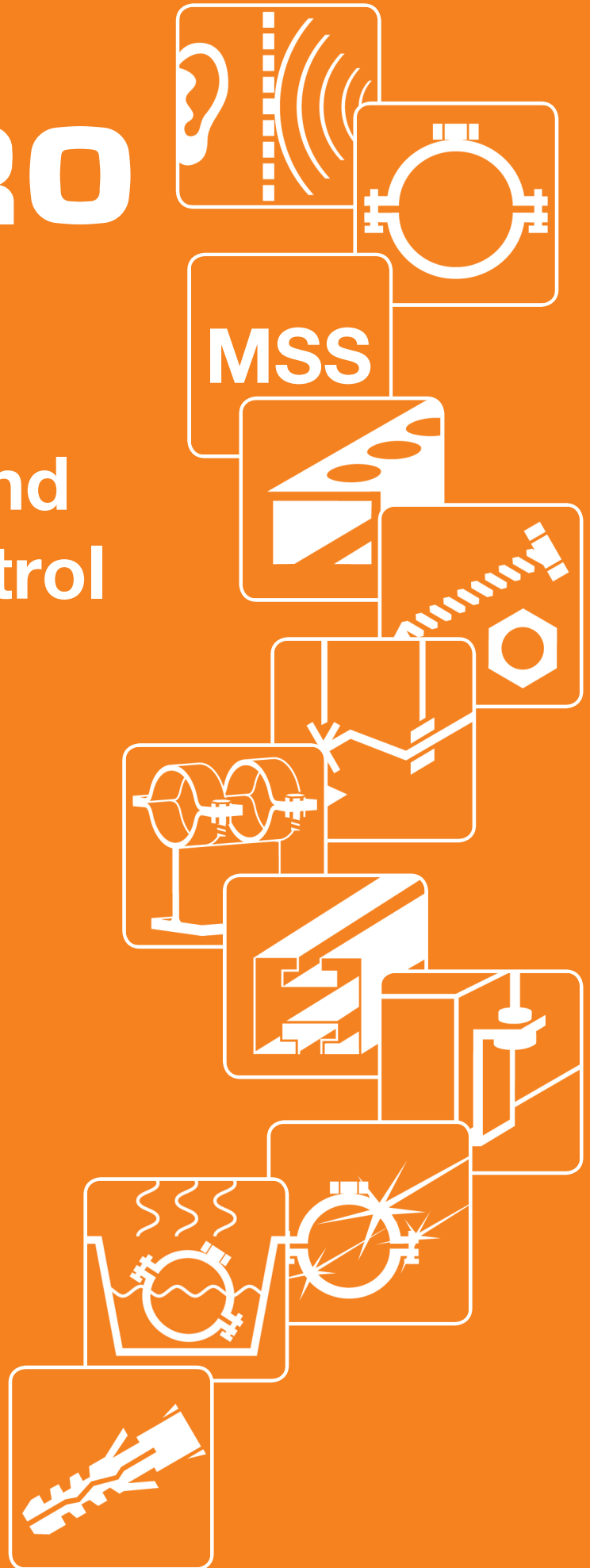
















MÜPRO

Support
technology and
vibration control
systems



0. MÜPRO 
1. Vibration control 
2. Pipe clamps 
3. MSS products 
4. Support channels 
5. Accessories 
6. Anchor points/expansion points 
7. Heavy-duty pipe support 
8. MPT-Support system 
9. Ventilation 
10. Stainless steel 
11. Hot-dip galvanised products 
12. Anchor plugs 
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Europe

Bosnia and Herzegovina
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 Finland
 Greece
 Great Britain
 Italy
 Macedonia
 Montenegro
 Portugal
 Serbia
 Sweden
 Switzerland

Other countries (excerpt)

Bahrain
 Brazil
 Chile
 Egypt
 India
 Israel
 Jordan
 Mexico
 Qatar
 Republic of Korea
 Kuwait
 Lebanon
 Oman
 Saudi Arabia
 UAE

MÜPRO – a brief portrait

“MÜPRO – A concept for progress and quality” has been our company philosophy for over 40 years. MÜPRO operates globally, providing support system solutions for almost every attachment problem, including the essential prevention of structure-borne vibration.

Our mission statement: “We are trend-setting for the support technology market” also inspires our product development. Our primary goal is to manufacture products to the highest functional and workmanship quality standards. Our highly qualified staff is available to provide advice on technical issues and individual applications – thus guaranteeing that our customers benefit from our know-how and enjoy high quality service.

With its headquarters in Hofheim-Wallau near Frankfurt am Main, MÜPRO has seven service centres in Germany, ten subsidiary companies worldwide, as well as more than 20 sales partners throughout the world.

MÜPRO – outstanding features

- MÜPRO – system solutions “Engineered in Germany”
- Extensive market experience – 40 years supporting our customers as the pioneer of pipe supports and vibration control
- Global presence
- Clear focus on support technology and vibration control
- On-going innovation to improve and extend the systems
- High quality products
- Customer-oriented logistics
- Comprehensive customer support
- Technical consulting service
- Project management
- Individual customer solutions in all aspects of products and services
- Comprehensive IT business support, with a problem-free interface to the customer

MÜPRO – core competencies

- Manufacture and distribution of modular pipe support systems for all areas of building construction and industrial installations, with special focus on structure-borne noise and vibration-isolation techniques
- Single-part fabrication and special designs according to customer specifications
- Development and supply of software in all areas of planning of support solutions for complex pipework systems – including the positioning and dimensioning of anchor/expansion points
- Planning and development of support solutions for special tasks
- Static load analysis of support substructures for pipeline routes
- Nationwide on-site support from qualified staff
- 24-hour delivery service within Germany

Quality creates trust

At MÜPRO quality is self-evident. From the very start it is expressed in our slogan: "MÜPRO – A concept for progress and quality" – and that was long before anyone had ever heard of quality management systems.

Today, quality assurance is integrated into an overall quality management system in which all processes are defined and subject to permanent inspection.

Our quality management system, which complies with the requirements of DIN ISO 9001:2008, is certified by one of the largest internationally recognised certifying bodies, the "DNV Zertifizierung und Umweltgutachter GmbH".



Conscious protection of the environment

Deliberate and responsible protection of the environment is one of our corporate values implemented on a daily basis. The company vision, which sets the course for corporate development, is firmly based on environmental protection as one of the company's core values and is openly communicated throughout the company. All of our staff members make their own individual contributions to environmental protection and are continuously encouraged to review and optimise these contributions by means of established improvement systems (for further information please consult the environmental report).

Quality mark RAL-GZ 655 “Pipe Mounting“

The technical regulation RAL-GZ 655 contains rules for any kind of pipe mountings and characterises pipe clamps, brackets, mounting rails and equipment. Technical performance and quality is proven in comprehensive, neutral tests and the resulting security is an advantage to all concerned partners.

RAL has given the authority to award the quality mark to the Pipe Mounting Quality Association. The RAL quality mark can only be awarded to products, which completely meet the high requirements on quality-assured pipe mountings.












These requirements are defined in the RAL-GZ 655 quality and test regulations. All products are thoroughly evaluated by a neutral, independent test centre before the seal is awarded. All products awarded subject to continuous external monitoring by this test centre and by the quality association. The technical performance of these pipe mountings is neutrally determined, using modern methods. Thus the Pipe Mounting Quality Association offers safety and facilitates the selection of pipe mountings.















The RAL quality mark is characterized by the high level of trust established among consultants, traders and installers.

Please find further information and the current product range under:
www.safe-connection.de



Overview of approvals and test marks for MÜPRO products

	Description
	European Technical Approval, ETA, with CE mark
	National approval from the German Institute for Building Technology, Dibt, Berlin
	Recognition from the German Association of Property Insurers (VdS), Cologne for the installation of sprinkler systems
	Factory Mutual (FM), approval for the installation of sprinkler system
	Product in accordance with VdS regulations for fastening sprinkler systems on concrete components
	Fire-tested as specified in DIN 4102, fire resistance classes F30, F60, F90, F120
	Vibration control tested
	Rostfrei
	RAL Quality mark
	Underwriters Laboratories (UL)
	Manufacturers Standardization Society (MSS), quality standard for steel castings, valves, flanges, fittings and other piping components

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PHONOLYT®

1/1



PHONOLYT® Button

1/2



DÄMMGULAST® Resilient pad

1/3



DÄMMGULAST® Washers

1/4



Vibration control hangers

1/5



PHONOLYT® Combination

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PHONOLYT®

Field of application

- The ideal component for vibration controlled anchor points for pipes to meet the vibration control requirements of DIN 4109 and VDI 4100
- For the attachment of pipes of 3/8" to DN 1500; can be combined with pipe clamps
- Versatile use, e. g. for vibration control of support structures made from MPC-Support channels
- Ideal as vibration decoupled down pipe-support for all pipe types
- Ideal for vibration controlled fixing of devices such as boilers, pumps, motors, air-conditioning and ventilation systems
- Suitable for ceiling, wall or floor mounting
- For sound-decoupled pipeline fixed points

Advantages

- Vibration decoupler available in two versions for different duties
- Isolates the pipe acoustically from the building structure
- Reduces the structure-borne noise by up to 40 dB(A)
- Predictable vibration control for planners and users
- Practical design made for easy installation
- High static loading capacity
- Encapsulated vibration control – safety that you can rely on
- Effective isolation of vibration coupling using vulcanised-in MÜPRO-LAN
- The cast-steel vibration-control capsule provides a high degree of safety, even in the case of fire
- Approved for all installation positions
- Silicone-free



Down-pipe support for all pipe types vibration-decoupled



Vibration-decoupled water pipe anchor points

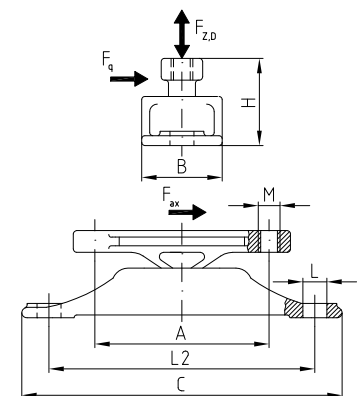


Vibration-decoupled support for equipment

Features



Type	dB(A) 27	dB(A) 40
Average vibration reduction [dB(A)]	27	40
Safe working load tension/compression $F_{z,D}$ [N]	5,400	20,000
Axial safe working load F_{ax} [N]	3,000	7,500
Radial safe working load F_q [N]	2,500	3,300



Type	Connecting thread	Part no.	Sales unit	Pack unit	Dimensions [mm]						
					A	B	C	H	M	Ø L	L2
dB(A) 27	M10	120292	1	pieces	80	37	147	40	10	11	122
dB(A) 40	M12	120296			126	60	227	66	12	13	194

PHONOLYT® Button

Field of application

- Ideal for vibration controlled fixing of devices such as boilers, pumps, motors, air-conditioning and ventilation systems; also vessels, MPC-Support channels, etc.
- Suitable for ceiling, wall or floor mounting
- For sound-decoupled pipeline fixed points
- The ideal component for vibration controlled elevating devices to meet the vibration control requirements of DIN 4109 and VDI 4100
- Various mounting options when used with cross beams and frames made of MPC-Support channels: stable, versatile and optionally expandable

Advantages

- High-performance anchor point attachments with outstanding structure-borne noise reduction of up to 30 dB(A)
- High loading capacity in all directions
- Time-saving fitting due to only one connection thread on each side
- Adjustment using threaded pins or rods
- Security provided by undercut vulcanised-in anchor
- Effective isolation of vibration coupling using vulcanised-in MÜPRO-LAN
- Silicone-free



Vibration-isolated wall mounting



Vibration-isolated pump baseframe made from MPC-Support channels

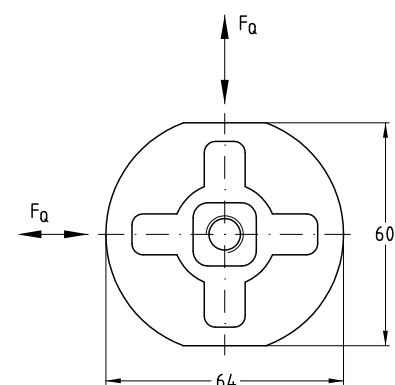
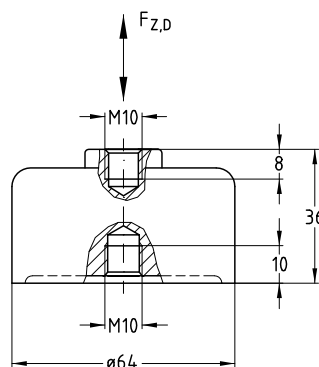


Vibration-isolated ceiling suspension

Features



Average vibration reduction [dB(A)]	30
Max. recommended loading tension/compression $F_{z,D}$ [N]	1,500
Max. recommended loading lateral F_a [N]	



Connecting thread	Part no.	Sales unit	Pack unit
M10	120442	1	pieces

DÄMMGULAST® Resilient pad

Field of application

- Vibration control of traverses and pipe bridges made of MPC-Support channels

Advantages

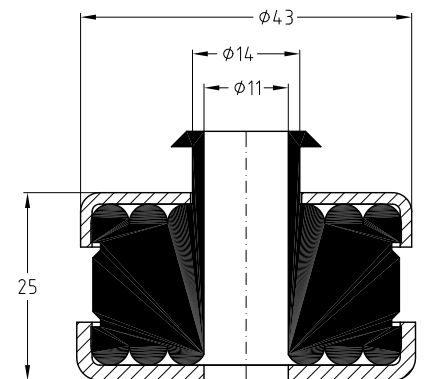
- Effective structure-borne vibration control for many installation situations
- Bushing to prevent metal contact between screws and mounted object
- Very simple installation without additional work
- Average sound level improvement of up to 17 dB(A)
- Ideal combination with DÄMMGULAST® Washers for vibration-isolated fitting of MPC-Support channels



Features



Max. recommended load [N]		1,000		
For thread	Size [mm]	Part no.	Sales unit	Pack unit
M8/M10	43 x 25	107083	50	pieces



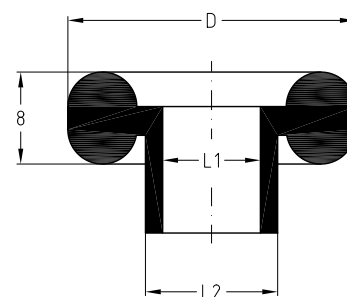
DÄMMGULAST® Washers

Field of application

- Decoupling of traverses and pipe bridges made of MPC-Support channels
- Can be fitted using screws, threaded pins and rods up to M10
- Ideal supplement to DÄMMGULAST® Resilient pad in channel installation

Advantages

- Highly elastic vibration decoupler for light compressive loadings
- Protective bushing against metal contact
- Very simple installation without additional work
- Noise reduction of up to 18 dB(A)



Features



	For thread	Size D x L1 [mm]	Part no.	Sales unit	Pack unit	Dimensions [mm]		
						D	L1	L2
Washers	M8	24 x 8.5	107087	100	pieces	24	8.5	11
		28 x 8.5	107089			28		
	M10	34 x 10.5	107086			34	10.5	14
Washers, flame-resistant	M8	24 x 8.5	107088			24	8.5	11
Washers			127238					
		28 x 8.5	127229			28		
	M10	34 x 10.5	127235			34	10.5	

⚠ For an even load distribution, always combine DÄMMGULAST® Washers with metal washers. Maximum recommended loading: 300 N.

Vibration control hangers galvanised

Field of application

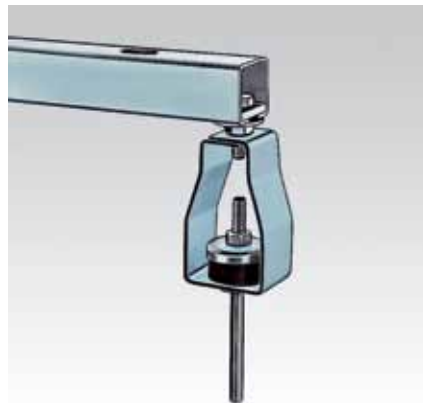
- Decoupling of traverses and pipe bridges made of MPC-Support channels

Advantages

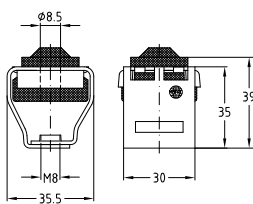
- Noise decoupling integrated into the hanger
- Very good vibration improvement of up to 17 dB(A) due to the highly elastic DÄMMGULAST® Spring element
- Attachment for threaded rods M8, M10 or alternatively for strip-mounting, depending on type
- The design for strip-mounting is also suitable for suspension attachment by means of hanger sockets
- Subsequent height adjustment of the threaded rods is possible



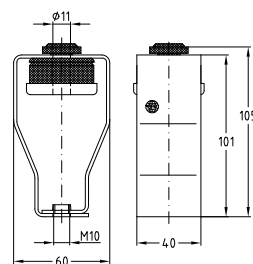
Vibration control hanger M8



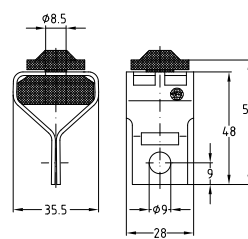
Vibration control hanger M10



For M8



For M10



For strip-mounting



For strip-mounting

Features



Connection for	Overall height L [mm]	Max. permitted load [N]	Average vibration reduction [dB(A)]	Part no.	Sales unit	Pack unit
Threaded rods M8	40	230	16	117736	100	pieces
Threaded rods M10	110	1,000	17	117733		
Strip-mounting, screws up to M8	55	230	16	117728		

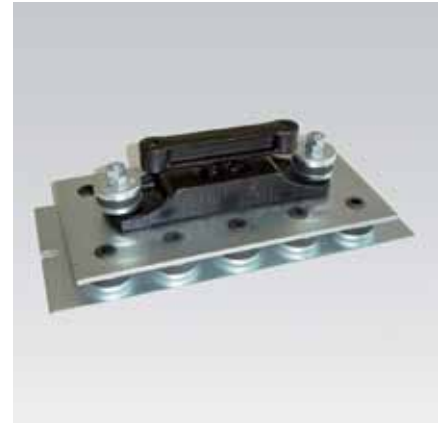
PHONOLYT® Combination

Field of application

- Isolates equipments' vibration throughout the frequency range
- Efficient disconnection of structure borne noise for various mounting arrangements















Advantages

- Efficient, economical and quick installation
- Requires just simple concrete plinth
- Available in two combination types



Features

Type	Scope of supply	Max. compressive stress [N]	Max. shear stress [N]	Part no.	Sales unit	Pack unit
dB(A) 27	1 PHONOLYT® dB(A) 27, 1 Load distribution plate 180 x 140 x 6 mm, 1 Load distribution plate 220 x 140 x 6 mm, 6 DÄMMGULAST® Resilient pads with caps, 2 DÄMMGULAST® Washers, 2 Threaded pins M8 x 70, 4 Hexagon nuts M8, 2 Washers M8, 24 x 2 mm	6,000	350	120283	1	pieces
dB(A) 40	1 PHONOLYT® dB(A) 40, 1 Load distribution plate 300 x 160 x 6 mm, 1 Load distribution plate 350 x 160 x 6 mm, 14 DÄMMGULAST® Resilient pads with caps, 2 Threaded pins M10 x 100, 4 Hexagon nuts M10, 2 Washers M10, 24 x 2 mm	12,000	700	120288		

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	Single bossed clamps JUNIOR	2/1
	EURO-QUICK®	2/2
	OPTIMAL	2/3–2/4
	Single bossed clamps, heavy duty version, with DÄMMGULAST® yellow	2/5
	Insulation clamps type H, M, T	2/6–2/9
	Load-distributing sleeves	2/10
	Rubber support inserts	2/11–2/20
	Filbow clamps pear-shaped	2/21
	U-bolts	2/22–2/23
	Ceramic fabric tapes	2/24

Single bossed clamps JUNIOR

two-piece, galvanised

Field of application

- Suitable for pipe attachments in industrial areas
- Suitable for fastening of drinking water and heating pipes
- For indoor use

Advantages

- Proven two-piece clamp
- High stiffness due to reinforcing bead
- The 2 locking screws allow adjustment to accommodate a greater variation in pipe diameter

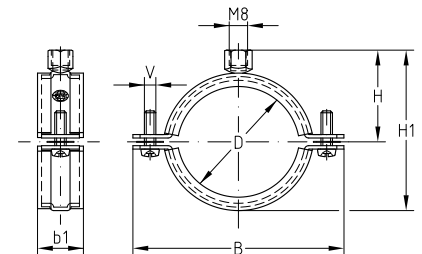
- Tightening bolts with combination cross-head convenient for power driver
- Fastener screws with captive washer
- Connecting thread with combi thread M8/M10
- DÄMMGULAST® Vibration control lining with green identification stripe: average sound level improvement of up to 18 dB(A)
- Vibration control tested



Features



Size	Max. recommended load [N]
12 mm–1/2"	700
3/4"–2"	1,200
70 mm–3"	2,000
102 mm–6"	2,500



Connecting thread	Size		Clamping range [mm]	Part no.	Sales unit	Pack unit	Dimensions [mm]				
	[inch]	[mm]					B	b1	H1	H	V
M8/M10	3/8	12	12–15	142357	100	pieces	45	22.5	38	28	M5
			15–19	142358			51		44	30	
			20–25	142359			57		50	33	
			25–30	142360			63		56	37	
			33–37	142361			70		64	40	
			42–46	142362			80		72	45	
			47–52	142363			86		79	48	
			54–58	142364			91		84	50	
			59–63	142365			96		88	53	
			68–73	142366			118		104	60	
	72–80	142367	127	113	65						
	82–85	142368	132	119	68						
	88–92	142369	139	125	71						
	99–103	142370	151	137	77						
	108–112	142371	160	145	81						
	112–118	142372	164	149	83						
	125–130	142373	174	159	88						
	133–137	142374	182	167	92						
	137–142	142375	191	175	96						
	5	160	159–164	142376	25		210		195	106	
164–169			142377	216			201		109		

	Connecting thread	Size [inch]	Part no.	Sales unit	Pack unit	Content [clamps]	Part no. Polybox excl. clamps	Type
Single bossed clamps JUNIOR, with DÄMMGULAST® green, in polybox	M8/M10	3/8	143958	1	box	200	121019	Polybox large 500/450 x 300 x 180
		1/2	143959					
		3/4	143960					
		1	143961					

EURO-QUICK®

galvanised

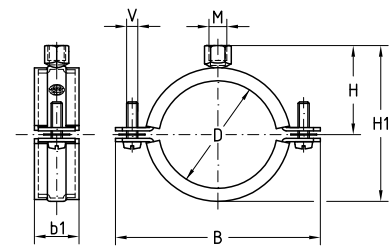
Field of application

- Suitable for fixings in housing and industrial areas
- Suitable for fastening of drinking water and heating pipes
- For indoor use

Advantages

- With highly elastic insert
- Captive fastening screws
- High rigidity thanks to reinforcing rib

- Usable temperature range from -50 °C to +110 °C
- Fastening screws with combination cross-head
- Safe handling thanks to rounded flange
- Clip-over edges and the guide rib of the pipe clamp insert ensures a secure hold and prevents it from being pushed out



Features

Size	Max. recommended load [N]
12–15 to 25–30 mm	853
32–37 to 59–63 mm	880
63.5–70 to 75–78 mm	1,355
78–84 to 108–115 mm	2,044
114–118 to 212–222 mm	2,700

Connecting thread	For pipe outer Ø				Part no.	Sales unit	Pack unit	Dimensions [mm]				
	with lining		without lining					B	b1	H	H1	V
	[mm]	[inch]	[mm]	[inch]								
M8	12–15	¼	17–19	¾	132122	50	pieces	48.5	21	28.5	40	M6
	15–20	⅜	20–24	½	132123			52.5		30.5	44	
	21–25	½	26–29	¾	132124			58.5		33.5	50	
	25–30	¾	30–34	1	132125			62.5		35.5	54	
	32–37	1	38–43	1¼	132126			70.5		39.5	62	
	40–45	1¼	45–50	1½	132127			78.5		43.5	70	
	46–53	1½	52–59		132128			86.5		47.5	78	
	54–58		60–64	2	132129			92.5		50.5	84	
	59–63	2	65–70		132130			96.5		52.5	88	
	M8/M10	63–70		71–75				132131		25		
72–78		2½	76–84	2½	132132	111.0	60.0	103				
78–86			85–90	3	132133	119.0	64.0	111				
87–93		3	92–100		132134	126.0	67.5	118				
98–104			104–110		132135	137.0	73.0	129				
108–115		4	113–119	4	132136	152.0	79.0	141				
114–118			120–124		132137	156.0	81.0	145				
124–130			128–134		132138	176.0	87.0	157				
132–137			135–140	5	132139	184.0	91.0	165				
137–142		5	143–152		132140	195.0	96.0	175				
159–163			165–174	6	132141	217.0	107.0	197				
164–168		6	170–177		132142	224.0	109.5	202				
193–203		200–206		139166	257.0	128.0	239					
212–222	8	219–228	8	132143	275.0	135.0	257					

OPTIMAL galvanised

Field of application

- Suitable for fixings in housing and industrial areas
- Suitable for fastening of drinking water and heating pipes
- For indoor use

Advantages

Economical solution due to advanced technology:

- **Practical latching fastener**
- The 2 locking screws allow adjustment to accommodate a greater variation in pipe diameter
- Installation advantages of an one-piece clamp
- High security due to the **positive-fit edge hook-in opening**
- **The pipe is free to move during the installation**
- No inadvertent opening once it has clicked in, due to the safety latching fastener



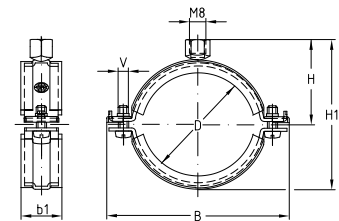
- Tightening bolts with combination, captive cross-head convenient for power driver
- DÄMMGULAST® Vibration control lining with green identification stripe: average vibration reduction of 18 dB(A)
- Optimum handling due to injury-proof design



Features



Size	Max. recommended load [N]
¼"-1¼"	800
1½"-70 mm	1,690
2½"-116 mm	2,320
125 mm-6"	2,696



- !** The attachment of pipes, especially under the ceiling, often requires the use of two hands. It is then convenient, if the OPTIMAL latching fastener can be closed with only one hand. After closing the latch, the pipe is safely held in place but remains free to move. Consequently, adjustment of pipe can be made with two hands.

And don't forget: high security due to the **positive-fit** edge hook-in opening.

OPTIMAL galvanised



Connecting thread	Size		Clamping range [mm]	Part no.	Sales unit	Pack unit	Dimensions [mm]				
	[inch]	[mm]					B	b1	H1	H	V
M8	¼		13–15	119822	100	pieces	55	23	42	26	M5
	⅜		16–18	119838					45	28	
	½		19–24	119818					51	31	
	¾		25–30	119834					57	34	
	1		32–37	119806					65	38	
	1¼		41–44	119814					76	38	
	1½		48–51	119810	85		41		M6		
		57	53–58	119842	93		45				
	2		60–63	119826	100		49				
		70	69–73	119846	107		52				
	2½		74–78	119830	116		56				
					127		58				
M8/M10	¼		13–15	119866	100	pieces	55	28	46	30	M5
	⅜		16–18	119882					49	32	
	½		19–24	119862					55	35	
	¾		25–30	119878					61	38	
	1		32–37	119850					69	42	
	1¼		41–44	119858					76	42	
	1½		48–51	119854	85		45		M6		
		57	53–58	119886	93		49				
	2		60–63	119870	100		53				
		70	69–73	119894	107		56				
	2½		74–78	119874	116		60				
		83	80–84	119898	127		62				
					132		66				
					139		68				
					155		75				
					163		80				
					168		82				
					172		84				
					174		89				
					185		93				
					188		95				
					212		106				
					220		108				

	Connecting thread	Size [inch]	Part no.	Sales unit	Pack unit	Content [clamps]	Part no. Polybox excl. clamps	Type
OPTIMAL, with DÄMMGULAST® green, in polybox	M8	¼	119954	1	box	300	121019	Polybox large 500/450 x 300 x 180
		⅜	119962			200		
		½	119950					
		¾	119958					
		1	119946					

Single bossed clamps

heavy-duty version, with DÄMMGULAST® yellow, galvanised

Field of application

- Suitable for pipelines with dynamic loads in combination with expansion points
- Suitable for fixings in industrial areas
- Suitable for fixings in air conditioning, ventilation and sanitary areas
- For indoor use

Advantages

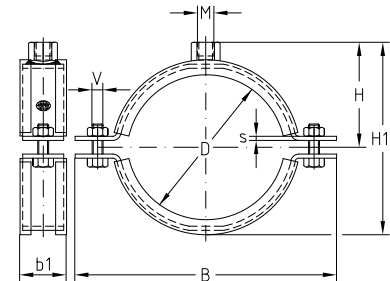
- Proven two-part clamp with increased material cross-section
- Stronger tightening bolts for high load capacity
- DÄMMGULAST® Vibration control lining with yellow identification stripe: average vibration improvement of up to 22.7 dB(A)



Features



Size	Max. recommended load [N]
1½"-2"	4,166
2½"-4"	5,000
133-315 mm	6,666
323 mm upwards	8,333



Connec- ting thread	Size		Clamping range [mm]	Part no.	Sales unit	Pack unit	Dimensions [mm]					
	[inch]	[mm]					b x s	B	b1	H1	H	V
M12	1½		48-54	121914	50	pieces	30 x 3.0	110	34	82	49	M8
			57-64	122099				126		99	M10	
	2		72-80	122111	144	111	63					
			88-92	122266	159	122	69					
	3		99-103	121934	170	134	75					
			108-118	122353	184	149	82					
	4		133-137	122018	25	40 x 4.0	212	46	176	95		
			138-144	122429			217		177	96		
	5		159-165	122052	10	50 x 5.0	235	56	195	105	M12	
			164-170	122473			242		204	109		
	6		193-203	122123	10	50 x 5.0	280	56	235	125		
			208-214	122151			299		245	130		
			217-224	122167	10	50 x 5.0	302	56	257	136		
			244-254	122214			330		285	148		
			267-277	122234	10	50 x 5.0	360	56	311	163		
			278-282	122250			394		350	183		
		313-318	122294	10	50 x 5.0	415	56	360	188			
		320-326	122305			447		392	204			
		353-360	122325									

⚠ Single bossed clamps can be produced in all other pipe sizes and types according to customer specifications.

ℹ Please refer to chapter „Heavy-duty pipe support“ for pipe clamps DIN 3567.

