

## Toggle clamps, power clamps





# Technical information



## Quick clamping - reliable fastening

### Durable and reliable

Now even more durable, more user-friendly and safer. This is the design aim that has been achieved in the new generation. You, the user, will notice the difference immediately: On first contact, the new toggle clamp has a good grip and is robust. It delivers fast, reliable and safe operation. High quality material ensures the necessary holding power.



### Secure fixation and locking with safety lock:

The inner locking system is a completely revolutionary development. Nothing gets caught or stuck. Operation is easy even when wearing work gloves.



### Advantages:

#### Impressively stable:

All models can easily withstand 300,000 clamping cycles

#### Durable:

High-quality bushings - without scoring

#### Extremely robust:

Corrosion-resistant NITROX COATING or stainless steel

#### Simple design

The fixed top nut eases spindle adjustment

#### Reliable:

Uniform force during opening and closing

#### Ideal where space is restricted:

Slim design supports safe operation

#### Optimum stability:

Conical clamping arm with U-profile

#### Safe application:

Nothing catches on the smooth edges

#### Fast and flexible:

Easy retrofitting thanks to a wide range of accessories

#### Ergonomic and slip-resistant:

Easy to operate when wearing work gloves

#### Non-reflecting

The NITROX-SURFACE is ideal for use with laser devices

#### Safe when opening:

More space between clamping arm and grip prevents pinching

#### Extremely compatible:

Oblong holes allows assembly on existing holes

### Operating principle of the safety locking mechanism:

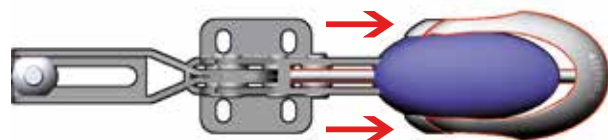
#### Fig. 1:

Locking mechanism closed. Safe to use thanks to revolutionary grip - no pinch points or interfering contours



#### Fig. 2:

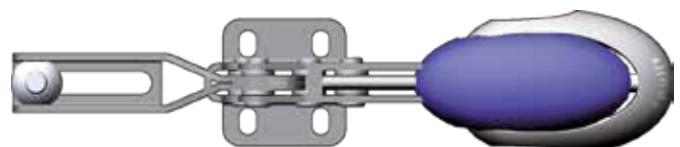
Inner rod locking mechanism with automatic safety catch. The lock is released by pulling the grip



#### Fig. 3:

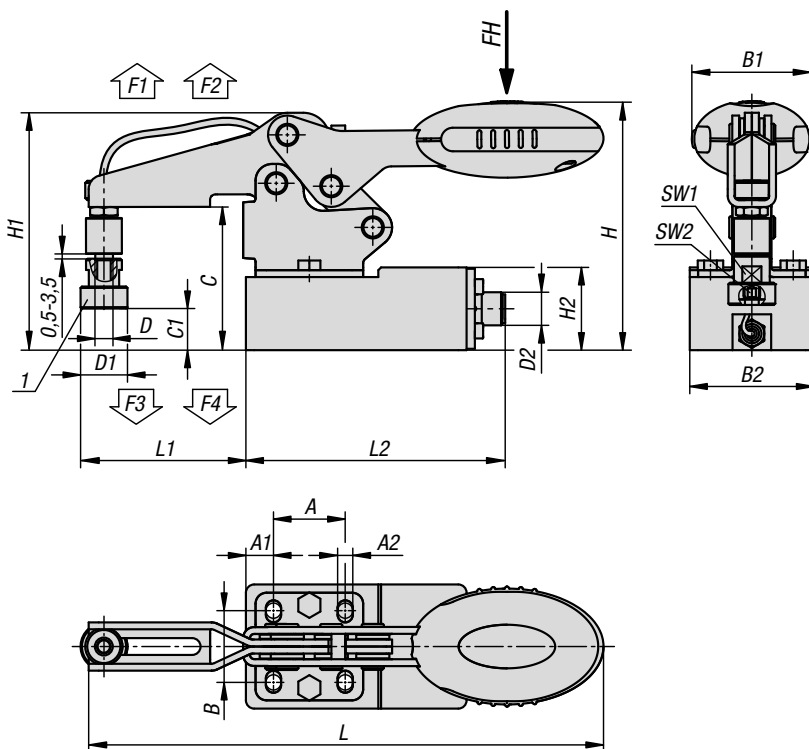
Locking mechanism open.

Release the grip to close the safety mechanism



## Toggle clamps, horizontal, stainless steel

with force sensor



### Drawing reference:

1) Clamping element K1464

### Material:

Clamp stainless steel.  
Grip polyamide.  
Force sensor stainless steel.  
Electronics housing stainless steel.

Spacer sleeve stainless steel.  
Grub screw stainless steel.  
Protective cap thermoplastic.

### Version:

Stainless steel parts bright.  
Protective cap black.

### Sample order:

K1463.10600011

### Note:

incl. 1 set clamping elements K1464

### Application:

Toggle clamps are used to hold and clamp workpieces. They are used as mounting and holding fixtures. The toggle clamp with force sensor enables measurement and adjustment of the retaining force. Workpieces can be defined and the retaining force recorded.

The clamping element is used to adjust the retaining force. Clamping elements with different heights are available for workpieces with different thicknesses.

### Accessories:

K1464

### Technical data:

Force sensor:

Nom. force  $F_{nom}$ : clamping force  $F4$

Calibration range: 0 - clamping force  $F4$

Overall system accuracy: 5%  $F_{nom}$

Limit force  $F_L$ : 120%  $F_{nom}$

Breaking force  $F_{B'}$ : >200%  $F_{nom}$

Nom. temp. range  $B_{T,nom}$ : -20 - +60 °C

Amplifier electronics:

Operating voltage: 10 - 30 V DC

Output signal (rated output)  $C_{nom}$ : 4 - 20 mA 3-wire

Permitted load:  $<(U_b - 10V)/0.024 A$

Electrical connection: M12x1

Pin assignment:

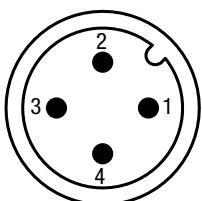
1: UB+

2: -

3: 0V / S-

4: S+

Protection class: IP66



## Toggle clamps, horizontal, stainless steel

with force sensor



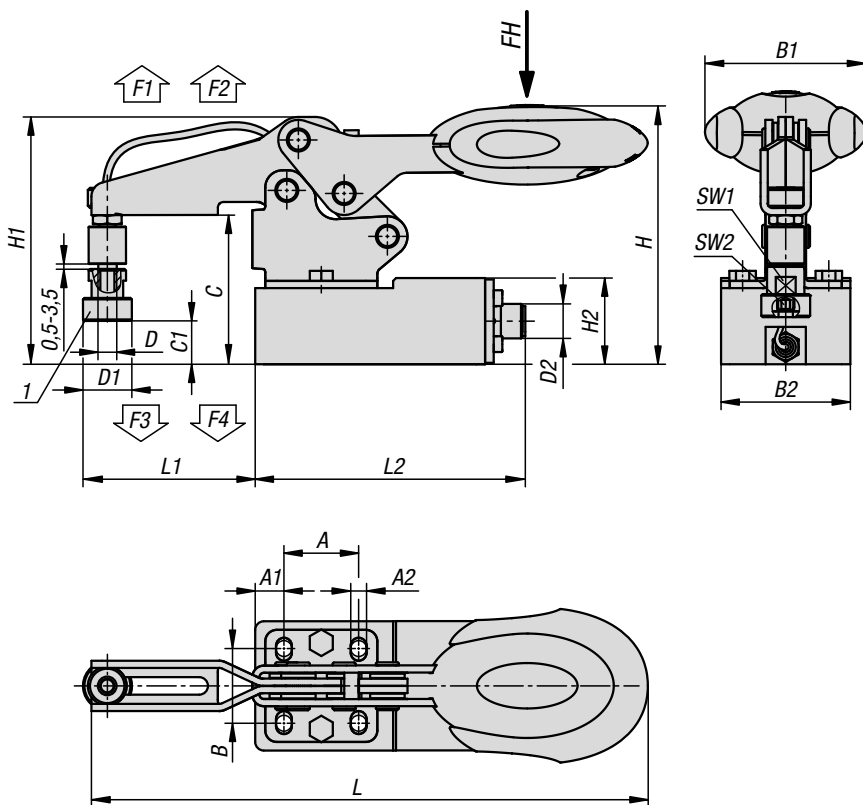
### KIPP Stainless steel toggle clamp, horizontal with force sensor

Order No.	Component colour	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N	Output signal
K1463.10600011	black grey RAL 7021	86°	67°	160	1350	1900	720	1200	4-20mA
K1463.10800011	black grey RAL 7021	86°	67°	200	2000	2800	830	1400	4-20mA
K1463.10600311	red	86°	67°	160	1350	1900	720	1200	4-20mA
K1463.10800311	red	86°	67°	200	2000	2800	830	1400	4-20mA

Order No.	Component colour	A	A1	A2	B	B1	B2	C	C1	D	D1	D2	H	H1	H2	L	L1	L2	SW1	SW2
K1463.10600011	black grey RAL 7021	26	10	5,5	26	43,5	45	51,9	max. 16,4	M6	17	M12x1	90,2	86,1	30	186,6	60	94	11	3
K1463.10800011	black grey RAL 7021	26	10	6,2	26	41,5	45	58,7	max. 18,4	M8	17	M12x1	100,4	96,6	30	223,1	73,5	94	11	4
K1463.10600311	red	26	10	5,5	26	43,5	45	51,9	max. 16,4	M6	17	M12x1	90,2	86,1	30	186,6	60	94	11	3
K1463.10800311	red	26	10	6,2	26	41,5	45	58,7	max. 18,4	M8	17	M12x1	100,4	96,6	30	223,1	73,5	94	11	4

## Toggle clamps, horizontal, stainless steel

with safety interlock and force sensor



### Material:

Clamp stainless steel.  
Grip polyamide.  
Release lever TPE.  
Force sensor stainless steel.  
Electronics housing stainless steel.

Spacer sleeve stainless steel.  
Grub screw stainless steel.  
Protective cap thermoplastic.

### Version:

Stainless steel parts bright.  
Protective cap black.

### Sample order:

K1463.10610011

### Note:

incl. 1 set clamping elements K1464

### Application:

Toggle clamps are used to hold and clamp workpieces. They are used as mounting and holding fixtures. The toggle clamp with force sensor enables measurement and adjustment of the retaining force. Workpieces can be defined and the retaining force recorded.

The clamping element is used to adjust the retaining force. Clamping elements with different heights are available for workpieces with different thicknesses.

### Accessories:

K1464

### Technical data:

Force sensor:  
Nom. force  $F_{nom}$ : clamping force  $F_4$   
Calibration range: 0 - clamping force  $F_4$   
Overall system accuracy: 5%  $F_{nom}$   
Limit force  $F_L$ : 120%  $F_{nom}$   
Breaking force  $F_B$ : >200%  $F_{nom}$   
Nom. temp. range  $B_{T,nom}$ : -20 - +60 °C

### Amplifier electronics:

Operating voltage: 10 - 30 V DC  
Output signal (rated output)  $C_{nom}$ : 4 - 20 mA 3-wire  
Permitted load:  $<(U_b - 10V)/0.024 A$   
Electrical connection: M12x1

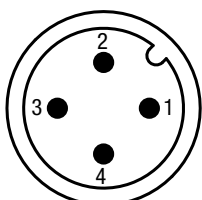
### Pin assignment:

1: UB+  
2: -  
3: 0V / S-  
4: S+

Protection class: IP66

### Drawing reference:

1) Clamping element K1464



## Toggle clamps, horizontal, stainless steel

with safety interlock and force sensor



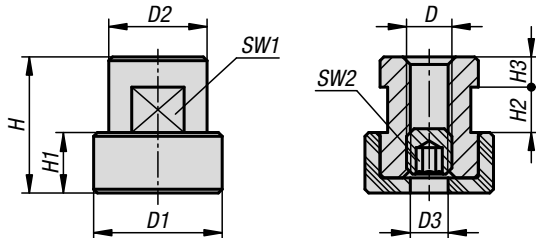
### KIPP Stainless steel toggle clamp, horizontal with safety interlock and force sensor

Order No.	Component colour	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N	Output signal
K1463.10610011	black grey RAL 7021	86°	67°	160	1350	1900	720	1200	4-20mA
K1463.10810011	black grey RAL 7021	86°	67°	200	2000	2800	830	1400	4-20mA
K1463.10610311	red	86°	67°	160	1350	1900	720	1200	4-20mA
K1463.10810311	red	86°	67°	200	2000	2800	830	1400	4-20mA

Order No.	Component colour	A	A1	A2	B	B1	B2	C	C1	D	D1	D2	H	H1	H2	L	L1	L2	SW1	SW2
K1463.10610011	black grey RAL 7021	26	10	5,5	26	53,4	45	51,9	max. 16,4	M6	17	M12x1	90,2	86,1	30	193,6	60	94	11	3
K1463.10810011	black grey RAL 7021	26	10	6,2	26	51,1	45	58,7	max. 18,4	M8	17	M12x1	100,4	96,6	30	230,4	73,5	94	11	4
K1463.10610311	red	26	10	5,5	26	53,4	45	51,9	max. 16,4	M6	17	M12x1	90,2	86,1	30	193,6	60	94	11	3
K1463.10810311	red	26	10	6,2	26	51,1	45	58,7	max. 18,4	M8	17	M12x1	100,4	96,6	30	230,4	73,5	94	11	4

## Clamp elements adjustable

for toggle clamp with force sensor



**Material:**

Spacer sleeve stainless steel.  
Grub screw stainless steel.  
Protective cap thermoplastic.

**Version:**

Stainless steel bright.  
Thermoplastic black.

**Sample order:**

K1464.11306X18

**Note:**

The thermoplastic used is characterised by high mechanical strength and rigidity.

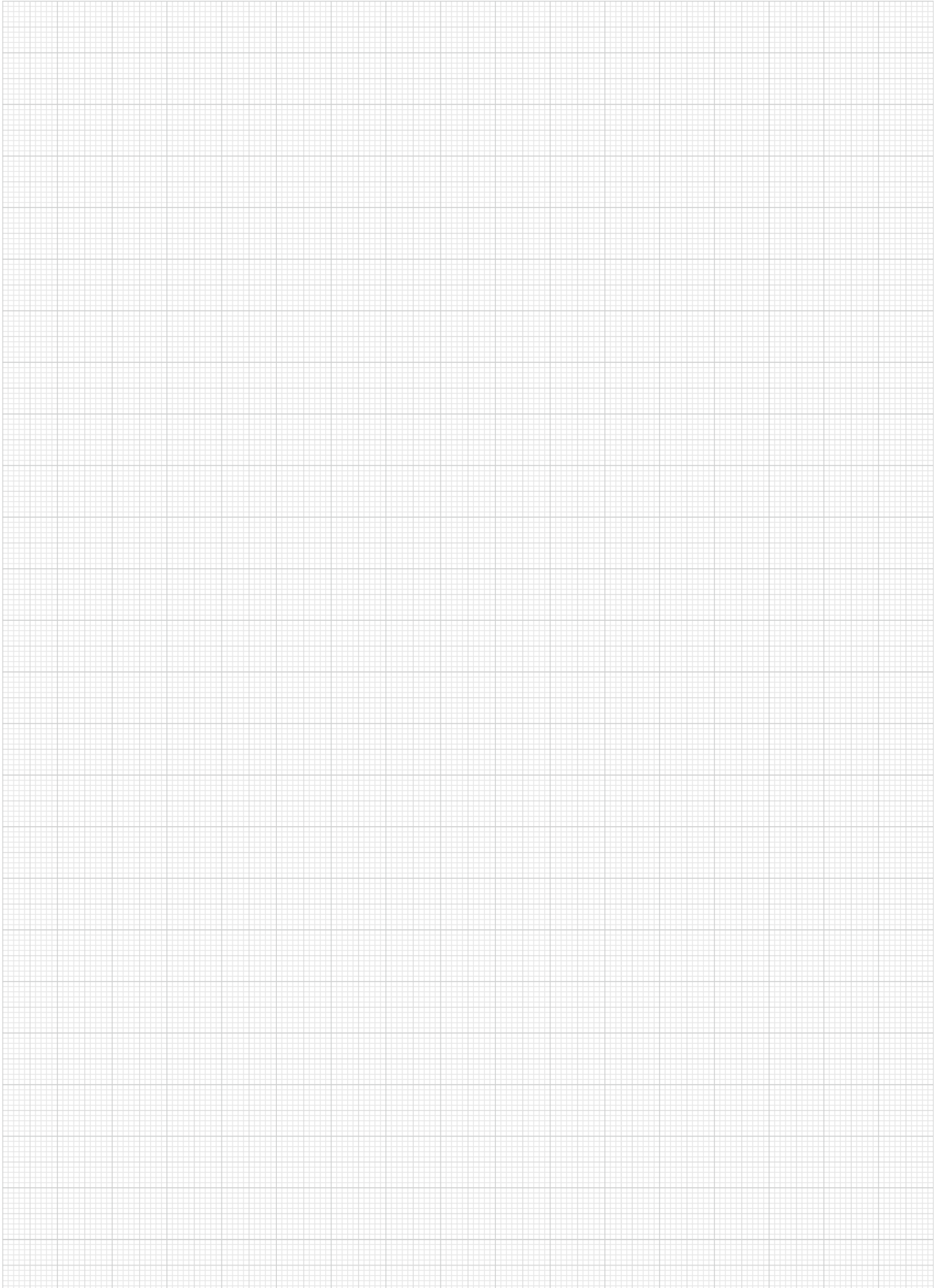
**Application:**

The clamping element is used to adjust the clamping force of toggle clamps with force sensor. Clamping elements with different heights are available for workpieces with different thicknesses.

### KIPP Adjustable clamping elements for toggle clamps with force sensor

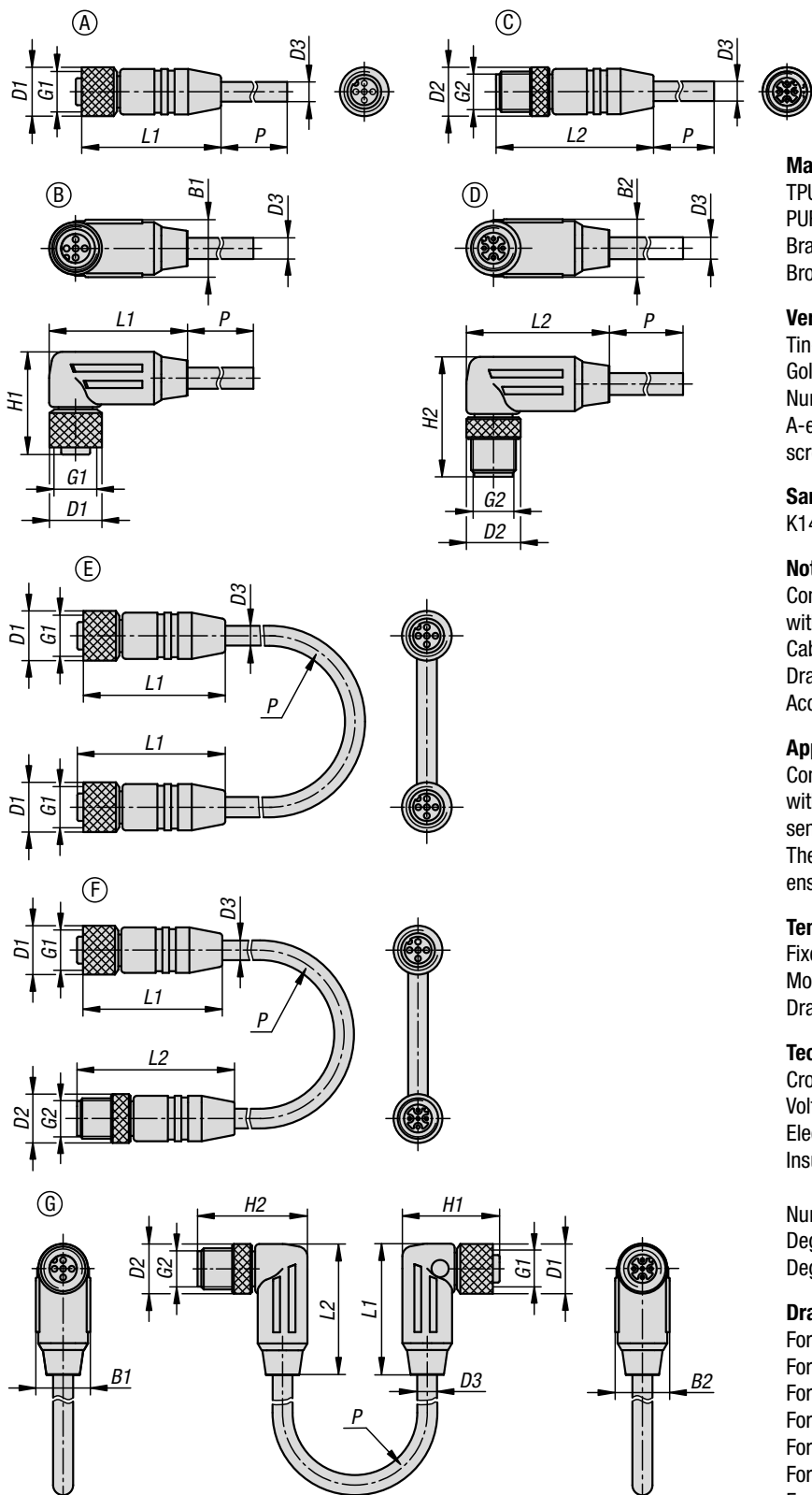
Order No.	Version 1	D	D1	D2	D3	H	H1	H2	H3	SW1	SW2
K1464.11306X18	adjustable	M6	17	13	5	18	8	6	4	11	3
K1464.11306X21	adjustable	M6	17	13	5	21	8	6	4	11	3
K1464.11306X23	adjustable	M6	17	13	5	23	8	6	4	11	3
K1464.11306X26	adjustable	M6	17	13	5	26	8	6	4	11	3
K1464.11306X29	adjustable	M6	17	13	5	29	8	6	4	11	3
K1464.11306X32	adjustable	M6	17	13	5	32	8	6	4	11	3
K1464.11308X22	adjustable	M8	17	13	5	22	8	8	4	11	4
K1464.11308X25	adjustable	M8	17	13	5	25	8	8	4	11	4
K1464.11308X28	adjustable	M8	17	13	5	28	8	8	4	11	4
K1464.11308X31	adjustable	M8	17	13	5	31	8	8	4	11	4
K1464.11308X34	adjustable	M8	17	13	5	34	8	8	4	11	4
K1464.11308X37	adjustable	M8	17	13	5	37	8	8	4	11	4
K1464.11308X40	adjustable	M8	17	13	5	40	8	8	4	11	4
K1464.11306	set	M6	17	13	5	-	8	6	4	11	3
K1464.11308	set	M8	17	13	5	-	8	8	4	11	4





# Connectors with screw fitting

screened



**Material:**

TPU housing.  
PUR cable sheath.  
Brass knurled nut.  
Bronze contacts.

**Version:**

Tin-plated knurled nut.  
Gold-plated contacts.  
Number of pins: 5-pin  
A-encoded.  
screened.

**Sample order:**

K1482.1215X2000

**Note:**

Connectors with screw fitting. Connector moulded to cable.  
Cable, PVC-, silicon- and halogen-free.  
Drag-chain suitable.  
Accessory for toggle clamp with force sensor K1463.

**Application:**

Connectors with screw fitting and cable serve as a connection cable for sensors and actuators.  
The cable screening protects from outside interference and ensures error-free signal transmission.

**Temperature range:**

Fixed: -50 °C to +80°C  
Moving: -25 °C to +80°C  
Drag chain: -25 °C to +80°C

**Technical data:**

Cross-section: 5 x 0.34 mm<sup>2</sup>  
Voltage: U max. 60 V  
Electric current: I max. 4 A  
Insulation resistance: > 1GΩ

Number of plug cycles: max. 100

Degree of contamination: 3

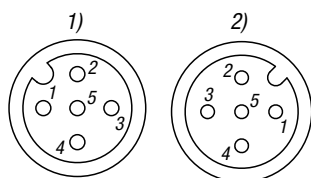
Degree of protection: IP67

**Drawing reference:**

- Form A: bush (female) straight
- Form B: bush (female) angled
- Form C: plug (male) straight
- Form D: plug (male) angled
- Form E: bush (female) straight + bush (female) straight
- Form F: bush (female) straight + plug (male) straight
- Form G: bush (female) angled + plug (male) angled

1) bush, 2) plug

- 1 = brown (BN)
- 2 = white (WH)
- 3 = blue (BU)
- 4 = black (BK)
- 5 = grey (GY)



## Connectors with screw fitting

screened



## KIPP Connectors with screw fitting screened

Order No.	Form	D1	D3	G1	L1	P	No. of conductors x conductor cross-section
K1482.1215X2000	A	14,5	6	M12X1	43	2000	5X0,34 mm <sup>2</sup>
K1482.1215X5000	A	14,5	6	M12X1	43	5000	5X0,34 mm <sup>2</sup>
K1482.1215X10000	A	14,5	6	M12X1	43	10000	5X0,34 mm <sup>2</sup>

Order No.	Form	B1	D1	D3	G1	H1	L1	P	No. of conductors x conductor cross-section
K1482.1225X2000	B	15,5	14,5	6	M12X1	28,35	38,25	2000	5X0,34 mm <sup>2</sup>
K1482.1225X5000	B	15,5	14,5	6	M12X1	28,35	38,25	5000	5X0,34 mm <sup>2</sup>
K1482.1225X10000	B	15,5	14,5	6	M12X1	28,35	38,25	10000	5X0,34 mm <sup>2</sup>

Order No.	Form	D2	D3	G2	L2	P	No. of conductors x conductor cross-section
K1482.1235X2000	C	14,5	6	M12X1	46,75	2000	5X0,34 mm <sup>2</sup>
K1482.1235X5000	C	14,5	6	M12X1	46,75	5000	5X0,34 mm <sup>2</sup>
K1482.1235X10000	C	14,5	6	M12X1	46,75	10000	5X0,34 mm <sup>2</sup>

Order No.	Form	B2	D2	D3	G2	H2	L2	P	No. of conductors x conductor cross-section
K1482.1245X5000	D	15,5	14,5	6	M12X1	32,05	38,25	5000	5X0,34 mm <sup>2</sup>

Order No.	Form	D1	D3	G1	L1	P	No. of conductors x conductor cross-section
K1482.1211215X5000	E	14,5	6	M12X1	43	5000	5X0,34 mm <sup>2</sup>
K1482.1211215X10000	E	14,5	6	M12X1	43	10000	5X0,34 mm <sup>2</sup>

Order No.	Form	D1	D2	D3	G1	G2	L1	L2	P	No. of conductors x conductor cross-section
K1482.1211235X1000	F	14,5	14,5	6	M12X1	M12X1	43	46,75	1000	5X0,34 mm <sup>2</sup>
K1482.1211235X2000	F	14,5	14,5	6	M12X1	M12X1	43	46,75	2000	5X0,34 mm <sup>2</sup>
K1482.1211235X5000	F	14,5	14,5	6	M12X1	M12X1	43	46,75	5000	5X0,34 mm <sup>2</sup>
K1482.1211235X10000	F	14,5	14,5	6	M12X1	M12X1	43	46,75	10000	5X0,34 mm <sup>2</sup>

Order No.	Form	B1	B2	D1	D2	D3	G1	G2	H1	H2	L1	L2	P	No. of conductors x conductor cross-section
K1482.1221245X1000	G	15,5	15,5	14,5	14,5	6	M12X1	M12X1	28,35	32,05	38,25	38,25	1000	5X0,34 mm <sup>2</sup>
K1482.1221245X5000	G	15,5	15,5	14,5	14,5	6	M12X1	M12X1	28,35	32,05	38,25	38,25	5000	5X0,34 mm <sup>2</sup>

## Toggle clamps horizontal

with flat foot and adjustable clamping spindle



**Material:**

Steel.  
Grip polyamide.

**Version:**

Carbonitrided and black oxidised.  
Grip blue, black or red.

**Sample order:**

K0660.005001  
(blue grip)

**Note for ordering:**

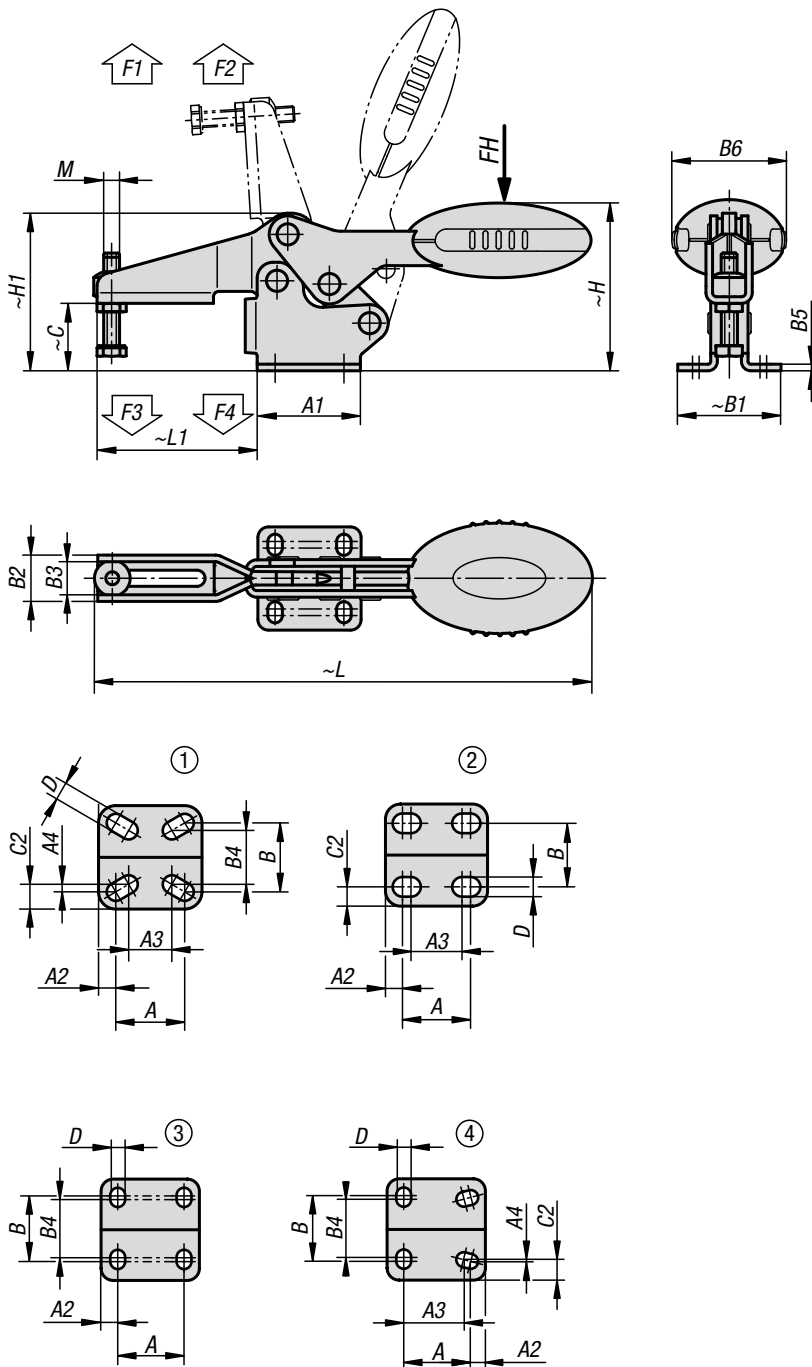
Δ Enter the desired grip colour here.

**Note:**

Maintenance-free high quality link bushings.  
Sustainable constant use of force during opening and closing. Optimum stability through the conical, U-profile clamping arm.

**Accessories:**

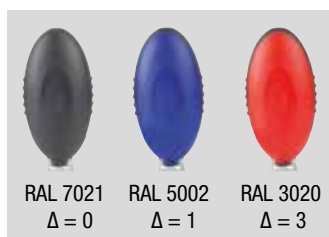
- K0106
- K0098
- K0383
- K0388
- K0390
- K0391
- K0392
- K0393



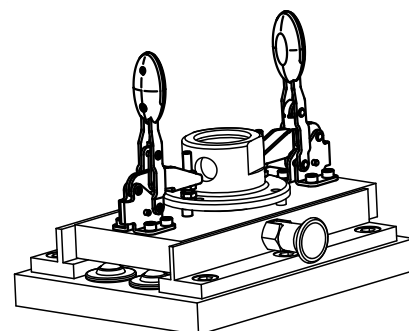
Angle bracket for front face mounting (see accessories)

## Toggle clamps horizontal

with flat foot and adjustable clamping spindle



RAL 7021  $\Delta = 0$     RAL 5002  $\Delta = 1$     RAL 3020  $\Delta = 3$



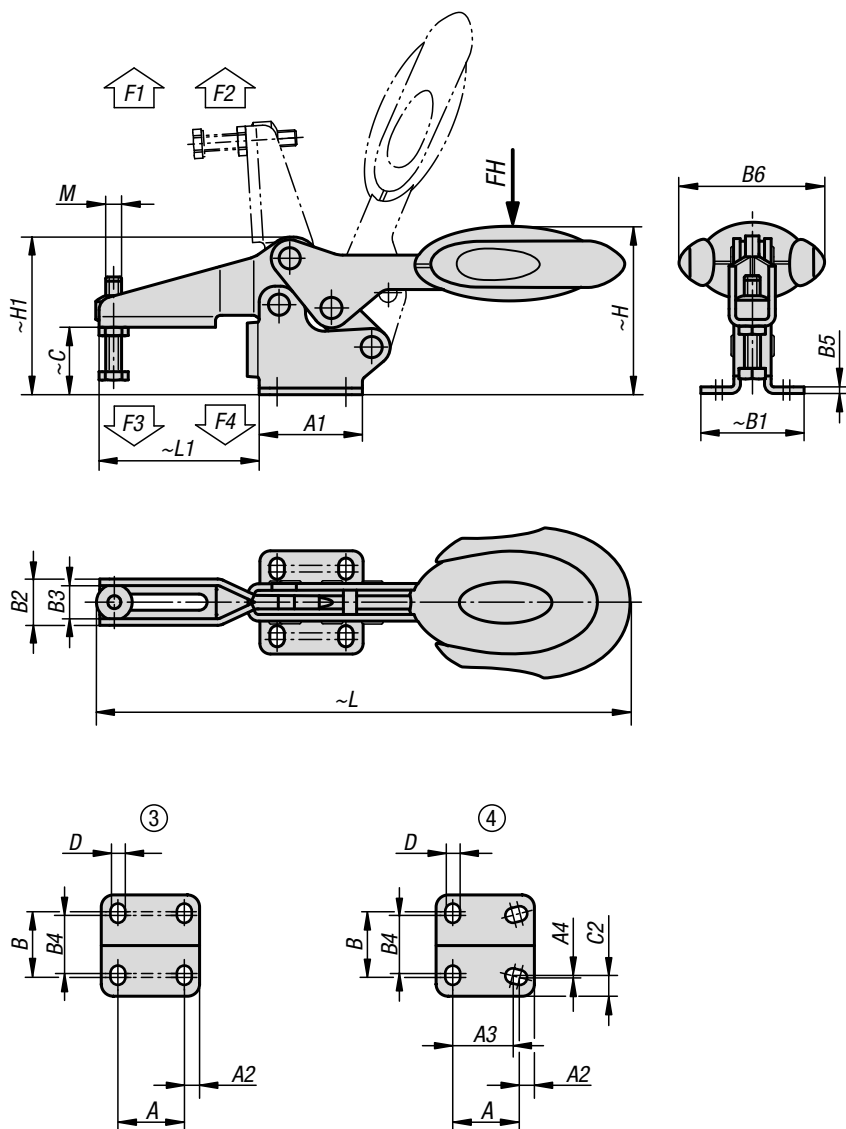
### KIPP Toggle clamps horizontal with flat foot and adjustable clamping spindle

Order No.	hole arrangement	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N	Order No. Angle bracket
K0660.00400Δ	1	87°	69°	80	400	500	250	300	K0098.02
K0660.00500Δ	2	86°	67°	100	650	900	550	620	K0098.02
K0660.00600Δ	3	86°	67°	160	1350	1900	720	1200	K0098.04
K0660.00800Δ	3	86°	67°	200	2000	2800	830	1400	K0098.04
K0660.01000Δ	3	90°	71°	250	2200	4500	1200	2800	K0098.06
K0660.01200Δ	4	88°	68°	280	2400	5500	1000	2800	K0098.06

Order No.	M	A	A1	A2	A3	A4	B	B1	B2	B3	B4	B5	B6	C	C2	D	H	H1	L	L1
K0660.00400Δ	M4x16	16	24	4	12,8	0,95	16	24	10,2	7,2	14,1	1,5	20	11,7	4,95	4,2	28,7	26,3	91,8	23,7
K0660.00500Δ	M5x25	18	27	4,5	13,5	-	16,8	27,3	13,2	9,2	-	2	22,5	17,2	5,25	5,5	43,4	38,9	125,7	41,8
K0660.00600Δ	M6x35	26	39	6,5	-	-	28	39	17,5	12,5	23	2,5	43,5	25,4	-	5,5	63,7	59,6	186,6	60,5
K0660.00800Δ	M8x45	26	44	9	-	-	31	45	21	16	24	2,5	41,5	32,2	-	6,2	73,9	70,1	223,1	74,9
K0660.01000Δ	M10x55	41,5	59	9	-	-	43	59	26	19	39	3,5	47	40	-	8,8	94,8	88	279,4	103,9
K0660.01200Δ	M12x70	44	65	10	40	1	42	67	28	21	40	3,5	47	52,3	13,5	8,5	104,8	101,6	314,7	122

## Toggle clamps horizontal with safety interlock

with flat foot and adjustable clamping spindle



**Material:**

Steel.  
Grip polyamide.  
Unlocking bracket TPE.

**Version:**

Carbonitrided and black oxidised.  
Grip blue, black or red.

**Sample order:**

K0660.006101  
(blue grip)

**Note for ordering:**

Δ Enter the desired grip colour here.

**Note:**

Maintenance-free high quality link bushings.  
Sustainable constant force during opening and closing.  
Optimum stability through the conical, U-profile clamping arm. Including internal bar lock with automatic safety catch.

**Accessories:**

- K0106
- K0098
- K0383
- K0388
- K0390
- K0391
- K0392
- K0393

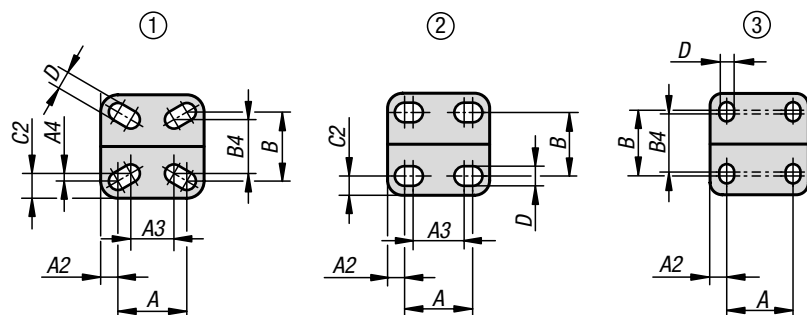
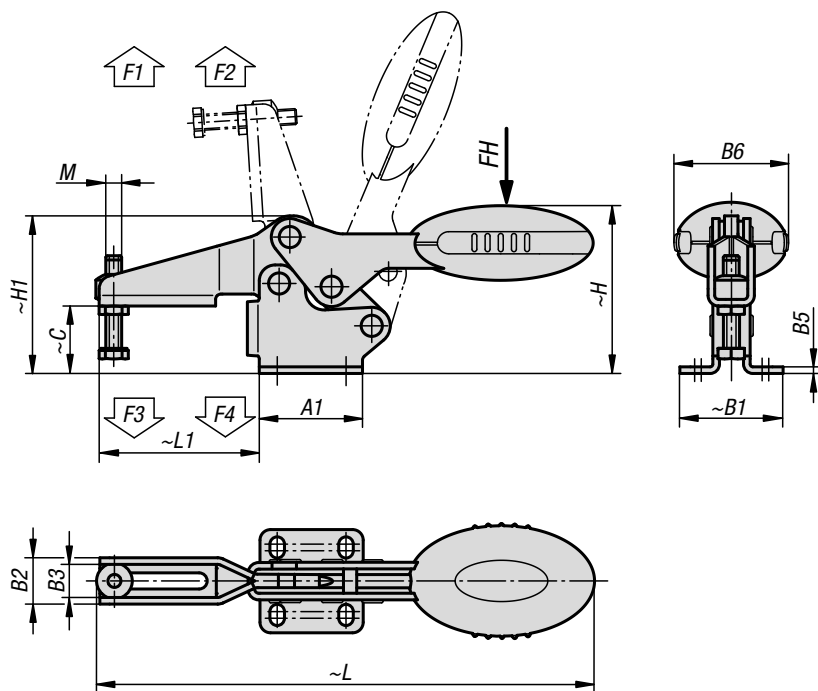
### KIPP Toggle clamps horizontal with safety interlock, with flat foot and adjustable clamping spindle

Order No.	hole arrangement	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N	Order No. Angle bracket
K0660.00610Δ	3	86°	67°	160	1350	1900	720	1200	K0098.04
K0660.00810Δ	3	86°	67°	200	2000	2800	830	1400	K0098.04
K0660.01010Δ	3	90°	71°	250	2200	4500	1200	2800	K0098.06
K0660.01210Δ	4	88°	68°	280	2400	5500	1000	2800	K0098.06

Order No.	M	A	A1	A2	A3	A4	B	B1	B2	B3	B4	B5	B6	C	C2	D	H	H1	L	L1
K0660.00610Δ	M6x35	26	39	6,5	-	-	28	39	17,5	12,5	23	2,5	53,4	25,4	-	5,5	63,7	59,6	193,3	60,5
K0660.00810Δ	M8x45	26	44	9	-	-	31	45	21	16	24	2,5	51,1	32,2	-	6,2	73,9	70,1	230,4	74,9
K0660.01010Δ	M10x55	41,5	59	8,5	-	-	43	59	26	19	39	3,5	56,5	40	-	8,8	94,8	88	286	103,9
K0660.01210Δ	M12x70	44	65	10	40	1	42	67	28	21	40	3,5	56,5	52,3	13,5	8,5	104,8	101,6	321,3	122

## Toggle clamps horizontal

with flat foot and adjustable clamping spindle, stainless steel



**Material:**  
Stainless steel.  
Grip polyamide.

**Version:**  
Bright.  
Grip blue, black or red.

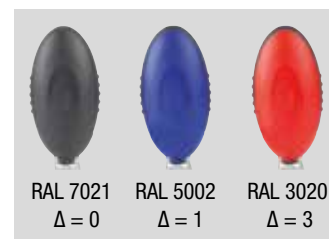
**Sample order:**  
K0660.105001  
(blue grip)

**Note for ordering:**  
Δ Enter the desired grip colour here.

**Note:**  
Maintenance-free high quality link bushings.  
Sustainable constant use of force during opening and closing. Optimum stability through the conical, U-profile clamping arm.

**On request:**  
Other grip colours.

**Accessories:**  
K0106  
K0384  
K0390  
K0392  
K0667



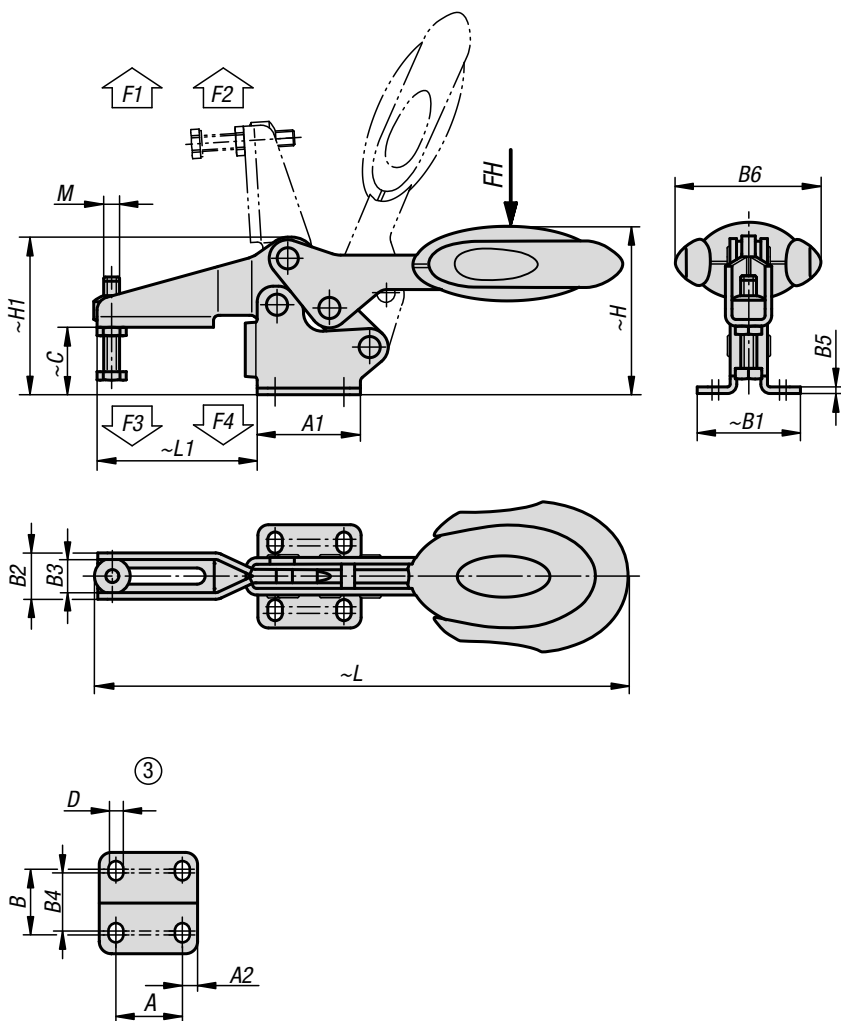
### KIPP Toggle clamps horizontal with flat foot, stainless steel

Order No.	hole arrangement	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K0660.10400Δ	1	87°	69°	80	400	500	250	300
K0660.10500Δ	2	86°	67°	100	650	900	550	620
K0660.10600Δ	3	86°	67°	160	1350	1900	720	1200
K0660.10800Δ	3	86°	67°	200	2000	2800	830	1400

Order No.	M	A	A1	A2	A3	A4	B	B1	B2	B3	B4	B5	B6	C	C2	D	H	H1	L	L1
K0660.10400Δ	M4x16	16	24	4	12,8	0,95	16	24	10,2	7,2	12,5	1,5	20	11,7	4,95	4,2	28,7	26,3	91,8	23,7
K0660.10500Δ	M5x25	18	27	4,5	13,5	-	16,8	27,3	13,2	9,2	-	2	22,5	17,2	5,25	5,5	43,4	38,9	125,7	41,8
K0660.10600Δ	M6x35	26	39	6,5	-	-	28	39	17,5	12,5	23	2,5	43,5	25,4	-	5,5	63,7	59,6	186,6	60,5
K0660.10800Δ	M8x45	26	44	9	-	-	31	45	21	16	24	2,5	41,5	32,2	-	6,2	73,9	70,1	223,1	74,9

## Toggle clamps horizontal with safety interlock

with flat foot and adjustable clamping spindle, stainless steel



**Material:**

Stainless steel.  
Grip polyamide.  
Unlocking bracket TPE.

