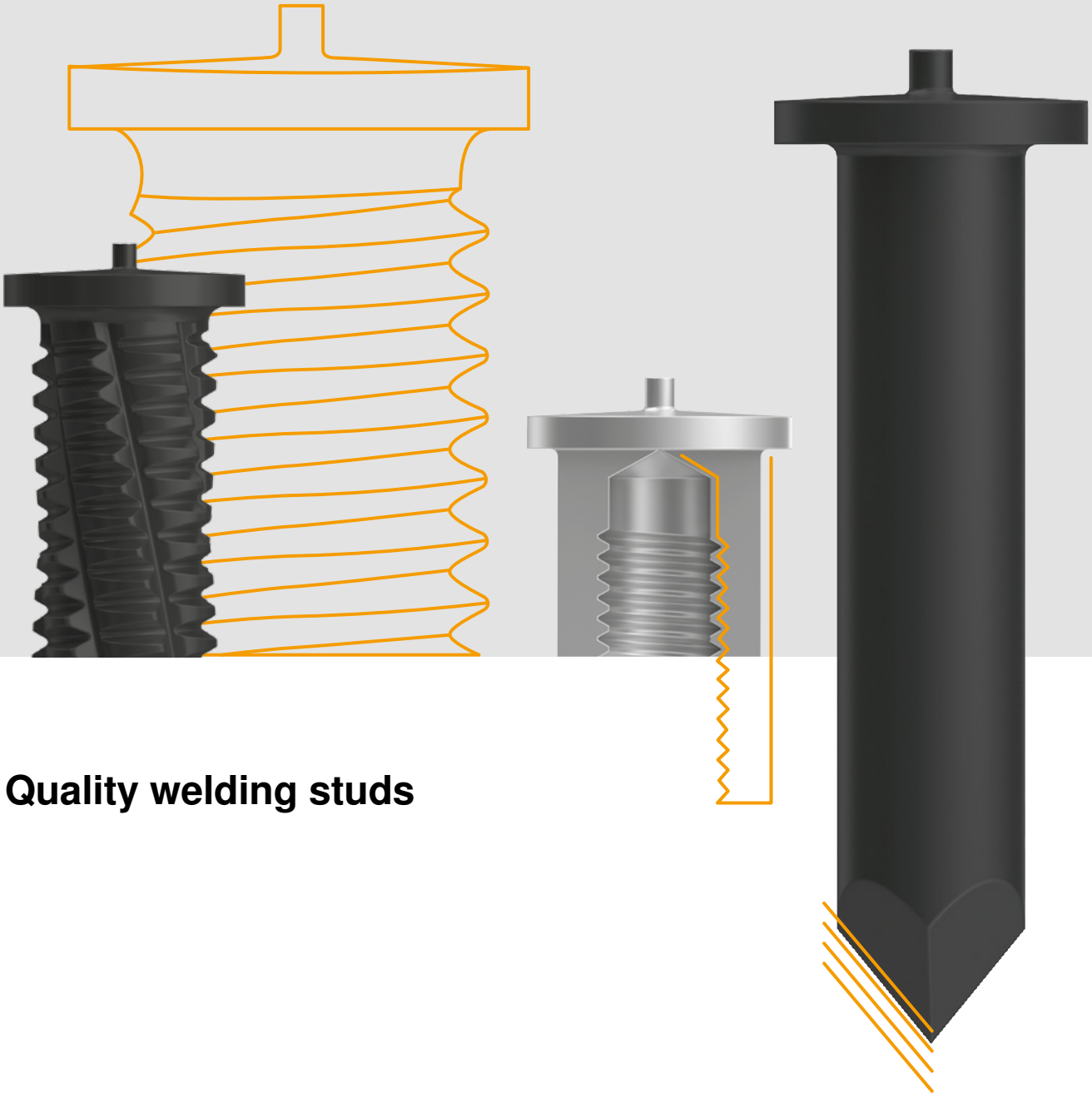
OBTEC® Quality welding studs



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

09 SBS_Katalog_2010 / en / 14/10/2010 (LLExport_01153)

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 acticles
- Proprietary development and productionfacilities
- Ongoing product maintenance and further development
- Customer-specific special dimensions on request
- Special fastening

