



HIGH SPEED FASTENING SYSTEMS WITH STUD WELDING

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Technical info

Our welding studs are made from materials suitable for stud welding. Dimensions and design of our standard products conform to EN ISO 13918; any non-standard products supplied will be produced to correspond to the norm. If you wish to use a type of stud other than those listed, please send us your enquiry and consult our specialists about your welding task.

Welding studs are available in different materials. Upon request the properties of each can be documented by test report 2.2. or inspection certificate 3.1 or 3.2 (EN 10204)

Non-alloy structural steel:

Non-alloy structural steel welding studs are manufactured from S235 according to EN 10025:2005 with more stringent requirements for carbon content, degree of purity, grain size and surface properties. This makes the material ideally suited for stud welding.

For threaded studs, pins, tapped studs and similar products, we guarantee mechanical properties according to EN ISO 898-1, property class 4.8.

We supply shear connectors of our partner Köco, manufactured from S235J2+C470 or S355 according to EN 10025:2005 with the following mechanical properties:

Tensile strength R_m	$\geq 470 \text{ N/mm}^2$
Tensile strength $R_m S355$	$\geq 510 \text{ N/mm}^2$
Yield strength R_{el}	$\geq 375 \text{ N/mm}^2$
Elongation A_5	$\geq 14\%$

Shear connectors exceed the requirements of EN ISO 13918. The CE-conformity with the European Technical Approval ETA-03/0039 dated May 31, 2010 by Deutsches Institut für Bautechnik (DIBt German

Institute for Building Engineering)) has been demonstrated

Stainless steel:

We supply threaded studs, pins, tapped studs and similar products made from A2-50 according to DIN EN ISO 3506-1.

Welding studs made from stainless and acid-resistant steels such as 1.4541, 1.4571, 1.4401, 1.4404 in various property classes are available upon request. We supply Köco stainless steel shear connectors made of 1.4301 in accordance with EN 10088:2005 with the following mechanical properties:

Tensile strength R_m	540-780 N/mm ²
Yield point $R_{p0.2}$	$\geq 350 \text{ N/mm}^2$

The CE-conformity with the European Technical Approval ETA-03/0039 dated May 31, 2010 by Deutsches Institut für Bautechnik (DIBt, German Institute for Building Engineering has been demonstrated

Heat- and scale-resistant welding studs are manufactured from 1.4713, 1.4742, 1.4762, 1.4828, 1.4841, 2.4851 or 2.4856. Other materials are available upon request.

Stud dimensions:

Generally, the nominal length is the length of the stud "after welding". The studs delivered are 1 to 5mm longer than their specified nominal length (except KKS boiler tube studs and KHS concave pins). This enables the welding parameters to be checked by measuring the stud length after welding.

Threads:

The threads of studs are cold rolled and manufactured in accordance with DIN 13-20, tolerance 6g; non-standard threads are available upon request.

Flux:

Studs for welding with ceramic ferrules are provided with an aluminium tip as required by the welding process, to facilitate the ignition of the arc, to stabilize the arc, and to deoxidize the welding pool. The correct amount of flux used is an essential factor in obtaining perfect welding results.

Surface protection:

Unless specified otherwise, welding studs are delivered uncoated.

Non-alloy structural steel	4.8
Stainless steel	A2-50
Stainless steel	A4-70
Heat resistant steel	1.4828
Zinc-plated	4.8 A2K
Copper-plated	4.8 C2E
Nickel-plated on copper base	4.8 G2E
Zinc-flake coating	4.8 zI
Aluminium	AlMg

In the case of zinc-plated studs, the zinc coating is removed at the welding tip to prevent contamination of the welding pool.

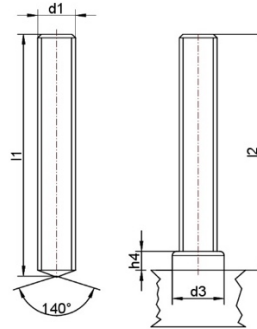
Ceramic ferrules

The ceramic ferrules can be used only once. The ferrules required for welding are generally included in the delivery of the studs. Ceramic ferrules are not available without studs.

Weld collar:

In the course of stud welding a weld collar is formed where the stud is joined to the work-piece, its dimensions depend on the welding parameters as well as the ceramic ferrule used. In this area threads, for example, cannot be utilized.

Drawn arc stud welding with ceramic ferrule
 fully-threaded stud type FD M6-M10 (EN
 ISO 13918)



dimension (d1x12)	h4	d3	Kg/100 *	unit	ceramic ferrule
M 6x15	4	8,5	0,28	500	UF6
M 6x20			0,38	500	
M 6x25			0,45	500	
M 6x30			0,55	500	
M 6x35			0,64	200	
M 6x40			0,73	200	
M 8x15		11	0,51	500	UF8
M 8x20			0,69	500	
M 8x25			0,84	500	
M 8x30			1,00	500	
M 8x35			1,16	200	
M 8x40			1,32	200	
M 8x45			1,48	200	
M 8x50			1,64	200	
M 8x70			2,23	200	
M 10x20		13	1,09	500	UF10
M 10x25			1,34	500	
M 10x30			1,57	500	
M 10x35			1,84	200	
M 10x40			2,09	200	
M 10x50			2,60	200	
M 10x55			2,85	200	
M 10x60			3,08	200	
M 10x70			3,60	200	

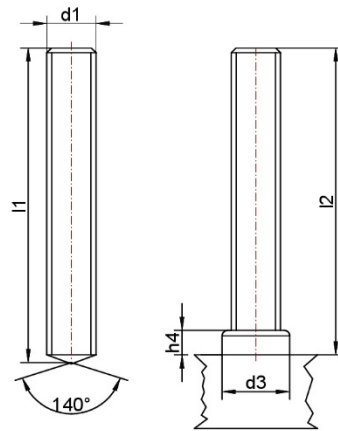
material: 4.8, A2, A4,

Surface coating: A2K (galvanized), zl (Zinc flake coating)

Further dimensions on request

*are values for 4.8 bolts

fully-threaded stud type FD M12-M20
(EN ISO 13918)



dimension (d1x l2)	h4	d3	Kg/100*	unit	ceramic ferrule
M 12x25	5	16	1,95	500	UF12
M 12x30			2,31	500	
M 12x35			2,64	200	
M 12x40			3,04	200	
M 12x45			3,40	200	
M 12x50			3,76	200	
M 12x60			4,49	200	
M 12x70			5,22	100	
M 16x40	7	21	5,60	100	UF16
M 16x50			6,93	100	
M 16x60			8,26	100	
M 16x70			9,59	100	
M 20x40	7	26	8,80	100	UF20
M 20x50			10,67	100	
M 20x60			12,97	100	

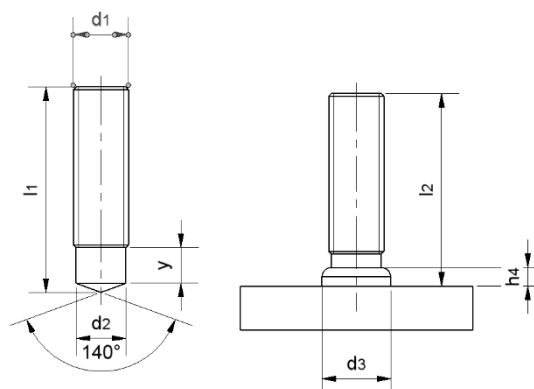
material: 4.8, A2, A4,

Surface coating: A2K (galvanized), zI (Zinc flake coating)

Further dimensions on request

*are values for 4.8 bolts

virtually fully-threaded stud type MD (EN ISO 13918)



dimension (d1xl2)	h	d2	d3	y	Kg/100*	unit	ceramic ferrule
M 6x30	3,5	5,35	9	5,5	0,52	500	MF6
M 6x40					0,69	200	
M 6x50					0,87	200	
M 8x20	3	7,19	9,9	6	0,61	500	MF8
M 8x25					0,77	500	
M 8x30					0,93	500	
M 8x40					1,25	500	
M 8x50					1,57	500	
M 10x30	3,4	9,03	12,5	6,5	1,46	500	MF8
M 10x40					1,97	200	
M 12x40	4,2	10,86	14,5	7,5	2,83	200	MF12
M 12x45					3,20	200	
M 12x50					3,56	200	
M 16x30	5,8	14,6	17,8	11	3,81	100	MF16
M 16x40					5,14	100	

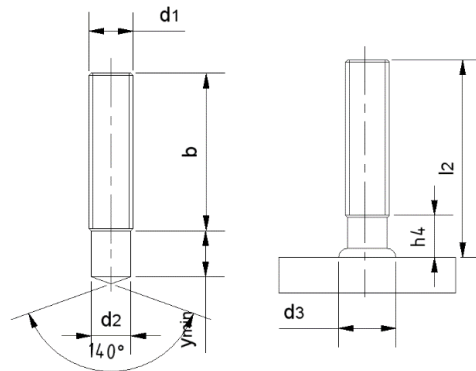
material: 4.8, A2, A4,

Surface coating: A2K (galvanized), zl (Zinc flake coating)

Further dimensions on request

*are values for 4.8 bolts

partially threaded stud type PD M6-M10
 (EN ISO 13918)



dimension (d1xl2)	d ₂	d ₃	y	b	h ₄	Kg/100*	unit	ceramic ferrule
M 6x20	5,35	8,5	9	•	3,5	0,38	500	PF6
M 6x25				•		0,45	500	
M 6x30			20	•		0,55	500	
M 6x35				•		0,64	200	
M 6x40				•		0,73	200	
M 6x50				•		0,91	200	
M 6x60				•		1,08	200	
M 8x20	7,19	10	9	•	3,5	0,69	500	PF8
M 8x25				•		0,84	500	
M 8x30				•		1,00	500	
M 8x35				•		1,16	200	
M 8x40				•		1,32	200	
M 8x45				•		1,48	200	
M 8x50			•	40		1,64	200	
M 8x55			•			1,80	200	
M 8x60			•			1,96	200	
M 10x20	9,03	12,5	9,5	•	4	1,09	500	PF10
M 10x25				•		1,34	500	
M 10x30				•		1,57	500	
M 10x35				•		1,84	200	
M 10x40				•		2,09	200	
M 10x50			•	40		2,60	200	
M 10x55			•			2,85	200	
M 10x60			•			3,08	200	
M 10x80			•			4,10	100	

material: 4.8, A2, A4,

Surface coating: A2K (galvanized), zl (Zinc flake coating)

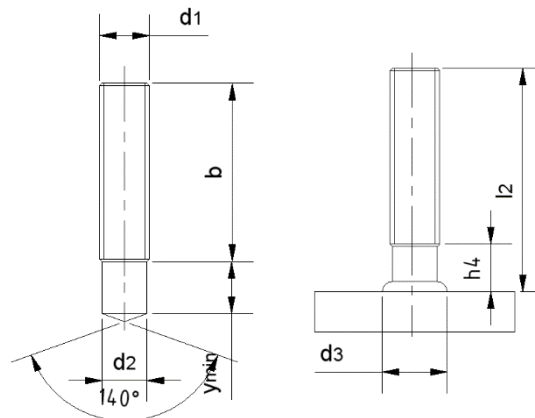
Further dimensions on request

*are values for 4.8 bolts

K2024-9-E

Hilbig GmbH ● Postweg 204 ● 21218 Seevetal ● Germany

partially threaded stud type PD M12-M16
 (EN ISO 13918)



dimension (d1x12)	d ₂	d ₃	y	b	h ₄	Kg/100*	unit	ceramic ferrule	
M 12x25	10,86	15,5	11,5	•	4,5	1,95	500	PF12	
M 12x30				•		2,31	500		
M 12x35				•		2,64	200		
M 12x40				•		3,04	200		
M 12x45				•		3,40	200		
M 12x50			•	40		4,5	3,76		200
M 12x60			•				4,49		200
M 12x70			•				5,22		200
M 12x80			•				5,94		100
M 16x30	14,6	19,5	13,5	•	6	4,27	100	PF16	
M 16x35				•		4,81	100		
M 16x40				•		5,60	100		
M 16x45				•		6,26	100		
M 16x50				•		6,93	100		
M 16x55			•	40		6	7,60		100
M 16x60			•				8,26		100
M 16x65			•				8,93		50
M 16x70			•				9,59		50
M 16x75	•	10,04	50						
M 16x80	•	50	10,93	50					

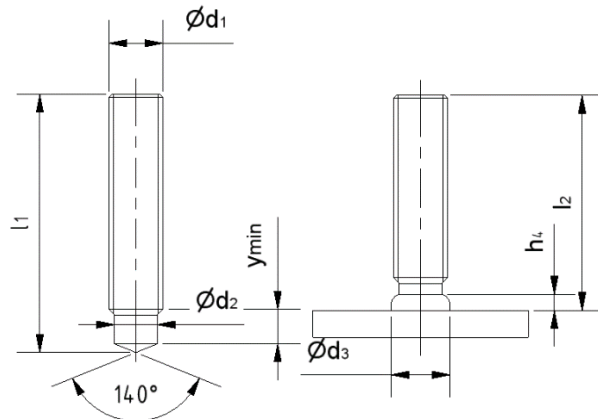
material: 4.8, A2, A4,

Surface coating: A2K (galvanized), zl (Zinc flake coating)

Further dimensions on request

*are values for 4.8 bolts

threaded stud with reduced shaft type
 RD M6-M10 (EN ISO 13918)



dimension (d1xl2)	h	d2	d3	y	Kg/100*	unit	ceramic ferrule
M 6x20	3	4,7	7	4	0,34	500	RF6
M 6x25					0,43	500	
M 6x30					0,52	500	
M 6x35					0,60	200	
M 6x40					0,69	200	
M 6x50					0,87	200	
M 6x60					1,05	200	
M 8x20	3	6,2	9	4	0,61	500	RF8/9
M 8x25					0,77	500	
M 8x30					0,93	500	
M 8x35					1,09	500	
M 8x40					1,25	500	
M 8x45					1,41	500	
M 8x50					1,57	500	
M 8x55					1,73	200	
M 8x60					1,89	200	
M 10x20	3	7,9	12	5	0,96	500	RF10
M 10x25					1,21	500	
M 10x30					1,46	500	
M 10x35					1,72	200	
M 10x40					1,97	200	
M 10x50					2,47	200	
M 10x55					2,72	200	
M 10x60					2,95	200	

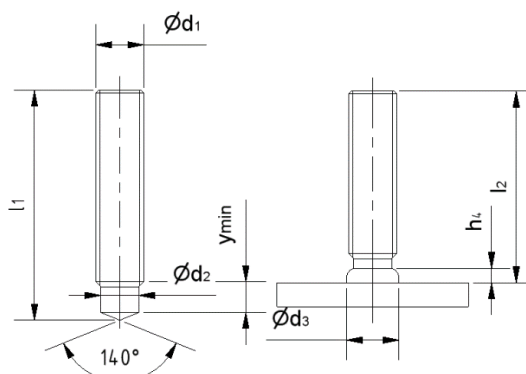
material: 4.8, A2, A4,

Surface coating: A2K (galvanized), zl (Zinc flake coating)

Further dimensions on request

*are values for 4.8 bolts

threaded stud with reduced shaft type
 RD M12-M20
 (EN ISO 13918)



dimension (d1x l2)	h	d2	d3	y	Kg/100*	unit	ceramic ferrule
M 12x25	4	9,5	14	6	1,74	500	RF12
M 12x30					2,11	500	
M 12x35					2,47	200	
M 12x40					2,83	200	
M 12x45					3,20	200	
M 12x50					3,56	200	
M 12x60					4,29	200	
M 12x70					5,02	200	
M 16x30	6	13	18	11	3,81	100	RF16, flat
M 16x35					4,48	100	
M 16x40					5,14	100	
M 16x45					5,81	100	
M 16x50					6,48	100	
M 16x55					7,14	100	
M 16x60					7,81	100	
M 16x70					9,14	50	
M 20x35	7	17	23	13	7,09	100	SR20F
M 20x40					8,00	100	
M 20x45					9,04	100	
M 20x50					10,80	100	
M 20x60					12,16	100	
M 20x65					13,20	100	
M 20x70					14,25	100	
M 20x80					16,33	100	

material: 4.8, A2, A4,

Surface coating: A2K (galvanized), zl (Zinc flake coating)

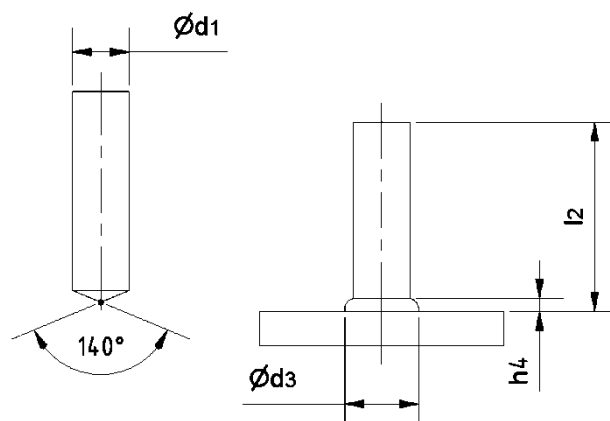
Further dimensions on request

*are values for 4.8 bolts

K2024-12-E

Hilbig GmbH ● Postweg 204 ● 21218 Seevetal ● Germany

unthreaded stud type UD (EN ISO 13918)



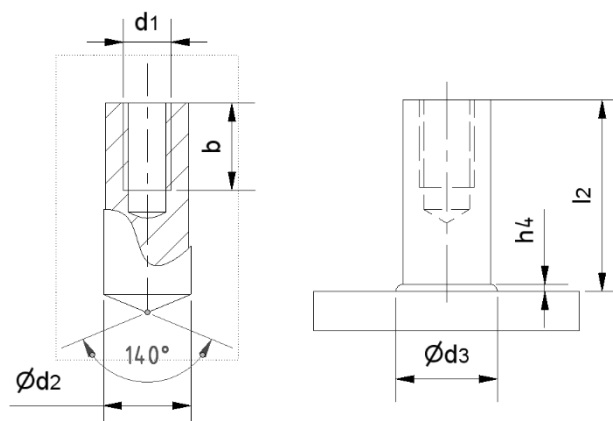
$d_{1\pm}$	6	8	10	12	14,6	16
d_3	8,5	11	13	16	18,5	17,8
h_4	3,5	3	3,4	4,2	6	5,8
ceramic ferrule	UF6	UF8	UF10	UF12	PF16	UF16
l_2	on request	on request	on request	on request	on request	on request

material: 4.8, A2, A4,

Surface coating: A2K (galvanized), zl (Zinc flake coating)

Further dimensions on request

stud with internal thread type ID
 (EN ISO 13918)



dimension d1xb-d2xl2	d3	h4	Kg/100*	unit	ceramic ferrule
M6x9-10x20			1,10	500	UF10
M6x9-10x30			1,71	500	
M6x9-10x40			2,33	200	
M6x9-10x50			2,95	200	
M6x9-10x60			3,56	200	
M8x12-12x20			1,43	500	UF12
M8x12-12x25			1,87	500	
M8x12-12x30			2,32	500	
M8x12-12x50			4,10	200	
M8x12-12x60			4,98	200	
M8x12-14,6x22	19	6	2,60	200	PF16
M8x12-14,6x30			3,65	200	
M8x12-14,6x40			4,97	100	
M10x15-16x25	21	7	3,30	100	UF16
M10x15-16x30			4,09	100	
M10x15-16x40			5,66	100	
M10x15-16x50			7,24	100	
M10x15-16x60			8,82	100	
M12x18-18,2x25	23	7	3,94	250	PF20
M12x18-18,2x30			4,96	250	
M12x18-18,2x50			9,05	200	
M12x18-18,2x60			11,09	200	

material: 4.8, A2, A4,

Surface coating: A2K (galvanized), zl (Zinc flake coating)

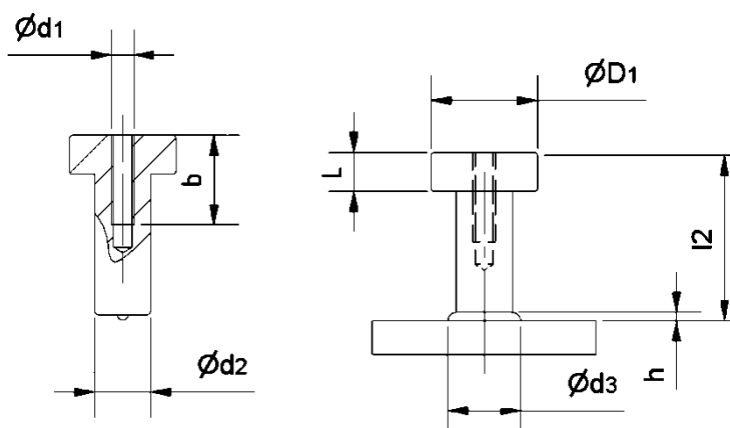
Further dimensions on request

*are values for 4.8 bolts

K2024-14-E

Hilbig GmbH ● Postweg 204 ● 21218 Seevetal ● Germany

stud type KBMI



example description: d2xl2-d1xb-235JR-A2K

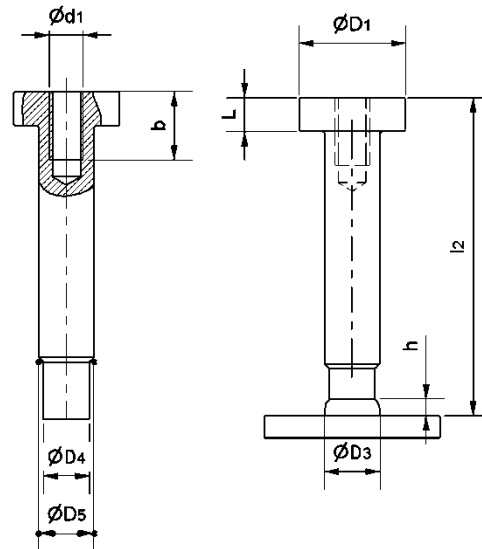
d2	l2	d1	b	D1	L	d3	h	Ceramic ferrule
10	30	M4	10	19	7	13	4	UF10
		M5	16					
	M6	50						
		75						
		100						
		175						
12	30	M8	25	8	16	5	UF12	
13	50				17		UF13	
	75							
	100							
16	50	M10			32	21	7	UF16
19	50	M12	20	32	10	26	9	UF19

material: 4.8, A2, A4,

Surface coating: A2K (galvanized), zl (Zinc flake coating)

Further dimensions on request

stud type KBMI reduced



example description: D4/D5xl2-d1xb-235JR-A2K

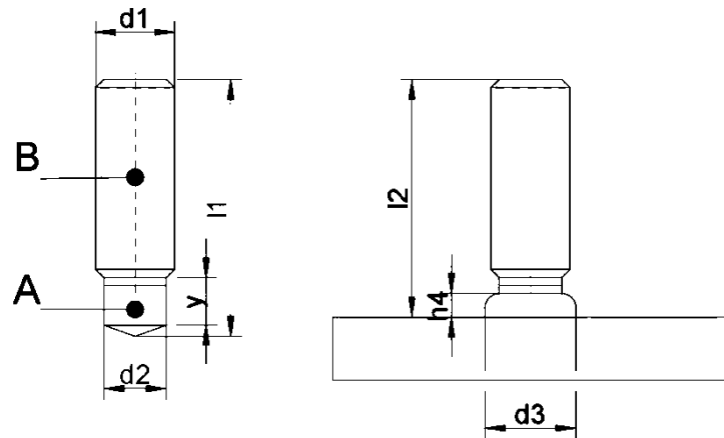
D4	D5	I2	d1	b	D1	D3	h	L	ceramic ferrule
10,8	13	35	M8	12	25	15,5	4,5	8	PF12
		50							
		75							
		100							
	16	40	M10	18	32				
		50							
		60							
		90							
		100							
	19	50	M12	20	32			10	

material: 4.8, A2, A4,

Surface coating: A2K (galvanized), zl (Zinc flake coating)

Further dimensions on request

DUO-threaded stud with reduced shaft type RD

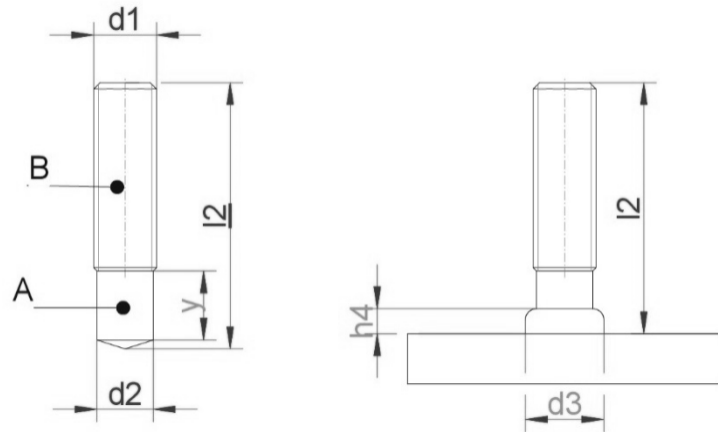


d ₁	M6	M8	M10	M12	M16	M20
d ₂	4,7	6,2	7,9	9,5	13,2	on request
d ₃	7	9	11,5	13,5	18	
h ₄	2,5	2,5	3	4	5	
y	5	5	7	8	11	
Ceramic ferrule	RF6	RF8	RF10	RF12	RF16 flach	
l ₂	15-100	15-100	15-100	20-100	25-100	

material: A= 4.8 B=1.4571

Further dimensions on request

DUO-partially threaded stud
type PD

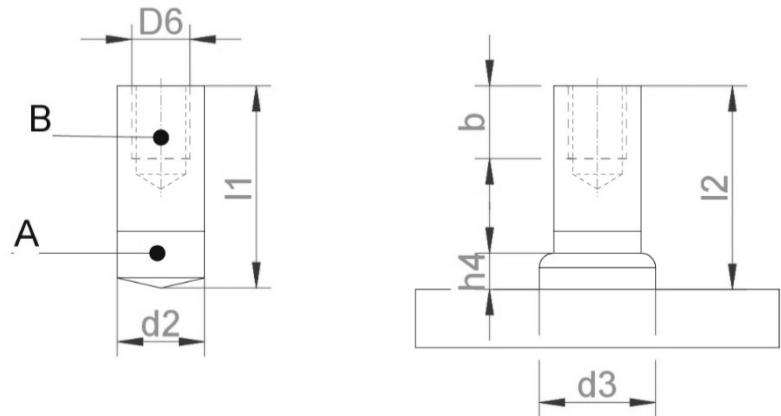


d ₁	M6	M8	M10	M12	M16
d _{2±1}	5,35	7,19	9,03	10,86	14,6
d ₃	8,5	10	12,5	15,5	19,5
h ₄	3,5	3,5	4	4,5	6
ceramic ferrule	PF6	PF8	PF10	PF12	PF16
l ₂	on request				

material: A= 4.8 B=1.4571

Further dimensions on request

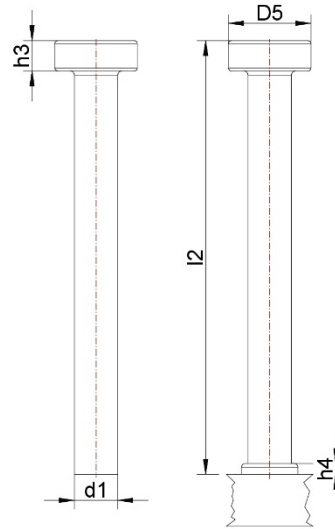
DUO-stud with internal thread
type ID



D ₆	M6	M8	M8	M10	M10
d ₂ ± 0,1	12	12	14,6	14,6	16
d ₃	16	16	18,5	18,5	21
b + 2P	9	12	15	15	15
h ₄	4	5	6	6	7
l _{2min}	20	20	25	25	25

material: A= 4.8 B=1.4571

Further dimensions on request

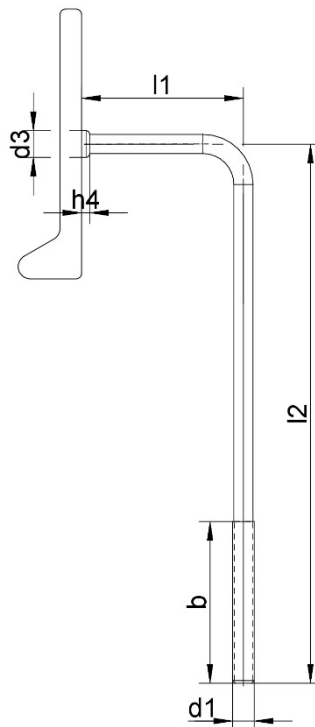
shear connector type SD (EN ISO 13918)
 ETA-03/0039


dimension (d1x l2)	barrel size	kg/100	h4	d5	h3
10x 30	5500	3,25	2,5	19	7
10x 50	4500	4,60			
10x 75	3300	6,10			
10x100	2400	7,60			
10x125	1800	9,20			
10x150	1400	10,80			
10x175	1000	12,30			
13x 50	2500	7,80	3	25	8
13x 75	1800	10,40			
13x100	1400	13,00			
13x125	1100	15,60			
13x150	900	18,20			
13x175	700	20,80			
13x200	500	22,40			
16x 35	2000	9,90	4,5	32	8
16x 50	1500	12,20			
16x 75	1200	16,20			
16x100	900	20,10			
16x125	750	24,10			
16x150	600	28,00			
16x200	400	34,90			
16x250	300	42,80			
16x300	700	51,00			

dimension (d1x l2)	barrel size	kg/100	h4	d5	h3
19x 50	1250	16,00	6	32	10
19x100	700	27,10			
19x150	500	38,30			
19x200	350	49,20			
19x225	300	54,80			
19x250	250	60,70			
19x300	600	72,00			
19x350	500	83,30	6	35	10
22x 50	1000	20,00			
22x 75	700	28,20			
22x 90	600	32,80			
22x100	550	35,70			
22x150	350	50,60			
22x175	310	58,10			
22x200	250	65,50			
22x225	225	73,00			
22x250	200	80,50			
22x300	500	97,00			
22x350	400	112,00			
25x100	400	46,50			
25x150	280	65,50			
25x200	200	84,50			
25x250	150	105,60			
25x300	350	121,50			
25x350	300	143,00			

material S235JRG2C+C470

angle stud type WB

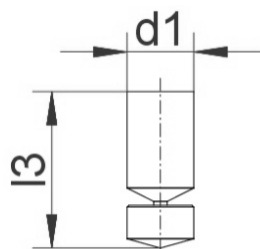


d ₁	M8	
d _{2±1}	7,19	
d ₃	10	
h ₄	3,5	
l ₁	60	120
l ₂	min60	

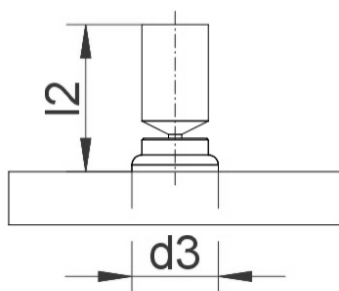
material: S235JRG2C+C

Further dimensions on request

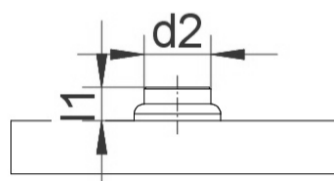
anti skid type AS



stud before welding



Welded studs



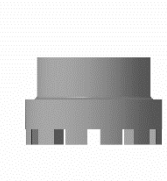
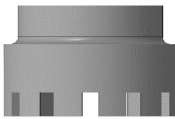
Bolt broken off

$d1 \pm 0,1$	10	10	10
$d3$	13	13	13
$d2$	10	10	10
$l1$	5	6	8
$l2$	25	20	25
$l1 \pm 1^a$	$l2 \pm 2,3$	$l2 \pm 2,3$	$l2 \pm 2,3$

material S235JR

Further dimensions on request

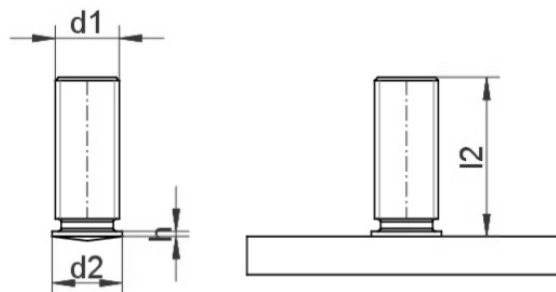
ceramic ferrule

description	total height (mm) ±2	total Ø(mm) ±2	used for bolt type	drawing
UF 4	9	10	ND	
UF 5	8	11,5	ND	
UF 6	8	11,5	FD, UD, ID,SD	
UF 8	8,5	15,5	FD,UD,ID	
UF 10	10	18	FD,UD,ID	
UF 12	10,5	20	FD,UD,ID	
UF 12,7	11	22	SD	
UF 13	11	26	SD	
UF 16	13	30	FD, UD, ID,SD	
UF 19	16,5	31	SD	
UF 20	16,5	31	FD,UD,ID	
UF 22	19	39	SD	
MF 6	-	-	MD	
MF 8	4,5	18	MD	
MF 10	5,5	20	MD	
MF 12	6	23	MD	
MF 16	9	29	MD	
MF 20	9	32,5	MD	
PF 6	6,5	11,5	PD	
PF 8	6,5	15	PD	
PF 10	6,5	18	PD	
PF 12	9	20	PD	
PF 16	11	26	PD	
PF 20	10	34	PD	
PF 24	18,5	39	PD	
RF 6	10	12	RD	
RF 8	9	15	RD	
RF 10	11,5	18	RD	
RF 12	13	20	RD	
RF 16	9	30	RD	
RF 20	9	32	RD	
RF 24	13 ^b	33	RD	

