



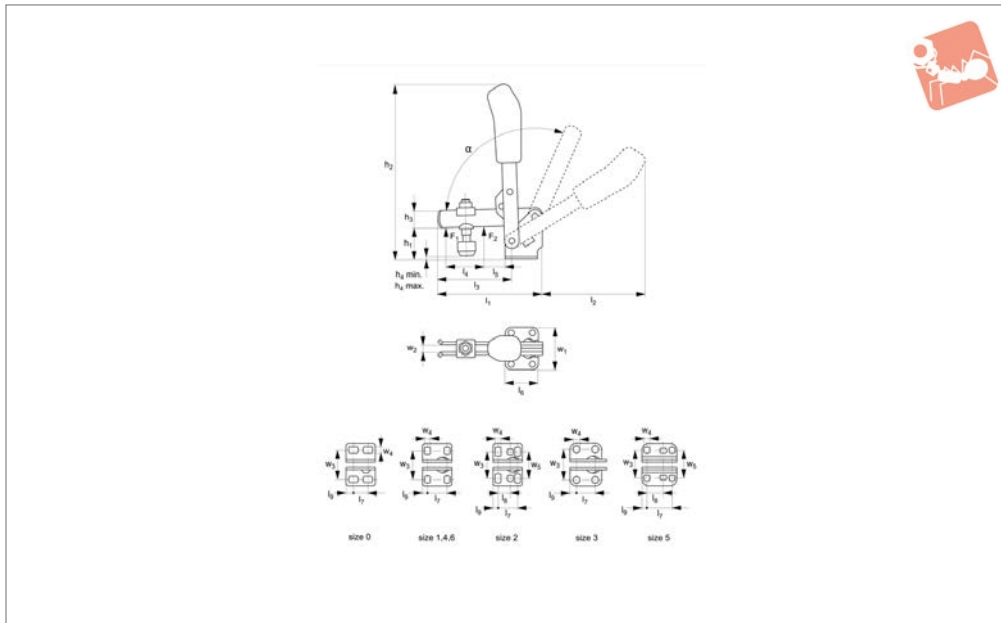
Vertical Acting Toggle Clamps

open arm - horizontal base



40000.1

STEEL TOGGLE CLAMPS



Material

Body: steel, zinc plated.
 Rivets: stainless steel running in hardened bushes (sizes 2-6). Pre-lubricated bearings (grease suitable for food industry use).
 Ergonomic, soft feel, oil-resistant handle with large grip area. Supplied complete

with clamping screw (with rubber pad).

Technical Notes

For fastening to mounting plates, etc.
 Opening angle (symbola/symbol/symbola/symbol*) can be changed by pressing in a stop pin on the clamp body.

Temperature range -10°C to +80°C.

Tips

This product is also available in stainless steel, matt black and ESD.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄ min.	h ₄ max.	l ₁	l ₂	Weight g
40000.W0000	0	0.5	0.7	M 4x25	18.0	81	8	-1.5	3.5	49	50	60
40000.W0001	1	0.6	1.1	M 5x30	19.0	98	10	-4.0	2.0	61	58	105
40000.W0002	2	0.8	1.2	M 6x35	23.0	140	12	-3.0	4.5	78	89	175
40000.W0003	3	1.2	2.5	M 8x45	33.0	186	18	2.0	11.0	112	112	410
40000.W0004	4	1.7	3.0	M 8x65	42.5	221	20	-6.0	22.5	141	130	630
40000.W0005	5	3.0	5.0	M12x80	55.8	281	25	-3.0	27.5	195	185	1480
40000.W0006	6	3.4	5.5	M12x110	81.0	333	30	-2.5	55.0	231	206	2200

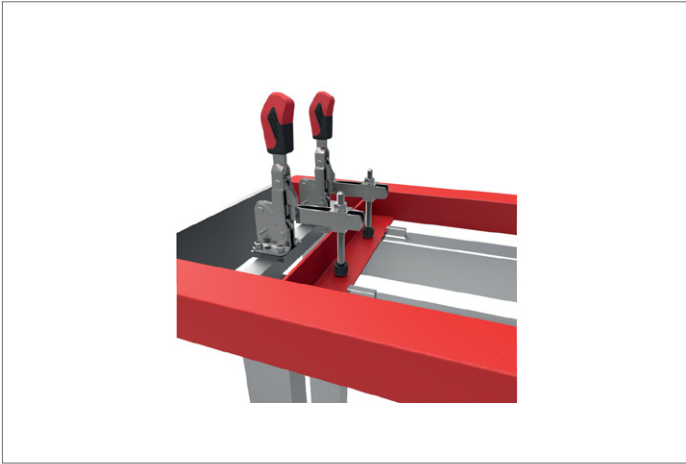
Order No.	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	l ₉	w ₁	w ₂	w ₃	w ₄	w ₅	α	α*
40000.W0000	31.0	14	5.5	22	8,5-13,5	-	5.5	32	4	23.0	4.5	-	95°	-
40000.W0001	39.0	18	6.0	27	16.0	-	5.5	34	5	22,5-26,0	4.5	-	95°	-
40000.W0002	52.0	25	11.0	32	20.0	12.5	6.0	43	6	23,0-31,0	5.5	27	105°	60°
40000.W0003	79.0	37	19.0	35	20.0	-	7.5	46	8	32.5	7.5	-	105°	60°
40000.W0004	101.0	54	16.0	53	32.0	-	13.0	64	10	43,0-46,5	8.6	-	105°	60°
40000.W0005	140.0	73	34.0	65	45.0	26,5-31,5	9.5	70	14	45,0-50,0	8.5	45	115°	60°
40000.W0006	165.5	89	28.0	90	50.5	-	24.5	100	14	67,5-72,5	13.0	-	140°	60°

Steel Toggle Clamps

Vertical Acting Toggle Clamps open arm - horizontal base



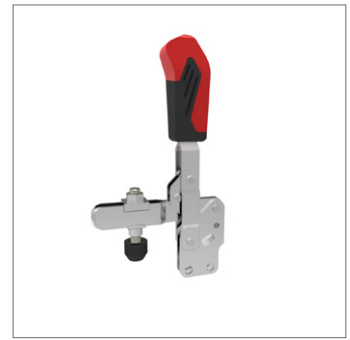
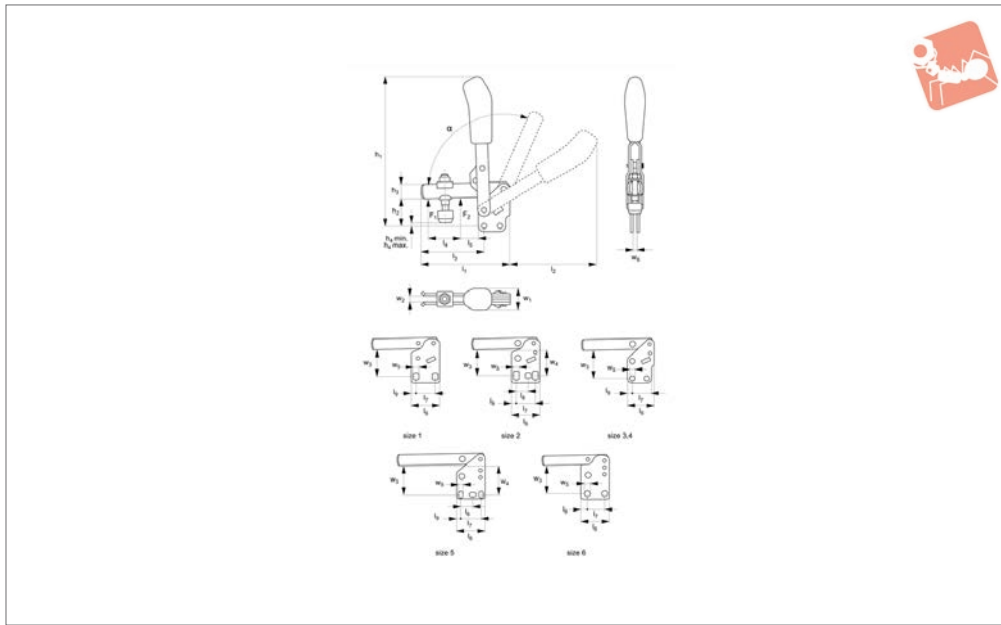
STEEL TOGGLE CLAMPS





Vertical Acting Toggle Clamps

open arm - vertical base



40050.1

STEEL TOGGLE CLAMPS

Material

Body: steel, zinc plated. Stainless steel rivets running in hardened bushes (sizes 2-6). Pre-lubricated bearings (grease suitable for food industry use). Ergonomic, soft feel, oil-resistant handle

with large grip area.

Supplied complete with clamping screw (with rubber pad).

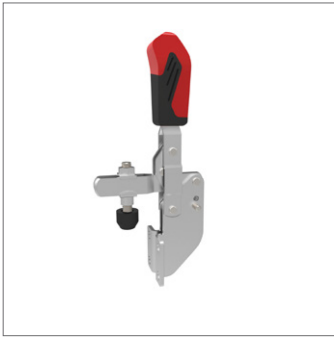
Technical Notes

For fastening to mounting plates, etc.

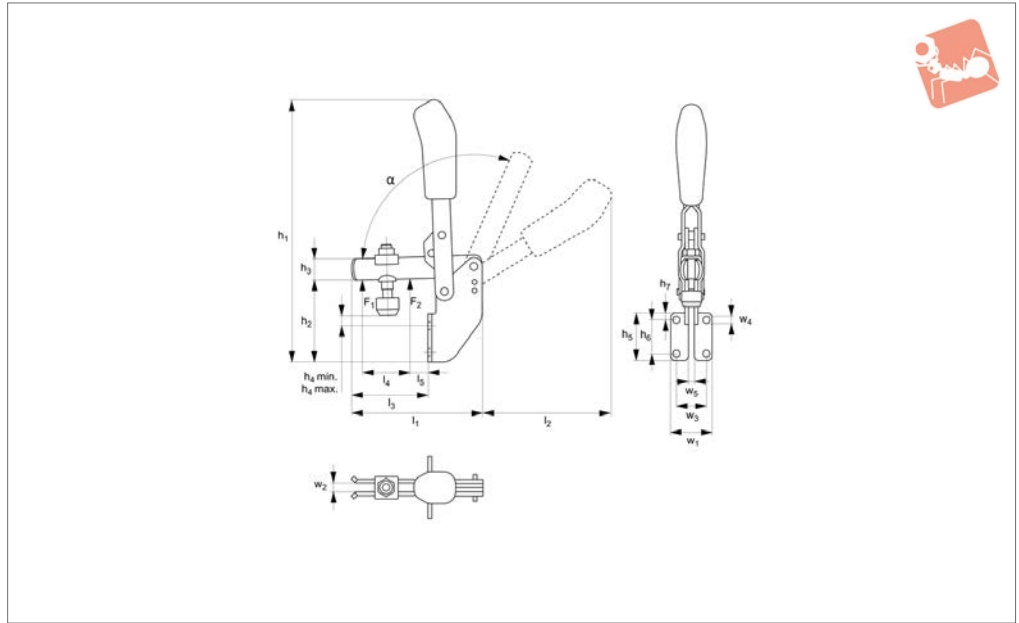
Opening angle (symbola/symbol/symbola/symbol*) can be changed by pressing in a stop pin on the clamp body.
Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄ min.	h ₄ max.	l ₁	l ₂	l ₃	Weight g
40050.W0001	1	0.6	1.1	M 5x30	109.0	29	10	6.0	12.5	61	59	39	105
40050.W0002	2	0.8	1.2	M 6x35	144.5	38	12	11.5	19.5	78	80	52	175
40050.W0003	3	1.2	2.5	M 8x45	200.0	48	18	16.5	25.0	112	114	79	410
40050.W0004	4	1.7	3.0	M 8x65	244.0	65	20	16.5	45.5	141	130	101	630
40050.W0005	5	3.0	5.0	M12x80	301.0	77	25	18.0	49.0	195	183	140	1480
40050.W0006	6	3.4	5.5	M12x110	369.0	117	30	33.0	90.5	231	206	165	2200

Order No.	l ₄	l ₅	l ₆	l ₇	l ₈	l ₉	w ₁	w ₂	w ₃	w ₄	w ₅	w ₆	α	α*
40050.W0001	18	6	27	16.0	-	5.5	19	5	23,5-25,0	4,5	-	5	95°	-
40050.W0002	25	11	32	20.0	12.5	6.0	21	6	28,5-32,0	5,5	30	5	105°	60°
40050.W0003	36	19	40	20.0	-	7.5	27	8	41.0	7,5	-	6	105°	60°
40050.W0004	54	16	53	32.0	-	13.0	35	10	55.5	8,6	-	8	105°	60°
40050.W0005	72	35	65	45.0	26,5-31,5	9.5	45	14	66.0	8,5	64	10	115°	60°
40050.W0006	89	28	90	50.5	-	24.5	45	14	102.0	13,0	-	10	140°	60°



40100.1



Material

Body: steel, zinc plated.
 Rivets: stainless steel running in hardened bushes (sizes 2-3). Pre-lubricated bearings (grease suitable for food industry use).
 Ergonomic, soft feel, oil-resistant handle

with large grip area.
 Supplied complete with clamping screw (with rubber pad).

Technical Notes
 For fastening to mounting plates, etc.

Opening angle (symbol α /symbol α *) can be changed by pressing in a stop pin on the clamp body.
 Lock washer for the thrust bolt at the end of the clamping arm.
 Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄ min.	h ₄ max.	h ₅	h ₆	h ₇	Weight g
40100.W0001	1	0.8	1.1	M 5x30	125.0	45.0	10	2.5	9.0	30	14	10	125
40100.W0002	2	1.0	1.2	M 6x35	176.5	60.0	12	8.0	15.5	32	20	6	220
40100.W0003	3	1.4	2.5	M 8x45	223.0	71.0	18	9.0	17.5	38	24	7	400
40100.W0004	4	2.0	3.0	M 8x65	280.0	101.5	20	11.0	39.5	96	32	54	650

Order No.	l ₁	l ₂	l ₃	l ₄	l ₅	w ₁	w ₂	w ₃	w ₄	w ₅	α	α^*
40100.W0001	61	58	34.5	18	7	30.0	5	20.0	4.5	5	98°	-
40100.W0002	77	90	41.0	25	6	37.0	6	25.5	6.1	5	105°	60°
40100.W0003	110	112	62.0	37	11	42.5	8	28.5	6.5	6	105°	60°
40100.W0004	141	129	83.0	54	11	52.0	10	32.0	8.5	8	105°	60°



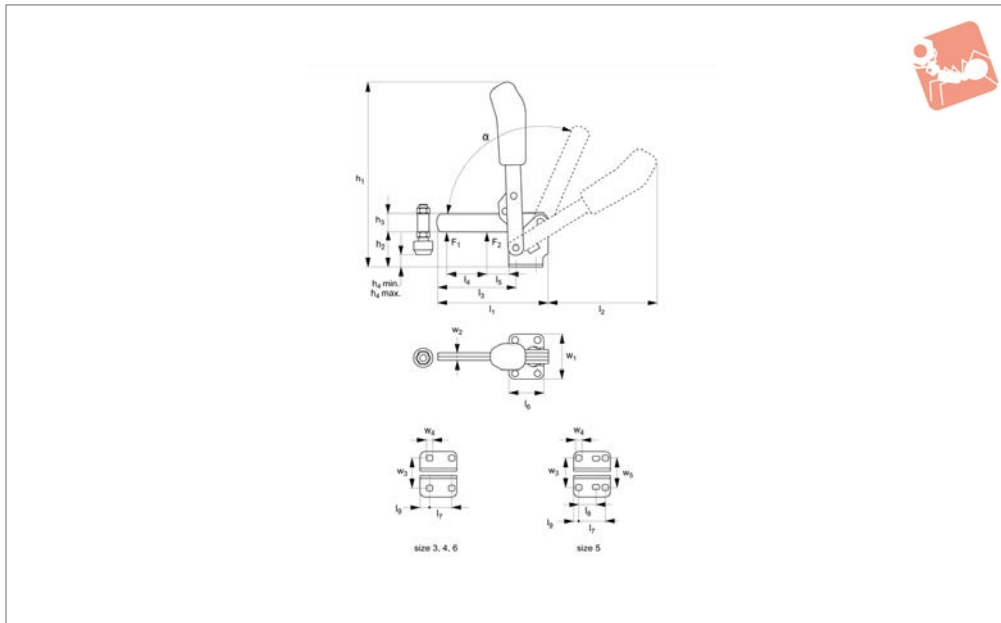
Vertical Acting Toggle Clamps

solid arm - horizontal base



40150

STEEL TOGGLE CLAMPS



Material

Body: steel, zinc plated.
 Rivets: stainless steel running in hardened bushes.
 Pre-lubricated bearings (grease suitable for food industry use).
 Ergonomic, soft feel, oil-resistant handle

with large grip area.
 Supplied complete with weldable clamping screw (with rubber pad).

Technical Notes

For fastening to mounting plates, etc. The arm can be shortened to suit the work-

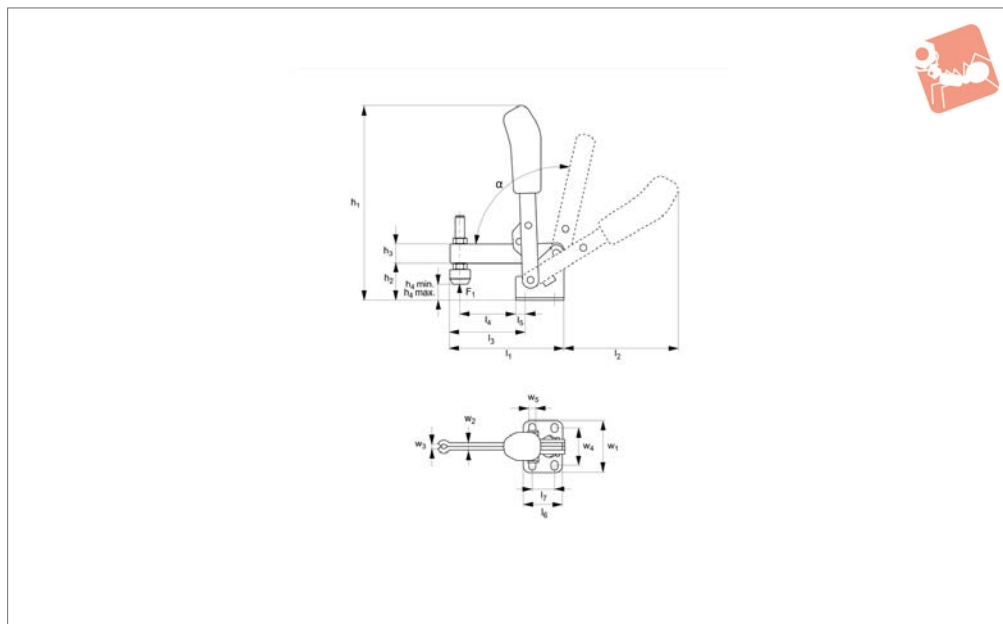
piece, the sleeve is then welded to the arm. Opening angle (symbol α /symbol α /symbol α /symbol α *) can be changed by pressing in a stop pin on the clamp body. Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄ min.	h ₄ max.	l ₁	l ₂	l ₃	Weight g
40150.W0003	3	1.4	2.5	M 8x45	186	33.5	18	0	12.0	108.5	116.5	81.0	340
40150.W0004	4	2.0	3.0	M 8x65	221	42.5	20	-8	21.0	141.5	129.5	101.0	585
40150.W0005	5	3.0	5.0	M12x80	281	55.5	25	-6	25.5	196.5	184.0	141.0	1480
40150.W0006	6	3.5	5.5	M12x110	331	81.0	30	-5	51.0	232.0	206.0	166.5	2200

Order No.	l ₄	l ₅	l ₆	l ₇	l ₈	l ₉	w ₁	w ₂	w ₃	w ₄	w ₅	α	α^*
40150.W0003	43	19.5	35	20.0	-	7.5	46	6	32.5	7.5	-	105°	60°
40150.W0004	61	17.0	53	32.0	-	13.0	64	8	45.0	8.6	-	105°	60°
40150.W0005	88	30.5	65	45.0	26,5-31,5	9.5	70	10	45,0-50,0	8.5	45	115°	60°
40150.W0006	90	20.5	90	50.5	-	24.5	100	10	68,0-72,0	13.0	-	140°	60°



40200



Material

Body: steel, zinc plated.
 Rivets: stainless steel running in hardened bushes.
 Pre-lubricated bearings (grease suitable

for food industry use).
 Ergonomic, soft feel, oil-resistant handle with large grip area.
 Supplied complete with clamping screw (with rubber pad).

Technical Notes

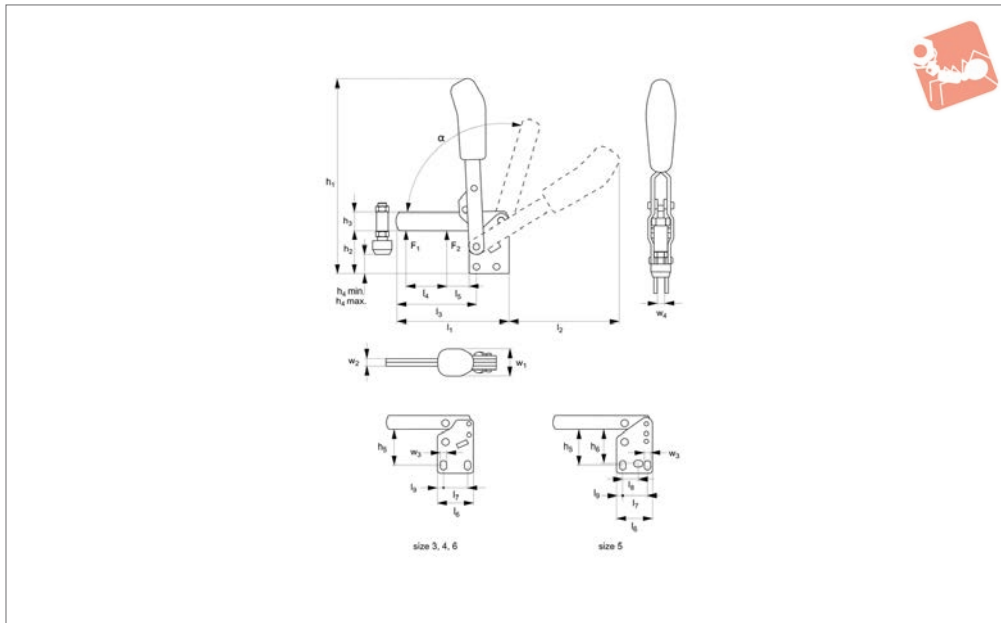
Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	Clamping screw		h ₁	h ₂	h ₃	h ₄ min.	h ₄ max.	l ₁	l ₂	Weight g
40200.W0001	1	1	M 5x30		98	18.5	10	-6	4.5	67	58	100
Order No.	l ₃	l ₄	l ₅	l ₆	l ₇	w ₁	w ₂	w ₃	w ₄	w ₅	α	
40200.W0001	45	33	5.5	27	16	34	5	5	22,5-25,5	4.5	95°	



Vertical Acting Toggle Clamps

solid arm - vertical base



40250

STEEL TOGGLE CLAMPS

Material

Body: steel, zinc plated.
 Rivets: stainless steel running in hardened bushes.
 Pre-lubricated bearings (grease suitable for food industry use).
 Ergonomic, soft feel, oil-resistant handle

with large grip area.
 Supplied complete with weldable clamping screw (with rubber pad).

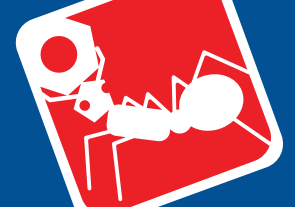
Technical Notes

For mounting to struts and for welding jigs. The arm can be shortened to suit the

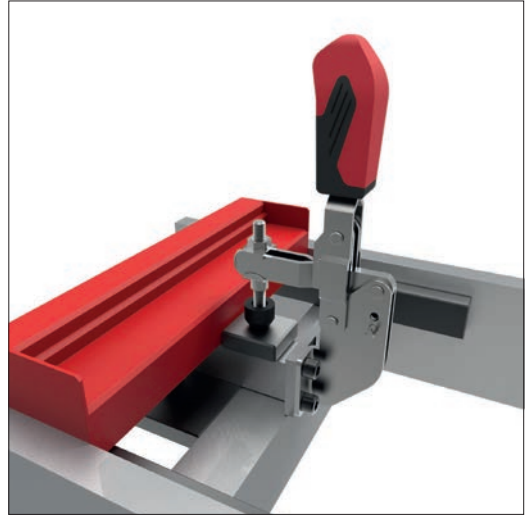
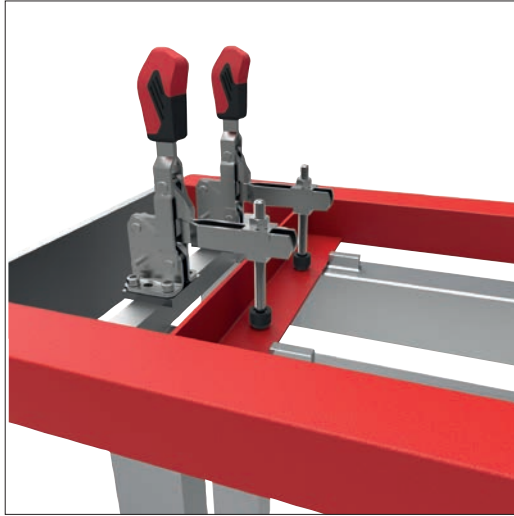
workpiece, the sleeve is then welded to the arm.
 Opening angle (symbol α /symbol α /symbol α /symbol α *) can be changed by pressing in a stop pin on the clamp body.
 Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄ min.	h ₄ max.	h ₅	h ₆	l ₁	l ₂	Weight g
40250.W0003	3	1.4	2.5	M 8x45	200	48	18	14.5	26.0	41.0	-	108.5	111.0	400
40250.W0004	4	2.0	3.0	M 8x65	244	65	20	13.0	44.0	55.5	-	141.5	129.5	585
40250.W0005	5	3.0	5.0	M12x80	302	77	25	15.0	47.0	66.0	64	196.5	184.0	1480
40250.W0006	6	3.5	5.5	M12x110	369	117	30	28.5	86.5	102.0	-	232.0	206.0	2200

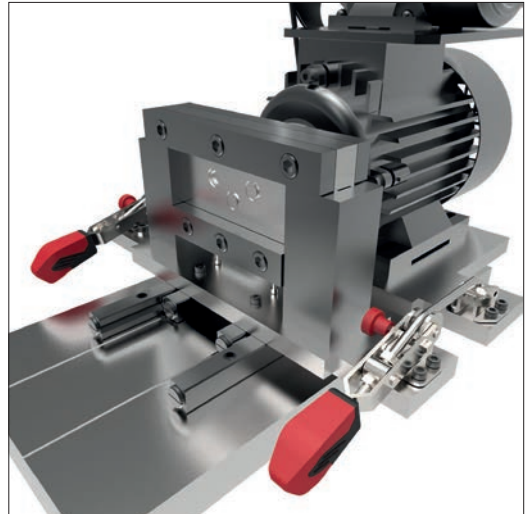
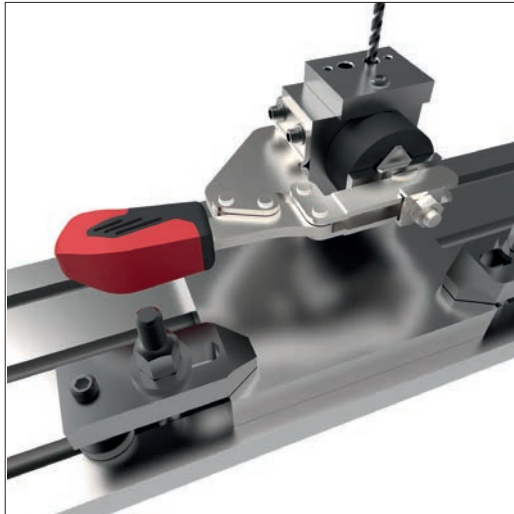
Order No.	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	l ₉	w ₁	w ₂	w ₃	w ₄	α	α^*
40250.W0003	81.0	43	19.5	35	20.0	-	7.5	27	6	7.5	6	105°	60°
40250.W0004	101.0	61	17.0	53	32.0	-	13.0	34	8	8.6	8	105°	60°
40250.W0005	141.0	88	30.5	65	45.0	26,5-31,5	9.5	36	10	8.5	10	115°	60°
40250.W0006	166.5	90	20.5	90	50.5	-	24.5	39	10	13.0	10	140°	60°



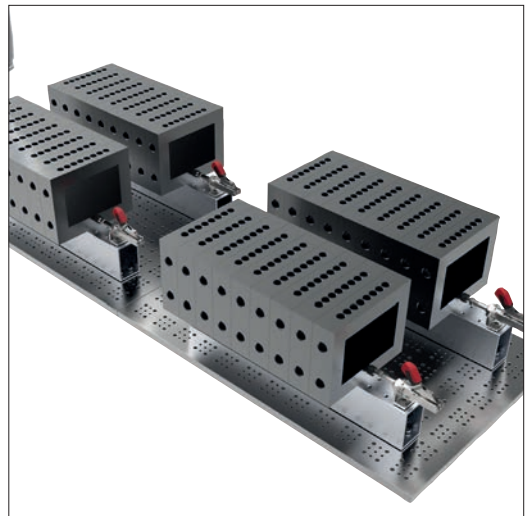
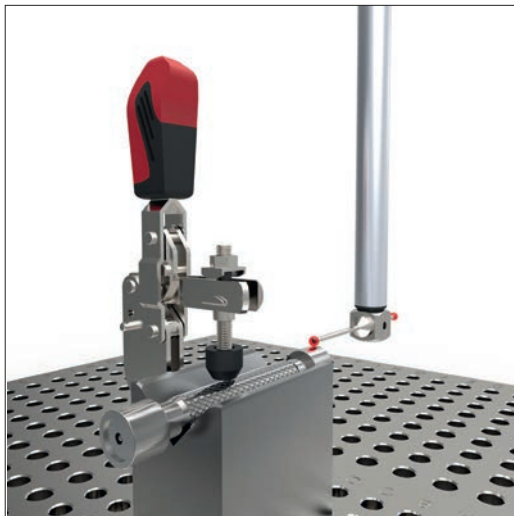
Welding Fixtures



Machining and Jig Assemblies

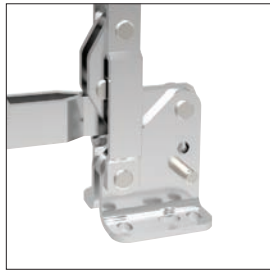


Cmm's

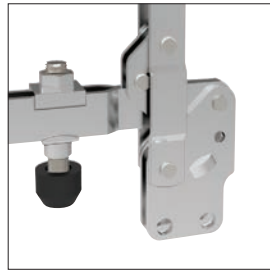




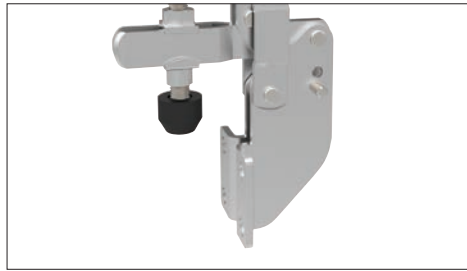
STEEL TOGGLE CLAMPS



Horizontal base



Vertical base



Angled base

Mounting Base Variations



Vertical acting



Horizontal acting



Push-pull

Clamping Variations



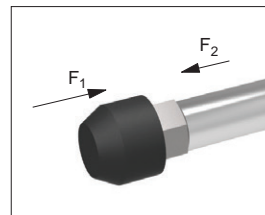
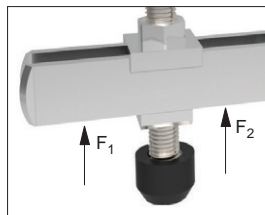
Hook type



Latch type

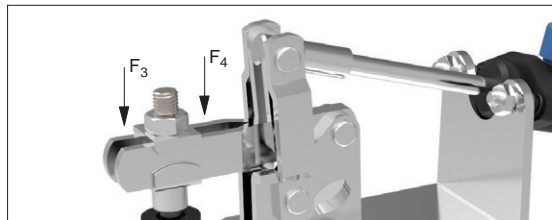
Explanation of forces

The force transmitted to the workpiece by the toggle clamp's closed arm, without itself being deformed when machine forces are applied. The holding force value is dependent upon the proximity of the measuring load point to the toggle clamp's pivot point (therefore two values, F_1 and F_2 are provided).



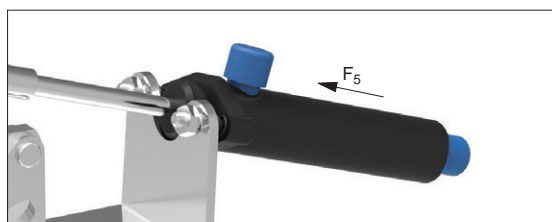
Holding Forces F_1 or F_2

The force applied to the workpiece when the toggle clamp's arm is closed. These clamping forces can only be stated for pneumatic toggle clamps, clamping forces of manual clamps cannot be easily measured as they are dependent upon the operator.



Clamping Forces F_3 or F_4

For pneumatically controlled toggle clamps only, F_5 is the piston force required (at 6 bar to) achieve the stated clamping force.



Piston Forces F_5

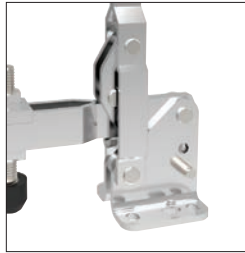
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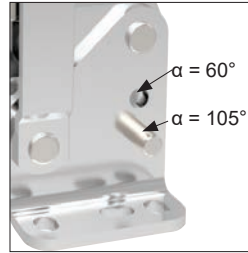
Quality Features



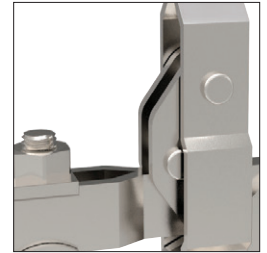
Ergonomic soft grip
2-component handle



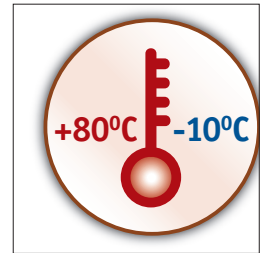
Stainless rivets and
hardened bushings



Moveable stop for
variable opening angle



Operator
finger protection



Temperature resistant

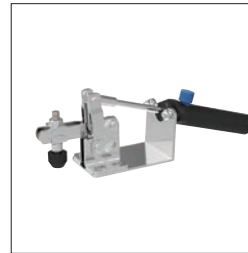
Unique Features



Safety catches



Heavy duty versions



Pneumatic versions



Matt black surface for
optical measurement

Materials



Steel, zinc plated
and passivated



Stainless steel (304)



Steel, matt black
vario-spektron coated



Protective cap and
handle made of an
electrostatic conductive
(dissipative) material.



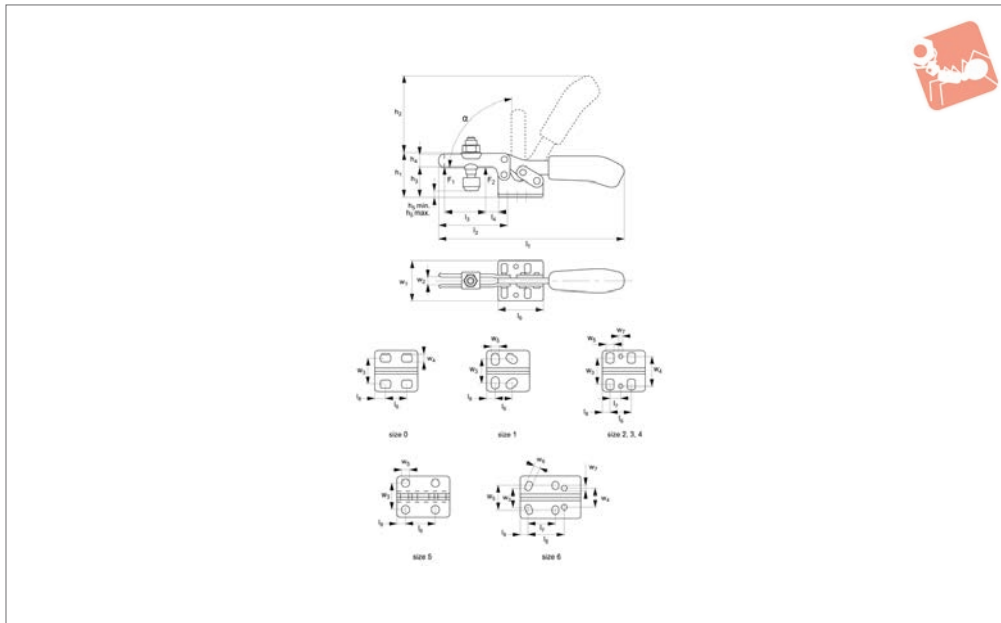
Horizontal Acting Toggle Clamps

open arm - horizontal base



41000.1

STEEL TOGGLE CLAMPS



Material

Body: steel, zinc plated.
 Rivets: stainless steel running in hardened bushes (sizes 2-6).
 Pre-lubricated bearings (grease suitable for food industry use).

Ergonomic, soft feel, oil-resistant handle with large grip area.
 Supplied complete with clamping screw (with rubber pad).

Technical Notes

Temperature range -10°C to +80°C.

Tips

For stainless steel version see part no. 41020.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄ min.	h ₅ min.	h ₅ max.	l ₁	l ₂	Weight g
41000.W0000	0	0.3	0.4	M 4x25	23.0	34	14.5	7.5	-5.5	0.0	79	28	35
41000.W0001	1	0.8	1.1	M 5x30	30.0	49	19.0	10.0	-3.0	2.5	120	42	105
41000.W0002	2	1.0	1.2	M 6x35	45.0	68	24.0	13.2	-1.5	5.0	162	64	185
41000.W0003	3	1.8	2.5	M 8x45	48.5	86	32.0	15.0	-2.0	9.0	206	73	320
41000.W0004	4	2.0	3.0	M 8x65	75.0	126	45.0	20.0	-4.0	24.0	287	113	700
41000.W0005	5	3.0	5.0	M 8x65	73.0	128	46.0	25.0	1.7	25.0	321	123	1080
41000.W0006	6	4.0	7.0	M10x116	114.5	181	71.5	30.0	-6.0	44.0	354	110	1925

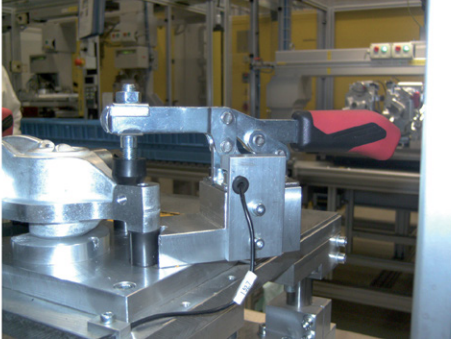
Order No.	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂	w ₃	w ₄	w ₅	w ₆	w ₇	α
41000.W0000	9.0	5.5	25.5	11,5-15,5	-	6.3	25.0	4	16.0	-	4.6	-	-	90°
41000.W0001	18.7	8.0	34.0	13,0-14,5	-	5.5	34.0	5	18,0-21,5	-	5.2	-	-	90°
41000.W0002	32.0	16.0	38.0	26.0	12.7	6.0	42.0	6	19,5-29,5	28.5	5.6	-	5.6	90°
41000.W0003	38.0	14.0	50.0	25.7	13.0	7.0	45.5	8	22,0-31,8	31.6	6.5	-	5.1	90°
41000.W0004	63.0	27.0	57.0	41.0	20.5	8.0	58.0	10	29,0-43,0	43.0	8.5	-	8.5	90°
41000.W0005	78.0	16.0	77.0	41.5	-	12.5	58.0	10	41.5	-	8.5	-	-	90°
41000.W0006	59.3	20.6	95.0	57.7	43.6	11.5	66.5	10	32,1-43,8	31.6	9.8	36,0-44,2	8.7	83°

Steel Toggle Clamps

Horizontal Acting Toggle Clamps open arm - horizontal base



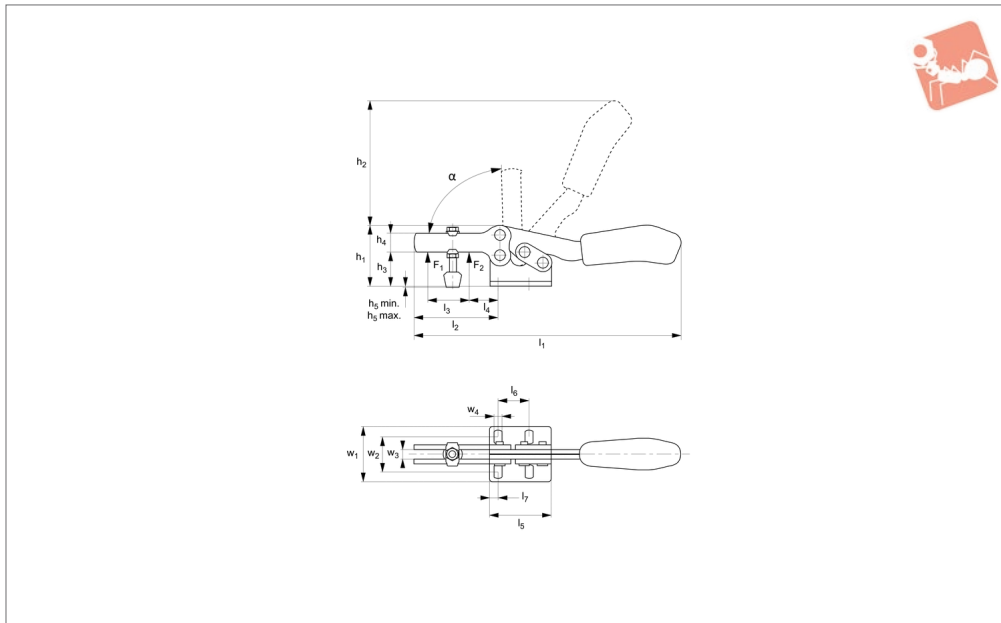
STEEL TOGGLE CLAMPS





Horizontal Toggle Clamp Plus

open arm - horizontal base - increased clamping



41001.1

STEEL TOGGLE CLAMPS

Material

Body: steel, zinc plated.
 Rivets: stainless steel running in hardened bushes.
 Pre-lubricated bearings (grease suitable for food industry use).

Ergonomic, soft feel, oil-resistant handle with large grip area.
 Supplied complete with clamping screw (with rubber pad).

Technical Notes

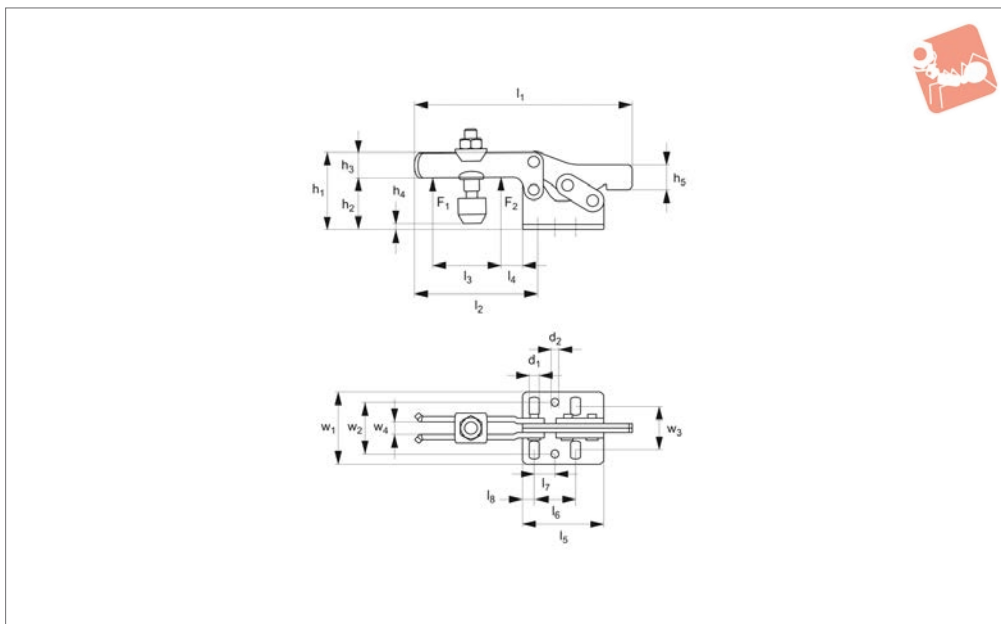
Temperature range -10°C to +80°C. **With increased clamping force.**
 Also available in stainless steel part no. 41001.W0301 - .W0304.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄	h ₅ min.	h ₅ max.	l ₁	Weight g
41001.W0001	1	1.1	1.7	M 5x35	35	46	19.0	12	0	10.0	126	114
41001.W0002	2	1.6	3.0	M 6x50	51	108	28.0	16	-1	12.0	224	450
41001.W0003	3	2.5	4.0	M 8x58	58	112	33.5	18	-1	13.0	242	560
41001.W0004	4	3.5	8.0	M10x76	77	135	41.0	24	-2	16.5	329	1250

Order No.	l ₂	l ₃	l ₄	l ₅	l ₆	l ₇	w ₁	w ₂	w ₃	w ₄	α
41001.W0001	46	20	16.5	34.0	13.5	6.0	27.5	15,0 - 19,5	5	4.3	90°
41001.W0002	71	39	14.0	52.0	26.0	7.0	46.0	23,5 - 34,0	8	6.5	90°
41001.W0003	78	43	22.0	52.5	26.0	6.5	47.0	25,5 - 36,0	8	6.5	90°
41001.W0004	120	69	23.0	76.0	41.5	10.5	60.0	34,5 - 45,0	10	8.6	90°



41005.1



Material

Body: steel, zinc plated.
Rivets: stainless steel running in hardened bushes.
Pre-lubricated bearings (grease suitable for food industry use).
Supplied complete with clamping screw

(with rubber pad).

Technical Notes

Temperature range -10°C to +80°C.

Tips

Order removable handle separately 41005.W0102- .W0104.

To prevent interference during use the handle can be removed after opening or closing the clamp.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄ min.	h ₄ max.	h ₅	Weight g
41005.W0002	2	1.0	1.2	M 6x35	45.0	24	13.2	-1.5	5	12	160
41005.W0003	3	1.8	2.5	M 8x45	48.5	32	15.0	-2.0	9	15	269
41005.W0004	4	2.0	3.0	M 8x65	75.0	45	20.0	-4.0	24	15	608

Order No.	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂	w ₃	w ₄	d ₁	d ₂	α
41005.W0002	113	64	32	16	38	26.0	12.7	6	42.0	19,5-29,5	6	28.5	5.6	5.6	90°
41005.W0003	134	73	38	14	50	25.7	13.0	7	45.5	22,0-31,8	8	31.6	6.5	5.1	90°
41005.W0004	191	113	63	27	57	41.5	20.5	8	58.0	29,0-43,0	10	43.0	8.5	8.5	90°

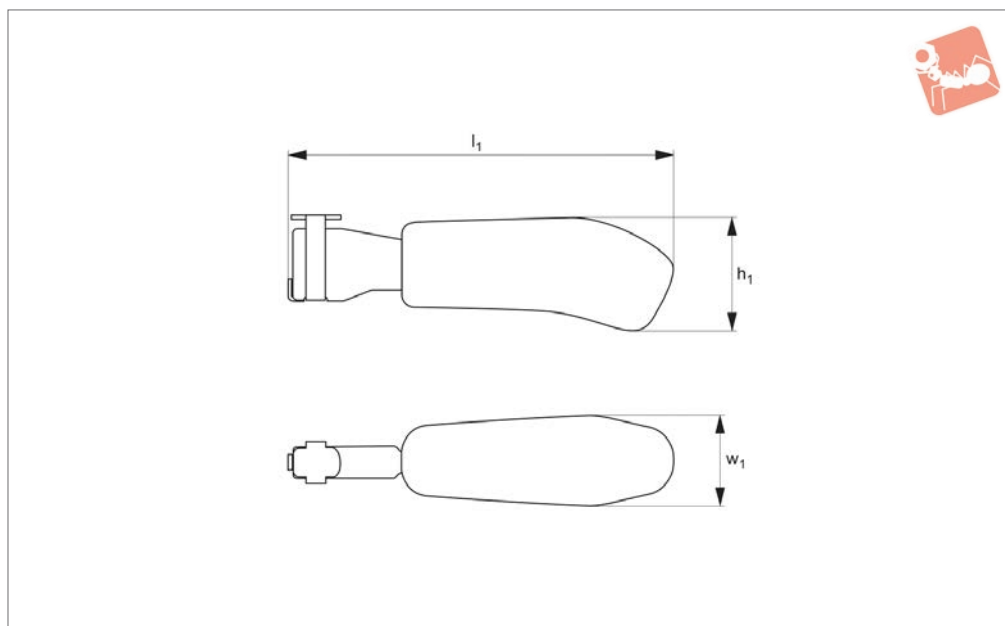




Red Handle - Removable for horizontal acting toggle clamp



Steel Toggle Clamps



41005.2

STEEL TOGGLE CLAMPS

Material

Ergonomic, oil-resistant handle with large grip surface and soft components.

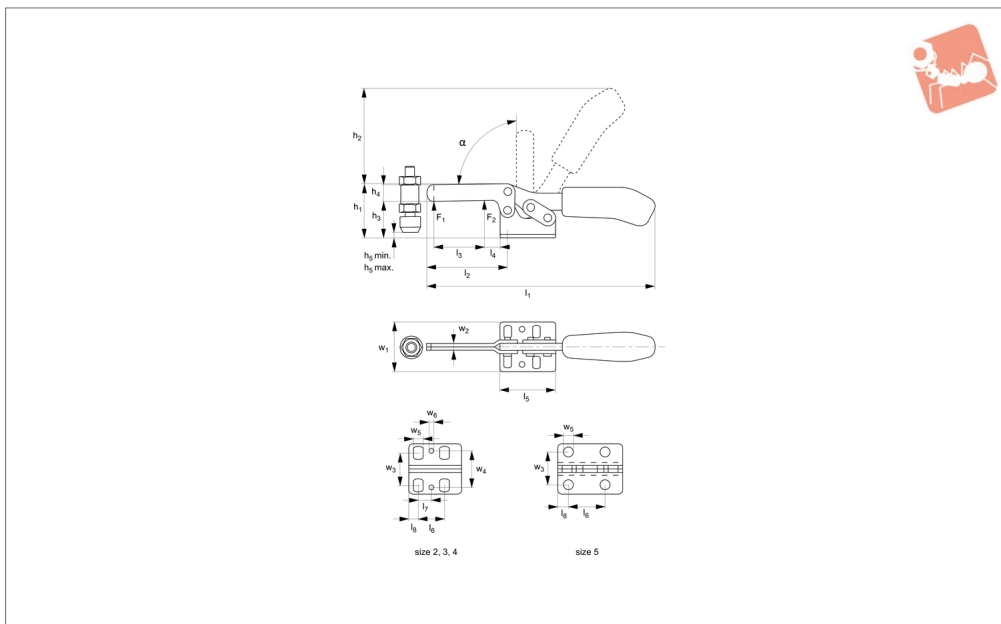
Technical Notes

For use with clamp no. 41005.W0002 - .W0004.

Order No.	Size	h_1	l_1	w_1	Weight g
41005.W0102	2	26	93.0	21.0	70
41005.W0103	3	35	118.5	27.0	122
41005.W0104	4	42	134.5	34.5	195



41030



Material

Body: steel, zinc plated.
 Rivets: stainless steel running in hardened bushes.
 Pre-lubricated bearings (grease suitable for food industry use).

Ergonomic, soft feel, oil-resistant handle with large grip area.
 Supplied complete with weldable clamping screw (with rubber pad).

Technical Notes

The arm can be shortened to suit the work-piece, the sleeve is then welded to the arm.
 Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄	h ₅ min.	h ₅ max.	l ₁	l ₂	Weight g
41030.W0002	2	1.0	1.2	M 6x35	45.0	66	24	13	-2.0	7.5	161	63	185
41030.W0003	3	1.8	2.5	M 8x45	48.5	86	32	15	-3.5	11.0	205	72	320
41030.W0004	4	2.0	3.0	M 8x65	75.0	114	45	20	-6.0	22.0	280	111	700
41030.W0005	5	3.0	5.0	M12x80	73.0	128	46	25	-13.0	12.5	320	121	1080

Order No.	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂	w ₃	w ₄	w ₅	w ₆	α
41030.W0002	35	16.0	38	26.0	12.7	6.0	42.0	5	19,5-29,5	28.5	5.6	5.6	90°
41030.W0003	44	15.0	50	26.0	13.0	7.0	45.5	6	22,0-31,8	32.0	6.5	5.1	90°
41030.W0004	66	26.0	57	41.0	20.5	8.0	58.0	8	29,0-43,0	43.0	8.5	8.5	90°
41030.W0005	78	17.5	77	41.5	-	12.5	58.0	10	41.5	-	8.5	-	90°



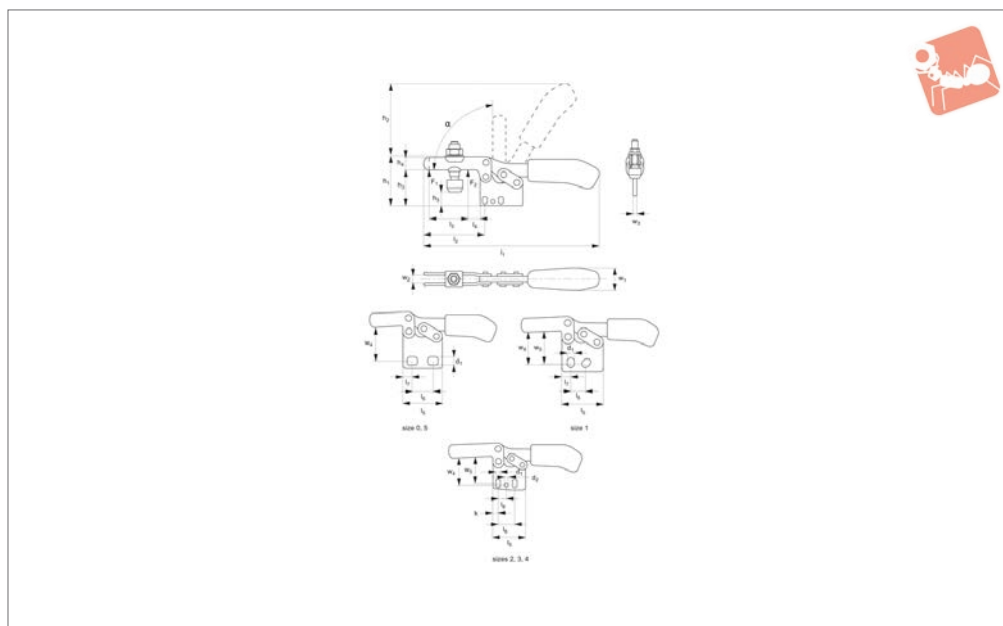
Horizontal Acting Toggle Clamps

open arm - vertical base



41050.1

STEEL TOGGLE CLAMPS



Material

Body: steel, zinc plated.
 Rivets: stainless steel running in hardened bushes (sizes 2-5).
 Pre-lubricated bearings (grease suitable

for food industry use).
 Ergonomic, soft feel, oil-resistant handle with large grip area.
 Supplied complete with clamping screw (with rubber pad).

Technical Notes

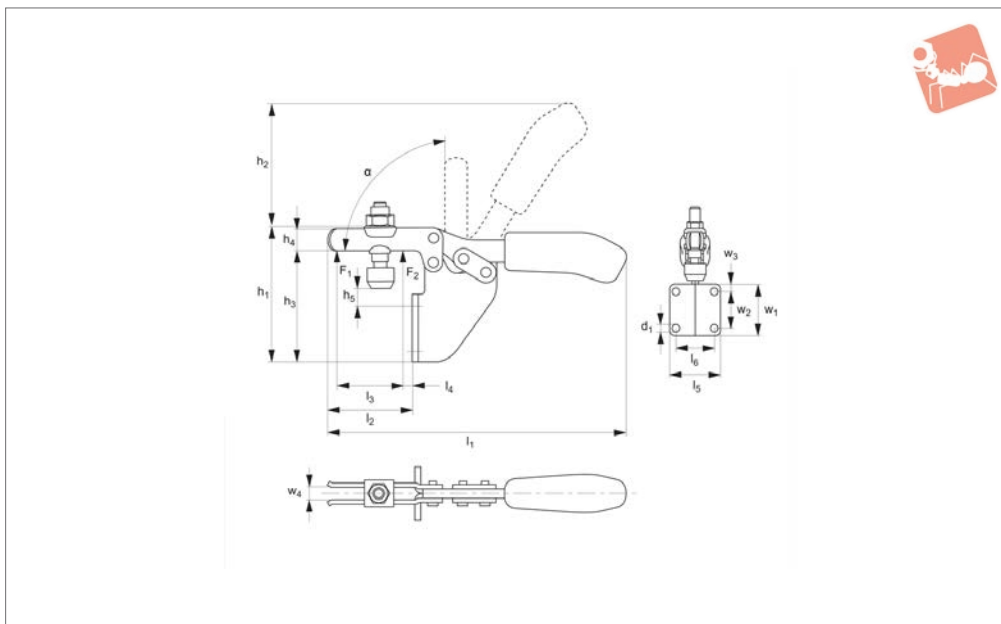
Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄	h ₅ min.	h ₅ max.	l ₁	l ₂	Weight g
41050.W0000	0	0.3	0.4	M 4x25	33.0	34	24.5	7.5	4.7	10.7	79	28	35
41050.W0001	1	0.8	1.1	M 5x30	43.0	49	31.5	10.0	8.0	15.0	120	42	105
41050.W0002	2	1.0	1.2	M 6x35	61.0	68	40.0	13.2	15.0	22.0	164	64	185
41050.W0003	3	1.8	2.5	M 8x45	65.0	86	49.0	15.0	14.5	26.0	206	73	320
41050.W0004	4	2.0	3.0	M 8x65	97.0	115	66.5	20.0	17.5	46.0	287	113	700
41050.W0005	5	3.0	5.0	M 8x65	92.5	128	65.0	25.0	21.5	45.0	321	123	1080

Order No.	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂	w ₃	w ₄	w ₅	d ₁	d ₂	α
41050.W0000	9.0	5	25.5	11,5-15,5	6.3	-	12	4	20.0	-	3	4.6	-	90°
41050.W0001	18.5	8	34.0	13,0-14,5	5.5	-	18	5	23,5-25,5	24.5	5	5.2	-	90°
41050.W0002	32.0	16	38.0	26.0	6.0	12.7	21	6	29,5-34,0	34.0	5	5.6	5.6	90°
41050.W0003	38.5	14	50.0	25.7	7.0	13.0	27	8	37,5-42,5	42.0	6	6.5	5.1	90°
41050.W0004	63.0	27	57.0	41.0	8.0	20.5	34	10	52,0-59,0	59.0	8	8.5	8.5	90°
41050.W0005	78.0	16	77.0	41.5	12.5	-	36	10	57.0	-	10	8.5	-	90°



41100



Material

Body: steel, zinc plated.
 Rivets: stainless steel running in hardened bushes (sizes 2-3).
 Pre-lubricated bearings (grease suitable

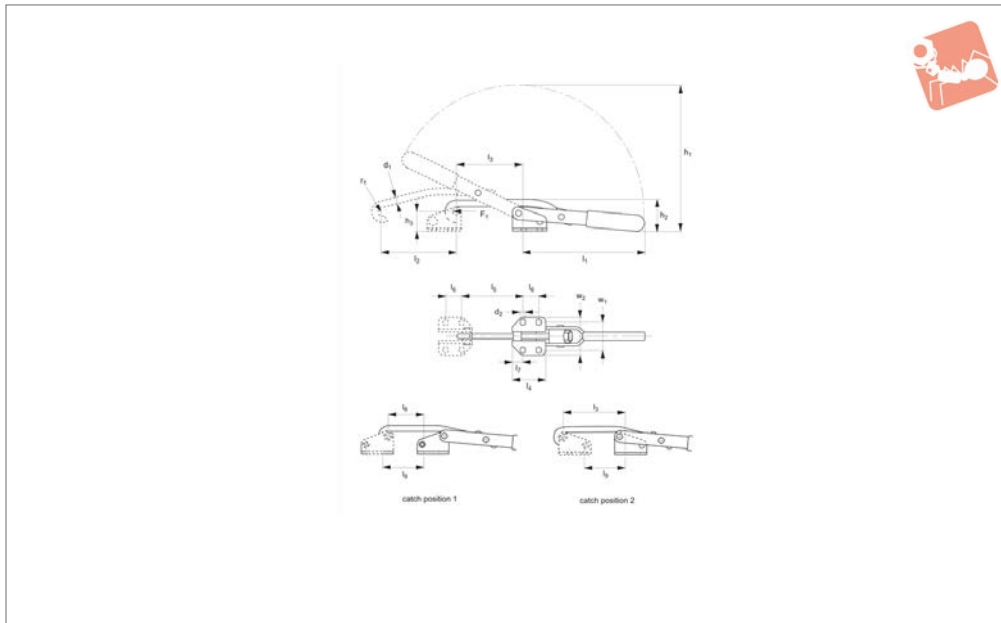
for food industry use).
 Ergonomic, soft feel, oil-resistant handle with large grip area.
 Supplied complete with clamping screw (with rubber pad).