Insulation clamps type H, M, T

two-piece, with DÄMMGULAST® and insulation shells, galvanised

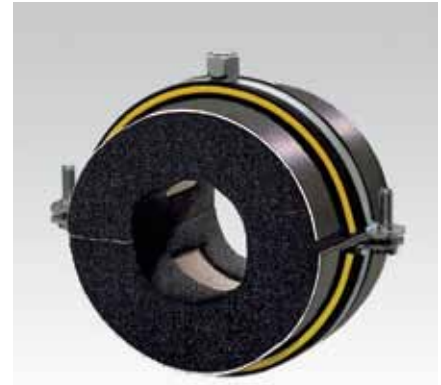
Field of application

- Thermal decoupled pipe attachment in the field of refrigeration
- Specially suitable for attachments in ventilation, air-conditioning, heating, refrigeration installations as well as for hot and chilled water pipes

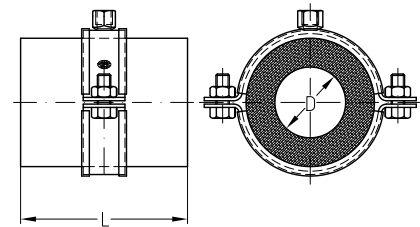
Advantages

- Rigorous avoidance of temperature bridges in cold pipelines
- Highly effective insulation due to support elements made of PIR and a synthetic rubber mantle
- Insulation thickness matched to the increasing insulation layer thickness of the insulation sleeves

- Secure water vapour diffusion barrier
- Easy installation using self-adhesive fasteners in the part-joint
- Rubber surfaces on the face sides allow easy bonding with the rubber pipe insulation
- Fixed load-distribution sleeves for improved load transfer
- Structure-borne noise damping due to DÄMMGULAST® Vibration control lining with yellow identification stripe: average vibration reduction of up to 22.7 dB(A)



Features




Material	Polyurethane-polyisocyanurate rigid foam, synthetic rubber
Density	145 kg/m ³
Thermal conductivity	$\lambda = 0.036 \text{ W/mK}$ (at 0 °C) $\lambda = 0.040 \text{ W/mK}$ (at +40 °C)
Fire classification	B2 (DIN 4102) in the integrated system with AF Armaflex: B1
Temperature range	-40 °C to +105 °C
Water vapour diffusion resistance	$\mu = 7,000$
Compression strength	1.35 N/mm ²
Type	PIR shell and closed-cell elastomeric foam, integral load-distributing sleeves, with two-piece pipe clamp, vibration-damped with DÄMMGULAST® lining

Pipe outer diameter	Max. recommended fastening distance [m]
10–15 mm	2.00
3/8"–18 mm	2.25
1/2"–24 mm	2.75
3/4"–30 mm	3.00
1"–38 mm	3.50
1 1/4"–44.5 mm	3.75
1 1/2"–57 mm	4.25
2"–70 mm	4.75
2 1/2"–80 mm	5.50
3" upwards	6.00


Insulation clamps type H – Insulation thickness 9.5–16 mm two-piece, with DÄMMGULAST® and insulation shells, galvanised

Pipe outer diameter			Insulation clamp M10 connection thread			Insulation shell type H					
Copper pipe [mm]	Steel pipe [inch]	Steel pipe [mm]	Part no. complete clamp	Sales unit	Pack unit	Size [mm]	Length of shell L [mm]	Outer-Ø shell [mm]	Part no. single shell	Sales unit	Pack unit
10		10.2	111364	1	pieces	10/12	45	34	124168	1	pieces
12		36									
	1/4	38									
15			111374			15/18		40	111773		
18	3/8							43			
22	1/2		111380			22/25		47	111779		
24								50			
28	3/4		111382			28/30		53	111781		
30			111384					56			
35	1		111386			35/38	50	64	111783		
38								65			
42			111388			42/45		69	111785		
		44.5						72			
	1 1/2		111390			48	55	76	111787		
54			111392			54/57		82	111789		
57								85			
	2		111394			60/64	65	89	111791		
64								92			
70			111396			70		98	111793		
	2 1/2		111398			76/80	75	105	111795		
80								109			
	3		111400			89	95	118	111797		
		101.6	111362			102/108		134	111765		
108								137			
	4		111366			114	115	144	111767		
125			111368			125		155	111769		
		133.0	111370			133/140		165	111771		
	5		111372					172			
160			111376			160	125	193	111775		
	6		111378			165/168		198	111777		
		168.3						201			

 Please refer to chapter „Insulation“ for further information and insulation products.

Insulation clamps type M – Insulation thickness 15.5–25 mm two-piece, with DÄMMGULAST® and insulation shells, galvanised

Pipe outer diameter			Insulation clamp M10 connection thread			Insulation shell type M					
Copper pipe [mm]	Steel pipe [inch]	Steel pipe [mm]	Part no. complete clamp	Sales unit	Pack unit	Size [mm]	Length of shell L [mm]	Outer-Ø shell [mm]	Part no. single shell	Sales unit	Pack unit
10		10.2	111404	1	pieces	10/12	55	46	111801	1	pieces
12		48									
	1/4	50									
15			111414			15/18	55	52	111809		
18	3/8							55			
22	1/2		111426			22/25	55	59	111821		
24								62			
28	3/4		111430			28/30	55	68	111829		
30								70			
35	1		111432			35/38	65	79	111835		
38								81			
42			111434			42/45	65	85	111837		
		44.5						88			
	1 1/2		111436			48	65	91	111839		
54			111438			54/57	65	98	111841		
57								101			
	2		111440			60/64	75	105	111843		
64								109			
70			111442			70	75	116	111845		
	2 1/2		111444			76/80	85	122	111847		
80								127			
	3		111446			89	100	136	111849		
		101.6	111402			102/108	100	151	111799		
108								156			
	4		111406			114	115	162	111803		
125			111408			125	115	173	111805		
		133.0	111410			133/140	115	183	111807		
	5		111412					189			
160			111416			160	115	210	111811		
	6		111418			165/168	125	216	111813		
		168.3	111420					219			
		216.0	111428			216/219	170	267	111823		
		219.1						270			

 Please refer to chapter „Insulation“ for further information and insulation products.

Insulation clamps type T – Insulation thickness 32–45 mm two-piece, with DÄMMGULAST® and insulation shells, galvanised

Pipe outer diameter			Insulation clamp M10 connection thread			Insulation shell type T					
Copper pipe [mm]	Steel pipe [inch]	Steel pipe [mm]	Part no. complete clamp	Sales unit	Pack unit	Size [mm]	Length of shell L [mm]	Outer-Ø shell [mm]	Part no. single shell	Sales unit	Pack unit
15			111527	1	Stück	15/18	75	77	111887	1	Stück
18	3/8							77			
22	1/2		111537			22/25	75	80	111895		
24								84			
28	3/4		111541			28/30	75	93	111901		
30								95			
35	1		111547			35/38	85	104	111905		
38								107			
42			111549			42/45	85	113	111909		
		44.5						116			
	1 1/2		111551			48	85	119	111911		
54			111553			54/57	85	126	111913		
57								129			
	2		111555			60/64	100	134	111915		
64								137			
70			111557			70	100	144	111917		
	2 1/2		111559			76/80	115	152	111919		
80								156			
	3		111560			89	125	167	111921		
		101.6	111515			102/108	125	182	111879		
108								188			
	4		111519			114	145	196	111881		
125			111521			125	145	207	111883		
		133.0	111523			133/140	145	219	111885		
	5		111525					225			
160			111529			160	145	248	111889		
	6		111531			165/168	165	254	111891		
		168.3	111533					257			
		200.0	111535			204	215	305	111893		
		216.0	111539			216/219	215	317	111897		
		219.1						320			
		267.0	111543			267/273	215	368	111903		
		273.0	111545					374			

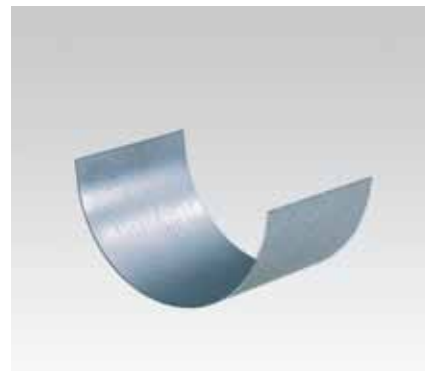
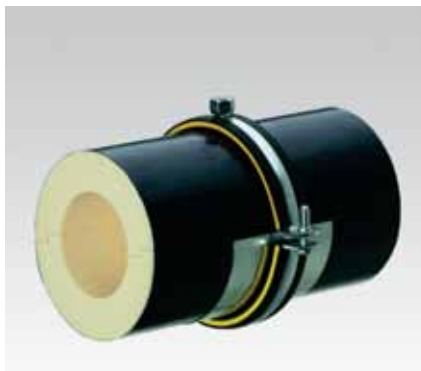


Please refer to chapter „Insulation“ for further information and insulation products.

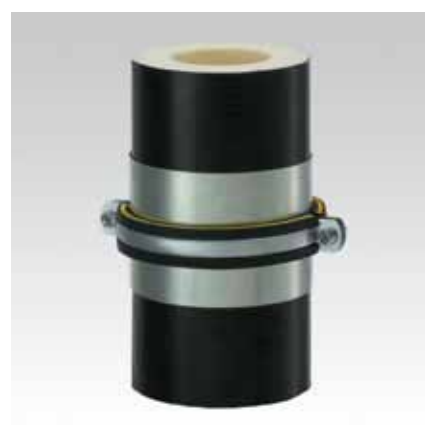
Load-distributing sleeves for insulation clamps with PU shells, galvanised

For large pipe diameters or spacings between supports it is mandatory that insulation clamps with PU shells are fitted with load-distributing sleeves for improved load distribution.

The use of load-distributing sleeves for pipe diameters of 2" and more is recommended.




Pipe outer-Ø D		Insulation thickness 20 mm Part no. (1 half-sleeve)	Insulation thickness 30 mm Part no. (1 half-sleeve)
[inch]	[mm]		
3/8	17.2	–	116834
1/2	21.3		116855
3/4	26.9		116897
1	33.7	116968	116971
1 1/4	42.4	117022	117025
1 1/2	48.3	117055	117058
	57.0	117082	117085
2	60.3	117097	117100
	70.0	117109	117112
2 1/2	76.0	117124	117127
	83.0	117138	117141
3	88.9	117150	117153
	102.0	116699	116702
	110.0	116717	116720
4	114.3	116732	116735
	125.0	116750	116753
	133.0	116765	116768
5	139.7	116780	116783
	160.0	116804	116807
6	168.3	116815	116818
8	219.1	116864	116867



Please submit your order as follows:

- For load-distributing sleeves in half-sleeve design:
Part no. of insulation clamp + **1 piece of part no.** of load distributing sleeve
- For load-distributing sleeves as full-sleeve design:
Part no. of insulation clamp + **2 pieces of part no.** of load-distributing sleeve

 Depending on the conduit **one** or, e. g. for vertical pipes, **two half-sleeves are needed around the shells** to distribute the load.

If vapour-tight, overlapped and glued butt joints are required, **100 mm-long load-distributing sleeves** should always be combined **with PU shells of 250 mm length**.

This leaves the insulation contractor sufficient excess to mask the butts.

Rubber support inserts

Field of application

- A cost effective support for pipes to prevent the insulated pipes from being crushed due to load and pressure
- Specially suitable for chilled water, condenser water and domestic hot/cold water installations

Advantages

- Excellent resistance to deterioration/distortion
- Very high load bearing capacity
- Unique tongue and groove design reduces labour charges while installation and also eliminates possibility of air gaps or shift of insert
- Resistance against vapour diffusion



Features

Material	EPDM Rubber	NR/SBR Rubber
Colour	black	black
Thermal conductivity	$\lambda = 0.060 \text{ W/mK}$	$\lambda = 0.140 \text{ W/mK}$
Temperature range	-20 °C to +120 °C	-20 °C to +120 °C
Compression strength	400 kg/cm ²	350 kg/cm ²
Tensile strength	63 kg/cm ²	65 kg/cm ²
Elongation at break	250 %	175 %
Specific gravity	1.40	1.50
Fire classification	B2 (DIN 4102)	B2 (DIN 4102)

Rubber support inserts 13 mm thick

Size [inch]	Inside diameter [mm]	Thickness [mm]	Width [mm]	Outside diameter [mm]	Part no.		Sales unit	Pack unit	
					EPDM	NR/SBR			
½	21.3	13	25	47.3	99151	99340	1	pieces	
¾	26.7			52.7	99152	99341			
1	33.4			59.4	99153	99342			
1¼	42.2			68.2	99154	99343			
1½	48.2			74.2	99155	99344			
2	60.3			86.3	99156	99345			
2½	73.0			99.0	99157	99346			
3	88.9			114.9	99158	99347			
4	114.3			38	140.3	99159			99348
5	141.3				167.3	99160			99349
6	168.3		50	38	194.3	99162			99350
8	219.1				245.1	99163			99351
10	273.0				299.0	99164			99352
12	323.9				349.9	99165			99353
14	355.6				381.6	99166			99354
16	406.4				432.4	99167			99355
18	457.2				483.2	99168			99356
20	508.0				534.0	99169			99357
24	609.6				635.6	99170			99358

Rubber support inserts

Rubber support inserts 19 mm thick

Size [inch]	Inside diameter [mm]	Thickness [mm]	Width [mm]	Outside diameter [mm]	Part no.		Sales unit	Pack unit
					EPDM	NR/SBR		
½	21.3	19	25	59.3	99171	99359	1	pieces
¾	26.7			64.7	99172	99360		
1	33.4			71.4	99173	99361		
1¼	42.2			80.2	99174	99362		
1½	48.2			86.2	99175	99363		
2	60.3			98.3	99176	99364		
2½	73.0			111.0	99177	99365		
3	88.9			126.9	99178	99366		
4	114.3			38	152.3	99179		
5	141.3		179.3		99180	99368		
6	168.3		50	206.3	99181	99369		
8	219.1			257.1	99182	99370		
10	273.0			311.0	99183	99371		
12	323.9			361.9	99184	99372		
14	355.6			393.6	99185	99373		
16	406.4			444.4	99186	99374		
18	457.2		495.2	99187	99375			
20	508.0		546.0	99188	99376			
24	609.6	647.6	99189	99377				

Rubber support inserts 25 mm thick

Size [inch]	Inside diameter [mm]	Thickness [mm]	Width [mm]	Outside diameter [mm]	Part no.		Sales unit	Pack unit	
					EPDM	NR/SBR			
½	21.3	25	25	71.3	99190	99378	1	pieces	
¾	26.7			76.7	99191	99379			
1	33.4			83.4	99192	99380			
1¼	42.2			92.2	99193	99381			
1½	48.2			98.2	99194	99382			
2	60.3			110.3	99195	99383			
2½	73.0			123.0	99196	99384			
3	88.9			30	138.9	99197			99385
4	114.3				38	164.3			99198
5	141.3			191.3		99199			99387
6	168.3		50	218.3		99200			99388
8	219.1			269.1	99201	99389			
10	273.0			323.0	99202	99390			
12	323.9			373.9	99203	99391			
14	355.6			405.6	99204	99392			
16	406.4			456.4	99205	99393			
18	457.2			507.2	99206	99394			
20	508.0			558.0	99207	99395			
24	609.6		659.6	99208	99396				

Rubber support inserts

Rubber support inserts 32 mm thick

Size [inch]	Inside diameter [mm]	Thickness [mm]	Width [mm]	Outside diameter [mm]	Part no.		Sales unit	Pack unit
					EPDM	NR/SBR		
½	21.3	32	25	85.3	99209	99397	1	pieces
¾	26.7			90.7	99210	99398		
1	33.4			97.4	99211	99399		
1¼	42.2			106.2	99212	99419		
1½	48.2			112.2	99213	99420		
2	60.3			124.3	99214	99421		
2½	73.0		30	137.0	99215	99422		
3	88.9			152.9	99216	99423		
4	114.3		38	178.3	99217	99424		
5	141.3			205.3	99218	99425		
6	168.3		50	232.3	99219	99426		
8	219.1			283.1	99220	99427		
10	273.0			337.0	99221	99428		
12	323.9			387.9	99222	99429		
14	355.6			419.6	99223	99449		
16	406.4			470.4	99224	99450		
18	457.2		521.2	99225	99451			
20	508.0		572.0	99226	99452			
24	609.6	673.6	99227	99453				

Rubber support inserts 38 mm thick

Size [inch]	Inside diameter [mm]	Thickness [mm]	Width [mm]	Outside diameter [mm]	Part no.		Sales unit	Pack unit
					EPDM	NR/SBR		
½	21.3	38	25	97.3	99228	99454	1	pieces
¾	26.7			102.7	99229	99455		
1	33.4			109.4	99230	99456		
1¼	42.2			118.2	99231	99457		
1½	48.2		30	124.2	99232	99458		
2	60.3			136.3	99233	99459		
2½	73.0			149.0	99234	99460		
3	88.9			164.9	99235	99461		
4	114.3		38	190.3	99236	99462		
5	141.3			217.3	99237	99463		
6	168.3		50	244.3	99238	99464		
8	219.1			295.1	99239	99465		
10	273.0			349.0	99240	99466		
12	323.9			399.9	99241	99467		
14	355.6			431.6	99242	99468		
16	406.4			482.4	99243	99469		
18	457.2			533.2	99244	99470		
20	508.0			584.0	99245	99471		
24	609.6		685.6	99246	99472			

Rubber support inserts

Rubber support inserts 50 mm thick

Size [inch]	Inside diameter [mm]	Thickness [mm]	Width [mm]	Outside diameter [mm]	Part no.		Sales unit	Pack unit	
					EPDM	NR/SBR			
½	21.3	50	25	121.3	99247	99473	1	pieces	
¾	26.7			126.7	99248	99474			
1	33.4			30	133.4	99249			99475
1¼	42.2				142.2	99250			99476
1½	48.2				148.2	99251			99477
2	60.3				160.3	99252			99478
2½	73.0				173.0	99253			99479
3	88.9		38		188.9	99254			99480
4	114.3			214.3	99255	99482			
5	141.3			241.3	99256	99483			
6	168.3			50	268.3	99257			99484
8	219.1				319.1	99258			99485
10	273.0		373.0		99259	99486			
12	323.9		423.9		99260	99487			
14	355.6		455.6		99261	99488			
16	406.4		506.4	99262	99489				
18	457.2		557.2	99263	99490				
20	508.0		608.0	99264	99491				
24	609.6		709.6	99265	99492				

Rubber support inserts 65 mm thick

Size [inch]	Inside diameter [mm]	Thickness [mm]	Width [mm]	Outside diameter [mm]	Part no.		Sales unit	Pack unit	
					EPDM	NR/SBR			
½	21.3	65	30	151.3	99268	99493	1	pieces	
¾	26.7			156.7	99269	99494			
1	33.4			38	163.4	99270			99495
1¼	42.2				172.2	99271			99496
1½	48.2				178.2	99272			99497
2	60.3				190.3	99273			99498
2½	73.0				203.0	99274			99499
3	88.9		50		218.9	99275			99500
4	114.3			244.3	99276	99501			
5	141.3			271.3	99277	99502			
6	168.3			298.3	99278	99503			
8	219.1			349.1	99279	99504			
10	273.0		403.0	99280	99505				
12	323.9		453.9	99281	99506				
14	355.6		485.6	99282	99507				
16	406.4		536.4	99283	99508				
18	457.2		587.2	99284	99509				
20	508.0		638.0	99285	99510				
24	609.6		739.6	99286	99511				

Rubber support inserts

Rubber support inserts 75 mm thick


Size [inch]	Inside diameter [mm]	Thickness [mm]	Width [mm]	Outside diameter [mm]	Part no.		Sales unit	Pack unit	
					EPDM	NR/SBR			
½	21.3	75	30	171.3	99287	99512	1	pieces	
¾	26.7			176.7	99288	99513			
1	33.4			183.4	99289	99514			
1¼	42.2		38	192.2	99290	99515			
1½	48.2			198.2	99291	99516			
2	60.3			210.3	99292	99517			
2½	73.0			223.0	99293	99518			
3	88.9			238.9	99294	99519			
4	114.3			264.3	99295	99520			
5	141.3			291.3	99296	99521			
6	168.3			50	318.3	99297			99522
8	219.1				369.1	99298			99523
10	273.0				423.0	99299			99524
12	323.9				473.9	99300			99525
14	355.6		505.6		99301	99526			
16	406.4		556.4		99302	99527			
18	457.2		607.2		99303	99528			
20	508.0		658.0		99304	99529			
24	609.6		759.6	99305	99530				

Rubber support inserts 80 mm thick

Size [inch]	Inside diameter [mm]	Thickness [mm]	Width [mm]	Outside diameter [mm]	Part no.		Sales unit	Pack unit	
					EPDM	NR/SBR			
½	21.3	80	30	181.3	99306	99531	1	pieces	
¾	26.7			186.7	99307	99532			
1	33.4			38	193.4	99308			99580
1¼	42.2		202.2		99309	99581			
1½	48.2		208.2		99310	99582			
2	60.3		220.3		99311	99583			
2½	73.0		233.0		99312	99584			
3	88.9		248.9		99313	99585			
4	114.3		274.3		99314	99586			
5	141.3		301.3		99315	99587			
6	168.3		50		328.3	99316			99588
8	219.1				379.1	99317			99589
10	273.0				433.0	99318			99590
12	323.9			483.9	99319	99591			
14	355.6			515.6	99320	99592			
16	406.4			566.4	99321	99593			
18	457.2			617.2	99322	99596			
20	508.0			668.0	99323	99597			
24	609.6		769.6	99324	99598				

Rubber support inserts

Rubber support inserts 13 mm thick



Size [inch]	Inside diameter [mm]	Thickness [mm]	Width [mm]	Outside diameter [mm]	Part no. EPDM	Sales unit	Pack unit
½	15.0	13	25	41.0	99007	1	pieces
1½	54.0			80.0	99008		
2	67.0			93.0	99009		
2½	75.4			101.4	99011		
3	108.0			134.0	99012		
5	140.2			166.2	99013		
6	159.0			185.0	99014		
8	225.0		38	251.0	99015		
10	250.4			276.4	99016		
12	315.5		50	341.5	99017		
16	400.5			426.5	99018		
18	450.5			476.5	99024		
20	500.5			526.5	99028		
22	560.5			586.5	99029		
24	630.6			656.6	99030		
28	710.7			736.7	99031		
30	800.8			826.8	99032		
32	825.6	851.6		99033			

Rubber support inserts 19 mm thick

Size [inch]	Inside diameter [mm]	Thickness [mm]	Width [mm]	Outside diameter [mm]	Part no. EPDM	Sales unit	Pack unit
½	15.0	19	25	53.0	99034	1	pieces
1½	54.0			92.0	99035		
2	67.0			105.0	99036		
2½	75.4			113.4	99037		
3	108.0			146.0	99038		
5	140.2			178.2	99039		
6	159.0			38	197.0		
8	225.0		263.0		99041		
10	250.4		288.4		99042		
12	315.5		50	353.5	99043		
16	400.5			438.5	99044		
18	450.5			488.5	99045		
20	500.5			538.5	99046		
22	560.5			598.5	99047		
24	630.6			668.6	99048		
28	710.7			748.7	99049		
30	800.8			838.8	99050		
32	825.6	863.6		99051			

Rubber support inserts

Rubber support inserts 25 mm thick

Size [inch]	Inside diameter [mm]	Thickness [mm]	Width [mm]	Outside diameter [mm]	Part no. EPDM	Sales unit	Pack unit
½	15.0	25	25	65.0	99052	1	pieces
1½	54.0			104.0	99053		
2	67.0			117.0	99054		
2½	75.4			125.4	99055		
3	108.0			158.0	99056		
5	140.2			38	190.2		
6	159.0		209.0		99058		
8	225.0		275.0		99059		
10	250.4		300.4		99060		
12	315.5		50	365.5	99061		
16	400.5			450.5	99062		
18	450.5			500.5	99063		
20	500.5			550.5	99064		
22	560.5			610.5	99065		
24	630.6			680.6	99066		
28	710.7			760.7	99067		
30	800.8			850.8	99068		
32	825.6		875.6	99069			




Rubber support inserts 32 mm thick

Size [inch]	Inside diameter [mm]	Thickness [mm]	Width [mm]	Outside diameter [mm]	Part no. EPDM	Sales unit	Pack unit
½	15.0	32	25	79.0	99070	1	pieces
1½	54.0			118.0	99071		
2	67.0			131.0	99072		
2½	75.4			139.4	99073		
3	108.0			172.0	99075		
5	140.2			38	204.2		
6	159.0		223.0		99077		
8	225.0		289.0		99078		
10	250.4		314.4		99079		
12	315.5		50	379.5	99080		
16	400.5			464.5	99081		
18	450.5			514.5	99082		
20	500.5			564.5	99083		
22	560.5			624.5	99084		
24	630.6			694.6	99085		
28	710.7			774.7	99086		
30	800.8			864.8	99087		
32	825.6		889.6	99088			

Rubber support inserts

Rubber support inserts 38 mm thick



Size [inch]	Inside diameter [mm]	Thickness [mm]	Width [mm]	Outside diameter [mm]	Part no. EPDM	Sales unit	Pack unit	
½	15.0	38	25	91.0	99089	1	pieces	
1½	54.0			130.0	99090			
2	67.0			143.0	99091			
2½	75.4			151.4	99092			
3	108.0			184.0	99093			
5	140.2			38	216.2			99141
6	159.0		235.0		99142			
8	225.0		301.0		99143			
10	250.4		326.4		99144			
12	315.5		50		391.5			99145
16	400.5				476.5			99146
18	450.5			526.5	99147			
20	500.5			576.5	99148			
22	560.5			636.5	99149			
24	630.6			706.6	99150			
28	710.7		786.7	99325				
30	800.8		876.8	99326				
32	825.6		901.6	99327				

Rubber support inserts 50 mm thick

Size [inch]	Inside diameter [mm]	Thickness [mm]	Width [mm]	Outside diameter [mm]	Part no. EPDM	Sales unit	Pack unit
½	15.0	50	25	115.0	99328	1	pieces
1½	54.0			154.0	99329		
2	67.0			167.0	99330		
2½	75.4			175.4	99331		
3	108.0		38	208.0	99332		
5	140.2			240.2	99333		
6	159.0			259.0	99334		
8	225.0			325.0	99335		
10	250.4		50	350.4	99336		
12	315.5			415.5	99337		
16	400.5			500.5	99338		
18	450.5			550.5	99339		
20	500.5			600.5	98101		
22	560.5			660.5	98102		
24	630.6			730.6	98103		
28	710.7			810.7	98104		
30	800.8			900.8	98105		
32	825.6			925.6	98106		

Rubber support inserts

Rubber support inserts 65 mm thick

Size [inch]	Inside diameter [mm]	Thickness [mm]	Width [mm]	Outside diameter [mm]	Part no. EPDM	Sales unit	Pack unit
½	15.0	65	25	145.0	98107	1	pieces
1½	54.0			184.0	98108		
2	67.0		38	197.0	98109		
2½	75.4			205.4	98110		
3	108.0			238.0	98111		
5	140.2			270.2	98112		
6	159.0			289.0	98113		
8	225.0			50	355.0		
10	250.4		380.4		98115		
12	315.5		445.5		98116		
16	400.5		530.5		98117		
18	450.5		580.5		98118		
20	500.5		630.5		98119		
22	560.5		690.5		98120		
24	630.6		760.6		98121		
28	710.7		840.7	98122			
30	800.8	930.8	98123				
32	825.6	955.6	98124				




Rubber support inserts 75 mm thick

Size [inch]	Inside diameter [mm]	Thickness [mm]	Width [mm]	Outside diameter [mm]	Part no. EPDM	Sales unit	Pack unit
½	15.0	75	25	165.0	98125	1	pieces
1½	54.0			38	204.0		
2	67.0		217.0		98127		
2½	75.4		225.4		98128		
3	108.0		258.0		98129		
5	140.2		290.2		98130		
6	159.0		309.0		98131		
8	225.0		50	375.0	98132		
10	250.4			400.4	98133		
12	315.5			465.5	98134		
16	400.5			550.5	98135		
18	450.5			600.5	98136		
20	500.5			650.5	98137		
22	560.5			710.5	98138		
24	630.6			780.6	98139		
28	710.7		860.7	98140			
30	800.8	950.8	98141				
32	825.6	975.6	98142				

Rubber support inserts

Rubber support inserts 80 mm thick



Size [inch]	Inside diameter [mm]	Thickness [mm]	Width [mm]	Outside diameter [mm]	Part no. EPDM	Sales unit	Pack unit	
½	15.0	80	30	175.0	98143	1	pieces	
1½	54.0			38	214.0			98144
2	67.0				227.0			98145
2½	75.4				235.4			98146
3	108.0				268.0			98147
5	140.2				300.2			98148
6	159.0				319.0			98149
8	225.0				50			385.0
10	250.4		410.4	98151				
12	315.5		475.5	98152				
16	400.5		560.5	98153				
18	450.5		610.5	98154				
20	500.5		660.5	98155				
22	560.5		720.5	98156				
24	630.6		790.6	98157				
28	710.7		870.7	98158				
30	800.8		960.8	98159				
32	825.6		985.6	98160				

Filbow clamps pear-shaped galvanised

Field of application

- Attachment of sprinkler lines

Advantages

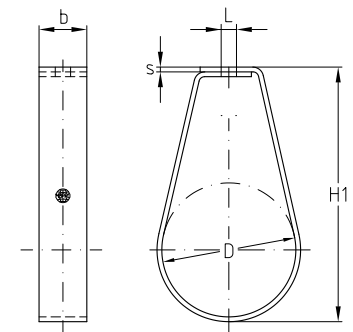
- One-piece design allows quick and easy installation of sprinkler pipes
- Ideal for suspension using threaded pins and threaded rods
- Easy height adjustment on the threaded rod
- Approved by VdS and FM



Features



Size	Max. recommended load [N]
¾"-2"	4,500
2½"-4"	7,333
133 mm -6"	8,666
168.3-219.1 mm	13,333



Size		VdS	FM	Part no.	Sales unit	Pack unit	Dimensions [mm]		
[inch]	[mm]						Ø L	b x s	H1
¾		●	●	126504	100	pieces	8.5	25 x 1.5	71
				126506			10.5		83
1		●	●	126462			8.5		95
				126460			10.5		103
1¼		●	●	126470			8.5		118
				126466			10.5		142
1½		●	●	126464			10.5		166
				126492			10.5		192
2		●	●	126494	50		8.5		204
				126496			10.5		237
2½		●	●	126508			10.5	25 x 2.5	249
				126472			10.5		264
3	108.0	●	●	126476			13.0	25 x 3.0	273
				126512			13.0		284
4	133.0	●	●	126476	25		13.0		287
				126518			17.0		376
5	152.4	●	●	126482			13.0	40 x 3.0	287
				126484			17.0		376
6	159.0	●	●	126520			13.0		287
				126520			17.0		376
	168.3	●	●	126490			13.0		287
				126488			17.0		376
	219.1	●		126498			17.0		376

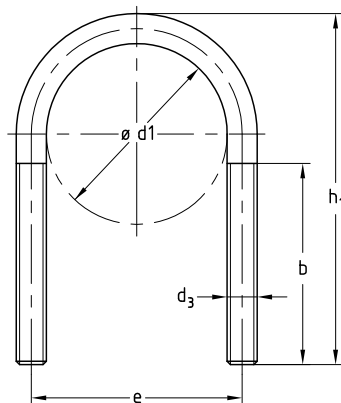
U-bolts galvanised

Field of application

- For installation of insulated and uninsulated pipes

Advantages

- Supplied with 4 hexagonal nuts
- Galvanised
- Other surface finish available upon request



Nominal size		For pipe outer-Ø d1 [mm]	Part no.	Sales unit	Pack unit	Dimensions [mm]			
[inch]	[mm]					b x s	B	b1	H1
½	15	21.3	151906	1	pieces	M6	34	28.3	51.0
		26.7	151907				35	33.7	57.0
1"	25	33.4	151908			M8	42.4	66.0	
		42.2	151909				51.2	75.0	
1½	40	48.3	151940			M10	57.3	81.0	
		60.3	151941				40	71.3	100.0
2½	65	73.0	151942			M10	84.0	113.0	
		77.0	148970				55	88.0	132.0
3	80	84.0	148971			M10	95.0	139.0	
		88.9	151943				99.9	143.9	
4	100	93.0	148972			M12	104.0	148.0	
		99.0	148973				110.0	154.0	
5	125	103.0	148974			M10	114.0	158.0	
		111.0	148977				122.0	166.0	
6	150	114.3	151944			M12	127.3	169.3	
		119.0	148978				M10	130.0	174.0
8	200	123.0	148979			M10	134.0	178.0	
		127.0	148980				138.0	182.0	
10	250	137.0	148981			M12	148.0	192.0	
		141.3	151945				M10	154.3	196.3
12	300	143.0	148983			M10	154.0	198.0	
		149.0	148984				160.0	204.0	
14	350	161.0	148985			M12	172.0	216.0	
		165.0	148986				176.0	220.0	
16	400	168.3	151946	M10	181.3	223.3			
		173.0	148987		M12	184.0	228.0		
18	450	192.0	148991	M12	62	205.0	254.0		
		215.0	148992		228.0	277.0			
20	500	219.1	151947	M10	70	232.1	281.1		
		245.0	148993		258.0	307.0			
24	600	270.0	148994	M16	283.0	332.0			
		273.1	151948		286.1	335.1			
28	700	296.0	148995	M16	309.0	358.0			
		323.9	151949		336.9	393.9			
32	800	355.6	151950	M16	373.6	425.6			

U-bolts galvanised

Nominal size		For pipe outer-Ø d1 [mm]	Part no.	Sales unit	Pack unit	Dimensions [mm]				
[inch]	[mm]					b x s	B	b1	H1	
16	400	374.0	148996	1	pieces	M16	70	392.0	444.0	
		406.4	151951					424.4	476.4	
		424.0	148997					442.0	494.0	
18	450	457.0	151952				75	475.0	532.0	
		484.0	148998					M20	506.0	559.0
		535.0	148999						M24	561.0
558.0	149000	584.0	638.0							
585.0	149001	611.0	665.0							



Ceramic fabric tapes

Field of application

- Ideal pipe clamp lining for especially high temperatures up to 1,150 °C

- Good acoustic and electrical insulating properties
- Asbestos-free

Advantages

- Non-fraying at both sides
- Largely resistant to oil, steam, water and liquid metal
- Inconel-enhanced
- Good thermal shock resistance

















Width [mm]	Thickness [mm]	Length of roll [m]	Part no.	Sales unit	Pack unit
20	5	10	113093	1	roll
25			113095		
30			113097		
40			113099		
50			113101		
60			113103		












Special adhesive

for ceramic fabric tapes, asbestos-free, temperature-resistant up to 1,000 °C, tin of 1.6 kg

Part no.	Sales unit	Pack unit
113200	1	pieces



0. MÜPRO 
1. Vibration control 
2. Pipe clamps 
3. MSS products 
4. Support channels 
5. Accessories 
6. Anchor points/expansion points 
7. Heavy-duty pipe support 
8. MPT-Support system 
9. Ventilation 
10. Stainless steel 
11. Hot-dip galvanised products 
12. Anchor plugs 
13. Technical information 

	Adjustable clevis hangers	3/1
	Riser clamps	3/2
	Swivel hangers	3/3
	I-beam clamps	3/4
	U-bolts	3/5
	Pipe straps	3/6–3/7
	Pipe covering protection saddles	3/8
	Roller supports	3/9
	Roller hangers	3/10
	Roller chairs	3/11
	Roller stands	3/12

Adjustable clevis hangers galvanised

Field of application

- To support suspended pipes

Advantages

- Size range from ½" to 24"
- Made of carbon steel
- Galvanised, other finish available upon request
- Complies with Manufacturers Standardization Society MSS-SP-58 and MSS-SP-69 (Type 1)
- Approved by FM and UL from ½" to 8"



MSS

Features

Size [inch]	Max. recommended load [N]	Size [inch]	Max. recommended load [N]
½–¾	2,700	10	16,000
1–2	3,200	12	16,900
2½–3	6,000	14	18,600
4–5	6,300	16	20,400
6	8,600	18–24	21,300
8	8,800		

Pipe outer diameter [mm]	Nominal size		Bolt size	Part no.	Sales unit	Pack unit
	[inch]	[mm]				
21.3	½	15	M10	148020	200	pieces
26.9	¾	20		148021	150	
33.7	1	25		148022	200	
42.4	1¼	32		148023		
48.3	1½	40		148024		
60.3	2	50		148025	120	
76.1	2½	65	M12	148026	70	
88.9	3	80	M16	148027	50	
114.3	4	100		148028	45	
139.7	5	125		148029	15	
168.3	6	150	M20	148030	10	
219.1	8	200		148031	1	
273.0	10	250	M22	148032		
323.9	12	300	M24	148033		
355.6	14	350		148034		
406.4	16	400	M27	148035		
457.0	18	450		148036		
508.0	20	500	M30	148037		
610.0	24	600		148038		

Riser clamps galvanised

Field of application

- For rigid support of steel pipe risers

Advantages


- Size range from 1" to 10"
- Made of carbon steel
- Galvanised, hot-dip galvanised available upon request
- Complies with Manufacturers Standardization Society MSS-SP-58 and MSS-SP-69 (Type 8)



Features

Size [inch]	Max. recommended load [N]	Size [inch]	Max. recommended load [N]
1-2	1,100	4	3,500
2½	1,700	5	5,000
3	2,300	6	7,000
3½	3,000	8-10	11,000

Pipe outer diameter [mm]	Nominal size		Bolt size	Part no.	Sales unit	Pack unit	Dimensions [mm]		
	[inch]	[mm]					Strip width	Strip thickness	Length
33.7	1	25	M10	148435	1	pieces	30	5	244
42.4	1¼	32		148436				6	254
48.3	1½	40		147141				264	
60.3	2	50		147143				273	
76.1	2½	65		148695				286	
88.9	3	80		147144				305	
101.6	3½	90	M12	148437		40	50	330	
114.3	4	100		147145				343	
139.7	5	125		148438		368			
168.3	6	150		147146		394			
219.1	8	200	M16	147147		10	10	470	
273.0	10	250		148439				524	

 Special sizes are available upon request.

