

TOGGLE CLAMPS, MANUAL AND PNEUMATIC



CATALOGUE 2019

WE GENERATE EXCITEMENT.

Since the foundation of the company in 1890 until today the goal has remained the same: the highest quality in products and services. Nevertheless, the circumstances, tasks and challenges have changed, of course. By focussing on our core areas of expertise, we have long set new standards for innovative clamping technology - driven by our own development, the greatest possible flexibility and passion for individual solutions.

All this is only possible with committed and contented employees. Respectful interaction with others, personal development and measures for the wellbeing of each individual are therefore values that matter to us.



Company Management:
Wolfgang Balle, Johannes Maier (CEO), Jürgen Förster

OUR COMPANY HISTORY

- 1890 Company founded as a lock manufacturer by Andreas Maier.
- 1920 Product range extended to include spanners.
- 1928 Production line assembly of FELLBACH LOCKS.
- 1951 Introduces clamping elements and diversifies into workpiece and tool clamping technology.
- 1965 Toggle clamps extend the AMF product range, AMF catalogues are now printed in ten languages.
- 1975 Further specialisation into hydraulic clamping technology.
- 1982 Clamping and fixture systems round off AMF's clamping expertise.
- 1996 AMF team organisation in all sectors of the business, Quality management with certification to ISO 9001.
- 2001 AMF Service Guarantee for all products.
- 2004 Introduction of the ZPS zero-point clamping system.
- 2007 The magnetic clamping technology extends the AMF product range.
- 2009 Development and marketing of AMF Vacuum clamping technology.
- 2012 LOW-COST AUTOMATION gripping, clamping, marking and cleaning.
- 2014 AMF presents the most extensive product range of automation solution in zero-point clamping technology.
- 2017 Wireless sensoring systems extend the expertise into Industry 4.0 and blends seamlessly into the AMF product range.

PLEDGES THAT COUNT IN EVERYDAY LIFE

For this reason, we have a few principles that we follow by conviction and which always apply..

INDIVIDUAL DEVELOPMENT

Even if the product you need does not even exist yet, we will find the right solution with you: from special designs to new developments, everything is possible.

WARRANTY

If, despite our high quality standard, there is a complaint, this is dealt with quickly and unbureaucratically, even beyond the warranty period.

HIGHEST QUALITY STANDARDS

Careful manufacturing based on tradition since 1890, and naturally with a modern quality management system according to ISO 9001 for many years.

SHORT DELIVERY TIME

With over 5,000 articles in our warehouse, you can expect your order to be dispatched on the same day.

COMPETENT SERVICE FROM EXPERTS

Your local retail partner or the specialists in our team will find the right solution for every task.

MADE IN GERMANY

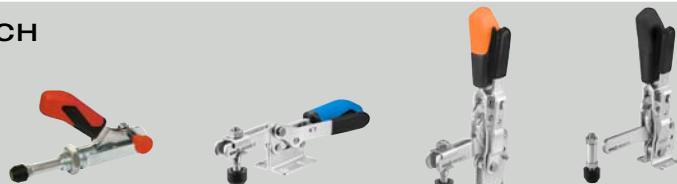
Our entire product range is developed and manufactured exclusively by our employees in Germany.

VERTICAL TOGGLE CLAMPS

10 - 29
HORIZONTAL TOGGLE CLAMPS

30 - 41
PUSH-PULL TYPE TOGGLE CLAMPS

42 - 55
HOOK TYPE TOGGLE CLAMPS

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STAINLESS STEEL TOGGLE CLAMPS

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**PNEUMATIC TOGGLE CLAMPS, AUTOMATION CLAMPS
PNEUMATIC SWING CLAMPS**

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ACCESSORIES

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**SWING CLAMP, PNEUMATIC,
FLANGE-MOUNTING VERSION**

No. 6829KR/KL, page 139
NEW SIZES!

NEW!

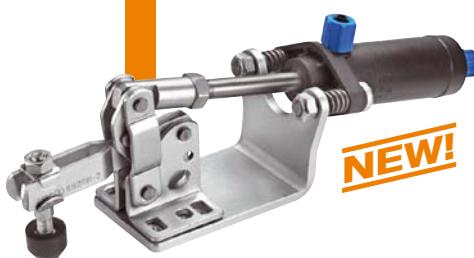
**HEAVY PNEUMATIC
TOGGLE CLAMPS**

No. 6825A + 6826A, page 126 + 128



PNEUMATIC TOGGLE CLAMP

No. 6820P, page 123



NEW!



**HORIZONTAL TOGGLE
CLAMP PLUS**

No. 68300NI, page 88-89
NEW SIZES!



ADAPTER FOR GRID HOLE TABLE

No. 6877, page 153

NEW!

CLAMPING SCREW

No. 68301NI, page 148
NEW SIZES!



**SWING CLAMP,
PNEUMATIC,
SCREW-IN VERSION**

No. 6829ER/EL, page 142
NEW SIZES!



THREADED FLANGE

No. 6829GF, page 144
NEW SIZES!



GROOVED NUT (DIN 70852)

No. 6829N, page 144
NEW SIZES!

NEW!

**PUSH TYPE PNEUMATIC
TOGGLE CLAMP**

No. 6850A, page 121



**AVAILABLE IN 6
DIFFERENT COLOURS!**



Subject to technical alterations.

> ADVANTAGES OF „TOGGLE“ PRINCIPLE

- > Large and quick opening.
- > Clearing the workpieces completely for unimpeded handling of work.
- > Large power transmission. Minimum operating effort giving maximum clamping force.
- > The clamps are self-arresting, they remain locked, resisting the force produced when machining components.

> APPLICATIONS

A wide range of uses can be found for these AMF toggle clamps owing to their favourable power to movement ratio, and their easy action. These versatile clamps can be used in the metal working industry when drilling, welding, bending, grinding, testing and fitting, as well as in the wood and plastic industry in glueing, drilling, cutting and milling jigs.

> QUALITY FEATURES

To rationalize effectively, a design should be selected which will function for many years. AMF toggle clamps are equipped with ample dimensioned rivets which are moving in case-hardened bushes (with exception of size 0 and 1 for space reasons). All parts are galvanized prior to assembly. The tempered and galvanized clamping screw (strength class 8.8) is quickly adjustable by the T-slot nut or the special nut. Certain toggle clamps are also available in STAINLESS STEEL versions. Please see pages 82 to 102.

AMF toggle clamps are designed for ambient temperatures from -10°C to +80°C and are free of paint-wetting impairment substances.

> DESIGN AND SERVICE LIFE

Due to the different applications the design is of importance. Besides our high quality standard types extra heavy duty toggle clamps no. 6811P and no. 6812P are available.

> FORCES WITH HAND- AND PNEUMATIC TOGGLE CLAMPS

The selection of the correct toggle clamp size depends on the required clamping forces (refer to specification tables). The forces are shown in kN and one should distinguish between:

- Holding force F1 or F2
- Clamping force F3 or F4
- Piston force F5 (6 bar air pressure)

> THE CLAMPING FORCE

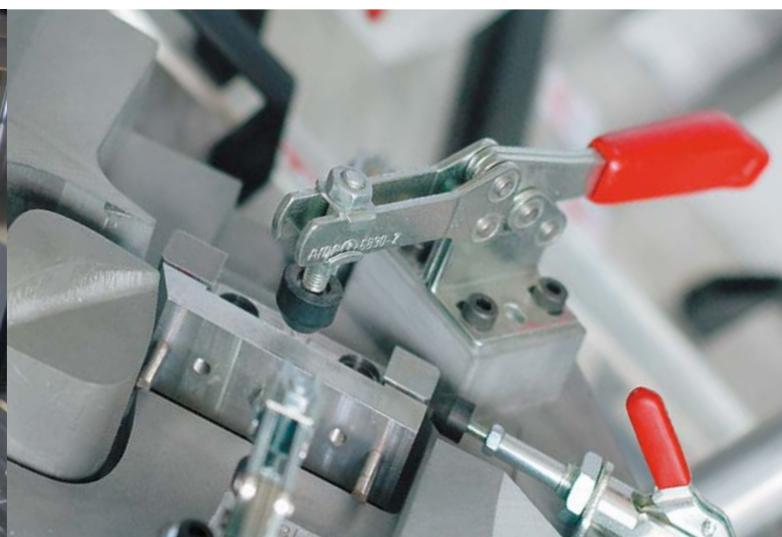
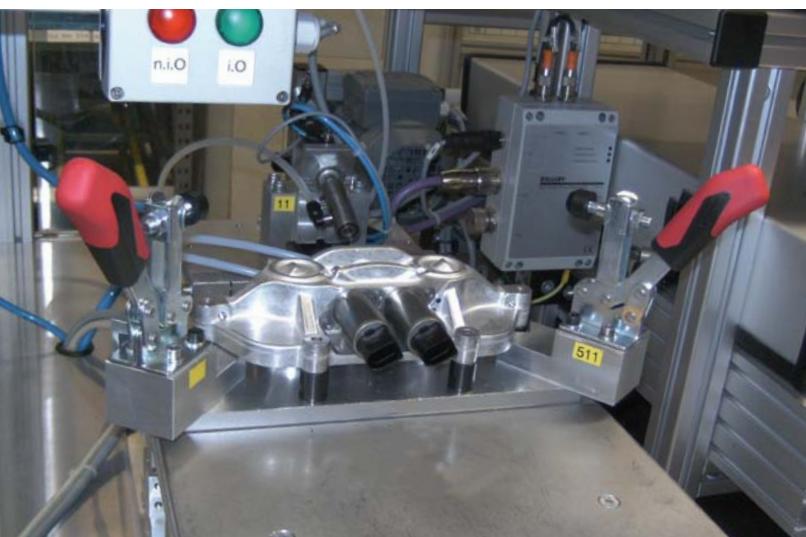
is the force applied when closing the clamp, measured between the arms and the component. As opposed to the pneumatic toggle clamps the clamping forces of manual clamps can not be correctly formulated as it is dependent on the operator.

> THE HOLDING FORCE

is the force the closed arm transmits to the workpiece, without itself being deformed when machine forces apply. When maximum force is reached, the hinged point goes over the dead centre, thereby insuring, that the action is locked and cannot be released until such time as the handle is returned to its original position.

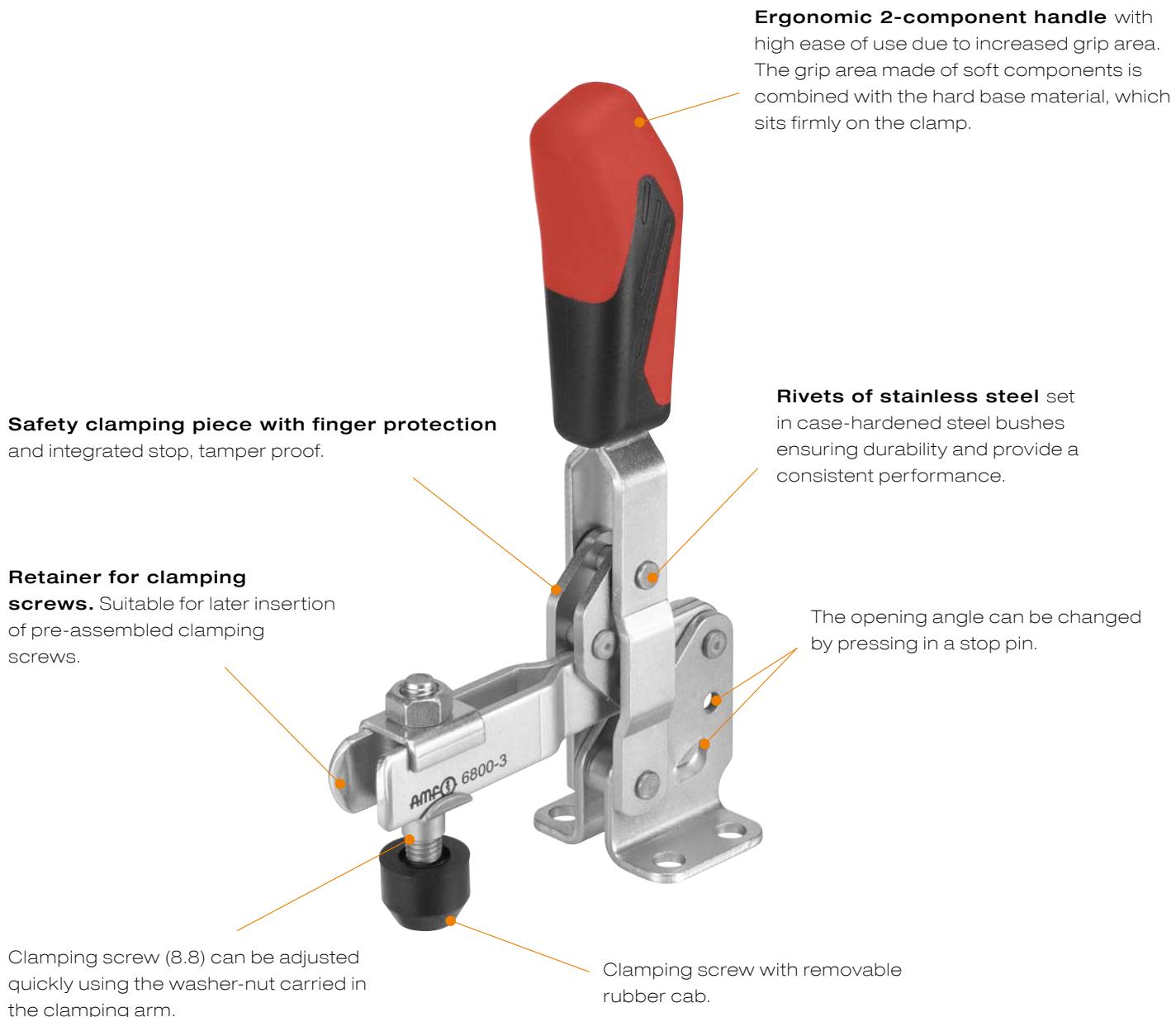
> MOUNTING POSSIBILITIES

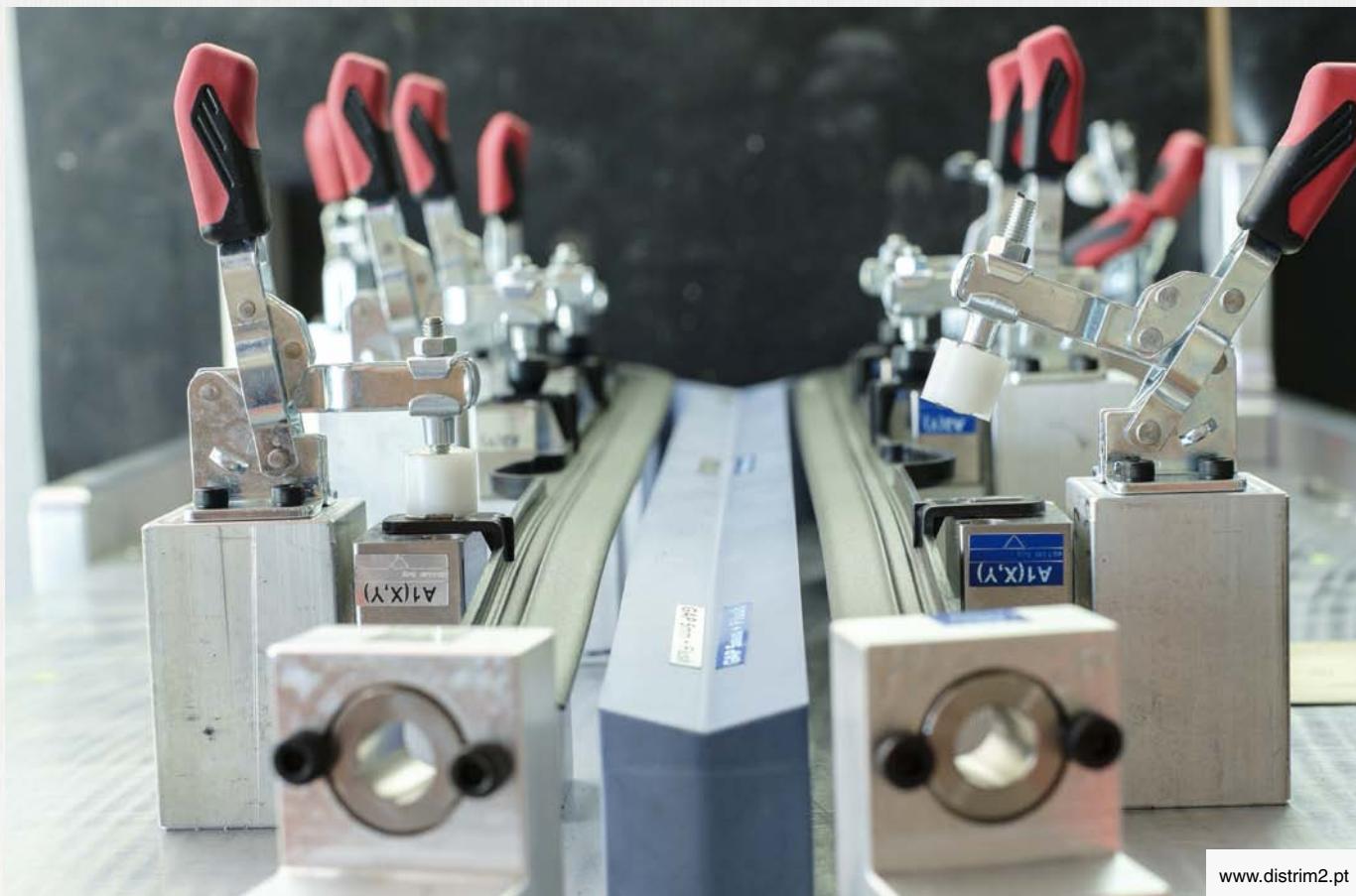
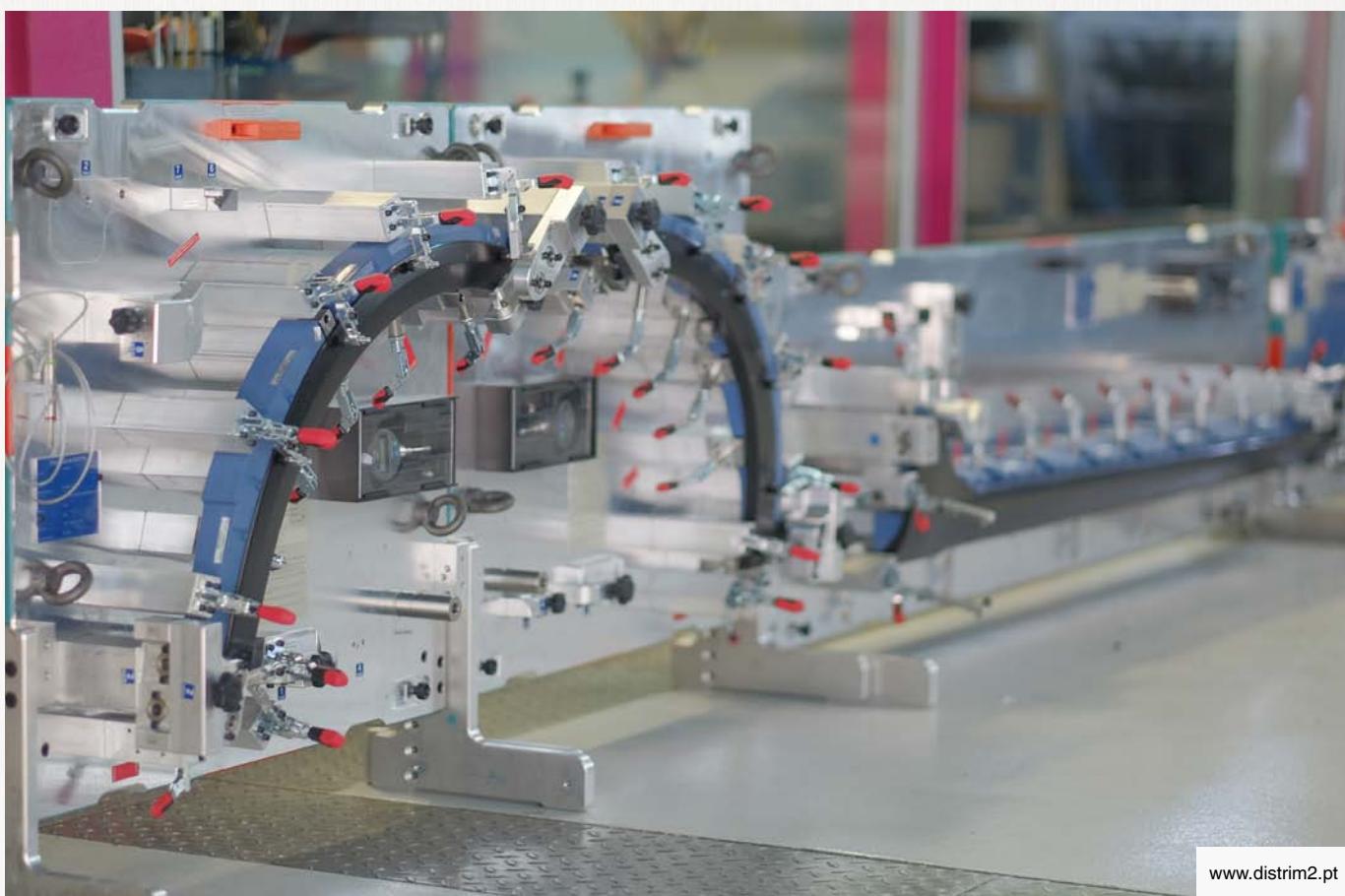
The base are offered in three versions: toggle clamps with horizontal base, vertical base (preferably used on welded construction and on webs) and toggle clamps with angel base for front mounting. With all toggle clamps the clamping screws are included in the price. Large quantities can be supplied without clamping screw if required.



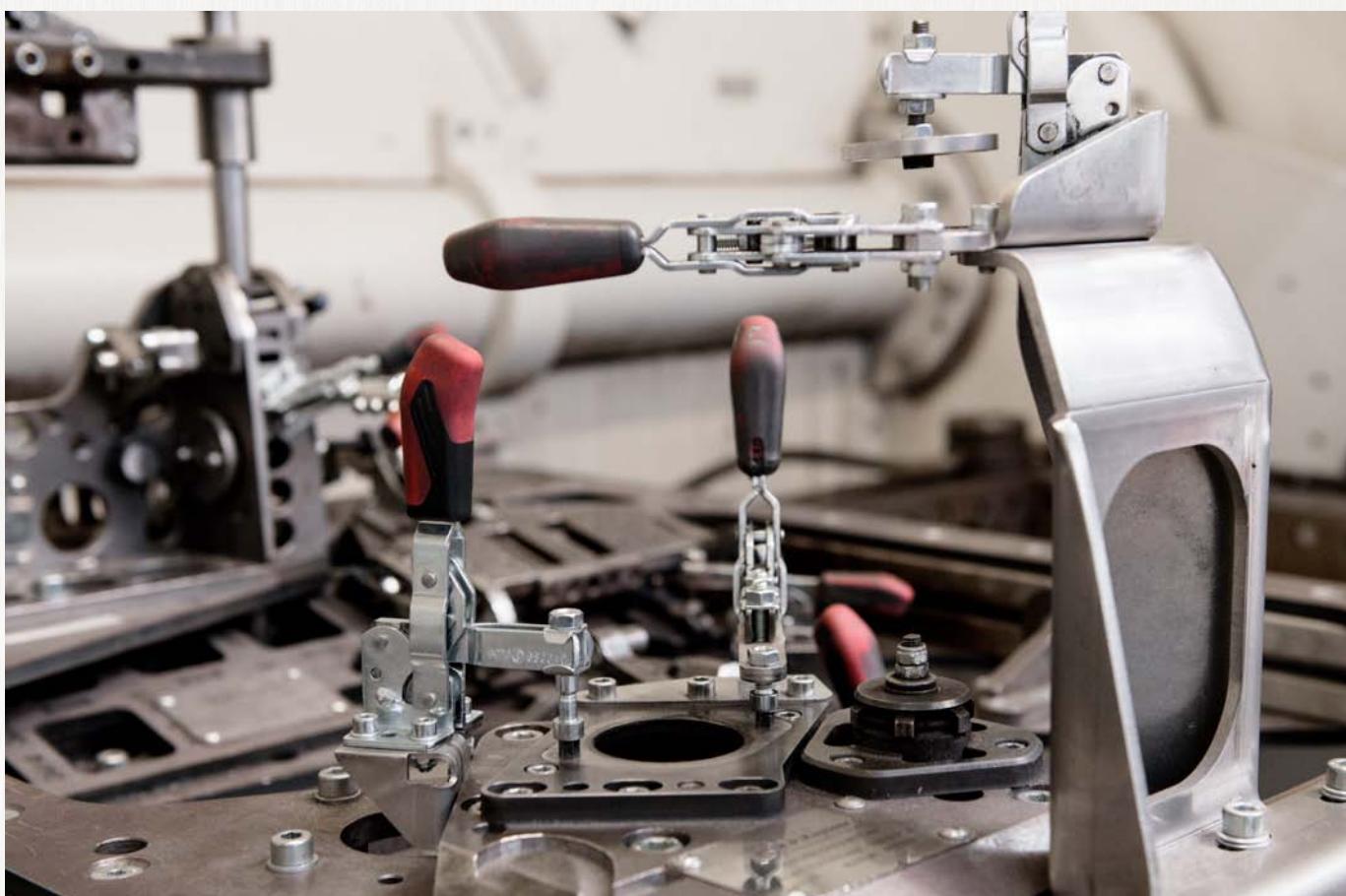
THE FEATURES OF OUR TOGGLE CLAMPS AT A GLANCE

- Ergonomic two-component handle
- Safety clamping piece with finger protection
- Retainer for clamping screws.
- Stainless steel rivets
- Removable rubber cap

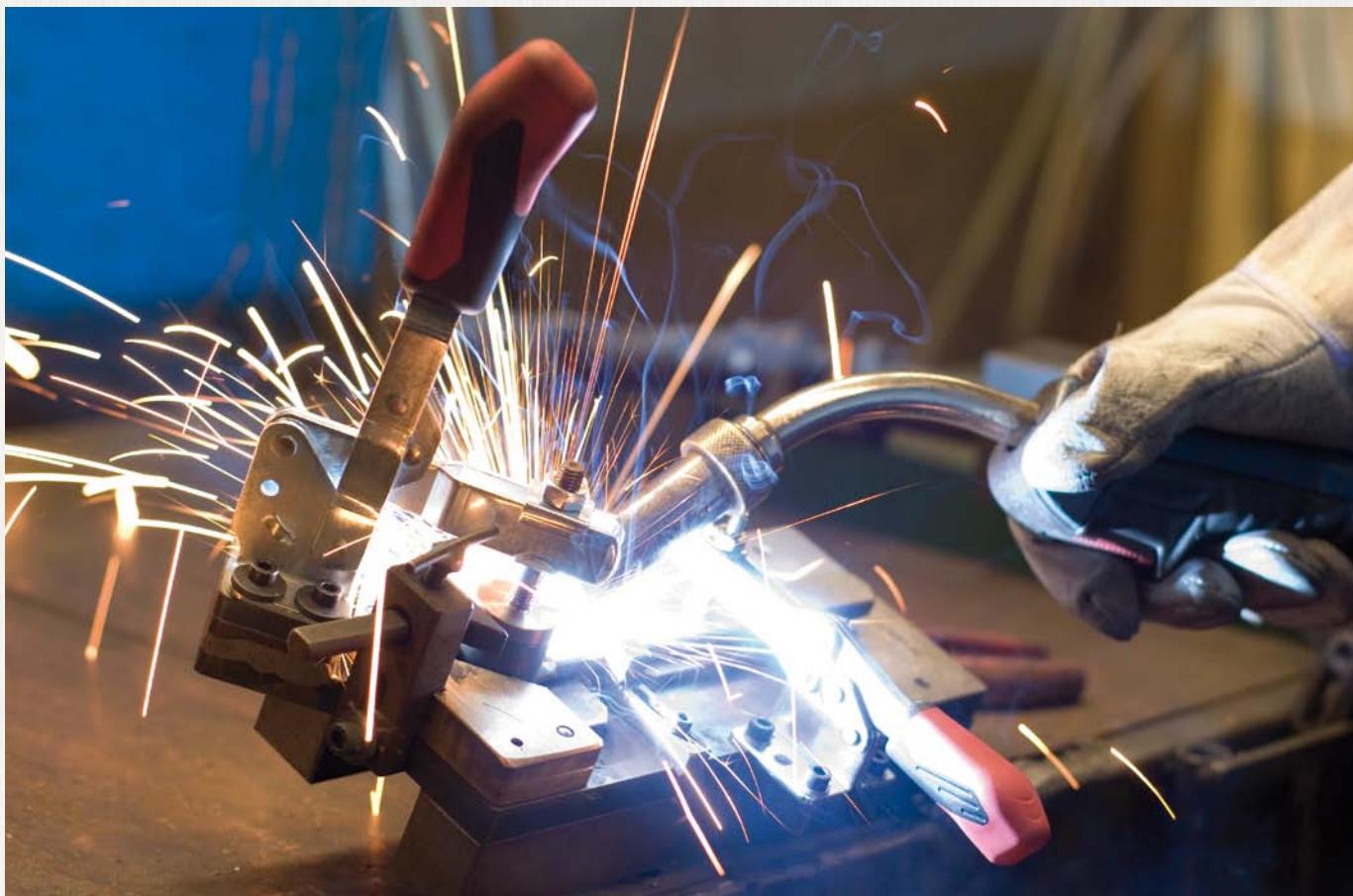


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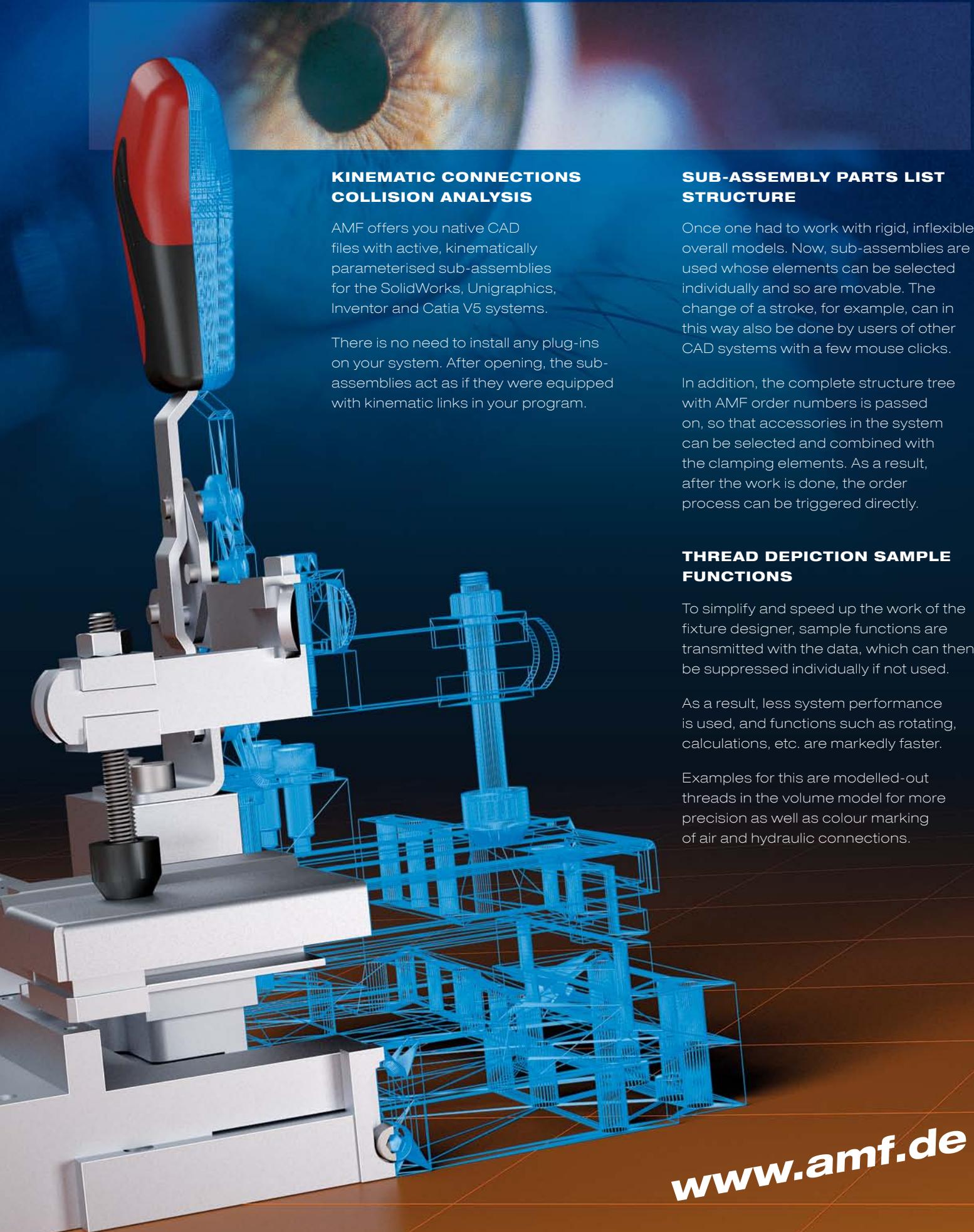
Subject to technical alterations.



Subject to technical alterations.



Subject to technical alterations.



KINEMATIC CONNECTIONS COLLISION ANALYSIS

AMF offers you native CAD files with active, kinematically parameterised sub-assemblies for the SolidWorks, Unigraphics, Inventor and Catia V5 systems.

There is no need to install any plug-ins on your system. After opening, the sub-assemblies act as if they were equipped with kinematic links in your program.

SUB-ASSEMBLY PARTS LIST STRUCTURE

Once one had to work with rigid, inflexible overall models. Now, sub-assemblies are used whose elements can be selected individually and so are movable. The change of a stroke, for example, can in this way also be done by users of other CAD systems with a few mouse clicks.

In addition, the complete structure tree with AMF order numbers is passed on, so that accessories in the system can be selected and combined with the clamping elements. As a result, after the work is done, the order process can be triggered directly.

THREAD DEPICTION SAMPLE FUNCTIONS

To simplify and speed up the work of the fixture designer, sample functions are transmitted with the data, which can then be suppressed individually if not used.

As a result, less system performance is used, and functions such as rotating, calculations, etc. are markedly faster.

Examples for this are modelled-out threads in the volume model for more precision as well as colour marking of air and hydraulic connections.

www.amf.de

Subject to technical alterations.

No. 6800

Vertical toggle clamp with red handle

with open clamping arm and horizontal base.

Galvanized and passivated. Rivets made of stainless steel, which, for sizes 2 to 6, run in hardened bushings. Bearings are pre-lubricated.

Ergonomic, oil-resistant handle with large grip surface and soft components. Safety clamping piece with finger protection, lock washer for the thrust bolt at the end of the clamping arm.

Complete with tempered, galvanized clamping screw no. 6890.

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
90001	0	0,5	0,7	M 4x 25	60
90019	1	0,6	1,1	M 5x 30	105
90027	2	0,8	1,2	M 6x 35	175
90035	3	1,2	2,5	M 8x 45	410
90043	4	1,7	3,0	M 8x 65	630
90050	5	3,0	5,0	M12x 80	1480
90068	6	3,4	5,5	M12x110	2200

Also available in „STAINLESS STEEL“ version (no. 6800NI) and in matte-black version (no. 6800B)!



No. 6800Y

Vertical toggle clamp with yellow handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557009	0	0,5	0,7	M 4x 25	60
557010	1	0,6	1,1	M 5x 30	105
557011	2	0,8	1,2	M 6x 35	175
557012	3	1,2	2,5	M 8x 45	410
557013	4	1,7	3,0	M 8x 65	630
557014	5	3,0	5,0	M12x 80	1480
557015	6	3,4	5,5	M12x110	2200

Also available in „STAINLESS STEEL“ version (no. 6800NIY).

No. 6800J

Vertical toggle clamp with orange handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557301	0	0,5	0,7	M 4x 25	60
557302	1	0,6	1,1	M 5x 30	105
557303	2	0,8	1,2	M 6x 35	175
557304	3	1,2	2,5	M 8x 45	410
557305	4	1,7	3,0	M 8x 65	630
557306	5	3,0	5,0	M12x 80	1480
557307	6	3,4	5,5	M12x110	2200

Also available in „STAINLESS STEEL“ version (no. 6800NIJ).

No. 6800E

Vertical toggle clamp with blue handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557615	0	0,5	0,7	M 4x 25	60
557616	1	0,6	1,1	M 5x 30	105
557617	2	0,8	1,2	M 6x 35	175
557618	3	1,2	2,5	M 8x 45	410
557619	4	1,7	3,0	M 8x 65	630
557620	5	3,0	5,0	M12x 80	1480
557621	6	3,4	5,5	M12x110	2200

Also available in „STAINLESS STEEL“ version (no. 6800NIE).

Subject to technical alterations.

No. 6800G
Vertical toggle clamp with green handle


Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557465	0	0,5	0,7	M 4x 25	60
557466	1	0,6	1,1	M 5x 30	105
557467	2	0,8	1,2	M 6x 35	175
557468	3	1,2	2,5	M 8x 45	410
557469	4	1,7	3,0	M 8x 65	630
557470	5	3,0	5,0	M12x 80	1480
557471	6	3,4	5,5	M12x110	2200

Also available in „STAINLESS STEEL“ version (no. 6800NIG).

No. 6800T
Vertical toggle clamp with black handle

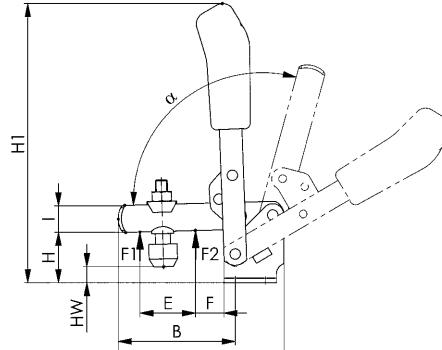

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557963	0	0,5	0,7	M 4x 25	60
557964	1	0,6	1,1	M 5x 30	105
557965	2	0,8	1,2	M 6x 35	175
557966	3	1,2	2,5	M 8x 45	410
557967	4	1,7	3,0	M 8x 65	630
557968	5	3,0	5,0	M12x 80	1480
557969	6	3,4	5,5	M12x110	2200

Also available in „STAINLESS STEEL“ version (no. 6800NIT).

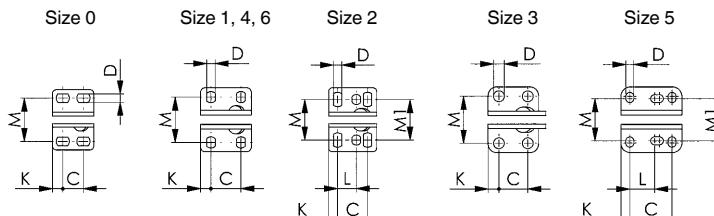
Recommendations

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page 154

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page 152

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page 64


CAD


Dimensions:

Size	A	B	C	D	E	F	H	H1	HW min.	HW max.	I	K	L	L1	L2	M	M1	N	P	α	α^*
0	4	31,0	8,5-13,5	4,5	14	5,5	18,0	81,0	-1,5	3,5	8	5,5	-	49	50	23,0	-	32	22	95°	-
1	5	39,0	16,0	4,5	18	6,0	19,0	98,0	-4,0	2,0	10	5,5	-	61	58	22,5-26,0	-	34	27	95°	-
2	6	52,0	20,0	5,5	25	11,0	23,0	129,0	-3,0	4,5	12	6,0	12,5	78	80	23,0-31,0	27	43	32	105°	60°
3	8	79,0	20,0	7,5	37	19,0	33,0	186,0	2,0	11,0	18	7,5	-	112	112	32,5	-	46	35	105°	60°
4	10	101,0	32,0	8,6	54	16,0	42,5	221,0	-6,0	22,5	20	13,0	-	141	130	43,0-46,5	-	64	53	105°	60°
5	14	140,0	45,0	8,5	73	34,0	55,8	281,0	-3,0	27,5	25	9,5	26,5-31,5	195	185	45,0-50,0	45	70	65	115°	60°
6	14	165,5	50,5	13,0	89	28,0	81,0	333,0	-2,5	55,0	30	24,5	-	231	206	67,5-72,5	-	100	90	140°	60°

* The opening angle can be changed by pressing in a stop pin.

Subject to technical alterations.

No. 6802

Vertical toggle clamp with red handle with open clamping arm and vertical base.

Galvanized and passivated. Rivets made of stainless steel, which, for sizes 2 to 6, run in hardened bushings. Bearings are pre-lubricated.

Ergonomic, oil-resistant handle with large grip surface and soft components. Safety clamping piece with finger protection. Lock washer for the thrust bolt at the end of the clamping arm.

Complete with tempered, galvanized clamping screw no. 6890.

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
90217	1	0,6	1,1	M 5x 30	105
90225	2	0,8	1,2	M 6x 35	175
90233	3	1,2	2,5	M 8x 45	410
90241	4	1,7	3,0	M 8x 65	630
90258	5	3,0	5,0	M12x 80	1480
90266	6	3,4	5,5	M12x110	2200

Also available in matte-black version (no. 6802B)!



No. 6802Y

Vertical toggle clamp with yellow handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557018	1	0,6	1,1	M 5x 30	105
557019	2	0,8	1,2	M 6x 35	175
557020	3	1,2	2,5	M 8x 45	410
557021	4	1,7	3,0	M 8x 65	630
557022	5	3,0	5,0	M12x 80	1480
557023	6	3,4	5,5	M12x110	2200

No. 6802J

Vertical toggle clamp with orange handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557310	1	0,6	1,1	M 5x 30	105
557311	2	0,8	1,2	M 6x 35	175
557312	3	1,2	2,5	M 8x 45	410
557313	4	1,7	3,0	M 8x 65	630
557314	5	3,0	5,0	M12x 80	1480
557315	6	3,4	5,5	M12x110	2200

No. 6802E

Vertical toggle clamp with blue handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557622	1	0,6	1,1	M 5x 30	105
557623	2	0,8	1,2	M 6x 35	175
557624	3	1,2	2,5	M 8x 45	410
557625	4	1,7	3,0	M 8x 65	630
557626	5	3,0	5,0	M12x 80	1480
557627	6	3,4	5,5	M12x110	2200

Subject to technical alterations.

No. 6802G
Vertical toggle clamp with green handle

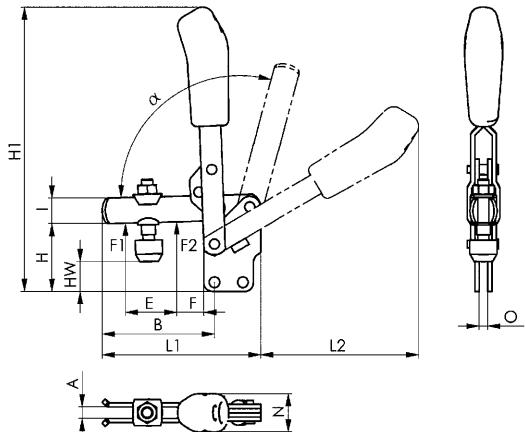
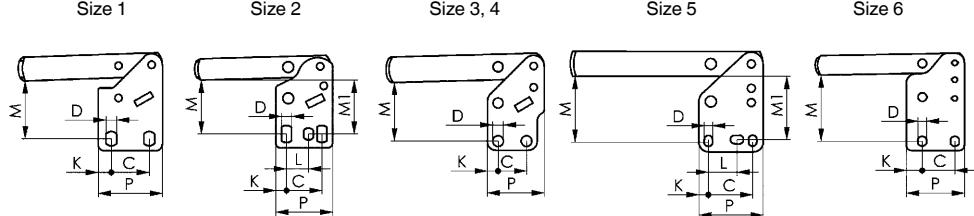

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557472	1	0,6	1,1	M 5x 30	105
557473	2	0,8	1,2	M 6x 35	175
557474	3	1,2	2,5	M 8x 45	410
557475	4	1,7	3,0	M 8x 65	630
557476	5	3,0	5,0	M12x 80	1480
557477	6	3,4	5,5	M12x110	2200

No. 6802T
Vertical toggle clamp with black handle


Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557970	1	0,6	1,1	M 5x 30	105
557971	2	0,8	1,2	M 6x 35	175
557972	3	1,2	2,5	M 8x 45	410
557973	4	1,7	3,0	M 8x 65	630
557974	5	3,0	5,0	M12x 80	1480
557975	6	3,4	5,5	M12x110	2200



CAD


Recommendations
No. 6891,
page 151No. 6802S,
page 66
Dimensions:

Size	A	B	C	D	E	F	H	H1	HW min.	HW max.	I	K	L	L1	L2	M	M1	N	O	P	α	α^*
1	5	39	16,0	4,5	18	6	29	109,0	6,0	12,5	10	5,5	-	61	59	23,5-25,0	-	19	5	27	95°	-
2	6	52	20,0	5,5	25	11	38	144,5	11,5	19,5	12	6,0	12,5	78	80	28,5-32,0	30	21	5	32	105°	60°
3	8	79	20,0	7,5	36	19	48	200	16,5	25,0	18	7,5	-	112	114	41,0	-	27	6	40	105°	60°
4	10	101	32,0	8,6	54	16	65	244	16,5	45,5	20	13,0	-	141	130	55,5	-	35	8	53	105°	60°
5	14	140	45,0	8,5	72	35	77	301	18,0	49,0	25	9,5	26,5-31,5	195	183	66,0	64	45	10	65	115°	60°
6	14	165	50,5	13,0	89	28	117	369	33,0	90,5	30	24,5	-	231	206	102,0	-	45	10	90	140°	60°

* The opening angle can be changed by pressing in a stop pin.

Subject to technical alterations.

No. 6803

Vertical toggle clamp with red handle

with open clamping arm and angle base.

Galvanized and passivated. Rivets made of stainless steel, which, for sizes 2 and 3, run in hardened bushings. Bearings are pre-lubricated.

Ergonomic, oil-resistant handle with large grip surface and soft components. Safety clamping piece with finger protection. Lock washer for the thrust bolt at the end of the clamping arm.

Complete with tempered, galvanized clamping screw no. 6890.

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
90316	1	0,8	1,1	M5x30	125
90324	2	1,0	1,2	M6x35	220
90332	3	1,4	2,5	M8x45	400
90340	4	2,0	3,0	M8x65	650

Also available in „STAINLESS STEEL“ version (no. 6803NI).



No. 6803Y

Vertical toggle clamp with yellow handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557024	1	0,8	1,1	M5x30	125
557025	2	1,0	1,2	M6x35	220
557026	3	1,4	2,5	M8x45	400
557027	4	2,0	3,0	M8x65	650

Also available in „STAINLESS STEEL“ version (no. 6803NIY).

No. 6803J

Vertical toggle clamp with orange handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557318	1	0,8	1,1	M5x30	125
557319	2	1,0	1,2	M6x35	220
557320	3	1,4	2,5	M8x45	400
557321	4	2,0	3,0	M8x65	650

Also available in „STAINLESS STEEL“ version (no. 6803NIJ).

No. 6803E

Vertical toggle clamp with blue handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557630	1	0,8	1,1	M5x30	125
557631	2	1,0	1,2	M6x35	220
557632	3	1,4	2,5	M8x45	400
557633	4	2,0	3,0	M8x65	650

Also available in „STAINLESS STEEL“ version (no. 6803NIE).

Subject to technical alterations.

No. 6803G
Vertical toggle clamp with green handle

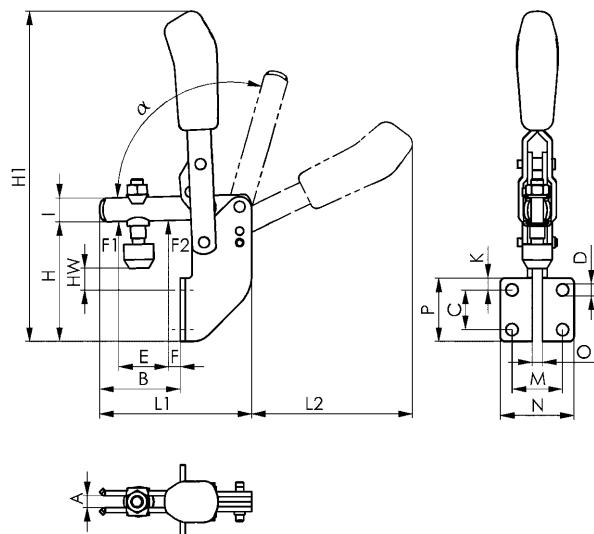
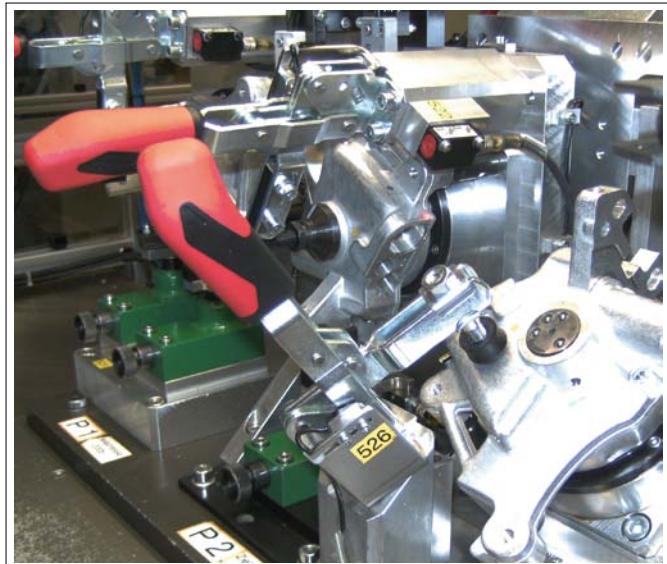

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557479	1	0,8	1,1	M5x30	125
557480	2	1,0	1,2	M6x35	220
557481	3	1,4	2,5	M8x45	400
557482	4	2,0	3,0	M8x65	650

Also available in „STAINLESS STEEL“ version (no. 6803NIG).

No. 6803T
Vertical toggle clamp with black handle


Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557977	1	0,8	1,1	M5x30	125
557978	2	1,0	1,2	M6x35	220
557979	3	1,4	2,5	M8x45	400
557980	4	2,0	3,0	M8x65	650

Also available in „STAINLESS STEEL“ version (no. 6803NIT).


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Dimensions:

Size	A	B	C	D	E	F	H	H1	HW min.	HW max.	I	K	L1	L2	M	N	O	P	α	α^*
1	5	34,5	14	4,5	18	7	45	125	2,5	9,0	10	10	61	58	20,0	30,0	5	30	98°	-
2	6	41,0	20	6,1	25	6	60	167	7,5	15,5	12	6	77	81	25,5	37,0	5	32	105°	60°
3	8	63,0	24	6,5	37	11	71	223	9,0	17,5	18	7	111	112	28,5	42,5	6	38	105°	60°
4	10	84,0	32	8,5	54	11	102	280	11,0	40,0	20	54	141	129	32,0	52,0	8	96	105°	60°

* The opening angle can be changed by pressing a stop pin.

Subject to technical alterations.

No. 6804

Vertical toggle clamp with red handle

with solid arm and horizontal base.

Galvanized and passivated.

Stainless steel rivets, which run in hardened bushes. Bearings are pre-lubricated.

Ergonomic, oil-resistant handle with large grip surface and soft components. Safety clamping piece with finger protection.

Complete with tempered, galvanized clamping screw no. 6885 and sleeve to weld on.

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
90431	3	1,4	2,5	M8x45	340
90449	4	2,0	3,0	M8x65	585
90456	5	3,0	5,0	M12x80	1480
90464	6	3,5	5,5	M12x110	2200



No. 6804Y

Vertical toggle clamp with yellow handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557028	3	1,4	2,5	M8x45	340
557029	4	2,0	3,0	M8x65	585
557030	5	3,0	5,0	M12x80	1480
557031	6	3,5	5,5	M12x110	2200

No. 6804J

Vertical toggle clamp with orange handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557322	3	1,4	2,5	M8x45	340
557323	4	2,0	3,0	M8x65	585
557324	5	3,0	5,0	M12x80	1480
557325	6	3,5	5,5	M12x110	2200

No. 6804E

Vertical toggle clamp with blue handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557635	3	1,4	2,5	M8x45	340
557636	4	2,0	3,0	M8x65	585
557637	5	3,0	5,0	M12x80	1480
557638	6	3,5	5,5	M12x110	2200

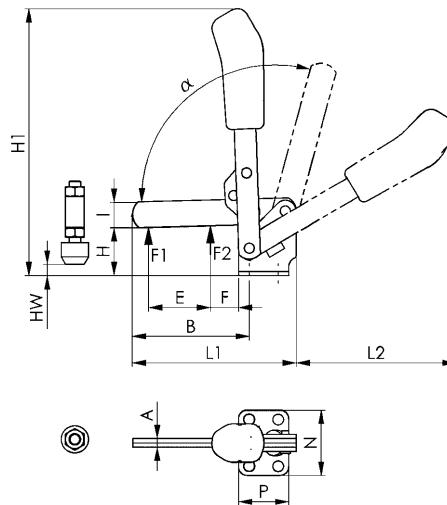
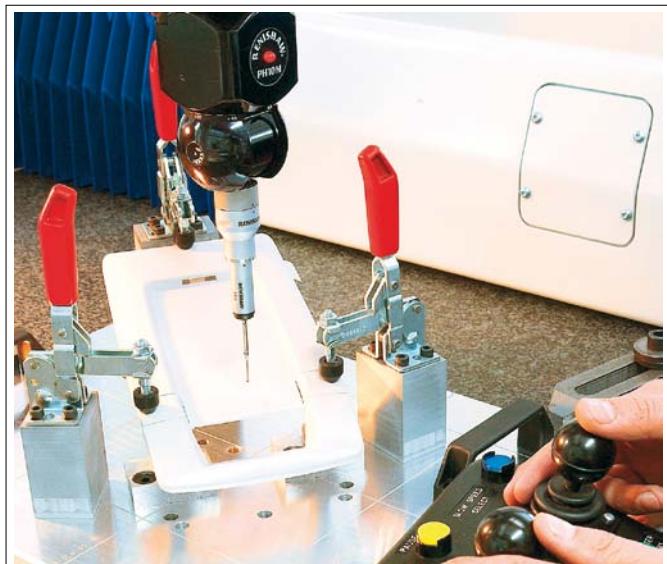
Subject to technical alterations.