Quality

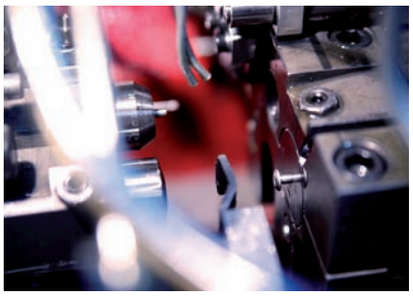
Professionals demand quality. A quality offered by all OBTEC brand products and services connected with stud welding:

- QA certification to DIN EN ISO 9001:2000
- Tested material and manufacturing quality

Active involvement in national and international standardisation bodies

09 SBS_Katalog_2010 / en / 13/10/2010 (LLExport_01153)

Welding methods



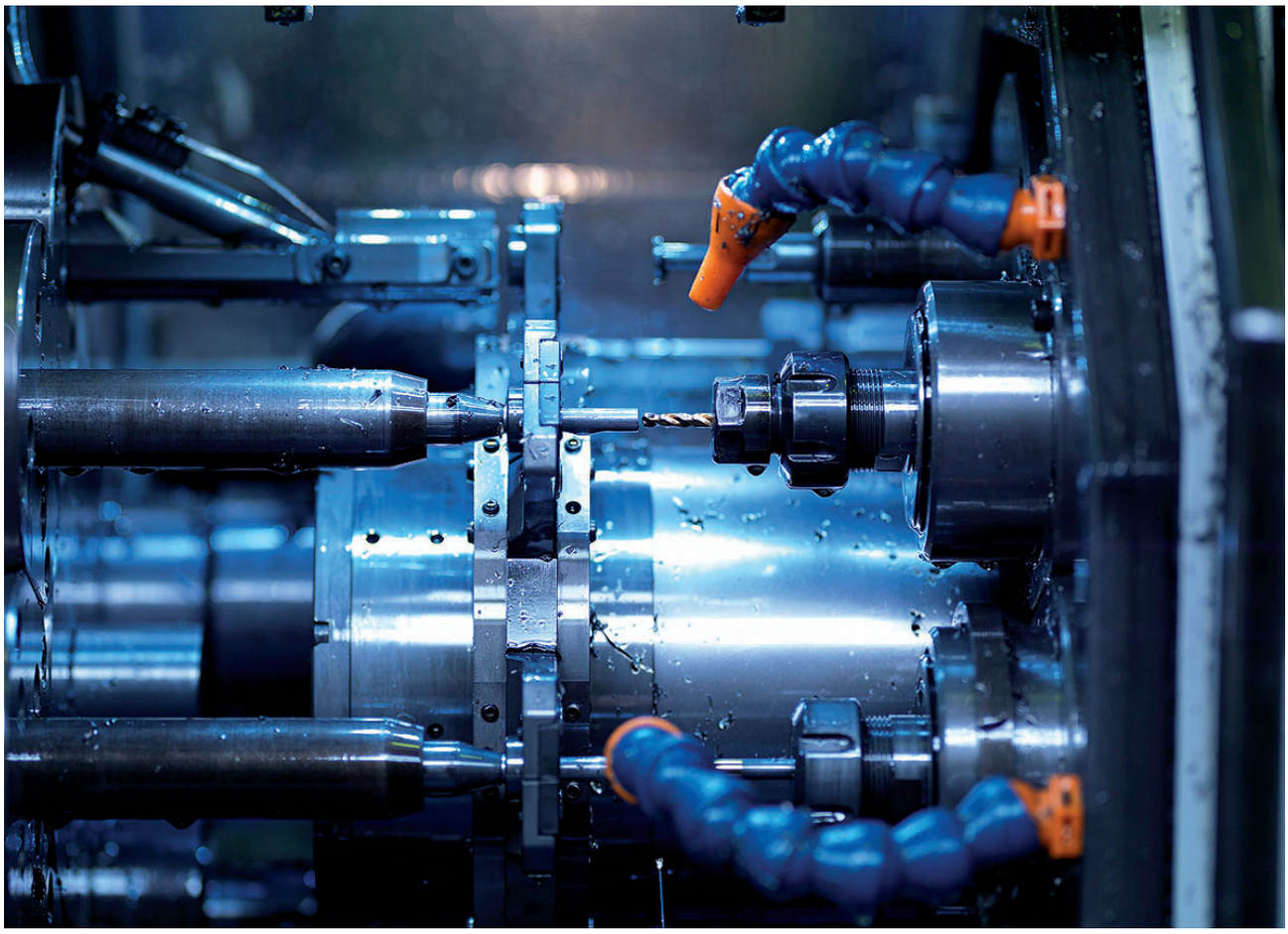
Stud welding is one of the arc stud welding methods. The different methods are described in detail in DIN EN ISO 14555. The fastening elements for stud welding are described in DIN EN ISO 13918; the only applies to rotationally symmetrical components. At OBTEC, these welding studs are created on state-of the-art multiple die presses through cold reduction. Decades of experience and continuousdevelopment of the manufacturingprocess guarantee theexceptional 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 an presses quarantee a high standard of quality for the fastening elements, as is required for hight-quality welding.

