



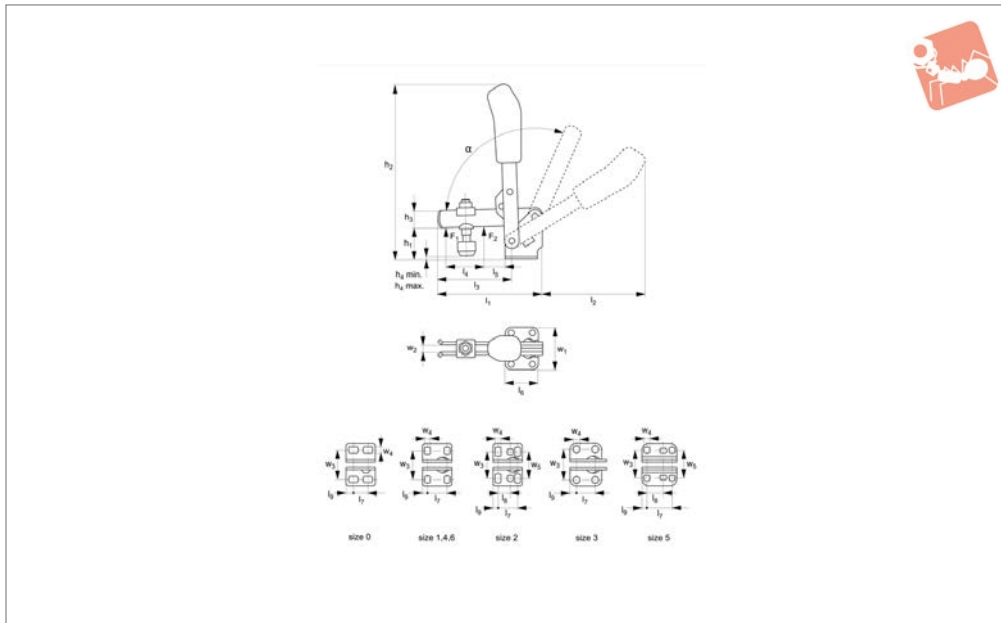
# Vertical Acting Toggle Clamps

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 <sub>1</sub> kN	F <sub>2</sub> kN	Clamping screw	h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>	h <sub>4</sub> min.	h <sub>4</sub> max.	l <sub>1</sub>	l <sub>2</sub>	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

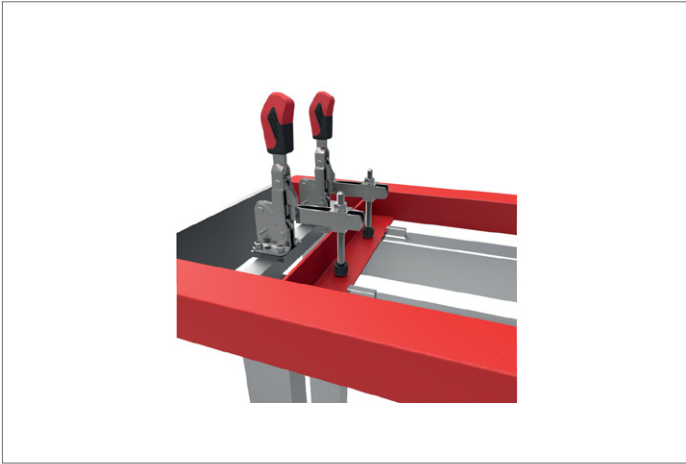
Order No.	l <sub>3</sub>	l <sub>4</sub>	l <sub>5</sub>	l <sub>6</sub>	l <sub>7</sub>	l <sub>8</sub>	l <sub>9</sub>	w <sub>1</sub>	w <sub>2</sub>	w <sub>3</sub>	w <sub>4</sub>	w <sub>5</sub>	α	α*
40000.W0000	31.0	14	5.5	22	8,5-13,5	-	5.5	32	4	23.0	4.5	-	95°	-
40000.W0001	39.0	18	6.0	27	16.0	-	5.5	34	5	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



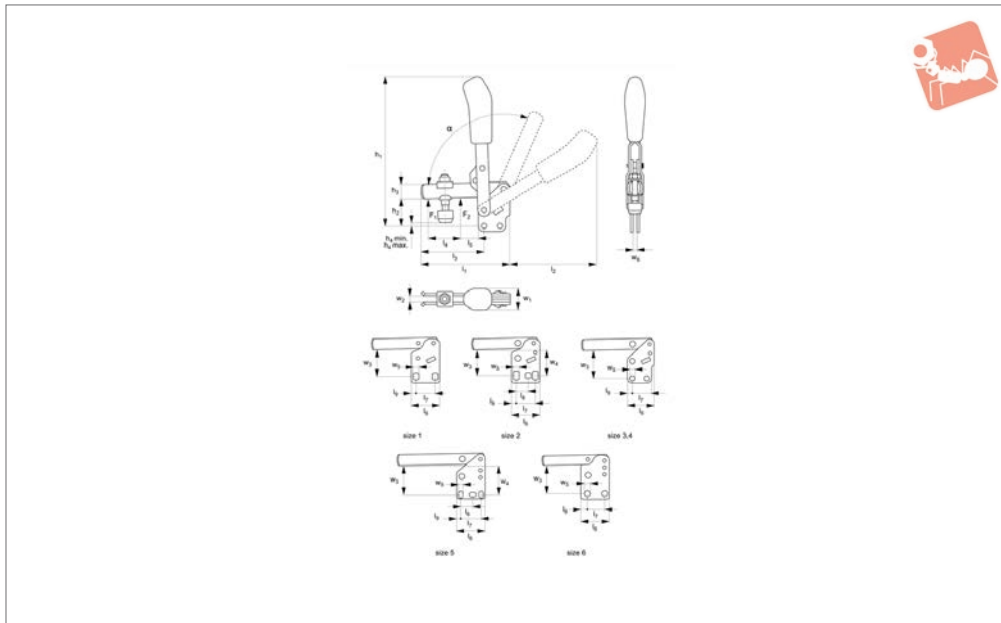
STEEL TOGGLE CLAMPS





# 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

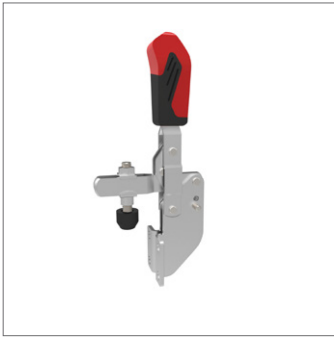
For fastening to mounting plates, etc.

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.

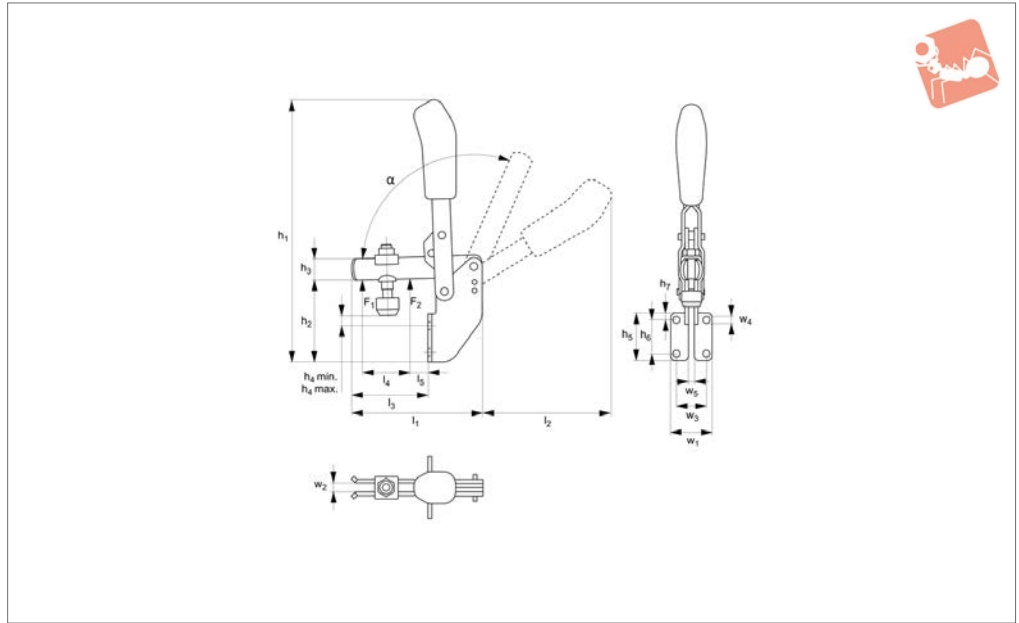
Order No.	Size	F <sub>1</sub> kN	F <sub>2</sub> kN	Clamping screw	h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>	h <sub>4</sub> min.	h <sub>4</sub> max.	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	Weight g
40050.W0001	1	0.6	1.1	M 5x30	109.0	29	10	6.0	12.5	61	59	39	105
40050.W0002	2	0.8	1.2	M 6x35	144.5	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 <sub>4</sub>	l <sub>5</sub>	l <sub>6</sub>	l <sub>7</sub>	l <sub>8</sub>	l <sub>9</sub>	w <sub>1</sub>	w <sub>2</sub>	w <sub>3</sub>	w <sub>4</sub>	w <sub>5</sub>	w <sub>6</sub>	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 $\alpha$ /symbol $\alpha$ \*) 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 <sub>1</sub> kN	F <sub>2</sub> kN	Clamping screw	h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>	h <sub>4</sub> min.	h <sub>4</sub> max.	h <sub>5</sub>	h <sub>6</sub>	h <sub>7</sub>	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 <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	l <sub>5</sub>	w <sub>1</sub>	w <sub>2</sub>	w <sub>3</sub>	w <sub>4</sub>	w <sub>5</sub>	$\alpha$	$\alpha^*$
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°

