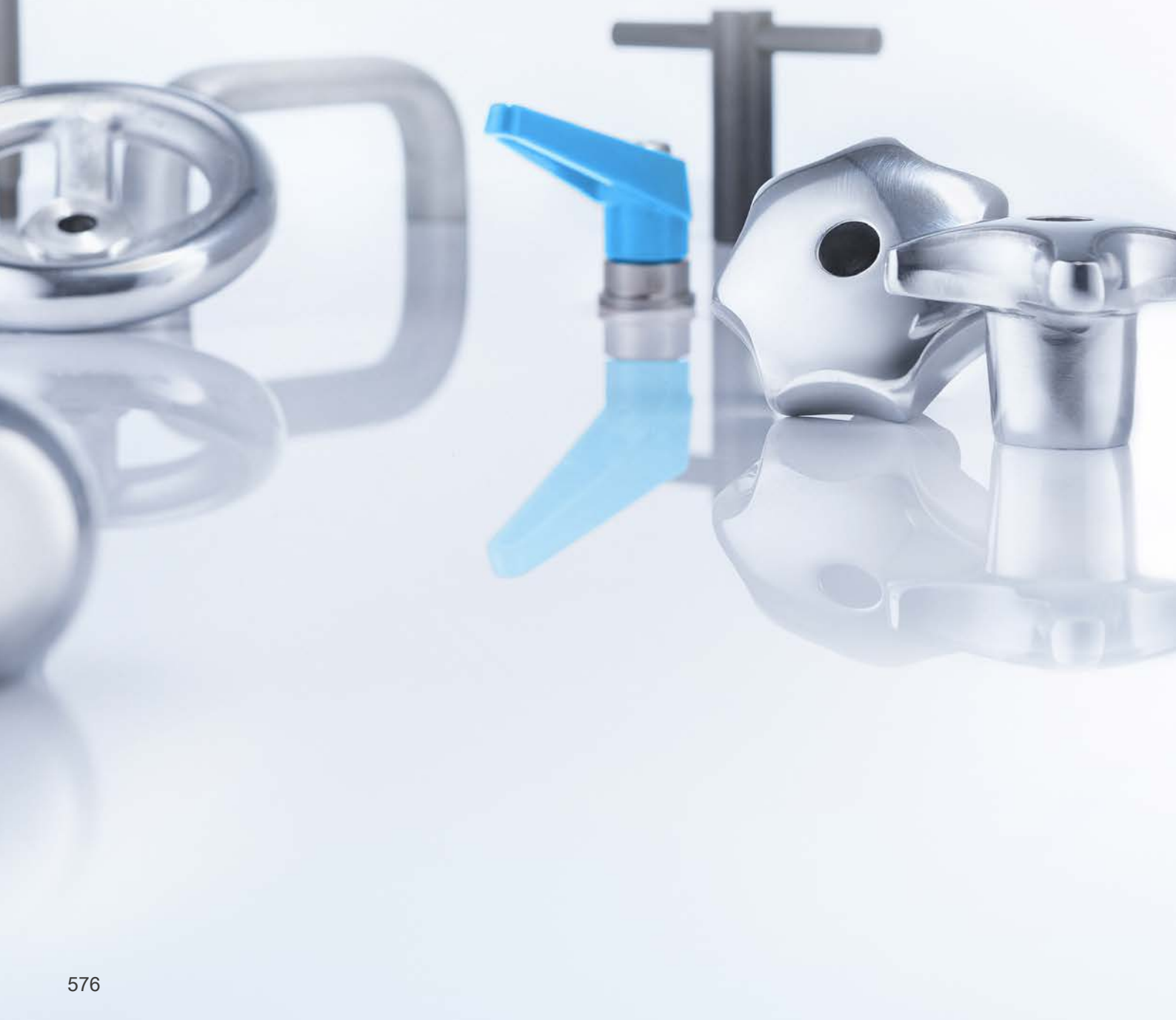


4 OPERATING ELEMENTS



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Retaining Latches • one-sided
EH 24100.



PRODUCT DESCRIPTION

To be used for door locking, drawers and as handling aid etc.
The retaining catch is indexing 4 x 90°.

Material

Lever

- Zinc die-cast, silver, similar to RAL 9006
- Zinc die-cast, black, similar to RAL 9005

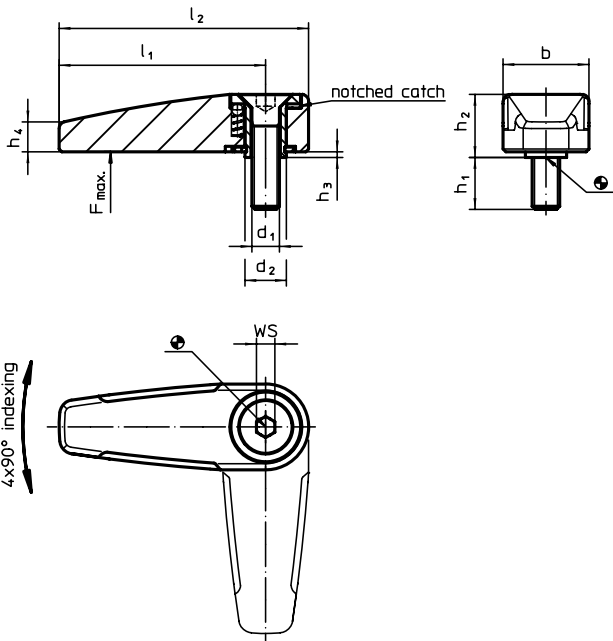
Inner parts

- Dry powdered metal

Screw

- Stainless steel A2 (ISO 10642)

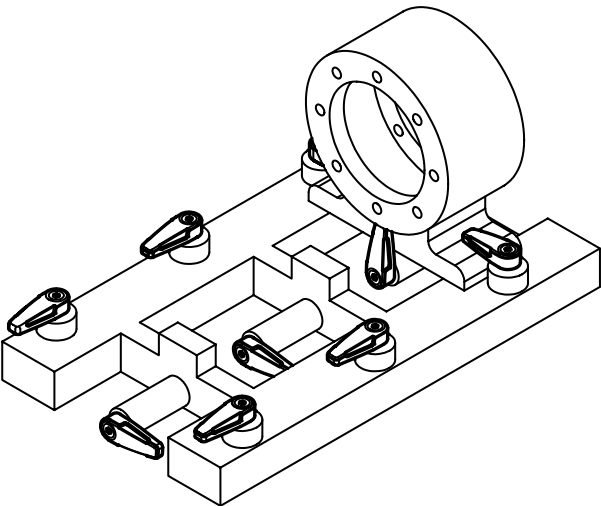
DRAWING



ORDER INFORMATION

Dimensions									WS	Load capacity max.		Art. No.	
d ₁	d ₂	l ₁	l ₂	b	h ₁	h ₂	h ₃	h ₄				silver	black
[mm]									[mm]	[N]	[g]		
M6	9	45	55	19.0	12	13.3	0.8	6.5	4	500	60	24100.0101	24100.0102
M8	14	65	78	25.2	14	15.8	0.8	9.0	5	1000	136	24100.0151	24100.0152

APPLICATION EXAMPLE



Retaining Latches • double-sided
EH 24100.



PRODUCT DESCRIPTION

To be used for door locking, drawers and as handling aid etc.
The retaining catch is indexing 4 x 90°.

Material

Lever

- Zinc die-cast, silver, similar to RAL 9006
- Zinc die-cast, black, similar to RAL 9005

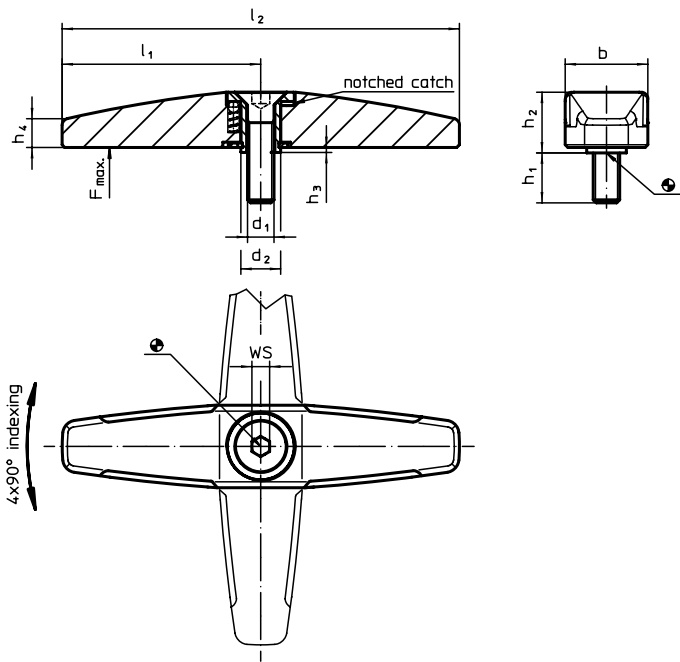
Inner parts

- Dry powdered metal

Screw

- Stainless steel A2 (ISO 10642)

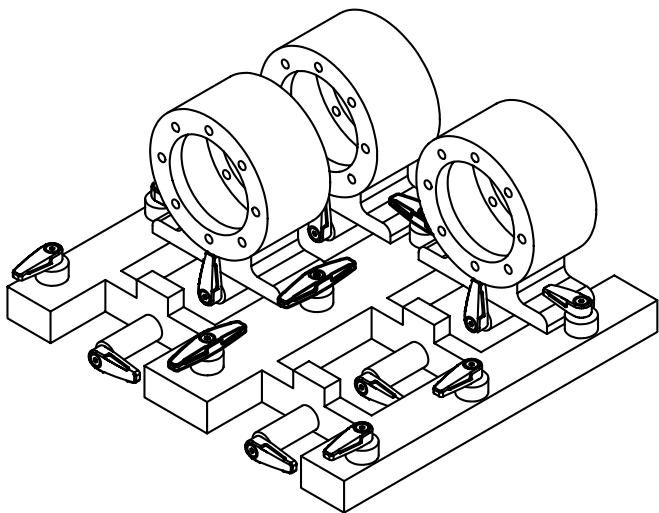
DRAWING



ORDER INFORMATION

Dimensions									WS	Load capacity max.		Art. No.	
d ₁	d ₂	l ₁	l ₂	b	h ₁	h ₂	h ₃	h ₄				silver	black
[mm]									[mm]	[N]	[g]		
M6	9	45	90	19.0	12	13.3	0.8	6.5	4	500	94	24100.0601	24100.0602
M8	14	65	130	25.2	14	15.8	0.8	9.0	5	1000	225	24100.0651	24100.0652

APPLICATION EXAMPLE



Retaining Latches • wing grip, one-sided

EH 24101.



PRODUCT DESCRIPTION

To be used for door locking, drawers and as handling aid etc.
The retaining catch is indexing 4 x 90°.

Material

Flange

- Zinc die-cast, plastic coated, black

Lever

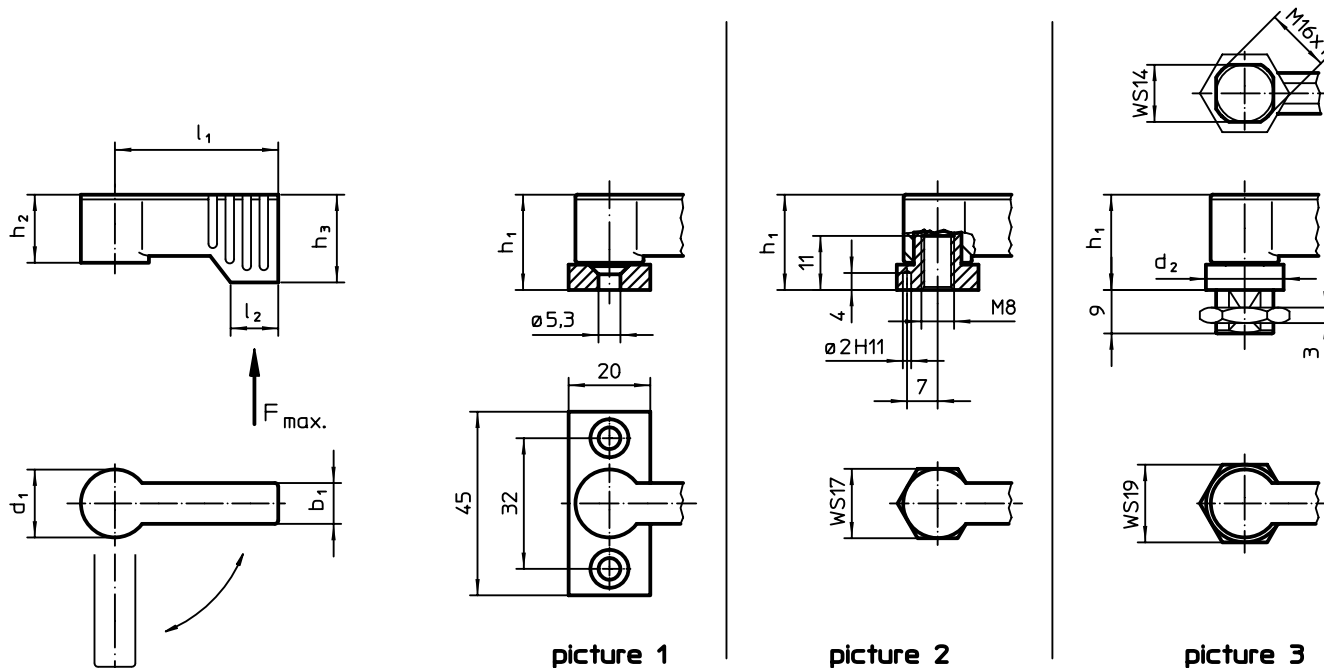
- Zinc die-cast, plastic coated, silver, similar to RAL 9006, matt structure

- Zinc die-cast, plastic coated, black, similar to RAL 9005, matt structure

Inner parts

- Zinc die-cast
- Steel
- Plastic

DRAWING



ORDER INFORMATION

Dimensions								Load capacity F max. [N]	 [g]	Art. No.	
d ₁	l ₁	b ₁	d ₂	h ₁ ~	h ₂ ~	h ₃ min.	l ₂			silver	black
[mm]											
with mounting flange – picture 1											
17	40	10	–	22	16.5	21.5	11	450	75	24101.0201	24101.0202
	55	10	–	22	16.5	21.5	11	450	83	24101.0204	24101.0203
with female thread – picture 2											
17	40	10	–	22	16.5	21.5	11	450	57	24101.0231	24101.0232
	55	10	–	22	16.5	21.5	11	450	65	24101.0234	24101.0233
with male thread – picture 3											
17	40	10	19	22	16.5	21.5	11	450	69	24101.0261	24101.0262
	55	10	19	22	16.5	21.5	11	450	76	24101.0264	24101.0263

U-Handles
EH 24300.



PRODUCT DESCRIPTION

U-handles are used, for example, on machine doors, furniture doors, cabinet doors, drawers and drawer units. These U-handles are characterised by their ergonomic profile design with very high stability and their simple and timeless design.

Material

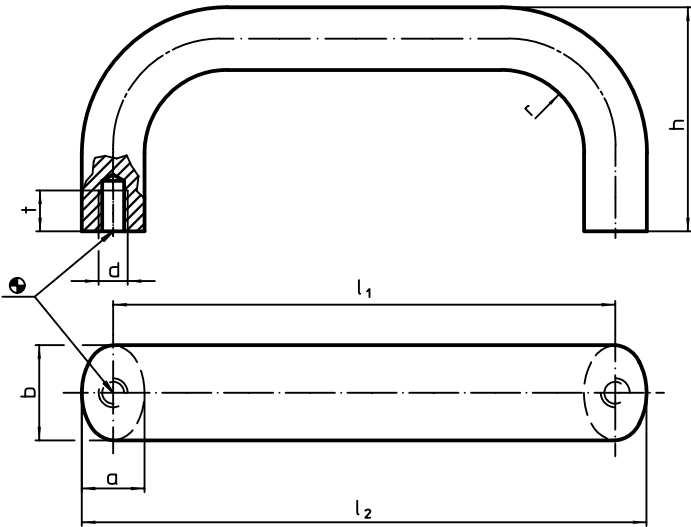
- Handle**
- Aluminium, drawn, bright, vibratory grinded
 - Aluminium, plastic coated, similar to RAL 9005, black

- Stainless steel 1.4301, dull blasted
- Stainless steel, slide polished, shiny metallic finish

Assembly

Back mount handle.

DRAWING



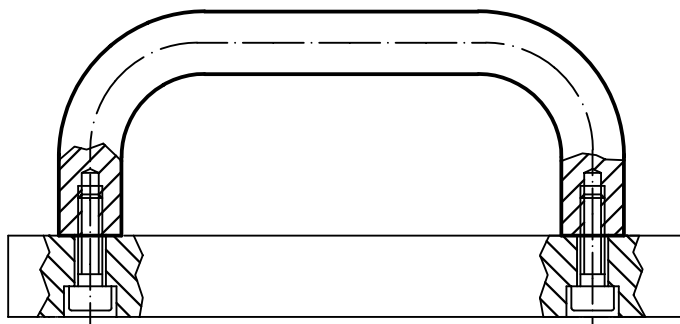
ORDER INFORMATION

Dimensions									Art. No.
b	l_1 ± 0.25	l_2	a	d	h	r	t		
[mm]								[g]	
aluminium, bright									
20	100	113	13	M6	49	13	10	90	24300.0100
	112	125	13	M6	49	13	10	97	24300.0110
	117	130	13	M6	49	13	10	100	24300.0112
	120	133	13	M6	49	13	10	97	24300.0114
	128	141	13	M6	51	13	10	107	24300.0120
	160	173	13	M6	51	13	10	122	24300.0130
	180	193	13	M6	51	13	10	128	24300.0132
	200	213	13	M6	51	13	10	150	24300.0134
	235	248	13	M6	51	13	10	180	24300.0136
26	112	129	17	M8	55	17	12	163	24300.0140
	117	134	17	M8	55	17	12	166	24300.0142
	120	137	17	M8	55	17	12	200	24300.0144
	125	142	17	M8	55	17	12	176	24300.0146
	128	154	17	M8	55	17	12	180	24300.0150
	160	177	17	M8	57	17	12	217	24300.0160
	179	196	17	M8	57	17	12	234	24300.0162
	192	209	17	M8	57	17	12	240	24300.0170
	300	317	17	M8	57	17	12	344	24300.0180
	400	417	17	M8	57	17	12	436	24300.0190
	500	517	17	M8	57	17	12	538	24300.0200



b	Dimensions								Art. No.	
	l ₁ ±0.25	l ₂	a	d	h	r	t			
	[mm]									[g]
aluminium, black										
20	100	113	13	M6	49	13	10	100	24300.0300	
	112	125	13	M6	49	13	10	98	24300.0310	
	117	130	13	M6	49	13	10	100	24300.0312	
	120	133	13	M6	49	13	10	104	24300.0314	
	128	141	13	M6	51	13	10	110	24300.0320	
	160	173	13	M6	51	13	10	126	24300.0330	
	180	193	13	M6	51	13	10	128	24300.0332	
	200	213	13	M6	51	13	10	150	24300.0334	
26	235	248	13	M6	51	13	10	180	24300.0336	
	112	129	17	M8	55	17	12	167	24300.0340	
	117	134	17	M8	55	17	12	166	24300.0342	
	120	137	17	M8	55	17	12	160	24300.0344	
	125	142	17	M8	55	17	12	178	24300.0346	
	128	145	17	M8	55	17	12	181	24300.0350	
	160	177	17	M8	57	17	12	217	24300.0360	
	179	196	17	M8	57	17	12	234	24300.0362	
	192	209	17	M8	57	17	12	250	24300.0370	
	300	317	17	M8	57	17	12	347	24300.0380	
	400	417	17	M8	57	17	12	445	24300.0390	
	500	517	17	M8	57	17	12	538	24300.0400	
stainless steel, dull blasted										
20	112	125	13	M6	49	13	10	271	24300.0510	
	128	141	13	M6	51	13	10	300	24300.0520	
	160	173	13	M6	51	13	10	366	24300.0530	
	200	213	13	M6	51	13	10	440	24300.0540	
	250	263	13	M6	51	13	10	517	24300.0550	
	300	313	13	M6	51	13	10	597	24300.0560	
	400	413	13	M6	51	13	10	737	24300.0580	
26	128	145	17	M8	57	19	12	517	24300.0651	
	160	177	17	M8	57	19	12	606	24300.0661	
	200	217	17	M8	57	19	12	708	24300.0671	
	300	317	17	M8	57	19	12	986	24300.0680	
	400	417	17	M8	57	19	12	1259	24300.0690	
20	500	517	17	M8	57	19	12	1519	24300.0700	
	stainless steel, slide polished, shiny metallic finish									
	112	125	13	M6	49	13	10	274	24300.0610	
	128	141	13	M6	51	13	10	309	24300.0620	
	160	173	13	M6	51	13	10	362	24300.0630	
	200	213	13	M6	51	13	10	420	24300.0640	
	128	145	17	M8	57	19	12	518	24300.0650	
26	160	177	17	M8	57	19	12	603	24300.0660	
	200	217	17	M8	57	19	12	711	24300.0670	

APPLICATION EXAMPLE



U-Handles • front mounting

EH 24300.



PRODUCT DESCRIPTION

U-handles are used, for example, on machine doors, furniture doors, cabinet doors, drawers and drawer units.

These U-handles are characterised by their ergonomic profile design with very high stability and their simple and timeless design.

Material

Handle

- Aluminium, drawn, bright, vibratory grinded
- Aluminium, plastic coated, similar to RAL 9005, black

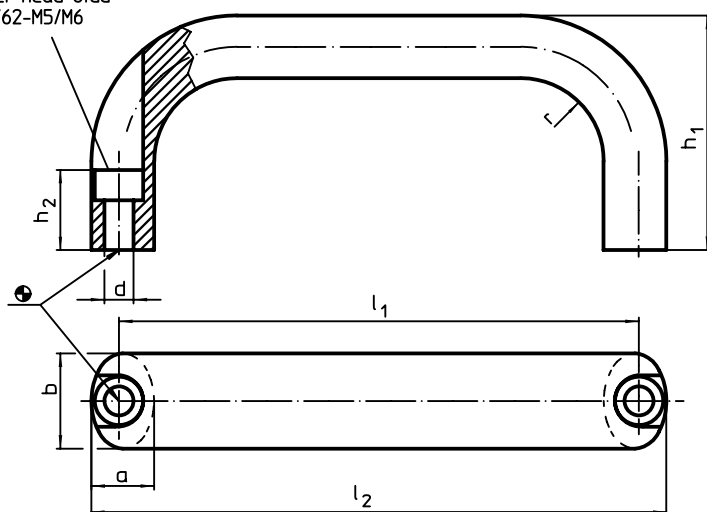
- Stainless steel, dull blasted

Assembly

Mounting is done from the operating side by means of a cylinder screw.

DRAWING

bore for
cylinder head stud
ISO 4762-M5/M6



ORDER INFORMATION

b	l ₁ ±0.25	l ₂	Dimensions					For cylinder screw		Art. No.		
			a	d	h ₁	h ₂	r			aluminium, bright	aluminium, black	stainless steel, dull blasted
[mm]									[mm]	[g]		
20	100	112	13	5.4	49	19	13	M5	80	24300.0101	24300.0301	-
	112	124	13	5.4	49	19	13	M5	82	24300.0111	24300.0311	24300.0511
	117	129	13	5.4	49	19	13	M5	84	24300.0113	24300.0313	-
	120	132	13	5.4	51	19	13	M5	90	24300.0115	24300.0315	-
	128	140	13	5.4	51	19	13	M5	100	24300.0121	24300.0321	24300.0521
	160	172	13	5.4	51	19	13	M5	100	24300.0131	24300.0331	24300.0531
26	116	130	17	6.4	55	17	17	M6	146	24300.0141	24300.0341	-
	120	134	17	6.4	55	17	17	M6	152	24300.0143	24300.0343	-
	128	140	17	6.4	57	17	19	M6	455	-	-	24300.0655
	132	146	17	6.4	55	17	17	M6	161	24300.0151	24300.0351	-
	160	172	17	6.4	57	17	19	M6	542	-	-	24300.0665
	164	178	17	6.4	57	17	17	M6	196	24300.0161	24300.0361	-
	179	193	17	6.4	57	17	17	M6	215	24300.0166	24300.0366	-
	196	210	17	6.4	57	17	17	M6	229	24300.0171	24300.0371	-
200	216	17	6.4	57	17	19	M6	651	-	-	24300.0675	

U-Handles • diagonal
EH 24300.



PRODUCT DESCRIPTION

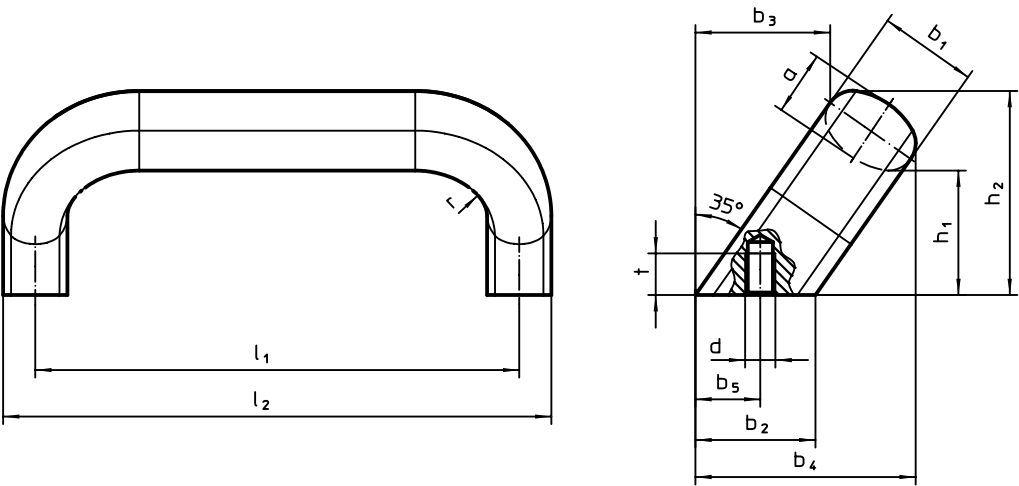
U-handles are used, for example, on machine doors, furniture doors, cabinet doors, drawers and drawer units.

Material

Handle

- Stainless steel 1.4301, dull blasted

DRAWING



ORDER INFORMATION

Dimensions														Art. No.
b_1	l_1 ± 0.25	l_2	a	b_2	b_3	b_4	b_5 $+1$	d	h_1	h_2	r	t		
[mm]													[g]	
20	112	125	13	24	32	50	13.5	M6	32	48	13	10	301	24300.0805
	128	141	13	24	32	50	13.5	M6	32	48	13	10	325	24300.0810
26	128	145	17	32	34	57	18.0	M8	34	54	17	12	550	24300.0815
	160	177	17	32	34	57	18.0	M8	34	54	17	12	631	24300.0820

U-Handles • with support washer

EH 24310.



PRODUCT DESCRIPTION

U-handles are used, for example, on machine doors, furniture doors, cabinet doors, drawers and drawer units.

These rounded U-handles are characterised by their ergonomic and stable construction and their simple and timeless design.

Material

Handle

- Steel, chromium-plated
- Steel, plastic coated, black
- Stainless steel 1.4305, dull blasted

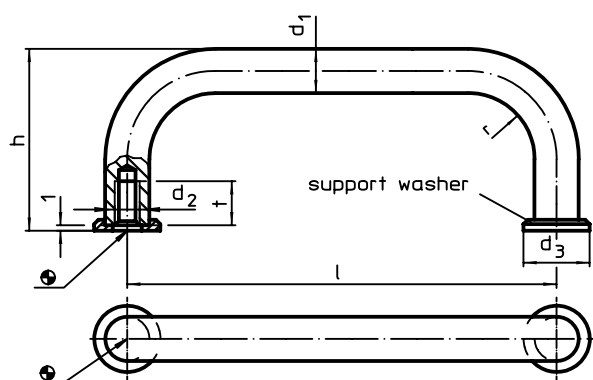
Support washer

- Zinc die-cast, nickel-plated
- Stainless steel

Assembly

The supporting washer provides a good bearing surface. Suitable washers are joined in loose form.

DRAWING



ORDER INFORMATION

Dimensions								Art. No.		
d ₁	l ±0.5	d ₂	d ₃	h	r	t min.		Steel, chromi- um-plated	Steel, plastic coated, black	Stainless steel 1.4305
[mm]							[g]			
6	32	M3	9	26	7	7	20	—	24310.0205	24310.0210
	45	M3	9	26	7	7	21	—	24310.0215	24310.0220
	55	M3	9	26	7	7	22	—	24310.0225	24310.0230
	64	M3	9	26	7	7	24	—	24310.0235	24310.0240
	88	M3	9	26	7	7	29	—	24310.0245	24310.0250
8	55	M4	12	35	10	8	41	24310.0010	24310.0310	24310.0510
	64	M4	12	35	10	8	44	24310.0020	24310.0320	24310.0520
	88	M4	12	35	10	8	54	24310.0030	24310.0330	24310.0530
	96	M4	12	35	10	8	57	24310.0040	24310.0340	24310.0540
	100	M4	12	35	10	8	60	24310.0050	24310.0350	24310.0550
	120	M4	12	35	10	8	66	24310.0060	24310.0360	24310.0560
	128	M4	12	35	10	8	69	24310.0110	24310.0410	24310.0610
10	88	M5	15	43	12	12	91	24310.0120	24310.0420	24310.0620
	100	M5	15	43	12	12	98	24310.0130	24310.0430	24310.0630
	120	M5	15	43	12	12	109	24310.0140	24310.0440	24310.0640
	180	M5	15	43	12	12	146	24310.0150	24310.0450	24310.0650
	200	M5	15	43	12	12	161	24310.0160	24310.0460	24310.0660
	235	M5	15	43	12	12	183	24310.0170	24310.0470	24310.0670

U-Handles
EH 24310.



PRODUCT DESCRIPTION

U-handles are used, for example, on machine doors, furniture doors, cabinet doors, drawers and drawer units. These rounded U-handles are characterised by their ergonomic and stable construction and their simple and timeless design. Same design as version with bearing washer. Thanks to the larger bearing surface, no bearing washers are needed.

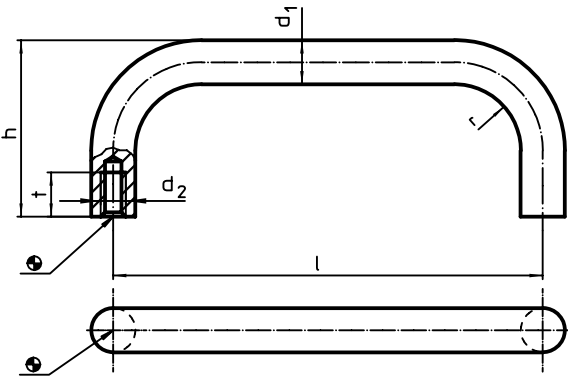
Material

- Steel, plastic coated, black

Handle

- Stainless steel 1.4301, dull blasted

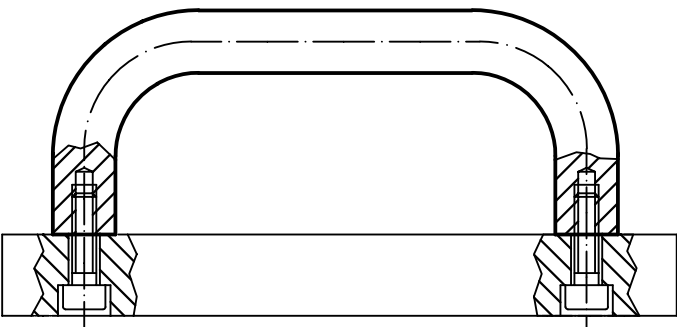
DRAWING



ORDER INFORMATION

Dimensions							Art. No.	
d ₁	l ±0.5	d ₂	h	r	t min.		Stainless steel	Steel
[mm]						[g]		
12	125	M6	51	14	12	197	24310.0710	24310.0910
	160	M6	51	14	12	201	24310.0720	24310.0920
	200	M6	51	14	12	237	24310.0730	24310.0930
	250	M6	51	14	12	282	24310.0740	24310.0940
16	160	M6	59	18	12	373	24310.0750	24310.0950
	200	M6	59	18	12	437	24310.0760	24310.0960
	250	M6	59	18	12	523	24310.0770	24310.0970
	300	M6	59	18	12	603	24310.0780	24310.0980

APPLICATION EXAMPLE





PRODUCT DESCRIPTION

U-handles are used, for example, on machine doors, furniture doors, cabinet doors, drawers and drawer units. These U-handles made of glass fibre reinforced plastic are characterised by their ergonomic and stable construction and their simple and timeless design.

Material

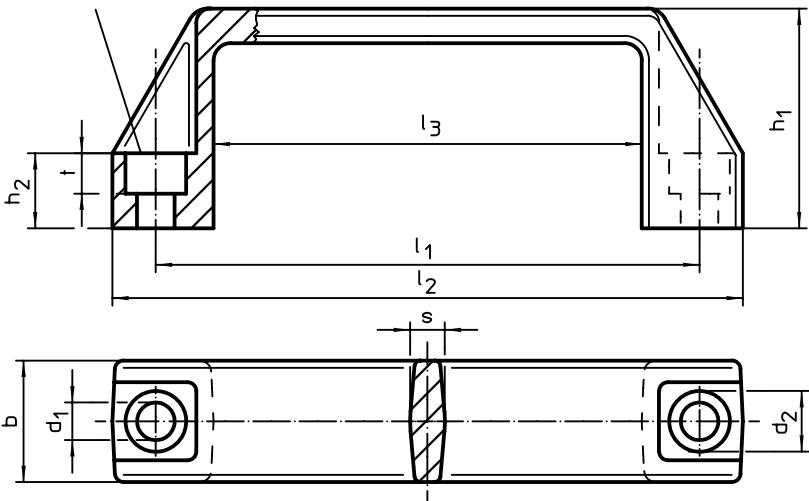
- Handle**
- Thermoplastic PA, glass-fibre reinforced, black

Assembly

Mounting is done from the operating side by means of a cylinder screw.

DRAWING

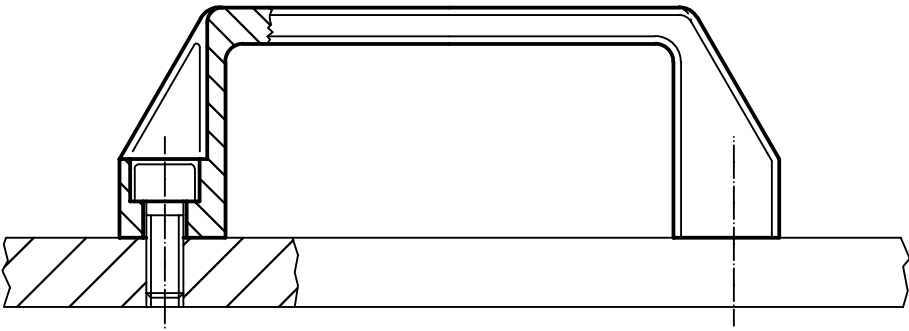
For for cylinder head stud
ISO4762 – M6/M8/M10



ORDER INFORMATION

Dimensions										For cylinder screw	max.		Art. No.
l_1 ± 0.5	d_1	b	l_2	d_2	h_1	h_2	l_3	s	t				
[mm]										[mm]	[°C]	[g]	
93.5	6.5	21	109	10.5	38	13	74	6.0	7.0	M 6	100	28	24320.0010
117.0	8.5	26	137	13.5	41	15	93	7.0	8.5	M 8	100	42	24320.0020
132.0	8.5	27	150	13.5	45	16	108	7.0	8.5	M 8	100	48	24320.0030
179.0	8.5	28	196	13.5	50	17	151	7.5	8.5	M 8	100	70	24320.0040
235.0	10.5	30	260	16.5	54	20	201	8.5	10.5	M10	100	118	24320.0050

APPLICATION EXAMPLE



U-Handles • plastic
EH 24320.



PRODUCT DESCRIPTION

U-handles are used, for example, on machine doors, furniture doors, cabinet doors, drawers and drawer units.
These U-handles made of glass fibre reinforced plastic are characterised by their ergonomic and stable construction and their simple and timeless design.

Material

Bushing
▪ Brass

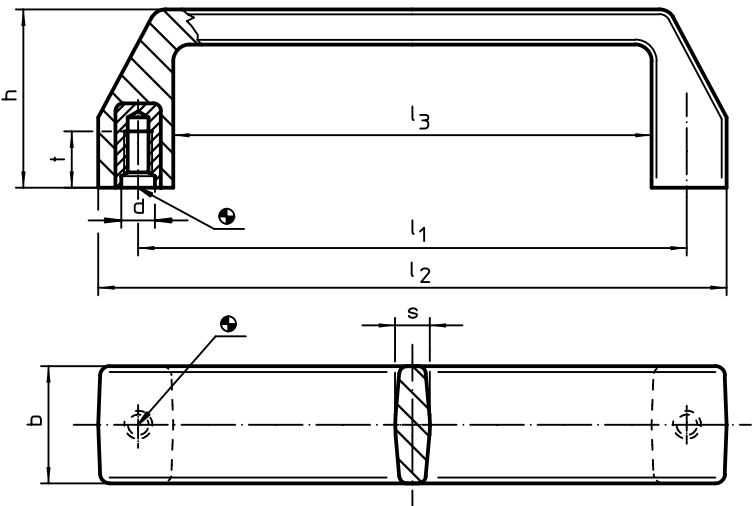
Handle

- Thermoplastic PA, glass-fibre reinforced, black

Assembly

Back mount handle.

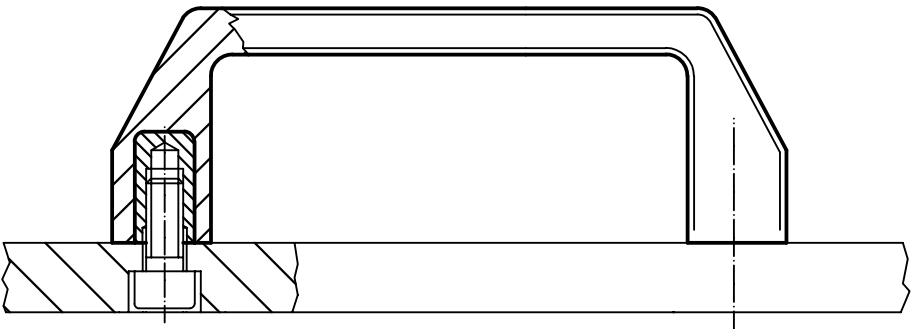
DRAWING



ORDER INFORMATION

Dimensions										Art. No.
l_1 ± 0.5	d	b	h	l_2	l_3	s	t	max. [°C]	[g]	
[mm]										
93.5	M6	21	36	107	79	6.0	10	100	31	24320.0210
117.0	M6	25	38	134	102	7.5	12	100	54	24320.0220
	M8	25	38	134	102	7.5	12	100	50	24320.0230
132.0	M8	26	45	150	116	8.0	13	100	59	24320.0240

APPLICATION EXAMPLE



Tubular Handles
EH 24321.



PRODUCT DESCRIPTION

Tubular handles are used, for example, on machine doors. These tubular handles made of aluminium are characterised by their ergonomic and robust construction and modern design. This version is equipped with angled handle legs (legs).

Material

- Cap**
- Plastic, light grey
- Handle**
- Aluminium, anodised
 - Aluminium, plastic coated, similar to RAL 9005 black, matt structure

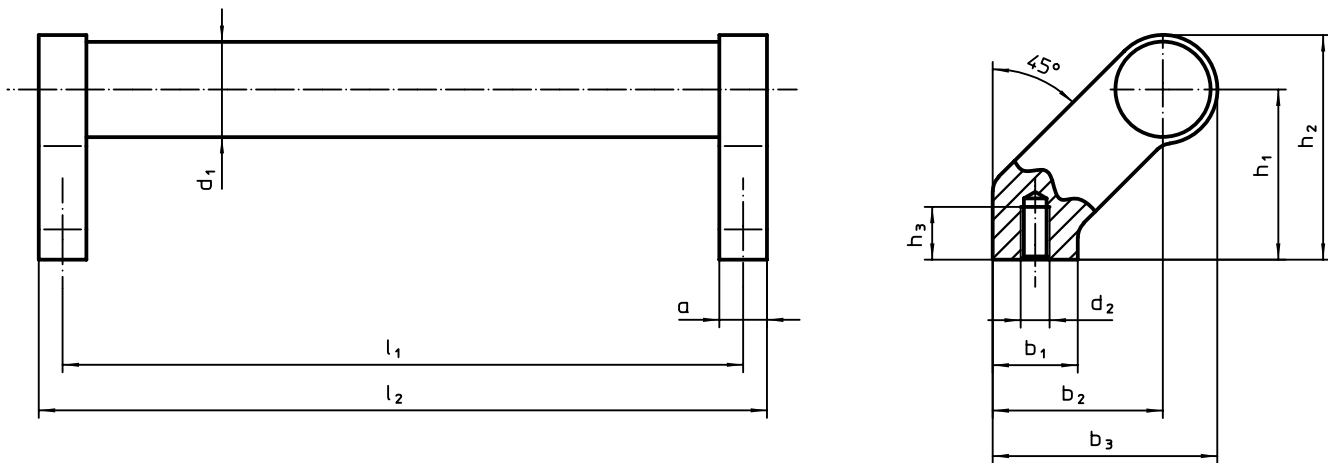
Assembly

Back mount handle.

MORE INFORMATION

Notes
Special types on request.

DRAWING



ORDER INFORMATION

Dimensions												Art. No.	
d_1	l_1 ± 0.25	a	b_1	b_2	b_3	d_2	h_1	h_2	h_3 min.	l_2		silver	black
[mm]											[g]		
20	180	12	24	42	54	M6	42	54	12	192	244	24321.0005	24321.0505
	200	12	24	42	54	M6	42	54	12	212	244	24321.0010	24321.0510
	250	12	24	42	54	M6	42	54	12	262	265	24321.0015	24321.0515
	300	12	24	42	54	M6	42	54	12	312	280	24321.0020	24321.0520
	350	12	24	42	54	M6	42	54	12	362	296	24321.0025	24321.0525
	400	12	24	42	54	M6	42	54	12	412	317	24321.0030	24321.0530
28	200	14	25	50	66	M8	50	66	15	214	424	24321.0035	24321.0535
	250	14	25	50	66	M8	50	66	15	264	455	24321.0040	24321.0540
	300	14	25	50	66	M8	50	66	15	314	480	24321.0045	24321.0545
	350	14	25	50	66	M8	50	66	15	364	501	24321.0050	24321.0550
	400	14	25	50	66	M8	50	66	15	414	536	24321.0055	24321.0555
	500	14	25	50	66	M8	50	66	15	514	593	24321.0060	24321.0560
	600	14	25	50	66	M8	50	66	15	614	570	24321.0065	24321.0565
30	200	17	27	51	68	M8	51	68	15	217	429	24321.0070	24321.0570
	300	17	27	51	68	M8	51	68	15	317	489	24321.0075	24321.0575
	350	17	27	51	68	M8	51	68	15	367	501	24321.0080	24321.0580
	400	17	27	51	68	M8	51	68	15	417	538	24321.0085	24321.0585
	500	17	27	51	68	M8	51	68	15	517	613	24321.0090	24321.0590
	600	17	27	51	68	M8	51	68	15	617	669	24321.0095	24321.0595

Tubular Handles • front mounting

EH 24321.



PRODUCT DESCRIPTION

Tubular handles are used, for example, on machine doors.

These tubular handles made of aluminium are characterised by their ergonomic and robust construction and modern design. This version is equipped with angled handle legs (legs).

Material

Cap

- Plastic, light grey

Handle

- Aluminium, anodised
- Aluminium, plastic coated, similar to RAL 9005 black, matt structure

Covering

- Plastic, light grey

- Plastic, black

Assembly

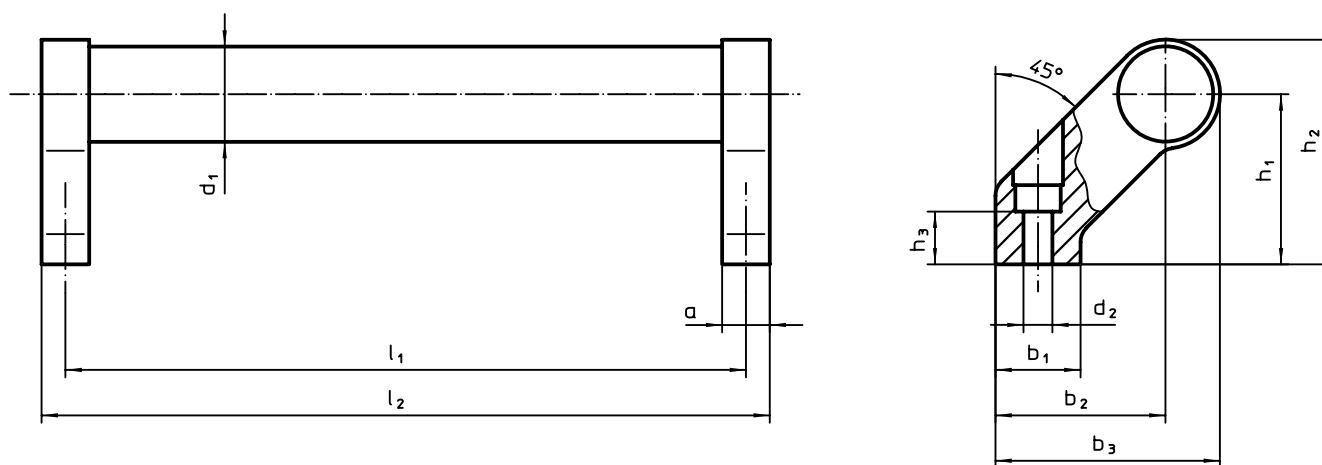
The handles can be mounted to the component from the front (operating side) using cylinder screws. The hole is closed with a plastic covering.

MORE INFORMATION

Notes

Special types on request.

