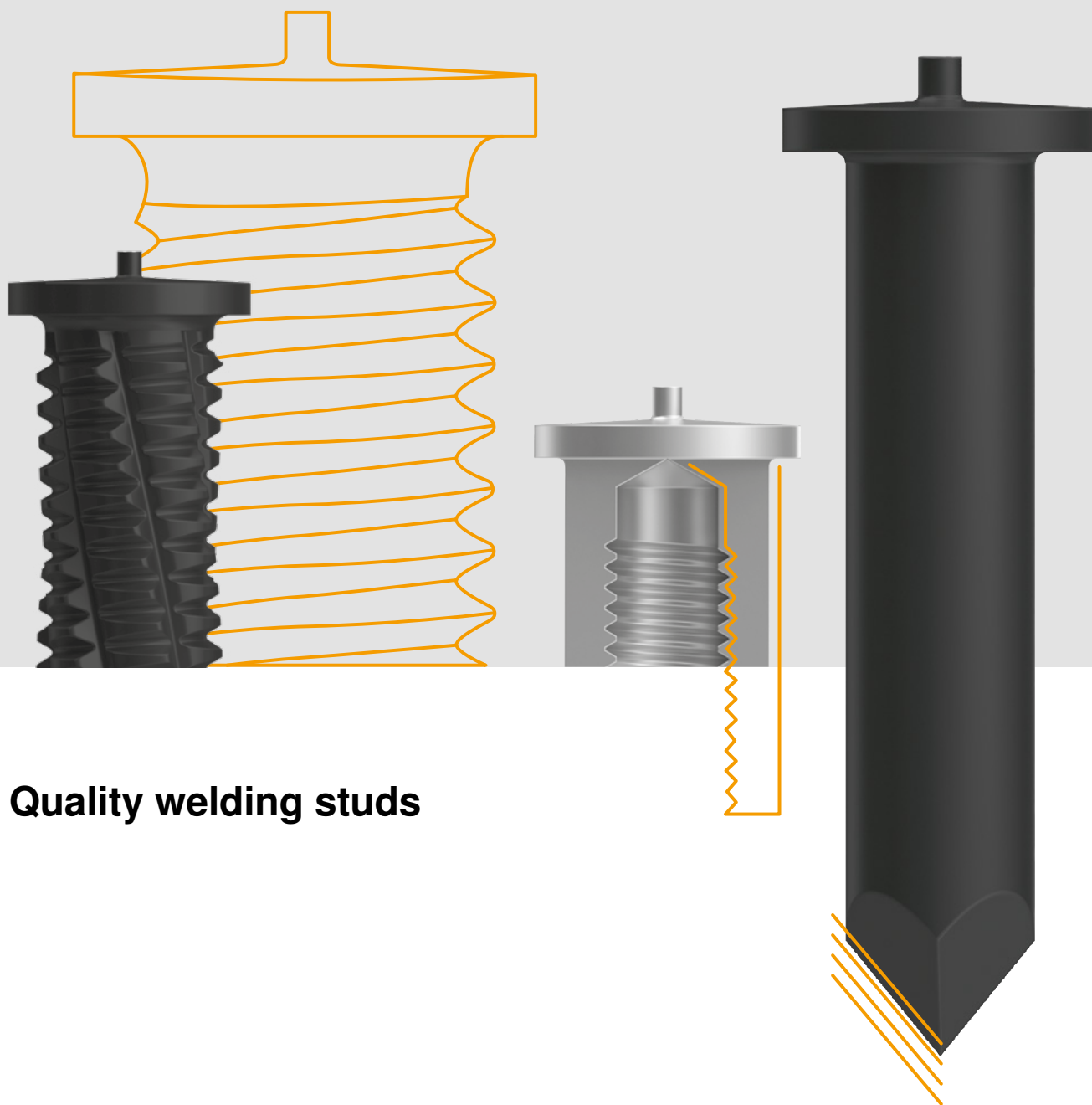




Quality welding studs



Welcome to Customer Service

Use the direct line to OBTEC Customer Service!

On the Service Hotline +49 (0)2373 89-1500, we are available every day from 7.30 a.m. to 5.00 p.m. for any questions about the OBTEC product range for electrical installations. The newly structured OBTEC Customer Service can offer you the full service:

- Competent contacts from your region
- All the information on the OBTEC product range
- Knowledgeable advice on special application topics
- Quick, direct access to all the technical data of the OBTEC products – we also want to provide the best in customer relations!

