



# Metal pipe systems

More effective work with precision steel pipes

# More effective work with precision steel pipes

## Increased precision, simpler installation

When producing steel pipes, the machining process creates a bulge along the welding seam.

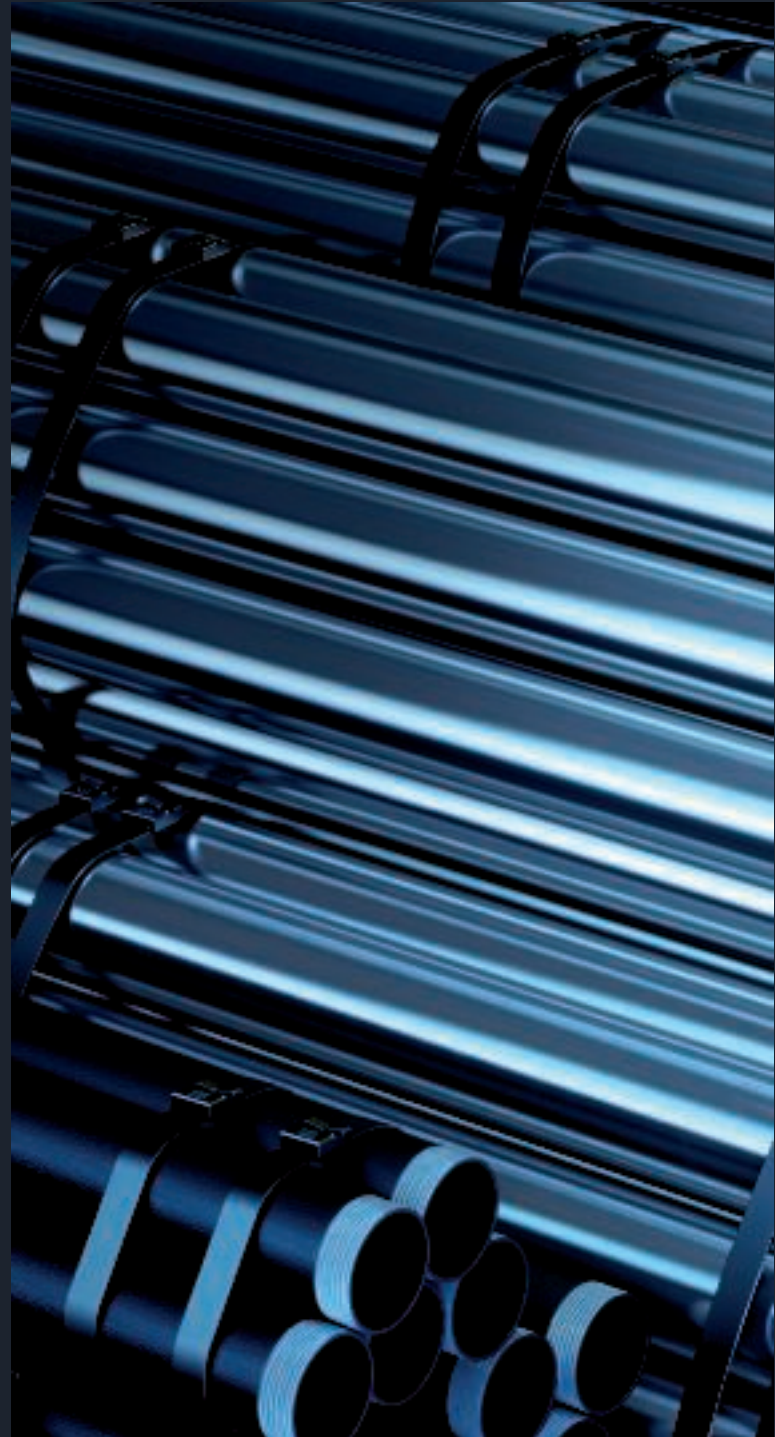
The OBO precision steel pipes have the annoying bulge removed directly after welding. This means that the inside of the pipes is completely smooth – and cables can be pushed through without any problems. This saves the installation engineer valuable time.



Structure with weld seam area, not scraped

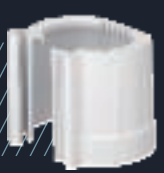


Structure with weld seam area, scraped





02590 1347 35 (1347) 03166 / 22.06/08 1347 41 134746



# Basic principles of the IEC classification of pipe systems

The OBO Bettermann pipe systems are machined and tested according to IEC EN 61386 "Conduit systems for cable management" and IEC EN 60423 "Conduit systems for cable management – Outside diameters of conduits for electrical installations and threads for conduits and fittings".



## IEC EN 61386

Standard	Contents
EN 61386-1	General requirements
EN 61386-21	Particular requirements for rigid electrical installation pipe systems
EN 61386-22	Particular requirements for pliable electrical installation pipe systems
EN 61386-23	Particular requirements for flexible electrical installation pipe systems
EN 61386-24	Particular requirements for electrical installation pipe systems routed in the earth
EN 61386-25	Particular requirements for pipe holders

## Classification according to IEC EN 61386-1 – Part 1: General requirements

Digit	Contents
1st digit	Resistance to compression
2nd digit	Resistance to impact loads
3rd digit	Lower temperature range
4th digit	Upper temperature range
5th digit	Resistance to bending
6th digit	Electrical properties
7th digit	Resistance against ingress of solid objects
8th digit	Resistance against ingress of water
9th digit	Resistance against corrosion
10th digit	Tensile strength
11th digit	Resistance to flame propagation
12th digit	Suspended load bearing capacity

# IEC classification 1st to 5th digit as numeric code on the product

## Numeric code

You can find the first five digits in the product descriptions of the pipe systems. The table below provides an overview of the different meanings of the numbers.



## Classification according to IEC EN 61386-1: Combination of the IP code

	First digit		Second digit		Third digit		Fourth digit		Fifth digit
	Pressure resistance		Impact resistance		Lower temperature range		Upper temperature range		Bending behaviour
1	Very light (125 N)	1	Very light (0.5 kg/100 mm)	1	+5 °C	1	+60 °C	1	Rigid
2	Light (320 N)	2	Light (1.0 kg/100 mm)	2	-5 °C	2	+90 °C	2	Bendable
3	Medium (750 N)	3	Medium (2.0 kg/100 mm)	3	-15 °C	3	+105 °C	3	Pliable, self-recovering
4	Heavy (1,250 N)	4	Heavy (2.0 kg/300 mm)	4	-25 °C	4	+120 °C	4	Flexible
5	Very heavy (4,000 N)	5	Very heavy (6.8 kg/300 mm)	5	-45 °C	5	+150 °C		
						6	+250 °C		
						7	+400 °C		



## IEC classification 7th to 9th digit

### Classification according to IEC EN 61386-1: Composition of the IP code

	7th digit		8th digit
	Ingress of solid bodies		Ingress of water
0		0	None declared
1		1	Protected against vertically falling water drops
2		2	Protected against vertically falling water drops, when the pipe system is tilted up to an angle of 15°
3	Protected against solid foreign objects of 2.5 mm Ø and greater	3	Protected against spraying water
4	Protected against solid foreign bodies of 1.0 mm Ø and larger	4	Protected against splashing water
5	Dust-protected	5	Protected against water jets
6	Dust-proof	6	Protection against powerful water jets
7		7	Protected against the effects of temporary immersion in water

**IP-Code: 5 2**

### Classification according to IEC EN 61386-1: Corrosion protection

	9th digit	
	<b>Resistance against corrosion</b>	<b>Suitable surfaces</b>
1	Low protection, inside and outside	
2	Medium protection, inside and outside	<ul style="list-style-type: none"> <li>• Black coated (SW)</li> <li>• Electrogalvanised (G)</li> <li>• Strip galvanised (FS)</li> </ul>
3	Medium protection inside, high protection outside	
4	High protection inside and outside	<ul style="list-style-type: none"> <li>• Hot-dip galvanised (FT)</li> <li>• Stainless steel (V2A, V4A)</li> </ul>

# Mechanical load and the maintenance of electrical function in the event of fire

## Protection against mechanical loads

OBO metal pipes are particularly suited to use under tough industrial conditions. They provide reliable protection against very heavy mechanical loads during cable routing. The different material and surface qualities, from galvanised to painted, allow perfect adaptation to the requirements of the appropriate environment.



## Maintenance of electrical function to E30/E90

Our steel pipes guarantee the maintenance of electrical function to E30/E90. They are thus ideal for the connection of safety-relevant equipment, such as smoke extraction systems.

E30

E90

# OBO steel pipes and their classification

## Overview

You can obtain the precision steel pipes as threaded and plug-in pipes, hot-dip galvanised, painted and electrogalvanised. The product range is completed with bends and couplings. Of course, they are also compatible with the entire OBO accessories range.



**Classification of the armoured steel pipes according to IEC EN 61386: Certification according to VDE**

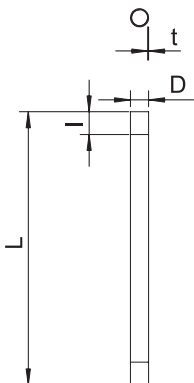
Product	Type	1st digit		2nd digit		3rd digit		4th digit		5th digit		
			Pressure resistance		Impact resistance		Lower temperature range		Upper temperature range		Bending behaviour	
Armoured steel plug-in pipe painted black	S...W SW	4	Heavy (1,250 N)	4	Heavy (2.0 kg/300 mm)	5	-45 °C	6	+250 °C	1	Rigid	0
Armoured steel plug-in pipe electrogalvanised	S...W G	4	Heavy (1,250 N)	4	Heavy (2.0 kg/300 mm)	5	-45 °C	7	+400 °C	1	Rigid	1
Armoured steel plug-in pipe hot-dip galvanised	S...W FT	4	Heavy (1,250 N)	4	Heavy (2.0 kg/300 mm)	5	-45 °C	7	+400 °C	1	Rigid	1
Armoured steel plug-in pipe stainless steel A2	S...W A2	5	Very heavy (4,000 N)	5	Very heavy (6.8 kg/300 mm)	5	-45 °C	7	+400 °C	1	Rigid	0
Armoured steel plug-in pipe stainless steel A4	S...W A4	5	Very heavy (4,000 N)	5	Very heavy (6.8 kg/300 mm)	5	-45 °C	7	+400 °C	1	Rigid	0
Armoured steel threaded pipe hot-dip galvanised	SM...W SW	5	Very heavy (4,000 N)	5	Very heavy (6.8 kg/300 mm)	5	-45 °C	6	+250 °C	1	Rigid	1
Armoured steel threaded plug pipe electrogalvanised	SM...W G	5	Very heavy (4,000 N)	5	Very heavy (6.8 kg/300 mm)	5	-45 °C	7	+400 °C	1	Rigid	1
Armoured steel threaded pipe hot-dip galvanised	SM...W FT	5	Very heavy (4,000 N)	5	Very heavy (6.8 kg/300 mm)	5	-45 °C	7	+400 °C	1	Rigid	1