**Version:**

Bright.  
Grip blue, black or red.

**Sample order:**

K0660.106101  
(blue grip)

**Note for ordering:**

Δ Enter the desired grip colour here.

**Note:**

Maintenance-free high quality link bushings.  
Sustainable constant force during opening and closing.  
Optimum stability through the conical, U-profile clamping arm. Including internal bar lock with automatic safety catch.

**On request:**

Other grip colours.

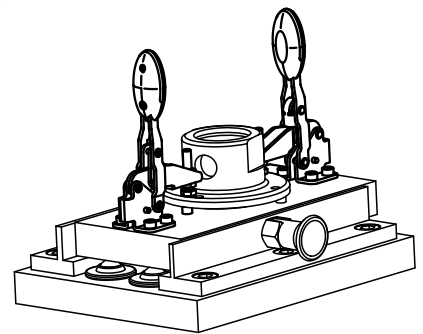
**Accessories:**

- K0106
- K0384
- K0390
- K0392
- K0667



## Toggle clamps horizontal with safety interlock

with flat foot and adjustable clamping spindle, stainless steel



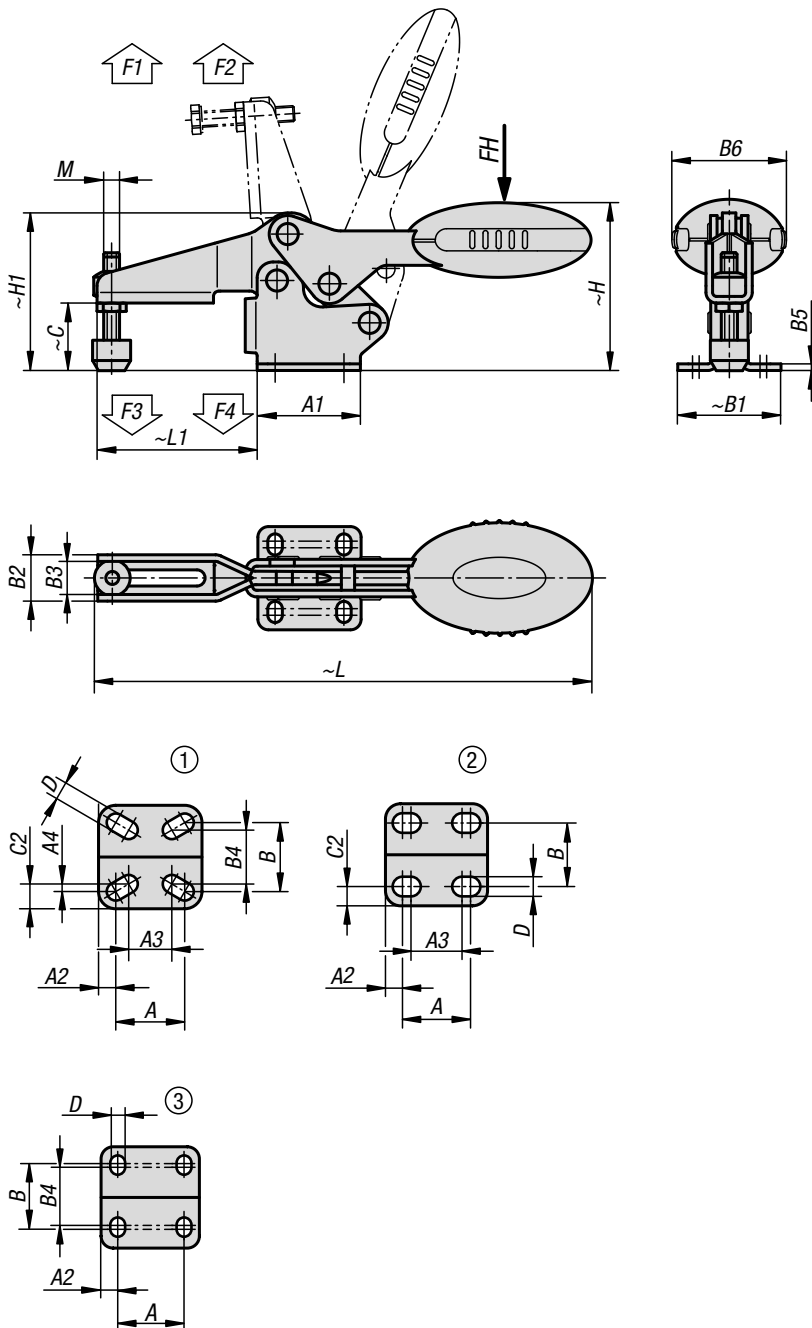
### KIPP Toggle clamps horizontal with flat foot and safety interlock, stainless steel

Order No.	hole arrangement	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
<b>K0660.10610Δ</b>	3	86°	67°	160	1350	1900	720	1200
<b>K0660.10810Δ</b>	3	86°	67°	200	2000	2800	830	1400

Order No.	M	A	A1	A2	B	B1	B2	B3	B4	B5	B6	C	D	H	H1	L	L1
<b>K0660.10610Δ</b>	M6x35	26	39	6,5	28	39	17,5	12,5	23	2,5	53,4	25,4	5,5	63,7	59,6	193,3	60,5
<b>K0660.10810Δ</b>	M8x45	26	44	9	31	45	21	16	24	2,5	51,1	32,2	6,2	73,9	70,1	230,4	74,9

## Horizontal antistatic toggle clamps

with flat foot and adjustable clamping spindle



**Material:**

Steel.  
Grip polyamide.

**Version:**

Nitro-carburised and black oxidised.  
Grip element graphite black.

**Sample order:**

K0660.004024

**Note:**

Maintenance-free high quality link bushes.  
Sustainable constant force during opening and closing.  
Optimum stability through the conical, U-profile clamping arm.

**Application:**

Sensitive electrical or electronic equipment, components and devices (ESD sensitive elements) may be damaged or destroyed by electrostatic discharges (ESD) in the immediate vicinity.  
Electrostatic discharges can come from people or through handling ESD sensitive components (e.g. during production, assembly, transport, storage etc).  
Electrically conductive products which conform to DIN EN 61340-5-1 are essential within electronic environments to prevent an electrostatic discharge.  
These products can be used for ESD applications or in ESD protection areas (EPA) in accordance with DIN EN 61340-5-1.

**Advantages:**

- Made from a special electrically conductive plastic
- To protect sensitive electrical or electronic parts, components and devices
- Toggle clamps and power clamps are used in assembly and workholding fixtures
- Ergonomic and user-friendly grip

**Accessories:**

K0098

## Horizontal antistatic toggle clamps

with flat foot and adjustable clamping spindle



### Safety:

These ESD products can also be used for devices, components and protection systems in areas where there is risk of explosion.

These ESD products prevent electrostatic spark discharges, and eliminate the risk of ignition of gases and dust which could lead to explosions in enclosed spaces.

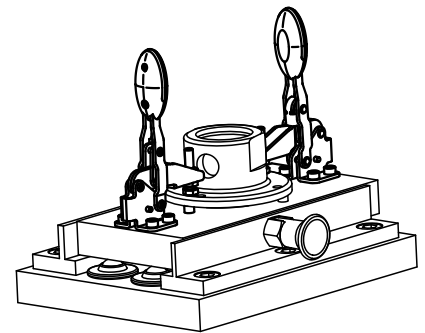
Manufacturers and operators must apply and comply with the ATEX directives for protecting persons working in areas where there is a risk of explosion.

These ESD products have been certified by TÜV-Süd for their electrical discharge capability.

### Target groups:

Device manufacturers required to conform to ATEX product directive 2014/34/EU.

Operators required to conform to ATEX worker protection directive 1999/92/EC.



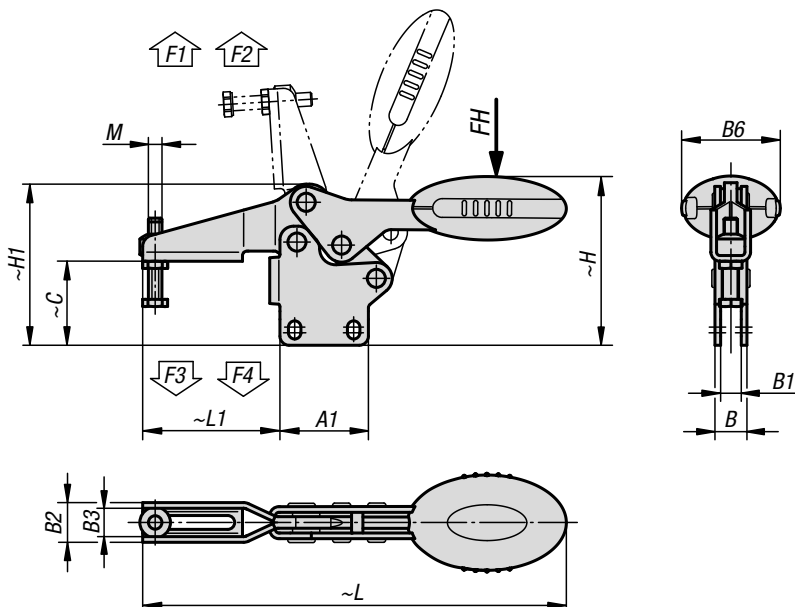
### KIPP Horizontal antistatic toggle clamps with horizontal foot

Order No.	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N	Order No. Angle bracket
K0660.004024	87°	69°	80	400	500	250	300	K0098.02
K0660.005024	86°	67°	100	650	900	550	620	K0098.02
K0660.006024	86°	67°	160	1350	1900	720	1200	K0098.04
K0660.008024	86°	67°	200	2000	2800	830	1400	K0098.04

Order No.	hole arrangement	M	A	A1	A2	A3	A4	B	B1	B2	B3	B4	B5	B6	C	C2	D	H	H1	L	L1
K0660.004024	1	M4x16	16	24	4	12,8	0,95	16	24	10,2	7,2	14,1	1,5	20	11,7	4,95	4,2	28,7	26,3	91,8	23,7
K0660.005024	2	M5x25	18	27	4,5	13,5	-	16,8	27,3	13,2	9,2	-	2	22,5	17,2	5,25	5,5	43,4	38,9	125,7	41,8
K0660.006024	3	M6x35	26	39	6,5	-	-	28	39	17,5	12,5	23	2,5	43,5	25,4	-	5,5	63,7	59,6	186,6	60,5
K0660.008024	3	M8x45	26	44	9	-	-	31	45	21	16	24	2,5	41,5	32,2	-	6,2	73,9	70,1	223,1	74,9

## Toggle clamps horizontal

with straight foot and adjustable clamping spindle



**Material:**

Steel.  
Grip polyamide.

**Version:**

Carbonitrided and black oxidised.  
Grip blue, black or red.

**Sample order:**

K0661.005001  
(blue grip)

**Note for ordering:**

Δ Enter the desired grip colour here.

**Note:**

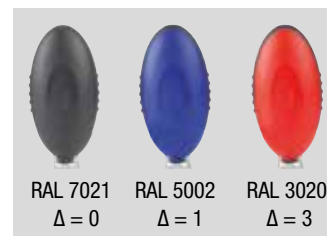
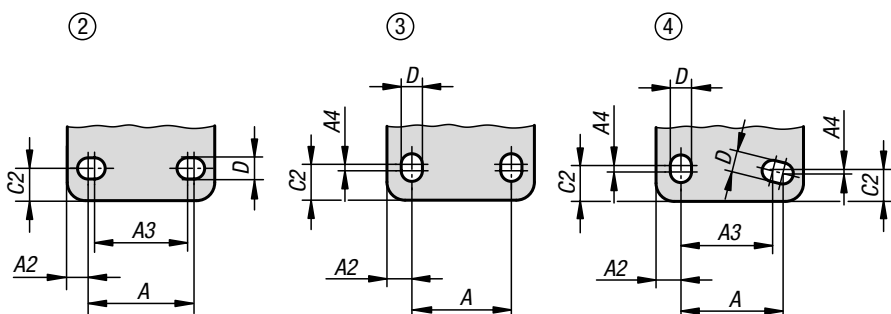
Maintenance-free high quality link bushings.  
Sustainable constant use of force during opening and closing. Optimum stability through the conical, U-profile clamping arm.

**On request:**

Other grip colours.

**Accessories:**

- K0106
- K0383
- K0388
- K0390
- K0391
- K0392
- K0393



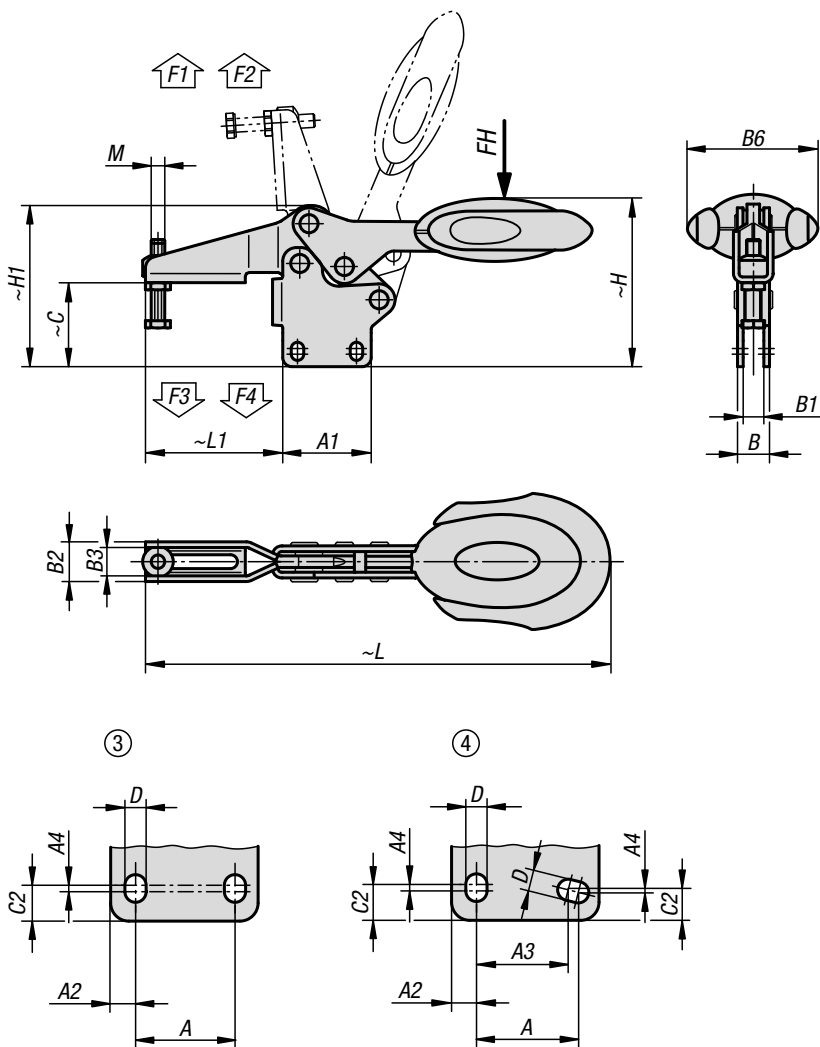
### KIPP Toggle clamps horizontal with straight foot and adjustable clamping spindle

Order No.	hole arrangement	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K0661.00500Δ	2	86°	67°	100	650	900	550	620
K0661.00600Δ	3	86°	67°	160	1350	1900	720	1200
K0661.00800Δ	3	86°	67°	200	2000	2800	830	1400
K0661.01000Δ	3	90°	71°	250	2200	4500	1200	2800
K0661.01200Δ	4	88°	68°	280	2400	5500	1000	2800

Order No.	M	A	A1	A2	A3	A4	B	B1	B2	B3	B6	C	C2	D	H	H1	L	L1
K0661.00500Δ	M5x25	18	27	4,5	13,5	-	8,1	4,1	13,2	9,2	22,5	26,2	5,2	5,5	52,2	47,9	125,7	41,8
K0661.00600Δ	M6x35	26	39	6,5	-	2,5	14,1	9,1	17,5	12,5	43,5	36,9	8	5,5	75,2	71	186,6	60,5
K0661.00800Δ	M8x45	26	44	9	-	3,5	14,1	9,1	21	16	41,5	46,5	10,5	6,2	88,2	84,3	223,1	74,9
K0661.01000Δ	M10x55	41,5	59	9	-	2	16,2	9,2	26	19	47	59,6	10	8,8	114,3	107,5	279,4	103,9
K0661.01200Δ	M12x70	44	65	11	40	1	16,2	9,2	28	21	47	75,9	13,5	8,5	128,4	125,2	314,7	122

## Toggle clamps horizontal with safety interlock

with straight foot and adjustable clamping spindle



**Material:**

Steel.  
Grip polyamide.  
Unlocking bracket TPE.

**Version:**

Carbonitrided and black oxidised.  
Grip blue, black or red.

**Sample order:**

K0661.006101  
(blue grip)

**Note for ordering:**

Δ Enter the desired grip colour here.

**Note:**

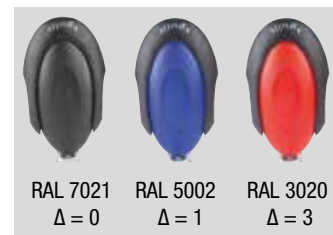
Maintenance-free high quality link bushings.  
Sustainable constant force during opening and closing.  
Optimum stability through the conical, U-profile clamping arm. Including internal bar lock with automatic safety catch.

**On request:**

Other grip colours.

**Accessories:**

- K0106
- K0383
- K0388
- K0390
- K0391
- K0392
- K0393



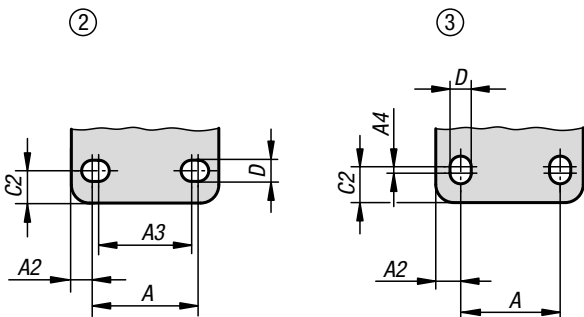
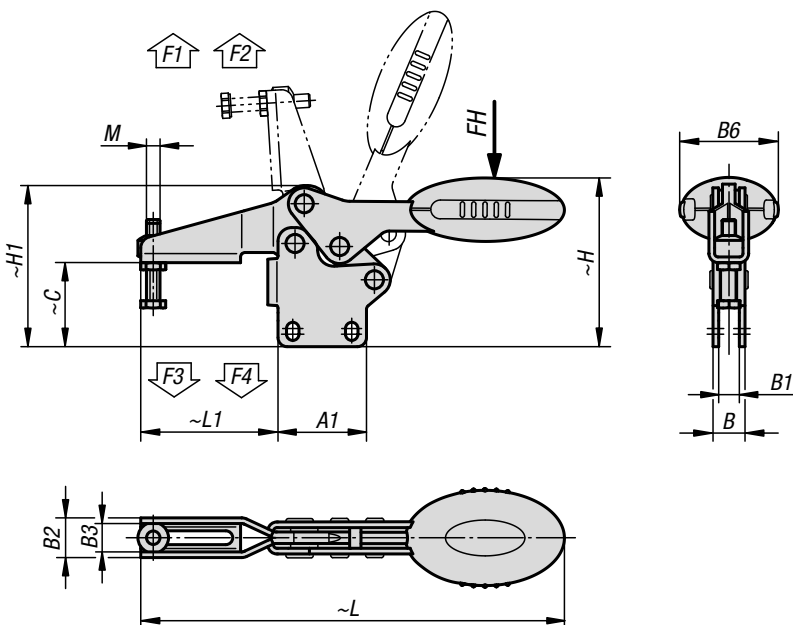
### KIPP Toggle clamps horizontal with safety interlock with straight foot and adjustable clamping spindle

Order No.	hole arrangement	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K0661.00610Δ	3	86°	67°	160	1350	1900	720	1200
K0661.00810Δ	3	86°	67°	200	2000	2800	830	1400
K0661.01010Δ	3	90°	71°	250	2200	4500	1200	2800
K0661.01210Δ	4	88°	68°	280	2400	5500	1000	2800

Order No.	M	A	A1	A2	A3	A4	B	B1	B2	B3	B6	C	C2	D	H	H1	L	L1
K0661.00610Δ	M6x35	26	39	6,5	-	2,5	14,1	9,1	17,5	12,5	53,4	36,9	8	5,5	75,2	71	193,3	60,5
K0661.00810Δ	M8x45	26	44	9	-	3,5	14,1	9,1	21	16	51,1	46,5	10,5	6,2	88,2	84,3	230,4	74,9
K0661.01010Δ	M10x55	41,5	59	9	-	2	16,2	9,2	26	19	56,5	59,6	10	8,8	114,3	107,5	286	103,9
K0661.01210Δ	M12x70	44	65	11	40	1	16,2	9,2	28	21	56,5	75,9	13,5	8,5	128,4	125,2	321,3	122

## Toggle clamps horizontal

with straight foot and adjustable clamping spindle, stainless steel



**Material:**  
Stainless steel.  
Grip polyamide.

**Version:**  
Bright.  
Grip blue, black or red.

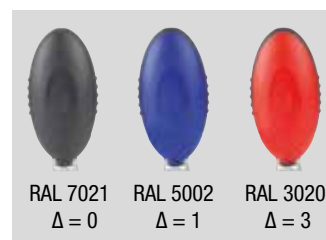
**Sample order:**  
K0661.105001  
(blue grip)

**Note for ordering:**  
Δ Enter the desired grip colour here.

**Note:**  
Maintenance-free high quality link bushings.  
Sustainable constant use of force during opening and closing. Optimum stability through the conical, U-profile clamping arm.

**On request:**  
Other grip colours.

**Accessories:**  
K0106  
K0384  
K0390  
K0392  
K0667



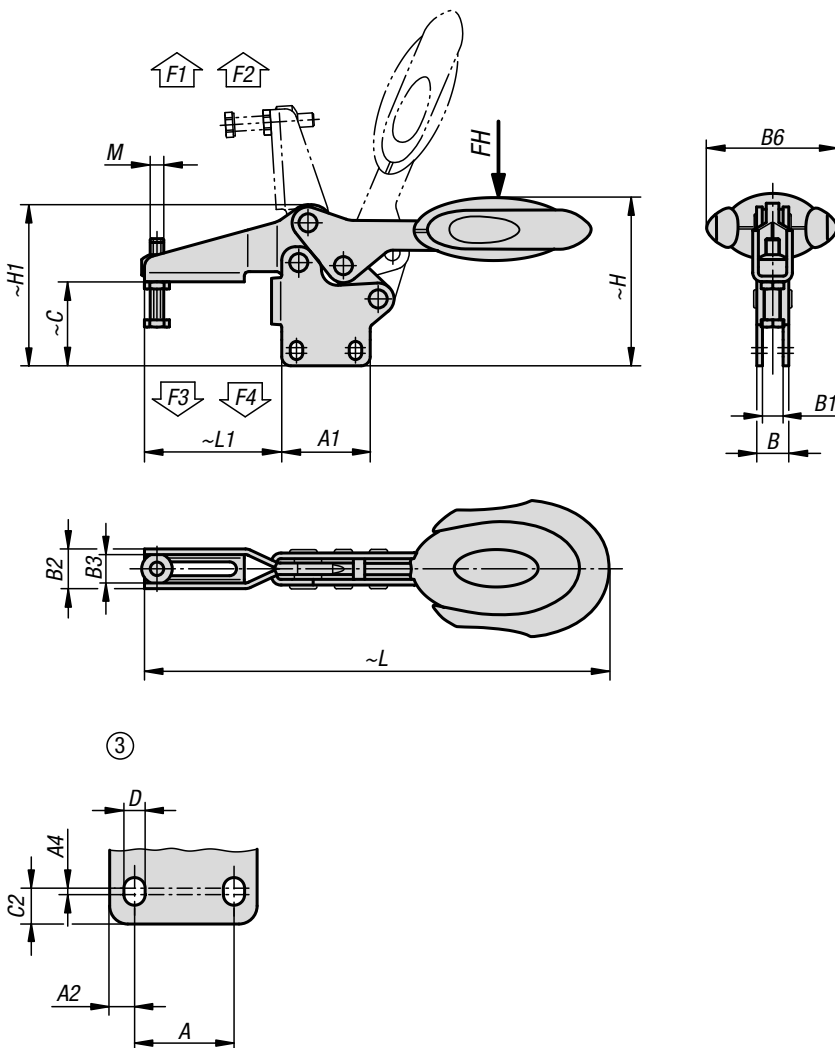
### KIPP Toggle clamps horizontal with straight foot and adjustable clamping spindle, stainless steel

Order No.	hole arrangement	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K0661.10500Δ	2	86°	67°	100	650	900	550	620
K0661.10600Δ	3	86°	67°	160	1350	1900	720	1200
K0661.10800Δ	3	86°	67°	200	2000	2800	830	1400

Order No.	M	A	A1	A2	A3	A4	B	B1	B2	B3	B6	C	C2	D	H	H1	L	L1
K0661.10500Δ	M5x25	18	27	4,5	13,5	-	8,1	4,1	13,2	9,2	22,5	26,2	5,2	5,5	52,2	47,9	125,7	41,8
K0661.10600Δ	M6x35	26	39	6,5	-	2,5	14,1	9,1	17,5	12,5	43,5	36,9	8	5,5	75,2	71	186,6	60,5
K0661.10800Δ	M8x45	26	44	9	-	3,5	14,1	9,1	21	16	41,5	46,5	10,5	6,2	88,2	84,3	223,1	74,9

## Toggle clamps horizontal with safety interlock

with straight foot and adjustable clamping spindle, stainless steel



**Material:**

Stainless steel.  
Grip polyamide.  
Unlocking bracket TPE.

**Version:**

Bright.  
Grip blue, black or red.

**Sample order:**

K0661.106101  
(blue grip)

**Note for ordering:**

Δ Enter the desired grip colour here.

**Note:**

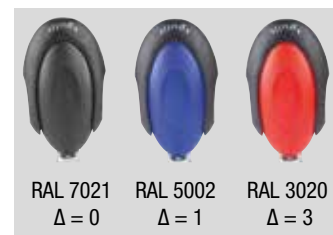
Maintenance-free high quality link bushings.  
Sustainable constant force during opening and closing.  
Optimum stability through the conical, U-profile clamping arm. Including internal bar lock with automatic safety catch.

**On request:**

Other grip colours.

**Accessories:**

- K0106
- K0384
- K0390
- K0392
- K0667



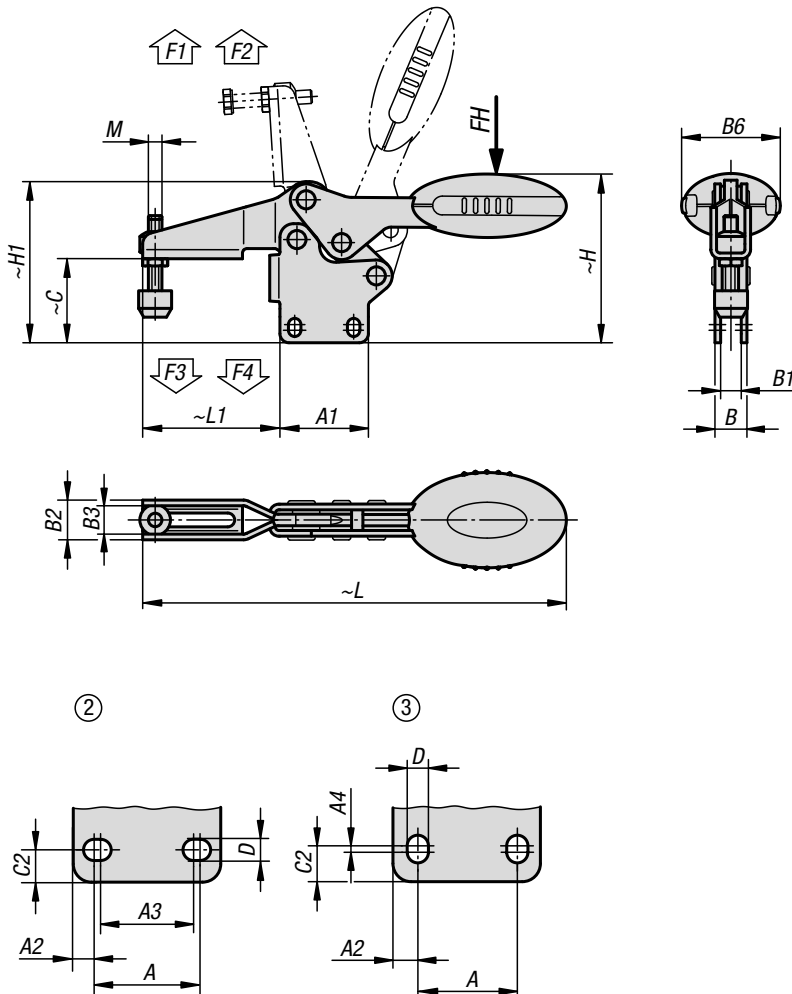
### KIPP Toggle clamps horizontal with safety interlock with straight foot and adjustable clamping spindle, stainless steel

Order No.	hole arrangement	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K0661.10610Δ	3	86°	67°	160	1350	1900	720	1200
K0661.10810Δ	3	86°	67°	200	2000	2800	830	1400

Order No.	M	A	A1	A2	A4	B	B1	B2	B3	B6	C	C2	D	H	H1	L	L1
K0661.10610Δ	M6x35	26	39	6,5	2,5	14,1	9,1	17,5	12,5	53,4	36,9	8	5,5	75,2	71	193,3	60,5
K0661.10810Δ	M8x45	26	44	9	3,5	14,1	9,1	21	16	51,1	46,5	10,5	6,2	88,2	84,3	230,4	74,9

# Horizontal antistatic toggle clamps

with straight foot and adjustable clamping spindle



## Material:

Steel.  
Grip polyamide.

## Version:

Nitro-carburised and black oxidised.  
Grip element graphite black.

## Sample order:

K0661.005024

## Note:

Maintenance-free high quality link bushes.  
Sustainable constant force during opening and closing.  
Optimum stability through the conical, U-profile clamping arm.

## Application:

Sensitive electrical or electronic equipment, components and devices (ESD sensitive elements) may be damaged or destroyed by electrostatic discharges (ESD) in the immediate vicinity.

Electrostatic discharges can come from people or through handling ESD sensitive components (e.g. during production, assembly, transport, storage etc).

Electrically conductive products which conform to DIN EN 61340-5-1 are essential within electronic environments to prevent an electrostatic discharge.

These products can be used for ESD applications or in ESD protection areas (EPA) in accordance with DIN EN 61340-5-1.

## Advantages:

- Made from a special electrically conductive plastic
- To protect sensitive electrical or electronic parts, components and devices
- Toggle clamps and power clamps are used in assembly and workholding fixtures
- Ergonomic and user-friendly grip

## Safety:

These ESD products can also be used for devices, components and protection systems in areas where there is risk of explosion.

These ESD products prevent electrostatic spark discharges, and eliminate the risk of ignition of gases and dust which could lead to explosions in enclosed spaces.

Manufacturers and operators must apply and comply with the ATEX directives for protecting persons working in areas where there is a risk of explosion.

These ESD products have been certified by TÜV-Süd for their electrical discharge capability.

## Target groups:

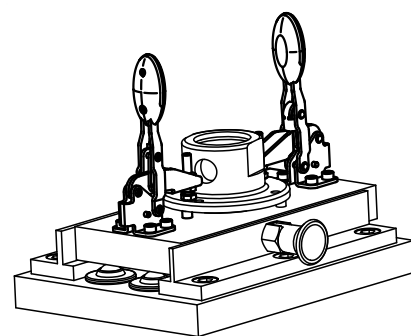
Device manufacturers required to conform to ATEX product directive 2014/34/EU.

Operators required to conform to ATEX worker protection directive 1999/92/EC.



## Horizontal antistatic toggle clamps

with straight foot and adjustable clamping spindle



### KIPP Horizontal antistatic toggle clamps with straight foot

Order No.	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K0661.005024	86°	67°	100	650	900	550	620
K0661.006024	86°	67°	160	1350	1900	720	1200
K0661.008024	86°	67°	200	2000	2800	830	1400

Order No.	hole arrangement	M	A	A1	A2	A3	A4	B	B1	B2	B3	B6	C	C2	D	H	H1	L	L1
K0661.005024	2	M5x25	18	27	4,5	13,5	-	8,1	4,1	13,2	9,2	22,5	26,2	5,2	5,5	52,2	47,9	125,7	41,8
K0661.006024	3	M6x35	26	39	6,5	-	2,5	14,1	9,1	17,5	12,5	43,5	36,9	8	5,5	75,2	71	186,6	60,5
K0661.008024	3	M8x45	26	44	9	-	3,5	14,1	9,1	21	16	41,5	46,5	10,5	6,2	88,2	84,3	223,1	74,9

# Toggle clamps vertical

with flat foot and adjustable clamping spindle



**Material:**

Steel.  
Grip polyamide.

**Version:**

Carbonitrided and black oxidised.  
Grip blue, black or red.

**Sample order:**

K0662.005001  
(blue grip)

**Note for ordering:**

Δ Enter the desired grip colour here.

**Note:**

Maintenance-free high quality link bushings.  
Sustainable constant use of force during opening and closing. Optimum stability through the conical, U-profile clamping arm.

**On request:**

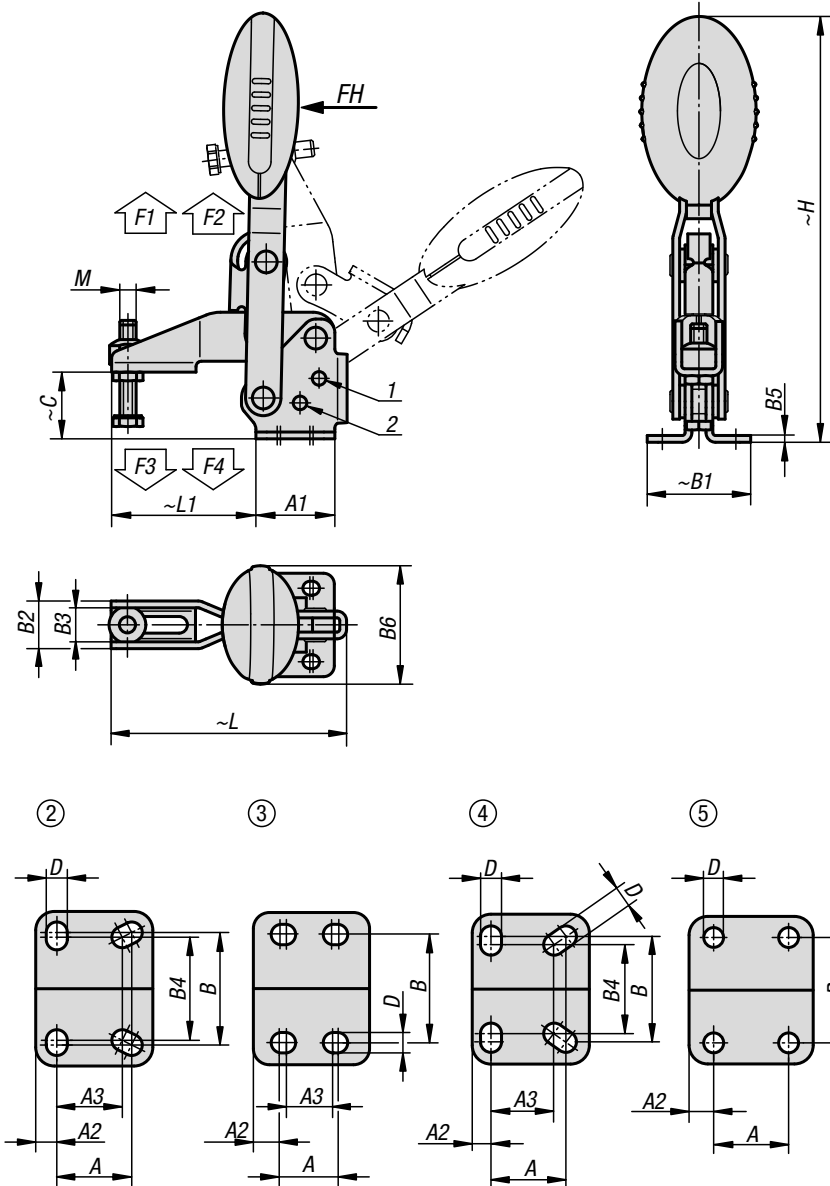
Other grip colours.

**Accessories:**

- K0106
- K0098
- K0383
- K0388
- K0390
- K0391
- K0392
- K0393

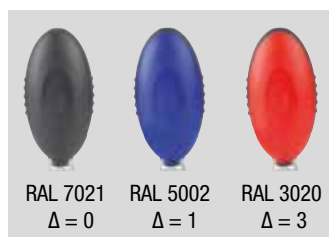
**Drawing reference:**

- 1) stop pin position 1
- 2) stop pin position 2

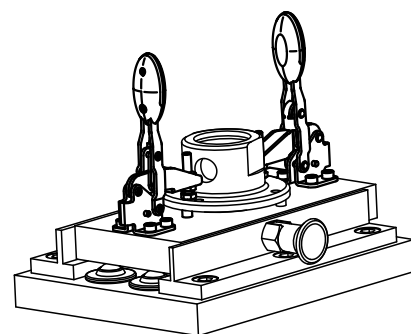


## Toggle clamps vertical

with flat foot and adjustable clamping spindle



RAL 7021  $\Delta = 0$     RAL 5002  $\Delta = 1$     RAL 3020  $\Delta = 3$



### KIPP Toggle clamps vertical with flat foot and adjustable clamping spindle

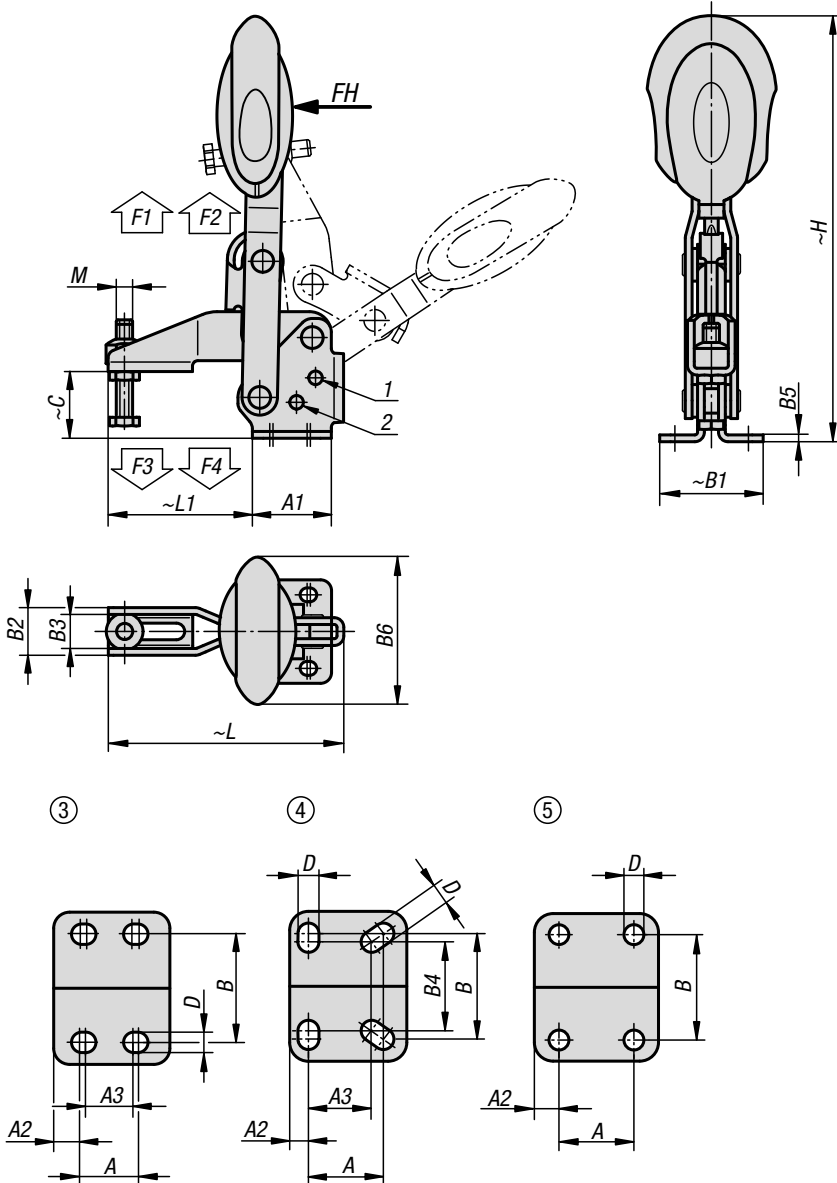
Order No.	Opening angle holding arm position 1	Opening angle holding arm position 2	Opening angle holding arm stop pin removed	Opening angle handle position 1	Opening angle handle position 2	Opening angle handle stop pin removed
K0662.00500Δ	100°	-	147°	64°	-	83°
K0662.00600Δ	56°	83°	152°	46°	56°	83°
K0662.00800Δ	13°	93°	158°	26°	61°	86°
K0662.01000Δ	6°	97°	176°	19°	59°	91°
K0662.01200Δ	11°	88°	164°	24°	60°	91°

Order No.	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N	Order No. Angle bracket
K0662.00500Δ	100	750	1050	620	750	K0098.02
K0662.00600Δ	160	1350	1650	920	1050	K0098.02
K0662.00800Δ	190	2000	2800	940	1350	K0098.04
K0662.01000Δ	250	2500	4500	1500	2800	K0098.06
K0662.01200Δ	280	3000	5500	1400	2800	K0098.06

Order No.	hole arrangement	M	A	A1	A2	A3	B	B1	B2	B3	B4	B5	B6	C	D	H	L	L1
K0662.00500Δ	2	M5x25	16	25	4,5	14	24	33	13,2	9,2	22	2	22,5	18	4,5	107,4	65,6	35
K0662.00600Δ	3	M6x35	14	29	7	12	27	38	17,5	12,5	-	2,5	43,5	24,9	5,5	156,3	86,5	53
K0662.00800Δ	3	M8x45	21	39	9	19	32	45	20,6	15,6	-	2,5	41,5	32,7	6,8	184,2	107	62
K0662.01000Δ	4	M10x55	32	50	8	27	45	64	25,5	18,5	38	3,5	47	38,7	9	223,9	153	95
K0662.01200Δ	5	M12x70	32	53	10,5	-	45	63	28	21	-	3,5	47	46,7	8,8	242,4	173,5	113,5

## Toggle clamps vertical with safety interlock

with flat foot and adjustable clamping spindle



**Material:**

Steel.  
Grip polyamide.  
Unlocking bracket TPE.

**Version:**

Carbonitrided and black oxidised.  
Grip blue, black or red.

**Sample order:**

K0662.006101  
(blue grip)

**Note for ordering:**

$\Delta$  Enter the desired grip colour here.

**Note:**

Maintenance-free high quality link bushings.  
Sustainable constant force during opening and closing.  
Optimum stability through the conical, U-profile clamping arm. Including internal bar lock with automatic safety catch.

**On request:**

Other grip colours.

**Accessories:**

- K0106
- K0098
- K0383
- K0388
- K0390
- K0391
- K0392
- K0393

**Drawing reference:**

- 1) stop pin position 1
- 2) stop pin position 2

## Toggle clamps vertical with safety interlock

with flat foot and adjustable clamping spindle



RAL 7021  $\Delta = 0$     RAL 5002  $\Delta = 1$     RAL 3020  $\Delta = 3$

### KIPP Toggle clamps vertical with safety interlock with flat foot and adjustable clamping spindle

Order No.	Opening angle holding arm position 1	Opening angle holding arm position 2	Opening angle holding arm stop pin removed	Opening angle handle position 1	Opening angle handle position 2	Opening angle handle stop pin removed
K0662.00610Δ	56°	83°	152°	46°	56°	83°
K0662.00810Δ	13°	93°	158°	26°	61°	86°
K0662.01010Δ	6°	97°	176°	19°	59°	91°
K0662.01210Δ	11°	88°	164°	24°	60°	91°

Order No.	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N	Order No. Angle bracket
K0662.00610Δ	160	1350	1650	920	1050	K0098.02
K0662.00810Δ	190	2000	2800	940	1350	K0098.04
K0662.01010Δ	250	2500	4500	1500	2800	K0098.06
K0662.01210Δ	280	3000	5500	1400	2800	K0098.06

Order No.	hole arrangement	M	A	A1	A2	A3	B	B1	B2	B3	B4	B5	B6	C	D	H	L	L1
K0662.00610Δ	3	M6x35	14	29	7	12	27	38	17,5	12,5	-	2,5	53,4	24,9	5,5	163	86,5	53
K0662.00810Δ	3	M8x45	21	39	9	19	32	45	20,6	15,6	-	2,5	51,1	32,7	6,8	191,4	107	62
K0662.01010Δ	4	M10x55	32	50	8	27	45	64	25,5	18,5	38	3,5	56,5	38,7	9	230,5	153	95
K0662.01210Δ	5	M12x70	32	53	10,5	-	45	63	28	21	-	3,5	56,5	46,7	8,8	249,1	173,5	113,5

# Toggle clamps vertical

with flat foot and adjustable clamping spindle, stainless steel



**Material:**

Stainless steel.  
Grip polyamide.