Telephone:

0 23 73 / 89-1166

Fax for requests:

0 23 73 / 89-12 38

Fax for orders:

0 23 73 / 89-12 38

E-Mail: info@obtec.eu

Internet: www.obtec.eu

Contents

	Welding stud systems	4
	PT threaded bolt for tip ignition	13
	UT pins for tip ignition	31
	IT internal threaded bolt for tip ignition	39
	ISO nails for tip ignition	45
	Flat connector for tip ignition	51
	Welding elements for short cycle	55
	Lacquer groove pin for tip ignition	61
	Directories	65

OBO high-quality welding stud



Product range

The range of welding studs is a reflection of what is required in practice. From all types of threaded bolt to the flat connector in any material and dimensions. As a brand manufacturer, we can offer you:

- Complete welding stud range containing over 2,000 articles
- Proprietary development and production facilities
- Ongoing product maintenance and further development
- Customer-specific special dimensions on request
- Special fastening

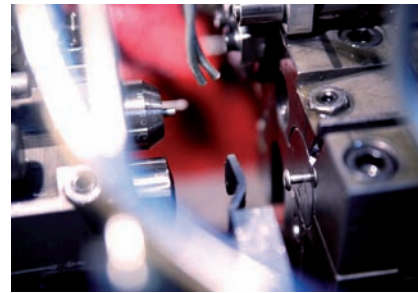
Quality

Professionals demand quality. A quality offered by all OBTEC brand products and services connected with stud welding:

- QA certification to DIN EN ISO 9001:2000
 - Tested material and manufacturing quality
- Active involvement in national and international standardisation bodies



Welding methods



Stud welding is one of the arc stud welding methods. The different methods are described in detail in DIN EN ISO 14555. The fastening elements for stud welding are described in DIN EN ISO 13918; the only applies to rotationally symmetrical components. At OBTEC, these welding studs are created on state-of-the-art multiple die presses through cold reduction. Decades of experience and continuous development of the manufacturing process guarantee the exceptional quality of OBTEC welding studs. In addition, there is a wealth of fastening elements for stud welding, which are not standardised, for example, the flat connector, also called an earthing connector. OBTEC has been producing these punched parts at the highest level of precision for many years. Modern punching tools and presses guarantee a high standard of quality for the fastening elements, as is required for high-quality welding.