6th digit	7th digit	8th digit	9th digit	10th digit	11th digit	12th digit
Electrical properties	Ingress of solid objects	Ingress of water	Resistance against corrosion	Tensile strength	Resistance to flame propagation	Suspended load bearing capacity
None declared	4 Protected against solid foreign objects of 1 mm Ø and greater	0 None declared	2 Medium protection, inside and outside	0 None declared	1 Non-flame propagating	0 None declared
With electrical continuity characteristics	4 Protected against solid foreign objects of 1 mm Ø and greater	0 None declared	2 Medium protection, inside and outside	0 None declared	1 Non-flame propagating	0 None declared
With electrical continuity characteristics	4 Protected against solid foreign objects of 1 mm Ø and greater	0 None declared	4 High protection, inside and outside	0 None declared	1 Non-flame propagating	0 None declared
With electrical continuity characteristics	4 Protected against solid foreign objects of 1 mm Ø and greater	0 None declared	4 High protection, inside and outside	0 None declared	1 Non-flame propagating	0 None declared
With electrical continuity characteristics	4 Protected against solid foreign objects of 1 mm Ø and greater	0 None declared	4 High protection, inside and outside	0 None declared	1 Non-flame propagating	0 None declared
With electrical continuity characteristics	5 Dust-protected	2 None declared	2 Medium protection, inside and outside	0 None declared	1 Non-flame propagating	0 None declared
With electrical continuity characteristics	5 Dust-protected	2 None declared	2 Medium protection, inside and outside	0 None declared	1 Non-flame propagating	0 None declared
With electrical continuity characteristics	5 Dust-protected	2 None declared	4 High protection, inside and outside	0 None declared	1 Non-flame propagating	0 None declared

### Electrogalvanised steel pipe, with thread

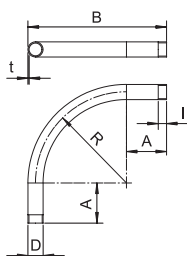


Type	Thread	Dim. D mm	Dim. L mm	Dim. I mm	Dim. t mm	Pack m	Weight kg/100 m	Item no.
SM16W G	M16x1,5	16	3000	13	1.3	30	50.390	2046861
SM20W G	M20x1,5	20	3000	13	1.5	30	66.667	2046862
SM25W G	M25x1,5	25	3000	18	1.5	30	92.290	2046863
SM32W G	M32x1,5	32	3000	18	1.5	21	120.000	2046864
SM40W G	M40x1,5	40	3000	20.5	1.5	15	151.450	2046865
SM50W G	M50x1,5	50	3000	25	1.5	15	190.000	2046866
SM63W G	M63x1,5	63	3000	25	1.7	9	287.700	2046867

Electrical installation pipe according to EN 61386-1 with threaded ends to EN 60423 for mechanical protection of cables.  
With burr-free inner wall. One coupling is already screwed onto each pipe.

5 | 5 | 5 | 7 | 1

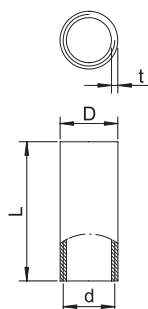
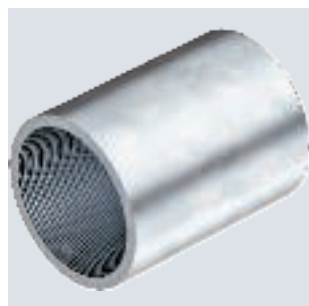
### Electrogalvanised steel bend, with thread



Type	Thread	Dim. A mm	Dim. B mm	Dim. D mm	Dim. I mm	Dim. R mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SBNM16 G	M16x1,5	45	103	16	13	50	1.4	15	10.400	2046778
SBNM20 G	M20x1,5	55	155	20	13	90	1.6	25	21.000	2046779
SBNM25 G	M25x1,5	68	190	25	18	110	1.6	25	33.000	2046780
SBNM32 G	M32x1,5	88	254	32	18	150	1.6	20	56.600	2046781
SBNM40 G	M40x1,5	89	279	40	20.5	170	1.6	15	77.600	2046782
SBNM50 G	M50x1,5	133	358	50	25	200	1.6	5	125.800	2046783
SBNM63 G	M63x1,5	165	446	63	25	250	1.8	3	227.000	2046784

90° bend for electrical installation pipes according to EN 61386-1 with threaded ends to DIN EN 60423. With burr-free inner wall.  
One connection sleeve is already screwed onto each pipe bend.

### Electrogalvanised steel sleeve, with thread



Type	Thread	Dim. D mm	Dim. d mm	Dim. L mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SVM16W G	M16x1,5	18.5	16	26	2	25	2.110	2046875
SVM20W G	M20x1,5	22.5	20	30	2	50	3.000	2046876
SVM25W G	M25x1,5	27.5	25	40	2	50	5.030	2046877
SVM32W G	M32x1,5	35.5	32	40	2.5	50	8.800	2046878
SVM40W G	M40x1,5	43.5	40	45	2.5	25	11.370	2046879
SVM50W G	M50x1,5	53.5	50	54	2.5	10	16.970	2046880
SVM63W G	M63x1,5	68	63	60	3.2	5	30.670	2046881

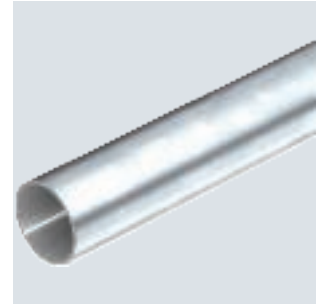
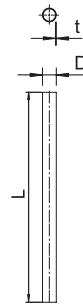
Accessory part: coupling with thread according to EN 60423 to connect electrical installation pipes and 90° bends.



## Armoured steel pipe without thread, electrogalvanised

Type	Dim. D mm	Dim. L mm	Dim. t mm	Pack m	Weight kg/100 m	Item no.
S16W G	16	3000	1	30	37.000	2046840
S20W G	20	3000	1	30	44.700	2046841
S25W G	25	3000	1.2	30	70.400	2046842
S32W G	32	3000	1.2	21	91.200	2046843
S40W G	40	3000	1.2	15	139.700	2046844
S50W G	50	3000	1.2	15	176.000	2046845
S63W G	63	3000	1.2	9	223.000	2046846

Electrical installation pipe without threaded ends according to EN 61386-1 for mechanical protection of cables. With burr-free inner wall.



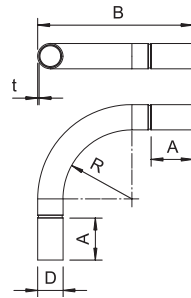
4 | 4 | 5 | 7 | 1



## Electrogalvanised steel bend, without thread

Type	Dim. A mm	Dim. B mm	Dim. D mm	Dim. R mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SBN16 G	43.7	103	18.6	50	1	15	7.200	2046808
SBN20 G	53.7	155	22.6	90	1	25	13.300	2046809
SBN25 G	66.5	190	28	110	1.2	25	24.400	2046810
SBN32 G	86.5	254	35.1	150	1.2	20	41.000	2046811
SBN40 G	87.2	279	43.7	170	1.5	15	70.200	2046812
SBN50 G	131	358	54	200	1.5	5	111.800	2046813
SBN63 G	163	446	67	250	1.5	3	174.200	2046814

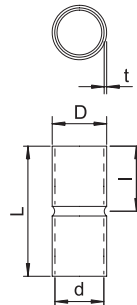
90° bend with moulded sleeves, for electrical installation pipes according to EN 61386-1. With burr-free inner wall.



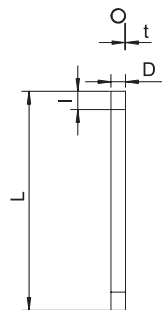
## Armoured steel pipe connection sleeve without thread, electrogalvanised

Type	Dim. D mm	Dim. d mm	Dim. L mm	Dim. l mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SV16W G	18.6	16.6	50	25	1	25	2.100	2046854
SV20W G	23.1	20.7	60	30	1.2	50	2.800	2046855
SV25W G	28.1	25.7	60	30	1.2	50	4.800	2046856
SV32W G	35.2	32.8	70	35	1.2	50	7.200	2046857
SV40W G	43.8	43.8	80	40	1.5	25	13.200	2046858
SV50W G	54	51	100	50	1.5	10	20.000	2046859
SV63W G	67	64	100	50	1.5	5	28.000	2046860

Accessory part: plug-in sleeve for the connections between electrical installation pipes. With burr-free inner wall.



## Armoured steel pipe with thread, black

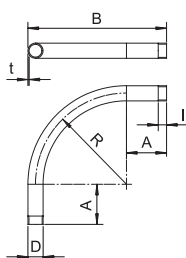


Type	Thread	Dim. D mm	Dim. L mm	Dim. l mm	Dim. t mm	Colour	Pack m	Weight kg/100 m	Item no.
SM16W SW	M16x1,5	16	3000	13	1.3	Jet black	30	50.000	2046500
SM20W SW	M20x1,5	20	3000	13	1.5	Jet black	30	73.000	2046501
SM25W SW	M25x1,5	25	3000	18	1.5	Jet black	30	92.000	2046502
SM32W SW	M32x1,5	32	3000	18	1.5	Jet black	21	120.000	2046503
SM40W SW	M40x1,5	40	3000	20.5	1.5	Jet black	15	152.000	2046505
SM50W SW	M50x1,5	50	3000	25	1.5	Jet black	15	190.700	2046506
SM63W SW	M63x1,5	63	3000	25	1.7	Jet black	9	287.700	2046507

Electrical installation pipe according to EN 61386-1 with threaded ends to EN 60423 for mechanical protection of cables.  
With burr-free inner wall. One coupling is already screwed onto each pipe.

5 | 5 | 5 | 6 | 1

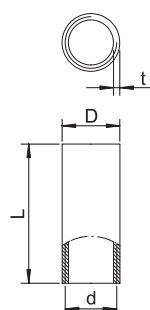
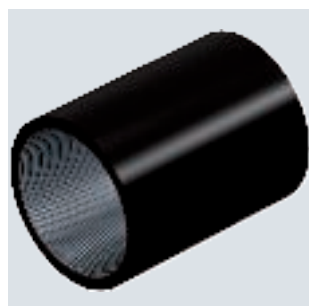
## Black powder-coated steel bend, with thread



Type	Thread	Dim. A mm	Dim. B mm	Dim. D mm	Dim. l mm	Dim. R mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SBNM16 SW	M16x1,5	45	103	16	13	50	1.4	15	10.400	2046793
SBNM20 SW	M20x1,5	55	155	20	13	90	1.6	25	21.000	2046794
SBNM25 SW	M25x1,5	68	190	25	18	110	1.6	25	33.000	2046795
SBNM32 SW	M32x1,5	88	254	32	18	150	1.6	20	56.600	2046796
SBNM40 SW	M40x1,5	89	279	40	20.5	170	1.6	15	77.600	2046797
SBNM50 SW	M50x1,5	133	358	50	25	200	1.6	5	125.800	2046798
SBNM63 SW	M63x1,5	165	446	63	25	250	1.8	3	227.000	2046799

90° bend for electrical installation pipes according to EN 61386-1 with threaded ends to DIN EN 60423. With burr-free inner wall.  
One connection sleeve is already screwed onto each pipe bend.

