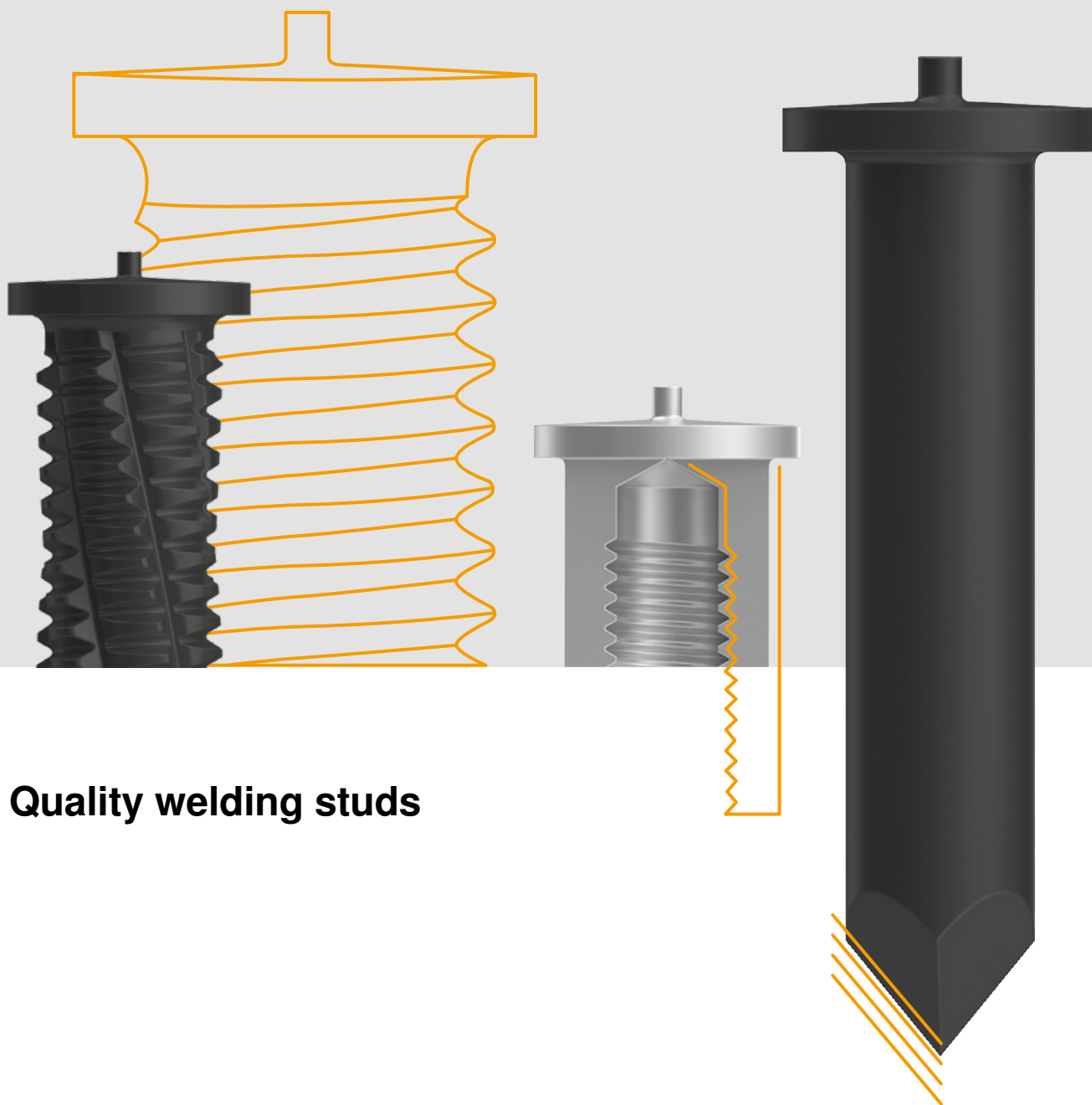




Quality welding studs



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

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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

