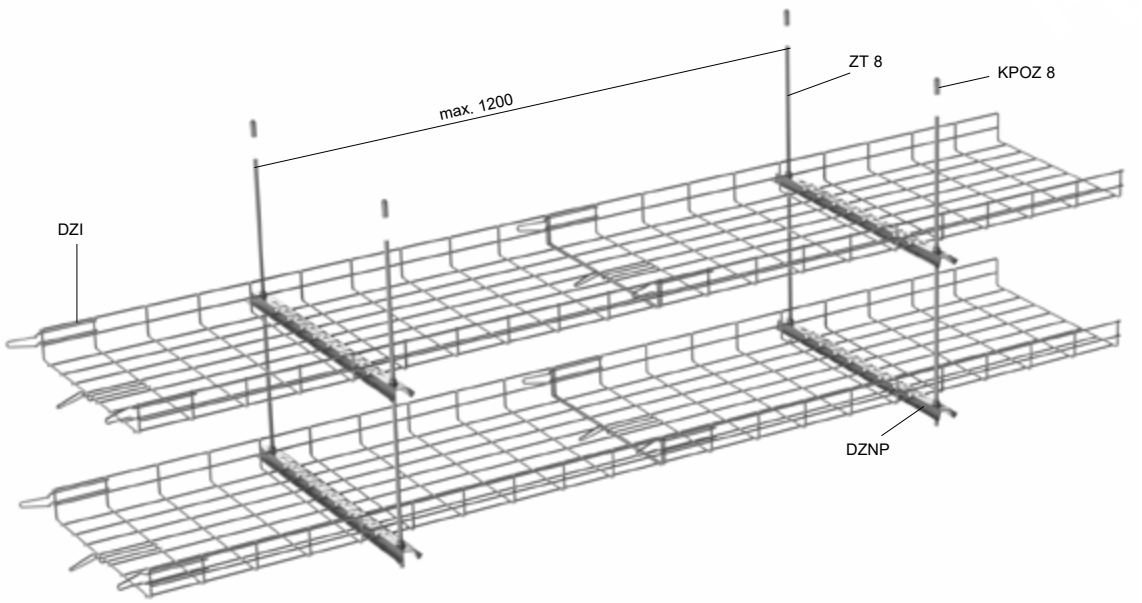
placement on ceiling

20 kg/m

max. 1200 mm

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List of products for one mounting point				
				page
ZT 8	2	2	2	98
KPOZ 8	2	2	2	101
DZNP	1	2	3	115
ML 8	4	8	12	99
OPT	1 pc every min. 50 m of the route			172

power cables						
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**		
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E60, P60-R, PS60	JR-095-24-NURS	20	100-600	1200
NKT s.r.o.	NOPOVIC 90	E90, P90-R, PS90	JR-095-24-NURS	20	100-600	1200
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-112-22-NURS	20	100-600	1200
ELKOND HHK, a.s.	1-CXKH-V	E60, P60-R, PS60	JR-095-24-NURS	20	100-600	1200
Technokabel S.A.	NHXH-J	E90, P90-R, PS90	JR-112-22-NURS	20	100-600	1200

data cables						
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**		
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E30, P30-R, PS30	JR-095-24-NURS	20	100-600	1200
Kabelovna Kabex a.s.	CPDex JCXFE-V	E60, P60-R, PS60	JR-112-22-NURS	20	100-600	1200
Technokabel S.A.	HTKSH	E60, P60-R, PS60	JR-112-22-NURS	20	100-600	1200

wire cable tray DZI

threaded rods ZT
central hangers DZCZ

60 mm

100 - 200 mm

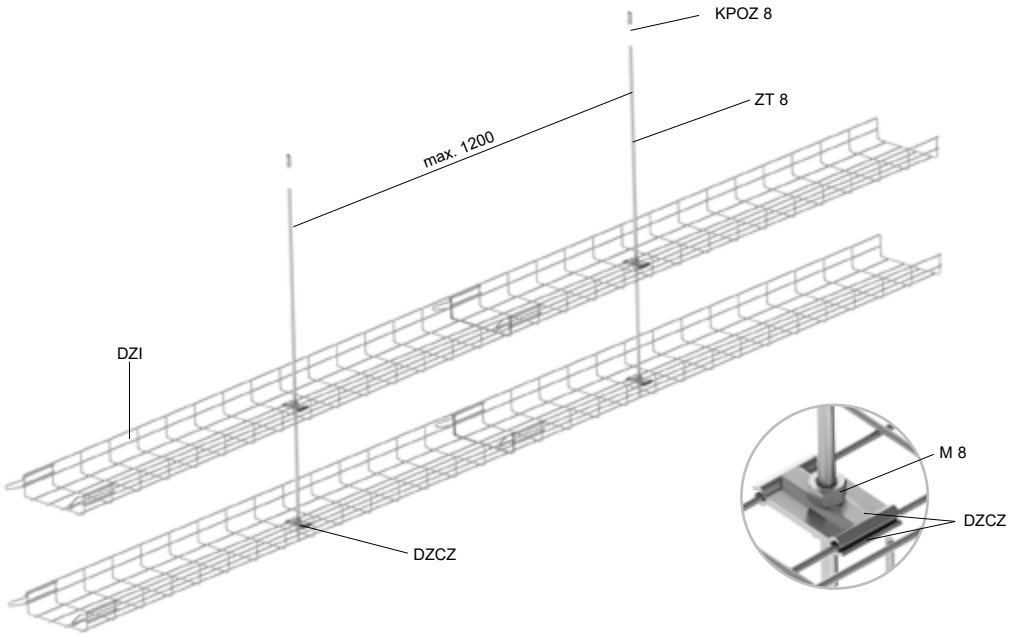
placement on ceiling

6 kg/m

max. 1200 mm

ČSN 730895
DIN 4102-12
STN 920205

PK9-03-17-913-C-5



List of products for one mounting point			
			page
ZT 8	1	1	98
KPOZ 8	1	1	101
DZCZ	2	4	114
M 8	2	4	99
OPT	1 pc every min. 50 m of the route		172

power cables							
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**			**note**
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E60, P60-R, PS60	JR-035-25-NURS	6	100-200	1200	for conductor cross-section up to 16 mm²
NKT s.r.o.	NOPOVIC 90	E90, P90-R, PS90	JR-030-22-NURS	6	100-200	1200	for conductor cross-section up to 10 mm²
	NOPOVIC 60	E90, P90-R, PS90	JR-035-25-NURS	6	100-200	1200	for conductor cross-section up to10 mm²
Kablo Vrchlabí s.r.o.	1-CXKH-V	E60, P60-R, PS60	Pr-18-2.005	6	100-200	1200	for conductor cross-section up to 16 mm²
ELKOND HHK, a.s.	1-CXKH-V	E30, P30-R, PS30	JR-015-22-NURS	6	100-200	1200	for conductor cross-section up to 10 mm²

data cables							
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**			**note**
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-035-25-NURS	6	100-200	1200	-
Kablo Vrchlabí s.r.o.	JXFE-V	E90, P90-R, PS90	Pr-18-2.005	6	100-200	1200	-
ELKOND HHK, a.s.	SHXKFH-V180	E60, P60-R, PS60	JR-015-22-NURS	6	100-200	1200	-

wire cable tray DZI

threaded rods ZT
bracket for ceiling DZCTS

60 mm

100 - 300 mm

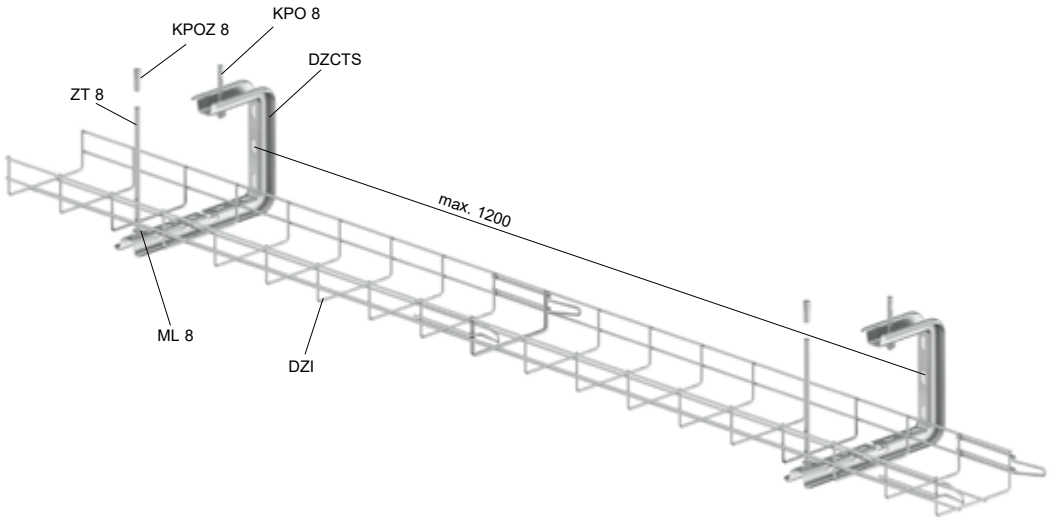
placement on ceiling

10 kg/m

max. 1200 mm

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List of products for one mounting point		
		page
KPO 8	2	100
DZCTS	1	114
ZT 8	1	98
KPOZ 8	1	101
ML 8	2	99
OPT	1 pc every min. 50 m of the route	172

power cables						
cable manufacturer	cable type	classification (min)	standpoint number	kg		
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	JR-095-24-NURS	10	100-300	1200

data cables						
cable manufacturer	cable type	classification (min)	standpoint number	kg		
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-095-24-NURS	10	100-300	1200

wire cable tray DZI

assembly profile DZNP

60 mm

100 - 600 mm

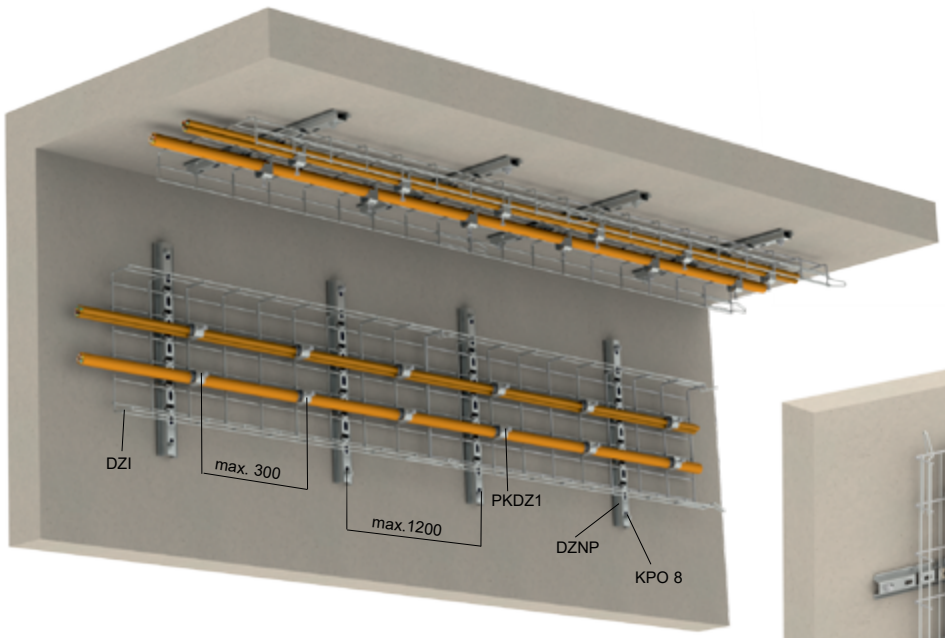
placement on the ceiling and wall

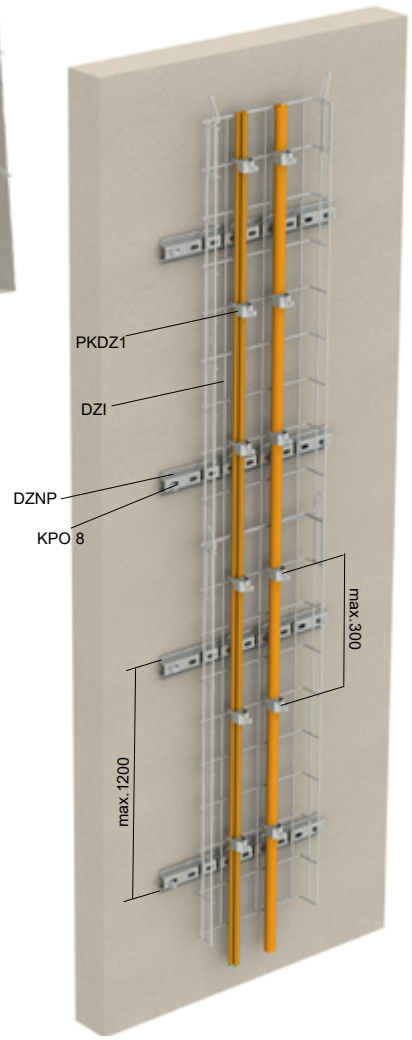
20 kg/m

max. 1200 mm

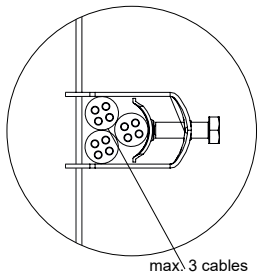
ČSN 730895
DIN 4102-12
STN 920205

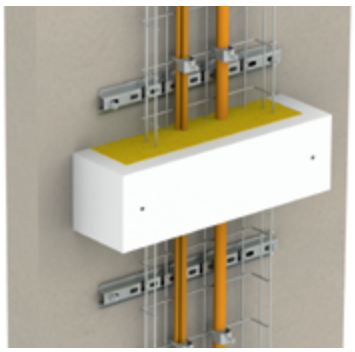
PK9-03-17-913-C-5





List of products for one mounting point				
				page
DZNP	1	1	1	115
KPO 8	2	2	2	100
PKDZ1	per number of cables (max. 3 cables per 1 PKDZ1)			117
OPT	1 pc every min. 50 m of the route			172





In the case of a vertical route longer than 3500 mm, it is necessary to create a relief bend or use KPS cable clip covers.