Short-cycle drawn arc stud welding

threaded stud with flange type PS M10

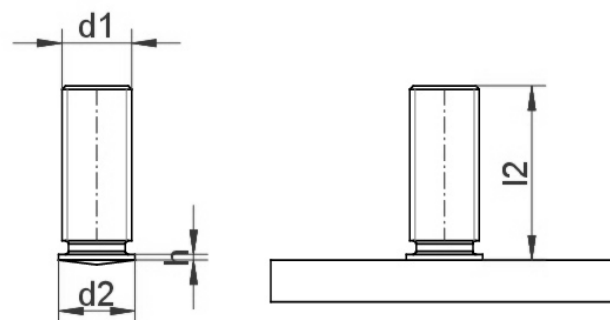
Aluminium



d1	l2	d2	h
M10	20	12	3
	25		
	30		
	40		
	60		
	80		
	150/140		
M12	40	14	3,3
	50		
	90		

material: AlMg5

threaded stud with flange type PS
(EN ISO 13918)

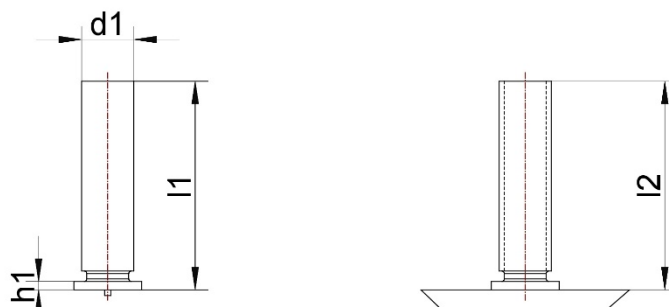


d1	l2	d2	h	chuck
M6	25	7	0,8-1,4	H10610
M6	30			H11589
M6	40			
M6	50			
M6	80/60			
M8	20	9		H10611
M8	30			H11152
M8	40			
M8	50			
M8	80/60			

material: 4.8, A2, A4

Stud welding with tip ignition

threaded stud type PT
(EN ISO 13918)

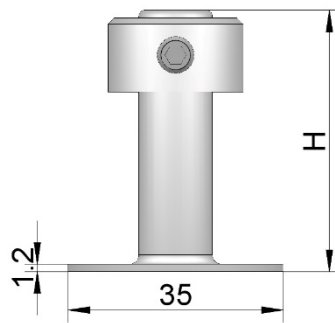
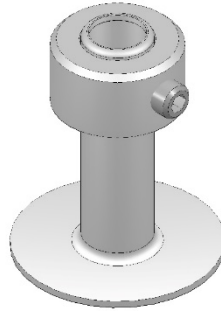


d1	l2	h1	VE	kg/100	chuck
M3	6	0,7-1,4	500	0,031	H13302
M3	8			0,039	
M3	10			0,047	
M3	12			0,056	
M3	16			0,720	
M3	20			0,089	
M4	8			0,067	H13303
M4	10			0,082	
M4	12			0,097	
M4	16			0,127	
M4	20			0,156	
M4	25			0,193	
M5	10			0,130	H13304
M5	12			0,153	
M5	16			0,201	
M5	20			0,248	
M5	25			0,307	
M5	30			0,366	
M6	10			0,186	H13305
M6	12			0,220	
M6	16			0,287	
M6	20			0,336	
M6	25			0,439	
M6	30			0,539	
M8	12	0,8-1,4	0,387	H13306	
M8	16		0,509		
M8	20		0,632		
M8	25		0,789		
M8	30		0,938		

material: 4.8 C2E(standard), A2

Ceiling and wall fixings

fastener type H without vibrating element



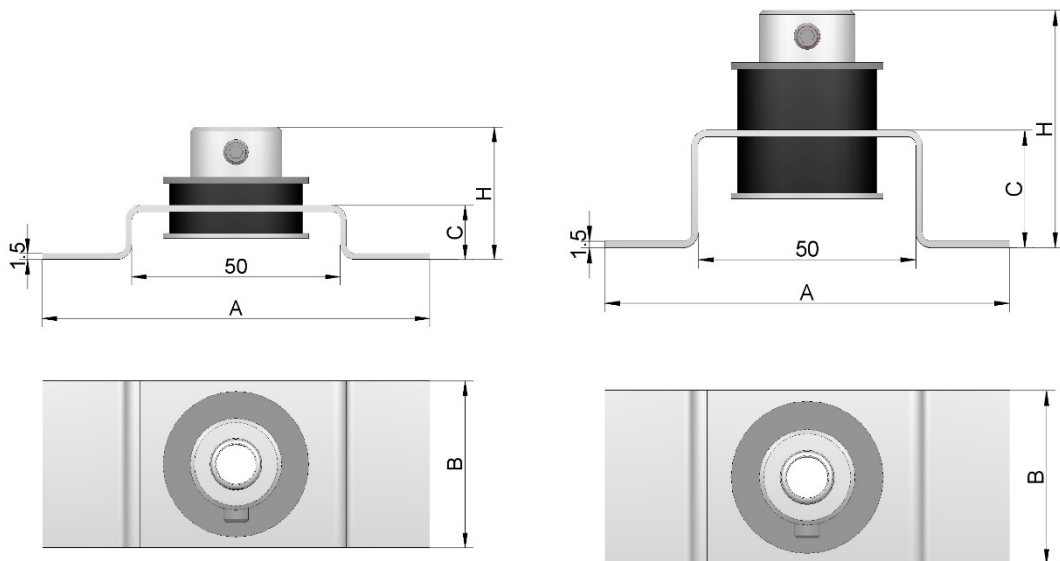
description	part-no.	PU	H	for stud	material
H 25	H13287	500	25	M8/8mm	StZn
H 40	H10507	500	40		
H 100	H10508	250	100		

Advantages:

- quick mounting
- high distance balance
- installable in all positions
- fire resistant
- maximum permissible load = 250N/fastener

other materials or dimensions on request

fastener type HG40 H with vibrating element



description	shore	part-no.	PU	dimension				for stud	material
				A	B	C	H		
HG 40/13 H	40°±5 TPE	H25213	150	93	40	13	35	M8/8mm	StZn
HG 40/25 H		H10512	100			25	54		
HG 40/50 H		H13647	150			50	79		
HG 40/80 H		H25080	100			80	107		
HG 40/100 H		H10513				100	130		
HG40/13 H	40°±5 TPE	H25669	150	93	40	13	35	M8/M10	1.4571
HG40/25 H		H25310	100			25	54		
HG40/50 H		H25467	150			50	79		
HG40/13 H	40°±5 silicone	H25790	150	93	40	13	35	M8/8mm	StZn
HG40/25 H		H25791	100			25	45		
HG40/50 h		H25802	150			50	70		
HG40/25 H	50°±5 TPE	H25387	100	93	40	25	54	M8/8mm	StZn
HG40/50 H		H25704	150			50	79		

Advantages:

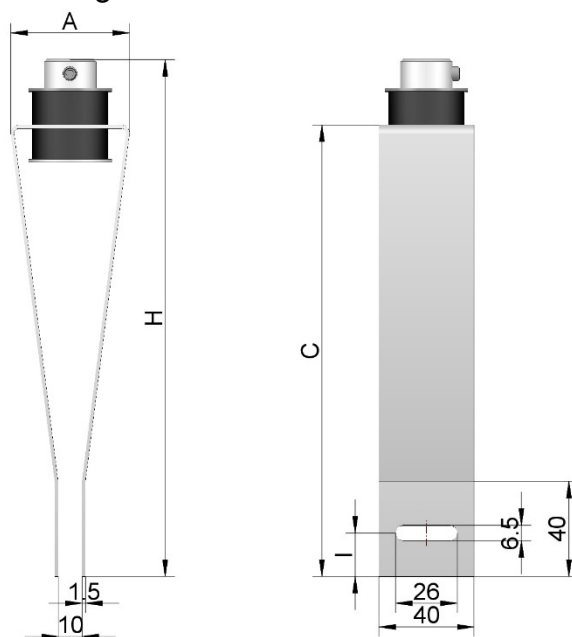
- quick mounting
- high distance balance
- installable in all positions
- fire resistant
- maximum permissible load = 250N/fastener

other materials or dimensions on request

K2024-28-E

Hilbig GmbH ● Postweg 204 ● 21218 Seevetal ● Germany

fastener type HG40 T with vibrating element



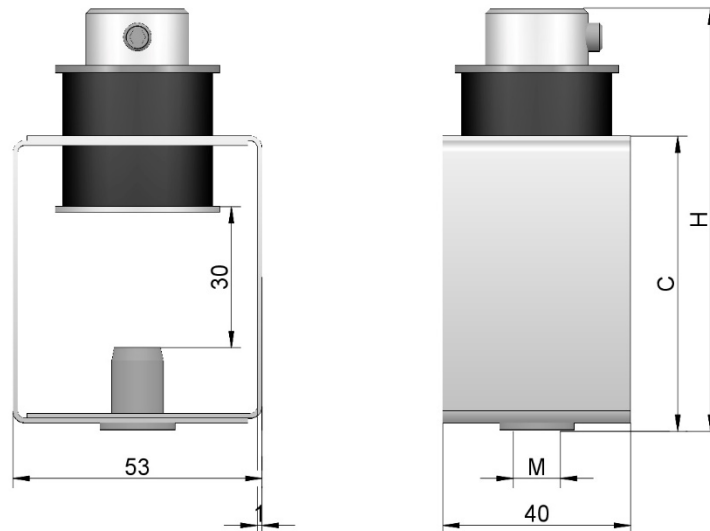
description	shore	part-no.	PU	dimension				for stud	material
				A	I	C	H		
HG 40/100 T	40°±5 TPE	H25530	100	50	15	100	129	M8/8mm	StZn
HG 40/100 T		H25743	100		20	100	129		
HG 40/190 T		H11229	75		15	190	219		
HG40/190 T	40°±5 TPE	H25733	75	50	15	190	219	M8/M10	1.4571
HG40/190 T	40°±5 silicone	H25799	75	50	15	190	219	M8/M10	StZn

Advantages:

- quick mounting
- high distance balance
- installable in all positions
- fire resistant
- maximum permissible load = 250N/fastener

other materials or dimensions on request

fastener type HG40 GM with vibrating element



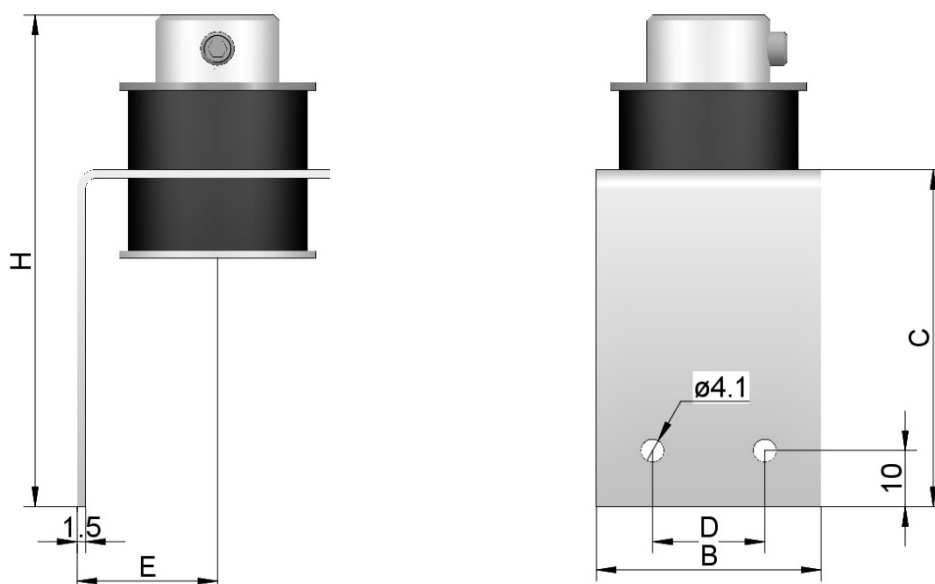
description	shore	part-no.	PU	Dimension				for stud	material
				M	B	C	H		
HG 40/60 GM6	40°±5 TPE	H11227	100	M6	40	63	90	M8	StZn
HG 40/60 GM8		H11224		M8					
HG 40/60 GM6	50°±5 TPE	H25421		M6					
HG 40/60 GM8		H25399		M8					

Advantages:

- quick mounting
- high distance balance
- installable in all positions
- fire resistant
- maximum permissible load = 250N/fastener

other materials or dimensions on request

fastener type HG40 W with vibrating element



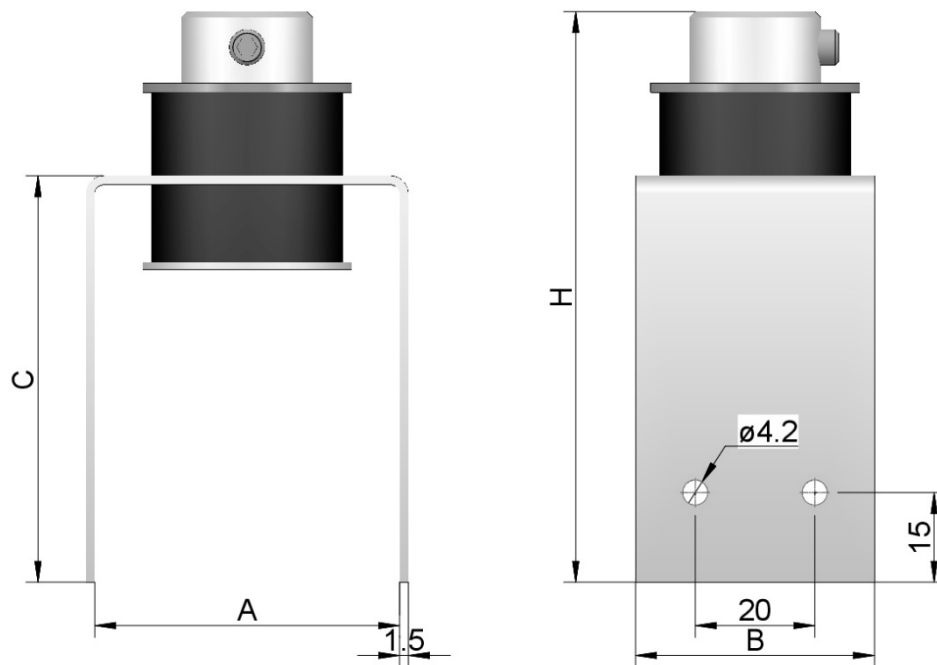
description	shore	part-no.	PU	Dimension						for stud	material
				A	B	C	D	E	H		
HG 40/40 W	40°±5 TPE	H25134	100	30	40	40	20	25	70	M8/8mm	StZn
HG 40/60 W		H13632		50		60			90		

Advantages:

- quick mounting
- high distance balance
- installable in all positions
- fire resistant
- maximum permissible load = 250N/fastener

other materials or dimensions on request

fastener type HG40 U with vibrating element



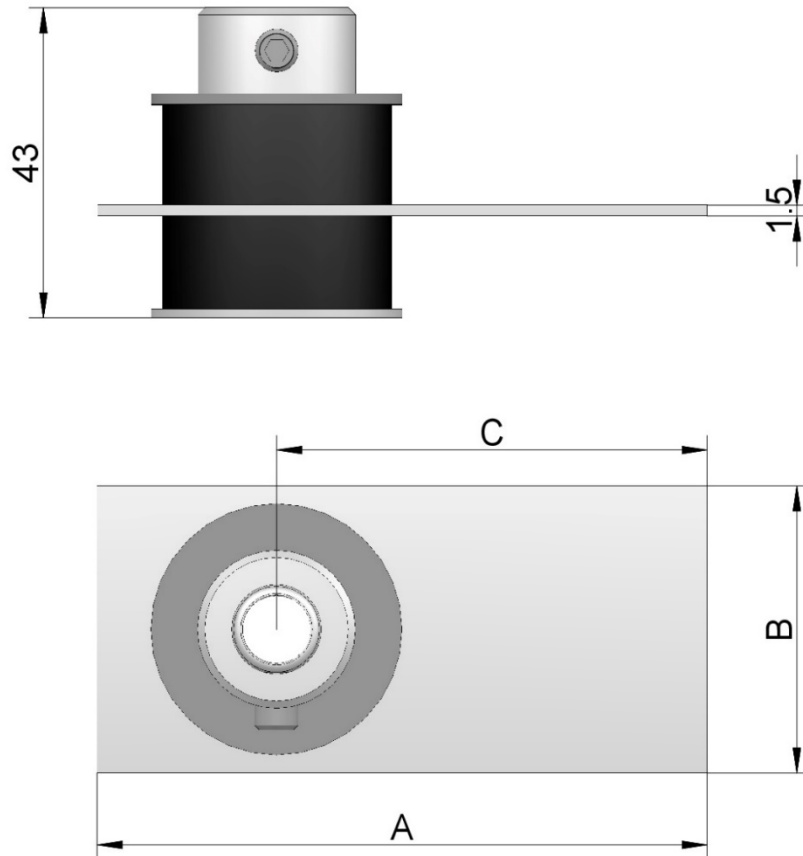
description	shore	part-no.	PU	dimension				for stud	material	comment
				A	B	C	H			
HG40/25 U	40°±5 TPE	H25916	100	52	40	26	53	M8	StZn	with one hole 4,2
HG 40/50 U		H25897		55,5		50	77			without hole 4,2
HG 40/60 U		H26009		51		68	95			
HG 40/60 U	40°±5 silicone	H25958	159	51	40	68	86	M8	StZn	

Advantages:

- quick mounting
- high distance balance
- installable in all positions
- fire resistant
- maximum permissible load = 250N/fastener

other materials or dimensions on request

fastener type HG40 B with vibrating element



description	shore	part-no.	PU	dimension				for stud	material
				A	B	C	H		
HG 40/ 60 B	40°±5 TPE	H25164	100	85	40	60	43	M8/8mm	StZn
HG 40/ 105 B		H25165		130		105			

Advantages:

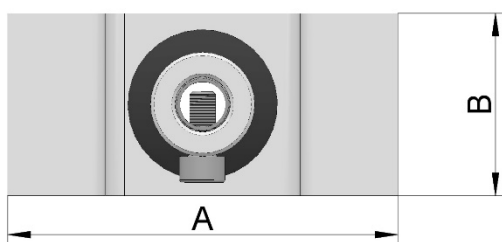
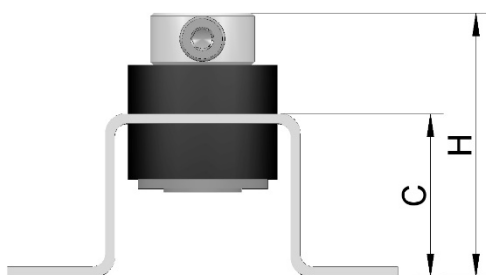
- quick mounting
- high distance balance
- installable in all positions
- fire resistant
- maximum permissible load = 250N/fastener

other materials or dimensions on request

K2024-33-E

Hilbig GmbH ● Postweg 204 ● 21218 Seevetal ● Germany

fastener type HG18 H with vibrating element



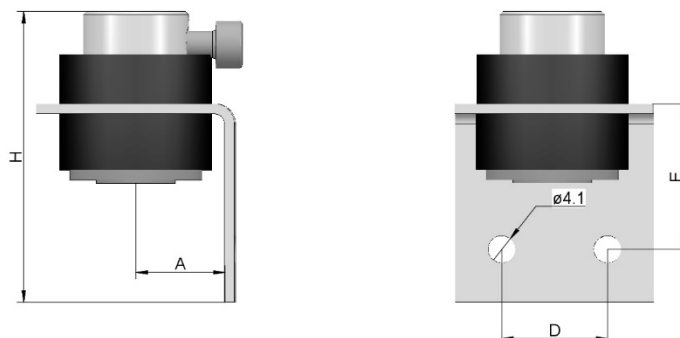
description	part-no.	dimension				shore	for stud	material
		A	B	C	H			
HG 18/15 H	H13827	60	28	15	30	40° TPE	M6	StZn
HG 18/25 H	H11231			25	40			
HG 18/50 H	H14168			50	65			

Advantages:

- quick mounting
- high distance balance
- installable in all positions
- fire resistant
- maximum permissible load = 150N/fastener

other materials or dimensions on request

fastener type HG18 W with vibrating element



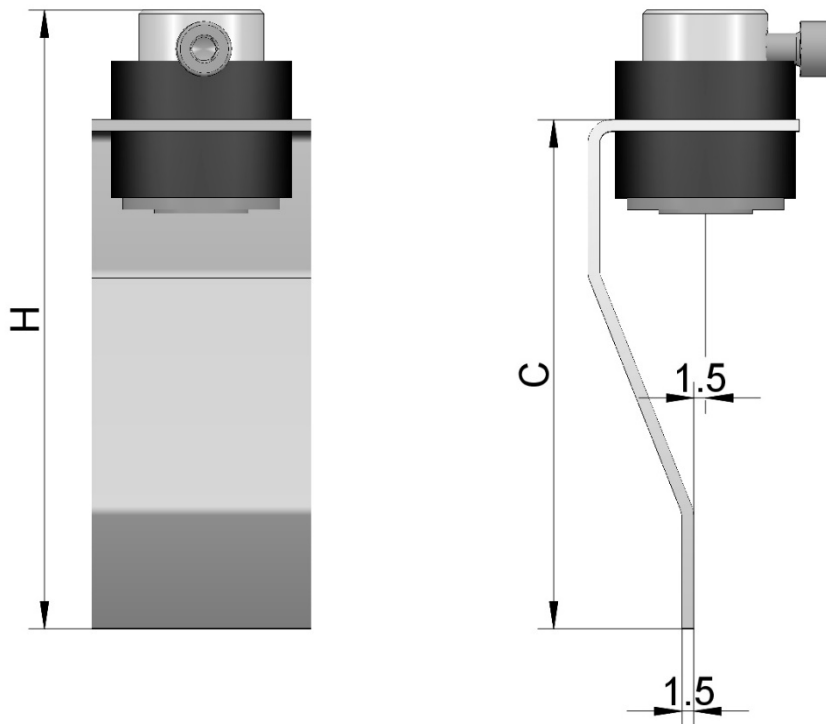
description	part-no.	dimension						shore	for stud	material
		A	B	C	D	E	H			
HG 18/30 W	H25066	15	30	30	16	22	46	40° TPE	M6	StZn
HG 18/60 W	H25071			60	16	52	76			
HG 18/80 W	H25072			80	16	72	96			
HG 18/100 W	H25070			100	16	92	116			

Advantages:

- quick mounting
- high distance balance
- installable in all positions
- fire resistant
- maximum permissible load = 150N/fastener

other materials or dimensions on request

fastener type HG18 WM with vibrating element



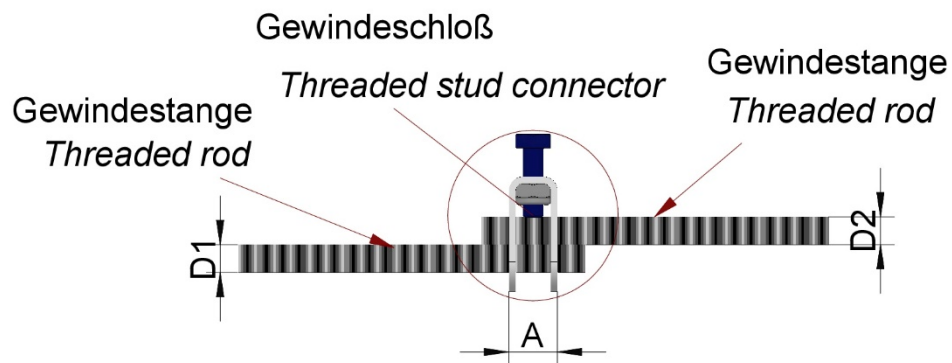
description	part-no.	dimension		shore	for stud	material
		C	H			
HG 18/65 WM	H25846	65	79	40° TPE	M6	StZn

Advantages:

- quick mounting
- high distance balance
- installable in all positions
- fire resistant
- maximum permissible load = 150N/fastener

other materials or dimensions on request

threaded stud connector

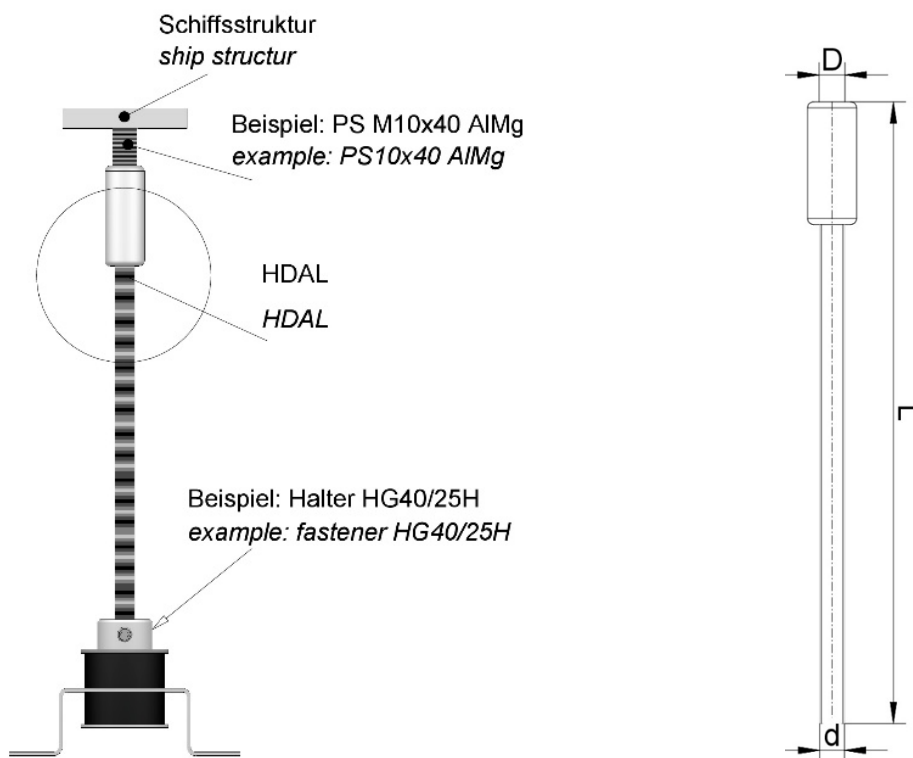


description	part-no.	PU	dimension				material
			A	D1	D2	H	
GS 6	H25135	100	14	M6	M6	33	StZn
GS 6 HDO	H25186			M6	HDO		
GS 8	H10573			M8	M8		
GS 10	H10574			M10	M10	38	
GS 12	H10575		23	M12	M12	48	
GS 8	H25145	100	14	M8	M8	33	1.4301
GS 8	H25498	100	14	M8	M8	33	1.4571

Advantages:

- adjustable
- quick mounting
- high strength
- self locking nut
- detachable connection

ceiling suspension type HDAL



description	part-no.	dimension			material
		D	d	L	
HDAL	H17393	M10	M10	120	StZn
	H17143			130	
	H16995			180	
	H17266			190	
	H17286			220	
HDAL	H16933	M10	M8	100	StZn
	H17420			120	
	H16932			150	
	H16931			200	
	H16929			300	
	H17048			400	
	H16928			500	
HDAL	H17267	M10	M10	190	1.4571
	H17248			200	
	H17061			400	

other materials or dimensions on request

K2024-38-E

Hilbig GmbH ● Postweg 204 ● 21218 Seevetal ● Germany

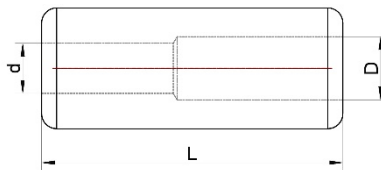
assembly parts

threaded rod DIN976-1

size: M5, M6, M8, M10, M12

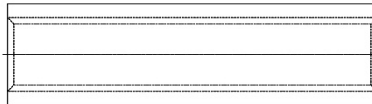
material: 4.8, 4.8-A2K, A2-50, A4-50

reduction sleeve



other materials or dimensions on request

tapped sleeve



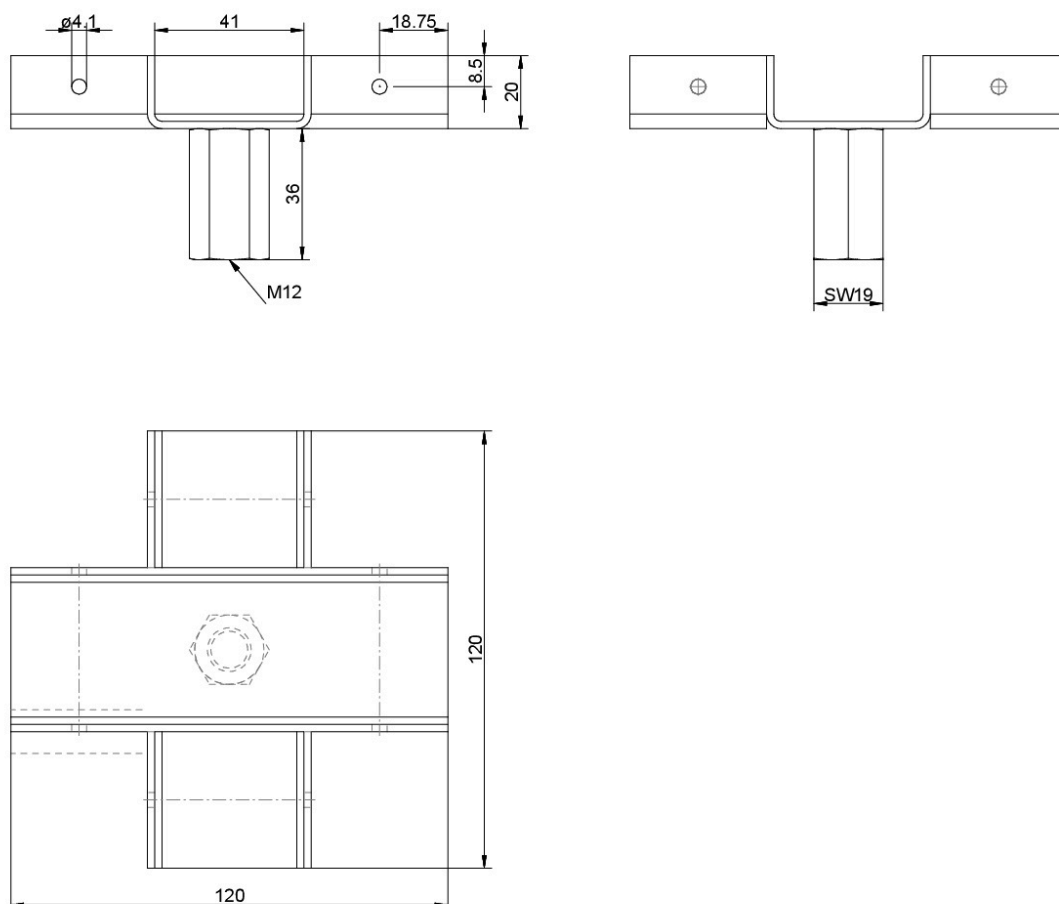
other materials or dimensions on request

standard parts

- Hexagon nut according to DIN934
- Hexagon nut according to DIN985
- Hexagon nut according to DIN6334
- Hexagon nut with rotating washer
- washer according to DIN125
- washer according to DIN9021

