

Cable ladders and lighting fixture suspension rails

Quality in Focus





## Seamless collaboration of lightness and carrying capacity

The new SYSTEMAL Presto of higher quality than ever before is a cable ladder and suspension rail system in which lightness and class are combined with reliability and a high carrying capacity. Due to its epochal properties the aluminium SYSTEMAL Presto is perfect for a great diversity of uses. It is at home in demanding situations and circumstances.



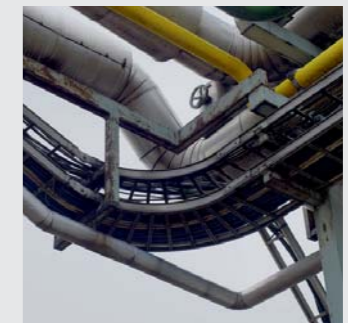
## Easy to work and install

The weight of aluminium is only one third of the weight of steel, which makes the SYSTEMAL Presto products so easy to handle and work with. When working with SYSTEMAL Presto, there are no problems with the coating coming off, and there is no need to protect cut surfaces. The non-sparking material ensures fire safety working in the installation. Meanwhile installing costs are significantly lowered.



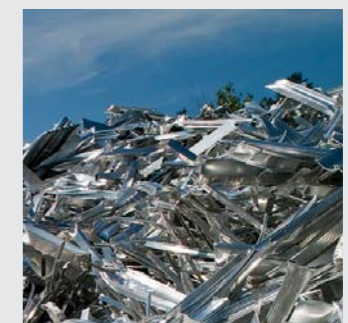
## Endures use and corrosion

The firm aluminium build of SYSTEMAL Presto is designed to endure time, strain, and for example the corrosive influence of sea water. Look to the accompanying picture for a real-life example: the installation in the picture has been in place for 40 years in sea conditions. With the right alloys aluminium products are highly corrosion resistant – a separate, cost-increasing corrosion treatment is not needed. In customary circumstances SYSTEMAL Presto products do not require any maintenance.



## Eco-friendly and recyclable

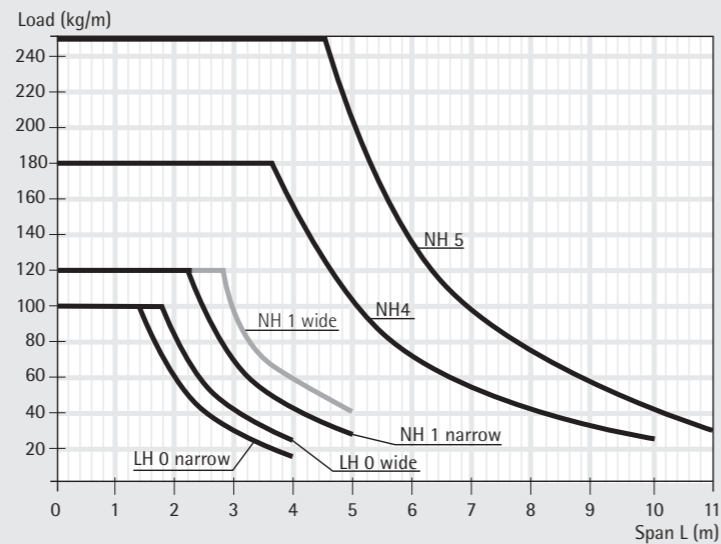
SYSTEMAL Presto is a fully aluminium shelving system. Aluminium is an easily recyclable material. Re-melting requires only five percent of the energy needed to produce the primary aluminium. Nordic Aluminium recycles the process scrap produced during compression and manufacturing through the foundry into recompressed material, which makes the manufacturing process ecological.



# SYSTEMAL Presto cable ladders



**SYSTEMAL Presto cable ladder loading capacities (kg/m) on even spans.**



The NH 1 series ladders can reach a higher loading capacity, thanks to the new NJP 10 coupler. The loading capacity for the NH 140–NH 160 ladders on a three meter span is 100 kg/m. Ladders’ rung spacing is 300 mm. The safety factor is 1.7.

SYSTEMAL Presto is a cable ladder solution designed especially for the demanding conditions of industry and construction. Among its most important qualities are corrosion-resistance and long spans. Aluminium makes SYSTEMAL Presto very lightweight yet highly dependable.

SYSTEMAL Presto can answer the strictest requirements set for cable ladders. It is an eco-friendly and easily recyclable system that lasts long even in the most demanding circumstances. SYSTEMAL Presto is an investment that will quickly pay for itself due to its easy workability, excellent dependability and long operating life.

The versatile SYSTEMAL Presto cable ladder system includes aluminous cable ladders dimensioned for different loading capacity needs, shape and installation parts and support systems.

When installing cables, the cable manufacturers’ directions and recommendations as well as the standard SFS 6000 must be followed.



### Coupler

With the new NJP 10 vertical coupler a greater loading capacity can be reached with the NH1 series cable ladders. The NH 140–NH 160 cable ladders have a loading capacity of 100 kg/m on a 3 meter span. When installing the vertical coupler the expansion of the ladders by 1 mm/meter when the temperature rises to 40 °C must be noted.



### Vertical ladder/horizontal ladder

The versatile SYSTEMAL Presto can also be installed as a vertical ladder either with NCV wall rails or fixed straight to the wall.



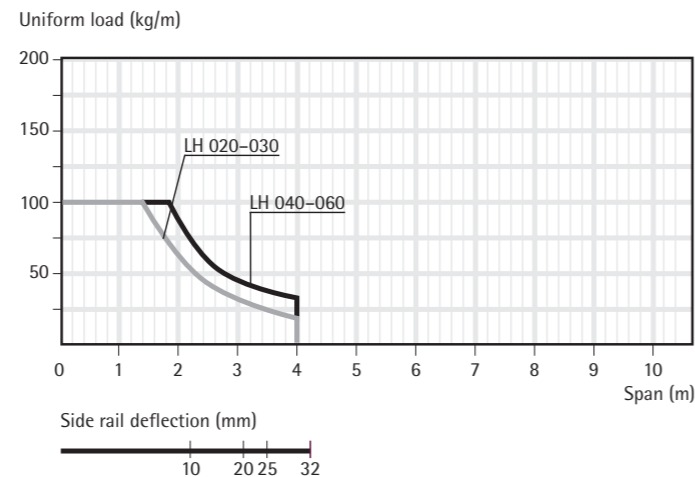
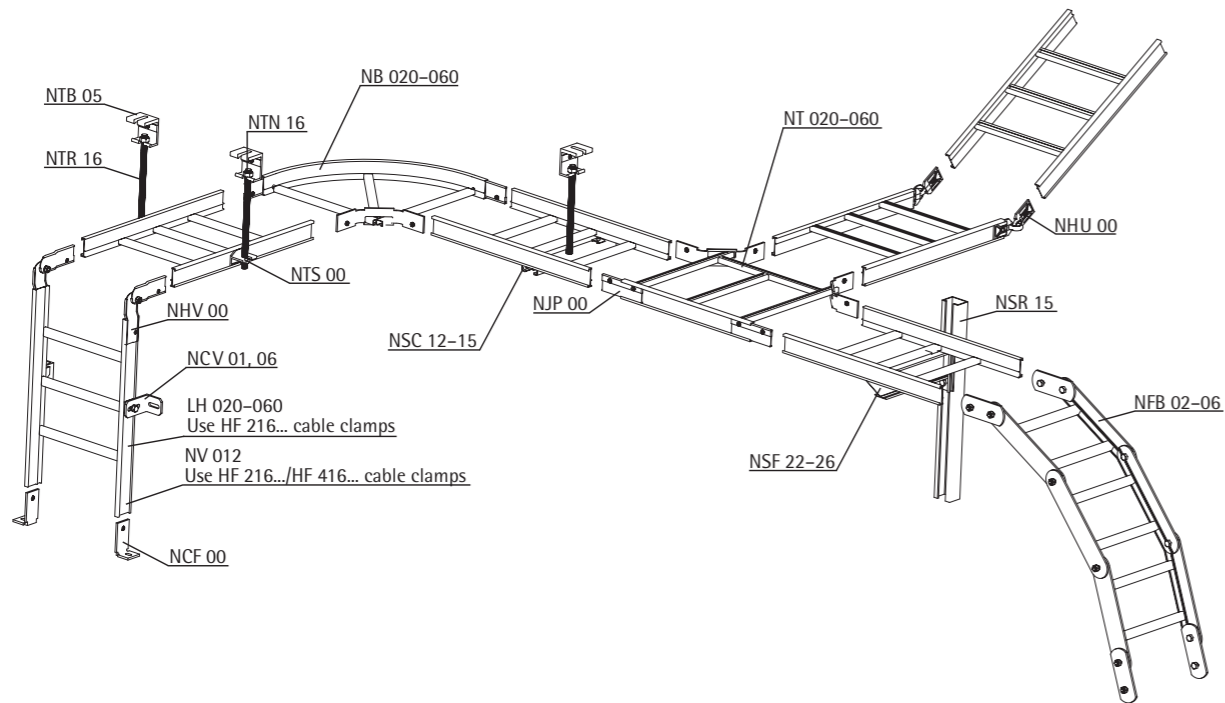
### More space for cables

The graceful and durable structure of SYSTEMAL Presto gives space as much as possible to the cables themselves.

# SYSTEMAL Presto cable ladders

These cable ladders are intended for light cable loads with maximum a 4 m span. The LH0 series is manufactured with widths between 200 and 600 mm. The LH 040-LH 060 ladders use stronger side profile than the narrower ladder. We recommend center or wall support systems for the series' ladders.

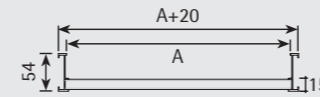
## Series 0



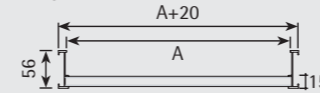
## Ladders and fittings series 0

### Horizontal ladders

LH 020, 030



LH 040-060  
NV 012

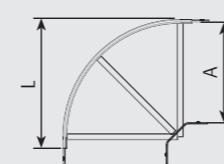


Type	EAN-code	Delivery pack/m	Length mm	A mm	Weight kg/m
LH 020 *)	64100 14 416 01-0	36	6000	200	0.74
LH 030 *)	64100 14 416 02-7	36	6000	300	0.80
LH 040 *)	64100 14 416 09-6	36	6000	400	1.04
LH 050 *)	64100 14 416 10-2	36	6000	500	1.10
LH 060 *)	64100 14 416 11-9	36	6000	600	1.16

\*) Also available at 3000 mm length.

Type	EAN-code	Delivery pack/m	Length mm	A mm	Weight kg/m
NV 012	64100 14 416 25-6	36	6000	120	0.87

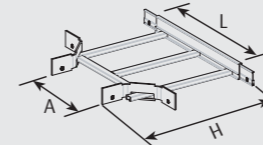
### 90° horizontal bend



Bends include the needed couplers.

Type	EAN-code	Delivery pack/pcs	A mm	L mm	H mm	Weight kg/pc
NB 020	64100 14 416 38-6	5	200	310	-	0.61
NB 030	64100 14 416 39-3	5	300	410	-	0.79
NB 040	64100 14 416 40-9	5	400	510	-	0.92
NB 050	64100 14 416 41-6	5	500	610	-	1.14
NB 060	64100 14 416 42-3	5	600	710	-	1.28

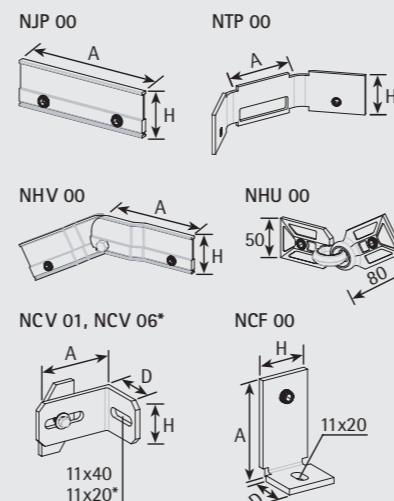
### T-piece



T-pieces include the needed couplers.

Type	EAN-code	Delivery pack/pcs	A mm	L mm	H mm	Weight kg/pc
NT 020	64100 14 416 51-5	5	200	394	385	0.85
NT 030	64100 14 416 52-2	5	300	494	485	1.05
NT 040	64100 14 416 53-9	5	400	594	585	1.21
NT 050	64100 14 416 54-6	5	500	694	685	1.32
NT 060	64100 14 416 55-3	5	600	794	785	1.62

### Parts



### Coupler and Corner coupler

Type	EAN-code	Delivery pack/pcs	A mm	H mm	D mm	Weight kg/pc
NJP 00	64100 14 417 01-7	20/200	150	50	-	0.07
NTP 00	64100 14 407 36-0	10	110	50	-	0.18