Swivel hangers galvanised

Field of application

- Attachment of sprinkler lines

Advantages

- Size range from 3/4" to 8"
- Made of carbon steel
- Galvanised, other finish available upon request
- Knurled Swivel nut provides a gripping surface when adjusting the pipe elevation

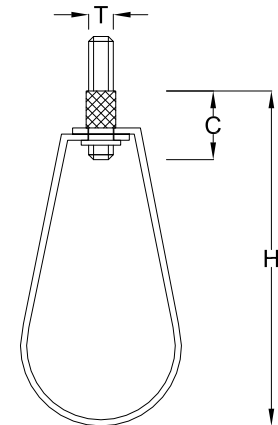
- Complies with Manufacturers Standardization Society MSS-SP-58 and MSS-SP-69 (Type 10)
- Approved by FM and UL



MSS

Features

Size [inch]	Max. recommended load [N]
3/4-2	2,220
2 1/2-4	4,440
5-8	8,450



Connecting thread T	Nominal size		Part no.	Sales unit	Pack unit	Dimensions [mm]	
	[inch]	[mm]				H	C
M10	3/4	20	147417	300	pieces	78	25
	1	25	147411	250		84	
	1 1/4	32	147413	200		90	
	1 1/2	40	147412			97	
	2	50	147414	150		108	
	2 1/2	65	147415			124	
	3	80	147416	100		144	
	4	100	147418			174	
M12	5	125	147419	50	208	32	
	6	150	147420		245		
	8	200	147421	30	313		

I-beam clamps galvanised

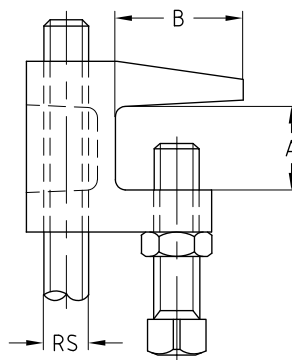
Field of application

- For attachment with I-beams

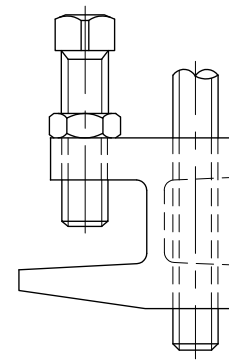
Advantages

- Size range from 3/8" and 1/2"
- Made of Ductile iron, hardened steel cup point set screw and locknut
- Galvanised, black finish available upon request
- Complies with Manufacturers Standardization Society MSS-SP-69 (Type 19 & 23)

MSS



Top



Bottom

Features



Size		Max. recommended load [N]		Part no.	Sales unit	Pack size	Dimensions	
[inch]	[mm]	Top	Bottom				A	B
	M10	2,220	1,110	148963	50	pieces	19 mm	29 mm
	M12	4,220	3,380	148964				31 mm
3/8		2,220	1,110	148965			3/4"	1 1/8"
1/2		4,220	3,380	148966				1 1/4"

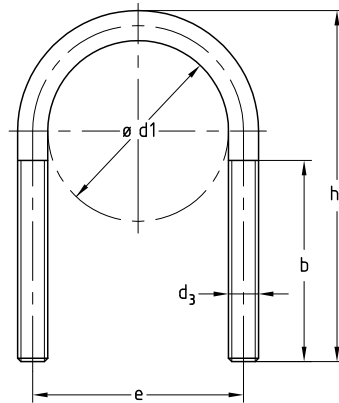
U-bolts
galvanised

Field of application

- For simple pipe attachment in building technology and industrial construction

Advantages

- Complies with Manufacturers Standardization Society MSS-SP-58 and MSS-SP-69 (Type 24) above 2"
- Supplied with 4 hexagonal nuts
- Galvanised
- Other surface finish available upon request



Nominal size		For pipe outer-Ø d1 [mm]	Part no.	Sales unit	Pack unit	Dimensions [mm]			
[inch]	[mm]					b x s	B	b1	H1
½	15	21.3	151906	1	pieces	M6	34	28.3	51.0
¾	20	26.7	151907				M8	35	33.7
1"	25	33.4	151908			M10		40	42.4
1¼	32	42.2	151909				51.2		75.0
1½	40	48.3	151940			M12	55	57.3	81.0
2	50	60.3	151941					71.3	100.0
2½	65	73.0	151942			M16	70	84.0	113.0
3	80	88.9	151943					99.9	143.9
4	100	114.3	151944			M20	80	127.3	169.3
5	125	141.3	151945					154.3	196.3
6	150	168.3	151946			M24	90	181.3	223.3
8	200	219.1	151947					232.1	281.1
10	250	273.1	151948			M30	100	286.1	335.1
12	300	323.9	151949					336.9	393.9
14	350	355.6	151950			M36	120	373.6	425.6
16	400	406.4	151951					424.4	476.4
18	450	457.0	151952			M42	120	475.0	532.0
20	500	508.0	151953					530.0	588.0
24	600	610.0	151954			M42	120	636.0	690.0
26	650	660.0	151955					693.0	750.0
28	700	711.0	151956	M42	120	744.0	801.0		
30	750	762.0	151957			795.0	852.0		
32	800	813.0	151958	M42	120	853.0	913.0		
34	850	864.0	151959			904.0	964.0		
36	900	914.0	151960	M42	120	954.0	1,014.0		
40	1,000	1,067.0	151961			1,114.0	1,187.0		

Pipe straps galvanised

Field of application

- For supporting horizontal and vertical pipes


Advantages

- Size range from 2" to 24"
- Made of carbon steel
- Galvanised, other finish available upon request
- Complies with Manufacturers Standardization Society MSS-SP-58 and MSS-SP-69 (Type 26)



MSS

Nominal Size [mm]	Part no.	Sales unit	Pack unit	Dimensions [mm]		
				Width b	Thickness s	Earhole d
48	147362	1	pieces	25	2.5	11
54	149127				2.5	11
60	147363				2.5	11
62	147364				3.0	13
67	147365					
72	149128					
75	147366					
77	147367					
82	147368					
86	147369				4.0	17
90	147370					
93	149129					
98	147371					
100	147372					
103	149130					
108	149131					
111	147373					
115	147374					
122	147376					
126	147375			4.0	21	
129	147377					
137	147378					
140	147379					
143	147380					
148	147381					
153	147382					
160	147383					
161	147385					
164	147384					
167	148961			4.0	21	
173	147386					
179	147387					
182	149132					
190	147388					
194	149133					
205	149134					

 Tolerance is +/- 5 %.

Pipe straps galvanised

Nominal Size [mm]	Part no.	Sales unit	Pack unit	Dimensions [mm]				
				Width b	Thickness s	Earhole d		
209	149135	1	pieces	40	4.0	21		
215	147389							
219	147390							
221	149136							
230	149137							
234	149142							
241	149178							
245	147391							
249	149143							
263	149144							
270	147392							
273	147393							
275	149145							
284	149146							
295	149147							
299	149148							
305	149149							
313	149150							
320	147394							
323	147395							
330	149151						5.0	25
337	149152							
350	147396							
356	147397							
374	147398							
380	147399							
388	149153							
396	149154							
400	149155							
406	147400							
420	149156							
424	149157							
432	149158							
447	149159							
456	149160			50	6.0	31		
471	149161							
482	149162							
486	149163							
498	149164							
508	149165							
516	149166							
522	149167							
533	149168							
537	149169							
548	149170							
559	149171							
567	149172							
573	149173							
583	149174							
588	149176							
610	149177							

MSS



Pipe covering protection saddles hot-dip galvanised

Field of application

- Ideal for protecting pipe insulation

Advantages

- Size range from 2" to 16"
- Made of carbon steel
- Hot-dip galvanised, other finish available upon request
- Complies with Manufacturers Standardization Society MSS-SP-58 and MSS-SP-69 (Type 39 A or B)



Features

Size [inch]	Max. recommended load [N]		
	50 mm insulation	80 mm insulation	100 mm insulation
2-3	8,000	8,000	–
4-8			8,000
10	22,000	22,000	22,000
12-14			22,000
16	32,000	32,000	32,000

Pipe outer diameter [mm]	Nominal size		Part no.			Sales unit	Pack unit	Dimensions [mm]						
	[inch]	[mm]	Insulation thickness 50 mm	Insulation thickness 80 mm	Insulation thickness 100 mm			Strip width	Strip thickness	Length				
60.3	2	50	153386	153497	153508	50	pieces	30	5	244				
73.0	2½	65	153387	153498	153509				6	254				
88.9	3	80	153388	153499	153510	25			40	6	264			
114.3	4	100	153389	153500	153511						273			
141.3	5	125	153490	153501	153512	5		50			10	286		
168.3	6	150	153491	153502	153513							305		
219.1	8	200	153492	153503	153514	1						50	10	330
273.1	10	250	153493	153504	153515									343
323.9	12	300	153494	153505	153516	1			50	10				368
355.6	14	350	153495	153506	153517									394
406.4	16	400	153496	153507	153518	470								

Roller supports hot-dip galvanised

Field of application

- For supporting suspended pipes with axial movements

Advantages

- Size range from 1" to 30"
- Cast iron roller and sockets, axle made of carbon steel
- Hot-dip galvanised, other finish available upon request
- Complies with Manufacturers Standardization Society MSS-SP-58 and MSS-SP-69 (Type 41)




MSS

Features

Size [inch]	Max. recommended load [N]	Size [inch]	Max. recommended load [N]
1-2	2,700	12	10,700
2½	2,900	14	14,000
3	3,100	16	17,700
3½-5	3,300	18	18,700
6	4,800	20	20,300
8	6,000	24	27,500
10	7,700	30	32,500

Thread rod	Nominal size		Part no.	Sales unit	Pack unit
	[inch]	[mm]			
M10	1	25	148444	1	pieces
	1¼	32	148448		
	1½	40	148449		
M12	2	50	148450		
	2½	65	148451		
	3	80	148452		
M16	3½	90	148453		
	4	100	148454		
	5	125	148455		
M20	6	150	148456		
M24	8	200	148457		
	10	250	148458		
	12	300	148459		
	14	350	148460		
M30	16	400	148461		
	18	450	148462		
	20	500	148463		
M36	24	600	148464		
M42	30	750	148465		

-  Hanger Rod and Nuts are not included.
- Special sizes are available upon request.

Roller hangers

hot-dip galvanised

Field of application

- For supporting suspended pipes with axial movements

Advantages


- Size range from 2" to 24"
- Carbon steel frame with a cast iron roller
- Hot-dip galvanised, other finish available upon request
- Complies with Manufacturers Standardization Society MSS-SP-58 and MSS-SP-69 (Type 43)



Features

Size [inch]	Max. recommended load [N]	Size [inch]	Max. recommended load [N]
2	700	6-8	3,500
2½	1,000	10	4,300
3	1,400	12-16	5,300
3½	1,700	18	6,200
4	2,000	20	7,000
5	3,000	24	8,000

Thread rod	Nominal size		Part no.	Sales unit	Pack unit	Yoke dimensions [mm]							
	[inch]	[mm]				Width	Thickness						
M12	2	50	148052	1	pieces	25	5						
	2½	65	148053				6						
	3	80	148054				6						
M16	3½	90	148055			1	pieces	30	10				
	4	100	148056						10				
M20	5	125	148057					1	pieces	45	12		
	6	150	148058								12		
	8	200	148059								12		
M24	10	250	148060							1	pieces	60	16
	12	300	148061										16
	14	350	148062										16
	16	400	148063										16
M30	18	450	148064	1	pieces							75	16
	20	500	148445										16
	24	600	148446										16

 Special sizes are available upon request.

Roller chairs

hot-dip galvanised

Field of application

- For supporting pipes with axial movements

Advantages

- Size range from 2" to 24"
- Carbon steel chair and axle with cast iron pipe roller
- Hot-dip galvanised, other finish available upon request
- Complies with Manufacturers Standardization Society MSS-SP-58 and MSS-SP-69 (Type 44)




MSS

Features

Size [inch]	Max. recommended load [N]	Size [inch]	Max. recommended load [N]
2	1,300	12	10,200
2½–3½	2,700	14	13,800
4–5	3,100	16	17,400
6	4,400	18	18,700
8	5,800	20	20,000
10	7,600	24	26,700

Thread	Nominal size		Part no.	Sales unit	Pack unit	Dimensions [mm]	
	[inch]	[mm]				Width	Thickness
M10	2	50	148040	1	pieces	30	6
	2½	65	148041				
	3	80	148042				
M12	3½	90	148043			40	10
	4	100	148044				
	5	125	148045				
	6	150	148046				
	8	200	148047				
	10	250	148048				
	12	300	148049				
M16	14	350	148050			60	12
	16	400	148051				
	18	450	148441				
M20	20	500	148422	75	16		
	24	600	148443				

 Special sizes are available upon request.

Roller stands

hot-dip galvanised

Field of application

- For supporting pipes with axial movements

Advantages


- Size range from 2" to 36"
- Carbon steel plate with cast iron roller
- Hot-dip galvanised, other finish available upon request
- Complies with Manufacturers Standardization Society MSS-SP-58 and MSS-SP-69 (Type 44)


















Features

Size [inch]	Max. recommended load [N]	Size [inch]	Max. recommended load [N]
2-3½	1,700	16-20	22,000
4-6	4,200	24	27,000
8-10	4,400	30	33,400
12-14	13,700	36	53,400

Nominal size		Part no.	Sales unit	Pack unit	Dimensions [mm]		
[inch]	[mm]				Width	Length	Thickness
2	50	153008	1	pieces	214	140	6
2½	65	153370				152	
3	80	153371					
3½	90	153372			203	10	
4	100	153373					
5	125	153374					
6	150	153375					
8	200	153376			229	12	
10	250	153377					
12	300	153378					
14	350	153379			305	20	
16	400	153380					
18	450	153381					
20	500	153382					
24	600	153383			279	12	
30	750	153384					
36	900	153385					

 Special sizes are available upon request.

0. MÜPRO 
1. Vibration control 
2. Pipe clamps 
3. MSS products 
4. Support channels 
5. Accessories 
6. Anchor points/expansion points 
7. Heavy-duty pipe support 
8. MPT-Support system 
9. Ventilation 
10. Stainless steel 
11. Hot-dip galvanised products 
12. Anchor plugs 
13. Technical information 

	MPC-Support channels	4/1–4/3
	MPC-Support channels H-Profiles	4/4–4/5
	MPC-Wall hanger brackets	4/6–4/7
	MPC-Rail nuts	4/8
	MPC-Double rail nut	4/8
	MPC-Clamp brackets	4/8
	MPC-Protection caps	4/8
	MPC-Saddle supports	4/9
	MPC-VARIO-Saddle support	4/10
	MPC-Mounting angles	4/11–4/12
	MPC-Girder cleats	4/13
	Channel connector	4/14
	Mounting angles 90°	4/15–4/16

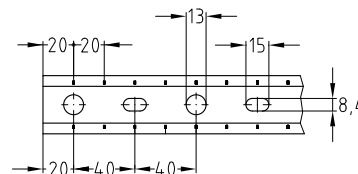
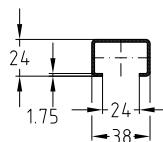
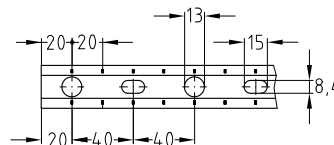
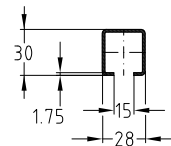
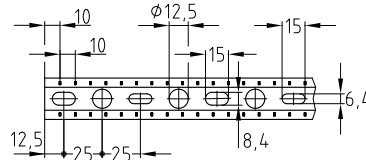
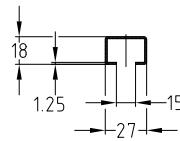
MPC-Support channels galvanised

Field of application

- Ideal for pipe installation as support structure for air ducts
- Variety of mounting options for pre-wall installations and shelves in combination with extensive range of system components

Advantages

- Quick and efficient attachment of pipe sections and multiple pipe-ways
- Scale marks on the sides and on the side with the slot simplify the alignment of the attachment elements during installation and facilitate the measuring and cutting to length of the section on site
- For secure fixing that is adjustable laterally and vertically
- High bending stiffness due to the cross-section design
- For setting up structures with correctly measured static loads by means of diverse connection components
- Suitable vibration control elements for all support channels available
- Clean-cut appearance by the use of protection caps



Profile 27/18



Profile 28/30



Profile 38/24

Profile	Length [mm]	Part no.	Sales unit	Pack unit
27/18	1,000	129883	25	pieces
	2,000	129911		
	6,000	130003		
28/30	2,000	118590	8	
	3,040	118692	1	
	4,000	118822	8	
	6,000	118994	1	
38/24	2,000	139920	10	
	6,000	139922	1	

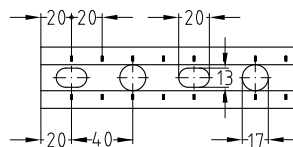
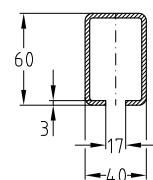
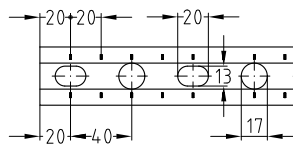
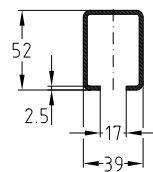
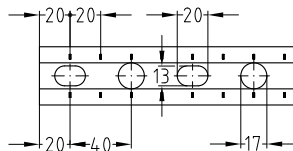
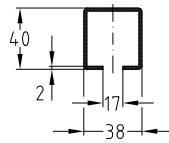
MPC-Support channels galvanised

Field of application

- Ideal for pipe installation as support structure for air ducts
- Variety of mounting options for pre-wall installations and shelves in combination with extensive range of system components

Advantages

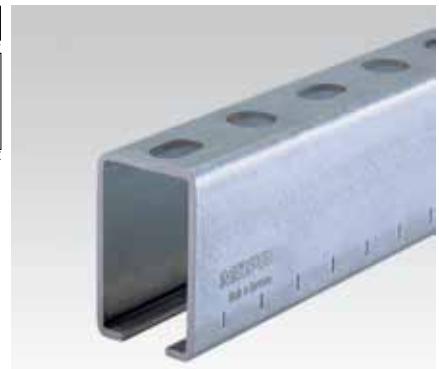
- Quick and efficient attachment of pipe sections and multiple pipe-ways
- Scale marks on the sides and on the side with the slot simplify the alignment of the attachment elements during installation and facilitate the measuring and cutting to length of the section on site
- For secure fixing that is adjustable laterally and vertically
- High bending stiffness due to the cross-section design
- For setting up structures with correctly measured static loads by means of diverse connection components
- Suitable vibration control elements for all support channels available
- Clean-cut appearance by the use of protection caps
- Support channels 38/40 and 40/60 are awarded the RAL-quality mark of the „Gütegemeinschaft Rohrbefestigung“. The following values apply:
 - Safety factor $v = 1.54$
 - Yield strength $f_{y,k} = 235 \text{ [N/mm}^2\text{]}$
 - Material DX51D Z 275 NQA
 - Deflection delimitation $L/200$



Profile 38/40



Profile 39/52



Profile 40/60

Features



Profile	Length [mm]	Part no.	Sales unit	Pack unit
38/40	2,000	129917	5	pieces
	3,040	129945	4	
	4,000	129964		
	6,000	130011	1	
39/52		130015		
40/60	2,000	129921		
	3,040	129946		
	4,000	129965		
	6,000	130020		

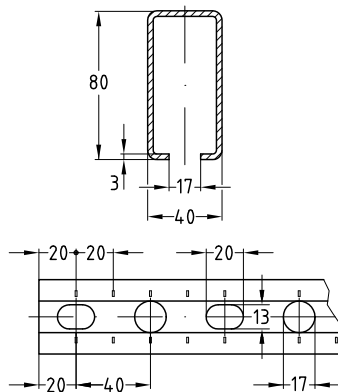
MPC-Support channels galvanised

Field of application

- Ideal for pipe installation as support structure for air ducts
- Variety of mounting options for pre-wall installations and shelves in combination with extensive range of system components

Advantages

- Quick and efficient attachment of pipe sections and multiple pipe-ways
- Scale marks on the sides and on the side with the slot simplify the alignment of the attachment elements during installation and facilitate the measuring and cutting to length of the section on site
- For secure fixing that is adjustable laterally and vertically
- High bending stiffness due to the cross-section design
- For setting up structures with correctly measured static loads by means of diverse connection components



Profile 40/80



Features



Profile	Length [mm]	Part no.	Sales unit	Pack unit
40/80	6,000	130024	1	pieces

MPC-Support channels

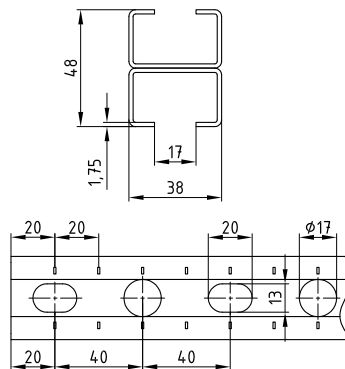
H-Profiles, galvanised

Field of application

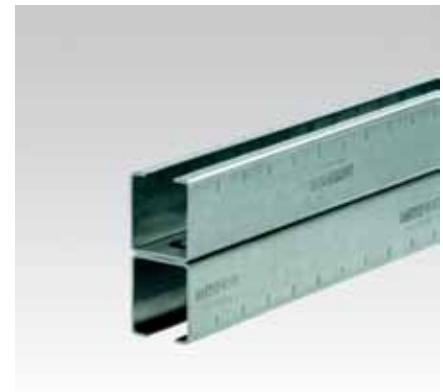
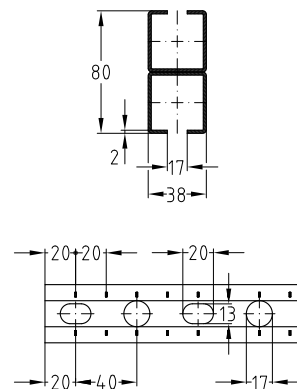
- Ideal for space-saving support structure of multisection pipeways between ceiling joists
- Ideal for pipe installation as well as support structure for air ducts
- Variety of mounting options for pre-wall installations and shelves in combination with extensive range of system components

Advantages

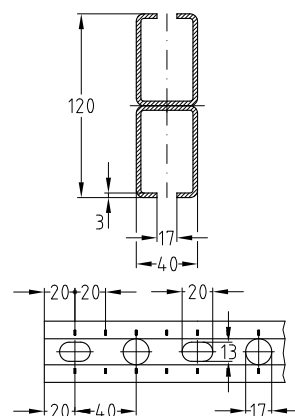
- Quick and efficient attachment of pipe sections and multiple pipe-ways
- Ideal combination of high bending stiffness and ease of installation
- Channel slots on both sides allow simple and quick alignment of all suspended and floor-mounted pipe supports
- Scale marks on the sides and on the sides with the slots simplify the alignment of the attachment elements during installation and facilitate the measuring and cutting to length of the section on site
- Suitable vibration control elements for all support channels available
- Clean-cut appearance by the use of protection caps



Profile 38/48



Profile 38/80



Profile 40/120




Features



Profile	Length [mm]	Part no.	Sales unit	Pack unit
38/48	6,000	141179	1	pieces
38/80	2,000	129870		
	4,000	129872		
	6,640	129874		
40/120		129875		

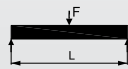
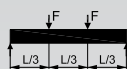
MPC-Support channels galvanised


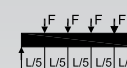
Technical data of profiles:

Profile 	Available MPC-Rail nuts	Profile weight [kg/m]	Profile cross-section [cm ²]	Moment of inertia		Resistance moment		Max. allowable point load capacity	
				I_y [cm ⁴]	I_z [cm ⁴]	W_y [cm ³]	W_z [cm ³]	F [N] 	[cm] 
27/18L	M8, M10	0.50	0.58	0.25	0.79	0.27	0.59	1,400	7
27/18		0.60	0.72	0.31	1.00	0.33	0.74	1,700	
28/30		1.16	1.42	1.52	2.16	0.99	1.54	2,500	12
38/24	M8, M10, M12, M16	1.19	1.40	1.07	3.72	0.79	1.96	2,200	10
38/40		1.82	2.28	4.60	6.34	2.104	3.33	5,000	15
39/52		2.80	3.45	11.07	10.10	4.26	5.18	6,700	20
40/60		3.50	4.62	19.10	14.07	5.847	7.03	8,300	23
40/80		4.68	5.82	40.73	18.18	10.18	9.09		
38/48 H-Profile		2.28	2.91	6.51	7.63	2.71	4.02	2,200	10
38/80 H-Profile		3.64	4.56	27.42	12.67	6.85	6.66	5,000	15
40/120 H-Profile	7.00	9.24	121.32	28.00	20.22	13.90	8,300	23	



Max. load capacities [N] (load capacities for RAL-certified products available upon request):

Profile	L [m]						L [m]					
												
	0.5	1.0	1.5	2.0	4.0	6.0	0.5	1.0	1.5	2.0	4.0	6.0
27/18L	343	167	71	–	–	–	257	98	–	–	–	–
27/18	420	204	86	–	–	–	315	120	–	–	–	–
28/30	1,264	627	413	240	–	–	948	470	260	141	–	–
38/24	1,008	499	308	165	–	–	756	374	181	96	–	–
38/40	2,939	1,463	967	718	–	–	2,204	1,097	725	440	–	–
39/52	5,445	2,712	1,796	1,335	400	–	4,084	2,034	1,347	1,001	230	–
40/60	8,131	4,051	2,685	1,997	720	230	6,098	3,038	2,014	1,498	420	130
40/80	13,021	6,494	4,310	3,212	1,520	590	9,766	4,870	3,232	2,409	940	350
38/48 H-Profile	3,466	1,725	1,140	845	–	–	2,594	1,295	855	625	–	–
38/80 H-Profile	8,759	4,366	2,895	2,156	1,010	380	6,556	3,277	2,171	1,616	620	220
40/120 H-Profile	25,862	12,903	8,517	6,395	3,060	1,930	19,396	9,677	6,428	4,796	2,300	1,180

Profile	L [m]						L [m]					
												
	0.5	1.0	1.5	2.0	4.0	6.0	0.5	1.0	1.5	2.0	4.0	6.0
27/18L	172	70	–	–	–	–	143	55	–	–	–	–
27/18	210	86	–	–	–	–	175	67	–	–	–	–
28/30	632	313	186	101	–	–	526	261	146	79	–	–
38/24	504	249	129	69	–	–	420	208	102	54	–	–
38/40	1,469	731	483	315	–	–	1,224	609	403	248	–	–
39/52	2,722	1,356	898	667	170	–	2,269	1,130	748	556	130	–
40/60	4,065	2,025	1,342	998	300	100	3,388	1,688	1,118	832	240	80
40/80	6,511	3,247	2,155	1,606	670	250	5,426	2,706	1,796	1,338	530	190
38/48 H-Profile	1,733	862	570	423	–	–	1,444	719	475	352	–	–
38/80 H-Profile	4,579	2,183	1,477	1,078	450	160	3,649	2,183	1,206	894	350	130
40/120 H-Profile	12,931	6,451	4,285	3,197	1,530	850	10,776	5,376	3,571	2,664	1,280	660

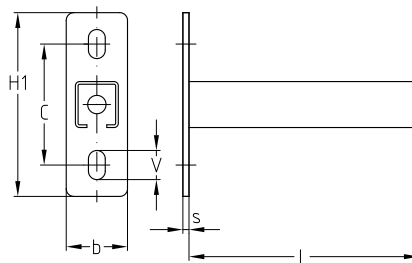
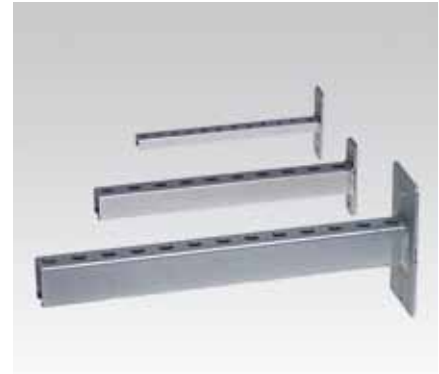
MPC-Wall hanger brackets galvanised

Field of application

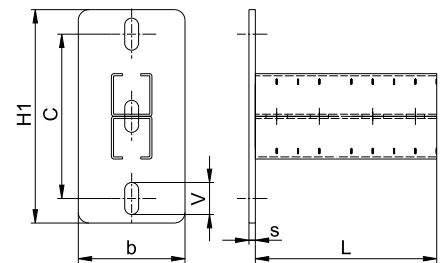
- Ideal as cantilever support structure of multisection pipeways
- Applicable as cantilever bracket for air ducts and cable trays
- Applicable in combination with saddle support and channel support brackets as a cross-beam for pipe attachments in shafts and ducts
- Solid wall bracket for valves and equipment
- The 38/80 profile is ideally suitable for double-sided installation of pipe sections due to double channel slots

Advantages

- The strong base plate ensures a high load carrying capacity
- The oblong holes in the base plate allow easy height adjustment of the bracket
- Variety of lengths covers all construction requirements
- Clean-cut appearance by the use of protection caps



Profiles 27/18, 28/30 and 38/40



Profiles 38/80 and 40/60

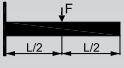
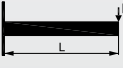
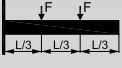
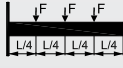
Features




Profile	Length L [mm]	Part no.	Sales unit	Pack unit	Dimensions [mm]				
					H1	b	s	C	V
27/18	200	118562	25	pieces	120	40	4	80	11 x 19
	300	118656							
	500	118888							
28/30	240	118602	30	pieces	120	40	4	80	11 x 19
	400	118771							
38/40	160	118518	30	pieces	120	40	6	80	11 x 19
	240	118604							
	320	118704	25						
	400	118775	20						
	480	118849							
	560	118908							
	640	119006	10						
	720	119050	1						
	800	119072							
	1,040	118453							
40/60	560	118940	20	pieces	200	100	8	155	13 x 30
	640	119029							
	800	119090							
	1,040	118465							
38/80	400	118807	20	pieces	120	40	4	80	11 x 19
	800	119087							

MPC-Wall hanger brackets galvanised

Max. load capacities:

Profile	Length L [mm]				
		Max. allowable load [N]			
27/18	200	526	263	263	175
	300	350	143	175	116
	500	163	50	76	49
28/30	240	1,317	658	658	439
	400	787	393	393	262
38/40	160	4,597	2,298	2,298	1,532
	240	3,062	1,531	1,531	1,020
	320	2,294	1,147	1,147	764
	400	1,832	916	916	610
	480	1,524	762	762	508
	560	1,304	612	652	434
	640	1,138	467	569	379
	720	1,009	367	504	336
	800	905	296	444	287
	1,040	549	171	257	166
40/60	560	3,613	1,806	1,806	1,204
	640	3,156	1,578	1,578	1,052
	800	2,514	1,242	1,257	838
	1,040	1,918	727	959	639
38/80	400	5,465	2,732	2,732	1,821
	800	2,711	1,355	1,355	903

 At the stated values, the max. admissible steel stress $\sigma_{adm.} = 160 \text{ N/mm}^2$ and the max. admissible deflection $L/150$ are not exceeded – dead weight has also been considered.