DRAWING



ORDER INFORMATION

d ₁	l ₁ ±0.25	Dimensions										Art. No.	
		a	b ₁	b ₂	b ₃	d ₂	h ₁	h ₂	h ₃ min.	l ₂		silver	black
[mm]											[g]		
28	200	14	25	50	66	6.5	50	66	17	214	406	24321.0100	24321.0600
	250	14	25	50	66	6.5	50	66	17	264	437	24321.0105	24321.0605
	300	14	25	50	66	6.5	50	66	17	314	448	24321.0110	24321.0610
	350	14	25	50	66	6.5	50	66	17	364	493	24321.0115	24321.0615
	400	14	25	50	66	6.5	50	66	17	414	520	24321.0120	24321.0620
	500	14	25	50	66	6.5	50	66	17	514	556	24321.0125	24321.0625
	600	14	25	50	66	6.5	50	66	17	614	631	24321.0130	24321.0630

Crank Handles • DIN 469 straight with square end DIN 79

EH 24330.



PRODUCT DESCRIPTION

With these crank handles, the seam is ground and blasted. The hub is machined.

Material

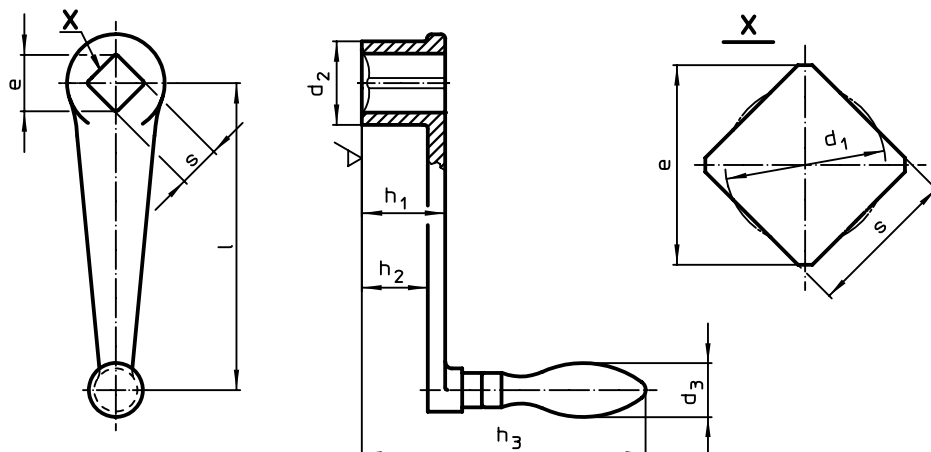
Machine handle

- Steel, turned, zinc-plated by galvanization, passivated

Handle body

- Cast iron (GTW), plastic coated, black
- Nodular cast iron, plastic coated, black

DRAWING



ORDER INFORMATION

l	s H11	e min.	Dimensions					d ₃ Machine handle ∅		Art. No.
			d ₁	d ₂	h ₁	h ₂ ~	h ₃			
			[mm]							
with rotating machine handle (EH 24460., DIN 98), form D										
63	10	13.1	10.5	20	20	15	79	16	118	24330.0010 ¹⁾
80	10	13.1	10.5	24	24	18	97	18	211	24330.0020
	12	16.1	12.6	24	24	18	97	18	197	24330.0021
100	12	16.1	12.6	28	28	21	100	20	297	24330.0030
	14	18.1	14.7	28	28	21	100	20	293	24330.0031
125	14	18.1	14.7	34	34	26	122	22	468	24330.0040
	17	22.2	17.9	34	34	26	122	22	433	24330.0041
160	17	22.2	17.9	38	38	29	126	25	667	24330.0050
	19	25.2	20.0	38	38	29	126	25	665	24330.0051
200	19	25.2	20.0	44	44	34	160	28	1054	24330.0060
	22	28.2	23.1	44	44	34	160	28	992	24330.0061
250	22	28.2	23.1	48	48	36	162	32	1441	24330.0070
	24	32.2	25.3	48	48	36	162	32	1409	24330.0071
with fixed machine handle (EH 24450., DIN 39), form F										
63	10	13.1	10.5	20	20	15	74	16	109	24330.0110 ¹⁾
80	10	13.1	10.5	24	24	18	94	18	183	24330.0120
	12	16.1	12.6	24	24	18	94	18	186	24330.0121
100	12	16.1	12.6	28	28	21	98	20	278	24330.0130
	14	18.1	14.7	28	28	21	98	20	259	24330.0131
125	14	18.1	14.7	34	34	26	120	22	444	24330.0140
	17	22.2	17.9	34	34	26	120	22	433	24330.0141
160	17	22.2	17.9	38	38	29	122	25	786	24330.0150
	19	25.2	20.0	38	38	29	122	25	633	24330.0151
200	19	25.2	20.0	44	44	34	154	28	962	24330.0160
	22	28.2	23.1	44	44	34	154	28	983	24330.0161
250	22	28.2	23.1	48	48	36	157	32	1360	24330.0170
	24	32.2	25.3	48	48	36	157	32	1678	24330.0171

¹⁾ Handle body made from cast iron (GTW)

Crank Handles • DIN 468 goose-neck form with square end DIN 79

EH 24330.



PRODUCT DESCRIPTION

With these crank handles, the seam is ground and blasted. The hub is machined.

Material

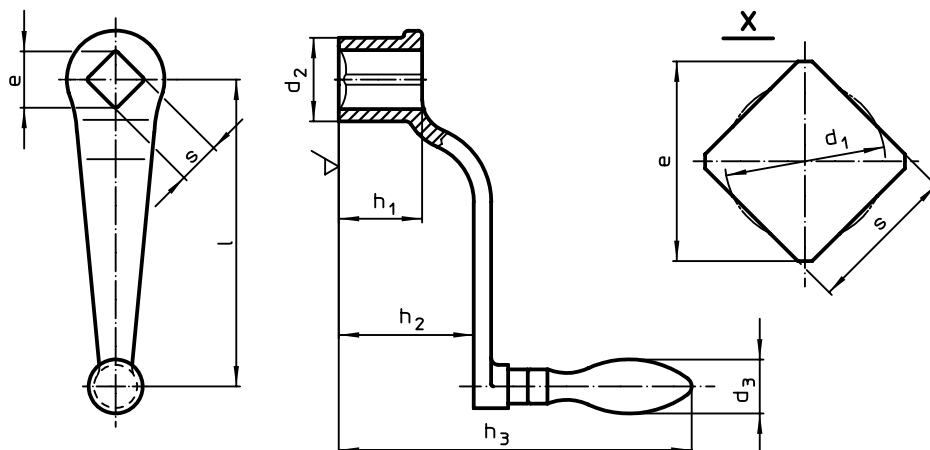
Machine handle

- Steel, turned, zinc-plated by galvanization, passivated

Handle body

- Cast iron (GTW), plastic coated, black
- Nodular cast iron, plastic coated, black

DRAWING



ORDER INFORMATION

l	s H11	e min.	Dimensions					d ₃ Machine handle ∅		Art. No.	
			d ₁	d ₂	h ₁	h ₂ ~	h ₃				
[mm]									[mm]	[g]	
with rotating machine handle (EH 24460., DIN 98), form D											
63	10	13.1	10.5	20	20	32	96	16	128	24330.0210 ¹⁾	
80	10	13.1	10.5	24	24	38	116	18	201	24330.0220	
	12	16.1	12.6	24	24	38	116	18	200	24330.0221	
100	12	16.1	12.6	28	28	48	126	20	310	24330.0230	
	14	18.1	14.7	28	28	48	126	20	291	24330.0231	
125	14	18.1	14.7	34	34	55	150	22	464	24330.0240	
	17	22.2	17.9	34	34	55	150	22	455	24330.0241	
160	17	22.2	17.9	38	38	65	160	25	674	24330.0250	
	19	25.2	20.0	38	38	65	160	25	664	24330.0251	
200	19	25.2	20.0	44	44	78	202	28	1083	24330.0260	
	22	28.2	23.1	44	44	78	202	28	1048	24330.0261	
250	22	28.2	23.1	48	48	90	214	32	1466	24330.0270	
	24	32.2	25.3	48	48	90	214	32	1478	24330.0271	
315	24	32.2	25.3	54	54	105	248	36	2303	24330.0280	
	27	36.2	28.4	54	54	105	248	36	2200	24330.0281	
with fixed machine handle (EH 24450., DIN 39), form F											
63	10	13.1	10.5	20	20	32	92	16	136	24330.0310 ¹⁾	
80	10	13.1	10.5	24	24	38	114	18	187	24330.0320	
	12	16.1	12.6	24	24	38	114	18	183	24330.0321	
100	12	16.1	12.6	28	28	48	124	20	288	24330.0330	
	14	18.1	14.7	28	28	48	124	20	292	24330.0331	
125	14	18.1	14.7	34	34	55	148	22	460	24330.0340	
	17	22.2	17.9	34	34	55	148	22	439	24330.0341	
160	17	22.2	17.9	38	38	65	158	25	661	24330.0350	
	19	25.2	20.0	38	38	65	158	25	627	24330.0351	
200	19	25.2	20.0	44	44	78	197	28	1020	24330.0360	
	22	28.2	23.1	44	44	78	197	28	1004	24330.0361	
250	22	28.2	23.1	48	48	90	209	32	1490	24330.0370	
	24	32.2	25.3	48	48	90	209	32	1415	24330.0371	
315	24	32.2	25.3	54	54	105	243	36	2200	24330.0380	
	27	36.2	28.4	54	54	105	243	36	2100	24330.0381	

¹⁾ Handle body made from cast iron (GTW)

Crank Handles
EH 24330.



PRODUCT DESCRIPTION

Material

Handle body

- Zinc die-cast, plastic coated, black, matt structure
- Aluminium, plastic coated, black, matt structure

Cylindrical handle

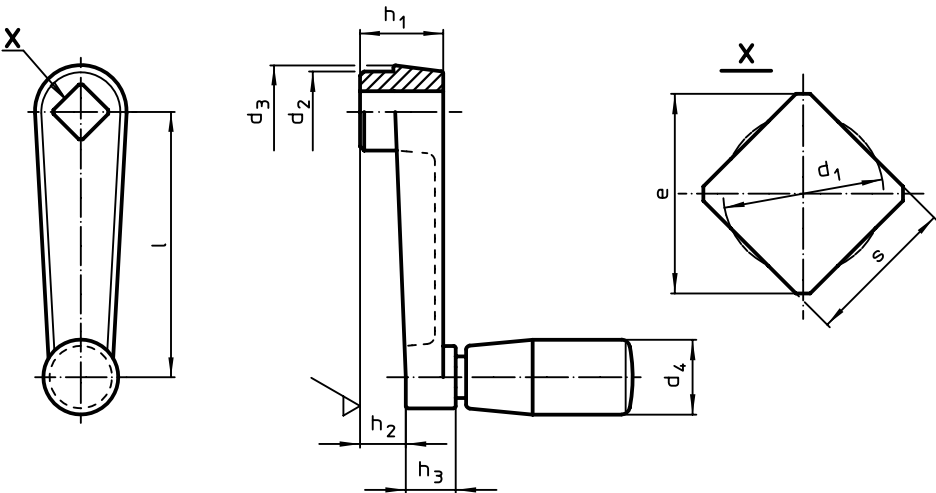
- Thermosetting plastic PF 31, black

MORE INFORMATION

References

Alternative to crank handles DIN 469.

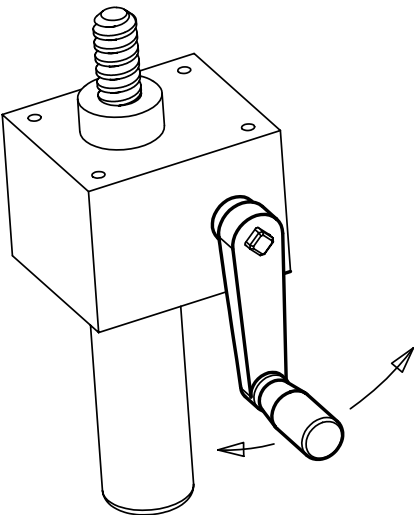
DRAWING



ORDER INFORMATION

Dimensions									d ₄ Cylindrical handle Ø EH 24530.	 max.	 [g]	Art. No.
l	s H11	e min.	d ₁ max.	d ₂	d ₃	h ₁	h ₂	h ₃	[mm]	[°C]	[g]	
zinc die-cast												
50	8	10.1	8.4	16	18	18	10	10	14	80	58	24330.0420
64	10	13.1	10.5	19	22	20	11	12	18	80	97	24330.0422
80	10	13.1	10.5	23	26	24	14	14	21	80	166	24330.0424
100	12	16.1	12.6	27	30	28	17	15	23	80	270	24330.0436
aluminium Al												
80	10	13.1	10.5	23	26	24	14	14	21	80	97	24330.0410
100	12	16.1	12.6	27	30	28	17	15	23	80	161	24330.0412
125	14	18.1	14.7	32	35	34	22	18	26	80	251	24330.0414
160	17	22.2	17.9	35	39	38	26	18	26	80	280	24330.0416

APPLICATION EXAMPLE



Crank Handles • stainless steel precision casting
EH 24330.



PRODUCT DESCRIPTION

Flat side of the hub is machined.

Material

- Axle part**
- Stainless steel 1.4301

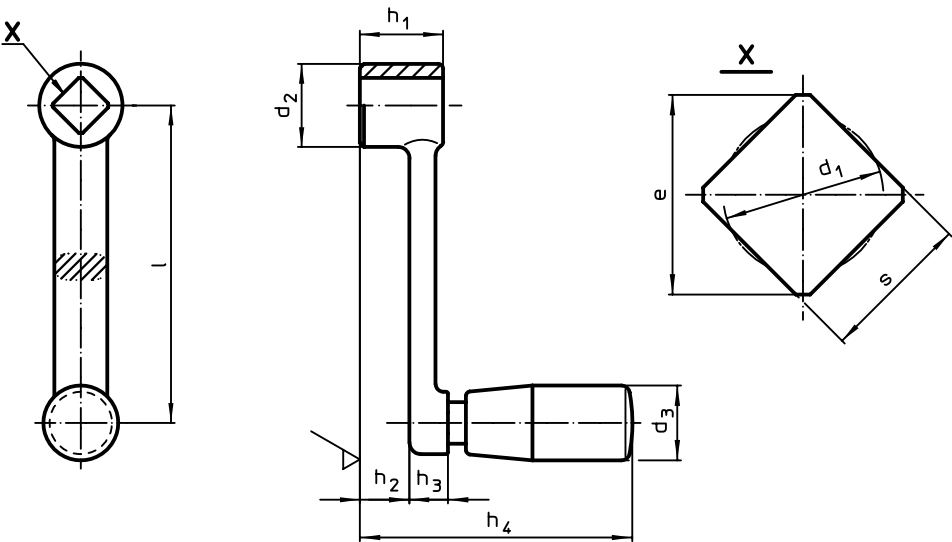
Handle body

- Stainless steel 1.4308

Cylindrical handle

- Thermosetting plastic PF 31, black

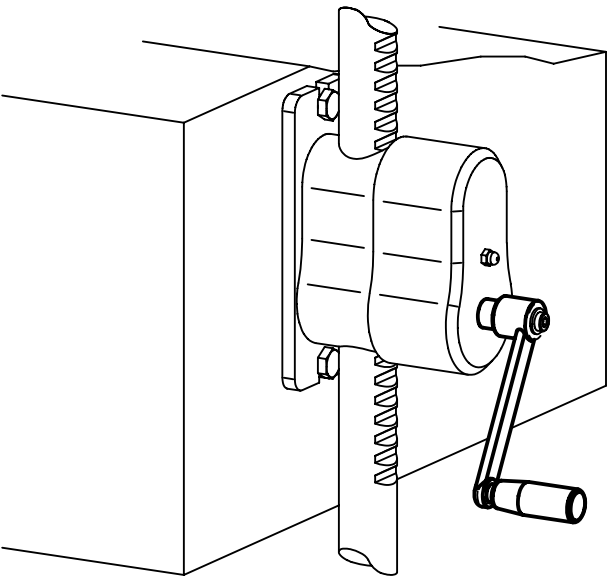
DRAWING



ORDER INFORMATION

Dimensions									d ₃ Cylindrical handle Ø EH 24530.		Art. No.
l	s H11	e min.	d ₁ max.	d ₂	h ₁	h ₂ ~	h ₃	h ₄ ~	[mm]	[g]	
[mm]											
80	10	13.1	10.5	22	22	15.4	6.6	64.5	18	124	24330.0520
100	12	16.1	12.6	26	26	17.7	8.3	78.5	21	191	24330.0530
125	14	18.1	14.7	28	28	18.8	9.2	95.5	23	320	24330.0540
160	17	22.2	17.9	32	32	22.6	9.4	99.5	23	370	24330.0550

APPLICATION EXAMPLE



Crank Handles • with folding handle

EH 24331.



PRODUCT DESCRIPTION

Material

Axle part

- Steel, blackened

Handle

- Thermoplastic, black, dull

Handle body

- Aluminium, plastic coated, similar to RAL 9006 silver, structural matt

- Aluminium, plastic coated, similar to RAL 9005 black, matt structure

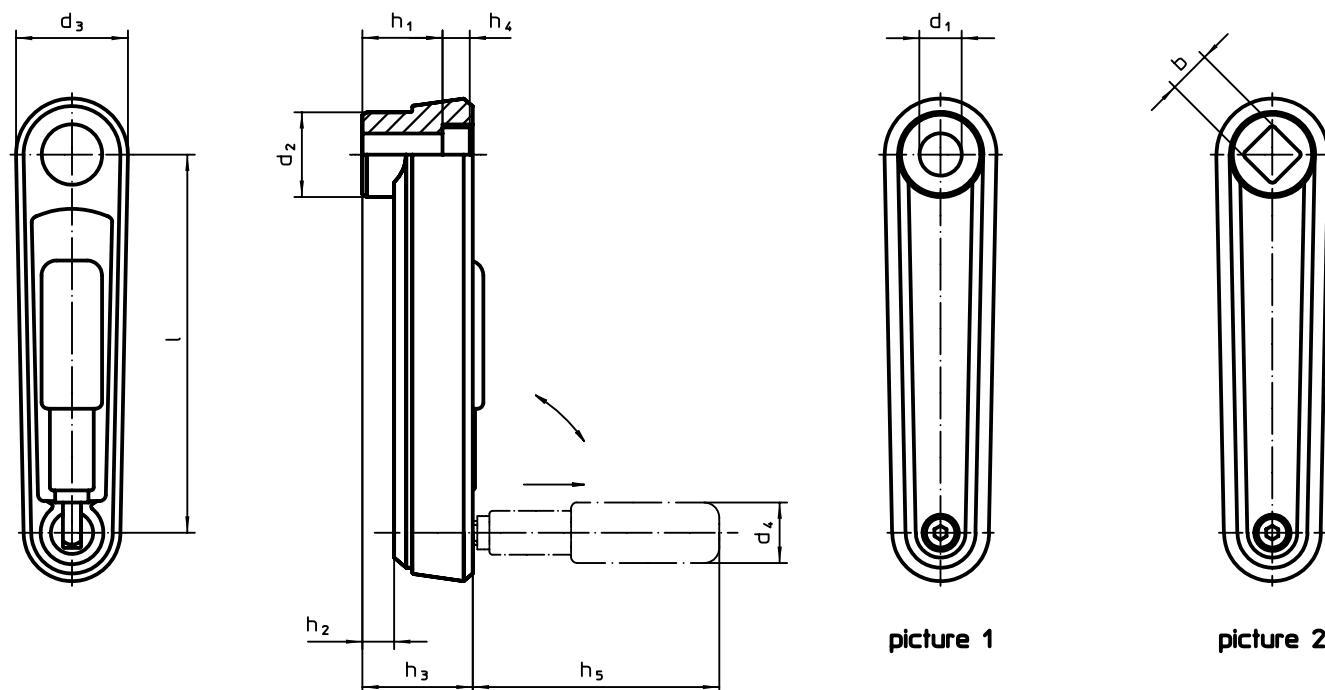
Covering

- Plastic, light grey

Operation

In the operating position the handle is locked. To move the handle to the rest position, it must be pulled out axially and flipped round.

DRAWING



ORDER INFORMATION

Dimensions												Art. No.	
l	d ₁ H7	b H11	d ₂	d ₃	h ₁	h ₂ ~	h ₃	h ₄	h ₅	d ₄ Cylindrical handle ∅		silver	black
[mm]											[g]		
with smooth bore – picture 1													
80	10	–	23.0	30	19.5	4.0	25.5	4.3	43.0	16	116	24331.0005	24331.0105
100	12	–	26.7	35	23.5	5.5	29.5	4.2	57.5	18	172	24331.0010	24331.0110
125	14	–	28.0	37	30.5	10.5	36.5	4.2	76.5	24	261	24331.0015	24331.0115
with square shaft – picture 2													
80	–	10	23.0	30	19.5	4.0	25.5	4.3	43.0	16	115	24331.0205	24331.0305
100	–	12	26.7	35	23.5	5.5	29.5	4.2	57.5	18	170	24331.0210	24331.0310
125	–	14	28.0	37	30.5	10.5	36.5	4.2	76.5	24	256	24331.0215	24331.0315

Crank Handles • with folding handle, stainless steel

EH 24331.



PRODUCT DESCRIPTION

Material

Axle part

- Stainless steel 1.4305

Handle

- Thermoplastic, black, dull

Handle body

- Aluminium, plastic coated, similar to RAL 9006 silver, structural matt

- Aluminium, plastic coated, similar to RAL 9005 black, matt structure

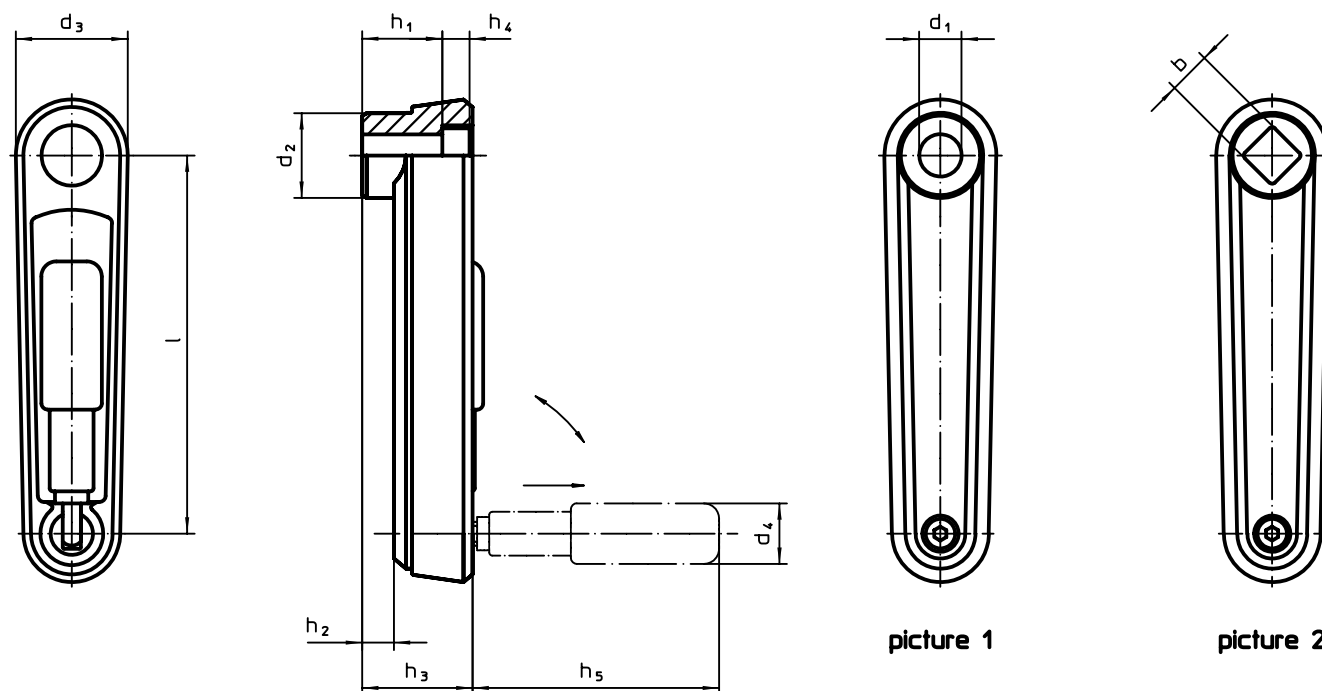
Covering

- Plastic, light grey

Operation

In the operating position the handle is locked. To move the handle to the rest position, it must be pulled out axially and flipped round.

DRAWING



ORDER INFORMATION

l	d ₁ H7	b H11	d ₂	d ₃	Dimensions					d ₄ Cylindrical handle ∅		Art. No.	
					h ₁	h ₂ ~	h ₃	h ₄	h ₅			silver	black
					[mm]							[g]	
with smooth bore – picture 1													
80	10	–	23.0	30	19.5	4.0	25.5	4.3	43.0	16	119	24331.0405	24331.0505
100	12	–	26.7	35	23.5	5.5	29.5	4.2	57.5	18	174	24331.0410	24331.0510
125	14	–	28.0	37	30.5	10.5	36.5	4.2	76.5	24	246	24331.0415	24331.0515
with square shaft – picture 2													
80	–	10	23.0	30	19.5	4.0	25.5	4.3	43.0	16	117	24331.0605	24331.0705
100	–	12	26.7	35	23.5	5.5	29.5	4.2	57.5	18	171	24331.0610	24331.0710
125	–	14	28.0	37	30.5	10.5	36.5	4.2	76.5	24	240	24331.0615	24331.0715

Gear Lever Handles

EH 24350.



PRODUCT DESCRIPTION

Material

Gear lever handle

- Steel, zinc-plated by galvanization, passivated
- Stainless steel 1.4305, dull blasted

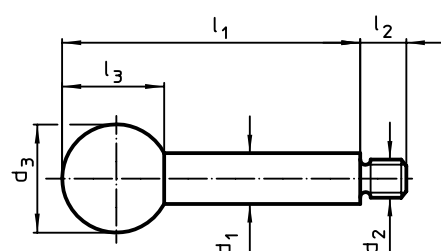
Ball knob

- Thermosetting plastic PF 31, black, DIN 319

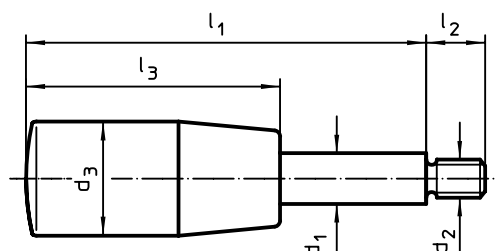
Cylindrical handle

- Thermosetting plastic PF 31, black

DRAWING



picture 1



picture 2

ORDER INFORMATION

Dimensions						max. [°C]	[g]	Art. No.	
d ₁	l ₁	d ₂	d ₃	l ₂	l ₃			Steel	Stainless steel
[mm]									
with spherical knob – picture 1									
8	63	M 6	20	9	18.0	110	30	24350.0020	24350.0520
	80	M 6	20	9	18.0	110	34	24350.0022	24350.0522
	100	M 6	20	9	18.0	110	39	24350.0024	24350.0524
10	80	M 8	25	11	22.5	110	50	24350.0030	24350.0530
	100	M 8	25	11	22.5	110	62	24350.0032	24350.0532
	125	M 8	25	11	22.5	110	76	24350.0034	24350.0534
12	100	M10	32	14	29.0	110	96	24350.0040	24350.0540
	125	M10	32	14	29.0	110	118	24350.0042	24350.0542
	160	M10	32	14	29.0	110	149	24350.0044	24350.0544
14	125	M12	35	16	32.5	110	157	24350.0050	24350.0550
	160	M12	35	16	32.5	110	203	24350.0052	24350.0552
	200	M12	35	16	32.5	110	251	24350.0054	24350.0554
16	160	M14	40	18	37.0	110	310	24350.0060	–
	200	M14	40	18	37.0	110	326	24350.0062	–
	250	M14	40	18	37.0	110	397	24350.0064	–
with cylindrical handle – picture 2									
8	63	M 6	18	9	40.0	110	26	24350.0120	24350.0620
	80	M 6	18	9	40.0	110	33	24350.0122	24350.0622
	100	M 6	18	9	40.0	110	42	24350.0124	24350.0624
10	80	M 8	21	11	50.0	110	50	24350.0130	24350.0630
	100	M 8	21	11	50.0	110	62	24350.0132	24350.0632
	125	M 8	21	11	50.0	110	78	24350.0134	24350.0634
12	100	M10	23	14	65.0	110	81	24350.0140	24350.0640
	125	M10	23	14	65.0	110	103	24350.0142	24350.0642
	160	M10	23	14	65.0	110	133	24350.0144	24350.0644
14	125	M12	26	16	80.0	110	125	24350.0150	24350.0650
	160	M12	26	16	80.0	110	168	24350.0152	24350.0652
	200	M12	26	16	80.0	110	216	24350.0154	24350.0654
16	160	M14	28	18	90.0	110	214	24350.0160	–
	200	M14	28	18	90.0	110	273	24350.0162	–
	250	M14	28	18	90.0	110	352	24350.0164	–

Adjustable Clamping Levers • inner parts from stainless steel, with female thread

EH 24390.



PRODUCT DESCRIPTION

Adjustable clamping levers with rust-proof inner parts. Suitable for multiple applications, e.g. medical environments, chemical industry, and so on.

Material

Lever

- Zinc die-cast, plastic coated, orange similar to RAL 2004, matt structure
- Zinc die-cast, plastic coated, black, similar to RAL 9005, matt structure

Threaded part

- Stainless steel 1.4305

Inner parts

- Stainless steel 1.4305

Operation

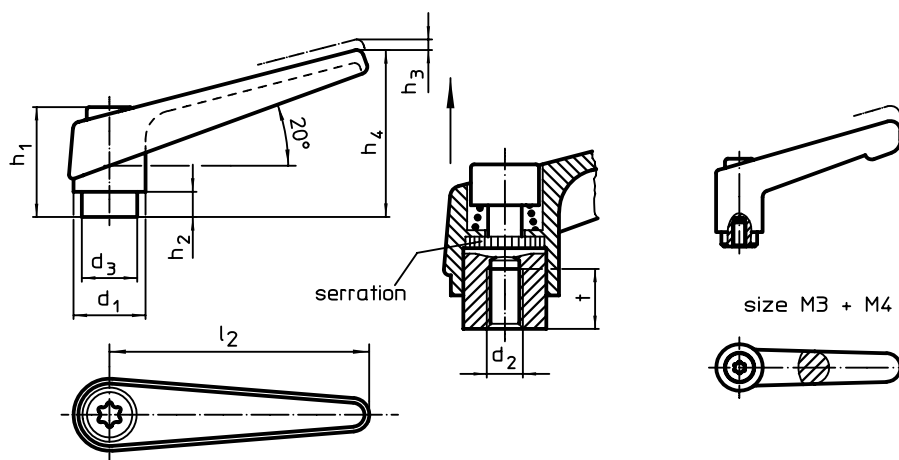
By lifting the lever the serrations are disengaged. The lever can be positioned by the serrations. On releasing the lever, the serrations are automatically re-engaged.

MORE INFORMATION

Notes

The threaded portion can be exchanged.

DRAWING



ORDER INFORMATION

Dimensions										Art. No.	
d ₁	d ₂	d ₃	h ₁	h ₂	h ₃	h ₄	l ₂	t ≥		orange	black
[mm]									[g]		
13	M 3	10.0	24.5	4.0	3.5	30.5	30	7	26	24390.0032	24390.0034
	M 4	10.0	24.5	4.0	3.5	30.5	30	9	25	24390.0036	24390.0038
14	M 5	10.0	24.5	4.0	3.0	35.0	45	8	33	24390.0111	24390.0114
	M 6	10.0	24.5	4.0	3.0	35.0	45	8	33	24390.0121	24390.0124
18	M 8	13.5	31.0	6.5	3.0	45.0	62	10	67	24390.0321	24390.0324
22	M 8	16.0	36.0	8.0	3.5	52.0	74	14	112	24390.0411	24390.0414
	M10	16.0	36.0	8.0	3.5	52.0	74	14	109	24390.0421	24390.0424
25	M10	19.0	43.0	11.0	4.0	63.0	89	17	175	24390.0511	24390.0514
	M12	19.0	43.0	11.0	4.0	63.0	89	17	171	24390.0521	24390.0524
30	M12	23.0	50.5	12.0	5.0	76.0	108	22	286	24390.0611	24390.0614
	M16	23.0	50.5	12.0	5.0	76.0	108	22	269	24390.0621	24390.0624

Adjustable Clamping Levers • inner parts from stainless steel, with screw

EH 24390.



PRODUCT DESCRIPTION

Adjustable clamping levers with rust-proof inner parts. Suitable for multiple applications, e.g. medical environments, chemical industry, and so on.

Material

Lever

- Zinc die-cast, plastic coated, orange similar to RAL 2004, matt structure
- Zinc die-cast, plastic coated, black, similar to RAL 9005, matt structure

Inner parts

- Stainless steel 1.4305

Screw

- Stainless steel 1.4305

Operation

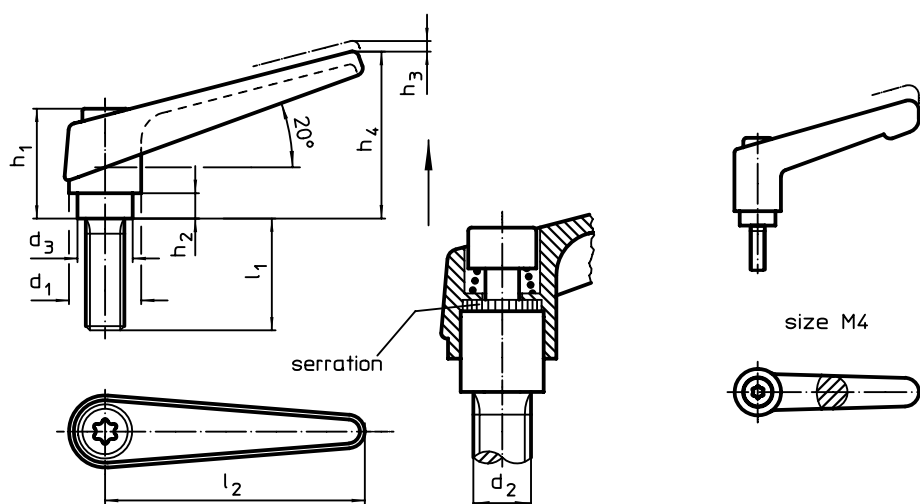
By lifting the lever the serrations are disengaged. The lever can be positioned by the serrations. On releasing the lever, the serrations are automatically re-engaged.

MORE INFORMATION

Notes

The screw part can be exchanged.

DRAWING



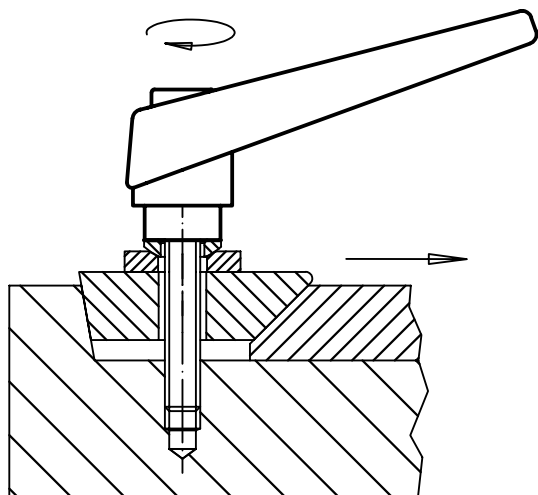
ORDER INFORMATION

Dimensions										Art. No.	
d ₁	d ₂	l ₁	d ₃	h ₁	h ₂	h ₃	h ₄	l ₂		orange	black
[mm]										[g]	
13	M 4	12	10.0	24.5	4.0	3.5	30.5	30	27	24390.0010	24390.0012
		16	10.0	24.5	4.0	3.5	30.5	30	30	24390.0014	24390.0016
		20	10.0	24.5	4.0	3.5	30.5	30	28	24390.0018	24390.0020
		25	10.0	24.5	4.0	3.5	30.5	30	28	24390.0022	24390.0024
		32	10.0	24.5	4.0	3.5	30.5	30	29	24390.0026	24390.0028
14	M 5	12	10.0	24.5	4.0	3.0	35.0	45	36	24390.0041	24390.0044
		16	10.0	24.5	4.0	3.0	35.0	45	36	24390.0051	24390.0054
		20	10.0	24.5	4.0	3.0	35.0	45	37	24390.0061	24390.0064
		25	10.0	24.5	4.0	3.0	35.0	45	38	24390.0071	24390.0074
		32	10.0	24.5	4.0	3.0	35.0	45	38	24390.0081	24390.0084
	M 6	40	10.0	24.5	4.0	3.0	35.0	45	39	24390.0086	24390.0089
		12	10.0	24.5	4.0	3.0	35.0	45	37	24390.0131	24390.0134
		16	10.0	24.5	4.0	3.0	35.0	45	37	24390.0141	24390.0144
		20	10.0	24.5	4.0	3.0	35.0	45	38	24390.0151	24390.0154
		25	10.0	24.5	4.0	3.0	35.0	45	39	24390.0161	24390.0164
		32	10.0	24.5	4.0	3.0	35.0	45	40	24390.0171	24390.0174
		40	10.0	24.5	4.0	3.0	35.0	45	41	24390.0181	24390.0184
		50	10.0	24.5	4.0	3.0	35.0	45	43	24390.0191	24390.0194



Dimensions										Art. No.	
d ₁	d ₂	l ₁	d ₃	h ₁	h ₂	h ₃	h ₄	l ₂		orange	black
[mm]										[g]	
18	M 8	16	13.5	31.0	6.5	3.0	45.0	62	74	24390.0331	24390.0334
		20	13.5	31.0	6.5	3.0	45.0	62	76	24390.0341	24390.0344
		25	13.5	31.0	6.5	3.0	45.0	62	77	24390.0351	24390.0354
		32	13.5	31.0	6.5	3.0	45.0	62	79	24390.0361	24390.0364
		40	13.5	31.0	6.5	3.0	45.0	62	81	24390.0371	24390.0374
		50	13.5	31.0	6.5	3.0	45.0	62	84	24390.0381	24390.0384
		63	13.5	31.0	6.5	3.0	45.0	62	89	24390.0391	24390.0394
		20	16.0	36.0	8.0	3.5	52.0	74	128	24390.0441	24390.0444
		25	16.0	36.0	8.0	3.5	52.0	74	130	24390.0451	24390.0454
		32	16.0	36.0	8.0	3.5	52.0	74	134	24390.0461	24390.0464
		40	16.0	36.0	8.0	3.5	52.0	74	138	24390.0471	24390.0474
		50	16.0	36.0	8.0	3.5	52.0	74	143	24390.0481	24390.0484
22	M10	63	16.0	36.0	8.0	3.5	52.0	74	148	24390.0486	24390.0489
		80	16.0	36.0	8.0	3.5	52.0	74	157	24390.0491	24390.0494
		25	19.0	43.0	11.0	4.0	63.0	89	205	24390.0541	24390.0544
		32	19.0	43.0	11.0	4.0	63.0	89	209	24390.0551	24390.0554
		40	19.0	43.0	11.0	4.0	63.0	89	215	24390.0561	24390.0564
		50	19.0	43.0	11.0	4.0	63.0	89	222	24390.0571	24390.0574
25	M12	63	19.0	43.0	11.0	4.0	63.0	89	232	24390.0581	24390.0584
		80	19.0	43.0	11.0	4.0	63.0	89	240	24390.0591	24390.0594
		32	23.0	50.5	12.0	5.0	76.0	108	348	24390.0641	24390.0644
		40	23.0	50.5	12.0	5.0	76.0	108	357	24390.0651	24390.0654
		50	23.0	50.5	12.0	5.0	76.0	108	370	24390.0661	24390.0664
		63	23.0	50.5	12.0	5.0	76.0	108	386	24390.0671	24390.0674
30	M16	80	23.0	50.5	12.0	5.0	76.0	108	407	24390.0681	24390.0684

APPLICATION EXAMPLE



Adjustable Clamping Levers • with female thread

EH 24400.



PRODUCT DESCRIPTION

Adjustable clamping levers find versatile applications when the area of use is confined or a specific lever position is required.

Material

Lever

- Zinc die-cast, plastic coated, orange similar to RAL 2004, matt structure
- Zinc die-cast, plastic coated, silver, similar to RAL 9006, matt structure
- Zinc die-cast, plastic coated, black, similar to RAL 9005, matt structure

Threaded part

- Steel, blackened, quality 5

Inner parts

- Steel, blackened, quality 5.8

Operation

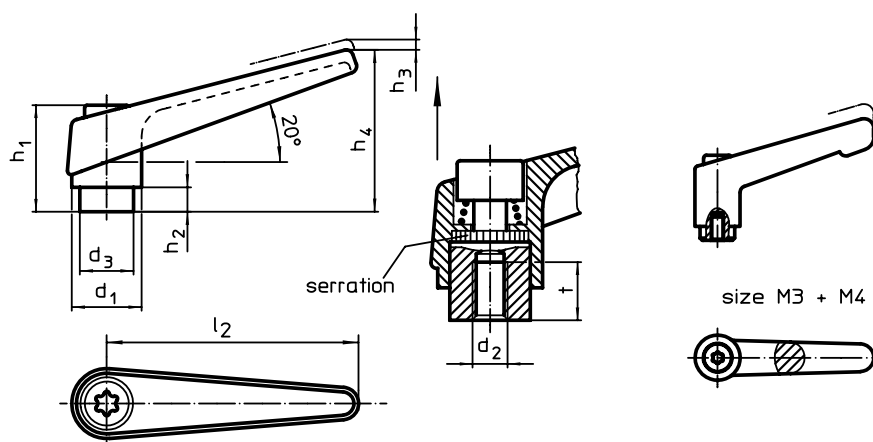
By lifting the lever the serrations are disengaged. The lever can be positioned by the serrations. On releasing the lever, the serrations are automatically re-engaged.

MORE INFORMATION

Notes

The threaded portion can be exchanged.

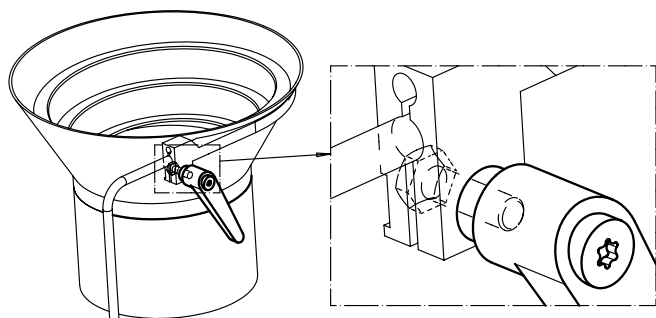
DRAWING



ORDER INFORMATION

Dimensions										Art. No.		
d ₁	d ₂	d ₃	h ₁	h ₂	h ₃	h ₄	l ₂	t ≥		orange	silver	black
[mm]									[g]			
13	M 3	10.0	24.5	4.0	3.5	30.5	30	7	26	24400.0032	—	24400.0034
	M 4	10.0	24.5	4.0	3.5	30.5	30	9	25	24400.0036	—	24400.0038
14	M 5	10.0	24.5	4.0	3.0	35.0	45	8	33	24400.0111	24400.0113	24400.0114
	M 6	10.0	24.5	4.0	3.0	35.0	45	8	33	24400.0121	24400.0123	24400.0124
18	M 6	13.5	31.0	6.5	3.0	45.0	62	10	67	24400.0311	24400.0313	24400.0314
	M 8	13.5	31.0	6.5	3.0	45.0	62	10	71	24400.0321	24400.0323	24400.0324
22	M 8	16.0	36.0	8.0	3.5	52.0	74	14	112	24400.0411	24400.0413	24400.0414
	M10	16.0	36.0	8.0	3.5	52.0	74	14	109	24400.0421	24400.0423	24400.0424
25	M10	19.0	43.0	11.0	4.0	63.0	89	17	176	24400.0511	24400.0513	24400.0514
	M12	19.0	43.0	11.0	4.0	63.0	89	17	171	24400.0521	24400.0523	24400.0524
30	M12	23.0	50.5	12.0	5.0	76.0	108	22	286	24400.0611	24400.0613	24400.0614
	M16	23.0	50.5	12.0	5.0	76.0	108	22	269	24400.0621	24400.0623	24400.0624

APPLICATION EXAMPLE



Adjustable Clamping Levers • with screw

EH 24400.



PRODUCT DESCRIPTION

Adjustable clamping levers find versatile applications when the area of use is confined or a specific lever position is required.

Material

Lever

- Zinc die-cast, plastic coated, orange similar to RAL 2004, matt structure
- Zinc die-cast, plastic coated, silver, similar to RAL 9006, matt structure
- Zinc die-cast, plastic coated, black, similar to RAL 9005, matt structure

Inner parts

- Steel, blackened, quality 5.8

Screw

- Steel, blackened, quality 5.8

Operation

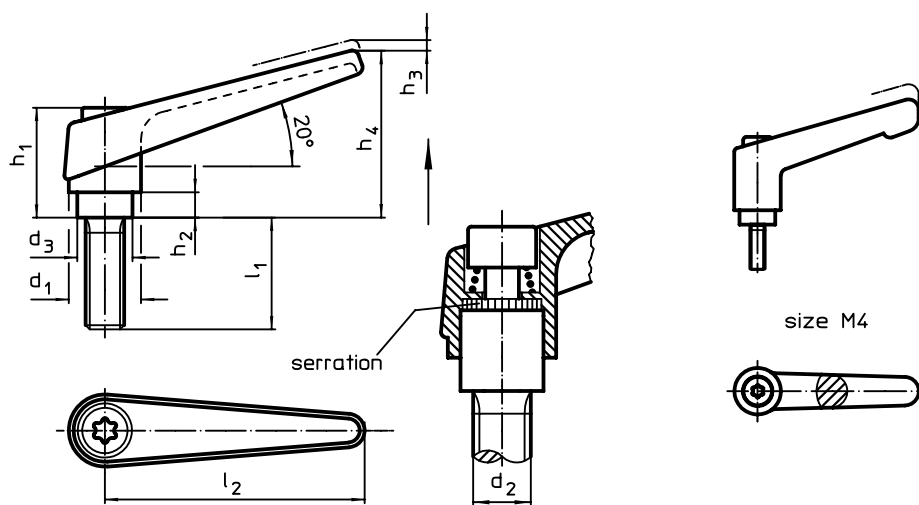
By lifting the lever the serrations are disengaged. The lever can be positioned by the serrations. On releasing the lever, the serrations are automatically re-engaged.