No. 6804G
Vertical toggle clamp with green handle


Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557483	3	1,4	2,5	M8x45	340
557484	4	2,0	3,0	M8x65	585
557485	5	3,0	5,0	M12x80	1480
557486	6	3,5	5,5	M12x110	2200

No. 6804T
Vertical toggle clamp with black handle

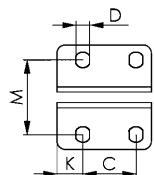

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557981	3	1,4	2,5	M8x45	340
557982	4	2,0	3,0	M8x65	585
557983	5	3,0	5,0	M12x80	1480
557984	6	3,5	5,5	M12x110	2200



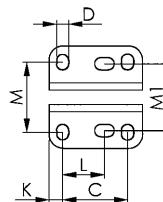
CAD

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Size 3, 4, 6



Size 5


Dimensions:

Size	A	B	C	D	E	F	H	H1	HW min.	HW max.	I	K	L	L1	L2	M	M1	N	P	α	α*
3	6	81,0	20,0	7,5	43	19,5	33,5	186	0	12,0	18	7,5	-	108,5	116,5	32,5	-	46	35	105°	60°
4	8	101,0	32,0	8,6	61	17,0	42,5	221	-8	21,0	20	13,0	-	141,5	129,5	45,0	-	64	53	105°	60°
5	10	141,0	45,0	8,5	88	30,5	55,5	281	-6	25,5	25	9,5	26,5-31,5	196,5	184,0	45-50	45	70	65	115°	60°
6	10	166,5	50,5	13,0	90	20,5	81,0	331	-5	51,0	30	24,5	-	232,0	206,0	68-72	-	100	90	140°	60°

* The opening angle can be changed by pressing in a stop pin.

Subject to technical alterations.

No. 6806

Vertical toggle clamp with red handle

with solid arm and vertical base.

Galvanized and passivated.

Stainless steel rivets, which run in hardened bushes. Bearings are pre-lubricated.

Ergonomic, oil-resistant handle with large grip surface and soft components. Safety clamping piece with finger protection.

Complete with tempered, galvanized clamping screw no. 6885 and sleeve to weld on.

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
90555	3	1,4	2,5	M 8x 45	400
90563	4	2,0	3,0	M 8x 65	585
90571	5	3,0	5,0	M12x 80	1480
90589	6	3,5	5,5	M12x110	2200



No. 6806Y

Vertical toggle clamp with yellow handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557032	3	1,4	2,5	M 8x 45	400
557033	4	2,0	3,0	M 8x 65	585
557034	5	3,0	5,0	M12x 80	1480
557035	6	3,5	5,5	M12x110	2200

No. 6806J

Vertical toggle clamp with orange handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557326	3	1,4	2,5	M 8x 45	400
557327	4	2,0	3,0	M 8x 65	585
557328	5	3,0	5,0	M12x 80	1480
557329	6	3,5	5,5	M12x110	2200

No. 6806E

Vertical toggle clamp with blue handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557650	3	1,4	2,5	M 8x 45	400
557651	4	2,0	3,0	M 8x 65	585
557652	5	3,0	5,0	M12x 80	1480
557653	6	3,5	5,5	M12x110	2200

Subject to technical alterations.

No. 6806G
Vertical toggle clamp with green handle


Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557487	3	1,4	2,5	M 8x 45	400
557488	4	2,0	3,0	M 8x 65	585
557489	5	3,0	5,0	M12x 80	1480
557490	6	3,5	5,5	M12x110	2200

No. 6806T
Vertical toggle clamp with black handle


Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557985	3	1,4	2,5	M 8x 45	400
557986	4	2,0	3,0	M 8x 65	585
557987	5	3,0	5,0	M12x 80	1480
557988	6	3,5	5,5	M12x110	2200

Recommendations

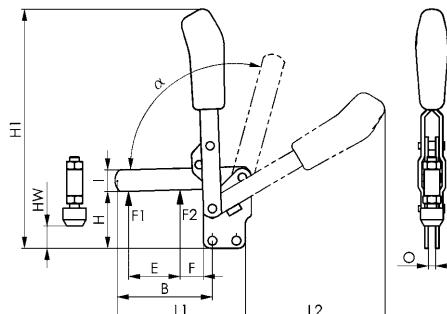

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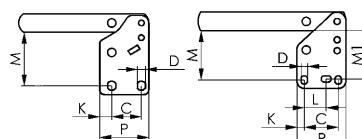


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Size 3, 4, 6

Size 5


Dimensions:

Size	A	B	C	D	E	F	H	H1	HW min.	HW max.	I	K	L	L1	L2	M	M1	N	O	P	α	α^*
3	6	81,0	20,0	7,5	43	19,5	48	200	14,5	26,0	18	7,5	-	108,5	116,0	41,0	-	27	6	35	105°	60°
4	8	101,0	32,0	8,6	61	17,0	65	244	13,0	44,0	20	13,0	-	141,5	129,5	55,5	-	34	8	53	105°	60°
5	10	141,0	45,0	8,5	88	30,5	77	302	15,0	47,0	25	9,5	26,5-31,5	196,5	184,0	66,0	64	36	10	65	115°	60°
6	10	166,5	50,5	13,0	90	20,5	117	369	28,5	86,5	30	24,5	-	232,0	206,0	102,0	-	39	10	90	140°	60°

* The opening angle can be changed by pressing in a stop pin.

Subject to technical alterations.

No. 6805

Vertical toggle clamp with red handle
clamping arm with fixed distance of clamping screw and horizontal base.

Galvanized and passivated. Stainless steel rivets. Bearings are pre-lubricated.

Ergonomic, oil-resistant handle with large grip surface and soft components. Safety clamping piece with finger protection.

Complete with tempered, galvanized clamping screw no. 6885.

Order no.	Size	F1 [kN]	Clamping screw	Weight [g]
90514	1	1	M5x30	100


No. 6805Y

Vertical toggle clamp with yellow handle

Order no.	Size	F1 [kN]	Clamping screw	Weight [g]
557037	1	1	M5x30	100


No. 6805J

Vertical toggle clamp with orange handle

Order no.	Size	F1 [kN]	Clamping screw	Weight [g]
557330	1	1	M5x30	100


No. 6805E

Vertical toggle clamp with blue handle

Order no.	Size	F1 [kN]	Clamping screw	Weight [g]
557654	1	1	M5x30	100



Subject to technical alterations.

No. 6805G
Vertical toggle clamp with green handle

Order no.	Size	F1 [kN]	Clamping screw	Weight [g]
557491	1	1	M5x30	100


No. 6805T
Vertical toggle clamp with black handle

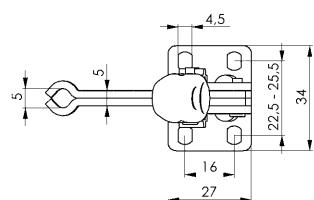
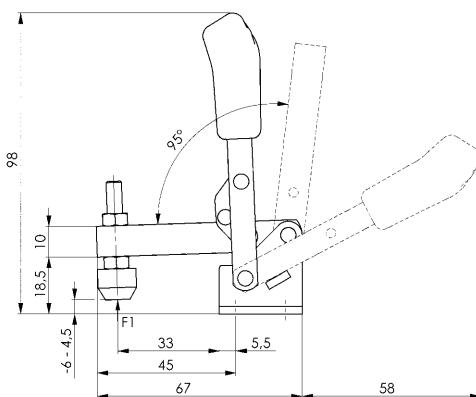
Order no.	Size	F1 [kN]	Clamping screw	Weight [g]
557989	1	1	M5x30	100


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CAD

Subject to technical alterations.

No. 6811P

Heavy vertical toggle clamp

with horizontal base.

Reamed and case-hardened bearing bushes.

Hardened, ground and permanently-lubricated pins. Clamp nuts on lever arm to vary friction in movement. Material: steel, blued.

Lever arm made of cast steel, blued. Handle of red, oil-resistant plastic.

Complete with tempered, galvanized clamping screw

no. 6885.

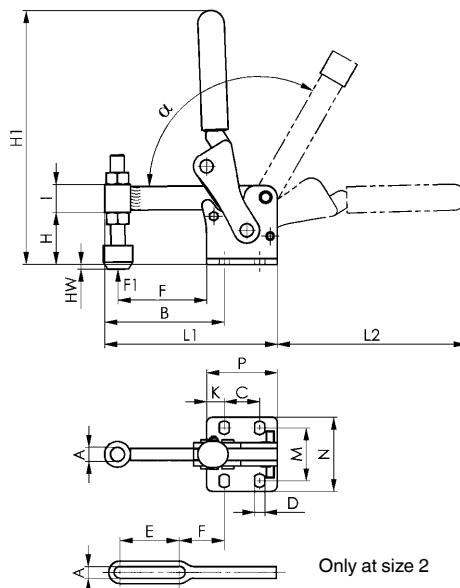


CAD

Order no.	Size	F1 [kN]	Clamping screw	Weight [g]
91314	2	2,5	M 6x 50	320
90878	4	5,0	M12x 80	1250
90886	6	6,0	M12x110	2130
90894	8	12,0	M12x110	4050

Note:

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



Recommendations



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Dimensions:

Order no.	Size	A	B	C	D	E	F	H	H1	HW min.	HW max.	I	K	L1	L2	M	N	P	α
91314	2	6,1	57	20	7,1	30	21	25	127	-13,5	6	15	8,5	85	94	32	47	37	120°
90878	4	12,2	100	30	8,5	-	75	44	216	-19,0	14	24	15	146	160	45	65	60	120°
90886	6	12,2	121	45	10,5	-	95	65	263	-22,0	35	30	15	181	185	52	78	75	120°
90894	8	12,2	151	55	12,5	-	120	71	303	-10,0	41	36	20	226	203	75	108	95	120°



Subject to technical alterations.

No. 6812P

Heavy vertical toggle clamp

with vertical base and mounting holes.

Reamed and case-hardened bearing bushes.

Hardened, ground and permanently-lubricated pins. Clamp nuts on lever arm to vary friction in movement. Material: steel, blued.

Lever arm made of cast steel, blued. Handle of red, oil-resistant plastic.

Complete with tempered, galvanized clamping screw no. 6885.

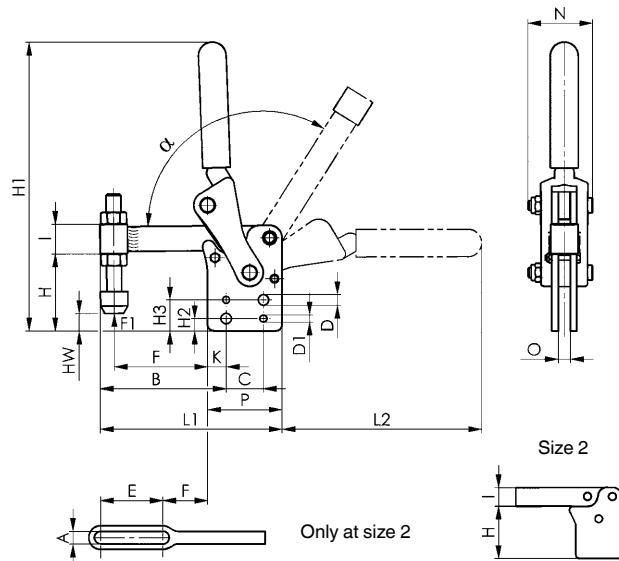


CAD

Order no.	Size	F1 [kN]	Clamping screw	Weight [g]
91330	2	2,5	M 6x 50	320
90902	4	10,0	M12x 80	1320
90910	6	12,0	M12x110	2120
90928	8	20,0	M12x110	4060

Note:

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



Recommendations



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No. 6806,
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No. 6811P,
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Dimensions:

Order no.	Size	A	B	C	D	D1	E	F	H	H1	H2	H3	HW min.	HW max.	I	K	L1	L2	N	O	P	α
91330	2	6,2	48	-	-	-	30	12	42,0	144	-	-	3,5	22,8	15	-	85	94	31	6	37	190°
90902	4	12,2	101	30	8,5	5,7	-	75	62,0	233	10	25	-1,0	35,0	24	15	146	161	52	10	60	120°
90910	6	12,2	121	45	10,5	7,7	-	95	87,5	289	15	35	0,0	58,0	30	15	181	189	60	12	75	120°
90928	8	12,2	151	55	12,5	9,7	-	120	106,0	338	15	40	25,0	76,0	36	20	226	219	76	16	95	120°

Subject to technical alterations.

No. 6809P
Modular clamp
with swivelling foot, welding version.

Mechanism can be welded at an angle to its support.
Reamed and case-hardened bearing bushes. Hardened, ground and permanently-lubricated pins. Clamp nuts on lever arm to vary friction in movement.

Materials: steel, blued. Lever arm made of cast steel, blued.

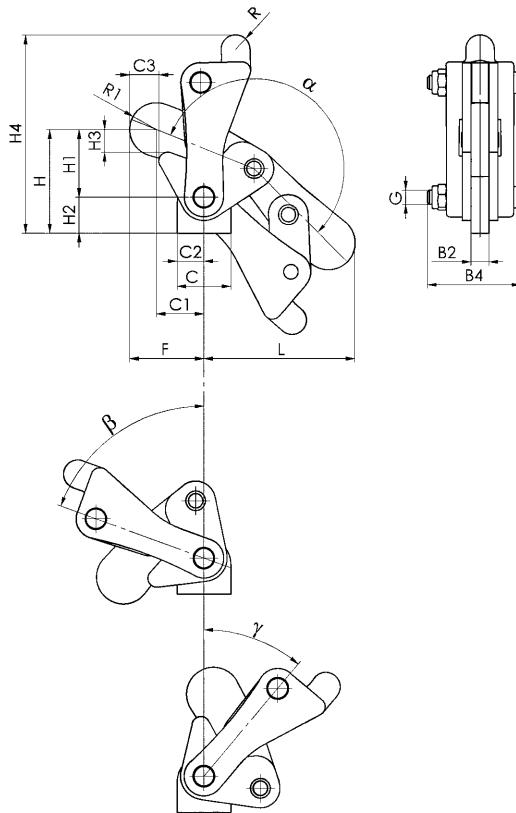
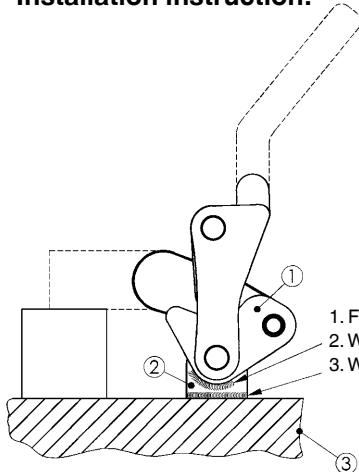


CAD

Order no.	Size	F1			Weight [g]
			[kN]		
90738	2		2,5		205
90746	4		7,0		855
90753	6		11,0		1600
90761	8		22,5		3100
90779	10		34,0		5560

Note:

These modular clamps can be supplemented with accessories just as you need to meet the requirements of your production equipment and fixtures.


Installation instruction:


1. Fix modular clamp in clamping position
2. Weld part ① to part ②
3. Weld part ② to part ③

Recommendations

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Dimensions:

Order no.	Size	B2	B4	C	C1	C2	C3	F	G	H	H1	H2	H3	H4	L	R	R1	α	β	γ
90738	2	6	31	22	22	11	12	32	M 6	38	18	20,0	5	76	58	5	10,0	200°	70°	40°
90746	4	10	52	30	26	15	16	41	M 8	58	38	20,0	12	112	82	8	15,0	200°	70°	40°
90753	6	12	60	36	36	18	20	55	M10	78	50	28,0	16	145	105	11	18,0	200°	70°	40°
90761	8	16	76	50	50	25	27	72	M12	98	65	33,0	19	172	135	14	22,5	200°	70°	40°
90779	10	20	90	70	52	35	22	77	M16	117	83	33,5	25	210	155	14	25,0	200°	60°	28°

Subject to technical alterations.

No. 6810P
Modular clamp
with vertical foot, welding version.

Reamed and case-hardened bearing bushes.

Hardened, ground and permanently-lubricated pins. Clamp nuts on lever arm to vary friction in movement.

Materials: steel, blued. Lever arm made of cast steel, blued.



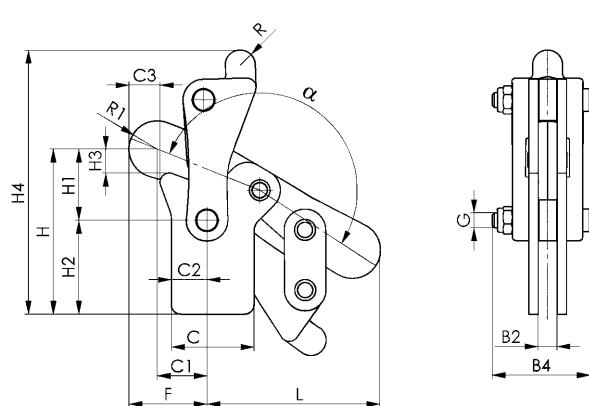
CAD



Order no.	Size	F1		Weight [g]
			[kN]	
90803	2		2,5	245
90811	4		7,0	970
90829	6		11,0	1750
90837	8		22,5	3310
90845	10		34,0	5970

Note:

These modular clamps can be supplemented with accessories just as you need to meet the requirements of your production equipment and fixtures.


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Dimensions:

Order no.	Size	B2	B4	C	C1	C2	C3	F	G	H	H1	H2	H3	H4	L	R	R1	α
90803	2	6	31	30	22	14	12	32	M 6	52	18	34	5	90	58	5	10,0	190°
90811	4	10	52	44	26	19	16	41	M 8	88	38	50	12	142	82	8	15,0	190°
90829	6	12	60	55	36	28	20	55	M10	114	50	64	16	182	106	11	18,0	190°
90837	8	16	76	66	50	37	27	72	M12	140	64	76	19	218	135	14	22,5	190°
90845	10	20	90	80	52	40	22	77	M16	173	83	90	25	266	155	14	25,0	190°

Subject to technical alterations.

No. 6809H
Hand grip

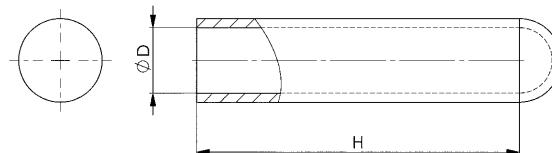
Red, oil-resistant plastic.

NEW!


CAD



Order no.	Size	ØD x H	Weight [g]
91355	2	13 x 50	7
91363	4	18 x 90	21
91371	6	22 x 100	28
91389	8+10	28 x 110	39


No. 6809RK
Lever arm tube, short

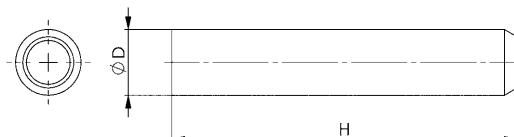
 For welding, chamfered to protect operator's hands.
 Steel, blued.

NEW!


CAD



Order no.	Size	ØD x H	Weight [g]
91033	2	13 x 55	37
91041	4	18 x 95	104
91058	6	22 x 105	148
91066	8+10	28 x 115	148


No. 6809RL
Lever arm tube, long

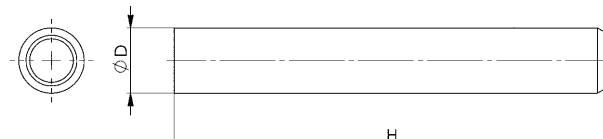
 For welding, chamfered to protect operator's hands.
 Steel, blued.

NEW!


CAD



Order no.	Size	ØD x H	Weight [g]
91074	2	13 x 95	60
91082	4	18 x 120	132
91090	6	22 x 150	211
91108	8+10	28 x 180	333



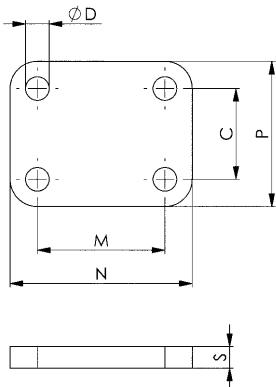
Subject to technical alterations.

No. 6809G
Base plate

For welding, with mounting holes. Steel, blued.

NEW!

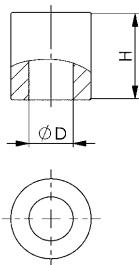

Order no.	Size	C	dia. D	M	N	P	S	Weight [g]
90944	2+4	25	6,5	35	50	40	8	86
90951	6	40	8,5	30	50	60	8	211
90969	8	50	8,5	45	65	70	8	333
90977	10	60	10,5	50	70	80	10	406


No. 6809S
Clamping screw holder

For welding, thick-walled. Steel, blued.

NEW!

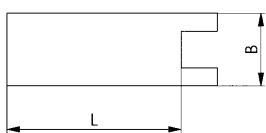

Order no.	Size	ØD x H	Weight [g]
91116	2	6,5 x 20	26
91124	4	12,1 x 24	50
91132	6	12,1 x 30	63
91173	8+10	12,1 x 36	75


No. 6809V
Clamping arm extension

For welding, slotted. Steel, blued.

NEW!


Order no.	Size	L x H x W	Weight [g]
90985	2	40 x 15 x 15	81
90993	4	48 x 25 x 20	208
91009	6	60 x 30 x 25	390
91017	8	75 x 35 x 30	676
91025	10	94 x 35 x 35	970



Subject to technical alterations.

No. 6830

Horizontal toggle clamp with red handle with open clamping arm and horizontal base.

Galvanized and passivated. Rivets made of stainless steel, which, for sizes 2 to 5, run in hardened bushings. Bearings are pre-lubricated.

Ergonomic, oil-resistant handle with large grip surface and soft components. Lock washer for the thrust bolt at the end of the clamping arm.

Complete with tempered, galvanized clamping screw no. 6890.



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
93005	0	0,25	0,4	M4x25	35
93013	1	0,8	1,1	M5x30	105
93021	2	1,0	1,2	M6x35	185
93039	3	1,8	2,5	M8x45	320
93047	4	2,0	3,0	M8x65	700
93054	5	3,0	5,0	M8x65	1080

Also available in „STAINLESS STEEL“ version (no. 6830NI) and in matte-black version (no. 6830B)!

Note:

For suitable sensor monitor for size 3 see no. 6897S.

No. 6830Y

Horizontal toggle clamp with yellow handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557038	0	0,25	0,4	M4x25	35
557039	1	0,8	1,1	M5x30	105
557040	2	1,0	1,2	M6x35	185
557041	3	1,8	2,5	M8x45	320
557042	4	2,0	3,0	M8x65	700
557043	5	3,0	5,0	M8x65	1080

Also available in „STAINLESS STEEL“ version (no. 6830NIY).

No. 6830J

Horizontal toggle clamp with orange handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557331	0	0,25	0,4	M4x25	35
557332	1	0,8	1,1	M5x30	105
557333	2	1,0	1,2	M6x35	185
557334	3	1,8	2,5	M8x45	320
557335	4	2,0	3,0	M8x65	700
557336	5	3,0	5,0	M8x65	1080

Also available in „STAINLESS STEEL“ version (no. 6830NIJ).

No. 6830E

Horizontal toggle clamp with blue handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557655	0	0,25	0,4	M4x25	35
557656	1	0,8	1,1	M5x30	105
557657	2	1,0	1,2	M6x35	185
557658	3	1,8	2,5	M8x45	320
557659	4	2,0	3,0	M8x65	700
557660	5	3,0	5,0	M8x65	1080

Also available in „STAINLESS STEEL“ version (no. 6830NIE).

Subject to technical alterations.

No. 6830G

Horizontal toggle clamp with green handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557492	0	0,25	0,4	M4x25	35
557493	1	0,8	1,1	M5x30	105
557494	2	1,0	1,2	M6x35	185
557495	3	1,8	2,5	M8x45	320
557496	4	2,0	3,0	M8x65	700
557497	5	3,0	5,0	M8x65	1080

Also available in „STAINLESS STEEL“ version (no. 6830NIG).

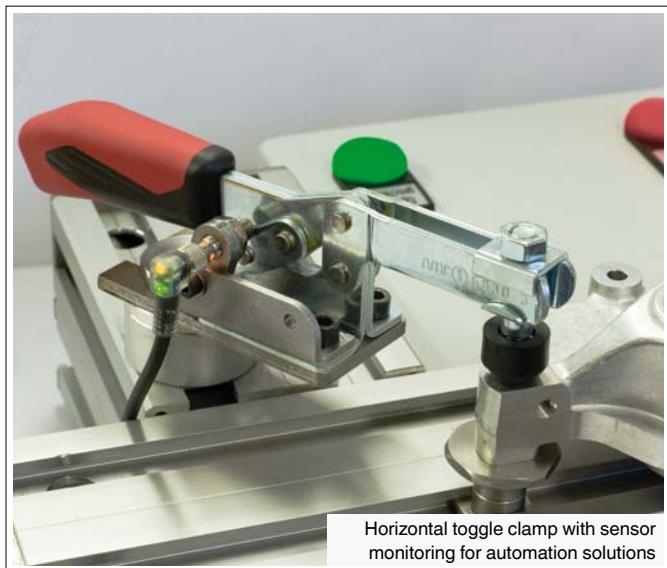
No. 6830T

Horizontal toggle clamp with black handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557991	0	0,25	0,4	M4x25	35
557992	1	0,8	1,1	M5x30	105
557993	2	1,0	1,2	M6x35	185
557994	3	1,8	2,5	M8x45	320
557995	4	2,0	3,0	M8x65	700
557996	5	3,0	5,0	M8x65	1080

Also available in „STAINLESS STEEL“ version (no. 6830NIT).



Horizontal toggle clamp with sensor monitoring for automation solutions

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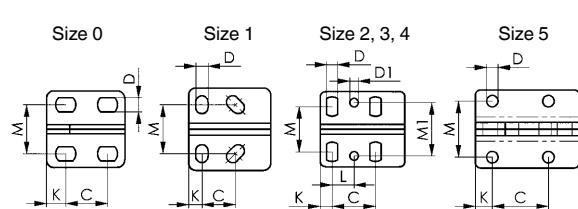
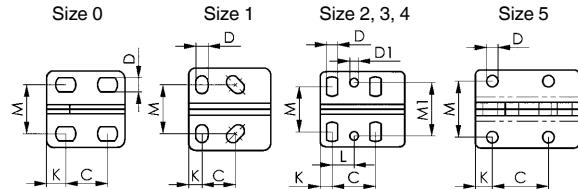
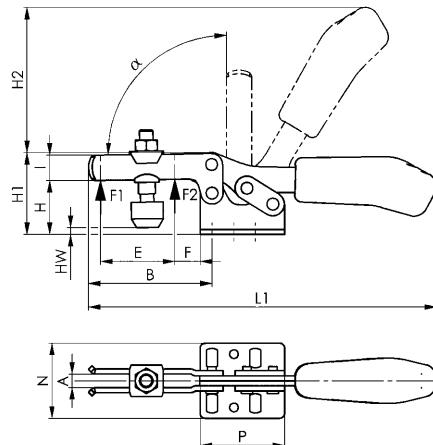
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page 72

Dimensions:

Size	A	B	C	D	D1	E	F	H	H1	H2	HW min.	HW max.	I	K	L	L1	M	M1	N	P	α
0	4	28	11,5-15,5	4,6	-	9,0	5,5	14,5	23,0	34	-5,5	0,0	7,5	6,3	-	79	16,0	-	25,0	25,5	90°
1	5	42	13,0-14,5	5,2	-	18,7	8,0	19,0	30,0	49	-3,0	2,5	10,0	5,5	-	120	18,0-21,5	-	34,0	34,0	90°
2	6	64	26,0	5,6	5,6	32,0	16,0	24,0	45,0	68	-1,5	5,0	13,2	6,0	12,7	162	19,5-29,5	28,5	42,0	38,0	90°
3	8	73	25,7	6,5	5,1	38,0	14,0	32,0	48,5	86	-2,0	9,0	15,0	7,0	13,0	206	22,0-31,8	31,6	45,5	50,0	90°
4	10	113	41,0	8,5	8,5	63,0	27,0	45,0	75,0	126	-4,0	24,0	20,0	8,0	20,5	287	29,0-43,0	43,0	58,0	57,0	90°
5	10	123	41,5	8,5	-	78,0	16,0	46,0	73,0	128	+1,7	25,0	25,0	12,5	-	321	41,5	-	58,0	77,0	90°



Subject to technical alterations.

No. 68300

Horizontal toggle clamp plus with red handle

With increased clamping force, open clamping arm and horizontal base.

Galvanised and passivated. Stainless steel rivets. The bearings are pre-lubricated. Ergonomic, oil-resistant handle with large grip surface and soft components. Safety clamping piece with lock washer for the clamping screw at the end of the clamping arm.

Complete with tempered, galvanised clamping screw no. 68301.



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
552552	1	1,1	1,7	M5 x 35	114
551715	2	1,6	3,0	M6 x 50	450
551716	3	2,5	4,0	M8 x 58	560
551717	4	3,5	8,0	M10 x 76	1250

Also available in „STAINLESS STEEL“ version (no. 68300NI).

No. 68300Y

Horizontal toggle clamp plus with yellow handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557046	1	1,1	1,7	M5 x 35	114
557930	2	1,6	3,0	M6 x 50	450
557047	3	2,5	4,0	M8 x 58	560
557048	4	3,5	8,0	M10 x 76	1250

Also available in „STAINLESS STEEL“ version (no. 68300NIY).

No. 68300J

Horizontal toggle clamp plus with orange handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557337	1	1,1	1,7	M5 x 35	114
557935	2	1,6	3,0	M6 x 50	450
557338	3	2,5	4,0	M8 x 58	560
557339	4	3,5	8,0	M10 x 76	1250

Also available in „STAINLESS STEEL“ version (no. 68300NIJ).

No. 68300E

Horizontal toggle clamp plus with blue handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557668	1	1,1	1,7	M5 x 35	114
557937	2	1,6	3,0	M6 x 50	450
557669	3	2,5	4,0	M8 x 58	560
557670	4	3,5	8,0	M10 x 76	1250

Also available in „STAINLESS STEEL“ version (no. 68300NIE).

Subject to technical alterations.

No. 68300G

Horizontal toggle clamp plus with green handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557498	1	1,1	1,7	M5 x 35	114
557936	2	1,6	3,0	M6 x 50	450
557499	3	2,5	4,0	M8 x 58	560
557500	4	3,5	8,0	M10 x 76	1250

Also available in „STAINLESS STEEL“ version (no. 68300NIG).

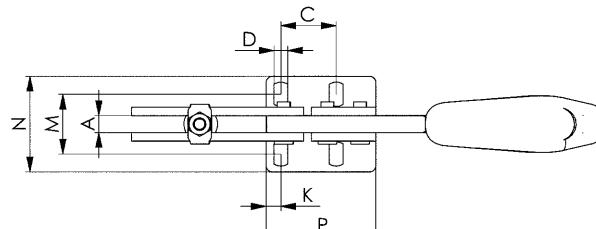
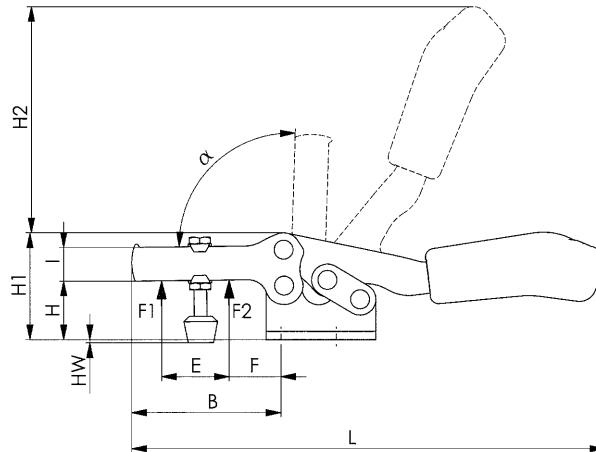
No. 68300T

Horizontal toggle clamp plus with black handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557997	1	1,1	1,7	M5 x 35	114
557998	2	1,6	3,0	M6 x 50	450
557999	3	2,5	4,0	M8 x 58	560
558000	4	3,5	8,0	M10 x 76	1250

Also available in „STAINLESS STEEL“ version (no. 68300NIT).


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Dimensions:

Size	A	B	C	D	E	F	H	H1	H2	HW min.	HW max.	I	K	L	M	N	P	α
1	5	46	13,5	4,3	20	16,5	19,0	35	46	0	10,0	12	6,0	126	15,0 - 19,5	27,5	34,0	90°
2	8	71	26,0	6,5	39	14,0	28,0	51	108	-1	12,0	16	7,0	224	23,5 - 34,0	46,0	52,0	90°
3	8	78	26,0	6,5	43	22,0	33,5	58	112	-1	13,0	18	6,5	242	25,5 - 36,0	47,0	52,5	90°
4	10	120	41,5	8,6	69	23,0	41,0	77	135	-2	16,5	24	10,5	329	34,5 - 45,0	60,0	76,0	90°

Subject to technical alterations.

No. 6832

Horizontal toggle clamp with red handle with open clamping arm and vertical base.

Galvanized and passivated. Rivets made of stainless steel, which, for sizes 2 to 5, run in hardened bushings. Bearings are pre-lubricated.

Ergonomic, oil-resistant handle with large grip surface and soft components. Lock washer for the thrust bolt at the end of the clamping arm.

Complete with tempered, galvanized clamping screw no. 6890.

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
93203	0	0,25	0,4	M4x25	35
93211	1	0,8	1,1	M5x30	105
93229	2	1,0	1,2	M6x35	185
93237	3	1,8	2,5	M8x45	320
93245	4	2,0	3,0	M8x65	700
93252	5	3,0	5,0	M8x65	1080

Also available in matte-black version (no. 6832B)!



No. 6832Y

Horizontal toggle clamp with yellow handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557097	0	0,25	0,4	M4x25	35
557098	1	0,8	1,1	M5x30	105
557099	2	1,0	1,2	M6x35	185
557100	3	1,8	2,5	M8x45	320
557101	4	2,0	3,0	M8x65	700
557102	5	3,0	5,0	M8x65	1080

No. 6832J

Horizontal toggle clamp with orange handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557340	0	0,25	0,4	M4x25	35
557341	1	0,8	1,1	M5x30	105
557342	2	1,0	1,2	M6x35	185
557343	3	1,8	2,5	M8x45	320
557344	4	2,0	3,0	M8x65	700
557345	5	3,0	5,0	M8x65	1080

No. 6832E

Horizontal toggle clamp with blue handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557671	0	0,25	0,4	M4x25	35
557672	1	0,8	1,1	M5x30	105
557673	2	1,0	1,2	M6x35	185
557674	3	1,8	2,5	M8x45	320
557675	4	2,0	3,0	M8x65	700
557676	5	3,0	5,0	M8x65	1080

Subject to technical alterations.

No. 6832G

Horizontal toggle clamp with green handle



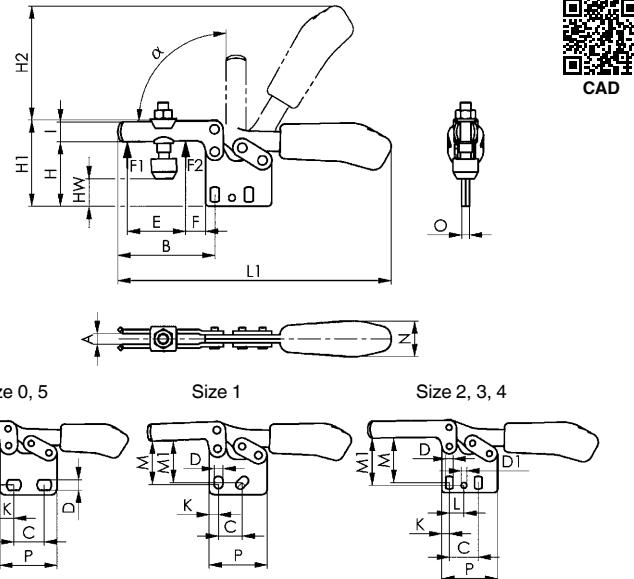
Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557501	0	0,25	0,4	M4x25	35
557502	1	0,8	1,1	M5x30	105
557503	2	1,0	1,2	M6x35	185
557504	3	1,8	2,5	M8x45	320
557505	4	2,0	3,0	M8x65	700
557506	5	3,0	5,0	M8x65	1080

No. 6832T

Horizontal toggle clamp with black handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
558010	0	0,25	0,4	M4x25	35
558011	1	0,8	1,1	M5x30	105
558012	2	1,0	1,2	M6x35	185
558013	3	1,8	2,5	M8x45	320
558014	4	2,0	3,0	M8x65	700
558015	5	3,0	5,0	M8x65	1080


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Dimensions:

Size	A	B	C	D	D1	E	F	H	H1	H2	HW min.	HW max.	I	K	L	L1	M	M1	N	O	P	a
0	4	28	11,5-15,5	4,6	-	9,0	5	24,5	33,0	34	4,7	10,7	7,5	6,3	-	79	20,0	-	12	3	25,5	90°
1	5	42	13,0-14,5	5,2	-	18,5	8	31,5	43,0	49	8,0	15,0	10,0	5,5	-	120	23,5-25,5	24,5	18	5	34,0	90°
2	6	64	26,0	5,6	5,6	32,0	16	40,0	61,0	68	15,0	22,0	13,2	6,0	12,7	164	29,5-34,0	34,0	21	5	38,0	90°
3	8	73	25,7	6,5	5,1	38,5	14	49,0	65,0	86	14,5	26,0	15,0	7,0	13,0	206	37,5-42,5	42,0	27	6	50,0	90°
4	10	113	41,0	8,5	8,5	63,0	27	66,5	97,0	115	17,5	46,0	20,0	8,0	20,5	287	52,0-59,0	59,0	34	8	57,0	90°
5	10	123	41,5	8,5	-	78,0	16	65,0	92,5	128	21,5	45,0	25,0	12,5	-	321	57,0	-	36	10	77,0	90°

Subject to technical alterations.

No. 6833

Horizontal toggle clamp with red handle with open clamping arm and angle base.

Galvanized and passivated. Rivets made of stainless steel, which, for sizes 2 and 3, run in hardened bushings. Bearings are pre-lubricated.

Ergonomic, oil-resistant handle with large grip surface and soft components. Lock washer for the thrust bolt at the end of the clamping arm.

Complete with tempered, galvanized clamping screw no. 6890.



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
93179	1	0,8	1,1	M5x30	170
93328	2	1,0	1,2	M6x35	245
93336	3	1,8	2,5	M8x45	390
93542	4	2,0	3,0	M8x65	730

No. 6833Y

Horizontal toggle clamp with yellow handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557118	1	0,8	1,1	M5x30	170
557119	2	1,0	1,2	M6x35	245
557120	3	1,8	2,5	M8x45	390
557121	4	2,0	3,0	M8x65	730

No. 6833J

Horizontal toggle clamp with orange handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557350	1	0,8	1,1	M5x30	170
557351	2	1,0	1,2	M6x35	245
557352	3	1,8	2,5	M8x45	390
557353	4	2,0	3,0	M8x65	730

No. 6833E

Horizontal toggle clamp with blue handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557682	1	0,8	1,1	M5x30	170
557683	2	1,0	1,2	M6x35	245
557684	3	1,8	2,5	M8x45	390
557685	4	2,0	3,0	M8x65	730

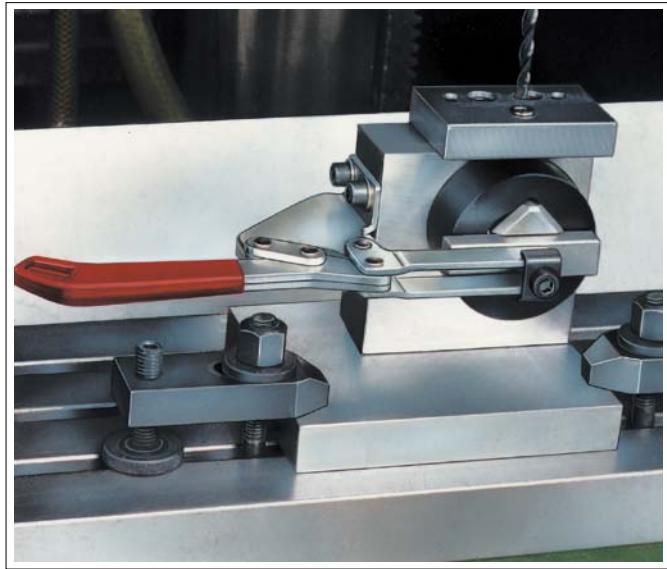
Subject to technical alterations.

No. 6833G
Horizontal toggle clamp with green handle

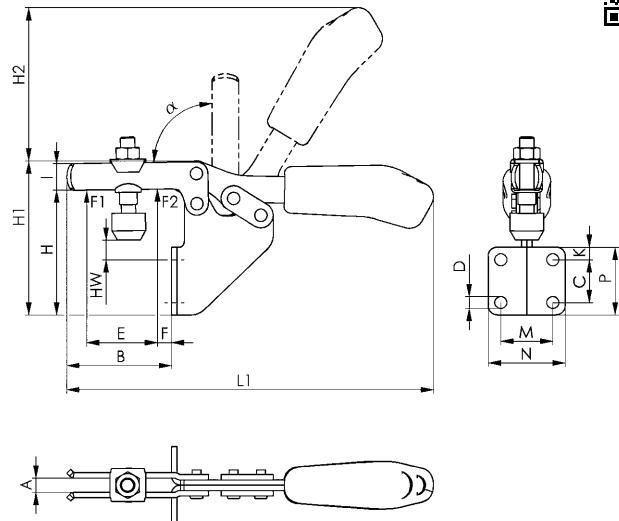

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557511	1	0,8	1,1	M5x30	170
557512	2	1,0	1,2	M6x35	245
557513	3	1,8	2,5	M8x45	390
557514	4	2,0	3,0	M8x65	730

No. 6833T
Horizontal toggle clamp with black handle


Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
558021	1	0,8	1,1	M5x30	170
558022	2	1,0	1,2	M6x35	245
558023	3	1,8	2,5	M8x45	390
558024	4	2,0	3,0	M8x65	730



CAD


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Dimensions:

Size	A	B	C	D	E	F	H	H1	H2	HW min.	HW max.	I	K	L1	M	N	P	α
1	5,0	32	13,5	5,2	18,5	4,0	57	68,0	49	14	20,0	10,0	8	120	19,0	31,0	28	90°
2	6,2	52	20,0	5,6	32,0	10,5	73	94,0	68	22	29,5	13,2	6	162	25,5	37,0	32	90°
3	8,0	59	24,0	6,8	37,0	6,5	70	86,5	86	5	16,0	15,0	7	206	28,5	42,5	38	90°
4	10,0	93	32,0	8,5	63,0	15,0	102	133,0	120	11	40,0	20,0	40	282	32,0	52,0	82	90°

Subject to technical alterations.

No. 6834

Horizontal toggle clamp with red handle

with solid arm and horizontal base.

Galvanized and passivated.

Stainless steel rivets, which run in hardened bushes.

Bearings are pre-lubricated.

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

Complete with tempered, galvanized clamping screw

no. 6885 and sleeve to weld on.



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
93427	2	1,0	1,2	M 6x35	185
93435	3	1,8	2,5	M 8x45	320
93443	4	2,0	3,0	M 8x65	700
93450	5	3,0	5,0	M12x80	1080

Note:

For suitable sensor monitor for size 3 see no. 6897S.

No. 6834Y

Horizontal toggle clamp with yellow handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557106	2	1,0	1,2	M 6x35	185
557108	3	1,8	2,5	M 8x45	320
557109	4	2,0	3,0	M 8x65	700
557110	5	3,0	5,0	M12x80	1080

No. 6834J

Horizontal toggle clamp with orange handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557346	2	1,0	1,2	M 6x35	185
557347	3	1,8	2,5	M 8x45	320
557348	4	2,0	3,0	M 8x65	700
557349	5	3,0	5,0	M12x80	1080

No. 6834E

Horizontal toggle clamp with blue handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557678	2	1,0	1,2	M 6x35	185
557679	3	1,8	2,5	M 8x45	320
557680	4	2,0	3,0	M 8x65	700
557681	5	3,0	5,0	M12x80	1080

Subject to technical alterations.

No. 6834G

Horizontal toggle clamp with green handle



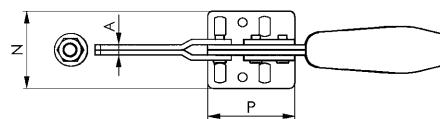
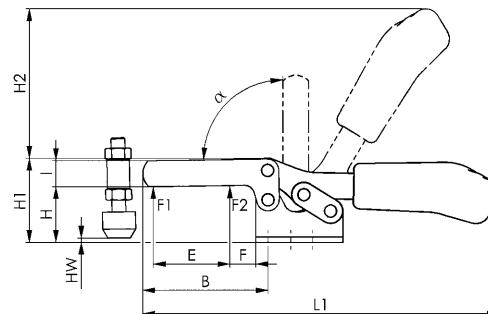
Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557507	2	1,0	1,2	M 6x35	185
557508	3	1,8	2,5	M 8x45	320
557509	4	2,0	3,0	M 8x65	700
557510	5	3,0	5,0	M12x80	1080

No. 6834T

Horizontal toggle clamp with black handle

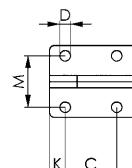
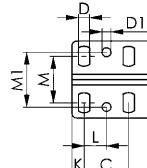


Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
558017	2	1,0	1,2	M 6x35	185
558018	3	1,8	2,5	M 8x45	320
558019	4	2,0	3,0	M 8x65	700
558020	5	3,0	5,0	M12x80	1080



Size 2, 3, 4

Size 5


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Dimensions:

Size	A	B	C	D	D1	E	F	H	H1	H2	HW min.	HW max.	I	K	L	L1	M	M1	N	P	a
2	5	63	26,0	5,6	5,6	35	16,0	24	45,0	66	-2,0	7,5	13	6,0	12,7	161	19,5-29,5	28,5	42	38	90°
3	6	72	26,0	6,5	5,1	44	15,0	32	48,5	86	-3,5	11,0	15	7,0	13,0	205	22,0-31,8	32,0	45,5	50	90°
4	8	111	41,0	8,5	8,5	66	26,0	45	75,0	114	-6,0	22,0	20	8,0	20,5	280	29,0-43,0	43,0	58	57	90°
5	10	121	41,5	8,5	-	78	17,5	46	73,0	128	-13,0	12,5	25	12,5	-	320	41,5	-	58	77	90°

Subject to technical alterations.

No. 6837M

Horizontal acting toggle clamp



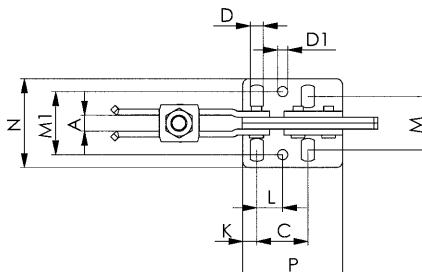
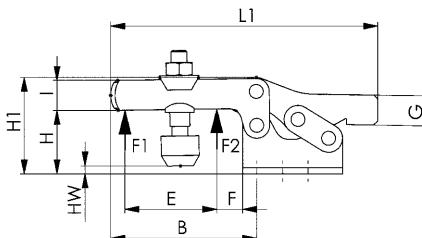
For removable handle.

To prevent interference during use, the handle can be removed after opening or closing this horizontal acting toggle clamp. With open clamping arm and horizontal base. Galvanized and passivated. Stainless steel rivets. The bearings are pre-lubricated.

Handle 6837H is not included in delivery and needs to be ordered separately.

Complete with tempered, galvanised clamping screw no. 6890.

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
93948	2	1,0	1,2	M6 x 35	160
94201	3	1,8	2,5	M8 x 45	269
94268	4	2,0	3,0	M8 x 65	608



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Dimensions:

Order no.	Size	A	B	C	D	D1	E	F	G	H	H1	HW min.	HW max.	I	K	L	L1	M	M1	N	P	α
93948	2	6	64	26,0	5,6	5,6	32	16	12	24	45,0	-1,5	5	13,2	6	12,7	113	19,5 - 29,5	28,5	42,0	38	90°
94201	3	8	73	25,7	6,5	5,1	38	14	15	32	48,5	-2,0	9	15,0	7	13,0	134	22,0 - 31,8	31,6	45,5	50	90°
94268	4	10	113	41,5	8,5	8,5	63	27	15	45	75,0	-4,0	24	20,0	8	20,5	191	29,0 - 43,0	43,0	58,0	57	90°

No. 6837H

Red handle, removable

For horizontal acting toggle clamp no. 6837M.



Order no.	Size	H	L	N	Weight [g]
94144	2	26	93,0	21,0	70
94284	3	35	118,5	27,0	122
94292	4	42	134,5	34,5	195

No. 6837HY

Yellow handle, removable



Order no.	Size	H	L	N	Weight [g]
557125	2	26	93,0	21,0	70
557126	3	35	118,5	27,0	122
557127	4	42	134,5	34,5	195

Subject to technical alterations.

No. 6837HJ
Orange handle, removable


Order no.	Size	H	L	N	Weight [g]
557357	2	26	93,0	21,0	70
557358	3	35	118,5	27,0	122
557359	4	42	134,5	34,5	195

No. 6837HE
Blue handle, removable

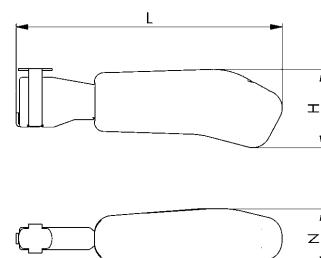

Order no.	Size	H	L	N	Weight [g]
557686	2	26	93,0	21,0	70
557687	3	35	118,5	27,0	122
557688	4	42	134,5	34,5	195

No. 6837HG
Green handle, removable


Order no.	Size	H	L	N	Weight [g]
557525	2	26	93,0	21,0	70
557526	3	35	118,5	27,0	122
557527	4	42	134,5	34,5	195

No. 6837HT
Black handle, removable


Order no.	Size	H	L	N	Weight [g]
558025	2	26	93,0	21,0	70
558026	3	35	118,5	27,0	122
558027	4	42	134,5	34,5	195



Subject to technical alterations.

POSITIONING AND CLAMPING AT THE SAME TIME AND IN ONE OPERATION

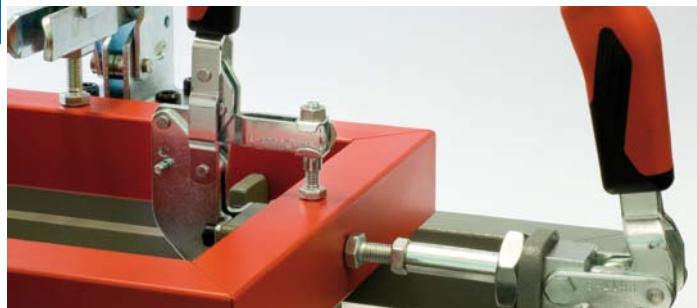
The benefits at a glance:

- Positioning and clamping in one operation
- Robust and stable design
- Workpiece easy to remove thanks to the fully retracted clamping arm
- Optimised quality consistent with the AMF quality standard

Precise positioning and reliable clamping of individual components are of paramount importance when welding fixtures. In practice, this is guaranteed through the simultaneous use of rods and vertical toggle clamps, or by one's own complex design. The AMF Combiclamp accomplishes these two tasks in one operation, eliminating the need to use different toggle clamps. The sliding block guide on the Combiclamp converts the motion of the lever arm into a horizontal and vertical clamping movement, through which the workpiece is positioned and clamped at the same time.

See for yourself the saving potential of using the new AMF Combiclamp!

PRESENT FIXTURE:



SET-UP WITH AMF-COMBICLAMP:



No. 6860

Combination clamp with red handle

Galvanized and passivated.
Rivets made of stainless steel which run in hardened bushings.
Bearings are pre-lubricated.
Ergonomic, oil-resistant handle with large grip surface and soft components.

Order no.	Size	F1 [kN]	F2 [kN]	Weight [g]
93831	1	1,0	1,0	340
93880	2	2,0	2,0	700
93864	3	3,0	3,0	1620



No. 6860Y

Combination clamp with yellow handle



Order no.	Size	F1 [kN]	F2 [kN]	Weight [g]
557143	1	1,0	1,0	340
557144	2	2,0	2,0	700
557145	3	3,0	3,0	1620

No. 6860J

Combination clamp with orange handle



Order no.	Size	F1 [kN]	F2 [kN]	Weight [g]
557360	1	1,0	1,0	340
557361	2	2,0	2,0	700
557362	3	3,0	3,0	1620

Subject to technical alterations.

No. 6860E
Combination clamp with blue handle

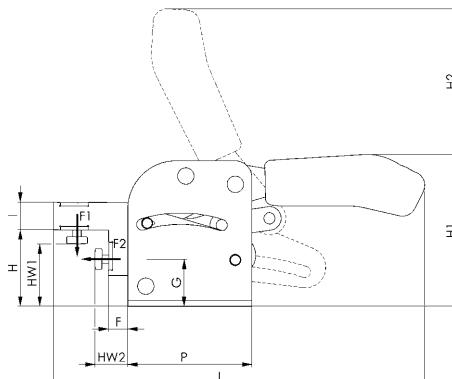

Order no.	Size	F1 [kN]	F2 [kN]	Weight [g]
557689	1	1,0	1,0	340
557690	2	2,0	2,0	700
557691	3	3,0	3,0	1620

No. 6860G
Combination clamp with green handle


Order no.	Size	F1 [kN]	F2 [kN]	Weight [g]
557528	1	1,0	1,0	340
557529	2	2,0	2,0	700
557530	3	3,0	3,0	1620

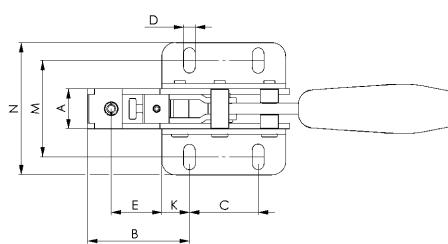
No. 6860T
Combination clamp with black handle


Order no.	Size	F1 [kN]	F2 [kN]	Weight [g]
558028	1	1,0	1,0	340
558029	2	2,0	2,0	700
558030	3	3,0	3,0	1620


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Dimensions:

Size	A	B	C	D	E	F	G	H	H1	H2	HW1 min.	HW1 max.	HW2 min.	HW2 max.	I	K	L	M	N	P
1	17,0	33	40	5,5	15	0,5	22	36,0	74	62	25	32	5	10	12	7,5	150	34,5-39,5	53	55
2	19,5	56	50	6,5	32	9,0	28	46,0	94	87	30	40	14	24	16	12,5	219	48,5-61,5	75	75
3	29,0	74	50	8,5	37	14,0	34	55,5	110	106	40	50	20	30	20	20,0	270	60,0-80,0	96	90

Subject to technical alterations.

No. 6841

Push-pull type toggle clamp with red handle

with small angle base. For push- and pull-clamping.
(Equal operation of rod and lever).
Long rod-guide with attaching thread and nut. Galvanized and passivated. Rivets made of stainless steel, which, for sizes 2 and 3, run in hardened bushings. Lever-parts and rod of tempered steel. Bearings are pre-lubricated. Lever can be set to any angle relative to base. Ergonomic, oil-resistant handle with large grip surface and soft components.

Complete with tempered, galvanized clamping screw
no. 6880.



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
94094	0	0,8	0,8	M 4x20	65
94110	1	1,0	1,0	M 4x20	125
94128	2	2,0	2,0	M 6x25	245
94136	3	2,5	2,5	M 8x35	445
94151	5	4,5	4,5	M12x50	880
94367	5-M27	4,5	4,5	M12x50	900

Also available in „STAINLESS STEEL“ version (no. 6841NI) and in matte-black version (no. 6841B)!

