

GENERAL CATALOGUE 2024 2025

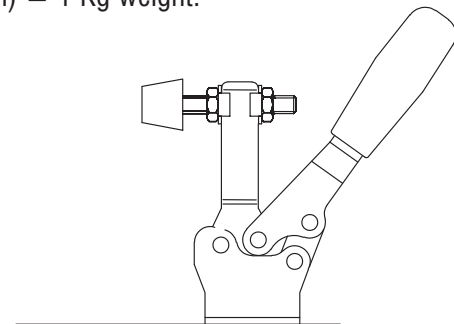


The operating principle of toggle clamps is based on a system of articulated levers that, once brought into a specific position, securely and stably lock the device. The “toggle” is the point where the levers connect and lock, creating a very strong and resistant clamping point. This mechanism allows for the application of considerable force without the risk of movement or slipping of the workpiece.

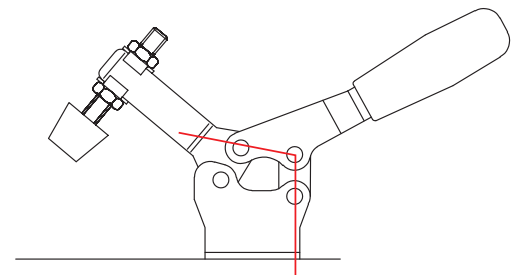
Here’s how the knee system works in detail:

- The clamping lever opens in such a way as to completely free up the work surface, allowing the workpiece to be removed and/or positioned in the equipment without difficulty (fig.1).
- A slight movement of the control lever is sufficient to bring the clamping lever closer to the workpiece. The arrangement of the three pivots (fig.2) clearly shows that the force exerted by the clamping lever is transmitted to the control lever.
- In the position (fig.3), when the three pivots are aligned, the maximum clamping force, F_s is reached. The intensity of the force F_s exerted on the tool primarily depends on:
 - 1) The force exerted on the control lever.
 - 2) The position of the pressure screw on the clamping lever. Since it is not possible to determine the operator’s force in manual use, the clamping force F_s is indicated for pneumatic tools only. In the position of maximum force (fig.3), the clamping balance is unstable, as opposing forces acting on the clamping lever can disengage the tool.
- If in the clamping position, the point of maximum clamping force is exceeded by a certain limit (fig.4), the clamping lever stops with a fixed stop, thus achieving a secure and irreversible clamping (dead point of the lever).

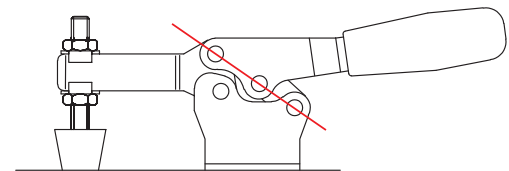
The force that the tool in the closed position can receive without undergoing permanent deformations is called the retaining force F_h . This is a characteristic quantity for each clamping tool and depends on the size (dimensions, geometry) of each individual tool. The tables indicate the respective maximum retaining force F_h of the tools including the safety factor. All forces are indicated in the unit of measurement daN (decaNewton) = 10 N (Newton) = 1 Kg weight.



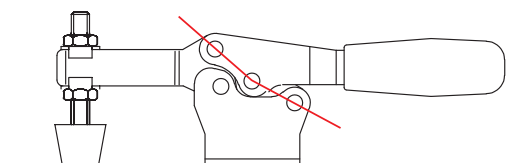
(fig. 1)



(fig. 2)



(fig. 3)



(fig. 4)

CERTIFICATIONS



< ISO 9001



< RoHS

SYMBOLS

Material



< stainless steel

Performances



< light



< heavy-duty



< reinforced heavy-duty



< high temperatures

Base



< straight



< folded



< weldable

Safety lever



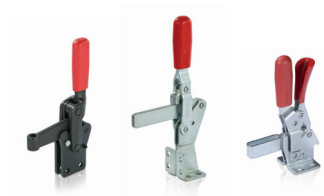
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Sensor



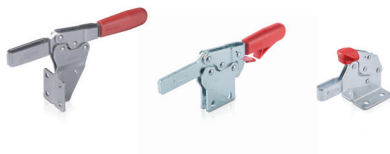
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Safety lever

-  < Available

Sensor

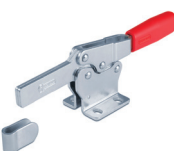
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HORIZONTAL SERIES



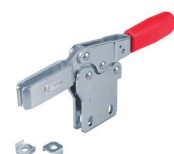
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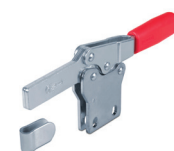
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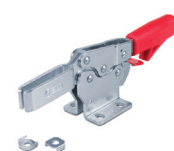
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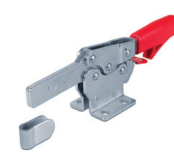
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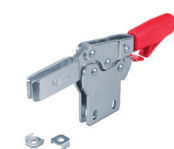
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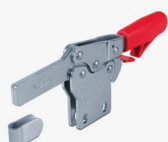
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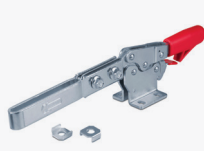
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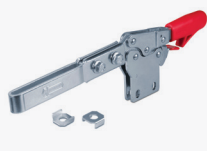
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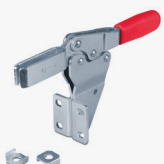
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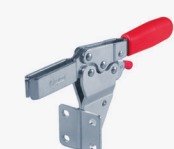
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-  < reinforced heavy-duty
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Base

-  < straight
-  < folded
-  < weldable

Safety lever

-  < Available

Sensor

-  < Predisposed

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-  < straight
-  < folded
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Safety lever

-  < Available

Sensor

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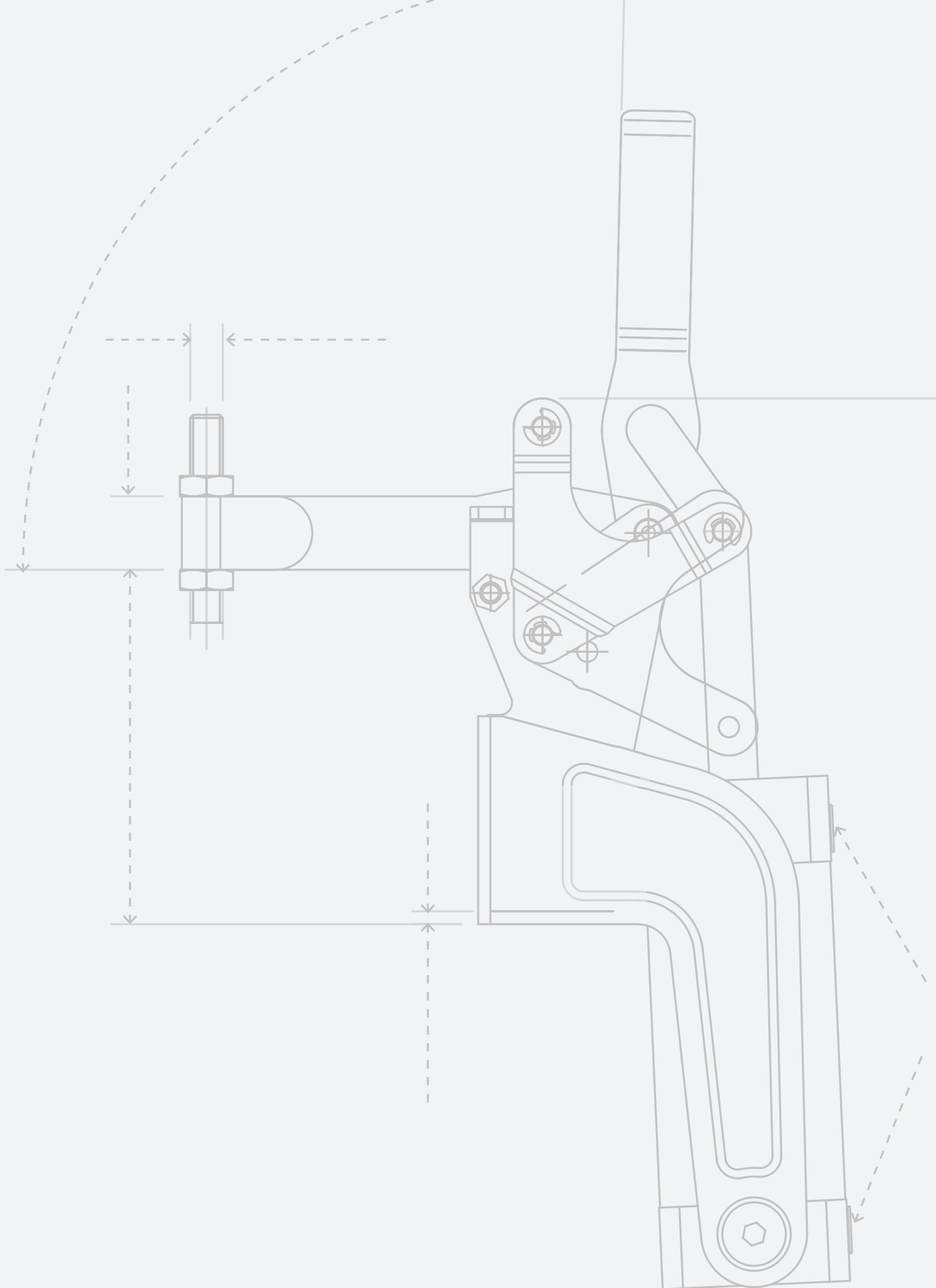
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-  < high temperatures

Base

-  < straight
-  < folded
-  < weldable

Safety lever

-  < Available

Sensor

-  < Predisposed

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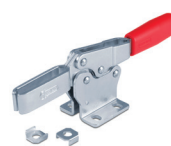


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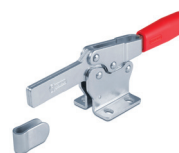


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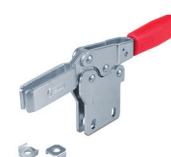
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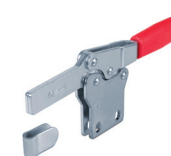
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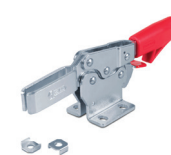
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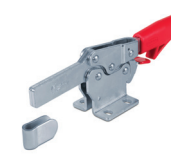
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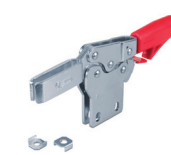
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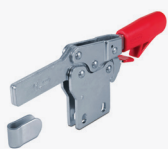


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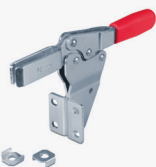
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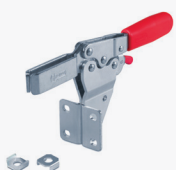
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Base

-  < straight
-  < folded
-  < weldable

Safety lever

-  < Available

Sensor

-  < Predisposed

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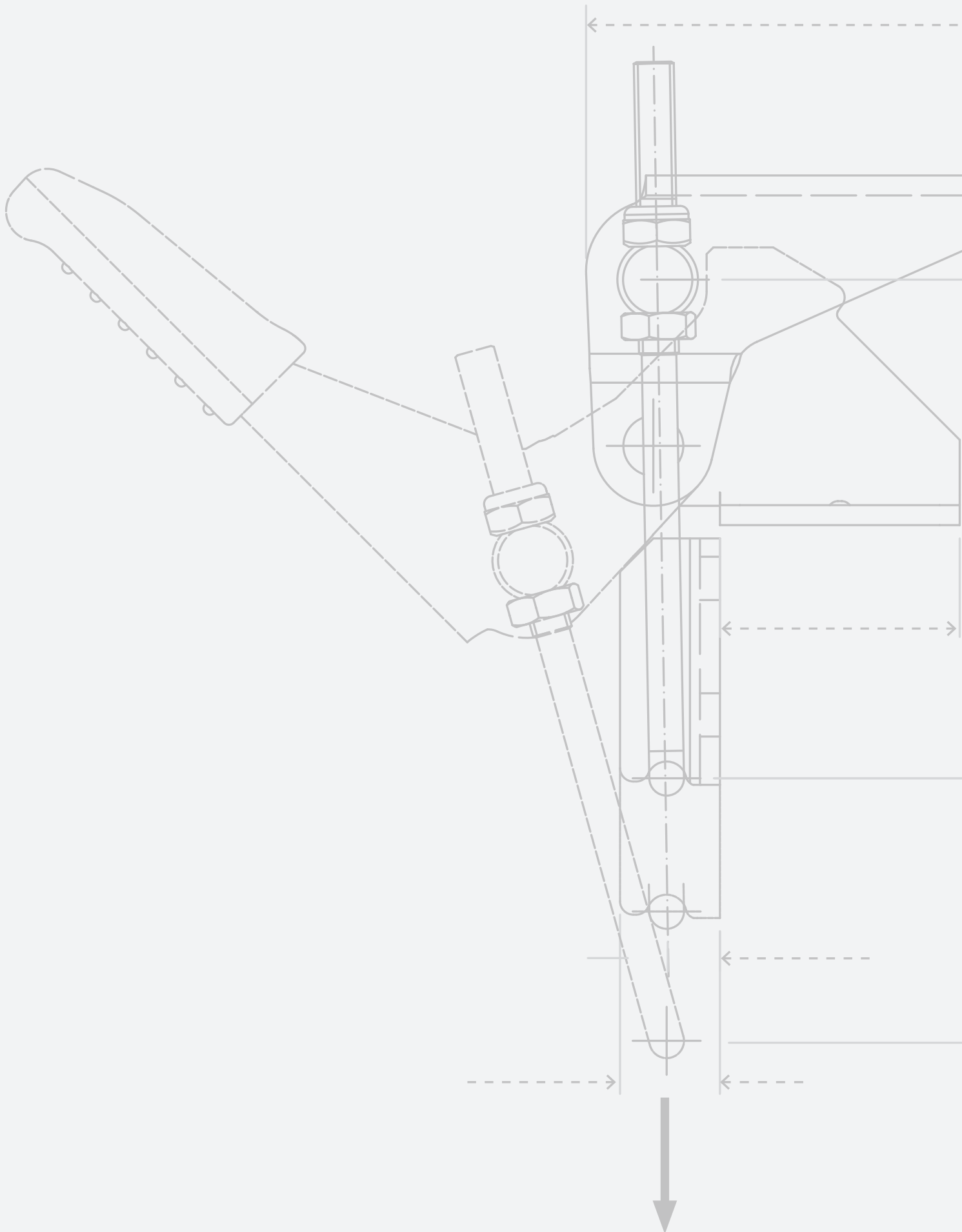
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-  < weldable

Safety lever

-  < Available

Material

-  < stainless steel

Sensor

-  < Predisposed

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Control Sensor Kit

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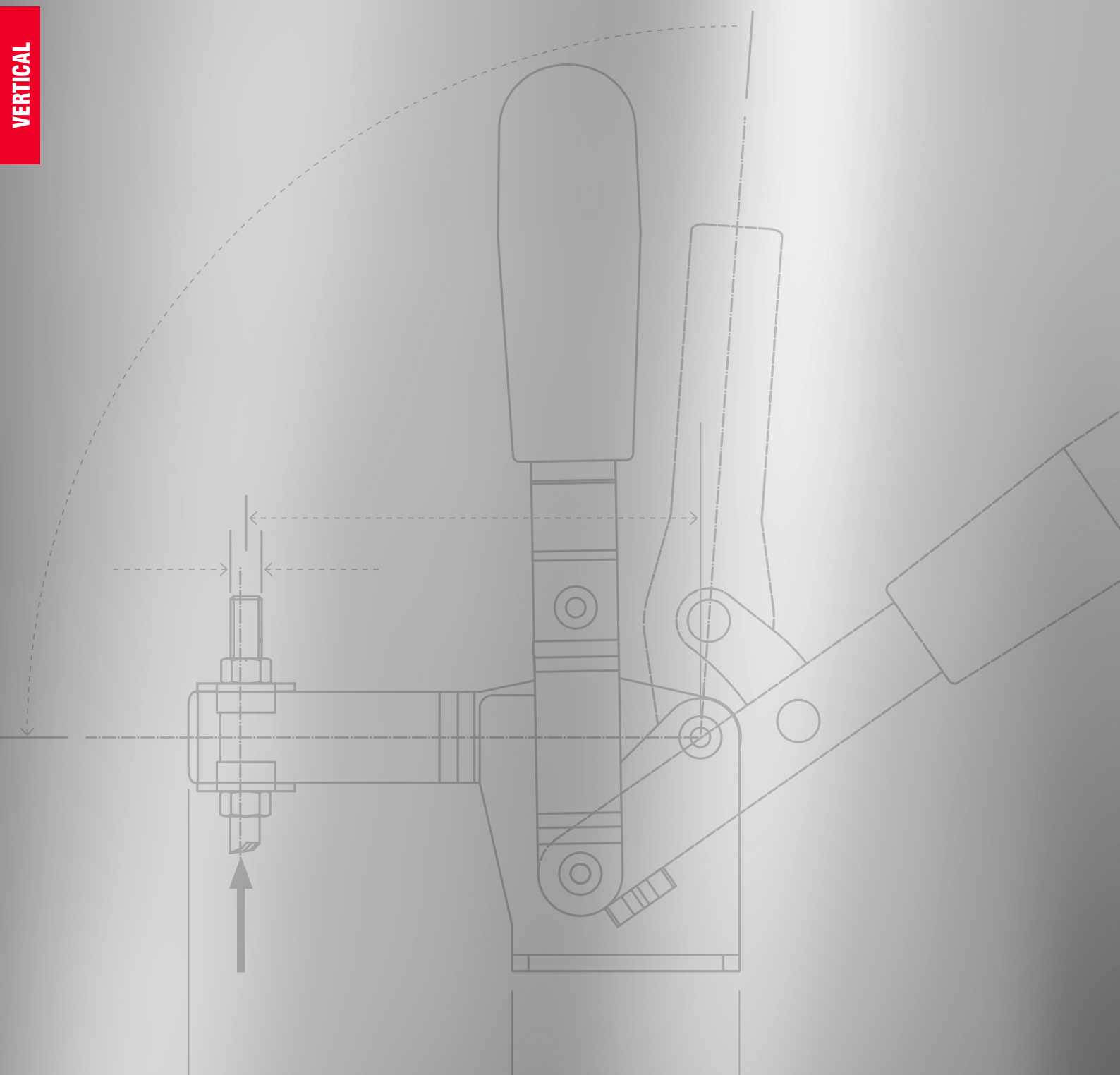


Accessories for LSC-LSG-LSH: Base

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VERTICAL SERIES

VERTICAL



Here you can download
2D and 3D CAD drawings
of all products.



The tools of this family are characterized by the vertical position of the control lever in the clamping position. The clamping and control levers normally move in the same direction.

Depending on the different needs of the application, you can choose between four different executions:

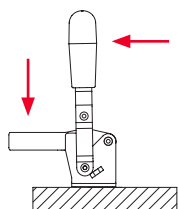
LIGHT SERIES: It has holding forces from 75 to 875 daN. They are available in galvanized steel and stainless steel.

HEAVY-DUTY SERIES: It has retention forces from 1000 to 3000 daN. The heavy-duty version is used when there are resistant forces of high intensity, for example: in the closing of moulds for foams, polyurethanes, etc. The tools of this series are built so that they can be easily disassembled so as to allow the reworking of the individual elements according to the needs of use. The products are made of phosphated weldable steel.

REINFORCED HEAVY-DUTY SERIES: It has holding forces from 220 to 1540 daN. The hot forged parts, as well as the tempered and ground pins and bushings, make this series suitable for heavy loads and a long service life. They are normally used on welding masks, carpentry work, moulds and generally where large clamping forces and strong repetitiveness of movements are required.

HIGH TEMPERATURE SERIES: It has holding forces from 160 to 1500 daN. These tools are free of plastic parts and with the appropriate modifications compared to the light series models (couplings with different tolerances, changes in geometries, different finishes, etc., etc.) that make them suitable for use in environments that can reach 240-300 °C. The products are made of phosphated weldable steel.

They are normally used in the rotational moulding of plastic and require a type of clamping capable of working safely and quickly at high temperatures without uncertainties in closing and opening.



A/AX - E/EX

VERTICAL TOGGLE CLAMPS WITH FOLDED BASE

Material:

Galvanized Steel (A/E) or **AISI 304 stainless steel** (AX/EX).

Riveted Pivots:

Galvanized steel (A/E) or **AISI 304 stainless steel** (AX/EX).

Supporting bushes (for sizes ≥ 130):

Hardened and ground galvanized or stainless steel.

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Executions:

- **A/AX**: open clamping lever with two flanged washers, included in the supply.
- **E/EX**: full clamping lever and bolt retainer, included in the supply, to be welded in the desired position and angle.

Features and applications:

During closing, the clamping lever is guided laterally to ensure greater stability against any transverse stresses.

The movement of the levers has been designed to ensure the safety of the operator's fingers and prevent them from being crushed during the movement of the tool.

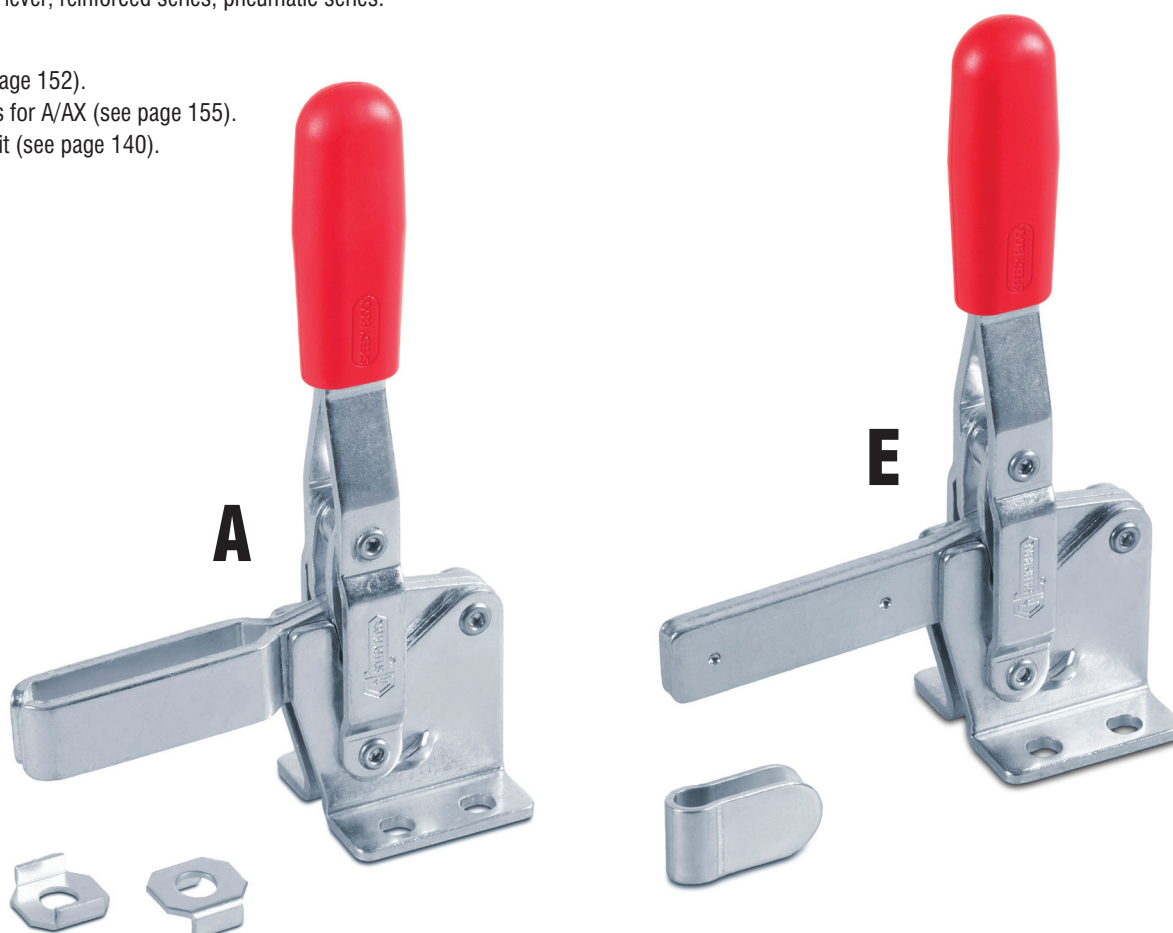
A special grease is applied to the contact surfaces to reduce friction and make the movement smoother.

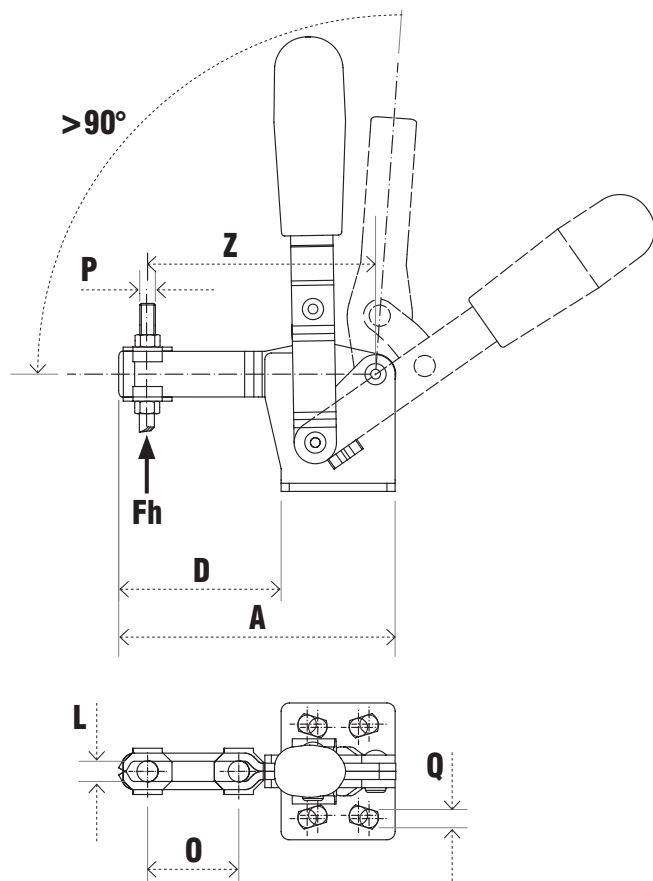
Other available executions:

Series with safety lever, reinforced series, pneumatic series.

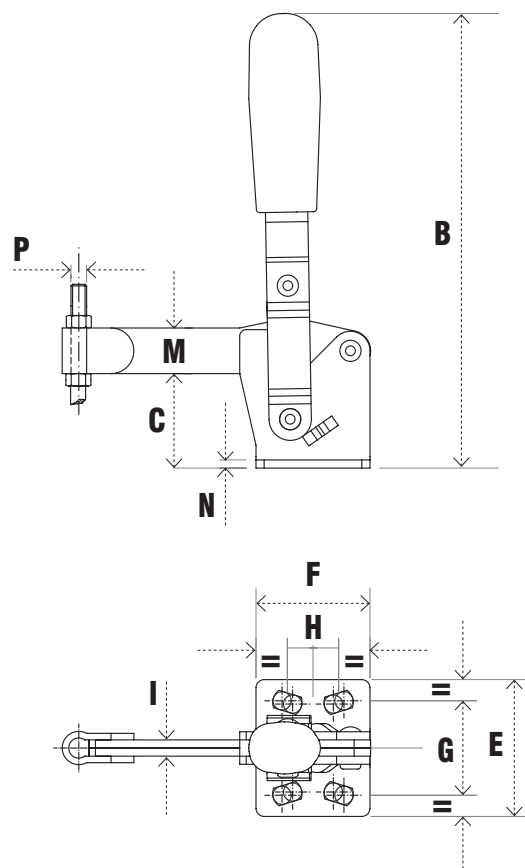
Accessories:

- Spindles (see page 152).
- Lever crossbars for A/AX (see page 155).
- Safety sensor kit (see page 140).





A/AX



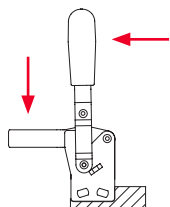
E/EX

Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	Z	Fh (daN)	Gr. Δ
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AA524	75/E	67.5	98	20.5	38.5	34	29	24	15÷16	4		11	2		M5	4.5		75	100
AA530	130/A	85	142	28	50	42	35	27÷29	12.5÷19		6.2	16	2.5	28	M6	5.6	71	105	230
AA534	130/E	86	142	28	51	42	35	27÷29	12.5÷19	5		16	2.5		M6	5.6		105	235
AA540	230/A	110.5	168	33.5	67.5	45	43	32	18÷21		8.5	18	3	40	M8	6.7	94	200	380
AA544	230/E	112	168	33.5	69	45	43	32	18÷21	6		18	3		M8	6.7		200	390
AA550	330/A	129	195	43	79	65	50	45÷46	29÷32		10.5	22	3.5	43	M10	8.5	108	240	604
AA554	330/E	130.5	195	43	80.5	65	50	45÷46	29÷32	7		22	3.5		M10	8.5		240	604
AA560	430/A	164	247	55.5	106	65	58	45	32		12.5	26	4	64	M12	8.5	138	280	1100
AA564	430/E	166	247	55.5	108	65	58	45	32	10		26	4		M12	8.5		280	1100
AA570	530/A	223	303	84.5	143	95	80	70	50÷51		12.5	32	7	90	M12	12.5	195	450	2110
AA574	530/E	225	303	84.5	145	95	80	70	50÷51	10		32	7		M12	12.5		450	2110



Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	Z	Fh (daN)	Gr. Δ
AS095	75/AX	67	98	20.5	38	34	29	24	15÷16		5.2	11	2	20	M5	4.5	56	75	98
AS105	75/EX	67.5	98	20.5	38.5	34	29	24	15÷16	4		11	2		M5	4.5		75	100
AS150	130/AX	85	142	28	50	42	35	27÷29	12.5÷19		6.2	16	2.5	28	M6	5.6	71	105	230
AS160	130/EX	86	142	28	51	42	35	27÷29	12.5÷19	5		16	2.5		M6	5.6		105	235
AS180	230/AX	110.5	168	33.5	67.5	45	43	32	18÷21		8.5	18	3	40	M8	6.7	94	200	380
AS190	230/EX	112	168	33.5	69	45	43	32	18÷21	6		18	3		M8	6.7		200	390





B/BX - F/FX

VERTICAL TOGGLE CLAMPS WITH STRAIGHT BASE

Material:

Galvanized Steel (B/F) or **AISI 304 stainless steel** (BX/FX).

Riveted Pivots:

Galvanized steel (B/F) or **AISI 304 stainless steel** (BX/FX).

Supporting bushes (for sizes ≥ 130):

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Handle:

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The movement of the levers has been designed to ensure the safety of the operator's fingers and prevent them from being crushed during the movement of the tool.

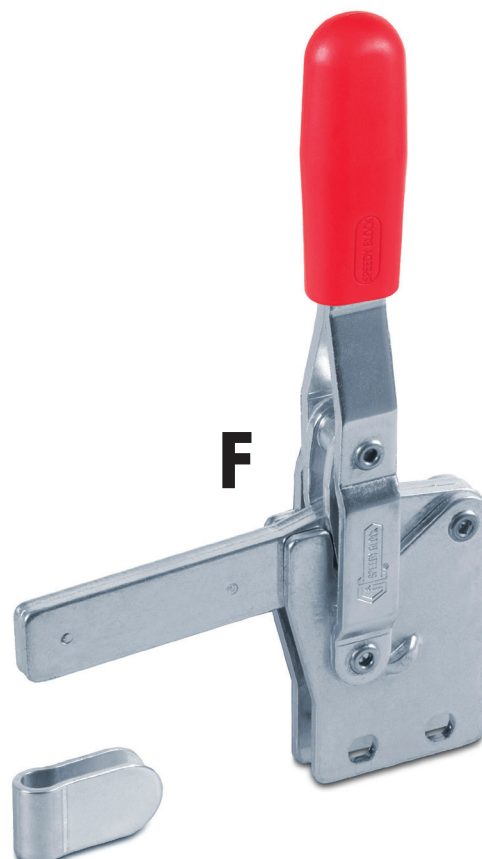
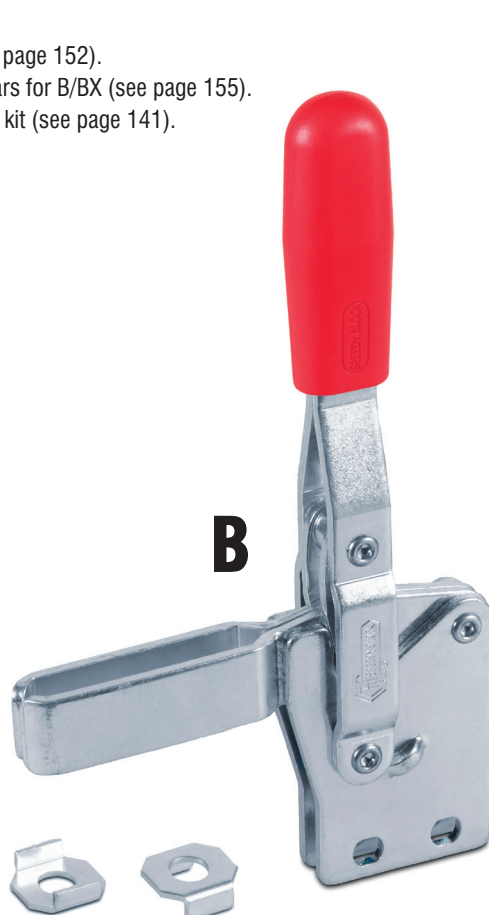
A special grease is applied to the contact surfaces to reduce friction and make the movement smoother.

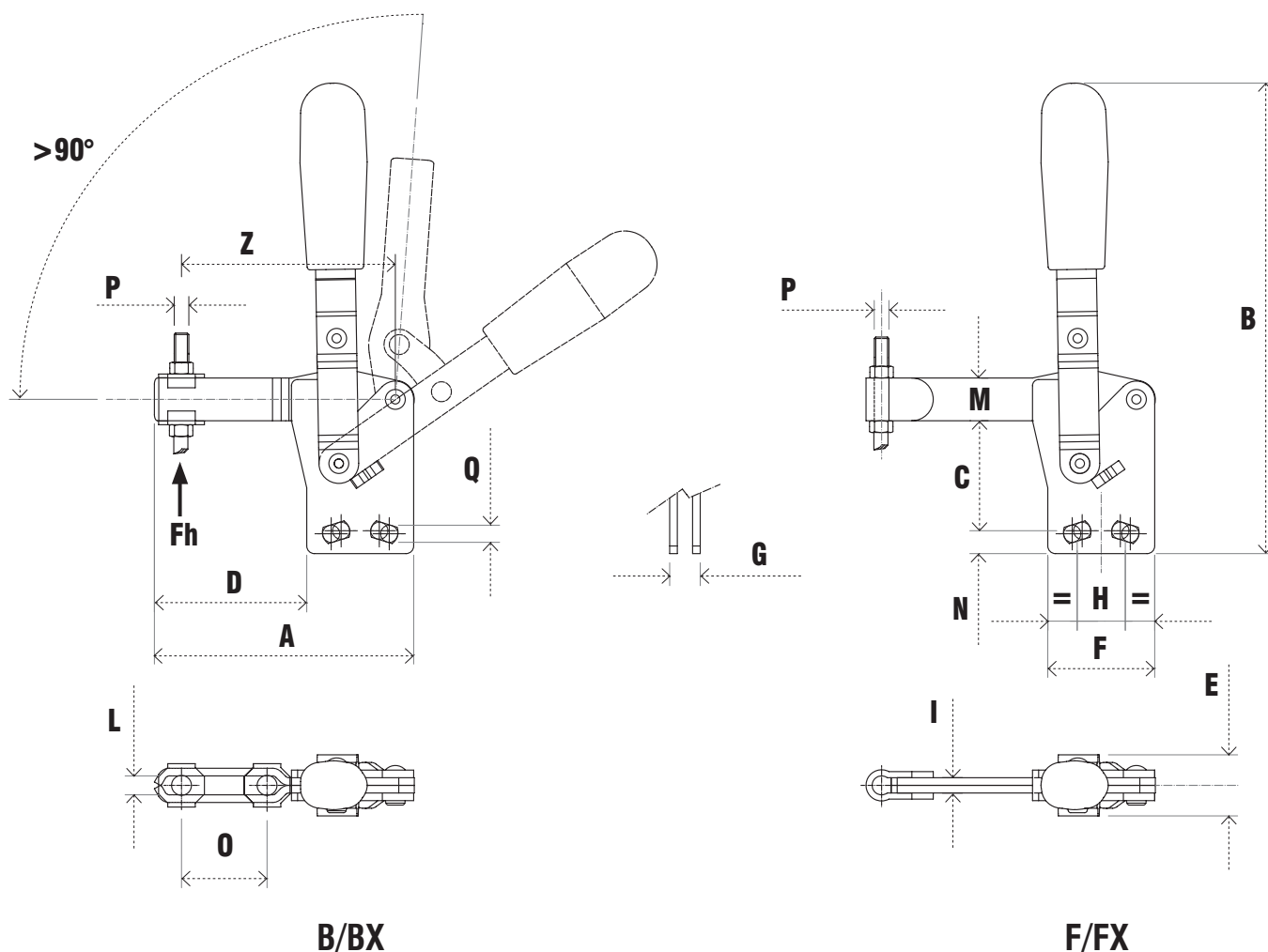
Other available executions:

Series with safety lever, reinforced series, pneumatic series.

Accessories:

- Spindles (see page 152).
- Lever crossbars for B/BX (see page 155).
- Safety sensor kit (see page 141).



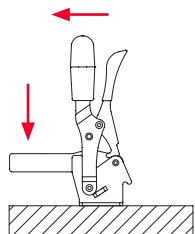


Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	Z	Fh (daN)	Gr.
AA522	75/B	67	109.5	27	38	16	29	8	15÷16		5.2	11	5	20	M5	4.5	56	75	98
AA526	75/F	67.5	109.5	27	38.5	16	29	8	15÷16	4		11	5		M5	4.5		75	100
AA532	130/B	85	156	35÷36	50	20	35	10	12.5÷19		6.2	16	7.5÷6.5	28	M6	5.6	71	105	230
AA536	130/F	86	156	35÷36	51	20	35	10	12.5÷19	5		16	7.5÷6.5		M6	5.6		105	235
AA542	230/B	110.5	183	41.5	67.5	23	43	12	18÷21		8.5	18	6.5	40	M8	6.7	94	200	380
AA546	230/F	112	183	41.5	69	23	43	12	18÷21	6		18	6.5		M8	6.7		200	390
AA552	330/B	129	218	56.5÷57	79	25	50	14	29÷32		10.5	22	10÷9.5	43	M10	8.5	108	240	620
AA556	330/F	130.5	218	56.5÷57	80.5	25	50	14	29÷32	7		22	10÷9.5		M10	8.5		240	620
AA562	430/B	164	267.5	67.5	106	34	58	18	32		12.5	26	10	64	M12	8.5	138	280	1100
AA566	430/F	166	267.5	67.5	108	34	58	18	32	10		26	10		M12	8.5		280	1100
AA572	530/B	223	337	105	146	34	77	18	50÷51		12.5	32	12.5	90	M12	12.5	195	450	2110
AA576	530/F	225	337	105	148	34	77	18	50÷51	10		32	12.5		M12	12.5		450	2110



Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	Z	Fh (daN)	Gr.
AS100	75/BX	67	109.5	27	38	16	29	8	15÷16		5.2	11	5	20	M5	4.5	56	75	98
AS110	75/FX	67.5	109.5	27	38.5	16	29	8	15÷16	4		11	5		M5	4.5		75	100
AS155	130/BX	85	156	35÷36	50	20	35	10	12.5÷19		6.2	16	7.5÷6.5	28	M6	5.6	71	105	230
AS165	130/FX	86	156	35÷36	51	20	35	10	12.5÷19	5		16	7.5÷6.5		M6	5.6		105	235
AS185	230/BX	110.5	183	41.5	67.5	23	43	12	18÷21		8.5	18	6.5	40	M8	6.7	94	200	380
AS195	230/FX	112	183	41.5	69	23	43	12	18÷21	6		18	6.5		M8	6.7		200	390





AL/ALX - EL/ELX

VERTICAL TOGGLE CLAMPS WITH FOLDED BASE AND SAFETY LEVER

Material:

Galvanized steel (AL/EL) or **AISI 304 stainless steel** (ALX/ELX).

Riveted Pivots:

Galvanized Steel (AL/EL) or **AISI 304 stainless steel** (ALX/ELX).

Supporting Bushes:

Hardened and ground galvanized or stainless steel.

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Executions:

- **AL/ALX:** open clamping lever with two folded washers, included in the supply.
- **EL/ELX:** full clamping lever and bolt retainer, included in the supply, to be welded in the desired position and angle.

Safety lever:

Galvanized steel (AL/EL) or **AISI 304 stainless steel** (ALX/ELX), red PVC coating.

Features and applications:

The safety lever ensures the perfect anchoring of the tool, even in the open position, preventing any accidental openings caused by vibrations or shocks (see picture 01). In fact, opening the tool requires a mechanical action by the operator to disengage the retaining system.

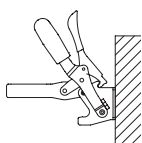
During closing, the clamping lever is guided laterally to ensure greater stability against any transverse stresses.

The movement of the levers has been designed to ensure the safety of the operator's fingers and prevent them from being crushed during the movement of the tool.

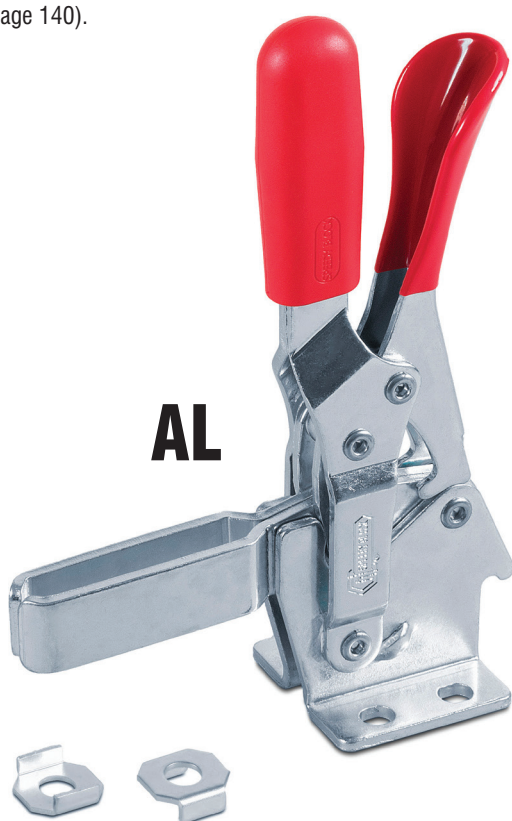
A special grease is applied to the contact surfaces to reduce friction and make the movement smoother.

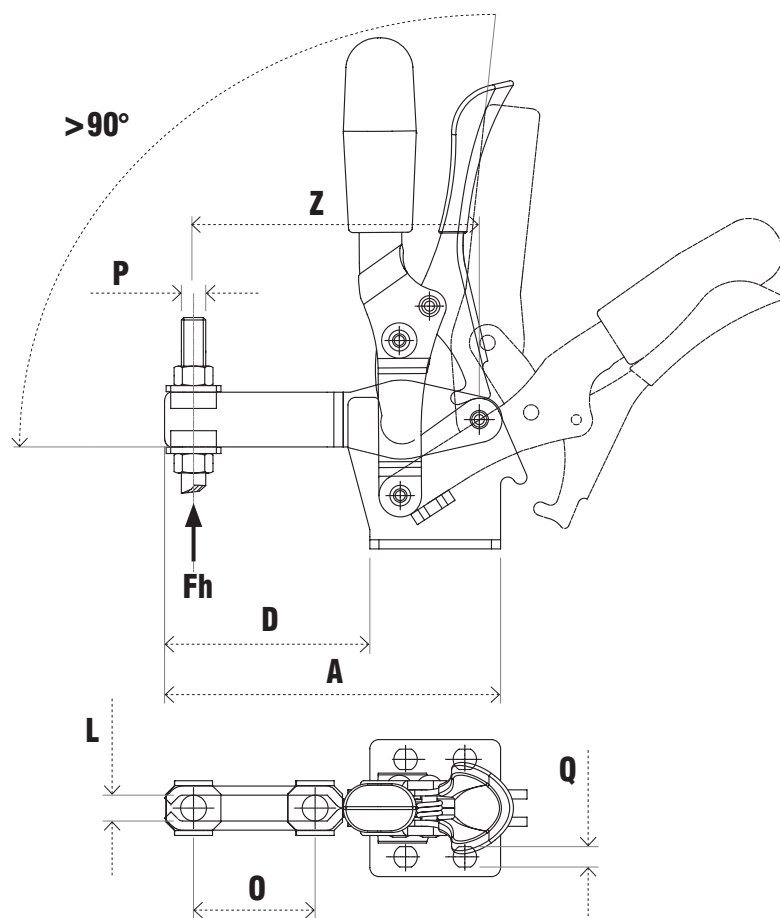
Accessories:

- Spindles (see page 152).
- Lever crossbars for AL/ALX (see page 155).
- Safety sensor kit (see page 140).

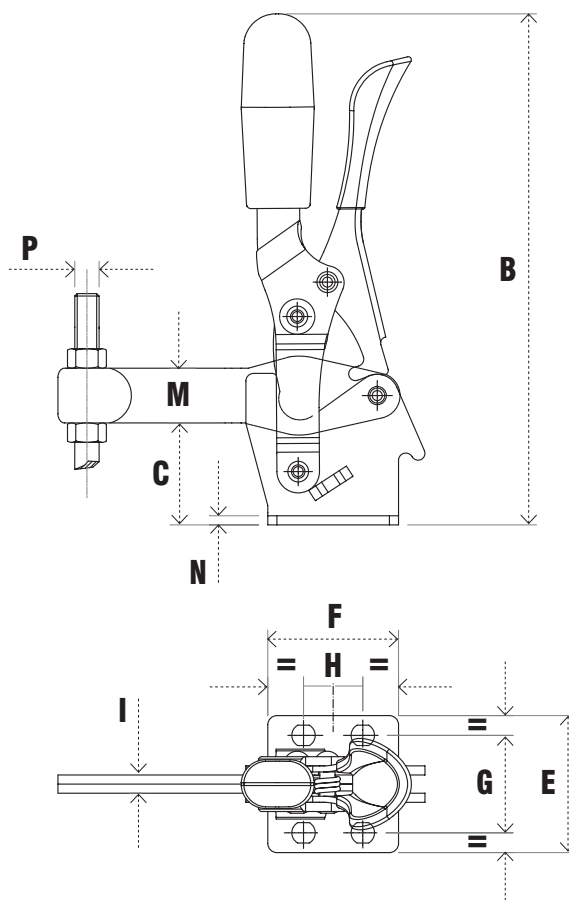


picture 01
Vertical assembly.





AL/ALX



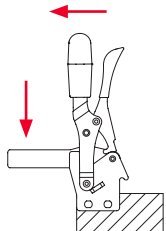
EL/ELX

Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	Z	Fh (daN)	Gr.
AA582	130/AL	85	142	28	50	42	35	27÷29	12.5÷19		6.2	16	2.5	28	M6	5.6	71	105	275
AA586	130/EL	86	142	28	51	42	35	27÷29	12.5÷19	5		16	2.5		M6	5.6		105	280
AA590	230/AL	110.5	168	33.5	67.5	45	43	32	18÷21		8.5	18	3	40	M8	6.7	94	200	380
AA594	230/EL	112	168	33.5	69	45	43	32	18÷21	6		18	3		M8	6.7		200	390



Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	Z	Fh (daN)	Gr.
AS200	130/ALX	85	142	28	50	42	35	27÷29	12.5÷19		6.2	16	2.5	28	M6	5.6	71	105	275
AS204	130/ELX	86	142	28	51	42	35	27÷29	12.5÷19	5		16	2.5		M6	5.6		105	280
AS210	230/ALX	110.5	168	33.5	67.5	45	43	32	18÷21		8.5	18	3	40	M8	6.7	94	200	380
AS214	230/ELX	112	168	33.5	69	45	43	32	18÷21	6		18	3		M8	6.7		200	390





BL/BLX – FL/FLX

VERTICAL TOGGLE CLAMPS WITH STRAIGHT BASE AND SAFETY LEVER

Material:

Galvanized steel (BL/FL) or **AISI 304 stainless steel** (BLX/FLX).

Riveted Pivots:

Galvanized steel (BL/FL) or **AISI 304 stainless steel** (BLX/FLX).

Supporting bushes:

Hardened and ground galvanized or stainless steel.

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Executions:

- **BL/BLX**: open clamping lever with two folded washers, included in the supply.
- **FL/FLX**: full clamping lever and bolt retainer, included in the supply, to be welded in the desired position and angle.

Safety lever:

Galvanized steel (BL/FL) or **AISI 304 stainless steel** (BLX/FLX), red PVC coating.

Features and applications:

The safety lever ensures the perfect anchoring of the tool, even in the open position, preventing any accidental openings caused by vibrations or shocks (see picture 01).

In fact, opening the tool requires a mechanical action by the operator to disengage the retaining system.

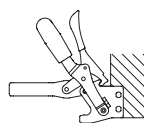
During closing, the clamping lever is guided laterally to ensure greater stability against any transverse stresses.

The movement of the levers has been designed to ensure the safety of the operator's fingers and prevent them from being crushed during the movement of the tool.

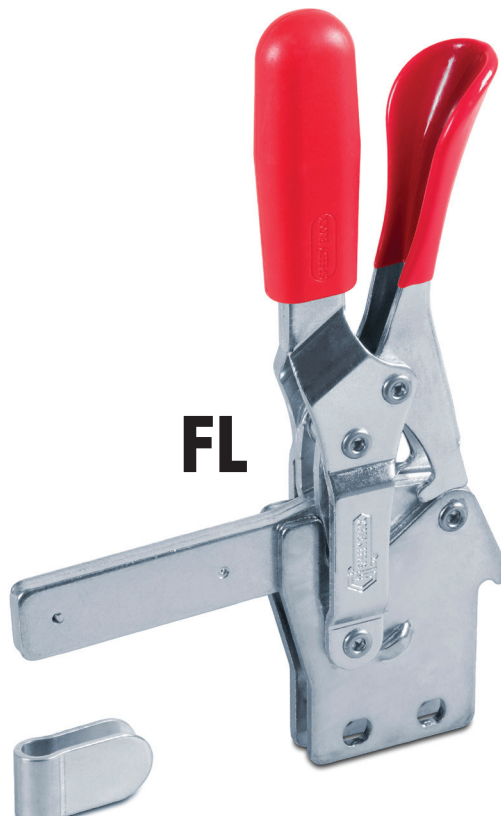
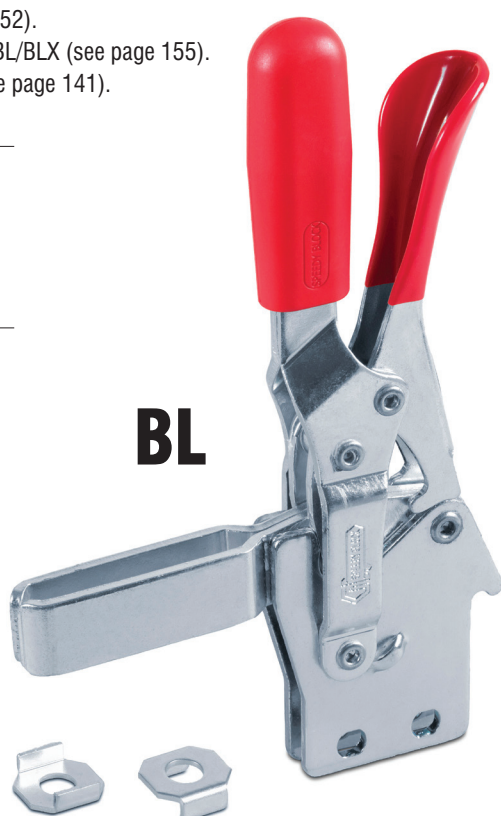
A special grease is applied to the contact surfaces to reduce friction and make the movement smoother.

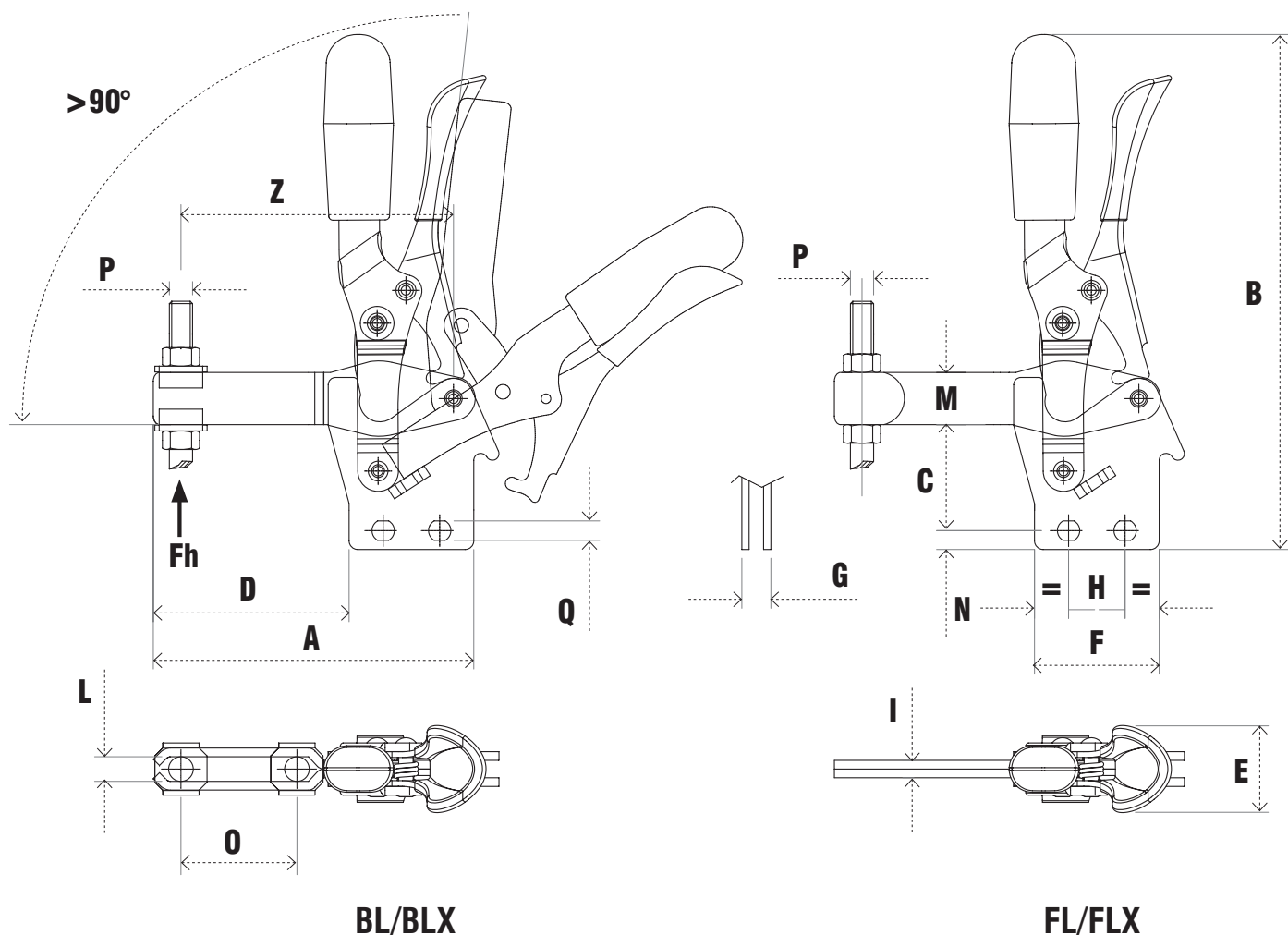
Accessories:

- Spindles (see page 152).
- Lever crossbars for BL/BLX (see page 155).
- Safety sensor kit (see page 141).



picture 01
Vertical assembly.



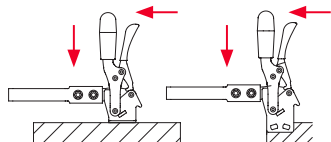


Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	Z	Fh (daN)	Gr. ⚖
AA584	130/BL	85	156	35÷36	50	25.5	35	10	12.5÷19		6.2	16	6.7÷7.5	28	M6	5.6	71	105	275
AA588	130/FL	86	156	35÷36	51	25.5	35	10	12.5÷19	5		16	6.7÷7.5		M6	5.6		105	280
AA592	230/BL	110.5	183	41.5	67.5	30	43	12	18÷21		8.5	18	6.5	40	M8	6.7	94	200	380
AA596	230/FL	112	183	41.5	69	30	43	12	18÷21	6		18	6.5		M8	6.7		200	390



Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	Z	Fh (daN)	Gr. ⚖
AS202	130/BLX	85	156	35÷36	50	25.5	35	10	12.5÷19		6.2	16	6.7÷7.5	28	M6	5.6	71	105	275
AS206	130/FLX	86	156	35÷36	51	25.5	35	10	12.5÷19	5		16	6.7÷7.5		M6	5.6		105	280
AS212	230/BLX	110.5	183	41.5	67.5	30	43	12	18÷21		8.5	18	6.5	40	M8	6.7	94	200	380
AS216	230/FLX	112	183	41.5	69	30	43	12	18÷21	6		18	6.5		M8	6.7		200	390





ELS/FLS

VERTICAL TOGGLE CLAMPS WITH SAFETY LEVER AND EXTENDED CLAMPING LEVER

Material:

Galvanized steel.

Riveted Pivots:

Galvanized steel.

Supporting bushes:

Hardened and ground steel.

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Executions:

- **ELS:** folded fixing base.
- **FLS:** straight fixing base.

Safety lever:

Galvanized steel, red PVC coating.

Extension:

AP6 and AP8 series in galvanized steel, included in the supply with screws and nuts for assembly (see page 154).

Features and applications:

The extended clamping lever is suitable for use on control jigs.

The safety lever ensures the perfect anchoring of the tool, even in the open position, preventing any accidental openings caused by vibrations or shocks. In fact, opening the tool requires a mechanical action by the operator to disengage the retaining system.

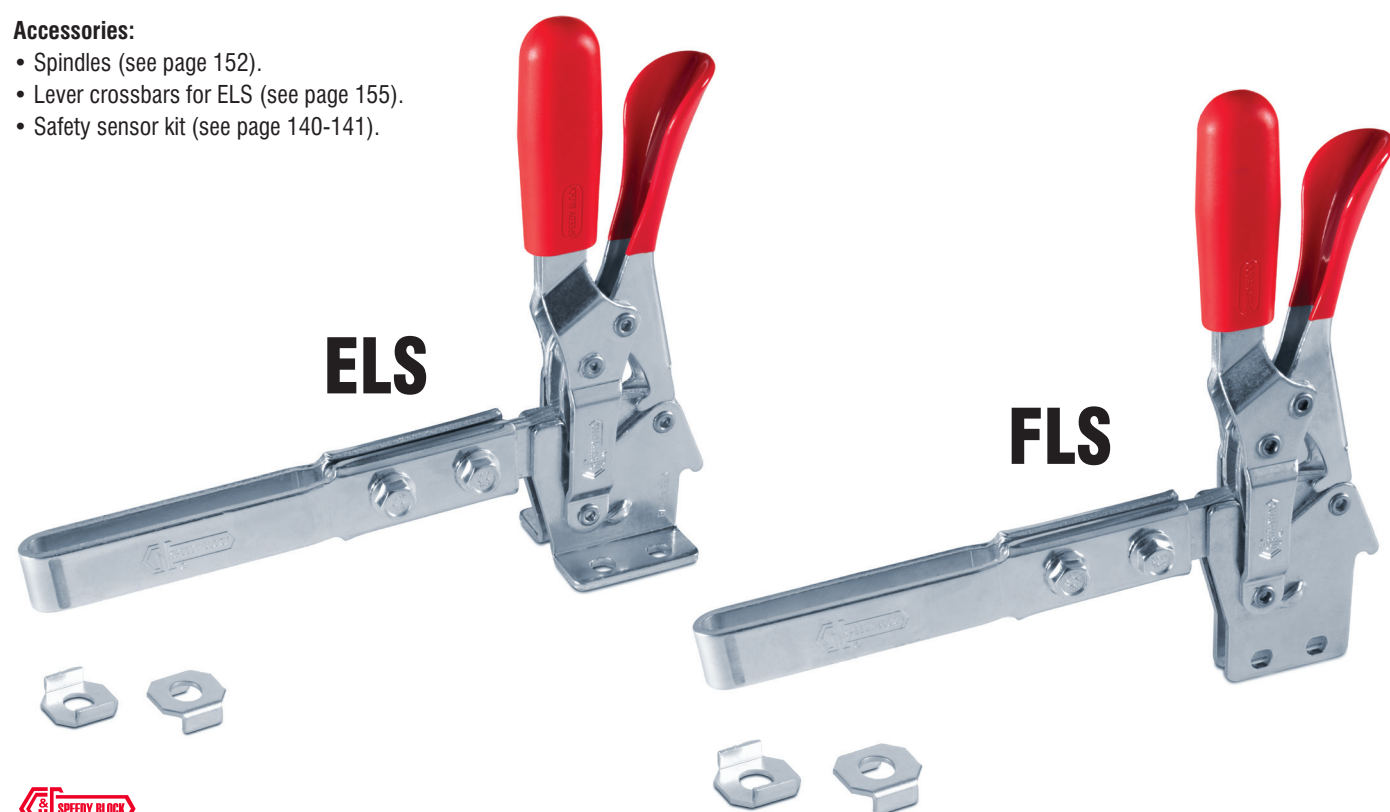
During closing, the clamping lever is guided laterally to ensure greater stability against any transverse stresses.

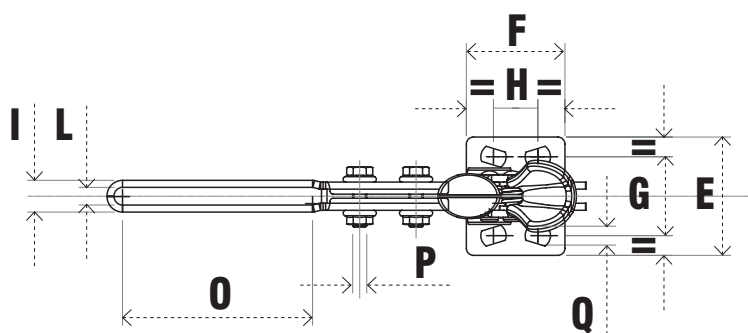
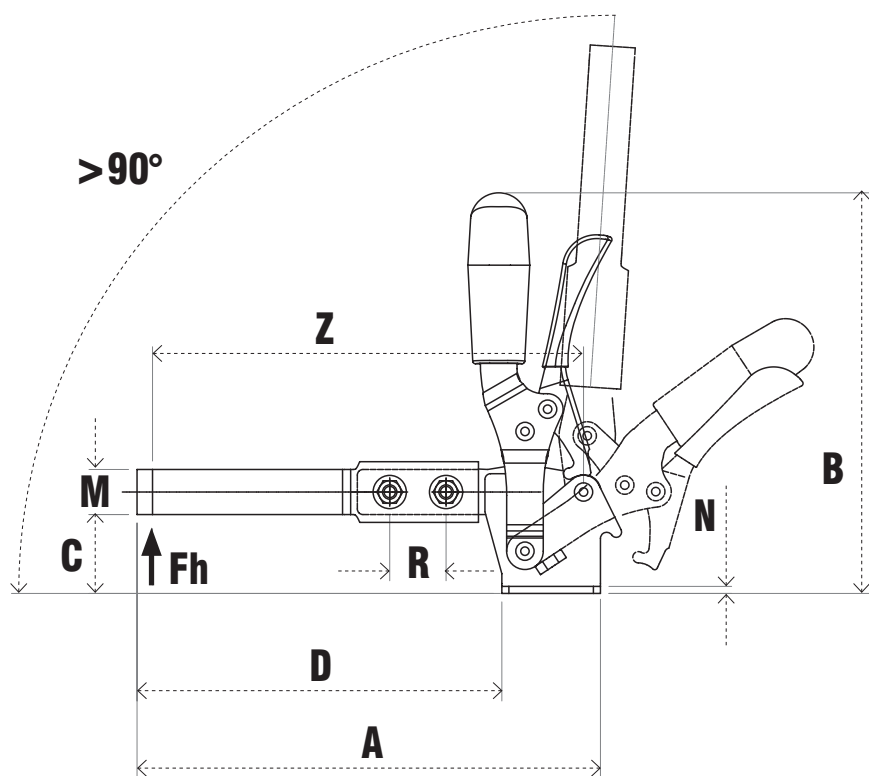
The movement of the levers has been designed to ensure the safety of the operator's fingers and prevent them from being crushed during the movement of the tool.

A special grease is applied to the contact surfaces to reduce friction and make the movement smoother.

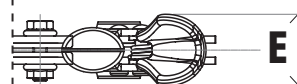
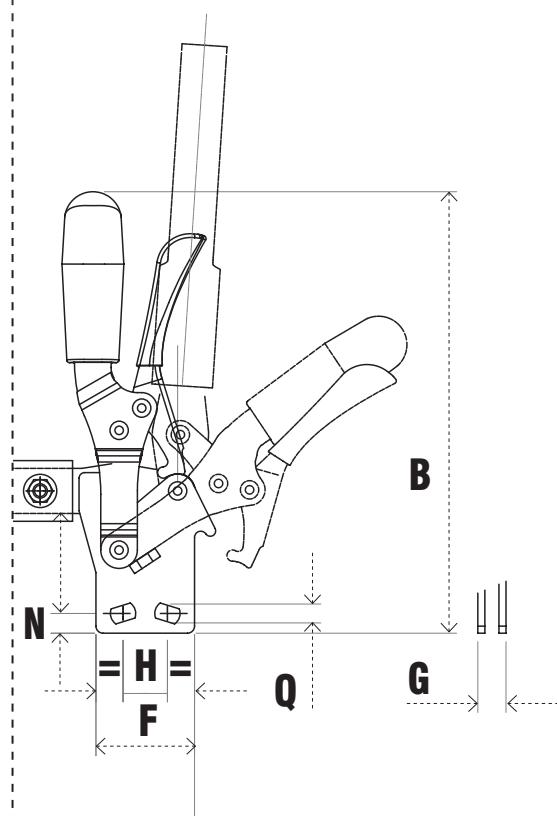
Accessories:

- Spindles (see page 152).
- Lever crossbars for ELS (see page 155).
- Safety sensor kit (see page 140-141).