### Vertical hinged coupler and Universal hinged coupler

NHV 00	64100 14 417 05-5	10/150	130	50	-	0.17
NHU 00	64100 14 404 10-9	10	-	-	-	0.14

### Wall bracket for vertical ladder

NCV 01	64100 14 401 73-3	10/50	95	50	60	0.18
NCV 06	64100 14 417 08-6	10/50	160	50	60	0.29

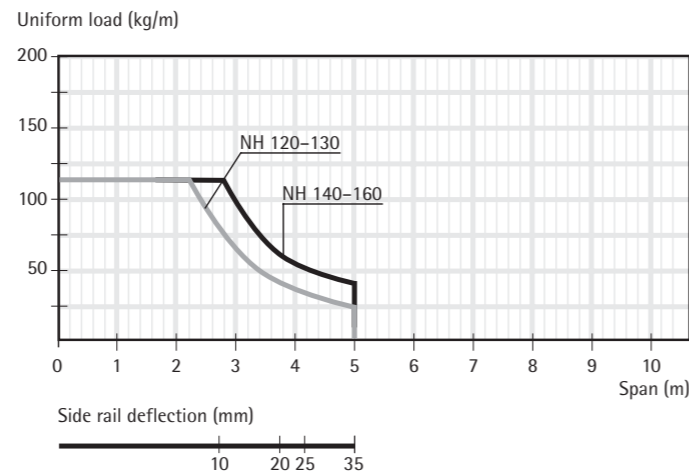
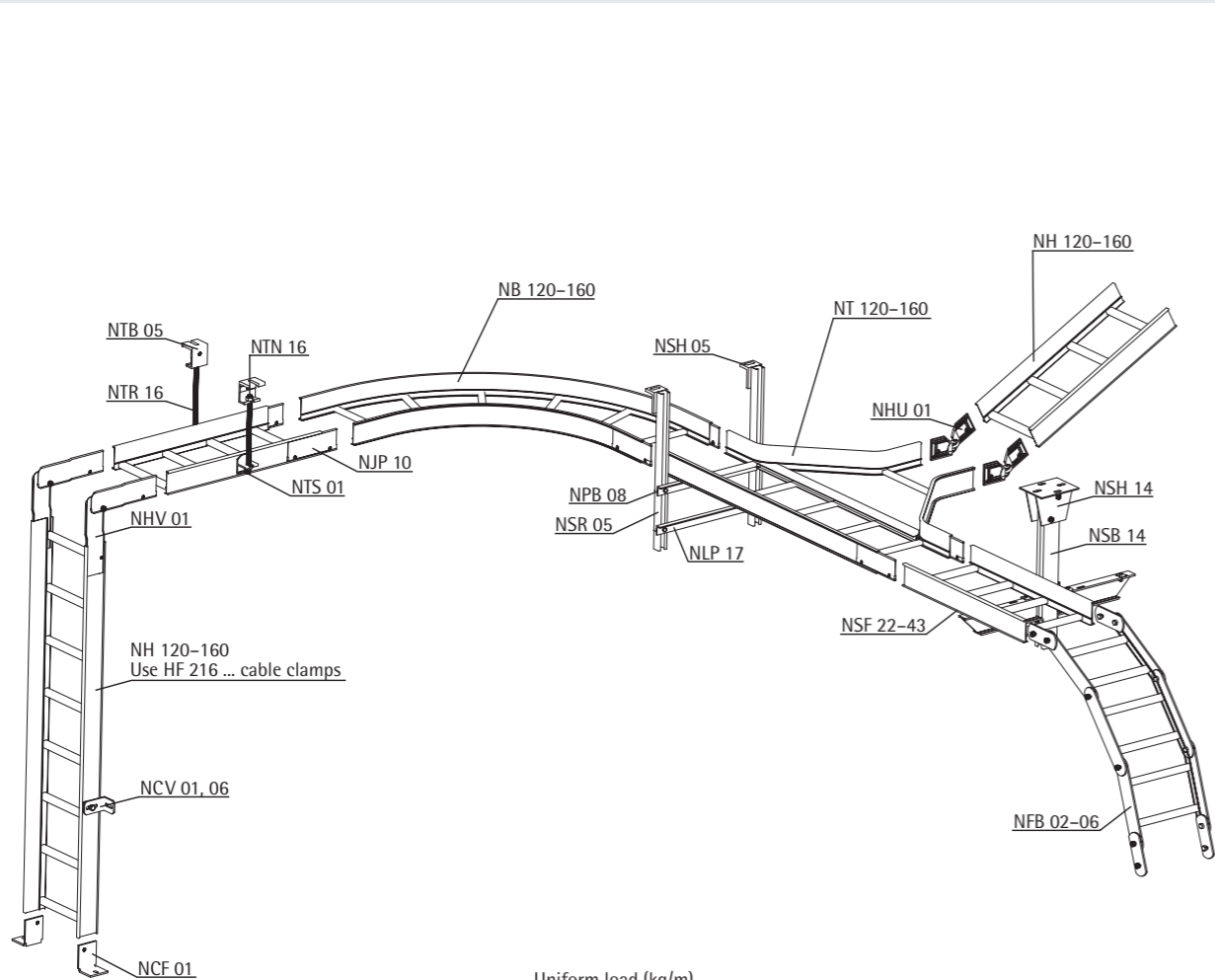
### Floor and wall bracket

NCF 00	64100 14 401 78-8	10/100	100	50	50	0.10
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# SYSTEMAL Presto cable ladders

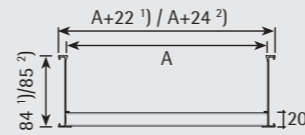
A cable ladder series meant for industry installations and ordinary cable loads with a span of 5 m at most. Wide ladders, 400–600 mm, use a stronger side profile than narrow ladders. Center and wall support systems as well as gate support systems work best with the series 1 ladders.

## Series 1



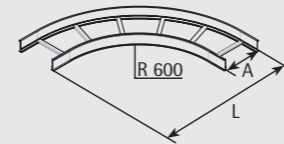
## Ladders and fittings series 1

### Horizontal ladders



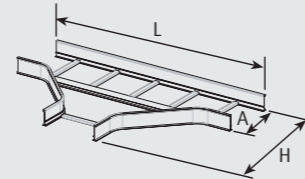
Type	EAN-code	Delivery pack/m	Length mm	A mm	Weight kg/m
NH 120 <sup>1)</sup>	64100 14 416 13-3	36	6000	200	1.13
NH 130 <sup>1)</sup>	64100 14 416 14-0	36	6000	300	1.20
NH 140 <sup>2)</sup>	64100 14 416 15-7	36	6000	400	1.49
NH 150 <sup>2)</sup>	64100 14 416 16-4	36	6000	500	1.56
NH 160 <sup>2)</sup>	64100 14 416 17-1	36	6000	600	1.63

### 90° horizontal bend



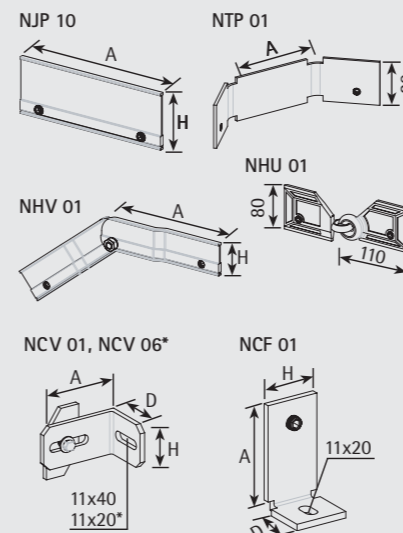
Type	EAN-code	Delivery pack/pcs	A mm	R mm	L mm	H mm	Weight kg/pc
NB 120	64100 14 416 44-7	5	200	600	965	-	1.65
NB 130	64100 14 416 45-4	5	300	600	1065	-	1.85
NB 140	64100 14 416 46-1	5	400	600	1165	-	2.47
NB 150	64100 14 416 47-8	5	500	600	1265	-	2.71
NB 160	64100 14 416 48-5	5	600	600	1365	-	2.95

### T-piece



Type	EAN-code	Delivery pack/pcs	A mm	L mm	H mm	Weight kg/pc
NT 120	64100 14 416 57-7	5	200	1160	691	2.29
NT 130	64100 14 416 58-4	5	300	1260	791	2.53
NT 140	64100 14 416 59-1	5	400	1360	891	2.77
NT 150	64100 14 416 60-7	5	500	1460	991	3.11
NT 160	64100 14 416 61-4	5	600	1560	1091	3.37

### Parts



### Coupler and Corner coupler

Type	EAN-code	Delivery pack/pcs	A mm	H mm	D mm	Weight kg/pc
NJP 10	64100 14 412 35-7	20/100	240	80	-	0.20
NTP 01	64100 14 407 38-4	10	170	80	-	0.52

### Vertical hinged coupler and Universal hinged coupler

Type	EAN-code	Delivery pack/pcs	A mm	H mm	D mm	Weight kg/pc
NHV 01	64100 14 417 06-2	10	180	80	-	0.28
NHU 01	64100 14 401 10-8	10	-	-	-	0.24

### Wall bracket for vertical ladder

Type	EAN-code	Delivery pack/pcs	A mm	H mm	D mm	Weight kg/pc
NCV 01	64100 14 401 73-3	10/150	95	50	60	0.18
NCV 06	64100 14 417 08-6	10/150	160	50	60	0.29

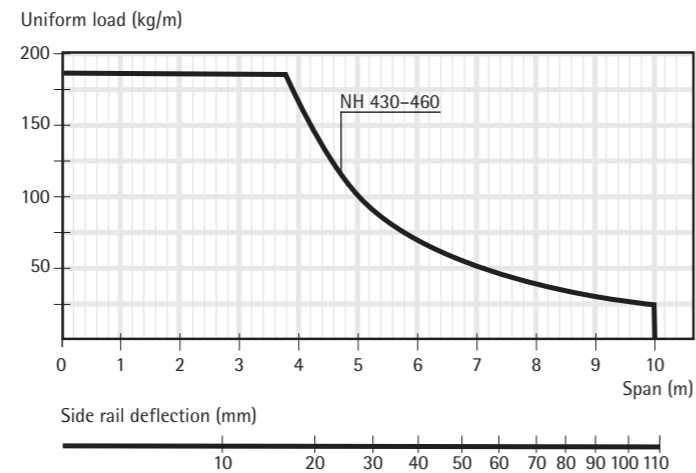
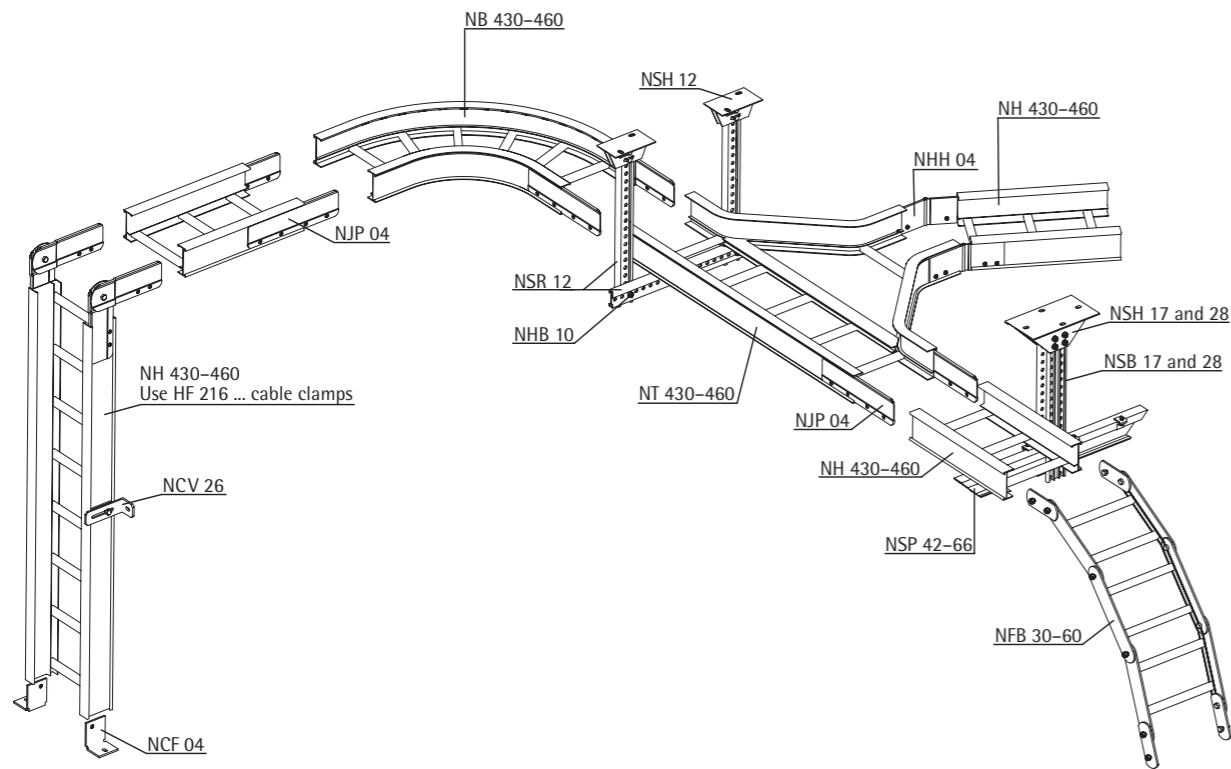
### Floor and wall bracket

Type	EAN-code	Delivery pack/pcs	A mm	H mm	D mm	Weight kg/pc
NCF 01	64100 14 401 77-1	10/100	100	80	75	0.17

# SYSTEMAL Presto cable ladders

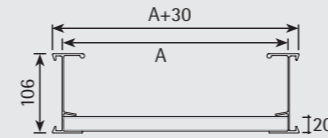
Series 4 is designed for especially heavy loads and spans of even 10 m. Suitable systems for hanging series 4 cable ladders are gate and support rail systems as well as wall support either straight to a wall or to a support rail.

## Series 4



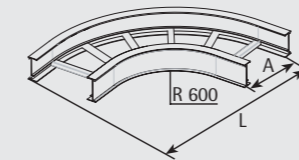
## Ladders and fittings series 4

### Horizontal ladders



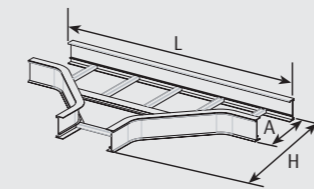
Type	EAN-code	Delivery pack/m	Length mm	A mm	Weight kg/m
NH 430	64100 14 414 14-6	36	6000	300	2.78
NH 440	64100 14 414 15-3	36	6000	400	2.85
NH 450	64100 14 414 16-0	36	6000	500	2.92
NH 460	64100 14 414 17-7	36	6000	600	2.99

### 90° horizontal bend



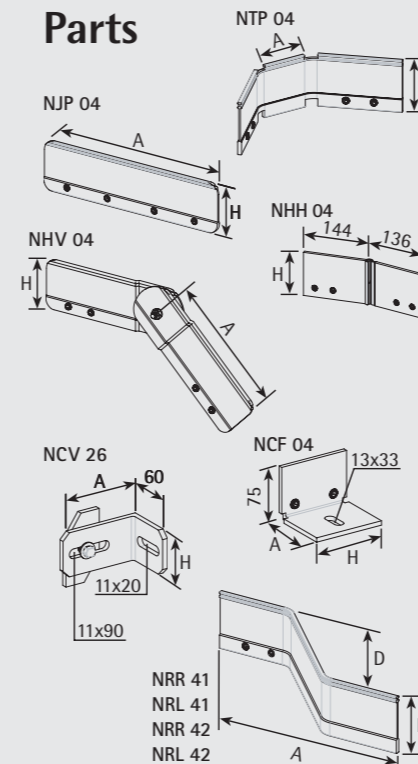
Type	EAN-code	Delivery pack/pcs	A mm	R mm	L mm	H mm	Weight kg/pc
NB 430	64100 14 414 33-7	5	300	600	1080	-	4.30
NB 440	64100 14 414 34-4	5	400	600	1180	-	4.60
NB 450	64100 14 414 35-1	5	500	600	1280	-	5.00
NB 460	64100 14 414 36-8	5	600	600	1380	-	5.30

### T-piece



Type	EAN-code	Delivery pack/pcs	A mm	L mm	H mm	Weight kg/pc
NT 430	64100 14 414 53-5	5	300	1260	795	4.45
NT 440	64100 14 414 54-2	5	400	1360	895	4.76
NT 450	64100 14 414 55-9	5	500	1460	995	5.17
NT 460	64100 14 414 56-6	5	600	1560	1095	5.49

### Parts



### Coupler and Corner coupler

Type	EAN-code	Delivery pack/pcs	A mm	H mm	D mm	Weight kg/pc
NJP 04	64100 14 415 61-7	20	380	99	-	0.41
NTP 04	64100 14 415 64-8	10	110	99	-	0.49

### Vertical hinged coupler and Universal hinged coupler

Type	EAN-code	Delivery pack/pcs	A mm	H mm	D mm	Weight kg/pc
NHV 04	64100 14 415 71-6	10	250	99	-	0.66
NHH 04	64100 14 415 74-7	10	-	99	-	0.59