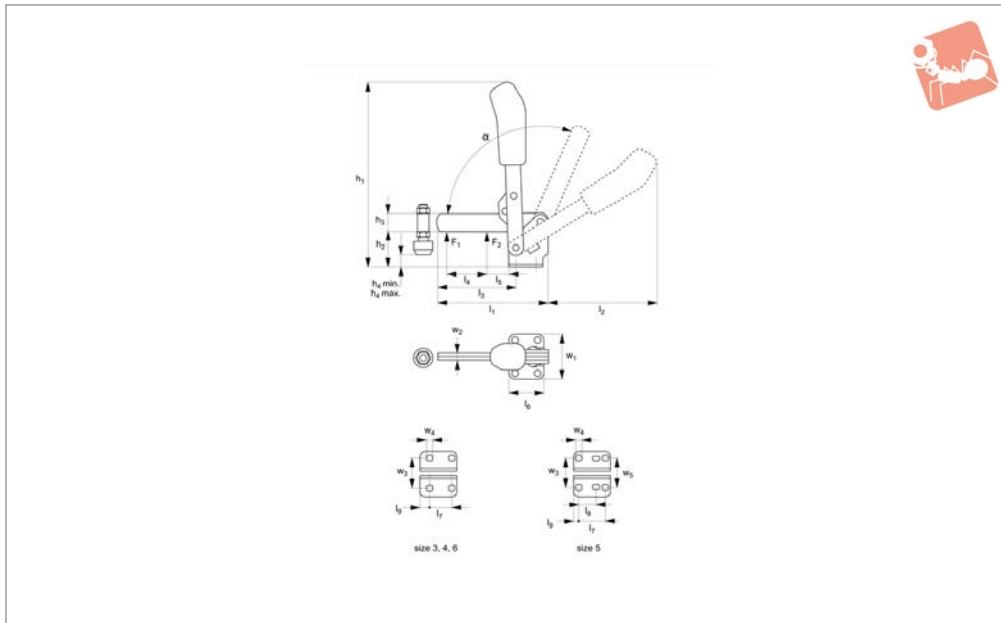


# Vertical Acting Toggle Clamps

solid arm - horizontal base



## Steel Toggle Clamps



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

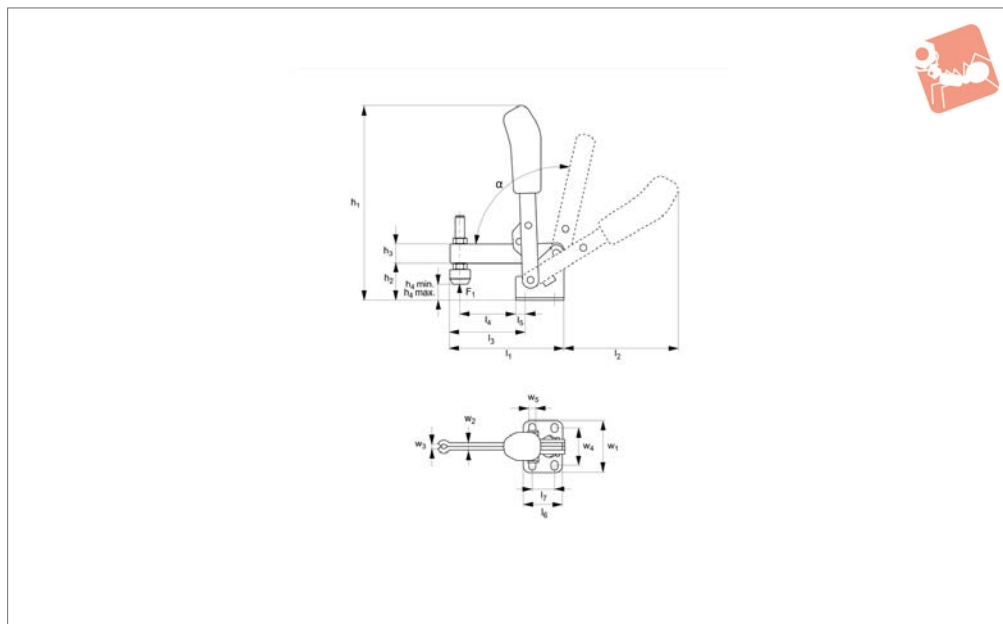
Order No.	Size	F <sub>1</sub> kN	F <sub>2</sub> kN	Clamping screw	h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>	h <sub>4</sub> min.	h <sub>4</sub> max.	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	Weight g
40150.W0003	3	1.4	2.5	M 8x45	186	33.5	18	0	12.0	108.5	116.5	81.0	340
40150.W0004	4	2.0	3.0	M 8x65	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 <sub>4</sub>	l <sub>5</sub>	l <sub>6</sub>	l <sub>7</sub>	l <sub>8</sub>	l <sub>9</sub>	w <sub>1</sub>	w <sub>2</sub>	w <sub>3</sub>	w <sub>4</sub>	w <sub>5</sub>	$\alpha$	$\alpha^*$
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 <sub>1</sub> kN	Clamping screw		h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>	h <sub>4</sub> min.	h <sub>4</sub> max.	l <sub>1</sub>	l <sub>2</sub>	Weight g
40200.W0001	1	1	M 5x30		98	18.5	10	-6	4.5	67	58	100
Order No.	l <sub>3</sub>	l <sub>4</sub>	l <sub>5</sub>	l <sub>6</sub>	l <sub>7</sub>	w <sub>1</sub>	w <sub>2</sub>	w <sub>3</sub>	w <sub>4</sub>	w <sub>5</sub>	α	
40200.W0001	45	33	5.5	27	16	34	5	5	22,5-25,5	4.5	95°	

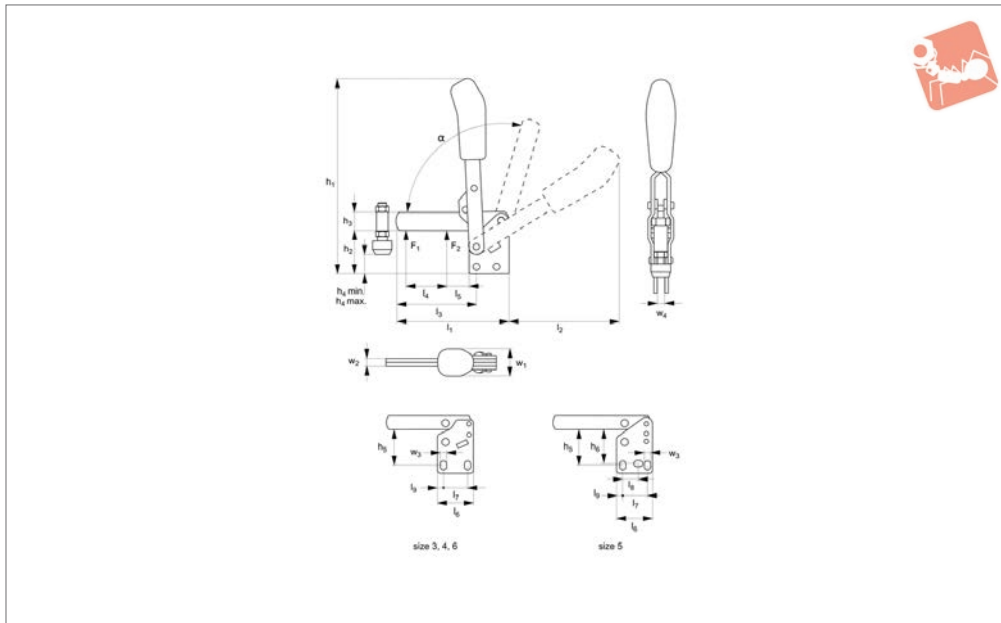


# Vertical Acting Toggle Clamps

solid arm - vertical base



## Steel Toggle Clamps



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.

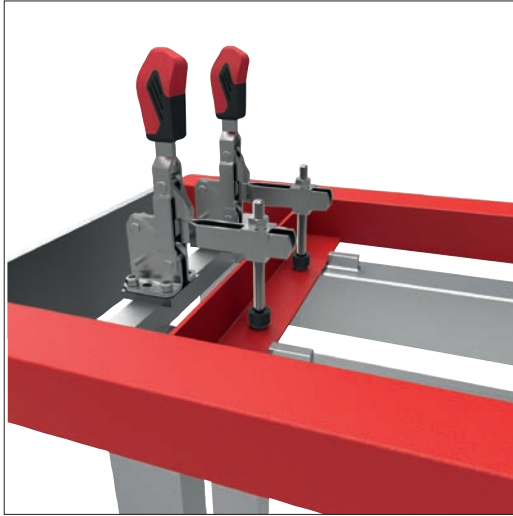
Opening angle (symbol $\alpha$ /symbol $\alpha$ /symbol $\alpha$ /symbol\*) can be changed by pressing in a stop pin on the clamp body.  
 Temperature range -10°C to +80°C.