No. 6841Y

Push-pull type toggle clamp with yellow handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557147	0	0,8	0,8	M 4x20	65
557148	1	1,0	1,0	M 4x20	125
557149	2	2,0	2,0	M 6x25	245
557150	3	2,5	2,5	M 8x35	445
557151	5	4,5	4,5	M12x50	880
557152	5-M27	4,5	4,5	M12x50	900

Also available in „STAINLESS STEEL“ version (no. 6841NIY).

No. 6841J

Push-pull type toggle clamp with orange handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557373	0	0,8	0,8	M 4x20	65
557374	1	1,0	1,0	M 4x20	125
557375	2	2,0	2,0	M 6x25	245
557376	3	2,5	2,5	M 8x35	445
557377	5	4,5	4,5	M12x50	880
557378	5-M27	4,5	4,5	M12x50	900

Also available in „STAINLESS STEEL“ version (no. 6841NIJ).

No. 6841E

Push-pull type toggle clamp with blue handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557692	0	0,8	0,8	M 4x20	65
557693	1	1,0	1,0	M 4x20	125
557694	2	2,0	2,0	M 6x25	245
557695	3	2,5	2,5	M 8x35	445
557696	5	4,5	4,5	M12x50	880
557697	5-M27	4,5	4,5	M12x50	900

Also available in „STAINLESS STEEL“ version (no. 6841NIE).

Subject to technical alterations.

No. 6841G

Push-pull type toggle clamp with green handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557531	0	0,8	0,8	M 4x20	65
557532	1	1,0	1,0	M 4x20	125
557533	2	2,0	2,0	M 6x25	245
557534	3	2,5	2,5	M 8x35	445
557535	5	4,5	4,5	M12x50	880
557536	5-M27	4,5	4,5	M12x50	900

Also available in „STAINLESS STEEL“ version (no. 6841NIG).

No. 6841T

Push-pull type toggle clamp with black handle

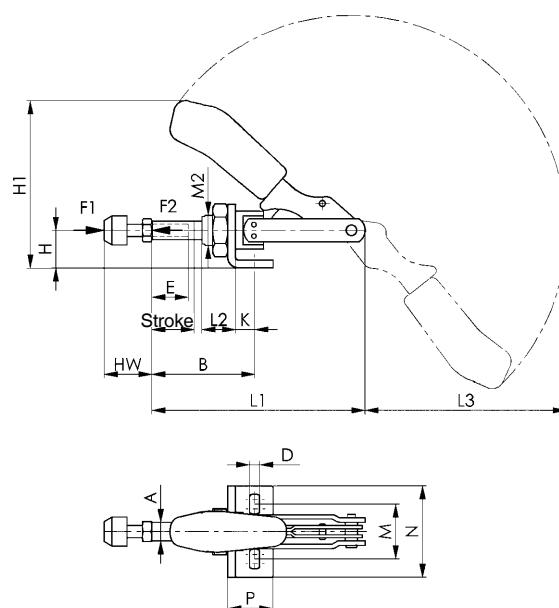


Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
558031	0	0,8	0,8	M 4x20	65
558032	1	1,0	1,0	M 4x20	125
558033	2	2,0	2,0	M 6x25	245
558034	3	2,5	2,5	M 8x35	445
558035	5	4,5	4,5	M12x50	880
558036	5-M27	4,5	4,5	M12x50	900

Also available in „STAINLESS STEEL“ version (no. 6841NIT).



CAD



Recommendations



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Dimensions:

Size	A	B min.	B max.	D	E	H	H1	Stroke	HW min.	HW max.	K	L1	L2	L3	M	M2	N	P
0	6,5	17,0	33,0	4,5	13	12	49,3	16	12	20	6,5	66,5	10	54,0	16,0	M10x1,0	25	16
1	8,0	24,5	44,5	4,5	20	15	60,5	20	12	20	7,0	91,0	16	74,0	16,0-19,5	M12x1,5	30	20
2	10,0	32,5	58,5	5,6	20	20	85,5	26	17	25	12,5	114,0	19	105,0	31,8-36,0	M16x1,5	50	34
3	12,0	37,0	69,0	6,5	30	25	108,0	32	22	35	13,0	140,0	22	127,5	29,5-42,5	M20x1,5	60	30
5	16,0	41,5	81,5	8,5	50	30	129,5	40	30	50	15,5	171,5	25	158,0	29,0-46,0	M24x1,5	65	35
5-M27	16,0	41,5	81,5	8,5	50	30	129,5	40	30	50	15,5	171,5	25	158,0	29,0-46,0	M27x2,0	65	35

Subject to technical alterations.

No. 6840

Push-pull type toggle clamp with red handle

without angle base. For push- and pull-clamping.
(Equal operation of rod and lever).
Long rod-guide with attaching thread and nut. Galvanized and passivated. Rivets made of stainless steel, which, for sizes 2 and 3, run in hardened bushings. Lever-parts and rod of tempered steel. Bearings are pre-lubricated. Push-pull toggle clamp with threaded front for direct mounting in vertical metal plates or in fixtures. Ergonomic, oil-resistant handle with large grip surface and soft components.

Complete with tempered, galvanized clamping screw no. 6880.

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
93906	0	0,8	0,8	M 4x20	60
93914	1	1,0	1,0	M 4x20	100
93922	2	2,0	2,0	M 6x25	245
93930	3	2,5	2,5	M 8x35	330
93955	5	4,5	4,5	M12x50	700
94359	5-M27	4,5	4,5	M12x50	720



No. 6840Y

Push-pull type toggle clamp with yellow handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557161	0	0,8	0,8	M 4x20	60
557162	1	1,0	1,0	M 4x20	100
557163	2	2,0	2,0	M 6x25	245
557164	3	2,5	2,5	M 8x35	330
557165	5	4,5	4,5	M12x50	700
557166	5-M27	4,5	4,5	M12x50	720

No. 6840J

Push-pull type toggle clamp with orange handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557389	0	0,8	0,8	M 4x20	60
557390	1	1,0	1,0	M 4x20	100
557391	2	2,0	2,0	M 6x25	245
557392	3	2,5	2,5	M 8x35	330
557393	5	4,5	4,5	M12x50	700
557394	5-M27	4,5	4,5	M12x50	720

No. 6840E

Push-pull type toggle clamp with blue handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557699	0	0,8	0,8	M 4x20	60
557700	1	1,0	1,0	M 4x20	100
557701	2	2,0	2,0	M 6x25	245
557702	3	2,5	2,5	M 8x35	330
557703	5	4,5	4,5	M12x50	700
557704	5-M27	4,5	4,5	M12x50	720

Subject to technical alterations.

No. 6840G

Push-pull type toggle clamp with green handle



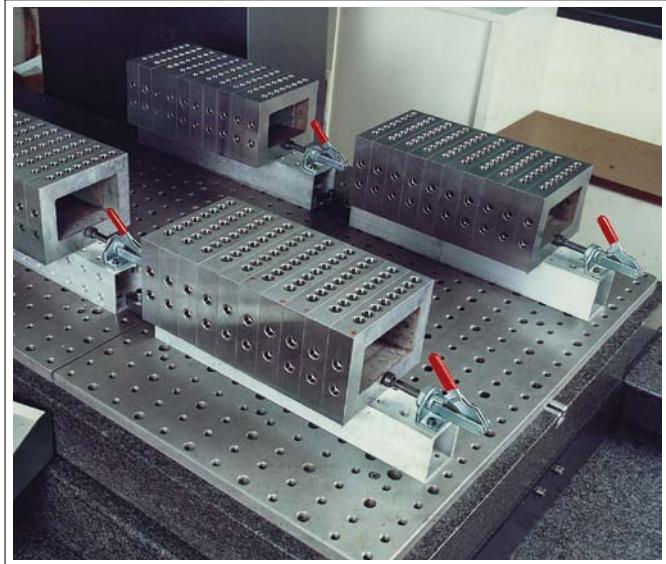
Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557537	0	0,8	0,8	M 4x20	60
557538	1	1,0	1,0	M 4x20	100
557539	2	2,0	2,0	M 6x25	245
557540	3	2,5	2,5	M 8x35	330
557541	5	4,5	4,5	M12x50	700
557542	5-M27	4,5	4,5	M12x50	720

No. 6840T

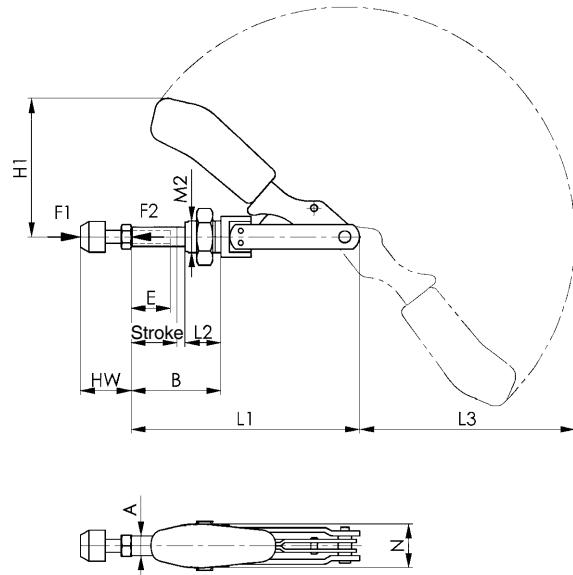
Push-pull type toggle clamp with black handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
558037	0	0,8	0,8	M 4x20	60
558038	1	1,0	1,0	M 4x20	100
558039	2	2,0	2,0	M 6x25	245
558040	3	2,5	2,5	M 8x35	330
558041	5	4,5	4,5	M12x50	700
558042	5-M27	4,5	4,5	M12x50	720



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Dimensions:

Size	A	B min.	B max.	E	H1	Stroke	HW min.	HW max.	L1	L2	L3	M2	N
0	6,5	10,5	26,5	13	37,0	16	12	20	66,5	10	54	M10x1,0	15,0
1	8,0	17,5	37,5	20	45,5	20	12	20	91,0	16	74	M12x1,5	18,0
2	10,0	20,0	46,0	20	66,0	26	17	25	114,0	19	105	M16x1,5	22,0
3	12,0	24,0	56,0	30	82,5	32	22	35	140,0	22	127	M20x1,5	27,0
5	16,0	26,5	66,5	50	99,0	40	30	50	171,5	25	158	M24x1,5	34,5
5-M27	16,0	26,5	66,5	50	99,0	40	30	50	171,5	25	158	M27x2,0	34,5

Subject to technical alterations.

No. 6844

Push-pull type toggle clamp with red handle

short version. For push- and pull-clamping.
Long rod-guide with attaching thread and nut.
Galvanized and passivated. Stainless steel rivet. Shoulder screws tempered. Bearings are pre-lubricated.
Ergonomic, oil-resistant handle with large grip surface and soft components.

Complete with tempered, galvanized clamping screw no. 6880.



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
94300	2	1,0	1,0	M 6x25	130
94318	3	2,5	2,5	M 8x35	320
94334	5	4,0	4,0	M12x50	1200
92676	5-M27	4,0	4,0	M12x50	1200

Also available in „STAINLESS STEEL“ version (no. 6844NI).

Application:

Toggle for direct fit up in metal plates or fixtures, using its front attaching thread or by means of solid base angle no. 6843.

No. 6844Y

Push-pull type toggle clamp with yellow handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557167	2	1,0	1,0	M 6x25	130
557168	3	2,5	2,5	M 8x35	320
557169	5	4,0	4,0	M12x50	1200
557170	5-M27	4,0	4,0	M12x50	1200

Also available in „STAINLESS STEEL“ version (no. 6844NIY).

No. 6844J

Push-pull type toggle clamp with orange handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557397	2	1,0	1,0	M 6x25	130
557398	3	2,5	2,5	M 8x35	320
557399	5	4,0	4,0	M12x50	1200
557400	5-M27	4,0	4,0	M12x50	1200

Also available in „STAINLESS STEEL“ version (no. 6844NIJ).

No. 6844E

Push-pull type toggle clamp with blue handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557710	2	1,0	1,0	M 6x25	130
557711	3	2,5	2,5	M 8x35	320
557712	5	4,0	4,0	M12x50	1200
557713	5-M27	4,0	4,0	M12x50	1200

Also available in „STAINLESS STEEL“ version (no. 6844NIE).

Subject to technical alterations.

No. 6844G

Push-pull type toggle clamp with green handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557548	2	1,0	1,0	M 6x25	130
557549	3	2,5	2,5	M 8x35	320
557550	5	4,0	4,0	M12x50	1200
557551	5-M27	4,0	4,0	M12x50	1200

Also available in „STAINLESS STEEL“ version (no. 6844NIG).

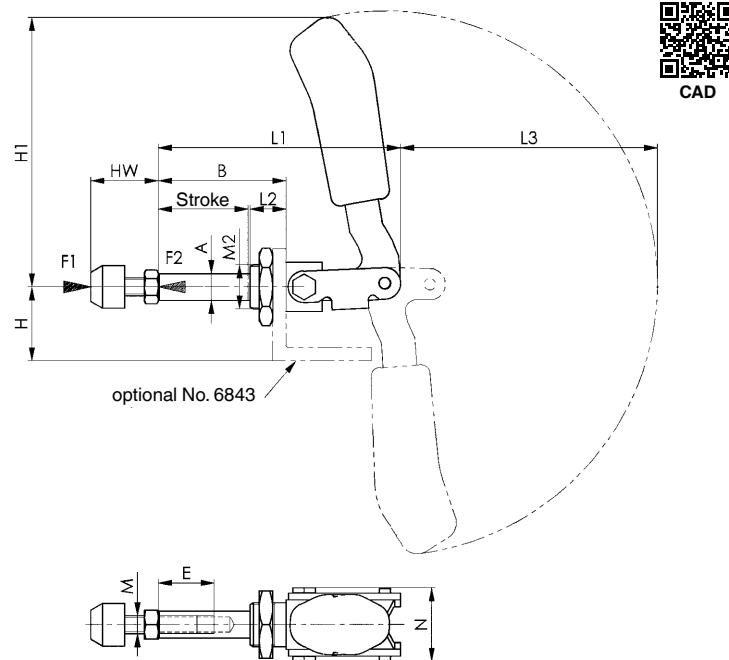
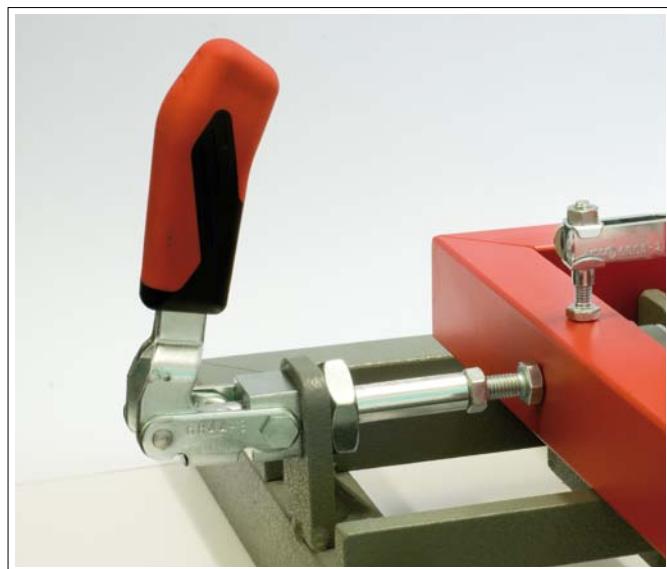
No. 6844T

Push-pull type toggle clamp with black handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
558046	2	1,0	1,0	M 6x25	130
558047	3	2,5	2,5	M 8x35	320
558048	5	4,0	4,0	M12x50	1200
558049	5-M27	4,0	4,0	M12x50	1200

Also available in „STAINLESS STEEL“ version (no. 6844NIT).


Recommendations


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page 42

Dimensions:

Size	A	B	E	H	H1	Stroke	HW min.	HW max.	L1	L2	L3	M	M2	N
2	10	36	15	24	73	21,5	17	25	68,5	13	68	M6	M16x1,5	30,5
3	12	57	25	33	123	40,0	22	35	108,0	16	115	M8	M20x1,5	33,0
5	16	92	45	37	149	67,0	30	50	175,0	24	139	M12	M24x1,5	49,0
5-M27	16	92	45	37	149	67,0	30	50	175,0	24	139	M12	M27x2,0	49,0

Subject to technical alterations.

No. 6843

Angle base, solid

for no. 6840 and no. 6844.

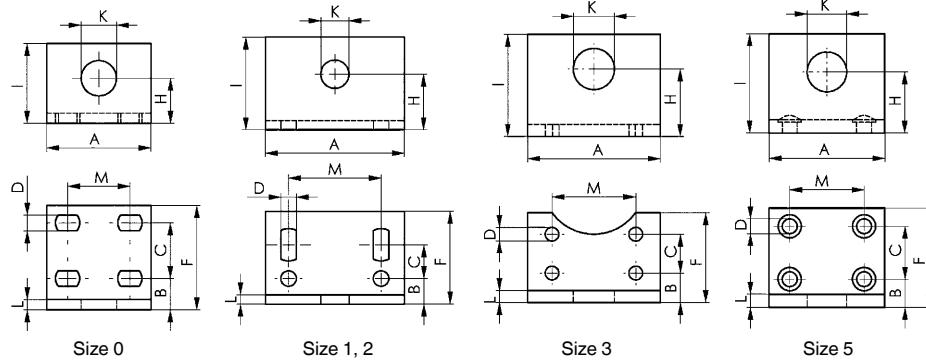
Increased range of application due to enlarged height of center line. Fastening by means of 4 screws.



CAD

Order no.	Size	A	B	C	D	F	H	I	K	L	M	Weight [g]
94003	0	30	9,0	16,0	4,5	30	13	23	10,2	3	15,5-20,5	35
94011	1	60	11,0	11-18	6,7	40	24	40	12,2	4	40,0	135
94029	2	60	11,0	11-18	6,7	40	24	40	16,2	5	40,0	160
94037	3	65	14,5	19,0	6,7	44	33	50	20,2	6	41,0	235
94052	5	70	17,0	32,0	9,0	60	37	60	24,0	8	45,0	450
94391	5-M27	70	17,0	32,0	9,0	60	37	60	27,0	8	45,0	440

Also available in „STAINLESS STEEL“ version (no. 6843NI).



Recommendations



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No. 6845

Push-pull type toggle clamp

Push-type clamp.

(Opposed operation of rod and lever). Version with long rod-guide. Base of malleable casting, varnished. Toggle parts and push rod are heat-treated steel, galvanized and passivated.

Stainless steel rivets, which run in hardened bushes. Bearings are pre-lubricated. Ergonomic, oil-resistant handle with large grip surface and soft components.

Complete with tempered, galvanized clamping screw no. 6880-3.

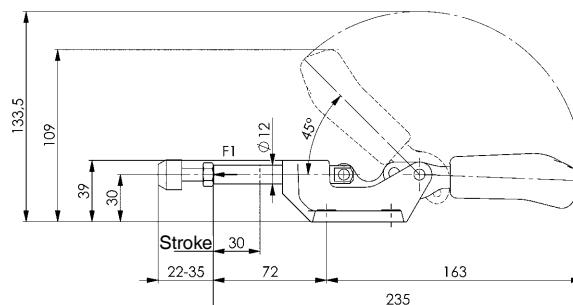


CAD

Order no.	Size	F1 [kN]	Clamping screw	Weight [g]
94243	3	4	M8x35	540

Advantage:

- Low height in clamped position
- Compatible with AMF push-pull toggle clamp no. 6842-3



Recommendations



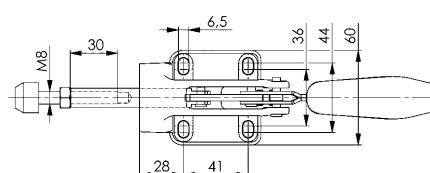
No. 6841,
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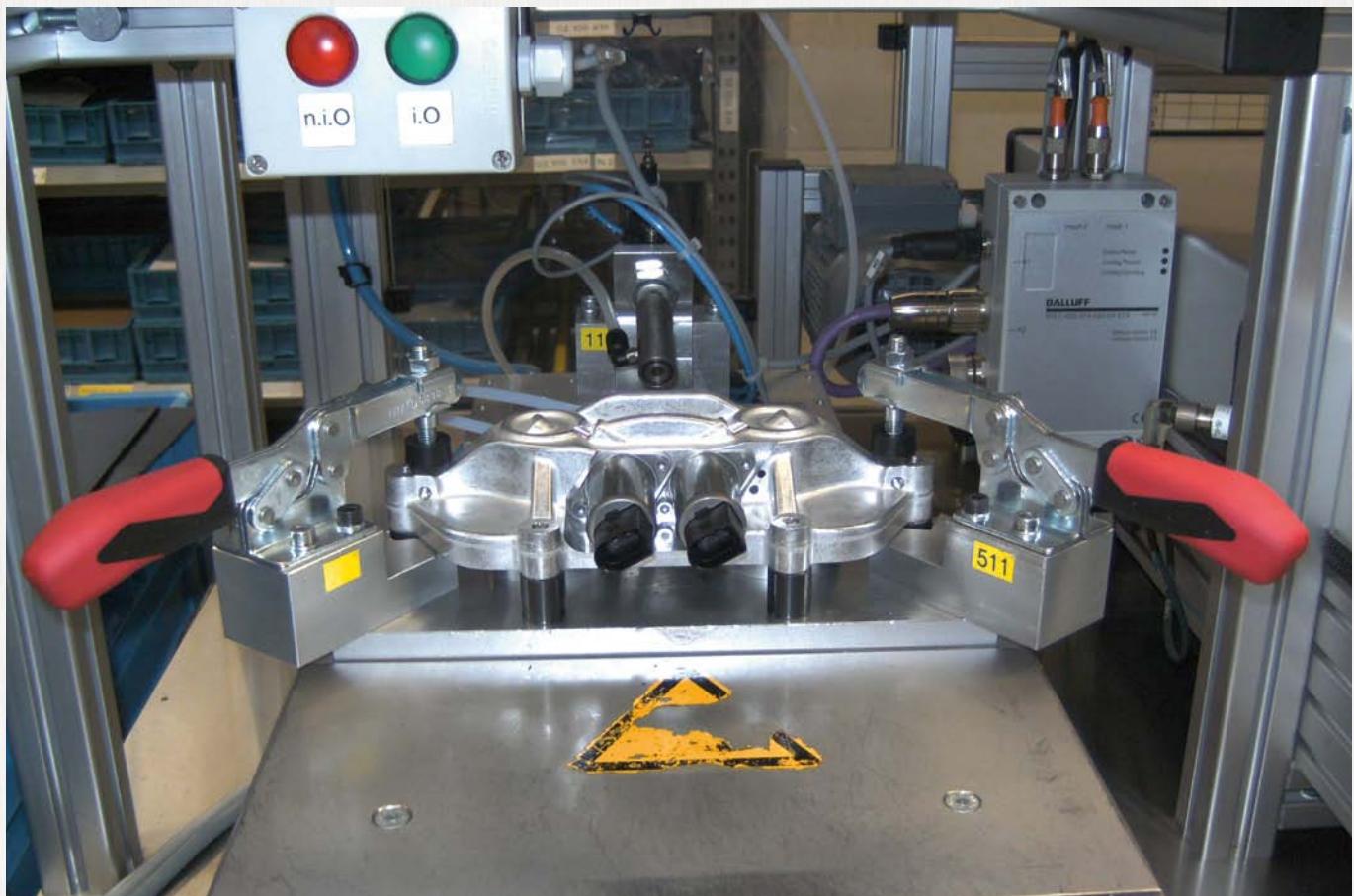
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page 52



No. 6842PK,
page 54



Subject to technical alterations.



Subject to technical alterations.

No. 6842

Heavy-duty push-pull type toggle clamp with red handle

For push and pull-clamping.

(Equal operation of rod and lever). Heavy-duty version with long rod-guide. Base (body) made of malleable cast iron, varnished. Lever parts and push rod made of tempered steel, galvanized and passivated. Rivets made of stainless steel, which, for size 3, run in hardened bearing bushes. Bearing positions are greased. Ergonomic, oil-resistant handle with large grip surface and soft components.

Complete with tempered, galvanized clamping screw no. 6880.

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
94235	3	4	4	M 8x35	540
94250	5	10	10	M12x50	1115
94276	7	25	25	M12x50	2840



No. 6842Y

Heavy-duty push-pull type toggle clamp with yellow handle

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557171	5	10	10	M12x50	1115
557172	7	25	25	M12x50	2840



No. 6842J

Heavy-duty push-pull type toggle clamp with orange handle

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557403	5	10	10	M12x50	1115
557404	7	25	25	M12x50	2840



No. 6842E

Heavy-duty push-pull type toggle clamp with blue handle

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557714	5	10	10	M12x50	1115
557715	7	25	25	M12x50	2840



Subject to technical alterations.

No. 6842G

**Heavy-duty push-pull type toggle clamp
with green handle**



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557561	5	10	10	M12x50	1115
557562	7	25	25	M12x50	2840

No. 6842T

**Heavy-duty push-pull type toggle clamp
with black handle**



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
558054	5	10	10	M12x50	1115
558055	7	25	25	M12x50	2840

Recommendations

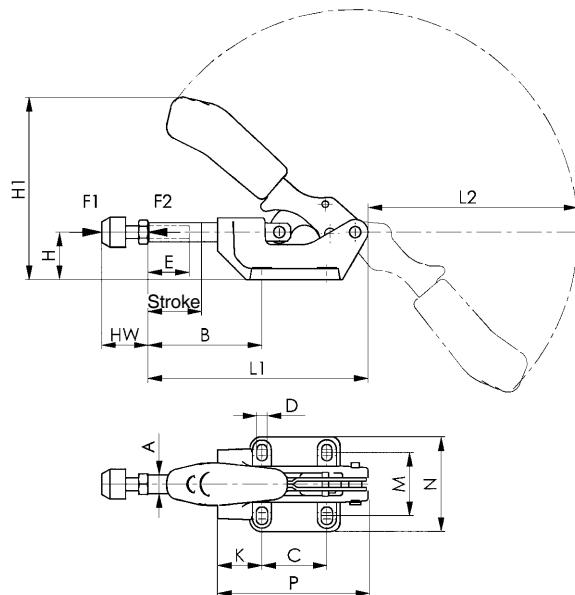

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page 44



No. 6842PL,
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page 42



CAD

Dimensions:

Size	A	B min.	B max.	C	D	E	H	H1	Stroke	HW min.	HW max.	K	L1	L2	M	N	P
3	12	40	72	41	6,5	30	30	116,0	32	22	35	28	139	135	36-44	60	95
5	16	58	98	41	8,5	50	38	137,5	40	30	50	45	174	156	41-50	71	121
7	22	59	105	70	11,0	50	55	179,0	50	30	50	45	218	192	57-65	93	158



Subject to technical alterations.

No. 6842PK

Heavy push-pull type toggle clamp

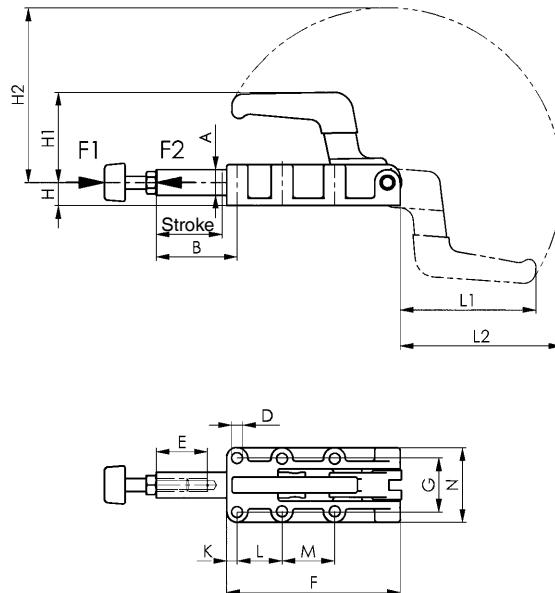
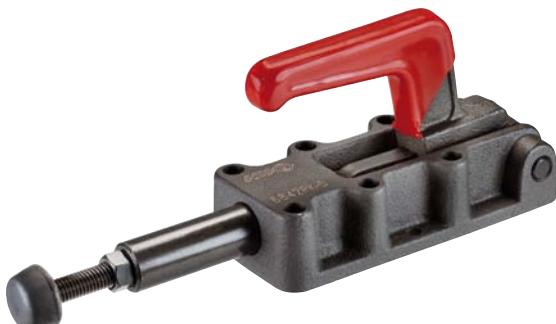
with solid lever. For push- and pull-clamping.
(Equal operation of rod and lever).

Heavy-duty version with long rod-guide. Base of malleable casting, burnished. Hardened pins. Lever-parts and rod of tempered steel, burnished. Handle made of red, oil-resistant plastic.

Complete with tempered, galvanized clamping screw no. 6880.



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
92544	4	7	7	M 8x35	590
92569	5	12	12	M10x50	1650
92585	7	25	25	M12x50	4150
92601	8	45	45	M16x80	7420



Recommendations



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page 24



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page 55

Dimensions:

Order no.	Size	A	B	D	E	F	G	H	H1	H2	Stroke	K	L	L1	L2	M	N
92544	4	14	63	5,5	30	90	33,3	12	42,5	96	32	25,0	36,5	69,0	88,0	-	47
92569	5	20	63	8,5	50	137	41,0	18	70,0	136	50	8,0	35,0	105,0	126,0	41	58
92585	7	25	114	10,5	50	198	54,0	22	93,5	196	75	12,0	45,0	151,5	183,5	45	84
92601	8	30	149	10,5	60	254	57,0	28	111,5	247	106	14,5	70,0	196,0	232,0	70	86

Subject to technical alterations.

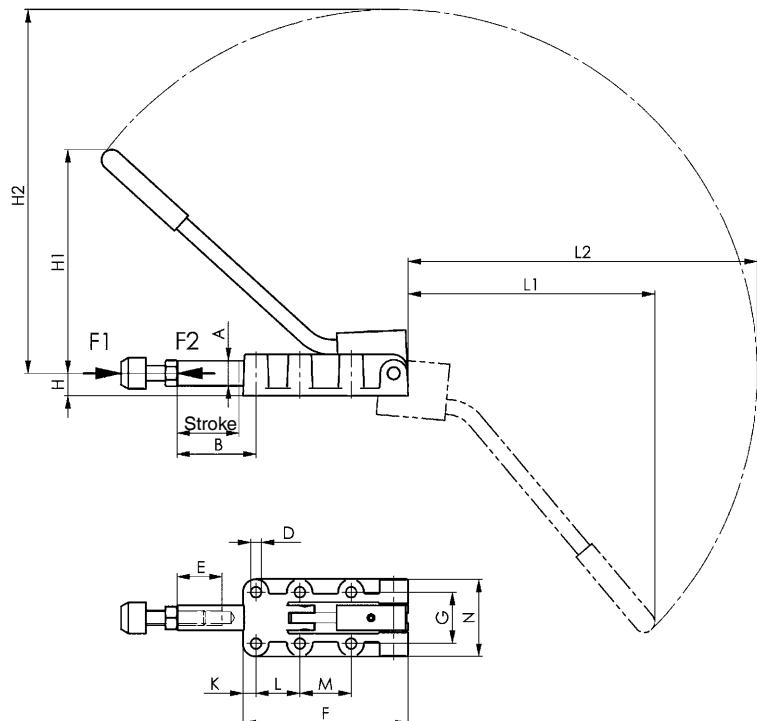
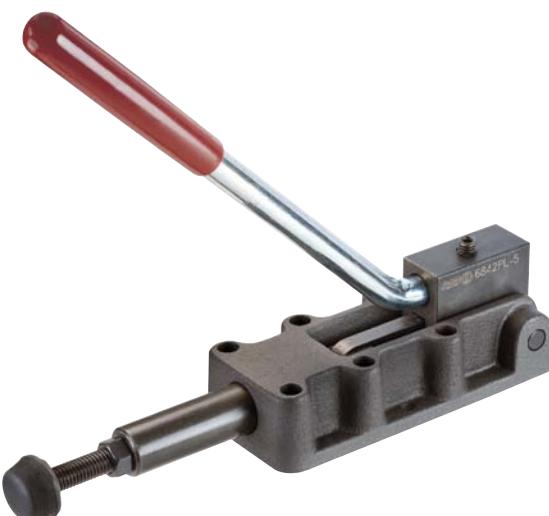
No. 6842PL
Heavy push-pull type toggle clamp

with reversible lever. For push- and pull-clamping.

(Equal operation of rod and lever).

Heavy-duty version with long rod-guide. Base of malleable casting, burnished. Hardened pins. Lever parts and rod made of tempered steel, burnished. Zinc-coated and passivated lever with handle made of red oil-resistant plastic.

Complete with tempered, galvanized clamping screw no. 6880.


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Dimensions:

Order no.	Size	A	B	D	E	F	G	H	H1	H2	Stroke	K	L	L1	L2	M	N
92627	4	14	63	5,5	30	90	33,3	12	115,0	190,0	32	25,0	36,5	128	182	-	47
92643	5	20	63	8,5	50	137	41,0	18	178,5	290,5	50	8,0	35,0	197	279	41	58
92668	7	25	114	10,5	50	198	54,0	22	246,0	392,0	75	12,0	45,0	267	374	45	84
92684	8	30	149	10,5	60	254	57,0	28	323,0	523,0	106	14,5	70,0	365	501	70	86

No. 6847

Hook type toggle clamp

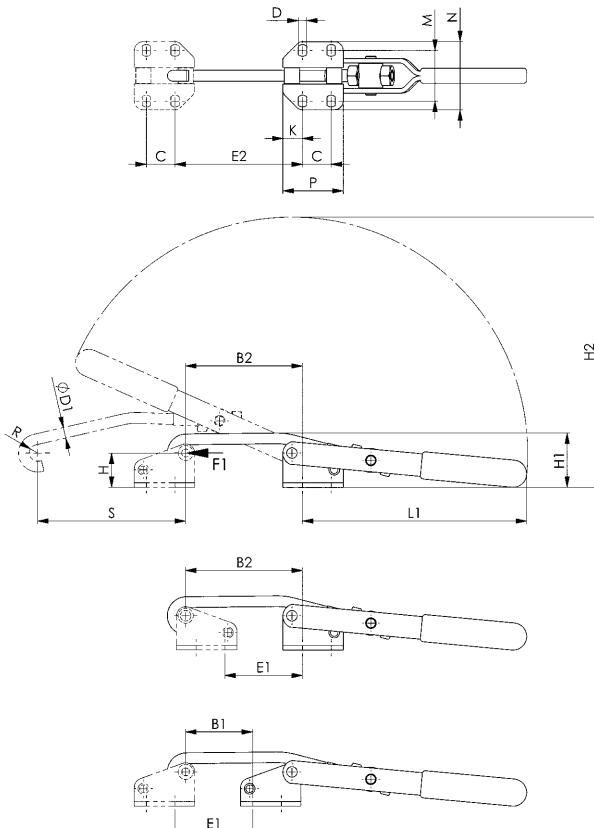
Galvanized and passivated. Bushes case hardened and greased; rivets of stainless steel. Hook and clamping sleeve tempered. Handle made of red, oil-resistant plastic. Ergonomic, oil-resistant handle with large grip surface and soft components for size 1.



CAD

Order no.	Size	F1 [kN]	Adjustm. distance [mm]	Weight [g]
94524	1	2	8	100
94540	3	3	12	270
94565	5	5	14	850

Also available in „STAINLESS STEEL“ version (no. 6847NI).



Recommendations



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Dimensions:

Order no.	Size	B1	B2	C	D	dia. D1	E1	E2	H	H1	H2	K	L1	M	N	P	R	S
94524	1	16-23	35-42	19	4,5	5,30	17-24	35-42	22,7	34,5	111	6	88	26,0-30,0	40	31	4,5	45
94540	3	32-44	65-77	19	5,5	7,10	39-51	72-84	22,7	36,0	181	13	149	31,5-35,5	45	40	5,5	98
94565	5	26-40	57-71	29	11,2	10,75	27-42	58-73	49,1	69,0	282	13	228	55,5-63,0	85	55	8,0	147

No. 6847G

Counter catch

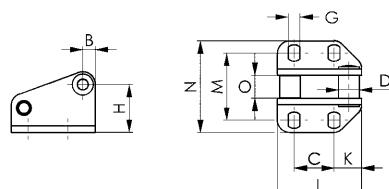
for no. 6847. Galvanized and passivated. Bushes case hardened; rivet of stainless steel.



CAD

Order no.	Size	Height [mm]	Length [mm]	Weight [g]
94623	1	29	31	40
94649	3	29	40	70
94664	5	61	55	320

Also available in „STAINLESS STEEL“ version (no. 6847GNI).



Dimensions:

Order no.	Size	B	C	D	G	H	K	L	M	N	O
94623	1	6	19	8	4,5	22,7	6	31	26,0-30,0	40	6,9
94649	3	6	19	10	5,5	22,7	13	40	31,3-35,8	45	10,9
94664	5	12	29	15	11,2	49,1	13	55	56,5-64,0	86	13,8

Subject to technical alterations.

No. 6847K

Hook type toggle clamp

for cylindrical mounting surfaces.

Galvanized and passivated. Case-hardened, pre-lubricated, continuous bearing bushes. Stainless steel rivets. Tempered hook and clamping sleeve. Handle made of red, oil-resistant plastic. Use socket cap screws to ISO 4762 (DIN 912) for mounting.



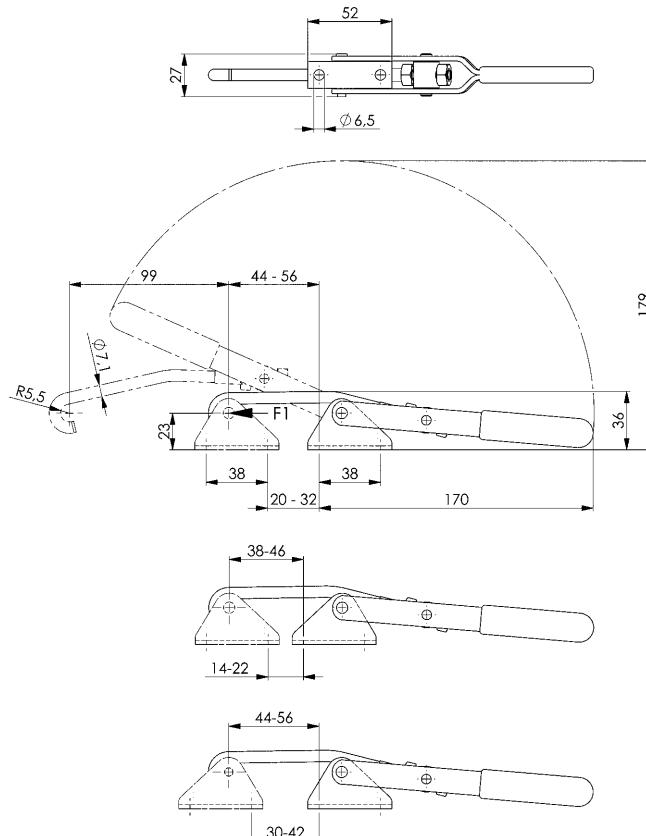
CAD

Order no.	Size	F1 [kN]	Adjustm. distance [mm]	Weight [g]
94680	3	3	22	270

Also available in „STAINLESS STEEL“ version (no. 6847KNI).

Note:

The range of movement can be adjusted by swiveling the base and repositioning the catch.



Recommendations



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No. 6849PH,
page 62

No. 6847GK

Counter catch

for cylindrical mounting surfaces.

For hook-type toggle clamp no. 6847K. Galvanized and passivated. Case-hardened, continuous bush. Stainless steel rivet. Use socket cap screws to ISO 4762 (DIN 912) for mounting.



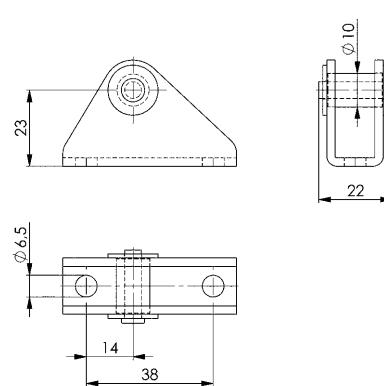
CAD

Order no.	Size	Height [mm]	Length [mm]	Weight [g]
94672	3	32	52	65

Also available in „STAINLESS STEEL“ version (no. 6847GKNI).

Note:

The adjustment range of the clamp can be increased by turning the counter catch.



No. 6848H

Horizontal hook-type toggle clamp with red handle

Galvanized and passivated.
Stainless steel rivets, which run in hardened bushes.
Tempered hook. Bearings are pre-lubricated. Ergonomic, oil-resistant handle with large grip surface and soft components.
Supplied complete with counter catch.

Order no.	Size	F1 [kN]	Weight [g]
94698	2	1,6	120
94706	3	3,2	330
94714	4	7,0	810

Also available in „STAINLESS STEEL“ version (no. 6848HNI).



No. 6848HY

Horizontal hook-type toggle clamp with yellow handle

Order no.	Size	F1 [kN]	Weight [g]
557173	2	1,6	120
557174	3	3,2	330
557175	4	7,0	810

Also available in „STAINLESS STEEL“ version (no. 6848HNIY).



No. 6848HJ

Horizontal hook-type toggle clamp with orange handle

Order no.	Size	F1 [kN]	Weight [g]
557405	2	1,6	120
557406	3	3,2	330
557407	4	7,0	810

Also available in „STAINLESS STEEL“ version (no. 6848HNIIJ).



No. 6848HE

Horizontal hook-type toggle clamp with blue handle

Order no.	Size	F1 [kN]	Weight [g]
557718	2	1,6	120
557719	3	3,2	330
557720	4	7,0	810

Also available in „STAINLESS STEEL“ version (no. 6848HNIE).



Subject to technical alterations.

No. 6848HG

Horizontal hook-type toggle clamp with green handle



Order no.	Size	F1 [kN]	Weight [g]
557563	2	1,6	120
557564	3	3,2	330
557565	4	7,0	810

Also available in „STAINLESS STEEL“ version (no. 6848HNIG).

No. 6848HT

Horizontal hook-type toggle clamp with black handle

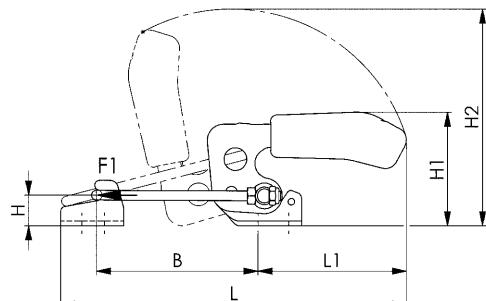
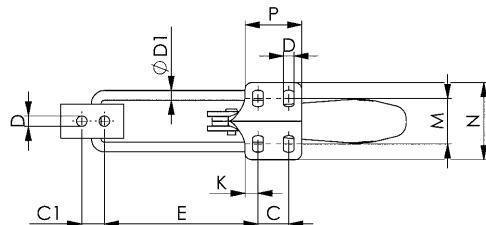


Order no.	Size	F1 [kN]	Weight [g]
558056	2	1,6	120
558057	3	3,2	330
558058	4	7,0	810

Also available in „STAINLESS STEEL“ version (no. 6848HNIT).



CAD


Recommendations


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No. 6848V,
page 60

Dimensions:

Size	B min.	B max.	C	C1	D	dia. D1	E min.	E max.	H	H1	H2	K	L min.	L max.	L1	M	N	P
2	42,0	76	13	11	5,2	4	38,0	72	12	47,0	99,0	6,4	125	159	156	19,5-23,5	38,0	26,0
3	53,5	101	19	14	6,5	6	48,6	96	19	70,0	135,5	8,0	169	216	210	24,5-32,0	48,0	35,0
4	66,0	130	32	19	8,5	8	59,0	123	26	94,5	171,5	9,5	209	273	270	35,0-46,0	64,3	53,5

Subject to technical alterations.

No. 6848V

Vertical hook-type toggle clamp with red handle

Galvanized and passivated.
Stainless steel rivets, which run in hardened bushes.
Tempered hook. Bearings are pre-lubricated. Ergonomic, oil-resistant handle with large grip surface and soft components.
Supplied complete with counter catch.



Order no.	Size	F1 [kN]	Weight [g]
94755	2	1,6	130
94763	3	3,2	340
94771	4	7,0	810

Also available in „STAINLESS STEEL“ version (no. 6848VNI).

No. 6848VY

Vertical hook-type toggle clamp with yellow handle



Order no.	Size	F1 [kN]	Weight [g]
557176	2	1,6	130
557177	3	3,2	340
557178	4	7,0	810

Also available in „STAINLESS STEEL“ version (no. 6848VNII).

No. 6848VJ

Vertical hook-type toggle clamp with orange handle



Order no.	Size	F1 [kN]	Weight [g]
557408	2	1,6	130
557409	3	3,2	340
557411	4	7,0	810

Also available in „STAINLESS STEEL“ version (no. 6848VNII).

No. 6848VE

Vertical hook-type toggle clamp with blue handle



Order no.	Size	F1 [kN]	Weight [g]
557721	2	1,6	130
557722	3	3,2	340
557723	4	7,0	810

Also available in „STAINLESS STEEL“ version (no. 6848VNIE).

Subject to technical alterations.

No. 6848VG

Vertical hook-type toggle clamp with green handle



Order no.	Size	F1 [kN]	Weight [g]
557566	2	1,6	130
557567	3	3,2	340
557568	4	7,0	810

Also available in „STAINLESS STEEL“ version (no. 6848VNIG).

No. 6848VT

Vertical hook-type toggle clamp with black handle

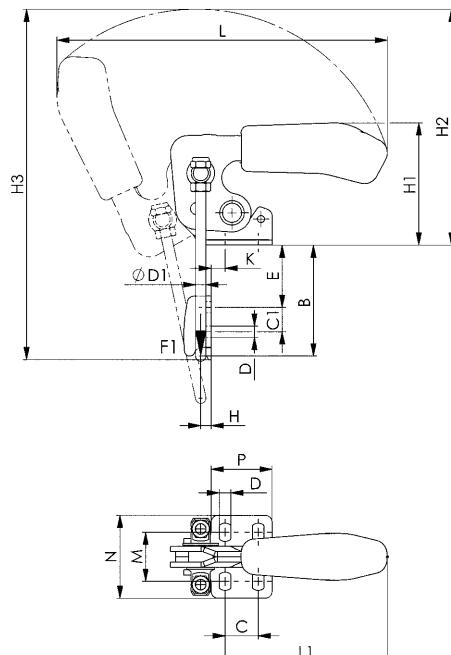


Order no.	Size	F1 [kN]	Weight [g]
558126	2	1,6	130
558127	3	3,2	340
558128	4	7,0	810

Also available in „STAINLESS STEEL“ version (no. 6848VNIT).



CAD


Recommendations


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No. 6849PH,
page 62

Dimensions:

Size	B min.	B max.	C	C1	D	dia. D1	E min.	E max.	H	H1	H2	H3	K	L	L1	M	N	P
2	24,0	47	13	11	5,2	4	5,0	28	4,5	47,0	99	150	6,8	158	69	19,5-23,5	38,0	26,0
3	33,0	63	19	14	6,5	6	6,5	36	6,0	70,0	137	172	8,0	190	93	24,5-32,5	48,0	35,0
4	43,0	81	32	19	8,5	8	9,0	47	8,0	94,5	168	254	9,5	239	111	35,0-46,0	64,5	53,5

Subject to technical alterations.

No. 6849PH
Heavy hook type toggle clamp

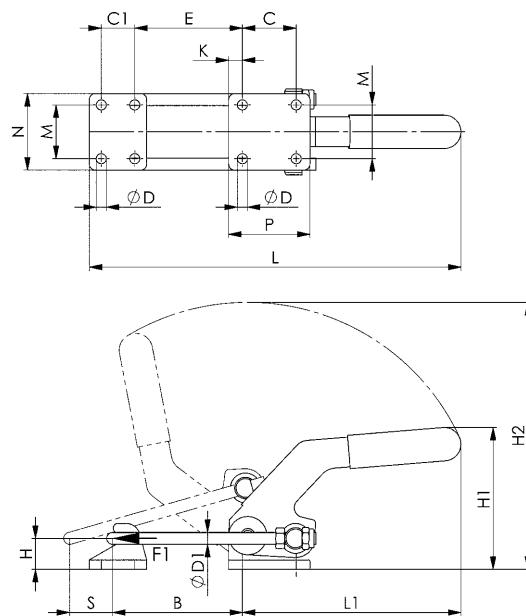
for high retaining force.

Pins hardened, ground and permanently-lubricated.

Circlips are used to retain pins in bearing bushes, and to centre the clamping pin. Foot, lever arm and catch are made of cast steel and blued. Stirrup, pins and nuts are heat-treated and zinc-plated. Handle grip is red, oil-resistant plastic.

Supplied complete with counter catch.


Order no.	Size	F1 [kN]	Adjustm. distance [mm]	Weight [g]
93849	4	15	66	2830
93856	5	27	65	4020


Recommendations

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 No. 6811P,
page 24

Dimensions:

Order no.	Size	B	C	C1	dia. D1	D	E	H	H1	H2	K	L	L1	M	N	P	S
93849	4	42-107	45	28	8,5	10	24-90	26	122	228	12,0	245-311	183	45	64	68	44
93856	5	49-114	57	35	10,5	12	28-93	32	146	285	12,5	313-378	238	57	82	86	47

Subject to technical alterations.



Subject to technical alterations.

THE ADVANTAGES OF THE SAFETY LATCH

The patented safety latch will hold the clamping arm of a manual clamp in both the closed and open positions, so that it is protected against unintentional opening or closing through vibration or if the clamp is mounted overhead.

A clear argument for safety in the workplace!



No. 6800S

Vertical toggle clamp with red handle and safety latch

for open and clamped positions.

With open clamping arm and horizontal base.

Galvanized and passivated. Stainless steel rivets, which run in hardened bushes. Bearings are pre-lubricated.

Ergonomic, oil-resistant handle with large grip surface and soft components. Safety clamping piece with finger protection. Lock washer for the thrust bolt at the end of the clamping arm.

Complete with tempered, galvanized clamping screw no. 6890.

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
90134	2	1,0	1,2	M6x35	260
90142	3	1,4	2,5	M8x45	470
90159	4	2,0	3,0	M8x65	690



No. 6800SY

Vertical toggle clamp with yellow handle and safety latch



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557179	2	1,0	1,2	M6x35	260
557180	3	1,4	2,5	M8x45	470
557181	4	2,0	3,0	M8x65	690

No. 6800SJ

Vertical toggle clamp with orange handle and safety latch



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557417	2	1,0	1,2	M6x35	260
557418	3	1,4	2,5	M8x45	470
557419	4	2,0	3,0	M8x65	690

Subject to technical alterations.

No. 6800SE

Vertical toggle clamp with blue handle and safety latch



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557724	2	1,0	1,2	M6x35	260
557725	3	1,4	2,5	M8x45	470
557726	4	2,0	3,0	M8x65	690

No. 6800SG

Vertical toggle clamp with green handle and safety latch



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557569	2	1,0	1,2	M6x35	260
557570	3	1,4	2,5	M8x45	470
557571	4	2,0	3,0	M8x65	690

No. 6800ST

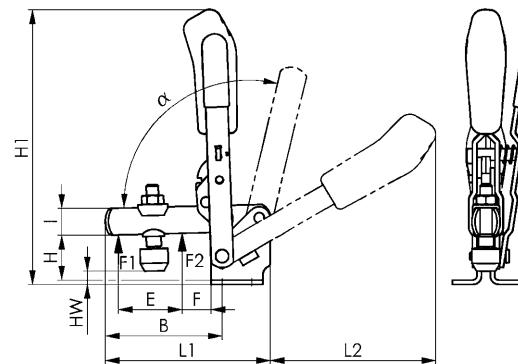
Vertical toggle clamp with black handle and safety latch



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
558129	2	1,0	1,2	M6x35	260
558130	3	1,4	2,5	M8x45	470
558131	4	2,0	3,0	M8x65	690



CAD


Recommendations

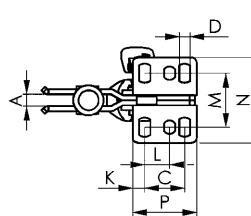

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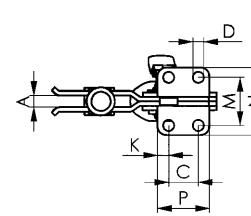
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Size 2



Size 3, 4

Dimensions:

Size	A	B	C	D	E	F	H	H1	HW min.	HW max.	I	K	L	L1	L2	M	N	P	α	α^*
2	6	52	20	5,5	25	11	23,0	139,5	-3	4,5	12	6,0	12,5	78	89	23-31	43	32	105°	60°
3	8	79	20	7,5	36	19	33,0	186,0	2	11,0	18	7,5	-	112	112	32,5	46	35	105°	60°
4	10	101	32	8,6	54	16	42,5	221,0	-6	22,5	20	13,0	-	141	130	45,0	64	53	105°	60°

* The opening angle can be changed by pressing in a stop pin.

Subject to technical alterations.

No. 6802S

Vertical toggle clamp with red handle and safety latch

for open and clamped positions.

With open clamping arm and vertical base.

Galvanized and passivated. Stainless steel rivets, which run in hardened bushes. Bearings are pre-lubricated.

Ergonomic, oil-resistant handle with large grip surface and soft components. Safety clamping piece with finger protection. Lock washer for the thrust bolt at the end of the clamping arm.

Complete with tempered, galvanized clamping screw no. 6890.



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
90209	2	1,0	1,2	M6x35	175
90274	3	1,4	2,5	M8x45	470
90282	4	2,0	3,0	M8x65	690

No. 6802SY

Vertical toggle clamp with yellow handle and safety latch



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557182	2	1,0	1,2	M6x35	175
557183	3	1,4	2,5	M8x45	470
557184	4	2,0	3,0	M8x65	690

No. 6802SJ

Vertical toggle clamp with orange handle and safety latch



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557420	2	1,0	1,2	M6x35	175
557421	3	1,4	2,5	M8x45	470
557422	4	2,0	3,0	M8x65	690

No. 6802SE

Vertical toggle clamp with blue handle and safety latch



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557735	2	1,0	1,2	M6x35	175
557736	3	1,4	2,5	M8x45	470
557737	4	2,0	3,0	M8x65	690

Subject to technical alterations.