power cables						
cable manufacturer	cable type	classification (min)	standpoint number	kg		
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E30, P45-R, PS45	JR-104-21-NURS	20	100-600	1200
ELKOND HHK, a.s.	1-CXKH-V	E90, P90-R, PS90	JR-074-23-NURS	20	100-600	1200
NKT s.r.o.	NOPOVIC 90	E90, P90-R, PS90	JR-104-21-NURS	20	100-600	1200
Technokabel S.A.	NHXH-J	E90, P90-R, PS90	JR-112-22-NURS	20	100-400	1200

data cables						
cable manufacturer	cable type	classification (min)	standpoint number	kg		
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E30, P30-R, PS30	JR-104-21-NURS	20	100-600	1200
ELKOND HHK, a.s.	SSKFH-V180	E30, P30-R, PS30	JR-074-23-NURS	20	100-600	1200
Technokabel S.A.	HTKSH	E90, P90-R, PS90	JR-112-22-NURS	20	100-400	1200
	HDGs	E90, P90-R, PS90	JR-112-22-NURS	20	100-400	1200

cable route height
cable tray width
placement
max. load
spacing of mounting points
certification according to standards
classification document number

wire cable tray DZI

assembly profile DZSSP

60 mm

100 - 600 mm

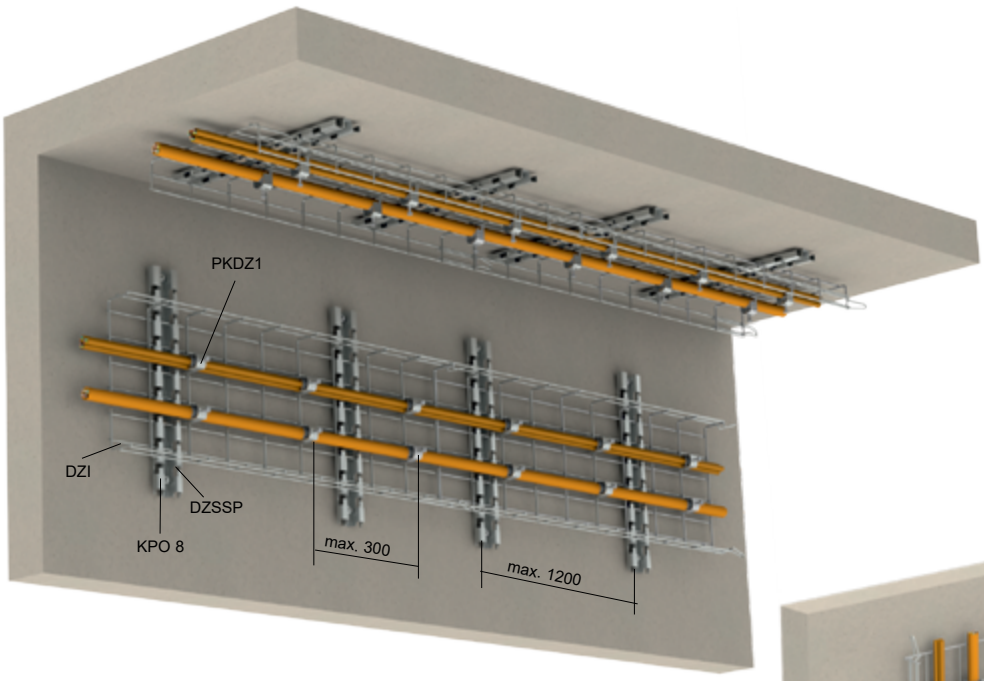
placement on the ceiling and wall

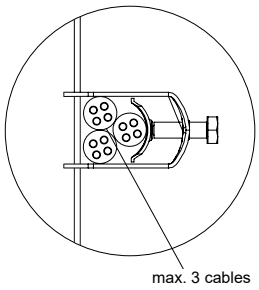
20 kg/m

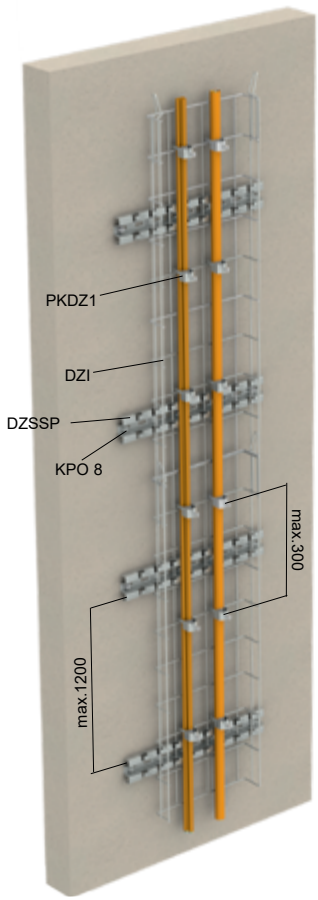
max. 1200 mm

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For a vertical route longer than 3500 mm, it is necessary to create a relief bend or use KPS cable clip covers.

List of products for one mounting point				
				page
DZSSP	1	1	1	115
KPO 8	2	2	2	100
PKDZ1	per number of cables (max. 3 cables per 1 PKDZ1)			117
OPT	1 pc every min. 50 m of the route			172

power cables						
cable manufacturer	cable type	classification (min)	standpoint number	kg		
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E60, P60-R, PS60	JR-095-24-NURS	20	100-600	1200
	PRAFlaDur+T	E60, P60-R, PS60	JR-095-24-NURS	20	100-600	1200
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E60, P60-R, PS60	JR-095-24-NURS	20	100-600	1200
ELKOND HHK, a.s.	1-CXKH-V	E60, P60-R, PS60	JR-095-24-NURS	20	100-600	1200
NKT s.r.o.	NOPOVIC 60	E60, P60-R, PS60	JR-095-24-NURS	20	100-600	1200

data cables						
cable manufacturer	cable type	classification (min)	standpoint number	kg		
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E60, P60-R, PS60	JR-095-24-NURS	20	100-600	1200
Kabelovna Kabex a.s.	CPDex JCXFE-V	E60, P60-R, PS60	JR-095-24-NURS	20	100-600	1200
ELKOND HHK, a.s.	SSKFH-V180	E30, P30-R, PS30	JR-095-24-NURS	20	100-600	1200



SUPPORTING CONSTRUCTION

CABLE CLAMP
WIRING PIPES
WIRING TRUNKING AND CHANNELS

E90

cable clamps

placement ceiling and wall,
vertical route

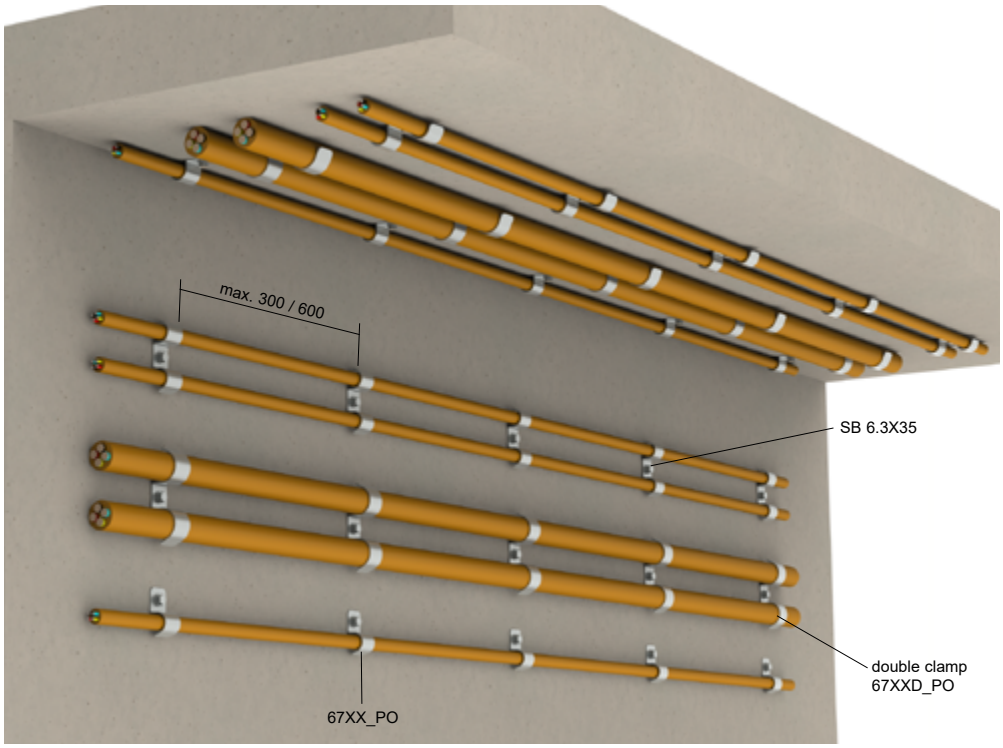
load of inserted cables

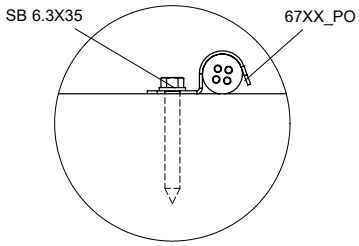
max. 300 - standardized constructions
max. 300 - vertical constructions
max. 600 - non-standardized constructions

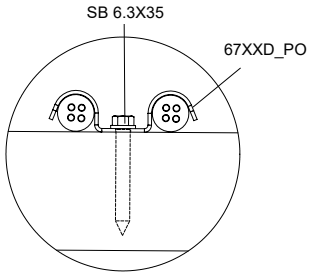
ČSN 730895
DIN 4102-12
STN 920205

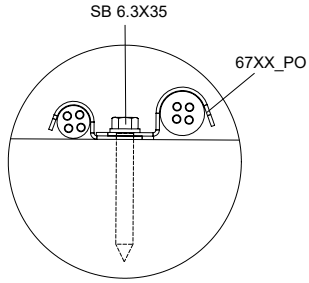
PK9-03-17-913-C-5

possibility of nailing



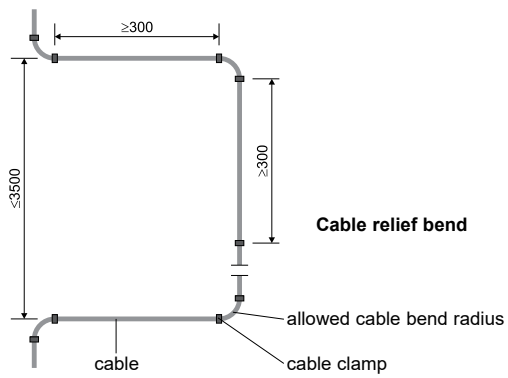






List of products for one mounting point			
			page
67XX_PO; 67XX_POGMT, 67XXD_PO	1	-	160
67XX_POBD, 67XXD_POBD	-	1	160
OPT	1 pc every min. 50 m of the route		172

The size of the clamps must be selected with regard to the diameter of the installed cable. A single-sided clamp can accommodate only one cable of the corresponding diameter, while a double clamp can hold two cables of the corresponding diameter. Clamps of type 6706_PO to 6725_PO can be installed two per bolt, creating a route for two cables of different diameters. For vertical routes longer than 3500 mm, it is necessary to create a relief curve or use the KPS cable clamp cover.



Cable relief bend

	power + data cables				
cable manufacturer	**cable type**	**classification (min)**	**classification document number**	**kg**	
cables from any manufacturer with verified fire performance		E90, P90-R, PS90	PK9-03-17-913-C-5	load of inserted cables	300

	power cables					
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**		**note**
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	JR-104-23-NURS	load of inserted cables	600	for conductor cross-section up to 16 mm²
	PRAFlaDur 90	E90, P90-R, PS90	JR-003-21-NURS	load of inserted cables	600	for conductor cross-section up to 16 mm²
	PRAFlaDur+T	E90, P90-R, PS90	JR-167-22-NURS	load of inserted cables	600	for conductor cross-section up to 16 mm²
NKT s.r.o.	NOPOVIC 60	E60, P60-R, PS60	JR-104-23-NURS	load of inserted cables	600	-
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-127-24-NURS	load of inserted cables	600	for conductor cross-section up to 16 mm²
Kablo Vrchlabí s.r.o.	1-CXKH-V	E90, P90-R, PS90	JR-101-23-NURS	load of inserted cables	600	for conductor cross-section up to 10 mm²
CICM s.r.o.	1-CXKE-V	E90, P90-R, PS90	CR-115-15-AUPS	load of inserted cables	600	for conductor cross-section up to 10 mm²
ELKOND HHK, a.s.	1-CXKH-V P60-R	E90, P90-R, PS90	JR-015-22-NURS	load of inserted cables	600	for conductor cross-section up to 10 mm²
Zakłady Kablowe BITNER Sp. z o.o.	BiTflame 1000	E90, P90-R, PS90	JR-127-24-NURS	load of inserted cables	600	for conductor cross-section up to 16 mm²
Klaus Faber AG	(N)HXH-J	E60, P60-R, PS60	JR-015-22-NURS	load of inserted cables	600	for conductor cross-section up to 16 mm²

	data cables					
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**		**note**
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-003-21-NURS	load of inserted cables	600	-
Kabelovna Kabex a.s.	CPDex JCXFE	E60, P60-R, PS60	JR-127-24-NURS	load of inserted cables	600	-
Kablo Vrchlabí s.r.o.	JXFE-V	E90, P90-R, PS90	JR-101-23-NURS	load of inserted cables	600	-
ELKOND HHK, a.s.	SHXKFH-V	E90, P90-R, PS90	JR-015-22-NURS	load of inserted cables	600	-
Zakłady Kablowe BITNER Sp. z o.o.	HTKSH	E90, P90-R, PS90	JR-127-24-NURS	load of inserted cables	600	-
Klaus Faber AG	JE-H(St)H	E90, P90-R, PS90	JR-015-22-NURS	load of inserted cables	600	-

kg max. load

spacing of mounting points

E90

cable clamps OMEGA

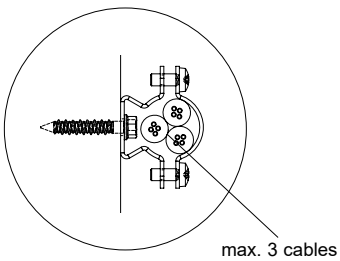
placement ceiling and wall, vertical route

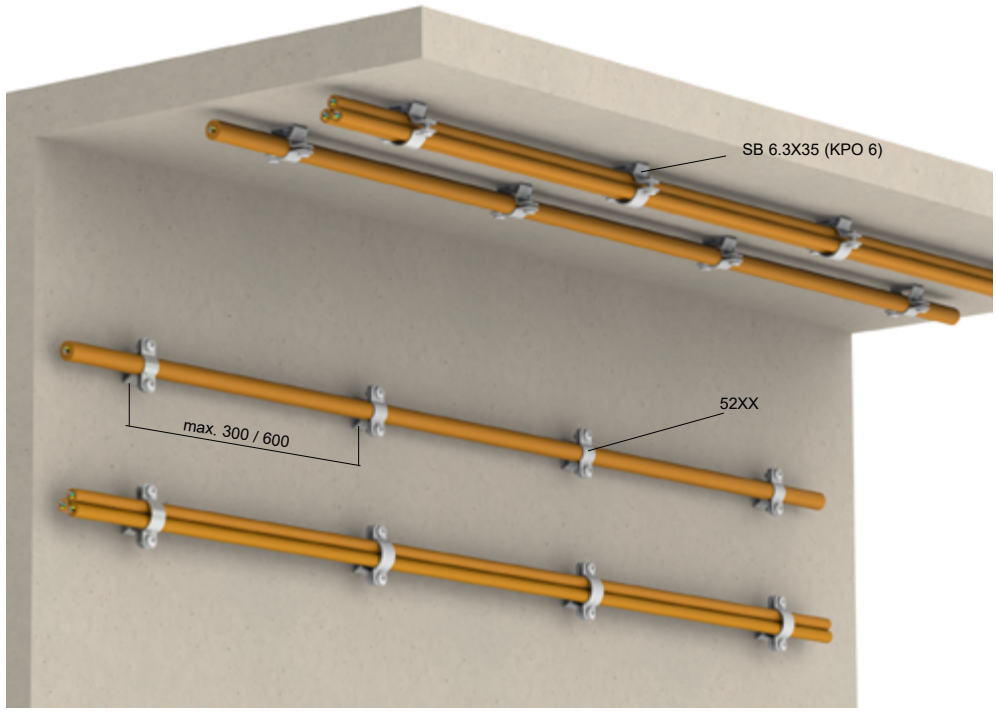
load of inserted cables (max. 3 pcs)

max. 300 - standardized constructions
max. 300 - vertical constructions
max. 600 - non-standardized constructions