Order No.	Size	F <sub>1</sub> kN	F <sub>2</sub> kN	Clamping screw	h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>	h <sub>4</sub> min.	h <sub>4</sub> max.	h <sub>5</sub>	h <sub>6</sub>	l <sub>1</sub>	l <sub>2</sub>	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

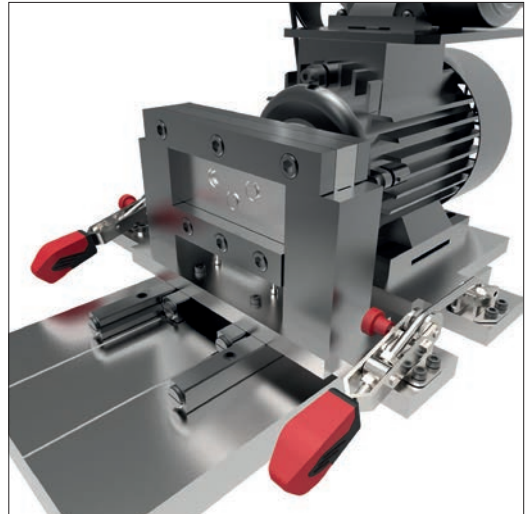
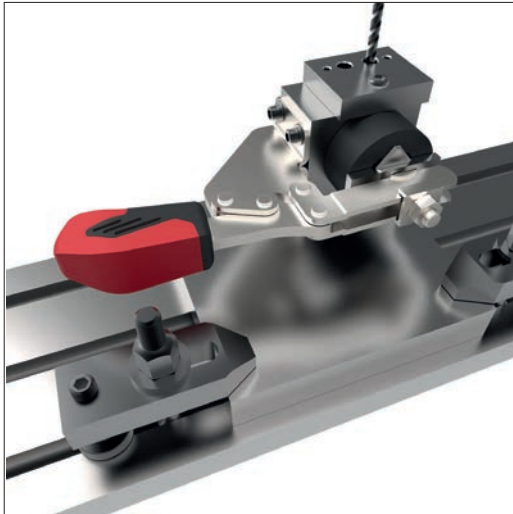
Order No.	l <sub>3</sub>	l <sub>4</sub>	l <sub>5</sub>	l <sub>6</sub>	l <sub>7</sub>	l <sub>8</sub>	l <sub>9</sub>	w <sub>1</sub>	w <sub>2</sub>	w <sub>3</sub>	w <sub>4</sub>	$\alpha$	$\alpha^*$
40250.W0003	81.0	43	19.5	35	20.0	-	7.5	27	6	7.5	6	105°	60°
40250.W0004	101.0	61	17.0	53	32.0	-	13.0	34	8	8.6	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°



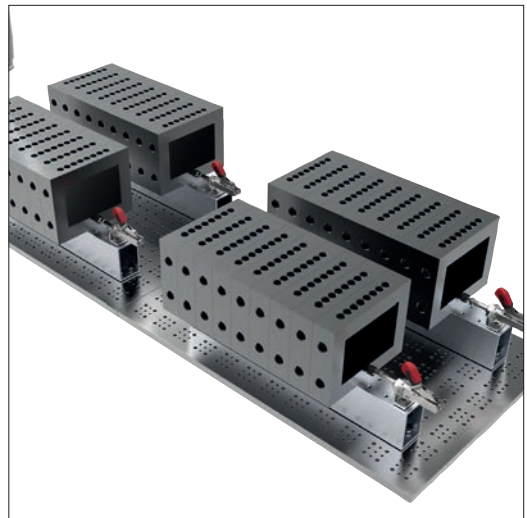
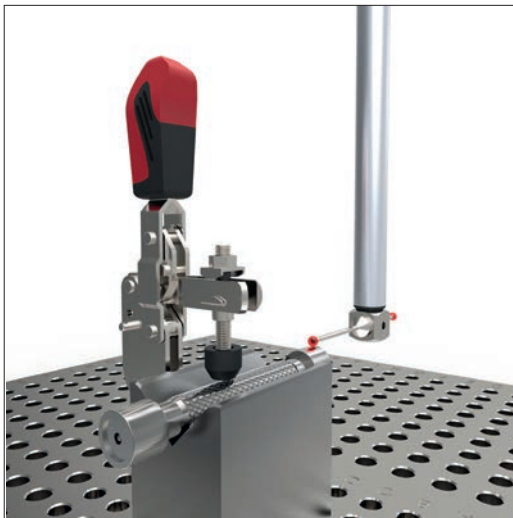
## Welding Fixtures



## Machining and Jig Assemblies



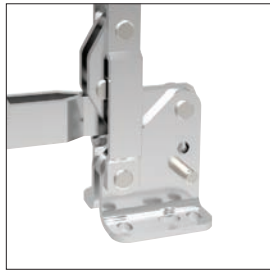
## Cmm's



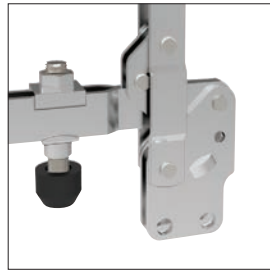




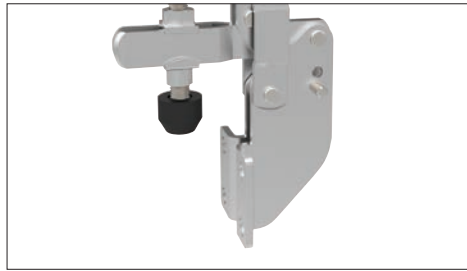
STEEL TOGGLE CLAMPS



Horizontal base



Vertical base



Angled base

### Mounting Base Variations



Vertical acting



Horizontal acting



Push-pull

### Clamping Variations



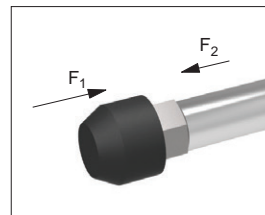
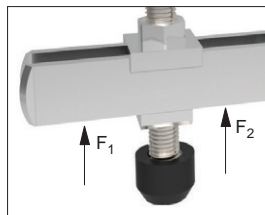
Hook type



Latch type

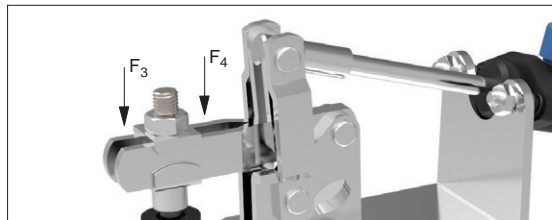
### Explanation of forces

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).



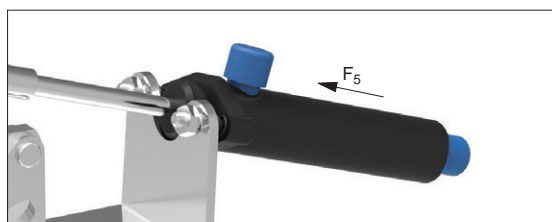
### Holding Forces $F_1$ or $F_2$

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 $F_5$

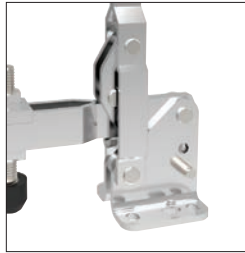
ov-W40000.1-A-T-W42070-A-T-b-rmh- Updated -27-10-2022



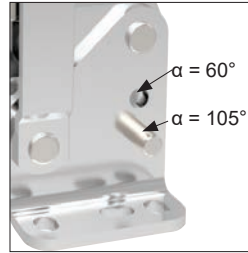
### Quality Features



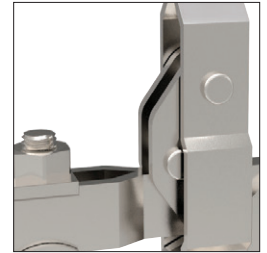
Ergonomic soft grip  
2-component handle



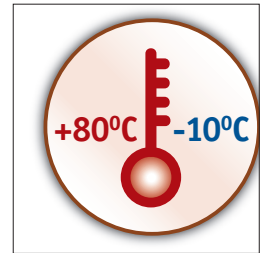
Stainless rivets and  
hardened bushings



Moveable stop for  
variable opening angle



Operator  
finger protection



Temperature resistant

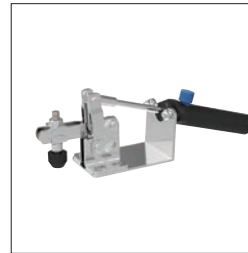
### Unique Features



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

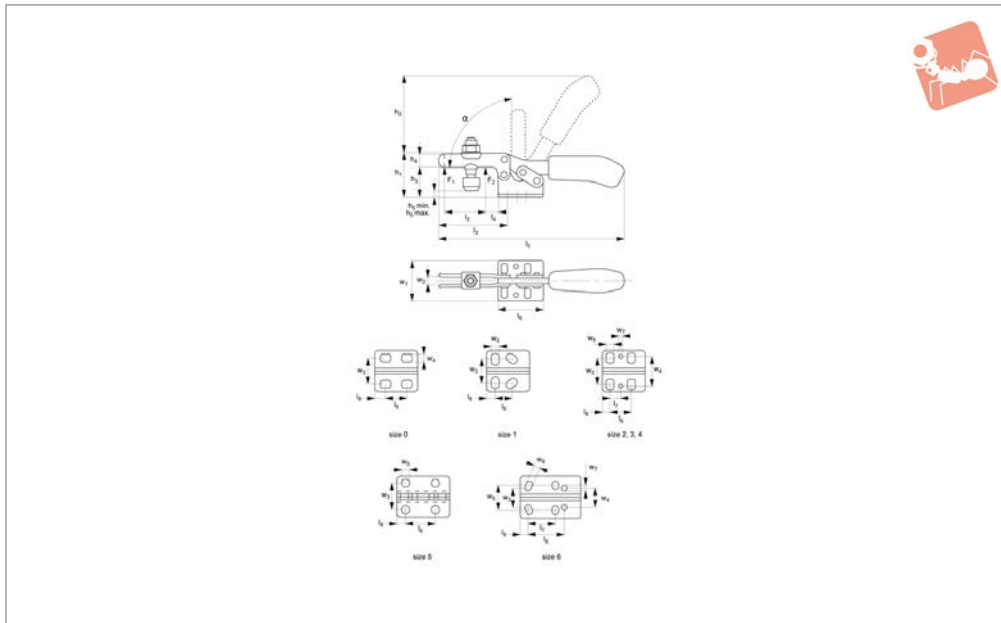


Protective cap and  
handle made of an  
electrostatic conductive  
(dissipative) material.