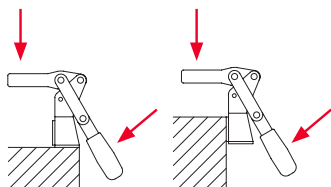


ELS



FLS

Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R	Z	Fh (daN)	Gr. 
AA587	130/ELS	164	142	28	129	42	35	27÷29	12.5÷19	11.3	6.3	16	2.5	67.5	M5	5.6	20	152	50	375
AA589	130/FLS	164	156	35÷36	129	25.5	35	10	12.5÷19	11.3	6.3	16	6.5÷7.5	67.5	M5	5.6	20	152	50	375
AA595	230/ELS	198	168	33.5	155	45	43	32	19.5	14.2	8.2	18	3	71.5	M6	6.7	26	182	100	545
AA597	230/FLS	198	183	41.5	155	30	43	32	19.5	14.2	8.2	18	6.5	71.5	M6	6.7	26	182	100	545



AV-EV

VERTICAL TOGGLE CLAMPS WITH DOUBLE HORIZONTAL AND FRONT BASE

Material:

Galvanized steel.

Riveted Pivots:

Galvanized steel.

Supporting bushes:

Hardened and ground steel.

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Executions:

- **AV:** open clamping lever with two folded washers, included in the supply
- **EV:** full clamping lever and bolt retainer, included in the supply, to be welded in the desired position and angle.

Features and applications:

During closing, the clamping lever is guided laterally to ensure greater stability against any transverse stresses.

The movement of the levers has been designed to ensure the safety of the operator's fingers and prevent them from being crushed during the movement of the tool.

A special grease is applied to the contact surfaces to reduce friction and make the movement smoother.

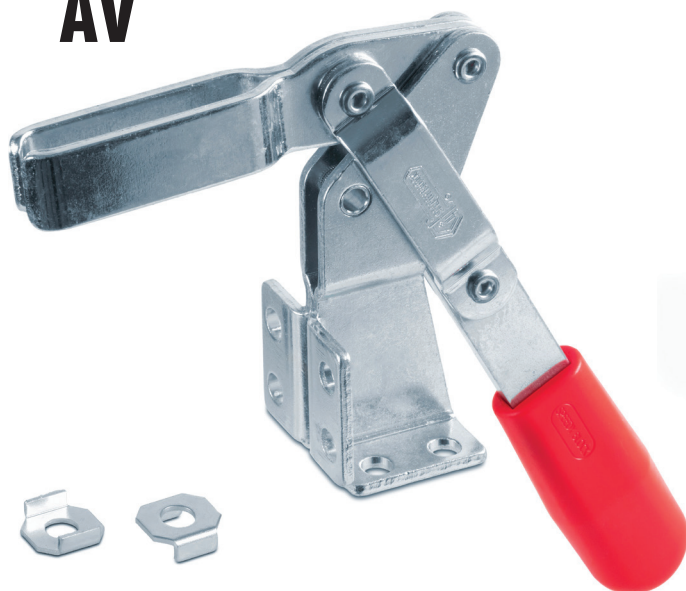
Other available designs:

Pneumatic series.

Accessories:

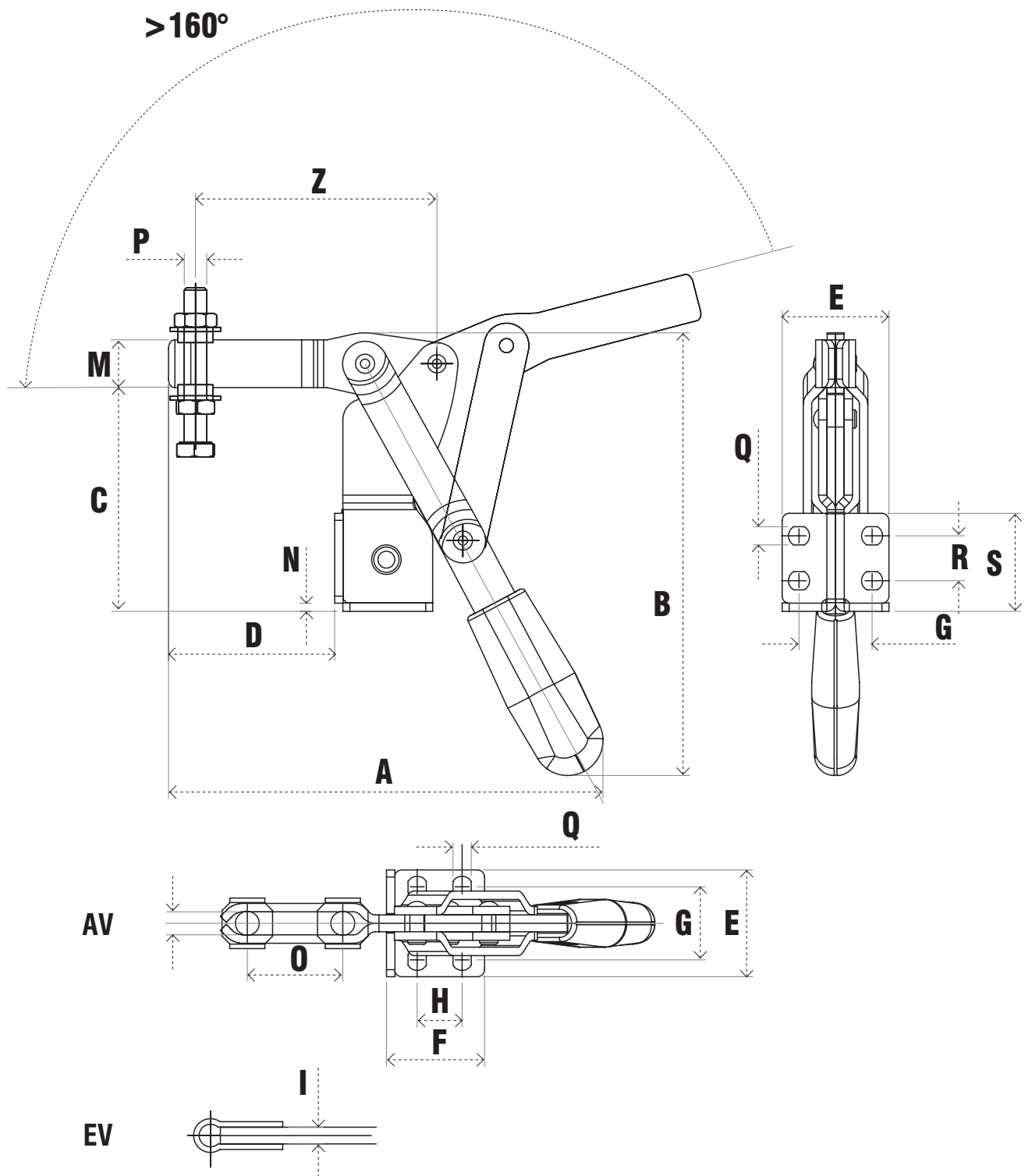
- Spindles (see page 152).
- Lever crossbars for AV (see page 155).

AV

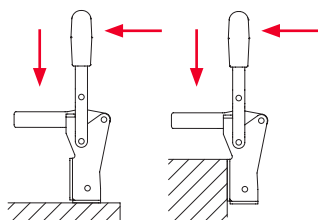


EV





Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R	S	Z	Fh (daN)	Gr. 
AA220	200/AV	156	157	76	59	38	35	26	16		8.5	17	3	34	M8	6.5	16	32	86	120	460
AA225	200/EV	157	157	76	61	38	35	26	16	6		17	3		M8	6.5	16	32		120	470
AA320	300/AV	190	198	108	76	48	48	30	28		10.2	20	3	42	M10	8.5	30	51	110	190	815
AA325	300/EV	191	198	108	78	48	48	30	28	8		20	3		M10	8.5	30	51		190	830



AVF-EVF

VERTICAL TOGGLE CLAMPS WITH DOUBLE HORIZONTAL AND FRONT BASE

Material:

Galvanized steel.

Riveted Pivots:

Galvanized steel.

Supporting bushes (for sizes ≥ 130):

Hardened and ground steel.

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Executions:

- **AVF:** clamping lever open with two folded washers, included in the supply
- **EVF:** full clamping lever and bolt retainer, included in the supply, to be welded in the desired position and angle.

Features and applications:

During closing, the clamping lever is guided laterally to ensure greater stability against any transverse stresses.

The movement of the levers has been designed to ensure the safety of the operator's fingers and prevent them from being crushed during the movement of the tool.

A special grease is applied to the contact surfaces to reduce friction and make the movement smoother.

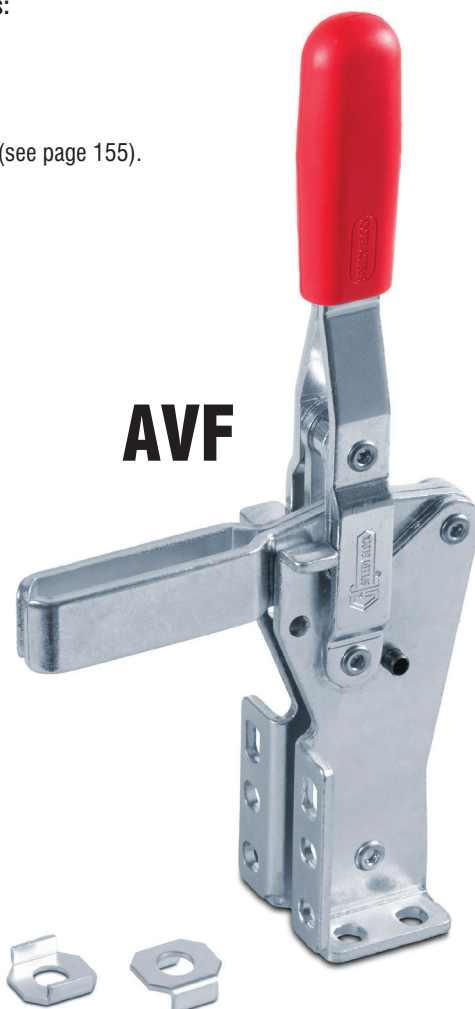
Other available executions:

Pneumatic series.

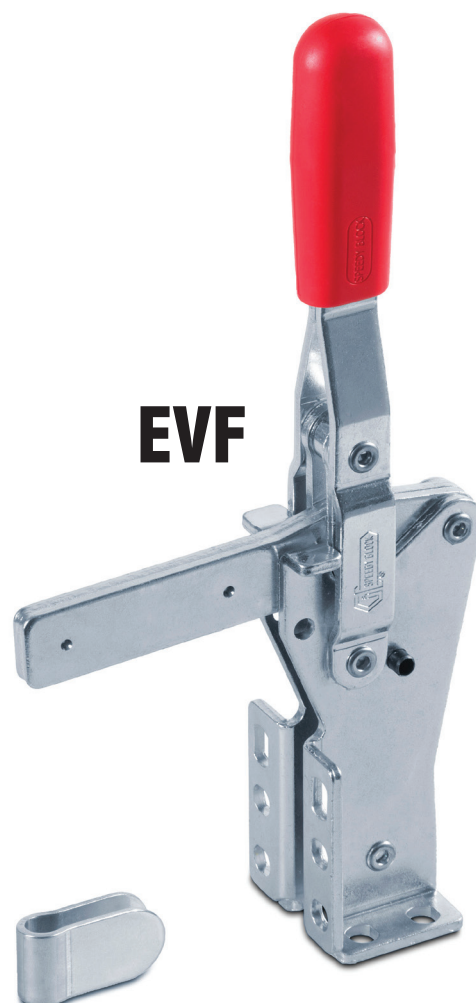
Accessories:

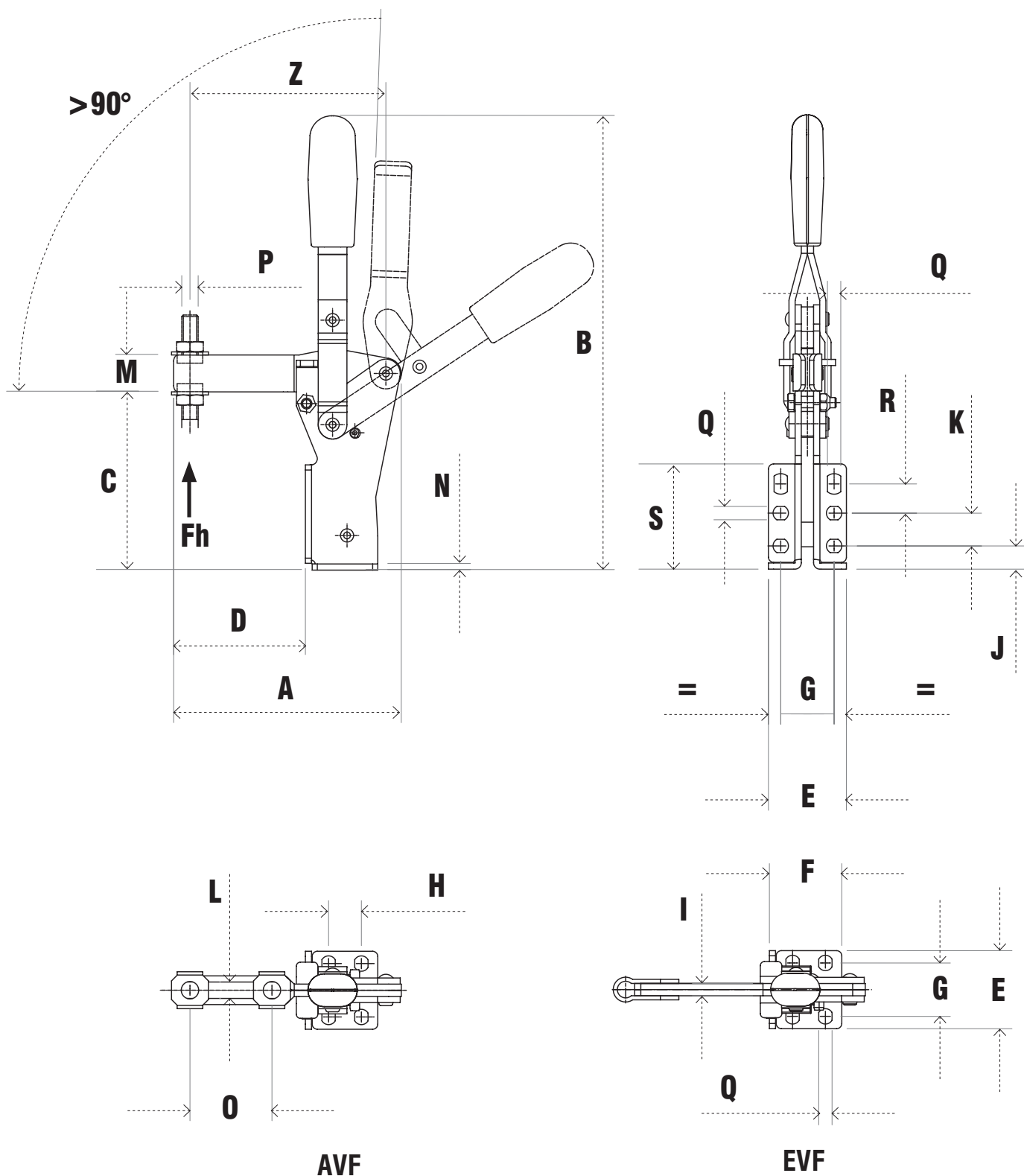
- Spindles (see page 152).
- Lever crossbars for AVF (see page 155).

AVF

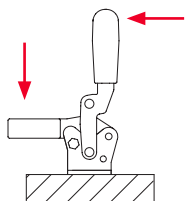


EVF





Code	Description	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	Z	F _h (daN)	Gr. $\Delta^+ \Delta^-$
AA090	75/AVF	67	120	43	35.5	34	24	24	12.5		10	12.5	5.2	11	2	20	M5	4.5		30	56	75	130
AA092	75/EVF	67.5	120	43	36.5	34	24	24	12.5	4	10	12.5		11	2		M5	4.5		30		75	130
AA142	130/AVF	85	184	70	43	42	31	27	12.5		16	12.5	6.2	16	2.5	28	M6	5.6	12.5	49	71	110	300
AA144	130/EVF	86	184	70	44	42	31	27	12.5	5	16	12.5		16	2.5		M6	5.6	12.5	49		110	300
AA223	230/AVF	111	222	87	64	38	35	26	16		11	16	8.5	18	3	40	M8	6.5	14.25	51	94	220	500
AA228	230/EVF	112	222	87	65	38	35	26	16	6	11	16		18	3		M8	6.5	14.25	51		220	500
AA322	330/AVF	129	259	108	71	48	49	30	28		19	30	10.5	22	3.5	45	M10	8.5	20	79	110	260	800
AA328	330/EVF	131	259	108	73	48	49	30	28	7	19	30		22	3.5		M10	8.5	20	79		260	800



LLA-LLE

VERTICAL TOGGLE CLAMPS WITH FOLDED BASE, REINFORCED SERIES

Material:

Phosphated weldable steel.

Pivots and supporting bushes:

Hardened and ground steel.

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Executions:

- **LLA:** open clamping lever with two folded washers.
- **LLE:** clamping lever with eyelet for spindle (to be ordered separately - see Accessories).

Accessories:

- Spindles (see page 152).

Features and applications:

These tools are suitable for tightening medium and heavy loads, on welding masks, carpentry work, moulds and, in general, in applications that require large clamping forces and numerous processing cycles.

The clamping and control levers are forged and the clamping lever guide is adjustable.

During closing, the clamping lever is guided laterally to ensure greater stability against any transverse stresses.

The movement of the levers has been designed to ensure the safety of the operator's fingers and prevent them from being crushed during the movement of the tool.

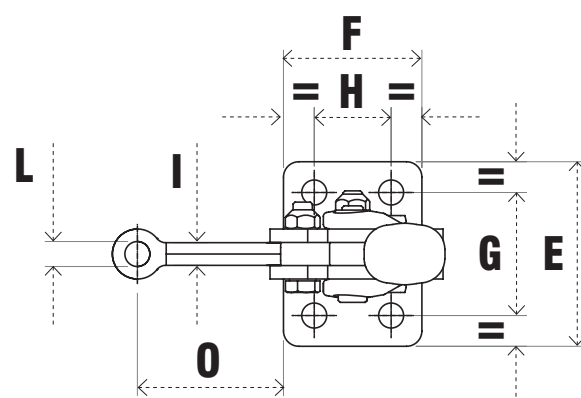
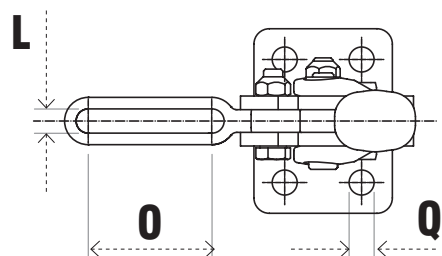
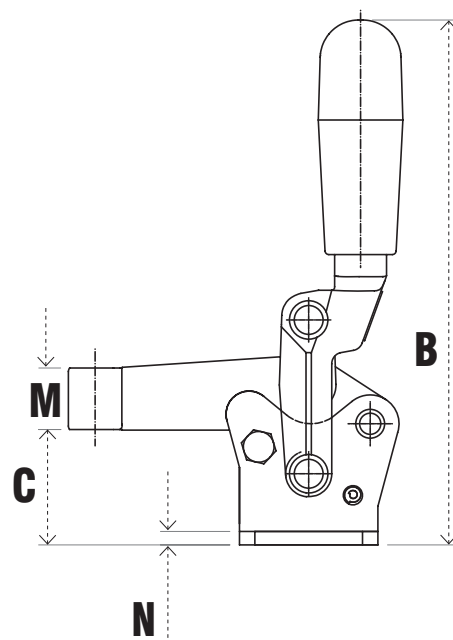
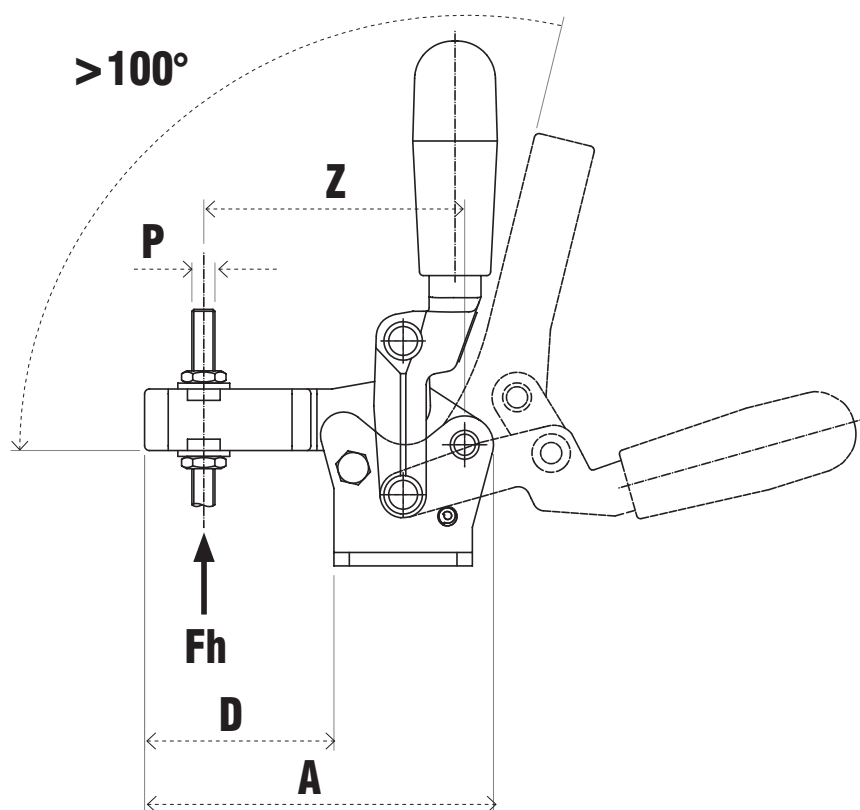
A special grease is applied to the contact surfaces to reduce friction and make the movement smoother.

LLA



LLE

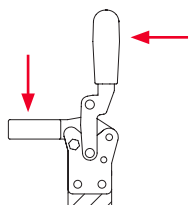




LLA

LLE

Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	Z	Fh (daN)	Gr. Δ
AA600	LLA01	91	136.5	30	49	48	36	32	20		6.3	16	3.5	32	M6	6.5	77	220	330
AA610	LLE01	86	136.5	30	44	48	36	32	20	6	6.5	16	3.5	38	M6	6.5		220	325
AA630	LLA02	129.5	215	50	64	65	54	45	30		10.3	24	5	34	M10	8.5	107	440	1200
AA640	LLE02	129.5	215	50	64	65	54	45	30	10	10.5	24	5	54.5	M10	8.5		440	1200
AA660	LLE03	161	280	67	74	75	75	55	55	12	12.5	30	6	62	M12	10.5		850	2200
AA680	LLE04	203	330	76.5	96	100	90	65	65	16	16.5	35	8	80	M16	12.5		1540	4510



LLB-LLF

VERTICAL TOGGLE CLAMPS WITH STRAIGHT BASE, REINFORCED SERIES

Material:

Phosphated weldable steel.

Pivots and supporting bushes:

Hardened and ground steel.

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Executions:

- **LLA:** open clamping lever with two folded washers.
- **LLE:** clamping lever with eyelet for spindle (to be ordered separately - see accessories).

Accessories:

- Spindles (see page 152).

Features and applications:

These tools are suitable for tightening medium and heavy loads, on welding masks, carpentry work, moulds and, in general, in applications that require large clamping forces and numerous processing cycles.

The clamping and control levers are forged and the clamping lever guide is adjustable.

During closing, the clamping lever is guided laterally to ensure greater stability against any transverse stresses.

The movement of the levers has been designed to ensure the safety of the operator's fingers and prevent them from being crushed during the movement of the tool.

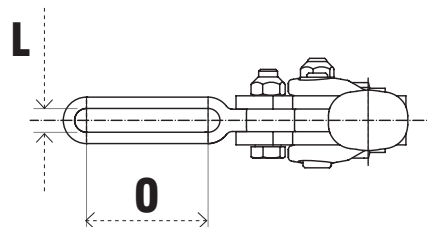
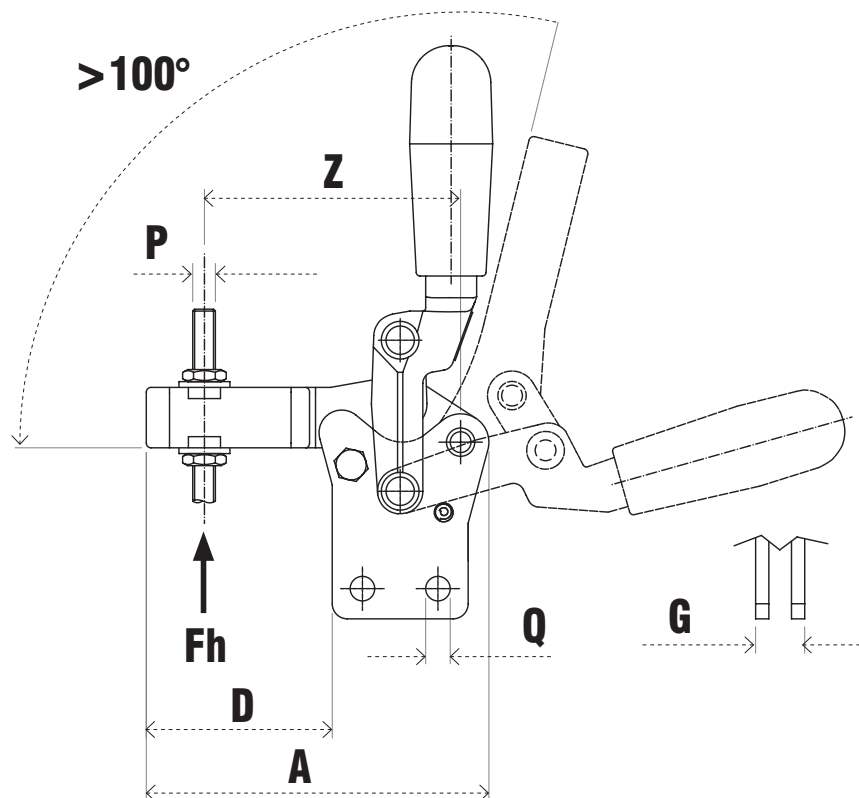
A special grease is applied to the contact surfaces to reduce friction and make the movement smoother.

LLB

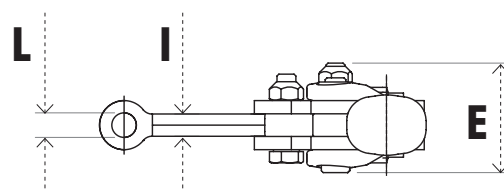
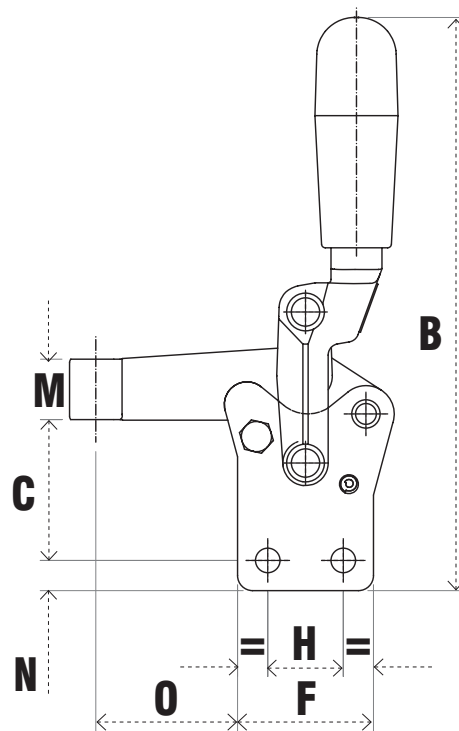


LLF



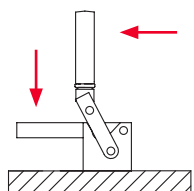


LLB



LLF

Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	Z	Fh (daN)	Gr.
AA605	LLB01	91	152	37.5	49	29	36	13	20		6.3	16	8	32	M6	6.5	77	220	330
AA615	LLF01	86	152	37.5	44	29	36	13	20	6	6.5	16	8	38	M6	6.5		220	325
AA635	LLB02	129.5	235	59.5	64	42	54	20	30		10.3	24	10	34	M10	8.5	107	440	1200
AA645	LLF02	129.5	235	59.5	64	42	54	20	30	10	10.5	24	10	54.5	M10	8.5		440	1200
AA665	LLF03	161	301	78	74	52	75	24	55	12	12.5	30	10	62	M12	10.5		850	2200
AA685	LLF04	203	360	88.5	96	68	90	32	65	16	16.5	35	17.5	80	M16	12.5		1540	4510



F

VERTICAL TOGGLE CLAMPS, HEAVY-DUTY SERIES

Material:

Phosphated weldable steel.

Pivots and supporting bushes:

Hardened and ground steel.

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Features and applications:

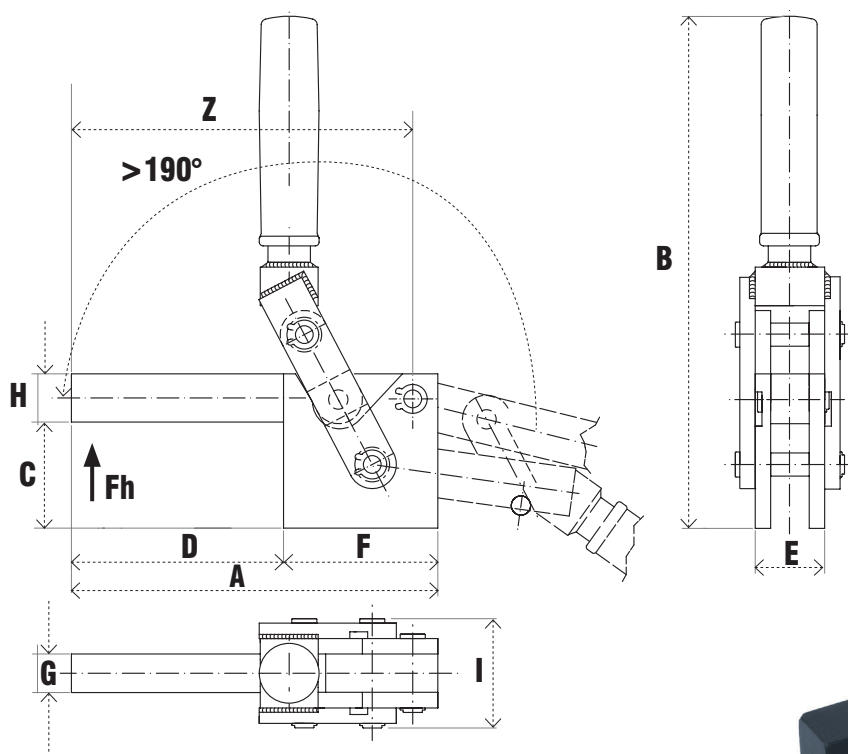
These tools are suitable for heavy use where high clamping forces are required

The individual components can be easily disassembled for reworking according to the requirement of use.

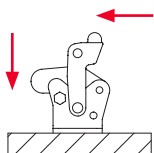
During closing, the clamping lever is guided laterally to ensure greater stability against any transverse stresses.

The movement of the levers has been designed to ensure the safety of the operator's fingers and prevent them from being crushed during the movement of the tool.

A special grease is applied to the contact surfaces to reduce friction and make the movement smoother.



Code	Description	A	B	C	D	E	F	G	H	I	Z	Fh (daN)	Gr. Δ
AA900	1000/F	190	265	55	110	36	80	20	25	57.5	176	1000	2400
AA905	2000/F	220	295	65	120	36	100	20	35	57.5	200	2000	3600
AA910	3000/F	250	320	80	140	45	110	25	40	71	228	3000	5700



LSC

TOGGLE MECHANISMS WITH FOLDED BASE

Material:

Phosphated weldable steel.

Pivots and supporting bushes:

Hardened and ground steel.

Accessories:

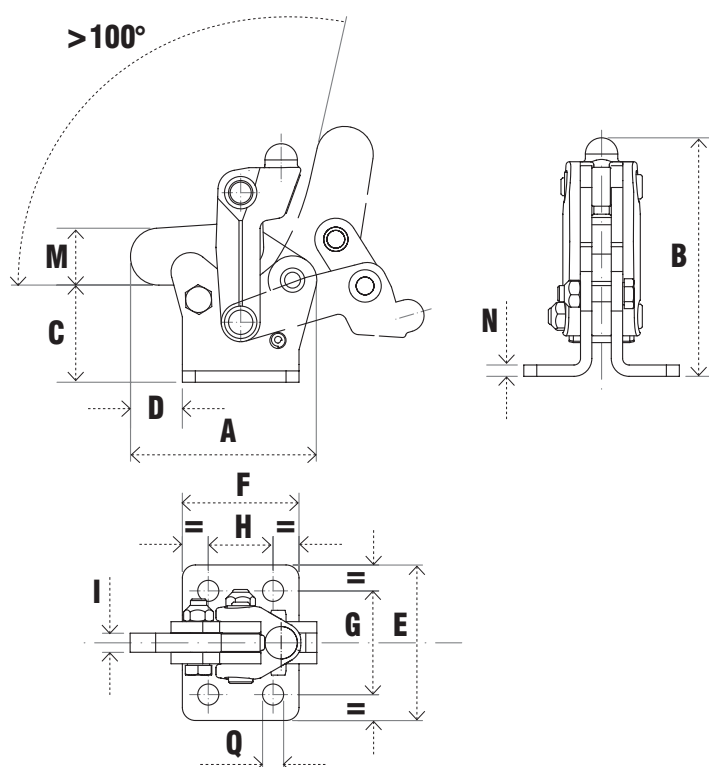
- Control levers (see page 157).
- Handles (see page 156).
- Clamping levers (see page 157).
- Sleeves (see page 157).

Features and applications:

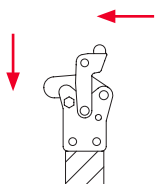
These tools are suitable for tightening medium and heavy loads, on welding masks, carpentry work, moulds and, in general, in applications that require large clamping forces and numerous processing cycles.

The possibility of welding control and clamping levers of variable shape and size allows you to create a customised tool according to the requirement of use.

A special grease is applied to the contact surfaces to reduce friction and make the movement smoother.



Code	Description	A	B	C	D	E	F	G	H	I	M	N	Q	Fh (daN)	Gr. ⚖️
AA700	LSC01	57.5	71	30	16	48	36	32	20	6	17.5	3.5	6.5	220	256
AA725	LSC02	85.5	121	50	20	65	54	45	30	10	28	5	8.5	440	967
AA750	LSC03	115	158	67	28	75	75	55	55	12	35	6	10.5	850	1900
AA775	LSC04	147.5	193	76.5	40.5	100	90	65	65	16	40.5	8	12.5	1540	3980



LSG

TOGGLE MECHANISMS WITH STRAIGHT BASE

Material:

Phosphated weldable steel.

Pivots and supporting bushes:

Hardened and ground steel.

Accessories:

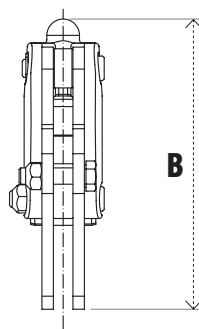
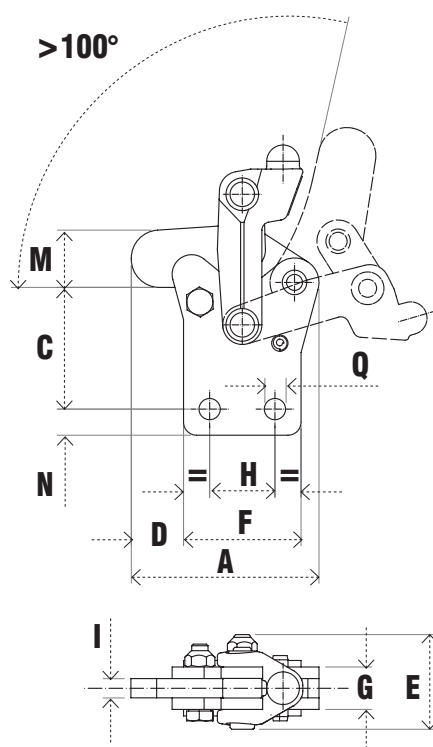
- Control levers (see page 157).
- Handles (see page 156).
- Clamping levers (see page 157).
- Sleeves (see page 157).

Features and applications:

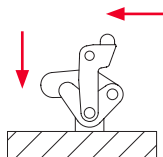
These tools are suitable for tightening medium and heavy loads, on welding masks, carpentry work, moulds and, in general, in applications that require large clamping forces and numerous processing cycles.

The possibility of welding control and clamping levers of variable shape and size allows you to create a customised tool according to the requirement of use.

A special grease is applied to the contact surfaces to reduce friction and make the movement smoother.



Code	Description	A	B	C	D	E	F	G	H	I	M	N	Q	Fh (daN)	Gr. ⚖️
AA705	LSG01	57.5	89	37.5	16	29	36	13	20	6	17.5	8	6.5	220	256
AA730	LSG02	85.5	140.5	59.5	20	42.5	54	20	30	10	28	10	8.5	440	967
AA755	LSG03	115	180	78	28	52	75	24	55	12	35	10	10.5	850	1900
AA780	LSG04	147.5	222	88.5	40.5	68	90	32	65	16	40.5	17.5	12.5	1540	3980



LSH

TOGGLE MECHANISMS WITH SWINGING BASE

Material:

Phosphated weldable steel.

Pivots and supporting bushes:

Hardened and ground steel.

Accessories:

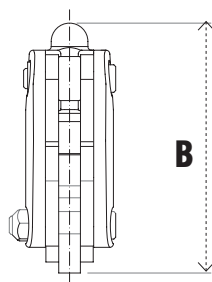
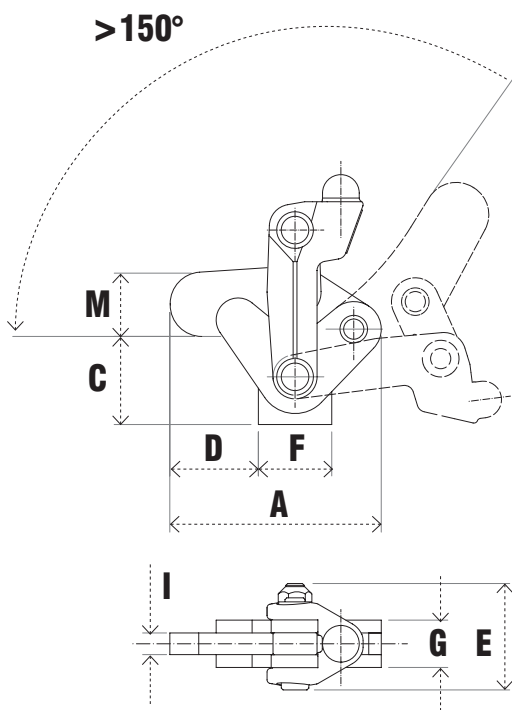
- Control levers (see page 157).
- Handles (see page 156).
- Clamping levers (see page 157).
- Sleeves (see page 157).

Features and applications:

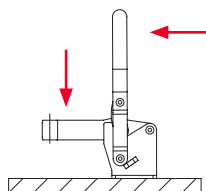
These tools are suitable for tightening medium and heavy loads, on welding masks, carpentry work, moulds and, in general, in applications that require large clamping forces and numerous processing cycles.

The possibility of welding control and clamping levers of variable shape and size allows you to create a customised tool according to the requirement of use.

A special grease is applied to the contact surfaces to reduce friction and make the movement smoother.



Code	Description	A	B	C	D	E	F	G	I	M	Fh (daN)	Gr. ⚖️
AA710	LSH01	57.5	68	24	24	29	20	13	6	17.5	220	268
AA735	LSH02	85.5	113	42	32	42	30	20	10	28	440	820
AA760	LSH03	115	148	57	40.5	52	50	24	12	35	850	1600
AA785	LSH04	147.5	183	66.5	55.5	68	60	32	16	40.5	1540	3450



ER

VERTICAL CLAMPING TOOLS WITH FOLDED BASE FOR HIGH TEMPERATURES

Material:

Phosphated steel.

Riveted Pivots:

Phosphated steel.

Supporting bushes:

Hardened and ground steel.

Clamping lever:

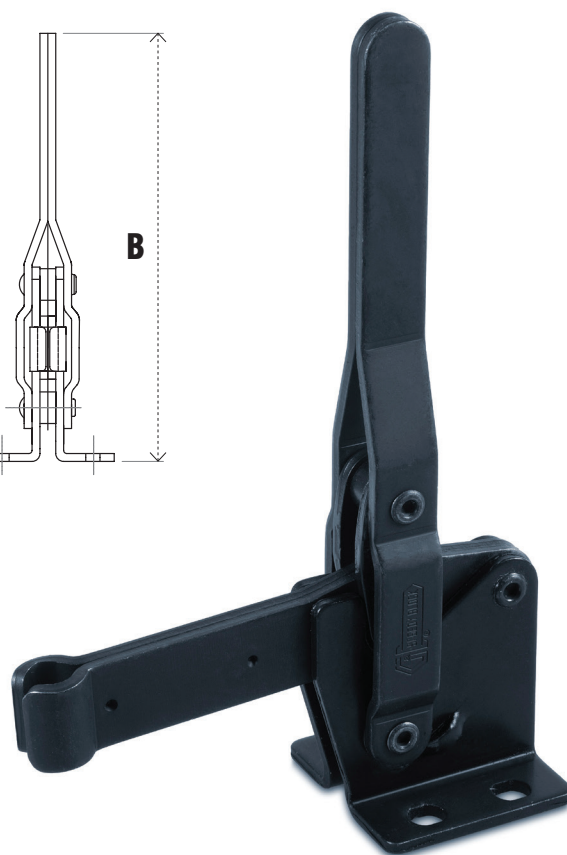
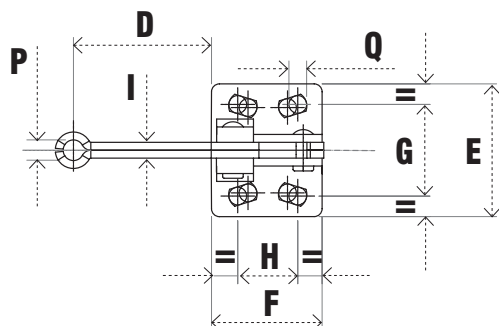
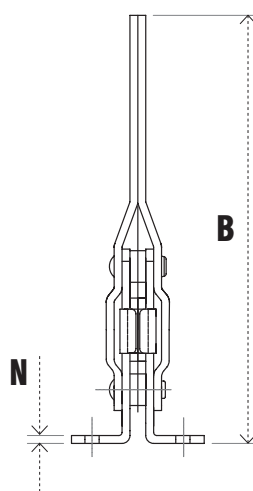
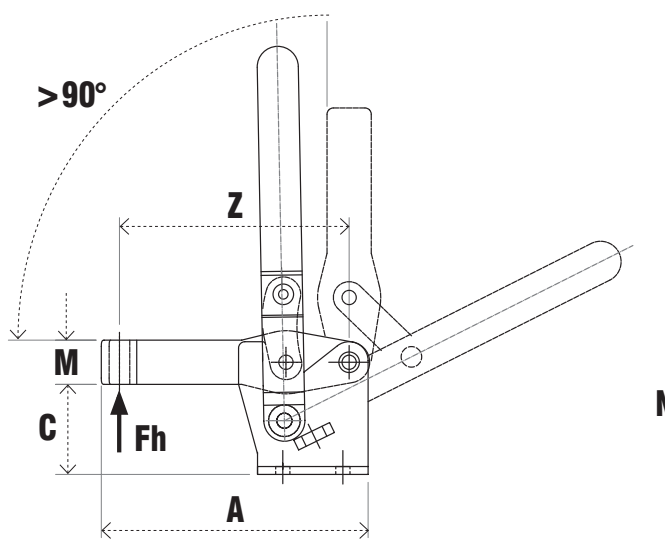
Eyelet for inserting the spindle, to be ordered separately.

Features and applications:

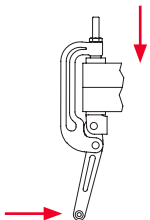
The tools of this series are generally used in rotational moulding, as they are able to operate at high temperatures (240-300°C); this is made possible thanks to their finishing, the interposition between the parts of a special copper grease and appropriate tolerances between the couplings.

Accessories:

- Spindles (see page 152).



Code	Description	A	B	C	D	E	F	G	H	I	M	N	P	Q	Z	Fh (daN)	Gr.
AR530	130/ER	85	136	28	44	42	35	27÷29	12.5÷19	5	16	2.5	6.5	5.6	73	160	210
AR540	230/ER	110	164	33.5	60	45	43	32	19÷20	6	18	3	8	6.7	96	200	330
AR550	330/ER	128	189	43	68.5	65	50	45÷46	29÷32	7	22	3.5	10.5	8.5	111	240	519



C

VERTICAL CLAMPING TOOLS WITH DOUBLE PLATE CLOSURE FOR HIGH TEMPERATURES

Material:

Phosphated weldable steel.

Pivots:

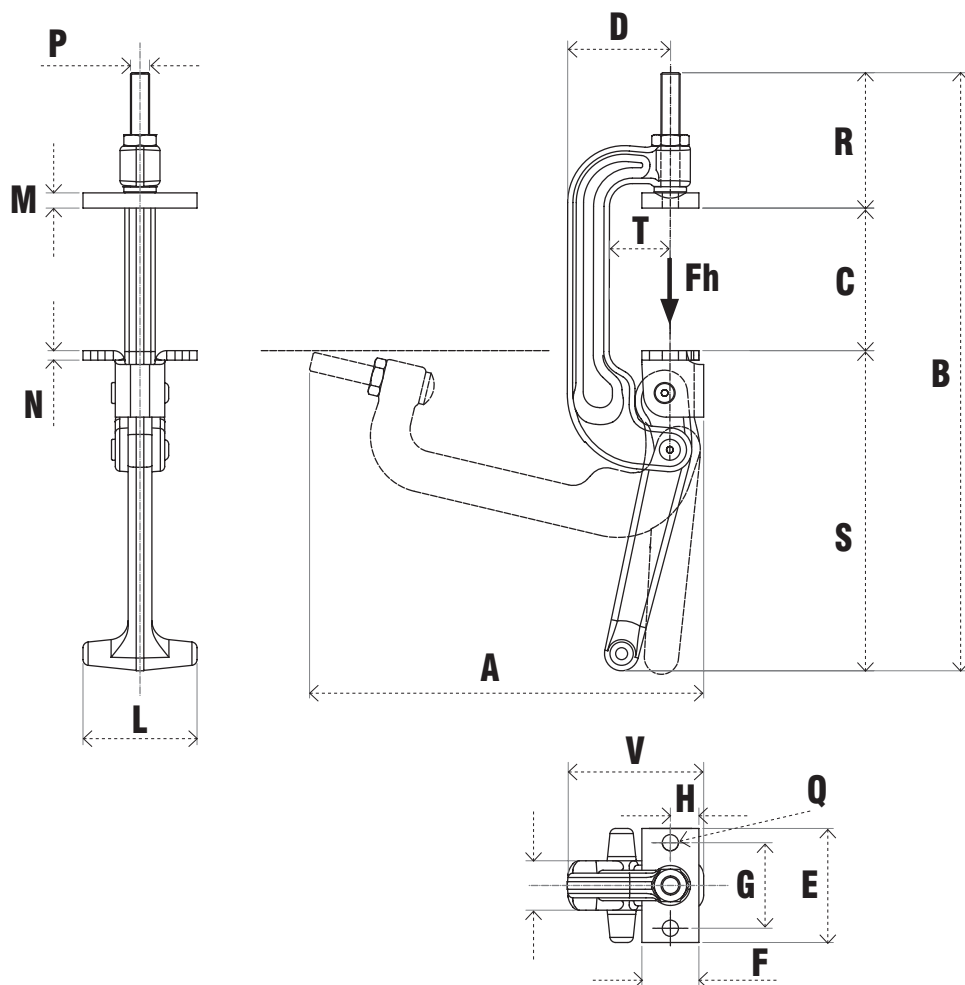
Hardened and ground steel.

Execution:

The tool is supplied complete with adjustment screw and support plate.

Features and applications:

The tools of this series are generally used in rotational moulding, as they are able to operate at high temperatures (240-300°C); this is made possible thanks to their finishing, the interposition between the parts of a special copper grease and appropriate tolerances between the couplings.

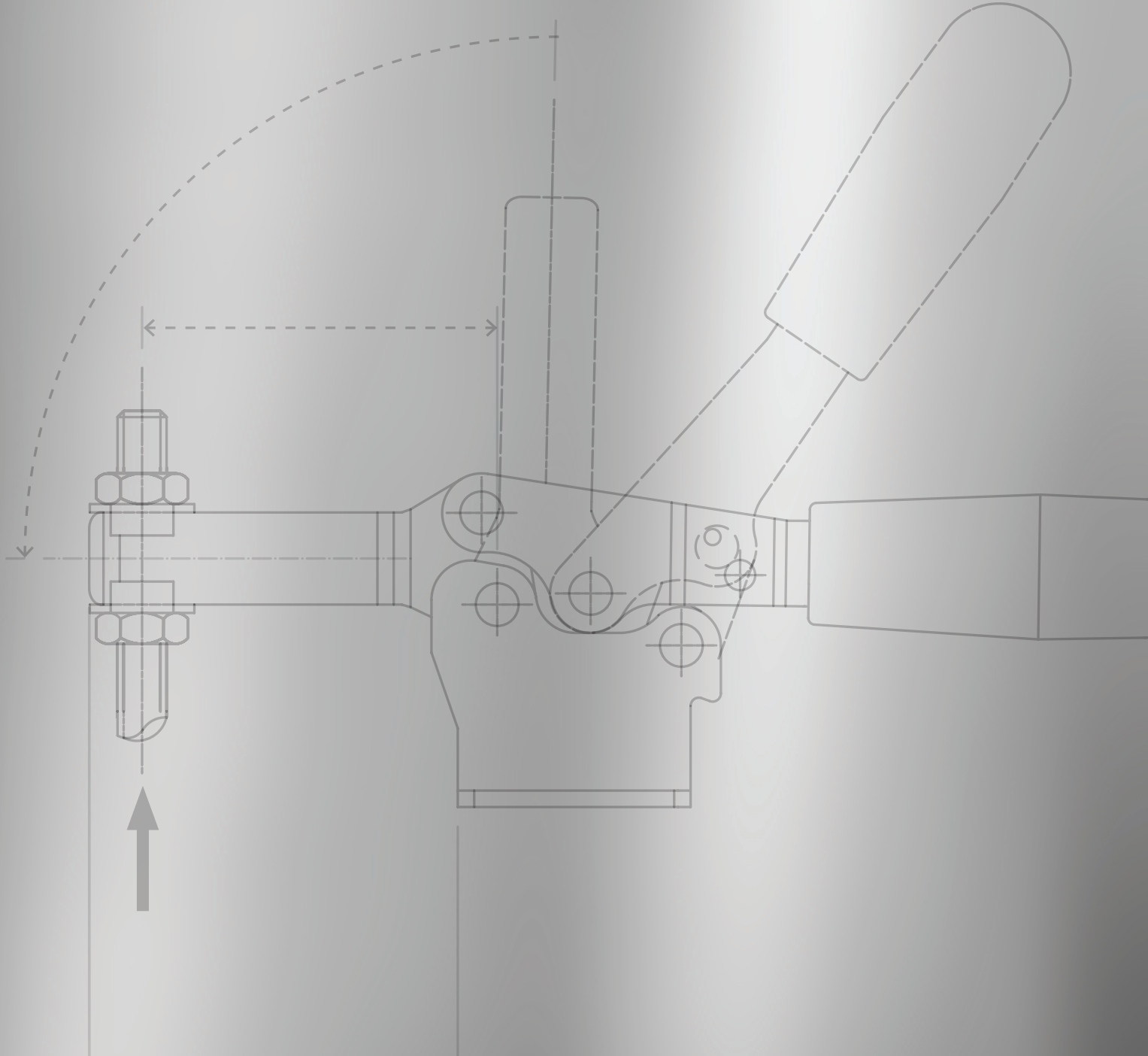


VERTICAL

Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	P	Q	R	S	T	V	Fh (daN)	Gr.
AL756	1520	145	250	20	54	60	30	45	15	26	60	8	5	M10	8.5	60	169	32	72	1500	1040
AL758	1540	173	280	40	54	60	30	45	15	26	60	8	5	M10	8.5	71	169	32	72	1500	1110
AL760	1575	207	315	75	54	60	30	45	15	26	60	8	5	M10	8.5	71	169	32	72	1500	1190

HORIZONTAL SERIES

HORIZONTAL



Here you can download
2D and 3D CAD drawings
of all products.



The tools of this family are characterized by the horizontal position of the control lever in the clamping position. The clamping and control levers normally move in opposite directions.

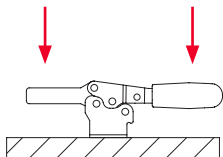
They are available in two different executions:

LIGHT SERIES:

It has holding forces from 40 to 620 daN.
They are available in galvanized steel and stainless steel.

HIGH TEMPERATURE SERIES:

It has holding forces from 100 to 180 daN. These tools are free of plastic parts and with the appropriate modifications compared to the light series models (couplings with different tolerances, changes in geometries, different finishes, etc. ,etc.) that make them suitable for use in environments that can reach 240-300 °C. The products are made of phosphated weldable steel. They are normally used in the rotational moulding of plastic that requires a type of clamping capable of working safely and quickly at high temperatures without uncertainties in closing and opening.



M/MX - O/OX

HORIZONTAL TOGGLE CLAMPS WITH FOLDED BASE

Material:

Galvanized steel (M/O) or **AISI 304 stainless steel** (MX/OX).

Riveted Pivots:

Galvanized steel (M/O) or **AISI 304 stainless steel** (MX/OX).

Supporting bushes (for M/O sizes ≥ 355):

Hardened and ground steel.

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Executions:

- **M/MX**: open clamping lever with two folded washers, included in the supply
- **O/OX**: full clamping lever and bolt retainer, included in the supply, to be welded in the desired position and angle.

Features and applications:

During closing, the clamping lever is guided laterally to ensure greater stability against any transverse stresses.

The movement of the levers has been designed to ensure the safety of the operator's fingers and prevent them from being crushed during the movement of the tool.

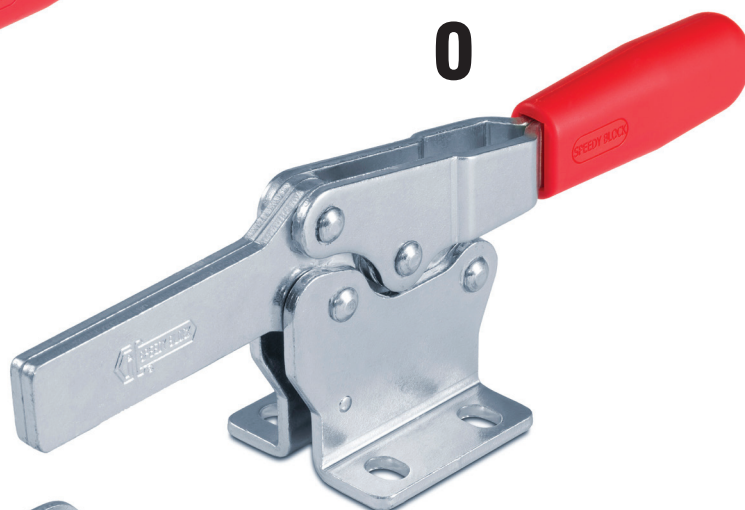
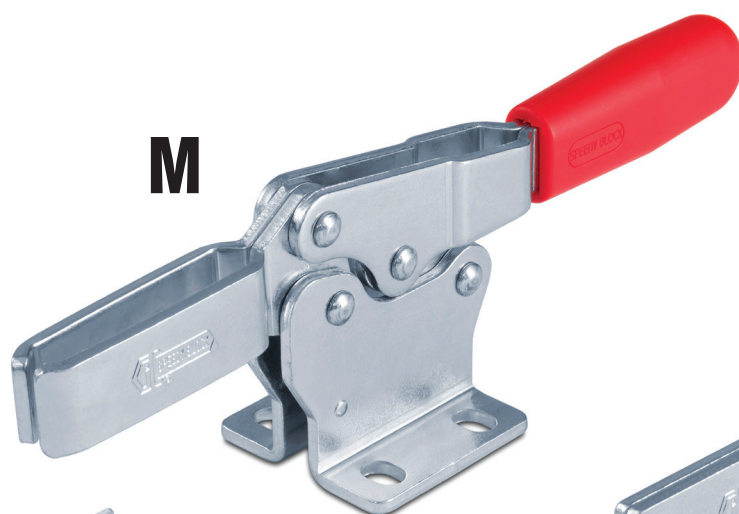
A special grease is applied to the contact surfaces to reduce friction and make the movement smoother.

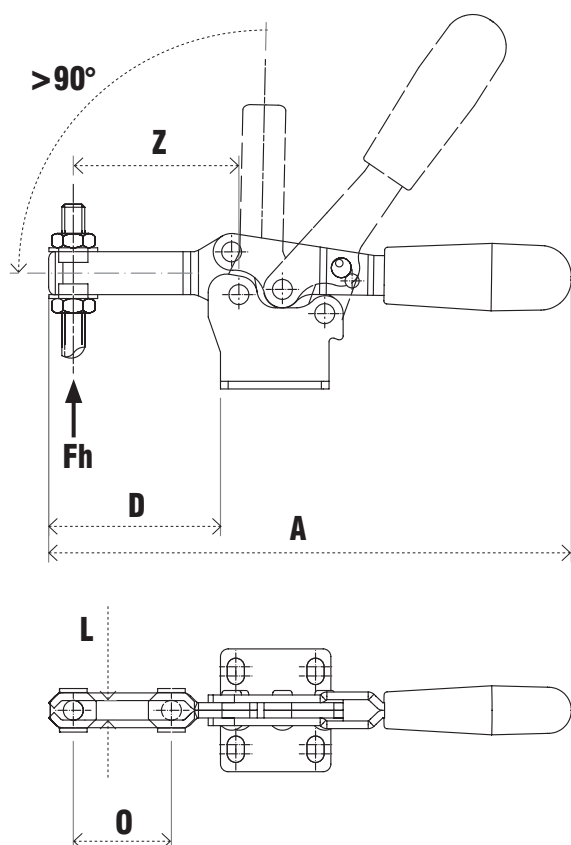
Other available executions:

Series with safety lever, pneumatic series

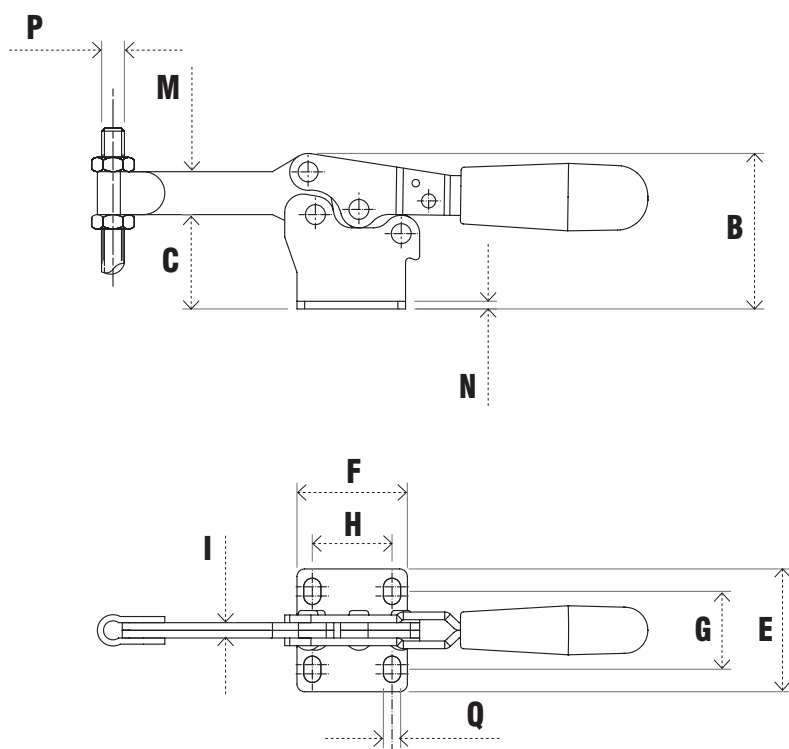
Accessories:

- Spindles (see page 152).
- Lever crossbars for M/MX (see page 155) .
- Safety sensor kit (see page 140).





M/MX



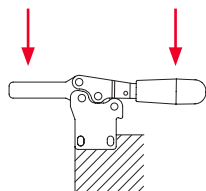
O/OX

Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	Z	Fh (daN)	Gr. Δ
AD025	25/M	69	23	12	19	24	24	16	15		4.2	7	1.2	10	M4	4.3	21	40	25
AD075	75/M	118	37	20	39	26	28	16 ÷ 19	13.5		5.3	11	2	20	M5	4.5	36	90	88
AD085	75/O	118.5	37	20	39.5	26	28	16 ÷ 19	13.5	4		11	2		M5	4.5		90	88
AD135	130/M	171.5	51	30.5	56.5	40	36	22.4 ÷ 28.4	26		6.3	16	2.5	32	M6	5.6	55	100	200
AD145	130/O	172	51	30.5	57	40	36	22.4 ÷ 28.4	26	5		16	2.5		M6	5.6		100	200
AD270	230/M	196	61.5	36.5	65	44	44	26 ÷ 31.5	26		8.5	18	3	37	M8	6.6	62	170	320
AD280	230/O	196.5	61.5	36.5	65	44	44	26 ÷ 31.5	26	6		18	3		M8	6.6		170	320
AD370	355/M	270	83	50	100	58	60	38.8 ÷ 43	41		10.5	22	3.5	58	M10	8.6	98	180	730
AD380	355/O	270	83	50	101	58	60	38.8 ÷ 43	41	7		22	3.5		M10	8.6		180	750
AD470	455/M	305	99	60	114	65	70	40 ÷ 43	41.5		12.5	26	4	65	M12	8.7	113	320	1200
AD480	455/O	306.5	99	60	115.5	65	70	40 ÷ 43	41.5	10		26	4		M12	8.7		320	1200



Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	Z	Fh (daN)	Gr. Δ
DS025	25/MX	69	23	12	19	24	24	16	15		4.2	7	1.2	10	M4	4.3	21	40	25
DS075	75/MX	118	37	20	39	26	28	16 ÷ 19	13.5		5.3	11	2	20	M5	4.5	36	90	88
DS085	75/OX	118.5	37	20	39.5	26	28	16 ÷ 19	13.5	4		11	2		M5	4.5		90	88
DS135	130/MX	171.5	51	30.5	56.5	40	36	22.4 ÷ 28.4	26		6.3	16	2.5	32	M6	5.6	55	100	200
DS145	130/OX	172	51	30.5	57	40	36	22.4 ÷ 28.4	26	5		16	2.5		M6	5.6		100	200
DS270	230/MX	196	61.5	36.5	65	44	44	26 ÷ 31.5	26		8.5	18	3	37	M8	6.6	62	170	320
DS280	230/OX	196.5	61.5	36.5	65	44	44	26 ÷ 31.5	26	6		18	3		M8	6.6		170	320





N/NX - P/PX

HORIZONTAL TOGGLE CLAMPS WITH STRAIGHT BASE

Material:

Galvanized steel (N/P) or **AISI 304 stainless steel** (NX/PX).

Riveted Pivots:

Galvanized steel (N/P) or **AISI 304 stainless steel** (NX/PX).

Supporting bushes (for N/P sizes ≥ 355):

Hardened and ground steel.

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Executions:

- **N/NX**: open clamping lever with two folded washers, included in the supply.
- **P/PX**: full clamping lever and bolt retainer, included in the supply, to be welded in the desired position and angle.

Features and applications:

During closing, the clamping lever is guided laterally to ensure greater stability against any transverse stresses.

The movement of the levers has been designed to ensure the safety of the operator's fingers and prevent them from being crushed during the movement of the tool.

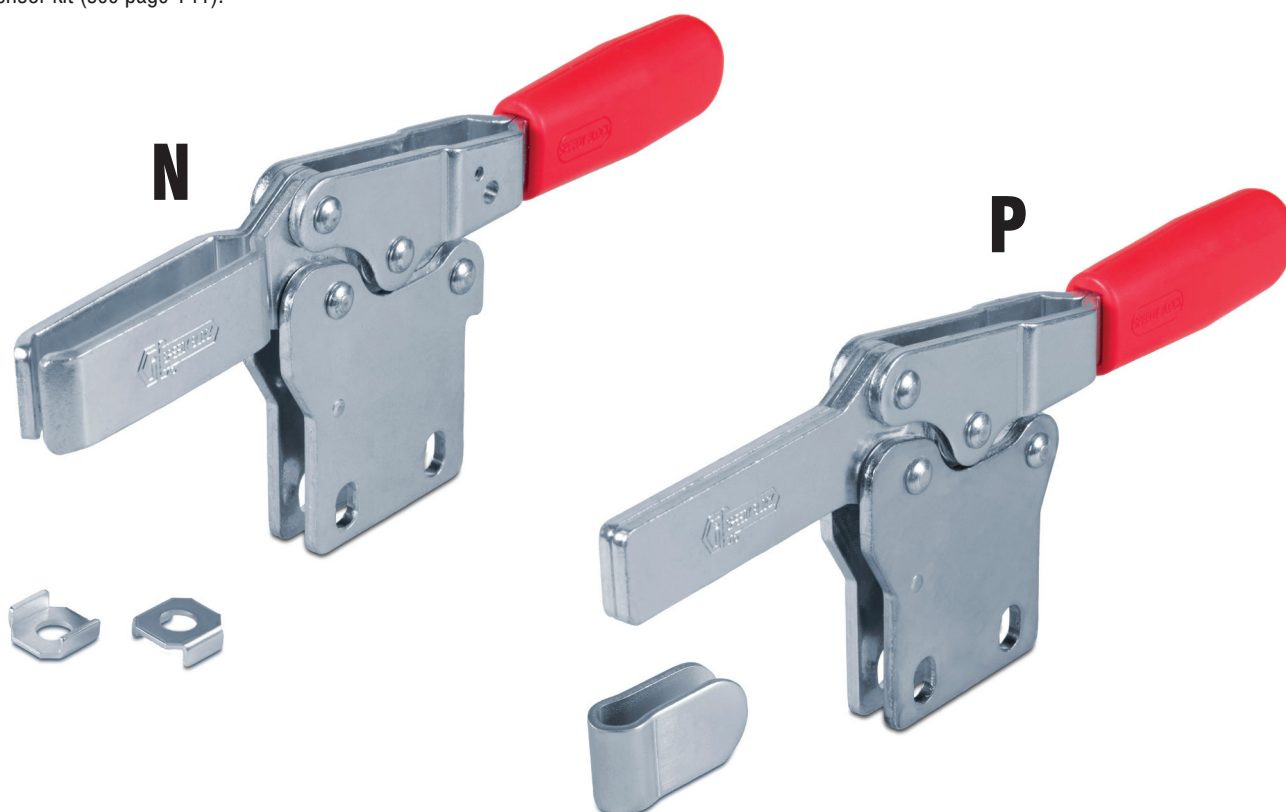
A special grease is applied to the contact surfaces to reduce friction and make the movement smoother.