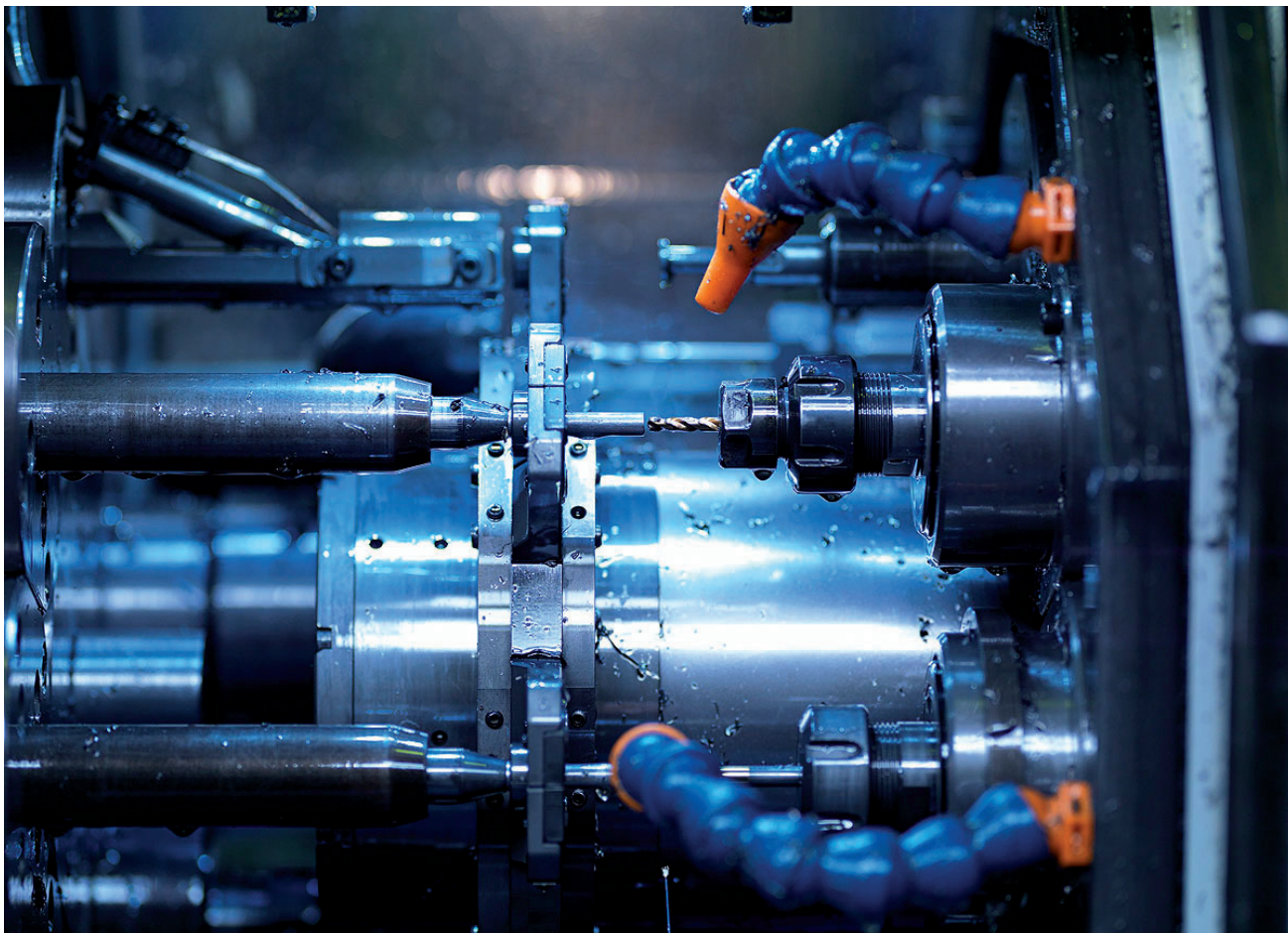
Welding methods

The welding methods are split into two main groups, which prevail in practice, according to the application:

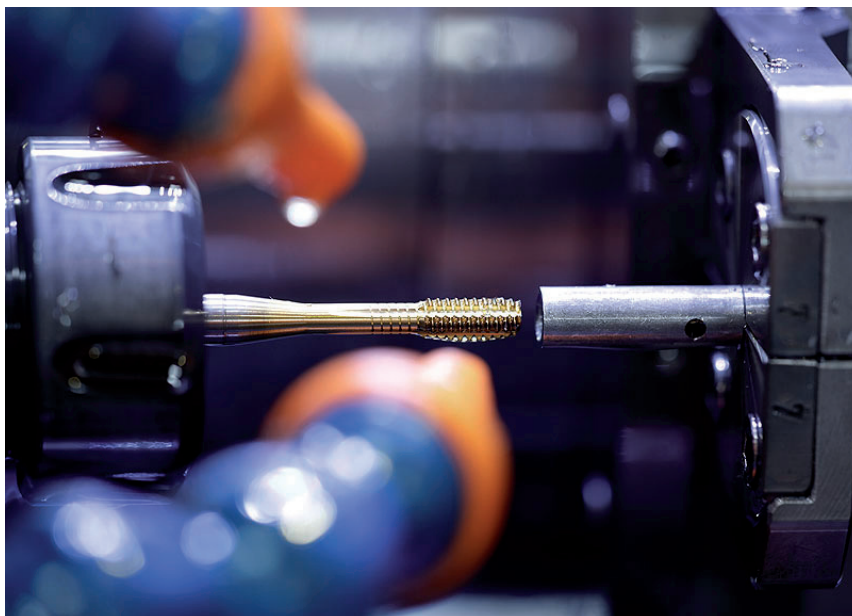
1. Capacitor discharge stud welding with tip ignition. There are two variants of this method: gap welding and contact welding.
2. Stud welding with arc ignition with the subgroup short arc ignition stud welding (short cycle).



