TOGGLE CLAMPS, MANUAL AND PNEUMATIC







WE GENERATE EXCITEMENT.

Since its founding by Andreas Maier in 1890, our company has lived though many exciting times. Today we are the leading manufacturer in Europe, supplying over 5,000 different products from the fields of clamping, hand tools and locks. With this extensive product range we can meet all of our customers' needs and requirements. But providing optimal quality means meeting the challenges at all levels: Expert consultation, modern team organisation, individual solutions (including special developments), flexibility in response to changing conditions, etc. And we ourselves find this so exciting that we look forward every day to shaping the market together with our employees and our customers – both now and in the future. That is something you can count on.

THE AMF SERVICE GUARANTEE

> Assuredly on the way to the top

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 AMF 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 Marking and cleaning tools included in the AMF product range.

5 Individual development

And if the product you need doesn't exist? Just ask us: We will find the best solution for you — whether it is a special version or a completely new development.

4 Warranty

We stand by our high quality standards. We handle customer complaints very liberally and without red tape — whenever possible even after the end of the warranty period.

3 Guaranteed quality standard

AMF stands for manufacturing in-house with the utmost care. A tradition we have upheld since 1890 – and naturally for many years now with a modern quality management system to ISO 9001.

2 Short delivery times

AMF's finished goods inventory with over 5,000 items guarantees a delivery readiness of 98%. You can also count on each warehouse item you order being shipped to you on the same day.

1 Service from genuine experts

"Different tasks, different solutions. In AMF's professional product range, you can find the right solution quickly and reliably: either from your local dealer or with help from the specialists in our teams. A phone call is all it takes."

E Made in Germany

It goes without saying that our range of products is developed and manufactured by our team of employees in Germany.

PRODUCTS ON THE COVER

Horizontal toggle clamps with coloured handles, page 26-27







Our innovations and highlights 2018





Toggle clamps with coloured handles





The most important facts ...

> ADVANTAGES OF "TOGGLE" PRINCIPLE

- > Large and quick opening.
- > Clearing the workpieces completely for unimpendend 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 glavanized 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 78 to 98.

AMF toggle clamps are designed for ambient temperatures from -10°C to +80°C and are free of paintwetting 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 as 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, there by insuring, that the action is locked and cannot be released until such time as the handle is returned to its origional position.

> MOUNTING POSSIBILITIES

The base are offered in three versions: toggle clamps with horizontal base, vertical base (preferably used on welded constuction 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.

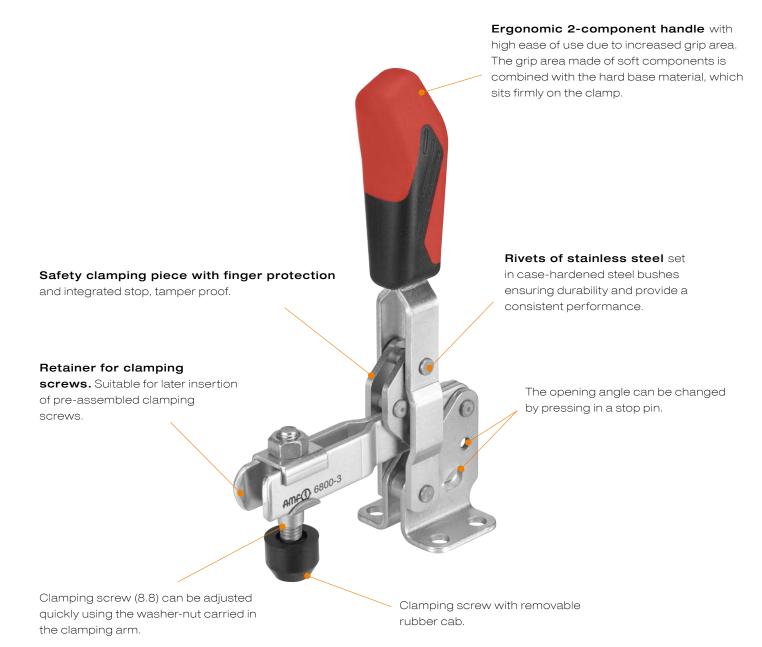




... about toggle clamps

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





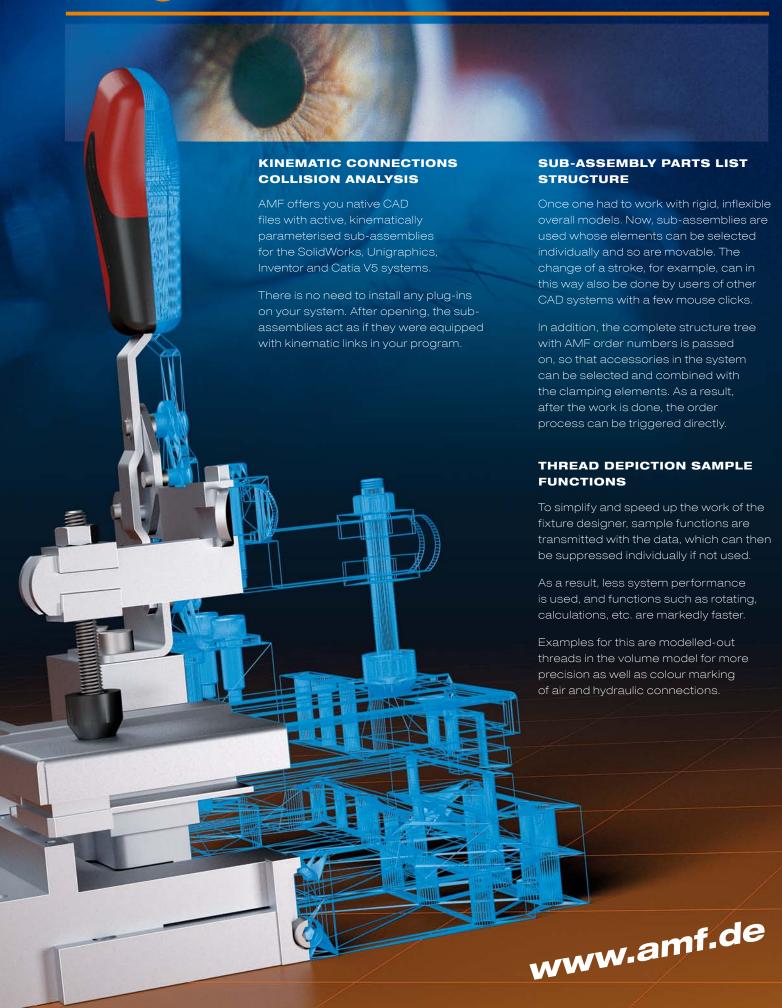




Subject to technical alterations.



