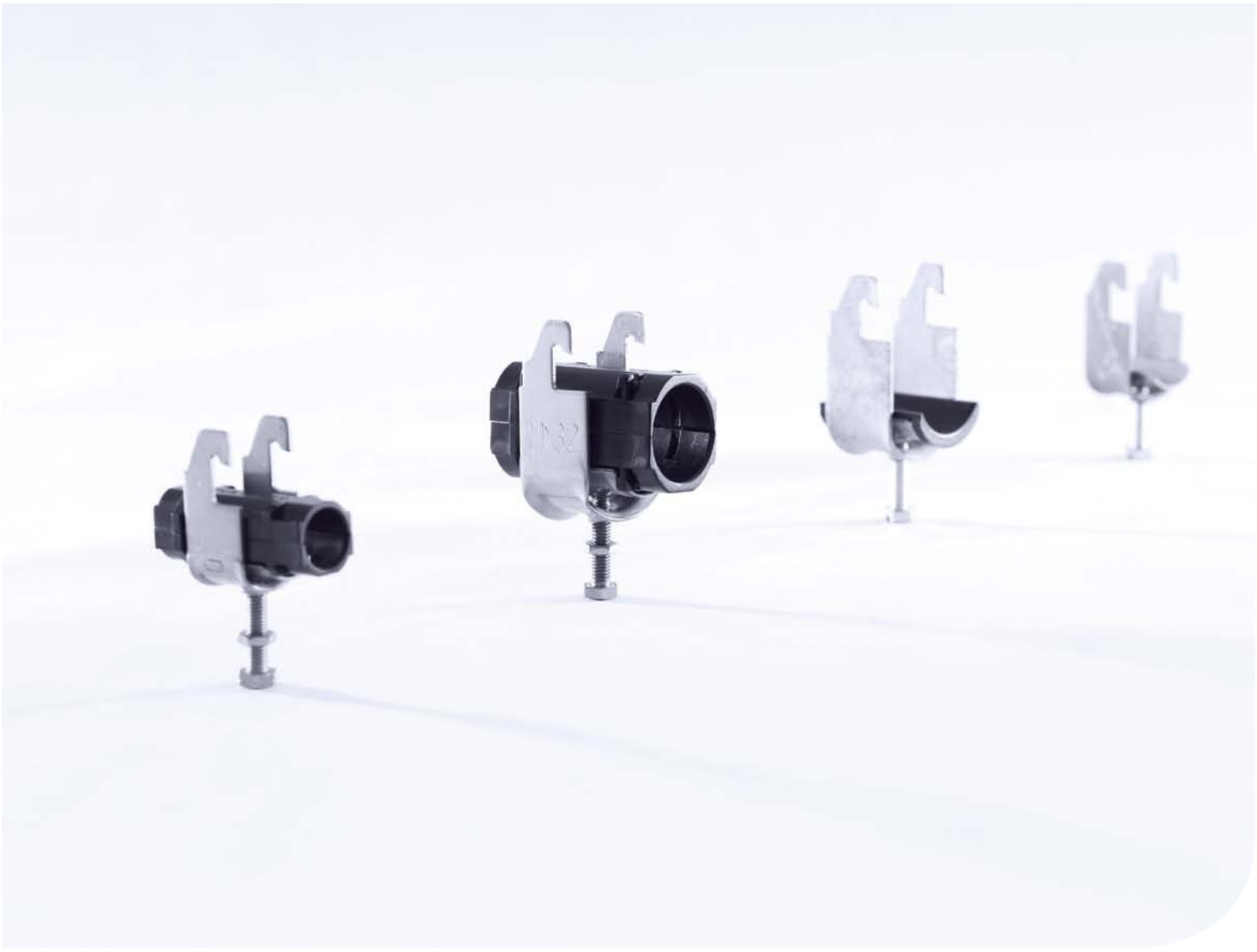
Cable clamps
Catalogue



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Cable clamps

Our history

The brand PUK represents an independent private enterprise, run in the best tradition of the German medium-sized businesses.

PUK-WERKE was formally founded in 1969. Our history, however, goes way back to the 30ies of the last century. Today, we may look back on 70 years of successful company history.

The Berlin-based businesses Herman Pohl OHG (general partnership, founded in 1951), and the Anton Klein OHG, (founded in 1935), whose shareholders decided in 1969 to bundle their business activities in the PUK-WERKE KG (limited partnership), form the roots of our company.

The merge of those two companies set the course for a positive future. Synergies could be utilized, enabling the enterprise to work the German market with greater intensity. At the same time, this step laid the foundations for an efficient internationalization of our business relations.

Both founding companies began their success story with the production of cable clamps – known until this day as “Pohl-clamps” or “KSV-clamps”.

The development and production of cable support systems was soon to follow, developing into our today’s complete and innovative product portfolio, complemented by under floor systems with new, patented solutions, as well as assembly systems for photovoltaic systems.

Our expertise in the installation of PV mounting systems are sourced from the long-time experience of our Spanish subsidiary PUK-Portacables and continue together with PUK Solar the success story.

Our group of companies

We supply cable support systems, cable clamps, under floor systems and assembly systems for photovoltaic systems directly to you; furthermore we will mount our products for you on your construction sites both, nationwide and abroad.

Consequentially, we see ourselves as a service provider for whom customer orientation, service and flexibility are number one priority. Your contact person is always nearby in our 10 branches all over Germany.

in addition we have our own distribution companies or distribution partners in many European countries; thanks to our subsidiary P&K ENERGO, we can offer you our products even in Moscow in stock.

With our Polish subsidiary EL-PUK and PUK-România we not only have our own production site for the East European market but are also able to offer you assembly on site at regional conditions.

TEKOM-PUK is the leading producer of cable support systems in Turkey. Together with PUK-Middle East new possibilities will be opened not only in Turkey but also in its adjacent states and in the Arabic region.

In Western Europe, PUK Portacables is your partner on the spanish and portuguese market, PUK Schweiz on the swiss market, PUK Benelux in The Netherlands and Belgium, as well as PUK UK in the United Kingdom and Ireland.

In the fiscal year of 2015, the PUK Group generated a turnover of about 140 million Euros with around 770 employees – 415 of them work in Germany.

Our **comprehensive offer**

Consulting

Our field staff and sales force consists of skilled specialists with high-level expert knowledge and many years of experience.

They are always happy to answer your questions regarding cable support systems, cable clamps, underfloor systems and photovoltaic systems.

If you wish, our experts will develop technical solutions for you and optimize your project together with you under consideration of costs.

If you chose to mount our products on your construction site, our local staff will help you all the way - from the right choice of products to the mounting technology.

Planning

Our technical department engineers in our Berlin headquarters are at our customers' disposal. During international large-scale projects, they work in close cooperation with the responsible planning and engineering offices Germany-wide and abroad.

Our engineers develop detailed recommendations for special applications, provide engineering drawings, static verifications and compile installation-typicals for complex situations to ensure a smooth mounting of our products.

Installation

Our competence in installation is being proven on nearly 1.000 construction sites per year.

The PUK branch offices provide flexible and customer-oriented support for small and medium-sized projects. Our experienced construction supervisors are located directly in our branch offices to make sure that your competent contact person is always close by during the completion of your project.

If you are planning a challenging and

complex major project in Germany or abroad, our main installation department in the Berlin headquarters will be by your side.

The construction of a power plant, a tunnel or an airport often times requires the timely delivery and installation of more than 100 kilometres of cable trays. Therefore, our construction supervisors are always on site.

Our SCC-certification meets high requirements regarding security, health and environment protection (according to SGU) on our construction sites.

Production and logistics

In Germany, we manufacture in two modern plants in Berlin and Schoenecken (Eifel) on a shop floor of more than 30.000 square metres.

Our high capacity and flexible production lines process more than 20.000 tons of steel each year into cable support parts, underfloor components and photovoltaic constructions.

Our own galvanizing plants are an essential factor for being able to guarantee our quality and flexibility.

Our broad experience has taught us how important it is for the completion of every individual project to have a reliable material availability, even on short-notice.

Therefore, our PUK storehouses in all regions are at your disposal offering an extensive assortment of products. With the storehouses at our production facilities plus other nine storehouses throughout Germany, we can guarantee shortest delivery times, no matter where you are, and – if you have commissioned us with the assembly as well – the capability for a proximate assembly start.

Quality and safety

We ensure the quality of our products and the application security by constant inspection and certification, as well as by supplementing the legal test procedures by additional, specially developed quality assurance. Specific instructions regarding work, procedures and inspection are an inherent part of our quality management.

Our plants and branch offices have been certified according to DIN EN ISO 9001. This certification applies to the construction, manufacture and mounting of PUK cable support systems.

In co-operation with the TÜV Rheinland (Technical Inspection Agency), we test our cable support systems on our own test stand according to the strict DIN EN 61537 guidelines and with a special focus on the bearing capacities and thus application security.

Our underfloor systems comply with DIN EN 50085 and DIN VDE 0634.

PUK Solar‘s mounting systems were tested and certified according to the TÜV specification TZE/2.572.11.

The corresponding specifications in our catalogues bear the „TÜV Rheinland - construction type tested“ label as well as the VDE label.

Our SCC-certification meets high requirements regarding security, health and environment protection (according to SGU) on our construction sites.

Our **product portfolio**

Cable trays

A time-tested complete solution, consisting of:

– wire mesh cable trays
– cable trays
– cable ladders
– wide-span systems
– supporting elements

Proven and tested system solutions consisting of serial parts. Cost-efficient due to serial production on state-of-the-art production facilities.

Cable clamps

The thoroughly tried and tested solution for the rational and safe mounting of one, two or three cables with a diameter of up to 175 mm. For mounting to channels of various dimensions, to sectional steel, or directly to the wall. Made of hot-dip galvanized steel, corrosion-resistant and non-magnetic high-grade steel or of aluminium.

Underfloor systems

Complete solutions for all types of use, consisting of:

– screed flush duct systems
– system components for double and cavity floors
– screed covered duct systems
– device cup and installation devices made of hot-dip galvanized steel, high-grade steel and synthetic material.

Industry

A specially developed product range for industrial plants with the highest safety standards, consisting of:

– wide-span cable systems
– ship ladders
– supporting systems
– PUK STRUT

PUK Solar

The mounting system for photovoltaic system underframes is based on the use of various standard mounting profiles. The simplicity of the coaction of the profiles to the module clams, the functionality as well as the flexible utilization are the prerequisites for the easily distinguishable user-friendly mountability of our system. Based on set parameters we offer solutions for the assembly of photovoltaic systems that are statically funded, yet at the same time unbeatably priced.

Of course, we offer our cable trays, underfloor systems, as well as mounting structures for photovoltaic systems with optional assembly!

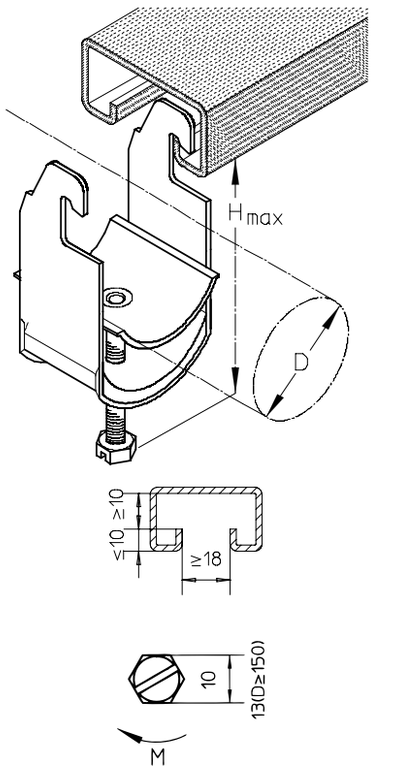
Cable clamps

Numeric index
Cable clamps

AC cable clamp for fastening to C-profiles

Articles with a diameter of 12-56mm are also available in stainless steel finish, material No. 1.4571 / 1.4404 (V4A).
For an application example, see the chapter assembly.

article number	D mm	H_{max} mm	M Nm	number of cables	G kg/100
Z					
12 AC	8-12	41	2,0	1	2,7
16 AC	12-16	46	2,0	1	3,1
20 AC	16-20	50	2,0	1	3,5
24 AC	20-24	54	2,0	1	3,7
28 AC	24-28	58	2,0	1	4,2
32 AC	28-32	63	2,0	1	6,4
36 AC	32-36	67	2,0	1	6,7
40 AC	36-40	71	2,0	1	7,5
44 AC	40-44	81	4,0	1	9,6
48 AC	44-48	85	4,0	1	9,8
52 AC	48-52	90	4,0	1	10,7
56 AC	52-56	94	4,0	1	11,5
60 AC	56-60	98	4,0	1	15,1
64 AC	60-64	102	4,0	1	15,9
70 AC	64-70	109	4,0	1	16,9
76 AC	70-76	113	4,0	1	23,3
82 AC	76-82	119	4,0	1	25,8
88 AC	82-88	125	4,0	1	27,3
94 AC	88-94	131	4,0	1	29,6
100 AC	94-100	137	4,0	1	32,0
110 AC	100-110	157	4,0	1	35,0
120 AC	110-120	167	4,0	1	37,4
150 AC	145-150	203	6,0	1	104,6
175 AC	170-175	228	6,0	1	130,3
12/2 AC	8-12	58	2,0	2	3,5
16/2 AC	12-16	67	2,0	2	4,0
20/2 AC	16-20	75	2,0	2	4,6
24/2 AC	20-24	84	2,0	2	5,0
28/2 AC	24-28	92	2,0	2	5,7
32/2 AC	28-32	101	2,0	2	8,9
36/2 AC	32-36	109	2,0	2	9,9
40/2 AC	36-40	117	2,0	2	11,4
44/2 AC	40-44	127	4,0	2	13,1
48/2 AC	44-48	135	4,0	2	14,2
52/2 AC	48-52	144	4,0	2	15,7
56/2 AC	52-56	152	4,0	2	15,9
12/3 AC	8-12	71	2,0	3	4,3
16/3 AC	12-16	85	2,0	3	5,1
20/3 AC	16-20	97	2,0	3	5,9
24/3 AC	20-24	110	2,0	3	6,7
28/3 AC	24-28	122	2,0	3	7,4



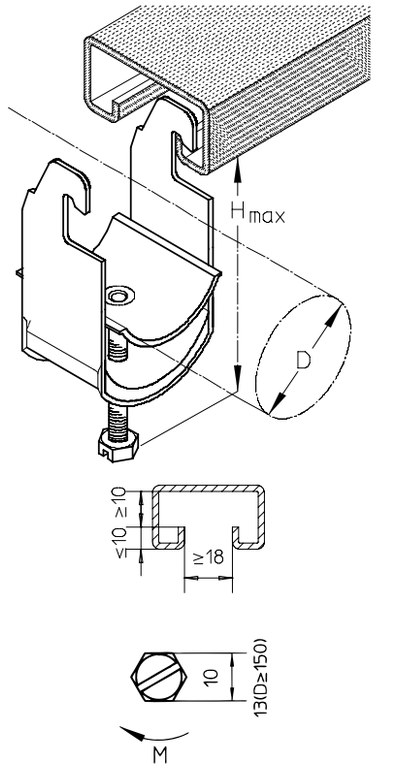
accessories optional:

A 41	C-rail, not perforated, 41x41 mm	(catalogue cable trays)
A 2	C-rail, not perforated, 50x31 mm	(catalogue cable trays)
A 4	C-rail, not perforated, 48x26 mm	(catalogue cable trays)
A 9	C-rail, not perforated, 40x25 mm	(catalogue cable trays)
A 8	C-rail, not perforated, 40x22 mm	(catalogue cable trays)
A 7	C-rail, not perforated, 40x22 mm	(catalogue cable trays)

AC cable clamp for fastening to C-profiles

Articles with a diameter of 12-56mm are also available in stainless steel finish, material No. 1.4571 / 1.4404 (V4A).
For an application example, see the chapter assembly.

article number	D mm	H_{max} mm	M Nm	number of cables	G kg/100
E					
12 AC-E	8-12	41	2,0	1	2,6
16 AC-E	12-16	46	2,0	1	2,9
20 AC-E	16-20	50	2,0	1	3,2
24 AC-E	20-24	54	2,0	1	3,6
28 AC-E	24-28	58	2,0	1	4,1
32 AC-E	28-32	63	2,0	1	4,8
36 AC-E	32-36	67	2,0	1	5,8
40 AC-E	36-40	71	2,0	1	6,6
44 AC-E	40-44	81	4,0	1	8,6
48 AC-E	44-48	85	4,0	1	9,1
52 AC-E	48-52	90	4,0	1	9,8
56 AC-E	52-56	94	4,0	1	10,8
12/2 AC-E	8-12	58	2,0	2	3,4
16/2 AC-E	12-16	67	2,0	2	3,8
20/2 AC-E	16-20	75	2,0	2	4,3
24/2 AC-E	20-24	84	2,0	2	5,0
28/2 AC-E	24-28	92	2,0	2	5,4
32/2 AC-E	28-32	101	2,0	2	7,3
36/2 AC-E	32-36	109	2,0	2	8,1
40/2 AC-E	36-40	117	2,0	2	9,7
44/2 AC-E	40-44	127	4,0	2	11,7
48/2 AC-E	44-48	135	4,0	2	12,9
52/2 AC-E	48-52	144	4,0	2	14,0
56/2 AC-E	52-56	152	4,0	2	14,9
AL					
12 AC-AL	8-12	41	1,5	1	1,2
16 AC-AL	12-16	46	1,5	1	1,4
20 AC-AL	16-20	50	1,5	1	1,6
24 AC-AL	20-24	54	1,5	1	1,8
28 AC-AL	24-28	58	1,5	1	2,0
32 AC-AL	28-32	63	1,5	1	3,3
36 AC-AL	32-36	67	1,5	1	3,6
40 AC-AL	36-40	71	1,5	1	4,0
44 AC-AL	40-44	81	3,0	1	4,3
48 AC-AL	44-48	85	3,0	1	4,6
52 AC-AL	48-52	90	3,0	1	5,3
56 AC-AL	52-56	94	3,0	1	5,6



accessories optional:

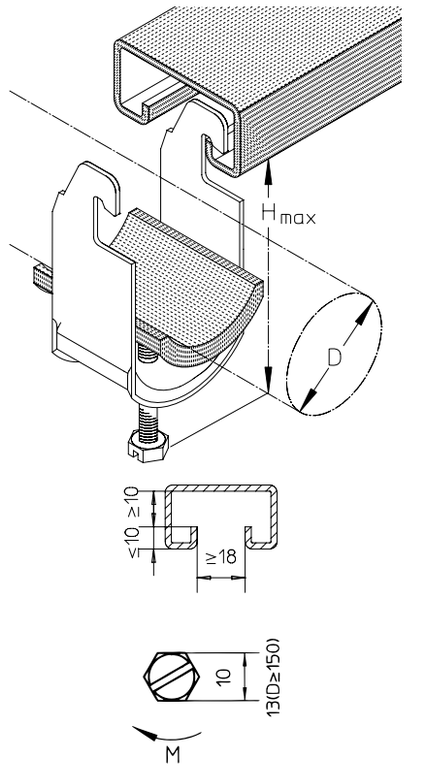
A 41	C-rail, not perforated, 41x41 mm	(catalogue cable trays)
A 2	C-rail, not perforated, 50x31 mm	(catalogue cable trays)
A 4	C-rail, not perforated, 48x26 mm	(catalogue cable trays)
A 9	C-rail, not perforated, 40x25 mm	(catalogue cable trays)
A 8	C-rail, not perforated, 40x22 mm	(catalogue cable trays)
A 7	C-rail, not perforated, 40x22 mm	(catalogue cable trays)

AC-IW cable clamp with additional insulating vat

article number	D mm	H_{max} mm	M Nm	number of cables	G kg/100
Z					
12 AC-IW	8-12	42,5	2	1	2,8
16 AC-IW	12-16	47,5	2	1	3,2
20 AC-IW	16-20	51,5	2	1	3,6
24 AC-IW	20-24	55,7	2	1	4,2
28 AC-IW	24-28	59,7	2	1	4,5
32 AC-IW	28-32	65,0	2	1	7,1
36 AC-IW	32-36	69,0	2	1	7,5
40 AC-IW	36-40	73,0	2	1	8,2
44 AC-IW	40-44	83,0	4	1	10,2
48 AC-IW	44-48	87,0	4	1	10,6
52 AC-IW	48-52	92,5	4	1	11,6
56 AC-IW	52-56	96,5	4	1	12,2
60 AC-IW	56-60	100,5	4	1	15,9
64 AC-IW	60-64	104,5	4	1	17,5
70 AC-IW	64-70	111,5	4	1	18,6

accessories optional:

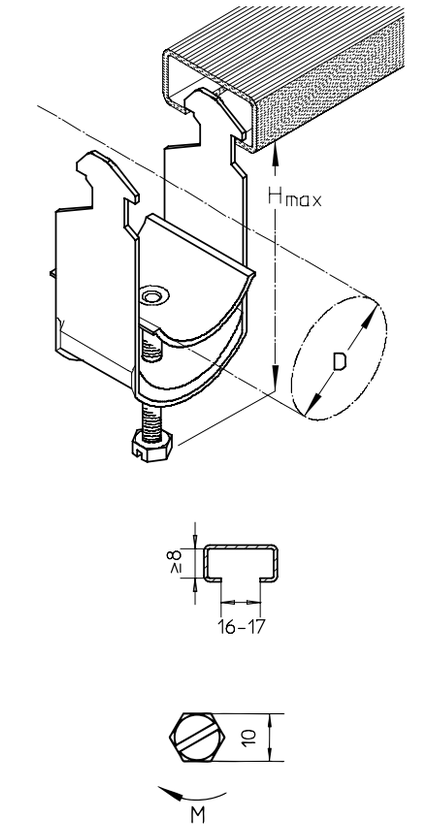
A 41	C-rail, not perforated, 41x41 mm	(catalogue cable trays)
A 2	C-rail, not perforated, 50x31 mm	(catalogue cable trays)
A 4	C-rail, not perforated, 48x26 mm	(catalogue cable trays)
A 9	C-rail, not perforated, 40x25 mm	(catalogue cable trays)
A 8	C-rail, not perforated, 40x22 mm	(catalogue cable trays)
A 7	C-rail, not perforated, 40x22 mm	(catalogue cable trays)



H cable clamp for fastening to C-profiles

Articles with a diameter of 12-56mm are also available in stainless steel finish, material No. 1.4571 / 1.4404 (V4A).

article number	D mm	H_{max} mm	M Nm	number of cables	G kg/100
Z					
12 H	8-12	41	2,0	1	2,7
16 H	12-16	46	2,0	1	3,2
20 H	16-20	50	2,0	1	3,6
24 H	20-24	54	2,0	1	3,9
28 H	24-28	58	2,0	1	4,4
32 H	28-32	63	2,0	1	6,3
36 H	32-36	67	2,0	1	7,0
40 H	36-40	71	2,0	1	7,5
44 H	40-44	81	4,0	1	9,8
48 H	44-48	85	4,0	1	10,2
52 H	48-52	90	4,0	1	10,6
56 H	52-56	94	4,0	1	11,3
60 H	56-60	98	4,0	1	15,8
64 H	60-64	102	4,0	1	16,5
70 H	64-70	109	4,0	1	17,1
12/2 H	8-12	58	2,0	2	3,5
16/2 H	12-16	67	2,0	2	4,0
20/2 H	16-20	75	2,0	2	4,8
24/2 H	20-24	84	2,0	2	5,3
28/2 H	24-28	92	2,0	2	6,0
32/2 H	28-32	101	2,0	2	8,9
36/2 H	32-36	109	2,0	2	9,6
40/2 H	36-40	117	2,0	2	10,8
44/2 H	40-44	127	4,0	2	13,3
48/2 H	44-48	135	4,0	2	13,9
52/2 H	48-52	144	4,0	2	15,2
56/2 H	52-56	152	4,0	2	16,2
12/3 H	8-12	71	2,0	3	4,3
28/3 H	24-28	122	2,0	3	7,4
E					
12 H-E	8-12	41	2,0	1	2,7
16 H-E	12-16	46	2,0	1	3,2
20 H-E	16-20	50	2,0	1	3,6
24 H-E	20-24	54	2,0	1	3,9
28 H-E	24-28	58	2,0	1	4,4
32 H-E	28-32	63	2,0	1	5,4
36 H-E	32-36	67	2,0	1	6,1
40 H-E	36-40	71	2,0	1	6,5
44 H-E	40-44	81	4,0	1	8,7
48 H-E	44-48	85	4,0	1	9,0
52 H-E	48-52	90	4,0	1	9,3
56 H-E	52-56	94	4,0	1	9,9
12/2 H-E	8-12	58	2,0	2	3,5
16/2 H-E	12-16	67	2,0	2	4,0
20/2 H-E	16-20	75	2,0	2	4,8
24/2 H-E	20-24	84	2,0	2	5,3
28/2 H-E	24-28	92	2,0	2	6,0
32/2 H-E	28-32	101	2,0	2	7,7



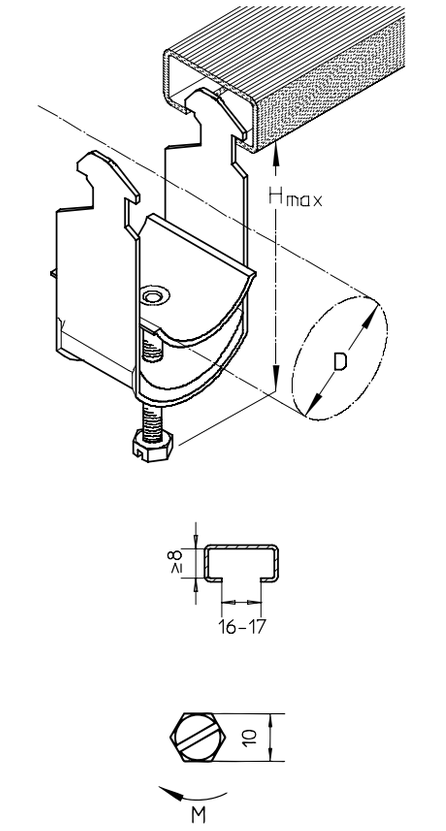
accessories optional:
B 7 profile rail, not perforated, 30x15 mm (catalogue cable trays)

H cable clamp for fastening to C-profiles

Articles with a diameter of 12-56mm are also available in stainless steel finish, material No. 1.4571 / 1.4404 (V4A).

article number	D mm	H_{max} mm	M Nm	number of cables	G kg/100
AL					
12 H-AL	8-12	41	1,5	1	2,1
16 H-AL	12-16	46	1,5	1	2,5
20 H-AL	16-20	50	1,5	1	2,9
24 H-AL	20-24	54	1,5	1	3,3
28 H-AL	24-28	58	1,5	1	3,6
32 H-AL	28-32	63	1,5	1	5,0
36 H-AL	32-36	67	1,5	1	5,5
40 H-AL	36-40	71	1,5	1	5,9
44 H-AL	40-44	81	3,0	1	7,6
48 H-AL	44-48	85	3,0	1	8,3
52 H-AL	48-52	90	3,0	1	10,2
56 H-AL	52-56	94	3,0	1	10,6

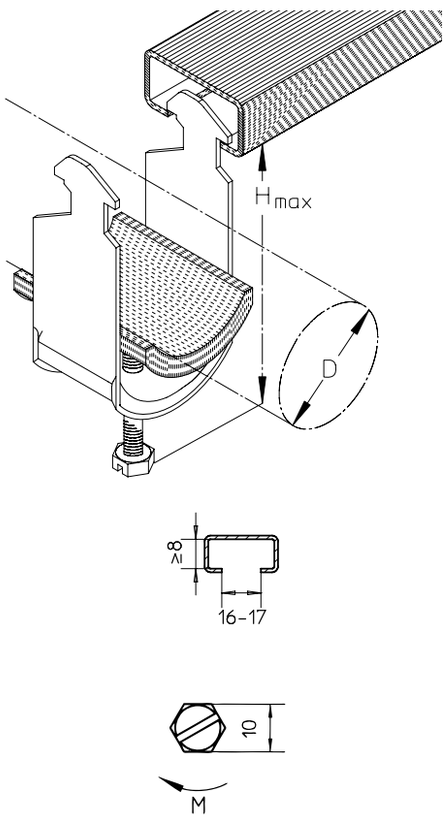
accessories optional:
B 7 profile rail, not perforated, 30x15 mm (catalogue cable trays)



H-IW cable clamp with additional insulating vat

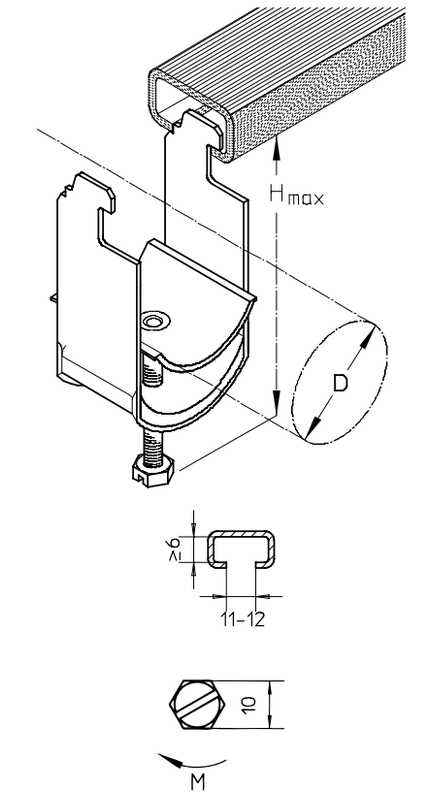
article number	D mm	H_{max} mm	M Nm	number of cables	G kg/100
Z					
12 H-IW	8-12	42,5	2	1	2,7
16 H-IW	12-16	47,5	2	1	3,1
20 H-IW	16-20	51,5	2	1	3,5
24 H-IW	20-24	55,7	2	1	3,9
28 H-IW	24-28	59,7	2	1	4,3
32 H-IW	28-32	65,0	2	1	6,6
36 H-IW	32-36	69,0	2	1	7,1
40 H-IW	36-40	73,0	2	1	7,8
44 H-IW	40-44	83,0	4	1	9,5
48 H-IW	44-48	87,0	4	1	10,1
52 H-IW	48-52	92,5	4	1	11,6
56 H-IW	52-56	96,5	4	1	12,2
60 H-IW	56-60	100,5	4	1	15,4
64 H-IW	60-64	104,5	4	1	16,6
70 H-IW	64-70	111,5	4	1	16,9

accessories optional:
B 7 profile rail, not perforated, 30x15 mm (catalogue cable trays)



B cable clamp for fastening to profile rails

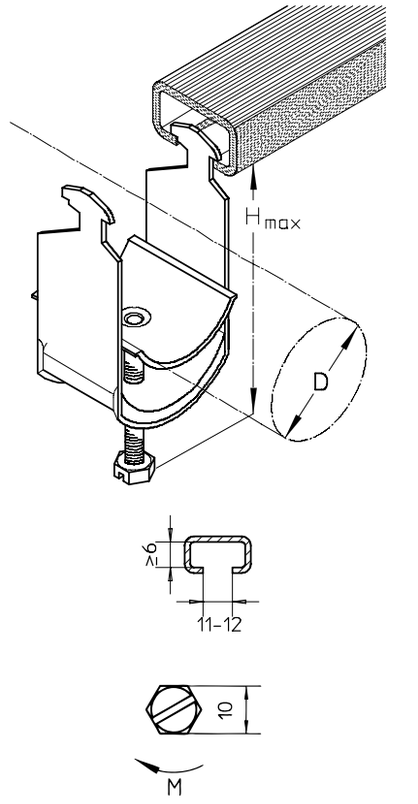
article number	D mm	H_{max} mm	M Nm	number of cables	G kg/100
Z					
12 B	8-12	41	2	1	2,5
16 B	12-16	46	2	1	2,8
20 B	16-20	50	2	1	3,2
24 B	20-24	54	2	1	3,5
28 B	24-28	58	2	1	3,9
32 B	28-32	63	2	1	6,1
36 B	32-36	67	2	1	6,6
40 B	36-40	71	2	1	7,9
44 B	40-44	81	4	1	9,2
48 B	44-48	85	4	1	9,7
52 B	48-52	90	4	1	10,7
56 B	52-56	94	4	1	11,4
60 B	56-60	98	4	1	14,1
64 B	60-64	102	4	1	15,0
70 B	64-70	109	4	1	16,8
12/2 B	8-12	58	2	2	3,3
16/2 B	12-16	67	2	2	4,0
20/2 B	16-20	75	2	2	4,7
24/2 B	20-24	84	2	2	5,2
28/2 B	24-28	92	2	2	5,7
32/2 B	28-32	101	2	2	8,6
36/2 B	32-36	109	2	2	9,3
40/2 B	36-40	117	2	2	9,9
44/2 B	40-44	127	4	2	13,2
48/2 B	44-48	135	4	2	13,9
52/2 B	48-52	144	4	2	14,8
56/2 B	52-56	152	4	2	15,6



accessories optional:
B 3 profile rail, not perforated, 28x12 mm (catalogue cable trays)
B 6 profile rail, not perforated, 28x15 mm (catalogue cable trays)

HB cable clamp for fastening to profile rails

article number	D mm	H_{max} mm	M Nm	number of cables	G kg/100
Z					
12 HB	8-12	41	2,0	1	2,5
16 HB	12-16	46	2,0	1	2,8
20 HB	16-20	50	2,0	1	3,2
24 HB	20-24	54	2,0	1	3,8
28 HB	24-28	58	2,0	1	4,1
32 HB	28-32	63	2,0	1	5,8
36 HB	32-36	67	2,0	1	6,7
40 HB	36-40	71	2,0	1	7,4
44 HB	40-44	81	4,0	1	9,3
48 HB	44-48	85	4,0	1	9,8
52 HB	48-52	90	4,0	1	10,4
56 HB	52-56	94	4,0	1	11,1
60 HB	56-60	98	4,0	1	14,7
64 HB	60-64	102	4,0	1	15,4
70 HB	64-70	109	4,0	1	17,1
12/2 HB	8-12	58	2,0	2	3,2
16/2 HB	12-16	67	2,0	2	3,9
20/2 HB	16-20	75	2,0	2	4,4
24/2 HB	20-24	84	2,0	2	5,1
28/2 HB	24-28	92	2,0	2	5,7
32/2 HB	28-32	101	2,0	2	8,7
36/2 HB	32-36	109	2,0	2	9,8
40/2 HB	36-40	117	2,0	2	10,5
44/2 HB	40-44	127	4,0	2	12,9
48/2 HB	44-48	135	4,0	2	13,5
52/2 HB	48-52	144	4,0	2	13,7
56/2 HB	52-56	152	4,0	2	16,1
AL					
12 HB-AL	8-12	41	1,5	1	1,7
16 HB-AL	12-16	46	1,5	1	1,9
20 HB-AL	16-20	50	1,5	1	2,5
24 HB-AL	20-24	54	1,5	1	2,9
28 HB-AL	24-28	58	1,5	1	3,2
32 HB-AL	28-32	63	1,5	1	4,2
36 HB-AL	32-36	67	1,5	1	4,5
40 HB-AL	36-40	71	1,5	1	4,8
44 HB-AL	40-44	81	3,0	1	6,4
48 HB-AL	44-48	85	3,0	1	7,0
52 HB-AL	48-52	90	3,0	1	9,8
56 HB-AL	52-56	94	3,0	1	10,4