# 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 <sub>1</sub> kN	F <sub>2</sub> kN	Clamping screw	h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>	h <sub>4</sub> min.	h <sub>5</sub> min.	h <sub>5</sub> max.	l <sub>1</sub>	l <sub>2</sub>	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

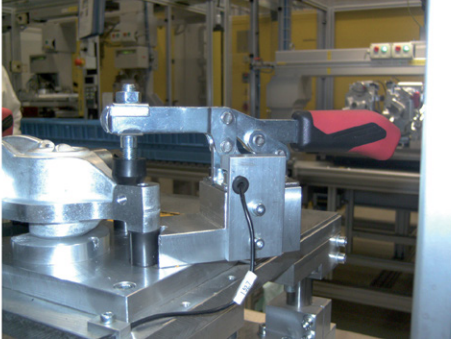
Order No.	l <sub>3</sub>	l <sub>4</sub>	l <sub>5</sub>	l <sub>6</sub>	l <sub>7</sub>	l <sub>8</sub>	w <sub>1</sub>	w <sub>2</sub>	w <sub>3</sub>	w <sub>4</sub>	w <sub>5</sub>	w <sub>6</sub>	w <sub>7</sub>	α
41000.W0000	9.0	5.5	25.5	11,5-15,5	-	6.3	25.0	4	16.0	-	4.6	-	-	90°
41000.W0001	18.7	8.0	34.0	13,0-14,5	-	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



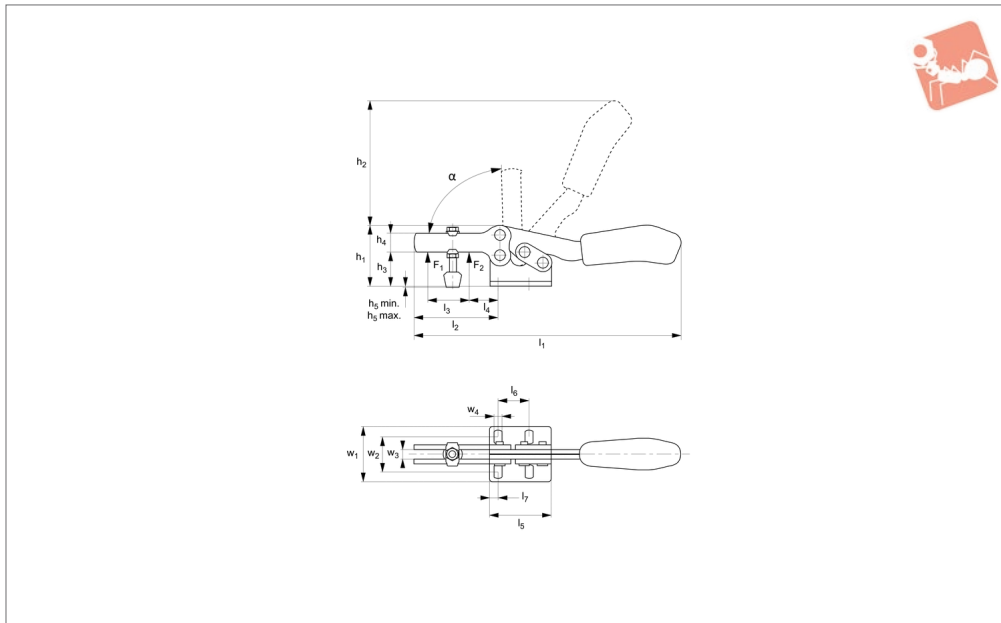
STEEL TOGGLE CLAMPS





# 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 <sub>1</sub> kN	F <sub>2</sub> kN	Clamping screw	h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>	h <sub>4</sub>	h <sub>5</sub> min.	h <sub>5</sub> max.	l <sub>1</sub>	Weight g
<b>41001.W0001</b>	1	1.1	1.7	M 5x35	35	46	19.0	12	0	10.0	126	114
<b>41001.W0002</b>	2	1.6	3.0	M 6x50	51	108	28.0	16	-1	12.0	224	450
<b>41001.W0003</b>	3	2.5	4.0	M 8x58	58	112	33.5	18	-1	13.0	242	560
<b>41001.W0004</b>	4	3.5	8.0	M10x76	77	135	41.0	24	-2	16.5	329	1250

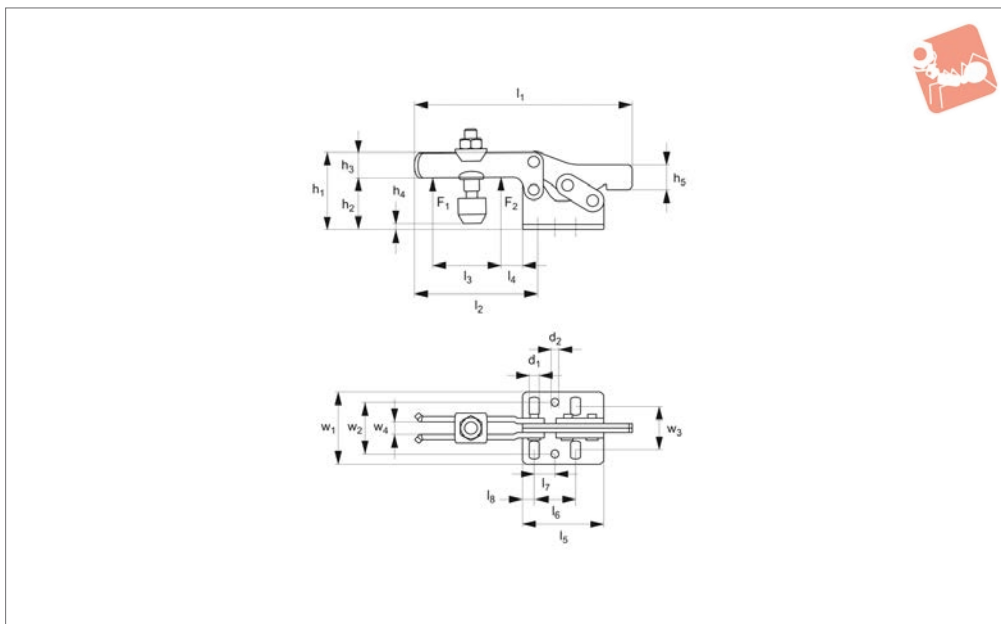
Order No.	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	l <sub>5</sub>	l <sub>6</sub>	l <sub>7</sub>	w <sub>1</sub>	w <sub>2</sub>	w <sub>3</sub>	w <sub>4</sub>	$\alpha$
<b>41001.W0001</b>	46	20	16.5	34.0	13.5	6.0	27.5	15,0 - 19,5	5	4.3	90°
<b>41001.W0002</b>	71	39	14.0	52.0	26.0	7.0	46.0	23,5 - 34,0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



STEEL TOGGLE CLAMPS



## 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 <sub>1</sub> kN	F <sub>2</sub> kN	Clamping screw	h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>	h <sub>4</sub> min.	h <sub>4</sub> max.	h <sub>5</sub>	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 <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	l <sub>5</sub>	l <sub>6</sub>	l <sub>7</sub>	l <sub>8</sub>	w <sub>1</sub>	w <sub>2</sub>	w <sub>3</sub>	w <sub>4</sub>	d <sub>1</sub>	d <sub>2</sub>	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°

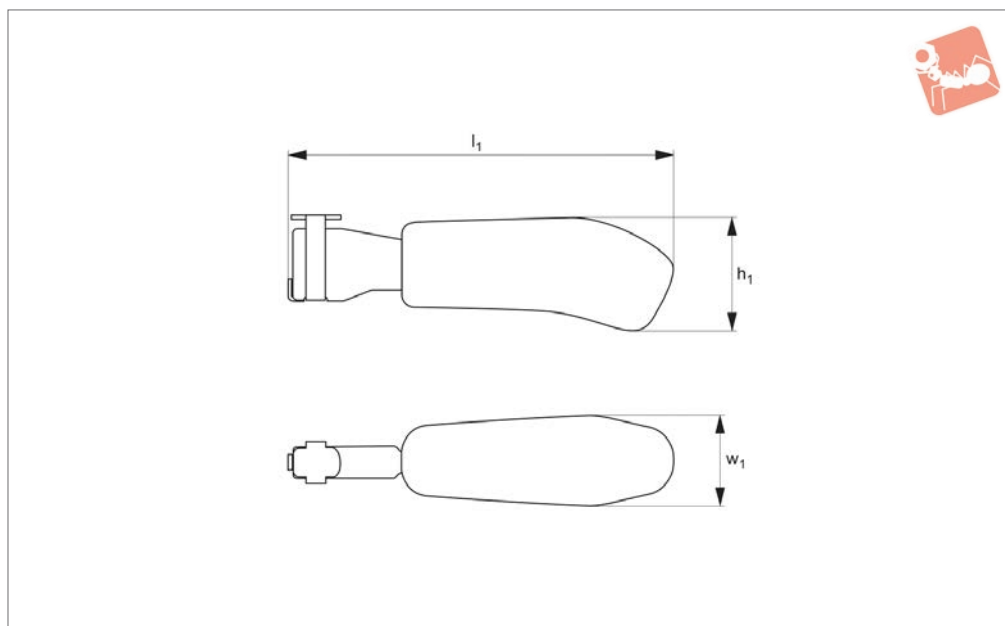




## Red Handle - Removable for horizontal acting toggle clamp



## 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.

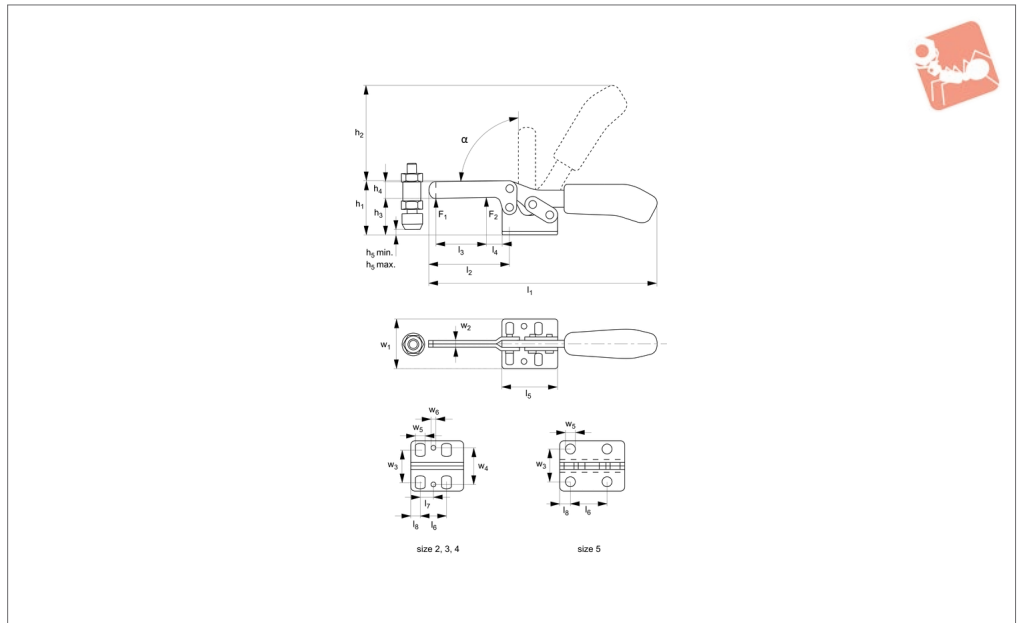
Order No.	Size	$h_1$	$l_1$	$w_1$	Weight g
41005.W0102	2	26	93.0	21.0	70
41005.W0103	3	35	118.5	27.0	122
41005.W0104	4	42	134.5	34.5	195