MORE INFORMATION

Notes

The screw part can be exchanged.

DRAWING



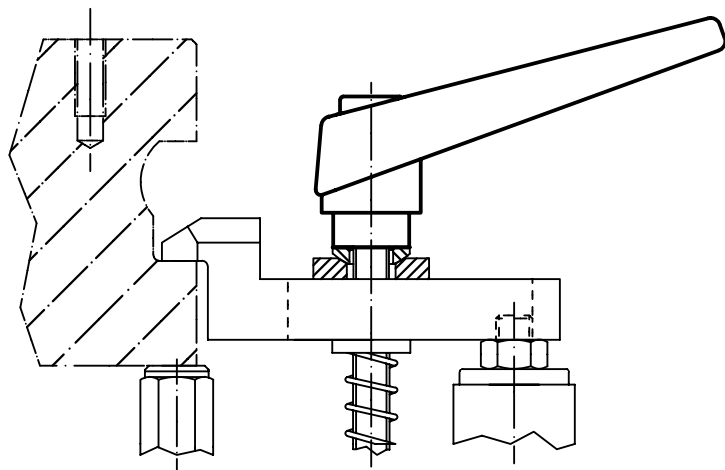
ORDER INFORMATION

Dimensions										Art. No.		
d ₁	d ₂	l ₁	d ₃	h ₁ [mm]	h ₂	h ₃	h ₄	l ₂		[g]	orange	silver
13	M 4	12	10.0	24.5	4.0	3.5	30.5	30	27	24400.0010	—	24400.0012
		16	10.0	24.5	4.0	3.5	30.5	30	27	24400.0014	—	24400.0016
		20	10.0	24.5	4.0	3.5	30.5	30	28	24400.0018	—	24400.0020
		25	10.0	24.5	4.0	3.5	30.5	30	28	24400.0022	—	24400.0024
		32	10.0	24.5	4.0	3.5	30.5	30	28	24400.0026	—	24400.0028
14	M 5	12	10.0	24.5	4.0	3.0	35.0	45	36	24400.0041	24400.0043	24400.0044
		16	10.0	24.5	4.0	3.0	35.0	45	36	24400.0051	24400.0053	24400.0054
		20	10.0	24.5	4.0	3.0	35.0	45	37	24400.0061	24400.0063	24400.0064
		25	10.0	24.5	4.0	3.0	35.0	45	38	24400.0071	24400.0073	24400.0074
		32	10.0	24.5	4.0	3.0	35.0	45	38	24400.0081	24400.0083	24400.0084
	M 6	40	10.0	24.5	4.0	3.0	35.0	45	39	24400.0086	24400.0088	24400.0089
		12	10.0	24.5	4.0	3.0	35.0	45	37	24400.0131	24400.0133	24400.0134
		16	10.0	24.5	4.0	3.0	35.0	45	37	24400.0141	24400.0143	24400.0144
		20	10.0	24.5	4.0	3.0	35.0	45	39	24400.0151	24400.0153	24400.0154
		25	10.0	24.5	4.0	3.0	35.0	45	41	24400.0161	24400.0163	24400.0164
		32	10.0	24.5	4.0	3.0	35.0	45	40	24400.0171	24400.0173	24400.0174
		40	10.0	24.5	4.0	3.0	35.0	45	41	24400.0181	24400.0183	24400.0184
		50	10.0	24.5	4.0	3.0	35.0	45	43	24400.0191	24400.0193	24400.0194



Dimensions										Art. No.		
d ₁	d ₂	l ₁	d ₃	h ₁	h ₂	h ₃	h ₄	l ₂		orange	silver	black
[mm]									[g]			
18	M 6	16	13.5	31.0	6.5	3.0	45.0	62	72	24400.0221	24400.0223	24400.0224
		20	13.5	31.0	6.5	3.0	45.0	62	72	24400.0231	24400.0233	24400.0234
		25	13.5	31.0	6.5	3.0	45.0	62	74	24400.0241	24400.0243	24400.0244
		32	13.5	31.0	6.5	3.0	45.0	62	74	24400.0251	24400.0253	24400.0254
		40	13.5	31.0	6.5	3.0	45.0	62	76	24400.0261	24400.0263	24400.0264
		50	13.5	31.0	6.5	3.0	45.0	62	76	24400.0271	24400.0273	24400.0274
	M 8	63	13.5	31.0	6.5	3.0	45.0	62	80	24400.0281	24400.0283	24400.0284
		16	13.5	31.0	6.5	3.0	45.0	62	74	24400.0331	24400.0333	24400.0334
		20	13.5	31.0	6.5	3.0	45.0	62	76	24400.0341	24400.0343	24400.0344
		25	13.5	31.0	6.5	3.0	45.0	62	86	24400.0351	24400.0353	24400.0354
		32	13.5	31.0	6.5	3.0	45.0	62	86	24400.0361	24400.0363	24400.0364
		40	13.5	31.0	6.5	3.0	45.0	62	88	24400.0371	24400.0373	24400.0374
		50	13.5	31.0	6.5	3.0	45.0	62	89	24400.0381	24400.0383	24400.0384
		63	13.5	31.0	6.5	3.0	45.0	62	96	24400.0391	24400.0393	24400.0394
22	M10	20	16.0	36.0	8.0	3.5	52.0	74	128	24400.0441	24400.0443	24400.0444
		25	16.0	36.0	8.0	3.5	52.0	74	130	24400.0451	24400.0453	24400.0454
		32	16.0	36.0	8.0	3.5	52.0	74	134	24400.0461	24400.0463	24400.0464
		40	16.0	36.0	8.0	3.5	52.0	74	138	24400.0471	24400.0473	24400.0474
		50	16.0	36.0	8.0	3.5	52.0	74	143	24400.0481	24400.0483	24400.0484
		63	16.0	36.0	8.0	3.5	52.0	74	152	24400.0486	24400.0488	24400.0489
		80	16.0	36.0	8.0	3.5	52.0	74	166	24400.0491	24400.0493	24400.0494
25	M12	25	19.0	43.0	11.0	4.0	63.0	89	205	24400.0541	24400.0543	24400.0544
		32	19.0	43.0	11.0	4.0	63.0	89	209	24400.0551	24400.0553	24400.0554
		40	19.0	43.0	11.0	4.0	63.0	89	215	24400.0561	24400.0563	24400.0564
		50	19.0	43.0	11.0	4.0	63.0	89	222	24400.0571	24400.0573	24400.0574
		63	19.0	43.0	11.0	4.0	63.0	89	232	24400.0581	24400.0583	24400.0584
		80	19.0	43.0	11.0	4.0	63.0	89	244	24400.0591	24400.0593	24400.0594
30	M16	32	23.0	50.5	12.0	5.0	76.0	108	348	24400.0641	24400.0643	24400.0644
		40	23.0	50.5	12.0	5.0	76.0	108	357	24400.0651	24400.0653	24400.0654
		50	23.0	50.5	12.0	5.0	76.0	108	370	24400.0661	24400.0663	24400.0664
		63	23.0	50.5	12.0	5.0	76.0	108	386	24400.0671	24400.0673	24400.0674
		80	23.0	50.5	12.0	5.0	76.0	108	407	24400.0681	24400.0683	24400.0684

APPLICATION EXAMPLE



Adjustable Clamping Levers • with clamping screw

EH 24410.



PRODUCT DESCRIPTION

Adjustable clamping levers find versatile applications when the area of use is confined or a specific lever position is required.

Material

Lever

- Zinc die-cast, plastic coated, orange similar to RAL 2004, matt structure
- Zinc die-cast, plastic coated, silver, similar to RAL 9006, matt structure
- Zinc die-cast, plastic coated, black, similar to RAL 9005, matt structure

Inner parts

- Steel, blackened, quality 5.8

Screw

- Steel, blackened, quality 5.8

Operation

By lifting the lever the serrations are disengaged. The lever can be positioned by the serrations. On releasing the lever, the serrations are automatically re-engaged.

MORE INFORMATION

Notes

The screw part can be exchanged.

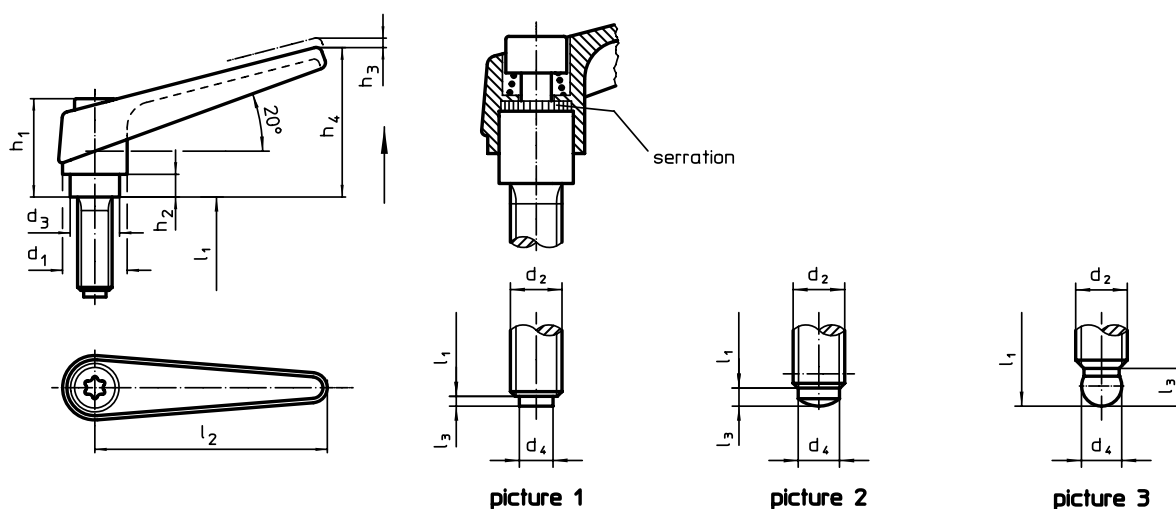
References

The version with ball-headed (picture 3) can be combined with the thrust piece, plastic (EH 22570.).

Further products

Thrust Pads, plastic. → p. 283

DRAWING



ORDER INFORMATION

Dimensions													Art. No.		
d ₁	d ₂	l ₁	d ₃	d ₄	h ₁	h ₂	h ₃	h ₄	l ₂	l ₃		orange	silver	black	
[mm]												[g]			
with plastic thrust pin – picture 1															
14	M 6	16	10.0	4.0	24.5	4.0	3	35	45	1.0	40	24410.0141	24410.0143	24410.0144	
		20	10.0	4.0	24.5	4.0	3	35	45	1.0	38	24410.0151	24410.0153	24410.0154	
		25	10.0	4.0	24.5	4.0	3	35	45	1.0	38	24410.0161	24410.0163	24410.0164	
		32	10.0	4.0	24.5	4.0	3	35	45	1.0	40	24410.0171	24410.0173	24410.0174	
		40	10.0	4.0	24.5	4.0	3	35	45	1.0	41	24410.0181	24410.0183	24410.0184	
		50	10.0	4.0	24.5	4.0	3	35	45	1.0	45	24410.0191	24410.0193	24410.0194	
18	M 8	20	13.5	6.0	31.0	6.5	3	45	62	1.0	81	24410.0341	24410.0343	24410.0344	
		25	13.5	6.0	31.0	6.5	3	45	62	1.0	80	24410.0351	24410.0353	24410.0354	
		32	13.5	6.0	31.0	6.5	3	45	62	1.0	86	24410.0361	24410.0363	24410.0364	
		40	13.5	6.0	31.0	6.5	3	45	62	1.0	81	24410.0371	24410.0373	24410.0374	
		50	13.5	6.0	31.0	6.5	3	45	62	1.0	84	24410.0381	24410.0383	24410.0384	
		63	13.5	6.0	31.0	6.5	3	45	62	1.0	95	24410.0391	24410.0393	24410.0394	
	M10	20	13.5	8.0	31.0	6.5	3	45	62	2.0	128	24410.0441	24410.0443	24410.0444	
		25	13.5	8.0	31.0	6.5	3	45	62	2.0	130	24410.0451	24410.0453	24410.0454	
		32	13.5	8.0	31.0	6.5	3	45	62	2.0	134	24410.0461	24410.0463	24410.0464	
		40	13.5	8.0	31.0	6.5	3	45	62	2.0	94	24410.0471	24410.0473	24410.0474	
		50	13.5	8.0	31.0	6.5	3	45	62	2.0	100	24410.0481	24410.0483	24410.0484	
		63	13.5	8.0	31.0	6.5	3	45	62	2.0	148	24410.0491	24410.0493	24410.0494	



Dimensions												Art. No.		
d ₁	d ₂	l ₁	d ₃	d ₄	h ₁	h ₂	h ₃	h ₄	l ₂	l ₃	[g]	orange	silver	black
[mm]														
with brass thrust pin – picture 1														
14	M 6	16	10.0	3.5	24.5	4.0	3	35	45	1.3	36	24410.1141	24410.1143	24410.1144
		20	10.0	3.5	24.5	4.0	3	35	45	1.3	37	24410.1151	24410.1153	24410.1154
		25	10.0	3.5	24.5	4.0	3	35	45	1.3	44	24410.1161	24410.1163	24410.1164
		32	10.0	3.5	24.5	4.0	3	35	45	1.3	45	24410.1171	24410.1173	24410.1174
		40	10.0	3.5	24.5	4.0	3	35	45	1.3	40	24410.1181	24410.1183	24410.1184
		50	10.0	3.5	24.5	4.0	3	35	45	1.3	42	24410.1191	24410.1193	24410.1194
18	M 8	20	13.5	5.0	31.0	6.5	3	45	62	1.3	83	24410.1341	24410.1343	24410.1344
		25	13.5	5.0	31.0	6.5	3	45	62	1.3	76	24410.1351	24410.1353	24410.1354
		32	13.5	5.0	31.0	6.5	3	45	62	1.3	78	24410.1361	24410.1363	24410.1364
		40	13.5	5.0	31.0	6.5	3	45	62	1.3	80	24410.1371	24410.1373	24410.1374
		50	13.5	5.0	31.0	6.5	3	45	62	1.3	91	24410.1381	24410.1383	24410.1384
		63	13.5	5.0	31.0	6.5	3	45	62	1.3	88	24410.1391	24410.1393	24410.1394
	M10	20	13.5	6.5	31.0	6.5	3	45	62	1.9	127	24410.1441	24410.1443	24410.1444
		25	13.5	6.5	31.0	6.5	3	45	62	1.9	129	24410.1451	24410.1453	24410.1454
		32	13.5	6.5	31.0	6.5	3	45	62	1.9	133	24410.1461	24410.1463	24410.1464
		40	13.5	6.5	31.0	6.5	3	45	62	1.9	137	24410.1471	24410.1473	24410.1474
		50	13.5	6.5	31.0	6.5	3	45	62	1.9	142	24410.1481	24410.1483	24410.1484
		63	13.5	6.5	31.0	6.5	3	45	62	1.9	147	24410.1491	24410.1493	24410.1494
with thrust pin – picture 2														
14	M 6	16	10.0	4.0	24.5	4.0	3	35	45	1.8	39	24410.2141	24410.2143	24410.2144
		20	10.0	4.0	24.5	4.0	3	35	45	1.8	40	24410.2151	24410.2153	24410.2154
		25	10.0	4.0	24.5	4.0	3	35	45	1.8	41	24410.2161	24410.2163	24410.2164
		32	10.0	4.0	24.5	4.0	3	35	45	1.8	42	24410.2171	24410.2173	24410.2174
		40	10.0	4.0	24.5	4.0	3	35	45	1.8	43	24410.2181	24410.2183	24410.2184
		50	10.0	4.0	24.5	4.0	3	35	45	1.8	45	24410.2191	24410.2193	24410.2194
18	M 8	20	13.5	6.0	31.0	6.5	3	45	62	1.8	78	24410.2341	24410.2343	24410.2344
		25	13.5	6.0	31.0	6.5	3	45	62	1.8	79	24410.2351	24410.2353	24410.2354
		32	13.5	6.0	31.0	6.5	3	45	62	1.8	81	24410.2361	24410.2363	24410.2364
		40	13.5	6.0	31.0	6.5	3	45	62	1.8	83	24410.2371	24410.2373	24410.2374
		50	13.5	6.0	31.0	6.5	3	45	62	1.8	86	24410.2381	24410.2383	24410.2384
		63	13.5	6.0	31.0	6.5	3	45	62	1.8	91	24410.2391	24410.2393	24410.2394
	M10	20	13.5	8.0	31.0	6.5	3	45	62	3.5	80	24410.2441	24410.2443	24410.2444
		25	13.5	8.0	31.0	6.5	3	45	62	3.5	132	24410.2451	24410.2453	24410.2454
		32	13.5	8.0	31.0	6.5	3	45	62	3.5	136	24410.2461	24410.2463	24410.2464
		40	13.5	8.0	31.0	6.5	3	45	62	3.5	140	24410.2471	24410.2473	24410.2474
		50	13.5	8.0	31.0	6.5	3	45	62	3.5	145	24410.2481	24410.2483	24410.2484
		63	13.5	8.0	31.0	6.5	3	45	62	3.5	150	24410.2491	24410.2493	24410.2494
ball-headed – picture 3														
14	M 6	16	10.0	4.5 +0.05	24.5	4.0	3	35	45	3.6	35	24410.3141	24410.3143	24410.3144
		20	10.0	4.5 +0.05	24.5	4.0	3	35	45	3.6	36	24410.3151	24410.3153	24410.3154
		25	10.0	4.5 +0.05	24.5	4.0	3	35	45	3.6	37	24410.3161	24410.3163	24410.3164
		32	10.0	4.5 +0.05	24.5	4.0	3	35	45	3.6	38	24410.3171	24410.3173	24410.3174
		40	10.0	4.5 +0.05	24.5	4.0	3	35	45	3.6	39	24410.3181	24410.3183	24410.3184
		50	10.0	4.5 +0.05	24.5	4.0	3	35	45	3.6	41	24410.3191	24410.3193	24410.3194
18	M 8	20	13.5	6.1 +0.05	31.0	6.5	3	45	62	3.6	74	24410.3341	24410.3343	24410.3344
		25	13.5	6.1 +0.05	31.0	6.5	3	45	62	3.6	75	24410.3351	24410.3353	24410.3354
		32	13.5	6.1 +0.05	31.0	6.5	3	45	62	3.6	77	24410.3361	24410.3363	24410.3364
		40	13.5	6.1 +0.05	31.0	6.5	3	45	62	3.6	90	24410.3371	24410.3373	24410.3374
		50	13.5	6.1 +0.05	31.0	6.5	3	45	62	3.6	82	24410.3381	24410.3383	24410.3384
		63	13.5	6.1 +0.05	31.0	6.5	3	45	62	3.6	87	24410.3391	24410.3393	24410.3394
	M10	20	13.5	7.8 +0.05	31.0	6.5	3	45	62	4.3	126	24410.3441	24410.3443	24410.3444
		25	13.5	7.8 +0.05	31.0	6.5	3	45	62	4.3	128	24410.3451	24410.3453	24410.3454
		32	13.5	7.8 +0.05	31.0	6.5	3	45	62	4.3	132	24410.3461	24410.3463	24410.3464
		40	13.5	7.8 +0.05	31.0	6.5	3	45	62	4.3	136	24410.3471	24410.3473	24410.3474
		50	13.5	7.8 +0.05	31.0	6.5	3	45	62	4.3	141	24410.3481	24410.3483	24410.3484
		63	13.5	7.8 +0.05	31.0	6.5	3	45	62	4.3	146	24410.3491	24410.3493	24410.3494

Adjustable Clamping Levers • with axial bearing

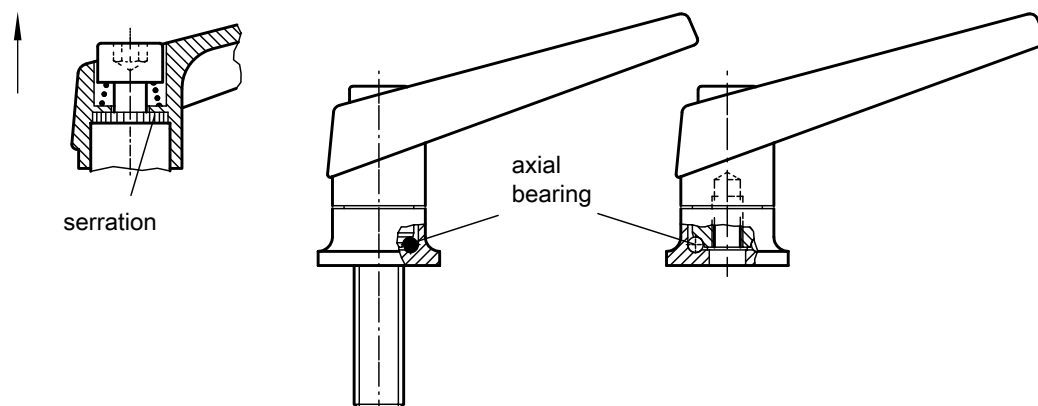
EH 24420.

TWICE THE CLAMPING FORCE AT THE SAME HAND FORCE

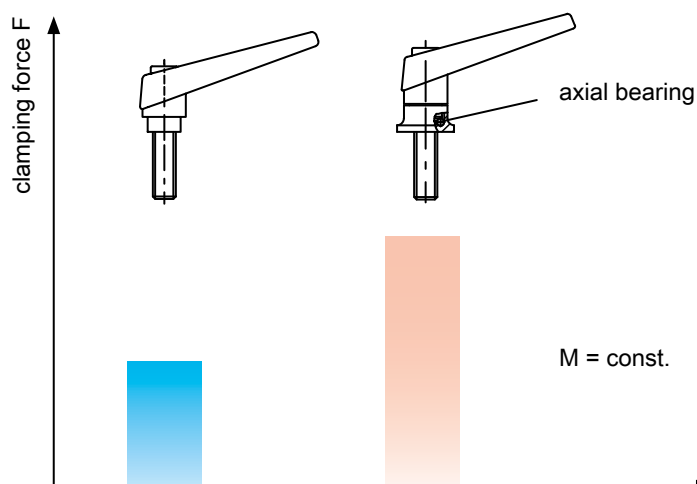
Tests have proven that vital advantages can be achieved when using clamping levers with integrated axial thrust bearing

ADVANTAGES

- The clamping force is greater in comparison to the clamping levers, by up to 100% (please refer to diagram) using the same amount of strength.
- Screwed connections can be replaced with clamping connections for technical applications.
- Smaller clamping levers can be used because of the improved clamping force, thus reducing the necessary construction space.
- Considerably less force loss due to settling; no releasing due to vibrations.
- Non-damaging to clamped parts due to the rotating bearing surface.



Increase of clamping force with axial bearing
(while manual force is unchanged)



Adjustable Clamping Levers • with axial bearing, with female thread

EH 24420.



PRODUCT DESCRIPTION

Adjustable clamping levers find versatile applications when the area of use is confined or a specific lever position is required.

Advantages of axial bearing:

- Double clamping force with same lever size, by reducing the surface friction.
- Protection of workpiece by a fixed locating surface.
- Little setting due to higher pre-clamping force of bolt, e.g. thread.

Material

Lever

- Zinc die-cast, plastic coated, orange similar to RAL 2004, matt structure
- Zinc die-cast, plastic coated, black, similar to RAL 9005, matt structure

Threaded part

- Steel, nitrided, blackened

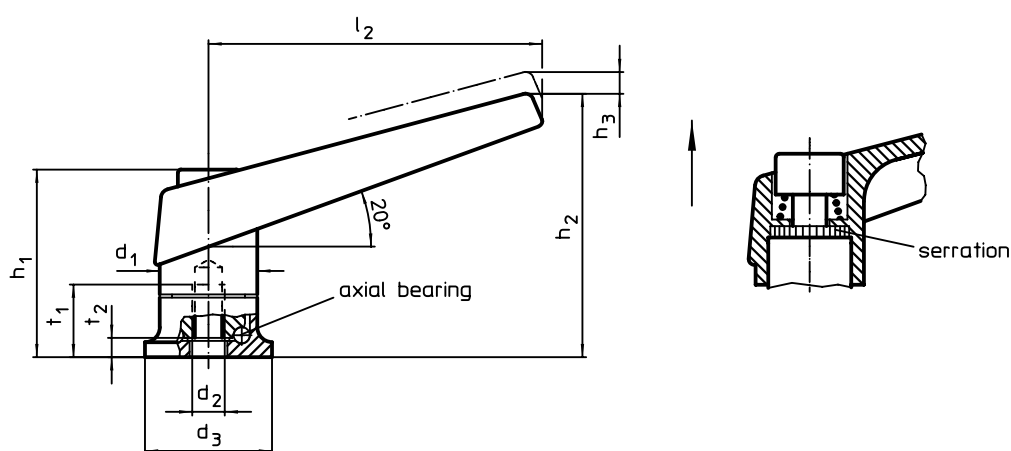
Inner parts

- Steel, nitrided, blackened

Operation

By lifting the lever the serrations are disengaged. The lever can be positioned by the serrations. On releasing the lever, the serrations are automatically re-engaged.

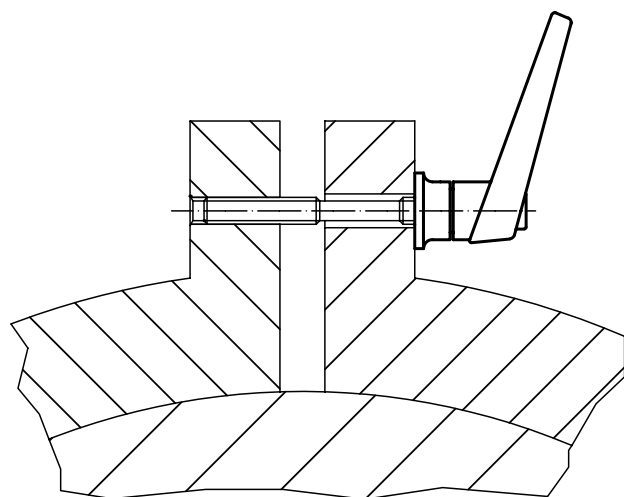
DRAWING



ORDER INFORMATION

Dimensions										Art. No.	
d ₁	d ₂	d ₃	h ₁	h ₂	h ₃	l ₂	t ₁ min.	t ₂		orange	black
[mm]										[g]	
18	M 6	24	34.5	50	3.0	62	12.5	5.0	91	24420.0010	24420.0012
22	M 8	25	39.5	56	3.5	74	14.0	4.2	138	24420.0110	24420.0112
25	M10	30	46.5	66	4.0	89	18.0	5.4	205	24420.0210	24420.0212
30	M12	35	56.5	82	5.0	108	26.5	6.6	358	24420.0310	24420.0312

APPLICATION EXAMPLE



Adjustable Clamping Levers • with axial bearing, with screw

EH 24420.



PRODUCT DESCRIPTION

Adjustable clamping levers find versatile applications when the area of use is confined or a specific lever position is required.

Advantages of axial bearing:

- Double clamping force with same lever size, by reducing the surface friction.
- Protection of workpiece by a fixed locating surface.
- Little setting due to higher pre-clamping force of bolt, e.g. thread.

Material

Lever

- Zinc die-cast, plastic coated, orange similar to RAL 2004, matt structure
- Zinc die-cast, plastic coated, black, similar to RAL 9005, matt structure

Inner parts

- Steel, nitrided, blackened

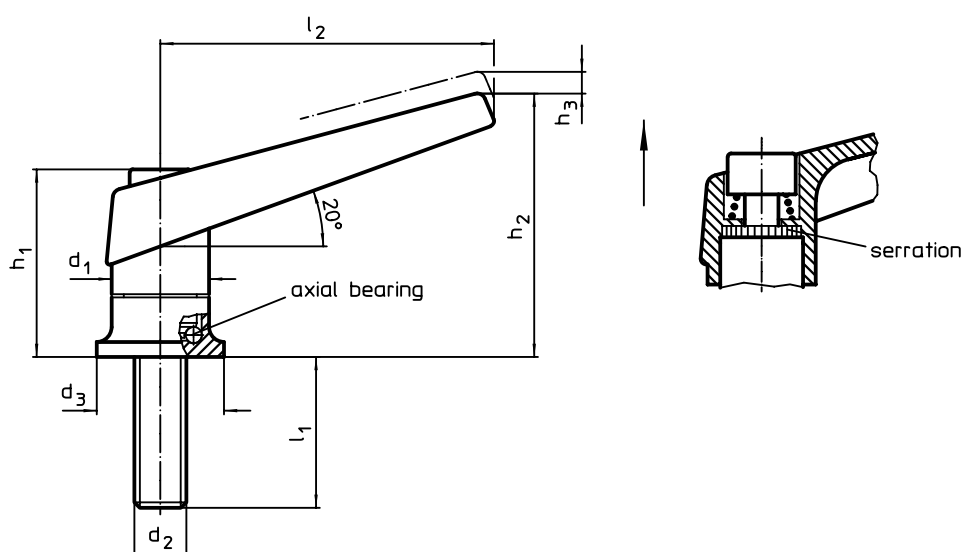
Screw

- Steel, nitrided, blackened

Operation

By lifting the lever the serrations are disengaged. The lever can be positioned by the serrations. On releasing the lever, the serrations are automatically re-engaged.

DRAWING



ORDER INFORMATION

Dimensions									Art. No.	
d ₁	d ₂	l ₁	d ₃	h ₁	h ₂	h ₃	l ₂		orange	black
[mm]								[g]		
18	M 6	20	24	34.5	50	3.0	62	91	24420.0030	24420.0032
		27	24	34.5	50	3.0	62	98	24420.0050	24420.0052
22	M 8	21	25	39.5	56	3.5	74	151	24420.0130	24420.0132
		36	25	39.5	56	3.5	74	154	24420.0150	24420.0152
25	M10	29	30	46.5	66	4.0	89	230	24420.0230	24420.0232
		47	30	46.5	66	4.0	89	239	24420.0250	24420.0252
30	M12	34	35	56.5	82	5.0	108	407	24420.0330	24420.0332
		50	35	56.5	82	5.0	108	418	24420.0346	24420.0348
		57	35	56.5	82	5.0	108	425	24420.0350	24420.0352
		65	35	56.5	82	5.0	108	429	24420.0364	24420.0366
		85	35	56.5	82	5.0	108	444	24420.0384	24420.0386

Adjustable Clamping Levers • with axial bearing from stainless steel, with female thread

EH 24420.



PRODUCT DESCRIPTION

Adjustable clamping levers with rust-proof inner parts. Suitable for multiple applications, e.g. medical environments, chemical industry, and so on.

Advantages of axial bearing:

- Double clamping force with same lever size, by reducing the surface friction.
- Protection of workpiece by a fixed locating surface.
- Little setting due to higher pre-clamping force of bolt, e.g. thread.

Material

Lever

- Zinc die-cast, plastic coated, orange similar to RAL 2004, matt structure
- Zinc die-cast, plastic coated, black, similar to RAL 9005, matt structure

Threaded part

- Stainless steel

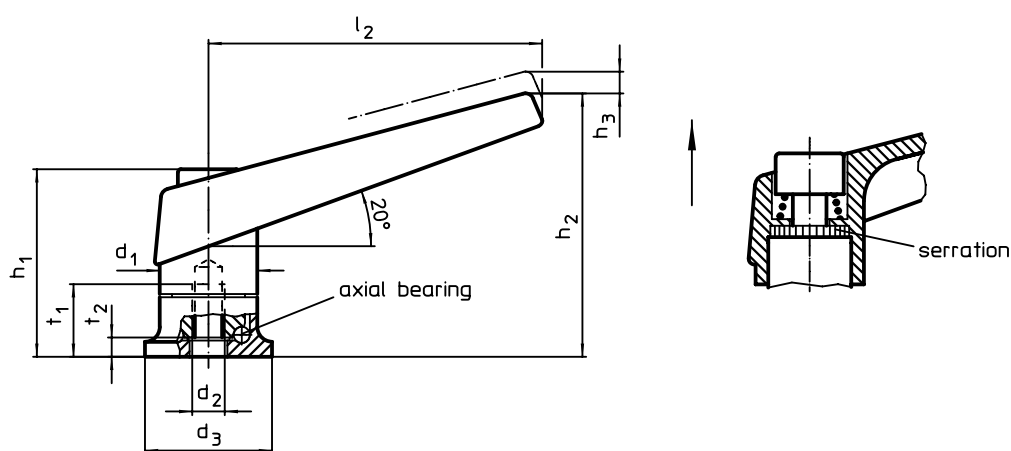
Inner parts

- Stainless steel

Operation

By lifting the lever the serrations are disengaged. The lever can be positioned by the serrations. On releasing the lever, the serrations are automatically re-engaged.

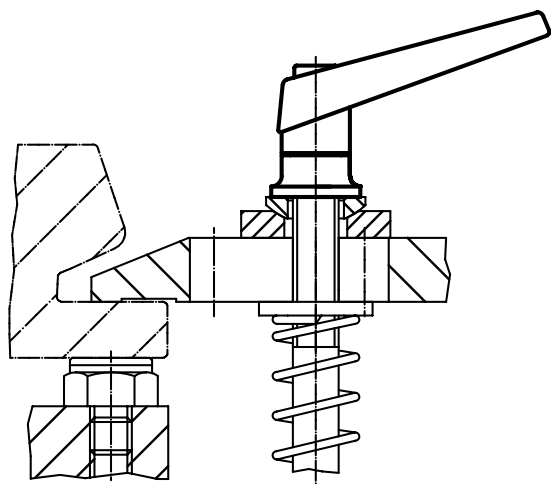
DRAWING



ORDER INFORMATION

Dimensions										Art. No.	
d ₁	d ₂	d ₃	h ₁	h ₂	h ₃	l ₂	t ₁ min.	t ₂		orange	black
[mm]										[g]	
18	M 6	24	34.5	50	3.0	62	12.5	5.0	92	24420.1010	24420.1012
22	M 8	25	39.5	56	3.5	74	14.0	4.2	135	24420.1110	24420.1112
25	M10	30	46.5	66	4.0	89	18.0	5.4	204	24420.1210	24420.1212
30	M12	35	56.5	82	5.0	108	26.5	6.6	359	24420.1310	24420.1312

APPLICATION EXAMPLE



Adjustable Clamping Levers • with axial bearing from stainless steel, with screw

EH 24420.



PRODUCT DESCRIPTION

Adjustable clamping levers with rust-proof inner parts. Suitable for multiple applications, e.g. medical environments, chemical industry, and so on.

Advantages of axial bearing:

- Double clamping force with same lever size, by reducing the surface friction.
- Protection of workpiece by a fixed locating surface.
- Little setting due to higher pre-clamping force of bolt, e.g. thread.

Material

Lever

- Zinc die-cast, plastic coated, orange similar to RAL 2004, matt structure
- Zinc die-cast, plastic coated, black, similar to RAL 9005, matt structure

Inner parts

- Stainless steel

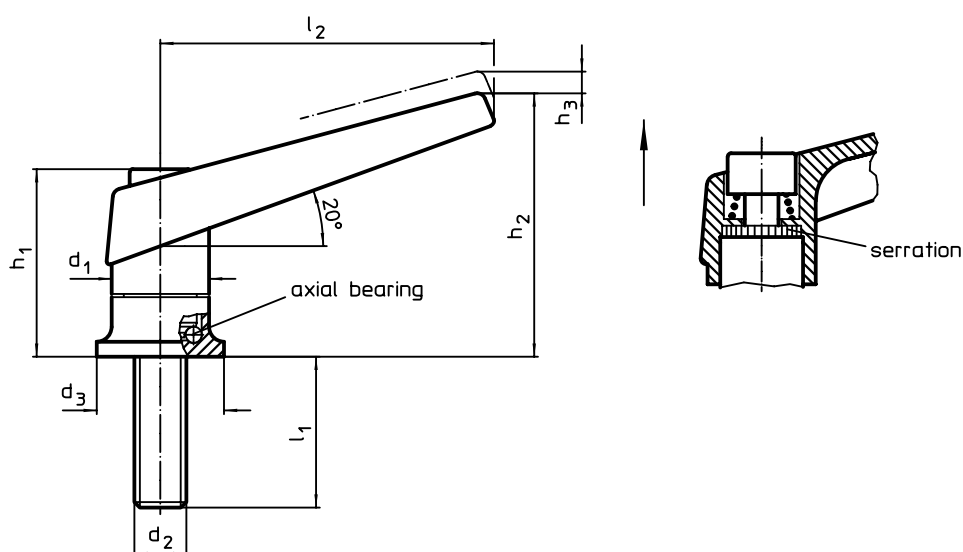
Screw

- Stainless steel

Operation

By lifting the lever the serrations are disengaged. The lever can be positioned by the serrations. On releasing the lever, the serrations are automatically re-engaged.

DRAWING



ORDER INFORMATION

Dimensions									Art. No.	
d ₁	d ₂	l ₁	d ₃	h ₁	h ₂	h ₃	l ₂		orange	black
[mm]								[g]		
18	M 6	20	24	34.5	50	3.0	62	96	24420.1030	24420.1032
		27	24	34.5	50	3.0	62	99	24420.1050	24420.1052
22	M 8	21	25	39.5	56	3.5	74	148	24420.1130	24420.1132
		36	25	39.5	56	3.5	74	152	24420.1150	24420.1152
25	M10	29	30	46.5	66	4.0	89	227	24420.1230	24420.1232
		47	30	46.5	66	4.0	89	239	24420.1250	24420.1252
30	M12	34	35	56.5	82	5.0	108	404	24420.1330	24420.1332
		50	35	56.5	82	5.0	108	419	24420.1346	24420.1348
		57	35	56.5	82	5.0	108	420	24420.1350	24420.1352
		65	35	56.5	82	5.0	108	430	24420.1364	24420.1366
		85	35	56.5	82	5.0	108	444	24420.1384	24420.1386

Tension Levers
EH 24430.



PRODUCT DESCRIPTION

Material

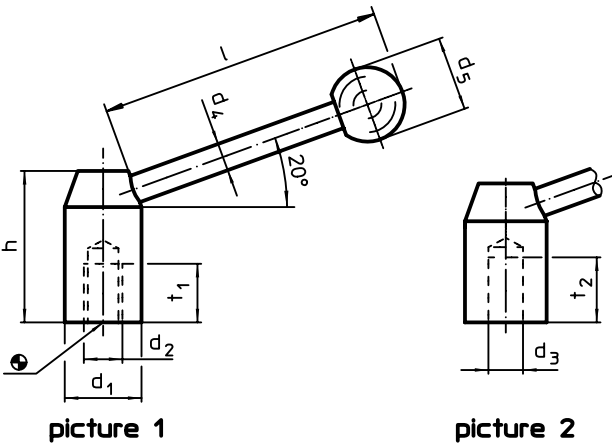
Lever

- Steel, blackened
- Stainless steel 1.4305, dull blasted

Ball knob

- Thermosetting plastic PF 31, black, DIN 319

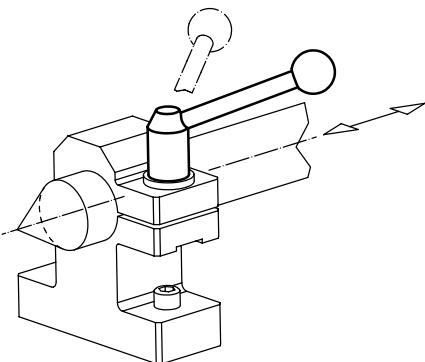
DRAWING



ORDER INFORMATION

Dimensions										Art. No.	
d ₁	d ₂	d ₃ H7	d ₄	d ₅	h	l ~	t ₁	t ₂		Steel	Stainless steel
[mm]									[g]		
with female thread – picture 1											
20	M 8	–	8	20	33	67	15	–	97	24430.0022	–
22	M 8	–	8	20	37	85	15	–	121	–	24430.0230
	M10	–	8	20	37	85	15	–	115	24430.0032	–
25	M10	–	10	25	42	95	18	–	186	–	24430.0236
	M12	–	10	25	42	95	18	–	165	24430.0038	–
28	M12	–	12	30	47	108	18	–	262	24430.0042	24430.0242
32	M16	–	12	32	52	126	23	–	354	24430.0048	24430.0248
36	M16	–	14	35	58	138	24	–	519	24430.0052	–
40	M20	–	16	40	64	154	27	–	708	24430.0058	–
with smooth bore – picture 2											
20	–	10	8	20	33	67	–	16	85	24430.0020	–
22	–	10	8	20	37	85	–	19	113	24430.0030	–
25	–	12	10	25	42	95	–	21	170	24430.0035	–
28	–	12	12	30	47	108	–	23	268	24430.0040	–
32	–	16	12	32	52	126	–	28	351	24430.0045	–
36	–	16	14	35	58	138	–	28	524	24430.0050	–
40	–	20	16	40	64	154	–	30	706	24430.0055	–

APPLICATION EXAMPLE



Adjustable Tension Levers

EH 24440.



PRODUCT DESCRIPTION

Material

Lever

- Steel, blackened
- Stainless steel 1.4305, dull blasted

Inner parts

- Steel, blackened, quality 5.8
- Stainless steel 1.4305, dull blasted

Screw

- Steel, blackened, quality 5.8
- Stainless steel 1.4305

Ball knob

- Thermosetting plastic PF 31, black, DIN 319

Operation

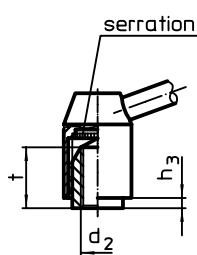
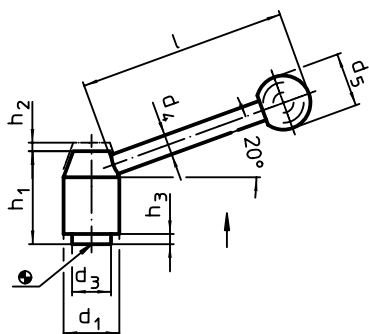
By lifting the lever the serrations are disengaged. The lever can be positioned by the serrations. On releasing the lever, the serrations are automatically re-engaged.

MORE INFORMATION

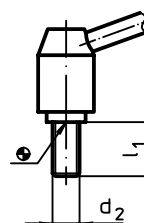
Notes

The threaded portion can be exchanged.

DRAWING



picture 1



picture 2

ORDER INFORMATION

Dimensions												Art. No.	
d ₁	d ₂	l ₁	d ₃	d ₄	d ₅	h ₁	h ₂	h ₃	l ~	t min.		Steel	Stainless steel
[mm]											[g]		
with female thread – picture 1													
21	M 6	–	13.5	8	20	33.5	4.0	1.0	70	11	91	24440.0101	24440.0601
	M 8	–	13.5	8	20	33.5	4.0	1.0	70	11	89	24440.0102	24440.0602
24	M 8	–	16.0	10	25	40.0	4.5	2.5	96	14	159	24440.0201	24440.0611
	M10	–	16.0	10	25	40.0	4.5	2.5	96	14	153	24440.0202	24440.0612
28	M10	–	19.0	12	30	48.5	4.5	4.5	110	17	255	24440.0301	24440.0621
	M12	–	19.0	12	30	48.5	4.5	4.5	110	17	248	24440.0302	24440.0622
33	M12	–	23.0	12	32	55.0	5.5	6.0	124	23	365	24440.0401	–
	M16	–	23.0	12	32	55.0	5.5	6.0	124	23	347	24440.0402	–
40	M16	–	30.0	14	35	68.0	5.5	6.0	138	36	622	24440.0501	–
	M20	–	30.0	14	35	68.0	5.5	6.0	138	36	599	24440.0502	–
with screw – picture 2													
21	M 8	12	13.5	8	20	33.5	4.0	1.0	70	–	98	24440.0120	–
		16	13.5	8	20	33.5	4.0	1.0	70	–	99	24440.0122	24440.0702
		20	13.5	8	20	33.5	4.0	1.0	70	–	103	24440.0124	24440.0704
		25	13.5	8	20	33.5	4.0	1.0	70	–	102	24440.0126	24440.0706
		32	13.5	8	20	33.5	4.0	1.0	70	–	105	24440.0128	24440.0708
		40	13.5	8	20	33.5	4.0	1.0	70	–	112	24440.0130	24440.0710
		50	13.5	8	20	33.5	4.0	1.0	70	–	109	24440.0132	24440.0712
24	M10	63	13.5	8	20	33.5	4.0	1.0	70	–	114	24440.0134	24440.0714
		16	16.0	10	25	40.0	4.5	2.5	96	–	172	24440.0220	–
		20	16.0	10	25	40.0	4.5	2.5	96	–	173	24440.0222	24440.0722
		25	16.0	10	25	40.0	4.5	2.5	96	–	174	24440.0224	24440.0724
		32	16.0	10	25	40.0	4.5	2.5	96	–	177	24440.0226	24440.0726
		40	16.0	10	25	40.0	4.5	2.5	96	–	184	24440.0228	24440.0728
		50	16.0	10	25	40.0	4.5	2.5	96	–	185	24440.0230	24440.0730
		63	16.0	10	25	40.0	4.5	2.5	96	–	195	24440.0232	24440.0732
		80	16.0	10	25	40.0	4.5	2.5	96	–	205	24440.0234	24440.0734



Dimensions												Art. No.	
d ₁	d ₂	l ₁	d ₃	d ₄	d ₅	h ₁	h ₂	h ₃	l ~	t min.		Steel	Stainless steel
[mm]											[g]		
28	M12	16	19.0	12	30	48.5	4.5	4.5	110	–	277	24440.0318	–
		20	19.0	12	30	48.5	4.5	4.5	110	–	282	24440.0320	–
		25	19.0	12	30	48.5	4.5	4.5	110	–	283	24440.0322	24440.0742
		32	19.0	12	30	48.5	4.5	4.5	110	–	287	24440.0324	24440.0744
		40	19.0	12	30	48.5	4.5	4.5	110	–	298	24440.0326	24440.0746
		50	19.0	12	30	48.5	4.5	4.5	110	–	302	24440.0328	24440.0748
		63	19.0	12	30	48.5	4.5	4.5	110	–	312	24440.0330	24440.0750
		80	19.0	12	30	48.5	4.5	4.5	110	–	320	24440.0332	24440.0752
33	M16	32	23.0	12	32	55.0	5.5	6.0	124	–	422	24440.0422	–
		40	23.0	12	32	55.0	5.5	6.0	124	–	435	24440.0424	–
		50	23.0	12	32	55.0	5.5	6.0	124	–	446	24440.0426	–
		63	23.0	12	32	55.0	5.5	6.0	124	–	461	24440.0428	–
		80	23.0	12	32	55.0	5.5	6.0	124	–	486	24440.0430	–
40	M20	40	30.0	14	35	68.0	5.5	6.0	138	–	772	24440.0520	–
		50	30.0	14	35	68.0	5.5	6.0	138	–	792	24440.0522	–
		63	30.0	14	35	68.0	5.5	6.0	138	–	826	24440.0524	–
		80	30.0	14	35	68.0	5.5	6.0	138	–	859	24440.0526	–

Adjustable Flat Tension Levers

EH 24441.