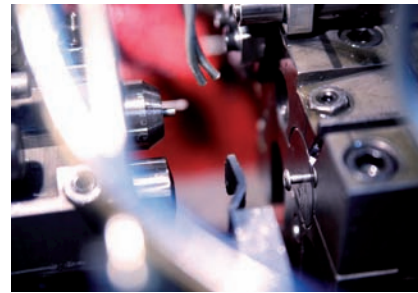
Quality

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



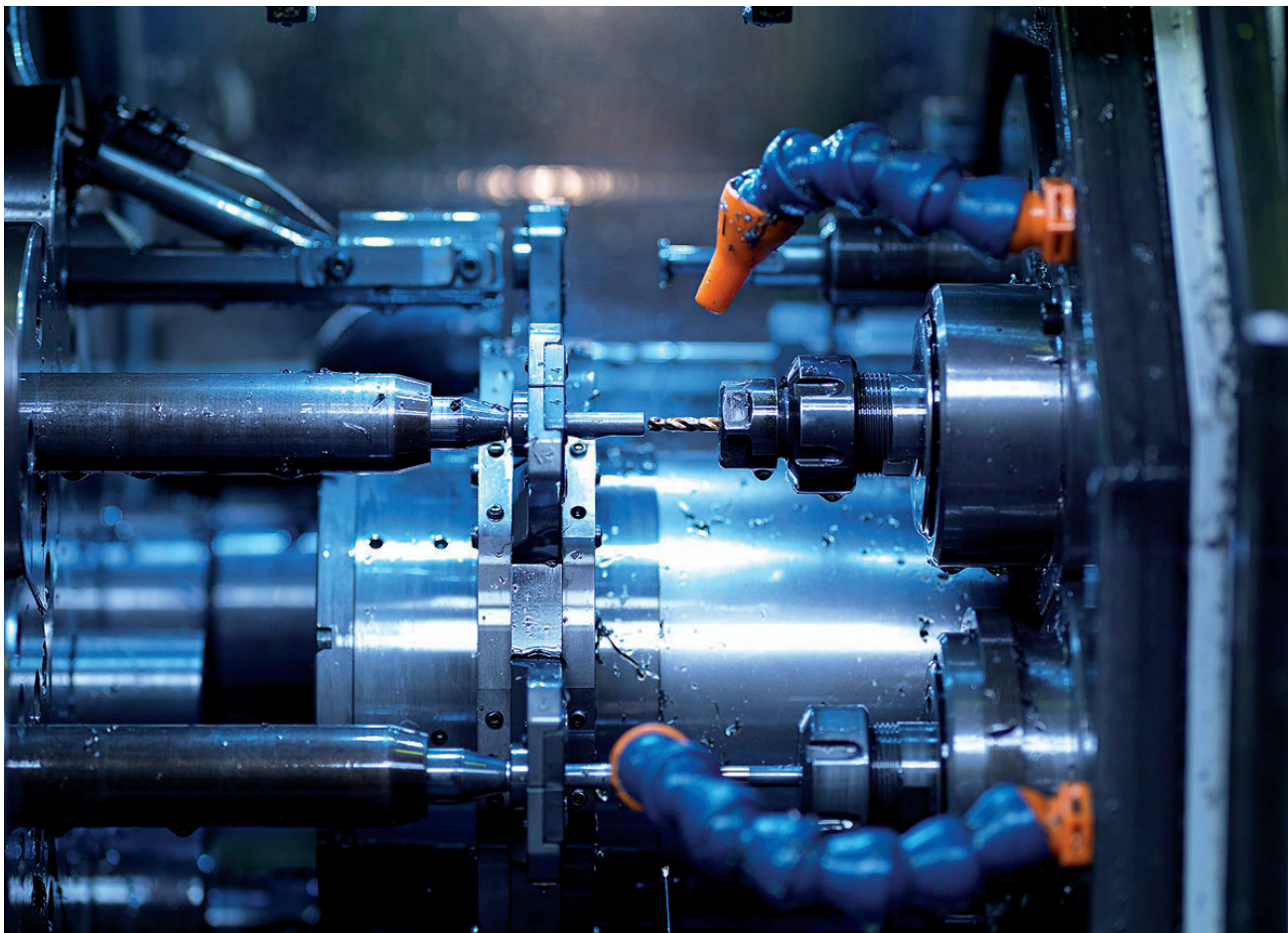
Stud welding is one of the arc stud welding methods. The different methods are described in detail in DIN EN ISO 14555. The fastening elements for stud welding are described in DIN EN ISO 13918; the only applies to rotationally symmetrical components. At OBTEC, these welding studs are created on state-of-the-art 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