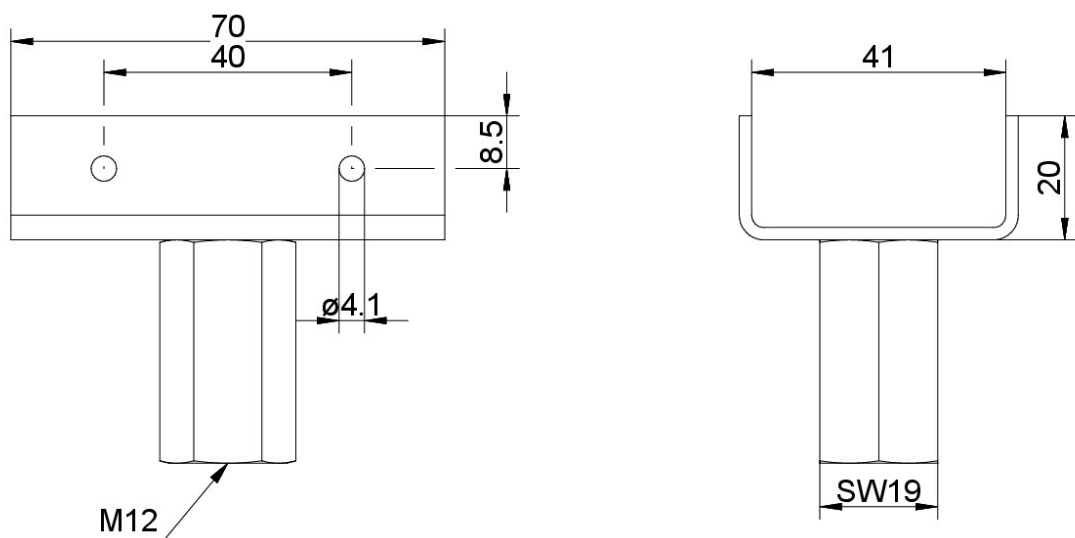
other materials or dimensions on request

floor support without vibrating element type FBL K



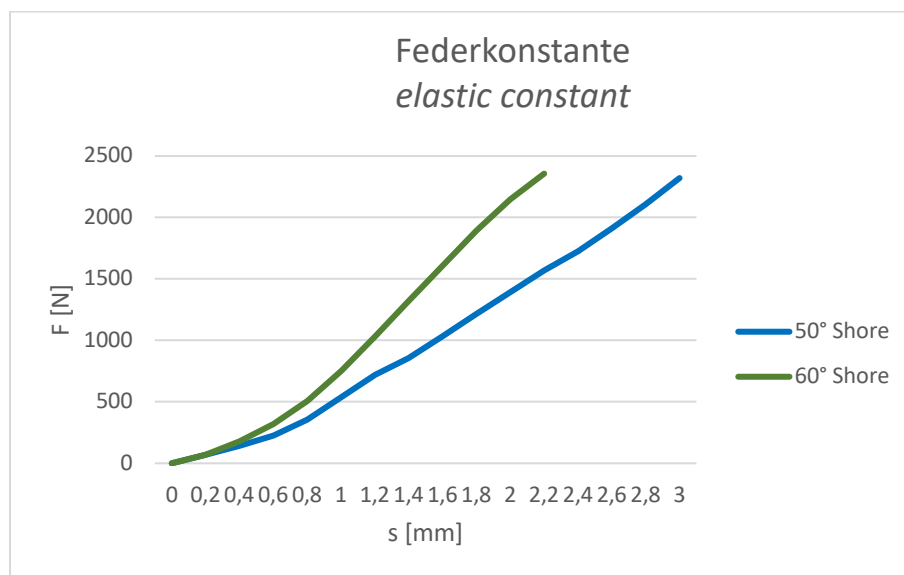
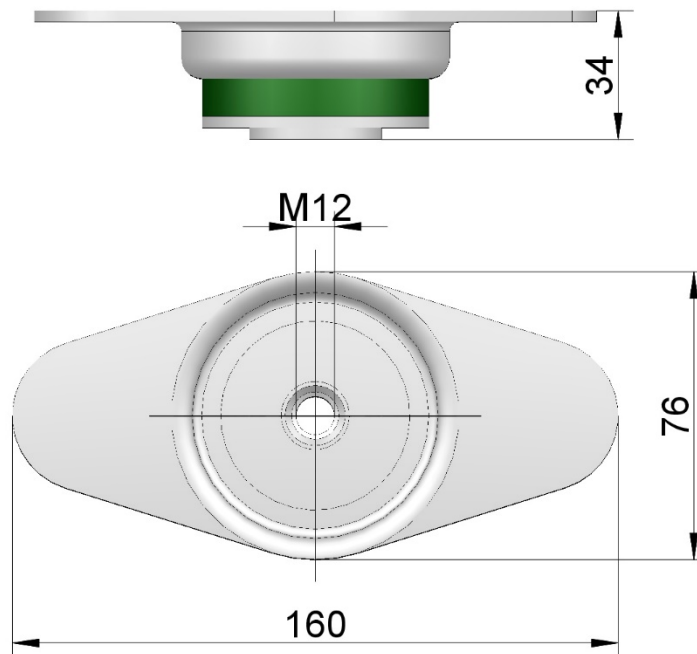
part-no: H25837
 surface painted
 Adjustment range steel ca.26mm
 for square tube 40x20x2mm
 Threaded bolts must be ordered separately

floor support without vibrating element type FBL U



part-no: H25455
surface painted
adjustment range steel ca.26mm
for square tube 40x20x2mm
threaded bolts must be ordered separately

floor support with vibrating element type FBLE

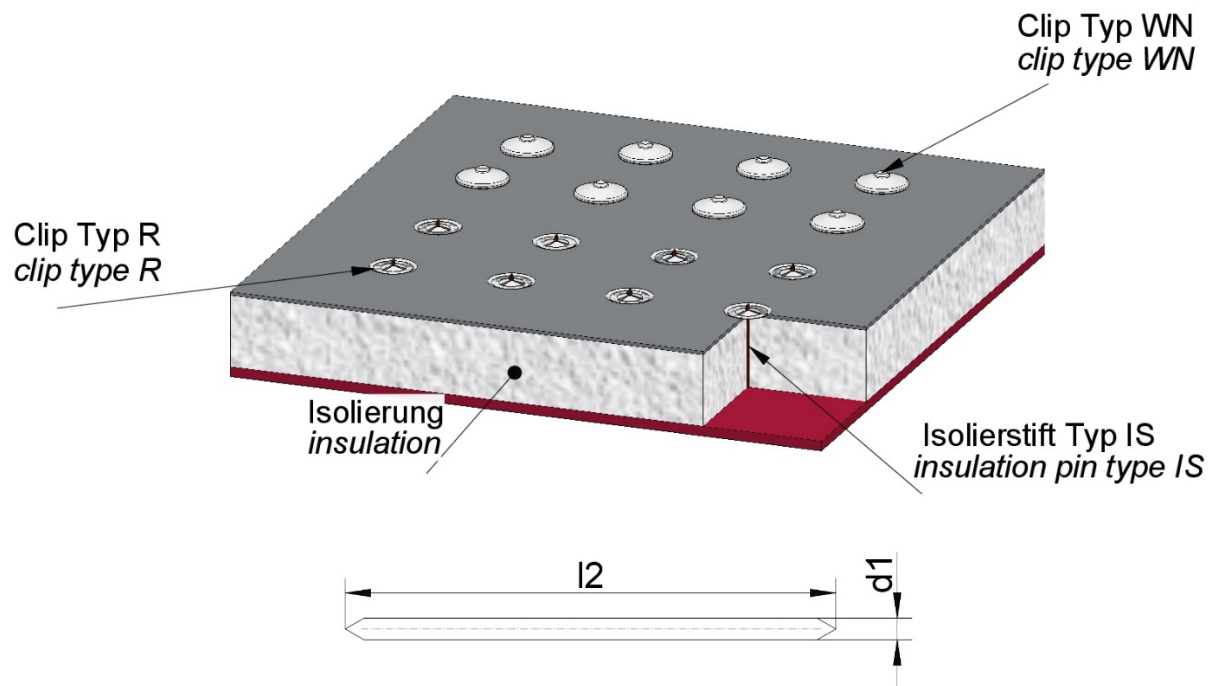


part-no. 50°Shore H25416
 part-no. 60°Shore H25417
 material: StZn/TPE
 adjustment range ca. 17mm

other materials or dimensions on request

Insulation

insulation pin type IS for steel-or Cr-Ni-construction



d1	3	4	5
l1+1	25-500	25-500	25-500
l2	l1+3	l1+3	l1+3

material

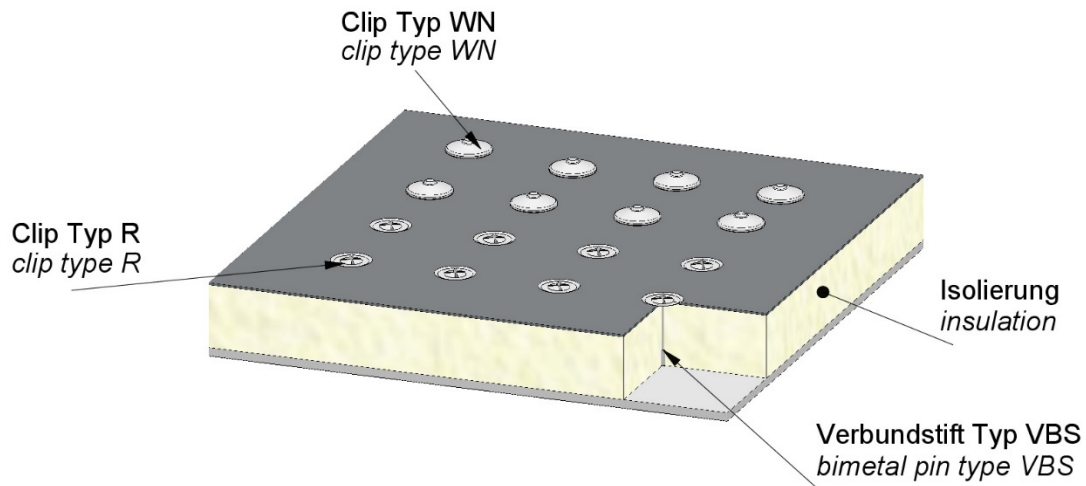
- copper plated steel
- Chrome-Nickel-steel 1.4571

other materials or dimensions on request

K2024-43-E

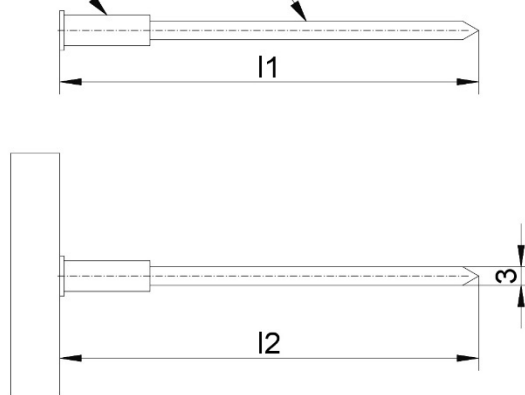
Hilbig GmbH ● Postweg 204 ● 21218 Seevetal ● Germany

bimetal type VBS for aluminium construction



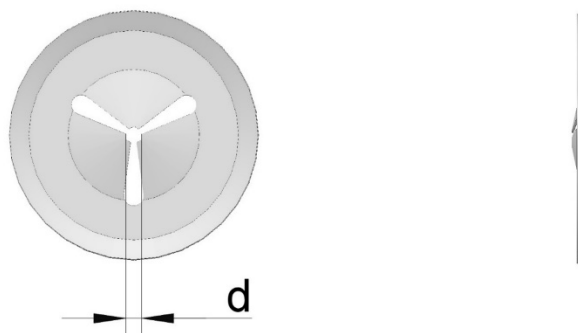
Aluminium
aluminum

Stahl verzinkt gerändelt oder 1.4571
gavanised steel, rough surface or 1.4571



l1±1	25-300
l2	l1-2,5

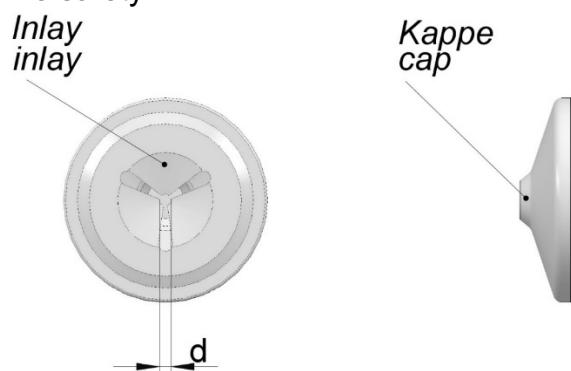
clip type R



description	d	part-no.	PU	material
Clip 2,7R	2,7	H25052	6000	galvanized steel
		H25550		A4
Clip-3R	3	H10003		galvanized steel
		H10013		A4
Clip-4R	4	H10004		galvanized steel
		H10014		A4
Clip-5R	5	H10005		galvanized steel
		H10015		A4

other materials or dimensions on request

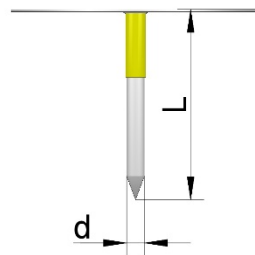
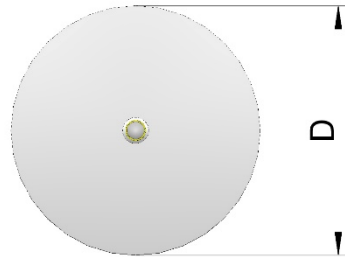
clip WN with metal inlay for fire safety



Description	d	Part-no.	PU	material inlay	material cap	colour cap
Clip 2,7WN	2,7	H25206	2000	galvanized steel	plastic, halogen free, self-extinguishing	white
		H25042		A4		
Clip-3WN	3	H13738		galvanized steel	plastic, halogen free, self-extinguishing	white
Clip-3SN		H25496		A4	galvanized steel -	
Clip-3WN		H13741			plastic, halogen free, self-extinguishing	white
Clip-3SN		H25212			1.4301	
Clip-3WES	3	H17218		galvanized steel	plastic, halogen free, self-extinguishing	black
Clip-4WN	4	H25085		galvanized steel	plastic, halogen free, self-extinguishing	white
Clip-4SN		H16996		A4	galvanized steel -	
Clip-4WN		H25120			plastic, halogen free, self-extinguishing	white
Clip-4SN		H25478			1.4301	
Clip-5WN	5	H13739		galvanized steel	plastic, halogen free, self-extinguishing	white
Clip-5SN		H16900		A4	galvanized steel	
Clip-5WN		H13740			plastic, halogen free, self-extinguishing	white
Clip-5SN		H25156			1.4301	

other materials or dimensions on request

cupped head pin (pin insulated)



pin	Ø2, Ø2,7mm
plate	d=Ø2 → D=30mm d=2,7 → D=38mm
length	Ø2 → L=9,5-54mm Ø2,7 → L=9,5- 152,4mm
material	StZn A2

other materials or dimensions on request

Glue

adhesive plate type HKL

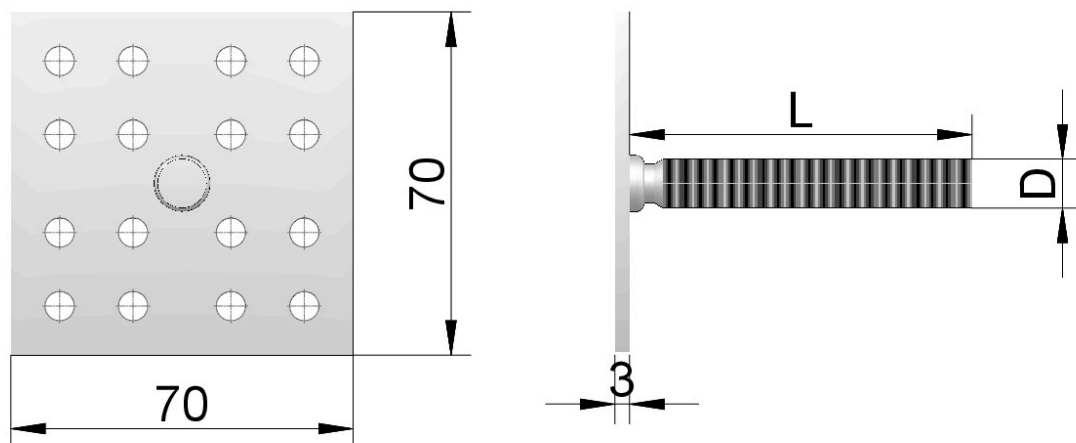


plate	70x70x3mm StZn, Cr-Ni-steel
stud	M8-M12 StZn. Cr-Ni-steel
material	S235, 1.4571
length	L=50-200mm
Adhesive surface	4400mm ²

without glue

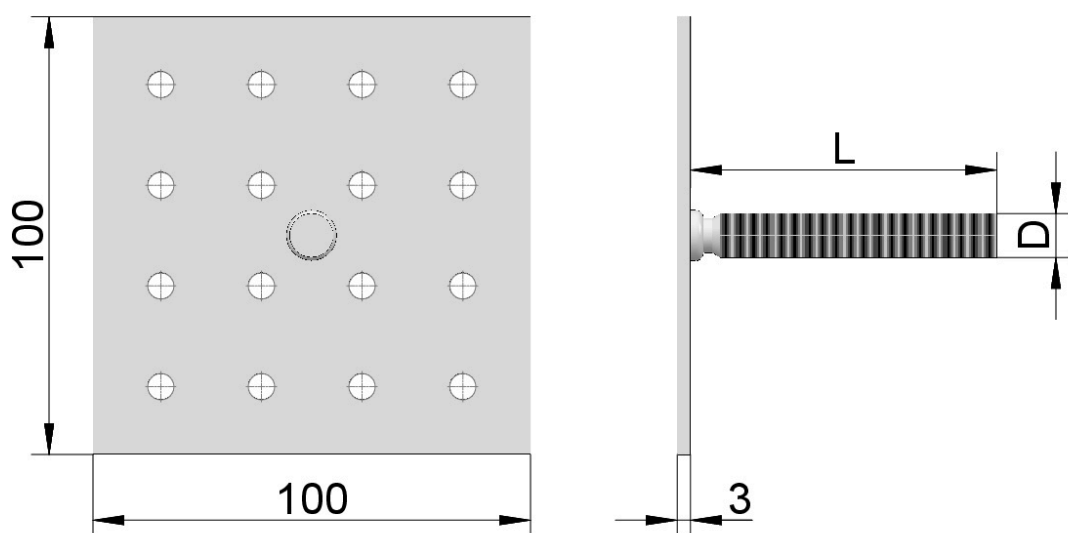


plate	100x100x3mm
stud	M8-M12 StZn.
material	S235, 1.4571
length	L=50-300mm
adhesive surface	9500mm ²

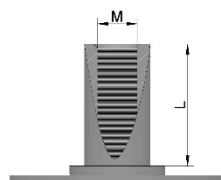
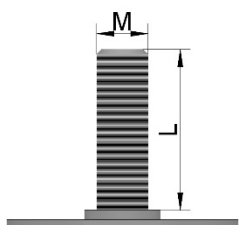
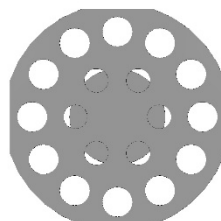
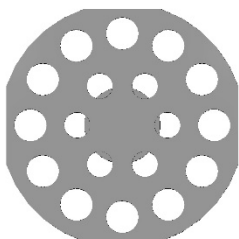
without glue

other materials or dimensions on request

K2024-48-E

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Adhesive plate type HKL



description	M	L	part-no.
HKL M6x20	M6	20	on request
HKL M6x30		30	
HKL M6x40		40	
HKL M6x50		50	
HKL M8x20	M8	20	
HKL M8x30		30	
HKL M8x40		40	
HKL M8x50		50	

description	M	L	part-no.
HKL M6x10	M6	10	H25573
HKL M6x16		16	H25585
HKL M8x22	M8	22	H25438

adhesive surface	808mm ²
plate	Ø36 mm StZn,

without glue

other materials or dimensions on request

glue fixing pin

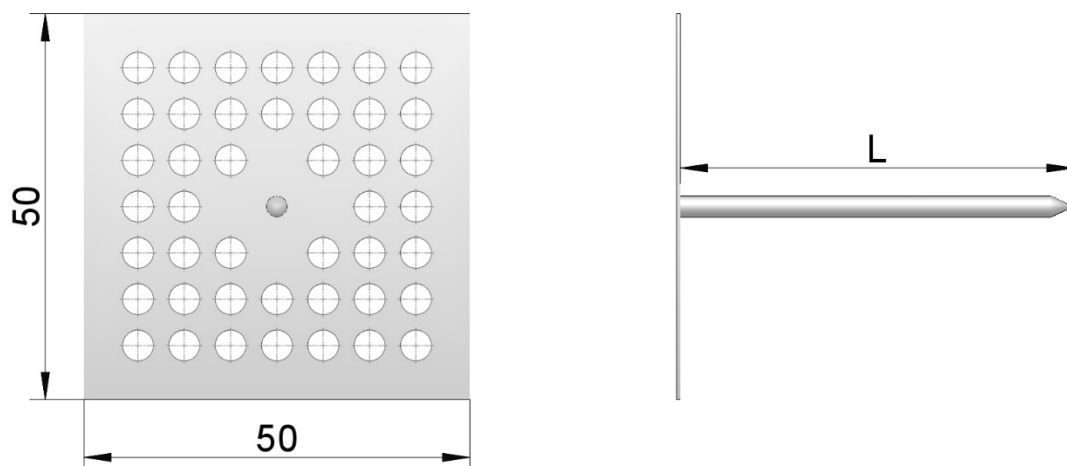
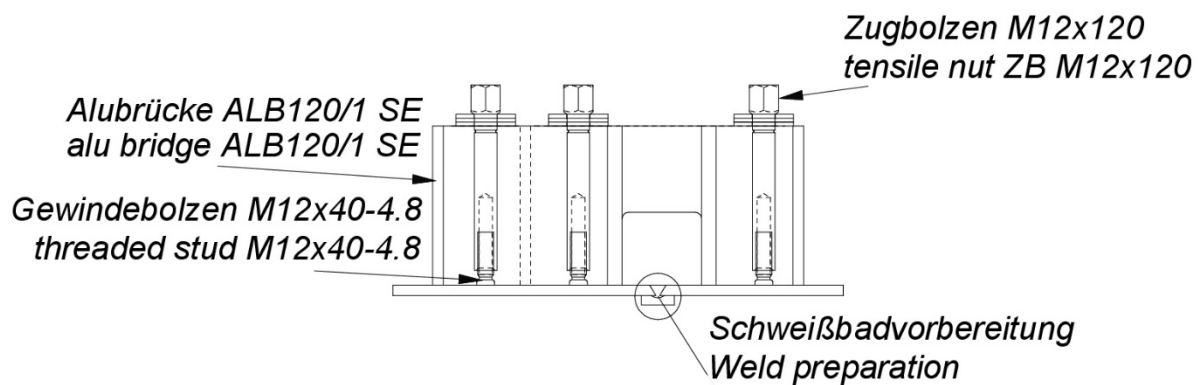
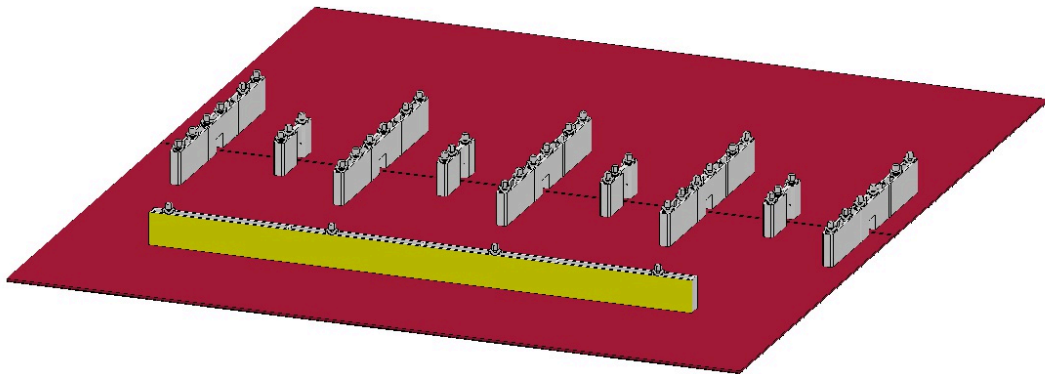


plate	50x50x0,5mm StZn, Cr-Ni-steel
pin	Ø2,7steel copper coated, Cr-Ni-steel
length	L=25-203mm
adhesive surface	1950mm ²

without glue
without clip

other materials or dimensions on request

deck plate fairing (steel area)

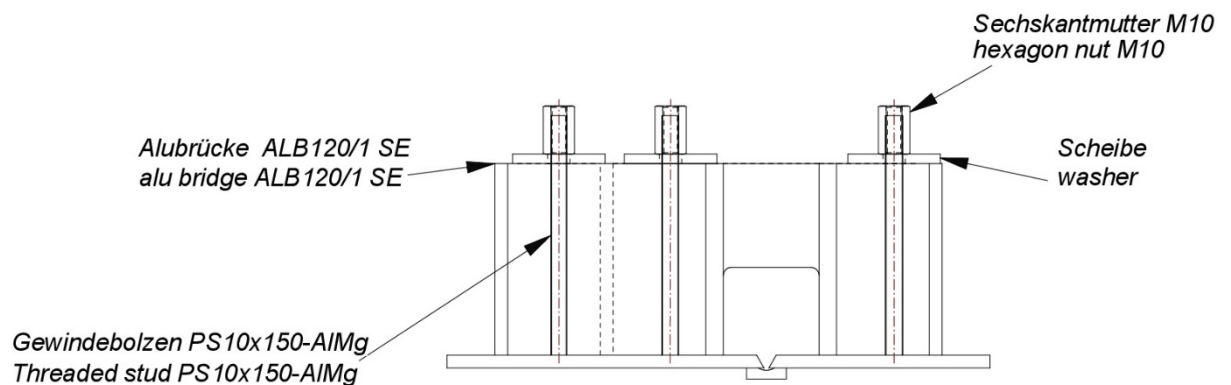
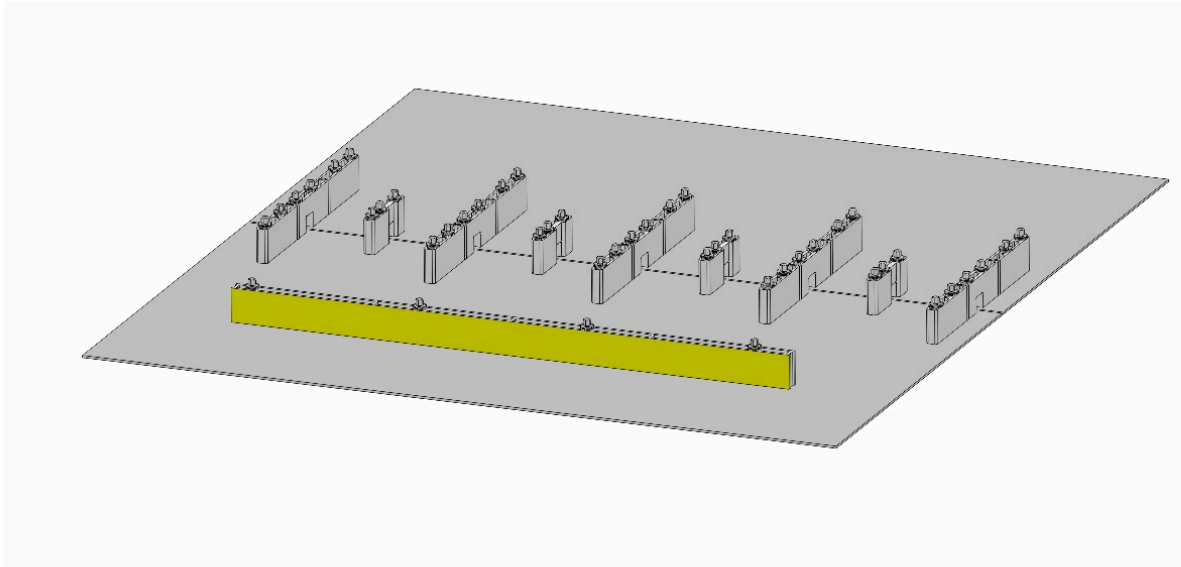


Advantages:

- safe alignment of the assembly joints
- easy installation by stud welding
- easy overhead installation
- saving of auxiliary materials
- safe system through stud welding
- energy saving
- quick dismantling

scope of application	tensile nut
steel < 7 mm	M10
steel 7 bis 15mm	M12
steel > 15mm	M16

deck plate fairing (aluminium area)



Advantages:

- safe alignment of the assembly joints
- easy installation by stud welding
- easy overhead installation
- saving of auxiliary materials
- safe system through stud welding
- energy saving
- quick dismantling

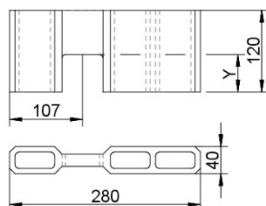
scope of application
aluminium < 11mm

K2024-52-E

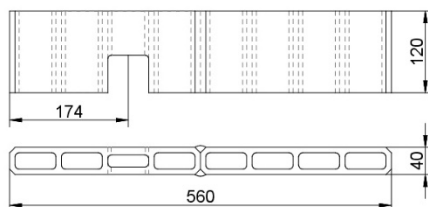
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aluminium bridges type ALB

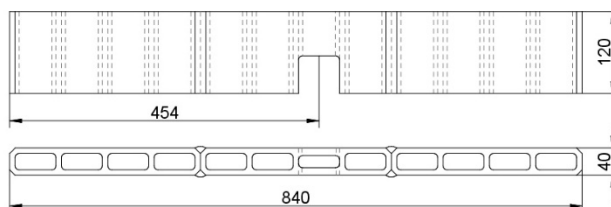
ALB120/1 SE
H45047



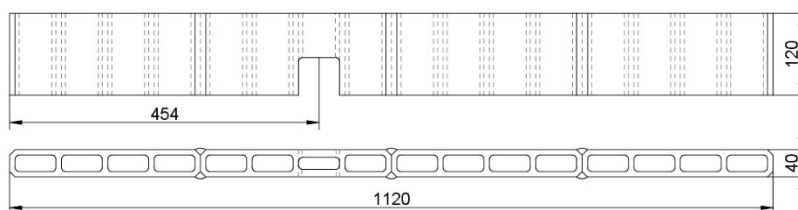
ALB120/2
H10493



ALB120/3
H10494

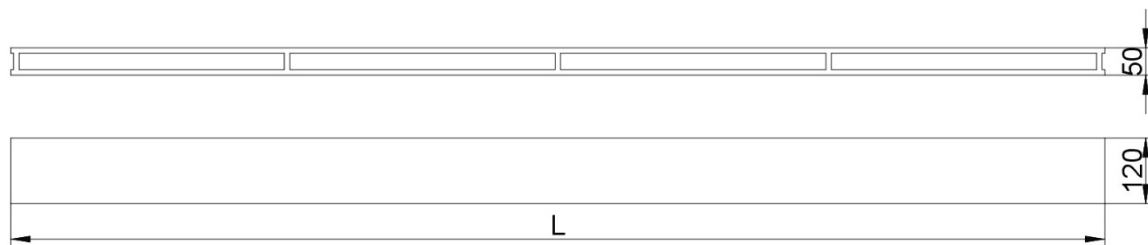


ALB120/4
H10495



other materials or dimensions on request

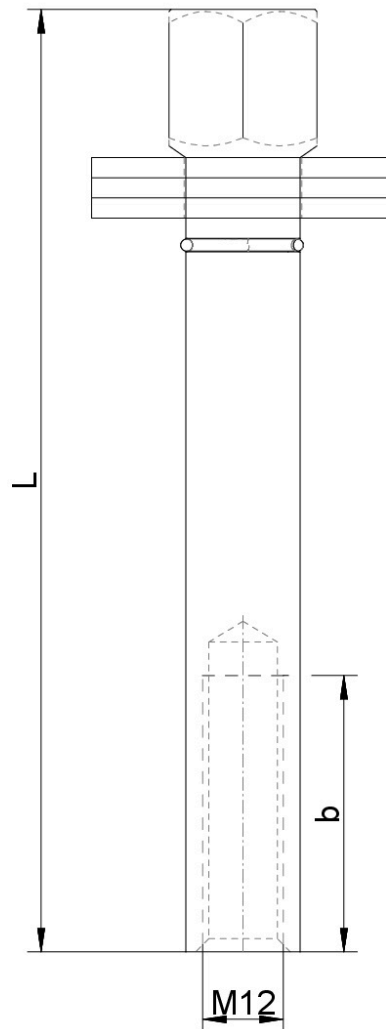
aluminium strong backs type ALG



description	part no.	dimension	
		L	kg/piece
ALG 120/2000	H45015	2000	14
ALG 120/4000	H45016	4000	28
ALG 120/6000	H45017	6000	42

other materials or dimensions on request

tensile nut type ZB and threaded stud



description	part-no.	length		
		L	G	b
ZB M12/120	H11144	140	M12	40
ZB M16/120	H14245	130	M16	50

comment:

- stud MD M12x40-4.8
- stud DD M16x40-4.8
- stud DD12x45-A5-50

material

steel

(4.8)

steel

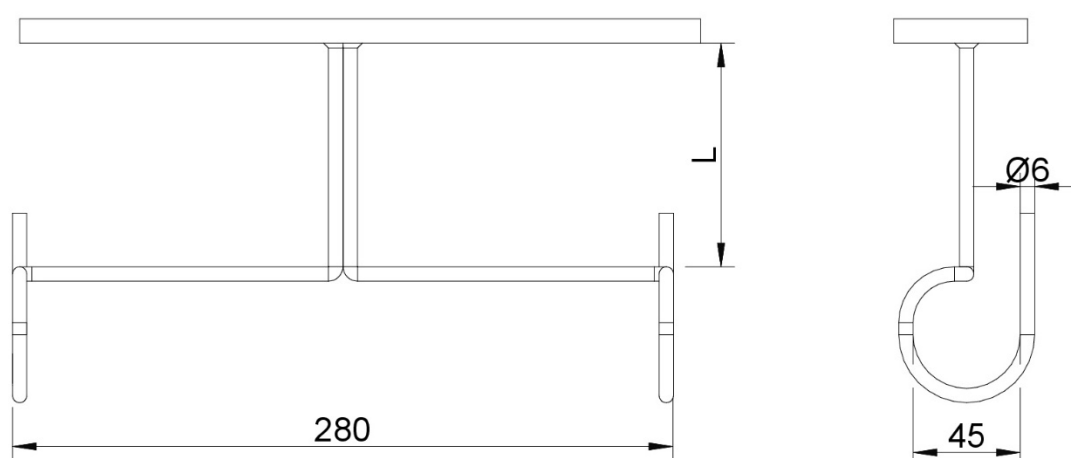
(4.8)

1.4571

K2024-55-E

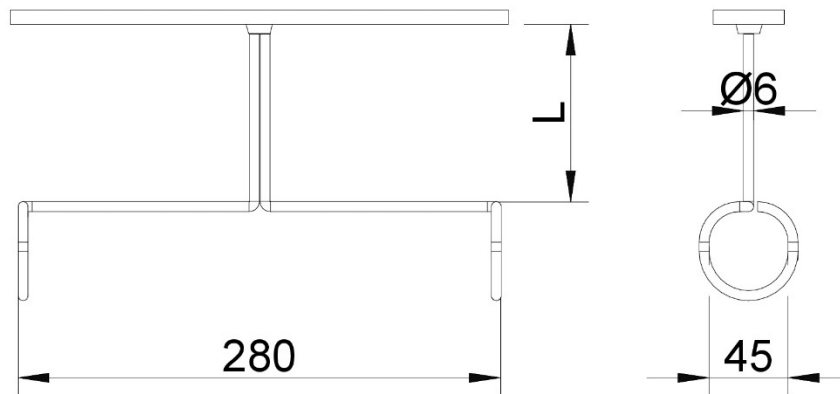
Electrical installation

cablE hanger type HDO



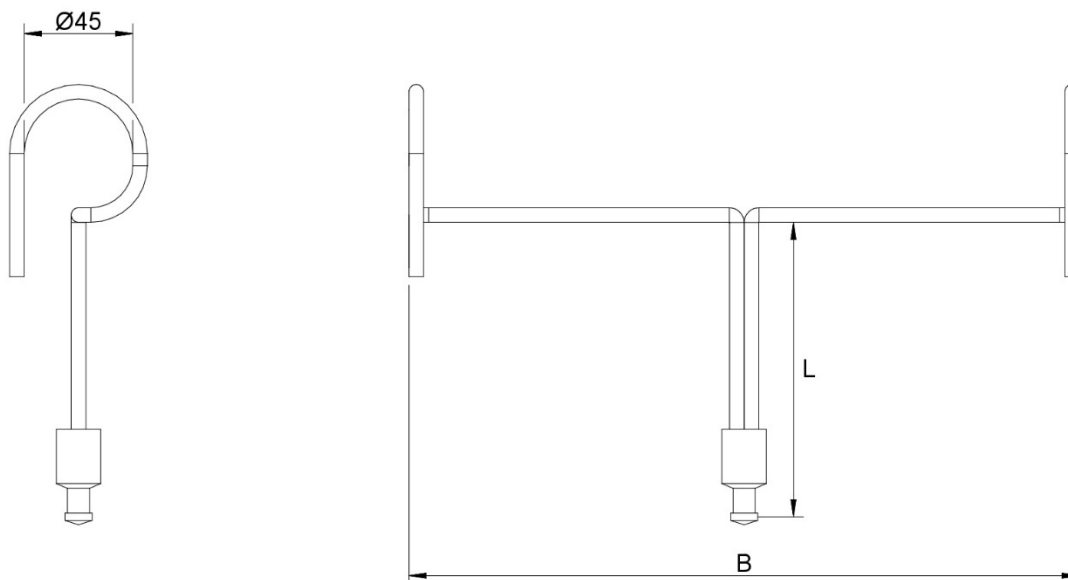
description	part-no.	PU	L	material
HDO60	H12225	150	60	4.8 C2E
HDO100	H12226		100	
HDO150	H12317	100	150	
HDO250	H12227	75	250	
HDO60	H12294	150	60	1.4301
HDO100	H25248		100	
HDO150	H25247	100	150	
HDO250	H12295	75	250	

Cable hanger type HDS



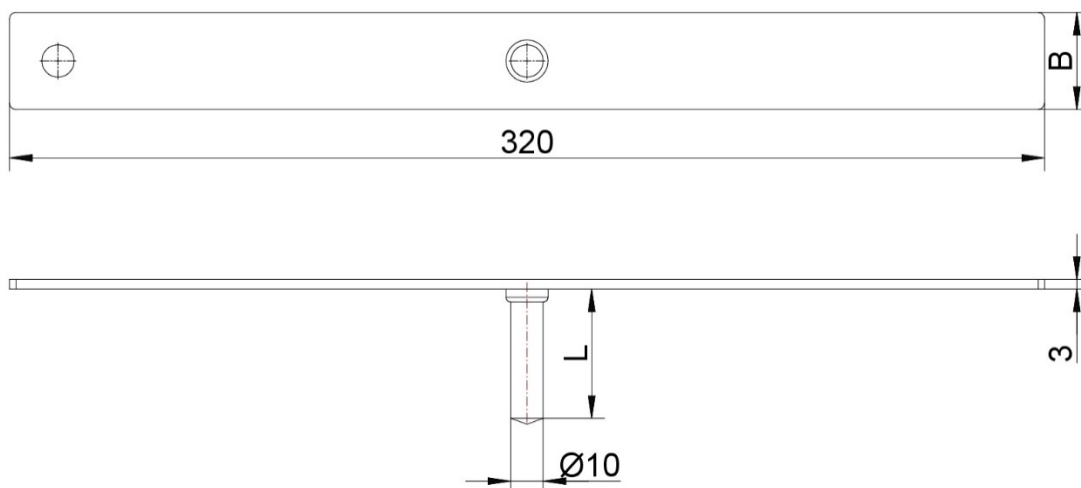
description	part-no.	PU	L	material
HDS 60	H11757	150	60	4.8 C2E
HDS 100	H11768		100	
HDS 150	H14098	100	150	
HDS 250	H11770	75	250	

cable hanger type HDO for aluminium area



description	part-no.	L	PU	material
HDO 80 alu	H14117	80	150	AlMg/4.8 C2E
HDO 120 alu	H13921	120	100	
HDO 170 alu	H25114	170	100	
HDO 270 alu	H25148	270	75	

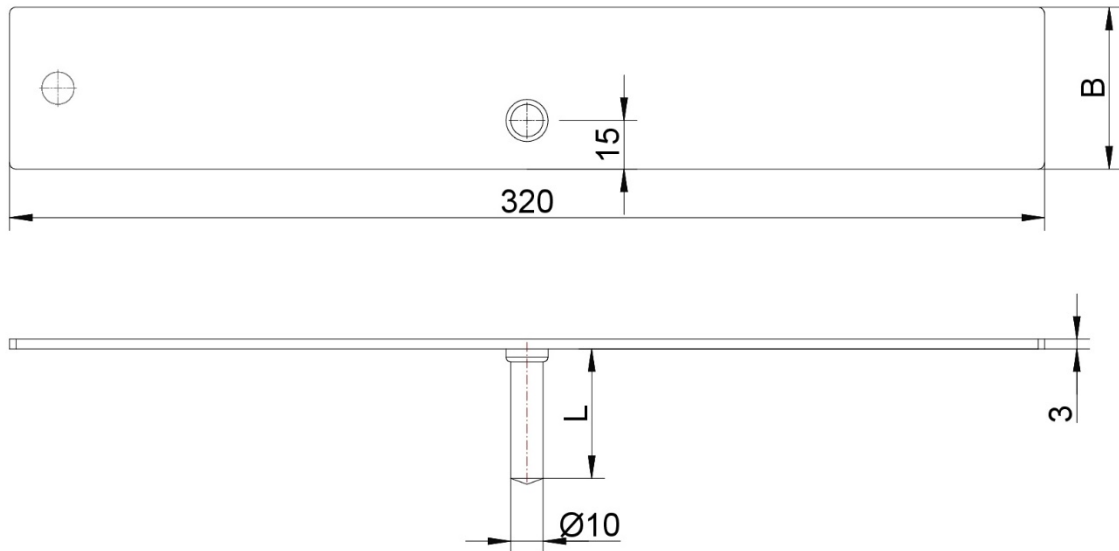
flat bar type HFS 30



description	part-no.	dimension		PU	material
		B	H		
HFS 30/320/40	H11396	30	40	100	S235JR+A2K
HFS 30/320/60	H13884		60		
HFS 30/320/80	H12287		80		
HFS 30/320/100	H25099		100		
HFS 30/320/120	H11559		120		
HFS 30/320/40	H25235		40		S235JR+TZN
HFS30/320/120	H25240		120		
HFS30/320/40	H25590		40		1.4301
HFS30/320/120	H25388		120		
HFS30/320/40	H26008		40		1.4571
HFS30/320/120	H26029		120		
HFS 30/320/60	H26079		60		AlMg

other materials or dimensions on request

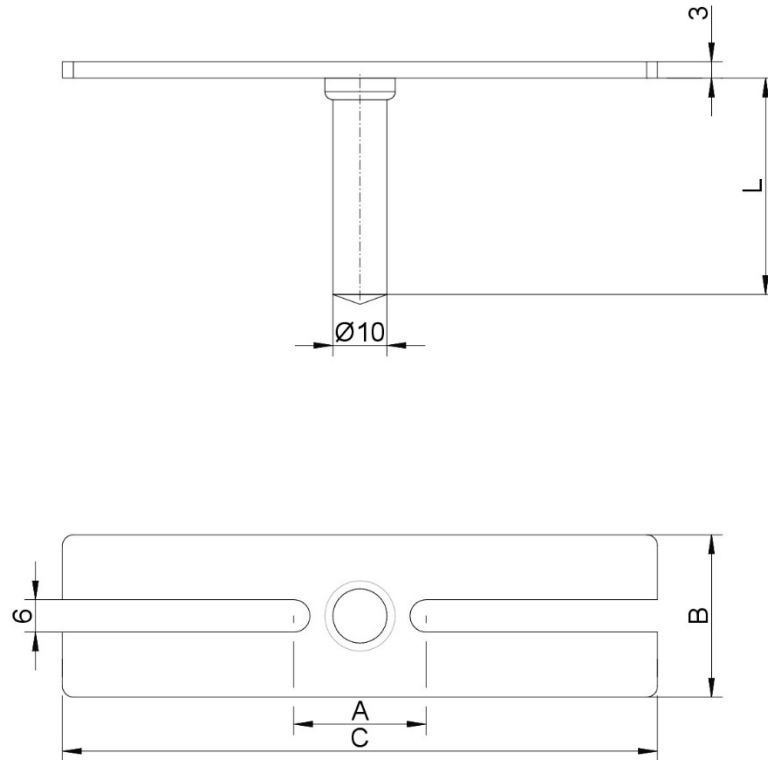
flat bar type HFS 50



description	part-no.	dimension		PU	material
		B	H		
HFS 50/320/40am	H25019	50	40	50	S235JR+A2K
HFS 50/320/80am	H12288		80		
HFS 50/320/120am	H25577		120		
HFS 50/320/40am	H25621		40		S235JR+TZN

other materials or dimensions on request

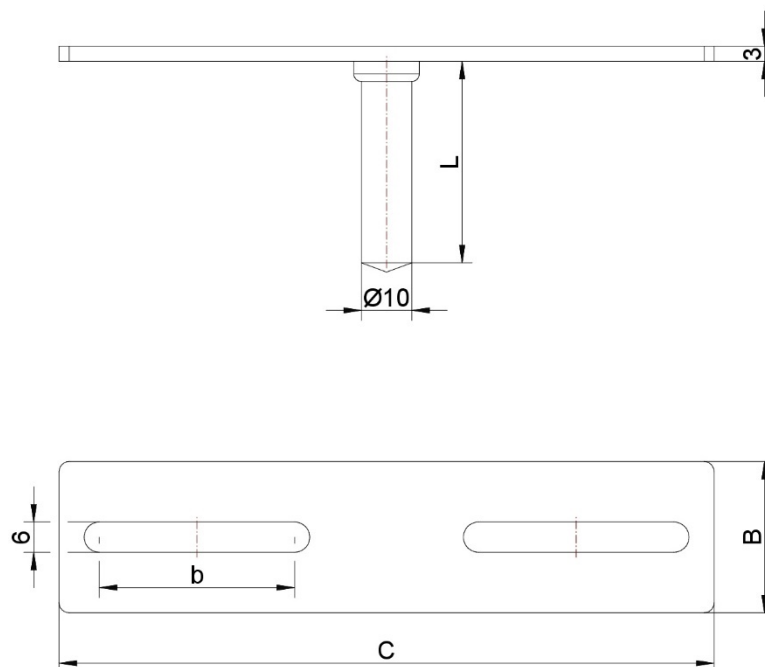
flat bar type HFSg open



description	part-no.	dimension					PU	material
		A	D	L	C	B		
HFSg 30/90/100	H14371	24,5	10	100	90	30	100	S235JR+A2K
HFSg 30/90/40	H13484			40	110			
HFSg30/110/40	H13485				130			
HFSg30/130/40	H25263	28						

other materials or dimensions on request

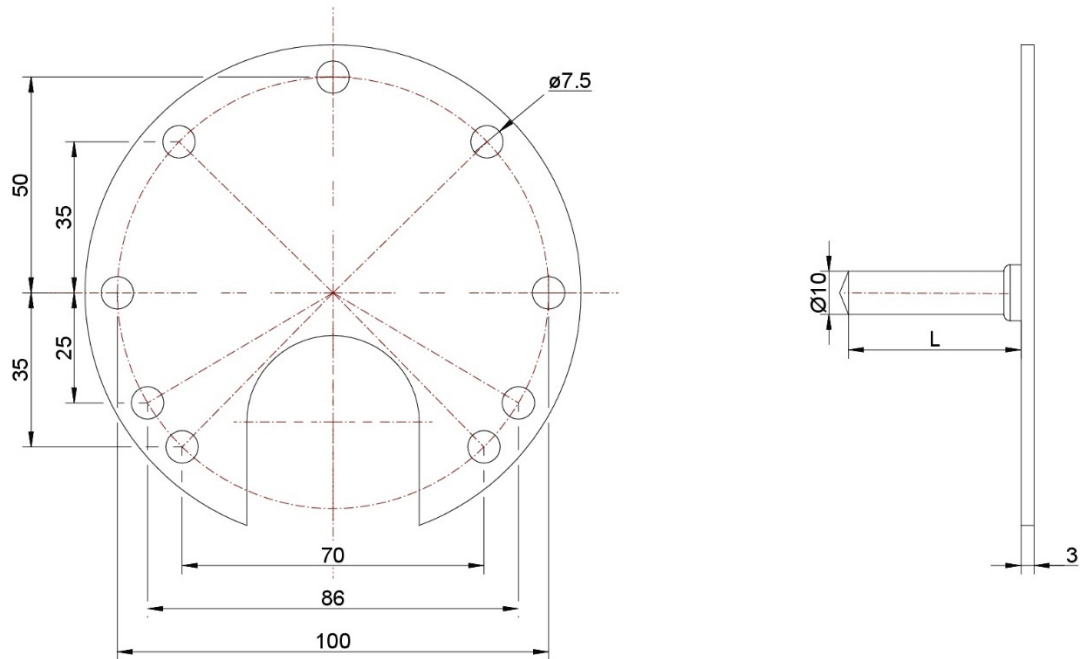
flat bar type HFSg closed



description	part-no.	dimension					PU	material
		b	D	L	C	B		
HFSg 30/130/40	H25226	50,75	10	40	130	30	100	S235JR+A2K
HFSg 30/220/40	H25557	90	10	40	220	30	100	S235JR+A2K

other materials or dimensions on request

electro ground plate type HNA



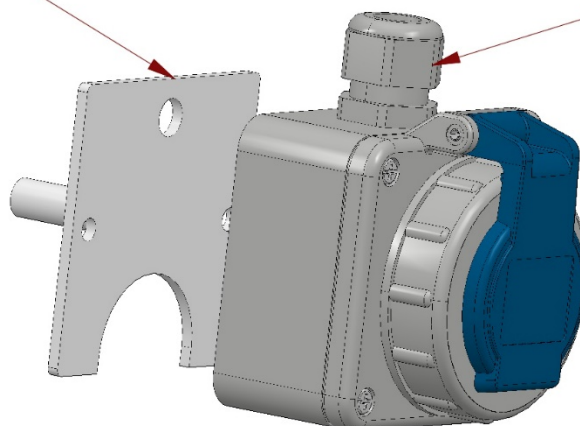
description	part-no.	L	PU	material
HNA-40	H11791	40	100	S235JR+A2K
HNA-120	H13080	120		
HNA-40	H25260	40		S235JR+TZN
HNA-120	H25751	120		

other materials or dimensions on request

electro ground plate on customer requirement

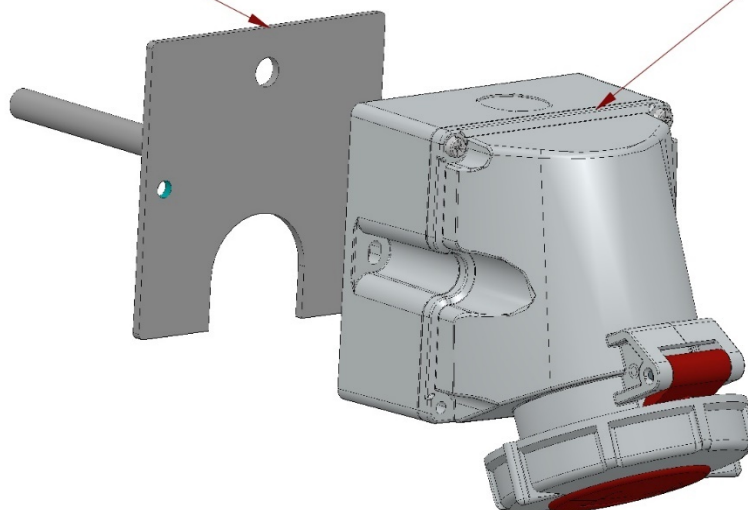
Montageplatte mit Bolzen Ø10x40
ground plate with Ø10x120

Wandsteckdose
wall socket



Montageplatte mit Bolzen Ø10x120
ground plate with Ø10x120

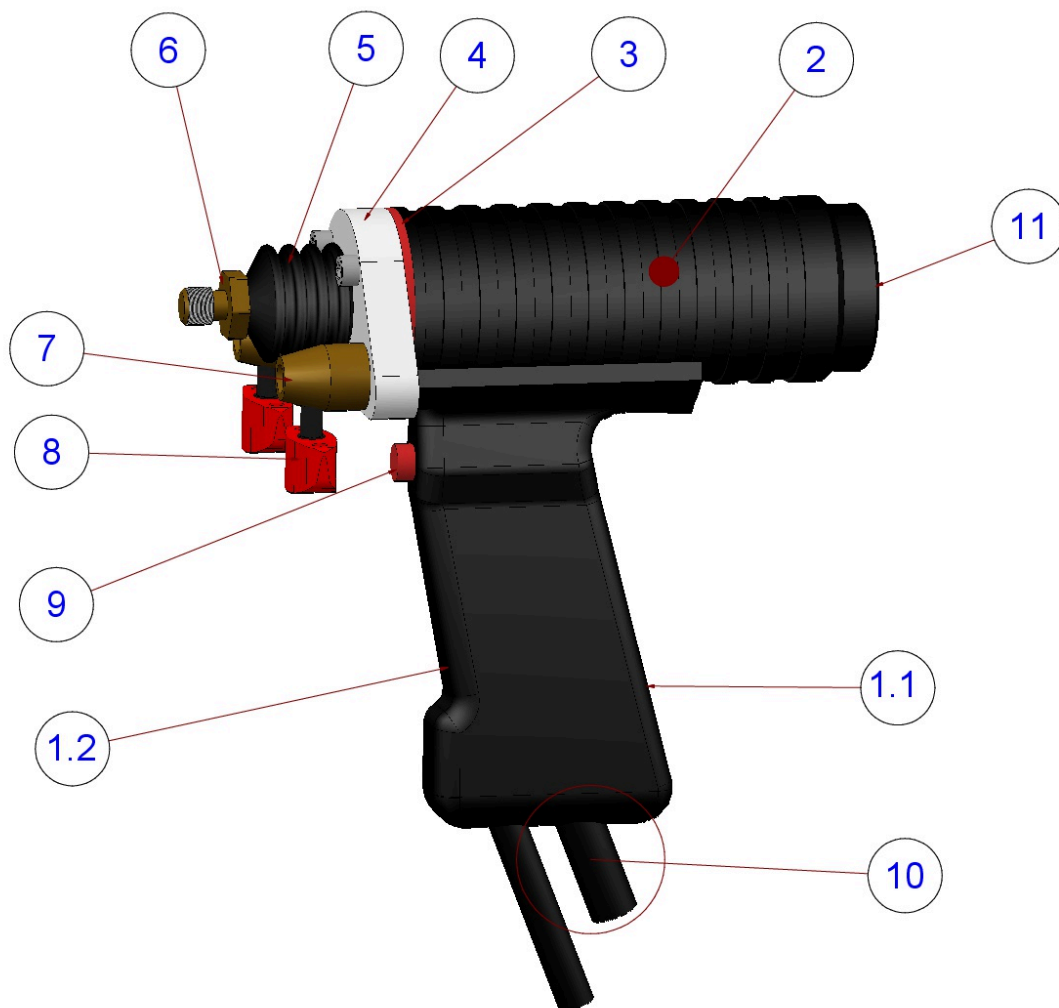
Wandsteckdose
wall socket



material: S235JR+A2K, S235JR+TZN, 1.4301, 1.4571

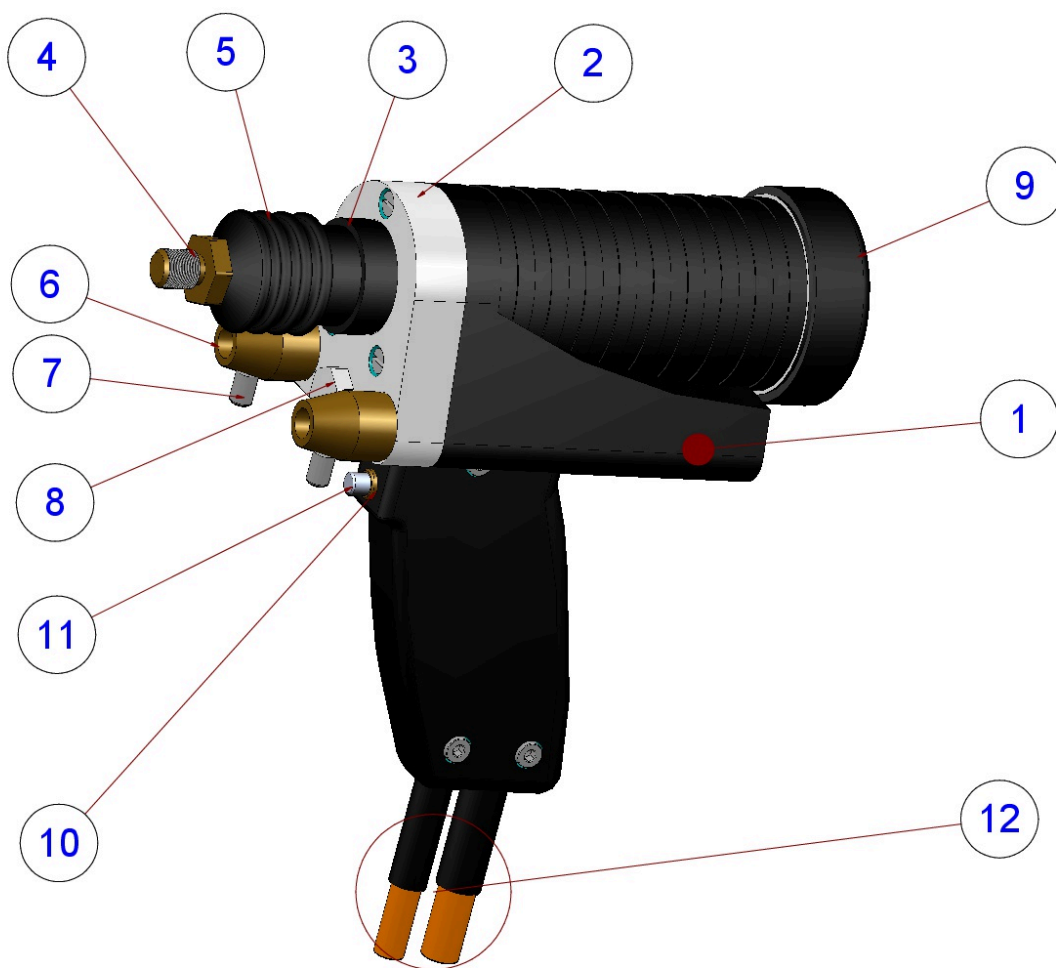
welding guns

welding gun type SK14 ISO



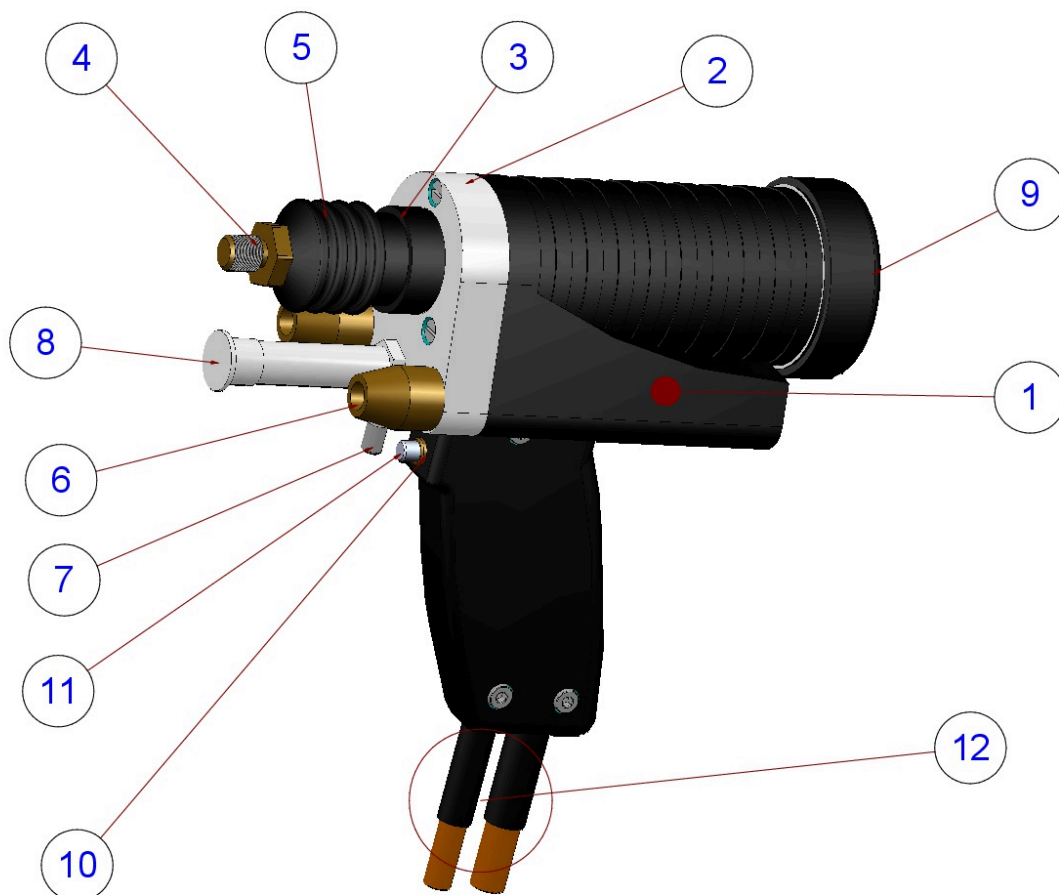
pos.	piece	description	part no.
1.1	1	grip plate, top	H35770
1.2	1	grip plate, bottom	H35769
2	1	casing	H35768
3	1	spacer ring	H35816
4	1	flange plate	H35817
5	1	bellow	H10911
6	1	adapter screw M10	H10896
7	2	guide bush	H35818
8	2	wing screw M6x10	H35906
9	1	push button	H35727
10	1	electric wire 5m	H35783
11	1	end cover	H35815

welding gun type K22



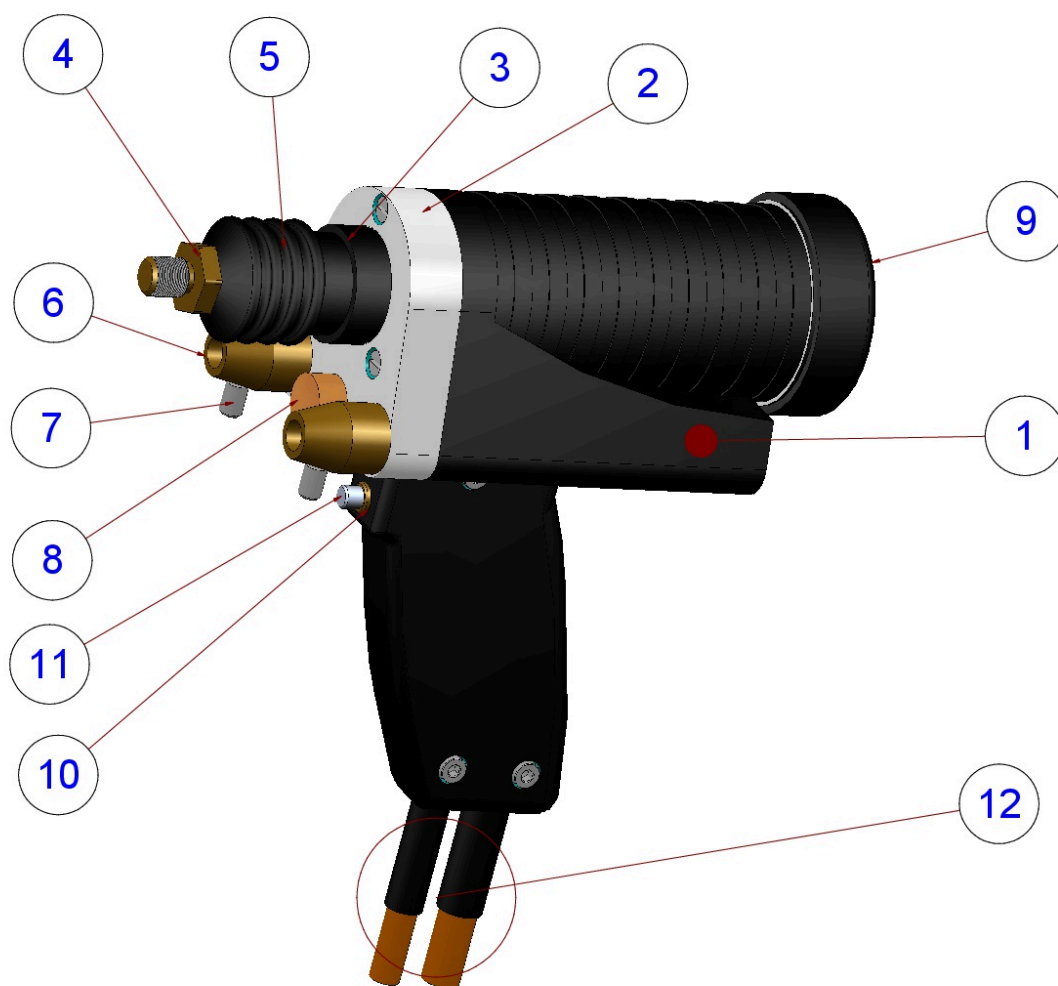
pos.	piece	description	part no.
1	1	casing	H35013
2	1	flange plate	H12002
3	1	piston cylinder	H35095
4	1	adapter screw M10	H10910
5	1	bellow	H10911
6	2	guid bushing	H11849
7	2	hexagon socket screw M6x8	H11356
8	1	locking screw	H14308
9	1	end cover	H11359
10	1	actuating bolt bearing	H11583
11	1	actuating bolt	H11582
12	1	electric wire 2m	H35425

welding gun type K22 D



pos.	piece	description	part no.
1	1	casing	H35013
2	1	flange plate	H12002
3	1	piston cylinder	H35095
4	1	adapter screw M10	H10910
5	1	bellow	H10911
6	2	guid bushing	H11849
7	2	hexagon socket screw M6x8	H11356
8	1	damper	H11992
9	1	end cover	H11359
10	1	actuating bolt bearing	H11583
11	1	actuating bolt	H11582
12	1	electric wire 2m	H35425