PRODUCT DESCRIPTION

Adjustable flat tension levers are used when the swivel range is limited or a specific lever position is required.

Adjustable flat tension levers are characterised by their low construction height and are particularly suitable for use in restricted spaces or when the lever should not overhang.

Material

Lever

- Zinc die-cast, plastic coated, black, similar to RAL 9005, matt structure
- Zinc die-cast, plastic coated, silver, similar to RAL 9006, matt structure

Inner parts

- Steel, blackened

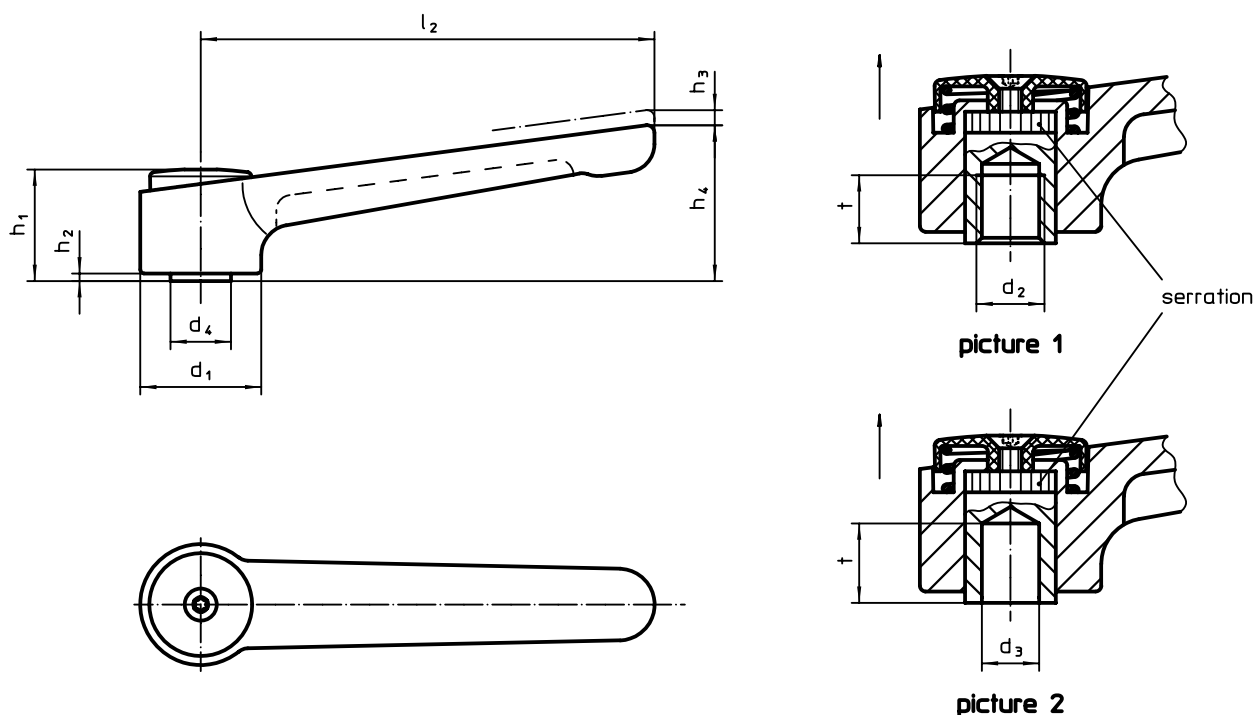
Covering

- Plastic, black
- Plastic, light grey

Operation

By lifting the lever the serrations are disengaged. The lever can be positioned by the serrations. On releasing the lever, the serrations are automatically re-engaged.

DRAWING



ORDER INFORMATION

Dimensions												Art. No.		
d ₁	d ₂	d ₃ H7	d ₄	h ₁	h ₂	h ₃	h ₄	l ₂	t min.	min.	max.		black	silver
[mm]										[°C]		[g]		
with female thread – picture 1														
32	M 8	–	16	29.5	2	2.5	41.5	120	14	-30	80	186	24441.0005	24441.0105
	M10	–	16	29.5	2	2.5	41.5	120	14	-30	80	183	24441.0010	24441.0110
	M12	–	16	29.5	2	2.5	41.5	120	14	-30	80	182	24441.0015	24441.0115
40	M12	–	23	42.0	4	4.0	56.0	145	22	-30	80	399	24441.0020	24441.0120
	M16	–	23	42.0	4	4.0	56.0	145	22	-30	80	384	24441.0025	24441.0125
with smooth bore – picture 2														
32	–	8	16	29.5	2	2.5	41.5	120	14	-30	80	188	24441.0050	24441.0150
		10	16	29.5	2	2.5	41.5	120	14	-30	80	185	24441.0055	24441.0155
40	–	12	23	42.0	4	4.0	56.0	145	22	-30	80	394	24441.0060	24441.0160
		16	23	42.0	4	4.0	56.0	145	22	-30	80	373	24441.0065	24441.0165

Adjustable Flat Tension Levers • stainless steel

EH 24441.



PRODUCT DESCRIPTION

Adjustable flat tension levers are used when the swivel range is limited or a specific lever position is required.

Adjustable flat tension levers are characterised by their low construction height and are particularly suitable for use in restricted spaces or when the lever should not overhang.

Material

Lever

- Zinc die-cast, plastic coated, black, similar to RAL 9005, matt structure
- Zinc die-cast, plastic coated, silver, similar to RAL 9006, matt structure

Inner parts

- Stainless steel 1.4305

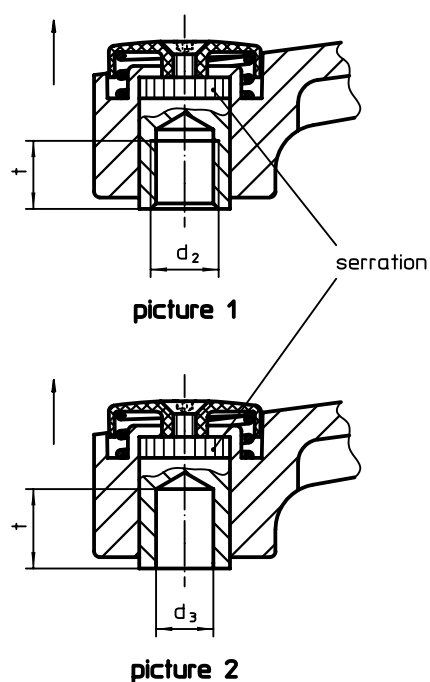
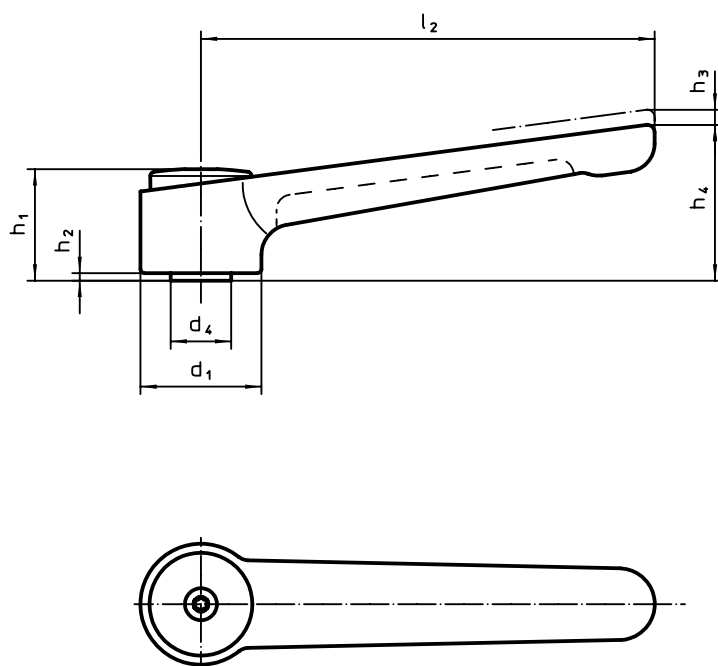
Covering

- Plastic, black
- Plastic, light grey

Operation

By lifting the lever the serrations are disengaged. The lever can be positioned by the serrations. On releasing the lever, the serrations are automatically re-engaged.

DRAWING



ORDER INFORMATION

Dimensions													Art. No.	
d ₁	d ₂	d ₃ H7	d ₄	h ₁	h ₂	h ₃	h ₄	l ₂	t min.	min.	max.		black	silver
[mm]										[°C]		[g]		
with female thread – picture 1														
32	M 8	–	16	29.5	2	2.5	41.5	120	14	-30	80	192	24441.0205	24441.0305
	M10	–	16	29.5	2	2.5	41.5	120	14	-30	80	183	24441.0210	24441.0310
	M12	–	16	29.5	2	2.5	41.5	120	14	-30	80	181	24441.0215	24441.0315
40	M12	–	23	42.0	4	4.0	56.0	145	22	-30	80	403	24441.0220	24441.0320
	M16	–	23	42.0	4	4.0	56.0	145	22	-30	80	381	24441.0225	24441.0325
with smooth bore – picture 2														
32	–	8	16	29.5	2	2.5	41.5	120	14	-30	80	188	24441.0250	24441.0350
		10	16	29.5	2	2.5	41.5	120	14	-30	80	181	24441.0255	24441.0355
40	–	12	23	42.0	4	4.0	56.0	145	22	-30	80	395	24441.0260	24441.0360
		16	23	42.0	4	4.0	56.0	145	22	-30	80	380	24441.0265	24441.0365

Adjustable Flat Tension Levers • with screw

EH 24441.



PRODUCT DESCRIPTION

Adjustable flat tension levers are used when the swivel range is limited or a specific lever position is required.

Adjustable flat tension levers are characterised by their low construction height and are particularly suitable for use in restricted spaces or when the lever should not overhang.

Material

Lever

- Zinc die-cast, plastic coated, black, similar to RAL 9005, matt structure
- Zinc die-cast, plastic coated, silver, similar to RAL 9006, matt structure

Inner parts

- Steel, blackened

Screw

- Steel, blackened

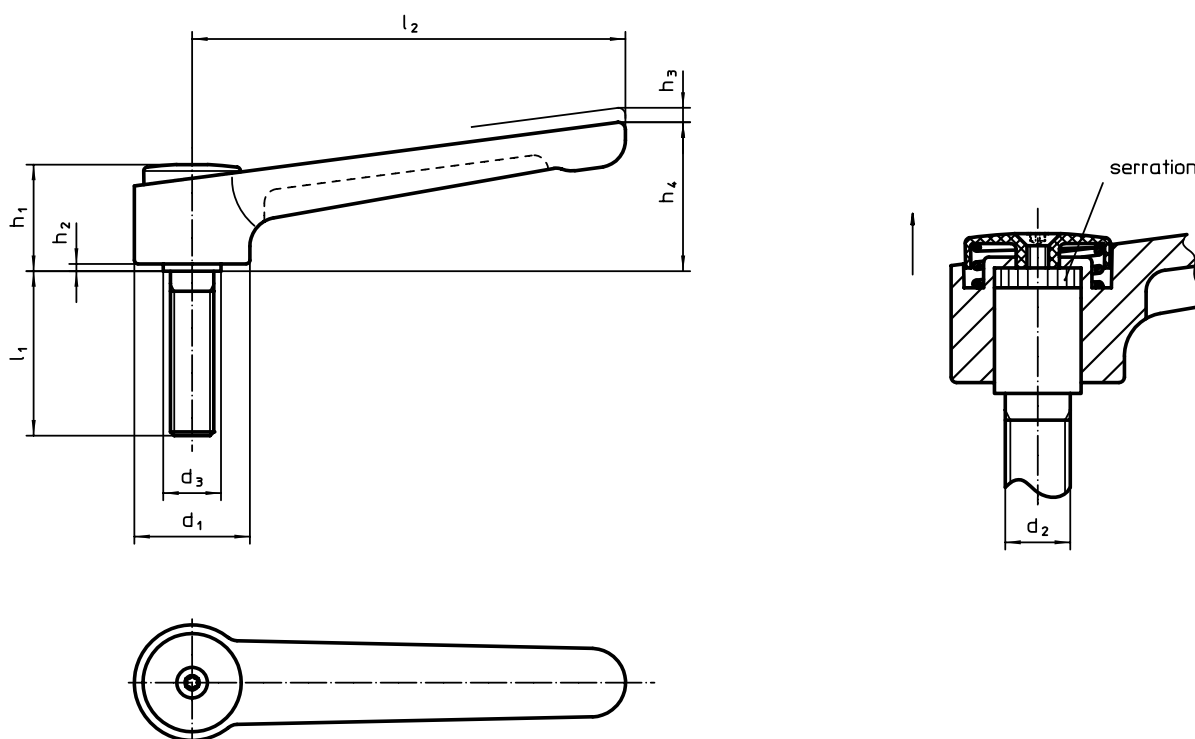
Covering

- Plastic, black
- Plastic, light grey

Operation

By lifting the lever the serrations are disengaged. The lever can be positioned by the serrations. On releasing the lever, the serrations are automatically re-engaged.

DRAWING



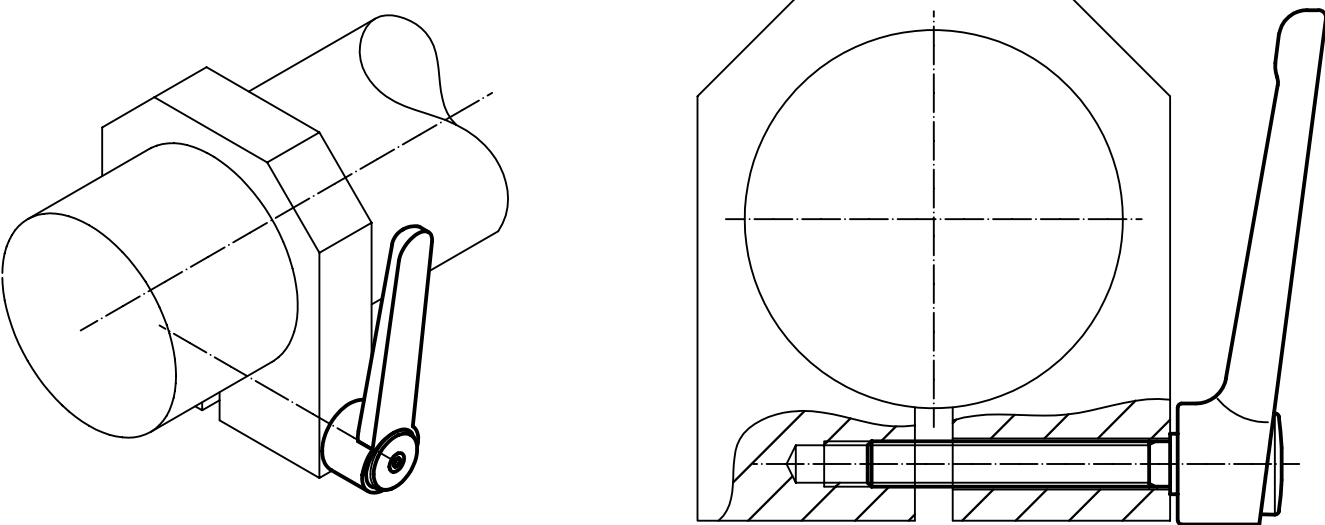
ORDER INFORMATION

Dimensions												Art. No.	
d ₁	d ₂	l ₁	d ₃	h ₁	h ₂	h ₃	h ₄	l ₂	min.	max.		black	silver
[mm]									[°C]		[g]		
32	M10	20	16	29.5	2	2.5	41.5	120	-30	80	209	24441.0450	24441.0850
		25	16	29.5	2	2.5	41.5	120	-30	80	208	24441.0455	24441.0855
		32	16	29.5	2	2.5	41.5	120	-30	80	207	24441.0460	24441.0860
		40	16	29.5	2	2.5	41.5	120	-30	80	210	24441.0465	24441.0865
		50	16	29.5	2	2.5	41.5	120	-30	80	220	24441.0470	24441.0870
		63	16	29.5	2	2.5	41.5	120	-30	80	226	24441.0475	24441.0875
	M12	80	16	29.5	2	2.5	41.5	120	-30	80	231	24441.0480	24441.0880
		20	16	29.5	2	2.5	41.5	120	-30	80	207	24441.0485	24441.0885
		25	16	29.5	2	2.5	41.5	120	-30	80	211	24441.0490	24441.0890
		32	16	29.5	2	2.5	41.5	120	-30	80	215	24441.0495	24441.0895
		40	16	29.5	2	2.5	41.5	120	-30	80	220	24441.0500	24441.0900
		50	16	29.5	2	2.5	41.5	120	-30	80	228	24441.0505	24441.0905
		63	16	29.5	2	2.5	41.5	120	-30	80	238	24441.0510	24441.0910
		80	16	29.5	2	2.5	41.5	120	-30	80	251	24441.0515	24441.0915



Dimensions												Art. No.	
d ₁	d ₂	l ₁	d ₃	h ₁	h ₂	h ₃	h ₄	l ₂	min.	max.		black	silver
[mm]									[°C]		[g]		
40	M12	32	23	42.0	4	4.0	56.0	145	-30	80	440	24441.0525	24441.0925
		40	23	42.0	4	4.0	56.0	145	-30	80	446	24441.0530	24441.0930
		50	23	42.0	4	4.0	56.0	145	-30	80	450	24441.0535	24441.0935
		63	23	42.0	4	4.0	56.0	145	-30	80	461	24441.0540	24441.0940
		80	23	42.0	4	4.0	56.0	145	-30	80	477	24441.0545	24441.0945
	M16	32	23	42.0	4	4.0	56.0	145	-30	80	461	24441.0550	24441.0950
		40	23	42.0	4	4.0	56.0	145	-30	80	472	24441.0555	24441.0955
		50	23	42.0	4	4.0	56.0	145	-30	80	482	24441.0560	24441.0960
		63	23	42.0	4	4.0	56.0	145	-30	80	498	24441.0565	24441.0965
		80	23	42.0	4	4.0	56.0	145	-30	80	523	24441.0570	24441.0970

APPLICATION EXAMPLE



Adjustable Flat Tension Levers • with screw, stainless steel

EH 24441.



PRODUCT DESCRIPTION

Adjustable flat tension levers are used when the swivel range is limited or a specific lever position is required.

Adjustable flat tension levers are characterised by their low construction height and are particularly suitable for use in restricted spaces or when the lever should not overhang.

Material

Lever

- Zinc die-cast, plastic coated, black, similar to RAL 9005, matt structure
- Zinc die-cast, plastic coated, silver, similar to RAL 9006, matt structure

Inner parts

- Stainless steel 1.4305

Screw

- Stainless steel 1.4305

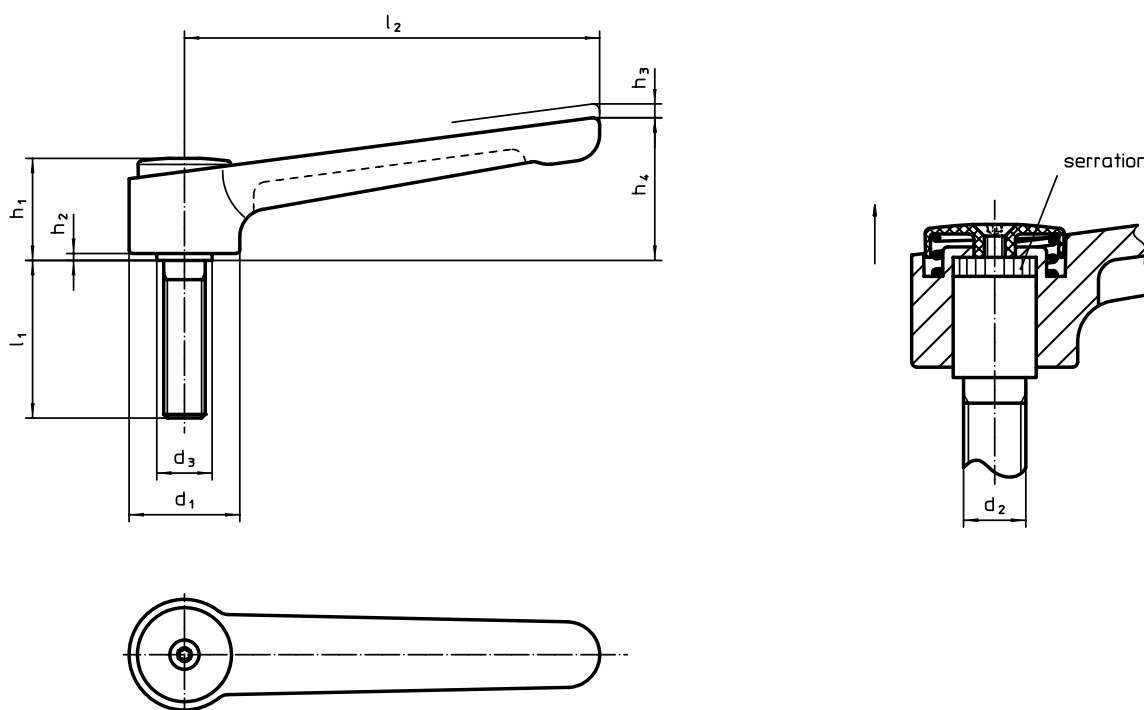
Covering

- Plastic, black
- Plastic, light grey

Operation

By lifting the lever the serrations are disengaged. The lever can be positioned by the serrations. On releasing the lever, the serrations are automatically re-engaged.

DRAWING



ORDER INFORMATION

Dimensions												Art. No.	
d ₁	d ₂	l ₁	d ₃	h ₁	h ₂	h ₃	h ₄	l ₂	min.	max.		black	silver
[mm]									[°C]		[g]		
32	M10	20	16	29.5	2	2.5	41.5	120	-30	80	205	24441.0650	24441.1650
		25	16	29.5	2	2.5	41.5	120	-30	80	206	24441.0655	24441.1655
		32	16	29.5	2	2.5	41.5	120	-30	80	209	24441.0660	24441.1660
		40	16	29.5	2	2.5	41.5	120	-30	80	211	24441.0665	24441.1665
		50	16	29.5	2	2.5	41.5	120	-30	80	217	24441.0670	24441.1670
		63	16	29.5	2	2.5	41.5	120	-30	80	223	24441.0675	24441.1675
	M12	80	16	29.5	2	2.5	41.5	120	-30	80	232	24441.0680	24441.1680
		20	16	29.5	2	2.5	41.5	120	-30	80	207	24441.0685	24441.1685
		25	16	29.5	2	2.5	41.5	120	-30	80	214	24441.0690	24441.1690
		32	16	29.5	2	2.5	41.5	120	-30	80	218	24441.0695	24441.1695
		40	16	29.5	2	2.5	41.5	120	-30	80	223	24441.0700	24441.1700
		50	16	29.5	2	2.5	41.5	120	-30	80	230	24441.0705	24441.1705
		63	16	29.5	2	2.5	41.5	120	-30	80	237	24441.0710	24441.1710
		80	16	29.5	2	2.5	41.5	120	-30	80	250	24441.0715	24441.1715



Dimensions									 min. max.		 [g]	Art. No.	
d ₁	d ₂	l ₁	d ₃	h ₁	h ₂	h ₃	h ₄	l ₂	[°C]			black	silver
[mm]													
40	M12	32	23	42.0	4	4.0	56.0	145	-30	80	442	24441.0725	24441.1725
		40	23	42.0	4	4.0	56.0	145	-30	80	453	24441.0730	24441.1730
		50	23	42.0	4	4.0	56.0	145	-30	80	456	24441.0735	24441.1735
		63	23	42.0	4	4.0	56.0	145	-30	80	463	24441.0740	24441.1740
		80	23	42.0	4	4.0	56.0	145	-30	80	460	24441.0745	24441.1745
	M16	32	23	42.0	4	4.0	56.0	145	-30	80	460	24441.0750	24441.1750
		40	23	42.0	4	4.0	56.0	145	-30	80	472	24441.0755	24441.1755
		50	23	42.0	4	4.0	56.0	145	-30	80	482	24441.0760	24441.1760
		63	23	42.0	4	4.0	56.0	145	-30	80	499	24441.0765	24441.1765
		80	23	42.0	4	4.0	56.0	145	-30	80	522	24441.0770	24441.1770

Tapered Levers • DIN 99

EH 24470.



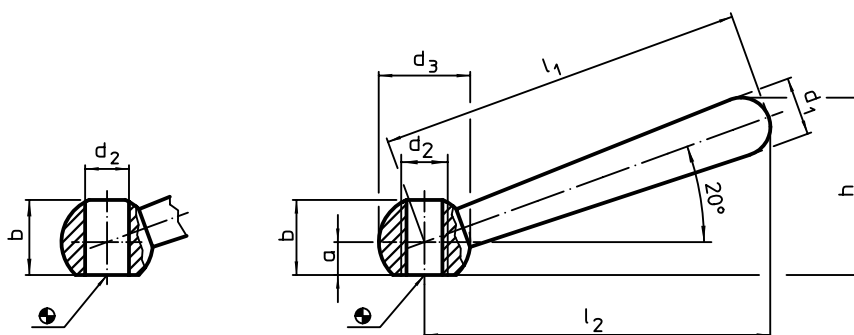
PRODUCT DESCRIPTION

Material

- Steel, blackened
- Stainless steel 1.4305, dull blasted

4

DRAWING



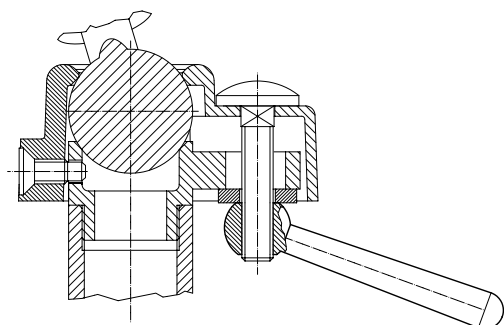
picture 1

picture 2

ORDER INFORMATION

Dimensions									Art. No.	
l_1	l_2	a	b	d_1	d_2	d_3	h		Steel	Stainless steel
[mm]								[g]		
slanted, with smooth bore, form L – picture 1										
50	48	4.0	9.5	8	6 H7	12	24.0	16	24470.0105	–
63	60	5.0	12.0	10	8 H7	16	30.5	37	24470.0106	24470.0206
80	76	6.0	14.5	13	10 H7	20	38.0	73	24470.0108	24470.0208
100	95	7.5	18.5	16	12 H7	25	47.0	140	24470.0110	24470.0210
125	119	10.0	24.0	20	16 H7	32	59.5	282	24470.0112	–
160	152	12.5	30.0	25	20 H7	40	75.7	553	24470.0116	–
200	190	18.0	40.0	32	24 H7	50	97.0	1096	24470.0120	–
slanted, with thread, form N – picture 2										
50	48	4.0	9.5	8	M 6	12	24.0	17	24470.0305	24470.0405
63	60	5.0	12.5	10	M 8	16	30.5	38	24470.0306	24470.0406
80	76	6.0	15.0	13	M10	20	38.0	74	24470.0308	24470.0408
100	95	7.5	19.0	16	M12	25	47.0	142	24470.0310	24470.0410
125	119	10.0	25.0	20	M16	32	59.5	297	24470.0312	24470.0412
160	152	12.5	31.0	25	M20	40	75.7	574	24470.0316	–
200	190	18.0	41.0	32	M24	50	97.0	1140	24470.0320	–

APPLICATION EXAMPLE



Clamping Nuts • welded

EH 24470.



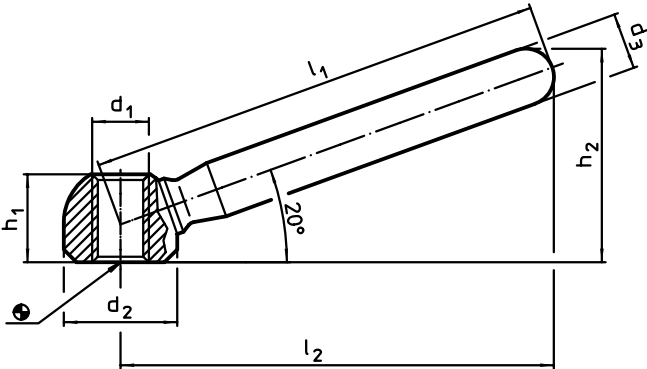
PRODUCT DESCRIPTION

Low-price version to DIN 99.

Material

- Steel, zinc-plated by galvanization
- Stainless steel 1.4301, dull blasted

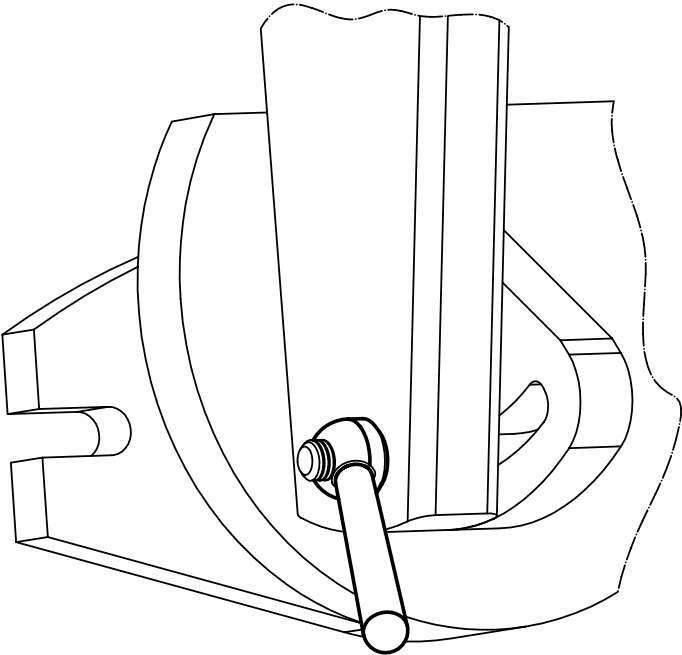
DRAWING



ORDER INFORMATION

Dimensions								Art. No.	
l_1	l_2 ~	d_1	d_2	d_3	h_1	h_2 ~		Steel	Stainless steel
[mm]							[g]		
63	60	M 8	16	10	12.5	30.5	39	24470.0506	24470.0606
80	76	M10	20	12	15.0	37.0	83	24470.0508	24470.0608
100	95	M12	25	14	19.0	46.0	149	24470.0510	24470.0610
125	119	M16	32	18	25.0	58.5	313	24470.0512	24470.0612
160	152	M20	40	20	31.0	73.0	533	24470.0516	24470.0616

APPLICATION EXAMPLE



Clamping Nuts • welded, double-sided
EH 24470.



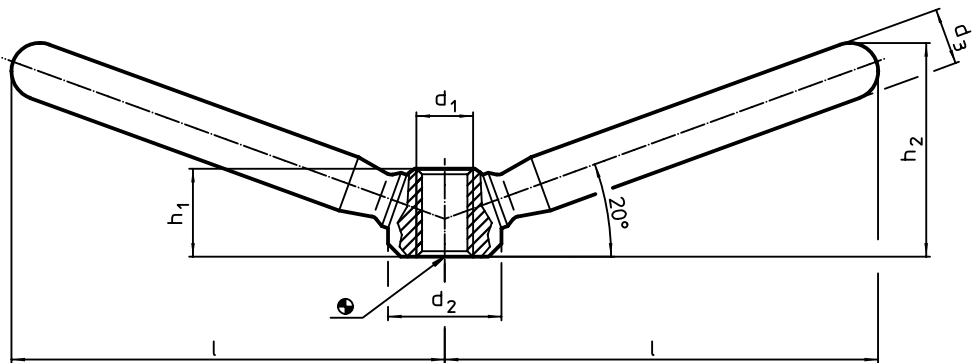
PRODUCT DESCRIPTION

Allows for two-handed operating.

Material

- Steel, zinc-plated by galvanization
- Stainless steel 1.4301, dull blasted

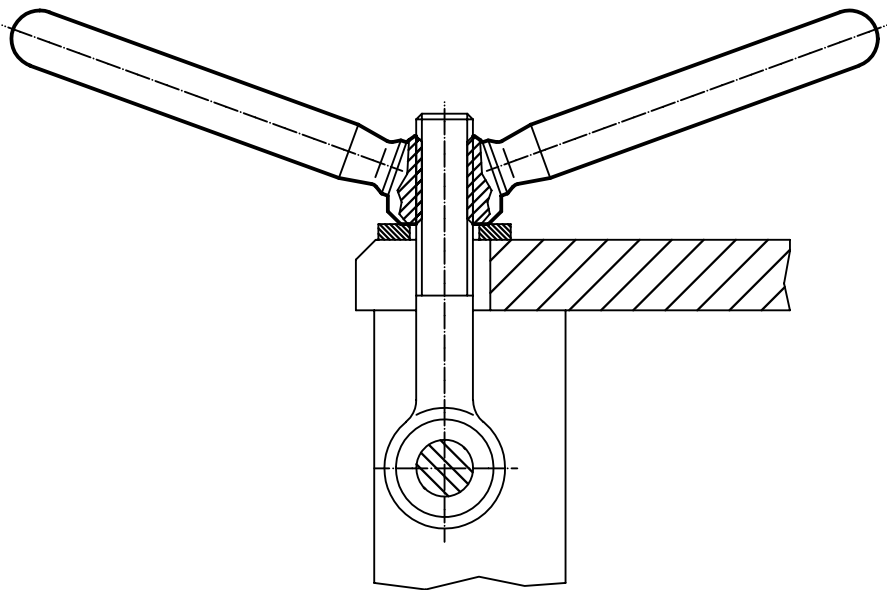
DRAWING



ORDER INFORMATION

Dimensions							Art. No.	
l	d ₁	d ₂	d ₃	h ₁	h ₂		Steel	Stainless steel
[mm]						[g]		
47.5	M 8	16	10	12.5	26	63	24470.0706	24470.0806
59.5	M10	20	12	15.0	32	116	24470.0708	24470.0808
75.5	M12	25	14	19.0	40	210	24470.0710	24470.0810
94.5	M16	32	18	25.0	52	432	24470.0712	24470.0812
118.0	M20	40	20	31.0	62	716	24470.0716	24470.0816

APPLICATION EXAMPLE



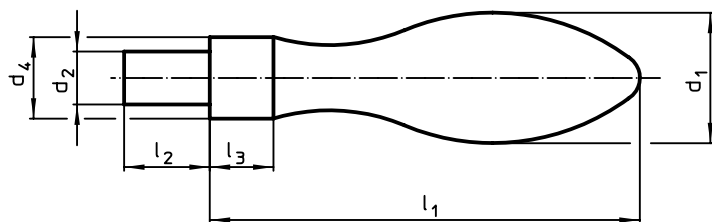


PRODUCT DESCRIPTION

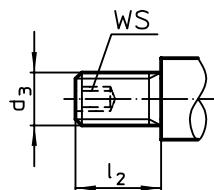
Material

- Steel, turned, zinc-plated by galvanization, passivated
- Stainless steel 1.4404

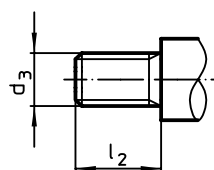
DRAWING



picture 1



picture 2

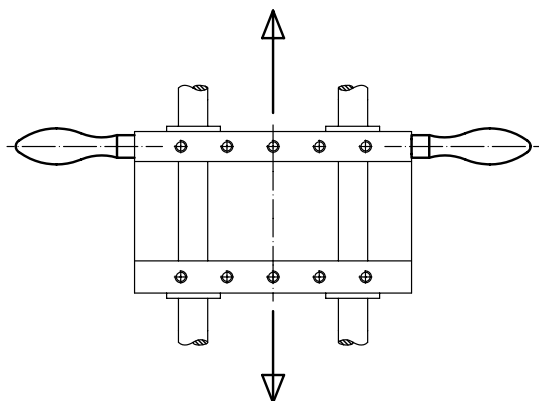


picture 3

ORDER INFORMATION

d ₁	d ₂ h8	d ₃	Dimensions				WS		Art. No.	
			d ₄ h13	l ₁ ~	l ₂	l ₃			Steel	Stainless steel
			[mm]							
with smooth lug, form D – picture 1										
16	7	–	10	50	11	7	–	45	24450.0016	–
20	8	–	13	64	13	8	–	92	24450.0020	–
25	10	–	16	80	14	10	–	179	24450.0025	–
32	13	–	20	100	21	13	–	356	24450.0032	–
36	16	–	22	112	26	14	–	519	24450.0036	–
with male thread lug, form E – picture 2										
16	–	M 6	10	50	11	7	3	43	24450.0116	–
20	–	M 8	13	64	13	8	4	88	24450.0120	–
25	–	M10	16	80	14	10	5	175	24450.0125	–
32	–	M12	20	100	21	13	6	340	24450.0132	–
36	–	M16	22	112	26	14	8	509	24450.0136	–
with male thread lug, form E – picture 3										
16	–	M 6	10	50	11	7	–	45	–	24450.0316
20	–	M 8	13	64	13	8	–	92	–	24450.0320
25	–	M10	16	80	14	10	–	186	–	24450.0325

APPLICATION EXAMPLE



Rotating Machine Handles • DIN 98
EH 24460.

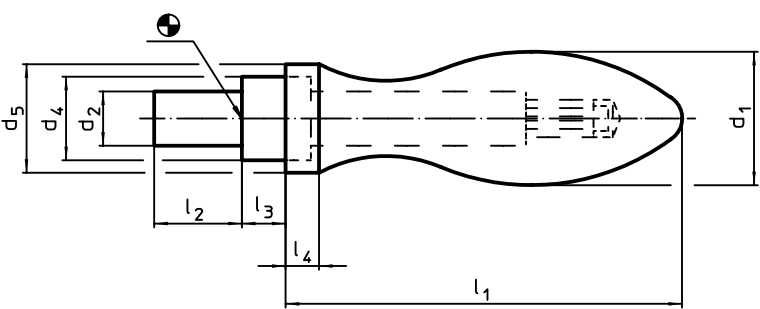


PRODUCT DESCRIPTION

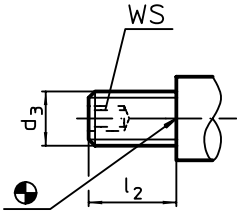
Material

- Steel, turned, zinc-plated by galvanization, passivated

DRAWING



picture 1

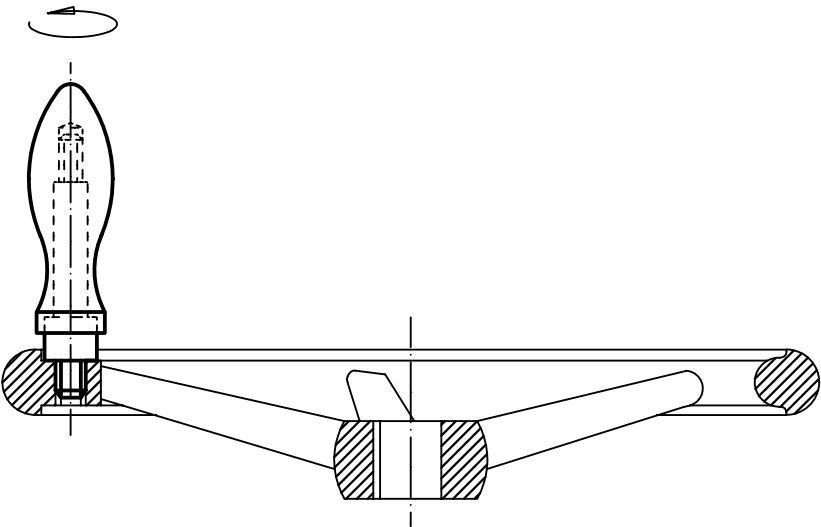


picture 2

ORDER INFORMATION

Dimensions									WS		Art. No.
d ₁	d ₂ h8	d ₃	d ₄ h13	d ₅	l ₁ ~	l ₂	l ₃	l ₄	[mm]	[g]	
with smooth lug, form D – picture 1											
16	7	–	10	14	49	11	5.5	5.0	–	69	24460.0016
20	8	–	13	18	61	13	6.0	6.0	–	109	24460.0020
25	10	–	16	21	75	14	8.0	6.5	–	200	24460.0025
32	13	–	20	26	95	21	10.5	8.0	–	395	24460.0032
36	16	–	22	29	106	26	11.0	9.0	–	569	24460.0036
with male thread lug, form E – picture 2											
16	–	M 6	10	14	49	11	5.5	5.0	3	51	24460.0116
20	–	M 8	13	18	61	13	6.0	6.0	4	105	24460.0120
25	–	M10	16	21	75	14	8.0	6.5	5	190	24460.0125
32	–	M12	20	26	95	21	10.5	8.0	6	387	24460.0132
36	–	M16	22	29	106	26	11.0	9.0	8	566	24460.0136

APPLICATION EXAMPLE





PRODUCT DESCRIPTION

Material

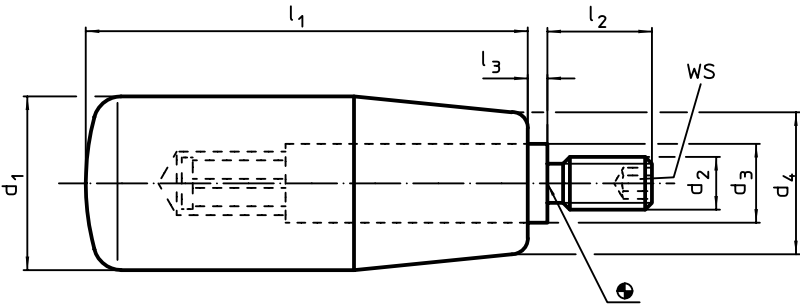
Axle part

- Steel, zinc-plated by galvanization
- Stainless steel 1.4305

Cylindrical handle

- Thermoplastic PA, black, dull
- Thermosetting plastic PF 31, black

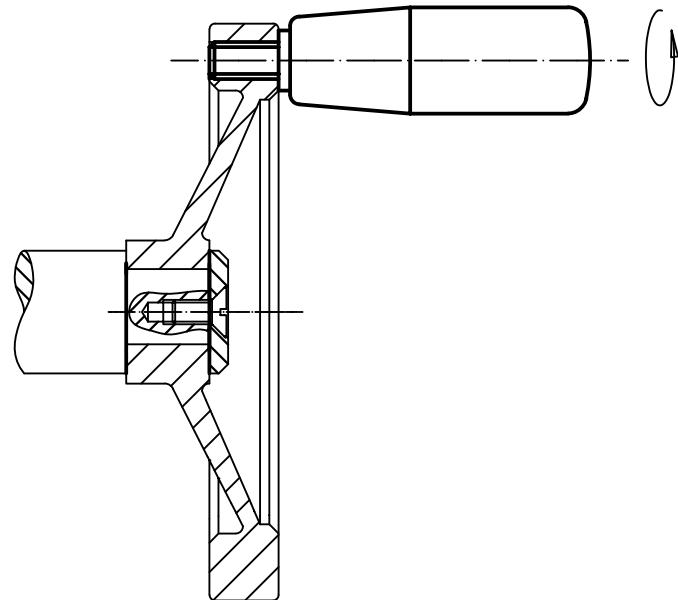
DRAWING



ORDER INFORMATION

Dimensions							WS			Art. No.	
d ₁	d ₂	d ₃	d ₄	l ₁	l ₂	l ₃	[mm]	max. [°C]	[g]	Steel	Stainless steel
[mm]											
cylindrical handle: thermoplastic											
14	M 6	8	11	28	10	0.5	3	80	13	24530.0008	–
cylindrical handle: thermosetting plastic											
18	M 6	10	15	40	12	2.5	3	110	29	24530.0010	24530.0210
21	M 6	10	17	50	13	2.5	3	110	42	24530.0020	24530.0220
	M 8	10	17	50	13	2.5	4	110	43	24530.0021	–
22	M 6	10	18	56	13	2.5	3	110	47	24530.0030	–
	M 8	10	18	56	13	2.5	4	110	48	24530.0031	–
23	M 8	13	19	65	14	2.5	4	110	79	24530.0040	24530.0240
	M10	13	19	65	14	2.5	5	110	80	24530.0041	–
26	M 8	13	21	80	16	2.5	4	110	107	24530.0050	–
	M10	13	21	80	16	2.5	5	110	100	24530.0051	24530.0251
28	M10	13	22	90	16	2.5	5	110	126	24530.0060	24530.0260
31	M12	14	25	102	20	2.5	6	110	177	24530.0071	24530.0271

APPLICATION EXAMPLE



Folding Handles • rotating
EH 24532.



PRODUCT DESCRIPTION

Material

Axle part

- Steel, blackened
- Stainless steel 1.4305

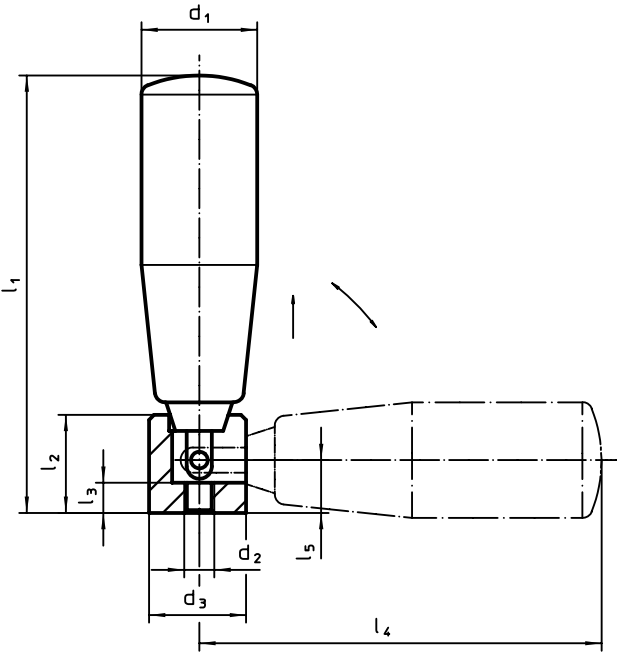
Handle

- Thermoplastic, black, dull

Operation

In the operating position the handle is locked. To move the handle to the rest position, it must be pulled out axially and flipped round.