Technical Notes

Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄	h ₅ min.	h ₅ max.	Weight g
41100.W0001	1	0.8	1.1	M 5x30	68.0	49	57	10.0	14	20.0	170
41100.W0002	2	1.0	1.2	M 6x35	94.0	68	73	13.2	22	29.5	245
41100.W0003	3	1.8	2.5	M 8x45	86.5	86	70	15.0	5	16.0	390
41100.W0004	4	2.0	3.0	M 8x65	133.0	120	102	20.0	11	40.0	730

Order No.	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	w ₁	w ₂	w ₃	w ₄	d ₁	α
41100.W0001	120	32	18.5	4.0	31.0	19.0	28	13.5	8	5.0	5.2	90°
41100.W0002	162	52	32.0	10.5	37.0	25.5	32	20.0	6	6.2	5.6	90°
41100.W0003	206	59	37.0	6.5	42.5	28.5	38	24.0	7	8.0	6.8	90°
41100.W0004	282	93	63.0	15.0	52.0	32.0	82	32.0	40	10.0	8.5	90°



41700.1

STEEL TOGGLE CLAMPS

Material

Body: steel, zinc plated.
 Rivets: stainless steel running in case hardened bushes. Pre-lubricated bearings (grease suitable for food industry use).
 Ergonomic, soft feel, oil-resistant handle with large grip area.

Technical Notes

Ideally suited for use as a toggle type

fastener for the lids or covers of fixed or rotating drums and containers.

The length of the hook is adjustable by rotating the threaded hook to extend or contract it's reach.

Temperature range -10°C to +80°C.

Tips

For counter strike see part no. 41700.W0011- .W0015.

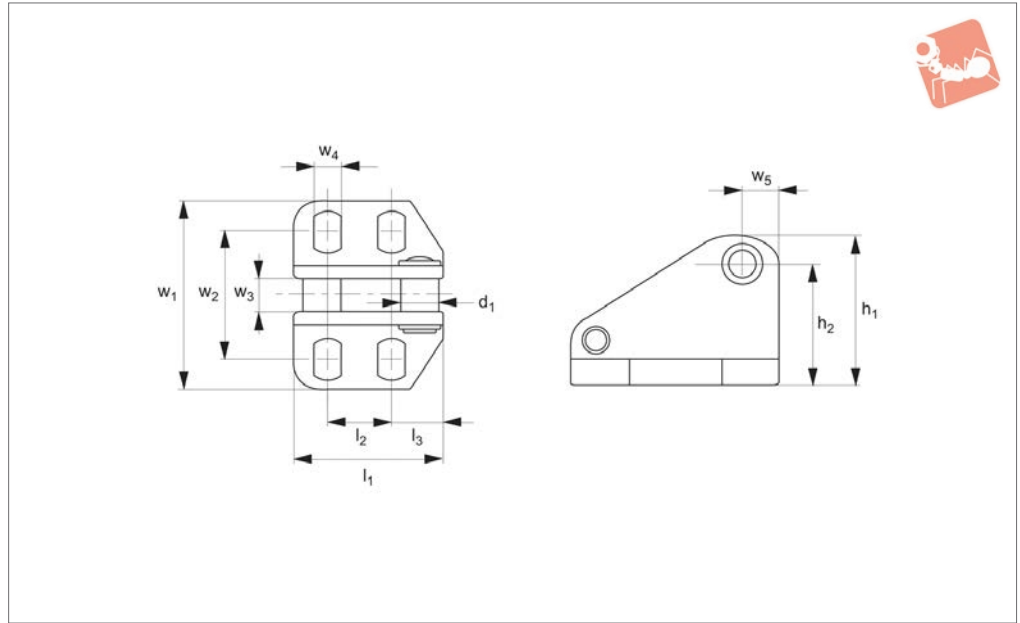
For stainless steel version see part no. 41740.W0001- .W0005.

Order No.	Size	F ₁ kN	h ₁	d ₁	d ₂	h ₂	h ₃	l ₁	l ₂	Weight g
41700.W0001	1	2	111	5.3	4.5	34.5	22.7	88	45	100
41700.W0003	3	3	179	7.1	5.6	36.0	22.7	148	98	270
41700.W0005	5	5	280	10.8	11.2	69.0	49.1	228	146	850

Order No.	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	l ₉	w ₁	w ₂	r ₁	Adj. distance
41700.W0001	35,0-42,0	31	35,0-42,5	19	6	16,0-23,0	16,5-23,5	40	25,5-30,5	4.5	8
41700.W0003	65,5-77,0	40	72,5-84,0	19	13	32,5-44,0	39,5-50,5	45	31,0-36,0	5.5	12
41700.W0005	57,0-71,0	55	58,0-72,0	29	13	26,5-40,0	27,5-42,0	85	56,0-63,5	8.0	14



41740.1



Material

Body: steel, zinc plated.
Rivets: stainless steel running in case hardened bushes.

Technical Notes

For use with no. 41600 and 41700.W0001 - .W0005.

Tips

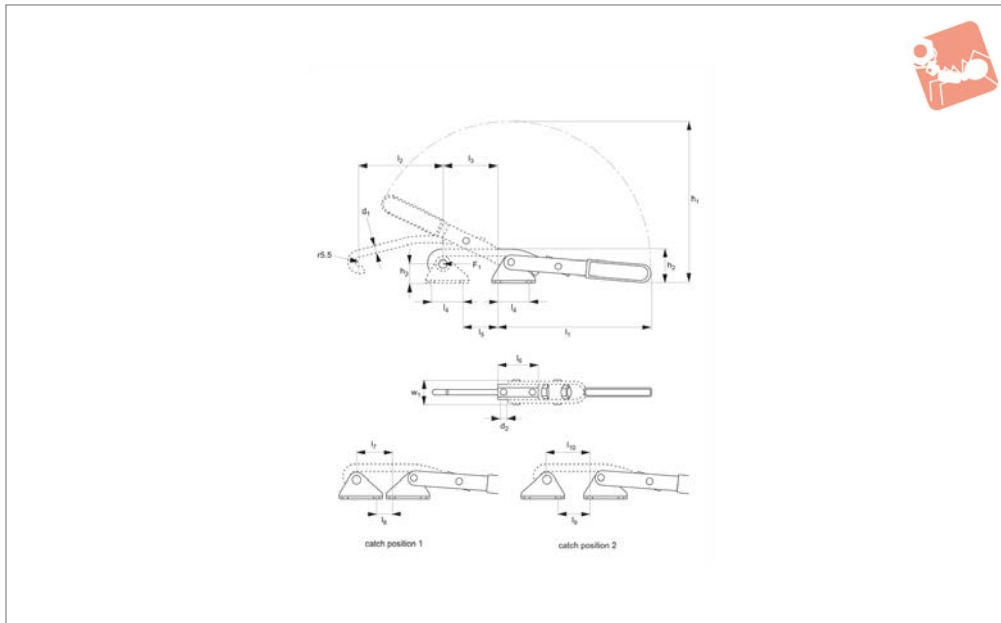
For stainless steel version see part no. 41740.W0311 - .W0315.

Order No.	Size	h_1	d_1	h_2	l_1	l_2	l_3	w_1	w_2	w_3	w_4	w_5	Weight g
41740.W0011	1	29	8	22.7	31	19	6	40	26,0-30,0	6.9	4.5	6	40
41740.W0013	3	29	10	22.7	40	19	13	45	31,3-35,8	10.9	5.5	6	70
41740.W0015	5	61	15	49.1	55	29	13	86	56,5-64,0	13.8	11.2	12	320



Hook Type Toggle Clamp

narrow base



41781.1

STEEL TOGGLE CLAMPS

Material

Body: steel, zinc plated.
 Rivets: stainless steel running in hardened bushes. Pre-lubricated bearings (grease suitable for food industry use).
 Handle: oil-resistant plastic with large grip area.

Technical Notes

Suitable for use as a toggle type fastener

for the lids or covers of fixed or rotating drums and containers.

Their narrow base makes them ideal for applications where space is limited but holding forces must not be compromised.

The length of the hook is adjustable, up to 22mm. Adjustment is made by rotating the threaded hook to extend or contract its reach.

Temperature range -10°C to +80°C.

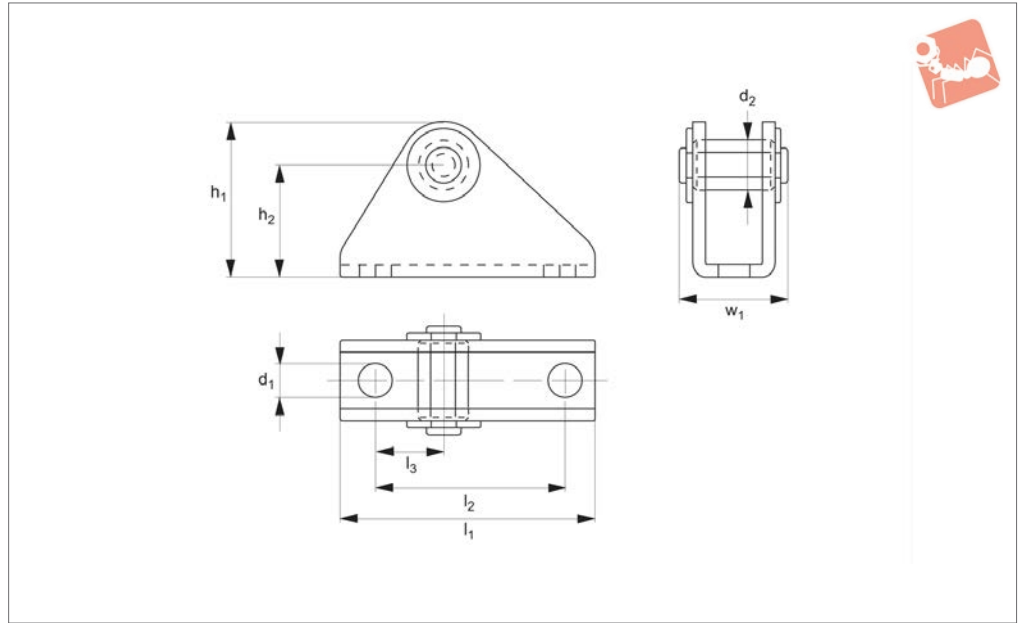
Tips

See part no. 41791.W0013 for strike catch. For stainless steel version see part no. 41781.W0303.

Order No.	Size	F_1 kN	h_1	d_1	d_2	h_2	h_3	l_1	l_2	Weight g
41781.W0003	3	3	179	7.1	6.5	36	23	170	99	270
Order No.	l_3	l_4	l_5	l_6	l_7	l_8	l_9	l_{10}	w_1	Adj. distance
41781.W0003	44-56	38	20-32	52	38-46	14-22	30-42	44-56	27	22



41791.1



Material

Body: steel, zinc plated.

Rivets: stainless steel running in hardened

bushes.

Technical Notes

The adjustment range of the clamp can be

altered by rotating the fixed catch.

Use socket cap screws for mounting.

Order No.	Size	h_1	d_1	d_2	h_2	l_1	l_2	l_3	w_1	Weight g
41791.W0013	3	32	6.5	10	23	52	38	14	22	65

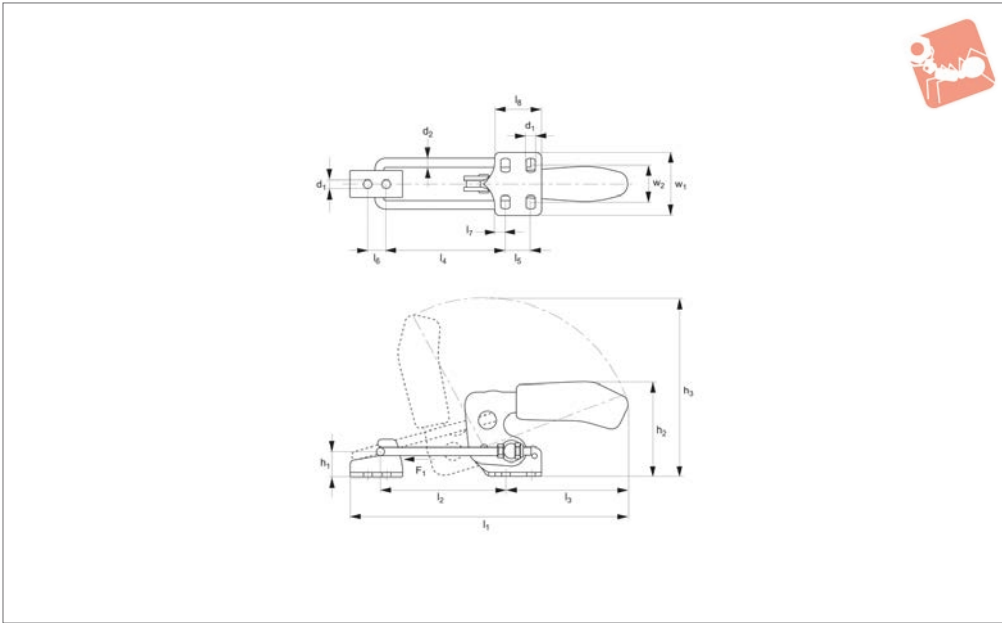


Latch Type Toggle Clamps

horizontal acting



41801.1



STEEL TOGGLE CLAMPS

Material

Body: steel, zinc-plated. Stainless steel rivets running in hardened bushes. Pre-lubricated bearings (grease suitable for food industry use).
Ergonomic, soft feel, oil-resistant handle

with large grip area.

Hook: steel, tempered.

Complete with counter strike.

Technical Notes

Temperature range -10°C to +80°C.

Tips

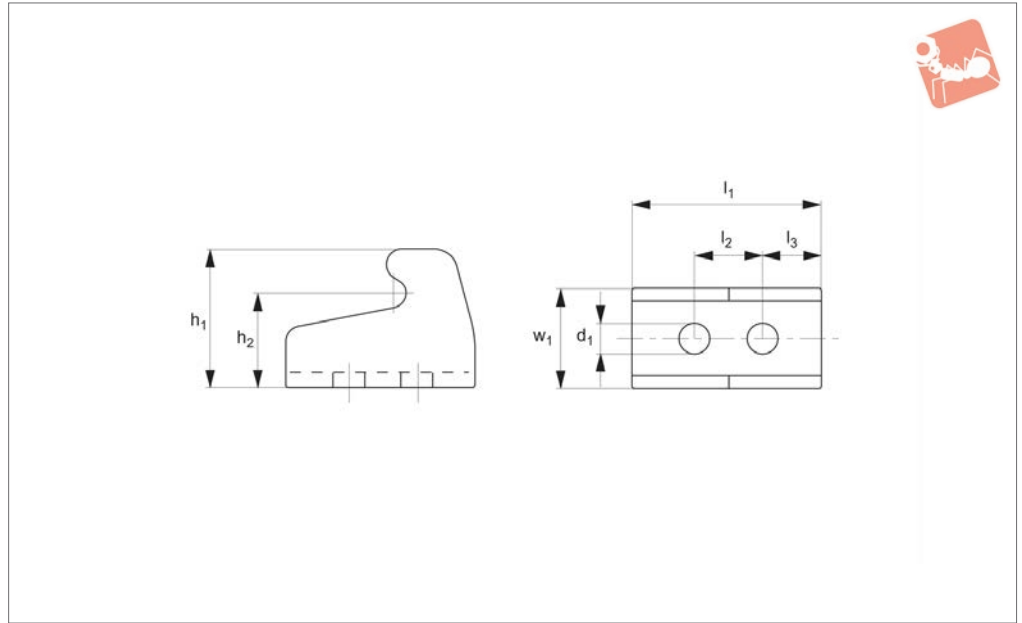
For stainless steel version see part no. 41811.

Order No.	Size	F ₁ kN	h ₁	h ₂	l ₁ min.	l ₁ max.	l ₂ min.	l ₂ max.	h ₃	Weight g
41801.W0002	2	1.6	12	47.0	125	159	42.0	76	99	120
41801.W0003	3	3.2	19	70.0	169	216	53.5	101	136	330
41801.W0004	4	7.0	26	94.5	209	273	66.0	130	168	810

Order No.	l ₃	l ₄ min.	l ₄ max.	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂	d ₁	d ₂
41801.W0002	69	38.0	72	13	11	6.4	26.0	38.0	19,5-23,5	5.2	4
41801.W0003	93	48.6	96	19	14	8.0	35.0	48.0	24,5-32,0	6.5	6
41801.W0004	111	59.0	123	32	19	9.5	53.5	64.5	35,0-46,0	8.5	8



41811.1



Material

Steel, zinc plated.

For stainless steel version see part no. 41781.W0303.

Technical Notes

See part no. 41781.W0013 for strike catch.

Order No.	Size	h_1	h_2	l_1	l_2	l_3	w_1	d_1	Weight g
41811.W0012	2	16	18	26	11	8	18	5.2	12
41811.W0013	3	44	28	39	14	12	23	6.5	19
41811.W0014	4	108	38	56	19	17	30	8.5	26

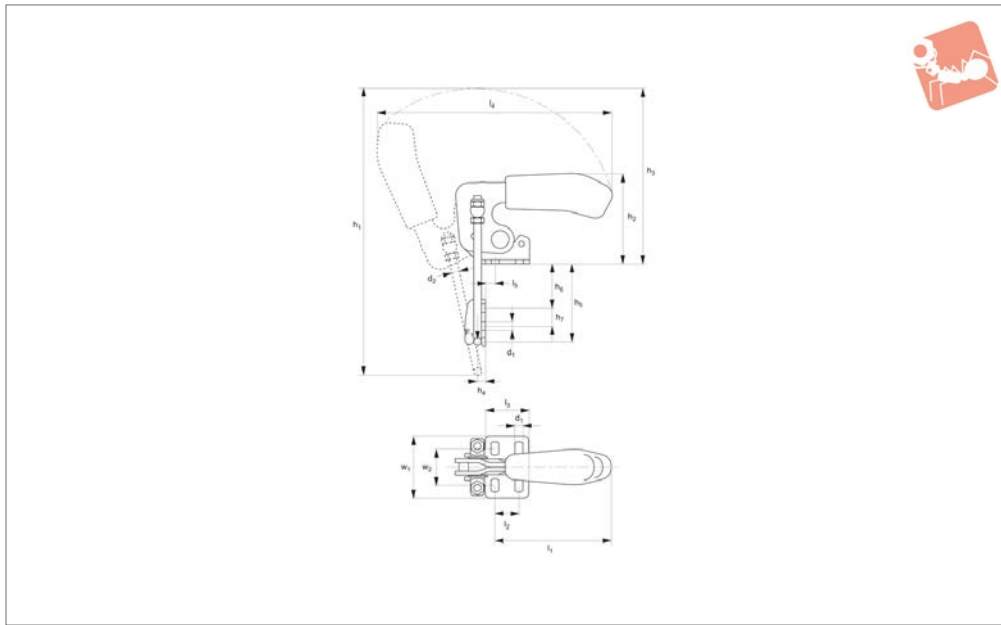


Latch Type Toggle Clamps

vertical acting



Steel Toggle Clamps



41821.1

STEEL TOGGLE CLAMPS

Material

Body: steel, zinc plated.
Rivets: stainless steel running in hardened bushes.
Bearings are pre-lubricated.

Ergonomic, soft feel, oil-resistant handle with large grip area.
Complete with counter strike.

Technical Notes

Temperature range -10°C to +80°C.

Tips

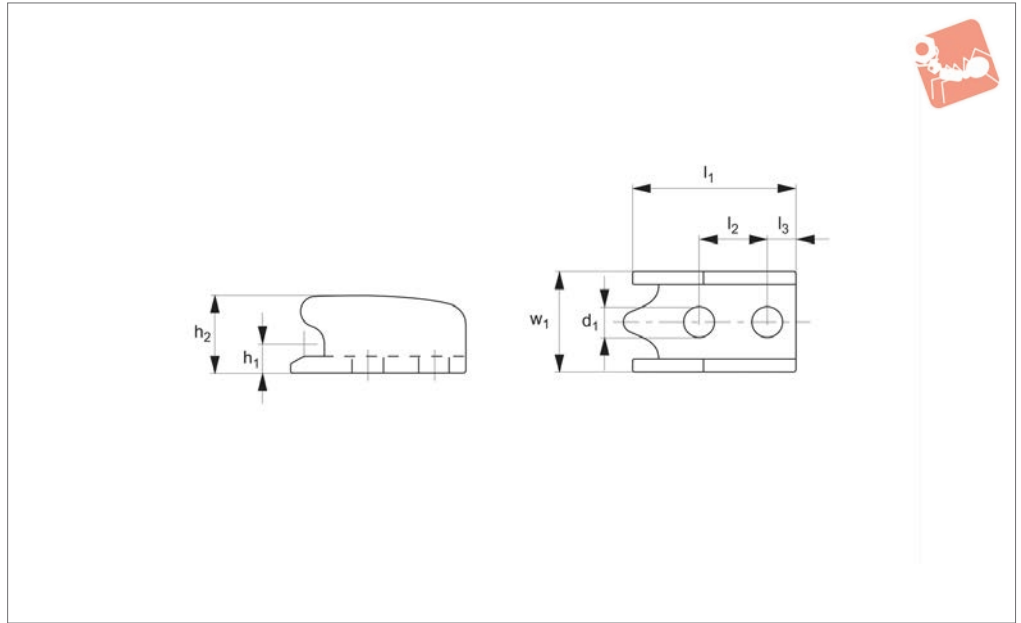
For stainless steel version see part 41821.

Order No.	Size	F ₁ kN	h ₁	h ₂	l ₁	l ₂	h ₃	h ₄	h ₅ min.	Weight g
41821.W0002	2	1.6	150	47.0	69	13	99	4.5	24	130
41821.W0003	3	3.2	172	70.0	93	19	137	6.0	33	340
41821.W0004	4	7.0	254	94.5	111	32	168	8.0	43	810

Order No.	h ₅ max.	h ₆ min.	h ₆ max.	h ₇	l ₃	l ₄	l ₅	w ₁	w ₂	d ₁	d ₂
41821.W0002	47	5.0	28	11	26.0	158	6.8	38.0	19,5-23,5	5.2	4
41821.W0003	63	6.5	36	14	35.0	190	8.0	48.0	24,5-32,5	6.5	6
41821.W0004	81	9.0	47	19	53.5	239	9.5	64.5	35,0-46,0	8.5	8



41831.1



Material

Steel, zinc plated.

Technical Notes

For use with toggle clamp no. 41821.W0002 - .W0004.

Order No.	Size	h_1	h_2	l_1	l_2	l_3	w_1	d_1	Weight g
41831.W0012	2	5	12	26	11	5	18	5.2	14
41831.W0013	3	6	16	36	14	7	23	6.5	30
41831.W0014	4	8	22	48	19	9	30	8.5	66

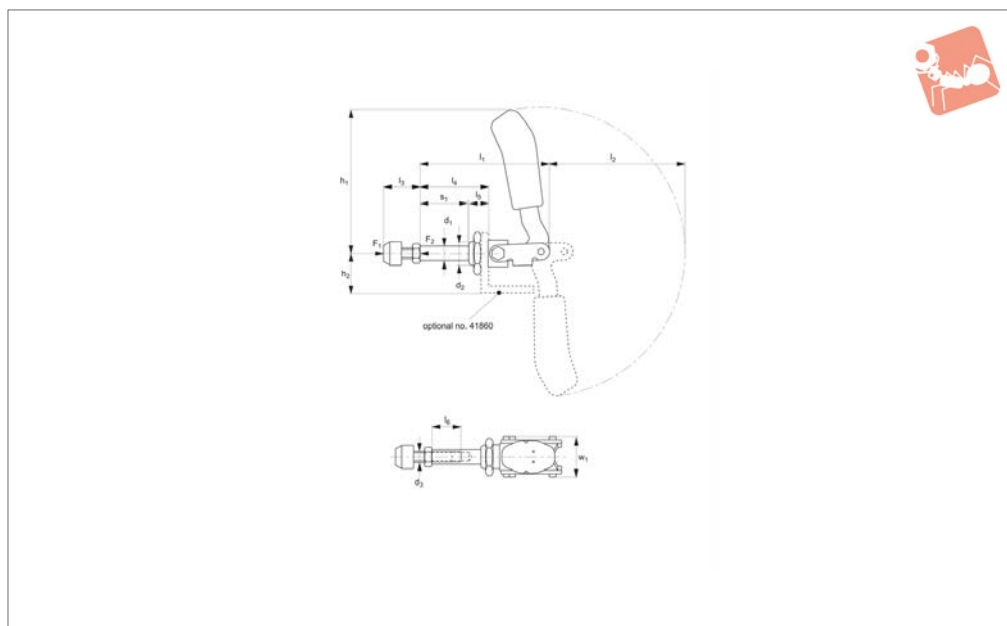


Push-Pull Toggle Clamps

compact version



Steel Toggle Clamps



41840.1

STEEL TOGGLE CLAMPS

Material

Body: steel, zinc plated.
 Rivets: stainless steel running in hardened bushes. Pre-lubricated bearings (grease suitable for food industry use).
 Ergonomic, soft feel, oil-resistant handle

with large grip area.
 Supplied complete with clamping screw (with rubber pad).

Technical Notes

Compact construction with long travel.

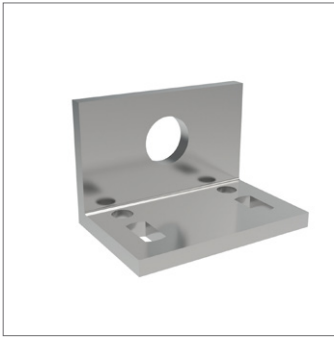
Temperature range -10°C to +80°C.

Tips

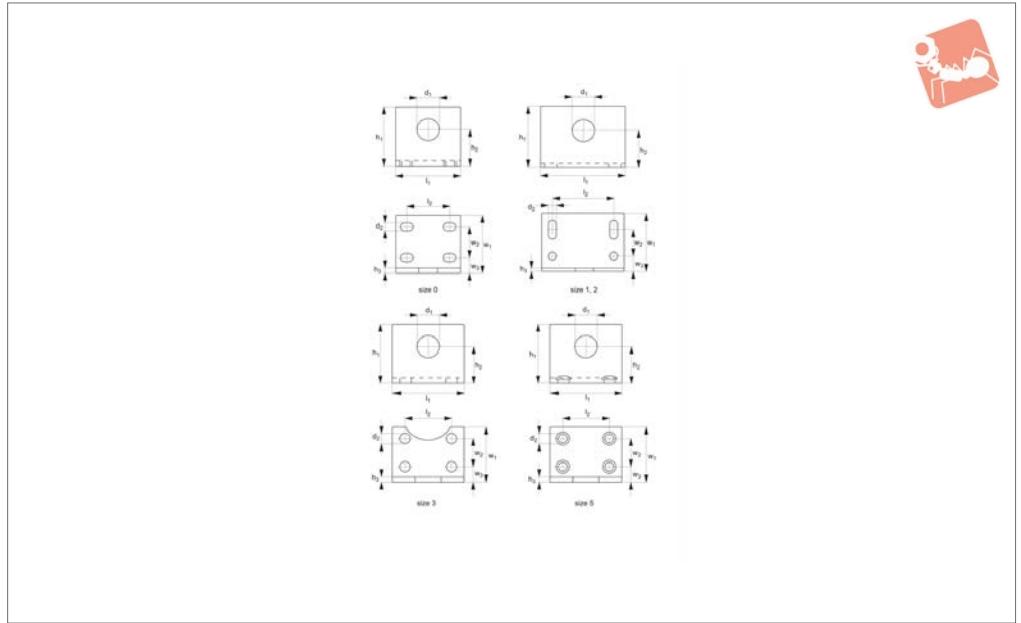
For stainless steel version see part no. 41840.W0002- .W0005.

Order No.	Size	Clamping screw	F ₁ kN	F ₂ kN	d ₁	d ₂	d ₃	h ₁	h ₂	Weight g
41840.W0002	2	M 6x25	1.0	1.0	10	M16x1,5	M 6	73	24	130
41840.W0003	3	M 8x35	2.5	2.5	12	M20x1,5	M 8	123	33	320
41840.W0005	5	M12x50	4.0	4.0	16	M24x1,5	M12	149	37	1200
41840.W0006	5-M27	M12x50	4.0	4.0	16	M27x2,0	M12	149	37	1200

Order No.	l ₁	l ₂	l ₃ min.	l ₃ max.	l ₄	l ₅	l ₆	w ₁	Stroke s ₁
41840.W0002	68.5	68	17	25	36	13	15	30.5	21.5
41840.W0003	108.5	115	22	35	57	16	25	33.0	40.0
41840.W0005	175.0	139	30	50	92	24	45	49.0	67.0
41840.W0006	175.0	139	30	50	92	24	45	49.0	67.0



41880.1



Material

Steel, zinc plated.

Technical Notes

The increased height of the centre line

allows a wide range of applications. Fastening by means of four screws.

For stainless steel version see part 41880.W0300- .W0305.

Order No.	Size	d ₁	d ₂	h ₁	h ₂	h ₃	l ₁	l ₂	w ₁	w ₂	w ₃	Weight g
41880.W0500	0	10.2	4.5	23	13	3	30	15,5-20,5	30	16	9.0	35
41880.W0501	1	12.2	6.7	40	24	4	60	40.0	40	18	11.0	135
41880.W0502	2	16.2	6.7	40	24	5	60	40.0	40	18	11.0	160
41880.W0503	3	20.2	6.7	50	33	6	65	41.0	44	19	14.5	235
41880.W0505	5	24.0	9.0	60	37	8	70	45.0	60	32	17.0	450
41880.W0506	5-M27	27.0	9.0	60	37	8	70	45.0	60	32	17.0	440

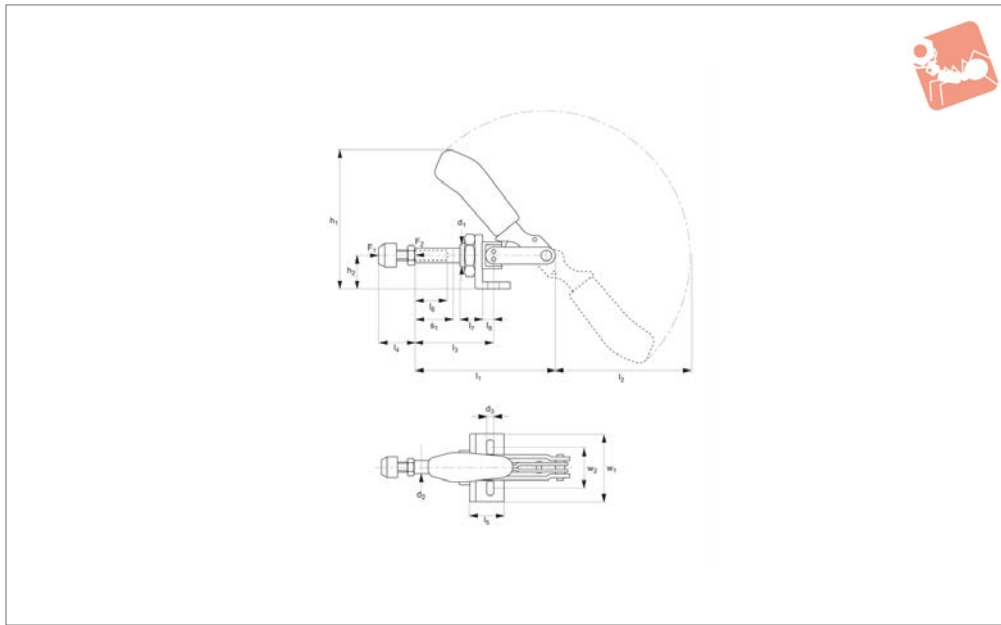


Push-Pull Type Toggle Clamps

extended push rod



42000.1



Material

Body: steel, zinc plated.
 Rivets: stainless steel running in hardened bushes. Pre-lubricated bearings (grease suitable for food industry use).
 Ergonomic, soft feel, oil-resistant handle

with large grip area.
 Supplied complete with clamping screw no. 45020 (with rubber pad).

Technical Notes

Temperature range -10°C to +80°C.

Tips

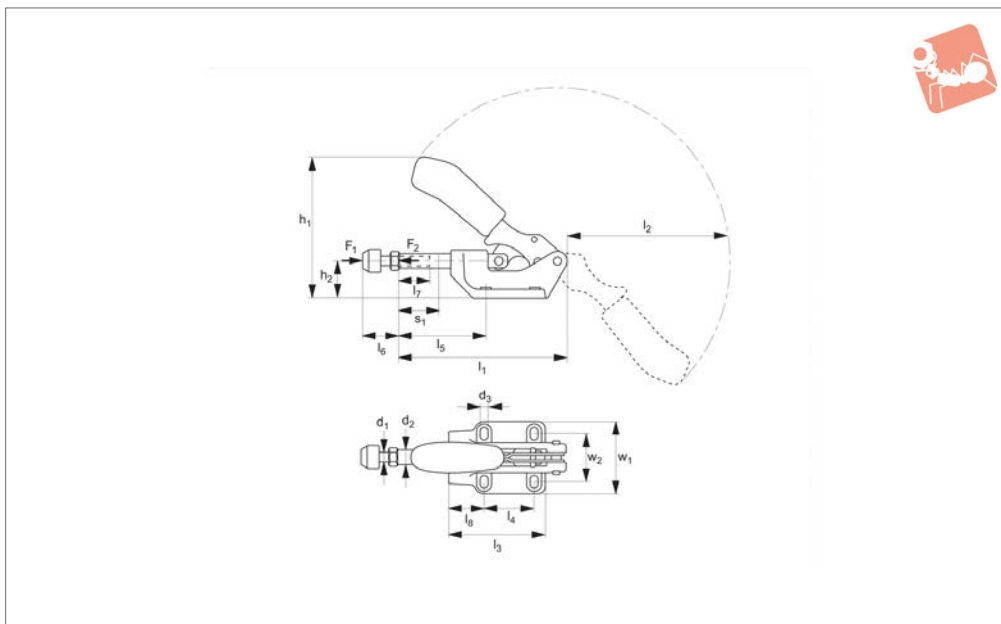
For stainless steel version see part no. 41890.W0000- .W0003.

Order No.	Size	Type	Clamping screw	F ₁ kN	F ₂ kN	d ₁	d ₂	d ₃	h ₁	h ₂	Weight g
42000.W0000	0	With Bracket	M 4x20	0.8	0.8	M10x1,0	6.5	4.5	49.3	12	65
42000.W0001	1	With Bracket	M 4x20	1.0	1.0	M12x1,5	8.0	4.5	60.5	15	125
42000.W0002	2	With Bracket	M 6x25	2.0	2.0	M16x1,5	10.0	5.6	85.5	20	245
42000.W0003	3	With Bracket	M 8x35	2.5	2.5	M20x1,5	12.0	6.5	108.0	25	445
42000.W0005	5	With Bracket	M12x50	4.5	4.5	M24x1,5	16.0	8.5	129.5	30	880
42000.W0006	5-M27	With Bracket	M12x50	4.5	4.5	M27x2,0	16.0	8.5	129.5	30	900
42000.W0010	0	W/o Bracket	M 4x20	0.8	0.8	M10x1,0	6.5	-	37.0	-	60
42000.W0011	1	W/o Bracket	M 4x20	1.0	1.0	M12x1,5	8.0	-	45.5	-	100
42000.W0012	2	W/o Bracket	M 6x25	2.0	2.0	M16x1,5	10.0	-	66.0	-	245
42000.W0013	3	W/o Bracket	M 8x35	2.5	2.5	M20x1,5	12.0	-	82.5	-	330
42000.W0015	5	W/o Bracket	M12x50	4.5	4.5	M24x1,5	16.0	-	99.0	-	700
42000.W0016	5-M27	W/o Bracket	M12x50	4.5	4.5	M27x2,0	16.0	-	99.0	-	720

Order No.	l ₁	l ₂	l ₃ min.	l ₃ max.	l ₄ min.	l ₄ max.	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂	Stroke s ₁
42000.W0000	66.5	54.0	17.0	33.0	12	20	16	13	10	6.5	25	16.0	16
42000.W0001	91.0	74.0	24.5	44.5	12	20	20	20	16	7.0	30	16,0-19,5	20
42000.W0002	114.0	105.0	32.5	58.5	17	25	34	20	19	12.5	50	31,8- 36,0	26
42000.W0003	140.0	127.5	37.0	69.0	22	35	30	30	22	13.0	60	29,5-42,5	32
42000.W0005	171.5	158.0	41.5	81.5	30	50	35	50	25	15.5	65	29,0-46,0	40
42000.W0006	171.5	158.0	41.5	81.5	30	50	35	50	25	15.5	65	29,0-46,0	40
42000.W0010	66.5	54.0	10.5	26.5	12	20	-	13	10	-	17	-	16
42000.W0011	91.0	74.0	17.5	37.5	12	20	-	20	16	-	19	-	20
42000.W0012	114.0	105.0	20.0	46.0	17	25	-	20	19	-	24	-	26
42000.W0013	140.0	127.0	24.0	56.0	22	35	-	30	22	-	30	-	32
42000.W0015	171.5	158.0	26.5	66.5	30	50	-	50	25	-	36	-	40
42000.W0016	171.5	158.0	26.5	66.5	30	50	-	50	25	-	41	-	40



42050.1



Material

Base: cast iron, malleable, varnished.
 Lever and push rod: zinc plated, passivated and tempered.
 Rivets: stainless steel running in hardened

bushes. Pre-lubricated bearings (grease suitable for food industry use).
 Ergonomic, soft feel, oil-resistant handle with large grip area.
 Supplied complete with clamping screw

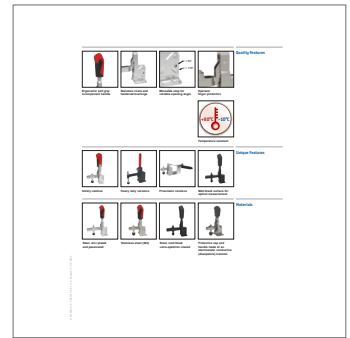
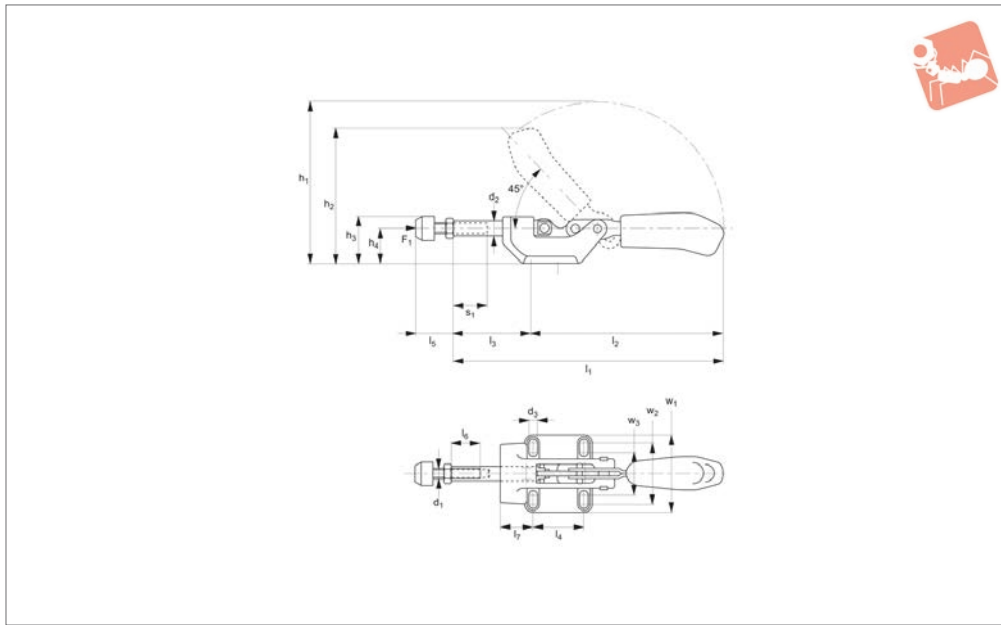
and rubber nose.
Technical Notes
 Temperature range -10°C to +80°C.

Order No.	Size	Clamping screw d_1	F_1 kN	F_2 kN	d_2	d_3	h_1	h_2	l_1	l_2	Weight g
42050.W0003	3	M 8x35	4	4	12	6.5	116.0	30	139	135	540
42050.W0005	5	M12x50	10	10	16	8.5	137.5	38	174	156	1115
42050.W0007	7	M12x50	25	25	22	11.0	179.0	55	218	192	2840

Order No.	l_3	l_4	l_5 min.	l_5 max.	l_6 min.	l_6 max.	l_7	l_8	w_1	w_2	Stroke s_1
42050.W0003	95	41	40	72	22	35	30	28	60	36-44	32
42050.W0005	121	41	58	98	30	50	50	45	71	41-50	40
42050.W0007	158	70	59	105	30	50	50	45	93	57-65	50



Reverse Action Push-Pull Toggle angle base - heavy duty



42070

STEEL TOGGLE CLAMPS

Material

Base: cast iron, malleable, varnished.
Lever and push rod: steel, zinc plated and tempered.
Rivets: stainless steel running in hardened bushes. Pre-lubricated bearings (grease suitable for food industry use).
Ergonomic, soft feel, oil-resistant handle

with large grip area.
Supplied complete with clamping screw and rubber nose.

Technical Notes

Reverse clamping position, clamp is locked when handle is extended at the back of the clamp (the reverse action of clamp no.

42050).
This toggle clamp boasts a low height when in the clamped position, making it ideal for use in small spaces.
Compatible with push-pull toggle clamps no. 42050.
Temperature range -10°C to +80°C.

Order No.	Size	Clamping screw d_1	F_1 kN	d_2	d_3	h_1	h_2	h_3	h_4	Weight g	
42070.W0003	3	M 8x35	4	12	6.5	133.5	109	39	30	540	
Order No.	l_1	l_2	l_3	l_4	l_5	l_6	l_7	w_1	w_2	w_3	Stroke s_1
42070.W0003	235	163	72	41	22-35	30	28	60	44	36	30

Stainless Steel Toggle Clamps

Vertical Acting Toggle Clamps

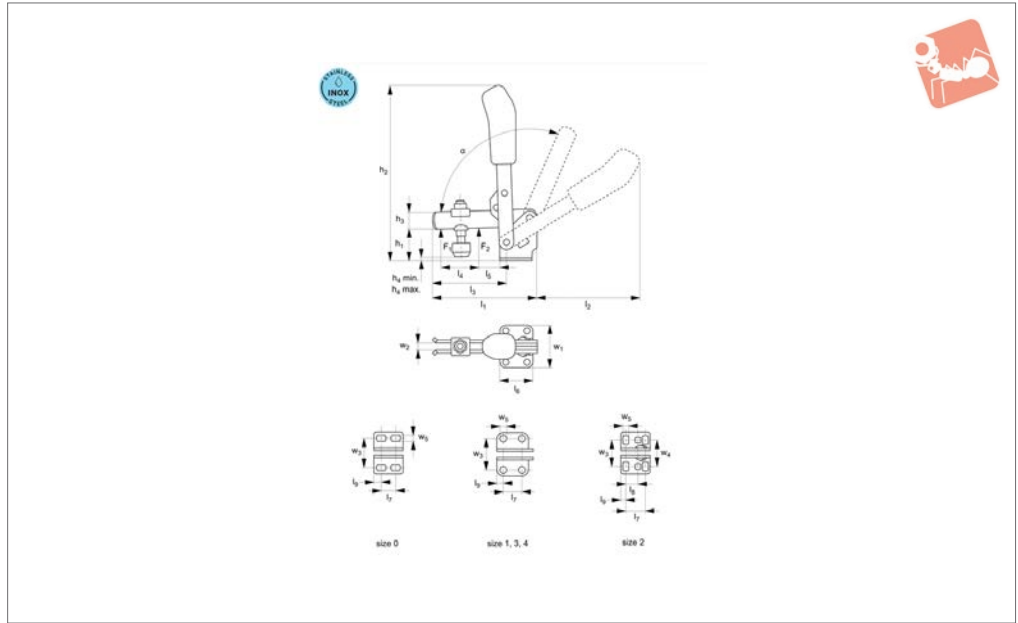
stainless steel - open arm - horizontal base



STAINLESS STEEL TOGGLE CLAMPS



40000.4



Material

Body: stainless steel (AISI 304, 1.4301).
 Rivets: stainless steel running in hardened bushes (sizes 2-4). Pre-lubricated bearings.
 Ergonomic soft feel oil-resistant handle

with large grip area.
 Supplied complete with stainless clamping screw (with rubber pad).

Technical Notes
 Opening angle (symbol α /symbol α /symbol α /

symbol*) can be changed by pressing in a stop pin on the clamp body.
 Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄ min.	h ₄ max.	l ₁	l ₂	l ₃	Weight g
40000.W0300	0	0.5	0.7	M 4x25	18.0	81	8	-1.5	3.5	49	50	31	60
40000.W0301	1	0.6	1.1	M 5x30	19.0	98	10	-4.0	2.0	61	58	39	105
40000.W0302	2	0.8	1.2	M 6x35	23.0	129	12	-3.3	4.5	78	80	52	175
40000.W0303	3	1.2	2.5	M 8x45	33.0	186	18	3.0	10.5	112	112	79	410
40000.W0304	4	1.7	3.0	M 8x65	42.5	221	20	-6.0	19.5	141	130	101	630

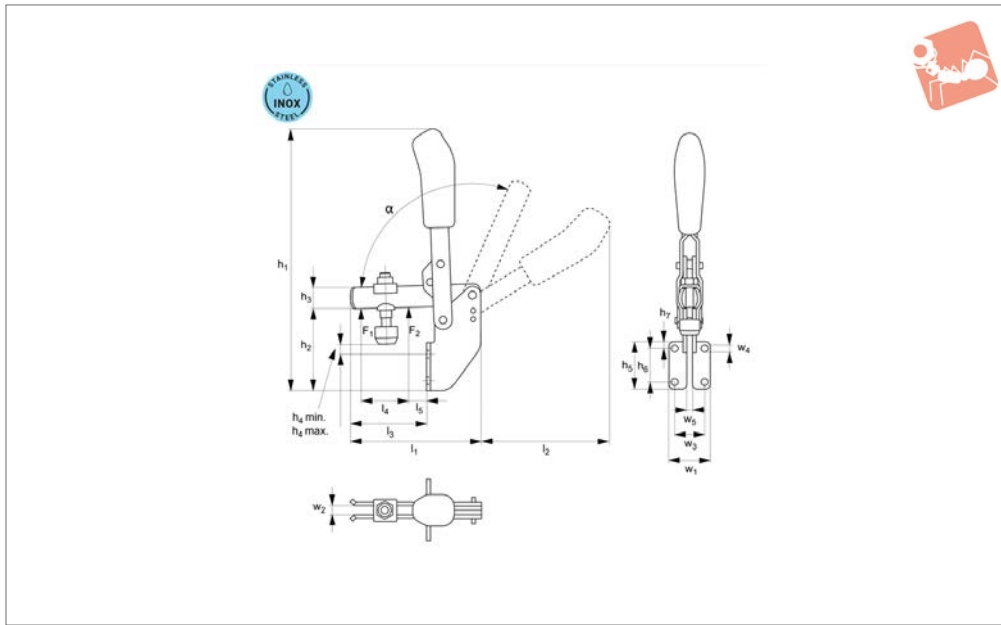
Order No.	l ₄	l ₅	l ₆	l ₇	l ₈	l ₉	w ₁	w ₂	w ₃	w ₄	w ₅	α	α^*
40000.W0300	14	5.5	22	8,5-13,5	-	5.5	32	4	23	-	4.5	95°	-
40000.W0301	18	6.0	27	16.0	-	5.5	34	5	22-26	-	4.5	95°	-
40000.W0302	25	11.0	32	20.0	12.5	6.0	43	6	23-31	27	5.5	105°	60°
40000.W0303	37	19.0	35	20.0	-	7.5	46	8	32	-	7.5	105°	60°
40000.W0304	54	16.0	53	32.0	-	13.0	64	10	45	-	8.6	105°	60°



Vertical Acting Toggle Clamps

angle base - stainless steel

Stainless Steel Toggle Clamps



40100.4

STAINLESS STEEL TOGGLE CLAMPS

Material

Body: stainless steel (AISI 304, 1.4301).
 Rivets: stainless steel running in hardened bushes.
 Pre-lubricated bearings.
 Ergonomic soft feel oil-resistant handle

with large grip area.
 Supplied complete with stainless clamping screw (with rubber pad).

Technical Notes

Suitable for use in the food industry.

Opening angle (symbol α /symbol α /symbol α /symbol*) can be changed by pressing in a stop pin on the clamp body.
 Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄ min.	h ₄ max.	h ₅	h ₆	h ₇	Weight g
40100.W0302	2	0.8	1.2	M 6x35	167	60	12	8	15	32	20	6	220
Order No.	l ₁	l ₂	l ₃	l ₄	l ₅	w ₁	w ₂	w ₃	w ₄	w ₅	α	α^*	
40100.W0302	77	81	41	25	6	37	6	25.5	6.1	5	105°	60°	

Stainless Steel Toggle Clamps

Horizontal Acting Toggle Clamps

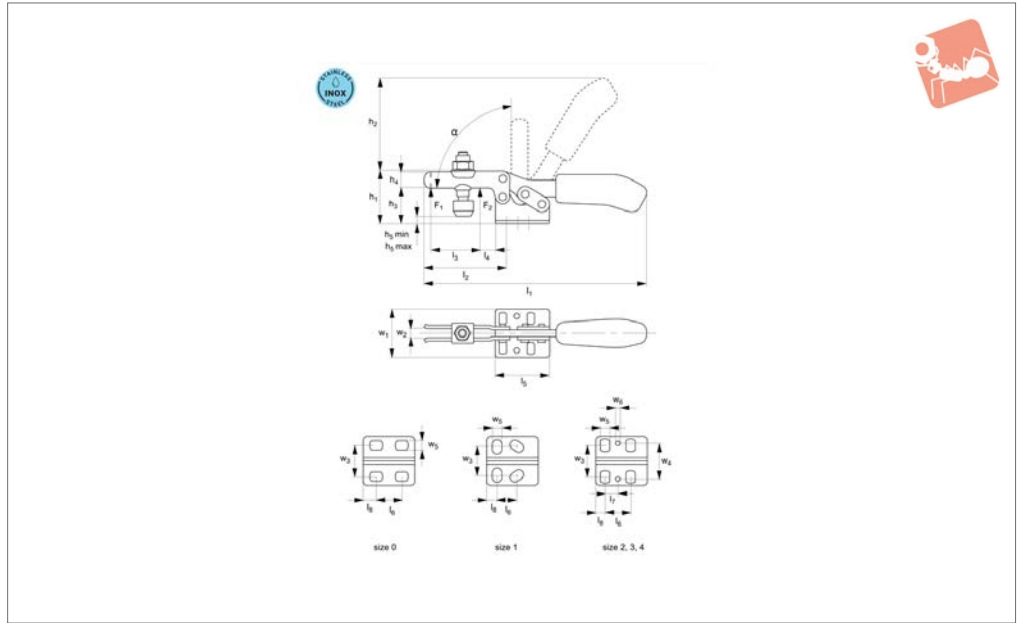
stainless steel - open arm - horizontal base



STAINLESS STEEL TOGGLE CLAMPS



41000.4



Material

Body: stainless steel (AISI 304, 1.4301), polished.
Rivets: stainless steel running in hardened bushes (sizes 2-5). Pre-lubricated

bearings.

Ergonomic soft feel oil-resistant handle with large grip area.
Supplied complete with stainless clamping screw (with rubber pad).

Technical Notes

Suitable for the food industry.
Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄	h ₅ min.	h ₅ max.	l ₁	l ₂	Weight g
41000.W0300	0	0.3	0.4	M 4x25	23.0	34	14.5	7.5	-5.0	0.6	79	28	35
41000.W0301	1	0.8	1.1	M 5x30	30.0	49	19.0	10.0	-4.0	2.0	120	42	105
41000.W0302	2	1.0	1.2	M 6x35	45.0	68	24.0	13.0	-1.6	5.0	162	64	185
41000.W0303	3	1.8	2.5	M 8x45	48.5	86	32.0	15.0	-2.0	9.0	206	73	320
41000.W0304	4	2.0	3.0	M 8x65	75.0	126	45.0	20.0	-4.0	24.0	287	113	700

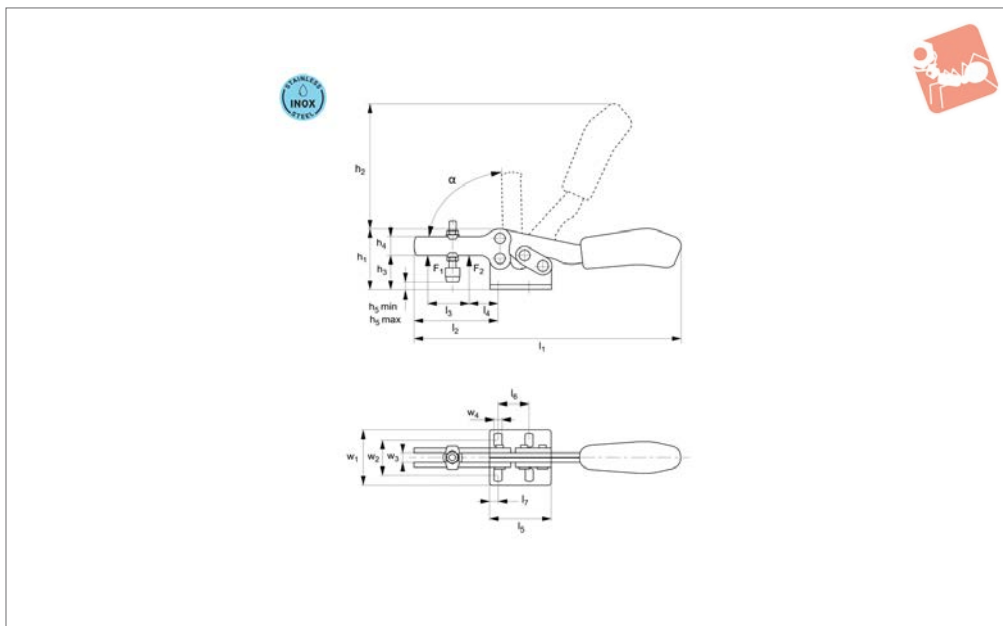
Order No.	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂	w ₃	w ₄	w ₅	w ₆	α
41000.W0300	9.0	5	25.5	11,5-15,5	-	6.3	25.0	4	16.0	-	4.6	-	90°
41000.W0301	18.6	8	34.0	13,3-14,7	-	5.5	34.0	5	18,0-21,5	-	5.2	-	90°
41000.W0302	32.0	16	38.0	26.0	12.7	6.0	42.0	6	19,5-29,5	28.5	5.6	5.6	90°
41000.W0303	36.0	14	50.0	25.7	13.0	7.0	44.5	8	22,0-31,8	31.6	6.5	5.1	90°
41000.W0304	63.0	27	57.0	41.0	20.5	8.0	58.0	10	29,0-43,0	43.0	8.5	8.5	90°



Horizontal Toggle Clamp Plus

stainless - increased clamping force

Stainless Steel Toggle Clamps



41001.4

STAINLESS STEEL TOGGLE CLAMPS

Material

Body: stainless steel, polished.
Rivets: stainless steel running in hardened bushes. Pre-lubricated bearings (grease suitable for food industry use).

Ergonomic soft feel oil-resistant handle with large grip area.
Supplied complete with stainless clamping screw (with rubber pad).