Welding methods

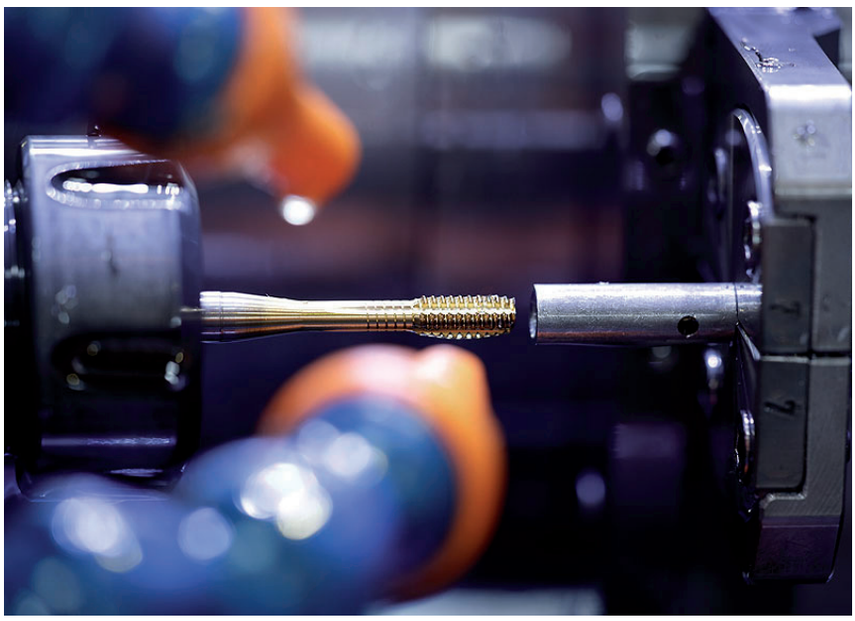
The welding methods are split into two main groups, which prevail in practive, according to the application:

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).

09 SBS_Katalog_2010 / en / 13/10/2010 (LLExport_01153)

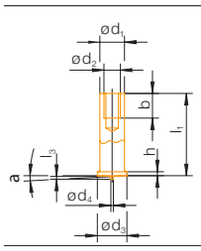


All the threads and stud flanges are created to DIN EN ISO 13918. The flange is a component part of the welding stud. Its diameter is greater than the external diameter of the stud. During welding, it prevents the arc from affecting the cylindrical section of the bolt, simultaneously increasing the welding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



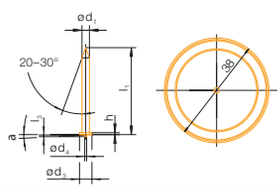
09 SBS_Katalog_2010 / en / 13/10/2010 (LLExport_01153)