### Wall bracket for vertical ladder

Type	EAN-code	Delivery pack/pcs	A mm	H mm	D mm	Weight kg/pc
NCV 26	64100 14 415 67-9	10/50	160	60	-	0.33

### Floor and wall bracket

Type	EAN-code	Delivery pack/pcs	A mm	H mm	D mm	Weight kg/pc
NCF 04	64100 14 415 57-0	50	85	99	-	0.25

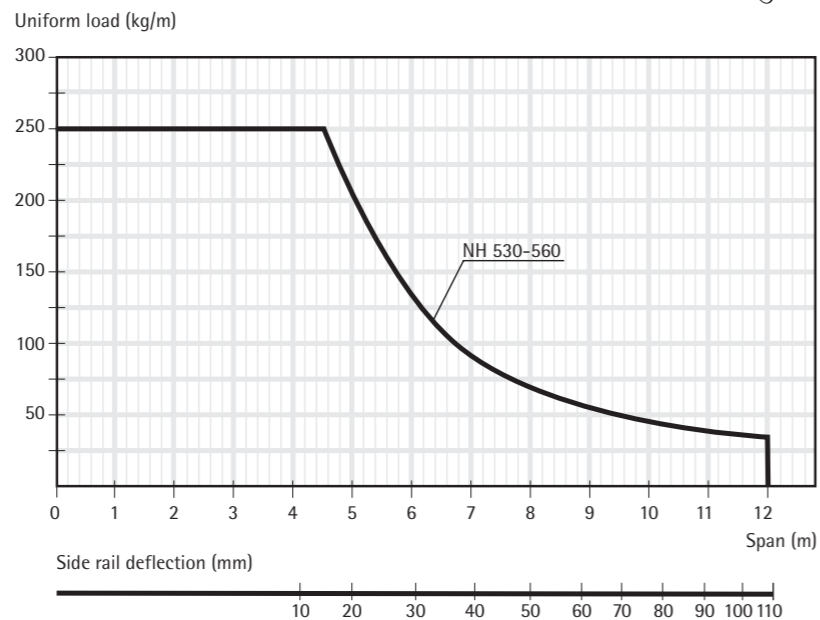
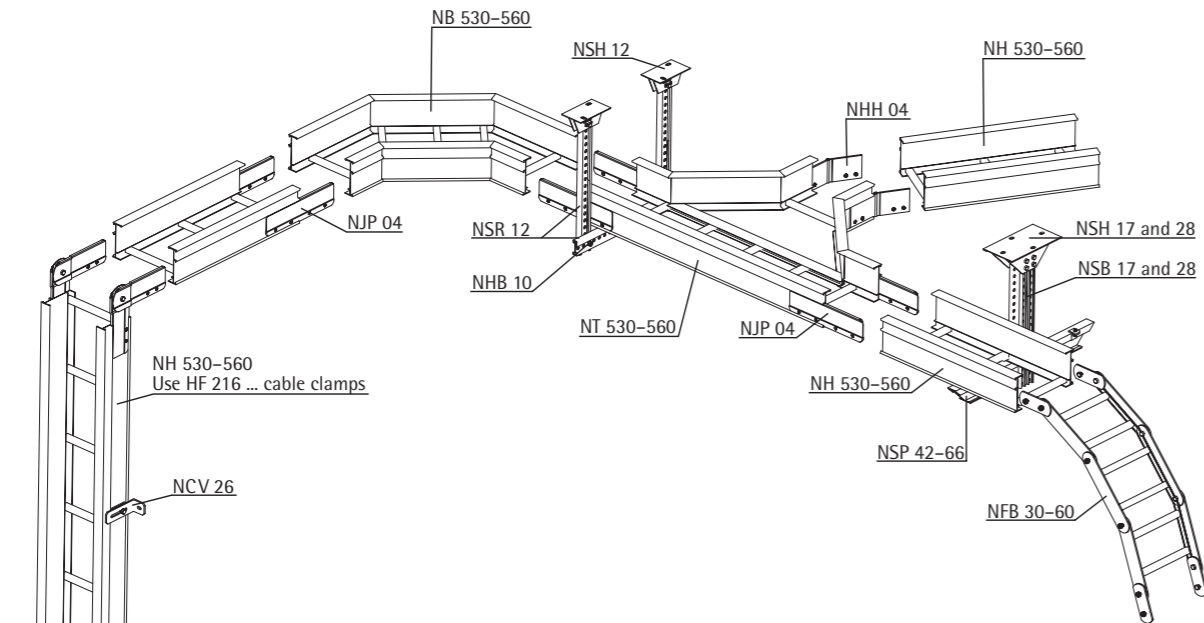
### Floor and wall bracket

Type	EAN-code	Delivery pack/pcs	A mm	H mm	D mm	Weight kg/pc
NRR 41 (right)	64100 14 415 84-6	2/10	419	99	100	0.49
NRL 41 (left)	64100 14 415 85-3	2/10	419	99	100	0.49
NRR 42 (right)	64100 14 415 86-0	2/10	475	99	200	0.61
NRL 42 (left)	64100 14 415 87-7	2/10	475	99	200	0.61

# SYSTEMAL Presto cable ladders

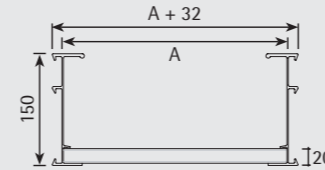
Series 5 is designed for spans up to 12 m. Suitable systems for hanging series 5 cable ladders are gate and support rail systems as well as wall support either straight to a wall or to a support rail. Note! Manufactured on order, check time of delivery.

## Series 5



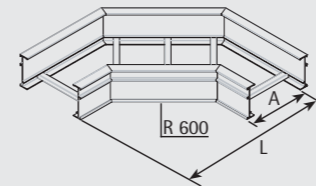
## Ladders and fittings series 5

### Horizontal ladders



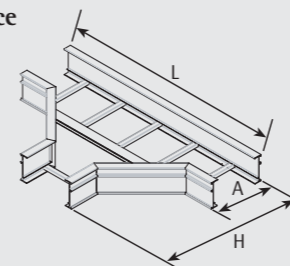
Type	EAN-code	Delivery pack/m	Length mm	A mm	Weight kg/m
NH 530	64100 14 416 71-3	36	6000	300	4.95
NH 540	64100 14 416 72-0	36	6000	400	5.07
NH 550	64100 14 416 73-7	36	6000	500	5.17
NH 560	64100 14 416 74-4	36	6000	600	5.28

### 90° horizontal bend



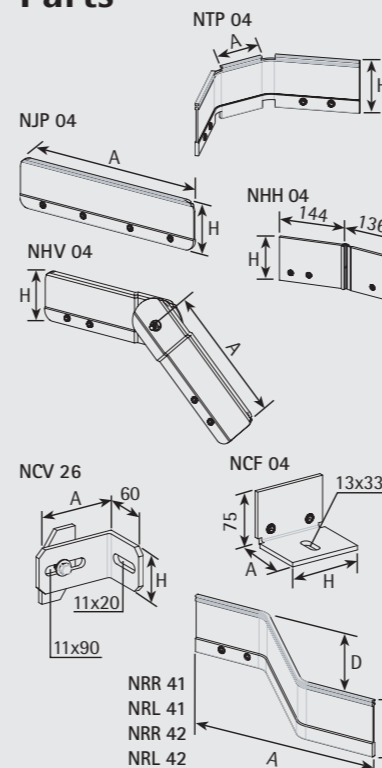
Type	EAN-code	Delivery pack/pcs	A mm	R mm	L mm	H mm	Weight kg/pc
NB 530	64100 14 416 81-2	5	300	600	795	-	5.52
NB 540	64100 14 416 82-9	5	400	600	895	-	6.07
NB 550	64100 14 416 83-6	5	500	600	995	-	6.62
NB 560	64100 14 416 84-3	5	600	600	1095	-	7.16

### T-piece



Type	EAN-code	Delivery pack/pcs	A mm	L mm	H mm	Weight kg/pc
NT 530	64100 14 416 91-1	5	300	1260	795	7.62
NT 540	64100 14 416 92-8	5	400	1360	895	8.11
NT 550	64100 14 416 93-5	5	500	1460	995	8.76
NT 560	64100 14 416 94-2	5	600	1560	1095	9.27

## Parts



### Coupler and Corner coupler

Type	EAN-code	Delivery pack/pcs	A mm	H mm	D mm	Weight kg/pc
NHP 04	64100 14 415 61-7	20	380	99	-	0.41
NTP 04	64100 14 415 64-8	10	110	99	-	0.49

### Vertical hinged coupler and Horizontal hinged coupler

Type	EAN-code	Delivery pack/pcs	A mm	H mm	D mm	Weight kg/pc
NHV 04	64100 14 415 71-6	10	250	99	-	0.66
NHH 04	64100 14 415 74-7	10	-	99	-	0.59

### Wall bracket for vertical ladder

Type	EAN-code	Delivery pack/pcs	A mm	H mm	D mm	Weight kg/pc
NCV 26	64100 14 415 67-9	10/50	160	60	-	0.33

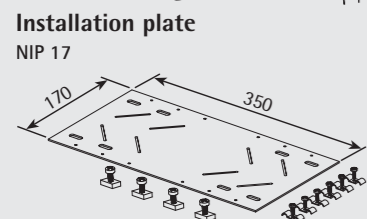
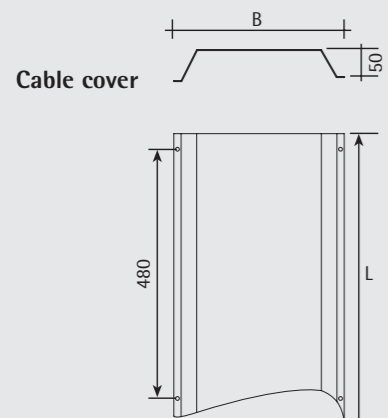
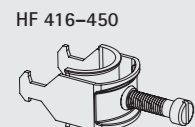
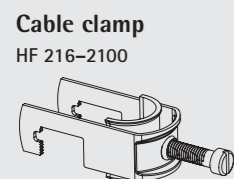
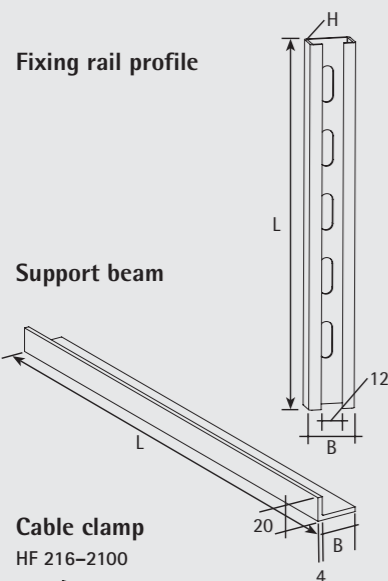
### Floor and wall bracket

Type	EAN-code	Delivery pack/pcs	A mm	H mm	D mm	Weight kg/pc
NCF 04	64100 14 415 57-0	10/50	85	99	-	0.25

### Reducers

Type	EAN-code	Delivery pack/pcs	A mm	H mm	D mm	Weight kg/pc
NRR 41 (right)	64100 14 415 84-6	2/10	419	99	100	0.49
NRL 41 (left)	64100 14 415 85-3	2/10	419	99	100	0.49
NRR 42 (right)	64100 14 415 86-0	2/10	475	99	200	0.61
NRL 42 (left)	64100 14 415 87-7	2/10	475	99	200	0.61

# SYSTEMAL Presto cable ladders, accessories



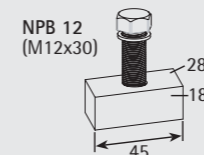
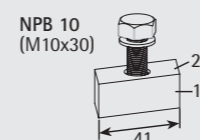
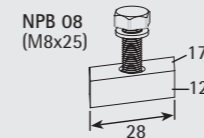
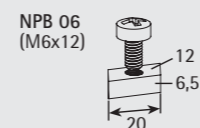
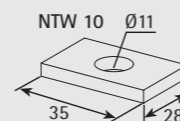
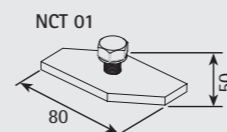
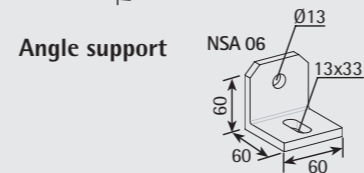
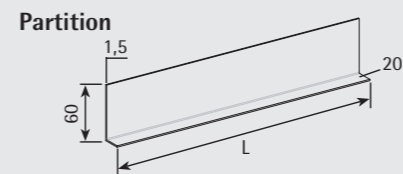
Type	EAN-code	Delivery pack/pcs	H mm	B mm	L mm	Weight kg/m
NHP 15	64100 14 407 30-8	20	15	25	2000	0.18
NHP 20	64100 14 401 50-4	36	20	27	6000	0.47

Type	EAN-code	Delivery pack/pcs	H mm	B mm	L mm	Weight kg/m
NLP 17	64100 14 401 23-8	36	20	35	6000	0.56

Type	EAN-code	Delivery pack/pcs	Range Ø mm	B mm	L mm	Weight kg/pc
HF 216	64100 14 404 32-1	50	12-16	-	-	0.016
HF 222	64100 14 404 33-8	50	17-22	-	-	0.019
HF 226	64100 14 404 34-5	50	23-26	-	-	0.023
HF 230	64100 14 404 35-2	50	27-30	-	-	0.025
HF 234	64100 14 404 36-9	50	31-34	-	-	0.028
HF 242	64100 14 404 37-6	50	35-42	-	-	0.033
HF 250	64100 14 404 38-3	50	43-50	-	-	0.038
HF 264	64100 14 404 39-0	50	51-64	-	-	0.044
HF 282	64100 14 404 40-6	50	65-82	-	-	0.070
HF 2100	64100 14 404 41-3	50	83-100	-	-	0.080
HF 416	64100 14 404 43-7	50	12-16	-	-	0.009
HF 422	64100 14 404 44-4	50	17-22	-	-	0.010
HF 426	64100 14 404 45-1	50	23-26	-	-	0.012
HF 430	64100 14 404 46-8	50	27-30	-	-	0.015
HF 434	64100 14 404 47-5	50	31-34	-	-	0.022
HF 442	64100 14 404 48-2	50	35-42	-	-	0.027
HF 450	64100 14 404 49-9	50	43-50	-	-	0.032

Type	EAN-code	Delivery pack/pcs	B mm	L mm	Weight kg/pc
NCP 12	64100 14 401 54-2	1	148	1500	0.85
NCP 20	64100 14 401 57-3	1	228	1500	1.15
NCP 30	64100 14 401 58-0	1	328	1500	2.30
NCP 40	64100 14 401 56-6	1	428	1500	2.90
NCP 50	64100 14 401 59-7	1	528	1500	3.50
NCP 60	64100 14 401 60-3	1	628	1500	4.20

Type	EAN-code	Delivery pack/pcs	B mm	L mm	Weight kg/pc
NIP 17	64100 14 401 52-8	1/10	-	-	0.41