Technical Notes

Suitable for use in the food industry.
Temperature range -10°C to +80°C.
With increased retaining forces.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄	h ₅ min.	h ₅ max.	l ₁	Weight g
41001.W0301	1	1.1	1.7	M 5x35	37	52	19.6	12	1	10.2	125	150
41001.W0302	2	1.6	3.0	M 6x50	51	110	28.0	16	-1	12.0	224	450
41001.W0303	3	2.5	4.0	M 8x58	61	112	35.0	18	1	13.0	243	600
41001.W0304	4	3.5	8.0	M10x76	77	135	41.0	24	-2	17.5	329	1250

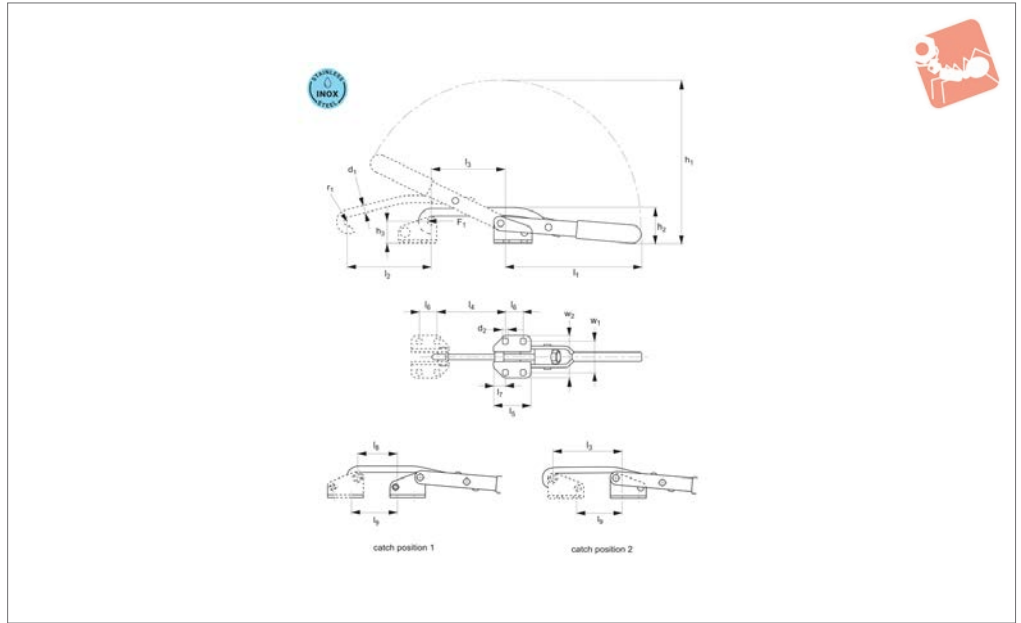
Order No.	l ₂	l ₃	l ₄	l ₅	l ₆	l ₇	w ₁	w ₂	w ₃	w ₄	α
41001.W0301	44	20.5	15.0	40	13.5	6.0	27.2	14,7 - 19,5	5	4.3	80°
41001.W0302	71	39.0	14.0	52	26.0	7.0	46.0	23,5 - 34,0	8	6.5	90°
41001.W0303	74	41.5	20.6	56	26.2	6.5	49.2	27,5 - 38,0	8	6.5	90°
41001.W0304	120	69.0	23.0	76	41.5	10.5	60.0	34,5 - 45,0	10	8.6	90°

Stainless Steel Toggle Clamps

Hook Type Toggle Clamps stainless steel



41700.4



STAINLESS STEEL TOGGLE CLAMPS

Material

Body: stainless steel (AISI 304, 1.4301).
Rivets: stainless steel running in hardened bushes. Pre-lubricated bearings.
Handle: oil-resistant plastic with large grip

area.

Technical Notes

For counter strike see part no. 41740.
W0011- .W0015.

The length of the hook is adjustable by rotating the threaded hook to extend or contract its reach.

Temperature range -10°C to +80°C.
Suitable for food industry.

Order No.	Size	F_1 kN	h_1	h_2	h_3	l_1	l_2	l_3	l_4	Weight g
41700.W0301	1	1.0	111	35.0	22.7	88	45	35,0-42,0	35,0-42,5	100
41700.W0303	3	1.5	179	36.5	22.7	148	97	65,5-77,0	72,5-84,0	270
41700.W0305	5	2.5	280	70.5	49.1	228	146	57,0-71,0	58,0-72,0	850

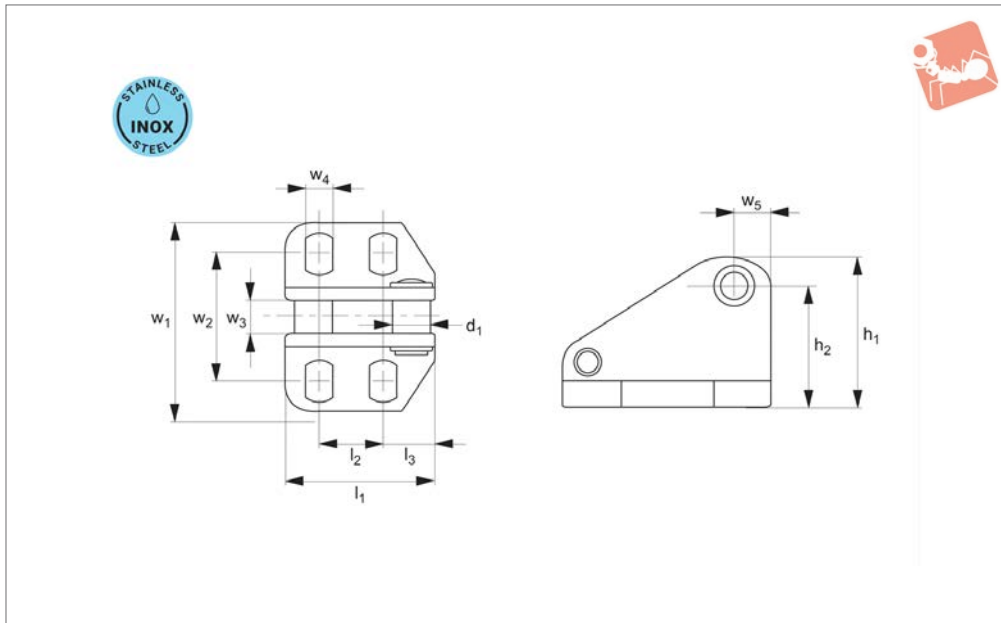
Order No.	l_5	l_6	l_7	l_8	l_9	w_1	w_2	d_1	d_2	r_1	Adj. distance
41700.W0301	31	19	6	16,5-23,5	16,0-23,0	40	25,5-30,5	6	4.5	4.5	8
41700.W0303	40	19	13	39,5-50,5	32,5-44,0	45	31,0-36,0	8	5.6	5.5	12
41700.W0305	55	29	13	27,5-42,0	26,5-40,0	85	56,0-63,5	12	11.2	8.0	14



Fixed Catch

stainless steel - for no. 41700.W0301 - .W0305

Stainless Steel Toggle Clamps



41740.4

STAINLESS STEEL TOGGLE CLAMPS

Material

Stainless steel (AISI 304, 1.4301), polished.

Tips

For zinc plated and passivated version see part no. 41740.W0011- .W0005.

Technical Notes

Catch for no. 41700.W0001- .W0005.

Order No.	Size	h_1	h_2	l_1	l_2	l_3	w_1	w_2	w_3	w_4	w_5	d_1	Weight g
41740.W0311	1	29	22.7	31	19	6	40	26,0-30,0	6.9	4.5	6	8	40
41740.W0313	3	29	22.7	40	19	13	45	31,3-35,8	10.9	5.6	6	10	70
41740.W0315	5	61	49.1	55	29	13	86	56,5-64,0	13.8	11.2	12	15	320

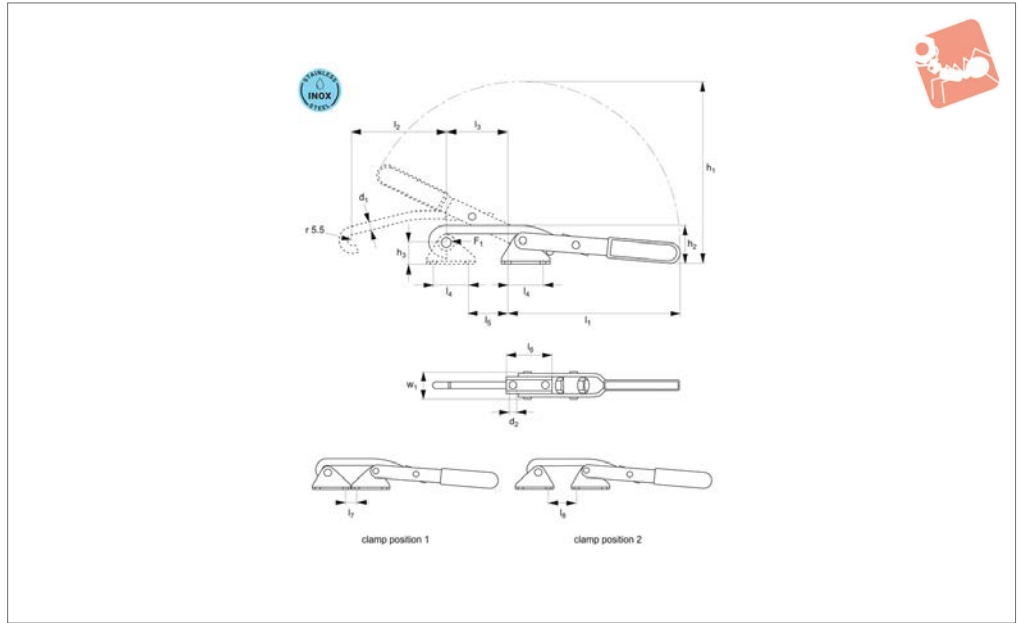
Stainless Steel Toggle Clamps

Hook Type Toggle Clamp

stainless steel - narrow base



41781.4



STAINLESS STEEL TOGGLE CLAMPS

Material

Body: stainless steel (AISI 304, 1.4301).
Rivets: stainless steel running in hardened bushes. Pre-lubricated bearings.
Handle: oil-resistant plastic with large grip area.

Technical Notes

Suitable for use as a toggle type fastener

for the lids or covers of fixed or rotating drums and containers. The length of the hook is adjustable.
Their narrow base makes them ideal for applications where space is limited but holding forces must not be compromised.
The length of the hook is adjustable, up to 22mm. Adjustment made by rotating

the threaded hook to extend or contract its reach.

Temperature range -10°C to +80°C.

Tips

See part no. 41791.W0313 for fixed catch.

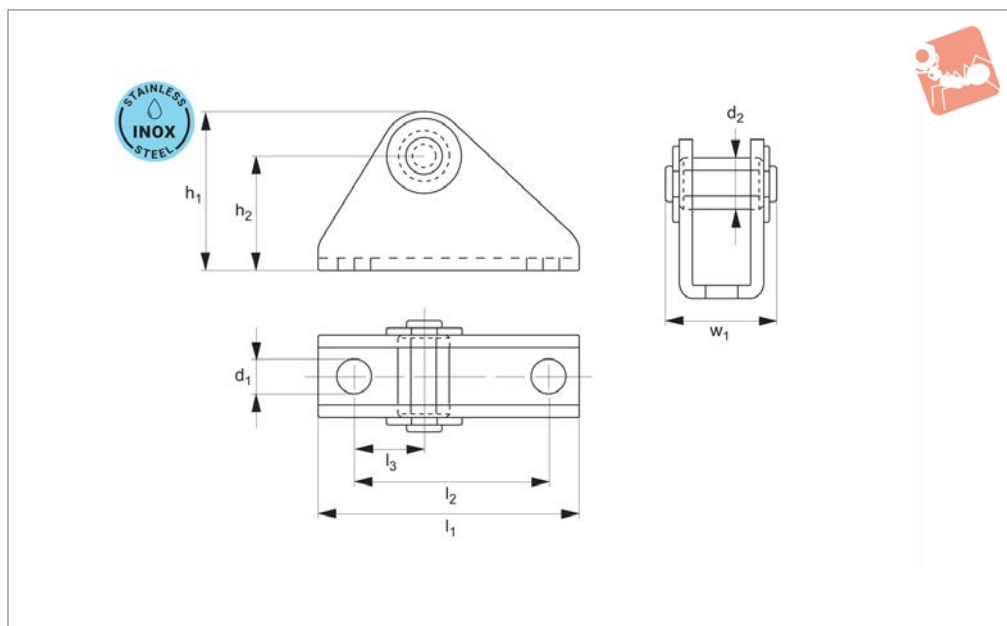
Order No.	Size	F ₁ kN	h ₁	h ₂	h ₃	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	w ₁	d ₁	d ₂	Adj. distance	Weight g
41781.W0303	3	1.5	179	37	23	169	98	44-55	38	15-41	52	15-20	29-41	26.5	8	6.5	22	270



Fixed Catch

stainless steel - for part no. 41791.W0003

Stainless Steel Toggle Clamps



41791.4

STAINLESS STEEL TOGGLE CLAMPS

Material

Stainless steel (AISI 304, 1.4301), polished.

altered by rotating the fixed catch.
Fixing catch for toggle clamp part no. 41791.W0003 Suitable for use in the food industry.

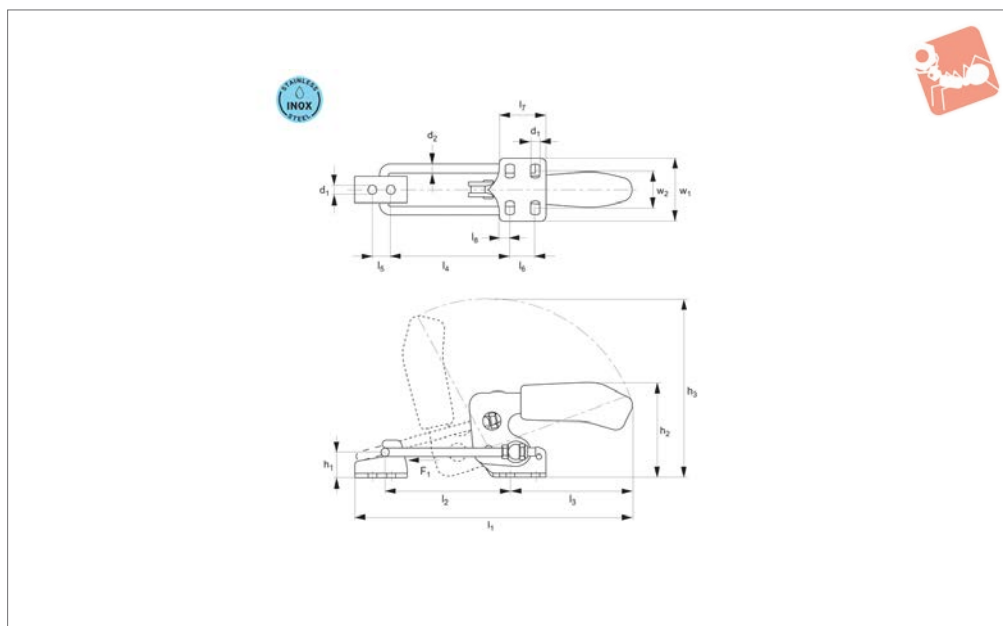
Technical Notes

The adjustment range of the clamp can be

Order No.	Size	h_1	h_2	l_1	l_2	l_3	w_1	d_1	d_2	Weight g
41791.W0313	3	32	23	52	38	14	22	6.5	10	65



41801.4



Material

Body: stainless steel (AISI 304, 1.4301).
Rivets: stainless steel running in hardened bushes. Pre-lubricated bearings.

Ergonomic soft feel oil-resistant handle with large grip area.

Technical Notes

Complete with counter strike, see part no. 41811.W0312 - .W0314.
Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	h ₁	h ₂	h ₃	l ₁ min.	l ₁ max.	l ₂ min.	l ₂ max.	Weight g
41801.W0302	2	1.6	12	47.0	99	125	159	42.0	76	120
41801.W0303	3	3.2	19	71.0	137	170	217	53.5	101	330
41801.W0304	4	7.0	26	94.5	171	212	276	66.0	130	810

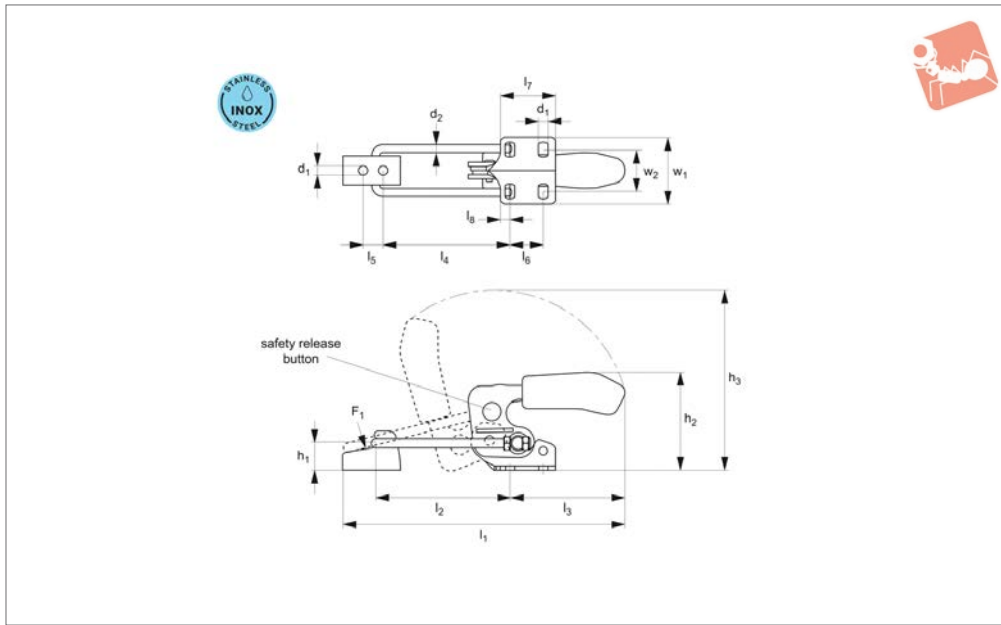
Order No.	l ₃	l ₄ min.	l ₄ max.	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂	d ₁	d ₂
41801.W0302	69	38.0	72	11	13	26.0	6.4	38.0	19,5-23,5	5.2	4
41801.W0303	94	48.5	96	14	19	35.0	8.0	48.0	24,5-32,5	6.5	6
41801.W0304	114	59.0	123	19	32	53.5	9.5	64.5	35,0-46,0	8.5	8



Latch Type Toggle Clamps

stainless - horizontal acting - safety button

Stainless Steel Toggle Clamps



41805.4

STAINLESS STEEL TOGGLE CLAMPS

Material

Body: stainless steel (AISI 304, 1.4301), polished.
 Rivets: stainless steel running in hardened bushes. Pre-lubricated bearings.
 Ergonomic soft feel oil-resistant handle

with large grip area.
 Complete with counter strike.

Technical Notes

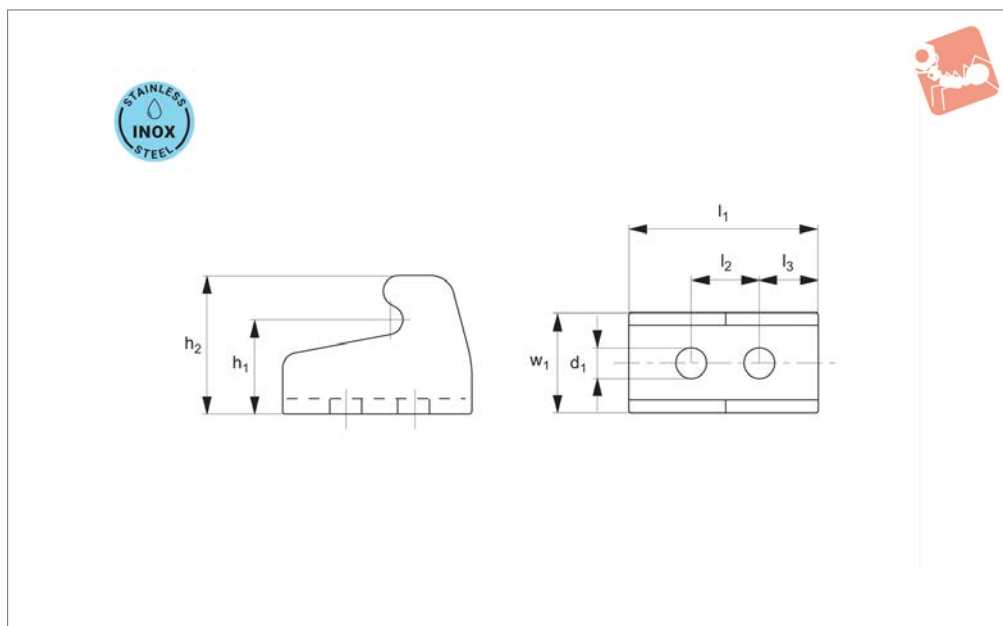
The safety latch holds the clamp in both the open and the closed position. This

prevents opening under vibration or inadvertent movement of the clamping arm when loading or unloading a fixture.
 Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	h ₁	h ₂	h ₃	l ₁ min.	l ₁ max.	l ₂ min.	l ₂ max.	Weight g	
41805.W0304	4	7.0	26	94	168	209	273	66	130	850	
Order No.	l ₃	l ₄ min.	l ₄ max.	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂	d ₁	d ₂
41805.W0304	111	59	123	19	32	53.5	9.5	64.5	35-46	8.5	8



41811.4



Material

Stainless steel (AISI 304, 1.4301), polished.

Technical Notes

Catch for toggle clamp no. 41811.W0002 - .W0004.

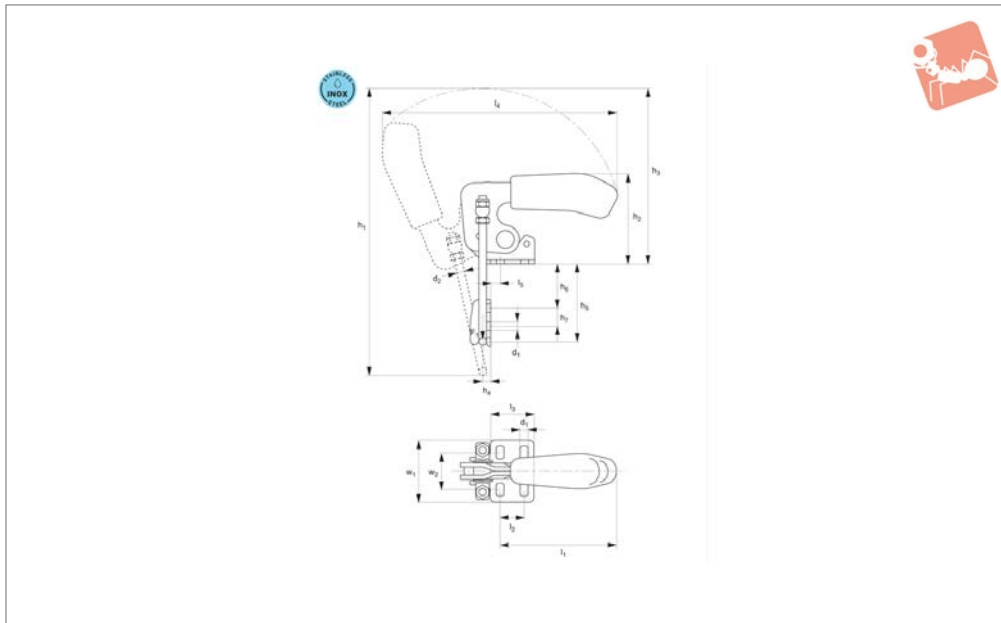
Order No.	Size	h_1	h_2	l_1	l_2	l_3	w_1	d_1	Weight g
41811.W0312	2	12	18	26	11	8	18	5.2	16
41811.W0313	3	19	28	39	14	12	23	6.5	44
41811.W0314	4	26	38	56	19	17	30	8.5	108



Latch Type Toggle Clamps

stainless - vertical acting

Stainless Steel Toggle Clamps



41821.4

STAINLESS STEEL TOGGLE CLAMPS

Material

Body: stainless steel (AISI 304, 1.4301), polished.
 Rivets: stainless steel running in greased bushes.
 Ergonomic soft feel oil-resistant handle

with large grip area.

Complete with counter strike.

Technical Notes

Temperature range -10°C to +80°C.

Tips

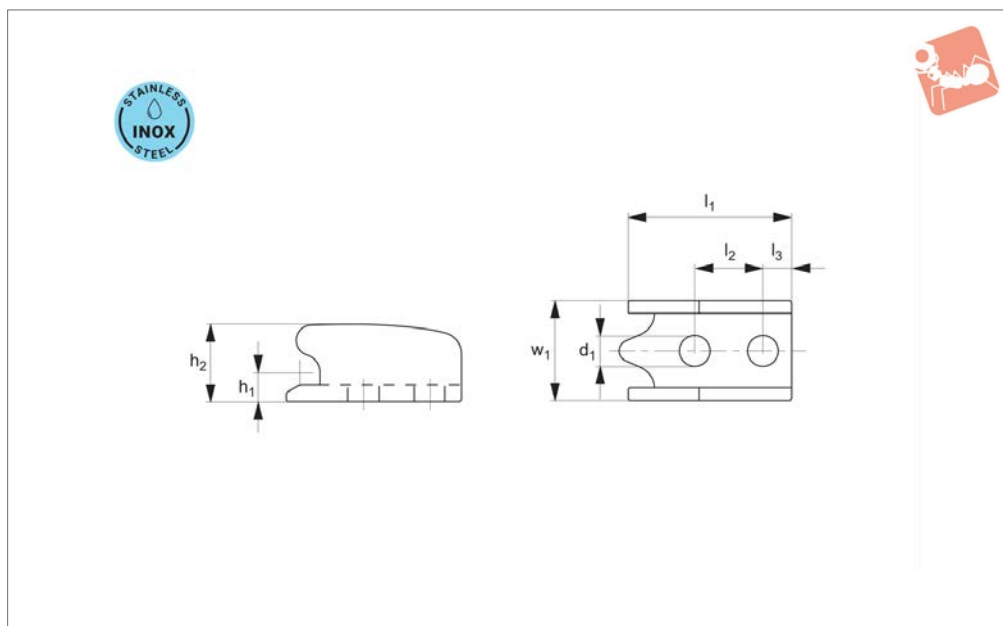
Suitable for use in the food industry.
 Also available in steel zinc plated version, see part no. 41821.W0002 - .W0004.

Order No.	Size	F ₁ kN	h ₁	h ₂	h ₃	h ₄	h ₅ min.	h ₅ max.	h ₆ min.	Weight g
41821.W0302	2	1.6	150	47.0	99	4.5	24	47	5.0	130
41821.W0303	3	3.2	172	70.0	137	6.0	33	63	6.5	340
41821.W0304	4	7.0	254	94.5	168	8.0	43	81	9.0	810

Order No.	h ₆ max.	h ₇	l ₁	l ₂	l ₃	l ₄	l ₅	w ₁	w ₂	d ₁	d ₂
41821.W0302	28	11	69	13	26.0	158	6.8	38.0	19,5-23,5	5.2	4
41821.W0303	36	14	93	19	35.0	195	8.0	48.0	24,5-32,5	6.5	6
41821.W0304	47	19	111	32	53.5	239	9.5	64.5	35,0-46,0	8.5	8



41831.4



Material

Stainless steel (AISI 304, 1.4301), polished.

Technical Notes

For use with toggle clamp no. 41821.W0302 - .W0304.

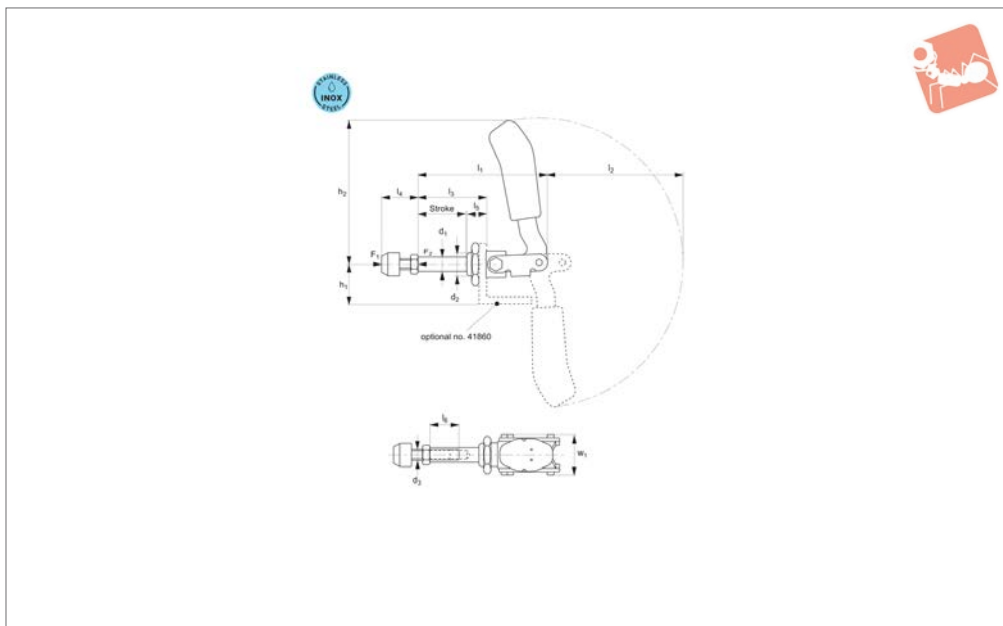
Order No.	Size	h_1	h_2	l_1	l_2	l_3	w_1	d_1	Weight g
41831.W0312	2	5	12	26	11	5	18	5.2	14
41831.W0313	3	6	16	36	14	7	23	6.5	30
41831.W0314	4	8	22	48	19	9	30	8.5	66



Push-Pull Toggle Clamps

stainless steel - compact version

Stainless Steel Toggle Clamps



41840.4

STAINLESS STEEL TOGGLE CLAMPS

Material

Body: stainless steel (AISI 304, 1.4301), polished.
Rivets: stainless steel running in hardened bushes. Pre-lubricated bearings.

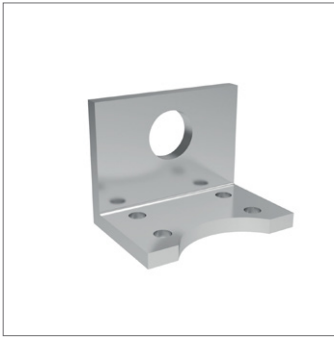
Ergonomic soft feel oil-resistant handle with large grip area.
Supplied complete with stainless clamping screw (with rubber pad).

Technical Notes

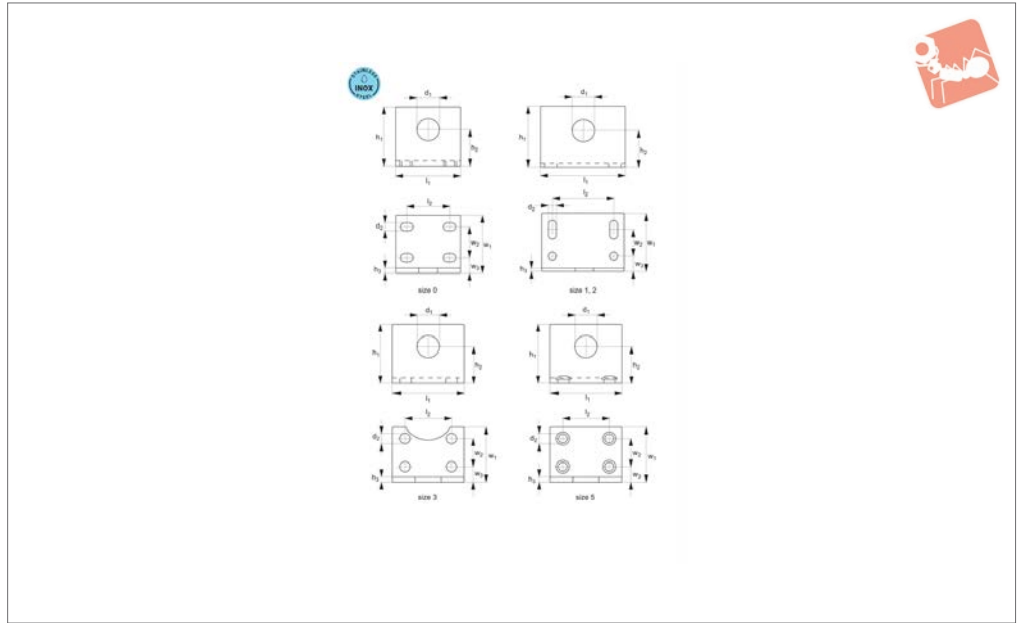
Compact version with long rod guide.
Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	Stroke s ₁	h ₁	h ₂	l ₁	l ₂	Weight g
41840.W0302	2	1.0	1.0	M 6x25	21.5	24	73.0	68.5	69	130
41840.W0303	3	2.5	2.5	M 8x35	40.0	33	120.5	108.0	115	320
41840.W0305	5	4.0	4.0	M12x50	67.0	37	149.0	175.0	139	1200

Order No.	l ₃	l ₄ min.	l ₄ max.	l ₅	l ₆	w ₁	d ₁	d ₂	d ₃
41840.W0302	36	17	27.0	13	15	30.5	10	M16x1,5	M 6
41840.W0303	57	22	37.5	16	25	33.0	12	M20x1,5	M 8
41840.W0305	92	30	50.0	24	45	49.0	16	M24x1,5	M12



41880.4



STAINLESS STEEL TOGGLE CLAMPS

Material

Stainless steel (AISI 304, 1.4301), polished.

Technical Notes

The increased height of the centre line

allows a wide range of applications. Fastening by means of four screws.

For use with toggle clamp nos. 41840. W0002- .W0005 and 41890.W0000- .W0003.

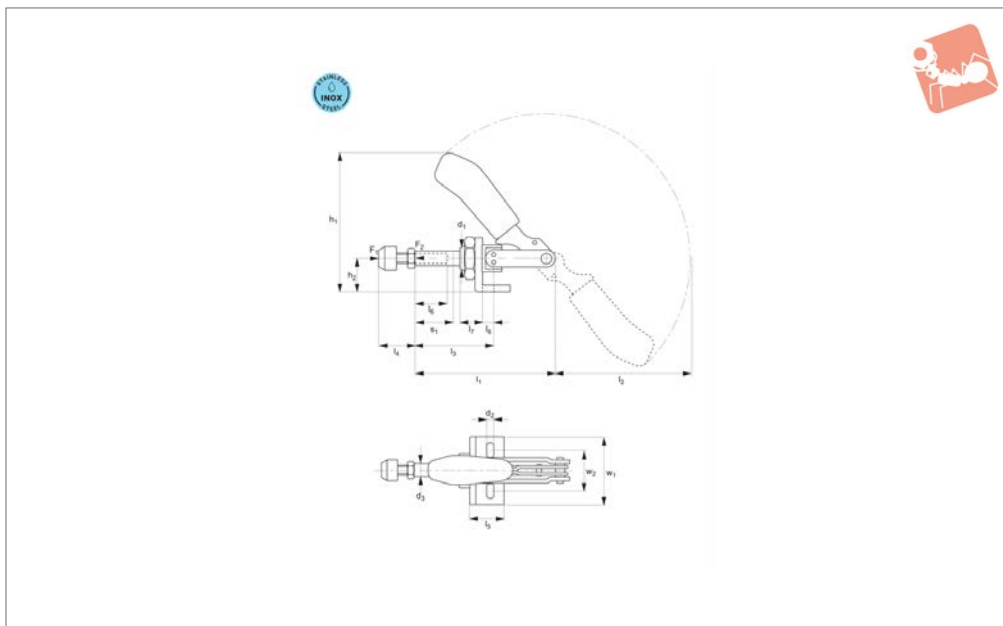
Order No.	Size	h ₁	h ₂	h ₃	l ₁	l ₂	w ₁	w ₂	w ₃	d ₁	d ₂	Weight g
41880.W0300	0	23	13	3	30	15,5-20,5	30	16	9.0	10.2	4.5	35
41880.W0302	2	40	24	5	60	40.0	40	18	11.0	16.2	6.7	170
41880.W0303	3	50	33	6	65	41.0	44	19	14.5	20.2	6.7	260
41880.W0305	5	60	37	8	70	45.0	60	32	17.0	24.0	9.0	480



Push-Pull Toggle Clamps

stainless steel - angle bracket

Stainless Steel Toggle Clamps



41890

STAINLESS STEEL TOGGLE CLAMPS

Material

Body: stainless steel (AISI 304, 1.4301), polished.
 Rivets: stainless steel running in hardened bushes. Pre-lubricated bearings.
 Ergonomic soft feel, oil-resistant handle

with large grip area.
 Supplied complete with stainless clamping screw (with rubber pad).

Technical Notes

Long clamping stroke. Lever can be set to

any angle relative to base.
 Suitable for use in the food industry.
 Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	Stroke s ₁	h ₁	h ₂	l ₁	l ₂	Weight g
41890.W0000	0	0.8	0.8	M 4x20	16	49.3	12	66.5	54	65
41890.W0003	3	2.5	2.5	M 8x35	32	110.0	25	140.0	132	445

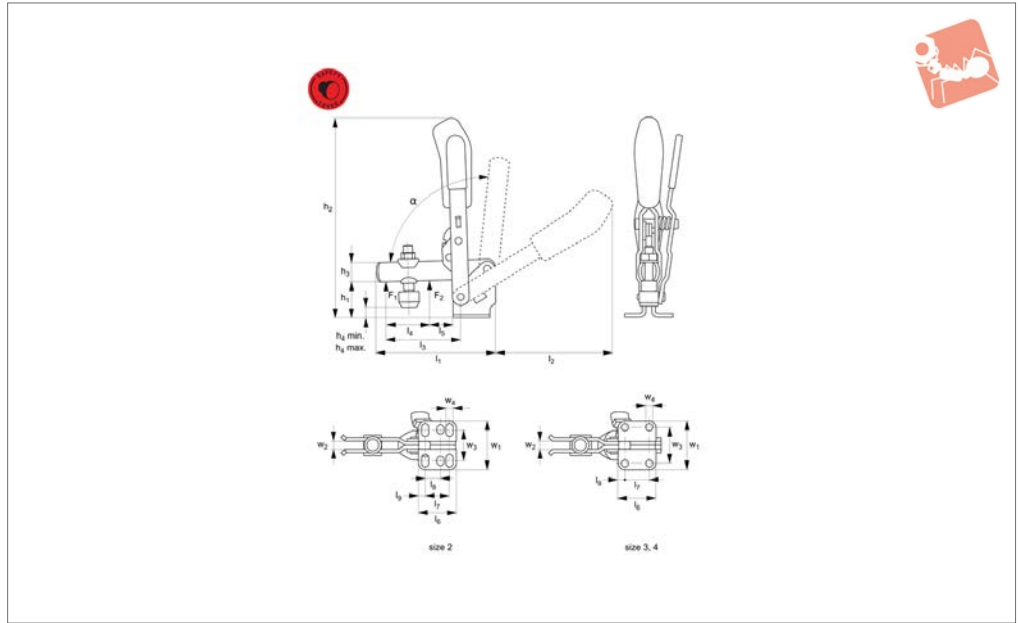
Order No.	l ₃ min.	l ₃ max.	l ₄ min.	l ₄ max.	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂	d ₁	d ₂	d ₃
41890.W0000	17	33	12	20	16	13	10	6.5	25	16.0	M10x1,0	4.5	6.5
41890.W0003	37	69	22	35	30	30	22	13.0	60	29,5-42,5	M20x1,5	6.5	12.0

Safety Lever Toggle Clamps

Vertical Acting Toggle Clamps safety lever - open arm - horizontal base



40010.1



SAFETY LEVER TOGGLE CLAMPS

Material

Body: steel, zinc plated. Rivets: stainless steel rivets running in hardened bushes. Pre-lubricated bearings (grease suitable for food industry use). Ergonomic soft feel oil-resistant handle with large grip area.

Supplied complete with clamping screw (with rubber pad).

Technical Notes

The safety lever holds the clamp in both the open and the closed position. This prevents opening under vibration or inad-

vertent movement of the clamping arm when loading or unloading a fixture. Opening angle (symbol α /symbol α /symbol α /symbol α *) can be changed by pressing in a stop pin on the clamp body. Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄ min.	h ₄ max.	l ₁	l ₂	l ₃	Weight g
40010.W0002	2	1.0	1.2	M 6x35	23.0	139.5	12	-3	4.5	78	89	52	260
40010.W0003	3	1.4	2.5	M 8x45	33.0	186.0	18	2	11.0	112	112	79	470
40010.W0004	4	2.0	3.0	M 8x65	42.5	221.0	20	-6	22.5	141	130	101	690

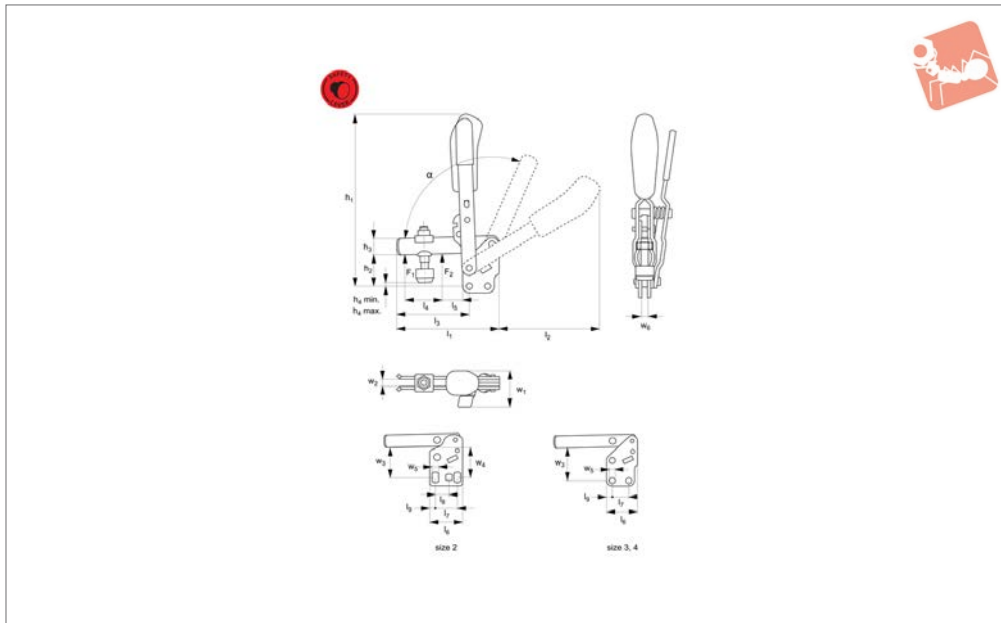
Order No.	l ₄	l ₅	l ₆	l ₇	l ₈	l ₉	w ₁	w ₂	w ₃	w ₄	α	α^*
40010.W0002	25	11	32	20	12.5	6.0	43	6	23,0-31,0	5.5	105°	60°
40010.W0003	36	19	35	20	-	7.5	46	8	32.5	7.5	105°	60°
40010.W0004	54	16	53	32	-	13.0	64	10	45.0	8.6	105°	60°



Vertical Acting Toggle Clamps

safety lever - open arm - vertical base

Safety Lever Toggle Clamps



40060.1

SAFETY LEVER TOGGLE CLAMPS

Material

Body: steel, zinc plated. Rivets: stainless steel running in hardened bushes. Pre-lubricated bearings (grease suitable for food industry use). Ergonomic soft feel oil-resistant handle with large grip area. Supplied complete with clamping screw

(with rubber pad).

Technical Notes

Ideal for mounting to struts and on welding jigs. The safety lever holds the clamp in both the open and the closed position. This prevents opening under vibration or inad-

vertent movement of the clamping arm when loading or unloading a fixture. Opening angle (symbol α /symbol α *) can be changed by pressing in a stop pin on the clamp body. Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄ min.	h ₄ max.	l ₁	l ₂	l ₃	Weight g
40060.W0002	2	1.0	1.2	M 6x35	154	38	12	11.5	19.5	78	89	52	175
40060.W0003	3	1.4	2.5	M 8x45	200	48	18	10.0	18.5	111	114	79	470
40060.W0004	4	2.0	3.0	M 8x65	244	65	20	16.5	45.5	141	130	101	690

Order No.	l ₄	l ₅	l ₆	l ₇	l ₈	l ₉	w ₁	w ₂	w ₃	w ₄	w ₅	w ₆	α	α^*
40060.W0002	25	11	32	20	12.5	6.0	37.5	6	28,5-32,0	30	5.5	5	105°	60°
40060.W0003	37	19	40	20	-	7.5	48.0	8	41.0	-	7.5	6	105°	60°
40060.W0004	54	16	53	32	-	13.0	53.0	10	55.5	-	8.6	8	105°	60°

Safety Lever Toggle Clamps

Vertical Acting Toggle Clamps

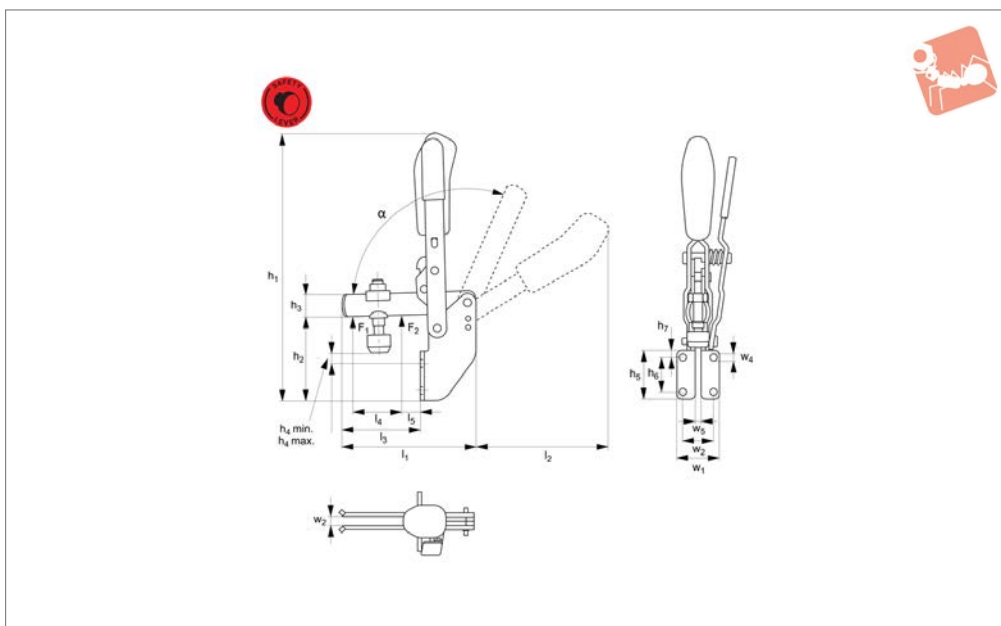
safety lever - open arm - angle base



SAFETY LEVER TOGGLE CLAMPS



40120



Material

Body: steel, zinc plated. Rivets: stainless steel running in hardened bushes. Pre-lubricated bearings (grease suitable for food industry use). Ergonomic soft feel oil-resistant handle with large grip area.

Supplied complete with clamping screw (with rubber pad).

Technical Notes

Ideal for side mounting. The safety lever holds the clamp in both the open and the closed position. This

prevents opening under vibration or inadvertent movement of the clamping arm when loading or unloading a fixture. Opening angle (symbol α /symbol α /symbol α /symbol α *) can be changed by pressing in a stop pin on the clamp body. Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄ min.	h ₄ max.	h ₅	h ₆	h ₇	Weight g
40120.W0002	2	1.0	1.2	M 6x35	176.5	60.0	12	8	15.5	32	20	6	250
40120.W0003	3	1.4	2.5	M 8x45	223.0	71.0	18	9	17.5	38	24	7	535
40120.W0004	4	2.0	3.0	M 8x65	280.0	101.5	20	11	39.5	96	32	54	750

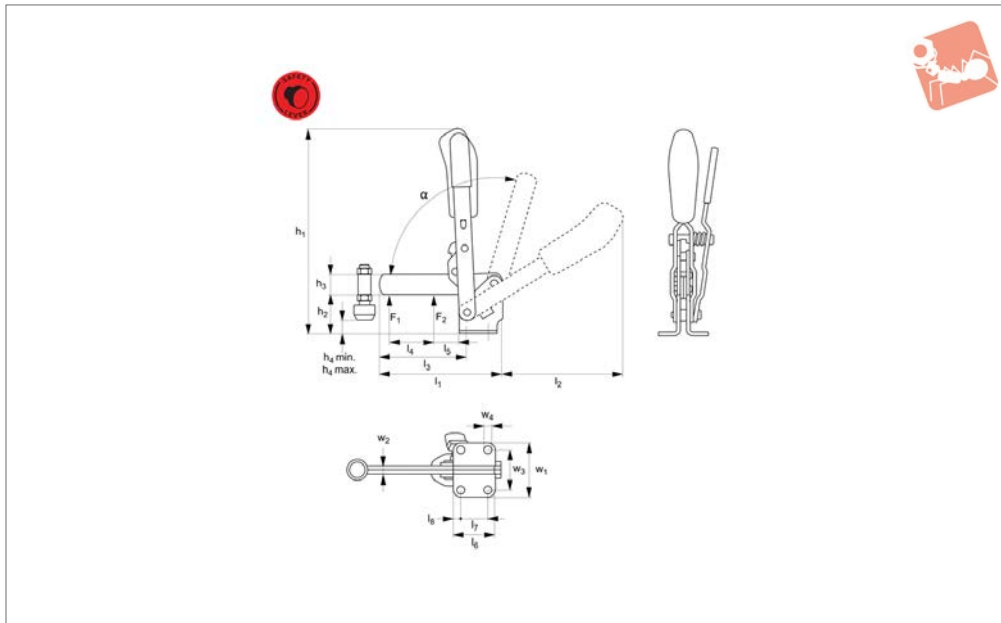
Order No.	l ₁	l ₂	l ₃	l ₄	l ₅	w ₁	w ₂	w ₃	w ₄	w ₅	α	α^*
40120.W0002	77	90	41	25	6	37.0	6	25.5	6.1	5	105°	60°
40120.W0003	110	112	62	37	11	42.5	8	28.5	6.5	6	105°	60°
40120.W0004	141	129	83	54	11	52.0	10	32.0	8.5	8	105°	60°



Vertical Acting Toggle Clamps

safety lever - solid arm - horizontal base

Safety Lever Toggle Clamps



40160

SAFETY LEVER TOGGLE CLAMPS

Material

Body: steel, zinc plated. Rivets: stainless steel running in hardened bushes. Pre-lubricated bearings (grease suitable for food industry use). Ergonomic soft feel oil-resistant handle with large grip area. Supplied complete with weldable clamping

screw (with rubber pad).

Technical Notes

For fastening to mounting plates, etc. The arm can be shortened to suit the work-piece. The sleeve is then welded to the arm.

The safety lever holds the clamp in both

the open and the closed position. This prevents opening under vibration or inadvertent movement of the clamping arm when loading or unloading a fixture. Opening angle (symbol α /symbol α /symbol α /symbol α *) can be changed by pressing in a stop pin on the clamp body. Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄ min.	h ₄ max.	h ₅	Weight g
40160.W0003	3	1.4	2.5	M 8x45	186	48.0	18	0	12	35	470
40160.W0004	4	2.0	3.0	M 8x65	220	42.5	20	-8	21	53	690

Order No.	h ₆	h ₇	l ₁	l ₂	l ₃	l ₄	l ₅	w ₁	w ₂	w ₃	w ₄	α	α^*
40160.W0003	20	7.5	112	112	81	43	19	46	6	32	7.1	105°	60°
40160.W0004	32	13.0	140	130	101	61	16	64	8	45	8.5	105°	60°

Safety Lever Toggle Clamps

Horizontal Acting Toggle Clamps

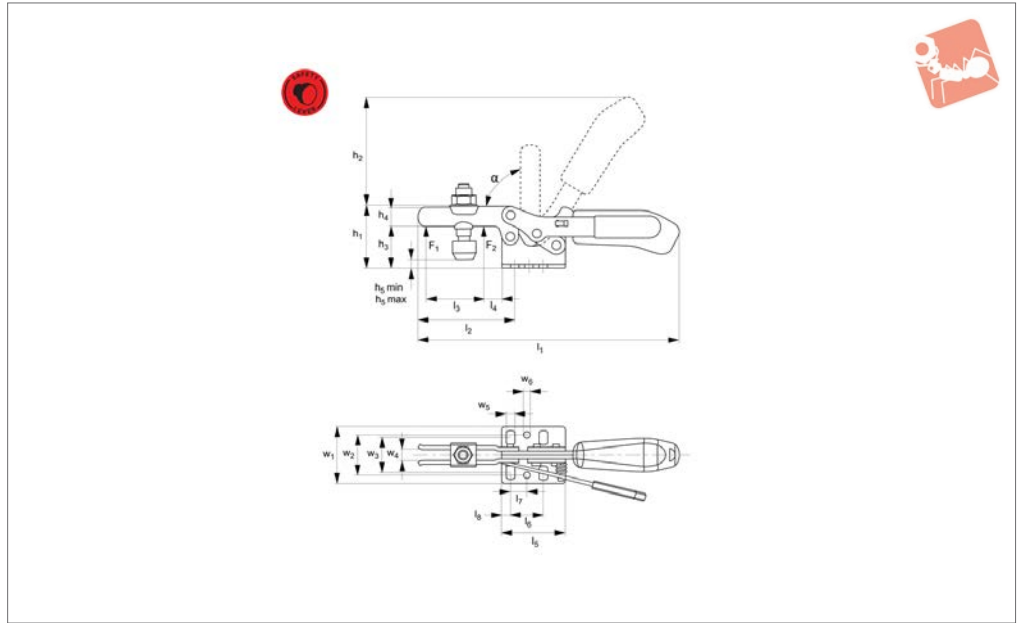
safety lever - open arm - horizontal base



SAFETY LEVER TOGGLE CLAMPS



41010



Material

Body: steel, zinc plated.
 Rivets: stainless steel running in hardened bushes. Pre-lubricated bearings (grease suitable for food industry use).
 Ergonomic soft feel oil-resistant handle

with large grip area.
 Supplied complete with clamping screw (with rubber pad).

Technical Notes

The safety lever holds the clamp in both

the open and the closed position. This prevents opening under vibration or inadvertent movement of the clamping arm when loading or unloading a fixture.

Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄	h ₅ min.	h ₅ max.	l ₁	l ₂	Weight g
41010.W0003	3	1.8	2.5	M 8x45	48.5	86.0	32	15	-2	9	206	73	390
41010.W0004	4	2.0	3.0	M 8x65	75.0	126.5	45	20	-4	24	287	113	800

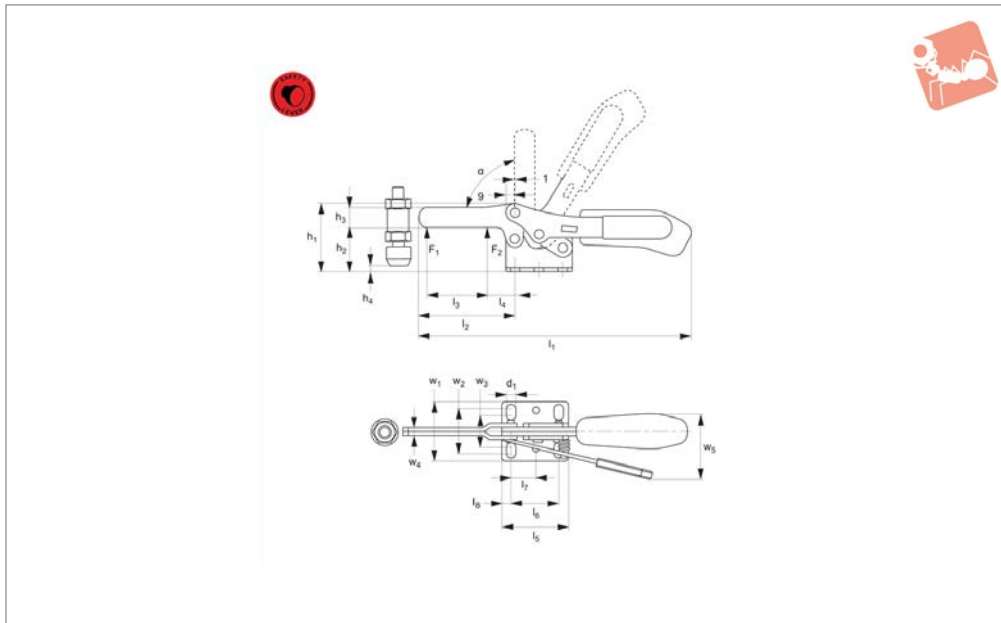
Order No.	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂	w ₃	w ₄	w ₅	w ₆	α
41010.W0003	38	14	50	25.7	13.0	7	45.5	31.6	22,0-31,8	8	6.5	5.1	90°
41010.W0004	63	27	57	41.0	20.5	8	58.0	43.0	29,0-43,0	10	8.5	8.5	90°



Horizontal Acting Toggle Clamps

safety lever - solid arm - horizontal base

Safety Lever Toggle Clamps



41040

SAFETY LEVER TOGGLE CLAMPS

Material

Body: steel, zinc plated. Rivets: stainless steel running in hardened bushes. Pre-lubricated bearings (grease suitable for food industry use). Ergonomic soft feel oil-resistant handle

with large grip area.

Supplied complete with weldable clamping screw (with rubber pad).

Technical Notes

The safety lever holds the clamp in both

the open and the closed position. This prevents opening under vibration or inadvertent movement of the clamping arm when loading or unloading a fixture. Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw		h ₁	h ₂	h ₃	h ₄ min.	h ₄ max.	l ₁	l ₂	Weight g
41040.W0004	4	2	3	M 8x65		75	45	20	-6	23	286	111	800
Order No.	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂	w ₃	w ₄	w ₅	d ₁	α
41040.W0004	66	34	57	41	20.5	8	58	43	29	8	56.3	8.5	90°

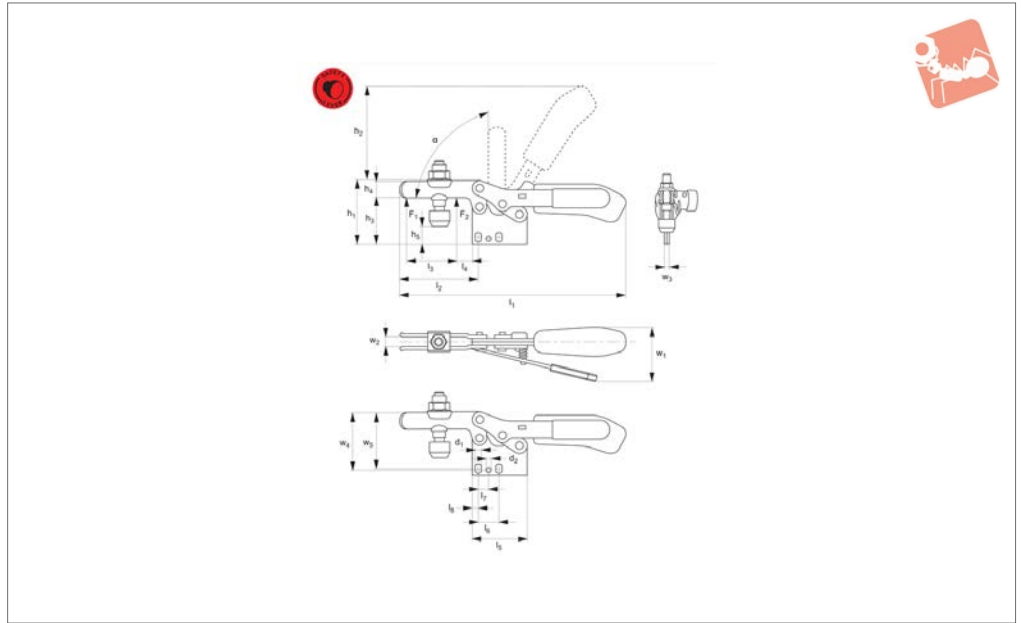
Safety Lever Toggle Clamps

Horizontal Toggle Clamps

safety lever - open arm - vertical base



41060.1



SAFETY LEVER TOGGLE CLAMPS

Material

Body: steel, zinc plated. Rivets: stainless steel running in hardened bushes. Pre-lubricated bearings (grease suitable for food industry use). Ergonomic soft feel oil-resistant handle

with large grip area.