DRAWING



ORDER INFORMATION

Dimensions										Art. No.	
d ₁	d ₂	d ₃	l ₁ ~	l ₂	l ₃	l ₄ ~	l ₅	max. [°C]	[g]	Steel	Stainless steel
[mm]											
18	M5	16	57	15.0	5	52	9.5	110	53	24532.0018	–
21	M5	16	67	15.0	5	62	9.5	110	63	24532.0021	–
22	M5	16	73	15.0	5	68	9.5	110	67	24532.0022	–
23	M6	20	87	19.5	6	80	10.5	110	111	24532.0023	24532.0123
26	M6	20	102	19.5	6	95	10.5	110	137	24532.0026	24532.0126
28	M8	26	118	26.0	10	106	16.0	110	225	24532.0028	24532.0128

Knurled Nuts • DIN 6303

EH 24480.



PRODUCT DESCRIPTION

Material

- Free cutting steel, blackened
- Stainless steel 1.4305

Assembly

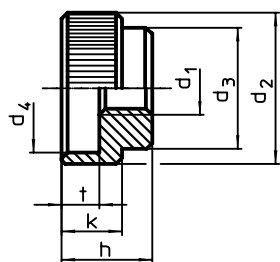
Form B: after being bored through the pin hole is to be situated within the tolerance field H7.

MORE INFORMATION

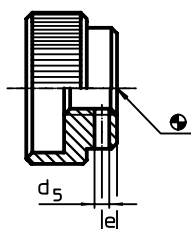
Notes

Knurling pitch and knurling depth may differ from DIN.

DRAWING



picture 1

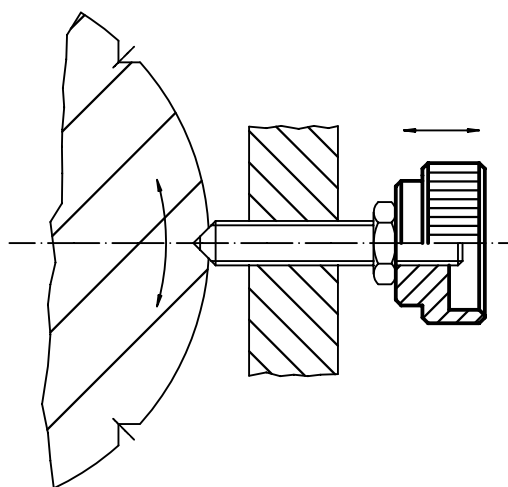


picture 2

ORDER INFORMATION

				Dimensions					Suitable straight pin DIN 7		Art. No.	
d ₁	d ₂	d ₃	d ₄	d ₅ Predrilled	e	h	k	t			Free cutting steel	Stainless steel
				[mm]							[g]	
without pin hole, form A – picture 1												
M 5	20	14	15	–	–	12	8	5	–	16	24480.0005	24480.0205
M 6	24	16	18	–	–	14	10	6	–	27	24480.0006	24480.0206
M 8	30	20	24	–	–	17	12	7	–	46	24480.0008	24480.0208
M10	36	28	30	–	–	20	14	8	–	83	24480.0010	24480.0210
M12	40	32	34	–	–	24	16	10	–	123	24480.0012	24480.0212
with pin hole, form B – picture 2												
M 5	20	14	15	1.4	2.5	12	8	5	1,5 m6 x 14	15	24480.0105	24480.0305
M 6	24	16	18	1.4	2.5	14	10	6	1,5 m6 x 16	25	24480.0106	24480.0306
M 8	30	20	24	1.9	3.0	17	12	7	2,0 m6 x 20	45	24480.0108	24480.0308
M10	36	28	30	2.9	4.0	20	14	8	3,0 m6 x 28	86	24480.0110	24480.0310
M12	40	32	34	3.9	4.0	24	16	10	4,0 m6 x 32	121	24480.0112	24480.0312

APPLICATION EXAMPLE



Flat Knurled Nuts • DIN 467

EH 24760.



PRODUCT DESCRIPTION

Material

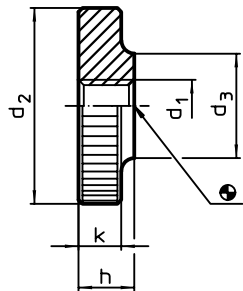
- Steel, blackened, quality 5
- Stainless steel 1.4305, dull blasted

MORE INFORMATION

Notes

Knurling pitch and knurling depth may differ from DIN.

DRAWING

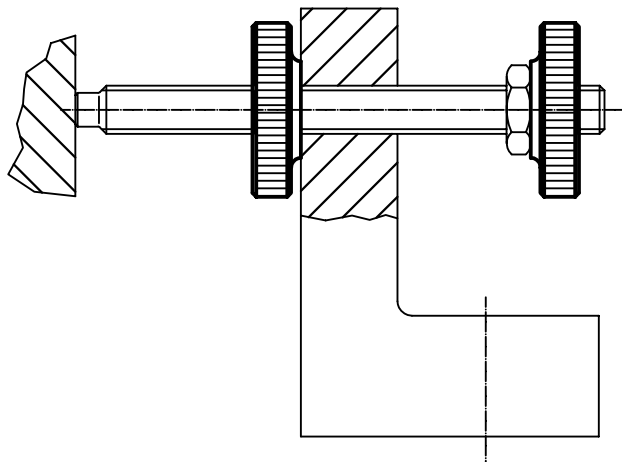


ORDER INFORMATION

Dimensions						Art. No.	
d ₁	d ₂	d ₃	h	k		Steel	Stainless steel
[mm]					[g]		
M 3	12	6	3	2.5	2.1	24760.0030	24760.0230
M 4	16	8	4	3.5	5.1	24760.0040	24760.0240
M 5	20	10	5	4.0	9.4	24760.0050	24760.0250
M 6	24	12	6	5.0	17.0	24760.0060	24760.0260
M 8	30	16	8	6.0	32.0	24760.0080	24760.0280
M10	36	20	10	8.0	61.0	24760.0100	24760.0300
M12	40	22	12	10.0	92.0	24760.0120¹⁾	—

¹⁾ DIN standards do not include these dimensions.

APPLICATION EXAMPLE



Flat Knurled Thumb Screws • DIN 653

EH 24770.



PRODUCT DESCRIPTION

All knurled screws are one-piece manufactured with thread up to the head (DIN-designation A).

Material

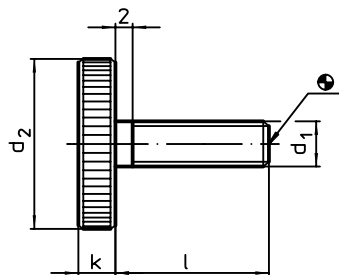
- Steel, blackened, quality 5.8
- Stainless steel 1.4305, dull blasted

MORE INFORMATION

Notes

Knurling pitch and knurling depth may differ from DIN.

DRAWING



ORDER INFORMATION

d ₁	Dimensions				Art. No.	
	l	d ₂	k		Steel	Stainless steel
[mm]				[g]		
M 3	6	12	2.5	2.3	24770.0072	—
	8	12	2.5	2.4	24770.0073	—
	10	12	2.5	2.5	24770.0074	—
	16	12	2.5	2.7	24770.0077	—
	20	12	2.5	2.9	24770.0079	—
M 4	8	16	3.5	5.6	24770.0092	24770.0292
	10	16	3.5	5.7	24770.0093	24770.0293
	12	16	3.5	6.1	24770.0094	24770.0294
	16	16	3.5	6.2	24770.0096	24770.0296
	20	16	3.5	6.6	24770.0098	—
M 5	25	16	3.5	7.1	24770.0100	—
	10	20	4.0	10.0	24770.0112	24770.0312
	12	20	4.0	11.0	24770.0113	24770.0313
	16	20	4.0	12.0	24770.0115	24770.0315
	20	20	4.0	12.0	24770.0117	24770.0317
M 6	25	20	4.0	12.0	24770.0119	—
	30	20	4.0	13.0	24770.0121	—
	12	24	5.0	18.0	24770.0132	24770.0332
	16	24	5.0	20.0	24770.0134	24770.0334
	20	24	5.0	21.0	24770.0136	24770.0336
M 8	25	24	5.0	21.0	24770.0138	24770.0338
	30	24	5.0	22.0	24770.0140	—
	40	24	5.0	23.0	24770.0142	—
	16	30	6.0	36.0	24770.0152	24770.0352
	20	30	6.0	37.0	24770.0154	24770.0354
M 10	25	30	6.0	39.0	24770.0156	24770.0356
	30	30	6.0	40.0	24770.0158	24770.0358
	35	30	6.0	42.0	24770.0160	—
	40	30	6.0	44.0	24770.0161	—
	20	36	8.0	71.0	24770.0172	24770.0372
M 10	25	36	8.0	72.0	24770.0174	24770.0374
	30	36	8.0	76.0	24770.0176	24770.0376
	35	36	8.0	78.0	24770.0178	—
	40	36	8.0	80.0	24770.0180	24770.0380

High Knurled Nuts (with Collar) • DIN 466

EH 24780.



PRODUCT DESCRIPTION

Material

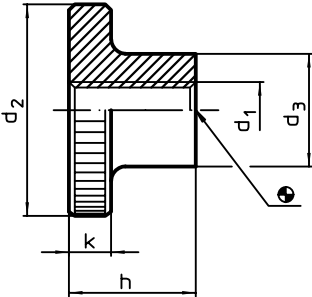
- Steel, blackened, quality 5
- Stainless steel 1.4301, dull blasted

MORE INFORMATION

Notes

Knurling pitch and knurling depth may differ from DIN.

DRAWING

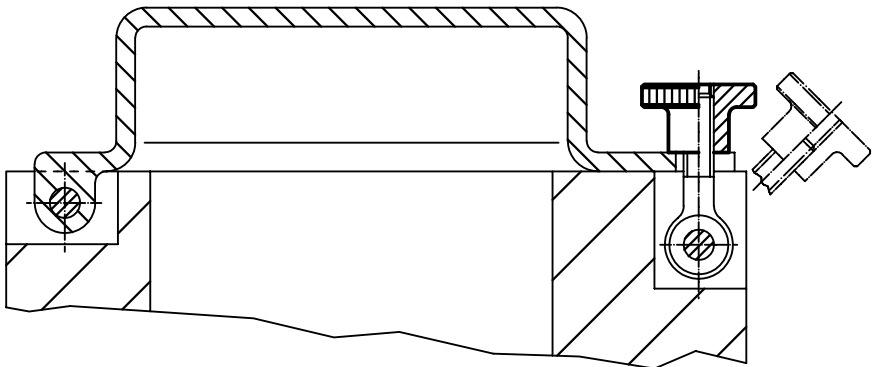


ORDER INFORMATION

Dimensions						Art. No.	
d ₁	d ₂	d ₃	h	k		Steel	Stainless steel
[mm]					[g]		
M 3	12	6	7.5	2.5	2.9	24780.0030	—
M 4	16	8	9.5	3.5	6.7	24780.0040	24780.0240
M 5	20	10	11.5	4.0	12.0	24780.0050	24780.0250
M 6	24	12	15.0	5.0	23.0	24780.0060	24780.0260
M 8	30	16	18.0	6.0	44.0	24780.0080	24780.0280
M10	36	20	23.0	8.0	85.0	24780.0100	24780.0300
M12	40	22	25.0	10.0	119.0	24780.0120¹⁾	—

¹⁾ DIN standards do not include these dimensions.

APPLICATION EXAMPLE



High Knurled Thumb Screws • DIN 464

EH 24790.



PRODUCT DESCRIPTION

All knurled screws are one-piece manufactured. Contrary to the Official Standard Sheet, they all have a thread up to the head, but no recess at the thread end.

Material

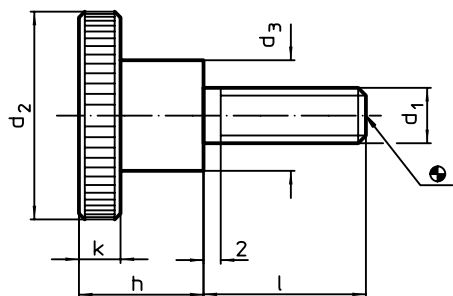
- Steel, blackened, quality 5.8
- Stainless steel 1.4305, dull blasted

MORE INFORMATION

Notes

Knurling pitch and knurling depth may differ from DIN.

DRAWING



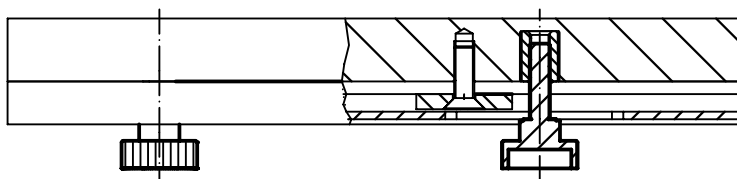
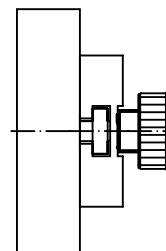
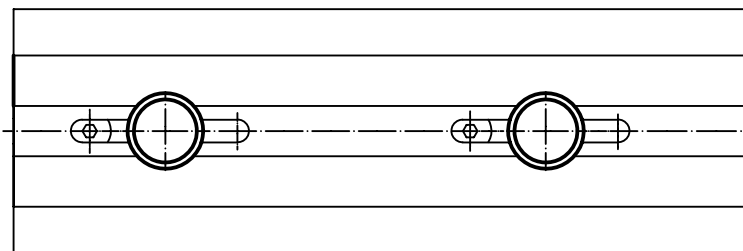
ORDER INFORMATION

Dimensions						Art. No.	Steel	Stainless steel
d ₁	l	d ₂	d ₃	h	k			
[mm]						[g]		
M 3	6	12	6	7.5	2.5	3.7	24790.0074	24790.0274
	10	12	6	7.5	2.5	3.8	24790.0076	24790.0276
	12	12	6	7.5	2.5	4.0	24790.0077	24790.0277
	16	12	6	7.5	2.5	4.0	24790.0079	24790.0279
	20	12	6	7.5	2.5	4.5	24790.0081	—
M 4	5	16	8	9.5	3.5	7.7	24790.0092	—
	8	16	8	9.5	3.5	8.0	24790.0094	24790.0294
	10	16	8	9.5	3.5	8.1	24790.0095	24790.0295
	12	16	8	9.5	3.5	8.6	24790.0096	24790.0296
	16	16	8	9.5	3.5	8.4	24790.0098	24790.0298
	20	16	8	9.5	3.5	9.1	24790.0100	24790.0300
M 5	25	16	8	9.5	3.5	9.0	24790.0102	24790.0302
	6	20	10	11.5	4.0	14.0	24790.0112	—
	8	20	10	11.5	4.0	15.0	24790.0113	—
	10	20	10	11.5	4.0	15.0	24790.0114	24790.0314
	12	20	10	11.5	4.0	15.0	24790.0115	24790.0315
	16	20	10	11.5	4.0	16.0	24790.0117	24790.0317
	20	20	10	11.5	4.0	16.0	24790.0119	24790.0319
	25	20	10	11.5	4.0	17.0	24790.0121	24790.0321
M 6	30	20	10	11.5	4.0	17.0	24790.0123	24790.0323
	8	24	12	15.0	5.0	28.0	24790.0132	—
	10	24	12	15.0	5.0	27.0	24790.0133	—
	12	24	12	15.0	5.0	28.0	24790.0134	24790.0334
	16	24	12	15.0	5.0	28.0	24790.0136	24790.0336
	20	24	12	15.0	5.0	29.0	24790.0138	24790.0338
	25	24	12	15.0	5.0	30.0	24790.0140	24790.0340
	30	24	12	15.0	5.0	31.0	24790.0142	24790.0342
	35	24	12	15.0	5.0	31.0	24790.0144	24790.0344

→

Dimensions							Art. No.	
d ₁	l	d ₂	d ₃	h	k		Steel	Stainless steel
[mm]							[g]	
M 8	12	30	16	18.0	6.0	53.0	24790.0152	–
	16	30	16	18.0	6.0	55.0	24790.0154	24790.0354
	20	30	16	18.0	6.0	56.0	24790.0156	24790.0356
	25	30	16	18.0	6.0	58.0	24790.0158	24790.0358
	30	30	16	18.0	6.0	60.0	24790.0160	24790.0360
	35	30	16	18.0	6.0	62.0	24790.0162	24790.0362
M10	40	30	16	18.0	6.0	61.0	24790.0164	–
	15	36	20	23.0	8.0	104.0	24790.0171	–
	20	36	20	23.0	8.0	106.0	24790.0173	–
	25	36	20	23.0	8.0	109.0	24790.0175	–
	30	36	20	23.0	8.0	112.0	24790.0177	–
	35	36	20	23.0	8.0	116.0	24790.0179	–
	40	36	20	23.0	8.0	116.0	24790.0181	–

APPLICATION EXAMPLE



Knurled Nuts • plastic
EH 24820.



PRODUCT DESCRIPTION

Material

- Stainless steel 1.4305

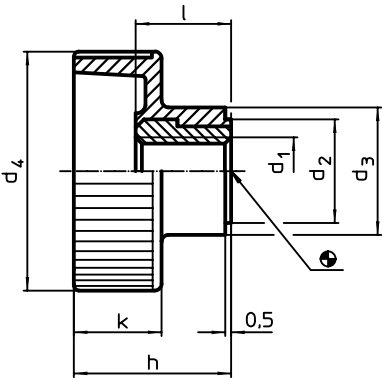
Bushing

- Steel, zinc-plated by galvanization

Handle

- Thermoplastic PA, black

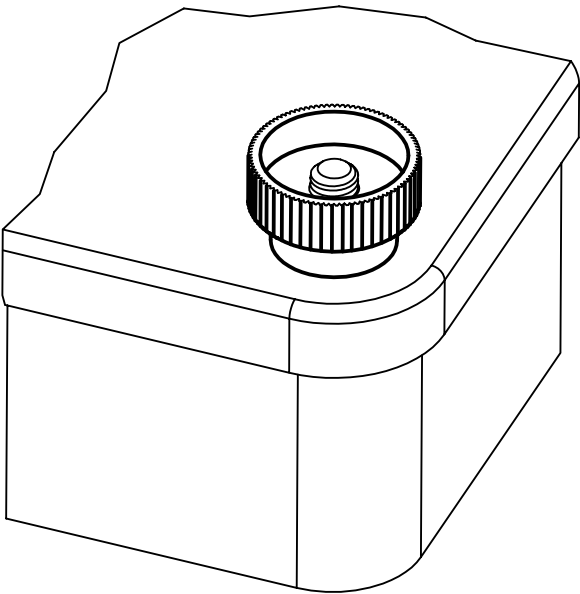
DRAWING



ORDER INFORMATION

Dimensions										Art. No.	
d ₁	d ₂	d ₃	d ₄	h	k	l	min.	max.		Steel	Stainless steel
[mm]							[°C]		[g]		
M 4	9	12	19	14.0	8.0	9.0	-30	80	4.5	24820.0004	—
M 5	9	12	19	14.0	8.0	9.0	-30	80	4.0	24820.0005	24820.0205
M 6	12	14	24	16.5	9.5	10.5	-30	80	7.0	24820.0006	24820.0206
M 8	14	16	30	19.5	11.0	11.5	-30	80	10.0	24820.0008	24820.0208
M10	16	18	36	22.5	12.5	14.0	-30	80	15.0	24820.0010	—

APPLICATION EXAMPLE



Knurled Thumb Screws • plastic

EH 24830.



PRODUCT DESCRIPTION

Material

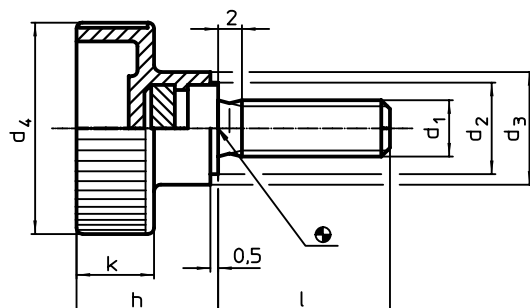
Handle

- Thermoplastic PA, black

Screw

- Steel, zinc-plated by galvanization
- Stainless steel 1.4567

DRAWING



ORDER INFORMATION

Dimensions										Art. No.	
d ₁	l	d ₂	d ₃	d ₄	h	k	min.	max.		Steel	Stainless steel
[mm]							[°C]		[g]		
M 4	10	9	12	19	14.0	8.0	-30	80	3.8	24830.0030	—
	15	9	12	19	14.0	8.0	-30	80	4.0	24830.0032	—
	20	9	12	19	14.0	8.0	-30	80	4.2	24830.0034	—
	30	9	12	19	14.0	8.0	-30	80	7.0	24830.0036	—
M 5	10	9	12	19	14.0	8.0	-30	80	4.3	24830.0042	24830.0242
	15	9	12	19	14.0	8.0	-30	80	5.0	24830.0043	24830.0243
	20	9	12	19	14.0	8.0	-30	80	5.5	24830.0045	24830.0245
	25	9	12	19	14.0	8.0	-30	80	6.0	24830.0046	24830.0246
M 6	10	12	14	24	16.5	9.5	-30	80	7.0	24830.0050	24830.0250
	16	12	14	24	16.5	9.5	-30	80	7.9	24830.0053	24830.0253
	20	12	14	24	16.5	9.5	-30	80	8.5	24830.0054	24830.0254
	25	12	14	24	16.5	9.5	-30	80	9.0	24830.0055	24830.0255
M 8	30	12	14	24	16.5	9.5	-30	80	10.0	24830.0057	24830.0257
	16	14	16	30	19.5	11.0	-30	80	14.0	24830.0060	—
	20	14	16	30	19.5	11.0	-30	80	16.0	24830.0062	24830.0262
	25	14	16	30	19.5	11.0	-30	80	17.0	24830.0064	24830.0264
	30	14	16	30	19.5	11.0	-30	80	19.0	24830.0065	24830.0265
M10	40	14	16	30	19.5	11.0	-30	80	20.0	24830.0067	24830.0267
	20	16	18	36	22.5	12.5	-30	80	30.0	24830.0070	24830.0270
	25	16	18	36	22.5	12.5	-30	80	31.0	24830.0072	24830.0272
	30	16	18	36	22.5	12.5	-30	80	33.0	24830.0074	24830.0274
	40	16	18	36	22.5	12.5	-30	80	38.0	24830.0076	—
	45	16	18	36	22.5	12.5	-30	80	38.0	—	24830.0278
	55	16	18	36	22.5	12.5	-30	80	48.0	—	24830.0280

Tommy Screws • DIN 6304 with fixed pin

EH 24490.



PRODUCT DESCRIPTION

With this version, the pin is pressed in.

Material

- Free cutting steel, blackened, pressure lug hardened.

MORE INFORMATION

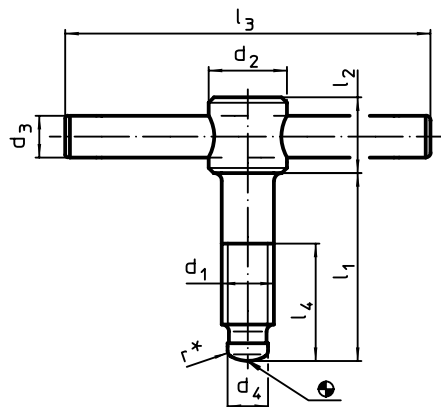
References

Thrust point for thrust pad DIN 6311 form S, EH 22560.

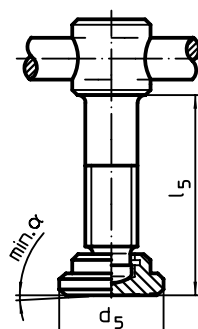
Further products

Thrust Pads, DIN 6311 and low model → p. 282

DRAWING



picture 1



picture 2

* to ease assembly the DIN 6304 specification has been completed by r

ORDER INFORMATION

Dimensions										α min.		Art. No.
d_1	l_1	d_2	d_3	d_4	d_5	l_2	l_3	l_4	l_5			
[mm]											[g]	
without thrust pad, form E – picture 1												
M 6	40	12	5	4.5	–	10	50	30	–	–	21	24490.0006
	50	12	5	4.5	–	10	50	40	–	–	23	24490.0007
M 8	50	14	6	6.0	–	12	60	35	–	–	39	24490.0008
	60	14	6	6.0	–	12	60	45	–	–	43	24490.0009
M10	60	18	8	8.0	–	14	80	40	–	–	81	24490.0010
	70	18	8	8.0	–	14	80	50	–	–	86	24490.0011
M12	70	20	10	8.0	–	18	100	50	–	–	141	24490.0012
	80	20	10	8.0	–	18	100	60	–	–	148	24490.0013
M16	75	24	12	12.0	–	20	120	55	–	–	249	24490.0016
	90	24	12	12.0	–	20	120	70	–	–	268	24490.0017
	110	24	12	12.0	–	20	120	90	–	–	294	24490.0018
M20	75	30	16	15.5	–	28	140	55	–	–	475	24490.0020
	90	30	16	15.5	–	28	140	70	–	–	504	24490.0021
	110	30	16	15.5	–	28	140	90	–	–	544	24490.0022
with thrust pad, form F – picture 2												
M 6	40	12	5	4.5	12	10	50	30	42.1	7°	24	24490.0106
	50	12	5	4.5	12	10	50	40	52.1	7°	28	24490.0107
M 8	50	14	6	6.0	16	12	60	35	53.0	4°	49	24490.0108
	60	14	6	6.0	16	12	60	45	63.0	4°	54	24490.0109
M10	60	18	8	8.0	20	14	80	40	63.6	3°	97	24490.0110
	70	18	8	8.0	20	14	80	50	73.6	3°	102	24490.0111
M12	70	20	10	8.0	25	18	100	50	74.6	3°	173	24490.0112
	80	20	10	8.0	25	18	100	60	84.6	3°	178	24490.0113
M16	75	24	12	12.0	32	20	120	55	80.4	5°	317	24490.0116
	90	24	12	12.0	32	20	120	70	95.4	5°	342	24490.0117
	110	24	12	12.0	32	20	120	90	115.4	5°	367	24490.0118
M20	75	30	16	15.5	40	28	140	55	80.5	4°	573	24490.0120
	90	30	16	15.5	40	28	140	70	95.5	4°	603	24490.0121
	110	30	16	15.5	40	28	140	90	115.5	4°	643	24490.0122

Tommy Screws • DIN 6306 with moveable pin

EH 24500.



PRODUCT DESCRIPTION

With this version, the pin is moveable and held by the spring.

Material

- Free cutting steel, blackened, pressure lug hardened.

MORE INFORMATION

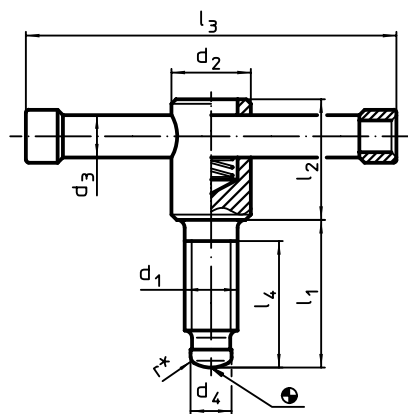
References

Thrust point for thrust pad DIN 6311 form S, EH 22560.

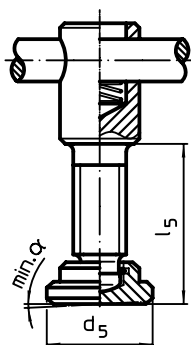
Further products

Thrust Pads, DIN 6311 and low model → p. 282

DRAWING



picture 1



picture 2

* to ease assembly the DIN 6306 specification has been completed by r

ORDER INFORMATION

Dimensions										α min.		Art. No.
d ₁	l ₁	d ₂	d ₃	d ₄	d ₅	l ₂	l ₃	l ₄	l ₅			
[mm]											[g]	
without thrust pad, form D – picture 1												
M 8	40	14	6	6.0	–	25	60	32	–	–	44	24500.0008
	50	14	6	6.0	–	25	60	42	–	–	47	24500.0009
M10	40	18	8	8.0	–	32	80	30	–	–	92	24500.0010
	50	18	8	8.0	–	32	80	40	–	–	96	24500.0011
M12	50	20	10	8.0	–	35	100	40	–	–	154	24500.0012
	60	20	10	8.0	–	35	100	50	–	–	162	24500.0013
M16	55	24	13	12.0	–	40	120	45	–	–	298	24500.0016
	70	24	13	12.0	–	40	120	60	–	–	319	24500.0017
	90	24	13	12.0	–	40	120	60	–	–	344	24500.0018
M20	55	30	16	15.5	–	45	140	45	–	–	520	24500.0020
	70	30	16	15.5	–	45	140	60	–	–	550	24500.0021
	90	30	16	15.5	–	45	140	80	–	–	593	24500.0022
with thrust pad, form E – picture 2												
M 8	40	14	6	6.0	16	25	60	32	43.0	3°	53	24500.0108
	50	14	6	6.0	16	25	60	42	53.0	3°	56	24500.0109
M10	40	18	8	8.0	20	32	80	30	43.6	3°	110	24500.0110
	50	18	8	8.0	20	32	80	40	53.6	3°	114	24500.0111
M12	50	20	10	8.0	25	35	100	40	54.6	3°	193	24500.0112
	60	20	10	8.0	25	35	100	50	64.6	3°	198	24500.0113
M16	55	24	13	12.0	32	40	120	45	60.4	5°	357	24500.0116
	70	24	13	12.0	32	40	120	60	75.4	5°	377	24500.0117
	90	24	13	12.0	32	40	120	80	95.4	5°	402	24500.0118
M20	55	30	16	15.5	40	45	140	45	60.5	4°	623	24500.0120
	70	30	16	15.5	40	45	140	60	75.5	4°	653	24500.0121
	90	30	16	15.5	40	45	140	80	95.5	4°	693	24500.0122

Tommy Nuts • DIN 6305 with fixed pin
EH 24510.



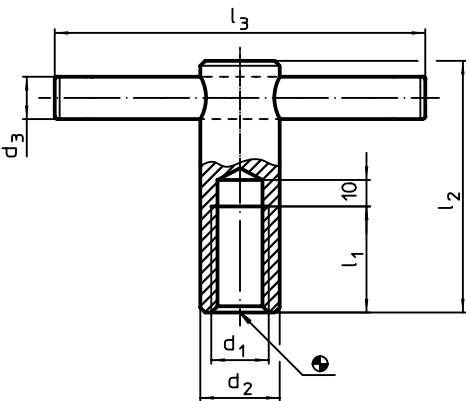
PRODUCT DESCRIPTION

With this version, the pin is pressed in.

Material

- Free cutting steel, blackened

DRAWING

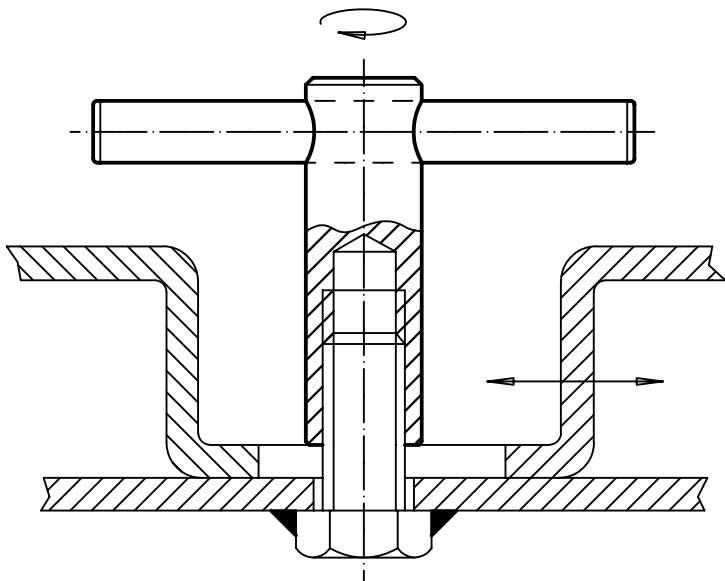


ORDER INFORMATION

Dimensions							Art. No.
d ₁	d ₂	d ₃	l ₁	l ₂	l ₃ ~		
[mm]						[g]	
M 8	16	6	16	50	60	78	24510.0508¹⁾
M10	18	8	20	60	80	126	24510.0510
M12	20	10	25	70	100	192	24510.0512
M16	24	12	35	85	120	320	24510.0516
M20	30	16	40	95	140	579	24510.0520

¹⁾ DIN standards do not include these dimensions.

APPLICATION EXAMPLE



Tommy Nuts • DIN 6307 with moveable pin

EH 24510.



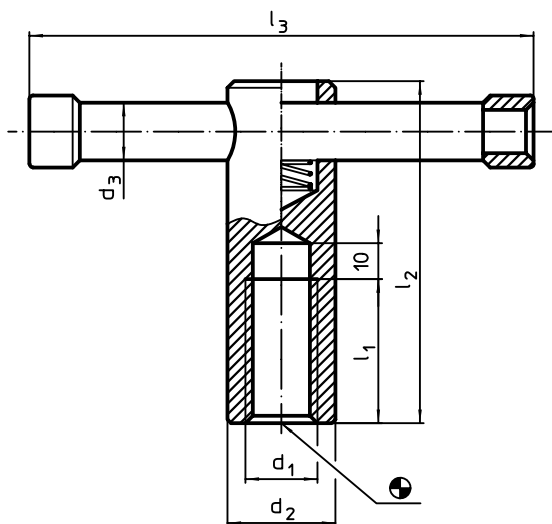
PRODUCT DESCRIPTION

With this version, the pin is moveable and held by the spring.

Material

- Free cutting steel, blackened

DRAWING

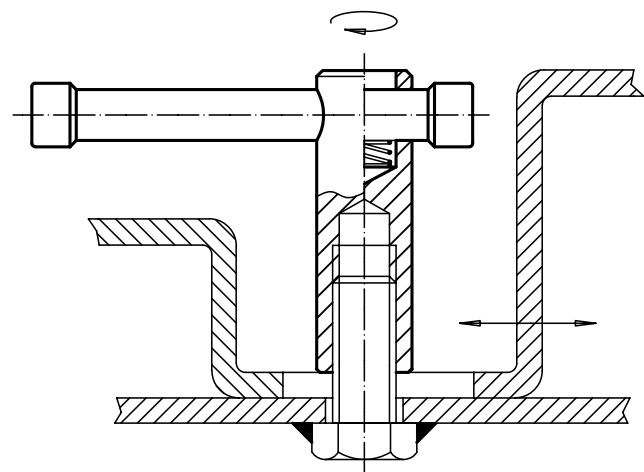


ORDER INFORMATION

Dimensions							Art. No.
d ₁	d ₂	d ₃	l ₁	l ₂	l ₃		
[mm]							
M 8	16	6	16	50	60	71	24510.0708¹⁾
M10	18	8	20	60	80	112	24510.0710
M12	20	10	25	70	100	180	24510.0712
M16	24	13	35	85	120	328	24510.0716
M20	30	16	40	95	140	582	24510.0720

¹⁾ DIN standards do not include these dimensions.

APPLICATION EXAMPLE



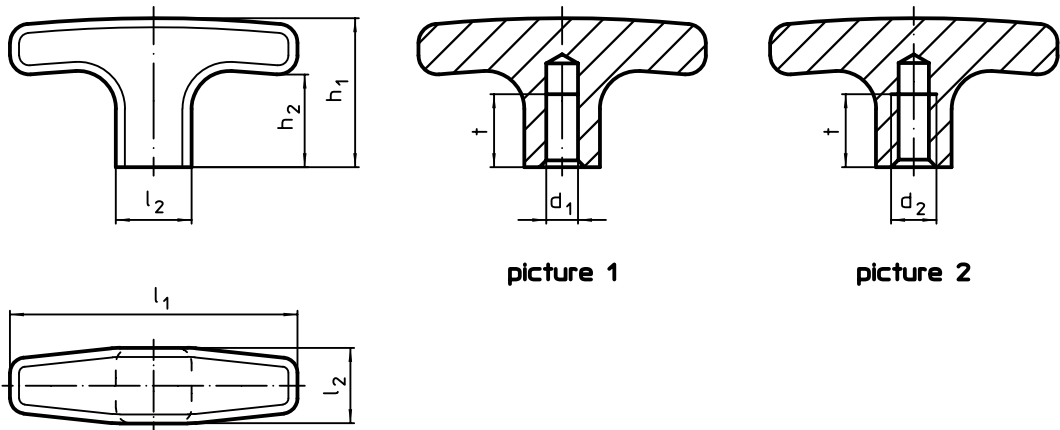


PRODUCT DESCRIPTION

Material

- Aluminium, plastic coated, similar to RAL 9005 black, matt structure

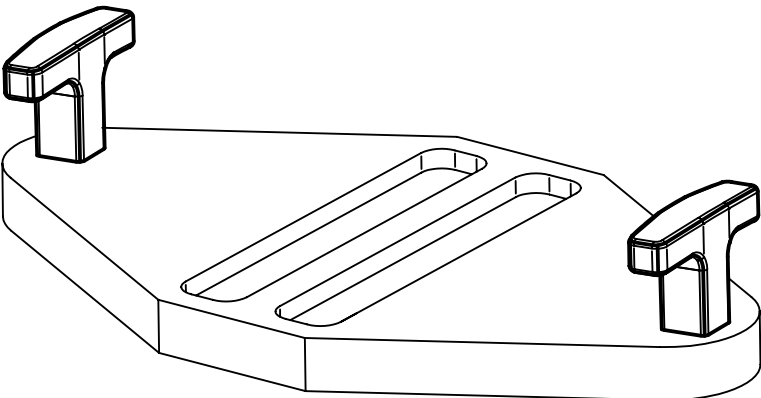
DRAWING



ORDER INFORMATION

d ₁ H7	d ₂	l ₁	Dimensions					Art. No.
			l ₂	h ₁	h ₂	t		
			[mm]					
with smooth blind hole – picture 1								
6	–	55	14	33	22	12	31	24512.0020
8	–	67	16	37	25	16	46	24512.0030
		80	20	41	26	16	80	24512.0035
with threaded blind hole – picture 2								
–	M 6	55	14	33	22	12	34	24512.0120
	M 8	55	14	33	22	12	31	24512.0125
		67	16	37	25	16	48	24512.0130
		80	20	41	26	16	80	24512.0135
	M10	80	20	41	26	16	80	24512.0140

APPLICATION EXAMPLE



Mushroom-Type Knobs

EH 24540.



PRODUCT DESCRIPTION

Material

- Mushroom-type knob
- Thermosetting plastic PF 31, black

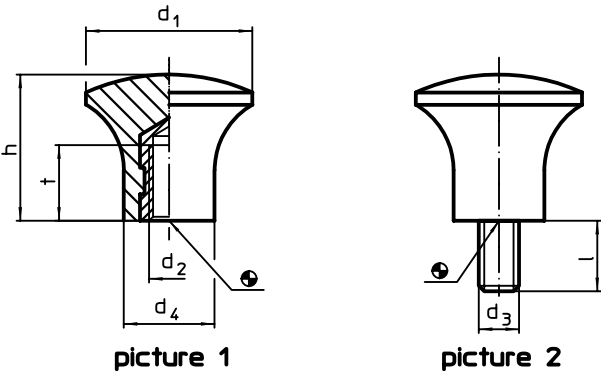
Bushing

- Brass

Screw

- Steel, zinc-plated by galvanization

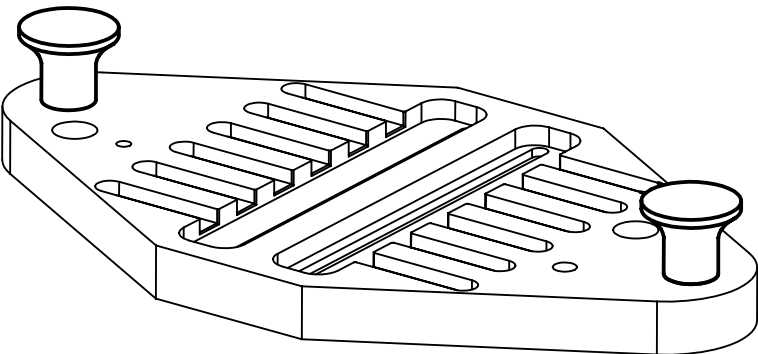
DRAWING



ORDER INFORMATION

Dimensions									Art. No.
d ₁	d ₂	d ₃	l	d ₄	h	t	max.		
[mm]							[°C]	[g]	
with female thread – picture 1									
17	M5	–	–	10	14	7	110	3.8	24540.0017
21	M6	–	–	12	17	11	110	6.2	24540.0021
25	M6	–	–	14	21	11	110	11.0	24540.0025
33	M8	–	–	18	29	12	110	21.0	24540.0033
with screw – picture 2									
17	–	M5	9	10	14	–	110	4.2	24540.0117
21	–	M6	10	12	17	–	110	7.1	24540.0121
25	–	M6	10	14	21	–	110	10.0	24540.0125
33	–	M8	14	18	29	–	110	23.0	24540.0133

APPLICATION EXAMPLE



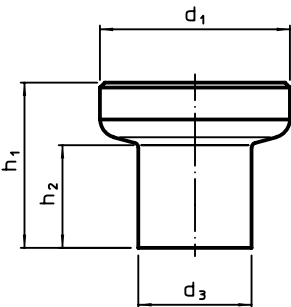


PRODUCT DESCRIPTION

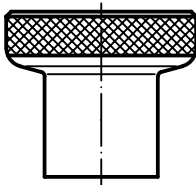
Material

- Steel, blackened
- Stainless steel 1.4305, dull blasted

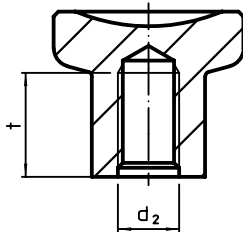
DRAWING



picture 1



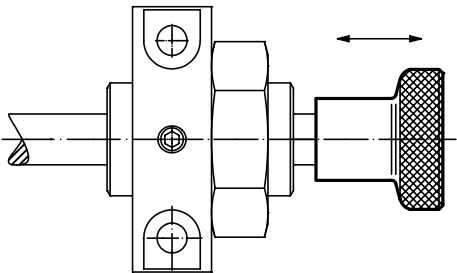
picture 2



ORDER INFORMATION

Dimensions							Art. No.	
d ₁	d ₂	d ₃	h ₁	h ₂	t min.		Steel	Stainless steel
[mm]							[g]	
without knurling – picture 1								
21	M 4	12.5	18.0	10.5	10	26	24520.0002	24520.0102
	M 5	12.5	18.0	10.5	10	25	24520.0003	24520.0103
25	M 6	14.5	22.5	14.0	12	42	24520.0005	24520.0105
	M 8	14.5	22.5	14.0	12	38	24520.0006	24520.0106
31	M 8	18.5	27.0	17.0	15	75	24520.0008	24520.0108
	M10	18.5	27.0	17.0	17	70	24520.0009	24520.0109
with knurling – picture 2								
21	M 4	12.5	18.0	10.5	10	26	24520.0022	24520.0122
	M 5	12.5	18.0	10.5	10	25	24520.0023	24520.0123
25	M 6	14.5	22.5	14.0	12	42	24520.0025	24520.0125
	M 8	14.5	22.5	14.0	12	39	24520.0026	24520.0126
31	M 8	18.5	27.0	17.0	15	75	24520.0028	24520.0128
	M10	18.5	27.0	17.0	17	70	24520.0029	24520.0129

APPLICATION EXAMPLE



Conical Knobs

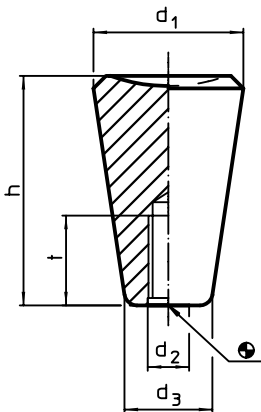
EH 24550.



PRODUCT DESCRIPTION

- Material
- Thermosetting plastic PF 31, black

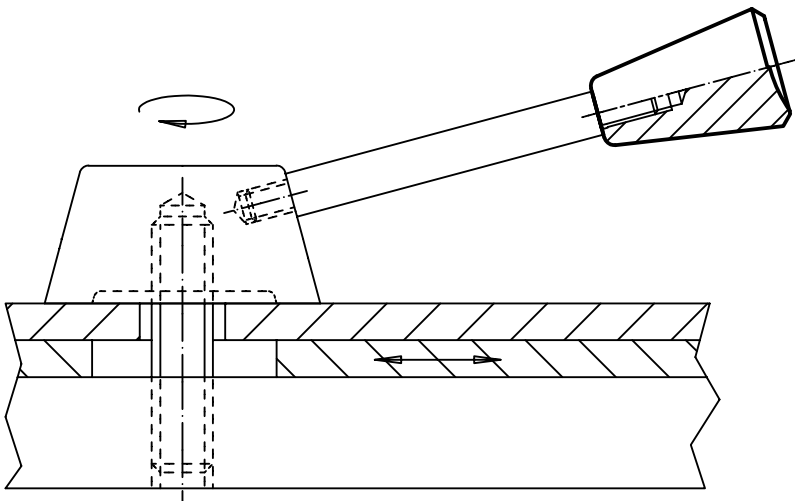
DRAWING



ORDER INFORMATION

Dimensions							Art. No.
d ₁	d ₂	d ₃ ~ [mm]	h	t min.	max. [°C]	[g]	
20	M 5	12	30	18	110	7.8	24550.0010
	M 6	12	30	18	110	7.4	24550.0011
25	M 6	15	38	18	110	18.0	24550.0020
	M 8	15	38	18	110	17.0	24550.0021
30	M 8	18	46	18	110	26.0	24550.0030
	M10	18	46	18	110	25.0	24550.0031
35	M10	21	53	21	110	46.0	24550.0040
	M12	21	53	21	110	43.0	24550.0041

APPLICATION EXAMPLE



Ball Knobs • DIN 319

EH 24560.



PRODUCT DESCRIPTION

The DIN 319 ball knobs are jointless and polished.