No. 6802SG

Vertical toggle clamp with green handle and safety latch



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557572	2	1,0	1,2	M6x35	175
557573	3	1,4	2,5	M8x45	470
557574	4	2,0	3,0	M8x65	690

No. 6802ST

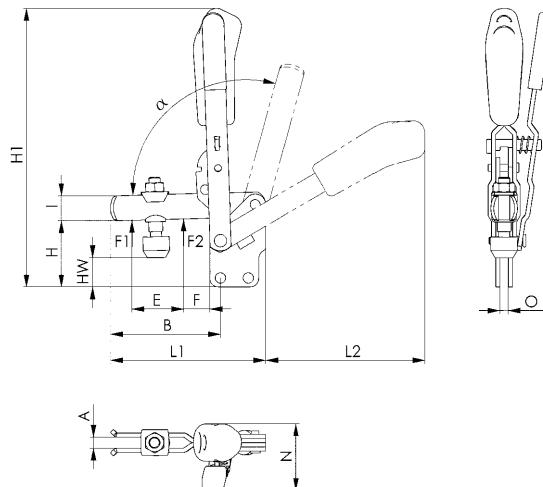
Vertical toggle clamp with black handle and safety latch



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
558136	2	1,0	1,2	M6x35	175
558137	3	1,4	2,5	M8x45	470
558138	4	2,0	3,0	M8x65	690



CAD


Recommendations


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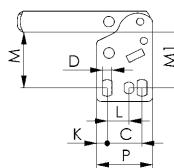


No. 6802,
page 14

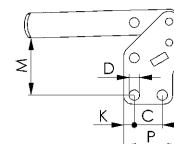


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Size 2



Size 3, 4


Dimensions:

Size	A	B	C	D	E	F	H	H1	HW min.	HW max.	I	K	L	L1	L2	M	M1	N	O	P	α	α^*
2	6	52	20	5,5	25	11	38	154	11,5	19,5	12	6,0	12,5	78	89	28,5-32	30	37,5	5	32	105°	60°
3	8	79	20	7,5	37	19	48	200	10,0	18,5	18	7,5	-	111	114	41,0	-	48,0	6	40	105°	60°
4	10	101	32	8,6	54	16	65	244	16,5	45,5	20	13,0	-	141	130	55,5	-	53,0	8	53	105°	60°

* The opening angle can be changed by pressing a stop pin.

Subject to technical alterations.

No. 6803S

Vertical toggle clamp with red handle and safety latch

for open and clamped positions.

With open clamping arm and angled base.

Galvanized and passivated. Stainless steel rivets, which run in hardened bushes. Bearings are pre-lubricated.

Ergonomic, oil-resistant handle with large grip surface and soft components. Safety clamping piece with finger protection. Lock washer for the thrust bolt at the end of the clamping arm.

Complete with tempered, galvanized clamping screw no. 6890.



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
90357	2	1,0	1,2	M6x35	250
90365	3	1,4	2,5	M8x45	535
90373	4	2,0	3,0	M8x65	750

No. 6803SY

Vertical toggle clamp with yellow handle and safety latch



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557202	2	1,0	1,2	M6x35	250
557203	3	1,4	2,5	M8x45	535
557204	4	2,0	3,0	M8x65	750

No. 6803SJ

Vertical toggle clamp with orange handle and safety latch



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557423	2	1,0	1,2	M6x35	250
557424	3	1,4	2,5	M8x45	535
557425	4	2,0	3,0	M8x65	750

No. 6803SE

Vertical toggle clamp with blue handle and safety latch



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557738	2	1,0	1,2	M6x35	250
557739	3	1,4	2,5	M8x45	535
557740	4	2,0	3,0	M8x65	750

Subject to technical alterations.

No. 6803SG

Vertical toggle clamp with green handle and safety latch



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557575	2	1,0	1,2	M6x35	250
557576	3	1,4	2,5	M8x45	535
557577	4	2,0	3,0	M8x65	750

No. 6803ST

Vertical toggle clamp with black handle and safety latch



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
558149	2	1,0	1,2	M6x35	250
558150	3	1,4	2,5	M8x45	535
558151	4	2,0	3,0	M8x65	750

Recommendations

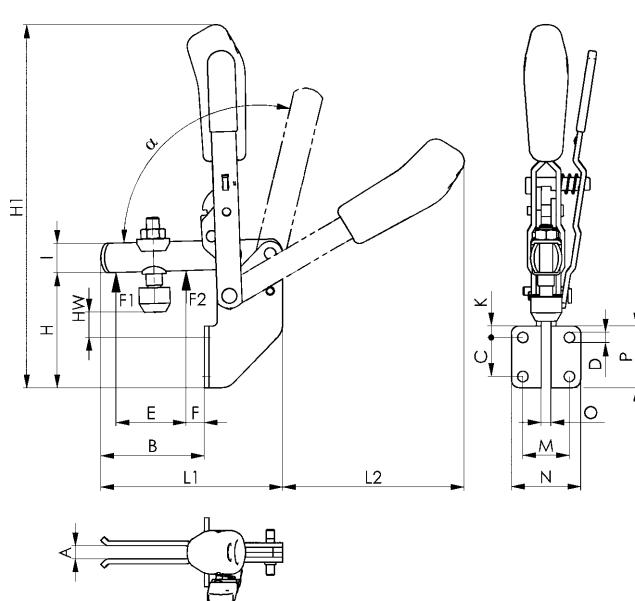

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Dimensions:

Size	A	B	C	D	E	F	H	H1	HW min.	HW max.	I	K	L1	L2	M	N	O	P	α	α*
2	6	40	20	5,5	25	9	61	180	2	11	12	6	78	63	25,5	38	5	32	105°	60°
3	8	65	24	6,5	43	11	71	243	6	18	18	7	112	111	28,5	43	6	38	105°	60°
4	10	84	32	8,5	50	17	102	280	11	40	20	54	140	129	32,0	52	8	96	105°	60°

* The opening angle can be changed by pressing a stop pin.

Subject to technical alterations.

No. 6804S

Vertical toggle clamp with red handle and safety latch

for open and clamped positions.

With solid clamping arm and horizontal base.

Galvanized and passivated. Stainless steel rivets, which run in hardened bushes. Bearings are pre-lubricated.

Ergonomic, oil-resistant handle with large grip surface and soft components. Safety clamping piece with finger protection.

Complete with tempered, galvanized clamping screw

no. 6890 and sleeve to weld on.

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
90399	3	1,4	2,5	M8x45	470
90407	4	2,0	3,0	M8x65	690



No. 6804SY

Vertical toggle clamp with yellow handle and safety latch

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557205	3	1,4	2,5	M8x45	470



No. 6804SJ

Vertical toggle clamp with orange handle and safety latch

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557426	3	1,4	2,5	M8x45	470



No. 6804SE

Vertical toggle clamp with blue handle and safety latch

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557746	3	1,4	2,5	M8x45	470



Subject to technical alterations.

No. 6804SG

Vertical toggle clamp with green handle and safety latch



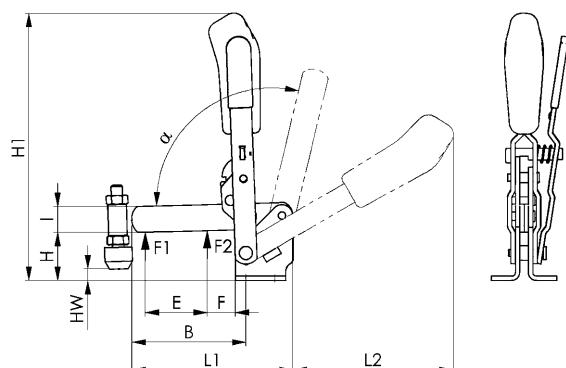
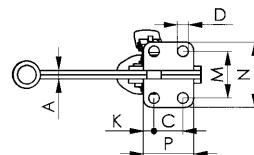
Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557578	3	1,4	2,5	M8x45	470

No. 6804ST

Vertical toggle clamp with black handle and safety latch



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
558155	3	1,4	2,5	M8x45	470


Recommendations


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Dimensions:

Size	A	B	C	D	E	F	H	H1	HW min.	HW max.	I	K	L1	L2	M	N	P	α	α^*
3	6	81	20	7,1	43	19	48,0	186	0	12	18	7,5	112	112	32	46	35	105°	60°
4	8	101	32	8,5	61	16	42,5	220	-8	21	20	13,0	140	130	45	64	53	105°	60°

* The opening angle can be changed by pressing in a stop pin.

Subject to technical alterations.

No. 6830S

Horizontal toggle clamp with red handle and safety latch

for open and clamped positions.

With open clamping arm and horizontal base.

Galvanized and passivated. Stainless steel rivets which run in hardened bushes, bearings are lubricated.

Ergonomic, oil-resistant handle with large grip surface and soft components. Lock washer for the thrust bolt at the end of the clamping arm.

Complete with tempered, galvanized clamping screw no. 6890.

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
92650	3	1,8	2,5	M8x45	390
93112	4	2,0	3,0	M8x65	800

Note:

For suitable sensor monitor for size 3 see no. 6897S.



No. 6830SY

Horizontal toggle clamp with yellow handle and safety latch



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557206	3	1,8	2,5	M8x45	390
557207	4	2,0	3,0	M8x65	800

No. 6830SJ

Horizontal toggle clamp with orange handle and safety latch



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557427	3	1,8	2,5	M8x45	390
557428	4	2,0	3,0	M8x65	800

No. 6830SE

Horizontal toggle clamp with blue handle and safety latch



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557747	3	1,8	2,5	M8x45	390
557748	4	2,0	3,0	M8x65	800

Subject to technical alterations.

No. 6830SG

Horizontal toggle clamp with green handle and safety latch



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557579	3	1,8	2,5	M8x45	390
557580	4	2,0	3,0	M8x65	800

No. 6830ST

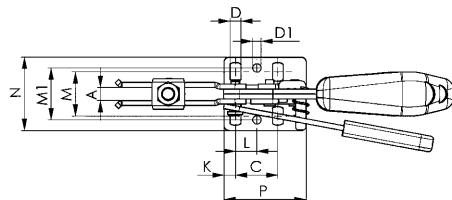
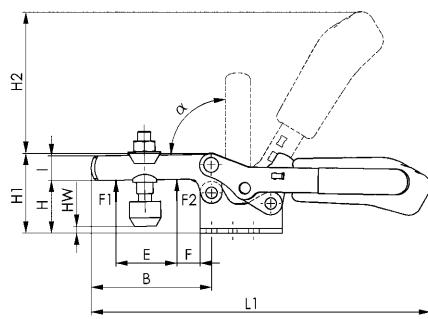
Horizontal toggle clamp with black handle and safety latch



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
558156	3	1,8	2,5	M8x45	390
558157	4	2,0	3,0	M8x65	800



CAD


Dimensions:

Size	A	B	C	D	D1	E	F	H	H1	H2	HW min.	HW max.	I	K	L	L1	M	M1	N	P	α
3	8	73	25,7	6,5	5,1	38	14	32	48,5	86,0	-2	9	15	7	13,0	206	22,0-31,8	31,6	45,5	50	90°
4	10	113	41,0	8,5	8,5	63	27	45	75,0	126,5	-4	24	20	8	20,5	287	29,0-43,0	43,0	58	57	90°

Subject to technical alterations.

No. 6832S

Horizontal toggle clamp with red handle and safety latch

for open and clamped positions.

With open clamping arm and vertical base.

Galvanized and passivated. Stainless steel rivets, which run in hardened bushes. Bearings are pre-lubricated.

Ergonomic, oil-resistant handle with large grip surface and soft components. Lock washer for the thrust bolt at the end of the clamping arm.

Complete with tempered, galvanized clamping screw no. 6890.

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
93195	3	1,8	2,5	M8x45	390
93260	4	2,0	3,0	M8x65	800



No. 6832SY

Horizontal toggle clamp with yellow handle and safety latch

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557209	3	1,8	2,5	M8x45	390
557210	4	2,0	3,0	M8x65	800



No. 6832SJ

Horizontal toggle clamp with orange handle and safety latch

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557429	3	1,8	2,5	M8x45	390
557430	4	2,0	3,0	M8x65	800



No. 6832SE

Horizontal toggle clamp with blue handle and safety latch

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557749	3	1,8	2,5	M8x45	390
557750	4	2,0	3,0	M8x65	800



Subject to technical alterations.

No. 6832SG

Horizontal toggle clamp with green handle and safety latch



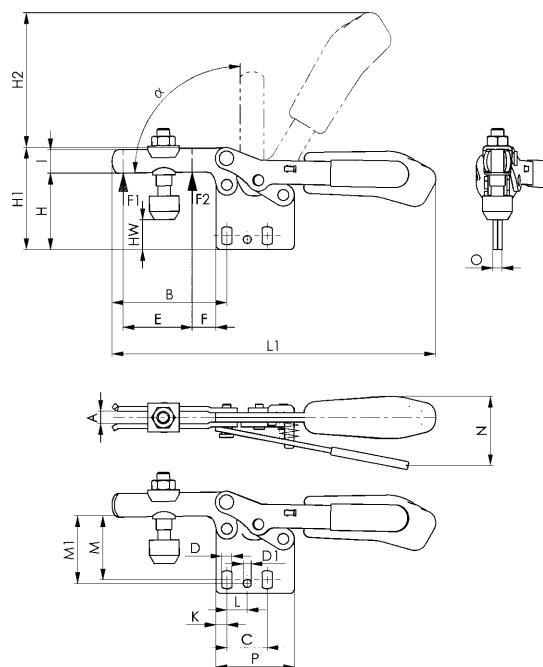
Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557581	3	1,8	2,5	M8x45	390
557582	4	2,0	3,0	M8x65	800

No. 6832ST

Horizontal toggle clamp with black handle and safety latch



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
558158	3	1,8	2,5	M8x45	390
558159	4	2,0	3,0	M8x65	800



CAD

Dimensions:

Size	A	B	C	D	D1	E	F	H	H1	H2	HW min.	HW max.	I	K	L	L1	M	M1	N	O	P	a
3	8	73	25,7	6,5	5,1	38	14	49,0	65	86	14,5	26	15	7	13,0	206	37,5-42,5	42	48	6	50	90°
4	10	113	41,0	8,5	8,5	63	27	66,5	97	115	17,5	46	20	8	20,5	287	52,0-59,0	59	51	8	57	90°

Subject to technical alterations.

No. 6834S

Horizontal toggle clamp with red handle and safety latch

for open and clamped positions.

With solid clamping arm and horizontal base.

Galvanized and passivated. Stainless steel rivets, which run in hardened bushes. Bearings are pre-lubricated.

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

Complete with tempered, galvanized clamping screw no. 6885 and sleeve to weld on.

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
93534	4	2	3	M8x65	800



No. 6834SY

Horizontal toggle clamp with yellow handle and safety latch

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557211	4	2	3	M8x65	800



No. 6834SJ

Horizontal toggle clamp with orange handle and safety latch

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557431	4	2	3	M8x65	800



No. 6834SE

Horizontal toggle clamp with blue handle and safety latch

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557751	4	2	3	M8x65	800



Subject to technical alterations.

No. 6834SG

Horizontal toggle clamp with green handle and safety latch



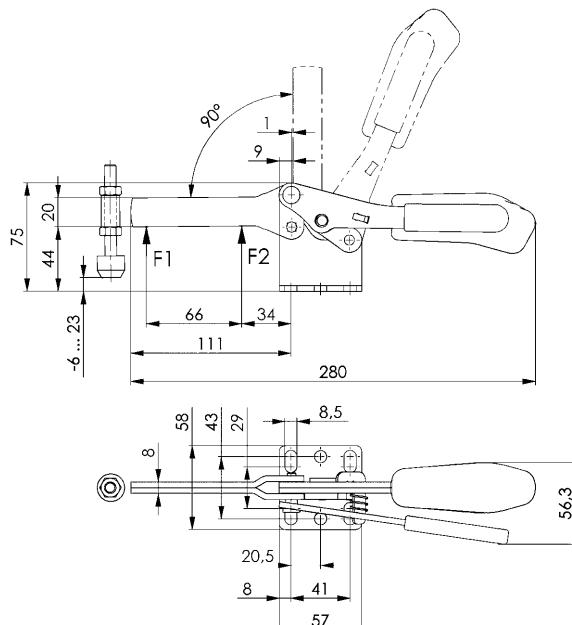
Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557583	4	2	3	M8x65	800

No. 6834ST

Horizontal toggle clamp with black handle and safety latch



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
558160	4	2	3	M8x65	800


Recommendations


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No. 6834,
page 38



No. 6804S,
page 70

Subject to technical alterations.

No. 6840S

Push-pull type toggle clamp with safety latch

For open and clamped positions.

Without angle base. Push and pull-clamping (equal operation of rod and lever).

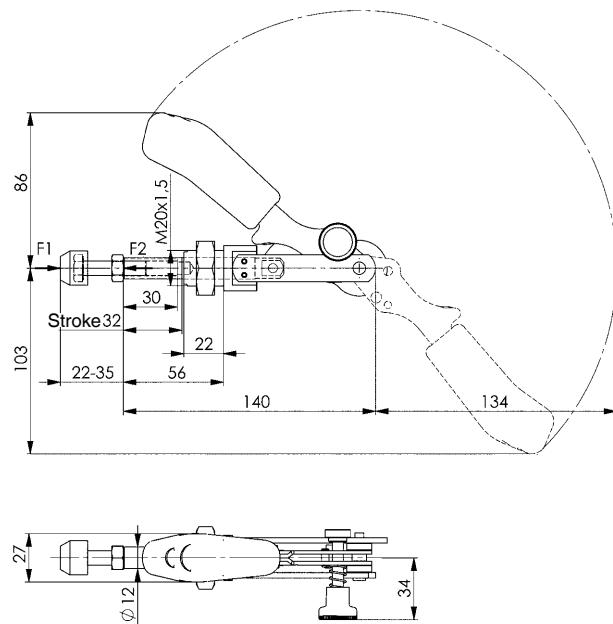
Long rod-guide with attaching thread and nut. Rivets made of stainless steel, lever-parts and rod of tempered steel. Bearings are pre-lubricated.

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

Complete with tempered, galvanized clamping screw
no. 6880.



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
92619	3	2,5	2,5	M8x35	402



Recommendations



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page 50



No. 6844,
page 48



No. 6800S,
page 64

Subject to technical alterations.

No. 6847S
Hook type toggle clamp with safety latch
Lock when closed.

Galvanized and passivated. Case-hardened, pre-lubricated bearing bushes. Rivet is stainless steel. Hook and clamping sleeve tempered. Handle made of red, oil-resistant plastic.



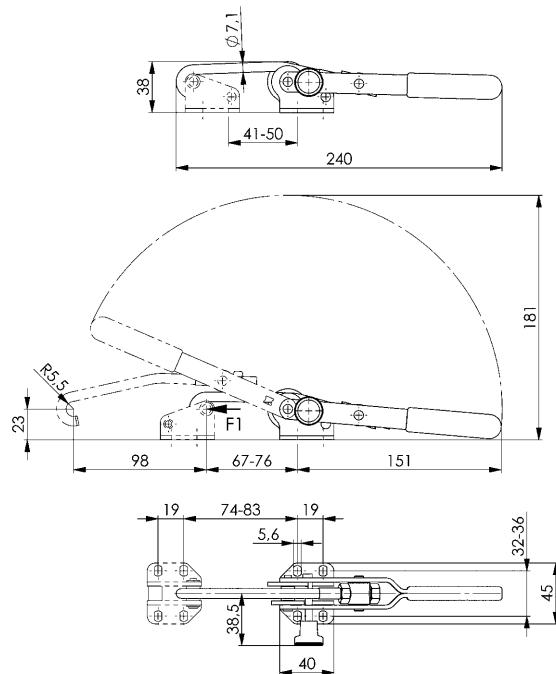
Order no.	Size	F1 [kN]	Weight [g]
93666	3	3	295

Note:

The engagement height of 23 mm must be observed to ensure secure latching.

On request:

A „stainless steel“ version is available.


Recommendations

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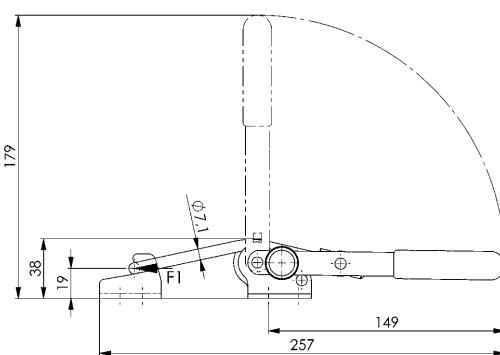
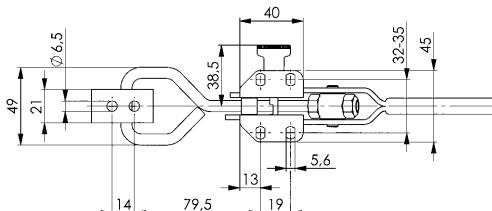
No. 6847SU,
page 79

No. 6847SU
Hook type toggle clamp with safety latch


Order no.	Size	F1 [kN]	Weight [g]
91470	3	3	295

U-shackle, locks when closed.

Galvanized and passivated. Case-hardened, pre-lubricated bearing bushes. Stainless steel rivets. Tempered shackle and clamping sleeve. Handle made of red, oil-resistant plastic.

Supplied complete with counter catch.

Recommendations

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No. 6849PH,
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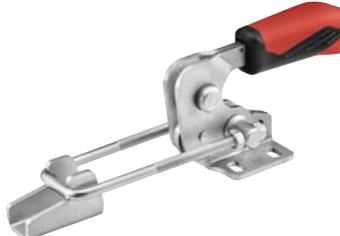
Subject to technical alterations.

No. 6848HS

Horizontal hook-type toggle clamp with red handle and safety latch

Galvanized and passivated. Stainless steel rivets, which run in hardened bushes. Tempered hook. Bearings are pre-lubricated. Ergonomic, oil-resistant handle with large grip surface and soft components.

Supplied complete with counter catch.



Order no.	Size	F1 [kN]	Weight [g]
92692	4	7,0	850

Also available in „STAINLESS STEEL“ version (no. 6848HSNI).

No. 6848HSY

Horizontal hook-type toggle clamp with yellow handle and safety latch



Order no.	Size	F1 [kN]	Weight [g]
557212	4	7,0	850

Also available in „STAINLESS STEEL“ version (no. 6848HSNIY).

No. 6848HSJ

Horizontal hook-type toggle clamp with orange handle and safety latch

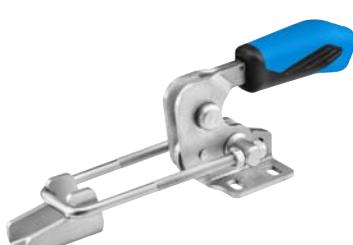


Order no.	Size	F1 [kN]	Weight [g]
557432	4	7,0	850

Also available in „STAINLESS STEEL“ version (no. 6848HSNIJ).

No. 6848HSE

Horizontal hook-type toggle clamp with blue handle and safety latch



Order no.	Size	F1 [kN]	Weight [g]
557752	4	7,0	850

Also available in „STAINLESS STEEL“ version (no. 6848HSNIE).

Subject to technical alterations.

No. 6848HSG

Horizontal hook-type toggle clamp with green handle and safety latch

Order no.	Size	F1 [kN]	Weight [g]
557584	4	7,0	850

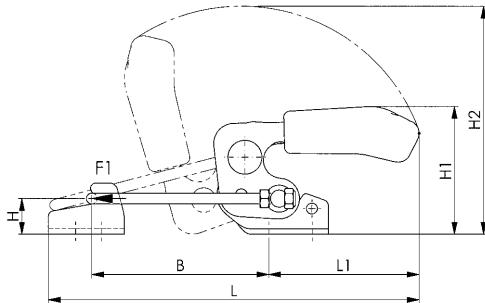
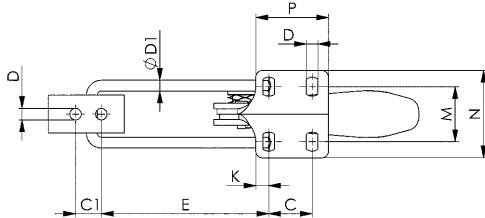
Also available in „STAINLESS STEEL“ version (no. 6848HSNIG).


No. 6848HST

Horizontal hook-type toggle clamp with black handle and safety latch

Order no.	Size	F1 [kN]	Weight [g]
558161	4	7,0	850

Also available in „STAINLESS STEEL“ version (no. 6848HSNIT).



CAD

Recommendations


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Dimensions:

Size	B min.	B max.	C	C1	D	dia. D1	E min.	E max.	H	H1	H2	K	L min.	L max.	L1	M	N	P
4	66	130	32	19	8,5	8	59	123	26	94	168	9,5	209	273	111	35-46	64,3	53,5

Subject to technical alterations.

Toggle clamp made from 1.4301 / V2A or 1.4567 for special-purpose applications - in the chemical and food industries for example. Especially well suited to applications on machines and devices that are subject to hygiene regulations or are used outdoors under unfavourable weather conditions or in corrosive environments.

THE ADVANTAGES OF STAINLESS STEEL:

Primary positive properties of the material are its resistance to corrosion due to humidity, water or other external influences and its resistance to acids. In addition, the material exhibits antimagnetic properties.

Additional finishing work such as painting or galvanizing, either before or after installation or use, is generally not required. This saves time and eliminates additional costs.



INOX STAINLESS STEEL

No. 6800NI

Vertical toggle clamp with red handle

with open clamping arm and horizontal base.

Stainless steel, polished. In sizes 2 to 4, rivets run in bearing bushes. Bearings are pre-lubricated.

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

Supplied complete with stainless clamping screw no. 6890NI.

Also suitable for use in the food industry.

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
95000	0	0,5	0,7	M4x25	60
95026	1	0,6	1,1	M5x30	105
95042	2	0,8	1,2	M6x35	175
95067	3	1,2	2,5	M8x45	410
95083	4	1,7	3,0	M8x65	630



No. 6800NIY

Vertical toggle clamp with yellow handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557213	0	0,5	0,7	M4x25	60
557214	1	0,6	1,1	M5x30	105
557215	2	0,8	1,2	M6x35	175
557216	3	1,2	2,5	M8x45	410
557217	4	1,7	3,0	M8x65	630

No. 6800NIJ

Vertical toggle clamp with orange handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557433	0	0,5	0,7	M4x25	60
557434	1	0,6	1,1	M5x30	105
557435	2	0,8	1,2	M6x35	175
557436	3	1,2	2,5	M8x45	410
557437	4	1,7	3,0	M8x65	630

Subject to technical alterations.

No. 6800NIE
Vertical toggle clamp with blue handle

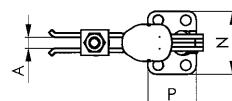
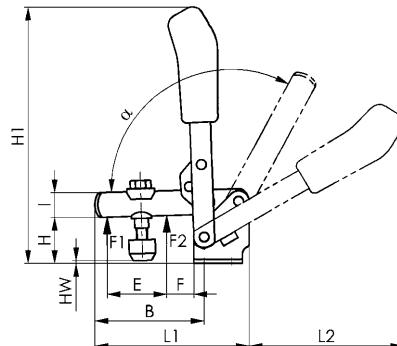

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557753	0	0,5	0,7	M4x25	60
557754	1	0,6	1,1	M5x30	105
557755	2	0,8	1,2	M6x35	175
557756	3	1,2	2,5	M8x45	410
557757	4	1,7	3,0	M8x65	630

No. 6800NIG
Vertical toggle clamp with green handle

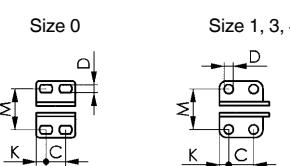

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557586	0	0,5	0,7	M4x25	60
557587	1	0,6	1,1	M5x30	105
557588	2	0,8	1,2	M6x35	175
557589	3	1,2	2,5	M8x45	410
557590	4	1,7	3,0	M8x65	630

No. 6800NIT
Vertical toggle clamp with black handle

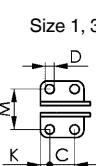

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
558164	0	0,5	0,7	M4x25	60
558165	1	0,6	1,1	M5x30	105
558166	2	0,8	1,2	M6x35	175
558167	3	1,2	2,5	M8x45	410
558168	4	1,7	3,0	M8x65	630



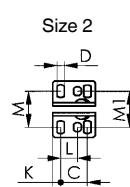
Size 0



Size 1, 3, 4



Size 2


Dimensions:

Size	A	B	C	D	E	F	H	H1	HW min.	HW max.	I	K	L	L1	L2	M	M1	N	P	α	α^*
0	4	31	8,5-13,5	4,5	14,0	5,5	18,0	81	-1,5	3,5	8	5,5	-	49	50	23	-	32	22	95°	-
1	5	39	16,0	4,5	18,0	6,0	19,0	98	-4,0	2,0	10	5,5	-	61	58	22-26	-	34	27	95°	-
2	6	52	20,0	5,5	25,0	11,0	23,0	129	-3,3	4,5	12	6,0	12,5	78	80	23-31	27	43	32	105°	60°
3	8	79	20,0	7,5	37,0	19,0	33,0	186	-3,0	10,5	18	7,5	-	112	112	32	-	46	35	105°	60°
4	10	101	32,0	8,6	54,0	16,0	42,5	221	-6,0	19,5	20	13,0	-	141	130	45	-	64	53	105°	60°

* The opening angle can be changed by pressing in a stop pin.

Subject to technical alterations.

No. 6803NI
Vertical toggle clamp with red handle

with open clamping arm and angle base.

Stainless steel, polished. Rivets running in greased bushes.
Ergonomic, oil-resistant handle with large grip surface and soft
components.

Supplied complete with stainless clamping screw
no. 6890NI.

Also suitable for use in the food industry.

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
95133	2	0,8	1,2	M6x35	220


No. 6803NIY
Vertical toggle clamp with yellow handle


Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557273	2	0,8	1,2	M6x35	220

No. 6803NIJ
Vertical toggle clamp with orange handle


Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557438	2	0,8	1,2	M6x35	220

No. 6803NIE
Vertical toggle clamp with blue handle


Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557759	2	0,8	1,2	M6x35	220

Subject to technical alterations.

No. 6803NIG
Vertical toggle clamp with green handle


Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557595	2	0,8	1,2	M6x35	220

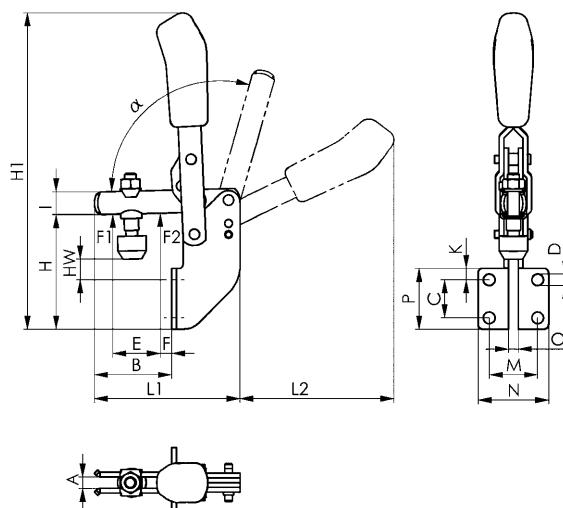
No. 6803NIT
Vertical toggle clamp with black handle


Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
558169	2	0,8	1,2	M6x35	220

Recommendations

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No. 6848VNI,
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No. 6844NI,
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CAD

Dimensions:

Size	A	B	C	D	E	F	H	H1	HW min.	HW max.	I	K	L1	L2	M	N	O	P	α	α^*
2	6	41	20	6,1	25	6	60	167	8	15	12	6	77	81	25,5	37	5	32	105°	60°

* The opening angle can be changed by pressing a stop pin.

Subject to technical alterations.

No. 6830NI

Horizontal toggle clamp with red handle

with open clamping arm and horizontal base.

Stainless steel, polished. In sizes 2 to 5, rivets run in bearing bushes. Bearings are pre-lubricated.

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

Supplied complete with stainless clamping screw no. 6890NI.

Also suitable for use in the food industry.

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
95141	0	0,25	0,4	M4x25	35
95166	1	0,80	1,1	M5x30	105
95182	2	1,00	1,2	M6x35	185
95208	3	1,80	2,5	M8x45	320
95224	4	2,00	3,0	M8x65	700

Note:

For suitable sensor monitor for size 3 see no. 6897S.



No. 6830NIY

Horizontal toggle clamp with yellow handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557274	0	0,25	0,4	M4x25	35
557275	1	0,80	1,1	M5x30	105
557276	2	1,00	1,2	M6x35	185
557277	3	1,80	2,5	M8x45	320
557278	4	2,00	3,0	M8x65	700

No. 6830NIJ

Horizontal toggle clamp with orange handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557439	0	0,25	0,4	M4x25	35
557440	1	0,80	1,1	M5x30	105
557441	2	1,00	1,2	M6x35	185
557442	3	1,80	2,5	M8x45	320
557443	4	2,00	3,0	M8x65	700

No. 6830NIE

Horizontal toggle clamp with blue handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557760	0	0,25	0,4	M4x25	35
557761	1	0,80	1,1	M5x30	105
557762	2	1,00	1,2	M6x35	185
557763	3	1,80	2,5	M8x45	320
557764	4	2,00	3,0	M8x65	700

Subject to technical alterations.

No. 6830NIG

Horizontal toggle clamp with green handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557596	0	0,25	0,4	M4x25	35
557597	1	0,80	1,1	M5x30	105
557598	2	1,00	1,2	M6x35	185
557599	3	1,80	2,5	M8x45	320
557600	4	2,00	3,0	M8x65	700

No. 6830NIT

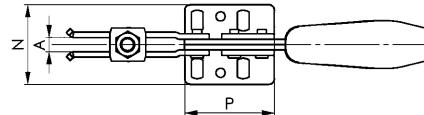
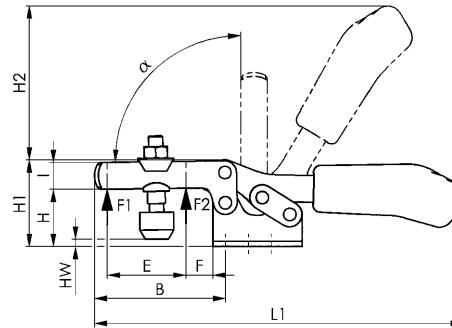
Horizontal toggle clamp with black handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
558170	0	0,25	0,4	M4x25	35
558171	1	0,80	1,1	M5x30	105
558172	2	1,00	1,2	M6x35	185
558173	3	1,80	2,5	M8x45	320
558174	4	2,00	3,0	M8x65	700

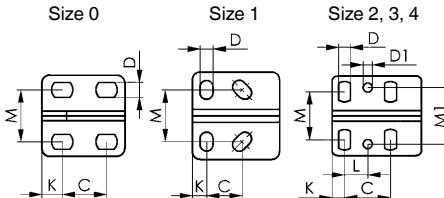


CAD


Recommendations

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page 95

Dimensions:

Size	A	B	C	D	D1	E	F	H	H1	H2	HW min.	HW max.	I	K	L	L1	M	M1	N	P	α
0	4	28	11,5-15,5	4,6	-	9,0	5	14,5	23,0	34	-5,0	0,6	7,5	6,25	-	79	16,0	-	25,0	25,5	90°
1	5	42	13,3-14,7	5,2	-	18,6	8	19,0	30,0	49	-4,0	2,0	10,0	5,50	-	120	18,0-21,5	-	34,0	34,0	90°
2	6	64	26,0	5,6	5,6	32,0	16	24,0	45,0	68	-1,6	5,0	13,0	6,00	12,7	162	19,5-29,5	28,5	42,0	38,0	90°
3	8	73	25,7	6,5	5,1	36,0	14	32,0	48,5	86	-2,0	9,0	15,0	7,00	13,0	206	22,0-31,8	31,6	44,5	50,0	90°
4	10	113	41,0	8,5	8,5	63,0	27	45,0	75,0	126	-4,0	24,0	20,0	8,00	20,5	287	29,0-43,0	43,0	58,0	57,0	90°

Subject to technical alterations.

No. 68300NI

Horizontal toggle clamp plus with red handle

with increased retaining forces, open clamp arm and horizontal base. Stainless steel, polished. Bearings positioned are lubricated. Ergonomic, oil-resistant handle with large grip surface and soft components. Safety clamping piece with retainer for the clamping screw at the end of the clamping arm.

Supplied complete with stainless clamping screw no. 68301NI. Also suitable for use in the food industry.

NEW!

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
560013	1	1,1	1,7	M5 x 35	150
555175	2	1,6	3,0	M6 x 50	450
558985	3	2,5	4,0	M8 x 58	600
555176	4	3,5	8,0	M10 x 76	1250



No. 68300NIY

Horizontal toggle clamp plus with yellow handle

NEW!

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
560157	1	1,1	1,7	M5 x 35	150
557279	2	1,6	3,0	M6 x 50	450
560158	3	2,5	4,0	M8 x 58	600
557280	4	3,5	8,0	M10 x 76	1250



No. 68300NIJ

Horizontal toggle clamp plus with orange handle

NEW!

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
560163	1	1,1	1,7	M5 x 35	150
557444	2	1,6	3,0	M6 x 50	450
560164	3	2,5	4,0	M8 x 58	600
557445	4	3,5	8,0	M10 x 76	1250



No. 68300NIE

Horizontal toggle clamp plus with blue handle

NEW!

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
560159	1	1,1	1,7	M5 x 35	150
557765	2	1,6	3,0	M6 x 50	450
560160	3	2,5	4,0	M8 x 58	600
557766	4	3,5	8,0	M10 x 76	1250



Subject to technical alterations.

No. 68300NIG

Horizontal toggle clamp plus with green handle


NEW!
NEW!

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
560161	1	1,1	1,7	M5 x 35	150
557601	2	1,6	3,0	M6 x 50	450
560162	3	2,5	4,0	M8 x 58	600
557602	4	3,5	8,0	M10 x 76	1250

No. 68300NIT

Horizontal toggle clamp plus with black handle


NEW!
NEW!

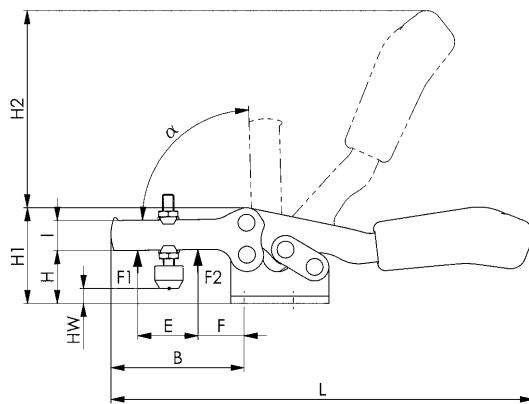
Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
560165	1	1,1	1,7	M5 x 35	150
558175	2	1,6	3,0	M6 x 50	450
560166	3	2,5	4,0	M8 x 58	600
558176	4	3,5	8,0	M10 x 76	1250

Recommendations

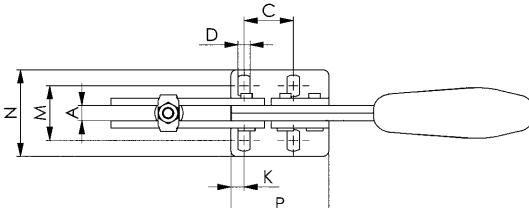

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CAD


Dimensions:

Size	A	B	C	D	E	F	H	H1	H2	HW min.	HW max.	I	K	L	M	N	P	α
1	5	44	13,5	4,3	20,5	15,0	19,6	37	52	1	10,2	12	6,0	125	14,7 - 19,5	27,2	40	80°
2	8	71	26,0	6,5	39,0	14,0	28,0	51	110	-1	12,0	16	7,0	224	23,5 - 34,0	46,0	52	90°
3	8	74	26,2	6,5	41,5	20,6	35,0	61	112	1	13,0	18	6,5	243	27,5 - 38,0	49,2	56	90°
4	10	120	41,5	8,6	69,0	23,0	41,0	77	135	-2	17,5	24	10,5	329	34,5 - 45,0	60,0	76	90°

Subject to technical alterations.

No. 6841NI
Push-pull type toggle clamp with red handle

with small angle base. For push- and pull-clamping. (Equal operation of rod and lever). Stainless steel, polished. Long rod-guide with attaching thread and nut. Bush for size 3. Bearings pre-lubricated. Lever can be set to any angle relative to base. Ergonomic, oil-resistant handle with large grip surface and soft components.

Supplied complete with stainless clamping screw no. 6880NI.

Also suitable for use in the food industry.

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
95265	0	0,8	0,8	M4x20	65
95299	3	2,5	2,5	M8x35	445


No. 6841NIY
Push-pull type toggle clamp with yellow handle


Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557288	0	0,8	0,8	M4x20	65

No. 6841NIJ
Push-pull type toggle clamp with orange handle


Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557453	0	0,8	0,8	M4x20	65

No. 6841NIE
Push-pull type toggle clamp with blue handle


Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557774	0	0,8	0,8	M4x20	65

Subject to technical alterations.

No. 6841NIG

Push-pull type toggle clamp with green handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557610	0	0,8	0,8	M4x20	65

No. 6841NIT

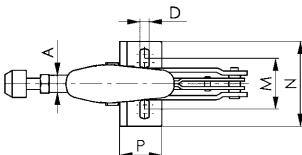
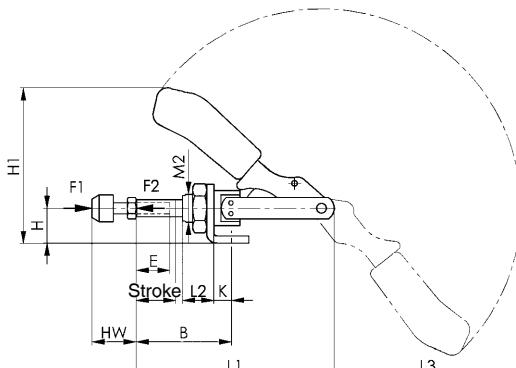
Push-pull type toggle clamp with black handle



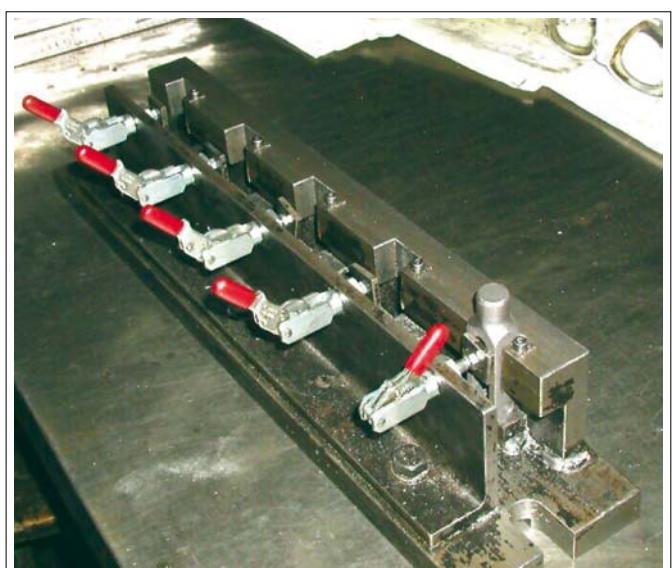
Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
558185	0	0,8	0,8	M4x20	65



CAD

Recommendations
No. 6844NI,
page 92No. 6860,
page 42No. 6800NI,
page 82
Dimensions:

Size	A	B min.	B max.	D	E	H	H1	Stroke	HW min.	HW max.	K	L1	L2	L3	M	M2	N	P
0	6,5	17	33	4,5	13	12	49,3	16	12	20	6,5	66,5	10	54	16,0	M10x1,0	25	16
3	12,0	37	69	6,5	30	25	110,0	32	22	35	13,0	140,0	22	132	29,5-42,5	M20x1,5	60	30



Subject to technical alterations.

No. 6844NI

Push-pull type toggle clamp with red handle

short version. For push and pull-clamping.
Stainless steel, polished. Long rod-guide with attaching thread and nut. Shoulder screws pasted into thread. Bearings are pre-lubricated. Ergonomic, oil-resistant handle with large grip surface and soft components.

Supplied complete with stainless clamping screw no. 6880NI.

Also suitable for use in the food industry.



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
95349	2	1,0	1,0	M6x25	130
95364	3	2,5	2,5	M8x35	320
95380	5	4,0	4,0	M12x50	1200

Application:

Toggle for direct fit up in metal plates or fixtures, using its front attaching thread or by means of solid base angle no. 6843NI.

No. 6844NIY

Push-pull type toggle clamp with yellow handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557289	2	1,0	1,0	M6x25	130
557290	3	2,5	2,5	M8x35	320
557291	5	4,0	4,0	M12x50	1200

No. 6844NIJ

Push-pull type toggle clamp with orange handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557454	2	1,0	1,0	M6x25	130
557455	3	2,5	2,5	M8x35	320
557456	5	4,0	4,0	M12x50	1200

No. 6844NIE

Push-pull type toggle clamp with blue handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557775	2	1,0	1,0	M6x25	130
557776	3	2,5	2,5	M8x35	320
557777	5	4,0	4,0	M12x50	1200

Subject to technical alterations.

No. 6844NIG

Push-pull type toggle clamp with green handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
557611	2	1,0	1,0	M6x25	130
557612	3	2,5	2,5	M8x35	320
557613	5	4,0	4,0	M12x50	1200

No. 6844NIT

Push-pull type toggle clamp with black handle



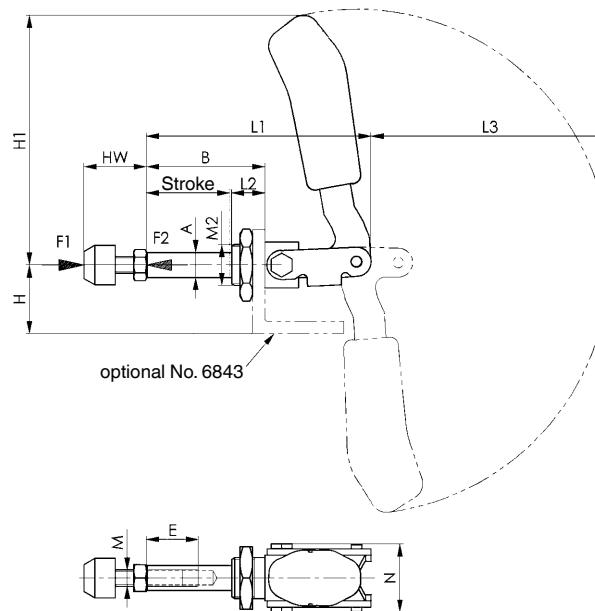
Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
558186	2	1,0	1,0	M6x25	130
558187	3	2,5	2,5	M8x35	320
558188	5	4,0	4,0	M12x50	1200


CAD
Recommendations


No. 6841NI,
page 90



No. 6847NI,
page 94


Dimensions:

Size	A	B	E	H	H1	Stroke	HW min.	HW max.	L1	L2	L3	M	M2	N
2	10	36	15	24	73,0	21,5	17	27,0	68,5	13	69	M6	M16x1,5	30,5
3	12	57	25	33	120,5	40,0	22	37,5	108,0	16	115	M8	M20x1,5	33,0
5	16	92	45	37	149,0	67,0	30	50,0	175,0	24	139	M12	M24x1,5	49,0

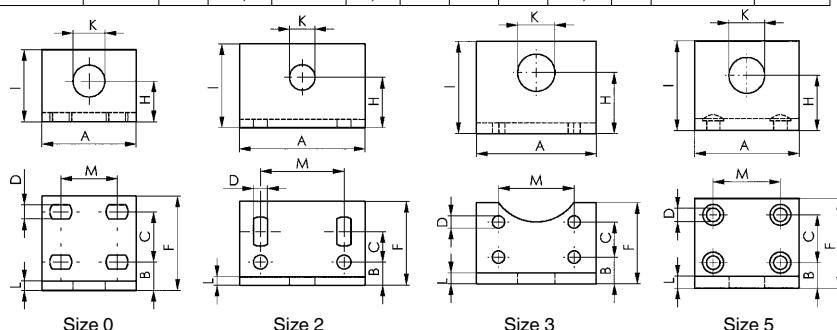
No. 6843NI
Angle base, solid

for no. 6841NI and no. 6844NI.

Stainless steel, polished. Increased range of application due to enlarged height of center line. Fastening by means of 4 screws.


CAD


Order no.	Size	A	B	C	D	F	H	I	K	L	M	Weight [g]
95091	0	30	9,0	16	4,5	30	13	23	10,2	3	15,5-20,5	35
95158	2	60	11,0	11-18	6,7	40	24	40	16,2	5	40	170
95174	3	65	14,5	19	6,7	44	33	50	20,2	6	41	260
95190	5	70	17,0	32	9,0	60	37	60	24,0	8	45	480



Subject to technical alterations.

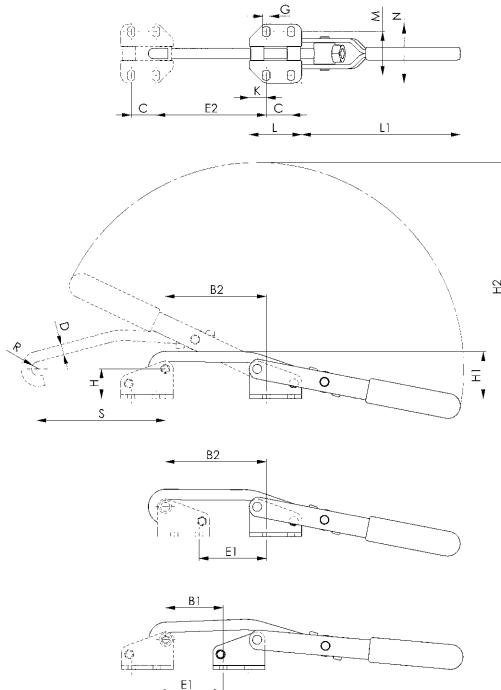
No. 6847NI

Hook type toggle clamp

Stainless steel, polished. Rivets running in greased bushes. Handle of red high quality oil-resistant plastic. Ergonomic, oil-resistant handle with large grip surface and soft components for size 1. Suitable for use in food industry.



Order no.	Size	F1 [kN]	Adjustm. distance [mm]	Weight [g]
95406	1	1,0	8	100
95422	3	1,5	12	270
95448	5	2,5	14	850



Recommendations



No. 6848HNI,
page 96



No. 6841NI,
page 90

Dimensions:

Order no.	Size	B1	B2	C	D	E1	E2	G	H	H1	H2	K	L	L1	M	N	R	S
95406	1	15-23	34-42	19	6	15-24	34-42	4,5	22,7	35,0	111	6	31	63	26,0-30,0	40	4,5	45
95422	3	32-44	65-77	19	8	39-51	72-84	5,6	22,7	36,0	181	13	40	121	31,5-35,5	45	5,5	97
95448	5	26-40	57-71	29	12	27-42	58-73	11,2	49,0	70,5	281	13	55	188	56,5-64,0	86	8,0	146

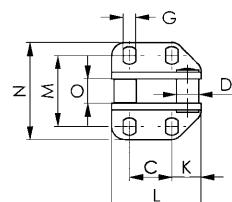
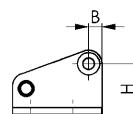
No. 6847GNI

Counter catch

For hook type toggle clamp no. 6847NI.
Stainless steel, polished.



Order no.	Size	Height [mm]	Length [mm]	Weight [g]
95463	1	29	31	40
95489	3	29	40	70
95505	5	61	55	320



Dimensions:

Order no.	Size	B	C	D	G	H	K	L	M	N	O
95463	1	6	19	8	4,5	22,7	6	31	26,0-30,0	40	6,9
95489	3	6	19	10	5,6	22,7	13	40	31,3-35,8	45	10,9
95505	5	12	29	15	11,2	49,1	13	55	56,5-64,0	86	13,8

Subject to technical alterations.

No. 6847KNI
Hook type toggle clamp

for cylindrical mounting surfaces.

Stainless steel, polished. Rivets running in greased, continuous bearing bushes. Handle made of red, oil-resistant plastic. Use socket cap screws to ISO 4762 (DIN 912) for mounting.

Also suitable for use in the food industry.

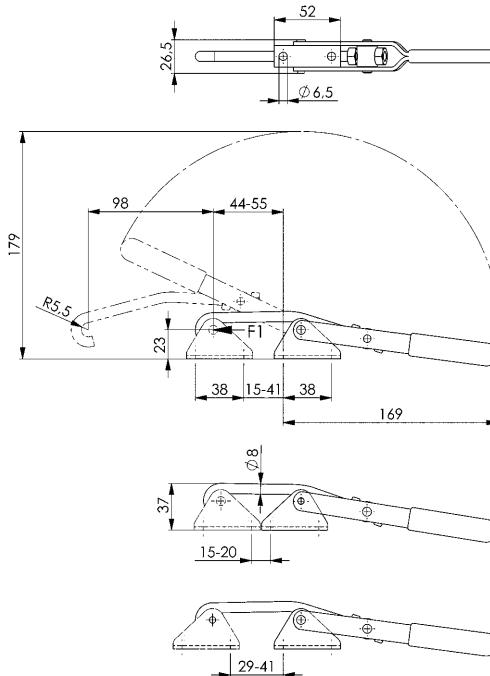


CAD

Order no.	Size	F1 [kN]	Adjustm. distance [mm]	Weight [g]
95455	3	1,5	22	270

Note:

The range of movement can be adjusted by swiveling the base and repositioning the catch.


Recommendations

 No. 6847NI,
page 94

 No. 6847GNI,
page 94

No. 6847GKNI
Counter catch

for cylindrical mounting surfaces.

For hook-type toggle clamp no. 6847KNI. Stainless steel, polished. Continuous bush. Use socket cap screws to ISO 4762 (DIN 912) for mounting.

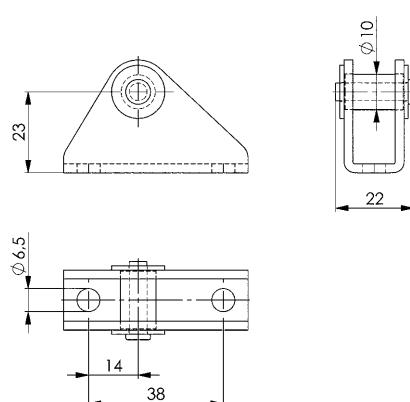


CAD

Order no.	Size	Height [mm]	Length [mm]	Weight [g]
95596	3	32	52	65

Note:

The adjustment range of the clamp can be increased by turning the counter catch.



No. 6848HNI
Horizontal hook-type toggle clamp with red handle

Stainless steel, polished. Rivets running in greased bushes.
Ergonomic, oil-resistant handle with large grip surface and soft components.

Supplied complete with counter catch.

Also suitable for use in the food industry.

Order no.	Size	F1 [kN]	Weight [g]
95521	2	1,6	120
95547	3	3,2	330
95562	4	7,0	810


No. 6848HNIY
Horizontal hook-type toggle clamp with yellow handle


Order no.	Size	F1 [kN]	Weight [g]
557281	2	1,6	120
557282	3	3,2	330
557283	4	7,0	810

No. 6848HNIIJ
Horizontal hook-type toggle clamp with orange handle


Order no.	Size	F1 [kN]	Weight [g]
557446	2	1,6	120
557447	3	3,2	330
557448	4	7,0	810

No. 6848HNIE
Horizontal hook-type toggle clamp with blue handle


Order no.	Size	F1 [kN]	Weight [g]
557767	2	1,6	120
557768	3	3,2	330
557769	4	7,0	810

Subject to technical alterations.