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STN 92 0205

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List of products for one mounting point		
		page
52XX	1	161
OPT	1 pc every min. 50 m of the route	172

OMEGA clamp anchoring can also be carried out on threaded rods. This placement is advantageous when supporting walls are clad with thermal insulation. Threaded rod anchoring is performed through the thermal insulation directly onto the building structure, with proven fire performance. Clamps can also be used for vertical routes. For vertical routes longer than 3500 mm, it is necessary to create a relief curve or use the KPS cable clamp cover.

	power + data cables				
cable manufacturer	**cable type**	**classification (min)**	**classification document number**	**kg**	
cables from any manufacturer with verified fire performance		E90, P90-R, PS90	PK9-03-17-913-C-5	load of inserted cables	300

	power cables					
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**		**note**
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	JR-104-23-NURS	load of inserted cables	600	-
	PRAFlaDur 90	E90, P90-R, PS90	JR-003-21-NURS		600	-
	PRAFlaDur+T	E90, P90-R, PS90	JR-167-22-NURS		600	for conductor cross-section up to 16 mm²
NKT s.r.o.	NOPOVIC 60	E60, P60-R, PS60	JR-170-24-NURS		600	-
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-127-24-NURS		600	-
Kablo Vrchlabí s.r.o.	1-CXKH-V	E90, P90-R, PS90	JR-101-23-NURS		600	-
ELKOND HHK, a.s.	1-CXKH-V P60-R	E90, P90-R, PS90	JR-074-23-NURS		600	for conductor cross-section up to 10 mm²
	1-CXKH-V P90-R	E90, P90-R, PS90	JR-074-23-NURS		600	for conductor cross-section up to 10 mm²
Klaus Faber AG	(N)HXH-J	E30, P30-R, PS30	JR-015-22-NURS		600	-

	data cables					
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**		**note**
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-104-23-NURS	load of inserted cables	600	-
Kabelovna Kabex a.s.	CPDex JCXFE	E60, P60-R, PS60	JR-127-24-NURS		600	-
Kablo Vrchlabí s.r.o.	JXFE-V	E90, P90-R, PS90	JR-101-23-NURS		600	-
Klaus Faber AG	JE-H(St)H	E90, P90-R, PS90	JR-015-22-NURS		600	-

placement
spacing of mounting points
classification document number
max. load
certification according to standards

E90

cable clamps DOBRMAN

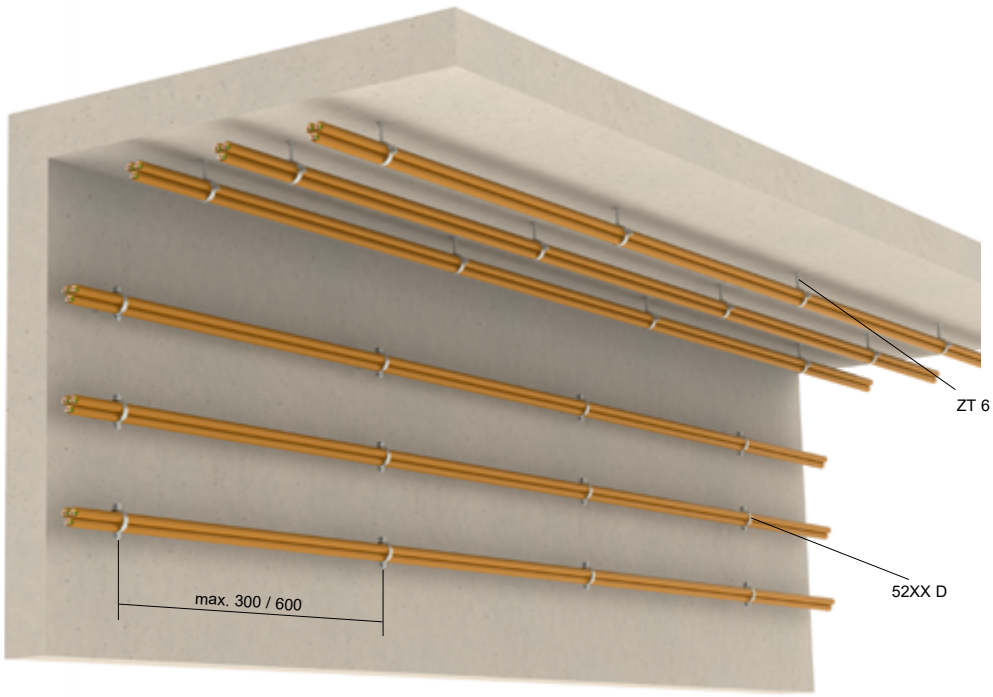
placement ceiling and wall, vertical route

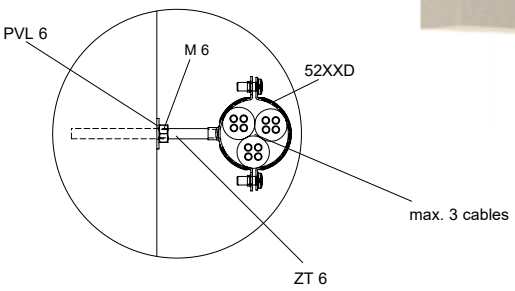
load of inserted cables (max. pcs)

max. 300 - standardized constructions
max. 300 - vertical constructions
max. 600 - non-standardized constructions

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STN 920205

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List of products for one mounting point		
		page
52XXD	1	161
M 6	1	99
PVL 6	1	100
ZT 6	1	98
OPT	1 pc every min. 50 m of the route	172

DOBRMAN clamp anchoring can also be carried out on threaded rods. This placement is advantageous in cases where the supporting walls are clad with thermal insulation. Threaded rod anchoring is performed through the thermal insulation directly onto the building structure, with proven fire performance. For vertical routes longer than 3500 mm, it is necessary to create a relief curve or use the KPS cable clamp cover. Clamps can also be used for vertical routes.

	power + data cables				
cable manufacturer	**cable type**	**classification (min)**	**classification document number**	**kg**	
cables from any manufacturer with verified fire performance		E90, P90-R, PS90	PK9-03-17-913-C-5	load of inserted cables	300

	power cables					
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**		**note**
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	JR-104-23-NURS	load of inserted cables	600	-
	PRAFlaDur 90	E90, P90-R, PS90	JR-003-21-NURS		600	-
	PRAFlaDur+T	E90, P90-R, PS90	JR-167-22-NURS		600	for conductor cross-section up to 16 mm²
ELKOND HHK, a.s.	1-CXKH-V P90-R	E90, P90-R, PS90	JR-015-22-NURS		600	for conductor cross-section up to 10 mm²
Klaus Faber AG	(N)HXH-J	E30, P30-R, PS30	JR-015-22-NURS		600	-

	data cables					
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**		**note**
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-104-23-NURS	load of inserted cables	600	-
ELKOND HHK, a.s.	SHXKFH-V	E90, P90-R, PS90	JR-015-22-NURS		600	-
Klaus Faber AG	JE-H(St)H	E90, P90-R, PS90	JR-015-22-NURS		600	-

placement
spacing of mounting points
classification document number
max. load
certification according to standards

grouped cable holder SD

placement on the wall and ceiling

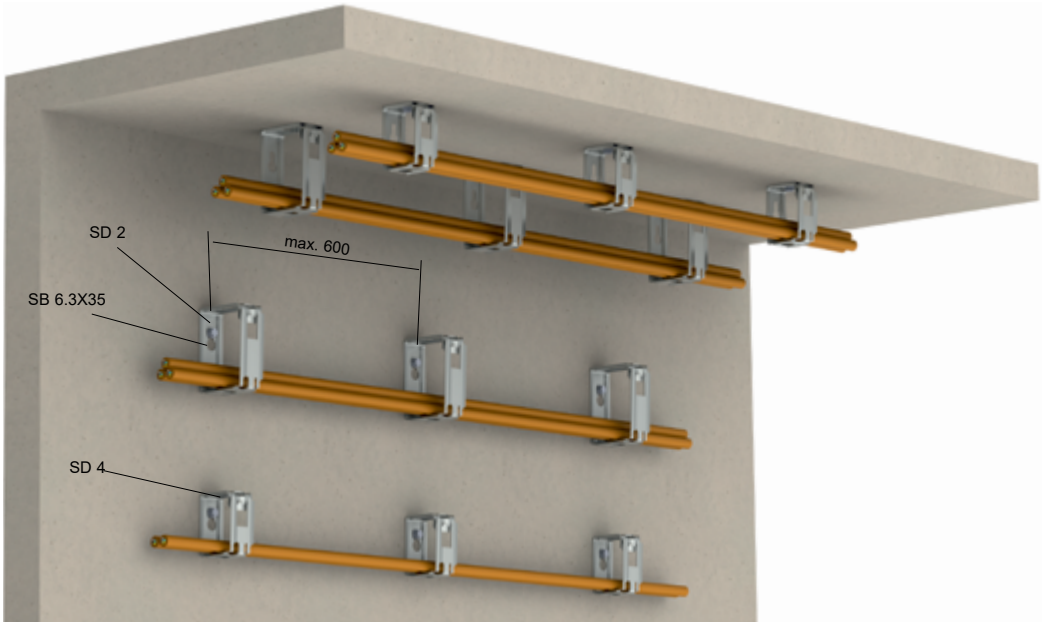
4,8 kg/m

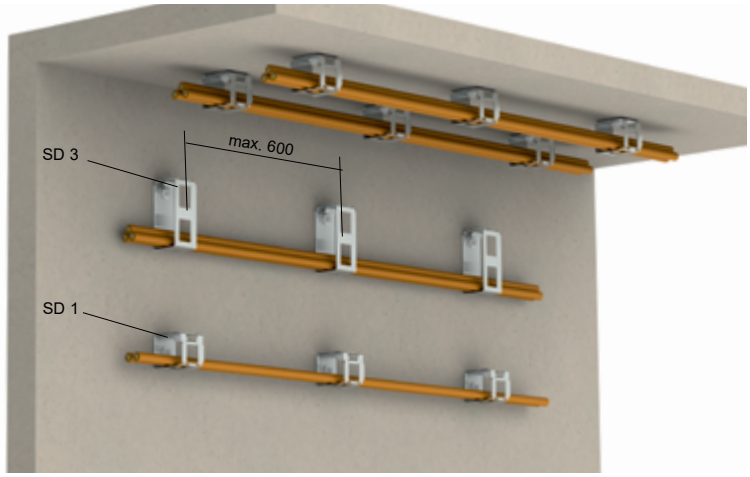
max. 600 mm

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possibility of nailing holders SD1 and SD3





List of products for one mounting point			
			page
SD 1, SD 3	1	-	163
SD 2, SD 4	-	1	163
OPT	1 pc every min. 50 m of the route		172

power cables						
cable manufacturer	cable type	classification (min)	standpoint number	kg		note
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E30, P30-R, PS30	JR-015-22-NURS	4,8	300	for conductor cross-section up to 16 mm²
	PRAFlaDur 90	E90, P90-R, PS90	JR-027-22-NURS	4,8	300	for conductor cross-section up to 16 mm²
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	FR-088-12-AUNS	4,8	300	for conductor cross-section up to 16 mm²
Klaus Faber AG	(N)HXH-J	P15-R, PS 15	JR-015-22-NURS	4,8	300	-
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E30, P45-R, PS45	JR-104-23-NURS	4,8	600	for conductor cross-section up to 16 mm²
NKT s.r.o.	NOPOVIC 60	E60, P60-R, PS60	JR-104-21-NURS	4,8	600	-
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-127-24-NURS	4,8	600	for conductor cross-section up to 16 mm²
Kablo Vrchlabí s.r.o.	1-CXKH-V	E30, P30-R, PS30	JR-101-23-NURS	4,8	600	for conductor cross-section up to 16 mm²
ELKOND HHK, a.s.	1-CXKH-V P60-R	E90, P90-R, PS90	JR-015-22-NURS	4,8	600	for conductor cross-section up to 10 mm²
Technokabel S.A.	NHXH-J	E90, P90-R, PS90	JR-112-22-NURS	4,8	600	-
Tele-Fonika Kable S.A.	FLAME-X 950	E30, P30-R, PS30	JR-149-20-NURS	4,8	600	-
Zakłady Kablowe BITNER Sp. z o.o.	BiTflame 1000	E90, P90-R, PS90	JR-127-24-NURS	4,8	600	for conductor cross-section up to 16 mm²

data cables						
cable manufacturer	cable type	classification (min)	standpoint number	kg		note
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-027-22-AUNS	4,8	300	-
Kabelovna Kabex a.s.	CPDex JCXFE	P15-R, PS 15	FR-088-12-AUNS	4,8	300	-
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E30, P45-R, PS 45	JR-101-23-NURS	4,8	600	-
Kablo Vrchlabí s.r.o.	JXFE-V	E60, P60-R, PS60	JR-101-23-NURS	4,8	600	-
ELKOND HHK, a.s.	SHXKFH-V	E60, P60-R, PS60	JR-074-23-NURS	4,8	600	-
Tele-Fonika Kable S.A.	FLAME-X 950 HTKSH	E30, P45-R, PS 45	JR-149-20-NURS	4,8	600	-
	FLAME-X 950 HDGs	E30, P30-R, PS 30	JR-149-20-NURS	4,8	600	-