Technical informations



All the threads and stud flanges are created to DIN EN ISO 13918. The flange is a component part of the welding stud. Its diameter is greater than the external diameter of the stud. During welding, it prevents the arc from affecting the cylindrical section of the bolt, simultaneously increasing the welding area.



IT internal threaded bolt, DIN EN ISO 13918

	$d_1 \pm 0,1$	$l_1 + 0,6$	$b + 0,5$	$d_3 \pm 0,2$	$d_4 \pm 0,08$	$l_3 \pm 0,05$	h	$\alpha \pm 1^\circ \text{ max.}$
	4		5	6,5	0,75	0,80	0,8 - 1,4	3°
	5		6	7,5	0,75	0,80	0,8 - 1,4	3°
	7,1		7,5	9	0,75	0,85	0,7 - 1,4	3°

ISO nail

	$d_1 \pm 0,1$	$l_1 + 0,6$	$d_3 \pm 0,2$	$d_4 \pm 0,5$	$l_3 \pm 0,05/-0,02$	$h \pm 0,2$	$\alpha \pm 1^\circ \text{ max.}$
	2,1		3,6	0,4	0,4	0,6	3°
	2,6		4,5	0,5	0,5	0,7	3°
	3		5,0	0,7	0,7	0,7	3°

Flat connector

	$S \pm 0,03$	$H \pm 0,3$	$H_1 + 0,5$	$D + 0,2$	$B \pm 0,2$	$B_1 + 0,1$	L
	0,8	11,5	8	1,65	8	6,3	10

Short cycle threaded bolt

	d_1	$l_1 + 0,6$	$d_3 \pm 0,2$	h	$n \text{ max.}$	$\alpha \pm 1^\circ \text{ max.}$
	M 3		4	0,7 - 1,4	1,5	7°
	M 4		5	0,7 - 1,4	1,5	7°
	M 5		6	0,8 - 1,4	2,0	7°
	M 6		7	0,8 - 1,4	2,0	7°
	M 8		9	0,8 - 1,4	2,0	7°
	M 8		11	0,7 - 1,4	2,0	3°

Lacquer groove pin

	d_1	$l_1 + 0,6$	$d_3 \pm 0,2$	h	$n \text{ max.}$	$\alpha \pm 1^\circ \text{ max.}$
	M 5		6,5	0,8 - 1,4	2,0	3°
	M 6		7,5	0,8 - 1,4	2,0	3°
	M 8		9,0	0,8 - 1,4	2,0	3°

Pictogram explanation

Welding method

	Tip ignition
	Short cycle

Materials

	Aluminium
	Stainless steel, grade 305
	Brass
	Steel

Thread metric

	Metric thread, 2.5 mm
	Metric thread, 3 mm
	Metric thread, 4 mm
	Metric thread, 5 mm
	Metric thread, 6 mm
	Metric thread, 8 mm
	Metric thread, 10 mm