Type	EAN-code	H mm	B mm	L mm	Weight kg/pc
NDI 60	64100 14 415 95-2	60	20	3000	0.32

Type	EAN-code	Delivery pack/pcs	Weight kg/pc
NSA 06	64100 14 401 32-0	10/100	0.150

Sliding bracket			
NCT 01	64100 14 407 88-9	10/100	0.070

Flat washer			
NTW 10	64100 14 407 40-7	50/500	0.007

Insert nuts and bolts			
NPB 06	64100 14 408 23-7	50/500	0.008
NPB 08	64100 14 406 93-6	20/500	0.030
NPB 10	64100 14 407 69-8	10/200	0.070
NPB 12	64100 14 401 76-4	10/200	0.100

Type	Insert nut			
	NPB 06	NPB 08	NPB 10	NPB 12
<b>Cantilever brackets</b>				
NSF 22			x	
NSF 23			x	
NSF 24			x	
NSF 25			x	
NSF 26			x	
NSF 42			x	
NSF 43			x	
NSF 44				x
NSF 45				x
NSF 46				x
NSF 26				x
NSP 08				x
<b>Wall rails</b>				
NSR 15	NPB 06	NPB 08	NPB 10	NPB 12
NSR 25			x	x
<b>Suspension rail</b>				
NSB 14	NPB 06	NPB 08	NPB 10	NPB 12
<b>Pendant rails</b>				
NSR 05	NPB 06	NPB 08	NPB 10	Nut and bolt
NSR 12		x		x
<b>Fixing rail profiles</b>				
NHP 15	x	x		
NHP 20	x	x		



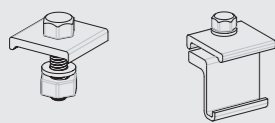
## SYSTEMAL Presto cable ladders, accessories

Nut and bolt  
(M10x40)



Type	EAN-code	Delivery pack/pcs	Weight kg/pc
NHB 10	64100 14 415 56-3	50/500	0.050

Hold down clamp  
NCH 06 NCH 30



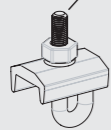
Type	EAN-code	Delivery pack/pcs	Weight kg/pc
NCH 06	64100 14 401 70-2	50/500	0.014
NCH 30	64100 14 415 50-1	10/200	0.020

Locking screw



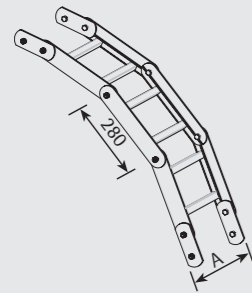
Type	EAN-code	Delivery pack/pcs	Weight kg/pc
NIS 12	64100 14 407 34-6	100/1000	0.002

Clamp for crossing ladders M6

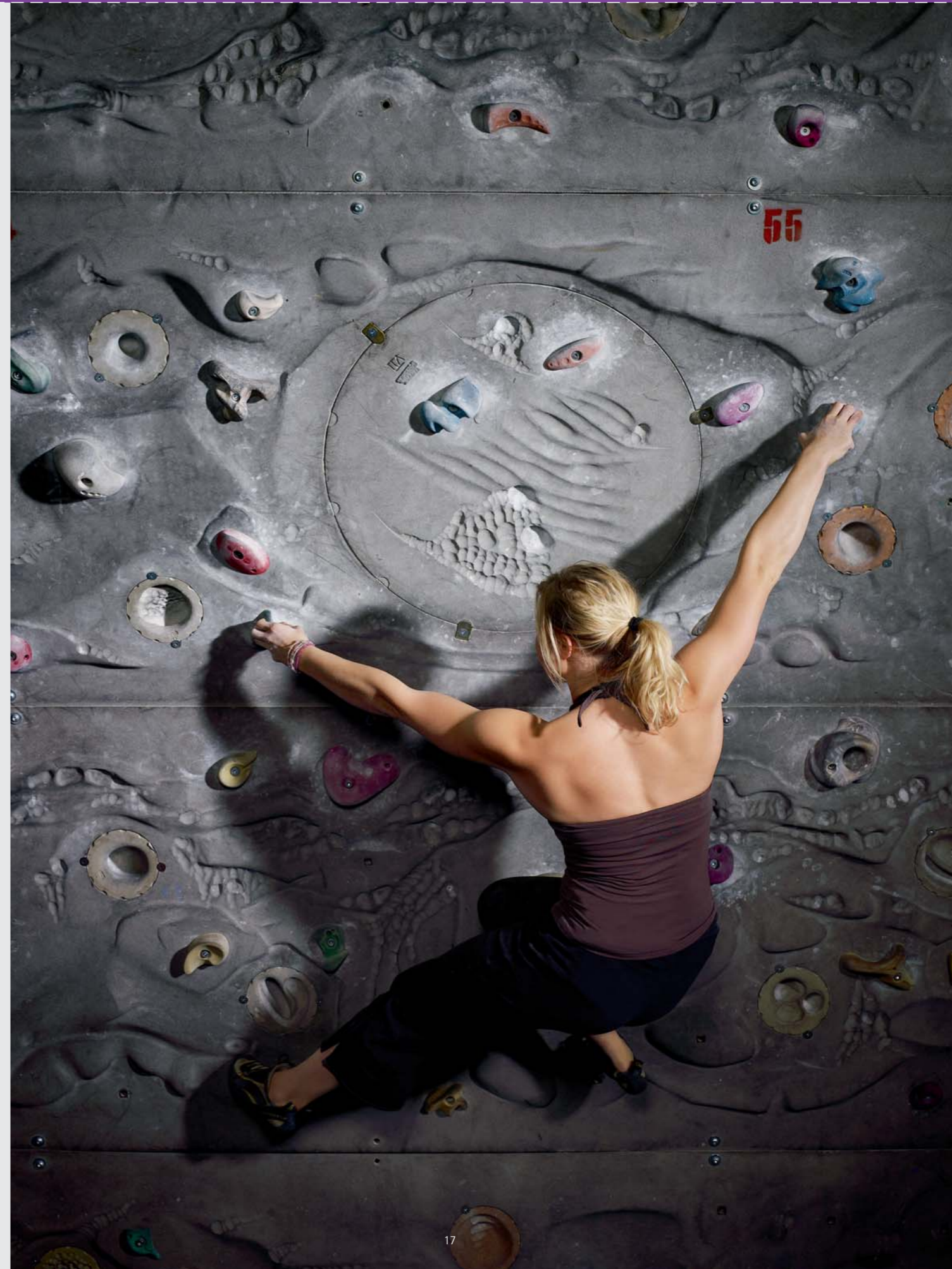


Type	EAN-code	Delivery pack/pcs	Weight kg/pc
NCI 06	64100 14 407 42-1	20/200	0.030

Vertical flexible bend



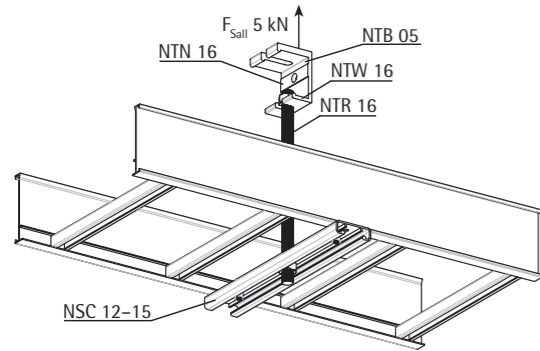
Type	EAN-code	Delivery pack/pcs	For series	Length mm	A mm	Weight kg/pc
NFB 02	64100 14 405 51-9	5	0-, 1-series	1040	200	3.40
NFB 03	64100 14 405 52-6	5	0-, 1-series	1040	300	3.60
NFB 04	64100 14 405 53-3	5	0-, 1-series	1040	400	3.70
NFB 05	64100 14 405 54-0	5	0-, 1-series	1040	500	3.90
NFB 06	64100 14 405 55-7	5	0-, 1-series	1040	600	4.00
NFB 30	64100 14 414 61-0	5	4-, 5-series	1040	300	3.80
NFB 40	64100 14 414 62-7	5	4-, 5-series	1040	400	3.90
NFB 50	64100 14 414 63-4	5	4-, 5-series	1040	500	4.10
NFB 60	64100 14 414 64-1	5	4-, 5-series	1040	600	4.20



# SYSTEMAL Presto cable ladders, fastening

## Center support systems

Loading capacity 5 kN (support beam 2 kN)



Recommended for ladder series LH 0 and NH 1

### Ceiling bracket

Type	EAN-code	Weight kg/pc	Delivery pack/pcs
NTB 05	64100 14 407 43-8	0.22	10/100

### Threaded rod

NTR 16 (M16)	64100 14 407 90-2	0.46/m	30 m
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### Support

NSC 12	64100 14 407 45-2	0.24	10
NSC 13	64100 14 407 46-9	0.33	10
NSC 14	64100 14 407 47-6	0.49	10
NSC 15	64100 14 407 48-3	0.60	10

### Nut

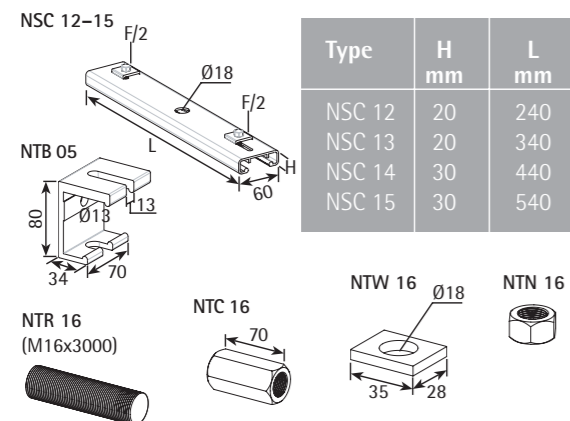
NTN 16 (M16)	64100 14 407 91-9	0.01	100/500
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### Rod coupling nut

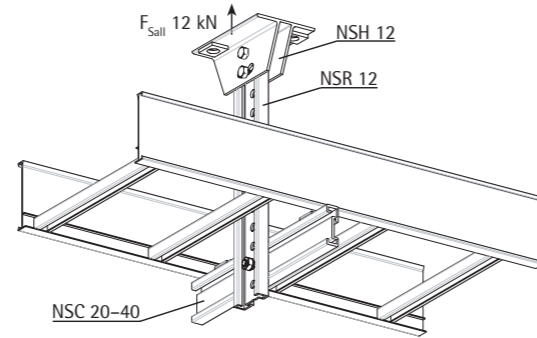
NTC 16 (M16)	64100 14 407 92-6	0.04	10/100
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### Flat washer

NTW 16	64100 14 407 41-4	0.01	50/500
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Loading capacity 12 kN



Recommended for ladder series NH 1

### Ceiling bracket

Type	EAN-code	Weight kg/pc	Delivery pack/pcs
NSH 12	64100 14 415 10-5	0.63	2/20

### Pendant rail

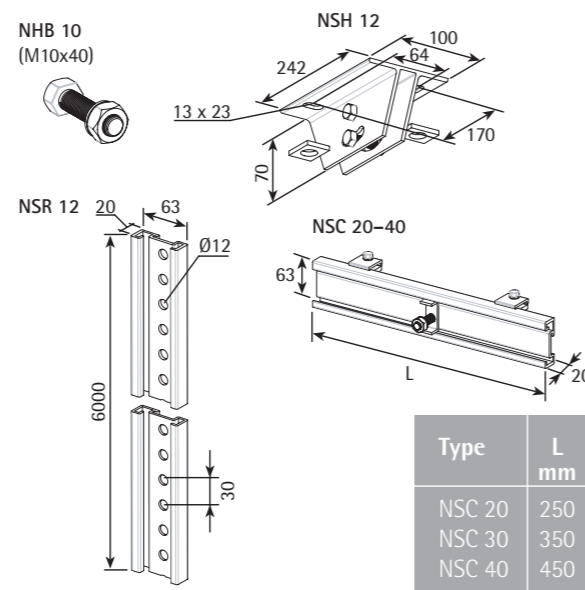
NSR 12	64100 14 415 04-4	1.24/m	36 m
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### Support

NSC 20	64100 14 415 40-2	0.41	10
NSC 30	64100 14 415 41-9	0.54	10
NSC 40	64100 14 415 42-6	0.67	10

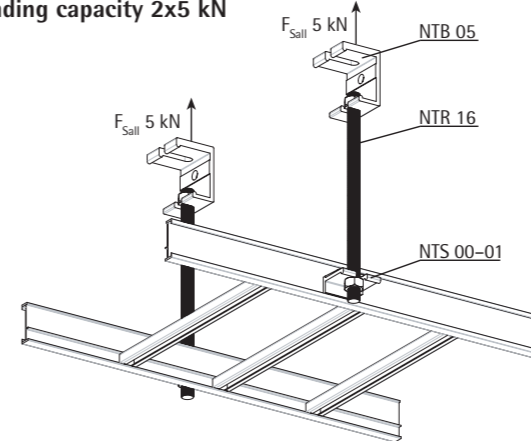
### Nut and bolt

NHB 10 (M10x40)	64100 14 415 56-3	0.05	50/500
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## Gate support systems

Loading capacity 2x5 kN



Recommended for ladder series LH 0 and NH 1

### Ceiling bracket

Type	EAN-code	Weight kg/pc	Delivery pack/pcs
NTB 05	64100 14 407 43-8	0.22	10/100

### Threaded rod

NTR 16 (M16)	64100 14 407 90-2	0.46/m	30 m
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### Vertical support

NTS 00 (0-series)	64100 14 407 85-8	0.07	10/100
NTS 01 (1-series)	64100 14 407 86-5	0.15	10/100

### Nut

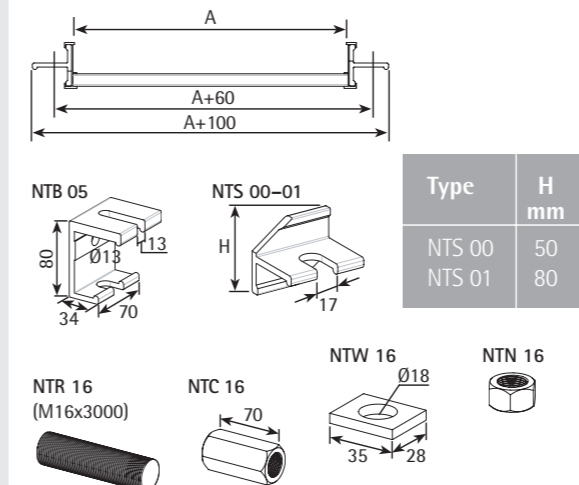
NTN 16 (M16)	64100 14 407 91-9	0.01	100
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### Rod coupling nut