## Black powder-coated steel sleeve, with thread



Type	Thread	Dim. D mm	Dim. d mm	Dim. L mm	Dim. t mm	Colour	Pack Piece	Weight kg/100 pc.	Item no.
SVM16W SW	M16x1,5	18.5	16	26	2	Jet black	25	2.100	2046522
SVM20W SW	M20x1,5	22.5	20	30	2	Jet black	50	3.400	2046523
SVM25W SW	M25x1,5	27.5	25	40	2	Jet black	50	5.000	2046524
SVM32W SW	M32x1,5	35.5	32	40	2.5	Jet black	50	8.800	2046525
SVM40W SW	M40x1,5	43.5	40	45	2.5	Jet black	25	11.400	2046526
SVM50W SW	M50x1,5	53.5	50	54	2.5	Jet black	10	17.000	2046527
SVM63W SW	M63x1,5	68	63	60	3.2	Jet black	5	30.700	2046528

Accessory part: coupling with thread according to EN 60423 to connect electrical installation pipes and 90° bends.

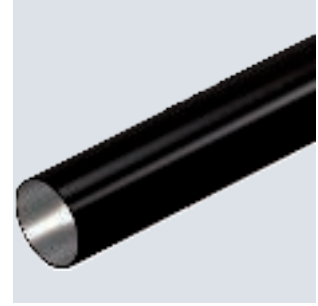
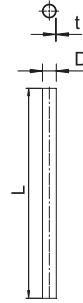
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E30 E90 

## Armoured steel pipe without thread, black

Type	Dim. D mm	Dim. L mm	Dim. t mm	Colour	Pack m	Weight kg/100 m	Item no.
S16W SW	16	3000	1	Jet black	30	37.000	2046565
S20W SW	20	3000	1	Jet black	30	44.700	2046566
S25W SW	25	3000	1.2	Jet black	30	70.400	2046567
S32W SW	32	3000	1.2	Jet black	21	91.200	2046568
S40W SW	40	3000	1.2	Jet black	15	139.700	2046569
S50W SW	50	3000	1.2	Jet black	15	176.000	2046570
S63W SW	63	3000	1.2	Jet black	9	223.000	2046571

Electrical installation pipe without threaded ends according to EN 61386-1 for mechanical protection of cables. With burr-free inner wall.



4 | 4 | 5 | 6 | 1

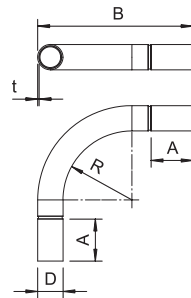
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E30 E90 

## Black powder-coated steel bend, without thread

Type	Colour	Dim. A mm	Dim. B mm	Dim. D mm	Dim. R mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SBN16 SW	Jet black	43.7	103	16.6	50	1	15	7.200	2046824
SBN20 SW	Jet black	53.7	155	20.6	90	1	25	13.300	2046825
SBN25 SW	Jet black	66.5	190	25.6	110	1.2	25	24.400	2046826
SBN32 SW	Jet black	86.5	254	32.7	150	1.2	20	41.000	2046827
SBN40 SW	Jet black	87.2	279	40.7	170	1.5	15	68.900	2046828
SBN50 SW	Jet black	131	358	51	200	1.5	5	111.800	2046829
SBN63 SW	Jet black	163	446	64	250	1.5	3	174.200	2046830

90° bend with moulded sleeves, for electrical installation pipes according to EN 61386-1. With burr-free inner wall.



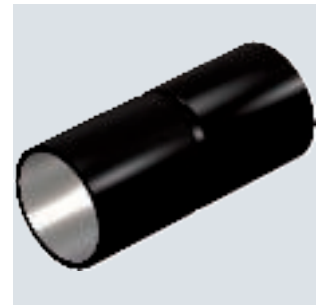
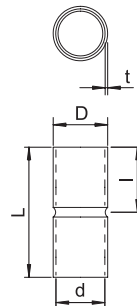
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E30 E90 

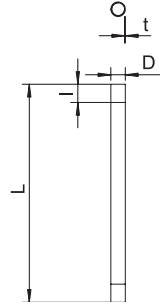
## Armoured steel pipe connection sleeve without thread, black

Type	Dim. D mm	Dim. d mm	Dim. L mm	Dim. l mm	Dim. t mm	Colour	Pack Piece	Weight kg/100 pc.	Item no.
SV16W SW	18.6	16.6	50	25	1	Jet black	25	2.400	2046582
SV20W SW	23.1	20.7	60	30	1.2	Jet black	50	3.200	2046583
SV25W SW	28.1	25.7	60	30	1.2	Jet black	50	5.500	2046584
SV32W SW	35.2	32.8	70	35	1.2	Jet black	50	7.900	2046585
SV40W SW	43.8	40.8	80	40	1.5	Jet black	25	13.200	2046586
SV50W SW	54	51	100	50	1.5	Jet black	10	20.000	2046587
SV63W SW	67	64	100	50	1.5	Jet black	5	28.000	2046588

Accessory part: plug-in sleeve for the connections between electrical installation pipes. With burr-free inner wall.



## Hot-dip galvanised steel pipe, with thread

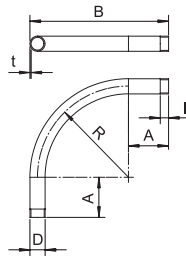


Type	Thread	Dim. D mm	Dim. L mm	Dim. I mm	Dim. t mm	Pack m	Weight kg/100 m	Item no.
SM16W FT	M16x1,5	16	3000	13	1.3	30	54.000	2046533
SM20W FT	M20x1,5	20	3000	13	1.5	30	79.000	2046534
SM25W FT	M25x1,5	25	3000	18	1.5	30	99.000	2046535
SM32W FT	M32x1,5	32	3000	18	1.5	21	130.000	2046536
SM40W FT	M40x1,5	40	3000	20.5	1.5	15	164.000	2046537
SM50W FT	M50x1,5	50	3000	25	1.5	15	206.000	2046538
SM63W FT	M63x1,5	63	3000	26	1.8	9	324.700	2046540

Electrical installation pipe according to EN 61386-1 with threaded ends to EN 60423 for mechanical protection of cables.  
With burr-free inner wall. Corrosion protection class 4 (high). One coupling is already screwed onto each pipe.

5 | 5 | 5 | 7 | 1

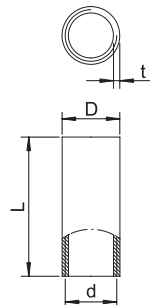
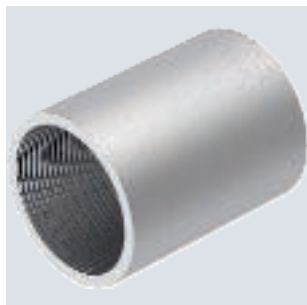
## Hot-dip galvanised steel bend, with thread



Type	Thread	Dim. A mm	Dim. B mm	Dim. D mm	Dim. I mm	Dim. R mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SBNM16 FT	M16x1,5	45	103	16	13	50	1.4	15	10.400	2046786
SBNM20 FT	M20x1,5	55	155	20	13	90	1.6	25	21.000	2046787
SBNM25 FT	M25x1,5	68	190	25	18	110	1.6	25	33.000	2046788
SBNM32 FT	M32x1,5	88	254	32	18	150	1.6	20	56.600	2046789
SBNM40 FT	M40x1,5	89	279	40	20.5	170	1.6	15	77.600	2046790
SBNM50 FT	M50x1,5	133	358	50	25	200	1.6	5	125.800	2046791
SBNM63 FT	M63x1,5	165	446	63	25	250	1.8	3	227.000	2046792

90° bend for electrical installation pipes according to EN 61386-1 with threaded ends to DIN EN 60423. With burr-free inner wall.  
One connection sleeve is already screwed onto each pipe bend.

## Zinc-nickel coated steel sleeve, with thread



Type	Thread	Dim. D mm	Dim. d mm	Dim. L mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SVM16W DN	M16x1,5	18.5	16	26	2	25	2.100	2046553
SVM20W DN	M20x1,5	22.5	20	30	2	50	3.000	2046554
SVM25W DN	M25x1,5	27.5	25	40	2	50	3.986	2046556
SVM32W DN	M32x1,5	35.5	32	40	2.5	50	8.800	2046557
SVM40W DN	M40x1,5	43.5	40	45	2.5	25	11.400	2046558
SVM50W DN	M50x1,5	53.5	50	54	2.5	10	17.000	2046559
SVM63W DN	M63x1,5	68	63	60	3.2	5	30.700	2046560

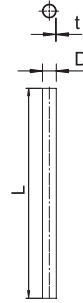
Accessory part: coupling with thread according to EN 60423 to connect electrical installation pipes and 90° bends.



## Hot-dip galvanised steel pipe, without thread

Type	Dim. D mm	Dim. L mm	Dim. t mm	Pack m	Weight kg/100 m	Item no.
S16W FT	16	3000	1	30	37.000	2046593
S20W FT	20	3000	1	30	44.700	2046594
S25W FT	25	3000	1.2	30	70.400	2046595
S32W FT	32	3000	1.2	21	91.200	2046596
S40W FT	40	3000	1.2	15	139.700	2046597
S50W FT	50	3000	1.2	15	176.000	2046598
S63W FT	63	3000	1.2	9	223.000	2046599

Electrical installation pipe without threaded ends according to EN 61386-1 for mechanical protection of cables. With burr-free inner wall. Corrosion protection class 4 (high).



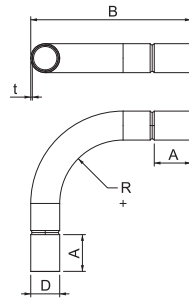
4 | 4 | 5 | 7 | 1



## Hot-dip galvanised steel bend, without thread

Type	Dim. A mm	Dim. B mm	Dim. D mm	Dim. R mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SBN16 FT	43.7	103	16.6	50	1	15	7.200	2046816
SBN20 FT	53.7	155	20.6	90	1	25	13.300	2046817
SBN25 FT	66.5	190	25.6	110	1.2	25	24.400	2046818
SBN32 FT	86.5	254	32.7	150	1.2	20	41.000	2046819
SBN40 FT	87.2	279	40.7	170	1.5	15	68.900	2046820
SBN50 FT	131	358	51	200	1.5	5	111.800	2046821
SBN63 FT	163	446	64	250	1.5	3	174.200	2046822

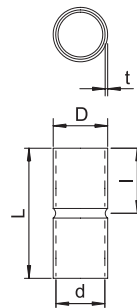
90° bend with moulded sleeves, for electrical installation pipes according to EN 61386-1. With burr-free inner wall.



## Hot-dip galvanised steel sleeve, without thread

Type	Dim. D mm	Dim. d mm	Dim. L mm	Dim. l mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SV16W FT	18.6	16.6	50	25	1	25	2.200	2046620
SV20W FT	23.1	20.7	60	30	1.2	50	3.200	2046621
SV25W FT	28.1	25.7	60	30	1.2	50	5.100	2046622
SV32W FT	35.2	32.8	70	35	1.2	50	7.500	2046623
SV40W FT	43.8	40.8	80	40	1.5	25	14.400	2046624
SV50W FT	54	51	100	50	1.5	10	22.000	2046625
SV63W FT	67	63	100	50	1.5	5	22.000	2046626

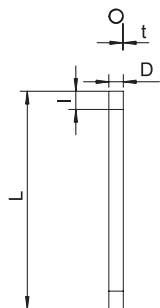
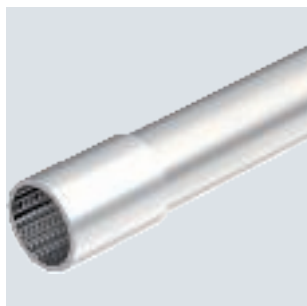
Accessory part: plug-in sleeve for the connections between electrical installation pipes. With burr-free inner wall.