E90

load bearing profile
NP + clamps PKC1

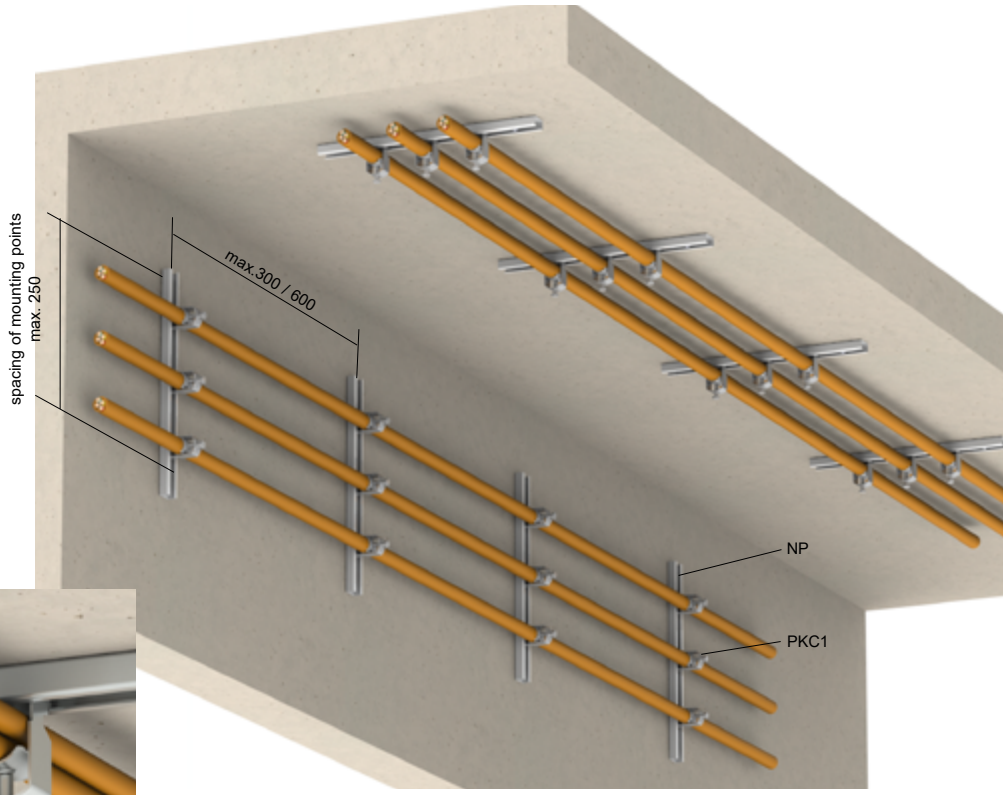
placement ceiling and wall,
vertical route

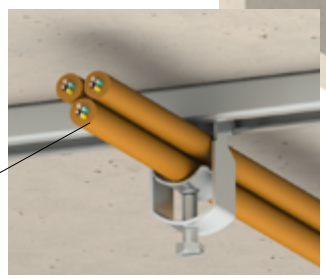
load of inserted cables (max. 3 pcs)

max. 300 - standardized constructions
max. 300 - vertical constructions
max. 600 - non-standardized constructions

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List of products for one mounting point		
		page
NP 30X15X1.20	1	87
NP 100 - NP 350	1	88
PKC1	based on cable diameter	96
OPT	1 pc every min. 50 m of the route	172

Clamps with supporting profiles can also be used for vertical routes.
For vertical routes longer than 3500 mm, it is necessary to create a relief curve or use the KPS cable clamp cover.

	power + data cables				
cable manufacturer	**cable type**	**classification (min)**	**classification document number**	**kg**	
cables from any manufacturer with verified fire performance		E90, P90-R, PS90	PK9-03-17-913-C-5	load of inserted cables	300

	power cables						
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**		**conductor cross-section (mm²)**
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	JR-003-21-NURS	load of inserted cables	600	-
	PRAFlaDur 90	E90, P90-R, PS90	JR-101-23-NURS		600	1,5 - 10
Kablo Vrchlabí s.r.o.	1-CXKH-V	E60, P60-R, PS60	JR-101-23-NURS		600	-

	data cables					
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**		**conductor cross-section (mm²)**
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E30, P45-R, PS45	JR-101-23-NURS	load of inserted cables	600	-
Kablo Vrchlabí s.r.o.	JXFE-V	E90, P90-R, PS90	JR-101-23-NURS		600	-

cable fastening SPK on threaded rods ZT

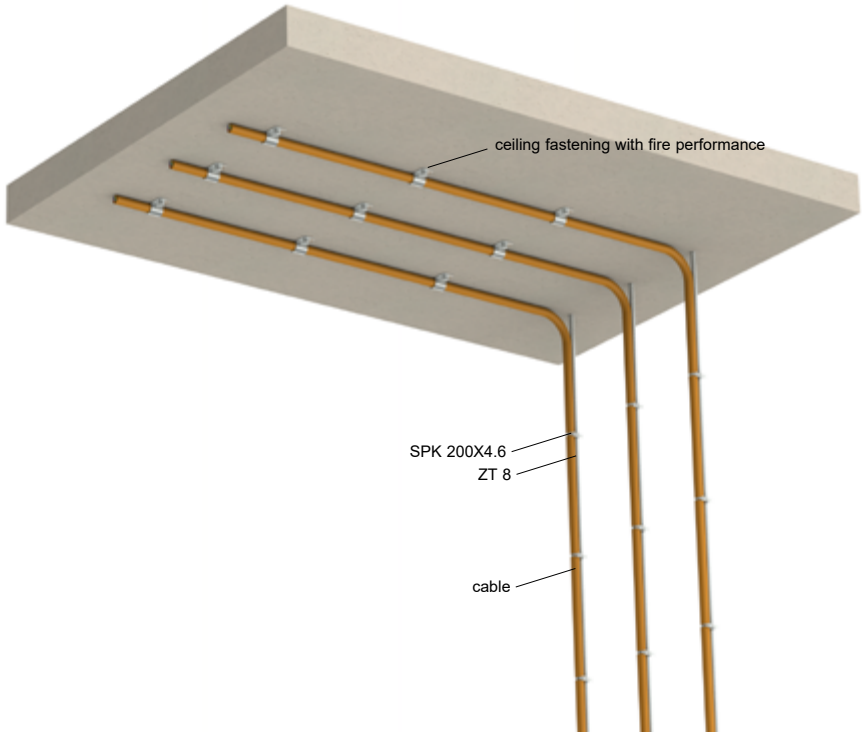
placement on ceiling

load of inserted cables
(max. 2 pcs per 1 pc threaded rods)

max. 300 mm

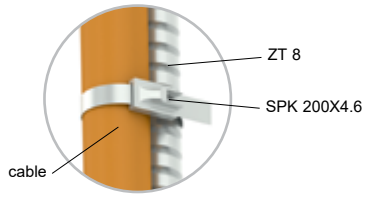
ČSN 730895
DIN 4102-12
STN 920205

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List of products for one mounting point		
		page
SPK 200X4.6	1	146
ZT 8	1	98
KPOZ 8	1	101
OPT	1 pc every min. 50 m of the route	172

The maximum length of the threaded rod is 2 m.



power cables						
cable manufacturer	cable type	classification (min)	standpoint number	kg	↔	note
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	JR-104-21-NURS	load of inserted cables	300	for conductor cross-section up to 10 mm²
	PRAFlaDur+T	E90, P90-R, PS90	JR-133-23-NURS		300	for conductor cross-section up to 16 mm²
NKT s.r.o.	NOPOVIC 90	E90, P90-R, PS90	JR-104-21-NURS		300	for conductor cross-section up to 6 mm²

steel pipes 60xx
clamps OMEGA

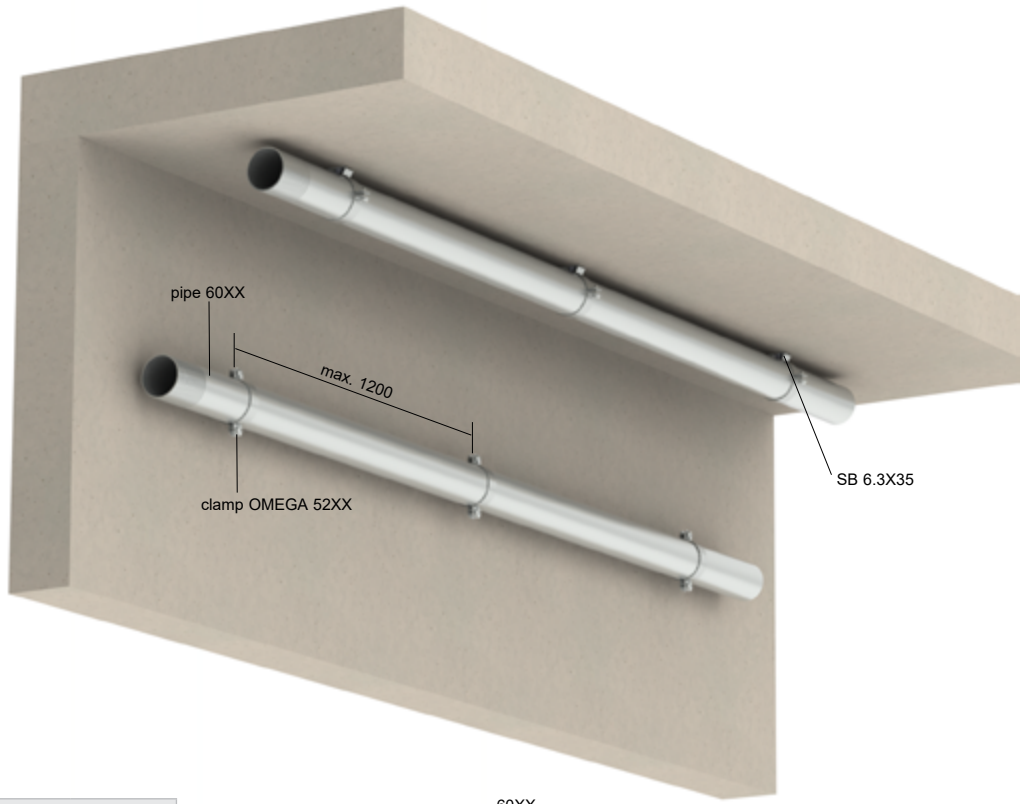
placement on the wall and ceiling

load of inserted cables (max. 1 cable per pipe)

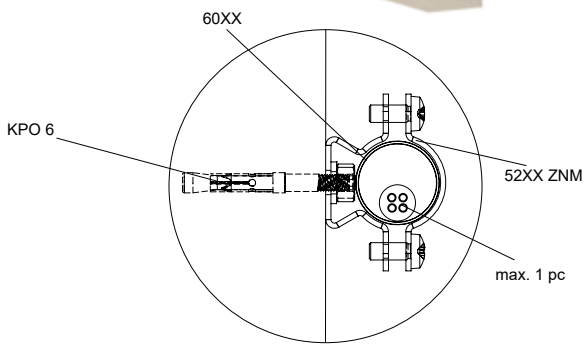
max. 1200 mm

ČSN 73 0895
DIN 4102-12
STN 92 0205

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List of products for one mounting point		
		page
52XX	1	161
OPT	1 pc every min. 50 m of the route	172



To connect ČSN pipes, it is necessary to order couplings that will replace the aluminum couplings supplied with the pipes. Couplings must also be replaced within pipe accessories (e.g. elbows, etc.) Pipe assemblies cannot be used to create vertical routes.

power cables						
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**		**pipe type (mm)**
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E60, P60-R, PS60	JR-021-22-NURS	load of inserted cables	1200	EN
	PRAFlaDur / PRAFLaDur+	E60, P60-R, PS60	JR-206-25-NURS		1200	ČSN
	PRAFlaDur+T	E30, P30-R, PS30	JR-170-24-NURS		1200	EN, for conductor cross-section up to 16 mm²
NKT s.r.o.	NOPOVIC 60	E60, P60-R, PS60	JR-170-24-NURS		1200	EN, for conductor cross-section up to 6 mm²
	NOPOVIC 60	E30, P30-R, PS30	JR-170-24-NURS		1200	EN, applicable to all cables
CICM s.r.o.	1-CXKE-V	E30, P30-R, PS30	JR-206-25-NURS		1200	ČSN
Technokabel S.A.	NHXH-J	E60, P60-R, PS60	JR-112-22-NURS		1200	ČSN

data cables						
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**		**pipe type (mm)**
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E60, P60-R, PS60	JR-021-22-NURS	load of inserted cables	1200	EN
	PRAFlaGuard F	E30, P30-R, PS30	JR-206-25-NURS		1200	ČSN
Kabelovna Kabex a.s.	CPDex JCXFE-V	E60, P60-R, PS60	JR-021-22-NURS		1200	EN
Technokabel S.A.	HTKSH	E30, P45-R, PS45	JR-112-22-NURS		1200	ČSN
	HDGS	E90, P90-R, PS90	JR-112-22-NURS		1200	ČSN
CICM s.r.o	JXFE	E60, P60-R, PS60	JR-206-25-NURS		1200	ČSN

halogen-free rigid pipes 15xxHF (40xxHF, 80xxHF) clamps OMEGA

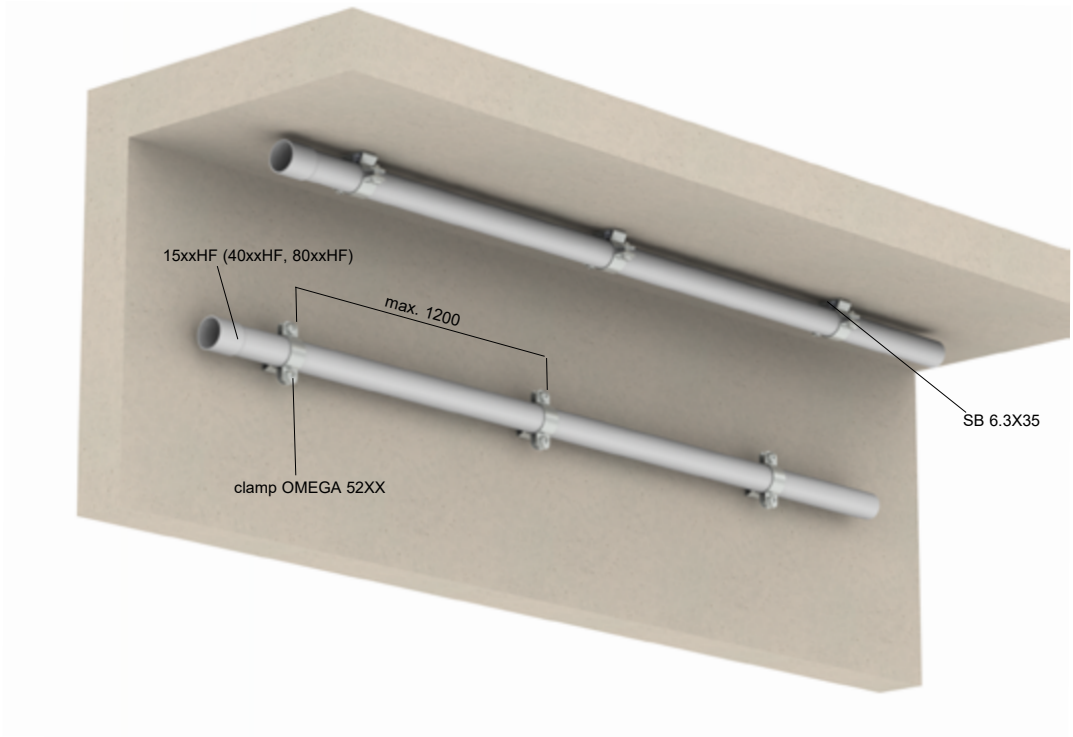
placement on the wall and ceiling

load of inserted cables (max. 1 cable per pipe)