**Version:**

Bright.  
Grip blue, black or red.

**Sample order:**

K0662.105001  
(blue grip)

**Note for ordering:**

Δ Enter the desired grip colour here.

**Note:**

Maintenance-free high quality link bushings.  
Sustainable constant use of force during opening and closing. Optimum stability through the conical, U-profile clamping arm.

**On request:**

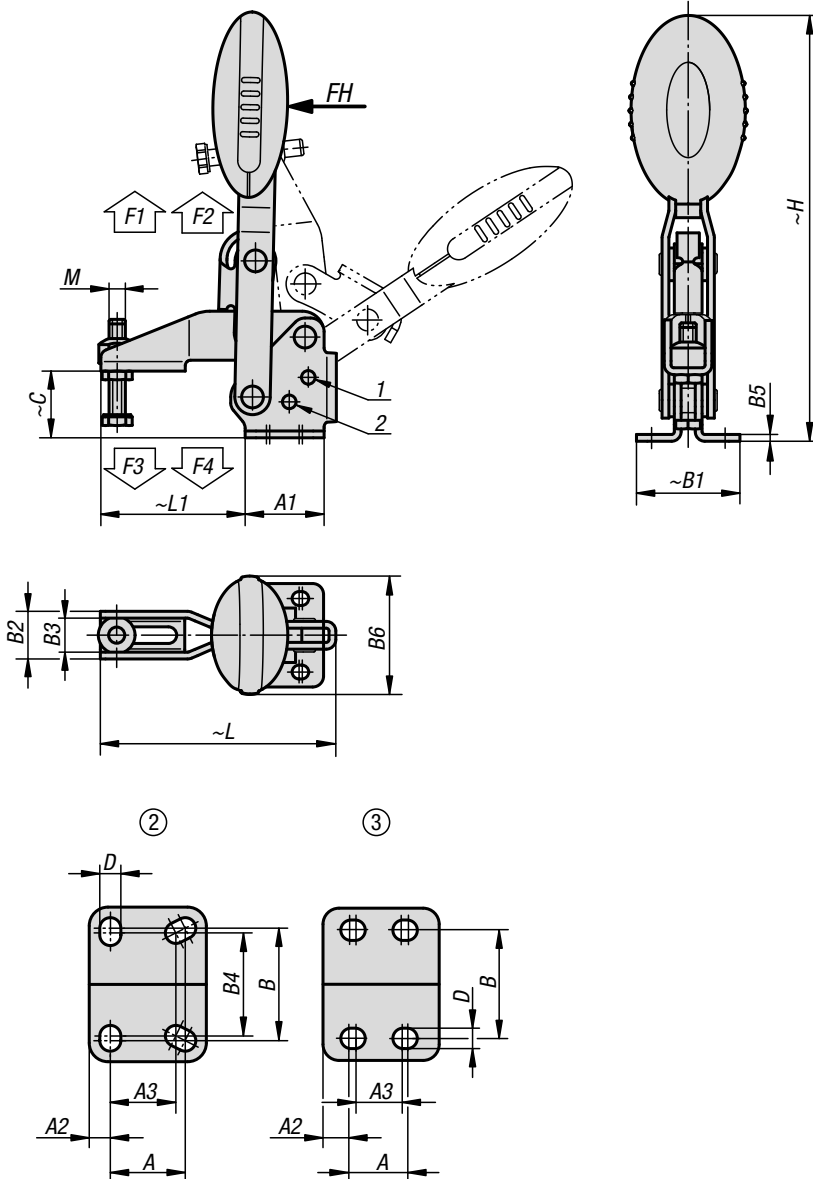
Other grip colours.

**Accessories:**

- K0106
- K0384
- K0390
- K0392
- K0667

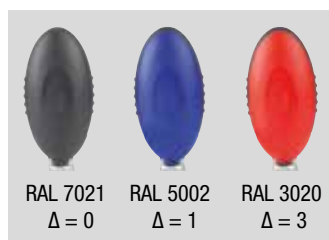
**Drawing reference:**

- 1) stop pin position 1
- 2) stop pin position 2

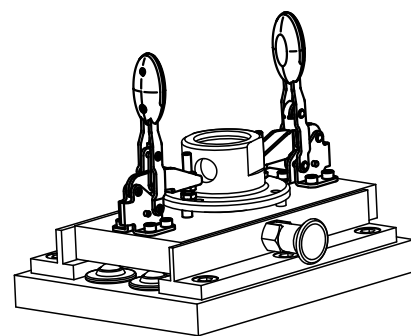


## Toggle clamps vertical

with flat foot and adjustable clamping spindle, stainless steel



RAL 7021  $\Delta = 0$     RAL 5002  $\Delta = 1$     RAL 3020  $\Delta = 3$



### KIPP Toggle clamps vertical with flat foot and adjustable clamping spindle, stainless steel

Order No.	Opening angle holding arm position 1	Opening angle holding arm position 2	Opening angle holding arm stop pin removed	Opening angle handle position 1	Opening angle handle position 2	Opening angle handle stop pin removed
K0662.10500Δ	100°	-	147°	64°	-	83°
K0662.10600Δ	56°	83°	152°	46°	56°	83°
K0662.10800Δ	13°	93°	158°	26°	61°	86°

Order No.	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K0662.10500Δ	100	750	1050	620	750
K0662.10600Δ	160	1350	1650	920	1050
K0662.10800Δ	190	2000	2800	940	1350

Order No.	hole arrangement	M	A	A1	A2	A3	B	B1	B2	B3	B4	B5	B6	C	D	H	L	L1
K0662.10500Δ	2	M5x25	16	25	4,5	14	24	33	13,2	9,2	22	2	22,5	18	4,5	107,4	65,6	35
K0662.10600Δ	3	M6x35	14	29	7	12	27	38	17,5	12,5	-	2,5	43,5	24,9	5,5	156,3	86,5	53
K0662.10800Δ	3	M8x45	21	39	9	19	32	45	20,6	15,6	-	2,5	41,5	32,7	6,8	184,2	107	62

# Toggle clamps vertical with safety interlock

with flat foot and adjustable clamping spindle, stainless steel



### Material:

Stainless steel.  
Grip polyamide.  
Unlocking bracket TPE.

### Version:

Bright.  
Grip blue, black or red.

### Sample order:

K0662.106101  
(blue grip)

### Note for ordering:

Δ Enter the desired grip colour here.

### Note:

Maintenance-free high quality link bushings.  
Sustainable constant force during opening and closing.  
Optimum stability through the conical, U-profile clamping arm. Including internal bar lock with automatic safety catch.

### On request:

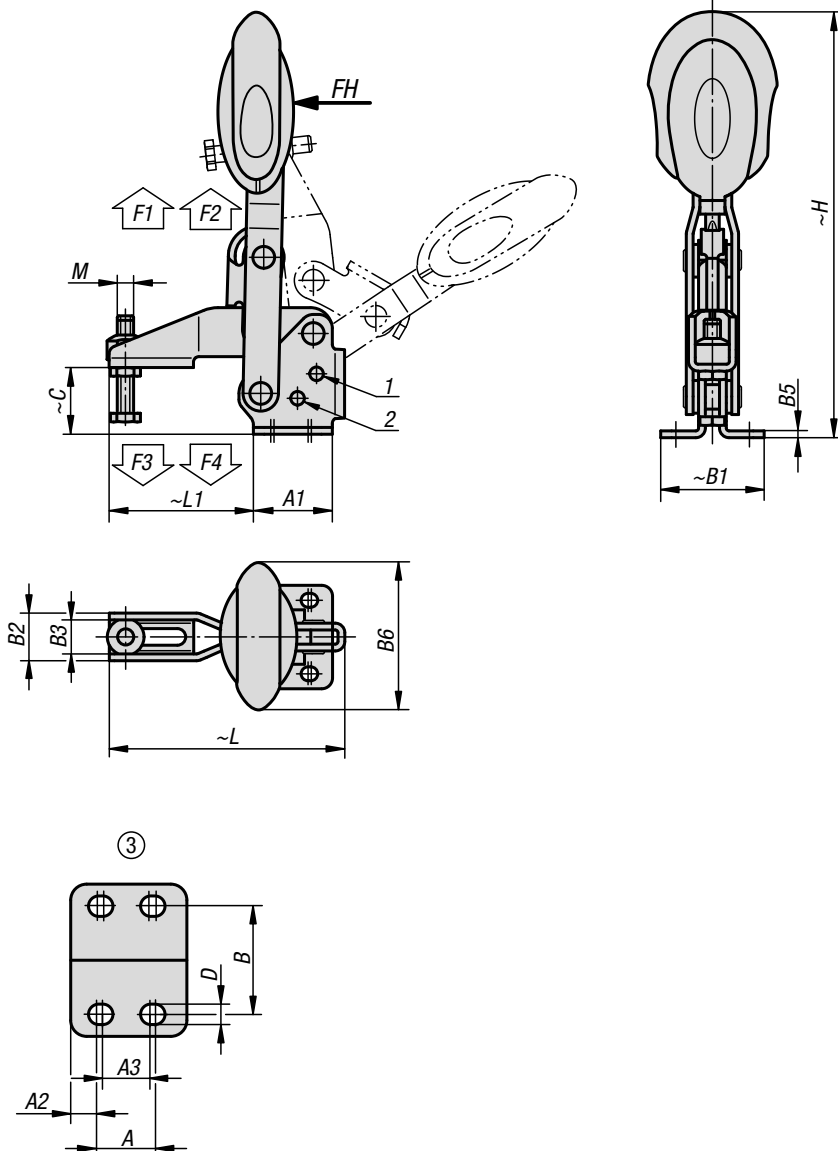
Other grip colours.

### Accessories:

K0106  
K0384  
K0390  
K0392  
K0667

### Drawing reference:

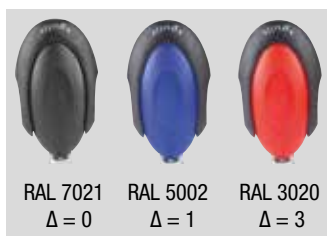
1) stop pin position 1  
2) stop pin position 2





## Toggle clamps vertical with safety interlock

with flat foot and adjustable clamping spindle, stainless steel



RAL 7021  $\Delta = 0$     RAL 5002  $\Delta = 1$     RAL 3020  $\Delta = 3$

### KIPP Toggle clamps, vertical with safety interlock, with flat foot and adjustable clamping spindle, stainless steel

Order No.	Opening angle holding arm position 1	Opening angle holding arm position 2	Opening angle holding arm stop pin removed	Opening angle handle position 1	Opening angle handle position 2	Opening angle handle stop pin removed
K0662.10610Δ	56°	83°	152°	46°	56°	83°
K0662.10810Δ	13°	93°	158°	26°	61°	86°

Order No.	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K0662.10610Δ	160	1350	1650	920	1050
K0662.10810Δ	190	2000	2800	940	1350

Order No.	hole arrangement	M	A	A1	A2	A3	B	B1	B2	B3	B5	B6	C	D	H	L	L1
K0662.10610Δ	3	M6x35	14	29	7	12	27	38	17,5	12,5	2,5	53,4	24,9	5,5	163	86,5	53
K0662.10810Δ	3	M8x45	21	39	9	19	32	45	20,6	15,6	2,5	51,1	32,7	6,8	191,4	107	62

# Vertical antistatic toggle clamps

with horizontal foot and adjustable thrust spindle



## Material:

Steel.  
Grip polyamide.

## Version:

Nitro-carburised and black oxidised.  
Grip element graphite black.

## Sample order:

K0662.005024

## Note:

Maintenance-free high quality link bushes.  
Sustainable constant force during opening and closing.  
Optimum stability through the conical, U-profile clamping arm.

## Application:

Sensitive electrical or electronic equipment, components and devices (ESD sensitive elements) may be damaged or destroyed by electrostatic discharges (ESD) in the immediate vicinity.  
Electrostatic discharges can come from people or through handling ESD sensitive components (e.g. during production, assembly, transport, storage etc).  
Electrically conductive products which conform to DIN EN 61340-5-1 are essential within electronic environments to prevent an electrostatic discharge.  
These products can be used for ESD applications or in ESD protection areas (EPA) in accordance with DIN EN 61340-5-1.

## Advantages:

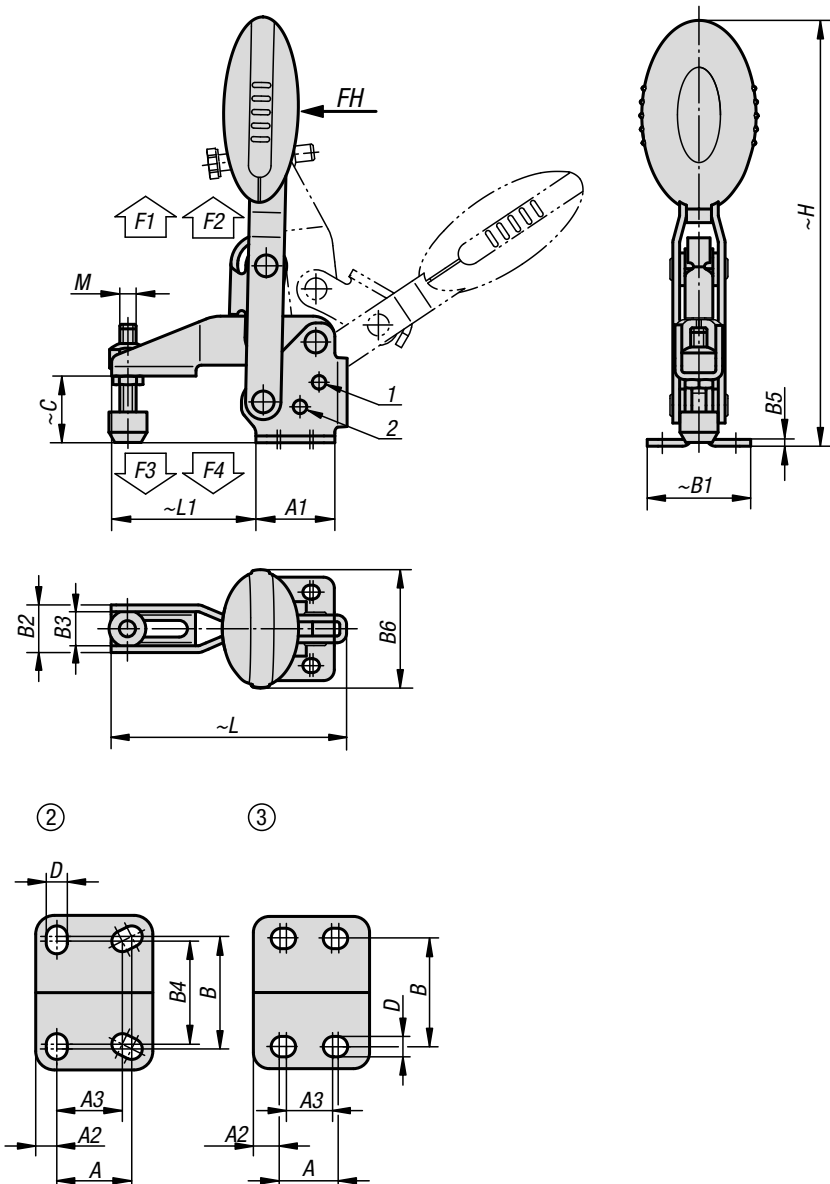
- Made from a special electrically conductive plastic
- To protect sensitive electrical or electronic parts, components and devices
- Toggle clamps and power clamps are used in assembly and workholding fixtures
- Ergonomic and user-friendly grip

## Accessories:

K0098

## Safety:

These ESD products can also be used for devices, components and protection systems in areas where there is risk of explosion.  
These ESD products prevent electrostatic spark discharges, and eliminate the risk of ignition of gases and dust which could lead to explosions in enclosed spaces.  
Manufacturers and operators must apply and comply with the ATEX directives for protecting persons working in areas where there is a risk of explosion.  
These ESD products have been certified by TÜV-Süd for their electrical discharge capability.



## Vertical antistatic toggle clamps

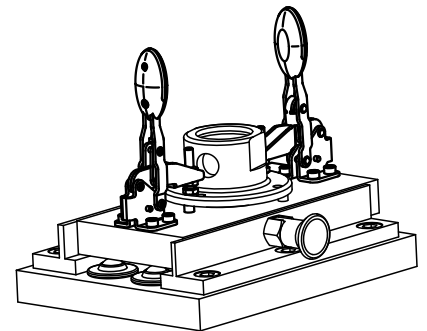
with horizontal foot and adjustable thrust spindle



### Target groups:

Device manufacturers required to conform to ATEX product directive 2014/34/EU.

Operators required to conform to ATEX worker protection directive 1999/92/EC.



### KIPP Vertical antistatic toggle clamps with horizontal foot

Order No.	Opening angle holding arm position 1	Opening angle holding arm position 2	Opening angle holding arm stop pin removed	Opening angle handle position 1	Opening angle handle position 2	Opening angle handle stop pin removed
K0662.005024	100°	-	147°	64°	-	83°
K0662.006024	56°	83°	152°	46°	56°	83°
K0662.008024	13°	93°	158°	26°	61°	86°

Order No.	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N	Order No. Angle bracket
K0662.005024	100	750	1050	620	750	K0098.02
K0662.006024	160	1350	1650	920	1050	K0098.04
K0662.008024	190	2000	2800	940	1350	K0098.04

Order No.	hole arrangement	M	A	A1	A2	A3	B	B1	B2	B3	B4	B5	B6	C	D	H	L	L1
K0662.005024	2	M5x25	16	25	4,5	14	24	33	13,2	9,2	22	2	22,5	18	4,5	107,4	65,6	35
K0662.006024	3	M6x35	14	29	7	12	27	38	17,5	12,5	-	2,5	43,5	24,9	5,5	156,3	86,5	53
K0662.008024	3	M8x45	21	39	9	19	32	45	20,6	15,6	-	2,5	41,5	32,7	6,8	184,2	107	62

# Toggle clamps vertical

with straight foot and adjustable clamping spindle



**Material:**

Steel.  
Grip polyamide.

**Version:**

Carbonitrided and black oxidised.  
Grip blue, black or red.

**Sample order:**

K0663.005001  
(blue grip)

**Note for ordering:**

Δ Enter the desired grip colour here.

**Note:**

Maintenance-free high quality link bushings.  
Sustainable constant use of force during opening and closing. Optimum stability through the conical, U-profile clamping arm.

**On request:**

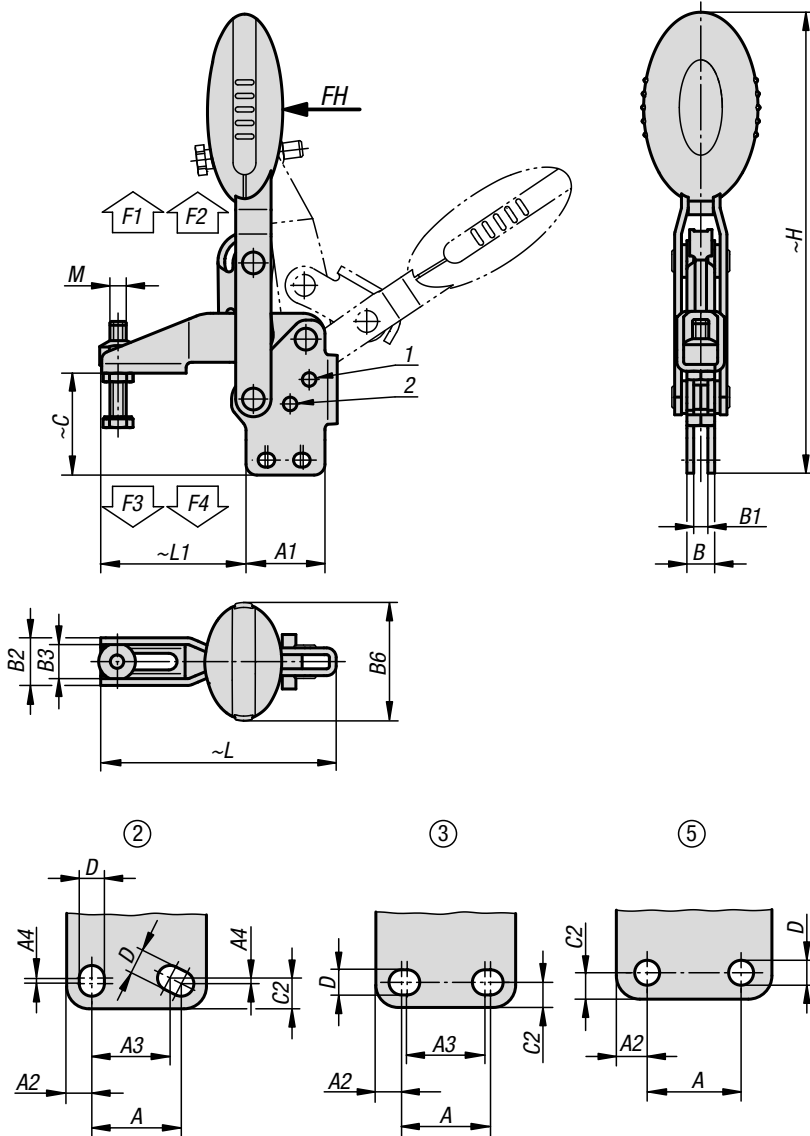
Other grip colours.

**Accessories:**

- K0106
- K0383
- K0388
- K0390
- K0391
- K0392
- K0393

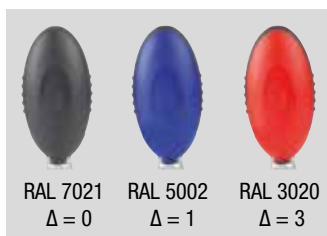
**Drawing reference:**

- 1) stop pin position 1
- 2) stop pin position 2

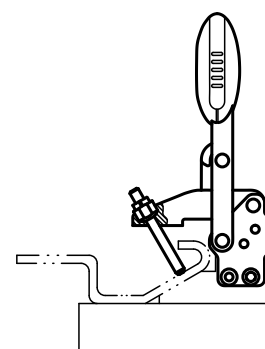


## Toggle clamps vertical

with straight foot and adjustable clamping spindle



RAL 7021  $\Delta = 0$     RAL 5002  $\Delta = 1$     RAL 3020  $\Delta = 3$



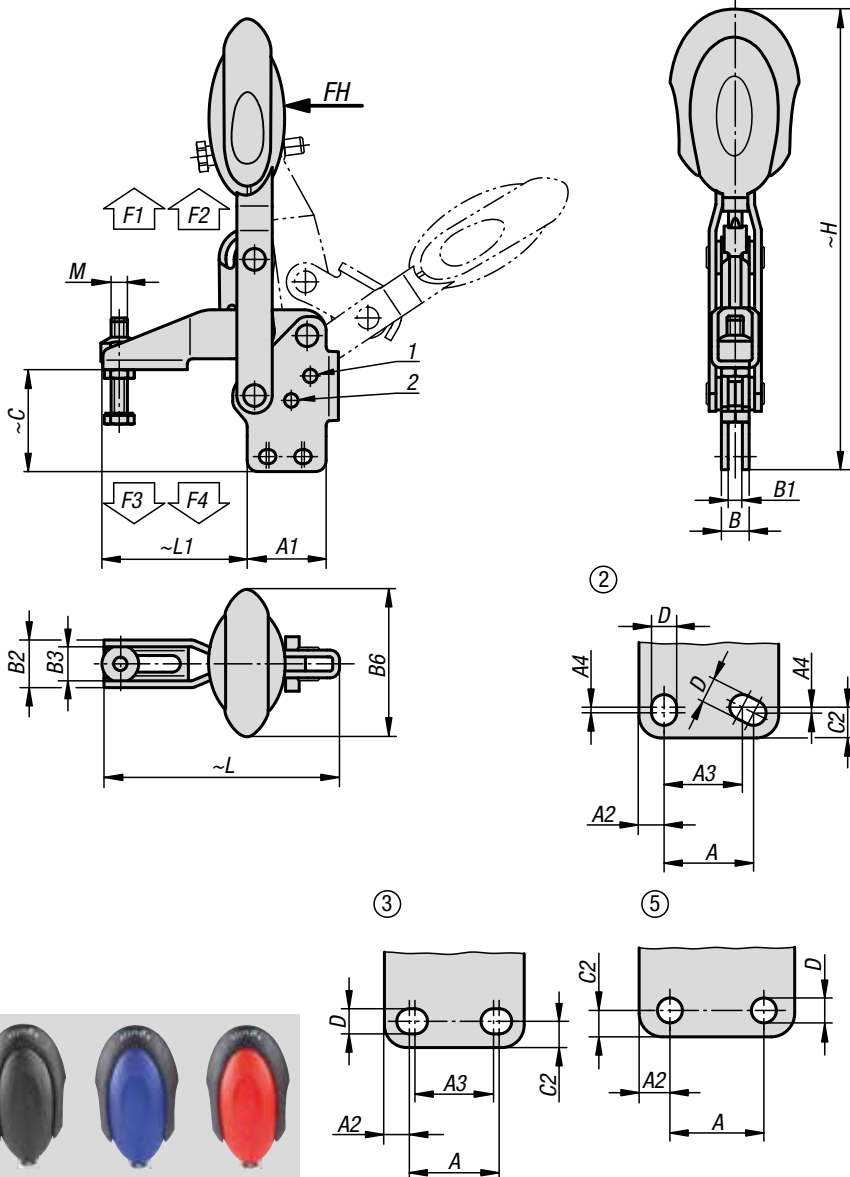
### KIPP Toggle clamps vertical with straight foot and adjustable clamping spindle

Order No.	Opening angle holding arm position 1	Opening angle holding arm position 2	Opening angle holding arm stop pin removed	Opening angle handle position 1	Opening angle handle position 2	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K0663.00500Δ	100°	-	129°	64°	-	100	750	1050	620	750
K0663.00600Δ	56°	83°	141°	46°	56°	160	1350	1650	920	1050
K0663.00800Δ	13°	93°	158°	26°	61°	190	2000	2800	940	1350
K0663.01000Δ	6°	97°	176°	19°	59°	250	2500	4500	1500	2800
K0663.01200Δ	11°	88°	164°	24°	60°	280	3000	5500	1400	2800

Order No.	hole arrangement	M	A	A1	A2	A3	A4	B	B1	B2	B3	B6	C	C2	D	H	L	L1
K0663.00500Δ	2	M5x25	16	25	4,5	14	1	8,1	4,1	13,2	9,2	22,5	29,8	5,5	4,5	119,2	65,6	35
K0663.00600Δ	3	M6x35	14	29	7	12	-	10,2	5,2	17,5	12,5	43,5	37,6	5,5	5,5	169	86,5	53
K0663.00800Δ	3	M8x45	21	39	9	19	-	10,2	5,2	20,6	15,6	41,5	49	6,5	6,8	200,4	107	62
K0663.01000Δ	2	M10x55	32	50	8	27	3,5	14,1	7,1	25,5	18,5	47	62,3	13	9	247,4	153	95
K0663.01200Δ	5	M12x70	32	53	10,5	-	-	14,1	7,1	28	21	47	69,8	9	8,8	265,5	173,5	113,5

# Toggle clamps vertical with safety interlock

with straight foot and adjustable clamping spindle



**Material:**  
Steel.  
Grip polyamide.  
Unlocking bracket TPE.

**Version:**  
Carbonitrided and black oxidised.  
Grip blue, black or red.

**Sample order:**  
K0663.006101 (blue grip)

**Note for ordering:**  
Δ Enter the desired grip colour here.

**Note:**  
Maintenance-free high quality link bushings.  
Sustainable constant force during opening and closing.  
Optimum stability through the conical, U-profile clamping arm. Including internal bar lock with automatic safety catch.

**On request:**  
Other grip colours.

**Accessories:**  
K0106  
K0383  
K0388  
K0390  
K0391  
K0392  
K0393

**Drawing reference:**  
1) stop pin position 1  
2) stop pin position 2

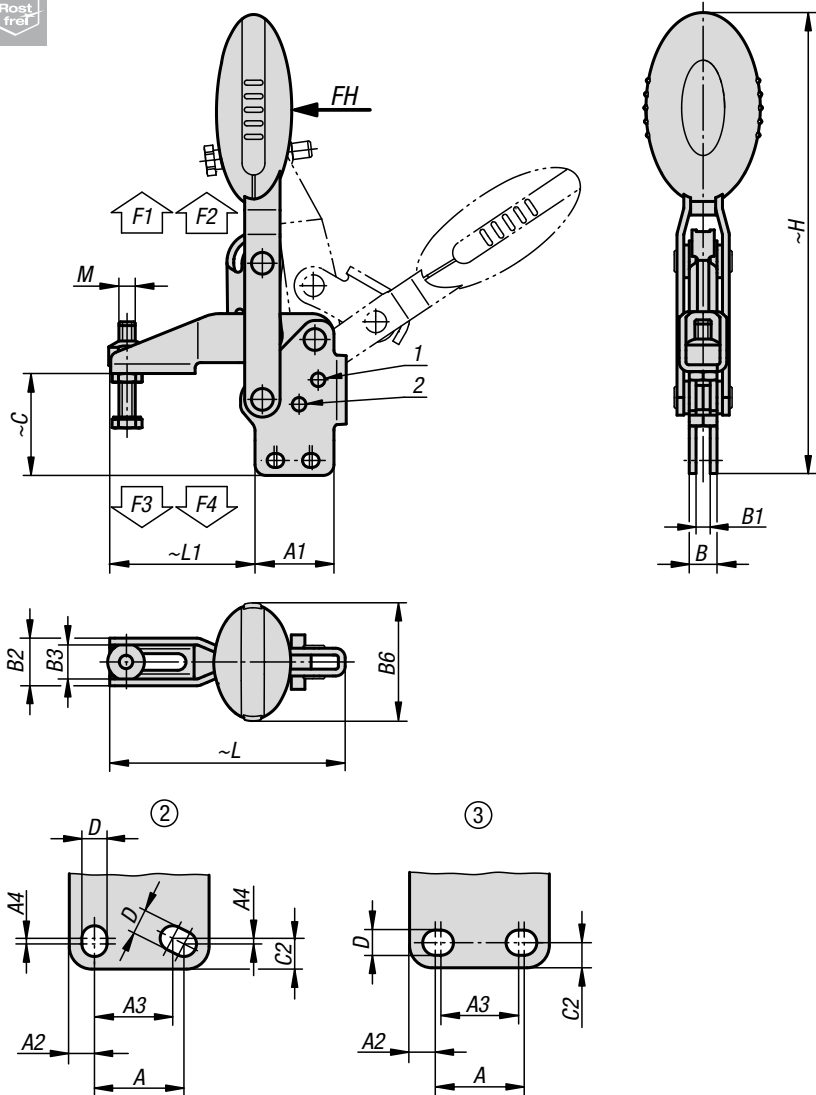
## KIPP Toggle clamps vertical with safety interlock, with straight foot and adjustable clamping spindle

Order No.	Opening angle holding arm position 1	Opening angle holding arm position 2	Opening angle holding arm stop pin removed	Opening angle handle position 1	Opening angle handle position 2	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K0663.00610Δ	56°	83°	141°	46°	56°	160	1350	1650	920	1050
K0663.00810Δ	13°	93°	158°	26°	61°	190	2000	2800	940	1350
K0663.01010Δ	6°	97°	176°	19°	59°	250	2500	4500	1500	2800
K0663.01210Δ	11°	88°	164°	24°	60°	280	3000	5500	1400	2800

Order No.	hole arrangement	M	A	A1	A2	A3	A4	B	B1	B2	B3	B6	C	C2	D	H	L	L1
K0663.00610Δ	3	M6x35	14	29	7	12	-	10,2	5,2	17,5	12,5	53,4	37,6	5,5	5,5	175,7	86,5	53
K0663.00810Δ	3	M8x45	21	39	9	19	-	10,2	5,2	20,6	15,6	51,1	49	6,5	6,8	207,6	107	62
K0663.01010Δ	2	M10x55	32	50	8	27	3,5	14,1	7,1	25,5	18,5	56,5	62,3	13	9	254	153	95
K0663.01210Δ	5	M12x70	32	53	10,5	-	-	14,1	7,1	28	21	56,5	69,8	9	8,8	272,1	173,5	113,5

## Toggle clamps vertical

with straight foot and adjustable clamping spindle, stainless steel



**Material:**  
Stainless steel.  
Grip polyamide.

**Version:**  
Bright.  
Grip blue, black or red.

**Sample order:**  
K0663.105001 (blue grip)

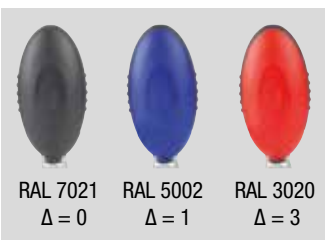
**Note for ordering:**  
 $\Delta$  Enter the desired grip colour here.

**Note:**  
Maintenance-free high quality link bushings.  
Sustainable constant use of force during opening and closing. Optimum stability through the conical, U-profile clamping arm.

**On request:**  
Other grip colours.

**Accessories:**  
K0106  
K0384  
K0390  
K0392  
K0667

**Drawing reference:**  
1) stop pin position 1  
2) stop pin position 2



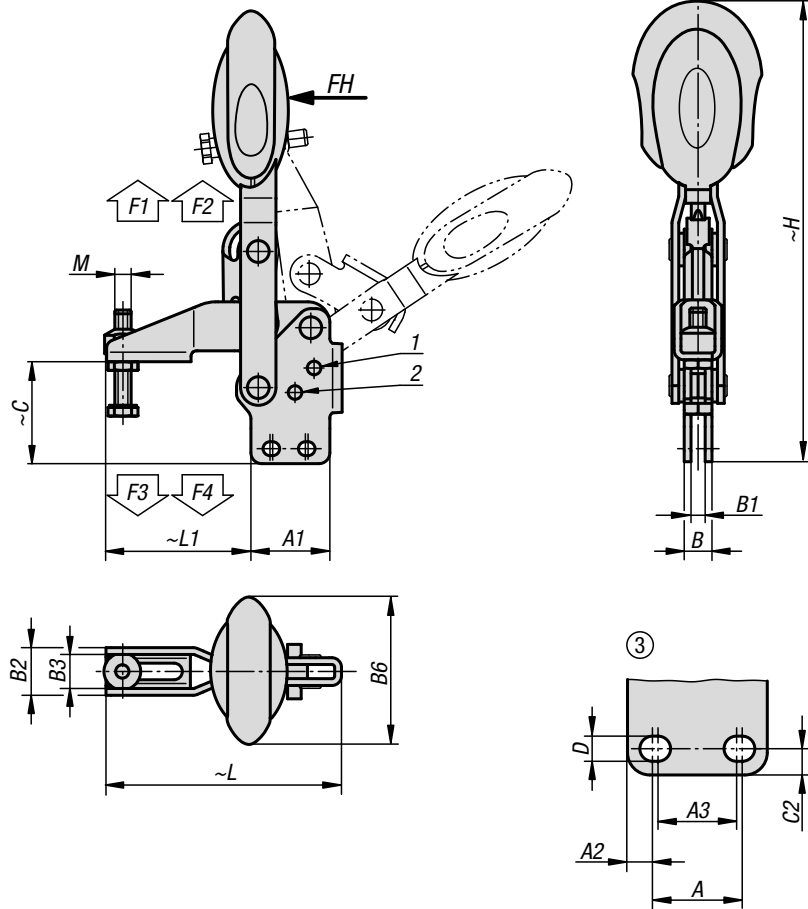
### KIPP Toggle clamps vertical with straight foot and adjustable clamping spindle, stainless steel

Order No.	Opening angle holding arm position 1	Opening angle holding arm position 2	Opening angle holding arm stop pin removed	Opening angle handle position 1	Opening angle handle position 2	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K0663.10500 $\Delta$	100°	-	129°	64°	-	100	750	1050	620	750
K0663.10600 $\Delta$	56°	83°	141°	46°	56°	160	1350	1650	920	1050
K0663.10800 $\Delta$	13°	93°	158°	26°	61°	190	2000	2800	940	1350

Order No.	hole arrangement	M	A	A1	A2	A3	A4	B	B1	B2	B3	B6	C	C2	D	H	L	L1
K0663.10500 $\Delta$	2	M5x25	16	25	4,5	14	1	8,1	4,1	13,2	9,2	22,5	29,8	5,5	4,5	119,2	65,6	35
K0663.10600 $\Delta$	3	M6x35	14	29	7	12	-	10,2	5,2	17,5	12,5	43,5	37,6	5,5	5,5	169	86,5	53
K0663.10800 $\Delta$	3	M8x45	21	39	9	19	-	10,2	5,2	20,6	15,6	41,5	49	6,5	6,8	200,4	107	62

## Toggle clamps vertical with safety interlock

with straight foot and adjustable clamping spindle, stainless steel



**Material:**

Stainless steel.  
Grip polyamide.  
Unlocking bracket TPE.

**Version:**

Bright.  
Grip blue, black or red.

**Sample order:**

K0663.106101  
(blue grip)

**Note for ordering:**

Δ Enter the desired grip colour here.

**Note:**

Maintenance-free high quality link bushings.  
Sustainable constant force during opening and closing.  
Optimum stability through the conical, U-profile clamping arm. Including internal bar lock with automatic safety catch.

**On request:**

Other grip colours.

**Accessories:**

- K0106
- K0384
- K0390
- K0392
- K0667

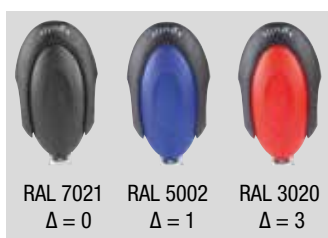
**Drawing reference:**

- 1) stop pin position 1
- 2) stop pin position 2



## Toggle clamps vertical with safety interlock

with straight foot and adjustable clamping spindle, stainless steel



### KIPP Toggle clamps vertical with safety interlock with straight foot and adjustable clamping spindle, stainless steel

Order No.	Opening angle holding arm position 1	Opening angle holding arm position 2	Opening angle holding arm stop pin removed	Opening angle handle position 1	Opening angle handle position 2	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
<b>K0663.10610Δ</b>	56°	83°	141°	46°	56°	160	1350	1650	920	1050
<b>K0663.10810Δ</b>	13°	93°	158°	26°	61°	190	2000	2800	940	1350

Order No.	hole arrangement	M	A	A1	A2	A3	B	B1	B2	B3	B6	C	C2	D	H	L	L1
<b>K0663.10610Δ</b>	3	M6x35	14	29	7	12	10,2	5,2	17,5	12,5	53,4	37,6	5,5	5,5	175,7	86,5	53
<b>K0663.10810Δ</b>	3	M8x45	21	39	9	19	10,2	5,2	20,6	15,6	51,1	49	6,5	6,8	207,6	107	62

# Vertical antistatic toggle clamps

with straight foot and adjustable clamping spindle



**Material:**

Steel.  
Grip polyamide.

**Version:**

Nitro-carburised and black oxidised.  
Grip element graphite black.

**Sample order:**

K0663.005024

**Note:**

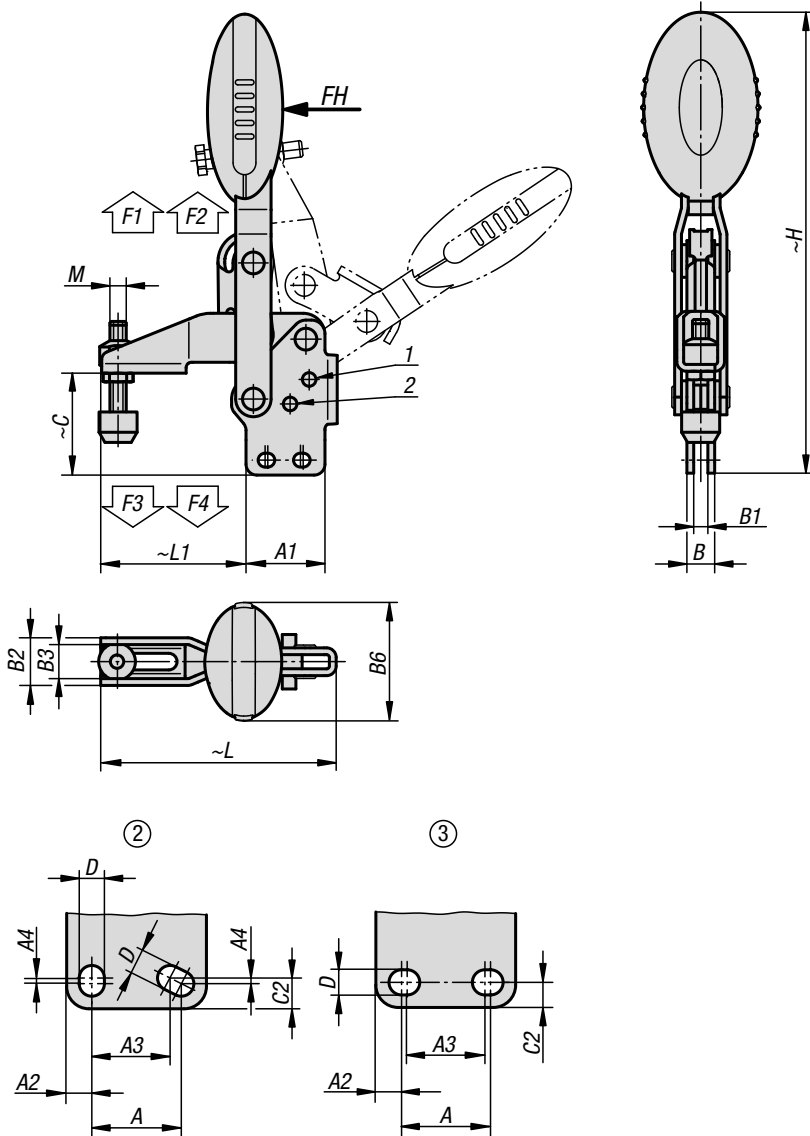
Maintenance-free high quality link bushes.  
Sustainable constant force during opening and closing.  
Optimum stability through the conical, U-profile clamping arm.

**Application:**

Sensitive electrical or electronic equipment, components and devices (ESD sensitive elements) may be damaged or destroyed by electrostatic discharges (ESD) in the immediate vicinity. Electrostatic discharges can come from people or through handling ESD sensitive components (e.g. during production, assembly, transport, storage etc). Electrically conductive products which conform to DIN EN 61340-5-1 are essential within electronic environments to prevent an electrostatic discharge. These products can be used for ESD applications or in ESD protection areas (EPA) in accordance with DIN EN 61340-5-1.

**Advantages:**

- Made from a special electrically conductive plastic
- To protect sensitive electrical or electronic parts, components and devices
- Toggle clamps and power clamps are used in assembly and workholding fixtures
- Ergonomic and user-friendly grip



# Vertical antistatic toggle clamps

with straight foot and adjustable clamping spindle



## Safety:

These ESD products can also be used for devices, components and protection systems in areas where there is risk of explosion.

These ESD products prevent electrostatic spark discharges, and eliminate the risk of ignition of gases and dust which could lead to explosions in enclosed spaces.

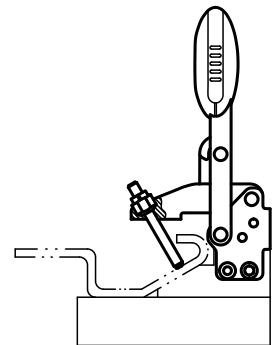
Manufacturers and operators must apply and comply with the ATEX directives for protecting persons working in areas where there is a risk of explosion.

These ESD products have been certified by TÜV-Süd for their electrical discharge capability.

## Target groups:

Device manufacturers required to conform to ATEX product directive 2014/34/EU.

Operators required to conform to ATEX worker protection directive 1999/92/EC.