Supplied complete with weldable clamping screw (with rubber pad).

Technical Notes

The safety lever holds the clamp in both

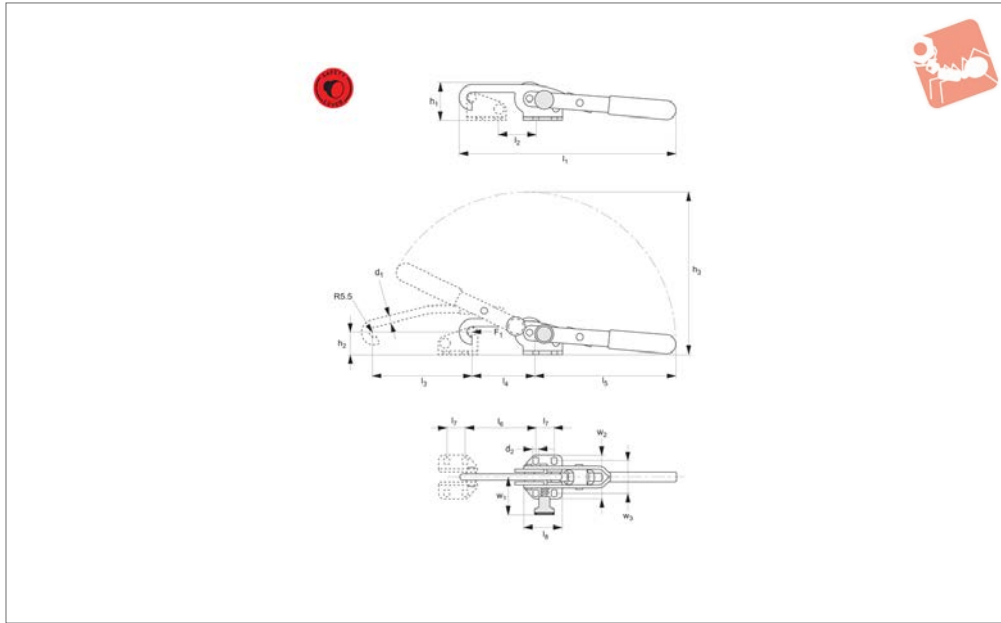
the open and the closed position. This prevents opening under vibration or inadvertent movement of the clamping arm when loading or unloading a fixture. Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄	h ₅ min.	h ₅ max.	l ₁	l ₂	Weight g	
41060.W0003	3	1.8	2.5	M 8x45	65	86	49.0	15	14.5	26	206	73	390	
41060.W0004	4	2.0	3.0	M 8x65	97	126	66.5	20	17.5	46	287	113	800	
Order No.	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂	w ₃	w ₄	w ₅	d ₁	d ₂	α
41060.W0003	38	14	50	25.7	13.0	7	48	8	6	42	37,5-42,5	6.5	5.1	90°
41060.W0004	63	27	57	41.0	20.5	8	51	10	8	59	52,0-59,0	8.5	8.5	90°



Hook Clamp safety knob

Safety Lever Toggle Clamps



41600

SAFETY LEVER TOGGLE CLAMPS

Material

Body: steel, zinc plated.
Rivets: stainless steel running in hardened bushes. Pre-lubricated bearings (grease suitable for food industry use).
Handle: oil-resistant plastic handle with large grip area.

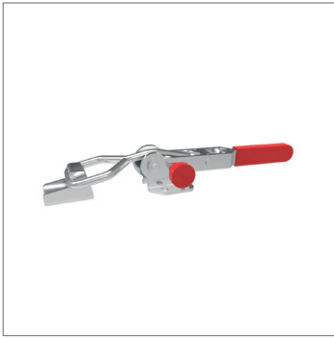
Technical Notes

The safety knob locks the clamp in the

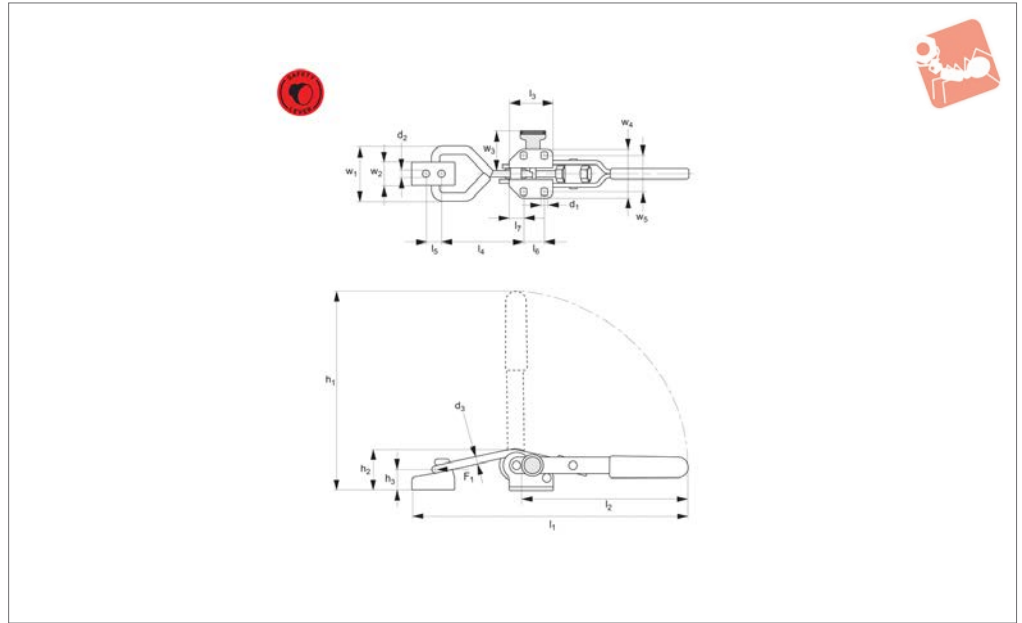
closed position. This prevents opening under vibration or inadvertent movement of the clamping arm when loading or unloading a fixture.
Pull out the safety knob to release the clamp.
The h_2 engagement height (23mm) must be adhered to, ensure safety knob functionality.

The length of the hook is adjustable up to 12mm. Adjustment is made by rotating the threaded hook to extend or contract its reach.
Use counter strike 41740.W0013, order separately.
Temperature range -10°C to +80°C.

Order No.	Size	F_1 kN	h_1	h_2	h_3	l_1	l_2	l_3	Weight g	
41600.W0003	3	3	38	23	181	240	41-50	98	295	
Order No.	l_4	l_5	l_6	l_7	l_8	w_1	w_2	w_3	d_1	d_2
41600.W0003	67-76	151	74-83	19	40	38.5	45	32-36	7.1	5.6



41620



Material

Body: steel, zinc plated.
 Rivets: stainless steel running in hardened bushes. Pre-lubricated bearings (grease suitable for food industry use).
 Handle: oil-resistant plastic with large grip area.

Technical Notes

The safety knob locks the clamp in the closed position. This prevents opening under vibration or inadvertent movement of the clamping arm when loading or unloading a fixture.
 Pull out the safety knob to release the

clamp.

Supplied complete with counter strike.
 For additional counter strikes, see part 41801.W00012- .W0014.
 Temperature range -10°C to +80°C.

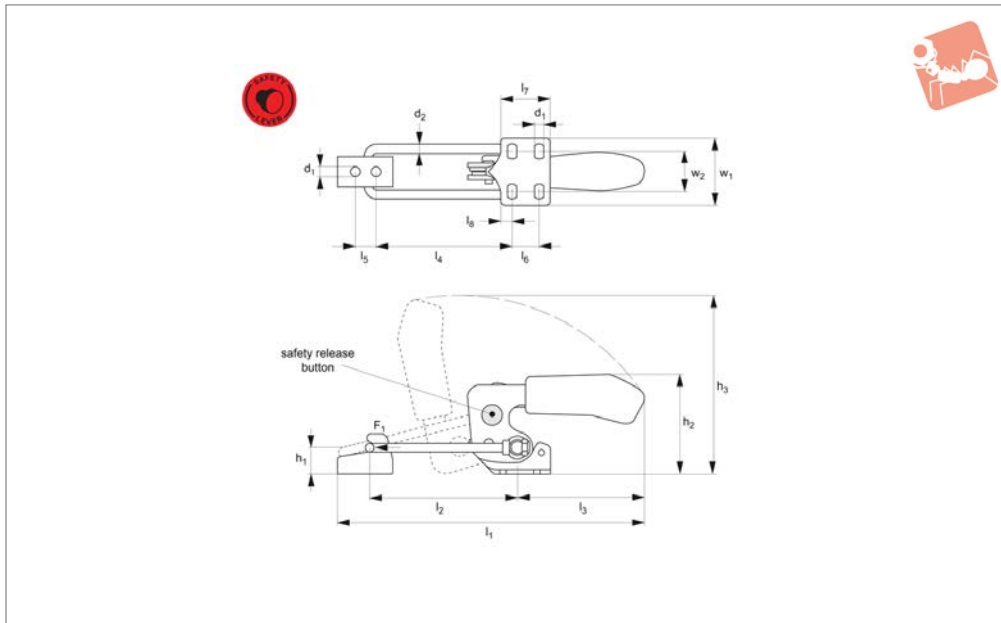
Order No.	Size	F_1 kN	h_1	h_2	h_3	l_1	l_2	l_3	l_4	Weight g	
41620.W0003	3	3	179	38	19	257	149	40	79.5	295	
Order No.	l_5	l_6	l_7	w_1	w_2	w_3	w_4	w_5	d_1	d_2	$\varnothing d_3$
41620.W0003	14	19	13	49	21	38.5	32-35	45	5.6	6.5	7.1



Latch Type Horizontal Toggle Clamp

safety button

Safety Lever Toggle Clamps



41805.1

SAFETY LEVER TOGGLE CLAMPS

Material

Body: steel, zinc plated.
 Rivets: stainless steel running in hardened bushes. Pre-lubricated bearings (grease suitable for food industry use).
 Handle: ergonomic soft feel, oil-resistant with a large grip area.

Hook: steel, tempered.

Technical Notes

The safety button locks the clamp in the closed position. This prevents opening under vibration or inadvertent movement of the clamping arm when loading or

unloading a fixture.
 Temperature range -10°C to +80°C.

Tips

Also available in stainless steel version part no. 41805.W0304.

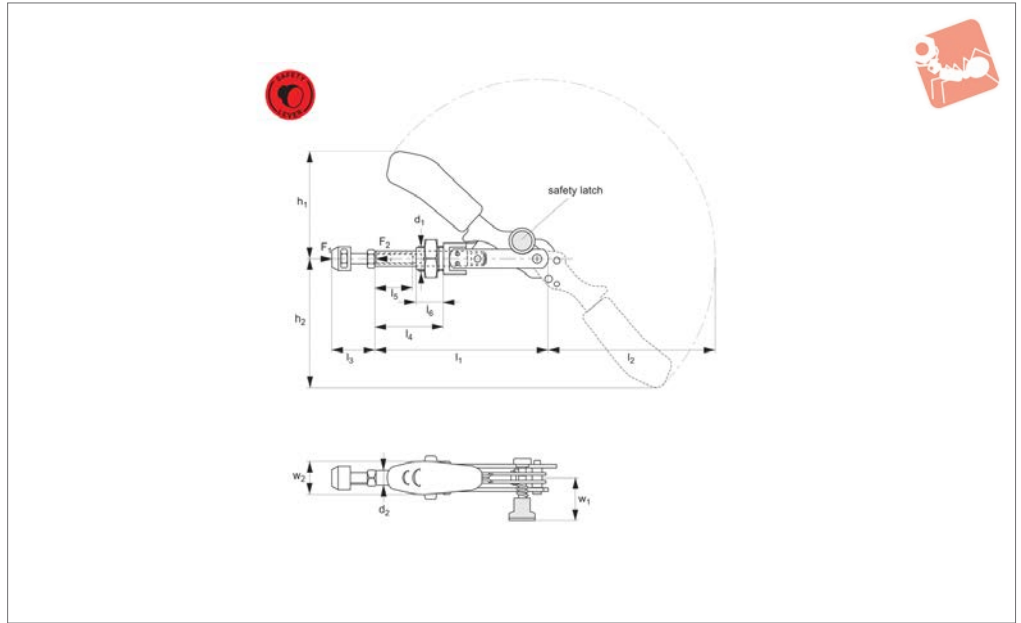
Order No.	Size	F ₁ kN	h ₁	h ₂	h ₃	l ₁ min.	l ₁ max.	l ₂ min.	l ₂ max.	l ₃	Weight g
41805.W0004	4	7.0	26	94	168	209	273	66	130	111	850
Order No.	l ₄ min.	l ₄ max.	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂	d ₁	d ₂	
41805.W0004	59	123	19	32	53.5	9.5	64.5	35-46	8.5	8	

Safety Lever Toggle Clamps

Push-Pull Type Toggle Clamp safety knob



41895



SAFETY LEVER TOGGLE CLAMPS

Material

Body: steel, zinc plated.
 Rivets: stainless steel running in hardened bushes. Pre-lubricated bearings (grease suitable for food industry use).
 Handle: ergonomic soft feel, oil-resistant with a large grip area.

Technical Notes

The safety knob holds the clamp in both the open and the closed position. This prevents opening under vibration or inadvertent movement of the clamping arm when loading or unloading a fixture. Without angle bracket. Push and pull-

clamping (equal operation of rod and lever). Long rod-guide with attaching thread and nut.
 Temperature range -10°C to +80°C.

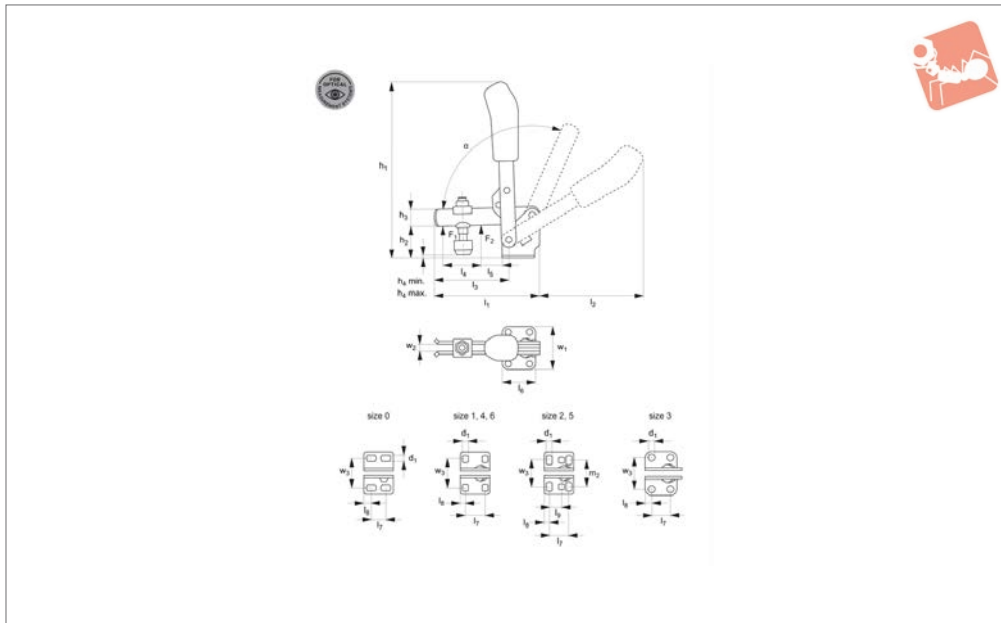
Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	d ₁	d ₂	h ₁	h ₂	l ₁	l ₂	l ₃ min./max.	l ₄	l ₅	l ₆	w ₁	w ₂	Weight g
41895.W0003	3	2,5	2,5	M 8x35	M20x1,5	12	86	103	140	134	22-35	56	30	22	36	27	402



Vertical Acting Toggle Clamps

black - open arm - horizontal base

Optical Measuring Toggle



40000.2

OPTICAL MEASURING TOGGLE CLAMPS

Material

Body: steel matt black.
 Bushes: case hardened and pre-lubricated.
 Handle: plastic, black, oil resistant, ergonomic.
 Supplied complete with matt black clamping screw (with rubber pad).

Technical Notes

For fastening to mounting plates, etc.

symbola/symbol* alternative angle through using the removable stop. Opening angle (symbola/symbol/symbola/symbol*) can be changed by pressing in a stop pin on the clamp body.

For optical analysis applications.

Tips

Designed specifically for clamping of parts during photometric measurement. Uniform

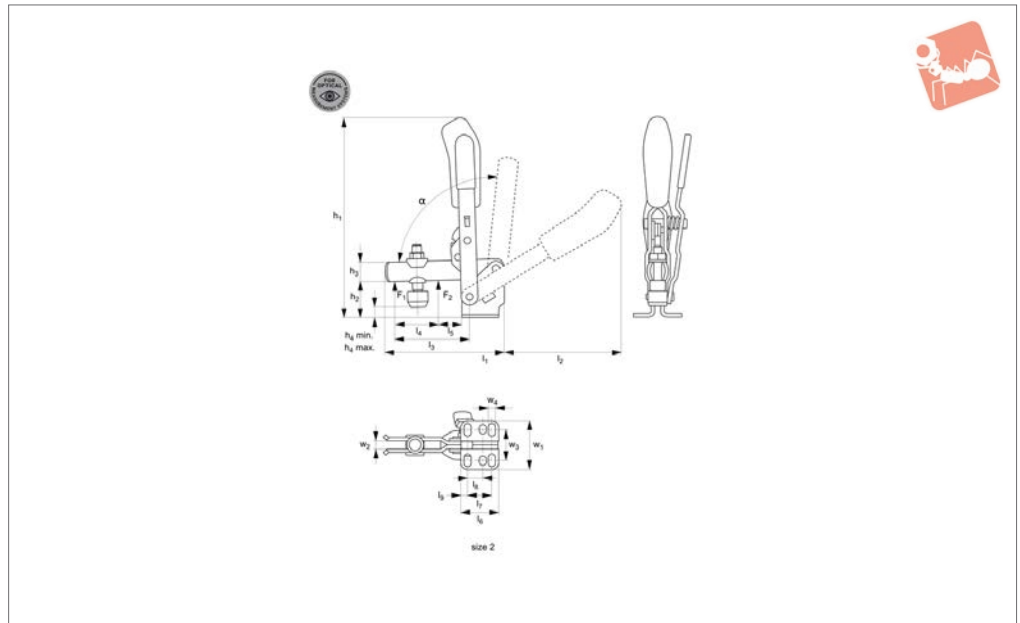
matt black surface prevents reflection, enabling easy „knocking-out“ of the clamp during optical analysis of a component.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄ min.	h ₄ max.	l ₁	l ₂	l ₃	Weight g
40000.W0100	0	0.5	0.7	M 4x34,5	81	18	8	-4.0	6.5	49	50	32	60
40000.W0101	1	0.6	1.1	M 5x38,0	98	19	10	-3.7	1.6	61	58	39	105
40000.W0102	2	0.8	1.2	M 6x46,0	140	23	12	-4.4	4.4	78	89	52	175
40000.W0103	3	1.2	2.5	M 8x63,0	188	33	18	-2.8	7.0	112	112	79	410

Order No.	l ₄	l ₅	l ₆	l ₇	l ₈	l ₉	w ₁	w ₂	w ₃	w ₄	d ₁	α	α*
40000.W0100	14	5.5	22	8,5-13,5	5.5	-	4	32	23.0	-	4.5	95°	-
40000.W0101	18	6.0	27	16.0	5.5	-	5	34	22,5-26,0	-	4.5	95°	-
40000.W0102	25	11.0	32	20.0	6.0	12.5	6	43	23,0-31,0	27	5.5	105°	60°
40000.W0103	36	19.0	35	20.0	7.5	-	8	46	32.5	-	7.5	105°	60°



40010.2



Material

Body: steel matt black.
 Bushes: case hardened and pre-lubricated.
 Ergonomic soft feel, oil-resistant handle with large grip area.
 Supplied complete with clamping screw (with rubber pad).

Technical Notes

The safety lever holds the clamping arm in

both the clamped and open position. This prevents opening under vibration or accidental movement of the clamping arm during assembly/disassembly of the fixture.

Opening angle (symbol α /symbol α^*) can be changed by pressing in a stop pin on the clamp body.

For optical analysis applications.

Tips

Designed specifically for clamping of parts during photometric measurement. Uniform matt black surface prevents reflection, enabling easy „knocking-out“ of the clamp during optical analysis of a component.

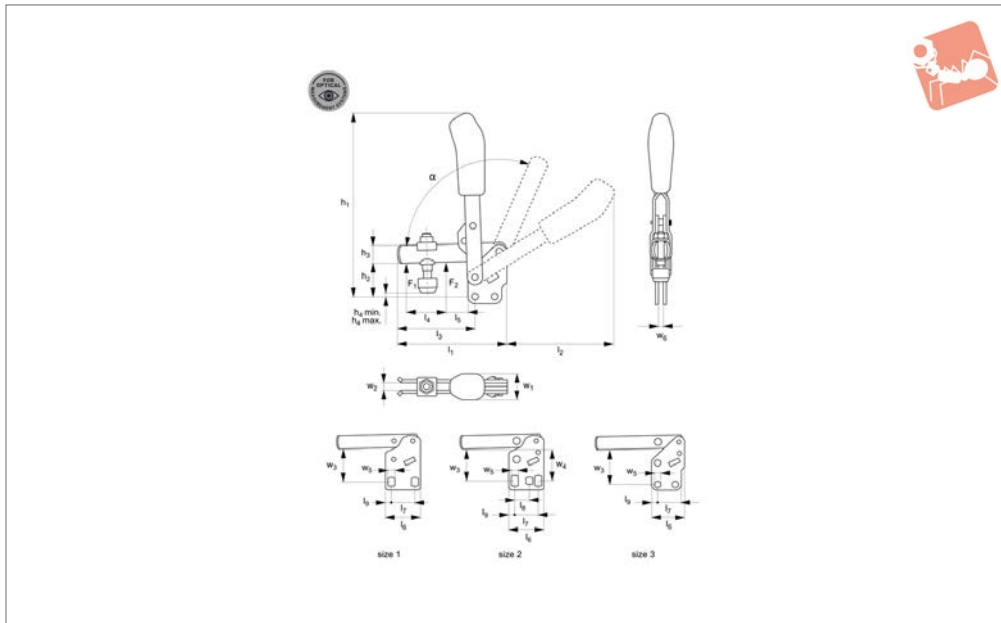
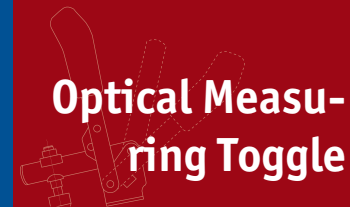
Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄ min.	h ₄ max.	l ₁	l ₂	l ₃	Weight g
40010.W0005	2	1.0	1.2	M 6x46	139	23	12	-4.4	4.4	78	88	52	260
Order No.	l ₄	l ₅	l ₆	l ₇	l ₈	l ₉	w ₁	w ₂	w ₃	d ₁	α	α^*	
40010.W0005	26	11	32	20	6	12.5	6	43	23-31	5.5	105°	60°	



Vertical Acting Toggle Clamps

open arm - vertical base - black

Optical Measuring Toggle



40050.2

OPTICAL MEASURING TOGGLE CLAMPS

Material

Body: steel matt black.
 Bushes: case hardened and pre-lubricated.
 Ergonomic soft feel, oil-resistant handle with large grip area.
 Supplied complete with clamping screw (with rubber pad).

Technical Notes

For fastening to mounting plates, etc.
 Opening angle (symbol α /symbol α /symbol α /symbol α *) can be changed by pressing in a stop pin on the clamp body.
For optical analysis applications.

Tips

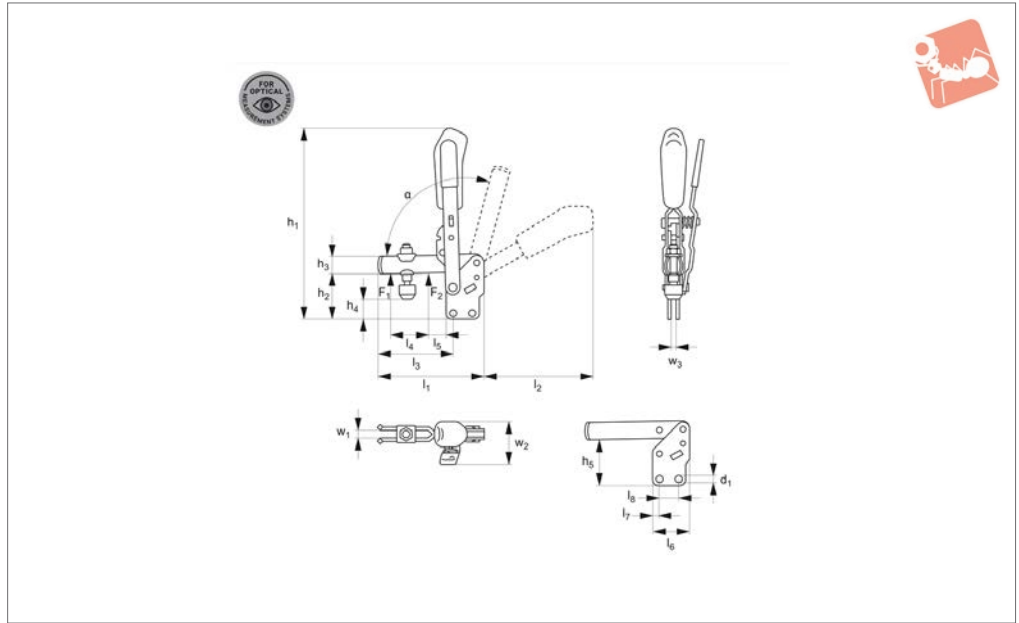
Designed specifically for clamping of parts during photometric measurement. Uniform matt black surface prevents reflection, enabling easy „knocking-out“ of the clamp during optical analysis of a component.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄ min.	h ₄ max.	h ₅	h ₆	l ₁	Weight g
40050.W0101	1	0.6	1.1	M 5x38	110.5	29	10	6.8	12	23,5-25,0	-	61	105
40050.W0102	2	0.8	1.2	M 6x46	114.5	38	12	10.5	19	28,5-32,0	30	78	175
40050.W0103	3	1.2	2.5	M 8x63	201.0	48	18	11.4	21	41.0	-	112	410

Order No.	l ₂	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	l ₉	w ₁	w ₂	w ₃	d ₁	α	α^*
40050.W0101	58	39	18	6	27	16	5.5	-	5	19	5	4.5	95°	-
40050.W0102	80	52	25	11	32	20	6.0	12,5	6	21	5	5.5	105°	60°
40050.W0103	113	79	36	19	40	20	7.5	-	8	27	6	7.5	105°	60°



40060.2



Material

Body: steel matt black.
 Bushes: case hardened and pre-lubricated.
 Ergonomic soft feel, oil-resistant handle with large grip area.
 Supplied complete with clamping screw (with rubber pad).

Technical Notes

For fastening to mounting plates, etc.
 Opening angle (symbol α /symbol α /symbol α /symbol α^*) can be changed by pressing in a stop pin on the clamp body.
For optical analysis applications.

Tips

Designed specifically for clamping of parts during photometric measurement. Uniform matt black surface prevents reflection, enabling easy „knocking-out“ of the clamp during optical analysis of a component.

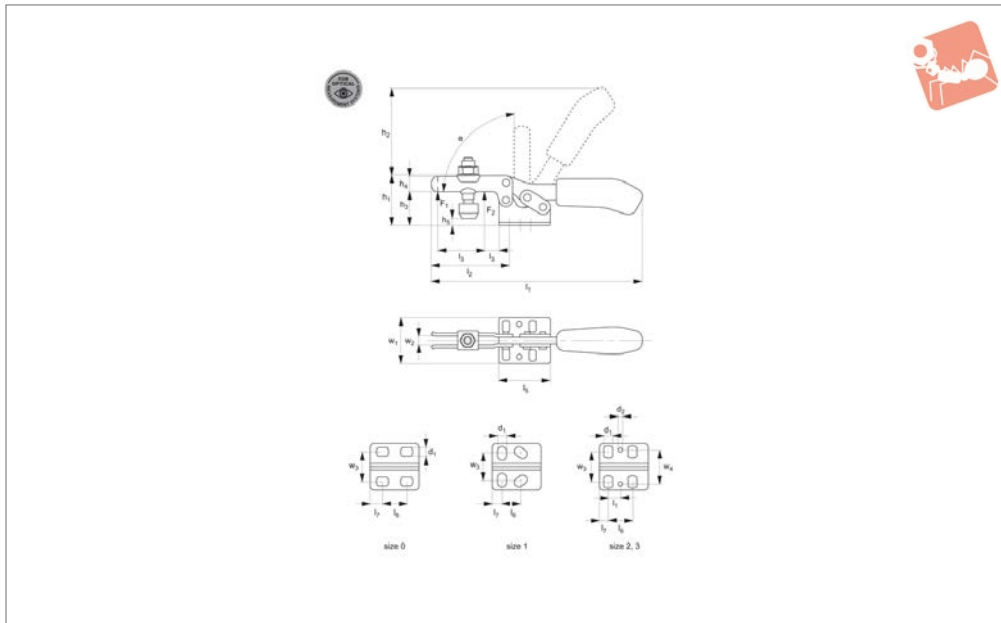
Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄ min.	h ₄ max.	h ₅	l ₁	l ₂	Weight g
40060.W0006	3	1.4	2.5	M 8x63	200	48	18	16.5	25	41	112	114	470
Order No.	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂	w ₃	d ₁	α	α^*	
40060.W0006	79	37	19	40	7.5	20	8	45.5	6	7.5	105°	60°	



Horizontal Acting Toggle Clamps

black - open arm - horizontal base

Optical Measuring Toggle



41000.2

OPTICAL MEASURING TOGGLE CLAMPS

Material

Body: steel matt black.
 Bushes: case hardened and pre-lubricated.
 Ergonomic soft feel, oil-resistant handle with large grip area.
 Supplied complete with clamping screw

(with rubber pad).

Technical Notes

For optical analysis applications.

Tips

Designed specifically for clamping of parts

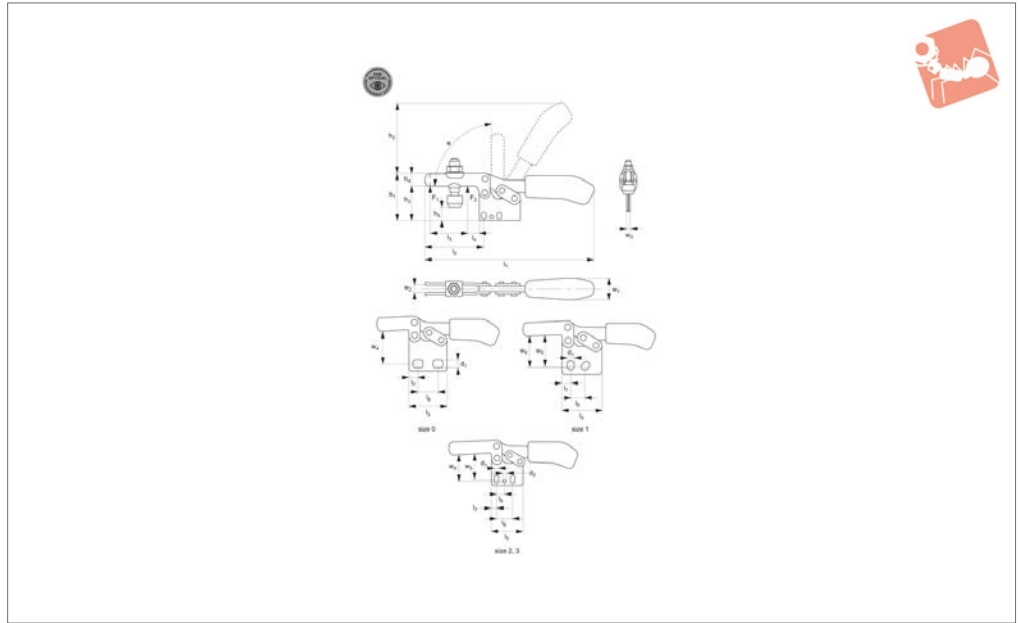
during photometric measurement. Uniform matt black surface prevents reflection, enabling easy „knocking-out“ of the clamp during optical analysis of a component.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄	h ₅ min.	h ₅ max.	l ₁	l ₂	Weight g
41000.W0100	0	0.3	0.4	M 4x34,5	23.0	34.0	14.5	7.5	-7.4	2.7	79	28	35
41000.W0101	1	0.8	1.1	M 5x38,0	30.0	49.0	19.0	10.0	-3.6	1.8	120	42	105
41000.W0102	2	1.0	1.2	M 6x46,0	45.0	66.3	24.0	13.2	-2.6	5.0	162	64	185
41000.W0103	3	1.8	2.5	M 8x63,0	48.5	86.0	32.0	15.0	-7.4	5.0	206	73	320

Order No.	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂	w ₃	w ₄	d ₁	d ₂	α
41000.W0100	9.0	5.5	25.5	11,5-15,5	6.25	-	25.0	4	16.0	-	4.6	-	90°
41000.W0101	18.8	8.0	34.0	13,0-14,5	5.50	-	34.0	5	18,0-21,5	-	5.2	-	90°
41000.W0102	32.0	16.0	38.0	26.0	6.00	12.7	42.0	6	19,5-29,5	28.5	5.6	5.6	90°
41000.W0103	37.0	14.0	50.0	25.7	7.00	-	45.5	8	22,0-31,8	31.6	6.5	5.1	90°



41050.2



Material

Body: steel, matt black.
 Bushes: sizes 2-3 case hardened and pre-lubricated.
 Ergonomic soft feel, oil-resistant handle with large grip area.
 Supplied complete with clamping screw

(with rubber pad).

Technical Notes

Opening angle (symbola/symbol/symbola/symbol*) can be changed by pressing in a stop pin on the clamp body.

For optical analysis applications.

Tips

Designed specifically for clamping of parts during photometric measurement. Uniform matt black surface prevents reflection, enabling easy „knocking-out“ of the clamp during optical analysis of a component.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄	h ₅ min.	h ₅ max.	l ₁	l ₂	l ₃	Weight g
41050.W0100	0	0.3	0.4	M 4x34,5	33	34	24.5	7.5	2.2	13.7	79.0	28.0	9.0	35
41050.W0101	1	0.8	1.1	M 5x38,0	43	49	31.5	10.0	8.9	14.8	119.7	41.7	18.5	105
41050.W0102	2	1.0	1.2	M 6x46,0	61	68	40.0	13.2	14.0	22.0	164.0	64.0	32.0	185
41050.W0103	3	1.8	2.5	M 8x63,0	65	86	49.0	15.0	9.5	22.0	206.0	73.0	39.0	320

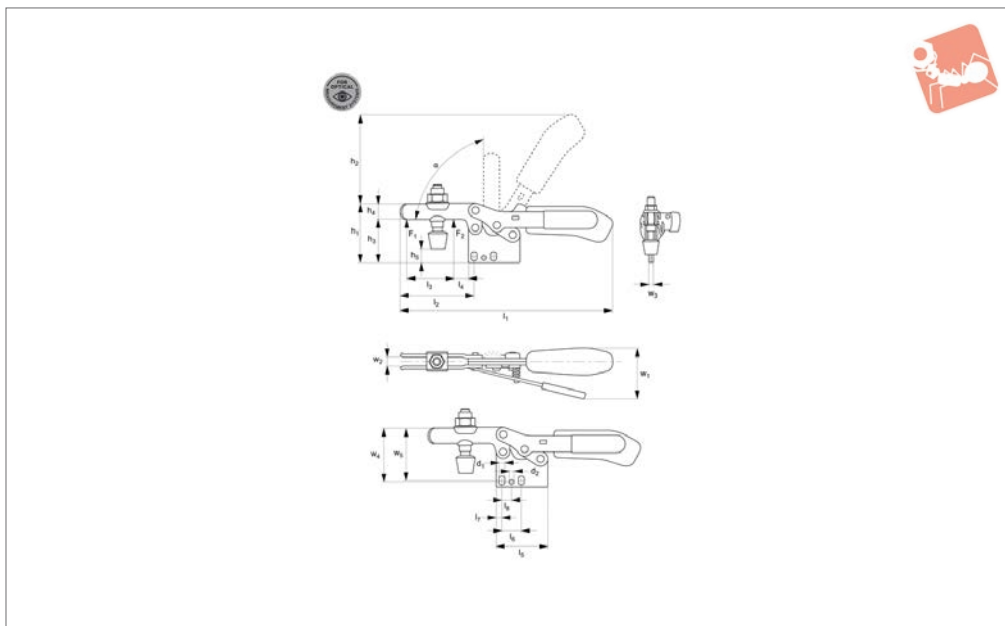
Order No.	l ₄	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂	w ₃	w ₄	w ₅	d ₁	d ₂	α
41050.W0100	5.5	25.5	11,5-15,5	6.25	-	4	12	3	-	20.0	4.6	-	90°
41050.W0101	8.0	34.0	13,0-15,5	5.50	-	5	18	5	24.5	23,5-25,5	5.2	-	90°
41050.W0102	16.0	38.0	26.0	6.00	12.7	6	21	5	34.0	29,5-34,0	5.6	5.6	90°
41050.W0103	12.0	50.0	25.7	7.00	13.0	8	27	6	42.0	37,5-42,5	6.5	5.1	90°



Horizontal Acting Toggle Clamps

black - open arm - vertical base - safety

Optical Measuring Toggle



41060.2

OPTICAL MEASURING TOGGLE CLAMPS

Material

Body: steel, matt black.
 Bushes: case hardened and pre-lubricated.
 Ergonomic soft feel, oil-resistant handle with large grip area.
 Supplied complete with clamping screw (with rubber pad).

Technical Notes

The safety lever holds the clamp in both

the open and the closed position. This prevents opening under vibration or inadvertent movement of the clamping arm when loading or unloading a fixture.

For optical analysis applications.

Tips

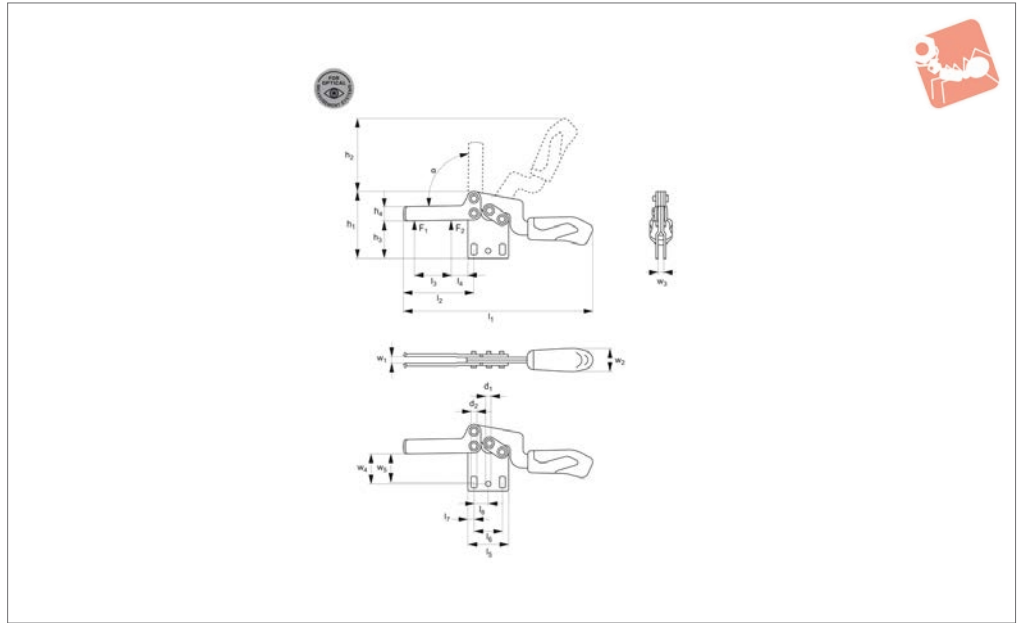
Designed specifically for clamping of parts during photometric measurement. Uniform matt black surface prevents reflection,

enabling easy „knocking-out“ of the clamp during optical analysis of a component.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄	h ₅ min.	h ₅ max.	l ₁	l ₂	l ₃	Weight g
41060.W0100	3	1.8	2.5	M 8x63	65	86	49	15	9	22	206	73	37	390
Order No.	l ₄	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂	w ₃	w ₄	w ₅	d ₁	d ₂	α	
41060.W0100	14	50	25.7	7	13	8	47	6	42	38-42	6.5	5.1	90°	



41062.1



Material

Body: steel, matt black.
 Bushes: case hardened and pre-lubricated.
 Ergonomic soft feel, oil-resistant handle with large grip area.
 Supplied complete with clamping screw (with rubber pad).

Technical Notes

symbola/symbol* alternative angle

through using the removable stop.
 Opening angle (symbola/symbol/symbola/symbol*) can be changed by pressing in a stop pin on the clamp body.

For optical analysis applications.

Tips

Designed specifically for clamping of parts during photometric measurement. Uniform matt black surface prevents reflection,

enabling easy „knocking-out“ of the clamp during optical analysis of a component.

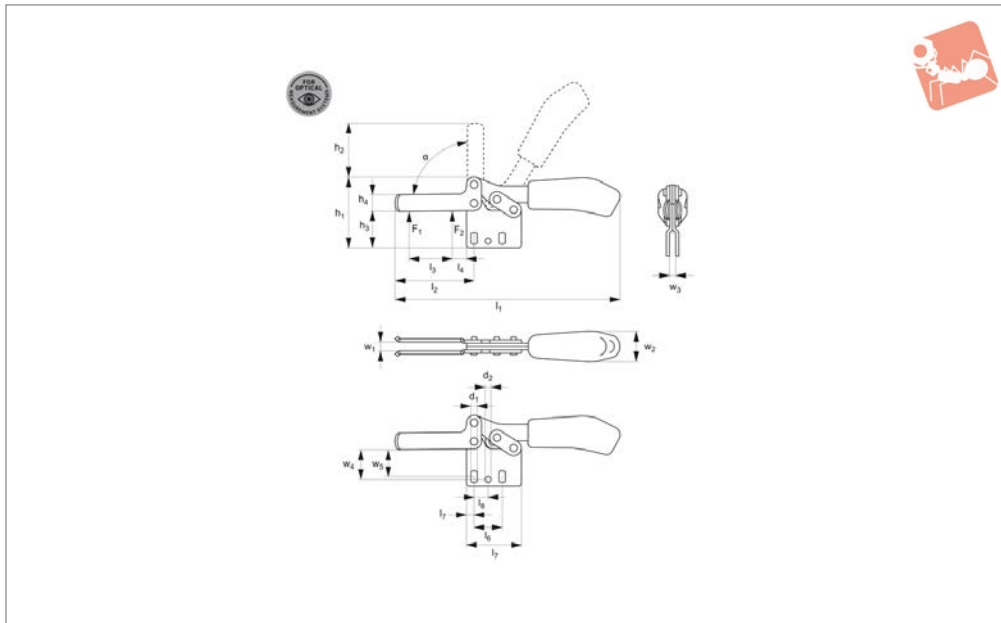
Order No.	Size	F ₁ kN	F ₂ kN	h ₁	h ₂	h ₃	h ₄	l ₁	l ₂	l ₃	l ₄	l ₅	Weight g
41062.W0100	2	1	1.2	190	34	67	13.2	173.5	64	38.6	11	38	61
Order No.	l ₆	l ₇	l ₈	w ₁	w ₂	w ₃	w ₄	w ₅	d ₁	d ₂	α		
41062.W0100	26	6	13.1	6.2	21	5	27	23-28	5.6	4.8	90°		



Horizontal Acting Toggle Clamps

black - open arm - vertical base

Optical Measuring Toggle



41062.2

OPTICAL MEASURING TOGGLE CLAMPS

Material

Body: steel, matt black.
 Bushes: case hardened and pre-lubricated.
 Ergonomic soft feel, oil-resistant handle with large grip area.
 Supplied complete with clamping screw

(with rubber pad).

Technical Notes
 For optical analysis applications.

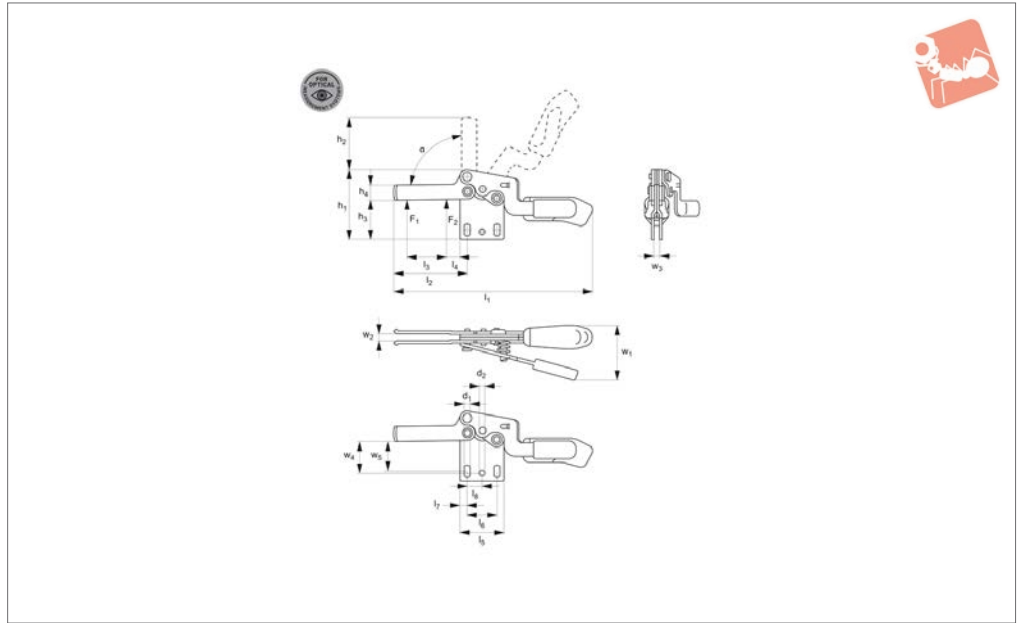
Tips
 Designed specifically for clamping of parts

during photometric measurement. Uniform matt black surface prevents reflection, enabling easy „knocking-out“ of the clamp during optical analysis of a component.

Order No.	Size	F ₁ kN	F ₂ kN	h ₁	h ₂	h ₃	h ₄	l ₁	l ₂	l ₃	l ₄	l ₅	Weight g
41062.W0110	3	1.8	2.5	65	86	34	15	206	73	34.5	16.5	50	320
Order No.	l ₆	l ₇	l ₈	w ₁	w ₂	w ₃	w ₄	w ₅	d ₁	d ₂	α		
41062.W0110	25.7	7	13	8	27	6	27	22,5-27,5	6.5	5.1	90°		



41064.1



Material

Body: steel, matt black.
 Bushes: case hardened and pre-lubricated.
 Ergonomic soft feel, oil-resistant handle with large grip area.
 Supplied complete with clamping screw (with rubber pad).

Technical Notes

The safety lever holds the clamping arm in

both the clamped and open position. This prevents opening under vibration or accidental movement of the clamping arm during assembly/disassembly of the fixture.

For optical analysis applications.

Tips

Designed specifically for clamping of parts during photometric measurement. Uniform

matt black surface prevents reflection, enabling easy „knocking-out“ of the clamp during optical analysis of a component.

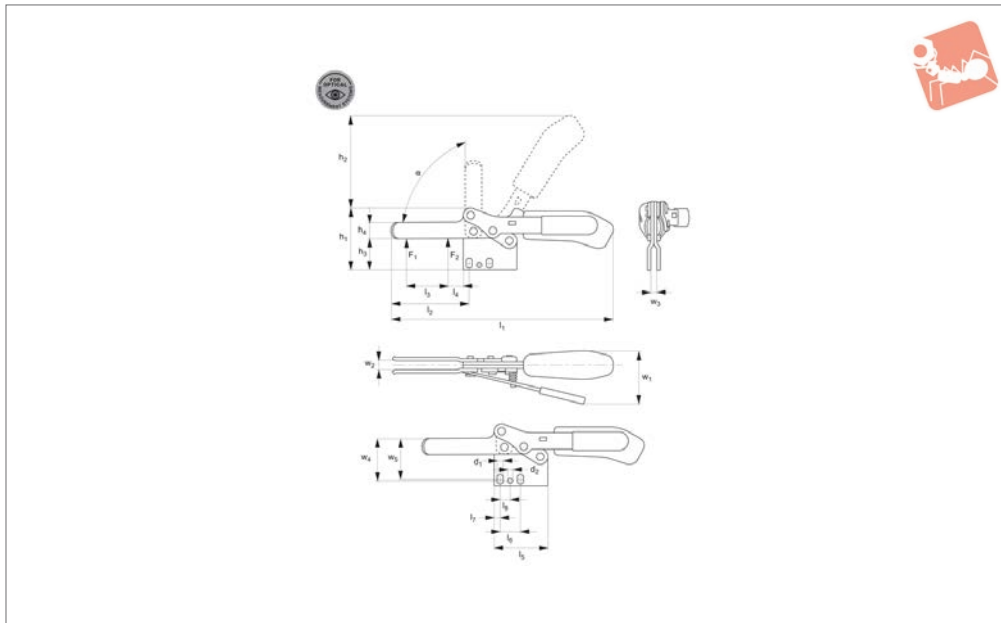
Order No.	Size	F ₁ kN	F ₂ kN	h ₁	h ₂	h ₃	h ₄	l ₁	l ₂	l ₃	l ₄	l ₅	Weight g
41064.W0100	2	1	1.2	61	67	34	13.2	173.5	64	38.6	11	38	230
Order No.	l ₆	l ₇	l ₈	w ₁	w ₂	w ₃	w ₄	w ₅	d ₁	d ₂	α		
41064.W0100	26	6	13.1	6.2	48	5	27	23-28	5.6	4.8	90°		



Horizontal Acting Toggle Clamps

black - open arm - vertical base - safety

Optical Measuring Toggle



41064.2

OPTICAL MEASURING TOGGLE CLAMPS

Material

Body: steel, matt black.
 Bushes: case hardened and pre-lubricated.
 Ergonomic soft feel, oil-resistant handle with large grip area.
 Supplied complete with clamping screw (with rubber pad).

Technical Notes

The safety lever holds the clamping arm in

both the clamped and open position. This prevents opening under vibration or accidental movement of the clamping arm during assembly/disassembly of the fixture.

For optical analysis applications.

Tips

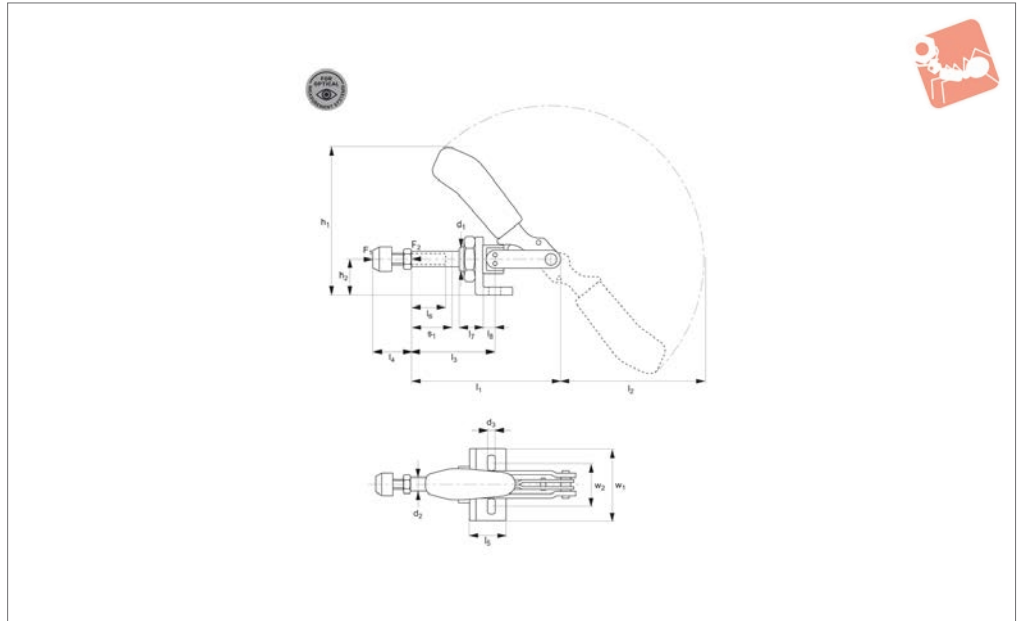
Designed specifically for clamping of parts during photometric measurement. Uniform

matt black surface prevents reflection, enabling easy „knocking-out“ of the clamp during optical analysis of a component.

Order No.	Size	F ₁ kN	F ₂ kN	h ₁	h ₂	h ₃	h ₄	l ₁	l ₂	l ₃	l ₄	l ₅	Weight g
41064.W0110	3	1.8	2.5	65	86	34	15	206	73	34.5	16.5	50	350
Order No.	l ₆	l ₇	l ₈	w ₁	w ₂	w ₃	w ₄	w ₅	d ₁	d ₂	α		
41064.W0110	25.7	7	13	8	46.5	6	27	22,5-27,5	6.5	5.1	90°		



42000.2



Material

Body: steel, matt black.
 Bushes: case hardened and pre-lubricated.
 Ergonomic soft feel, oil-resistant handle with large grip area.
 Supplied complete with clamping screw

45020.2 (with rubber pad).

Technical Notes

For optical analysis applications.

Tips
 Designed specifically for clamping of parts

during photometric measurement. Uniform matt black surface prevents reflection, enabling easy „knocking-out“ of the clamp during optical analysis of a component.

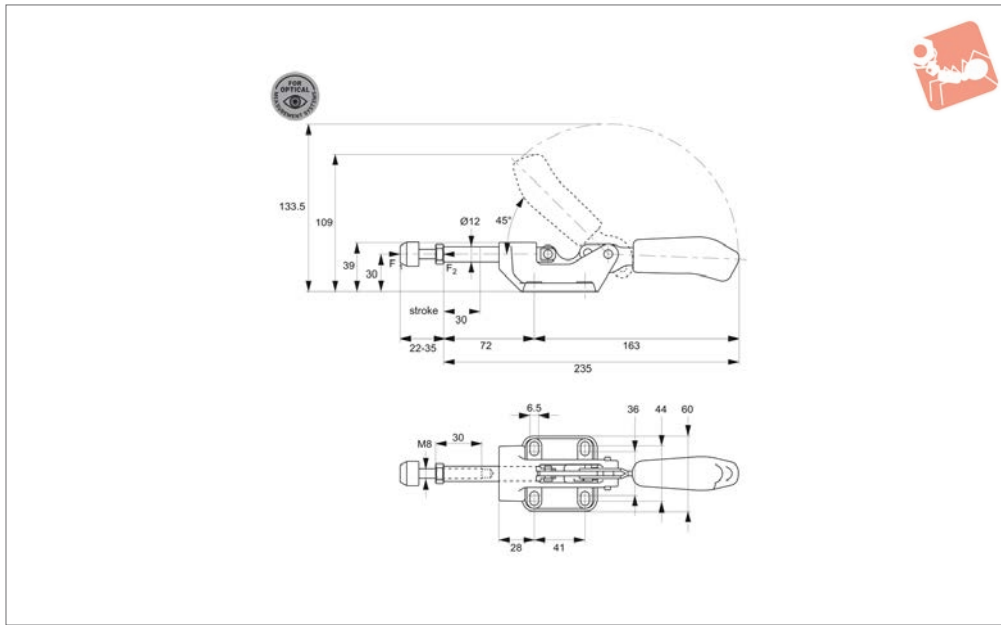
Order No.	Size	F ₁ kN	F ₂ kN	Stroke s ₁	d ₁	d ₂	Clamping screw d ₃	d ₄	h ₁	h ₂	l ₁	Weight g
42000.W0501	1	1	1	20	M12x1,5	8	M 4x20	4.5	60	15	91	125
42000.W0502	2	2	2	26	M16x1,5	10	M 6x25	5.6	95	20	114	245

Order No.	l ₂	l ₃ min.	l ₄ min.	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂
42000.W0501	72	24.5	12	20	20	16	7.0	30	16,0-19,5
42000.W0502	105	32.5	17	34	25	19	12.5	50	31,8-36,0



Push-Pull Type Toggle Clamps - Black for optical measuring equipment

Optical Measuring Toggle



42050.2

OPTICAL MEASURING TOGGLE CLAMPS

Material

Body: malleable cast iron, matt black.
Levers and rods of tempered steel, matt black galvanised.

Technical Notes

For optical analysis applications.