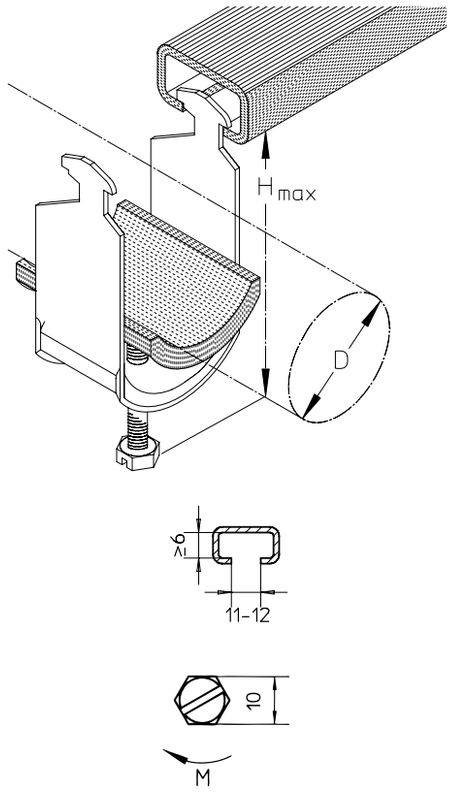
accessories optional:

B 3 profile rail, not perforated, 28x12 mm (catalogue cable trays)
B 6 profile rail, not perforated, 28x15 mm (catalogue cable trays)

HB-IW cable clamp with additional insulating vat

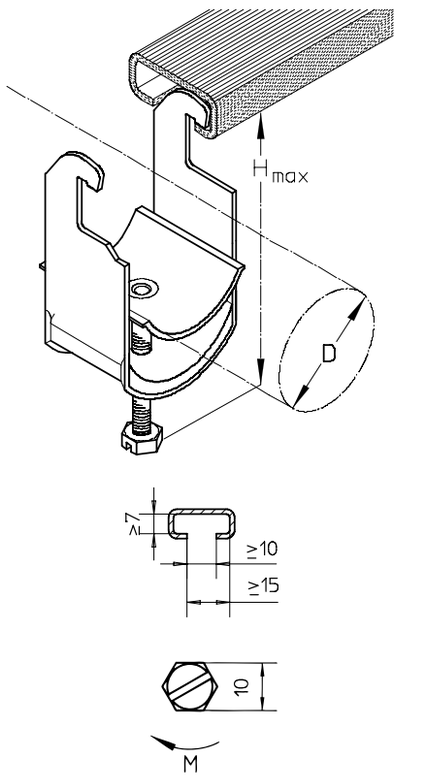
article number	D mm	H_{max} mm	M Nm	number of cables	G kg/100
z					
12 HB-IW	8-12	42,5	2	1	2,7
16 HB-IW	12-16	47,5	2	1	3,0
20 HB-IW	16-20	51,5	2	1	3,4
24 HB-IW	20-24	55,7	2	1	4,0
28 HB-IW	24-28	59,7	2	1	4,5
32 HB-IW	28-32	65,0	2	1	6,2
36 HB-IW	32-36	69,0	2	1	7,1
40 HB-IW	36-40	73,0	2	1	7,9
44 HB-IW	40-44	83,0	4	1	9,9
48 HB-IW	44-48	87,0	4	1	10,1
52 HB-IW	48-52	92,5	4	1	11,1
56 HB-IW	52-56	96,5	4	1	11,7
60 HB-IW	56-60	100,5	4	1	15,4
64 HB-IW	60-64	104,5	4	1	16,1
70 HB-IW	64-70	111,5	4	1	17,8

accessories optional:
B 3 profile rail, not perforated, 28x12 mm (catalogue cable trays)
B 6 profile rail, not perforated, 28x15 mm (catalogue cable trays)



ACF-E cable clamp for fastening to C-profiles

article number	D mm	H_{max} mm	M Nm	number of cables	G kg/100
E					
12 ACF-E	8-12	41	2	1	2,4
16 ACF-E	12-16	46	2	1	2,8
20 ACF-E	16-20	50	2	1	3,1
24 ACF-E	20-24	54	2	1	3,5
28 ACF-E	24-28	58	2	1	3,9
32 ACF-E	28-32	63	2	1	4,9
36 ACF-E	32-36	67	2	1	5,8
40 ACF-E	36-40	71	2	1	6,5
44 ACF-E	40-44	81	4	1	7,4
48 ACF-E	44-48	85	4	1	8,9
52 ACF-E	48-52	90	4	1	9,9
56 ACF-E	52-56	94	4	1	10,2
12/2 ACF-E	8-12	58	2	2	3,1
16/2 ACF-E	12-16	67	2	2	3,7
20/2 ACF-E	16-20	75	2	2	4,2
24/2 ACF-E	20-24	84	2	2	4,8
28/2 ACF-E	24-28	92	2	2	5,5
32/2 ACF-E	28-32	101	2	2	7,3
36/2 ACF-E	32-36	109	2	2	8,1
40/2 ACF-E	36-40	117	2	2	9,4
44/2 ACF-E	40-44	127	4	2	11,7
48/2 ACF-E	44-48	135	4	2	12,8
52/2 ACF-E	48-52	144	4	2	13,8
56/2 ACF-E	52-56	152	4	2	15,4



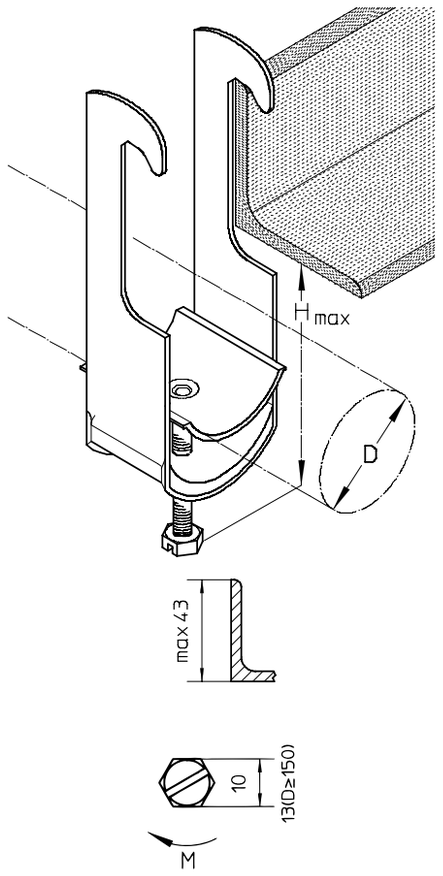
accessories optional:

B 3	profile rail, not perforated, 28x12 mm	(catalogue cable trays)
B 6	profile rail, not perforated, 28x15 mm	(catalogue cable trays)
A 41	C-rail, not perforated, 41x41 mm	(catalogue cable trays)
A 2	C-rail, not perforated, 50x31 mm	(catalogue cable trays)
A 4	C-rail, not perforated, 48x26 mm	(catalogue cable trays)
A 9	C-rail, not perforated, 40x25 mm	(catalogue cable trays)
A 8	C-rail, not perforated, 40x22 mm	(catalogue cable trays)
A 7	C-rail, not perforated, 40x22 mm	(catalogue cable trays)

S cable clamp for fastening to angle profiles

Articles with a diameter of 12-56mm are also available in stainless steel finish, material No. 1.4571 / 1.4404 (V4A).

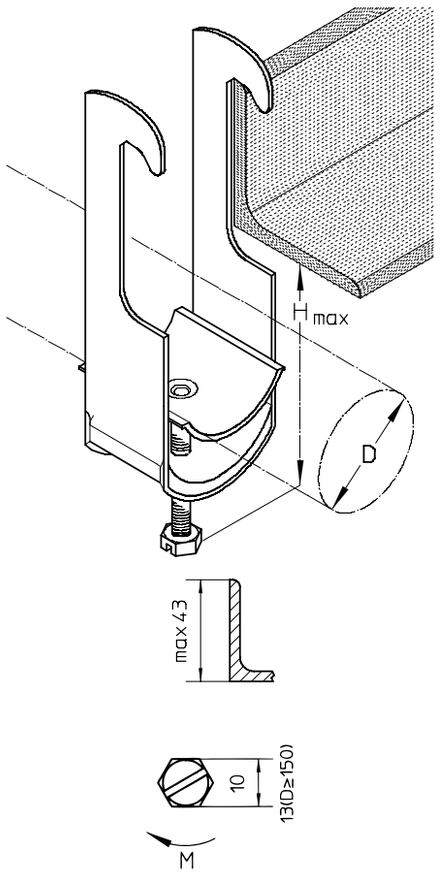
article number	D mm	H_{max} mm	M Nm	number of cables	G kg/100
Z					
12 S	8-12	41	2,0	1	3,6
16 S	12-16	46	2,0	1	4,1
20 S	16-20	50	2,0	1	4,6
24 S	20-24	54	2,0	1	4,8
28 S	24-28	58	2,0	1	5,3
32 S	28-32	63	2,0	1	7,9
36 S	32-36	67	2,0	1	8,4
40 S	36-40	71	2,0	1	9,0
44 S	40-44	81	4,0	1	11,2
48 S	44-48	85	4,0	1	11,7
52 S	48-52	90	4,0	1	12,4
56 S	52-56	94	4,0	1	12,9
60 S	56-60	98	4,0	1	17,2
64 S	60-64	102	4,0	1	17,7
70 S	64-70	109	4,0	1	18,6
76 S	70-76	113	4,0	1	25,3
82 S	76-82	119	4,0	1	28,5
88 S	82-88	125	4,0	1	29,4
94 S	88-94	131	4,0	1	33,2
100 S	94-100	137	4,0	1	34,8
110 S	100-110	157	4,0	1	38,2
120 S	110-120	167	4,0	1	40,3
150 S	145-150	203	6,0	1	107,7
175 S	170-175	228	6,0	1	128,0
12/2 S	8-12	58	2,0	2	4,2
16/2 S	12-16	67	2,0	2	4,9
20/2 S	16-20	75	2,0	2	5,7
24/2 S	20-24	84	2,0	2	6,2
28/2 S	24-28	92	2,0	2	6,7
32/2 S	28-32	101	2,0	2	10,3
36/2 S	32-36	109	2,0	2	11,3
40/2 S	36-40	117	2,0	2	12,0
44/2 S	40-44	127	4,0	2	15,2
48/2 S	44-48	135	4,0	2	16,6
52/2 S	48-52	144	4,0	2	16,9
56/2 S	52-56	152	4,0	2	18,2
12/3 S	8-12	71	2,0	3	5,2
16/3 S	12-16	85	2,0	3	5,9
20/3 S	16-20	97	2,0	3	6,6
24/3 S	20-24	110	2,0	3	7,5
28/3 S	24-28	122	2,0	3	8,4



S cable clamp for fastening to angle profiles

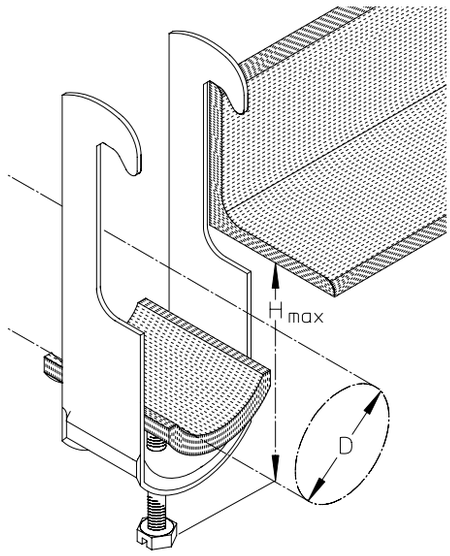
Articles with a diameter of 12-56mm are also available in stainless steel finish, material No. 1.4571 / 1.4404 (V4A).

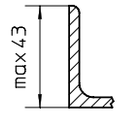
article number	D mm	H_{max} mm	M Nm	number of cables	G kg/100
E					
12 S-E	8-12	41	2,0	1	3,5
16 S-E	12-16	46	2,0	1	3,8
20 S-E	16-20	50	2,0	1	4,2
24 S-E	20-24	54	2,0	1	4,6
28 S-E	24-28	58	2,0	1	5,0
32 S-E	28-32	63	2,0	1	6,6
36 S-E	32-36	67	2,0	1	7,5
40 S-E	36-40	71	2,0	1	8,4
44 S-E	40-44	81	4,0	1	9,6
48 S-E	44-48	85	4,0	1	10,5
52 S-E	48-52	90	4,0	1	11,5
56 S-E	52-56	94	4,0	1	12,2
AL					
12 S-AL	8-12	41	1,5	1	2,2
16 S-AL	12-16	46	1,5	1	2,6
20 S-AL	16-20	50	1,5	1	3,2
24 S-AL	20-24	54	1,5	1	3,6
28 S-AL	24-28	58	1,5	1	3,9
32 S-AL	28-32	63	1,5	1	5,5
36 S-AL	32-36	67	1,5	1	6,3
40 S-AL	36-40	71	1,5	1	6,9
44 S-AL	40-44	81	3,0	1	7,5
48 S-AL	44-48	85	3,0	1	8,1
52 S-AL	48-52	90	3,0	1	10,4
56 S-AL	52-56	94	3,0	1	11,2

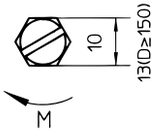


S-IW cable clamp with additional insulating vat

article number	D mm	H_{max} mm	M Nm	number of cables	G kg/100
Z					
12 S-IW	8-12	42,5	2	1	3,8
16 S-IW	12-16	47,5	2	1	4,3
20 S-IW	16-20	51,5	2	1	4,8
24 S-IW	20-24	55,7	2	1	5,1
28 S-IW	24-28	59,7	2	1	5,5
32 S-IW	28-32	65,0	2	1	8,3
36 S-IW	32-36	69,0	2	1	8,9
40 S-IW	36-40	73,0	2	1	9,3
44 S-IW	40-44	83,0	4	1	11,8
48 S-IW	44-48	87,0	4	1	12,4
52 S-IW	48-52	92,5	4	1	13,3
56 S-IW	52-56	96,5	4	1	14,0
60 S-IW	56-60	100,5	4	1	18,4
64 S-IW	60-64	104,5	4	1	19,1
70 S-IW	64-70	111,5	4	1	20,2