### Aluminium pipe, with thread

Alu

M



Type	Thread	Dim. D mm	Dim. L mm	Dim. l mm	Dim. t mm	Pack m	Weight kg/100 m	Item no.
SM16W ALU	M16x1,5	16	3000	15	1,6	30	19.543	2046032
SM20W ALU	M20x1,5	20	3000	15	1,9	30	29.170	2046033
SM25W ALU	M25x1,5	25	3000	20	1,9	30	37.230	2046034
SM32W ALU	M32x1,5	32	3000	20	1,9	30	48.510	2046035
SM40W ALU	M40x1,5	40	3000	20	1,9	15	61.403	2046036
SM50W ALU	M50x1,5	50	3000	25	2,1	15	85.323	2046037
SM63W ALU	M63x1,5	63	3000	25	2,1	15	108.480	2046038

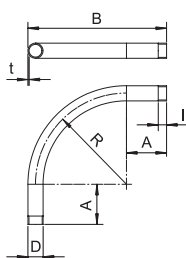
Electrical installation pipe to EN 61386-1 with threaded ends to DIN EN 60423 for mechanical protection of cables. With burr-free inner wall. One connection sleeve is already screwed onto each pipe.

5 | 5 | 5 | 6 | 1

### Aluminium pipe bend, with thread

Alu

M



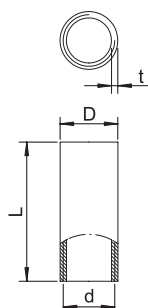
Type	Thread	Dim. A mm	Dim. B mm	Dim. D mm	Dim. l mm	Dim. R mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SBM16W ALU	M16x1,5	78	150	16	15	64	1,6	15	3.300	2046042
SBM20W ALU	M20x1,5	80	170	20	15	80	1,9	25	7.300	2046043
SBM25W ALU	M25x1,5	93	208	25	20	102,5	1,9	25	11.500	2046044
SBM32W ALU	M32x1,5	105	252	32	20	131	1,9	20	20.000	2046045
SBM40W ALU	M40x1,5	115	300	40	20	165	1,9	15	27.300	2046046
SBM50W ALU	M50x1,5	128	358	50	25	205	2,1	5	49.500	2046047
SBM63W ALU	M63x1,5	135	423	63	25	256,5	2,1	3	78.400	2046048

90° bend for electrical installation pipes according to EN 61386-1 with threaded ends to DIN EN 60423. With burr-free inner wall. One connection sleeve is already screwed onto each pipe bend.

### Aluminium sleeve, with thread

Alu

M



Type	Thread	Dim. D mm	Dim. d mm	Dim. L mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SVM16W ALU	M16x1,5	18,5	16	35	2,25	50	1.080	2046052
SVM20W ALU	M20x1,5	22,5	20	35	2,25	50	1.100	2046053
SVM25W ALU	M25x1,5	28	25	45	2,5	50	2.430	2046054
SVM32W ALU	M32x1,5	35	32	45	2,5	50	3.100	2046055
SVM40W ALU	M40x1,5	43,5	40	45	2,75	20	4.270	2046056
SVM50W ALU	M50x1,5	53,5	50	55	2,75	20	6.510	2046057
SVM63W ALU	M63x1,5	66,5	63	55	2,8	20	8.320	2046058

Accessory part: coupling with thread according to EN 60423 to connect electrical installation pipes and 90° bends.

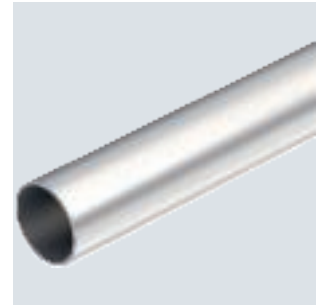
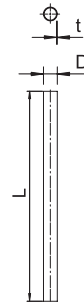


Alu

### Aluminium pipe, without thread

Type	Dim. D mm	Dim. L mm	Dim. t mm	Pack m	Weight kg/100 m	Item no.
S16W ALU	16	3000	1.2	30	15.065	2046002
S20W ALU	20	3000	1.2	30	19.134	2046003
S25W ALU	25	3000	1.3	30	26.134	2046004
S32W ALU	32	3000	1.3	30	33.853	2046005
S40W ALU	40	3000	1.4	15	45.839	2046006
S50W ALU	50	3000	1.4	15	57.714	2046007
S63W ALU	63	3000	1.7	15	88.394	2046008

Electrical installation pipe without threaded ends to EN 61386-1 for mechanical protection of cables. With burr-free inner wall.



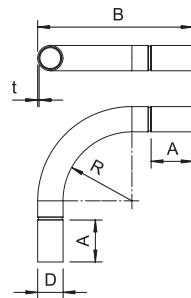
4 | 4 | 5 | 6 | 1

Alu

### Aluminium pipe bend, without thread

Type	Dim. A mm	Dim. B mm	Dim. D mm	Dim. R mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SB16W ALU	78	151	16	64	1.2	15	2.350	2046012
SB20W ALU	80	171	20	80	1.2	25	5.500	2046013
SB25W ALU	93	209	25	102.5	1.3	25	9.000	2046014
SB32W ALU	105	253	32	131	1.3	20	14.100	2046015
SB40W ALU	115	302	40	165	1.4	15	22.400	2046016
SB50W ALU	128	360	50	205	1.4	5	35.400	2046017
SB63W ALU	135	425	63	256.5	1.7	3	59.500	2046018

90° bend with moulded sleeves, for electrical installation pipes according to EN 61386-1. With burr-free inner wall.

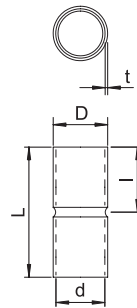


Alu

### Aluminium sleeve, without thread

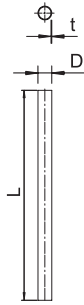
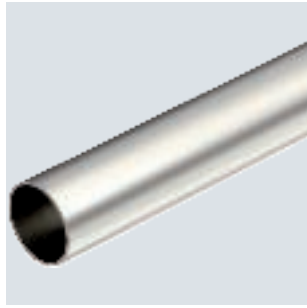
Type	Dim. D mm	Dim. d mm	Dim. L mm	Dim. l mm	Dim. t mm	Dimen- sion M	Pack Piece	Weight kg/100 pc.	Item no.
SV16W ALU	18.6	16.2	40	20	1.2	16	50	0.700	2046022
SV20W ALU	22.6	20.2	50	25	1.2	20	50	1.300	2046023
SV25W ALU	27.6	25.2	60	30	1.2	25	50	1.900	2046024
SV32W ALU	34.6	32.2	70	35	1.2	32	50	2.400	2046025
SV40W ALU	43	40.2	70	35	1.4	40	20	4.000	2046026
SV50W ALU	53	50.2	90	45	1.4	50	20	6.100	2046027
SV63W ALU	66.2	63.2	110	55	1.5	63	20	9.000	2046028

Accessory part: plug-in sleeve for the connections between electrical installation pipes. With burr-free inner wall.



## Stainless steel pipe, V2A

VA 2B  
E30 E90



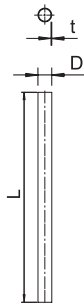
Type	Dim. D mm	Dim. L mm	Dim. t mm	Pack m	Weight kg/100 m	Item no.
S16W A2	16	3000	1	30	37.000	2046720
S20W A2	20	3000	1	30	46.900	2046721
S25W A2	25	3000	1	30	59.200	2046722
S32W A2	32	3000	1.2	21	91.200	2046723
S40W A2	40	3000	1.2	15	114.800	2046724
S50W A2	50	3000	1.5	15	179.400	2046725
S63W A2	63	3000	1.5	9	227.500	2046726

Electrical installation pipe without threaded ends to EN 61386-1 for mechanical protection of cables. With burr-free inner wall. Corrosion protection class 4 (high). Classification according to DIN EN 61386-1: 555711404010

5 | 5 | 5 | 7 | 1

## Stainless steel pipe, V4A

VA 2B  
E30 E90



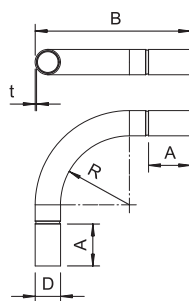
Type	Dim. D mm	Dim. L mm	Dim. t mm	Pack m	Weight kg/100 m	Item no.
S16W A4	16	3000	1	15	37.000	2046750
S20W A4	20	3000	1	15	46.900	2046751
S25W A4	25	3000	1	15	59.200	2046752
S32W A4	32	3000	1.2	15	91.200	2046753
S40W A4	40	3000	1.2	9	114.800	2046754
S50W A4	50	3000	1.5	9	179.400	2046755
S63W A4	63	3000	1.5	9	227.500	2046756

Electrical installation pipe without threaded ends to EN 61386-1 for mechanical protection of cables. With burr-free inner wall. Corrosion protection class 4 (high).

5 | 5 | 5 | 7 | 1

## Stainless steel pipe bend, V4A

VA 2B  
E30 E90



Type	Dim. A mm	Dim. B mm	Dim. D mm	Dim. R mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SB16W A4	54	104	18.2	50	1	5	7.200	2046760
SB20W A4	66	156	22.2	90	1	10	13.300	2046761
SB25W A4	81.5	194	27.2	112.5	1	10	20.400	2046762
SB32W A4	104	250	34.7	146	1.25	10	42.000	2046763
SB40W A4	129	294	42.7	165	1.25	5	61.200	2046764
SB50W A4	158	408	52.7	250	1.25	5	79.500	2046765
SB63W A4	198	448	65.7	250	1.25	3	144.600	2046766

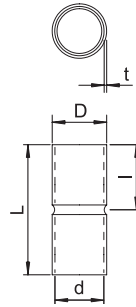
90° bend with moulded sleeves, for electrical installation pipes according to EN 61386-1. With burr-free inner wall.

VA 2B  
E30 E90

### Stainless steel sleeve V4A

Type	Dim. D mm	Dim. d mm	Dim. L mm	Dim. l mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SV16W A4	18.2	16.2	50	25	1	10	2.100	2046770
SV20W A4	22.2	20.2	60	30	1	15	3.200	2046771
SV25W A4	27.2	25.2	60	30	1	15	3.900	2046772
SV32W A4	34.7	32.2	70	35	1.25	15	7.300	2046773
SV40W A4	42.7	40.2	80	40	1.25	10	10.300	2046774
SV50W A4	52.8	50.2	100	50	1.3	5	16.700	2046775
SV63W A4	65.8	63.2	100	50	1.3	3	20.900	2046776

Accessory part: plug-in sleeve for the connections between electrical installation pipes. With burr-free inner wall.