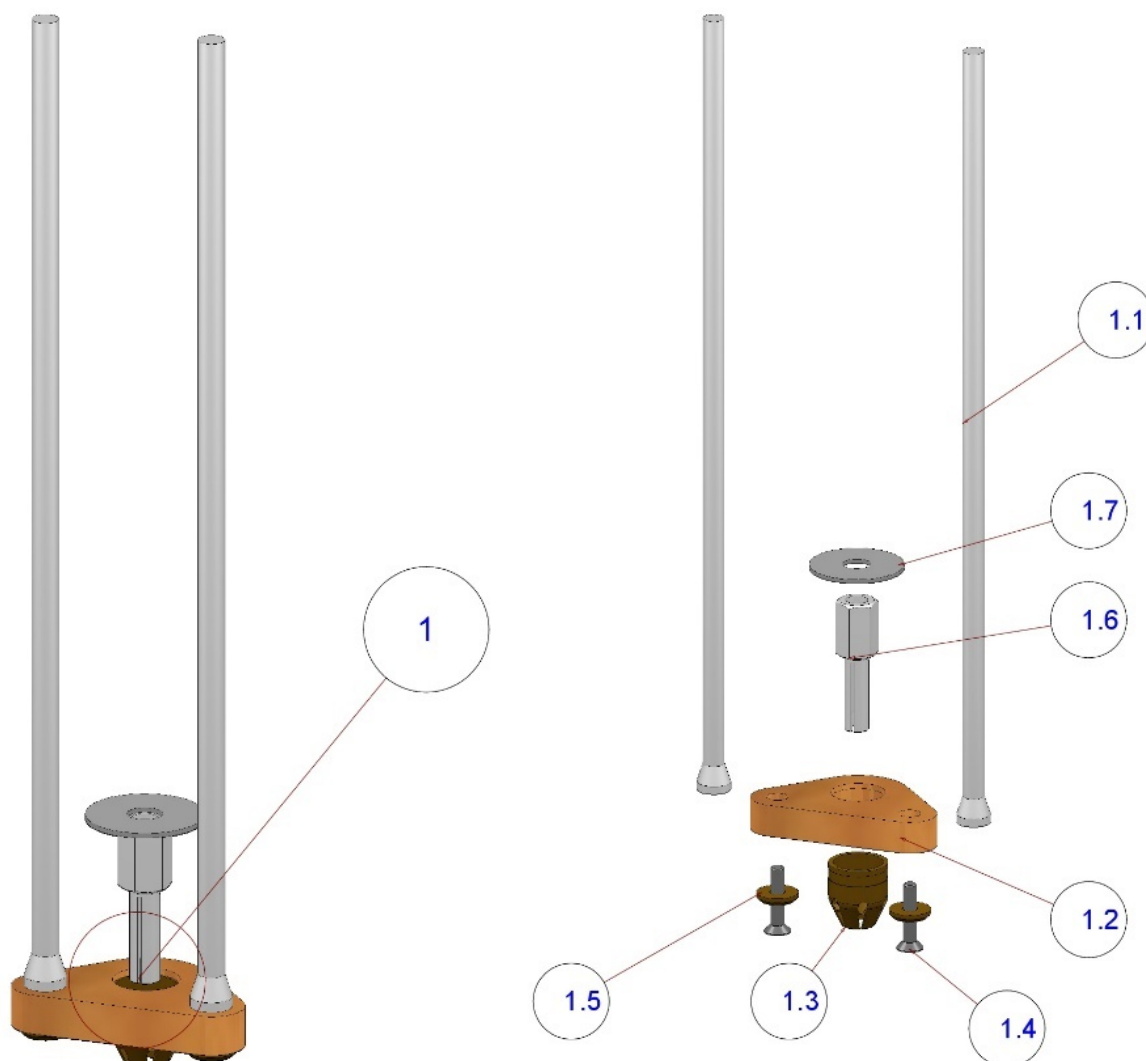
welding gun type K22 ALU



pos.	piece	description	part no.
1	1	casing	H35013
2	1	flange plate	H12002
3	1	piston cylinder	H35095
4	1	adapter screw M10	H10910
5	1	bellow	H10911
6	2	guid bushing	H11849
7	2	hexagon socket screw M6x8	H11356
8	1	Spring gate bush	H35235
9	1	end cover	H11359
10	1	actuating bolt bearing	H11583
11	1	actuating bolt	H11582
12	1	electric wire 2m	H35425

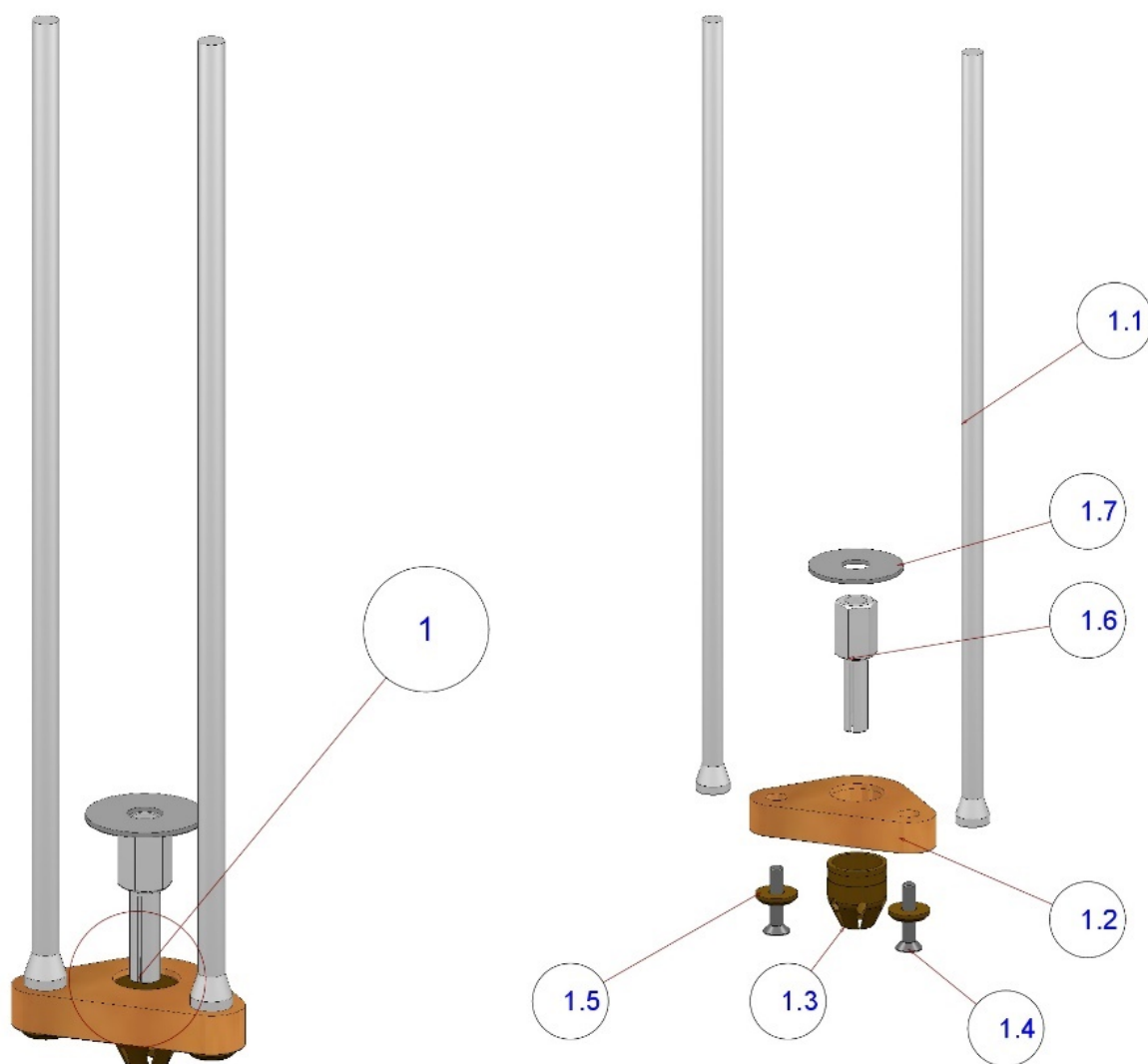
Wear parts

tool set for stud welding gun SK12/SK14/SK14 ISO to weld threaded studs M6 up to a length of 100mm



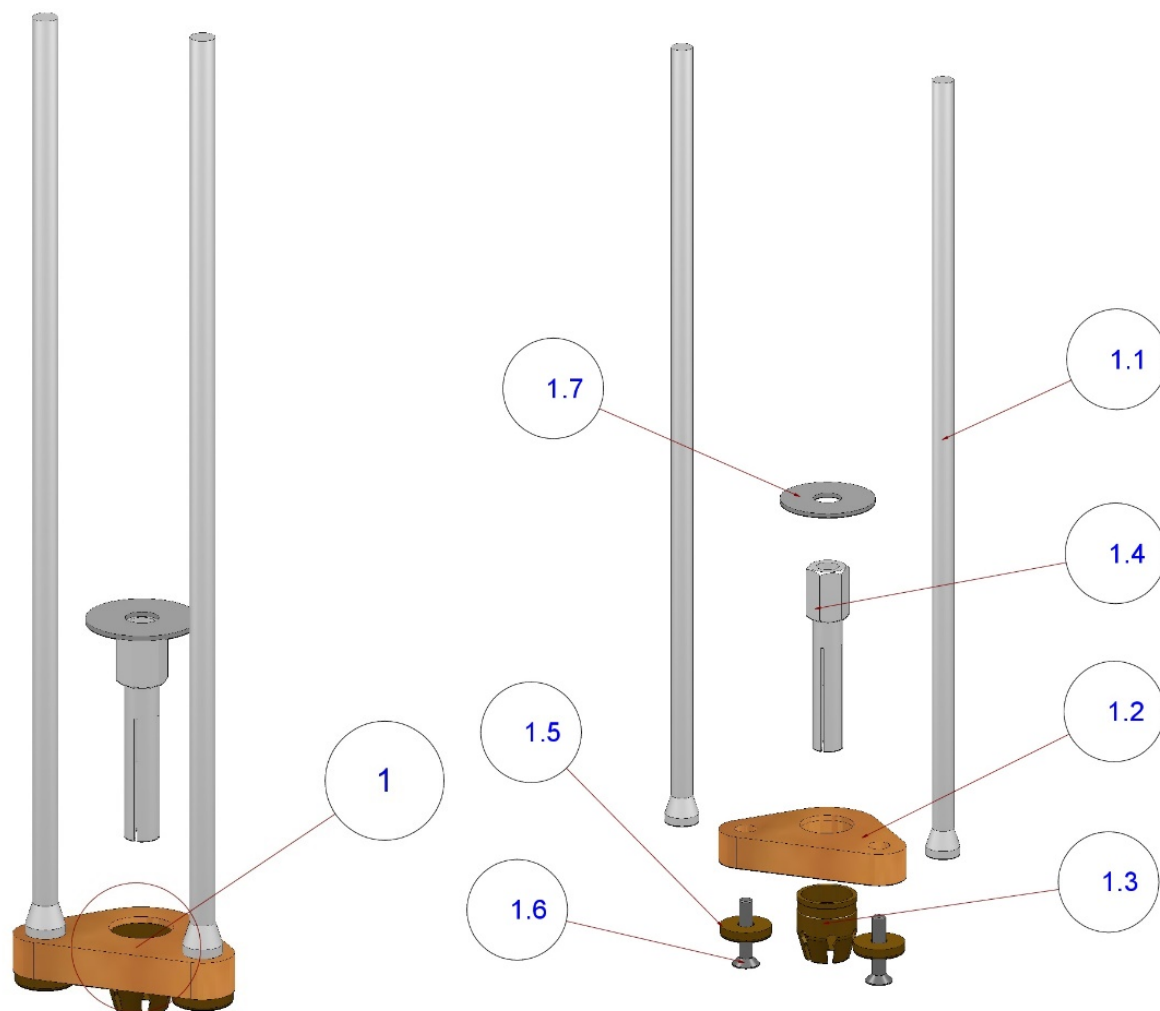
pos.	quantity	description	part no.	material
1	1	tool set (total)	H35590	
1.1	2	leg Ø8mmx300mm	H10954	S235JR A2K
1.2	1	footplate Ø22,2	H10876	HGW2082
1.3	1	ferrule grip KRH 5/6	H10667	CuZn31Si1
1.4	2	screw M5x25-DIN 7991	H10991	10.9
1.5	2	washer	H35203	CuZn31Si1
1.6	1	chuck M6x7x50	H10586	S235JR A2K
1.7	1	protection disc	H11441	S235JR A2K

tool set for stud welding gun SK12/SK14/SK14 ISO to weld threaded studs M8 up to a length of 100mm for type RD, FD and PD



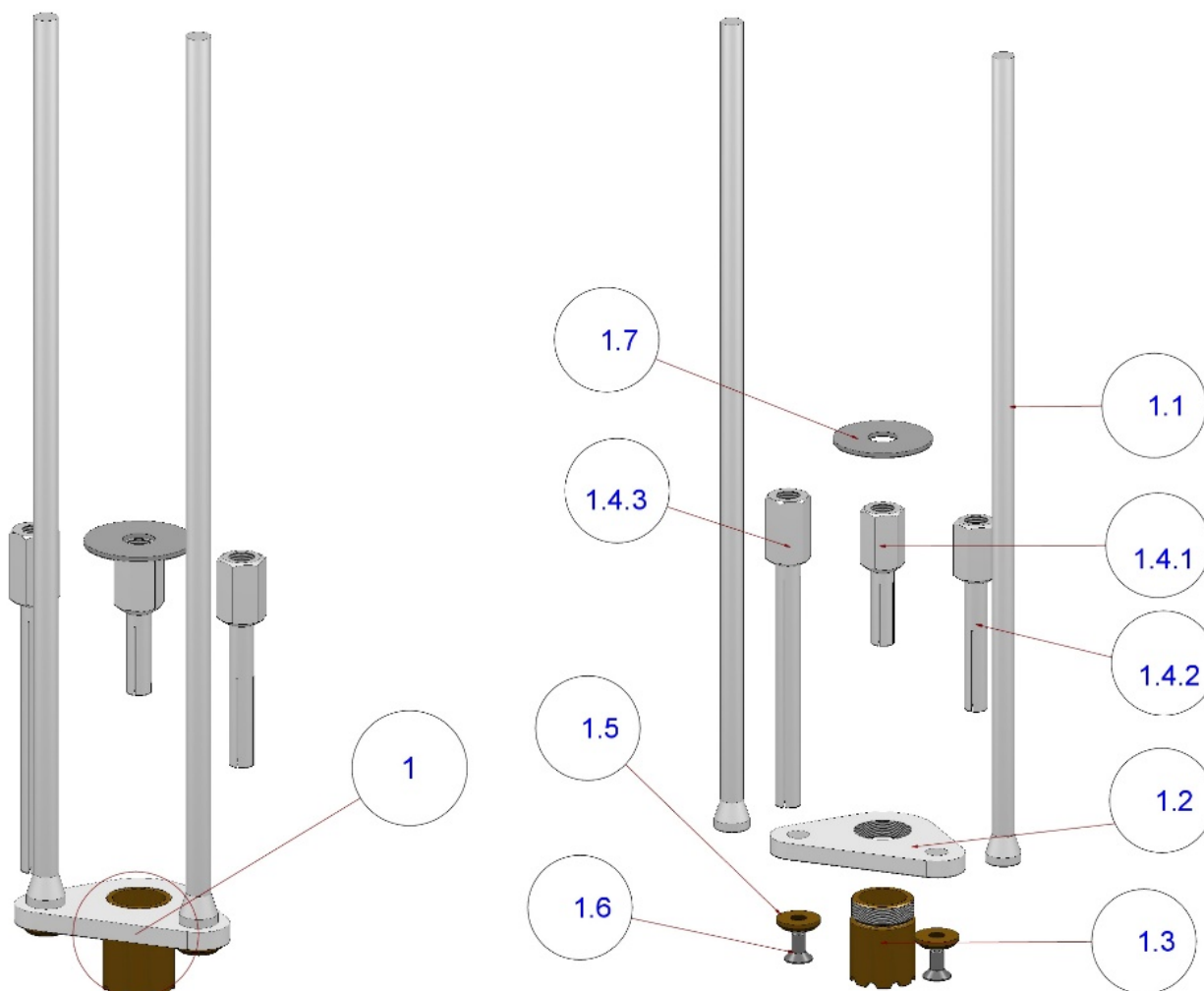
pos.	quantity	description	part no.	material
1	1	tool set (total)	H35591	
1.1	2	leg Ø8mmx300mm	H10954	S235JR A2K
1.2	1	foot plate Ø22,2	H10876	HGW2082
1.3	1	ferrule grip KRH 8	H10668	CuZn31Si1
1.4	2	screw M5x25-DIN 7991	H10991	10.9
1.5	2	washer	H35203	CuZn31Si1
1.6	1	chuck M8x9x50	H10588	S235JR A2K
1.7	1	protection disc	H11441	S235JR A2K

tool set for stud welding gun SK12/SK14/SK14 ISO to weld type UD 8mm



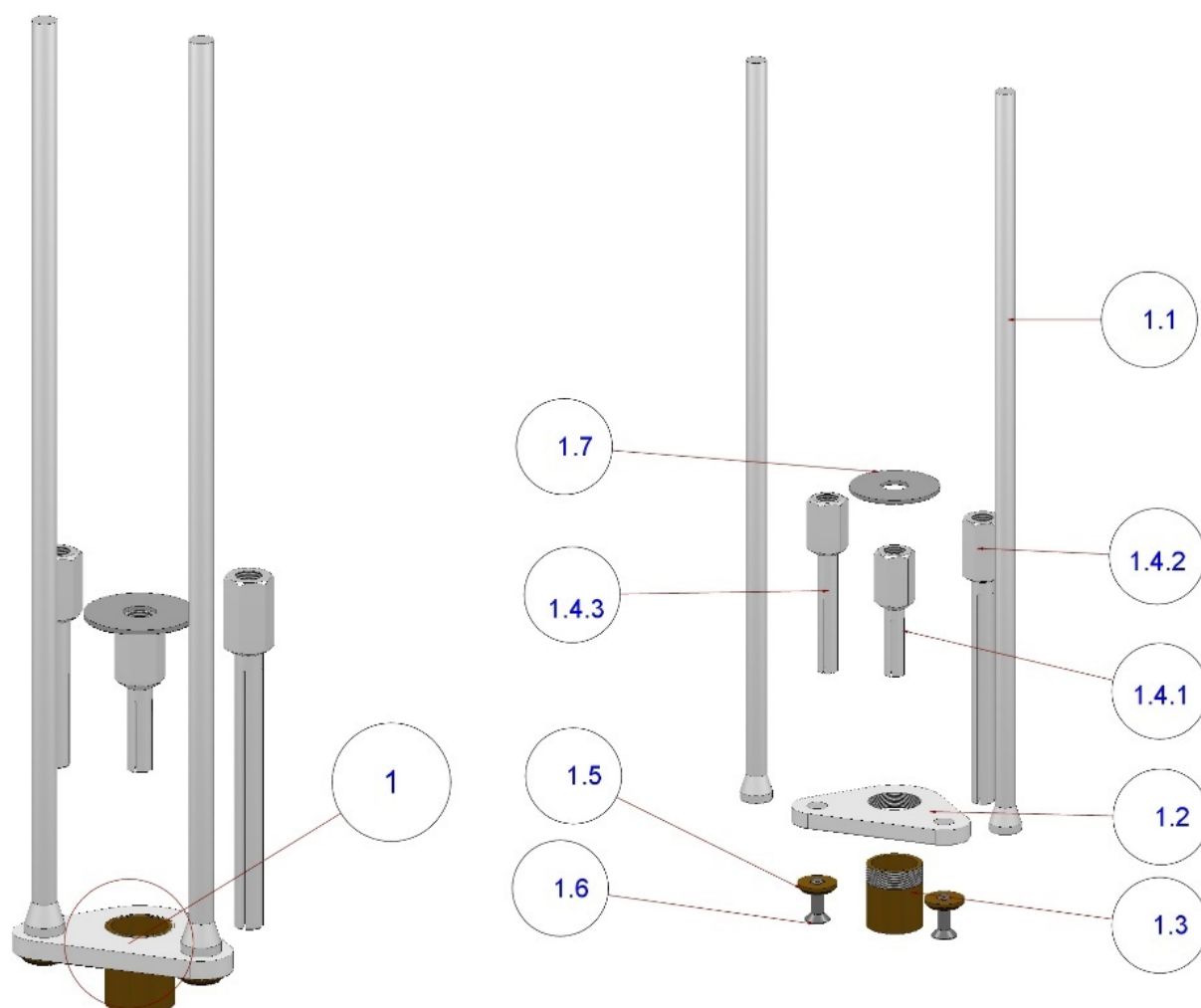
pos.	quantity	description	part no.	material
1	1	tool set (total)	H35598	
1.1	2	leg Ø8mmx300mm	H10954	S235JR A2K
1.2	1	foot plate Ø22,2	H10876	HGW2082
1.3	1	ferrule grip KRH8	H10668	CuZn31Si1
1.4	1	chuck M8x25x70	H35637	S235JR A2K
1.5	2	washer	H35203	CuZn31Si1
1.6	2	screw M5x25-DIN 7991	H10991	10.9
1.7	1	protection disc	H11441	S235JR A2K

tool set for stud welding gun SK12/SK14/SK14 ISO to weld bimetal pin VBS or insulation pin IS
 Ø3mm



pos.	quantity	description	part no.	material
1	1	tool set (total)	H35512	
1.1	2	leg Ø8mmx300mm	H10954	S235JR A2K
1.2	1	foot plate M22x1,5	H10862	ENAW-AlMg3-H111
1.3	1	copper pipe M22	H10439	CuZn31Si1
1.4.1	1	chuck 3x25x50	H10639	S235JR A2K
1.4.2	1	chuck 3x46x70	H10640	S235JR A2K
1.4.3	1	chuck 3x90x115	H10642	S235JR A2K
1.5	2	washer	H35203	CuZn31Si1
1.6	2	screw M5x16-DIN 7991	H00020	10.9
1.7	1	protection disc	H11441	S235JR A2K

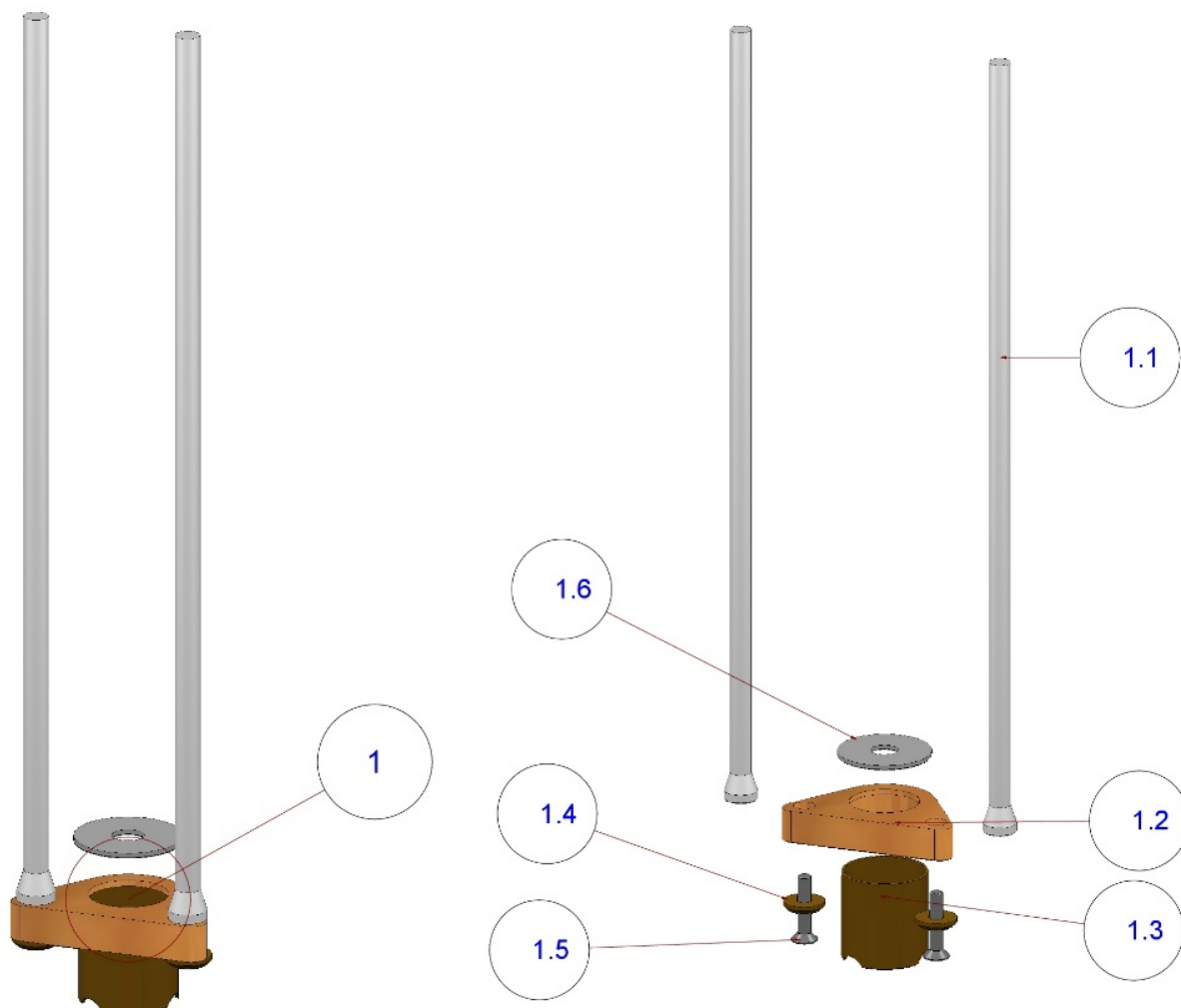
tool set for stud welding gun SK12/SK14/SK14 ISO to weld 3mm insulation pin with permanent ferrule



pos.	quantity	description	part no.	material
1	1	tool set (total)	H35511	
1.1	2	leg Ø8mmx300mm	H10954	S235JR A2K
1.2	1	foot plate M22x1,5	H10862	ENAW-AlMg3-H111
1.3	1	Ferrule grip KRHK 6	H10699	CuZn31Si1
1.4.1	1	chuck 3x25x50	H10639	S235JR A2K
1.4.2	1	chuck 3x46x70	H10640	S235JR A2K
1.4.3	1	chuck 3x90x115	H10642	S235JR A2K
1.5	2	washer	H35203	CuZn31Si1
1.6	2	screw M5x16-DIN 7991	H00020	10.9
1.7	1	protection disc	H11441	S235JR A2K

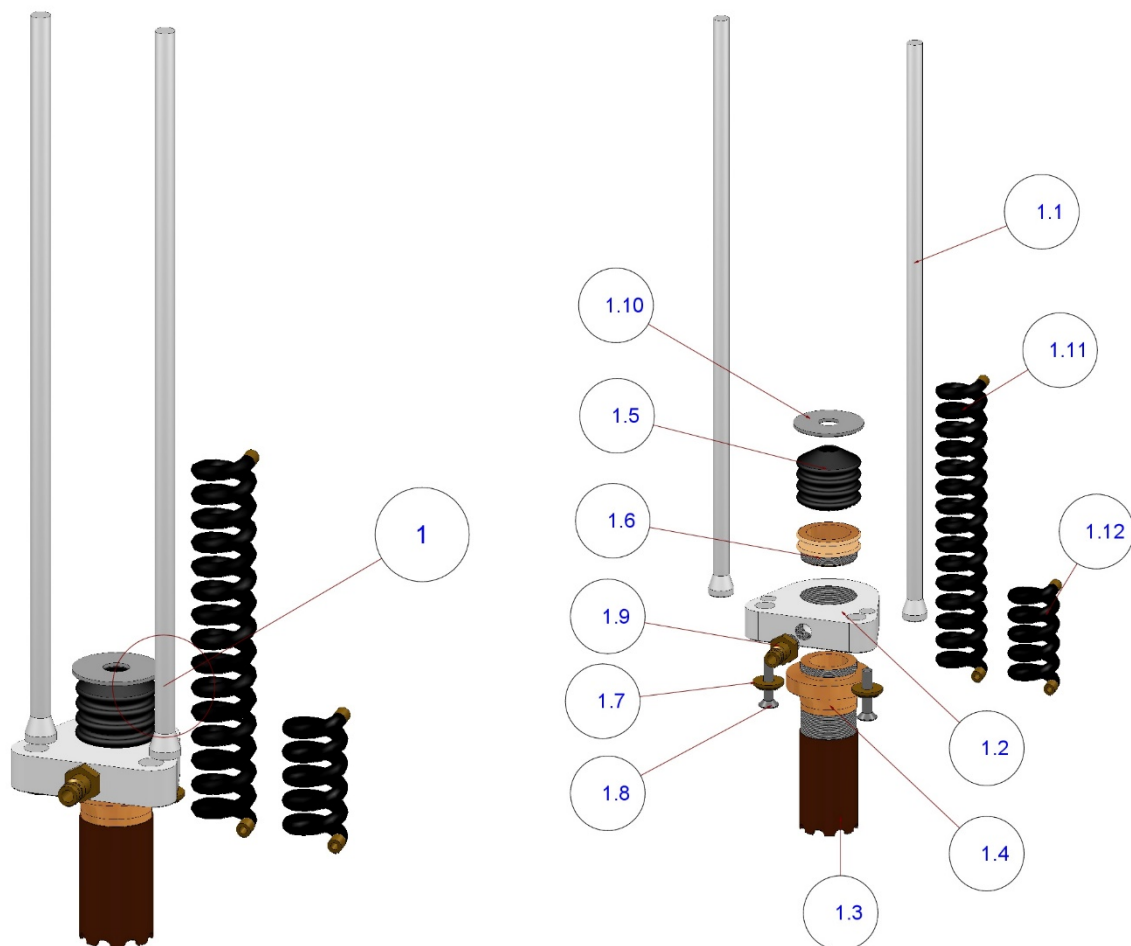
permanent ferrule consumption: 1 ferrule /100 pins

tool set for stud welding gun SK12/SK14/SK14 ISO to weld studs type PS without shield gas