MPC-Rail nuts

galvanised

For support channels	Thread	Length [mm]	Width [mm]	Height [mm]	Part no.	Sales unit	Pack unit
27/18, 28/30	M6	21.5	11.8	4	118013	100	pieces
	M8		14.0	5	120043		
38/24, 38/40, 39/52, 40/60, 40/80, 38/80, 40/120	M6	31.0	16.0	6	148757		
			23.0		148759		
	M8		16.0	148761			
			23.0	118040			
	M10		16.0	147854			
			23.0	117968			
M12		117986					
M16	32.5	32.5	8	148762	25		



Size 27/18 to 28/30



Size 38/24 to 40/120

MPC-Double rail nut

galvanised

For support channels	Part no.	Sales unit	Pack unit
38/24, 38/40, 39/52, 40/60, 40/80, 38/80, 40/120	117944	50	pieces



MPC-Clamp brackets

galvanised

For support channels	For thread	Part no.	Sales unit	Pack unit
27/18, 28/30	M8	114439	100	pieces
	M10	114503		
38/24, 38/40, 38/48, 38/80	M8	114447		
	M10	114450		
39/52, 40/60, 40/80, 40/120	M8	114471		
	M10	114474		
	M12	114477		
	M16	114459	25	



MPC-Clamp bracket heavy-duty

to transfer large forces, galvanised

For support channels	For thread	Part no.	Sales unit	Pack unit
39/52, 40/60, 40/80, 38/80, 40/120	M10/M12	114557	25	pieces



MPC-Protection caps

For support channels	Part no.	Sales unit	Pack unit
27/18	106000	100	pieces
28/30	106002		
38/24, 38/48	106004	50	
38/40, 38/80	106006		
39/52	106007	25	
40/60, 40/120	106008		
40/80	106009		



MPC-Saddle supports galvanised

Field of application

- Simple assembly of strong cross-beams using MPC-Support channels
- Applicable for cramped installation conditions in shafts and ducts

Advantages

- Consistent oblong holes in the base plate enable simple alignment of the flange
- Good load transfer due to the high bending stiffness of the saddle connection
- Ideal connecting element for channel section structures
- The section 38/80 provides torque-resistant support as channel is encompassed on both sides



MPC-Saddle support, crosswise



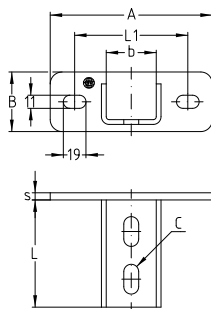
MPC-Saddle support, lengthwise



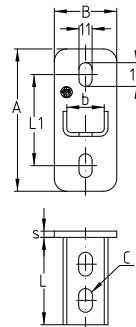
Mounting example with MPC-Double rail nut



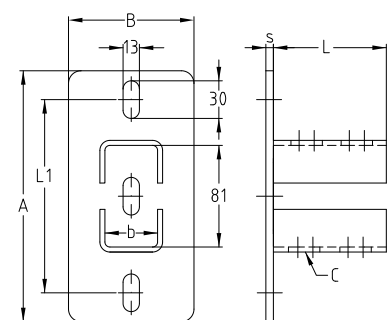
MPC-Saddle support, lengthwise for profiles 38/80, 40/80 and 40/120



MPC-Saddle support, crosswise



MPC-Saddle support, lengthwise



MPC-Saddle support, lengthwise for profiles 38/80 and 40/120

Features

Description	For support channels	Part no.	Sales unit	Pack unit	Dimensions [mm]						
					A	B	b	s	L	L1	C
Crosswise	27/18, 28/30	129648	30	pieces	125	40	30	5	70	84	11 x 19
	38/24, 38/40, 39/52, 40/60, 40/80, 41/41	129649	25		136	50	42	6	90	95	13 x 25
Lengthwise	27/18, 28/30	129633	30		114		30	5	70	73	11 x 19
	38/24, 38/40, 39/52, 40/60, 41/41	129638	25		144	70	42	6	90	103	13 x 25
	38/80, 40/80	129645	1		200	100		8		155	
	40/120	139813			246					200	



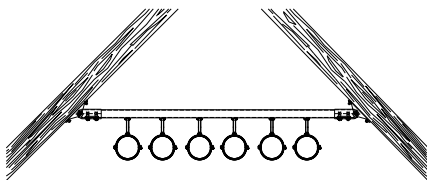
MPC-VARIO-Saddle support galvanised

Field of application

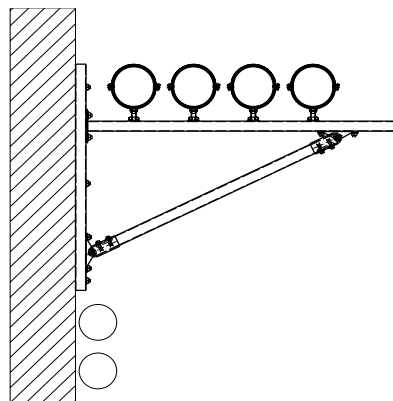
- Ideal for attachment to inclined roof trusses, vaults and in round cable shafts

Advantages

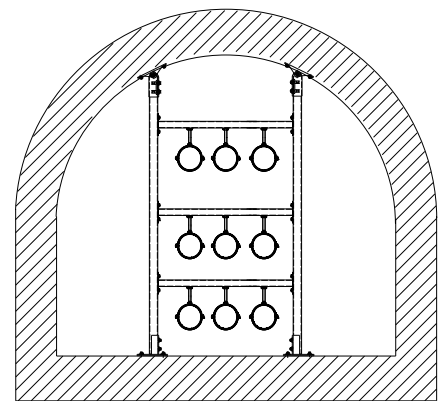
- Variable angle adjustment possible during installation
- Simple and quick installation due to pre-installed double rail nut
- Attachment to the slot of support channels 38/40 possible in all directions



Attachment of a pipe run to an inclined roof truss



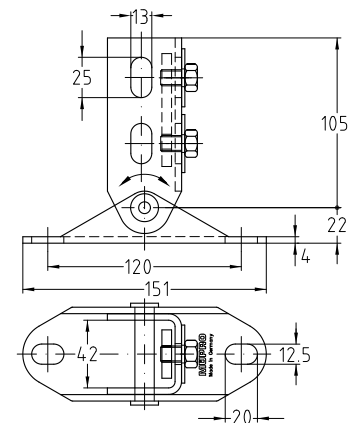
Pipes installed on a MPC-Wall hanger with diagonal strut



Installation of brackets in vaults or round cable ducts and shafts

Completely pre-assembled:

- 1 MPC-VARIO-Saddle support
- 1 Double rail nut
- 2 Hexagonal head bolts M10
- 2 Washers



For support channels	Minimum angle [°]	Part no.	Sales unit	Pack unit
38/40, 38/48, 39/52, 40/60, 40/80	20	129660	1	pieces

MPC-Mounting angles

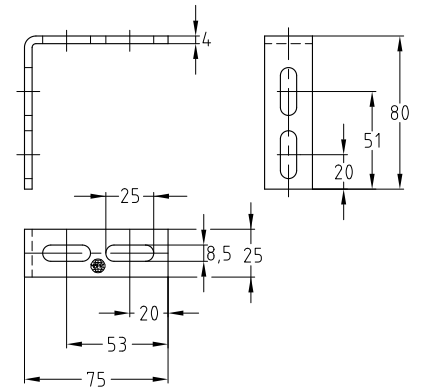
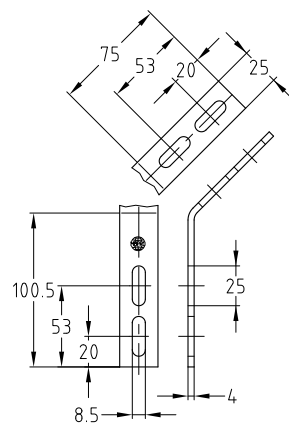
for MPC-Support channels 27/18 and 28/30, galvanised

Field of application

- Solid fixing element for construction of pre-wall installations, shelves as well as for channel constructions for mountings of pipelines and air ducts without welding
- Also applicable for direct mounting on walls, ceilings or floors

Advantages

- Versatile in use due to oblong holes
- Versatile in use, e. g. as:
 - Angular support bracket
 - Angular load-bearing bracket
 - Connection element
 - Angular bracket
- Multi-purpose component for professional, practical installation solutions



Angle [°]	For support channels	Part no.	Sales unit	Pack unit
45	27/18, 28/30	118753	50	pieces
90		118797		

MPC-Mounting angle 45°

for MPC-Support channels 38/24 to 40/120, galvanised

Field of application

- Solid fixing element for construction of pre-wall installations, shelves as well as for channel constructions for mountings of pipelines and air ducts without welding
- Also applicable for direct mounting on walls, ceilings or floors

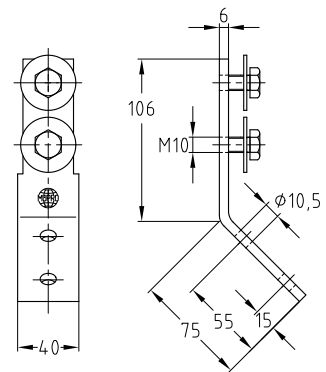
Advantages

- Versatile in use, e. g. as:
 - Angular support bracket
 - Connection element
- Multi-purpose component for professional, practical installation solutions
- Quick installation on site due to pre-assembled bolts and washers



Completely pre-assembled:

- 1 MPC-Mounting angle 45°
- 2 Hexagonal head bolts M10
- 2 Washers



For support channels	Part no.	Sales unit	Pack unit
38/24, 38/40, 39/52, 40/60, 40/80, 38/48, 38/80, 40/120	118769	25	pieces

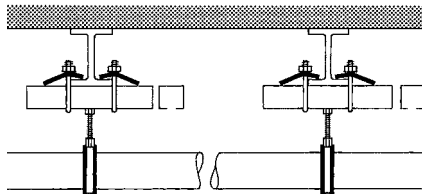
MPC-Girder cleats galvanised

Field of application

- Attachment of MPC-Support channels to steel girders without drilling or welding

Advantages

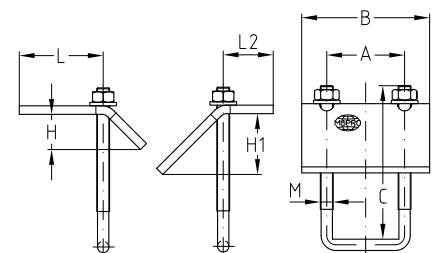
- Attachment to supporting structure without welding or drilling
- Allows subsequent adjustment of the channels along and across the supporting structure
- Suitable for all flange thicknesses of common girders
- Easy to install, pre-assembled kit
- Proper attachment of suspended loads on girders
- Approved by VdS, if used with thread M8 or M10 for profiles 38/40 or 40/60



Features



For support channels	Thread	Max. permitted load/pair [N]
27/18, 28/30	M6	2,800
38/24, 38/40	M8	5,400
39/52, 40/60		6,000
38/40, 39/52, 40/60	M10	10,400
38/80, 40/80		8,750
40/120		



For support channels	Thread	Part no.	Sales unit	Pack unit	Dimensions [mm]						
					A	B	C	H	H1	L	L2
27/18, 28/30	M6	130281	50	pieces	37	60	80	18.0	29.0	43.8	27.8
38/24, 38/40	M8	130283	20		48	70		17.0			
39/52, 40/60				130284				100			
38/40, 39/52, 40/60	M10	130273	15		50	80	18.5			39.7	30.7
38/80, 40/80		130274						125			
40/120		130277						180			

Channel connector

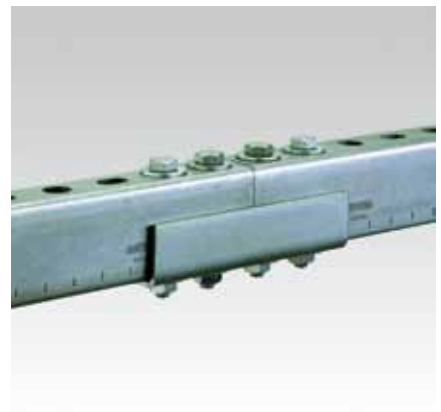
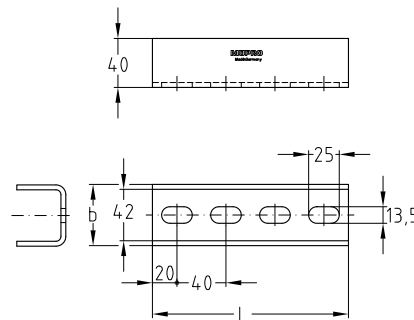
heavy-duty version, galvanised

Field of application

- Quick butt-joint connection for MPC- and MPR-Support channels

Advantages

- Enables exact alignment of the channels
- Four bolts provide a frictional joint
- Form-locking connection between channel and connector (passthrough installation)
- Also available in double length for heavy-duty connections



For support channels	Part no.	Sales unit	Pack unit	Dimensions [mm]	
				b	L
38/40, 39/52, 40/60, 40/80, 38/48, 38/80, 40/120, 41/41	120136	1	pieces	50	160



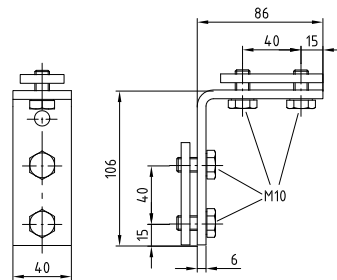
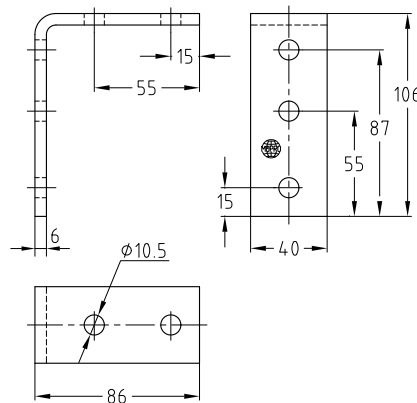
Mounting angles 90° galvanised

Field of application

- Solid fixing element for construction of pre-wall installations, shelves as well as for channel constructions for mountings of pipelines and air ducts without welding
- Also applicable for direct mounting on walls, ceilings or floors

Advantages

- Variable fitting possibilities
- Versatile in use, e. g. as:
 - Angular support bracket
 - Angular load-bearing bracket
 - Connection element
 - Angular bracket
- Multi-purpose component for professional, practical installation solutions
- Can be provided already pre-assembled with MPC-Double rail nut for the quick attachment within channel slot



Mounting angle 90°



Mounting angle 90°, pre-assembled



	For support channels	Part no.	Sales unit	Pack unit
Mounting angle 90°	38/24, 38/40, 39/52, 40/60,	118808	25	pieces
Mounting angle 90°, pre-assembled	40/80, 38/48, 38/80	147764		

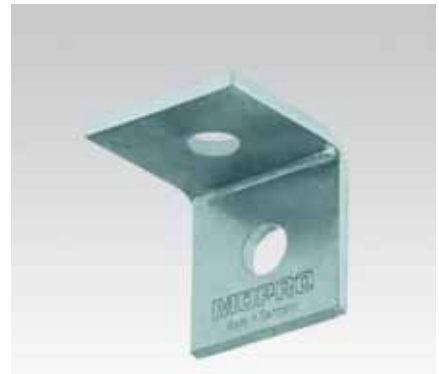
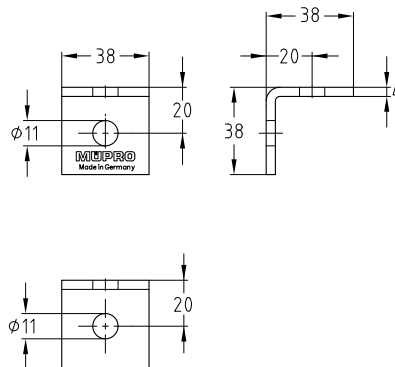
Mounting angle 90° short, galvanised

Field of application















- Strong and good value connecting element for the construction of frames, shelves and supports for pre-wall mounted installations


















Advantages

- Creation of rigid structures without welding
- High flexibility and easy mounting
- Good adjustment to the widths of MPC- and MPR-Support channels



For support channels	Part no.	Sales unit	Pack unit
38/40, 39/52, 40/60, 40/80, 38/48, 38/80, 40/120, 41/41	118820	25	pieces

0. MÜPRO 
1. Vibration control 
2. Pipe clamps 
3. MSS products 
4. Support channels 
5. Accessories 
6. Anchor points/expansion points 
7. Heavy-duty pipe support 
8. MPT-Support system 
9. Ventilation 
10. Stainless steel 
11. Hot-dip galvanised products 
12. Anchor plugs 
13. Technical information 

	Threaded rods	5/1
	Threaded pins	5/1–5/2
	Turnbuckles	5/2
	Hex connectors	5/2
	Round connectors	5/3
	Parallel couplings	5/3
	Girder clamps with joint	5/4
	Girder clamps	5/5
	Punched tapes	5/6
	Oval head screws	5/7
	Power hook	5/7
	Hexagon head bolts	5/7
	Hexagonal nuts	5/8
	Hexagonal nuts self locking	5/8
	Cap nuts	5/8
	Protection caps	5/8
	Washers	5/9

Threaded rods strength class 4.6, galvanised

Thread	Length [m]	Part no.	Sales unit	Pack unit
M6	1	113603	100	pieces
	2	113612	50	
M8	1	113639	25	
	2	113651		
	3	113660		
M10	1	113467	20	
	2	113486		
	3	113495		
M12	1	113513	10	
	2	113525		
	3	113534		
M16	1	113549	5	
	2	113561		
	3	113567		
M20	1	113579		
	2	113582		



Threaded pins galvanised

Connecting thread	Length [mm]	Part no.	Sales unit	Pack unit
M6	25	114094	100	pieces
	40	114097		
	70	114099		
	80	114103		
	100	114082		
M8	20	114149		
	30	114184		
	40	114211		
	50	114223		
	60	114241		
	70	114253		
	80	114262		
	90	114271		
	100	114115		
	110	114118		
	120	114128		
	140	114137		
	160	114140		
M10	180	114143		
	25	113762		
	35	113792		
	55	113825		
	80	113858		
	100	113699		
	120	113714		
	140	113723		
M12	160	113729		
	180	113744		
	25	113942		
	55	113983		
	80	114001		
	100	113882		
M16	130	113900	25	
	150	113915		
	60	114058		
	120	114016		
	160	114031		
	250	114046		



Turnbuckles

with left-hand and right-hand threads and safety sight holes, galvanised

Connecting thread	Total length [mm]	Adjustment range [mm]	Part no.	Sales unit	Pack unit
M8	50	30	125025	100	pieces
M10	60	40	125007	50	
M12	70	50	125013		
M16	170	120	125019	10	



Threaded pins with left-hand and right-hand threads

for turnbuckles, galvanised

Connecting thread	Length [mm]	Part no.	Sales unit	Pack unit
M8	50	114226	100	pieces
M10	60	113840		
M12	70	113992		
	150	113921		
M16	210	114040	50	



Hex connectors

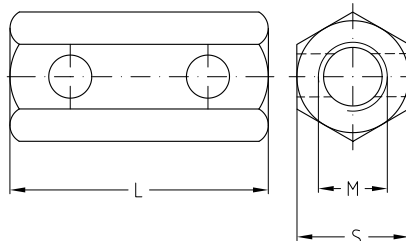
with cross hole, galvanised

Field of application

- For the extension and joining of threaded rods and pins

Advantages

- Robust, galvanised, threaded pipe coupling with hexagonal section and a cross hole
- Two check holes for verifying the required screw-in depth of the threaded ends



Connecting thread	Hole diameter D [mm]	Length L [mm]	Spanner size S [mm]	Part no.	Sales unit	Pack unit
M8	5	30	13	113319	100	pieces
M10				113322		
M12	35	24	113328	50		
M16	–		113307			

Round connector according to DIN EN 10241, galvanised

Field of application

- Connecting element for the combination of slide guides 4.0 kN and threaded pipes 1/2"
- For the extension and joining of threaded pipes

- Fast and easy extension and joining of threaded pipes
- Stable, galvanised round connector according to DIN EN 10241



Advantages

- Ideal combination of round connector and threaded pipe for a rigid attachment with greater distance from building structure

Connecting thread	Total length [mm]	Outer diameter [mm]	Part no.	Sales unit	Pack unit
1/2	34	26.6	147091	1	pieces

Round connectors

for the extension of mounting threads, galvanised

Thread	Length [mm]	Outer diameter [mm]	Part no.	Sales unit	Pack unit
M6	20	10	113239	100	pieces
	30		113248		
	40		113251		
M8	20	11	113254		
	30		113259		
	40		113274		
	50		113283		
M10	30	13	113175		
	40		113190		
M12	30	15	113196		
	40		113205		
	55		113220		



Parallel couplings

for threaded rods or threaded pins, galvanised

For thread	Length [mm]	Max. recommended load [N]	Part no.	Sales unit	Pack unit
M8	35	1,000	120137	100	pieces
M10		1,500	120141	50	



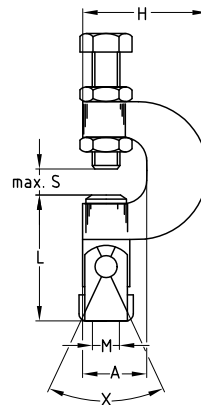
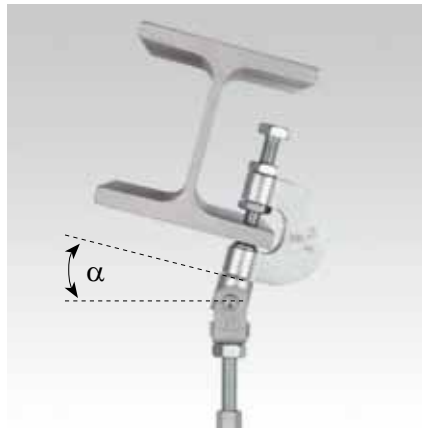
Girder clamps with joint type Lindapter FLS, galvanised

Field of application

- For flexible attachment of hangers on inclined girders and flanges

Advantages

- For suspensions that cannot be achieved using conventional girder clamps
- Easy fitting using a hexagonal head clamping screw
- Rotatable about 360°
- High load transfer
- Approved by the FM and VdS for the suspension of sprinkler lines from girders inclined at an angle of up to 25°



Features



Size	Max. permitted load [N] deflection angle		Tightening torque [Nm]
	$\alpha \leq 25^\circ$ VdS + FM	$25^\circ \leq \alpha \leq 45^\circ$	
M8	2,500	1,500	18
M10			

Size	Part no.	Sales unit	Pack unit	Dimensions [mm]				
				A	H	L	M	S max.
M8	130262	10	pieces	27	53	55	M8	17
M10	130261						M10	

Girder clamps galvanised

Field of application

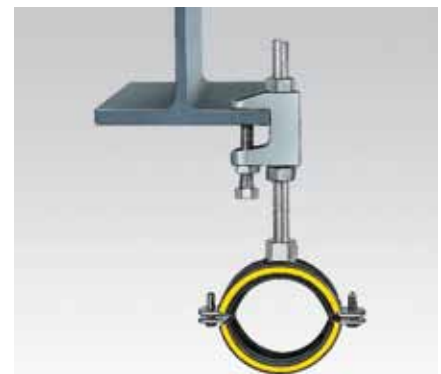
- For attachment of pipelines, air ducts and sprinkler systems on steel girders
- For suspension of threaded pins and threaded rods for the attachment of pipe clamps or cross-beams made with MPC-Support channels

Advantages

- Attachment on girder without welding or drilling
- Subsequent alignment on the girder possible
- High loading capacity
- Quick, subsequent height adjustment of the threaded rods at the non-threaded through-hole
- Approved by VdS
- Sizes M10 and M12 have FM approval
- Also available with internal thread



- ⚠** The girder clamp with clearance hole allows quick and efficient installation when suspending pipes from steel girders. To fasten the pipe clamp, a threaded rod with locknut is inserted into the unthreaded clearance hole of the girder clamp and held in place by screwing a nut on to the upper end. The pipe clamp can be pre-mounted on the threaded rod.
- In contrast to girder clamps with internal thread, a height adjustment of the assembled pipework can also be made after the pipe has been installed. The threaded rod can be moved freely upwards in the clearance hole without screwing. Thus there is no risk of loosening the connection between the rod and the pipe clamp by screw movements. The rod is then fixed in position by tightening the locknut.

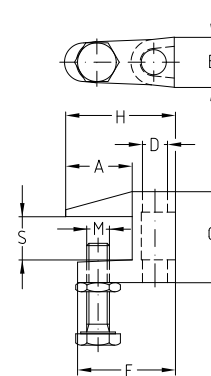


Features



Size	Max. permitted load [N]
M8	1,200
M10	2,500
M12	3,500

- ⚠** When fastening pipes bigger than DN 65, a safety steel strip must be used according to VdS certification.



Size	Clamping range [mm]	Part no.	Sales unit	Pack unit	Dimensions [mm]						
					A	B	C	D	E	H	M
With clearance hole	M8	3-18	50	pieces	21	19	35	9	35	38	8
	M10	0-20			23	21	42	11	41	44	10
	M12	4-26			35	24	54	13	48	58	
With internal thread	M8	3-18	50	pieces	21	19	35	M8	35	38	8
	M10	0-20			23	21	42	M10	41	44	10
	M12	4-26			35	24	54	M12	48	58	

Part no.	Sales unit	Pack unit
Safety steel strip , galvanised Length 350 mm, material 25 x 3.0 mm	123485	25 pieces

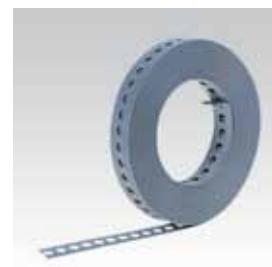
Punched tapes galvanised or plastic coated

Field of application

- Efficient punched tape for simple fastening jobs

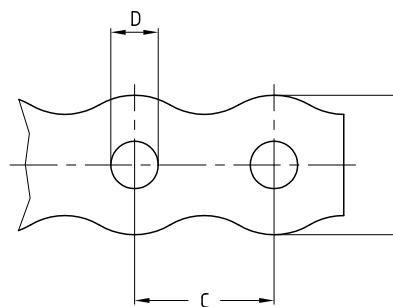
Advantages

- Easy to handle due to versatile mounting accessories
- Can be fitted with DÄMMGULAST® Junior vibration control lining




Features

Type	Tape width b [mm]	Tensile breaking strength [N]	Max. recommended load [N]
Straight edges, galvanised	17	2,220	740
Corrugated edges, galvanised	12	1,440	480
	17	4,200	1,400
	25	6,750	2,250
Plastic coated	19	3,300	1,100
	27	3,900	1,300



Type	Tape width b [mm]	Hole diameter D [mm]	Hole spacing C [mm]	Length of roll [m]	Part no.	Sales unit	Pack unit
Straight edges, galvanised	17	6.5	11.5	10	114798	20	roll
				50	114804	1	
Corrugated edges, galvanised	12	5.5	14.5	10	114807	20	
					114801		
					114810	15	
Plastic coated	19	6.5	15.0		114786	12	
				114789	9		

 Rolls of 50 m are supplied in a practical dispenser case.