Material

Bushing

- Steel, zinc-plated by galvanization
- Brass

Ball

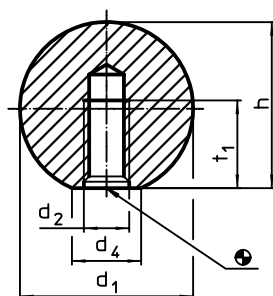
- DIN 7708 - thermosetting plastic (PF 31), black similar to RAL 9005

- DIN 7708 - thermosetting plastic (PF 31), red similar to RAL 3003

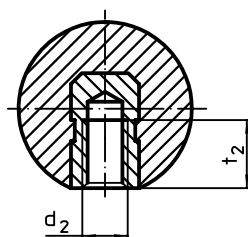
Assembly

Assembly instruction for form M: Fitted by lightly tapping with a hammer, holds in position without being cemented. For the counter element a h9-fit is sufficient.

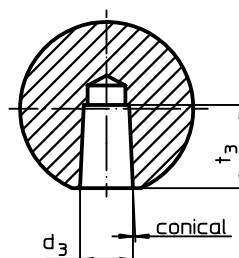
DRAWING



picture 1



picture 2



picture 3

ORDER INFORMATION

Dimensions									For pin h9			Art. No.	
d ₁	d ₂	d ₃	d ₄	h	t ₁ min.	t ₂ min.	t ₃ min.			max.		black	red
[mm]									[mm]	[°C]	[g]		
with moulded material thread, form C – picture 1													
16	M 4	–	8	15.0	7	–	–	–	–	110	3.2	24560.0016	24560.0516
20	M 5	–	12	18.0	9	–	–	–	–	110	5.2	24560.0020	24560.0520
25	M 6	–	15	22.5	11	–	–	–	–	110	10.0	24560.0025	24560.0525
32	M 8	–	18	29.0	14	–	–	–	–	110	22.0	24560.0032	24560.0532
40	M10	–	22	37.0	18	–	–	–	–	110	42.0	24560.0040	24560.0540
50	M12	–	28	46.0	21	–	–	–	–	110	86.0	24560.0050	24560.0550
with threaded bushing, form E – picture 2													
16	M 4	–	8	15.0	–	6.0	–	–	–	110	3.9	24560.0116 ¹⁾	24560.0616 ¹⁾
20	M 5	–	12	18.0	–	7.5	–	–	–	110	8.0	24560.0120	24560.0620
25	M 6	–	15	22.5	–	9.0	–	–	–	110	14.0	24560.0125	24560.0625
32	M 8	–	18	29.0	–	12.0	–	–	–	110	26.0	24560.0132	24560.0632
40	M10	–	22	37.0	–	15.0	–	–	–	110	56.0	24560.0140	24560.0640
50	M12	–	28	46.0	–	18.0	–	–	–	110	108.0	24560.0150	24560.0650
with taper bore form M – picture 3													
16	–	4	8	15.0	–	–	9	4	110	2.7	24560.0216	–	–
20	–	5	12	18.0	–	–	12	5	110	5.1	24560.0220	–	–
25	–	6	15	22.5	–	–	15	6	110	9.3	24560.0225	–	–
32	–	8	18	29.0	–	–	15	8	110	19.0	24560.0232	–	–
40	–	10	22	37.0	–	–	20	10	110	39.0	24560.0240	–	–
50	–	12	28	46.0	–	–	22	12	110	84.0	24560.0250	–	–

¹⁾ bushing from brass

Ball Knobs • metal types similar to DIN 319

EH 24561.



PRODUCT DESCRIPTION

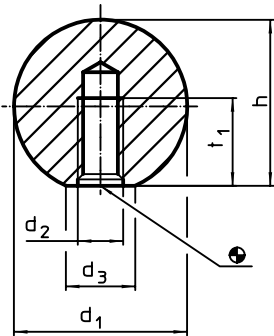
- Material
- Steel, polished, bright
 - Stainless steel 1.4305, dull blasted
 - Aluminium, polished

MORE INFORMATION

Notes

Supplement DIN 319 Form C about metallic versions.

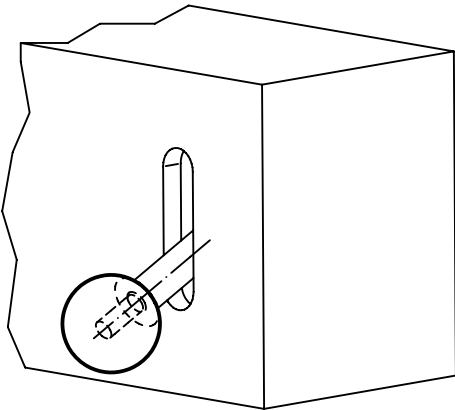
DRAWING



ORDER INFORMATION

Dimensions						Art. No.		
d ₁	d ₂	d ₃ ~ [mm]	h ~	t ₁ min.		Steel	Stainless steel	Aluminium Al
16	M 4	8	15.0	7.0	16	24561.0016	24561.0216	24561.0116
20	M 5	12	18.0	9.0	26	24561.0020	24561.0220	24561.0120
25	M 6	15	22.5	11.0	58	24561.0025	24561.0225	24561.0125
32	M 8	18	29.0	14.5	116	24561.0032	24561.0232	24561.0132
40	M10	22	37.0	18.0	241	24561.0040	24561.0240	24561.0140
50	M12	27	46.0	21.0	475	24561.0050	—	24561.0150

APPLICATION EXAMPLE



Star Grips • DIN 6336 grey cast iron

EH 24650.



PRODUCT DESCRIPTION

These star grips are manufactured according to DIN 6336.
Sandblasted or tumbled.

Material

Handle

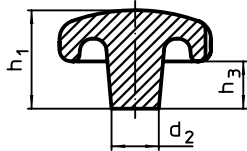
- Grey cast iron GG 20, bright

MORE INFORMATION

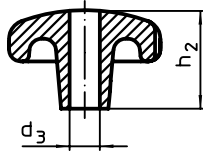
Notes

Grips with different bores or surface treatment can be obtained on request.

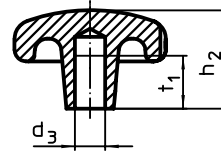
DRAWING



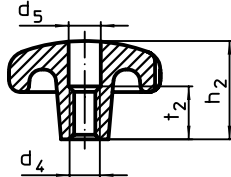
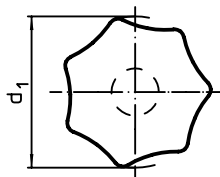
picture 1



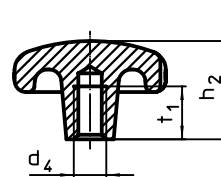
picture 2



picture 3



picture 4



picture 5

ORDER INFORMATION

Dimensions											Art. No.
d ₁	d ₂	d ₃ H7	d ₄	d ₅	h ₁	h ₂	h ₃	t ₁ min.	t ₂		
[mm]										[g]	
raw part, form A – picture 1											
32	12	–	–	–	21	–	10	–	–	55	24650.0032
40	14	–	–	–	26	–	13	–	–	77	24650.0040
50	18	–	–	–	34	–	17	–	–	147	24650.0050
63	20	–	–	–	42	–	21	–	–	314	24650.0063
80	25	–	–	–	52	–	25	–	–	629	24650.0080
with smooth throughgoing bore, form B – picture 2											
32	12	6	–	–	–	20	–	–	–	186	24650.0132
40	14	8	–	–	–	25	–	–	–	72	24650.0140
50	18	10	–	–	–	32	–	–	–	130	24650.0150
63	20	12	–	–	–	40	–	–	–	275	24650.0163
80	25	16	–	–	–	50	–	–	–	548	24650.0180
with smooth blind hole, form C – picture 3											
32	12	6	–	–	–	20	–	12	–	40	24650.0232
40	14	8	–	–	–	25	–	15	–	74	24650.0240
50	18	10	–	–	–	32	–	18	–	133	24650.0250
63	20	12	–	–	–	40	–	22	–	280	24650.0263
80	25	16	–	–	–	50	–	28	–	573	24650.0280
with thread, drilled out, form D – picture 4											
32	12	–	M 6	6.4	–	20	–	–	10	39	24650.0332
40	14	–	M 8	8.4	–	25	–	–	13	72	24650.0340
50	18	–	M10	10.5	–	32	–	–	16	125	24650.0350
63	20	–	M12	13.0	–	40	–	–	20	277	24650.0363
80	25	–	M16	17.0	–	50	–	–	20	541	24650.0380
with threaded blind hole, form E – picture 5											
32	12	–	M 6	–	–	20	–	12	–	40	24650.0432
40	14	–	M 8	–	–	25	–	15	–	186	24650.0440
50	18	–	M10	–	–	32	–	18	–	132	24650.0450
63	20	–	M12	–	–	40	–	22	–	280	24650.0463
80	25	–	M16	–	–	50	–	28	–	572	24650.0480

Star Grips • DIN 6336 light metal

EH 24660.



PRODUCT DESCRIPTION

These star grips are manufactured according to DIN 6336.

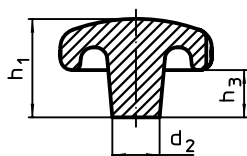
Material

- Light metal Al, polished

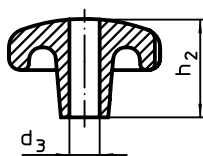
Handle

- Light metal Al, unpolished

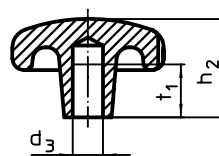
DRAWING



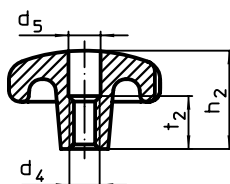
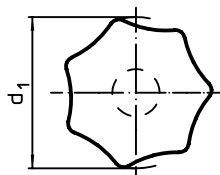
picture 1



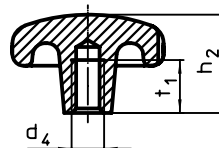
picture 2



picture 3



picture 4



picture 5

ORDER INFORMATION

Dimensions											Art. No.	
d ₁	d ₂	d ₃ H7	d ₄	d ₅	h ₁	h ₂	h ₃	t ₁ min.	t ₂		unpolished	polished
[mm]											[g]	
raw part, form A – picture 1												
40	14	–	–	–	26	–	13	–	–	36	24660.0040	–
50	18	–	–	–	34	–	17	–	–	70	24660.0050	–
63	20	–	–	–	42	–	21	–	–	128	24660.0063	–
80	25	–	–	–	52	–	25	–	–	245	24660.0080	–
with smooth blind hole, form C – picture 3												
40	14	8	–	–	–	25	–	15	–	30	24660.0240	24660.0640
50	18	10	–	–	–	32	–	18	–	63	24660.0250	24660.0650
63	20	12	–	–	–	40	–	22	–	117	24660.0263	24660.0663
80	25	16	–	–	–	50	–	28	–	223	24660.0280	24660.0680
with thread, drilled out, form D – picture 4												
40	14	–	M 8	8.4	–	25	–	–	13	32	24660.0340	24660.0740
50	18	–	M10	10.5	–	32	–	–	16	62	24660.0350	24660.0750
63	20	–	M12	13.0	–	40	–	–	20	109	24660.0363	24660.0763
80	25	–	M16	17.0	–	50	–	–	20	218	24660.0380	24660.0780
with threaded blind hole, form E – picture 5												
40	14	–	M 8	–	–	25	–	15	–	33	24660.0440	24660.0840
50	18	–	M10	–	–	32	–	18	–	63	24660.0450	24660.0850
63	20	–	M12	–	–	40	–	22	–	118	24660.0463	24660.0863
80	25	–	M16	–	–	50	–	28	–	227	24660.0480	24660.0880

Star Grips • DIN 6336 stainless steel die-cast

EH 24661.



PRODUCT DESCRIPTION

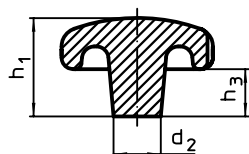
These star grips are manufactured according to DIN 6336.

Material

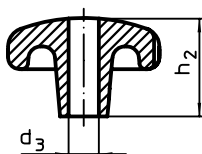
Handle

- Stainless steel A2, dull blasted

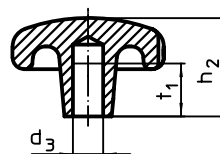
DRAWING



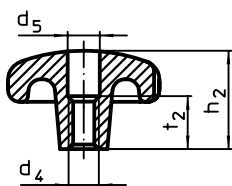
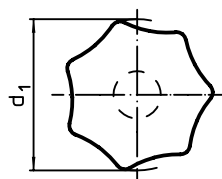
picture 1



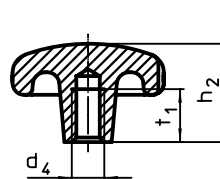
picture 2



picture 3



picture 4



picture 5

ORDER INFORMATION

Dimensions										Art. No.
d ₁	d ₂	d ₄	d ₅	h ₁	h ₂	h ₃	t _{1 min.}	t ₂		
[mm]									[g]	
raw part, form A – picture 1										
32	12	–	–	21	–	10	–	–	56	24661.0032
40	14	–	–	26	–	13	–	–	85	24661.0040
50	18	–	–	34	–	17	–	–	181	24661.0050
63	20	–	–	42	–	21	–	–	319	24661.0063
with thread, drilled out, form D – picture 4										
32	12	M 6	6.4	–	20	–	–	10	52	24661.0332
40	14	M 8	8.4	–	25	–	–	13	75	24661.0340
50	18	M10	10.5	–	32	–	–	16	149	24661.0350
63	20	M12	13.0	–	40	–	–	20	279	24661.0363
with threaded blind hole, form E – picture 5										
32	12	M 6	–	–	20	–	12	–	53	24661.0432
40	14	M 8	–	–	25	–	15	–	77	24661.0440
50	18	M10	–	–	32	–	18	–	158	24661.0450
63	20	M12	–	–	40	–	22	–	296	24661.0463

Star Grips • DIN 6336 plastic
EH 24670.



PRODUCT DESCRIPTION

Material

Bushing

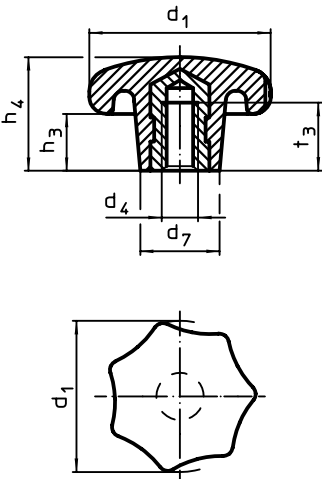
- Brass
- Steel, zinc-plated by galvanization

- Stainless steel A2

Handle

- DIN 7708 - thermosetting plastic (PF 31), black similar to RAL 9005

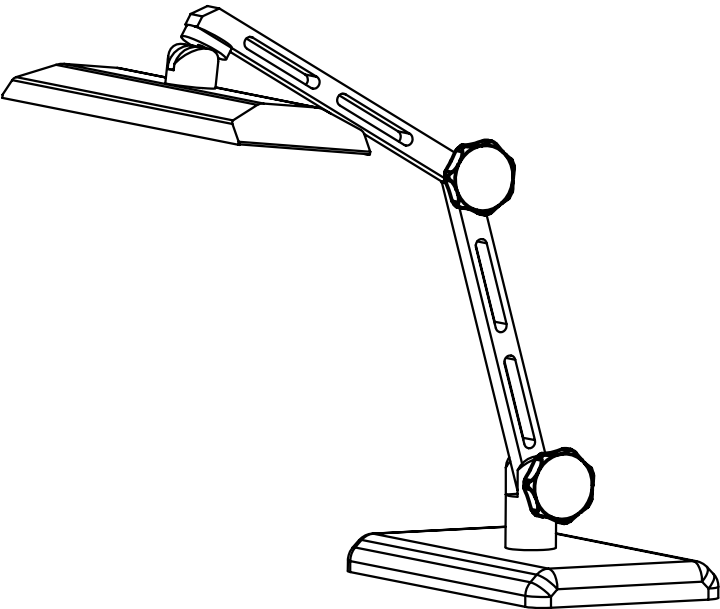
DRAWING



ORDER INFORMATION

Dimensions								Art. No.		
d ₁	d ₄	d ₇	h ₃	h ₄	t ₃	max. [°C]	[g]	Brass	Steel	Stainless steel
[mm]										
with threaded bushing, form K										
20	M 4	10	7	13	6.5	110	3.4	24670.0220	—	—
25	M 5	12	8	16	9.5	110	7.4	—	24670.0225	24670.1225
32	M 6	14	10	20	12.0	110	13.0	—	24670.0232	24670.1232
40	M 8	18	13	25	14.0	110	20.0	—	24670.0240	24670.1240
50	M10	22	17	32	18.0	110	40.0	—	24670.0250	24670.1250
63	M12	26	21	40	22.0	110	83.0	—	24670.0263	24670.1263
80	M16	35	25	50	30.0	110	161.0	—	24670.0280	24670.1280

APPLICATION EXAMPLE





PRODUCT DESCRIPTION

Material

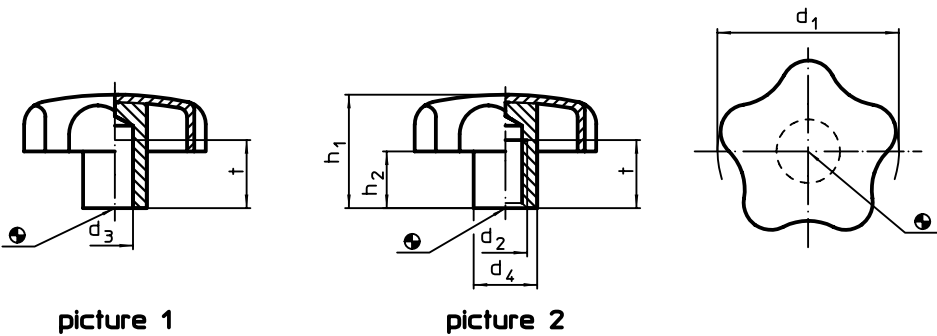
- Handle
- Stainless steel 1.4301, dull blasted

MORE INFORMATION

Notes

Grip: Sheet-iron drawn. Hub: Butt-welded

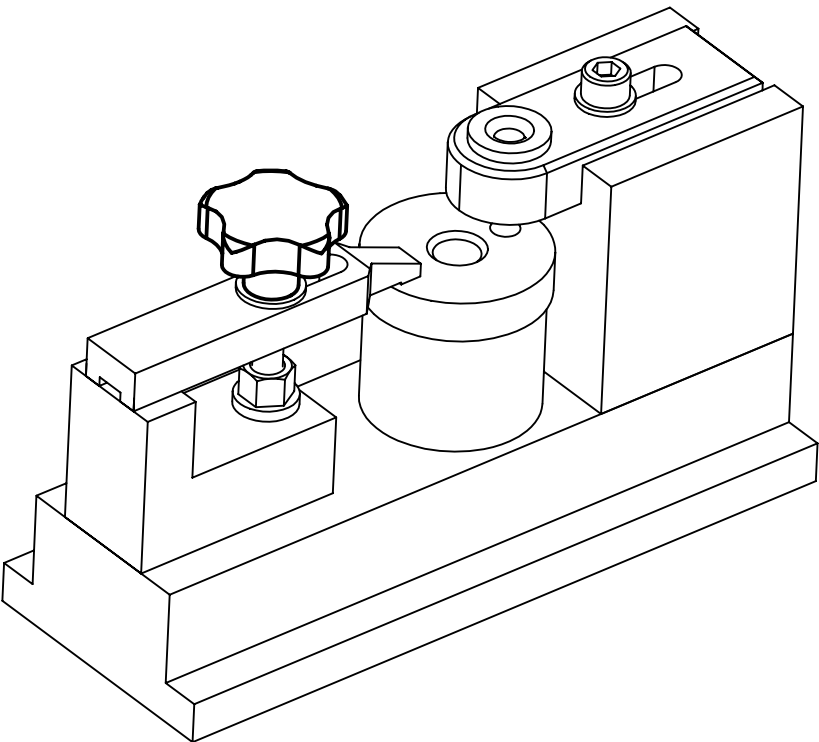
DRAWING



ORDER INFORMATION

Dimensions								Art. No.
d ₁	d ₂	d ₃ H7	d ₄	h ₁ ~	h ₂ ~	t min.		
[mm]								
with smooth blind hole – picture 1								
40	–	8	14	25	12.5	15	37	24690.0240
50	–	10	18	32	17.5	18	68	24690.0250
60	–	12	20	40	21.0	22	110	24690.0260
with threaded blind hole – picture 2								
40	M 8	–	14	25	12.5	15	37	24690.0440
50	M10	–	18	32	17.5	18	69	24690.0450
60	M12	–	20	40	21.0	22	112	24690.0460

APPLICATION EXAMPLE



Star Grips • similar to DIN 6336, stainless steel A4

EH 24691.

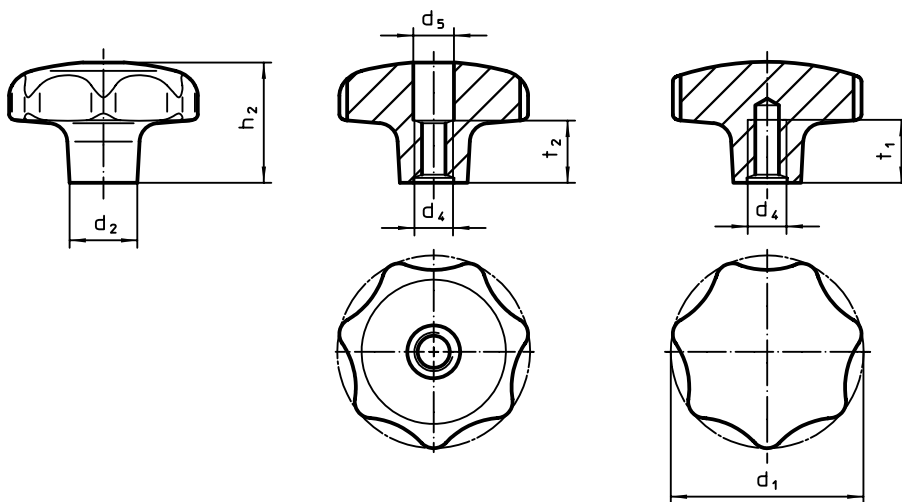
**PRODUCT DESCRIPTION**

Version without dirt trap. Convenient for all applications having high hygienic requirements (e.g. food industry).

The stainless steel A4 version ensures maximum corrosion resistance.

Material**Handle**

- Stainless steel 1.4408, precision casting, polished

DRAWING

picture 1

picture 2

ORDER INFORMATION

Dimensions								Art. No.
d ₁	d ₂	d ₄	d ₅	h ₂	t ₁ min.	t ₂		
[mm]								
with thread, drilled-out – picture 1								
32	12	M 6	6.4	20	–	10	57	24691.1332
40	14	M 8	8.4	25	–	13	103	24691.1340
50	18	M10	10.0	32	–	16	209	24691.1350
63	20	M12	13.0	40	–	20	384	24691.1363
with threaded blind hole – picture 2								
32	12	M 6	–	20	12	–	59	24691.1432
40	14	M 8	–	25	15	–	107	24691.1440
50	18	M10	–	32	18	–	221	24691.1450
63	20	M12	–	40	22	–	389	24691.1463

Star Grip Screws • stainless steel
EH 24690.



PRODUCT DESCRIPTION

Material

Handle

- Stainless steel 1.4301, dull blasted

Screw

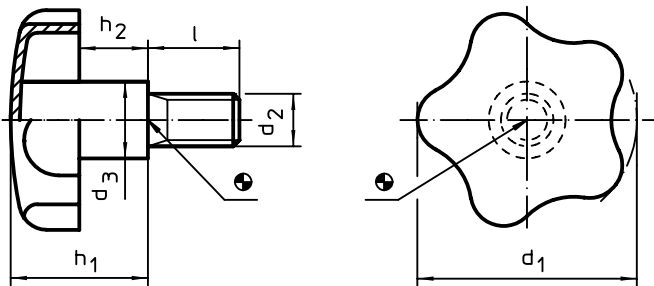
- Stainless steel 1.4301

MORE INFORMATION

Notes

Grip: Sheet-iron drawn. Hub: Butt-welded

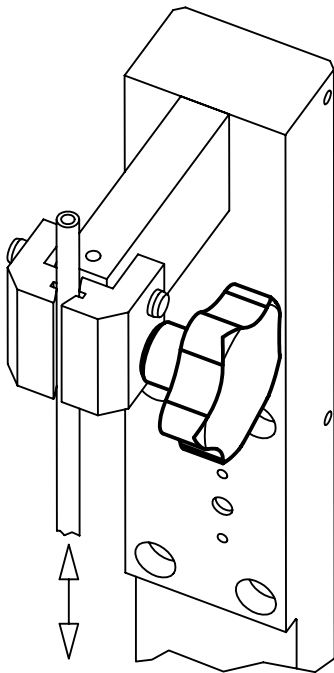
DRAWING



ORDER INFORMATION

Dimensions							Art. No.
d ₁	d ₂	l	d ₃	h ₁ ~	h ₂ ~		
[mm]						[g]	
40	M 8	20	14	24.0	12.0	50	24690.0140
		30	14	24.0	12.0	55	24690.0142
		40	14	24.0	12.0	57	24690.0144
50	M10	20	18	30.0	16.5	95	24690.0150
		30	18	30.0	16.5	97	24690.0152
		40	18	30.0	16.5	102	24690.0154
60	M12	30	20	37.5	20.0	155	24690.0160
		40	20	37.5	20.0	162	24690.0162
		50	20	37.5	20.0	169	24690.0164

APPLICATION EXAMPLE



Star Grips • stainless steel, solid

EH 24690.



PRODUCT DESCRIPTION

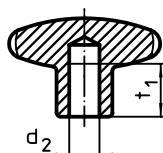
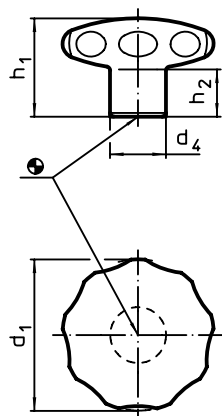
Version without dirt trap. Convenient for all applications having high hygienic requirements (e.g. food industry).

Material

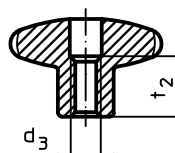
Handle

- Stainless steel 1.4305, dull blasted

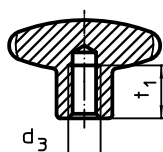
DRAWING



picture 1



picture 2



picture 3

ORDER INFORMATION

Dimensions									Art. No.
d ₁	d ₂ h ₇	d ₃	d ₄	h ₁	h ₂	t ₁ min.	t ₂		
[mm]									
with smooth blind hole – picture 1									
40	8	–	18	30.5	15	12	–	131	24690.0643
50	10	–	21	34.0	17	15	–	223	24690.0653
60	12	–	25	39.0	18	18	–	388	24690.0663
with thread, drilled-out – picture 2									
40	–	M 8	18	30.5	15	–	13	140	24690.0644
50	–	M10	21	34.0	17	–	16	216	24690.0654
60	–	M12	25	39.0	18	–	20	362	24690.0664
with threaded blind hole – picture 3									
40	–	M 6	18	30.5	15	12	–	134	24690.0645
		M 8	18	30.5	15	12	–	132	24690.0646
50	–	M 8	21	34.0	17	15	–	226	24690.0655
		M10	21	34.0	17	15	–	270	24690.0656
60	–	M10	25	39.0	18	18	–	395	24690.0665
		M12	25	39.0	18	18	–	384	24690.0666

Star Grip Screws • DIN 6336 plastic

EH 24740.



PRODUCT DESCRIPTION

Material

- Stainless steel A2

Handle

- DIN 7708 - thermosetting plastic (PF 31), black similar to RAL 9005

Screw

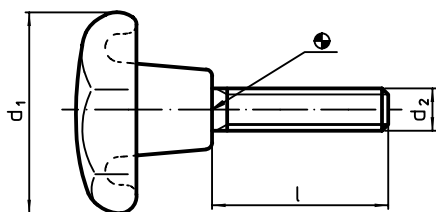
- Steel, zinc-plated by galvanization

MORE INFORMATION

Notes

Special types, e.g. differing lengths or screws from brass / stainless steel on request.

DRAWING



ORDER INFORMATION

Dimensions					Art. No.	
d ₁	d ₂	l	max.		Steel	Stainless steel
	[mm]		[°C]	[g]		
form L						
25	M 5	10	110	7.3	24740.0051	24740.1051
		15	110	7.4	24740.0053	24740.1053
		20	110	8.7	24740.0056	24740.1056
		25	110	8.7	24740.0058	24740.1058
		30	110	9.2	24740.0059	24740.1059
32	M 6	15	110	14.0	24740.0101	24740.1101
		20	110	15.0	24740.0104	24740.1104
		25	110	14.0	24740.0106	24740.1106
		30	110	16.0	24740.0107	24740.1107
		40	110	17.0	24740.0110	24740.1110
40	M 8	20	110	28.0	24740.0152	24740.1152
		25	110	31.0	24740.0154	24740.1154
		30	110	32.0	24740.0155	24740.1155
		40	110	35.0	24740.0158	24740.1158
		50	110	38.0	24740.0160	24740.1160
50	M10	25	110	51.0	24740.0202	24740.1202
		30	110	54.0	24740.0203	24740.1203
		40	110	60.0	24740.0206	24740.1206
		50	110	64.0	24740.0208	24740.1208
		60	110	73.0	24740.0209	24740.1209
63	M12	30	110	101.0	24740.0251	24740.1251
		40	110	108.0	24740.0254	24740.1254
		50	110	115.0	24740.0256	24740.1256
		60	110	121.0	24740.0257	24740.1257
		80	110	143.0	24740.0260	24740.1260
80	M16	40	110	223.0	24740.0302	24740.1302
		50	110	237.0	24740.0304	24740.1304
		60	110	249.0	24740.0305	24740.1305
		80	110	274.0	24740.0308	24740.1308

Star Grip Screws • similar to DIN 6336, stainless steel

EH 24741.



PRODUCT DESCRIPTION

These star grip screws are manufactured according to DIN 6336, but it is a version without dirty edges. This makes these star grip screws suitable for all areas of application with high hygienic requirements.

Material

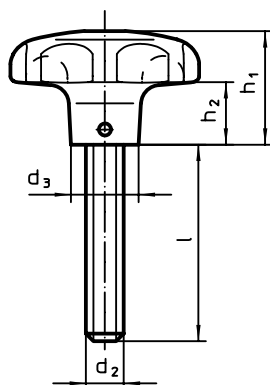
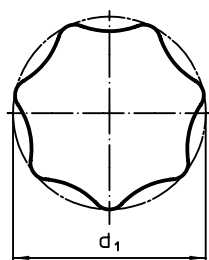
Handle

- Stainless steel 1.4308, precision casting, matt blasted

Screw

- Stainless steel 1.4305

DRAWING



ORDER INFORMATION

Dimensions							Art. No.
d ₁	d ₂	l ~	d ₃	h ₁	h ₂		
[mm]							
40	M 8	20	14	25	12	89	24741.0005
		25	14	25	12	87	24741.0010
		30	14	25	12	97	24741.0015
		40	14	25	12	93	24741.0020
50	M10	20	18	32	15	171	24741.0025
		25	18	32	15	172	24741.0030
		30	18	32	15	177	24741.0035
		45	18	32	15	187	24741.0040
		55	18	32	15	194	24741.0045
63	M12	30	20	40	19	343	24741.0050
		40	20	40	19	338	24741.0055
		50	20	40	19	329	24741.0060

Star Grip Screws • similar to DIN 6336, stainless steel A4
EH 24741.



PRODUCT DESCRIPTION

These star grip screws are manufactured according to DIN 6336, but it is a version without dirty edges. This makes these star grip screws suitable for all areas of application with high hygienic requirements. The stainless steel A4 version ensures maximum corrosion resistance.

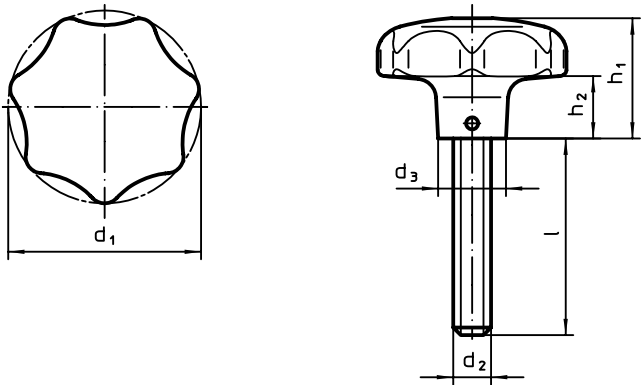
Material

- Handle
- Stainless steel 1.4408, precision casting, polished

Screw

- Stainless steel A4

DRAWING



ORDER INFORMATION

Dimensions							Art. No.
d ₁	d ₂	l	d ₃	h ₁	h ₂		
[mm]						[g]	
40	M 8	20	14	25	12	118	24741.0105
		25	14	25	12	115	24741.0110
		30	14	25	12	120	24741.0115
		40	14	25	12	124	24741.0120
50	M10	20	18	32	15	229	24741.0125
		25	18	32	15	232	24741.0130
		30	18	32	15	234	24741.0135
		45	18	32	15	242	24741.0140
		55	18	32	15	252	24741.0145
63	M12	30	20	40	19	429	24741.0150
		40	20	40	19	435	24741.0155
		50	20	40	19	442	24741.0160

Star Grips • plastic

EH 24750.



PRODUCT DESCRIPTION

Material

Cap

- Thermoplastic PA, black similar to RAL 9005
- Thermoplastic PA, white similar to RAL 9019
- Thermoplastic PA, orange similar to RAL 2004
- Thermoplastic PA, yellow similar to RAL 1016
- Thermoplastic PA, blue similar to RAL 5015

Handle

- Thermoplastic PA 6, black similar to RAL 9005

Threaded bushing

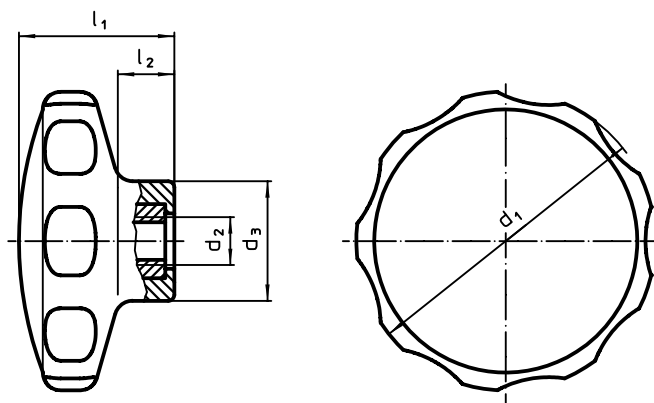
- Stainless steel

MORE INFORMATION

Notes

Special types, e.g. differing threads, on request.

DRAWING



ORDER INFORMATION

Dimensions								Art. No.				
d ₁	d ₂	d ₃	l ₁	l ₂	min.	max.		black	white	orange	yellow	blue
[mm]					[°C]		[g]					
30	M 4	14.0	19	7	-30	80	5.5	24750.0030	24750.0031	24750.0032	24750.0033	24750.0034
	M 5	14.0	19	7	-30	80	5.7	24750.0035	24750.0036	24750.0037	24750.0038	24750.0039
40	M 5	16.5	22	9	-30	80	8.2	24750.0040	24750.0041	24750.0042	24750.0043	24750.0044
	M 6	16.5	22	9	-30	80	9.5	24750.0045	24750.0046	24750.0047	24750.0048	24750.0049
50	M 6	22.0	26	10	-30	80	16.0	24750.0050	24750.0051	24750.0052	24750.0053	24750.0054
	M 8	22.0	26	10	-30	80	19.0	24750.0055	24750.0056	24750.0057	24750.0058	24750.0059
62	M 8	22.0	35	13	-30	80	30.0	24750.0060	24750.0061	24750.0062	24750.0063	24750.0064
	M10	22.0	35	13	-30	80	39.0	24750.0065	24750.0066	24750.0067	24750.0068	24750.0069

Star Grip Screws • plastic

EH 24750.



PRODUCT DESCRIPTION

Material

Cap

- Thermoplastic PA, black similar to RAL 9005
- Thermoplastic PA, white similar to RAL 9019
- Thermoplastic PA, orange similar to RAL 2004
- Thermoplastic PA, yellow similar to RAL 1016
- Thermoplastic PA, blue similar to RAL 5015

Handle

- Thermoplastic PA 6, black similar to RAL 9005

Screw

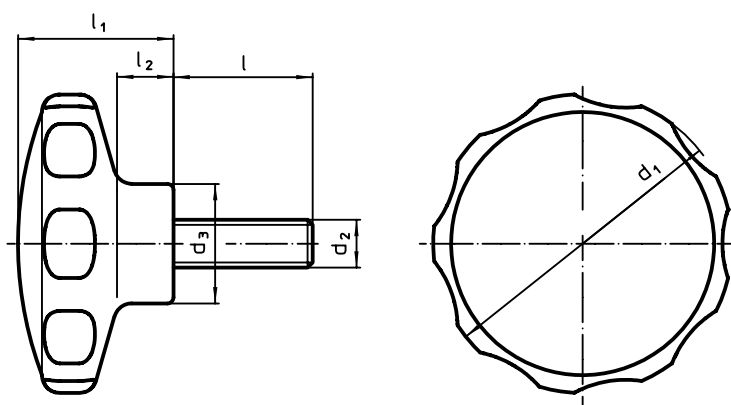
- Stainless steel

MORE INFORMATION

Notes

Special types, e.g. differing threads or thread lengths, on request.

DRAWING



ORDER INFORMATION

Dimensions										Art. No.				
d ₁	d ₂	l	d ₃	l ₁	l ₂	min.	max.		black	white	orange	yellow	blue	
[mm]						[°C]		[g]						
30	M 4	10	14.0	19	7	-30	80	6.1	24750.0100	24750.0101	24750.0102	24750.0103	24750.0104	
		14	14.0	19	7	-30	80	6.6	24750.0110	24750.0111	24750.0112	24750.0113	24750.0114	
		18	14.0	19	7	-30	80	6.9	24750.0120	24750.0121	24750.0122	24750.0123	24750.0124	
		23	14.0	19	7	-30	80	7.3	24750.0130	24750.0131	24750.0132	24750.0133	24750.0134	
		28	14.0	19	7	-30	80	7.7	24750.0140	24750.0141	24750.0142	24750.0143	24750.0144	
	M 5	10	14.0	19	7	-30	80	7.5	24750.0150	24750.0151	24750.0152	24750.0153	24750.0154	
		14	14.0	19	7	-30	80	7.9	24750.0160	24750.0161	24750.0162	24750.0163	24750.0164	
		18	14.0	19	7	-30	80	8.4	24750.0170	24750.0171	24750.0172	24750.0173	24750.0174	
		23	14.0	19	7	-30	80	9.0	24750.0180	24750.0181	24750.0182	24750.0183	24750.0184	
		28	14.0	19	7	-30	80	9.0	24750.0190	24750.0191	24750.0192	24750.0193	24750.0194	
40	M 5	10	16.5	22	9	-30	80	9.6	24750.0200	24750.0201	24750.0202	24750.0203	24750.0204	
		14	16.5	22	9	-30	80	10.0	24750.0210	24750.0211	24750.0212	24750.0213	24750.0214	
		18	16.5	22	9	-30	80	11.0	24750.0220	24750.0221	24750.0222	24750.0223	24750.0224	
		23	16.5	22	9	-30	80	12.0	24750.0230	24750.0231	24750.0232	24750.0233	24750.0234	
		28	16.5	22	9	-30	80	12.0	24750.0240	24750.0241	24750.0242	24750.0243	24750.0244	
	M 6	14	16.5	22	9	-30	80	12.0	24750.0250	24750.0251	24750.0252	24750.0253	24750.0254	
		18	16.5	22	9	-30	80	13.0	24750.0260	24750.0261	24750.0262	24750.0263	24750.0264	
		23	16.5	22	9	-30	80	14.0	24750.0270	24750.0271	24750.0272	24750.0273	24750.0274	
		28	16.5	22	9	-30	80	15.0	24750.0280	24750.0281	24750.0282	24750.0283	24750.0284	
		38	16.5	22	9	-30	80	16.0	24750.0290	24750.0291	24750.0292	24750.0293	24750.0294	

→

Dimensions									Art. No.				
d ₁	d ₂	l	d ₃	l ₁	l ₂	min.	max.		black	white	orange	yellow	blue
[mm]						[°C]		[g]					
50	M 6	14	22.0	26	10	-30	80	19.0	24750.0300	24750.0301	24750.0302	24750.0303	24750.0304
		18	22.0	26	10	-30	80	19.0	24750.0310	24750.0311	24750.0312	24750.0313	24750.0314
		23	22.0	26	10	-30	80	20.0	24750.0320	24750.0321	24750.0322	24750.0323	24750.0324
		28	22.0	26	10	-30	80	21.0	24750.0330	24750.0331	24750.0332	24750.0333	24750.0334
		38	22.0	26	10	-30	80	23.0	24750.0340	24750.0341	24750.0342	24750.0343	24750.0344
	M 8	18	22.0	26	10	-30	80	26.0	24750.0350	24750.0351	24750.0352	24750.0353	24750.0354
		23	22.0	26	10	-30	80	27.0	24750.0360	24750.0361	24750.0362	24750.0363	24750.0364
		28	22.0	26	10	-30	80	29.0	24750.0370	24750.0371	24750.0372	24750.0373	24750.0374
		38	22.0	26	10	-30	80	32.0	24750.0380	24750.0381	24750.0382	24750.0383	24750.0384
		48	22.0	26	10	-30	80	35.0	24750.0390	24750.0391	24750.0392	24750.0393	24750.0394
62	M 8	18	22.0	35	13	-30	80	40.0	24750.0400	24750.0401	24750.0402	24750.0403	24750.0404
		23	22.0	35	13	-30	80	41.0	24750.0410	24750.0411	24750.0412	24750.0413	24750.0414
		28	22.0	35	13	-30	80	43.0	24750.0420	24750.0421	24750.0422	24750.0423	24750.0424
		38	22.0	35	13	-30	80	46.0	24750.0430	24750.0431	24750.0432	24750.0433	24750.0434
		48	22.0	35	13	-30	80	49.0	24750.0440	24750.0441	24750.0442	24750.0443	24750.0444
	M10	23	22.0	35	13	-30	80	51.0	24750.0450	24750.0451	24750.0452	24750.0453	24750.0454
		28	22.0	35	13	-30	80	54.0	24750.0460	24750.0461	24750.0462	24750.0463	24750.0464
		38	22.0	35	13	-30	80	59.0	24750.0470	24750.0471	24750.0472	24750.0473	24750.0474
		48	22.0	35	13	-30	80	64.0	24750.0480	24750.0481	24750.0482	24750.0483	24750.0484
		58	22.0	35	13	-30	80	69.0	24750.0490	24750.0491	24750.0492	24750.0493	24750.0494

Palm Grips • DIN 6335 grey cast iron

EH 24620.



PRODUCT DESCRIPTION

These palm grips are manufactured according to DIN 6335. Sandblasted or tumbled.

Material

Handle

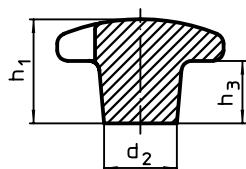
- Grey cast iron GG 20, bright

MORE INFORMATION

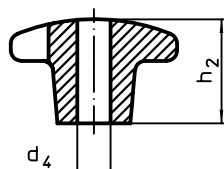
Notes

Grips with different bores or surface treatment can be obtained on request.

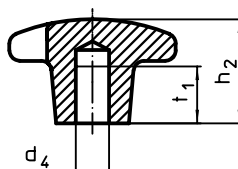
DRAWING



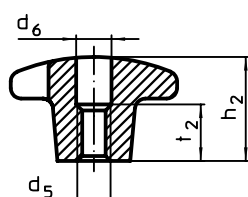
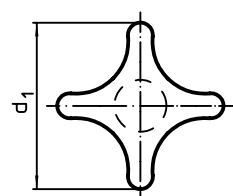
picture 1



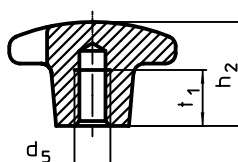
picture 2



picture 3



picture 4



picture 5

ORDER INFORMATION

Dimensions											Art. No.
d ₁	d ₂	d ₂ H7	d ₅	d ₆	h ₁	h ₂	h ₃	t ₁	t ₂		
[mm]										[g]	
raw part, form A – picture 1											
32	12	–	–	–	21	–	10	–	–	38	24620.0032
40	14	–	–	–	26	–	14	–	–	69	24620.0040
50	18	–	–	–	34	–	20	–	–	115	24620.0050
63	20	–	–	–	42	–	25	–	–	224	24620.0063
80	25	–	–	–	52	–	30	–	–	415	24620.0080
100	32	–	–	–	65	–	38	–	–	855	24620.0090
with smooth throughgoing bore, form B – picture 2											
32	12	6	–	–	–	20	–	–	–	34	24620.0132
40	14	8	–	–	–	25	–	–	–	59	24620.0140
50	18	10	–	–	–	32	–	–	–	95	24620.0150
63	20	12	–	–	–	40	–	–	–	171	24620.0163
80	25	16	–	–	–	50	–	–	–	338	24620.0180
100	32	20	–	–	–	63	–	–	–	709	24620.0190
with smooth blind hole, form C – picture 3											
32	12	6	–	–	–	20	–	12	–	36	24620.0232
40	14	8	–	–	–	25	–	15	–	61	24620.0240
50	18	10	–	–	–	32	–	18	–	99	24620.0250
63	20	12	–	–	–	40	–	22	–	195	24620.0263
80	25	16	–	–	–	50	–	28	–	380	24620.0280
100	32	20	–	–	–	63	–	36	–	648	24620.0290

→

Dimensions											Art. No.
d ₁	d ₂	d ₄ H7	d ₅	d ₆	h ₁	h ₂	h ₃	t ₁	t ₂		
[mm]											
with thread, drilled out, form D – picture 4											
32	12	–	M 6	6.4	–	20	–	–	10	34	24620.0332
40	14	–	M 8	8.4	–	25	–	–	13	188	24620.0340
50	18	–	M10	10.5	–	32	–	–	16	97	24620.0350
63	20	–	M12	13.0	–	40	–	–	20	186	24620.0363
80	25	–	M16	17.0	–	50	–	–	20	339	24620.0380
100	32	–	M20	21.0	–	63	–	–	25	673	24620.0390
with threaded blind hole, form E – picture 5											
32	12	–	M 6	–	–	20	–	12	–	35	24620.0432
40	14	–	M 8	–	–	25	–	15	–	56	24620.0440
50	18	–	M10	–	–	32	–	18	–	104	24620.0450
63	20	–	M12	–	–	40	–	22	–	199	24620.0463
80	25	–	M16	–	–	50	–	28	–	363	24620.0480
100	32	–	M20	–	–	63	–	36	–	725	24620.0490

Palm Grips • DIN 6335 grey cast iron, plastic-coated

EH 24620.