## KIPP Vertical antistatic toggle clamps with straight foot

Order No.	Opening angle holding arm position 1	Opening angle holding arm position 2	Opening angle holding arm stop pin removed	Opening angle handle position 1	Opening angle handle position 2
K0663.005024	100°	-	129°	64°	-
K0663.006024	56°	83°	141°	46°	56°
K0663.008024	13°	93°	158°	26°	61°

Order No.	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K0663.005024	100	750	1050	620	750
K0663.006024	160	1350	1650	920	1050
K0663.008024	190	2000	2800	940	1350

Order No.	hole arrangement	M	A	A1	A2	A3	A4	B	B1	B2	B3	B6	C	C2	D	H	L	L1
K0663.005024	2	M5x25	16	25	4,5	14	1	8,1	4,1	13,2	9,2	22,5	29,8	5,5	4,5	119,2	65,6	35
K0663.006024	3	M6x35	14	29	7	12	-	10,2	5,2	17,5	12,5	43,5	37,6	5,5	5,5	169	86,5	53
K0663.008024	3	M8x45	21	39	9	19	-	10,2	5,2	20,6	15,6	41,5	49	6,5	6,5	200,4	107	62

## Spherical seating nuts

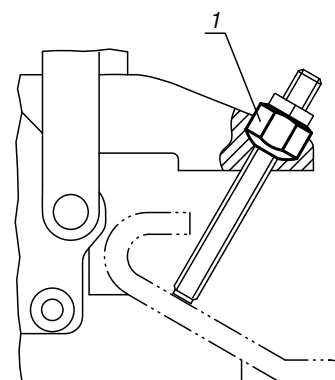
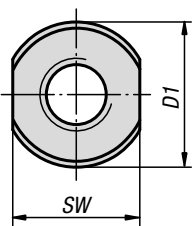
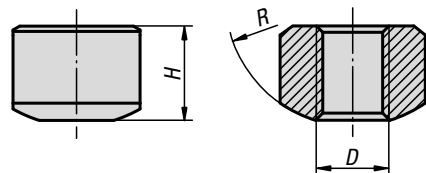


**Material:**  
Steel or stainless steel.

**Version:**  
Steel black oxidised.  
Stainless steel bright.

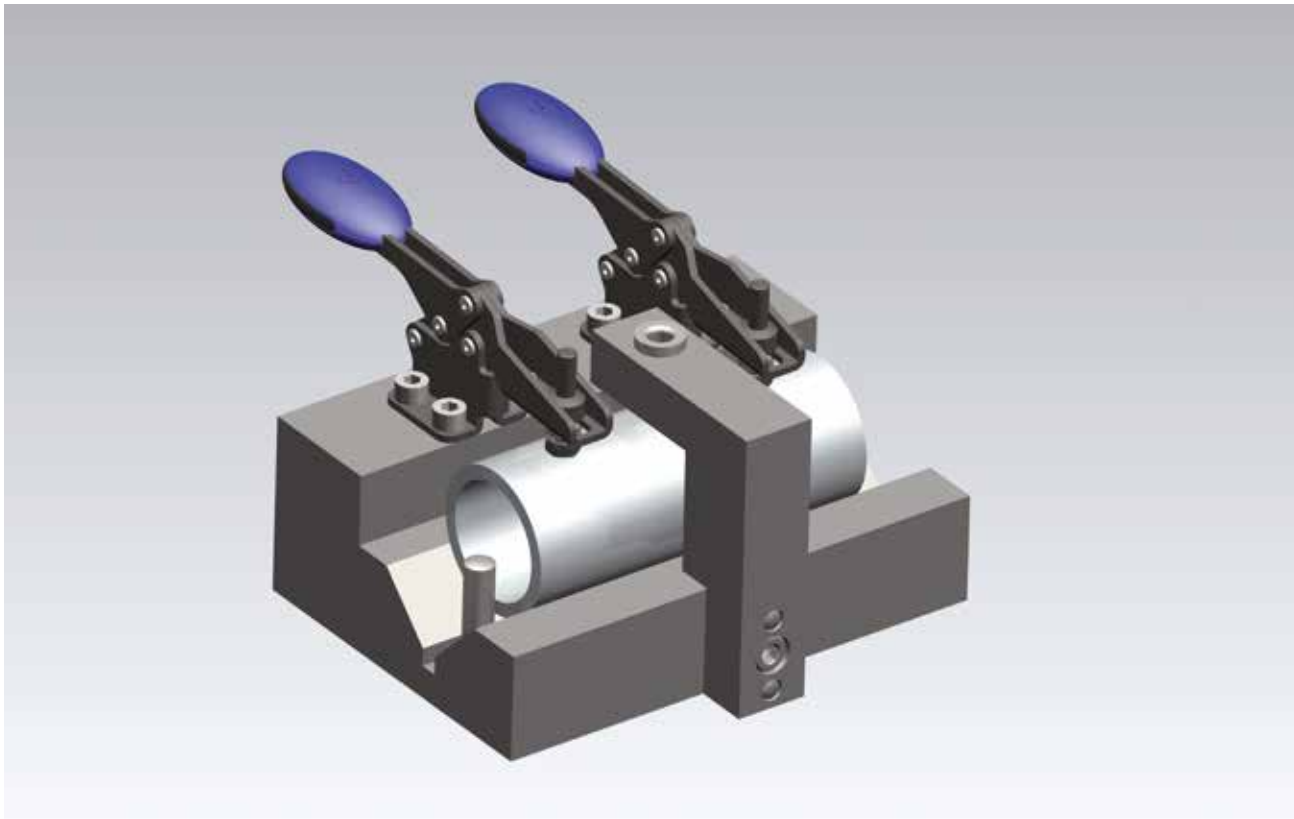
**Sample order:**  
K0664.04

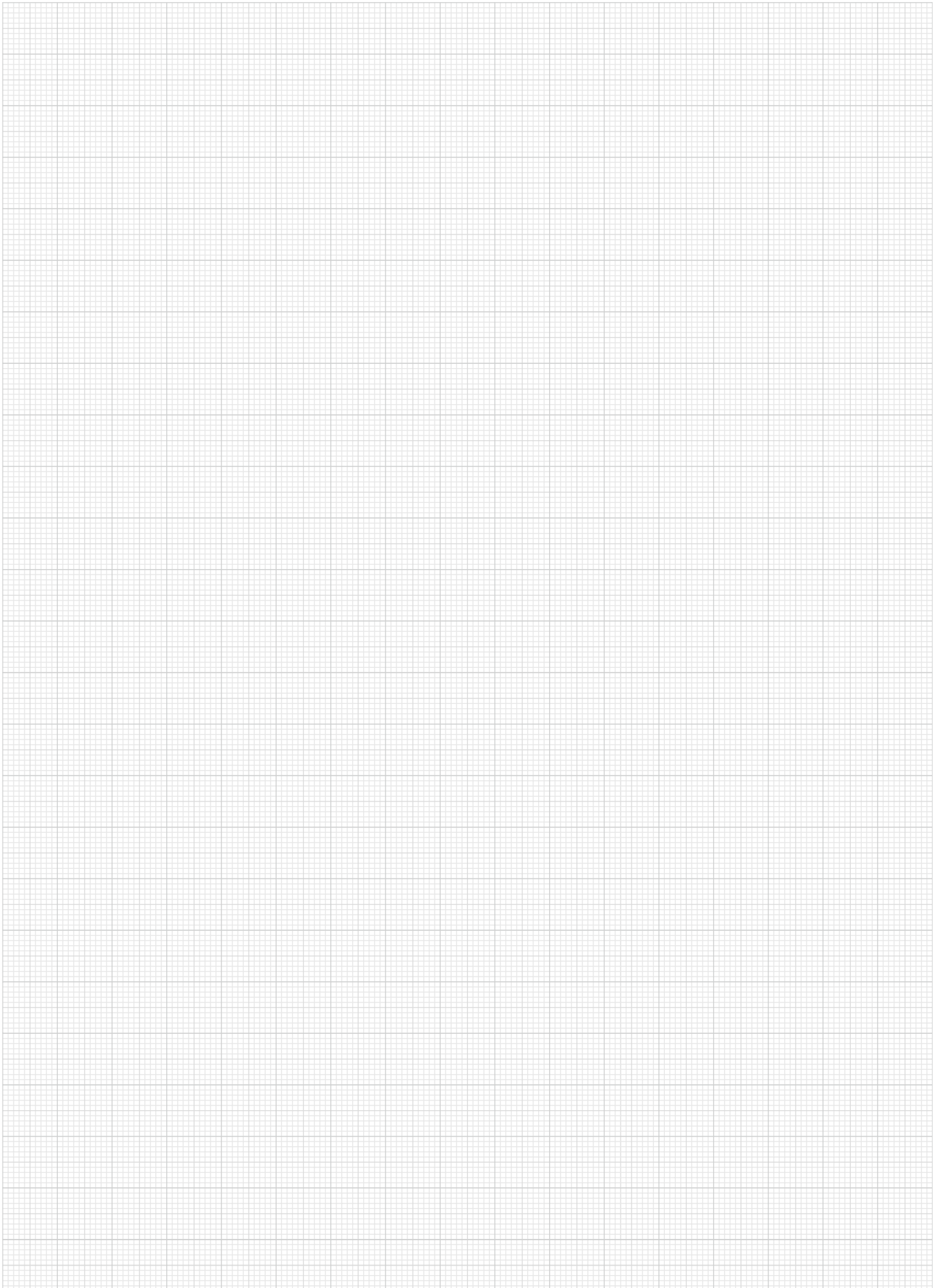
**Drawing reference:**  
1) Weldable



### KIPP Spherical seating nuts

Order No. steel	Order No. stainless steel	D	H	D1	SW	R
K0664.04	K0664.104	M4	5,2	8	7	7
K0664.05	K0664.105	M5	6,7	10	9	9
K0664.06	K0664.106	M6	9,5	13,5	12,2	10
K0664.08	K0664.108	M8	12,8	18	15,3	12
K0664.10	-	M10	12,1	20	18,2	14
K0664.12	-	M12	14,8	23	20	16





# Technical information



Fig. 1:

**Clamp top dead centre.**

Self-locking of the hinge prevents independent opening during the machining process.

Fig. 2:

**Clamp in intermediate position.**

The holding arm approaches dead centre of the toggle hinge very rapidly when closing the clamp (swivel angle of handle  $\ll$  swivel angle of holding arm).

Fig. 3:

**Clamp open.**

The wide opening angle of the clamping arm allows easy loading and unloading.

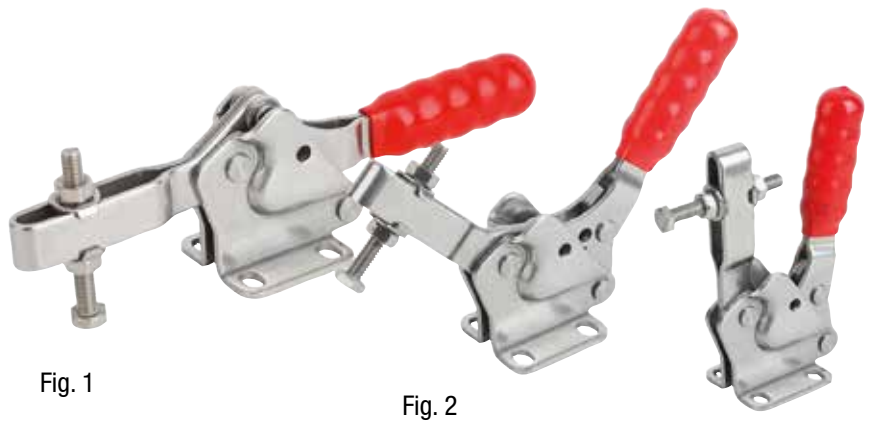


Fig. 1

Fig. 2

Fig. 3

Toggle clamps generate the maximum clamping force when the three pivots are in a straight line (dead centre position). A clamp is locked by moving one pivot beyond the dead centre position. The end position over dead centre is carefully chosen to retain the maximum clamping force while preventing inadvertent opening of the clamp due to vibration or varying loading.

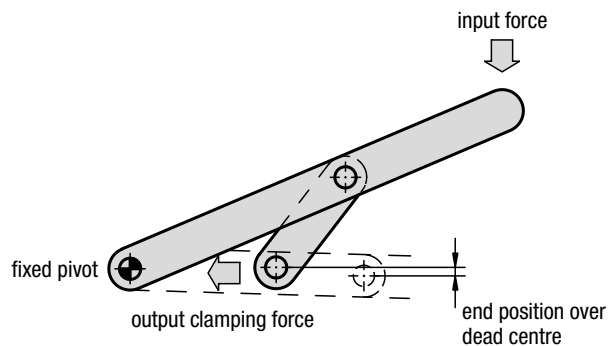
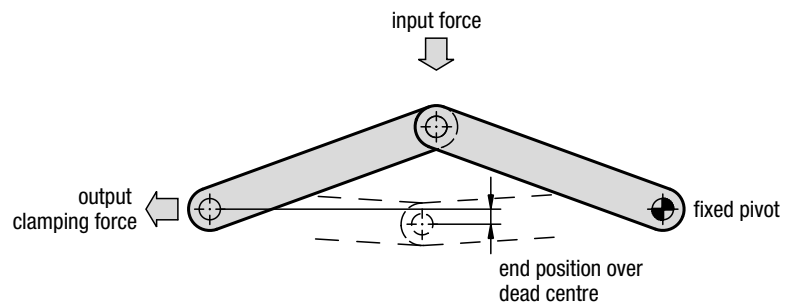
The force-multiplying characteristics of the toggle hinge mechanism put in practice in straight line action clamps can be used to carry out work such as light punching, drilling, forming, bonding, jointing, riveting, welding and locking.

**Retention force**

The retention force is the force applied to the workpiece which the closed clamp can readily withstand without permanent distortion or loss of function.

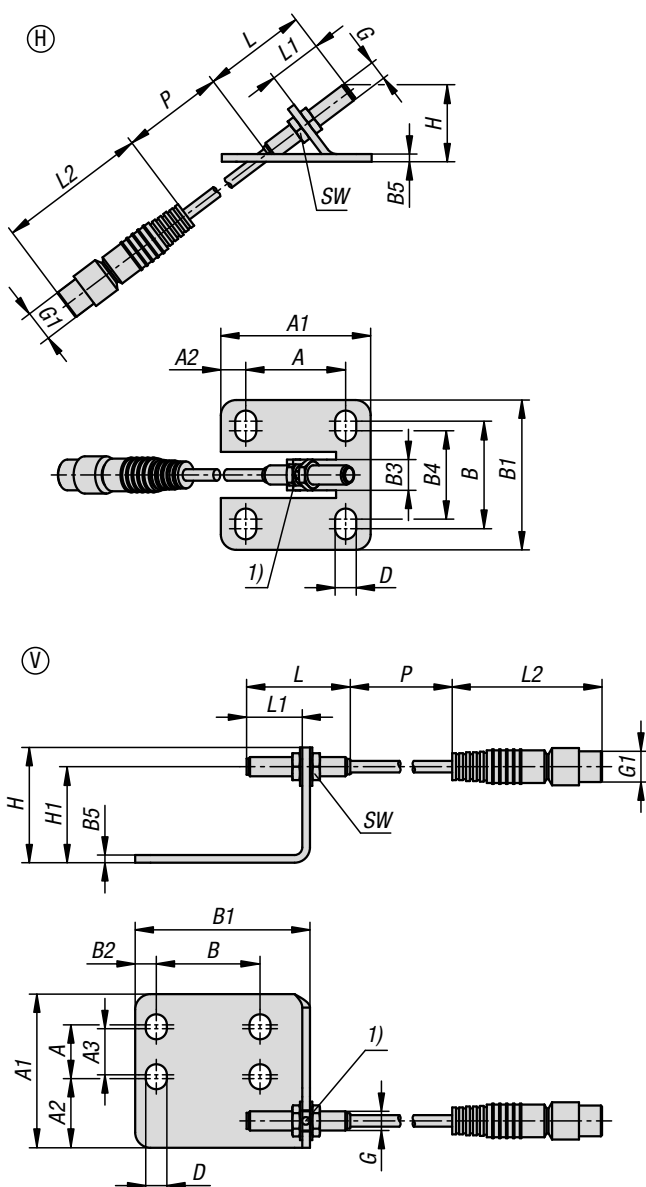
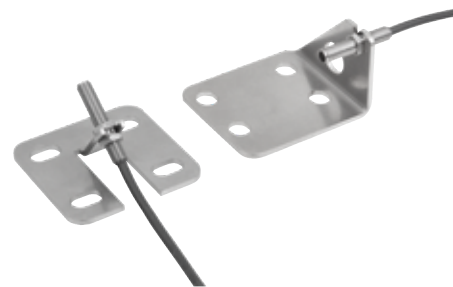
**Clamping force**

The clamping force is the force applied to the workpiece by the clamping arm when it is closed. The hand forces indicated in the catalogue can achieve the corresponding clamping forces.



# Status sensors, stainless steel with bracket

for toggle clamps



Status sensors with brackets are used to monitor the actuated status of toggle clamps. The sensor detects whether the toggle clamp is open or closed and enables this status information to be processed electronically. The sensor is attached to the toggle clamp via the bracket.

**Material:**  
Stainless steel

**Version:**  
Bright.

**Sample order:**  
K1736.06111

**Note:**  
The status sensor and brackets are supplied unassembled.

**Assembly:**  
The status sensor is fastened to the bracket with the nuts and set to dimension L1. The bracket is attached with the toggle clamp screws through holes between the foot and the mounting surface. The switch point fine-tuning is carried out once the toggle clamp is mounted. The detailed procedure is described in the assembly instructions.

**Accessories:**  
K0660  
K0662  
K1278  
K1737

**Technical data:**  
Inductive sensor:  
Output circuit: PNP NO  
Operating voltage: 10 - 30 V DC  
Operating current: 100 mA  
Contact gap: 0.8 mm  
Switch frequency: 5000 Hz  
Short-circuit proof: yes  
Reverse polarity protection: yes  
Rating: IP 67  
Connection type: 0.3 m cable, PUR with plug  
Temperature range: -25 °C - +70 °C  
Approvals: CE, c UL us, EAC

**Safety:**  
Status sensors are not suitable for protecting people.



## Status sensors, stainless steel with bracket

for toggle clamps



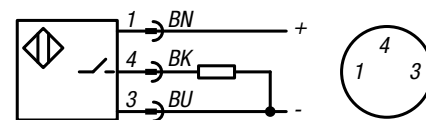
**Drawing reference:**

1) LED-indicator

BN = brown

BK = black

BU = blue

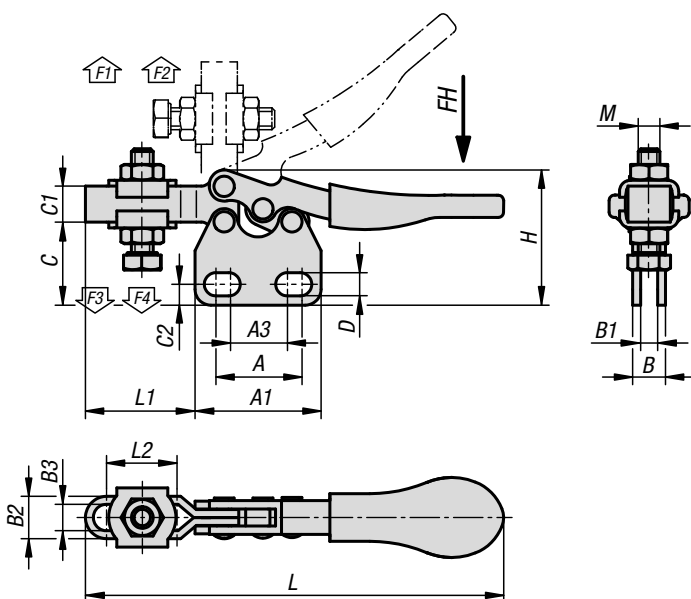


### KIPP Status sensors, stainless steel with bracket for toggle clamps

Order No.	Form	A	A1	A2	A3	B	B1	B2	B3	B4	B5	D	G	G1	H	H1	L	L1	L2	P	SW	for toggle clamp	M=Spindle toggle clamp
K1736.06111	H	26	39	6,5	-	28	39	-	8	23	2	5,5	M5X0,5	M8x1	20,1	-	27	13,8	39	300	7	K0660	M6x35
K1736.08111	H	26	44	9	-	31	45	-	8	24	2	6,2	M5X0,5	M8x1	27,3	-	27	20,6	39	300	7	K0660	M8x45
K1736.06121	V	14	40	18	12	27	45,5	5,5	-	-	2	5,5	M5X0,5	M8x1	30	25	27	14,5	39	300	7	K0662	M6x35
K1736.08121	V	21	45	15	19	32	49	6,5	-	-	2	6,8	M5X0,5	M8x1	30	25	27	14,5	39	300	7	K0662	M8x45

## Toggle clamp mini, horizontal

with straight foot and adjustable clamping spindle



**Material:**  
Steel.

**Version:**  
Electro zinc-plated steel.  
Plastic handle, oil-resistant.

**Sample order:**  
K1243.0500

**Accessories:**  
K0101  
K1442  
K0103  
K0106  
K1441

### KIPP Toggle clamp mini, horizontal with straight foot and adjustable clamping spindle

Order No.	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K1243.0500	90°	75°	50	250	500	150	350

Order No.	A	A1	A3	B	B1	B2	B3	C	C1	C2	D	H	L	L1	L2	M
K1243.0500	15,9	23,8	11,1	6	3	8	5	16	6,8	4	4,4	25,3	79	20,7	13,5	M4x20

## Toggle clamp mini, horizontal

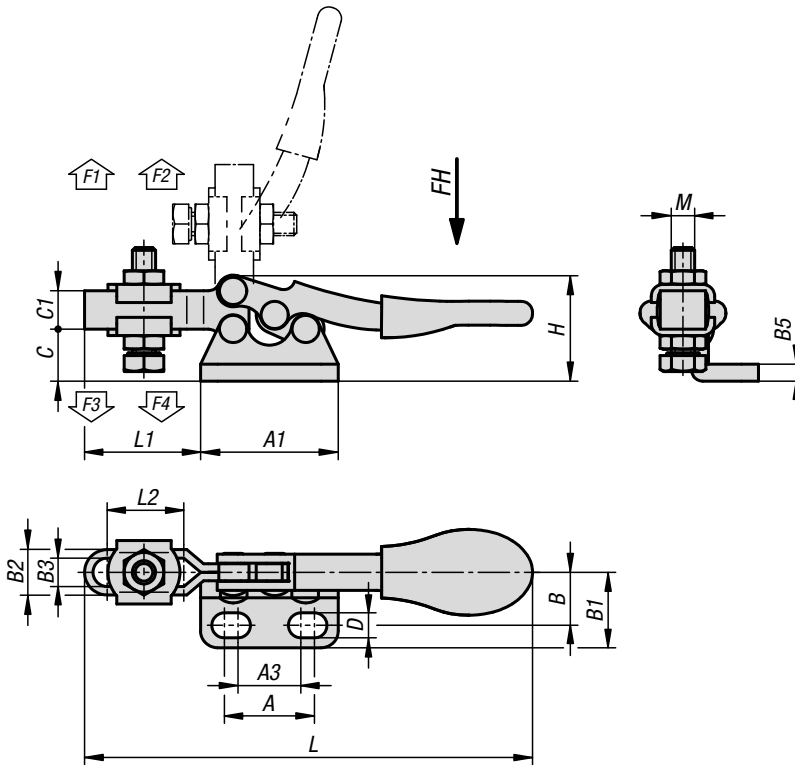
with flat left foot and adjustable clamping spindle



**Material:**  
Steel.

**Version:**  
Electro zinc-plated steel.  
Plastic handle, oil-resistant.

**Sample order:**  
K1543.0250



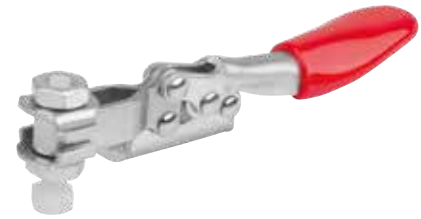
### KIPP Toggle clamp mini, horizontal with flat left foot and adjustable clamping spindle

Order No.	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K1543.0250	90°	75°	80	250	500	150	350

Order No.	A	A1	A3	B	B1	B2	B3	B5	C	C1	D	H	L	L1	L2	M
K1543.0250	15,9	24,3	11,1	9,4	13,3	8	5	3	9,2	6,8	4,4	18,7	79	20,5	13,5	M4x20

## Toggle clamp mini, horizontal

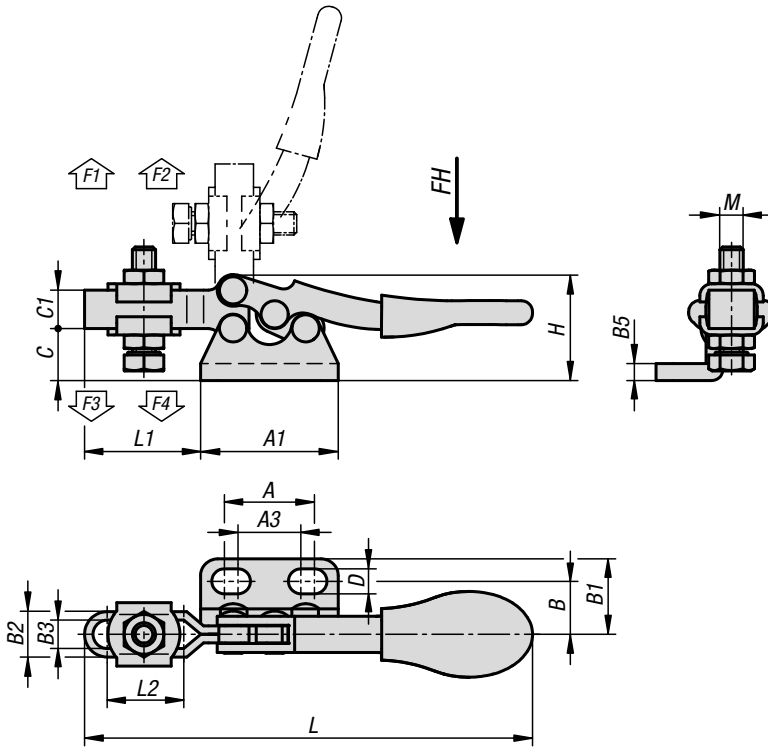
with horizontal foot right and adjustable clamping spindle



**Material:**  
Steel.

**Version:**  
Electro zinc-plated steel.  
Plastic handle, oil-resistant.

**Sample order:**  
K1544.0250



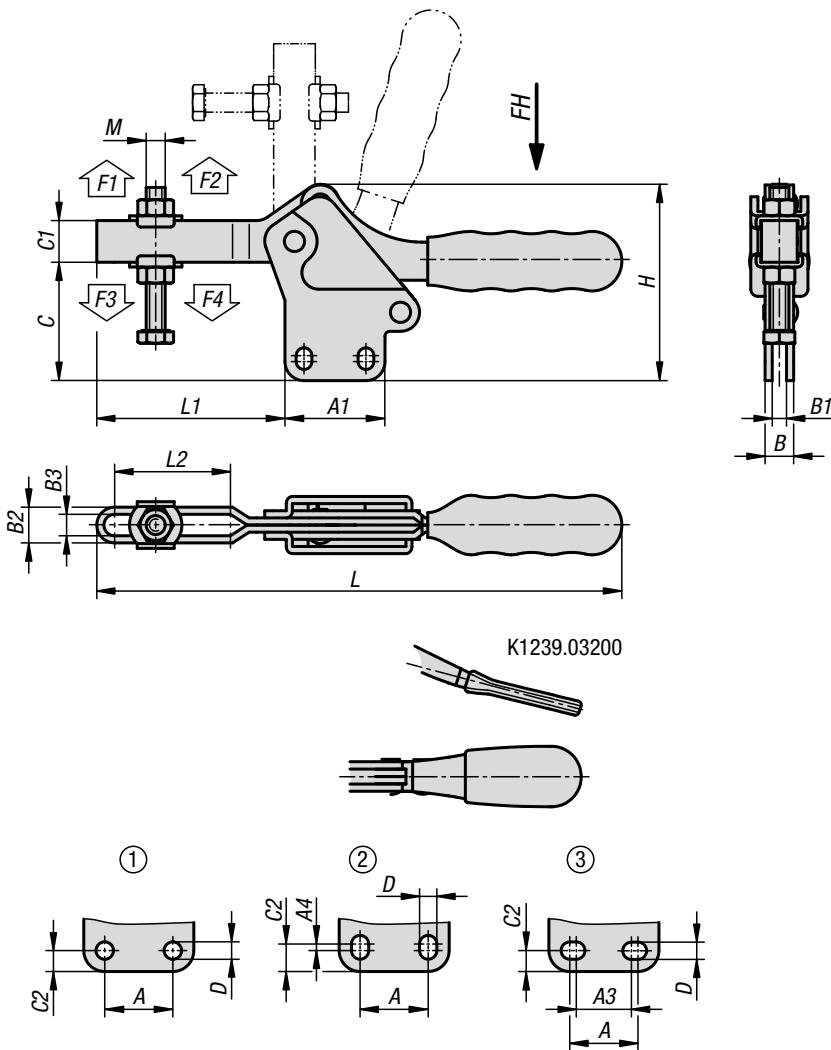
### KIPP Toggle clamp mini, horizontal with flat right foot and adjustable clamping spindle

Order No.	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K1544.0250	90°	75°	80	250	500	150	350

Order No.	A	A1	A3	B	B1	B2	B3	B5	C	C1	D	H	L	L1	L2	M
K1544.0250	15,9	24,3	11,1	8	13,3	9,4	5	3	9,2	6,8	4,4	18,7	79	20,5	13,5	M4x20

## Toggle clamps horizontal

with straight foot and adjustable clamping spindle



**Material:**  
Steel.

**Version:**  
Electro zinc-plated steel.  
Plastic handle, oil-resistant.

**Sample order:**  
K1239.03200

**Note:**  
A neoprene thrust pad is supplied with versions K1239.01000, K1239.02500 and K1239.03200.

**Accessories:**

- K0688
- K0689
- K0690
- K0101
- K1442
- K0102
- K0103
- K1443
- K0104
- K0106
- K1441

### KIPP Toggle clamps horizontal with straight foot and adjustable clamping spindle

Order No.	hole arrangement	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K1239.01000	1	96°	78°	50	500	1000	250	600
K1239.02500	2	93°	76°	150	1200	2500	400	1000
K1239.03200	3	90°	65°	150	2000	3200	800	1600
K1239.03400	2	90°	72°	200	1400	3400	800	1900
K1239.05400	2	94°	76°	250	2400	5400	1100	3000
K1239.06400	1	94°	80°	250	3000	6400	1100	3000

Order No.	A	A1	A3	A4	B	B1	B2	B3	C	C1	C2	D	H	L	L1	L2	M
K1239.01000	13,5	25	-	-	8	4	9,3	5,1	27,5	9,5	5,1	5,2	47	110	37	25	M5x35
K1239.02500	26	38	-	3	10	5	11,2	6,3	38,2	14	9	5,5	65,4	173	61	40,6	M6x50
K1239.03200	25,4	38	20,8	-	12	6	14,7	8,7	48,3	12,7	6,4	6,7	61	173	71,6	39,1	M8x63
K1239.03400	26	42	-	2,5	12	6	15	8,6	49,7	17,5	10,5	6,6	82,2	225	79	52,7	M8x60
K1239.05400	41,2	59	-	2	16	8	19,4	11,5	63,8	23	10	8,7	109	277	108	79,5	M10x80
K1239.06400	41,2	66	-	-	20	10	23,2	13,7	79,6	26	12,9	8,7	131	308	128	93,5	M12x100

## Toggle clamps horizontal

with straight foot and full holding arm



**Material:**  
Steel.

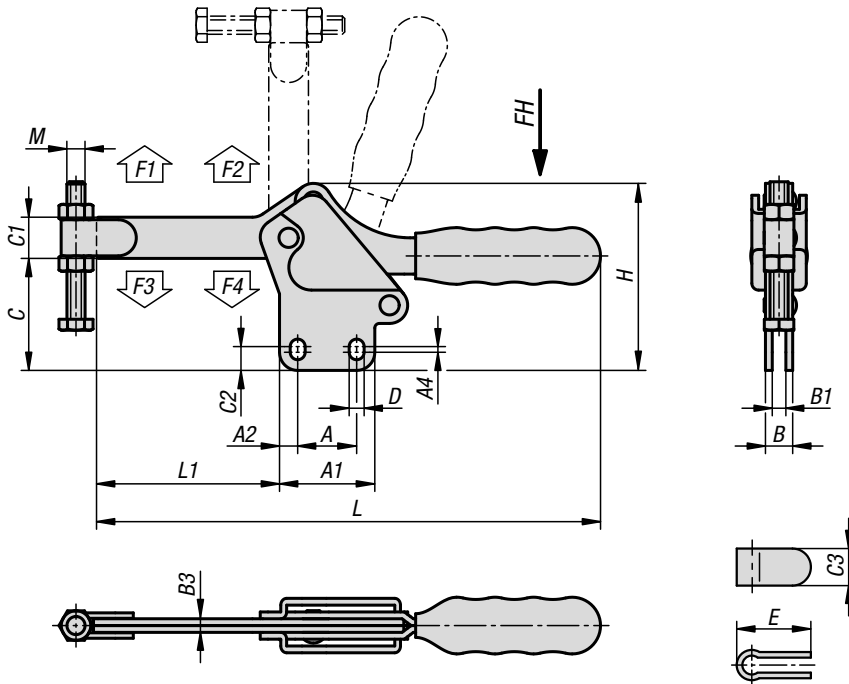
**Version:**  
Electro zinc-plated steel.  
Plastic handle, oil-resistant.

**Sample order:**  
K1433.03400

**Note:**  
spindle bracket weldable.

**Accessories:**

- K0688
- K0689
- K0690
- K0101
- K1442
- K0102
- K0103
- K1443
- K0104
- K0106



### KIPP Toggle clamps horizontal with straight foot and full holding arm

Order No.	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K1433.03400	90°	72°	200	1400	3400	800	1900
K1433.05400	94°	76°	250	2400	5400	1100	3000

Order No.	A	A1	A2	A4	B	B1	B3	C	C1	C2	C3	D	E	H	L	L1	M
K1433.03400	26	42	8	2,5	12	6	6	49,7	17,5	10,5	16	6,6	31	82,5	224	82	M8x60
K1433.05400	41,2	59	9	2	16	8	8	63,8	23	10	20	8,7	40	109	280	111	M10x80

## Mini toggle clamps, horizontal

with flat foot and fixed clamping spindle



**Material:**

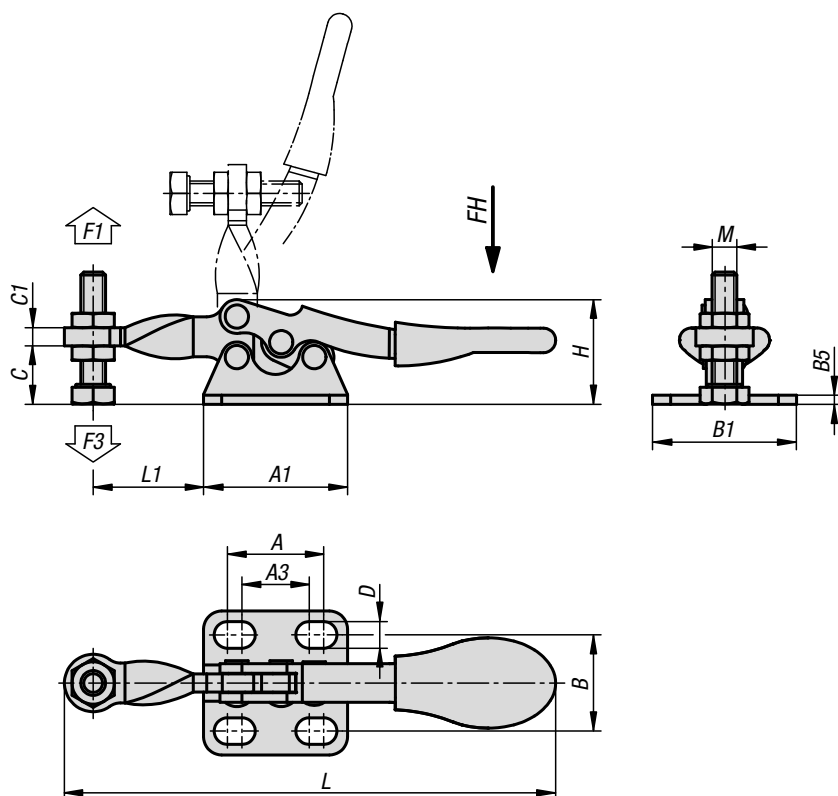
Steel or stainless steel.

**Version:**

Electro zinc-plated steel.  
Bright stainless steel.  
Plastic handle, oil-resistant.

**Sample order:**

K1541.00500



### KIPP Mini toggle clamps, horizontal with flat foot and fixed clamping spindle

Order No.	Main material	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Clamping force F3 N
K1541.00500	steel	90°	75°	80	500	250
K1541.10500	stainless steel	90°	75°	80	500	250

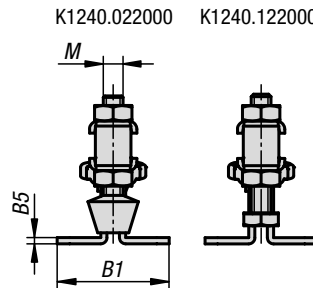
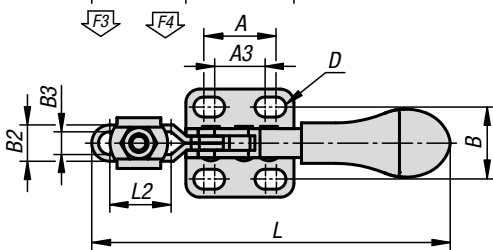
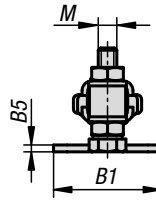
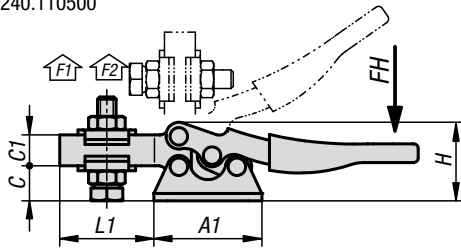
Order No.	Main material	A	A1	A3	B	B1	B5	C	C1	D	H	L	L1	M
K1541.00500	steel	15,9	23,8	11,1	15,9	23,8	1,5	9,7	3	4,4	17,3	81,2	18,3	M4x20
K1541.10500	stainless steel	15,9	23,8	11,1	15,9	23,8	1,5	9,7	3	4,4	17,3	81,2	18,3	M4x20

## Toggle clamps horizontal

with flat foot and adjustable clamping spindle



K1240.010500  
K1240.110500



**Material:**

Steel or stainless steel.

**Version:**

Electro zinc-plated steel.  
Bright stainless steel.  
Plastic handle, oil-resistant.

**Sample order:**

K1240.010500

**Note:**

Version K1240.010500 has a nylon clamping spindle.  
A neoprene thrust pad is supplied with versions K1240.022000, K1240.033200 and K1240.045000.

**Accessories:**

- K0688
- K0689
- K0690
- K0101
- K1442
- K0102
- K0103
- K1443
- K0104
- K0106
- K1441

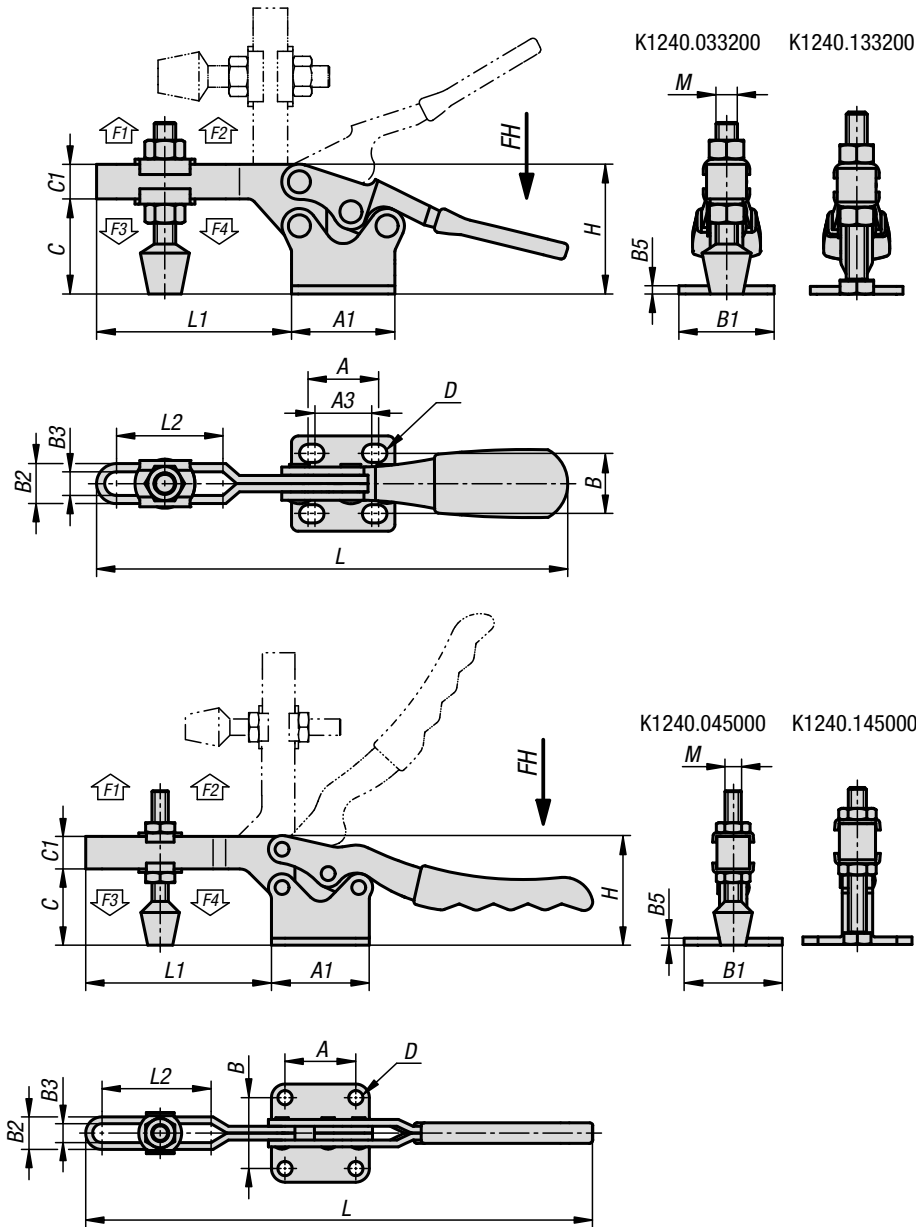
### KIPP Toggle clamps horizontal with flat foot and adjustable clamping spindle

Order No.	Main material	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K1240.010500	steel	90°	75°	50	250	500	150	350
K1240.022000	steel	85°	73°	100	1000	2000	600	1200
K1240.033200	steel	90°	65°	150	2000	3200	800	1600
K1240.045000	steel	90°	68°	250	2200	5000	1100	3000
K1240.110500	stainless steel	90°	75°	50	250	500	150	350
K1240.122000	stainless steel	85°	73°	100	1000	2000	600	1200
K1240.133200	stainless steel	90°	65°	150	2000	3200	800	1600
K1240.145000	stainless steel	90°	68°	250	2200	5000	1100	3000



## Toggle clamps horizontal

with flat foot and adjustable clamping spindle

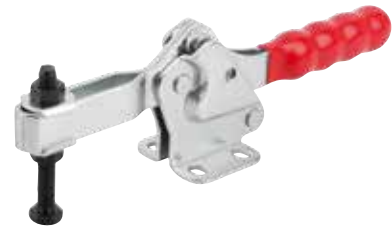
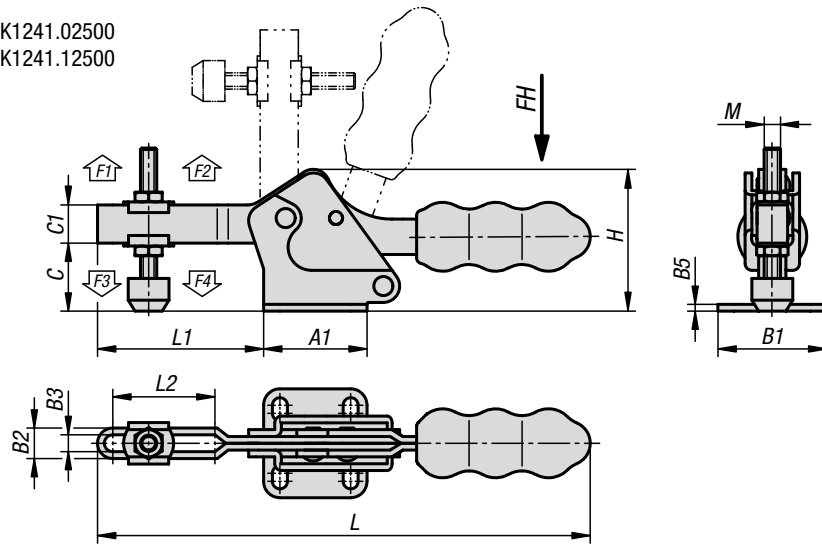


Order No.	Main material	A	A1	A3	B	B1	B2	B3	B5	C	C1	D	H	L	L1	L2	M
K1240.010500	steel	15,9	23,8	11,1	15,9	23,8	8	5	1,5	7,7	6,8	4,4	17,3	79	20,7	13,5	M4x20
K1240.022000	steel	27	37	25,4	22	36	11,4	7,4	2	25,1	12,7	5,5	37,8	143,5	56,9	35,7	M6x44
K1240.033200	steel	25,4	38	20,8	22,2	35	14,7	8,7	3	34,9	12,7	6,7	47,6	173	71,6	39,1	M8x63
K1240.045000	steel	41,3	57,1	-	41,3	57,2	19	11	4	44,4	19	8,3	63,4	295,6	108,3	63,6	M10x85
K1240.110500	stainless steel	15,9	23,8	11,1	15,9	23,8	8	5	1,5	7,7	6,9	4,4	17,3	79	20,7	13,5	M4x20
K1240.122000	stainless steel	27	37	25,4	22	36	11,4	7,4	2	25,1	12,7	5,5	37,8	143,5	56,9	35,7	M6x40
K1240.133200	stainless steel	25,4	38	20,8	22,2	35	14,7	8,7	3	34,9	12,7	6,7	47,6	173	71,6	39,1	M8x60
K1240.145000	stainless steel	41,3	57,1	-	41,3	57,2	19	11	4	44,4	19	8,3	63,4	295,6	108,3	63,6	M10x80