Bolts with nuts and washers for punched tapes, galvanised

	Connecting thread	Screw length [mm]	Part no.	Sales unit	Pack unit
Bolts with nuts	M5	15	121159	100	pieces
	M6	20	121163		
	M8	25	121167		



	For thread	Part no.	Sales unit	Pack unit
Washers	M6	127307	100	pieces
	M8	127310		

Oval head screws

DIN 964, nickel-plated

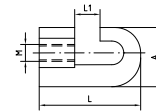
Size	Part no.	Sales unit	Pack unit
M4 x 35	114765	100	pieces
M4 x 45	114768		
M5 x 35	114771		
M5 x 50	114774		
M5 x 60	114777		
M6 x 50	114780		
M6 x 60	114783		



Power hook

with internal thread, ideal for suspension of heaters, ceiling radiators, ventilators, air-conditioners and lighting units, galvanised

Connecting thread	Min. diameter of suspension hole [mm]	Max. permitted suspension load [N]	Part no.	Sales unit	Pack unit	Dimensions [mm]		
						L1	L	A
M10	11	1,320	113697	50	pieces	15.0	60.0	35



Hexagon head bolts

DIN 933, galvanised

Thread	Length [mm]	Spanner size [mm]	Part no.	Sales unit	Pack unit
M8	16	13	105757	100	pieces
	20		105763		
	25		105770		
	30		105777		
	35		105781		
	45		105789		
	55		105794		
	60		105797		
	75		105798		
	85		105802		
	100		105743		
	110		105744		
120	105752				
M10	20	17	105560	50	pieces
	25		105565		
	30		105575		
	35		105585		
	40		105590		
	55		105600		
	60		105605		
	80		105609		
	90		105612		
	100		105545		
120	105547				
M12	25	19	105621	50	pieces
	30		105626		
	35		105633		
	60		105647		
	80		105653		
M16	45	24	105677	25	pieces
	60		105681		
	80		105687		
	100		105657		
	120		105660		
M20	50	30	105711	25	pieces
M24	60	36	105720	25	pieces



Hexagonal nuts

DIN 934, galvanised

Thread	Nut height [mm]	Spanner size [mm]	Part no.	Sales unit	Pack unit
M6	5.0	10	105484	100	pieces
M8	6.5	13	105498		
M10	8.0	17	105433		
M12	10.0	19	105447		
M16	13.0	24	105460		
M20	16.0	30	105469	25	



Hexagonal nuts

self-locking plastic ring, DIN 985, galvanised

Thread	Nut height [mm]	Spanner size [mm]	Part no.	Sales unit	Pack unit
M6	4.0	10	105525	100	pieces
M8	5.5	13	105531		
M10	6.5	17	105511		
M12	8.0	19	105517		



Cap nuts

DIN 1587, galvanised

Thread	Nut height [mm]	Spanner size [mm]	Part no.	Sales unit	Pack unit
M8	15	13	117119	100	pieces
M10	18	17	117060		
M12	22	19	117069		
M16	28	24	117080	50	
M20	34	30	117086	25	
M24	42	36	117089	5	



Protection caps

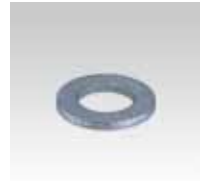
for the protection of threaded ends, with inner hexagon, plug on, black

For hexagonal nuts	Part no.	Sales unit	Pack unit
M8	105994	100	pieces
M10	105996		
M12	105998		



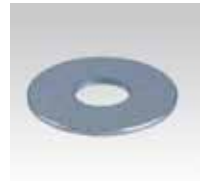
Washers DIN 125, galvanised















For thread	Outer diameter [mm]	Thickness [mm]	Part no.	Sales unit	Pack unit
M6	12	1.6	127307	100	pieces
M8	16		127310		
M10	20	2.0	127277		
M12	24	2.5	127286		
M16	30	3.0	127295		



Washers for MPC-Support channels, galvanised

For thread	Outer diameter [mm]	Thickness [mm]	Part no.	Sales unit	Pack unit	
M6	24	2	127244	100	pieces	
	36		127184			
M8	24		127253			
	36		127214			
M10	24		127079			
	29		127088			
	36		127121			
M12			127151			
M16	40		3			127169



0. MÜPRO 
1. Vibration control 
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10. Stainless steel 
11. Hot-dip galvanised products 
12. Anchor plugs 
13. Technical information 



STATO® Brackets

6/1–6/2



STATO® Clamps

6/3–6/4



Swivel hangers

6/5



Slide guides 1.75 kN

6/6



Slide guide 4 kN

6/7–6/8



Box-section heavy slide guide 7.8 kN

6/8

STATO® Brackets galvanised

Field of application

- Stable support system with high load-bearing capacity for pipe installations
- Ideal pipe anchor point in combination with STATO® Clamps without lining**
- Ideal as height adjustable subframe for anchor and expansion assemblies
- Ideal as **anchor point for insulated chilled water pipes in combination with wooden blocks and STATO® Clamps**

Advantages

- Continuously adjustable in height and slope
- As height adjustment for waste water pipes or to compensate for unevennesses
- Can be fitted with up to 3 STATO® Clamps in case of heavy loads
- Especially suitable for heavy pipes with large wall clearances
- Can be used as bearing block, adjustable in height and slope

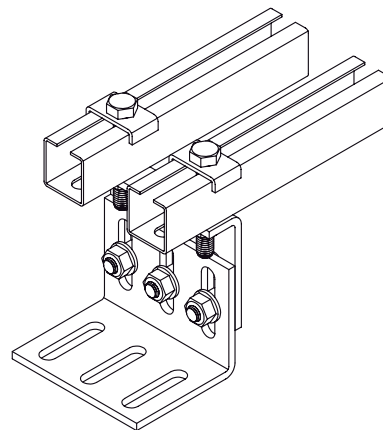
The complete kit consists of:

- 4 STATO® Angle pieces
- 6 Coach bolts M12
- 6 Hex. nuts M12
- 6 Washers for M12

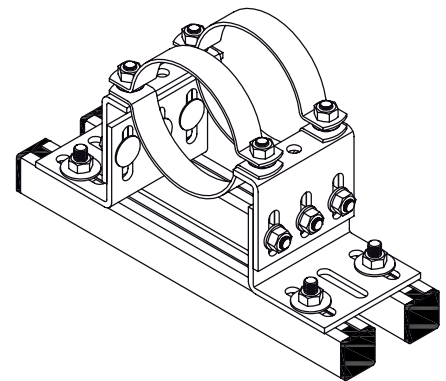
All parts are galvanised.



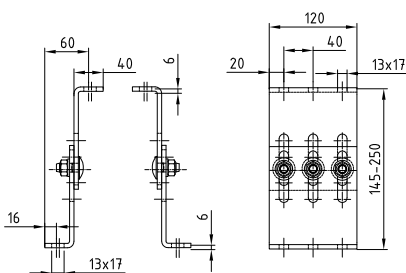
STATO® Clamps with adjustable STATO® Bracket



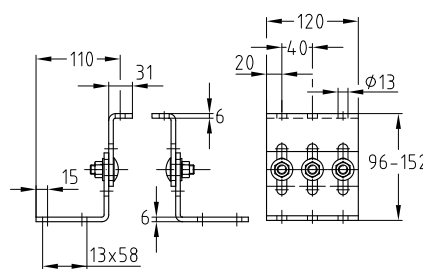
Height adjustable sub-frame for anchor and expansion assemblies



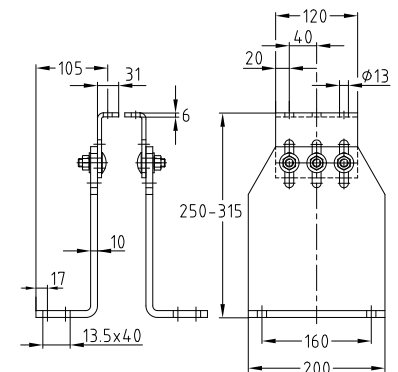
Free slidable elevation



Slim version



Standard version

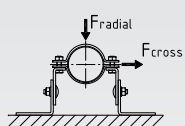
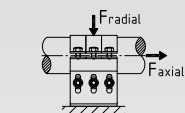


Heavy-duty version, larger distance from structure

Type	Overall height [mm]		Adjustment range [mm]	Part no.	Sales unit	Pack unit
	min.	max.				
Slim version	145	250	105	129171	5	pieces
Standard version	96	152	56	129167		
Heavy-duty version	250	315	65	129176	1	

STATO® Brackets galvanised

Features					
Type		Slim version	Standard version	Heavy-duty version	
Max. recommended load [N] (valid for M12 at a tightening torque of 75 Nm, steel pipes without coating)	axial	5,500 per clamp	5,500 per clamp	5,500 per clamp	
	cross	min. overall height			
		6,000	8,000	7,000	
		max. overall height			
		3,000	6,000	7,000	
	radial	min. overall height	25,000		25,000
		20,000			
		max. overall height			
		10,000			

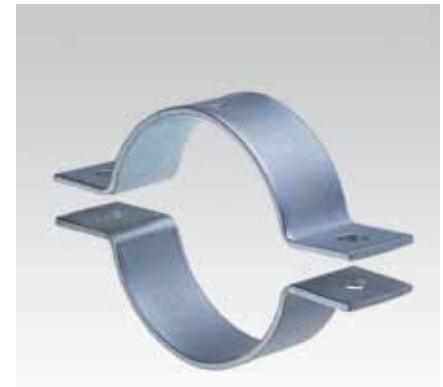


STATO® Clamps two-piece, galvanised

Field of application

- Ideal as anchor point clamp, if used without anti-vibration lining
- Attachment of pipelines with higher load requirements
- In combination with the STATO® Bracket usable as the ideal pipeline anchor point

- Also available with vibration control lining DÄMMGULAST® yellow
- The matching clamp for STATO® Bracket
- Supplied with connecting screws, nuts and captive washers



Advantages

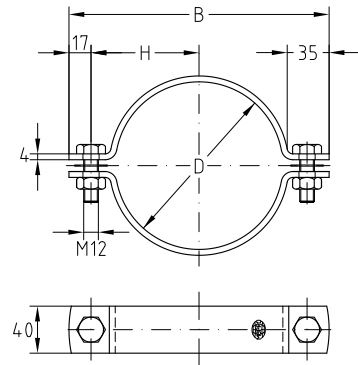
- High-duty, two-part clamp
- The 2 locking screws allow adjustments to accommodate a greater variation in pipe diameter

Nominal size pipe outer diameter		Pipe clamp range [mm] (anchor point clamp)	Without lining (anchor point clamp)			Without lining (guiding clamp)			With DÄMMGULAST®		
[inch]	[mm]		Part no.	Sales unit	Pack unit	Part no.	Sales unit	Pack unit	Part no.	Sales unit	Pack unit
2	60.3	56–61	129377	12	pieces	129150	12	pieces	129214	12	pieces
	63.5	63–68	129383			129164			129262		
	70.0	70–74	129386			129165			129263		
2½	76.0	75–80	129389			129151			129215		
	82.5	82–85	129392			129166			129267		
3	88.9	88–93	129395			129157			129235		
	101.6	98–103	129396			129140			129187		
	108.0	108–115	129283			6					
110.0			129142	129191							
114.3			129159	129243							
4	125.0	125–130	129288			129143			129195		
	127.0					129144			129196		
	133.0	133–140	129290			129145			129199		
5	139.7					129162			129255		
	152.4	150–156	129295			129146			129202		
	159.0	159–166	129296			129147			129205		
6	165.1					129163			129260		
	168.3	167–172	129299			129148			129211		
	177.8	176–182	129303			129149			129212		
	212.0	210–216	129314			129152			129221		
8	219.1	219–225	129316			129153			129224		
	244.5	244–250	129320			129154			129227		
	267.0	267–274	129329			129155			129231		
	273.0					129156			129233		

⚠ The three versions of STATO® Clamps can be produced for all other pipe sizes according to customer specifications.

In combination with STATO® Brackets, a maximum of 3 STATO® Clamps without linings or a maximum of 2 STATO® Clamps with DÄMMGULAST® linings may be mounted per set of brackets. For a pipe outer diameter of 315 mm upwards, the STATO® Bracket heavy-duty version must be used.

STATO® Clamps two-piece, galvanised



Features		
Max. recommended tensile load [N]	without lining	10,000
	with DÄMMGULAST®	4,660
Max. recommended load axial [N]		5,500

Nominal size pipe outer diameter		Connecting thread	Without lining (anchor point clamp)			Without lining (guiding clamp)			With DÄMMGULAST®		
[inch]	[mm]		Part no.	B	H	Part no.	B	H	Part no.	B	H
2	60.3	M12	129377	137	52	129150	138	52	129214	148	57
	63.5		129383	150	58	129164	142	54	129262	152	59
70.0	129386		151	59	129165	148	57	129263	158	62	
2½	76.0		129389	156	61	129151	154	60	129215	164	65
	82.5		129392	163	65	129166	161	63	129267	171	68
3	88.9		129395	170	68	129157	167	66	129235	177	71
	101.6		129396	184	75	129140	180	73	129187	190	78
4	108.0		129283	191	79	129141	186	76	129190	196	81
	110.0					129142	188	77	129191	198	82
	114.3					129159	192	79	129243	202	84
	125.0		129288	207	87	129143	203	85	129195	213	90
5	127.0					129144	205	86	129196	215	91
	133.0		129290	217	92	129145	211	89	129199	221	94
	139.7					129162	218	92	129255	228	97
	152.4		129295	235	101	129146	230	98	129202	240	103
6	159.0		129296	243	105	129147	237	102	129205	247	107
	165.1				129163	243	106	129260	253	110	
	168.3	129299	250	108	129148	246		129211	256	111	
	177.8	129303	260	113	129149	256	111	129212	266	116	
8	212.0	129314	293	130	129152	290	128	129221	300	133	
	219.1	129316	303	135	129153	297	132	129224	307	137	
	244.5	129320	330	148	129154	323	144	129227	333	149	
	267.0	129329	350	158	129155	345	156	129231	355	161	
273.0				129156	351	159	129233	361	164		

Swivel hangers galvanised

Field of application

- Attachment solution for suspended pipes – allows axial and lateral pipe movements
- Attachment of pipes with thermal, axial expansion
- Especially suitable for large ceiling distances

Advantages

- 360° degree of freedom
- Large deflection from the vertical
- Appropriate threaded rod lengths allow the pipes to be set to the desired height
- Screw-in depth of thread hanger allows precise height adjustment
- Screw-in depth visible through inspection hole (long version)
- Short version for low overall height



Swivel hanger, short



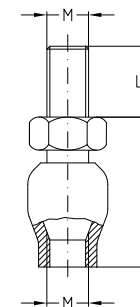
Swivel hanger, long



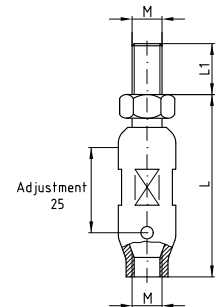
Features



Connecting thread	Max. recommended load [N]
M8	2,400
M10	3,000
M12	3,500



short version



long version

Type	Connecting thread	Overall height L [mm]	Threaded length L ₁ [mm]	Deflection from the vertical	Height adjustment up to [mm]	Part no.	Sales unit	Pack unit
Short	M8	34	14	up to 12°	–	120231	100	pieces
	M10	35	17			120227	50	
Long, with inspection hole	M12	70	19	up to 22°	25	120211		
		61	57			120208		
	M8	60	14			120204		
		61	17			120223		
Long, greater deflection	M10	61	17			120196		



For secure tilt-free pipe guides two swivel hangers – one at the top and one at the bottom – must be considered for each attachment point.

The threaded rod must be secured against loosening by the use of locknuts.

Slide guides 1.75 kN galvanised

Field of application

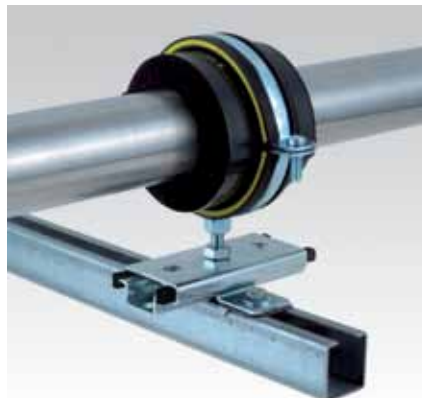
- Attachment of pipes with temperature affected, axial expansion
- A variety of installation possibilities (floor-mount, ceiling-mount, wall-mount)
- Expansion point attachment for standing and suspended pipes
- Expansion point attachment as cross connection for pipe movement in axial and lateral directions

Advantages

- Flat, compact design for secure mounting in cramped mounting situations
- Large slide travel of up to 76 mm
- High-level application flexibility due to triple connection facilities for pipe clamps
- One or two pipe clamps can be mounted depending on the application
- Fire-proof design for application in escape routes and emergency routes



Ceiling installation with steel anchors



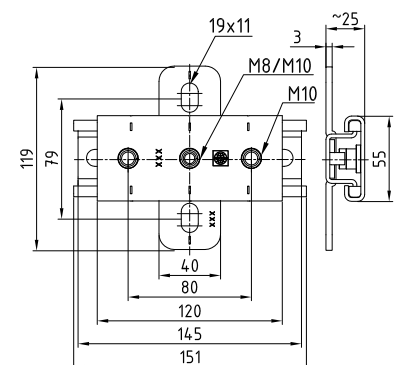
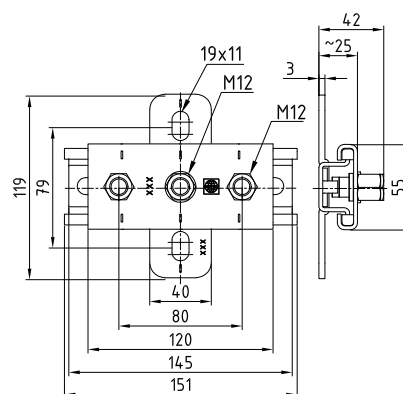
Upright installation of an insulation clamp on a MPC-Support channel



Upright installation of a sliding shoe and a slide guide on a MPC-Support channel



Upright installation of two slide guides in crisscross arrangement, on a MPC-Support channel



Features



Connecting thread 1x	Connecting thread 2x	Temperature range	Max. recommended load [N]	Max. slide travel [mm]	Part no.	Sales unit	Pack unit
M8/M10	M10	-40 °C to +100 °C	1,750	76	130662	25	pieces
M12	M12				139199		

⚠ When attaching two slide guides in crisscross arrangement, the use of an allen bolt with washer, **part no. 121079**, is recommended.

Slide guide 4 kN galvanised

Field of application

- Attachment of pipes with temperature affected, axial expansion
- A variety of installation possibilities (floor-mount, ceiling-mount, wall-mount)
- Expansion point attachment for standing and suspended pipes
- Expansion point attachment as cross connection for pipe movement in axial and lateral directions

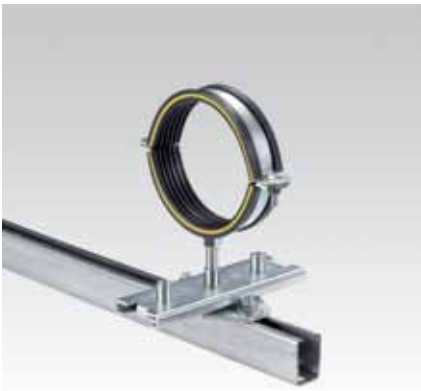
Advantages

- Smooth-running slide guide for high loads
- Flat, compact design for secure mounting in cramped spaces
- Large slide travel of up to 113 mm

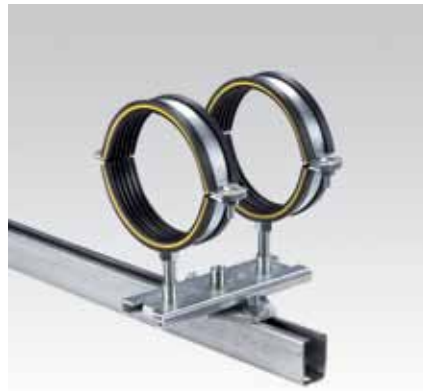
- Highly flexible use due to triple connection possibility with internal threads M12, M16 and external thread 1/2"
- One or two pipe clamps can be mounted depending on the application
- Quick and easy assembly due to center line and mounting marks
- Base plate compatible with MPC, MPR and MPT-Support channel systems
- Fire-proof design for use in escape routes and emergency routes
- For installation situations where both axial and radial movement needs to be accommodated, a 4 kN slide guide and a 4 kN



adapter slide guide can be mounted together as a cross connection



Single bossed clamp mounted with a M16 connection thread to a MPC-Support channel



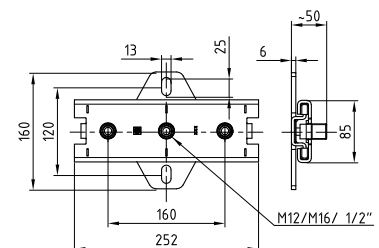
Two single bossed clamps with M16 connection threads mounted on a MPC-Support channel



Two single bossed clamps with M16 connection threads mounted on a MPT-Console Q100

Features

Connecting thread	Temperature range	Max. recommended load [N]	Max. slide travel [mm]	Part no.	Sales unit	Pack unit
M12/ M16/1/2"	-40 °C to +100 °C	4,000	216	139936	1	pieces



Slide guide 4 kN for crisscross arrangement galvanised

Max. sliding distance [mm]	Part no.	Sales unit	Pack unit
216	139947	1	pieces



For cross connection assembly the following components are used:

	Thread	Length [mm]	Part no.	Sales unit	Pack unit
Coach bolt, DIN 603	–	30	143876	1	pieces
Hexagonal nut, DIN 934	M12	–	105447	100	
Washers, DIN 125			127286		

Box-section heavy slide guide 7.8 kN galvanised

Field of application

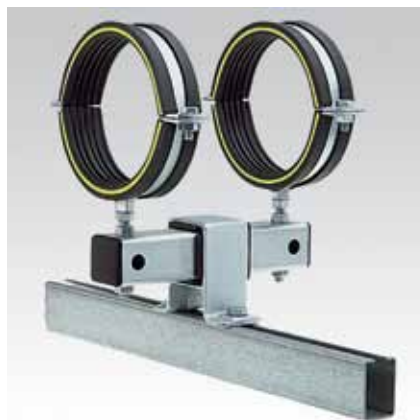
- Suitable for wall fixing with horizontal or vertical pipes
- Attachment of pipes with temperature affected, axial expansion
- Variety of installation possibilities (floor-mount, ceiling-mount, wall-mount, rail-mount, cross stay)
- Expansion point attachment for standing and suspended pipes

- With long slide travel up to 125 mm for pipelines with large changes in length
- Tilt-proof load distribution in standing and suspended installations
- Variable, height-adjustable pipe clamp attachments using threaded pins
- Two pipe clamps prevent jamming and misalignment
- Connection holes for M12 and M16



Advantages

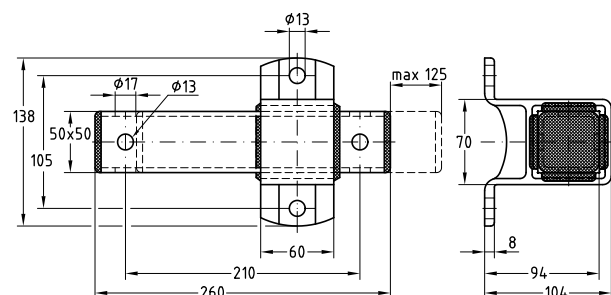
- Smooth-running slide guide for heavy loads



Features

















Max. recommended load [N] | 7,800



Max. slide travel [mm]	Part no.	Sales unit	Pack unit
125	105309	1	pieces

⚠ Also available in stainless steel version upon request.

0. MÜPRO 
1. Vibration control 
2. Pipe clamps 
3. MSS products 
4. Support channels 
5. Accessories 
6. Anchor points/expansion points 
7. Heavy-duty pipe support 
8. MPT-Support system 
9. Ventilation 
10. Stainless steel 
11. Hot-dip galvanised products 
12. Anchor plugs 
13. Technical information 



Pipe slides type TP-1

7/4–7/5



Pipe slides type DS-2

7/6–7/7



Cramping sets type F2 AH

7/8

Selection of heavy-duty pipe supports

Identification system for pipe slides

In addition to standard combinations for pipe slides (see bold print in table below) you will find further feasible material/surface finish/attachment combinations in the table below. These can be manufactured upon request. Furthermore, pipe slides can be produced with a polyamide (PA) sliding seating.

Pipe slide material	Pipe slide code	Pipe slide surface	Code for surface	Bolts and nuts	Code for bolts and nuts
S235JR (St37)	W37	untreated	OR	Strength class 8.8, galvanised	SG
		untreated		Strength class 8.8, hot-dip galvanised	SF
		hot-dip galvanised	OF	Strength class 8.8, galvanised	SG
		hot-dip galvanised		Strength class 8.8, hot-dip galvanised	SF
		hot-dip galvanised		V2A stainless steel	SA2
		primer coated	OG	Strength class 8.8, galvanised	SG
		primer coated		Strength class 8.8, hot-dip galvanised	SF
		primer coated		V2A stainless steel	SA2
V2A stainless steel	WA2	pickled, passivated	OP	V2A stainless steel	SA2
		pickled, passivated		V4A stainless steel	SA4
V4A stainless steel	WA4	pickled, passivated		V4A stainless steel	SA4


Cramping elements and cramping sets

Cramping elements and complete cramping sets can be supplied for attaching the pipe slide to the supporting steel structure.

Sample order for a cramping set:

Cramping set, guidance with two lift-off securing devices, type F2AH for application of a pipe slide on an HEA 140 T-section.

Part no. 134691 – for HEA 140 T-section, section width 140

 Specification of the section type and the section width is absolutely necessary when ordering a cramping set.



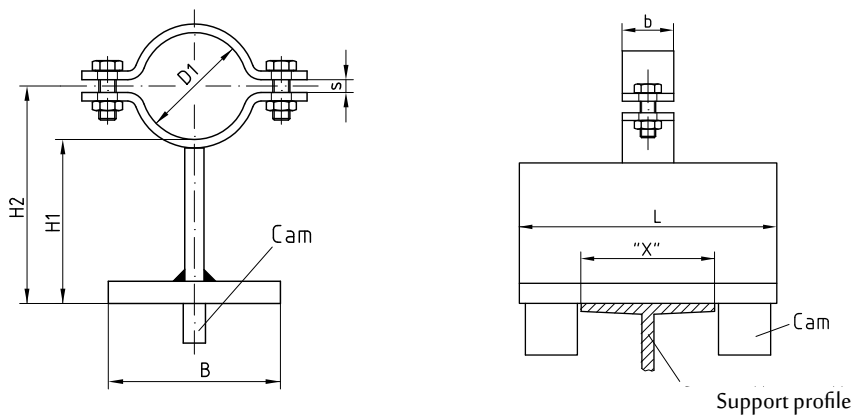
Selection of heavy-duty pipe supports

Technical information

Important advice regarding the application of pipe slides: The pipe slide can be used individually as an anchor point, as a guidance with and without lift-off securing devices or as a simple support. The pipe slide can be fixed to the supporting structure using the appropriate cramping sets or cramping elements.

The cramping sets are supplied with bolts and nuts for attaching to the existing supporting structure. Hereto, the specification of the **section width „X“** or the standard designation for the support sections (see sketch below) respectively **is absolutely necessary**.

If applied as an anchor point, the pipe slide must be fitted additionally with cams (see sketch below). The cams are either already welded to the slide or supplied separately. If the cams are to be supplied ex-factory (welded to the pipe slide), it is imperative that this is specified in the order. For this reason, the specification of the section width or the standard designation for the support section, e.g. HEB 140 acc. to DIN 1025, is absolutely necessary.



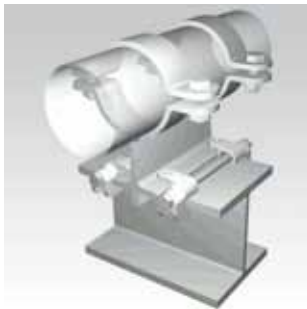
Selection of heavy-duty pipe supports

The pipe slide can be used in combination with various cramping sets for different functions:

1. Pipe slide as anchor point
2. Pipe slide as guide bearing with lift-off securing
3. Pipe slide as guide bearing without lift-off securing
4. Pipe slide as bearing

1. Application:

Anchor point pipe slide with anchoring cams, fitted using the cramping set type F2AH



T-section pipe slide with two welded-on anchoring cams using cramping set "guidance with two lift-off securing devices".
The pipe slide is firmly fixed to the substructure by means of the anchoring stops in combination with the side guides and the lift-off securing devices.
(0 degrees of freedom)

2. Application:

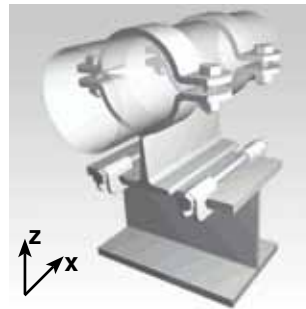
Guidance with lift-off securing, pipe slide fitted using cramping set type F2AH



T-section pipe slide fitted using cramping set "guidance with two lift-off securing devices".
Due to the guidance of the pipe slide at the side and the lift-off securing, sliding of the pipe slide is only possible in the pipe axial directions.
(1 degree of freedom)

3. Application:

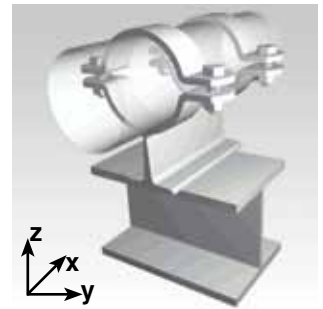
Guidance without lift-off securing, pipe slide fitted using cramping set type F



T-section pipe slide fitted using cramping set "type F guidance". Due to the guidance of the pipe slide only at the side, movements in axial and vertical directions of the pipe are possible.
(2 degrees of freedom)

4. Application:

Bearing



T-section pipe slide fitted without cramping set.
The pipe slide can move in the x, y and z directions.
(3 degrees of freedom)



Pipe slides type TP-1

with one pipe clamp, DIN 3567

Field of application

- Attachment of pipelines in heavy-duty building technology, industrial construction and plant engineering
- For insulation thicknesses up to 75 mm for type TP80-1
- For insulation thicknesses up to 90 mm for type TP100-1

Advantages

- Special lengths are available upon request
- Also available with polyamide sliding plate on request
- Also available in stainless steel as well as in primer coated version upon request



	Nominal size DN	Pipe outer diameter D1 [mm]	Part no.		Sales unit	Pack unit
			W37-OR-SG	W37-OF-SF		
T-Profile 80	25	33.7	116871	116826	1	pieces
	32	42.4	116874	116829		
	40	48.3	116877	116832		
	50	60.3	116880	116835		
	65	76.1	116883	116838		
	80	88.9	116886	116841		
	100	114.3	116856	116811		
	125	139.7	116859	116814		
	150	168.3	116862	116817		
	(175)	193.7	116865	116820		
T-Profile 100	25	33.7	116611	116581	1	pieces
	32	42.4	116614	116584		
	40	48.3	116617	116587		
	50	60.3	116620	116590		
	65	76.1	116627	116593		
	80	88.9	116630	116596		
	100	114.3	116602	116566		
	125	139.7	116605	116569		
	150	168.3	116624	116572		
	(175)	193.7	116633	116575		
	200	219.1	116608	116578		

Pipe slide material	Pipe slide code	Pipe slide surface	Code for surface	Bolts and nuts	Code for bolts and nuts
S235JR (St37)	W37	untreated	OR	Strength class 8.8, galvanised	SG
		hot-dip galvanised	OF	Strength class 8.8, hot-dip galvanised	SF

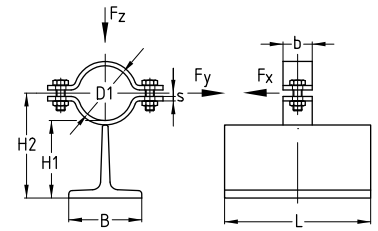
Ordering example: T-section slide guide made from S235JR (St37) with 1 pipe clamp, pipe slide hot-dip galvanised, with hot-dip galvanised bolts and nuts, strength class 8.8, for pipe outside diameter of 60.3 mm.

Part no. 116590 Type: TP100-1-W37-OF-SF-60.3



Pipe guide with polyamide sliding surface as well as other versions available upon request.

Pipe slides type TP-1 with one pipe clamp, DIN 3567



	Nominal size DN	Pipe outer diameter D1 [mm]	Dimensions [mm]						Loading			Weight [kg/piece]		
			s	b	L	B	H1	H2	F _x [kN]	F _y [kN]	F _z [kN]			
T-Profile 80	25	33.7	5	30	200	80	85	102	0.6	0.6	1.2	2.470		
	32	42.4						106	0.7	0.7			2.500	
	40	48.3						109		1.4				2.520
	50	60.3	6	40			86	116	1.2	1.2	2.4	2.840		
	65	76.1						124	1.3	1.3	2.6		2.930	
	80	88.9						130	1.4	1.4	2.8			3.020
	100	114.3	8	50			250	88	145	2.8	2.8	5.6	4.040	
	125	139.7							158	2.9	2.9	5.8		4.230
	150	168.3							172			5.020		
	(175)	193.7	185	3.0				3.0	6.0	5.360				
200	219.1	198			5.580									
T-Profile 100	25	33.7	5	30	200	100		105	122	0.5	0.5	1.0	3.610	
	32	42.4							126	0.6	0.6	1.2		3.640
	40	48.3							129			3.660		
	50	60.3	6	40				106	136	1.1	1.1	2.2	4.045	
	65	76.1							144	1.3	1.3	2.6		4.105
	80	88.9					150				4.195			
	100	114.3	8	50			250	108	165	2.8	2.8	5.6	5.180	
	125	139.7							178	3.0	3.0	6.0		5.370
	150	168.3							192	3.3	3.3	6.6		
	(175)	193.7	205	3.5				3.5	7.0	6.780				
	200	219.1	218	3.7				3.7	7.4		7.010			

Pipe slides type DS-2

with two pipe clamps, DIN 3567

Field of application

- Attachment of pipelines preferably with insulation in heavy-duty building technology, industrial construction and plant engineering
- Preferred for insulated pipes lines
- For insulation thicknesses up to 140 mm

Advantages

- Special lengths are available upon request
- Also available with polyamide sliding plate upon request
- Also available in stainless steel as well as in primer coated version upon request



Nominal size DN	Pipe outer diameter D1 [mm]	Part no.		Sales unit	Pack unit
		W37-OR-SG	W37-OF-SF		
175	191.0	115980	116254	1	pieces
	193.7	115982	116260		
200	216.0	115985	116266		
	219.1	115989	116272		
250	267.0	115992	116278		
	273.0	115995	116284		
300	315.0	115998	116290		
	323.9	116001	116296		
350	355.6	116004	116302		
	368.0	116007	116309		
400	406.4	116010	116315		
	419.0	116013	116321		
500	508.0	116016	116327		
	521.0	116019	116333		
600	610.0	116022	116339		

Pipe slide material	Pipe slide code	Pipe slide surface	Code for surface	Bolts and nuts	Code for bolts and nuts
S235JR (St37)	W37	untreated	OR	Strength class 8.8, galvanised	SG
		hot-dip galvanised	OF	Strength class 8.8, hot-dip galvanised	SF

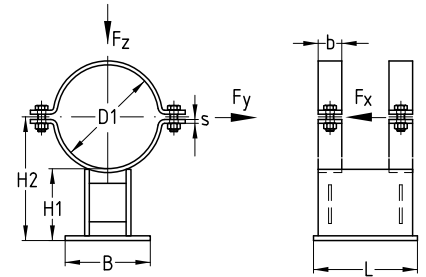
Ordering example: Twin-stay slide guide made from S235JR (St37) with 2 pipe clamps, pipe slide hot-dip galvanised, with hot-dip galvanised bolts and nuts, strength class 8.8, for pipe outer diameter of 406.4 mm.