PRODUCT DESCRIPTION

These palm grips are manufactured according to DIN 6335.

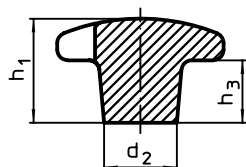
Material

- Grey cast iron GG 20, plastic-coated, black similar to RAL 9005

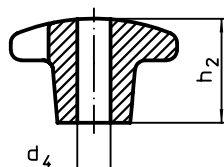
Handle

- Grey cast iron GG 20, plastic-coated, orange similar to RAL 2004

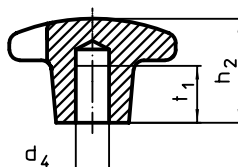
DRAWING



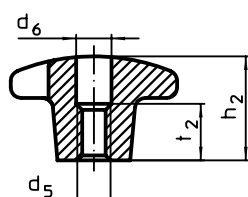
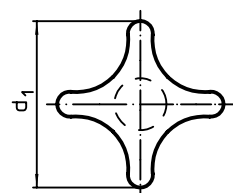
picture 1



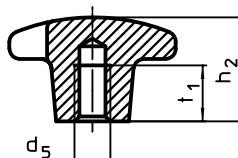
picture 2



picture 3



picture 4

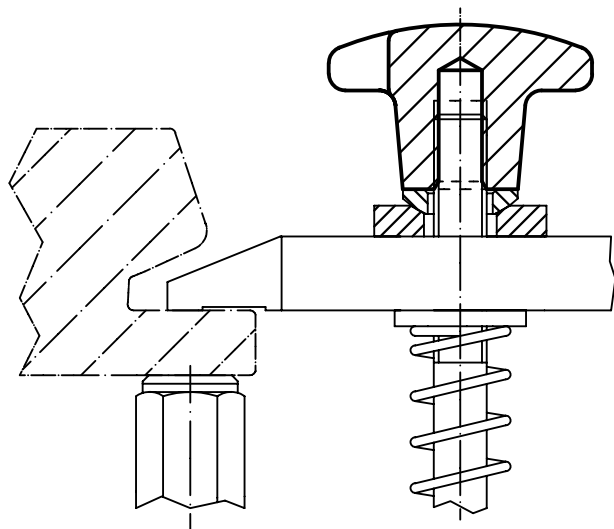


picture 5

ORDER INFORMATION

Dimensions							Art. No.	
d ₁	d ₂	d ₄ H7	d ₅	h ₂	t ₁		orange	black
[mm]						[g]		
with smooth blind hole, form C – picture 3								
40	14	8	–	25	15	62	24620.0540	24620.0640
50	18	10	–	32	18	106	24620.0550	24620.0650
63	20	12	–	40	22	201	24620.0563	24620.0663
80	25	16	–	50	28	353	24620.0580	24620.0680
with threaded blind hole, form E – picture 5								
40	14	–	M 8	25	15	56	24620.0541	24620.0641
50	18	–	M10	32	18	105	24620.0551	24620.0651
63	20	–	M12	40	22	198	24620.0564	24620.0664
80	25	–	M16	50	28	369	24620.0581	24620.0681

APPLICATION EXAMPLE



Palm Grips • DIN 6335 light metal

EH 24630.

**PRODUCT DESCRIPTION**

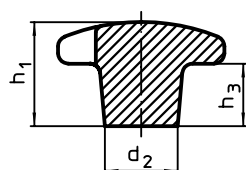
These palm grips are manufactured according to DIN 6335.

Material

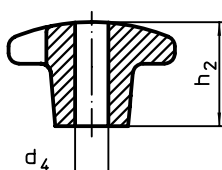
- Light metal Al, polished

Handle

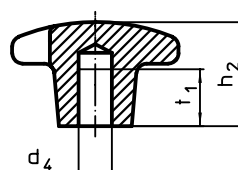
- Light metal Al, unpolished

DRAWING

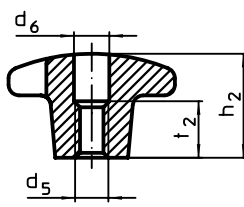
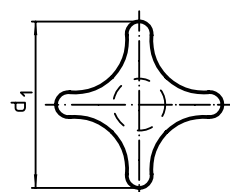
picture 1



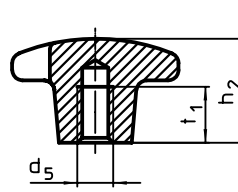
picture 2



picture 3



picture 4



picture 5

ORDER INFORMATION

Dimensions											Art. No.		
d ₁	d ₂	d ₄ H7	d ₅	d ₆	h ₁	h ₂	h ₃	t ₁	t ₂		unpolished	polished	
[mm]											[g]		
raw part, form A – picture 1													
40	14	–	–	–	26	–	14	–	–	27	24630.0040	–	
50	18	–	–	–	34	–	20	–	–	51	24630.0050	–	
63	20	–	–	–	42	–	25	–	–	95	24630.0063	–	
80	25	–	–	–	52	–	30	–	–	161	24630.0080	–	
with smooth blind hole, form C – picture 3													
40	14	8	–	–	–	25	–	15	–	23	24630.0240	24630.0640	
50	18	10	–	–	–	32	–	18	–	42	24630.0250	24630.0650	
63	20	12	–	–	–	40	–	22	–	73	24630.0263	24630.0663	
80	25	16	–	–	–	50	–	28	–	138	24630.0280	24630.0680	
with thread, drilled out, form D – picture 4													
40	14	–	M 8	8.4	–	25	–	–	13	23	24630.0340	24630.0740	
50	18	–	M10	10.5	–	32	–	–	16	44	24630.0350	24630.0750	
63	20	–	M12	13.0	–	40	–	–	20	70	24630.0363	24630.0763	
80	25	–	M16	17.0	–	50	–	–	20	129	24630.0380	24630.0780	
with threaded blind hole, form E – picture 5													
40	14	–	M 8	–	–	25	–	15	–	24	24630.0440	24630.0840	
50	18	–	M10	–	–	32	–	18	–	46	24630.0450	24630.0850	
63	20	–	M12	–	–	40	–	22	–	74	24630.0463	24630.0863	
80	25	–	M16	–	–	50	–	28	–	142	24630.0480	24630.0880	

Palm Grips • DIN 6335 stainless steel, die-cast

EH 24631.



PRODUCT DESCRIPTION

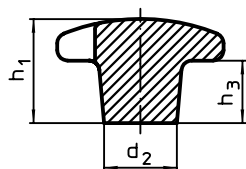
These palm grips are manufactured according to DIN 6335.

Material

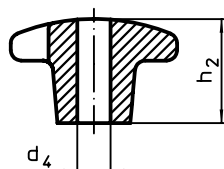
Handle

- Stainless steel A2, dull blasted

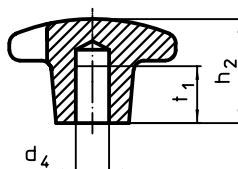
DRAWING



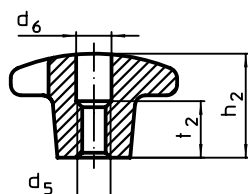
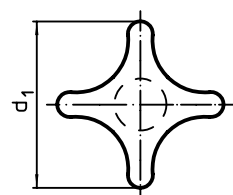
picture 1



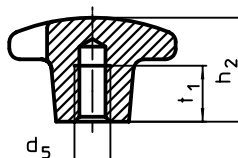
picture 2



picture 3



picture 4

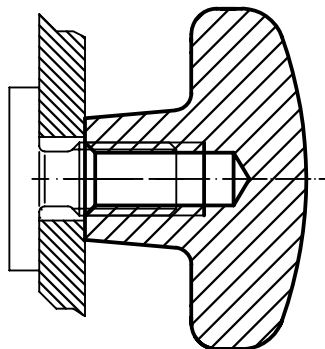


picture 5

ORDER INFORMATION

Dimensions										Art. No.
d ₁	d ₂	d ₅	d ₆	h ₁	h ₂	h ₃	t ₁ min.	t ₂		
[mm]										
raw part, form A – picture 1										
32	12	–	–	21	–	10	–	–	41	24631.0032
40	14	–	–	26	–	14	–	–	70	24631.0040
50	18	–	–	34	–	20	–	–	128	24631.0050
63	20	–	–	42	–	25	–	–	227	24631.0063
with thread, drilled out, form D – picture 4										
32	12	M 6	6.4	–	20	–	–	10	36	24631.0332
40	14	M 8	8.4	–	25	–	–	13	60	24631.0340
50	18	M10	10.5	–	32	–	–	16	100	24631.0350
63	20	M12	13.0	–	40	–	–	20	186	24631.0363
with threaded blind hole, form E – picture 5										
32	12	M 6	–	–	20	–	12	–	38	24631.0432
40	14	M 8	–	–	25	–	15	–	70	24631.0440
50	18	M10	–	–	32	–	18	–	114	24631.0450
63	20	M12	–	–	40	–	22	–	205	24631.0463

APPLICATION EXAMPLE



Palm Grips • similar to DIN 6335, stainless steel A4

EH 24631.

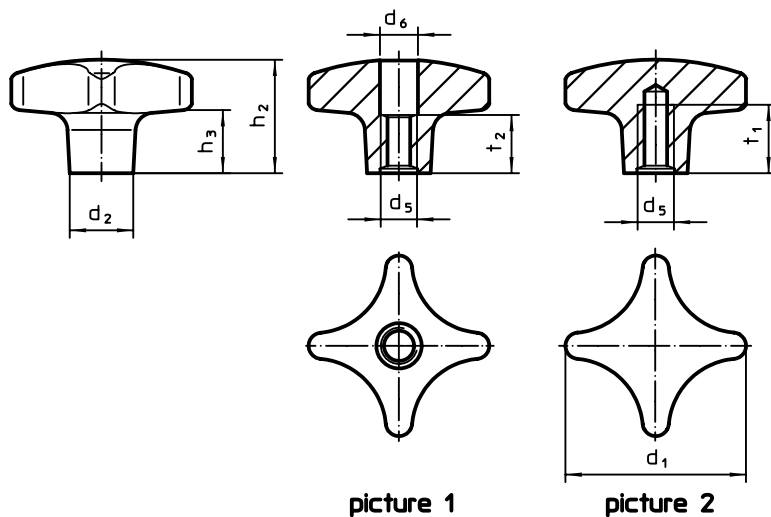
**PRODUCT DESCRIPTION**

Version without dirt trap. Convenient for all applications having high hygienic requirements (e.g. food industry).

The stainless steel A4 version ensures maximum corrosion resistance.

Material**Handle**

- Stainless steel A4, polished

DRAWING**ORDER INFORMATION**

Dimensions									Art. No.
d ₁	d ₂	d ₅	d ₆	h ₂	h ₃	t ₁ min.	t ₂		
[mm]									
with thread, drilled-out – picture 1									
32	12	M 6	6.4	20	9	–	10	37	24631.1332
40	14	M 8	8.4	25	13	–	13	60	24631.1340
50	18	M10	10.5	32	18	–	16	110	24631.1350
63	20	M12	13.0	40	23	–	20	200	24631.1363
with threaded blind hole – picture 2									
32	12	M 6	–	20	9	12	–	39	24631.1432
40	14	M 8	–	25	13	15	–	62	24631.1440
50	18	M10	–	32	18	18	–	117	24631.1450
63	20	M12	–	40	23	22	–	213	24631.1463



PRODUCT DESCRIPTION

Material

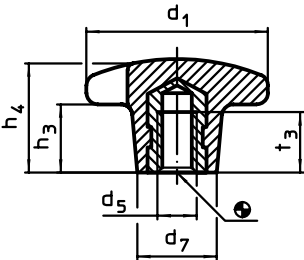
- Bushing**
- Brass
 - Steel, zinc-plated by galvanization

- Stainless steel A2

Handle

- DIN 7708 - thermosetting plastic (PF 31), black similar to RAL 9005

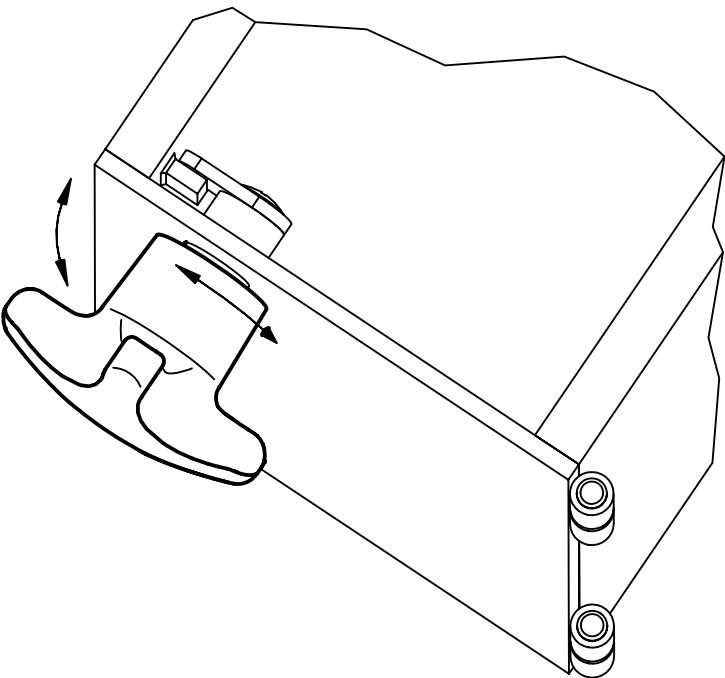
DRAWING



ORDER INFORMATION

Dimensions						 max. [°C]	 [g]	Art. No.		
d ₁	d ₅	d ₇	h ₃	h ₄	t ₃			Brass	Steel	Stainless steel
[mm]										
with threaded bushing, form K										
20	M 4	10	6	13	6.5	110	3.3	24640.0220	–	–
25	M 5	12	8	16	9.5	110	7.0	–	24640.0225	24640.1225
32	M 6	14	10	20	12.0	110	11.0	–	24640.0232	24640.1232
40	M 8	18	13	25	14.0	110	16.0	–	24640.0240	24640.1240
50	M10	22	20	32	18.0	110	34.0	–	24640.0250	24640.1250
63	M12	26	25	40	22.0	110	66.0	–	24640.0263	24640.1263
80	M16	35	30	50	30.0	110	137.0	–	24640.0280	24640.1280

APPLICATION EXAMPLE



Palm Grips • with axial bearing

EH 24700.



PRODUCT DESCRIPTION

Advantages of axial bearing:

- Double clamping force with same grip size, by reducing the surface friction.
- Protection of workpiece by a fixed locating surface.
- Little setting due to higher pre-clamping force of bolt resp. thread.

Material

Handle

- Thermoplastic PA

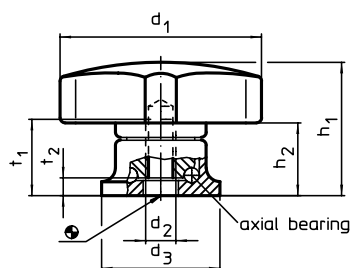
Inner part

- Steel, nitrided, blackened

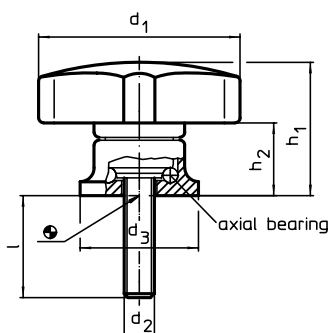
Screw

- Steel, blackened, quality 8.8

DRAWING



picture 1



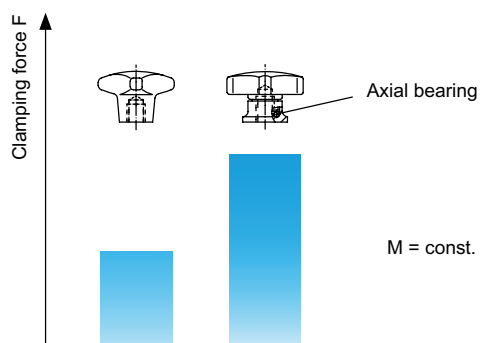
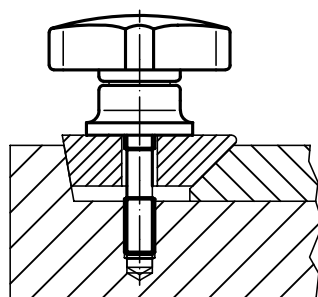
picture 2

ORDER INFORMATION

Dimensions										Art. No.
d ₁	d ₂	l +2	d ₃	h ₁ ~	h ₂ ~	t ₁ min.	t ₂	max.		
[mm]								[°C]	[g]	
with female thread – picture 1										
40	M 6	–	24	27	15.0	12.5	5.0	80	45	24700.0040
50	M 8	–	25	34	22.5	14.0	4.2	80	68	24700.0050
63	M10	–	30	41	26.5	18.0	5.4	80	109	24700.0063
80	M12	–	35	54	34.0	26.5	6.6	80	213	24700.0080
with screw – picture 2										
40	M 6	15	24	27	15.0	–	–	80	51	24700.0042
		25	24	27	15.0	–	–	80	52	24700.0044
50	M 8	20	25	34	22.5	–	–	80	81	24700.0053
		35	25	34	22.5	–	–	80	86	24700.0056
63	M10	30	30	41	26.5	–	–	80	136	24700.0066
		40	30	41	26.5	–	–	80	141	24700.0068
80	M12	30	35	54	34.0	–	–	80	259	24700.0083
		50	35	54	34.0	–	–	80	273	24700.0087

APPLICATION EXAMPLE

Increase of clamping force with axial bearing
(while manual force is unchanged)



Palm Grip Screws • DIN 6335 plastic

EH 24730.



PRODUCT DESCRIPTION

Material

- Stainless steel A2

Handle

- DIN 7708 - thermosetting plastic (PF 31), black similar to RAL 9005

MORE INFORMATION

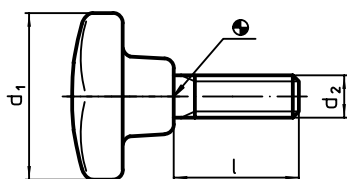
Notes

Special types, e.g. differing lengths or screws from brass / stainless steel on request.

Screw

- Steel, zinc-plated by galvanization

DRAWING



ORDER INFORMATION

Dimensions					Art. No.	
d ₁	d ₂	l	max.		Steel	Stainless steel
	[mm]		[°C]	[g]		
form L						
25	M 5	10	110	6.6	24730.0051	24730.1051
		15	110	7.0	24730.0053	24730.1053
		20	110	7.5	24730.0056	24730.1056
		25	110	8.1	24730.0058	24730.1058
		30	110	8.9	24730.0059	24730.1059
32	M 6	15	110	11.0	24730.0101	24730.1101
		20	110	13.0	24730.0104	24730.1104
		25	110	13.0	24730.0106	24730.1106
		30	110	14.0	24730.0107	24730.1107
		40	110	16.0	24730.0110	24730.1110
40	M 8	20	110	24.0	24730.0152	24730.1152
		25	110	25.0	24730.0154	24730.1154
		30	110	26.0	24730.0155	24730.1155
		40	110	30.0	24730.0158	24730.1158
		50	110	32.0	24730.0160	24730.1160
50	M10	25	110	41.0	24730.0202	24730.1202
		30	110	48.0	24730.0203	24730.1203
		40	110	51.0	24730.0206	24730.1206
		50	110	56.0	24730.0208	24730.1208
		60	110	68.0	24730.0209	24730.1209
63	M12	30	110	99.0	24730.0251	24730.1251
		40	110	93.0	24730.0254	24730.1254
		50	110	99.0	24730.0256	24730.1256
		60	110	105.0	24730.0257	24730.1257
		80	110	112.0	24730.0260	24730.1260
80	M16	40	110	198.0	24730.0302	24730.1302
		50	110	214.0	24730.0304	24730.1304
		60	110	219.0	24730.0305	24730.1305
		80	110	251.0	24730.0308	24730.1308

Palm Grip Screws • similar to DIN 6335, stainless steel
EH 24731.



PRODUCT DESCRIPTION

These grub screws with palm grip are manufactured according to DIN 6335, but it is a version without dirty edges. This makes these grub screws with palm grip suitable for all areas of application with high hygienic requirements.

Material

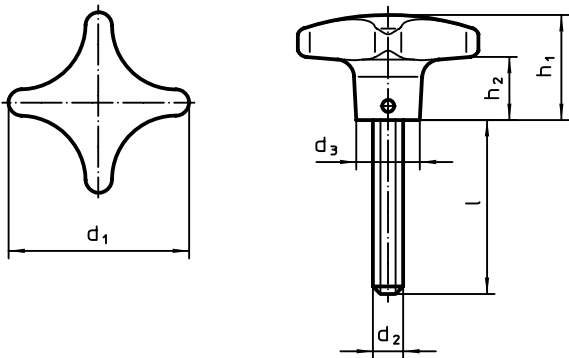
Handle

- Stainless steel, dull blasted

Screw

- Stainless steel 1.4305

DRAWING



ORDER INFORMATION

Dimensions							Art. No.
d ₁	d ₂	l ~	d ₃	h ₁	h ₂		
[mm]						[g]	
40	M 8	20	14	25	13	76	24731.0005
		25	14	25	13	70	24731.0010
		30	14	25	13	70	24731.0015
		40	14	25	13	82	24731.0020
50	M10	20	18	32	18	135	24731.0025
		25	18	32	18	138	24731.0030
		30	18	32	18	138	24731.0035
		45	18	32	18	160	24731.0040
		55	18	32	18	149	24731.0045
63	M12	30	20	40	23	249	24731.0050
		40	20	40	23	240	24731.0055
		50	20	40	23	250	24731.0060

Palm Grip Screws • similar to DIN 6335, stainless steel A4
EH 24731.



PRODUCT DESCRIPTION

These grub screws with palm grip are manufactured according to DIN 6335, but it is a version without dirty edges. This makes these grub screws with palm grip suitable for all areas of application with high hygienic requirements. The stainless steel A4 version ensures maximum corrosion resistance.

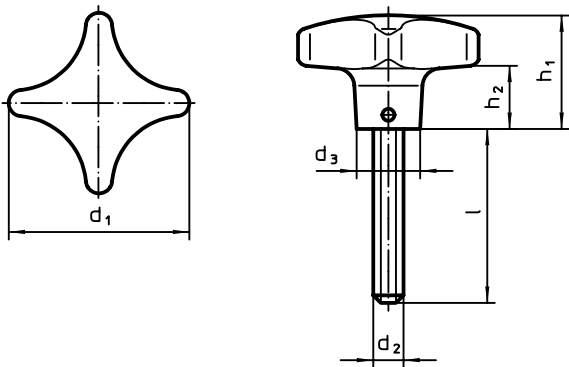
Material

- Handle
- Stainless steel A4, polished

Screw

- Stainless steel A4

DRAWING



ORDER INFORMATION

Dimensions							Art. No.
d ₁	d ₂	l	d ₃	h ₁	h ₂		
[mm]						[g]	
40	M 8	20	14	25	13	73	24731.0105
		25	14	25	13	75	24731.0110
		30	14	25	13	76	24731.0115
		40	14	25	13	80	24731.0120
50	M10	20	18	32	18	132	24731.0125
		25	18	32	18	136	24731.0130
		30	18	32	18	137	24731.0135
		45	18	32	18	144	24731.0140
		55	18	32	18	152	24731.0145
63	M12	30	20	40	23	248	24731.0150
		40	20	40	23	256	24731.0155
		50	20	40	23	263	24731.0160

Torque Handles

EH 24710.



PRODUCT DESCRIPTION

Torque handles are used wherever a limitation of the exerted hand force is required. The handle, similar to a knurled nut / knurled thumb screw, with integrated torque mechanism allows a defined torque limit during tightening. Reaching the torque results in an "over-locking". For releasing the torque is transmitted indefinitely. These handles combine the functionality of a ratchet wrench with the modern and ergonomic design of a knurled nut / knurled thumb screw.

Material

Cap

- Thermoplastic PA 6, light grey, similar to RAL 7035

Torque mechanism

- Steel, hardened

Handle

- Aluminium, black anodised

Inner part

- Steel, blackened

Screw

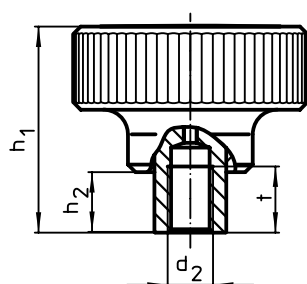
- Steel, blackened

MORE INFORMATION

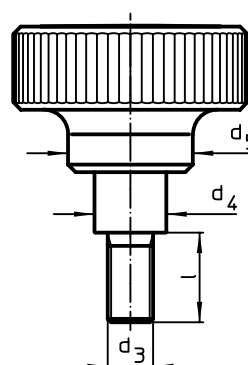
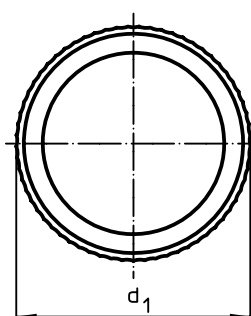
Further products

Three-Lobed Torque Handles → p. 672

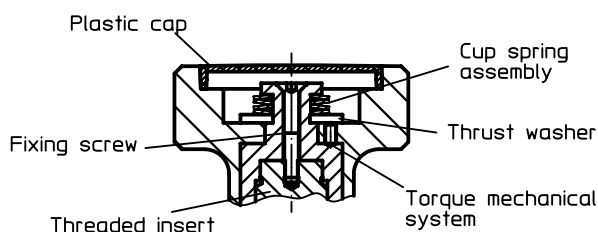
DRAWING



picture 1



picture 2



ORDER INFORMATION

Dimensions										Tightening torque +/- 10%		Art. No.
d ₁	d ₂	d ₃	l	d ₄	d ₅	h ₁	h ₂	t	max. [°C]	max. [Nm]	[g]	
[mm]												
with female thread – picture 1												
34	M 3	–	–	10.0	21	37.5	9.5	7	100	1.0	48	24710.0020
	M 4	–	–	10.0	21	37.5	9.5	9	100	1.0	60	24710.0022
	M 5	–	–	10.0	21	37.5	9.5	9	100	1.0	62	24710.0024
	M 6	–	–	10.0	21	37.5	9.5	9	100	1.0	60	24710.0026
42	M 6	–	–	13.5	27	43.5	11.5	11	100	2.0	111	24710.0030
	M 8	–	–	13.5	27	43.5	11.5	11	100	2.0	112	24710.0032
52	M10	–	–	19.0	32	54.0	15.5	17	100	3.0	221	24710.0040
	M12	–	–	19.0	32	54.0	15.5	17	100	3.0	208	24710.0042
62	M10	–	–	19.0	33	54.0	15.5	17	100	4.0	244	24710.0050
	M12	–	–	19.0	33	54.0	15.5	17	100	4.0	285	24710.0052
	M10	–	–	19.0	33	54.0	15.5	17	100	5.5	245	24710.0060
	M12	–	–	19.0	33	54.0	15.5	17	100	5.5	285	24710.0062



Dimensions									 max. [°C]	Tightening torque +/- 10% max. [Nm]	 [g]	Art. No.
d ₁	d ₂	d ₃	l	d ₄	d ₅	h ₁	h ₂	t				
[mm]												
with screw – picture 2												
34	–	M 5	12	10.0	21	37.5	9.5	–	100	1.0	62	24710.0300
			16	10.0	21	37.5	9.5	–	100	1.0	63	24710.0301
			20	10.0	21	37.5	9.5	–	100	1.0	60	24710.0302
			25	10.0	21	37.5	9.5	–	100	1.0	64	24710.0303
		M 6	32	10.0	21	37.5	9.5	–	100	1.0	65	24710.0304
			12	10.0	21	37.5	9.5	–	100	1.0	60	24710.0305
			16	10.0	21	37.5	9.5	–	100	1.0	65	24710.0306
			20	10.0	21	37.5	9.5	–	100	1.0	65	24710.0307
42	–	M 8	25	10.0	21	37.5	9.5	–	100	1.0	67	24710.0308
			32	10.0	21	37.5	9.5	–	100	1.0	70	24710.0309
		M10	16	13.5	27	43.5	11.5	–	100	2.0	152	24710.0400
			20	13.5	27	43.5	11.5	–	100	2.0	153	24710.0401
			25	13.5	27	43.5	11.5	–	100	2.0	123	24710.0402
			32	13.5	27	43.5	11.5	–	100	2.0	158	24710.0403
			40	13.5	27	43.5	11.5	–	100	2.0	128	24710.0404
			20	13.5	27	43.5	11.5	–	100	2.0	120	24710.0405
			25	13.5	27	43.5	11.5	–	100	2.0	120	24710.0406
			32	13.5	27	43.5	11.5	–	100	2.0	131	24710.0407
			40	13.5	27	43.5	11.5	–	100	2.0	179	24710.0408
52	–	M10	50	13.5	27	43.5	11.5	–	100	2.0	187	24710.0409
			25	19.0	32	54.0	15.5	–	100	3.0	241	24710.0500
			32	19.0	32	54.0	15.5	–	100	3.0	246	24710.0501
			40	19.0	32	54.0	15.5	–	100	3.0	248	24710.0502
			50	19.0	32	54.0	15.5	–	100	3.0	254	24710.0503
		M12	63	19.0	32	54.0	15.5	–	100	3.0	254	24710.0504
			25	19.0	32	54.0	15.5	–	100	3.0	251	24710.0505
			32	19.0	32	54.0	15.5	–	100	3.0	254	24710.0506
			40	19.0	32	54.0	15.5	–	100	3.0	262	24710.0507
			50	19.0	32	54.0	15.5	–	100	3.0	270	24710.0508
62	–	M10	63	19.0	32	54.0	15.5	–	100	3.0	274	24710.0509
			25	19.0	33	54.0	15.5	–	100	4.0	334	24710.0600
			32	19.0	33	54.0	15.5	–	100	4.0	339	24710.0601
			40	19.0	33	54.0	15.5	–	100	4.0	341	24710.0602
			50	19.0	33	54.0	15.5	–	100	4.0	347	24710.0603
		M12	63	19.0	33	54.0	15.5	–	100	4.0	355	24710.0604
			25	19.0	33	54.0	15.5	–	100	4.0	344	24710.0605
			32	19.0	33	54.0	15.5	–	100	4.0	347	24710.0606
			40	19.0	33	54.0	15.5	–	100	4.0	355	24710.0607
			50	19.0	33	54.0	15.5	–	100	4.0	363	24710.0608
		M10	63	19.0	33	54.0	15.5	–	100	4.0	367	24710.0609
			25	19.0	33	54.0	15.5	–	100	5.5	266	24710.0700
			32	19.0	33	54.0	15.5	–	100	5.5	339	24710.0701
			40	19.0	33	54.0	15.5	–	100	5.5	277	24710.0702
			50	19.0	33	54.0	15.5	–	100	5.5	280	24710.0703
		M12	63	19.0	33	54.0	15.5	–	100	5.5	355	24710.0704
			25	19.0	33	54.0	15.5	–	100	5.5	344	24710.0705
			32	19.0	33	54.0	15.5	–	100	5.5	347	24710.0706
			40	19.0	33	54.0	15.5	–	100	5.5	355	24710.0707
			50	19.0	33	54.0	15.5	–	100	5.5	363	24710.0708
		M12	63	19.0	33	54.0	15.5	–	100	5.5	367	24710.0709

Three-Lobed Torque Handles

EH 24711.



PRODUCT DESCRIPTION

Torque handles are used wherever a limitation of the exerted hand force is required. The three-lobed torque handle with integrated torque mechanism allows a defined torque limit during tightening. Reaching the torque results in an "over-locking". For releasing the torque is transmitted indefinitely. These handles combine the functionality of a ratchet wrench with the modern and ergonomic design of a three-lobed handle.

Material

Cap

- Plastic, light grey

Torque mechanism

- Steel, hardened

Handle

- Thermoplastic PA-HP, glass fibre reinforced, black, matt

Inner part

- Steel, blackened

Screw

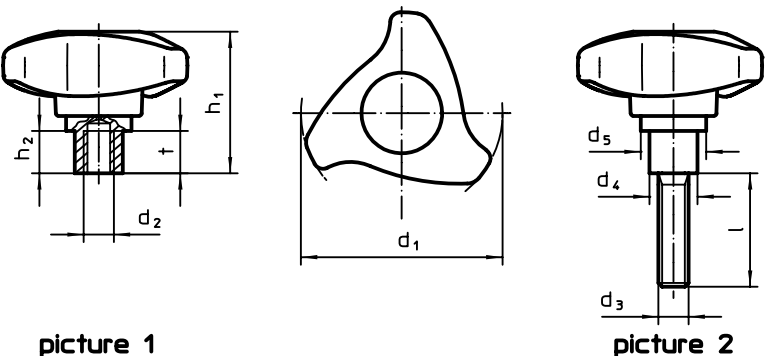
- Steel, blackened

MORE INFORMATION

Further products

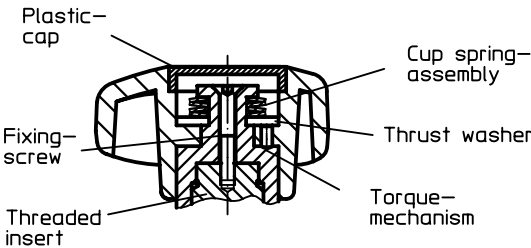
Torque Handles. → p. 670

DRAWING



picture 1

picture 2



ORDER INFORMATION

Dimensions									Tightening torque +/- 10% max. [Nm]	 [g]	Art. No.
d ₁	d ₂	d ₃	l	d ₄	d ₅	h ₁	h ₂	t			
[mm]											
with female thread – picture 1											
50	M 6	–	–	13.5	23.6	41.6	10.7	11	2.0	65	24711.0020
									3.0	62	24711.0021
									4.0	63	24711.0022
	M 8	–	–	13.5	23.6	41.6	10.7	11	2.0	60	24711.0023
									3.0	60	24711.0024
									4.0	64	24711.0025
63	M 8	–	–	16.0	28.1	46.6	12.9	14	3.2	104	24711.0030
									4.0	105	24711.0031
									4.7	107	24711.0032
	M10	–	–	16.0	28.1	46.6	12.9	14	3.2	103	24711.0033
									4.0	102	24711.0034
									4.7	105	24711.0035

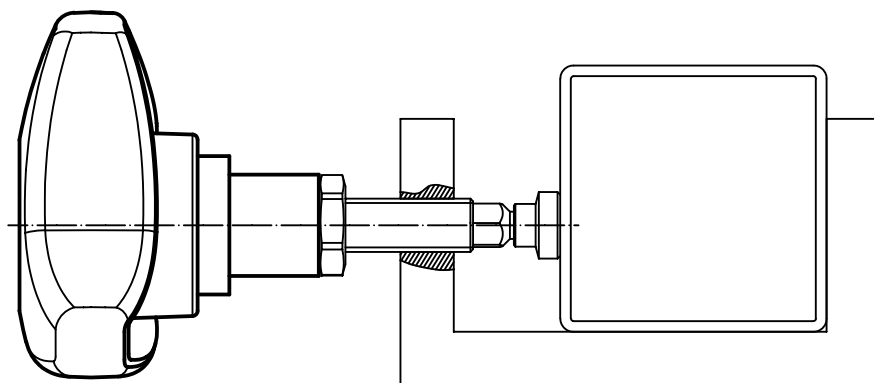


Dimensions									Tightening torque +/- 10% max.		Art. No.
d ₁	d ₂	d ₃	l	d ₄	d ₅	h ₁	h ₂	t			
[mm]									[Nm]	[g]	
80	M10	–	–	19.0	34.1	56.2	16.8	17	4.0	172	24711.0040
									5.5	173	24711.0041
									7.5	174	24711.0042
	M12	–	–	19.0	34.1	56.2	16.8	17	4.0	180	24711.0043
									5.5	168	24711.0044
									7.5	171	24711.0045
with screw – picture 2											
50	–	M 8	16	13.5	23.6	41.6	10.7	–	2.0	72	24711.0300
									3.0	75	24711.0301
									4.0	76	24711.0302
			20	13.5	23.6	41.6	10.7	–	2.0	70	24711.0303
									3.0	73	24711.0304
									4.0	71	24711.0305
			25	13.5	23.6	41.6	10.7	–	2.0	72	24711.0306
									3.0	72	24711.0307
									4.0	73	24711.0308
			32	13.5	23.6	41.6	10.7	–	2.0	77	24711.0309
									3.0	74	24711.0310
									4.0	75	24711.0311
			40	13.5	23.6	41.6	10.7	–	2.0	76	24711.0312
									3.0	76	24711.0313
									4.0	77	24711.0314
		M10	20	13.5	23.6	41.6	10.7	–	2.0	73	24711.0315
									3.0	73	24711.0316
									4.0	74	24711.0317
			25	13.5	23.6	41.6	10.7	–	2.0	76	24711.0318
									3.0	76	24711.0319
									4.0	77	24711.0320
			32	13.5	23.6	41.6	10.7	–	2.0	80	24711.0321
									3.0	80	24711.0322
									4.0	81	24711.0323
			40	13.5	23.6	41.6	10.7	–	2.0	87	24711.0324
									3.0	82	24711.0325
									4.0	83	24711.0326
			50	13.5	23.6	41.6	10.7	–	2.0	87	24711.0327
									3.0	87	24711.0328
									4.0	88	24711.0329
63	–	M 8	25	16.0	28.1	46.6	12.9	–	3.2	116	24711.0400
									4.0	117	24711.0401
									4.7	118	24711.0402
			32	16.0	28.1	46.6	12.9	–	3.2	119	24711.0403
									4.0	120	24711.0404
									4.7	121	24711.0405
			40	16.0	28.1	46.6	12.9	–	3.2	82	24711.0406
									4.0	83	24711.0407
									4.7	83	24711.0408
			50	16.0	28.1	46.6	12.9	–	3.2	128	24711.0409
									4.0	127	24711.0410
									4.7	128	24711.0411
			63	16.0	28.1	46.6	12.9	–	3.2	130	24711.0412
									4.0	131	24711.0413
									4.7	132	24711.0414

→

Dimensions									Tightening torque +/- 10% max. [Nm]	 [g]	Art. No.
d ₁	d ₂	d ₃	l	d ₄	d ₅	h ₁	h ₂	t			
[mm]											
63	–	M10	25	16.0	28.1	46.6	12.9	–	3.2	122	24711.0415
									4.0	123	24711.0416
									4.7	124	24711.0417
			32	16.0	28.1	46.6	12.9	–	3.2	125	24711.0418
									4.0	126	24711.0419
									4.7	127	24711.0420
			40	16.0	28.1	46.6	12.9	–	3.2	129	24711.0421
									4.0	130	24711.0422
									4.7	131	24711.0423
			50	16.0	28.1	46.6	12.9	–	3.2	134	24711.0424
									4.0	135	24711.0425
									4.7	136	24711.0426
			63	16.0	28.1	46.6	12.9	–	3.2	140	24711.0427
									4.0	141	24711.0428
									4.7	142	24711.0429
80	–	M10	25	19.0	34.1	56.2	16.8	–	4.0	194	24711.0500
									5.5	195	24711.0501
									7.5	196	24711.0502
			32	19.0	34.1	56.2	16.8	–	4.0	198	24711.0503
									5.5	199	24711.0504
									7.5	200	24711.0505
			40	19.0	34.1	56.2	16.8	–	4.0	202	24711.0506
									5.5	203	24711.0507
									7.5	204	24711.0508
			50	19.0	34.1	56.2	16.8	–	4.0	208	24711.0509
									5.5	209	24711.0510
									7.5	210	24711.0511
			63	19.0	34.1	56.2	16.8	–	4.0	213	24711.0512
									5.5	223	24711.0513
									7.5	215	24711.0514
		M12	25	19.0	34.1	56.2	16.8	–	4.0	206	24711.0515
									5.5	202	24711.0516
									7.5	203	24711.0517
			32	19.0	34.1	56.2	16.8	–	4.0	205	24711.0518
									5.5	206	24711.0519
									7.5	207	24711.0520
			40	19.0	34.1	56.2	16.8	–	4.0	210	24711.0521
									5.5	211	24711.0522
									7.5	212	24711.0523
			50	19.0	34.1	56.2	16.8	–	4.0	218	24711.0524
									5.5	219	24711.0525
									7.5	220	24711.0526
63	19.0	34.1	56.2	16.8	–	4.0	227	24711.0527			
						5.5	228	24711.0528			
						7.5	229	24711.0529			

APPLICATION EXAMPLE



Disc-Type Handwheels • DIN 3670

EH 24570.



PRODUCT DESCRIPTION

There are gripping indentations on the rear sides.

Hub machined; rim turned and mirror-finished on all sides, non-machined surfaces cleanly blasted.

Material

Handwheel

- Aluminium permanent-mould casting

Assembly

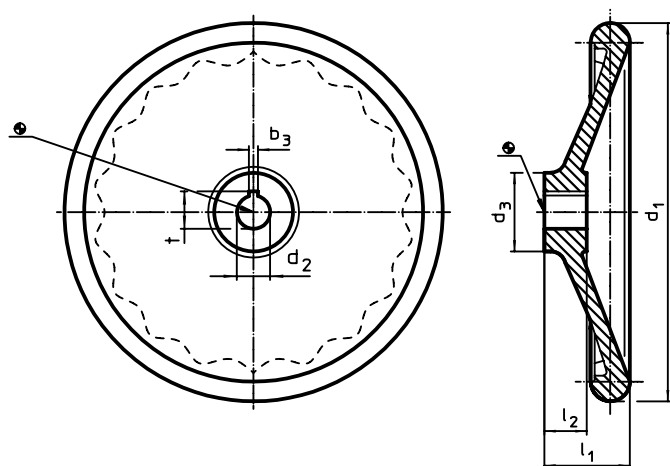
Shaft-end washers EH 22270. for axial fastening.

MORE INFORMATION

Further products

Shaft-End Washers → p. 187

DRAWING



The orientation of the hub keyway may be different than shown in the drawing.

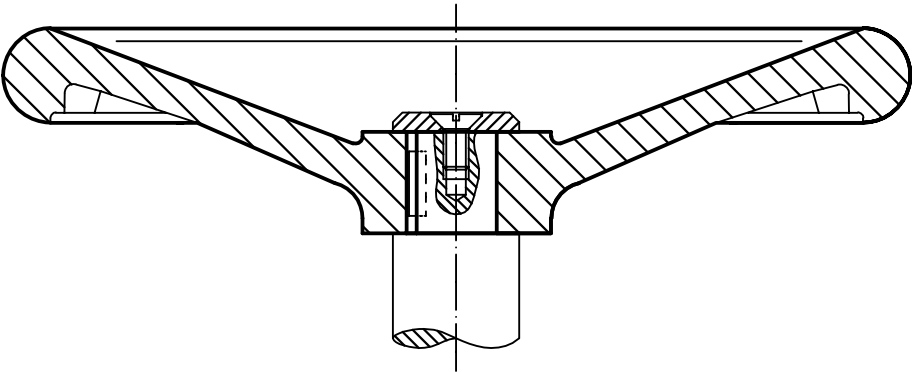
ORDER INFORMATION

Dimensions					Hub keyway, DIN 6885 sheet 1			Art. No.
d ₁	d ₂ H7	d ₃	l ₁ ~	l ₂	b ₃	t		
[mm]					[mm]		[g]	
without steel bushing, form B, without hub keyway								
80	10	26	29	16	–	–	119	24570.0103
	12	26	29	16	–	–	116	24570.0104
100	10	28	33	17	–	–	194	24570.0105
	12	28	33	17	–	–	189	24570.0106
125	12	31	36	18	–	–	288	24570.0110
	14	31	36	18	–	–	284	24570.0111
160	14	36	40	20	–	–	477	24570.0120
	16	36	40	20	–	–	501	24570.0121
200	18	42	45	24	–	–	955	24570.0130
	22	42	45	24	–	–	940	24570.0131
250	22	48	50	28	–	–	1685	24570.0140
	26	48	50	28	–	–	1674	24570.0141
315	26	56	56	33	–	–	2710	24570.0150
	28	56	56	33	–	–	2695	24570.0151
400	30	65	63	38	–	–	4720	24570.0160
	32	65	63	38	–	–	5700	24570.0161
without steel bushing, form N, with hub keyway								
80	10	26	29	16	3	11.4	120	24570.0303
	12	26	29	16	4	13.8	129	24570.0304
100	10	28	33	17	3	11.4	244	24570.0305
	12	28	33	17	4	13.8	183	24570.0306
125	12	31	36	18	4	13.8	250	24570.0310
	14	31	36	18	5	16.3	290	24570.0311
160	14	36	40	20	5	16.3	491	24570.0320
	16	36	40	20	5	18.3	481	24570.0321

→

Dimensions					Hub keyway, DIN 6885 sheet 1			Art. No.
d ₁	d ₂ H7	d ₃	l ₁ ~	l ₂	b ₃	t		
[mm]					[mm]			
200	18	42	45	24	6	20.8	880	24570.0330
	22	42	45	24	6	24.8	928	24570.0331
250	22	48	50	28	6	24.8	1681	24570.0340
	26	48	50	28	8	29.3	1670	24570.0341
315	26	56	56	33	8	29.3	2700	24570.0350
	28	56	56	33	8	31.3	2670	24570.0351
400	30	65	63	38	8	33.3	4771	24570.0360
	32	65	63	38	10	35.3	4720	24570.0361

APPLICATION EXAMPLE



4

Handwheels • DIN 950 grey cast iron EH 24580.