## Toggle clamps horizontal

with flat foot and adjustable clamping spindle

K1241.02500  
K1241.12500



**Material:**  
Steel or stainless steel.

**Version:**  
Electro zinc-plated steel.  
Bright stainless steel.  
Plastic handle, oil-resistant.

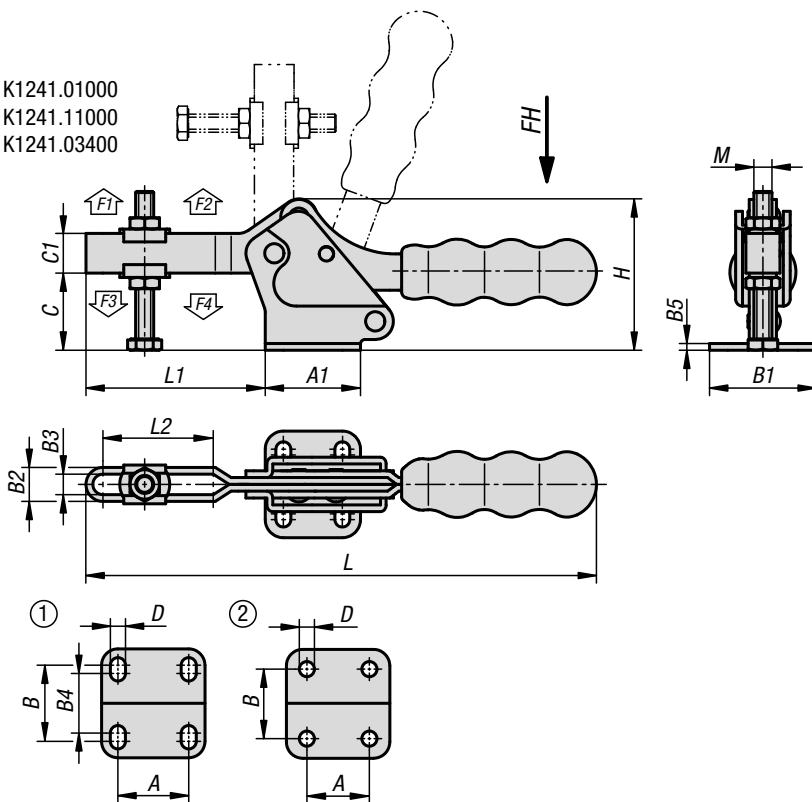
**Sample order:**  
K1241.02500

**Note:**  
A neoprene thrust pad is supplied with versions K1241.02500 and K1241.12500.

**Accessories:**

- K0688
- K0689
- K0690
- K0101
- K1442
- K0102
- K0103
- K1443
- K0104
- K0106
- K1441
- K1431

K1241.01000  
K1241.11000  
K1241.03400

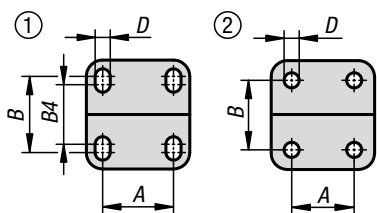
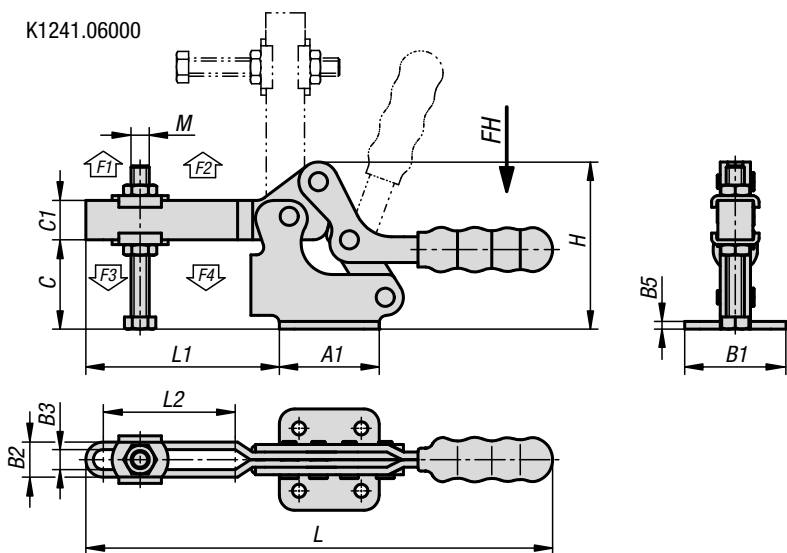
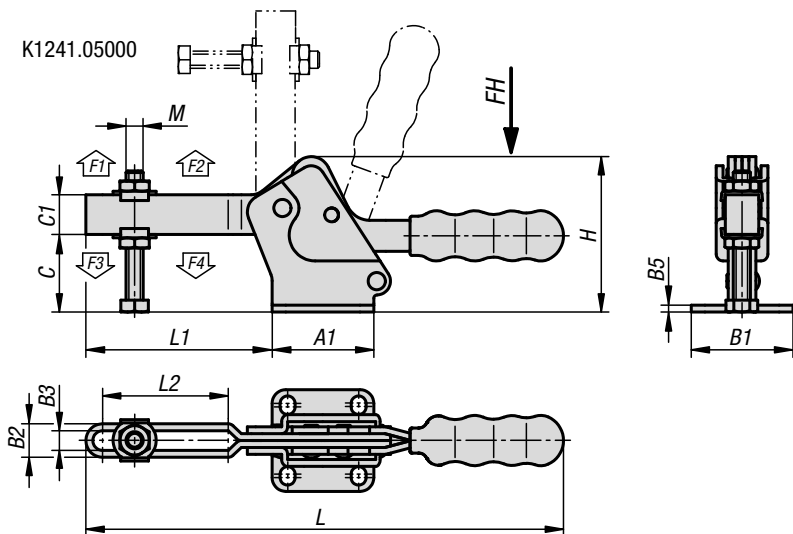


### KIPP Toggle clamps horizontal with flat foot and adjustable clamping spindle

Order No.	Main material	hole arrangement	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K1241.01000	steel	2	96°	78°	80	500	1000	250	500
K1241.02500	steel	1	93°	76°	150	1200	2500	400	1000
K1241.03400	steel	1	90°	72°	200	1400	3400	800	1900
K1241.05000	steel	1	90°	72°	250	2200	5000	1100	3000
K1241.06000	steel	2	94°	80°	250	3000	6000	1200	3200
K1241.11000	stainless steel	2	96°	78°	80	500	1000	250	500
K1241.12500	stainless steel	1	93°	76°	150	1200	2500	400	1000

## Toggle clamps horizontal

with flat foot and adjustable clamping spindle



Order No.	Main material	A	A1	B	B1	B2	B3	B4	B5	C	C1	D	H	L	L1	L2	M
K1241.01000	steel	13,5	25	16,8	27	9,3	5,3	-	2	19	9,5	5,2	38,5	112	37	22,8	M5x40
K1241.02500	steel	26	38	28	40	11,2	6,2	22	2,5	25	14	5,5	52,1	173	61	37,5	M6x50
K1241.03400	steel	26	42	31	47	15	9	26	3	34	17,5	6,6	66,5	225	79	48,6	M8x60
K1241.05000	steel	41,2	59	43	59	19,4	11,4	39	4	45	23	8,7	90,1	277	108	72,9	M10x80
K1241.06000	steel	41,2	66	41,3	67	23,2	13,2	-	5	59	26	8,7	110,4	308	128	87,2	M12x100
K1241.11000	stainless steel	13,5	25	16,8	27	9,3	5,3	-	2	19	9,5	5,2	38,5	112	37	22,8	M5x40
K1241.12500	stainless steel	26	38	28	40	11,2	6,2	22	2,5	25	14	5,5	52,1	173	61	37,5	M6x50

## Toggle clamps horizontal

with flat foot and fixed clamping spindle



**Material:**  
Steel.

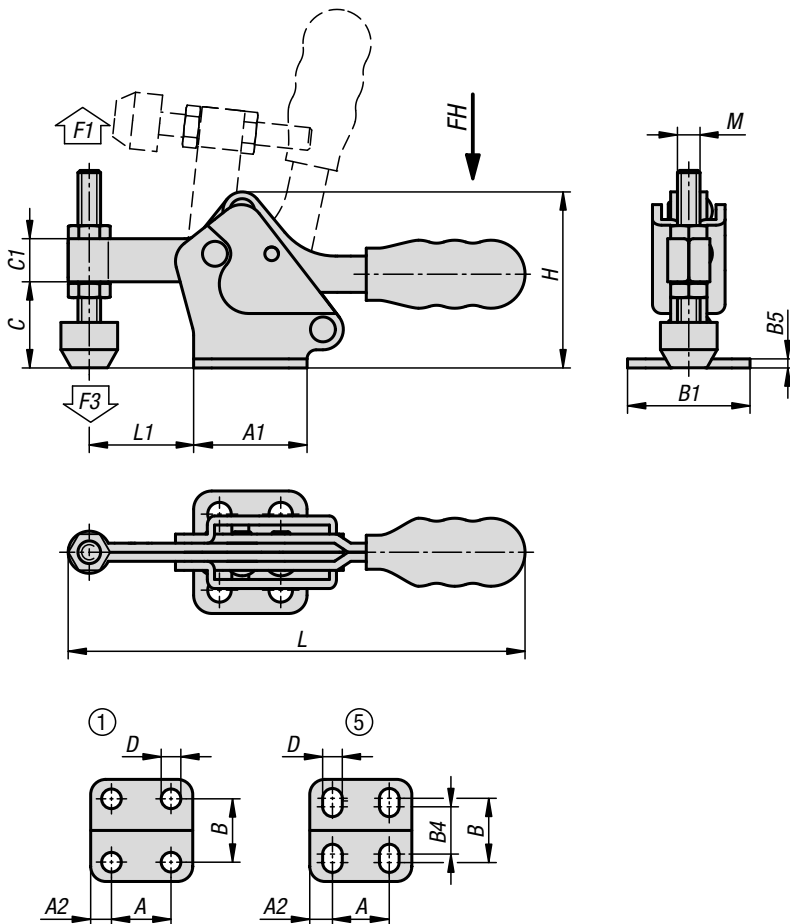
**Version:**  
Trivalent passivated.  
Clamping spindle and nuts phosphated.  
Plastic grip oil-resistant.

**Sample order:**  
K1434.00700

**Note:**  
The clamping spindle is supplied with a neoprene thrust pad.

**Accessories:**

- K0688
- K0689
- K0101
- K1442
- K0102
- K0103
- K1443
- K0104
- K0106
- K1431



### KIPP Toggle clamps horizontal with flat foot and fixed clamping spindle

Order No.	hole arrangement	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Clamping force F3 N
K1434.00700	1	96°	78°	50	700	300
K1434.01400	5	93°	76°	150	1400	600

Order No.	A	A1	A2	B	B1	B4	B5	C	C1	D	H	L	L1	M
K1434.00700	13,5	25	5,7	16,8	27	-	2	19	9,5	5,2	38,8	101	23	M5x35
K1434.01400	26	38	6	28	40	22	2,5	25	14	5,5	53	156	38	M6x50

## Toggle clamps horizontal

with flat foot and full holding arm



**Material:**  
Steel.

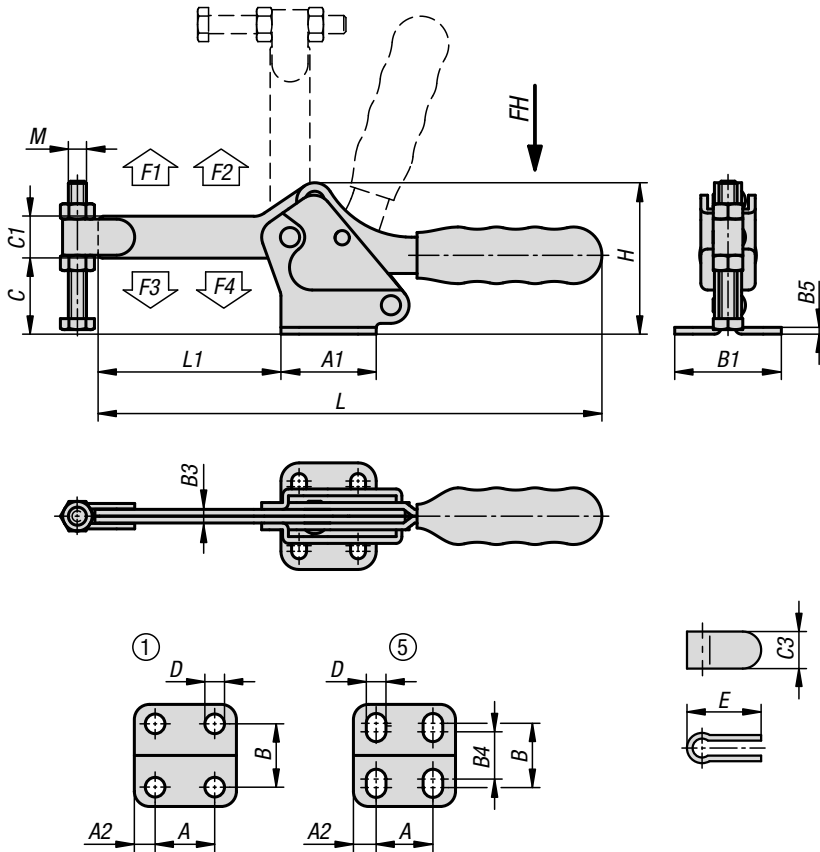
**Version:**  
Electro zinc-plated steel.  
Plastic handle, oil-resistant.

**Sample order:**  
K1435.01400

**Note:**  
spindle bracket weldable.

**Accessories:**

- K0688
- K0689
- K0690
- K0101
- K1442
- K0102
- K0103
- K1443
- K0104
- K0106
- K1431



### KIPP Toggle clamps horizontal with flat foot and full holding arm

Order No.	hole arrangement	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K1435.01400	5	90°	72°	200	1400	3400	800	1900
K1435.02400	5	94°	76°	250	2400	5400	1100	3000
K1435.03000	1	94°	80°	250	3000	6400	1100	3000

Order No.	A	A1	A2	B	B1	B3	B4	B5	C	C1	C3	D	E	H	L	L1	M
K1435.01400	26	42	8	31	47	6	26	3	34	17,5	16	6,6	31	67	224	82	M8x60
K1435.02400	41,2	59	9	43	59	8	39	4	45	23	20	8,7	40	90,1	280	111	M10x80
K1435.03000	41,2	66	13	41,3	67	10	-	5	59	26	23	8,7	44	111	307	130	M12x100

## Toggle clamps horizontal

heavy duty with adjustable clamping spindle



**Material:**  
Steel.

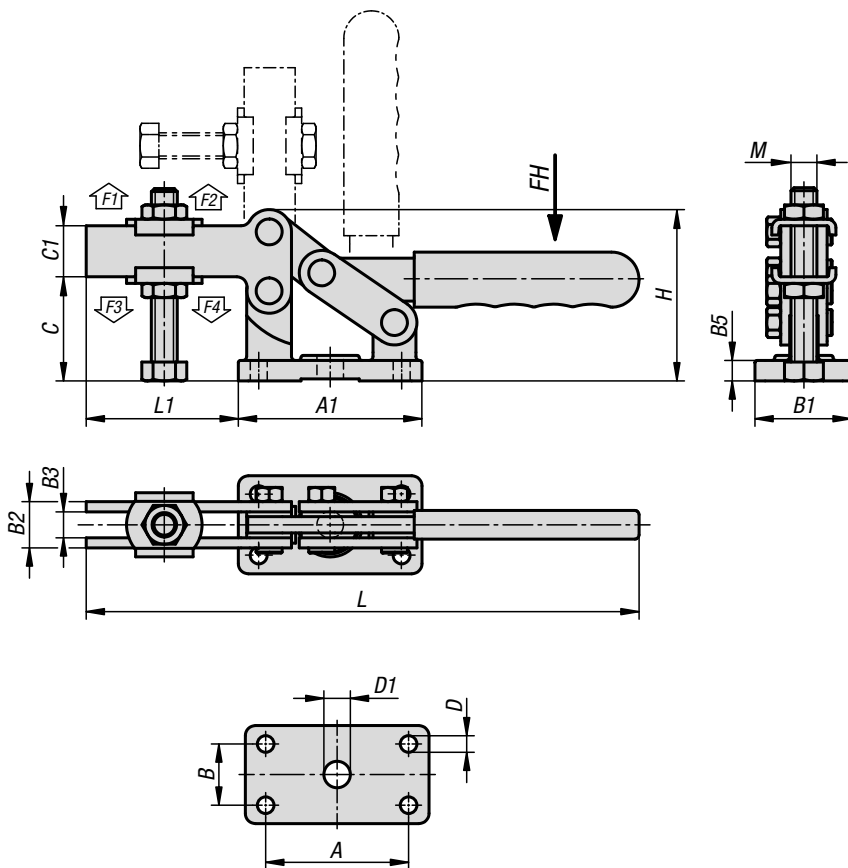
**Version:**  
Electro zinc-plated steel.  
Plastic handle, oil-resistant.

**Sample order:**  
K1242.06000

**Note:**  
The clamp can only be mounted from below using M8 studs and DIN 934 hexagon nuts, see sketch.

**Accessories:**

- K0688
- K0689
- K1442
- K0102
- K0103
- K0106
- K1441

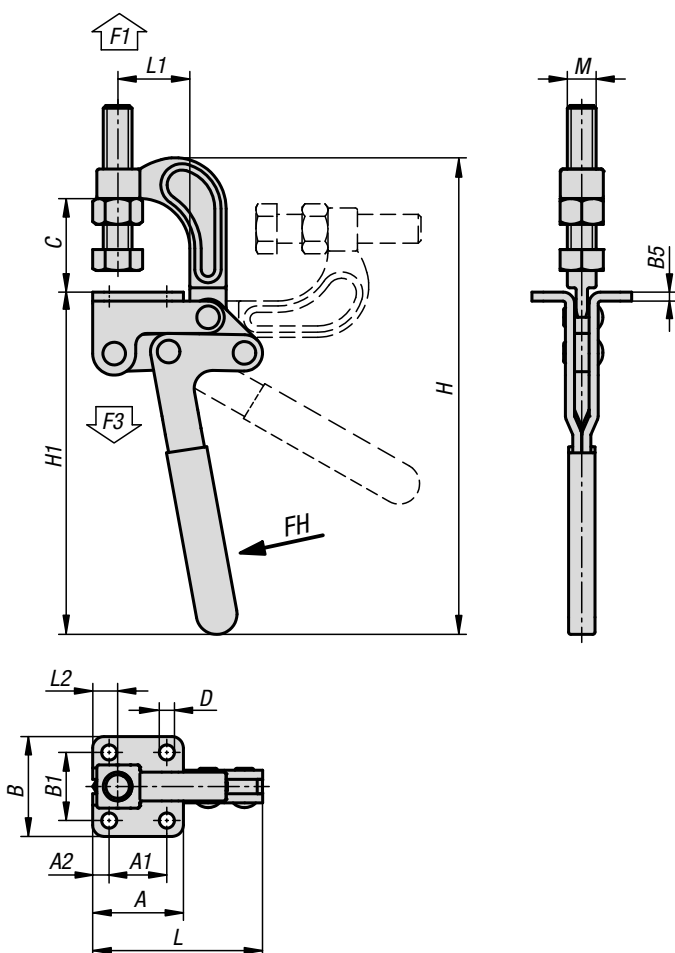


### KIPP Toggle clamps horizontal heavy-duty with adjustable clamping spindle

Order No.	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K1242.06000	91°	93°	250	3000	6000	1800	3400

Order No.	A	A1	B	B1	B2	B3	B5	C	C1	D	D1	H	L	L1	M
K1242.06000	70	90	30	48	22,7	12,7	10	51	25	8,3	13	83,9	271	74,5	M12x100

## Toggle clamps pivot jaw



**Material:**

Steel. Draw bail in cast steel.  
Stainless steel.

**Version:**

Steel electro zinc-plated and passivated.  
Bright stainless steel.  
Plastic grip oil-resistant

**Sample order:**

K1439.03400

**Note:**

The pivot jaw toggle clamp is ideal for applications in which there is little mounting space at the sides. In this case the clamp plate is secured from below to the work surface.

### KIPP Toggle clamps pivot jaw

Order No.	Main material	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Clamping force F3 N
K1439.03400	steel	90°	50°	250	3400	1100
K1439.13000	stainless steel	90°	50°	200	3000	1000

Order No.	Main material	A	A1	A2	B	B1	B5	C	D	H	H1	L	L1	L2	M
K1439.03400	steel	40	25,4	7,3	44	30	4	41,2	6,7	210	153	74,6	31,8	14	1/2-13x2,5
K1439.13000	stainless steel	40	25,4	7,3	44	30	4	41,2	6,7	210	153	74,6	31,8	14	1/2-13x2,5

## Toggle clamps vertical

with straight foot and fixed clamping spindle



**Material:**

Steel.

**Version:**

Electro zinc-plated steel.  
Plastic handle, oil-resistant.

**Sample order:**

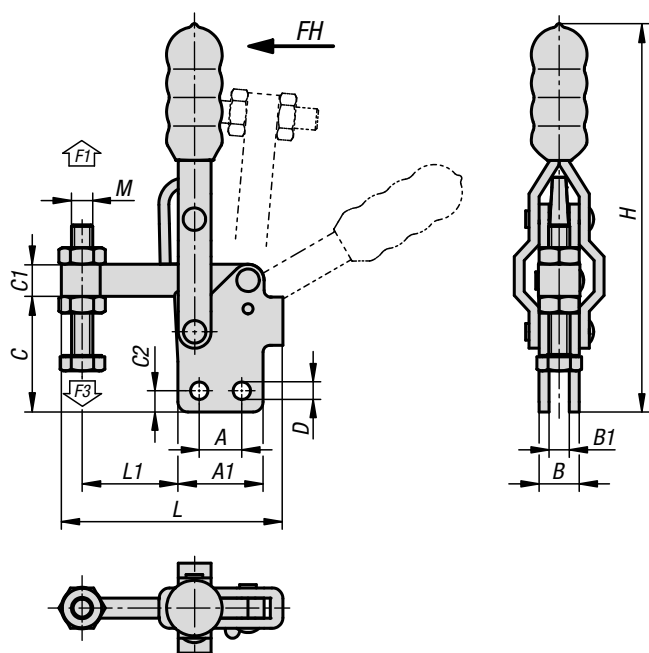
K1244.00800

**Note:**

A neoprene thrust pad is supplied with version K1244.00800.

**Accessories:**

- K0688
- K0689
- K0690
- K0101
- K1442
- K0102
- K0103
- K1443
- K0104
- K0106



### KIPP Toggle clamps vertical with straight foot and fixed clamping spindle

Order No.	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Clamping force F3 N
K1244.00800	95°	60°	100	800	600
K1244.02400	90°	70°	150	2400	1200
K1244.03400	90°	70°	200	3400	1600
K1244.04400	90°	70°	250	4400	1600
K1244.05400	100°	50°	280	5400	1800

Order No.	A	A1	B	B1	C	C1	C2	D	H	L	L1	M
K1244.00800	12,7	25,4	12	6	34,5	9,6	6,4	5,2	116	65,8	28,6	M6x44
K1244.02400	19	35	12	6	48	17,5	7,5	7,1	194	87,7	40	M8x50
K1244.03400	32	50	16	8	64	22	9,5	8,3	240	124,25	65	M10x80
K1244.04400	32	53	20	10	70,4	25	9,5	8,7	245	138,25	74	M12x100
K1244.05400	50,8	76,2	20	10	113,5	31,8	12,7	12,3	335	197,5	107,8	M16x150



## Toggle clamps vertical

heavy duty with adjustable clamping spindle



**Material:**

Steel.

**Version:**

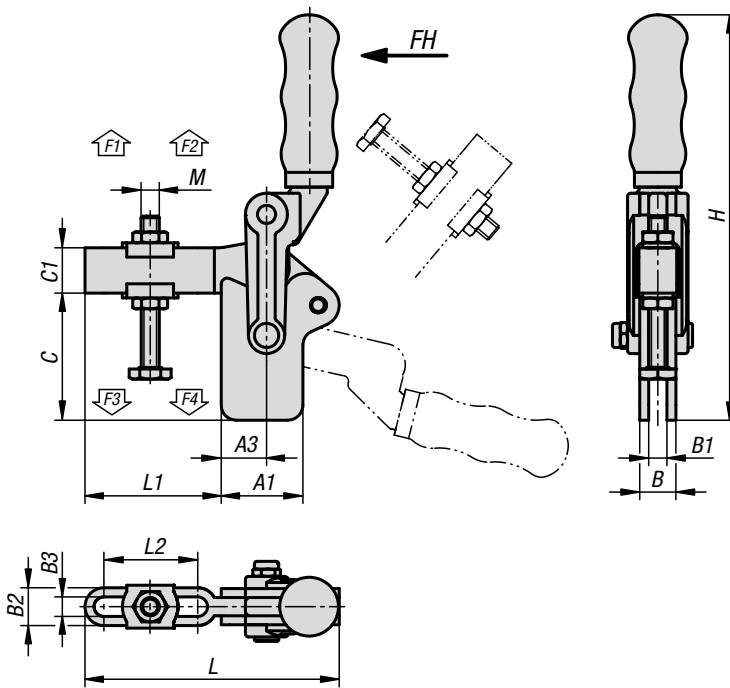
Steel, hardened and passivated.  
Plastic handle, oil-resistant.

**Sample order:**

K1245.06000

**Accessories:**

- K0688
- K0689
- K0101
- K1442
- K0102
- K0103
- K1443
- K0104
- K0106
- K1441



### KIPP Toggle clamps vertical heavy-duty with adjustable clamping spindle

Order No.	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K1245.06000	210°	134°	200	3000	6000	800	900

Order No.	A1	A3	B	B1	B2	B3	C	C1	H	L	L1	L2	M
K1245.06000	27	15	12	6	12,5	6,5	42	15	137	84	45	31	M6x50

## Toggle clamps vertical

with straight foot and adjustable clamping spindle



**Material:**

Steel.

**Version:**

Electro zinc-plated steel.

Plastic handle, oil-resistant.

**Sample order:**

K1246.02400

**Note:**

The clamping spindle is supplied with a neoprene thrust pad.

**Accessories:**

K0688

K0689

K0690

K0101

K1442

K0102

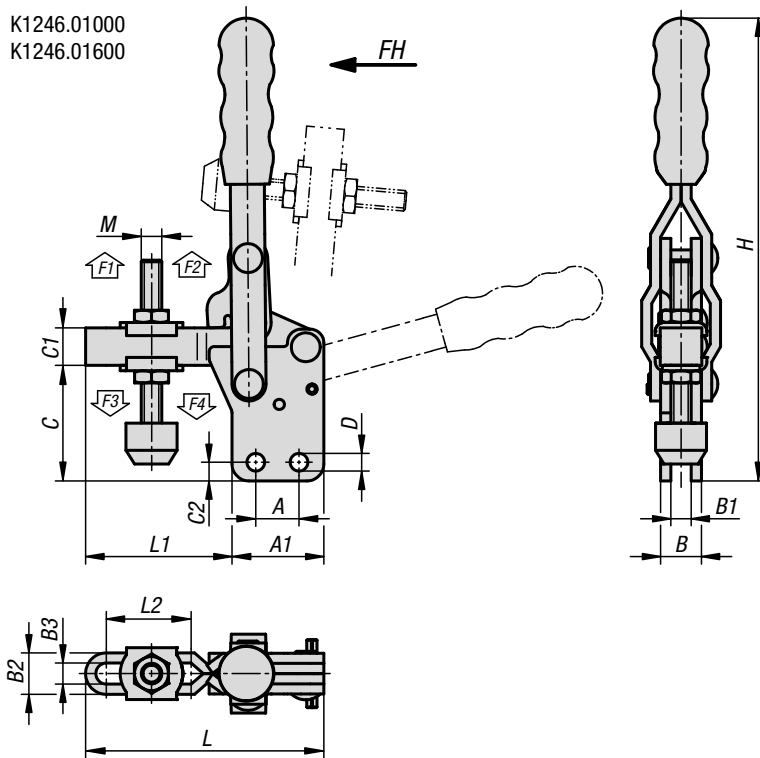
K0103

K1443

K0104

K0106

K1441



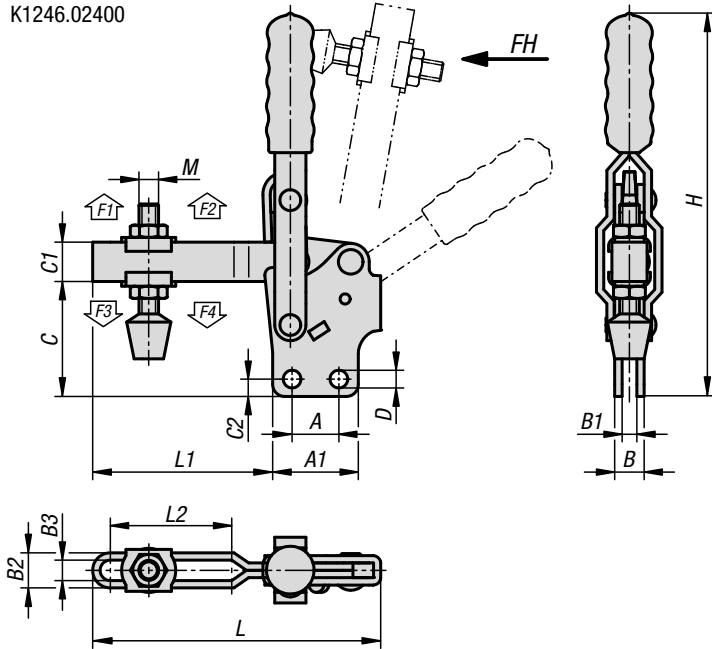
### KIPP Toggle clamps vertical with straight foot and adjustable clamping spindle

Order No.	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K1246.01000	120°	85°	80	700	1000	500	750
K1246.01600	95°	75°	100	1200	1600	800	1000
K1246.02400	100°	56°	150	1200	2400	800	1600
K1246.04000	112°	61°	250	2000	4000	1400	3000

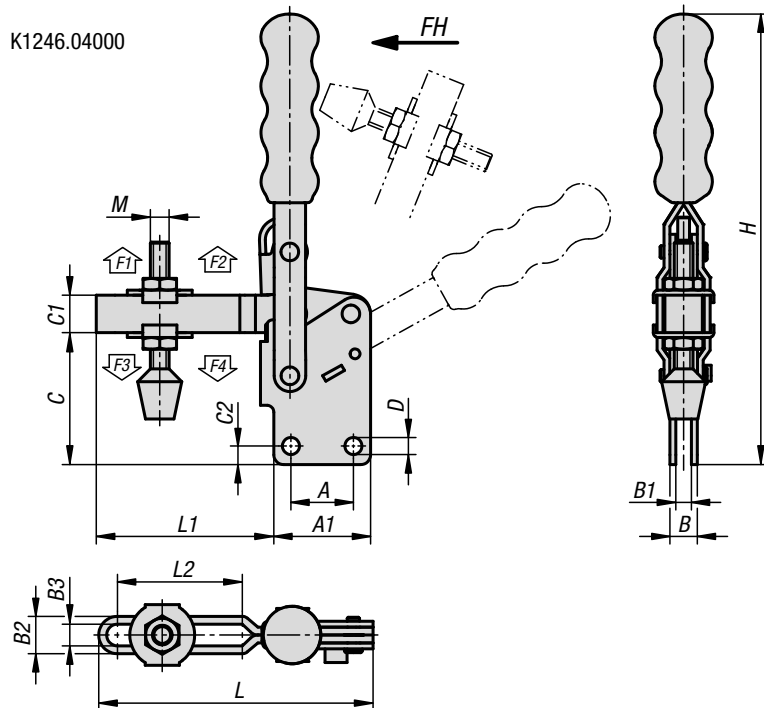
## Toggle clamps vertical

with straight foot and adjustable clamping spindle

K1246.02400



K1246.04000



Order No.	A	A1	B	B1	B2	B3	C	C1	C2	D	H	L	L1	L2	M
K1246.01000	16	26	8	4	9,5	5,5	27,6	9	5	4,4	99,7	57	31	16,6	M5x40
K1246.01600	12,7	27	12	6	12,2	6,2	34	11	5,5	5,2	136	70	43	24,9	M6x50
K1246.02400	19	34,9	12	6	14,3	8,3	46,8	16	7,1	7,2	156	117,2	73,2	49,4	M8x63
K1246.04000	31,8	49,2	14	8	19	11	67,2	19	9,5	8,7	229	139,5	90,3	63,5	M10x85

## Toggle clamps vertical

with straight foot and adjustable clamping spindle



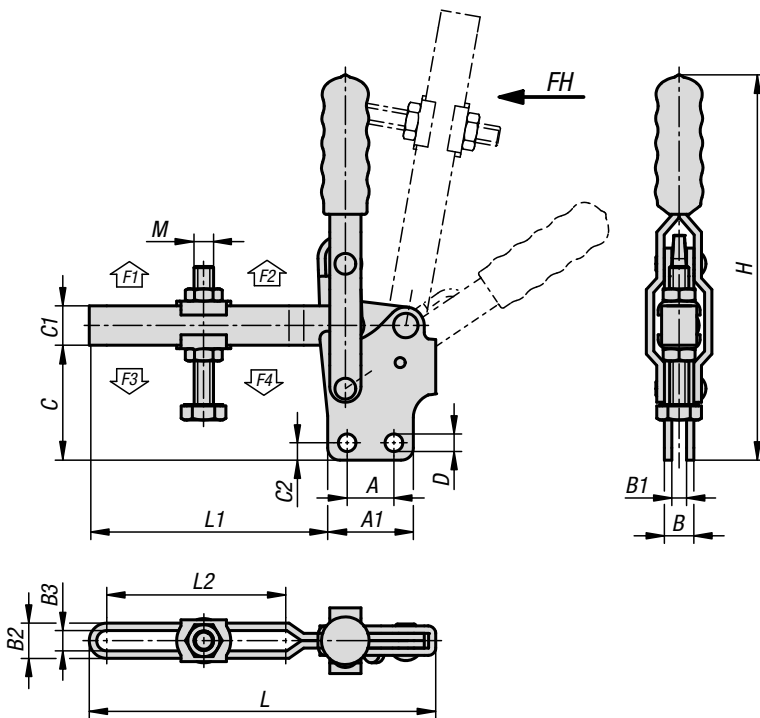
**Material:**  
Steel.

**Version:**  
Electro zinc-plated steel.  
Plastic handle, oil-resistant.

**Sample order:**  
K1248.02400

**Note:**  
A neoprene thrust pad is supplied with version K1248.02400.

**Accessories:**  
K0688  
K0689  
K0690  
K0101  
K1442  
K0102  
K0103  
K1443  
K0104  
K0106  
K1441



### KIPP Toggle clamps vertical with straight foot and adjustable clamping spindle

Order No.	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K1248.02400	100°	56°	150	1200	2400	800	1600
K1248.07000	90°	70°	250	3200	7000	1400	3000
K1248.08000	100°	50°	280	3000	8000	1800	3900

Order No.	A	A1	B	B1	B2	B3	C	C1	C2	D	H	L	L1	L2	M
K1248.02400	19	34,9	12	6	14,3	8,3	46,8	16	7,1	7,2	156	141	97	73,2	M8x63
K1248.07000	32	53	20	10	22,7	12,7	70,4	25	9,5	8,7	245	177	124	90	M12x100
K1248.08000	50,8	76,2	20	10	26,5	16,5	113,5	31,8	12,7	12,3	335	229,2	153	105	M16x150

## Toggle clamps vertical

heavy-duty with fixed clamping spindle



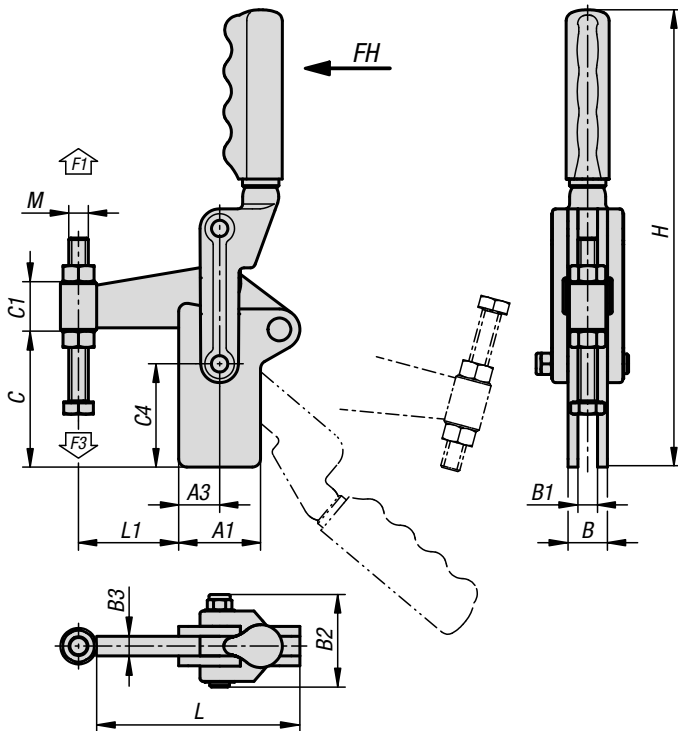
**Material:**  
Steel.

**Version:**  
Steel, hardened and passivated.  
Plastic handle, oil-resistant.

**Sample order:**  
K1250.007000

**Note:**  
spindle bracket weldable.

**Accessories:**  
K1442  
K0102  
K0103  
K1443  
K0106



### KIPP Toggle clamps vertical heavy-duty with fixed clamping spindle

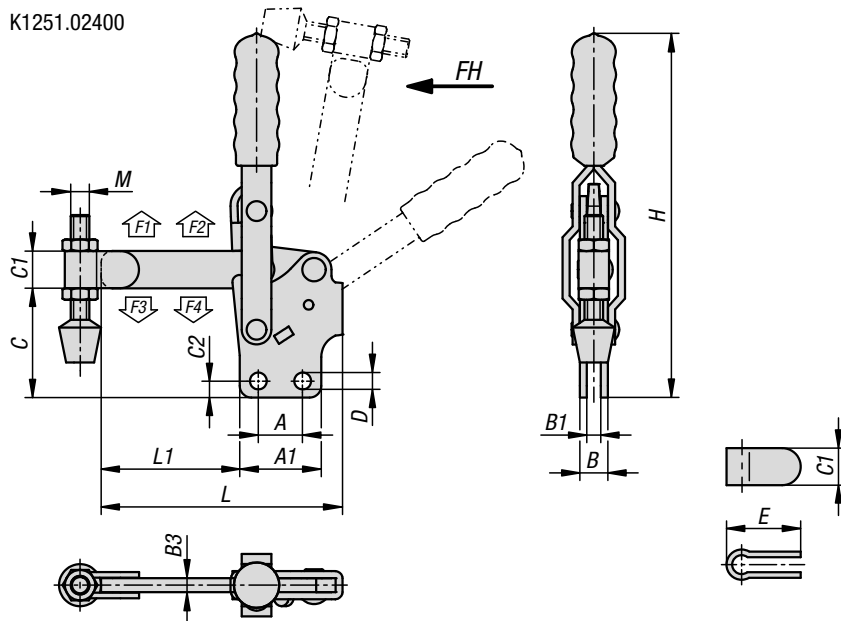
Order No.	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Clamping force F3 N
K1250.007000	205°	130°	300	7000	1400
K1250.012000	195°	130°	500	12000	1400
K1250.014000	195°	130°	500	14000	1850

Order No.	A1	A3	B	B1	B2	B3	C	C1	C4	H	L	L1	M
K1250.007000	45	25	20	10	49,5	10	70	30	50	243	105	51,1	M10x80
K1250.012000	50	25	24	12	56,5	12	85	30	63	279	124	61,1	M12x100
K1250.014000	63	40	32	16	67,5	16	108	38	78	325	158	75	M16x150

## Toggle clamps vertical

with straight foot and full holding arm

K1251.02400



**Material:**  
Steel.

**Version:**  
Electro zinc-plated steel.  
Plastic handle, oil-resistant.

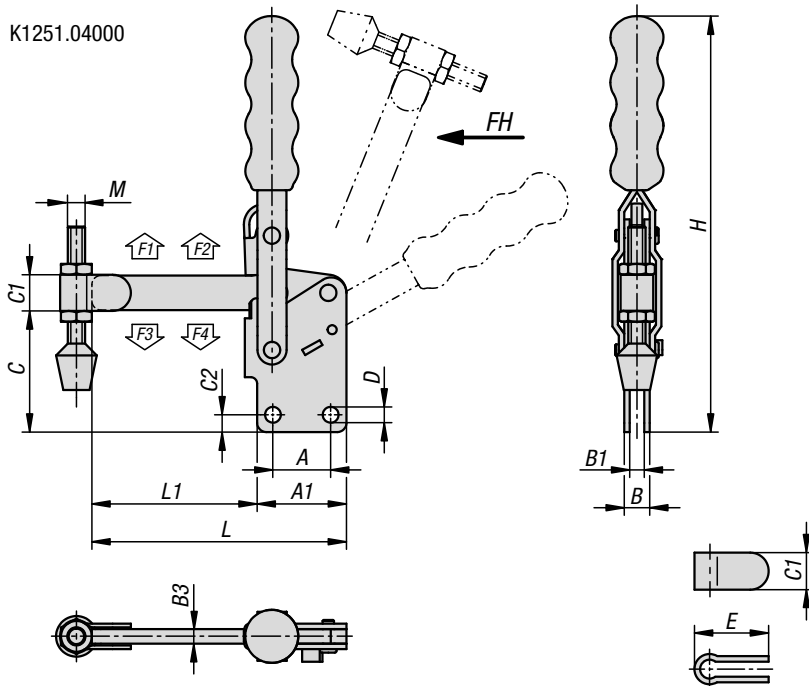
**Sample order:**  
K1251.04000

**Note:**  
The clamping spindle is supplied with a neoprene thrust pad.  
Spindle bracket is weldable.

**Accessories:**

- K0688
- K0689
- K0690
- K0101
- K1442
- K0102
- K0103
- K1443
- K0104
- K0106

K1251.04000



### KIPP Toggle clamps vertical with straight foot and full holding arm

Order No.	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K1251.02400	100°	56°	150	1200	2400	800	1600
K1251.04000	112°	61°	250	2000	4000	1400	3000

Order No.	A	A1	B	B1	B3	C	C1	C2	D	E	H	L	L1	M
K1251.02400	19	34,9	12	6	6	46,8	16	7,1	7,2	31	156	103,4	59,4	M8x63
K1251.04000	31,8	49,2	14	8	8	67,2	19	9,5	8,7	40	229	140,3	91,1	M10x85

## Toggle clamps vertical

heavy-duty with fixed clamping spindle

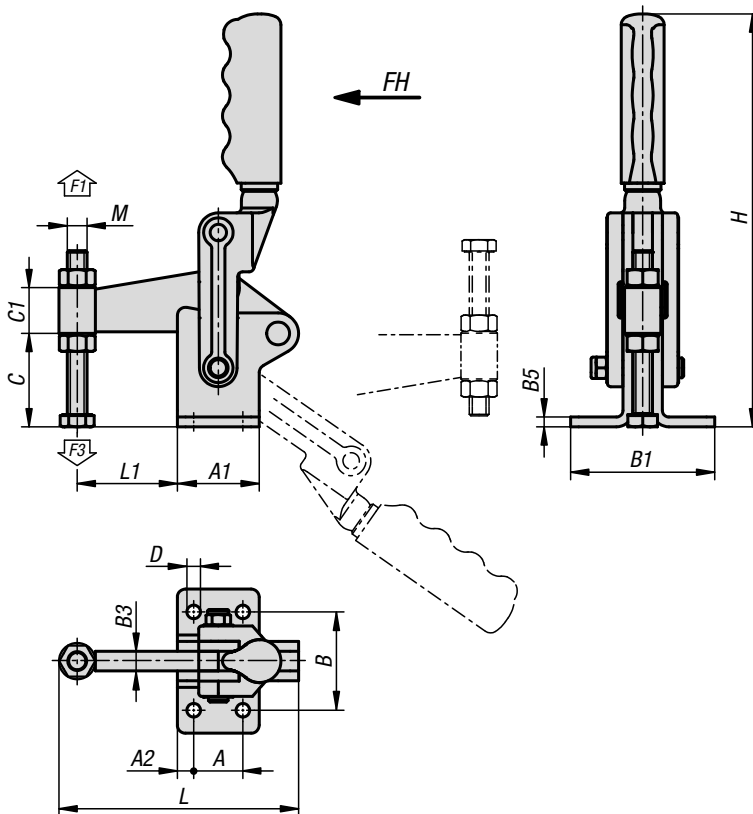


**Material:**  
Steel.

**Version:**  
Steel, hardened and passivated.  
Plastic handle, oil-resistant.

**Sample order:**  
K1253.012000

**Accessories:**  
K0688  
K0689  
K1442  
K0102  
K0103  
K0106



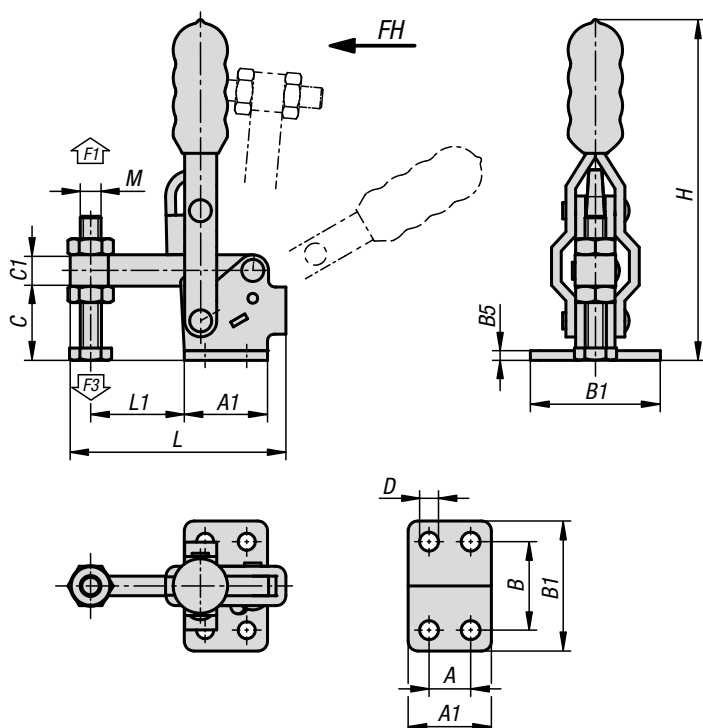
### KIPP Toggle clamps vertical heavy-duty with fixed clamping spindle

Order No.	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Clamping force F3 N
K1253.06000	180°	120°	300	6000	1200
K1253.012000	180°	125°	500	12000	1400
K1253.014000	195°	130°	500	14000	1850

Order No.	A	A1	A2	B	B1	B3	B5	C	C1	D	H	L	L1	M
K1253.06000	25	45	10	50	67	10	5	48	30	8,3	221	127,2	51,1	M12x100
K1253.012000	30	50	10	60	88	12	6	58	30	8,3	252	146,2	61,1	M12x100
K1253.014000	40	63	12	75	105	16	8	75	38	10,3	295	185,25	75	M16x150

## Toggle clamps mini vertical

with flat foot and fixed clamping spindle



**Material:**

Steel or stainless steel.