No. 6848HNIG

Horizontal hook-type toggle clamp with green handle



Order no.	Size	F1		Weight [g]
		[kN]		
557603	2	1,6		120
557604	3	3,2		330
557605	4	7,0		810

No. 6848HNIT

Horizontal hook-type toggle clamp with black handle



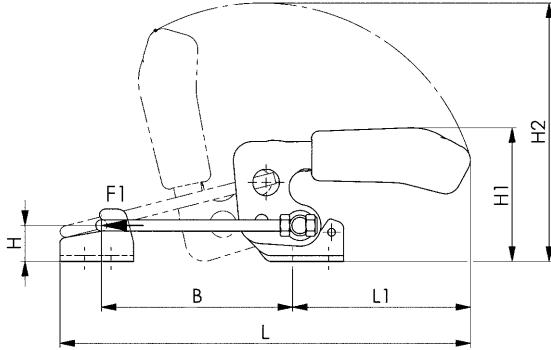
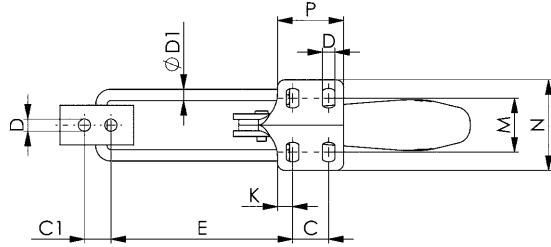
Order no.	Size	F1		Weight [g]
		[kN]		
558178	2	1,6		120
558179	3	3,2		330
558180	4	7,0		810

Recommendations


No. 6848VNI,
page 100



No. 6847NI,
page 94


Dimensions:

Size	B min.	B max.	C	C1	D	dia. D1	E min.	E max.	H	H1	H2	K	L min.	L max.	L1	M	N	P
2	42,0	76	13	11	5,2	4	38,0	72	12	47,0	99	6,4	125	159	69	19,5-23,5	38,0	26,0
3	53,5	101	19	14	6,5	6	48,6	96	19	70,0	137	8,0	169	217	94	24,5-32,5	48,0	35,0
4	72,0	127	32	19	8,5	8	65,0	120	26	94,5	168	9,5	214	270	111	35,0-46,0	64,5	53,5

Subject to technical alterations.

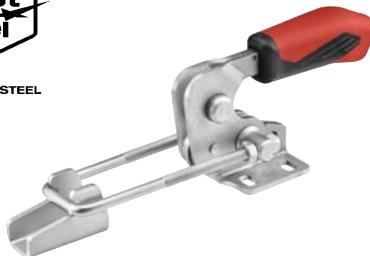
No. 6848HSNI
Horizontal hook-type toggle clamp with red handle and safety latch

Stainless steel, polished. Rivets running in greased bushes.
Ergonomic, oil-resistant handle with large grip surface and soft components.

Supplied complete with counter catch.

Also suitable for use in the food industry.

Order no.	Size	F1 [kN]	Weight [g]
93658	4	7,0	850


No. 6848HSNIY
Horizontal hook-type toggle clamp with yellow handle and safety latch

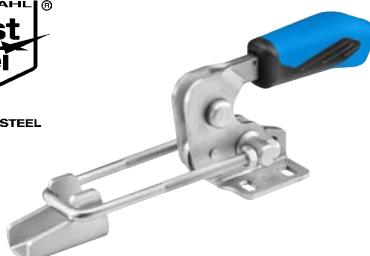
Order no.	Size	F1 [kN]	Weight [g]
557284	4	7,0	850


No. 6848HSNIJ
Horizontal hook-type toggle clamp with orange handle and safety latch

Order no.	Size	F1 [kN]	Weight [g]
557449	4	7,0	850


No. 6848HSNIE
Horizontal hook-type toggle clamp with blue handle and safety latch

Order no.	Size	F1 [kN]	Weight [g]
557770	4	7,0	850

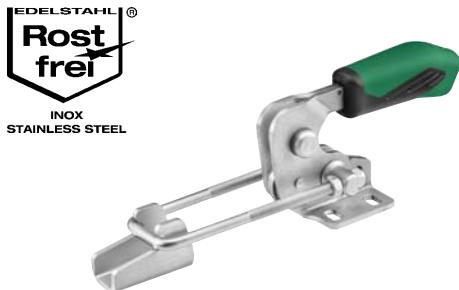


Subject to technical alterations.

No. 6848HSNIG

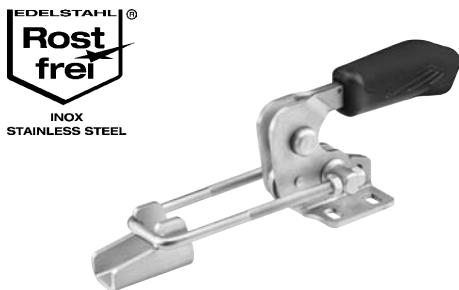
Horizontal hook-type toggle clamp with green handle and safety latch

Order no.	Size	F1 [kN]	Weight [g]
557606	4	7,0	850

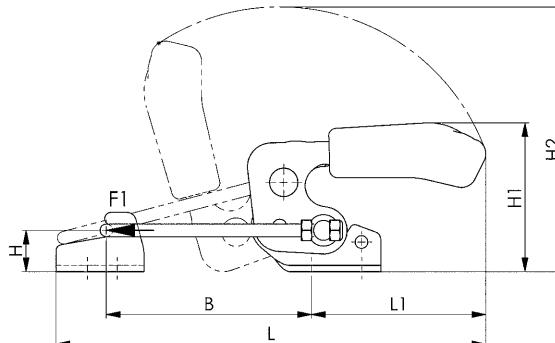
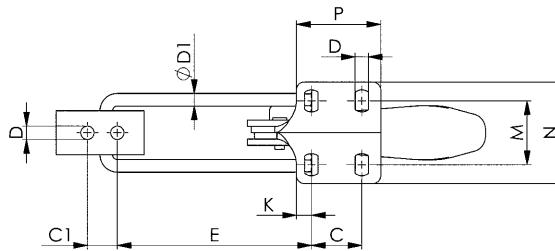

No. 6848HSNIT

Horizontal hook-type toggle clamp with black handle and safety latch

Order no.	Size	F1 [kN]	Weight [g]
558181	4	7,0	850



CAD


Recommendations


No. 6848VNI,
page 100



No. 6848GHNI,
page 155

Dimensions:

Size	B min.	B max.	C	C1	D	dia. D1	E min.	E max.	H	H1	H2	K	L min.	L max.	L1	M	N	P
4	72	130	32	19	8,5	8	65	123	26	94	168	9,5	215	273	111	35-46	64,5	53,5

Subject to technical alterations.

No. 6848VNI
Vertical hook-type toggle clamp with red handle

Stainless steel, polished. Rivets running in greased bushes. Ergonomic, oil-resistant handle with large grip surface and soft components.

Supplied complete with counter catch.

Also suitable for use in the food industry.

Order no.	Size	F1 [kN]	Weight [g]
95588	2	1,6	130
95604	3	3,2	340
95620	4	7,0	810


No. 6848VNIY
Vertical hook-type toggle clamp with yellow handle


Order no.	Size	F1 [kN]	Weight [g]
557285	2	1,6	130
557286	3	3,2	340
557287	4	7,0	810

No. 6848VNIIJ
Vertical hook-type toggle clamp with orange handle


Order no.	Size	F1 [kN]	Weight [g]
557450	2	1,6	130
557451	3	3,2	340
557452	4	7,0	810

No. 6848VNIE
Vertical hook-type toggle clamp with blue handle


Order no.	Size	F1 [kN]	Weight [g]
557771	2	1,6	130
557772	3	3,2	340
557773	4	7,0	810

Subject to technical alterations.

No. 6848VNIG

Vertical hook-type toggle clamp with green handle


No. 6848VNIT

Vertical hook-type toggle clamp with black handle



Order no.	Size	F1		Weight [g]
		[kN]		
557607	2	1,6		130
557608	3	3,2		340
557609	4	7,0		810

Order no.	Size	F1		Weight [g]
		[kN]		
558182	2	1,6		130
558183	3	3,2		340
558184	4	7,0		810

Recommendations

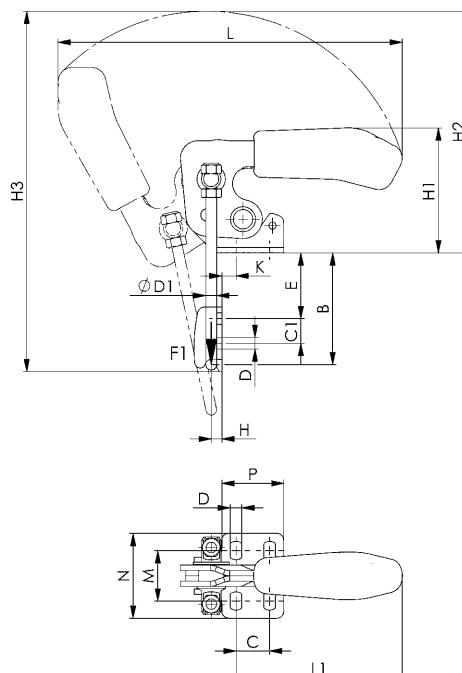

No. 6848GVNI,
page 155



No. 6844NI,
page 92



No. 6803NI,
page 84

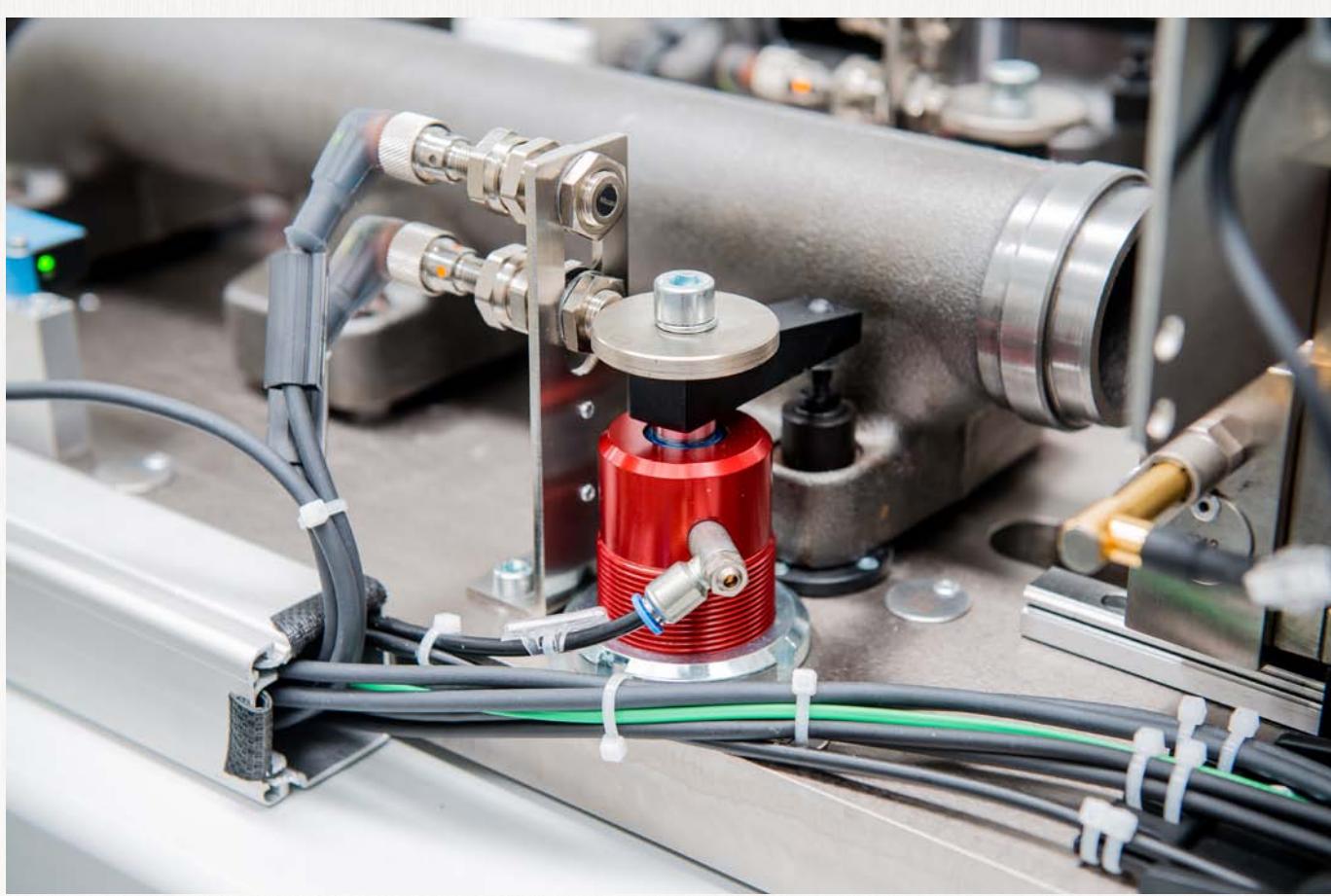
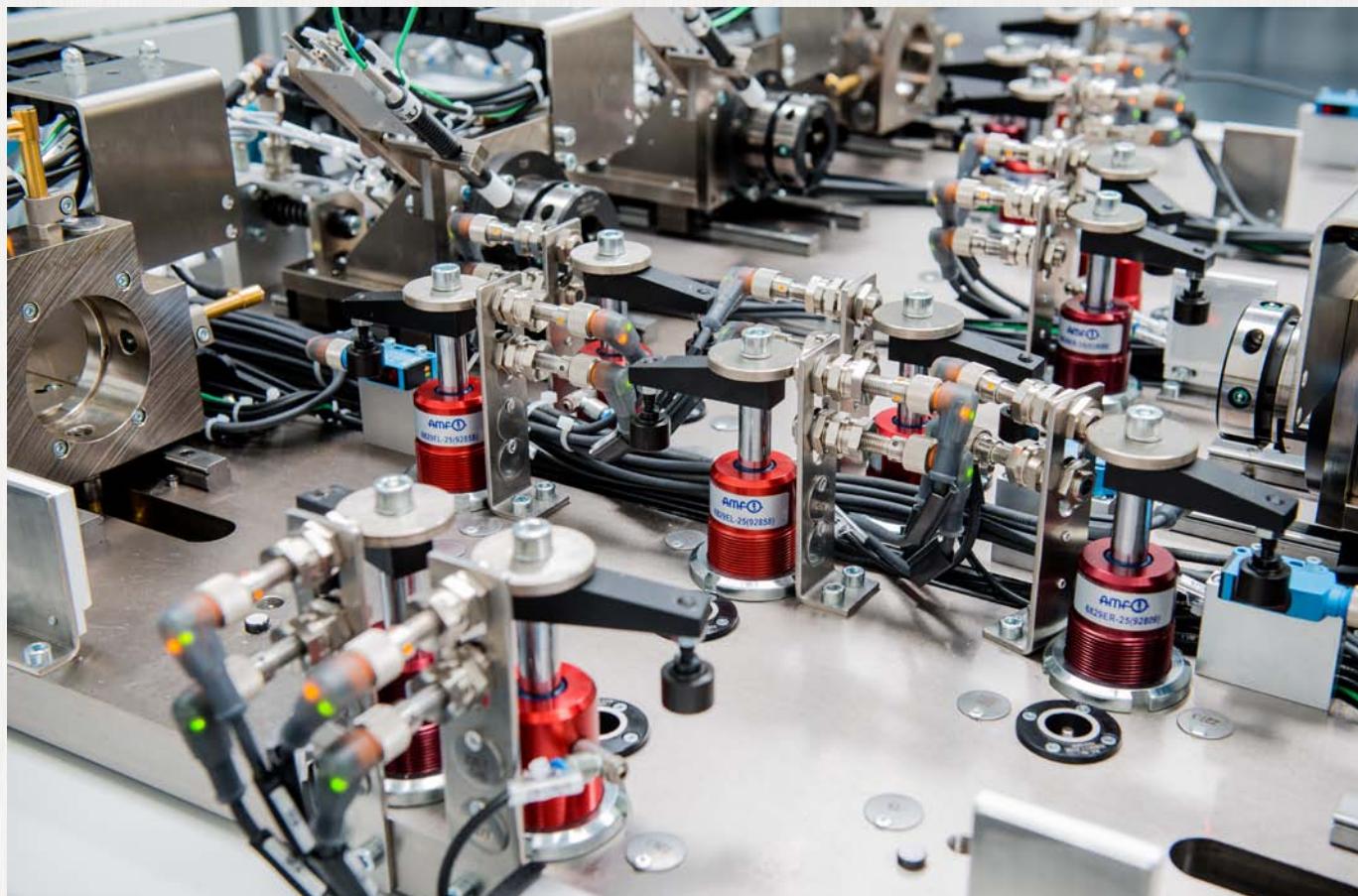


CAD

Dimensions:

Size	B min.	B max.	C	C1	D	dia. D1	E min.	E max.	H	H1	H2	H3	K	L	L1	M	N	P
2	24	47	13	11	5,2	4	5,0	28	4,5	47,0	99	150	6,8	158	69	19,5-23,5	38,0	26,0
3	33	63	19	14	6,5	6	6,5	36	6,0	70,0	137	172	8,0	195	93	24,5-32,5	48,0	35,0
4	43	81	32	19	8,5	8	9,0	47	8,0	94,5	168	254	9,5	239	111	35,0-46,0	64,5	53,5

Subject to technical alterations.

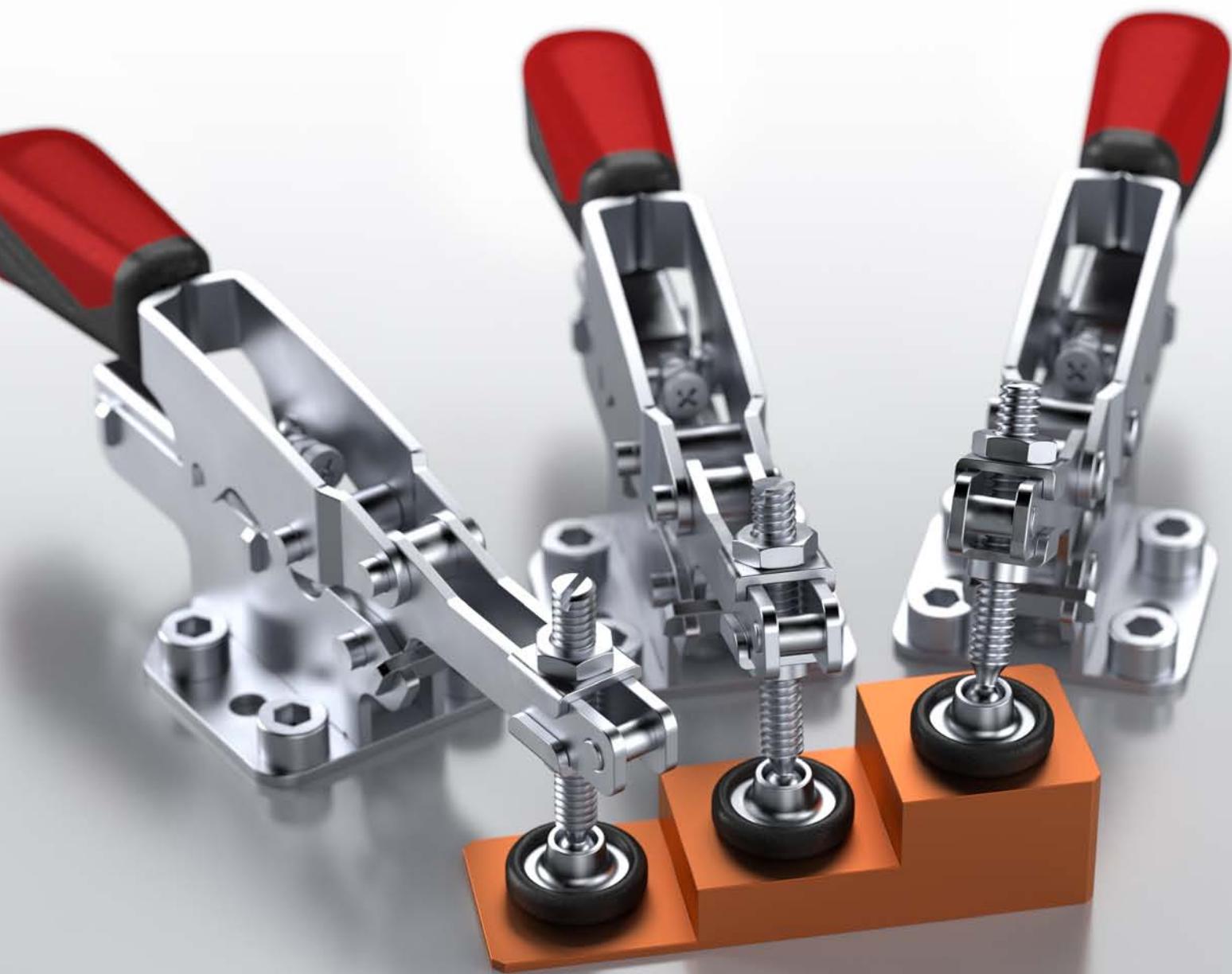


Subject to technical alterations.

AUTO-ADJUST TOGGLE CLAMPS

The benefits at a glance:

- Auto-adjust clamping height
- Clamps different workpiece types
- Ideal for small batch sizes
- Adjustable clamping force
- Ergonomic 2-component handle
- Retained on the clamp arm



No. 6870

Horizontal toggle clamp with auto-adjust clamping height

with open clamping arm and horizontal base.

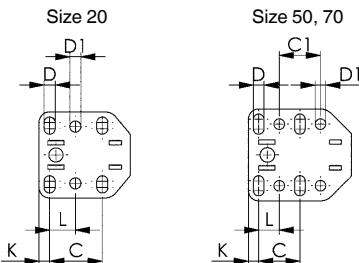
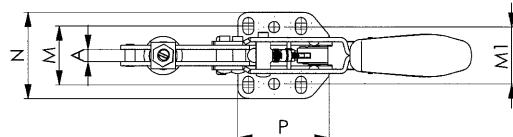
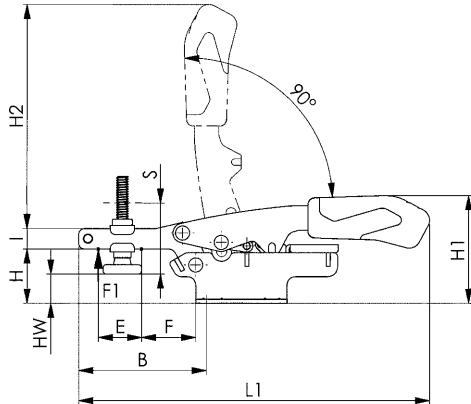
Toggle clamp with continuous counterbalance function for workpieces with different clamping heights.

Galvanised and passivated. Ergonomic, oil-resistant handle with large grip surface and soft components. Retainer for the clamping screw at the end of the clamp arm.

Complete with galvanised clamping screw.



Order no.	Size	F1 [kN]	Automatic height compensation S [mm]	Maximum height compensation [mm]	Clamping screw	Weight [g]
554878	20	2	20	35	M6 x 40	272
554879	50	3	35	40	M8 x 39	499
554880	70	3	35	60	M8 x 55	544



Recommendations



No. 6860,
page 42



No. 68300,
page 32

Dimensions:

Order no.	Size	A	B	C	C1	D	D1	E	F	H	H1	H2	HW min.	HW max.	I	K	L	L1	M	M1	N	P
554878	20	6,0	63	26,0	-	5,5	5,5	22	26	27,0	53,0	111	-6,5	14	10	5,3	12,7	173	26 - 32	28	42,5	45,0
554879	50	8,4	104	25,4	25,4	6,5	6,5	35	22	23,0	58,5	158	-8,5	6	13	6,3	12,7	244	32 - 44	38	57,0	63,5
554880	70	8,4	104	25,4	25,4	6,5	6,5	35	50	40,5	76,5	158	-6,5	24	13	6,3	12,7	243	32 - 44	38	57,0	63,5

Subject to technical alterations.

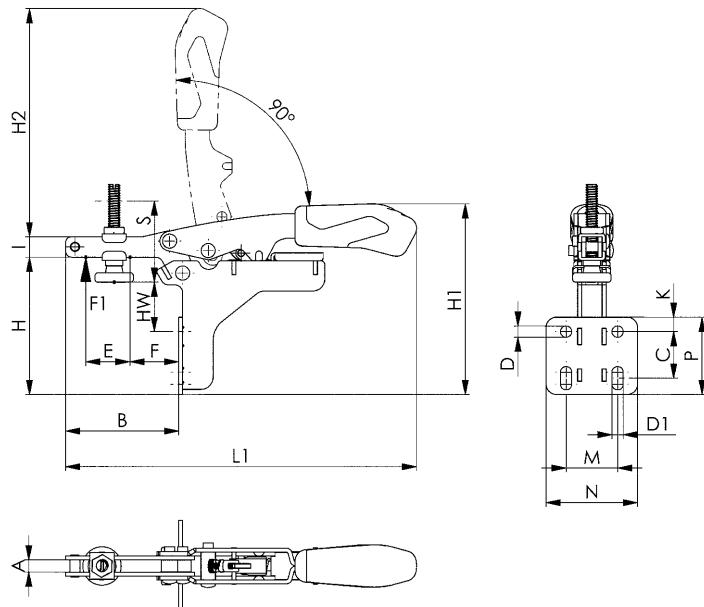
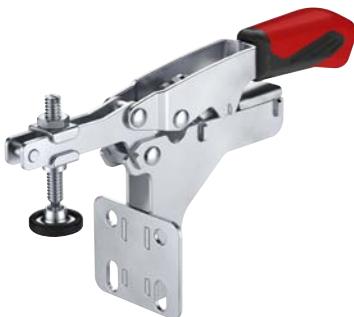
No. 6871
Horizontal toggle clamp with auto-adjust clamping height
with open clamping arm and angle base.

Toggle clamp with continuous counterbalance function for workpieces with different clamping heights.

Galvanised and passivated. Ergonomic, oil-resistant handle with large grip surface and soft components. Retainer for the clamping screw at the end of the clamp arm.

Complete with galvanised clamping screw.


Order no.	Size	F1 [kN]	Automatic height compensation S [mm]	Maximum height compensation [mm]	Clamping screw	Weight [g]
554881	20	2	20	35	M6 x 40	272
554882	50	3	35	40	M8 x 55	544


Dimensions:

Order no.	Size	A	B	C	D	D1	E	F	H	H1	H2	HW min.	HW max.	I	K	L1	M	N	P
554881	20	6,0	56	20 - 26	5,6	5,6	22	24	68	94	113	-3	24	10	7,1	173	25,4	45	38
554882	50	8,4	85	22 - 32	6,5	6,5	35	37	88	124	158	1	31	13	10,6	244	38,1	57	51

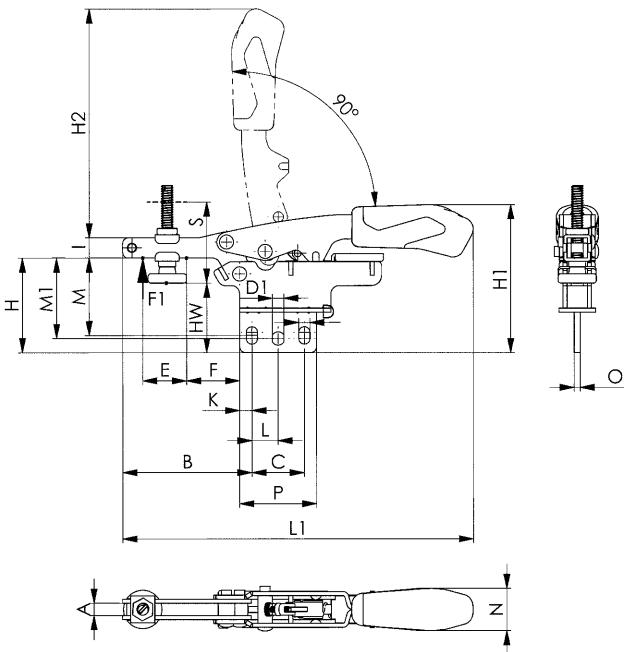
No. 6872
Horizontal toggle clamp with auto-adjust clamping height
with open clamping arm and vertical base.

Toggle clamp with continuous counterbalance function for workpieces with different clamping heights.

Galvanised and passivated. Ergonomic, oil-resistant handle with large grip surface and soft components. Retainer for the clamping screw at the end of the clamp arm.

Complete with galvanised clamping screw.


Order no.	Size	F1 [kN]	Automatic height compensation S [mm]	Maximum height compensation [mm]	Clamping screw	Weight [g]
554883	20	2	20	35	M6 x 40	272
554884	50	3	35	40	M8 x 39	544


Recommendations

 No. 6860,
page 42

 No. 68300,
page 32

Dimensions:

Order no.	Size	A	B	C	D	D1	E	F	H	H1	H2	HW min.	HW max.	I	K	L	L1	M	M1	N	O	P
554883	20	6,0	64,0	25,9	5,6	5,6	22	26	47	73	113	13,0	34	10	6,0	12,9	173	37 - 40	39,8	21,0	3	38
554884	50	8,4	106,5	38,0	6,5	6,5	35	50	59	94,5	158	27,5	42	13	8,5	19,0	243	45 - 49	49,0	26,5	4	55

Subject to technical alterations.

No. 6873

Push-pull type toggle clamp with auto-adjust clamping width

with angle base.

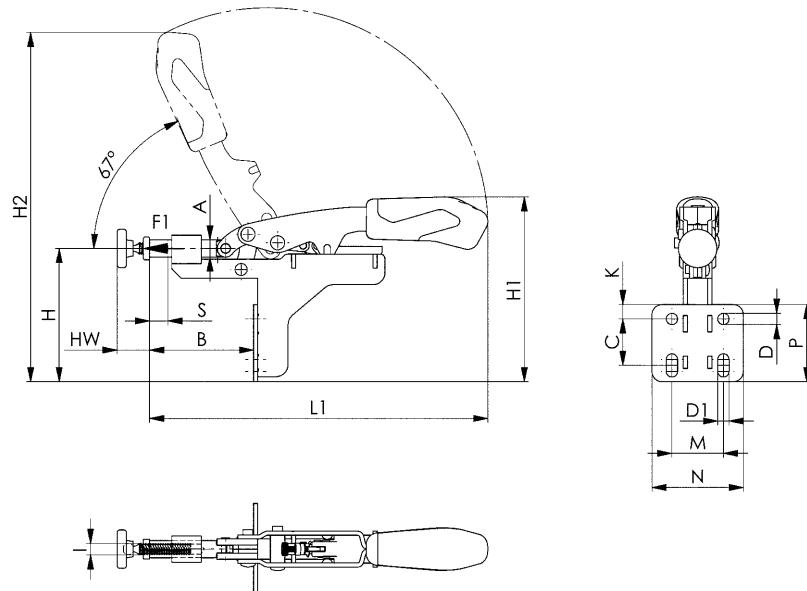
Toggle clamp with continuous counterbalance function for workpieces with different clamping widths.

Galvanised and passivated. Ergonomic, oil-resistant handle with large grip surface and soft components. Retainer for the clamping screw at the end of the clamp arm.

Complete with galvanised clamping screw.



Order no.	Size	F1 [kN]	automatic stroke compensation S [mm]	maximum stroke compensation [mm]	Clamping screw	Weight [g]
554885	15	2	8	25	M6 x 29	272
554886	25	3	13	35	M8 x 38	544



Dimensions:

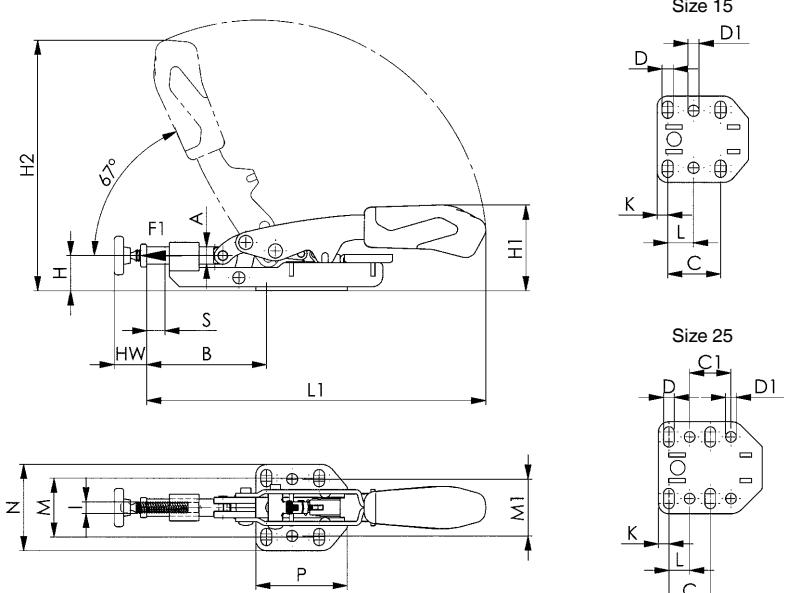
Order no.	Size	A	B	C	D	D1	H	H1	H2	HW min.	HW max.	I	K	L1	M	N	P
554885	15	8,5	42 - 51	20 - 26	5,6	5,6	66	91	173	12	29	M6	7,1	167	25,4	45	38
554886	25	11,8	58 - 83	22 - 32	6,5	6,5	84	119	244	17	39	M8	10,6	236	38,1	57	51

No. 6874

Push-pull type toggle clamp with auto-adjust clamping width



Order no.	Size	F1 [kN]	automatic stroke compensation S [mm]	maximum stroke compensation [mm]	Clamping screw	Weight [g]
554887	15	2	8	25	M6 x 29	272
554888	25	3	13	35	M8 x 38	499



Recommendations



No. 6842,
page 52



No. 6841,
page 44

Dimensions:

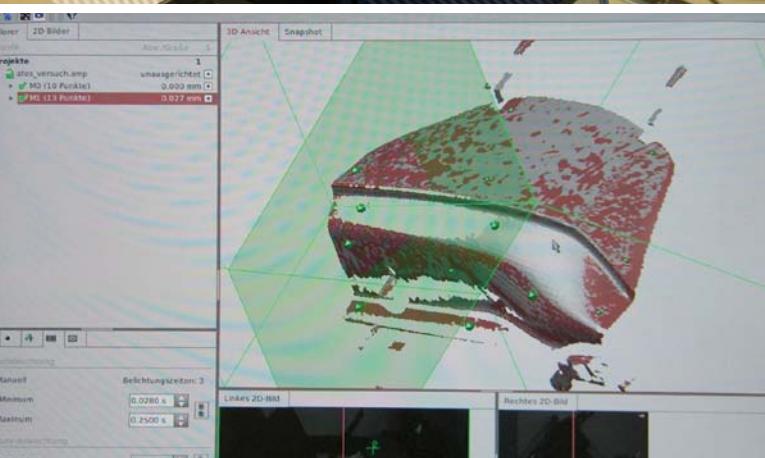
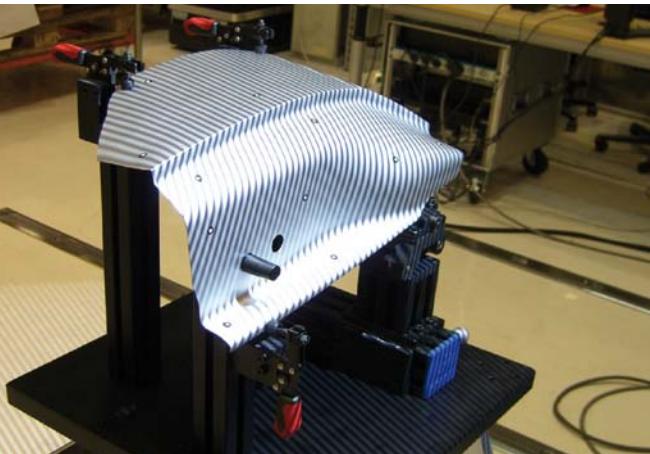
Order no.	Size	A	B	C	C1	D	D1	H	H1	H2	HW min.	HW max.	I	K	L	L1	M	M1	N	P
554887	15	8,5	50 - 59	26,0	-	5,5	5,5	17,5	42	124	12	29	M6	5,3	12,7	167	26 - 32	28	42,5	45,0
554888	25	11,8	67 - 92	25,4	25,4	6,5	6,5	23,0	59	170	17	39	M8	6,3	12,7	236	32 - 44	38	57,0	63,5

Subject to technical alterations.

AMF TOGGLE CLAMPS FOR OPTICAL MEASUREMENT TECHNOLOGY

The new black toggle clamps are especially suited for the optical measurement of workpieces. The complete matte-black surface of the clamps prevents reflections. As a result, in the later evaluation of the measurement results on the PC, all unneeded clamp parts can be suppressed and only the actual workpiece is visible.

All black toggle clamps are blackened using a special process. This offers effective protection against corrosion and film rust formation. In addition, environmentally damaging emissions are not created with this process.



MARKING AND MEASURING OF THE WORKPIECE

For overlaying of several pictures, circular markings are attached to the object. A stripe pattern is projected onto the object surface by a white-light projector and photographed by two cameras from different angles of view.

EVALUATION

Within seconds, highly precise 3D coordinates of up to 4 million object points per measurement are calculated. For this, the black device with the black toggle clamps are „suppressed“.

VISUALISATION AND RESULT

Variances from the CAD are calculated. The 3D coordinates of the measurement points can be measured exactly and visualised in colour.

The complete 3D data set and the comparison results can be exported into common formats for further processing.

Subject to technical alterations.

No. 6800B

Vertical toggle clamp, black

With open clamping arm and horizontal base.

Matte black surface. Rivets made of stainless steel, which, for sizes 2 and 3, run in hardened bushings. Bearings are pre-lubricated.

Ergonomic, oil-resistant black handle with large grip surface and soft components. Safety clamping piece with finger protection.

Lock washer for the thrust bolt at the end of the clamping arm.

Complete with tempered, matte-black clamping screw

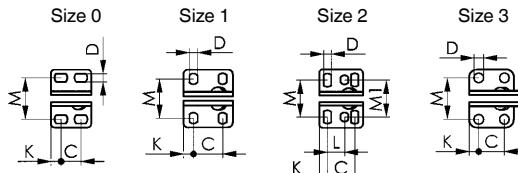
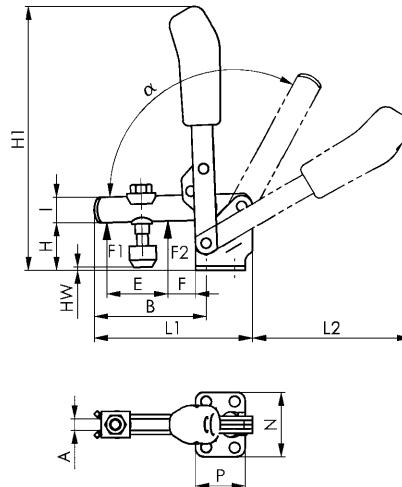
no. 6890B.

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
90167	0	0,5	0,7	M4x34,5	60
90175	1	0,6	1,1	M5x38,0	105
90183	2	0,8	1,2	M6x46,0	175
90191	3	1,2	2,5	M8x63,0	410

Note:

These clamps are suitable for photogrammetric use. The matte-black surface of the clamps prevents reflection while photographing.

For suitable clamping arm extension see no. 6896.



Recommendations



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page 149



No. 6802B,
page 109



No. 6800BS,
page 115

Dimensions:

Order no.	Size	A	B	C	D	E	F	H	H1	HW min.	HW max.	I	K	L	L1	L2	M	M1	N	P	α	α^*
90167	0	4	32	8,5-13,5	4,5	14	5,5	18	81,0	-4,0	6,5	8	5,5	-	49,0	50,0	23,0	-	32	22	95°	-
90175	1	5	39	16	4,5	18	6,0	19	97,5	-3,7	1,6	10	5,5	-	61,0	58,0	22,5-26	-	34	27	95°	-
90183	2	6	52	20	5,5	25	11,0	23	130,0	-4,4	4,4	12	6,0	12,5	78,0	80,0	23,0-31	27	43	32	105°	60°
90191	3	8	79	20	7,5	36	19,0	33	188,0	-2,8	7,0	18	7,5	-	111,5	111,5	32,5	-	46	35	105°	60°

* The opening angle can be changed by pressing in a stop pin.

CAD



Subject to technical alterations.

No. 6802B

Vertical toggle clamp, black

With open clamping arm and vertical base.

Matte black surface. Rivets made of stainless steel, which, for sizes 2 and 3, run in hardened bushings. Bearings are pre-lubricated.

Ergonomic, oil-resistant black handle with large grip surface and soft components. Safety clamping piece with finger protection.

Lock washer for the thrust bolt at the end of the clamping arm.

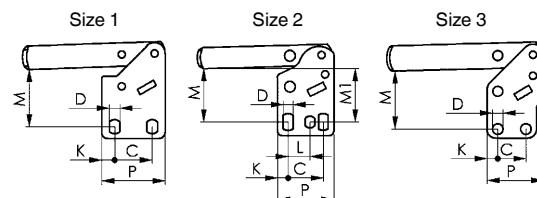
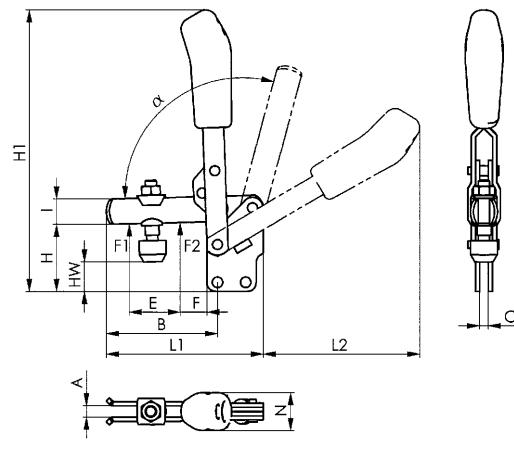
Complete with tempered, matte-black clamping screw no. 6890B.

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
90415	1	0,6	1,1	M5x38	105
90472	2	0,8	1,2	M6x46	175
90498	3	1,2	2,5	M8x63	410

Note:

These clamps are suitable for photogrammetric use. The matte-black surface of the clamps prevents reflection while photographing.

For suitable clamping arm extension see no. 6896.



Recommendations



No. 6890B,
page 149



No. 6802BS,
page 116



No. 6841B,
page 114

Dimensions:

Order no.	Size	A	B	C	D	E	F	H	H1	HW min.	HW max.	I	K	L	L1	L2	M	M1	N	O	P	α	α^*
90415	1	5	39	16	4,5	18	6	29	110,5	6,8	12	10	5,5	-	61	58	23,5-25	-	19	5	27	95°	-
90472	2	6	52	20	5,5	25	11	38	144,5	10,5	19	12	6,0	12,5	78	80	28,5-32	30	21	5	32	105°	60°
90498	3	8	79	20	7,5	36	19	48	201,0	11,4	21	18	7,5	-	112	113	41	-	27	6	40	105°	60°

* The opening angle can be changed by pressing a stop pin.

CAD



Subject to technical alterations.

No. 6830B

Horizontal toggle clamp, black

With open clamping arm and horizontal base.

Matte black surface. Rivets made of stainless steel, which, for sizes 2 and 3, run in hardened bushings. Bearings are pre-lubricated.

Ergonomic, oil-resistant black handle with large grip surface and soft components. Lock washer for the thrust bolt at the end of the clamping arm.

Complete with tempered, matte-black clamping screw

no. 6890B.



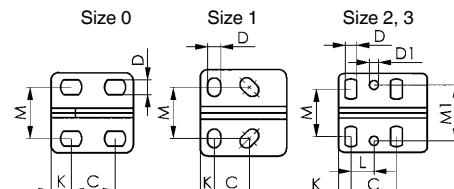
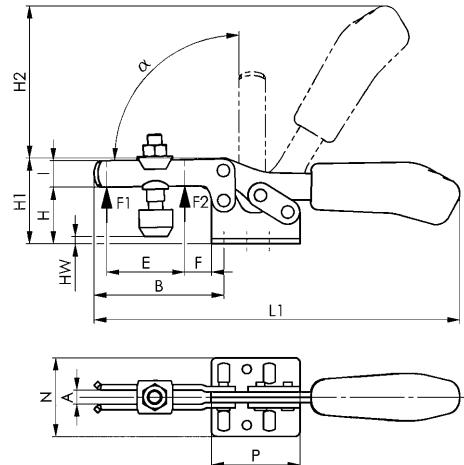
Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
90423	0	0,3	0,4	M4x34,5	35
90480	1	0,8	1,1	M5x38	105
90506	2	1,0	1,2	M6x46	185
90522	3	1,8	2,5	M8x63	320

Note:

These clamps are suitable for photogrammetric use. The matte-black surface of the clamps prevents reflection while photographing.

For suitable clamping arm extension see no. 6896.

For suitable sensor monitor for size 3 see no. 6897S.



Recommendations



No. 6890B,
page 149



No. 6832B,
page 111



No. 6841B,
page 114

Dimensions:

Order no.	Size	A	B	C	D	D1	E	F	H	H1	H2	HW min.	HW max.	I	K	L	L1	M	M1	N	P	α
90423	0	4	28	11,5-15,5	4,6	-	9,0	5,5	14,5	23,0	34,0	-7,4	2,7	7,5	6,25	-	79	16,0	-	25,0	25,5	90°
90480	1	5	42	13,0-14,5	5,2	-	18,8	8,0	19,0	30,0	49,0	-3,6	1,8	10,0	5,50	-	120	18,0-21,5	-	34,0	34,0	90°
90506	2	6	64	26,0	5,6	5,6	32,0	16,0	24,0	45,0	66,3	-2,6	5,0	13,2	6,00	12,7	162	19,5-29,5	28,5	42,0	38,0	90°
90522	3	8	73	25,7	6,5	5,1	37,0	14,0	32,0	48,5	86,0	-7,4	5,0	15,0	7,00	-	206	22,0-31,8	31,6	45,5	50,0	90°

CAD



Subject to technical alterations.

No. 6832B

Horizontal toggle clamp, black

With open clamping arm and vertical base.

Matte black surface. Rivets made of stainless steel, which, for sizes 2 and 3, run in hardened bushings. Bearings are pre-lubricated.

Ergonomic, oil-resistant black handle with large grip surface and soft components. Lock washer for the thrust bolt at the end of the clamping arm.

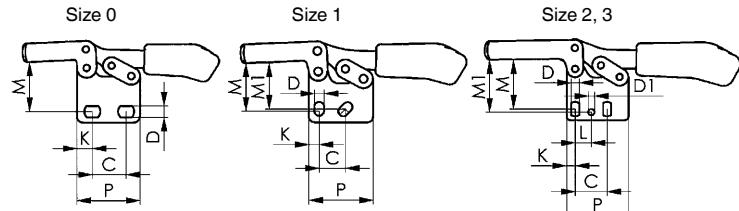
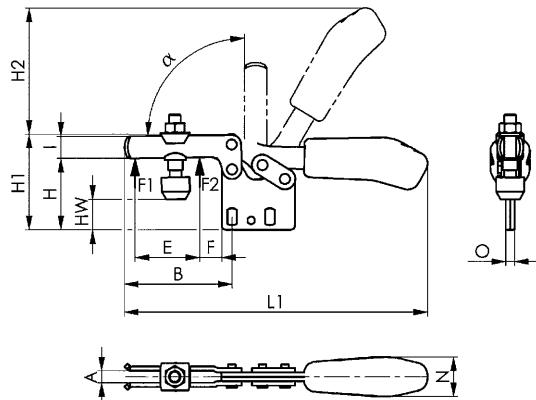
Complete with tempered, matte-black clamping screw no. 6890B.

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
90290	0	0,3	0,4	M4x34,5	35
90308	1	0,8	1,1	M5x38	105
482471	1	0,8	1,1	-	95
90530	2	1,0	1,2	M6x46	185
456400	2	1,0	1,2	-	170
90381	3	1,8	2,5	M8x63	320
482497	3	1,8	2,5	-	280

Note:

These clamps are suitable for photogrammetric use. The matte-black surface of the clamps prevents reflection while photographing.

For suitable clamping arm extension see no. 6896.



Recommendations



No. 6890B,
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No. 6830B,
page 110



No. 6800B,
page 108

Dimensions:

Order no.	Size	A	B	C	D	D1	E	F	H	H1	H2	HW min.	HW max.	I	K	L	L1	M	M1	N	O	P	α
90290	0	4	28,0	11,5-15,5	4,6	-	9,0	5,5	24,5	33	34	2,2	13,7	7,5	6,25	-	79,0	20,0	-	12	3	25,5	90°
90308	1	5	41,7	13,0-15,5	5,2	-	18,5	8,0	31,5	43	49	8,9	14,8	10,0	5,50	-	119,7	23,5-25,5	24,5	18	5	34,0	90°
482471	1	5	41,7	13,0-15,5	5,5	-	18,5	8,0	31,5	43	49	-	-	10,0	5,50	-	119,7	23,5-25,5	24,5	18	5	34,0	90°
90530	2	6	64,0	26,0	5,6	5,6	32,0	16,0	40,0	61	68	14,0	22,0	13,2	6,00	12,7	164,0	29,5-34,0	34,0	21	5	38,0	90°
456400	2	6	64,0	26,0	5,6	5,6	32,0	16,0	40,0	61	68	-	-	13,2	6,00	12,7	164,0	29,5-34,0	34,0	21	5	38,0	90°
90381	3	8	73,0	25,7	6,5	5,1	39,0	12,0	49,0	65	86	9,5	22,0	15,0	7,00	13,0	206,0	37,5-42,5	42,0	27	6	50,0	90°
482497	3	8	73,0	25,7	6,5	5,1	39,0	12,0	49,0	65	86	-	-	15,0	7,00	13,0	206,0	37,5-42,5	42,0	27	6	50,0	90°

CAD



Subject to technical alterations.

No. 6835B-2

Horizontal toggle clamp, black

With open clamping arm and vertical, open base.

Matte black surface. Stainless steel rivets, which run in hardened bushes. Bearings are pre-lubricated.

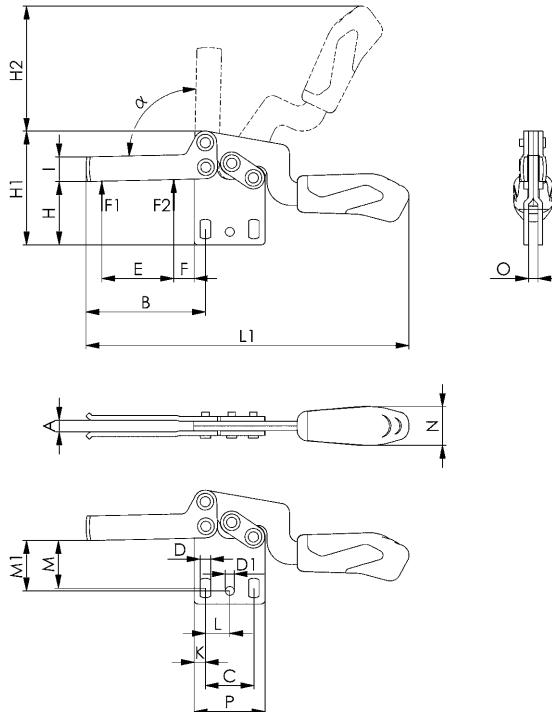
Ergonomic, oil-resistant black handle with large grip surface and soft components. Lock washer for the thrust bolt at the end of the clamping arm.

Order no.	Size	F1 [kN]	F2 [kN]	Weight [g]
90670	2	1,0	1,2	190

Note:

These clamps are suitable for photogrammetric use. The matte-black surface of the clamps prevents reflection while photographing.

For suitable clamping arm extension see no. 6896.



Recommendations



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Dimensions:

Order no.	Size	A	B	C	D	D1	E	F	H	H1	H2	I	K	L	L1	M	M1	N	O	P	a
90670	2	6,2	64	26,0	5,6	4,8	38,6	11,0	34	61	67	13,2	6	13,1	173,5	23,0-28,0	27	21	5	38	90°

CAD



Subject to technical alterations.

No. 6835B-3

Horizontal toggle clamp, black

With open clamping arm and vertical, open base.

Matte black surface. Stainless steel rivets, which run in hardened bushes. Bearings are pre-lubricated.

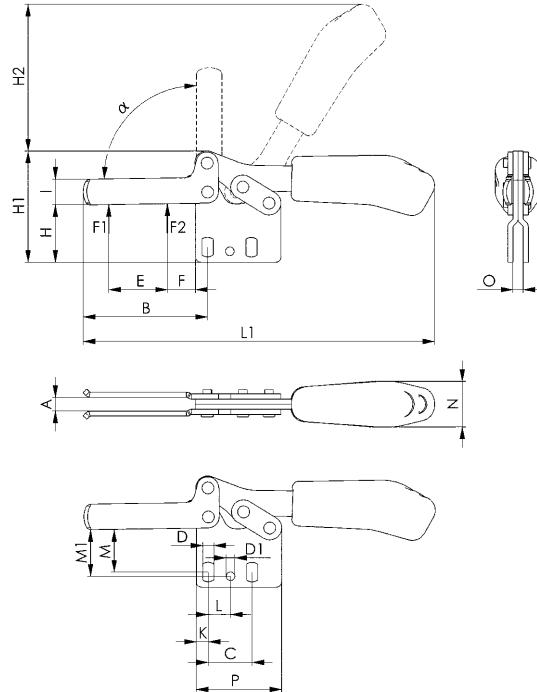
Ergonomic, oil-resistant black handle with large grip surface and soft components. Lock washer for the thrust bolt at the end of the clamping arm.

Order no.	Size	F1 [kN]	F2 [kN]	Weight [g]
90696	3	1,8	2,5	320

Note:

These clamps are suitable for photogrammetric use. The matte-black surface of the clamps prevents reflection while photographing.

For suitable clamping arm extension see no. 6896.



Recommendations



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page 149

Dimensions:

Order no.	Size	A	B	C	D	D1	E	F	H	H1	H2	I	K	L	L1	M	M1	N	O	P	a
90696	3	8,0	73	25,7	6,5	5,1	34,5	16,5	34	65	86	15,0	7	13,0	206,0	22,5-27,5	27	27	6	50	90°

CAD



Subject to technical alterations.

No. 6841B

Push-pull type toggle clamp, black

With small angle base. Push- and pull-clamping.

(Equal operation of rod and lever). Long rod-guide with attaching thread and nut. Matte black surface. Stainless steel rivets. Lever-parts and rod of tempered steel. Bearings are pre-lubricated. Ergonomic, oil-resistant black handle with large grip surface and soft components. Lever can be set to any angle relative to base.

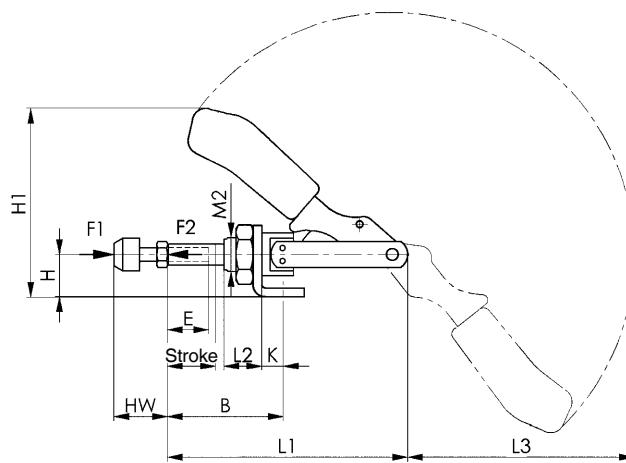
Complete with tempered, matte-black clamping screw no. 6880B.



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
90548	1	1,0	1,0	M4x20	125
91280	2	2,0	2,0	M6x25	245

Note:

These clamps are suitable for photogrammetric use. The matte-black surface of the clamps prevents reflection while photographing.