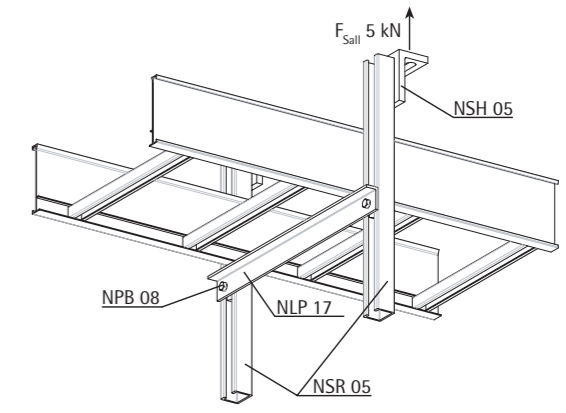
NTC 16 (M16)	64100 14 407 92-6	0.04	10/100
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### Flat washer

NTW 16	64100 14 407 41-4	0.01	50/500
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Loading capacity 2x5 kN



Recommended for ladder series NH 1

### Ceiling bracket

Type	EAN-code	Weight kg/pc	Delivery pack/pcs
NSH 05	64100 14 407 87-2	0.19	10/50

### Pendant rail

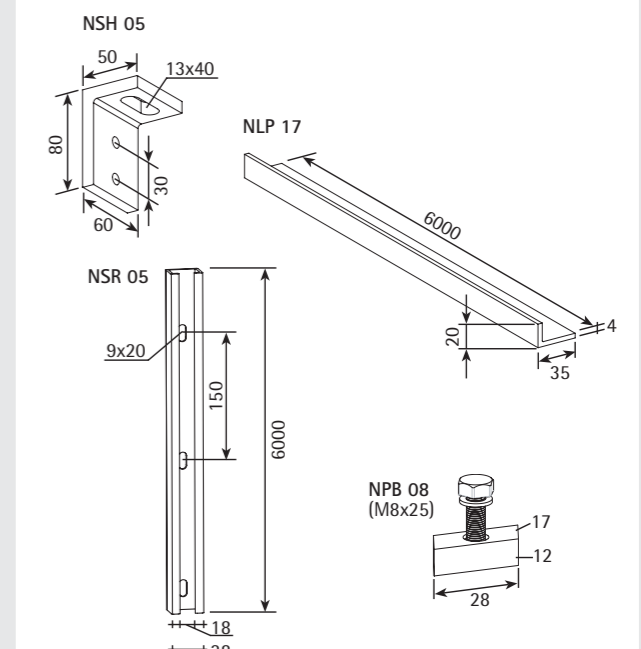
NSR 05	64100 14 407 89-6	0.88/m	36 m
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### Support beam

NLP 17	64100 14 401 23-8	0.56/m	36
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### Nut and bolt

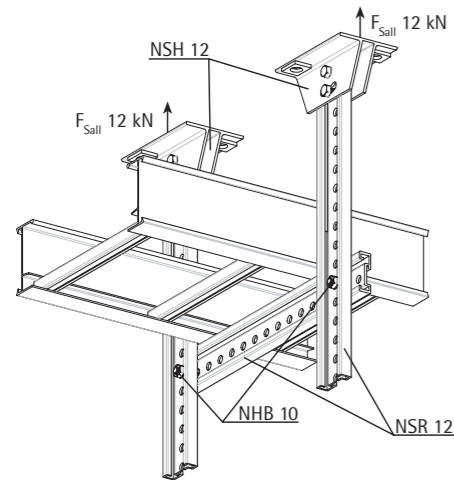
NPB 08 (M8)	64100 14 406 93-6	0.03	20/500
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# SYSTEMAL Presto cable ladders, fastening

## Gate support systems

Loading capacity 2x12 kN



Recommended for ladder series NH 4 and NH 5

Type	EAN-code	Weight kg/pc	Delivery pack/pcs
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### Ceiling bracket

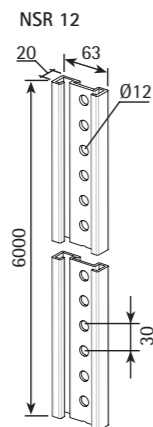
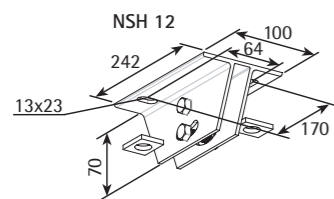
NSH 12	64100 14 415 10-5	0.63	2/20
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### Pendant rail

NSR 12	64100 14 415 04-4	1.24/m	36 m
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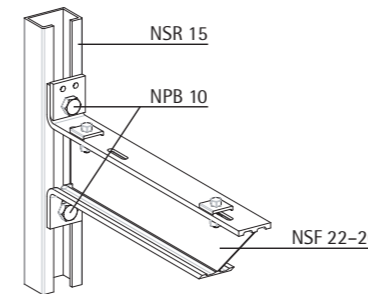
### Nut and bolt

NHB 10	64100 14 415 56-3	0.05	50/500
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## Wall support straight to wall. Wall support to wall rail.

Loading capacity 2 kN



Recommended for ladder series LH 0

### Cantilever bracket

Type	EAN-code	Weight kg/pc	Delivery pack/pcs
NSF 22	64100 14 405 66-3	0.27	10
NSF 23	64100 14 405 67-0	0.38	10
NSF 24	64100 14 405 68-7	0.56	10
NSF 25	64100 14 405 69-4	0.68	10
NSF 26	64100 14 405 70-0	0.79	10

### Wall rail

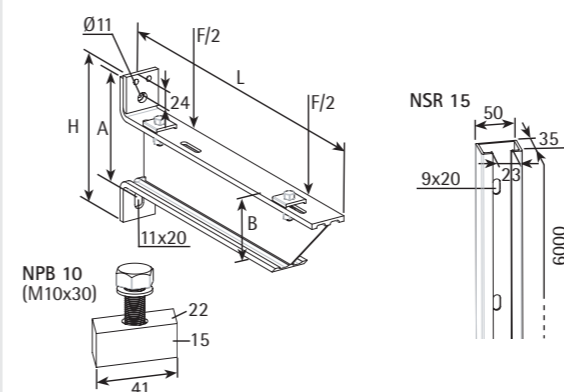
NSR 15	64100 14 401 33-7	1.15/m	36 m
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### Nut and bolt

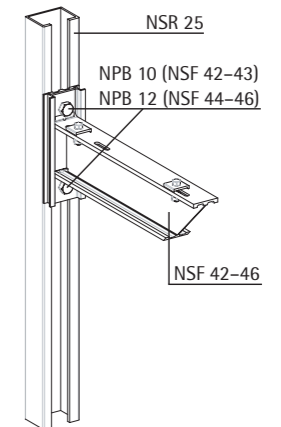
NPB 10 (M10)	64100 14 407 69-8	0.07	10/200
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Type	B mm	A mm	H mm	L mm
NSF 22	60	97	142	257
NSF 23	80	117	162	357
NSF 24	80	117	162	457
NSF 25	80	117	162	557
NSF 26	80	117	162	657

NSF 22-26



Loading capacity 4 kN



Recommended for ladder series NH 1

### Cantilever bracket

Type	EAN-code	Weight kg/pc	Delivery pack/pcs
NSF 42	64100 14 405 76-2	0.38	10
NSF 43	64100 14 405 77-9	0.54	10
NSF 44	64100 14 405 78-6	0.73	10
NSF 45	64100 14 405 79-3	0.86	10
NSF 46	64100 14 405 80-9	1.18	10

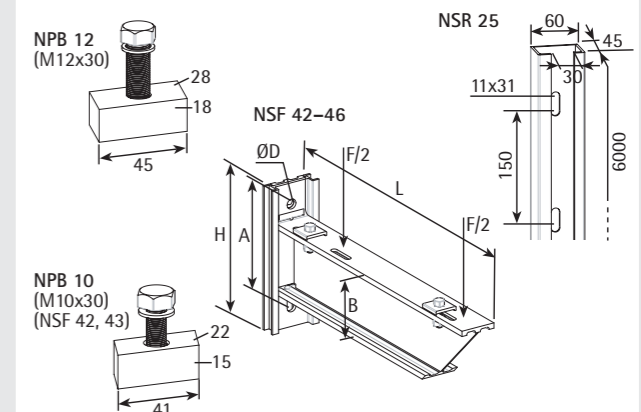
### Wall rail

NSR 25	64100 14 401 31-3	1.57/m	36 m
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### Nut and bolt

NPB 10 (M10)	64100 14 407 69-8	0.07	10/200
NPB 12 (M12)	64100 14 401 76-4	0.10	10/200

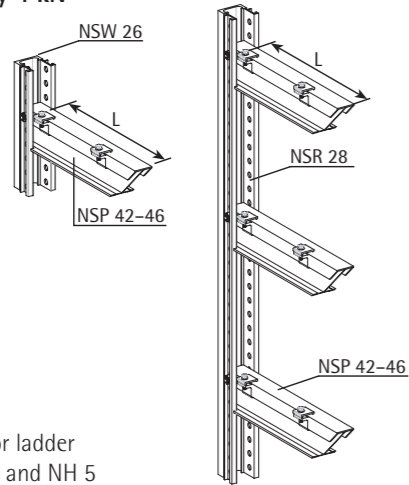
Type	B mm	A mm	H mm	L mm	Ø D mm
NSF 42	80	117	162	257	11
NSF 43	80	117	162	357	11
NSF 44	100	137	182	457	13
NSF 45	100	137	182	557	13
NSF 46	100	137	182	657	13



# SYSTEMAL Presto cable ladders, fastening

Wall support straight to wall. Wall support to wall rail.

Loading capacity 4 kN



Recommended for ladder series NH 1, NH 4 and NH 5

**Cantilever bracket**

Type	EAN-code	Weight kg/pc	Delivery pack/pcs
NSP 42	64100 14 415 20-4	0.48	10
NSP 43	64100 14 415 21-1	0.63	10
NSP 44	64100 14 415 22-8	0.78	10
NSP 45	64100 14 415 23-5	1.00	10
NSP 46	64100 14 415 24-2	1.16	10

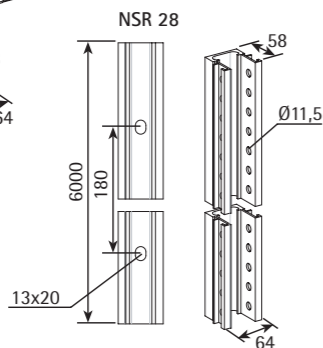
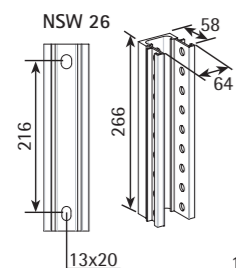
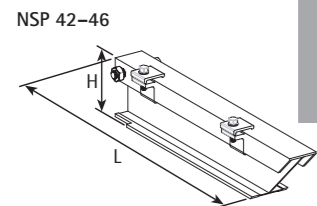
**Wall support**

NSW 26	64100 14 415 16-7	0.57	10
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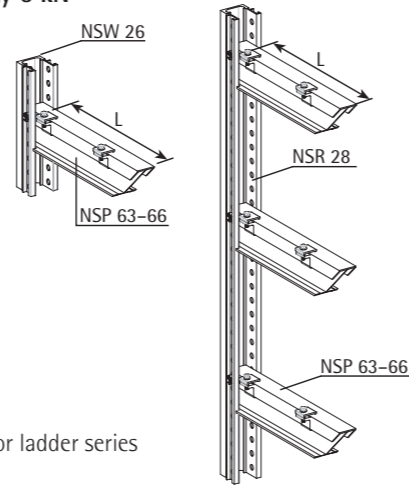
**Wall rail**

NSR 28	64100 14 415 03-7	2.13/m	36 m
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Type	H mm	L mm
NSP 42	80	290
NSP 43	80	390
NSP 44	80	490
NSP 45	100	590
NSP 46	100	690



Loading capacity 6 kN



Recommended for ladder series NH 4 ja NH 5

**Cantilever bracket**

Type	EAN-code	Weight kg/pc	Delivery pack/pcs
NSP 63	64100 14 415 26-6	0.67	10
NSP 64	64100 14 415 27-3	0.83	10
NSP 65	64100 14 415 28-0	1.30	10
NSP 66	64100 14 415 29-7	1.52	10

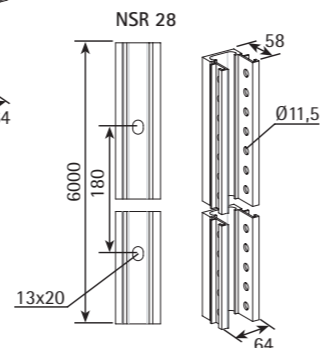
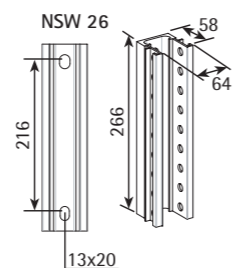
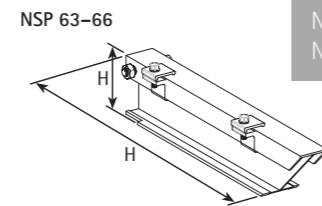
**Wall support**

NSW 26	64100 14 415 16-7	0.57	10
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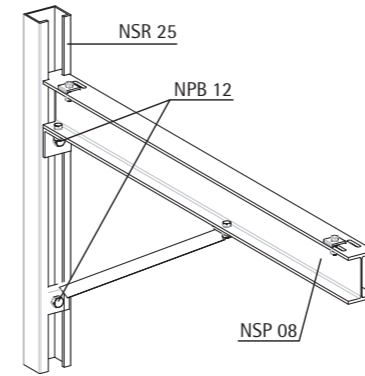
**Wall rail**

NSR 28	64100 14 415 03-7	2.13/m	36 m
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Type	H mm	L mm
NSP 63	100	390
NSP 64	100	490
NSP 65	120	590
NSP 66	120	690



Loading capacity 3-5 kN



Recommended for ladder series LH 0 ja NH 1

**Cantilever bracket**

Type	EAN-code	Weight kg/pc	Delivery pack/pcs
NSP 08	64100 14 401 22-1	2.10	1

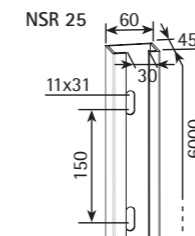
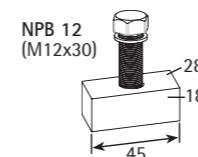
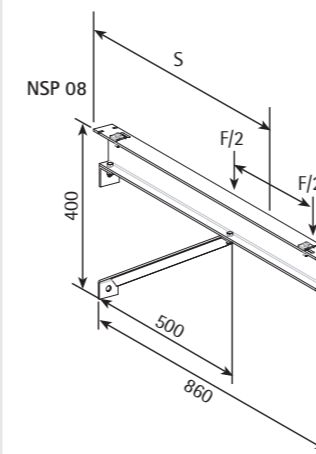
**Wall rail**

NSR 25	64100 14 401 31-3	1.57/m	36 m
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**Nut and bolt**