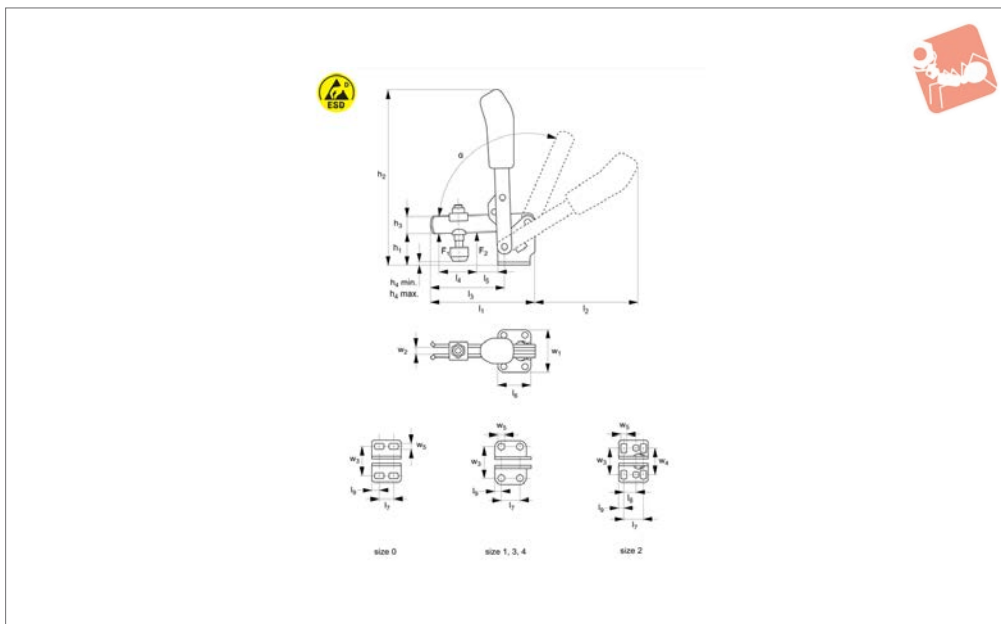
Tips

Designed specifically for clamping of parts during photometric measurement. Uniform matt black surface prevents reflection, enabling easy „knocking-out“ of the clamp during optical analysis of a component.

Order No.	Size	F ₁ kN	Clamping screw	Weight g
42050.W0103	3	4	M 8x44	540



40000.3



Material

Body: steel, zinc plated.

Rivets: stainless steel running in hardened bushings (sizes 2-3). Bearing positions are greased.

With protective cap and handle made of electrostatic conductive (dissipative) material. The handle is ergonomic, soft

feel, oil-resistant and with large grip area.

Safety clamping piece with finger protection, retainer for the clamping screw at the end of the clamping arm.

Complete with zinc plated and tempered clamping screw no. 45060.W0300- .W0303.

Technical Notes

Temperature range -10°C to +80°C.

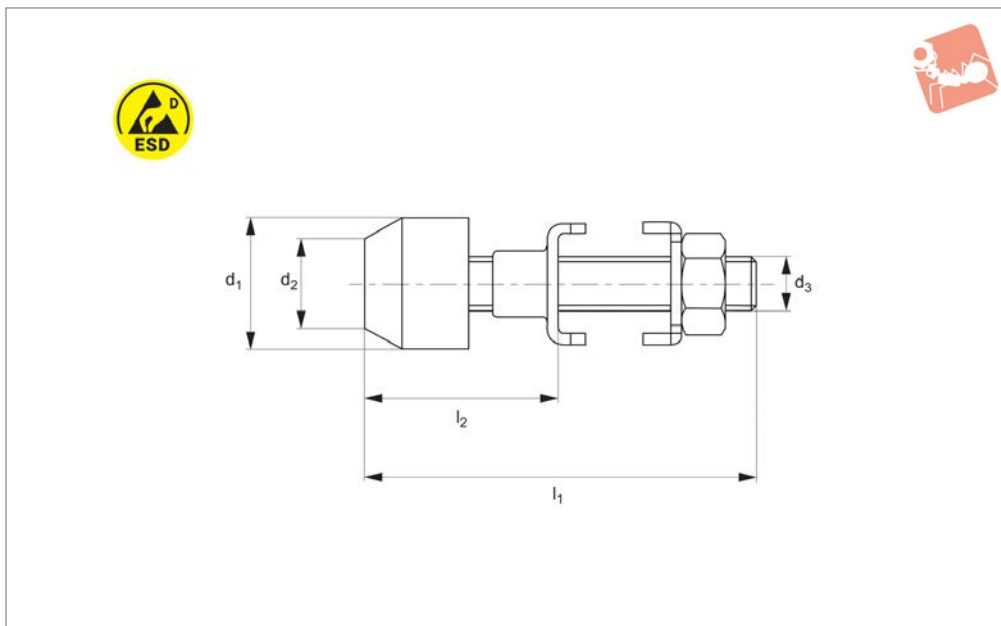
The ESD (electrostatically sensitive devices) vertical clamp is non-insulating. It must not be used in areas where open voltages are used.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄ min.	h ₄ max.	l ₁	l ₂	l ₃	Weight g
40000.W0200	0	0.5	0.7	M 4x25	18	81	8	-1.5	3.5	49	50	31	60
40000.W0201	1	0.6	1.1	M 5x30	19	98	10	-4.0	2.0	61	58	39	105
40000.W0202	2	0.8	1.2	M 6x35	23	140	12	-3.0	4.5	78	89	52	175
40000.W0203	3	1.2	2.5	M 8x45	33	186	18	2.0	11.0	112	112	79	410

Order No.	l ₄	l ₅	l ₆	l ₇	l ₈	l ₉	w ₁	w ₂	w ₃	w ₄	w ₅	α	α*
40000.W0200	14	5	22	8,5-13,5	-	5.5	32	4	23.0	-	4.5	95°	-
40000.W0201	18	6	27	16.0	-	5.5	34	5	22,5-26,0	-	4.5	95°	-
40000.W0202	25	11	32	20.0	12.5	6.0	43	6	23,0-31,0	27	5.5	105°	60°
40000.W0203	37	19	35	20.0	-	7.5	46	8	32.5	-	7.5	105°	60°



ESD Clamping Screws for open arm toggle clamps



45060.3

ESD TOGGLE CLAMPS

Material

Steel, zinc plated and tempered steel.
Tensile strength class 8.8. With nut and removable rubber pad.

Technical Notes

The ESD (electrostatically sensitive devices) clamping screw is non-insulating. It must not be used in areas

where open voltages are used.

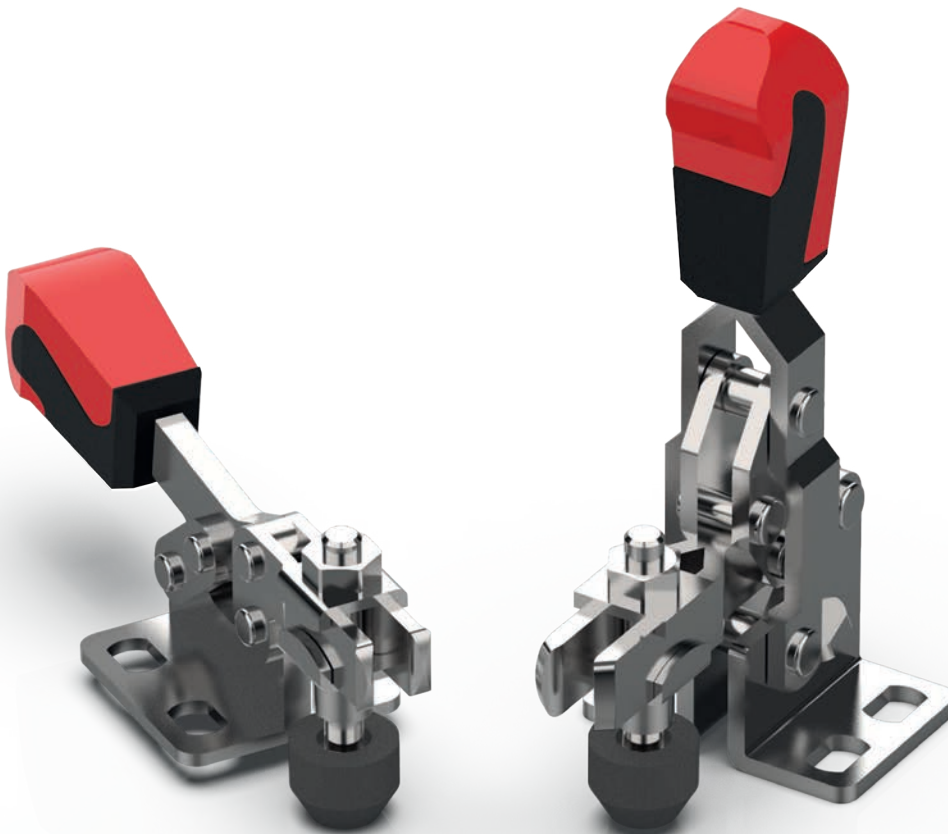
Order No.	Size	Type	Washer size	l_1	l_2	d_1	d_2	Screw DIN 933 $d_3 \times l_3$	Weight g
45060.W0300	0	Steel	0	32	13-20	11.0	7	M 4x25	5
45060.W0301	1	Steel	1	38	17-24	12.5	8	M 5x30	10
45060.W0302	2	Steel	2	45	18-28	15.0	10	M 6x35	22
45060.W0303	3	Steel	3	58	22-34	15.0	10	M 8x45	40



The ESD toggle clamps have been specially developed for working with electrostatically sensitive components, assemblies or devices in ESD protection zones (EPA) in accordance with the standard DIN EN 61340-5-1. All our toggle clamps have been tested and certified by an independent expert regarding leakage resistance, discharge time and surface tension.

Features

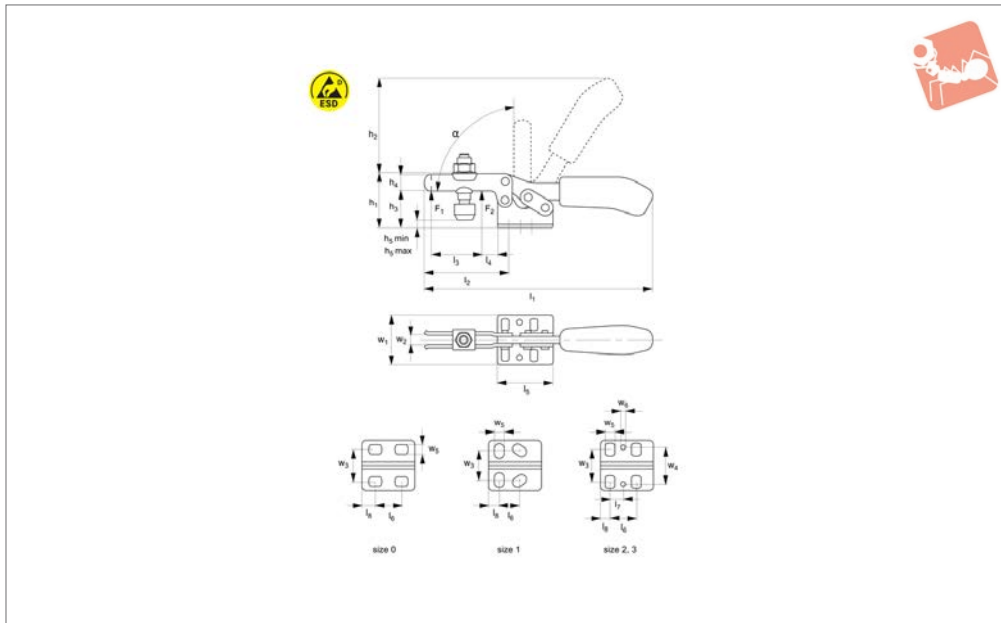
- Leakage resistance according to DIN IEC / TR 61340-5-2 between 10^{04} and 10^{09} Ohm.
- Discharge time according to DIN IEC / TR 61340-5-2 < 2 seconds.
- Surface tension (electric field strength) according to DIIN EN 61340-5-1 < 100 Volt.





Horizontal Acting Toggle Clamps

ESD - open arm - horizontal base



41000.3

ESD TOGGLE CLAMPS

Material

Body: steel, zinc plated.
 Rivets: stainless steel running in hardened bushings (sizes 2-3). Bearing positions are greased.
 With protective cap and handle made of electrostatic conductive (dissipative)

material. The handle is ergonomic, soft feel, oil-resistant and with large grip area. Retainer for the clamping screw at the end of the clamping arm.
 Complete with zinc plated and tempered clamping screw no. 45060.W0300- .W0303.

Technical Notes

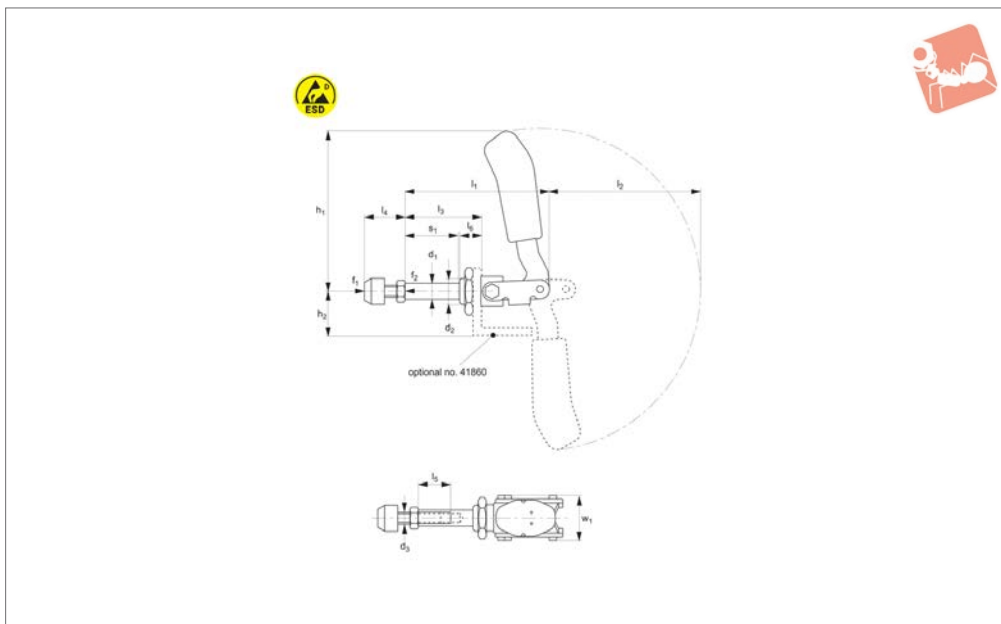
Temperature range -10°C to +80°C.
The ESD (electrostatically sensitive devices) horizontal clamp is non-insulating. It must not be used in areas where open voltages are used.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄	h ₅ min.	h ₅ max.	l ₁	l ₂	Weight g
41000.W0200	0	0.25	0.4	M 4x25	23.0	34	14.5	7.5	-5.5	0.0	79	28	35
41000.W0201	1	0.80	1.1	M 5x30	30.0	49	19.0	10.0	-3.0	2.5	120	42	105
41000.W0202	2	1.00	1.2	M 6x35	45.0	68	24.0	13.2	-1.5	5.0	162	64	185
41000.W0203	3	1.80	2.5	M 8x45	48.5	86	32.0	15.0	-2.0	9.0	206	73	320

Order No.	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂	w ₃	w ₄	w ₅	w ₆	α
41000.W0200	9.0	5.5	25.5	11,5-15,5	-	6.3	25.0	4	16.0	-	4.6	-	90°
41000.W0201	18.7	8.0	34.0	13,0-14,5	-	5.5	34.0	5	18,0-21,5	-	5.2	-	90°
41000.W0202	32.0	16.0	38.0	26.0	12.7	6.0	42.0	6	19,5-29,5	28.5	5.6	5.6	90°
41000.W0203	38.0	14.0	50.0	25.7	13.0	7.0	45.5	8	22,0-31,8	31.6	6.5	5.1	90°



41840.3



Material

Body: steel, zinc-plated.
 Piston rod: non-rusting steel.
 Shoulder screws: steel, tempered. Bearing positions are greased.
 Long rod-guide with attaching thread and nut.

With protective cap and handle made of electrostatic conductive (dissipative) material. The handle is ergonomic, soft feel, oil-resistant and with large grip area. Complete with zinc plated and tempered clamping screw no. 45020.W0301- .W0303.

Technical Notes

Temperature range -10°C to +80°C.
The ESD (electrostatically sensitive devices) push-pull type toggle clamp is non-insulating. It must not be used in areas where open voltages are used.

Order No.	Size	F ₁ kN	F ₂ kN	h ₁	h ₂	l ₁	l ₂	l ₃	l ₄ min.	Weight g
41840.W0202	2	1.0	1.0	73	24	68.5	68	36	17	130
41840.W0203	3	2.5	2.5	123	33	108.0	115	57	22	320

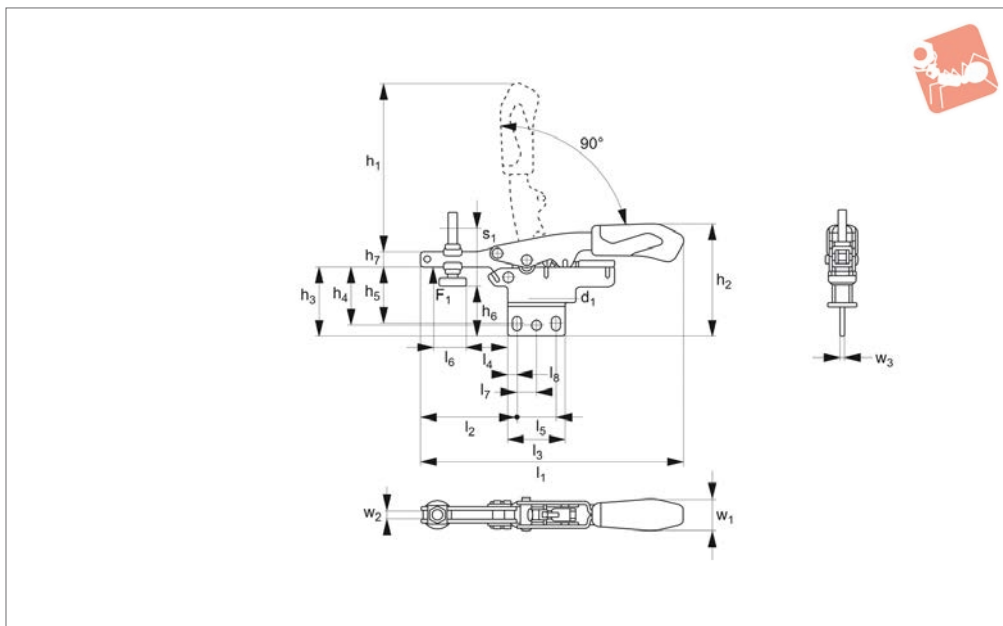
Order No.	l ₄ max.	l ₅	l ₆	d ₁	d ₂	d ₃	w ₁	Stroke s ₁	Clamping screw
41840.W0202	25	15	13	10	M16x1,5	M 6	30.5	24.5	M 6x25
41840.W0203	35	25	16	12	M20x1,5	M 8	33.0	40.0	M 8x35



Auto-Adjust Toggle Clamp

open clamping arm - vertical base

Auto-Adjust Toggle Clamps



42609

AUTO-ADJUST TOGGLE CLAMPS

Material

Body: steel, zinc plated.
Ergonomic, soft feel and oil-resistant handle with large grip area.

Supplied complete with zinc plated clamping screw (with rubber pad).

Technical Notes

Automatically adjusts to suit work-piece height.
Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	Automatic height compensation s ₁	Height compensation max.	Clamping screw	h ₁	h ₂	h ₃	h ₄	h ₅	h ₆ min.	Weight g
42609.W0020	20	2	20	35	M 6x49	113	73.0	47	39.8	37-40	13.5	272
42609.W0050	50	3	35	40	M 8x50	158	94.5	59	49.0	45-49	27.5	544

Order No.	h ₆ max.	h ₇	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂	w ₃	d ₁	d ₂
42609.W0020	31	10	173	64.0	38	25.9	26	22	13	6.0	21	6.0	3	5.6	5.6
42609.W0050	38	13	243	106.5	55	38.0	50	35	19	8.5	27	8.2	4	6.5	5.6

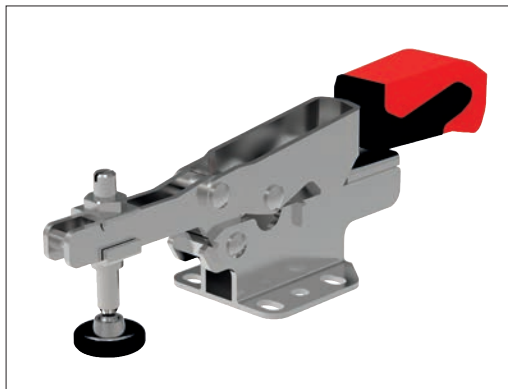


Benefits

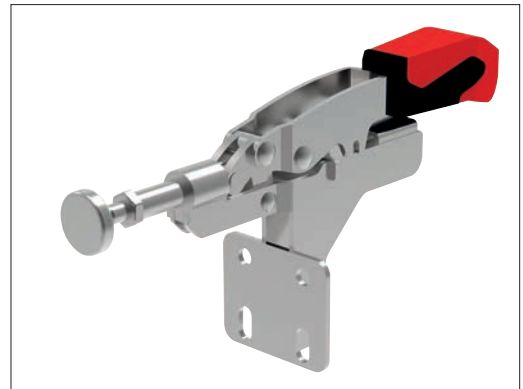
- Automatically adapts to workpiece height / width.
- Ideal for small batch sizes.
- Adjustable clamping forces.



Example Toggle Clamps



42605 - Horizontal base - vertical acting



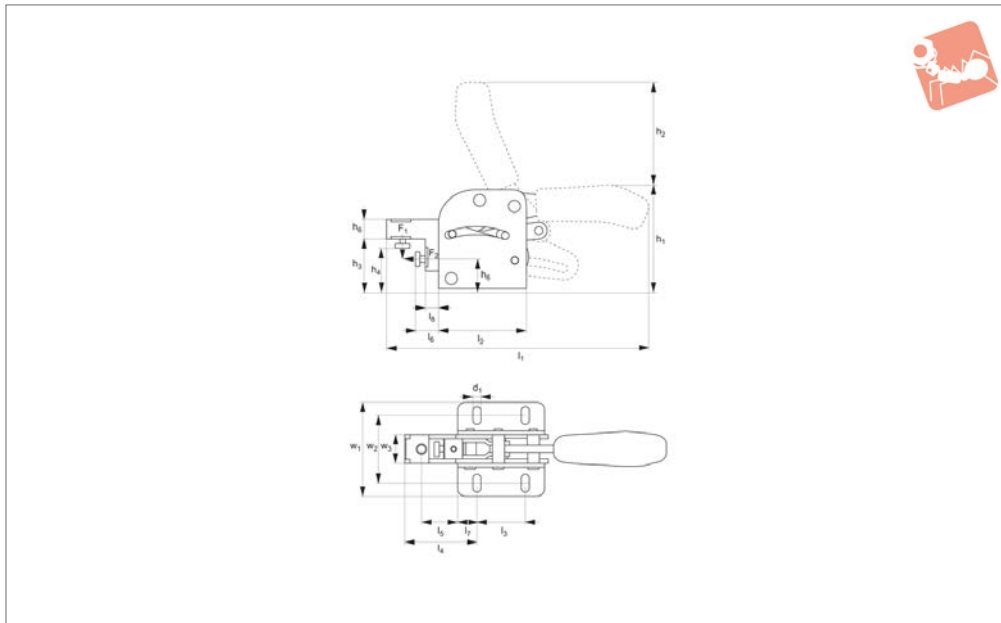
42611 - Push pull type - horizontal acting



Combination Toggle Clamp

position and clamp

Auto-Adjust Toggle Clamps



42500

AUTO-ADJUST TOGGLE CLAMPS

Material

Body: steel, zinc plated.
Rivets: stainless steel running in hardened bushes. Pre-lubricated bearings (grease suitable for food industry use).

Ergonomic, soft feel and oil-resistant handle with large grip area.

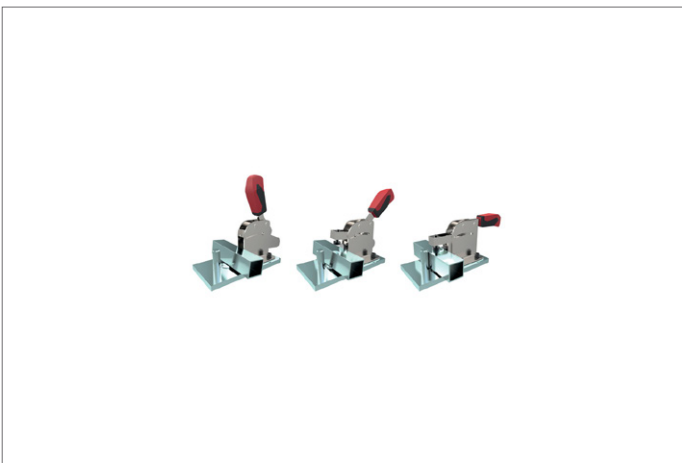
Technical Notes

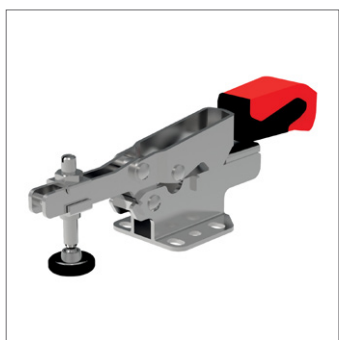
Especially useful in welding applications.

The positioning rod and toggle clamp achieve precise positioning and clamping of components in one operation.
Temperature range -10°C to +80°C.

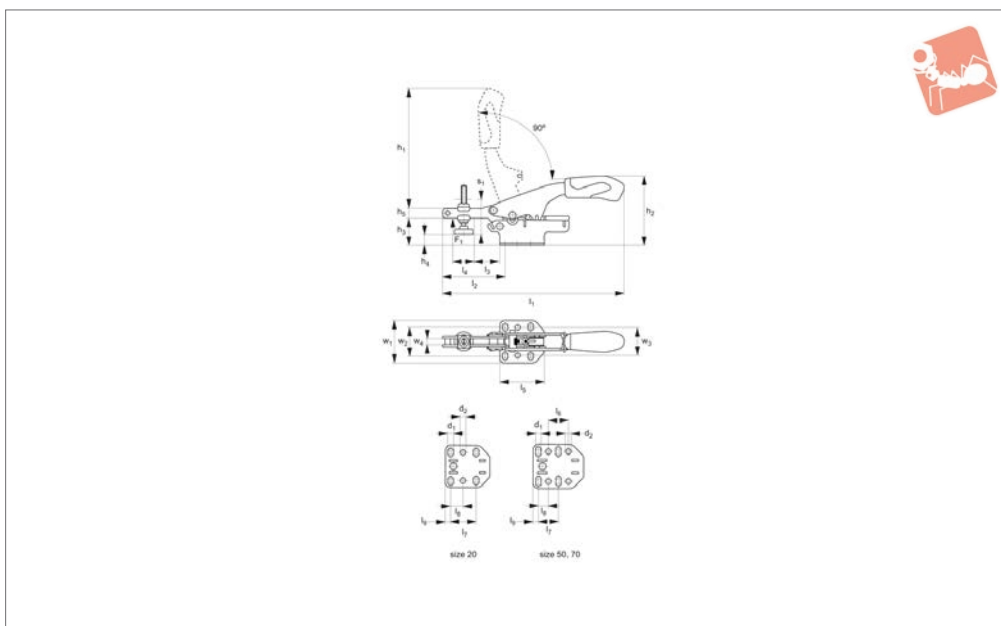
Order No.	Size	F ₁ kN	F ₂ kN	d ₁	h ₁	h ₂	h ₃	h ₄ min.	h ₄ max.	h ₅	h ₆	l ₁	Weight g
42500.W0001	1	1.0	1.0	5.5	74	62	36.0	25	32	22	12	150	340
42500.W0002	2	2.0	2.0	6.5	94	87	46.0	30	40	28	16	219	700
42500.W0003	3	3.0	3.0	8.5	110	106	55.5	40	50	34	20	270	1620

Order No.	l ₂	l ₃	l ₄	l ₅	l ₆ min.	l ₆ max.	l ₇	l ₈	w ₁	w ₂	w ₃
42500.W0001	55	40	33	15	5	10	7.5	0.5	53	34,5-39,5	17.0
42500.W0002	75	50	56	32	14	24	12.5	9.0	75	48,5-61,5	19.5
42500.W0003	90	50	74	37	20	30	20.0	14.0	96	60,0-80,0	29.0





42605



Material

Body: steel, zinc plated.
Ergonomic soft feel oil-resistant handle with large grip area.

Supplied complete with zinc-plated clamping screw (with rubber pad).

Technical Notes

Automatically adjusts to suit workpiece height.

Order No.	Size	F ₁ kN	Automatic height compensation s ₁	d ₁	d ₂	h ₁	h ₂	h ₃	h ₄ min.	h ₄ max.	h ₅	Weight g
42605.W0020	20	2	20	5.5	5.5	121	70	27	-7.0	11.0	10	345
42605.W0050	50	3	35	6.5	6.5	174	72	23	-8.9	1.5	13	520
42605.W0070	70	3	35	6.5	6.5	174	90	41	-6.6	19.7	13	575

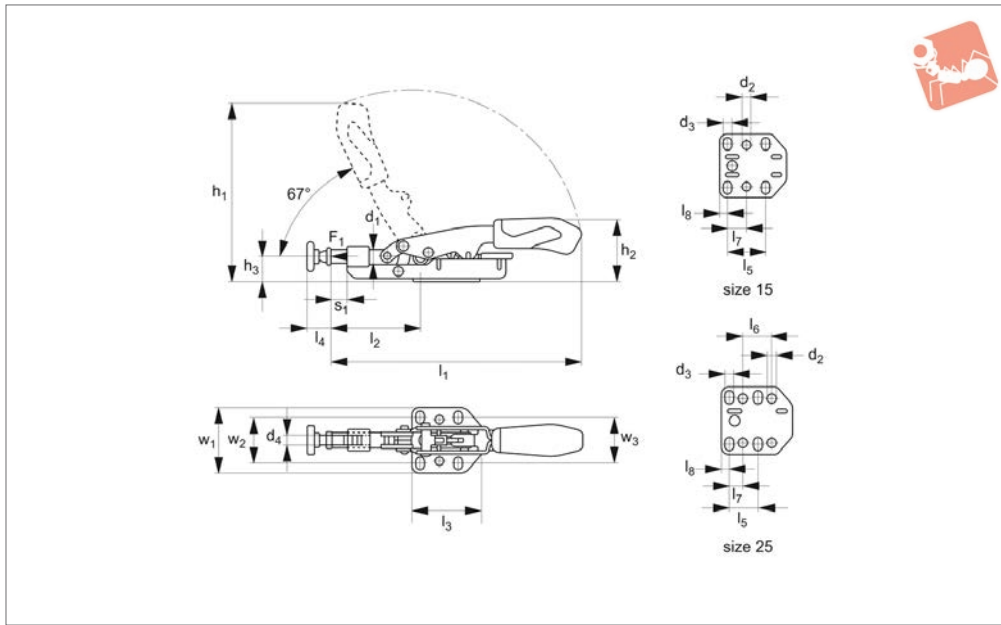
Order No.	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	l ₉	w ₁	w ₂	w ₃	w ₄	Clamping screw	Height compensation max.
42605.W0020	184	63	22.0	26.0	45.0	-	26.0	12.7	5.3	42.5	26-32	28	6.1	M 6x49	35
42605.W0050	261	104	35.2	22.2	63.5	25.4	25.4	12.7	6.3	57.0	32-44	38	8.4	M 8x50	40
42605.W0070	261	104	35.0	50.0	63.5	25.4	25.4	12.7	6.3	57.0	32-44	38	8.5	M 8x66	60



Auto-Adjust Push-Pull Toggle Clamp

horizontal base

Auto-Adjust Toggle Clamps



42613

AUTO-ADJUST TOGGLE CLAMPS

Material

Body: steel, zinc plated.
Ergonomic, soft feel and oil-resistant handle with large grip area.

Supplied complete with zinc plated clamping screw (with rubber pad).

Technical Notes

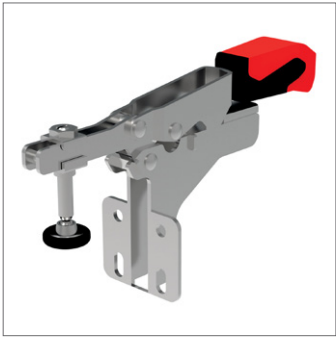
Automatically adjusts to suit work-piece height.
Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	Automatic height compensation s ₁		d ₁	d ₂	d ₃	d ₄	h ₁	h ₂	h ₃	Weight g
42613.W0015	15	2	8		8.5	5.5	5.5	M 6	145	58	16.8	230
42613.W0025	25	3	13		11.8	6.5	6.5	M 8	207	71	23.2	550

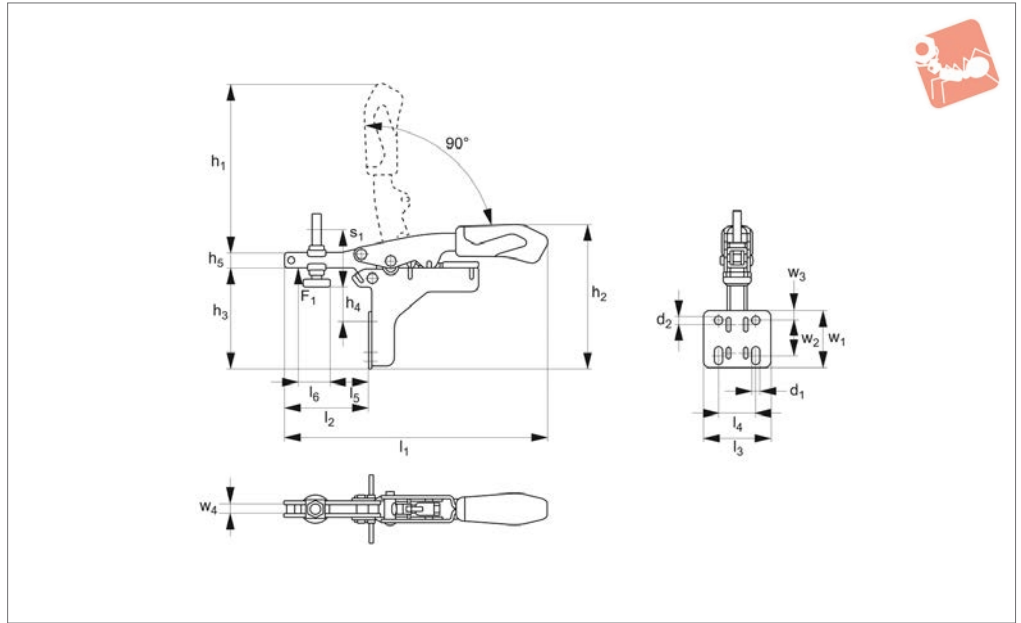
Order No.	l ₁	l ₂	l ₃	l ₄ min.	l ₄ max.	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂	w ₃	Clamping screw	Height compensation max.
42613.W0015	177	52-69	45.0	13	25	26.0	-	12.7	5.3	42.5	26-32	28	M 6x37	25
42613.W0025	256	72-98	63.5	16	35	25.4	25.4	12.7	6.3	57.0	32-44	38	M 8x50	35

Auto-Adjust Toggle Clamps

Auto-Adjust Toggle Clamp open clamping arm - angle base



42607



AUTO-ADJUST TOGGLE CLAMPS

Material

Body: steel, zinc plated.
Ergonomic, soft feel and oil-resistant handle with large grip area.

Supplied complete with zinc plated clamping screw (with rubber pad).

Technical Notes

Automatically adjusts to suit work-piece height.
Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	Automatic height compensation s ₁	Height compensation max.	Clamping screw	h ₁	h ₂	h ₃	h ₄ min.	Weight g
42607.W0020	20	2	20	35	M 6x49	113	94	68	3	272
42607.W0050	50	3	35	40	M 8x66	158	124	88	1	544

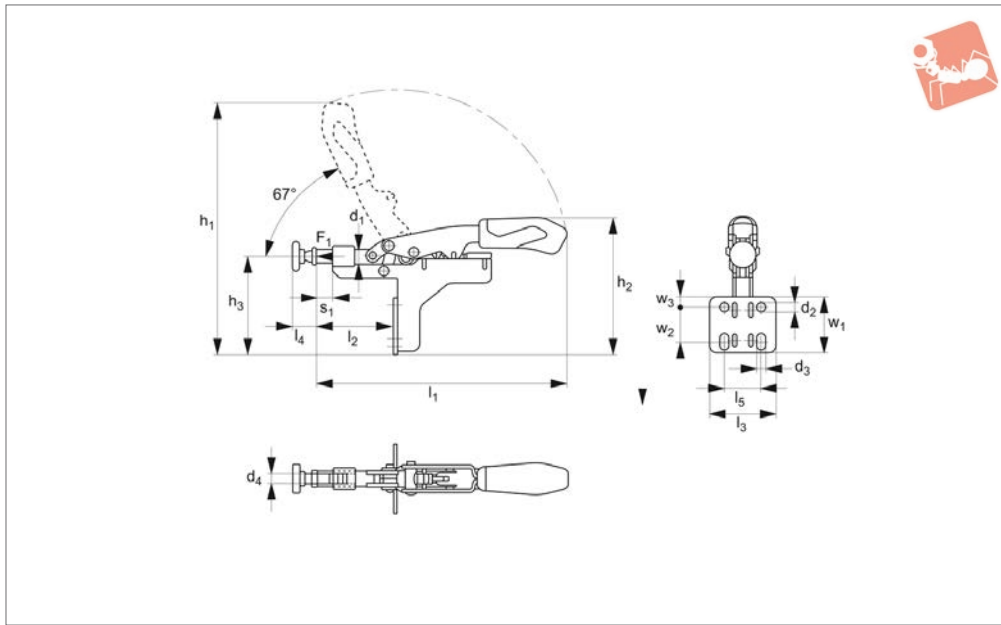
Order No.	h ₄ max.	h ₅	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	d ₁	d ₂	w ₁	w ₂	w ₃	w ₄
42607.W0020	24	10	173	56	45	25.4	24	22	5.6	5.6	38	20,0-26,0	7.1	6.0
42607.W0050	30	13	244	85	57	38.1	31	40	6.5	6.5	51	20,5-30,0	10.6	8.2



Auto-Adjust Push-Pull Toggle Clamp

angle base

Auto-Adjust Toggle Clamps



42611

AUTO-ADJUST TOGGLE CLAMPS

Material

Body: steel, zinc plated.
Ergonomic, soft feel and oil-resistant handle with large grip area.

Supplied complete with zinc plated clamping screw (with rubber pad).

Technical Notes

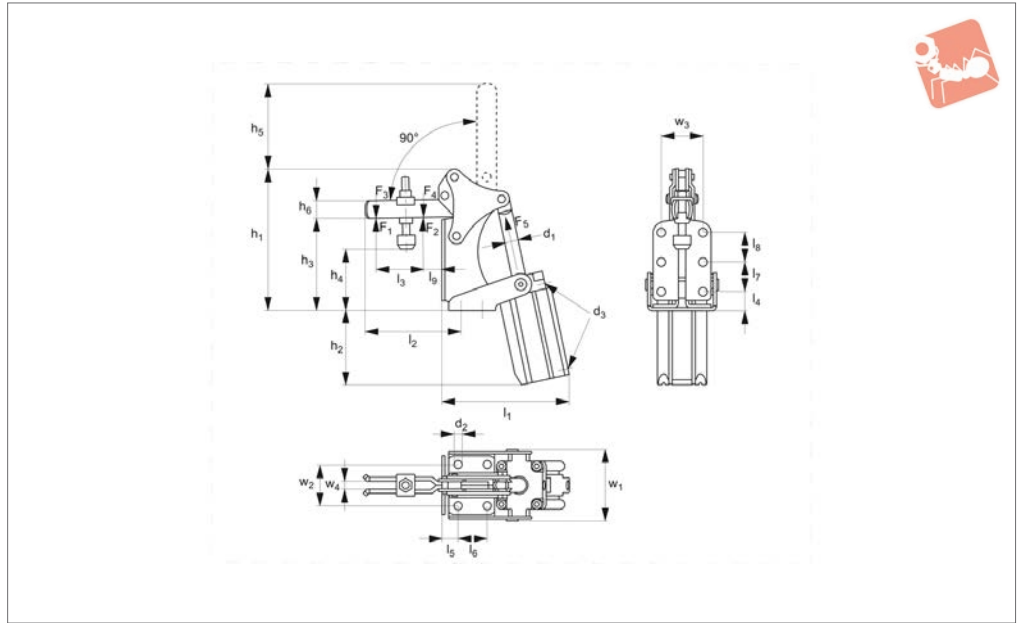
Automatically adjusts to suit work-piece height.
Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	Automatic height compensation s ₁	Height compensation max.	Clamping screw	h ₁	h ₂	h ₃	l ₁	Weight g
42611.W0015	15	2	8	25	M 6x37	173	91	66	167	272
42611.W0025	25	3	13	35	M 8x50	238	119	84	236	544

Order No.	l ₂	l ₃	l ₄ min.	l ₄ max.	l ₅	d ₁	d ₂	d ₃	d ₄	w ₁	w ₂	w ₃
42611.W0015	42-59	45	14	29	25.4	8.5	5.6	5.6	M 6	38	20,0-26,0	7.1
42611.W0025	58-83	57	19	39	38.1	11.8	6.5	6.5	M 8	51	20,5-30,0	10.6



47060



PNEUMATIC TOGGLE CLAMPS

Material

Body: steel, zinc plated.
 Bushes: case hardened and greased.
 Rivets: stainless steel.
 Complete with tempered, white zinc plated clamping screw.

Technical Notes

Bearings are pre-lubricated.
 Clamp ready for installation and consists

of:
 - vertical toggle clamp no. 40000 (without handle)
 Pneumatic cylinder, double acting.
 F_3 and F_4 = max. clamping force at 6 bar.
 V_n = air consumption per double stroke in dm^3 at 6 bar.
 Suitable proximity switches for end-position monitoring are available using

order 45001. 0.3m PUR cable with M8 connector and rotatable knurled nuts.
 Switching function: NOC.
 Output: PNP.

Tips

The console is self-supporting and must be clear of other surfaces. There is a valve for controlling the speed of operation.

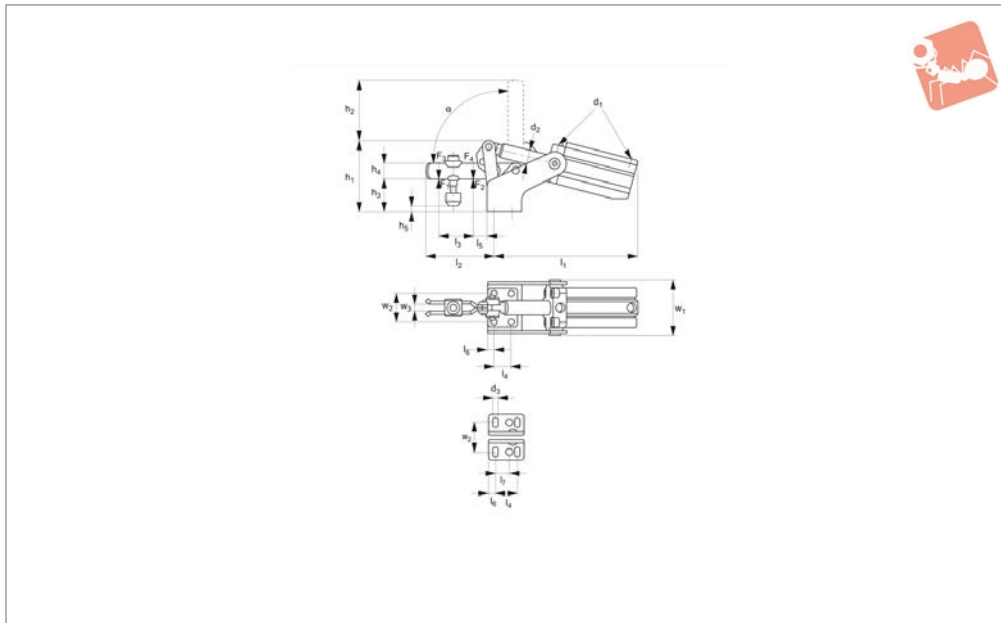
Order No.	Size	F ₁ kN	F ₂ kN	F ₃ kN	F ₄ kN	F ₅ kN	Clamping screw	Piston dia.	h ₁	h ₂	h ₃	h ₄ min.	h ₄ max.	h ₅	h ₆	Weight g
47060.W0002	2	1.0	1.2	0.70	1.0	0.30	M 6x35	25	100.5	67.5	65.0	38.4	45.0	43	12	625
47060.W0003	3	1.0	2.5	0.65	1.1	0.50	M 8x45	32	114.5	78.0	68.7	38.0	46.5	69	18	1025
47060.W0004	4	2.0	3.0	1.50	2.2	0.75	M 8x65	40	153.0	80.0	100.0	51.0	80.0	92	20	1700

Order No.	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	l ₉	w ₁	w ₂	w ₃	w ₄	d ₁	d ₂	d ₃	Vn dm ³
47060.W0002	83.0	56.5	25	15.9	15.3	13	13	12.5	6.5	27	6	54.5	26.6	12	5.6	M 5	0.3
47060.W0003	96.0	80.5	36	17.5	16.5	16	16	-	12.5	25	8	62.5	25.0	16	6.5	G1/8	0.4
47060.W0004	123.5	102.0	49	20.5	17.5	32	32	32.0	19.0	45	10	77.5	45.0	16	8.5	G1/4	0.8



Pneumatic Toggle Clamp with horizontal cylinder attachment

Pneumatic Toggle Clamps



47010

PNEUMATIC TOGGLE CLAMPS

Material

Body: steel, zinc plated and galvanised.
Bushes: case hardened and greased.
Rivets: stainless steel.
Complete with tempered, galvanized clamping screw.

Technical Notes

Bearings are pre-lubricated.
Clamp ready for installation and consists of:

- vertical toggle clamp no. 40000 (without handle)
- FESTO-pneumatic cylinder, double acting.

F_3 and F_4 = max. clamping force at 6 bar.
piston \emptyset^* = required piston dia. to achieve force F_5 at 6 bar.

V_n = air consumption per double stroke in dm^3 at 6 bar.

Suitable proximity switches for end-

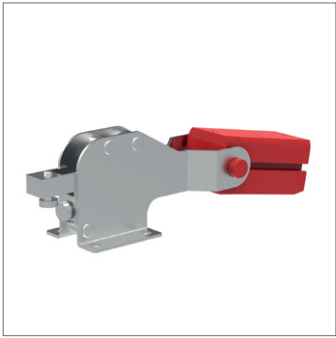
position monitoring are available using order 45001. 0.3m PUR cable with M8 connector and rotatable knurled nuts.
Switching function: NOC.
Output: PNP.

Tips

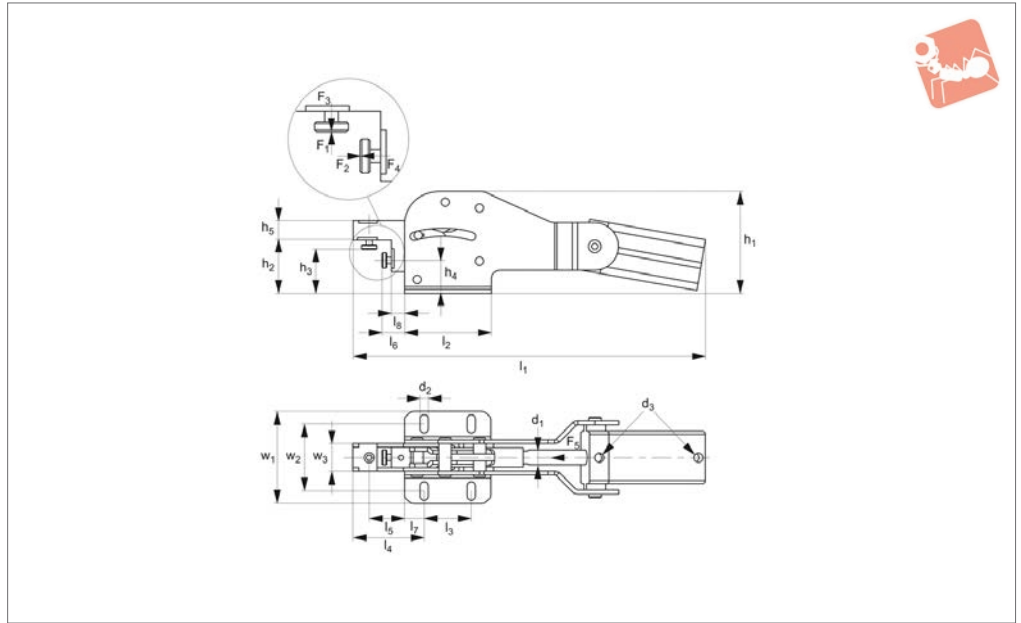
The console is self-supporting and must be clear of other surfaces. There is a valve for controlling the speed of operation.

Order No.	Size	F_1 kN	F_2 kN	F_3 kN	F_4 kN	Clamping screw	Piston dia.	d_1	d_2	d_3	h_1	h_2	Weight g
47010.W0001	1	0.8	1.1	0.2	0.3	M 5x30	16	M 5	8	4.5	51.0	34.0	320
47010.W0002	2	1.0	1.2	0.7	1.0	M 6x35	25	M 5	12	5.5	62.0	42.5	600
47010.W0003	3	1.0	2.5	0.7	1.1	M 8x45	32	G1/8	16	7.5	82.0	69.0	1005
47010.W0004	4	2.0	3.0	1.5	2.2	M 8x65	40	G1/8	16	8.6	99.5	92.0	1520

Order No.	h_3	h_4	h_5 min.	h_5 max.	l_1	l_2	l_3	l_4	l_5	l_6	l_7	Opening angle α	V_n dm^3	w_1	w_2	w_3
47010.W0001	21.0	10	-2.0	4.5	126.0	39.0	18	16	6	6.0	-	92,0°	0.1	50.0	24	5
47010.W0002	26.0	12	-1.0	7.0	145.0	51.5	25	20	11	6.0	12.5	91,5°	0.3	54.5	27	6
47010.W0003	36.5	18	5.4	14.0	165.5	78.0	36	20	19	7.5	-	90,0°	0.4	62.5	32	8
47010.W0004	45.0	20	-3.0	25.5	196.0	101.0	45	32	25	13.0	-	90,5°	0.8	77.5	45	10



47030



Material

Body: steel, zinc plated and galvanised.
 Bushes: case hardened and greased.
 Rivets: stainless steel.
 Complete with tempered, galvanized clamping screw.

Technical Notes

Bearings are pre-lubricated.
 Clamp ready for installation and consists

of:

- vertical toggle clamp no. 40000 (without handle)
 - FESTO-pneumatic cylinder, double acting.
- With magnetic piston for limit position query.
 F_3 and F_4 = max. clamping force at 6 bar.
 V_n = air consumption per double stroke in dm^3 at 6 bar.

Suitable proximity switches for end-position monitoring are available using order 45001. 0.3m PUR cable with M8 connector and rotatable knurled nuts.
 Switching function: NOC. Output: PNP.

Tips

The console is self-supporting and must be clear of other surfaces. There is a valve for controlling the speed of operation.

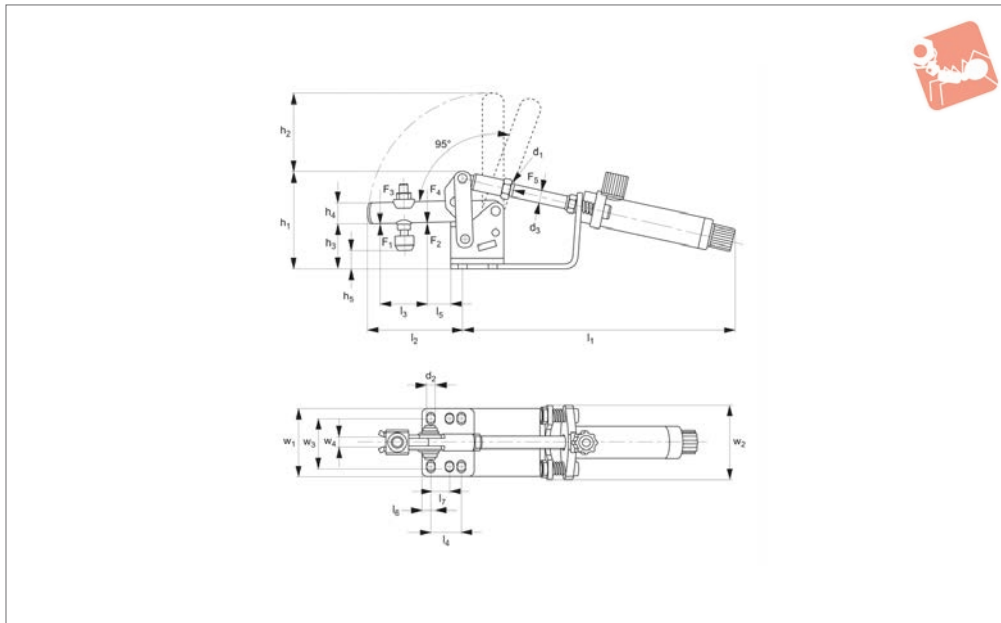
Order No.	Size	F_1/F_2 kN	F_3 kN	F_4 kN	F_5 kN	Piston dia.	d_1	d_2	d_3	h_1	h_2	h_3 min.	h_3 max.	h_4	Weight g
47030.W0001	1	1	0.3	0.1	0.3	25	5.5	10	M 5	68	36.0	25	32	22	770
47030.W0002	2	2	0.5	0.3	0.4	32	6.5	12	G1/8	88	46.0	30	40	28	1450
47030.W0003	3	3	0.7	0.4	0.8	40	8.5	16	G1/8	106	55.5	40	50	34	3050

Order No.	h_5	l_1	l_2	l_3	l_4	l_5	l_6 min.	l_6 max.	l_7	l_8	V_n dm^3	w_1	w_2	w_3
47030.W0001	12	225	55	40	33	15	5	10	7.5	0.5	0.3	53	34,5-39,5	17.0
47030.W0002	16	305	75	50	56	32	10	20	12.5	10.5	0.4	75	55.0	19.5
47030.W0003	20	370	90	50	74	37	20	30	20.0	14.0	0.8	96	70.0	29.0



Pneumatic Toggle Clamp with horizontal cylinder attachment

Pneumatic Toggle Clamps



47040

PNEUMATIC TOGGLE CLAMPS

Material

Body: steel, zinc plated and galvanised.
Bushes: case hardened and greased.
Rivets: stainless steel.
Complete with tempered, galvanized clamping screw.

Technical Notes

Bearings are pre-lubricated.

Clamp ready for installation and consists of:

- vertical toggle clamp no. 40000 (without handle)
- Plastic pneumatic cylinder, double acting.

Vn = air consumption per double stroke in dm³ at 6 bar.

Tips

The console is self-supporting and must be clear of other surfaces. There is a valve for controlling the speed of operation.

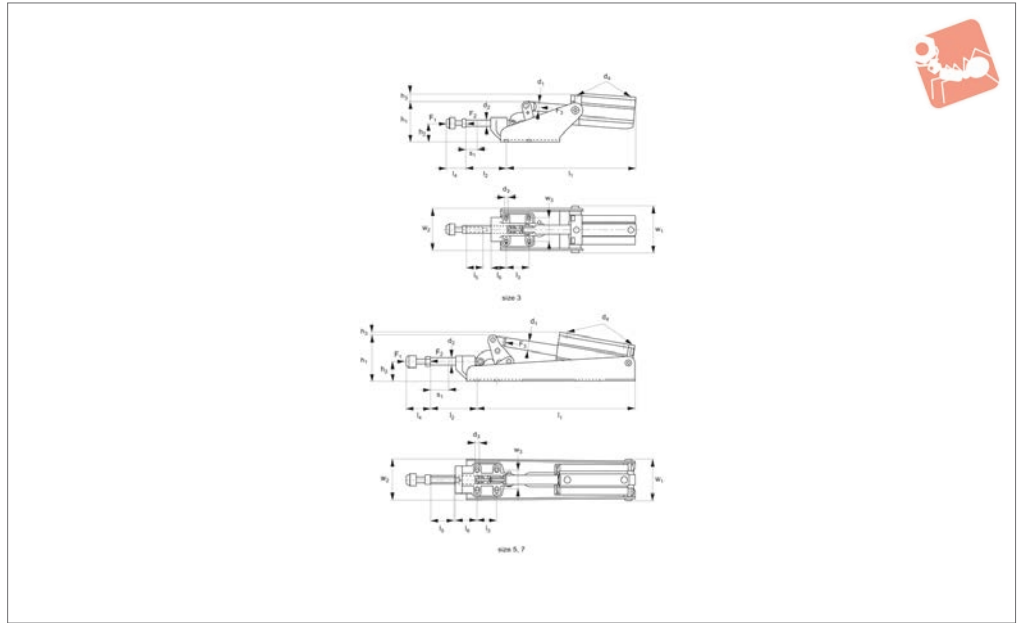
F₃ and F₄ = max. clamping force at 6 bar.

Order No.	Size	F ₁ kN	F ₂ kN	F ₃ kN	F ₄ kN	F ₅ kN	Clamping screw	d ₁	d ₂	d ₃	h ₁	h ₂	h ₃	Weight g
47040.W0000	0	0.5	0.7	0.07	0.09	38	M 4x25	M 4	4.5	4	46	23.0	20	125
47040.W0001	1	0.8	1.1	0.13	0.18	60	M 5x30	M 6	4.5	6	50	34.5	22	400
47040.W0002	2	1.0	1.2	0.35	0.50	170	M 6x35	M 8	5.4	8	63	42.5	27	600
47040.W0003	3	1.4	2.5	0.55	1.00	265	M 8x45	M10x1,25	7.1	10	64	69.0	38	800

Order No.	h ₄	h ₅ min.	h ₅ max.	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	l ₇	Vn dm ³	w ₁	w ₂	w ₃	w ₄
47040.W0000	8	-1	6	132	31	14	13.5	5.5	5.0	-	0.03	33	29	23	4
47040.W0001	10	-2	5	145	38	18	16.0	6.0	6.0	-	0.06	34	33	24	5
47040.W0002	12	1	8	163	52	25	20.0	11.0	6.0	12.5	0.17	44	54	27	6
47040.W0003	18	7	16	205	78	37	20.0	19.0	7.5	-	0.30	50	59	32	8



47050



Material

Console: steel, zinc plated.
Clamp body: malleable iron casting, painted.
Lever parts and push rod: zinc plated, passivated and tempered.
Rivets: stainless steel.

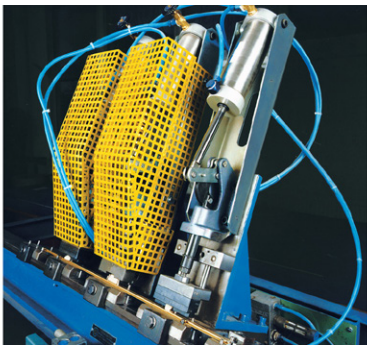
Bearing positions are greased. Pneumatic cylinder with magnetic piston for end-position monitoring. Complete with zinc plated and tempered clamping screw no. 45020.

Technical Notes

Heavy duty version for long working life. Suitable proximity switches for end-position monitoring are available using order 45001. 0.3 m PUR cable with M8 connector and rotatable knurled nuts. Switching function: NOC. Output: PNP.