Recommendations



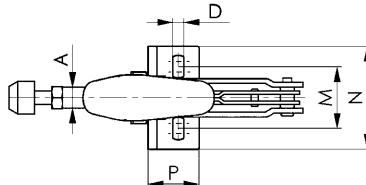
No. 6880B,
page 150



No. 6800B,
page 108



No. 6830B,
page 110



Dimensions:

Order no.	Size	A	B min.	B max.	D	E	H	H1	Stroke	HW min.	HW max.	K	L1	L2	L3	M	M2	N	P
90548	1	8,0	24,5	44,5	4,5	20	15	60	20	12	20	7,0	91	16	72	16,0-19,5	M12x1,5	30	20
91280	2	10,0	32,5	57,5	5,6	25	20	95	26	17	25	12,5	114	19	105	31,8-36,0	M16x1,5	50	34

No. 6845B

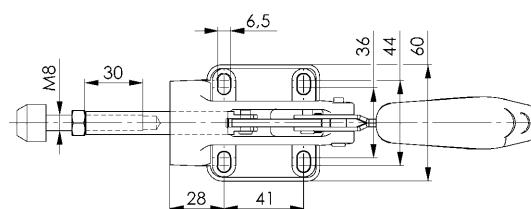
Push-pull type toggle clamp, black

Push clamp.

(Opposed operation of rod and lever). Version with long rod guide. Basic body of malleable cast iron, matt black surface. Lever parts and rod of tempered steel, matte-black galvanised. Stainless steel rivets, which run in hardened bushes. Bearings are pre-lubricated. Ergonomic, oil-resistant handle with large grip surface and soft components.

Complete with tempered, matte-black clamping screw no. 6880B-3.

Order no.	Size	F1 [kN]	Clamping screw	Weight [g]
99663	3	4	M8 x 44	540



Subject to technical alterations.

No. 6800BS

Vertical toggle clamp with safety latch, black

For open and clamped positions. With open clamping arm and horizontal base.

Matte black surface. Stainless steel rivets, which run in hardened bushes. Bearings are pre-lubricated.

Ergonomic, oil-resistant black handle with large grip surface and soft components. Safety clamping piece with finger protection.

Lock washer for the thrust bolt at the end of the clamping arm.

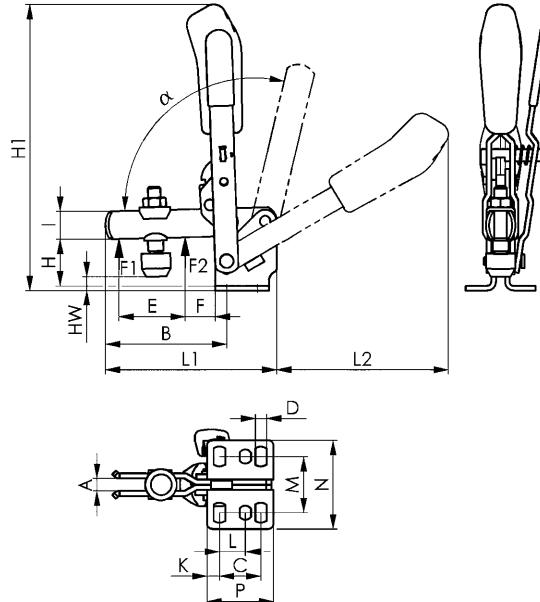
Complete with tempered, matte-black clamping screw no. 6890B.

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
91348	2	1,0	1,2	M6x46	260

Note:

These clamps are suitable for photogrammetric use. The matte-black surface of the clamps prevents reflection while photographing.

For suitable clamping arm extension see no. 6896.



Recommendations



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No. 6800B,
page 108



No. 6802B,
page 109

Dimensions:

Order no.	Size	A	B	C	D	E	F	H	H1	HW min.	HW max.	I	K	L	L1	L2	M	N	P	a	a*
91348	2	6	52	20	5,5	26	11	23	139	-4,4	4,4	12	6	12,5	78	88	23-31	43	32	105°	60°

* The opening angle can be changed by pressing in a stop pin.

CAD



Subject to technical alterations.

No. 6802BS

Vertical toggle clamp with safety latch, black

For open and clamped positions. With open clamping arm and vertical base.

Matte black surface. Stainless steel rivets, which run in hardened bushes. Bearings are pre-lubricated.

Ergonomic, oil-resistant black handle with large grip surface and soft components. Safety clamping piece with finger protection.

Lock washer for the thrust bolt at the end of the clamping arm.

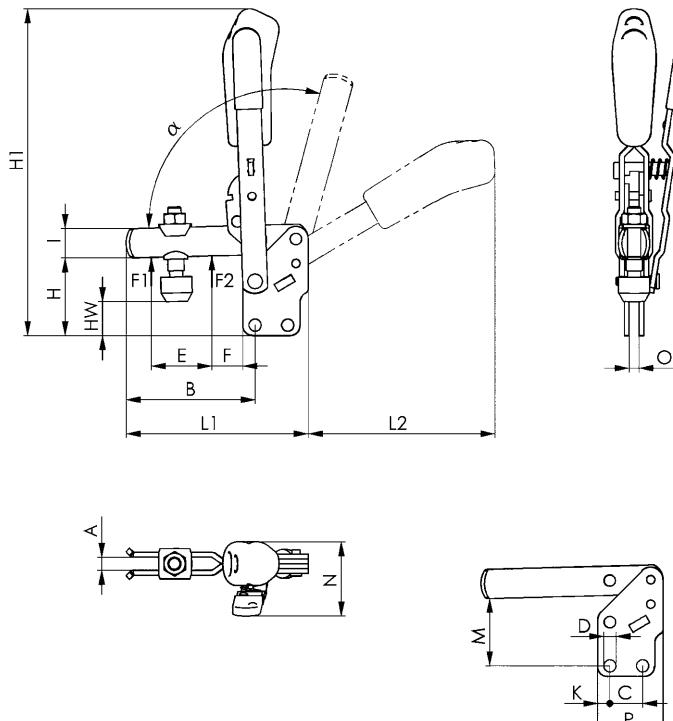
Complete with tempered, matte-black clamping screw no. 6890B.

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
99689	3	1,4	2,5	M8x63	470

Note:

These clamps are suitable for photogrammetric use. The matte-black surface of the clamps prevents reflection while photographing.

For suitable clamping arm extension see no. 6896.



Recommendations



No. 6890B,
page 149



No. 6802B,
page 109



No. 6800B,
page 108

Dimensions:

Order no.	Size	A	B	C	D	E	F	H	H1	HW min.	HW max.	I	K	L1	L2	M	N	O	P	α	α^*
99689	3	8	79	20	7,5	37	19	48	200	16,5	25	18	7,5	112	114	41	45,5	6	40	105°	60°



No. 6832BS

Horizontal toggle clamp with safety latch, black

For open and clamped positions. With open clamping arm and vertical base.

Matte black surface. Stainless steel rivets, which run in hardened bushes. Bearings are pre-lubricated.

Ergonomic, oil-resistant black handle with large grip surface and soft components. Lock washer for the thrust bolt at the end of the clamping arm.

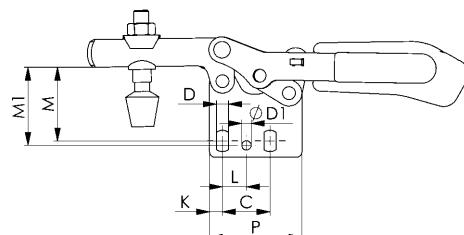
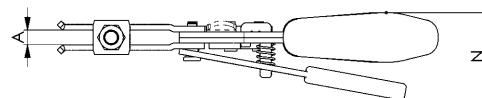
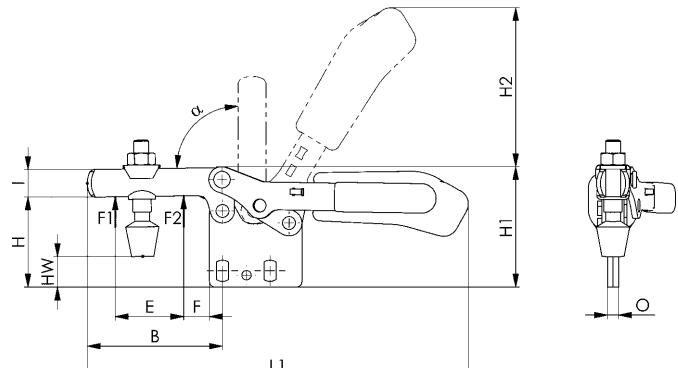
Complete with tempered, matte-black clamping screw no. 6890B.

Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight [g]
99648	3	1,8	2,5	M8x63	390

Note:

These clamps are suitable for photogrammetric use. The matte-black surface of the clamps prevents reflection while photographing.

For suitable clamping arm extension see no. 6896.



Recommendations



No. 6896,
page 153



No. 6890B,
page 149



No. 6835BS-2,
page 118

Dimensions:

Order no.	Size	A	B	C	D	D1	E	F	H	H1	H2	HW min.	HW max.	I	K	L	L1	M	M1	N	O	P	α
99648	3	8	73	25,7	6,5	5,1	37	14	49	65	86	9	22	15	7	13	206	38-42	42	47	6	50	90°

CAD



Subject to technical alterations.

No. 6835BS-2

Horizontal toggle clamp with safety latch, black

For open and clamped positions. With open clamping arm and vertical, open base.

Matte black surface. Stainless steel rivets, which run in hardened bushes. Bearings are pre-lubricated.

Ergonomic, oil-resistant black handle with large grip surface and soft components. Lock washer for the thrust bolt at the end of the clamping arm.

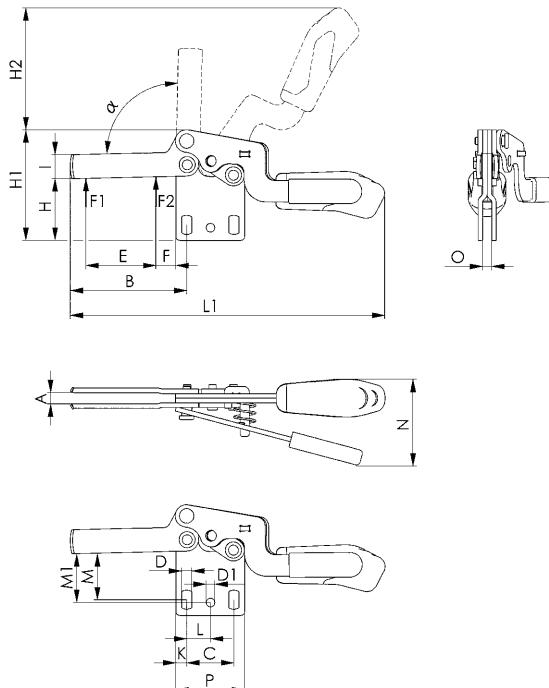


Order no.	Size	F1 [kN]	F2 [kN]	Weight [g]
90712	2	1,0	1,2	230

Note:

These clamps are suitable for photogrammetric use. The matte-black surface of the clamps prevents reflection while photographing.

For suitable clamping arm extension see no. 6896.



Recommendations



No. 6896,
page 153



No. 6890B,
page 149



No. 6832BS,
page 117

Dimensions:

Order no.	Size	A	B	C	D	D1	E	F	H	H1	H2	I	K	L	L1	M	M1	N	O	P	α
90712	2	6,2	64	26,0	5,6	4,8	38,6	11,0	34	61	67	13,2	6	13,1	173,5	23,0-28,0	27	48,0	5	38	90°

CAD



Subject to technical alterations.

No. 6835BS-3

Horizontal toggle clamp with safety latch, black

For open and clamped positions. With open clamping arm and vertical, open base.

Matte black surface. Stainless steel rivets, which run in hardened bushes. Bearings are pre-lubricated.

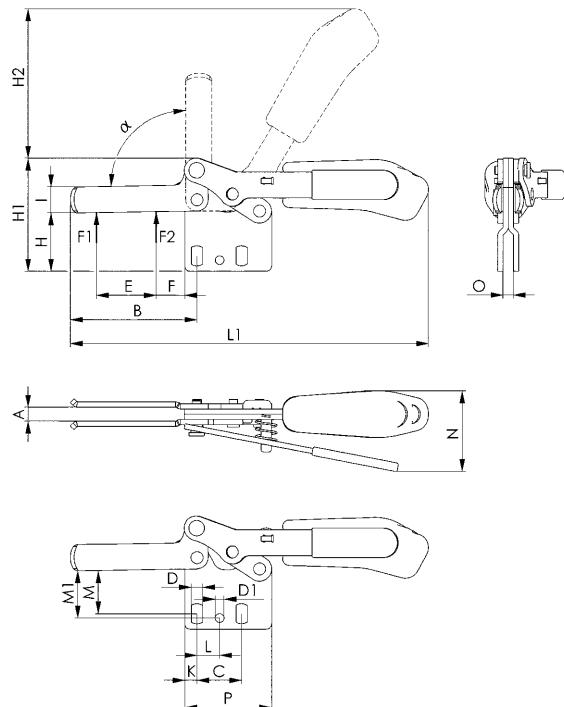
Ergonomic, oil-resistant black handle with large grip surface and soft components. Lock washer for the thrust bolt at the end of the clamping arm.

Order no.	Size	F1 [kN]	F2 [kN]	Weight [g]
90662	3	1,8	2,5	350

Note:

These clamps are suitable for photogrammetric use. The matte-black surface of the clamps prevents reflection while photographing.

For suitable clamping arm extension see no. 6896.



Recommendations



No. 6896,
page 153



No. 6890B,
page 149

Dimensions:

Order no.	Size	A	B	C	D	D1	E	F	H	H1	H2	I	K	L	L1	M	M1	N	O	P	α
90662	3	8,0	73	25,7	6,5	5,1	34,5	16,5	34	65	86	15,0	7	13,0	206,0	22,5-27,5	27	46,5	6	50	90°

CAD



Subject to technical alterations.

> AMF PNEUMATIC TOGGLE CLAMPS

have definite advantages over the manual toggle clamps:

- > relieve operator of strenuous clamping movement
- > a number of clamps can be used simultaneously
- > a number of clamps can be operated with different sequences
- > one or more clamps can be controlled from the machine panel
- > one or more clamps can be operated from different positions.

> ADVANTAGES OF THE TOGGLE ACTION...

- > in the event of air failure, clamp stays locked
- > low air consumption with maximum leverage
- > large opening angle, clearing the component for easy removal
- > assures maximum power-to movement ratio.

> SELECTION GUIDE

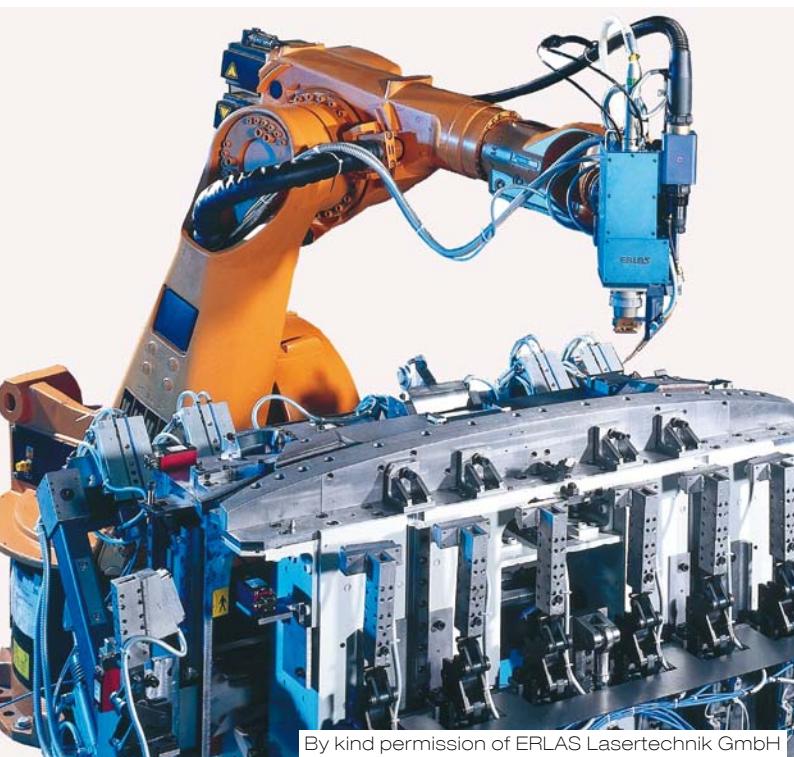
The pneumatic toggle clamp no. 6820 correspond in design and dimensions to the mechanical toggle clamp no. 6800. Therefore hand operated clamps can be replaced with pneumatic toggle clamps - if required.

Heavy duty pneumatic toggle clamps no. 6825A/CE and no. 6826A are recommended to be incorporated in special and transfer machines. Tempered and ground bolts guarantee long life. The push type pneumatic toggle clamp no. 6850A corresponds in design and dimensions to the mechanical toggle clamp no. 6842 when pushed/closed, maximum forces of 2.5 - 10 kN can be reached.

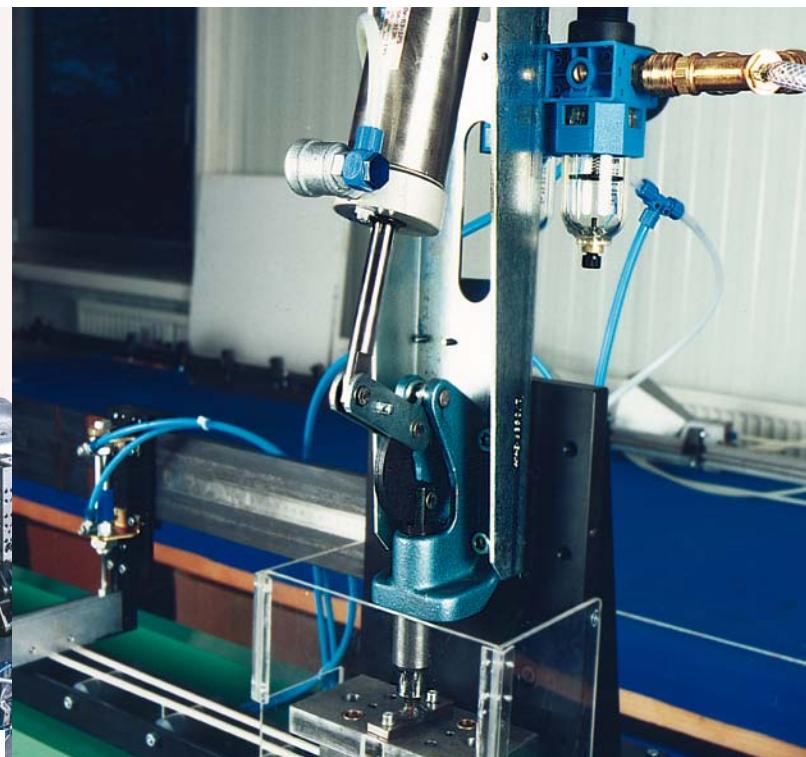
> CLAMPING AND HOLDING FORCES

As already explained for the hand operated toggle clamps, the selection of the correct clamp is of utmost importance. To select the correct size of pneumatic clamp, apart from the holding force, the possible clamping force at 6 bar air pressure (other pressure media may also be used at pressures up to max. 10 bar) is indicated in the tables

- > F3 is the possible clamping force at the end of the arm.
- > F4 is the force applied at the fulcrum.
- > F5 is the piston force 6 bar air pressure.



By kind permission of ERLAS Lasertechnik GmbH



Subject to technical alterations.

No. 6850A

Push type pneumatic toggle clamp

Push-type clamp.

Heavy version for long working life. Pneumatic cylinder with magnetic piston for end-position monitoring. Console galvanized and passivated, clamp body made of malleable iron casting, painted. Lever parts and push rod made of tempered steel, galvanized and passivated. Stainless steel rivets. Bearing positions are greased.

Complete with tempered, galvanised clamping screw no. 6880.

NEW!



Order no.	Size	F1 [kN]	F3 [kN]	F5 [kN]	Vn [dm³]	Clamping screw	Weight [g]
560007	3	4	2,5	0,75	0,8	M8 x 35	2610
560008	5	10	5,0	1,00	2,2	M12 x 50	5265
560009	7	25	10,0	1,80	4,5	M12 x 50	6120

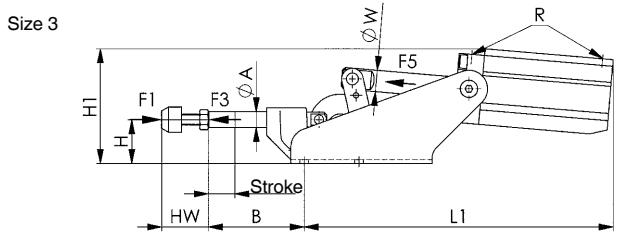
Note:

Sizes 5 and 7 are not to design, and have long consoles.

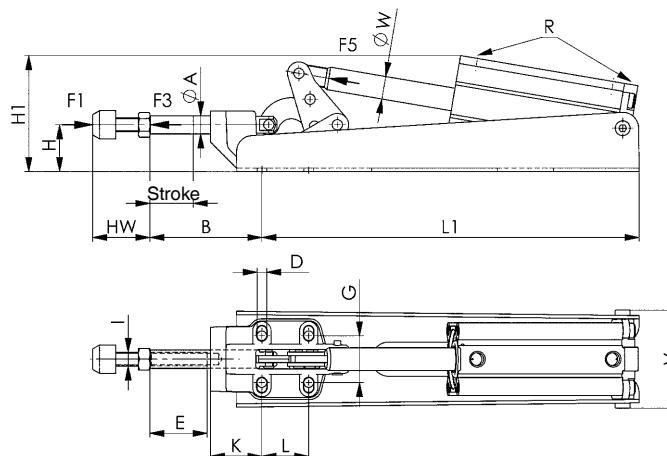
Suitable proximity switches for end-position monitoring are available using order no. 392241.

0.3 m PUR cable with M8 connector and rotatable knurled nuts.

Switching function: NOC. Output: PNP.



Size 5, 7



Dimensions:

Order no.	Size	dia. A	B	D	E	G	H	H1	Stroke	HW min.	HW max.	I	K	L	L1	R	V	dia. W	Piston dia.
560007	3	12	72	6,5	30	41	33	86	20	21,5	35	M8	28	41	232	G1/8	83	16	40
560008	5	16	98	8,5	50	41	41	102	29	30,0	50	M12	45	41	316	G1/4	86	20	50
560009	7	22	105	11,0	50	57	59	131	38	30,0	50	M12	45	70	422	G1/4	114	20	63

Subject to technical alterations.

No. 6860P
Combi-clamp, pneumatic

Galvanized and passivated. Stainless steel rivets which run in case-hardened bearing bushes. Bearing points greased. Equipped with pneumatic cylinder, double-acting, red anodised.

With magnetic piston for limit position query.



CAD

Order no.	Size	F1 [kN]	F2 [kN]	F3 [kN]	F4 [kN]	F5 [kN]	Vn [dm³]	Weight [g]
90787	1	1,0	1,0	0,3	0,12	0,26	0,26	770
91488	2	2,0	2,0	0,5	0,25	0,35	0,35	1450
92163	3	3,0	3,0	0,7	0,35	0,80	0,80	3050

F3 or. F4 = max. achievable clamping force at 6 bar.

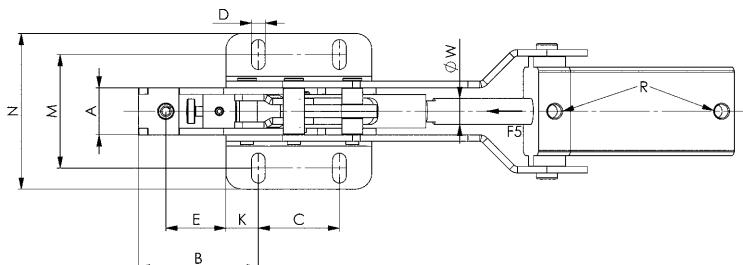
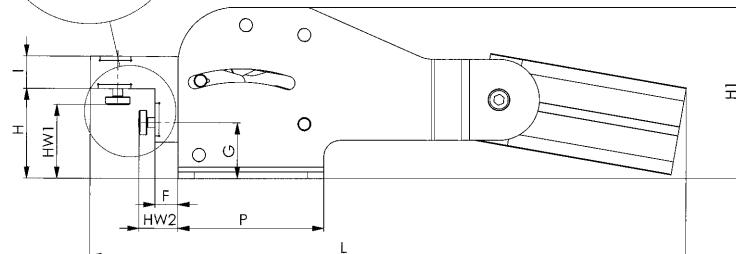
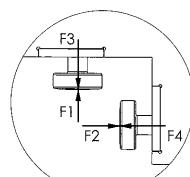
Vn = air consumption per double stroke in dm³ at 6 bar.

Note:

Suitable proximity switches for end-position monitoring are available using order no. 392241.

0.3 m PUR cable with M8 connector and rotatable knurled nuts.

Switching function: NOC. Output: PNP.


Recommendations


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page 42

Dimensions:

Order no.	Size	A	B	C	D	E	F	G	H	H1	HW1 min.	HW1 max.	HW2 min.	HW2 max.	I	K
90787	1	17,0	33	40	5,5	15	0,5	22	36,0	68	25	32	5	10	12	7,5
91488	2	19,5	56	50	6,5	32	10,5	28	46,0	88	30	40	10	20	16	12,5
92163	3	29,0	74	50	8,5	37	14,0	34	55,5	106	40	50	20	30	20	20,0

Order no.	Size	L	M	N	P	R	dia. W	Piston dia.
90787	1	225	34,5-39,5	53	55	M5	10	25
91488	2	305	55	75	75	G1/8	12	32
92163	3	370	70	96	90	G1/8	16	40

Subject to technical alterations.

No. 6820P

Pneumatic toggle clamp

With horizontal cylinder attachment.

Plastic pneumatic cylinder, double-acting and ready to connect. Clamps galvanized and passivated, rivets made of stainless steel, which, for sizes 2 and 3, run in hardened bearing bushes. Bearing positions are greased.

Complete with tempered, galvanised clamping screw no. 6890. The console is self-supporting and must be clear of other surfaces.



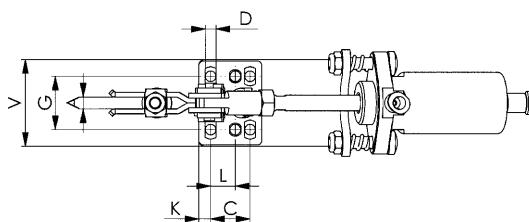
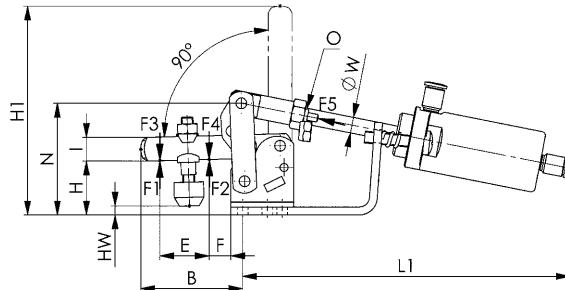
NEW!



Order no.	Size	F1 [kN]	F2 [kN]	F3 [kN]	F4 [kN]	F5 [N]	Vn [dm³]	Clamping screw	Weight [g]
559791	0	0,5	0,7	0,07	0,09	38	0,03	M4 x 25	125
559792	1	0,8	1,1	0,13	0,18	60	0,06	M5 x 30	400
559793	2	1,0	1,2	0,35	0,50	170	0,17	M6 x 35	600
559794	3	1,4	2,5	0,55	1,00	265	0,30	M8 x 45	800

F3 or. F4 = max. achievable clamping force at 6 bar.

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



Dimensions:

Order no.	Size	A	B	C	D	E	F	G	H	H1	HW min.	HW max.	I	K
559791	0	4	31	13,5	4,5	14	5,5	23	20	70	-1	6	8	5,0
559792	1	5	39	16,0	4,5	18	6,0	24	22	85	-2	5	10	6,0
559793	2	6	52	20,0	5,4	25	11,0	27	27	106	1	8	12	6,0
559794	3	8	78	20,0	7,1	37	19,0	32	38	152	7	16	18	7,5

Order no.	Size	L	L1	N	O	V	dia. W	Piston dia.	Outside-Ø for compressed air tubing
559791	0	-	132	41	M4	33	4	10	4
559792	1	-	145	45	M6	34	6	12	6
559793	2	12,5	163	56	M8	44	8	20	6
559794	3	-	205	76	M10 x 1,25	50	10	25	6

Subject to technical alterations.

No. 6820A

Pneumatic clamp

with horizontal cylinder attachment.

Fitted with pneumatic cylinder, double-acting. **With magnetic piston for end-position monitoring.** With throttle bores for reduced speed. Clamps are galvanised and passivated. Stainless steel rivets which, for sizes 2 to 4, run in hardened bearing bushes. Bearings positioned are lubricated.

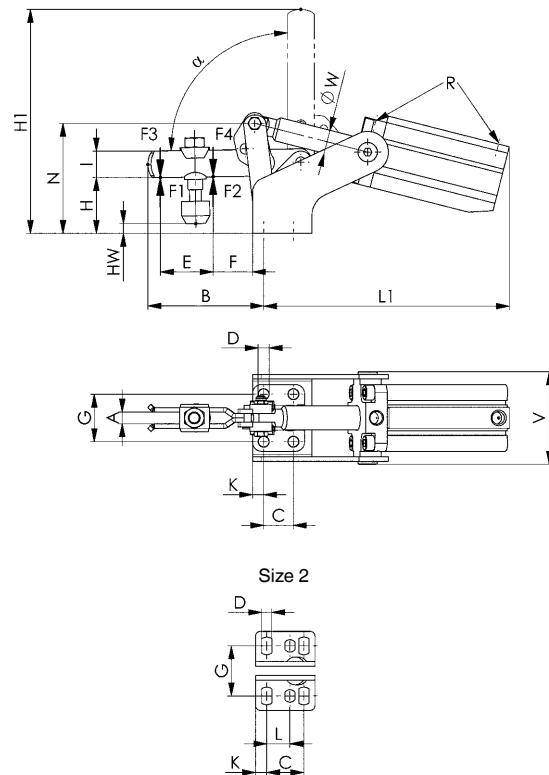
Complete with tempered, galvanised clamping screw no. 6890.



Order no.	Size	F1 [kN]	F2 [kN]	F3 [kN]	F4 [kN]	Vn [dm³]	Clamping screw	Weight [g]
555061	1	0,8	1,1	0,20	0,3	0,08	M5 x 30	320
555062	2	1,0	1,2	0,70	1,0	0,26	M6 x 35	600
555063	3	1,0	2,5	0,65	1,1	0,35	M8 x 45	1005
555064	4	2,0	3,0	1,50	2,2	0,80	M8 x 65	1520

Note:

Suitable proximity switches for end-position monitoring are available using order no. 392241. 0.3 m PUR cable with M8 connector and rotatable knurled nuts.
Switching function: NOC. Output: PNP.



Recommendations



No. 6895,
page 154



No. 6821A,
page 125

Dimensions:

Order no.	Size	A	B	C	D	E	F	G	H	H1	HW min.	HW max.	I	K	L	L1	N	R	V	dia. W	Piston dia.	Opening angle α
555061	1	5	39,0	16	4,5	18	6	24	21,0	84	-2,0	4,5	10	6,0	-	126,0	45,5	M5	50,0	8	16	92,0°
555062	2	6	51,5	20	5,5	25	11	27	26,0	104	-1,0	7,0	12	6,0	12,5	145,0	55,0	M5	54,5	12	25	91,5°
555063	3	8	78,0	20	7,5	36	19	32	36,5	151	5,4	14,0	18	7,5	-	165,5	74,5	G1/8	62,5	16	32	90,0°
555064	4	10	101,0	32	8,6	45	25	45	45,0	191	-3,0	25,5	20	13,0	-	196,0	90,0	G1/8	77,5	16	40	90,5°

Subject to technical alterations.

No. 6821A
Pneumatic clamp

with vertical cylinder structure.

Space-saving angled form. Vertical or horizontal mounting. Fitted with pneumatic cylinder, double-acting.

With magnetic piston for end-position monitoring.

With throttle bores for reduced speed. Clamps are galvanised and passivated. Stainless steel rivets, which run in hardened bearing bushes. Bearings positioned are lubricated.

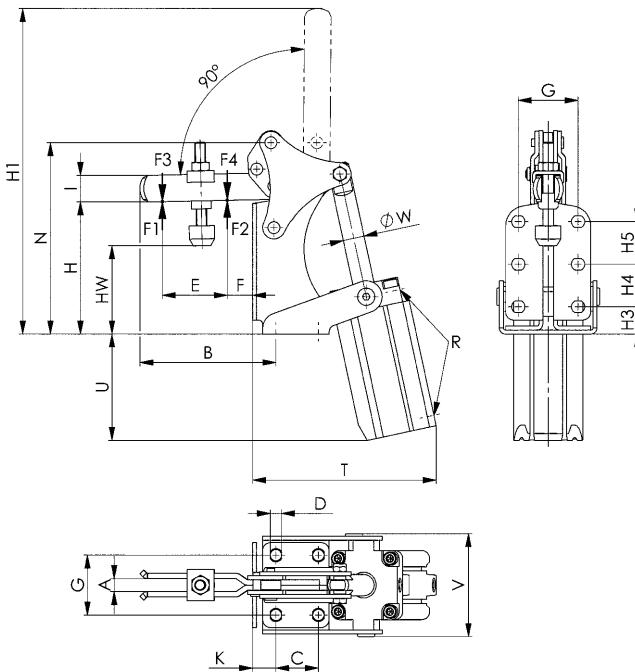
Complete with tempered, galvanised clamping screw no. 6890.


Order no.	Size	F1 [kN]	F2 [kN]	F3 [kN]	F4 [kN]	Vn [dm³]	Clamping screw	Weight [g]
555065	2	1	1,2	0,70	1,0	0,26	M6 x 35	625
555066	3	1	2,5	0,65	1,1	0,35	M8 x 45	1025
555067	4	2	3,0	1,50	2,2	0,80	M8 x 65	1700

Note:

Suitable proximity switches for end-position monitoring are available using order no. 392241. 0.3 m PUR cable with M8 connector and rotatable knurled nuts.

Switching function: NOC. Output: PNP.


Recommendations

 No. 6895,
page 154

 No. 6829V,
page 129

 No. 6826A,
page 128

Dimensions:

Order no.	Size	A	B	C	D	E	F	G	H	H1	H3	H4	H5	HW min.	HW max.	I	K	N	R	T	U	V	dia. W	Piston dia.
555065	2	6	56,5	12,5	5,6	25	6,5	27	65,0	143,5	15,8	12,5	12,5	38,4	45,0	12	15,3	94	M5	93,0	67,5	54,5	12	25
555066	3	8	80,5	16,0	6,5	36	12,5	25	68,7	184,0	17,5	16,0	-	38,0	46,5	18	16,5	107	G1/8	112,5	78,0	62,5	16	32
555067	4	10	102,0	32,0	8,5	49	19,0	45	100,0	245,0	20,5	32,0	32,0	51,0	80,0	20	17,5	144	G1/4	139,0	80,0	77,5	16	40

Subject to technical alterations.

No. 6825A

Heavy pneumatic toggle clamp

With horizontal cylinder attachment.
Tempered steel, burnished. The bearing bolts running in bearing bushes are tempered, ground and locked with circlips.
With magnetic piston for end-position monitoring.

Ready to connect, comprising:
- mechanical element
- double acting pneumatic cylinder



NEW!



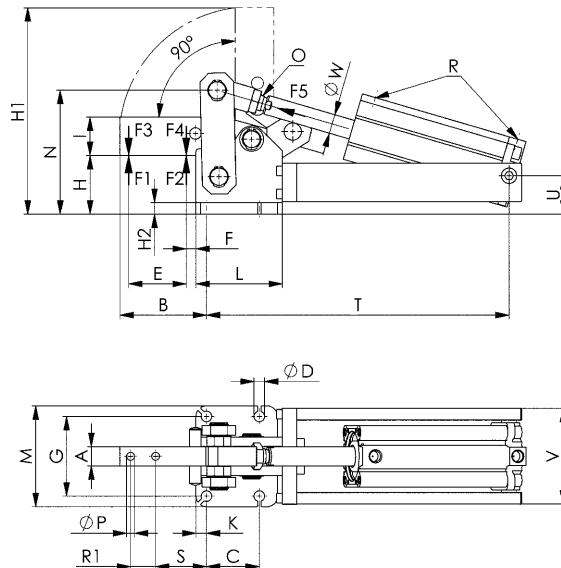
Order no.	Size	F1 [kN]	F2 [kN]	F3 [kN]	F4 [kN]	F5 [kN]	Vn [dm³]	Weight [g]
559769	4	6	9	1,5	2,2	0,75	1,0	4800
559770	6	12	18	2,5	3,5	1,00	1,8	6965
559771	8	20	30	4,0	6,0	1,80	4,3	12785

Application:

These pneumatic toggle clamps are of machine tool quality and can be installed in machines such as material handling lines and special machines. Opening and clamping position of the clamp can be controlled electrically and can be integrated into automated manufacturing.

Note:

This heavy pneumatic toggle clamp is also available in a hydraulic drive version (article no. 6960C). In case of interest, please ask for our catalogue „Hydraulic Clamping Systems“.
Suitable proximity switches for end-position monitoring are available using order no. 392241.
Design: PUR cable 0.3 m with M8 plug connection and rotating knurled nuts.
Switching function: NOC.
Output: PNP.



Dimensions:

Order no.	Size	A	B	C	dia. D	E	F	G	H	H1	H2	I	K	L
559769	4	15	82	52	11	54	10,0	70	57	197	12	30	10,0	82
559770	6	20	90	55	11	60	10,0	83	61	215	12	40	11,0	90
559771	8	30	128	80	13	95	9,5	111	86	306	12	60	12,5	120

Order no.	Size	M	N	O	dia. P	R	R1	S	T	U	V	dia. W	Piston dia.
559769	4	90	109	M12 x 1,25	6,2	G1/8	27	47,0	277	35,5	82	16	40
559770	6	105	129	M16 x 1,50	8,2	G1/4	26	53,0	315	40,0	100	20	50
559771	8	135	176	M16 x 1,50	13,0	G1/4	40	69,5	383	54,0	123	20	63

Subject to technical alterations.

No. 6825CE

Heavy pneumatic toggle clamp

with horizontal cylinder attachment.

With adjustable end position cushioning.

Magnetic piston for end-position monitoring. Tempered steel, blued. The axle bolts running in bronze bushes are tempered, ground and locked with circlips.

Clamp is ready for installation and consists of:

- toggle clamp element
- double acting FESTO pneumatic cylinder
- bearing block

These cylinders are made to DIN ISO 6432.



Order no.	Size	F1 [kN]	F2 [kN]	F3 [kN]	F4 [kN]	F5 [kN]	Vn [dm³]	Weight [g]
92106	0	0,6	1,0	0,2	0,4	0,10	0,10	260
92122	1	0,8	1,2	0,6	0,8	0,19	0,15	500

F3 or. F4 = max. achievable clamping force at 6 bar.

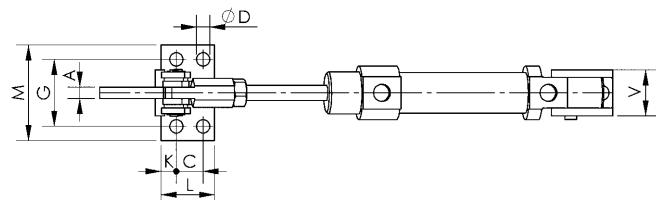
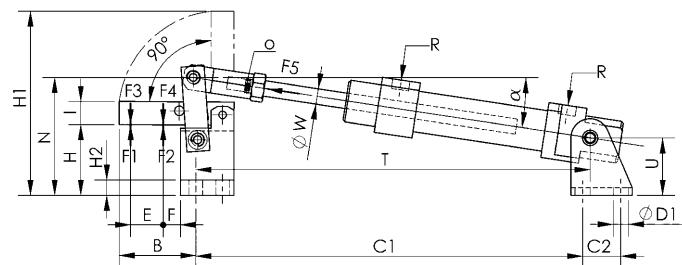
Vn = air consumption per double stroke in dm³ at 6 bar.

Application:

These pneumatic toggle clamps are of machine tool quality and can be installed in machines such as material handling lines and special machines. Opening and clamping position of the clamp can be controlled electrically and can be integrated into automated manufacturing.

Note:

Please enquire separately for suitable fastening kits and proximity switches for end position monitoring.



Recommendations



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page 126



No. 6828V,
page 136

Dimensions:

Order no.	Size	A	B	C	C1	C2	dia. D	dia. D1	E	F	G	H	H1	H2	I
92106	0	5	34	11	175	15	4,5	5,5	14	7	27	26	76	6	10
92122	1	6	41	14	200	20	7,0	6,5	17	9	35	37	96	8	12

Order no.	Size	K	L	M	N	O	R	T	U	V	dia. W	a	Piston dia.	Piston stroke
92106	0	5,5	22	35	47,5	M6	M5	177	27	18	6	6,6°	16	40
92122	1	8,0	28	50	62,0	M8	G1/8	204	30	24	8	9,0°	20	40

Piston dia. = Cylinder dia. required for piston force F5 at 6 bar air pressure.

Subject to technical alterations.

No. 6826A

Heavy pneumatic toggle clamp

with vertical cylinder attachment.

Tempered steel, burnished. The bearing bolts running in bearing bushes are tempered, ground and locked with circlips. With magnetic piston for end-position monitoring.

Ready to connect, comprising:
 - mechanical element
 - double acting pneumatic cylinder



Order no.	Size	F1 [kN]	F2 [kN]	F3 [kN]	F4 [kN]	F5 [kN]	Vn [dm³]	Weight [g]
559772	4	6	9	1,5	2,2	0,75	1,0	3850
559773	6	12	18	2,5	3,5	1,00	1,6	6950
559774	8	20	30	4,0	6,0	1,80	1,8	13160

Application:

These pneumatic toggle clamps are of machine tool quality and can be installed in machines such as material handling lines and special machines. Opening and clamping position of the clamp can be controlled electrically and can be integrated into automated manufacturing.

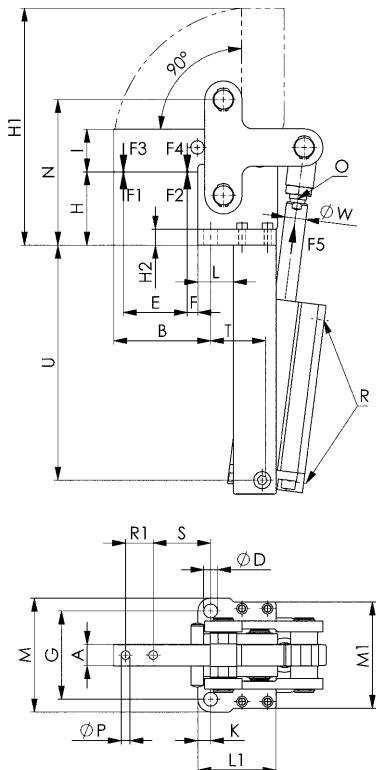
Note:

Suitable proximity switches for end-position monitoring are available using order no. 392241.

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

Switching function: NOC.

Output: PNP.



Dimensions:

Order no.	Size	A	B	dia. D	E	F	G	H	H1	H2	I	K	L	L1
559772	4	15	82	11	54	10,0	70	65	205	12	30	10	37,0	67,0
559773	6	20	91	13	60	10,0	83	69	223	15	40	12	33,5	73,5
559774	8	30	125	17	95	9,5	115	94	314	20	60	15	49,0	109,0

Order no.	Size	M	M1	N	O	dia. P	R	R1	S	T	U	dia. W	Piston dia.
559772	4	90	82	117	M12 x 1,25	6,2	G1/8	27	47	45,5	193	16	40
559773	6	107	100	137	M16 x 1,50	8,2	G1/4	26	54	48,5	221	20	50
559774	8	145	115	184	M16 x 1,50	13,0	G1/4	40	67	77,0	255	20	63

Subject to technical alterations.

No. 6829V

Link Clamp, pneumatic, flange-mounting version

dual acting.

Parts of mechanism are made of steel and blued. Piston rod non-rusting, polished. Body is made of aluminium, red anodised. HART-COAT® surface for wear-resistance.

Complete with clamping screw.



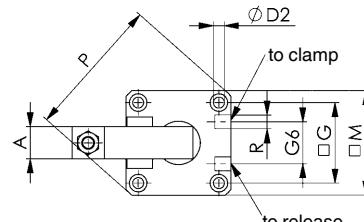
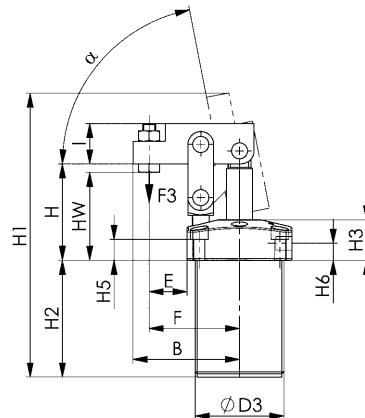
Order no.	Size	F3 [kN]	Clamping screw	Weight [g]
93609	25	0,23	M 6x25	580
93617	32	0,37	M 8x35	950
93625	40	0,56	M 8x35	1200
93633	50	0,76	M12x50	1900
93641	63	1,35	M12x50	2300

Attachment options:

- from above by cylinder screws through the flange
- screwed in using the threads and secured with lock nut
- both ends secured with lock nuts

Accessories (not supplied as standard):

- lock nut no. 6829N
- threaded flange bi. 6829GF
- clamping screw no. 6880



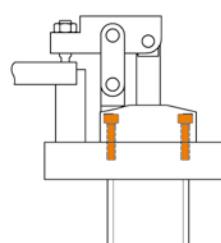
Recommendations

No. 6828M,
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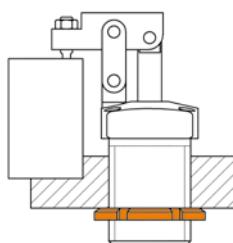
Dimensions:

Order no.	Size	A	B	dia. D2	dia. D3	E	F	G	G6	H	H1	H2	H3	H5	H6	HW	I	M	P	R	Piston dia.	a
93609	25	16	48,0	5,5	M40x1,5	16,0	41,0	37	23	51,0	144	62	25	15	12,0	37-47	17	50	66	M5	25	79°
93617	32	16	60,0	6,5	M50x1,5	22,0	52,0	45	23	57,0	170	73	25	13	10,5	50-56	20	60	80	G1/8	32	80°
93625	40	20	66,0	6,8	M55x1,5	23,5	56,0	50	26	60,0	178	73	25	13	10,5	50-54,5	25	65	87	G1/8	40	79°
93633	50	22	77,5	8,5	M65x1,5	26,0	63,5	58	32	65,0	200	79	25	11	10,5	47-57	30	75	100	G1/8	50	72°
93641	63	22	88,0	8,5	M80x1,5	29,5	74,0	70	35	71,5	211	80	25	11	9,0	54-64	30	89	118	G1/8	63	63°

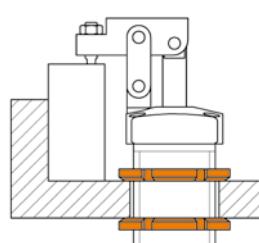
Examples of mountings



From above with 4 socket cap screws through the flange.



By screwing the body into a tapped hole and locking with a grooved nut.



By inserting the body into a plain hole and locking with two grooved nuts.

Subject to technical alterations.

No. 6828M

Pneumatic toggle clamp

double-acting.

Max. operating pressure 6 bar.

Mini design in block version for clamping and grasping uses.

High-strength aluminium, red anodised. **Magnetic piston for end-position monitoring.** Clamping arm made of steel, burnished, with three holes.



CAD

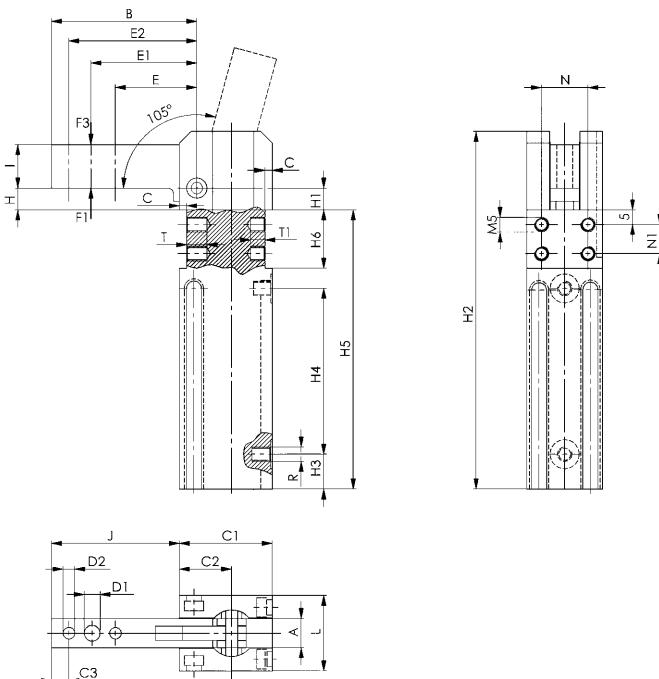
Order no.	Size	Clamping moment at 5 bar		Holding moment max. [Nm]	Weight [g]
		[Nm]			
91843	16	8		25	300
91868	20	15		54	550
91884	25	25		75	850

Note:

Suitable proximity switches for end-position monitoring are available using order no. 392241.

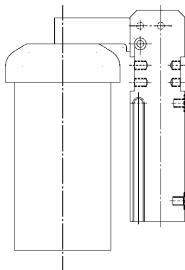
0.3 m PUR cable with M8 connector and rotatable knurled nuts.

Switching function: NOC. Output: PNP.



Application example:

Mini clamp, e.g. as „cover close device“. Defined, locked close position through toggle lever mechanism.



Recommendations



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page 136

Dimensions:

Order no.	Size	A	B	C	C1	C2	C3	D1	D2 H7	E	E1	E2	H	H1	H2
91843	16	10	50	2,5	32	18	6	5,5	4	28	36,0	44	7,5	7,5	123
91868	20	12	60	3,0	39	22	8	6,5	5	32	42,0	52	15,0	14,0	158
91884	25	16	75	4,0	45	25	10	8,5	6	40	52,5	65	19,0	17,0	182

Order no.	Size	H3	H4	H5	H6 +0.1	I	J	L	N ±0.1	N1 ±0.1	R	T	T1	Piston dia.
91843	16	12,0	57	96	20	15	44	26	16	10	M5	7	5	16
91868	20	15,0	69	120	25	18	53	30	20	15	G1/8	8	6	20
91884	25	17,5	80	136	28	22	68	35	25	18	G1/8	8	6	25

Subject to technical alterations.

No. 6828H

Pneumatic clamp with lever

double-acting and with additional lever for manual opening and/or closing.

Max. operating pressure 6 bar.

Mini design in block version for clamping and gripping technology. High-strength aluminium, red anodised. **Magnetic piston for end-position monitoring.** Clamp arm made from steel, bronzed, with three bores.



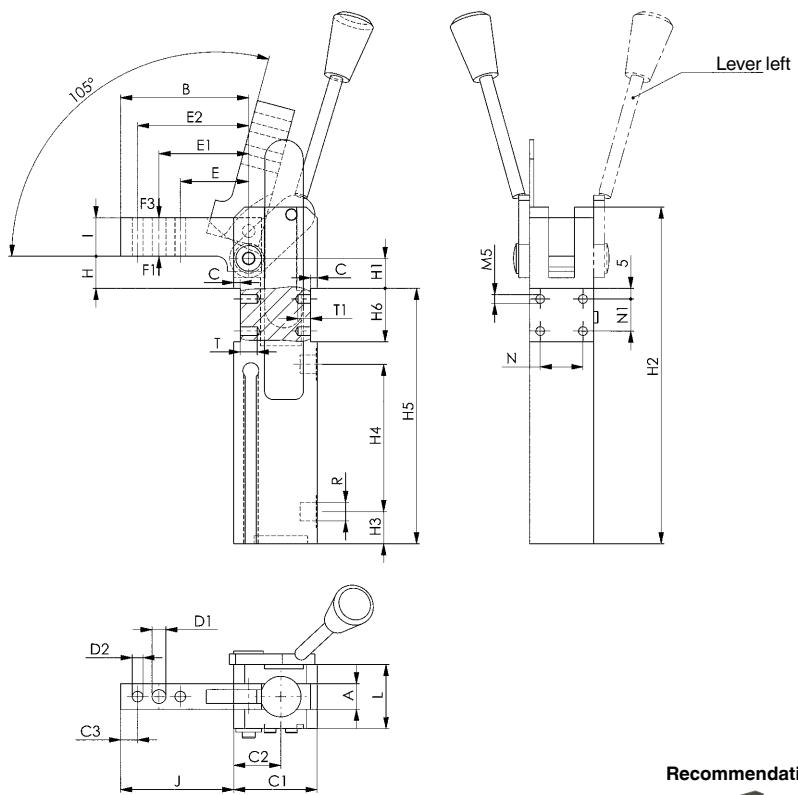
Order no.	Size	Clamping moment at 5 bar [Nm]		Lever left	Lever right	Holding moment max. [Nm]		Weight [g]
		[Nm]	[Nm]			[Nm]	[g]	
555083	16	8	-	●	-	25	320	
555170	16	8	●	-	-	25	320	
555084	20	15	-	●	-	54	700	
555171	20	15	●	-	-	54	700	
555085	25	25	-	●	-	75	920	
555172	25	25	●	-	-	75	920	

Note:

Suitable proximity switches for end-position monitoring are available using order no. 392241.

0.3 m PUR cable with M8 connector and rotatable knurled nuts.

Switching function: NOC. Output: PNP.



Recommendations



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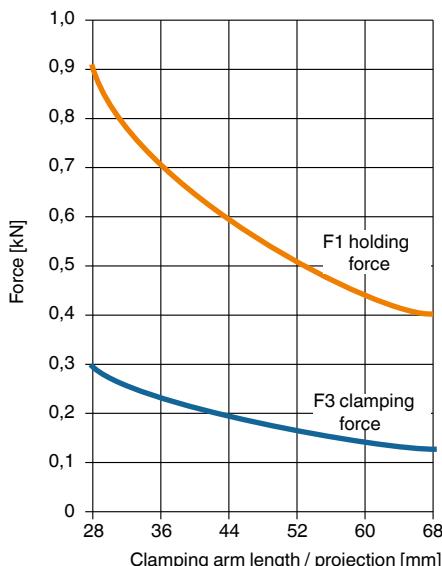
Dimensions:

Order no.	Size	A	B	C	C1	C2	C3	D1	D2 H7	E	E1	E2	H	H1	H2	H3	H4	H5	H6 +0.1	I	J	L	N ±0.1	N1 ±0.1	R	T	T1	Piston dia.
555083	16	10	50	2,5	32	18	6	5,5	4	28	36,0	44	7,5	7,5	123	12,0	57	96	20	15	44	26	10	10	M5	7	5	16
555170	16	10	50	2,5	32	18	6	5,5	4	28	36,0	44	7,5	7,5	123	12,0	57	96	20	15	44	26	10	10	M5	7	5	16
555084	20	12	60	3,0	39	22	8	6,5	5	32	42,0	52	15,0	14,0	158	15,0	69	120	25	18	53	30	15	15	G1/8	8	6	20
555171	20	12	60	3,0	39	22	8	6,5	5	32	42,0	52	15,0	14,0	158	15,0	69	120	25	18	53	30	15	15	G1/8	8	6	20
555085	25	16	75	4,0	45	25	10	8,5	6	40	52,5	65	19,0	17,0	182	17,5	80	136	28	22	68	35	18	18	G1/8	8	6	25
555172	25	16	75	4,0	45	25	10	8,5	6	40	52,5	65	19,0	17,0	182	17,5	80	136	28	22	68	35	18	18	G1/8	8	6	25

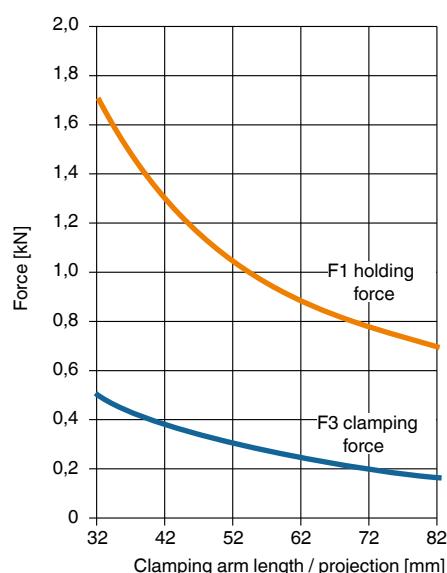
Subject to technical alterations.