IT internal threaded bolt, DIN EN ISO 13918



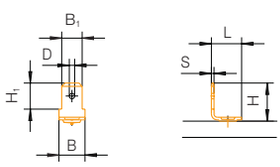
d_1 ± 0,1	l_1 + 0,6	b + 0,5	d_3 ± 0,2	d_4 ± 0,08	l_3 ± 0,05	h	α ± 1° max.
4		5	6,5	0,75	0,80	0,8 - 1,4	3°
5		6	7,5	0,75	0,80	0,8 - 1,4	3°
7,1		7,5	9	0,75	0,85	0,7 - 1,4	3°

ISO nail



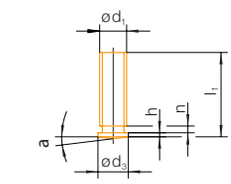
d_1 ± 0,1	l_1 + 0,6	d_3 ± 0,2	d_4 ± 0,5	l_3 ± 0,05/-0,02	h ± 0,2	α ± 1° max.
2,1		3,6	0,4	0,4	0,6	3°
2,6		4,5	0,5	0,5	0,7	3°
3		5,0	0,7	0,7	0,7	3°

Flat connector



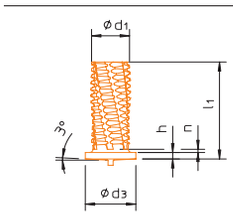
S ± 0,03	H ± 0,3	H_1 + 0,5	D + 0,2	B ± 0,2	B_1 + 0,1	L
0,8	11,5	8	1,65	8	6,3	10

Short cycle threaded bolt



d_1	l_1 + 0,6	d_3 ± 0,2	h	n max.	α ± 1° 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 ± 0,2	h	n max.	α ± 1° 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

Alu	Aluminium
VA	Stainless steel, grade 305
CuZn 37	Brass
St	Steel

Thread metric

M2,5	Metric thread, 2.5 mm
M3	Metric thread, 3 mm
M4	Metric thread, 4 mm
M5	Metric thread, 5 mm
M6	Metric thread, 6 mm
M8	Metric thread, 8 mm
M10	Metric thread, 10 mm

Diameter

Ø 2,1	Diameter 2.1 mm
Ø 2,6	Diameter 2.6 mm
Ø3	Diameter 3 mm
Ø4	Diameter 4 mm
Ø5	Diameter 5 mm
Ø6	Diameter 6 mm
Ø 7,1	Diameter 7.1 mm