Order No.	F ₁ kN	F ₂ kN	F ₃ kN	Clamping screw	Piston dia.	d ₁	d ₂	d ₃	d ₄	h ₁	h ₂	h ₃	Weight g
47050.W0003	4	2.5	0.75	M 8 x 35	40	16.0	12	6.5	G1/8	72	33	22	2610
47050.W0005	10	5.0	1.00	M12 x 50	50	20.0	16	8.5	G1/4	96	41	22	5265
47050.W0007	25	10.0	1.80	M12 x 50	63	20.0	22	11.0	G1/4	128	59	29	6120

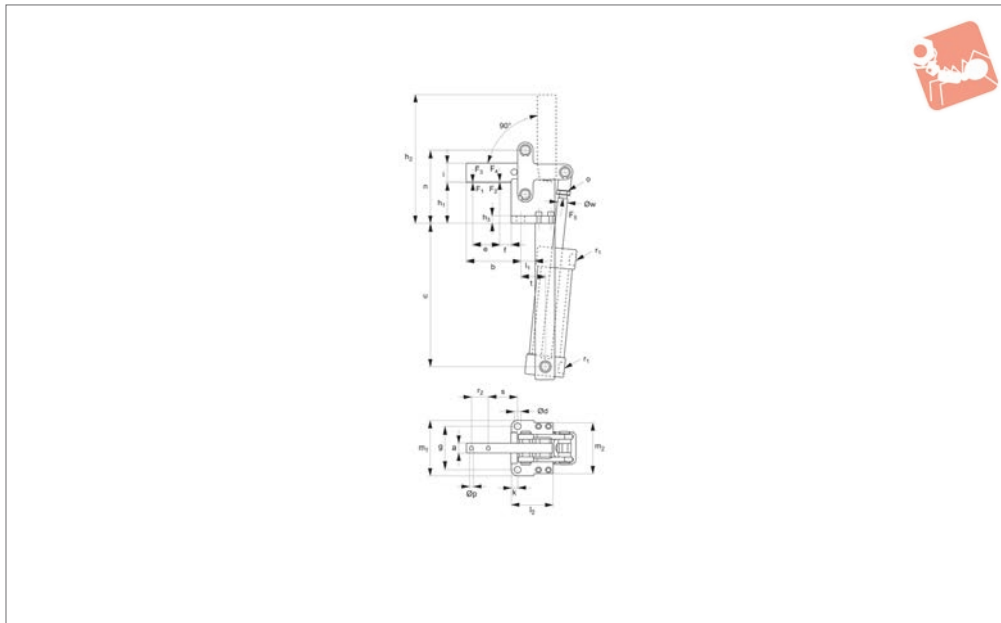
Order No.	l ₁	l ₂	l ₃	l ₄ min.	l ₄ max.	l ₅	l ₆	Stroke s ₁	Vn dm ³	w ₁	w ₂	w ₃
47050.W0003	232	72	41	21.5	35	30	28	20	0.8	83	73.5	41
47050.W0005	316	98	41	30.0	50	30	45	29	2.2	86	84.0	41
47050.W0007	422	105	70	30.0	50	50	45	38	4.5	93	114.0	57





Heavy Duty Vertical Pneumatic Toggle with vertical cylinder mounting

Pneumatic Toggle Clamps



47800

PNEUMATIC TOGGLE CLAMPS

Material

Body: tempered steel, burnished.
Axle bolts: tempered and ground, locked with circlips.
Bushes: case hardened and greased.

Technical Notes

Clamp ready for installation, fitted with FESTO-pneumatic cylinder, double acting.

f_3 and f_4 = max. clamping force at 6 bar.
Piston dia. = required piston dia. to

achieve force f_5 at 6 bar.

Vn = air consumption per double stroke in dm^3 at 6 bar.

Tips

Ideal for installation in material handling lines and special purpose machines.
Opening and closing of clamp can be controlled electronically, allowing integration into automated processes.
See also no. 46200 <\46200#25> - clamp only.

Clamps are maintenance free, due to heat-treated and ground axle bolts. Holes are provided in arm to allow fixing of clamping elements via welding or screws.

Important Notes

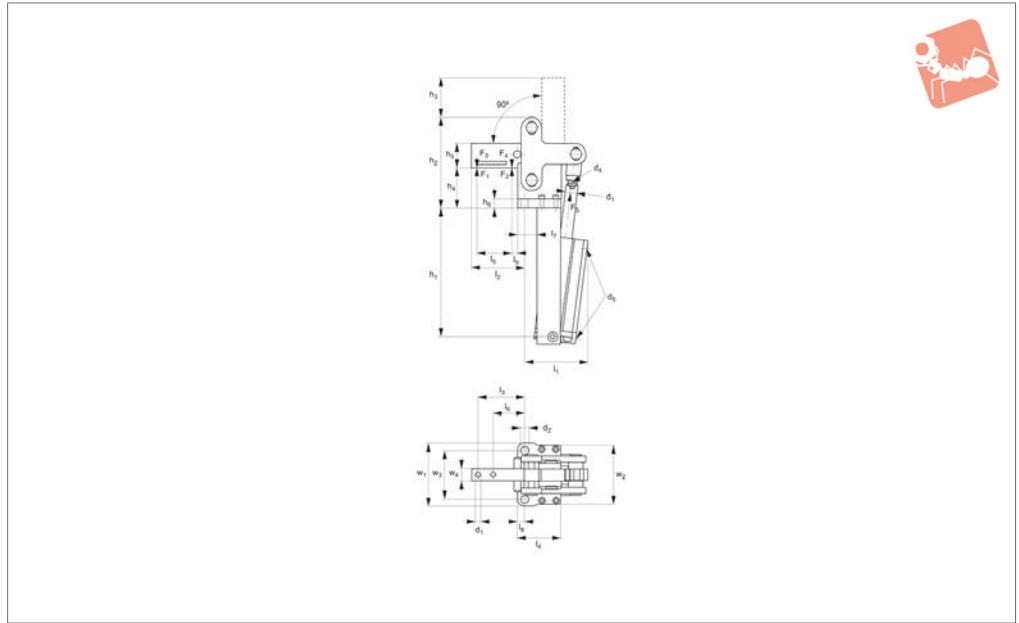
Magnetic piston for end-position sensing.

Please order proximity switch separately from FESTO, see table for details.

Order No.	Size	F_1 kN	F_2 kN	F_3 kN	F_4 kN	F_5 kN	Vn dm^3	h_1	h_2	h_3	a	b	d	Dia. p	e	f	Weight g
47800.W0006	6	12	18	2.5	3.5	1.0	1.8	69	226	15	20	91	13	8.2	60	10.0	7250
Order No.	g_1	i	k	l_1	l_2	m_1	m_2	n	o	$\varnothing w$	Piston dia.	Piston stroke	r_1	r_2	s	t	u
47800.W0006	83	40	12	32	73.5	107	100	137	M16x1,5	16	50	87	G1/4	26	54	48	221



47850



PNEUMATIC TOGGLE CLAMPS

Material

Body: tempered steel, burnished.
Axle bolts: tempered and ground, locked with circlips.
Bushes: case hardened and greased.

Technical Notes

With swivel mounting and adj. end position cushioning.
Clamp ready for installation, fitted with pneumatic cylinder double acting.

F_3 and F_4 = max. clamping force at 6 bar.
 V_n = air consumption per double stroke in dm^3 at 6 bar.
Suitable proximity switches for end-position monitoring are available using order 45001. 0.3m PUR cable with M8 connector and rotatable knurled nuts.
Switching function: NOC. Output: PNP.

Tips

Ideal for installation in material handling lines and special purpose machines.

Opening and closing of clamp can be controlled electronically, allowing integration into automated processes.
See also no. 46100 <X\46100#25> - clamp only.

Important Notes

Magnetic piston for end-position sensing.

Order No.	Size	F_1 kN	F_2 kN	F_3 kN	F_4 kN	F_5 kN	V_n dm^3	h_1	h_2	h_3	h_4	h_5	h_6	l_1	l_2	l_3	Weight g
47850.W0004	4	6	9	1.5	2.2	0.8	1.0	193	129.5	75.5	65	30	12	103	82	74	3850
47850.W0006	6	12	18	2.5	3.5	1.0	1.6	221	154.5	68.5	69	40	15	120	91	80	6950
47850.W0008	8	20	30	4.0	6.0	1.8	1.8	255	204.0	110.0	94	60	20	162	125	107	13160

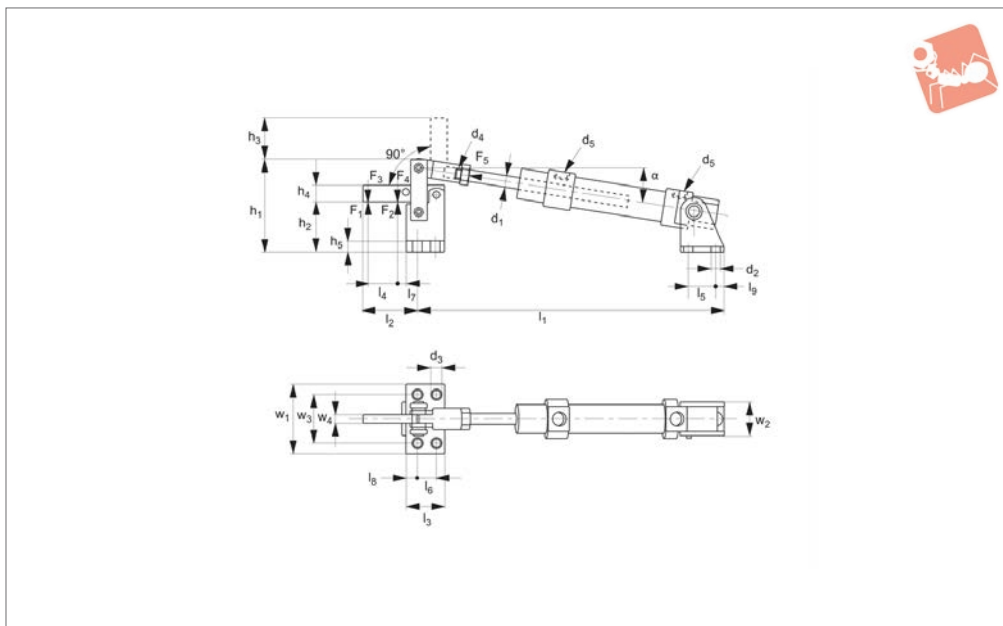
Order No.	l_4	l_5	l_6	l_7	l_8	Piston dia.	w_1	w_2	w_3	w_4	d_1	d_2	d_3	d_4	d_5
47850.W0004	67	54	47	37	10	40	90	82	70	15	16	11	6.2	M12x1,25	G1/8
47850.W0006	74	60	54	34	12	50	107	100	83	20	20	13	8.2	M16x1,50	G1/4
47850.W0008	109	95	67	49	15	63	145	115	115	30	20	17	13.0	M16x1,50	G1/4



Pneumatic Toggle Clamps

heavy duty - horizontal

Pneumatic Toggle Clamps



47480

PNEUMATIC TOGGLE CLAMPS

Material

Tempered steel, blued.
The axle bolts run in bronze bushes and are tempered, ground and locked with circlips.

Technical Notes

Clamp ready for installation and consists of:
- heavy duty vertical toggle clamp no. 46100
- FESTO-pneumatic cylinder, double acting.

- Bearing block.
 F_3 and F_4 = max. clamping force at 6 bar.
*Vn = air consumption per double stroke in dm^3 at 6 bar.
Cylinders are to DIN ISO 6432.

Tips

Ideal for installation in material handling lines and special purpose machines.
Opening and closing of clamp can be controlled electronically, allowing integra-

tion into automated processes.
See also no. 46100 <X\46100#25> - clamp only.

Important Notes

Magnetic piston for end-position sensing.

Please order proximity switch separately from FESTO, see table for details.

Order No.	Size	F_1 kN	F_2 kN	F_3 kN	F_4 kN	F_5 kN	Piston stroke s_1	h_1	h_2	h_3	h_4	h_5	l_1	l_2	l_3	l_4	Weight g
47480.W0000	0	0.6	1.0	0.2	0.4	0.1	40	53	26	23	10	6	195	34	22	14	260
47480.W0001	1	0.8	1.2	0.6	0.8	0.2	40	68	37	28	12	8	238	41	28	17	500

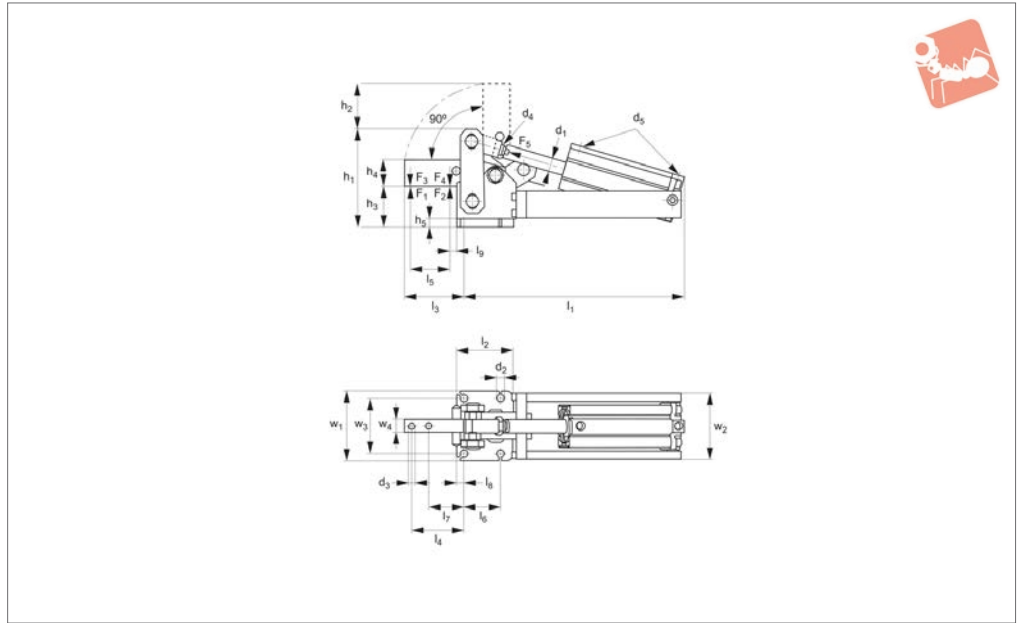
Order No.	l_5	l_6	l_7	l_8	l_9	w_1	w_2	w_3	w_4	d_1	d_2	d_3	d_4	d_5	Piston dia.	Vn dm^3	α
47480.W0000	15	11	7	5.5	5	35	27	27.5	5	6	5.5	4.5	M 6	M 5	16	0.1	6,6°
47480.W0001	20	14	9	8.0	6	50	35	34.0	6	8	6.5	7.0	M 8	G1/8	20	0.2	9,0°

Pneumatic Toggle Clamps

Heavy Duty Pneumatic Toggle Clamps with horizontal cylinder



47500



PNEUMATIC TOGGLE CLAMPS

Material

Body: tempered steel, burnished.
 Axle bolts: tempered and ground, locked with circlips.
 Bushes: case hardened and greased.

Technical Notes

Clamp ready for installation and consists of:
 - heavy duty vertical toggle clamp no. 46100
 Pneumatic cylinder, double acting.

F_3 and F_4 = max. clamping force at 6 bar.
 V_n = air consumption per double stroke in dm^3 at 6 bar.
 Suitable proximity switches for end-position monitoring are available using order 45001. 0.3m PUR cable with M8 connector and rotatable knurled nuts.
 Switching function: NOC. Output: PNP.

Tips

Ideal for installation in material handling lines and special purpose machines.
 Opening and closing of clamp can be

controlled electronically, allowing integration into automated processes.
 See also no. 46100 <X\46100#25> - clamp only.
 Holes are provided in the arm to allow fixing of clamping elements by screwing or welding. Also available in a hydraulic version.

Important Notes

Magnetic piston for end-position sensing.

Order No.	Size	F_1 kN	F_2 kN	F_3 kN	F_4 kN	F_5 kN	h_1	h_2	h_3	h_4	h_5	l_1	l_2	l_3	l_4	l_5	Weight g
47500.W0004	4	6	9	1.5	2.2	0.8	122	75	57	30	12	284	77	82	74	54	4800
47500.W0006	6	12	18	2.5	3.5	1.0	147	68	61	40	12	333	85	90	79	60	6965
47500.W0008	8	20	30	4.0	6.0	1.8	196	110	86	60	12	404	113	128	110	95	12785

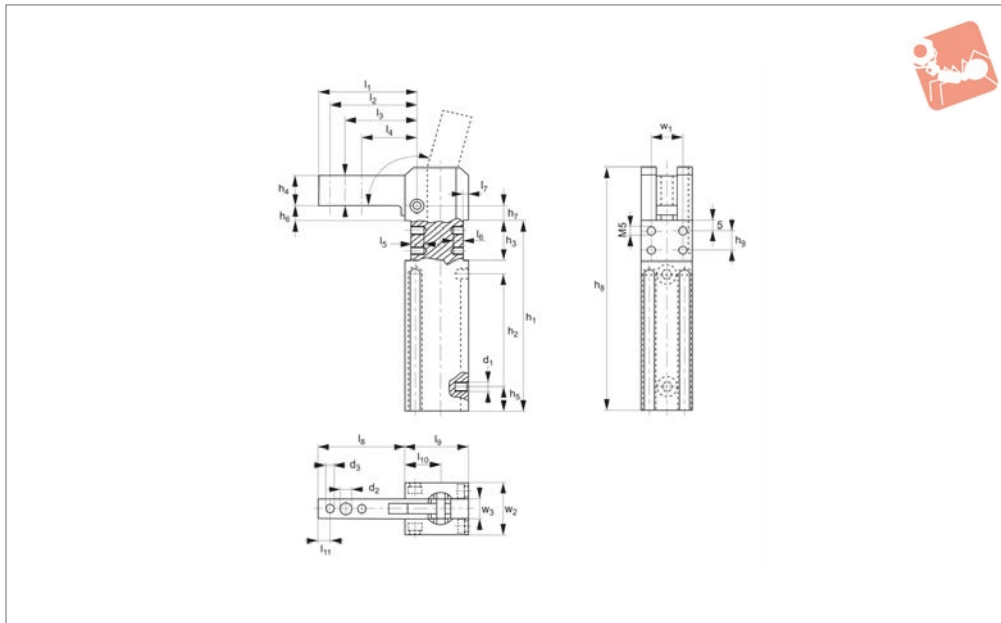
Order No.	l_6	l_7	l_8	l_9	w_1	w_2	w_3	d_1	d_2	d_3	d_4	d_5	Piston dia.	V_n dm^3
47500.W0004	52	47	10	10	90	82	70	16	11	6.2	M12x1,25	G1/8	40	1.0
47500.W0006	55	53	11	10	105	100	83	20	11	8.2	M16x1,50	G1/4	50	1.8
47500.W0008	80	70	13	10	135	123	111	20	13	13.0	M16x1,50	G1/4	63	4.3



Pneumatic Toggle Clamp

double acting

Pneumatic Toggle Clamps



47902

PNEUMATIC TOGGLE CLAMPS

Material

Case: high-strength aluminium, red anodised.
 Clamp arm: steel, burnished, with three holes.
 Max. operating pressure 6 bar. Mini design

in block version for clamping and gripping applications. Magnetic piston for end-position monitoring.

Technical Notes

Suitable proximity switches for end-

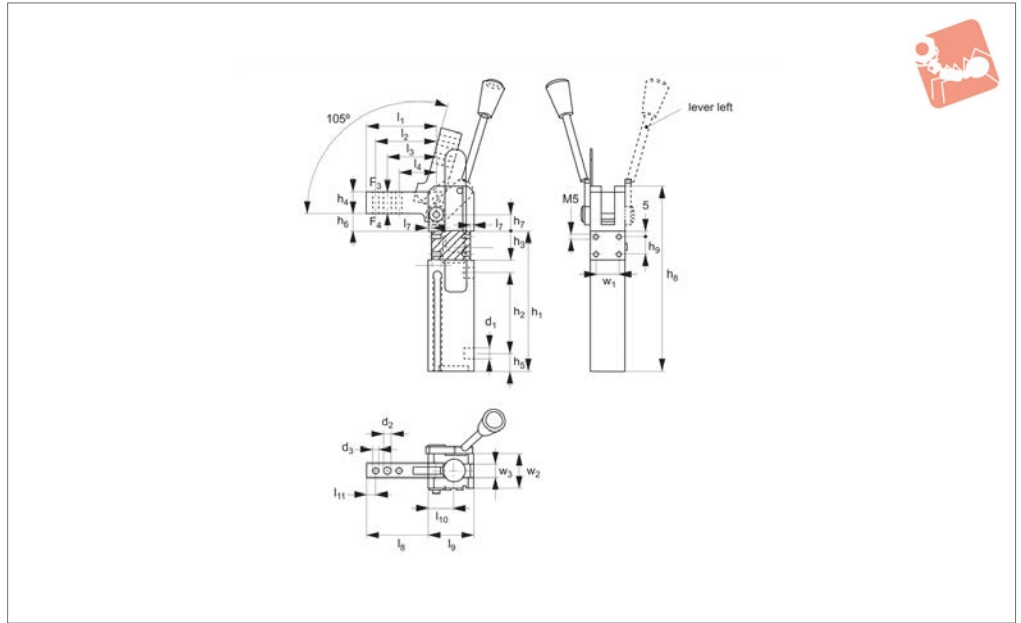
position monitoring are available using order 45001. 0.3m PUR cable with M8 connector and rotatable knurled nuts.
 Switching function: NOC. Output: PNP.

Order No.	Size	Clamping moment at 5 bar Nm	Holding moment Nm max.	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	l ₉	l ₁₀	l ₁₁	Weight g
47902.W0001	16	8	25	50	44	36	28	7	5	2.5	44	32	18	6	300
47902.W0002	20	15	54	60	52	42	32	8	6	3.0	53	39	22	8	550
47902.W0003	25	25	75	75	65	53	40	8	6	4.0	68	45	25	10	850

Order No.	h ₁	h ₂	h ₃ +0.1	h ₄	h ₅	h ₆	h ₇	h ₈	h ₉ ±0.1	d ₁	d ₂	d ₃ tol. H7	w ₁ ±0.1	w ₂	w ₃	w ₄	Piston dia.
47902.W0001	96	57	20	15	12	7.5	7.5	123	10	M 5	5.5	4	16	26	10	18	16
47902.W0002	120	69	25	18	15	15.0	14.0	158	15	G1/8	6.5	5	20	30	12	22	20
47902.W0003	136	80	28	22	18	19.0	17.0	182	18	G1/8	8.5	6	25	35	16	25	25



47904



PNEUMATIC TOGGLE CLAMPS

Material

Case: high-strength aluminium, red anodised.
 Clamp arm: steel, bronzed, with three bores.
 Max. operating pressure 6 bar. Double-acting and with additional lever for manual

opening and/or closing. Mini design in block version for clamping and gripping applications.
 Magnetic piston for end-position monitoring.

Technical Notes

Suitable proximity switches for end-position monitoring are available using order 45001. 0.3m PUR cable with M8 connector and rotatable knurled nuts.
 Switching function: NOC. Output: PNP.

Order No.	Size	Clamping moment at 5 bar Nm	Holding moment Nm max.	l_1	l_2	l_3	l_4	l_5	l_6	l_7	l_8	l_9	l_{10}	l_{11}	h_1	Weight g
47904.W0001	16	8	25	50	44	36.0	28	7	5	2.5	44	32	18	6	96	320
47904.W0002	16	8	25	50	44	36.0	28	7	5	2.5	44	32	18	6	96	320
47904.W0003	20	15	54	60	52	42.0	32	8	6	3.0	53	39	22	8	120	700
47904.W0004	20	15	54	60	52	42.0	32	8	6	3.0	53	39	22	8	120	700
47904.W0005	25	25	75	75	65	52.5	40	8	6	4.0	68	45	25	10	136	920
47904.W0006	25	25	75	75	65	52.5	40	8	6	4.0	68	45	25	10	136	920

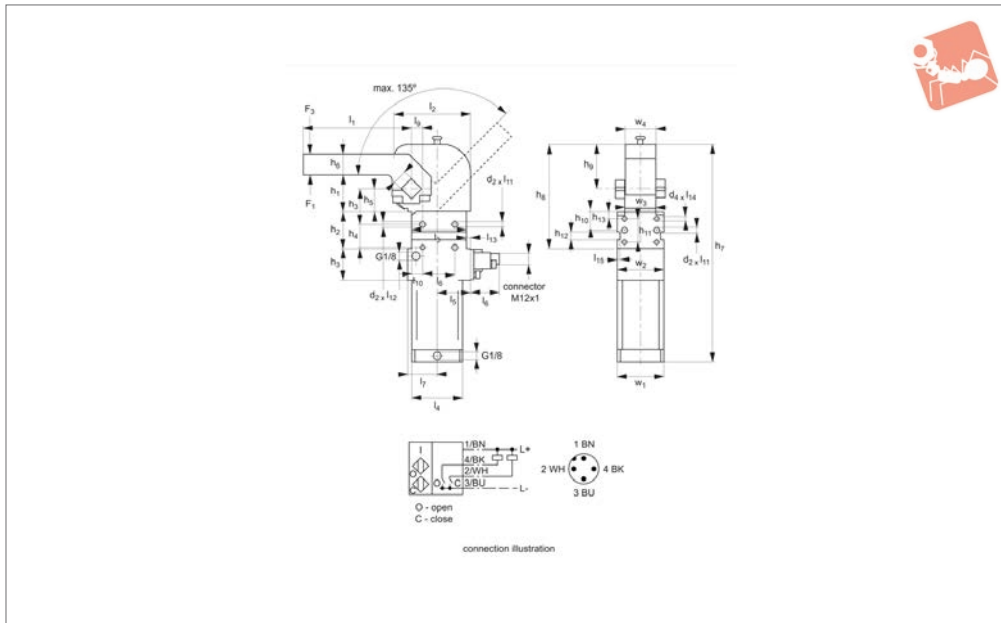
Order No.	h_2	h_3 +0.1	h_4	h_5	h_6	h_7	h_8	h_9 ± 0.1	d_1	d_2	d_3 tol. H7	w_1 ± 0.1	w_2	w_3	Lever type	Piston dia.
47904.W0001	57	20	15	12	7.5	7.5	123	10	M 5	5.5	4	10	26	10	Right	16
47904.W0002	57	20	15	12	7.5	7.5	123	10	M 5	5.5	4	10	26	10	Left	16
47904.W0003	69	25	18	15	15.0	14.0	158	15	G1/8	6.5	5	20	30	12	Right	20
47904.W0004	69	25	18	15	15.0	14.0	158	15	G1/8	6.5	5	20	30	12	Left	20
47904.W0005	80	28	22	18	19.0	17.0	182	18	G1/8	8.5	6	18	35	16	Right	25
47904.W0006	80	28	22	18	19.0	17.0	182	18	G1/8	8.5	6	18	35	16	Left	25



Heavy Pneumatic Toggle Clamp

dual acting

Pneumatic Toggle Clamps



47910.1

PNEUMATIC TOGGLE CLAMPS

Material

Case: aluminium. Max. operating pressure 6 bar. With continuously adjustable opening angle in the range 10° to 135°. With pneumatic end position cushioning and self-locking. With inductive query 24V as standard. **Clamp arm not included.**

Technical Notes

Accessories (not included in the standard

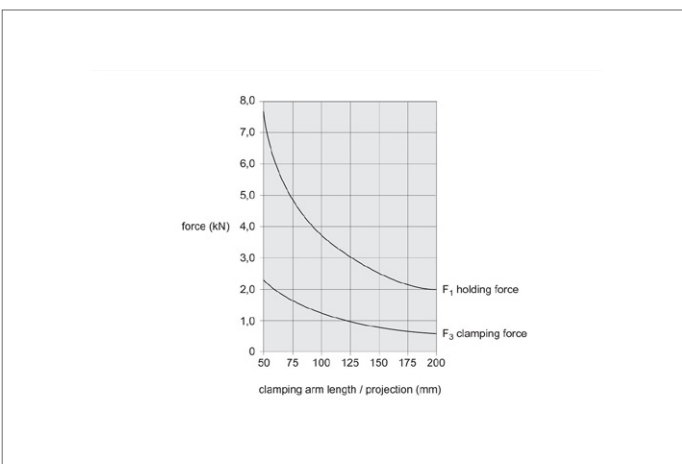
scope of delivery) are clamping arm no. 47912.W0210 - .W0218 centre, right and left, and connecting plug for inductive query.
Piston diameter: 40mm.
Clamping moment at 5 bar 120Nm.
Holding moment max. 380Nm.

Tips

These pneumatic toggle clamps are

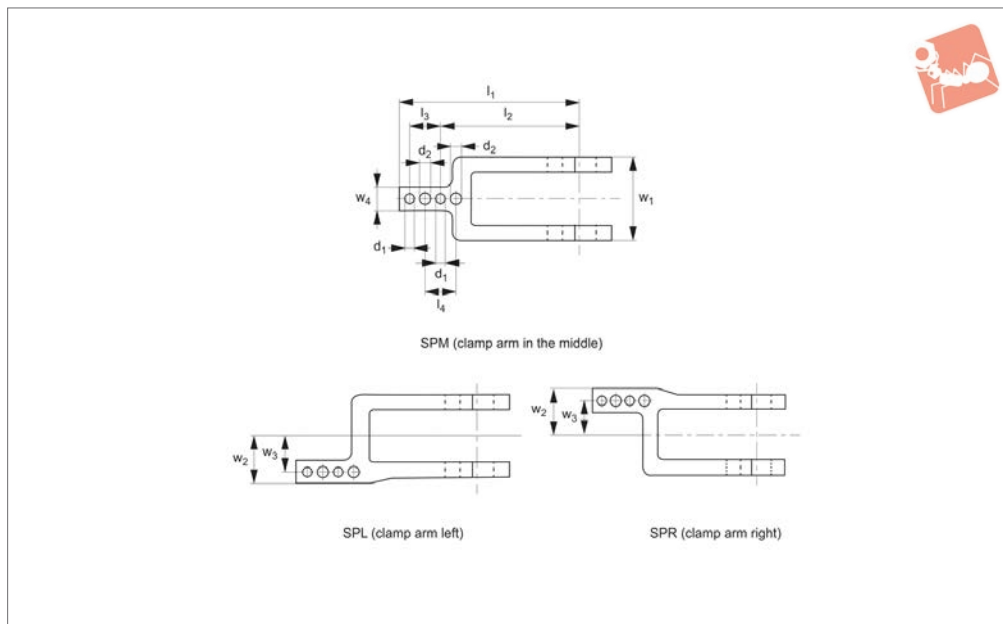
suitable for use in material handling lines and on special machines. Opening and clamping position of the clamp can be controlled electrically, allowing integration into automated manufacturing processes.

Order No.	l_1	l_2	l_3	l_4	l_5	l_6	l_7	l_8	l_9	l_{10}	l_{11}	l_{12}	l_{13}	l_{14}	l_{15}	h_1	h_{10}	Weight
47910.W0001	117	83	60	55	36	35	34	32	± 0.05 12	± 0.05 12	8	6	4	12	3.5	40	± 0.05 20	1400
Order No.	h_{11}	h_{12}	h_{13}	h_2	h_3	h_4	h_5	h_6	h_7	h_8	h_9	d_1	d_2	w_1	w_2	w_3	w_4	
47910.W0001	25	8	± 0.1 7.5	40	± 0.05 38.5	25	25	22	235.5	113	48	tol. d_1 h_9 16	6	50	50	35	-0.5 33	





47910.2



Material

Steel.

Technical Notes

For heavy pneumatic toggle clamp no. 47910.W0001, size 40.

Order No.	Size	Clamp for 47910.W0001	l_1	l_2 ± 0.1	l_3 ± 0.02	l_4 ± 0.02	d_1	d_2	w_1	w_2	w_3 ± 0.1	w_4 -0.1	Weight g
47910.W0210	40	Left	117	90	20	20	6	7	54	31	23	16	520
47910.W0211	40	Middle	117	90	20	20	6	7	54	31	23	16	520
47910.W0212	40	Right	117	90	20	20	6	7	54	31	23	16	520

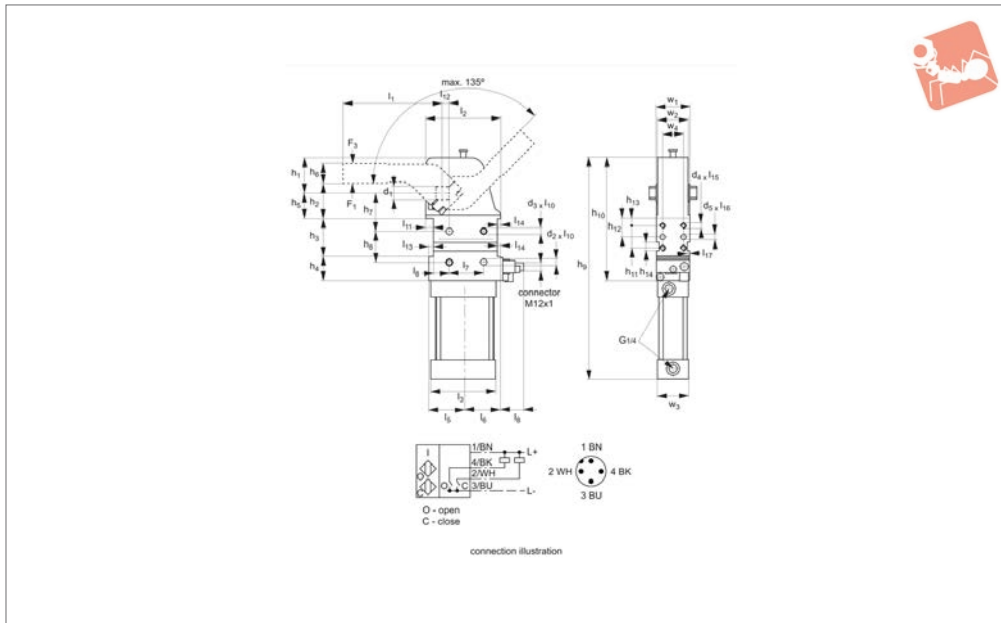


Heavy Pneumatic Toggle Clamp

dual acting



Pneumatic Toggle Clamps



47912.1

PNEUMATIC TOGGLE CLAMPS

Material

Case: aluminium. Max. operating pressure 6 bar. With continuously adjustable opening angle in the range 5° to 135°. With pneumatic end position cushioning and self-locking. With inductive query 24V as standard. **Clamp arm not included.**

Technical Notes

Accessories (not included in the standard

scope of delivery) are clamping arm no. 47912.W0210 - .W0218 centre, right and left, and connecting plug for inductive query.

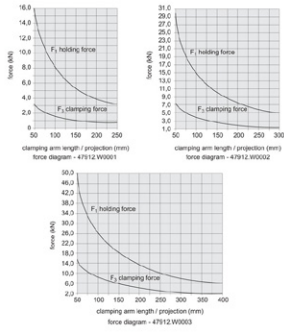
Tips

These pneumatic toggle clamps are suitable for use in material handling lines and on special machines. Opening and clamping position of the clamp can be

controlled electrically, allowing integration into automated manufacturing processes.

Order No.	l_1	l_2	l_3	l_4	l_5	l_6	l_7	l_8	l_9 ± 0.1	l_{10}	l_{11}	l_{12}	l_{13}	l_{14}	l_{15}	h_1	h_{10} ± 0.2	h_{11} ± 0.1	Weight g
47912.W0001	144	108.0	94	93	52	52	50	33	23	12	11	10	7	5	12	51.5	178	32	3.5
47912.W0002	144	112.5	106	93	54	54	50	34	23	12	12	10	8	8	12	58.5	185	32	4.6
47912.W0003	179	162.0	140	134	81	72	70	33	36	13	20	15	8	8	15	88.0	270	50	15.6

Order No.	h_{12} ± 0.05	h_{13} ± 0.1	h_{14}	h_2	h_3 ± 0.1	h_4	h_5 ± 0.05	h_6 ± 0.1	h_7 ± 0.05	h_8	h_9 ± 0.1	d_1	d_2 tol. H7	d_3 tol. H7	d_4	w_1	w_2	w_3	w_4
47912.W0001	27	11	12	52	55	35	37	28	55	45	321	19	10	M10	M 8	48	45	45	30
47912.W0002	27	11	12	52	55	35	37	28	55	45	335	22	10	M10	M 8	54	52	52	30
47912.W0003	40	15	12	70	80	55	50	35	65	75	488	30	12	M12	M10	76	74	62	50

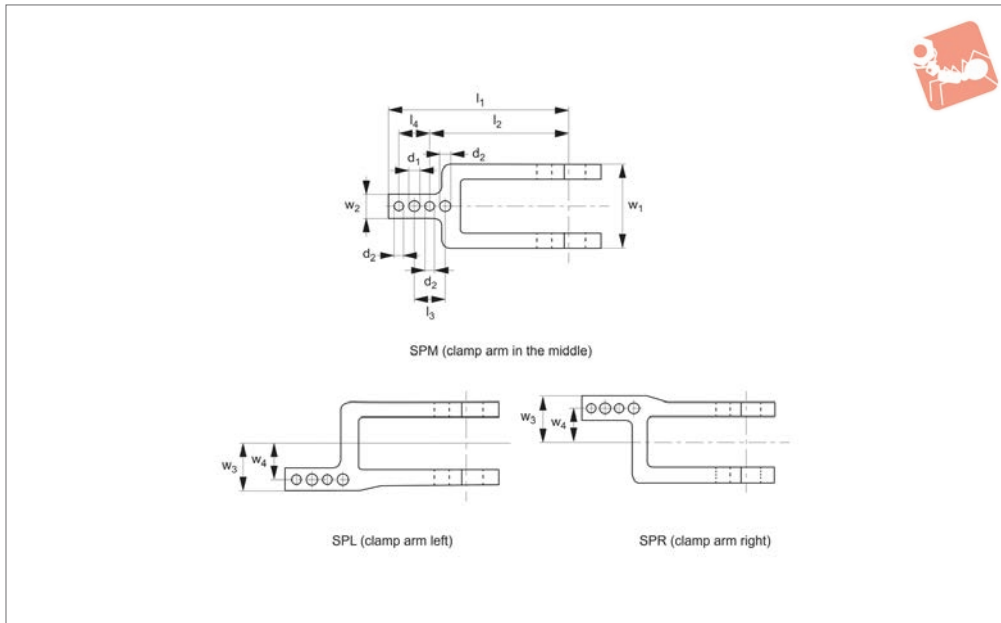
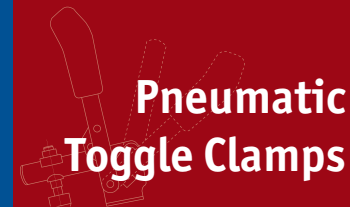




Clamp Arm

for 47912.W0001 - .W0003

Pneumatic Toggle Clamps



47912.2

PNEUMATIC TOGGLE CLAMPS

Material

Steel.

Technical Notes

For heavy pneumatic toggle clamp no. 47912, sizes 50, 63 and 80.

Order No.	Size	Article no.	l_1	l_2 ± 0.2	l_3 ± 0.02	l_4	d_1	d_2 tol. H7	w_1	w_2 -0.1	w_3	w_4 ± 0.1	Weight g
47912.W0210	50	Left	144	30	30	9	9	6	68	20	44	34.0	855
47912.W0211	50	Middle	144	30	30	9	9	6	68	20	44	34.0	855
47912.W0212	50	Right	144	30	30	9	9	6	68	20	44	34.0	855
47912.W0213	63	Left	144	30	30	9	9	6	78	20	47	37.0	1150
47912.W0214	63	Middle	144	30	30	9	9	6	78	20	47	37.0	1150
47912.W0215	63	Right	144	30	30	9	9	6	78	20	47	37.0	1150
47912.W0216	80	Left	179	30	30	9	9	6	108	25	63	50.5	1450
47912.W0217	80	Middle	179	30	30	9	9	6	108	25	63	50.5	1450
47912.W0218	80	Right	179	30	30	9	9	6	108	25	63	50.5	1450

Heavy Duty Toggle Clamps

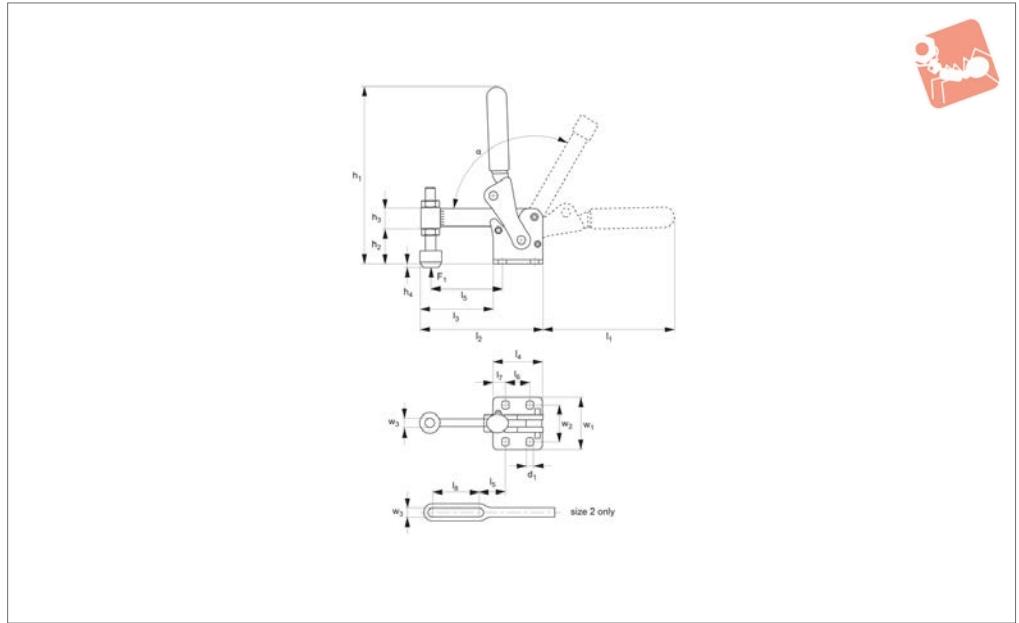
Heavy Duty Vertical Toggle Clamp horizontal base



HEAVY DUTY TOGGLE CLAMPS



46080



Material

Body: steel, black oxide coated.
 Lever: cast steel, black oxide coated.
 Bushes: reamed, case hardened.
 Pins: hardened, ground and permanently lubricated.
 Handle: ergonomic soft feel, oil-resistant, with large grip area.
 Supplied complete with zinc plated and

tempered clamping screw (with rubber pad).

Technical Notes

Heavy vertical toggle clamps are especially suitable for production equipment and fixtures.
 Temperature range -10°C to +80°C.

Tips

Clamp nuts on lever arm to vary friction in movement.
 Supplement these base modular toggle clamps with your own clamping arms, handles etc. to meet the requirements of your specific application.

Order No.	Size	F ₁ kN	Clamping screw	h ₁	h ₂	h ₃	h ₄ min.	h ₄ max.	l ₁	l ₂	l ₃	Weight g
46080.W0202	2	2.5	M 6x50	127	25	15	-13.5	6	94	85	57	320
46080.W0204	4	5.0	M12x80	216	44	24	-19.0	14	160	146	100	1250
46080.W0206	6	6.0	M12x110	263	65	30	-22.0	35	185	181	121	2130
46080.W0208	8	12.0	M12x110	303	71	36	-10.0	41	203	226	151	4050

Order No.	l ₄	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂	w ₃	d ₁	α
46080.W0202	37	21	20	8.5	30	47	32	6.1	7.1	120°
46080.W0204	60	75	30	15.0	-	65	45	12.2	8.5	120°
46080.W0206	75	95	45	15.0	-	78	52	12.2	10.5	120°
46080.W0208	95	120	55	20.0	-	108	75	12.2	12.5	120°



Heavy Duty Vertical Toggle Clamp

horizontal base



Heavy Duty Toggle Clamps



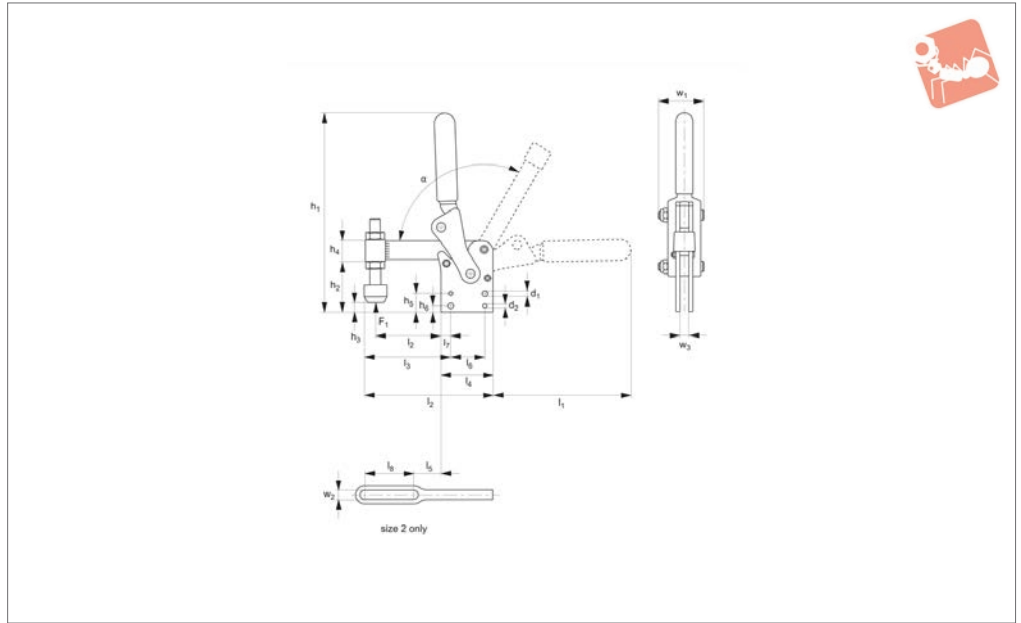
HEAVY DUTY TOGGLE CLAMPS

Heavy Duty Toggle Clamps

Heavy Duty Vertical Toggle Clamp with vertical base and mounting holes



46090



HEAVY DUTY TOGGLE CLAMPS

Material

Body and lever: steel, blued.
 Bushes: reamed, case hardened.
 Pins: hardened, ground and permanently lubricated.
 Handle: ergonomic soft feel, oil-resistant, with large grip area.

Supplied complete with clamping screw (with rubber pad).

Technical Notes

Heavy vertical toggle clamps are especially suitable for production equipment and fixtures.

Temperature range -10°C to +80°C.

Tips

Clamp nuts on lever arm to vary friction in movement.

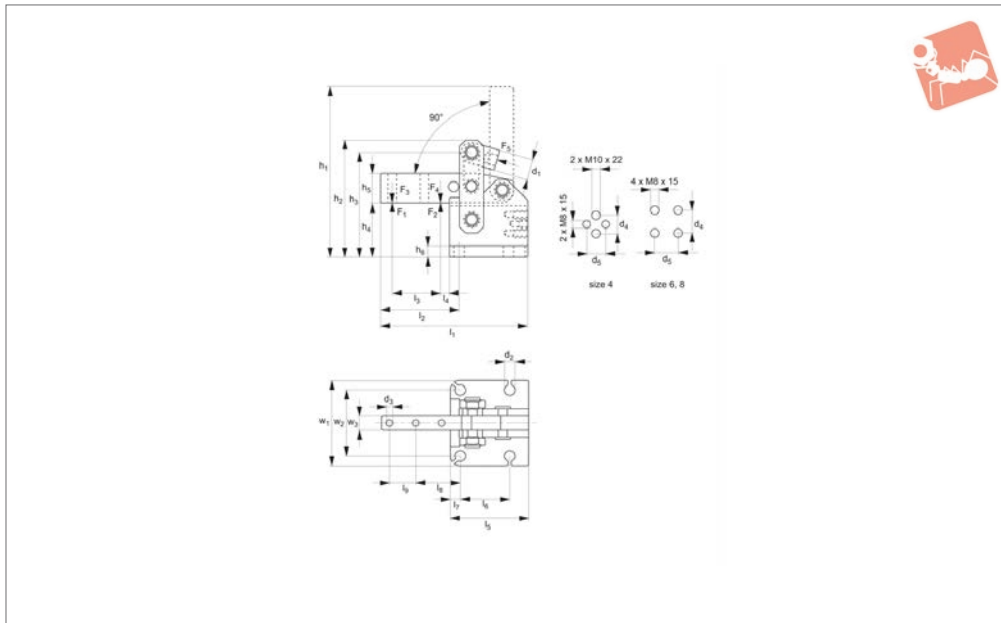
Order No.	Size	F ₁ kN	Clamping screw	h ₁	h ₂	h ₃ min.	h ₃ max.	h ₄	h ₅	h ₆	Weight g
46090.W0202	2	2.5	M 6x50	144	42.0	3.5	22.8	15	-	-	320
46090.W0204	4	10.0	M12x80	233	62.0	-1.0	35.0	24	25	10	1320
46090.W0206	6	12.0	M12x110	289	87.5	0.0	58.0	30	35	15	2120
46090.W0208	8	20.0	M12x110	338	106.0	25.0	76.0	36	40	20	4060

Order No.	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂	w ₃	d ₁	d ₂	α
46090.W0202	94	85	48	37	12	-	-	30	31	6.2	6	-	-	190°
46090.W0204	161	146	101	60	75	30	15	-	52	12.2	10	8.5	5.7	120°
46090.W0206	189	181	121	75	95	45	15	-	60	12.2	12	10.5	7.7	120°
46090.W0208	219	226	151	95	120	55	20	-	76	12.2	16	12.5	9.7	120°



Heavy Duty Vertical Toggle Clamp

with vertical base and mounting holes



46100

HEAVY DUTY TOGGLE CLAMPS

Material

Body: tempered steel, burnished.
Axle Bolts: tempered and ground, locked with circlips.

Bushes: case hardened and greased.

Technical Notes

The clamping forces F_3 and F_4 can be

achieved by using a cylinder with piston force F_5 . This clamp can be equipped with a normal hydraulic or pneumatic cylinder. The rod joint is exchangeable.

Order No.	Size	F_1 kN	F_2 kN	F_3 kN	F_4 kN	F_5 kN	h_1	h_2	h_3	h_4	h_5	h_6	l_1	l_2	l_3	Weight g
46100.W0000	0	0.6	1.0	0.2	0.4	0.1	75.5	53.5	47.5	25.5	10	6	50	33.5	14	110
46100.W0001	1	0.8	1.2	0.6	0.8	0.2	96.0	68.0	61.5	37.0	12	8	61	41.0	17	230
46100.W0004	4	6.0	9.0	1.5	2.2	0.8	197.0	122.0	109.0	57.0	30	12	154	82.0	54	2535
46100.W0006	6	12.0	18.0	2.5	3.5	1.0	215.0	147.0	129.0	61.0	40	12	169	90.0	60	4215
46100.W0008	8	20.0	30.0	4.0	6.0	1.8	306.0	196.0	176.0	86.0	60	12	235	127.5	95	10670

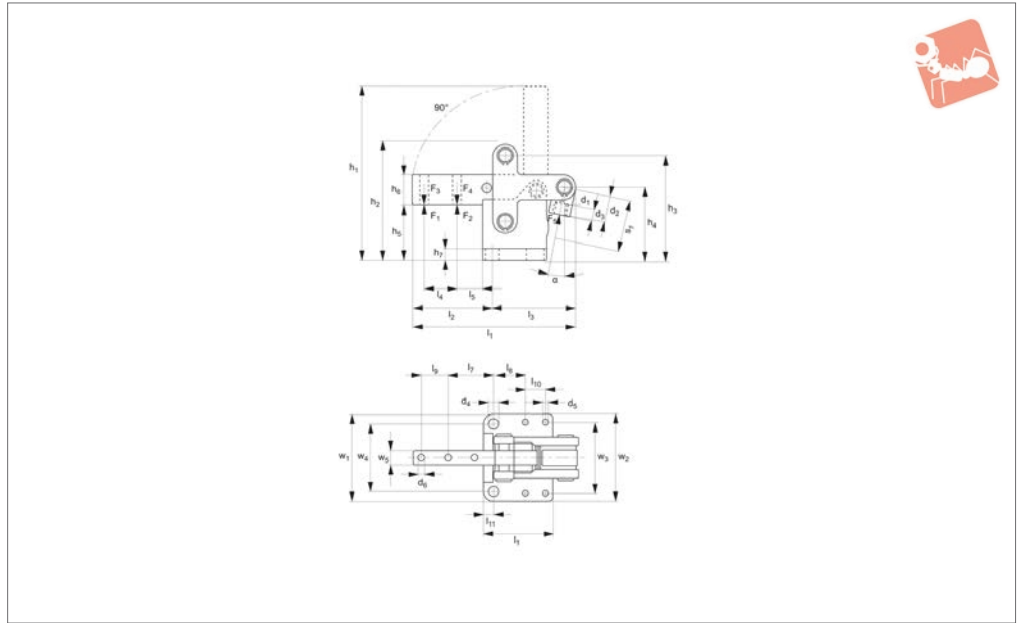
Order No.	l_4	l_5	l_6	l_7	l_8	l_9	w_1	w_2	w_3	d_1	d_2	d_3	d_4	d_5	Piston dia.	Piston stroke
46100.W0000	8.5	22.0	11	5.5	-	-	35	27	5	M 6	4.5	-	-	-	16	40
46100.W0001	9.0	28.0	14	8.0	-	-	50	35	6	M 8	7.0	-	-	-	20	40
46100.W0004	10.0	77.0	52	10.0	47.0	27	90	70	15	M12x1,25	11.0	6.2	20	18	40	80
46100.W0006	10.0	85.0	55	11.0	53.0	26	105	83	20	M16x1,50	11.0	8.2	24	24	50	100
46100.W0008	9.5	112.5	80	12.5	69.5	40	136	111	30	M16x1,50	13.0	13.0	40	34	63	120

Heavy Duty Toggle Clamps

Heavy Duty Toggle Clamps for vertical cylinder connection



46200



HEAVY DUTY TOGGLE CLAMPS

Material

Body: tempered steel, burnished.
Axle Bolts: tempered and ground, locked with circlips.

Bushes: case hardened and greased.

Technical Notes

The clamping forces F_3 and F_4 can be

achieved by using a cylinder with piston force F_5 . This clamp can be equipped with a normal hydraulic or pneumatic cylinder. The rod joint is exchangeable.

Order No.	Size	F_1 kN	F_2 kN	F_3 kN	F_4 kN	F_5 kN	h_1	h_2	h_3	h_4	h_5	h_6	h_7	l_1	l_{10}	l_{11}	l_2	l_3	Weight g
46200.W0004	4	6	9	1.5	2.2	0.75	206	130	117	82	65	30	12	172	18	10	82	76	2400
46200.W0006	6	12	18	2.5	3.5	1.00	226	155	137	92	69	40	15	200	24	12	91	88	4300
46200.W0008	8	20	30	4.0	6.0	1.80	318	204	184	124	94	60	20	265	40	15	125	120	11000

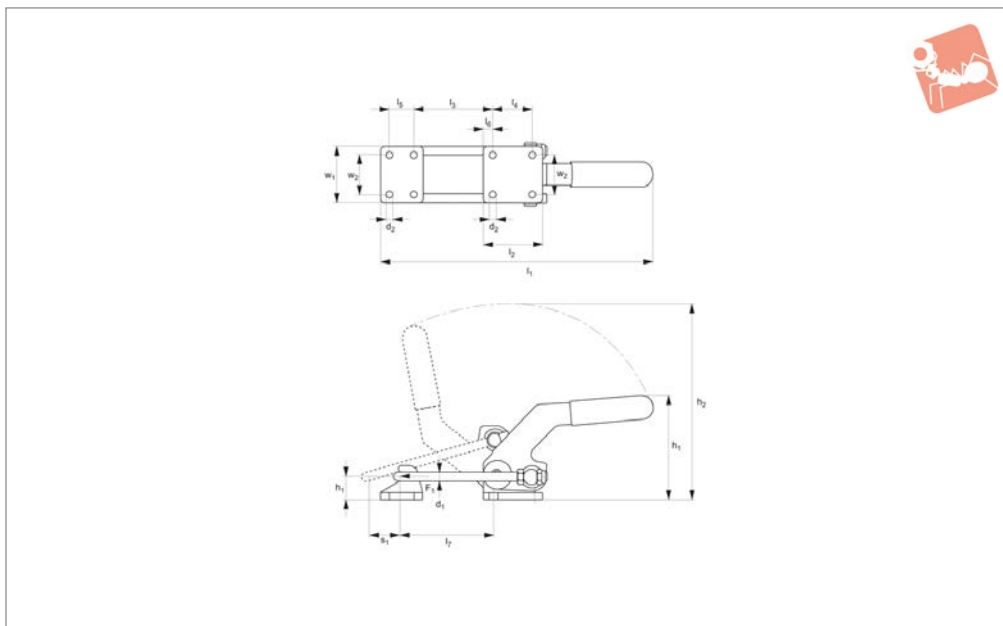
Order No.	l_4	l_5	l_6	l_7	l_8	l_9	Stroke s_1	w_1	w_2	w_3	w_4	w_5	d_1	d_2	d_3	d_4	d_5	d_6	α
46200.W0004	54	20.0	67.0	47	33.0	27	74	90	90	75.5	70	15	M12x1,25	29.5	14	11	6.5	6.2	9,0°
46200.W0006	60	22.0	73.5	54	29.5	26	87	107	100	87.5	83	20	M16x1,50	37.0	18	13	6.5	8.2	7,5°
46200.W0008	95	24.5	109.0	67	44.0	40	120	145	123	120.5	115	30	M16x1,50	32.0	17	13	6.5	13.2	6,5°



Heavy Duty Hook Toggle Clamp

for high retaining force

Heavy Duty Toggle Clamps



46030

HEAVY DUTY TOGGLE CLAMPS

Material

Foot, lever, arm and catch: cast steel, black oxide coated.

Strap, pins and nuts: steel, heat treated and zinc plated.

Pins: hardened, ground and permanently lubricated.

Handle: ergonomic soft feel, oil-resistant, with large grip area.

Supplied complete with counter catch.

Technical Notes

Four mounting holes in both foot and

catch.