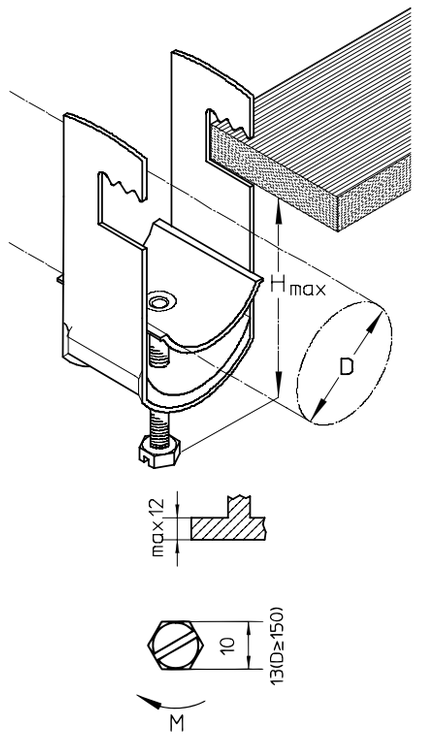






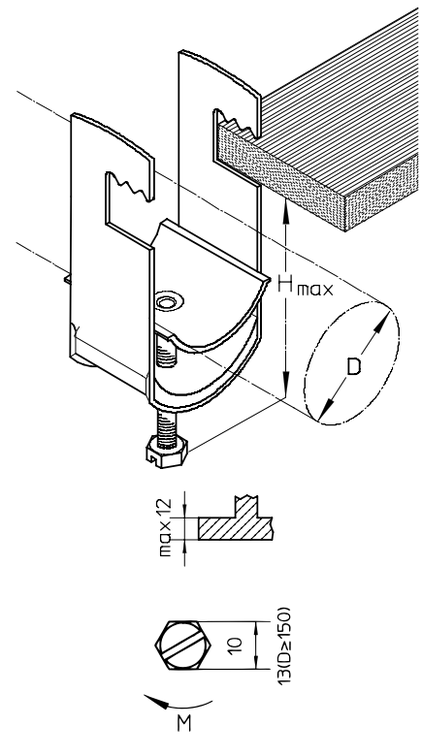
U cable clamp for fastening to flat sections

article number	D mm	H_{max} mm	M Nm	number of cables	G kg/100
Z					
12 U	8-12	41	2,0	1	3,1
16 U	12-16	46	2,0	1	3,4
20 U	16-20	50	2,0	1	3,8
24 U	20-24	54	2,0	1	4,3
28 U	24-28	58	2,0	1	4,5
32 U	28-32	63	2,0	1	7,1
36 U	32-36	67	2,0	1	7,5
40 U	36-40	71	2,0	1	8,1
44 U	40-44	81	4,0	1	10,5
48 U	44-48	85	4,0	1	10,8
52 U	48-52	90	4,0	1	11,5
56 U	52-56	94	4,0	1	12,2
60 U	56-60	98	4,0	1	16,8
64 U	60-64	102	4,0	1	17,4
70 U	64-70	109	4,0	1	18,5
76 U	70-76	113	4,0	1	24,8
82 U	76-82	119	4,0	1	27,2
88 U	82-88	125	4,0	1	28,3
94 U	88-94	131	4,0	1	31,0
100 U	94-100	137	4,0	1	33,6
110 U	100-110	157	4,0	1	35,6
120 U	110-120	167	4,0	1	38,4
150 U	145-150	203	6,0	1	108,2
175 U	170-175	228	6,0	1	133,1
12/2 U	8-12	58	2,0	2	3,9
16/2 U	12-16	67	2,0	2	4,4
20/2 U	16-20	75	2,0	2	5,0
24/2 U	20-24	84	2,0	2	5,7
28/2 U	24-28	92	2,0	2	6,1
32/2 U	28-32	101	2,0	2	9,7
36/2 U	32-36	109	2,0	2	10,6
40/2 U	36-40	117	2,0	2	11,5
44/2 U	40-44	127	4,0	2	13,4
48/2 U	44-48	135	4,0	2	14,9
52/2 U	48-52	144	4,0	2	15,8
56/2 U	52-56	152	4,0	2	17,0
12/3 U	8-12	71	2,0	3	4,5
16/3 U	12-16	85	2,0	3	5,4
20/3 U	16-20	97	2,0	3	6,2
24/3 U	20-24	110	2,0	3	7,1
28/3 U	24-28	122	2,0	3	7,9
E					
12 U-E	8-12	41	2,0	1	2,9
16 U-E	12-16	46	2,0	1	3,3
20 U-E	16-20	50	2,0	1	3,7
24 U-E	20-24	54	2,0	1	4,0
28 U-E	24-28	58	2,0	1	4,4
32 U-E	28-32	63	2,0	1	5,4
36 U-E	32-36	67	2,0	1	6,7
40 U-E	36-40	71	2,0	1	7,6
44 U-E	40-44	81	4,0	1	9,3
48 U-E	44-48	85	4,0	1	9,9
52 U-E	48-52	90	4,0	1	11,0
56 U-E	52-56	94	4,0	1	11,3



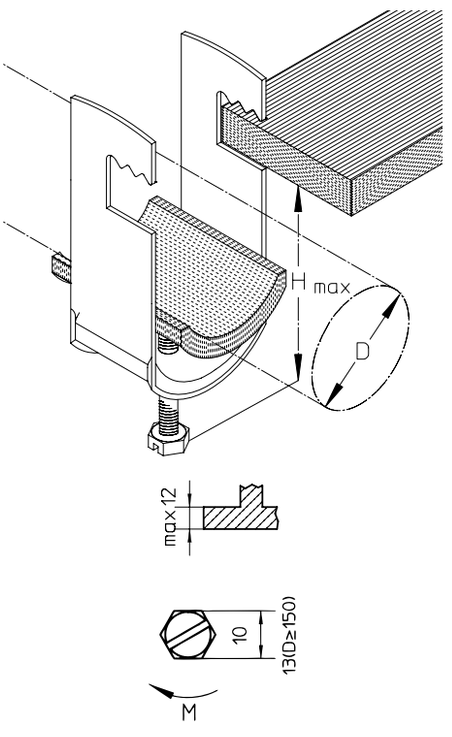
U cable clamp for fastening to flat sections

article number	D mm	H_{max} mm	M Nm	number of cables	G kg/100
AL					
12 U-AL	8-12	41	1,5	1	2,0
16 U-AL	12-16	46	1,5	1	2,6
20 U-AL	16-20	50	1,5	1	3,0
24 U-AL	20-24	54	1,5	1	3,1
28 U-AL	24-28	58	1,5	1	3,4
32 U-AL	28-32	63	1,5	1	4,5
36 U-AL	32-36	67	1,5	1	4,9
40 U-AL	36-40	71	1,5	1	5,3
44 U-AL	40-44	81	3,0	1	6,0
48 U-AL	44-48	85	3,0	1	6,4
52 U-AL	48-52	90	3,0	1	9,9
56 U-AL	52-56	94	3,0	1	10,7



U-IW cable clamp with additional insulating vat

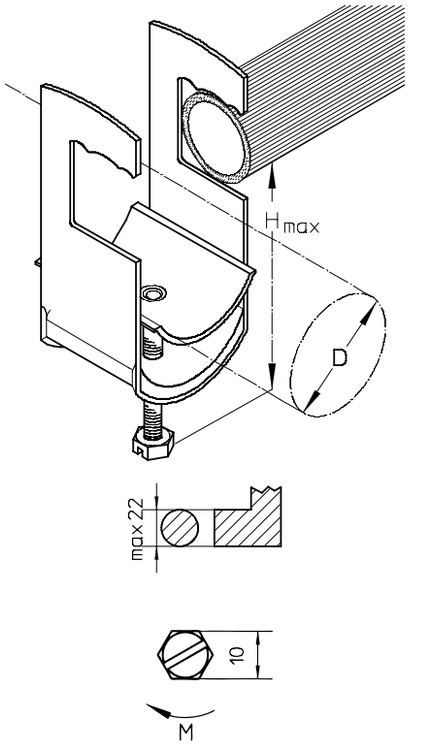
article number	D mm	H_{max} mm	M Nm	number of cables	G kg/100
Z					
12 U-IW	8-12	42,5	2	1	3,3
16 U-IW	12-16	47,5	2	1	3,6
20 U-IW	16-20	51,5	2	1	4,1
24 U-IW	20-24	55,7	2	1	4,6
28 U-IW	24-28	59,7	2	1	4,8
32 U-IW	28-32	65,0	2	1	7,5
36 U-IW	32-36	69,0	2	1	7,9
40 U-IW	36-40	73,0	2	1	8,7
44 U-IW	40-44	83,0	4	1	11,1
48 U-IW	44-48	87,0	4	1	11,7
52 U-IW	48-52	92,5	4	1	12,6
56 U-IW	52-56	96,5	4	1	13,2
60 U-IW	56-60	100,5	4	1	17,5
64 U-IW	60-64	104,5	4	1	18,3
70 U-IW	64-70	111,5	4	1	19,6



RU cable clamp for fastening to round sections

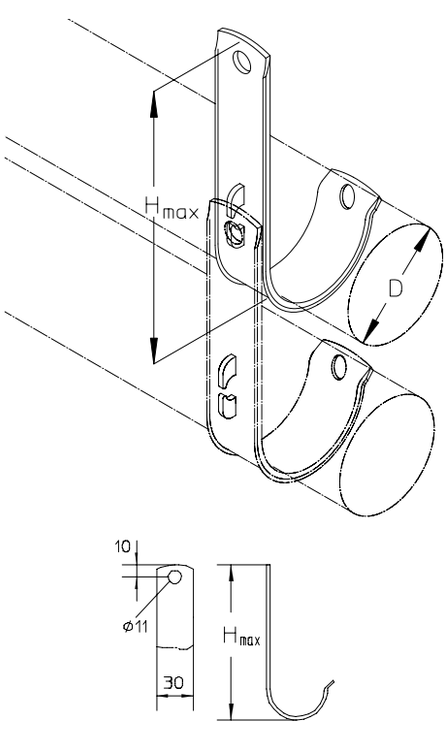
For an application example, see the chapter assembly.

article number	D mm	H_{max} mm	M Nm	number of cables	G kg/100
Z					
14 RU	8-14	48	2	1	4,3
20 RU	14-20	54	2	1	4,9
26 RU	20-26	60	2	1	5,9
32 RU	26-32	67	2	1	9,2
38 RU	32-38	74	2	1	10,5
44 RU	38-44	82	4	1	12,0
52 RU	44-52	91	4	1	14,3
60 RU	52-60	99	4	1	16,4
70 RU	64-70	109	4	1	18,4
14/2 RU	8-14	63	2	2	5,6
20/2 RU	14-20	75	2	2	6,8
26/2 RU	20-26	88	2	2	8,1
32/2 RU	26-32	101	2	2	12,5



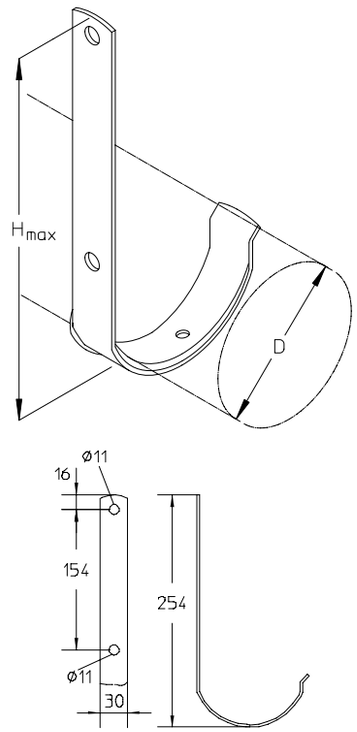
HK 30-70 cable hook

article number	D mm	H_{max} mm	number of cables	G kg/100
F				
HK 30	≤ 30	105	1	9,8
HK 40	≤ 40	110	1	11,0
HK 50	≤ 50	130	1	13,1
HK 60	≤ 60	150	1	15,1
HK 70	≤ 70	170	1	16,2



HK 100 cable hook, Ø 100 mm

article number	D mm	H_{max} mm	number of cables	G kg/100
F				
HK 100	≤ 100	252	1	25,5

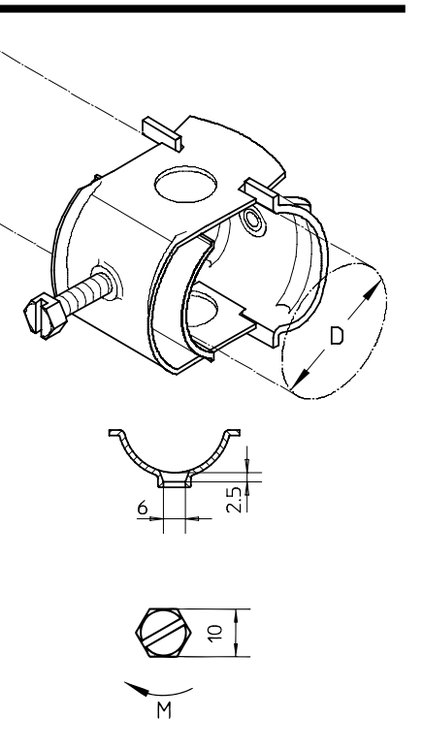


W cable clamp for wall fastening

For an application example, see the chapter assembly.

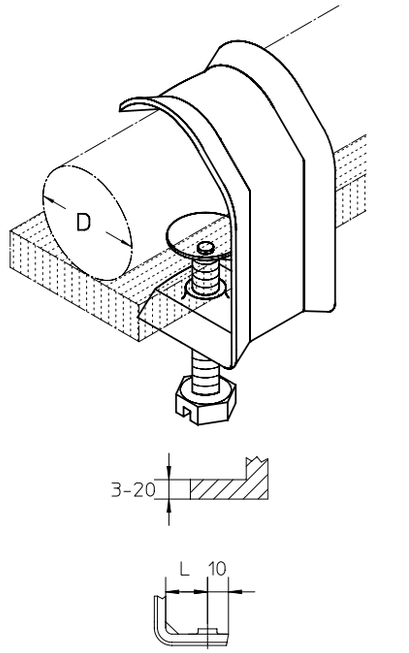
article number	D mm	M Nm	G kg/100
Z			
16 W	12-16	2	4,4
20 W	16-20	2	5,4
24 W	20-24	2	5,8
28 W	24-28	2	6,3
32 W	28-32	4	8,5
36 W	32-36	4	9,1
44 W	36-44	4	13,5
52 W	44-52	4	16,5
60 W	52-60	4	19,5

accessories optional:
SSV countersunk head screw (page D04)



KH cable support

article number	D mm	L mm	G kg/100
Z			
KH 12	≤ 12	15	4,2
KH 16	≤ 16	20	4,9
KH 20	≤ 20	20	5,2
KH 24	≤ 24	20	5,3
KH 28	≤ 28	20	5,6
KH 32	≤ 32	20	6,6



Vats

D

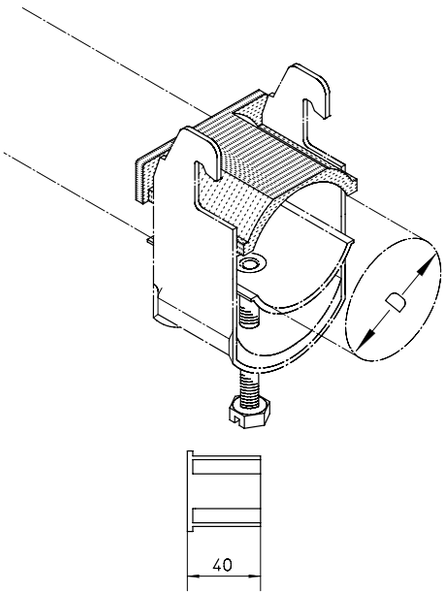
G

H

L

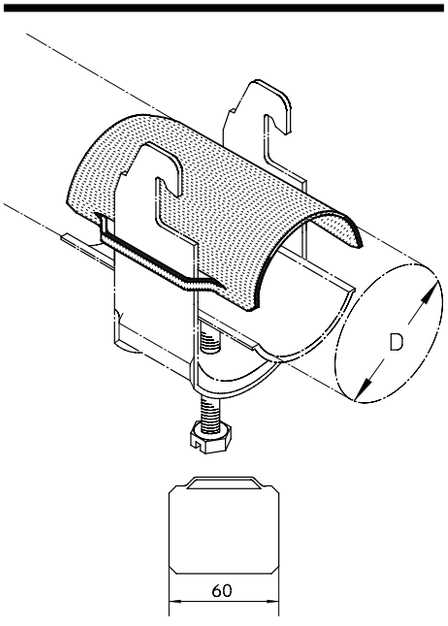
GW 12-70 counter vat, Ø 12-70 mm

article number	D mm	G kg/100
PE		
GW 12	9-12	0,12
GW 16	13-16	0,16
GW 20	17-20	0,26
GW 24	21-24	0,28
GW 28	25-28	0,32
GW 32	29-32	0,40
GW 36	33-36	0,44
GW 40	37-40	0,57
GW 48	41-48	0,66
GW 56	49-56	0,75
GW 64	57-64	0,95
GW 70	65-70	1,60



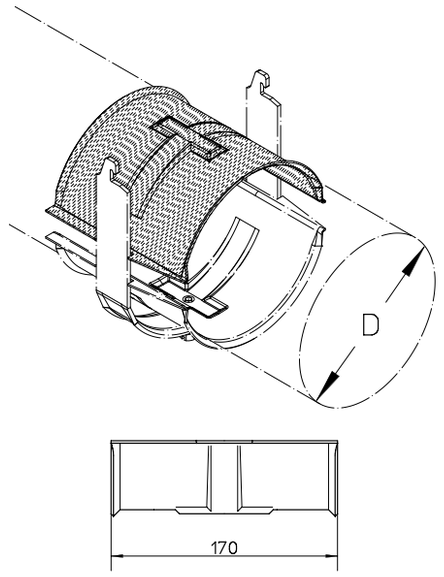
GW 76-120 counter vat, Ø 76-120 mm

article number	D mm	G kg/100
S		
GW 76	71-76	6,0
GW 82	77-82	6,4
GW 88	83-88	6,8
GW 94	89-94	12,3
GW 100	95-100	13,2
GW 110	101-110	14,6
GW 120	111-120	16,3



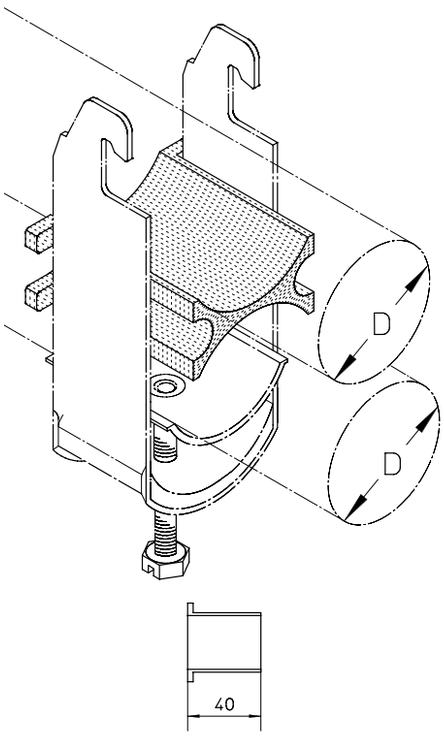
GW 150-175 counter vat, Ø 150-175 mm

article number	D mm	G kg/100
F		
GW 150	121-150	47,1
GW 175	151-175	67,2



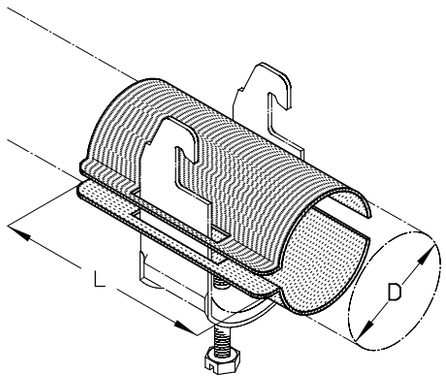
DW double vat

article number	D mm	G kg/100
PE		
DW 14	9-14	0,13
DW 22	15-22	0,28
DW 30	23-30	0,60
DW 38	31-38	0,74
DW 48	39-48	0,85
DW 56	49-56	1,00