Part no: 116315 Type: DS-2-W37-OF-SF-406.4



Pipe guide with polyamide sliding surface as well as other versions available upon request.

Pipe slides type DS-2 with two pipe clamps, DIN 3567



Nominal size DN	Pipe outer diameter D1 [mm]	Dimensions [mm]						Loading			Weight [kg/piece]		
		s	b	L	B	H1	H2	F _x [kN]	F _y [kN]	F _z [kN]			
175	191.0	8	50	220	180	150	246	12.0	12.0	24	13.700		
	247						13.760						
200	216.0						260	220	258	14.0	14.0	28	14.200
	260								14.300				
250	267.0		60	260	220		284	17.0	17.0	34	18.650		
	287						18.790						
300	315.0						308	19.0	19.0	38	20.370		
	312										20.580		
350	355.6						328	20.5	20.5	41	21.440		
	368.0										21.910		
400	406.4	353	21.5	21.5	43	33.530							
	419.0					34.030							
500	508.0	404	23.0	23.0	46	37.270							
	521.0					37.920							
600	610.0	455	25.0	25.0	50	41.470							



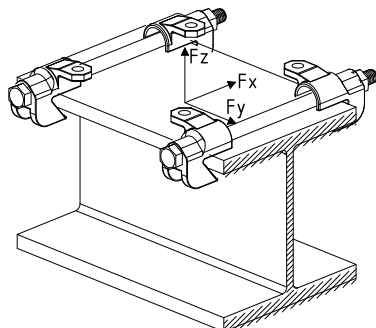
Cramping sets type F2 AH, hot-dip galvanised

Field of application


- For attachment of pipe slide to the supporting steel structure
- Applicable as anchor point and as guidance (expansion point) with lift-off securing
- Hot-dip galvanised version for indoor and outdoor applications
- Applicable for pipe slides with a base plate thickness up to 15 mm















Advantages

- Pre-assembled sets consisting of cramping elements and the associated bolts and nuts available
- 1 set consists of cramping elements and corresponding bolts and nuts for attachment of the pipe slide to the supporting steel structure



Area of application of support profile	Abbreviation	Connection to profile		Loading			Thread	Weight [kg/piece]	Part no.	Sales unit	Pack unit
		Flange thickness [mm]	Profile width [mm]	F _x [kN]	F _y [kN]	F _z [kN]					
HEA acc. to DIN 1025 part 3	100	8.0	100	-	±4,0	-5,0	M12	0.8	134690	1	set
	120		120						133065		
	140	8.5	140						134691		
	160	9.0	160						133263		
HEB acc. to DIN 1025 part 2	100	10.0	100	132069							
	120	11.0	120	132639							
	140	12.0	140	135373							
	160	13.0	160	135374							
I 240 acc. to DIN 1025 part 1	240	13.1	106	135461							
IPE acc. to DIN 1025 part 5	220	9.2	110	135469							
	240	9.8	120	135476							
	270	10.2	135	135477							
	330	11.5	160	135478							
	360	12.7	170	135479							
T120 acc. to DIN 1024	120	13.0	120	135491							

 When ordering please specify the profile type. Applicable for pipe slides with a base plate thickness of up to 15 mm. Other cramping sets available upon request.

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9. Ventilation 
10. Stainless steel 
11. Hot-dip galvanised products 
12. Anchor plugs 
13. Technical information 



MPT-Support profiles Q100

8/1–8/2



MPT-Console Q100

8/3–8/4



MPT-Console Q50

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MPT-Girder cleats

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MPT-Support profiles Q100

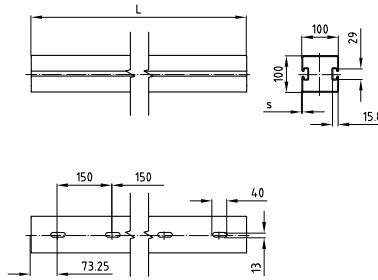
hot-dip galvanised

Field of application

- For support structures used in heavy-duty building technology and on industrial and plant building sites

Advantages

- For construction of safe structures due to the high load-bearing capacity of the profiles
- High corrosion protection due to standardised hot-dip galvanising ensures flexible implementation
- Efficient installation due to the double fastening groove
- Saves time and costs due to functional accessories that are matched to the support profile
- System components with finished surface and ready for installation save set-up and installation time
- Product quality is ensured through the imprinted manufacturing code
- Continuous fastening groove for flexible arrangement of accessories and fastening components



Profile	Profile length L [mm]	Profile thickness s [mm]	Part no.	Sales unit	Pack unit	Weight [kg/piece]
Q100-2.5	6,000	2.5	131608	1	pieces	59.820
Q100-3.5		3.5	131609			84.300



MPT-Support profile Q100 hot-dip galvanised


Technical data of profiles:

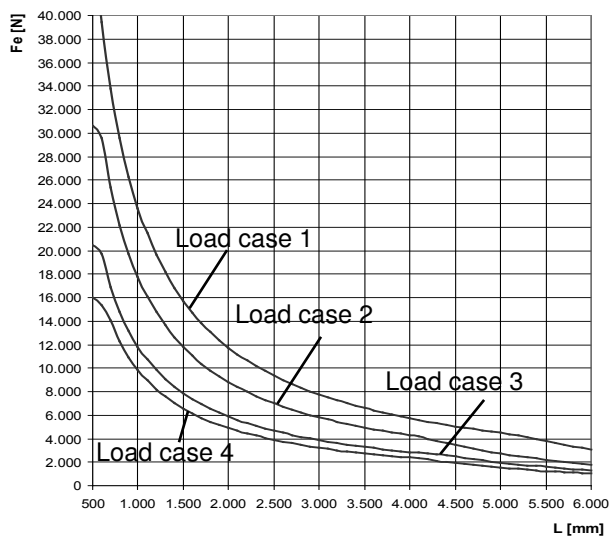
Profile	Available hammer head bolts	Profile weight [kg/m]	Profile cross [cm ²]	Moment of inertia		Resistance moment		Max. permitted point load capacity	
				I _y [cm ⁴]	I _z [cm ⁴]	W _y [cm ³]	W _z [cm ³]	F [N]	[cm]
Q100-2.5	M10	9.97	12.8	185.1	156.0	37.0	31.2	6,000	50
	M12							8,000	
Q100-3.5	M10	14.05	17.3	249.1	213.9	49.8	42.8	10,000	
	M12							12,000	

Max. load capacities [N]:

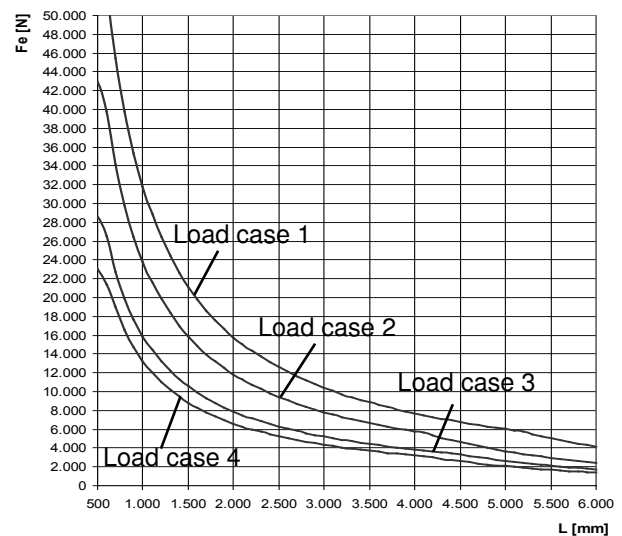
Profile	Bending into direction	L [m]						L [m]					
		0.5	1.0	1.5	2.0	4.0	6.0	0.5	1.0	1.5	2.0	4.0	6.0
Q100-2.5	ZZ	47,336	23,631	15,713	11,742	5,742	3,089	30,642	17,741	11,785	8,802	4,294	1,813
Q100-3.5		63,710	31,803	21,145	15,798	7,692	4,133	42,899	23,876	15,858	11,843	5,771	2,426

Profile	Bending into direction	L [m]						L [m]					
		0.5	1.0	1.5	2.0	4.0	6.0	0.5	1.0	1.5	2.0	4.0	6.0
Q100-2.5	ZZ	20,428	11,816	7,857	5,871	2,882	1,300	15,321	9,846	6,547	5,154	2,385	1,021
Q100-3.5		28,599	15,902	10,572	7,899	3,846	1,740	21,449	13,251	8,810	6,583	3,205	1,367

 At the indicated values, the max. admissible steel stress $\sigma_{adm.} = 160 \text{ N/mm}^2$ and the max. admissible deflection $L/150$ is not being exceeded - dead weight has also been considered.
Load capacity values are valid for primarily static load.



MPT-Support profile Q100-2.5



MPT-Support profile Q100-3.5

MPT-Console Q100

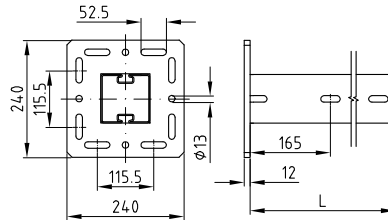
hot-dip galvanised

Field of application

- Console for accommodation of pipelines and aggregates in industrial construction, plant building construction and heavy-duty building technology for attachment on floor, wall and ceiling

Advantages

- Stable, perforated baseplate for direct or indirect connection to the structure
- High corrosion protection due to standardised hot-dip galvanising ensures flexible implementation outdoors and indoors
- Quick fastening of add-on parts via the dual-side fastening groove
- Can also be implemented universally as support from the floor or as a shaft from the ceiling

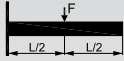
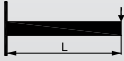
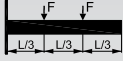




Size	Length L [mm]	Part no.	Sales unit	Pack unit	Weight [kg/piece]
Q100-2.5	500	135617	1	pieces	8.960
	750	135619			11.480
	1,000	135620			13.960
	1,500	135621			18.960
	2,000	135622			23.960
	3,000	135623			33.960

MPT-Console Q100

hot-dip galvanised

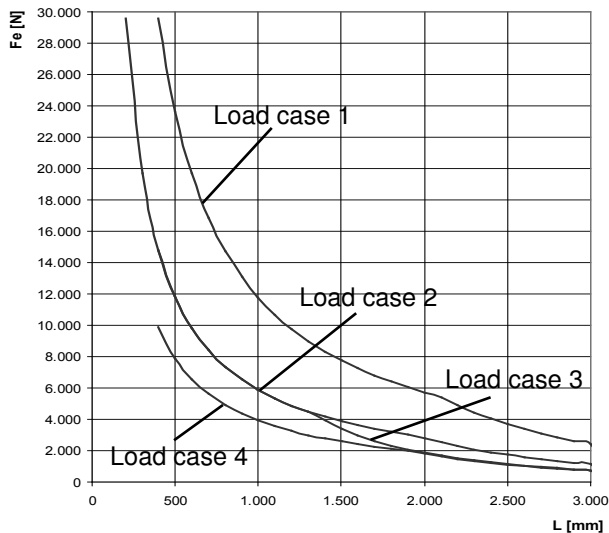
Max. load capacities [N]:

Profile	Lenght L [mm]	L [m] 	L [m] 	L [m] 	L [m] 
Q100-2.5	500	23,631	11,816	11,816	7,877
	750	15,784	7,892	7,892	5,261
	1,000	11,742	5,871	5,871	3,914
	1,500	7,742	3,400	3,873	2,582

 At the indicated values, the max. admissible steel stress $\sigma_{adm.} = 160 \text{ N/mm}^2$ is not being exceeded – dead weight has also been considered.

Load capacity values are valid for primarily static load.

The load-carrying values refer to the console support. Fastening elements such as plugs and screws, must be chosen in accordance with the loads. If capacity utilisation of the specified values for load-bearing capacity exceeds 60 %, bracing elements need to be included.



MPT-Console Q100-2.5

MPT-Console Q50

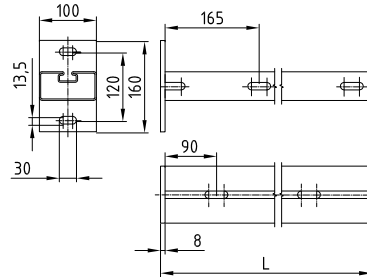
hot-dip galvanised

Field of application

- Console for accommodation of pipelines and aggregates in industrial construction, plant building construction and heavy-duty building technology for attachment on floor, wall and ceiling

Advantages

- Baseplate for direct or indirect connection to the structure
- Quick fixing due to continuous mounting slot
- High corrosion protection due to standardised hot-dip galvanising ensures flexible implementation outdoors and indoors



Size	Length L [mm]	Part no.	Sales unit	Pack unit	Weight [kg/piece]
Q50-2.5	500	147941	1	pieces	2.540
	750	147942			1.680
	1,000	147943			1.250

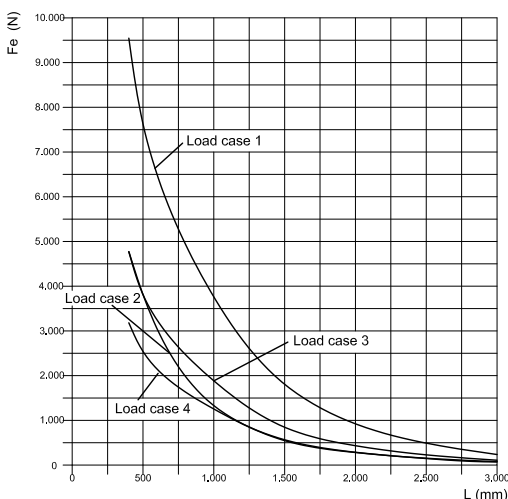
Max. load capacities [N]:

Profile	Length L [mm]	L [m]			
Q50-2.5	500	7,620	3,810	3,810	2,540
	750	5,060	2,390	2,530	1,680
	1,000	3,760	1,330	1,880	1,250

At the indicated values, the max. admissible steel stress $\sigma_{adm.} = 160 \text{ N/mm}^2$ is not being exceeded – dead weight has also been considered.

Load capacity values are valid for primarily static load.

The load-carrying values refer to the console support. Fastening elements such as plugs and screws must be chosen in accordance with the loads. If capacity utilisation of the specified values for load-bearing capacity exceeds 60 %, bracing elements need to be included.



MPT-Console Q50-2.5

MPT-Girder cleats

hot-dip galvanised

Field of application

- Attachment of MPT-Support channels to steel girders without drilling or welding

Advantages

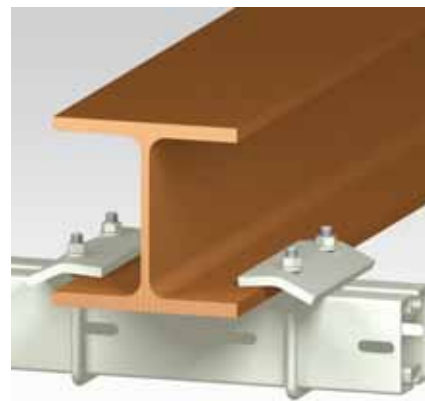
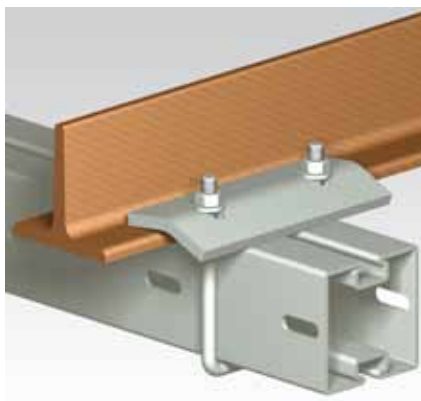
- Suitable for steel beams with flange thicknesses up to 25 mm
- Easy to install, pre-assembled kit
- High-level corrosion protection due to standardised hot-dip galvanising ensures flexible implementation outdoors and indoors



For profile Q50

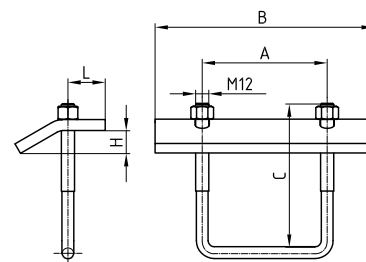


For profile Q100

















Features

For profile	Max. permitted loading/pair [N]
Q100-2.5, Q100-3.5	12,000
Q50-2.5, Q50-3.5	



For profile	Thread	Part no.	Sales unit	Pack unit	Weight [kg/piece]	Dimensions [mm]				
						A	B	C	H	L
Q100-2.5, Q100-3.5	M12	151344	1	pieces	1.425	114	200	180	17.4	28.6
Q50-2.5, Q50-3.5		151343						130		

0. MÜPRO 
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13. Technical information 



Duct clamps

9/1–9/2



Duct fixing bracket

9/3–9/4



Duct fixing angles

9/5

Duct clamps

with DÄMMGULAST® orange, galvanised

Field of application

- For attachment of spiral-seam pipes

Advantages

- Manufactured to suit spiral-seam dimensions
- Practical latching fastener: simple and secure insertion and fastening of the pipe due to quick fastener for nominal pipe size of up to 450 mm, M8 hexagon screws for pipe sizes from 450 mm and upwards
- Easy installation due to the wide opening angle of the clamp
- Added rigidity due to the grooved design of the duct clamp
- Easy clicking-in of the fastening bolt with the tip of a finger

- High level of safety due to the hinge-like opening
- No inadvertent opening once it has clicked in
- The easy click-in fastener allows opening and closing of the pipe clamp with only one hand
- DÄMMGULAST® Vibration control lining with orange identification stripe: average vibration reduction of 18 dB(A)
- Manufactured to suite connecting thread M8/M10



This product is awarded with the "Gütezeichen Rohrbefestigung" (quality mark of pipe support) and is submitted to controls according to RAL-GZ 655-B



Pipe nominal size [mm]	Connecting thread	Part no.	Sales unit	Pack unit
80	M8/M10	143247	100	pieces
90		143248		
100		143249		
112		143250		
125		143251		
140		143252	50	
150		143253		
160		143254		
180		143255	25	
200		143256		
224		143257		
250		143258		
280		143259		
300		143260		
315		143261		
355		143262	1	
400		143263		
450		143264		
500		143265		
560		143266		
600	143267			
630	143268			
710	143269			
800	143270			

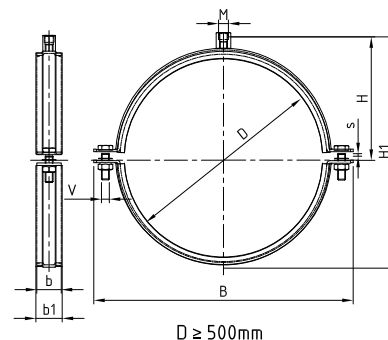
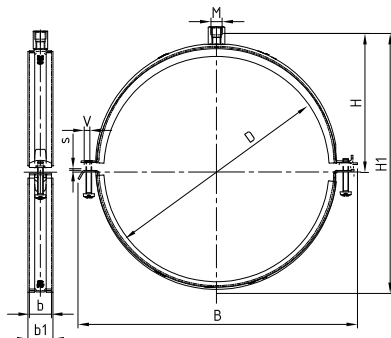
Duct clamps can be produced in all other pipe sizes and types according to customer specifications.

Duct clamps with DÄMMGULAST® orange, galvanised

Features



Nominal pipe diameter [mm]	Max. recommended load [N]
80–200	700
224–450	1,000
500–800	1,200



Pipe nominal size [mm]	Dimensions [mm]							
	V	b x s	B	b1	H	H1		
80	M5	20 x 1.5	124	23	65	114		
90			137		70	124		
100			149		76	135		
112			157		82	147		
125			170		88	160		
140			185		96	175		
150			195		101	185		
160			205		106	195		
180			225		116	215		
200			245		126	235		
224			M6		25 x 1.5	286	28	138
250	312	151		285				
280	342	166		315				
300	363	177		336				
315	378	184		351				
355	418	204		391				
400	25 x 2.0	462		227		436		
450		513		253		487		
500		M8		567		278		538
560				25 x 2.5		627		308
600	667		328		638			
630	697		343		668			
710	777		383		748			
800	867	428	838					



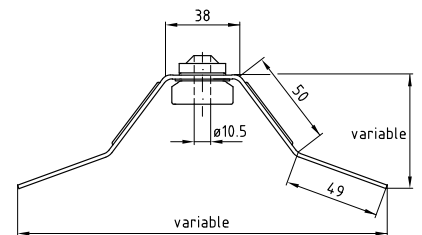
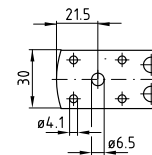
Duct fixing bracket with insulator, galvanised

Field of application

- For vibration-isolated suspension of round and rectangular air ducts
- Versatile application options, e. g. on trapezoidal corrugated metal sheeting for the suspension of MPC-Support channels

Advantages

- DÄMMGULAST® Spring element integrated in the duct fixing bracket
- Average vibration reduction of 16 dB(A)
- Ideal adaptation to all duct diameters and cross-sections due to pre-determined bending points
- Simple attachment to the air duct with rivets or self-drilling screws
- Suspension of the duct fixing bracket from threaded rods or direct attachment to the structure



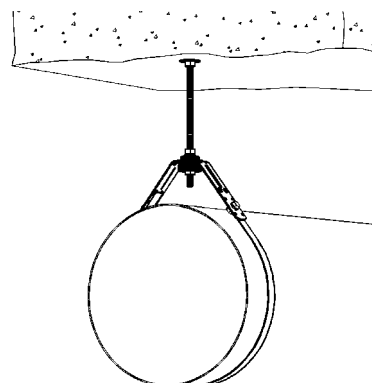
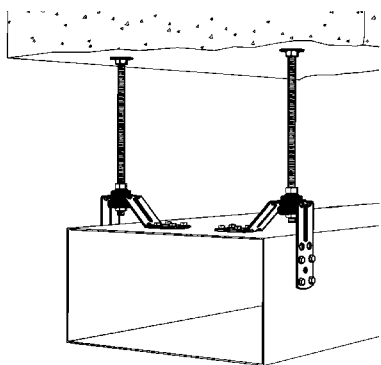
Features



Max. recommended load [N]	230	
Part no.	Sales unit	Pack unit
116516	100	pieces

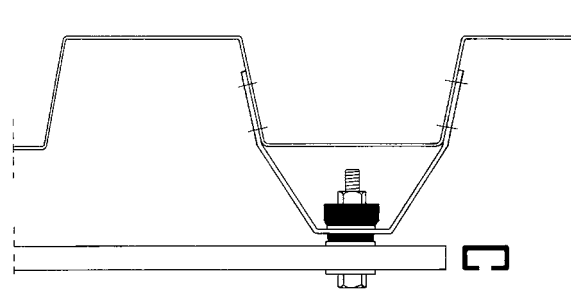
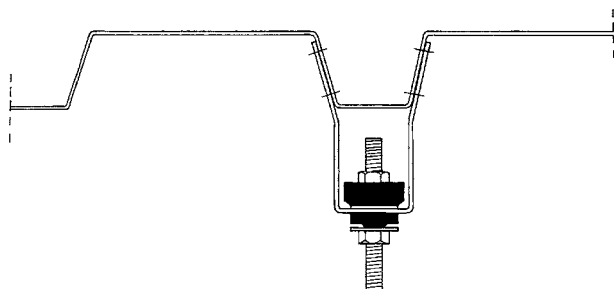


Duct fixing bracket with insulator, galvanised



Rectangular duct attached to the ceiling with duct fixing brackets, threaded rods and steel anchors

Air duct suspended from the ceiling with duct fixing bracket, steel tape or punched tape



Direct attachment to trapezoidal corrugated steel sheet with a duct fixing bracket

Vibration damped attachment of a MPC-Support channel to a wide trapezoidal corrugated sheet with a duct fixing bracket

! The highly-elastic DÄMMGULAST® Spring element is essential for efficient prevention of structure-borne vibration. The installation is carried out with threaded rods. This prevents vibration coupling between air pipe or air duct and the structure. The duct fixing bracket is attached to the air pipe or duct section with rivets or selfdrilling screws.



Duct fixing angles with insulator, galvanised

Field of application

- Easy to install suspension for air ducts

Advantages

- Incorporated highly-elastic vibration-isolating element
- Excellent alignment and height adjustment via the threaded rods
- Design as angle and twin-angle
- Various attachment options to air duct with rivets, self-drilling screws or bolts up to M8 in the oblong hole
- Direct attachment to building structure possible
- Average vibration reduction of 17 dB(A)



Duct fixing angles

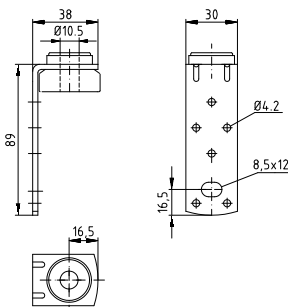
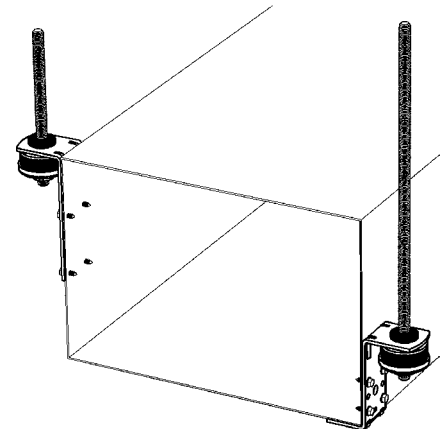


Duct fixing twin-angles

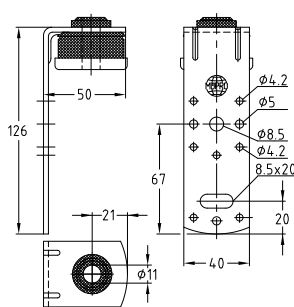
Features



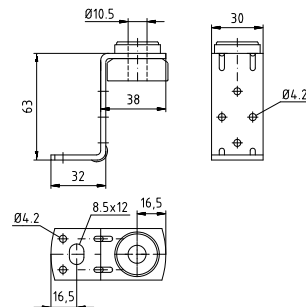
Type	Max. recommended load [N]	Average vibration reduction [dB(A)]
I	230	16
II	800	17



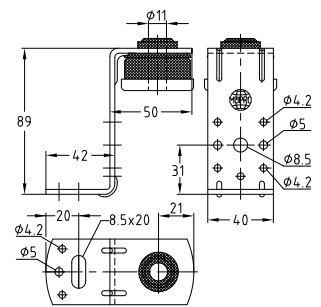
Duct fixing angles Type I



Duct fixing angles Type II

















Duct fixing twin-angles Type I









Duct fixing twin-angles Type II

	Type	Part no.	Sales unit	Pack unit
Duct fixing angles with insulator, galvanised	I	116579	100	pieces
	II	116635	50	
Duct fixing twin-angles with insulator, galvanised	I	116543	100	
	II	116546	50	
Rubber washers, single	12 x 24 x 4 mm	113092	100	
	12 x 24 x 6 mm	113094		

Duct fixing angles and twin-angles are also available in other lengths.

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12. Anchor plugs 
13. Technical information 

	Single bossed clamps with DAMMGULAST® yellow	10/1–10/2
	MPC-Support channels	10/3–10/5
	MPC-Saddle supports	10/6
	Threaded pins	10/7
	Threaded rods	10/7
	Round connectors	10/8
	Bolt screws	10/8
	Hexagonal nuts	10/8
	Washers	10/9
	Hexagonal head bolts	10/10
	Allen bolts	10/10
	Steel anchors	10/11

Single bossed clamps with DÄMMGULAST® yellow

Field of application

- Application in areas with high demands on sound insulation
- Suitable for attachments in industrial areas, as well as in air-conditioning, ventilation and sanitary areas
- For indoor and outdoor use

Advantages

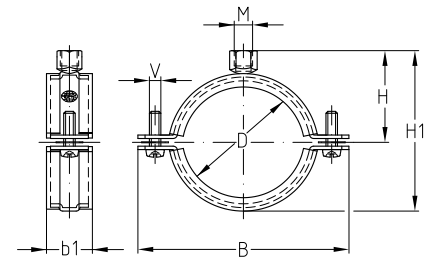
- Proven two-piece single bossed clamp
- 2 locking screws allow adjustments to accommodate a greater variation in pipe diameter

- Tightening bolts with combination cross-head convenient for power driver
- Tightening bolts secured with captive washers
- Acoustic insulation, positive-fit insulation lining with wide clip-over edges prevent them from slipping out of the clamp
- Vibration control lining DÄMMGULAST® with yellow identification stripe: average vibration improvement of up to 22.7 dB(A)



Features

Size	Max. recommended load [N]
3/8"-2"	1,500
70 mm-6"	3,166



Connecting thread	Size		Clamping range [mm]	Part no.		Sales unit	Pack unit	Dimensions [mm]					
	[inch]	[mm]		V2A	V4A			B	b1	H	H1	V	
M8	3/8		15-20	127928	127931	25	pieces	64	23	28	44	M6	
	1/2		21-26	127802	127805			71		31	51		
	3/4		26-32	127916	127919			75		33	54		
	1		32-36	127772	127775			81		36	61		
	1 1/4		40-44	127790	127793			91		41	71		
	1 1/2		48-53	127781	127785			98		45	78		
		57	54-58	127955	127958			105		48	85		
	2		59-64	127886	127889			107	49	87			
		70	68-73	127974	127977			126	28	57	103		M8
	2 1/2		74-80	127898	127901			132		60	109		
		83	80-85	127987	127990			138		63	114		
	3		88-93	127907	127910			146		67	123		
		102	99-103	127823	127826			161		74	137		
		110	108-112	127832	127835			175		79	147		
	4		112-118	127937	127940			176		82	152		
		125	125-130	127850	127853			188		86	161		
		133	133-137	127859	127862			196		90	169		
	5		137-142	127946	127949			201		93	175		
	160	159-164	127871	127874	220	102	193						
6		164-169	127416	127965	226	106	200						

Single bossed clamps can be produced in all other pipe sizes and types according to customer specifications.

Single bossed clamps with DÄMMGULAST® yellow

Connecting thread	Size		Clamping range [mm]	Part no.		Sales unit	Pack unit	Dimensions [mm]						
	[inch]	[mm]		V2A	V4A			B	b1	H	H1	V		
M10	3/8		15–20	127332	127335	25	pieces	64	23	30	46	M6		
	1/2		21–26	127096	127102			71		33	53			
	3/4		26–32	127314	127317			75		35	56			
	1		32–36	127056	127058			81		38	63			
	1 1/4		40–44	127078	127081			91		43	73			
	1 1/2		48–53	127066	127069			98		47	80			
		57	54–58	127401	127404			105		50	87			
	2		59–64	127231	127234			107		51	89			
		70	68–73	127437	127440			126		28	59		105	M8
	2 1/2		74–80	127252	127255			132			62		111	
		83	80–85	127449	127452			138	65		116			
	3		88–93	127302	127305			146	69		125			
		102	99–103	127111	127114			161	76		139			
		110	108–112	127126	127129			175	81		149			
	4		112–118	127353	127356			176	84		154			
		125	125–130	127138	127141			188	88		163			
		133	133–137	127147	127150			196	92		171			
	5		137–142	127380	127383			201	95		177			
		160	159–164	127195	127198			220	104	195				
	6		164–169	127419	127422			226	108	202				



Single bossed clamps can be produced in all other pipe sizes and types according to customer specifications.