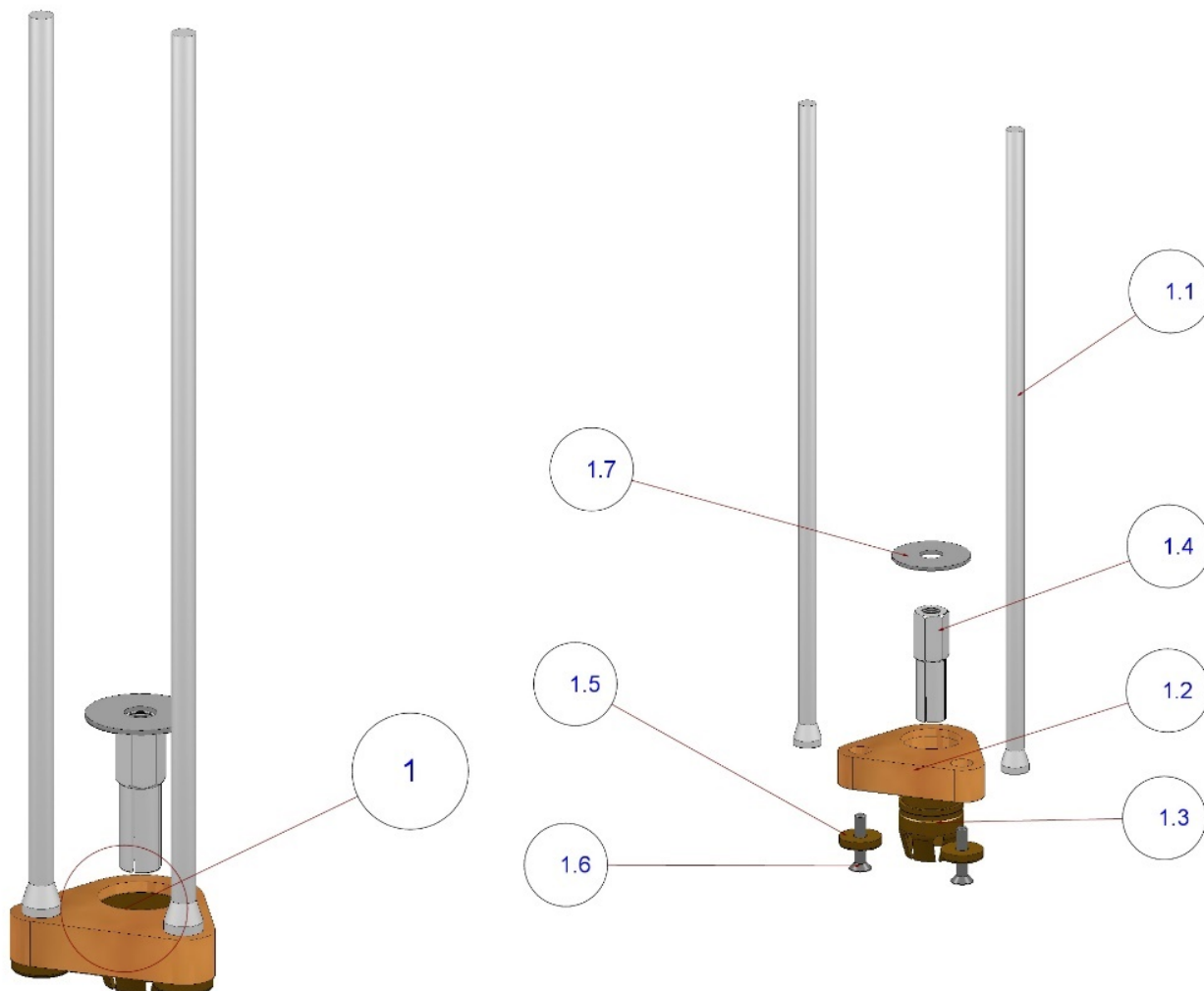
pos.	quantity	description	part no.	material
1	1	tool set (total)	H35966	
1.1	2	leg Ø8mmx300mm	H10954	S235JR A2K
1.2	1	foot plate Ø32	H10877	HGW2082
1.3	1	support tube Ø32	H14336	CuZn31Si1
1.4	2	washer	H35203	CuZn31Si1
1.5	2	screw M5x25-DIN 7991	H10991	10.9
1.6	1	protection disc	H11441	S235JR A2K

tool set for stud welding gun SK12/SK14/SK14 ISO to weld with shield gas



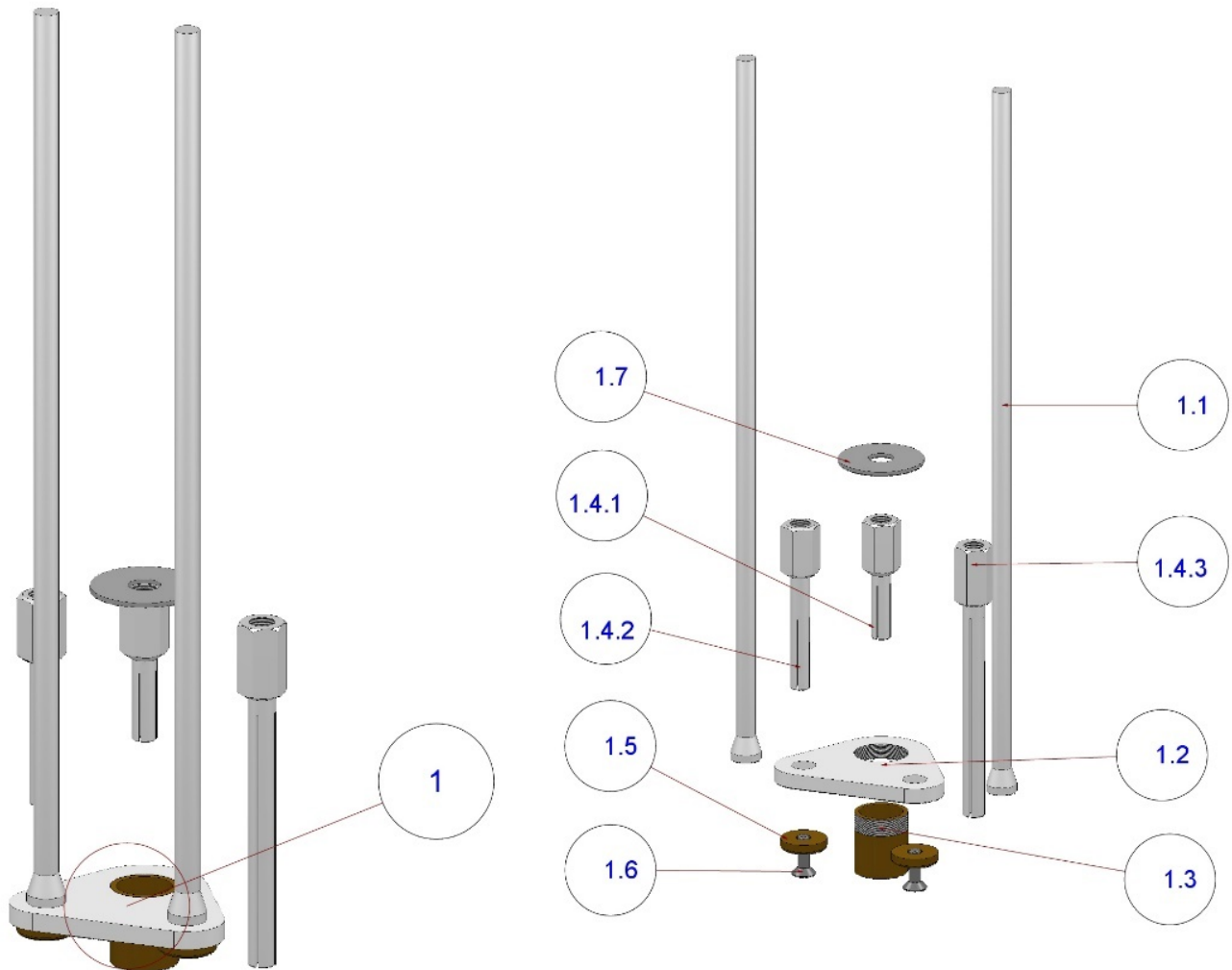
pos.	quantity	description	part no.	material
1	1	tool set (total)	H35565	
1.1	2	leg Ø8mmx300mm	H10954	S235JR A2K
1.2	1	shielding gas footplate M28	H11155	ENAW-ALMg3-H111
1.3	1	copper pipe M28	H11167	CuZn37Mn2Al2Si
1.4	1	shielding gas adapter M28	H11166	HGW2082
1.5	1	bellow	H10911	42 CR 764
1.6	1	shielding gas clamp ring	H11156	HGW2082
1.7	2	washer	H35203	CuZn31Si1
1.8	2	screw M5x25-DIN 7991	H10991	10.9
1.9	1	shielding gas plug male 1/8	H11158	CuZn31Si1
1.10	1	protection disc	H11441	S235JR A2K
1.11	1	tube 15m complete	H35514	
1.12	1	tube 3m complete	H35082	

tool set for stud welding gun K22 to weld anti-skid studs type AS



pos.	quantity	description	part no.	material
1		tool set (total)	H35519	
1.1	2	leg Ø8mmx300mm	H10954	S235JR A2K
1.2	1	foot plate Ø29	H10726	HGW2082
1.3	1	ferrule grip KRH16	H10672	CuZn31Si1
1.4	1	chuck M10x11x50	H10590	S235JR A2K
1.5	2	washer	H10745	CuZn31Si1
1.6	2	screw M5x25-DIN 7991	H10991	10.9
1.7	1	protection disc	H11441	S235JR A2K

tool set for stud welding gun K22 to weld 3mm insulation pins

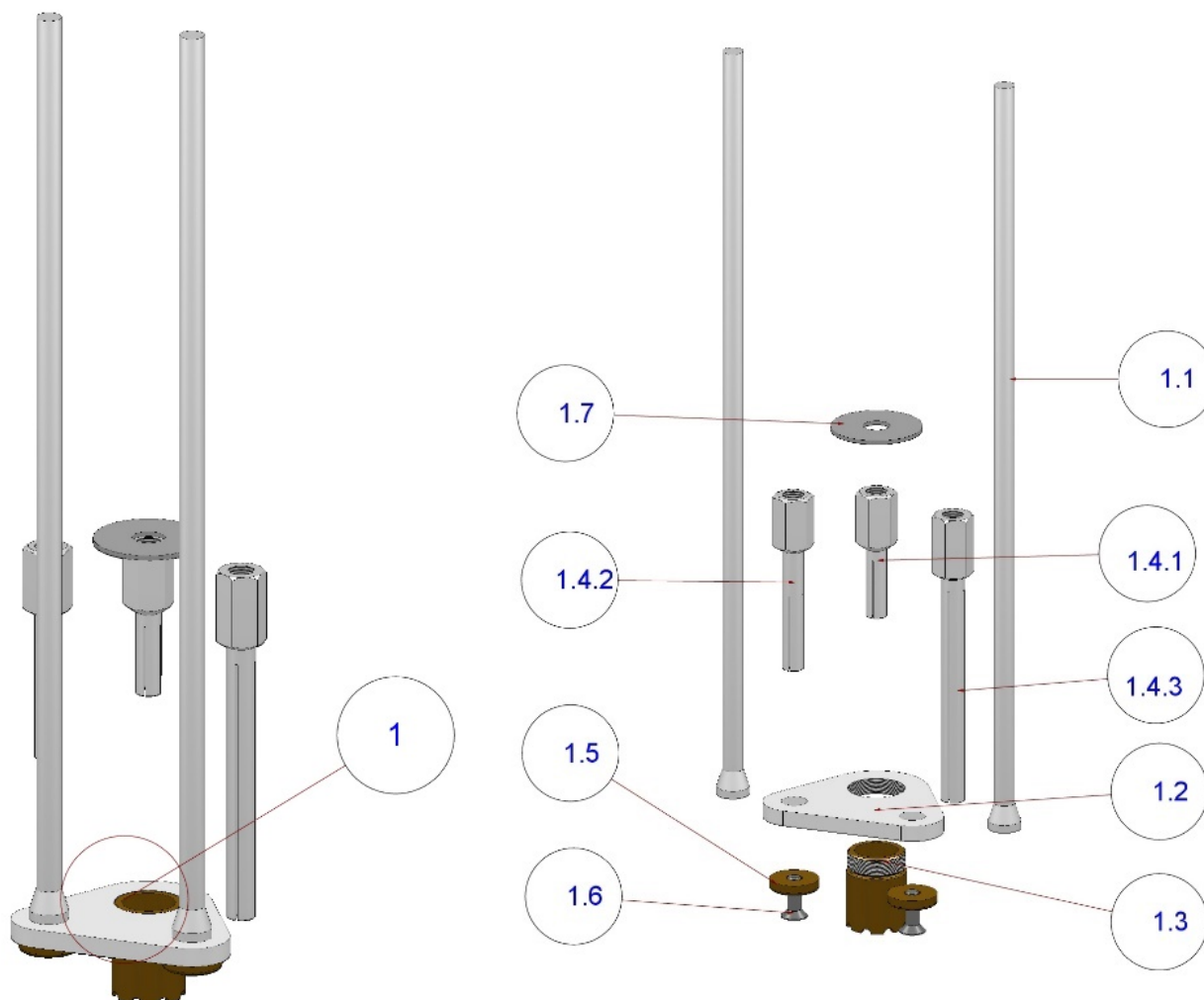


pos.	quantity	description	part no.	material
1	1	tool set (total)	H35659	
1.1	2	leg Ø8mmx300mm	H10954	S235JR A2K
1.2	1	foot plate M22x1,5	H10863	ENAW-AlMg3-H111
1.3	1	ferrule grip KRH K6	H10699	CuZn31Si1
1.4.1	1	chuck 3x25x50	H10639	S235JR A2K
1.4.2	1	chuck 3x46x70	H10640	S235JR A2K
1.4.3	1	chuck 3x90x115	H10642	S235JR A2K
1.5	2	washer	H35203	CuZn31Si1
1.6	2	screw M5x16-DIN 7991	H00020	10.9
1.7	1	protection disc	H11441	S235JR A2K

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tool set for stud welding gun K22 to weld VBS and IS 3mm (without shield gas)



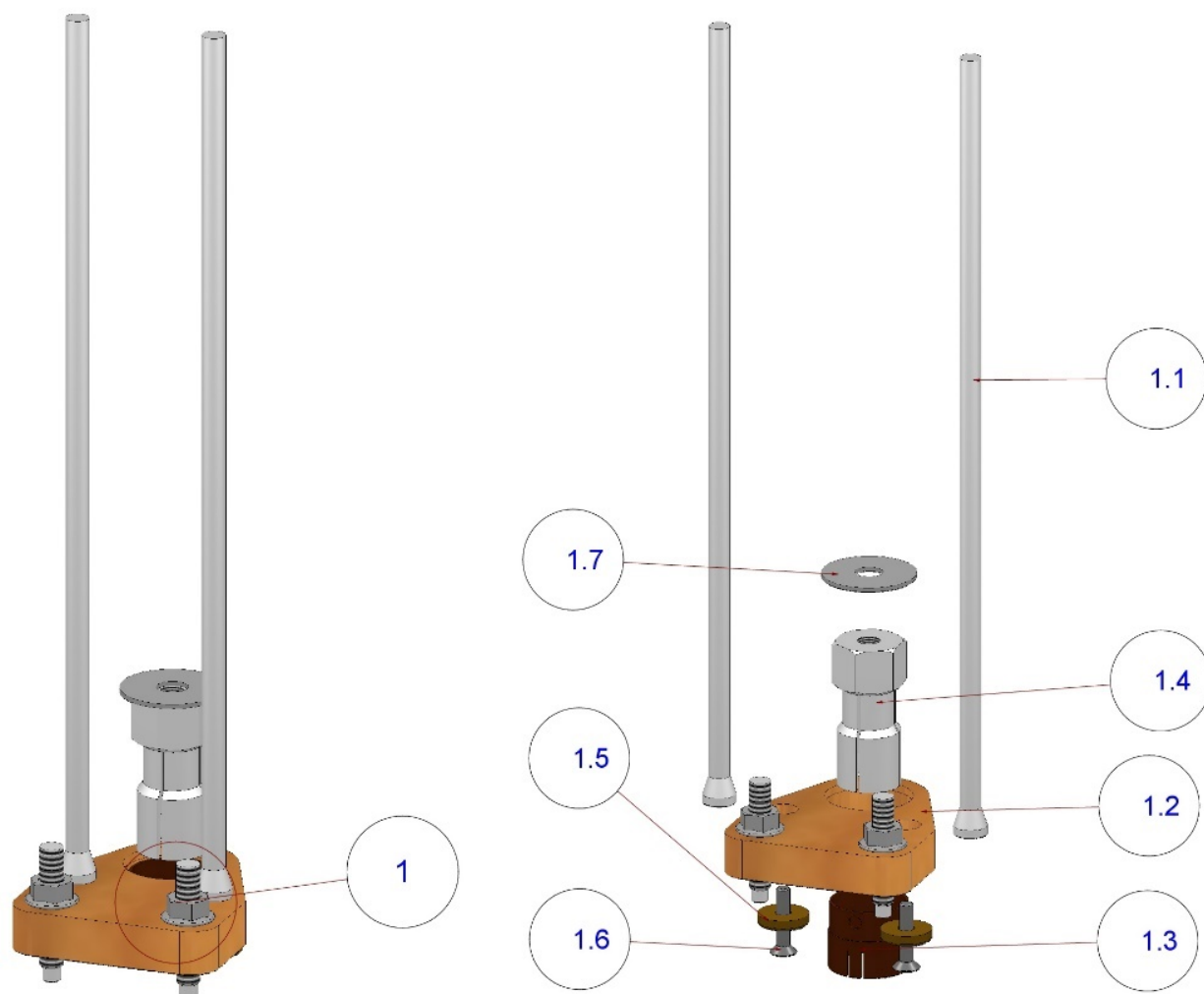
pos.	quantity	description	part no.	material
1	1	tool set (total)	H35630	
1.1	2	leg Ø8mmx300mm	H10954	S235JR A2K
1.2	1	foot plate M22x1,5	H10863	ENAW-AlMg3-H111
1.3	1	copper pipe M22	H10439	CuZn31Si1
1.4.1	1	chuck 3x25x50	H10639	S235JR A2K
1.4.2	1	chuck 3x46x70	H10640	S235JR A2K
1.4.3	1	chuck 3x90x115	H10642	S235JR A2K
1.5	2	washer	H35203	CuZn31Si1
1.6	2	screw M5x16-DIN 7991	H00020	10.9
1.7	1	protection disc	H11441	S235JR A2K

Permanent ferrule consumption: 1 ferrule/100 pins

K2024-78-E

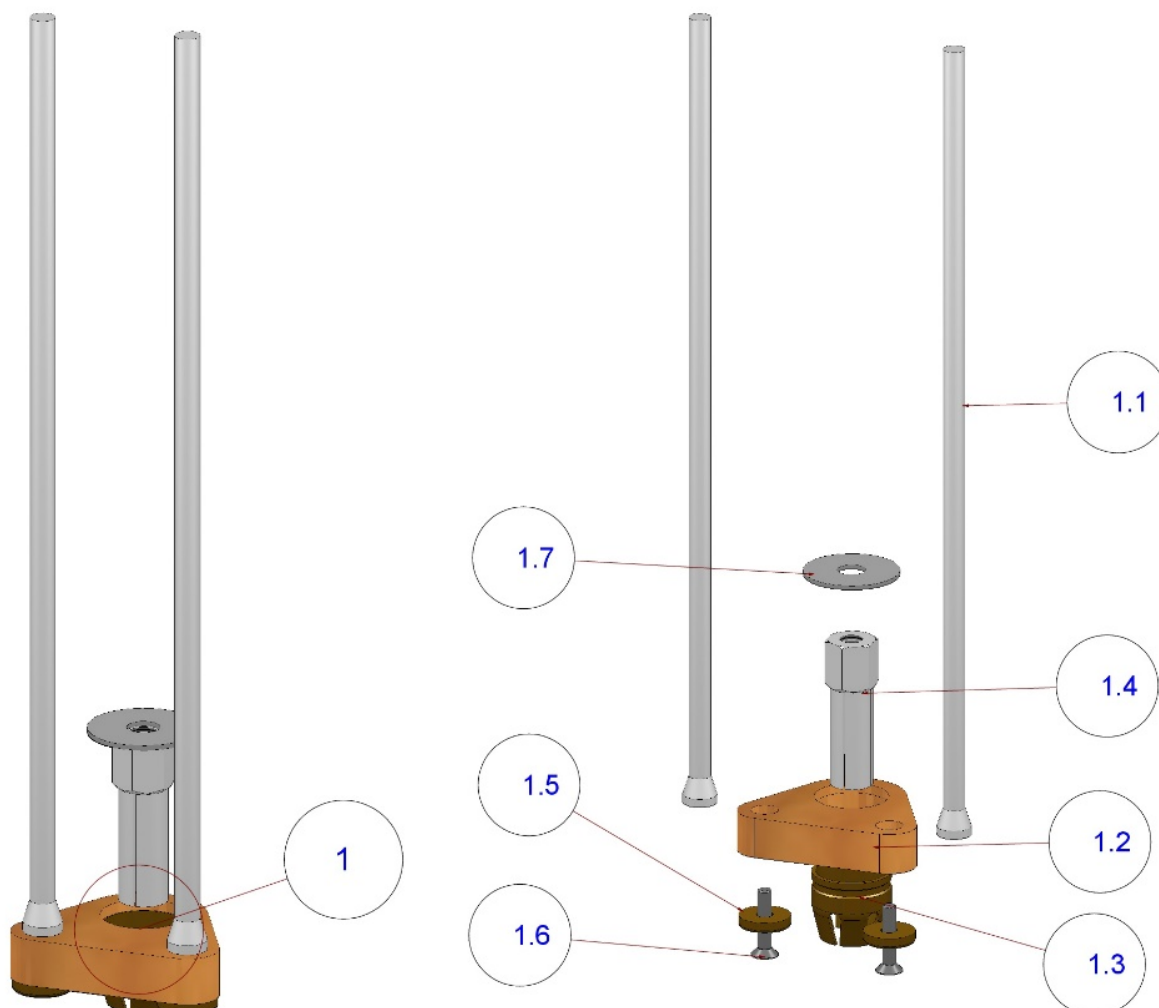
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tool set for stud welding gun K24 to weld threaded studs M20 on to manhole rings



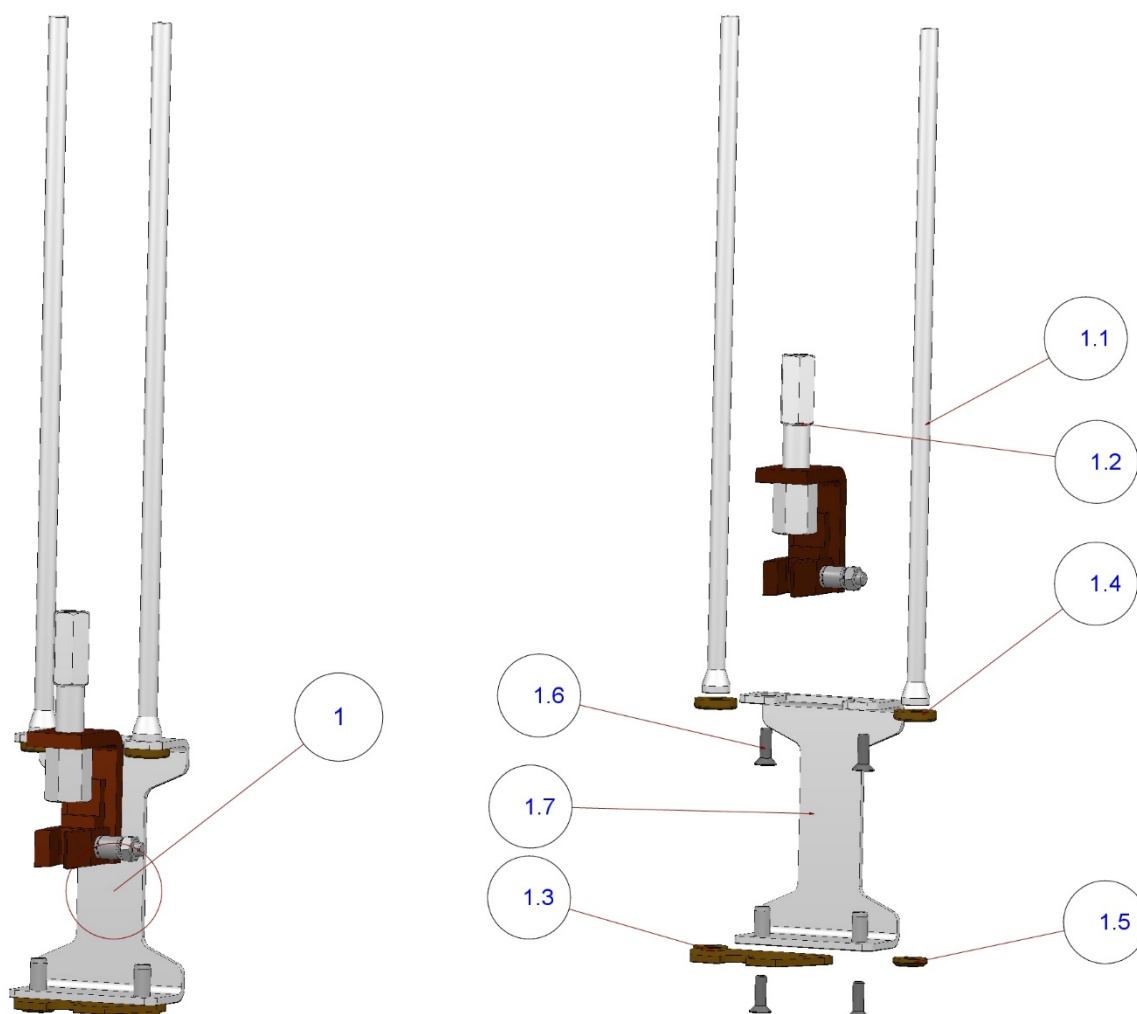
pos.	quantity	description	part no.	material
1	1	tool set (total)	H35570	
1.1	2	leg Ø8mmx300mm	H10954	S235JR A2K
1.2	1	foot plate (three-legged) 29mm	H10870	HGW2082
1.3	1	ferrule grip KRH 20	H11259	CuZn37Mn2Al2Si
1.4	1	chuck M20x15x55	H10601	S235JR A2K
1.5	2	washer	H10745	CuZn31Si1
1.6	2	screw M5x25-DIN 7991	H10991	10.9
1.7	1	protection disc	H11441	S235JR A2K

tool set for stud welding gun K22/K22-D to weld studs M12 type RD (DIN32500 T6) and type MD up to length L=100mm



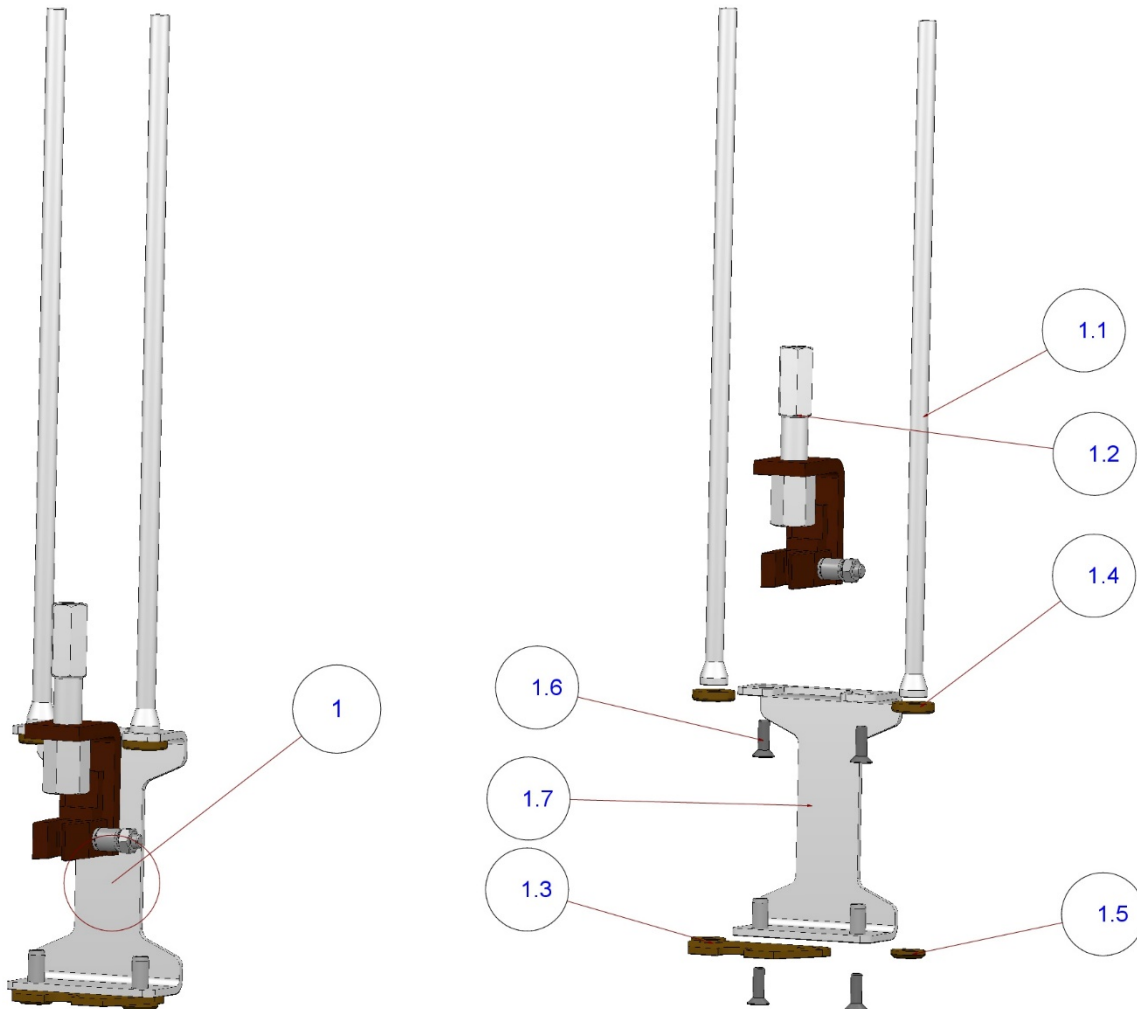
pos.	quantity	description	part no.	material
1		tool set (total)	H35552	
1.1	2	leg Ø8mmx300mm	H10954	S235JR A2K
1.2	1	foot plate 29mm	H10726	HGW2082
1.3	1	ferrule grip KRH16	H10672	CuZn31Si1
1.4	1	chuck M12x13x55	H10592	S235JR A2K
1.5	2	washer	H10745	CuZn31Si1
1.6	2	screw M5x25-DIN 7991	H10991	10.9
1.7	1	protection disc	H11441	S235JR A2K

tool set for stud welding gun K22 to weld flat bar type HFS and ground plate type HNA with studs Ø10x40 up to Ø10x80



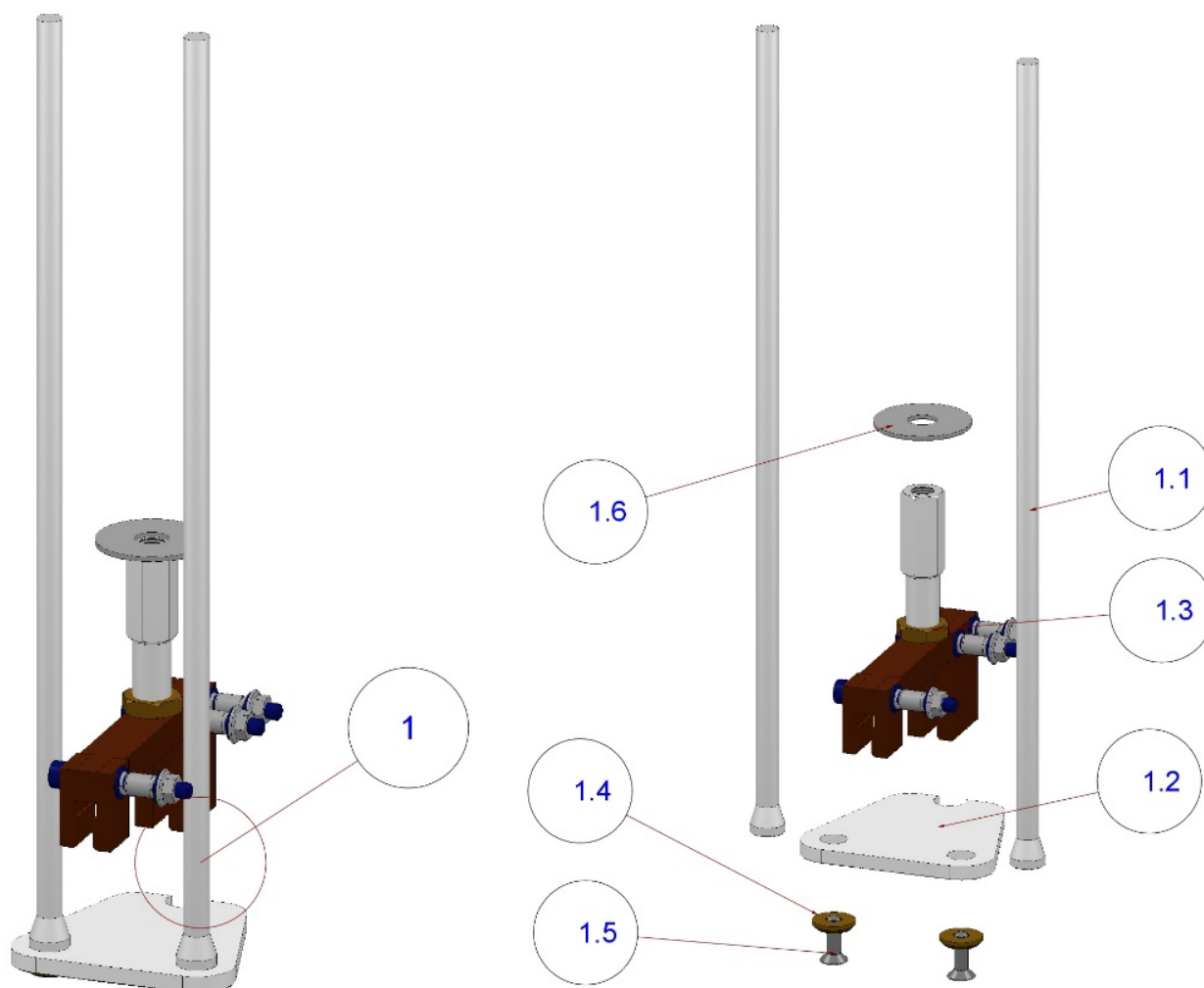
pos.	quantity	description	part no.	material
1	1	tool set (total)	H35811	
1.1	2	leg Ø8mmx300mm	H10954	S235JR A2K
1.2	1	chuck HFS	H11529	
1.3	1	foot plate SSP10 open	H10703	CuZn31Si1
1.4	2	washer	H10745	CuZn31Si1
1.5	2	washer	H36070	
1.6	4	screw M5x16-DIN 7991	H00020	10.9
1.7	1	distance piece 40-80	H75241	S235JR A2K

tool set for stud welding gun K22 to weld flat bar type HFS and ground plate type HNA with studs Ø10x100 up to Ø10x120