Force diagrams No. 6828M and No. 6828H

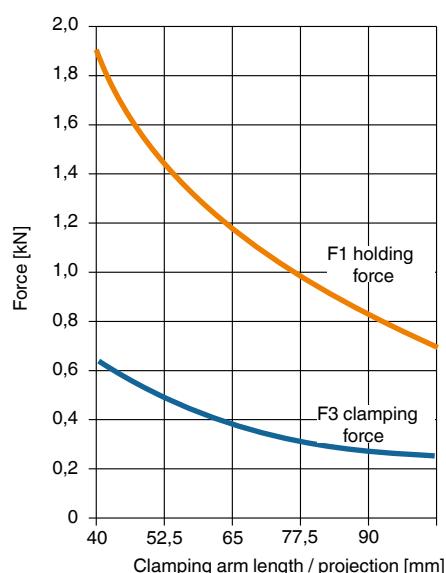
Size 16



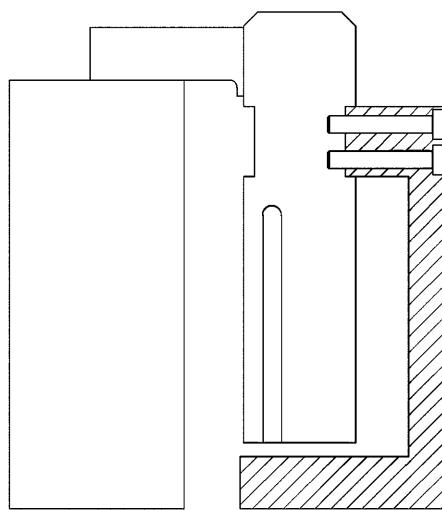
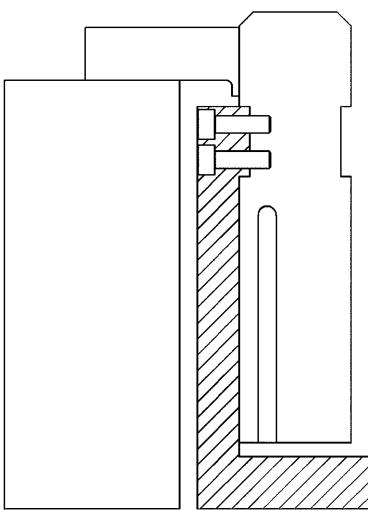
Size 20



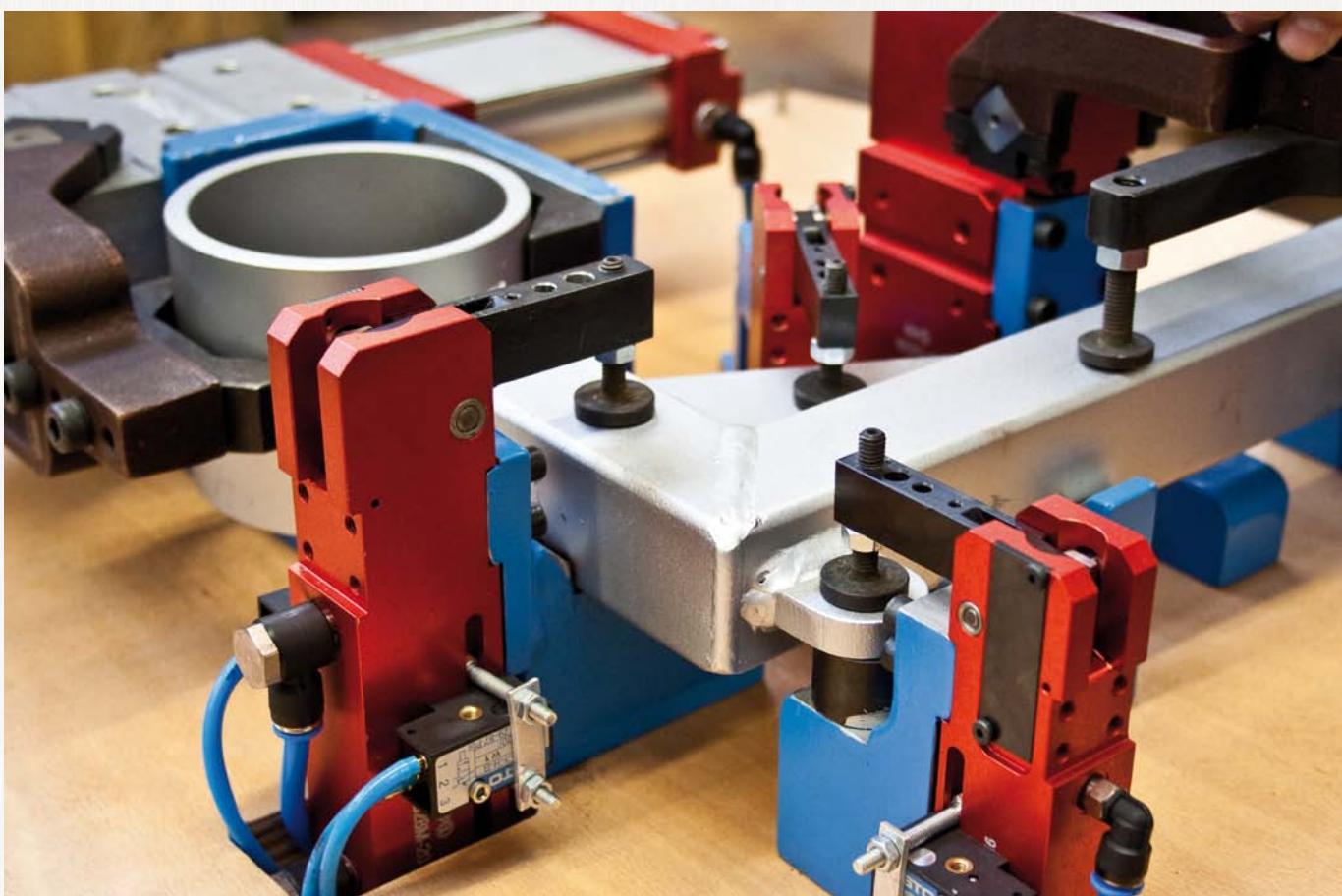
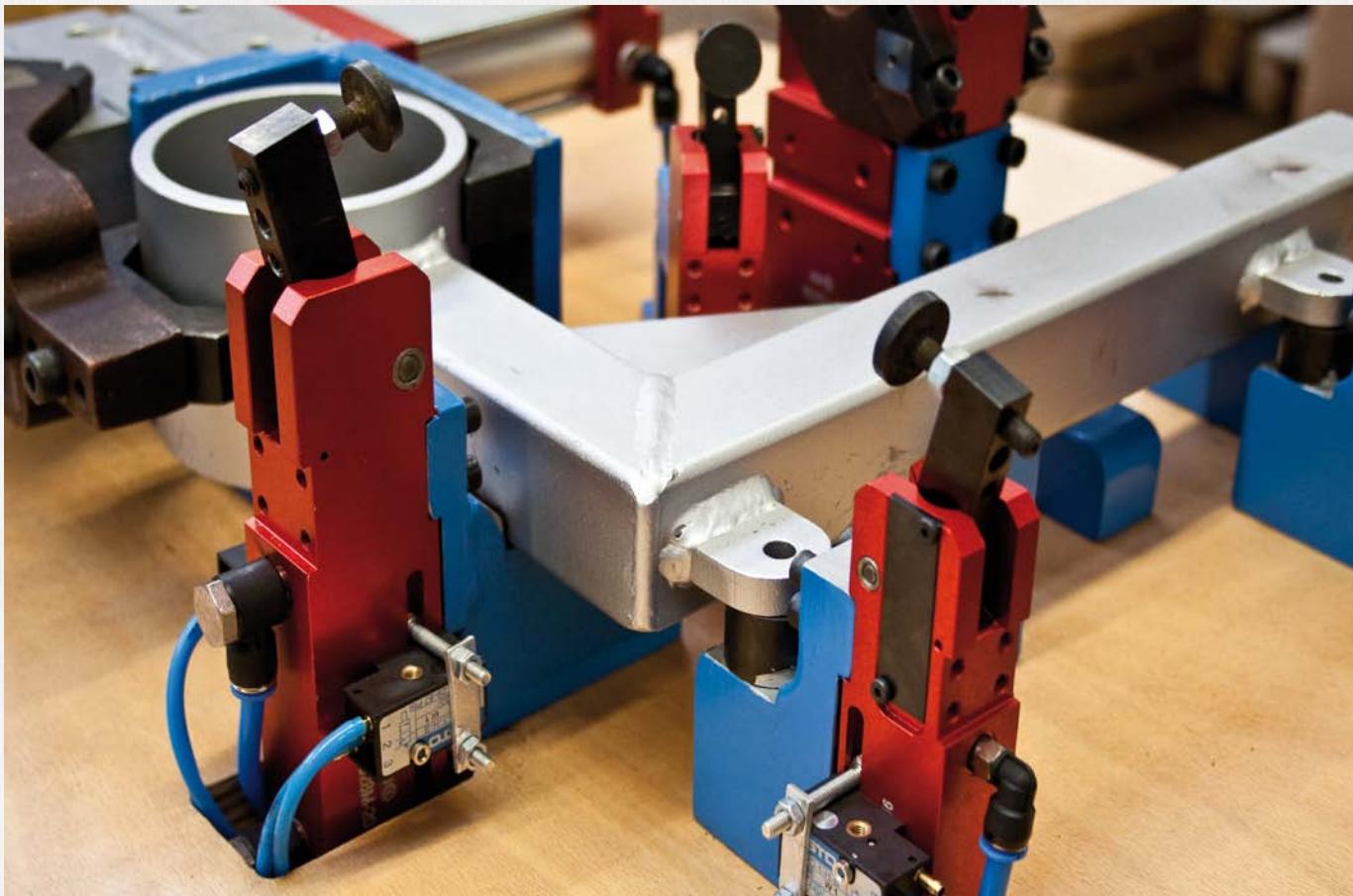
Size 25



Examples of mountings:



Subject to technical alterations.



Subject to technical alterations.

No. 6828V

Heavy pneumatic toggle clamp

dual acting.

Max. operating pressure 6 bar.

With continuously adjustable opening angle in the range 10° to 135°. Aluminium case. With pneumatic end position cushioning and self-locking. With inductive query 24V as standard.

Supplied without clamp arm.

Accessories (not included in the standard scope of delivery):

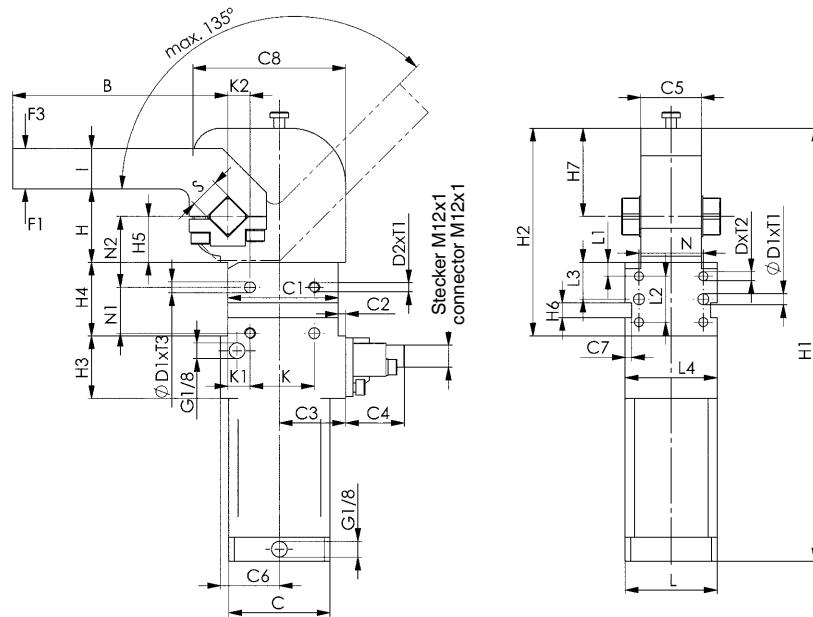
- Clamping arm no. 6828SP centre, right and left
- Connecting plug for inductive query



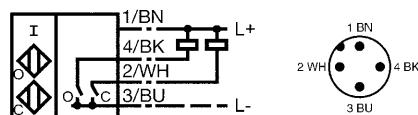
Order no.	Size	Clamping moment at 5 bar [Nm]	Holding moment max. [Nm]	Weight [Kg]
91835	40	120	380	1,4

Application:

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



Connection sketch:



O ... open

C ... close

Recommendations



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No. 6829V,
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Dimensions:

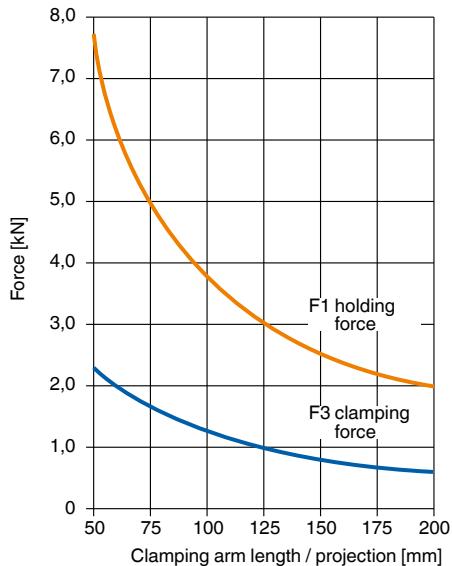
Order no.	Size	B	C	C1 *	C2	C3	C4	C5 -0.5	C6	C7	C8	D	dia. D1 H7	D2	H ±0.2	H1	H2	H3	H4 +0.1	H5
91835	40	117	55	60	4	36	34	33	32	3,5	83	M6	6	M6	40	235,5	113	34	40	25

Order no.	Size	H6 N9	H7	I ±0,1	K*	K1 ±0.05	K2 ±0.05	L	L1 ±0,1	L2*	L3 ±0.05	L4	N*	N1*	N2 ±0.05	S h9	T1	T2	T3	Piston dia.
91835	40	8	48	22	35	12	12	50	7,5	25	20	50	35	25	38,5	16	8	12	6	40

* Tolerance for peg holes ± 0.02 mm; for threaded holes ± 0.1 mm.

Subject to technical alterations.

Force diagram No. 6828V-40



No. 6828SP

Clamp arm

made of steel, for heavy pneumatic toggle clamp no. 6828V, size 40.



Order no.	Size	Article no.	A -0.1	A1 ±0.1	A2	A3	B	Weight [g]
92080	40	6828SPL-40	16	23	31	54	117	520
91900	40	6828SPM-40	16	23	31	54	117	520
92007	40	6828SPR-40	16	23	31	54	117	520

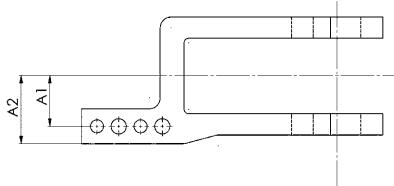
Recommendations



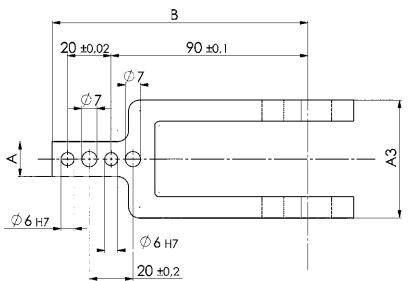
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Clamp arm variants:

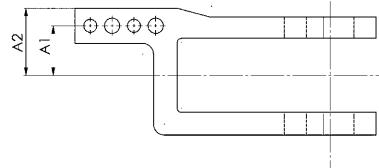
SPL (Clamp arm left)



SPM (Clamp arm in the middle)



SPR (Clamp arm right)



Subject to technical alterations.

No. 6828V

Heavy pneumatic toggle clamp

dual acting.

Max. operating pressure 6 bar.

With continuously adjustable opening angle in the range 5° to 135°. Aluminium case. With pneumatic end position cushioning and self-locking. With inductive query 24V as standard.

Clamp arm not included.

Accessories (not included in the standard scope of delivery):

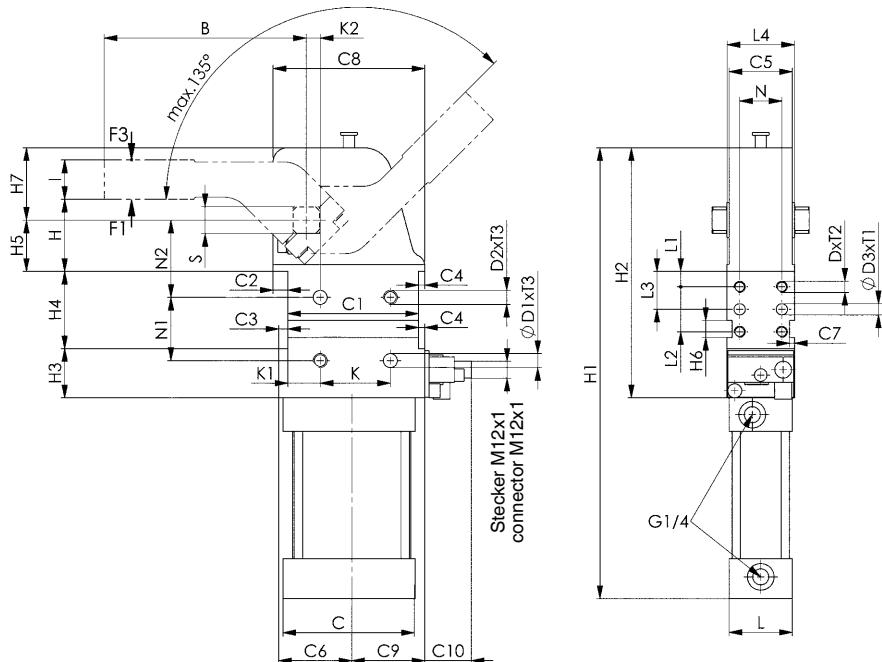
- Clamping arm no. 6828SP centre, right and left
- Connecting plug for inductive query



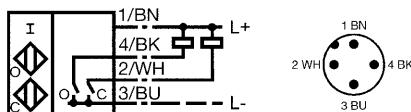
Order no.	Size	Clamping moment at 5 bar		Holding moment max. [Nm]	Weight [Kg]
		[Nm]			
91850	50	160		800	3,5
91876	63	380		1500	4,6
91892	80	800		2500	15,6

Application:

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



Connection sketch:



O ... open
C ... close

Recommendations



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No. 6828M,
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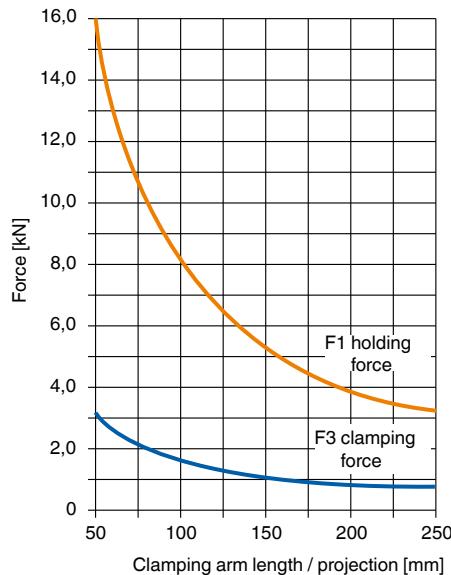
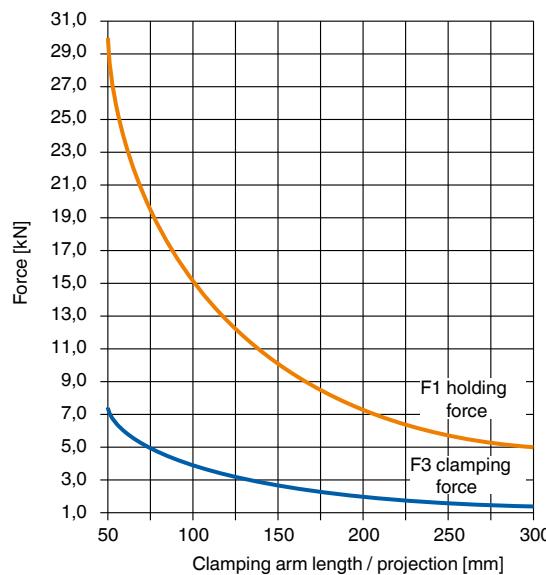
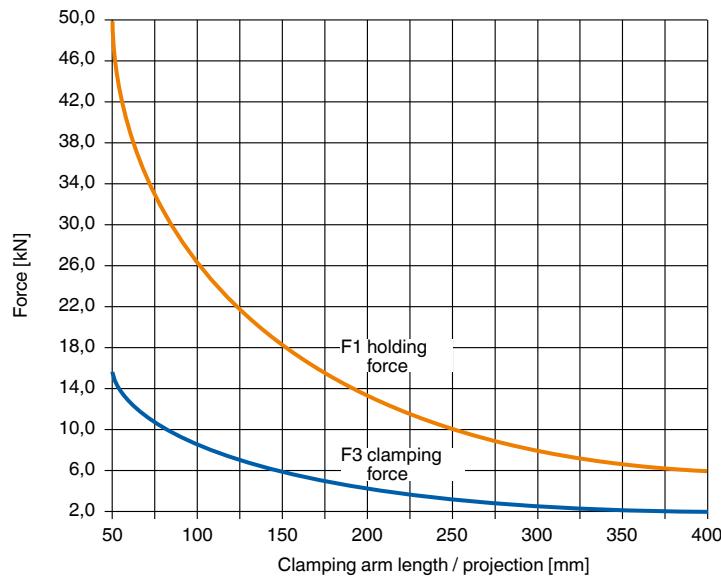
Dimensions:

Order no.	Size	B	C	C1 *	C2	C3	C4	C5	C6	C7	C8	C9	C10	D	D1 H7	D2	ØD3 H7	H ±0,2	H1	H2	H3	H4 +0,1	H5 ±0,05	H6	H7	I ±0,1
91850	50	144	94	93	10,5	6,5	4,5	45	52	3,5	108,0	52	33	M8	10	M10	8	51,5	321	178	35	55	36,5	12	51,5	28
91876	63	144	106	93	12,0	7,5	7,5	52	54	3,5	112,5	54	34	M8	10	M10	8	51,5	335	185	35	55	36,5	12	58,5	28
91892	80	179	140	134	20,0	8,0	8,0	74	81	3,5	162,0	72	33	M10	12	M12	8	70,0	488	270	55	80	50,0	12	88,0	35

Order no.	Size	K*	K1 ±0,1	K2 ±0,05	L	L1 ±0,1	L2 ±0,1	L3 ±0,05	L4	N*	N1*	N2 ±0,05	S	T1	T2	T3	Piston dia.
91850	50	50	23	10	45	11	32	27	48	30	45	55	19	12	12	12	50
91876	63	50	23	10	52	11	32	27	54	30	45	55	22	12	12	12	63
91892	80	70	36	15	62	15	50	40	76	50	75	65	30	12	15	13	80

* Tolerance for peg holes ±0,02 mm; for threaded holes ±0,1 mm.

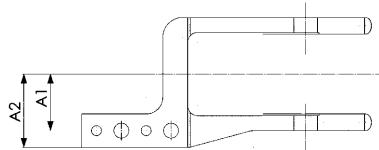
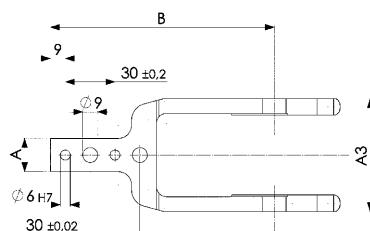
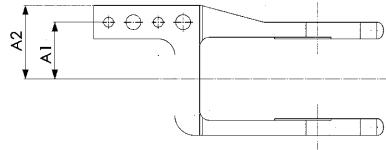
Subject to technical alterations.

Force diagrams No. 6828V-50

No. 6828V-63

No. 6828V-80

No. 6828SP
Clamp arm

made of steel, for heavy pneumatic toggle clamp no. 6828V,
size 50, 63, 80.

CAD


Order no.	Size	Article no.	A -0.1	A1 ±0.1	A2	A3	B	Weight [g]
92072	50	6828SPL-50	20	34,0	44	68	144	855
91959	50	6828SPM-50	20	34,0	44	68	144	855
92056	50	6828SPR-50	20	34,0	44	68	144	855
92130	63	6828SPL-63	20	37,0	47	78	144	1150
92098	63	6828SPM-63	20	37,0	47	78	144	1150
92114	63	6828SPR-63	20	37,0	47	78	144	1150
92395	80	6828SPL-80	25	50,5	63	108	179	1450
92353	80	6828SPM-80	25	50,5	63	108	179	1450
92379	80	6828SPR-80	25	50,5	63	108	179	1450

Clamp arm variants:
SPL (Clamp arm left)

SPM (Clamp arm in the middle)

SPR (Clamp arm right)


Subject to technical alterations.

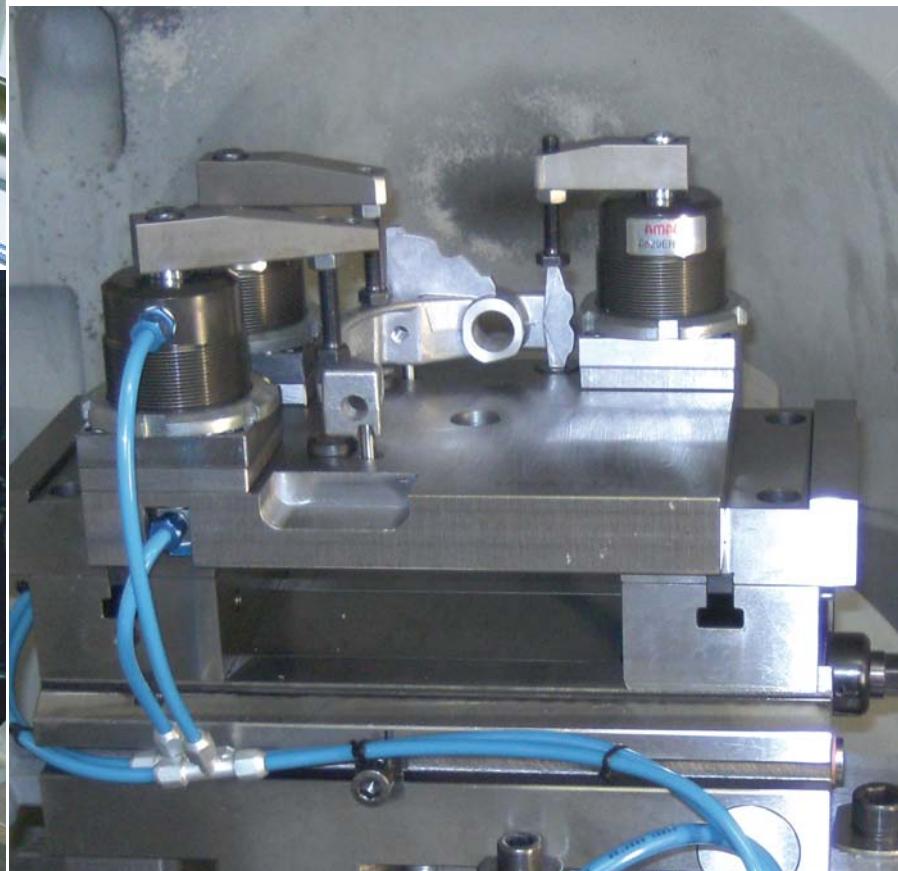
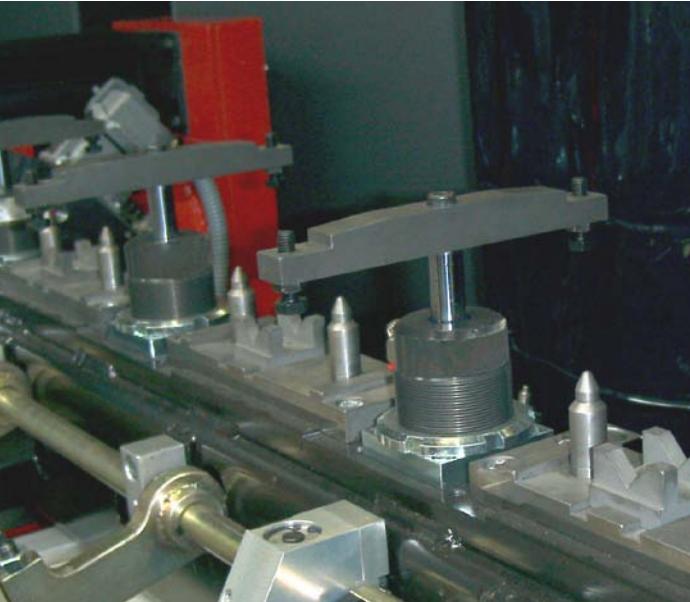
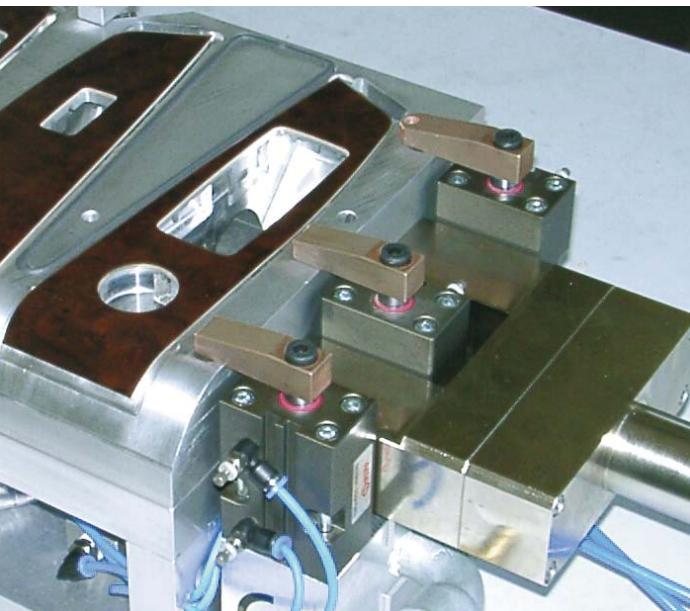
PNEUMATIC SWING CLAMPS

> APPLICATIONS

Pneumatic swing clamps are used where low clamping forces are needed (e.g. for welding), and where workpieces must be easily positioned from above.

> POINTS TO REMEMBER!

The swing action of toggle clamps must not be hindered. They can only clamp on their vertical stroke, not while swinging.



Subject to technical alterations.

No. 6829KR/KL

Swing clamp, pneumatic, flange-mounting version

double-acting

For recessed installation in fixtures. Both compressed-air connections are in the flange. Piston rod non-rusting, polished. Body is made of aluminium, anodised. HART-COAT® surface for wear-resistance. Including screw and spring washer for simple setting of the clamp arm position.

Mounting:

- from above with cap screws through the flange
- from below in a bore in the fixture using grooved nuts and clamping against the flange
- from above with grooved nuts against the fixture

Accessories (not included in pack):

- Clamping arm 6829SP
- Grooved nut 6829N
- Clamping screw 6880



CAD



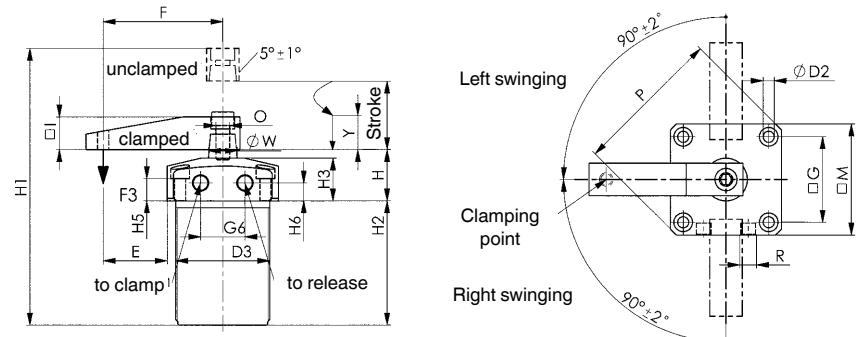
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Order no.	Size	right swinging	left swinging	F3 [kN]	Connecting thread for clamping screws	Weight [g]
560012	12	●	-	0,03	M4	130
560018	12	-	●	0,03	M4	130
560011	16	●	-	0,06	M4	180
560019	16	-	●	0,06	M4	180
560010	20	●	-	0,08	M6	300
560020	20	-	●	0,08	M6	300
93484	25	●	-	0,17	M6	500
93559	25	-	●	0,17	M6	500
93492	32	●	-	0,27	M8	650
93567	32	-	●	0,27	M8	650
93500	40	●	-	0,45	M8	800
93575	40	-	●	0,45	M8	800
93518	50	●	-	0,70	M12	920
93583	50	-	●	0,70	M12	920
93526	63	●	-	1,10	M12	1080
93591	63	-	●	1,10	M12	1080

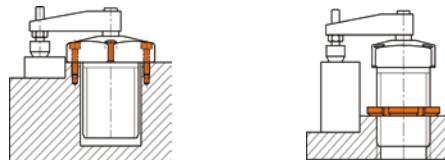
F3 = at 6 bar max. air pressure

Note:

The mounting holes in the flange are the same as in threaded flange no. 6828GF. Operate only with lubricated air.

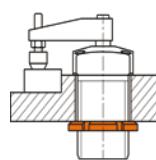


Examples of mountings:



with 4 cap screws from above

with grooved nut from above



with grooved nut from below

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page 144No. 6829GF,
page 144

Dimensions:

Order no.	Size	dia. D2	D3	E	F	G	G6	H	H1	H2	H3	H5	H6	I	M	O	P	R	dia. W	Piston dia.	Y Clamping stroke*	Stroke
560012	12	4,5	M25x1,5	18,7	35	23,0	10	25	105	50	20	11	9,0	12,0	33	M5	43	M5	8	12	8,6	17,6
560018	12	4,5	M25x1,5	18,7	35	23,0	10	25	105	50	20	11	9,0	12,0	33	M5	43	M5	8	12	8,6	17,6
560011	16	4,5	M30x1,5	23,0	41	26,5	12	25	105	50	20	11	9,0	12,0	36	M5	47	M5	8	16	8,5	17,5
560019	16	4,5	M30x1,5	23,0	41	26,5	12	25	105	50	20	11	9,0	12,0	36	M5	47	M5	8	16	8,5	17,5
560010	20	4,5	M35x1,5	27,5	48	30,5	14	26	107	65	20	10	9,0	16,0	41	M8	54	M5	12	20	15,0	27,0
560020	20	4,5	M35x1,5	27,5	48	30,5	14	26	107	65	20	10	9,0	16,0	41	M8	54	M5	12	20	15,0	27,0
93484	25	5,5	M40x1,5	25,0	50	37,0	23	30	135	62	25	15	11,5	16,0	50	M8	66	M5	14	25	13,0	26,0
93559	25	5,5	M40x1,5	25,0	50	37,0	23	30	135	62	25	15	11,5	16,0	50	M8	66	M5	14	25	13,0	26,0
93492	32	6,5	M50x1,5	30,0	60	45,0	23	30	152	73	25	13	10,5	19,0	60	M8	80	G1/8	16	32	14,0	28,0
93567	32	6,5	M50x1,5	30,0	60	45,0	23	30	152	73	25	13	10,5	19,0	60	M8	80	G1/8	16	32	14,0	28,0
93500	40	6,5	M55x1,5	37,5	70	50,0	26	30	152	73	25	13	10,5	19,0	65	M8	87	G1/8	16	40	16,0	30,0
93575	40	6,5	M55x1,5	37,5	70	50,0	26	30	152	73	25	13	10,5	19,0	65	M8	87	G1/8	16	40	16,0	30,0
93518	50	8,5	M65x1,5	42,5	80	58,0	32	30	164	80	25	11	10,5	25,5	75	M10	100	G1/8	20	50	16,0	32,0
93583	50	8,5	M65x1,5	42,5	80	58,0	32	30	164	80	25	11	10,5	25,5	75	M10	100	G1/8	20	50	16,0	32,0
93526	63	8,5	M80x1,5	45,0	90	70,0	35	30	164	80	25	11	10,5	25,5	90	M10	118	G1/8	20	63	14,0	30,0
93591	63	8,5	M80x1,5	45,0	90	70,0	35	30	164	80	25	11	10,5	25,5	90	M10	118	G1/8	20	63	14,0	30,0

* Swing clamps may only be loaded during the clamping stroke Y.

Subject to technical alterations.

No. 6829BR/BL**Swing clamp, pneumatic, block version****double-acting**

Piston rod non-rusting, polished. Body is made of aluminium, anodised. HART-COAT® surface for wear-resistance. **Magnetic piston to signal end positions.** Including screw and spring washer for simple setting of the clamp arm position.

Mounting:

- on front or rear faces, using through holes
- from above with long socket bolts ISO 4762 (DIN 912)
- from below using tapped holes in base

Accessories (not included in pack):

- Clamping arm 6829SP
- Clamping screw 6880

Order no.	Size	right swinging	left swinging	F3 [kN]	Connecting thread for clamping screws	Weight [g]
91496	12	●	-	0,03	M 4	200
91397	12	-	●	0,03	M 4	200
91504	16	●	-	0,06	M 4	300
91405	16	-	●	0,06	M 4	300
91512	20	●	-	0,08	M 6	400
91413	20	-	●	0,08	M 6	400
91520	25	●	-	0,17	M 6	600
91421	25	-	●	0,17	M 6	600
91538	32	●	-	0,27	M 8	800
91439	32	-	●	0,27	M 8	800
91546	40	●	-	0,45	M 8	920
91447	40	-	●	0,45	M 8	920
91553	50	●	-	0,70	M12	1000
91454	50	-	●	0,70	M12	1000
91561	63	●	-	1,10	M12	1150
91462	63	-	●	1,10	M12	1150

F3 = at 6 bar max. air pressure

Note:

Suitable proximity switches for end-position monitoring are available using order no. 392241.

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

Switching function: NOC. Output: PNP.

Operate only with lubricated air.

**Recommendations**

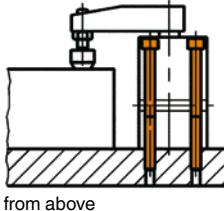
No. 6880,
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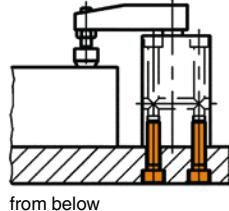
No. 6829SP,
page 143



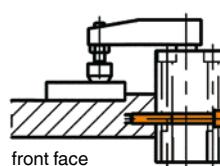
No. 6829ER/EL,
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Examples of mountings:

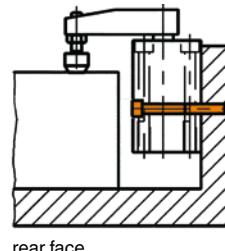
from above



from below

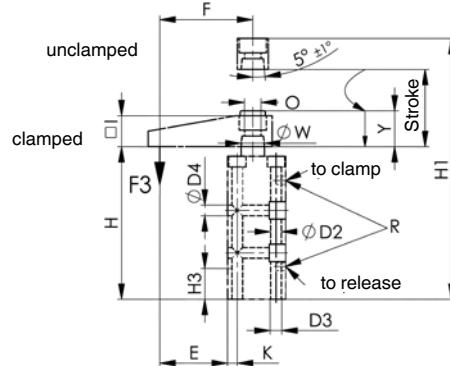
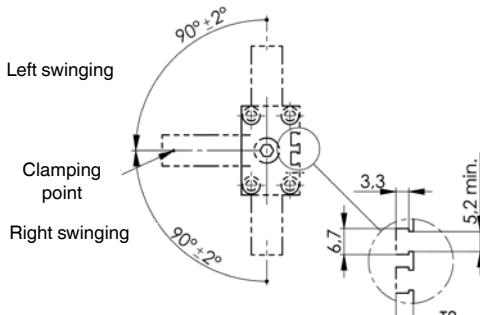
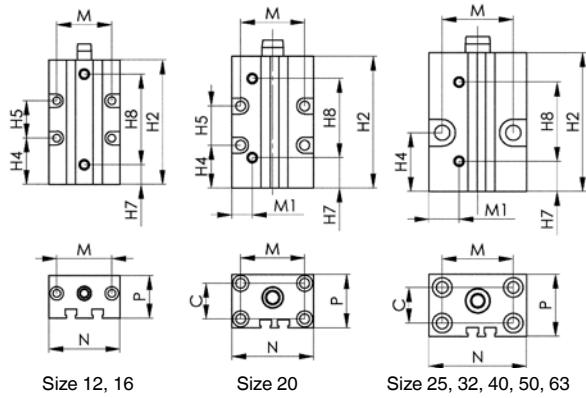


front face



rear face





Dimensions:

Order no.	Size	C	dia. D2	D3	dia. D4	E	F	H	H1	H2	H3	H4	H5	H7	H8
91496	12	-	4,3	M 5	4,3	25,0	35	76	105	70	15	26	21	11	51,0
91397	12	-	4,3	M 5	4,3	25,0	35	76	105	70	15	26	21	11	51,0
91504	16	-	4,3	M 5	4,3	30,0	41	76	105	70	15	26	21	11	51,0
91405	16	-	4,3	M 5	4,3	30,0	41	76	105	70	15	26	21	11	51,0
91512	20	20	5,5	M 6	5,5	35,0	48	80	125	74	20	24	22	17	44,5
91413	20	20	5,5	M 6	5,5	35,0	48	80	125	74	20	24	22	17	44,5
91520	25	20	6,5	M 8	8,5	35,0	50	83	125	78	20	32	-	17	44,5
91421	25	20	6,5	M 8	8,5	35,0	50	83	125	78	20	32	-	17	44,5
91538	32	30	6,5	M 8	8,5	40,0	60	96	145	90	20	43	-	22	50,0
91439	32	30	6,5	M 8	8,5	40,0	60	96	145	90	20	43	-	22	50,0
91546	40	37	8,5	M10	8,5	45,5	70	96	145	90	25	40	-	20	52,0
91447	40	37	8,5	M10	8,5	45,5	70	96	145	90	25	40	-	20	52,0
91553	50	46	8,5	M10	10,5	49,0	80	106	162	100	30	45	-	25	53,5
91454	50	46	8,5	M10	10,5	49,0	80	106	162	100	30	45	-	25	53,5
91561	63	60	10,5	M12	10,5	52,5	90	106	162	100	30	36	-	28	53,0
91462	63	60	10,5	M12	10,5	52,5	90	106	162	100	30	36	-	28	53,0

Order no.	Size	I	K	M	M1	N	O	P	R	T8	dia. W	Piston dia.	Y Clamping stroke*	Stroke
91496	12	12	10,0	31	20,0	40	M 5	24	M 5	5,0	8	12	8,5	17,5
91397	12	12	10,0	31	20,0	40	M 5	24	M 5	5,0	8	12	8,5	17,5
91504	16	12	13,0	31	21,0	42	M 5	28	M 5	4,5	8	16	8,5	17,5
91405	16	12	13,0	31	21,0	42	M 5	28	M 5	4,5	8	16	8,5	17,5
91512	20	16	5,0	36	11,5	46	M 8	30	M 5	4,5	12	20	14,0	27,0
91413	20	16	5,0	36	11,5	46	M 8	30	M 5	4,5	12	20	14,0	27,0
91520	25	16	7,5	40	17,0	55	M 8	35	M 5	5,0	14	25	14,0	27,0
91421	25	16	7,5	40	17,0	55	M 8	35	M 5	5,0	14	25	14,0	27,0
91538	32	19	7,5	45	18,0	60	M 8	45	G1/8	6,5	16	32	15,5	30,0
91439	32	19	7,5	45	18,0	60	M 8	45	G1/8	6,5	16	32	15,5	30,0
91546	40	19	9,0	52	22,0	70	M 8	55	G1/8	8,0	16	40	15,5	30,0
91447	40	19	9,0	52	22,0	70	M 8	55	G1/8	8,0	16	40	15,5	30,0
91553	50	25	9,5	66	25,0	85	M10	65	G1/8	6,5	20	50	15,0	31,0
91454	50	25	9,5	66	25,0	85	M10	65	G1/8	6,5	20	50	15,0	31,0
91561	63	25	10,0	80	30,0	100	M10	80	G1/8	8,5	20	63	15,0	31,0
91462	63	25	10,0	80	30,0	100	M10	80	G1/8	8,5	20	63	15,0	31,0

* Swing clamps may only be loaded during the clamping stroke Y.

Subject to technical alterations.

No. 6829ER/EL
**Swing clamp, pneumatic,
screw-in version**
double-acting

Piston rod non-rusting, polished. Body is made of aluminium, anodised. HART-COAT® surface for wear-resistance. Including screw and spring washer for simple setting of the clamp arm position.

Mounting:

- with grooved nut 6829N (DIN 70852)
- with threaded flange 6829GF

Accessories (not included in pack):

- Clamping arm 6829SP
- Grooved nut 6829N
- Thread flange 6829GF
- Clamping screw 6880


Recommendations

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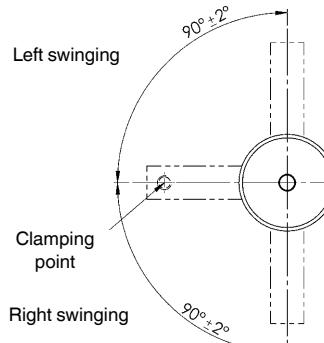
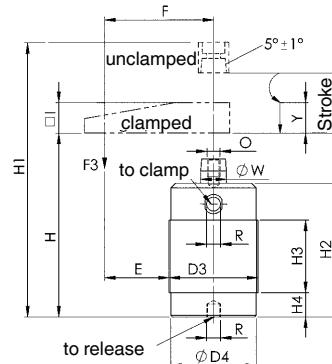
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Order no.	Size	right swinging	left swinging	F3 [kN]	Connecting thread for clamping screws	Weight [g]
560062	12	●	-	0,03	M4	100
560027	12	-	●	0,03	M4	100
560063	16	●	-	0,06	M4	150
560028	16	-	●	0,06	M4	150
560064	20	●	-	0,08	M6	270
560029	20	-	●	0,08	M6	270
92809	25	●	-	0,17	M 6	450
92858	25	-	●	0,17	M 6	450
92817	32	●	-	0,27	M 8	550
92866	32	-	●	0,27	M 8	550
92825	40	●	-	0,45	M 8	700
92874	40	-	●	0,45	M 8	700
92833	50	●	-	0,70	M12	850
92882	50	-	●	0,70	M12	850
92841	63	●	-	1,10	M12	1000
92890	63	-	●	1,10	M12	1000

F3 = at 6 bar max. air pressure

Note:

Operate only with lubricated air.



Order no.	Size	D3	dia. D4	E	F	H	H1	H2	H3	H4	I	O	R	dia. W	Piston dia.	Y Clamping stroke*	Stroke
560062	12	M25x1,5	23	22,5	35	75	105	70	48	2	12,0	M5	M5	8	12	8,6	17,6
560027	12	M25x1,5	23	22,5	35	75	105	70	48	2	12,0	M5	M5	8	12	8,6	17,6
560063	16	M30x1,5	28	26,0	41	75	105	70	48	2	12,0	M5	M5	8	16	8,5	17,5
560028	16	M30x1,5	28	26,0	41	75	105	70	48	2	12,0	M5	M5	8	16	8,5	17,5
560064	20	M35x1,5	33	30,5	48	91	134	85	64	2	16,0	M8	M5	12	20	15,0	27,0
560029	20	M35x1,5	33	30,5	48	91	134	85	64	2	16,0	M8	M5	12	20	15,0	27,0
92809	25	M40x1,5	38	30,0	50	73	118	70	35	10	16,0	M 8	M 5	14	25	13,0	26,0
92858	25	M40x1,5	38	30,0	50	73	118	70	35	10	16,0	M 8	M 5	14	25	13,0	26,0
92817	32	M50x1,5	48	35,0	60	83	132	79	40	15	19,0	M 8	G1/8	16	32	15,5	29,5
92866	32	M50x1,5	48	35,0	60	83	132	79	40	15	19,0	M 8	G1/8	16	32	15,5	29,5
92825	40	M55x1,5	53	42,5	70	87	136	83	45	15	19,0	M 8	G1/8	16	40	16,5	30,5
92874	40	M55x1,5	53	42,5	70	87	136	83	45	15	19,0	M 8	G1/8	16	40	16,5	30,5
92833	50	M65x1,5	62	47,5	80	92	148	87	50	15	25,5	M10	G1/8	20	50	14,0	30,0
92882	50	M65x1,5	62	47,5	80	92	148	87	50	15	25,5	M10	G1/8	20	50	14,0	30,0
92841	63	M80x1,5	77	50,0	90	98	153	92	56	15	25,5	M10	G1/8	20	63	13,5	29,5
92890	63	M80x1,5	77	50,0	90	98	153	92	56	15	25,5	M10	G1/8	20	63	13,5	29,5

* Swing clamps may only be loaded during the clamping stroke Y.

Examples of mountings:

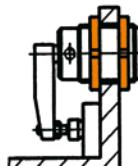

with grooved nut from below



with grooved nut from above



with threaded flange and grooved nut

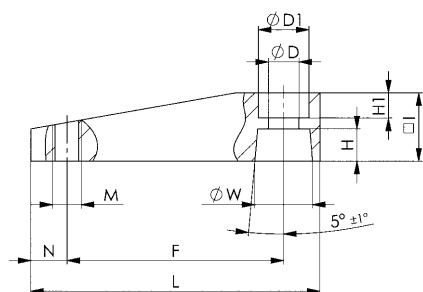


with two grooved nuts

Subject to technical alterations.

No. 6829SP
Clamping arm

High-strength aluminium alloy. HART-COAT® surface for wear-resistance and reduced adhesion of weld spatter. With thread for clamping screw No. 6880.



CAD



Order no.	Size	dia. D	dia. D1	F	H	H1	I	L	M	N	dia. W	Weight [g]
92486	12	5,5	9	35	5,0	5,0	12	45	M4	4	8	13
92494	16	5,5	9	41	5,0	4,0	12	51	M4	4	8	15
92502	20	8,5	14	48	5,5	7,5	16	64	M6	6	12	31
93674	25	8,5	14	50	6,5	6,0	16	66	M6	6	14	32
93682	32	8,5	14	60	9,0	7,0	19	80	M8	10	16	55
93690	40	8,5	14	70	9,0	7,0	19	90	M8	10	16	65
93708	50	10,5	17	80	10,0	9,0	25	105	M12	10	20	132
93716	63	10,5	17	90	10,0	9,0	25	115	M12	10	20	149

Note:

Fitting clamping arm:

1) Set up clamping arm with spring washer and screw without play.

2) Turn clamping arm into position.

3) Hold clamping arm fixed with wrench and tighten screw.

Clamping arm removal:

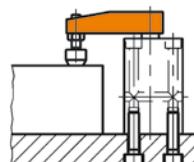
1) Hold clamping arm fixed with wrench and loosen screw.

2) With light blows from below (plastic hammer), separate clamping arm from the piston rod.

Caution! No side blows permitted!


Application example:

Clamping arm with clamping screw no. 6880.


No. 6829AD
Adapter

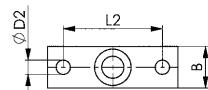
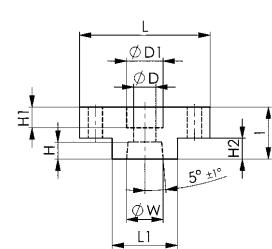
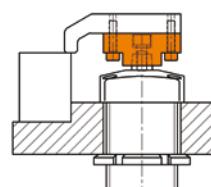
for mounting special clamping arms, with taper bore and mounting holes for arm. High-strength aluminium alloy. HART-COAT® surface for wear-resistance and reduced adhesion of weld spatter.



Order no.	Size	B	dia. D	dia. D1	dia. D2	H	H1	H2	I	L	L1	L2	dia. W	Weight [g]
92403	12/16	12	5,5	10	4,5	5,0	7,0	6	14	30	13	22	8	8
92411	20	16	8,5	14	5,5	5,5	10,5	8	20	40	18	30	12	20
92429	25	16	8,5	14	5,5	6,5	8,0	8	20	50	25	38	14	28
92437	32/40	19	8,5	14	7,0	9,0	11,0	10	25	60	30	45	16	50
92452	50/63	25	10,5	17	9,0	10,0	14,0	12	30	65	30	48	20	80

Application example:

Adapter in use as a connecting element between an individual clamping arm and the piston rod of a pneumatic swing clamp no. 6829.



CAD



Subject to technical alterations.

No. 6829N

Grooved nut (DIN 70852)

Steel, galvanized.
Use hook spanner for tightening (see AMF catalogue „Hand Tools“).

NEW!
NEW!
NEW!

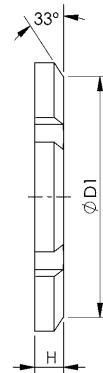
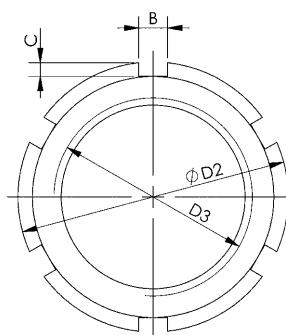
Order no.	Size	B	C	dia. D1	dia. D2	D3	H	Weight [g]
560083	12 *	5,0	2,0	32	38	M25x1,5	7	32
560084	16	6,5	2,8	38	44	M30x1,5	7	36
560085	20	7,0	3,3	43	50	M35x1,5	8	51
92924	25	7,0	3,3	49	56	M40x1,5	8	63
92932	32	8,0	3,8	60	68	M50x1,5	8	84
92940	40	8,0	3,8	67	75	M55x1,5	8	106
92957	50	11,0	4,3	76	85	M65x1,5	9	132
92973	63	11,0	4,3	91	100	M80x1,5	10	180

* according to DIN 981



Application example:

Grooved nut from above for locking swing clamp in a fixture.



CAD



No. 6829GF

Threaded flange

Aluminium.