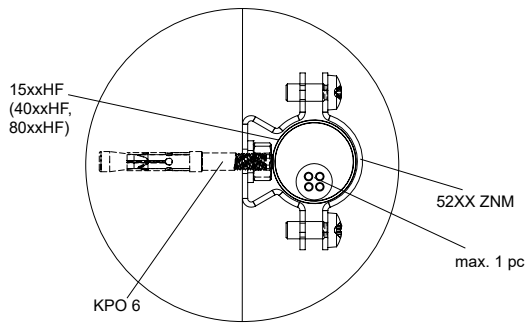
max. 1200 mm

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List of products for one mounting point		
		page
52XX	1	161
OPT	1 pc every min. 50 m of the route	172



The assembly cannot be used to form an ascending route.

power cables						
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**load**	**spacing**	**note**
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E90, P90-R, PS90	JR-123-24-NURS	load of inserted cables	600	max. 3 cables per conduit for conductor cross-section up to 16 mm²
	PRAFlaDur+T	E90, P90-R, PS90	JR-133-23-NURS	load of inserted cables	600	for conductor cross-section up to 16 mm²
NKT s.r.o.	NOPOVIC 60	E90, P90-R, PS90	JR-104-21-NURS	load of inserted cables	1200	-
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-127-24-NURS	load of inserted cables	600	-
Kablo Vrchlabí s.r.o.	1-CXKH-V	E60, P60-R, PS60	JR-101-23-NURS	load of inserted cables	600	for conductor cross-section up to 16 mm²
Technokabel S.A.	NHXH-J	E90, P90-R, PS90	JR-112-22-NURS	load of inserted cables	1200	-

data cables						
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**load**	**spacing**	**note**
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-127-24-NURS	load of inserted cables	600	-
Kabelovna Kabex a.s.	CPDex JCXFE-V	E30, P45-R, PS45	JR-127-24-NURS	load of inserted cables	600	-
Kablo Vrchlabí s.r.o.	1-CXKH-V	E90, P90-R, PS90	JR-101-23-NURS	load of inserted cables	600	-
Technokabel S.A.	HTKSH	E90, P90-R, PS90	JR-112-22-NURS	load of inserted cables	1200	-
	HDGS	E90, P90-R, PS90	JR-112-22-NURS	load of inserted cables	1200	-

halogen-free rigid pipes 15xxHF (40xxHF, 80xxHF) clamps DOBRMAN

placement on the wall and ceiling

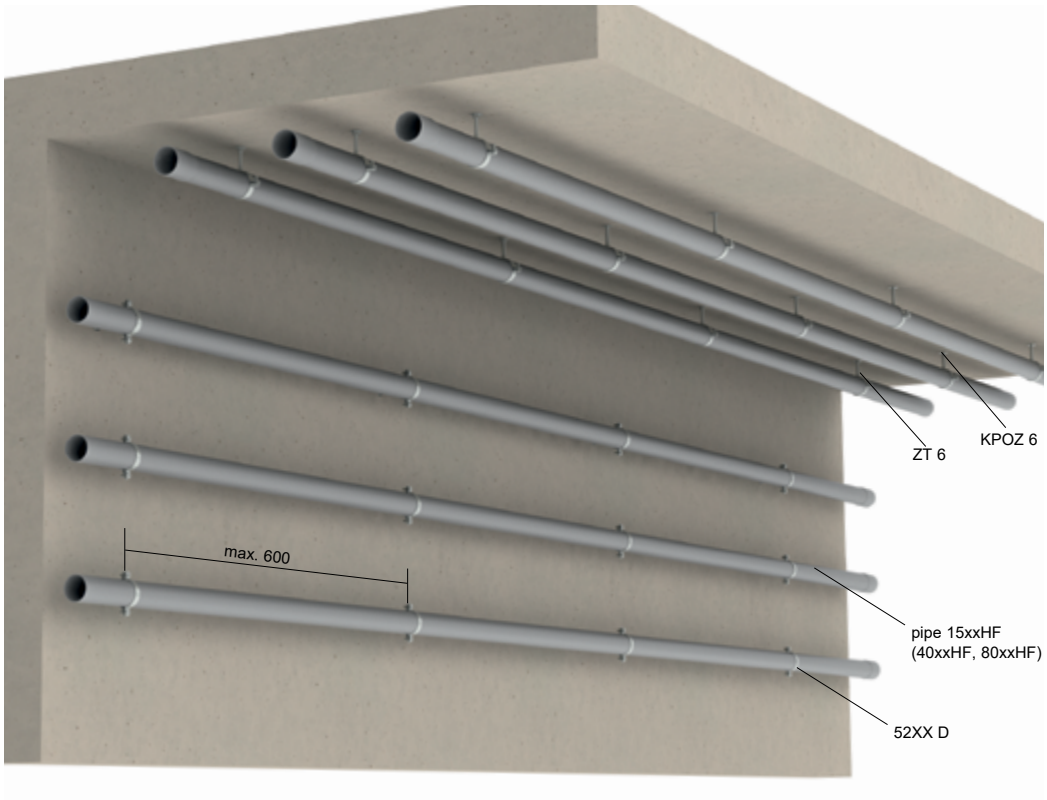
load of inserted cables (max. 2 cables per 1 pipe)

max. 600 mm

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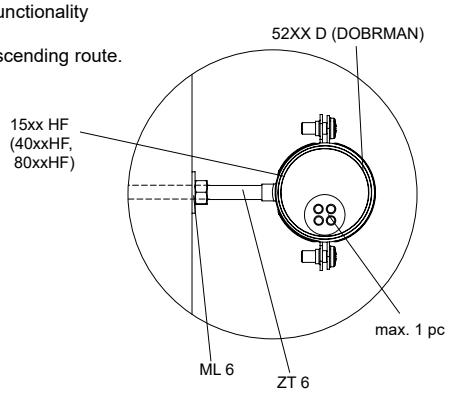
PK9-03-17-913-C-5

HF



List of products for one mounting point		
		page
52XX D	1	161
ML 6	1	99
ZT 6	1	98
OPT	1 pc every min. 50 m of the route	172

DOBRMAN clamps can also be attached to threaded rods. This placement is an advantage in the case of insulating the supporting walls with thermal insulation. Anchoring of threaded rods is performed through thermal insulation directly to the building structure with proven functionality in the event of a fire.
The assembly cannot be used to create an ascending route.



power cables					
cable manufacturer	cable type	classification (min)	standpoint number	kg	
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E60, P60-R, PS60	JR-127-24-NURS	load of inserted cables	600
Kabelovna Kabex a.s.	CPDex 1-CHKE-V	E90, P90-R, PS90	JR-127-24-NURS	load of inserted cables	600
Technokabel S.A.	NHXH-J	E90, P90-R, PS90	JR-127-24-NURS	load of inserted cables	600
Zakłady Kablowe BITNER Sp. z o.o.	BiTflame 1000	E90, P90-R, PS90	JR-127-24-NURS	load of inserted cables	600

data cables					
cable manufacturer	cable type	classification (min)	standpoint number	kg	
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E90, P90-R, PS90	JR-133-23-NURS	load of inserted cables	600
Kabelovna Kabex a.s.	CPDex JCXFE-V	E30, P45-R, PS45	JR-127-24-NURS	load of inserted cables	600
Zakłady Kablowe BITNER Sp. z o.o.	HTKSH	E90, P90-R, PS90	JR-127-24-NURS	load of inserted cables	600

halogen-free trunkings
LHD 40X20 HF
clamps 67XX_PO

placement on the wall and ceiling

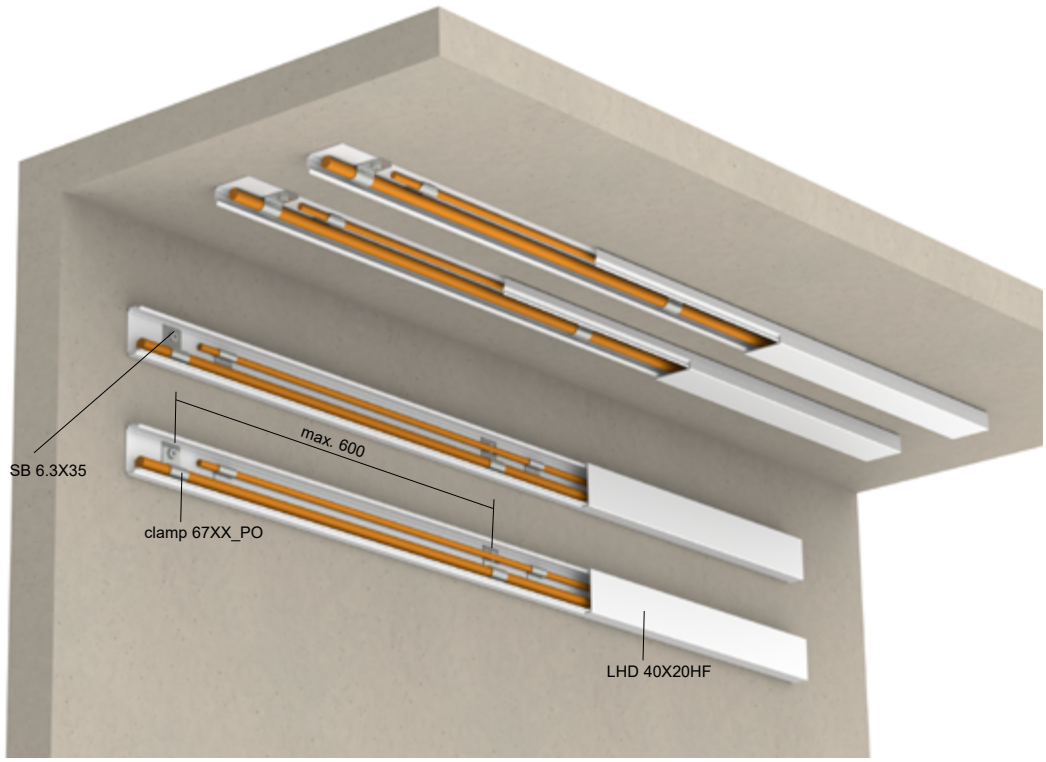
load of inserted cables (max. 2 cables per 1 wiring trunking)

max. 600 mm

ČSN 730895
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STN 920205

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HF



List of products for one mounting point		
		page
67xx_PO	1	160
OPT	1 pc every min. 50 m of the route	172

Maximum clamp size is 6710_PO.

power cables						
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**		**note**
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E60, P60-R, PS60	JR-101-23-NURS	load of inserted cables	600	for conductor cross-section up to 6 mm²
Kablo Vrchlabí s.r.o.	1-CXKH-V	E90, P90-R, PS90	JR-101-23-NURS	load of inserted cables	600	only for 4x1.5 cable

data cables						
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**		**note**
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E60, P60-R, PS60	JR-101-23-NURS	load of inserted cables	600	-
Kablo Vrchlabí s.r.o.	JXFE-V	E90, P90-R, PS90	JR-101-23-NURS	load of inserted cables	600	-

halogen-free parapet channels PK 110X65 D HF

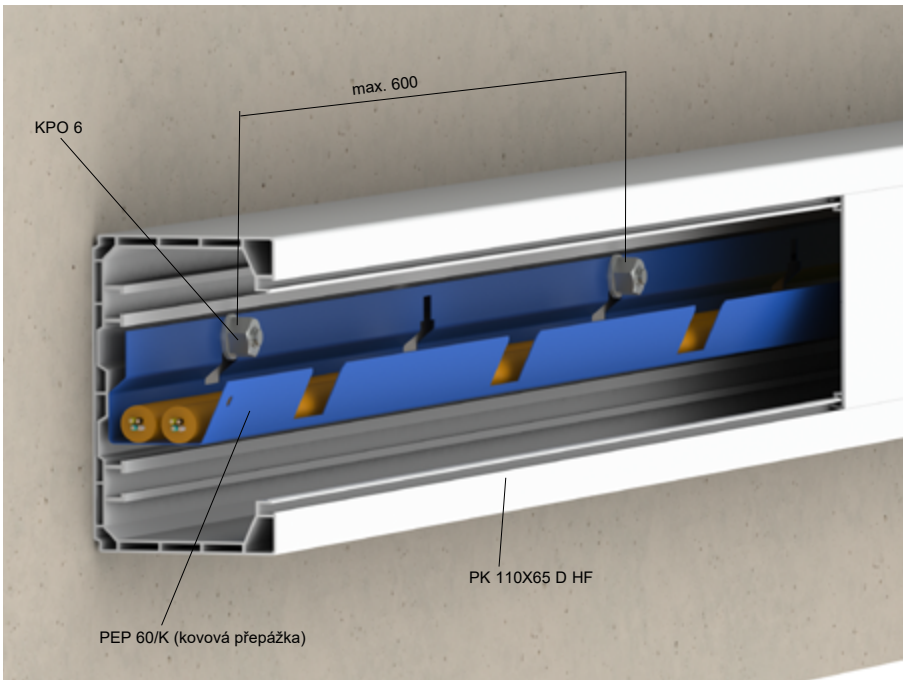
placement on the wall

load of inserted cables (max. 2 pcs)

max. 600 mm

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List of products for one mounting point		
		page
PEP 60/K	1	164
KPO 6	1	100
OPT	1 pc every min. 50 m of the route	172

power cables						
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**	**↔**	**conductor cross-section (mm²)**
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaDur / PRAFLaDur+	E30, P30-R, PS30	JR-123-24-NURS	load of inserted cables	400	10
NKT s.r.o.	NOPOVIC 60	E90, P90-R, PS90	JR-104-21-NURS	load of inserted cables	600	10
Kablo Vrchlabí s.r.o.	1-CXKH-V	E30, P30-R, PS30	JR-101-23-NURS	load of inserted cables	600	10

data cables						
cable manufacturer	**cable type**	**classification (min)**	**standpoint number**	**kg**	**↔**	**conductor cross-section (mm²)**
PRAKAB Pražská Kabelovna s.r.o.	PRAFlaGuard F	E30, P30-R, PS30	JR-123-24-NURS	load of inserted cables	400	-