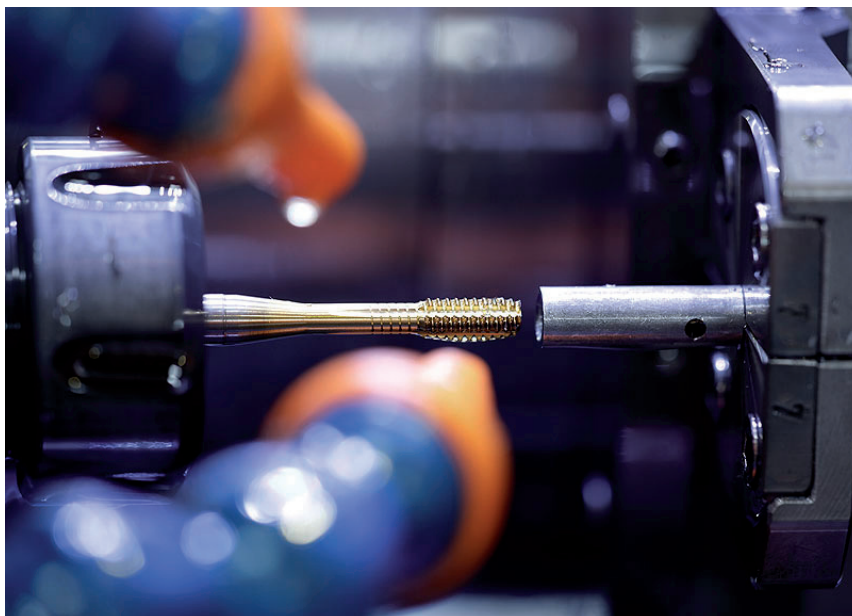
The welding methods are split into two main groups, which prevail in practice, according to the application:

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

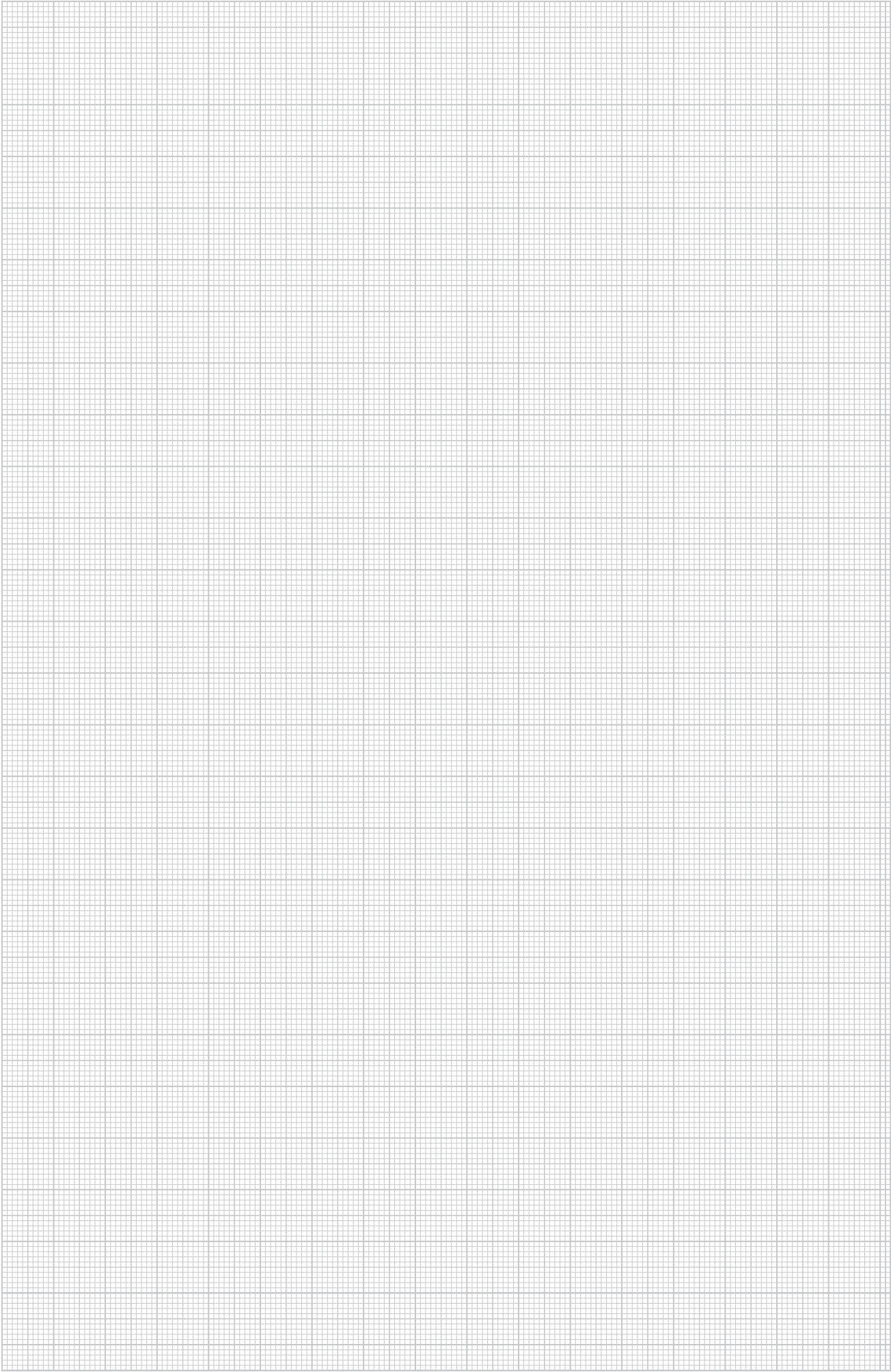
	Diameter 2.1 mm
	Diameter 2.6 mm
	Diameter 3 mm
	Diameter 4 mm
	Diameter 5 mm
	Diameter 6 mm
	Diameter 7.1 mm

Thread types

	UNC thread
	UNF thread

Materials

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





Contents

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Internal threaded bolt, metric



M3 Ø5



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.
1 IM 3 x 5 x 6	M3	6	5	4,8	Copper-plated	15000	1000	0,084	4079 88 4
1 IM 3 x 5 x 8	M3	8	5	4,8	Copper-plated	10000	1000	0,107	4079 00 0
1 IM 3 x 5 x 10	M3	10	5	4,8	Copper-plated	10000	1000	0,134	4079 01 9
1 IM 3 x 5 x 12	M3	12	5	4,8	Copper-plated	5000	1000	0,164	4079 02 7
1 IM 3 x 5 x 15	M3	15	5	4,8	Copper-plated	5000	1000	0,211	4079 03 5
1 IM 3 x 5 x 16	M3	16	5	4,8	Copper-plated	5000	1000	0,226	4078 95 0
1 IM 3 x 5 x 19	M3	19	5	4,8	Copper-plated	4000	1000	0,272	4080 81 5
1 IM 3 x 5 x 20	M3	20	5	4,8	Copper-plated	4000	1000	0,288	4079 04 3
1 IM 3 x 5 x 25	M3	25	5	4,8	Copper-plated	3000	1000	0,365	4079 05 1
1 IM 3 x 5 x 30	M3	30	5	4,8	Copper-plated	2000	1000	0,442	4079 07 8

St Steel

Cu Copper-plated

price/1,000 pc.