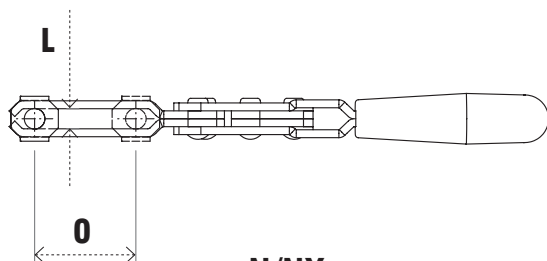
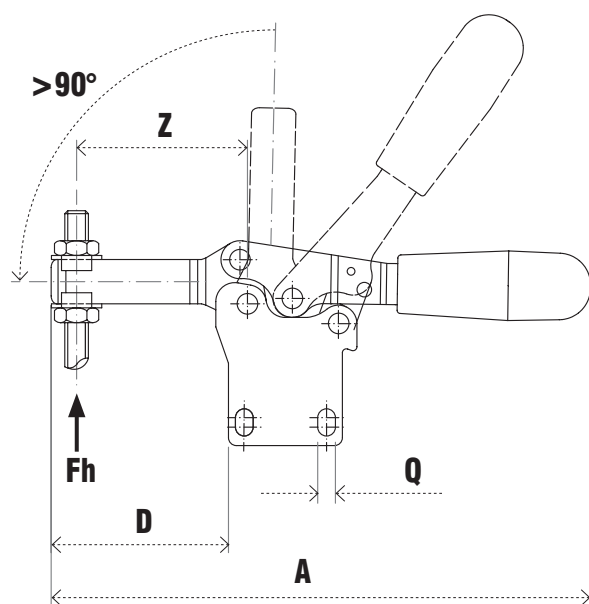
Other available executions:

Series with safety lever, pneumatic series.

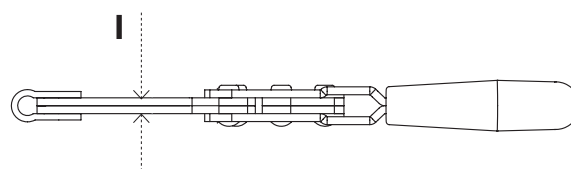
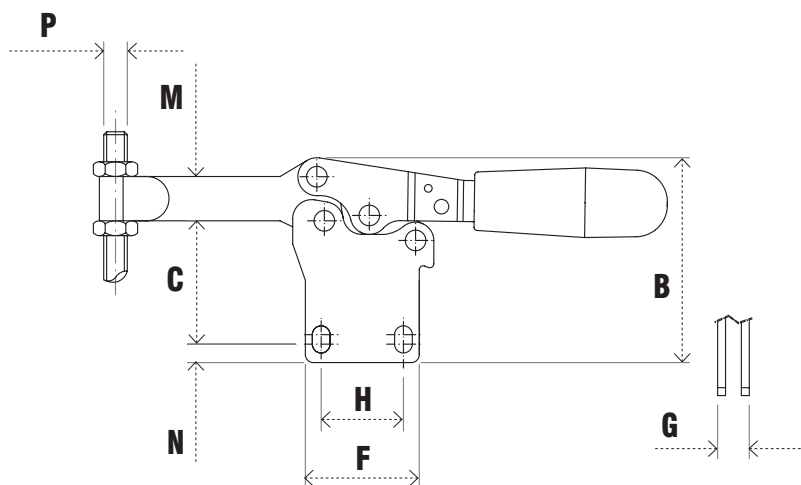
Accessories:

- Spindles (see page 152).
- Lever crossbars for N/NX (see page 155).
- Safety sensor kit (see page 141).





N/NX



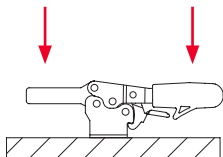
P/PX

Code	Description	A	B	C	D	F	G	H	I	L	M	N	O	P	Q	Z	Fh (daN)	Gr.
AD080	75/N	118	45.5	24 ÷ 25.5	39	28	8	13.5		5.3	11	5 ÷ 3.5	20	M5	4.5	36	90	88
AD090	75/P	118.5	45.5	24 ÷ 25.5	39.5	28	8	13.5	4		11	5 ÷ 3.5		M5	4.5		90	88
AD140	130/N	171.5	64.5	35 ÷ 38	56.5	36	10	26		6.3	16	8.8 ÷ 5.8	32	M6	5.6	55	100	200
AD150	130/P	172	64.5	35 ÷ 38	57	36	10	26	5		16	8.8 ÷ 5.8		M6	5.6		100	200
AD275	230/N	196	75.5	42 ÷ 44.5	65	44	12	26		8.5	18	9 ÷ 6.5	37	M8	6.6	62	170	330
AD285	230/P	196.5	75.5	42 ÷ 44.5	67	44	12	26	6		18	9 ÷ 6.5		M8	6.6		170	340
AD375	355/N	270	103	60 ÷ 62	100	60	14	41		10.5	22	9.6 ÷ 7.5	58	M10	8.6	98	180	720
AD385	355/P	270	103	60 ÷ 62	101	60	14	41	7		22	9.6 ÷ 7.5		M10	8.6		180	730
AD475	455/N	305	120	68 ÷ 69.5	113	70	18	41.5		12.5	26	12.5 ÷ 11	65	M12	8.7	113	320	1200
AD485	455/P	306.5	120	68 ÷ 69.5	115.5	70	18	41.5	10		26	12.5 ÷ 11		M12	8.7		320	1230



Code	Description	A	B	C	D	F	G	H	I	L	M	N	O	P	Q	Z	Fh (daN)	Gr.
DS080	75/NX	118	45.5	24 ÷ 25.5	39	28	8	13.5		5.3	11	5 ÷ 3.5	20	M5	4.5	36	90	88
DS090	75/PX	118.5	45.5	24 ÷ 25.5	39.5	28	8	13.5	4		11	5 ÷ 3.5		M5	4.5		90	88
DS140	130/NX	171.5	64.5	35 ÷ 38	56.5	36	10	26		6.3	16	8.8 ÷ 5.8	32	M6	5.6	55	100	200
DS150	130/PX	172	64.5	35 ÷ 38	57	36	10	26	5		16	8.8 ÷ 5.8		M6	5.6		100	200
DS275	230/NX	196	75.5	42 ÷ 44.5	65	44	12	26		8.5	18	9 ÷ 6.5	37	M8	6.6	62	170	330
DS285	230/PX	196.5	75.5	42 ÷ 44.5	67	44	12	26	6		18	9 ÷ 6.5		M8	6.6		170	340





ML/MLX - OL/OLX

HORIZONTAL TOGGLE CLAMPS WITH FOLDED BASE AND SAFETY LEVER

Material:

Galvanized steel (ML/OL) or **AISI 304 stainless steel** (MLX/OLX).

Riveted Pivots:

Galvanized steel (ML/OL) or **AISI 304 stainless steel** (MLX/OLX).

Supporting bushes (for ML/OL sizes ≥ 355):

Hardened and ground steel.

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Executions:

- **ML/MLX**: open clamping lever with two folded washers, included in the supply.
- **OL/OLX**: full clamping lever and bolt retainer, included in the supply, to be welded in the desired position and angle.

Safety lever:

Galvanized steel (ML/OL) or **AISI 304 stainless steel** (MLX/OLX), red PVC coating.

Features and applications:

The safety lever ensures the perfect anchoring of the tool, even in the open position, preventing any accidental openings caused by vibrations or shocks. In fact, opening the tool requires a mechanical action by the operator to disengage the retaining system.

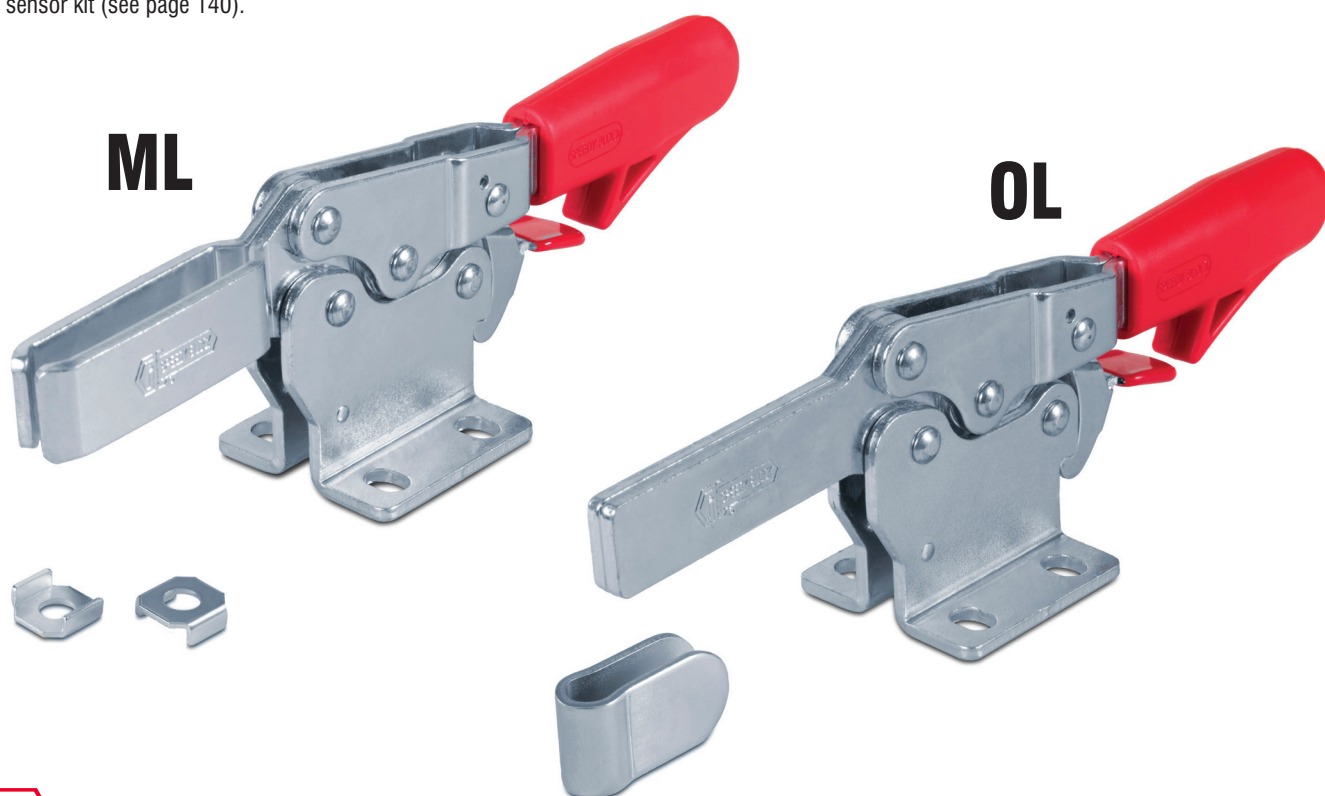
During closing, the clamping lever is guided laterally to ensure greater stability against any transverse stresses.

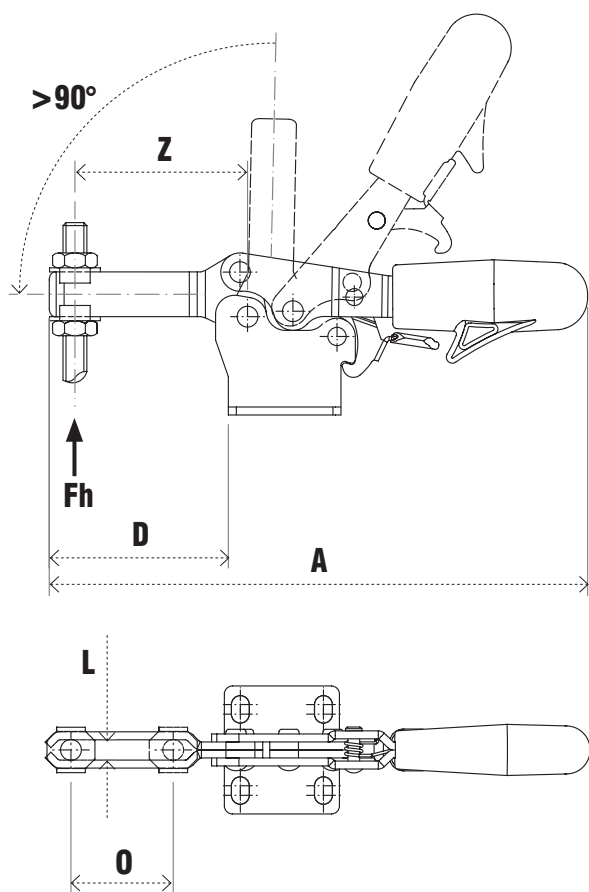
The movement of the levers has been designed to ensure the safety of the operator's fingers and prevent them from being crushed during the movement of the tool.

A special grease is applied to the contact surfaces to reduce friction and make the movement smoother.

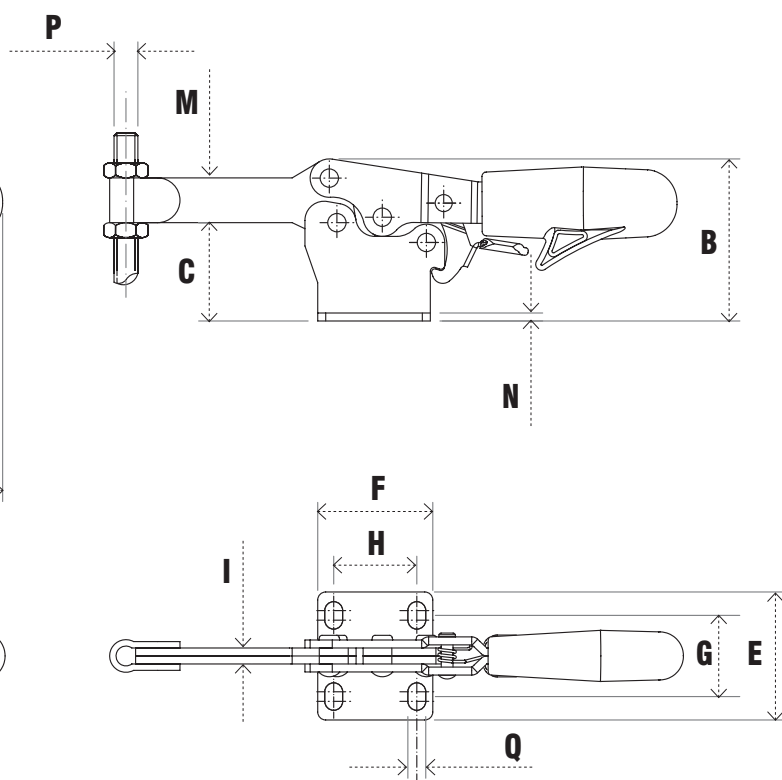
Accessories:

- Spindles (see page 152).
- Lever crossbar for ML/MLX (see page 155).
- Safety sensor kit (see page 140).





ML/MLX



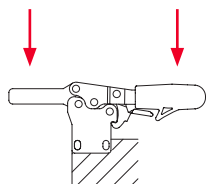
OL/OLX

Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	Z	Fh (daN)	Gr. Δ
AD092	75/ML	118	37	20	39	26	28	16 ÷ 19	13.5		5.3	11	2	20	M5	4.5	36	90	90
AD096	75/OL	118.5	37	20	39.5	26	28	16 ÷ 19	13.5	4		11	2		M5	4.5		90	90
AD152	130/ML	171.5	51	30.5	56.5	40	36	24.4 ÷ 28.4	26		6.3	16	2.5	32	M6	5.6	55	100	200
AD156	130/OL	172	51	30.5	57	40	36	24.4 ÷ 28.4	26	5		16	2.5		M6	5.6		100	200
AD290	230/ML	196	61.5	36.5	65	44	44	26 ÷ 31.5	26		8.5	18	3	37	M8	6.6	62	170	320
AD294	230/OL	196.5	61.5	36.5	66	44	44	26 ÷ 31.5	26	6		18	3		M8	6.6		170	330
AD390	355/ML	270	83	50	100	58	60	38.8 ÷ 43	41		10.5	22	3.5	58	M10	8.6	98	180	750
AD394	355/OL	271	83	50	101	58	60	38.8 ÷ 43	41	7		22	3.5		M10	8.6		180	750
AD490	455/ML	305	99	60	114	65	70	40 ÷ 43	41.5		12.5	26	4	65	M12	8.7	113	320	1200
AD494	455/OL	306.5	99	60	115.5	65	70	40 ÷ 43	41.5	10		26	4		M12	8.7		320	1220



Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	Z	Fh (daN)	Gr. Δ
DS100	75/MLX	118	37	20	39	26	28	16 ÷ 19	13.5		5.3	11	2	20	M5	4.5	36	90	90
DS104	75/OLX	118.5	37	20	39.5	26	28	16 ÷ 19	13.5	4		11	2		M5	4.5		90	90
DS152	130/MLX	171.5	51	30.5	56.5	40	36	24.4 ÷ 28.4	26		6.3	16	2.5	32	M6	5.6	55	100	200
DS156	130/OLX	172	51	30.5	57	40	36	24.4 ÷ 28.4	26	5		16	2.5		M6	5.6		100	200
DS287	230/MLX	196	61.5	36.5	65	44	44	26 ÷ 31.5	26		8.5	18	3	37	M8	6.6	62	170	320
DS291	230/OLX	196.5	61.5	36.5	66	44	44	26 ÷ 31.5	26	6		18	3		M8	6.6		170	330





NL/NLX - PL/PLX

HORIZONTAL TOGGLE CLAMPS WITH STRAIGHT BASE AND SAFETY LEVER

Material:

Galvanized steel (NL/PL) or **AISI 304 stainless steel** (NLX/PLX).

Riveted Pivots:

Galvanized steel (NL/PL) or **AISI 304 stainless steel** (NLX/PLX).

Supporting bushes (for NL/PL sizes ≥ 355):

Hardened and ground steel.

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Executions:

- **NL/NLX:** open clamping lever with two folded washers, included in the supply.
- **PL/PLX:** full clamping lever and bolt retainer, included in the supply, to be welded in the desired position and angle.

Safety lever:

Galvanized steel (NL/PL) or **AISI 304 stainless steel** (NLX/PLX), red PVC coating.

Features and applications:

The safety lever ensures the perfect anchoring of the tool, even in the open position, preventing any accidental openings caused by vibrations or shocks. In fact, opening the tool requires a mechanical action by the operator to disengage the retaining system.

During closing, the clamping lever is guided laterally to ensure greater stability against any transverse stresses.

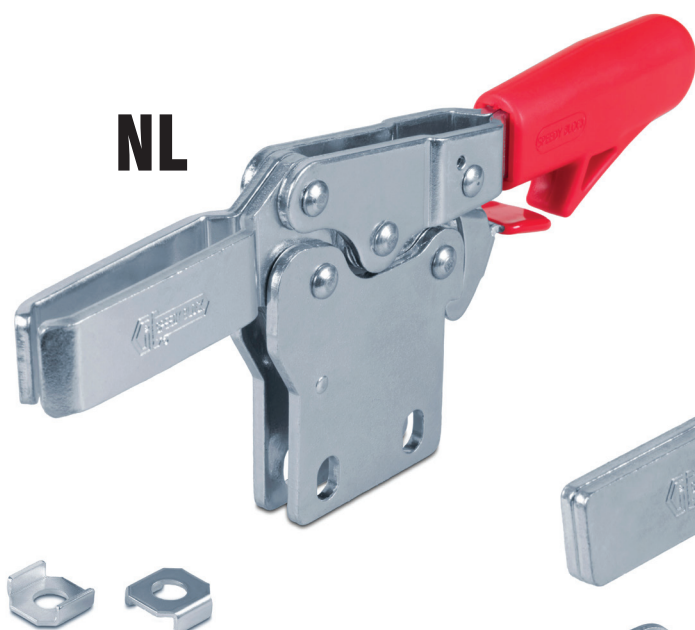
The movement of the levers has been designed to ensure the safety of the operator's fingers and prevent them from being crushed during the movement of the tool.

A special grease is applied to the contact surfaces to reduce friction and make the movement smoother.

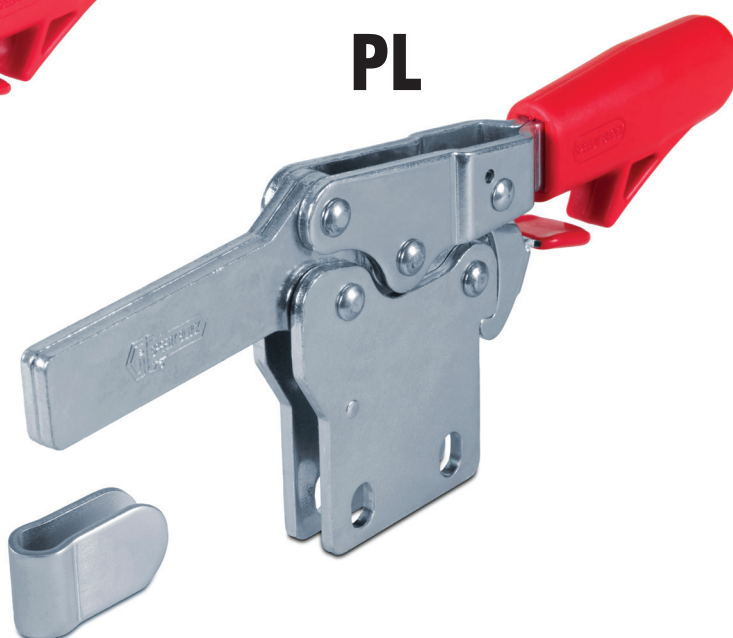
Accessories:

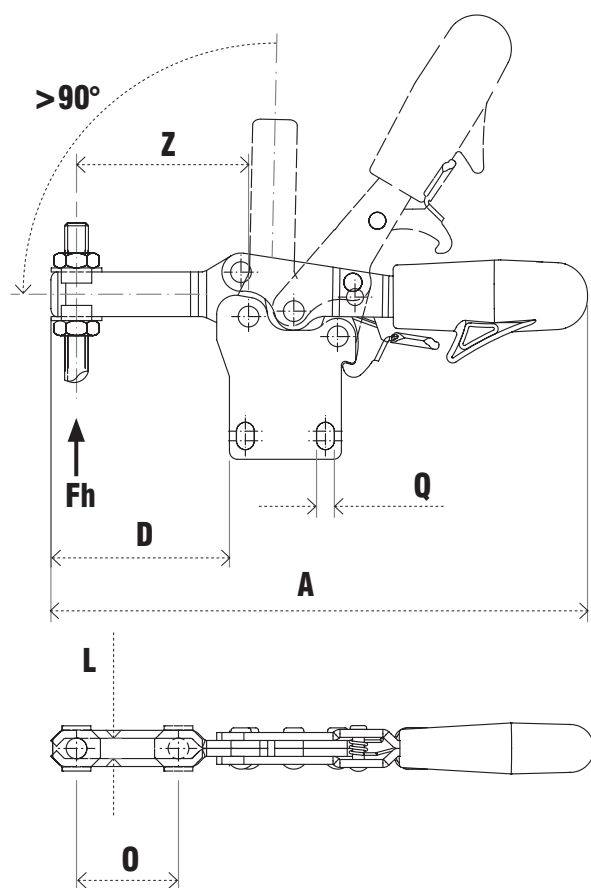
- Spindles (see page 152).
- Lever crossbar for NL/NLX (see page 155).
- Safety sensor kit (see page 141).

NL

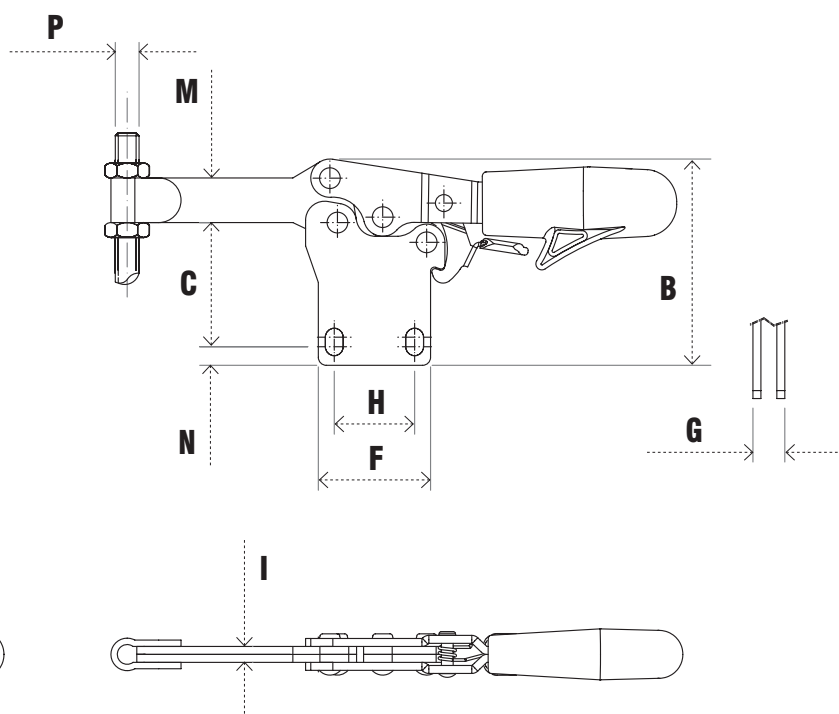


PL





NL/NLX



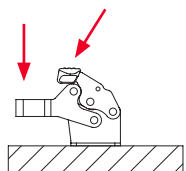
PL/PLX

Code	Description	A	B	C	D	F	G	H	I	L	M	N	O	P	Q	Z	Fh (daN)	Gr. $\Delta^+ \Delta^-$
AD094	75/NL	118	45.5	24 ÷ 25.5	39	28	8	13.5		5.3	11	5 ÷ 3.5	20	M5	4.5	36	90	90
AD098	75/PL	118.5	45.5	24 ÷ 25.5	39.5	28	8	13.5	4		11	5 ÷ 3.5		M5	4.5		90	90
AD154	130/NL	171.5	51	22.4 ÷ 28.4	56.5	40	36	26		6.3	16	8.8 ÷ 5.8	32	M6	5.6	55	100	200
AD158	130/PL	172	51	22.4 ÷ 28.4	57	40	36	26	5		16	8.8 ÷ 5.8		M6	5.6		100	200
AD292	230/NL	196	61.5	26 ÷ 31.5	65	44	44	26		8.5	18	9 ÷ 6.5	37	M8	6.6	62	170	320
AD296	230/PL	196.5	61.5	26 ÷ 31.5	66	44	44	26	6		18	9 ÷ 6.5		M8	6.6		170	330
AD392	355/NL	270	83	38.8 ÷ 43	100	58	60	41		10.5	22	9.6 ÷ 7.5	58	M10	8.6	98	180	750
AD396	355/PL	271	83	38.8 ÷ 43	101	58	60	41	7		22	9.6 ÷ 7.5		M10	8.6		180	750
AD492	455/NL	305	99	40 ÷ 43	113	65	70	41.5		12.5	26	12.5 ÷ 11	65	M12	8.7	113	320	1200
AD496	455/PL	306.5	99	40 ÷ 43	115.5	65	70	41.5	10		26	12.5 ÷ 11		M12	8.7		320	1200



Code	Description	A	B	C	D	F	G	H	I	L	M	N	O	P	Q	Z	Fh (daN)	Gr. $\Delta^+ \Delta^-$
DS102	75/NLX	118	45.5	24 ÷ 25.5	39	28	8	13.5		5.3	11	5 ÷ 3.5	20	M5	4.5	36	90	90
DS106	75/PLX	118.5	45.5	24 ÷ 25.5	39.5	28	8	13.5	4		11	5 ÷ 3.5		M5	4.5		90	90
DS154	130/NLX	171.5	51	22.4 ÷ 28.4	56.5	40	36	26		6.3	16	8.8 ÷ 5.8	32	M6	5.6	55	100	200
DS158	130/PLX	172	51	22.4 ÷ 28.4	57	40	36	26	5		16	8.8 ÷ 5.8		M6	5.6		100	200
DS289	230/NLX	196	61.5	26 ÷ 31.5	65	44	44	26		8.5	18	9 ÷ 6.5	37	M8	6.6	62	170	320
DS293	230/PLX	196.5	61.5	26 ÷ 31.5	66	44	44	26	6		18	9 ÷ 6.5		M8	6.6		170	330





M - MX

HORIZONTAL TOGGLE CLAMPS WITH FOLDED BASE

Material:

Galvanized steel (M) or **AISI 304 stainless steel** (MX).

Riveted Pivots:

Galvanized steel (M) or **AISI 304 stainless steel** (MX).

T-Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Features and applications:

Compact profile with reduced horizontal tool development.

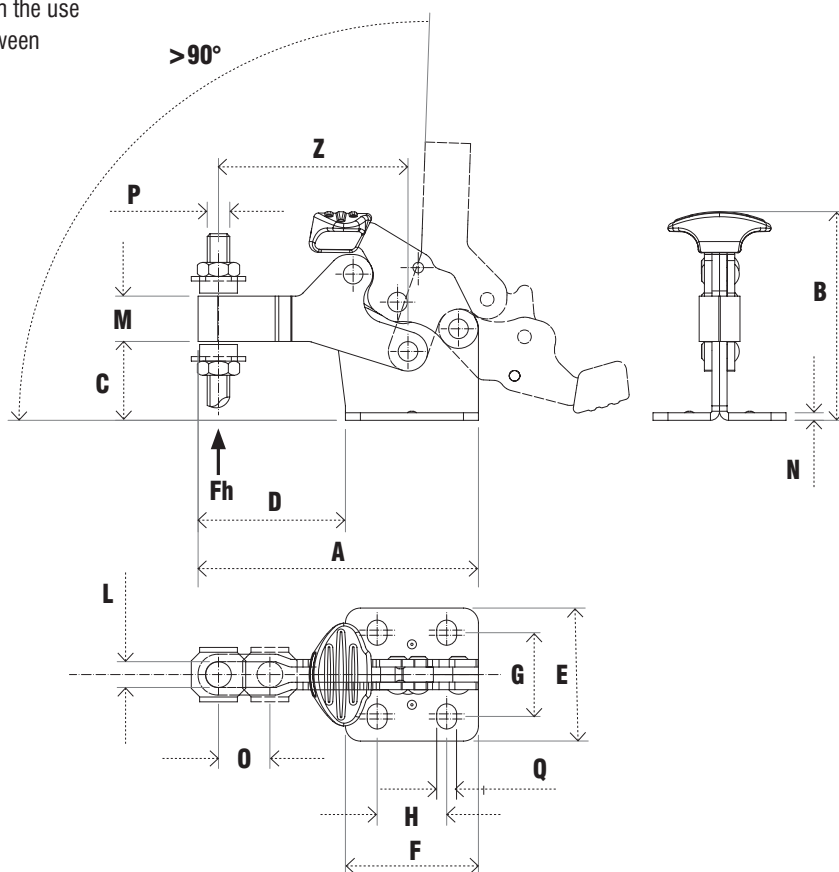
The ergonomic T-handle facilitates the opening of the lever with the use of only two fingers of the hand. A special grease is placed between the contacting surfaces during assembly.

Other available executions:

Series with safety lever.

Accessories:

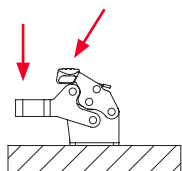
- Spindles (see page 152).
- Lever crossbars (see page 155).



Code	Description	A	B	C	D	E	F	G	H	L	M	N	O	P	Q	Z	Fh (daN)	Gr.
AD398	80/M	57	46	18	31	26	26	15.5 ÷ 16.5	13.5	5.5	9	2	10	M5	4.5	38	90	67
AD402	140/M	93	69	26	49	44	44	26 ÷ 29.5	23	8.5	15	2.5	17	M8	6.6	62.5	130	217
AD406	250/M	131	96	34	67	62	64	37.5 ÷ 38.5	35	10.5	20	3	24	M10	8.7	89	240	528



Code	Description	A	B	C	D	E	F	G	H	L	M	N	O	P	Q	Z	Fh (daN)	Gr.
DS300	80/MX	57	46	18	31	26	26	15.5 ÷ 16.5	13.5	5.5	9	2	10	M5	4.5	38	90	67
DS304	140/MX	93	69	26	49	44	44	26 ÷ 29.5	23	8.5	15	2.5	17	M8	6.6	62.5	130	217
DS308	250/MX	131	96	34	67	62	64	37.5 ÷ 38.5	35	10.5	20	3	24	M10	8.7	89	240	528



ML - MLX

HORIZONTAL TOGGLE CLAMPS WITH FOLDED BASE AND SAFETY LEVER

Material:

Galvanized steel (ML) or **AISI 304 stainless steel** (MLX).

Riveted Pivots:

Galvanized steel (ML) or **AISI 304 stainless steel** (MLX).

T-Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Safety lever:

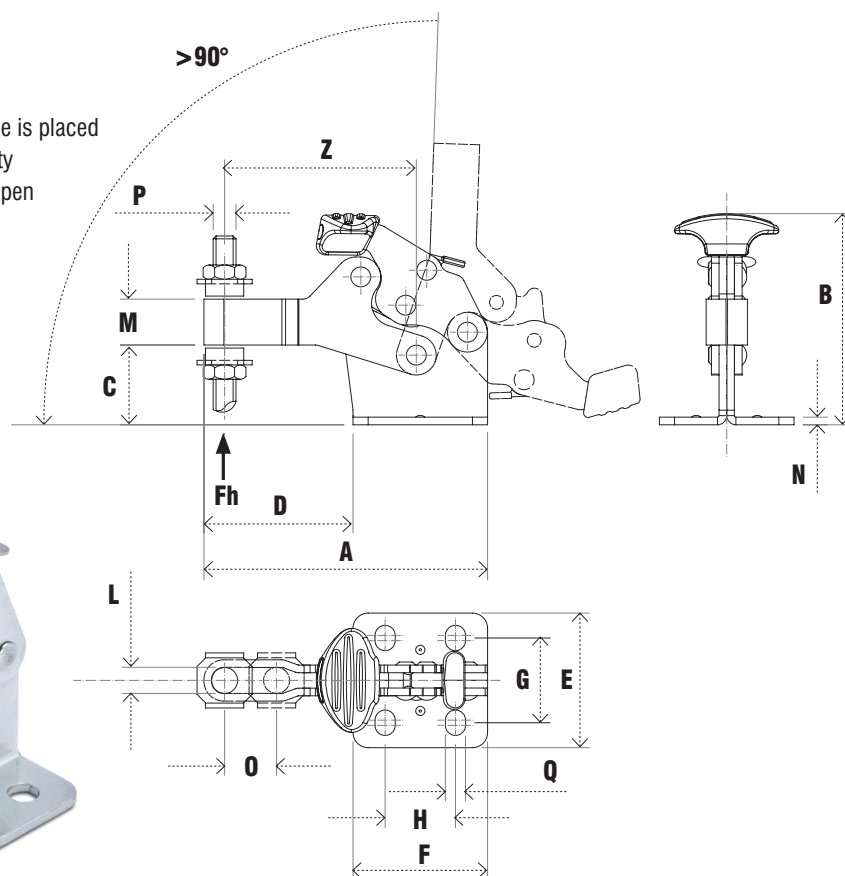
Galvanized steel (ML) or **AISI 304 stainless steel** (MLX).

Features and applications:

Compact profile with reduced horizontal tool development. The ergonomic T-handle facilitates the opening of the lever with the use of only two fingers of the hand. A special grease is placed between the contacting surfaces during assembly. The safety lever ensures the perfect anchoring of the tool, even in the open position, preventing any accidental openings caused by vibrations or shocks.

Accessories:

- Spindles (see page 152).
- Lever crossbars (see page 155).



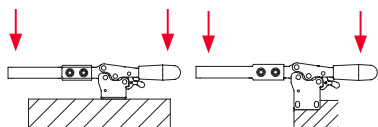
HORIZONTAL

Code	Description	A	B	C	D	E	F	G	H	L	M	N	O	P	Q	Z	Fh (daN)	Gr. Δ
AD400	80/ML	57	46	18	31	26	26	15.5 ÷ 16.5	13.5	5.5	9	2	10	M5	4.5	38	90	67
AD404	140/ML	93	69	26	49	44	44	26 ÷ 29.5	23	8.5	15	2.5	17	M8	6.6	62.5	130	218
AD408	250/ML	131	96	34	67	62	64	37.5 ÷ 38.5	35	10.5	20	3	24	M10	8.7	89	240	532



Code	Description	A	B	C	D	E	F	G	H	L	M	N	O	P	Q	Z	Fh (daN)	Gr. Δ
DS302	80/MLX	57	46	18	31	26	26	15.5 ÷ 16.5	13.5	5.5	9	2	10	M5	4.5	38	90	67
DS306	140/MLX	93	69	26	49	44	44	26 ÷ 29.5	23	8.5	15	2.5	17	M8	6.6	62.5	130	218
DS310	250/MLX	131	96	34	67	62	64	37.5 ÷ 38.5	35	10.5	20	3	24	M10	8.7	89	240	532





OLS - PLS

HORIZONTAL TOGGLE CLAMPS WITH SAFETY LEVER AND EXTENDED CLAMPING LEVER

Material:

Galvanized steel.

Riveted Pins:

Galvanized Steel.

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Fixing base:

- **OLS:** folded base.
- **PLS:** straight base.

Safety lever:

Galvanized steel, red PVC coating.

Extension:

AP6 and AP8 series in galvanized steel, included in the supply with screws and nuts for assembly (see page 154).

Features and applications:

The extended clamping lever is suitable for use on control jigs.

The safety lever ensures the perfect anchoring of the tool, even in the open position, preventing any accidental openings caused by vibrations or shocks. In fact, opening the tool requires a mechanical action by the operator to disengage the retaining system.

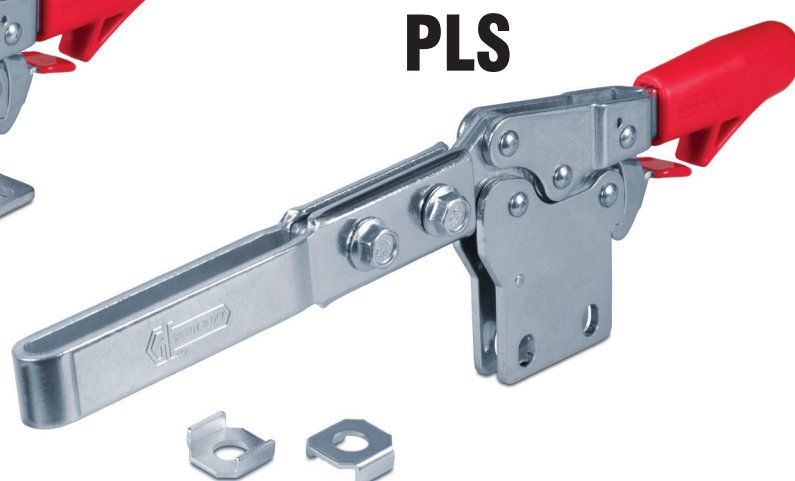
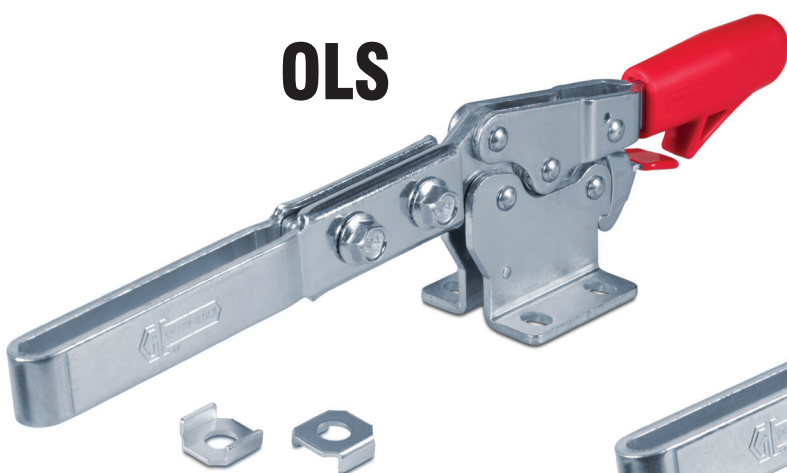
During closing, the clamping lever is guided laterally to ensure greater stability against any transverse stresses.

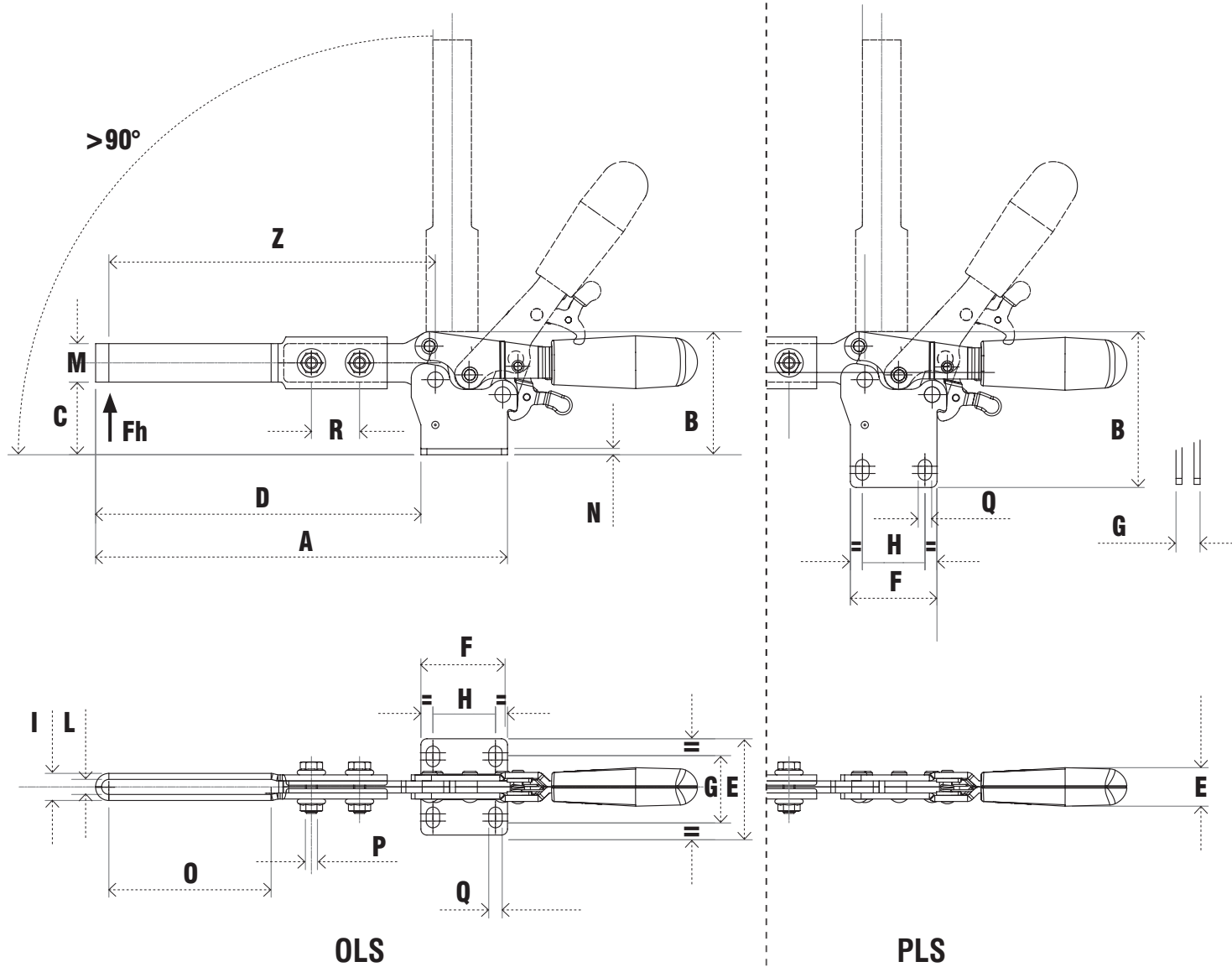
The movement of the levers has been designed to ensure the safety of the operator's fingers and prevent them from being crushed during the movement of the tool.

A special grease is applied to the contact surfaces to reduce friction and make the movement smoother.

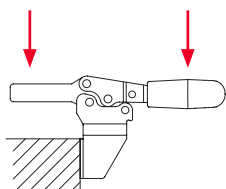
Accessories:

- Spindles (see page 152).
- Lever crossbars (see page 155).
- Safety sensor kit (see page 140-141).





Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R	Z	Fh (daN)	Gr. Δ
AD146	130/OLS	171	51	30.5	135	40	36	22.4 - 28.4	26	11.5	6.3	16	2.5	67.5	M5	5.6	20	134	60	295
AD151	130/PLS	171	64.5	35 - 38	135	16	36	10	26	11.5	6.3	16	5.8 - 8.8	67.5	M5	5.6	20	134	60	295
AD295	230/OLS	196	61.5	36.5	152	44	44	26 - 31.5	26	14.2	8.2	18	3	71.5	M6	6.6	26	150	110	485
AD297	230/PLS	196	75.5	42 - 44.5	152	16	44	12	26	14.2	8.2	18	6.5	71.5	M6	6.6	26	150	110	485



MF - MFX

HORIZONTAL TOGGLE CLAMPS WITH FRONT BASE

Material:

Galvanized steel (MF) or **AISI 304 stainless steel** (MFX).

Riveted Pivots:

Galvanized steel (MF) or **AISI 304 stainless steel** (MFX).

Supporting bushes (for MF sizes ≥ 355):

Hardened and ground steel.

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Clamping lever:

Open with two folded washers, included in the supply.

Features and applications:

During closing, the clamping lever is guided laterally to ensure greater stability against any transverse stresses.

The movement of the levers has been designed to ensure the safety of the operator's fingers and prevent them from being crushed during the movement of the tool.

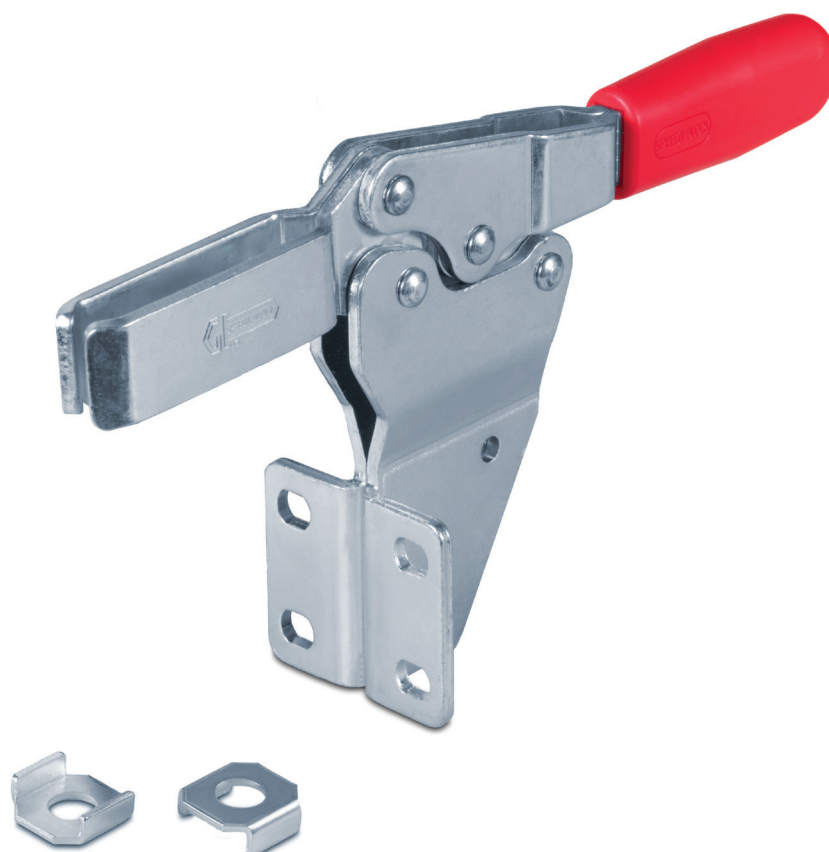
A special grease is applied to the contact surfaces to reduce friction and make the movement smoother.

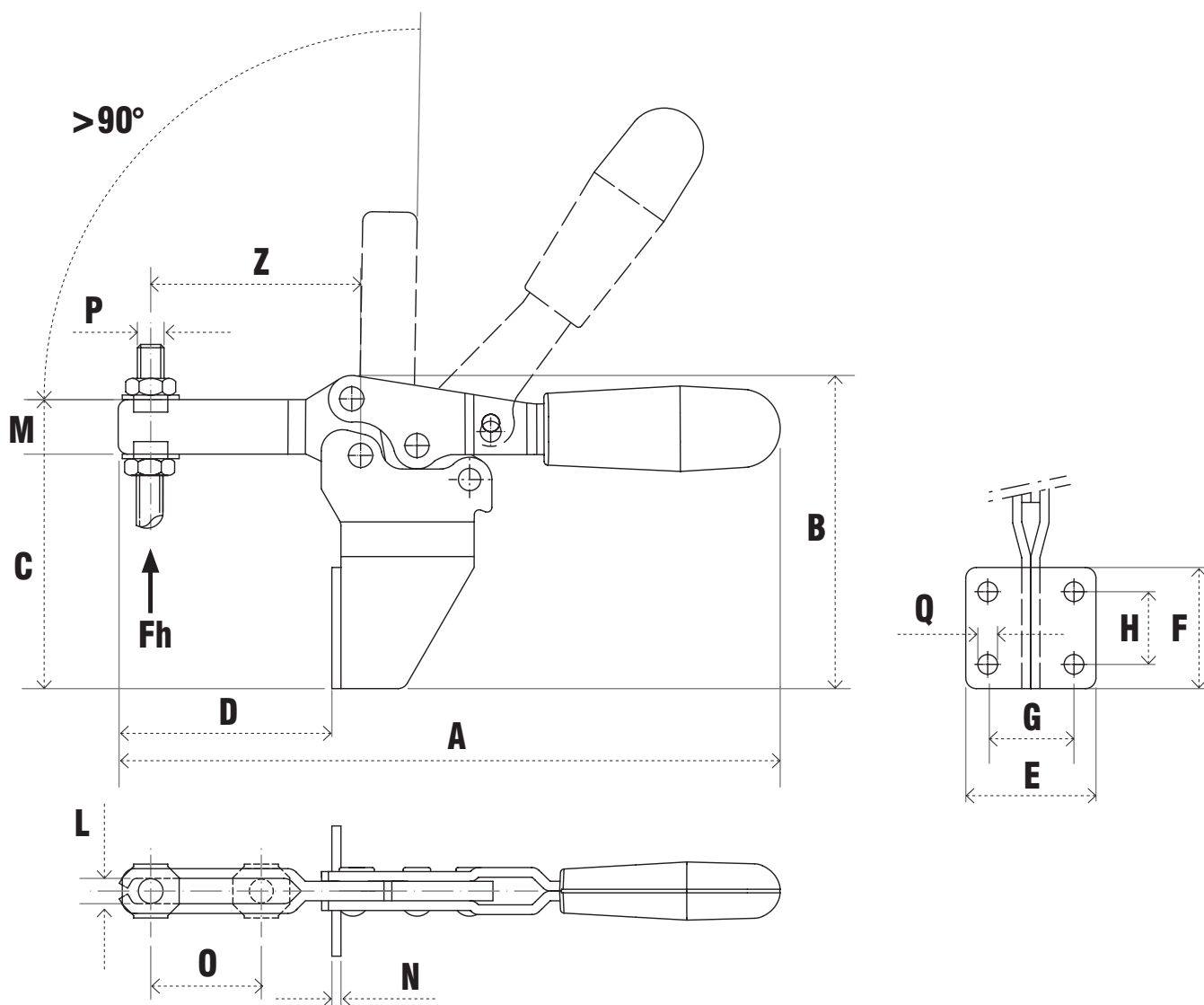
Other available executions:

Pneumatic series.

Accessories:

- Spindles (see page 152).
- Lever crossbars (see page 155).



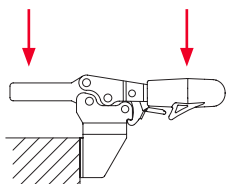


Code	Description	A	B	C	D	E	F	G	H	L	M	N	O	P	Q	Z	Fh (daN)	Gr. $\Delta \nabla$
AD076	75/MF	118	62	45	36	30	25.5	18	13.5	5.3	11	2	20	M5	4.5	36	90	105
AD136	130/MF	171.5	85	64	54	39	35	26	22	6.5	16	2.5	32	M6	5.5	55	100	240
AD271	230/MF	196	102	77	62	43	40	28.5	24	8.5	18	3	37	M8	6.5	62	170	400
AD371	355/MF	270	135	102	97	52	52	32	32	10.5	22	3.5	58	M10	8.5	98	180	830



Code	Description	A	B	C	D	E	F	G	H	L	M	N	O	P	Q	Z	Fh (daN)	Gr. $\Delta \nabla$
DS076	75/MFX	118	62	45	36	30	25.5	18	13.5	5.3	11	2	20	M5	4.5	36	90	105
DS136	130/MFX	171.5	85	64	54	39	35	26	22	6.5	16	2.5	32	M6	5.5	55	100	240
DS271	230/MFX	196	102	77	62	43	40	28.5	24	8.5	18	3	37	M8	6.5	62	170	400





MFL - MFLX

HORIZONTAL TOGGLE CLAMPS WITH FRONT BASE AND SAFETY LEVER

Material:

Galvanized steel (MFL) or **AISI 304 stainless steel** (MFLX).

Riveted Pivots:

Galvanized steel (MFL) or **AISI 304 stainless steel** (MFLX).

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Clamping lever:

Open with two folded washers, included in the supply.

Safety lever:

Galvanized steel (MFL) or **AISI 304 stainless steel** (MFLX), red PVC coating.

Features and applications:

The safety lever ensures the perfect anchoring of the tool, even in the open position, preventing any accidental openings caused by vibrations or shocks. In fact, opening the tool requires a mechanical action by the operator to disengage the retaining system.

During closing, the clamping lever is guided laterally to ensure greater stability against any transverse stresses.

The movement of the levers has been designed to ensure the safety of the operator's fingers and prevent them from being crushed during the movement of the tool.

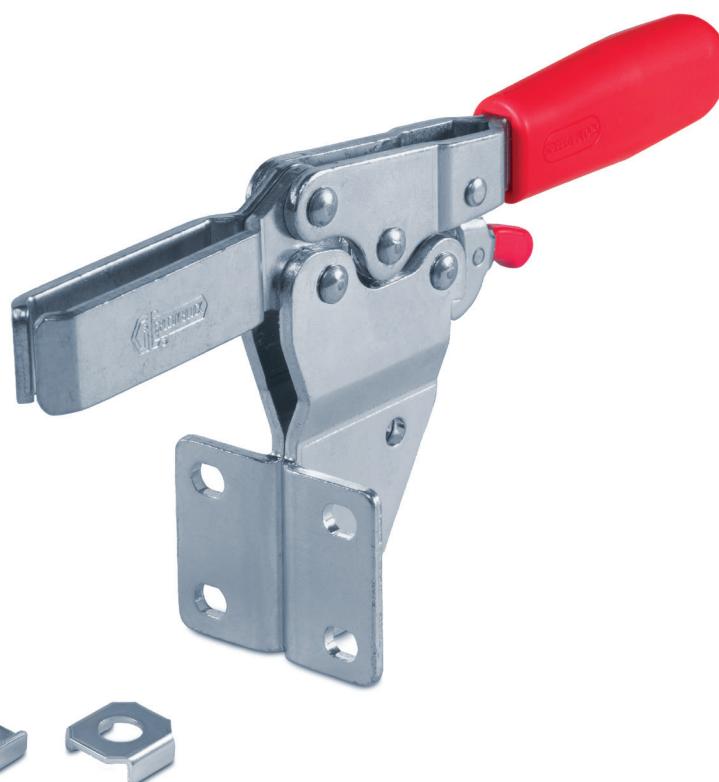
A special grease is applied to the contact surfaces to reduce friction and make the movement smoother.

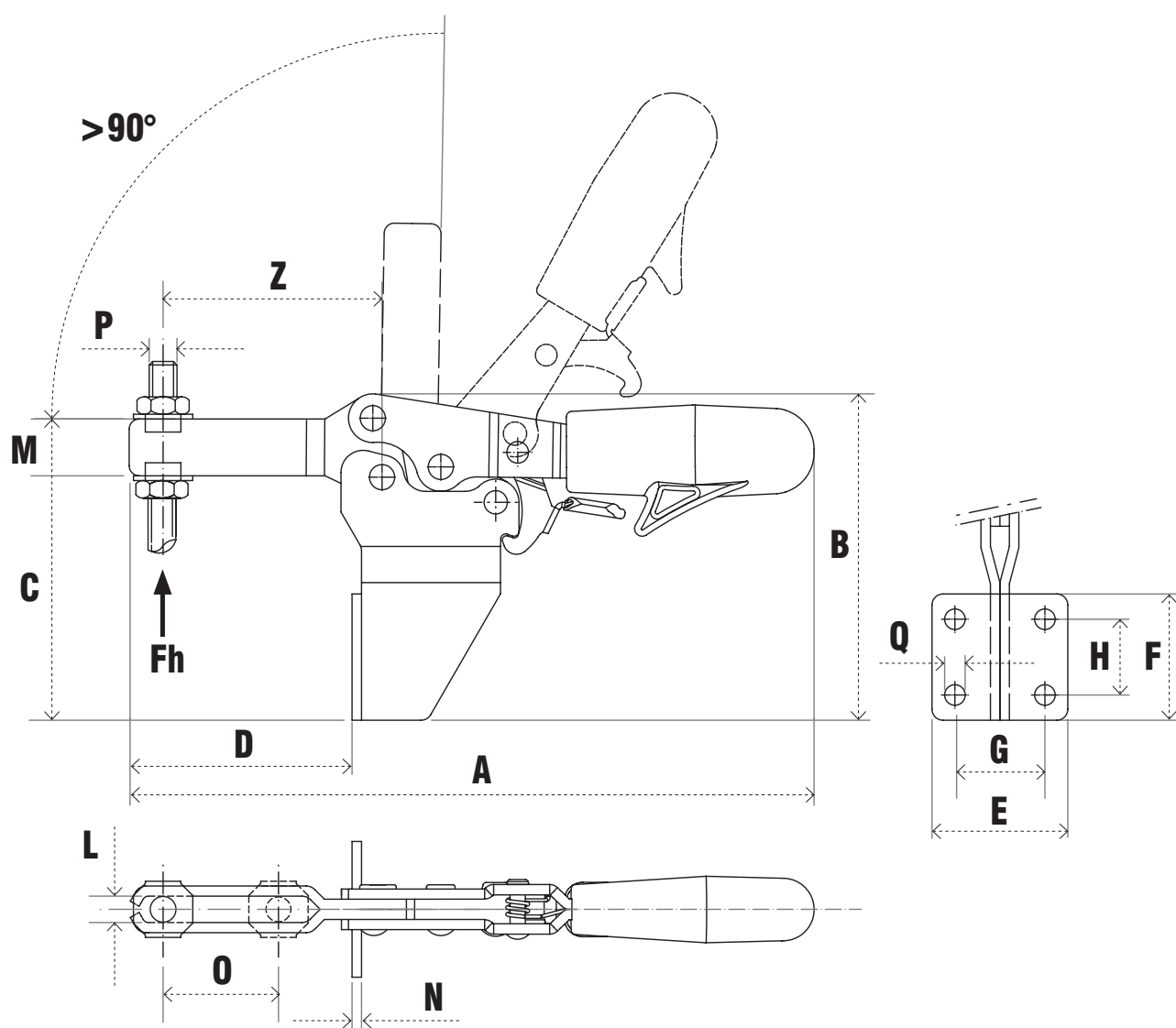
Other available executions:

Pneumatic series.

Accessories:

- Spindles (see page 152).
- Lever crossbars (see page 155).



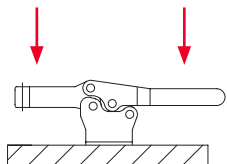


Code	Description	A	B	C	D	E	F	G	H	L	M	N	O	P	Q	Z	Fh (daN)	Gr. 
AD078	75/MFL	118	62	45	36	30	25.5	18	13.5	5.3	11	2	20	M5	4.5	36	90	105
AD138	130/MFL	171.5	85	64	54	39	35	26	22	6.5	16	2.5	32	M6	5.5	55	100	240
AD273	230/MFL	196	102	77	62	43	40	28.5	24	8.5	18	3	37	M8	6.5	62	170	400



Code	Description	A	B	C	D	E	F	G	H	L	M	N	O	P	Q	Z	Fh (daN)	Gr. 
DS110	75/MFLX	118	62	45	36	30	25.5	18	13.5	5.3	11	2	20	M5	4.5	36	90	105
DS160	130/MFLX	171.5	85	64	54	39	35	26	22	6.5	16	2.5	32	M6	5.5	55	100	240
DS295	230/MFLX	196	102	77	62	43	40	28.5	24	8.5	18	3	37	M8	6.5	62	170	400





OR

HORIZONTAL TOGGLE CLAMPS WITH FOLDED BASE FOR HIGH TEMPERATURES

Material:

Phosphated steel.

Riveted Pivots:

Phosphated steel.

Supporting bushes:

Hardened and ground steel.

Clamping lever:

Eyelet for inserting the spindle, to be ordered separately.

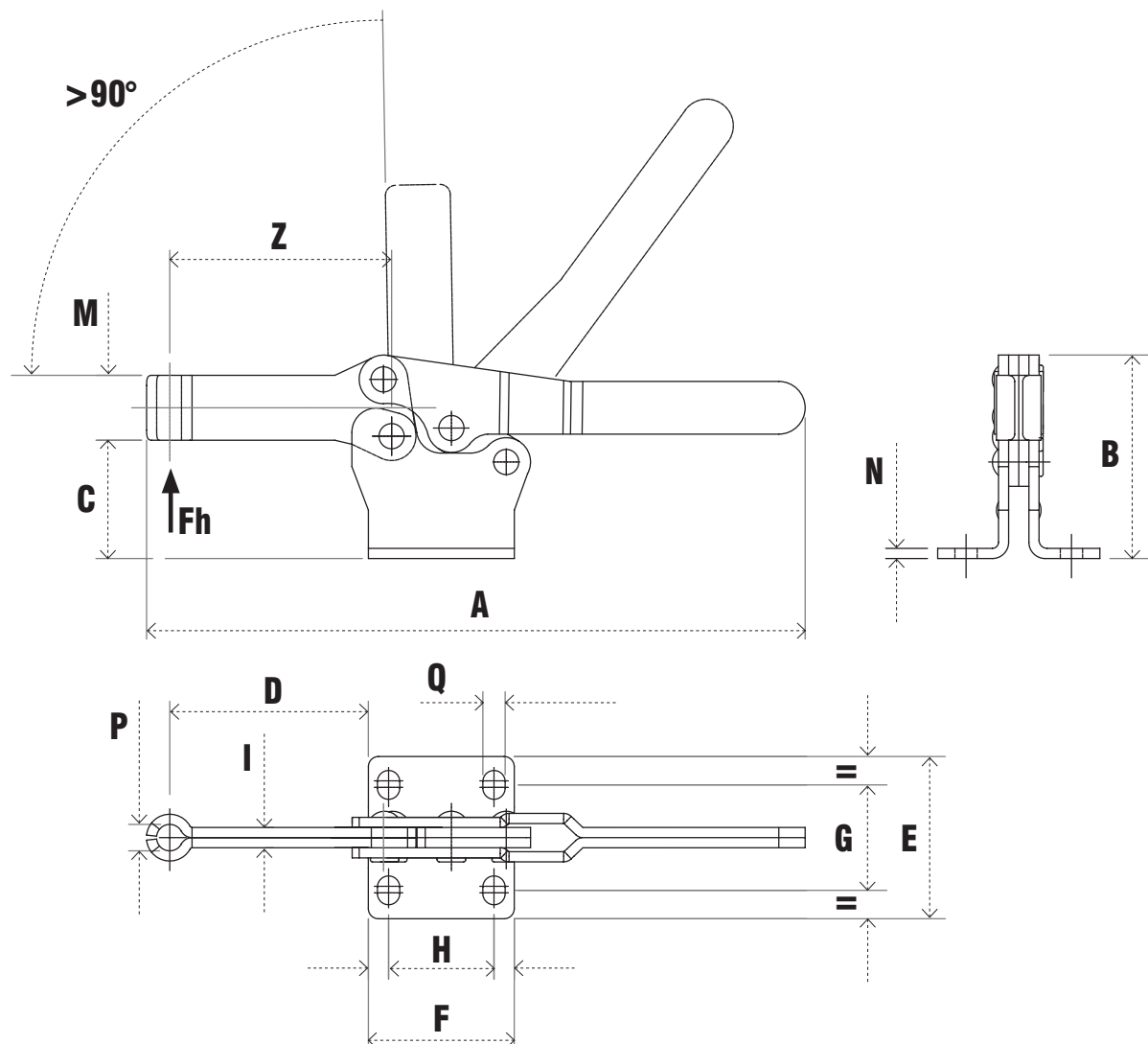
Features and applications:

The tools of this series are generally used in rotational moulding, as they are able to operate at high temperatures (240-300°C); this is made possible thanks to their finishing, the interposition between the parts of a special copper grease and appropriate tolerances between the couplings.

Accessories:

- Spindles (see page 152).