NPB 12 (M12)	64100 14 401 76-4	0.10	10/200
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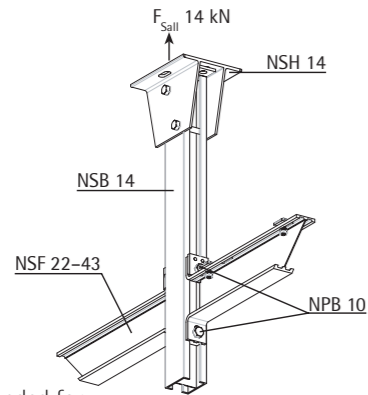
S	F <sub>fall</sub> kN
400	5
500	4
600	3.3
700	2.8
800	2.5



# SYSTEMAL Presto cable ladders, fastening

## Suspension rail support systems

Loading capacity 14 kN, 1000 Nm



Recommended for ladder series NH 1

### Ceiling bracket

Type	EAN-code	Weight kg/pc	Delivery pack/pcs
NSH 14	64100 14 401 21-4	0.75	2/10

### Suspension rail

NSB 14	64100 14 401 20-7	1.66/m	36 m
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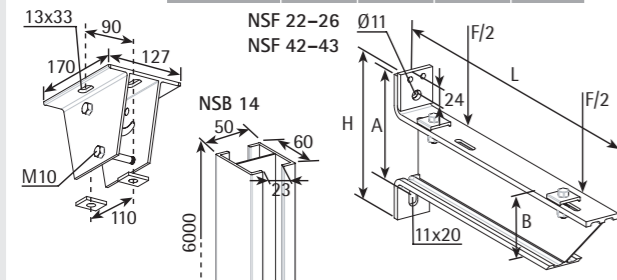
### Cantilever bracket

NSF 22	64100 14 405 66-3	0.27	10
NSF 23	64100 14 405 67-0	0.38	10
NSF 24	64100 14 405 68-7	0.56	10
NSF 25	64100 14 405 69-4	0.68	10
NSF 26	64100 14 405 70-0	0.79	10
NSF 42	64100 14 405 76-2	0.38	10
NSF 43	64100 14 405 77-9	0.54	10

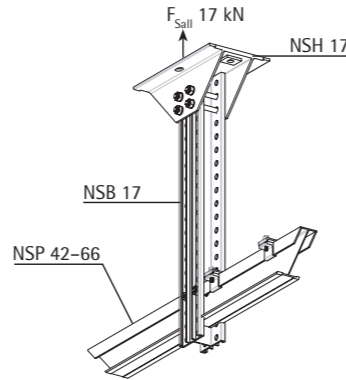
### Nut and bolt

NPB 10	64100 14 407 69-8	0.07	10/200
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Type	B mm	A mm	H mm	L mm
NSF 22	60	97	142	257
NSF 23	80	117	162	357
NSF 24	80	117	162	457
NSF 25	80	117	162	557
NSF 26	80	117	162	657
NSF 42	80	117	162	257
NSF 43	80	117	162	357



Loading capacity 17 kN, 1500 Nm



Recommended for ladder series NH 1, NH 4, and NH 5

### Ceiling bracket

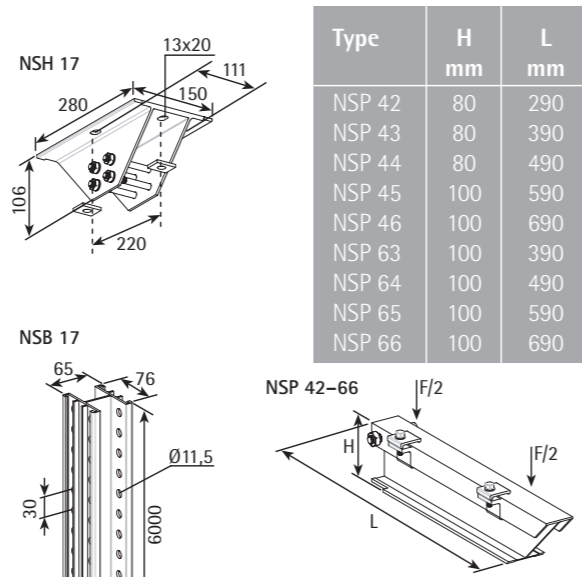
Type	EAN-code	Weight kg/pc	Delivery pack/pcs
NSH 17	64100 14 415 12-9	1.32	2/20

### Suspension rail

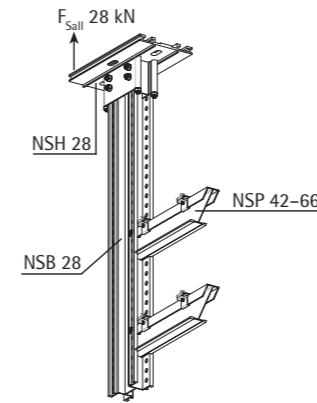
NSB 17	64100 14 415 00-6	2.4/m	36 m
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### Cantilever bracket

NSP 42	64100 14 415 20-4	0.48	10
NSP 43	64100 14 415 21-1	0.63	10
NSP 44	64100 14 415 22-8	0.78	10
NSP 45	64100 14 415 23-5	1.00	10
NSP 46	64100 14 415 24-2	1.16	10
NSP 63	64100 14 415 26-6	0.67	10
NSP 64	64100 14 415 27-3	0.83	10
NSP 65	64100 14 415 28-0	1.30	10
NSP 66	64100 14 415 29-7	1.52	10



Loading capacity 28 kN, 3500 Nm



Recommended for ladder series NH 4 ja NH5

### Ceiling bracket

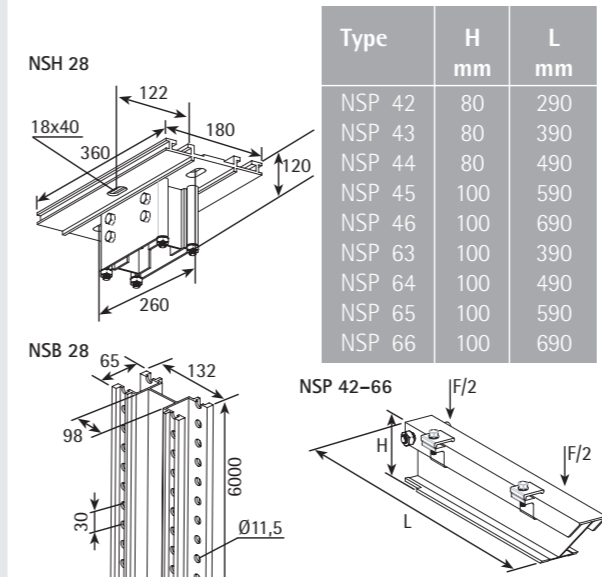
Type	EAN-code	Weight kg/pc	Delivery pack/pcs
NSH 28	64100 14 415 11-2	2.1	5

### Suspension rail

NSB 28	64100 14 415 01-3	3.6/m	36 m
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### Cantilever bracket

NSP 42	64100 14 415 20-4	0.48	10
NSP 43	64100 14 415 21-1	0.63	10
NSP 44	64100 14 415 22-8	0.78	10
NSP 45	64100 14 415 23-5	1.00	10
NSP 46	64100 14 415 24-2	1.16	10
NSP 63	64100 14 415 26-6	0.67	10
NSP 64	64100 14 415 27-3	0.83	10
NSP 65	64100 14 415 28-0	1.30	10
NSP 66	64100 14 415 29-7	1.52	10



# SYSTEMAL Presto use and installation of suspension rails

## NSB 14

Asymmetric loading

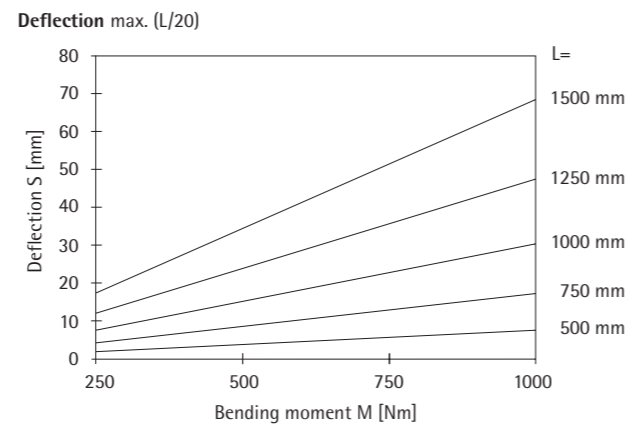
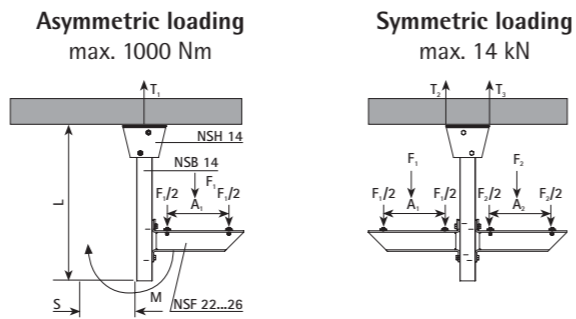
**Bending moment**  
 $M = F_1 \times (A/2 + 0.07)$

**Deflection S**

**Loading of mounting bolts**  
 (anchoring must be checked separately)  
 $T_1 = (M/0.22 + F/2)$

Symmetric loading

$F_1 = F_2$   
 $F = F_1 + F_2$   
 $T_2 = T_3 = F/2$



## NSB 17

Asymmetric loading

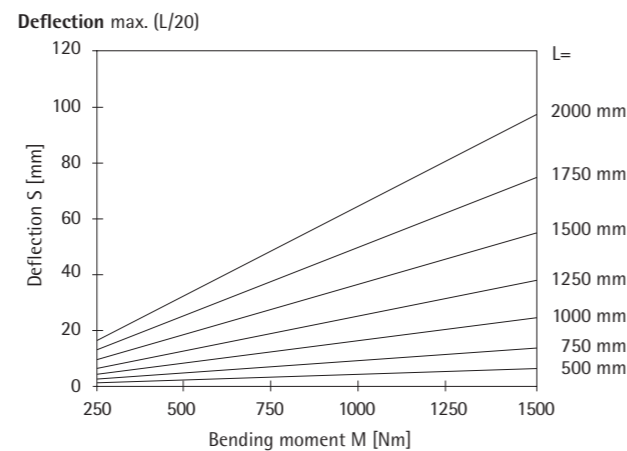
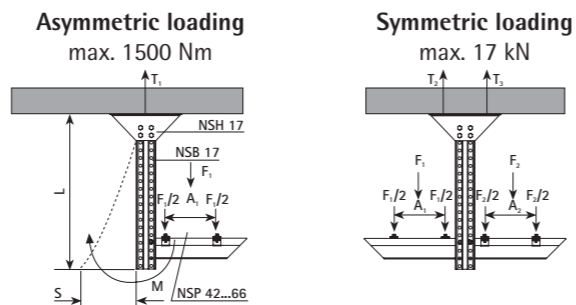
**Bending moment**  
 $M = F_1 \times (A/2 + 0.01)$

**Deflection S**

**Loading of mounting bolts**  
 (anchoring must be checked separately)  
 $T_1 = (M/0.22 + F/2)$

Symmetric loading

$F_1 = F_2$   
 $F = F_1 + F_2$   
 $T_2 = T_3 = F/2$



## NSB 28

Asymmetric loading

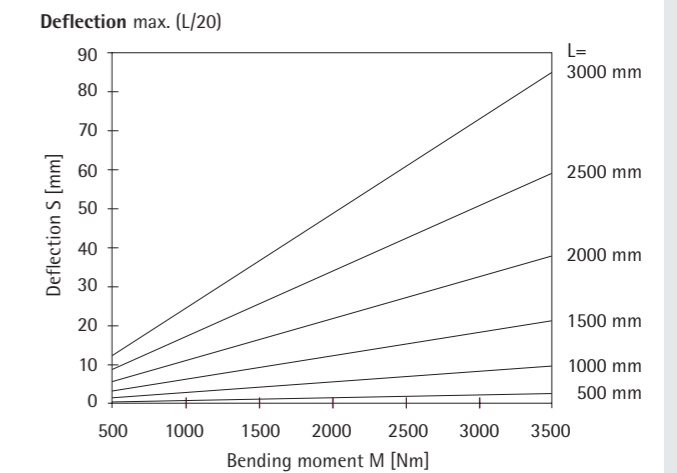
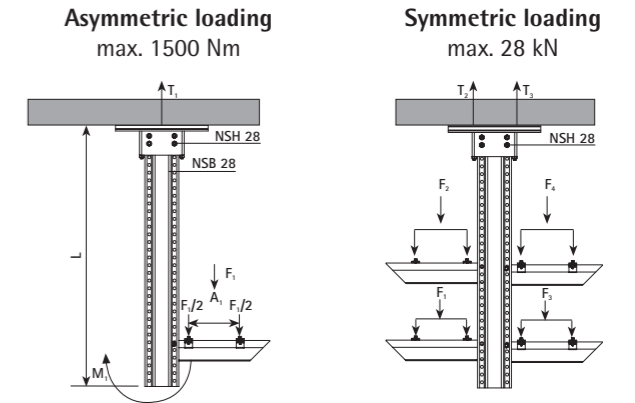
**Bending moment**  
 $M = F_1 \times (A/2 + 0.1)$

**Deflection S**

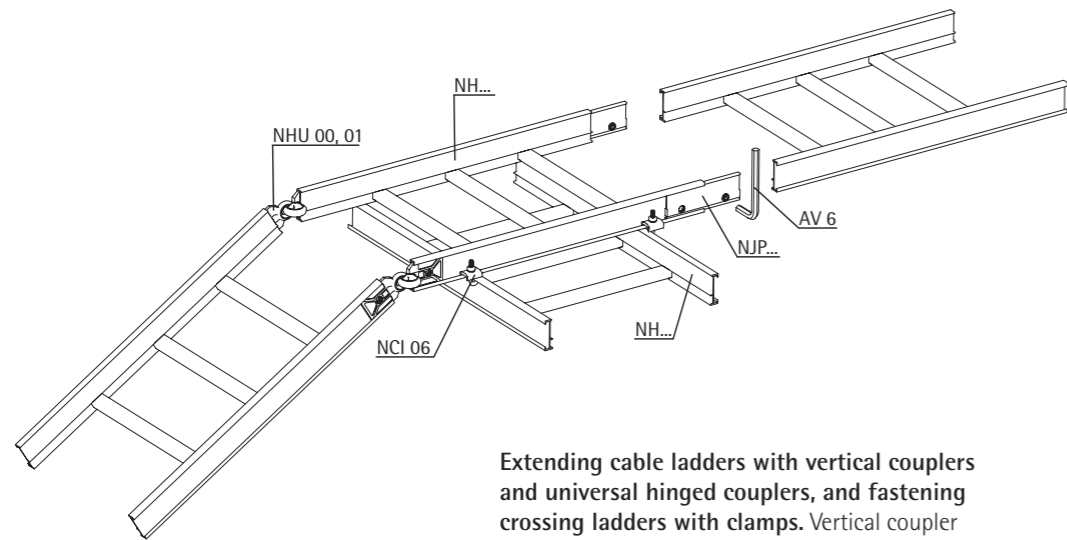
**Loading of mounting bolts**  
 (anchoring must be checked separately)  
 $T_1 = (M/0.26 + F/2)$