With four counterbored mounting holes. Female screw-in thread for swing clamp. Use grooved nut to lock in desired.

NEW!
NEW!
NEW!

Order no.	Size	C	dia. D1	dia. D2	D3	H	H1	L	Weight [g]
560065	12	24	8	4,5	M25x1,5	8	5	35	15
560066	16	29	8	4,5	M30x1,5	8	5	40	18
560067	20	32	9	5,5	M35x1,5	9	6	45	25
93062	25	37	9	5,5	M40x1,5	9	6	50	30
93070	32	45	11	6,5	M50x1,5	12	7	60	50
93088	40	50	11	6,5	M55x1,5	12	7	65	55
93096	50	58	13	8,5	M65x1,5	15	9	75	85
93104	63	70	13	8,5	M80x1,5	15	9	88	102



Advantage:

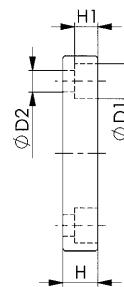
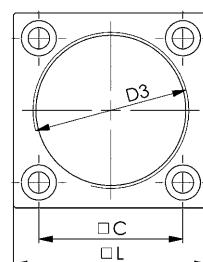
Avoids cutting a large thread in the fixture.

Note:

The mounting holes in the flange are the same as in pneumatic clamp flange no. 6829K and 6829V.

Application example:

Swing clamp screwed into threaded flange.



CAD



Subject to technical alterations.

No. 6829W

Swing Clamp with welding protection, pneumatic

double acting

Piston rod non-rusting, polished and protected against weld spatter. Body, welding protection and clamping arm made of aluminium. HART-COAT® surface for wear-resistance. **Magnetic piston for end-position monitoring.**

Clamp arm not included.

Accessories (not included in pack):

- Welding protection no. 6829WS
- Clamping arm no. 6829WSP



Order no.	Size	right swinging	left swinging	F3	Weight
				[kN]	[g]
91579	25	●	-	0,2	326
92361	25	-	●	0,2	326
91595	32	●	-	0,3	537
92387	32	-	●	0,3	537
91611	40	●	-	0,6	680
92445	40	-	●	0,6	680
91637	50	●	-	0,9	1160
92460	50	-	●	0,9	1160
91652	63	●	-	1,4	1520
92478	63	-	●	1,4	1520

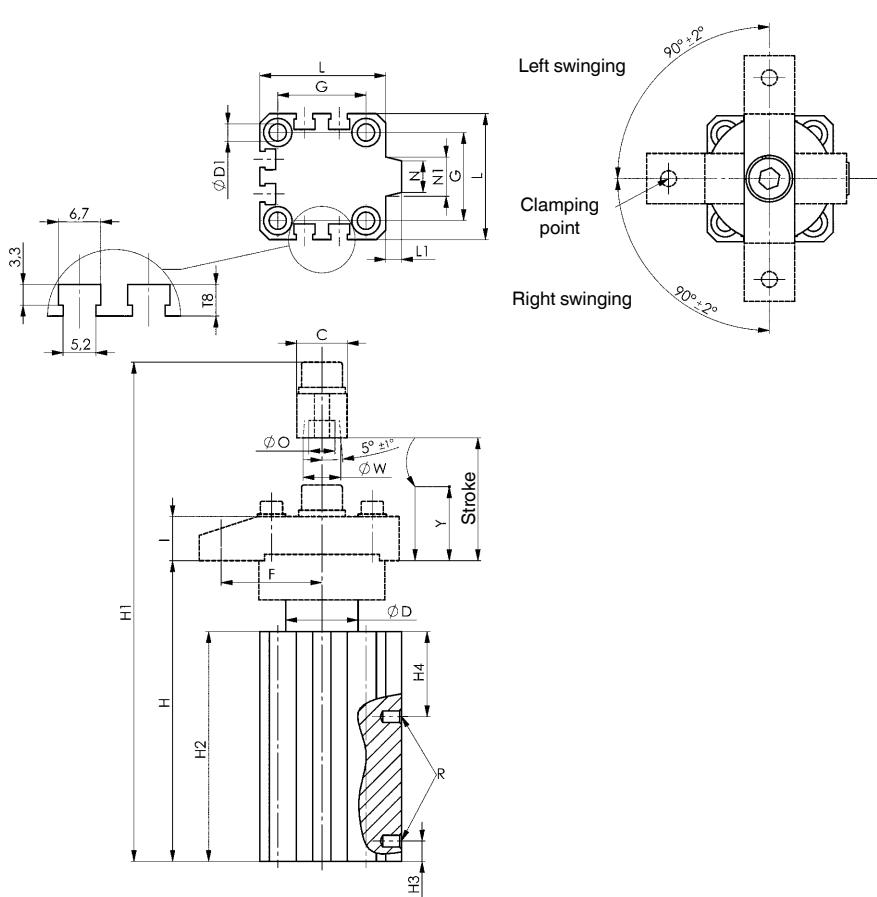
Note:

Suitable proximity switches for end-position monitoring are available using order no. 392241.

Design: PUR cable 0,3 m with M8 plug connection and rotating knurled nuts.

Switching function: NOC. Output: PNP.

Operate only with lubricated air.



Recommendations



No. 6829WS,
page 146



No. 6829WSP,
page 146

CAD



Dimensions:

Order no.	Size	C	dia. D	dia. D1	F	G	H	H1	H2	H3	H4	I	L	L1	N	N1	dia. O	R	T8	dia. W	Piston dia.	Y Clamping stroke*	Stroke
91579	25	16	23	5,5	32,0	29	95,5	139,0	73,0	6,5	27,0	14	40	5,0	10,0	12,5	8,3	M5	5,0	12	25	10	19,5
92361	25	16	23	5,5	32,0	29	95,5	139,0	73,0	6,5	27,0	14	40	5,0	10,0	12,5	8,3	M5	5,0	12	25	10	19,5
91595	32	22	30	5,5	45,0	34	113,0	168,0	80,0	9,0	34,5	18	45	4,5	14,5	16,5	10,5	G1/8	6,5	16	32	10	25,0
92387	32	22	30	5,5	45,0	34	113,0	168,0	80,0	9,0	34,5	18	45	4,5	14,5	16,5	10,5	G1/8	6,5	16	32	10	25,0
91611	40	22	30	5,5	45,0	40	114,0	173,0	80,0	9,0	34,5	22	52	5,0	17,5	22,0	10,5	G1/8	8,0	16	40	10	25,0
92445	40	22	30	5,5	45,0	40	114,0	173,0	80,0	9,0	34,5	22	52	5,0	17,5	22,0	10,5	G1/8	8,0	16	40	10	25,0
91637	50	25	37	6,6	65,0	50	149,4	227,9	101,5	11,0	39,0	25	64	6,0	20,0	23,0	12,5	G1/4	6,5	20	50	20	39,0
92460	50	25	37	6,6	65,0	50	149,4	227,9	101,5	11,0	39,0	25	64	6,0	20,0	23,0	12,5	G1/4	6,5	20	50	20	39,0
91652	63	25	47	6,6	72,5	60	152,9	231,4	104,0	9,0	35,0	25	77	7,0	28,0	33,0	12,5	G1/4	8,5	20	63	20	39,0
92478	63	25	47	6,6	72,5	60	152,9	231,4	104,0	9,0	35,0	25	77	7,0	28,0	33,0	12,5	G1/4	8,5	20	63	20	39,0

* Swing clamps may only be loaded during the clamping stroke Y.

Subject to technical alterations.

No. 6829WS

Welding protection

for piston rod

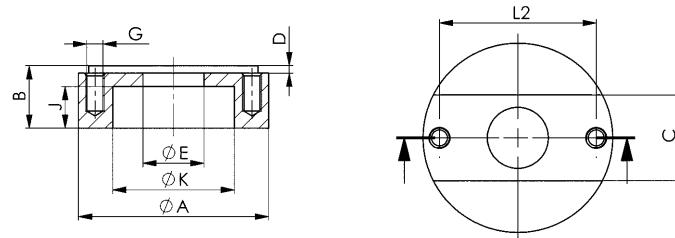
for swing clamp with welding protection no. 6829W for protection of the piston rod against weld spatter. High-strength aluminium alloy, anodised.



CAD



Order no.	Size	dia. A	B	C	D	dia. E	G	J	dia. K	L2	Weight [g]
91645	25	40	14,5	16,4	2,0	12,1	M4	10,5	25	32,0	32
91660	32	50	16,5	22,6	3,0	16,1	M5	11,0	32	41,3	55
91686	40	50	17,9	22,6	3,8	16,1	M6	11,0	32	41,4	58
91702	50	59	33,0	25,8	5,1	20,1	M6	25,0	39	46,5	122
91793	63	69	33,0	25,8	5,1	20,1	M6	25,0	50	59,5	160



No. 6829WSP

Clamp arm

for swing clamp with welding protection no. 6829W.

High-strength aluminium alloy, black. HART-COAT® surface for wear-resistance and reduced adhesion of weld spatter.

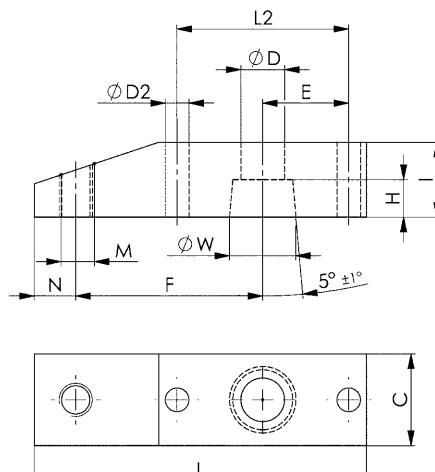
Ready for mounting, with connection thread for clamping screw no. 6880.



CAD



Order no.	Size	C	dia. D	dia. D2	E	F	H	I	L	M	L2	N	dia. W	Weight [g]
91678	25	16	8,3	4,8	16,00	32,0	5,5	14	63,5	M6	32,0	7	12	36
91694	32	22	10,5	5,7	20,70	45,0	9,0	18	80,0	M8	41,3	10	16	83
91751	40	22	10,5	6,4	20,70	45,0	9,0	22	82,0	M8	41,4	10	16	84
91603	50	25	12,5	6,4	23,25	65,0	12,0	25	105,0	M10	46,5	10	20	144
91629	63	25	12,5	6,4	29,75	72,5	12,0	25	120,0	M10	59,5	10	20	168

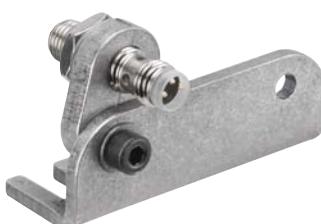


No. 6897S

Sensor monitor

for manual clamps.

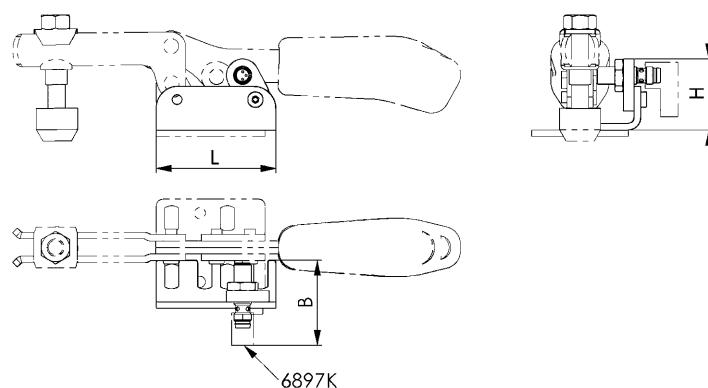
For monitoring the closed position of the toggle clamp. Complete with inductive sensor M8x1 for ambient temperatures from 0° to 60° C. Matching plug connection no. 6897K.



Order no.	Size	L x W x H			Weight [g]
90597	3	55 x 40 x 35			60

Note:

Sensor monitor size 3 can be used on both sides for horizontal toggle clamp no. 6830-3, 6834-3 and 6830B-3, only on one side for horizontal toggle clamp with safety latch no. 6830S-3.



Subject to technical alterations.

No. 6897K
Plug connection for sensor monitor

for sensor monitor no. 6897S.

Angled plug connection, cable permanently injection-moulded on.

Order no.	Size	Cable length		Weight [g]
		[m]		
90613	1	2		75
90639	2	5		150

Note:

IP68 acc. to IEC 529, silicone-free, halogen-free, gold-plated contacts.


No. 6898V
Rotatable base unit

incl. stop pin for limiting the opening position of 90°

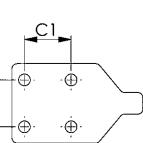
Order no.	Size	Weight		
		[g]		
555182	1	430		
555183	2	915		
555184	3	430		
555185	4	922		

Note:

Order no. 555182 for toggle clamp 6830 Size 2 and 3

Size 1, 2

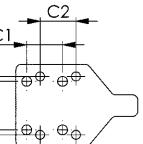
Order no. 555183 for toggle clamp 6830 Size 4 and 5



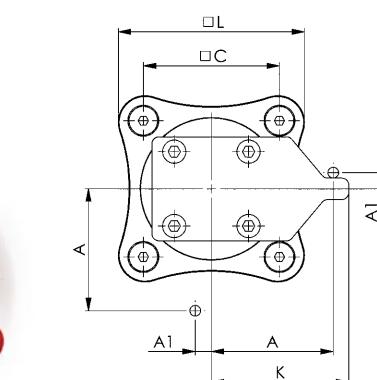
Order no. 555184 for toggle clamp 6800 Size 2 and 3

Size 3

Order no. 555185 for toggle clamp 6800 Size 4 and 5



Size 4


Dimensions:

Order no.	Size	A	A1	C	C1	C2	H	K	L	N1	N2
555182	1	41	9,0	54	26,0	-	11,4	47,0	76	26,0	-
555183	2	68	9,0	76	41,5	-	13,4	77,0	104	41,5	-
555184	3	41	9,0	54	20,0	20	11,4	45,0	76	27,0	32,5
555185	4	59	10,5	76	32,0	45	13,4	69,2	104	45,0	45,0

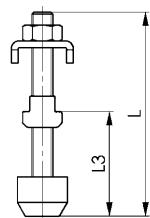
CAD



Subject to technical alterations.

No. 6890
Clamping screw
for open clamping arms,

tempered, tensile strength class 8.8, galvanized and passivated, with removable rubber nose. Sizes 0-3 with washer/nut-element. Sizes 4-7 with nut.



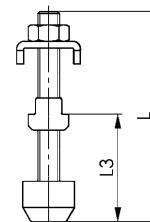
CAD



Order no.	Size	Screw DIN 933	T-Nut DIN 508	Washer size	L	L3	Weight [g]
99002	0	M 4x 25	-	0	32	13-20	5
99010	1	M 5x 30	-	1	38	17-24	10
99028	2	M 6x 35	-	2	45	19-28	22
99077	2	M 6x 50	-	2	60	19-43	30
99036	3	M 8x 45	-	3	58	22-34	40
99044	4	M 8x 65	M 8x10	4	78	21-50	62
99051	5	M 8x 65	M 8x10	5	78	21-45	62
99085	6	M12x 80	M12x14	6	97	28-58	160
99069	7	M12x110	M12x14	6	127	28-88	180

No. 6890NI
Clamping screw
for open clamping arms,

stainless steel. Size 4 with 2 washers.



CAD

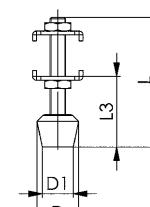


Order no.	Size	Screw DIN 933	Washer size	L	L3	Weight [g]
96040	0	M4x25	0	32	13-20	5
96057	1	M5x30	1	38	17-24	10
96065	2	M6x35	2	45	19-28	22
96073	3	M8x45	3	58	22-34	40
96081	4	M8x65	4	78	21-50	60

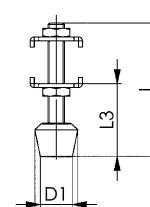
No. 68301
Clamping screw
For horizontal acting toggle clamp plus.

complete with U-washers, hex nuts and screw with bonded pressure pad, made of oil-resistant neoprene to prevent damage to delicate workpieces. Hardness 85 Shore A, LABS-free (silicone-free). Strength class 8.8.

Order no.	Size	M x L	D	D1	L3	Weight [g]
552698	1	M5 x 35	11	10	9 - 18	15
551718	2	M6 x 50	16	12	17 - 29	20
551719	3	M8 x 58	21	16	21 - 34	36
551720	4	M10 x 76	26	20	28 - 44	95



CAD


No. 68301NI
Clamping screw
for horizontal toggle clamp plus,
stainless steel.


Order no.	Size	M x L	D	D1	L3	Weight [g]
560014	1	M5 x 35	11	10	10 - 22	15
555177	2	M6 x 50	16	12	17 - 29	20
558996	3	M8 x 58	21	16	22 - 31	45
555178	4	M10 x 76	26	20	28 - 44	95

CAD

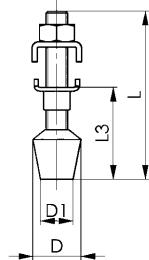


Subject to technical alterations.

No. 6890B
Clamping screw, black
for open clamping arms,

matte-black galvanized, complete with washer, nut element, washer, hex nut and screw with bonded pressure pad, made of oil-resistant neoprene to prevent damage to delicate workpieces. Hardness 85 Shore A, LABS-free (silicone-free). Strength class 8.8.

Strength class 8.8.



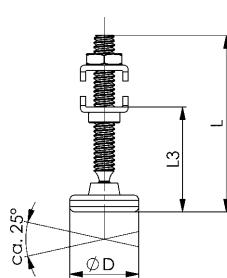
CAD



Order no.	Size	M x L	D	D1	L3	Weight [g]
99614	0	M4x34,5	10	-	11,5-22	6
99671	1	M5x38,0	13	10	17,0-24	11
99630	2	M6x46,0	16	10	20,0-27	17
92635	2	M6x60,0	16	10	20,0-40	22
92916	2	M6x110,0	16	10	20,0-90	60
99655	3	M8x63,0	18	13	27,0-37	39

No. 6875
Clamping screw
for open clamping arms,

galvanised. For auto-adjust toggle clamps.



CAD

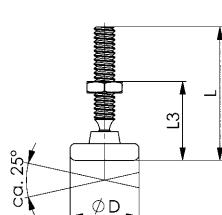


Order no.	Size	M x L	D	L3	Weight [g]
557079	1	M6 x 50	19	17 - 35	23
557080	2	M8 x 50	27	21 - 31	51
557081	3	M8 x 65	27	21 - 42	55

No. 6876
Clamping screw
for push-pull type toggle clamps,

galvanised. For auto-adjust toggle clamps.

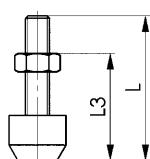
Order no.	Size	M x L	D	L3	Weight [g]
557086	1	M6 x 37	19	13 - 25	16
557087	2	M8 x 50	19	16 - 35	41



CAD


No. 6880
Clamping screw
for push-pull type clamps,

tempered, tensile strength class 8.8, galvanized and passivated, with nut and removable rubber nose.



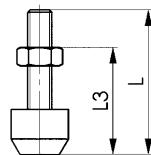
CAD



Order no.	Size	Screw DIN 933	L	L3	Weight [g]
98012	0+1	M 4x20	27	12-20	4
98038	2	M 6x25	35	17-25	15
98046	3	M 8x35	48	22-35	26
98053	5	M 10x50	66	30-52	57
98061	7	M 12x50	68	30-50	82
98475	8	M 16x80	90	25-70	220

No. 6880NI
Clamping screw

for push-pull type clamps,
stainless steel



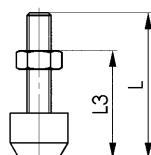
Order no.	Size	Screw DIN 933	L	L3	Weight [g]
96008	0+1	M 4x20	27	12-20	4
96016	2	M 6x25	35	18-27	15
96024	3	M 8x35	48	22-35	26
96032	7	M12x50	68	30-50	82

CAD

No. 6880B
Clamping screw, black

for push-pull type clamps,
matte-black, with nut and bonded pressure pad,
strength class 8.8.

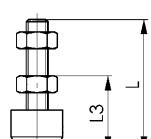
Order no.	Size	Screw DIN 933	L	L3	Weight [g]
99622	1	M4 x 20	23	10-17	4
99705	2	M6 x 25	35	17-25	15
492058	3	M8 x 44	44	26 - 33	26


CAD

No. 6885
Clamping screw

for solid and fixed clamping arms,
tempered, tensile strength class 8.8, galvanized and passivated,
with 2 nuts and removable rubber nose.

Order no.	Size	Screw DIN 933	L	L3	Weight [g]
98517	1	M 5x 30	38	14-25	10
98525	2	M 6x 35	45	17-25	20
98533	3	M 8x 45	58	22-32	35
98541	4	M 8x 65	78	22-52	40
98558	5	M12x 80	98	30-60	130
98566	6	M12x110	128	30-88	160
98582	8	M16x120	130	25-84	280

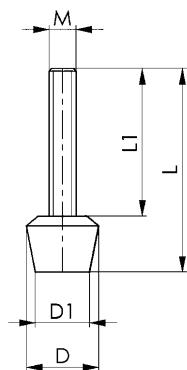

CAD


Subject to technical alterations.

No. 6894

Clamping screw

with a bonded pressure pad, made of oil resistant neoprene to prevent damage to delicate workpieces. Hardness 85 Shore A, LABS-free (silicone-free). Screw tempered, galvanized and passivated, strength class 8.8.



Order no.	M x L	D	D1	L1	Weight [g]
99408	M 4x 32	11	8	24	4
99416	M 5x 38	13	10	28	8
99390	M 6x 35	16	12	23	11
99424	M 6x 45	16	12	33	13
99556	M 6x 60	16	12	48	16
99432	M 8x 48	21	16	32	25
99499	M 8x 58	21	16	42	29
99440	M 8x 63	21	16	47	31
99457	M 8x 78	21	16	62	37
99580	M10x 66	26	20	46	53
99598	M10x 76	26	20	56	59
99606	M10x116	26	20	96	84
99465	M12x 70	31	24	46	78
99473	M12x100	31	24	76	105
99481	M12x130	31	24	106	131

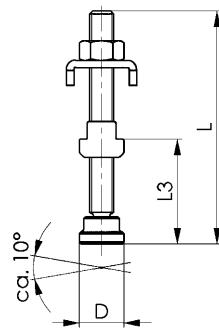
CAD



No. 6891

Self-aligning clamping screw

for open clamping arms, tempered, galvanized and passivated. Sizes 1-3 with washer/nut-element. Sizes 4-6 with T-nut.

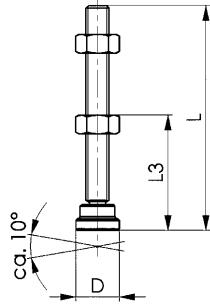


Order no.	Size	Screw DIN 6332	T-Nut DIN 508	Washer size	D	L	L3	Weight [g]
99119	1	M 5x 35	-	1	12	37	12-22	12
99127	2	M 6x 50	-	2	12	52	14-33	20
99135	3	M 8x 75	-	3	16	78	18-52	47
99143	4	M 8x 75	M 8x10	4	16	78	15-50	62
99168	6	M12x100	M12x14	6	25	105	25-62	183

No. 6886

Self-aligning clamping screw

for solid and closed clamping arms, tempered, galvanized and passivated.



Order no.	Size	Screw DIN 6332	D	L	L3	Weight [g]
98616	1	M 5x 35	12	37	8-23	9
98632	4	M 8x 75	16	78	16-52	42
98665	6	M12x100	25	105	30-61	138

No. 6892
Spring loaded screw

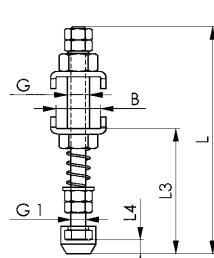
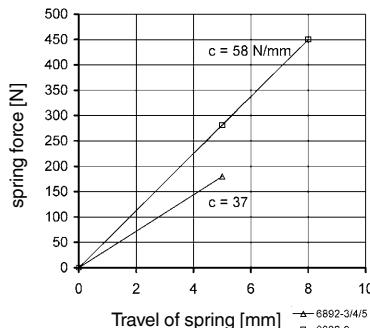
for open ended clamping arms,
tempered, galvanized and passivated.



CAD



Order no.	Size	B	G	G1	Rubber nose	L	L3	L4	Weight [g]
99259	3	14,5	M 8	M5	6893-M5	90	39-52	5	55
99267	4	18,5	M 8	M5	6893-M5	90	40-53	5	63
99275	5	20,5	M 8	M5	6893-M5	90	40-48	5	64
99283	6	24,0	M12	M8	6893-M8	123	60-68	7	182


Spring rate:

No. 6893
Rubber nose

Made of oil resistant neoprene to prevent damage to delicate components. Hardness 70 Shore A. Fits the clamping screws no. 6880, no. 6885, no. 6890 and no. 6892, for placement on hexagon screw head ISO 272. Minimum order quantity is 10 pieces per size.



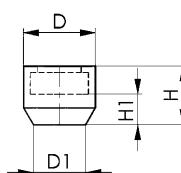
CAD



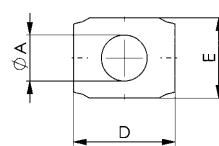
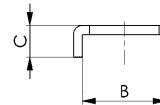
Order no.	Size	SW	D	D1	H	H1	Weight [g]
99309	M 4	7	11,0	7	8,5	4,2	1
99325	M 5	8	12,5	8	10,0	5,0	1
99333	M 6	10	15,0	10	12,0	6,0	2
99341	M 8	13	19,0	13	15,0	7,5	4
99358	M10	16	22,0	15	17,5	8,5	5
99374	M12-SW18	18*	25,0	18	20,0	9,5	8
99366	M12-SW19	19**	26,0	19	20,0	9,5	9
99382	M16	24	33,0	24	27,0	14,0	19

* According to new standard ISO 4017 (marked with a „6“ on its clamping face).

** According to old norm DIN 933.


No. 6887
U-washer

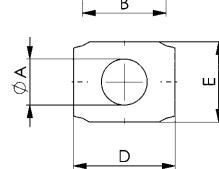
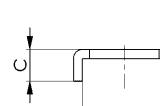
galvanised and passivated.



Order no.	Size	dia. A	B	C	D	E	Weight [g]
557062	0	4,2	8,1	3,0	10,6	9	1
557074	1+2	6,3	11,5	4,4	14,0	11	2
557075	3	8,5	14,6	7,2	18,6	20	7

No. 6887B
U-washer

matte-black.



Order no.	Size	dia. A	B	C	D	E	Weight [g]
557076	1+2	6,3	11,5	4,4	14,0	11	2
557077	3	8,5	14,6	7,2	18,6	20	7

Subject to technical alterations.

No. 6899
Clamping arm extension
for manual clamps,

Aluminium. Complete with fastening bolt. Without clamping screw.

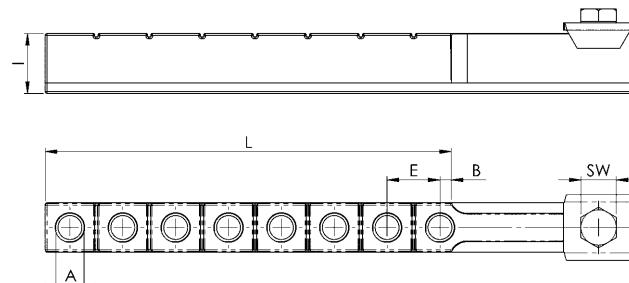
Order no.	Size	A	B	E	I	L	SW	Weight [g]
557094	1	5 x M5	6	12	11	61	7	24
557095	2	6 x M6	8	15	14	90	8	47
557096	3	8 x M8	3	15	17	115	10	92

Note:

Can be shortened to desired length.

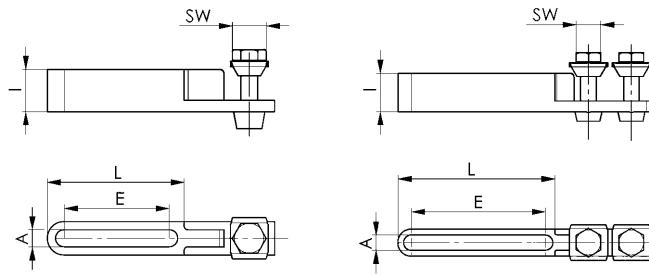


CAD


No. 6896
Clamping arm extension
for manual clamps,

steel, blued. Complete with fastening screw. Without clamping screw.

Order no.	Size	Clamping screw	A	E	I	L	SW	Weight [g]
94045	0	M4	4,2	25	10	32,5	7	15
94060	1	M5	5,2	45	12	55,0	8	25
94086	2	M6	6,2	65	14	73,5	10	40
94102	3	M8	8,2	70	20	82,0	13	80



CAD

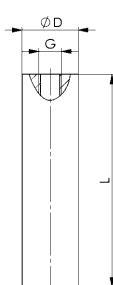

No. 6877
Adapter for grid hole table

Aluminium.

Adapter for fastening the auto-adjust toggle clamps on perforated tables.

Fastening the adapter onto the toggle clamps by a screw and hole at the foot of the toggle clamp.

Order no.	Size	dia. D	L	G	Weight [g]
558988	1	19	76,0	M8	60
558989	2	19	190,5	M8	150
558990	3	20	76,0	M8	70
558991	4	20	190,5	M8	170

NEW!


CAD



Subject to technical alterations.

No. 6895
Supporting arm for toggle clamps

Galvanized and passivated, complete with two tempered clamping screws no. 6890 and fastening screw.

Order no.	Size	Screw DIN 933	Distance between screws	Length [mm]	Weight [g]
99507	0	M 4x25	18-60	70	40
99515	1	M 5x30	22-72	85	65
99523	2	M 6x35	28-85	100	90
99531	3	M 8x45	34-100	120	200
99549	4	M 8x65	40-125	150	370
99572	5	M 8x65	40-125	150	370
99564	6	M 12x80	54-200	240	985


Application possibilities, in relation to toggle clamp size:

Item no. of toggle clamp	Size of supporting arm						
	0	1	2	3	4	5	6
6800	0	1	2	3	4	-	5+6
6800S/6802S	-	-	2	3	4	-	-
6802	-	1	2	3	4	-	-
6803	-	1	2	3	4	-	-
6803S	-	-	1	3	4	-	-
6820K	0	1	2	3	-	-	-
6830/6832	0	1	2	3	4	5	-
6830S/6832S	-	-	-	3	4	-	-
6833	-	1	2	3	4	-	-

CAD

No. 6820SIS
Proximity switch

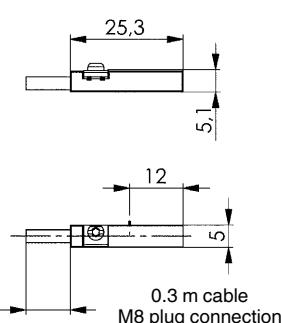
Order no.	Cable length [m]	Weight [g]
392241	0,3	15

Application:

Proximity switch for end-position sensing.

Note:

PUR cable 0.3 m with M8 plug connection and rotating knurled nuts.
Switching function: NOC.
Output: PNP.



Subject to technical alterations.

No. 6848GH
Counter catch

for no. 6848H.
Galvanized and passivated.

Order no.	Size	F	dia. G	H	H1	K	L	N	Weight [g]
94821	2	11	5,2	12	18	8	26	18	16
94839	3	14	6,5	19	28	12	39	23	44
94847	4	19	8,5	26	38	17	56	30	108

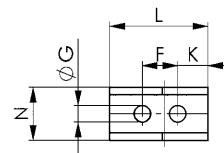
CAD


No. 6848GHNI
Counter catch

for no. 6848HNI.
Polished stainless steel.



Order no.	Size	F	dia. G	H	H1	K	L	N	Weight [g]
95638	2	11	5,2	12	18	8	26	18	16
95646	3	14	6,5	19	28	12	39	23	44
95653	4	19	8,5	26	38	17	56	30	108



CAD


No. 6848GV
Counter catch

for no. 6848V.
Galvanized and passivated.

Order no.	Size	F	dia. G	H	H1	K	L	N	Weight [g]
94854	2	11	5,2	5	12	5	26	18	14
94862	3	14	6,5	6	16	7	36	23	30
94870	4	19	8,5	8	22	9	48	30	66

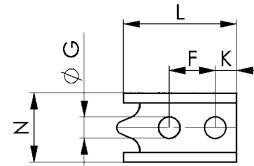
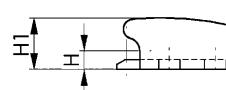
CAD


No. 6848GVNI
Counter catch

for no. 6848VNI.
Polished stainless steel.



Order no.	Size	F	dia. G	H	H1	K	L	N	Weight [g]
95661	2	11	5,2	5	12	5	26	18	14
95679	3	14	6,5	6	16	7	36	23	30
95687	4	19	8,5	8	22	9	48	30	66



CAD



Subject to technical alterations.

... BY ITEM NO.

Article no.	Page	Article no.	Page	Article no.	Page	Article no.	Page	Article no.	Page
No. 6800	12	No. 6804Y	18	No. 6830Y	30	No. 6840T	47	No. 6848HS	80
No. 6800B	108	No. 6805	22	No. 68300	32	No. 6840Y	46	No. 6848HSE	80
No. 6800BS	115	No. 6805E	22	No. 68300E	32	No. 6841	44	No. 6848HSG	81
No. 6800E	12	No. 6805G	23	No. 68300G	33	No. 6841B	114	No. 6848HSJ	80
No. 6800G	13	No. 6805J	22	No. 68300J	32	No. 6841E	44	No. 6848HSNI	98
No. 6800J	12	No. 6805T	23	No. 68300NI	88	No. 6841G	45	No. 6848HSNIE	98
No. 6800NI	82	No. 6805Y	22	No. 68300NIE	88	No. 6841J	44	No. 6848HSNIG	99
No. 6800NIE	83	No. 6806	20	No. 68300NIG	89	No. 6841NI	90	No. 6848HSNIJ	98
No. 6800NIG	83	No. 6806E	20	No. 68300NIJ	88	No. 6841NIE	90	No. 6848HSNIT	99
No. 6800NIJ	82	No. 6806G	21	No. 68300NIT	89	No. 6841NIG	91	No. 6848HSNIY	98
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No. 6800NIY	82	No. 6806T	21	No. 68300T	33	No. 6841NIT	91	No. 6848HSY	80
No. 6800S	64	No. 6806Y	20	No. 68300Y	32	No. 6841NIY	90	No. 6848HT	59
No. 6800SE	65	No. 6809G	29	No. 68301	148	No. 6841T	45	No. 6848HY	58
No. 6800SG	65	No. 6809H	28	No. 68301NI	148	No. 6841Y	44	No. 6848V	60
No. 6800SJ	64	No. 6809P	26	No. 6832	34	No. 6842	52	No. 6848VE	60
No. 6800ST	65	No. 6809RK	28	No. 6832B	111	No. 6842E	52	No. 6848VG	61
No. 6800SY	64	No. 6809RL	28	No. 6832BS	117	No. 6842G	53	No. 6848VJ	60
No. 6800T	13	No. 6809S	29	No. 6832E	34	No. 6842J	52	No. 6848VNI	100
No. 6800Y	12	No. 6809V	29	No. 6832G	35	No. 6842PK	54	No. 6848VNIE	100
No. 6802	14	No. 6810P	27	No. 6832J	34	No. 6842PL	55	No. 6848VNIG	101
No. 6802B	109	No. 6811P	24	No. 6832S	74	No. 6842T	53	No. 6848VNIJ	100
No. 6802BS	116	No. 6812P	25	No. 6832SE	74	No. 6842Y	52	No. 6848VNIT	101
No. 6802E	14	No. 6820A	124	No. 6832SG	75	No. 6843	50	No. 6848VNIV	100
No. 6802G	15	No. 6820P	123	No. 6832SJ	74	No. 6843NI	93	No. 6848VT	61
No. 6802J	14	No. 6820SIS	154	No. 6832ST	75	No. 6844	48	No. 6848VY	60
No. 6802S	66	No. 6821A	125	No. 6832SY	74	No. 6844E	48	No. 6849PH	62
No. 6802SE	66	No. 6825A	126	No. 6832T	35	No. 6844G	49	No. 6850A	121
No. 6802SG	67	No. 6825CE	127	No. 6832Y	34	No. 6844J	48	No. 6860	42
No. 6802SJ	66	No. 6826A	128	No. 6833	36	No. 6844NI	92	No. 6860E	43
No. 6802ST	67	No. 6828H	131	No. 6833E	36	No. 6844NIE	92	No. 6860G	43
No. 6802SY	66	No. 6828M	130	No. 6833G	37	No. 6844NIG	93	No. 6860J	42
No. 6802T	15	No. 6828SP	135, 137	No. 6833J	36	No. 6844NIJ	92	No. 6860P	122
No. 6802Y	14	No. 6828V	134, 136	No. 6833T	37	No. 6844NIT	93	No. 6860T	43
No. 6803	16	No. 6829AD	143	No. 6833Y	36	No. 6844NIY	92	No. 6860Y	42
No. 6803E	16	No. 6829BR/BL	140	No. 6834	38	No. 6844T	49	No. 6870	104
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No. 6803NIG	85	No. 6829SP	143	No. 6834SE	76	No. 6847G	56	No. 6875	149
No. 6803NIJ	84	No. 6829V	129	No. 6834SG	77	No. 6847GK	57	No. 6876	149
No. 6803NIT	85	No. 6829W	145	No. 6834SJ	76	No. 6847GNKI	95	No. 6877	153
No. 6803NIY	84	No. 6829WS	146	No. 6834ST	77	No. 6847GNI	94	No. 6880	149
No. 6803S	68	No. 6829WSP	146	No. 6834SY	76	No. 6847K	57	No. 6880B	150
No. 6803SE	68	No. 6830	30	No. 6834T	39	No. 6847KNI	95	No. 6880NI	150
No. 6803SG	69	No. 6830B	110	No. 6834Y	38	No. 6847NI	94	No. 6885	150
No. 6803SJ	68	No. 6830E	30	No. 6835BS-2	118	No. 6847S	79	No. 6886	151
No. 6803ST	69	No. 6830G	31	No. 6835BS-3	119	No. 6847SU	79	No. 6887	152
No. 6803SY	68	No. 6830J	30	No. 6835B-2	112	No. 6848GH	155	No. 6887B	152
No. 6803T	17	No. 6830NI	86	No. 6835B-3	113	No. 6848GHN	155	No. 6890	148
No. 6803Y	16	No. 6830NIE	86	No. 6837H	40	No. 6848GV	155	No. 6890B	149
No. 6804	18	No. 6830NIG	87	No. 6837HE	41	No. 6848GVNI	155	No. 6890NI	148
No. 6804E	18	No. 6830NIJ	86	No. 6837HG	41	No. 6848H	58	No. 6891	151
No. 6804G	19	No. 6830NIT	87	No. 6837HJ	41	No. 6848HE	58	No. 6892	152
No. 6804J	18	No. 6830NIY	86	No. 6837HT	41	No. 6848HG	59	No. 6893	152
No. 6804S	70	No. 6830S	72	No. 6837HY	40	No. 6848HJ	58	No. 6894	151
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No. 6804SJ	70	No. 6830SJ	72	No. 6840E	46	No. 6848HNIG	97	No. 6897K	147
No. 6804ST	71	No. 6830ST	73	No. 6840G	47	No. 6848HNJ	96	No. 6897S	146
No. 6804SY	70	No. 6830SY	72	No. 6840J	46	No. 6848HNIT	97	No. 6898V	147
No. 6804T	19	No. 6830T	31	No. 6840S	78	No. 6848HNIV	96	No. 6899	153

... BY ORDER NO.

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551716	32	557047	32	557210	74	557350	36	557455	92
551717	32	557048	32	557211	76	557351	36	557456	92
551718	148	557062	152	557212	80	557352	36	557465	13
551719	148	557074	152	557213	82	557353	36	557466	13
551720	148	557075	152	557214	82	557357	41	557467	13
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555061	124	557100	34	557283	96	557391	46	557482	17
555062	124	557101	34	557284	98	557392	46	557483	19
555063	124	557102	34	557285	100	557393	46	557484	19
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555065	125	557108	38	557287	100	557397	48	557486	19
555066	125	557109	38	557288	90	557398	48	557487	21
555067	125	557110	38	557289	92	557399	48	557488	21
555083	131	557118	36	557290	92	557400	48	557489	21
555084	131	557119	36	557291	92	557403	52	557490	21
555085	131	557120	36	557301	12	557404	52	557491	23
555170	131	557121	36	557302	12	557405	58	557492	31
555171	131	557125	40	557303	12	557406	58	557493	31
555172	131	557126	40	557304	12	557407	58	557494	31
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555176	88	557143	42	557306	12	557409	60	557496	31
555177	148	557144	42	557307	12	557411	60	557497	31
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555182	147	557147	44	557311	14	557418	64	557499	33
555183	147	557148	44	557312	14	557419	64	557500	33
555184	147	557149	44	557313	14	557420	66	557501	35
555185	147	557150	44	557314	14	557421	66	557502	35
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557010	12	557152	44	557318	16	557423	68	557504	35
557011	12	557161	46	557319	16	557424	68	557505	35
557012	12	557162	46	557320	16	557425	68	557506	35
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557014	12	557164	46	557322	18	557427	72	557508	39
557015	12	557165	46	557323	18	557428	72	557509	39
557018	14	557166	46	557324	18	557429	74	557510	39
557019	14	557167	48	557325	18	557430	74	557511	37
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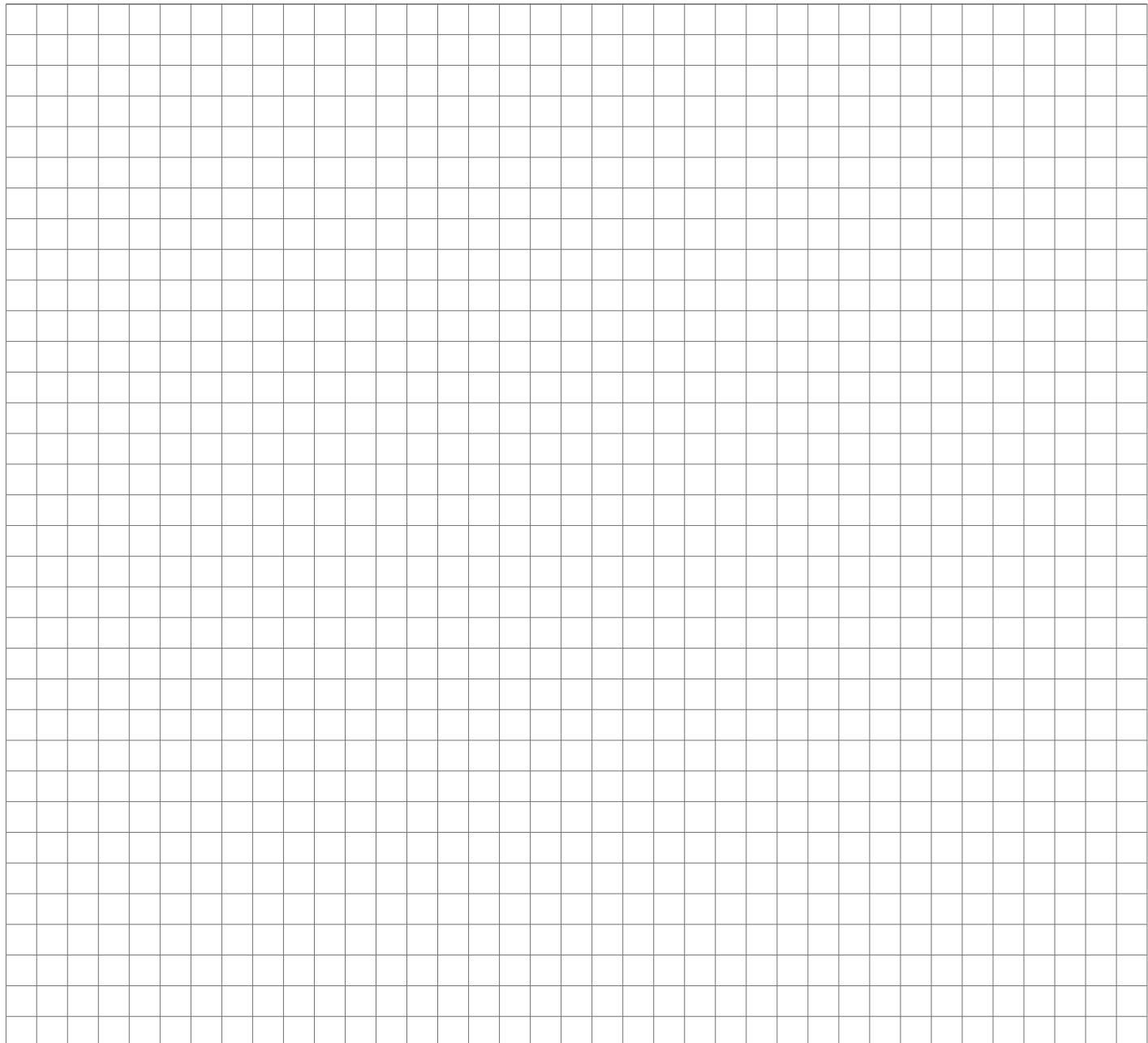
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These Terms of Payment apply for companies, legal entities governed by public law and public law special funds. Our goods and services are supplied exclusively on the basis of the following conditions. Any deviating purchasing conditions of the customer not expressly recognised by us will not become part of the contract through acceptance of the order. By placing the order and accepting the goods we deliver, the customer confirms its consent to our terms and conditions.

1. Offer and contractual conclusion

All our offers are always subject to change without notice unless otherwise explicitly agreed. Our delivery contracts are based on the latest version of our catalogue. Dimension and weight values, as well as illustrations, drawings and data, are non-binding and can be changed by us at any time. Therefore, deviations cannot be ruled out and do not justify any compensation claims against us.

Orders are considered accepted only when confirmed by us in writing. If, for organisational reasons, the customer does not receive a separate confirmation upon the delivery of goods, the invoice shall also be deemed the order confirmation.

2. Prices

The prices are in EURO, ex-works, excluding VAT, packing, freight, postage and insurance. Unless otherwise agreed, our list prices valid on the day of delivery shall apply. For orders below 50 EUR goods net, we must make a minimum quantity surcharge of a 10 EURO for cost reasons.

3. Tool costs

Unless any other agreements have been reached, the tools fabricated for the purpose of executing the order shall remain our property in all cases, even if we have invoiced a tool cost component separately.

4. Payment

Unless otherwise stated on the invoice, the purchase price falls due for net payment within 30 days of the invoice date (without deduction of discount). Invoice amounts of below 50 EURO are due for payment immediately.

In case of payment default, we shall be entitled to charge default interest. The amount corresponds to our interest rate for current account credits at our main bank; the minimum however being 8 percentage points above the relevant base interest rate applied by the European Central Bank. Moreover, in case of default following written notice to the customer, we shall be entitled to cease to fulfil our obligations until payments are received.

5. No set-off

The customer can set-off only with legally confirmed or undisputed counterclaims.

6. Right of withdrawal in case of delayed acceptance or payment and insolvency

If the customer fails to accept the goods in due time, we shall be entitled to set a reasonable period of grace, after which we can dispose of the goods elsewhere and supply the customer on a reasonably longer term. Our rights to withdraw from the contract under the provisions of Section 326 BGB and demand damages for non-performance shall not be affected. If the customer fails to pay for the goods once payment is due, we shall be entitled, at the end of a reasonable period of grace we have set, to withdraw from the contract and demand the return of any goods already supplied. Section 323 BGB remains unaffected in all other cases.

If the customer applies for the opening of insolvency proceedings, we shall be entitled, prior to the ordering of security measures by the insolvency court, to withdraw from the contract and demand the immediate return of the goods.

7. Customer-specific fabrications/project fabrications (custom fabrications)

Customer-specific fabrications require binding information on design, quantity etc. in written form at the time of ordering. For manufacturing reasons, we reserve the right to supply up to 10% above or below the order quantity. Technical modifications or cancellations are subject to any costs incurred. The return of customer-specific fabrications is impossible.

8. Delivery and packaging, transfer of risk

The delivery date is non-binding; although stated to the best of our knowledge. It is subject to us receiving correct, defect-free and complete deliveries. The stated delivery dates relate to completion in the factory, starting on the day the order is accepted by us. Delivery is EXW (ex-works) in accordance with Incoterms 2010. Therefore, the costs are borne by the customer. The risk is transferred to the customer when the goods are passed to the person, company or facility nominated to execute the shipment. This applies also for partial deliveries, or if we have assumed responsibility for delivery and installation. The risk shall be transferred to the customer even in the case of delayed acceptance.

In the absence of specific shipping instructions, we shall proceed as we deem fit and without any obligation to the cheapest or most expedient method. The customer agrees that the order can also be delivered in parts, insofar as this is reasonable for the customer. We shall charge a 5 EURO processing free for shipping to third parties that we supply on behalf of the customer.

The packaging complies with the packaging ordinance. Disposable packaging shall be charged at cost price. The packaging cannot be taken back.

9. Performance impediment and/or impossibility

If we are hindered in the fulfilment of our obligation due to the onset of unforeseeable circumstances, which we are unable to avoid despite reasonable effort in relation to the nature of the circumstances (e.g. operational interruption, delay in the delivery of important raw materials, defects in the delivery), the delivery time shall be extended by a reasonable period, insofar as the supply of goods or services is not rendered unreasonably difficult or impossible.

If we have to accept that these circumstances are not only temporary, we shall be entitled to withdraw from the contract either in whole or in part.

If the supply of goods or services becomes impossible, the customer shall not be obliged to furnish its own contractual service. Section 275 BGB applies mutatis mutandis. If, however, the customer is solely or predominantly responsible for the

circumstances that led to impossibility, it shall remain under an obligation to render the return service. The same applies if this circumstance occurs at a time when the customer is behind schedule with acceptance.

10. Samples/returns

Samples shall be provided only against payment. If samples or models are provided, a credit note shall be issued with the subsequent order if the order value is 125 EURO net or more. Goods can be returned only by agreement, although custom fabrications are excluded from such return.

In the case of returns for which we are not responsible (e.g. incorrect order), we shall charge a processing fee of 10%, the minimum value, however, being 7.50 EURO.

11. Retention of title

The goods shall remain our property unless full payment of all claims and/or until the cheques provided for this purpose are honoured. The itemisation of claims in an ongoing invoice, as well as balancing the account and the recognition thereof does not affect the retention of title. The customer is entitled to sell on the retained goods during the ordinary course of business. However, the customer is not permitted to pledge the goods or transfer them by way of security. It shall assign its claim ensuing from the selling on of the retained goods to us in advance. The customer shall be entitled to collect the claim to the extent that it has fulfilled its obligations towards us. At our request, the customer shall be obliged to state third-party debtors and we shall be entitled to report this and the assignment.

12. Property rights

We reserve property rights and copyrights to all contractual documents such as drafts, drawings, calculations and cost estimates. Such documents must not be reproduced or disclosed to third parties without our consent. Any rights to patents, utility models etc. reside solely with us, insofar as such patents have not yet been filed. Our products are allowed to be replicated only with our written consent.

If objects are fabricated according to drawings or samples, the customer shall warrant that any third party property rights are not infringed by manufacture or delivery. If a third party forbids manufacture and delivery on account of property rights, we shall be entitled to stop manufacture and delivery immediately. The customer shall be obliged to reimburse us with all costs incurred and indemnify us from third party compensation claims. Compensation claims by the customer are impossible.

13. Warranty

If the customer agrees with us a particular quality of the goods, we shall base this agreement on our technical delivery specifications. If we have to deliver according to customer drawings, specifications, samples etc., the customer shall assume the risk for suitability for the intended purpose. If, after the contract is concluded, the scope of goods or services is changed at the customer's request and this impairs the quality or suitability of the goods, claims for defects on the part of the customer shall be ruled out, insofar as such impairments are caused by the customer's requests for change. The time at which the risk is transferred is decisive for the contractual state of the goods. Wear and tear of wearing parts caused by ordinary use does not constitute a defect. Claims for defects are ruled out in the following cases in particular: Unsuitable or improper use, incorrect installation and/or commissioning by the customer or third party, normal wear and tear, incorrect or negligent handling - in particular excessive use -, unsuitable equipment, replacement materials, chemical, electrochemical or electrical influences, unless such defects are caused by ourselves.

If the goods contain a defects, we shall provide, following a reasonable period of grace set by the customer, either a replacement or a repair as we deem fit. If such subsequent performance fails, the customer shall be entitled to either reduce the purchase price or withdraw from the contract. Any further warranty claims are ruled out. In case of negligible deviations from the agreed quality, no claims for defects shall be recognised.

The discovery of defects must be communicated to us immediately in writing. In the case of recognisable defects, however, within 10 days of acceptance, in the case of non-recognisable defects immediately after they become evident. The warranty is 12 months, starting with delivery of the goods ex-works.

14. Liability

With the exception of harm to life, body or health on account of a breach of duty by ourselves, our liability shall be limited to intent or gross negligence.

15. Place of fulfilment, place or jurisdiction and governing law

The place of fulfilment for all obligations ensuing from this contractual relationship is D-70734 Fellbach.

The place of jurisdiction for all legal disputes ensuing from the contractual relationship is the court responsible for the headquarters of Andreas Maier GmbH & Co. KG.

All disputes ensuing from the contract or regarding the validity thereof shall be finally decided by a court of arbitration in accordance with the Court of Arbitration Ordinance of the German Committee for Arbitration Court Procedures or the Conciliation and Arbitration Arrangement of the International Chamber of Commerce, recourse to ordinary courts of law being excluded. The legal dunning process, however, remains permissible.

German law shall govern (BGB and HGB). The applicability of the UN Convention on Contracts for the International Sale of Goods (CISG) is ruled out.

16. Severability clause

If individual provisions become legally invalid, the remaining provisions shall not be affected. The legally invalid provision shall be replaced by regulations that most closely reflect the economic purpose of the contract with reasonable consideration for the mutual interests. The publication of these Terms of Sale, Delivery and Payment renders all previous versions invalid. This does not apply for any contracts concluded prior to announcement.

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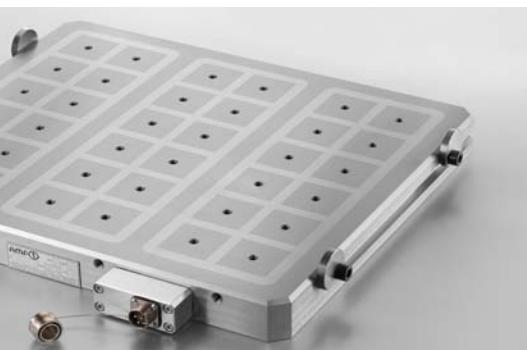
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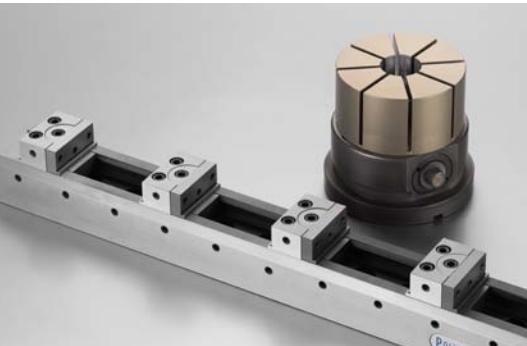
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