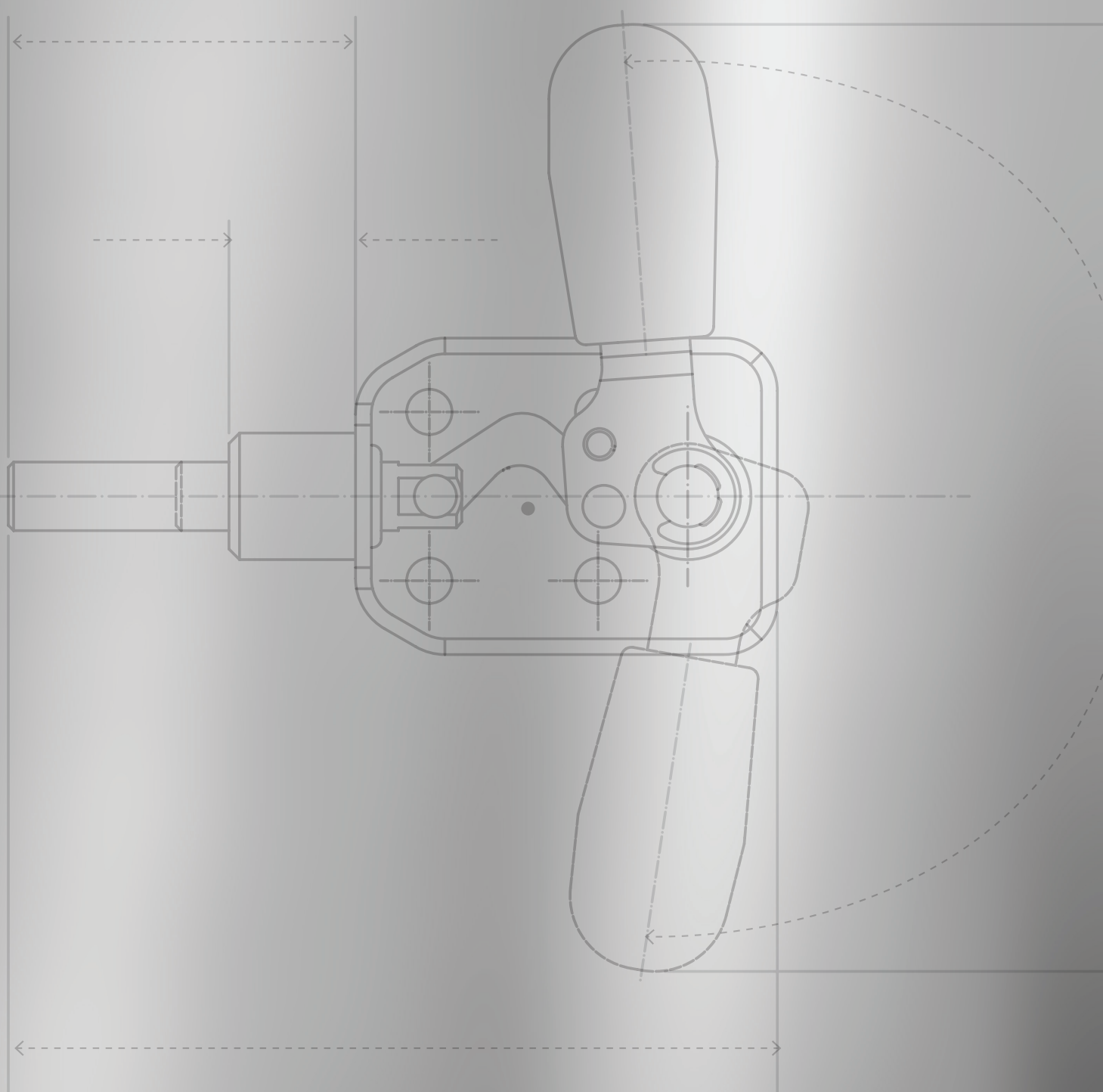




Code	Description	A	B	C	D	E	F	G	H	I	M	N	P	Q	Z	Fh (daN)	Gr. 
AR145	130/OR	165	51	30.5	50	40	36	22.4 - 28.4	26	5	16	2.5	6.5	5.6	56	100	185
AR280	230/OR	190	61.5	36.5	56	44	44	26 - 31.5	26	6	18	3	8.5	6.6	63	170	300
AR380	355/OR	260.5	83	50	89.5	58	60	38.8 - 43	41	7	22	3.5	10.5	8.6	98.5	180	700

STRAIGHT-LINE ACTION SERIES

STRAIGHT-LINE



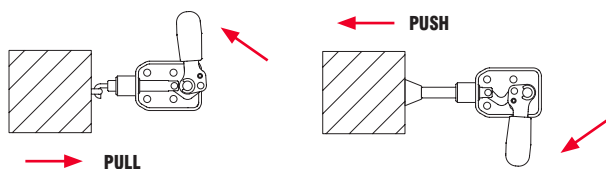
Here you can download
2D and 3D CAD drawings
of all products.



In the tools of this family, the circular movement of the control lever is transformed into the linear movement of the push rod. Some models can work and lock with both thrust and traction, others can only work with thrust.

LIGHT SERIES: It has holding forces from 80 to 720 daN. They are available in galvanized steel and stainless steel. The main feature of the ASD/ASS models is the low point of application of force as well as the very small vertical footprint. For models 80-165-340/AS there is the possibility of front mounting with an external thread that allows the rotation of the control lever in the most favourable position for use. The fixing bracket on the table increases the possibilities of use.

HEAVY-DUTY SERIES: It has holding forces from 120 to 4500 daN. The base body is made of hot forged ASTM A105 steel with a manganese phosphate finish for all sizes. Riveted Pins are available for sizes 70-160-360. Pins with support bushings hardened by cementation for the other sizes. Push rod and control lever in galvanized steel.



ASD - ASS

PUSH AND PULL ROD TOGGLE CLAMPS

Base, control lever, riveted pivots, sliding bushing and push-pull rod:

Galvanized steel. Rod with threaded hole for the spindle housing (to be ordered separately - see Accessories).

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Executions:

• **ASD:**

- push clamping with anti-clockwise control lever rotation.
- pull clamping with clockwise control lever rotation.

• **ASS**

- push clamping with clockwise control lever rotation.
- pull clamping with anti-clockwise control lever rotation.

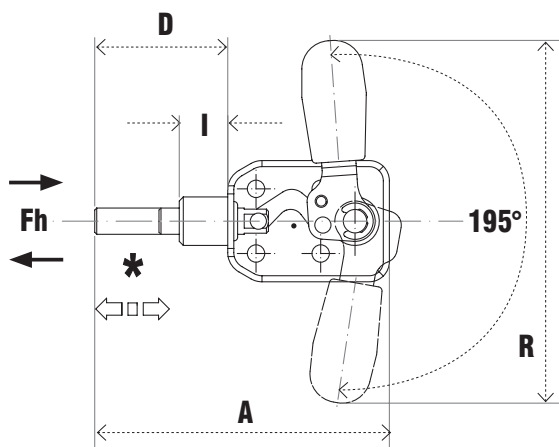
Features and applications:

The structure of the mechanism allows force to be applied at a point very close to the mounting surface and a small vertical footprint.

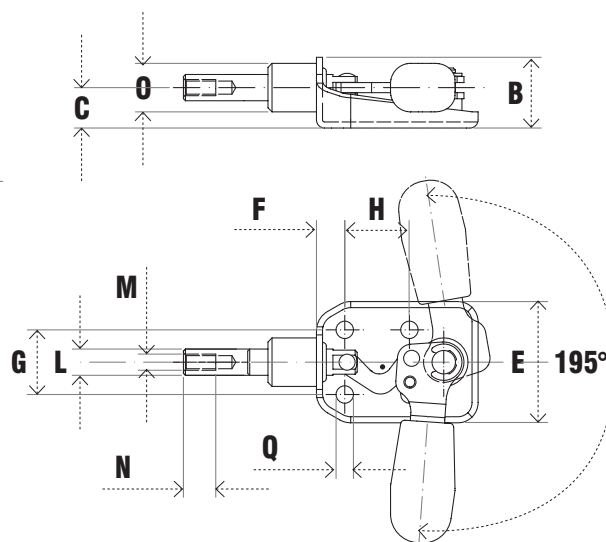
A special grease is applied to the contact surfaces to reduce friction and make the movement smoother.

Accessories (to be ordered separately):

- Spindles (see page 152).

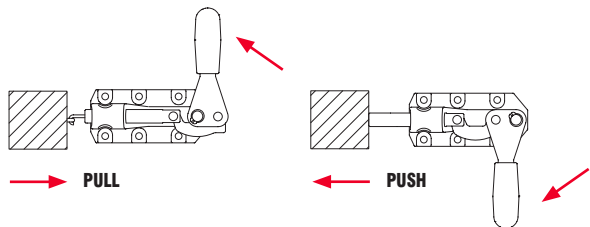


ASD



ASS

Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	Q	R	*	Fh (daN)	Gr.
AG050	50/ASD	73	17.5	10	33	30.5	7	16	16	12	6.5	M4	9	12	4.3	90	16	80	60
AG055	50/ASS	73	17.5	10	33	30.5	7	16	16	12	6.5	M4	9	12	4.3	90	16	80	60



ASD - ASS

PUSH AND PULL ROD TOGGLE CLAMPS

Base:

ASTM A105 hot forged steel with manganese phosphated finishing.

Control lever, riveted pivots and push-pull rod:

Galvanized steel. Rod with threaded hole for the spindle housing (to be ordered separately - see Accessories).

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Executions:

• ASD:

- push clamping with anti-clockwise control lever rotation.
- pull clamping with clockwise control lever rotation.

• ASS

- push clamping with clockwise control lever rotation.
- pull clamping with anti-clockwise control lever rotation.

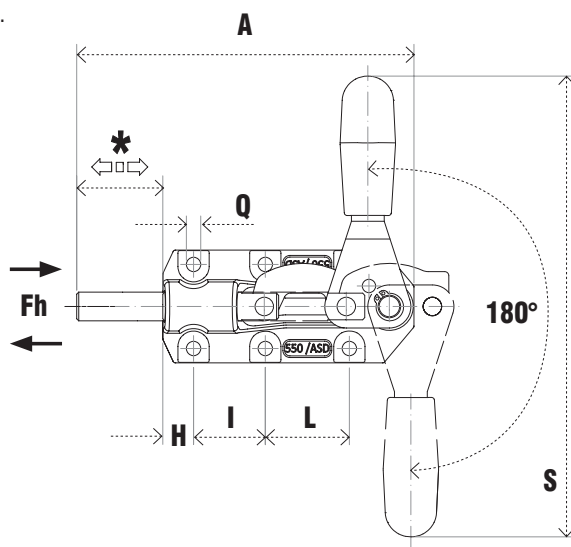
Features and applications:

The structure of the mechanism allows force to be applied at a point very close to the mounting surface and a small vertical footprint.

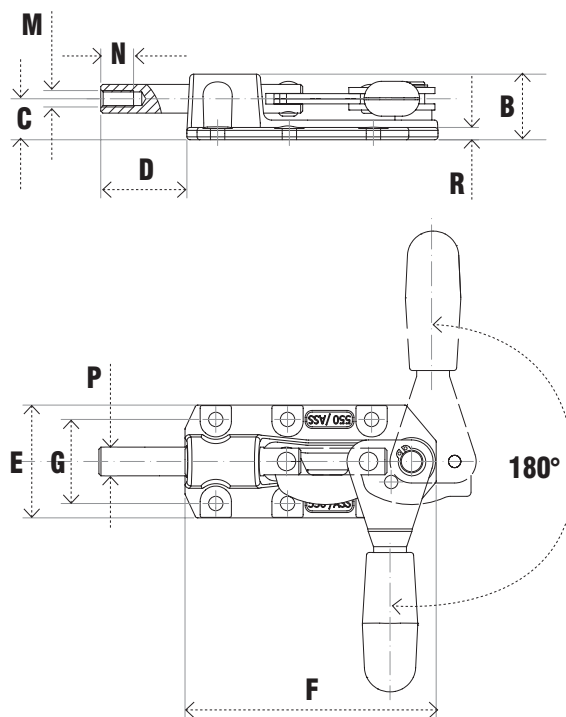
A special grease is applied to the contact surfaces to reduce friction and make the movement smoother.

Accessories (to be ordered separately):

- Spindles (see page 152).

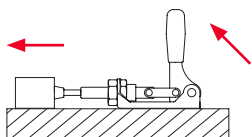


ASD



ASS

Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	P	Q	R	S	*	Fh (daN)	Gr.
AG075	70/ASD	85	19.5	12	22	36	64	26	13	26		M6	12	8.5	4.3	6	98	20	90	160
AG080	70/ASS	85	19.5	12	22	36	64	26	13	26		M6	12	8.5	4.3	6	98	20	90	160
AG165	160/ASD	117	25	15	32	46	85	33.5	11.5	36.5		M6	12	11	5.5	7	158	30	130	350
AG170	160/ASS	117	25	15	32	46	85	33.5	11.5	36.5		M6	12	11	5.5	7	158	30	130	350
AG175	550/ASD	164.5	32	20	42	55	122.5	41	15	35	41	M8	16	14	7	6	225	42	450	720
AG180	550/ASS	164.5	32	20	42	55	122.5	41	15	35	41	M8	16	14	7	6	225	42	450	720



AS

PUSH-ONLY ROD TOGGLE CLAMPS

Base, control lever, riveted pivots, sliding bushing and push rod:

Galvanized steel. Rod with threaded hole for the spindle housing (to be ordered separately - see Accessories).

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

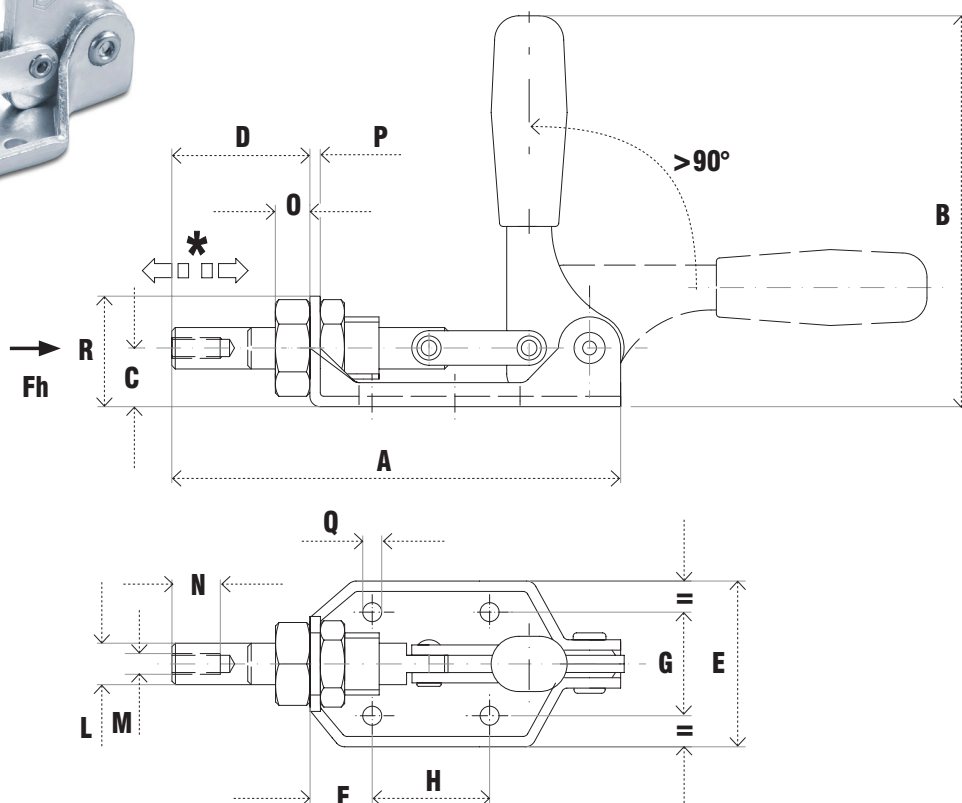
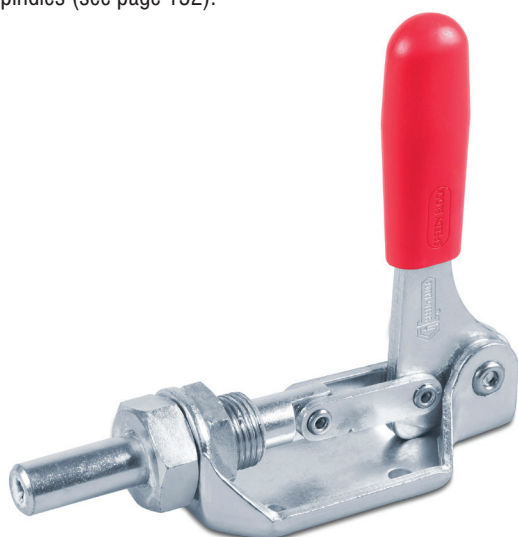
Features and applications:

The tools of this series can only work by pushing.

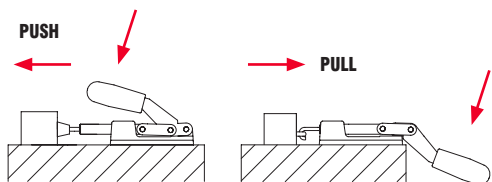
A special grease is applied to the contact surfaces to reduce friction and make the movement smoother.

Accessories (to be ordered separately):

- Spindles (see page 152).



Code	Description	A	B	C	D	E	F	G	H	L	M	N	O	P	Q	R	*	Fh (daN)	Gr.
AG120	120/AS	130	111	17	40	48	18	30	34	12	M6	12	10	3	5.5	32	20	360	350
AG300	300/AS	167	140	20	57	58	18	34	50	14	M8	16	12	3	6.5	36	33	720	560



AS - ASX

PUSH AND PULL ROD TOGGLE CLAMPS

Base:

- **AS:** Hot-forged ASTM A105 steel with manganese phosphate finishing (70-160-550/AS) or painted finishing (360-1100-2100-3100/AS)
- **ASX:** Polished **AISI 304 stainless steel**.

Control lever, riveted pivots and push-pull rod:

Galvanized steel (AS), **AISI 304 stainless steel** (ASX). Galvanized steel or **AISI 303 stainless steel** push-pull rod. Rod with threaded hole for the spindle housing (to be ordered separately - see Accessories).

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Features and applications:

The tools of this series can work with both push and traction.

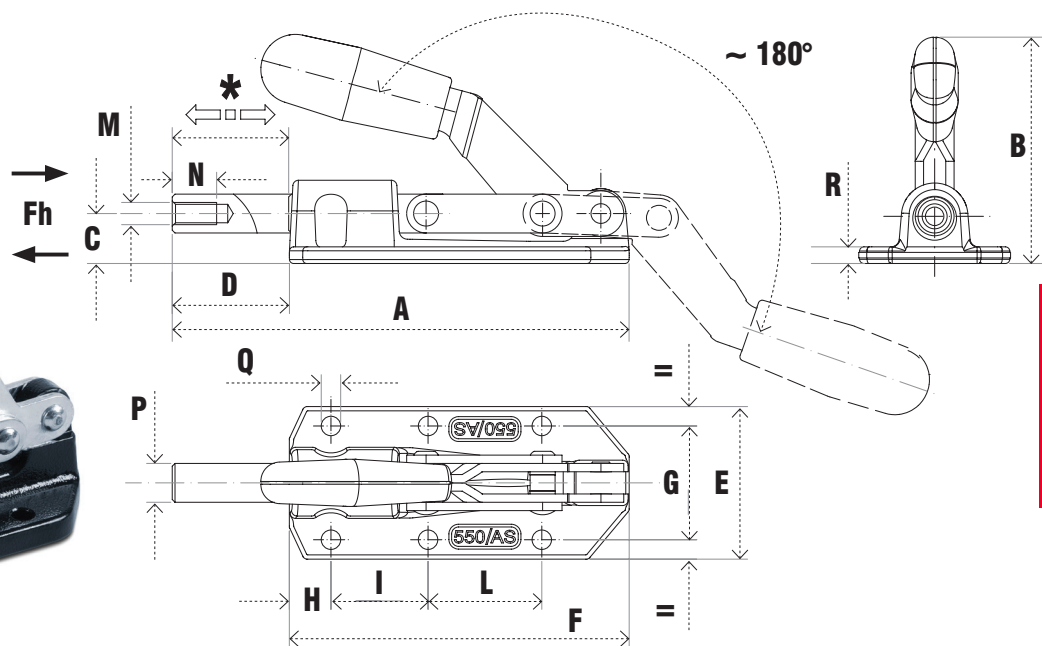
A special grease is applied to the contact surfaces to reduce friction and make the movement more fluid.

Other available executions:

Pneumatic series.

Accessories (to be ordered separately):

- Spindles (see page 152).



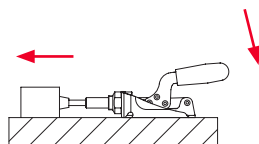
STRAIGHT-LINE

Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	P	Q	R	*	Fh (daN)	Gr. Δ
AG070	70/AS	86	41	12	22	36	64	26	13	26		M6	12	8.5	4.3	6	20	120	165
AG160	160/AS	116	56	15	31	46	85	33.5	11.5	36.5		M6	12	11	5.5	7	30	280	360
AG351	360/AS	122	70	25	32	45.5	90	33.5	30	36.5		M8	15	12	5.5	7	32	560	480
AG355	550/AS	164.5	75	18	42	55	122.5	41	15	35	41	M8	16	14	7	7	42	800	750
AG361	1100/AS	182	92	25	49	57	133	41	15	35	41	M10	18	16	8.5	8	50	1600	1060
AG371	2100/AS	238	118.5	35	61	70	177	50	35	50	50	M12	22	20	8.5	10	60	2500	2280
AG381	3100/AS	316	137	40	100	76	216	54	40	70	70	M14	25	22	11	10	100	4500	3350



Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	P	Q	R	*	Fh (daN)	Gr. Δ
AS395	70/ASX	86	41	12	22	36	64	26	13	26		M6	12	8.5	4.3	6	20	120	165
AS397	160/ASX	116	56	15	31	46	85	33.5	11.5	36.5		M6	12	11	5.5	7	30	280	360
AS399	360/ASX	122	70	25	32	45.5	90	33.5	30	36.5		M8	15	12	5.5	7	32	560	480





ASX

PUSH-ONLY ROD TOGGLE CLAMPS

Base, control lever, riveted pivots:

AISI 304 stainless steel.

Sliding bushing, ring nut, spacer bushing and push rod:

AISI 303 stainless steel. Rod with threaded hole for the spindle housing (to be ordered separately - see Accessories).

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

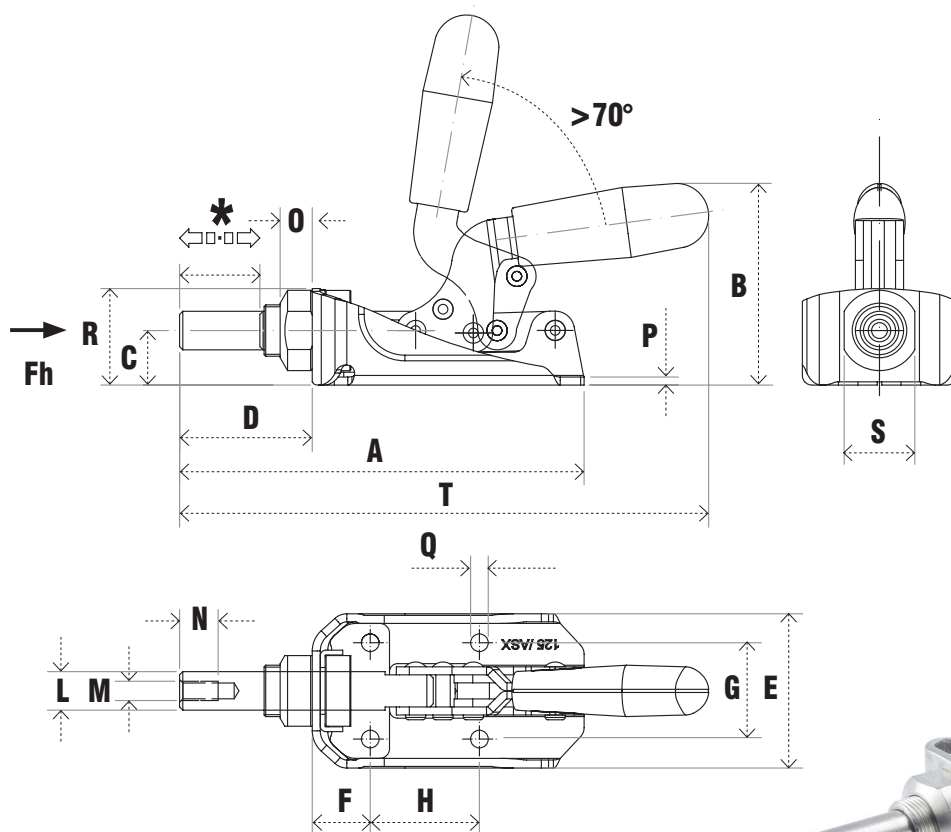
Features and applications:

The tools of this series can only work by pushing

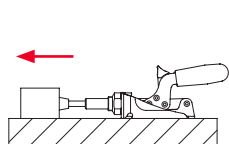
A special grease is applied to the contact surfaces to reduce friction and make the movement smoother.

Accessories (to be ordered separately):

- Spindles (see page 152).



Code	Description	A	B	C	D	E	F	G	H	L	M	N	O	P	Q	R	S	T	*	Fh (daN)	Gr.
AS383	85/ASX	98	46	12.7	31.5	38	12	24	24	8	M5	10	8	2	4.3	22.5	16	112	15	400	142
AS385	125/ASX	126	62	17	41	48	18	30	34	12	M6	12	10	2.5	5.5	30	22	165	19	520	343
AS387	305/ASX	158	74	20	53	58	18	34	50	14	M8	16	12	3	6.5	36	24	197	25	675	615



ASLX

PUSH-ONLY ROD TOGGLE CLAMPS WITH SAFETY LEVER

Base, control lever, riveted pivots:

AISI 304 stainless steel.

Sliding bushing, ring nut, spacer bushing and push rod:

AISI 303 stainless steel. Rod with threaded hole for the spindle housing (to be ordered separately - see Accessories).

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Safety lever:

AISI 303 stainless steel with ergonomic red PVC button.

Features and applications:

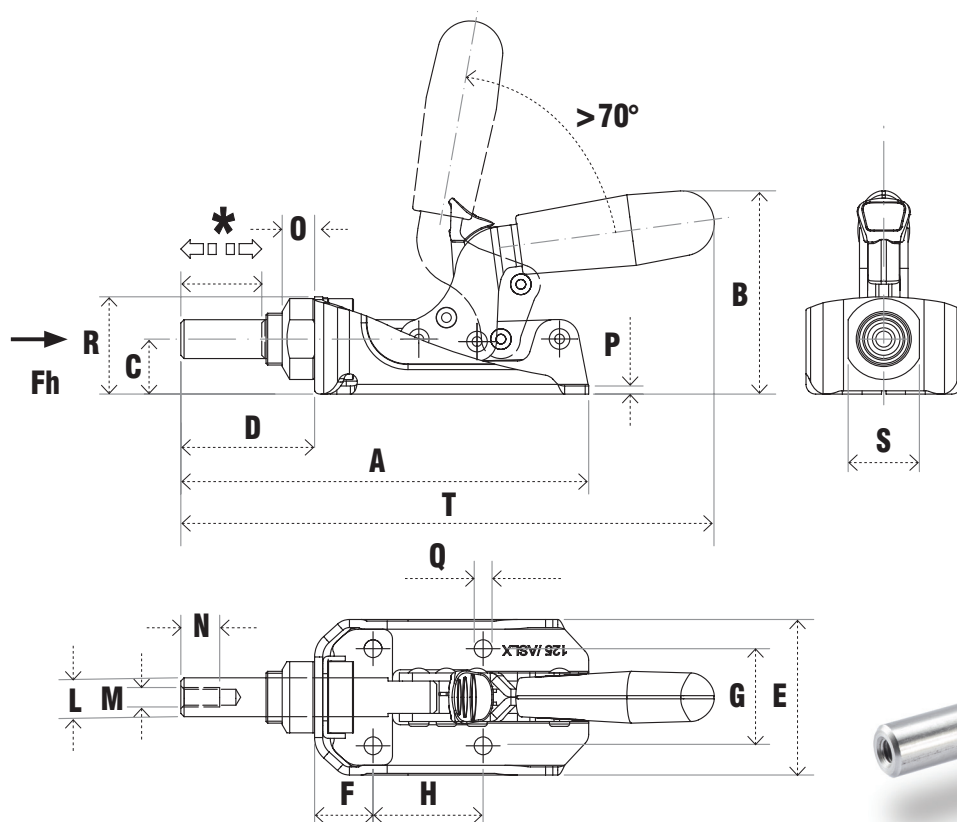
The tools of this series can only work by pushing.

The safety lever ensures the perfect anchoring of the tool, even in the open position, preventing any accidental openings caused by vibrations or shocks.

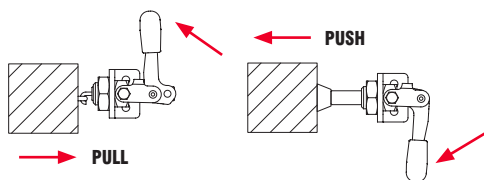
A special grease is placed between the contacting surfaces during assembly.

Accessories (to be ordered separately):

- Spindles (see page 152).



Code	Description	A	B	C	D	E	F	G	H	L	M	N	O	P	Q	R	S	T	*	Fh (daN)	Gr. $\Delta^+ \Delta^-$
AS389	85/ASLX	98	46	12.7	31.5	38	12	24	24	8	M5	10	8	2	4.3	22.5	16	112	15	400	146
AS391	125/ASLX	126	62	17	41	48	18	30	34	12	M6	12	10	2.5	5.5	30	22	165	19	520	352
AS393	305/ASLX	158	74	20	53	58	18	34	50	14	M8	16	12	3	6.5	36	24	197	25	675	620



AS - ASX

PUSH AND PULL ROD TOGGLE CLAMPS

Control lever, riveted pivots, bushing fixing screws and ring nut:

Galvanized steel (AS), **AISI 304 stainless steel** (ASX).

Sliding bushing and push-pull rod:

Galvanized steel (AS), **AISI 303 stainless steel** (ASX). Rod with threaded hole for the spindle housing (to be ordered separately - see Accessories).

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Features and applications:

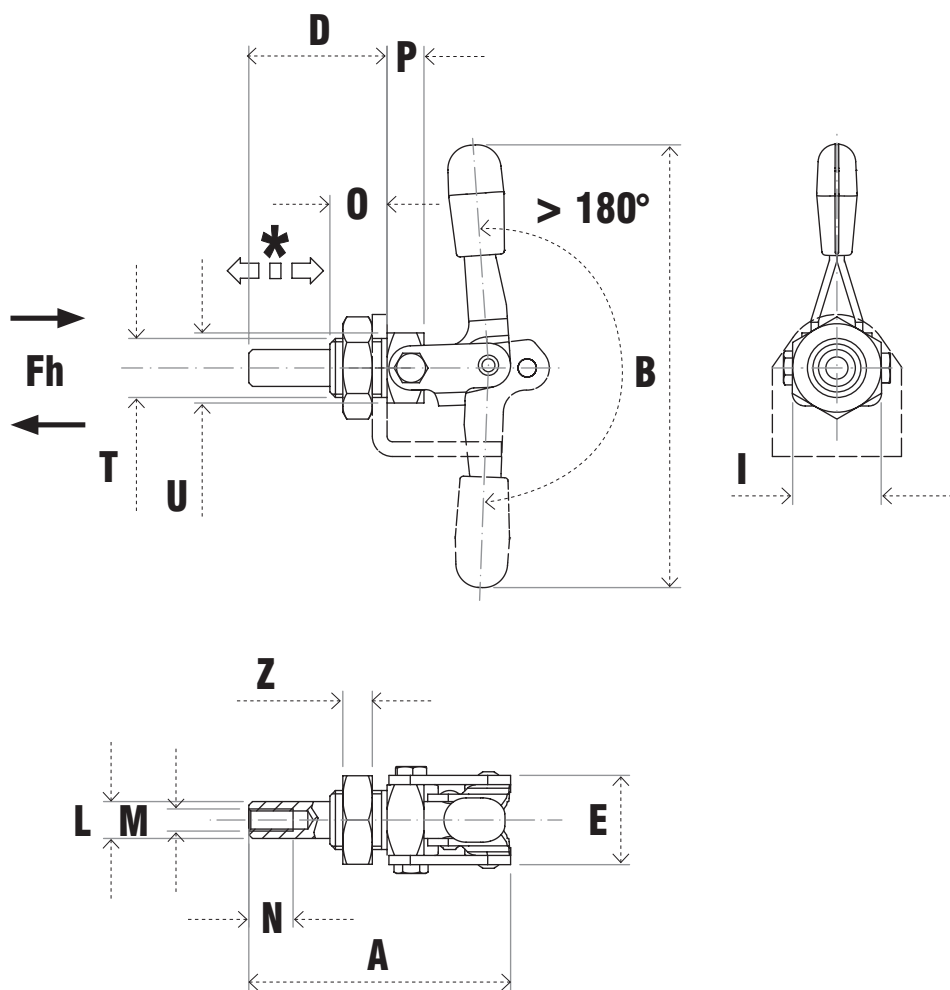
The tools of this series can work with both push and traction.

A special grease is applied on the contact surfaces to reduce friction and make the movement more fluid.

Accessories (to be ordered separately):

- Fixing brackets (see page 144).
- Spindles (see page 152).





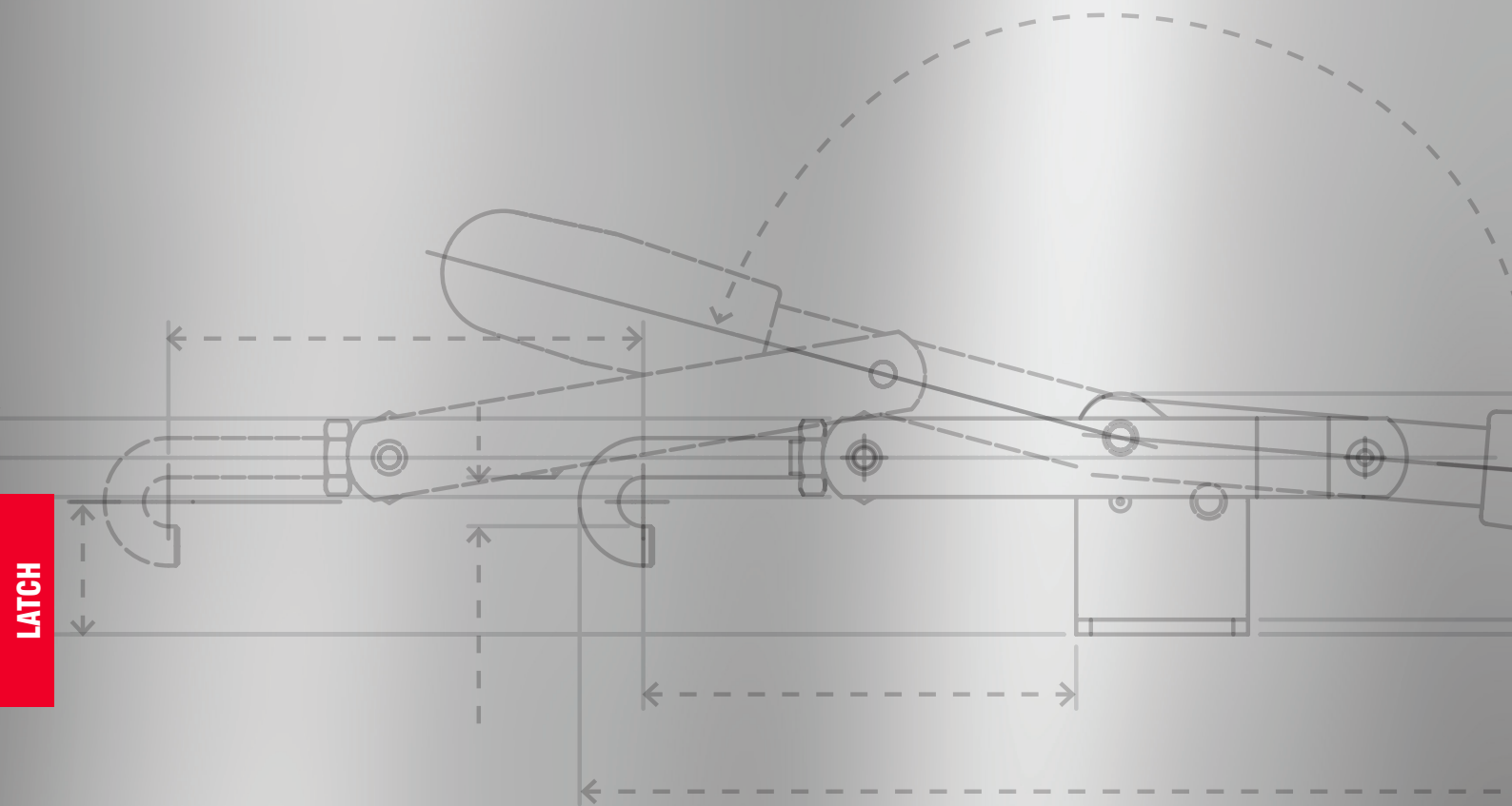
Code	Description	A	B	D	E	I	L	M	N	O	P	T	U	Z	*	Fh (daN)	Gr.
AG401	80/AS	71	120	38	24	24	10	M6	12	15.5	10	M16X1.5	10	8	21	300	135
AG406	165/AS	113	194	59	28	30	12	M8	15	20	16	M20X1.5	22	9	38	540	335
AG411	340/AS	173	256	90	38	36	16	M10	18	22	28	M24X2	30	10	66	700	835



Code	Description	A	B	D	E	I	L	M	N	O	P	T	U	Z	*	Fh (daN)	Gr.
AS401	80/ASX	71	120	38	24	24	10	M6	12	15.5	10	M16X1.5	10	8	21	300	135
AS406	165/ASX	113	194	59	28	30	12	M8	15	20	16	M20X1.5	22	9	38	540	335
AS411	340/ASX	173	256	90	38	36	16	M10	18	22	28	M24X2	30	10	66	700	835



LATCH SERIES



Here you can download
2D and 3D CAD drawings
of all products.



The tie rod clamping tools are characterized by a circular movement of the control lever that transforms into a linear movement of the tie rod. These products are mostly used in closing hinged lids, for container boxes or for machine and equipment doors.

LIGHT SERIES: It has holding forces from 160 to 1000 daN. They are available in galvanized steel and stainless steel.

HEAVY-DUTY SERIES: It has holding forces from 1700 to 4000 daN. They are available in hot-stamped, painted, phosphated or stainless steel.

HIGH TEMPERATURE SERIES:

It has retention forces of 1500 daN.

These tools are free of plastic parts and with the appropriate modifications compared to the light series models (couplings with different tolerances, changes in geometries, different finishes, etc., etc.) that make them suitable for use in environments that can reach 240-300 °C. The products are made of raw steel. They are normally used in the rotational moulding of plastic and require a type of clamping capable of working safely and quickly at high temperatures without uncertainties in closing and opening.

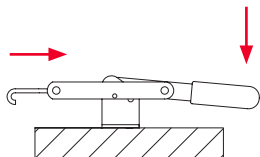
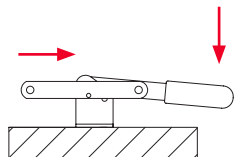
TOGGLE LATCHES: The ET-EG-ETL-EGL models represent a compact version of the lightweight series. They are normally used for closing lids or light doors. Thanks to the possibility of inserting a padlock, they can be used as anti-intrusion security locks.

TIE RODS: they can be single (eyebolt, T-shaped and hook-shaped) or double. All the tie rods are adjustable within the stroke (dimension D).

BASIC TYPES: The support base is parallel to the line of action of the force. In the closed position, the control lever is parallel to the support base. T - TF - TL - TFL - T2- T5 - T6.

The support base is perpendicular to the line of action of the force. In the closed position, the control lever is parallel to the support base. T3.

The support base is perpendicular to the line of action of the force. In the closed position, the control lever is perpendicular to the support base. T4.



T - TF

TIE ROD TOGGLE CLAMPS

Base, control lever, clamping lever, riveted pivots:

Galvanized steel.

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Executions:

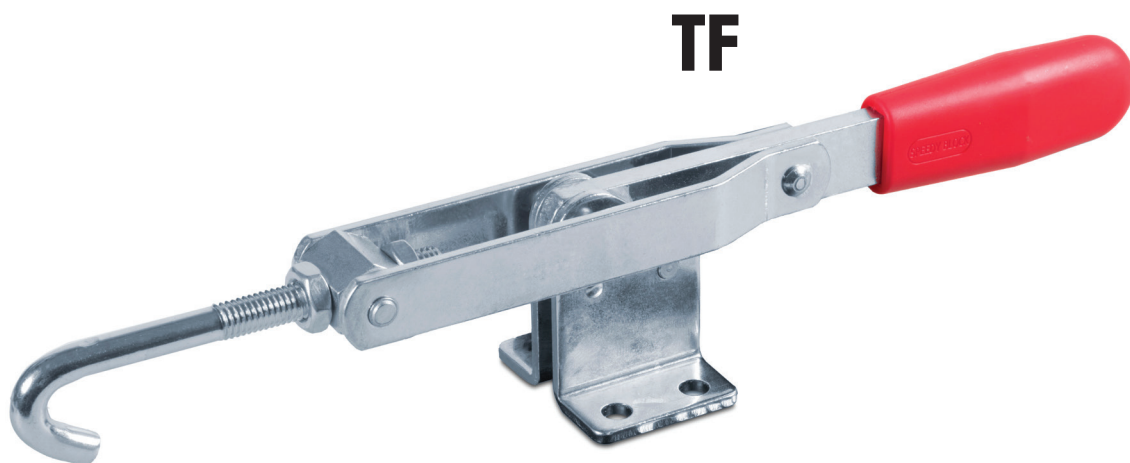
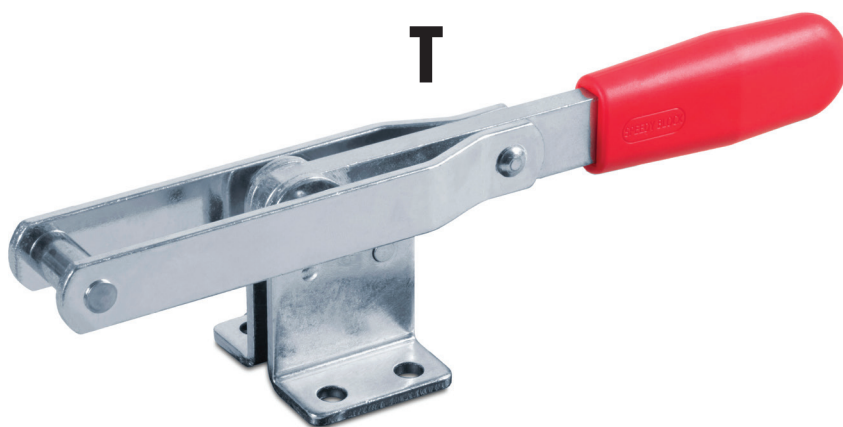
- **T**: equipped with galvanized steel traction pivot.
- **TF**: equipped with galvanized steel traction hook rod.

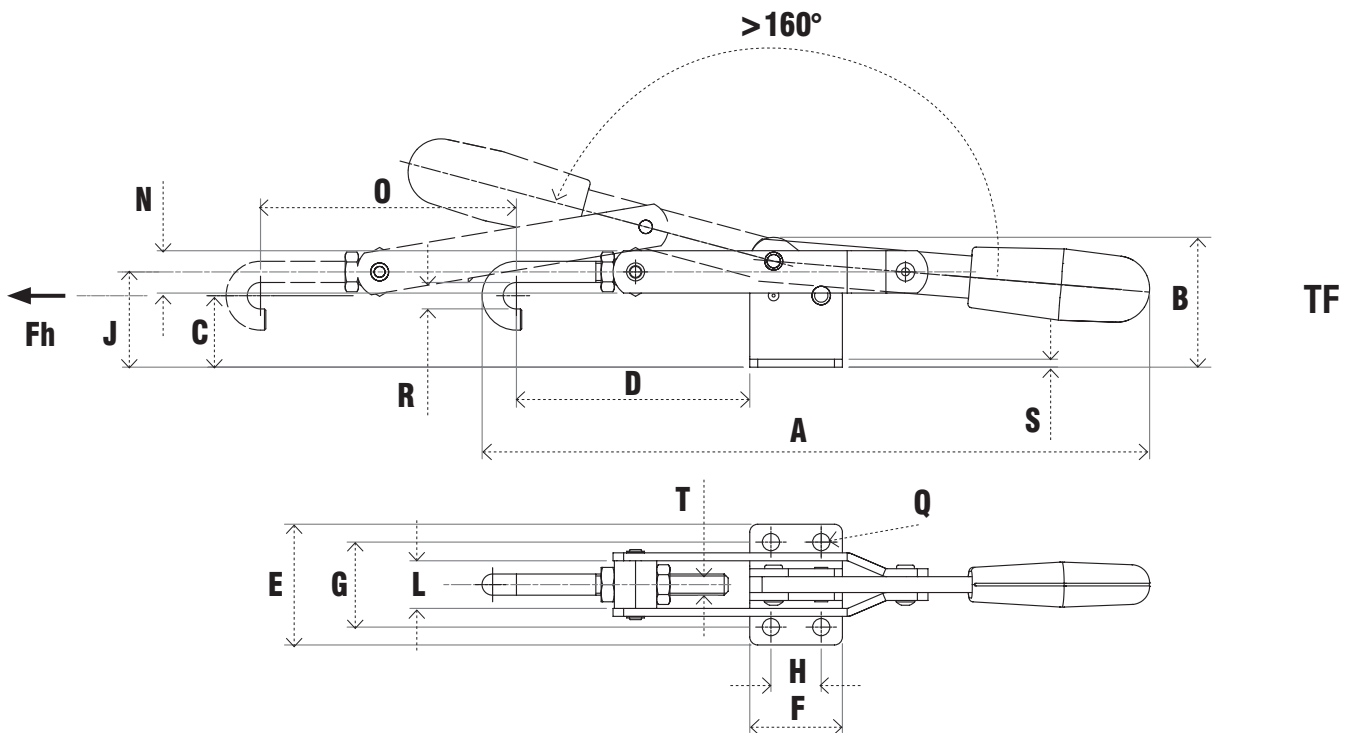
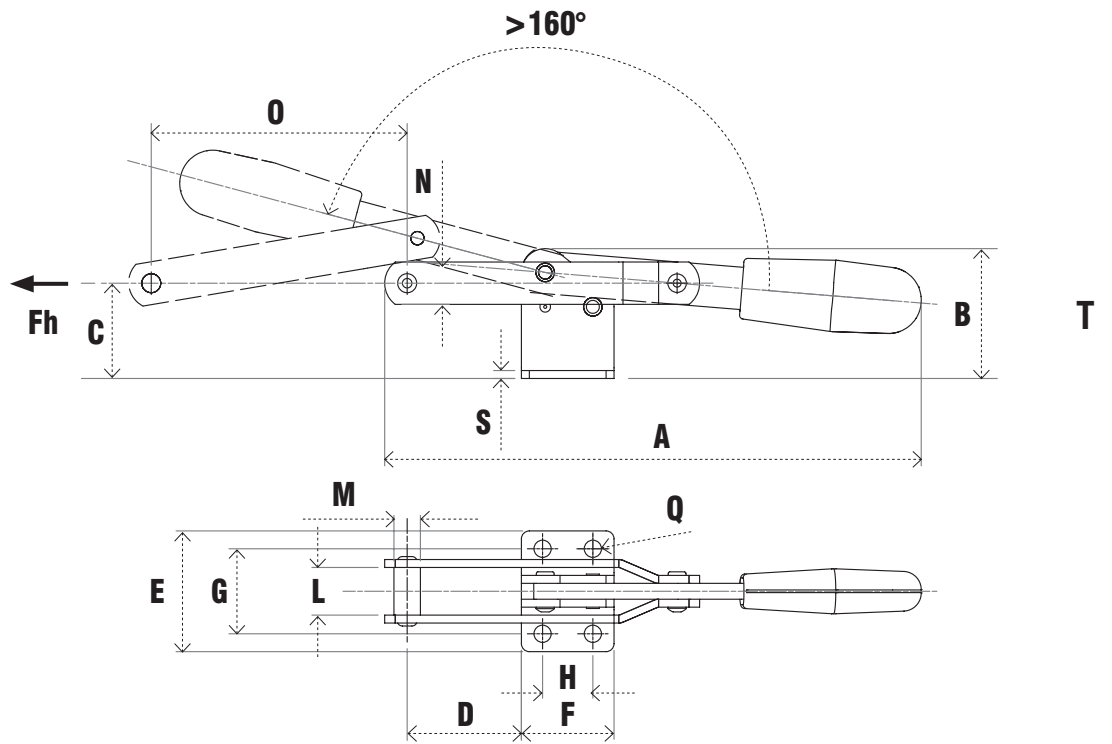
Features and applications:

These tools are particularly suitable for closing machine covers or doors.

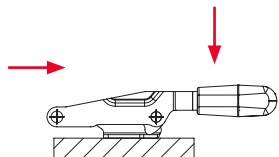
The position of the threaded tie rod can be adjusted within a certain range (see dimension "D") to fit the requirements of use.

A special grease is placed between the contacting surfaces during assembly.





Code	Description	A	B	C	D	E	F	G	H	J	L	M	N	O	Q	R	S	T	Fh (daN)	Gr. 
AL200	200/T	203	49	36	43	45	35	32	19		18	10	16	100	6.5		3		200	300
AL205	200/TF	251	49	29	85 ÷ 105	45	35	32	19	36	18		16	100	6.5	5	3	M8	200	380
AL300	300/T	225	49	36	43	60	48	45	32		21	10	18	100	8.5		3		300	460
AL305	300/TF	277	49	25	90 ÷ 115	60	48	45	32	36	21		18	100	8.5	6	3	M10	300	560
AL400	400/T	275	60.5	43	45.5	84	54	60.5	28.5		26	14	25	160	10.5		5		400	1000
AL405	400/TF	339	60.5	30	107 ÷ 129	84	54	60.5	28.5	43	26		25	160	10.5	7	5	M12	400	1200



T/TX - TF/TFX

TIE ROD TOGGLE CLAMPS

Base, control lever, clamping lever, riveted pivots:

Galvanized steel (T-TF) or **AISI 304 stainless steel** (TX-TFX).

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Executions:

- **T/TX**: equipped with traction pivot and hooking bracket in galvanized steel (T) or **AISI 304 stainless steel** (TX).
- **TF/TFX**: equipped with galvanized steel (TF) or **AISI 304 stainless steel** (TFX) traction pivot, suitable for the use of hook tie rods, to be ordered separately (see Accessories).

Features and applications:

These tools are particularly suitable for closing machine covers or doors.

The position of the threaded tie rod can be adjusted within a certain range (see dimension "D") to fit the requirements of use.

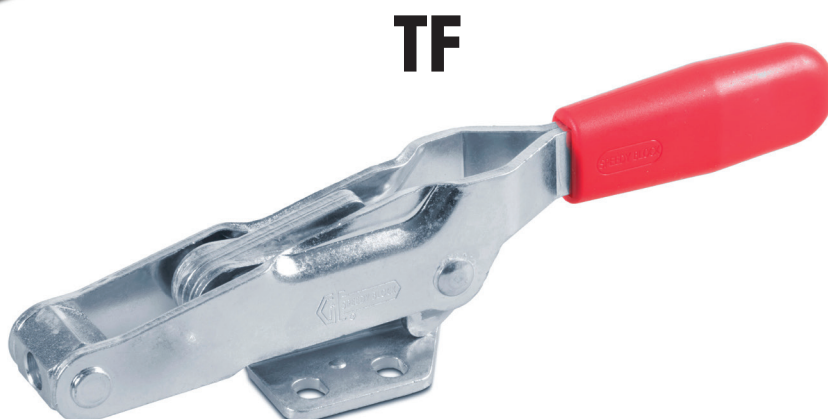
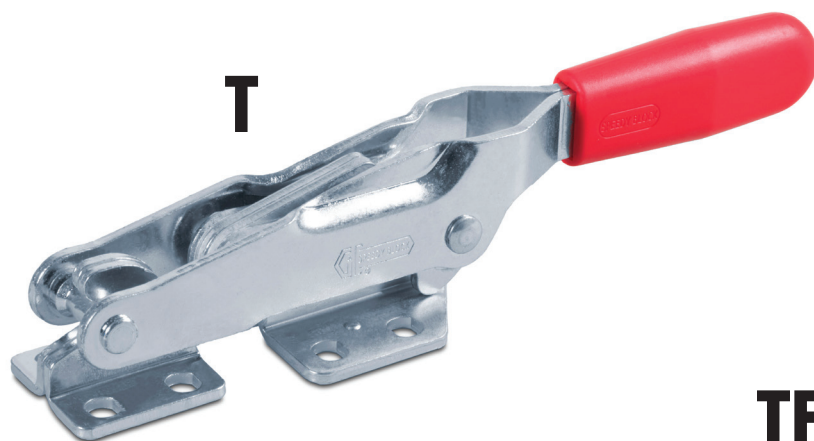
A special grease is placed between the contacting surfaces during assembly.

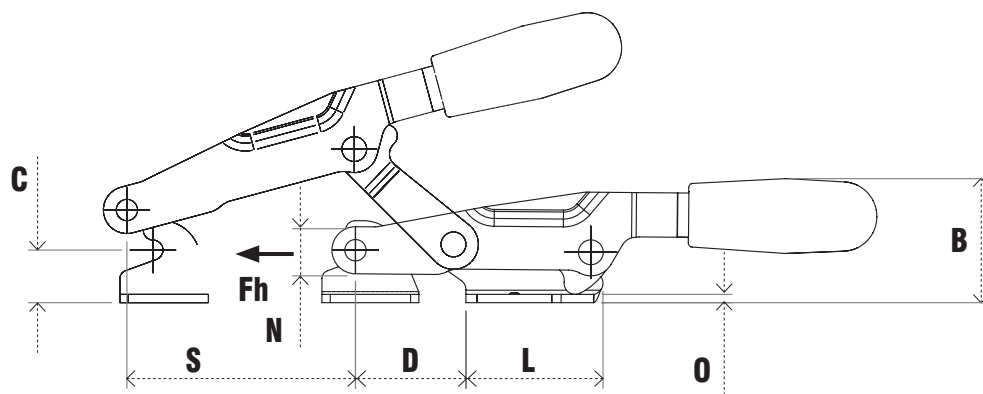
Other available executions:

Series with safety lever.

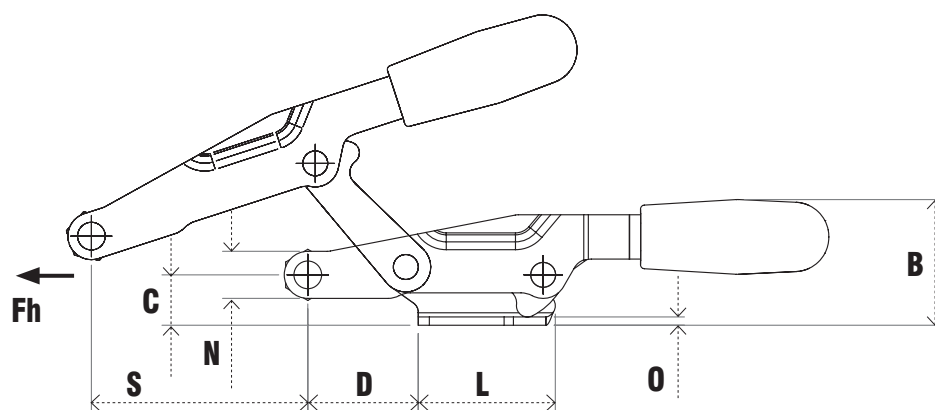
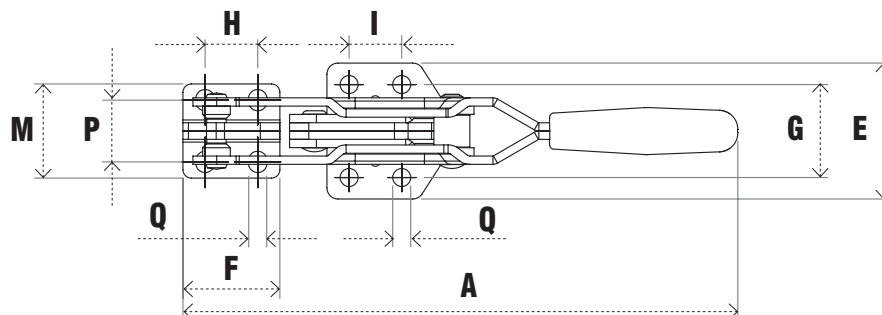
Accessories:

- TG series eyebolt tie rods (see page 146).
- TT series T-tie rods (see page 146).
- TU series hook tie rods (see page 146).

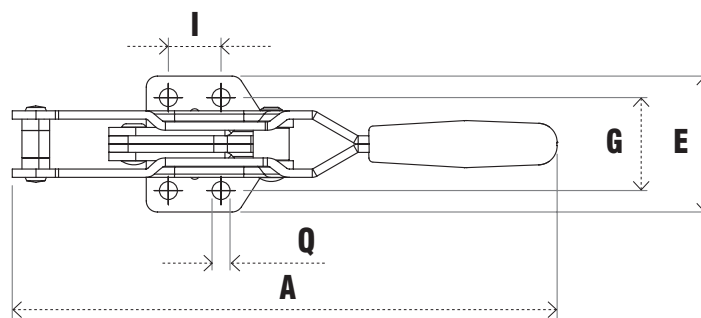




T/TX



TF/TFX

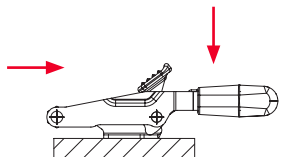


Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	S	Fh (daN)	Gr. Δ
AL410	33/T	200	45	19	40	49	35	33.5	19	19	50	34	17	3	22.3	6.5	83	500	422
AL415	33/TF	197	45	19	40	49		33.5		19	50		17	3		6.5	83	500	394
AL420	43/T	248	56	28	51	63	50	45	31	32	61	41	20	4	25.4	8.5	110	1000	811
AL425	43/TF	242	56	28	51	63		45		32	61		20	4		8.5	90	1000	696



Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	S	Fh (daN)	Gr. Δ
AS430	33/TX	200	45	19	40	49	35	33.5	19	19	50	34	17	3	22.3	6.5	83	500	422
AS432	33/TFX	197	45	19	40	49		33.5		19	50		17	3		6.5	83	500	394
AS436	43/TX	248	56	28	51	63	50	45	31	32	61	41	20	4	25.4	8.5	110	1000	811
AS438	43/TFX	242	56	28	51	63		45		32	61		20	4		8.5	90	1000	696





TL/TLX - TFL/TFLX

TIE ROD TOGGLE CLAMPS, WITH SAFETY LEVER

Base, control lever, clamping lever, riveted pins:

Galvanized steel (TL-TFL) or **AISI 304 stainless steel** (TLX-TFLX).

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Safety lever:

Galvanized steel (TL-TFL) or **AISI 304 stainless steel** (TLX-TFLX), red polyurethane coating.

Executions:

- **TL/TLX:** equipped with traction pivot and hooking bracket in galvanized steel (TL) or **AISI 304 stainless steel** (TLX).
- **TFL/TFLX:** equipped with galvanized steel (TFL) or **AISI 304 stainless steel** (TFLX) traction pivot, suitable for the use of hook tie rods, to be ordered separately (see Accessories).

Features and applications:

These clamping tools are equipped with a special safety lever that ensures the perfect anchoring of the tool, preventing any accidental openings caused by vibrations or shocks. The tools of this series are particularly suitable for closing covers or doors of machines and equipment subjected to movement or vibration.

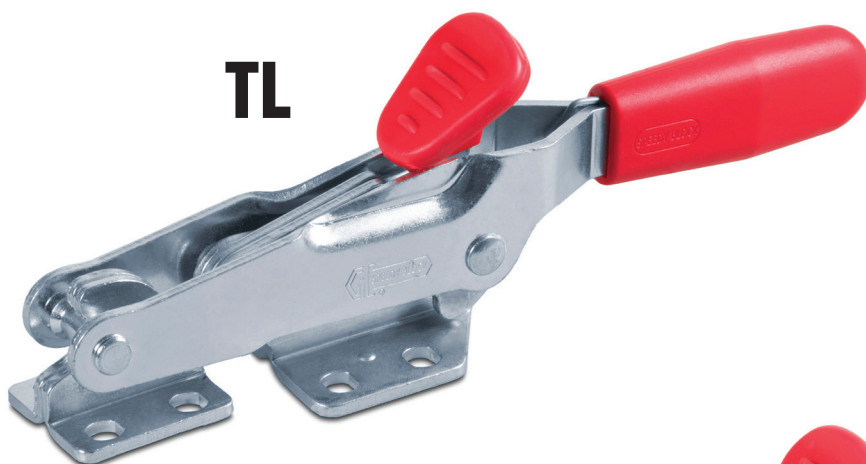
The position of the threaded tie rod can be adjusted within a certain range (see dimension "D") to fit the requirements of use.

A special grease is placed between the contacting surfaces during assembly.

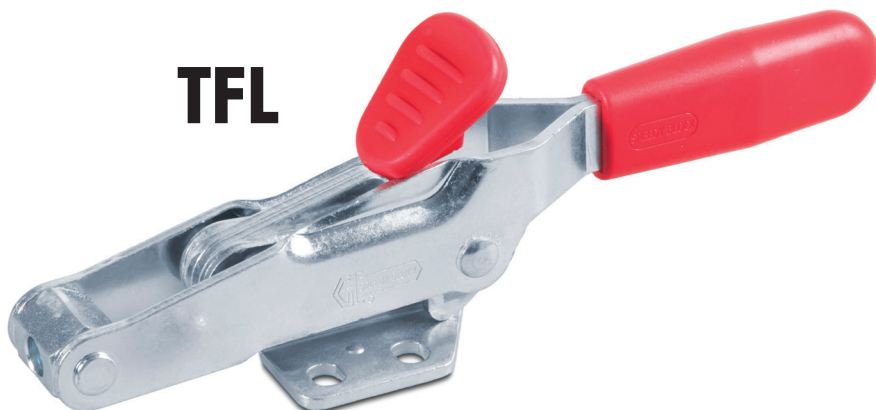
Accessories:

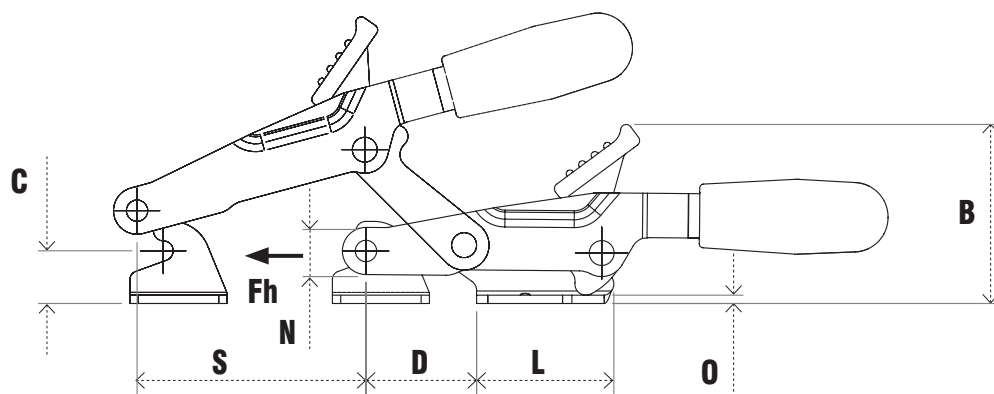
- TG series eyebolt tie rods (see page 146).
- TT series T-tie rods (see page 146).
- TU series hook tie rods (see page 146).

TL

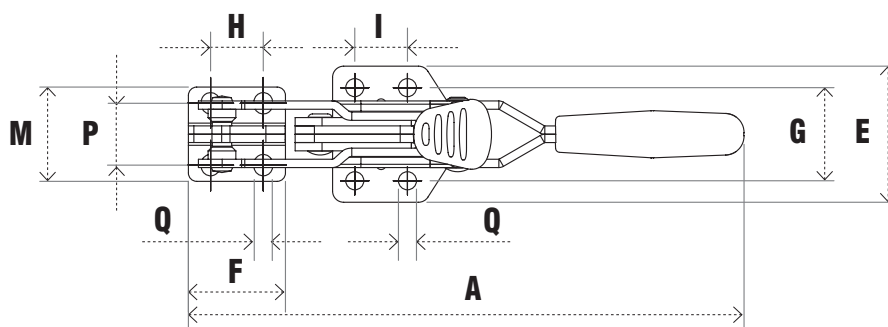


TFL

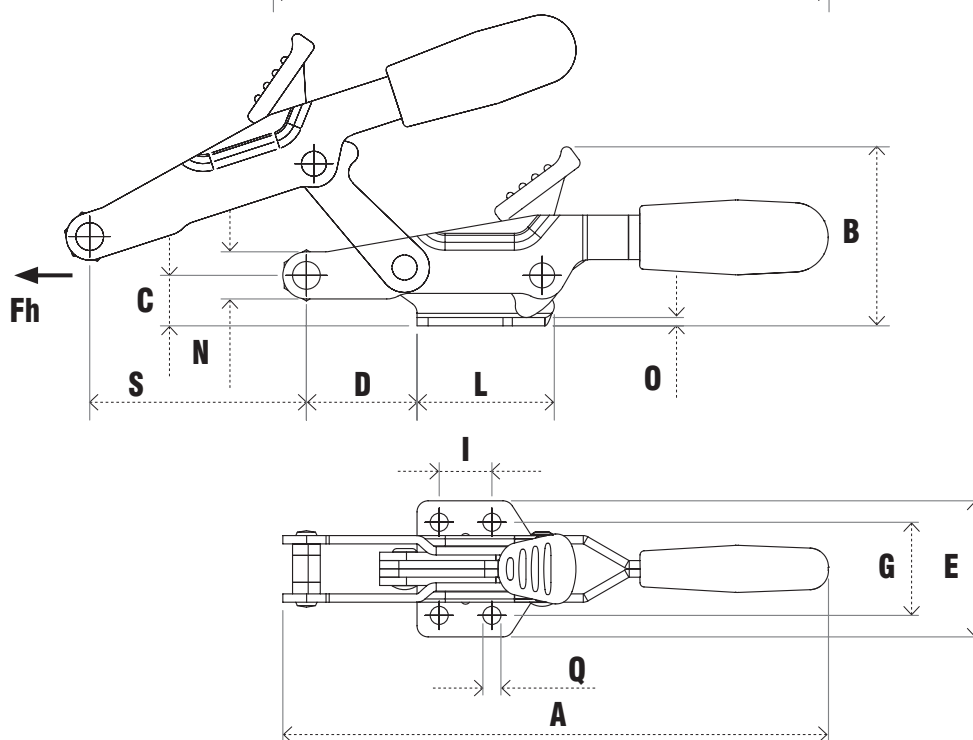




TL/TLX



TFL/TFLX

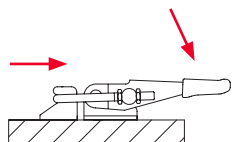


Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	S	Fh (daN)	Gr. 
AL430	33/TL	200	65	19	40	49	35	33.5	19	19	50	34	17	3	22.3	6.5	83	500	441
AL435	33/TFL	197	65	19	40	49		33.5		19	50		17	3		6.5	83	500	413
AL440	43/TL	248	74	28	51	63	50	45	31	32	61	41	20	4	25.4	8.5	110	1000	834
AL445	43/TFL	242	74	28	51	63		45		32	61		20	4		8.5	90	1000	719



Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	S	Fh (daN)	Gr. 
AS440	33/TLX	200	65	19	40	49	35	33.5	19	19	50	34	17	3	22.3	6.5	83	500	441
AS442	33/TFLX	197	65	19	40	49		33.5		19	50		17	3		6.5	83	500	413
AS444	43/TLX	248	74	28	51	63	50	45	31	32	61	41	20	4	25.4	8.5	110	1000	834
AS446	43/TFLX	242	74	28	51	63		45		32	61		20	4		8.5	90	1000	719





T2/T2X - T20/T20X

DOUBLE TIE ROD TOGGLE CLAMPS

Base, control lever, riveted pins, hooking bracket:

Galvanized steel (T2-T20) or **AISI 304 stainless steel** (T2X-T20X).

Swinging pivot and nuts:

Galvanized steel (T2-T20) or **AISI 303 stainless steel** (T2X-T20X).

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Executions:

- **T2-T2X:** equipped with double threaded tie rod with nuts, swinging pivot and hooking bracket.
- **T20-T20X:** equipped with swinging pivot and hooking bracket. Double tie rod to be ordered separately (see Accessories).