Symmetric loading

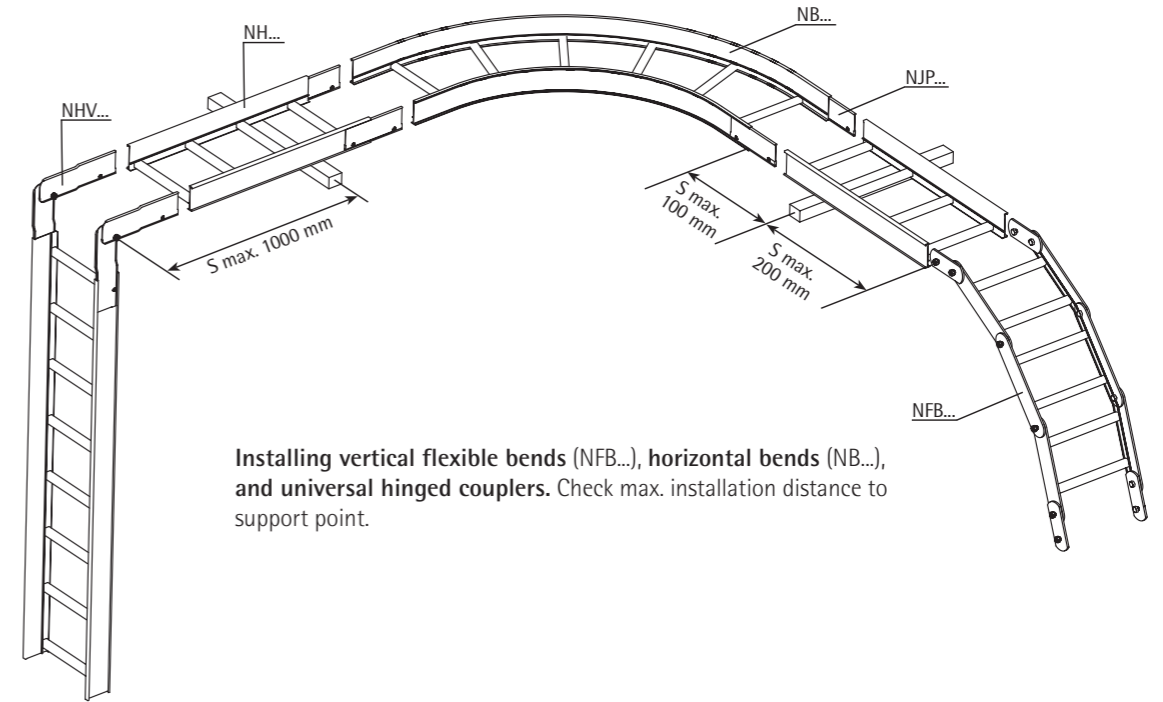
$F_1 = F_2 = F_3 = F_4$   
 $F = F_1 + F_2 + F_3 + F_4$   
 $T_2 = T_3 = F/2$



# SYSTEMAL Presto installation examples



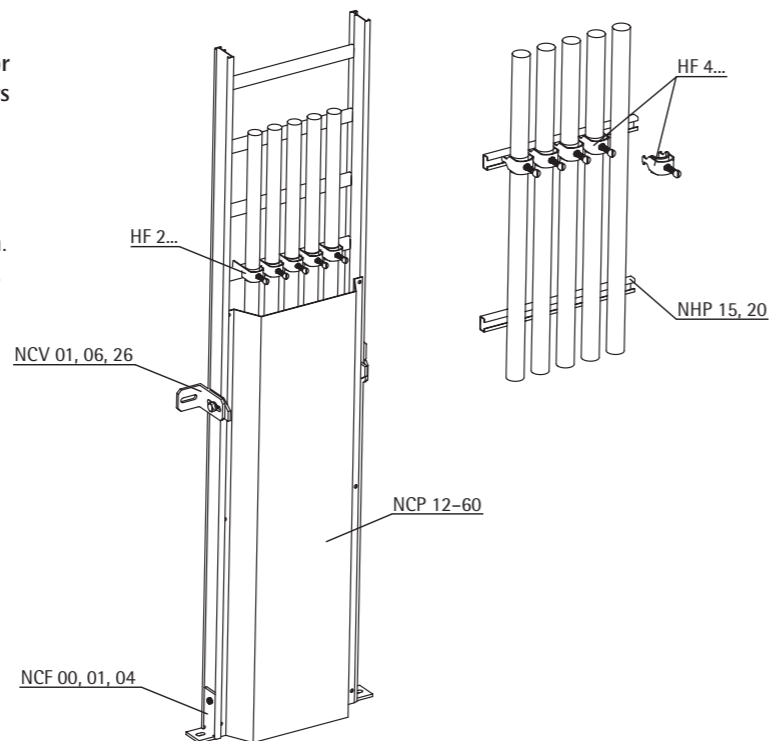
Extending cable ladders with vertical couplers and universal hinged couplers, and fastening crossing ladders with clamps. Vertical coupler NJP... is also used in joining angle and T-pieces.



Installing vertical flexible bends (NFB...), horizontal bends (NB...), and universal hinged couplers. Check max. installation distance to support point.

Attaching vertical ladders to wall and floor (NCV... and NCF...), and installing cable covers (NCP...) and cable clamps (HF 2... and HF 4...) to vertical ladders and fixing rail profiles (NHP 15 and NHP 20).

Fastening distance of wall attachments  $\leq 2$  m. Cable cover (NCP...) includes fastening screws.

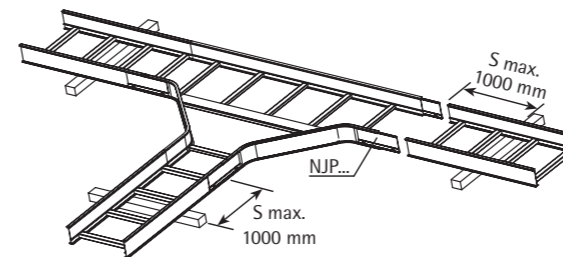


Distance from wall (mm):

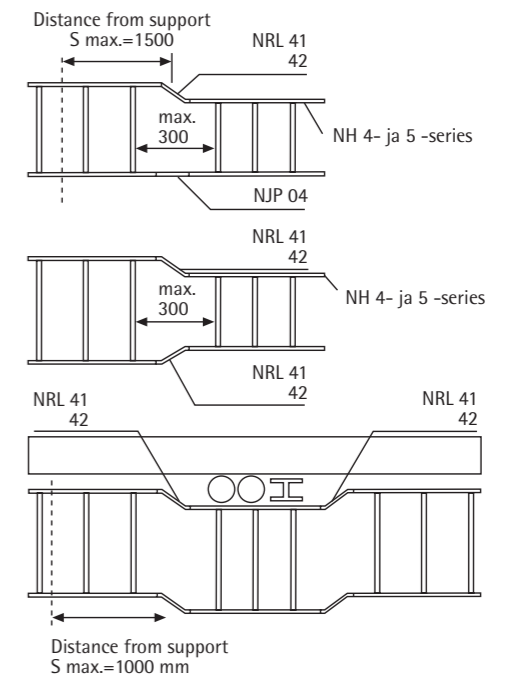
	NH 0...	NH 1...	NH 4-5
NCV 01	15-40	-	-
NCV 06	25-105	10-70	-
NCV 26	-	-	45-135

### Installing T-pieces

When installing corner couplers (NTP...) and horizontal hinged couplers (NHH...) the max. distance to the support point is 1000 mm. When installing the T-piece compare the distance to the vertical coupler (NJP...).



### Installing reducers



# SYSTEMAL Presto lighting fixture suspension rails

The main places of use for lighting fixture rails are stores, offices, industrial halls and storage spaces as well as other high spaces. Their task is to ease the installation of lighting fixtures as well as high- and low-tension equipment. Well-designed and purposefully placed lighting fixture rail solutions secure a sufficient and even amount of light for the entire space.

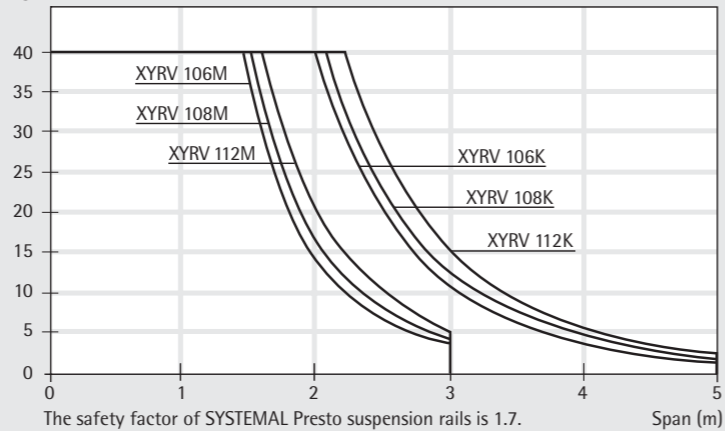
The aluminous SYSTEMAL Presto lighting fixture rails are light-weight. Despite this they have an excellent torsion and bending stiffness. Long spans and a large selection of accessories that ease handling secure not only a fast and easy installation, but also low installation costs.



**Even lighting fixture load allowed for rails**

(Deflection 1/200)

q  
kg/m



**T-bracket**  
T-bracket XYRV 2454M and XYRV 2454K for making a T-joint.



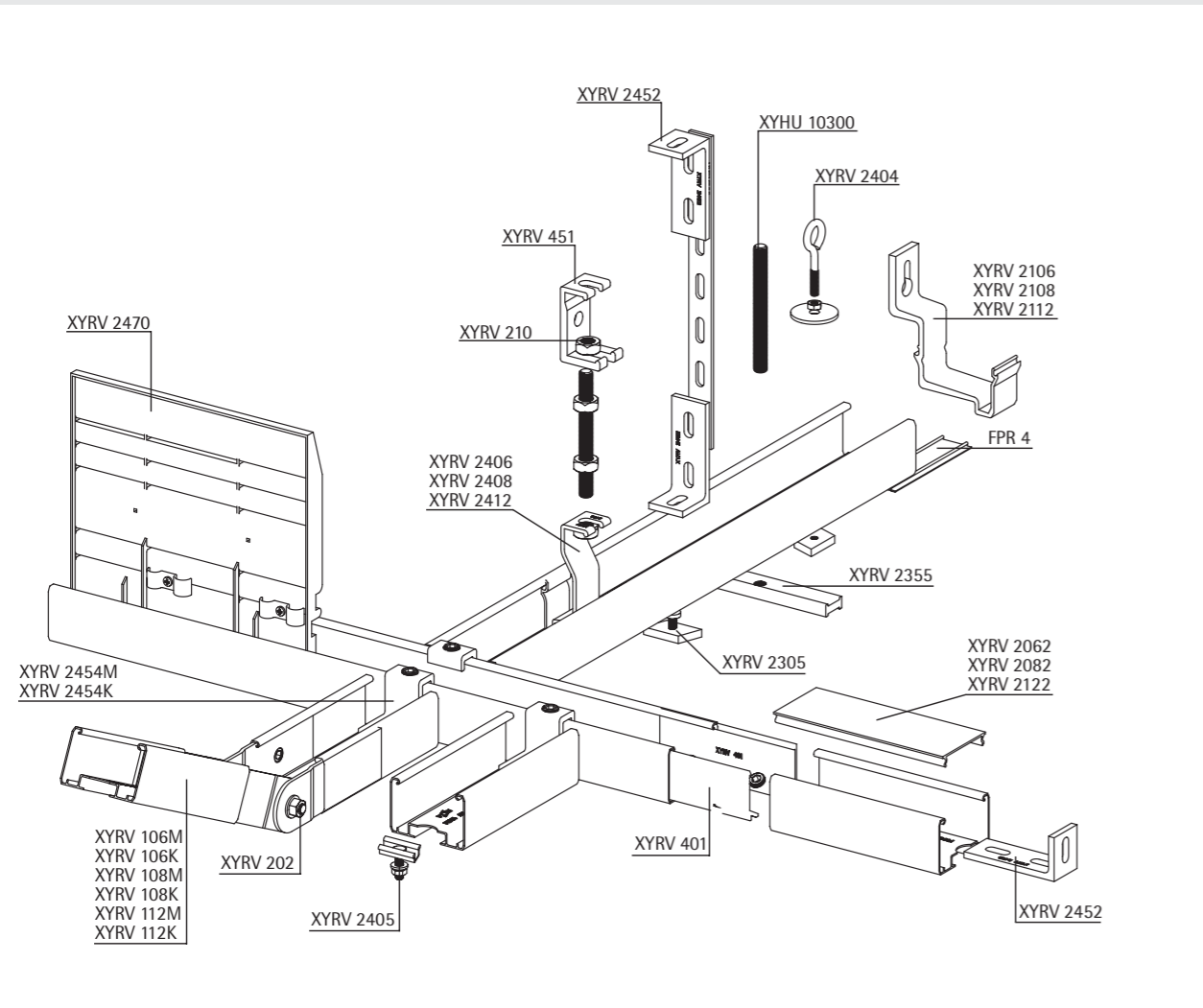
**Internal wall bracket**  
Internal wall bracket XYRV 2106, XYRV 2108, and XYRV 2112 for attaching rails to walls.



**Cover strip**  
Cover strip FPR 4-1 (grey) and FPR 4-3 (white) for covering the bottom groove of the suspension rail.



# SYSTEMAL Presto lighting fixture suspension rails



The SYSTEMAL Presto suspension rails manufactured by Nordic Aluminium PLC are aluminium profile. With the rails, both lighting fixtures as well as high- and low-tension equipment can be installed quickly and easily. The suspension rail's perforation (21x70 mm) is dimensioned for example for the EnstoNet installation system's 3 and 5 poled socket. The lightness, long spans, and the accessories of the rails enable cheap installation costs.

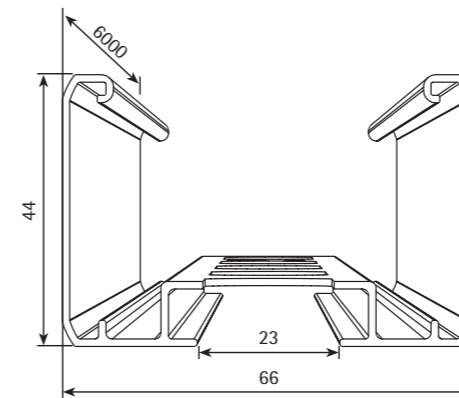
The aluminous SYSTEMAL Presto suspension rails are manufactured for two different types of loading capacities, M (height 44 mm) and K (height 60 mm). Both rails are available in three different widths: 66, 80, and 120 mm. The standard delivery length is 6 meters.

The standard types of the suspension rails are delivered clear or painted RAL 9010 (white). The rails are also available anodized and painted in RAL colors on order.