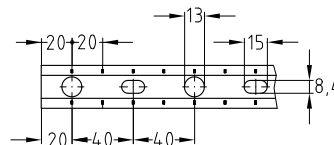
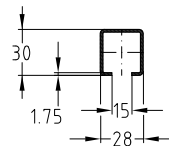
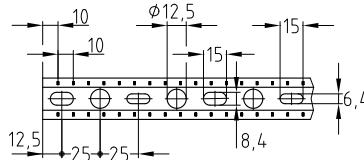
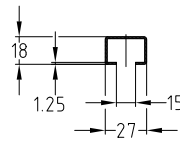
MPC-Support channels

Field of application

- Ideally suitable as support structure for air ducts
- Variety of mounting options for pre-wall installations and shelves in combination with extensive range of system components

Advantages

- Quick and efficient attachment of pipe sections and multiple pipe-ways
- Scale marks on the sides and on the side with the slot simplify the alignment of the attachment elements during installation and facilitate the measuring and cutting to length of the section on site
- For secure attachment that is adjustable laterally and vertically
- High bending stiffness due to convenient cross-section design
- For setting up structures with correctly measured static loads by means of diverse connection components
- Suitable vibration control elements for all support channels available
- Clean-cut appearance by the use of MPC-Protection caps



Profile 27/18



Profile 28/30

Features



Profile	Length [mm]	Part no.		Sales unit	Pack unit
		V2A	V4A		
27/18	2,000	129907	129908	1	pieces
	6,000	129999	-		
28/30	2,000	118582	118586	1	pieces
	6,000	118976	118979		



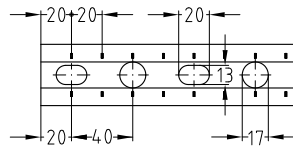
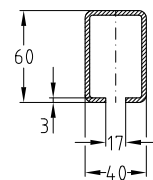
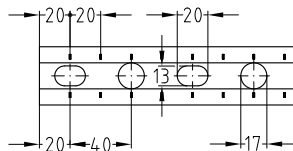
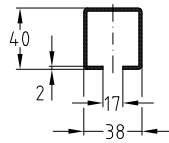
MPC-Support channels

Field of application

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- Variety of mounting options for pre-wall installations and shelves in combination with extensive range of system components

Advantages

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- For secure attachment that is adjustable laterally and vertically
- High bending stiffness due to convenient cross-section design
- For setting up structures with correctly measured static loads by means of diverse connection components
- Suitable vibration control elements for all support channels available
- Clean-cut appearance by the use of MPC-Protection caps



Profile 38/40



Profile 40/60

Features



Profile	Length [mm]	Part no.		Sales unit	Pack unit
		V2A	V4A		
38/40	2,000	129914	129915	1	pieces
	4,000	129962	129963		
	6,000	130006	130007		
40/60		130017	130018		



MPC-Support channels


Technical data of profiles:


Profile	Available MPC-Rail nuts	Profile weight [kg/m]	Profile cross-section [cm ²]	Moment of inertia		Resistance moment		Max. allowable point load capacity	
				I_y [cm ⁴]	I_z [cm ⁴]	W_y [cm ³]	W_z [cm ³]	F [N]	[cm]
27/18	M8, M10	0.60	0.72	0.31	1.00	0.33	0.74	1,700	7
28/30		1.16	1.42	1.52	2.16	0.99	1.54	2,500	12
38/40	M8, M10, M12	1.82	2.28	4.60	6.34	2.30	3.33	5,000	15
40/60		3.50	4.62	19.10	14.07	6.36	7.03	8,300	23

Max. load capacities [N]:

Profile	L [m]						L [m]					
	0.5	1.0	1.5	2.0	4.0	6.0	0.5	1.0	1.5	2.0	4.0	6.0
27/18	420	204	86	–	–	–	315	120	–	–	–	–
28/30	1,264	627	413	240	–	–	948	470	260	141	–	–
38/40	2,939	1,463	967	718	–	–	2,204	1,097	725	440	–	–
40/60	8,131	4,051	2,685	1,997	720	230	6,098	3,038	2,014	1,498	420	130

Profile	L [m]						L [m]					
	0.5	1.0	1.5	2.0	4.0	6.0	0.5	1.0	1.5	2.0	4.0	6.0
27/18	210	86	–	–	–	–	175	67	–	–	–	–
28/30	632	313	186	101	–	–	526	261	146	79	–	–
38/40	1,469	731	483	315	–	–	1,224	609	403	248	–	–
40/60	4,065	2,025	1,342	998	300	100	3,388	1,688	1,118	832	240	80

 At the stated values, the max. admissible steel stress $\sigma_{adm.} = 160 \text{ N/mm}^2$ and the max. admissible deflection $L/150$ are not exceeded - dead weight has also been considered.

 For max. load capacities of profiles 38/40 and 40/60 for wider spans please refer to chapter "Technical information".

MPC-Saddle supports

Field of application

- Simple assembly of strong cross-beams using MPC-Support channels
- Applicable for cramped installation conditions in shafts and ducts

Advantages

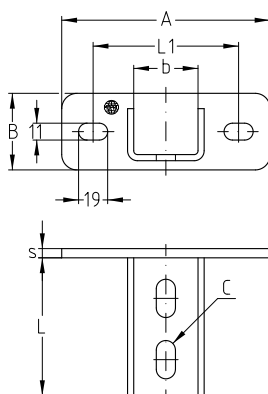
- Consistent oblong holes in the base plate enable simple alignment of the flange
- Good load transfer due to the high bending stiffness of the saddle connection
- Ideal connecting element for channel constructions



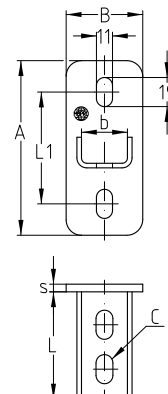
MPC-Saddle support, crosswise



MPC-Saddle support, lengthwise



MPC-Saddle support, crosswise



MPC-Saddle support, lengthwise

Features



Description	For support channels	Part no.		Sales unit	Pack unit	Dimensions [mm]						
		V2A	V4A			A	B	b	s	L	L1	C
Crosswise	27/18, 28/30	129650	129651	5	pieces	125	40	30	5	70	84	11 x 19
	38/40, 40/60	129657	129654			136	50	42	6	90	95	13 x 25
Lengthwise	27/18, 28/30	129634	129635			114		30	5	70	73	11 x 19
	38/40, 40/60	129640	129641			144	70	42	6	90	103	13 x 25



Threaded pins

Thread	Length [mm]	Part no.		Sales unit	Pack unit
		V2A	V4A		
M8	25	114160	114163	100	pieces
	30	114175	114181		
	40	114202	114205		
	50	114217	114220		
	60	114235	114238		
	70	114247	114250		
	80	114256	114259		
	90	114265	114268		
	100	114105	114112		
	120	114122	114125		
	140	114131	114134		
M10	25	113756	113759	50	pieces
	30	113771	113774		
	40	113798	113801		
	50	113807	113810		
	55	113816	113819		
	60	113831	113834		
	70	113846	113849		
	80	113852	113855		
	90	113864	113867		
	100	113687	113690		
	120	113708	113711		
	140	113717	113720		
M12	25	113936	113939	50	pieces
	60	113986	113989		
	80	113995	113998		
	100	113873	113876		
	110	113888	113891		



Threaded rods

Thread	Length [m]	Part no.		Sales unit	Pack unit	Part no.	Sales unit	Pack unit
		V2A	V4A					
M6	1	113594	113597	25	pieces	113597	25	pieces
M8		113621						
M10	2	113645	113648	10	pieces	113458	10	pieces
	1	113455	113479					
M12	1	113501	113504	20	pieces	113504	5	pieces
	2	113519						
M16	1	113537	113540	5	pieces	113540	5	pieces
	2	113555						



Round connectors

for extension of fastening threads

Thread	Length [mm]	Part no.	Outer diameter [mm]	Part no.	Outer diameter [mm]	Sales unit	Pack unit
		V2A		V4A			
M8	30	113262	11	113266	11	100	pieces
	40	113277		113280			
M10	30	113169	13	113172	13	50	
	40	113178		113181			
M12	30	113199	15	113202	15		
M16	40	113227	22	113230	25		



Bolt screws

for fastening to wooden ceilings or for use with nylon plugs

Connecting thread	Total length [mm]	Wood thread	Wood thread length [mm]	Metric thread length [mm]	Spanner size [mm]	Material	Part no.	Sales unit	Pack unit
M8	50	H8	27	20	-	V2A	129713	100	pieces
	60		37				129716		
	80		47	30	6		129723		
	100			40	129697				
	120			50	129701				
	140			129705					
	160			129707					
M10	60	H10	37	20	8	129677	50		
	80		47			129679			
	100		57	30		129665			
	120			40		129667			
	140			129669					
	160			129671					
	180			129673					
M12	80	H12		20	10	129684			



Hexagonal nuts

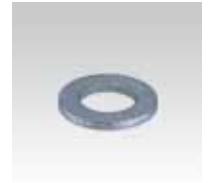
DIN 934

Thread	Nut height [mm]	Spanner size [mm]	Part no.		Sales unit	Pack unit
			V2A	V4A		
M6	5.0	10	105477	105479	100	pieces
M8	6.5	13	105486	105488		
M10	8.0	17	105423	105425		
M12	10.0	19	105439	105441		
M16	13.0	24	105453	105455		
M20	16.0	30	105465	105467	50	
M24	19.0	36	105470	105472	25	



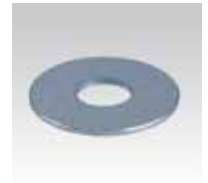
Washers DIN 125

For thread	Outer diameter [mm]	Thickness [mm]	Part no.		Sales unit	Pack unit
			V2A	V4A		
M6	12	1.6	127301	127304	100	pieces
M8	16		127313	127272		
M10	20	2.0	127269	127283		
M12	24	2.5	127280	127292		
M16	30	3.0	127289	127275		



Washers with larger outer diameter for attachment of MPC-Support channels

For thread	Outer diameter [mm]	Thickness [mm]	Part no.		Sales unit	Pack unit
			V2A	V4A		
M8	24	2.0	127190	127199	100	pieces
	30		127204	127207		
M10	35	2.5	127097	127103		
	37		127106	127112		
M12	37	3.0	127160	127163		



Hexagonal head bolts

DIN 933

Thread	Length [mm]	Part no.		Sales unit	Pack unit
		V2A	V4A		
M8	16	105754	105755	100	pieces
	20	105760	105761		
	25	105765	105767		
	30	105772	105774		
	35	105778	105780		
	45	105785	105786		
	55	105791	105792		
M10	20	105553	105555	50	pieces
	25	105561	105562		
	30	105568	105570		
	35	105577	105579		
	40	105586	105588	50	
	55	105597	105598		
	60	105601	105602		
	80	105607	105608		
M12	100	105541	105540	100	pieces
	25	105618	105619		
	30	105622	105624		
	35	105627	105629		
	50	105640	105641		
	60	105644	105645		
M16	70	105649	105650	50	pieces
	30	105666	105667		
	35	105669	105670		
	40	105672	105673		
M20	45	105674	105675	25	pieces
	50	105708	105709		
M24	60	105717	105718	25	pieces



Allen bolts

with metric thread for the attachment of MPC-Support channels with steel anchors

Thread	Thread length [mm]	Allen bolt spanner width [mm]	Material	Part no.	Sales unit	Pack unit
M8	16	6	V2A	121048	100	pieces
M10				121010		
				30		



Steel anchors

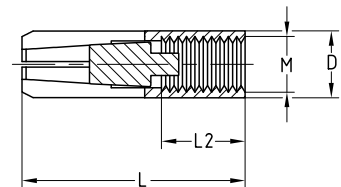
Field of application

- For anchorages of medium-weight loads in concrete and natural stone (hard) in dry interiors of buildings, in damp rooms as well as outdoor
- Versatilely applicable for attachment with screws or threaded rods in all plumbing, heating and ventilation installations

Advantages

- Secure grip due to controlled splaying as the taper is driven in

- Only small drilling depth required
- Flush finish with surface of the building material
- Secure expansion force even when the mounting screw is loosened
- European Technical Approval (ETA) for non-cracked and cracked concrete (reduced loads)
- When using the setting tool for check marking, the load test (proof load) of the anchor is not necessary



Features



Connecting thread	Overall length [mm]	Part no.	Sales unit	Pack unit	Drill-Ø D [mm]	Usable thread length [mm]	Multiple attachment of non-load bearing systems ETA approval		Non-cracked concrete, centrally tensile loaded ETA approval	
							Drilled hole depth h_0 [mm]	Approved load ¹⁾ [kN]	Drilled hole depth h_0 [mm]	Approved load ²⁾ [kN]
M6	30	129086	100	pieces	8	13	30	1.2	30	3,3 ³⁾
M8		129087			10					
M10	40	129082	50		12	20	40	2.0	40	6,1
M12	50	129083			15	18	50	2.4	50	8,5
M16	65	129084	25		20	23	-	-	65	12,6

¹⁾ Use as multiple attachment of non-load-bearing systems. The overall safety coefficient according to ETAG is taken into consideration. The European Technical Approval 05/0161 shall be observed for dimensioning.















²⁾ The approved loading applies for single anchors in concrete strength class \geq C20/25 (B25) for axially applied tension without the influence of axial and edge spacings. The safety coefficient according to ETAG is included. The European Technical Approval 05/0160 shall be observed for dimensioning.










³⁾ Only for use in statically indeterminate systems.

Setting tools for steel anchors

	Connecting thread	Part no.	Sales unit	Pack unit
Setting tools, hardened	M6	123117	1	pieces
Setting tools, hardened for check marking	M8	123104		
	M10	123092		
	M12	123096		
	M16	123113		



0. MÜPRO 
1. Vibration control 
2. Pipe clamps 
3. MSS products 
4. Support channels 
5. Accessories 
6. Anchor points/expansion points 
7. Heavy-duty pipe support 
8. MPT-Support system 
9. Ventilation 
10. Stainless steel 
11. Hot-dip galvanised products 
12. Anchor plugs 
13. Technical information 

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	Mounting angles	11/3
	Hexagonal bolts	11/4
	Hexagonal nuts	11/4
	Threaded rods	11/4
	Threaded pins	11/5
	Turnbuckles	11/5
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	Link chain	11/5

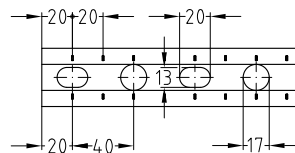
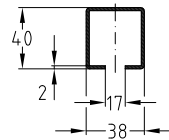
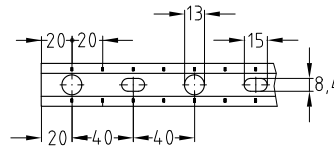
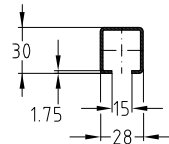
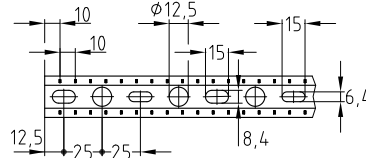
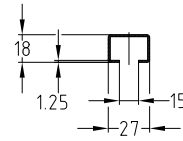
MPC-Support channels

Field of application

- Ideal for pipe installation as support structure for air ducts
- Variety of mounting options for wall-mounted installations and shelves in combination with extensive range of system components
- Suitable for outdoor use

Advantages

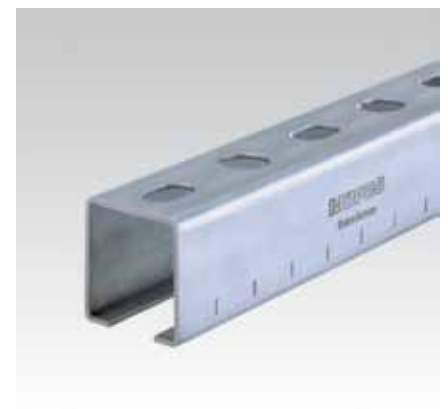
- Quick and efficient attachment of pipe sections and pipeways
- Scale marks on the sides and on the side with the slot simplify the alignment of the attachment elements during the installation and facilitate the measuring and cutting to length of the profiles on site
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- High bending stiffness due to the good cross-section design
- For setting up structures with correctly measured static loads by means of diverse connection components
- Suitable vibration control elements for all support channels available
- Clean-cut appearance by the use of protection caps



Profile 27/18




Profile 28/30



Profile 38/40

Profile	Length [mm]	Part no.	Sales unit	Pack unit
27/18	2,000	129909	10	pieces
	6,000	130004	1	
28/30		118990		
38/40	2,000	129916	4	
	6,000	130008	1	

 For further technical information please refer to chapter "Technical information".



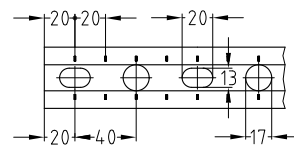
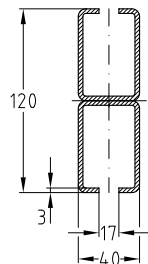
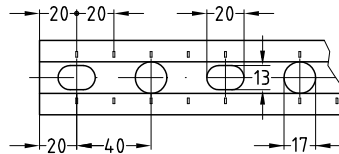
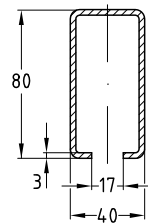
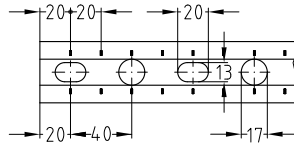
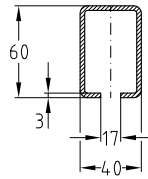
MPC-Support channels

Field of application

- Ideal for pipe installation as support structure for air ducts
- Variety of mounting options for wall-mounted installations and shelves in combination with extensive range of system components
- Suitable for outdoor use

Advantages

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- Scale marks on the sides and on the side with the slot simplify the alignment of the attachment elements during the installation and facilitate the measuring and cutting to length of the profiles on site
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- High bending stiffness due to the good cross-section design
- For setting up structures with correctly measured static loads by means of diverse connection components
- Suitable vibration control elements for all support channels available
- Clean-cut appearance by the use of protection caps



Profile 40/60



Profile 40/80



Profile 40/120

Profile	Length [mm]	Part no.	Sales unit	Pack unit
40/60	2,000	129920	1	pieces
	6,000	130019		
40/80		130022		
40/120	6,640	130033		

For further technical information please refer to chapter "Technical information".

Mounting angles

Field of application

- Solid fixing element for construction of pre-wall installations and shelves as well as for channel constructions for attachments of pipelines and air ducts without welding
- Also applicable for direct mounting on walls, ceilings or floors
- Suitable for outdoor use

Advantages

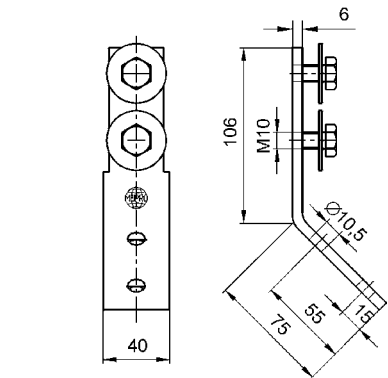
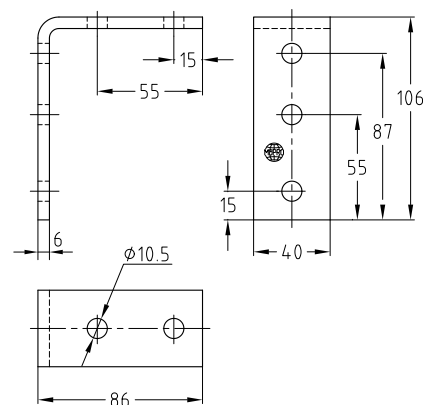
- Versatile in use due to oblong holes e. g. as:
 - Angular support bracket
 - Angular load-bearing bracket
 - Connection element
 - Angular bracket
- Multi-purpose component for professional, practical installation solutions



Mounting angle 90°



Mounting angle 45°



Angle [°]	Accessories	For support channels	Part no.	Sales unit	Pack unit
45	2 Washers, 2 hexagon head bolts M10	38/40, 40/60, 40/80, 40/120	118777	25	pieces
90	–		118846		



Hexagonal bolts

DIN 933

Thread	Length [mm]	Part no.	Sales unit	Pack unit	
M8	20	105745	100	pieces	
	30	105746			
	45	105747			
M10	16	105551			
	20	105558			
	30	105573			
	35	105581			
	55	105599			50
	60	105604			100
	100	105542			
M12	25	105620	50		
	35	105631			
	40	105636	100		
	50	105642			
	60	105646	50		
M16	45	105676	25		
	60	105680			
M20	50	105710			
M24	60	105719			



Hexagonal nuts

DIN 934

Thread	Part no.	Sales unit	Pack unit
M8	105497	100	pieces
M10	105431		
M12	105445		
M16	105459		
M20	105468		
M24	105473	25	



Threaded rods

DIN 975

Thread	Length [mm]	Part no.	Sales unit	Pack unit
M10	1,000	113452	25	pieces
	2,000	113483	10	
M12	1,000	113510	20	
M16		113546	10	
M20		113576	5	



Threaded pins DIN 976

Connecting thread	Length [mm]	Part no.	Sales unit	Pack unit
M12	100	113879	100	pieces
	150	113912		
	200	113924	50	
	250	113945		
	300	113951		



i For threaded pins with left-hand and right-hand thread please refer to chapter „Accessories“.

Turnbuckles DIN 1480

Connecting thread	Overall length [mm]	Adjustment range [mm]	Part no.	Sales unit	Pack unit
M12	125	80	125010	25	pieces
M16	170	110	125016		



Washers DIN 125















For thread	Part no.	Sales unit	Pack unit
M8	127346	100	pieces
M10	127318		
M12	127325		
M16	127328		









Link chain DIN 763

Length [m]	Part no.	Sales unit	Pack unit
30	112096	1	pieces



0. MÜPRO 
1. Vibration control 
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6. Anchor points/expansion points 
7. Heavy-duty pipe support 
8. MPT-Support system 
9. Ventilation 
10. Stainless steel 
11. Hot-dip galvanised products 
12. Anchor plugs 
13. Technical information 

	Steel anchors	12/1
	Setting tools for steel anchors	12/2
	Wedge anchors K	12/3
	Setting tools for wedge anchors K	12/3
	Heavy-duty anchors BZ	12/4–12/5
	Hollow-core slab ceiling anchors	12/6

Steel anchors galvanised

Field of application

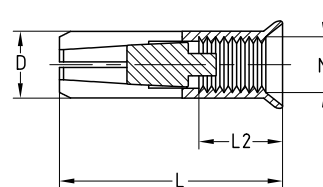
- For anchorages of medium-weight loads in concrete and natural stone (hard) in dry interiors of buildings
- Versatile and suitable for attachment with screws or threaded rods in all plumbing, heating and ventilation installations

Advantages

- Secure grip due to controlled splaying as the taper is driven in
- Requires only small drilling depth
- Flush finish with surface of the building material
- Secure expansion force even when the mounting screw is loosened
- European Technical Approval (ETA) for non-cracked and cracked concrete (reduced loads)
- If used the setting tools for check marking, test loading of the anchor is not required



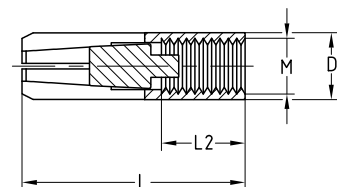
Steel anchor with collar



Steel anchor with collar



Steel anchor



Steel anchor

Features



								Multiple attachment of non-load bearing systems ETA approval		Non-cracked concrete, centrally tensile loaded ETA approval		
	Connecting thread	Anchor length L [mm]	Part no.	Sales unit	Pack unit	Drill- \varnothing D [mm]	Usable thread length [mm]	Drilled hole depth h_0 [mm]	Approved load ¹⁾ [kN]	Drilled hole depth h_0 [mm]	Approved load ²⁾ [kN]	
Steel anchor	M6	30	129092	100	pieces	8	13	30	1.2	30	3.3 ³⁾	
	M8		129093			1.7			2.8 ³⁾			
		40	129088	50		10	20	40	2.0	40	3.6	
	M10		129089			12			15			5.1
		50	129090	25		15	18	50	2.4	50	7.1	
	M12		129091			20			23			65
Steel anchor with collar	M8	30	149067	100		10	13	30	1.7	30	2.8 ³⁾	
		40	150703									2.0
	M10	30	149068	50		12	12	30		30	30	3.3 ³⁾
		40	149325									
		50	150704	50		15	18	50	2.4	50	50	7.1
	M12											

¹⁾ Use as multiple attachment of non-load-bearing systems. The overall safety coefficient according to ETA is taken into consideration. The European Technical Approval 05/0161 shall be observed for dimensioning.

²⁾ The admissible loads apply for single anchors in concrete strength class \geq C20/25 (B25) for axially applied tension without the influence of axial and edge spacings. The safety coefficient according to ETA is included. The European Technical Approval 05/0160 shall be observed for dimensioning.

³⁾ Only for use in statically indeterminate systems.

For the stainless steel version please refer to chapter „Stainless steel“. Please refer to the "Technical information" chapter for additional characteristic values, of plugs.

Setting tools for steel anchors

	Connecting thread	Part no.	Sales unit	Pack unit
Setting tools, hardened	M6 x 30	123117	1	pieces
Setting tools, for check marking, hardened	M8 x 30	123104		
	M8 x 40	123100		
	M10 x 40	123092		
	M12 x 50	123096		
	M16 x 65	123113		



Setting tools for steel anchors

with gloves, to set control markings

Connecting thread	Part no.	Sales unit	Pack unit
M8 x 30	151706	1	pieces
M8 x 40	151707		
M10 x 30	149401		
M10 x 40	150682		
M12 x 50	151708		
M16 x 65	151709		



Machine-setting tools for steel anchors

to set control markings

Connecting thread	Part no.	Sales unit	Pack unit
M8 x 30	151674	1	pieces
M10 x 40	151677		
M12 x 50	151696		



When inserting the plug with the setting tool the swivel function of the hammer drill must be switched off.



Wedge anchors K galvanised

Field of application

- Anchoring in non-cracked concrete
- For the anchoring of pipelines, cladding and cable channels on floor and wall

Advantages

- Sizes M6 to M20
- Fast, easy assembly with the setting tool by driving



Connecting thread	Anchor length L [mm]	Drill-Ø [mm]	Usable thread length [mm]	Part no.	Sales unit	Pack unit
M6	25	8	11	152778	100	pieces
M8	30	10	13	152779		
M10	40	12	15	152780	50	
M12	50	15	20	152781		
M16	65	20	25	152782	25	
M20	80	25	35	152783	15	



Please refer to chapter "Technical information" for additional characteristic values of plugs.

Setting tools for wedge anchors K

Connecting thread	Part no.	Sales unit	Pack unit
M6	152784	1	pieces
M8	152785		
M10	152786		
M12	152787		
M16	152788		
M20	152789		



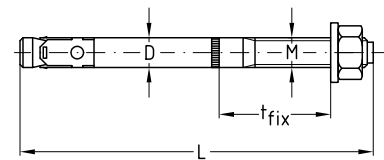
Heavy-duty anchors BZ galvanised

Field of application


- For anchorages of medium-weight to heavy loads in cracked and non-cracked concrete
- Attachment of wall hanger brackets, support channels, base plates, constructions made of metal and wood, cable trays, railings, etc.
- Also applicable in hard natural stone

Advantages




- Secure anchorage due to slit splaying sleeve with serrations
- Force-controlled splaying from the tightening torque
- Secure splaying due to taper with slide coating
- European Technical Approval (ETA) for cracked concrete (tensile zone) and non-cracked concrete (compression zone)
- Higher loading possible when used in the compression zone



Type	Connecting thread M	Clamping thickness t_{fix} [mm]	Overall length L [mm]	Anchor diameter D [mm]	Part no.	Sales unit	Pack unit
BZ 8/30	M8	30	95	8	116758	100	pieces
BZ 8/50		50	115		116764		
BZ 10/10	M10	10	90	10	116693	50	
BZ 10/30		30	110		116700		
BZ 10/50		50	130		116706		
BZ 10/75		75	155		116709		
BZ 12/15	M12	15	110	12	116715	25	
BZ 12/50		50	145		116725		
BZ 12/65		65	160		116728		
BZ 12/125		125	220		116712		
BZ 16/140	M16	140	260	16	116737	10	


 Also available in stainless steel.

Heavy-duty anchors BZ galvanised

Features			  	
			Central tensile load ETA approval	
Type	Drill- \varnothing D [mm]	Drilled hole depth min. ²⁾ h ₁ [mm]	Admissible load ¹⁾ [kN] cracked concrete	Admissible load ¹⁾ [kN] uncracked concrete
BZ 8/30	8	60	2.4	5.7
BZ 8/50				
BZ 10/10	10	75	4.3	7.6
BZ 10/30				
BZ 10/50				
BZ 10/75				
BZ 12/15	12	90	5.7	9.5
BZ 12/50				
BZ 12/65				
BZ 12/125				
BZ 16/140	16	110	11.9	16.7

¹⁾ The admissible loads apply for single anchors in concrete strength class \geq C20/25 for axially applied tension without the influence of axial and edge spacings. The safety coefficient according to ETA is included. The European Technical Approval shall be observed for dimensioning.

²⁾ Insert the anchor in the drilled hole up to the setting depth.

 Please refer to chapter "Technical information" for additional characteristic values of plugs.



Hollow-core slab ceiling anchors

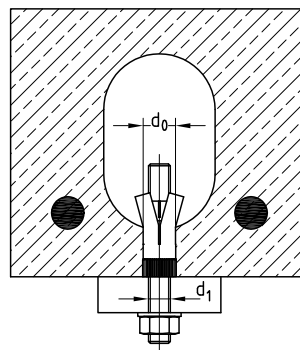
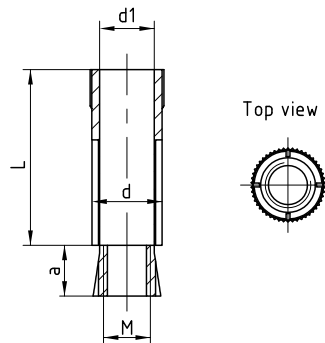
type Easy for anchoring in prestressed concrete hollow-core slab ceilings

Field of application

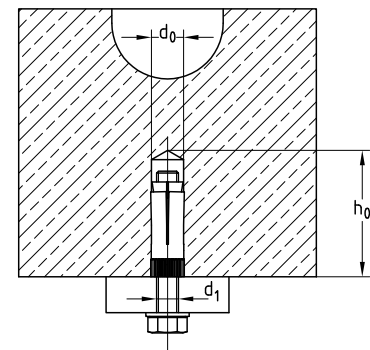
- Special anchor for suspension in prestressed concrete hollow-core slab ceilings

Advantages

- Flexible application in combination with threaded rods or hexagon head bolts
- Approved by the building authorities
- Secured function in the hollow core and in the solid material
- Quick and easy to install
- Flush with the surface of the building component
- For material thicknesses of up to 50 mm
- Approved by the VdS (Verband der Schadenversicherer) / Association of Indemnity Insurers



Application of the hollow-core slab ceiling anchor in the hollow core of the prestressed concrete ceiling slab

















Application of the hollow-core slab ceiling anchor in the solid material of the prestressed concrete ceiling slab

Features



Connecting thread	Sleeve length L [mm]	Drilled hole-Ø do [mm]	Drilled hole depth ho [mm]	Part no.	Sales unit	Pack unit	Max. allowable load ¹⁾ [kN] for material thickness			
							25 [mm]	30 [mm]	40 [mm]	50 [mm]
M8	35	12	55	116773	50	pieces	0.7	0.9	2.0	3.6
M10	40	16	60	116767			0.9	1.2	3.0	
M12	45	18	70	116770	25		1.0			4.3

¹⁾ The admissible loads apply for single anchors in prestressed concrete hollow-core slab ceilings of strength class C45/55 for axially applied tension, lateral load and inclined load at any angle without the effect of axial and edge clearances. The safety coefficient according to ETAG is included. The construction approval of the building inspectorate DIBt shall be observed for dimensioning.