The intelligent CAD world of AMF





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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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





Size	F1	F2	Clamping screw	Weight
	[kN]	[kN]		[g]
0	0,5	0,7	M 4x 25	60
1	0,6	1,1	M 5x 30	105
2	0,8	1,2	M 6x 35	175
3	1,2	2,5	M 8x 45	410
4	1,7	3,0	M 8x 65	630
5	3,0	5,0	M12x 80	1480
6	3,4	5,5	M12x110	2200
	0 1 2 3 4 5	[kN] 0 0,5 1 0,6 2 0,8 3 1,2 4 1,7 5 3,0	[kN] [kN] 0 0.5 0.7 1 0.6 1.1 2 0.8 1.2 3 1.2 2.5 4 1.7 3.0 5 3.0 5.0	[kN] [kN] 0 0,5 0,7 M 4x 25 1 0,6 1,1 M 5x 30 2 0,8 1,2 M 6x 35 3 1,2 2,5 M 8x 45 4 1,7 3,0 M 8x 65 5 3,0 5,0 M12x 80

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

No. 6800E

Vertical toggle clamp with blue handle





Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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. 6800 NIE).



No. 6800G

Vertical toggle clamp with green handle





Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[9]
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).



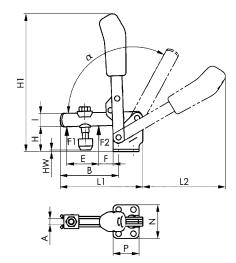


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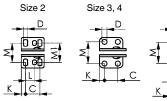
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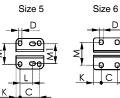












Dimensions:

Size	Α	В	С	D	E	F	Н	H1	HW min.	HW max.	1	К	L	L1	L2	М	M1	N	Р	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	98,5	-4,0	2,0	10	5,5	-	61	59	22,5-26,0	-	34	27	95°	-
2	6	52,0	20,0	5,5	25	11,0	23,0	139,5	-3,0	4,5	12	6,0	12,5	78	89	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	43,5-46,5	-	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.



No. 6802

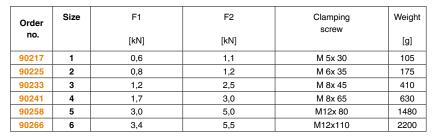
Vertical toggle clamp with red handle

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.



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



No. 6802Y

Vertical toggle clamp with yellow handle





Order no.	Size	F1	F2	Clamping screw	Weight
110.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[9]
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



No. 6802G

Vertical toggle clamp with green handle





Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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

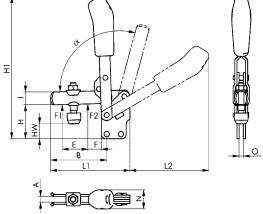




Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[9]
557970	1	0,6	1,1	M 5x 30	105
557971	2	0,8	1,2	M 6x 35	175
557972	3	1,2	2,5	M 8x 45	410
557973	4	1,7	3,0	M 8x 65	630
557974	5	3,0	5,0	M12x 80	1480
557975	6	3,4	5,5	M12x110	2200







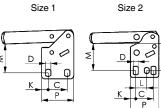
Recommendations



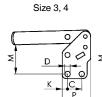
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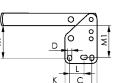


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Size 5



Size 6

Dimensions:

Size	Α	В	С	D	Е	F	Н	H1	HW min.	HW max.	ı	K	L	L1	L2	М	M1	N	0	Р	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°

 $^{^{\}star}\,\mbox{The}$ opening angle can be changed by pressing in a stop pin.



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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[9]
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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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).



No. 6803G

Vertical toggle clamp with green handle





Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[9]
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

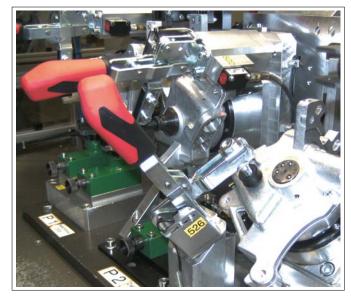
Vertical toggle clamp with black handle

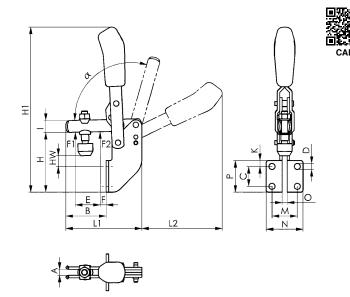




Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[g]
557977	1	0,8	1,1	M5x30	125
557978	2	1,0	1,2	M6x35	220
557979	3	1,4	2,5	M8x45	400
557980	4	2,0	3,0	M8x65	650

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





Recommendations







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Dimensions:

Size	А	В	С	D	Е	F	н	H1	HW min.	HW max.	ı	К	L1	L2	М	N	0	Р	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 in a stop pin.



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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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



No. 6804G

Vertical toggle clamp with green handle





Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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

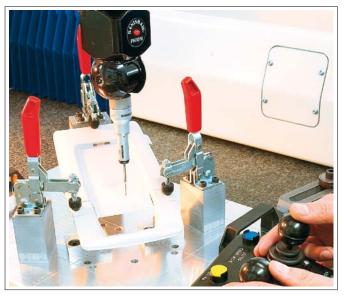
No. 6804T

Vertical toggle clamp with black handle





Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[9]
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



Recommendations



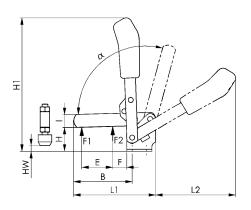


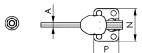


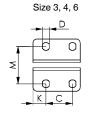
No. 6805, page 20

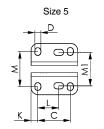


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Dimensions:

Size	А	В	С	D	Е	F	Н	H1	HW min.	HW max.	ı	К	L	L1	L2	М	M1	N	Р	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°

 $^{^{\}star}\,\mbox{The opening angle can be changed by pressing in a stop pin.}$



No. 6806

Vertical toggle clamp with red handle

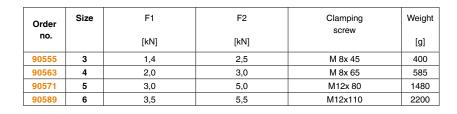
with solid arm and vertical base.

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. Safe	ty clamping piece with finger protection.
Complete with to	empered, galvanized clamping screw
no. 6885 and sle	eve to weld on.





No. 6806Y

Vertical toggle clamp with yellow handle





Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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



No. 6806G

Vertical toggle clamp with green handle





Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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



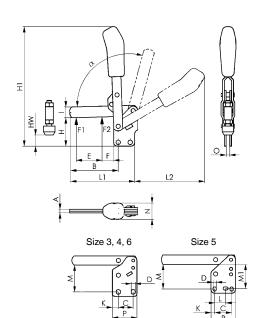
No. 6886, page 151



No. 6802, page 12



No. 6804, page 16



Dimensions:

Size	А	В	С	D	Е	F	Н	H1	HW min.	HW max.	I	K	L	L1	L2	М	M1	N	0	Р	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°

 $^{^{\}star}\,\mbox{The opening angle can be changed by pressing in a stop pin.}$



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

No. 6805Y

Vertical toggle clamp with yellow handle

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





No. 6805J

Vertical toggle clamp with orange handle

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





No. 6805E

Vertical toggle clamp with blue handle

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







No. 6805G

Vertical toggle clamp with green handle

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





No. 6805T

Vertical toggle clamp with black handle

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





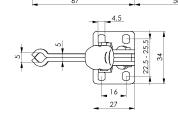
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Recommendations





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Heavy vertical toggle clamp

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

Complete with tempered, galvanized clamping screw no. 6885.