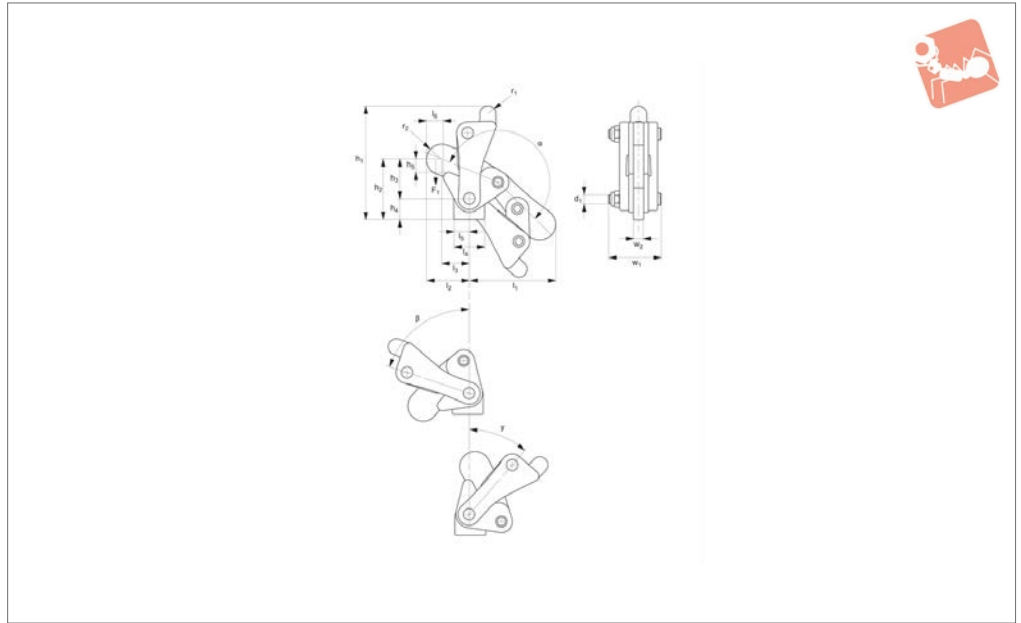
Circlips are used to retain pins in bearing bushes, and to centre the clamping pin. Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	Adj. distance	Stroke s ₁	h ₁	h ₂	l ₁	l ₂	Weight g
46030.W0204	4	15	66	44	228	122	245-311	183	2830
46030.W0205	5	27	65	47	285	146	313-378	238	4020

Order No.	l ₃	l ₄	l ₅	l ₆	l ₇	w ₁	w ₂	d ₁	d ₂
46030.W0204	42-107	24-90	68	45	28	64	45	10	8.5
46030.W0205	49-114	28-93	86	57	35	82	57	12	10.5



46050



Material

Body: steel, black oxide coated.
 Lever: cast steel, black oxide coated.
 Bushes: reamed and case hardened bearings.
 Pins: hardened, ground and permanently lubricated.

Technical Notes

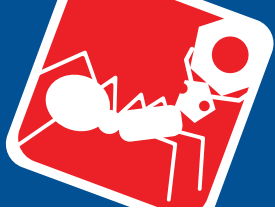
Mechanism can be welded at an angle to its support. Clamp nuts on lever arm enable adjustment of friction in clamp movement.
 Temperature range -10°C to +80°C.

Tips

Supplement these base modular toggle clamps with your own clamping arms, handles etc. to meet the requirements of your specific application.

Order No.	Size	F_1 kN	h_1	h_2	h_3	h_4	h_5	l_1	l_2	Weight g
46050.W0002	2	2.5	76	38	18	20.0	5	58	32	205
46050.W0004	4	7.0	112	58	38	20.0	12	82	41	855
46050.W0006	6	11.0	145	78	50	28.0	16	105	55	1600
46050.W0008	8	22.5	172	98	65	33.0	19	135	72	3100
46050.W0010	10	34.0	210	117	83	33.5	25	155	77	5560

Order No.	l_3	l_4	l_5	l_6	r_1	r_2	w_1	w_2	d_1	α	β	γ
46050.W0002	22	22	11	12	5	10.0	31	6	M 6	200°	70°	40°
46050.W0004	26	30	15	16	8	15.0	52	10	M 8	200°	70°	40°
46050.W0006	36	36	18	20	11	18.0	60	12	M10	200°	70°	40°
46050.W0008	50	50	25	27	14	22.5	76	16	M12	200°	70°	40°
46050.W0010	52	70	35	22	14	25.0	90	20	M16	200°	60°	28°

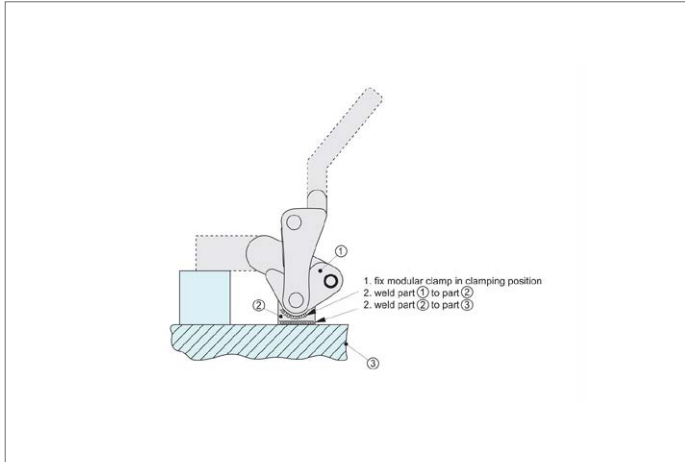


Modular Toggle Clamp

swivelling foot - welding version



Heavy Duty Toggle Clamps



HEAVY DUTY TOGGLE CLAMPS

Heavy Duty Toggle Clamps

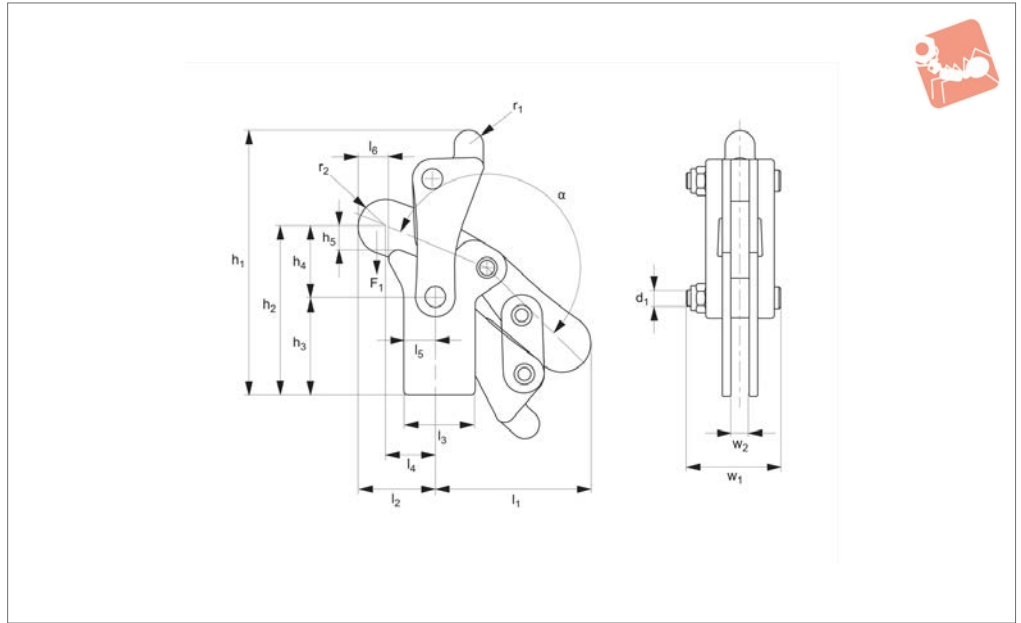
Modular Toggle Clamp vertical foot - welding version



HEAVY DUTY TOGGLE CLAMPS



46060



Material

Body: steel, black oxide coated.
Lever: cast steel, black oxide coated.
Bushes: reamed and case hardened bearings.
Pins: hardened, ground and permanently

lubricated.

Technical Notes

Clamp nuts on lever arm enable adjustment of friction in clamp movement.
Temperature range -10°C to +80°C.

Tips

Supplement these base modular toggle clamps with your own clamping arms, handles etc. to meet the requirements of your specific application.

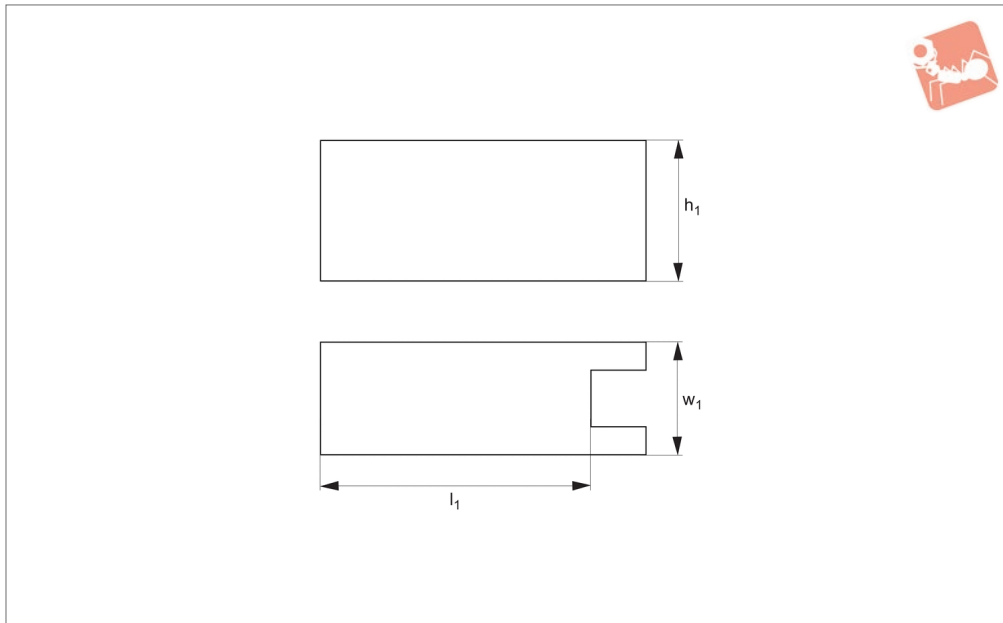
Order No.	Size	F_1 kN	h_1	h_2	h_3	h_4	h_5	l_1	l_2	Weight g
46060.W0002	2	2.5	90	52	34	18	5	58	32	245
46060.W0004	4	7.0	142	88	50	38	12	82	41	970
46060.W0006	6	11.0	182	114	64	50	16	106	55	1750
46060.W0008	8	22.5	218	140	76	64	19	135	72	3310
46060.W0010	10	34.0	266	173	90	83	25	155	77	5970

Order No.	l_3	l_4	l_5	l_6	r_1	r_2	w_1	w_2	d_1	α
46060.W0002	30	22	14	12	5	10.0	31	6	M 6	190°
46060.W0004	44	26	19	16	8	15.0	52	10	M 8	190°
46060.W0006	55	36	28	20	11	18.0	60	12	M10	190°
46060.W0008	66	50	37	27	14	22.5	76	16	M12	190°
46060.W0010	80	52	40	22	14	25.0	90	20	M16	190°



Clamping Arm Extension for modular toggle clamps

Heavy Duty Toggle Clamps



46070.1

HEAVY DUTY TOGGLE CLAMPS

Material

Steel, black oxide coated.
For welding.

Technical Notes

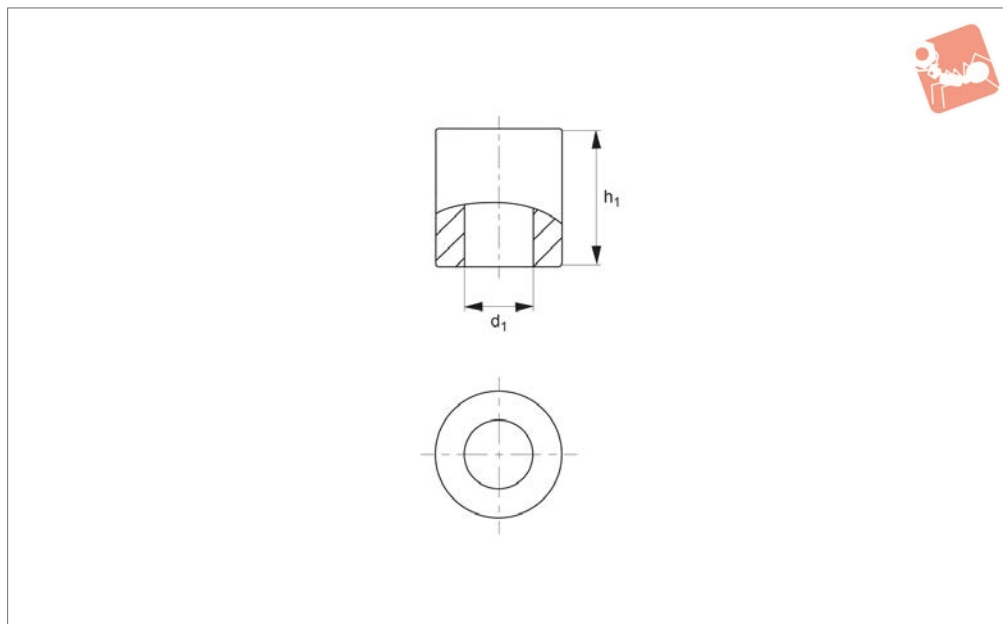
To suit modular toggle clamps 46050 and 46060.

Temperature range -10°C to +80°C.

Order No.	Size	$l_1 \times h_1 \times w_1$	Weight g
46070.W0002	2	40x15x15	81
46070.W0004	4	48x25x20	208
46070.W0006	6	60x30x25	390
46070.W0008	8	75x35x30	676
46070.W0010	10	94x35x35	970



46070.2



Material

Steel, black oxide coated.
For welding.

Technical Notes

To suit modular toggle clamps 46050 and 46060.

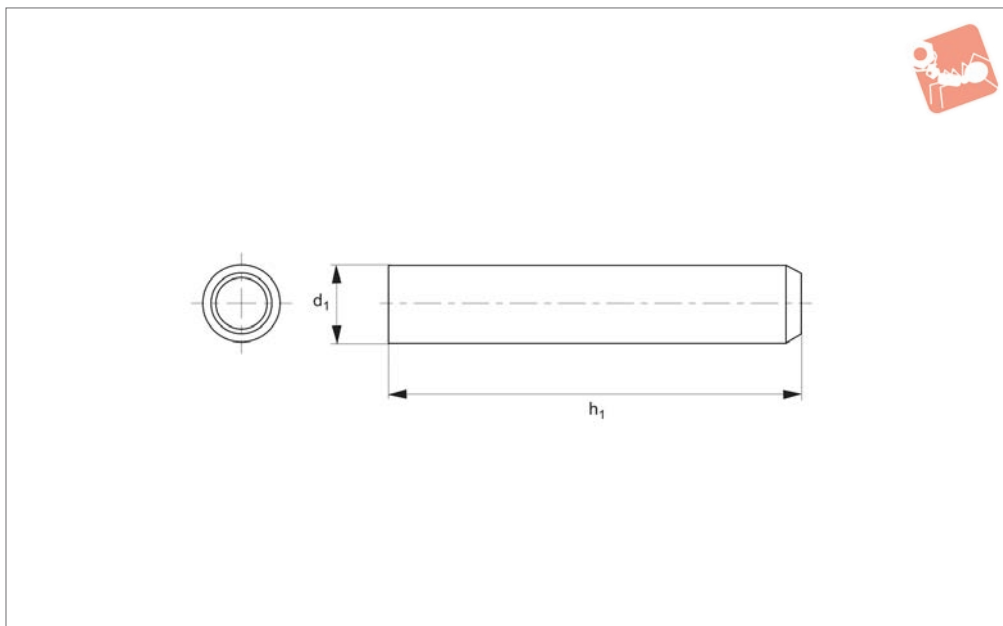
Order No.	Size	$d_1 \times h_1$	Weight g
46070.W0102	2	6,5x20	26
46070.W0104	4	12,1x24	50
46070.W0106	6	12,1x30	63
46070.W0108	8+10	12,1x36	75



Lever Arm Tube - Short

for modular toggle clamps

Heavy Duty Toggle Clamps



46070.3

HEAVY DUTY TOGGLE CLAMPS

Material

Steel, black oxide coated.
For welding.

Technical Notes

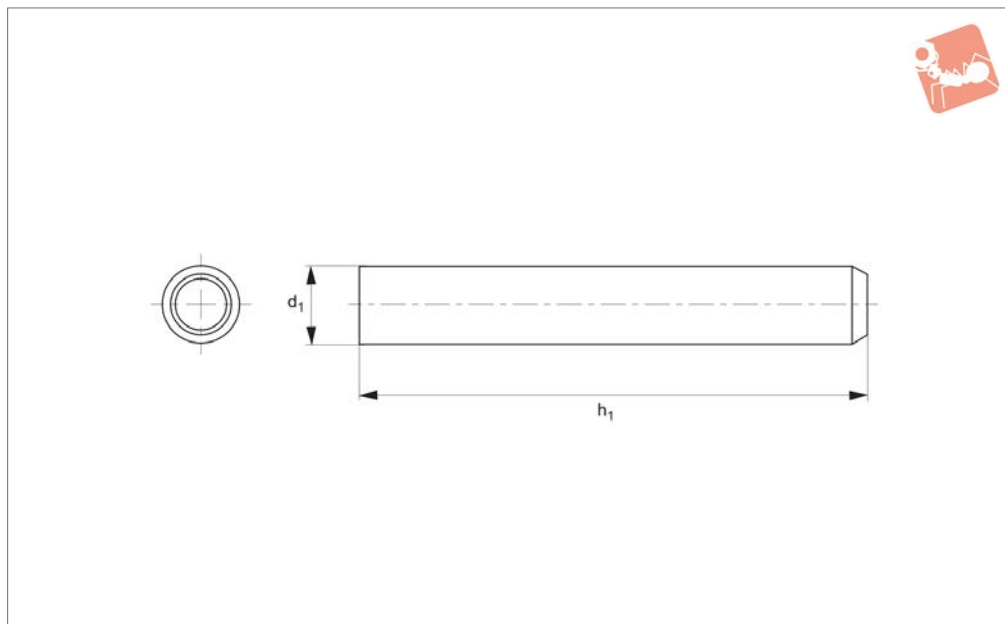
To suit modular toggle clamps 46050 and 46060.

Chamfered to protect operator's hands.

Order No.	Size	$d_1 \times h_1$	Weight g
46070.W0202	2	13x55	37
46070.W0204	4	18x95	104
46070.W0206	6	22x105	148
46070.W0208	8+10	28x115	148



46070.4



Material

Steel, black oxide coated.
For welding.

Technical Notes

To suit modular toggle clamps 46050 and 46060.

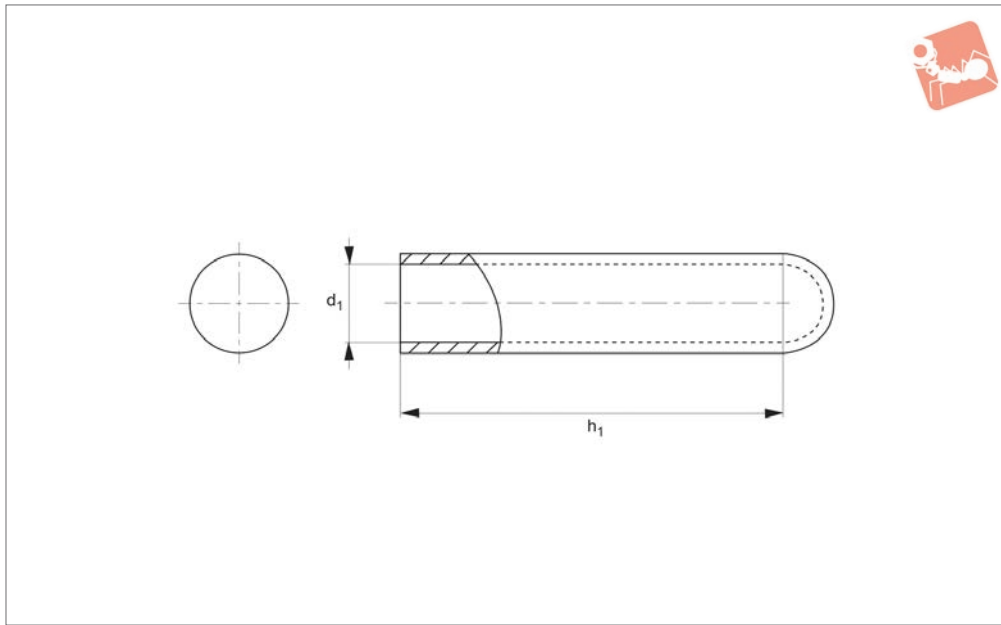
Chamfered to protect operator's hands.

Order No.	Size	$d_1 \times h_1$	Weight g
46070.W0302	2	13x95	60
46070.W0304	4	18x120	132
46070.W0306	6	22x150	211
46070.W0308	8+10	28x180	333



Grips for Levers for modular toggle clamps

Heavy Duty Toggle Clamps



46070.5

HEAVY DUTY TOGGLE CLAMPS

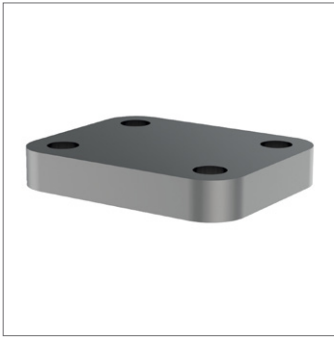
Material

Oil-resistant plastic, red.

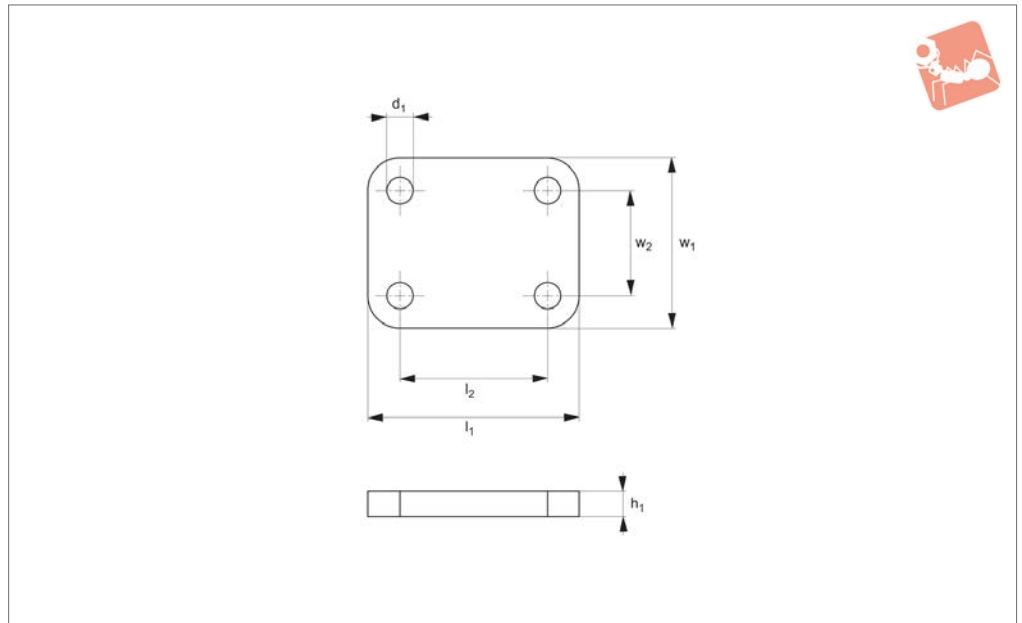
Technical Notes

To suit lever arms 46070.W0202- .W0208
and 46070.W0302 - .W0308.

Order No.	Size	$d_1 \times h_1$	Weight g
46070.W0402	2	13x50	7
46070.W0404	4	18x90	21
46070.W0406	6	22x100	28
46070.W0408	8+10	28x110	39



46070.6



Material

Steel, black oxide coated.
For welding.

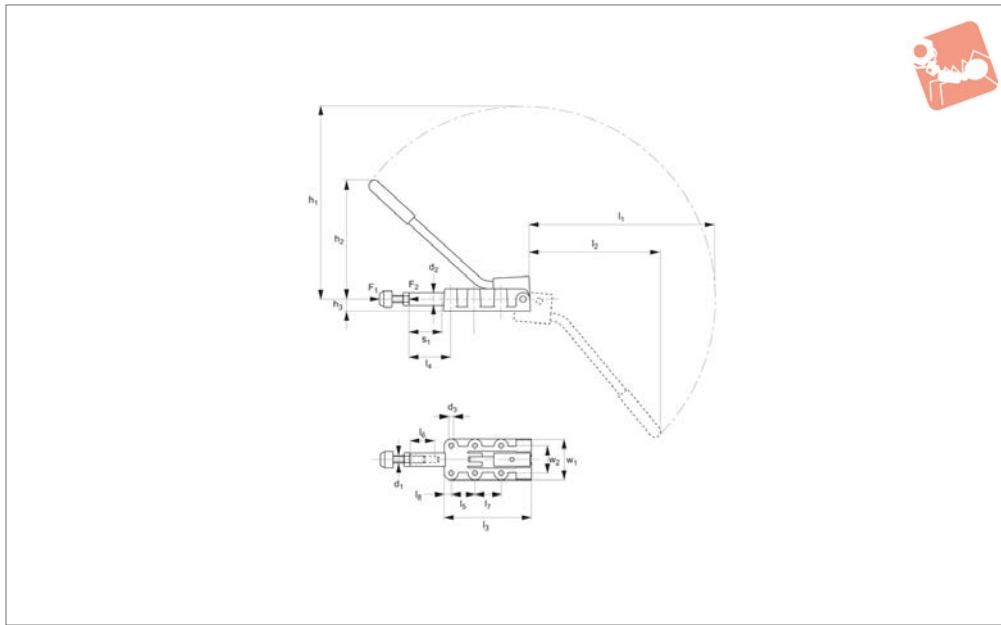
Order No.	Size	h_1	l_1	l_2	w_1	w_2	d_1	Weight g
46070.W0502	2+4	8	50	35	40	25	6.5	86
46070.W0506	6	8	50	30	60	40	8.5	211
46070.W0508	8	8	65	45	70	50	8.5	333
46070.W0510	10	10	70	50	80	60	10.5	406



Heavy Duty Push-Pull Toggle Clamps

reversible lever

Heavy Duty Toggle Clamps



42100

HEAVY DUTY TOGGLE CLAMPS

Material

Body: cast iron, malleable, burnished.
 Lever and rod: tempered steel, burnished.
 Lever: steel, zinc plated.
 Handle: ergonomic soft feel, oil-resistant,

with large grip area.

Supplied complete with zinc plated clamping screw.

Technical Notes

For push-pull clamping.
 Very strong construction with long push-rod guidance.
 Temperature range -10°C to +80°C.

Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw d ₁	Stroke s ₁	d ₂	d ₃	h ₁	h ₂	h ₃	Weight g
42100.W0004	4	7	7	M 8x35	32	14	5.5	190.0	115.0	12	650
42100.W0005	5	12	12	M10x50	50	20	8.5	290.5	178.5	18	1600
42100.W0007	7	25	25	M12x50	75	25	10.5	392.0	246.0	22	4280
42100.W0008	8	45	45	M16x80	106	30	10.5	523.0	323.0	28	7720

Order No.	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂
42100.W0004	182	128	90	63	36.5	30	-	25.0	47	33.3
42100.W0005	279	197	137	63	35.0	50	41	8.0	58	41.0
42100.W0007	374	267	198	114	45.0	50	45	12.0	84	54.0
42100.W0008	501	365	254	149	70.0	60	70	14.5	86	57.0

Heavy Duty Toggle Clamps

Heavy Duty Push-Pull Toggle Clamp

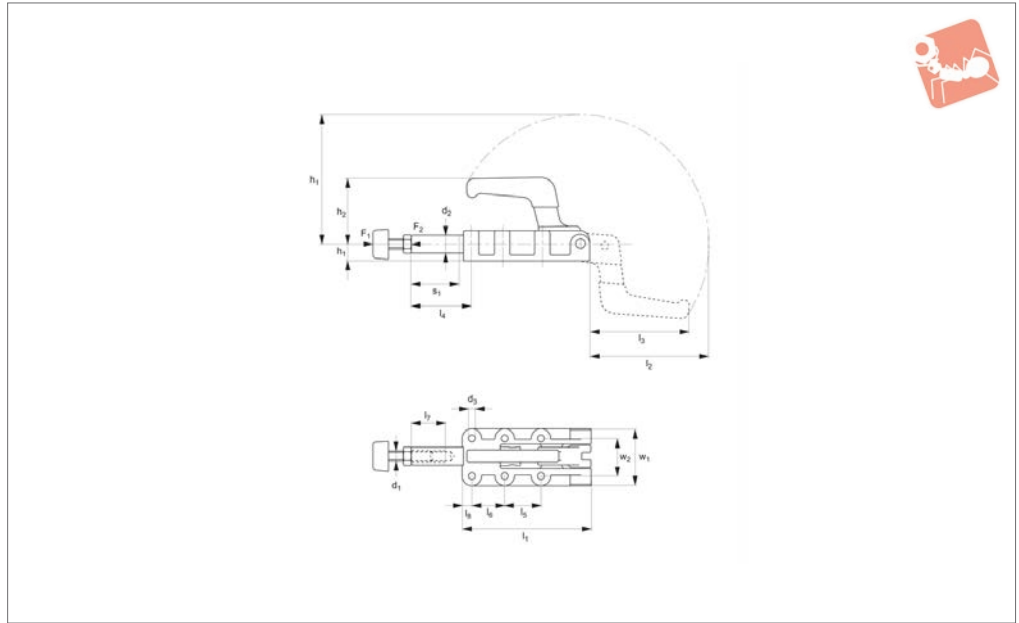
solid hand lever



HEAVY DUTY TOGGLE CLAMPS



42150



Material

Body: cast iron, malleable, burnished.
 Lever and rod: tempered steel, burnished.
 Handle: ergonomic soft feel, oil-resistant, with large grip area.

Supplied complete with zinc plated and tempered clamping screw.

Technical Notes

Heavy duty version with long guide rod.
 Temperature range -10°C to +80°C.

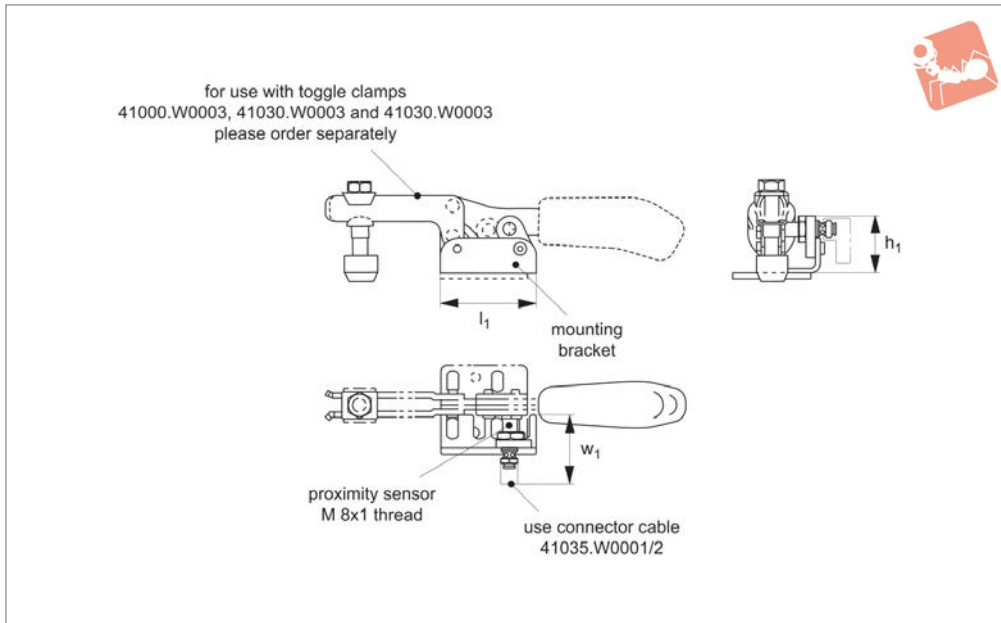
Order No.	Size	F ₁ kN	F ₂ kN	Clamping screw d ₁	Stroke s ₁	d ₂	d ₃	h ₁	h ₂	h ₃	Weight g
42150.W0004	4	7	7	M 8x35	32	14	5.5	96	42.5	12	590
42150.W0005	5	12	12	M10x50	50	20	8.5	136	70.0	18	1650
42150.W0007	7	25	25	M12x50	75	25	10.5	196	93.5	22	4150
42150.W0008	8	45	45	M16x80	106	30	10.5	247	111.5	28	7420

Order No.	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂
42150.W0004	90	88.0	69.0	63	-	36.5	30	25.0	47	33.3
42150.W0005	137	126.0	105.0	63	41	35.0	50	8.0	58	41.0
42150.W0007	198	183.5	151.5	114	45	45.0	50	12.0	84	54.0
42150.W0008	254	232.0	196.0	149	70	70.0	60	14.5	86	57.0



Position Sensor for manual toggle clamps

Toggle Clamp Accessories



41035.1

TOGGLE CLAMP ACCESSORIES

Material

Sensor and mounting bracket: steel, zinc plated complete with inductive sensor M 8x1.

Cable: angled connector with cable permanently injection moulded on. Silicone-free, halogen-free, gold plated contacts. IP68 rated in accordance to IEC529.

Technical Notes

Monitors the closed position of a toggle

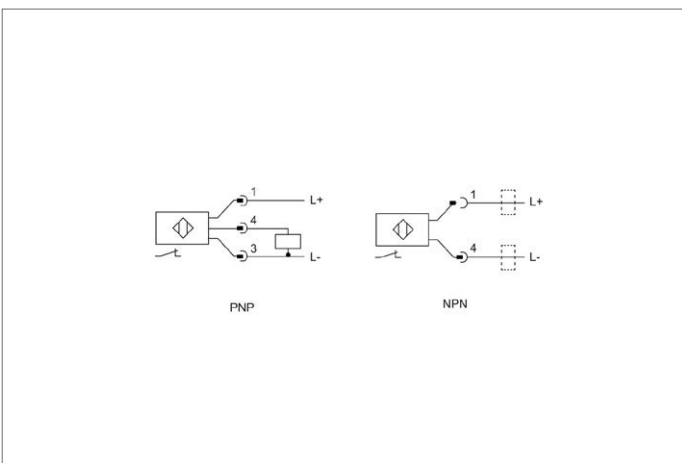
clamp and enables their integration into fixture/application monitoring systems. Sensor monitor can be used on both sides for horizontal toggle clamp nos. 41000.W0003, 41030.W0003 and 41000.W0103, and only on one side for horizontal toggle clamp with safety latch no. 41000.W0003. Temperature range: 0°C to 60°C. Sensing bracket 41035.W0103 can be integrated into your monitoring system using cables 41035.W0001 or W0002 and can be

rewired either PNP or NPN (see circuit diagram below).

Tips

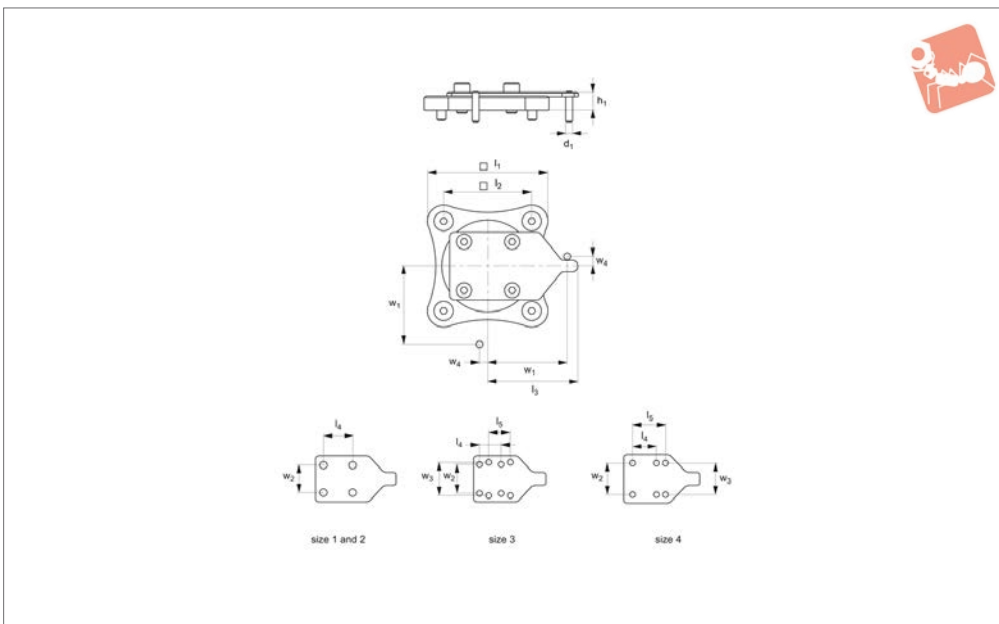
Order toggle clamp separately.

Order No.	Type	Cable length m	w ₁	h ₁	l ₁	Weight g
41035.W0001	Cable	2	-	-	-	75
41035.W0002	Cable	5	-	-	-	150
41035.W0103	Bracket	-	40	35	55	60





41035.2



Material

Body: steel, zinc plated.
Includes stop pin for limiting the opening position of 90°.

Technical Notes

Order 41035.W0010 for toggle clamp

41000 size 3.

Order 41035.W0012 for toggle clamp

41000 size 4.

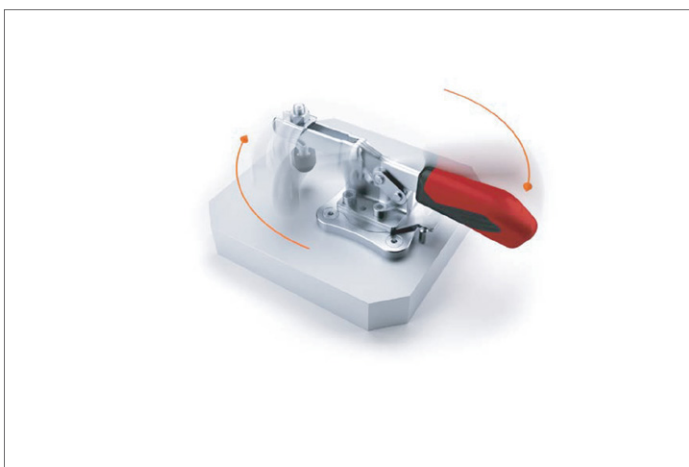
Order 41035.W0013 for toggle clamp

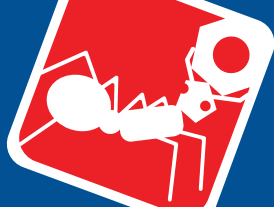
40000 sizes 2 and 3.

Order 41035.W0014 for toggle clamp

40000 size 4.

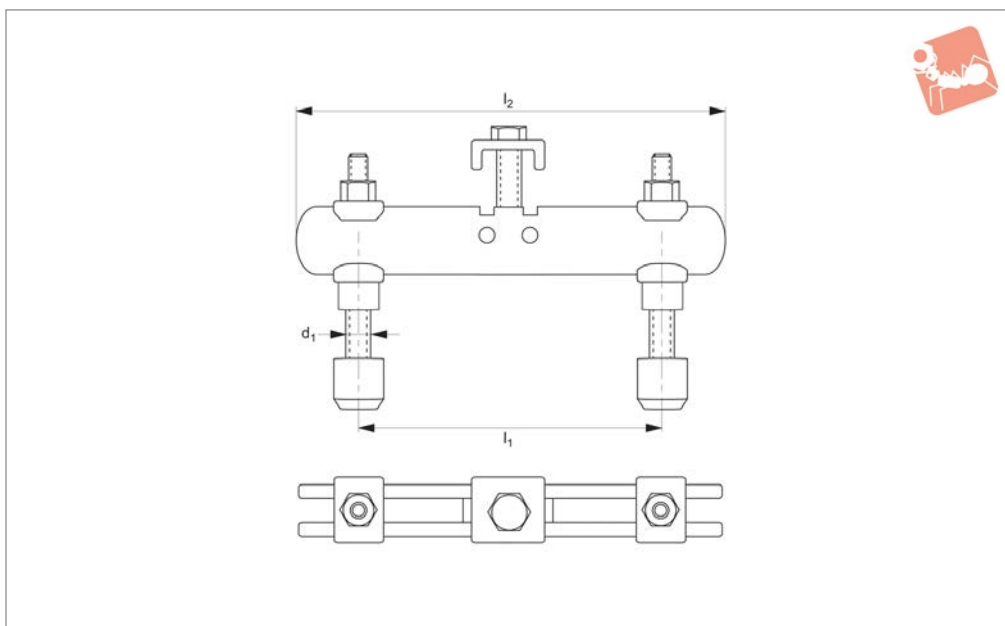
Order No.	Size	d_1	w_1	h_1	l_1	l_2	l_3	l_4	l_5	w_2	w_3	w_4	Weight g
41035.W0010	1	6	41	11.4	76	54	47.0	26.0	-	26.0	-	9.0	430
41035.W0012	2	6	68	13.4	104	76	77.0	41.5	-	41.5	-	9.0	915
41035.W0013	3	6	41	11.4	76	54	45.0	20.0	20	27.0	32.5	9.0	430
41035.W0014	4	6	59	13.4	104	76	69.2	32.0	45	45.0	45.0	10.5	922





Supporting Arms for toggle clamps

Toggle Clamp Accessories



45000

TOGGLE CLAMP ACCESSORIES

Material

Steel, zinc plated. Complete with two clamping screws no. 45060 and hexagon screw.

Technical Notes

With this supporting arm there is the option of clamping either two small workpieces or one large workpiece at two

points. See table below for suitable toggle clamps.

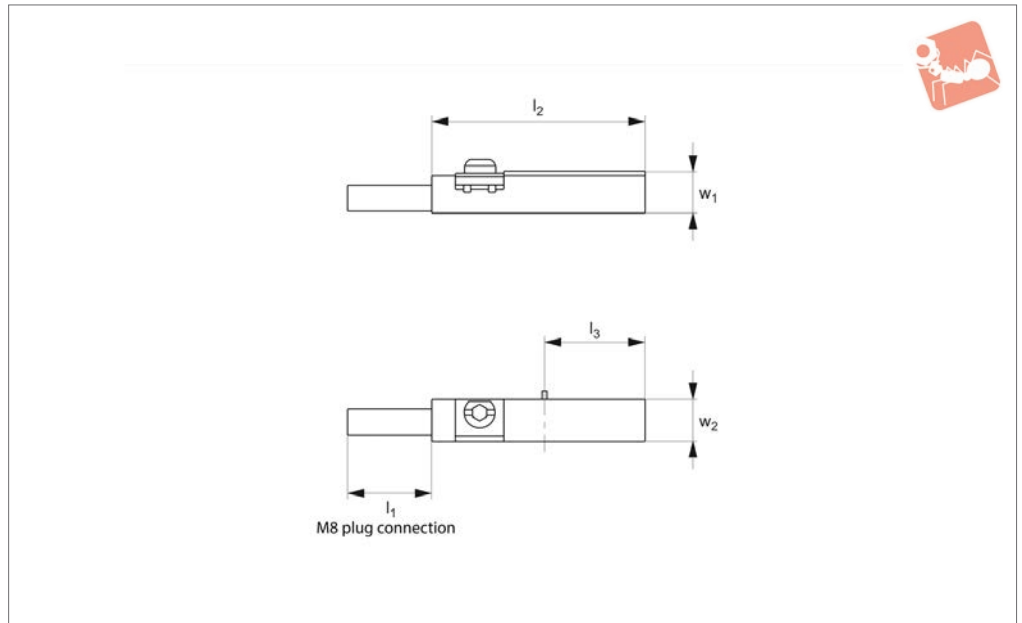
Temperature range -10°C to +80°C.

Order No.	Size	Clamping screw d_1	Distance between screws l_1 min. max.	l_2	Weight g
45000.W0000	0	M 4x25	18-60	70	40
45000.W0001	1	M 5x30	22-72	85	65
45000.W0002	2	M 6x35	28-85	100	90
45000.W0003	3	M 8x45	34-100	120	200
45000.W0004	4	M 8x65	40-125	150	370
45000.W0005	5	M 8x65	40-125	150	370
45000.W0006	6	M12x80	54-200	240	985





45001



Technical Notes

PUR cable 0.3m with M8 plug connection and rotating knurled nuts.

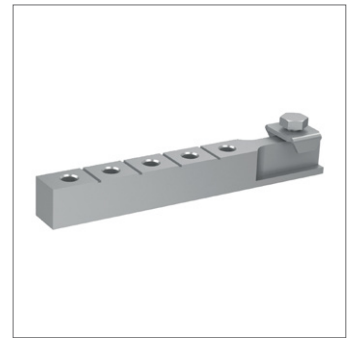
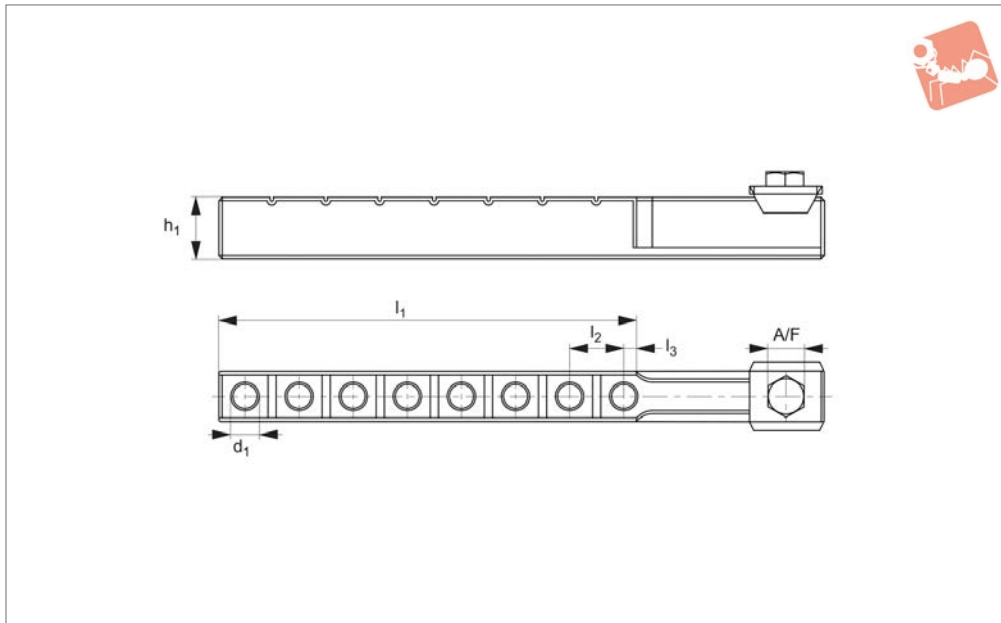
Switching function: NOC. Output: PNP.

Order No.	Cable length l_1	w_1	l_2	l_3	w_2	Weight g
45001.W0000	300	5.1	25.3	12	5	15



Clamping arm extension for manual toggle clamps

Toggle Clamp Accessories



45002

TOGGLE CLAMP ACCESSORIES

Material

Aluminium.

Complete with fastening bolt, without

clamping screw.

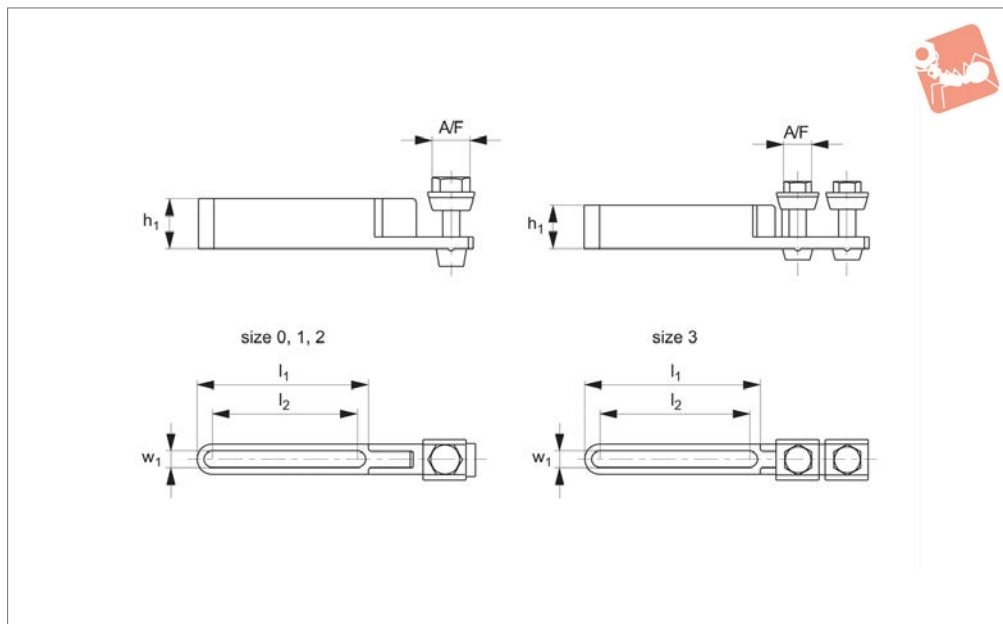
Tips

Can be shortened to required length.

Order No.	Size	d ₁	h ₁	l ₁	l ₂	l ₃	A/F	Weight g
45002.W0000	1	5xM 5	11	61	12	6	7	24
45002.W0001	2	6xM 6	14	90	15	8	8	47
45002.W0002	3	8xM 8	17	115	15	3	10	92



45010



Material

Steel, blued.
Complete with fastening screw, without clamping screw

Technical Notes

For clamping screws see part 45020.
Temperature range -10°C to +80°C.

Tips

Can be shortened to required length.

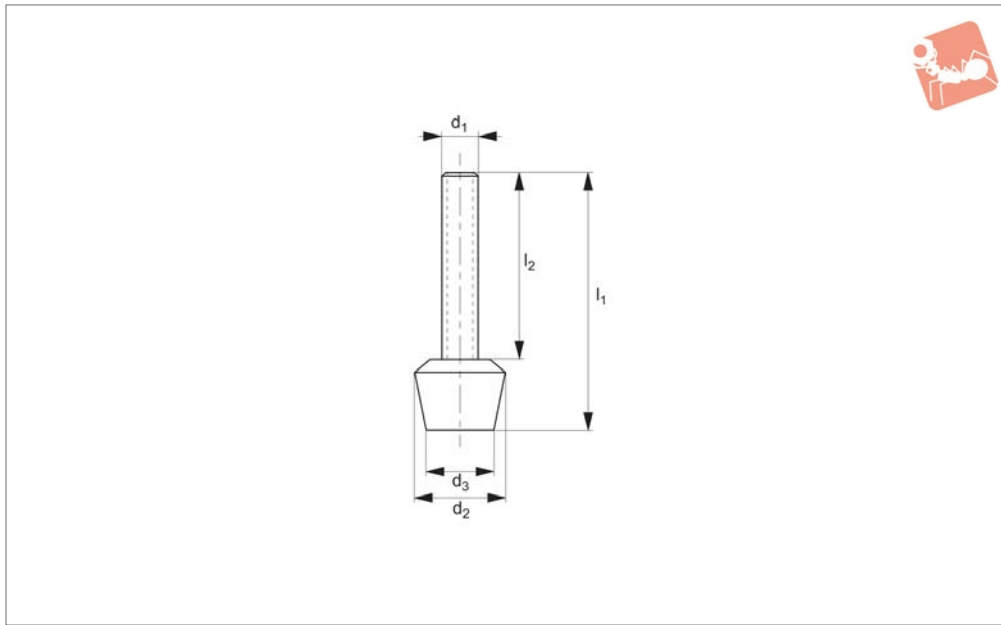
Order No.	Size	w ₁	h ₁	l ₁	l ₂	To suit clamping screw	A/F	Weight g
45010.W0000	0	4.2	10	32.5	25	M 4	7	15
45010.W0001	1	5.2	12	55.0	45	M 5	8	25
45010.W0002	2	6.2	14	73.5	65	M 6	10	40
45010.W0003	3	8.2	20	82.0	70	M 8	13	80



Clamping Screws for Toggle Clamps

bonded pressure pad

Toggle Clamp Accessories



45016

TOGGLE CLAMP ACCESSORIES

Material

Screw: steel, zinc plated and tempered, strength class 8.8.

Pad: oil-resistant neoprene, hardness 85

shore A, silicone free.

Technical Notes

The bonded pressure pad is used to prevent

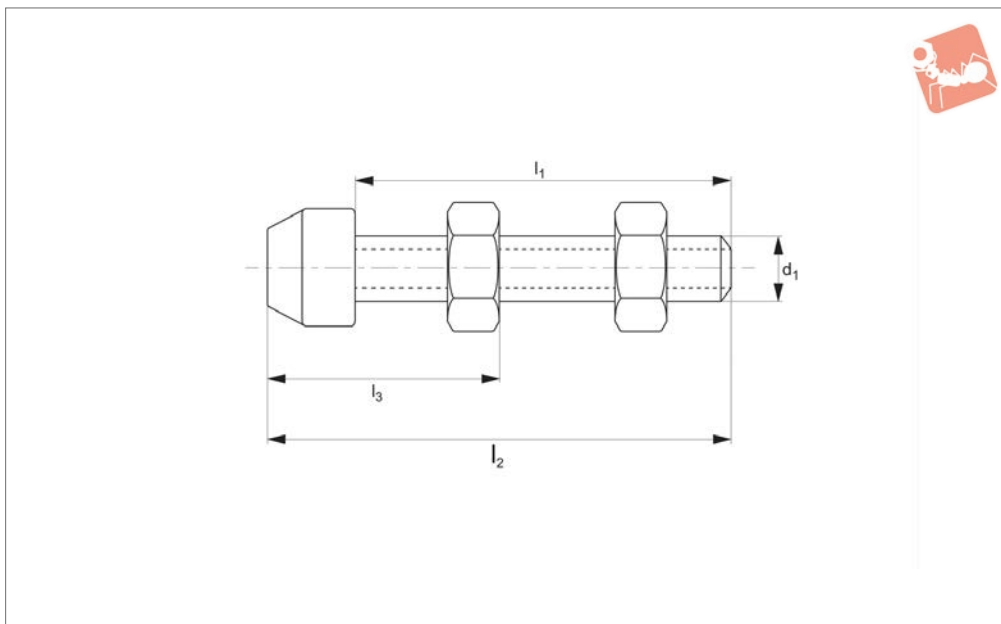
damage to delicate workpieces.

Temperature range -10°C to +80°C.

Order No.	d ₁ x l ₁	d ₂	d ₃	l ₂	Weight g
45016.W0001	M 4x32	11	8	24	4
45016.W0002	M 5x38	13	10	28	8
45016.W0003	M 6x35	16	12	23	11
45016.W0004	M 6x45	16	12	33	13
45016.W0005	M 6x60	16	12	48	16
45016.W0006	M 8x48	21	16	32	25
45016.W0007	M 8x58	21	16	42	29
45016.W0008	M 8x63	21	16	47	31
45016.W0009	M 8x78	21	16	62	37
45016.W0010	M10x66	26	20	46	53
45016.W0011	M10x76	26	20	56	59
45016.W0012	M10x116	26	20	96	84
45016.W0013	M12x70	31	24	46	78
45016.W0014	M12x100	31	24	76	105
45016.W0015	M12x130	31	24	106	131



45018



Material

Body: steel, zinc plated and tempered, tensile strength class 8.8.
Supplied complete with two nuts and

removable protection pad.

Temperature range -10°C to +80°C.

Technical Notes

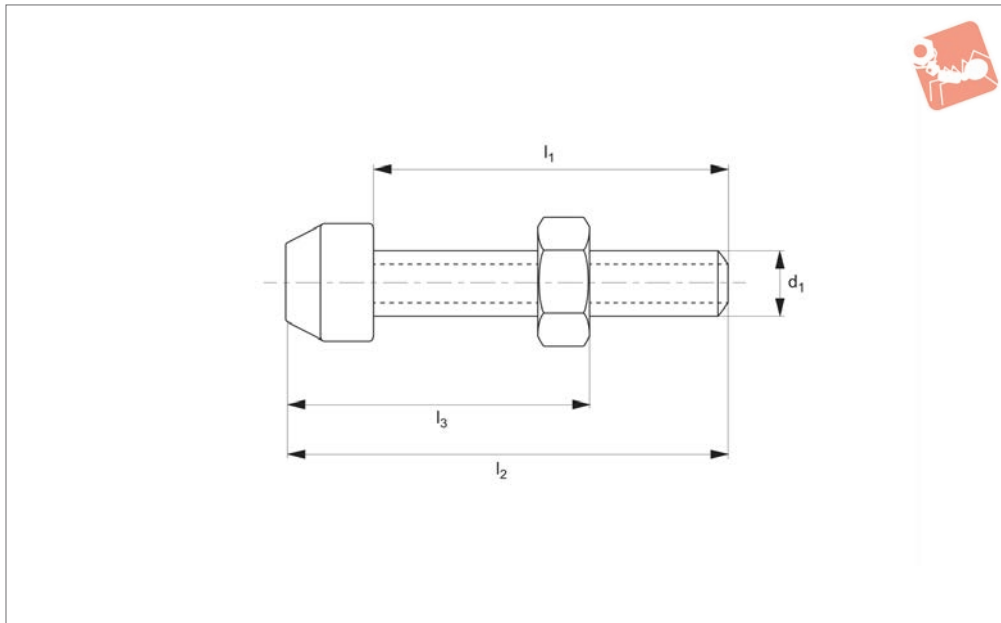
For toggle clamps.

Order No.	Size	$d_1 \times l_1$	l_2	l_3	Weight g
45018.W0001	1	M 5x30	38	14-25	10
45018.W0002	2	M 6x35	45	17-25	20
45018.W0003	3	M 8x45	58	22-32	35
45018.W0004	4	M 8x65	78	22-52	40
45018.W0005	5	M12x80	98	30-60	130
45018.W0006	6	M12x110	128	30-88	160
45018.W0008	8	M16x120	130	25-84	280



Clamping Screws for push-pull toggle clamps

Toggle Clamp Accessories



45020.1

TOGGLE CLAMP ACCESSORIES

Material

Steel: zinc plated and tempered, tensile strength class 8.8.

Stainless: stainless steel (AISI 304,

1.4301). With nut and removable rubber protection pad.