STEEL TOGGLE CLAMPS



## 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 <sub>1</sub> kN	F <sub>2</sub> kN	Clamping screw	h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>	h <sub>4</sub>	h <sub>5</sub> min.	h <sub>5</sub> max.	l <sub>1</sub>	l <sub>2</sub>	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 <sub>3</sub>	l <sub>4</sub>	l <sub>5</sub>	l <sub>6</sub>	l <sub>7</sub>	l <sub>8</sub>	w <sub>1</sub>	w <sub>2</sub>	w <sub>3</sub>	w <sub>4</sub>	w <sub>5</sub>	w <sub>6</sub>	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°



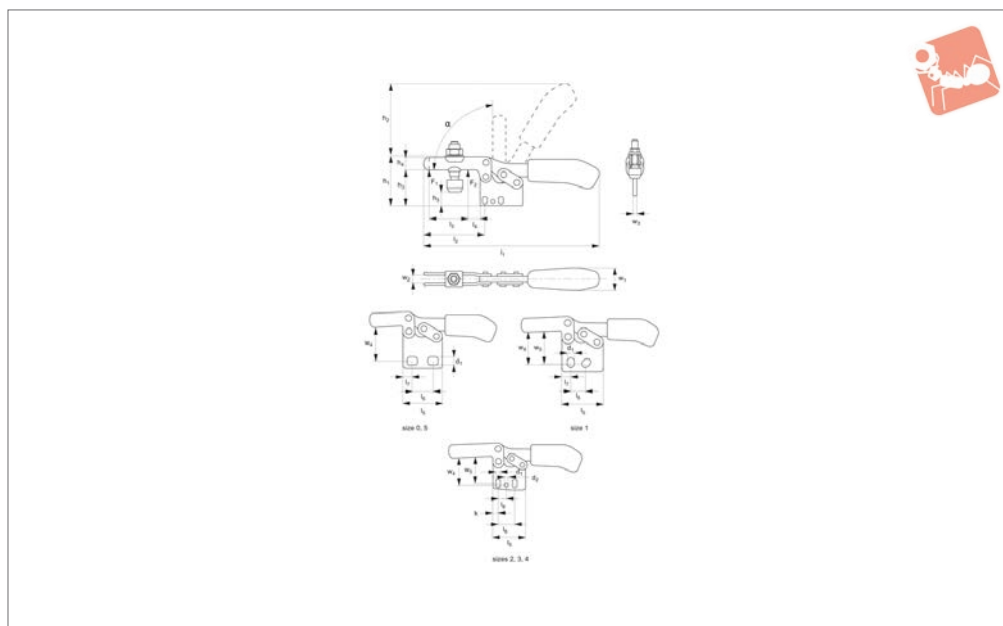


# Horizontal Acting Toggle Clamps

open arm - vertical base



## Steel Toggle Clamps



### 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.

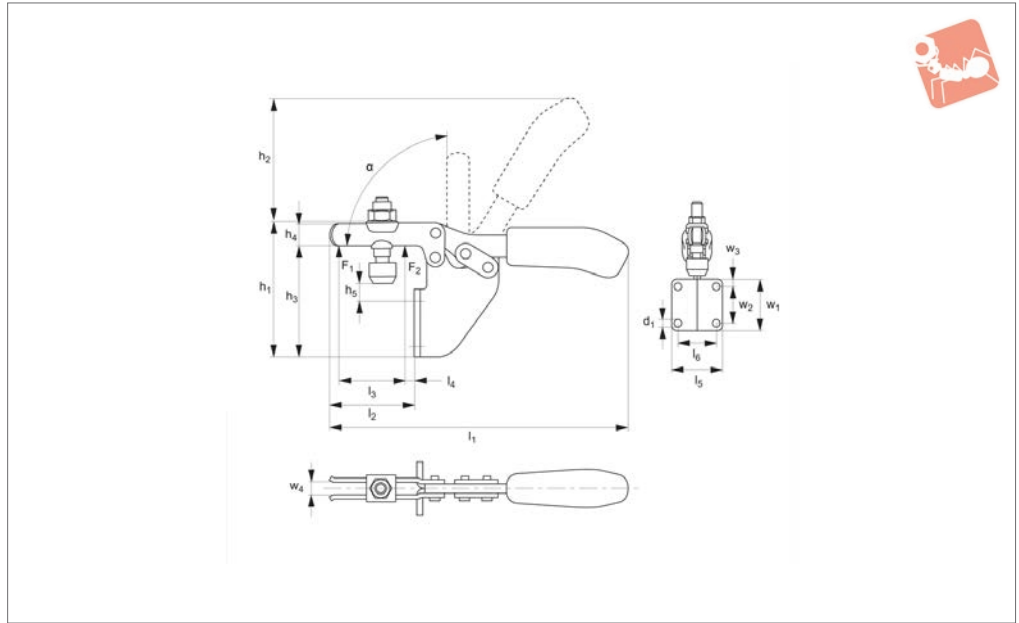
Order No.	Size	F <sub>1</sub> kN	F <sub>2</sub> kN	Clamping screw	h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>	h <sub>4</sub>	h <sub>5</sub> min.	h <sub>5</sub> max.	l <sub>1</sub>	l <sub>2</sub>	Weight g
41050.W0000	0	0.3	0.4	M 4x25	33.0	34	24.5	7.5	4.7	10.7	79	28	35
41050.W0001	1	0.8	1.1	M 5x30	43.0	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 <sub>3</sub>	l <sub>4</sub>	l <sub>5</sub>	l <sub>6</sub>	l <sub>7</sub>	l <sub>8</sub>	w <sub>1</sub>	w <sub>2</sub>	w <sub>3</sub>	w <sub>4</sub>	w <sub>5</sub>	d <sub>1</sub>	d <sub>2</sub>	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).

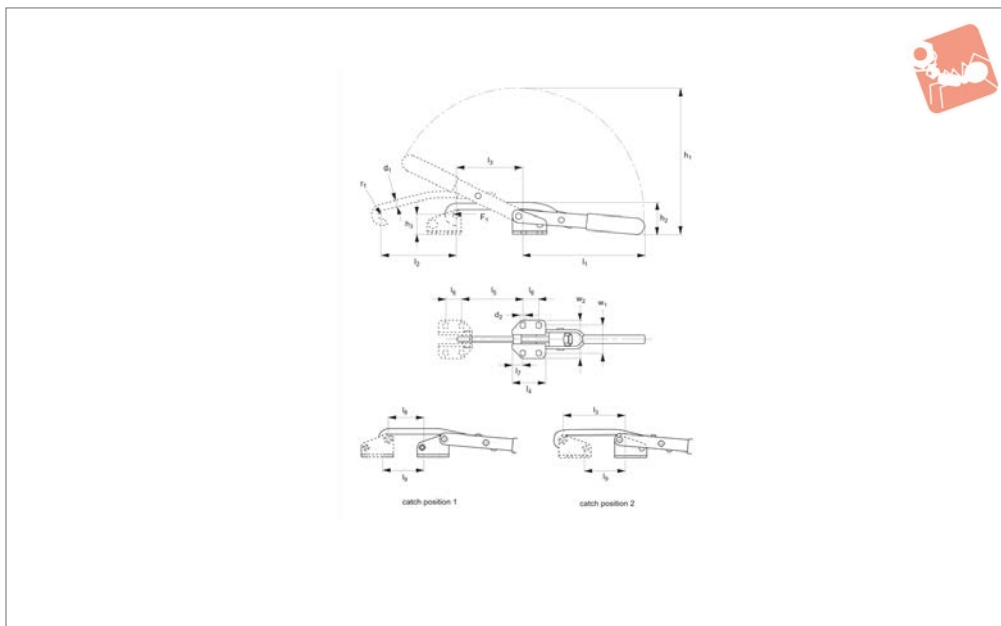
### Technical Notes

Temperature range  $-10^{\circ}\text{C}$  to  $+80^{\circ}\text{C}$ .