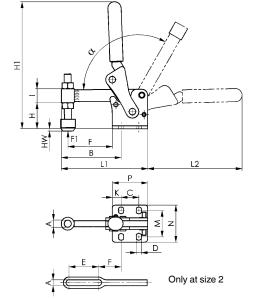


Order	Size	F1	Clamping screw	Weight
no.		[kN]	33.31	[g]
91314	2	2,5	M 6x 50	320
90878	4	5,0	M12x 80	1250
90886	6	6,0	M12x110	2130
90894	8	12,0	M12x110	4050

Note:

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





Recommendations



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Order no.	Size	A	В	С	D	E	F	Н	H1	HW min.	HW max.	1	K	L1	L2	М	N	Р	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.



Heavy vertical toggle clamp

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.

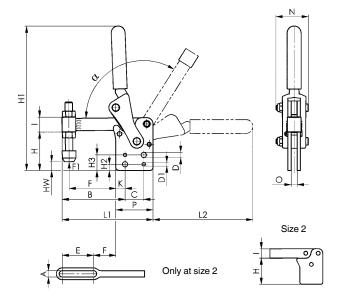


Order	Size	F1	Clamping screw	Weight
no.		[kN]	SCIEW	[g]
91330	2	2,5	M 6x 50	320
90902	4	10,0	M12x 80	1320
90910	6	12,0	M12x110	2120
90928	8	20,0	M12x110	4060

Note:

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





Recommendations







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No. 6811P, page 22

Order no.	Size	А	В	С	D	D1	E	F	Н	H1	H2	НЗ	HW min.	HW max.	I	К	L1	L2	N	0	Р	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°



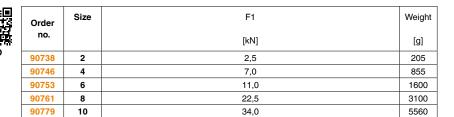
No. 6809P

Modular clamp

with swivelling foot, welding version.

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

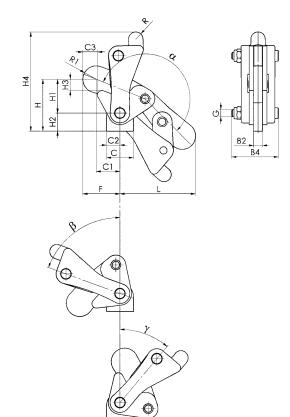
Materials: steel, blued. Lever arm made of cast steel, blued.



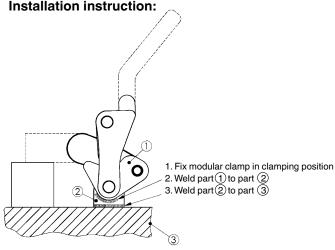
Note:

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









Recommendations



No. 6810P, page 25



No. 6811P, page 22



No. 6812P, page 23

Order no.	Size	B2	B4	С	C1	C2	C3	F	G	Н	H1	H2	НЗ	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°



Modular clamp

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.

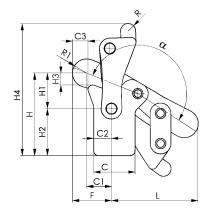


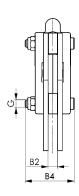
Order	Size	F1	Weight
no.		[kN]	[g]
90803	2	2,5	245
90811	4	7,0	970
90829	6	11,0	1750
90837	8	22,5	3310
90845	10	34,0	5970

Note:

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







Recommendations







No. 6811P, page 22



No. 6812P, page 23

Order no.	Size	B2	B4	С	C1	C2	СЗ	F	G	н	H1	H2	НЗ	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°



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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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).



No. 6830G

Horizontal toggle clamp with green handle



Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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).



Recommendations





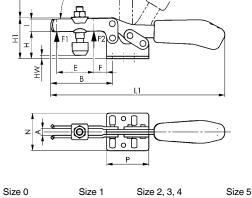


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Size	А	В	С	D	D1	Е	F	Н	H1	H2	HW min.	HW max.	I	К	L	L1	М	M1	N	Р	α
0	4	28	11,5-15,5	4,6	-	9,0	5,5	14,5	23,0	34	-5,5	0,0	7,5	6,3	-	79	16,0	-	25,0	25,5	90°
1	5	42	13,0-14,5	5,2	-	18,7	8,0	19,0	30,0	49	-3,0	2,5	10,0	5,5	-	120	18,0-21,5	-	34,0	34,0	90°
2	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°





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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[9]
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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[9]
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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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).



No. 68300G

Horizontal toggle clamp plus with green handle



Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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).

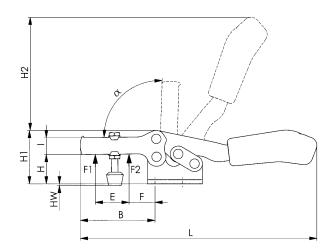
No. 68300T

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).





Recommendations







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No. 6800, page 10

Dimensions:

Size	А	В	С	D	Е	F	Н	H1	H2	HW min.	HW max.	I	К	L	М	N	Р	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°



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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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



No. 6832G

Horizontal toggle clamp with green handle





Order	Size	F1	F2	Clamping	Weight
no.		71.3.17		screw	
		[kN]	[kN]		[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

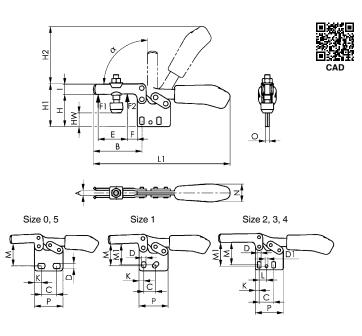
Horizontal toggle clamp with black handle





Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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





Recommendations







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No. 6832S, page 70

Dimensions:

Size	А	В	С	D	D1	Е	F	Н	H1	H2	HW min.	HW max.	ı	К	L	L1	М	M1	N	0	Р	α
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°



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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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



No. 6834G

Horizontal toggle clamp with green handle



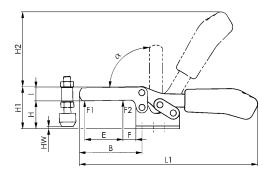
Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[g]
557507	2	1,0	1,2	M 6x35	185
557508	3	1,8	2,5	M 8x45	320
557509	4	2,0	3,0	M 8x65	700
557510	5	3,0	5,0	M12x80	1080