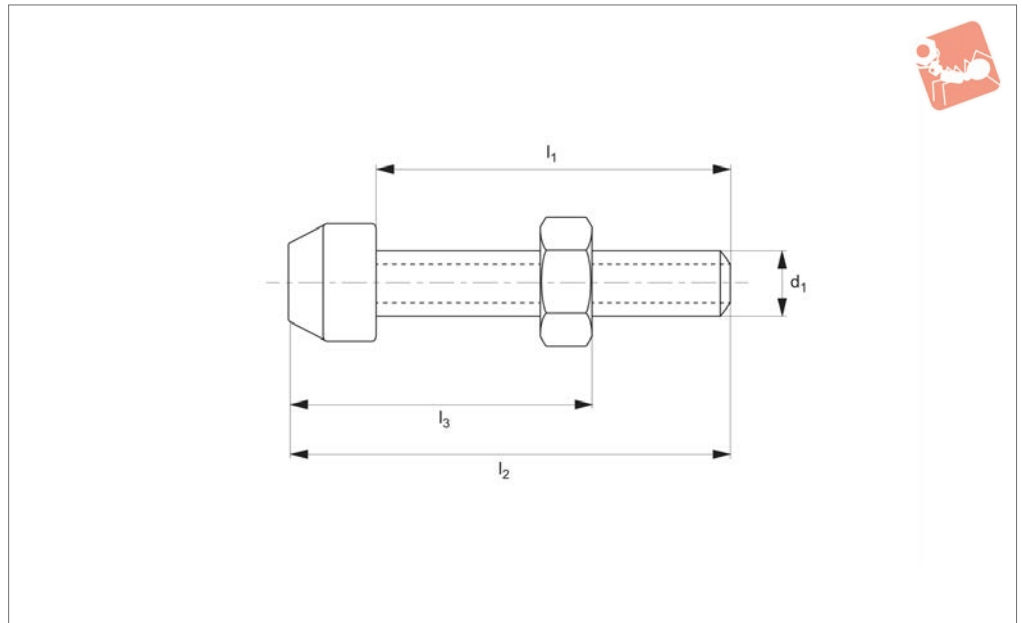
Technical Notes

Protection pad is made of oil-resistant neoprene to prevent damage to delicate workpiece surfaces, hardness 70 shore A,

Order No.	Type	Size	$d_1 \times l_1$	l_2	l_3	Weight g
45020.W0001	Steel	0+1	M 4x20	27	12-20	4
45020.W0002	Steel	2	M 6x25	35	17-25	15
45020.W0003	Steel	3	M 8x35	48	22-35	26
45020.W0005	Steel	5	M10x50	66	30-52	57
45020.W0007	Steel	7	M12x50	68	30-50	82
45020.W0008	Steel	8	M16x80	90	25-70	220
45020.W0501	Stainless	0+1	M 4x20	27	12-20	4
45020.W0502	Stainless	2	M 6x25	35	18-27	15
45020.W0503	Stainless	3	M 8x35	48	22-35	26
45020.W0507	Stainless	7	M12x50	68	30-50	82



45020.2



Material

Steel matt black, tensile strength class 8.8. With nut and bonded pressure pad.

Technical Notes

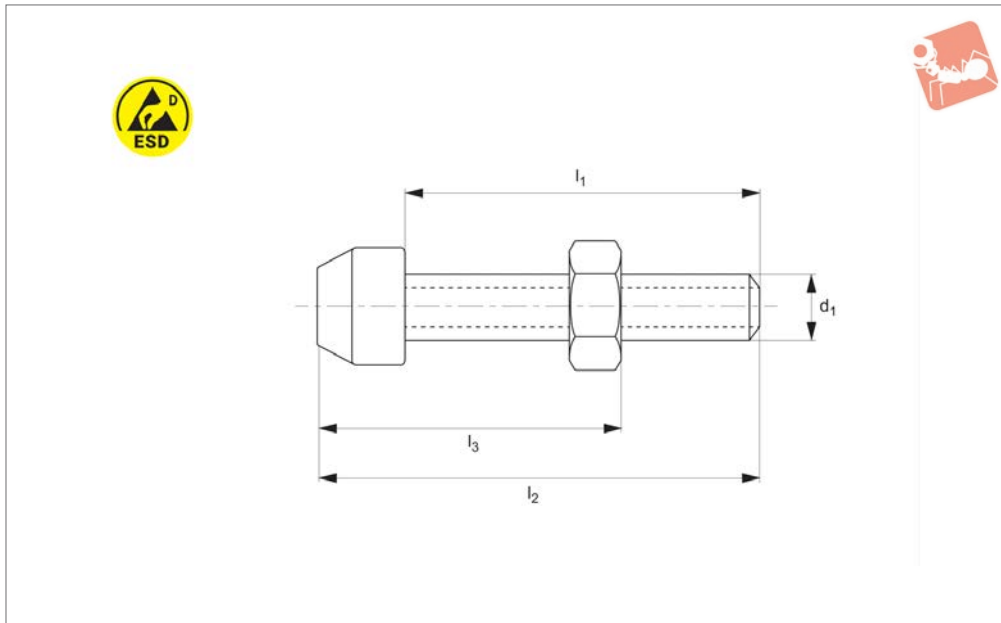
For optical analysis applications.

Order No.	Size	$d_1 \times l_1$	l_2	l_3	Weight g
45020.W0100	1	M 4x20	23	10-17	4
45020.W0101	2	M 6x25	35	17-25	15
45020.W0102	3	M 8x44	44	26-33	26



ESD Clamping Screws for push-pull toggle clamps

Toggle Clamp Accessories



45020.3

TOGGLE CLAMP ACCESSORIES

Material

Steel, zinc plated and tempered. Tensile strength class 8.8. With nut and removable rubber pad.

Technical Notes

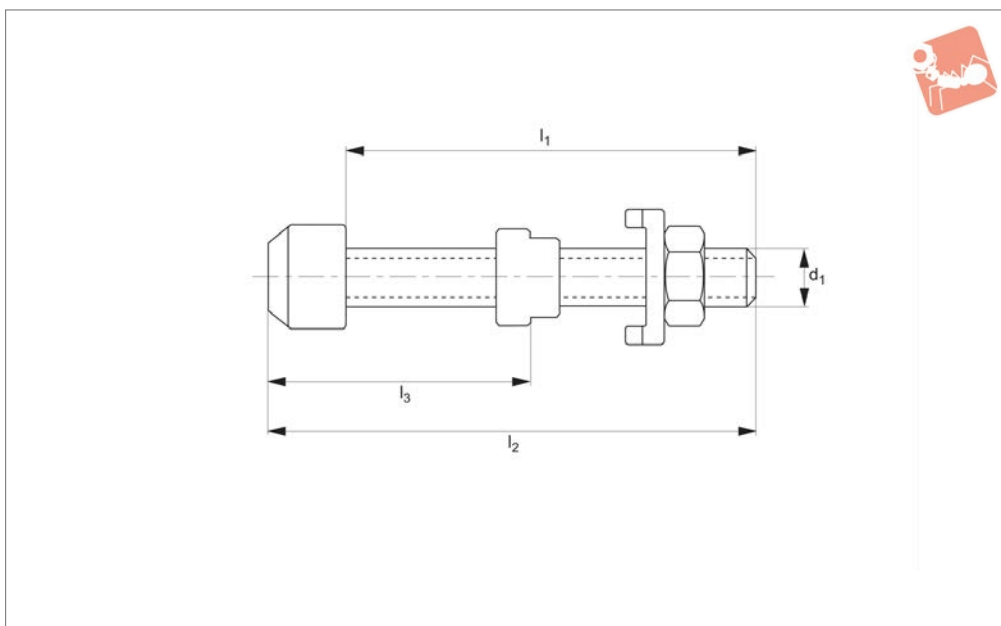
The ESD (electrostatically sensitive devices) clamping screw is non-insulating. It must not be used in areas

where open voltages are used.

Order No.	Size	$d_1 \times l_1$ DIN 933	l_2	l_3	Weight g
45020.W0301	0+1	M 4x20	27	12-20	4
45020.W0302	2	M 6x25	35	17-25	15
45020.W0303	3	M 8x35	48	22-35	26



45060.1



Material

Steel, zinc plated and tempered, tensile strength class 8.8 or stainless steel (AISI 304, 1.4301).

Removable protective cap made of oil-

resistant neoprene to prevent damage to delicate workpiece surfaces, hardness 70 shore A, silicone-free.

Technical Notes

Sizes 0-3, 6 supplied with washer/nut element.

Sizes 4-7 supplied with nut for T-slot.

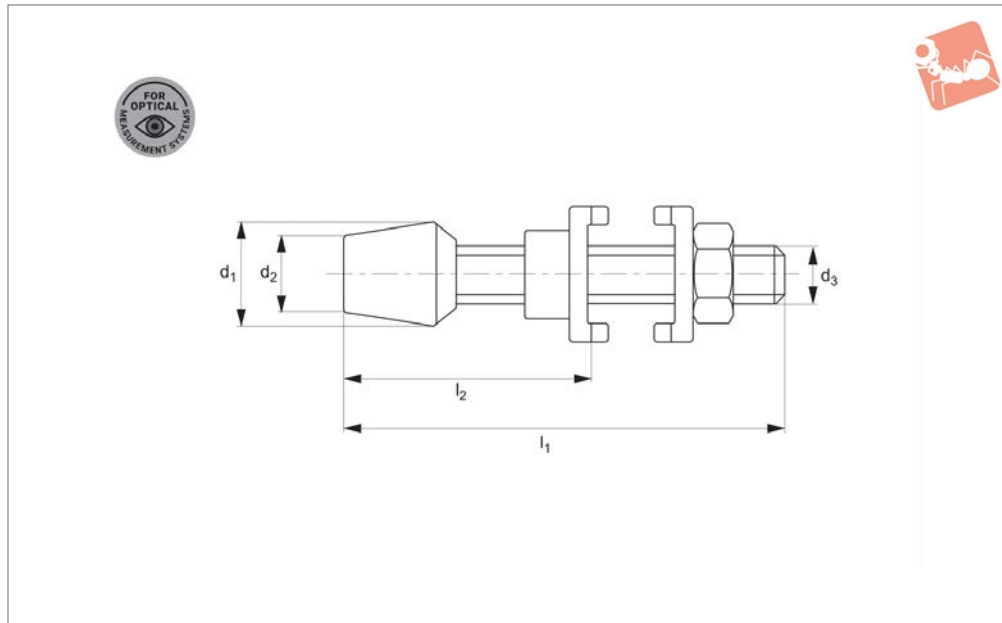
Order No.	Type	Size	$d_1 \times l_1$	l_2	l_3	T-nut DIN 508	U-washer size	Weight g
45060.W0000	Steel	0	M 4x25	32	13-20	-	0	5
45060.W0001	Steel	1	M 5x30	38	17-24	-	1	10
45060.W0002	Steel	2	M 6x35	45	19-28	-	2	22
45060.W0012	Steel	2	M 6x50	60	19-43	-	2	30
45060.W0003	Steel	3	M 8x45	58	22-34	-	3	40
45060.W0004	Steel	4	M 8x65	78	21-50	M 8x10	4	62
45060.W0005	Steel	5	M 8x65	78	21-45	M 8x10	5	62
45060.W0016	Steel	6*	M10x116	116	28-78	-	6	122
45060.W0006	Steel	6	M12x80	97	28-58	M12x14	6	160
45060.W0007	Steel	7	M12x110	127	28-88	M12x14	6	180
45060.W0500	Stainless Steel	0	M 4x25	32	13-20	-	0	5
45060.W0501	Stainless Steel	1	M 5x30	38	17-24	-	1	10
45060.W0502	Stainless Steel	2	M 6x35	45	19-28	-	2	22
45060.W0503	Stainless Steel	3	M 8x45	58	22-34	-	3	40
45060.W0504	Stainless Steel	4	M 8x65	78	21-50	-	3	60



Clamping Screw - Black

for open clamping arms

Toggle Clamp Accessories



45060.2

TOGGLE CLAMP ACCESSORIES

Material

Steel matt black, galvanized, tensile strength class 8.8. Complete with washer, nut and screw. With bonded pressure pad

made of oil-resistant neoprene to prevent damage to delicate workpieces. Hardness 85 Shore A, silicone-free.

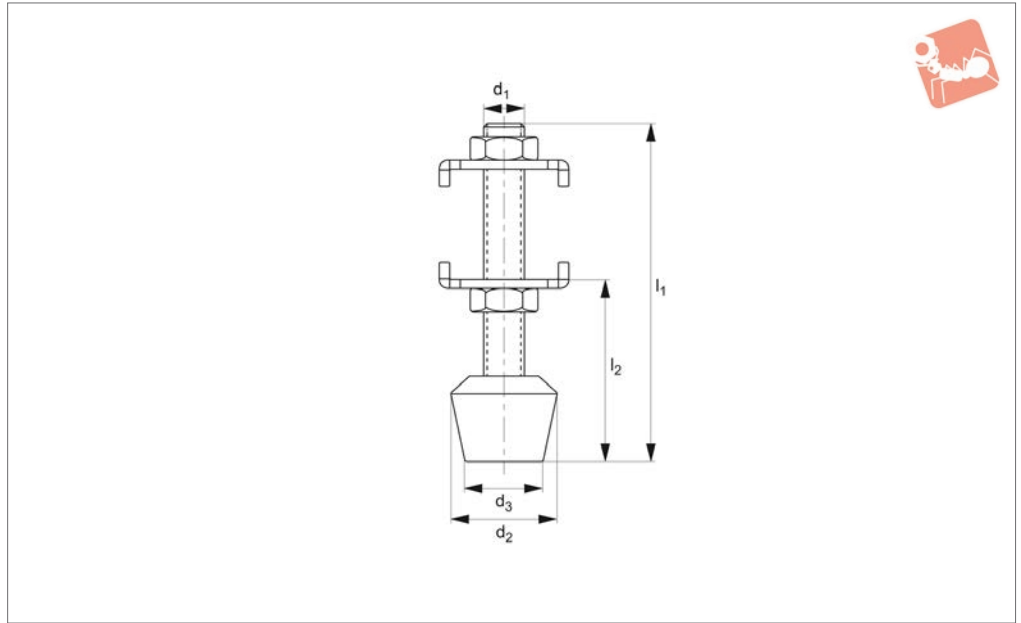
Technical Notes

For optical analysis applications.

Order No.	Size	d ₁	l ₁	d ₂	d ₃	l ₂	Weight g
45060.W0100	0	M 4	34.5	10	-	11,5-22	6
45060.W0101	1	M 5	38.0	13	10	17,0-24	11
45060.W0102	2	M 6	46.0	16	10	20,0-27	17
45060.W0103	2	M 6	60.0	16	10	20,0-40	22
45060.W0104	2	M 6	110.0	16	10	20,0-90	60
45060.W0105	3	M 8	63.0	18	13	27,0-37	39



45062.1



Material

Steel. Strength class 8.8.

Pad: oil resistant neoprene, hardness 85

shore A silicone-free.

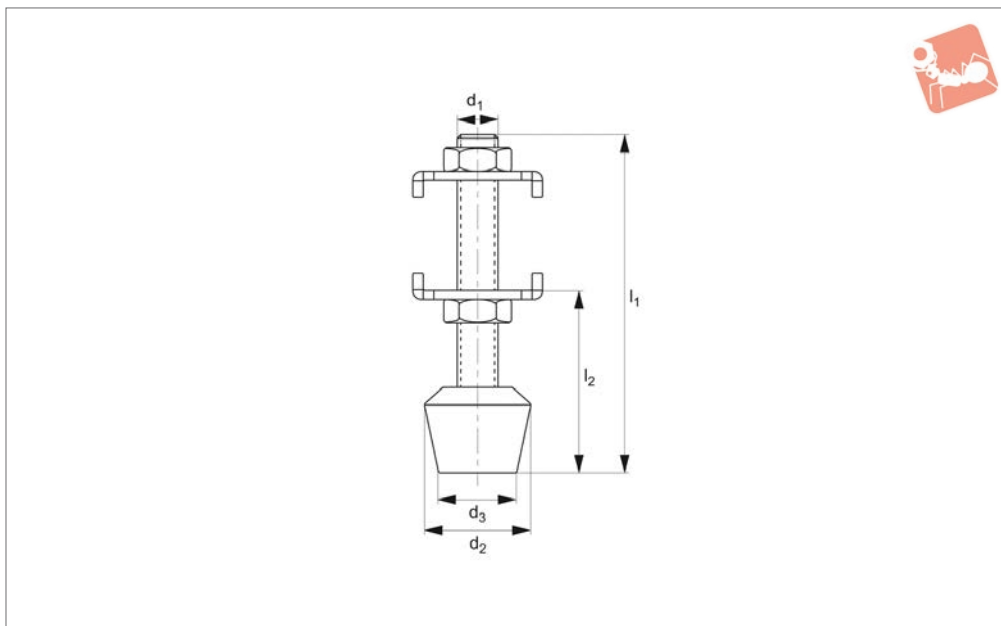
Complete with U-washers, hex nuts and screw with bonded pad.

Order No.	Size	$d_1 \times l_1$	d_2	d_3	l_2	Weight g
45062.W0001	1	M 5 x 35	11	10	9-18	15
45062.W0002	2	M 6 x 50	16	12	17-29	20
45062.W0003	3	M 8 x 58	21	16	21-34	36
45062.W0004	4	M 10 x 76	26	20	28-44	95



Stainless Clamping Screws for horizontal acting toggle clamp

Toggle Clamp Accessories



45062.2

TOGGLE CLAMP ACCESSORIES

Material

Stainless steel, strength class 8.8.

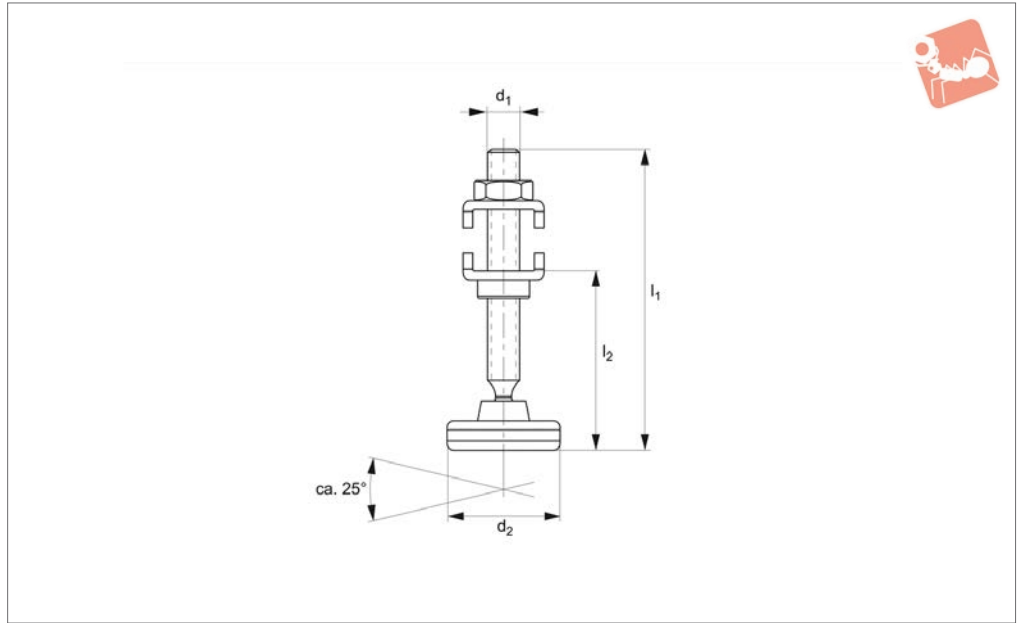
Pad: oil resistant neoprene, hardness 85

shore A silicone-free.

Order No.	Size	$d_1 \times l_1$	d_2	d_3	l_2	Weight g
45062.W0101	1	M 5 x 35	11	10	10-22	15
45062.W0102	2	M 6 x 50	16	12	17-29	20
45062.W0103	3	M 8 x 58	21	16	22-31	45
45062.W0104	4	M 10 x 76	26	20	28-44	95



45070



TOGGLE CLAMP ACCESSORIES

Material

Steel, zinc plated.

Technical Notes

For use with auto adjust toggle clamps.

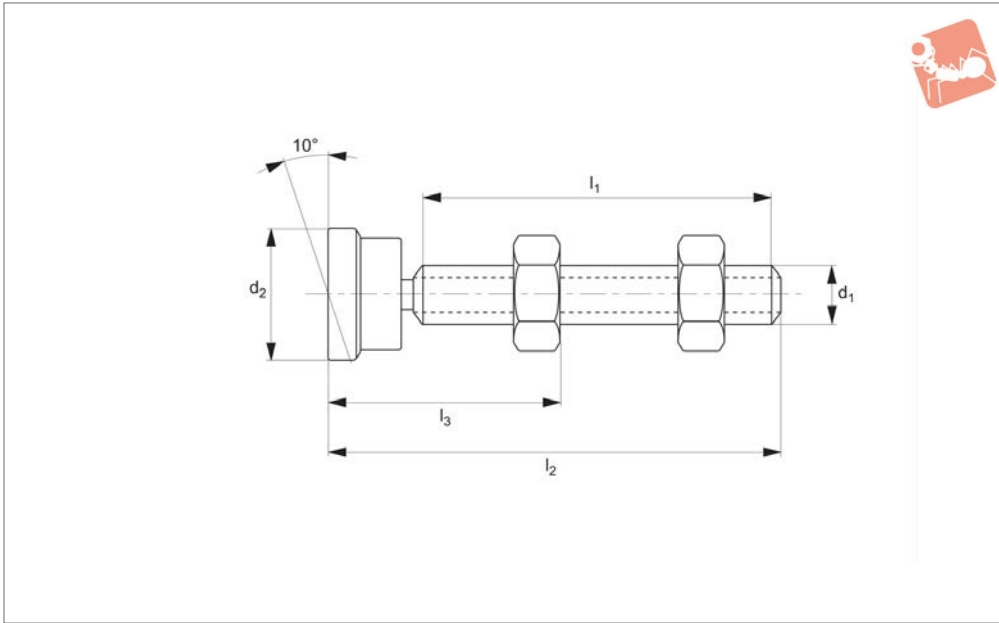
Order No.	Size	$d_1 \times l_1$	d_2	l_2	Weight g
45070.W0001	1	M 6x49	19	16-34	23
45070.W0002	2	M 8x50	27	21-31	51
45070.W0003	3	M 8x66	27	21-47	55



Self Aligning Clamping Screws

for solid and closed twin-arm toggle clamps

Toggle Clamp Accessories



45078

TOGGLE CLAMP ACCESSORIES

Material

Steel, tempered, galvanised and passivated.

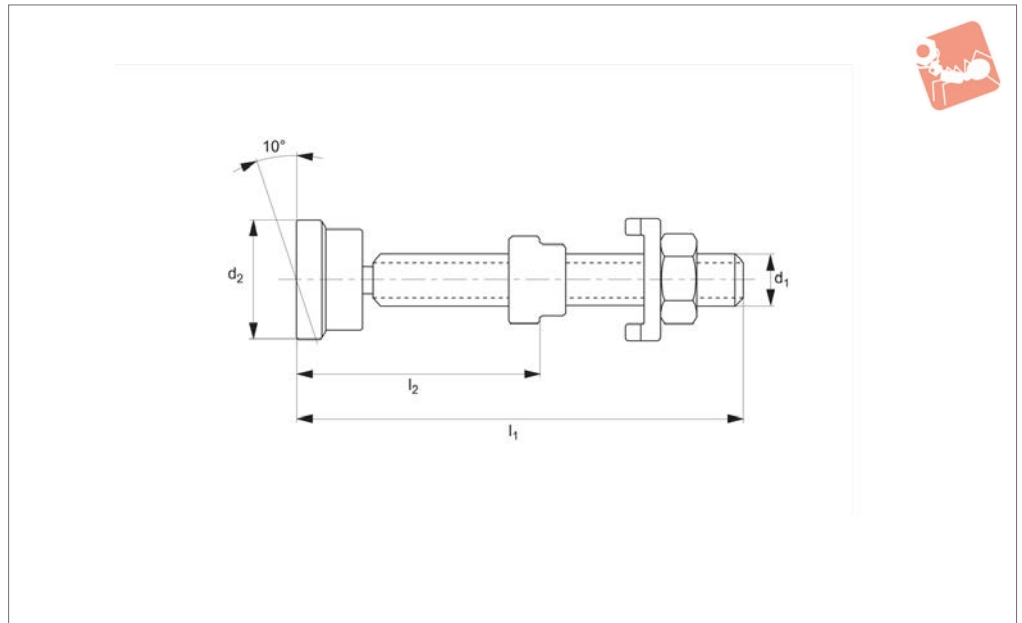
Tips

For use with toggle clamps.

Order No.	Size	Screw $d_1 \times l_1$	d_2	l_2	l_3	Weight g
45078.W0001	1	M 5x35	12	37	8-23	9
45078.W0004	4	M 8x75	16	78	16-52	42
45078.W0005	6	M12x100	25	105	30-61	138



45080



Material

Steel, zinc plated and tempered.

Sizes 4-6 with T-nut.

Technical Notes

Sizes 1-3 with washer/nut element.

Tips

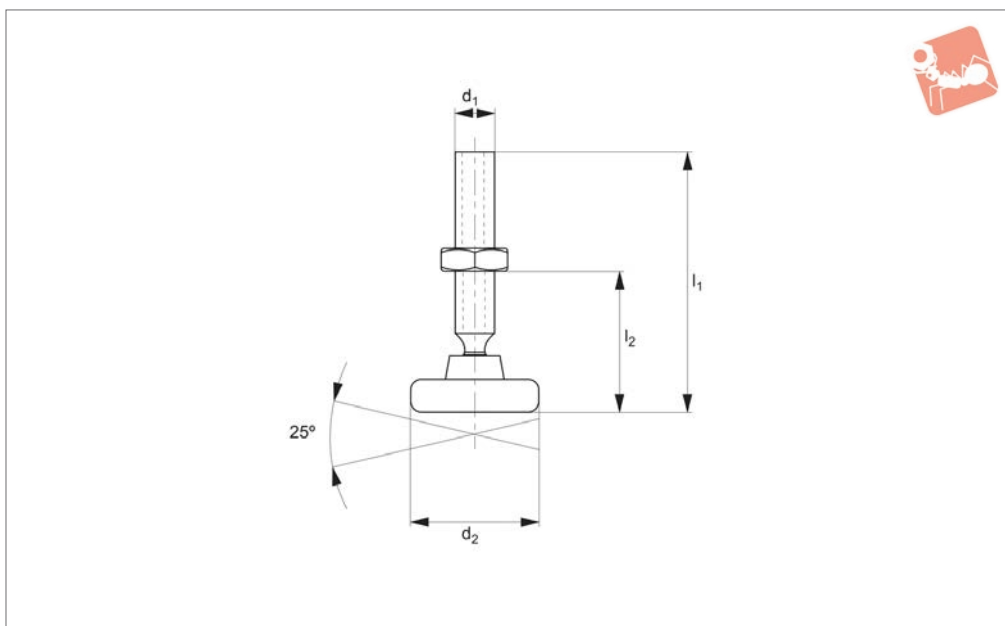
For use with toggle clamps.

Order No.	Size	Screw	d ₁	l ₁	l ₂	T-nut DIN 508	Washer size	Weight g
45080.W0001	1	M 5x35	12	37	12-22	-	1	12
45080.W0002	2	M 6x50	12	52	14-33	-	2	20
45080.W0003	3	M 8x75	16	78	18-52	-	3	47
45080.W0004	4	M 8x75	16	78	15-50	M 8x10	4	62
45080.W0006	6	M12x100	25	105	25-62	M12x14	6	183



Clamping Screws for auto adjust toggle clamps

Toggle Clamp Accessories



45084

TOGGLE CLAMP ACCESSORIES

Material

Steel, galvanised.

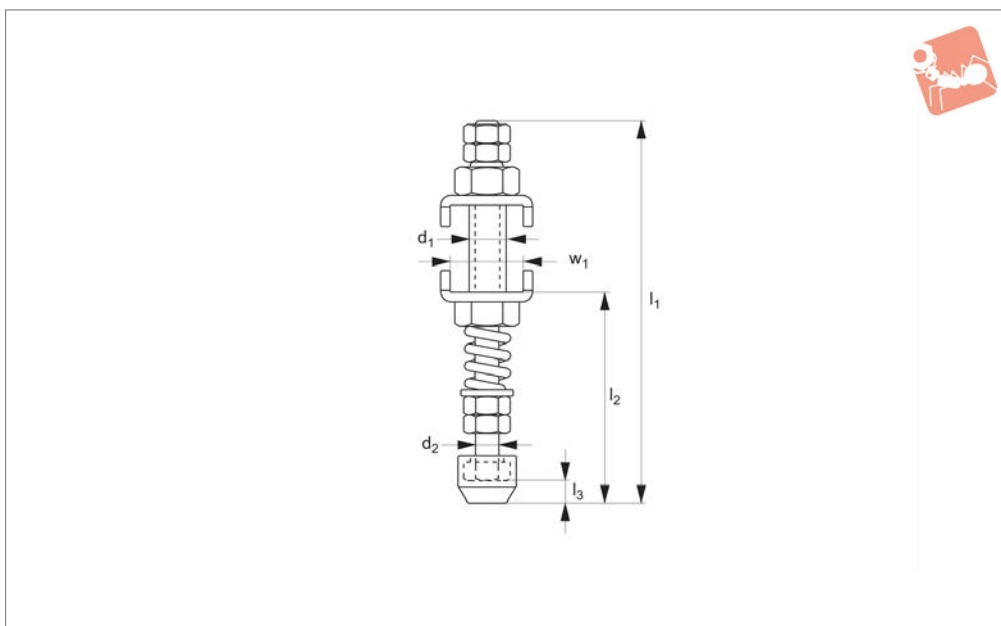
Tips

For auto adjust toggle clamps.

Order No.	Size	$d_1 \times l_1$	d_2	l_2	Weight g
45086.W0001	1	M 6x37	19	13-25	16
45086.W0002	2	M 8x50	19	16-35	41



45100



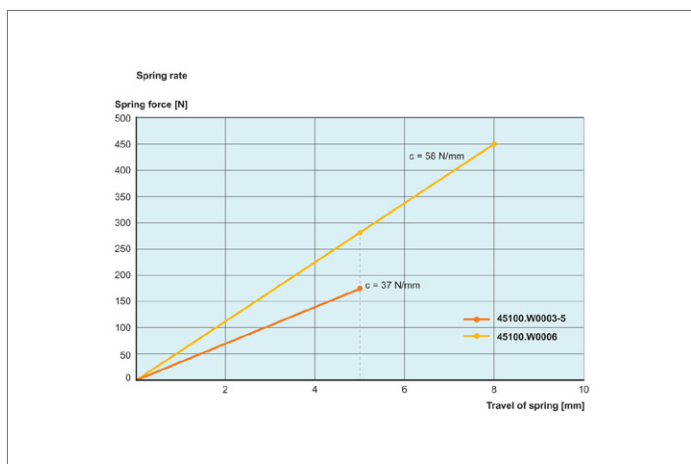
Material

Steel, zinc plated and tempered.
Rubber pad.

Tips

For toggle clamps with open ended arms.

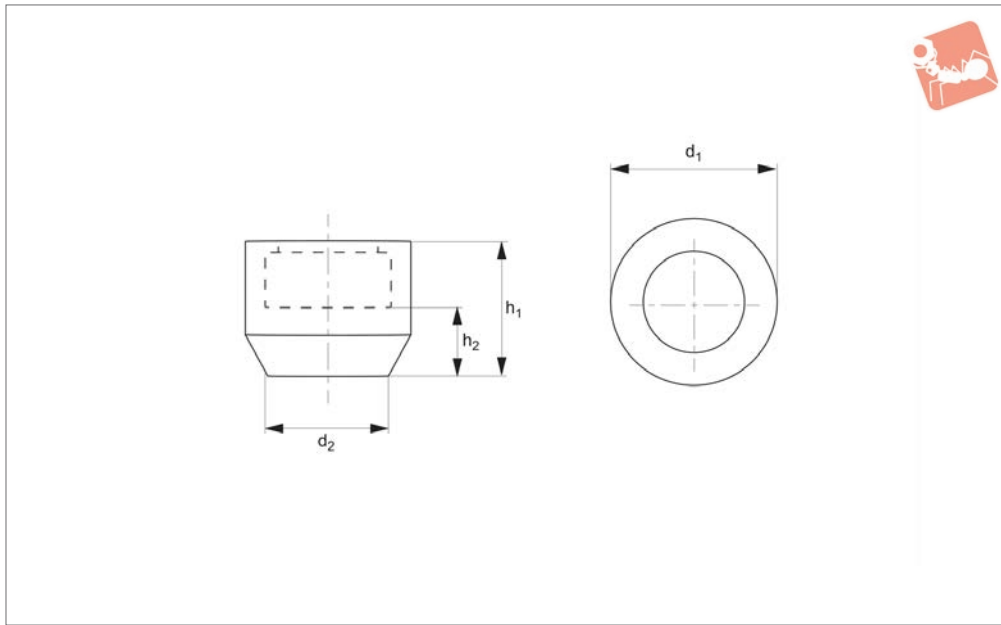
Order No.	Size	d ₁	w ₁	l ₁	d ₂	l ₂	l ₃	Rubber pad 45120	Weight g
45100.W0003	3	M 8	14.5	90	M 5	39-52	5	.W0001	55
45100.W0004	4	M 8	18.5	90	M 5	40-53	5	.W0001	63
45100.W0005	5	M 8	20.5	90	M 5	40-48	5	.W0001	64
45100.W0006	6	M12	24.0	123	M 8	60-68	7	.W0003	182





Rubber Caps for clamping screws

Toggle Clamp Accessories



45120

TOGGLE CLAMP ACCESSORIES

Material

Oil-resistant neoprene, hardness 70 Shore A.

Technical Notes

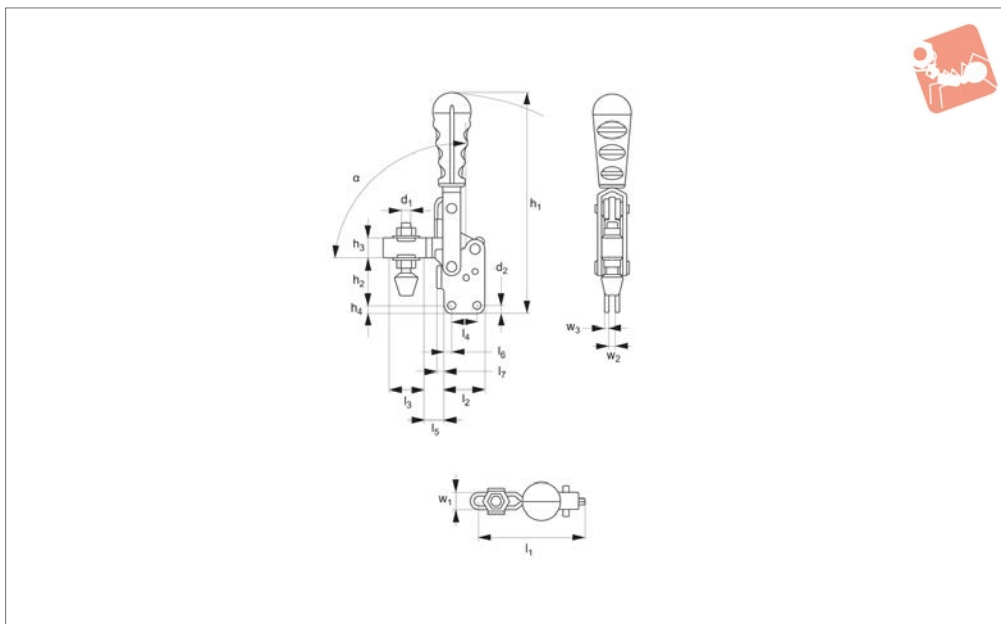
Prevents damage to delicate components. Suitable for clamping screws nos. 45018,

45020.W0001- .W0008, 45060.W0000- .W0007 and 45100.

Order No.	Size	d_1	h_1	d_2	h_2	Weight g
45120.W0000	M 4	11.0	8.5	7	4.2	1
45120.W0001	M 5	12.5	10.0	8	5.0	1
45120.W0002	M 6	15.0	12.0	10	6.0	2
45120.W0003	M 8	19.0	15.0	13	7.5	4
45120.W0005	M10	22.0	17.5	15	8.5	5
45120.W0006	M12	25.0	20.0	19	9.5	8
45120.W0007	M12	26.0	20.0	18	9.5	9
45120.W0009	M16	33.0	27.0	24	14.0	19



EC602



Material

Body: steel, zinc plated.
 Rivets: stainless steel.
 Bushes: case hardened and greased.
 Handle: plastic, red, oil resistant.

Supplied complete with clamping screw (with rubber pad).

symbol*) can be changed by pressing in a stop pin on the clamp body.

Technical Notes

Opening angle (symbola/symbolsymbola/

Order No.	Size	Holding force kN	d ₁	d ₂	h ₁	h ₂	h ₃	Weight g
EC602-2	2	1.1	M 6	5.2	122	28.5	11.0	160
EC602-3	3	1.7	M 8	7.1	190	40.4	17.5	380
EC602-4	4	2.8	M10	8.3	240	54.5	22.0	600
EC602-5	5	3.6	M12	8.7	240	57.4	22.5	1100

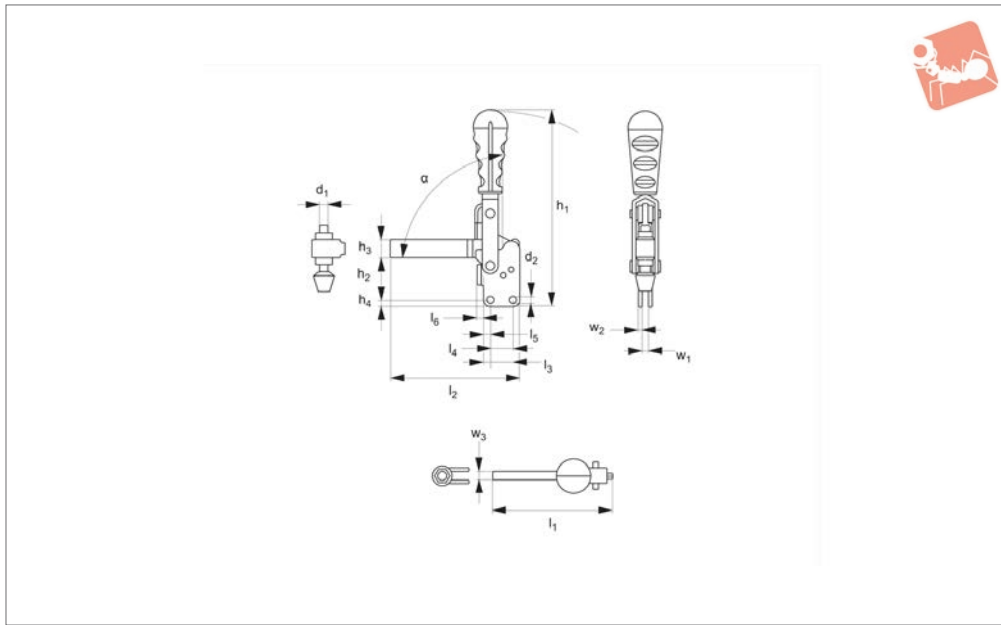
Order No.	h ₄	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	l ₇	w ₁	w ₂	w ₃	α/α*
EC602-2	5.5	71.2	27	21.7	12.7	8.3	7	6.7	6.2	6	3	93°
EC602-3	7.5	90.2	35	29.2	19.0	18.8	8	5.5	8.9	6	3	91°
EC602-4	9.5	142.0	50	62.0	32.0	12.3	9	10.0	10.6	8	4	90°/115°
EC602-5	9.5	179.0	51	81.4	31.8	20.0	10	12.2	13.4	10	5	101°/129°



Toggle Clamps - Vertical Acting

economy - vertical base - weldable arm

Economy Toggle Clamps



EC606

ECONOMY TOGGLE CLAMPS

Material

Body: steel, zinc plated.

Bushes: case hardened and greased.

Handle: plastic, red, oil resistant.

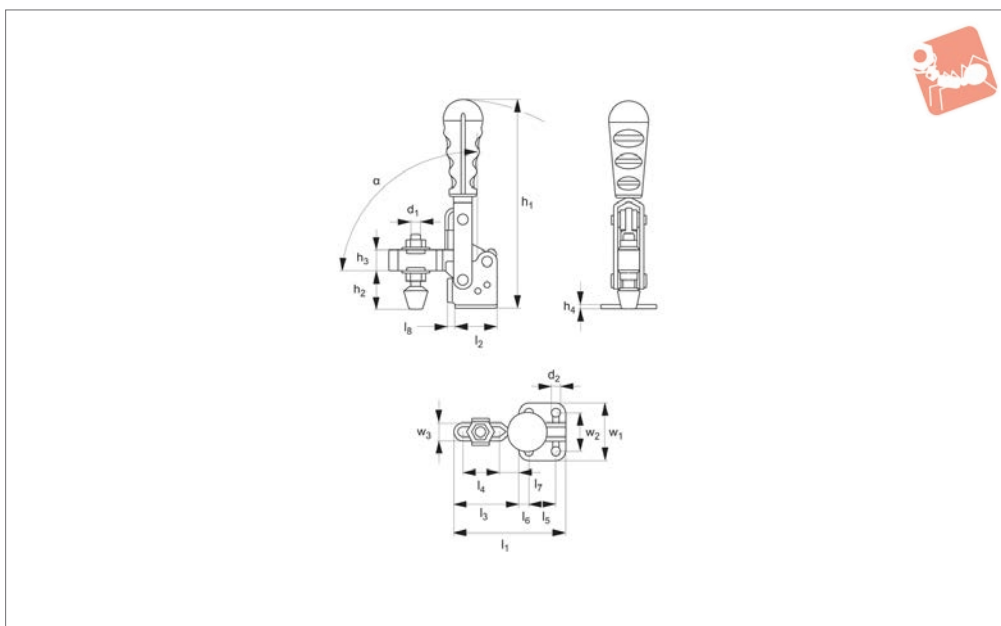
Supplied complete with clamping screw (with rubber pad).

Order No.	Size	Holding force kN	d ₁	d ₂	h ₁	h ₂	h ₃	h ₄	l ₁	Weight g
EC606-3	3	2.0	M 8	7.1	190	40.4	17.5	7.5	123	380
EC606-4	4	3.4	M10	8.3	240	54.5	22.0	9.5	141	600
EC606-5	5	4.5	M12	8.7	240	57.4	22.5	9.5	176	1100

Order No.	l ₂	l ₃	l ₄	l ₅	l ₆	w ₁	w ₂	w ₃	α
EC606-3	88.4	35	19	8	5.5	6	6	3	90°
EC606-4	90.0	50	32	9	10.0	8	8	4	90°
EC606-5	125.0	51	32	10	12.2	10	10	5	103°



EC600



Material

Body: steel, zinc plated.
Rivets: stainless steel.

Bushes: case hardened and greased. (with rubber pad).
Handle: plastic, red, oil resistant.
Supplied complete with clamping screw

Order No.	Size	Holding force kN	d ₁	d ₂	h ₁	h ₂	h ₃	h ₄	l ₁	l ₂	Weight g
EC600-1	1	0.5	M 5	4.4	77	19	8.0	2.0	50.4	26.0	50
EC600-2	2	1.5	M 6	5.1	111	23	11.0	3.0	69.9	27.0	190
EC600-3	3	2.5	M 8	7.1	175	32	17.5	3.2	90.0	35.0	380
EC600-4	4	3.4	M10	8.3	218	42	22.0	4.0	143.0	50.0	810
EC600-5	5	3.6	M12	8.7	224	51	22.5	3.0	176.0	50.8	1100

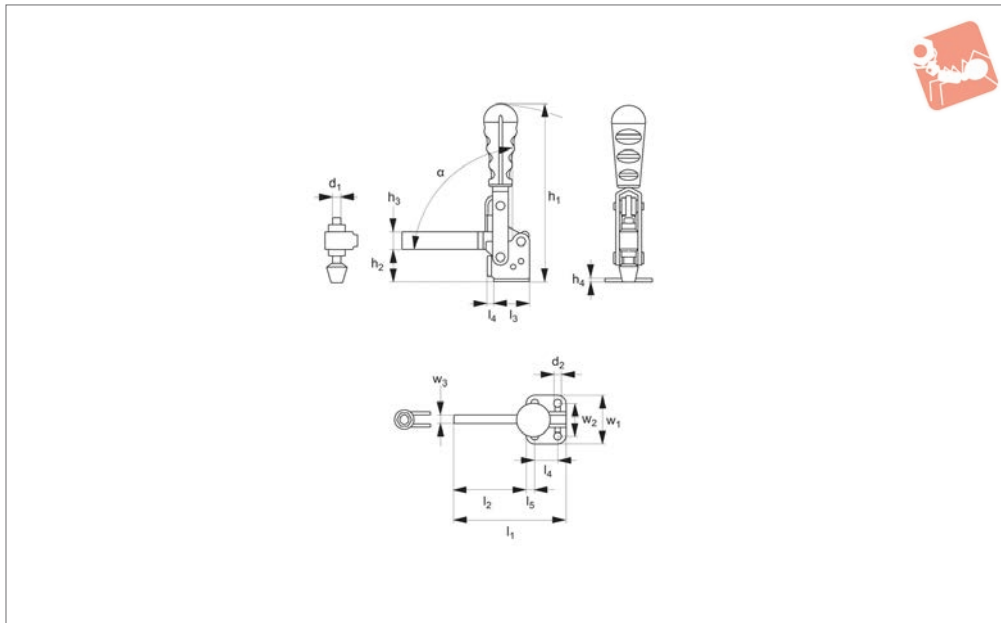
Order No.	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂	w ₃	α
EC600-1	24.4	16.4	16.0	5.0	3.5	-	33.4	23.4	5.0	67,4°
EC600-2	42.9	21.5	12.7	7.0	15.0	-	37.9	26.9	6.0	93,0°
EC600-3	55.0	28.0	19.0	8.0	19.0	5.5	47.0	32.0	8.9	90,4°
EC600-4	92.8	60.5	32.0	9.0	23.0	10.0	64.0	45.0	10.6	90,0°
EC600-5	125.0	82.5	32.0	9.5	31.0	12.2	64.0	45.0	13.4	101°



Toggle Clamps - Vertical Acting

economy - horizontal base - weldable arm

Economy Toggle Clamps



EC604

ECONOMY TOGGLE CLAMPS

Material

Body: steel, zinc plated.
Rivets: stainless steel.
Bushes: case hardened and greased.

Handle: plastic, red, oil resistant.
Supplied complete with clamping screw and rubber nose.

Technical Notes

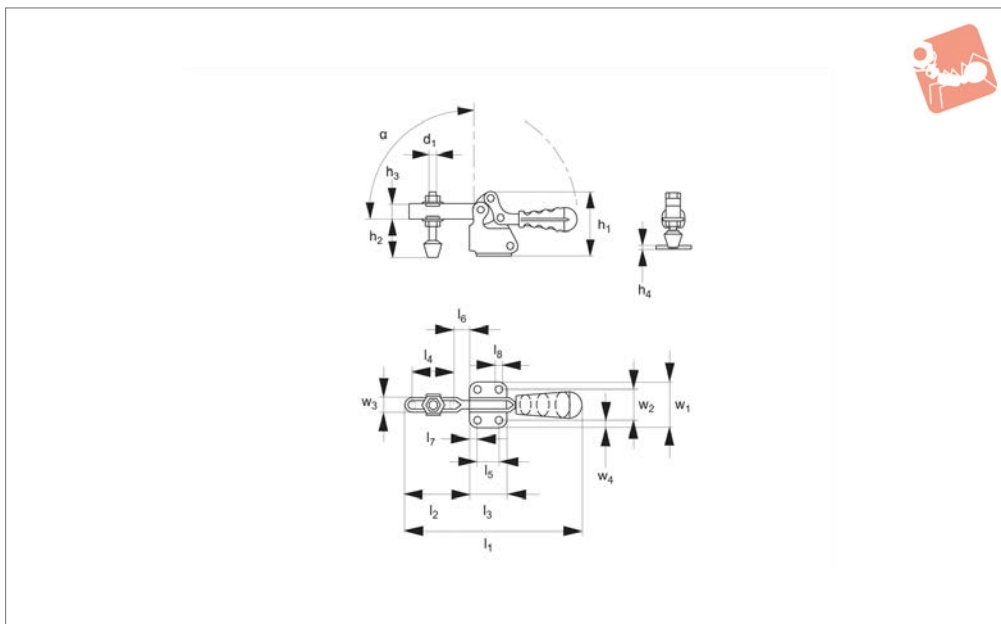
symbola/symbol* alternative angle through use of removable stop.

Order No.	Size	Holding force kN	d ₁	d ₂	h ₁	h ₂	h ₃	h ₄	Weight g
EC604-3	3	2.0	M 8	7.1	175	32.0	17.5	3	380
EC604-4	4	3.4	M10	8.3	218	42.0	22.0	4	600
EC604-5	5	4.5	M12	8.7	224	50.8	22.5	8	1100

Order No.	l ₁	l ₂	l ₃	l ₄	l ₅	w ₁	w ₂	w ₃	α/α*
EC604-3	123	88.4	35	19	8	47.0	32.0	6	90°
EC604-4	141	91.0	50	32	9	64.0	45.0	8	90°
EC604-5	176	125.0	51	32	10	64.2	45.2	10	103°/112°



EC630



Material

Body: steel, zinc plated.

Bushes: case hardened and greased.

Handle: plastic, red, oil resistant.

Supplied complete with clamping screw (with rubber pad).

Order No.	Size	Holding force kN	d ₁	d ₂	h ₁	h ₂	h ₃	h ₄	l ₁	Weight g
EC630-1	1	0.7	M 5	5.2	38.2	19	9.5	2.0	105	70
EC630-2	2	0.9	M 6	5.5	52.6	25	14.0	2.5	162	230
EC630-3	3	2.2	M 8	6.6	68.5	34	17.5	3.0	189	430
EC630-4	4	3.4	M10	8.7	90.0	45	23.8	4.0	269	910

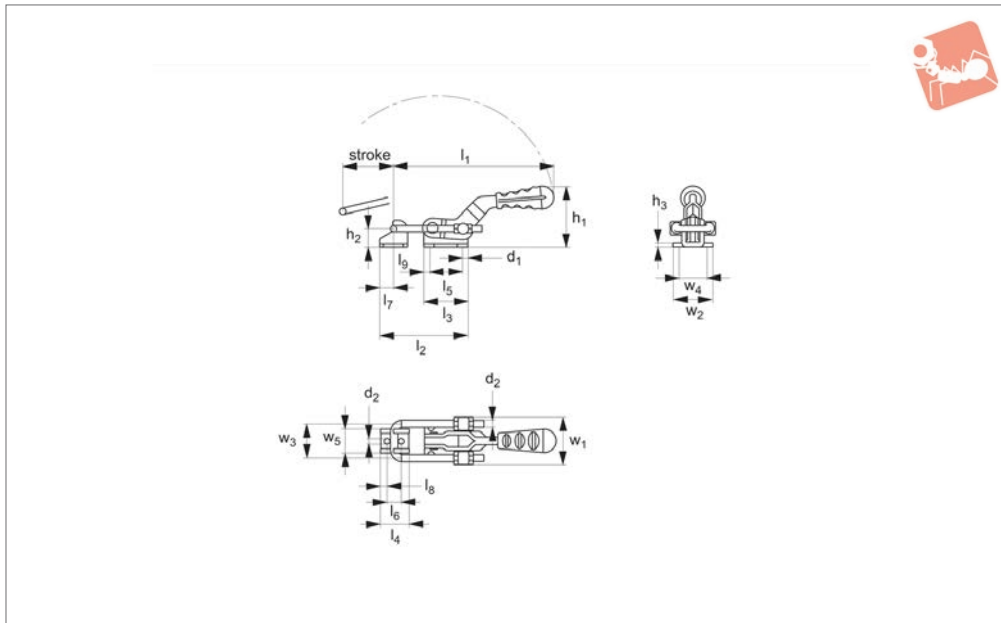
Order No.	l ₂	l ₃	l ₄	l ₅	l ₆	l ₇	w ₁	w ₂	w ₃	w ₄	α
EC630-1	36.8	25	20.0	13.5	12.0	5.7	27	19	5.8	-	94°
EC630-2	61.4	38	36.5	26.0	19.0	6.0	40	28	6.2	3.0	96°
EC630-3	66.3	42	36.8	26.0	22.0	8.0	47	31	9.0	2.5	96°
EC630-4	103.0	59	64.8	41.2	28.5	9.0	59	43	11.4	1.8	95°



Economy Toggle Clamps - Latch Type

horizontal acting

Economy Toggle Clamps



EC648

ECONOMY TOGGLE CLAMPS

Material

Body: steel, zinc plated.

Bushes: case-hardened and greased.

Handle: plastic, red, oil resistant.

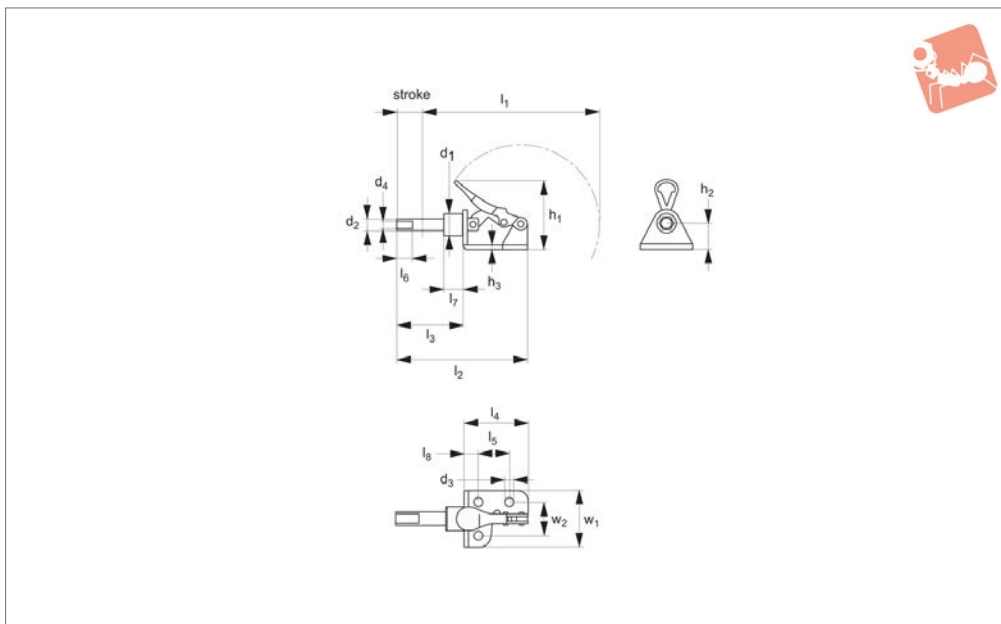
Complete with counter strike.

Order No.	Size	Holding force kN	Stroke s_1	d_1	d_2	d_3	h_1	h_2	h_3	l_1	l_2 max.	Weight g
EC648-2	2	1.6	27.5	4.2	4.2	M 4	32	12	2	96	59	70
EC648-3	3	3.2	35.5	6.7	6.7	M 5	57	14	3	151	80	250
EC648-4	4	7.0	66.5	8.5	8.5	M 8	85	24	4	203	118	750

Order No.	l_3	l_4	l_5	l_6	l_7	l_8	l_9	w_1	w_2	w_3	w_4	w_5
EC648-2	26.0	20.0	16.0	10.0	9.0	6.0	5.0	28.0	28.0	19.0	19	13
EC648-3	39.5	25.3	19.0	14.3	12.3	5.5	6.5	42.0	44.5	25.5	32	20
EC648-4	60.5	38.0	41.3	19.0	19.0	9.5	9.6	60.5	54.0	44.5	38	30



EC641



Material

Body: steel, zinc plated.
Bushes: stainless steel, hardened and

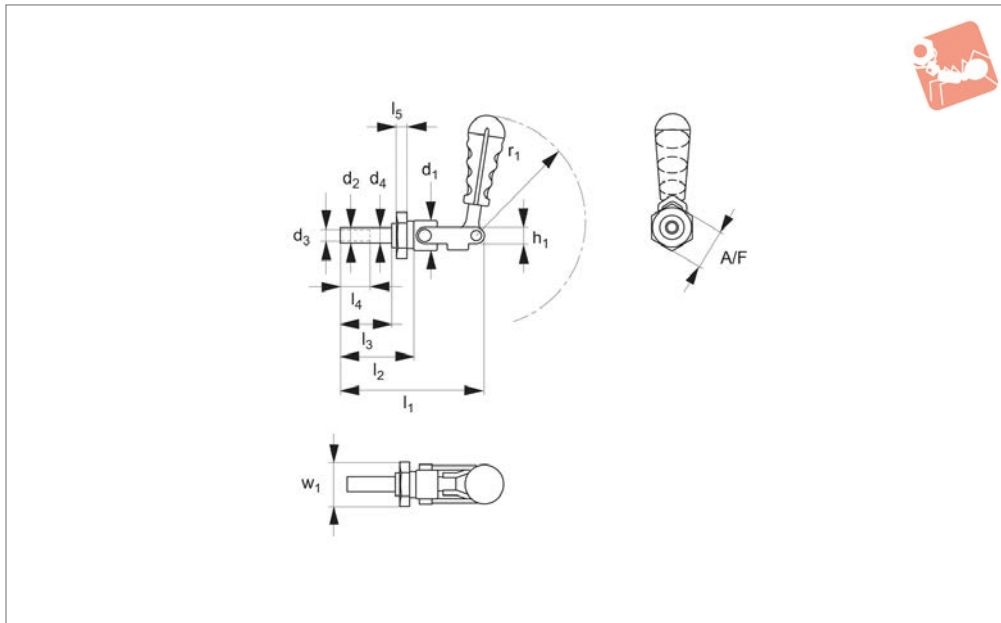
greased. (with rubber pad).
Handle: plastic, red, oil resistant.
Supplied complete with clamping screw

Order No.	Size	Holding force kN	d ₁	d ₂	d ₃	d ₄	h ₁	l ₁	Weight g			
EC641-0	0	0.5	11	6.5	4.4	4	35	88.5	50			
Order No.	h ₂	l ₂	h ₃	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	w ₁	w ₂	Stroke s ₁
EC641-0	12.7	68	12.7	35	33	16	12	10	7	27	16	16



Economy Toggle Clamps - Push Pull short

Economy Toggle Clamps



EC644

ECONOMY TOGGLE CLAMPS

Material

Body: steel, zinc plated.
Bushes: stainless steel, hardened and greased.

Handle: plastic, red, oil resistant.
Supplied complete with clamping screw (with rubber pad).

Important Notes

Supplied with corresponding mounting plate - see drawing for dimensions.

Order No.	Size	Holding force kN	d ₁	d ₂	d ₃	d ₄	h ₁	l ₁	l ₂	l ₃	l ₄	l ₅	r ₁	w ₁	A/F	Stroke	Weight g
EC644-2	2	0.9	19	9.4	M 6	M16x1,5	9.5	64	33.5	20.7	15.8	6.4	66.3	26.0	23	19.7	110
EC644-3	3	1.3	19	11.0	M 8	M20x1,5	11.0	104	56.0	39.7	26.0	6.4	90.5	32.6	30	39	280