Diameter

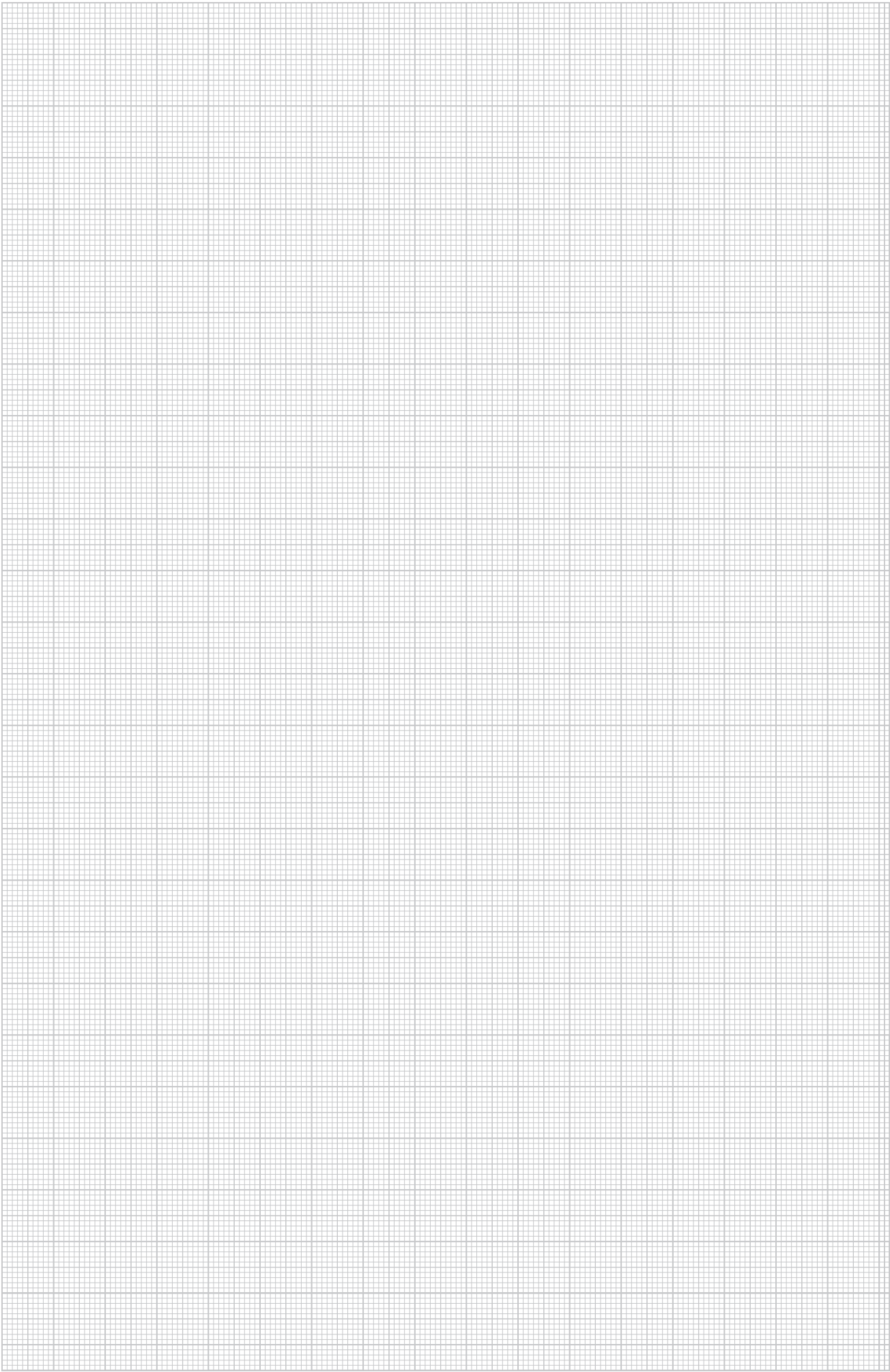
	Diameter 2.1 mm
	Diameter 2.6 mm
	Diameter 3 mm
	Diameter 4 mm
	Diameter 5 mm
	Diameter 6 mm
	Diameter 7.1 mm

Thread types

	UNC thread
	UNF thread

Materials

	Flat connector with 90° angle
	Flat connector with 135° angle





Contents

	Threaded bolt, metric	Steel, copper-plated St 37-3	56
		Stainless steel, grade 305	56
	Coarse threaded bolt	Steel, copper-plated St 37-3	57
	Pins	Steel, copper-plated St 37-3	58
	Internal threaded bolt, metric	Steel, copper-plated St 37-3	59
		Stainless steel, grade 305	59



Threaded bolt, metric



M6



Threaded bolt, metric, Steel, copper-plated St 37-3

Type	Metrical thread	Length mm	Material	Quality	Surface	Shipping box Units	Pack Units	Weight kg/100 pc.	Item no.
1 GM 6 x 16 SC	M6	16	Steel	4,8	Copper-plated	4000	1000	0,283	4029 94 1
1 GM 6 x 20 SC	M6	20	Steel	4,8	Copper-plated	3000	1000	0,350	4029 94 9
1 GM 6 x 25 SC	M6	25	Steel	4,8	Copper-plated	2000	1000	0,435	4029 95 2

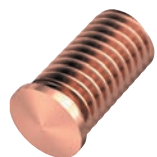
St Steel

Cu Copper-plated

price/1,000 pc.