No. 6834T

Horizontal toggle clamp with black handle



Order	Size	F1	F2	Clamping	Weight
no.		[kN]	[kN]	screw	[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





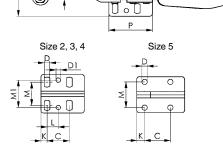




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Q° Q

Size	Α	В	С	D	D1	Е	F	Н	H1	H2	HW min.	HW max.	ı	К	L	L1	М	M1	N	Р	α
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°



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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
110.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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



No. 6833G

Horizontal toggle clamp with green handle





Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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

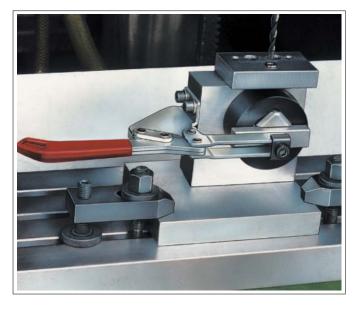
No. 6833T

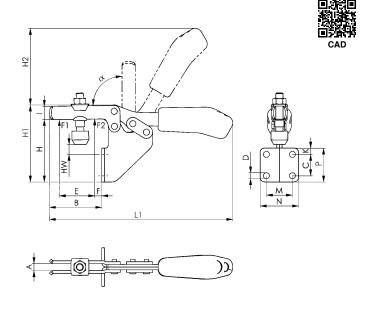
Horizontal toggle clamp with black handle





	Order	Size	F1	F2	Clamping screw	Weight
	no.		[kN]	[kN]		[9]
Г	558021	1	0,8	1,1	M5x30	170
Γ	558022	2	1,0	1,2	M6x35	245
	558023	3	1,8	2,5	M8x45	390
Г	558024	4	2,0	3,0	M8x65	730





Recommendations







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Size	А	В	С	D	E	F	Н	H1	H2	HW min.	HW max.	I	К	L1	М	N	Р	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°



No. 6837M

Horizontal acting toggle clamp

For removable handle.

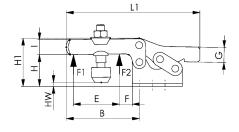
To prevent interference during use, the handle can be removed after opening or closing this horizontal acting toggle clamp. With open clamping arm and horizontal base. Galvanized and passivated. Stainless steel rivets. The bearings are prelubricated.

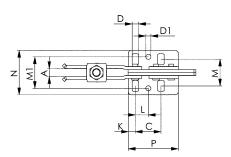
Handle 6837H is not included in delivery and needs to be ordered separately.

Complete with tempered, galvanised clamping screw no. 6890.



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





Recommendations







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Dimensions:

Order no.	Size	А	В	С	D	D1	Е	F	G	Н	H1	HW min.	HW max.	I	К	L	L1	М	M1	N	Р	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	Н	L	N	Weight
110.					[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	Size	н	L	N	Weight
no.					[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



Horizontal toggle clamp

No. 6837HJ

Orange handle, removable





Order no.	Size	Н	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





	der	Size	Н	L	N	Weight
	10.					[g]
557	7525	2	26	93,0	21,0	70
557	7526	3	35	118,5	27,0	122
557	7527	4	42	134,5	34,5	195

No. 6837HG

Green handle, removable





Order	Size	н	L	N	Weight
no.					[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. 6837HT

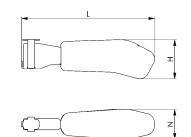
Black handle, removable





Order no.	Size	Н	L	N	Weight
110.					[9]
558025	2	26	93,0	21,0	70
558026	3	35	118,5	27,0	122
558027	4	42	134,5	34,5	195









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.

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



Combination clamp

No. 6860E

Combination clamp with blue handle





Order	Size	F1	F2	Weight
no.		[kN]	[kN]	[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	Size	F1	F2	Weight
no.		[kN]	[kN]	[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



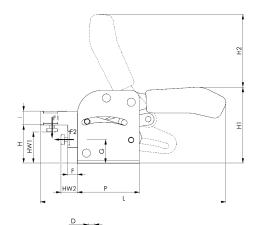


Order	Size	F1	F2	Weight
no.		[kN]	[kN]	[g]
558028	1	1,0	1,0	340
558029	2	2,0	2,0	700
558030	3	3,0	3,0	1620











Recommendations







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No. 6860P, page 118

Dimensions:

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Size	Α	В	С	D	Е	F	G	Н	H1	H2	HW1 min.	HW1 max.	HW2 min.	HW2 max.	ı	K	L	М	N	Р
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



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	Size	F1	F2	Clamping	Weight
no.		[kN]	[kN]	screw	[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	F2	Clamping screw	Weight
110.		[kN]	[kN]		[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).



No. 6841G

Push-pull type toggle clamp with green handle





Order	Size	F1	F2	Clamping	Weight
no.		[kN]	[kN]	screw	[g]
		[KI4]	[KI4]		[9]
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

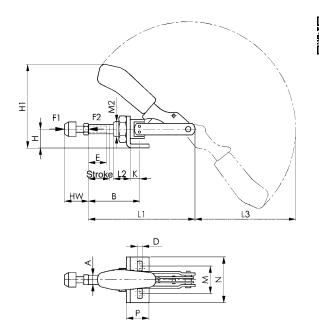




Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[g]
558031	0	0,8	0,8	M 4x20	65
558032	1	1,0	1,0	M 4x20	125
558033	2	2,0	2,0	M 6x25	245
558034	3	2,5	2,5	M 8x35	445
558035	5	4,5	4,5	M12x50	880
558036	5-M27	4,5	4,5	M12x50	900

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

















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Dimensions:

Size	А	B min.	B max.	D	E	Н	H1	Stroke	HW min.	HW max.	К	L1	L2	L3	М	M2	N	Р
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



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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	F2	Clamping screw	Weight
		[kN]	[kN]		[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



No. 6840G

Push-pull type toggle clamp with green handle





Order no.	Size	F1	F2	Clamping screw	Weight
		[kN]	[kN]	Sciew	[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

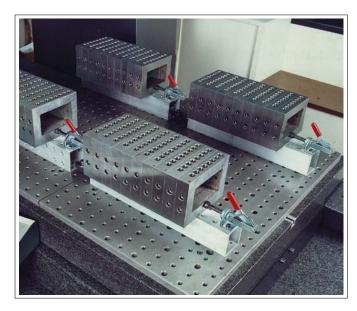
No. 6840T

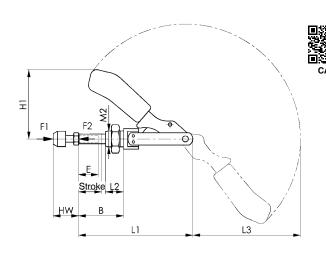
Push-pull type toggle clamp with black handle

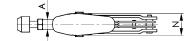




Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[9]
558037	0	0,8	0,8	M 4x20	60
558038	1	1,0	1,0	M 4x20	100
558039	2	2,0	2,0	M 6x25	245
558040	3	2,5	2,5	M 8x35	330
558041	5	4,5	4,5	M12x50	700
558042	5-M27	4,5	4,5	M12x50	720







Recommendations







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No. 6840S, page 74

Dimensions:

Size	А	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



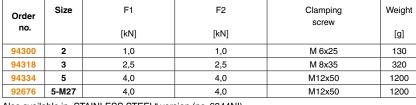
No. 6844

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

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

Complete with tempered, galvanized clamping screw no. 6880.