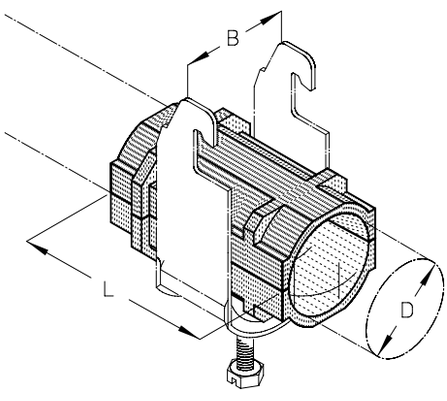
LW extended counter vat

article number	D mm	L mm	G kg/100
S			
LW 12	9-12	70	0,88
LW 16	13-16	70	1,16
LW 20	17-20	70	1,43
LW 24	21-24	70	1,71
LW 28	25-28	70	2,04
LW 32	29-32	70	2,31
LW 36	33-36	70	2,57
LW 40	37-40	70	2,88
LW 44	41-44	70	3,14
LW 48	45-48	70	3,32
LW 52	49-52	70	3,66
LW 56	53-56	70	3,90
LW 60	57-60	70	9,23
LW 64	61-64	70	9,84
LW 70	65-70	70	10,76
LW 76	71-76	70	11,69
LW 82	77-82	100	12,61
LW 88	83-88	100	13,54
LW 94	89-94	100	14,44
LW 100	95-100	100	15,38
LW 110	101-110	100	16,91
LW 120	111-120	100	18,46
E			
LW 12E	9-12	70	0,88
LW 16E	13-16	70	1,16
LW 20E	17-20	70	1,43
LW 24E	21-24	70	1,71
LW 28E	25-28	70	2,04
LW 32E	29-32	70	2,35
LW 36E	33-36	70	2,64
LW 40E	37-40	70	2,94
LW 44E	41-44	70	3,21
LW 48E	45-48	70	3,48
LW 52E	49-52	70	3,66
LW 56E	53-56	70	3,90



HW HF vat

article number	B mm	D mm	L mm	G kg/100
PS				
HW 20-1/2	20	17 (1/2‘‘)	55	0,46
HW 32-7/8	32	29 (7/8‘‘)	60	1,10
HW 44-1 1/4	44	39 (1 1/4‘‘)	60	1,85
HW 56-1 5/8	56	51 (1 5/8‘‘)	60	2,66



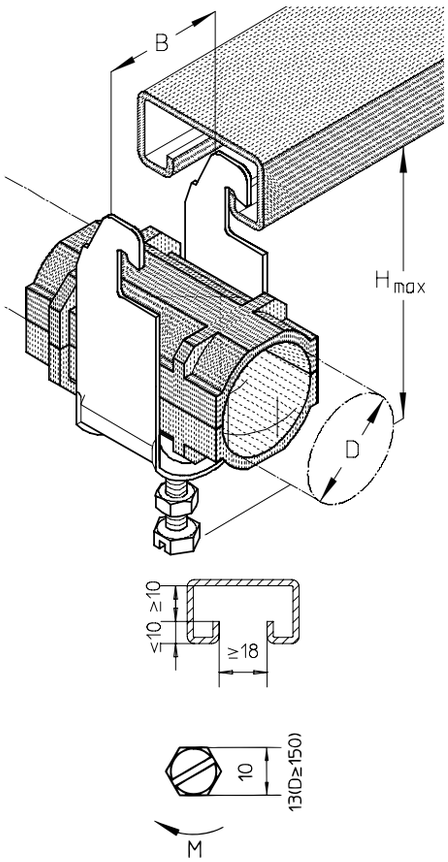
HF-Cable clamps

Numeric index
HF-Cable clamps

AC-HW cable clamp for fastening to C-profiles

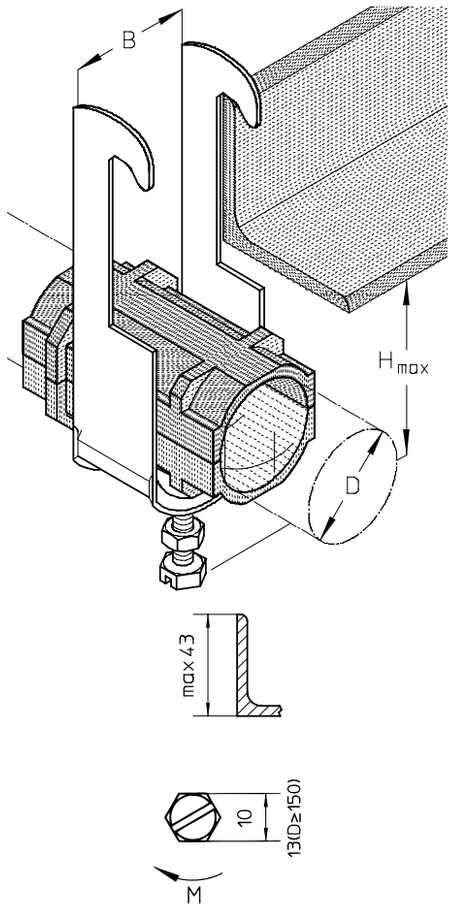
For an application example, see the chapter assembly.

article number	B mm	D customs	H_{max} mm	number of cables	G kg/100
Z					
20 AC-HW	20	1/2	53	1	4,42
32 AC-HW	32	7/8	68	1	8,60
44 AC-HW	44	1 1/4	83	1	10,20
56 AC-HW	56	1 5/8	106	1	16,82
20/2 AC-HW	20	1/2	73	2	6,44
32/2 AC-HW	32	7/8	102	2	13,30
44/2 AC-HW	44	1 1/4	129	2	20,50
56/2 AC-HW	56	1 5/8	164	2	26,54
20/3 AC-HW	20	1/2	93	3	8,66
32/3 AC-HW	32	7/8	136	3	18,00
44/3 AC-HW	44	1 1/4	176	3	28,60
E					
20 AC-HW-E	20	1/2	53	1	4,12
32 AC-HW-E	32	7/8	68	1	7,00
44 AC-HW-E	44	1 1/4	83	1	12,30
56 AC-HW-E	56	1 5/8	106	1	16,10
20/2 AC-HW-E	20	1/2	73	2	6,14
32/2 AC-HW-E	32	7/8	102	2	11,70
44/2 AC-HW-E	44	1 1/4	129	2	19,10
20/3 AC-HW-E	20	1/2	93	3	7,65
32/3 AC-HW-E	32	7/8	136	3	15,90
44/3 AC-HW-E	44	1 1/4	176	3	26,00



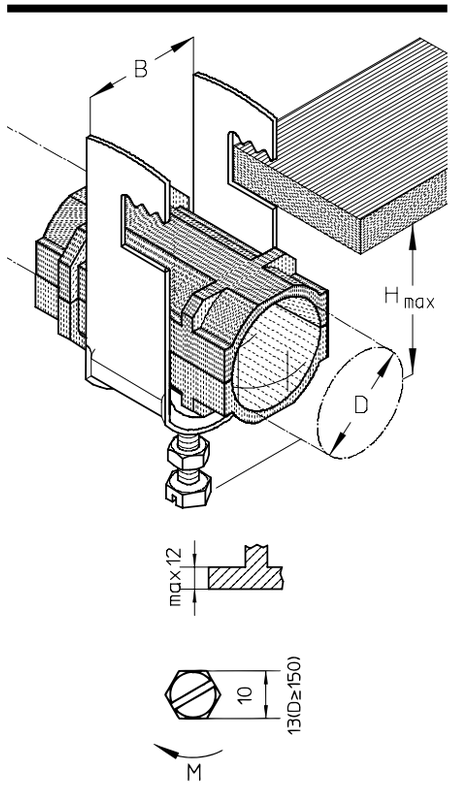
S-HW cable clamp for fastening to angle profiles

article number	B mm	D mm	D customs	H_{max} mm	number of cables	G kg/100
Z						
20 S-HW	20	20	1/2	53	1	5,52
32 S-HW	32	32	7/8	68	1	8,60
44 S-HW	44	44	1 1/4	83	1	14,90
56 S-HW	56	56	1 5/8	106	1	18,22
20/2 S-HW	20	20	1/2	73	2	6,44
32/2 S-HW	32	32	7/8	102	2	13,30
20/3 S-HW	20	20	1/2	93	3	8,66
32/3 S-HW	32	32	7/8	136	3	18,00
E						
20 S-HW-E	20	20	1/2	53	1	5,12
32 S-HW-E	32	32	7/8	68	1	8,80
44 S-HW-E	44	44	1 1/4	83	1	13,30
56 S-HW-E	56	56	1 5/8	106	1	17,50
20/2 S-HW-E	20	20	1/2	73	2	7,44
32/2 S-HW-E	32	32	7/8	102	2	13,50
44/2 S-HW-E	44	44	1 1/4	129	2	20,10
56/2 S-HW-E	56	56	1 5/8	164	2	26,80
20/3 S-HW-E	20	20	1/2	93	3	9,30
32/3 S-HW-E	32	32	7/8	136	3	17,70
44/3 S-HW-E	44	44	1 1/4	176	3	26,90



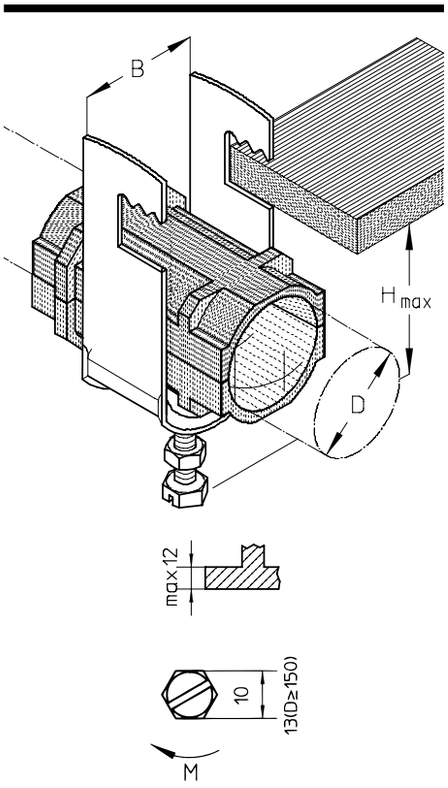
U-HW cable clamp for fastening to flat sections

article number	B mm	D customs	H_{max} mm	number of cables	G kg/100
Z					
20 U-HW	20	1/2	53	1	4,72
32 U-HW	32	7/8	68	1	9,30
44 U-HW	44	1 1/4	83	1	14,20
56 U-HW	56	1 5/8	106	1	17,52
20/2 U-HW	20	1/2	73	2	6,84
32/2 U-HW	32	7/8	102	2	14,10
44/2 U-HW	44	1 1/4	129	2	21,80
56/2 U-HW	56	1 5/8	164	2	27,64
20/3 U-HW	20	1/2	93	3	8,96
32/3 U-HW	32	7/8	136	3	21,80



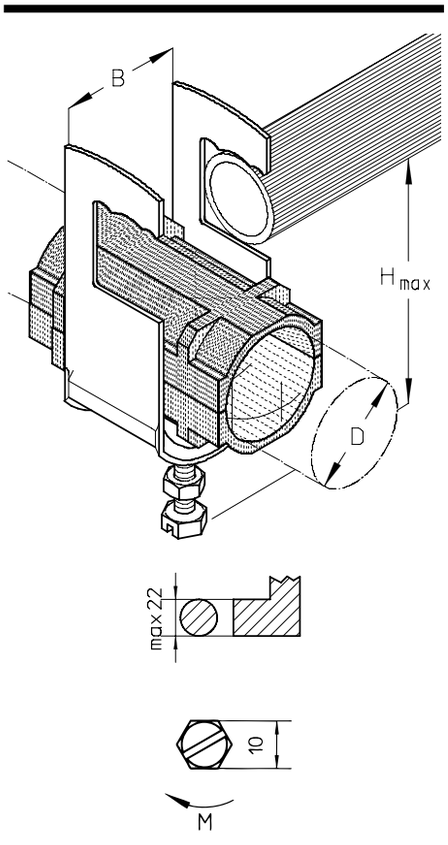
U-HW cable clamp for fastening to flat sections

article number	B mm	D customs	H_{max} mm	number of cables	G kg/100
E					
20 U-HW-E	20	1/2	53	1	4,62
32 U-HW-E	32	7/8	68	1	8,50
44 U-HW-E	44	1 1/4	83	1	13,00
56 U-HW-E	56	1 5/8	106	1	16,60
20/2 U-HW-E	20	1/2	73	2	6,64
32/2 U-HW-E	32	7/8	102	2	12,50
44/2 U-HW-E	44	1 1/4	129	2	19,90
56/2 U-HW-E	56	1 5/8	164	2	26,60
20/3 U-HW-E	20	1/2	93	3	8,60
32/3 U-HW-E	32	7/8	136	3	16,80
44/3 U-HW-E	44	1 1/4	176	3	26,80



RU-HW cable clamp for fastening to round sections

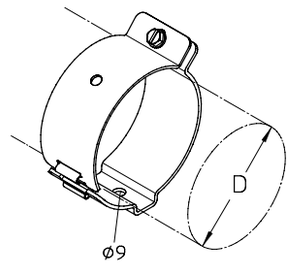
article number	B mm	D customs	H_{max} mm	number of cables	G kg/100
Z					
20 RU-HW	20	1/2	53	1	5,82
32 RU-HW	32	7/8	68	1	11,40
44 RU-HW	44	1 1/4	83	1	15,70
56 RU-HW	56	1 5/8	106	1	21,72
20/2 RU-HW	20	1/2	73	2	8,64
32/2 RU-HW	32	7/8	102	2	16,90
44/2 RU-HW	44	1 1/4	129	2	23,24
56/2 RU-HW	56	1 5/8	164	2	29,24
20/3 RU-HW	20	1/2	93	3	12,80
32/3 RU-HW	32	7/8	136	3	25,00
44/3 RU-HW	44	1 1/4	176	3	34,40
E					
20 RU-HW-E	20	1/2	53	1	5,72
32 RU-HW-E	32	7/8	68	1	11,10
44 RU-HW-E	44	1 1/4	83	1	14,60
56 RU-HW-E	56	1 5/8	106	1	18,50
20/2 RU-HW-E	20	1/2	73	2	7,94
32/2 RU-HW-E	32	7/8	102	2	16,70
44/2 RU-HW-E	44	1 1/4	129	2	22,60
56/2 RU-HW-E	56	1 5/8	164	2	29,30
20/3 RU-HW-E	20	1/2	93	3	10,40
32/3 RU-HW-E	32	7/8	136	3	22,10
44/3 RU-HW-E	44	1 1/4	176	3	30,60



HF-EL 1-4 HF-cable clamp for wall fastening

For an application example, see the chapter assembly.