## Cross-sections of the rails

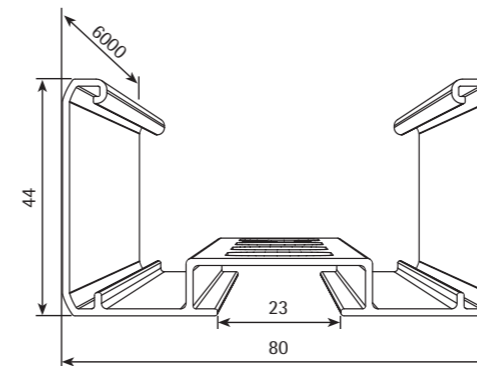
Type	Color	EAN-code	Length
XYRV 106M*)	Clear	64100 14 412 01-2	60/540 m
XYRV 106M-3	White	64100 14 412 51-7	60 m

Weight: 0.65 kg/m  
\*) Also available at 3000 mm length



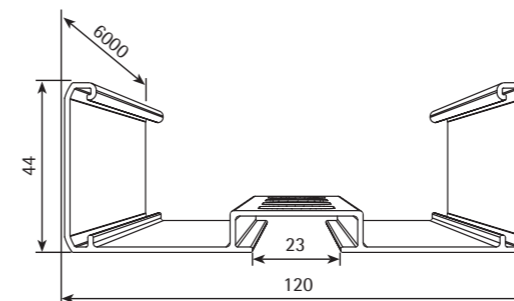
Type	Color	EAN-code	Length
XYRV 108M	Clear	64100 14 412 02-9	60/540 m
XYRV 108M-3	White	64100 14 412 52-4	48 m

Weight: 0.75 kg/m



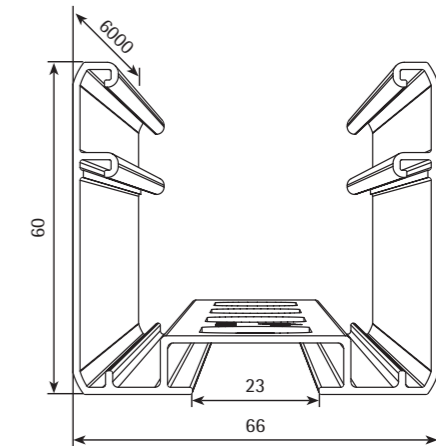
Type	Color	EAN-code	Length
XYRV 112M	Clear	64100 14 412 03-6	60/540 m
XYRV 112M-3	White	64100 14 412 53-1	36 m

Weight: 0.96 kg/m



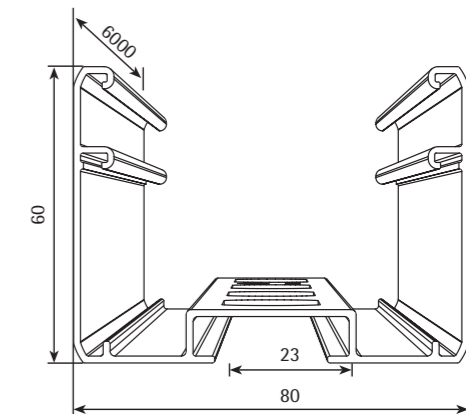
Type	Color	EAN-code	Length
XYRV 106K	Clear	64100 14 412 05-0	60/360 m
XYRV 106K-3	White	64100 14 412 55-5	60 m

Weight: 0.88 kg/m



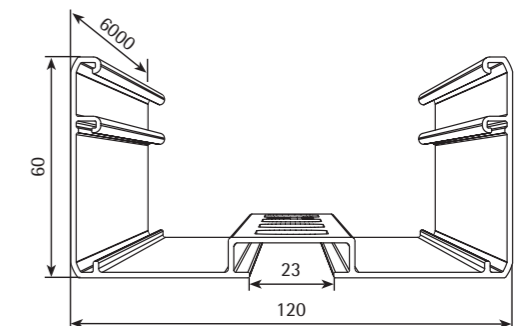
Type	Color	EAN-code	Length
XYRV 108K	Clear	64100 14 412 06-7	60/540 m
XYRV 108K-3	White	64100 14 412 56-2	48 m

Weight: 1.00 kg/m



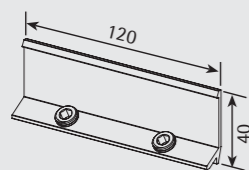
Type	Color	EAN-code	Length
XYRV 112K	Clear	64100 14 412 07-4	60/360 m
XYRV 112K-3	White	64100 14 412 57-9	36 m

Weight: 1.22 kg/m



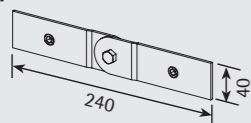
# SYSTEMAL Presto lighting fixture rails, installation parts

Coupler



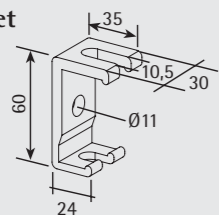
Type	EAN-code	Delivery pack
XYRV 401	64100 14 408 18-3	20/200 pcs

Hinged coupler



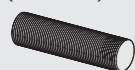
Type	EAN-code	Delivery pack
XYRV 202	64100 14 408 17-6	10/100 pcs

Ceiling bracket



Type	EAN-code	Delivery pack
XYRV 451	64100 14 408 84-8	20/500 pcs

Threaded rod (M10x3000)

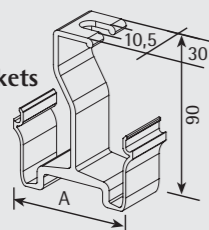


Aluminium nut (M10)



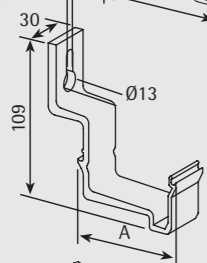
Type	Description	EAN-code	Delivery pack
	Theaded rod 3000mm		
XYHU 10300	Aluminium nut M10	64100 14 408 32-9	75/750 m
XYRV 210		64100 14 408 37-4	100 pcs

Suspension brackets

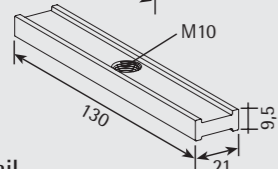


Suspension brackets			
XYRV 2406	64100 14 412 10-4	100 pcs	A=59
XYRV 2408	64100 14 412 11-1	100 pcs	A=72
XYRV 2412	64100 14 412 12-8	100 pcs	A=112
Internal wall brackets			
XYRV 2106	64100 14 412 30-2	10/50 pcs	A=59
XYRV 2108	64100 14 412 31-9	10/50 pcs	A=72
XYRV 2112	64100 14 412 32-6	10/50 pcs	A=112

Internal wall brackets

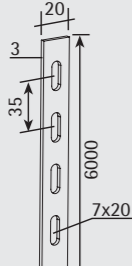


Support bar



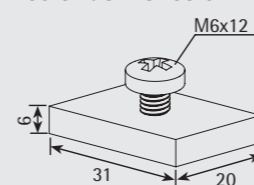
Type	EAN-code	Delivery pack
XYRV 2355	64100 14 412 15-9	20/200 pcs

Pendant rail



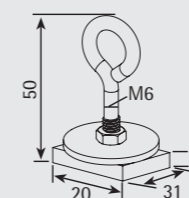
Type	EAN-code	Delivery pack
XYRV 203	64100 14 408 19-0	60 m

Insert nut with screw



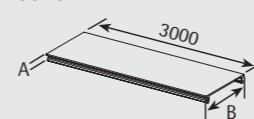
Type	EAN-code	Delivery pack
XYRV 2305	64100 14 412 16-6	50/500 pcs

Suspension hook



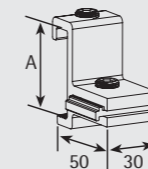
Type	EAN-code	Delivery pack
XYRV 2404	64100 14 412 23-4	20/200 pcs

Cover



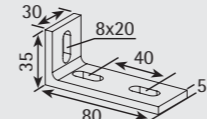
Type	EAN-code	Delivery pack	A	B
XYRV 2062	64100 14 412 20-3	30 m	A=10	B=56
XYRV 2082	64100 14 412 21-0	30 m	A=9	B=70
XYRV 2122	64100 14 412 22-7	30 m	A=15	B=110

T-bracket



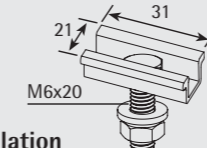
Type	EAN-code	Delivery pack	A
XYRV 2454M	64100 14 412 33-3	10/100 pcs	A=47
XYRV 2454K	64100 14 412 34-0	10/100 pcs	A=63

Wall bracket



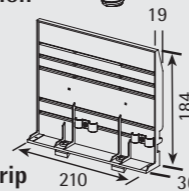
Type	EAN-code	Delivery pack
XYRV 2452	64100 14 412 18-0	20/200 pcs

Insert nut with screw



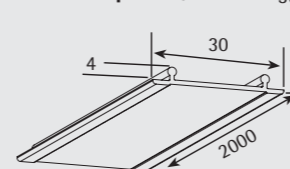
Type	EAN-code	Delivery pack
XYRV 2405	64100 14 412 17-3	50/500 pcs

Installation plate



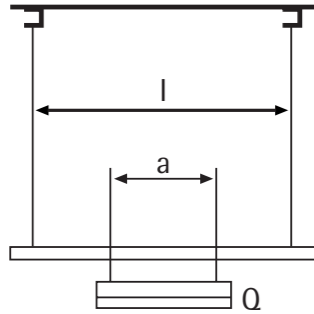
Type	EAN-code	Delivery pack
XYRV 2470	64100 14 412 19-7	1/10 pcs

Cover strip



Type	EAN-code	Delivery pack
FPR 4-1	64100 14 5 2211-7	12 m/288 m
FPR 4-3	64100 14 5 2210-0	12 m/288 m

# SYSTEMAL Presto suspension rails, loading capacities



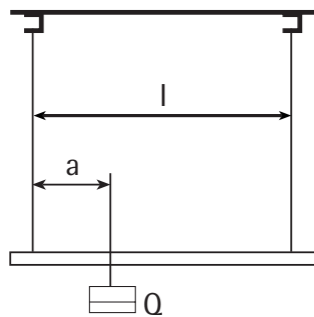
The following cable loads have been used in the calculations:

- XYRV 106M and 106K 1 kg/m
- XYRV 108M and 108K 1.5 kg/m
- XYRV 112M and 112K 2 kg/m

The lighting fixture has two points of fastening.

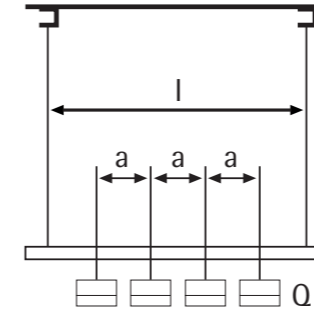
l (m)	a (m)	Q, allowed load (kg)						l (m)
		106M	108M	112M	106K	108K	112K	
2	0.5	21	25	30				2
	1	29	33	40				
	1.5	57	66	80				
2.5	0.5	12	13	16				2.5
	1	14	16	19				
	1.5	20	23	28				
3	0.5	7	7	9	23	26	31	3
	1	8	8	10	26	29	35	
	1.5	10	10	12	33	36	43	
3.5	0.5	4	4	4	15	17	20	3.5
	1	4	4	5	17	18	22	
	1.5	5	5	5	20	21	25	
4	0.5				10	11	13	4
	1				11	12	14	
	1.5				12	13	15	
4.5	0.5				6	6	7	4.5
	1				7	7	8	
	1.5				7	7	8	
5	0.5				3	3	3	5
	1				4	4	4	
	1.5				4	4	4	

The lighting fixture has one point of fastening.



When a=0,  
Q allowed=100 kg

l (m)	a (m)	Q, allowed load (kg)						l (m)
		106M	108M	112M	106K	108K	112K	
1	0.5	86	99	100				1
1.5	0.5	43	49	60				1.5
	0.75	37	42	52				
2	0.5	28	32	39				2
	1	20	23	27				
2.5	0.5	20	22	27				2.5
	1.25	11	13	15				
3	0.5	13	14	17	46	50	60	3
	1	8	8	10	26	29	35	
	1.5	7	8	8	22	25	29	
3.5	0.5	8	8	9	35	37	44	3.5
	1	4	4	5	19	21	25	
	1.75	3	3	4	15	16	19	
4	0.5				26	27	32	4
	1				14	15	17	
	1.5				11	12	13	
5	0.5				11	11	11	5
	1				6	6	6	
	2				4	4	4	
	2.5				3	3	3	



When installing, thermal expansion must be taken into consideration. The coefficient of thermal expansion is  $23 \times 10^{-6} / ^\circ\text{C}$ , which is equal to approximately 1 mm/m, when the temperature changes 40 °C.

Even load of lighting fixtures.

l (m)	a (m)	Q, allowed load (kg)						l (m)
		106M	108M	112M	106K	108K	112K	
2	0.5	8	9	10				2
	1	14	16	20				
2.5	0.5	4	4	5				2.5
	1	7	8	10				
	1.5	10	11	13				
3	0.5				7	8	9	3
	1	4	4	5	13	14	17	
	1.5	5	5	6	16	17	21	
	2	7	7	9	23	24	29	
3.5	1	2	2	2	7	8	9	3.5
	1.5	2	2	3	10	11	12	
	2	3	3	4	12	13	15	
4	1				4	4	5	4
	1.5				6	6	7	
	2				7	7	8	
	2.5				9	9	11	
5	1.5				2	2	2	5
	2				2	2	2	
	3				3	3	3	



Nordic Aluminium supports the Finnish youth on the way to the top of the world. Roosa Huhtikorpi is the young Nordic Champion of wall climbing. Her goal is to become the world's best wall climber within the next five years.

# Nordic Aluminium – leading aluminium manufacturer

Nordic Aluminium PLC is Europe's leading lighting trac manufacturer, Finland's most significant cableway-product manufacturer, as well as manufacturer of highly refined aluminium components and profiles.

Our headquarters are located along the Hanko road in Pikkala, Kirkkonummi, approximately 40 km west of Helsinki. A modern production plant specialized in mechanization is located in Nivala. Our domestic sales offices are in Oulu and Turku. Our international sales offices are located in Sweden, the USA, and Russia.

# SYSTEMAL Presto

SYSTEMAL Presto is a trademark registered by Nordic Aluminium PLC. We retain the right to changes.

SYSTEMAL Presto cable ladders are dimensioned according to the IEC 61537 -standard "Cable tray systems and cable ladder systems for cable management."

Det Norske Veritas (DNV) has accepted SYSTEMAL cable ladders NH 1–NH 5 -series for offshore use (certificate E-7906).



The Quality System of Nordic Aluminium PLC is certified by Lloyd's Register Quality Assurance according to the following quality assurance standards: ISO 9001:2000 and SFS-EN ISO 9001:2000



The Environmental System of Nordic Aluminium PLC is certified by Lloyd's Register Quality Assurance according to the following environmental standards: ISO 14001:2004 and SFS-EN ISO 14001:2004

**NORDIC  ALUMINIUM**

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