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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
	no.		[kN]	[kN]		[g]
ĺ	557397	2	1,0	1,0	M 6x25	130
ĺ	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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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).



No. 6844G

Push-pull type toggle clamp with green handle





Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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

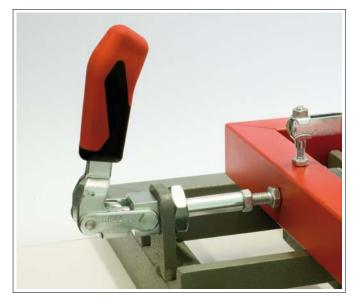
Push-pull type toggle clamp with black handle

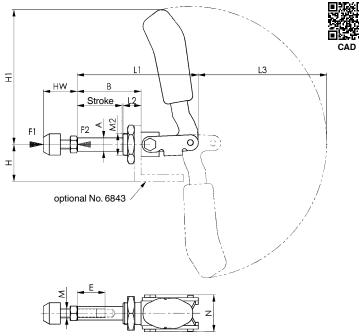




Order no.	Size	F1	F2	Clamping screw	Weight
		[kN]	[kN]		[g]
558046	2	1,0	1,0	M 6x25	130
558047	3	2,5	2,5	M 8x35	320
558048	5	4,0	4,0	M12x50	1200
558049	5-M27	4,0	4,0	M12x50	1200

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





Recommendations





No. 6843, page 46

No. 6860, page 38

Dimensions:

Size	А	В	E	Н	H1	Stroke	HW min.	HW max.	L1	L2	L3	М	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



No. 6843

Angle base, solid

for no. 6840 and no. 6844.

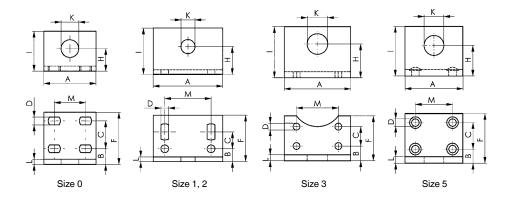
Increased range of application due to enlarged height of center line. Fastening by means of 4 screws.



Order	Size	Α	В	С	D	F	Н	I	К	L	М	Weight
no.												[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



No. 6841, page 40



No. 6840, page 42



No. 6844, page 44

No. 6845

Push-pull type toggle clamp

Push-type clamp.

(Opposed operation of rod and lever). Version with long rodguide. 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.

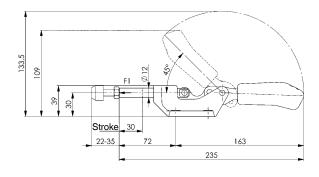


Order	Size	F1	Clamping screw	Weight
no.		[kN]		[g]
94243	3	4	M8x35	540

Advantage:

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





Recommendations

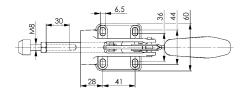


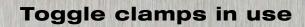




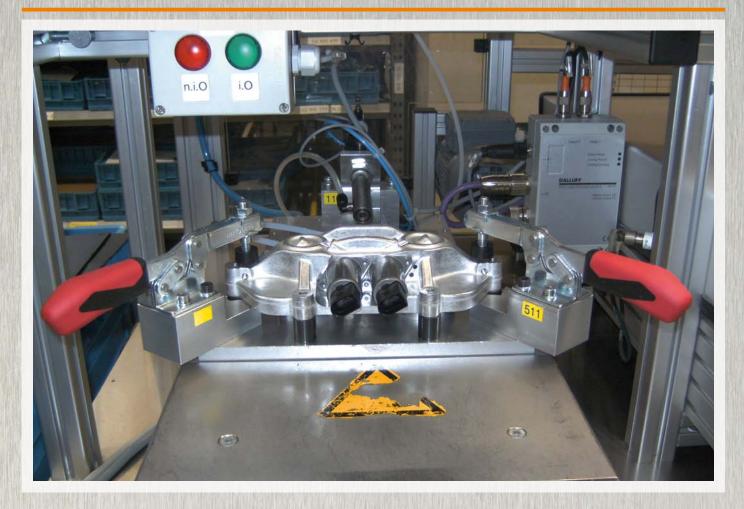
page 48

No. 6842PK, page 50













Heavy-duty push-pull type toggle clamp

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 of malleable casting, varnished. Toggle parts and push rod are heat-treated $\,$ steel, galvanized and passivated. Rivets made of stainless steel, which, for size 3, run in hardened bushings. Bearings are prelubricated.

Ergonomic, oil-resistant handle with large grip surface and soft components for size 3 and 5.

Complete with tempered, galvanized clamping screw no. 6880.

M

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	F2	Clamping screw	Weight
110.		[kN]	[kN]		[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	F2	Clamping screw	Weight
110.		[kN]	[kN]		[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	F2	Clamping screw	Weight
110.		[kN]	[kN]		[g]
557714	5	10	10	M12x50	1115
557715	7	25	25	M12x50	2840



Heavy-duty push-pull type toggle clamp

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

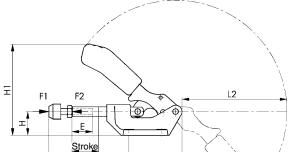
No. 6842T

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





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





Recommendations



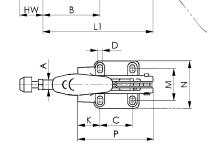
No. 6841, page 40



No. 6842PL, page 51



No. 6860, page 38



Size	А	B min.	B max.	С	D	Е	Н	H1	Stroke	HW min.	HW max.	К	L1	L2	М	N	Р
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.



Heavy push-pull type toggle clamp

No. 6842PK

Heavy push-pull type toggle clamp

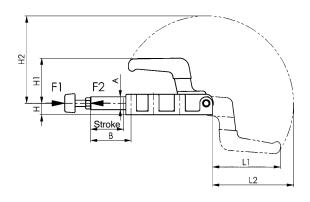
with solid lever. For push- and pull-clamping. (Equal operation of rod and lever).

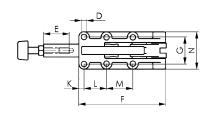
Heavy-duty version with long rod-guide. Base of malleable casting, burnished. Hardened pins. Lever-parts and rod of tempered steel, burnished. Handle made of red, oil-resistant plastic.