FIRE-RESISTANT BOXES



KPZ

FIRE RATED DEVICE BOXES



SUITABLE FOR SOUND-PROOF WALLS WITH ATTENUATION UP TO 69 D

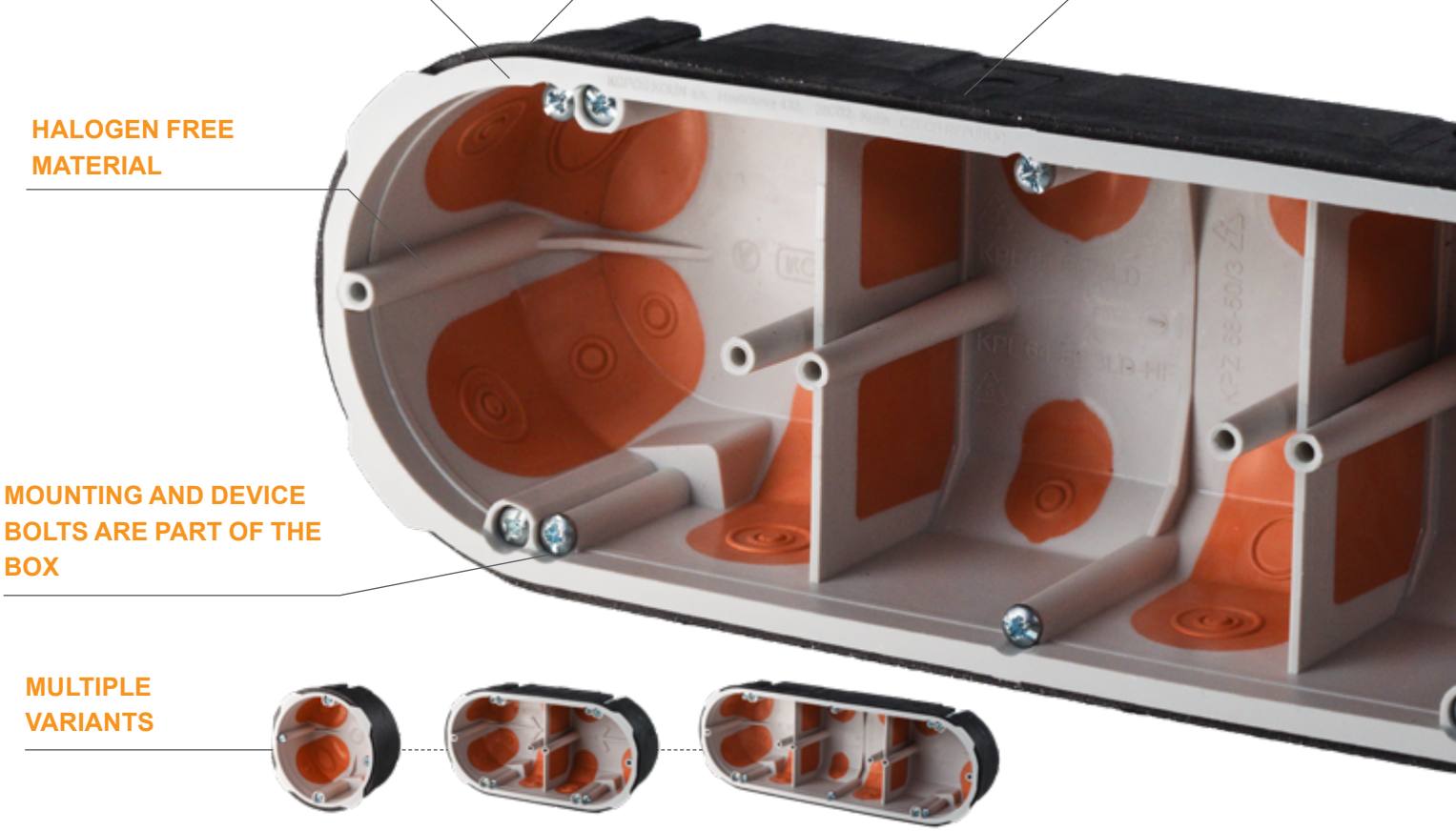
DRILL DIAMETER FOR INSTALLATION 73 MM

FOAMING MATERIAL ENSURING INTEGRITY AND EI 90 INSULATION

HALOGEN FREE MATERIAL

MOUNTING AND DEVICE BOLTS ARE PART OF THE BOX

MULTIPLE VARIANTS



EI 120

fire resistant wiring instrument box KPZ-1

placement on the wall

73 mm

850 °C

A1 - F

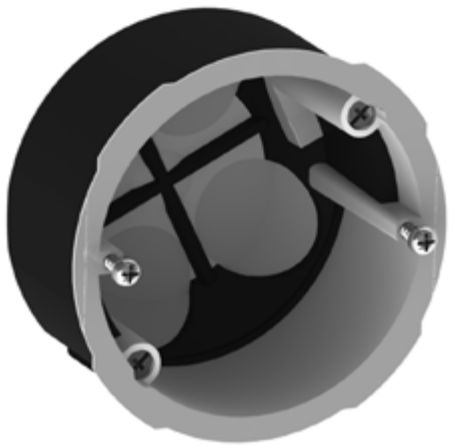
IP 30

ČSN EN 1363-1
ČSN EN 1364-1
ČSN EN 1366-3
ČSN 73 0810

PKO-19-031

HF

I - insulation
E - integrity



KPZ-1_PO

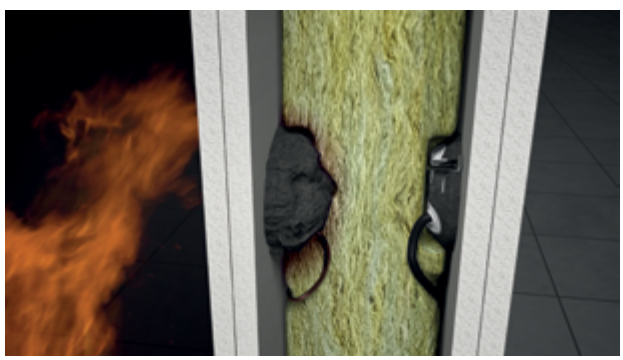
Fire resistant instrument box in a non-support wall

The KPZ-1_PO fire resistant box is intended for fire dividers formed by fireproof plasterboard or for aerated concrete structures. The box is designed for electrical distribution with a voltage up to 400 V. Its advantage is that the inlet openings are made of softened material, which ensures airtight passage between the box and the cable or pipe installed in it. Foaming material is applied to the outer and inner side of the box, which, in the event of a fire, closes the mounting hole - thus ensuring the integrity and insulation of the fire dividers even at the location of the devices. Its use prevents the spread of fire between individual fire sections in the event of a fire.
The box can be used in non-load-bearing fire walls made of 2x12.5 mm SDK with or without mineral wool, or in aerated concrete structures.

The diameter of the drill for installation is 73 mm. The mounting bolts are equipped with a three-way thread and metal flap for quick installation. The use of this box is mainly in buildings with an increased need for protection of people and property in the event of a fire.

Use of boxes – maximum 3 pcs side by side horizontally and maximum 2 pcs vertically.





Demonstration of the behavior of fire instrument box

EI 90

fire resistant wiring instrument box KPZ 68XX_PO

placement on the wall

73 mm

850 °C

A1 - F

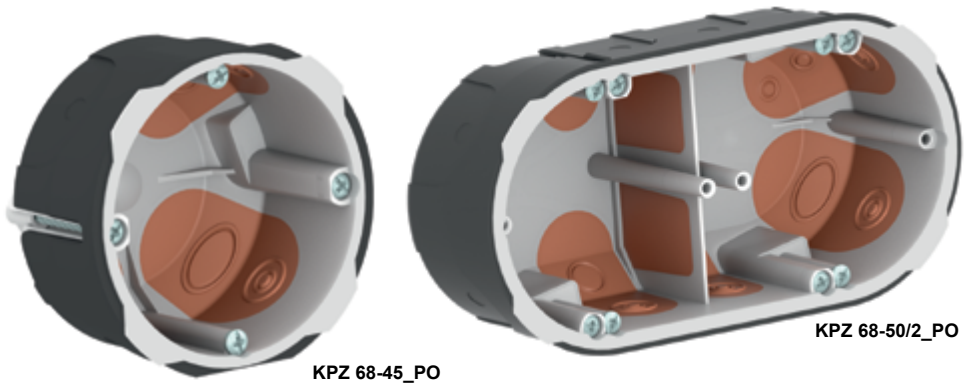
IP 30

ČSN EN 1363-1
ČSN EN 1364-1
ČSN EN 1366-3
ČSN 73 0810

PKO-23-094

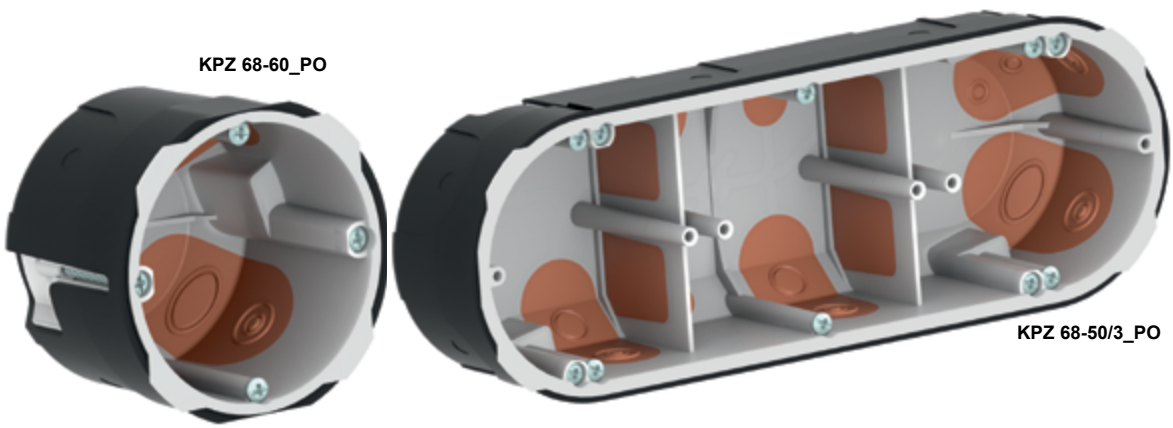
HF

I - insulation
E - integrity



KPZ 68-45_PO

KPZ 68-50/2_PO



KPZ 68-60_PO

KPZ 68-50/3_PO

Fire resistant instrument boxes in a non-support wall

Fire-resistant boxes are designed for fire partition walls made of fire-resistant plasterboard. The boxes are designed for electrical installations with a voltage of up to 400 V. They have the advantage that the inlets are made of a softened material which ensures airtightness between the box and the cable or pipe installed in it.
A foaming material is on the outside of the boxes, which in the event of a fire will seal the mounting hole - this ensures the integrity and insulation of the fire partitions and the location of the devices. Their use therefore prevents the spread of fire and smoke in the event of a fire. The boxes can be used both in fire-resistant partitions with or without mineral wool. With wool the boxes provide integrity and insulation for up to 90 minutes, i.e. EI 90, without wool up to EI 60. The drill diameter for the installation of single boxes is 73 mm.

The mounting bolts are equipped with a three-way thread and metal flap for quick installation.
The box can be used in non-load-bearing fire walls made of 2x12.5 mm SDK with or without mineral wool, or in aerated concrete structures..

The use of this box is mainly in buildings with an increased need for protection of people and property in the event of a fire.

Use of boxes – maximum 3 pcs side by side horizontally and maximum 3 pcs vertically.

Permissible technical parameters of the route			
box type	**max. number of side by side position**	**max. number above each other position**	**opposing each other**
KPZ 68-45_PO	3	3	YES
KPZ 68-50/2_PO	1	1	NO
KPZ 68_50/3_PO	1	1	
KPZ 68-60_PO	3	3	



Demonstration of the behavior of fire instrument box

placement
drill bit diameter for installation
class of reaction to fire of the base material
flaming loop test
Degree of protection
certification according to standards
classification document number
sound insulation up to 69 dB
EI 90 - integrity and insulation 90 min.
halogen-free material

E90

fire resistant boxKSK
for power and data cables

placement on the wall and ceiling

850 °C

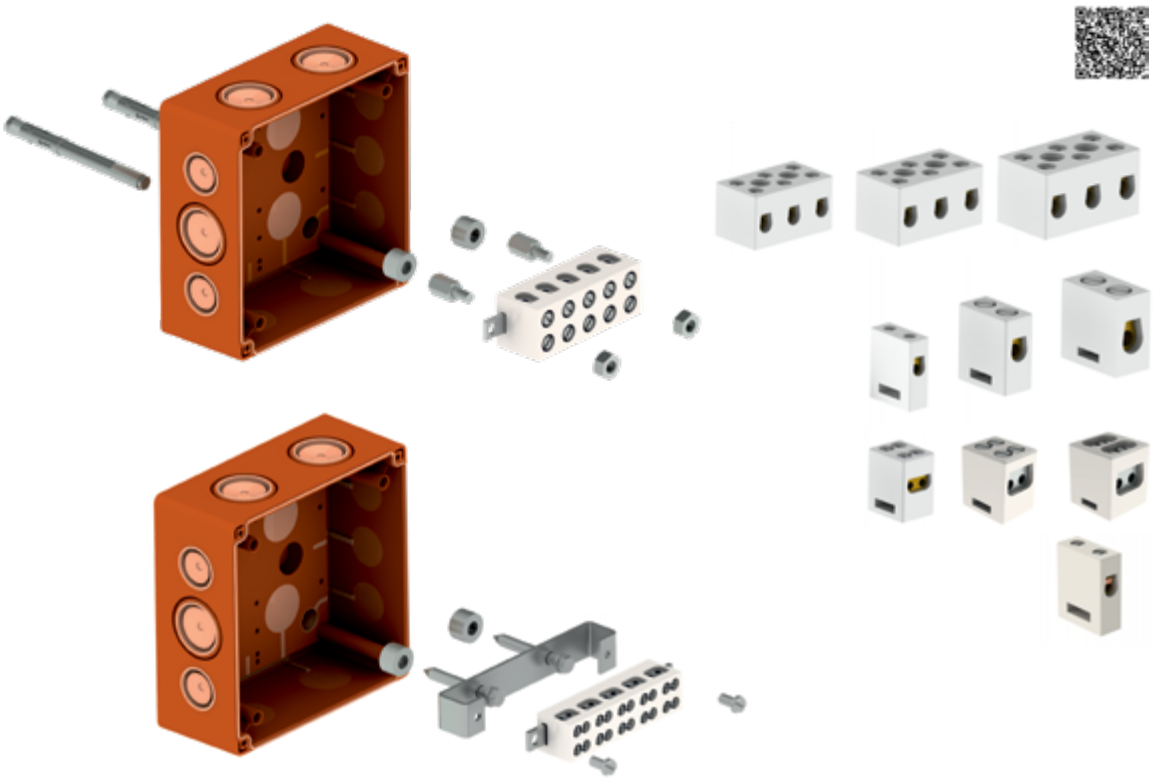
A1 - F

IP 66

ČSN 73 0895
DIN 4102-12
STN 92 0205

PK9-03-17-913-C-5

HF



The boxes can be part of either standard or non-standard supporting structure.
Information on suitable cable types for non-standard structures can be found in the individual assemblies. For standard structures, any cable manufacturer providing functional integrity can be used. Individual ceramic terminals do not form a fire-resistant route. The TP_PO fuse, as well as multiple fuses, can be used for all types of boxes. Individual KS_XX terminals can be interchanged with each other, provided that the other box parameters remain unchanged.