M4 Ø6



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.
1 IM 4 x 6 x 8	M4	8	6	4,8	Copper-plated	10000	1000	0,146	4079 19 1
1 IM 4 x 6 x 10	M4	10	6	4,8	Copper-plated	5000	1000	0,181	4079 11 6
1 IM 4 x 6 x 12	M4	12	6	4,8	Copper-plated	5000	1000	0,218	4079 12 4
1 IM 4 x 6 x 14	M4	14	6	4,8	Copper-plated	4000	1000	0,246	4080 94 7
1 IM 4 x 6 x 15	M4	15	6	4,8	Copper-plated	4000	1000	0,285	4079 13 2
1 IM 4 x 6 x 16	M4	16	6	4,8	Copper-plated	4000	1000	0,307	4079 30 2
1 IM 4 x 6 x 20	M4	20	6	4,8	Copper-plated	3000	1000	0,396	4079 14 0
1 IM 4 x 6 x 25	M4	25	6	4,8	Copper-plated	2000	1000	0,507	4079 15 9
1 IM 4 x 6 x 30	M4	30	6	4,8	Copper-plated	1000	1000	0,618	4079 16 7

St Steel

Cu Copper-plated

price/1,000 pc.



M5 Ø 7,1



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.
1 IM 5 x 7 x 10	M5	10	7,1	4,8	Copper-plated	4000	1000	0,233	4081 01 3
1 IM 5 x 7 x 12	M5	12	7,1	4,8	Copper-plated	5000	1000	0,270	4081 02 1
1 IM 5 x 7 x 15	M5	15	7,1	4,8	Copper-plated	3000	1000	0,355	4079 24 8
1 IM 5 x 7 x 16	M5	16	7,1	4,8	Copper-plated	2000	1000	0,387	4081 04 8
1 IM 5 x 7 x 20	M5	20	7,1	4,8	Copper-plated	1000	1000	0,513	4081 05 6
1 IM 5 x 7 x 25	M5	25	7,1	4,8	Copper-plated	1000	1000	0,670	4081 06 4
1 IM 5 x 7 x 30	M5	30	7,1	4,8	Copper-plated	1000	1000	0,828	4081 07 2
1 IM 5 x 7 x 35	M5	35	7,1	4,8	Copper-plated	1000	1000	0,985	4081 08 0

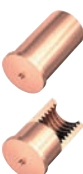
St Steel

Cu Copper-plated

price/1,000 pc.



M6 Ø8



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.
1 IM 6 x 8 x 10	M6	10	8	4,8	Copper-plated	5000	1000	0,265	4080 51 0
1 IM 6 x 8 x 12	M6	12	8	4,8	Copper-plated	4000	1000	0,316	4080 51 3
1 IM 6 x 8 x 15	M6	15	8	4,8	Copper-plated	1000	1000	0,388	4080 54 6
1 IM 6 x 8 x 16	M6	16	8	4,8	Copper-plated	1000	1000	0,427	4080 54 8
1 IM 6 x 8 x 20	M6	20	8	4,8	Copper-plated	1000	1000	0,585	4080 55 6
1 IM 6 x 8 x 25	M6	25	8	4,8	Copper-plated	1000	1000	0,782	4080 57 2
1 IM 6 x 8 x 30	M6	30	8	4,8	Copper-plated	1000	1000	0,979	4080 58 0

St Steel

Cu Copper-plated

price/1,000 pc.