**Version:**

Electro zinc-plated steel.  
Bright stainless steel.  
Plastic handle, oil-resistant.

**Sample order:**

K1254.0800

**Note:**

A neoprene thrust pad is supplied with version K1254.0800.

**Accessories:**

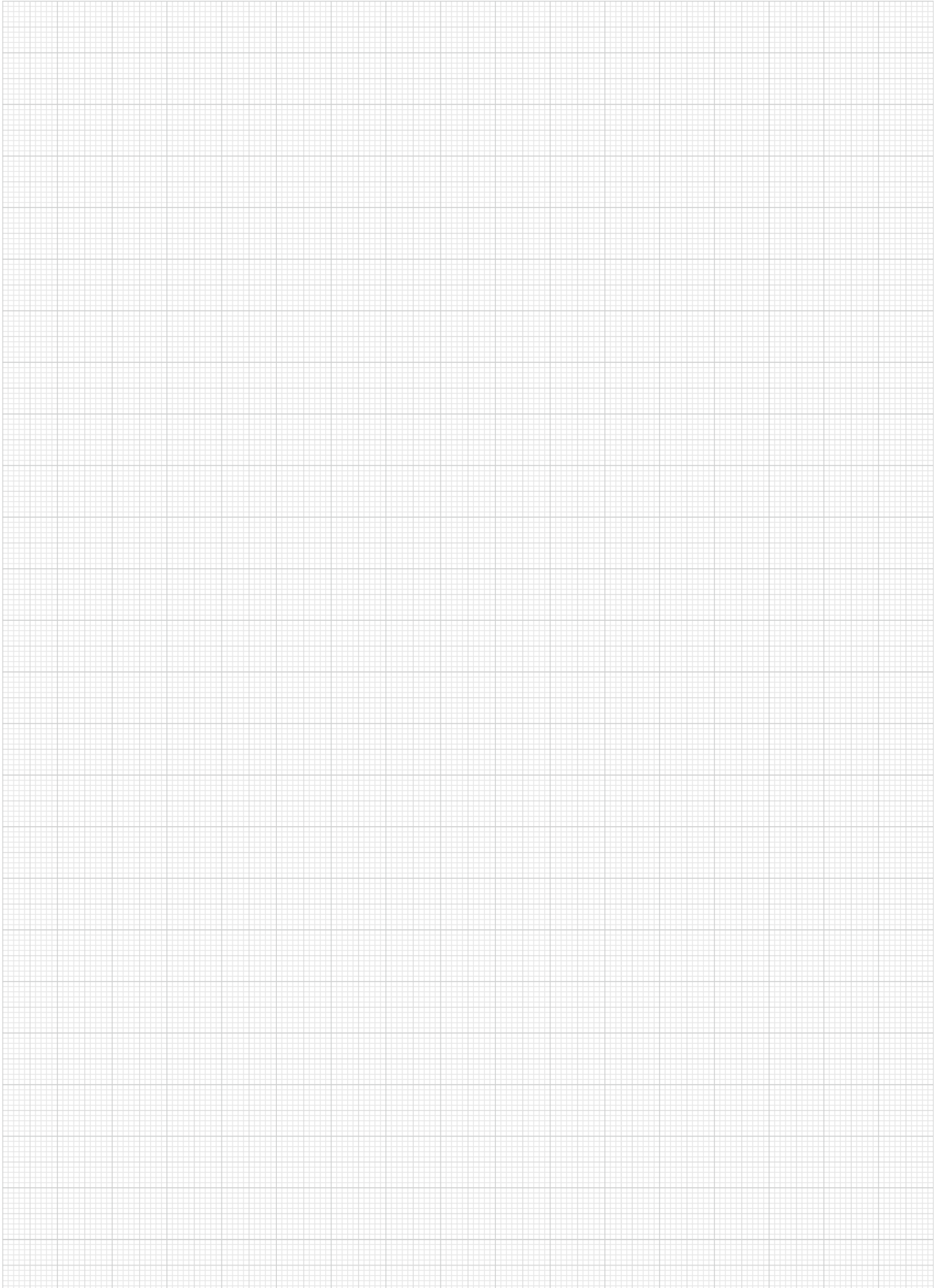
- K0688
- K0689
- K0101
- K1442
- K0102
- K0103
- K1443
- K0104
- K0106

### KIPP Toggle clamps mini vertical with flat foot and fixed clamping spindle

Order No.	Main material	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Clamping force F3 N
K1254.0800	steel	95°	60°	100	800	600
K1254.1800	stainless steel	95°	60°	100	800	600

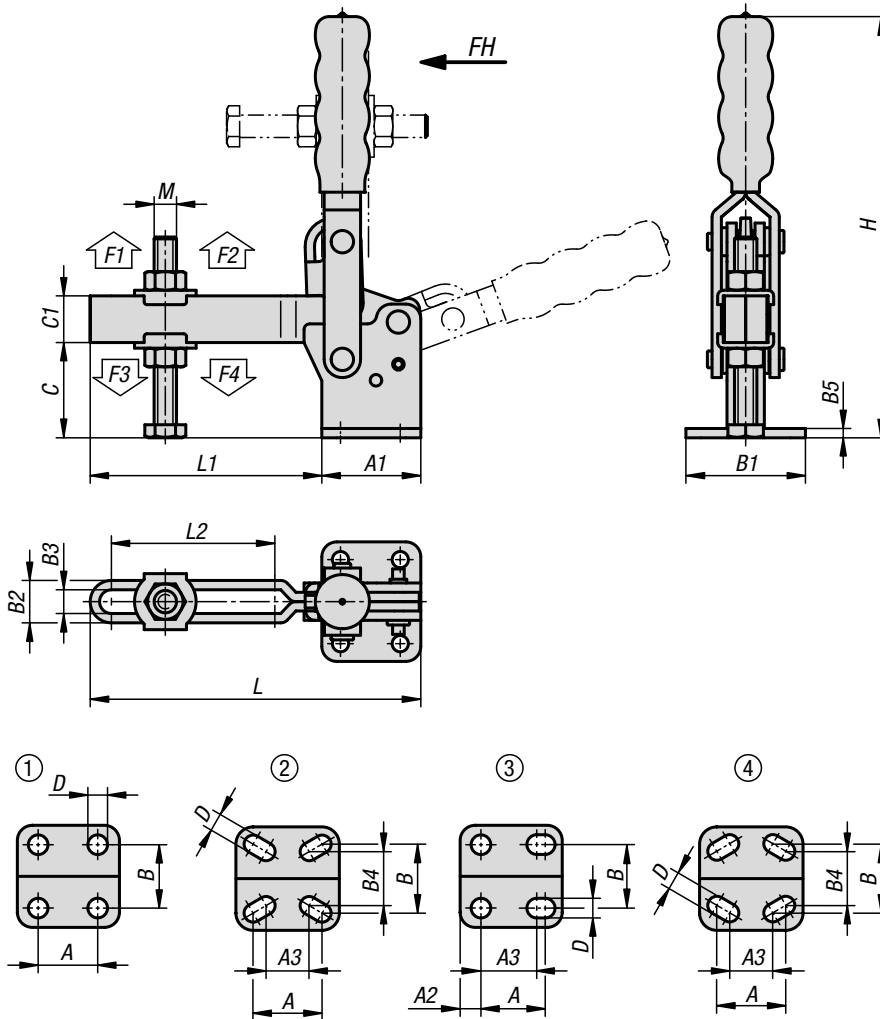
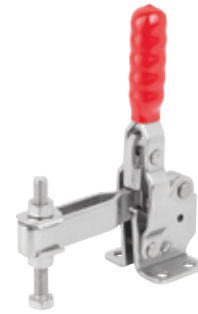
Order No.	Main material	A	A1	B	B1	B5	C	C1	D	H	L	L1	M
K1254.0800	steel	12,7	25,4	27	39,7	3	22,7	9,6	5,2	104	65,8	28,6	M6x44
K1254.1800	stainless steel	12,7	25,4	27	39,7	3	22,7	9,6	5,2	104	65,8	28,6	M6x40





## Toggle clamps vertical

with flat foot and adjustable clamping spindle



**Material:**

Steel or stainless steel.

**Version:**

Electro zinc-plated steel.  
Bright stainless steel.  
Plastic handle, oil-resistant.

**Sample order:**

K1255.001000

**Note:**

A neoprene thrust pad is supplied with versions K1255.001000, K1255.101000, K1255.001800, K1255.010001, K1255.001600, K1255.101600, K1255.002400 and K1255.004000.

**Accessories:**

- K0688
- K0689
- K0690
- K0101
- K1442
- K0102
- K0103
- K1443
- K0104
- K0106
- K1441
- K1431



# Toggle clamps vertical

with flat foot and adjustable clamping spindle



## KIPP Toggle clamps vertical with flat foot and adjustable clamping spindle

Order No.	Main material	hole arrangement	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K1255.001000	steel	1	120°	85°	50	700	1000	500	700
K1255.001800	steel	1	95°	60°	100	800	1800	600	1200
K1255.010001	steel	2	96°	69°	50	700	1000	500	800
K1255.001600	steel	1	95°	75°	100	1200	1600	800	1000
K1255.002000	steel	4	108°	70°	100	1000	2000	900	1200
K1255.002400	steel	1	100°	56°	150	1200	2400	800	1600
K1255.002600	steel	1	90°	70°	150	1000	2600	800	1600
K1255.004000	steel	1	112°	61°	250	2000	4000	1400	3000
K1255.040001	steel	1	90°	70°	250	2000	4000	1400	3000
K1255.007000	steel	1	90°	70°	250	3200	7000	1400	3000
K1255.003600	steel	3	106°	67°	100	1800	3600	900	1800
K1255.008000	steel	1	100°	50°	280	3000	8000	1800	3900
K1255.101000	stainless steel	1	120°	85°	50	700	1000	500	700
K1255.101800	stainless steel	1	95°	60°	100	800	1800	600	1200
K1255.101600	stainless steel	1	95°	75°	100	1200	1600	800	1000
K1255.102600	stainless steel	1	90°	70°	150	1000	2600	800	1600
K1255.102400	stainless steel	1	100°	56°	150	1200	2400	800	1600
K1255.104000	stainless steel	1	112°	61°	250	2000	4000	1400	3000

Order No.	Main material	A	A1	A2	A3	B	B1	B2	B3	B4	B5	C	C1	D	H	L	L1	L2	M
K1255.001000	steel	16	26	-	-	24	34	9,5	5,5	-	2	16	9	4,4	88	57	31	16,6	M5x35
K1255.001800	steel	12,7	25,4	-	-	27	39,7	13	7	-	3	22,7	9,5	5,2	104	64,7	33,7	19,9	M6x44
K1255.010001	steel	16	29	-	14	24	34	10	5	17,5	2,5	22	10	4,8	97	67	38	27,9	M5x35
K1255.001600	steel	12,7	27	-	-	26,8	37,8	12,2	6,2	-	3	23	11	5,2	125	70	43	24,9	M6x50
K1255.002000	steel	19	35	-	12,7	27	42	11	6	25	3	29	13	5,5	135	79	44	32,9	M6x50
K1255.002400	steel	19	34,9	-	-	31,8	46	14,3	8,3	-	3	31,8	16	7,2	141	117,2	73,2	49,4	M8x63
K1255.002600	steel	19	35	-	-	32	47	14,9	8,9	-	3	32	17,5	7,1	178	110,2	75,2	50,1	M8x60
K1255.004000	steel	31,8	49,2	-	-	45,3	64,3	19	11	-	3	44	19	8,7	206	139,5	90,3	63,5	M10x85
K1255.040001	steel	32	50	-	-	45	64	18,6	10,6	-	4	42	22	8,3	220,4	142,8	92,8	62,2	M10x80
K1255.007000	steel	32	53	-	-	45	64	22,7	12,7	-	5	51	25	8,7	226	177	124	90	M12x100
K1255.003600	steel	25	43	9	19	33,7	51,2	14,8	8,8	-	3	35	19	8	197	143	100	70	M8x60
K1255.008000	steel	50,8	76,2	-	-	69,8	95,2	26,5	16,5	-	8	82,1	31,8	12,3	303	229,2	153	105	M16x150
K1255.101000	stainless steel	16	26	-	-	24	34	9,5	5,5	-	2	16	9	4,4	88	57	31	16,6	M5x35
K1255.101800	stainless steel	12,7	25,4	-	-	27	39,7	13	7	-	3	22,7	9,5	5,2	104	64,7	33,7	19,9	M6x40
K1255.101600	stainless steel	12,7	27	-	-	26,8	37,8	12,2	6,2	-	3	23	11	5,2	125	70	43	24,9	M6x50
K1255.102600	stainless steel	19	35	-	-	32	47	14,9	8,9	-	3	32	17,5	7,1	178	110,2	75,2	50,1	M8x60
K1255.102400	stainless steel	19	34,9	-	-	31,8	46	14,3	8,3	-	3	31,8	16	7,2	141	117,2	73,2	49,4	M8x60
K1255.104000	stainless steel	31,8	49,2	-	-	45,3	64,3	19	11	-	3	44	19	8,7	206	139,5	90,3	63,5	M10x80

## Toggle clamps vertical

with flat foot and adjustable clamping spindle



**Material:**

Steel or stainless steel.

**Version:**

Electro zinc-plated steel.  
Bright stainless steel.  
Plastic handle, oil-resistant.

**Sample order:**

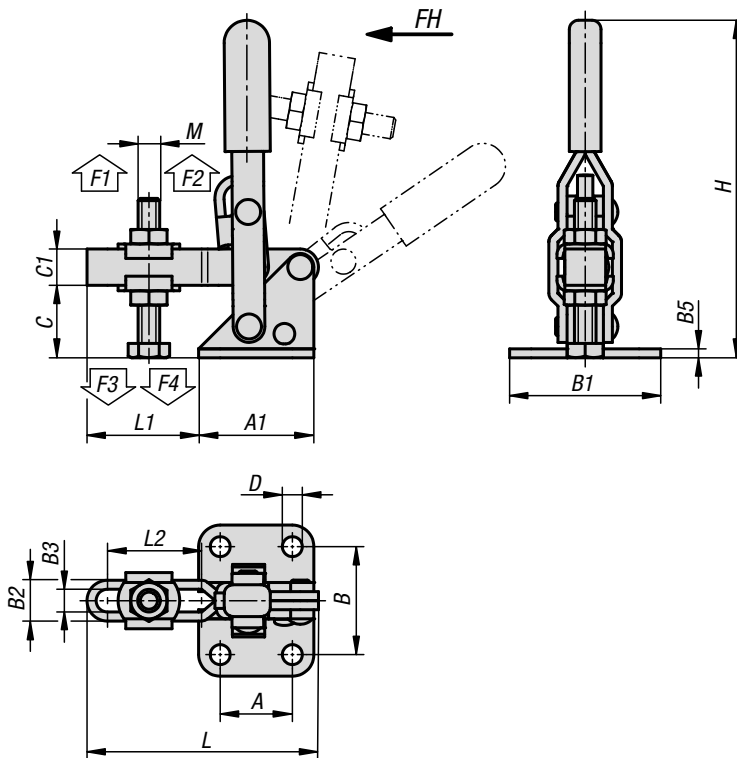
K1256.01000

**Note:**

A neoprene thrust pad is supplied with version K1256.01000.

**Accessories:**

- K0101
- K1442
- K0102
- K0103
- K1443
- K0106
- K1441



### KIPP Toggle clamps vertical with flat foot and adjustable clamping spindle

Order No.	Main material	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K1256.01000	steel	100°	56°	50	700	1000	500	700
K1256.11000	stainless steel	100°	56°	50	700	1000	500	700

Order No.	Main material	A	A1	B	B1	B2	B3	B5	C	C1	D	H	L	L1	L2	M
K1256.01000	steel	15,9	25,4	23,8	33,3	9	5	2	16	8	4,4	74,4	51	24,6	20,8	M5x37
K1256.11000	stainless steel	15,9	25,4	23,8	33,3	9	5	2	16	8	4,4	74,4	51	24,6	20,8	M5x30

## Toggle clamps vertical

with flat foot and adjustable clamping spindle



**Material:**

Steel or stainless steel.

**Version:**

Electro zinc-plated steel.  
Bright stainless steel.  
Plastic handle, oil-resistant.

**Sample order:**

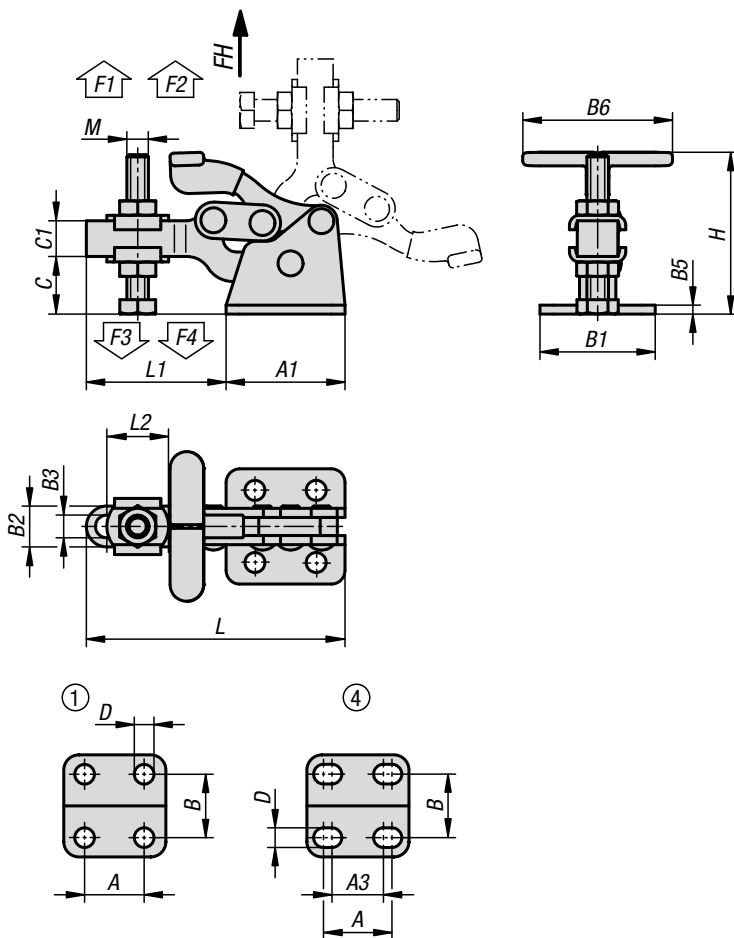
K1257.011200

**Note:**

A neoprene thrust pad is supplied with versions K1257.011200 and K1257.023400.

**Accessories:**

- K0688
- K0689
- K0690
- K0101
- K1442
- K0102
- K0103
- K1443
- K0104
- K0106
- K1441



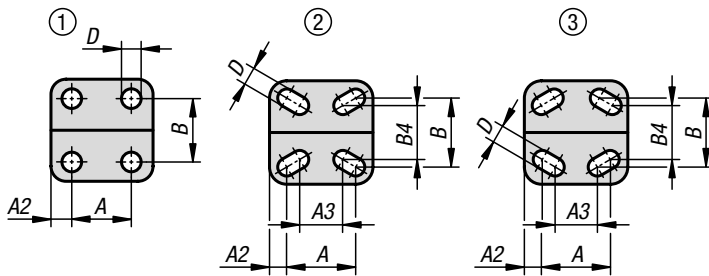
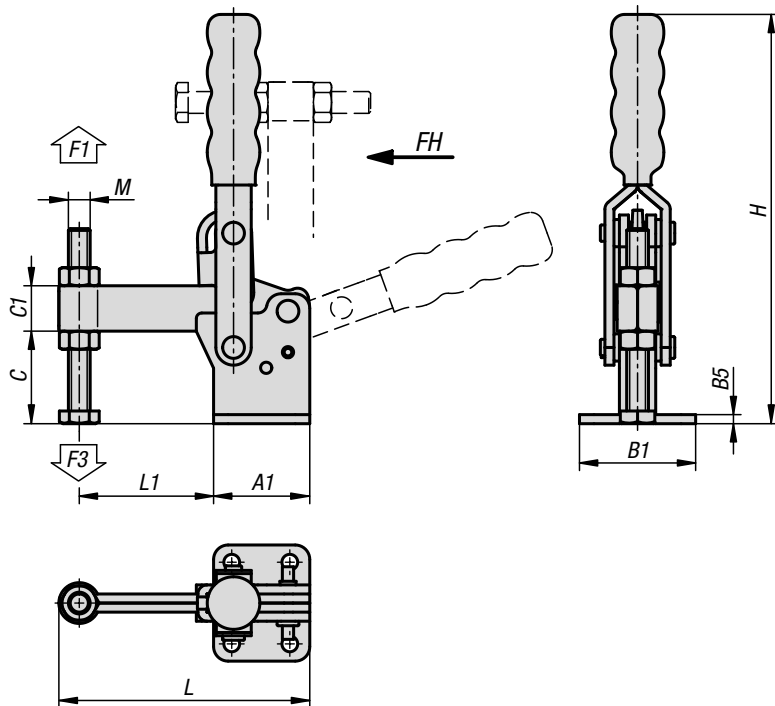
### KIPP Toggle clamps vertical with flat foot and adjustable clamping spindle

Order No.	Main material	hole arrangement	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K1257.011200	steel	1	90°	170°	50	800	1200	500	700
K1257.023400	steel	4	90°	170°	200	1400	3400	800	1800
K1257.111200	stainless steel	1	90°	170°	50	800	1200	500	700

Order No.	Main material	A	A1	A3	B	B1	B2	B3	B5	B6	C	C1	D	H	L	L1	L2	M
K1257.011200	steel	13,5	26,2	-	15,9	25,4	9	5	2	34	12,7	7,9	4,4	36	57	30,8	12,7	M5x37
K1257.023400	steel	39	64,3	31	38,1	62,7	18,3	10,3	3	70	33,3	19	7,9	91	131,8	67,5	28	M10x80
K1257.111200	stainless steel	13,5	26,2	-	15,9	25,4	9	5	2	34	12,7	7,9	4,4	36	57	30,8	12,7	M5x30

## Toggle clamps vertical

with flat foot and fixed clamping spindle



**Material:**  
Steel.

**Version:**  
Trivalent passivated.  
Clamping spindle and nuts phosphated.  
Plastic grip oil-resistant.

**Sample order:**  
K1438.00800

**Note:**  
A neoprene thrust pad is supplied with version  
K1438.00800.

**Accessories:**

- K0688
- K0689
- K0690
- K0101
- K1442
- K0102
- K0103
- K1443
- K0104
- K0106
- K1431



### KIPP Toggle clamps vertical with flat foot and fixed clamping spindle

Order No.	hole arrangement	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Clamping force F3 N
K1438.00800	2	96°	69°	50	800	600
K1438.01500	3	108°	70°	100	1500	1000
K1438.02400	1	90°	70°	150	2400	1200
K1438.03400	1	90°	70°	200	3400	1600
K1438.04400	1	90°	70°	250	4400	1600
K1438.05400	1	100°	50°	280	5400	1800

Order No.	A	A1	A2	A3	B	B1	B4	B5	C	C1	D	H	L	L1	M
K1438.00800	16	29	6,5	14	24	34	17,5	2,5	21,8	10,5	4,8	97	66,7	31,5	M5x35
K1438.01500	19	35	8	12,7	27	42	25	3	29	13	5,5	135	75,7	35	M6x50
K1438.02400	19	35	8	-	32	47	-	3	32	17,5	7,1	178	87,7	40	M08x65
K1438.03400	32	50	9	-	45	64	-	4	42	22	8,3	218	124,3	65	M10x80
K1438.04400	32	53	10	-	45	64	-	5	51	25	8,7	226	138,3	74	M12x100
K1438.05400	50,8	76,2	12,7	-	69,8	95,2	-	8	82,1	31,8	12,3	303	197,5	107,8	M16x150

## Toggle clamps vertical

with flat foot and full holding arm



**Material:**  
Steel.

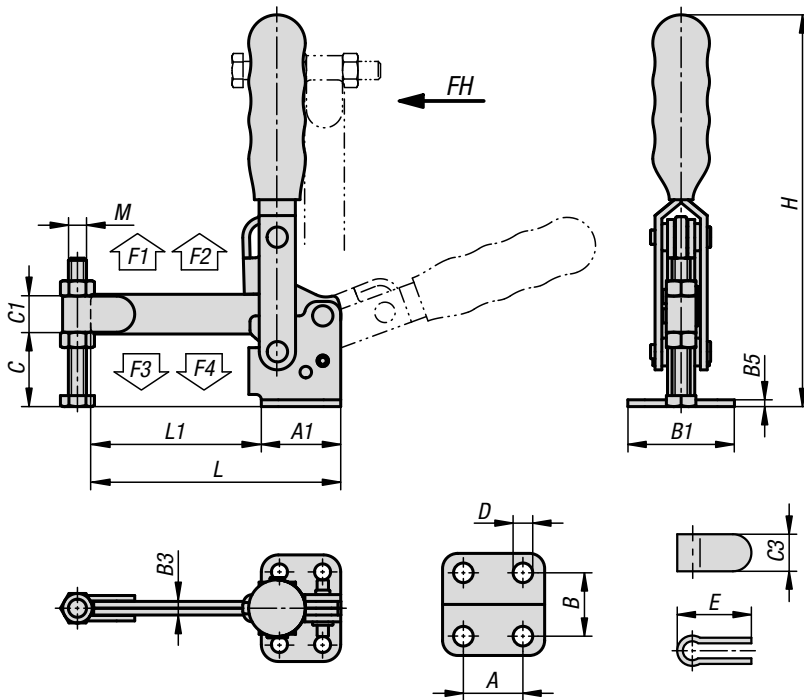
**Version:**  
Electro zinc-plated steel.  
Plastic handle, oil-resistant.

**Sample order:**  
K1258.04000

**Note:**  
A neoprene thrust pad is supplied with version K1258.04000. spindle bracket weldable.

**Accessories:**

- K0688
- K0689
- K0690
- K0101
- K1442
- K0102
- K0103
- K1443
- K0104
- K0106
- K1431



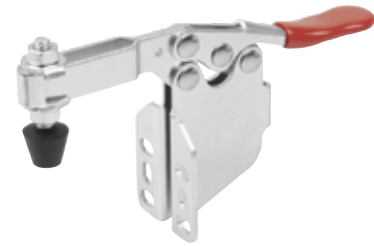
### KIPP Toggle clamps vertical with flat foot and full holding arm

Order No.	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K1258.02600	90°	70°	150	1000	2600	800	1600
K1258.04000	112°	61°	250	2000	4000	1400	3000
K1258.04400	90°	70°	200	2200	4400	1400	2800
K1258.07000	90°	70°	250	3200	7000	1400	3000
K1258.08000	100°	50°	280	3000	8000	1800	3900

Order No.	A	A1	B	B1	B3	B5	C	C1	C3	D	E	H	L	L1	M
K1258.02600	19	35	32	47	6	3	32	17,5	16	7,1	31	173	111,9	73,9	M8x60
K1258.04000	31,8	49,2	45,3	64,3	8	3	44	19	20	8,7	40	206	140,3	91,1	M10x85
K1258.04400	32	50	45	64	8	4	42	22	20	8,3	40	218	148	98	M10x80
K1258.07000	32	53	45	64	10	5	51	25	23	8,7	44	226	178	128	M12x100
K1258.08000	50,8	76,2	69,8	95,2	10	8	82,1	31,8	32	12,3	50	303	234	157,8	M16x150

## Toggle clamp horizontal

with angled foot and adjustable clamping spindle

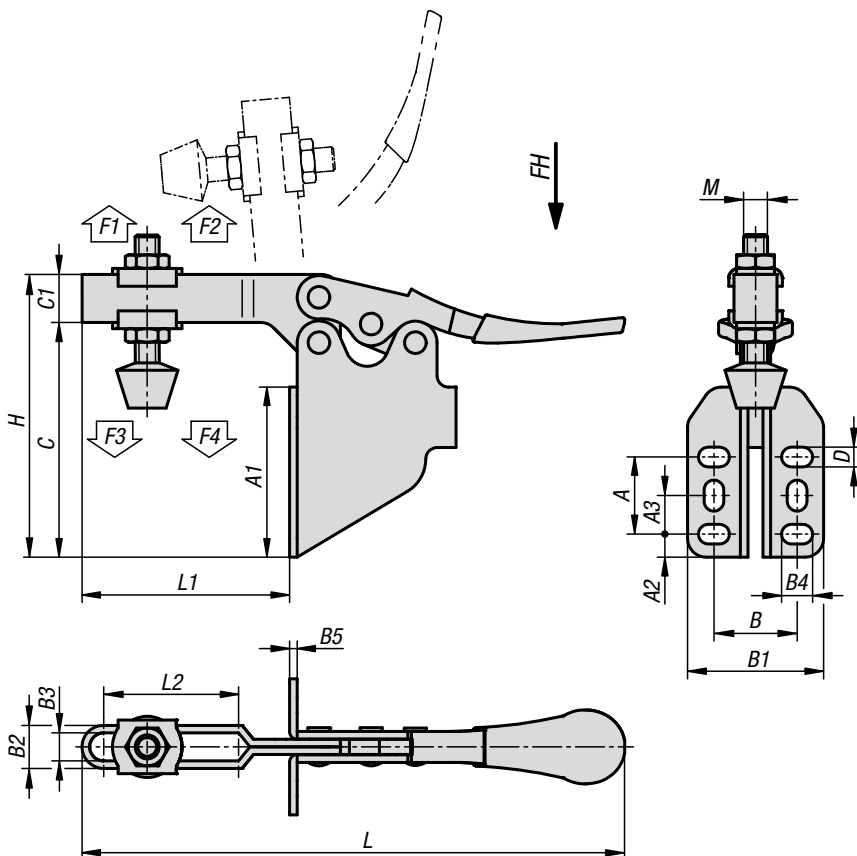


**Material:**  
Steel.

**Version:**  
Electro zinc-plated steel.  
Plastic handle, oil-resistant.

**Sample order:**  
K1542.01200

**Note:**  
The clamping spindle is supplied with a neoprene thrust pad.



### KIPP Toggle clamp horizontal with angled foot and adjustable clamping spindle

Order No.	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K1542.01200	85°	73°	100	600	1200	300	700
K1542.02800	90°	65°	160	1200	2800	600	1000

Order No.	A	A1	A2	A3	B	B1	B2	B3	B4	B5	C	C1	D	H	L	L1	L2	M
K1542.01200	20,4	45	6,1	10,2	22	36	11,4	7,4	8,2	2	62,1	12,7	5,2	74,8	143,5	54,9	35,6	M6x44
K1542.02800	21,4	40	5,9	10,7	27,6	42,4	14,7	8,7	9,7	3	67,2	12,7	6,7	79,9	173	68	39,1	M8x63



## Toggle clamps vertical

with angled foot and adjustable clamping spindle



**Material:**  
Steel.

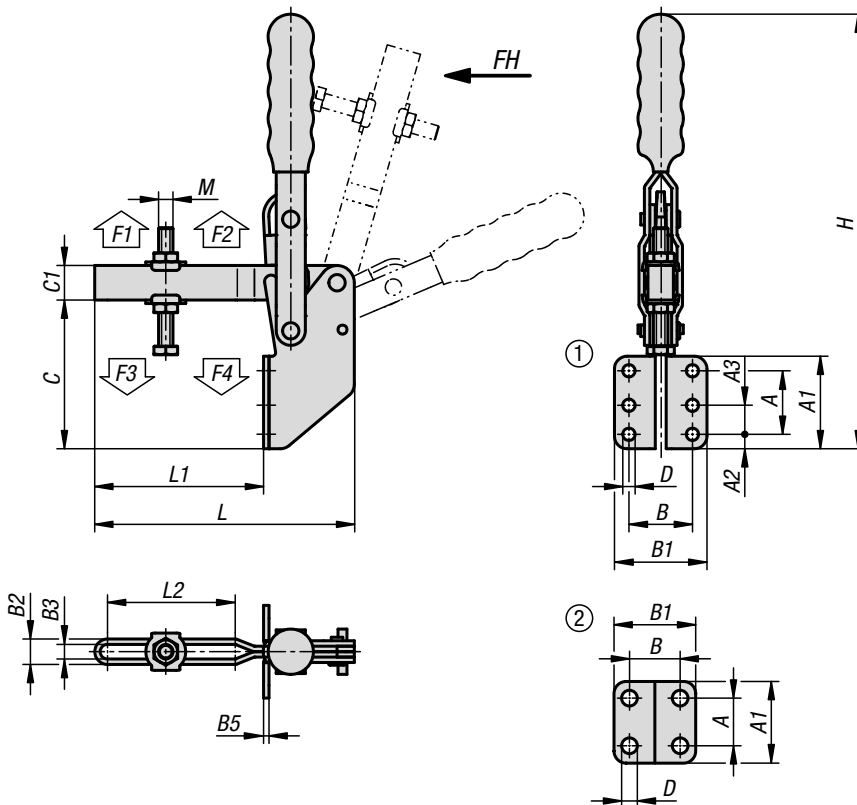
**Version:**  
Electro zinc-plated steel.  
Plastic handle, oil-resistant.

**Sample order:**  
K1259.01000

**Note:**  
A neoprene thrust pad is supplied with versions K1259.01000 and K1259.02000.

**Accessories:**

- K0688
- K0689
- K0690
- K0101
- K1442
- K0102
- K0103
- K1443
- K0104
- K0106
- K1441



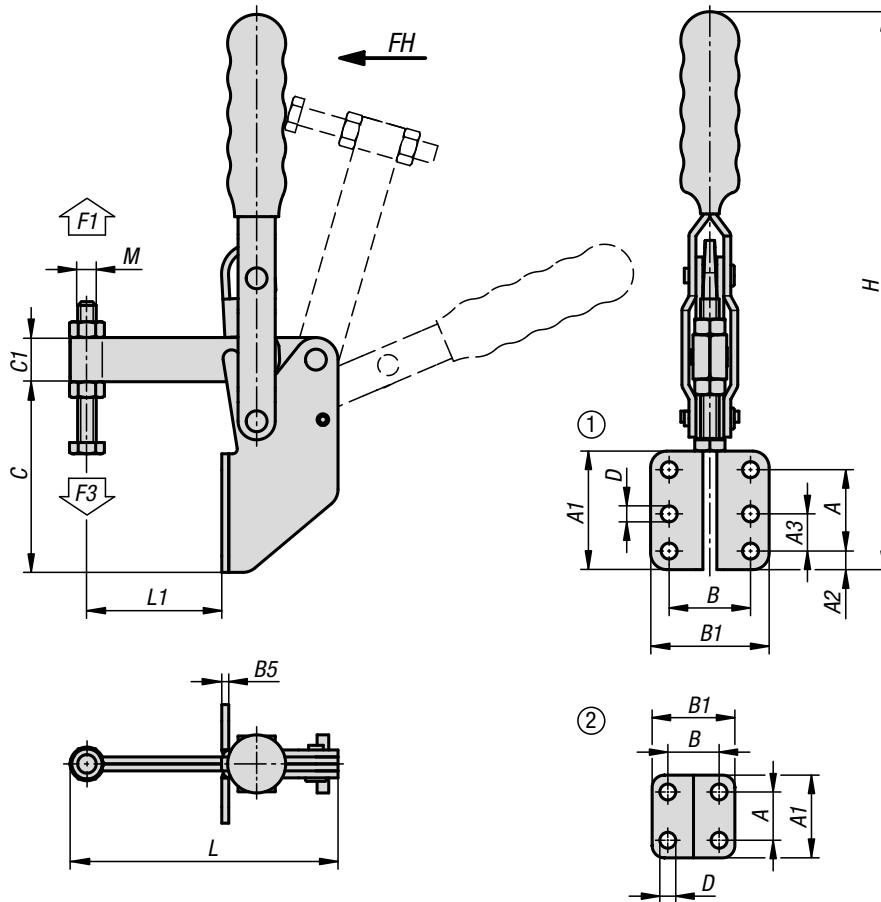
### KIPP Toggle clamps vertical with angled foot and adjustable clamping spindle

Order No.	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K1259.01000	96°	69°	50	700	1000	500	800
K1259.02000	108°	70°	100	1000	2000	900	1300
K1259.03600	106°	67°	100	1800	3600	900	1800

Order No.	A	A1	A2	A3	B	B1	B2	B3	B5	C	C1	D	H	L	L1	L2	M
K1259.01000	14	29	-	-	17,5	28	10	5	2,5	44	10	4,9	121	67	31	26	M5x35
K1259.02000	19	35	-	-	26	42	11	6	3	64	13	5,5	170	79	35	29,5	M6x50
K1259.03600	35	51	8	16	35	51	14,8	8,8	3	82	19	6,8	244	143	93	70	M8x60

## Toggle clamps vertical

with angled foot and fixed clamping spindle



**Material:**  
Steel.

**Version:**  
Trivalent passivated.  
Clamping spindle and nuts phosphated.  
Plastic grip oil-resistant.

**Sample order:**  
K1436.00800

**Note:**  
A neoprene thrust pad is supplied with versions K1436.00800 and K1436.01600.

**Accessories:**

- K0688
- K0689
- K0690
- K0101
- K1442
- K0102
- K0103
- K1443
- K0104
- K0106



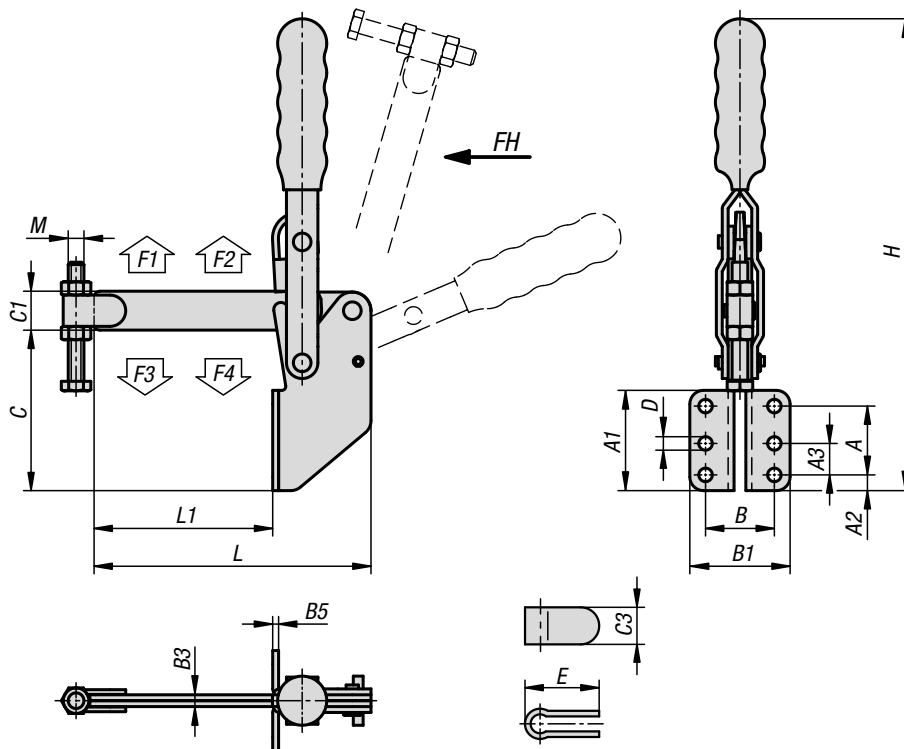
### KIPP Toggle clamps vertical with angled foot and fixed clamping spindle

Order No.	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Clamping force F3 N
K1436.00800	96°	69°	50	800	600
K1436.01600	108°	70°	100	1600	1100
K1436.03000	106°	67°	100	3000	1100

Order No.	A	A1	A2	A3	B	B1	B5	C	C1	D	H	L	L1	M
K1436.00800	14	29	-	-	17,5	28	2,5	44	10	4,9	121	65,65	24,5	M5x35
K1436.01600	19	35	-	-	26	42	3	64	13	5,5	170	75,7	26	M6x50
K1436.03000	35	51	8	16	35	51	3	82	19	6,8	244	115,3	58	M8x60

## Toggle clamps vertical

with angled foot and full holding arm



**Material:**  
Steel.

**Version:**  
Electro zinc-plated steel.  
Plastic handle, oil-resistant.

**Sample order:**  
K1437.03600

**Note:**  
spindle bracket weldable.

**Accessories:**  
K0688  
K0689  
K0690  
K0101  
K1442  
K0102  
K0103  
K1443  
K0104  
K0106

### KIPP Toggle clamps vertical with angled foot and full holding arm

Order No.	Opening angle of holding arm	Opening angle of handle	Hand force FH N	Retaining force F1 N	Retaining force F2 N	Clamping force F3 N	Clamping force F4 N
K1437.03600	106°	67°	100	2000	3600	900	1800

Order No.	A	A1	A2	A3	B	B1	B3	B5	C	C1	C3	D	E	H	L	L1	M
K1437.03600	35	51	8	16	35	51	6	3	82	19	16	6,8	31	244	143	93	M8x60

## Toggle clamps latch horizontal

with catch plate



**Material:**

Steel or stainless steel.

**Version:**

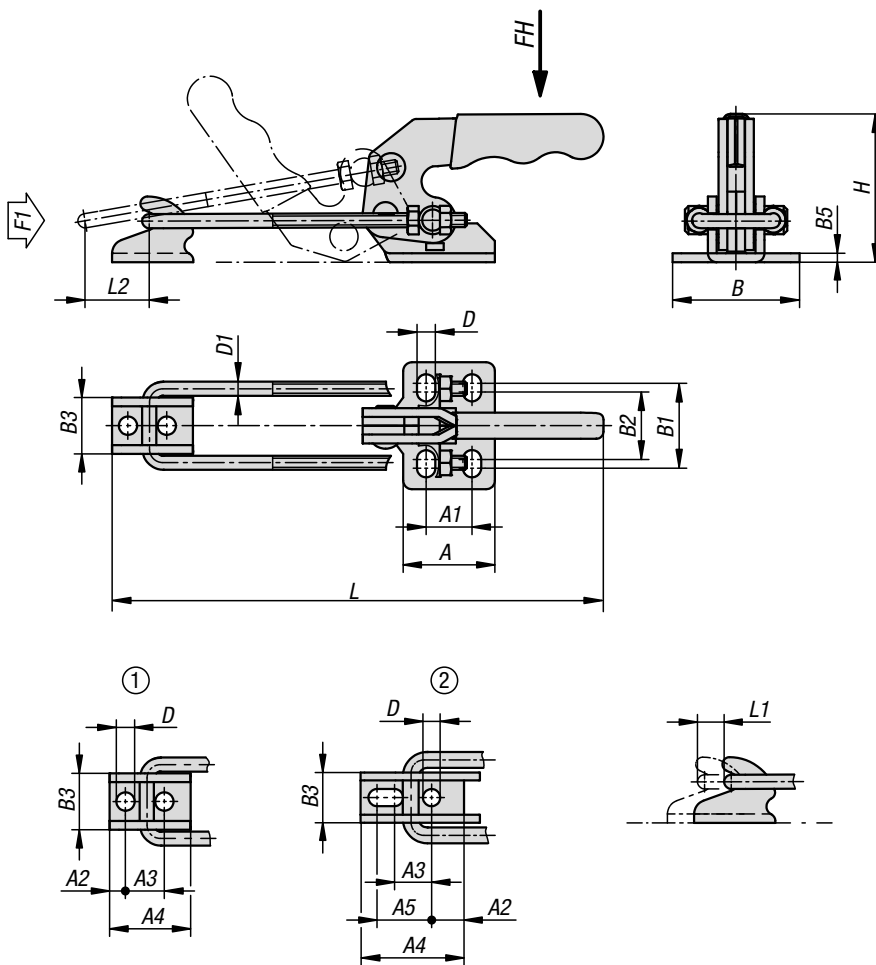
Electro zinc-plated steel.  
Bright stainless steel.  
Plastic handle, oil-resistant.

**Sample order:**

K1260.02000

**Note:**

Latch toggle clamps are especially suitable for quickly closing and locking covers and hatches.  
The travel can be set by altering the hasp length.