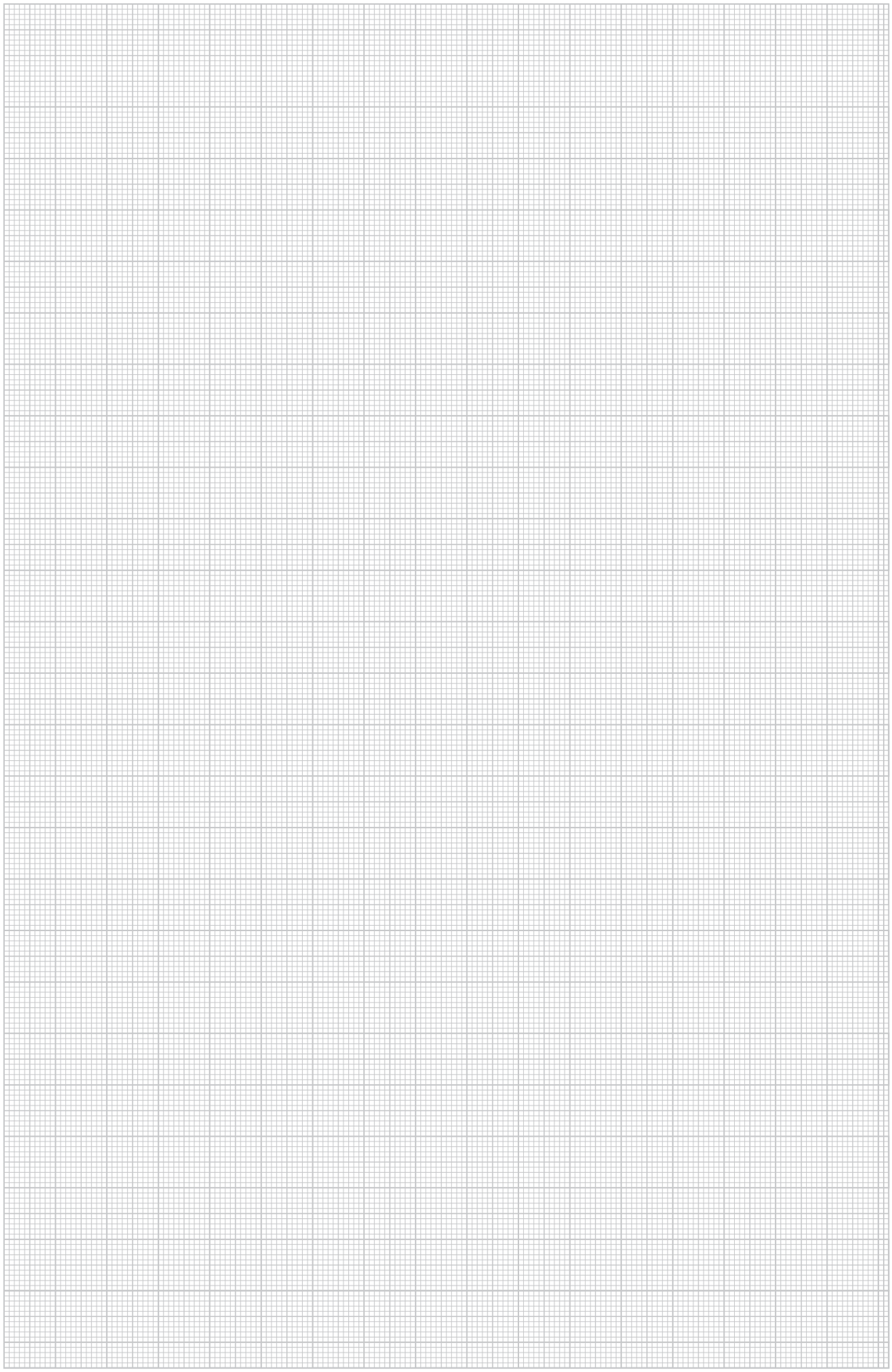
Thread types

UNC	UNC thread
UNF	UNF thread

Materials

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

09 SBS_Katalog_2010 / en / 14/10/2010 (LLExport_01153)



Contents

Lacquer groove pin

M6

Lacquer groove pin, Steel, copper-plated St 37-3

Type	Metrical thread	Length mm	Diameter mm	Material	Quality	Surface	Shipping box Units	Pack Units	Weight kg/100 pc.	Item no.
1 LN 6 x 12	M6	12	—	St	4,8	Copper-plated	5000	1000	0,197	**4029 85 8**
1 LN 6 x 15	M6	15	—	St	4,8	Copper-plated	4000	1000	0,241	**4029 86 2**
1 LN 6 x 16	M6	16	—	St	4,8	Copper-plated	4000	1000	0,257	**4029 86 4**
1 LN 6 x 20	M6	20	—	St	4,8	Copper-plated	3000	1000	0,316	**4029 86 5**

St Steel Cu Copper-plated price/1,000 pc.

M8

Lacquer groove pin, Steel, copper-plated St 37-3

Type	Metrical thread	Length mm	Diameter mm	Material	Quality	Surface	Shipping box Units	Pack Units	Weight kg/100 pc.	Item no.
1 LN 8 x 12	M8	12	—	St	4,8	Copper-plated	3000	1000	0,342	**4029 86 7**
1 LN 8 x 20	M8	20	—	St	4,8	Copper-plated	1000	1000	0,554	**4029 86 8**

St Steel Cu Copper-plated price/1,000 pc.

09 SBS_Katalog_2010 / en / 14/10/2010 (LLExport_01153)

Always indicate the item number when ordering.

Lacquer groove pin for short cycle, Steel, copper-plated St 37-3

Type	Metrical thread	Length mm	Diameter mm	Material	Quality	Shipping box Units	Pack Units	Weight kg/100 pc.	Item no.
1 LN 6 x 15 SC	M6	15	—	St	4,8	5000	5000	0,231	**4029 86 0**

St Steel Cu Copper-plated price/1,000 pc.

M6 St