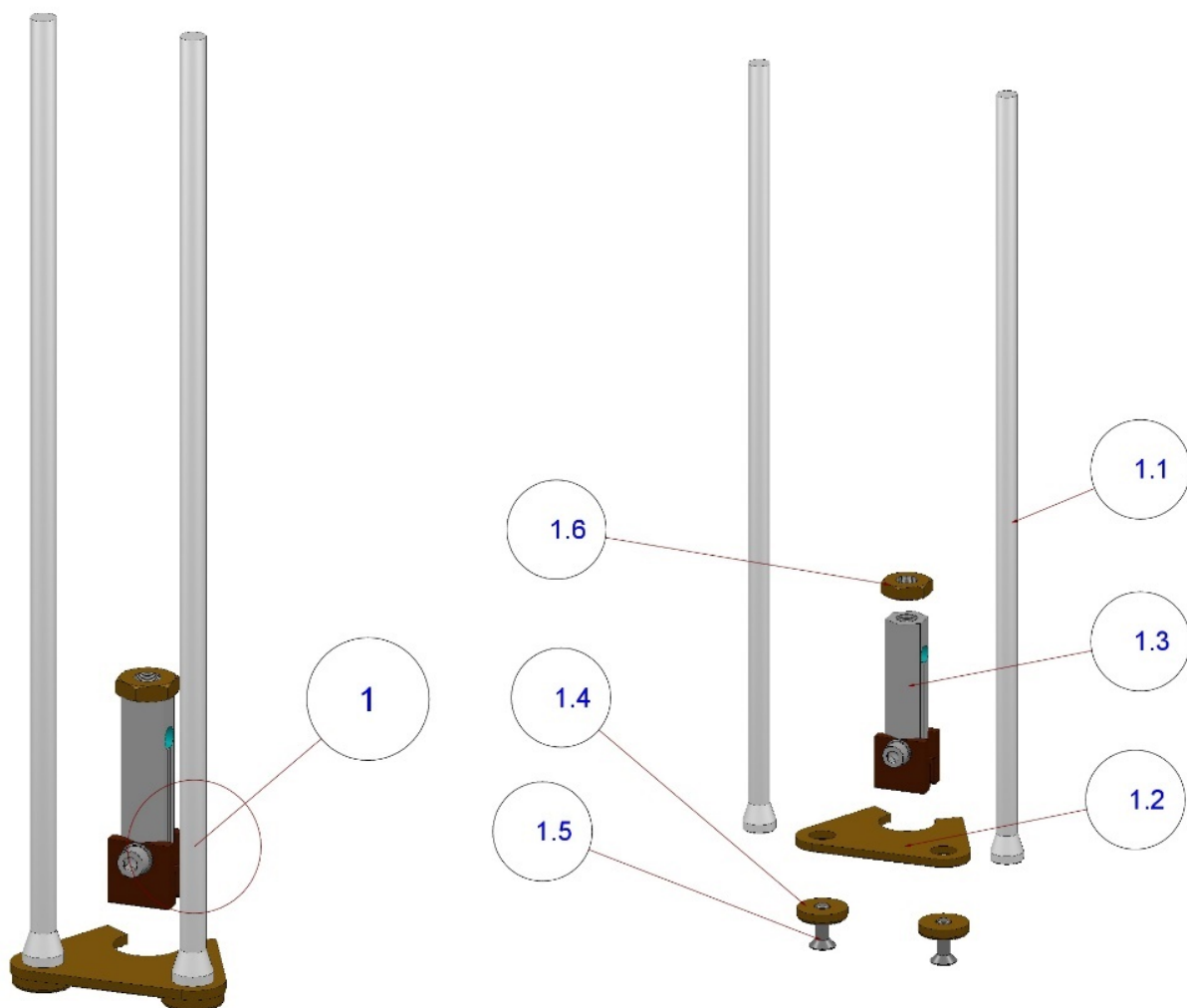
pos.	quantity	description	part no.	material
1	1	tool set (total)	H35812	
1.1	2	leg Ø8mmx300mm	H10954	S235JR A2K
1.2	1	chuck HFS	H11529	
1.3	1	foot plate SSP10 open	H10703	CuZn31Si1
1.4	2	washer	H10745	CuZn31Si1
1.5	2	washer	H36070	
1.6	4	screw M5x16-DIN 7991	H00020	10.9
1.7	1	distance piece 100-120	H75242	S235JR A2K

tool set for stud welding gun K22 to weld elbow-threaded studs type WB8



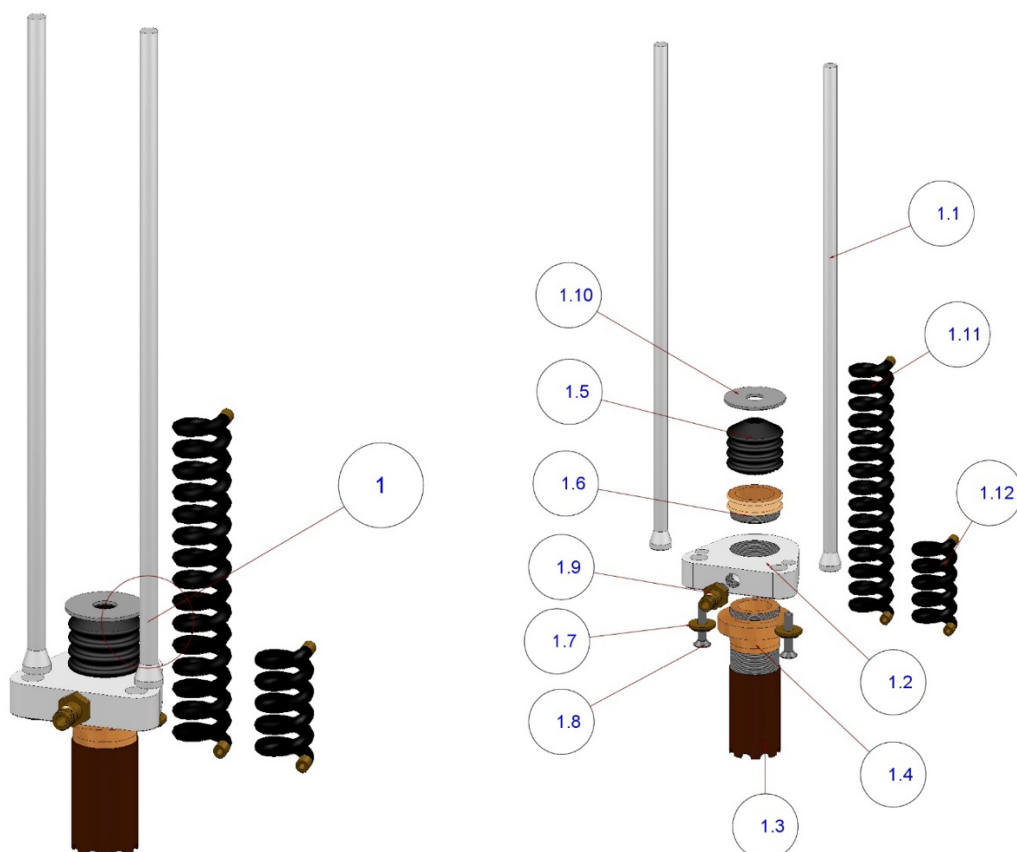
pos.	quantity	description	part no.	material
1	1	tool set (total)	H35825	
1.1	2	leg Ø8mmx300mm	H10954	S235JR A2K
1.2	1	Foot plate	H35728	ENAW-AlMg3-H111
1.3	1	chuck	H35729	
1.4	2	washer	H35203	CuZn31Si1
1.5	2	screw M5x16-DIN 7991	H00020	10.9
1.6	1	protection disc	H11441	S235JR A2K

tool set for stud welding gun K22/K22D to weld cable hanger type HDO/HDS
 up to length $l = 150\text{mm}$



pos.	quantity	description	part no.	material
1	1	tool set (total)	H35525	
1.1	2	leg $\varnothing 8\text{mm} \times 300\text{mm}$	H10954	S235JR A2K
1.2	1	foot plate	H10705	CuZn31Si1
1.3	1	chuck	H11804	
1.4	2	washer	H10745	CuZn31Si1
1.5	2	screw M5x16-DIN 7991	H00020	10.9
1.6	1	lock nut	H10975	CuZn31Si1

tool set for stud welding gun K22/K24/K22 to weld using shield gas

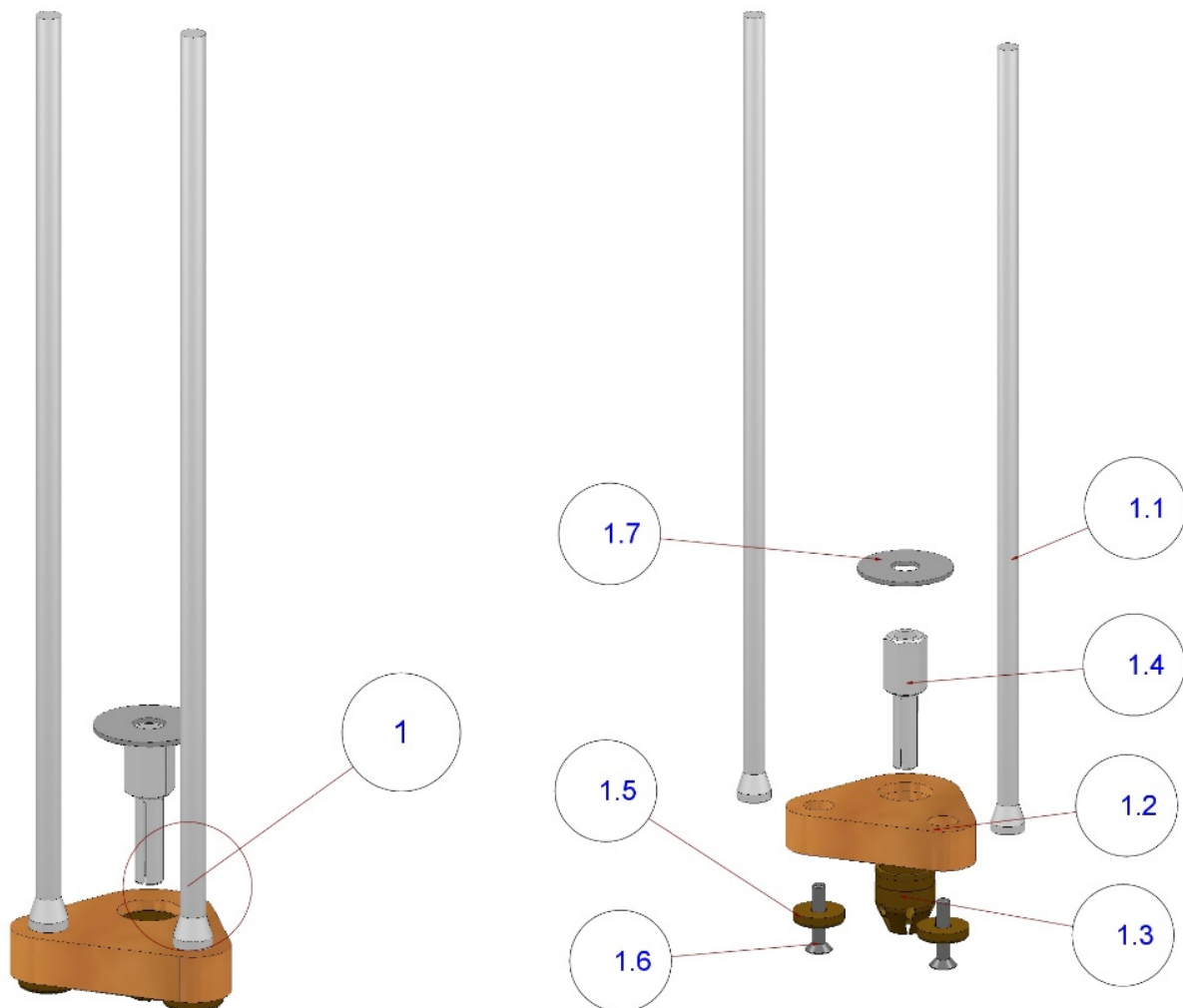


pos.	quantity	description	part no.	material
1	1	tool set (total)	H11727	
1.1	2	leg Ø8mmx300mm	H10954	S235JR A2K
1.2	1	shielding gas foot plate M28	H11155	ENAW-ALMg3-H111
1.3	1	copper pipe M28	H11167	CuZn37Mn2Al2Si
1.4	1	shielding gas adapter	H11166	HGW2082
1.5	1	bellow	H10911	42 CR 764
1.6	1	shielding gas clamp ring	H11156	HGW2082
1.7	2	washer	H10745	CuZn31Si1
1.8	2	screw M5x25-DIN 7991	H10991	10.9
1.9	1	shielding gas plug male 1/8	H11158	CuZn31Si1
1.10	1	protection disc	H11441	S235JR A2K
1.11	1	tube 12m complete	H13812	
1.12	1	tube 3m complete	H35082	

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tool set for stud welding gun K22/K22D to weld threaded studs M6 DIN 13918 up to length L=100 mm
 for stud types: RD, FD and PD

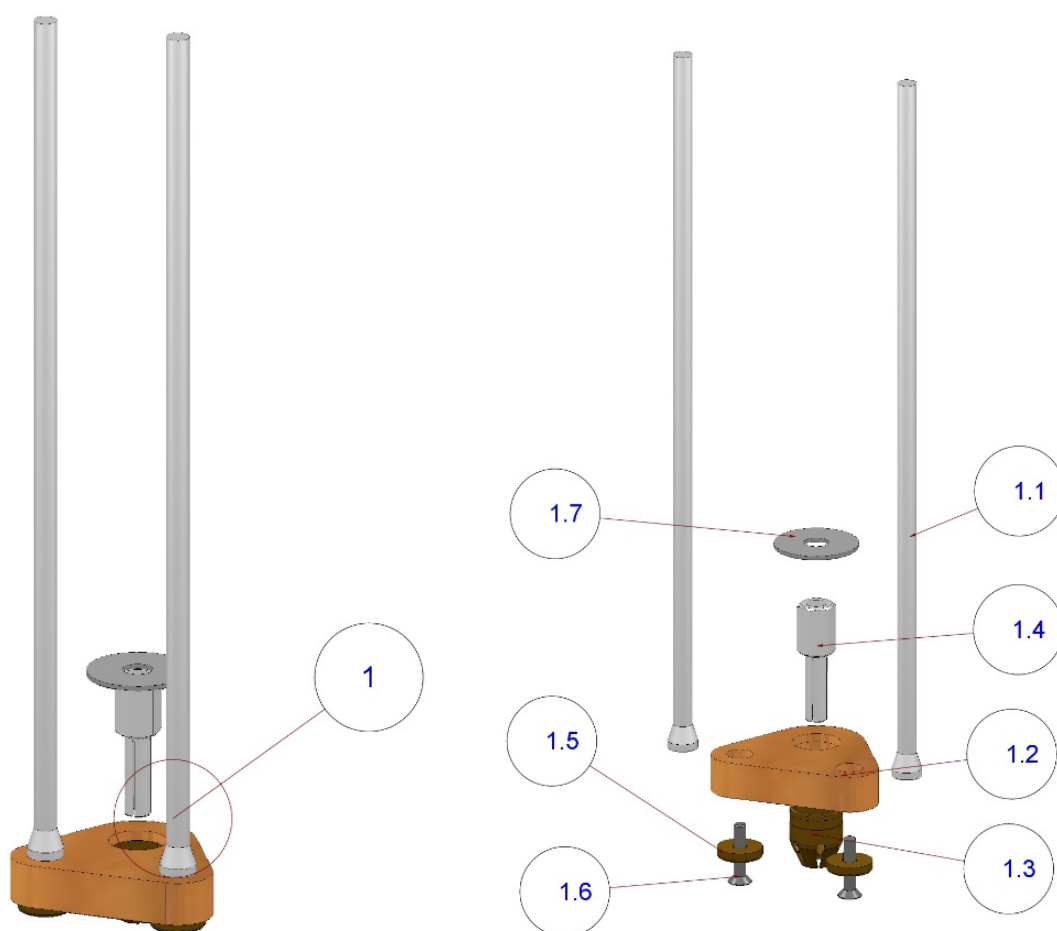


pos.	quantity	description	part no.	material
1	1	tool set (total)	H35504	
1.1	2	leg Ø8mmx300mm	H10954	S235JR A2K
1.2	1	foot plate 22,2mm	H10723	HGW2082
1.3	1	ferrule grip KRH 5/6	H10667	CuZn31Si1
1.4	1	chuck M6x7x50	H10586	S235JR A2K
1.5	2	washer	H10745	CuZn31Si1
1.6	2	screw M5x25-DIN 7991	H10991	10.9
1.7	1	protection disc	H11441	S235JR A2K

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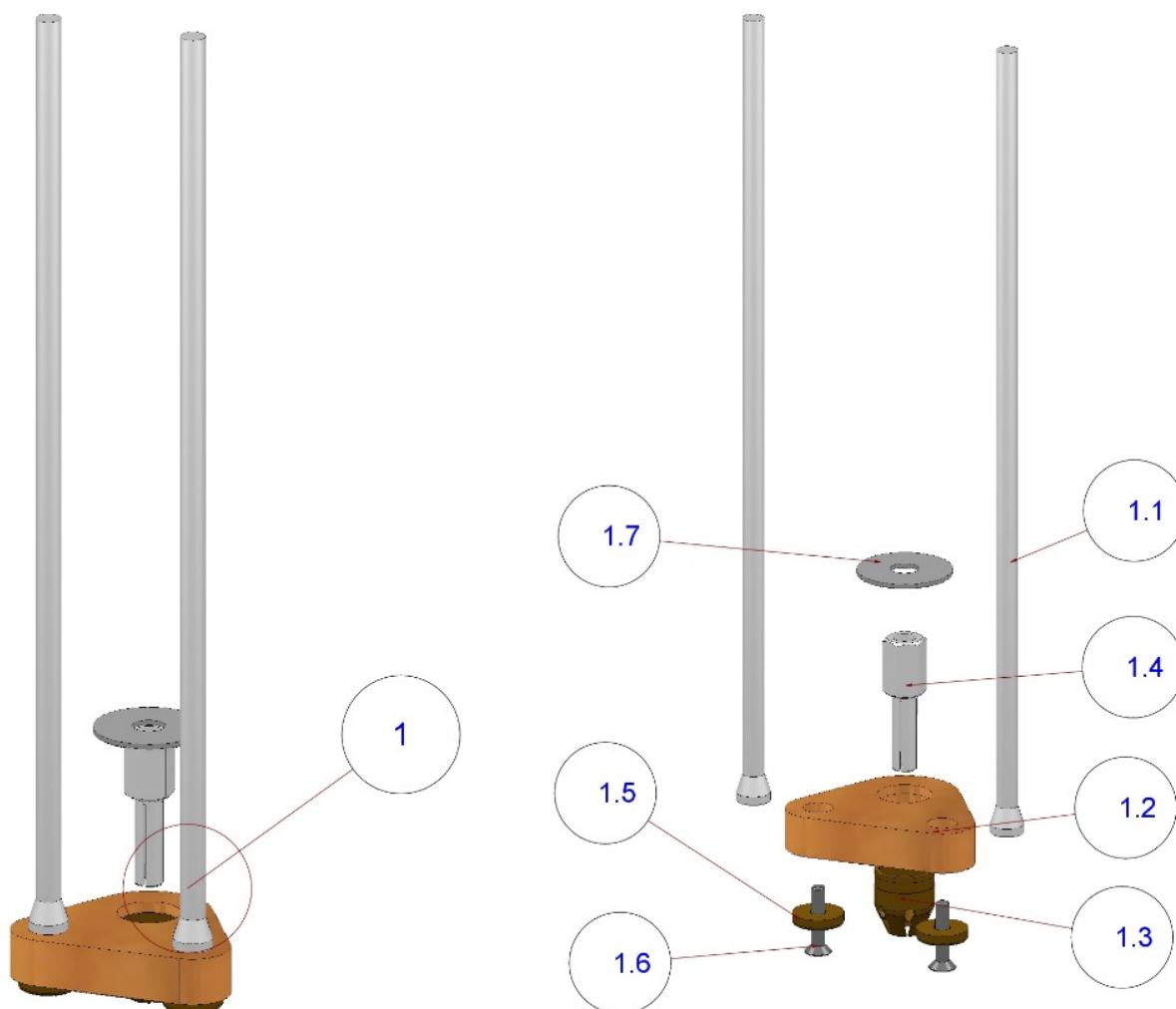
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tool set for stud welding gun K22/K22D to weld threaded studs M8 DIN 13918 up to length
 L=100 mm
 for stud types: RD, FD and PD



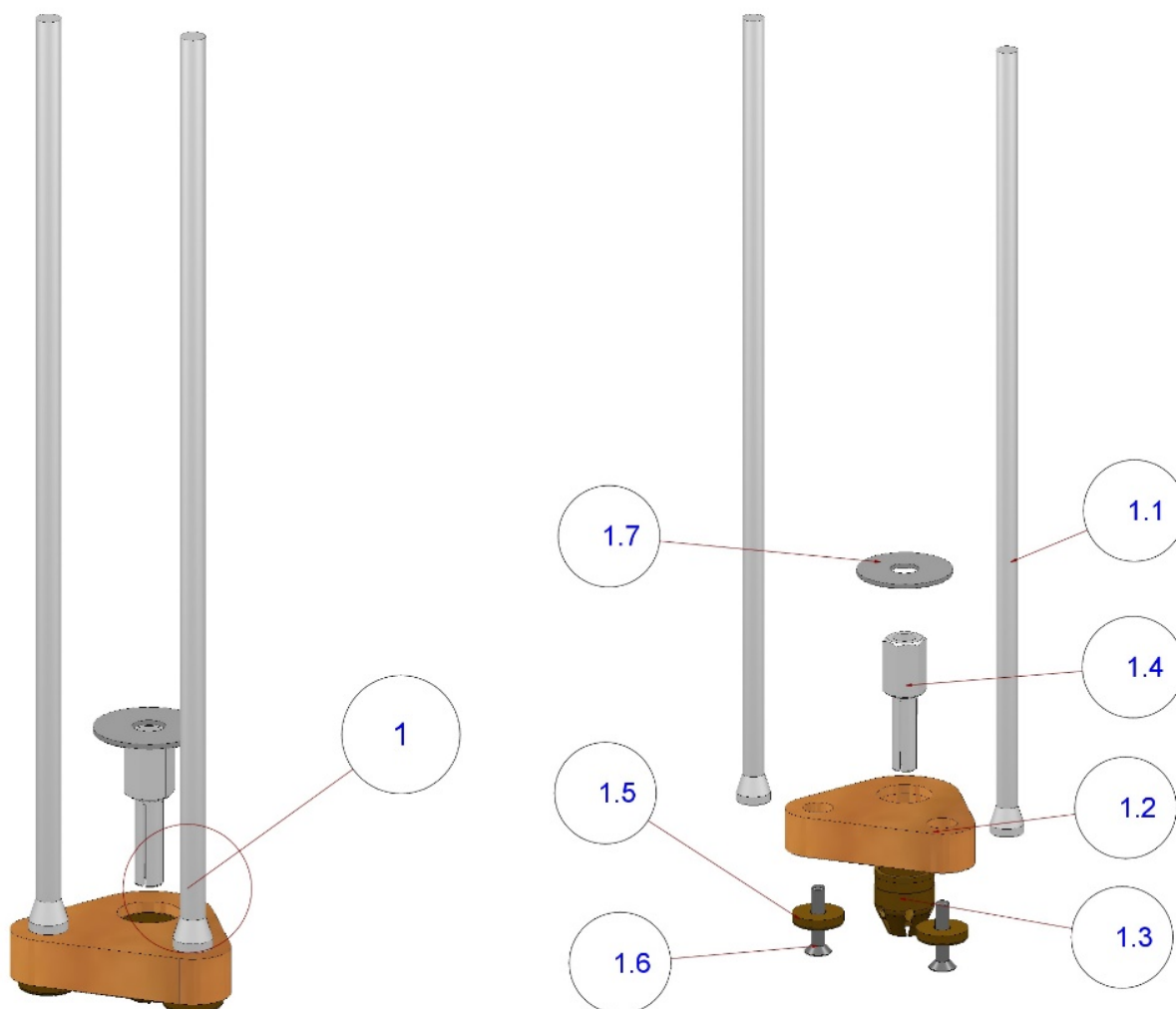
pos.	quantity	description	part no.	material
1	1	tool set (total)	H35505	
1.1	2	leg Ø8mmx300mm	H10954	S235JR A2K
1.2	1	foot plate 22,2mm	H10723	HGW2082
1.3	1	ferrule grip KRH 8	H10668	CuZn31Si1
1.4	1	chuck M8x9x50	H10588	S235JR A2K
1.5	2	washer	H10745	CuZn31Si1
1.6	2	screw M5x25-DIN 7991	H10991	10.9
1.7	1	protection disc	H11441	S235JR A2K

tool set for stud welding gun K22/K22D to weld threaded studs M10 DIN 13918 up to length
 L=100 mm
 for stud types: RD, FD and PD



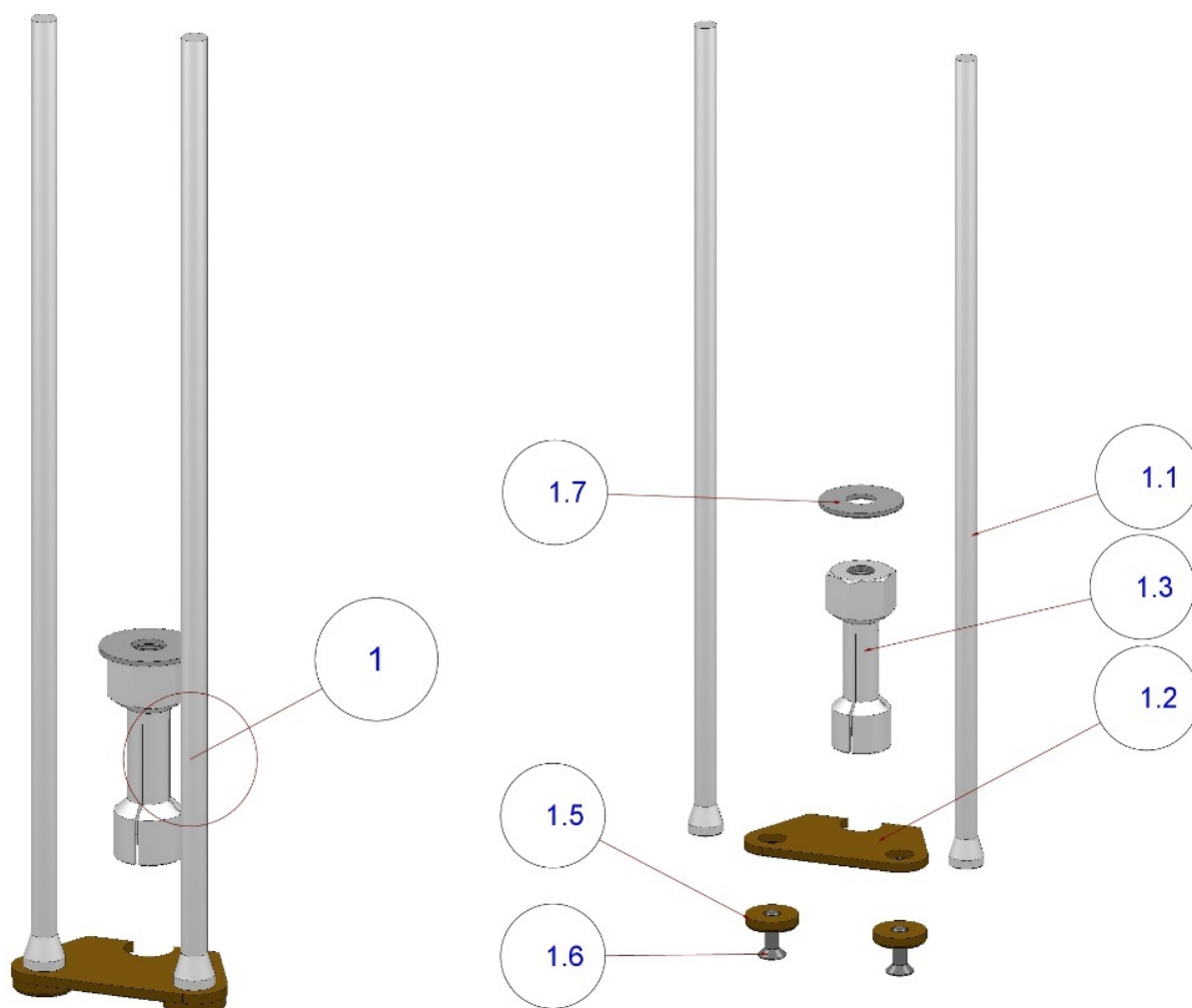
pos.	quantity	description	part no.	material
1	1	tool set (total)	H35506	
1.1	2	leg Ø8mmx300mm	H10954	S235JR A2K
1.2	1	foot plate 22,2mm	H10723	HGW2082
1.3	1	ferrule grip KRH 10	H10669	CuZn31Si1
1.4	1	chuck M10x11x50	H10590	S235JR A2K
1.5	2	washer	H10745	CuZn31Si1
1.6	2	screw M5x25-DIN 7991	H10991	10.9
1.7	1	protection disc	H11441	S235JR A2K

tool set for stud welding gun K22/K22D to weld threaded studs M12 DIN 13918 up to length
 L=100 mm
 for stud types: RD, FD and PD