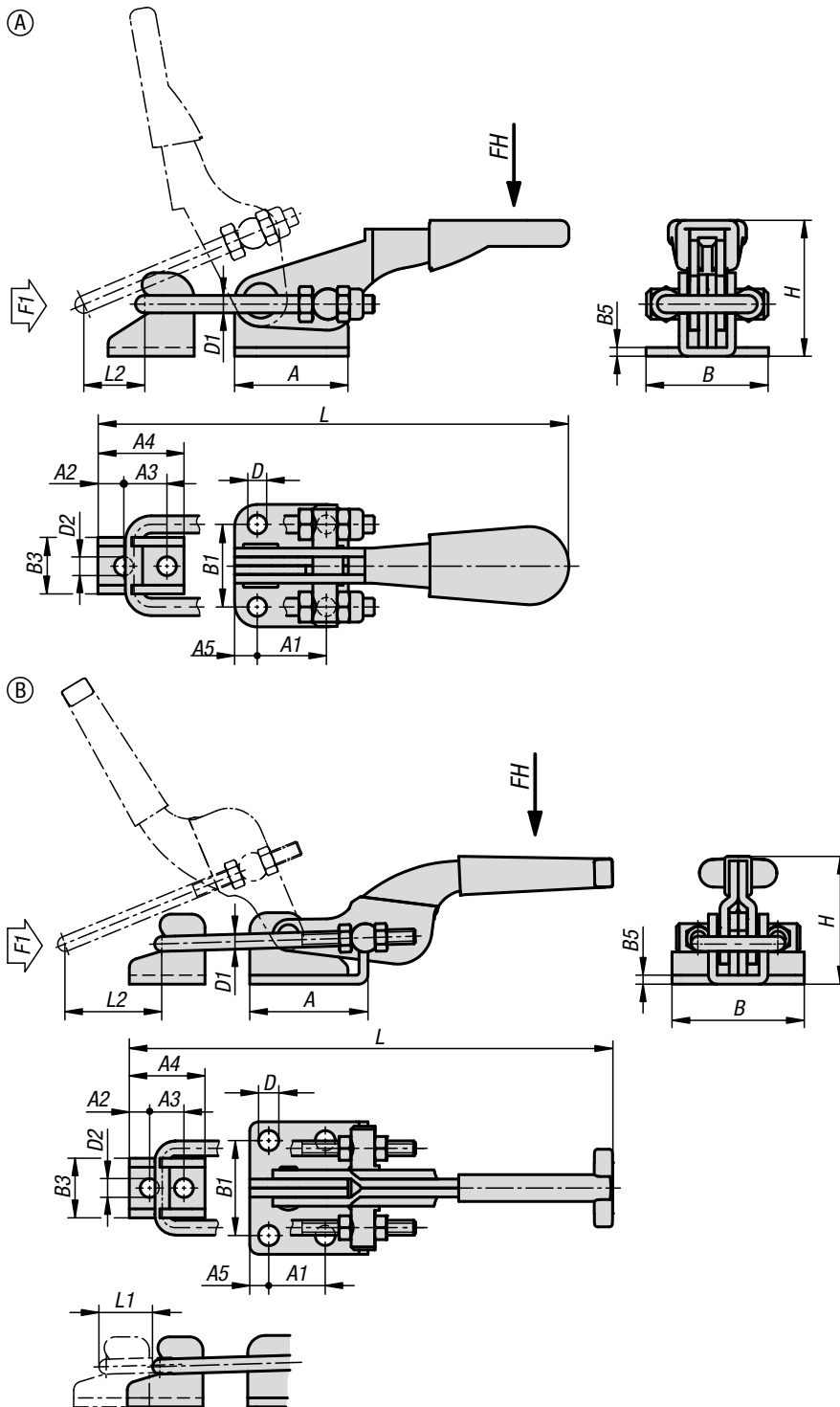


### KIPP Toggle clamps latch horizontal with catch plate

Order No.	Main material	hole arrangement	Traction force F1 N	Hand force FH N	A	A1	A2	A3	A4	A5	B	B1	B2	B3	B5	D	D1	H	Travel path L min.	Travel path L max.	L1	Clamping travel L2
K1260.02000	steel	1	2000	100	26	13	4,5	11	23	-	36	24	19	16	2,5	5,2	4	42	101,7	142,3	40,6	16
K1260.04000	steel	2	4000	150	35	19	12,2	14	39,1	20,6	48	32	24,8	19	3	6,5	6	60,5	142,4	192,2	49,8	24
K1260.07000	steel	1	7000	200	51	32	8	19	40	-	60	45	36	28	4	8,5	8	85,6	177,7	234	56,3	32
K1260.12000	stainless steel	1	2000	100	26	13	4,5	11	23	-	36	24	19	16	2,5	5,2	4	42	101,7	142,3	40,6	16
K1260.14000	stainless steel	2	4000	150	35	19	12,2	14	39,1	20,6	48	32	24,8	19	3	6,5	6	60,5	142,4	192,2	49,8	24
K1260.17000	stainless steel	1	7000	200	51	32	8	19	40	-	64	45	36	28	4	8,6	8	76,6	177,7	234	56,3	32

## Toggle clamps latch horizontal

with catch plate



**Material:**  
Steel or stainless steel.

**Version:**  
Electro zinc-plated steel.  
Bright stainless steel.  
Plastic handle, oil-resistant.

**Sample order:**  
K1261.03000

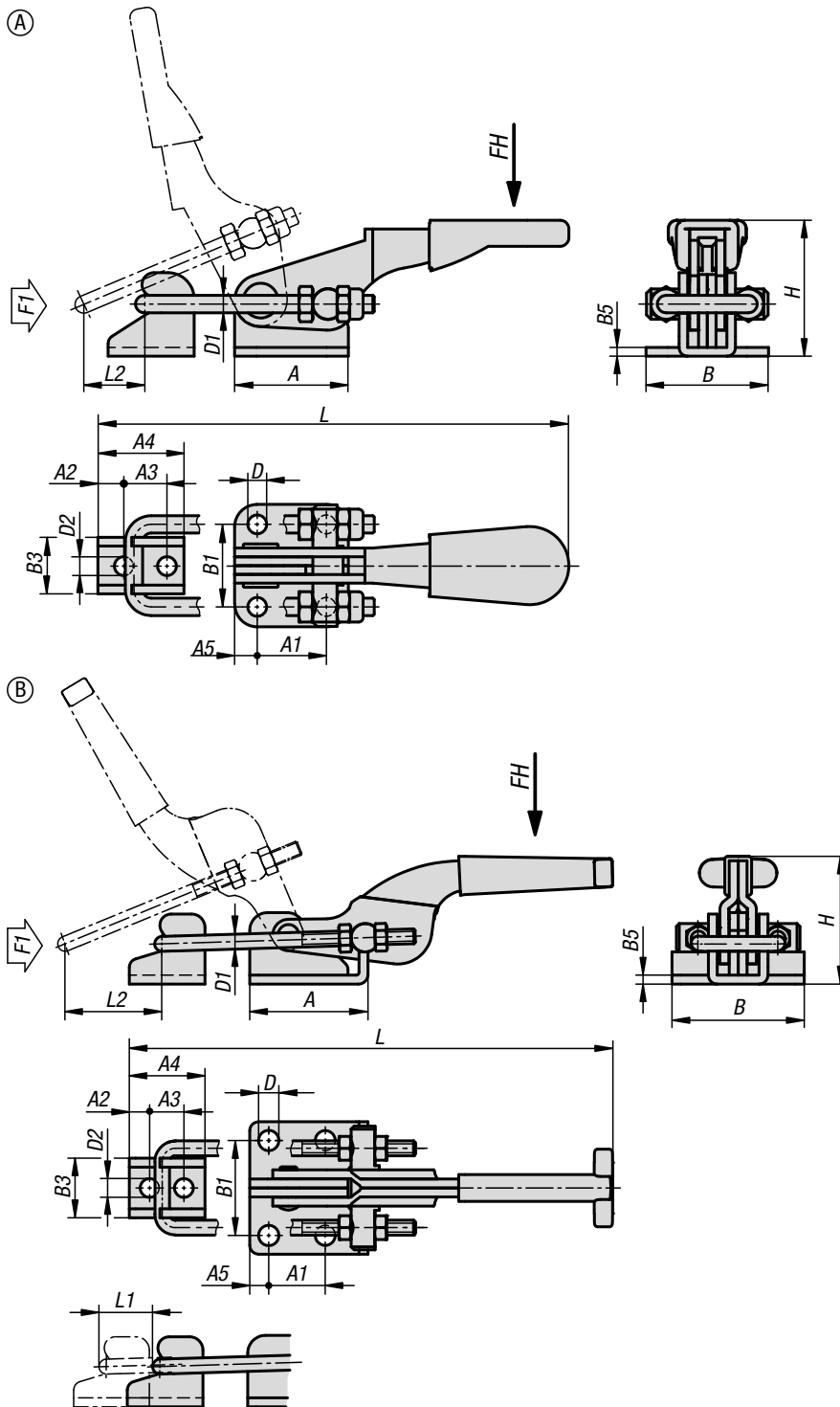
**Note:**  
Latch toggle clamps are especially suitable for quickly closing and locking covers and hatches.  
The travel can be set by altering the hasp length.

### KIPP Toggle clamps latch horizontal with catch plate

Order No.	Main material	Form	Hand force FH N	Traction force F1 N	A	A1	A2	A3	A4	A5	B	B1	B3	B5	D	D1	D2	H	Travel path L min.	Travel path L max.	L1	Clamping travel L2
K1261.01600	steel	A	100	1600	26,2	15,9	6	9,9	19,8	5,2	28,2	19	13	2	4,4	4	4,4	31,3	82,5	112,5	10,4	30
K1261.11600	stainless steel	A	100	1600	26,2	15,9	6	9,9	19,8	5,2	28,2	19	13	2	4,4	4	4,4	31,3	82,5	112,5	10,4	30
K1261.03000	steel	B	150	3000	39,7	19	6,8	11,5	25,4	6,4	44,4	31,8	20	3	6,7	5	6,3	42	148,7	170,3	21,6	45
K1261.07000	steel	B	200	7000	60,3	41,3	9,5	19,1	38,1	9,5	54	38,1	30,2	4	8,6	8	8,5	76,1	209,1	232,8	23,7	75
K1261.13000	stainless steel	B	150	3000	39,7	19	6,8	11,5	25,4	6,4	44,4	31,8	20	3	6,7	5	6,3	42	148,7	170,3	21,6	45
K1261.17000	stainless steel	B	200	7000	60,3	41,3	9,5	19,1	38,1	9,5	54	38,1	30,2	4	8,6	8	8,5	76,1	209,1	232,8	23,7	75

## Toggle clamps latch horizontal

heavy-duty with catch plate



**Material:**  
Steel. Body and catch plate cast steel.  
Grip ductile iron (SGI).

**Version:**  
Trivalent passivated.  
Plastic grip oil-resistant.

**Sample order:**  
K1262.020000

**Note:**  
Horizontal latch toggle clamps are especially suitable for quickly closing and locking covers and hatches. The travel can be set by altering the hasp length.

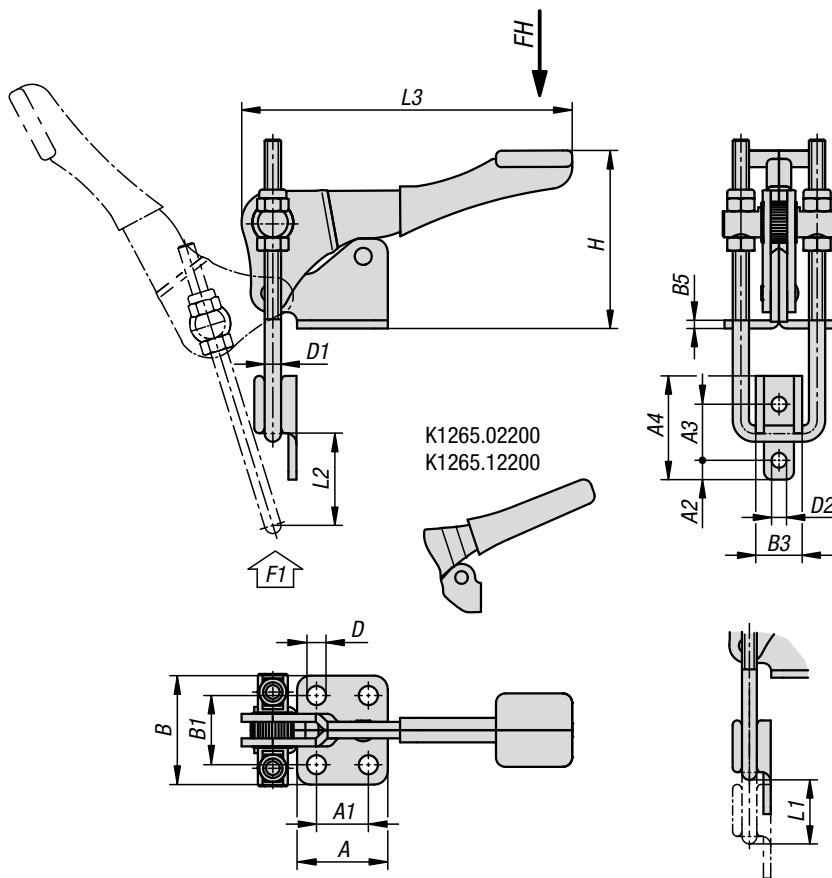
### KIPP Toggle clamps, latch, horizontal, heavy-duty with catch plate

Order No.	Opening angle of handle	Hand force FH N	Traction force F1 N	Retaining force F2 N	Travel path L min.	Travel path L max.	Travel path L1 min.	Travel path L1 max.	Clamping travel L2
K1262.020000	138°	600	16500	20000	270	320	38	88	60
K1262.040000	120°	600	19000	40000	335	395	52	112	70

Order No.	A	A1	A2	A3	A4	B	B1	B3	B5	D	D1	H	T
K1262.020000	59,5	24	37	18	65	74	50	28	10	10,4	10	114,3	27
K1262.040000	82	36	44	22	78	84	56	34	12	12,4	12	131	33,5

## Toggle clamps latch vertical

with catch plate



**Material:**

Steel or stainless steel.

**Version:**

Electro zinc-plated steel.  
Bright stainless steel.  
Plastic handle, oil-resistant.

**Sample order:**

K1265.02200

**Note:**

Latch toggle clamps are especially suitable for quickly closing and locking covers and hatches. The travel can be set by altering the hasp length.

### KIPP Toggle clamps latch vertical with catch plate

Order No.	Main material	Hand force FH N	Traction force F1 N	A	A1	A2	A3	A4	B	B1	B3	B5	D	D1	D2	H	L1	Clamping travel L2	L3
K1265.02200	steel	100	2200	26	13	4	14,3	25,4	35	22	13,5	2	5,3	4	4,4	55	12,2	38	81
K1265.04500	steel	150	4500	33,3	19,1	7,1	20,6	38,1	40	25,4	17	3	7,1	6	5,6	65,4	20,3	50	121,5
K1265.07000	steel	200	9000	47,6	31,8	9,5	27	54	53	36,5	30	4	8,7	8	8,7	85,5	29,4	63	132,4
K1265.12200	stainless steel	100	2200	26	13	4	14,3	25,4	35	22	13,5	2	5,3	4	4,4	55	12,2	38	81
K1265.14500	stainless steel	150	4500	33,3	19,1	7,1	20,6	38,1	40	25,4	17	3	7,1	6	5,6	65,4	20,3	50	121,5
K1265.17000	stainless steel	200	9000	47,6	31,8	9,5	27	54	53	36,5	30	4	8,7	8	8,7	92	29,4	63	132,4

## Toggle clamps latch horizontal

heavy-duty with catch plate



**Material:**

Steel or stainless steel.

**Version:**

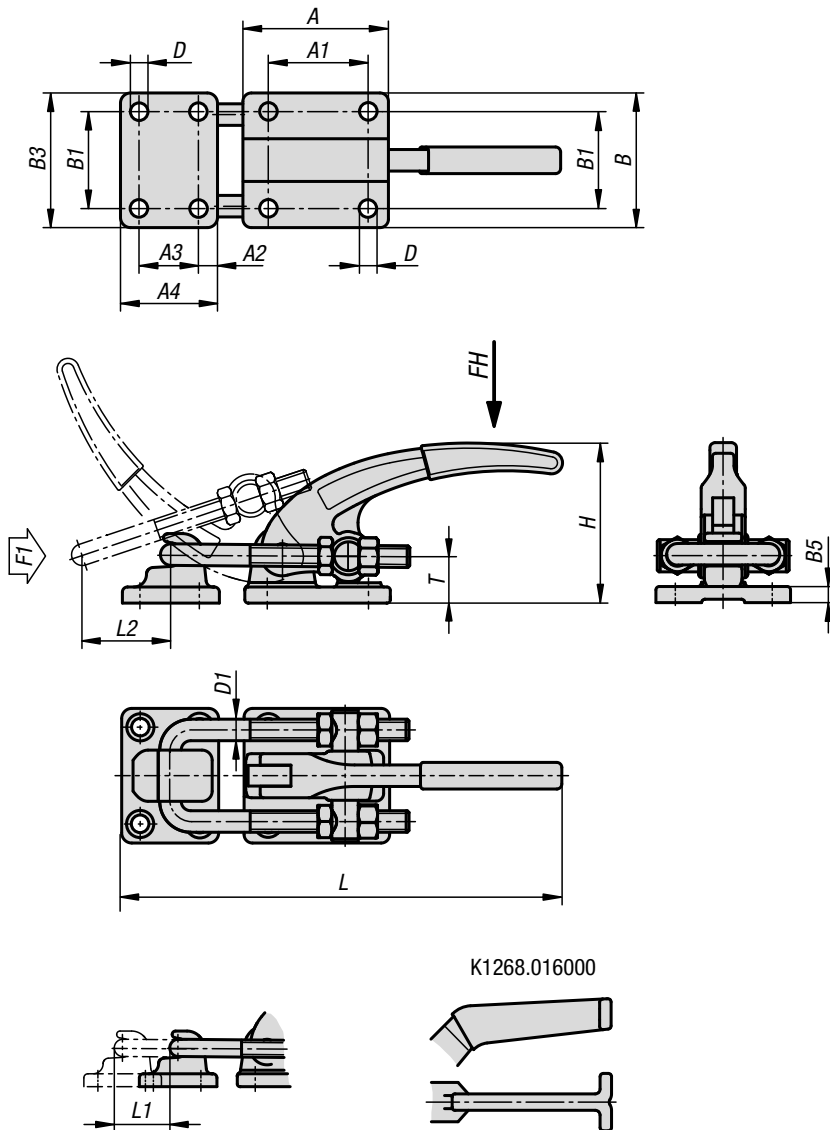
Electro zinc-plated steel.  
Bright stainless steel.  
Plastic handle, oil-resistant.

**Sample order:**

K1268.016000

**Note:**

Latch toggle clamps are especially suitable for quickly closing and locking covers and hatches.  
The travel can be set by altering the hasp length.



K1268.016000

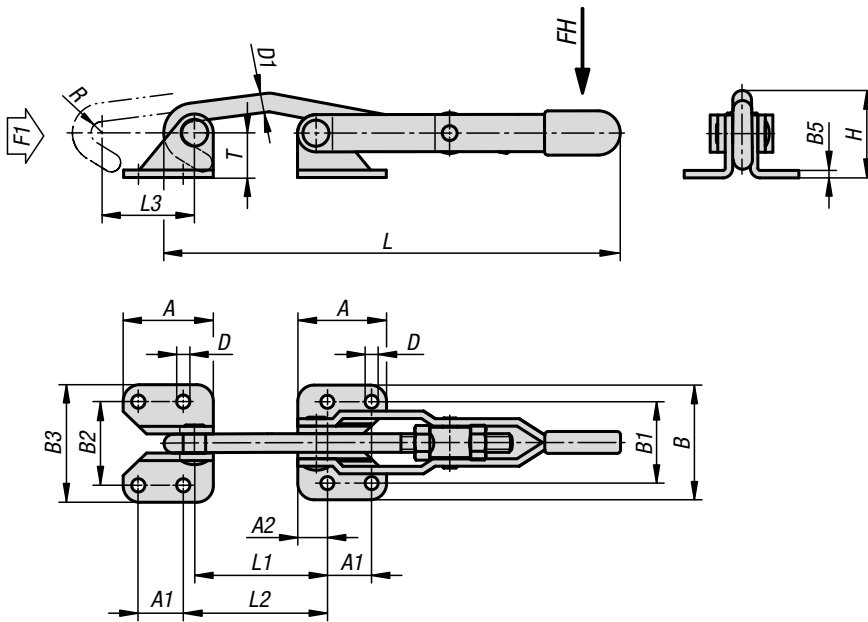
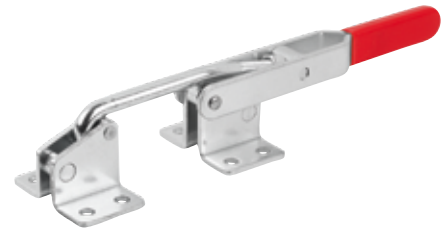
### KIPP Toggle clamps, latch, horizontal, heavy-duty with catch plate

Order No.	Main material	Hand force FH N	Traction force F1 N	A	A1	A2	A3	A4	B	B1	B3	B5	D	D1	H	Travel path L min.	Travel path L max.	L1	Clamping travel L2	T
K1268.016000	steel	300	16000	85,8	57,2	-	34,9	57,2	79,4	57,2	80,5	9,6	10,3	9,6	95,5	274,5	297,3	22,8	87	28,6
K1268.030000	steel	500	30000	85,8	57,2	11,2	34,9	57,2	79,4	57,2	80,5	9,6	10,3	12,7	93,8	249,6	278	28,4	50	28,6
K1268.130000	stainless steel	500	30000	85,8	57,2	11,2	34,9	57,2	79,4	57,2	80,5	9,6	10,3	12,7	93,8	249,6	278	28,4	50	28,6



## Toggle clamps hook horizontal

with catch plate



**Material:**

Steel or stainless steel.

**Version:**

Electro zinc-plated steel.  
Bright stainless steel.  
Plastic handle, oil-resistant.

**Sample order:**

K1270.02500

**Note:**

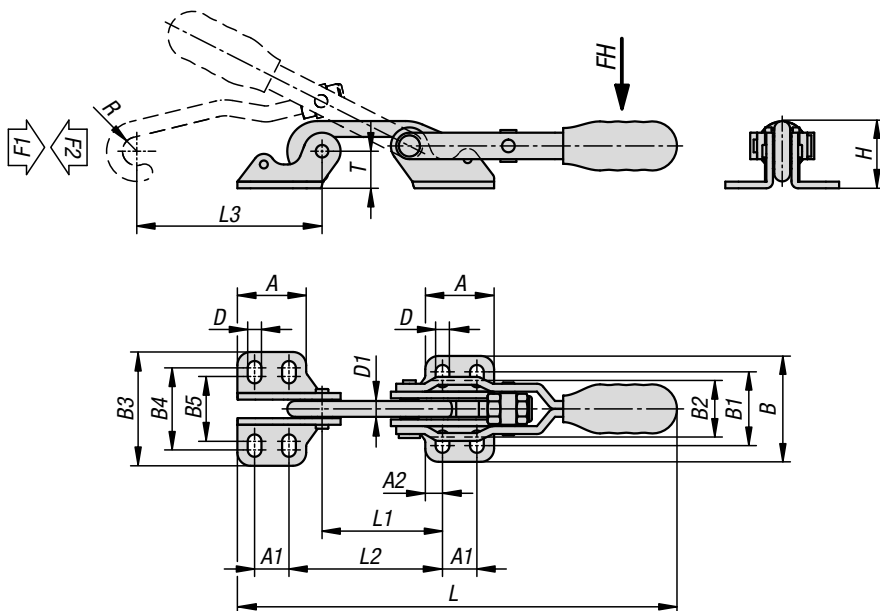
Horizontal hook toggle clamps are especially suitable for quickly closing and locking covers and hatches. The amount of travel can be set by altering the hook length. Adjustment length: 0 - 5 mm.

### KIPP Toggle clamps hook horizontal with catch plate

Order No.	Main material	Hand force FH N	Traction force F1 N	A	A1	A2	B	B1	B2	B3	B5	D	D1	H	L	L1	L2	Clamping travel L3	R	T
K1270.02500	steel	150	2500	38,1	19	12,7	49,2	34,9	36,8	51,1	3	5,6	8	36,5	212	71,1	75,8	100	4,9	16,9
K1270.04000	steel	150	4000	47,6	31,8	7,9	65,7	49,2	49,2	65,7	4	8,7	9,5	57,4	287,5	86,9	82,1	133,8	7	33
K1270.05000	steel	200	5000	54	28,6	12,7	85,7	60,3	60,3	85,7	5	10,3	12,7	67	337,5	90,4	91,9	153	8	42,6
K1270.12500	stainless steel	150	2500	38,1	19	12,7	49,2	34,9	36,8	51,1	3	5,6	8	36,5	212	71,1	75,8	100	4,9	16,9

## Toggle clamps hook horizontal

with catch plate



**Material:**

Steel or stainless steel.

**Version:**

Electro zinc-plated steel.  
Bright stainless steel.  
Plastic handle, oil-resistant.

**Sample order:**

K1432.02000

**Note:**

Horizontal hook toggle clamps are especially suitable for quickly closing and locking covers and hatches. The amount of travel can be set by altering the hook length. Adjustment length: 0 - 5 mm.

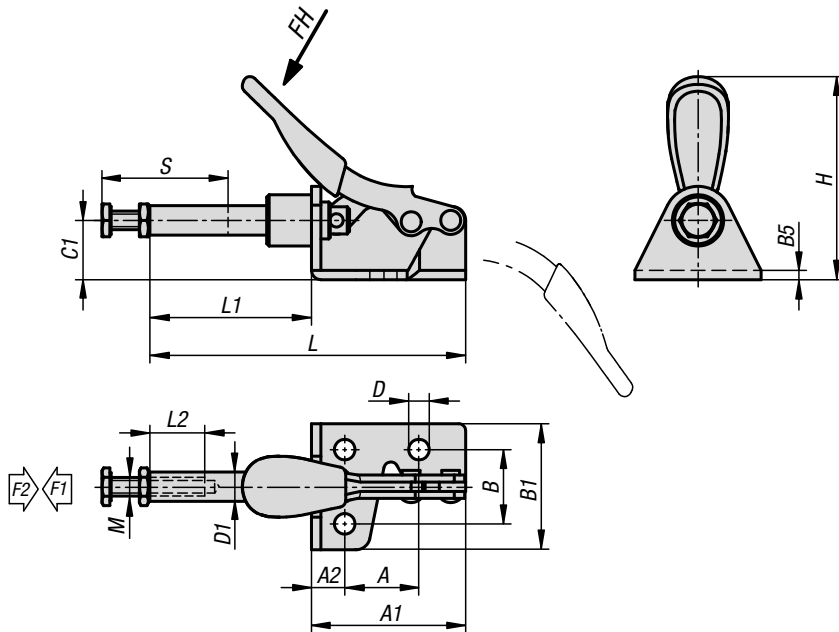
### KIPP Toggle clamps hook horizontal with catch plate

Order No.	Main material	Opening angle of handle	Hand force FH N	Traction force F1 N	Retaining force F2 N
K1432.02000	steel	153°	100	1500	2000
K1432.04000	steel	155°	160	3000	4000
K1432.07000	steel	155°	200	4000	7000
K1432.12000	stainless steel	153°	100	1500	2000
K1432.14000	stainless steel	155°	160	3000	4000
K1432.17000	stainless steel	155°	200	4000	7000

Order No.	Main material	A	A1	A2	B	B1	B2	B3	B4	B5	D	D1	H	L	L1	L2	Clamping travel L3	R	T
K1432.02000	steel	26	13	6,5	40	28	21,5	43	31	24,5	5,2	6	25,4	167	45,5	58	70	5,4	14
K1432.04000	steel	35	19	8	52	36	29	57	41	34	6,5	8	35	247	68,2	84	90	7	20
K1432.07000	steel	51	32	9,5	71,5	52,5	43,5	78	59	50	8,5	12	49,3	314	84	104	115	10	27
K1432.12000	stainless steel	26	13	6,5	40	28	21,5	43	31	24,5	5,2	6	25,4	167	45,5	58	70	5,4	14
K1432.14000	stainless steel	35	19	8	52	36	29	57	41	34	6,5	8	35	247	68,2	84	90	7	20
K1432.17000	stainless steel	51	32	9,5	71,5	52,5	43,5	78	59	50	8,5	12	49,3	314	84	104	115	10	27

## Mini push-pull toggle clamp

with mounting bracket



**Material:**

Steel or stainless steel.

**Version:**

Electro zinc-plated steel.  
Bright stainless steel.  
Plastic handle, oil-resistant.

**Sample order:**

K1545.00500

**Note:**

The clamps lock in the open and closed handle positions. This means they can clamp during the pushing or pulling actions.

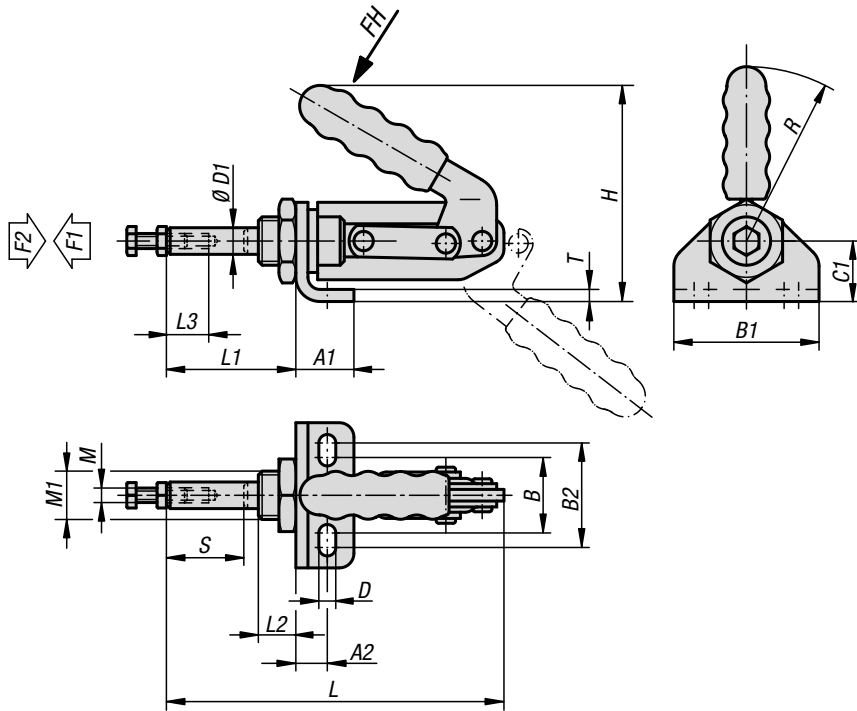
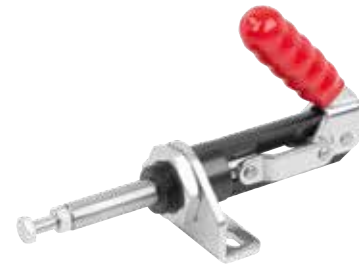
### KIPP Push-Pull Mini-Clamp with mounting bracket

Order No.	Main material	Opening angle of handle	Hand force FH N	Clamping force F1 N	Retaining force F2 N
K1545.00500	steel	190°	80	500	500
K1545.10500	stainless steel	190°	80	500	500

Order No.	Main material	A	A1	A2	B	B1	B5	C1	D	D1	H	L	L1	L2	M	Travel S
K1545.00500	steel	15,9	33	7,1	15,9	27	2	12,7	4,4	6,3	43,5	67,9	34,9	12	M4x20	17
K1545.10500	stainless steel	15,9	33	7,1	15,9	27	2	12,7	4,4	6,3	43,5	67,9	34,9	12	M4x20	17

## Push-pull toggle clamp

with mounting bracket



**Material:**  
Steel.

**Version:**  
Steel electro zinc-plated and passivated.  
Plastic handle oil-resistant.

**Sample order:**  
K1546.02400

**Note:**  
As the push-pull toggle clamps lock in open and closed handle positions, they can be used to clamp when pushing or pulling.  
The fastening nut supplied allows the clamps to be mounted in any desired position.

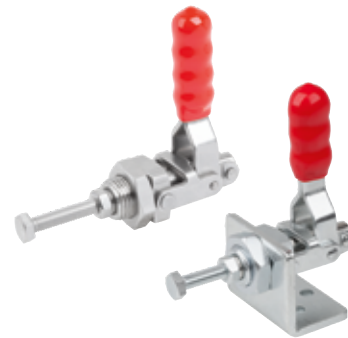
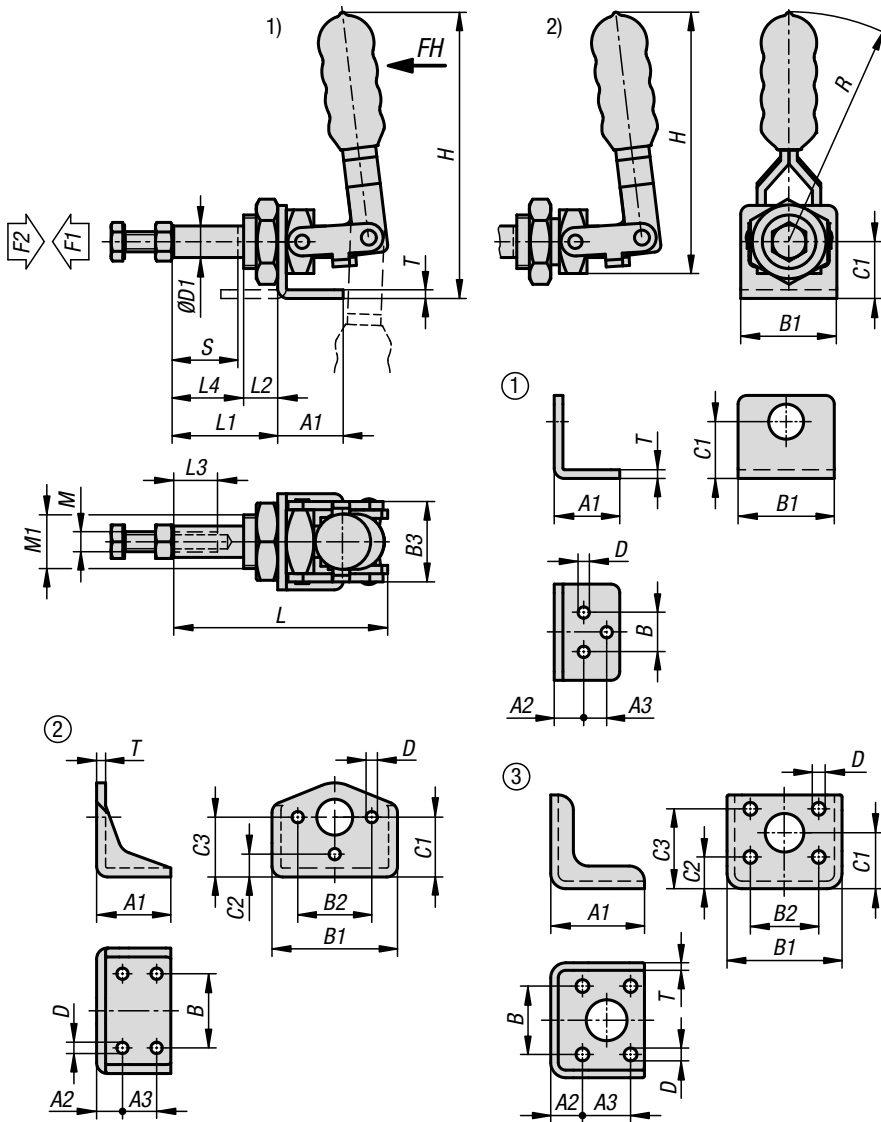
### KIPP Push-Pull Clamps with mounting bracket

Order No.	Opening angle of handle	Hand force FH N	Clamping force F1 N	Retaining force F2 N
K1546.02400	190°	150	1200	2400
K1546.04000	185°	180	2000	4000

Order No.	A1	A2	B	B1	B2	C1	D	D1	H	L	L1	L2	L3	M	M1	R	T	Travel S
K1546.02400	22,4	13,4	30	57	42	25	6,5	11	85	136	51	13	12	M6	M20x1,5	60	4	32
K1546.04000	28	15,5	30	64	45	30	8,5	16	120	173	59,5	17,5	20	M10	M24x1,5	90	4,5	38

## Push-pull toggle clamp

with mounting bracket



**Material:**  
Steel or stainless steel.

**Version:**  
Steel electro zinc-plated and passivated.  
Bright stainless steel.  
Plastic grip oil-resistant

**Sample order:**  
K1547.01000

**Note:**  
As the push-pull toggle clamps lock in open and closed handle positions, they can be used to clamp when pushing or pulling.  
The fastening nut supplied allows the clamps to be mounted in any desired position.

**Attention:**  
The stainless steel versions come without mounting bracket.

**Drawing reference:**  
1) with mounting bracket  
2) without mounting bracket

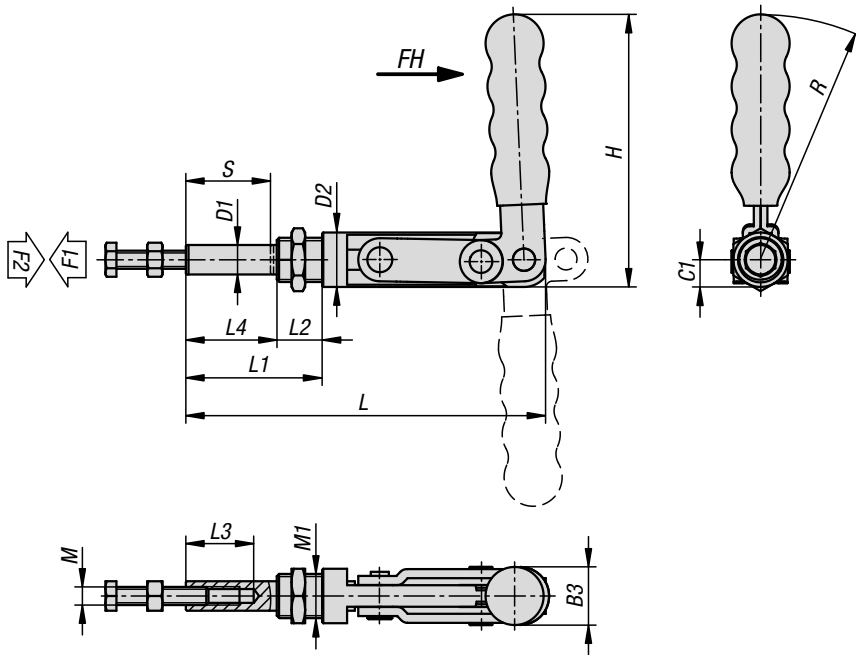
### KIPP Push-Pull Clamps with mounting bracket

Order No. steel with mounting bracket	Order No. stainless steel without mounting bracket	hole arrangement	M	M1	R	Travel S	Opening angle of handle	Hand force FH N	Clamping force F1 N	Retaining force F2 N
K1547.01000	K1547.11000	1/-	M6	M16x1,5	68,5	20,3	189°	40	500	1000
K1547.02000	K1547.12000	2/-	M8	M20x1,5	90	40	186°	60	1000	2000
K1547.04000	K1547.14000	3/-	M10	M27x2	127	66,7	181°	100	2000	4000

Order No. steel with mounting bracket	Order No. stainless steel without mounting bracket	A1	A2	A3	B	B1	B2	B3	C1	C2	C3	D	D1	H	L	L1	L2	L3	L4	T
K1547.01000	K1547.11000	30/-	13,5/-	10,5/-	18/-	44/-	-	24/-	26/-	-	-	5,2/-	9,4	94,5/78	64,3	30/34	8,7/12,7	15,8	21,3	4/-
K1547.02000	K1547.12000	41,3/-	14,4/-	19/-	41,3/-	69,9/-	41,3/-	28,6/-	33/-	12,7/-	33,3/-	5,6/-	10,9	123/100,9	118,7	41,7/46,7	11/16	25,4	40,7	5/-
K1547.04000	K1547.14000	62/-	21/-	31,8/-	45,2/-	76/-	45,2/-	40/-	37/-	21/-	52,8/-	8,5/-	15,9	164,5/143	169,2	86/91	17/22	32	69	5/-

## Toggle clamps push-pull

without mounting bracket



**Material:**  
Steel.

**Version:**  
Trivalent passivated.  
Connecting rod, guide body and thrust screw phosphated.  
Plastic grip oil-resistant.

**Sample order:**  
K1440.03500

**Note:**  
As the push-pull toggle clamps lock in open and closed handle positions, they can be used to clamp when pushing or pulling.  
The fastening nut supplied allows the clamps to be mounted in any desired position.

**Accessories:**  
K0101  
K1442  
K0102  
K0103  
K1443  
K0106

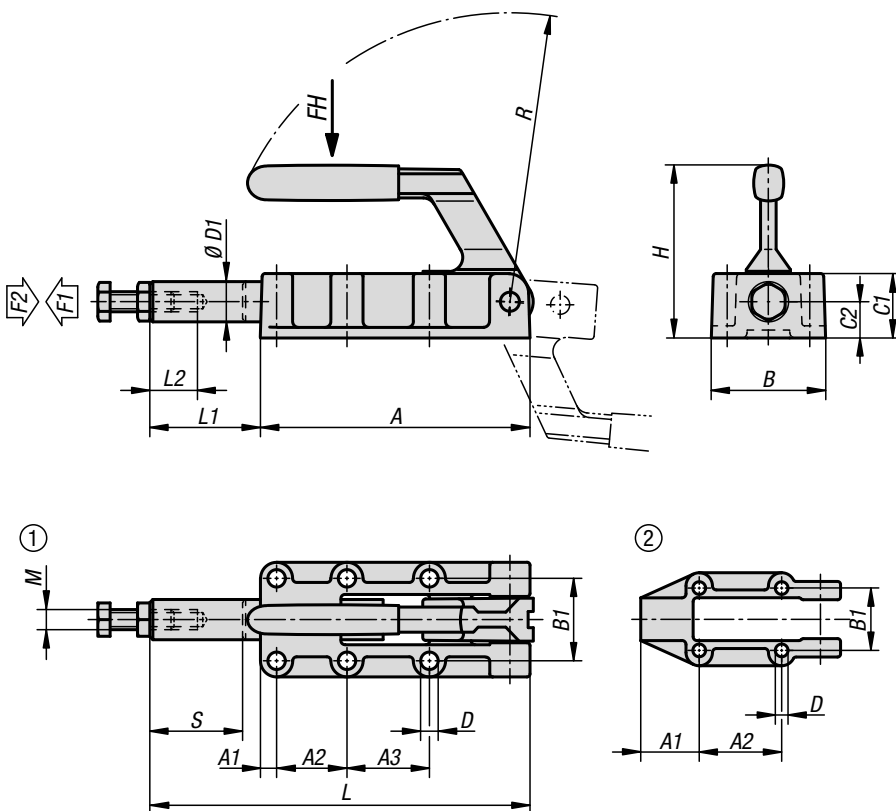
### KIPP Toggle clamps push-pull without mounting bracket

Order No.	Opening angle of handle	Hand force FH N	Clamping force F1 N	Retaining force F2 N
K1440.03500	185°	100	1400	3500
K1440.05500	185°	140	1500	5500
K1440.07500	185°	160	1600	7500

Order No.	B3	C1	D1	D2	H	L	L1	L2	L3	L4	M	M1	R	Travel S
K1440.03500	24	9,5	10	19	104,5	126,4	52	16	18	36	M6x25	M16x1,5	95	31
K1440.05500	25,6	12	13	24	120,5	158,5	60	20	30	40	M8x40	M20x1,5	108,5	38
K1440.07500	29	14,3	16	28,6	146,3	234,9	92,8	23	40	69,8	M10x50	M24x1,5	132	67

## Push-pull clamps

heavy-duty version with handle



**Material:**  
Steel.  
Body and handle ductile iron (SG iron)

**Version:**  
Phosphated.  
Plastic grip oil-resistant.

**Sample order:**  
K0087.250003

**Note:**  
The clamps lock in the open and closed handle positions. They can be used for thrust or tension clamping. These clamps also have travel limitation for advance and retraction.

**Accessories:**  
K0101  
K0102  
K0103  
K0106

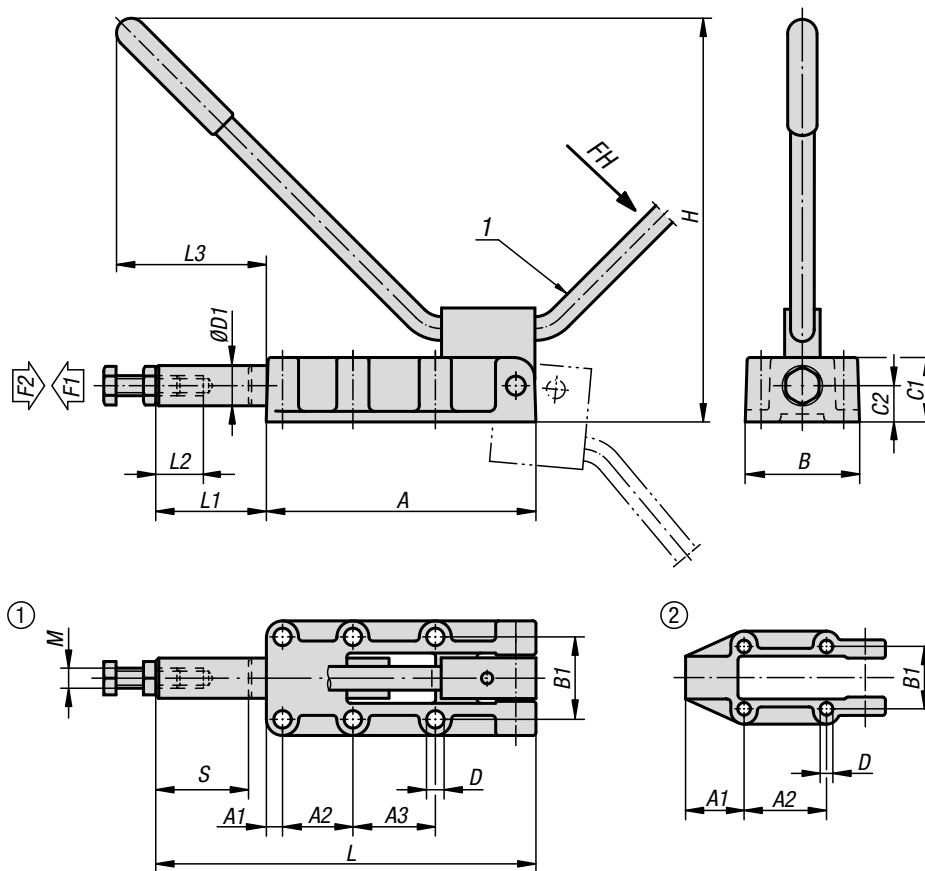
### KIPP Push-pull clamps heavy-duty version with handle

Order No.	hole arrangement	Component colour	Opening angle of handle	Hand force FH N	Retaining force F2 N	Clamping force F1 N
K0087.0600	2	blue	185°	140	6000	3000
K0087.1200	1	blue	185°	150	12000	5000
K0087.2500	1	blue	185°	170	25000	5000
K0087.5000	1	blue	185°	200	50000	7000
K0087.060003	2	red	185°	140	6000	3000
K0087.120003	1	red	185°	150	12000	5000
K0087.250003	1	red	185°	170	25000	5000
K0087.500003	1	red	185°	200	50000	7000

Order No.	A	A1	A2	A3	B	B1	C1	C2	D	D1	H	L	L1	L2	M	R	Travel S
K0087.0600	89	25	36,5	-	46	33,4	23	12	5,5	14	63	127	38	30	M8	95	32
K0087.1200	133	8	35	41	61	41	32	18	8,5	20	88	188	55	40	M10	143	50
K0087.2500	197	11	45	45	82	54	41	22	10,3	25	108	300	103	60	M12	200	75
K0087.5000	254	10	70	70	85	57	50	28	10,3	30	127	390	136	60	M16	245	100
K0087.060003	89	25	36,5	-	46	33,4	23	12	5,5	14	63	127	38	30	M8	95	32
K0087.120003	133	8	35	41	61	41	32	18	8,5	20	88	188	55	40	M10	143	50
K0087.250003	197	11	45	45	82	54	41	22	10,3	25	108	300	103	60	M12	200	75
K0087.500003	254	10	70	70	85	57	50	28	10,3	30	127	390	136	60	M16	245	100

## Push-pull clamps

heavy-duty version with reversible hand lever



**Material:**

Steel.  
Body ductile iron (SG iron)

**Version:**

Phosphated.  
Lever trivalent passivated.  
Plastic grip oil-resistant.