Features and applications:

These tools are particularly suitable for closing machine covers or doors.

The position of the threaded tie rod can be adjusted within a certain range (see dimension "D") to fit the requirements of use.

The support base is parallel to the line of action of the force. In the closed position, the control lever is parallel to the support base.

A special grease is placed between the contacting surfaces during assembly.

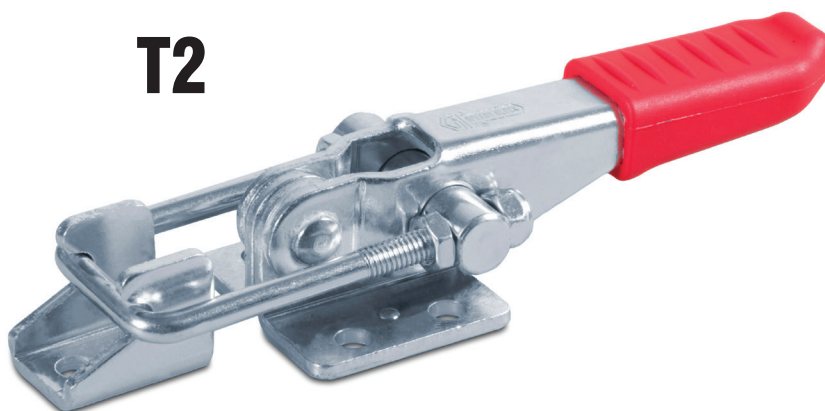
Other available executions:

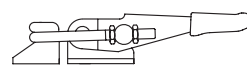
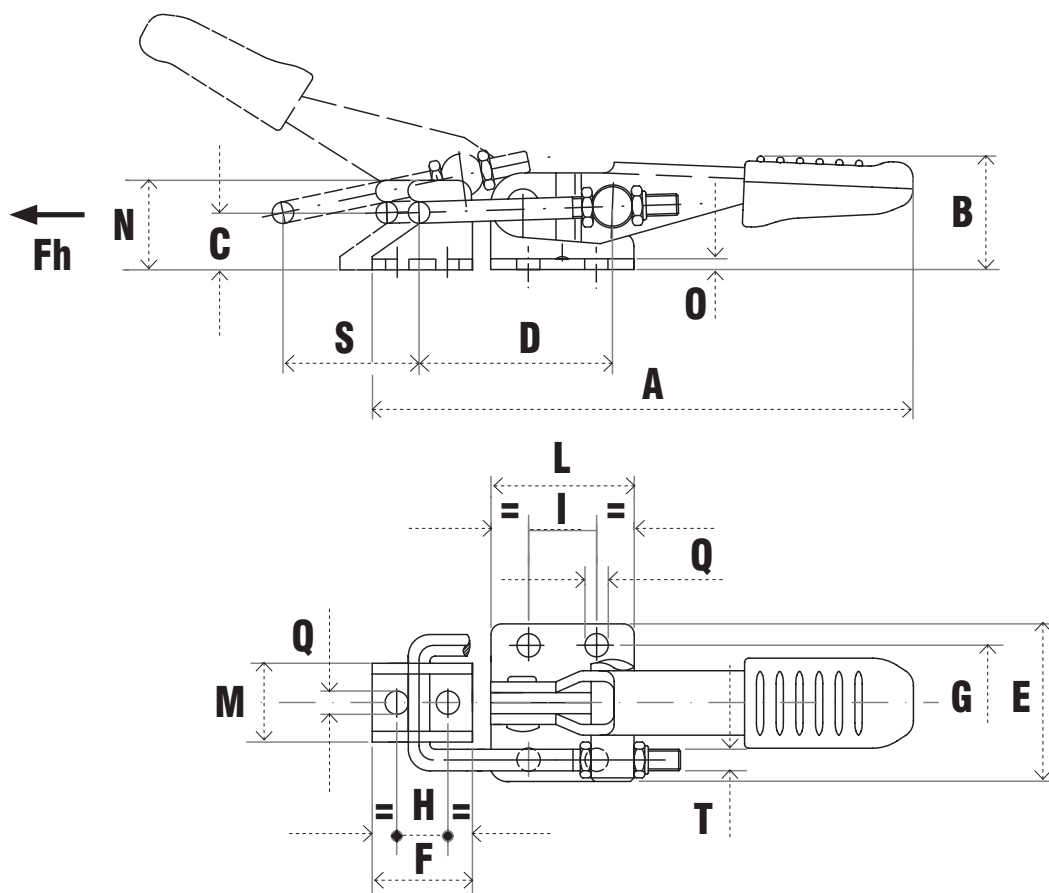
Series with safety lever, heavy series.

Accessories:

- Tie rods of different sizes (see page 145).

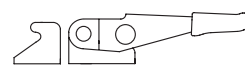
T2





T2/T2X

Tool provided with
standard size tie rod.



T20/T20X

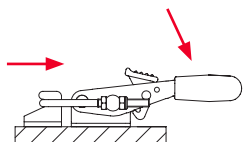
Tool supplied without tie rod.
Match with tie rods of different
sizes (see page 145).

Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	Q	S	T	Fh (daN)	Gr.
AL500	160/T2	99	26	12	35÷44	28	20	19	10	16	26	14	18	2	4.3	25÷27.5	M4	160	85
AL505	320/T2	152	32	16	54÷63	44	28	32	14.3	19	40	22	25	3	6.5	34÷41	M6	320	250
AL510	700/T2	224	42	24	70÷90	54	38	38	19	41.5	60	26	36	3.5	8.5	43÷54	M8	750	600
AL512	160/T20		26	12		28	20	19	10	16	26	14	18	2	4.3		M4	160	72
AL514	320/T20		32	16		44	28	32	14.3	19	40	22	25	3	6.5		M6	320	225
AL516	700/T20		42	24		54	38	38	19	41.5	60	26	36	3.5	8.5		M8	750	530



Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	Q	S	T	Fh (daN)	Gr.
AS500	160/T2X	99	26	12	35÷44	28	20	19	10	16	26	14	18	2	4.3	25÷27.5	M4	160	85
AS505	320/T2X	152	32	16	54÷63	44	28	32	14.3	19	40	22	25	3	6.5	34÷41	M6	320	250
AS510	700/T2X	224	42	24	70÷90	54	38	38	19	41.5	60	26	36	3.5	8.5	43÷54	M8	750	600
AS512	160/T20X		26	12		28	20	19	10	16	26	14	18	2	4.3		M4	160	73
AS514	320/T20X		32	16		44	28	32	14.3	19	40	22	25	3	6.5		M6	320	227
AS516	700/T20X		42	24		54	38	38	19	41.5	60	26	36	3.5	8.5		M8	750	538





T6/T16 - T60/T160

DOUBLE TIE ROD TOGGLE CLAMPS, WITH SAFETY LEVER

Base, control lever, riveted pins, swinging pivot, hooking bracket, nuts and tie rod:

Galvanized steel (T6-T60) or **AISI 316 stainless steel** (T16-T160).

Safety lever:

Galvanized steel (T6-T60) or **AISI 316 stainless steel** (T16-T160), red polyurethane coating.

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Executions:

- **T6-16:** equipped with double threaded tie rod with nuts, swinging pivot and hooking bracket.
- **T60-T160:** equipped with swinging pivot and hooking bracket. Double tie rod to be ordered separately (see Accessories).

Features and applications:

These clamping tools are equipped with a special safety lever that ensures the perfect anchoring of the tool, preventing any accidental openings caused by vibrations or shocks. The tools of this series are particularly suitable for closing covers or doors of machines and equipment subjected to movement or vibration.

The position of the threaded tie rod can be adjusted within a certain range (see dimension "D") to fit the requirements of use.

The support base is parallel to the line of action of the force. In the closed position, the control lever is parallel to the support base.

A special grease is placed between the contacting surfaces during assembly.

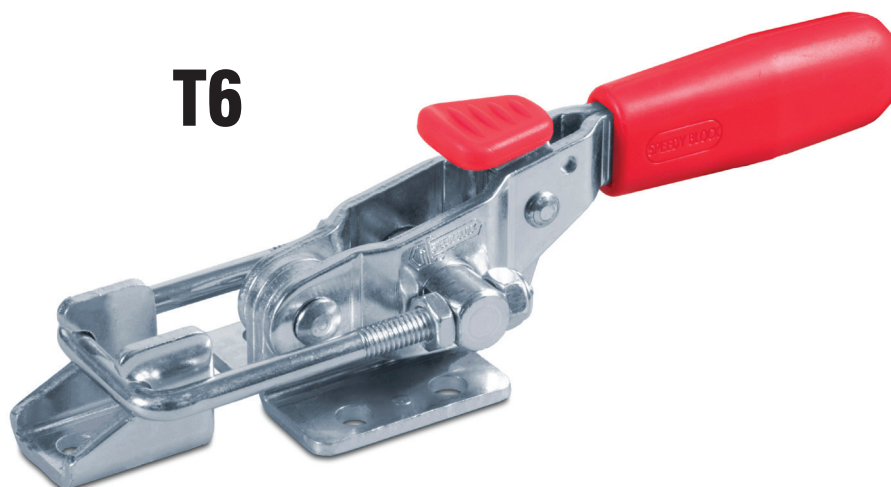
Other available executions:

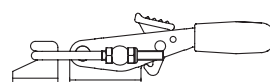
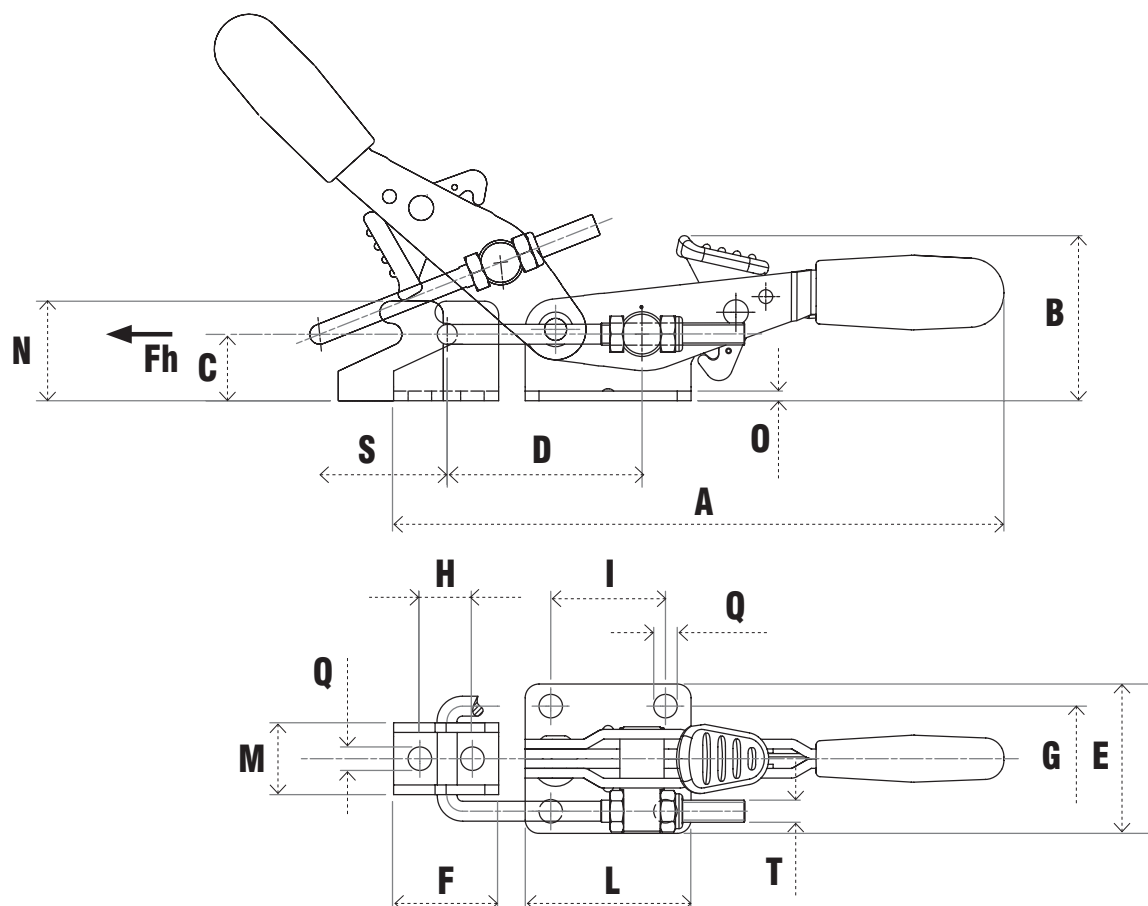
Heavy series.

Accessories:

- Tie rods of different sizes (see page 145).

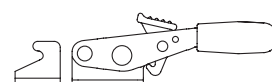
T6





T6/T16

Tool provided with
standard size tie rod.



T60/T160

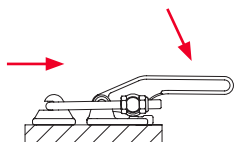
Tool supplied without tie rod.
Match with tie rods of different
sizes (see page 145).

Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	Q	S	T	Fh (daN)	Gr. 
AL780	160/T6	101	31	12	35÷44	28	20	19	10	16	26	14	18	2	4.3	18÷24	M4	160	95
AL785	320/T6	169	45	16	54÷63	44	28	32	14.3	19	40	22	25	3	6.5	26÷34	M6	320	331
AL790	700/T6	221	56	24	70÷90	54	38	38	19	41.5	60	26	36	3.5	8.5	40÷50	M8	750	644
AL820	160/T60		31	12		28	20	19	10	16	26	14	18	2	4.3		M4	160	76
AL822	320/T60		45	16		44	28	32	14.3	19	40	22	25	3	6.5		M6	320	258
AL824	700/T60		56	24		54	38	38	19	41.5	60	26	36	3.5	8.5		M8	750	507



Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	Q	S	T	Fh (daN)	Gr. 
AS600	160/T16	101	31	12	35÷44	28	20	19	10	16	26	14	18	2	4.3	18÷24	M4	160	95
AS605	320/T16	169	45	16	54÷63	44	28	32	14.3	19	40	22	25	3	6.5	26÷34	M6	320	331
AS610	700/T16	221	56	24	70÷90	54	38	38	19	41.5	60	26	36	3.5	8.5	40÷50	M8	750	644
AS640	160/T160		31	12		28	20	19	10	16	26	14	18	2	4.3		M4	160	78
AS642	320/T160		45	16		44	28	32	14.3	19	40	22	25	3	6.5		M6	320	260
AS644	700/T160		56	24		54	38	38	19	41.5	60	26	36	3.5	8.5		M8	750	507





T2/T2X - T20/T20X

DOUBLE TIE ROD TOGGLE CLAMPS, HEAVY-DUTY SERIES

Base, control lever and hooking bracket:

Hot-stamped steel, black painted, (T2-T20) or hot-stamped **AISI 304 stainless steel** (T2X-T20X).

Base-handle pivot:

Hardened, ground and knurled steel to prevent rotation (T2-T20) or **AISI 303 stainless steel** (T2X-T20X).

Tie rod:

Galvanized steel (T2-T20) or **AISI 304 stainless steel** (T2X-T20X).

Swivel pin and nuts:

Galvanized steel (T2-T20) or **AISI 303 stainless steel** (T2X-T20X).

Executions:

- **T2-T2X:** equipped with double threaded tie rod with nuts, swinging pivot and hooking bracket.
- **T20-T20X:** equipped with swinging pivot and hooking bracket. Double tie rod to be ordered separately (see Accessories).

Features and applications:

These tools are particularly suitable for closing machine covers or doors.

The construction features and the materials used give these tools high resistance, making them suitable for particularly heavy-duty uses.

The position of the threaded tie rod can be adjusted within a certain range (see dimension "D") to fit the requirements of use.

The support base is parallel to the line of action of the force. In the closed position, the control lever is parallel to the support base.

A special grease is placed between the contacting surfaces during assembly.

Other available executions:

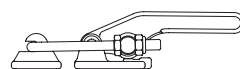
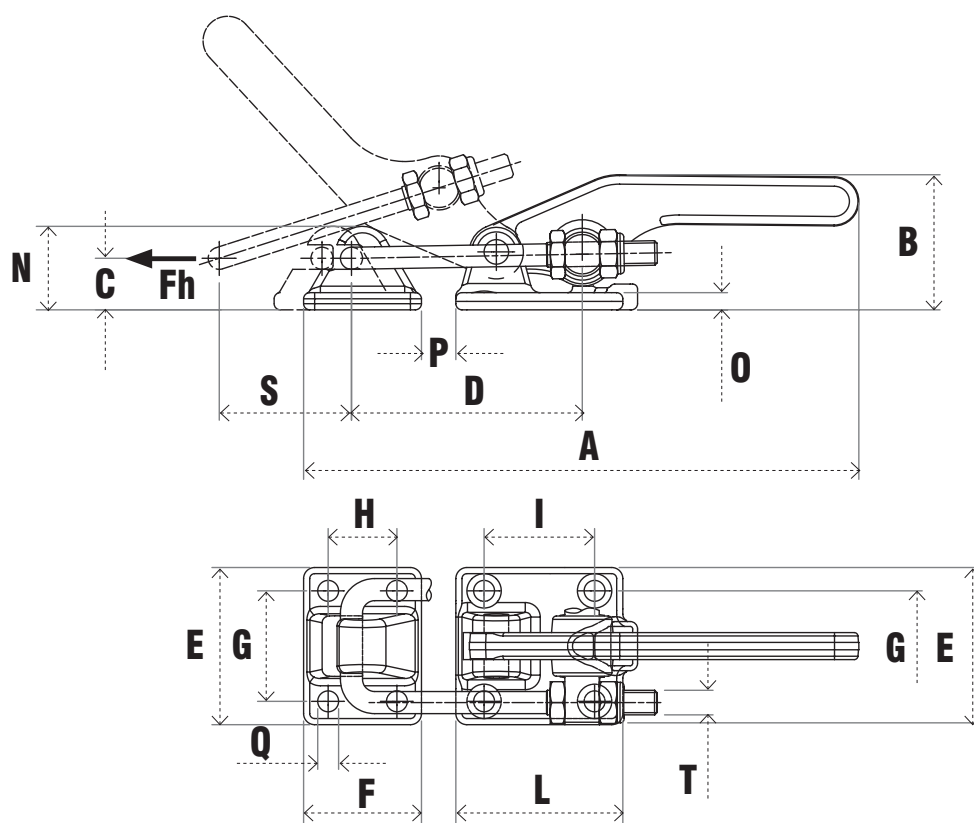
Series with safety lever, light series.

Accessories:

- Tie rods of different sizes (see page 145).

T2





T2/T2X

Tool provided with
standard size tie rod.



T20/T20X

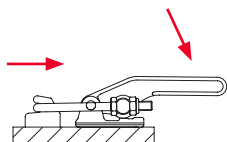
Tool supplied without tie rod.
Match with tie rods of different
sizes (see page 145).

Code	Description	A	B	C	D	E	F	G	H	I	L	N	O	P	Q	S	T	Fh (daN)	Gr.
AL518	1700/T2	226	55	21	94÷106	64	48	45	28	45	68	34	7	14	8.5	54÷58	M10	1700	1110
AL522	4000/T2	282	68	27	112÷124	80	60	57	35	57	85	42	9	14	10.5	62÷65	M12	4000	2100
AL519	1700/T20		55	21		64	48	45	28	45	68	34	7	14	8.5		M10	1700	931
AL523	4000/T20		68	27		80	60	57	35	57	85	42	9	14	10.5		M12	4000	1735



Code	Description	A	B	C	D	E	F	G	H	I	L	N	O	P	Q	S	T	Fh (daN)	Gr.
AS518	1700/T2X	226	55	21	94÷106	64	48	45	28	45	68	34	7	14	8.5	54÷58	M10	1400	1110
AS522	4000/T2X	282	68	27	112÷124	80	60	57	35	57	85	42	9	14	10.5	62÷65	M12	3000	2100
AS519	1700/T20X		55	21		64	48	45	28	45	68	34	7	14	8.5		M10	1400	931
AS523	4000/T20X		68	27		80	60	57	35	57	85	42	9	14	10.5		M12	3000	1735





T2S/T2SX - T2S0/T2S0X

DOUBLE TIE ROD TOGGLE CLAMPS, WELDABLE, HEAVY-DUTY SERIES

Base, control lever and hooking bracket:

Hot-stamped steel manganese phosphate, weldable, (T2S-T2S0) or hot-stamped **AISI 304 stainless steel** (T2SX-T2S0X).

Base-handle pivot:

Hardened, ground and knurled steel to prevent rotation (T2S-T2S0) or **AISI 303 stainless steel** (T2SX-T2S0X).

Tie rod:

Galvanized steel (T2S-T2S0) or **AISI 304 stainless steel** (T2SX-T2S0X).

Swinging pin and nuts:

Galvanized steel (T2S-T2S0) or **AISI 303 stainless steel** (T2SX-T2S0X).

Executions:

- **T2S-T2SX:** equipped with double threaded tie rod with nuts, swinging pivot and hooking bracket.
- **T2S0-T2S0X:** equipped with swinging pivot and hooking bracket. Double tie rod to be ordered separately (see Accessories).

Features and applications:

These tools are particularly suitable for closing machine covers or doors.

The construction features and the materials used give these tools high resistance, making them suitable for particularly heavy-duty uses.

The position of the threaded tie rod can be adjusted within a certain range (see dimension "D") to fit the requirements of use.

The support base is parallel to the line of action of the force. In the closed position, the control lever is parallel to the support base.

A special grease is placed between the contacting surfaces during assembly.

Other available executions:

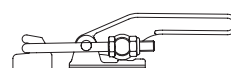
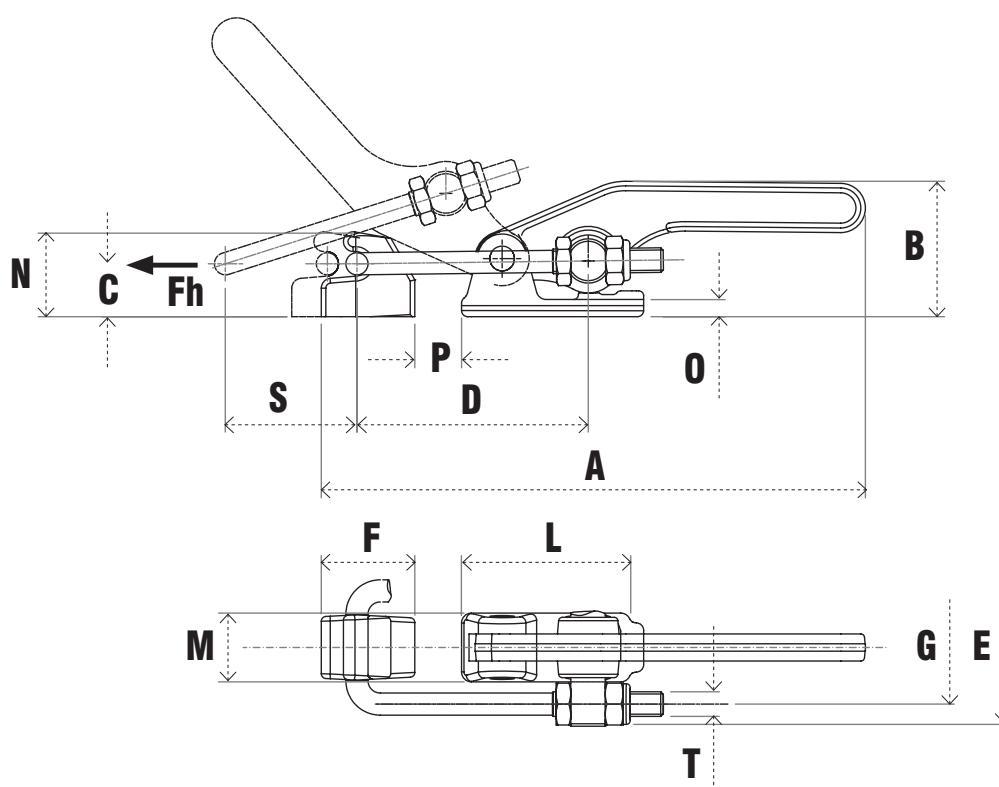
Series with safety lever, light series.

Accessories:

- Tie rods of different sizes (see page 145).

T2S





T2S/T2SX

Tool provided with
standard size tie rod.



T2S0/T2S0X

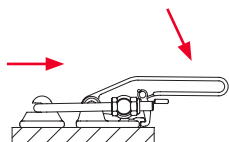
Tool supplied without tie rod.
Match with tie rods of different
sizes (see page 145).

Code	Description	A	B	C	D	E	F	G	L	M	N	O	P	S	T	Fh (daN)	Gr.
AL520	1700/T2S	221	55	21	94÷106	64	38	46	68	26.5	34.5	7	19	54÷58	M10	1700	1110
AL524	4000/T2S	277	68	27	112÷124	80	50	55	85	32	43	9	19	62÷65	M12	4000	2100
AL521	1700/T2S0		55	21		64	38	46	68	26.5	34.5	7	19		M10	1700	750
AL525	4000/T2S0		68	27		80	50	55	85	32	43	9	19		M12	4000	1352



Code	Description	A	B	C	D	E	F	G	L	M	N	O	P	S	T	Fh (daN)	Gr.
AS520	1700/T2SX	221	55	21	94÷106	64	38	46	68	26.5	34.5	7	19	54÷58	M10	1400	1110
AS524	4000/T2SX	277	68	27	112÷124	80	50	55	85	32	43	9	19	62÷65	M12	3000	2100
AS521	1700/T2S0X		55	21		64	38	46	68	26.5	34.5	7	19		M10	1400	750
AS525	4000/T2S0X		68	27		80	50	55	85	32	43	9	19		M12	3000	1352





T6/T6X - T60/T60X

DOUBLE TIE ROD TOGGLE CLAMPS, WITH SAFETY LEVER, HEAVY-DUTY SERIES

Base, control lever and hooking bracket:

Hot-stamped steel, black painted, (T6-T60) or hot-stamped **AISI 304 stainless steel** (T6X-T60X).

Base-handle pivot:

Hardened, ground and knurled steel to prevent rotation (T6-T60) or **AISI 303 stainless steel** (T6X-T60X).

Tie rod:

Galvanized steel (T6-T60) or **AISI 304 stainless steel** (T6X-T60X).

Swinging pivot and nuts:

Galvanized steel (T6-T60) or **AISI 303 stainless steel** (T6X-T60X).

Safety lever:

Galvanized steel (T6-T60) or **AISI 304 stainless steel** (T6X-T60X), red polyurethane coating.

Executions:

- **T6-T6X:** equipped with double threaded tie rod with nuts, swinging pivot and hooking bracket.
- **T60-T60X:** equipped with swinging pivot and hooking bracket. Double tie rod to be ordered separately (see Accessories).

Features and applications:

These clamping tools are equipped with a special safety lever that ensures the perfect anchoring of the tool, preventing any accidental openings caused by vibrations or shocks. The tools of this series are particularly suitable for closing covers or doors of machines and equipment subjected to movement or vibration.

The construction features and the materials used give these tools high resistance, making them suitable for particularly heavy-duty uses.

The position of the threaded tie rod can be adjusted within a certain range (see dimension "D") to fit the requirements of use.

The support base is parallel to the line of action of the force. In the closed position, the control lever is parallel to the support base.

A special grease is placed between the contacting surfaces during assembly.

Other available executions:

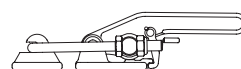
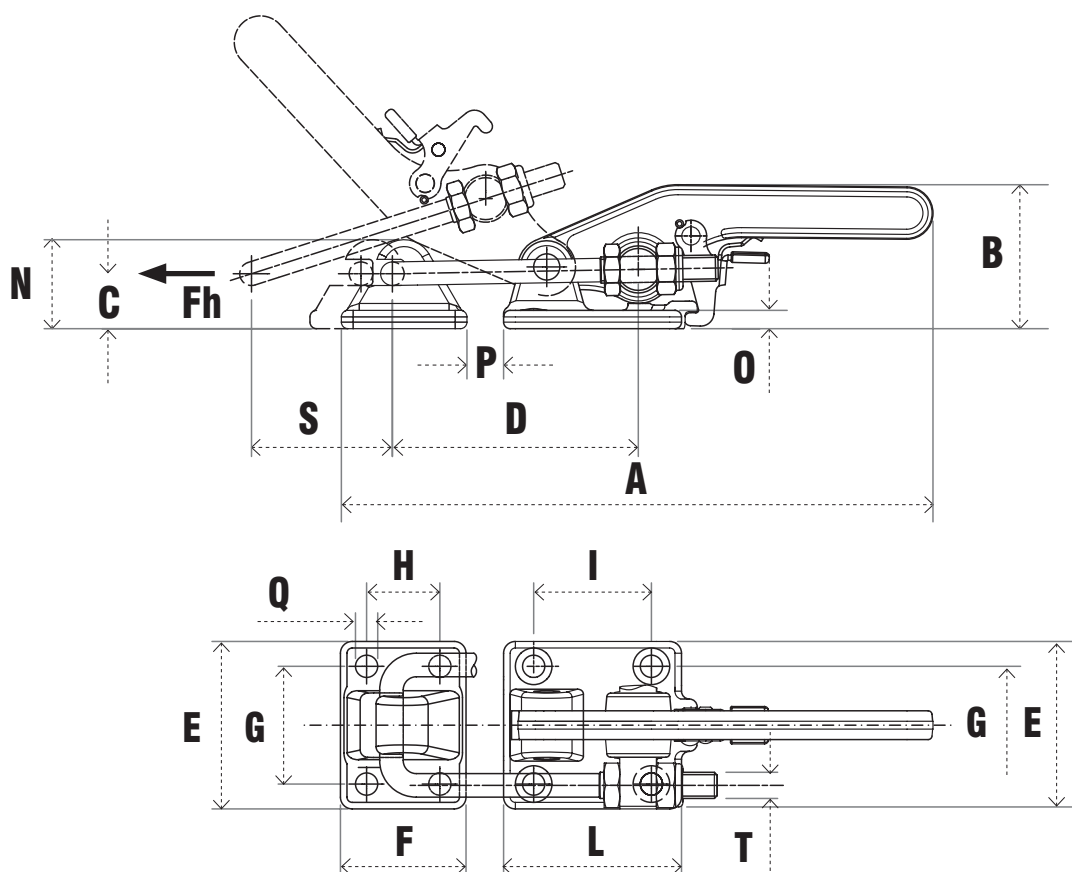
Light series.

Accessories:

- Tie rods of different sizes (see page 145).

T6





T6/T6X

Tool provided with
standard size tie rod.



T60/T60X

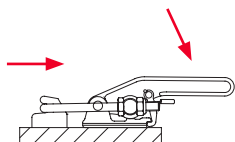
Tool supplied without tie rod.
Match with tie rods of different
sizes (see page 145).

Code	Description	A	B	C	D	E	F	G	H	I	L	N	O	P	Q	S	T	Fh (daN)	Gr. ⚖️
AL795	1700/T6	226	55	21	94÷106	64	48	45	28	45	68	34	7	14	8.5	54÷58	M10	1700	1110
AL800	4000/T6	282	68	27	112÷124	80	60	57	35	57	85	42	9	14	10.5	62÷65	M12	4000	2100
AL826	1700/T60		55	21		64	48	45	28	45	68	34	7	14	8.5		M10	1700	959
AL828	4000/T60		68	27		80	60	57	35	57	85	42	9	14	10.5		M12	4000	1755



Code	Description	A	B	C	D	E	F	G	H	I	L	N	O	P	Q	S	T	Fh (daN)	Gr. ⚖️
AS615	1700/T6X	226	55	21	94÷106	64	48	45	28	45	68	34	7	14	8.5	54÷58	M10	1400	1110
AS620	4000/T6X	282	68	27	112÷124	80	60	57	35	57	85	42	9	14	10.5	62÷65	M12	3000	2100
AS646	1700/T60X		55	21		64	48	45	28	45	68	34	7	14	8.5		M10	1400	955
AS648	4000/T60X		68	27		80	60	57	35	57	85	42	9	14	10.5		M12	3000	1755





T6S/T6SX - T6S0/T6S0X

DOUBLE TIE ROD TOGGLE CLAMPS, WELDABLE, WITH SAFETY LEVER, HEAVY-DUTY SERIES

Base, control lever and hooking bracket:

Hot-stamped steel manganese phosphate, weldable (T6S-T6S0) or hot-stamped **AISI 304 stainless steel** (T6SX-T6S0X).

Base-handle pivot:

Hardened, ground and knurled steel to prevent rotation (T6S-T6S0) or **AISI 303 stainless steel** (T6SX-T6S0X).

Tie rod:

Galvanized steel (T6S-T6S0) or **AISI 304 stainless steel** (T6SX-T6S0X).

Swinging pivot and nuts:

Galvanized steel (T6S-T6S0) or **AISI 303 Stainless steel** (T6SX-T6S0X).

Safety lever:

Galvanized steel (T6S-T6S0) or **AISI 304 stainless steel** (T6SX-T6S0X), red polyurethane coating.

Executions

- **T6S-T6SX:** equipped with double threaded tie rod with nuts, swinging pivot and hooking bracket
- **T6S0-T6S0X:** equipped with swinging pivot and hooking bracket. Double tie rod to be ordered separately (see Accessories).

Features and applications:

These clamping tools are equipped with a special safety lever that ensures the perfect anchoring of the tool, preventing any accidental openings caused by vibrations or shocks. The tools of this series are particularly suitable for closing covers or doors of machines and equipment subjected to movement or vibration.

The construction features and the materials used give these tools high resistance, making them suitable for particularly heavy-duty uses.

The position of the threaded tie rod can be adjusted within a certain range (see dimension "D") to fit the requirements of use.

The support base is parallel to the line of action of the force. In the closed position, the control lever is parallel to the support base.

A special grease is placed between the contacting surfaces during assembly.

Other available executions:

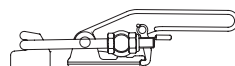
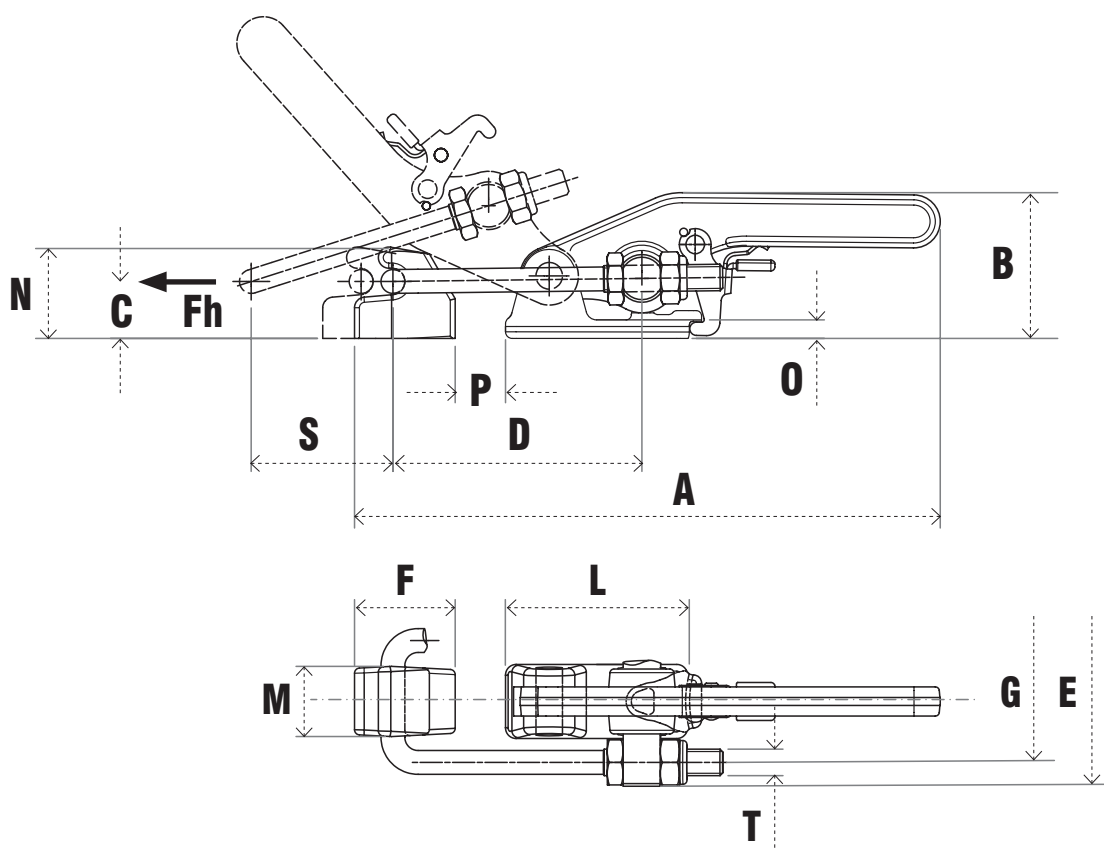
Light series.

Accessories:

- Tie rods of different sizes (see page 145).

T6S





T6S/T6SX

Tool provided with
standard size tie rod.



T6S0/T6S0X

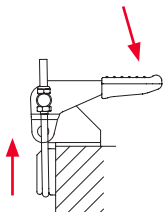
Tool supplied without tie rod.
Match with tie rods of different
sizes (see page 145).

Code	Description	A	B	C	D	E	F	G	L	M	N	O	P	S	T	Fh (daN)	Gr.
AL805	1700/T6S	221	55	21	94÷106	64	38	46	68	26.5	34.5	7	19	54÷58	M10	1700	1110
AL810	4000/T6S	277	68	27	112÷124	80	50	55	85	32	43	9	19	62÷65	M12	4000	2100
AL830	1700/T6S0		55	21		64	38	46	68	26.5	34.5	7	19		M10	1700	762
AL832	4000/T6S0		68	27		80	50	55	85	32	43	9	19		M12	4000	1380



Code	Description	A	B	C	D	E	F	G	L	M	N	O	P	S	T	Fh (daN)	Gr.
AS625	1700/T6SX	221	55	21	94÷106	64	38	46	68	26.5	34.5	7	19	54÷58	M10	1400	1110
AS630	4000/T6SX	277	68	27	112÷124	80	50	55	85	32	43	9	19	62÷65	M12	3000	2100
AS650	1700/T6S0X		55	21		64	38	46	68	26.5	34.5	7	19		M10	1400	762
AS652	4000/T6S0X		68	27		80	50	55	85	32	43	9	19		M12	3000	1380





T3/T3X - T30/T30X

DOUBLE TIE ROD TOGGLE CLAMPS

Base, control lever, riveted pins, hooking bracket and tie rod:

Galvanized steel (T3-T30) or **AISI 304 stainless steel** (T3X-T30X).

Swinging pivot and nuts:

Galvanized steel (T3-T30) or **AISI 303 stainless steel** (T3X-T30X).

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Executions:

- **T3-T3X:** equipped with double threaded tie rod with nuts, swinging pivot and hooking bracket.
- **T30-T30X:** equipped with swinging pivot and hooking bracket. Double tie rod to be ordered separately (see Accessories).

Features and applications:

These tools are particularly suitable for closing machine covers or doors.

The position of the threaded tie rod can be adjusted within a certain range (see dimension "D") to fit the requirements of use.

The support base is perpendicular to the line of action of the force. In the closed position, the control lever is parallel to the support base.

A special grease is placed between the contacting surfaces during assembly.

Other available executions:

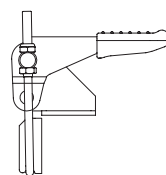
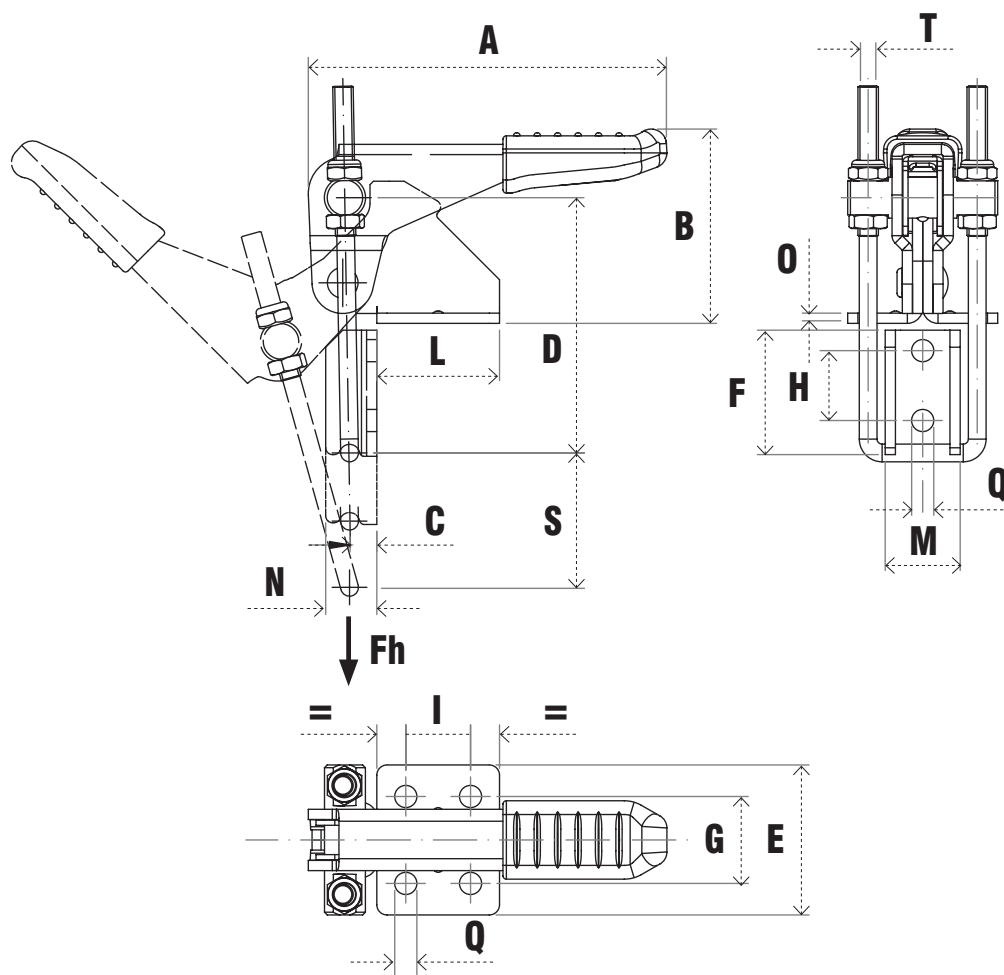
Series with safety lever, heavy series.

Accessories:

- Tie rods of different sizes (see page 145).

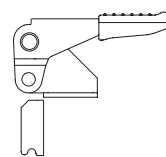
T3





T3/T3X

Tool provided with standard size tie rod.



T30/T30X

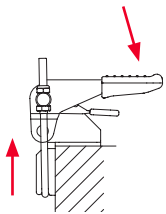
Tool supplied without tie rod. Match with tie rods of different sizes (see page 145).

Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	Q	S	T	Fh (daN)	Gr.
AL530	160/T3	68	37	5	49.5÷58	35	25.5	22	14.3	13	26	14	10	2	4.3	22÷29	M4	160	106
AL535	320/T3	106	53	8	75÷95	44	37	25.5	20.5	19	36	22	15	3	6.5	39÷49	M6	320	331
AL540	700/T3	147	66	13	98÷122	54	48.5	36.5	27	32	52	26	23	3.5	8.5	50÷62	M8	750	722
AL542	160/T30	68	37	5		35	25.5	22	14.3	13	26	14	10	2	4.3		M4	160	97
AL544	320/T30	106	53	8		44	37	25.5	20.5	19	36	22	15	3	6.5		M6	320	294
AL546	700/T30	147	66	13		54	48.5	36.5	27	32	52	26	23	3.5	8.5		M8	750	667



Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	Q	S	T	Fh (daN)	Gr.
AS530	160/T3X	68	37	5	49.5÷58	35	25.5	22	14.3	13	26	14	10	2	4.3	22÷29	M4	160	106
AS535	320/T3X	106	53	8	75÷95	44	37	25.5	20.5	19	36	22	15	3	6.5	39÷49	M6	320	331
AS540	700/T3X	147	66	13	98÷122	54	48.5	36.5	27	32	52	26	23	3.5	8.5	50÷62	M8	750	722
AS542	160/T30X	68	37	5		35	25.5	22	14.3	13	26	14	10	2	4.3		M4	160	97
AS544	320/T30X	106	53	8		44	37	25.5	20.5	19	36	22	15	3	6.5		M6	320	294
AS543	700/T30X	147	66	13		54	48.5	36.5	27	32	52	26	23	3.5	8.5		M8	750	667





T3L/T3LX - T3LO/T3LOX

DOUBLE TIE ROD TOGGLE CLAMPS, WITH SAFETY LEVER

Base, control lever, riveted pins, hooking bracket and tie rod:

Galvanized steel (T3L-T3LO) or **AISI 304 stainless steel** (T3LX-T3LOX).

Swinging pivot and nuts:

Galvanized steel (T3L-T3LO) or **AISI 303 stainless steel** (T3LX T3LOX).

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Safety lever:

Galvanized steel (T3L-T3LO) or **AISI 304 stainless steel** (T3LX- T3LOX), red polyurethane coating.

Executions:

- **T3L-T3LX:** equipped with double threaded tie rod with nuts, swinging pivot and hooking bracket.
- **T3LO-T3LOX:** equipped with swinging pivot and hooking bracket. Double tie rod to be ordered separately (see Accessories).

Features and applications:

These tools are particularly suitable for closing machine covers or doors.

The position of the threaded tie rod can be adjusted within a certain range (see dimension "D") to fit the requirements of use.

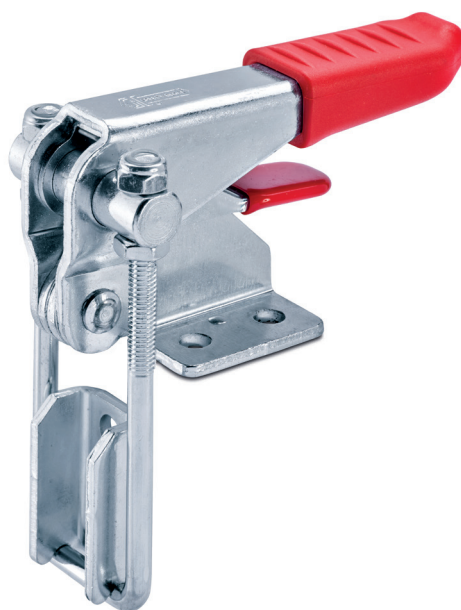
The support base is perpendicular to the line of action of the force. In the closed position, the control lever is parallel to the support base.

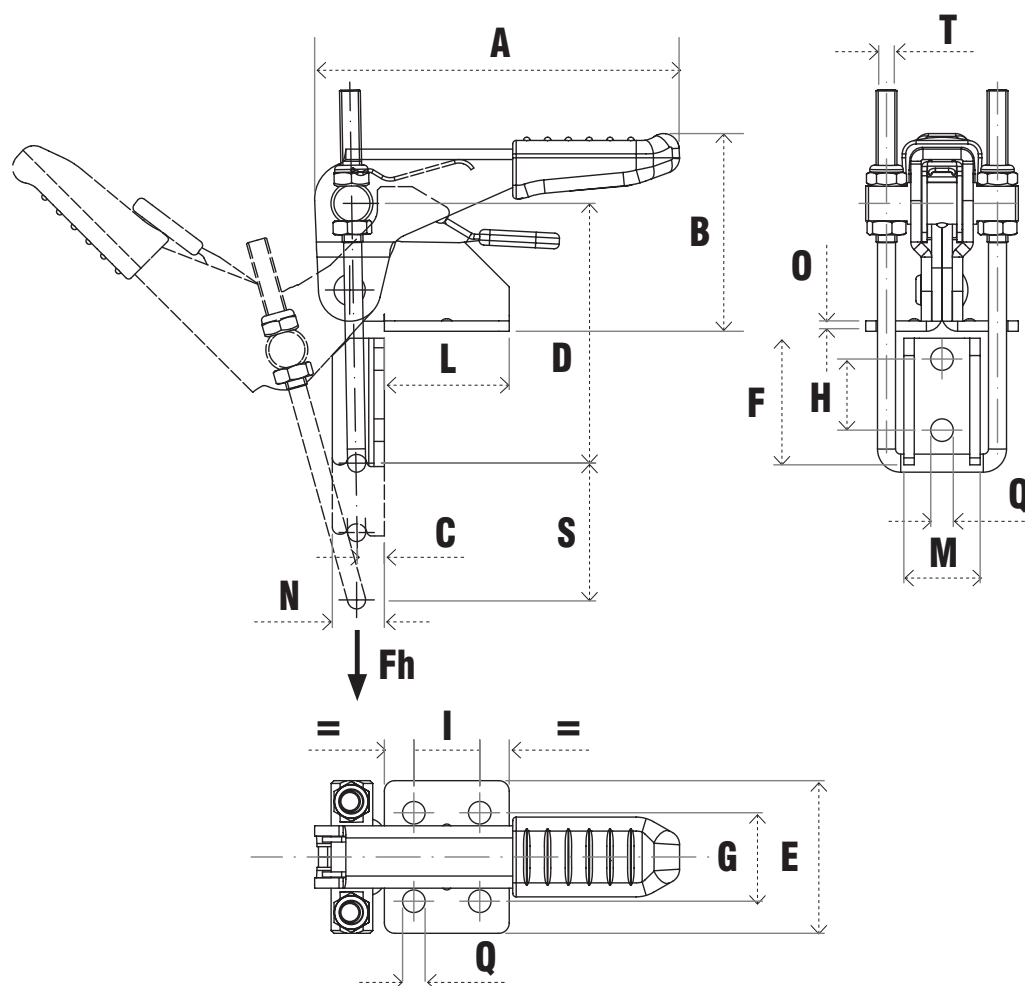
A special grease is placed between the contacting surfaces during assembly.

Accessories:

- Tie rods of different sizes (see page 145).

T3L





T3L/T3LX

Tool provided with
standard size tie rod.

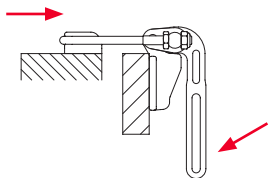
T3LO/T3LOX

Tool supplied without tie rod.
Match with tie rods of different
sizes (see page 145).

Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	Q	S	T	Fh (daN)	Gr.
AL636	160/T3L	68	37	5	49.5÷58	35	25.5	22	14.3	13	26	14	10	2	4.3	22÷29	M4	160	113
AL640	320/T3L	106	53	8	75÷95	44	37	25.5	20.5	19	36	22	15	3	6.5	39÷49	M6	320	347
AL644	700/T3L	147	66	13	98÷122	54	48.5	36.5	27	32	52	26	23	3.5	8.5	50÷62	M8	750	759
AL638	160/T3LO	68	37	5		35	25.5	22	14.3	13	26	14	10	2	4.3		M4	160	104
AL642	320/T3LO	106	53	8		44	37	25.5	20.5	19	36	22	15	3	6.5		M6	320	310
AL646	700/T3LO	147	66	13		54	48.5	36.5	27	32	52	26	23	3.5	8.5		M8	750	704



Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	Q	S	T	Fh (daN)	Gr.
AS654	160/T3LX	68	37	5	49.5÷58	35	25.5	22	14.3	13	26	14	10	2	4.3	22÷29	M4	160	113
AS658	320/T3LX	106	53	8	75÷95	44	37	25.5	20.5	19	36	22	15	3	6.5	39÷49	M6	320	347
AS662	700/T3LX	147	66	13	98÷122	54	48.5	36.5	27	32	52	26	23	3.5	8.5	50÷62	M8	750	759
AS656	160/T3LOX	68	37	5		35	25.5	22	14.3	13	26	14	10	2	4.3		M4	160	104
AS660	320/T3LOX	106	53	8		44	37	25.5	20.5	19	36	22	15	3	6.5		M6	320	310
AS664	700/T3LOX	147	66	13		54	48.5	36.5	27	32	52	26	23	3.5	8.5		M8	750	704



T3/T3S - T30/T3S0

DOUBLE TIE ROD TOGGLE CLAMPS, HEAVY-DUTY SERIES

Base, control lever and hooking bracket:

Hot stamped steel, manganese phosphate steel, weldable.

Base-handle pivot:

Hardened, ground and knurled steel to prevent rotation.

Tie rod, swinging pivot and nuts:

Galvanized steel.

Executions:

- **T3-T3S:** equipped with double threaded tie rod with nuts, swinging pivot and hooking bracket.
- **T30-T3S0:** equipped with swinging pivot and hooking bracket. Double tie rod to be ordered separately (see Accessories).

Features and applications:

These tools are particularly suitable for closing machine covers or doors.

The construction features and the materials used give these tools high resistance, making them suitable for particularly heavy-duty uses.

The position of the threaded tie rod can be adjusted within a certain range (see dimension "D") to fit the requirements of use.

The support base is perpendicular to the line of action of the force. In the closed position, the control lever is parallel to the support base.

A special grease is placed between the contacting surfaces during assembly.

Other available executions:

Series with safety lever, light series.

Accessories:

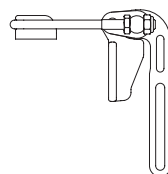
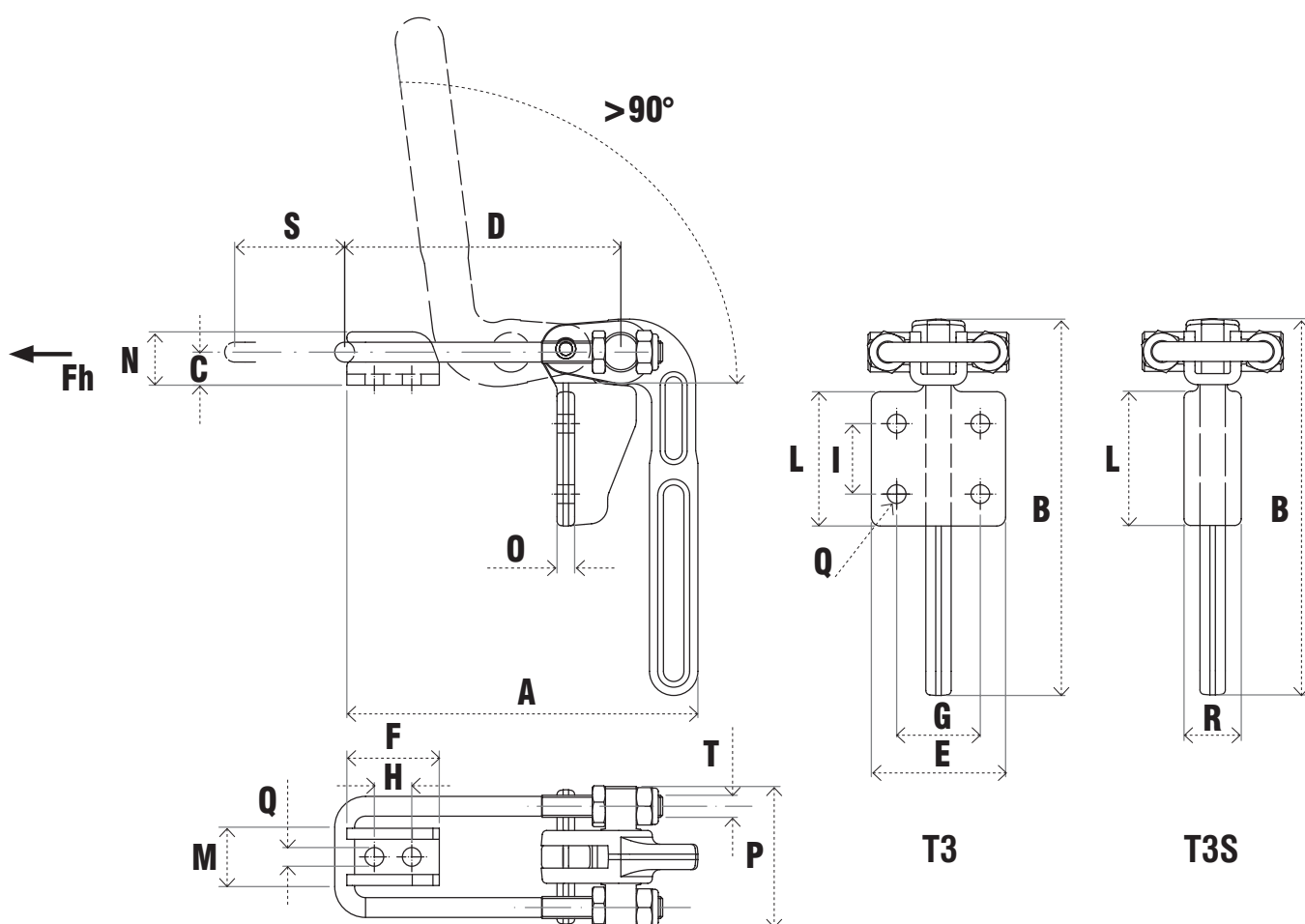
- Tie rods of different sizes (see page 145).

T3



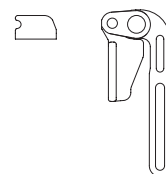
T3S





T3/T3S

Tool provided with
standard size tie rod.

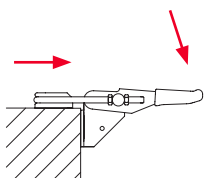


T30/T3S0

Tool supplied without tie rod.
Match with tie rods of different
sizes (see page 145).

Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	S	T	Fh (daN)	Gr.
AL550	1400/T3	159.5	171	15	104.5 ÷ 125.5	61	42	38	17	32	61	26	24	8	64	8.5	50	M10	1200	1235
AL554	1400/T30		171	15		61	42	38	17	32	61	26	24	8	64	8.5		M10	1200	945

Code	Description	A	B	C	D	E	F	H	L	M	N	O	P	Q	R	S	T	Fh (daN)	Gr.
AL552	1400/T3S	159.5	171	15	104.5 ÷ 125.5		42	17	61	26	24	8	64	8.5	26	50	M10	1200	1115
AL556	1400/T3S0		171	15			42	17	61	26	24	8	64	8.5	26		M10	1200	828



T4 - T40

DOUBLE TIE ROD TOGGLE CLAMPS

Base, control lever, riveted pins, swinging pivot, hooking bracket, nuts and tie rod:

Galvanized steel.

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Executions:

- **T4:** equipped with double threaded tie rod with nuts, swinging pivot and hooking bracket.
- **T40:** equipped with swinging pivot and hooking bracket. Double tie rod to be ordered separately (see Accessories).

Features and applications:

These tools are particularly suitable for closing machine covers or doors

The position of the threaded tie rod can be adjusted within a certain range (see dimension "D") to fit the requirements of use.

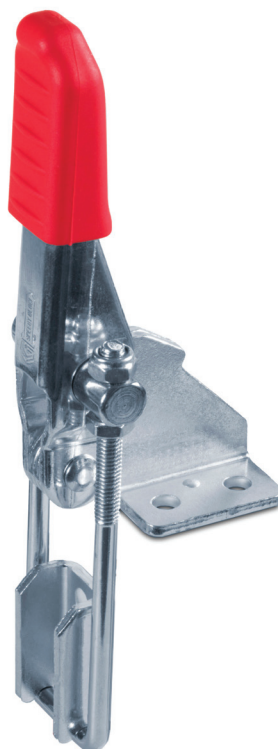
The support base is perpendicular to the line of action of the force. In the closed position, the control lever is perpendicular to the support base.

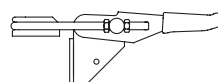
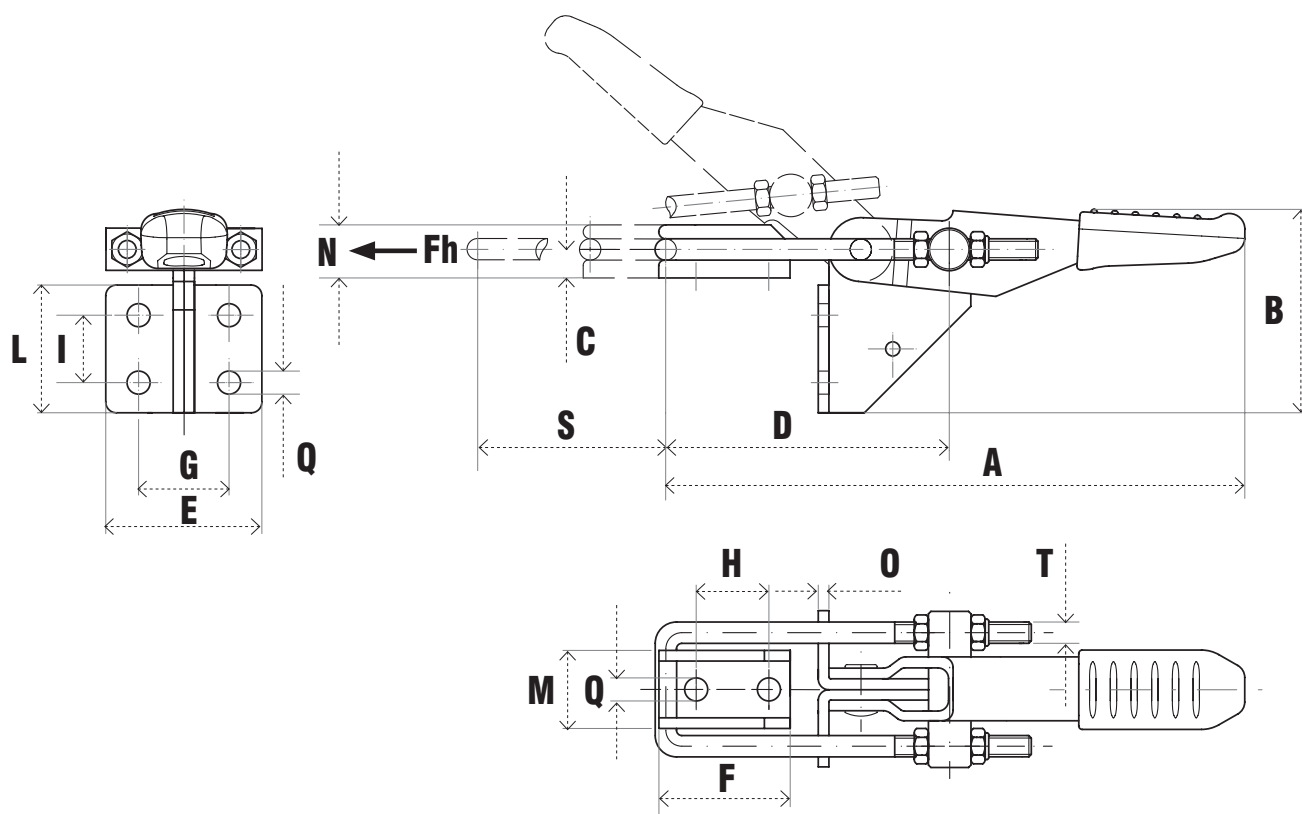
A special grease is placed between the contacting surfaces during assembly.

Accessories:

- Tie rods of different sizes (see page 145).

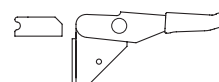
T4





T4

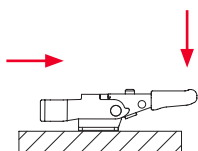
Tool provided with
standard size tie rod.



T40

Tool supplied without tie rod.
Match with tie rods of different
sizes (see page 145).

Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	Q	S	T	Fh (daN)	Gr. 
AL560	160/T4	104	40	5	48÷58	35	25.5	22	14.3	13	26	14	10	2	4.3	23.5÷27.5	M4	160	95
AL565	320/T4	160	57.5	8	75÷95	44	37	25.5	20.5	19	36	22	15	3	6.5	40÷46	M6	320	295
AL570	700/T4	233	82	13	98÷122	54	48.5	36.5	27	32	52	26	23	3.5	8.5	50÷58	M8	750	655
AL571	160/T40		40	5		35	25.5	22	14.3	13	26	14	10	2	4.3		M4	160	86
AL572	320/T40		57.5	8		44	37	25.5	20.5	19	36	22	15	3	6.5		M6	320	261
AL573	700/T40		82	13		54	48.5	36.5	27	32	52	26	23	3.5	8.5		M8	750	598



T5/T5X

TIE ROD TOGGLE CLAMPS, WITH SAFETY LEVER

Material:

Phosphated steel (T5) or **AISI 304 stainless steel** (T5X).

Pins:

Galvanized steel (T5) or **AISI 304 stainless steel** (T5X).

Threaded bushing:

Phosphated steel (T5) or **AISI 303 stainless steel** (T5X).

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Safety lever:

Phosphated steel with galvanized steel button (T5) or **AISI 304 stainless steel** (T5X).

Tie rod:

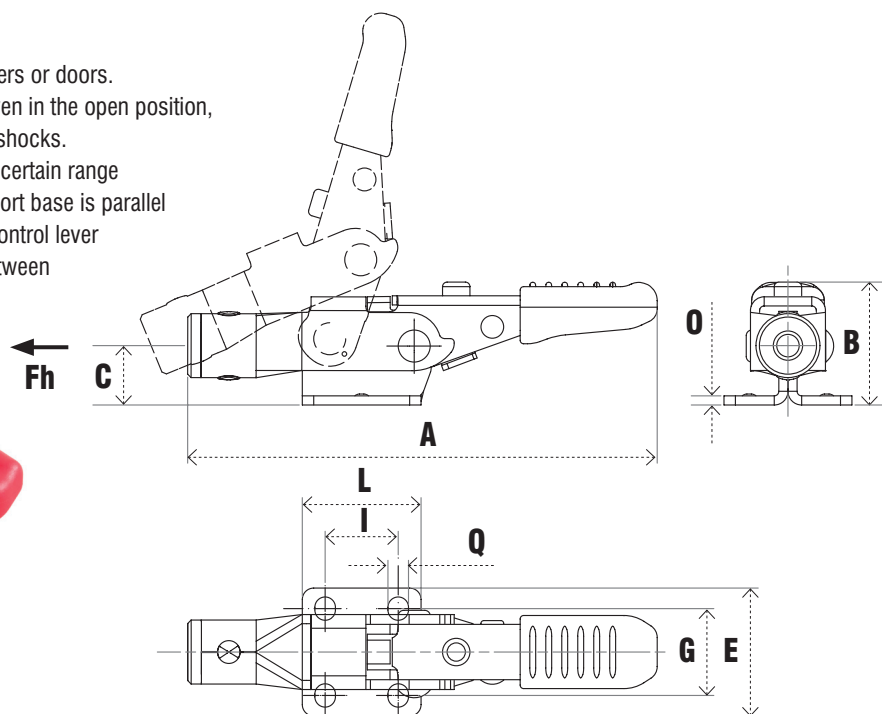
To be ordered separately (see Accessories).

Features and applications:

These tools are particularly suitable for closing machine covers or doors. The safety lever ensures the perfect anchoring of the tool, even in the open position, preventing any accidental openings caused by vibrations or shocks. The position of the threaded tie rod can be adjusted within a certain range (see dimension "D") to fit the requirements of use. The support base is parallel to the line of action of the force. In the closed position, the control lever is parallel to the support base. A special grease is placed between the contacting surfaces during assembly.