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.	$l_1$	$l_2$	$l_3$	$l_4$	$l_5$	$l_6$	$w_1$	$w_2$	$w_3$	$w_4$	$d_1$	$\alpha$
41100.W0001	120	32	18.5	4.0	31.0	19.0	28	13.5	8	5.0	5.2	$90^{\circ}$
41100.W0002	162	52	32.0	10.5	37.0	25.5	32	20.0	6	6.2	5.6	$90^{\circ}$
41100.W0003	206	59	37.0	6.5	42.5	28.5	38	24.0	7	8.0	6.8	$90^{\circ}$
41100.W0004	282	93	63.0	15.0	52.0	32.0	82	32.0	40	10.0	8.5	$90^{\circ}$



## 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.

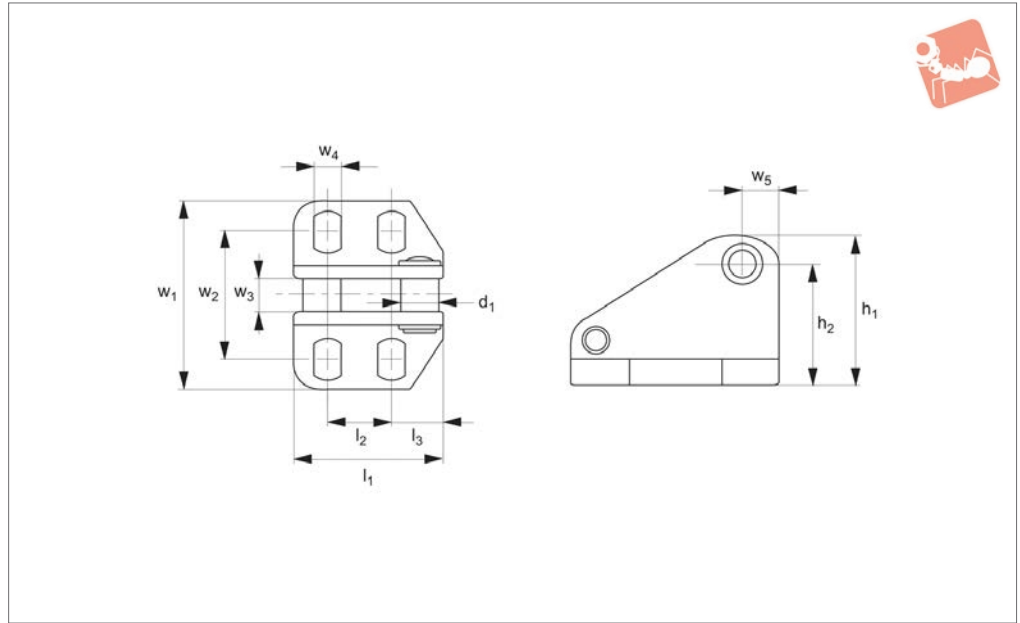
Order No.	Size	F <sub>1</sub> kN	h <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>	h <sub>2</sub>	h <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	Weight g
41700.W0001	1	2	111	5.3	4.5	34.5	22.7	88	45	100
41700.W0003	3	3	179	7.1	5.6	36.0	22.7	148	98	270
41700.W0005	5	5	280	10.8	11.2	69.0	49.1	228	146	850

Order No.	l <sub>3</sub>	l <sub>4</sub>	l <sub>5</sub>	l <sub>6</sub>	l <sub>7</sub>	l <sub>8</sub>	l <sub>9</sub>	w <sub>1</sub>	w <sub>2</sub>	r <sub>1</sub>	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

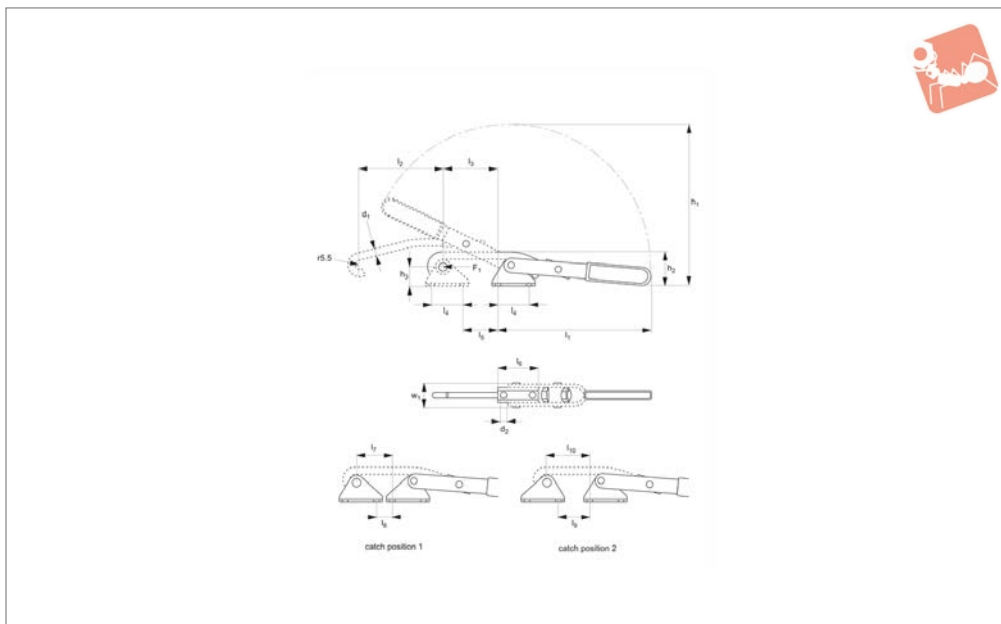
For stainless steel version see part no. 41740.W0311 - .W0315.

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.

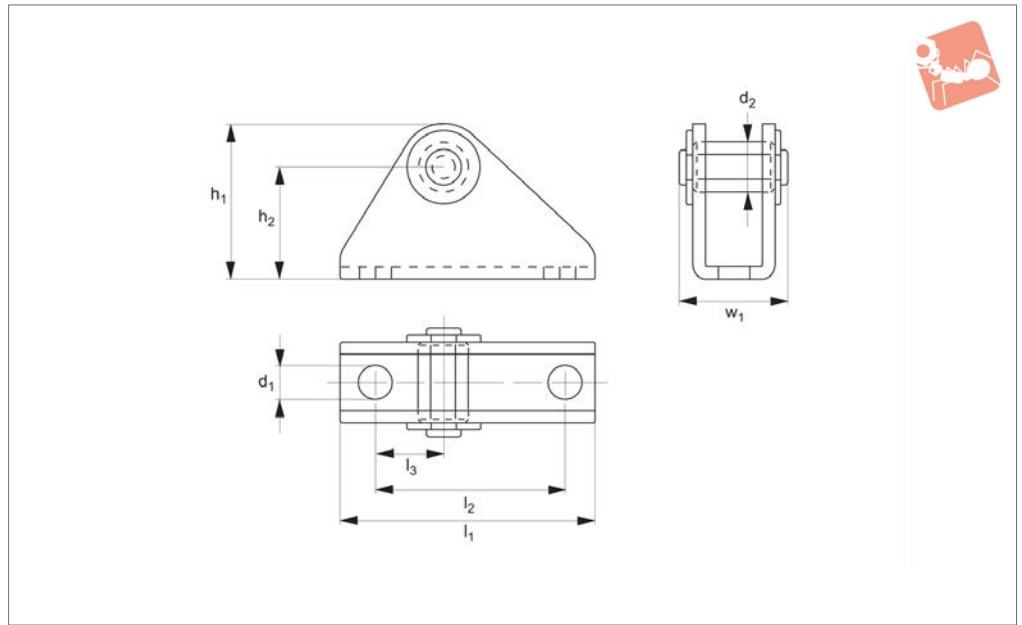
### Tips

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

Order No.	Size	F <sub>1</sub> kN	h <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>	h <sub>2</sub>	h <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	Weight g
<b>41781.W0003</b>	3	3	179	7.1	6.5	36	23	170	99	270
Order No.	l <sub>3</sub>	l <sub>4</sub>	l <sub>5</sub>	l <sub>6</sub>	l <sub>7</sub>	l <sub>8</sub>	l <sub>9</sub>	l <sub>10</sub>	w <sub>1</sub>	Adj. distance
<b>41781.W0003</b>	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

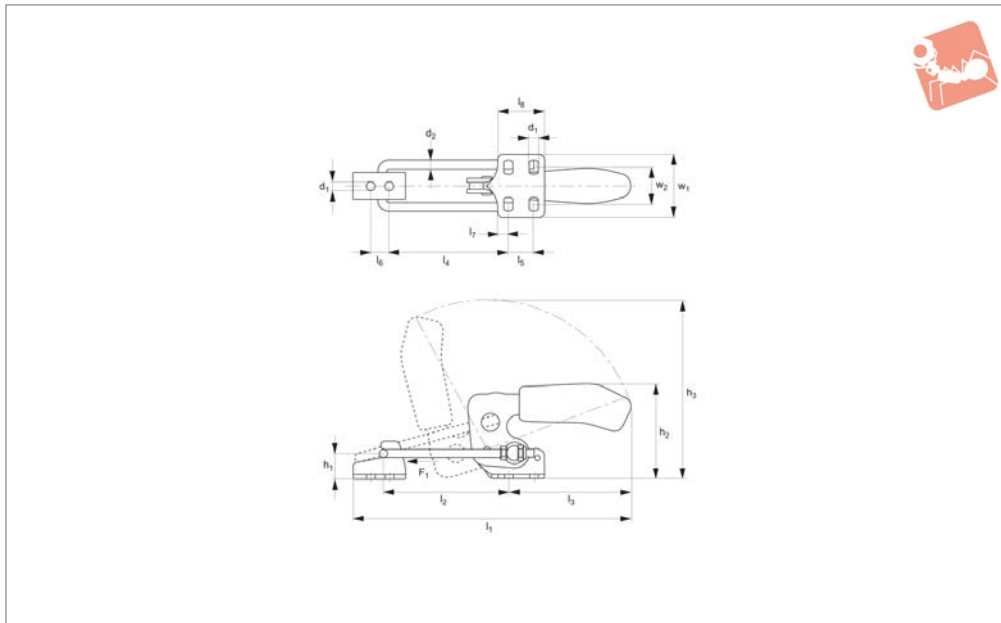


# Latch Type Toggle Clamps

horizontal acting



## 41801.1



### 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 <sub>1</sub> kN	h <sub>1</sub>	h <sub>2</sub>	l <sub>1</sub> min.	l <sub>1</sub> max.	l <sub>2</sub> min.	l <sub>2</sub> max.	h <sub>3</sub>	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