power boxes	fire resistance classification	dimension (mm)	type / number of ceramic terminal	conductor cross-section (mm²)	concrete anchoring
KSK 100_PO	E90, P90-R, PS90	101 x 101 x 63	5 pcs single-pole ceramic terminals	1,5 - 6	KPO 6X50
KSK 125_PO10	E90, P90-R, PS90	126 x 126 x 76	5 pcs single-pole ceramic terminals	1,5 - 10	SB 6.3X45
KSK 175_PO16	E90, P90-R, PS90	176 x 126 x 90	5 pcs single-pole ceramic terminals	1,5 - 16	SB 6.3X45
KSK 100_PO4J	E90, P90-R, PS90	101 x 101 x 63	1 pc three-pole ceramic terminal	1,5 - 4	KPO 6X50
KSK 100_PO6J	E90, P90-R, PS90	101 x 101 x 63	1 pc three-pole ceramic terminal	1,5 - 6	KPO 6X50
KSK 100_PO10J	E90, P90-R, PS90	101 x 101 x 63	1 pc three-pole ceramic terminal	1,5 - 10	KPO 6X50
KSK 125_2PO6	E90, P90-R, PS90	126 x 126 x 76	5 pcs double-pole ceramic terminals	1,5 - 6	SB 6.3X45
KSK 175_2PO10	E90, P90-R, PS90	176 x 126 x 90	5 pcs double-pole ceramic terminals	1,5 - 10	SB 6.3X45
KSK 175_2PO16	E90, P90-R, PS90	176 x 126 x 90	4 pcs double-pole terminals + 1 pc grounding clamp	1,5 - 16	SB 6.3X45
KSK 125_PO6P	E90, P90-R, PS90	126 x 126 x 76	5 pcs single-pole, 1 pc double-pole + fuse	1,5 - 6	SB 6.3X45
KSK 175_PO10P	E90, P90-R, PS90	176 x 126 x 90	5 pcs single-pole, 1 pc double-pole + fuse	1,5 - 10	SB 6.3X45

data boxes	fire resistance classification	dimension (mm)	type / number of ceramic terminal	conductor cross-section (mm²)	concrete anchoring
KSK 125_DPO	E90, P90-R, PS90	126 x 126 x 76	8 pcs data ceramic terminals	0,5 - 4	SB 6.3X45
KSK 175_DPO	E90, P90-R, PS90	176 x 126 x 90	14 pcs data ceramic terminal	0,5 - 4	SB 6.3X45

E90

metal fire-resistant boxes KPK for power and data cables

placement on the wall and ceiling

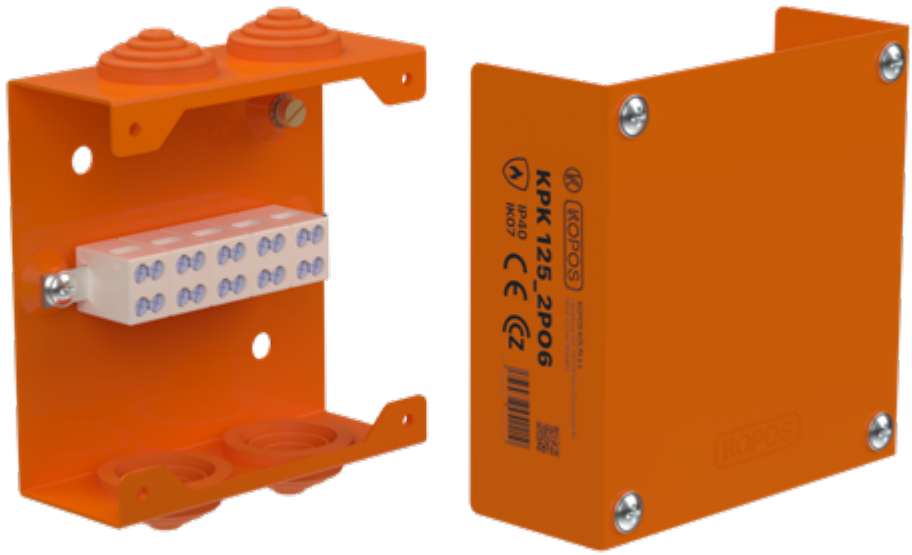
IP 40

IK07

ČSN 73 0895
DIN 4102-12
STN 92 0205

PK9-03-17-913-C-5

HF



The boxes can be part of either standard or non-standard supporting structure.
Information on suitable cable types for non-standard structures can be found in the individual assemblies. For standard structures, any cable manufacturer providing functional integrity can be used. Individual ceramic terminals do not form a fire-resistant route. The TP_PO fuse, as well as multiple fuses, can be used for all types of boxes. Individual KS_XX terminals can be interchanged with each other, provided that the other box parameters remain unchanged.

power boxes	fire resistance classification	dimension (mm)	type / number of ceramic terminal	conductor cross-section (mm²)	anchoring included in the package
KPK 125_PO6	E90, P90-R, PS90	126 x 126 x 48	5 pcs single-pole ceramic terminals	1,5 - 6	SB 6.3X45
KPK 125_PO10	E90, P90-R, PS90	126 x 126 x 48	5 pcs single-pole ceramic terminals	1,5 - 10	SB 6.3X45
KPK 125_PO16	E90, P90-R, PS90	126 x 126 x 48	5 pcs single-pole ceramic terminals	1,5 - 16	SB 6.3X45
KPK 200_PO10	E90, P90-R, PS90	190 x 203 x 75	5 pcs single-pole ceramic terminals	1,5 - 10	SB 6.3X45
KPK 200_PO16	E90, P90-R, PS90	190 x 203 x 75	5 pcs single-pole ceramic terminals	1,5 - 16	SB 6.3X45
KPK 125_2PO6	E90, P90-R, PS90	126 x 126 x 48	5 pcs double-pole ceramic terminals	1,5 - 6	SB 6.3X45
KPK 200_2PO10	E90, P90-R, PS90	190 x 203 x 75	5 pcs double-pole ceramic terminals	1,5 - 10	SB 6.3X45
KPK 200_2PO16	E90, P90-R, PS90	190 x 203 x 75	5 pcs double-pole ceramic terminals	1,5 - 16	SB 6.3X45

data boxes	fire resistance classification	dimension (mm)	type / number of ceramic terminal	conductor cross-section (mm²)	anchoring included in the package
KPK 125_DPO	E90, P90-R, PS90	126 x 126 x 48	8 pcs data ceramic terminals	0,5 - 4	SB 6.3X45
KPK 200_DPO16	E90, P90-R, PS90	190 x 203 x 75	16 pcs data ceramic terminals	0,5 - 4	SB 6.3X45
KPK 250_DPO30	E90, P90-R, PS90	223 x 250 x 75	30 pcs data ceramic terminals	0,5 - 4	SB 6.3X45

basic anchoring material for assemblies with fire resistance functionality				
base material	**item**	**max. load kg/ pc**	**use with products**	**certification**
Concrete Solid masonry	KPOZ 6_PO	52	cable trays MARS, JUPITER, wire cable trays, cable ladders and other systems with functional integrity, suspended on threaded rods ZT 8, ZT 10, or fastened with bolts with threads M6, M8, M10	ETA 16/0783
	KPOZ 8_PO	102		
	KPOZ 10_PO	155		
	SB 6.3X35_POGMT	10	cable trays MARS, JUPITER, wire cable trays, cable ladders and other systems with functional integrity	test protocol No. 090-040009/2590
	SB 6.3X45_POGMT	10		
		tension / shear		ETA-01/0013
	KPO 6X50_PO	500/430		
	KPO 6X70_PO	500/430		
	KPO 8X77_PO	480/930		
	KPO 8X97_PO	670/930		
	KPO 8X110_PO	670/930		
	KPO 10X95_PO	590/1500		
	KPO 10X115_PO	590/1500		
	KPO 10X175_PO	950/1220		
	KPO 12X120_PO	1050/2110		
	KBS 6X35 M8/M10_PO/POF	60/24	cable trays MARS, JUPITER, wire cable trays, cable ladders and other systems with functional integrity suspended on threaded rods ZT 8 or ZT 10	ETA-15/0352
Sheet metal up to a thickness of 2 mm	STP 4.2X13_PO	load of inserted cables	clamps 67xx_PO and other systems with functional integrity in conjunction with sheet metal up to 2.0 mm thick	DoP No. 0618-CPF-0016
				DoP No. W0005
Aerated concrete	KHP 6X32_PO + SB 6,3X35_POGMT	4	clamps 67xx_PO, OMEGA, grouped cable holder SD 2, SD 4 and other systems with functional integrity	FR-026-25-AUNS
	KHP 8X38_PO + SB 6,3X45_POGMT	4		
	KHP 6X32_PO + SVD 30_PO	4	clamps DOBRMAN and other systems with functional integrity with external thread M6	FR-026-25-AUNS, FR-243-23-AUNS, FR-205-19-AUNS, FR-327-22-AUNS
	KHP 8X38_PO + SVD 40_PO	4		
	KHP 6X32_PO + KVD 6X40_PO	4	clamps 67xx_PO, OMEGA, grouped cable holder SD 2, SD 4 and other systems with functional integrity	
	KHP 8X38_PO + KVD 6X50_PO	4		
	KHP 8X60_PO + KVD 6X60_PO	4		
Wood Wood-based materials	KVD 5X16_PO	load of inserted cables	clamps 67xx_PO, OMEGA, grouped cable holder SD 2, SD 4 and other systems with functional integrity	ETA-19/0175
	KVD 5X20_PO			
	KVD 5X25_PO			
	KVD 5X30_PO			
	KVD 5X40_PO			
	KVD 5X50_PO			
	KVD 5X60_PO			
	KVD 5X70_PO			
	KVD 6X40_PO			
	KVD 6X50_PO			
	KVD 6X60_PO			
I-profile	US 1_ZNCR	20	cable traysMARS, JUPITER, wire cable trays, cable ladders and other systems with functional integrity suspended on threaded rods ZT 8	No. Pr-08-2.114
Trapezoidal sheet metal	DSOS 8_ZNCR	12	cable trays MARS, JUPITER, wire cable trays, cable ladders and other systems with functional integrity suspended on threaded rods ZT 8 or ZT 10	PK9-03-17-913-C-5
	DSOS 10_ZNCR	12		
Nailing	ZZT 6_PO	30	cable trays MARS, JUPITER, wire cable trays, cable ladders and other systems with functional integrity suspended on threaded rods ZT 8 or ZT 6	JR-023-21-NURS, JR-026-21-NURS, JR-079-17-NURE
	ZZT 8_PO	50		
	UVD 6_PO	30	clamps DOBRMAN, OMEGA, alternatively, other accessories with M6 and M8 threads	
	UVD 8_PO	50		

Fire resistance classification: E30 to E90, P15-R to P90-R, PS15 to PS90

note
KPOZ 
SB 
KPO 
KBS 
STP 
KHP  SB 
KHP  SVD 
KHP  KVD 
KVD 
US 1 
DSOS 
ZZT 6  ZZT 8 
UVD 6  UVD 8 


KOPOS

11 TECHNICAL INFORMATION



standards and regulations

The entire system of cable trays, cable ladders and accessories is tested in EZÚ (Electrotechnical Testing Institute) and meets the requirements of the standard ČSN EN 61537:02 – Cable management – cable ladder systems and cable grid systems. All products comply with EU requirements.

surface treatments and protection against corrosion

One of the important criteria in the selection of cable bearing systems is the choice of the correct surface treatment of the products and thus the prevention of corrosion. A common method of protecting steel against corrosion is to create protective coatings that provide a barrier between the steel and the corrosive environment. The most frequently used metal, which is able to ensure the long-term life of a steel part in protection against atmospheric corrosion, is zinc. Depending on the environment in which the system will be used, it is necessary to choose the correct method of applying the zinc protective layer.
If anti-corrosion surface treatments are not sufficient for the requirements, stainless steel products are available.
The requirements for surface treatment are not always only protective, for aesthetic or distinguishing reasons, it is possible to paint the products.

S
PO
VS



Continuous galvanizing by the Sendzimir method – ČSN EN 10346, ČSN EN 10143
A method of galvanizing, where a cold-rolled steel strip passes through a zinc bath after degreasing, pickling and annealing. The zinc layer is leveled and smoothed with scraper knives and the sheet is wound into coils.
The products are therefore made from coils or sheets already protected with a layer of zinc. Factory cuts are protected by cathodic protection. This means that the zinc ions will move to the damaged part of the steel sheet.
The sheet metal used for KOPOS products has a coating designation of Z275, which corresponds to a zinc layer of 13-27 µm.
The surface treatment is used on cable trays, cable ladders, fittings and accessories for cable routes.
Suitable for indoor environments.

ZNCR
VEZ



Electrolytic (galvanic) galvanizing - ČSN EN ISO 2081, ČSN EN 12329, DIN 50961
Galvanic galvanizing is an electrolytic process in which a zinc coating is precipitated on the finished steel product in an electrolytic bath. The zinc coating layer is 8-12 µm thick. To increase corrosion resistance, the zinc layer is passivated with chrome as standard. The resulting surface is smooth and shiny. The surface treatment is used on wire cable trays and fixing and connecting material.
Suitable for indoor environments.

ZM



Magnelis® - Continuous galvanizing with addition of magnesium and aluminium - EN 10346, EN 10143
A galvanizing method where a cold-rolled steel strip is after degreasing and pickling passed through an alloy zinc bath alloyed with 3.5% aluminium and 3% magnesium.
The products are manufactured from coils or sheets of sheet metal that has already been coated. The coating has a self-repairing capability that will provide progressive protection to the cuts in the material. In the first phase, visible signs of corrosion are possible at the cutting points, which, over time, due to the chemical composition, are covered by the protective layer.
The sheet metal used for KOPOS products has a coating designation of ZM310, which corresponds to 18-31 µm. The coating is used on cable trays, cable ladders, fittings and cable route accessories. Suitable for indoor and outdoor environments.The surface treatment is suitable to replace hot-dip galvanized products. Products with a Magnelis® surface treatment can be used in environments with corrosivity categories C1–C4. According to ISO 12944-2, the surface treatment also meets the requirements for use in a C5 environment.

VF
POF



Hot dip galvanizing – ČSN EN ISO 1461
Finished steel products are chemically prepared to a metallic clean surface through several processes and then immersed in a bath of molten zinc. In the bath, a metallurgical reaction will occur between zinc and iron, during which several protective layers of iron and zinc alloys are formed on the surface of the product. The thickness of the protective coating depends on the chemical composition of the steel and the thickness of the material.

thickness of the material – t (mm)	average coating thickness(µm)	minimum thickness from a single measurement (µm)
t < 1,5	45	35
1,5 ≤ t ≤ 3	55	45
3 < t ≤ 6	70	55
t > 6	85	70

Directly after the hot-dip galvanizing process, the appearance of the product is glossy with a typical zinc bloom. Due to air humidity and the passage of time, an oxidized layer begins to form on the surface, thanks to which the appearance gets a dull and darker color. It is a natural stabilization process of surface treatment. Hot-dip galvanized products may have various indentations or imperfections after being removed from the zinc bath. Most of these "defects" are only aesthetic and conform to the norm. In order to preserve the functionality of the products, some imperfections are adjusted, for example by sanding, or some places are coated with zinc paint. Everything is in accordance with the standard and with regard to the functionality and corrosion resistance of the product. Due to hanging, non-perforated or inappropriately perforated parts are supplemented with a technological hole. The surface treatment is used on cable trays, cable ladders, wire cable trays and accessories for cable routes.

Suitable for external environments, or for internal environments with higher humidity.