Complete with tempered, galvanized clamping screw no. 6880.

Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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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No. 6811P, page 22



No. 6842PL, page 51

Order no.	Size	А	В	D	E	F	G	Н	H1	H2	Stroke	К	L	L1	L2	М	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



Heavy push-pull type toggle clamp

No. 6842PL

Heavy push-pull type toggle clamp

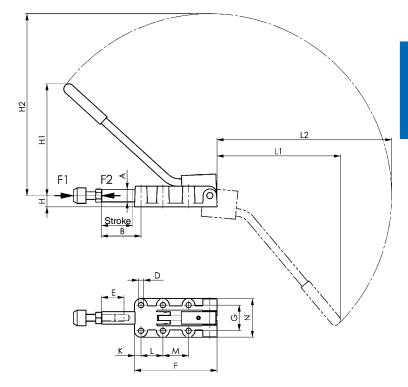
with reversible lever. For push- and pull-clamping. (Equal operation of rod and lever).

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.

Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[g]
92627	4	7	7	M 8x35	650
92643	5	12	12	M10x50	1600
92668	7	25	25	M12x50	4280
92684	8	45	45	M16x80	7720





Recommendations







No. 6842, page 48



No. 6842PK, page 50

Order no.	Size	А	В	D	E	F	G	Н	H1	H2	Stroke	К	L	L1	L2	М	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

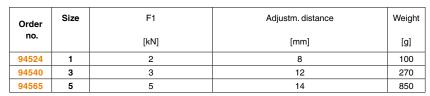


Hook type toggle clamp

No. 6847

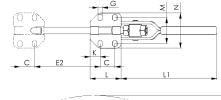
Hook type toggle clamp

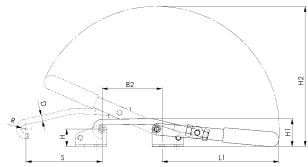
Galvanized and passivated. Bushes case hardened and greased; rivets of stainless steel. Hook and clamping sleeve tempered. Handle made of red, oil-resistant plastic. Ergonomic, oil-resistant handle with large grip surface and soft components for size 1.

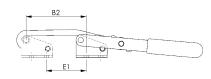


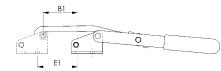
Also available in "STAINLESS STEEL" version (no. 6847NI).













Recommendations





No. 6848H, page 54

Dimensions:

Order no.	Size	B1	B2	С	D	E1	E2	G	Н	H1	H2	К	L	L1	М	N	R	S
94524	1	16-23	35-42	19	5,30	17-24	35-42	4,5	22,7	34,5	111	6	31	62,6	26,0-30,0	40	4,5	45
94540	3	32-44	65-77	19	7,10	39-51	72-84	5,5	22,7	36,0	181	13	40	123,5	31,5-35,5	45	5,5	98
94565	5	26-40	57-71	29	10,75	27-42	58-73	11,2	49,0	69,0	282	13	55	189,5	55,5-63,0	85	8,0	147

No. 6847G

Counter catch

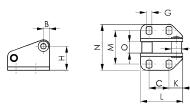
for no. 6847. Galvanized and passivated. Bushes case hardened; rivet of stainless steel.



Order no.	Size	Height	Length	Weight
110.		[mm]	[mm]	[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	В	С	D	G	Н	К	L	М	N	0
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



Hook type toggle clamp

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.

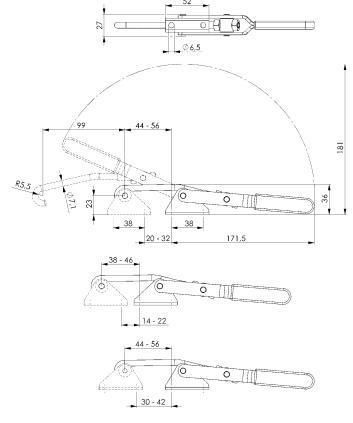


Order	Size	F1	Adjustm. distance	Weight
no.		[kN]	[mm]	[g]
94680	3	3	22	270

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

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





Recommendations



No. 6847S, page 75



No. 6849PH, page 58

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.



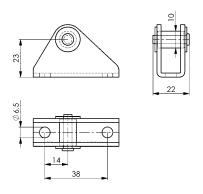


Order	Size	Height	Length	Weight
no.		[mm]	[mm]	[g]
94672	3	32	52	65

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

Note:

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





Horizontal hook-type toggle clamp

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

Also available in "STAINLESS STEEL" version (no. 6848HNIJ).

No. 6848HE

Horizontal hook-type toggle clamp with blue handle



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

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



Horizontal hook-type toggle clamp

No. 6848HG

Horizontal hook-type toggle clamp with green handle



Order	Size	F1	Weight
no.		[kN]	[9]
557563	2	1,6	120
557564	3	3,2	330
557565	4	7,0	810

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

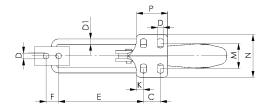
No. 6848HT

Horizontal hook-type toggle clamp with black handle



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

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



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Recommendations







No. 6848V, page 56

Dimensions:

Size	B min.	B max.	С	D	D1	E min.	E max.	F	Н	H1	H2	К	L1 min.	L1 max.	L5	М	N	Р
2	42,0	76	13	5,2	4	38,0	72	11	12	47,0	99,0	6,4	125	159	69	19,5-23,5	38,0	26,0
3	53,5	101	19	6,5	6	48,6	96	14	19	70,0	135,5	8,0	169	216	93	24,5-32,0	48,0	35,0
4	66,0	130	32	8,5	8	59,0	123	19	26	94,5	171,5	9,5	209	273	111	35,0-46,0	64,3	53,5



Vertical hook-type toggle clamp

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, oilresistant handle with large grip surface and soft components.
Supplied complete with counter catch.

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

Also available in "STAINLESS STEEL" version (no. 6848VNIY).

No. 6848VJ

Vertical hook-type toggle clamp with orange handle





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

Also available in "STAINLESS STEEL" version (no. 6848VNIJ).