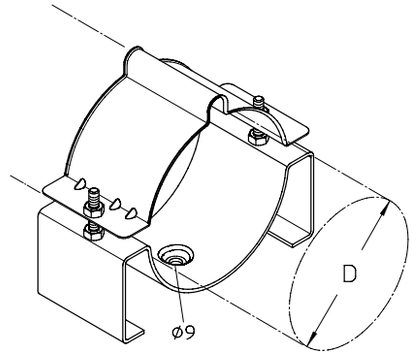
article number	D mm	G kg/100
Z		
HF-EL 1	37 (E 108/19-220)	12,7
HF-EL 2	50 (E 75-100)	14,1
HF-EL 3	62 (E 48-70)	16,1
HF-EL 4	100 (E 38-46)	23,2



HF-EL 5-6 HF-cable clamp for wall fastening

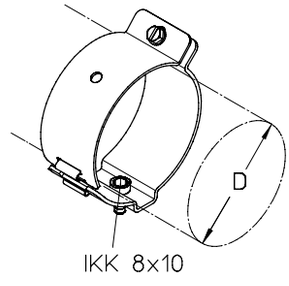
For an application example, see the chapter assembly.

article number	D mm	G kg/100
Z		
HF-EL 5	128 (E 26-30)	85,0
HF-EL 6	160 (E 20)	99,8



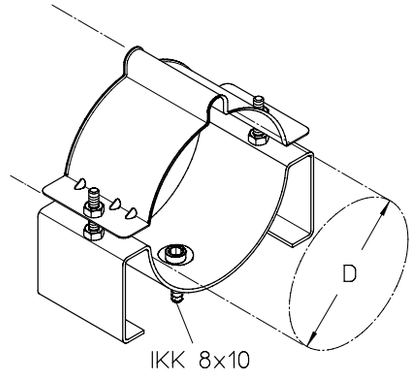
HF-EM 8 1-4 HF-cable clamp for wall fastening

article number	D mm	G kg/100
Z		
HF-EM 8 1	37 (E 108/19-220)	13,4
HF-EM 8 2	50 (E 75-100)	14,8
HF-EM 8 3	62 (E 48-70)	16,9
HF-EM 8 4	100 (E 38-46)	24,0



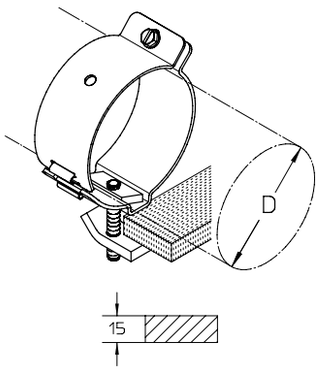
HF-EM 8 5-6 HF-cable clamp for wall fastening

article number	D mm	G kg/100
Z		
HF-EM 8 5	128 (E 26-30)	85,8
HF-EM 8 6	160 (E 20)	100,5



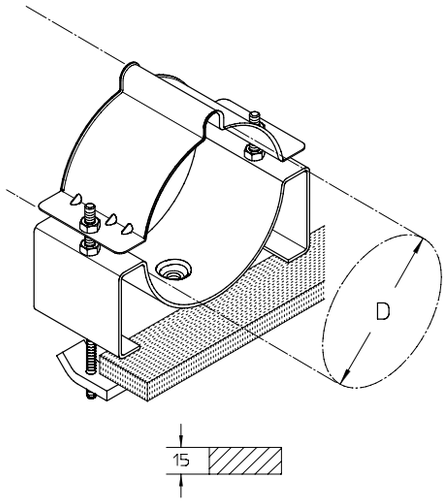
HF-EU 1-4 HF-cable clamp for flat-steel profile fastening

article number	D mm	G kg/100
Z		
HF-EU 1	37 (E 108/19-220)	22,8
HF-EU 2	50 (E 75-100)	24,2
HF-EU 3	62 (E 48-70)	26,2
HF-EU 4	100 (E 38-46)	33,3



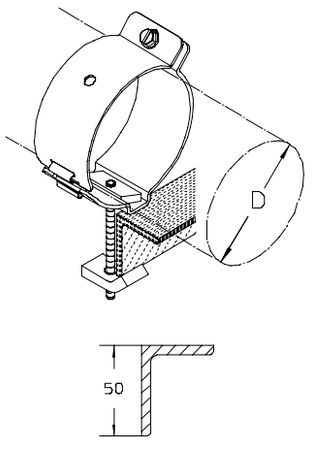
HF-EU 5-6 HF-cable clamp for flat-steel profile fastening

article number	D mm	G kg/100
Z		
HF-EU 5	128 (E 26-30)	102,0
HF-EU 6	160 (E 20)	117,7



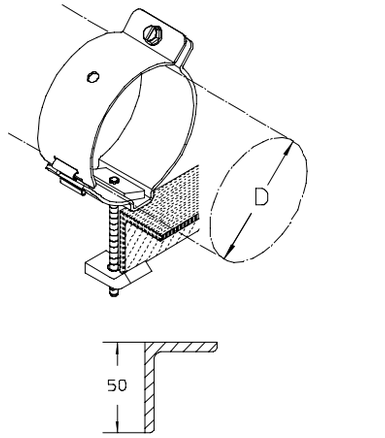
HF-ES 50 1-4 HF-cable clamp for angular profile fastening

article number	D mm	G kg/100
Z		
HF-ES 50 1	37 (E 108/19-220)	23,9
HF-ES 50 2	50 (E 75-100)	25,3
HF-ES 50 3	62 (E 48-70)	27,3
HF-ES 50 4	100 (E 38-46)	34,5



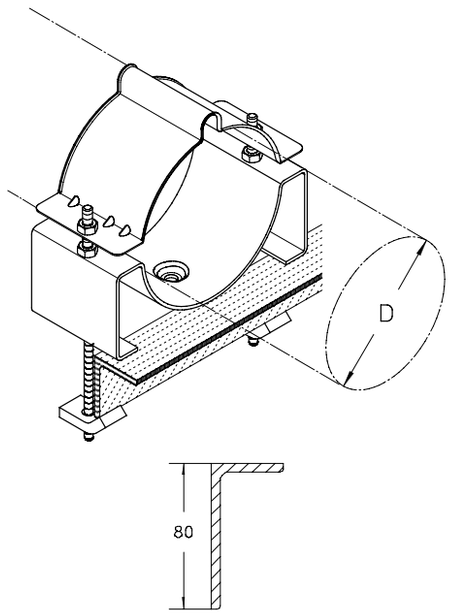
HF-ES 50 5-6 HF-cable clamp for angular profile fastening

article number	D mm	G kg/100
Z		
HF-ES 50 5	128 (E 26-30)	104,2
HF-ES 50 6	160 (E 20)	120,0



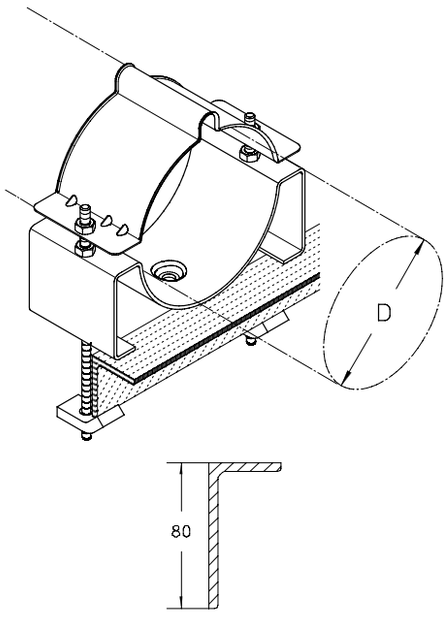
HF-ES 80 1-4 HF-cable clamp for angular profile fastening

article number	D mm	G kg/100
Z		
HF-ES 80 1	37 (E 108/19-220)	24,9
HF-ES 80 2	50 (E 75-100)	26,3
HF-ES 80 3	62 (E 48-70)	28,3
HF-ES 80 4	100 (E 38-46)	35,4



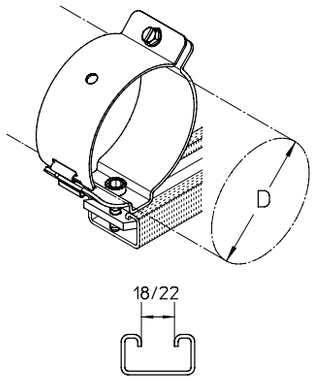
HF-ES 80 5-6 HF-cable clamp for angular profile fastening

article number	D mm	G kg/100
Z		
HF-ES 80 5	128 (E 26-30)	106,1
HF-ES 80 6	160 (E 20)	121,9



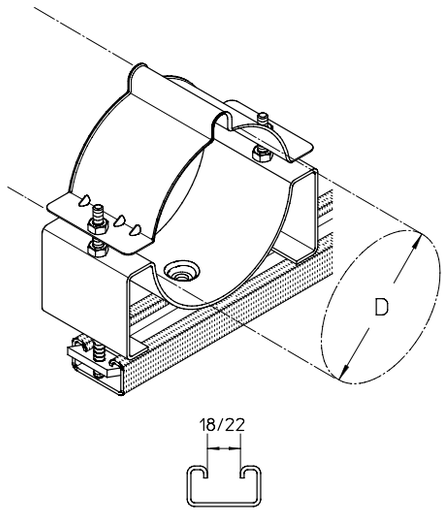
HF-EAC 1-4 HF-cable clamp for fastening to C-rails

article number	D mm	G kg/100
Z		
HF-EAC 1	37 (E 108/19-220)	17,2
HF-EAC 2	50 (E 75-100)	18,6
HF-EAC 3	62 (E 48-70)	20,7
HF-EAC 4	100 (E 38-46)	27,8



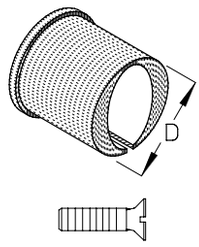
HF-EAC 5-6 HF-cable clamp for fastening to C-rails

article number	D mm	G kg/100
Z		
HF-EAC 5	128 (E 26-30)	96,6
HF-EAC 6	160 (E 20)	112,6



HF-EE HF-clamp lining

article number	D mm	G kg/100
z		
HF-EE 190	37 (E 190)	8,1
HF-EE 150	37 (E 150)	8,0
HF-EE 130	37 (E 130)	7,9
HF-EE 105	50 (E 105)	10,0
HF-EE 78	50 (E 78)	9,7
HF-EE 70	62 (E 70)	15,2
HF-EE 65	62 (E 65)	14,9
HF-EE 60	62 (E 60)	14,8
HF-EE 46	100 (E 46)	28,6
HF-EE 38	100 (E 38)	30,0



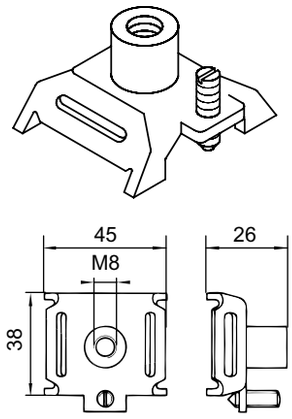
Fastenings

Numeric index
Fastenings

GP base plate

For an application example, see the chapter assembly.

article number	G kg
F	
GP	0,07

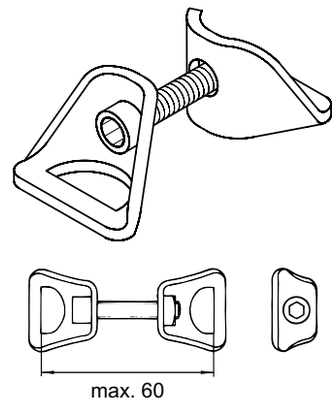


SC tightening clip

For an application example, see the chapter assembly.

article number	G kg
F	
SC	0,07

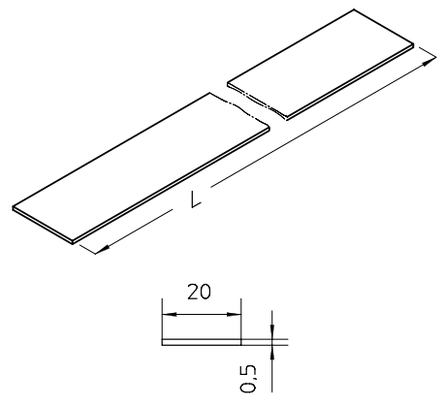
accessories included:
1 x **IK 8x40E** hexagon socket head screw, DIN 912 (page D05)



SD E fastening strip

For an application example, see the chapter assembly.

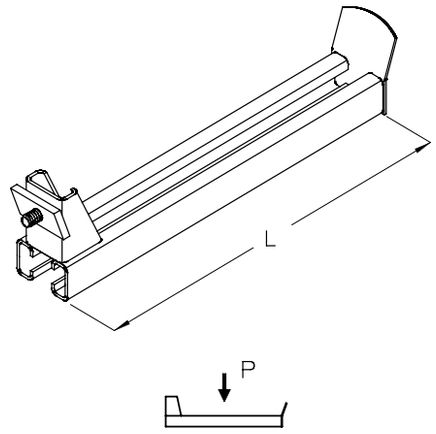
article number	L mm	P_{zul} kN	G kg
E			
SD E	1000	< 2	0,08
SD E 50M	50000	< 2	4,00



T bracket

For an application example, see the chapter assembly.

article number	L mm	P kN	G kg
F			
T 20/AM18	200	3,0	0,50
T 25/AM18	250	2,4	0,58
T 30/AM18	300	2,0	0,66
T 35/AM18	350	1,7	0,74
T 40/AM18	400	1,5	0,84
T 45/AM18	450	1,4	0,93
T 50/AM18	500	1,2	1,00
T 60/AM18	600	1,0	1,18

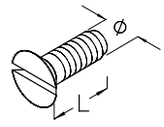


accessories included:
1 x **SES 8x20** hexagon head bolt, DIN 933 (page D06)
1 x **AMA18 M8F** channel nut, A7/ A8 (catalogue cable trays)

accessories optional:
AC cable clamp for fastening to C-profiles (page A03)
RU cable clamp for fastening to round sections (page A17)

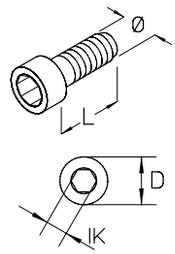
SSV countersunk head screw

article number	Ø mm	L mm	G kg/100
Z			
SSV 6x10	6	10	0,3
SSV 6x25	6	25	0,5
SSV 6x40	6	40	0,8
E			
SSV 6x10E	6	10	0,3
SSV 8x10E	8	10	0,5



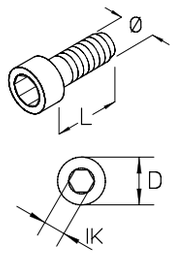
IK hexagon socket head screw, DIN 912

article number	Ø mm	D mm	L mm	IK mm	G kg/100
GV					
IK 6x20	6	10,2	20	5	0,7
IK 8x20	8	13,3	20	6	1,3
IK 8x25	8	13,3	25	6	1,5
IK 8x30	8	13,3	30	6	1,7
IK 8x40	8	13,3	40	6	2,1
IK 10x20	10	16,3	20	8	2,3
IK 10x25	10	16,3	25	8	2,5
IK 10x30	10	16,3	30	8	2,8
IK 10x40	10	16,3	40	8	3,3
IK 12x20	12	18,3	20	10	3,2
IK 12x25	12	18,3	25	10	3,6
IK 12x30	12	18,3	30	10	3,9
IK 12x40	12	18,3	40	10	4,7
IK 12x50	12	18,3	50	10	5,5



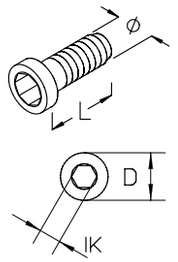
IK hexagon socket head screw, DIN 912

article number	Ø mm	D mm	L mm	IK mm	G kg/100
E					
IK 8x10E	8	13,3	10	6	1,0
IK 8x20E	8	13,3	20	6	1,3
IK 8x25E	8	13,3	25	6	1,3
IK 8x30E	8	13,3	30	6	1,7
IK 8x40E	8	13,3	40	6	2,1
IK 8x50E	8	13,3	50	6	2,5
IK 10x20E	10	16,3	20	8	2,3
IK 10x25E	10	16,3	25	8	2,5
IK 10x30E	10	16,3	30	8	2,8
IK 10x40E	10	16,3	40	8	3,3
IK 12x20E	12	18,3	20	10	3,2
IK 12x25E	12	18,3	25	10	3,6
IK 12x30E	12	18,3	30	10	3,9
IK 12x40E	12	18,3	40	10	4,7
IK 12x50E	12	18,3	50	10	5,5



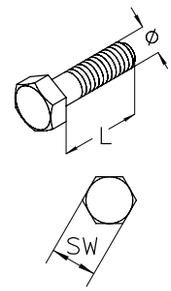
IKK hexagon socket head screw, DIN 7984

article number	Ø mm	D mm	L mm	IK mm	G kg/100
E					
IKK 8x10E	8	13	10	5	1,03



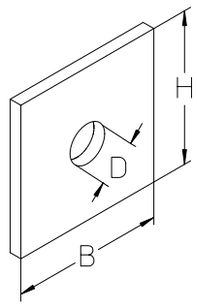
SES hexagon head bolt, DIN 933

article number	Ø mm	L mm	SW mm	G kg/100
GV				
SES 6x16	6	16	10	0,5
SES 6x20	6	20	10	0,6
SES 6x25	6	25	10	0,7
SES 6x30	6	30	10	0,8
SES 8x16	8	16	13	1,1
SES 8x20	8	20	13	1,2
SES 8x25	8	25	13	1,4
SES 8x30	8	30	13	1,4
SES 8x40	8	40	13	1,9
SES 8x110	8	110	13	4,1
SES 10x20	10	20	17(16)	2,1
SES 10x25	10	25	17(16)	2,4
SES 10x30	10	30	17(16)	2,6
SES 10x40	10	40	17(16)	3,1
SES 10x75	10	75	17(16)	4,7
SES 10x90	10	90	17(16)	5,6
SES 10x100	10	100	17(16)	6,1
SES 12x20	12	20	19(18)	3,1
SES 12x25	12	25	19(18)	3,4
SES 12x30	12	30	19(18)	3,8
SES 12x40	12	40	19(18)	4,5
SES 12x50	12	50	19(18)	5,2
F				
SES 10x20F	10	20	17(16)	2,1
SES 10x25F	10	25	17(16)	2,4
SES 10x30F	10	30	17(16)	2,6
SES 10x55F	10	55	17(16)	3,9
SES 10x75F	10	75	17(16)	4,9
SES 10x90F	10	90	17(16)	5,6
SES 10x100F	10	100	17(16)	6,1
SES 12x20F	12	20	19(18)	3,1
SES 12x30F	12	30	19(18)	3,8
SES 12x40F	12	40	19(18)	4,5
SES 12x50F	12	50	19(18)	5,2
SES 12x70F	12	70	19(18)	6,6
E				
SES 6x16E	6	16	10	0,5
SES 8x16E	8	16	13	1,1
SES 6x20E	6	20	10	0,6
SES 8x20E	8	20	13	1,2
SES 8x25E	8	25	13	1,4
SES 8x30E	8	30	13	1,5
SES 10x20E	10	20	17	2,1
SES 10x30E	10	30	17	2,6
SES 10x75E	10	75	17(16)	4,9
SES 10x100E	10	100	17(16)	6,1
E4				
SES 8x20E4	8	20	13	1,2
SES 8x30E4	8	30	13	1,5
SES 10x20E4	10	20	17	2,1
SES 10x75E4	10	75	17(16)	4,9
SES 10x100E4	10	100	17(16)	6,1



RUS 40 mounting plate, KHA profiles

article number	H mm	B mm	D mm	G kg/100
F				
RUS 40-L7F	40	40	7	1,88
RUS 40-L9F	40	40	9	1,85



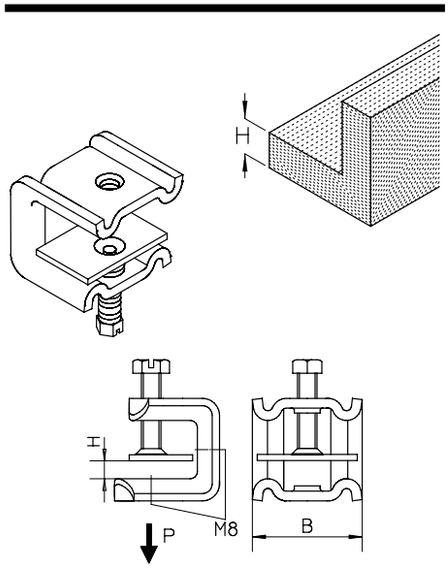
MKD beam clamp

For an application example, see the chapter assembly.

article number	B mm	k mm	P kN	M Nm	G kg
F					
MKD 21	44	6-21	1,5	9	0,19
MKD 40	44	20-40	1,3	9	0,22
E					
MKD 21E	44	6-21	1,5	9	0,19
MKD 40E	44	20-40	1,3	9	0,22
E4					
MKD 21E4	44	6-21	1,5	9	0,19
MKD 40E4	44	20-40	1,3	9	0,22

accessories optional:

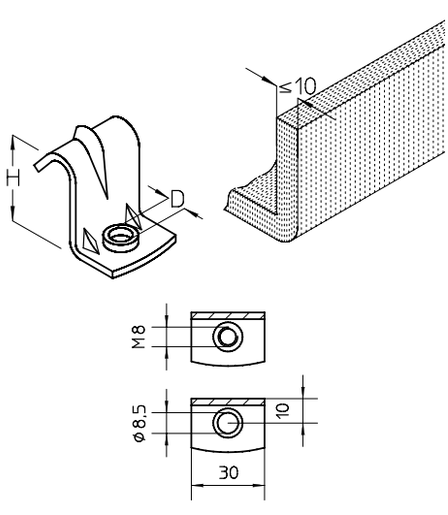
HFEF8EXP 2	wire suspension with threaded end M8 and express closure	(catalogue cable trays)
HFEF8 3	wire suspension with threaded end M8 and universal closure	(catalogue cable trays)



SN G beam clamp

For an application example, see the chapter assembly.