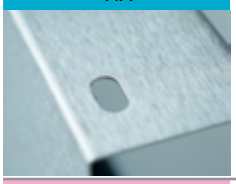
surface treatments and protection against corrosion

GMT
VNEZ



Microlamellar zinc coatings = non-electrolytic zinc coatings
The surface treatment was developed for the automotive industry, but thanks to its thin, yet very protective layer, it is mainly used for connecting material and smaller components. Steel products chemically freed of impurities are immersed in a bath with zinc-aluminum microlamellas, after removing excess material, the surface is hardened in an oven. The protective layer is 5-15 µm thin and has a matte gray surface. Salt fog test results show better resistance than hot-dip galvanized products, therefore this surface treatment is suitable as an alternative and supplement for hot-dip galvanized products.
Surface treatment is used on connecting material and smaller accessories.
Suitable for external environments, or for internal environments with higher humidity.

IX
VIX



Stainless steel – A2 (V2A), AISI 304, DIN 1.4301, ČSN 17 240 Chromium-nickel austenitic steel (food grade steel) is ideal for use in the chemical or food industry. Steel is resistant to water, water vapor, air
humidity, edible acids and weak organic and inorganic acids. It resists weather effects except of coastal areas or environments where there is a higher concentration of aggressive chemicals.
Most parts are outside covered with a protective film.
Custom manufacturing is also available in A4 (V4A) steel, AISI 316, DIN 1.4401, ČSN 17346.

EO
EC



Powder varnish
Polyester powder paint is applied in an electrostatic field to the galvanized product and then the paint is harden in an oven.
In this way, a smooth uniform surface with high corrosion resistance is created.
The main reason for painting products is aesthetic requirements or the possibility of color differentiation of routes. Painting has also very good resistance to corrosion, during tests in salt fog it showed better resistance than hot-dip galvanizing. Considering the price, most parts will be painted only from the visible side (EO) - cable trays, fittings. Supporting products and products that cannot be painted only from visible side are painted all over the entire surface (EC). Threaded products cannot be painted. To determine the price, it is necessary to state the desired color according to the RAL sample. The colors are divided into several price groups and the price is determined directly for the given order. If the RAL color is not specified, the price is calculated for the basic white color RAL 9010 in a matte finish. Painted products are not in stock as standard, the painting process is made on request. The surface treatment can be used for most continuously or electrolytically galvanized products from the system. Hot-dip galvanized products can only be painted under specific conditions, and various surface imperfections arising from the hot-dip galvanizing process remain visible.
Painted products can be used in both indoor and outdoor environments.

Areas of cable trays, accessories or support systems that have been damaged by cutting, drilling or otherwise should be treated with zinc spray or zinc paint.

corrosive aggressiveness of the environment

The protective coating of the material decreases over time and its rate of decreasing depends on the corrosive aggressiveness of the environment. The corrosion rate of zinc depending on the environment is given in the table according to ČSN EN ISO 9223..

level of corrosion aggressiveness		description of the environment	average corrosion loss of the protective layer (µm / year)		recommended surface finish
			Zn	Magnelis®	
C1	very low	**Interior:** dry, ventilated, air-conditioned spaces - offices, residential spaces, shops, schools, hotels	<0,1	-	S, PO, VS, ZNCR, VEZ EO, EC
C2	low	**Interior:** ventilated spaces with unstable temperature and possible occasional humidity - sports, production and storage halls, garages **Exterior:** dry, unpolluted places with very moderate occasional humidity - free landscape	0,1 - 0,7	<0,5	(S, PO, VS, ZNCR, VEZ - limited) ZM, POZM, F, POF, VF, GMT, VNEZ, IX, VIX EO, EC
C3	medium	**Interior:** production areas with higher humidity and medium pollution - food **areas,** dairies, breweries, laundries **Exterior:** urban and industrial areas with low to medium air pollution, coastal areas with low salinity	0,7 - 2,1	<0,5 - 0,8	ZM, POZM, F, POF, VF, GMT, VNEZ, IX, VIX EO, EC
C4	high	**Interior:** areas with higher condensation and heavy pollution - swimming pools, chemical areas **Exterior:** industrial areas, coastal areas with medium salinity	2,1 - 4,2	0,8 - 1,8	ZM, POZM, F, POF, VF, GMT, VNEZ, IX, VIX EO, EC
C5	very high	**Interior:** areas with very high condensation or heavy pollution from production processes and mines **Exterior:** industrial areas with high pollution and humidity, seaside areas with high salinity	4,2 - 8,4	1,8 - 3,5	(ZM, POZM, F, POF, VF, GMT, VNEZ - limited) X, VIX EO, EC

mechanical resistance

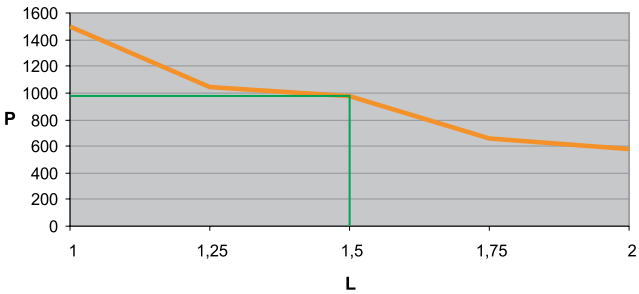
Cable trays are designed, constructed and type tested according to ČSN EN 61537 so they provide, where it is required, a reliable mechanical protection for insulated wires, cables, cords and possibly other electrical devices contained in them. Furthermore, these trays will withstand the stresses which will probably occur during the classified minimal temperature for storage, transport, installation and application. The bolted connections and other mechanical connections will withstand the mechanical stressing during installation and normal use.

Load carrying capacity - loading of the tray

The loading of cable trays must be adequate with regards to the expected weight of the cables.
The trays are not designed to be walked on. The loading of the trays is effected by the distance of the load bearing supports and also the width of the supports for the wall and the length of the hanger.
- the loading decreases with the increased span of the supports
- the shorter the wall support the lesser the tray bend

Example of a display of a loading graph (NKZI 50X125)

With the placing of the supports at a distance of 1.5 m the maximum possible loading of the tray NKZI 50X125 is 1000 N/m.



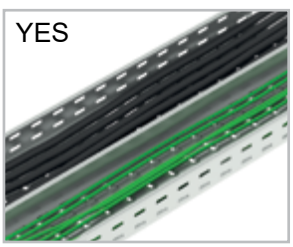
L = distance of supports (m)
P = allowed even loading (N/m)

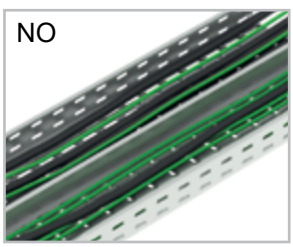
electromagnetic compatibility

The cable tray systems are frequently operated in an industrial environment which exhibits a high level of external electromagnetic effects. Due to this reason it is necessary to maintain certain rules which will steady a perfect function of the system.
Electromagnetic compatibility (from the English Electromagnetic Compatibility, abbreviation EMC) is the capability for a device or system to exhibit the proper function also in an environment where sources of electromagnetic signals or acting. At the same time this device or system should not be the source of non- permissible electromagnetic disturbance. Relation between the source of the disturbance and the disturbed equipment.

Source of electromagnetic disturbance	→	Path of electromagnetic disturbance	→	Receiver of electromagnetic disturbance
motors, switches, relays, semiconductor converters, fluorescent tubes, welders, arc furnace, energy distributions, electrostatic discharge, etc.		air, energy cables, power supply cables, grounding, shielding, signal wires, data wires, etc.		digital technology, computers, measuring devices, telecommunication systems, data transfer systems, broadcast receiver, television receiver, etc.

In order to reach a good level of electromagnetic compatibility it is necessary to remove or to lessen as much as possible one of these elements.
A properly connected and grounded system of cable trays “MARS” is properly steadyd against external electromagnetic discharge. The trays which are closed with a cover then act as shielding channels. It is necessary to only maintain certain rules inside the tray, where individual cables can act as a source and others as receivers of electromagnetic disturbance. For the limiting or complete removal of the effect of electromagnetic compatibility the basic condition is the separation of the power and data cables in the scope of a single tray. This can be achieved by several ways:





1. Separate individual lines using a metal partition NPZ 50 or NPZ 100
2. Do not place the data and power distributions together in one tray
3. If within the scope of a single sheet metal tray there occurs the placing of various types of lines, which could mutually effect each other, then it is necessary to maintain between them a minimum space of 20 cm.

electrical conductibility and grounding

The system of cable trays and ladders is designed in such a way that a high-quality connection is ensured when the individual parts are connected. This is achieved by a solid connection using special NSM 6X10 bolts. The claim is based on the test report concerning cable routes and cable ladders classed under the ČSN EN 61357 standard pursuant to Article 6.3.2 as cable routes with the characteristics of electrical continuity to ensure protective bonding and ground connection. Under Article 11.1.2 25A + - 1A alternating current at a frequency of 50 Hz to 60 Hz is fed along the length of the test samples. The test performed under this article was compliant. Impedance on the circuit board is less than 50 mΩ. The cable trays and cable ladders were also found to be compliant during this test. When using the KSV clamp it is necessary to connect individualparts (trays, accessories) by an additional protective wire with the corresponding cross section. Wire cable trays connected by integrated coupling or firmly connected by the DZS.

electrical conductibility and grounding
For safety reasons, the system of trays bonded in this way shall be on both ends connected to a ground clampg. This connection must meet the requirements of the standard ČSN 33 2000-4-54 ed.3 art.543.1. (The minimum cross-section of the protective conductor must either be calculated in accordance with Article 543.1.2 or must be selectedaccording to Table 54.2).

cables - recommendation for their installation



The metal cable trays are a universal carrier for all types of cables, from high-current to low-current.

- for high-current cables it is necessary to pay attention to the resistance of the cable and the subsequent development of heat, for these cables a wider tray with a lower sidewall is more suitable.
- for data cables it is necessary to prevent the effect of electromagnetic waves by shielding. For these cables the narrower trays with a higher sidewall are suitable. The design of certain types of data cables steadys by itself a partial resistance against electromagnetic disturbance (for example the shielded double line STP, coaxial cables etc)
- for optic cables, which by their principle are resistant to electromagnetic disturbance, it is necessary to maintain the minimum bending ratio in order to maintain their correct function.

When laying cables into cable supporting trays “MARS” it is necessary to consider the method of placing and to consider the requirements of the standards ČSN 33 2000-4-43, ČSN 33 2000-4-473 during the installation. According to these standards, permanent wire and cable current-carrying capacity can be determined with respect to their installation, mutual position and the ambient temperature.

In order to prevent the mutual interference of the installed cables, it is recommended to observe the principles described in the chapter Electromagnetic Compatibility (separate data and power lines etc.). It is also recommendable to band individual cables or cable bundles and to attach them to the cable tray proper. In particular, cables are attached inside the cable tray if the system of cable trays is not only horizontal but the route also rises or descends. Furthermore, the power cables for which high current loading and current surges are expected shall also be fixed.



packaging and storage

Straight parts are fixed on pallets by elastic polypropylene band; other material is stored in crates.

Scope of applicability
These terms apply to the storage of metal products manufactured by KOPOS KOLÍN a.s. company and comply with the standard ČSN EN 60721-3-1 (Classification of environmental conditions, Part 3: classification of groups of environmental parameters and their severities, Section 1: Product storage).

General
1. The products shall be protected from harmful effects, such as mechanical damage, climatic or chemical influences.
2. Preferentially, the products stored for the longest time shall be taken first (FIFO system).
3. The products stored shall be duly and visibly marked in the warehouse so that they are not confused.

Storage requirements
Products shall be stored in dry, dustless environment to prevent damage.
Storehouse specification:
- A place fully protected from climatic influences, i.e. at a closed place where direct weather influence is completely eliminated.
- Water from sources other than rain shall be completely removed: dripping water, spouting water, condensates.
- Complete elimination of chemical influences arising from particles of salts.

References

ČVUT building - technical university - Prague
Sewage treatment plant - Kellihers, Ireland
Sewage treatment plant - Želivka
DEZA, a. s. - Valašské Meziříčí
Draslovka Kolín
DUBAL Dubai aluminium, SAE
Power plant Chvaletice Sev.en EC
Ethyesl Energy - Vrdy
ETIHAD sugar factory - Babylon, Iraq
Nuclear power plant - Jaslovské Bohunice, Slovakia
Nuclear power plant Pyhäjoki, Finland
Nuclear power plant Temelín
KFK - Zagreb, Chorvatsko
Kiekert-CS, s.r.o. - Přelouč
Komerční banka - Prague
Compression station Lakšárska Nová Ves, Slovakia
Kronospan woodworking production - Jihlava
Airport Dublin, Ireland
Airport Pardubice - Jan Kašpar Terminal
Airport Záhřeb - Franjo Tuđman, Croatia
NAFTA Gbely reservoir Gajary, Slovakia
Shopping gallery Harfa - Prague
Hospital Třebíč
Sv. Anna Hospital - Brno
Shopping centre NOVUM - Prešov, Slovakia
IKEA Centrum Černý most - Prague
OC Atrium - Hradec Králové
Ostrovská teplárenská a.s. - Ostrov
Parkview Pankrác - Prague
Pepperl+Fuchs Manufacturing s.r.o. - Trutnov
Praga Studios - Prague
Prefa Hodonín
Precheza - Přerov
Retail Park Štěrboholy - Prague
Air traffic control of Mošnov - Ostrava airport
Saint-Gobain Adfors CZ s.r.o. - Litomyšl
Slovnaft Bratislava, Slovakia
Sports hall RATES - Zvolen, Slovakia
Synthesia, a.s. Pardubice
ŠKODA Motorsport - Mladá Boleslav
České Budějovice heating plant
Trelleborg Bohemia a.s. - Hradec Králové
Ejpovice tunnel
Istralandia Water Park - Novigrad, Croatia


Power plant Chvaletice


Ethyesl Energy - Vrdy


Airport Pardubice


Airport Dublin


Praga Studios - Prague


Air traffic control of Mošnov - Ostrava airport


Kiekert-CS, s.r.o. - Přelouč


Ejpovice tunel


DUBAL Dubai aluminium

Returnable packages



IP1 - pipe pallet
dimension: 120 x 80 x 63 cm
EAN: 8595057687660



IP3-1 - wooden pallet EUR
dimension: 120 x 80 cm
EAN: 8595057687684



IP3-3 - wooden pallet
dimension: 160 x 240 cm
EAN: 8595057687677



IP3-4 - wooden pallet
dimension: 120 x 183 cm
EAN: 8595568926906



IP3-5 - wooden base
dimension: 205 x 112 cm
EAN: 8595568931696



IP5 - wooden base
dimension: 300 x 65 cm
EAN: 8595057687714



IP7 - wooden base
dimension: 200 x 65 cm
EAN: 8595057687738



IP9 - pallet extension
dimension: 120 x 80 x 20 cm
EAN: 8595568925923



IP10 - metal pallet
dimension: 180 x 120 x 82 cm
EAN: 8595057688230



M6500 - drum M220
dimension: 225 x 116 cm
EAN: 8595057687769



M6502 - metal drum
dimension: 230 x 116 cm
EAN: 8595568910639

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