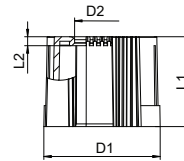
### Metal pipes, system accessories

PE  
M

### Pipe end cap, splittable, metric, light grey

Type	Size	Dim. D1 mm	Dim. D2 mm	Dim. L1 mm	Dim. L2 mm	Colour	Pack Piece	Weight kg/100 pc.	Item no.
129 TB M16	M16	20	10	30	3	Light grey	50	0.400	2047812
129 TB M20	M20	24	13.4	30	3	Light grey	50	0.440	2047831
129 TB M25	M25	30	18.4	30	3	Light grey	50	0.500	2047839
129 TB M32	M32	36	25.4	30	3	Light grey	50	0.656	2047855
129 TB M40	M40	44	33.4	30	3	Light grey	30	0.790	2047863
129 TB M50	M50	53	43	30	3	Light grey	30	0.935	2047890
129 TB M63	M63	67	56	30	3	Light grey	20	1.140	2047898

Separable pipe end cap to slot onto metric electrical installation pipes. The separable pipe end cap can be used for repairs on existing installations according to regulations. It is not necessary to disconnect the cables, allowing quick mounting.

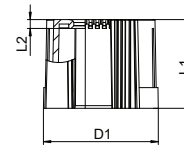


PE  
M

### Pipe end cap, splittable, metric, black

Type	Size	Dim. D1 mm	Dim. D2 mm	Dim. L1 mm	Dim. L2 mm	Colour	Pack Piece	Weight kg/100 pc.	Item no.
129 TB M16 SW	M16	20	10	30	3	Black	50	0.400	2047936
129 TB M20 SW	M20	24	13.4	30	3	Black	50	0.440	2047944
129 TB M25 SW	M25	30	18.4	30	3	Black	50	0.500	2047952
129 TB M32 SW	M32	36	25.4	30	3	Black	50	0.656	2047971
129 TB M40 SW	M40	44	33.4	30	3	Black	30	0.790	2047979
129 TB M50 SW	M50	53	43	30	3	Black	30	0.935	2047987
129 TB M63 SW	M63	67	56	30	3	Black	20	1.140	2047995

Separable pipe end cap to slot onto metric electrical installation pipes. The separable pipe end cap can be used for repairs on existing installations according to regulations. It is not necessary to disconnect the cables, allowing quick mounting.

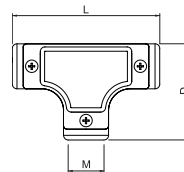


AIG  
M IP 54

### Control T piece with thread

Type	Size	Dim. D mm	Dim. L mm	Dimension M	Pack Piece	Weight kg/100 pc.	Item no.
SKTM16W ALU	16	47.5	72	M16x1.5	5	7.200	2047604
SKTM20W ALU	20	65	102	M20x1.5	5	13.500	2047605
SKTM25W ALU	25	75	115	M25x1.5	5	22.000	2047606
SKTM32W ALU	32	96	156	M32x1.5	4	46.600	2047607
SKTM40W ALU	40	96	156	M40x1.5	4	34.000	2047608
SKTM50W ALU	50	124.5	194	M50x1.5	2	56.300	2047609

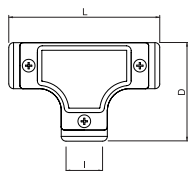
Die-cast aluminium T piece, with internal thread, for mounting in pipe sections as a junction. Removable cover for easier cable routing and later checking.



## Control T piece without thread

AlG

IP  
54

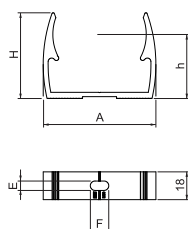
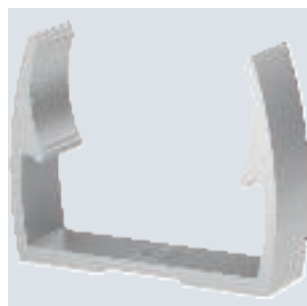


Type	Size	Dim.			Pack Piece	Weight kg/100 pc.	Item no.
		D mm	L mm	I mm			
SKT16W ALU	16	47.5	72	16	5	6.900	2047588
SKT20W ALU	20	65	102	20	5	12.900	2047589
SKT25W ALU	25	75	115	25	5	21.500	2047590
SKT32W ALU	32	96	156	32	4	45.300	2047591
SKT40W ALU	40	96	156	40	4	32.800	2047592
SKT50W ALU	50	124.5	194	50	2	53.100	2047593

Die-cast aluminium T piece, for mounting in pipe sections as a junction.  
Removable cover for easier cable routing and later checking.

## Quick clip, aluminium

Alu



Type	Nominal size	Shipping		Pack Piece	Weight kg/100 pc.	Item no.
		box	Piece			
ALQ M16	16	1200		100	0.780	2149916
ALQ M20	20	1200		100	0.900	2149920
ALQ M25	25	100		100	1.110	2149925
ALQ M32	32	600		50	1.600	2149932
ALQ M40	40	50		50	2.400	2149940
ALQ M50	50	300		25	2.730	2149950
ALQ M63	63	20		20	3.340	2149963

OBO Quick clip, type ALQ M, for all metric ALU pipe systems, as well as light-duty and heavy-duty insulation pipes. Suitable for mounting the OBO pipe system, material: aluminium. Pipe centring aids allow optimal attachment of the pipe and automatically turn the clip into the correct position.  
Slot for side alignment during mounting with wood screw or knock-in anchor.  
Recommended fastening spacing 50–60 cm.



## Spacer clip 732

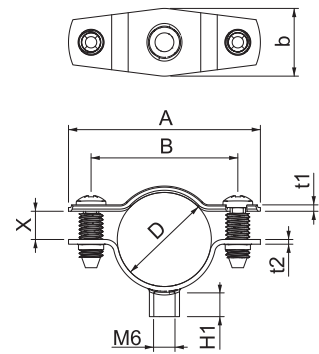


Type	Clamping range D mm	Pack Piece	Weight kg/100 pc.	Item no.
ASG 732 6 G	5-6	25	1.136	1362404
ASG 732 7 G	6-7	25	1.341	1362406
ASG 732 8 G	7-8	25	1.349	1362408
ASG 732 10 G	8-10	25	1.504	1362410
ASG 732 12 G	10-12	25	1.567	1362412
ASG 732 14 G	12-14	25	1.638	1362414
ASG 732 17 G	14-17	25	1.793	1362417
ASG 732 20 G	17-20	25	1.895	1362420
ASG 732 25 G	20-25	25	2.145	1362424
ASG 732 30 G	25-30	20	3.157	1362428
ASG 732 36 G	30-36	20	3.664	1362432
ASG 732 44 G	36-44	20	4.002	1362436
ASG 732 53 G	44-53	20	4.713	1362440
ASG 732 63 G	53-63	20	5.231	1362444

Spacer clip for the installation of pipes and cables on walls, ceilings and floors. With self-locking cover. Fastening via attachment piece with internal thread. Approved for the maintenance of electrical function according to DIN 4102 Part 12, maintenance of electrical function classes E 30 to E 90.

Type	Clamping range D mm	Dim. A mm	Dim. B mm	Dim. x mm	Dim. b mm	Dimension t1 mm	Dimension t2 mm	Dim. H1 mm
ASG 732 6 G	5-6	35	23	1.5	18	1	1.25	6.5
ASG 732 7 G	6-7	35	23	1.5	18	1	1.25	6.5
ASG 732 8 G	7-8	35	23	1.5	18	1	1.25	6.5
ASG 732 10 G	8-10	37	25	3	18	1	1.25	6.5
ASG 732 12 G	10-12	39	27	3	18	1	1.25	6.5
ASG 732 14 G	12-14	41	29	3	18	1	1.25	6.5
ASG 732 17 G	14-17	44	32	4.5	18	1	1.25	6.5
ASG 732 20 G	17-20	47	35	4.5	18	1	1.25	6.5
ASG 732 25 G	20-25	51	39	7.5	18	1	1.25	6.5
ASG 732 30 G	25-30	59	45	7.5	18	1.5	1.5	6.5
ASG 732 36 G	30-36	65	51	9	18	1.5	1.5	6.5
ASG 732 44 G	36-44	73	59	12	18	1.5	1.5	6.5
ASG 732 53 G	44-53	84	70	13.5	18	1.5	1.5	6.5
ASG 732 63 G	53-63	94	80	15	18	1.5	1.5	6.5

### Dimensions



## Spacer clip 732

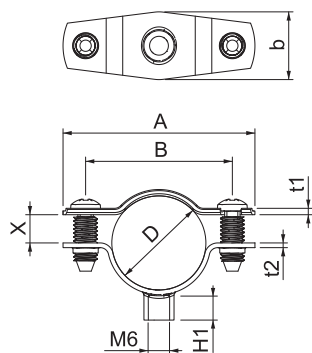


Type	Clamping range D mm	Pack Piece	Weight kg/100 pc.	Item no.
ASG 732 6 FT	5-6	25	1.398	1362354
ASG 732 7 FT	6-7	25	1.415	1362356
ASG 732 8 FT	7-8	25	1.424	1362358
ASG 732 10 FT	8-10	25	1.585	1362360
ASG 732 12 FT	10-12	25	1.653	1362362
ASG 732 14 FT	12-14	25	1.729	1362364
ASG 732 17 FT	14-17	25	1.892	1362367
ASG 732 20 FT	17-20	25	2.002	1362369
ASG 732 25 FT	20-25	25	2.261	1362372
ASG 732 30 FT	25-30	20	3.309	1362374
ASG 732 36 FT	30-36	20	3.840	1362378
ASG 732 44 FT	36-44	20	4.197	1362382
ASG 732 53 FT	44-53	20	4.942	1362386
ASG 732 63 FT	53-63	20	5.492	1362389

Spacer clip for the installation of pipes and cables on walls, ceiling and floors. With self-locking upper part. Surfaces G and FT from a clip size of 20 are suitable for the installation with a nail device or a bolt-firing tool.

Approved for the maintenance of electrical function according to DIN 4102 Part 12, maintenance of electrical function classes E30 to E90.