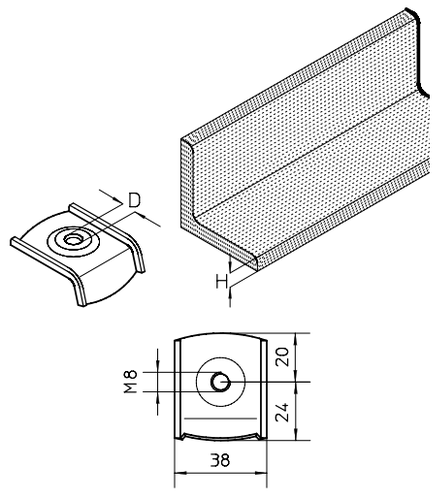
article number	H mm	D mm	G kg
F			
SN 25 M/G	25	M 8	0,04
SN 35 M/G	35	M 8	0,05
SN 25 O/G	25	8,5	0,04
SN 35 O/G	35	8,5	0,05



SK clamping claw

For an application example, see the chapter assembly.

article number	H mm	D mm	G kg
F			
SK 4 M8	4	M 8	0,04
SK 6 M8	6	M 8	0,04
SK 8 M8	8	M 8	0,04
SK 10 M8	10	M 8	0,04
SK 12 M8	12	M 8	0,04



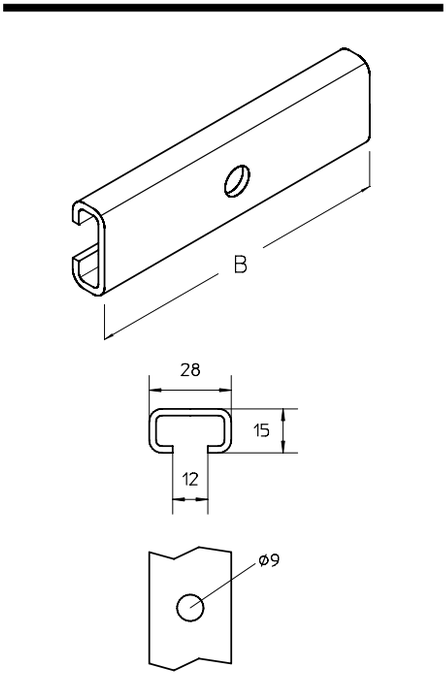
AN support

For an application example, see the chapter assembly.

article number	B mm	G kg/100
F		
AN100 F	100	10,00

accessories optional:

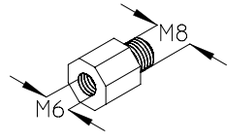
B	cable clamp for fastening to profile rails	(page A08)
HB	cable clamp for fastening to profile rails	(page A09)
ACF-E	cable clamp for fastening to C-profiles	(page A11)



RGW reducing bolt

For an application example, see the chapter assembly.

article number	G kg
Z	
RGW 8/6	0,01
E	
RGW 8/6E	0,01



Planning

The technical information is provided to
– inform you about protective measures against corrosion
– help you finding the suitable products for your application
– inform you about available, castum-made products.

In order to make the use of this catalogue easier for you we use tokens and symbols. You find the explanations on the inner pocket of the back side page. If you should have any technical questions or requests about available non-standard products we are glad to help you from our headquarters in Berlin or our branch offices at any time.

Subject to technical modifications.

Laying technique

Cable clamps

allow a fast and easy laying of single or bundled cables. They are used to fix cables to supporting profiles (lengthwise or transverse) or with plugs and screws against walls and ceilings.

To mount several parallel round cables we recommend to use cable support systems. They can be anchored to walls and ceilings, resp. be clamped to support profiles (see catalogue „cable trays“). If drilling is prohibited, the fastening points can be made using the fastening band system (see chapter „Assembly Instructions“).

If the wall or ceiling area is not available to lay out cables in one layer, upright crossbars can be used to provide additional fastening points (see chapter „Assembly Instructions“). Thus cables con be rounted in multilayers.

To fasten single conductor cables cable clamps made of amagnetic aluminium or high-grade steel have to be used. They are marked with the symbols AL and E.

In order to avoid deformation of cables through exceeding pressure of cable clamp fastening, it is recommended to use form stabilizing counter- and double vats (see chapter B). For pressure sensitive cables or fragil plastic tubes we provide metal long vats that minimize the surface pressure effectively.

Highly sensitive radiofrequency cables can be mounted safely with standard cable clamps if the clamps are equipped with a high frequency counter beds (see chapter B). These are two sturdy half shells made of plastic. They enclose the cable completely and make sure that in spite of relatively high fastening tension and screwing force the „armed“ cable is only held with a defined lower fastening pressure. Signal reflections and modulations are minimized; damage to the cable is is excluded.

Complete armatures containing cable clamps, high frequency counter beds as well as counter bolts for secure screw joints under stress of vibrations (for example for installation of transmission poles) can be found in chapter C. There you can also find special clamps for other high frequency sizes and types of high frequency cables. To install various elliptic cables Neopreninlays (notation EE) have to be used.

Custom-made applications

In addition to our catalogue program, we can provide you on request with the followring:

Cable clamps
– in further other sizes (intermediate and / or plus sizes)
– with high-grade steel nuts and bolts for exclusion of corrosion in aggressive environments
– with counter bolts for secure screw joints to minimize shock load & vibration load
– made of stainless steel, material number 1.4571, marked with the symbol E4.

Corrosion Prevention

Prior to choosing materials for mounting of cables it is recommended to determine at the corrosive environmental conditions at the construction site and the corrosion prevention accordingly.

For installations in regular environment, zinc coatings have proven to be protective for steel against corrosion. However, the protective zinc coat is being reduced by various climatic influences throughout the years. The following table shows the ablation of coating per year:

Environmental influence and corrosion risk

Corrosion-categorie	Loss of thickness µm/year	Typical environment outdoors	indoors
C1 inconsiderable	≥ 0,1	-	Heated buildings like offices, stores, schools, hotels
C2 slight	> 0,1 until 0,7	Little pollution, like rural areas	Not heated buildings with formation of condensate as store houses
C3 moderate	> 0,7 until 2,1	City and industrial environments with moderate pollution	Production plants with high humidity, as laundres, breweres and daires
C4 strong	> 2,1 until 4,2	Industrial areas and coastlines with moderate salt impact	Chemical plants, swimming pools
C5-I very strong (industrial)	> 4,2 until 8,2	Industrial environment with high humidity and aggressive atmosphere	Buildings or areas with almost permanent condensation and pollution
C5-M very strong (ocean)	> 4,2 until 8,2	Coastlines and offshore areas with high salt impact	Buildings or areas with almost permanent condensation and pollution

(Source: EN ISO 12944-2)

The ablation rate per year multiplied with the expected life span of the construction determines the necessary thickness of zinc coating. There are mainly three zinc coatings that differ in thickness of coating, adhesive strength and appearance.

Galvanic zinc (EN ISO 4042)

The small parts are zinced by means of electrolysis bath in which the zinc ions apply very evenly to the metal. The zinc coat is approximately 5 µm thick, slighty shiny and has an additional protection by succeeding bichromium conditioning against abrasion.

Nuts and bolts marked with GV in the catalogue are galvanic zinc coated. They are used to connect sendzimir zinc coated construction elements.

Hot galvanized according to the Sendzimir procedure (EN 10346)

The steel strapping (thickness up to 2 mm) is coated in a steel-mill with zinc (flow path procedure). The result is an evenly spread and highly adhesive zinc coat with an average thickness of 19 µm.
Damage to the zinc coat caused by cutting, pun-ching or drilling does not result in progressing corrision because the neighbouring zinc is dissolving under the impact of (air-)humidity and builds a protective, brown coating layer of zinc hydroxide over the blanc metal. The spreading of zinc ions protect those areas up to approximately 2 mm thick.

These articles are marked with the symbol S.

Hot dip galvanized (EN ISO 1461)

The parts are hot dip galvanized after being processed in liquid zinc (app. 450 C). Chemical reactions lead to various zinc-iron alloys, which are especially firmly connected to the steel core. These alloys are usually coated with a pure zinc layer surface irregularities can occur clue to the zinc-iron alloy. Depending on the speed of the reaction, steel composition, time of dipping, cooling process.

Therefore the surface can vary from dull dark grey to slightly shiny. This is no indication for the thickness of zinc coating or quality of corrosion prevention. A humid environment can also cause a forming of zinc-hydroxide-carbonate (so called white rust). This does not influence the efficiency of the corrosion prevention.

Cutting edges need to be protected with cold zinc paint (see catalogue cable trays, chapter A).

According to EN ISO 1461 the average local thickness of the coating is at least
45 µm for material thicknesses up to 1,5 mm
55 µm for material thicknesses from 1,5 up to 3 mm
70 µm for material thicknesses from 3 up to 6 mm

The EN ISO 1461 complies basically with
BS EN ISO 1461 in Great Britain
EN ISO 1461 in France
NEN EN 1461 in USA

All types of cable trays and medium-heavy or heavy support systems are deliverable with a hot dip galvanized coating by the manufactory. This program is marked with the symbol F.

The cable clamps marked with the symbol Z contain construction parts of various zinc coatings:
– galvanized (cable diameter ≤ 40 mm) or hot dip galvanized rivet shank screws (cable diameter ≥ 44 mm)
– sendzimir coated counter bed
– hot dip galvanized clips

Stainless steel

Considering the aspects of high corrosion resistance, easily cleanable surface, ability of recycling, and fire-resistance, stainless steel is the material of first choice. Especially for the chemical, paper, textile and food industry, in sewages, refineries, car tunnels and in off-shore areas it is being commonly used.

Regarding the long lasting life cycle of such construc-tions stainless steel is more often the economically advantageous solution in spite of the higher initial investment. In case of insufficient corrosion resistance clueto the wrong material choice the investments afterwards are accelerated because of business interruption, rearrangement of cable loads, exchange of structural components.

Compared to various plastic materials stainless steel stands out clue to high firmness, fire and heat resistance, as well as the emission free mannor in case of fire and mechanical processing.

The commonly used material No.: 1.4301 is marked with the short description X5CrNi 18-10 according to EN 10088-2 and has been approved by the German Institute for Construction Engineering in Berlin under the general admittance Z-30.3-6 for construction processes.

See a list of recent and outdated norms below:

EN 10088-2	:	1.4301 X5CrNi 18-10
AISI	:	304
UNS	:	S 30400
BS	:	304 S15- 304 S31
AFNOR	:	Z7CN 18-09
DIN	:	17441

PUK offers a complete high-grade steel program made of: bracket supports, brackets, cable trays, ladders, vertical ladders, channels and cable clamps. Nuts and bolts comply to steel-group A2 (according to ISO 3506). This is indicated with the symbol E.

The high-grade steel program is available on request in material No. 1.4571 with the short appellation X6CrNiMoTi17-12-2 (according to EN 10088-2) and has been also certified by the German Institute for Construction Engineering in Berlin. Nuts and bolts comply to steel-group A4 (according to ISO 3506)

See a list recent and outdated norms below:

EN 10088-2	:	1.4571 X6CrNiMoTi17-12-2
AISI	:	316L
UNS	:	S 31635
BS	:	320 S31
AFNOR	:	Z6CNDT 14-12
DIN	:	17441

This steel type is marked with E4. Other materials of the same corrosion category available on request.

For custom-made applications such as light- and cable support constructions in car tunnels according to ZTV-ING the high alloyed material No. 1.4529 is available.

Plastic

Counter vats and double vats are made of HDPE (high density polyethylene). This material is indicated with the symbol PE.

The corresponding features are listed below:

Vicat-softening temperature:	70-75 °C
Deformation resistance B (0,45 N/mm^2):	75-80 °C
Area of melting temperatures:	130-135 °C
Coldness resistance:	app. -40 °C

The vats are light-stabilized and increased UV-resistance through special carbon black additive. They are resistant against bye, salinesolut, funistiby and non-oxidizing acid, but-not resistant against strong oxidants (nitration acid, concentrated saltpetre acid) and halogens.

Isolation and high frequency beds are made of polystyrene, impact resistant (SB). This material is indicated with the symbol PS.

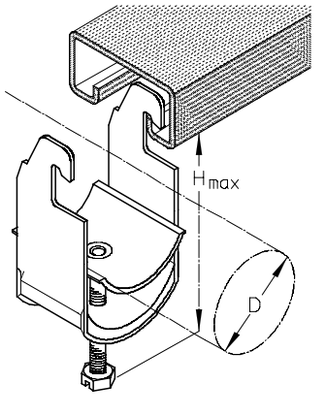
Vicat-softening temperature:	75-80 °C
Deformation resistance B (0,45 N/mm^2):	74-81°C
Area of melting temperatures:	≤ 55 °C
Coldness resistance:	-40 °C

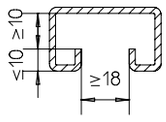
Light stabilized and increased UV-resistance through special carbon black additive. Resistant against saline solution, brine, humidity and non oxidizing acid. Not resistant against aromatic and chlorinated hydrocarbon, ester, ketone, petrol, ethereal oil and some flavouring agents.

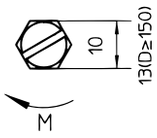
Cable support systems with integrated continuous function in case of fire

Information on fire proofed cable clamps and other support systems for rounting safety cables (E 30-E 90) as well as advice for installation can be found in our catalogue “Fire Protection”.