PRODUCT DESCRIPTION

Hub machined; rim turned and mirror-finished on all sides, non-machined surfaces cleanly blasted.

Material

Handwheel

- Grey cast iron GG

Machine handle DIN 39 EH 24450.

- Steel, turned, zinc-plated by galvanization, passivated

Machine handle DIN 98 EH 24460. rotating

- Steel, turned, zinc-plated by galvanization, passivated

Assembly

Shaft-end washers EH 22270. for axial fastening.

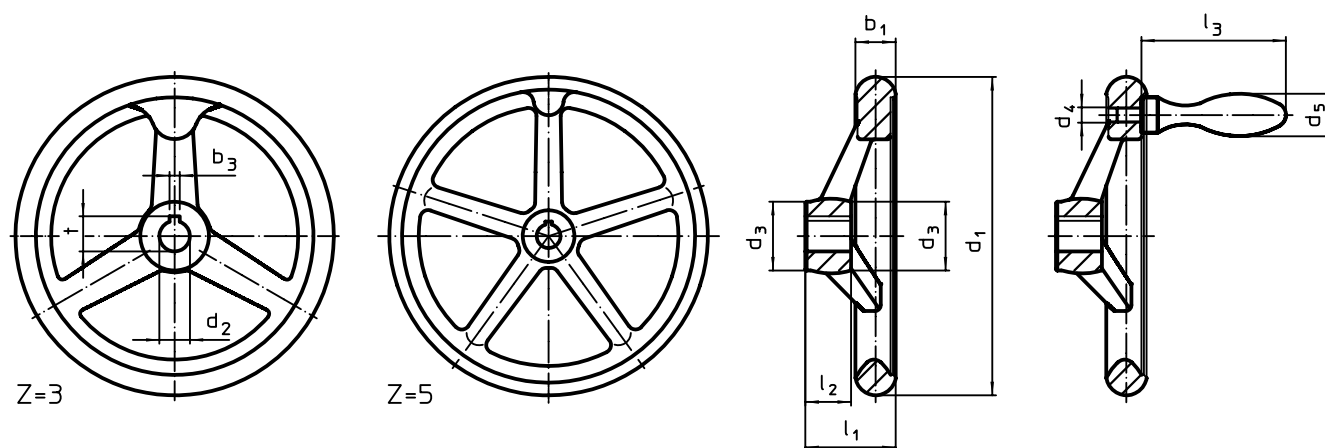
MORE INFORMATION

Further products

Shaft-End Washers → p. 187

Rotating Machine Handles, DIN 98... → p. 624

DRAWING



picture 1

picture 2

The orientation of the hub keyway may be different than shown in the drawing.

ORDER INFORMATION

Dimensions								Hub keyway, DIN 6885 sheet 1		Number of spokes z	Corresponding machine handle DIN 39 / DIN 98		Art. No.
d ₁	d ₂ H7	d ₃	d ₄	d ₅	l ₁ ~	l ₂	l ₃ ~	b ₃	t				
[mm]								[mm]			[mm]	[g]	
without hub keyway, without handle, form B-F/A (formerly: A 4) – picture 1													
80	10	24	–	–	29	16	–	–	–	3	–	304	24580.0000
	12	24	–	–	29	16	–	–	–	3	–	319	24580.0001
100	10	26	–	–	33	17	–	–	–	3	–	486	24580.0005
	12	26	–	–	33	17	–	–	–	3	–	506	24580.0006
125	12	28	–	–	36	18	–	–	–	3	–	720	24580.0010
	14	28	–	–	36	18	–	–	–	3	–	750	24580.0011
140	14	30	–	–	39	19	–	–	–	3	–	865	24580.0015
	16	30	–	–	39	19	–	–	–	3	–	907	24580.0016
160	14	32	–	–	40	20	–	–	–	3	–	1151	24580.0020
	16	32	–	–	40	20	–	–	–	3	–	1145	24580.0021
200	18	38	–	–	45	24	–	–	–	3	–	2218	24580.0030
	22	38	–	–	45	24	–	–	–	3	–	2168	24580.0031
250	22	45	–	–	50	28	–	–	–	5	–	3740	24580.0040
	26	45	–	–	50	28	–	–	–	5	–	3621	24580.0041
315	26	53	–	–	56	33	–	–	–	5	–	6180	24580.0045
	30	53	–	–	56	33	–	–	–	5	–	5800	24580.0046
400	30	65	–	–	63	38	–	–	–	5	–	9500	24580.0050
	34	65	–	–	63	38	–	–	–	5	–	9500	24580.0051

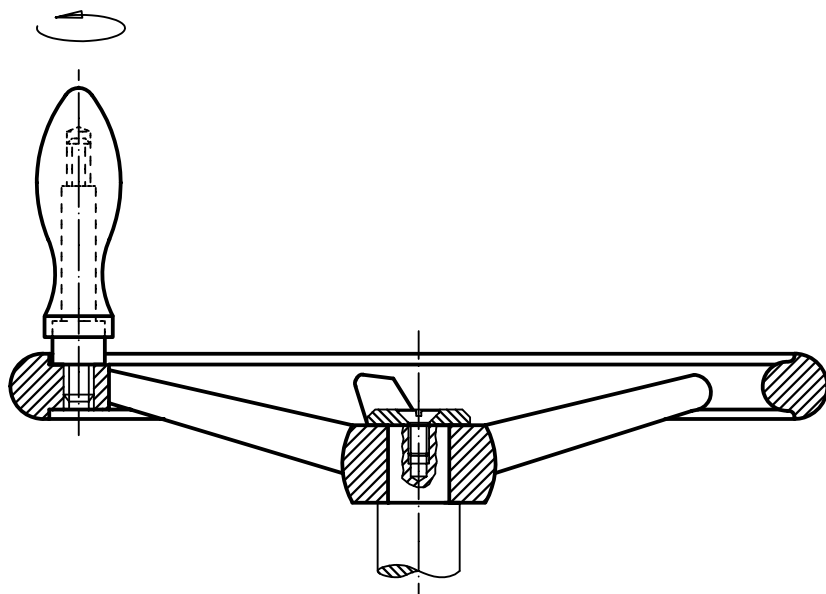
→

Dimensions								Hub keyway, DIN 6885 sheet 1		Number of spokes z	Corresponding machine handle DIN 39 / DIN 98		Art. No.
d ₁	d ₂ H7	d ₃	d ₄	d ₅	l ₁ ~	l ₂	l ₃ ~	b ₃	t				
[mm]								[mm]			[mm]	[g]	
with hub keyway, without handle, form N-F/A (formerly: A 3) – picture 1													
80	10	24	–	–	29	16	–	3	11.4	3	–	288	24580.0100
	12	24	–	–	29	16	–	4	13.8	3	–	287	24580.0101
100	10	26	–	–	33	17	–	3	11.4	3	–	500	24580.0105
	12	26	–	–	33	17	–	4	13.8	3	–	500	24580.0106
125	12	28	–	–	36	18	–	4	13.8	3	–	750	24580.0110
	14	28	–	–	36	18	–	5	16.3	3	–	723	24580.0111
140	14	30	–	–	39	19	–	5	16.3	3	–	902	24580.0115
	16	30	–	–	39	19	–	5	18.3	3	–	940	24580.0116
160	14	32	–	–	40	20	–	5	16.3	3	–	1139	24580.0120
	16	32	–	–	40	20	–	5	18.3	3	–	1217	24580.0121
200	18	38	–	–	45	24	–	6	20.8	3	–	2142	24580.0130
	22	38	–	–	45	24	–	6	24.8	3	–	1909	24580.0131
250	22	45	–	–	50	28	–	6	24.8	5	–	3652	24580.0140
	26	45	–	–	50	28	–	8	29.3	5	–	3635	24580.0141
315	26	53	–	–	56	33	–	8	29.3	5	–	1157	24580.0145
	30	53	–	–	56	33	–	8	33.3	5	–	5800	24580.0146
400	30	65	–	–	63	38	–	8	33.3	5	–	10650	24580.0150
	34	65	–	–	63	38	–	10	37.3	5	–	11600	24580.0151
without hub keyway, with rotating handle EH 24460., assembled form B-F/G (formerly D 4) – picture 2													
80	10	24	M 6	16	29	16	49	–	–	3	16	410	24580.0200
	12	24	M 6	16	29	16	49	–	–	3	16	410	24580.0201
100	10	26	M 6	16	33	17	49	–	–	3	16	550	24580.0205
	12	26	M 6	16	33	17	49	–	–	3	16	550	24580.0206
125	12	28	M 8	20	36	18	61	–	–	3	20	850	24580.0210
	14	28	M 8	20	36	18	61	–	–	3	20	850	24580.0211
140	14	30	M 8	20	39	19	61	–	–	3	20	1040	24580.0215
	16	30	M 8	20	39	19	61	–	–	3	20	1040	24580.0216
160	14	32	M10	25	40	20	75	–	–	3	25	1390	24580.0220
	16	32	M10	25	40	20	75	–	–	3	25	1390	24580.0221
200	18	38	M10	25	45	24	75	–	–	3	25	2190	24580.0230
	22	38	M10	25	45	24	75	–	–	3	25	2190	24580.0231
250	22	45	M12	32	50	28	95	–	–	5	32	4185	24580.0240
	26	45	M12	32	50	28	95	–	–	5	32	4185	24580.0241
315	26	53	M12	32	56	33	95	–	–	5	32	6185	24580.0245
	30	53	M12	32	56	33	95	–	–	5	32	6185	24580.0246
400	30	65	M16	36	63	38	106	–	–	5	36	10500	24580.0250
	34	65	M16	36	63	38	106	–	–	5	36	10500	24580.0251
with hub keyway, with rotating handle EH 24460. assembled, form N-F/G (formerly: D 3) – picture 2													
80	10	24	M 6	16	29	16	49	3	11.4	3	16	410	24580.0300
	12	24	M 6	16	29	16	49	4	13.8	3	16	410	24580.0301
100	10	26	M 6	16	33	17	49	3	11.4	3	16	550	24580.0305
	12	26	M 6	16	33	17	49	4	13.8	3	16	550	24580.0306
125	12	28	M 8	20	36	18	61	4	13.8	3	20	850	24580.0310
	14	28	M 8	20	36	18	61	5	16.3	3	20	850	24580.0311
140	14	30	M 8	20	39	19	61	5	16.3	3	20	1040	24580.0315
	16	30	M 8	20	39	19	61	5	18.3	3	20	1040	24580.0316
160	14	32	M10	25	40	20	75	5	16.3	3	25	1390	24580.0320
	16	32	M10	25	40	20	75	5	18.3	3	25	1390	24580.0321
200	18	38	M10	25	45	24	75	6	20.8	3	25	2190	24580.0330
	22	38	M10	25	45	24	75	6	24.8	3	25	2190	24580.0331
250	22	45	M12	32	50	28	95	6	24.8	5	32	4185	24580.0340
	26	45	M12	32	50	28	95	8	29.3	5	32	4185	24580.0341
315	26	53	M12	32	56	33	95	8	29.3	5	32	6185	24580.0345
	30	53	M12	32	56	33	95	8	33.3	5	32	6185	24580.0346
400	30	65	M16	36	63	38	106	8	33.3	5	36	10500	24580.0350
	34	65	M16	36	63	38	106	10	37.3	5	36	10500	24580.0351



Dimensions								Hub keyway, DIN 6885 sheet 1		Number of spokes z	Corresponding machine handle DIN 39 / DIN 98		Art. No.
d ₁	d ₂ H7	d ₃	d ₄	d ₅	l ₁ ~	l ₂	l ₃ ~	b ₃	t				
[mm]								[mm]			[mm]	[g]	
without hub keyway, with machine handle EH 24450., assembled, form B-F/G (formerly: F 4) – picture 2													
80	10	24	M 6	16	29	16	50	–	–	3	16	410	24580.0400
	12	24	M 6	16	29	16	50	–	–	3	16	410	24580.0401
100	10	26	M 6	16	33	17	50	–	–	3	16	550	24580.0405
	12	26	M 6	16	33	17	50	–	–	3	16	550	24580.0406
125	12	28	M 8	20	36	18	64	–	–	3	20	835	24580.0410
	14	28	M 8	20	36	18	64	–	–	3	20	835	24580.0411
140	14	30	M 8	20	39	19	64	–	–	3	20	1025	24580.0415
	16	30	M 8	20	39	19	64	–	–	3	20	1025	24580.0416
160	14	32	M10	25	40	20	80	–	–	3	25	1380	24580.0420
	16	32	M10	25	40	20	80	–	–	3	25	1380	24580.0421
200	18	38	M10	25	45	24	80	–	–	3	25	2180	24580.0430
	22	38	M10	25	45	24	80	–	–	3	25	2180	24580.0431
250	22	45	M12	32	50	28	100	–	–	5	32	4160	24580.0440
	26	45	M12	32	50	28	100	–	–	5	32	4160	24580.0441
315	26	53	M12	32	56	33	100	–	–	5	32	6160	24580.0445
	30	53	M12	32	56	33	100	–	–	5	32	6160	24580.0446
400	30	65	M16	36	63	38	112	–	–	5	36	10460	24580.0450
	34	65	M16	36	63	38	112	–	–	5	36	10460	24580.0451
with hub keyway, with machine handle EH 24450. assembled, form N-F/G (formerly: F 3) – picture 2													
80	10	24	M 6	16	29	16	50	3	11.4	3	16	410	24580.0500
	12	24	M 6	16	29	16	50	4	13.8	3	16	410	24580.0501
100	10	26	M 6	16	33	17	50	3	11.4	3	16	550	24580.0505
	12	26	M 6	16	33	17	50	4	13.8	3	16	550	24580.0506
125	12	28	M 8	20	36	18	64	4	13.8	3	20	835	24580.0510
	14	28	M 8	20	36	18	64	5	16.3	3	20	835	24580.0511
140	14	30	M 8	20	39	19	64	5	16.3	3	20	1025	24580.0515
	16	30	M 8	20	39	19	64	5	18.3	3	20	1025	24580.0516
160	14	32	M10	25	40	20	80	5	16.3	3	25	1380	24580.0520
	16	32	M10	25	40	20	80	5	18.3	3	25	1380	24580.0521
200	18	38	M10	25	45	24	80	6	20.8	3	25	2180	24580.0530
	22	38	M10	25	45	24	80	6	24.8	3	25	2180	24580.0531
250	22	45	M12	32	50	28	100	6	24.8	5	32	4160	24580.0540
	26	45	M12	32	50	28	100	8	29.3	5	32	4160	24580.0541
315	26	53	M12	32	56	33	100	8	29.3	5	32	6160	24580.0545
	30	53	M12	32	56	33	100	8	33.3	5	32	6160	24580.0546
400	30	65	M16	36	63	38	112	8	33.3	5	36	10460	24580.0550
	34	65	M16	36	63	38	112	10	37.3	5	36	10460	24580.0551

APPLICATION EXAMPLE



Handwheels • DIN 950 light metal

EH 24590.

**PRODUCT DESCRIPTION**

Hub machined; rim turned and mirror-finished on all sides, non-machined surfaces cleanly blasted.

Material**Handwheel**

- Light metal Al

Machine handle DIN 39 EH 24450.

- Steel, turned, zinc-plated by galvanization, passivated

Machine handle DIN 98 EH 24460. rotating

- Steel, turned, zinc-plated by galvanization, passivated

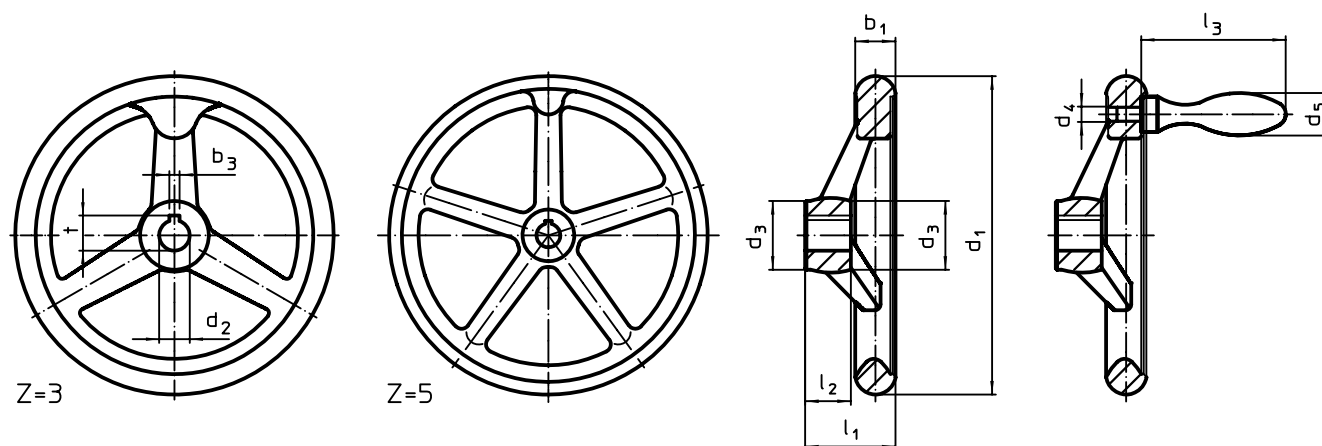
Assembly

Shaft-end washers EH 22270. for axial fastening.

MORE INFORMATION**Further products**

Shaft-End Washers → p. 187

Rotating Machine Handles, DIN 98 ... → p. 624

DRAWING

picture 1

picture 2

The orientation of the hub keyway may be different than shown in the drawing.

ORDER INFORMATION

Dimensions								Hub keyway, DIN 6885 sheet 1		Number of spokes z	Corresponding machine handle DIN 39 / DIN 98		Art. No.
d ₁	d ₂ H7	d ₃	d ₄	d ₅	l ₁ ~	l ₂	l ₃ ~	b ₃	t				
[mm]								[mm]			[mm]	[g]	
without hub keyway, without handle, form B-F/A (formerly: A 4) – picture 1													
80	10	24	–	–	29	16	–	–	–	3	–	129	24590.0000
	12	24	–	–	29	16	–	–	–	3	–	128	24590.0001
100	10	26	–	–	33	17	–	–	–	3	–	207	24590.0005
	12	26	–	–	33	17	–	–	–	3	–	205	24590.0006
125	12	28	–	–	36	18	–	–	–	3	–	292	24590.0010
	14	28	–	–	36	18	–	–	–	3	–	298	24590.0011
140	14	30	–	–	39	19	–	–	–	3	–	394	24590.0015
	16	30	–	–	39	19	–	–	–	3	–	363	24590.0016
160	14	32	–	–	40	20	–	–	–	3	–	480	24590.0020
	16	32	–	–	40	20	–	–	–	3	–	471	24590.0021
200	18	38	–	–	45	24	–	–	–	3	–	783	24590.0030
	22	38	–	–	45	24	–	–	–	3	–	770	24590.0031
250	22	45	–	–	50	28	–	–	–	5	–	1509	24590.0040
	26	45	–	–	50	28	–	–	–	5	–	1510	24590.0041
315	26	53	–	–	56	33	–	–	–	5	–	2350	24590.0045
	30	53	–	–	56	33	–	–	–	5	–	2314	24590.0046
400	30	65	–	–	63	38	–	–	–	5	–	3740	24590.0050
	34	65	–	–	63	38	–	–	–	5	–	3700	24590.0051

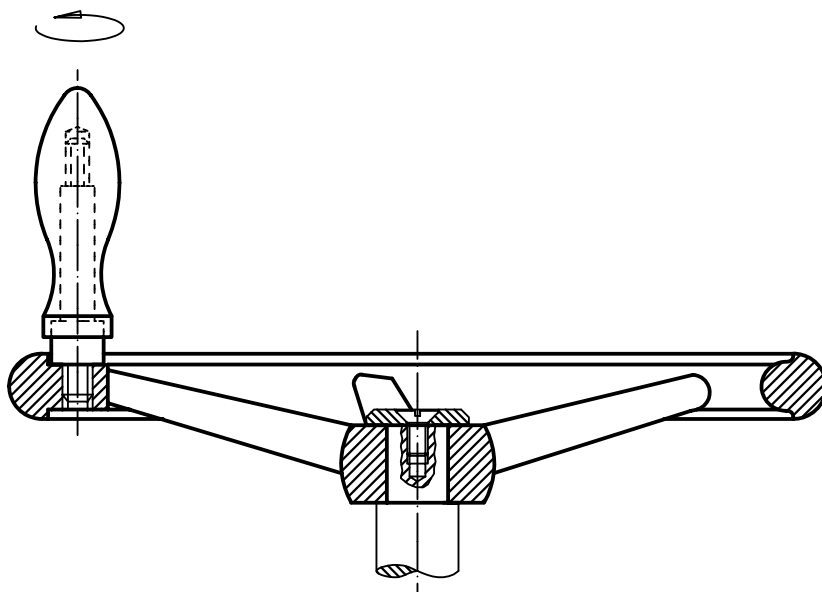


Dimensions								Hub keyway, DIN 6885 sheet 1		Number of spokes z	Corresponding machine handle DIN 39 / DIN 98		Art. No.
d ₁	d ₂ H7	d ₃	d ₄	d ₅	l ₁ ~	l ₂	l ₃ ~	b ₃	t				
[mm]								[mm]			[mm]	[g]	
with hub keyway, without handle, form N-F/A (formerly: A 3) – picture 1													
80	10	24	–	–	29	16	–	3	11.4	3	–	128	24590.0100
	12	24	–	–	29	16	–	4	13.8	3	–	127	24590.0101
100	10	26	–	–	33	17	–	3	11.4	3	–	208	24590.0105
	12	26	–	–	33	17	–	4	13.8	3	–	199	24590.0106
125	12	28	–	–	36	18	–	4	13.8	3	–	299	24590.0110
	14	28	–	–	36	18	–	5	16.3	3	–	291	24590.0111
140	14	30	–	–	39	19	–	5	16.3	3	–	374	24590.0115
	16	30	–	–	39	19	–	5	18.3	3	–	318	24590.0116
160	14	32	–	–	40	20	–	5	16.3	3	–	422	24590.0120
	16	32	–	–	40	20	–	5	18.3	3	–	422	24590.0121
200	18	38	–	–	45	24	–	6	20.8	3	–	779	24590.0130
	22	38	–	–	45	24	–	6	24.8	3	–	758	24590.0131
250	22	45	–	–	50	28	–	6	24.8	5	–	1441	24590.0140
	26	45	–	–	50	28	–	8	29.3	5	–	1472	24590.0141
315	26	53	–	–	56	33	–	8	29.3	5	–	2500	24590.0145
	30	53	–	–	56	33	–	8	33.3	5	–	2304	24590.0146
400	30	65	–	–	63	38	–	8	33.3	5	–	3600	24590.0150
	34	65	–	–	63	38	–	10	37.3	5	–	4725	24590.0151
without hub keyway, with rotating handle EH 24460., assembled form B-F/G (formerly D 4) – picture 2													
80	10	24	M 6	16	29	16	49	–	–	3	16	150	24590.0200
	12	24	M 6	16	29	16	49	–	–	3	16	150	24590.0201
100	10	26	M 6	16	33	17	49	–	–	3	16	210	24590.0205
	12	26	M 6	16	33	17	49	–	–	3	16	220	24590.0206
125	12	28	M 8	20	36	18	61	–	–	3	20	340	24590.0210
	14	28	M 8	20	36	18	61	–	–	3	20	340	24590.0211
140	14	30	M 8	20	39	19	61	–	–	3	20	430	24590.0215
	16	30	M 8	20	39	19	61	–	–	3	20	430	24590.0216
160	14	32	M10	25	40	20	75	–	–	3	25	615	24590.0220
	16	32	M10	25	40	20	75	–	–	3	25	615	24590.0221
200	18	38	M10	25	45	24	75	–	–	3	25	970	24590.0230
	22	38	M10	25	45	24	75	–	–	3	25	970	24590.0231
250	22	45	M12	32	50	28	95	–	–	5	32	1885	24590.0240
	26	45	M12	32	50	28	95	–	–	5	32	1885	24590.0241
315	26	53	M12	32	56	33	95	–	–	5	32	2737	24590.0245
	30	53	M12	32	56	33	95	–	–	5	32	2701	24590.0246
400	30	65	M16	36	63	38	106	–	–	5	36	4250	24590.0250
	34	65	M16	36	63	38	106	–	–	5	36	4250	24590.0251
with hub keyway, with rotating handle EH 24460. assembled, form N-F/G (formerly: D 3) – picture 2													
80	10	24	M 6	16	29	16	49	3	11.4	3	16	150	24590.0300
	12	24	M 6	16	29	16	49	4	13.8	3	16	150	24590.0301
100	10	26	M 6	16	33	17	49	3	11.4	3	16	210	24590.0305
	12	26	M 6	16	33	17	49	4	13.8	3	16	210	24590.0306
125	12	28	M 8	20	36	18	61	4	13.8	3	20	340	24590.0310
	14	28	M 8	20	36	18	61	5	16.3	3	20	340	24590.0311
140	14	30	M 8	20	39	19	61	5	16.3	3	20	456	24590.0315
	16	30	M 8	20	39	19	61	5	18.3	3	20	430	24590.0316
160	14	32	M10	25	40	20	75	5	16.3	3	25	615	24590.0320
	16	32	M10	25	40	20	75	5	18.3	3	25	615	24590.0321
200	18	38	M10	25	45	24	75	6	20.8	3	25	970	24590.0330
	22	38	M10	25	45	24	75	6	24.8	3	25	970	24590.0331
250	22	45	M12	32	50	28	95	6	24.8	5	32	1885	24590.0340
	26	45	M12	32	50	28	95	8	29.3	5	32	1885	24590.0341
315	26	53	M12	32	56	33	95	8	29.3	5	32	2885	24590.0345
	30	53	M12	32	56	33	95	8	33.3	5	32	2885	24590.0346
400	30	65	M16	36	63	38	106	8	33.3	5	36	4250	24590.0350
	34	65	M16	36	63	38	106	10	37.3	5	36	4250	24590.0351



Dimensions								Hub keyway, DIN 6885 sheet 1		Number of spokes z	Corresponding machine handle DIN 39 / DIN 98		Art. No.
d ₁	d ₂ H7	d ₃	d ₄	d ₅	l ₁ ~	l ₂	l ₃ ~	b ₃	t				
[mm]								[mm]			[mm]	[g]	
without hub keyway, with machine handle EH 24450., assembled, form B-F/G (formerly: F 4) – picture 2													
80	10	24	M 6	16	29	16	50	–	–	3	16	150	24590.0400
	12	24	M 6	16	29	16	50	–	–	3	16	150	24590.0401
100	10	26	M 6	16	33	17	50	–	–	3	16	210	24590.0405
	12	26	M 6	16	33	17	50	–	–	3	16	210	24590.0406
125	12	28	M 8	20	36	18	64	–	–	3	20	340	24590.0410
	14	28	M 8	20	36	18	64	–	–	3	20	340	24590.0411
140	14	30	M 8	20	39	19	64	–	–	3	20	420	24590.0415
	16	30	M 8	20	39	19	64	–	–	3	20	420	24590.0416
160	14	32	M10	25	40	20	80	–	–	3	25	615	24590.0420
	16	32	M10	25	40	20	80	–	–	3	25	615	24590.0421
200	18	38	M10	25	45	24	80	–	–	3	25	970	24590.0430
	22	38	M10	25	45	24	80	–	–	3	25	970	24590.0431
250	22	45	M12	32	50	28	100	–	–	5	32	1860	24590.0440
	26	45	M12	32	50	28	100	–	–	5	32	1860	24590.0441
315	26	53	M12	32	56	33	100	–	–	5	32	2860	24590.0445
	30	53	M12	32	56	33	100	–	–	5	32	2860	24590.0446
400	30	65	M16	36	63	38	112	–	–	5	36	4210	24590.0450
	34	65	M16	36	63	38	112	–	–	5	36	4210	24590.0451
with hub keyway, with machine handle EH 24450. assembled, form N-F/G (formerly: F 3) – picture 2													
80	10	24	M 6	16	29	16	50	3	11.4	3	16	150	24590.0500
	12	24	M 6	16	29	16	50	4	13.8	3	16	150	24590.0501
100	10	26	M 6	16	33	17	50	3	11.4	3	16	210	24590.0505
	12	26	M 6	16	33	17	50	4	13.8	3	16	210	24590.0506
125	12	28	M 8	20	36	18	64	4	13.8	3	20	330	24590.0510
	14	28	M 8	20	36	18	64	5	16.3	3	20	330	24590.0511
140	14	30	M 8	20	39	19	64	5	16.3	3	20	420	24590.0515
	16	30	M 8	20	39	19	64	5	18.3	3	20	420	24590.0516
160	14	32	M10	25	40	20	80	5	16.3	3	25	610	24590.0520
	16	32	M10	25	40	20	80	5	18.3	3	25	610	24590.0521
200	18	38	M10	25	45	24	80	6	20.8	3	25	960	24590.0530
	22	38	M10	25	45	24	80	6	24.8	3	25	960	24590.0531
250	22	45	M12	32	50	28	100	6	24.8	5	32	1860	24590.0540
	26	45	M12	32	50	28	100	8	29.3	5	32	1860	24590.0541
315	26	53	M12	32	56	33	100	8	29.3	5	32	2860	24590.0545
	30	53	M12	32	56	33	100	8	33.3	5	32	2860	24590.0546
400	30	65	M16	36	63	38	112	8	33.3	5	36	4210	24590.0550
	34	65	M16	36	63	38	112	10	37.3	5	36	4210	24590.0551

APPLICATION EXAMPLE



Handwheels • similar to DIN 950, stainless steel

EH 24591.



PRODUCT DESCRIPTION

Hub machined; rim turned and mirror-finished on all sides, non-machined surfaces cleanly blasted.

Material

Handwheel

- Stainless steel A4

Machine handle

- Stainless steel A4

Assembly

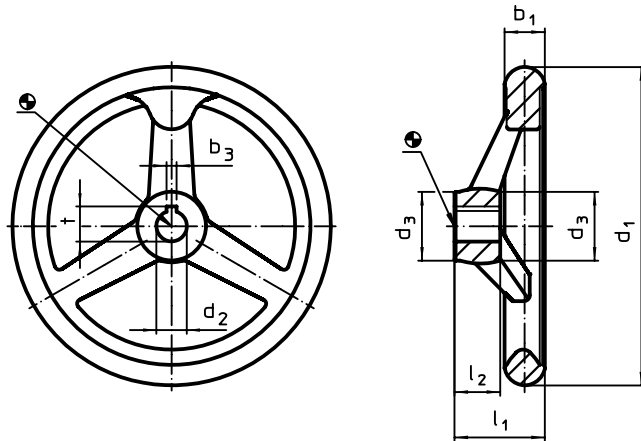
Shaft-end washers EH 22270. for axial fastening.

MORE INFORMATION

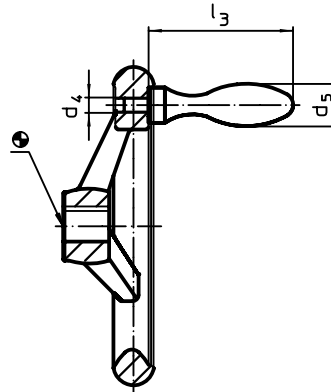
Further products

Shaft-End Washers → p. 187

DRAWING



picture 1



picture 2

The orientation of the hub keyway may be different than shown in the drawing.

ORDER INFORMATION

Dimensions								Hub keyway, DIN 6885 sheet 1		Number of spokes	Corresponding machine handle DIN 39		Art. No.		
d ₁	d ₂ H9	d ₃	d ₄	d ₅	l ₁	l ₂	l ₃ ~	b ₃	t						
[mm]								[mm]						[mm]	[g]
without hub keyway, without handle, form B-F/A (formerly: A 4) – picture 1															
100	10	25.5	–	–	33.0	17	–	–	–	3	–	431	24591.0005		
125	12	27.0	–	–	35.5	18	–	–	–	3	–	633	24591.0010		
140	14	29.0	–	–	38.5	19	–	–	–	3	–	851	24591.0015		
160	14	31.0	–	–	39.5	20	–	–	–	3	–	1112	24591.0020		
200	18	37.0	–	–	44.5	24	–	–	–	3	–	1877	24591.0030		
with hub keyway, without handle, form N-F/A (formerly: A 3) – picture 1															
100	10	25.5	–	–	33.0	17	–	3	11.4	3	–	434	24591.0105		
125	12	27.0	–	–	35.5	18	–	4	13.8	3	–	659	24591.0110		
140	14	29.0	–	–	38.5	19	–	5	16.3	3	–	854	24591.0115		
160	14	31.0	–	–	39.5	20	–	5	16.3	3	–	1115	24591.0120		
200	18	37.0	–	–	44.5	24	–	6	20.8	3	–	1882	24591.0130		
without hub keyway, with machine handle EH 24450., assembled, form B-F/G (formerly: F 4) – picture 2															
100	10	25.5	M 6	16	33.0	17	50	–	–	3	16	472	24591.0405		
125	12	27.0	M 8	20	35.5	18	64	–	–	3	20	748	24591.0410		
140	14	29.0	M 8	20	38.5	19	64	–	–	3	20	939	24591.0415		
160	14	31.0	M10	25	39.5	20	80	–	–	3	25	1273	24591.0420		
200	18	37.0	M10	25	44.5	24	80	–	–	3	25	2000	24591.0430		
with hub keyway, with machine handle EH 24450. assembled, form N-F/G (formerly: F 3) – picture 2															
100	10	25.5	M 6	16	33.0	17	50	3	11.4	3	16	473	24591.0505		
125	12	27.0	M 8	20	35.5	18	64	4	13.8	3	20	753	24591.0510		
140	14	29.0	M 8	20	38.5	19	64	5	16.3	3	20	939	24591.0515		
160	14	31.0	M10	25	39.5	20	80	5	16.3	3	25	1282	24591.0520		
200	18	37.0	M10	25	44.5	24	80	6	20.8	3	25	2000	24591.0530		

Disc-Type Handwheels • light metal

EH 24600.



PRODUCT DESCRIPTION

There are gripping indentations on the rear sides.

For all handwheels, the hub is machined, rim is turned and mirror-finished on all sides. The unmachined raw surfaces have been blasted clean. Together with their mirror-polished rim, these handwheels therefore present a finish which generally does not require additional lacquering.

Material

Axle part

- Steel, zinc-plated by galvanization

Handwheel

- Aluminium permanent-mould casting

Cylindrical handle EH 24530

- DIN 7708 - thermosetting plastic (PF 31), black similar to RAL 9005

Assembly

Shaft-end washers EH 22270. for axial fastening.

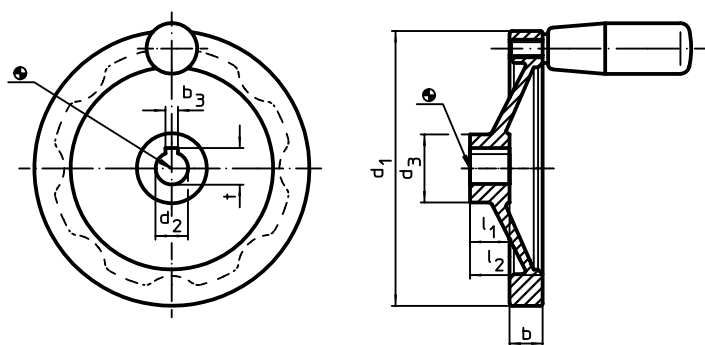
MORE INFORMATION

Further products

Shaft-End Washers → p. 187

Cylindrical Handles, rotating → p. 625

DRAWING



The orientation of the hub keyway may be different than shown in the drawing.

ORDER INFORMATION

Dimensions						Hub keyway, DIN 6885 sheet 1		Corresponding cylindrical handle EH 24530.	max. [°C]	[g]	Art. No.
d ₁	d ₂ H7	d ₃	b	l ₁	l ₂ ~	b ₃	t	[mm]			
[mm]											
without hub keyway, without cylindrical handle											
80	10	26	13.0	16	26	—	—	—	—	121	24600.0000
	12	26	13.0	16	26	—	—	—	—	139	24600.0001
100	10	28	14.0	17	30	—	—	—	—	203	24600.0005
	12	28	14.0	17	30	—	—	—	—	205	24600.0006
125	12	31	15.0	18	33	—	—	—	—	307	24600.0010
	14	31	15.0	18	33	—	—	—	—	298	24600.0011
140	14	36	16.5	19	36	—	—	—	—	430	24600.0015
	16	36	16.5	19	36	—	—	—	—	417	24600.0016
160	14	36	18.0	20	39	—	—	—	—	540	24600.0020
	16	36	18.0	20	39	—	—	—	—	533	24600.0021
200	18	42	20.5	24	45	—	—	—	—	849	24600.0030
	20	42	20.5	24	45	—	—	—	—	866	24600.0031
250	22	48	23.0	28	51	—	—	—	—	1495	24600.0040
	26	48	23.0	28	51	—	—	—	—	1441	24600.0041
with hub keyway, without cylindrical handle											
80	10	26	13.0	16	26	3	11.4	—	—	139	24600.0100
	12	26	13.0	16	26	4	13.8	—	—	128	24600.0101
100	10	28	14.0	17	30	3	11.4	—	—	201	24600.0105
	12	28	14.0	17	30	4	13.8	—	—	194	24600.0106
125	12	31	15.0	18	33	4	13.8	—	—	291	24600.0110
	14	31	15.0	18	33	5	16.3	—	—	288	24600.0111
140	14	36	16.5	19	36	5	16.3	—	—	413	24600.0115
	16	36	16.5	19	36	5	18.3	—	—	397	24600.0116
160	14	36	18.0	20	39	5	16.3	—	—	529	24600.0120
	16	36	18.0	20	39	5	18.3	—	—	528	24600.0121



Dimensions						Hub keyway, DIN 6885 sheet 1		Corresponding cylindrical handle EH 24530.	 max.	 [g]	Art. No.
d ₁	d ₂ H7	d ₃	b	l ₁	l ₂ ~	b ₃	t				
[mm]						[mm]		[mm]	[°C]	[g]	
200	18	42	20.5	24	45	6	20.8	–	–	880	24600.0130
	20	42	20.5	24	45	6	22.8	–	–	870	24600.0131
250	22	48	23.0	28	51	6	24.8	–	–	1515	24600.0140
	26	48	23.0	28	51	8	29.3	–	–	1496	24600.0141
without hub keyway, with cylindrical handle EH 24530.											
80	10	26	13.0	16	26	–	–	18 x M 6	110	160	24600.0200
	12	26	13.0	16	26	–	–	18 x M 6	110	160	24600.0201
100	10	28	14.0	17	30	–	–	21 x M 6	110	255	24600.0205
	12	28	14.0	17	30	–	–	21 x M 6	110	255	24600.0206
125	12	31	15.0	18	33	–	–	23 x M 8	110	390	24600.0210
	14	31	15.0	18	33	–	–	23 x M 8	110	390	24600.0211
140	14	36	16.5	19	36	–	–	23 x M 8	110	510	24600.0215
	16	36	16.5	19	36	–	–	23 x M 8	110	510	24600.0216
160	14	36	18.0	20	39	–	–	26 x M10	110	675	24600.0220
	16	36	18.0	20	39	–	–	26 x M10	110	675	24600.0221
200	18	42	20.5	24	45	–	–	26 x M10	110	995	24600.0230
	20	42	20.5	24	45	–	–	26 x M10	110	995	24600.0231
250	22	48	23.0	28	51	–	–	28 x M10	110	1625	24600.0240
	26	48	23.0	28	51	–	–	28 x M10	110	1625	24600.0241
with hub keyway, with cylindrical handle EH 24530.											
80	10	26	13.0	16	26	3	11.4	18 x M 6	110	160	24600.0300
	12	26	13.0	16	26	4	13.8	18 x M 6	110	160	24600.0301
100	10	28	14.0	17	30	3	11.4	21 x M 6	110	255	24600.0305
	12	28	14.0	17	30	4	13.8	21 x M 6	110	255	24600.0306
125	12	31	15.0	18	33	4	13.8	23 x M 8	110	390	24600.0310
	14	31	15.0	18	33	5	16.3	23 x M 8	110	390	24600.0311
140	14	36	16.5	19	36	5	16.3	23 x M 8	110	510	24600.0315
	16	36	16.5	19	36	5	18.3	23 x M 8	110	510	24600.0316
160	14	36	18.0	20	39	5	16.3	26 x M10	110	572	24600.0320
	16	36	18.0	20	39	5	18.3	26 x M10	110	675	24600.0321
200	18	42	20.5	24	45	6	20.8	26 x M10	110	995	24600.0330
	20	42	20.5	24	45	6	22.8	26 x M10	110	995	24600.0331
250	22	48	23.0	28	51	6	24.8	28 x M10	110	1625	24600.0340
	26	48	23.0	28	51	8	29.3	28 x M10	110	1625	24600.0341

Spoked Handwheels • light metal

EH 24610.



PRODUCT DESCRIPTION

For all handwheels, the hub is machined, rim is turned and mirror-finished on all sides. The unmachined raw surfaces have been blasted clean. Together with their mirror-polished rim, these handwheels therefore present a finish which generally does not require additional lacquering.

Material

Axle part

- Steel, zinc-plated by galvanization

Handwheel

- Aluminium permanent-mould casting

Cylindrical handle EH 24530

- DIN 7708 - thermosetting plastic (PF 31), black similar to RAL 9005

Assembly

Shaft-end washers EH 22270. for axial fastening.

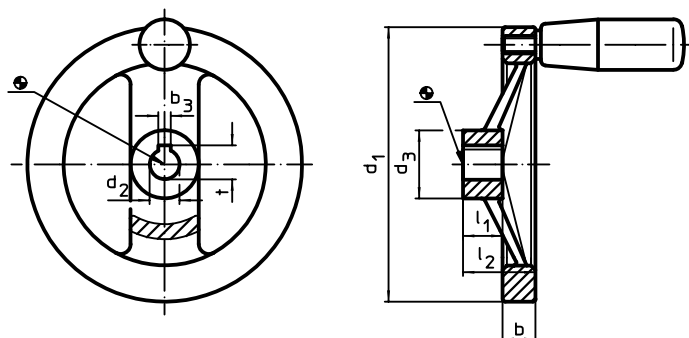
MORE INFORMATION

Further products

Shaft-End Washers → p. 187

Cylindrical Handles, rotating → p. 625

DRAWING



The orientation of the hub keyway may be different than shown in the drawing.

ORDER INFORMATION

Dimensions						Hub keyway, DIN 6885 sheet 1		Corresponding cylindrical handle EH 24530.	max. [°C]	[g]	Art. No.
d ₁	d ₂ H7	d ₃	b	l ₁	l ₂	b ₃	t	[mm]	[°C]	[g]	
[mm]											
without hub keyway, without cylindrical handle											
125	12	31	15.0	18	33	–	–	–	–	301	24610.0010
	14	31	15.0	18	33	–	–	–	–	300	24610.0011
140	14	36	16.5	19	36	–	–	–	–	400	24610.0015
	16	36	16.5	19	36	–	–	–	–	396	24610.0016
160	14	36	18.0	20	39	–	–	–	–	520	24610.0020
	16	36	18.0	20	39	–	–	–	–	526	24610.0021
200	18	42	20.5	24	45	–	–	–	–	886	24610.0030
	20	42	20.5	24	45	–	–	–	–	876	24610.0031
250	22	48	23.0	28	51	–	–	–	–	1454	24610.0040
	26	48	23.0	28	51	–	–	–	–	1516	24610.0041
with hub keyway, without cylindrical handle											
125	12	31	15.0	18	33	4	13.8	–	–	303	24610.0110
	14	31	15.0	18	33	5	16.3	–	–	306	24610.0111
140	14	36	16.5	19	36	5	16.3	–	–	406	24610.0115
	16	36	16.5	19	36	5	18.3	–	–	404	24610.0116
160	14	36	18.0	20	39	5	16.3	–	–	542	24610.0120
	16	36	18.0	20	39	5	18.3	–	–	525	24610.0121
200	18	42	20.5	24	45	6	20.8	–	–	887	24610.0130
	20	42	20.5	24	45	6	22.8	–	–	875	24610.0131
250	22	48	23.0	28	51	6	24.8	–	–	1446	24610.0140
	26	48	23.0	28	51	8	29.3	–	–	1443	24610.0141



Dimensions						Hub keyway, DIN 6885 sheet 1		Corresponding cylindrical handle EH 24530.	 max.	 [g]	Art. No.
d ₁	d ₂ H7	d ₃	b	l ₁	l ₂ ~	b ₃	t				
[mm]						[mm]		[mm]	[°C]	[g]	
without hub keyway, with cylindrical handle EH 24530.											
125	12	31	15.0	18	33	–	–	23 x M 8	110	390	24610.0210
	14	31	15.0	18	33	–	–	23 x M 8	110	390	24610.0211
140	14	36	16.5	19	36	–	–	23 x M 8	110	490	24610.0215
	16	36	16.5	19	36	–	–	23 x M 8	110	490	24610.0216
160	14	36	18.0	20	39	–	–	26 x M10	110	645	24610.0220
	16	36	18.0	20	39	–	–	26 x M10	110	645	24610.0221
200	18	42	20.5	24	45	–	–	26 x M10	110	1000	24610.0230
	20	42	20.5	24	45	–	–	26 x M10	110	1000	24610.0231
250	22	48	23.0	28	51	–	–	28 x M10	110	1585	24610.0240
	26	48	23.0	28	51	–	–	28 x M10	110	1585	24610.0241
with hub keyway, with cylindrical handle EH 24530.											
125	12	31	15.0	18	33	4	13.8	23 x M 8	110	390	24610.0310
	14	31	15.0	18	33	5	16.3	23 x M 8	110	387	24610.0311
140	14	36	16.5	19	36	5	16.3	23 x M 8	110	490	24610.0315
	16	36	16.5	19	36	5	18.3	23 x M 8	110	490	24610.0316
160	14	36	18.0	20	39	5	16.3	26 x M10	110	645	24610.0320
	16	36	18.0	20	39	5	18.3	26 x M10	110	645	24610.0321
200	18	42	20.5	24	45	6	20.8	26 x M10	110	1000	24610.0330
	20	42	20.5	24	45	6	22.8	26 x M10	110	1000	24610.0331
250	22	48	23.0	28	51	6	24.8	28 x M10	110	1585	24610.0340
	26	48	23.0	28	51	8	29.3	28 x M10	110	1585	24610.0341