### Dimensions



Type	Clamping range D mm	Dim. A mm	Dim. B mm	Dim. x mm	Dim. b mm	Dimen- sion t1 mm	Dimen- sion t2 mm	Dim. H1 mm
ASG 732 6 FT	5-6	35	23	1.5	18	1	1.25	6.5
ASG 732 7 FT	6-7	35	23	1.5	18	1	1.25	6.5
ASG 732 8 FT	7-8	35	23	1.5	18	1	1.25	6.5
ASG 732 10 FT	8-10	37	25	3	18	1	1.25	6.5
ASG 732 12 FT	10-12	39	27	3	18	1	1.25	6.5
ASG 732 14 FT	12-14	41	29	3	18	1	1.25	6.5
ASG 732 17 FT	14-17	44	32	4.5	18	1	1.25	6.5
ASG 732 20 FT	17-20	47	35	4.5	18	1	1.25	6.5
ASG 732 25 FT	20-25	51	39	7.5	18	1	1.25	6.5
ASG 732 30 FT	25-30	59	45	7.5	18	1.5	1.5	6.5
ASG 732 36 FT	30-36	65	51	9	18	1.5	1.5	6.5
ASG 732 44 FT	36-44	73	59	12	18	1.5	1.5	6.5
ASG 732 53 FT	44-53	84	70	13.5	18	1.5	1.5	6.5
ASG 732 63 FT	53-63	94	80	15	18	1.5	1.5	6.5

VA



## Spacer clip 732

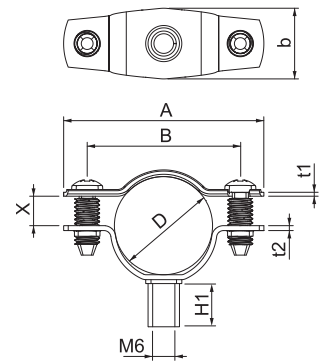
Type	Clamping range D mm	Pack Piece	Weight kg/100 pc.	Item no.
ASG 732 6 A2	5-6	25	1.537	1362622
ASG 732 7 A2	6-7	25	1.553	1362624
ASG 732 8 A2	7-8	25	1.561	1362626
ASG 732 10 A2	8-10	25	1.749	1362628
ASG 732 12 A2	10-12	25	1.796	1362630
ASG 732 14 A2	12-14	25	1.859	1362632
ASG 732 17 A2	14-17	25	2.007	1362634
ASG 732 20 A2	17-20	25	2.110	1362636
ASG 732 25 A2	20-25	25	2.361	1362638
ASG 732 30 A2	25-30	20	3.321	1362640
ASG 732 36 A2	30-36	20	3.728	1362642
ASG 732 44 A2	36-44	20	4.099	1362644
ASG 732 53 A2	44-53	20	4.781	1362646
ASG 732 63 A2	53-63	20	5.301	1362648



Spacer clip for the installation of pipes and cables on walls, ceiling and floors. With self-locking upper part. Surfaces G and FT from a clip size of 20 are suitable for the installation with a nail device or a bolt-firing tool.  
Approved for the maintenance of electrical function according to DIN 4102 Part 12, maintenance of electrical function classes E30 to E90.

Type	Clamping range D mm	Dim. A mm	Dim. B mm	Dim. x mm	Dim. b mm	Dimension t1 mm	Dimension t2 mm	Dim. H1 mm
ASG 732 6 A2	5-6	35	23	1.5	18	1	1.25	12
ASG 732 7 A2	6-7	35	23	1.5	18	1	1.25	12
ASG 732 8 A2	7-8	35	23	1.5	18	1	1.25	12
ASG 732 10 A2	8-10	37	25	3	18	1	1.25	12
ASG 732 12 A2	10-12	39	27	3	18	1	1.25	12
ASG 732 14 A2	12-14	41	29	3	18	1	1.25	12
ASG 732 17 A2	14-17	44	32	4.5	18	1	1.25	12
ASG 732 20 A2	17-20	47	35	4.5	18	1	1.25	12
ASG 732 25 A2	20-25	51	39	7.5	18	1	1.25	12
ASG 732 30 A2	25-30	59	45	7.5	18	1.5	1.5	12
ASG 732 36 A2	30-36	65	51	9	18	1.5	1.5	12
ASG 732 44 A2	36-44	73	59	12	18	1.5	1.5	12
ASG 732 53 A2	44-53	84	70	13.5	18	1.5	1.5	12
ASG 732 63 A2	53-63	94	80	15	18	1.5	1.5	12

### Dimensions



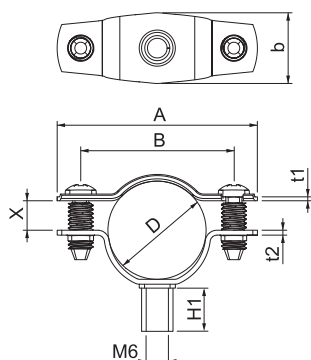
## Spacer clip 732



Type	Clamping range D mm	Pack Piece	Weight kg/100 pc.	Item no.
ASG 732 6 A4	5-6	25	1.558	1362454
ASG 732 7 A4	6-7	25	1.574	1362456
ASG 732 8 A4	7-8	25	1.582	1362458
ASG 732 10 A4	8-10	25	1.773	1362460
ASG 732 12 A4	10-12	25	1.821	1362462
ASG 732 14 A4	12-14	25	1.885	1362464
ASG 732 17 A4	14-17	25	2.035	1362467
ASG 732 20 A4	17-20	25	2.139	1362469
ASG 732 25 A4	20-25	25	2.394	1362472
ASG 732 30 A4	25-30	20	3.370	1362474
ASG 732 36 A4	30-36	20	3.782	1362478
ASG 732 44 A4	36-44	20	4.158	1362482
ASG 732 53 A4	44-53	20	4.851	1362486
ASG 732 63 A4	53-63	20	5.379	1362489

Spacer clip for the installation of pipes and cables on walls, ceilings and floors. With self-locking cover. Fastening via attachment piece with internal thread.  
Approved for the maintenance of electrical function according to DIN 4102 Part 12, maintenance of electrical function classes E 30 to E 90.

### Dimensions

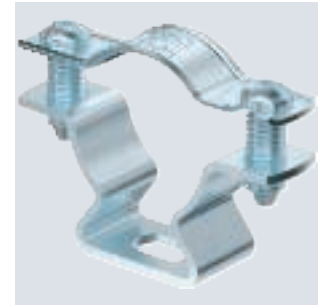


Type	Clamping range D mm	Dim. A mm	Dim. B mm	Dim. x mm	Dim. b mm	Dimen- sion t1 mm	Dimen- sion t2 mm	Dim. H1 mm
ASG 732 6 A4	5-6	35	23	1.5	18	1	1.25	12
ASG 732 7 A4	6-7	35	23	1.5	18	1	1.25	12
ASG 732 8 A4	7-8	35	23	1.5	18	1	1.25	12
ASG 732 10 A4	8-10	37	25	3	18	1	1.25	12
ASG 732 12 A4	10-12	39	27	3	18	1	1.25	12
ASG 732 14 A4	12-14	41	29	3	18	1	1.25	12
ASG 732 17 A4	14-17	44	32	4.5	18	1	1.25	12
ASG 732 20 A4	17-20	47	35	4.5	18	1	1.25	12
ASG 732 25 A4	20-25	51	39	7.5	18	1	1.25	12
ASG 732 30 A4	25-30	59	45	7.5	18	1.5	1.5	12
ASG 732 36 A4	30-36	65	51	9	18	1.5	1.5	12
ASG 732 44 A4	36-44	73	59	12	18	1.5	1.5	12
ASG 732 53 A4	44-53	84	70	13.5	18	1.5	1.5	12
ASG 732 63 A4	53-63	94	80	15	18	1.5	1.5	12





## Spacer clip 733

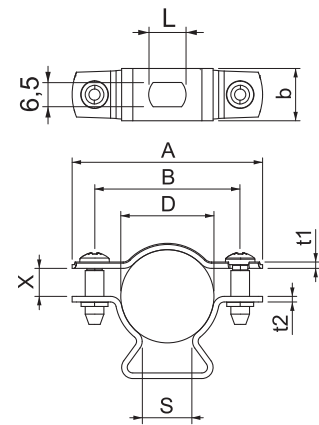


Type	Clamping range D mm	Pack Piece	Weight kg/100 pc.	Item no.
ASL 733 10 G	8-10	25	1.794	1362754
ASL 733 12 G	10-12	25	1.857	1362756
ASL 733 14 G	12-14	25	1.936	1362758
ASL 733 17 G	14-17	25	2.099	1362762
ASL 733 20 G	17-20	25	2.201	1362764
ASL 733 25 G	20-25	25	2.419	1362768
ASL 733 30 G	25-30	20	3.401	1362772
ASL 733 36 G	30-36	20	3.774	1362776
ASL 733 44 G	36-44	20	4.151	1362780
ASL 733 53 G	44-53	20	5.616	1362784
ASL 733 63 G	53-63	20	6.212	1362788

Spacer clip for the installation of pipes and cables on walls, ceilings and floors. With self-locking cover. Fastening via slot.  
Approved for the maintenance of electrical function according to DIN 4102 Part 12, maintenance of electrical function classes E 30 to E 90.

Type	Dim. A mm	Dim. B mm	Dim. x mm	Dimen- sion t1 mm	Dimen- sion t2 mm	Dim. L mm	Dim. b mm	Dim. s mm
ASL 733 10 G	37	25	3	1	1.5	10	16	5.5
ASL 733 12 G	39	27	3	1	1.5	10	14	6.9
ASL 733 14 G	41	29	3	1	1.5	10	14	8
ASL 733 17 G	44	32	4.5	1	1.5	10	14	9.5
ASL 733 20 G	47	35	4.5	1	1.5	10	14	12
ASL 733 25 G	51	39	7.5	1	1.5	10	14	13.5
ASL 733 30 G	59	45	7.5	1.5	1.5	10	16	16.5
ASL 733 36 G	65	51	9	1.5	1.5	10	16	20
ASL 733 44 G	73	59	12	1.5	1.5	10	16	24
ASL 733 53 G	84	70	13.5	1.5	2	10	16	29.5
ASL 733 63 G	94	80	15	1.5	2	10	16	35.3

### Dimensions



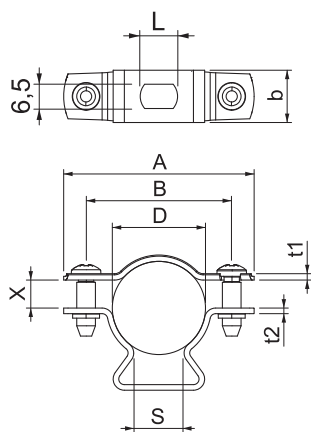
## Spacer clip 733



Type	Clamping range D mm	Pack Piece	Weight kg/100 pc.	Item no.
ASL 733 10 FT	8-10	25	1.883	1362704
ASL 733 12 FT	10-12	25	1.951	1362706
ASL 733 14 FT	12-14	25	2.035	1362708
ASL 733 17 FT	14-17	25	2.206	1362712
ASL 733 20 FT	17-20	25	2.000	1362714
ASL 733 25 FT	20-25	25	2.540	1362718
ASL 733 30 FT	25-30	20	3.567	1362722
ASL 733 36 FT	30-36	20	3.956	1362726
ASL 733 44 FT	36-44	20	4.356	1362730
ASL 733 53 FT	44-53	20	5.850	1362734
ASL 733 63 FT	53-63	20	6.477	1362738

Spacer clip for the installation of pipes and cables on walls, ceilings and floors. With self-locking cover. Fastening via slot.  
Approved for the maintenance of electrical function according to DIN 4102 Part 12, maintenance of electrical function classes E 30 to E 90.