Internal threaded bolt, metric

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 3 x 5 x 6	M3	6	5	1,4303	Pickled	15000	1000	0,084	4081 21 0
2 IM 3 x 5 x 8	M3	8	5	1,4303	Pickled	10000	1000	0,107	4081 21 8
2 IM 3 x 5 x 10	M3	10	5	1,4303	Pickled	10000	1000	0,134	4081 22 6
2 IM 3 x 5 x 12	M3	12	5	1,4303	Pickled	5000	1000	0,164	4081 23 4
2 IM 3 x 5 x 16	M3	16	5	1,4303	Pickled	5000	1000	0,226	4081 24 2
2 IM 3 x 5 x 20	M3	20	5	1,4303	Pickled	4000	1000	0,288	4081 25 0
2 IM 3 x 5 x 25	M3	25	5	1,4303	Pickled	3000	1000	0,365	4081 26 9
2 IM 3 x 5 x 30	M3	30	5	1,4303	Pickled	2000	1000	0,442	4081 27 7

V2A Stainless steel, grade 305

Pickled

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 4 x 6 x 8	M4	8	6	1,4303	Pickled	10000	1000	0,146	4081 39 0
2 IM 4 x 6 x 10	M4	10	6	1,4303	Pickled	5000	1000	0,181	4081 31 5
2 IM 4 x 6 x 12	M4	12	6	1,4303	Pickled	5000	1000	0,218	4081 32 3
2 IM 4 x 6 x 15	M4	15	6	1,4303	Pickled	4000	1000	0,285	4081 38 2
2 IM 4 x 6 x 16	M4	16	6	1,4303	Pickled	4000	1000	0,307	4081 33 1
2 IM 4 x 6 x 16	M4	16	6	1,4303	Pickled	1000	1000	0,410	4081 74 9
2 IM 4 x 6 x 20	M4	20	6	1,4303	Pickled	3000	1000	0,396	4081 35 8
2 IM 4 x 6 x 25	M4	25	6	1,4303	Pickled	2000	1000	0,507	4081 36 6
2 IM 4 x 6 x 30	M4	30	6	1,4303	Pickled	1000	1000	0,618	4081 37 4

V2A Stainless steel, grade 305

Pickled

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 5 x 7 x 10	M5	10	7,1	1,4303	Pickled	4000	1000	0,233	4081 41 2
2 IM 5 x 7 x 12	M5	12	7,1	1,4303	Pickled	5000	1000	0,270	4081 42 0
2 IM 5 x 7 x 16	M5	16	7,1	1,4303	Pickled	2000	1000	0,387	4081 43 9
2 IM 5 x 7 x 20	M5	20	7,1	1,4303	Pickled	1000	1000	0,513	4081 44 7
2 IM 5 x 7 x 25	M5	25	7,1	1,4303	Pickled	1000	1000	0,670	4081 45 5
2 IM 5 x 7 x 30	M5	30	7,1	1,4303	Pickled	1000	1000	0,828	4081 46 3
2 IM 5 x 7 x 35	M5	35	7,1	1,4303	Pickled	1000	1000	0,985	4081 47 1
2 IM 5 x 7 x 40	M5	40	7,1	1,4303	Pickled	1000	1000	1,143	4081 49 8

V2A Stainless steel, grade 305

Pickled

price/1,000 pc.