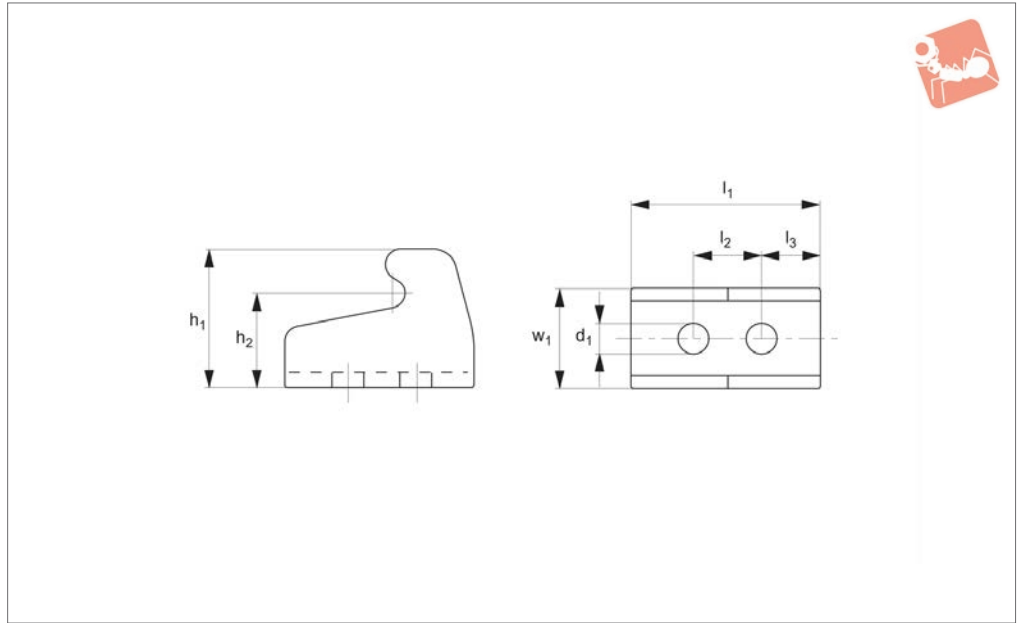
  

Order No.	l <sub>3</sub>	l <sub>4</sub> min.	l <sub>4</sub> max.	l <sub>5</sub>	l <sub>6</sub>	l <sub>7</sub>	l <sub>8</sub>	w <sub>1</sub>	w <sub>2</sub>	d <sub>1</sub>	d <sub>2</sub>
41801.W0002	69	38.0	72	13	11	6.4	26.0	38.0	19,5-23,5	5.2	4
41801.W0003	93	48.6	96	19	14	8.0	35.0	48.0	24,5-32,0	6.5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

STEEL TOGGLE CLAMPS



**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



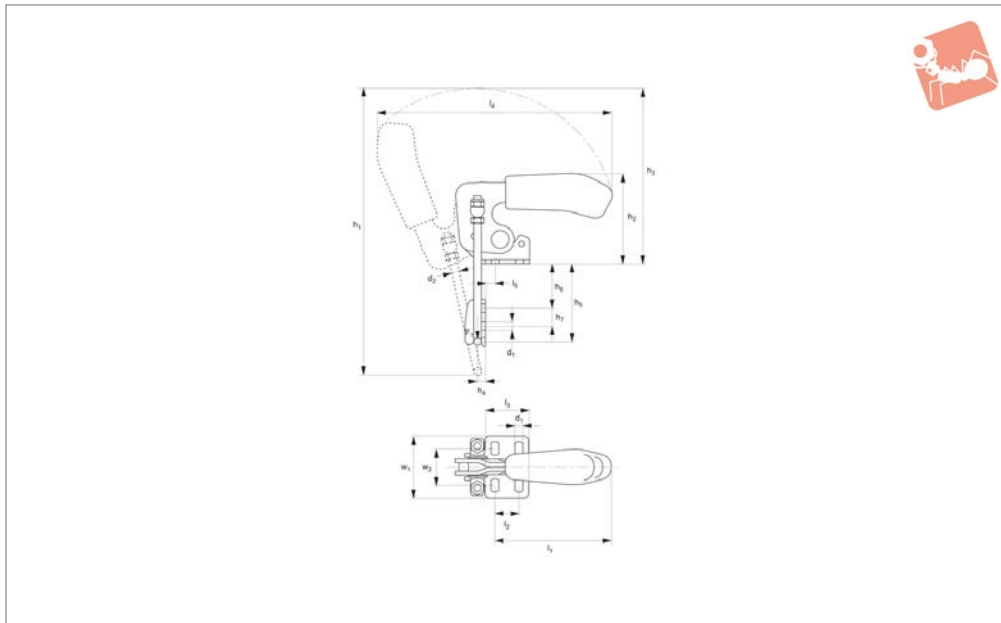


# Latch Type Toggle Clamps

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.

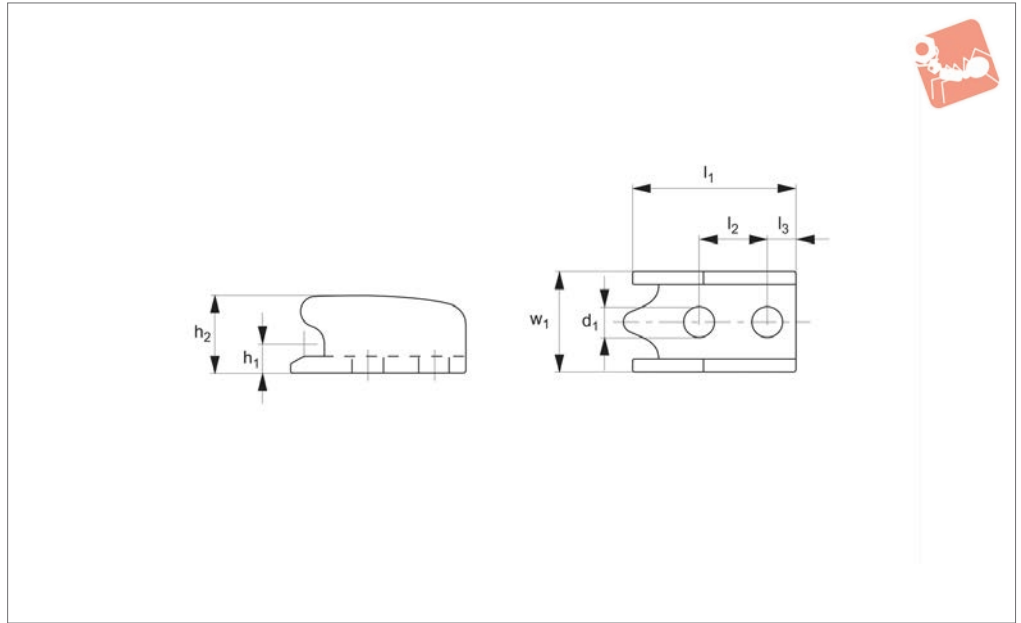
Order No.	Size	F <sub>1</sub> kN	h <sub>1</sub>	h <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>	h <sub>3</sub>	h <sub>4</sub>	h <sub>5</sub> min.	Weight g
41821.W0002	2	1.6	150	47.0	69	13	99	4.5	24	130
41821.W0003	3	3.2	172	70.0	93	19	137	6.0	33	340
41821.W0004	4	7.0	254	94.5	111	32	168	8.0	43	810

Order No.	h <sub>5</sub> max.	h <sub>6</sub> min.	h <sub>6</sub> max.	h <sub>7</sub>	l <sub>3</sub>	l <sub>4</sub>	l <sub>5</sub>	w <sub>1</sub>	w <sub>2</sub>	d <sub>1</sub>	d <sub>2</sub>
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



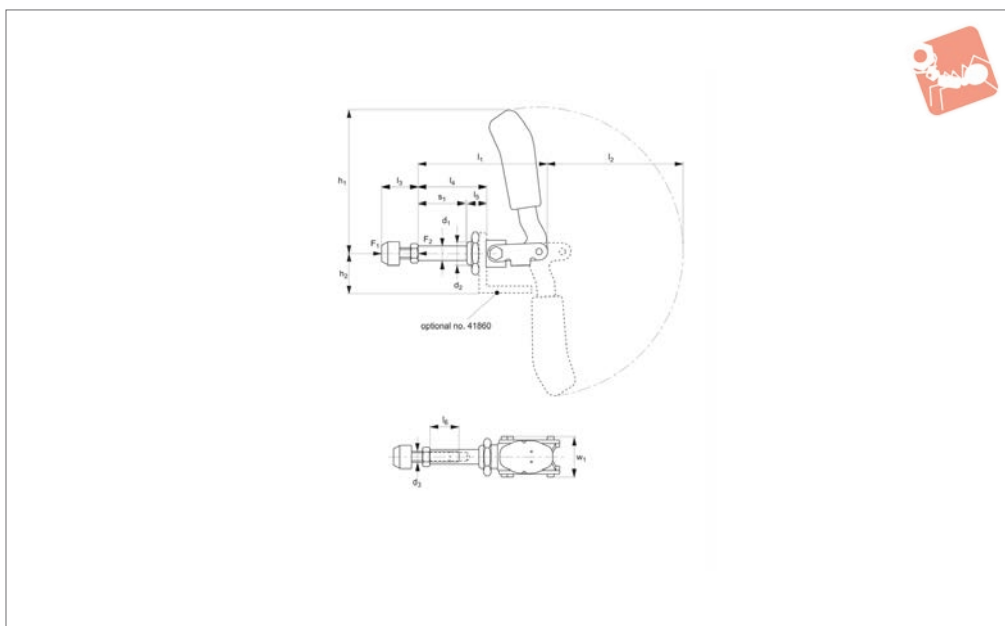
# Push-Pull Toggle Clamps

compact version



## 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.

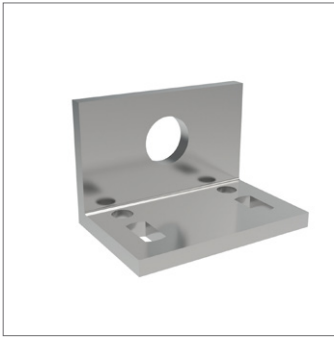
Temperature range -10°C to +80°C.