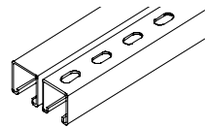
AC Mounting on c-profiles

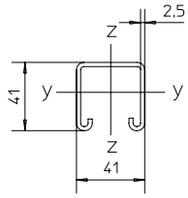




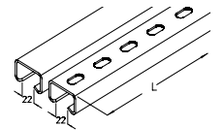


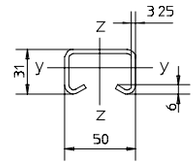
A 41 / KHA 41



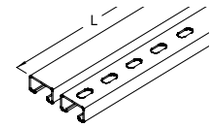


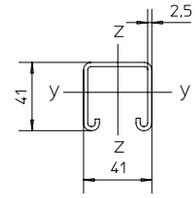
A 2 / KHA 2



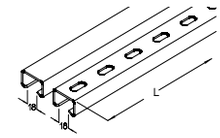


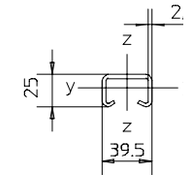
A 4 / KHA 4



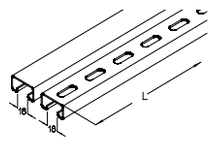


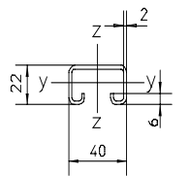
A 9 / KHA 9



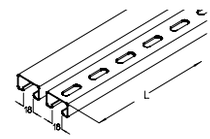


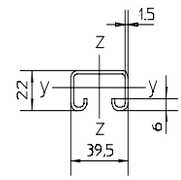
A 8 / KHA 8



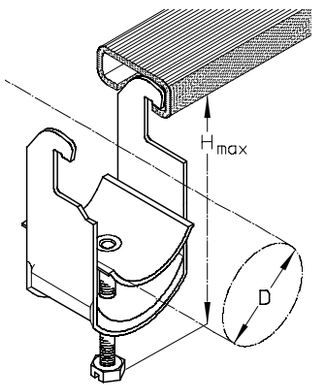


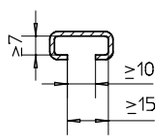
A 7 / KHA 7

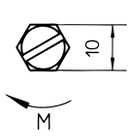




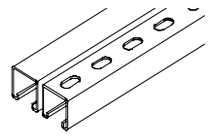
ACF-E Mounting on c-profiles

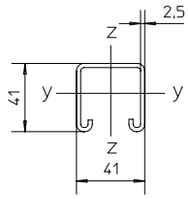




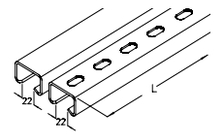


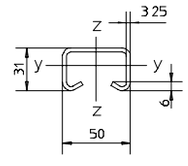
A 41 / KHA 41



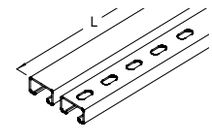


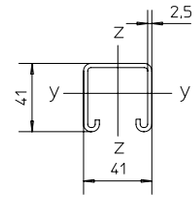
A 2 / KHA 2



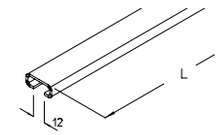


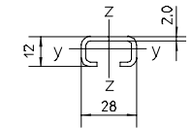
A 4 / KHA 4



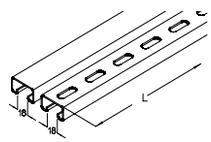


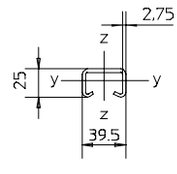
B3



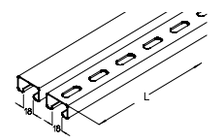


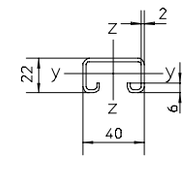
A 9 / KHA 9



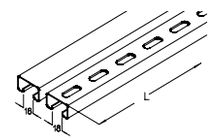


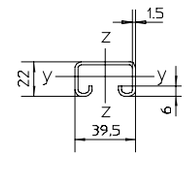
A 8 / KHA 8



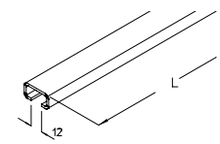


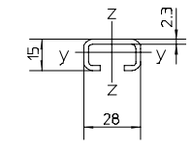
A 7 / KHA 7



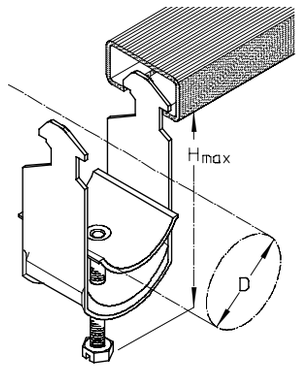


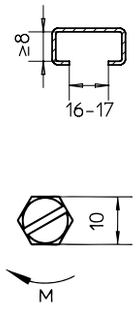
B 6



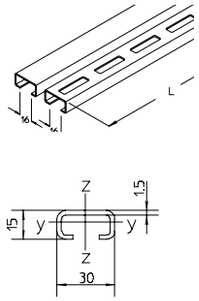


H Mounting on c-profiles

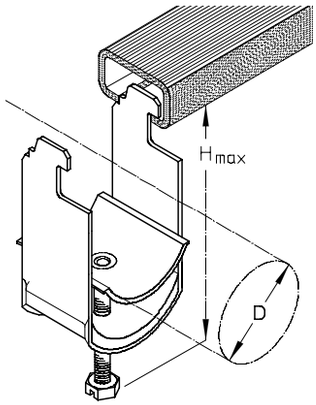


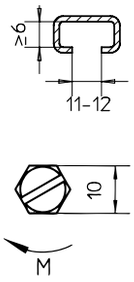


B 7 / KHB 7

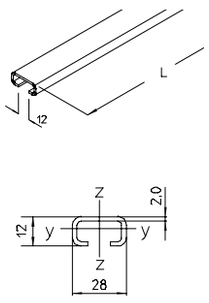


B Mounting on profiles

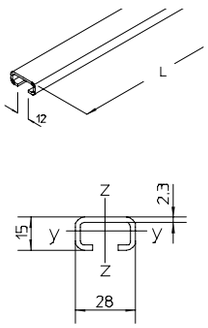




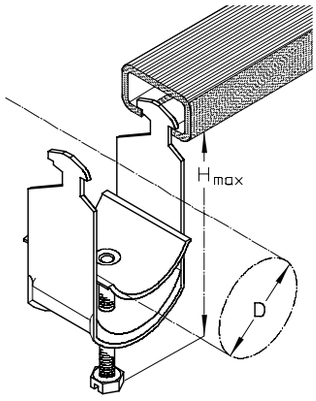
B 3

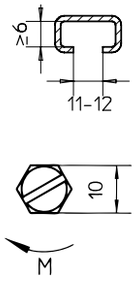


B 6

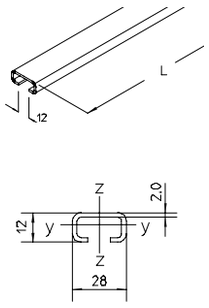


HB Mounting on profiles

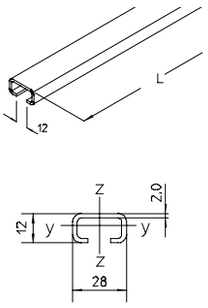




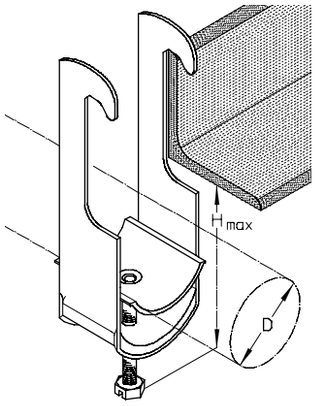
B 3

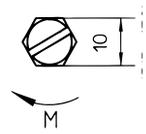


B 3



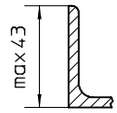
S Mounting on angle profile



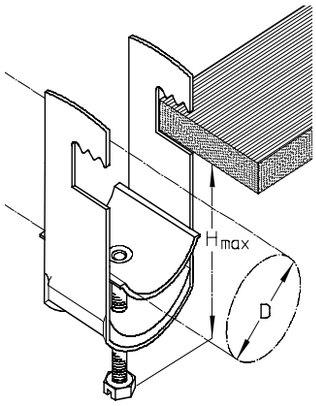


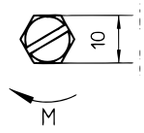
Schlüsselweite SW 13 bei
Durchmesser D ≥ 150

Angle profile



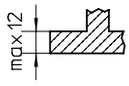
U Mounting on flat section



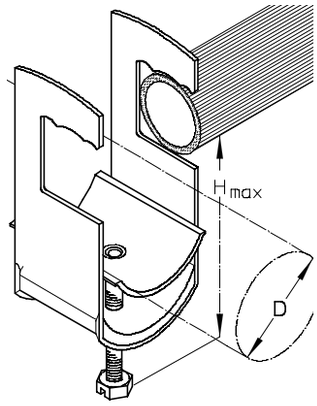


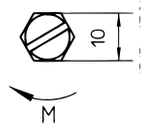
Schlüsselweite SW 13 bei
Durchmesser D ≥ 150

Flat section

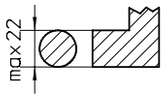


RU Mounting on round profiles



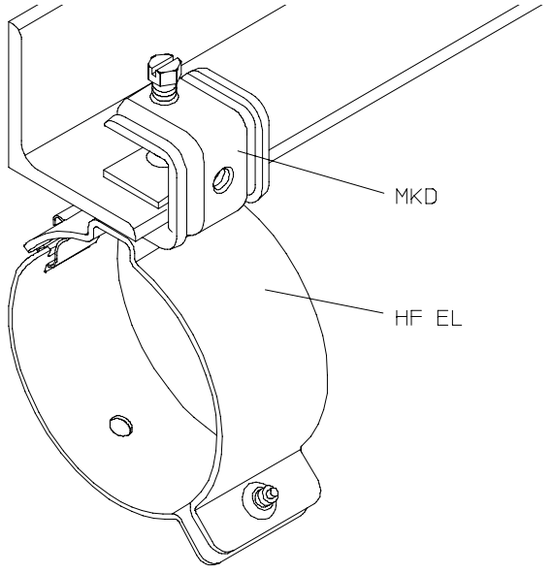


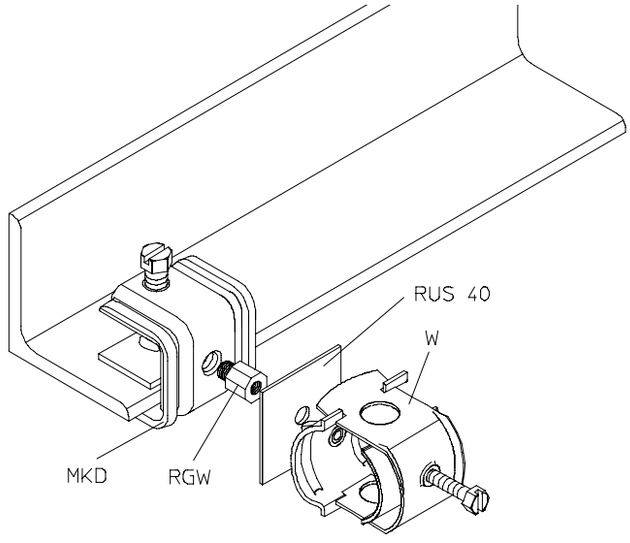
Flat- and round profiles



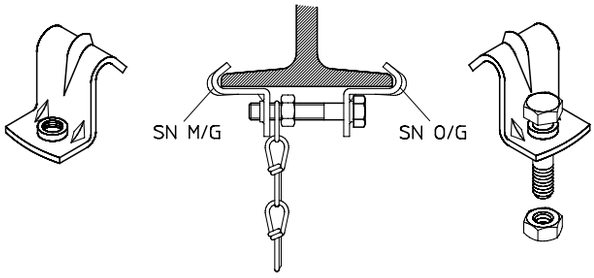
Examples for mounting cable clamps
Application examples

Cable clamp type MKD, mounted on a steel beam

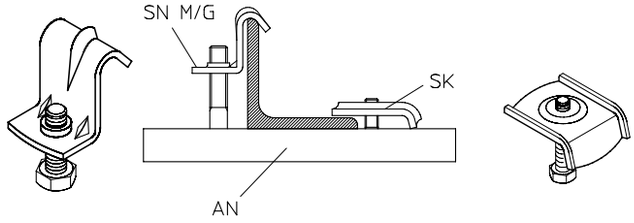




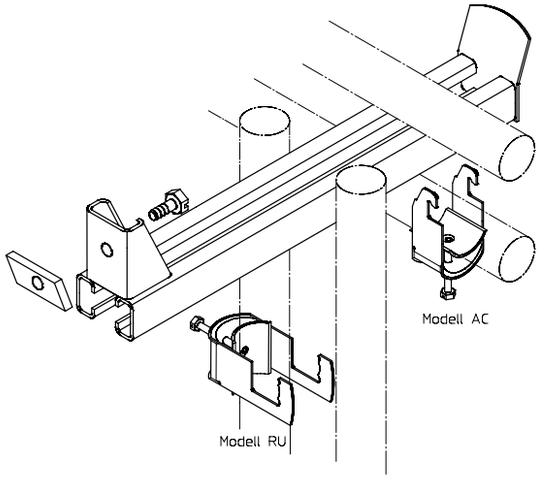
Beam clamp type SN, mounted on steel beams



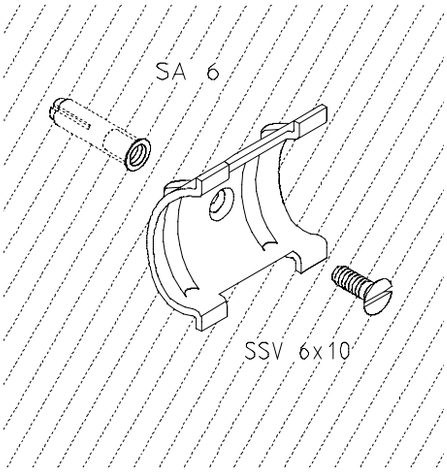
Beam clamp type SN / SK, mounted on steel beams

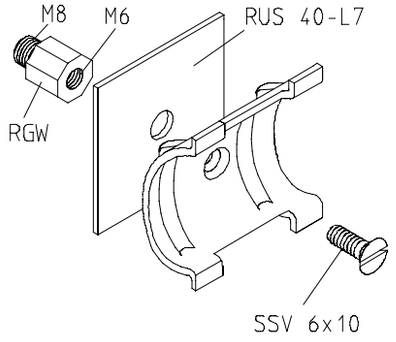


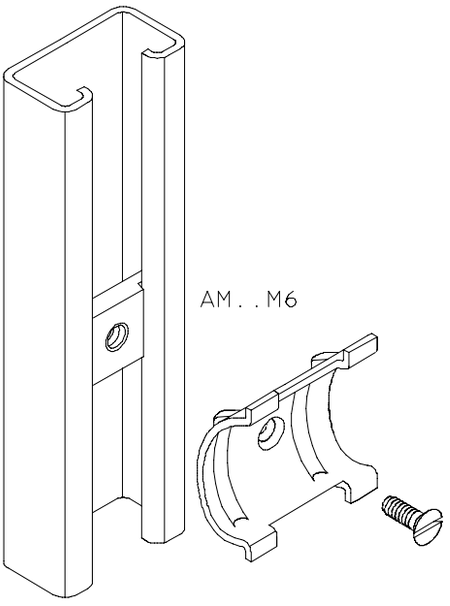
Traverse type T for multiple installations of cable clamps



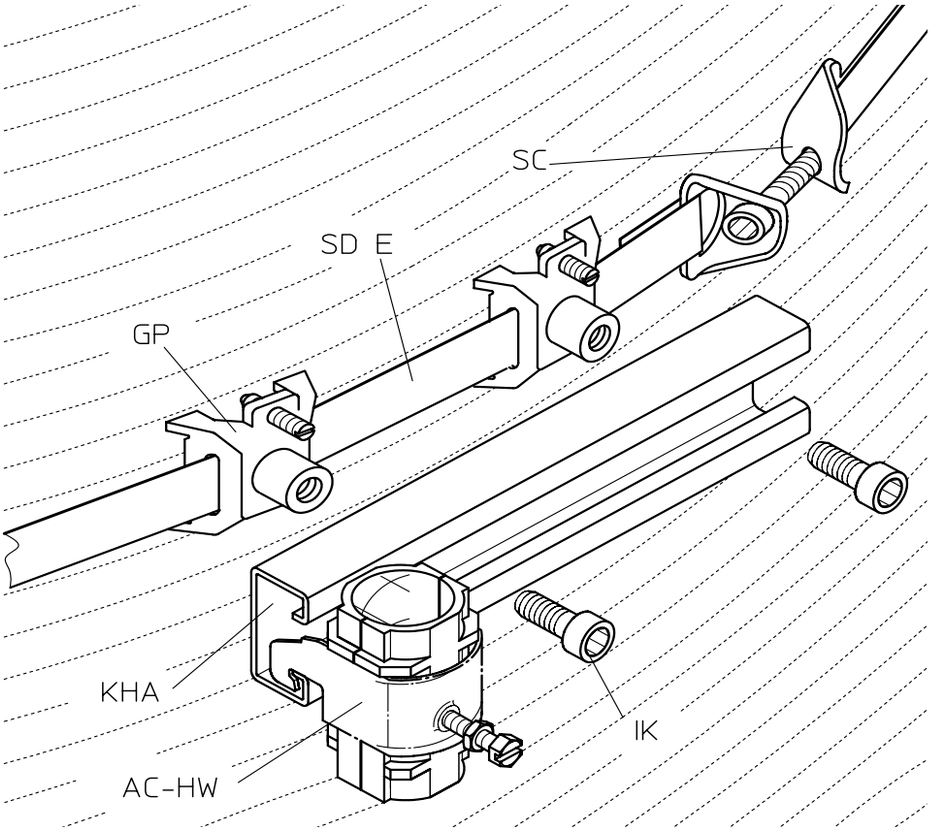
Cable clamp type W for mounting onto c-profiles or directly on the wall







Fastening strip type SD for mounting on round or flat profiles



Numeric index

Numeric index

B	Width
D | Ø	Diameter
G	Weight per piece
H	Height
H_{max}	Maximum height
IK	Internal hexagon
L	Length
M	Torque
P	Bracket load
P_{zul}	Permissible load
SW	Wrench size
AL	Aluminium
E	Stainless steel, material no. 1.4301 (ANSI 304) (V2A)
E4	Stainless steel, material no. 1.4571 (ANSI 316 Ti) / 1.4404 (ANSI 316 L)
F	Hot-dip galvanized, according to EN ISO 1461
GV	Fastenings galvanized, according to ISO 4042
PE	Polyethylen
PS	Polystyrene
S	Continously hot galvanized (Sendzimir process) (EN 10346) (10244-2 for wire)
Z	Zinc coated

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