### Dimensions



Type	Dim. A mm	Dim. B mm	Dim. x mm	Dimen- sion t1 mm	Dimen- sion t2 mm	Dim. L mm	Dim. b mm	Dim. s mm
ASL 733 10 FT	37	25	3	1	1.5	10	16	5.5
ASL 733 12 FT	39	27	3	1	1.5	10	14	6.9
ASL 733 14 FT	41	29	3	1	1.5	10	14	8
ASL 733 17 FT	44	32	4.5	1	1.5	10	14	9.5
ASL 733 20 FT	47	35	4.5	1	1.5	10	14	12
ASL 733 25 FT	51	39	7.5	1	1.5	10	14	13.5
ASL 733 30 FT	59	45	7.5	1.5	1.5	10	16	16.5
ASL 733 36 FT	65	51	9	1.5	1.5	10	16	20
ASL 733 44 FT	73	59	12	1.5	1.5	10	16	24
ASL 733 53 FT	84	70	13.5	1.5	2	10	16	29.5
ASL 733 63 FT	94	80	15	1.5	2	10	16	35.3

VA

E30 E60 E90 

## Spacer clip 733

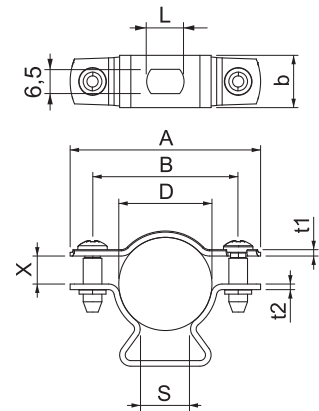
Type	Clamping range D mm	Pack Piece	Weight kg/100 pc.	Item no.
ASL 733 10 A2	8-10	25	1.804	1362976
ASL 733 12 A2	10-12	25	1.867	1362978
ASL 733 14 A2	12-14	25	1.946	1362980
ASL 733 17 A2	14-17	25	2.110	1362982
ASL 733 20 A2	17-20	25	2.213	1362984
ASL 733 25 A2	20-25	25	2.432	1362986
ASL 733 30 A2	25-30	20	3.416	1362988
ASL 733 36 A2	30-36	20	3.792	1362990
ASL 733 44 A2	36-44	20	4.170	1362992
ASL 733 53 A2	44-53	20	5.643	1362994
ASL 733 63 A2	53-63	20	6.242	1362996



Spacer clip for the installation of pipes and cables on walls, ceilings and floors. With self-locking cover. Fastening via slot.  
Approved for the maintenance of electrical function according to DIN 4102 Part 12, maintenance of electrical function classes E 30 to E 90.

Type	Dim. A mm	Dim. B mm	Dim. x mm	Dimen- sion t1 mm	Dimen- sion t2 mm	Dim. L mm	Dim. b mm	Dim. s mm
ASL 733 10 A2	37	25	3	1	1.5	10	16	5.5
ASL 733 12 A2	39	27	3	1	1.5	10	14	6.9
ASL 733 14 A2	41	29	3	1	1.5	10	14	8
ASL 733 17 A2	44	32	4.5	1	1.5	10	14	9.5
ASL 733 20 A2	47	35	4.5	1	1.5	10	14	12
ASL 733 25 A2	51	39	7.5	1	1.5	10	14	13.5
ASL 733 30 A2	59	45	7.5	1.5	1.5	10	16	16.5
ASL 733 36 A2	65	51	9	1.5	1.5	10	16	20
ASL 733 44 A2	73	59	12	1.5	1.5	10	16	24
ASL 733 53 A2	84	70	13.5	1.5	2	10	16	29.5
ASL 733 63 A2	94	80	15	1.5	2	10	16	35.3

### Dimensions



## Spacer clip 733

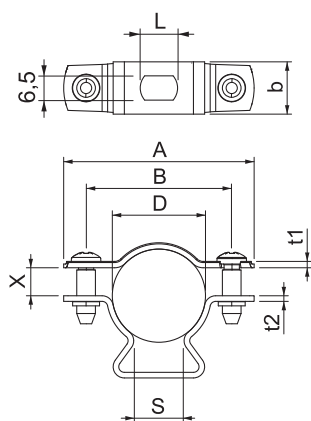


Type	Clamping range D mm	Pack Piece	Weight kg/100 pc.	Item no.
ASL 733 10 ALU	8-10	25	0.917	1362804
ASL 733 12 ALU	10-12	25	0.938	1362806
ASL 733 14 ALU	12-14	25	0.965	1362808
ASL 733 17 ALU	14-17	25	1.062	1362812
ASL 733 20 ALU	17-20	25	1.097	1362814
ASL 733 25 ALU	20-25	25	1.254	1362818
ASL 733 30 ALU	25-30	20	1.592	1362822
ASL 733 36 ALU	30-36	20	1.802	1362826
ASL 733 44 ALU	36-44	20	1.931	1362830
ASL 733 53 ALU	44-53	20	2.537	1362834
ASL 733 63 ALU	53-63	20	2.742	1362838

Spacer clip for the installation of pipes and cables on walls, ceilings and floors. With self-locking upper part. Fastening via slot. From the clip size of 20 suitable for the installation with a nail device or bolt-firing device.

Approved for the maintenance of electrical function to DIN 4102 Part 12, maintenance of electrical function classes E30 to E90 (except ALU).

### Dimensions



Type	Dim. A mm	Dim. B mm	Dim. x mm	Dimen- sion t1 mm	Dimen- sion t2 mm	Dim. L mm	Dim. b mm	Dim. s mm
ASL 733 10 ALU	37	25	3	1	1.5	10	16	5.5
ASL 733 12 ALU	39	27	3	1	1.5	10	14	6.9
ASL 733 14 ALU	41	29	3	1	1.5	10	14	8
ASL 733 17 ALU	44	32	4.5	1	1.5	10	14	9.5
ASL 733 20 ALU	47	35	4.5	1	1.5	10	14	12
ASL 733 25 ALU	51	39	7.5	1	1.5	10	14	13.5
ASL 733 30 ALU	59	45	7.5	1.5	1.5	10	16	16.5
ASL 733 36 ALU	65	51	9	1.5	1.5	10	16	20
ASL 733 44 ALU	73	59	12	1.5	1.5	10	16	24
ASL 733 53 ALU	84	70	13.5	1.5	2	10	16	29.5
ASL 733 63 ALU	94	80	15	1.5	2	10	16	35.3

VA



## Spacer clip 733

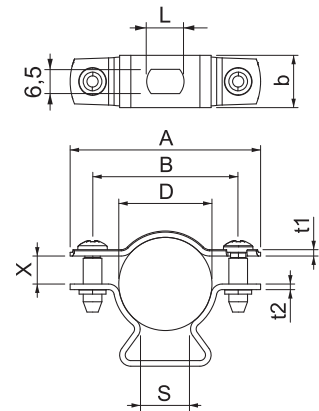
Type	Clamping range D mm	Pack Piece	Weight kg/100 pc.	Item no.
ASL 733 10 A4	8-10	25	1.828	1362904
ASL 733 12 A4	10-12	25	1.893	1362906
ASL 733 14 A4	12-14	25	1.973	1362908
ASL 733 17 A4	14-17	25	2.139	1362912
ASL 733 20 A4	17-20	25	2.243	1362914
ASL 733 25 A4	20-25	25	2.466	1362918
ASL 733 30 A4	25-30	20	3.466	1362922
ASL 733 36 A4	30-36	20	3.846	1362926
ASL 733 44 A4	36-44	20	4.230	1362930
ASL 733 53 A4	44-53	20	5.723	1362934
ASL 733 63 A4	53-63	20	6.331	1362938



Spacer clip for the installation of pipes and cables on walls, ceilings and floors. With self-locking cover. Fastening via slot.  
Approved for the maintenance of electrical function according to DIN 4102 Part 12, maintenance of electrical function classes E 30 to E 90.

Type	Dim. A mm	Dim. B mm	Dim. x mm	Dimen- sion t1 mm	Dimen- sion t2 mm	Dim. L mm	Dim. b mm	Dim. s mm
ASL 733 10 A4	37	25	3	1	1.5	10	16	5.5
ASL 733 12 A4	39	27	3	1	1.5	10	14	6.9
ASL 733 14 A4	41	29	3	1	1.5	10	14	8
ASL 733 17 A4	44	32	4.5	1	1.5	10	14	9.5
ASL 733 20 A4	47	35	4.5	1	1.5	10	14	12
ASL 733 25 A4	51	39	7.5	1	1.5	10	14	13.5
ASL 733 30 A4	59	45	7.5	1.5	1.5	10	16	16.5
ASL 733 36 A4	65	51	9	1.5	1.5	10	16	20
ASL 733 44 A4	73	59	12	1.5	1.5	10	16	24
ASL 733 53 A4	84	70	13.5	1.5	2	10	16	29.5
ASL 733 63 A4	94	80	15	1.5	2	10	16	35.3

### Dimensions



### Fastening clip 822, heavy duty

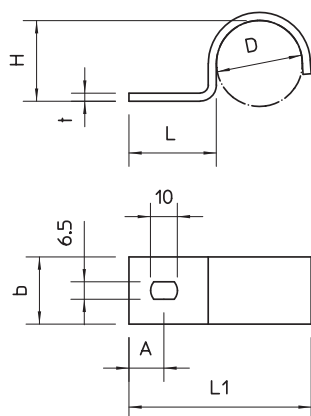
VA 2B



Type	For Ø mm	Hole size mm	Material thickness mm	Pack Piece	Weight kg/100 pc.	Item no.
822 16 A4	15,2	6,5x10	2	100	1.733	1013877
822 20 A4	20	6,5x10	2	100	2.125	1013885
822 25 A4	25	6,5x10	2	50	2.400	1013893
822 32 A4	32	6,5x10	2	100	5.490	1013903
822 40 A4	40	6,5x10	2	100	6.590	1013911
822 50 A4	50	6,5x10	3	100	7.690	1013921
822 63 A4	63	6,5x10	3	100	9.260	1013925

Single-lobe fastening clip for cables and pipes.

#### Dimensions



Type	Dim. D mm	Dim. L mm	Dim. H mm	Dim. t mm	Dim. A mm	Dim. L1 mm	Dim. b mm
822 16 A4	15,2	23,5	14	2	10	42	20
822 20 A4	20	23,5	19,5	2	10	48	20
822 25 A4	25	25,5	23,5	3	11	53	20
822 32 A4	32	32,5	30	3	13	68	25
822 40 A4	40	32,5	38	3	13	76	25
822 50 A4	50	32,5	47	3	15	86	25
822 63 A4	63	33,5	60	3	15	100	25

### Fastening clip 822, heavy duty

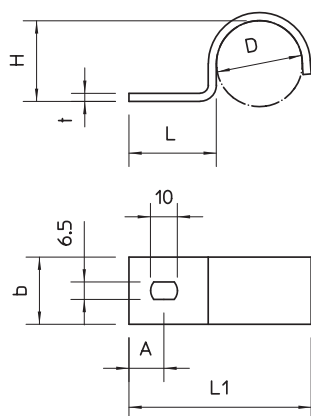
St FT



Type	For Ø mm	Hole size mm	Material thickness mm	Pack Piece	Weight kg/100 pc.	Item no.
822 16 FT	15,2	6,5x10	2	100	1.733	1014099
822 20 FT	20	6,5x10	2	100	2.125	1014137
822 25 FT	25	6,5x10	2	50	2.400	1014501
822 32 FT	32	6,5x10	2	100	5.490	1014528
822 40 FT	40	6,5x10	2	100	6.590	1014536
822 50 FT	50	6,5x10	3	100	7.690	1014544
822 63 FT	63	6,5x10	3	100	9.260	1014552

Single-lobe fastening clip for cables and pipes.