Accessories:

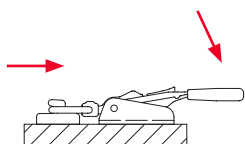
- TG series eyebolt tie rods (see page 148).
- TT series T-tie rods (see page 148).
- TU series hook tie rods (see page 148).



Code	Description	A	B	C	E	G	I	L	O	Q	Fh (DaN)	Gr.
AL575	160/T5	103	26.8	13	28	19	16	26	2	4.5	175	100
AL580	320/T5	153	38.5	19	44	32	19	40	3	6.7	400	295
AL585	700/T5	222	53	28	54	38.1	41.5	60	3.5	8.5	750	690



Code	Description	A	B	C	E	G	I	L	O	Q	Fh (DaN)	Gr.
AS545	160/T5X	103	26.8	13	28	19	16	26	2	4.5	175	100
AS550	320/T5X	153	38.5	19	44	32	19	40	3	6.7	400	295
AS555	700/T5X	222	53	28	54	38.1	41.5	60	3.5	8.5	750	690



T5

TIE RODS CLAMPING TOOLS, WITH SAFETY LEVER, HEAVY-DUTY SERIES

Material:

Forged and phosphated steel.

Base and safety slider:

Phosphated steel.

Pins:

Hardened steel.

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Features and applications:

These clamping tools are equipped with a special safety lever that ensures the perfect anchoring of the tool, preventing any accidental openings caused by vibrations or shocks.

With one hand you can open the tool, disengage the work surface (the clamping lever opens by itself) and close it for the next operation.

The construction features and the materials used give these tools high resistance, making them suitable for particularly heavy-duty uses.

The position of the threaded tie rod can be adjusted within a certain range (see dimension "D") to fit the requirements of use.

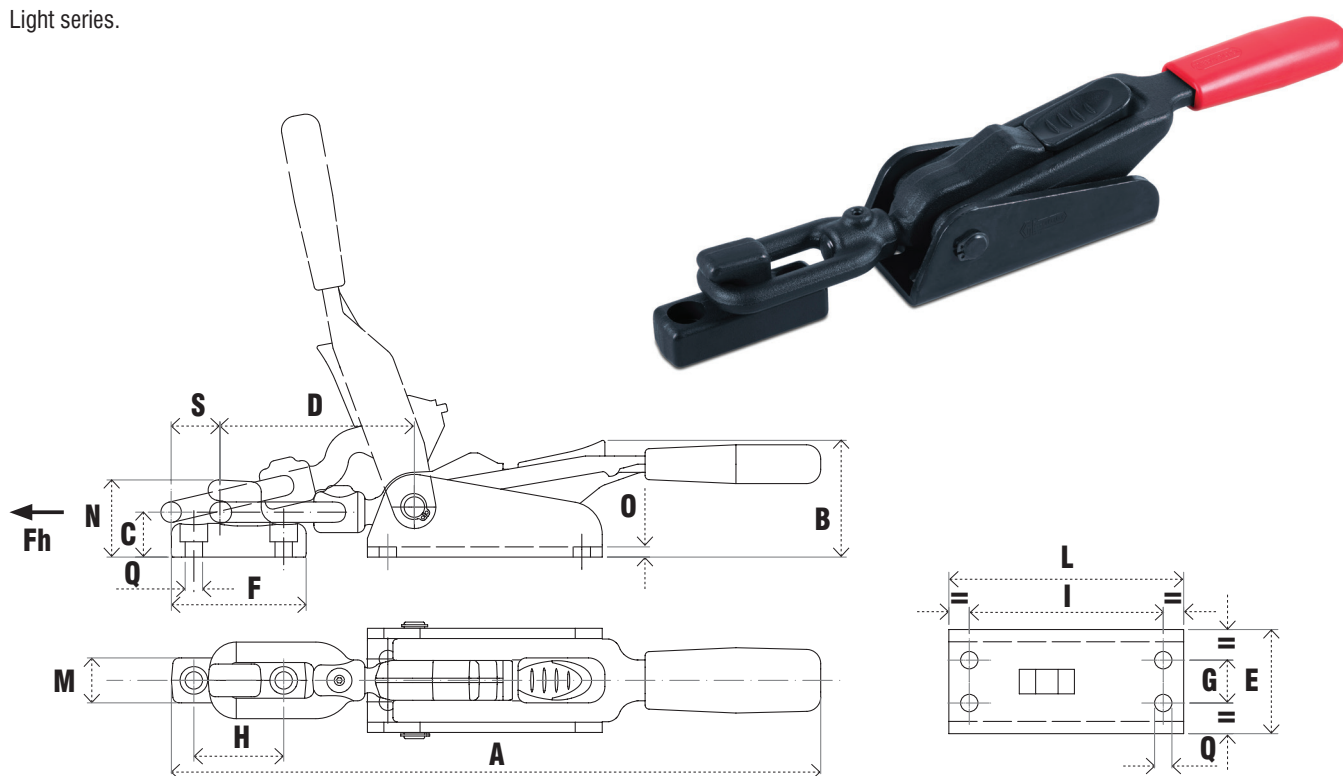
The support base is parallel to the line of action of the force.

In the closed position, the control lever is parallel to the support base.

A special grease is placed between the contacting surfaces during assembly.

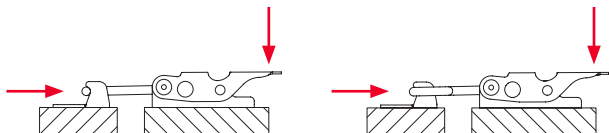
Other available executions:

Light series.



LATCH

Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	Q	S	Fh (daN)	Gr.
AL590	1400/T5	318	57	22	95 ÷ 105	51	66	21	44	95	115	22	38	5	8.5	24	1500	1600



ET/ETX - EG/EGX

TIE ROD TOGGLE LATCHES

Base, control lever, hooking bracket, riveted pivots:

Galvanized steel (ET-EG) or **AISI 304 stainless steel** (ETX-EGX).

Swinging pivot:

Galvanized steel (ET-EG) or **AISI 303 Stainless steel** (ETX-EGX).

Executions

- **ET**: galvanized steel T-tie rod.
- **ETX**: **AISI 304 stainless steel** T-tie rod.
- **EG**: galvanized steel eyebolt tie rod.
- **EGX**: **AISI 304 stainless steel** eyebolt tie rod.

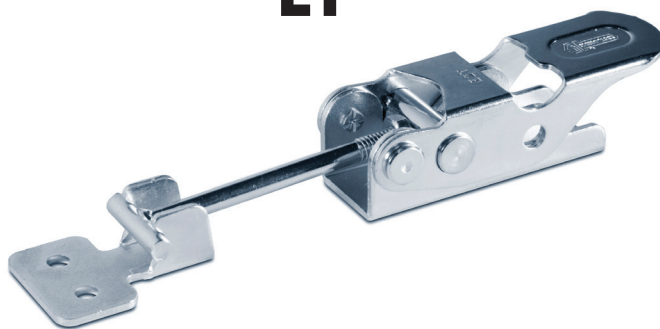
Features and applications:

These tools are particularly suitable for closing box covers and cabinet doors.

They are provided with holes for the insertion of locking padlocks.

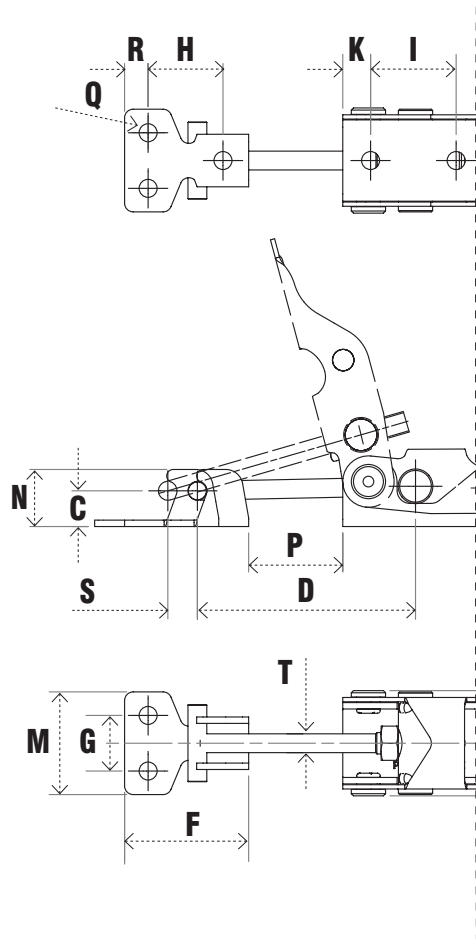
The position of the threaded tie rod can be adjusted within a certain range (see dimension "D") to fit the requirements of use.

ET

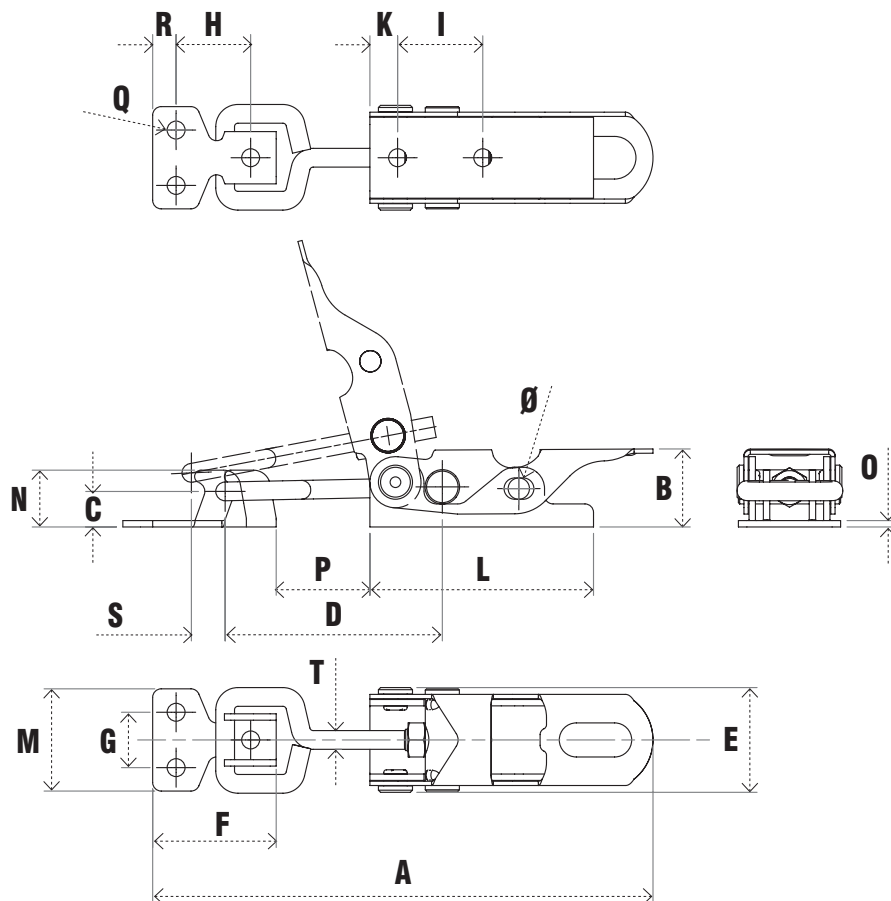


EG





ET/ETX



EG/EGX

Code	Description	A	B	C	D	E	F	G	H	I	K	L	M	N	O	P	Q	R	S	T	Diam.	Fh (daN)	Gr.
AE1020	E1T	117.5	18	8.3	51÷58	25	29	13	17.5	20	6.5	52.5	24	13.3	1.5	22÷29	4.2	5.5	11	M5	5	100	61
AE2020	E2T	155.5	25	10	64÷75	31	42	15	24	24.5	8	65	32	16.4	2	28÷39	5.2	10	13	M6	6	200	135
AE3020	E3T	189.5	32	12.7	79.5÷92	36	52	20	29.5	30	11	81.5	38	20.7	2.5	33÷45.5	6.5	12.5	16	M8	8	300	256

Code	Description	A	B	C	D	E	F	G	H	I	K	L	M	N	O	P	Q	R	S	T	Diam.	Fh (daN)	Gr.
AE1010	E1G	117.5	18	8.3	51÷58	25	29	13	17.5	20	6.5	52.5	24	13.3	1.5	22÷29	4.2	5.5	12	M5	5	100	63
AE2010	E2G	155.5	25	10	64÷75	31	42	15	24	24.5	8	65	32	16.4	2	28÷39	5.2	10	14	M6	6	200	142
AE3010	E3G	189.5	32	12.7	79.5÷92	36	52	20	29.5	30	11	81.5	38	20.7	2.5	33÷45.5	6.5	12.5	18	M8	8	300	270

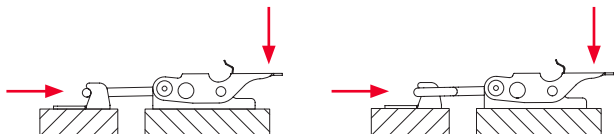


Code	Description	A	B	C	D	E	F	G	H	I	K	L	M	N	O	P	Q	R	S	T	Diam.	Fh (daN)	Gr.
ES1020	E1TX	117.5	18	8.3	51÷58	25	29	13	17.5	20	6.5	52.5	24	13.3	1.5	22÷29	4.2	5.5	11	M5	5	100	61
ES2020	E2TX	155.5	25	10	64÷75	31	42	15	24	24.5	8	65	32	16.4	2	28÷39	5.2	10	13	M6	6	200	135
ES3020	E3TX	189.5	32	12.7	79.5÷92	36	52	20	29.5	30	11	81.5	38	20.7	2.5	33÷45.5	6.5	12.5	16	M8	8	300	256



Code	Description	A	B	C	D	E	F	G	H	I	K	L	M	N	O	P	Q	R	S	T	Diam.	Fh (daN)	Gr.
ES1010	E1GX	117.5	18	8.3	51÷58	25	29	13	17.5	20	6.5	52.5	24	13.3	1.5	22÷29	4.2	5.5	12	M5	5	100	63
ES2010	E2GX	155.5	25	10	64÷75	31	42	15	24	24.5	8	65	32	16.4	2	28÷39	5.2	10	14	M6	6	200	142
ES3010	E3GX	189.5	32	12.7	79.5÷92	36	52	20	29.5	30	11	81.5	38	20.7	2.5	33÷45.5	6.5	12.5	18	M8	8	300	270





ETL/ETLX - EGL/EGLX

TIE ROD TOGGLE LATCHES WITH SAFETY LEVER

Base, control lever, hooking bracket, riveted pivots and safety lever:

Galvanized steel (ETL-EGL) or **AISI 304 stainless steel** (ETLX-EGLX).

Swinging pivot:

Galvanized steel (ETL-EGL) or **AISI 303 stainless steel** (ETLX-EGLX).

Executions:

- **ETL:** Galvanized steel T-tie rod.
- **ETLX:** **AISI 304 stainless steel** T-tie rod.
- **EGL:** Galvanized steel eyebolt tie rod.
- **EGLX:** **AISI 304 stainless steel** eyebolt tie rod.

Features and applications:

These tools are particularly suitable for closing box covers and cabinet doors.

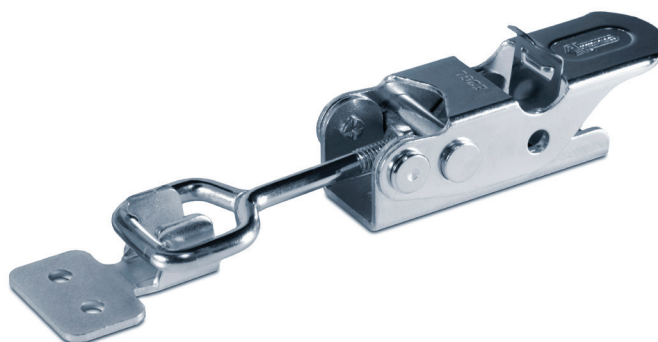
They are provided with holes for the insertion of locking padlocks.

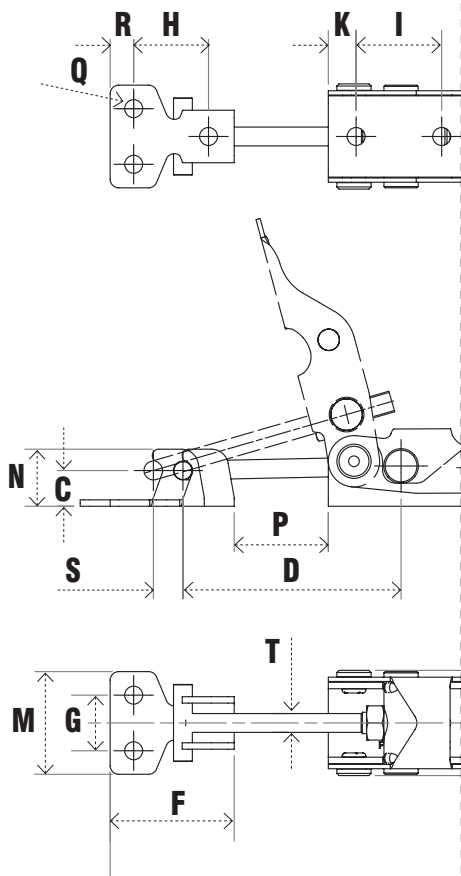
The position of the threaded tie rod can be adjusted within a certain range (see dimension "D") to fit the requirements of use.

ETL

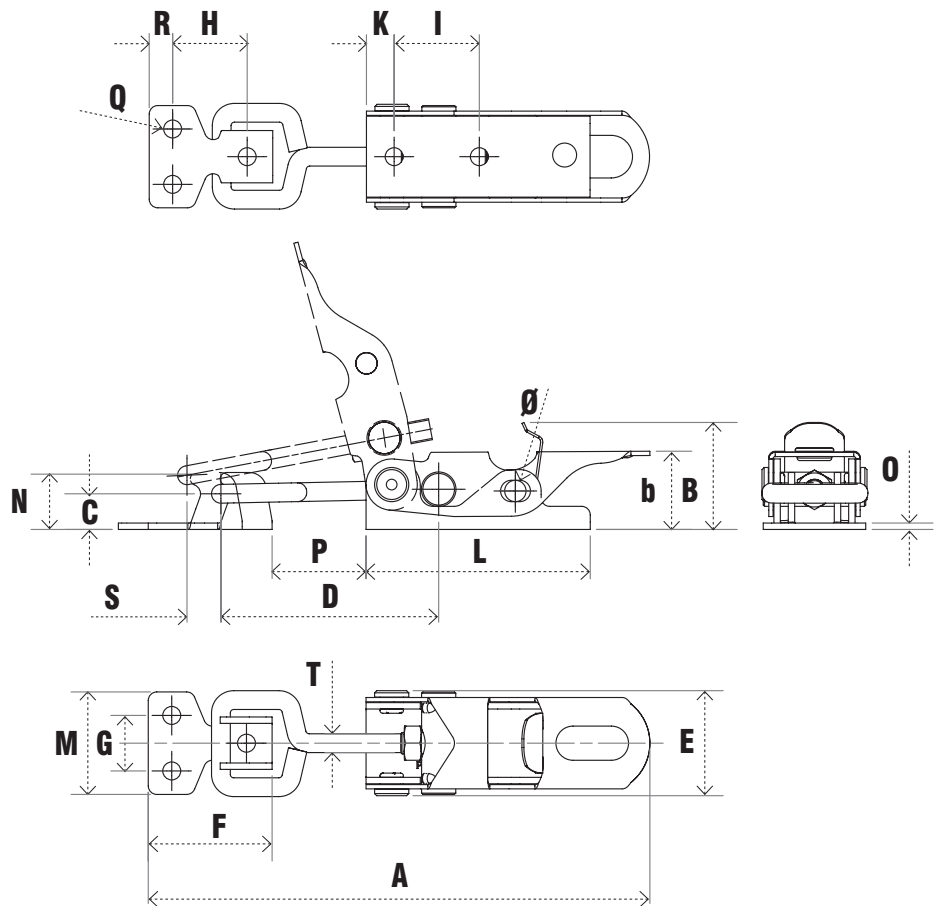


EGL





ETL/ETLX



EGL/EGLX

Code	Description	A	b	B	C	D	E	F	G	H	I	K	L	M	N	O	P	Q	R	S	T	Diam.	Fh (daN)	Gr. $\Delta^+ \Delta^-$
AE1120	E1TL	117.5	18	25	8.3	51÷58	25	29	13	17.5	20	6.5	52.5	24	13.3	1.5	22÷29	4.2	5.5	11	M5	5	100	62
AE2120	E2TL	155.5	25	33	10	64÷75	31	42	15	24	24.5	8	65	32	16.4	2	28÷39	5.2	10	13	M6	6	200	136
AE3120	E3TL	189.5	32	41.5	12.7	79.5÷92	36	52	20	29.5	30	11	81.5	38	20.7	2.5	33÷45.5	6.5	12.5	16	M8	8	300	258

Code	Description	A	b	B	C	D	E	F	G	H	I	K	L	M	N	O	P	Q	R	S	T	Diam.	Fh (daN)	Gr. $\Delta^+ \Delta^-$
AE1110	E1GL	117.5	18	25	8.3	51÷58	25	29	13	17.5	20	6.5	52.5	24	13.3	1.5	22÷29	4.2	5.5	12	M5	5	100	65
AE2110	E2GL	155.5	25	33	10	64÷75	31	42	15	24	24.5	8	65	32	16.4	2	28÷39	5.2	10	14	M6	6	200	143
AE3110	E3GL	189.5	32	41.5	12.7	79.5÷92	36	52	20	29.5	30	11	81.5	38	20.7	2.5	33÷45.5	6.5	12.5	18	M8	8	300	270

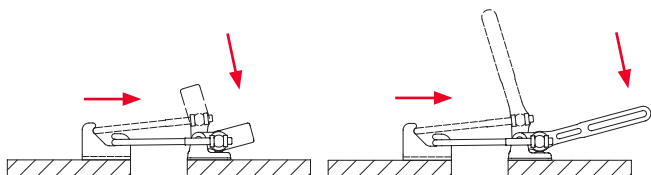


Code	Description	A	b	B	C	D	E	F	G	H	I	K	L	M	N	O	P	Q	R	S	T	Diam.	Fh (daN)	Gr. $\Delta^+ \Delta^-$
ES1120	E1TLX	117.5	18	25	8.3	51÷58	25	29	13	17.5	20	6.5	52.5	24	13.3	1.5	22÷29	4.2	5.5	11	M5	5	100	62
ES2120	E2TLX	155.5	25	33	10	64÷75	31	42	15	24	24.5	8	65	32	16.4	2	28÷39	5.2	10	13	M6	6	200	136
ES3120	E3TLX	189.5	32	41.5	12.7	79.5÷92	36	52	20	29.5	30	11	81.5	38	20.7	2.5	33÷45.5	6.5	12.5	16	M8	8	300	258



Code	Description	A	b	B	C	D	E	F	G	H	I	K	L	M	N	O	P	Q	R	S	T	Diam.	Fh (daN)	Gr. $\Delta^+ \Delta^-$
ES1110	E1GLX	117.5	18	25	8.3	51÷58	25	29	13	17.5	20	6.5	52.5	24	13.3	1.5	22÷29	4.2	5.5	12	M5	5	100	65
ES2110	E2GLX	155.5	25	33	10	64÷75	31	42	15	24	24.5	8	65	32	16.4	2	28÷39	5.2	10	14	M6	6	200	143
ES3110	E3GLX	189.5	32	41.5	12.7	79.5÷92	36	52	20	29.5	30	11	81.5	38	20.7	2.5	33÷45.5	6.5	12.5	18	M8	8	300	270





1500/T2S - 1510/T2S

DOUBLE TIE ROD TOGGLE CLAMPS FOR HIGH TEMPERATURES

Base and control lever:

Hot moulded raw steel.

Tie rod with nuts, swinging pivot and hooking bracket:

Raw steel.

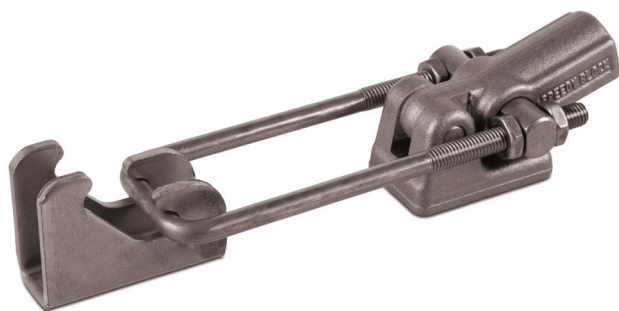
Accessories:

- Tie rods of different sizes (see page 145).

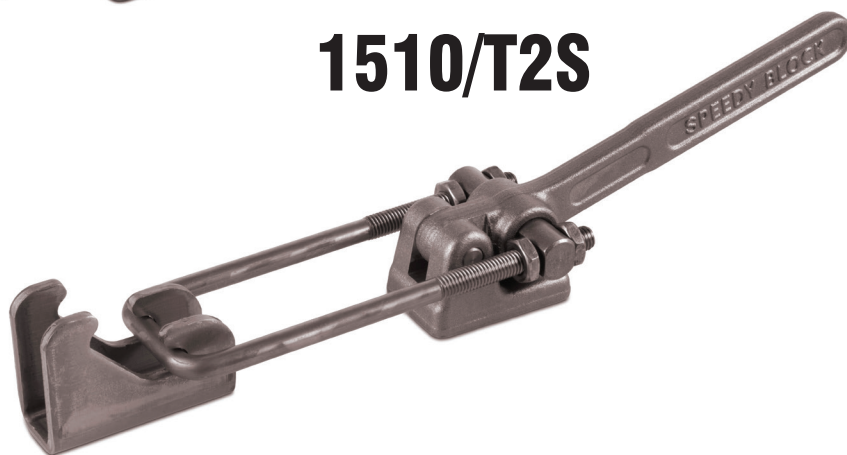
Features and applications:

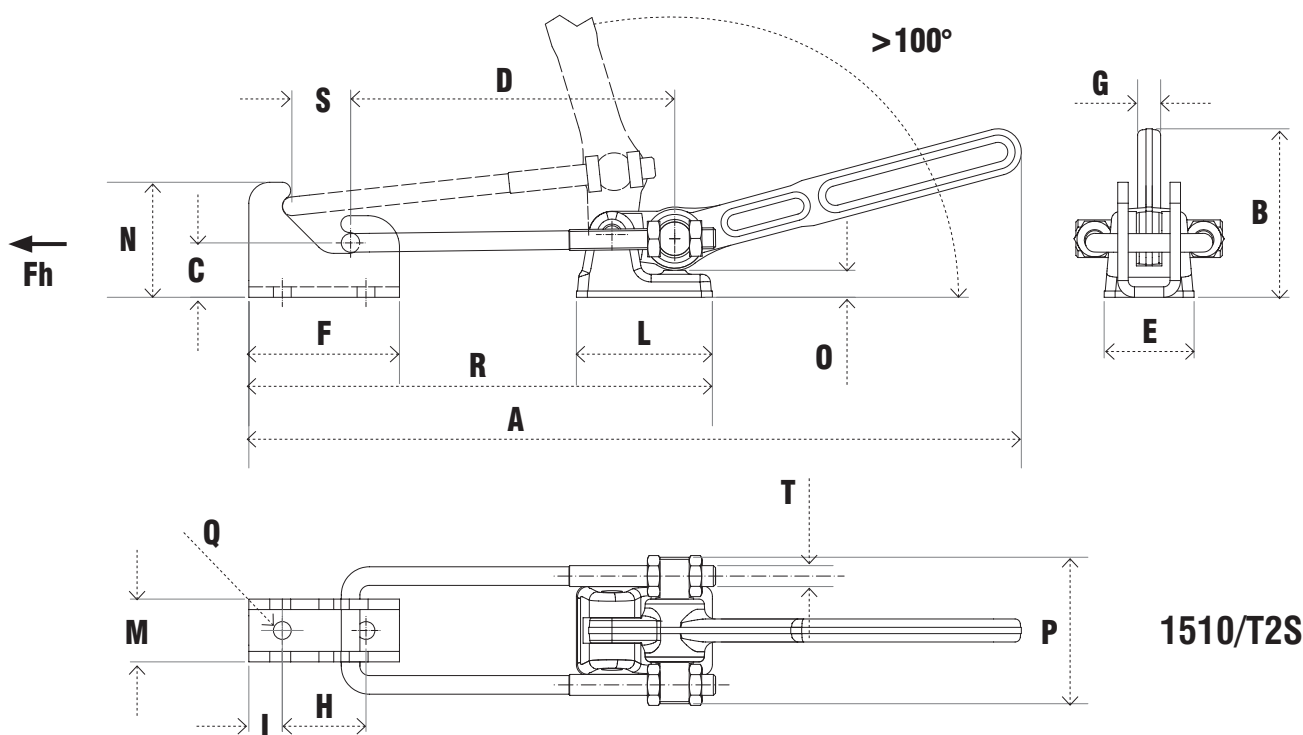
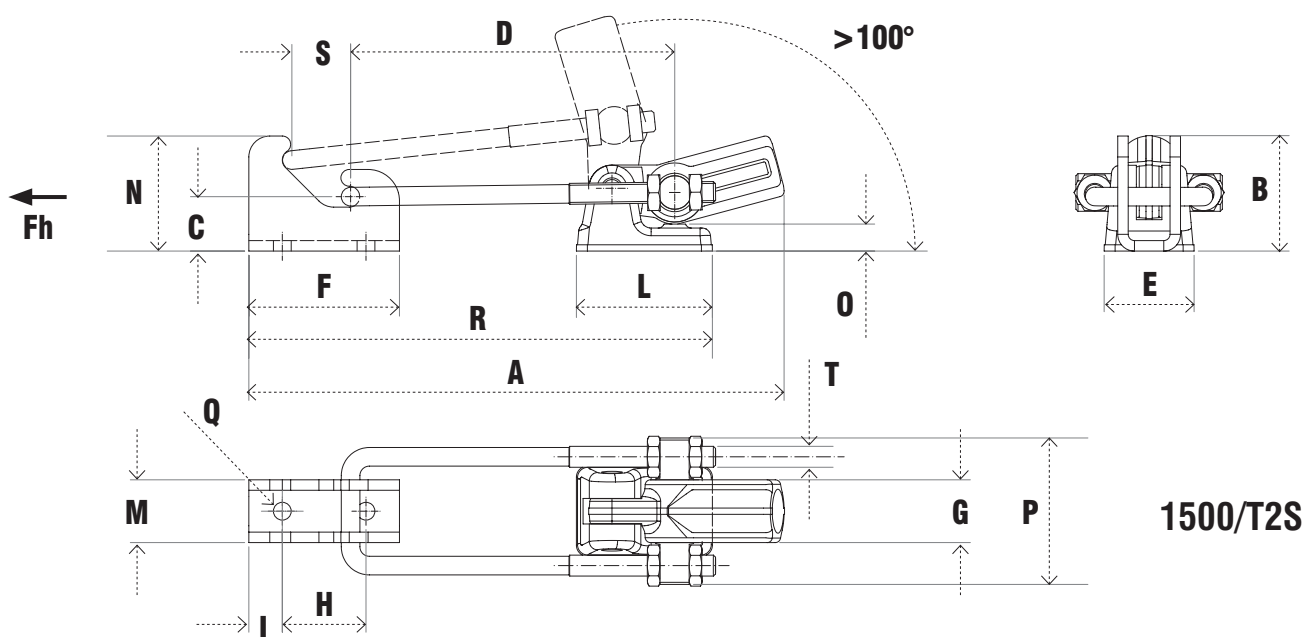
The tools of this series are generally used in rotational moulding, as they are able to operate at high temperatures (240-300°C); this is made possible thanks to their finishing, the interposition between the parts of a special copper grease and appropriate tolerances between the couplings.

1500/T2S



1510/T2S

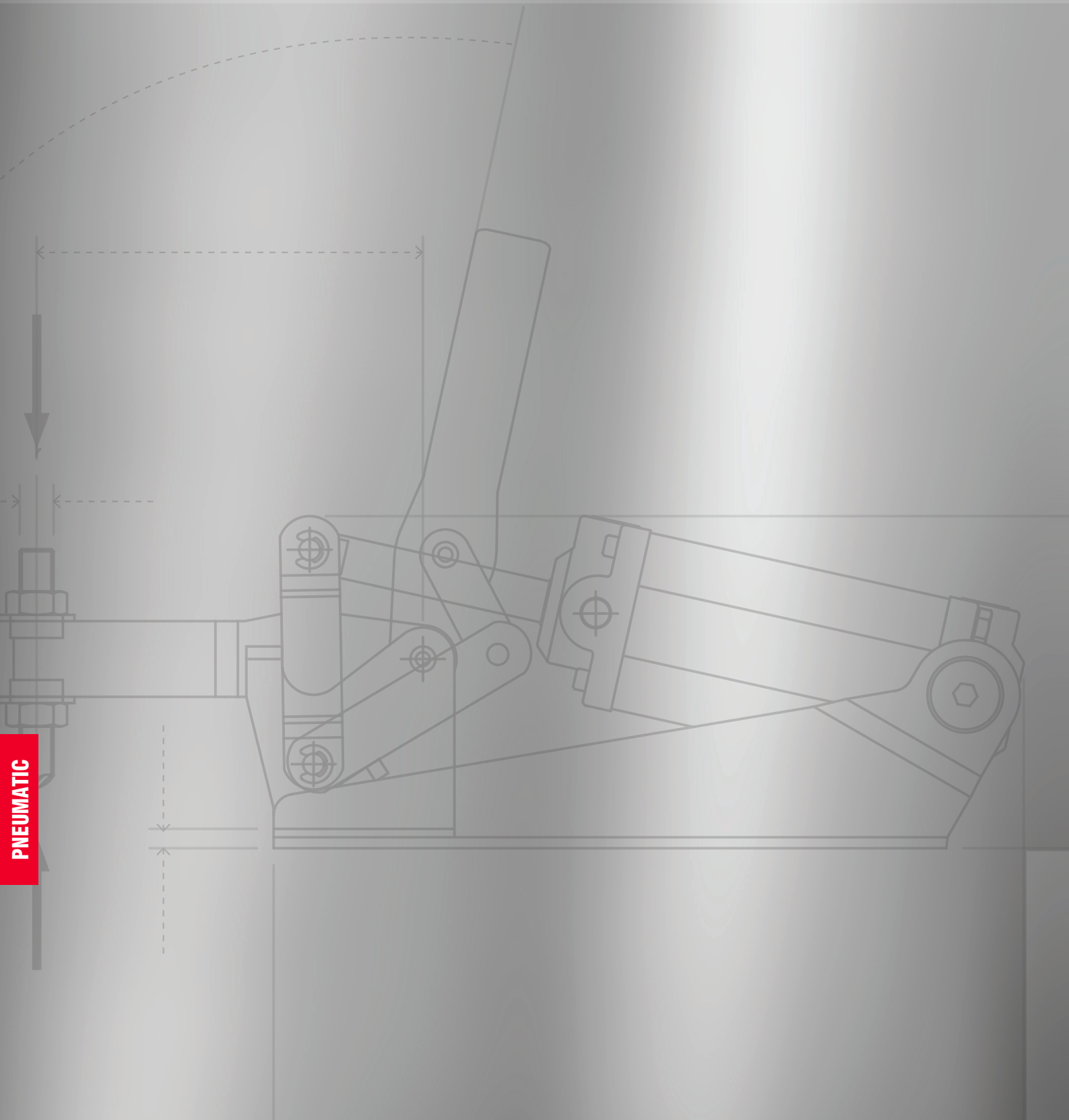




Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R	S	T	Fh (daN)	Gr.
AL750	1500/T2S	256	55	26	155	43	72	30	40	16	65	30	55	13	70	8.5	222	28	M10	1500	1240

Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R	S	T	Fh (daN)	Gr.
AL755	1510/T2S	369	80.5	26	155	43	72	11	40	16	65	30	55	13	70	8.5	222	28	M10	1500	1320

PNEUMATIC SERIES



Here you can download
2D and 3D CAD drawings
of all products.



Pneumatic clamping tools represent an innovative and highly effective solution in the world of industrial assembly and mechanical engineering. They are capable of replacing the manual intervention of the operator for opening and closing with the operation of an appropriate pneumatic cylinder thus offering a variety of advantages.

Speedy Block's pneumatic clamping tools are available in four different executions:

LIGHT SERIES: components in case-hardening sheet steel. Rotation pivots and bushings in hardened and ground steel. Clamping forces F_s from 38 to 552 daN and holding forces F_h from 70 to 2500 daN.

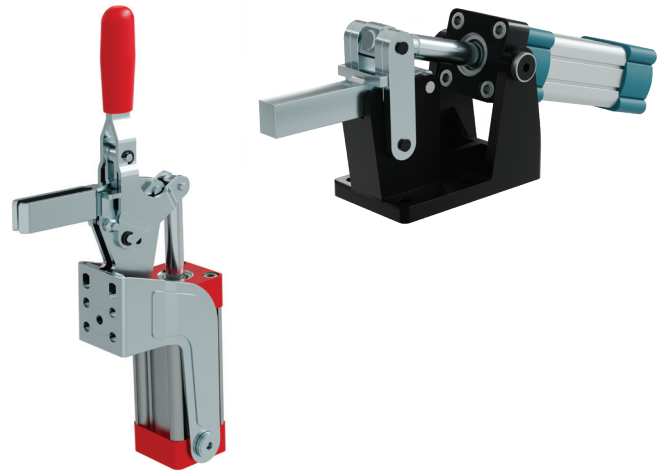
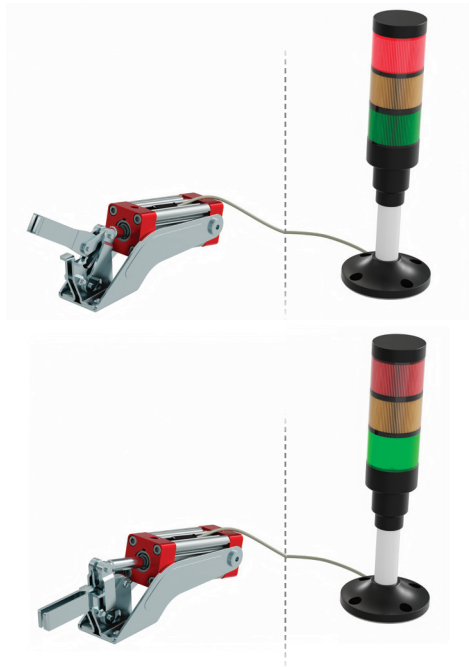
HEAVY SERIES: Spheroidal cast iron base, black painted. Additional parts made of galvanized (weldable) steel. Rotation pivots and bushings in hardened and ground steel. Clamping forces F_s from 320 daN to 432 daN with F_h from 1000 to 2000 daN.

REINFORCED HEAVY SERIES: Base made of black phosphated steel. Rotation pivots and bushings in hardened and ground steel. Double-acting cylinder with adjustable shock absorption. The tools in this series are constructed so that they can be easily disassembled to facilitate possible reworking of the parts according to the needs of use. The support pins are axially secured with seeger rings. Clamping forces F_s from 118 daN to 317 daN with F_h from 220 to 850 daN.

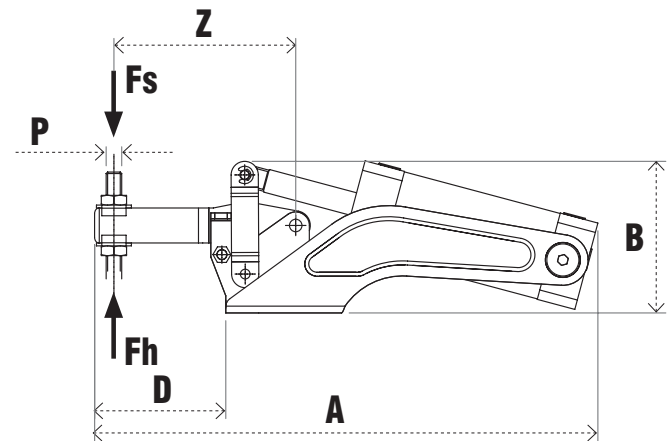
COMPACT SERIES: The toggle mechanism is completely housed within an aluminium body lightweight, which protects it from any contamination. The Clamping with continuous angle adjustment of the opening ensures precise and backlash-free positioning. Clamping forces F_s from 50 daN to 270 daN with holding forces F_h from 80 to 1041 daN.

FEATURES OF SPEEDY BLOCK PNEUMATIC CLAMPING TOOLS

- 1. PRECISION IN TIGHTENING:** Accurate adjustment of air pressure allows meticulous control of the tightening force, minimizing the risk of damage due to excessive pressure.
- 2. RELIABILITY AND CONSISTENCY:** They provide consistent performance, ensuring uniform and repeatable tightening, crucial for the structural stability of the assemblies.
- 3. OPERATIONAL SPEED:** The use of compressed air significantly accelerates tightening processes, enhancing productivity and reducing downtime in production.
- 4. VERSATILITY:** Adaptable to different sequences of closures and openings, allowing easy access from multiple locations.
- 5. IMPROVED SAFETY:** Thanks to magnetic cylinders and sensors, the correct tightening position can be monitored and operated remotely without the need for direct contact.



The choice of the correct pneumatic clamping tool depends first of all on the type of movement and assembly required, while the most suitable size depends on the clamping forces F_s and holding forces F_h required. These maximum allowed data are indicated in the tables of the different series.



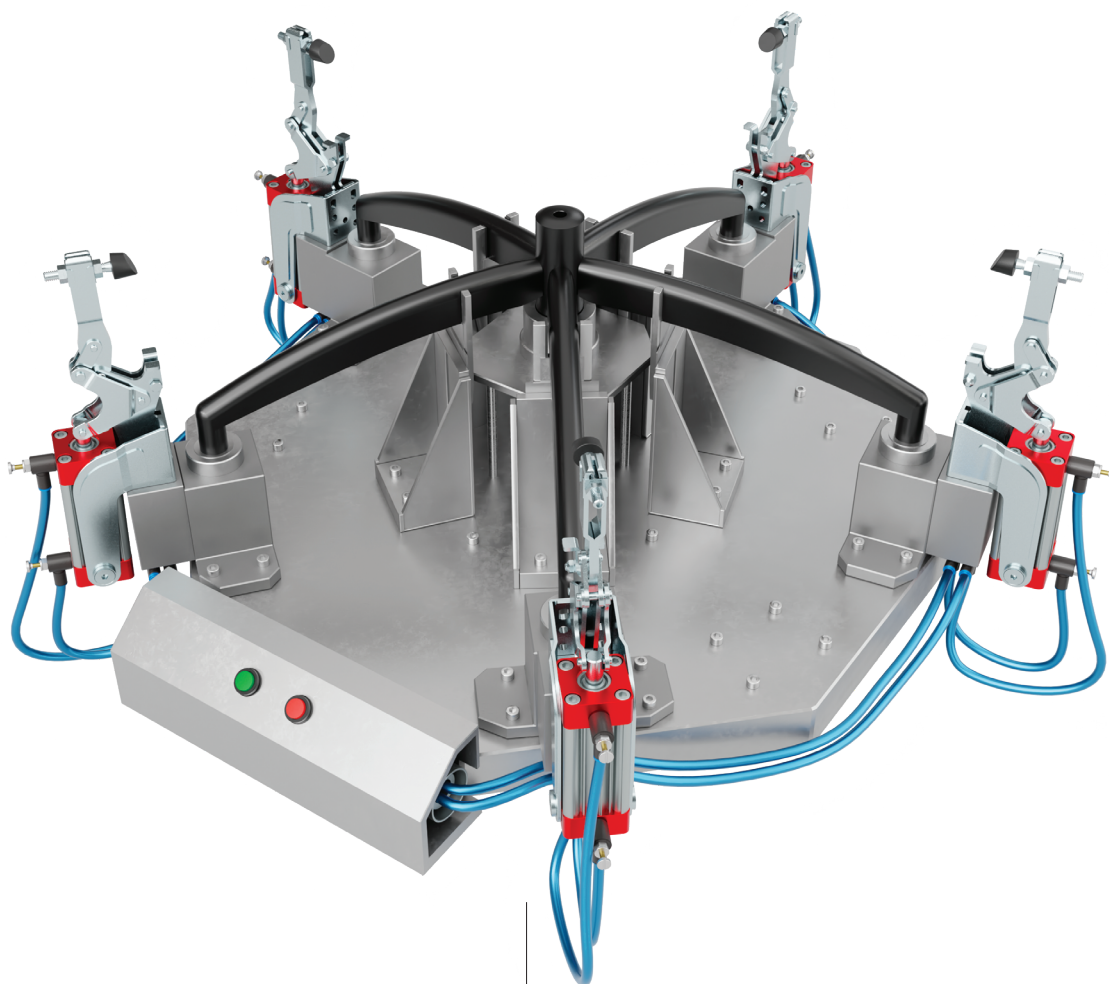
CLAMPING FORCE F_s

It is intended as the force that the tool is able to express at the end of the clamping lever during the closing phase. Obviously it depends on the operating air pressure.

HOLDING FORCE F_h

It is intended as the maximum resistant force that the closed tool is able to absorb at the end of the clamping lever without undergoing permanent deformation. The force F_h depends solely on the dimensions and geometry of the tool.

- 7. DURABILITY:** Made of high quality materials, they are able to withstand demanding operating conditions and wear.
- 8. REDUCTION OF OPERATIONAL FATIGUE:** Tightening automation allows operators to focus on more critical tasks, improving the quality of work and reducing fatigue.



THE APPLICATIONS OF SPEEDY BLOCK PNEUMATIC CLAMPING TOOLS

With a wide range of models available, which vary according to power, size and technical specifications, the Speedy Block pneumatic clamping tools are perfectly adapted to the needs of each project, offering tailor-made solutions that significantly improve production processes. These products combine the advantages of knee locking (even in the event of a drop in pressure, the tool remains closed) with the possibilities offered by pneumatics

Applications for pneumatic clamps

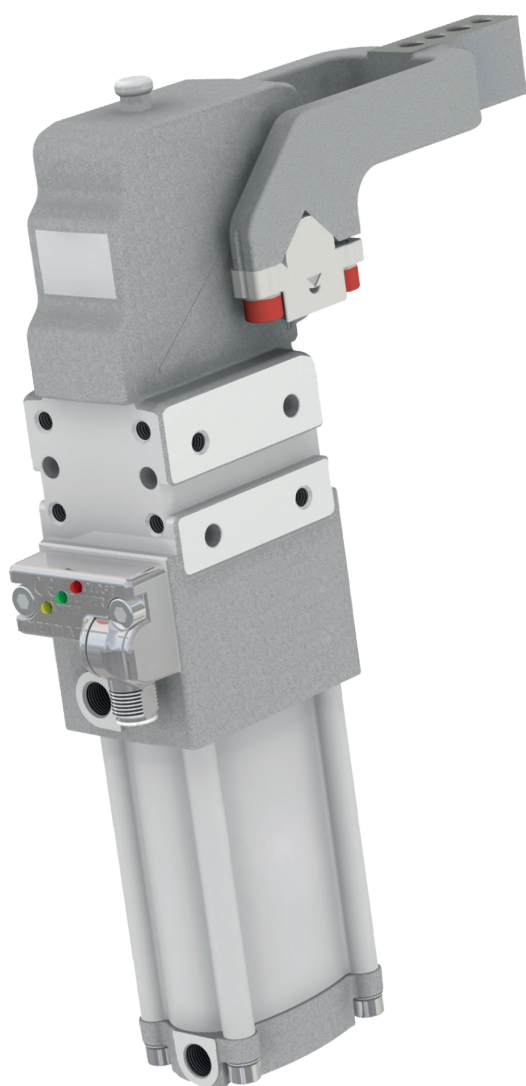
- **ASSEMBLY:** They can be used to hold the components together during the assembly process.
- **FIXING AND TESTING:** Can be used to fix workpieces in place for testing and inspection.
- **FOOD INDUSTRY:** They are used in the food industry to hold components together during processing and packaging.
- **AUTOMOTIVE INDUSTRY:** Pneumatic clamps are used in the automotive industry for a variety of activities, including welding and assembly.

GENERAL NOTES FOR THE USE OF SPEEDY BLOCK PNEUMATIC CLAMPING TOOLS

- The use of a filter - reducer - lubricator unit is essential for a good prolonged operation of the cylinder.
- To ensure a prolonged life of the mechanical parts, it is advisable to equip yourself with appropriate flow regulators and to calibrate the speed of execution of the movements starting from a low speed and gradually increasing the air flow.
- On heavy series cylinders (1000-2000/EPM/EPVM) these flow regulators are already inserted in the heads and can be adjusted by means of a screw placed next to the air supply; for all other cylinders a pneumatic brake is inserted in the rear head to slow down the stroke of the same when opening.

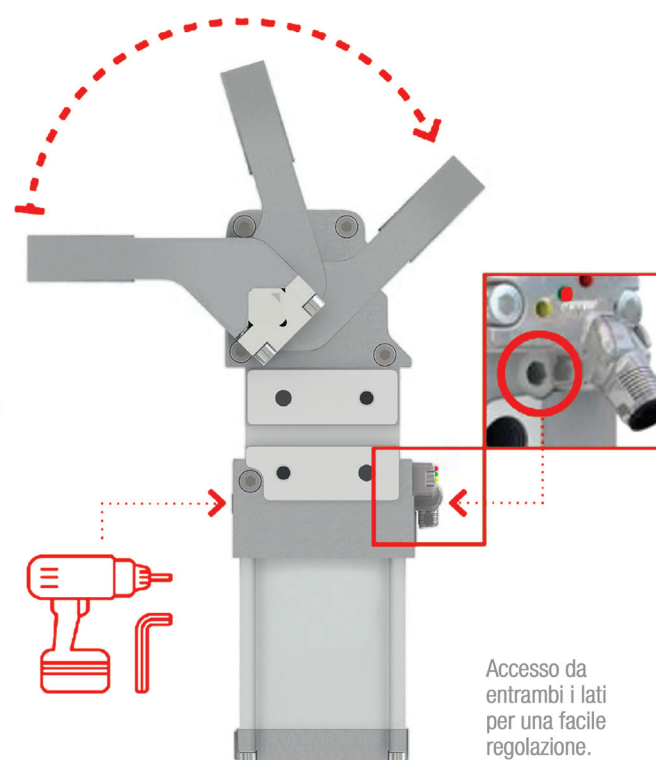
PNEUMATIC CLAMPING TOOLS POWER CLAMPS SERIES

Pneumatic Power Clamps are designed with a small aluminium body that incorporates the components of the clamping mechanism. This structure offers protection against contamination from welding splashes, debris and refrigerants, allowing the clamps to operate effectively even in extreme working conditions. They are ideal for the automotive industry, but their versatility makes them suitable for any type of locking application.



MAIN FEATURES:

- **CONTINUOUS ADJUSTMENT OF THE OPENING ANGLE:** Thanks to a patented system integrated into the tool body, the opening position can be easily adjusted and is always repeatable.
- **EASY ACCESS FOR ADJUSTMENT:** Adjusting the opening can be done without disassembling the clamping lever from the tool by using built-in access keys on both the rear and front sides of the body, thus ensuring the fastest installation times on the market.

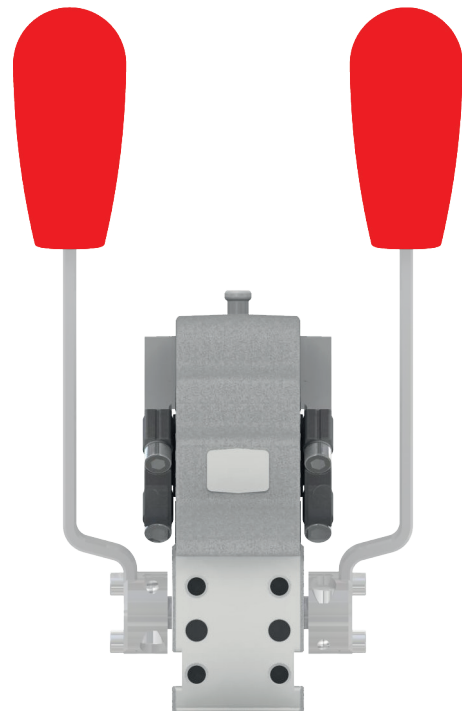


- **LIGHTNESS AND COMPACTNESS:** Designed to be extremely light and easy to handle without compromising strength and durability.
- **ADVANCED PROTECTION:** Maximum resistance to external contamination and extremely harsh working conditions.



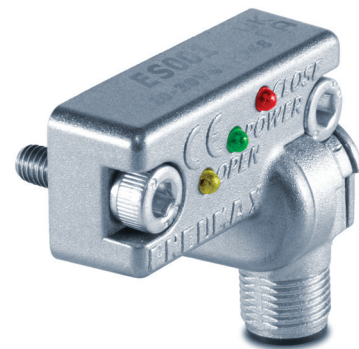
- **EFFICIENCY OF THE DAMPING SYSTEM:**

Reduces noise, cycle time, and impact forces, improving the duration and accuracy of the positioning without backlash.

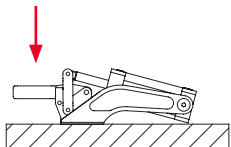


- **ROBUST AND VERSATILE MANUAL LEVER:**

Innovative design that requires minimal effort for irreversible locking. The lever can be applied on both sides of the tool.



- **ELECTRONIC SENSOR:** All models are equipped with an electronic sensor, resistant to magnetic fields and with a metal body, which increases the reliability of operations.
- **STRUCTURAL AND FATIGUE RESISTANCE:** Tested up to 3 million cycles, these tools guarantee excellent durability and reliability.



AP - EP

PNEUMATIC TOGGLE CLAMPS

Base, levers, and riveted pivots:

Galvanized steel.

Rotation pivots and bushings:

Hardened and ground steel.

Executions:

- **A:** Open clamping lever with two folded washers, included in the supply.
- **E:** Full clamping lever and bolt retainer, included in the supply, to be welded in the desired position and angle.

Pneumatic cylinder:

Aluminium, magnetic type, with pneumatic brake in the rear head.

Operating pressure:

6 bar.

Maximum temperature:

70°C.

Features and applications:

A filter-lubricator-reducer assembly is recommended for proper cylinder operation.

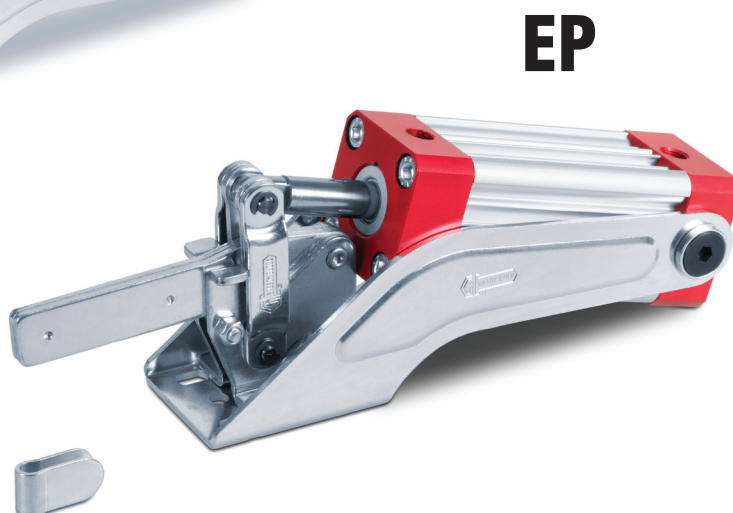
To ensure a prolonged life of the mechanical parts, it is advisable to be equipped with appropriate flow regulators and to calibrate the speed of execution of the movements starting from a low speed and gradually increasing the air flow.

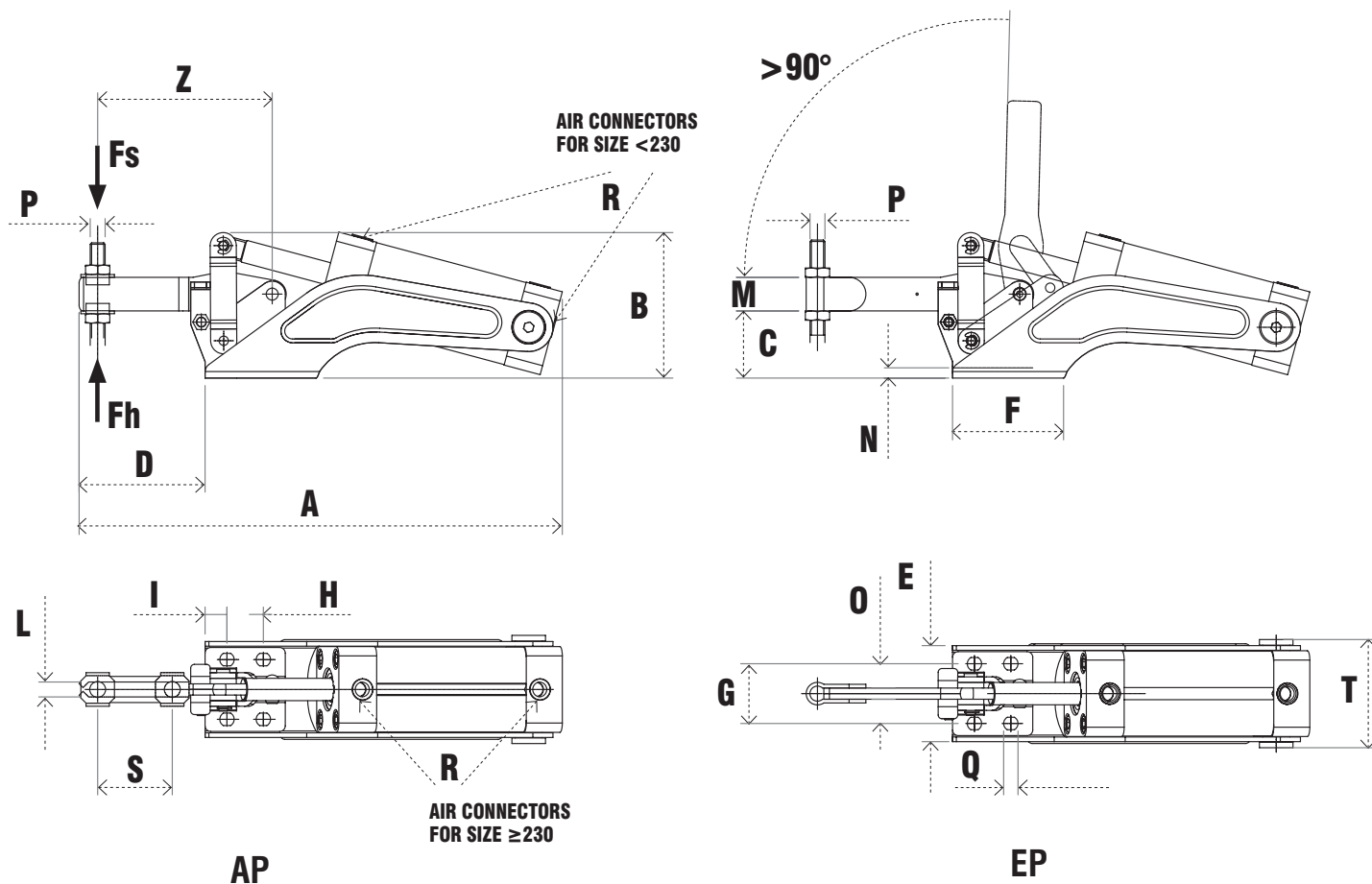
The values of the clamping force F_s shown in the table were detected at a pressure of 6 bar.

A special grease is placed between the contacting surfaces during assembly.

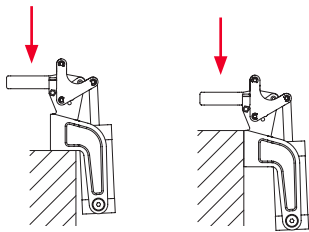
Accessories (to be ordered separately):

- Spindles (see page 152).
- Lever crossbars for AP (see page 155).
- Safety sensor type AU570 (see page 143).





Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R	S	T	Z	Fh (daN)	Fs (daN)	Gr. Δ
A0400	75/AP	162	54	22	38	40	40	24	14.5÷16.5	6.5÷7	5.2	11	4		M5	4.5	M5	20	47	56	75	38	400
A0402	75/EP	163	54	22	39	40	40	24	14.5÷16.5	6.5÷7		11	4	4	M5	4.5	M5		47		75	38	400
A0408	130/AP	195	66	30	50	47.5	45	27÷29	12.5÷19	8÷11.2	6.2	16	5		M6	5.6	1/8"	28	51	71	105	80	650
A0410	130/EP	196	66	30	51	47.5	45	27÷29	12.5÷19	8÷11.2		16	5	5	M6	5.6	1/8"		51		105	80	650
A0416	230/AP	259	78	36	67	52	55	32	18.5÷20.5	11.5÷12	8.2	18	6		M8	6.7	1/8"	40	58	94	200	118	1130
A0418	230/EP	261	78	36	69	52	55	32	18.5÷20.5	11.5÷12		18	6	6	M8	6.7	1/8"		58		200	118	1130
A0428	330/AP	308	96	46	78	74	64	45÷46	29÷32	8.5÷10.5	10.5	22	7		M10	8.6	1/4"	45	70	110	240	173	1850
A0430	330/EP	310	96	46	80	74	64	45÷46	29÷32	8.5÷10.5		22	7	7	M10	8.6	1/4"		70		240	173	1900
A0440	430/AP	364	115	55	89	73	78	45	32	14	12.5	26	8		M12	8.5	1/4"	48	82.5	124	400	325	3300
A0442	430/EP	365	115	55	90	73	78	45	32	14		26	8	10	M12	8.5	1/4"		82.5		400	325	3300



APV - EPV

PNEUMATIC TOGGLE CLAMPS

Base, levers, and riveted pivots:

Galvanized steel.

Rotation pivots and bushings:

Hardened and ground steel.

Executions:

- **A:** Open clamping lever with two folded washers, included in the supply.
- **E:** Full clamping lever and bolt retainer, included in the supply, to be welded in the desired position and angle.

Pneumatic cylinder:

Aluminium, magnetic type, with pneumatic brake in the rear head.

Operating pressure:

6 bar.

Maximum temperature:

70°C.

Features and applications:

A filter-lubricator-reducer assembly is recommended for proper cylinder operation.

To ensure a prolonged life of the mechanical parts, it is advisable to be equipped with appropriate flow regulators and to calibrate the speed of execution of the movements starting from a low speed and gradually increasing the air flow.

The values of the clamping force F_s shown in the table were detected at a pressure of 6 bar.

A special grease is placed between the contacting surfaces during assembly.

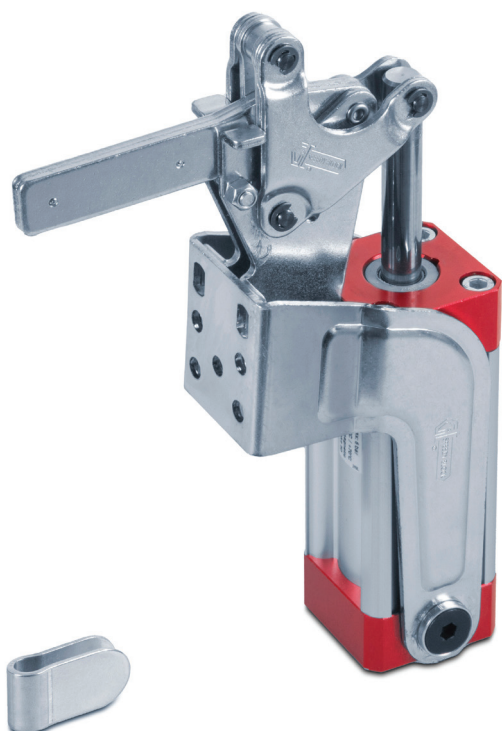
Accessories (to be ordered separately):

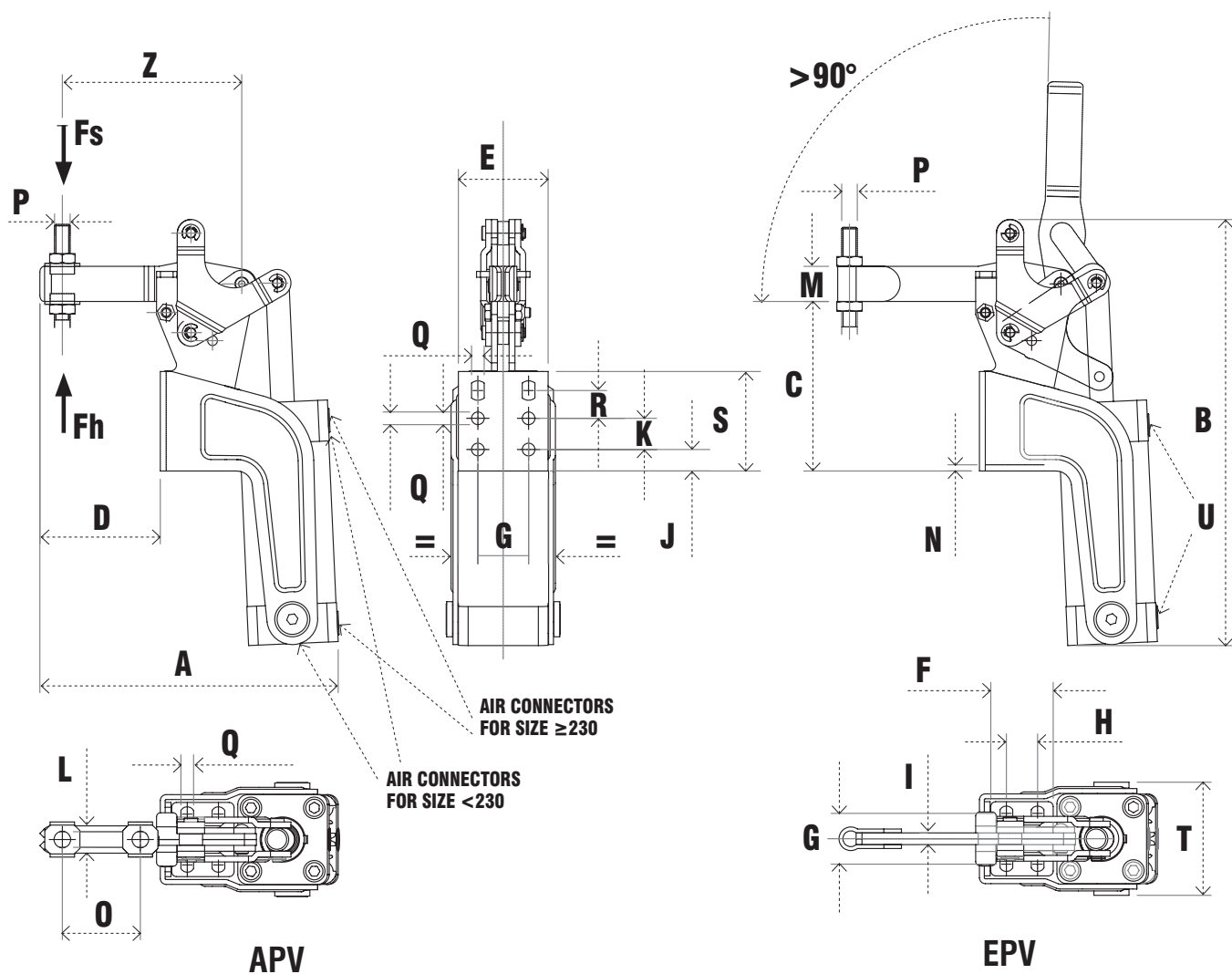
- Spindles (see page 152).
- Lever crossbars for APV (see page 155).
- Safety sensor type AU570 (see page 143).