No. 6848VE

Vertical hook-type toggle clamp with blue handle





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

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



Vertical hook-type toggle clamp

No. 6848VG

Vertical hook-type toggle clamp with green handle





Order	Size	F1	Weight
no.		[kN]	[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

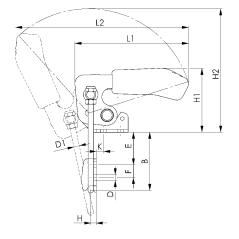
Vertical hook-type toggle clamp with black handle

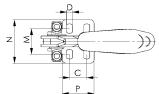




Order	Size	F1	Weight
no.		[kN]	[g]
558126	2	1,6	130
558127	3	3,2	340
558128	4	7,0	810

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





Recommendations







No. 6848H, page 54



Dimensions:

Si	ze	B min.	B max.	С	D	D1	E min.	E max.	F	н	H1	H2	К	L1	L2	М	N	Р
- 2	2	24,0	49	13	5,2	4	5	30	11	4,5	47,0	99	6,4	91	158	19,5-23,5	38,0	26,0
(3	34,5	64	19	6,5	6	7	36	14	6,0	70,0	136	8,0	125	190	24,5-32,0	48,0	35,0
4	4	43,0	81	32	8,5	8	9	47	19	8,0	94,5	168	9,5	151	239	35,0-46,0	64,5	53,5

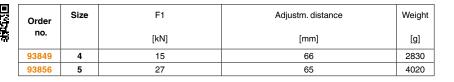


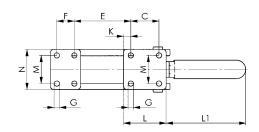
Heavy hook type toggle clamp

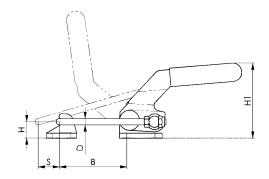
No. 6849PH

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 zincplated. Handle grip is red, oil-resistant plastic. Supplied complete with counter catch.







Recommendations







No. 6847K, page 53

No. 6848H, page 54

No. 6811P, page 22

Order no.	Size	В	С	D	E	F	G	Н	H1	К	L	L1	М	N	S
93849	4	42-107	45	10	24-90	28	8,5	26	122	12,0	68	130	45	64	44
93856	5	49-114	57	12	28-93	35	10,5	32	146	12,5	86	164	57	82	47









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

no. 6890.

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



Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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





					1
Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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



No. 6800SE

Vertical toggle clamp with blue handle and safety latch





Order	Size	F1	F2	Clamping screw	Weight
		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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

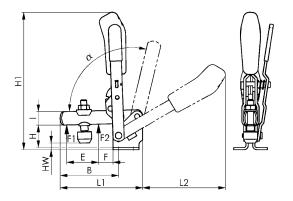
No. 6800ST

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





Recommendations



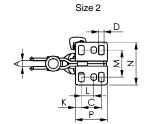
No. 6891, page 151

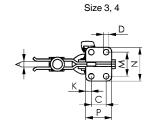


No. 6800, page 10



No. 6860, page 38





Dimensions:

Size	А	В	С	D	Е	F	Н	H1	HW min.	HW max.	ı	К	L	L1	L2	М	N	Р	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°

 $[\]ensuremath{^{\star}}$ The opening angle can be changed by pressing in a stop pin.



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	F2	Clamping screw	Weight
110.		[kN]	[kN]		[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	F2	Clamping screw	Weight
110.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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



No. 6802SG

Vertical toggle clamp with green handle and safety latch





Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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

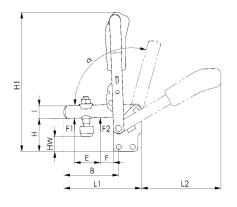
No. 6802ST

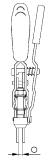
Vertical toggle clamp with black handle and safety latch



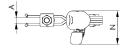


Order no.	Size	F1	F2	Clamping screw	Weight
110.		[kN]	[kN]		[g]
558136	2	1,0	1,2	M6x35	175
558137	3	1,4	2,5	M8x45	470
558138	4	2,0	3,0	M8x65	690









Recommendations



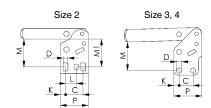




No. 6802. page 12



No. 6820A, page 120



Dimensions:

Size	А	В	С	D	Е	F	Н	H1	HW min.	HW max.	ı	К	L	L1	L2	М	M1	N	0	Р	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 in a stop pin.



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

Complete with tempered, galvanized clamping screw no. 6890.

no. 6890.



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight
		[10.4]	[id4]		เลา
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	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	F2	Clamping screw	Weight
110.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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



No. 6803SG

Vertical toggle clamp with green handle and safety latch





Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight
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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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



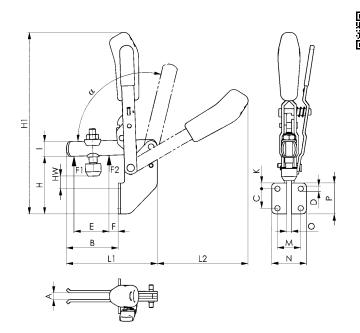
No. 6896, page 153



No. 6803, page 14



No. 6821A,



Dimensions:

Size	А	В	С	D	Е	F	Н	H1	HW min.	HW max.	ı	К	L1	L2	М	N	0	Р	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°

 $^{^{\}star}\,\mbox{The}$ opening angle can be changed by pressing in a stop pin.



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

No. 6804SJ

Vertical toggle clamp with orange handle and safety latch





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

No. 6804SE

Vertical toggle clamp with blue handle and safety latch





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



No. 6804SG

Vertical toggle clamp with green handle and safety latch





Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]	00.0	[g]
557578	3	1,4	2,5	M8x45	470

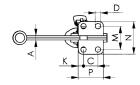
No. 6804ST

Vertical toggle clamp with black handle and safety latch

	=W!
N	EW



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









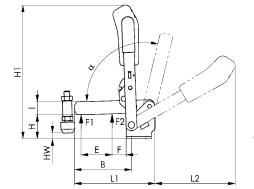
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No. 6804, page 16



No. 6834S, page 72



Dimensions:

Size	Α	В	С	D	Е	F	Н	H1	HW min.	HW max.	I	К	L1	L2	М	N	Р	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°

 $^{^{\}star}\,\mbox{The}$ opening angle can be changed by pressing in a stop pin.



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	Size	F1	F2	Clamping screw	Weight
	no.		[kN]	[kN]		[g]
ſ	92650	3	1,8	2,5	M8x45	390
ſ	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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	F2	Clamping screw	Weight
		[kN]	[kN]		[g]
557747	3	1,8	2,5	M8x45	390
557748	4	2,0	3,0	M8x65	800



No. 6830SG

Horizontal toggle clamp with green handle and safety latch



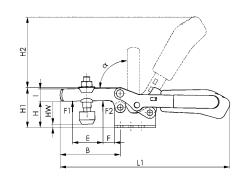
Order	Size	F1 F2		Clamping screw	Weight
no.		[kN]	[kN]		[g]
557579	3	1,8	2,5	M8x45	390
557580	4	2,0	3,0	M8x65	800

No. 6830ST

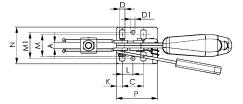
Horizontal toggle clamp with black handle and safety latch



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







Dimensions:

Size	А	В	С	D	D1	E	F	Н	H1	H2	HW min.	HW max.	I	К	L	L1	М	M1	N	Р	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°



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]
		[KIV]	[KIV]		[9]
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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[g]
557749	3	1,8	2,5	M8x45	390
557750	4	2,0	3,0	M8x65	800



No. 6832SG

Horizontal toggle clamp with green handle and safety latch



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

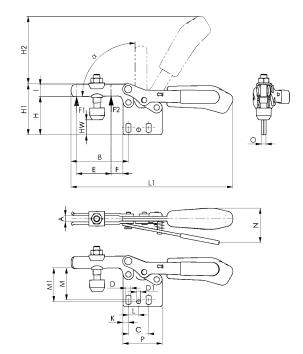
No. 6832ST

Horizontal toggle clamp with black handle and safety latch





Order no.	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[9]
558158	3	1,8	2,5	M8x45	390
558159	4	2,0	3,0	M8x65	800





Dimensions:

Size	А	В	С	D	D1	E	F	н	H1	H2	HW min.	HW max.	ı	К	L	L1	М	M1	N	0	Р	α
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°



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.