#### Dimensions



Type	Dim. D mm	Dim. L mm	Dim. H mm	Dim. t mm	Dim. A mm	Dim. L1 mm	Dim. b mm
822 16 FT	15,2	23,5	14	2	10	42	20
822 20 FT	20	23,5	19,5	2	10	48	20
822 25 FT	25	25,5	23,5	3	11	53	20
822 32 FT	32	32,5	30	3	13	68	25
822 40 FT	40	32,5	38	3	13	76	25
822 50 FT	50	32,5	47	3	15	86	25
822 63 FT	63	33,5	60	3	15	100	25



### Fastening clip 605, medium duty

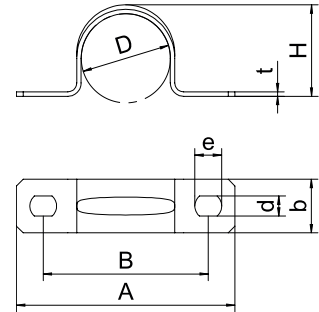
Type	For Ø mm	Hole size mm	Material thickness mm	Pack Piece	Weight kg/100 pc.	Item no.
605 16 G	16	4,5x6	1	100	0.585	1018167
605 20 G	20	4,5x6	1	100	0.664	1018205
605 25 G	25	4,5x6	1	100	0.960	1018256
605 32 G	32	4,5x6	1	100	1.260	1018337
605 40 G	40	5,5x7	1.5	50	1.900	1018396
605 50 G	50	5,5x7	1.5	25	2.770	1018507
605 63 G	63	5,5x7	1.5	25	3.670	1018639



Two lobe fastening clips for cables and pipes.  
\* Sizes 7 to 12 not suitable for bolt-firing tool.

Type	Dim. D mm	Dim. H mm	Dim. t mm	Dim. A mm	Dim. B mm	Dim. b mm	Dim. d mm	Dim. e mm
605 16 G	16	14,5	1	44	32	12	4,5	6
605 20 G	20	18,5	1	49	37	12	4,5	6
605 25 G	25	23	1	58	44	14	4,5	6
605 32 G	32	30	1	66	52	14	5,5	6
605 40 G	40	37	1,5	75	61	14	5,5	7
605 50 G	50	46	1,5	88	74	16	5,5	7
605 63 G	63	59	1,5	112	98	16	5,5	7

Dimensions



### Fastening clip 605, medium duty

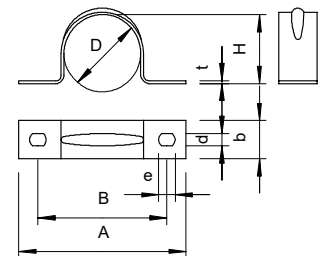
Type	For Ø mm	Hole size mm	Material thickness mm	Pack Piece	Weight kg/100 pc.	Item no.
605 16 ALU	16	4,5x6	1	100	0.218	1017799
605 20 ALU	20	4,5x6	1	100	0.228	1017837
605 25 ALU	25	4,5x6	1	100	0.330	1017861
605 32 ALU	32	4,5x6	1	100	0.433	1017926
605 40 ALU	40	5,5x7	1	50	0.650	1017950
605 50 ALU	50	5,5x7	1.5	25	0.952	1017980
605 63 ALU	63	5,5x7	1.5	25	1.260	1017997



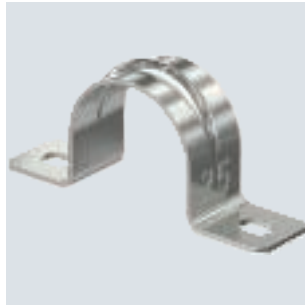
Two lobe fastening clips for cables and pipes.

Type	Dim. D mm	Dim. H mm	Dim. t mm	Dim. A mm	Dim. B mm	Dim. b mm	Dim. d mm	Dim. e mm
605 16 ALU	16	14,5	1	44	32	12	4,5	6
605 20 ALU	20	18,5	1	49	37	12	4,5	6
605 25 ALU	25	23	1	58	44	14	4,5	6
605 32 ALU	32	29	1	95	71	25	4,5	6
605 40 ALU	40	37	1,5	75	61	14	5,5	7
605 50 ALU	50	46	1,5	110	86	25	5,5	7
605 63 ALU	63	59	1,5	120	96	25	5,5	7

Dimensions



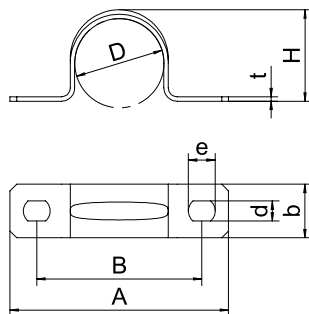
## Fastening clip 605, medium duty



Type	For Ø mm	Hole size mm	Material thickness mm	Pack Piece	Weight kg/100 pc.	Item no.
605 16 A4	16	4,5x6	1	100	0.585	1018661
605 20 A4	20	4,5x6	1	100	0.664	1018669
605 25 A4	25	4,5x6	1	100	0.992	1018679
605 32 A4	32	4,5x6	1	100	1.260	1018693
605 40 A4	40	5,5x7	1.5	50	1.900	1018705
605 50 A4	50	5,5x7	1.5	25	2.770	1018717
605 63 A4	63	5,5x7	1.5	25	3.670	1018729

Two lobe fastening clips for cables and pipes.

### Dimensions



Type	Dim. D mm	Dim. H mm	Dim. t mm	Dim. A mm	Dim. B mm	Dim. b mm	Dim. d mm	Dim. e mm
605 16 A4	16	14,5	1	44	32	12	4,5	6
605 20 A4	20	18,5	1	49	37	12	4,5	6
605 25 A4	25	23	1	58	44	14	4,5	6
605 32 A4	32	30	1	66	52	14	5,5	6
605 40 A4	40	37	1,5	75	61	14	5,5	7
605 50 A4	50	46	1,5	88	74	16	5,5	7
605 63 A4	63	59	1,5	112	98	16	5,5	7

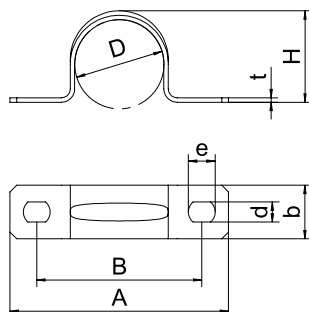
## Fastening clip 823, heavy duty



Type	For Ø mm	Hole size mm	Material thickness mm	Pack Piece	Weight kg/100 pc.	Item no.
823 16 FT	16	6,5x10	2	50	2.260	1015095
823 20 FT	20	6,5x10	2	50	2.662	1015133
823 25 FT	25	6,5x10	3	25	6.770	1015494
823 32 FT	32	6,5x10	3	100	7.469	1015496
823 40 FT	40	6,5x10	3	100	8.460	1015498
823 50 FT	50	6,5x10	3	100	9.050	1015500
823 63 FT	63	6,5x10	3	100	10.700	1015508

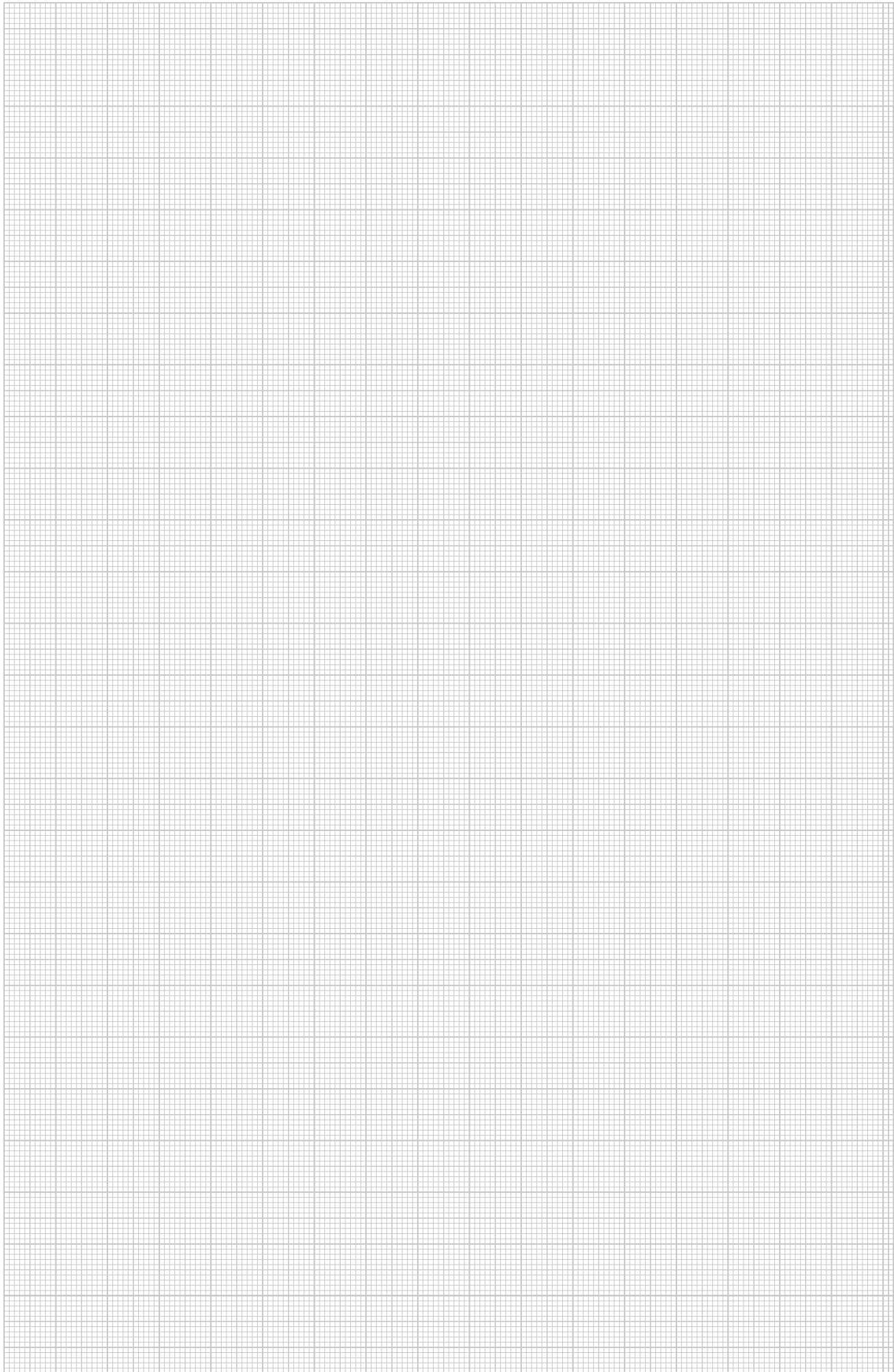
Two lobe fastening clips for cables and pipes.

### Dimensions



Type	Dim. D mm	Dim. H mm	Dim. t mm	Dim. A mm	Dim. B mm	Dim. b mm	Dim. d mm	Dim. e mm
823 16 FT	15,2	13	2	59	40	20	6,5	10
823 20 FT	20,4	18	2	64	45	20	6,5	10
823 25 FT	25	23,5	3	79	60	25	6,5	10
823 32 FT	32	29	3	95	71	25	6,5	10
823 40 FT	40	36	3	100	76	25	6,5	10
823 50 FT	50	46	3	110	86	25	6,5	10
823 63 FT	63	59	3	120	96	25	6,5	10





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