0. MÜPRO 
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12. Anchor plugs 
13. Technical information 

Pipelines

pipe weights and distances between supports

Maximum recommended fastening distances for pipelines with single bossed clamps and DÄMMGULAST® Vibration control lining

Steel piping DIN 2448			Pipe weights			Maximum spacing [m]
DN [NW]	DN [inch]	Outer Ø [mm]	Empty [kg/m]	Water-filled [kg/m]	Water-filled + insulated [kg/m]	
10	3/8	17.2	0.68	0.83	1.5	1.4
15	1/2	21.3	0.95	1.19	2.0	1.6
20	3/4	26.9	1.40	1.79	2.7	1.9
25	1	33.7	1.99	2.64	3.7	2.2
32	1 1/4	42.4	2.69	3.90	5.2	2.6
40	1 1/2	48.3	2.93	4.39	6.3	2.7
46		51.0	3.10	4.76	6.8	2.8
50		57.0	3.87	5.93	8.1	3.1
50	2	60.3	4.11	6.44	8.8	3.1
57		63.5	4.33	6.95	9.4	3.2
65	2 1/2	76.1	5.24	9.12	12.0	3.6
76		82.5	6.26	10.81	14.7	3.8
80	3	88.9	6.76	12.11	16.3	3.9
94		101.6	8.70	15.70	20.5	4.3
100		108.0	9.27	17.25	22.3	4.4
100	4	114.3	9.83	18.84	24.2	4.6
		127.0	12.13	23.26	29.3	4.9
125		133.0	12.73	25.00	31.4	5.0
125	5	139.7	13.39	27.01	33.8	5.1
		152.4	16.41	32.57	40.0	5.5
150		159.0	17.15	34.82	42.7	5.6
150	6	168.3	18.18	38.11	46.6	5.7
		177.8	21.31	43.43	52.5	6.0
		193.7	25.08	51.35	61.4	6.0
200	8	219.1	31.02	64.78	76.7	6.0
		267.0	40.50	91.34	107.0	6.0
250	10	273.0	41.44	94.70	110.9	6.0

Threaded pipes DIN 2440		Pipe weights			Maximum spacing [m]
DN [inch]	Outer Ø [mm]	Empty [kg/m]	Water-filled [kg/m]	Water-filled + insulated [kg/m]	
1/4	13.5	0.65	0.71	1.3	1.2
3/8	17.2	0.86	0.99	1.7	1.4
1/2	21.3	1.22	1.42	2.2	1.7
3/4	26.9	1.58	1.96	2.8	1.9
1	33.7	2.44	3.03	4.1	2.2
1 1/4	42.4	3.14	4.16	5.4	2.6
1 1/2	48.3	3.61	4.99	6.9	2.8
2	60.3	5.10	7.31	9.6	3.2
2 1/2	76.1	6.52	10.24	13.1	3.7
3	88.9	8.47	13.61	17.8	4.1
4	114.3	12.19	20.90	26.3	4.7
5	139.7	16.13	29.41	36.1	5.3
6	165.1	19.17	38.14	46.4	5.8





Plug characteristic values for steel plugs

with and without collar, galvanised

Permissible loads of single plugs in non-cracked concrete, concrete strength class C20/25 B25 in accordance with ETA approval

Plug (thread)	Dim.	M6 ¹⁾	M8 ¹⁾	M8 x 40	M10	M10 x 30 ¹⁾	M12	M16
Permissible loads per plug at tensile force	perm. N [kN]	3.3	2.8	3.6	5.1	3.3	7.1	10.5
Permissible loads per plug at transverse load ²⁾	perm. V [kN]	2.1	3.9	3.9	4.1	3.9	9.0	16.8
Permissible bending moment ²⁾	perm. M [Nm]	2.7	8.1	8.1	15.8	15.8	27.8	71.0
Effective anchoring depth	h_{ef} [mm]	30	30	40	40	30	50	65
Characteristic axial spacing	$s_{cr,N}$ [mm]	90	90	120	120	90	150	195
Characteristic edge spacing	$c_{cr,N}$ [mm]	45	45	60	60	45	75	97.5
Minimum axial spacing	s_{min} [mm]	55	60	80	100	100	120	150
Minimum edge spacing	c_{min} [mm]	95	95	95	135	115	165	200
Minimum component thickness	h_{min} [mm]	100	100	100	120	120	130	160

¹⁾ Only for application of statically indetermined systems.

²⁾ With screw, strength class 5.6

Loads are for single plugs without the effects of axial and edge spacing.

The safety coefficient according to ETAG is included.

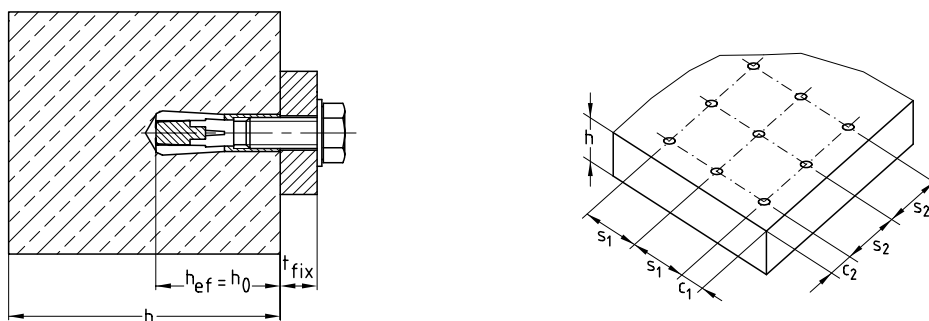
All the specifications in the European Technical Approval ETA-05/0160 need to be taken into account.

Installation and plug characteristic values

Plug (thread)	Dim.	M6	M8	M8 x 40	M10	M10 x 30	M12	M16
Drilled hole depth	$h_1 \geq$ [mm]	30	30	40	40	30	50	65
Nominal drill diameter	$d_0 =$ [mm]	8	10	10	12	12	15	20
Bit cutting diameter	$d_{cut} \leq$ [mm]	8.45	10.45	10.45	12.5	12.5	15.5	20.55
Torque for anchoring	$T_{inst} =$ [Nm]	4	8	8	15	15	35	60
Clearance hole in the component that will be connected	$d_f \leq$ [mm]	7	9	9	12	12	14	18
Minimum screwing depth	L_{sd} [mm]	7	9	9	11	10	13	18
Maximum screwing depth	L_{th} [mm]	13	13	20	15	12	18	23

See the European Technical Approval for additional installation and plug characteristic values.

Plug arrangement and component dimensions





Plug characteristic values for steel plugs

with and without collar, galvanised

Permissible loads for the use of multiple fastening of non-load bearing systems in concrete, strength class C20/25 (B25) in accordance with ETA approval

Plug (thread)	Dim.	M6	M8	M8 x 40	M10	M10 x 30	M12
Permissible loads per plug at tensile force	perm. N [kN]	1.2	1.7	2.0	2.0	2.0	2.4
Permissible bending moment steel 5.6	perm. M [kNm]	3.3	8.1	8.1	15.8	15.8	27.8
Effective anchoring depth	h_{ef} [mm]	30	30	40	40	30	50
Characteristic axial spacing	$s_{cr,N}$ [mm]	130	180	210	170	230	170
Characteristic edge spacing	$c_{cr,N}$ [mm]	65	90	105	85	115	85
Minimum axial spacing	s_{min} [mm]	55	60	80	100	100	120
Minimum edge spacing	c_{min} [mm]	95	95	95	135	115	165
Minimum component thickness	h_{min} [mm]	100	100	100	120	120	130

Use as multiple fastening of non-load bearing systems in cracked and non-cracked concrete. The total safety coefficient (γ_M and γ_F) in accordance with ETAG is included.

All the specifications in the European Technical Approval ETA-05/0161 need to be taken into account when dimensioning.

Installation and plug characteristic values

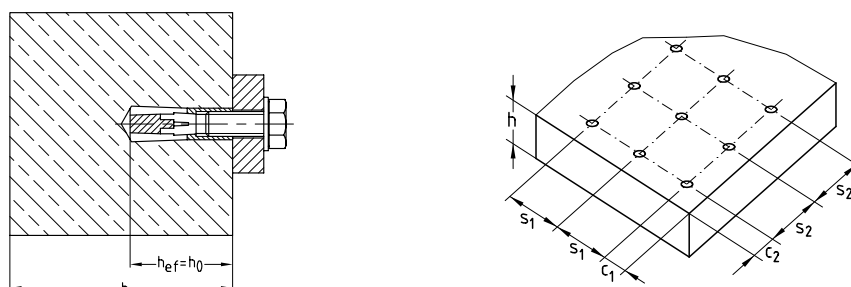
Plug (thread)	Dim.	M6	M8	M8 x 40	M10	M10 x 30	M12
Drilled hole depth	h_0 [mm]	30	30	40	40	30	50
Nominal drill diameter	d_0 [mm]	8	10	10	12	12	15
Bit cutting diameter	$d_{cut} \leq$ [mm]	8.45	10.45	10.45	12.5	12.5	15.5
Torque for anchoring	$T_{inst} =$ [Nm]	4	8	8	15	15	35
Clearance hole in the component that will be connected	$d_f \leq$ [mm]	7	9	9	12	12	14
Minimum screwing depth	L_{sd} [mm]	7	9	9	11	10	13
Maximum screwing depth	L_{th} [mm]	13	13	20	15	12	18

See the European Technical Approval for additional installation and plug characteristic values.

Loads under fire exposure (for screw 5.6 to 8.8)

Plug (thread)	Dim.	M6	M8	M8 x 40	M10	M10 x 30	M12
Permissible loads R30	perm. F [kN]	0.8	0.9	0.9	1.5	0.9	1.5
Permissible loads R60	perm. F [kN]	0.8	0.9	0.9	1.5	0.9	1.5
Permissible loads R90	perm. F [kN]	0.4	0.9	0.9	1.5	0.9	1.5
Permissible loads R120	perm. F [kN]	0.2	0.4	0.4	1.0	0.7	1.2
Characteristic axial spacing	$s_{cr,Fi}$ [mm]	130	180	210	170	170	200
Characteristic edge spacing	$c_{cr,Fi}$ [mm]	65	90	105	85	85	100
Minimum axial spacing	s_{min} [mm]	55	60	80	100	100	120
Minimum edge spacing	c_{min} [mm]	95	95	95	135	115	165

Plug arrangement and component dimensions



Characteristic load values for wedge anchors K

galvanised, for anchorages in concrete

Permissible loads, characteristic values and component dimensions of single plugs in non-cracked concrete, concrete strength class C20/25–C50/60

Wedge anchor K, galvanised	Dim.	M6	M8	M10	M12	M16	M20
Permissible loads per plug at tensile force	perm. N [kN]	1.83	3.78	5.92	8.39	12.39	16.93
Permissible loads per plug at transverse force	perm. V [kN]	2.56	5.28	8.27	11.74	23.31	36.40
Anchoring depth	h_{ef} [mm]	25	30	40	50	65	80
Minimum axial spacing	s_{min} [mm]	105	105	220	220	220	250
Minimum edge spacing	c_{min} [mm]	105	105	220	220	220	250
Minimum component thickness	h_{min} [mm]	100	100	100	100	140	160

For single plugs without the effects of axial and edge spacing.
 Partial safety factor 1.4.

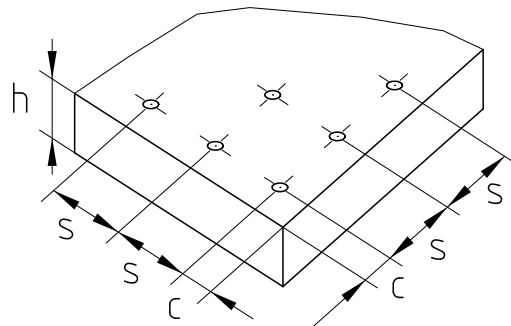
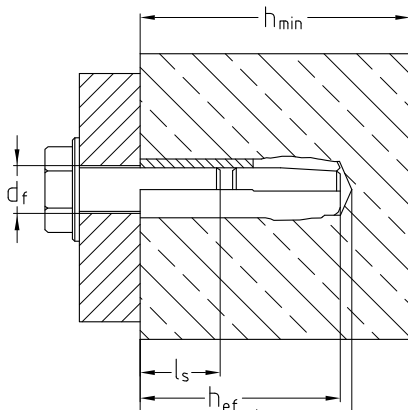
Permissible loads of single plugs in cracked concrete

Wedge anchor K, galvanised	Dim.	M6	M8	M10	M12	M16	M20
Permissible loads per plug at tensile force	perm. N [kN]	0.89	1.71	2.33	2.84	4.43	6.07
Permissible loads per plug at transverse force	perm. V [kN]	1.26	2.40	3.26	3.97	12.42	16.99

For single plugs without the effects of axial and edge spacing.

Installation and plug characteristic values

Wedge anchor K, galvanised	Dim.	M6	M8	M10	M12	M16	M20
Drilled hole diameter	d_0 [mm]	8	10	12	15	20	25
Clearance hole in the add-on part	d_f [mm]	7	9	11	14	18	22
Drilled hole depth	h_1 [mm]	27	32	42	52	70	85
Max. torque	$\leq T_{inst}$ [Nm]	4.5	11	22	38	95	185
Usable thread length	l_s [mm]	11	13	17	22	25	35



Australia

Victorian Railway, Melbourne
Launceton Hospital, Launceton
Government Building, Perth
Curtin University, Perth

Austria

Federal Railways, Head-Office Vienna
UNO-City, Vienna
Reconstruction of University, Salzburg
Technical University, Vienna
University, Innsbruck
University of Economy, Vienna
Multistoried building Neue Donau,
Vienna
IZD-Tower, Vienna
Gasometer, Vienna
Office building McHenry, Vienna
Europlaza, Vienna
Campus 21, Brunn am Gebirge
Airport Vienna-Schwechat
Thermenhotel, Loipersdorf
Thermenhotel, Bad Tatzmannsdorf

Bahrain

Salmania Medical Center, Manama
Airport, Al Muharraq
Ministry Buildings, Manama
Bank of Bahrain and Kuwait, Manama
Four Season Hotel, Manama
Museum Jiddah Island
Bahrain Specialist Hospital
Alyal Tower, Seef
Spring Hills Tower, Juffair

Belgium

Palais de Congres, Bruxelles
University, Leuven

Cyprus

Elma House, Nicosia
Popular Bank Building, Nicosia
Hotel Marathon, Limassol

Czech Republik

Matoni Drink Water Plant, Karlovy Vary
Skoda Auto, Mladá Boleslav
Airport, Prague - Ruzyně
Kaufland Centralstore, Pague-Modletice
Philips Hranice na Morave
Infineon, Trutnov
Siemens, Frenštát pod Radhoštěm
Schowa-Aluminium, Kladno
Valeo, Žebrák
Tesco, Havířov
Schwarze Wiese, Ostrava

Denmark

T.V. Station, Odense
IBM Headquarters, Kopenhagen
University, Aalborg

Egypt

Nasser Institute, Cairo
Metro, Cairo

Finnland

Airport, Helsinki
Metro, Helsinki
Concert Hall, Kuopio
Shopping Centre, Tampere

France

Eiffel Tower, Paris
Louvre, Paris
Centre Culturel Pompidou, Paris
Euro-Disneyland, Marne la Vallee
Bastille Opera, Paris

University Hospitals, Strasbourg
Technology Centre Renault,
Guyancourt
Japanese Embassy, Paris
Museum La Villette, Paris
Banque de France, Paris
Europaen Parliament, Strasbourg
European Hospital G. Pompidou
Cité de L'Europe, Calais
Alcatel Câbles de Lyon, Lens
Railway Station TGV Nord, Saint Denis
Parfums Christian Dior, Orléans
Moët et Chandon, Epernay
Cuverie Piper Heidsieck Reims
Piscine Sea Club, Monaco
Hotel Le Méridien, Paris Montparnasse
Prison d'Elsau, Strasbourg
Citroën Car Factory, Rennes
Musée de la Mer, Biarritz
Rhône Poulenc, Aubervilliers
L'Oréal, Aulnay/Bois
CERN Nuclear Power Plant, Genève
Hôpital Bouillante, Guadeloupe
Coca-Cola, Dunkerque

Germany

Radio Tower, Frankfurt
Dresdner Bank AG, Frankfurt
Bank für Gemeinwirtschaft AG, Frankfurt
Alte Oper (reconstruction), Frankfurt
Staatstheater Wiesbaden, Wiesbaden
Cargo Plant Airport, Frankfurt
Deutsche Börse, Frankfurt
Deutsche Bundesbank, Frankfurt
Hessischer Rundfunk Radiostation,
Frankfurt
European Patent Office, Munich
Bayrische Hypo-Bank AG, H.-O. Munich
Congress-Centrum, Berlin
IKEA, Düsseldorf
Hotel Kempinski Frankfurt, Gravenbruch
Hotel Maritim, Gelsenkirchen, Kiel,
Lübeck
Hospital Münster
Hospital Augsburg
Lufthansa AG, Head-Office, Cologne
Maintenance Hall, Flughafen, Cologne-
Wahn
Administration Office, Airport Tegel,
Berlin
Broadcasting Corporation Hessen,
Kassel
Sheraton-Hotel, Frankfurt
Radio Tower „Coloniuss“, Cologne
Reconstruction Land Parliament, Düs-
seldorf
Steigenberger-Hotel, Berlin
Interconti-Hotel, Berlin
Hospital Neukölln, Berlin
Humboldt-Hospital, Berlin
Schering AG, Berlin
Adlon-Hotel, Berlin
RTL Television Studio, Cologne
Test-Centre Ford-plant, Cologne
Daimler-Benz Administration Office,
Stuttgart
Daimler-Benz Development Centre,
Sindelfingen
Sevage Works (reconstruction),
Heilbronn
Volkswagen Plant, Mosel
VW factory, Mosel
Opera Building, Chemnitz
Heating Power Station University,
Konstanz

Great Britain

BBC, London
Lloyds, London
The Cascades, London
Tennis Court No.1, Wimbledon
Moorfields Eye Hospital, London
Marks and Spencers Supermarkets,
several locations in GB

Greece

IKEA, Athens
Metro, Athens
Music Hall, Athens
University Hospital and Research
Centre, Heraklion
Hellenic Refinery, Aspropyros
Hospitals of Jannina, Heraklion,
Athens, Xanthi
Dairy Plants Delta, Ebga, Fage

Hungary

US-Embassy, Budapest
Penta Hotel, Budapest
Ministry of Finance, Budapest
Szabadság Hotel, Budapest
Opel construction plant, Szentgotthárd
Korona Hotel, Budapest
Tesco Supermarket, Szekszárd,
Budapest, Siofok,
Flextronics, Zalaegerszeg
OBI Center, Miskolc
OBI Center, Eger
Industrial hall, Kunszentmárton
Montragon industrial hall, Budapest

Iceland

Hotel Saga, Reykjavik
Airport, KevlavikHospital, Reykjavik
Kringlan Centre, Reykjavik

Ireland

Coca Cola Factory, Droghenda
Wheatfield Prison, Clondalkin
Newport Chemicals, Baldoyle
Trinity University, Dublin
Wyeths Medical, Newbridge
Intel Corporation, Leixlip

Italy

Ministry of Post and Telegraph, Rome
IBM Italia, Milan
Linare Airport, Milan
Boehringer Chemicals, Monza

Jordan

Royal Hospital, Amman
Television Studios, Amman
Housing Bank Headquarters, Amman
Hilton Hotel, Dead Sea

Lebanon

Airport, Beirut
Faqra Project, Beirut
Gardenia Building, Beirut
Meridien Hotel, Beirut
University, Beirut
St. Joseph Hospital Beirut, Lebanon
Government University Hospital, Beirut
Beirut Municipality Stadium, Beirut
Hotel Dieu de France, Beirut
Cap Sur Ville, Beirut
Casino du Liban, Beirut
Chronic Care Center, Hazmieh
Arabien Gulf Oil, Head-Office Tripoli
Hospitals, Tripoli

Luxembourg

Hotel Intercontinental, Luxembourg
 European Parliament, Luxembourg
 European Court of Justice,
 Luxembourg
 Good Year S.A., Colmar-Berg
 Centre de Congres, Luxembourg
 Spa Rooms and Casino Mondorf,
 Luxembourg
 Hôpital Kirchberg,
 Luxembourg-Kirchberg
 Hôpital St. Louis, Ettelbrück
 State Street Bank, Kirchberg
 Chambre de Commerce, Kirchberg
 Codic Bank, Kirchberg

Netherlands

Stopera, Amsterdam
 University Maastricht
 KLM, Amsterdam
 Arena Stadion Amsterdam
 Parkstad Stadion, Kerkrade
 Philips High Tech Campus, Eindhoven
 Luchthaven Schiphol, Amsterdam
 Ziekenhuis Gelderse Vallei, Ede
 Academisch Medisch Centrum,
 Amsterdam
 Global Switch Amsterdam
 Parkstad Stadion, Kerkrade
 Villa Arena Amsterdam
 ASLM Veldhoven
 De Zilveren Toren, Den Haag
 Rijnstate Ziekenhuis Arnhem
 Interpolis Tilburg
 Feyenoord Stadion Rotterdam
 Mondriaan Toren, Amsterdam
 Ovale Toren Amsterdam
 Technische Universiteit, Delft
 World Trade Center Rotterdam,
 Amsterdam
 Gelredome Arnhem
 Cisco Amsterdam

Norway

Storting (Houses of Parliament), Oslo
 National Bank, Oslo
 Central Hospital, Kristiansand
 Mineral Oil Authorities, Stavanger

Oman

Sultan Qaboos Mosque, Muscat
 Khoula Hospital, Muscat
 New Dining Hall, Sultan Qaboos
 University, Muscat
 Oman Aviation Catering Center, Muscat
 Oman Medical Collage Building, Muscat
 National heart center at Royal hospital,
 Muscat
 Al Ameen Mosque, Muscat
 Azaiba hotel, Muscat
 The Wave Muscat, Muscat
 Al Fardan complex, Muscat
 Panorama, Muscat
 Muttrah Sub station, Muscat
 New Guest Palace, Barkah
 Health Centre, Dibba
 Youth Centres, Ibri, Sur
 Qalhat Housing Complex, Sur
 Hotel Development, Ghubra
 Hospital, Nizwa
 Appeal court at Nizwa, Nizwa
 Ras Al Had Airport, Ras Al Had
 Duqum beach hotel, Duqum
 Radisson Blu hotel, Sohar
 Sultan Qaboos, Sohar
 Cardiac center, Salalah

Poland

Hochland dairy, Katy Wroclawskie
 Proctor & Gamble, Warsaw
 Brewery Lech, Poznan
 Opel production plant, Gliwice
 Volkswagen, Polkowice
 Volkswagen, Poznan
 Metropolitan Centre, Warsaw

Portugal

US-Embassy, Lisbon
 Auto-Europa (Ford/Volkswagen),
 Palmela
 Hospitals, Lisbon
 Portugal Bank, Carregado
 Republic of Korea Marriott Hotel, Seoul
 Samsung Dokok Tower Palace, Seoul
 Incheon International Airport

Romania

Eurocenter, Bucharest
 Hotel National, Bucharest
 Bank Ion Tiriac, Bucharest
 Commercial Romanian Bank, Bucharest
 Astra Company Head-Off., Bucharest
 Toma Caragiu Theatre, Bucharest
 Romanian Chamber of Commerce,
 Bucharest
 Holiday Inn, Otopeni
 Romanian Peasant Museum, Bucharest
 Romtelecom Headquarter, Bucharest
 Romanian Data Soft Co., Bucharest

Russia

Petrowski-Passage, Moscow
 Hospitals, Moscow
 Duma Parliament Building, Moscow
 Borisow Housing Program, Borisow
 Krasnodar Housing Program, Krasnodar
 Hotel Cosmos, Moscow
 Gazprom Administrative Centre,
 Moscow
 Michelin Warehouse, Davidovo
 Mayor Office, Moscow
 Philip Morris Cigarettes Plant,
 St. Petersburg
 METRO Hypermarkets,
 several locations in Moscow
 City Star Shopping & Entertainment
 Complex, Moscow
 Oncological Hospital, Moscow
 Business & Trading Centre
 Rublyovskoye sh., Moscow
 Bottle Factory, Gorokhovets
 Pokrovsky Hills Villas, Moscow
 Crédit Lyonnais, St Petersburg
 Conversbank, Moscow

Qatar

New Doha International Airport, Doha
 Barwa Commercial Avenue,
 Type 3, 4 & 5, Doha
 Business Park, Doha
 Ministry of Interior Buildings, Doha
 Shemouk Tower, Doha
 Bilal Tower, Doha
 MKH Tower, Doha
 Central Library, Qatar foundation, Doha
 Samriya Tower, Doha
 Marsa Malaz Hotel, Pearl Qatar
 Medina Centrale, Pearl Qatar
 EPIC Joint Forces, Ras Laffan
 Emergency & Safety College,
 Ras Laffan

South Africa

Prisons, Kokstad (Natal), Pietermaritz-
 burg (Natal), Umtata (Eastern Cape),
 Louis Trichard (North West), Diep-
 kloof (Gauteng), Leeukop (Gauteng)
 Ceasars Casino (Gauteng)
 Gloden Horse Shoe Casino,
 Pietermaritzburg
 Flamingo Casino, Kimberly
 La-Lucia Mall, Natal
 Durban International Airport
 Acedemic Hospital, Cato Manor (Natal)
 Umtata Hospital, UmtataUnitas
 Hospital (Gauteng)
 Bedford Hospital (Eastern Cape)
 St Barnabas Hospital (Eastern Cape)
 Unileaver Head Office, Umhlanga
 Rocks (Natal)
 Japanees Embassy
 Werkmas Office Block (Gauteng)
 Herretige Site (Gauteng)
 MTN Office, Cape Town
 Cape Technicon, Cape Town
 Health & Raquet, Bloemfontein
 Standard Bank, Bloemfontein

Saudi Arabia

University, Riyadh
 King Khaled Airport, Riyadh
 Al Ali Hospital, Riyadh
 SANG Villa, Riyadh
 Lexus Showroom, Riyadh
 Dallah hospital, Riyadh
 German Embassy, Riyadh
 Information technology communication
 complex, Riyadh
 King Fahad specialist hospital,
 Dammam
 King Fahd University of Petroleum and
 Minerals, Dammam
 Tabuk pharmaceuticals factory,
 Dammam
 Al Mana hospital, Khobar
 Arac Makkah Hotel, Makkah
 Baith Al Khair hotel, Madinah
 Science & Society college, Qassim

Slovenia

Remats Recycling Plant, Ljubljana
 Lek pharmaceutical industry, Ljubljana
 Intercity shopping, Maribor
 Renault-Revovz motorcar factory,
 Novo mesto
 LECLERC Supermarket, Ljubljana
 Gorenje production plant, Velenje
 Nuclear power plant, Krško
 OBI Centres, Maribor, Ljubljana
 Merkator, Ljubljana, Maribor, Koper
 Super Nova, Koper
 Merkur, Kranj, Celje, Ljubljana, Maribor
 Hotel Sion, Ljubljana
 Electric Power Plant, Šoštanj
 Interspar, Celje
 Electric Power Plant, Brestanica
 Unitech Ljubljana
 BSH, Nazarje
 Brewery Union, Brewery Laško
 Krka, Novo Mesto

Spain

Insalud Hospital, Madrid
 Banco de España, Gran Canaria
 Hospital, Gran Canaria
 Hotel Europa, Tenerife
 Iberotel, Lanzarote
 Mercamadrid, Madrid

Fabrica Tafime, Madrid
 Fabrica Rockwool, Pamplona
 Centro Comercial Diagonal Mar,
 Barcelona
 Hipercor Supermarkets, Barcelona,
 Las Palmas, Tenerife, Alcalá,
 Cádiz
 Hotel AC, Madrid
 Fabrica Ford, Valencia
 Fabrica Seat, Barcelona
 Fabrica Mercedes, Vitoria
 Corte Ingles Hypermarket, Barcelona

Sweden

Vasa-Terminals, Stockholm
 Volvo Head-Office, Göteborg
 Globen, Stockholm

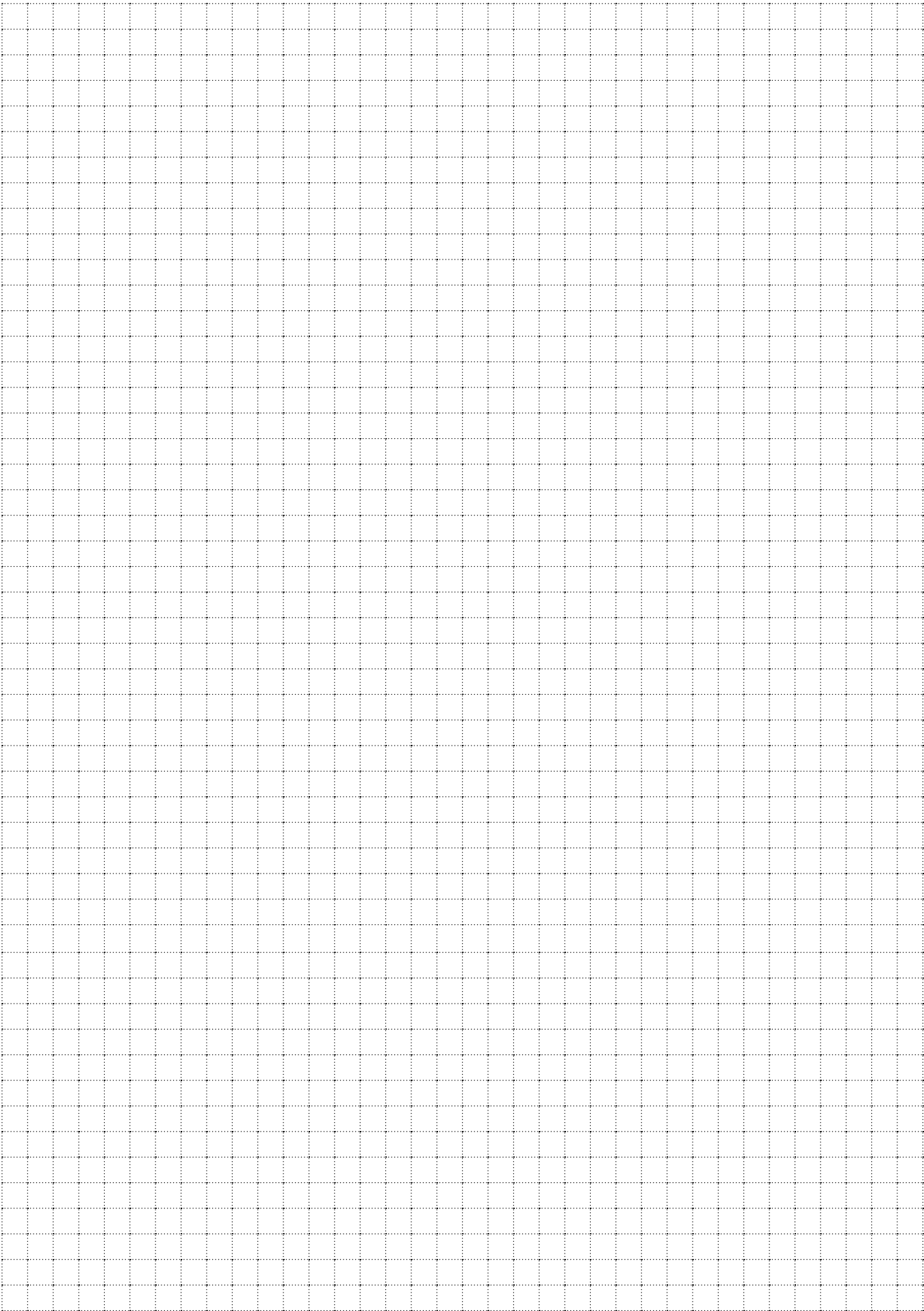
Switzerland

Television Studios, Zurich
 University Hospital, Zurich
 Swiss Technical University, Zurich

United Arab Emirates

International Airports, Dubai, Abu Dhabi
 Abu Dhabi Polymers Co. Ltd.(Borouge),
 Abu Dhabi
 Bloom Central, Abu Dhabi
 Ruwais Housing Complex Expansion
 Phase 3, Abu Dhabi
 Al Shohub School, Abu Dhabi
 Masdar Northern Car Park, Abu Dhabi
 Abu Dhabi Future School Program,
 Phase – 3, Abu Dhabi
 ADNOC Headquarters, Abu Dhabi
 SWEIHAN Air Base, Admin buildings,
 Abu Dhabi
 Shaikh Ahmed Bin Maktoum Palace,
 Dubai
 Park Plaza Hotel and Towers, Dubai
 Grand Hyatt Hotel, Dubai
 Royal Mirage Beach Resort Phase II,
 Dubai
 Al Raha Beach Resort, Dubai
 Madinat Jumeirah Port Al Salaam,
 Dubai
 Sheraton Plaza Hotel & Towers, Dubai
 Ministry of Education, Dubai
 Dubai Marina Port of Entry Hotels &
 Towers, Dubai
 Burj Khalifa, Dubai
 Dubai Int'l Airport Concourse 3, Dubai
 Dubai Sports Complex, Dubai
 Al Ghurair Expansion 2, Dubai
 Dubai Int'l Airport Expansion Phase 3,
 Dubai
 Aweer Gas Turbine Power Station,
 Dubai
 New Al Zahra Hospital, Dubai
 Central Park CP-08, Dubai
 East Hotel at Mall of Emirates, Dubai
 Marsa Tower, Dubai
 Palace Tower, Dubai
 Marina Tower, Dubai
 Green West Community – DIP, Dubai
 Dubai Lake Hotel, Dubai
 Al Barari Development Phase 1, Dubai
 Al Shafar Development Tower at
 Business Bay, Dubai
 Al Fattan Hotel and Apartment at Palm
 Jumeirah, Dubai
 Al Shafar Development at Business
 Bay, Dubai
 Emirates Crown Tower, Dubai
 National Housing Project, Ajman
 National Housing Project, Fujairah

National Housing Project,
 Ras Al Khaimah
 Al Naeem Mall Ras Al Khaimah,
 Ras Al Khaimah
 Sheikh Khalifa Specialist Hospital,
 Ras Al Khaimah





MSS