### Tips

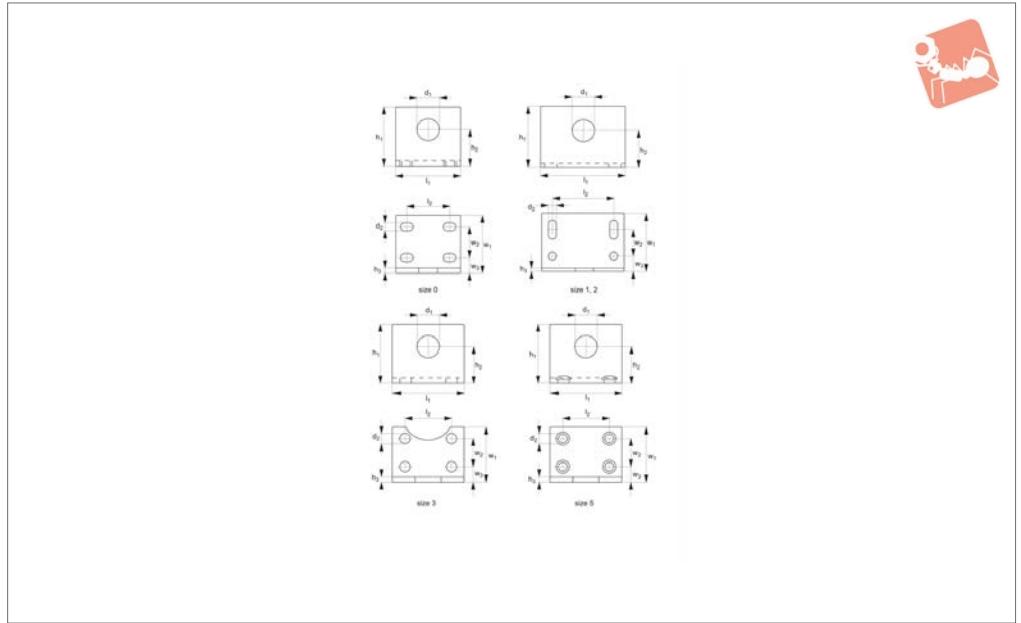
For stainless steel version see part no. 41840.W0002- .W0005.

Order No.	Size	Clamping screw	F <sub>1</sub> kN	F <sub>2</sub> kN	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	h <sub>1</sub>	h <sub>2</sub>	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 <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub> min.	l <sub>3</sub> max.	l <sub>4</sub>	l <sub>5</sub>	l <sub>6</sub>	w <sub>1</sub>	Stroke s <sub>1</sub>
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 <sub>1</sub>	d <sub>2</sub>	h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	w <sub>1</sub>	w <sub>2</sub>	w <sub>3</sub>	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

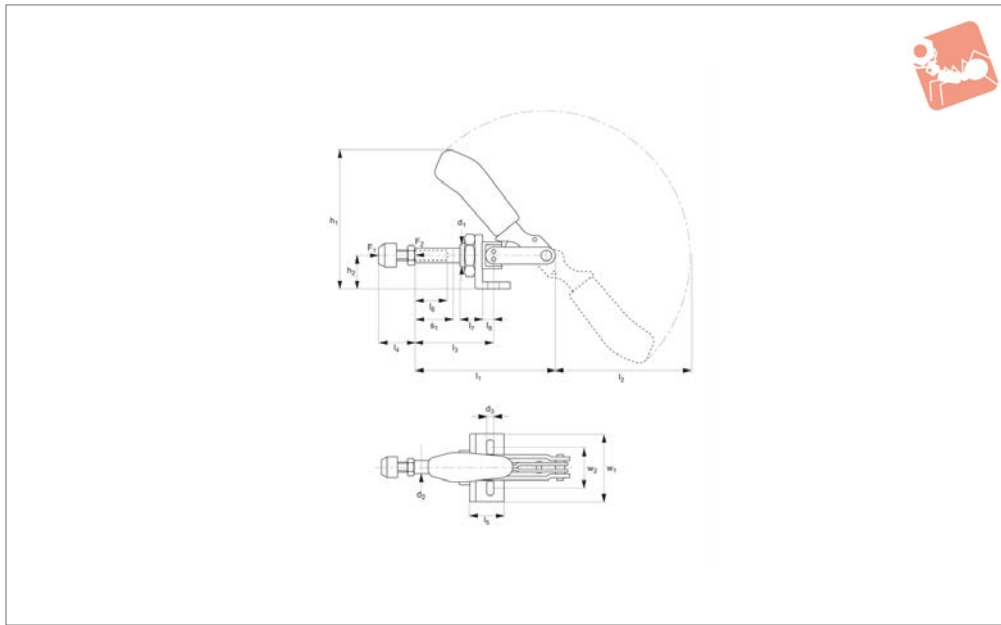


# Push-Pull Type Toggle Clamps

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

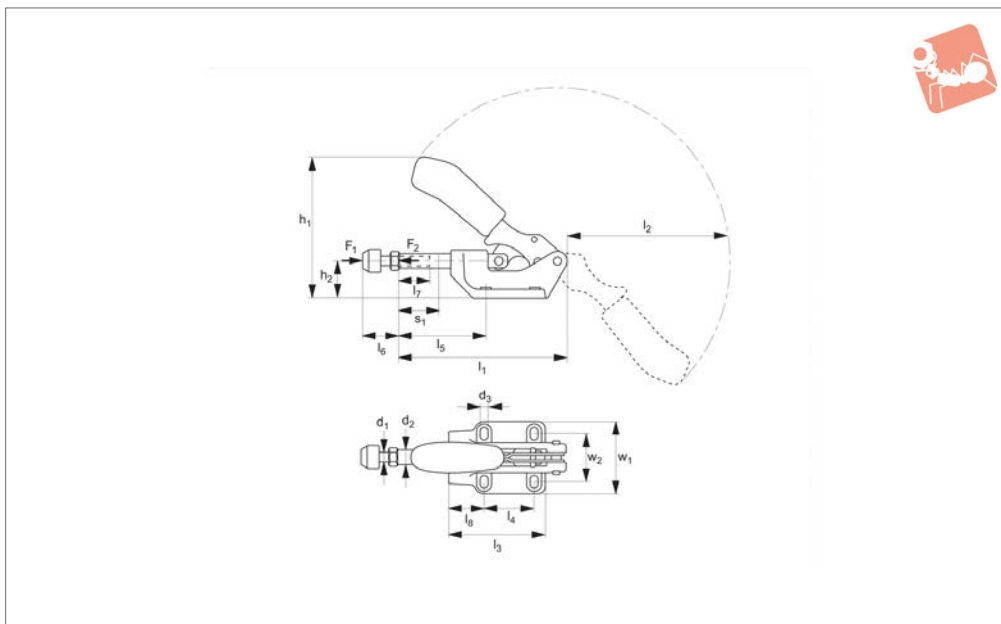
For stainless steel version see part no. 41890.W0000- .W0003.

Order No.	Size	Type	Clamping screw	F <sub>1</sub> kN	F <sub>2</sub> kN	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	h <sub>1</sub>	h <sub>2</sub>	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 <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub> min.	l <sub>3</sub> max.	l <sub>4</sub> min.	l <sub>4</sub> max.	l <sub>5</sub>	l <sub>6</sub>	l <sub>7</sub>	l <sub>8</sub>	w <sub>1</sub>	w <sub>2</sub>	Stroke s <sub>1</sub>
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.

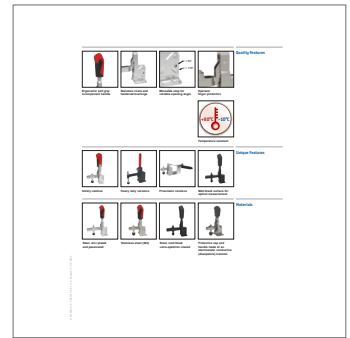
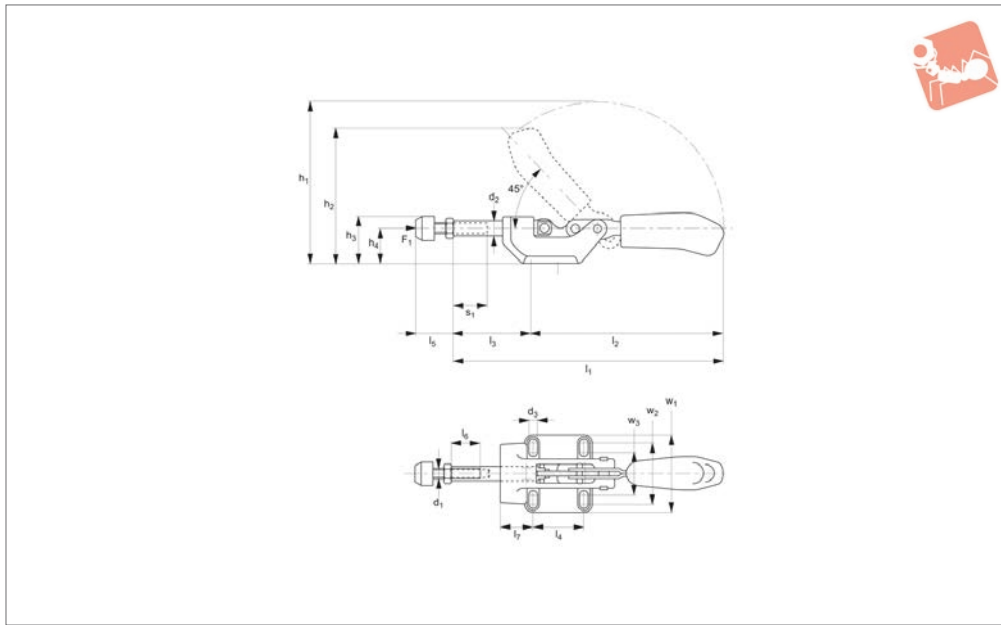
Order No.	Size	Clamping screw $d_1$	$F_1$ kN	$F_2$ kN	$d_2$	$d_3$	$h_1$	$h_2$	$l_1$	$l_2$	Weight g
42050.W0003	3	M 8x35	4	4	12	6.5	116.0	30	139	135	540
42050.W0005	5	M12x50	10	10	16	8.5	137.5	38	174	156	1115
42050.W0007	7	M12x50	25	25	22	11.0	179.0	55	218	192	2840

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