IT internal threaded bolt for tip ignition



Internal threaded bolt, metric



Internal threaded bolt, metric, Aluminium, AlMg 3

Type	Metrical thread	Length mm	Diameter mm	Quality	Surface	Shipping box Units	Pack Units	Weight kg/100 pc.	Item no.
4 IM 3 x 5 x 6	M3	6	5	AlMg 3	—	15000	1000	0,029	4081 99 4
4 IM 3 x 5 x 8	M3	8	5	AlMg 3	—	10000	1000	0,037	4082 00 1
4 IM 3 x 5 x 10	M3	10	5	AlMg 3	—	10000	1000	0,046	4082 02 8
4 IM 3 x 5 x 12	M3	12	5	AlMg 3	—	5000	1000	0,057	4082 03 6
4 IM 3 x 5 x 16	M3	16	5	AlMg 3	—	5000	1000	0,078	4082 04 4
4 IM 3 x 5 x 20	M3	20	5	AlMg 3	—	4000	1000	0,099	4082 05 2
4 IM 3 x 5 x 25	M3	25	5	AlMg 3	—	3000	1000	0,125	4082 06 0

Al Aluminium

price/1,000 pc.



Internal threaded bolt, metric, Aluminium, AlMg 3

Type	Metrical thread	Length mm	Diameter mm	Quality	Surface	Shipping box Units	Pack Units	Weight kg/100 pc.	Item no.
4 IM 4 x 6 x 8	M4	8	6	AlMg 3	—	10000	1000	0,050	4079 39 6
4 IM 4 x 6 x 10	M4	10	6	AlMg 3	—	5000	1000	0,062	4079 41 8
4 IM 4 x 6 x 12	M4	12	6	AlMg 3	—	5000	1000	0,075	4079 43 4
4 IM 4 x 6 x 16	M4	16	6	AlMg 3	—	4000	1000	0,106	4082 13 3
4 IM 4 x 6 x 20	M4	20	6	AlMg 3	—	3000	1000	0,136	4082 14 1
4 IM 4 x 6 x 25	M4	25	6	AlMg 3	—	2000	1000	0,174	4082 16 8
4 IM 4 x 6 x 30	M4	30	6	AlMg 3	—	1000	1000	0,212	4082 17 6

Al Aluminium

price/1,000 pc.



Internal threaded bolt, metric, Aluminium, AlMg 3

Type	Metrical thread	Length mm	Diameter mm	Quality	Surface	Shipping box Units	Pack Units	Weight kg/100 pc.	Item no.
4 IM 5 x 7 x 10	M5	10	7,1	AlMg 3	—	4000	1000	0,080	4082 22 2
4 IM 5 x 7 x 12	M5	12	7,1	AlMg 3	—	5000	1000	0,093	4082 23 0
4 IM 5 x 7 x 16	M5	16	7,1	AlMg 3	—	2000	1000	0,133	4082 24 9
4 IM 5 x 7 x 20	M5	20	7,1	AlMg 3	—	1000	1000	0,176	4082 25 7
4 IM 5 x 7 x 25	M5	25	7,1	AlMg 3	—	1000	1000	0,230	4082 26 5
4 IM 5 x 7 x 30	M5	30	7,1	AlMg 3	—	1000	1000	0,285	4082 27 3
4 IM 5 x 7 x 35	M5	35	7,1	AlMg 3	—	1000	1000	0,339	4082 28 1
4 IM 5 x 7 x 40	M5	40	7,1	AlMg 3	—	1000	1000	0,393	4082 30 3

Al Aluminium

price/1,000 pc.

Bolt with inched inner thread

Bolt with inched inner thread, Steel, copper-plated St 37-3

Type	Thread Diameter	Length in	Quality	Surface	Shipping box Units	Pack Units	Weight kg/100 pc.	Item no.
6 - 32 x 1 1/4	6 - 32	1 1/4	4,8	Copper-plated	2000	1000	0,478	4089 36 7
St Steel		Cu Copper-plated					price/1,000 pc.	



Bolt with inched inner thread, Steel, copper-plated St 37-3

Type	Thread Diameter	Length in	Quality	Surface	Shipping box Units	Pack Units	Weight kg/100 pc.	Item no.
1/4 - 20 x 5/8	1/4 - 20	5/8	4,8	Copper-plated	1000	1000	0,823	4089 38 3
St Steel		Cu Copper-plated					price/1,000 pc.	



IT internal threaded bolt for tip ignition