EPV

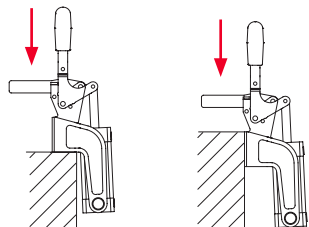


APV





Code	Description	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	Z	Fh (daN)	Fs (daN)	Gr.  
A0404	75/APV	99	154	43	34	40	22	24	12.5		10	12.5	5.2	11	2	20	M5	4.5		30	47	M5	56	75	57	500
A0406	75/EPV	100	154	43	35	40	22	24	12.5	4	10	12.5		11	2		M5	4.5		30	47	M5		75	57	500
A0412	130/APV	118	167	70	41	47	28	27	12.5		16	12.5	6.2	16	2.5	28	M6	5.6	12.5	49	51	1/8"	71	110	61	750
A0414	130/EPV	119	167	70	42	47	28	27	12.5	5	16	12.5		16	2.5		M6	5.6	12.5	49	51	1/8"		110	61	750
A0420	230/APV	153	218	87	62	46	32	26	16		11	16	8.5	18	3	40	M8	6.5	14.25	51	58	1/8"	94	220	126	1250
A0422	230/EPV	155	218	87	63	46	32	26	16	6	11	16		18	3		M8	6.5	14.25	51	58	1/8"		220	126	1255
A0432	330/APV	182	263	108	68	56	45	30	28		19	30	10.5	22	3.5	45	M10	8.5	20	79	70	1/4"	110	260	181	2200
A0434	330/EPV	184	263	108	70	56	45	30	28	7	19	30		22	3.5		M10	8.5	20	79	70	1/4"		260	181	2200



APVS - EPVS

PNEUMATIC TOGGLE CLAMPS WITH MANUAL CONTROL LEVER

Base, levers, and riveted pivots:

Galvanized steel.

Rotation pivots and bushings:

Hardened and ground steel.

Executions:

- **A:** Open clamping lever with two folded washers, included in the supply.
- **E:** Full clamping lever and bolt retainer, included in the supply, to be welded in the desired position and angle.

Pneumatic cylinder:

Aluminium, magnetic type, with pneumatic brake in the rear head.

Handle:

Red polyurethane; resistant to oils, greases and other chemical agents.

Operating pressure:

6 bar.

Maximum temperature:

70°C.

Features and applications:

A filter-lubricator-reducer assembly is recommended for proper cylinder operation.

To ensure a prolonged life of the mechanical parts, it is advisable to be equipped with appropriate flow regulators and to calibrate the speed of execution of the movements starting from a low speed and gradually increasing the air flow.

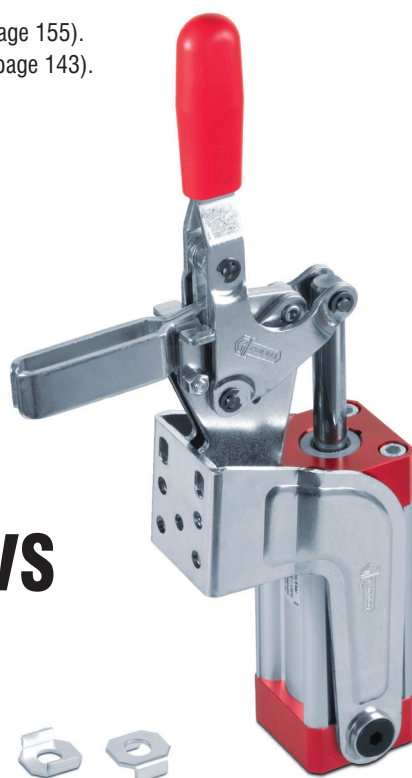
The values of the clamping force F_s shown in the table were detected at a pressure of 6 bar.

A special grease is placed between the contacting surfaces during assembly.

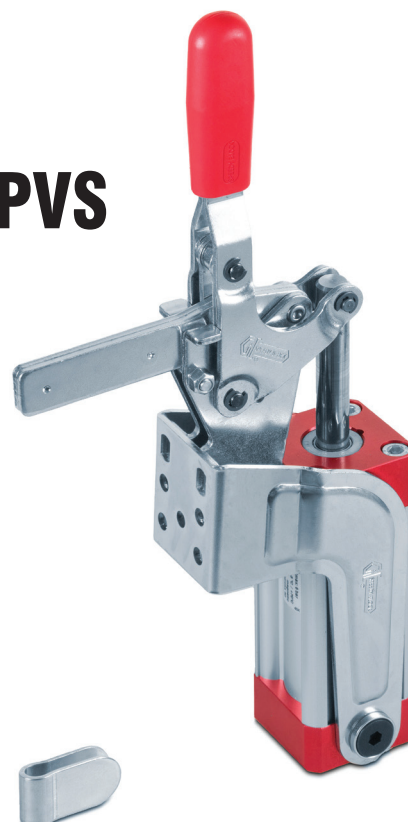
Accessories (to be ordered separately):

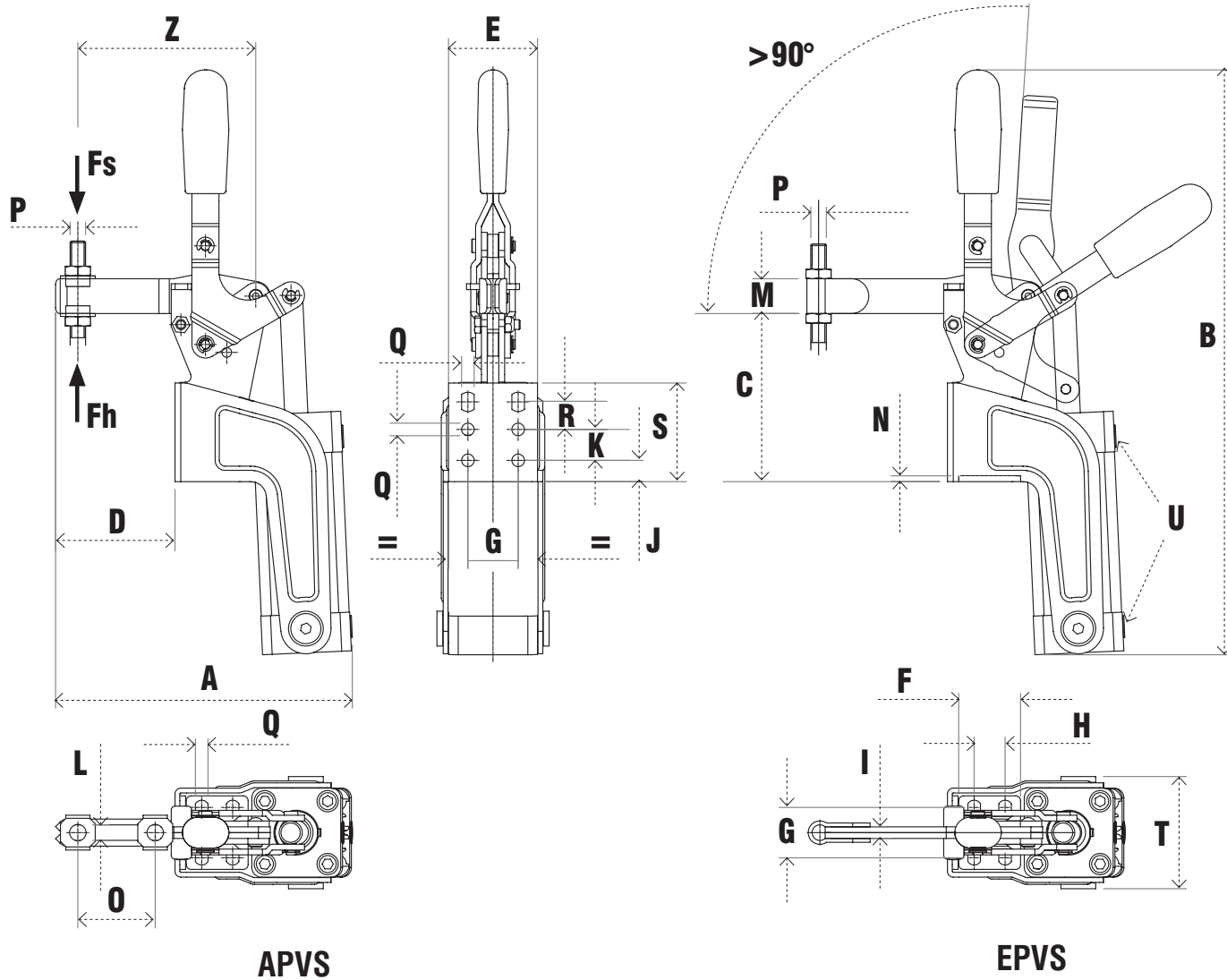
- Spindles (see page 152).
- Lever crossbars for APVS (see page 155).
- Safety sensor type AU570 (see page 143).

APVS

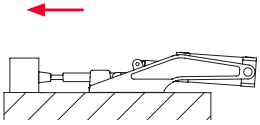


EPVS





Code	Description	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	Z	F _h (daN)	F _s (daN)	Gr. Δ
A0424	230/APVS	153	302	87	62	46	32	26	16		11	16	8.5	18	3	40	M8	6.5	14.25	51	58	1/8"	94	220	126	1350
A0426	230/EPVS	155	302	87	63	46	32	26	16	6	11	16		18	3		M8	6.5	14.25	51	58	1/8"		220	126	1400
A0436	330/APVS	182	363	108	68	56	45	30	28		19	30	10.5	22	3.5	45	M10	8.5	20	79	70	1/4"	110	260	180	2300
A0438	330/EPVS	184	363	108	70	56	45	30	28	7	19	30		22	3.5		M10	8.5	20	79	70	1/4"		260	180	2300



SP4

PNEUMATIC TOGGLE CLAMPS

Base, levers, and riveted pivots:

Galvanized steel.

Rotation pivots and bushings:

Hardened and ground steel.

Push rod:

Galvanized steel, threaded hole for the spindle housing (to be ordered separately - see Accessories).

Pneumatic cylinder:

Aluminium, magnetic type, with pneumatic brake in the rear head.

Operating pressure:

6 bar.

Maximum temperature:

70°C.

Features and applications:

A filter-lubricator-reducer assembly is recommended for proper cylinder operation.

To ensure a prolonged life of the mechanical parts, it is advisable to be equipped with appropriate flow regulators and to calibrate the speed of execution of the movements starting from a low speed and gradually increasing the air flow.

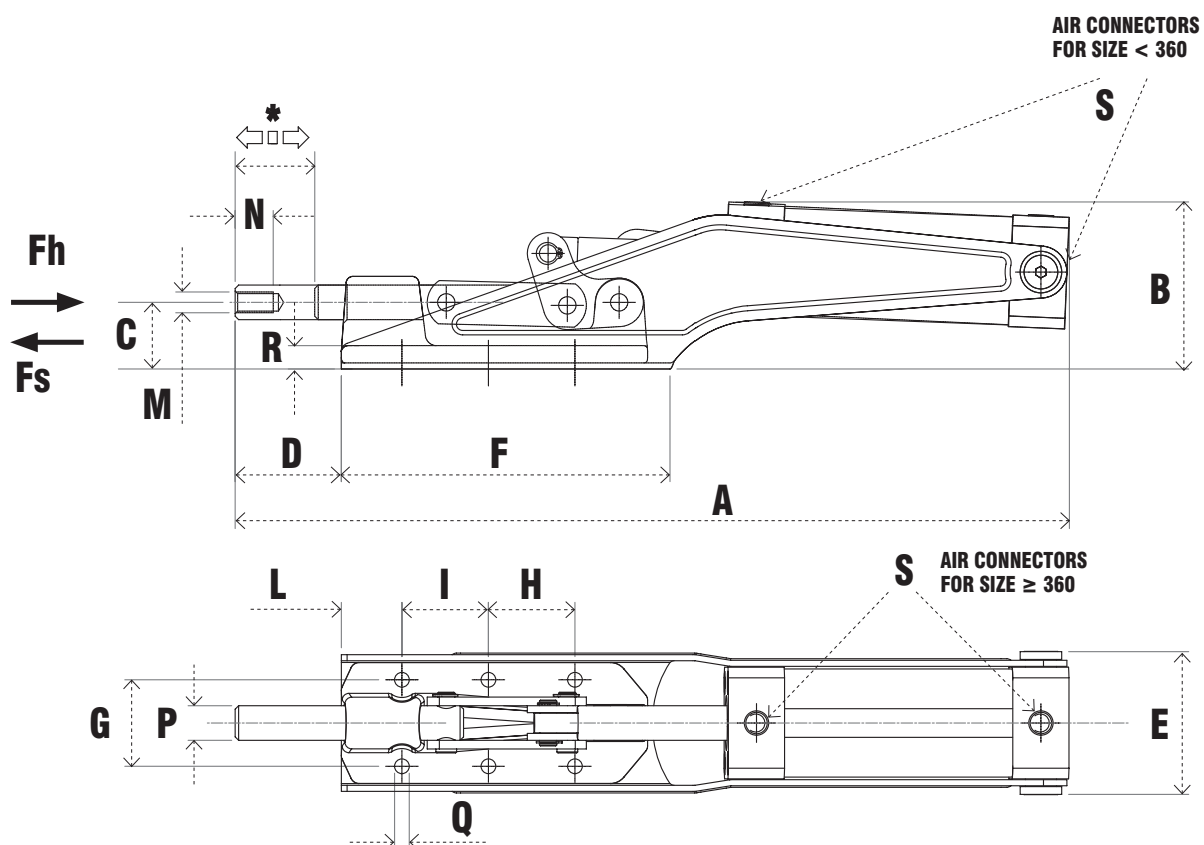
The values of the clamping force F_s shown in the table were detected at a pressure of 6 bar.

A special grease is placed between the contacting surfaces during assembly.

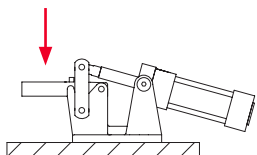
Accessories (to be ordered separately):

- Spindles (see page 152).
- Safety sensor type AU570 (see page 143).





Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	P	Q	R	S	*	Fh (daN)	Fs (daN)	Gr. 
A0444	70/SP4	163	50	13.5	20	48	70	26		26	13	M6	12	8.5	4.3	7.5	M5	12	120	78	500
A0446	360/SP4	274	69	27.5	32	58	94	33.5		36.5	30	M8	15	12	5.5	9.5	1/8"	23	560	128	1400
A0448	1100/SP4	361	85	28	49	70	138	41	41	35	15	M10	18	16	8.5	11	1/4"	32	1600	340	2600
A0450	2100/SP4	482	96.5	38.5	61.5	82.5	190	50	50	50	35	M12	22	20	8.5	13.5	1/4"	45	2500	552	5200



EPM

PNEUMATIC TOGGLE CLAMPS HEAVY-DUTY SERIES

Base:

Spheroidal cast iron, black painted.

Clamping lever:

Galvanized steel.

Rotation pivots and bushings:

Hardened and ground steel.

Pneumatic cylinder:

Aluminium, magnetic ISO standards, with double pneumatic brake in the rear and front head.

Operating pressure:

10 bar.

Maximum temperature:

80°C.

Features and applications:

A filter-lubricator-reducer assembly is recommended for proper cylinder operation.

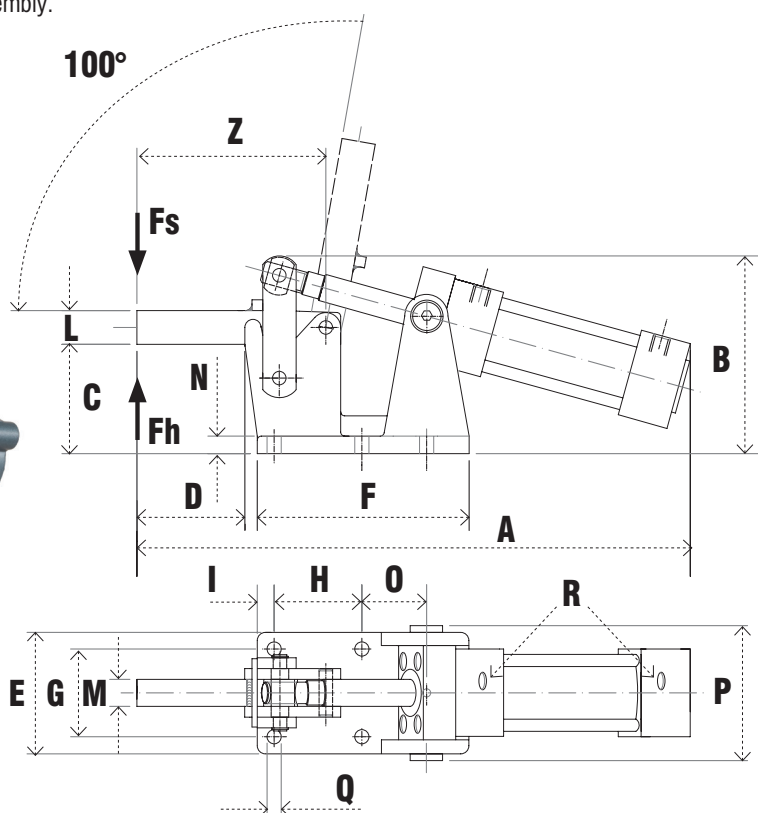
To ensure a prolonged life of the mechanical parts, it is advisable to be equipped with appropriate flow regulators and to calibrate the speed of execution of the movements starting from a low speed and gradually increasing the air flow.

The values of the clamping force F_s shown in the table were detected at a pressure of 10 bar.

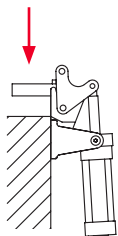
A special grease is placed between the contacting surfaces during assembly.

Accessories (to be ordered separately):

- Safety sensor type AU570 (see page 143).



Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R	Z	F_h (daN)	F_s (daN)	Gr. Δ
A0600	1000/EPM	410	146.5	80	80	90	155	65	65	12.5	25	20	14	48	102	10.5	1/4"	140	1000	320	6500
A0620	2000/EPM	487	171.5	90	100	100	176	70	70	15	35	20	14	56	112	10.5	3/8"	172	2000	380	9500



EPVM

PNEUMATIC TOGGLE CLAMPS HEAVY-DUTY SERIES

Base:

Spheroidal cast iron, black painted.

Clamping lever:

Galvanized steel.

Rotation pivots and bushings:

Hardened and ground steel.

Pneumatic cylinder:

Aluminium, magnetic ISO standards, with double pneumatic brake in the rear and front head.

Operating pressure:

10 bar.

Maximum temperature:

80°C.

Features and applications:

A filter-lubricator-reducer assembly is recommended for proper cylinder operation.

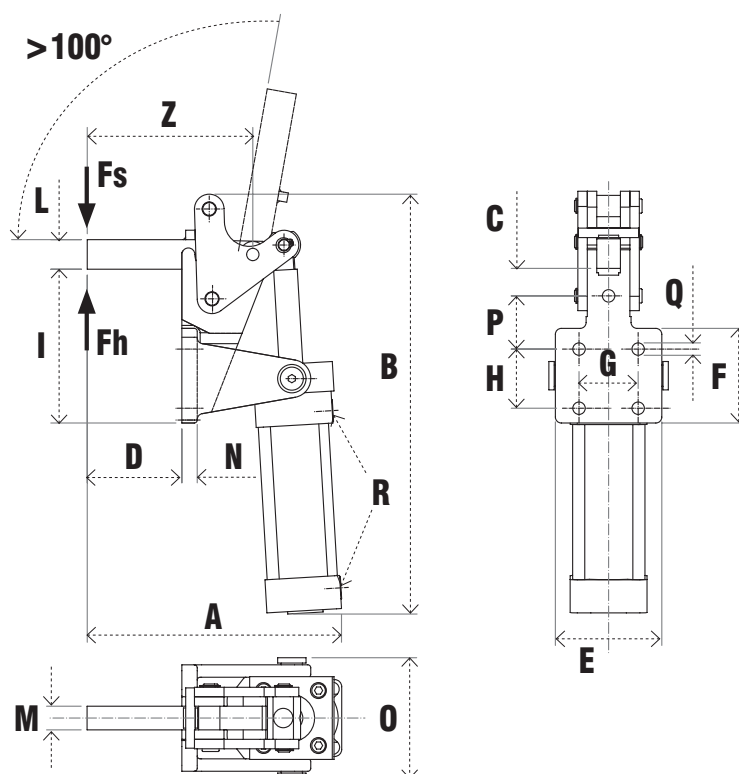
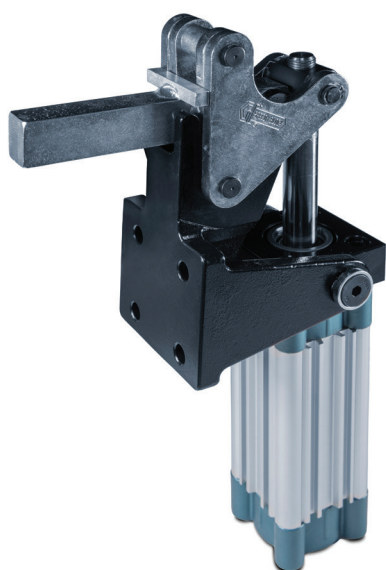
To ensure a prolonged life of the mechanical parts, it is advisable to be equipped with appropriate flow regulators and to calibrate the speed of execution of the movements starting from a low speed and gradually increasing the air flow.

The values of the clamping force F_s shown in the table were detected at a pressure of 10 bar.

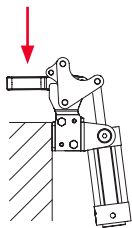
A special grease is placed between the contacting surfaces during assembly.

Accessories (to be ordered separately):

- Safety sensor type AU570 (see page 143).



Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R	Z	Fh (daN)	Fs (daN)	Gr. Δ
A0605	1000/EPVM	215	355		80	90	80	50	50	132.5	25	20	13	102		10.5	1/4"	140	1000	340	6500
A0625	2000/EPVM	246.5	424	45	100	100	90	54	58	157	35	20	14	112	45	13	3/8"	172	2000	432	9000



LPV

PNEUMATIC TOGGLE CLAMPS REINFORCED HEAVY-DUTY SERIES

Rotation pivots and bushings:

Hardened and ground steel.

Clamping lever:

Hot-molded phosphate steel, eyelet shape for inserting the spindle (to be ordered separately – see Accessories).

Pneumatic cylinder:

Aluminium, magnetic type, with pneumatic brake in the rear head.

Operating pressure:

10 bar.

Maximum temperature:

80°C.

Features and applications:

These tools are generally used in clamping work with medium and heavy loads, on welding masks, carpentry work, moulds and where large clamping forces and strong repetitiveness of movements are required.

Features and applications: A filter-lubricator-reducer assembly is recommended for proper cylinder operation.

To ensure a prolonged life of the mechanical parts, it is advisable to be equipped with appropriate flow regulators and to calibrate the speed of execution of the movements starting from a low speed and gradually increasing the air flow.

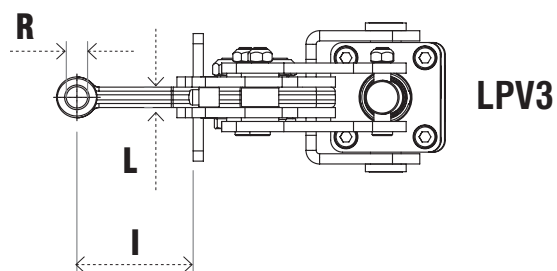
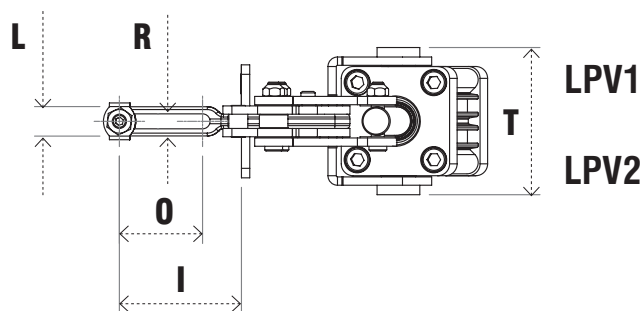
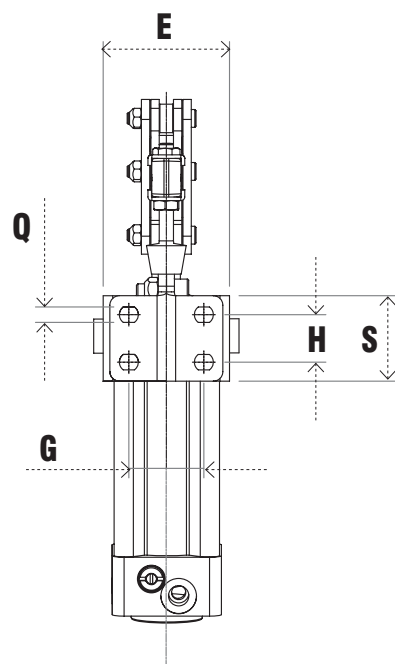
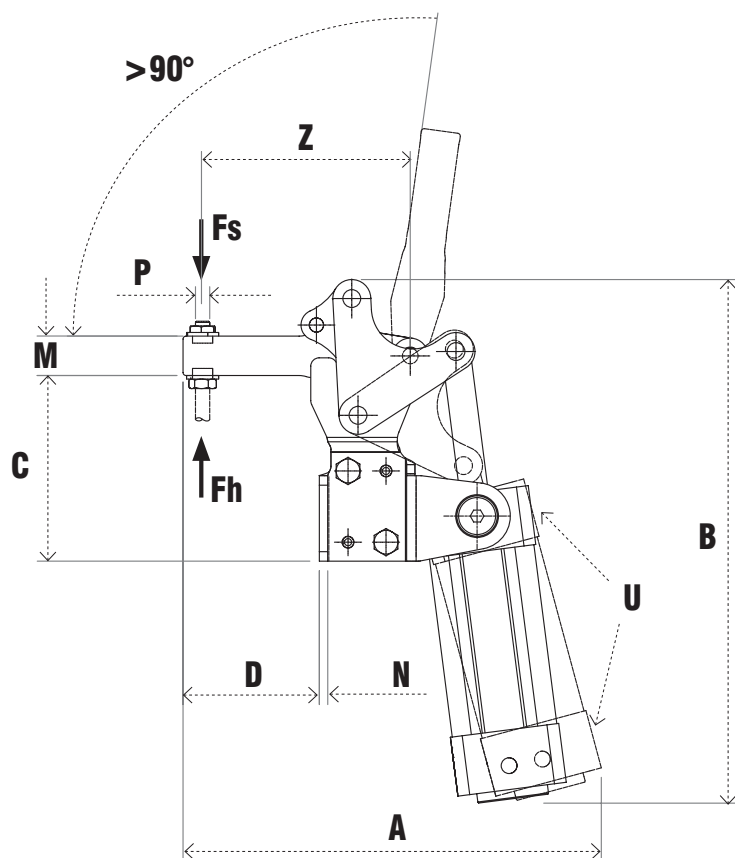
The values of the clamping force F_s shown in the table were detected at a pressure of 10 bar.

A special grease is placed between the contacting surfaces during assembly.

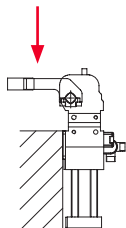
Accessories (to be ordered separately):

- Spindles (see page 152).
- Safety sensor type AU570 (see page 143).





Code	Description	A	B	C	D	E	G	H	I	L	M	N	O	P	Q	R	S	T	U	Z	Fh (daN)	FS	Gr. Δ
A0384	LPV1	172	215	77	57	54	32	20	51	12.3	16.6	3.5	35	M6	6.5	6.3	36	63	1/8"	89	240	118	1150
A0386	LPV2	195	288	106	71	65	44.5	30	60	20	24	5	35	M10	8.5	10.3	54	75	1/4"	113.5	440	217	2750
A0388	LPV3	239	372	141	80	78	54	55	68	12	31	6		M12	10.5	12.5	75	89	1/4"	139	850	317	5300



SBPC-P-25

PNEUMATIC POWER CLAMP

Body:

High quality light aluminium alloy, compact shape.

Square shaft:

Nitrided steel.

Integrated sensor:

Aluminum body, electromagnetic compatibility according to EN 60947-5-2:2007 + A1:2012 with 90° swivel connector (see specifications page 135).

Features:

Compact device. It is recommended for use on test, welding and tooling control applications that present very small spaces.

Opening angle adjustable from 0° to 135°.

Clamping lever to be ordered separately (see page 134).

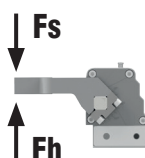
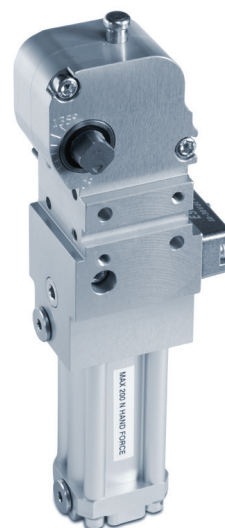
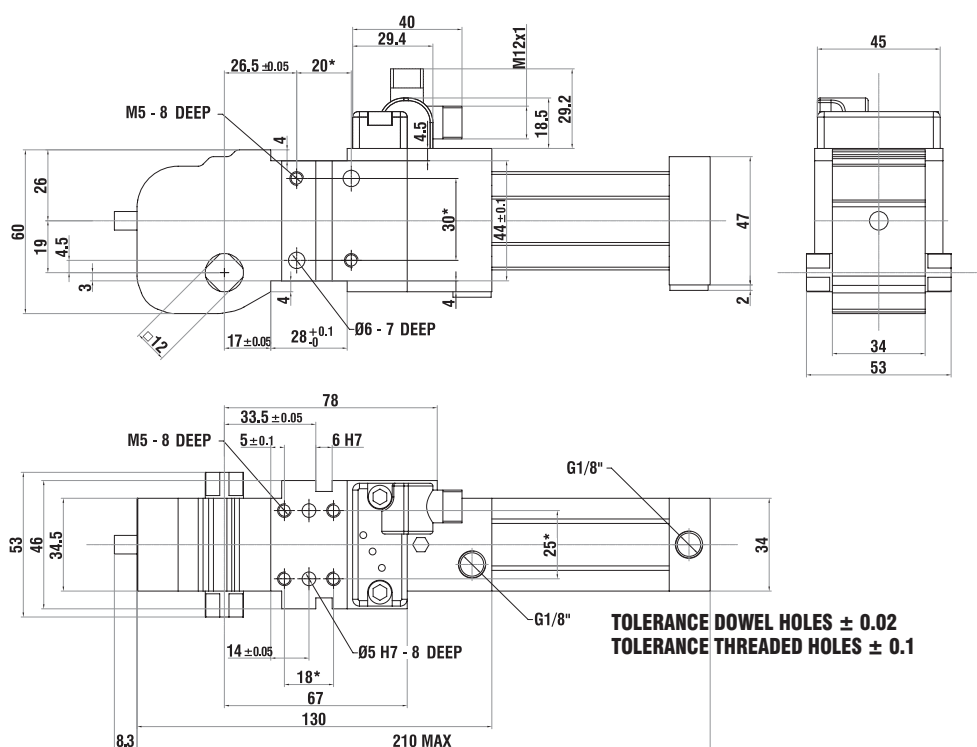
Manual release button to open the device in the absence of air pressure.

Operating pressure 2 to 8 bar / 30 to 115 psi.

Assembly by means of threaded and dowel holes on all four sides of the tool.

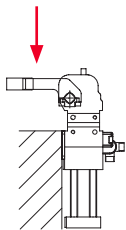
Lubrication:

All devices are lubricated for life at the factory. It is not necessary to lubricate the mechanism during its use.



F_s (Clamping Force) = Clamping Moment/Clamping Arms Length (meters).
 F_h (Holding Force) = Holding Moment/Clamping Arms Length (meters).

Code	Description	Fh (daN)	Fs (daN)	Gr. ⚖️
C001P25	SBPC-P-25	80	53	550



SBPC-P-40

PNEUMATIC POWER CLAMP

Body:

High quality light aluminium alloy, compact shape.

Square shaft:

Nitrided steel.

Integrated sensor:

Aluminum body, electromagnetic compatibility according to EN 60947-5-2:2007 + A1:2012 with 90° swivel connector (see specifications page 135).

Features:

This device is recommended for use on test, welding and tooling control applications that present very small spaces.

Opening angle adjustable from 0° to 135°.

Clamping lever to be ordered separately (see page 134).

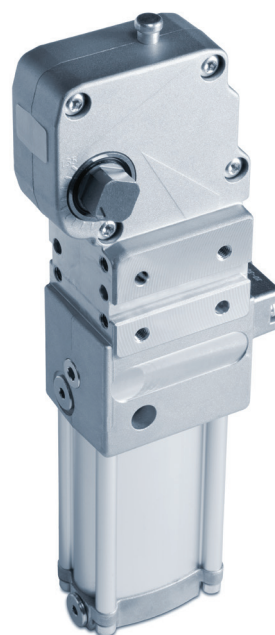
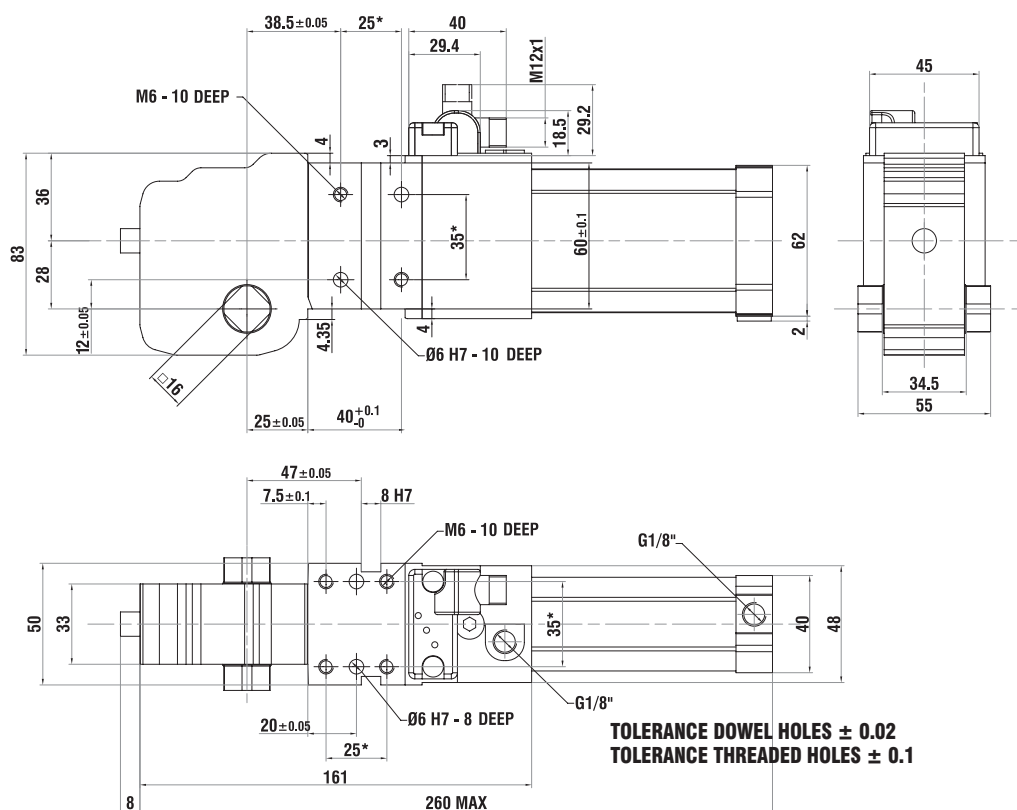
Manual release button to open the device in the absence of air pressure.

Operating pressure 2 to 8 bar / 30 to 115 psi.

Assembly by means of threaded and dowel holes on all four sides of the tool.

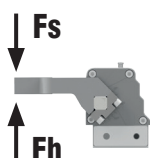
Lubrication:

All devices are lubricated for life at the factory. It is not necessary to lubricate the mechanism during its use.



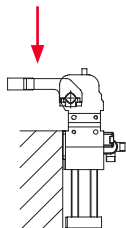
PNEUMATIC

Code	Description	Fh (daN)	Fs (daN)	Gr. ⚖️
C001P40	SBPC-P-40	324	111	1450



Fs (Clamping Force) = Clamping Moment/Clamping Arms Length (meters).

Fh (Holding Force) = Holding Moment/Clamping Arms Length (meters).



SBPC-P-63

PNEUMATIC POWER CLAMP

Body:

High quality light aluminium alloy, compact shape.

Square shaft:

Nitrided steel.

Integrated sensor:

Aluminum body, electromagnetic compatibility according to EN 60947-5-2:2007 + A1:2012 with 90° swivel connector (see specifications page 135).

Features:

This device is recommended for use on test, welding and tooling control applications.

Opening angle adjustable from 0° to 135°.

Clamping lever to be ordered separately (see page 134).

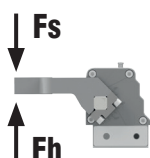
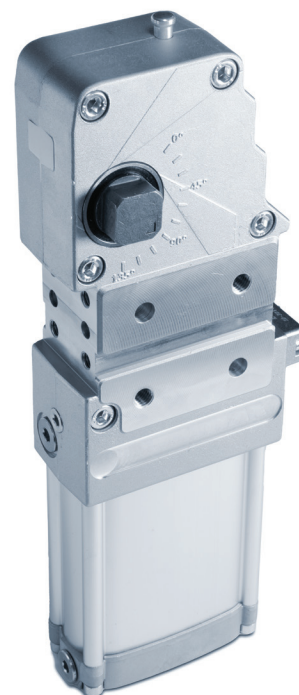
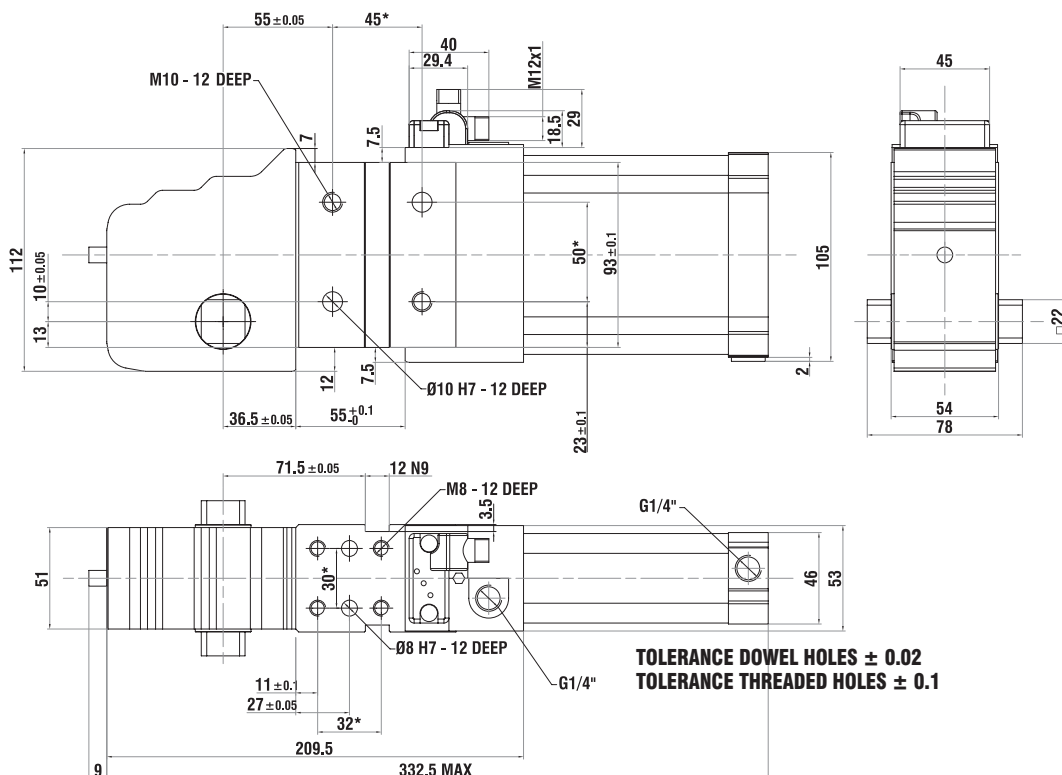
Manual release button to open the device in the absence of air pressure.

Operating pressure 2 to 8 bar / 30 to 115 psi.

Assembly by means of threaded and dowel holes on all four sides of the tool.

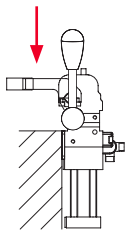
Lubrication:

All devices are lubricated for life at the factory. It is not necessary to lubricate the mechanism during its use.



Fs (Clamping Force) = Clamping Moment/Clamping Arms Length (meters).
Fh (Holding Force) = Holding Moment/Clamping Arms Length (meters).

Code	Description	Fh (daN)	Fs (daN)	Gr. ⚖️
C001P63	SBPC-P-63	1041	270	3500



SBPC-M-25

PNEUMATIC POWER CLAMP WITH CONTROL LEVER

Body:

High quality light aluminium alloy, compact shape.

Square shaft:

Nitrided steel.

Integrated sensor:

Aluminum body, electromagnetic compatibility according to EN 60947-5-2:2007 + A1:2012 with 90° swivel connector (see specifications page 135).

Control Lever:

Steel, with red polyurethane ergonomic handle, supplied unassembled.

Features:

This device is recommended for use on test, welding and tooling control applications.

Opening angle adjustable from 0° to 135°.

Clamping lever to be ordered separately (see page 134).

Manual release button to open the device in the absence of air pressure.

Operating pressure 2 to 8 bar / 30 to 115 psi.

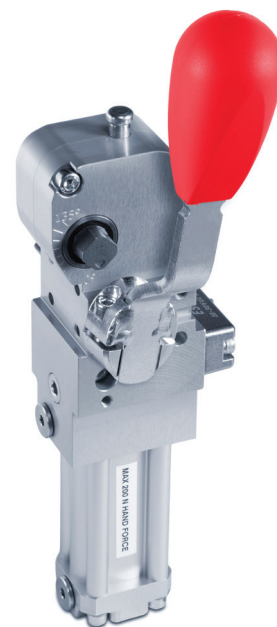
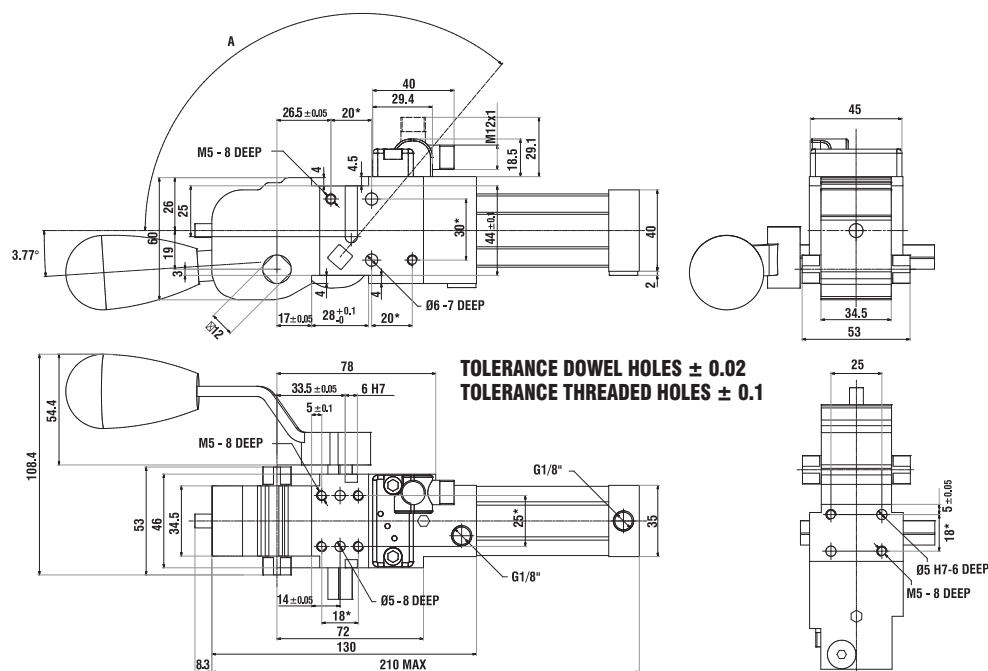
Assembly by means of threaded and dowel holes on all four sides of the tool.

Lubrication:

All devices are lubricated for life at the factory. It is not necessary to lubricate the mechanism during its use.

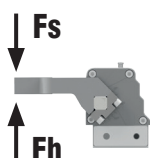
Opening angle	A= Control lever swivel angle
0°	-3.77°
15°	19°
30°	35°
45°	53°
60°	74°
75°	94°
90°	109.5°
105°	120°
120°	126°
135°	130°

Max applicable force = 20 N



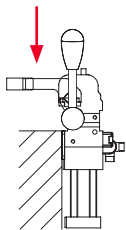
PNEUMATIC

Code	Description	Fh (daN)	Fs (daN)	Gr.
C001M25	SBPC-M-25	80	53	987



Fs (Clamping Force) = Clamping Moment/Clamping Arms Length (meters).

Fh (Holding Force) = Holding Moment/Clamping Arms Length (meters).



SBPC-M-63

PNEUMATIC POWER CLAMP WITH CONTROL LEVER

Body:

High quality light aluminium alloy, compact shape.

Square shaft:

Nitrided steel.

Integrated sensor:

Aluminum body, electromagnetic compatibility according to EN 60947-5-2:2007 + A1:2012 with 90° swivel connector (see specifications page 135).

Control Lever:

Steel, with red polyurethane ergonomic handle, supplied unassembled.

Features:

This device is recommended for use on test, welding and tooling control applications.

Opening angle adjustable from 0° to 135°.

Clamping lever to be ordered separately (see page 134). Manual release button to open the device in the absence of air pressure. Operating pressure 2 to 8 bar / 30 to 115 psi.

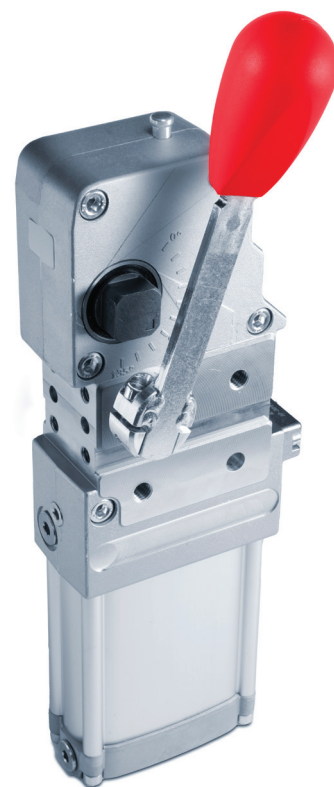
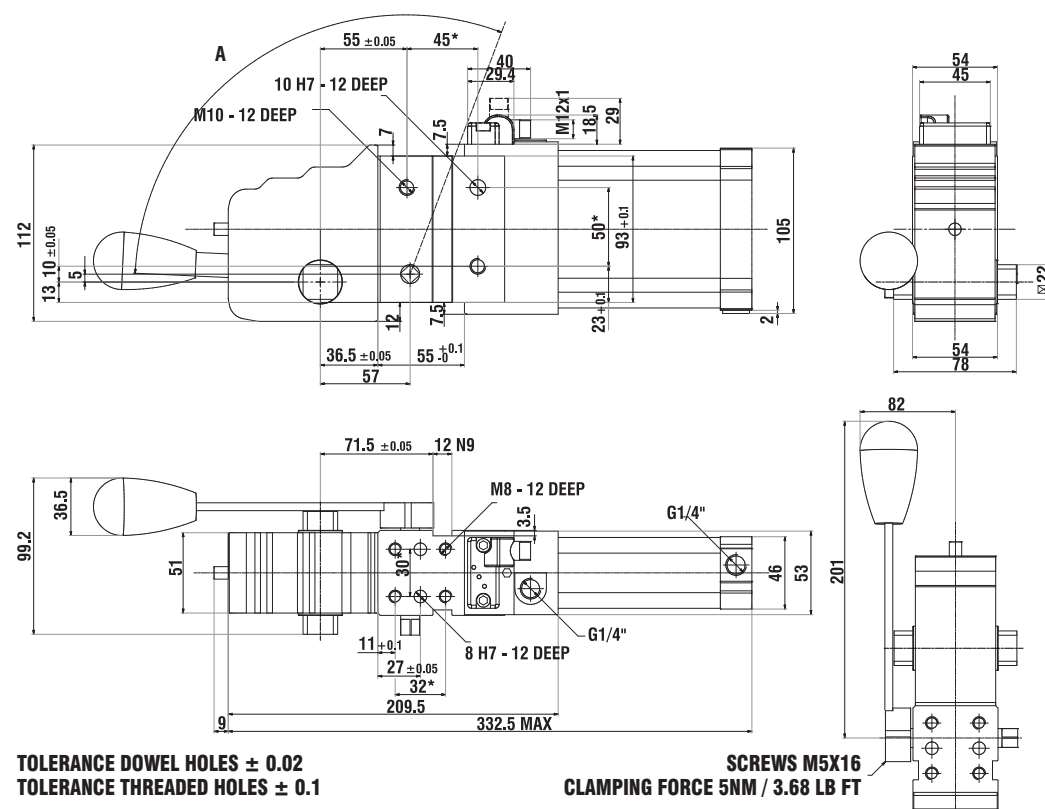
Assembly by means of threaded and dowel holes on all four sides of the tool.

Lubrication:

All devices are lubricated for life at the factory. It is not necessary to lubricate the mechanism during its use.

Opening angle	A= Control lever swivel angle
0°	2.65°
15°	26.35°
30°	41.38°
45°	56°
60°	70.38°
75°	83.43°
90°	94°
105°	102°
120°	107°
135°	110.7°

Max applicable force = 20 N

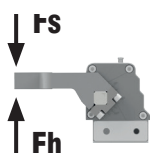


PNEUMATIC

TOLERANCE DOWEL HOLES ± 0.02
TOLERANCE THREADED HOLES ± 0.1

SCREWS M5X16
CLAMPING FORCE 5NM / 3.68 LB FT

Code	Description	Fh (daN)	Fs (daN)	Gr.
C001M63	SBPC-M-63	1.041	270	3930



Fs (Clamping Force) = Clamping Moment/Clamping Arms Length (meters).
Fh (Holding Force) = Holding Moment/Clamping Arms Length (meters).



CLAMPING LEVERS

Material:

Aluminium.

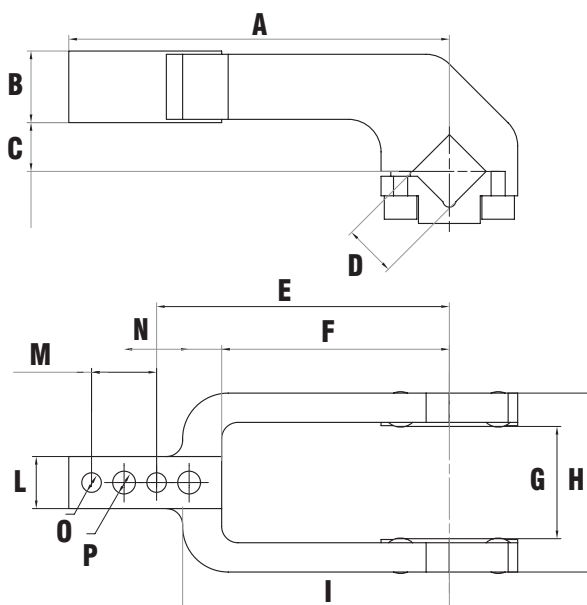
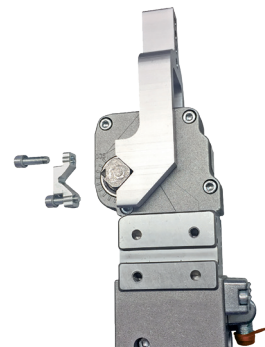
Features:

Provided with two cylinder head screws with hexagon socket for assembly on the device.

The lever arm is provided with four dowel holes for assembly of spindles, extensions and other clamping accessories.

The lever can be assembled in four different positions.

Clamping levers with double clamping surface are available upon request.



Code	Description	A	B	C Offset	D	E	F	G	H	I	L	M	N	O	P	Screws	Clamping moment	Device
CUB12012	B12012	93	20±0.1	0	□12	65±0.1	48	36	53	57	12	20±0.02	20±0.2	Ø 4 H7	Ø 6.5	M5x14	5 N m 3.68 lb ft	SBPC-P-25 SBPC-M-25
CUB1601	B1601	117	22±0.1	15±0.1	□16	90±0.1	70	34.5	55	82	16	20±0.02	20±0.2	Ø 6 H7	Ø 7	M6x20	10 N m 7.37 lb ft	SBPC-P-40 SBPC-M-40
CUB2201	B2201	144	28±0.1	15±0.1	□22	105±0.1	80	54	78	95	20	30±0.02	30±0.2	Ø 6 H7	Ø 9	M8x25	25 N m 18.43 lb ft	SBPC-P-63 SBPC-M-63



Code	Description	C Offset	Weight Gr. Δ	Max opening angle			
				pos 1	pos 2	pos 3	pos 4
CUB12012	B12012	0	127	135°	105°	135°	90°
CUB1601	B1601	15	240	135°	125°	N/A	45°
CUB2201	B2201	15	520	135°	115°	135°	80°



TECHNICAL DATA

Sensor (supplied with the clamping tool)

Material:

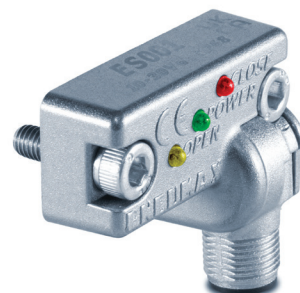
Aluminium.

Features:

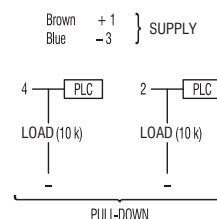
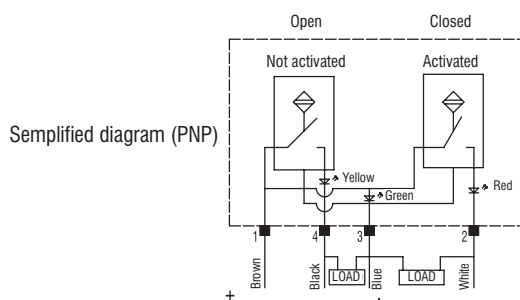
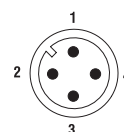
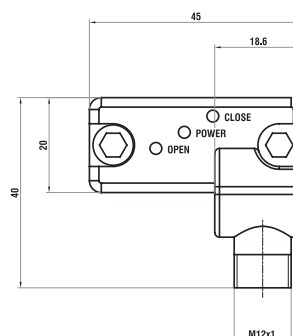
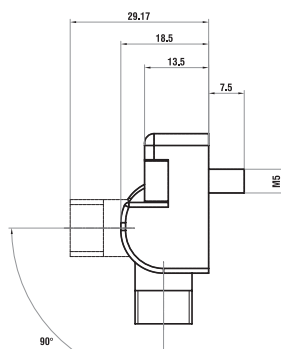
Oscillating connector allows it to rotate 90° to be connected to the cable in the most favourable position.

Supplied assembled on the clamping tool by means of two hexagon socket head cap screws.

Sensor with electromagnetic compatibility.



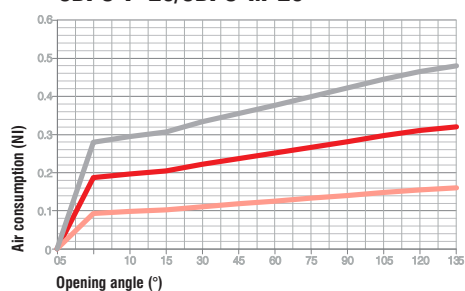
TECHNICAL DATA	
Operating voltage	10-30 VDC
Voltage drop	<=2V
Load current	<=100 mA
Current consumption	<=30 mA
Short-circuit protection	protected
IP protection rating	IP68
Operating temperature	-0 °C +50 °C
Storage temperature	-25 °C +60 °C
Electromagnetic compatibility	EN 60947-5-2:2007 + A1:2012
Power supply indication	green LED
Open position indication	yellow LED
Closed position indication	red LED
Digital output type	PNP



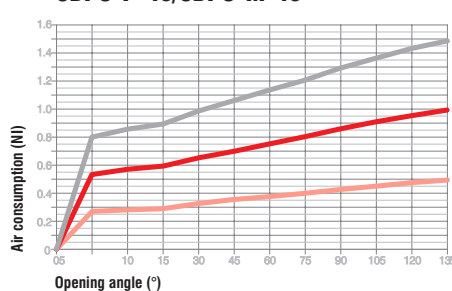
Air consumption graphs

Air consumption per complete cycle (opening and closing)

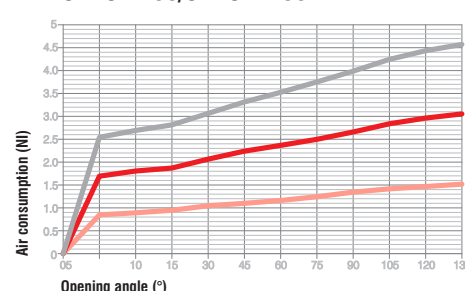
SBPC-P-25/SBPC-M-25



SBPC-P-40/SBPC-M-40

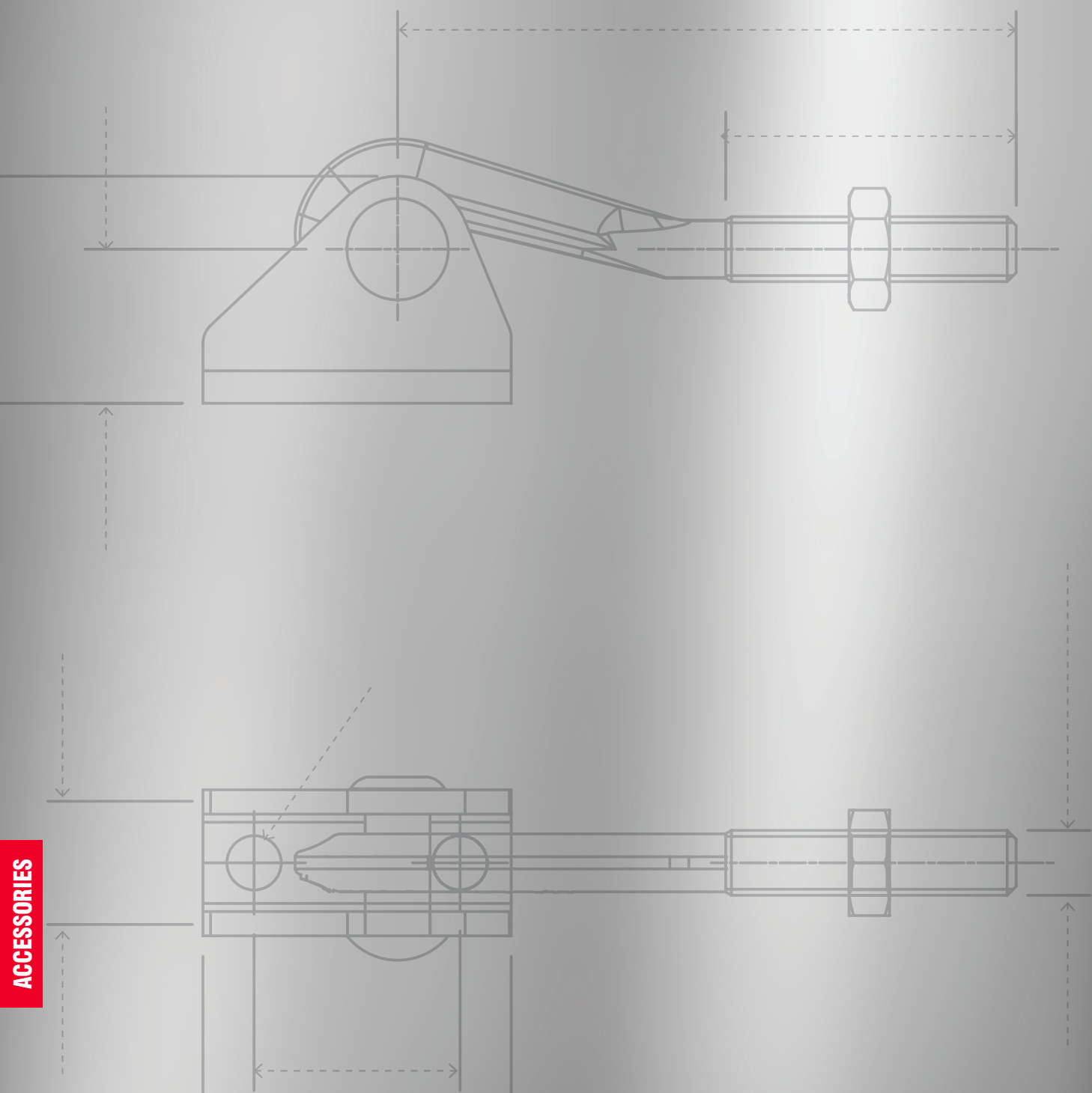


SBPC-P-63/SBPC-M-63



— Air consumption (NI) at 2 bar / 30 psi
 — Air consumption (NI) at 5 bar / 72.5 psi
 — Air consumption (NI) at 8 bar / 115 psi

ACCESSORIES



Here you can download
2D and 3D CAD drawings
of all products.



The Speedy Block clamping tools have a series of accessories that can be used both to complete the standard tools, in some cases adding new functions, and to replace any damaged parts.

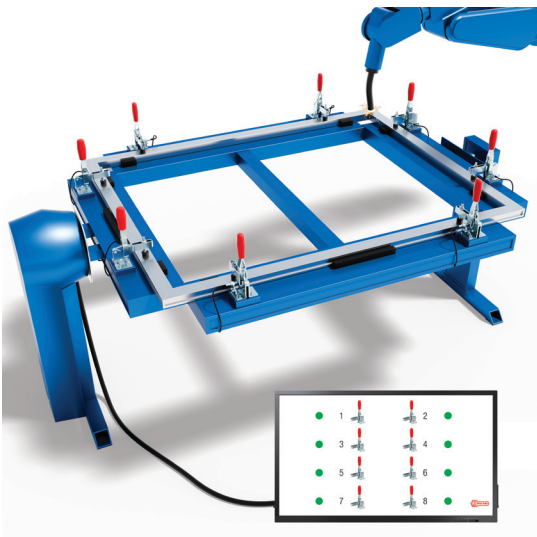
They fall within the caseload of the first group:

- Inductive sensors for manual tools
- Magnetic sensors for pneumatic tools
- Lever extensions and cross bars
- The spindles
- Single tie rods and special double tie rods
- The supports
- The accessories for the toggle mechanisms

They are part of the second group of accessories:

- The handles
- The flanged washers
- The bolt retainer band

QUICK CLAMPING TOOLS: PRECISION AND CONTROL FOR OPTIMIZED PROCESSES



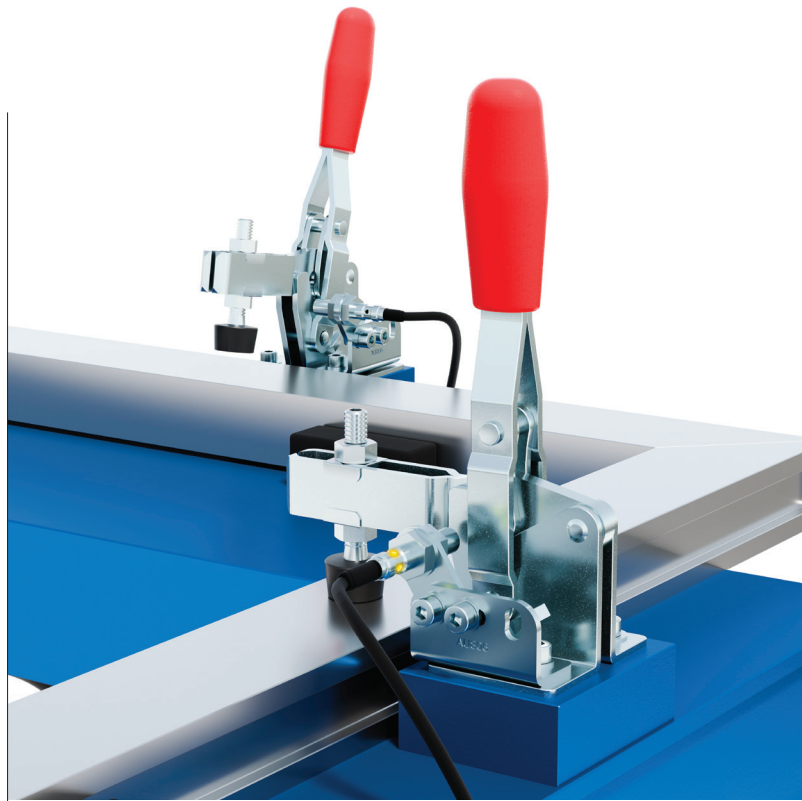
In the landscape of industrial assembly, quick-release clamping tools play a crucial role, ensuring speed, precision, and safety in component fastening operations. To further enhance the efficiency and reliability of these tools, Speedy Block has implemented innovative sensors capable of monitoring and controlling the clamping process with extreme accuracy.

Inductive Proximity Sensors for Manual Tools:

- Inductive proximity sensors detect the presence or absence of a metallic object, in this case, the clamping arm, at a specific location. By generating an oscillating magnetic field, these sensors identify changes caused by the metallic object, providing a precise signal to the control system.

Magnetic Position Sensors for Pneumatic Tools with Magnetic Cylinders:

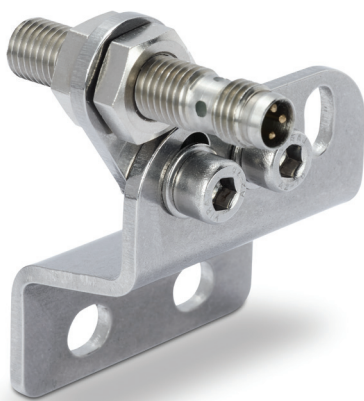
- Utilizing the magnetic field generated by magnetic cylinders, these sensors detect the precise position of the magnet inside the cylinder. This technology allows for extremely accurate monitoring of the clamping arm movement, ensuring complete control of the process. The technology used in magnetic position sensors makes them immune to electromagnetic interference, ensuring stable operation in any environment.



Integrating these sensors into Speedy Block's quick-release clamping tools offers numerous benefits:

- **Increased Precision:** The sensors ensure that the clamping arm reaches the correct position with utmost accuracy, minimizing errors and potential damage to components.
- **Optimized Control:** Continuous monitoring of the clamping process allows for the optimization of parameters and ensures safe and uniform clamping.
- **Enhanced Flexibility:** The sensors enable advanced functions such as the sequencing of multiple tools' clamping or automatic stop in case of malfunctions.
- **Improved Safety:** The sensors can activate safety devices in case of hazardous situations, protecting the operators' safety.
- **Ease of Installation:** The installation process of these sensors is simple and quick, requiring no special technical skills.
- **Reliability:** The robustness and durability of these sensors make them highly reliable over time, minimizing the risk of malfunctions.