**Sample order:**

K0088.060003

**Note:**

The clamps lock in the open and closed handle positions. They can be used for thrust or tension clamping. These clamps also have travel limitation for advance and retraction.

**Accessories:**

- K0099
- K0101
- K0102
- K0103
- K0106

**Drawing reference:**

1) handle can be mounted right or left

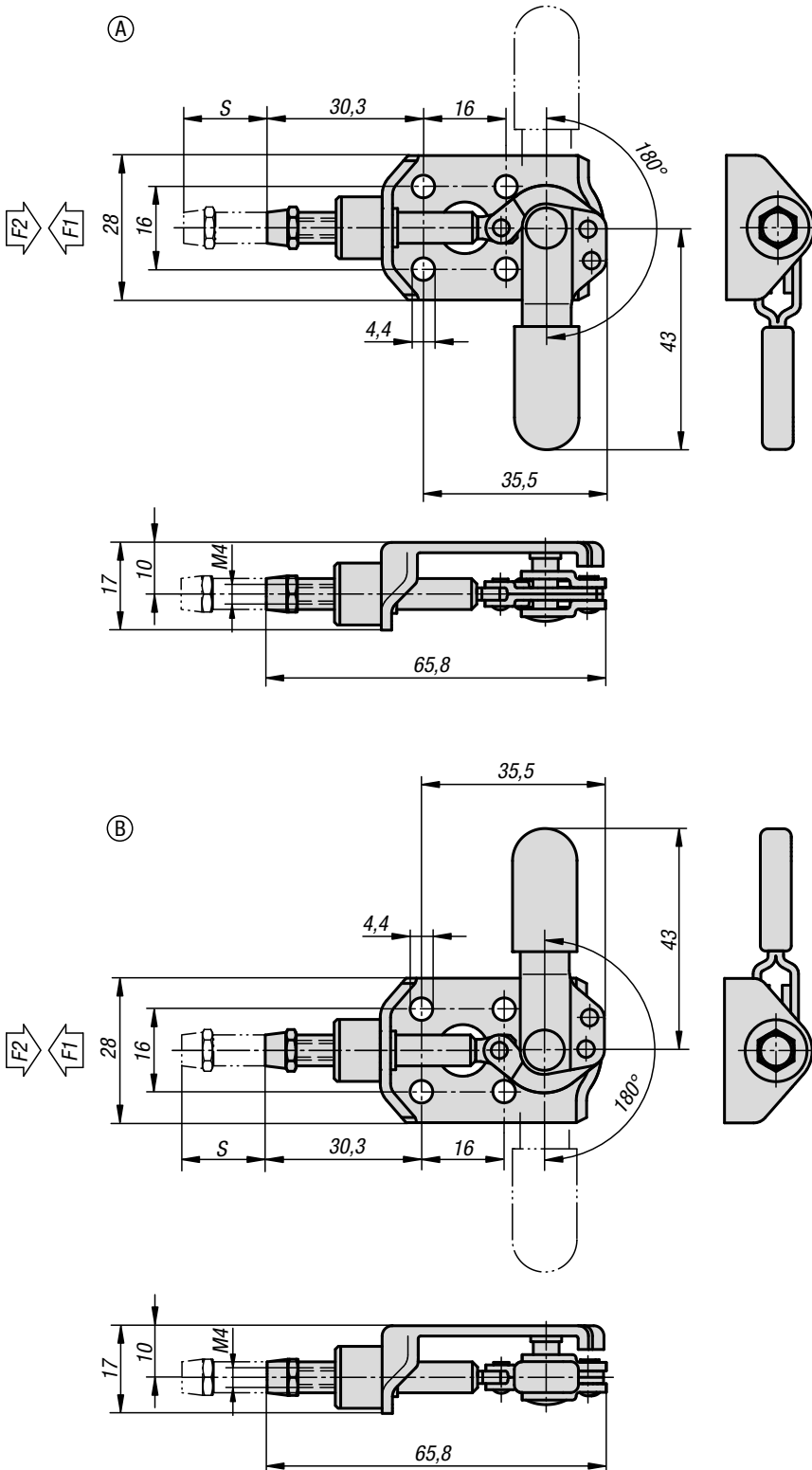
### KIPP Push-pull clamps heavy-duty version with reversible hand lever

Order No.	Component colour	A	A1	A2	A3	B	B1	C1	C2	D	D1	H	L	L1	L2	L3	M	Travel S	Hand force FH N	Retaining force F2 N	Opening angle of handle
K0088.0600	blue	89	25	36,5	-	46	33,4	23	12	5,5	14	127	127	38	30	65	M8	32	140	6000	185°
K0088.1200	blue	133	8	35	41	61	41	32	18	8,5	20	196	188	55	40	106	M10	50	150	12000	185°
K0088.2500	blue	197	11	45	45	82	54	41	22	10,3	25	270	300	103	60	125	M12	75	170	25000	185°
K0088.5000	blue	254	10	70	70	85	57	50	28	10,3	30	360	390	136	60	155	M16	100	200	50000	185°
K0088.060003	red	89	25	36,5	-	46	33,4	23	12	5,5	14	127	127	38	30	65	M8	32	140	6000	185°
K0088.120003	red	133	8	35	41	61	41	32	18	8,5	20	196	188	55	40	106	M10	50	150	12000	185°
K0088.250003	red	197	11	45	45	82	54	41	22	10,3	25	270	300	103	60	125	M12	75	170	25000	185°
K0088.500003	red	254	10	70	70	85	57	50	28	10,3	30	360	390	136	60	155	M16	100	200	50000	185°

Order No.	Thrust rod extended / Clamping force F1 N
K0088.0600	5mm/1100N, 10mm/700N, 15mm/750N, 20mm/800N, 25mm/850N, 30mm/1460N, 31mm/1900N, 32mm/5800N
K0088.1200	5mm/1670N, 10mm/900N, 15mm/730N, 20mm/700N, 25mm/720N, 30mm/850N, 35mm/1000N, 40mm/1100N, 45mm/1500N, 48mm/2200N, 49mm/2900N, 50mm/9300N
K0088.2500	10mm/1000N, 20mm/720N, 30mm/600N, 40mm/700N, 50mm/880N, 60mm/1180N, 70mm/1900N, 72mm/2300N, 74mm/3530N, 75mm/11000N
K0088.5000	10mm/1800N, 20mm/1100N, 30mm/750N, 40mm/800N, 50mm/820N, 70mm/1000N, 80mm/1300N, 90mm/1900N, 95mm/2500N, 97mm/3100N, 99mm/4500N, 100mm/12100N
K0088.060003	5mm/1100N, 10mm/700N, 15mm/750N, 20mm/800N, 25mm/850N, 30mm/1460N, 31mm/1900N, 32mm/5800N
K0088.120003	5mm/1670N, 10mm/900N, 15mm/730N, 20mm/700N, 25mm/720N, 30mm/850N, 35mm/1000N, 40mm/1100N, 45mm/1500N, 48mm/2200N, 49mm/2900N, 50mm/9300N
K0088.250003	10mm/1000N, 20mm/720N, 30mm/600N, 40mm/700N, 50mm/880N, 60mm/1180N, 70mm/1900N, 72mm/2300N, 74mm/3530N, 75mm/11000N
K0088.500003	10mm/1800N, 20mm/1100N, 30mm/750N, 40mm/800N, 50mm/820N, 70mm/1000N, 80mm/1300N, 90mm/1900N, 95mm/2500N, 97mm/3100N, 99mm/4500N, 100mm/12100N



## Toggle clamps mini push-pull



**Material:**  
Steel.

**Version:**  
Trivalent passivated.  
Plastic grip oil resistant.

**Sample order:**  
K0745.10050

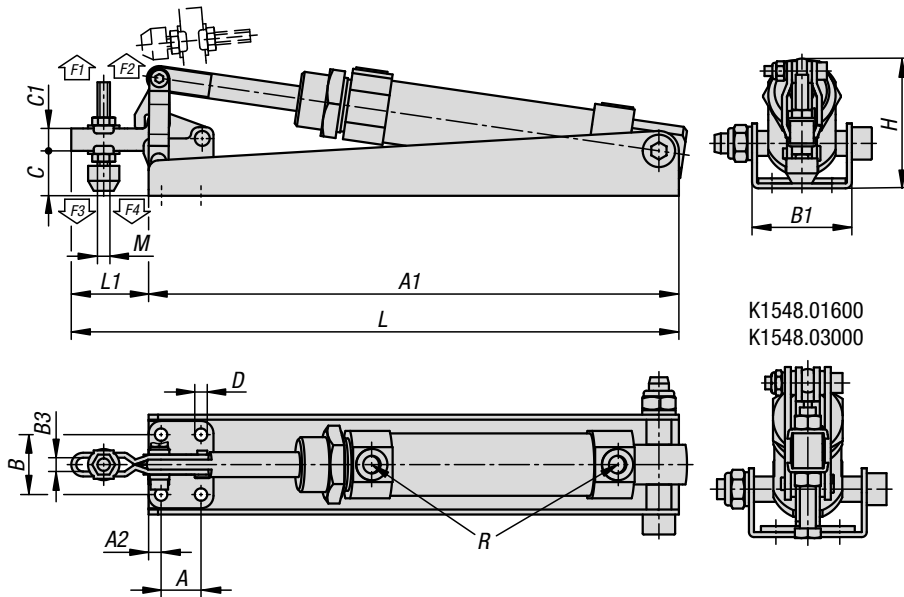
**Note:**  
Push-pull toggle clamps with very low profile. As the clamps lock in the open and closed handle positions, they can be used to clamp when pushing or pulling.

**Drawing reference:**  
Form A: Thrust exerted by rotating handle to the right  
Form B: Thrust exerted by rotating handle to the left

### KIPP Toggle clamps mini push-pull

Order No.	Form	Travel S	Retaining force F2 N	Retaining force F1 N
K0745.10050	A	16	500	500
K0745.20050	B	16	500	500

## Horizontal Pneumatic Clamps



**Material:**

Lever parts and clamping spindle steel.

**Version:**

Lever parts trivalent passivated.  
Clamping spindle and nuts phosphated.  
Cylinder bright.

**Sample order:**

K1548.01000

**Note:**

A neoprene thrust pad is supplied with versions K1548.01000 and K1548.01200.

**Pneumatic cylinder:**

Double-acting without end of stroke dampening.

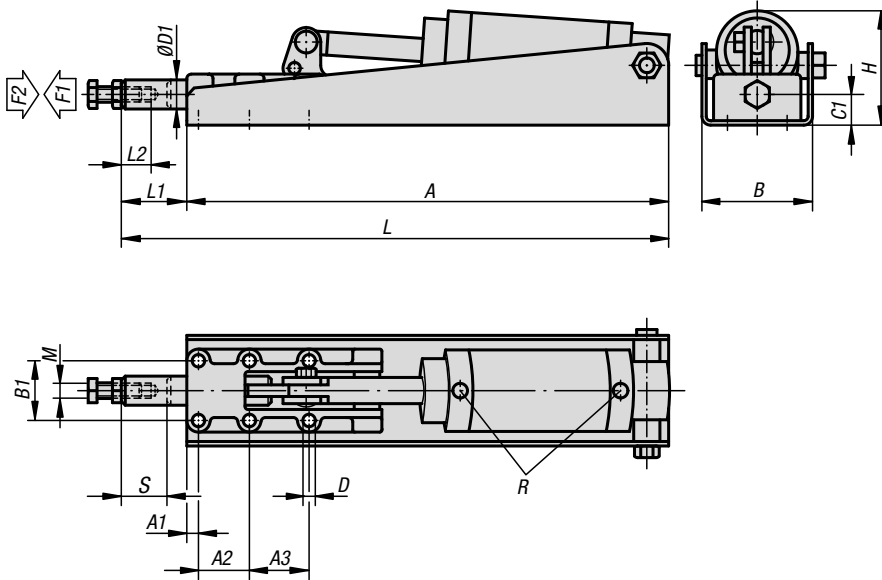
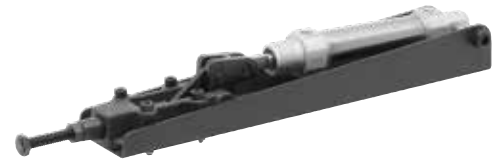
K1548.01600  
K1548.03000

### KIPP Horizontal Pneumatic Clamps

Order No.	Opening angle of holding arm	Air consumption per cycle	Holding force at 6 bar F1 N	Holding force at 6 bar F2 N	Clamping force at 6 bar F3 N	Clamping force at 6 bar F4 N	Operating pressure bar	strokes per min. at 6 bar
K1548.01000	70°	0,06 dm <sup>3</sup>	1000	1500	800	1200	2 - 6	60
K1548.01200	85°	0,08 dm <sup>3</sup>	1200	1800	1000	1500	2 - 6	60
K1548.01600	90°	0,28 dm <sup>3</sup>	1600	2400	1200	1800	2 - 6	50
K1548.03000	85°	0,32 dm <sup>3</sup>	3000	5400	2400	4800	2 - 6	50

Order No.	A	A1	A2	B	B1	B3	C	C1	D	H	L	L1	M	R
K1548.01000	16	212,5	5	24	40	5,5	18	9	4,5	52	243,5	31	M5x35	G1/8
K1548.01200	12,7	218	7	26,8	48	6,2	25	11	5,2	61,5	261	43	M6x50	G1/8
K1548.01600	19	270	8	32	59	8,9	34,5	17,5	7,1	85,2	345,2	75,2	M08x65	G1/8
K1548.03000	32	311,5	10	45	76	13,2	53,5	25	8,7	117,5	435,5	124	M12x100	G1/8

## Pneumatic push-pull clamps



**Material:**

Lever parts, bracket and thrust rod, steel.  
Thrust rod housing ductile iron (SG iron)

**Version:**

Phosphated. Cylinder bright.

**Sample order:**

K1549.06000

**Pneumatic cylinder:**

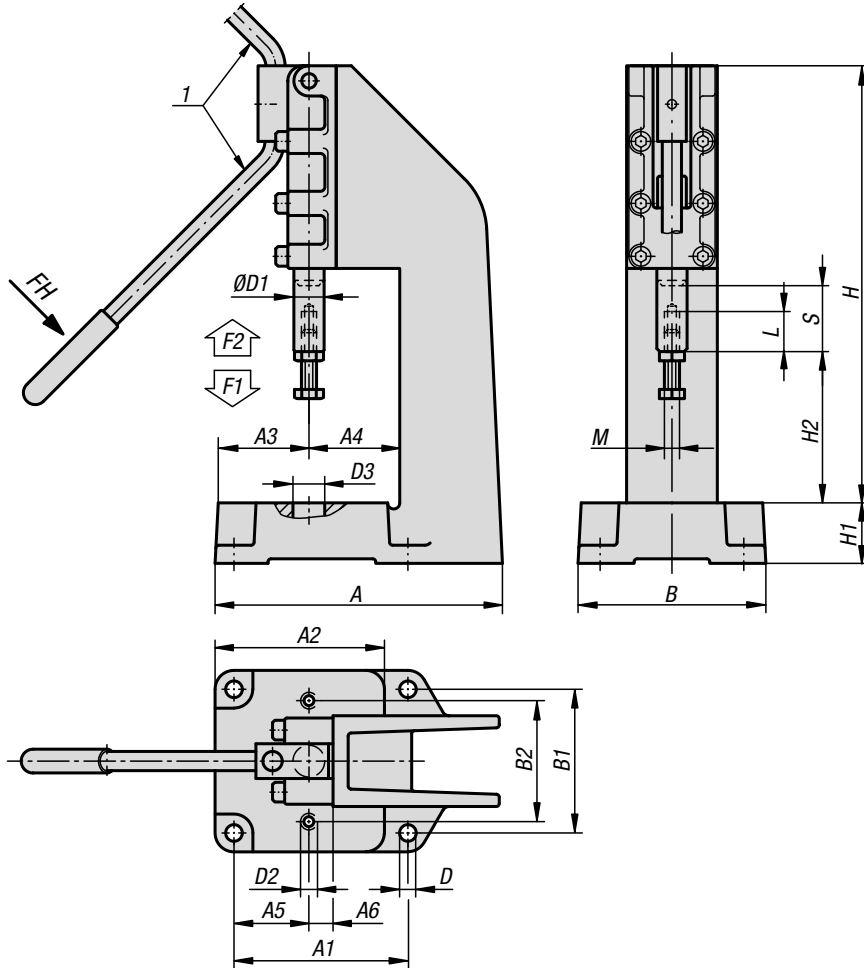
Double-acting without end of stroke dampening.

### KIPP Pneumatic push-pull clamps

Order No.	Thrust rod extended / Clamping force F1 N	Retaining force F2 N	Air consumption per cycle	Operating pressure bar	strokes per min. at 6 bar
K1549.06000	5mm/300N, 10mm/400N, 15mm/600N, 20mm/800N, 24mm/1500N	6000	0,04 dm <sup>3</sup>	2 - 6	60
K1549.12000	5mm/1200N, 10mm/1400N, 15mm/1600N, 20mm/1800N, 25mm/2300N, 30mm/4000N	12000	0,1 dm <sup>3</sup>	2 - 6	50
K1549.25000	5mm/1400N, 10mm/1600N, 20mm/2000N, 30mm/2400N, 40mm/3000N, 49mm/7000N	25000	0,25 dm <sup>3</sup>	2 - 6	40

Order No.	A	A1	A2	A3	B	B1	C1	D	D1	H	L	L1	L2	M	R	Travel S
K1549.06000	284	25	36,5	-	59	33,4	14	5,5	14	46,2	325	41	30	M8	G1/8	25
K1549.12000	380	8	35	41	76,5	41	21	8,5	19,9	66,5	435	55	40	M10	G1/8	32
K1549.25000	475	12	45	45	96	54	26	10,3	25	94,5	577	102	60	M12	G1/8	50

## Toggle press, manual version



**Material:**  
Press stand cast steel.  
For push-pull clamp see K0088

**Version:**  
Press uprights painted blue.  
For push-pull toggle clamps, see K0088.

**Sample order:**  
K1550.06000

**Note:**  
The thrust clamps can be re-ordered as a complete assembly kit. See K0088 for specifications.

**Drawing reference:**  
1) handle can be mounted right or left

### KIPP Toggle Presses for manual operation

Order No.	Opening angle of handle	Hand force FH N	Clamping force F1 N	Retaining force F2 N
K1550.06000	185°	140	3000	6000
K1550.12000	185°	160	5000	12000
K1550.25000	185°	180	7000	25000

Order No.	A	A1	A2	A3	A4	A5	A6	B	B1	B2	D	D1	D2	D3	H	H1	H2	L	M	Travel S
K1550.06000	157	95	95	56	44	46,5	12	105	80	70	9	14	M8	15,5	202	32	75	30	M8	32
K1550.12000	210	115	113	62	60	49,6	18	126	95	80	11	19,9	M10	20	290	40	100	40	M10	50
K1550.25000	238	145	139	65	75	52	22	150	125	90	11	25	M10	30	418	50	120	60	M12	75

## Toggle presses for pneumatic operation

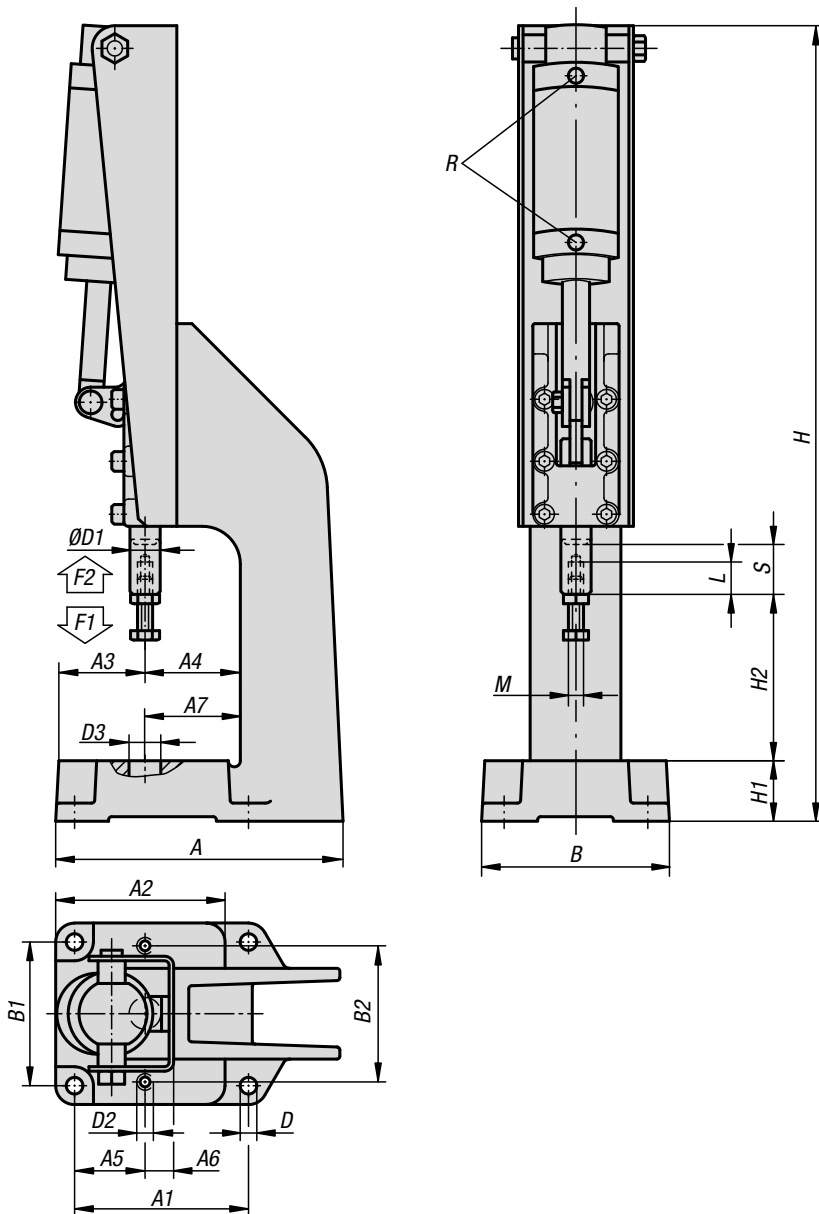


**Material:**  
Press uprights cast steel.  
For pneumatic push-pull clamps, see K1549.

**Version:**  
Press uprights painted blue.  
For pneumatic push-pull clamps, see K1549.

**Sample order:**  
K1551.06000

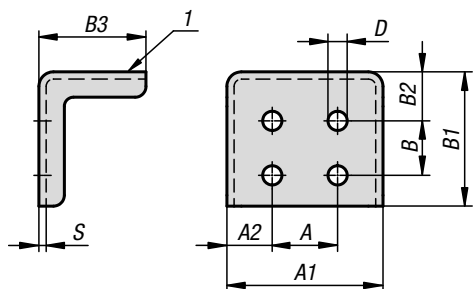
**Note:**  
Double-acting cylinder without end position damping.  
Pneumatic push-pull clamps can be reordered as a complete assembly kit. For technical data and clamping forces, see K1549.



### KIPP Toggle presses for pneumatic operation

Order No.	Clamping force F1 N	Retaining force F2 N	Operating pressure bar	Air consumption per cycle	strokes per min. at 6 bar
K1551.06000	3000	6000	2 - 6	0,04 dm <sup>3</sup>	60
K1551.12000	5000	12000	2 - 6	0,1 dm <sup>3</sup>	50
K1551.25000	7000	25000	2 - 6	0,25 dm <sup>3</sup>	40

Order No.	A	A1	A2	A3	A4	A5	A6	A7	B	B1	B2	D	D1	D2	D3	H	H1	H2	L	M	R	Travel S
K1551.06000	157	95	95	53,9	46	46,5	12	44	105	80	70	9	14	M8	15,5	412	32	96	30	M8	G1/8	25
K1551.12000	210	115	113	59	63	49,6	18	60	126	95	80	11	19,9	M10	20	575	40	155	40	M10	G1/8	32
K1551.25000	238	145	139	61	79	52	22	75	150	125	90	11	25	M10	30	747	50	222	60	M12	G1/8	50

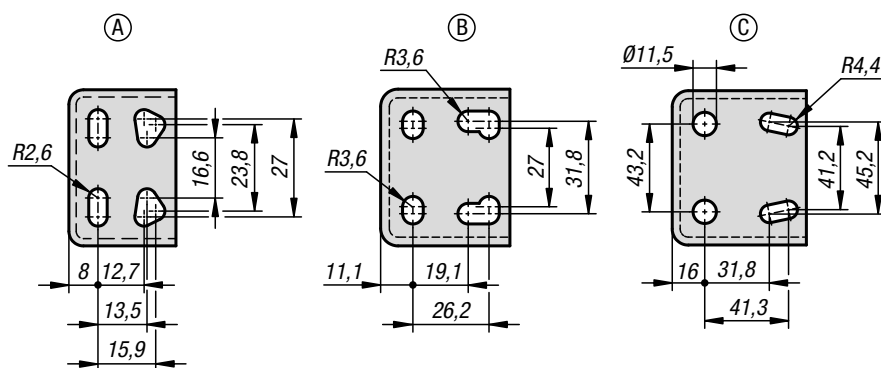


**Material:**  
Steel.

**Version:**  
Trivalent passivated.

**Sample order:**  
K1431.02

**Drawing reference:**  
1) mount clamp on this face

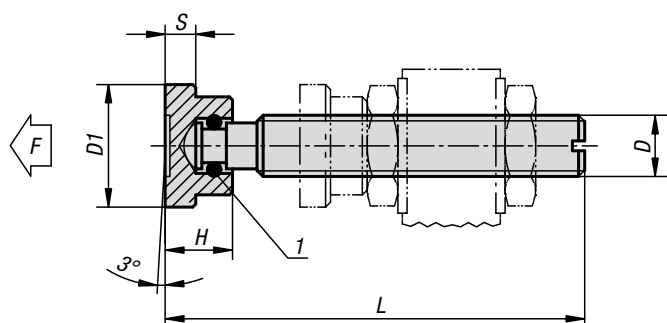


### KIPP Angle brackets

Order No.	Form	A	A1	A2	B	B1	B2	B3	D	S
K1431.02	A	18	43	12,5	15	37	13,5	29,5	5,3	2
K1431.04	B	25,4	54	14,3	19,1	41,5	12	44,5	5,5	3
K1431.06	C	44	76	16	32	62	21	66	8,5	4

## Thrust screws

with thrust pad



**Material:**

Screw and thrust pad steel.

**Version:**

Screw black.

Thrust pad black oxidised.

Screw pin and thrust pad case-hardened.

**Sample order:**

K0688.10X63

**Drawing reference:**

1) snap ring

### KIPP Thrust screws with thrust pad

Order No.	L	H	D	D1	S	F max. kN
K0688.06X	32/37/42/52	7	M6	12	2,5	1
K0688.08X	38/43/48/53/63	9	M8	16	4	2,3
K0688.10X	53,5/58,5/63,5/68,5/83,5	11	M10	20	5	3,5
K0688.12X	64,5/69,5/74,5/84,5/104,5	13	M12	25	6	4,6
K0688.16X	70,3/75,3/85,3/105,3/130,3	15	M16	32	7	6

## Thrust screws

with thrust pad



**Material:**

Screw and thrust pad steel.

**Version:**

Screw black.

Thrust pad black oxidised.

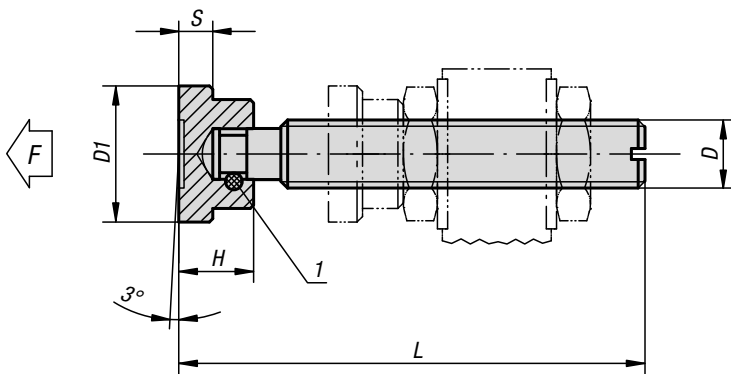
Screw pin and thrust pad case-hardened.

**Sample order:**

K0689.10X84

**Drawing reference:**

1) retaining pin

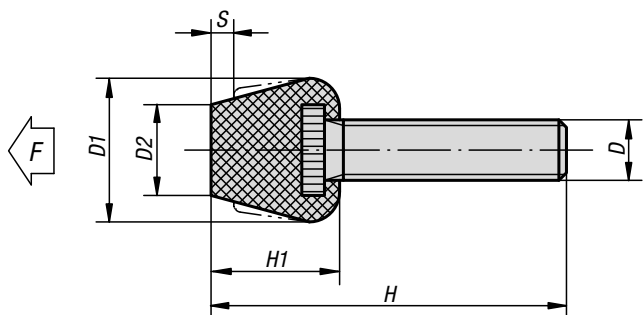


### KIPP Thrust screws with thrust pad

Order No.	L	H	D	D1	S	F max. kN
K0689.06X52	52	7	M6	12	2,5	1
K0689.08X63	63	9	M8	16	4	2,3
K0689.10X84	84	11	M10	20	5	3,5
K0689.12X104	104	13	M12	25	6	4,6
K0689.14X105	105	14	M14	28	6	5
K0689.16X130	130	15	M16	32	7	6



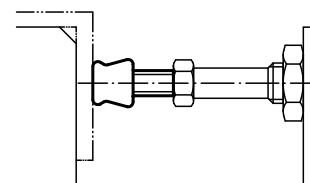
## Thrust screws neoprene



**Material:**  
Screw steel.  
Thrust pad neoprene.

**Version:**  
Neoprene pad moulded onto screw end.  
Screw copper-plated.

**Sample order:**  
K0690.08

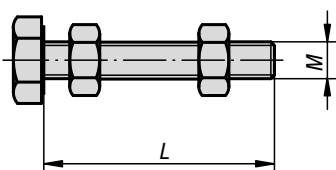


### KIPP Thrust screws neoprene

Order No.	H	H1	D	D1	D2	S max.	F max. N
K0690.08	63	17	M8 x 46	19	12	3	750
K0690.081	43	17	M8 x 26	19	12	3	750
K0690.10	80	19	M10 x 61	19	14	3,5	1000
K0690.101	55	19	M10 x 36	19	14	3,5	1000

## Clamping spindles

rigid

**Material:**

Polyamide, steel or stainless steel.

**Version:**Spindle and nuts, electro zinc-plated.  
K1442.204020 made from nylon.**Sample order:**

K1442.005035

**Note:**

The clamping spindle K1442.204020 is supplied with one nut.

## KIPP Clamping spindles, rigid

Order No.	Main material	Form	M	L
K1442.204020	polyamide	A	M4	20
K1442.004025	steel	A	M4	25
K1442.004040	steel	A	M4	40
K1442.005035	steel	A	M5	35
K1442.006025	steel	A	M6	25
K1442.006050	steel	A	M6	50
K1442.008040	steel	A	M8	40
K1442.008060	steel	A	M8	60
K1442.010050	steel	A	M10	50
K1442.010080	steel	A	M10	80
K1442.012075	steel	A	M12	75
K1442.012100	steel	A	M12	100
K1442.016150	steel	A	M16	150
K1442.104020	stainless steel	A	M4	20
K1442.105030	stainless steel	A	M5	30
K1442.105035	stainless steel	A	M5	35
K1442.106040	stainless steel	A	M6	40
K1442.106050	stainless steel	A	M6	50
K1442.108060	stainless steel	A	M8	60
K1442.110080	stainless steel	A	M10	80

## Clamping spindles

with vulcanized neoprene thrust pad



**Material:**

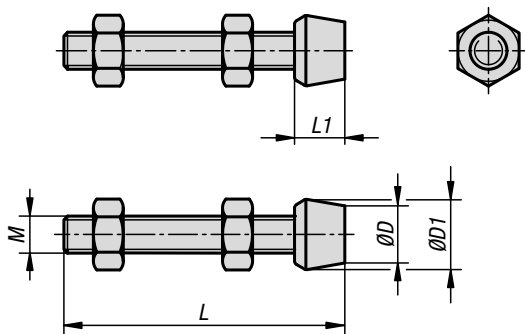
Threaded spindle and nuts in steel or stainless steel.  
Thrust pad neoprene.

**Version:**

Threaded spindle and nuts electro zinc-plated or bright.

**Sample order:**

K1443.050372



### KIPP Clamping spindles with vulcanised neoprene thrust pad

Order No.	Main material	D	D1	M	L	L1
K1443.040421	steel	8	12	M4	42	10
K1443.050372	steel	10	10	M5	37	5,7
K1443.060441	steel	10	16	M6	44	14
K1443.080631	steel	13	19	M8	63	19
K1443.100851	steel	15	24	M10	85	26
K1443.121001	steel	25	31	M12	100	26
K1443.1040251	stainless steel	8	12	M4	25	10
K1443.1050421	stainless steel	11	13	M5	42	10
K1443.1060501	stainless steel	10	16	M6	50	14
K1443.1080641	stainless steel	13	19	M8	64	19
K1443.1100851	stainless steel	24	30	M10	85	26

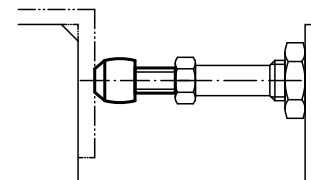
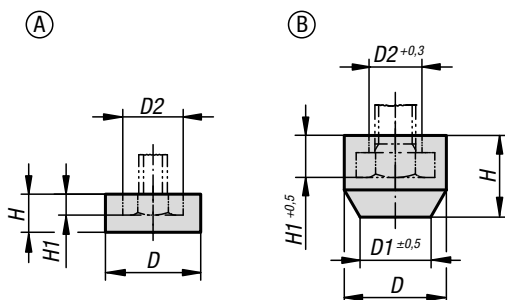
## Protective caps



**Material:**  
Neoprene or Polyamide.

**Version:**  
Neoprene black, oil resistant, Shore hardness 75A.  
Polyamide white.

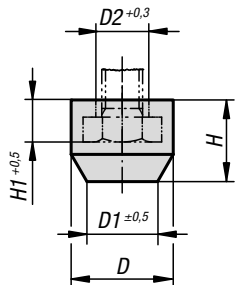
**Sample order:**  
K0106.03



### KIPP Protective caps

Order No.	Form	Main material	D	D1	D2	H	H1	for screws
K0106.06	A	polyamide	9	-	6,6	4	2,3	M3
K0106.01	B	neoprene	11	6,6	5,5	8,5	4	M4
K0106.02	B	neoprene	12,5	7,3	6,5	10	4,7	M5
K0106.03	B	neoprene	15	9,9	8,5	12	5,8	M6
K0106.04	B	neoprene	19	12,7	11	15	7,1	M8
K0106.07	B	neoprene	23	15	14,5	18	9	M10
K0106.05	B	neoprene	26	19	16,5	20	10	M12
K0106.08	B	neoprene	33	24	22	27	13	M16

## Antistatic protective caps

**Material:**

Neoprene.

**Version:**

Neoprene black, oil resistant, Shore hardness 75A.

**Sample order:**

K0106.0124

**Application:**

Sensitive electrical or electronic equipment, components and devices (ESD sensitive elements) may be damaged or destroyed by electrostatic discharges (ESD) in the immediate vicinity.

Electrostatic discharges can come from people or through handling ESD sensitive components (e.g. during production, assembly, transport, storage etc).

Electrically conductive products which conform to DIN EN 61340-5-1 are essential within electronic environments to prevent an electrostatic discharge.

These products can be used for ESD applications or in ESD protection areas (EPA) in accordance with DIN EN 61340-5-1.

**Advantages:**

- Made from a special electrically conductive plastic
- To protect sensitive electrical or electronic parts, components and devices

**Safety:**

These ESD products can also be used for devices, components and protection systems in areas where there is risk of explosion.

These ESD products prevent electrostatic spark discharges, and eliminate the risk of ignition of gases and dust which could lead to explosions in enclosed spaces.

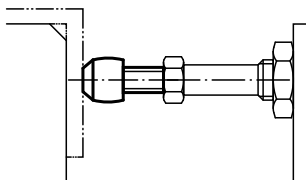
Manufacturers and operators must apply and comply with the ATEX directives for protecting persons working in areas where there is a risk of explosion.

These ESD products have been certified by TÜV-Süd for their electrical discharge capability.

**Target groups:**

Device manufacturers required to conform to ATEX product directive 2014/34/EU.

Operators required to conform to ATEX worker protection directive 1999/92/EC.

**KIPP Antistatic protective caps**

Order No.	D	D1	D2	H	H1	for screws
K0106.0124	11	6,6	5,5	8,5	4	M4
K0106.0224	12,5	7,3	6,8	10	4,7	M5
K0106.0324	15	9,9	8,5	12	5,8	M6
K0106.0424	19	12,7	11,3	15	7,1	M8

## Locking washers

for clamping spindles



**Material:**

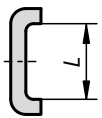
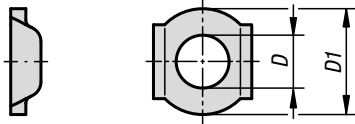
Steel or stainless steel 1.4301.

**Version:**

Steel electro zinc-plated.  
Stainless steel bright.

**Sample order:**

K1441.0041

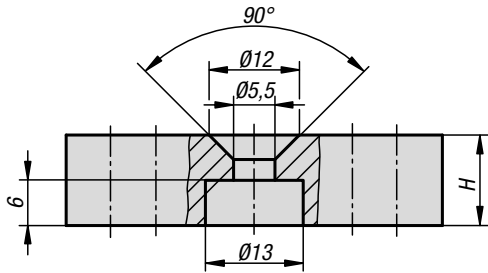


### KIPP Locking washers for clamping spindles

Order No. steel	Order No. stainless steel	D through hole for	D1	L
K1441.0041	K1441.1041	M4	12,7	8,7
K1441.0051	K1441.1051	M5	12,6	9,7
K1441.0061	K1441.1061	M6	14	12
K1441.0062	K1441.1062	M6	15	13,5
K1441.0081	K1441.1081	M8	22	15,5
K1441.0101	K1441.1101	M10	25	19
K1441.0121	-	M12	33	24
K1441.0161	-	M16	35	27

## Adapter block

aluminium



**Material:**

Aluminium.

**Version:**

natural tone anodised

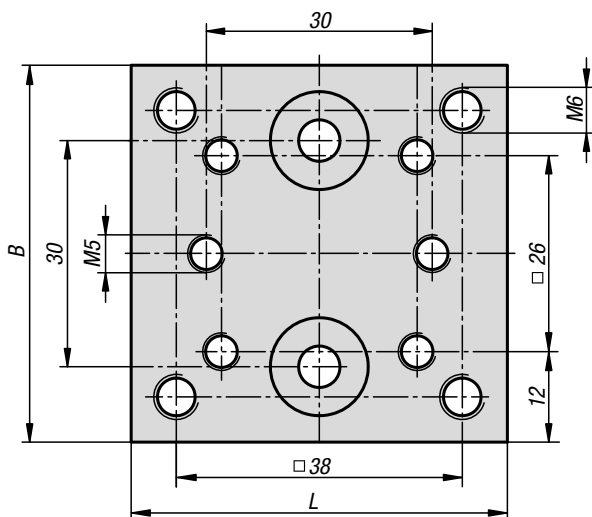
**Sample order:**

K1210.5050

**Note:**

Adapter blocks are used as risers in combination with the round adapter plates K1211.

Fastening screws and nuts for assembling the block are supplied.

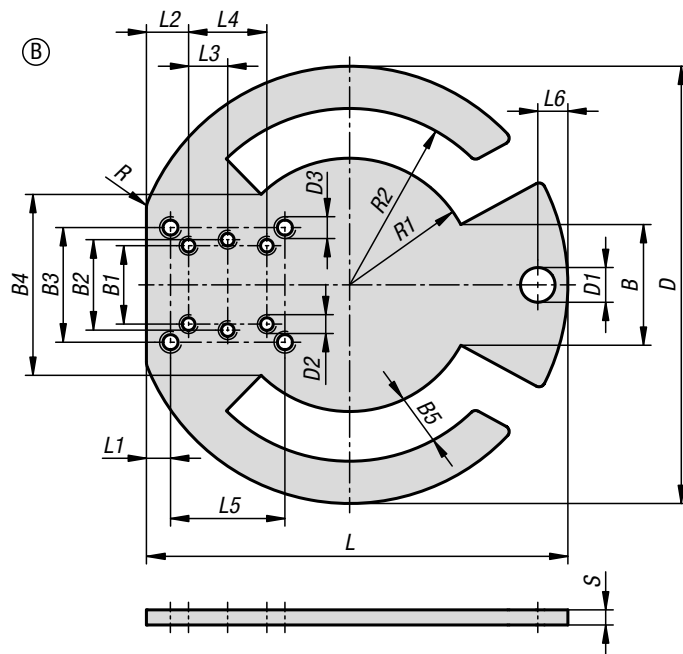
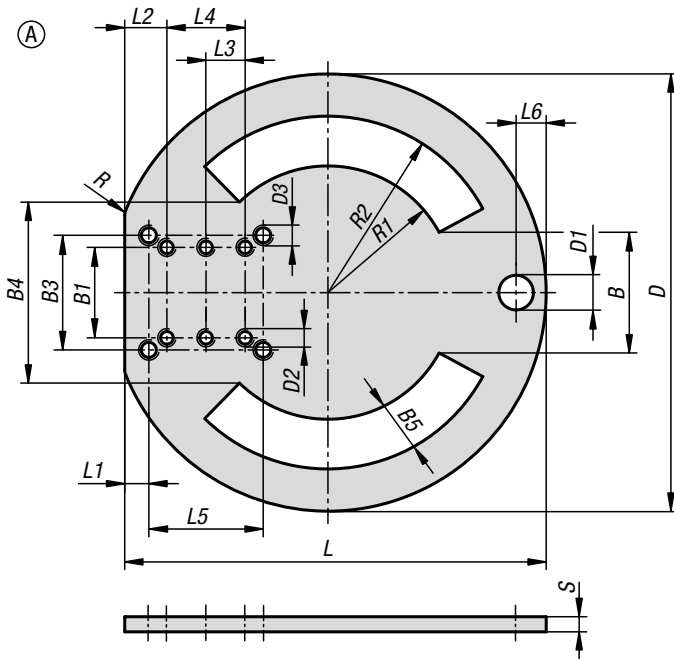


**KIPP Adapter block, aluminium**

Order No.	B	H	L
K1210.5050	50	12	50

## Adapter plate

round



**Material:**  
Steel.

**Version:**  
Electro zinc-plated and trivalent blue passivated.

**Sample order:**  
K1211.145

**Note:**  
Adapter plates can be used in combination with toggle clamps. They enable toggle clamps to be positioned flexibly.  
The adapter plates are clamped to the machine table using eccentric clamp modules.

**Advantages:**  
Flexible movement and positioning.  
Flexible height construction using the adapter block.  
Easy assembly through the opening in Form B.

**Accessories:**  
Eccentric clamp modules K0754  
Toggle clamp K....

**Drawing reference:**  
Form A: closed  
Form B: open



### KIPP Adapter plate, round

Order No.	Form	Version 2	B	B1	B2	B3	B4	B5	D	D1	D2	D3	L	L1	L2	L3	L4	L5	L6	R	R1	R2	S
K1211.145	A	closed	40	30	-	38	60	16,5	145	11,5	M5	M6	140	8	14	13	26	38	10	5	42	58,5	5
K1211.1145	B	open	40	30	30	38	60	16,5	145	11,5	M5	M6	140	8	14	13	26	38	10	5	42	58,5	5