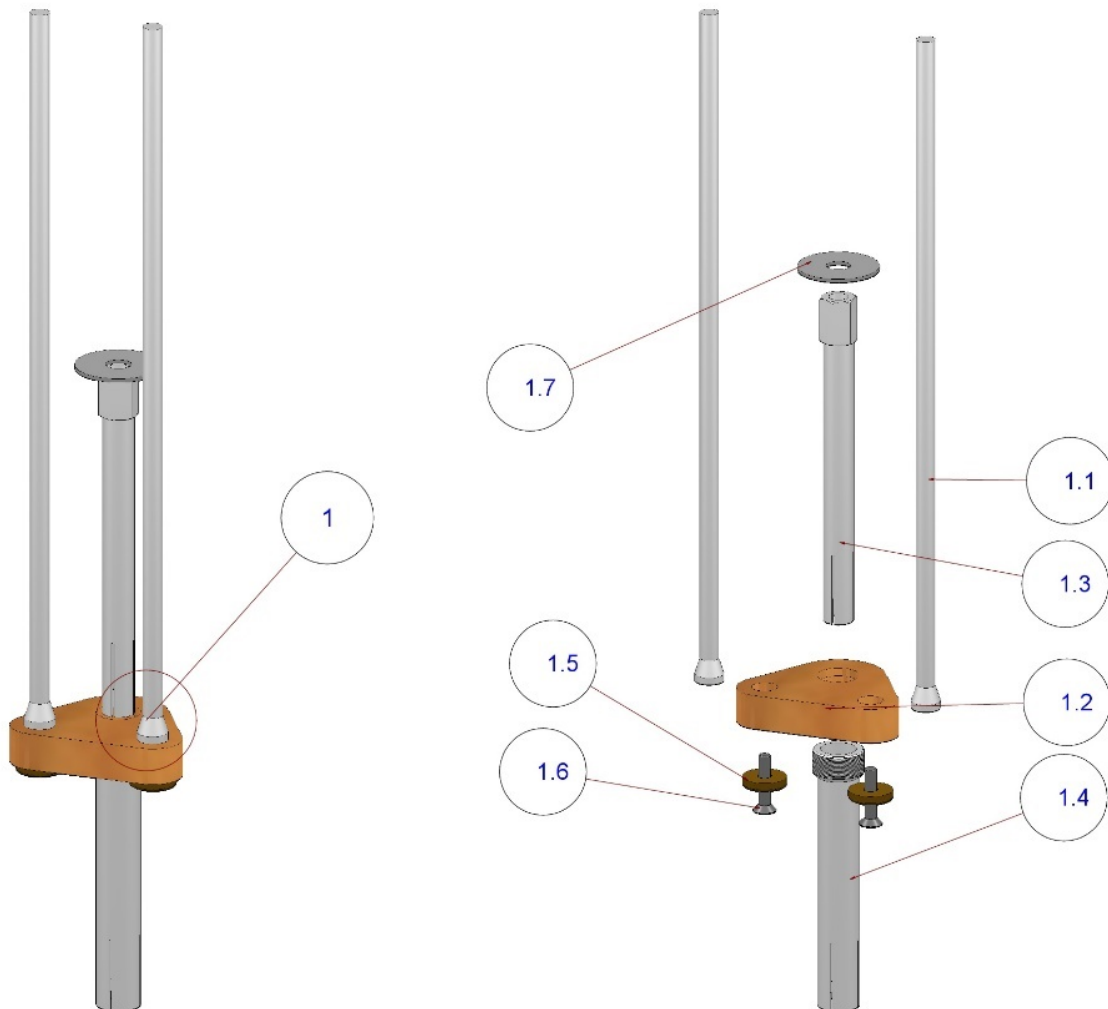
pos.	quantity	description	part no.	material
1	1	tool set (total)	H35507	
1.1	2	leg Ø8mmx300mm	H10954	S235JR A2K
1.2	1	foot plate 22,2mm	H10723	HGW2082
1.3	1	ferrule grip KRH 12	H10671	CuZn31Si1
1.4	1	chuck M12x13x50	H10592	S235JR A2K
1.5	2	washer	H10745	CuZn31Si1
1.6	2	screw M5x25-DIN 7991	H10991	10.9
1.7	1	protection disc	H11441	S235JR A2K

tool set for stud welding gun K22/K24/K22-D to weld studs type SD and type KBMI
 (headØ=20mm weldØ=10mm)



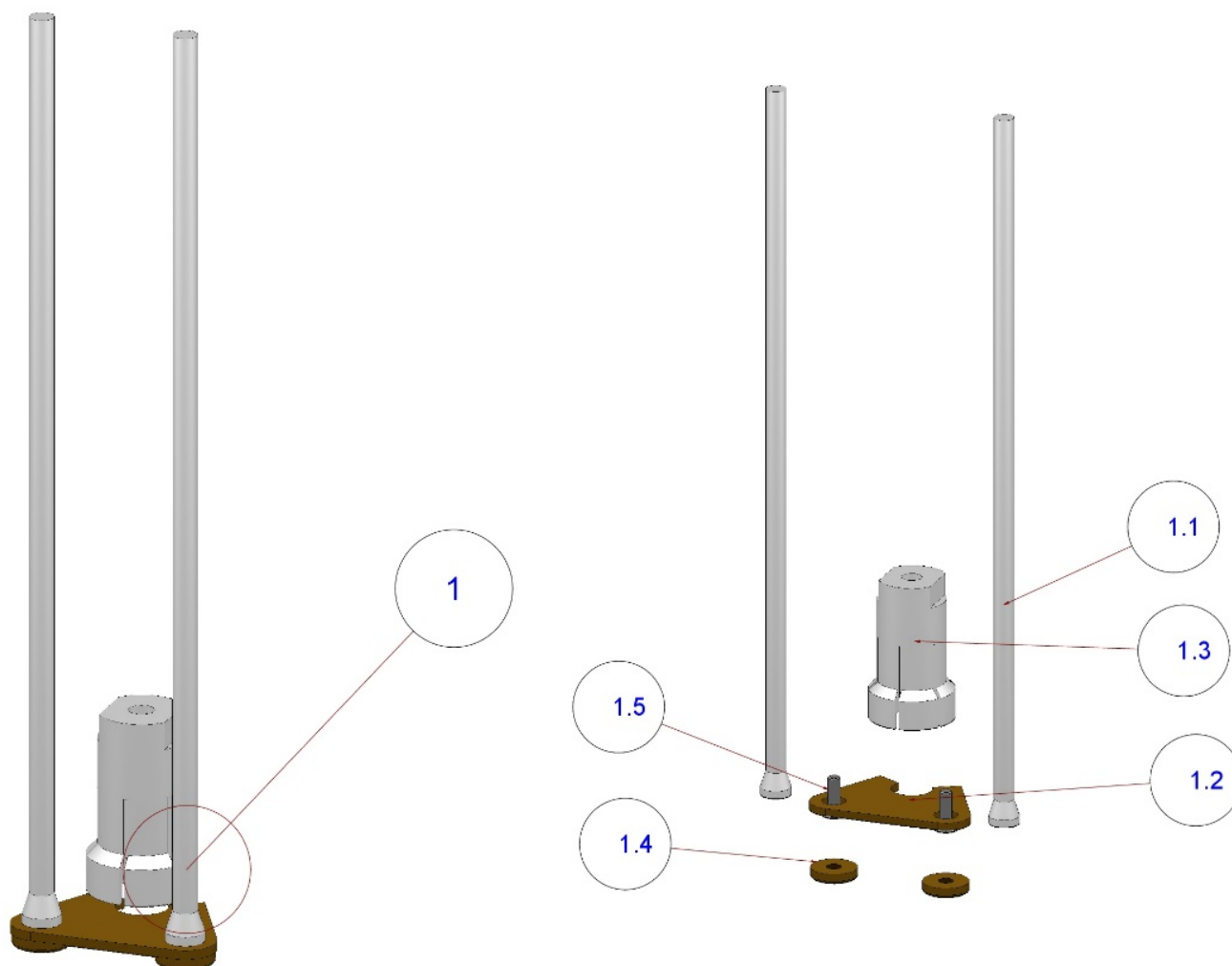
pos.	quantity	description	part no.	material
1	1	tool set (total)	H35515	
1.1	2	leg Ø8mmx300mm	H10954	S235JR A2K
1.2	1	foot plate SSP10 open	H10703	Messing
1.3	1	chuck	H10624	S235JR A2K
1.4	2	washer	H10745	CuZn31Si1
1.5	2	screw M5x16-DIN 7991	H00020	10.9
1.6	1	protection disc	H11441	S235JR A2K

tool set for stud welding gun to weld threaded studs M10 for wooden deck fastening



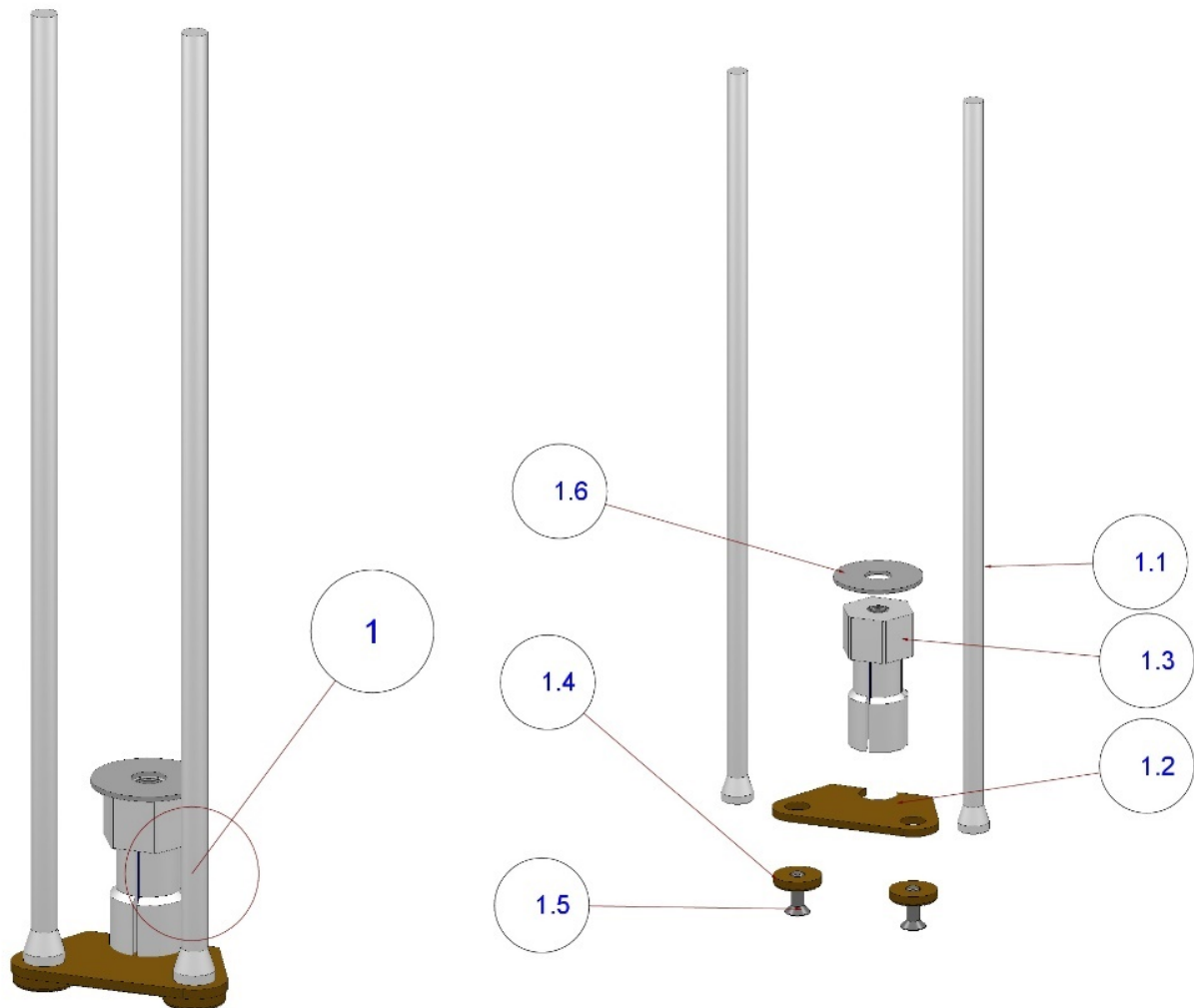
pos.	quantity	description	part no.	material
1	1	tool set (total)	H35520	
1.1	2	leg $\varnothing 8\text{mm} \times 300\text{mm}$	H10954	S235JR A2K
1.2	1	foot plate M22x1,5	H10728	HGW2082
1.3	1	chuck M10S	H10924	S235JR A2K
1.4	1	ferrule grip M10S	H10922	S235JR A2K
1.5	2	washer	H10745	CuZn31Si1
1.6	2	screw M5x25-DIN 7991	H10991	10.9
1.7	1	protection disc	H11441	S235JR A2K

tool set for stud welding gun K22 for studs type KBMI reduced



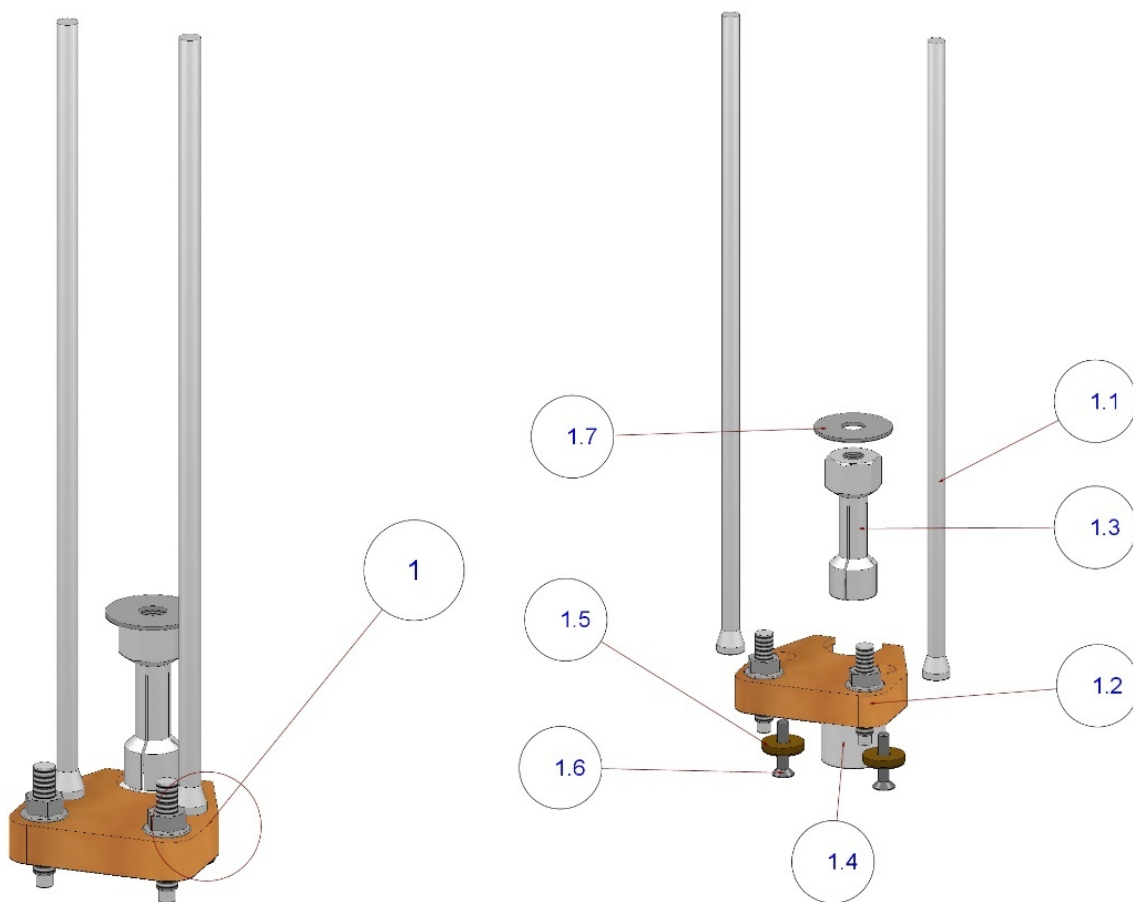
pos.	quantity	description	part no.	material
1	1	tool set (total)	H35898	
1.1	2	leg Ø8mmx300mm	H10924	S235JR A2K
1.2	1	foot plate SSP12 open	H10704	CuZn31Si1
1.3	1	Chuck for shear connector type KBMI head 32mm	H35892	S235JR A2K
1.4	2	washer	H10745	CuZn31Si1
1.5	2	screw M5x16-DIN 7991	H00020	10.9

tool set for stud welding gun K22/K24/K22-D to weld studs type KBMI (HeadØ=20mm; weldØ=10mm)



pos.	quantity	description	part no.	material
1	1	tool set (total)	H36040	
1.1	2	leg Ø8mmx300mm	H10954	S235JR A2K
1.2	1	foot plate SSP10 open	H10703	CuZn31Si1
1.3	1	chuck M20x4x55	H35510	S235JR A2K
1.4	2	washer	H10745	CuZn31Si1
1.5	2	screw M5x16-DIN 7991	H00020	10.9
1.6	1	protection disc	H11441	S235JR A2K

tool set for stud welding gun K22 with 3-point-support to weld studs type SD10 as of length L=50mm

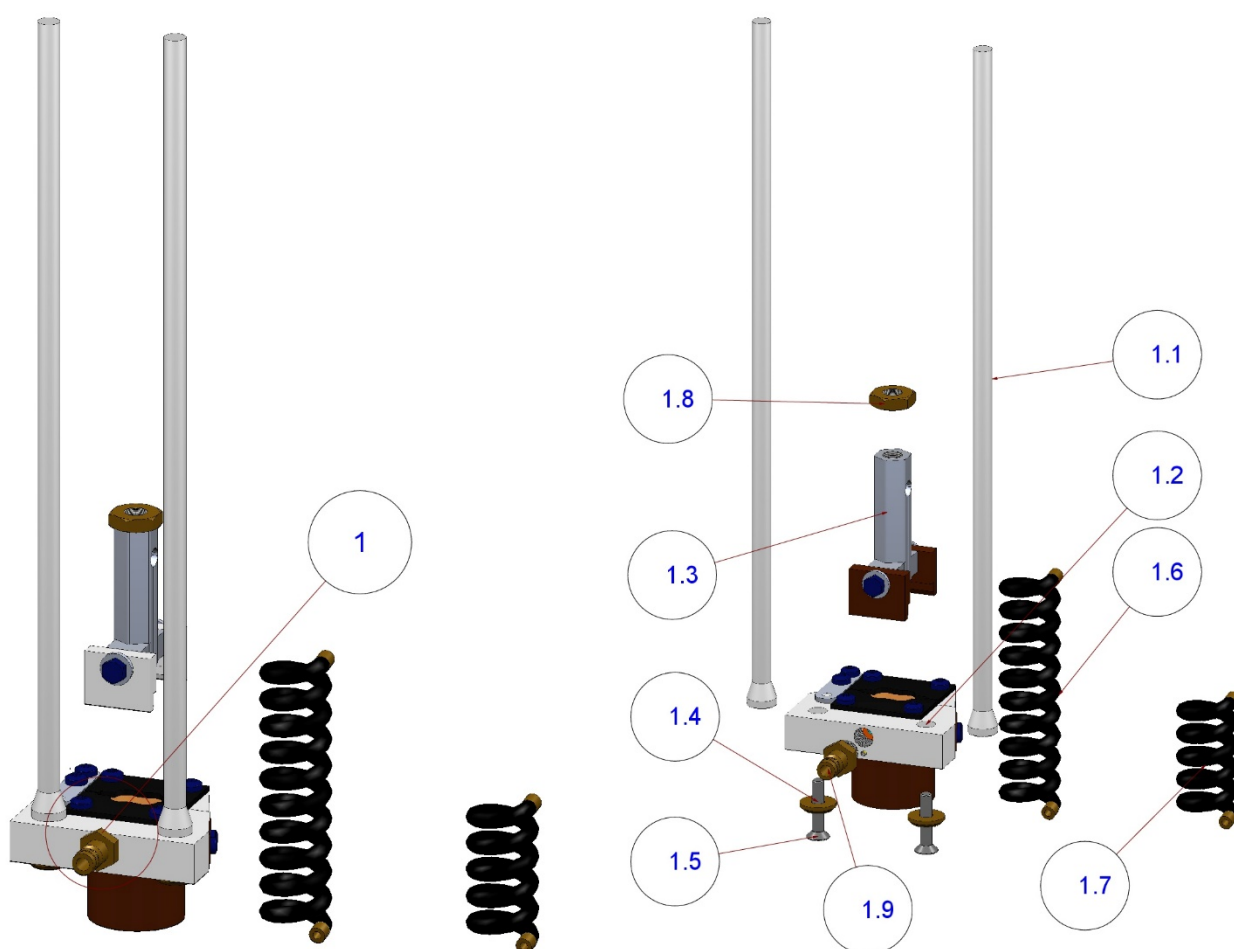


pos.	quantity	description	part no.	material
1	1	tool set (total)	H35792	
1.1	2	leg Ø8mmx300mm	H10954	S235JR A2K
1.2	1	Foot plate open 29	H10873	HGW2082
1.3	1	Chuck for shear connector type KBMI10	H10624	S235JR A2K
1.4	1	ferrule grip for shear connector SN10	H10687	1C45
1.5	2	washer	H10745	CuZn31Si1
1.6	2	screw M5x25-DIN 7991	H10991	10.9
1.7	1	protection disc	H11441	S235JR A2K

K2024-94-E

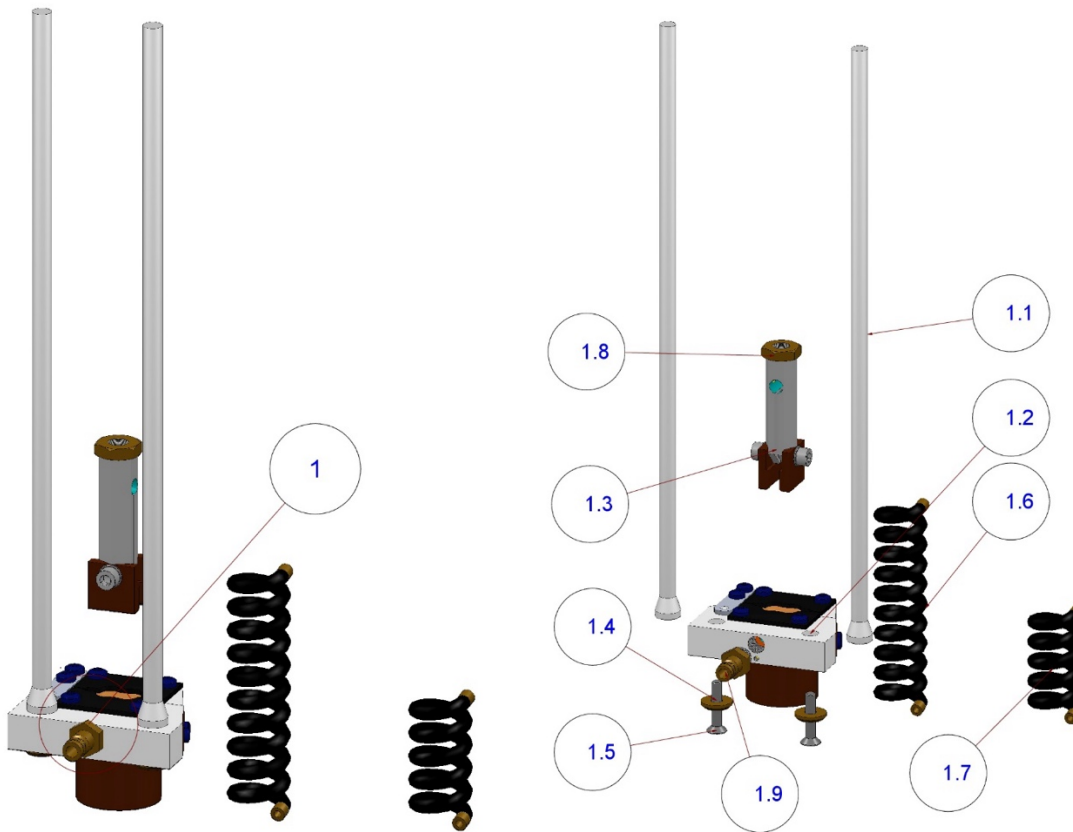
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tool set for stud welding gun K22 Alu to weld flat bar type HFS using shield gas



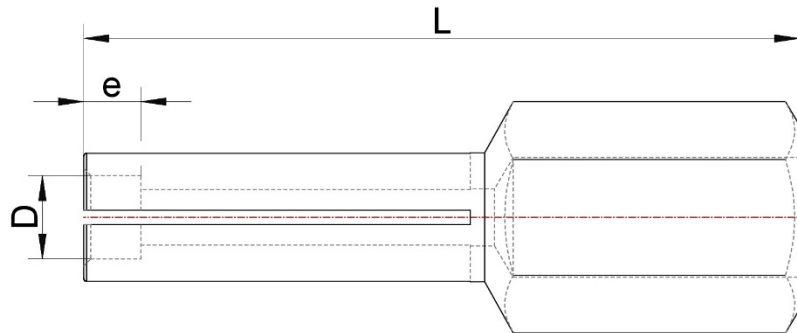
pos.	quantity	description	part no.	material
1	1	tool set (total)	H36047	
1.1	2	leg Ø8mmx300mm	H10954	S235JR A2K
1.2	1	foot plate foldable	H35621	
1.3	1	Chuck complete for HFS	H36046	
1.4	2	washer	H35203	CuZn31Si1
1.5	2	screw M5x25-DIN 7991	H10991	10.9
1.6	1	tube 12m complete	H13812	
1.7	1	tube 3m complete	H35082	
1.8	1	lock nut M10	H10975	CuZn31Si1
1.9	1	shielding gas plug male 1/8	H11158	CuZn31Si1

tool set for stud welding gun K22 Alu to weld cable Hanger open type HDO using shield gas



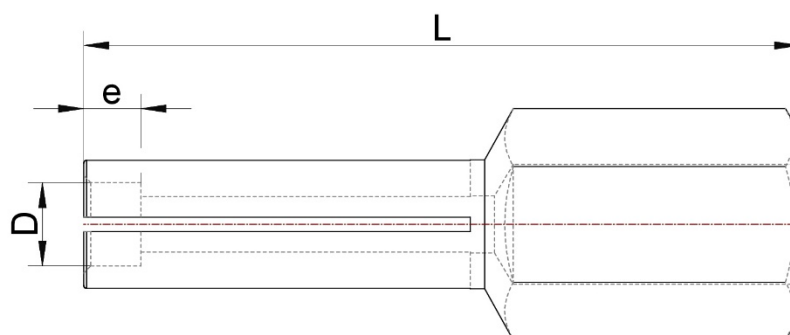
pos.	quantity	description	part no.	material
1	1	tool set (total)	H14305	
1.1	2	leg Ø8mmx300mm	H10954	S235JR A2K
1.2	1	foot plate foldable	H35621	
1.3	1	chuck complete for HDO	H11804	
1.4	2	washer	H35203	CuZn31Si1
1.5	2	screw M5x25-DIN 7991	H10991	10.9
1.6	1	tube 12m complete	H13812	
1.7	1	tube 3m complete	H35082	
1.8	1	lock nut M10	H10975	CuZn31Si1
1.9	1	Shielding gas plug male 1/8	H11158	CuZn31Si1

chuck for threaded studs



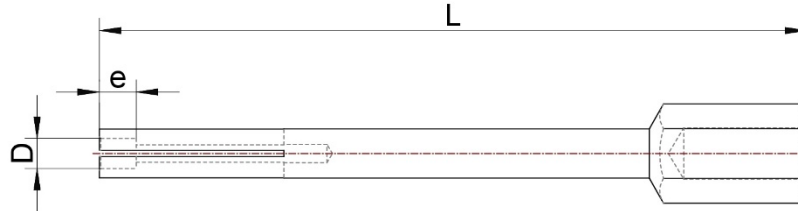
description	D	e	L	part no.
chuck M3x 5x50	3	5	50	H10528
chuck M4x 5x50	4	5		H10529
chuck M4x25x50		25		H10957
chuck M5x 6x50	5	6		H10537
chuck M6x 4x50	6	4		H10585
chuck M6x 7x50		7		H10586
chuck M6x15x50		15		H10606
chuck M6x25x50		25		H10607
chuck M8x 4x50	8	4		H10958
chuck M8x 6x50		6		H10587
chuck M8x 9x50		9		H10588
chuck M8x25x50		25		H10959
chuck M8x25x70		25	70	H35637
chuck M10x 4x50	10	4	50	H10960
chuck M10x 6x50		6		H10589
chuck M10x11x50		11		H10590
chuck M10x25x50		25		H35597
chuck M12x 6x55	12	6	55	H10591
chuck M12x13x55		13		H10952
chuck M12x30x55		30		H35612
chuck M16x 5x55	16	5		H10597
chuck M16x10x55		10		H10961
chuck M16x15x55		15		H10598
chuck M18x 5x55	18	5		H10962
chuck M18x15x55		15		H10599
chuck M20x8x55	20	8		H10600
chuck M20x15x55		15		H10601
chuck M22x 7x55	22	7		H10602
chuck M22x15x55		15		H10603
chuck M24x 7x55	24	6		H10604
chuck M24x15x55		15		H10605

chuck for insulation pins



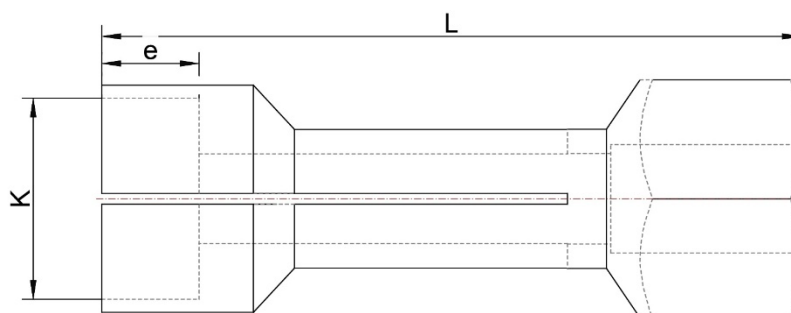
description	D	e	L	part no.
chuck 3x25x50	3	25	50	H10639
chuck 3x46x70	3	46	70	H10640
chuck 3x85x110	3	90	110	H10642
chuck 4x25x50	4	25	50	H10637
chuck 4x45x70	4	45	70	H10921
chuck 4x85x11	4	85	85	H10955
chuck 5x20x50	5	20	20	H10645
chuck 5x40x70	5	40	40	H10646
chuck 5x85x115	5	85	115	H10647

chuck long



description	D	e	L	part no.
chuck M4x 5x110	4	5		H10608
chuck M5x 4x110	5	4	110	H10616
chuck M5x 6x110		6		H10609
chuck M5x 11x115		11	115	H12373
chuck M5x 15x115		15		H11345
chuck M6x 4x110	6	4	110	H10617
chuck M6x 7x110		7		H10610
chuck M6x 15x115		15	115	H11589
chuck M8x 4x110	8	4		H10618
chuck M8x 9x110		9		H10611
chuck M8x 20x110		20	110	H11152
chuck M10x 4x110	10	4		H10619
chuck M10x11x110		11		H10612
chuck M10x11x145		11		H10924
chuck M10x25x145		25	145	H35126
chuck M10x30x145		30		H35305
chuck M12x 4x110	12	4	110	H10620
chuck M12x13x110		13		H10613
chuck M12x13x145		13	145	H10925
chuck M12x30x145		30		H35306
chuck M16x 5x110	16	5	110	H10966
chuck M16x 7x110		7		H10967
chuck M16x13x125		13		H35375
chuck M20x15x125	20	15	125	H10969

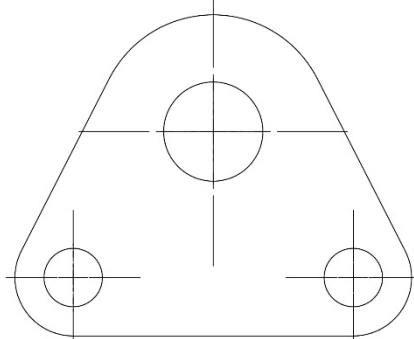
chuck for studs type SD and KBMI



L	for studs ø	K	e	part no.
55	6 (1/4")	13	5,5	H10622
	8	16	7	H10623
	10 (3/8")	20	8,5	H10624
65	12+13 (1/2")	25		H10625
	16 (5/8")	32	12	H10626
	19 (3/4")			
75	22 (7/8")	35		H10628

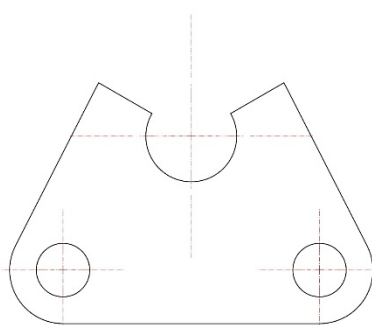
ferrule grip as footplate

SSP12



for studs ø	description	part no.
4	SSP4	H10708
6	SSP6	H10709
8	SSP8	H10710
10	SSP10	H10711
12	SSP12	H10712
16	SSP16	H10713
20	SSP20	H10714
22	SSP22	H10715

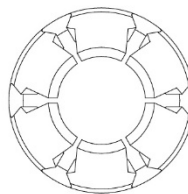
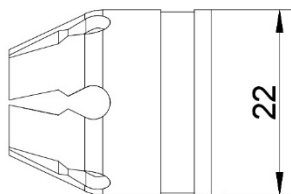
SSP12o



for studs ø	description	part no.
4	SSP4o	H10700
6	SSP6o	H10701
8	SSP8o	H10702
10	SSP10o	H10703
12	SSP12o	H10704
16	SSP16o	H10705
20	SSP20o	H10706
22	SSP22o	H10707

ferrule grip

KRH



for studs ø	description	material	ø d	part no.
3+4	KRH4	brass	22	H10665
5	KRH5			H10667
6	KRH6			H10667
8	KRH8			H10668
10	KRH10			H10669
12	KRH12			H10671
16	KRH16		29	H10672
20	KRH20			H10673
for stud ø	description	material	ø	part no.
4	KRHø4	brass	22	H10693
5	KRHø5			H10694
6	KRHø6			H10695
8	KRHø8			H10696
10	KRHø10			H10697
12	KRHø12			H10697
16	KRHø16		29	H10698
20	KRHø20			H10973
22+24	KRHø22		44	H10974