M8



Threaded bolt, metric, Steel, copper-plated St 37-3

Type	Metrical thread	Length mm	Material	Quality	Surface	Shipping box Units	Pack Units	Weight kg/100 pc.	Item no.
1 GM 8 x 15 SC	M8	15	Steel	4,8	Copper-plated	5000	5000	0,526	4029 92 5
1 GM 8 x 16 SC	M8	16	Steel	4,8	Copper-plated	2000	1000	0,509	4029 21 6
1 GM 8 x 18 SC	M8	18	Steel	4,8	Copper-plated	1000	1000	0,571	4029 21 8
1 GM 8 x 20 SC	M8	20	Steel	4,8	Copper-plated	1000	1000	0,632	4029 17 8
1 GM 8 x 25 SC	M8	25	Steel	4,8	Copper-plated	1000	1000	0,785	4029 22 6
1 GM 8 x 35 SC	M8	35	Steel	4,8	Copper-plated	1000	1000	1,091	4029 18 5

St Steel

Cu Copper-plated

price/1,000 pc.



M6



Threaded bolt, metric, Stainless steel, grade 305

Type	Metrical thread	Length mm	Material	Quality	Surface	Shipping box Units	Pack Units	Weight kg/100 pc.	Item no.
2 GM 6 x 14 SC	M6	14	V2A	1,4303	Pickled	4000	1000	0,249	4030 43 0

V2A Stainless steel, grade 305

Pickled

price/1,000 pc.



Coarse threaded bolt

Coarse threaded bolt, Steel, copper-plated St 37-3

Type	Metrical thread	Length mm	Material	Quality	Shipping box Units	Pack Units	Weight kg/100 pc.	Item no.
1 T5 x 14,2	—	14,2	St	4,8	5000	5000	0,164	4029 43 3
St Steel		GC	Electrogalvanised, yellow-chromalised				price/1,000 pc.	



Coarse threaded bolt, Steel, copper-plated St 37-3

Type	Metrical thread	Length mm	Material	Quality	Shipping box Units	Pack Units	Weight kg/100 pc.	Item no.
1 T5 x 14,2 SC	—	14,2	St	4,8	6000	1000	0,164	4029 68 5
1 T5 x 16,5 SC	—	16,5	St	4,8	5000	5000	0,189	4029 88 7
St Steel		Cu	Copper-plated				price/1,000 pc.	





Pins

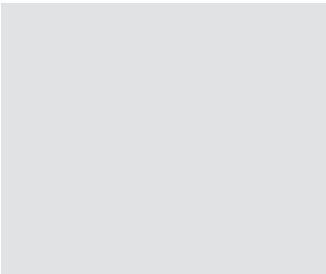


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Pins, Steel, copper-plated St 37-3

Type	Diameter mm	Length mm	Material	Quality	Surface	Shipping box Units	Pack Units	Weight kg/100 pc.	Item no.
1 S 4 x 20 SC	4	20	St	4,8	Copper-plated	6000	1000	0,204	4042 80 0
St Steel			Cu Copper-plated					price/1,000 pc.	



Internal threaded bolt, metric

Internal threaded bolt, metric, Steel, copper-plated St 37-3

Type	Metrical thread	Length mm	Diameter mm	Internal thread length mm	Quality	Shipping box Units	Pack Units	Weight kg/100 pc.	Item no.
1 IM 5x7x15 SC	M5	15	7,1	—	4,8	3000	1000	0,317	4079 25 6
St	Steel	Cu	Copper-plated						price/1,000 pc.



Internal threaded bolt, metric, Steel, copper-plated St 37-3

Type	Metrical thread	Length mm	Diameter mm	Quality	Surface	Shipping box Units	Pack Units	Weight kg/100 pc.	Item no.
1IM6x8x20 SC	M6	20	8	4,8	Copper-plated	1000	1000	0,585	4080 68 8
St	Steel	Cu	Copper-plated						price/1,000 pc.



Internal threaded bolt, metric, Stainless steel, grade 305

Type	Metrical thread	Length mm	Diameter mm	Quality	Surface	Shipping box Units	Pack Units	Weight kg/100 pc.	Item no.
2 IM 5x7x12 SC	M5	12	7,1	1,4303	Pickled	4000	1000	0,270	4081 50 1
2IM5x7x20 SC	M5	20	7,1	1,4303	Pickled	1000	1000	0,645	4081 69 2
V2A	Stainless steel, grade 305	Pickled							price/1,000 pc.