In conclusion, the use of innovative sensors in Speedy Block's quick-release clamping tools represents a significant step forward in improving the efficiency, precision, and safety of assembly processes. The careful selection of the type of sensor, between inductive and magnetic, allows meeting the specific needs of each application, ensuring optimal results and excellent performance.



SPEEDY BLOCK SOLUTIONS

Inductive proximity sensors

Speedy Block offers for its clamping tools a Kit, consisting of a support structure, to be screwed to the base of the tool, and an inductive proximity sensor. Proximity sensors, applied to clamping tools manual tools, play a key role in ensuring correct positioning of the mechanisms during industrial machining operations. They send a remote signal of the successful closing or opening of the clamping tool and, in case of movements accidental or incorrect opening caused by vibration or shocks, they can trigger a lockout of the machining process. Thanks to this functionality, proximity sensors ensure accurate and reliable clamping, preventing potential errors or damage to the parts involved and thereby promoting quality and process safety.

Application
example on
vertical series tool

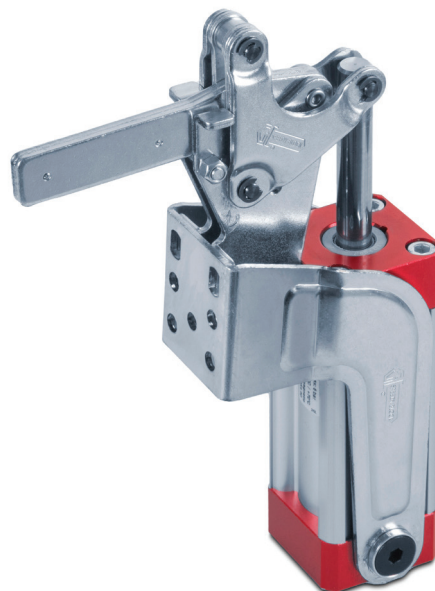


Magnetic position sensors

In Speedy Block range clamping tools, magnetic position sensors can be used on the magnetic cylinders of the pneumatic series, light and heavy-duty series.

These products are provided of magnetic cylinders which, supplemented by the corresponding position sensors provide, electric command and/or control impulses during their operations. Being equipped by luminous LEDs, they operate at a minimum voltage of 3 V., and in case of connection in series, the voltage drop will be 3 V. for each. It is good practice to use a connecting cable that is as short as possible because the excessive length of the cable could harm the operation of the sensor, due to the cable capacity which is directly proportional to its length.

For example, for a cable 10 m long, we recommend the application in series with the sensor of an inductor that will avoid the effects of the cable capacity itself. DC positive pole should always be connected to the brown wire. It is also advisable to maintain an adequate distance from power cables and large masses of ferrous as these could cause disturbances to the sensor due to mutual induction effects. The sensors are in a condition to receive a signal at a speed of 1 m/s





CONTROL SENSOR KIT

FOLDED BASED

Sensor holder:

Bracket to be attached to the base of the clamping tool and support made of **AISI 304 stainless steel**, to be connected to the bracket by means of two threaded screws with stainless steel nuts and washers, included in the supply.

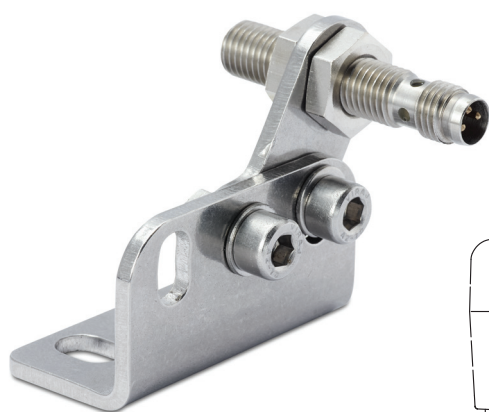
Slotted holes in the bracket allow the kit to be assembled on both sides of the clamping tool base and the sensor to be positioned in a manner appropriate to the needs of the application.

Control Sensor:

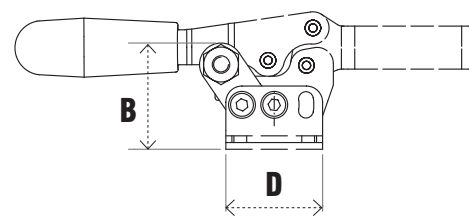
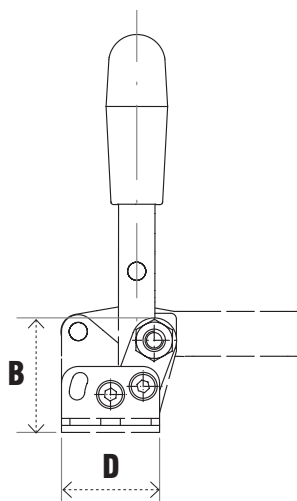
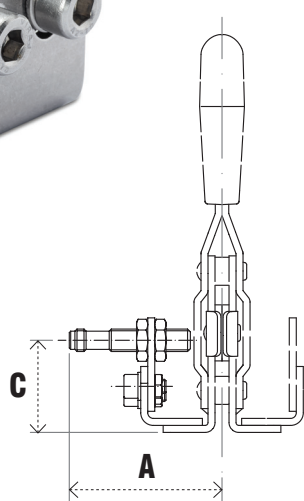
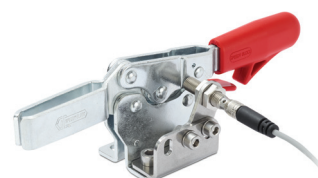
M8x1 threaded body in AISI 304 stainless steel, equipped with two nuts for assembly to the sensor holder bracket. See features on page 142.

Accessories to be ordered separately:

- Connector with 3-, 5- or 10-meter cable.



Application example
on horizontal series tool



A-E

M-O

Code	Description	A	B	C	D	Q	Weight	Matching series
AU800	130/A-E	52	41	33	35	5.5	67	130/A - AX - AL - ALX - E - EX - EL - ELX - ELS
AU802	130/M-O	48	40	32	36	5.5	68	130/M - MX - ML - MLX - O - OX - OL - OLX - OLS
AU804	230/A-E	54	45	37	43	6.5	76	230/A - AX - AL - ALX - E - EX - EL - ELX - ELS
AU806	230/M-O	50	44	36	44	6.5	77	230/M - MX - ML - MLX - O - OX - OL - OLX - OLS



CONTROL SENSOR KIT

STRAIGHT BASED

Sensor holder:

Bracket to be attached to the base of the clamping tool and support made of **AISI 304 stainless steel**, to be connected to the bracket by means of two threaded screws with stainless steel nuts and washers, included in the supply.

Slotted holes in the bracket allow the kit to be assembled on both sides of the clamping tool base and the sensor to be positioned in a manner appropriate to the needs of the application.

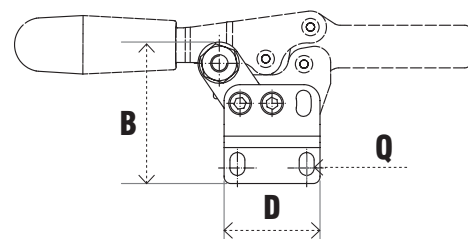
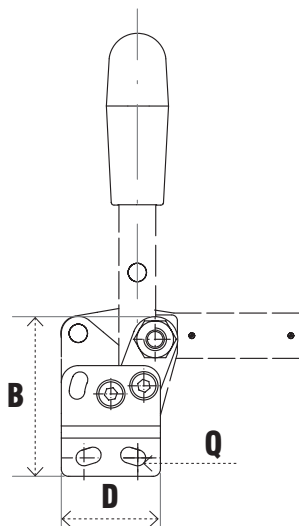
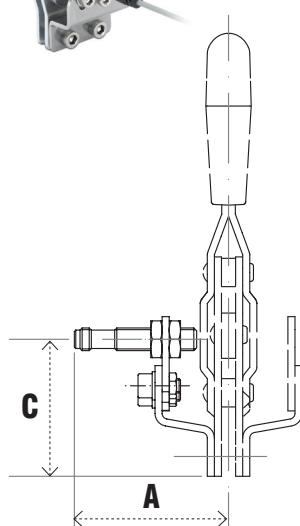
Control Sensor:

M8x1 threaded body in AISI 304 stainless steel, equipped with two nuts for assembly to the sensor holder bracket. See features on page 142.

Accessories to be ordered separately:

- Connector with 3-, 5- or 10-meter cable.

Application example
on vertical series tool



B-F

N-P

Code	Description	A	B	C	D	Q	Weight	Matching series
AU801	130/B-F	52	56	48	35	5.5	76	130/B - BX - BL - BLX - F - FX - FL - FLX - FLS
AU803	130/N-P	48	53	45	36	5.5	76	130/N - NX - NL - NLX - P - PX - PL - PLX - PLS
AU805	230/B-F	53	59	51	43	6.5	87	230/B - BX - BL - BLX - F - FX - FL - FLX - FLS
AU807	230/N-P	50	59	51	44	6.5	88	230/N - NX - NL - NLX - P - PX - PL - PLX - PLS



INDUCTIVE CONTROL SENSOR

Sensor body:

AISI 304 stainless steel M8x1 threaded body with two nuts for fixing to the sensor support bracket.
Can be used on Speedy Block supports (see Control Sensor Kit).

Code:

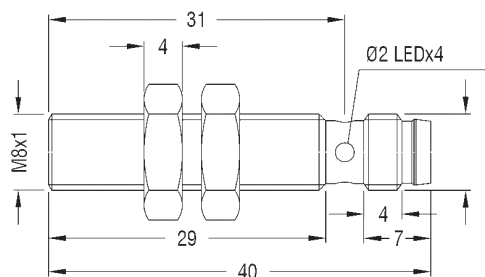
AU573

Description:

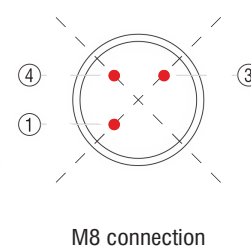
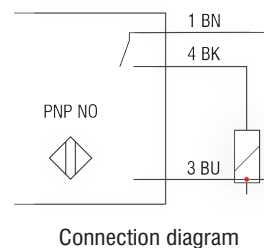
M8 inductive sensor.

Accessories to be ordered separately:

Connector with 3, 5 or 10 meter cable.



Output	PNP normally open
Working voltage	10-36 V DC
Output indicator	Yellow LED on
Short circuit/overload indicator	Flashing LED
Working temperature	-25 +80 °C
Protection degree	IP 67



CONNECTOR

Three-way M8 connector for control sensors.

Available with 3, 5 or 10 meter cable.

Can be used on Speedy Block control sensors (see Control Sensor Kit).



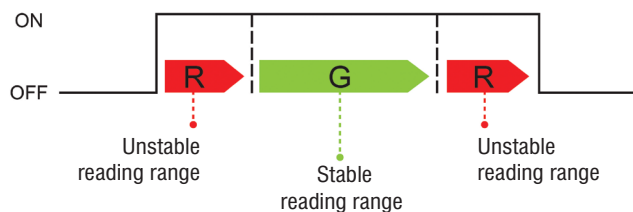
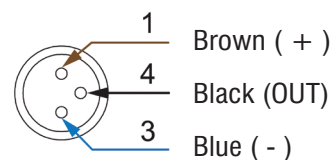
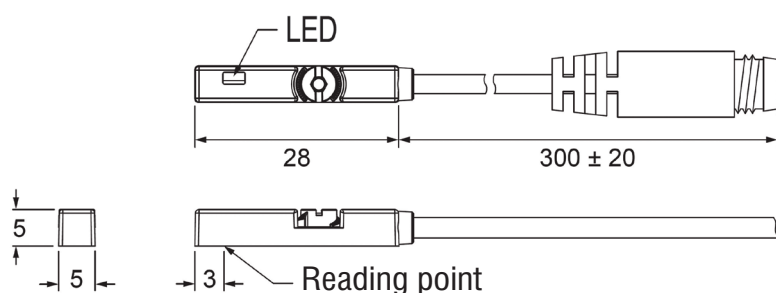
Code	Description	Cable length
AU570-3	Connector M8 Length 3m	3 meters
AU570-5	Connector M8 Length 5m	5 meters
AU570-10	Connector M8 Length 10m	10 meters



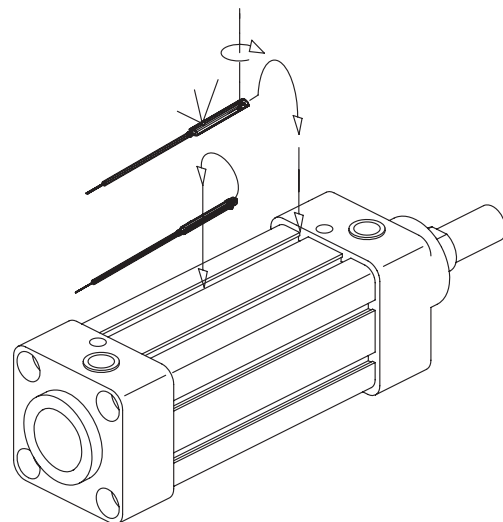
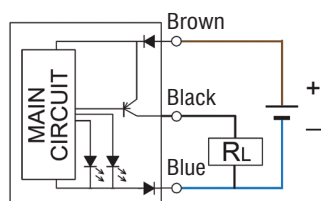
MAGNETIC CONTROL SENSOR

Three-pole connector with 300 mm cable for pneumatic series.

Product code:
AU570



CONNECTION BOARD



APPLICATION EXAMPLE ON PNEUMATIC CYLINDER

Electrical data		Matching series
Switch logic	Electronic normally open	AP-EP-APV-EPV-APVS-EPVS-SP4-EPM-EPVM-LPV
Model	PNP	
Working voltage	10~28 V DC	
Working current	80 mA max	
Power	2 W max	
Led information	Red led: unstable reading range Green LED: stable reading range	
Working temperature	-10 ~60 °C	



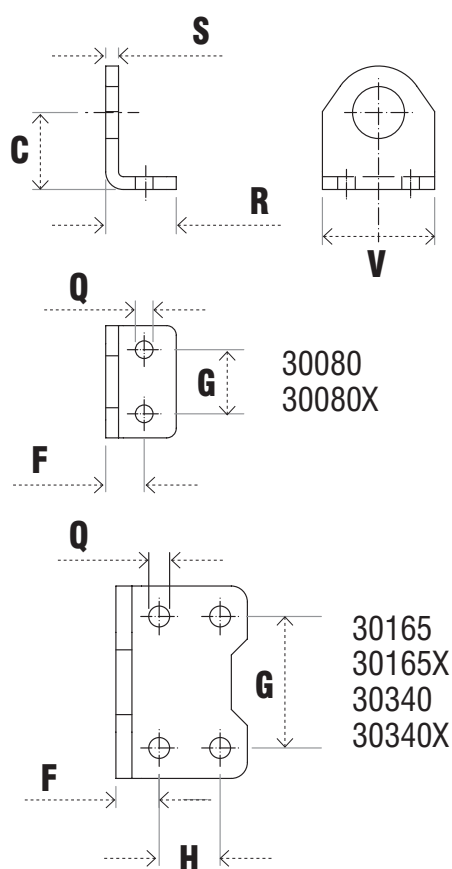
AS-ASX BRACKETS

SUPPORT BRACKETS FOR PUSH AND PULL ROD AS-ASX SERIES

Material:

Galvanized steel or **AISI 304 stainless steel**.

Fastened by screws, not included in the supply.



Code	Description	C	F	G	H	Q	R	S	V	Matching series
AG416	30080	24	12	20	-	5.5	22	4	35	80/AS
AG421	30165	32	13.5	41	19	6.5	41	5	60	165/AS
AG426	30340	48	19	55	25	8.5	59	5	75	340/AS

Code	Description	C	F	G	H	Q	R	S	V	Matching series
AS416	30080X	24	12	20	-	5.5	22	4	35	80/ASX
AS421	30165X	32	13.5	41	19	6.5	41	5	60	165/ASX
AS426	30340X	48	19	55	25	8.5	59	5	75	340/ASX





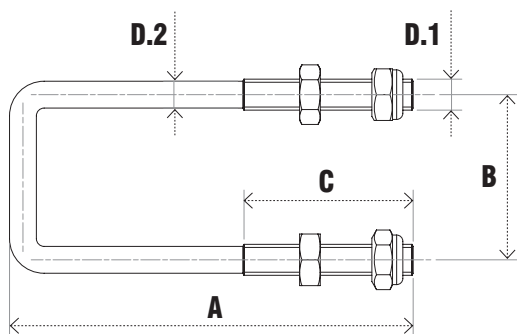
U-SHAPED TIE RODS

TIE RODS FOR DOUBLE TIE ROD TOGGLE CLAMPS

Material:

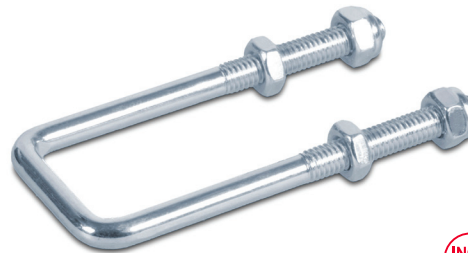
Galvanized steel, **AISI 304 or AISI 316 stainless steel.**

Assembly by means of four threaded nuts, included in the supply.



Code	Description	A	B	C	D.1	D.2
AX556	160/T2 - T6	56.4	21	27.5	M4	3.4
AX556-103	160/T20 - T30 - T40 - T60	103.4	21	30	M4	3.4
AX556-153	160/T20 - T30 - T40 - T60	153.4	21	35	M4	3.4
AX556-203	160/T20 - T30 - T40 - T60	203.4	21	35	M4	3.4
AX557	160/T3 - T4	70.4	21	28.5	M4	3.4
AX558	320/T2 - T6	78.2	32	33	M6	5.2
AX558-130	320/T20 - T30 - T40 - T60	130.2	32	45	M6	5.2
AX558-155	320/T20 - T30 - T40 - T60	155.2	32	45	M6	5.2
AX558-205	320/T20 - T30 - T40 - T60	205.2	32	45	M6	5.2
AX559	320/T3 - T4	110.2	32	44	M6	5.2
AX560	700/T2 - T6	111.2	38	52	M8	7.2
AX560-127	700/T20 - T30 - T40 - T60	127.2	38	60	M8	7.2
AX560-157	700/T20 - T30 - T40 - T60	157.2	38	60	M8	7.2
AX560-207	700/T20 - T30 - T40 - T60	207.2	38	60	M8	7.2
AX563	700/T3 - T4	143.2	38	56	M8	7.2

Code	Description	A	B	C	D.1	D.2
AX561	1700/T2 - T2S - T6 - T6S	129	46	45	M10	9
AX561-179	1700/T20 - T2S0 - T60 - T6S0	179	46	45	M10	9
AX561-209	1700/T20 - T2S0 - T60 - T6S0	209	46	45	M10	9
AX561-259	1700/T20 - T2S0 - T60 - T6S0	259	46	45	M10	9
AX562	4000/T2 - T2S - T6 - T6S	150.8	55	70	M12	10.8
AX562-211	4000/T20 - T2S0 - T60 - T6S0	210.8	55	70	M12	10.8
AX562-361	4000/T20 - T2S0 - T60 - T6S0	360.8	55	70	M12	10.8
AX562-421	4000/T20 - T2S0 - T60 - T6S0	420.8	55	70	M12	10.8
AX564	1400/T3 - T3S	149	46	55	M10	9
AX565	1510/T2 - T2S	179	52	70	M10	8.9



Code	Description	A	B	C	D.1	D.2
AX570	160/T2X	56.4	21	27.5	M4	3.4
AX570-103	160/T20X - T30X	103.4	21	30	M4	3.4
AX570-153	160/T20X - T30X	153.4	21	35	M4	3.4
AX570-203	160/T20X - T30X	203.4	21	35	M4	3.4
AX572	320/T2X	78.2	32	33	M6	5.2
AX572-130	320/T20X - T30X	130.2	32	45	M6	5.2
AX572-155	320/T20X - T30X	155.2	32	45	M6	5.2
AX572-205	320/T20X - T30X	205.2	32	45	M6	5.2
AX573	700/T2X	111.2	38	52	M8	7.2
AX573-127	700/T20X - T30X	127.2	38	60	M8	7.2
AX573-157	700/T20X - T30X	157.2	38	60	M8	7.2
AX573-207	700/T20X - T30X	207.2	38	60	M8	7.2
AX574	160/T3X	70.4	21	28.5	M4	3.4
AX576	320/T3X	110.2	32	44	M6	5.2
AX577	700/T3X	143.2	38	56	M8	7.2
AX604	160/T16	56.4	21	27.5	M4	3.4
AX604-103	160/T160	103.4	21	30	M4	3.4
AX604-153	160/T160	153.4	21	35	M4	3.4
AX604-203	160/T160	203.4	21	35	M4	3.4
AX606	320/T16	78.2	32	33	M6	5.2
AX606-130	320/T160	130.2	32	45	M6	5.2
AX606-155	320/T160	155.2	32	45	M6	5.2
AX606-205	320/T160	205.2	32	45	M6	5.2
AX608	700/T16	111.2	38	52	M8	7.2
AX608-127	700/T160	127.2	38	60	M8	7.2
AX608-157	700/T160	157.2	38	60	M8	7.2
AX608-207	700/T160	207.2	38	60	M8	7.2



Code	Description	A	B	C	D.1	D.2
AX578	1700/T2X - T2SX - T6 - T6SX	129	46	45	M10	9
AX578-179	1700/T20X - T2S0X - T60X - T6S0X	179	46	45	M10	9
AX578-209	1700/T20X - T2S0X - T60X - T6S0X	209	46	45	M10	9
AX578-259	1700/T20X - T2S0X - T60X - T6S0X	259	46	45	M10	9
AX580	4000/T2X	150.8	55	70	M12	10.8
AX580-211	4000/T20X - T2S0X - T60X - T6S0X	210.8	55	70	M12	10.8
AX580-361	4000/T20X - T2S0X - T60X - T6S0X	360.8	55	70	M12	10.8
AX580-421	4000/T20X - T2S0X - T60X - T6S0X	420.8	55	70	M12	10.8





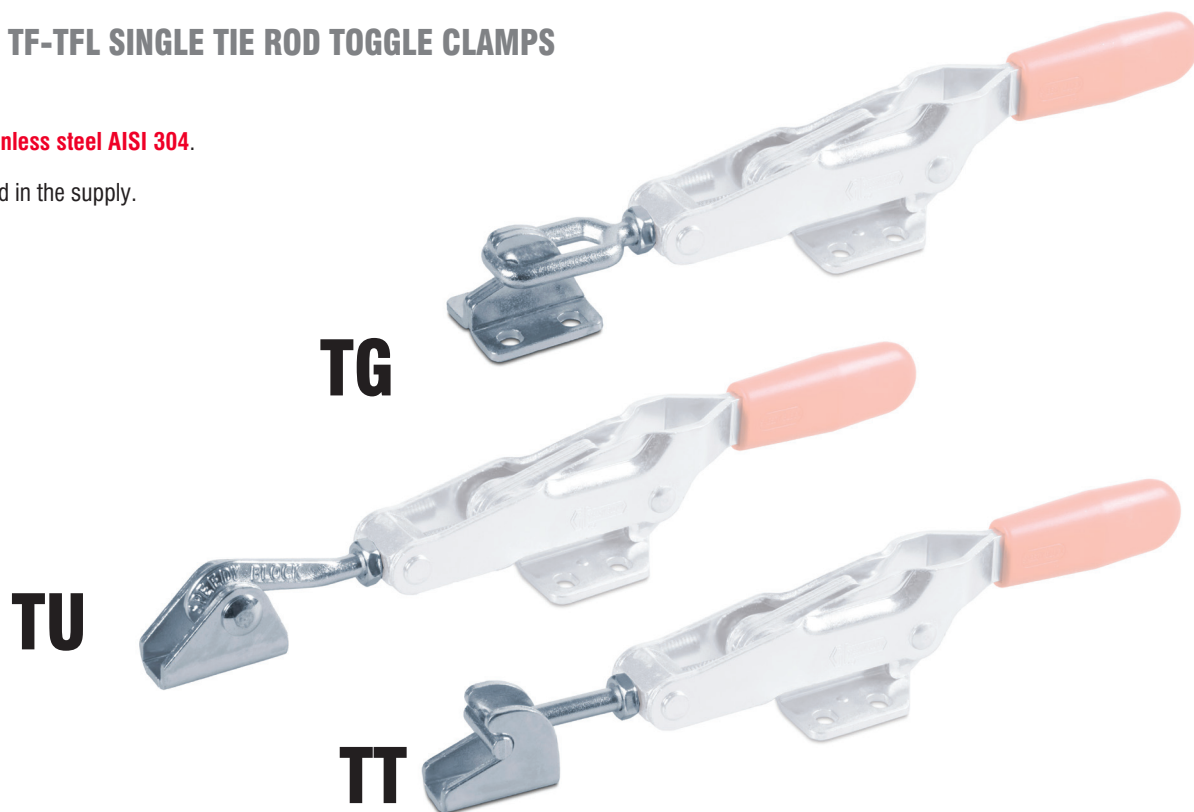
TT-TG-TU

TIE RODS FOR TF-TFL SINGLE TIE ROD TOGGLE CLAMPS

Material:

Galvanized steel, **stainless steel AISI 304**.

Threaded nut included in the supply.



Code	Description	A	B	C	D	G	H	I	L	M	P
AU544	33/TG	35	34	19	30	19	22.3	34	76.5	M8	6.7
AU546	43/TG	50	41	28	40.5	31	25.4	42	95.5	M10	8.5



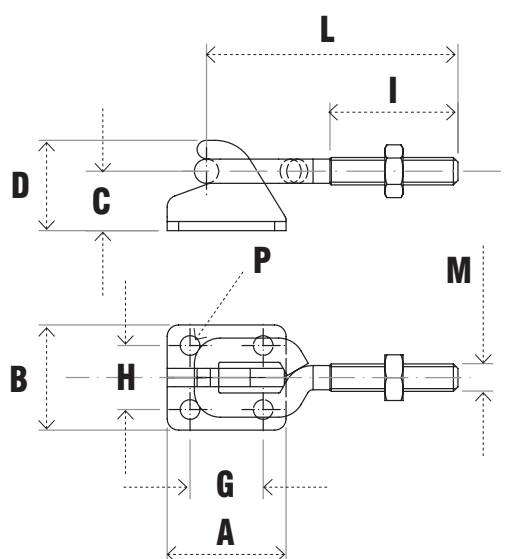
Code	Description	A	B	C	D	G	H	I	L	M	P
AU556	33/TGX	35	34	19	30	19	22.3	34	76.5	M8	6.7
AU558	43/TGX	50	41	28	40.5	31	25.4	42	95.5	M10	8.5

Code	Description	A	B	C	D	G	I	L	M	P
AU548	33/TU	38	18	19	28	25.4	34	76.5	M8	6.7
AU550	43/TU	50	26	28	39	31	43	93	M10	8.5

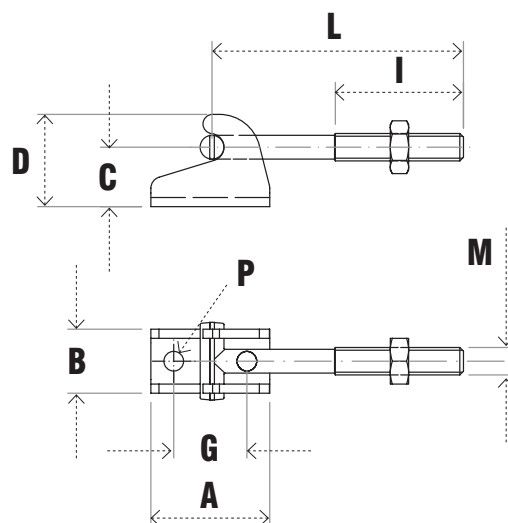


Code	Description	A	B	C	D	G	I	L	M	P
AU560	33/TUX	38	18	19	28	25.4	34	76.5	M8	6.7
AU562	43/TUX	50	26	28	39	31	43	93	M10	8.5

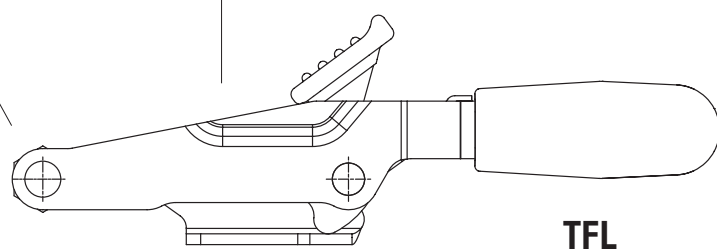
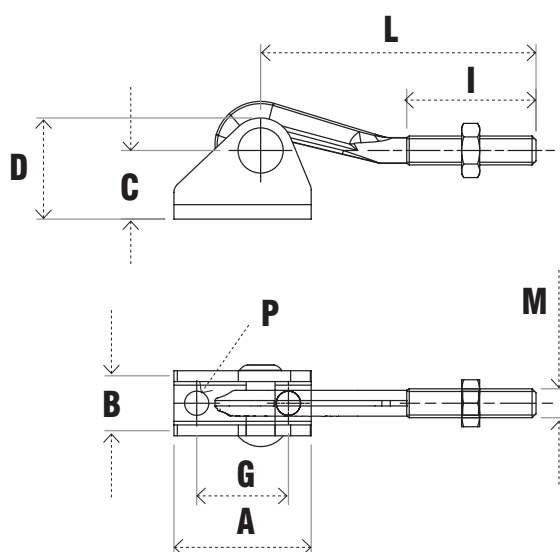
TG
Eyebolt tie rod



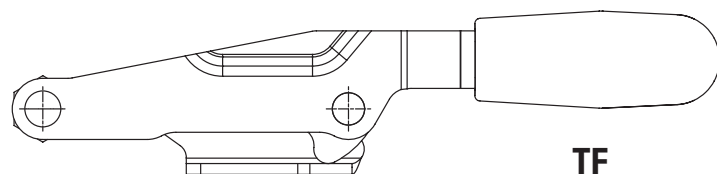
TT
T-tie rod



TU
Hook tie rod



TFL



TF

Code	Description	A	B	C	D	G	I	L	M	P
AU552	33/TT	35	18	19	30	19	34	76.5	M8	6.7
AU554	43/TT	50	26	28	40.5	31	43	93	M10	8.5



Code	Description	A	B	C	D	G	I	L	M	P
AU564	33/TTX	35	18	19	30	19	34	76.5	M8	6.7
AU566	43/TTX	50	26	28	40.5	31	43	93	M10	8.5





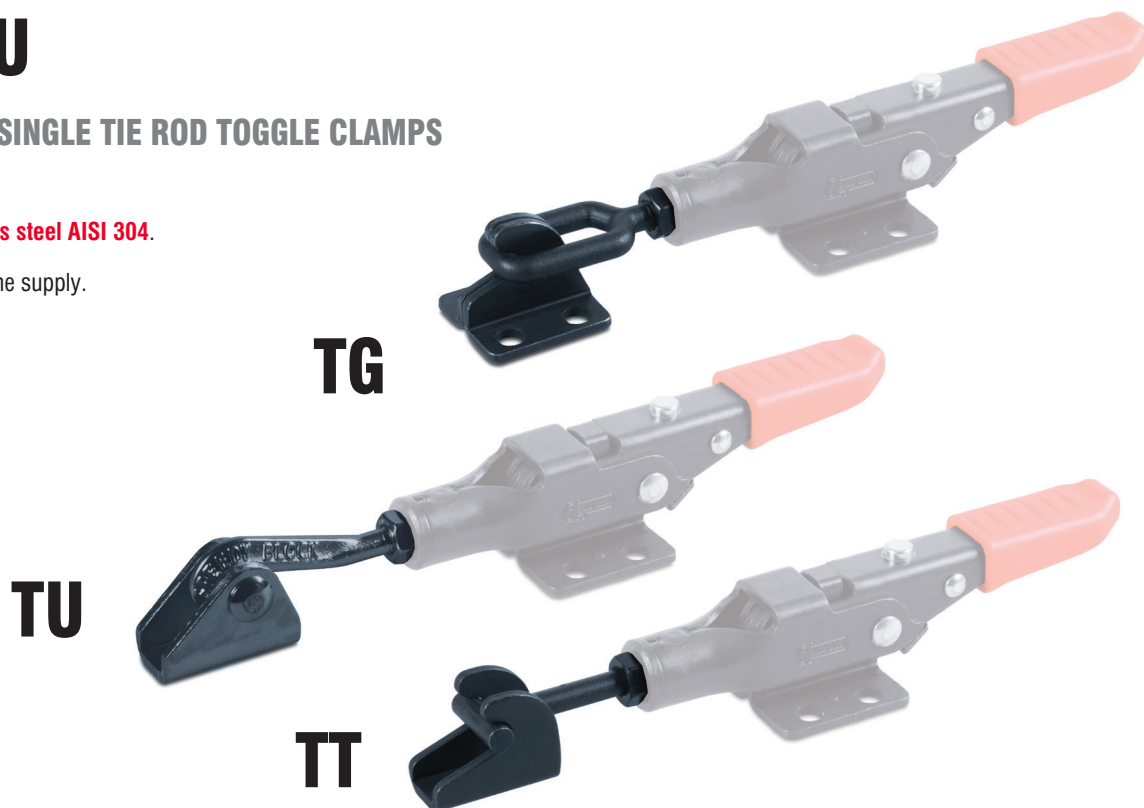
TT-TG-TU

TIE RODS FOR T5 SINGLE TIE ROD TOGGLE CLAMPS

Material:

Phosphated steel, **stainless steel AISI 304**.

Threaded nut included in the supply.



Code	Description	A	B	C	D	G	H	I	L	M	P
AU400	160/TG	26	23	13	19.8	16	14.3	28	55	M6	4.5
AU406	320/TG	35	34	19	30	19	22.3	34	76.5	M8	6.7
AU412	700/TG	50	41	28	40.5	31	25.4	42	95.5	M10	8.5



Code	Description	A	B	C	D	G	H	I	L	M	P
AU420	160/TGX	26	23	13	19.8	16	14.3	28	55	M6	4.5
AU556	320/TGX	35	34	19	30	19	22.3	34	76.5	M8	6.7
AU558	700/TGX	50	41	28	40.5	31	25.4	42	95.5	M10	8.5

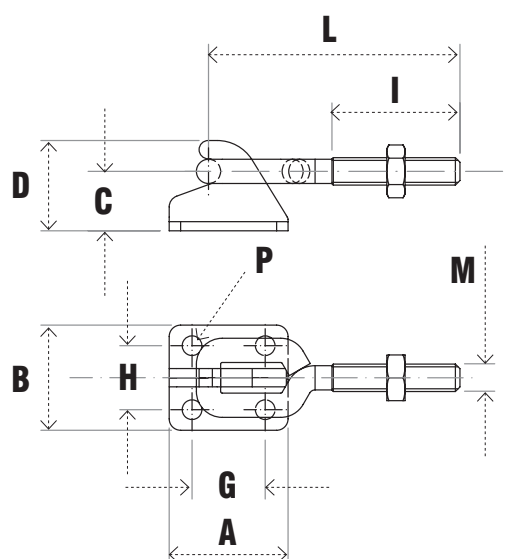
Code	Description	A	B	C	D	G	I	L	M	P
AU402	160/TU	35	14	13	20.4	25.4	28	54	M6	4.5
AU408	320/TU	38	18	19	28	25.4	34	75.5	M8	6.7
AU414	700/TU	50	26	28	39	31	43	93	M10	8.5



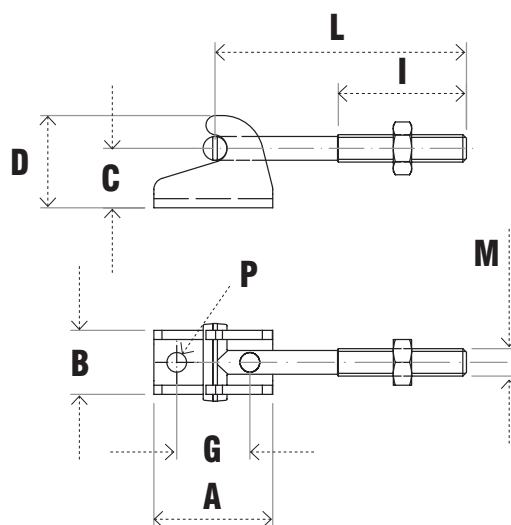
Code	Description	A	B	C	D	G	I	L	M	P
AU422	160/TUX	35	14	13	20.4	25.4	28	54	M6	4.5
AU428	320/TUX	38	18	19	28	25.4	34	75.5	M8	6.7
AU434	700/TUX	50	26	28	39	31	43	93	M10	8.5



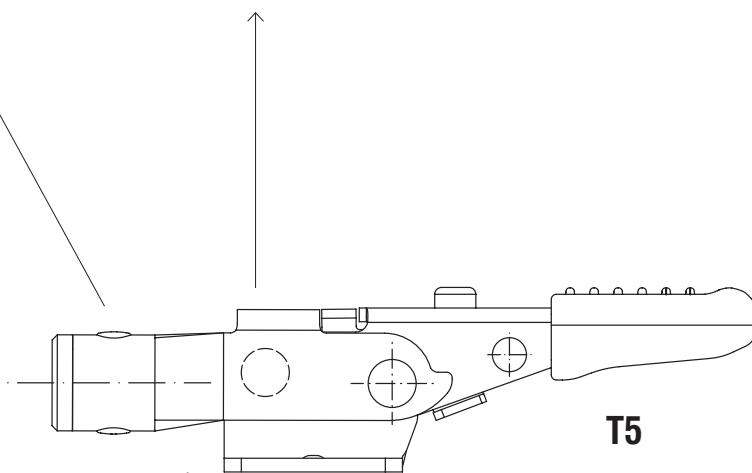
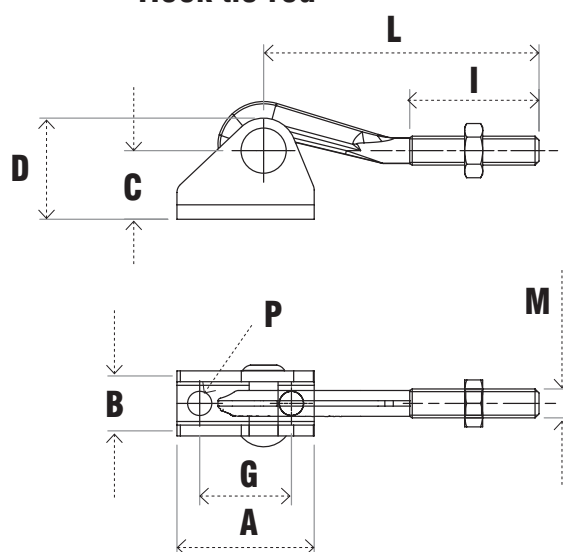
TG
Eyebolt tie rod



TT
T-tie rod



TU
Hook tie rod



Code	Description	A	B	C	D	G	I	L	M	P
AU404	160/TT	26	14	13	20	16	28	55	M6	4.5
AU410	320/TT	35	18	19	30	19	34	76.5	M8	6.7
AU416	700/TT	50	26	28	40.5	31	42	93	M10	8.5



Code	Description	A	B	C	D	G	I	L	M	P
AU424	160/TTX	26	14	13	20	16	28	55	M6	4.5
AU564	320/TTX	35	18	19	30	19	34	76.5	M8	6.7
AU566	700/TTX	50	26	28	40.5	31	42	93	M10	8.5



TT-TG

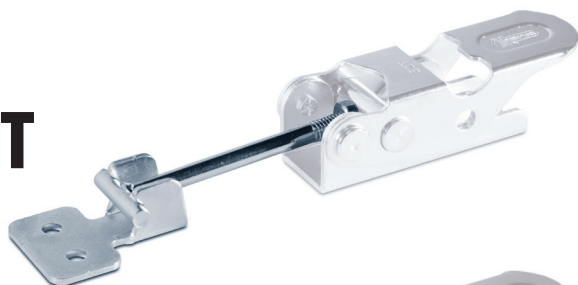
TIE RODS FOR TOGGLE LATCHES

Material:

Galvanized steel, **stainless steel AISI 304**.

Threaded nut included in the supply.

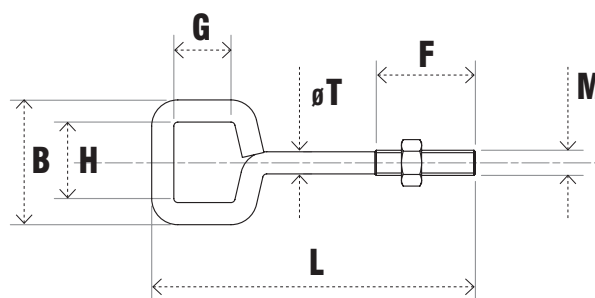
TT



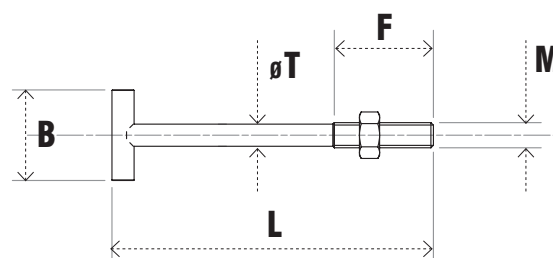
TG



TG
Eyebolt tie rod



TT
T-tie rod



Code	Description	B	F	G	H	L	M	T
AX630	E1G-E1GL	25	20	12	16	64	M5	4.4
AX632	E2G-E2GL	31	25	15	20.4	83	M6	5.2
AX634	E3G-E3GL	42	30	18.4	28	102	M8	7
AX642	E1T-E1TL	18	20			64	M5	4.4
AX644	E2T-E2TL	24	25			84	M6	5.2
AX646	E3T-E3TL	30	30			102	M8	7



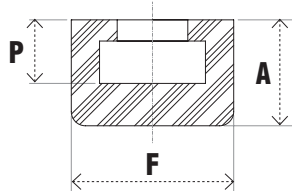
Code	Description	B	F	G	H	L	M	T
AX636	E1GX-E1GLX	25	20	12	16	64	M5	4.4
AX638	E2GX-E2GLX	31	25	15	20.4	83	M6	5.2
AX640	E3GX-E3GLX	42	30	18.4	28	102	M8	7
AX648	E1TX-E1TLX	18	20			64	M5	4.4
AX650	E2TX-E2TLX	24	25			84	M6	5.2
AX652	E3TX-E3TLX	30	30			102	M8	7



NEOPRENE CAP

CAP FOR RIGID SPINDLE

Material:
Neoprene.

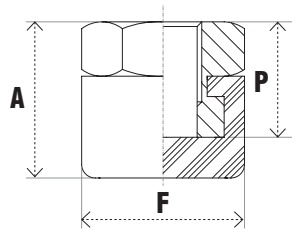


Code	Description	A	F	P	Matching spindle
AU109	1099	6.5	11	4	M4
AU110	1100	8	12.5	5	M5
AU111	1101	10	15	6	M6
AU112	1102	13	19	7.5	M8
AU113	1103	16	24	9	M10
AU114	1104	19	26	10.5	M12

NEOPRENE CAP WITH THREADED NUT

CAP FOR THREADED SCREW

Material:
Galvanized steel threaded nut and neoprene cap.



Code	Description	A	F	P	Matching spindle
AU200	1200	11	12.5	8.5	M5
AU201	1201	14	15	10	M6
AU202	1202	18	19	12.5	M8
AU203	1203	23	24	16	M10
AU204	1204	26.6	26	18	M12

ERGONOMIC HANDLES

Material:
Red polyurethane; resistant to oil, grease and other chemicals.



Code	Description	Matching series
AU150	10150	75/AVF-EVF-A-B-E-F-M-MF-MFL-N-O-P-ML-NL-OL-PL-50/ASD-ASS-70/AS-ASD-ASS-80/AS-160/T6-T60 "Also for Inox series"
AU151	10151	130/AVF-EVF-A-B-E-F-AL-BL-EL-ELS-FL-FLS-LLA01-LLB01-LLE01-LLF01-130/M-MF-MFL-N-O-OLS-P-ML-NL-OL-PL-120/AS-360/AS "Also for Inox series"
AU152	10152	230/AVF-EVF-A-B-E-F-AL-BL-EL-ELS-FL-M-MF-N-O-P-165/AS-320/T6-T60-230/APVS-EPVS "Also for Inox series"
AU153	10153	200/AV-EV-330/AVF-EVF-A-B-E-F-550/ASD-ASS-300/AS-550/AS-200/T-TF-33/T-TF-TL-TFL-700/T6-T60-330/APVS-EPVS "Also for Inox series"
AU154	10154	300/AV-EV-430/A-B-E-F-LLA02-LLB02-LLE02-LLF02-355/M-MF-N-O-P-1100/AS-340/AS-300/T-TF-43/TL-TFL-1400/T5 "Also for Inox series"
AU155	10155	530/A-B-E-F-455/M-N-O-P-2100/AS-3100/AS-400-T-TF
AU156	10156	LLE03-LLF03-1000/F-2000/F
AU157	10157	LLE04-LLF/04-3000/F
AU158	10158	160/AS-ASD-ASS "Also for Inox series"
AU159	10159	230/ML-NL-OL-OLS-PL-PLS "Also for Inox series"
AU160	10160	355/ML-NL-OL-PL
AU161	10161	455/ML-NL-OL-PL



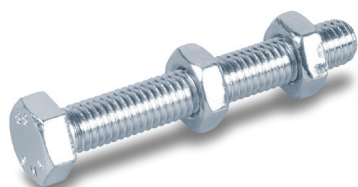
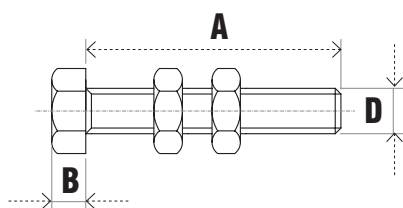
RIGID SPINDLE

SPINDLE FOR CLAMPING LEVER ARMS

Material:

Galvanized steel or **AISI 304 stainless steel**.

Two threaded nuts, included in the supply.



Code	Description	A	B	D
AU099	10099	20	3	M4
AU100	10100	35	3.5	M5
AU101	10101	45	4	M6
AU102	10102	55	5	M8
AU103	10103	70	6	M10
AU104	10104	80	8	M12
AU105	10105	120	8	M12



Code	Description	A	B	D
AU509	50099	20	3	M4
AU510	50100	35	3.5	M5
AU511	50101	45	4	M6
AU512	50102	55	5	M8

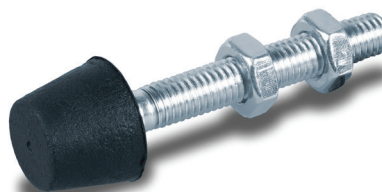
NEOPRENE SPINDLE

SPINDLE FOR CLAMPING LEVER ARMS

Material:

Galvanized steel or **AISI 304 stainless steel** body and neoprene head.

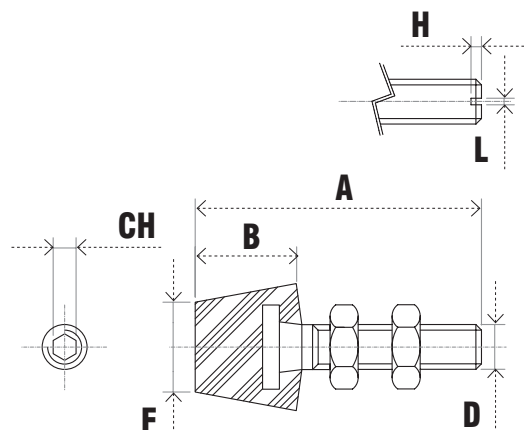
Two threaded nuts, included in the supply.



Code	Description	A	B	D	F	CH	L	H
AU139	10139	25	5	M4	6			
AU140	10140	45	11	M5	10	2.5		
AU141	10141	55	12	M6	12.5	3		
AU142	10142	70	16	M8	16	4		
AU143	10143	77	20	M10	20	5		
AU144	10144	100	25	M12	24		2	2.8
AU145	10145	130	25	M12	24		2	2.8



Code	Description	A	B	D	F	CH	L	H
AU539	50139	25	5	M4	6			
AU540	50140	45	11	M5	10	2.5		
AU541	50141	55	12	M6	12.5	3		
AU542	50142	70	16	M8	16	4		





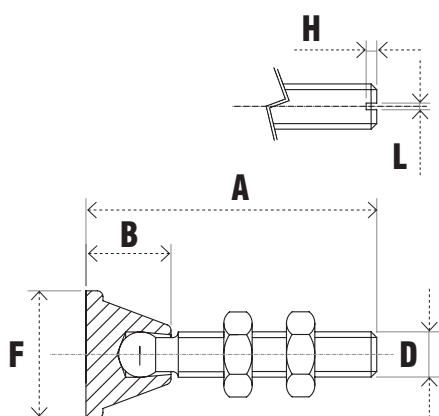
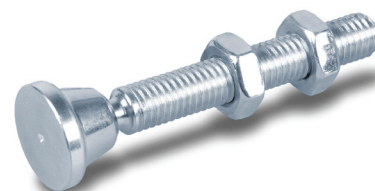
ARTICULATED HEAD SPINDLE

SPINDLE FOR CLAMPING LEVER ARMS

Material:

Galvanized steel or **AISI 304 stainless steel**.

Two threaded nuts, included in the supply.



Code	Description	A	B	D	F	L	H
AU120	10120	36	9.5	M5	14	0.8	1.25
AU121	10121	46	10	M6	16	1	1.6
AU122	10122	65	12	M8	18	1.2	2
AU123	10123	75	14	M10	20	1.6	2.4
AU124	10124	85	16	M12	24	2	2.8
AU125	10125	125	16	M12	24	2	2.8



Code	Description	A	B	D	F	L	H
AU520	50120	36	9.5	M5	14	0.8	1.25
AU521	50121	46	10	M6	16	1	1.6
AU522	50122	65	12	M8	18	1.2	2

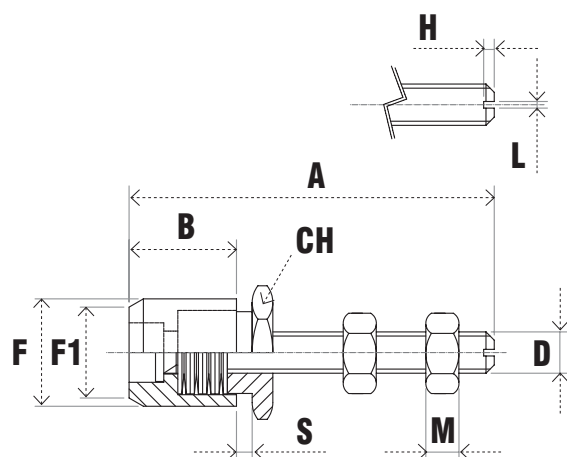
SPRING SPINDLE

SPRING SPINDLE FOR CLAMPING LEVER ARMS

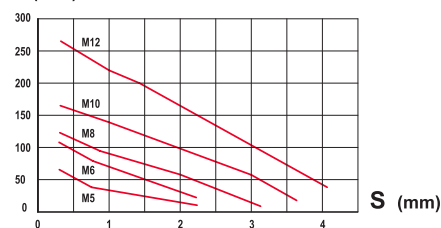
Material:

Galvanized steel body and phosphated steel head.

Two threaded nuts, included in the supply.



FH (daN)



Code	Description	A	B	D	F	F1	M	CH	L	H
AU128	10128	45	13	M5	13	11	4	14	0.8	1.25
AU129	10129	50	15	M6	16	13	4	16	1	1.6
AU130	10130	70	17	M8	18	15	5	18	1.2	2
AU131	10131	85	20	M10	24	18	6	24	1.6	2.4
AU132	10132	106	24	M12	28	21	7	27	2	2.8





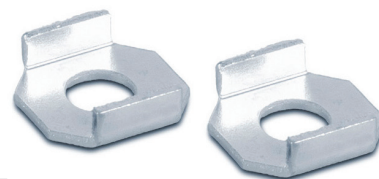
BENT WASHERS

WASHERS FOR SPINDLES

Material:

Galvanized steel or **AISI 304 stainless steel**.

For assembling spindles on open levers.



Code	Description	Matching spindle
AU205	20105	M4
AU206	20106	M5
AU207	20107	M6
AU208	20108	M8
AU209	20109	M10
AU210	20110	M12
AU211	20111	M6
AU212	20112	M10

Code	Description	Matching spindle
AU505	50105	M4
AU506	50106	M5
AU507	50107	M6
AU508	50108	M8
AU543	50109	M10

BOLT RETAINER BAND

BOLT RETAINERS FOR SPINDLES

Material:

Galvanized steel or **AISI 304 stainless steel**.

For assembling spindles on the solid levers.



Code	Description	Matching spindle
AU180	10180	M5
AU181	10181	M6
AU182	10182	M8
AU183	10183	M10
AU184	10184	M12
AU185	10185	M12
AU186	10186	M12
AU189	10189	M12
AU190	10190	M8

Code	Description	Matching spindle
AU580	50180	M5
AU581	50181	M6
AU582	50182	M8
AU589	50189	M6

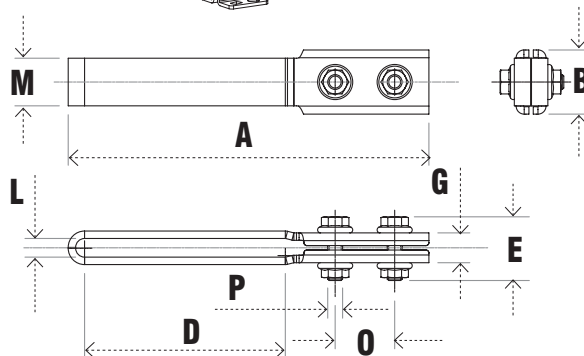
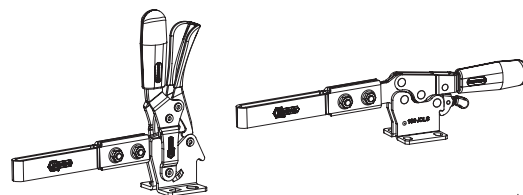
EXTENSIONS

OPEN EXTENSIONS FOR SOLID CLAMPING LEVER ARMS

Material:

Galvanized steel.

Supplied with two nuts and screws for assembly on solid levers.



Code	Description	A	B	D	E	G	L	M	O	P	Gr.	Matching series
AU340	AP6	121	21.5	67.5	21.5	10	6.3	16	20	M5	95	130/OLS/PLS/ELS/FLS
AU342	AP8	142	24.5	71.5	26.5	12	8.2	18	26	M6	165	230/OLS/PLS/ELS/FLS



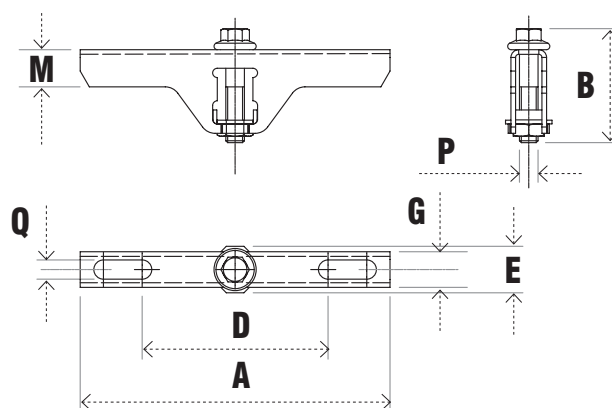
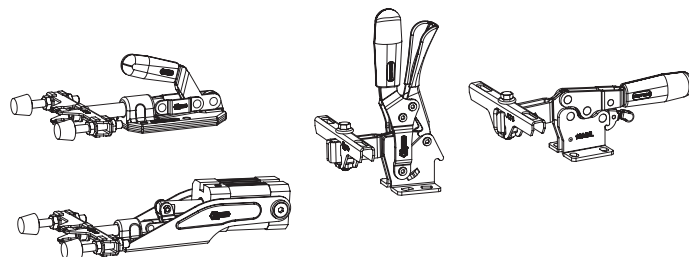
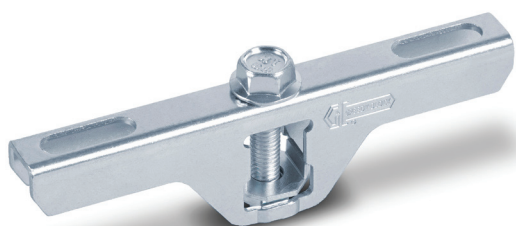
CROSSBARS

CROSSBARS FOR OPEN CLAMPING LEVER ARMS

Material:

Galvanized steel.

Supplied with nut and screw for assembly on open levers.



Code	Description	A	B	D	E	G	M	P	Q	Gr.	Matching series with spindle
AU320	AT6	100	37	60-85	15	11.5	12	M6	6.2	50	M6
AU322	AT8	120	43	70-100	18	14	15.5	M8	8.2	96	M8

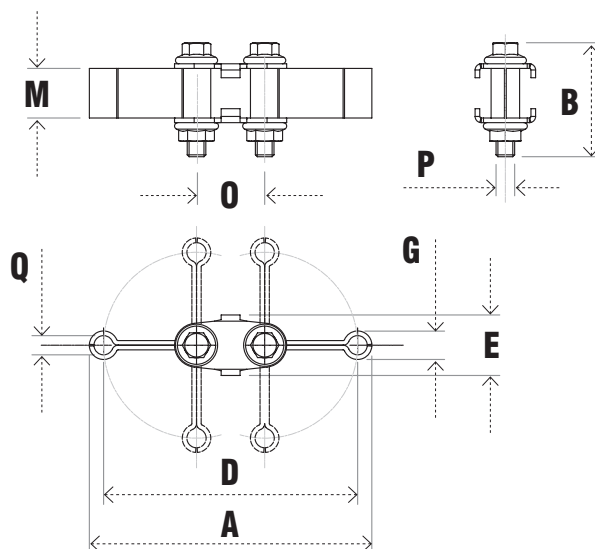
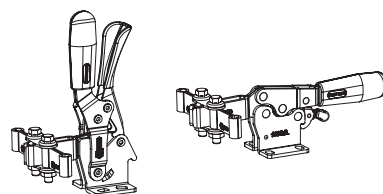
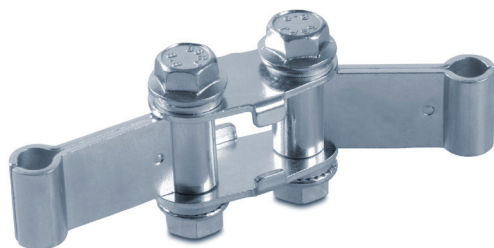
ARTICULATED CROSSBARS

CROSSBARS FOR OPEN CLAMPING LEVER ARMS

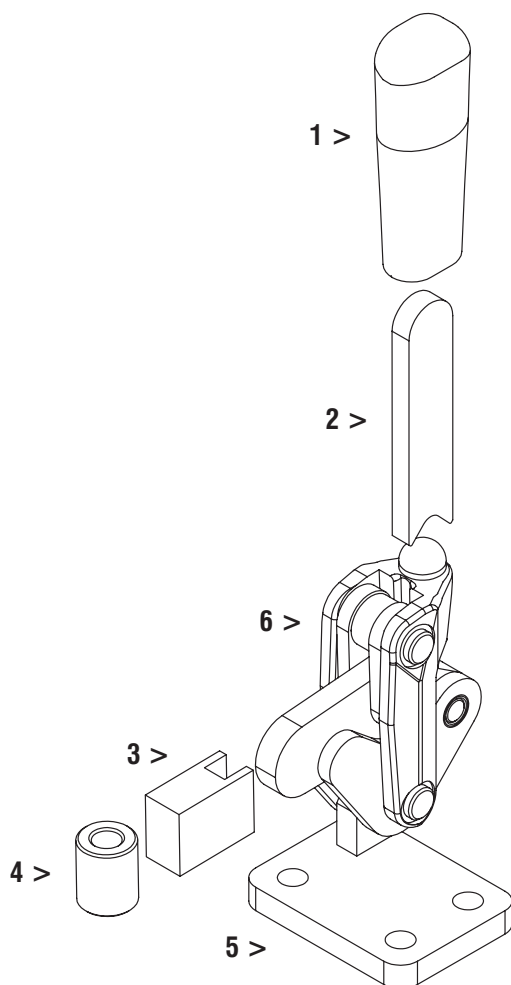
Material:

Galvanized steel.

Supplied with two nuts and screws for assembly on open levers.



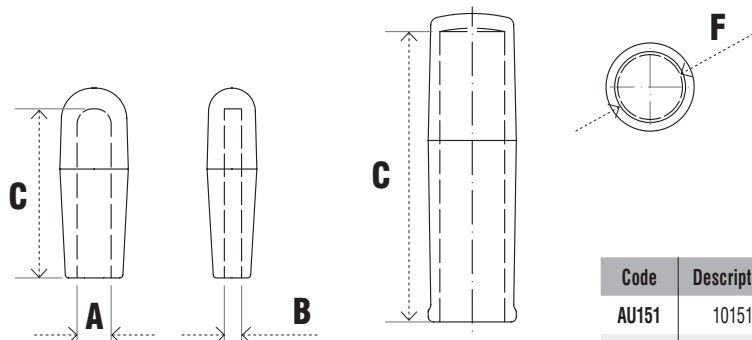
Code	Description	A	B	D	E	G	M	O	P	Q	Gr.	Matching series with spindle
AU330	TS6	91	37	82	19.5	9.2	16	22	M6	6.2	70	M6
AU332	TS8	112	43	100	26	12	18	27	M8	8	120	M8



ACCESSORIES FOR LSC-LSG-LSH

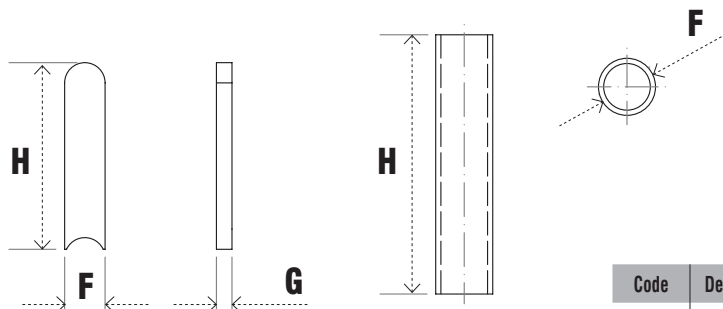
1 > Handles:

Red polyurethane; resistant to oil, grease and other chemicals.



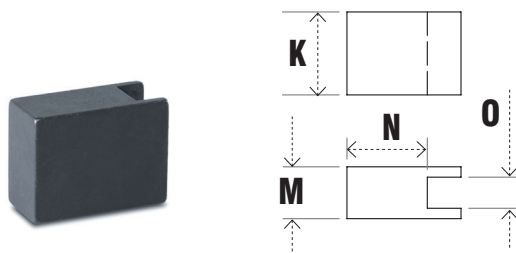
Code	Description	A	B	C	F	Gr. ⚖️
AU151	10151	13	5	55		12
AU154	10154	20	8	77		34
AU156	10156	22		112	22	50
AU157	10157	28		113	25	50

2 > Control lever:
Phosphated steel.



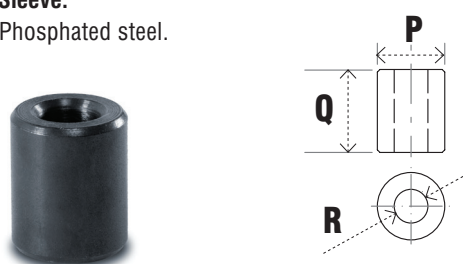
Code	Description	F	G	H	Gr. ⚖
AU250	LC01	13	5	63	31
AU255	LC02	20	8	90	108
AU260	LC03	22		122	122
AU265	LC04	25		138	175

3 > Clamping lever:
Phosphated steel.



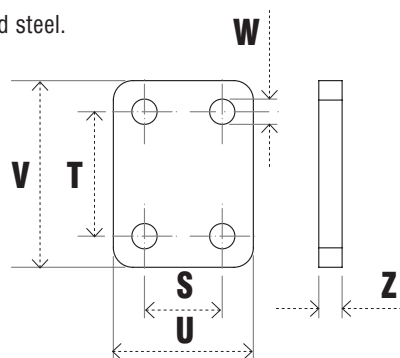
Code	Description	K	M	N	O	Gr. ⚖
AU230	LS01	16	10	15.5	6	23
AU235	LS02	24	15	16	10	75.5
AU240	LS03	30	20	22.1	12	130
AU245	LS04	35	25	23.5	16.2	160

4 > Sleeve:
Phosphated steel.



Code	Description	P	Q	E	Gr. ⚖
AU280	LM01	13	16	6.5	13
AU285	LM02	20	24	10.5	42
AU290	LM03	24	30	12.5	76
AU295	LM04	32	35	16.5	120

5 > Base:
Phosphated steel.



Code	Description	S	T	U	V	W	Z	Gr. ⚖
AU300	PB01	20	32	36	48	6.5	6	74
AU305	PB02	30	45	54	65	8.5	8	205
AU310	PB03	55	55	75	75	10.5	10	400
AU315	PB04	65	65	90	100	12.5	10	570

6 > Toggle Mechanisms:
(see pages 39-41).

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AA225	200/EV	31
AA228	230/EVF	33
AA320	300/AV	31
AA322	330/AVF	33
AA325	300/EV	31
AA328	330/EVF	33
AA520	75/A	21
AA522	75/B	23
AA524	75/E	21
AA526	75/F	23
AA530	130/A	21
AA532	130/B	23
AA534	130/E	21
AA536	130/F	23
AA540	230/A	21
AA542	230/B	23
AA544	230/E	21
AA546	230/F	23
AA550	330/A	21
AA552	330/B	23
AA554	330/E	21
AA556	330/F	23
AA560	430/A	21
AA562	430/B	23
AA564	430/E	21
AA566	430/F	23
AA570	530/A	21
AA572	530/B	23
AA574	530/E	21
AA576	530/F	23
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AA587	130/ELS	29
AA588	130/FL	27
AA589	130/FLS	29
AA590	230/AL	25
AA592	230/BL	27
AA594	230/EL	25
AA595	230/ELS	29
AA596	230/FL	27
AA597	230/FLS	29
AA600	LLA01	35
AA605	LLB01	37
AA610	LLE01	35
AA615	LLF01	37
AA630	LLA02	35
AA635	LLB02	37
AA640	LLE02	35
AA645	LLF02	37
AA660	LLE03	35
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AA680	LLE04	35

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AD273	230/MFL	61
AD275	230/N	49
AD280	230/O	47
AD285	230/P	49
AD290	230/ML	51
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AL535	320/T3	95
AL540	700/T3	95
AL542	160/T30	95
AL544	320/T30	95
AL546	700/T30	95
AL550	1400/T3	99
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AL554	1400/T30	99
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AU211	20111	154
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AU260	LC03	157
AU265	LC04	157
AU280	LM01	157
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AU295	LM04	157
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