Ord		F1	F2	Clamping screw	Weight
no).	[kN]	[kN]		[g]
935	34 4	2	3	M8x65	800

No. 6834SY

Horizontal toggle clamp with yellow handle and safety latch



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

No. 6834SJ

Horizontal toggle clamp with orange handle and safety latch



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

No. 6834SE

Horizontal toggle clamp with blue handle and safety latch

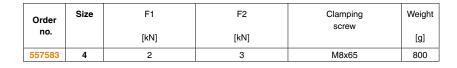


Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[g]
557751	4	2	3	M8x65	800



No. 6834SG

Horizontal toggle clamp with green handle and safety latch



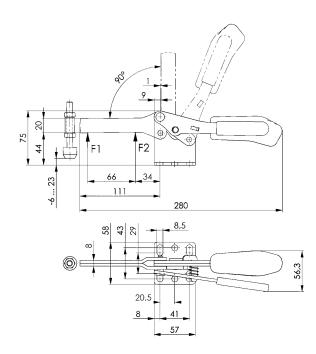


No. 6834ST

Horizontal toggle clamp with black handle and safety latch



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





Recommendations







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No. 6840S

Push-pull type toggle clamp with safety latch

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

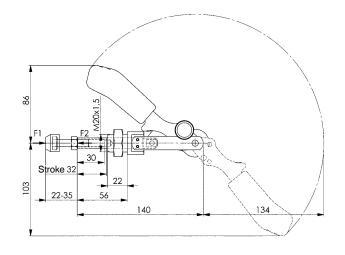
For open and clamped positions.
Without angle base. Push and pull-clamping (equal operation of rod and lever).

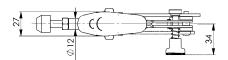
Long rod-guide with attaching thread and nut. Rivets made of stainless steel, lever-parts and rod of tempered steel. Bearings are pre-lubricated.

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

Complete with tempered, galvanized clamping screw no. 6880.

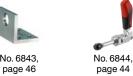






Recommendations









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.



Orde	Size	F1	Weight
no.		[kN]	[g]
9366	3	3	295

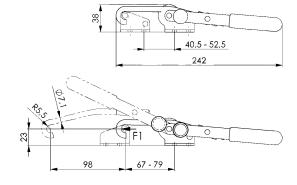
Note:

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

On request:

A "stainless steel" version is available.





Recommendations



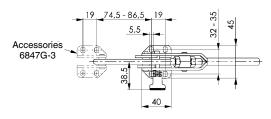


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page 52



No. 6847SU, page 75



page 52 No. 6847SU

Hook type toggle clamp with safety latch

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.



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



54 259 259

Recommendations



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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

Supplied complete with counter catch.



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

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



No. 6848HSG

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

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

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



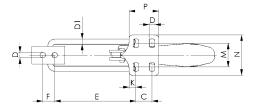
No. 6848HST

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

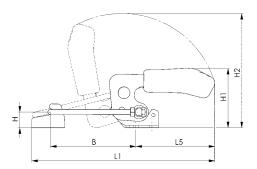
Order	Size	F1	Weight
no.		[kN]	[g]
558161	4	7,0	850

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









Recommendations







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No. 6847S, page 75

No. 6848GH, page 155

Dimensions:

Size	B min.	B max.	С	D	D1	E min.	E max.	F	Н	H1	H2	К	L1 min.	L1 max.	L5	М	N	Р
4	66	130	32	8,5	8	59	123	19	26	94	168	9,5	209	273	111	35-46	64,3	53,5



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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
110.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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



No. 6800NIE

Vertical toggle clamp with blue handle





Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[9]
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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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

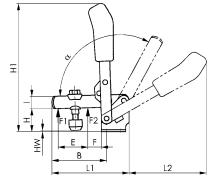
Vertical toggle clamp with black handle

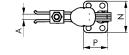






Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]	301011	[g]
558164	0	0,5	0,7	M4x25	60
558165	1	0,6	1,1	M5x30	105
558166	2	0,8	1,2	M6x35	175
558167	3	1,2	2,5	M8x45	410
558168	4	1,7	3,0	M8x65	630











Dimensions:

Size	А	В	С	D	E	F	Н	H1	HW min.	HW max.	ı	К	L	L1	L2	М	M1	N	Р	α	α*
0	4	31	8,5-13,5	4,5	14,0	5,5	18,0	81	-1,5	3,5	8	4,3	-	49	50	23	-	32	22	95°	-
1	5	39	16	4,5	17,5	6,0	19,0	98	-4,2	2,0	10	5,5	-	61	57	24	-	34	27	95°	-
2	6	52	20	5,5	25,0	11,0	23,0	129	-3,3	5,0	12	6,0	12,5	78	80	23-31	27	43	32	105°	60°
3	8	79	20	7,5	36,0	19,0	33,0	186	2,4	11,2	18	7,5	-	112	112	32	-	46	35	105°	60°
4	10	100	32	8,5	54,0	16,0	42,5	220	-6,0	22,0	20	13,0	-	141	130	45	-	64	53	105°	60°

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



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

No. 6803NIY

Vertical toggle clamp with yellow handle





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

No. 6803NIJ

Vertical toggle clamp with orange handle





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

No. 6803NIE

Vertical toggle clamp with blue handle





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



No. 6803NIG

Vertical toggle clamp with green handle





(Order	Size	F1	F2	Clamping screw	Weight
	no.		[kN]	[kN]		[g]
5	57759	2	0,8	1,2	M6x35	220

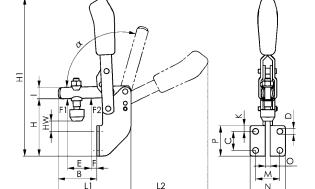
No. 6803NIT

Vertical toggle clamp with black handle





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





Recommendations







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No. 6844NI,

Dimensions:

Size	Α	В	С	D	Е	F	Н	H1	HW min.	HW max.	I	K	L1	L2	М	N	0	Р	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°

 $^{^{\}star}\,\mbox{The opening angle can be changed by pressing in a stop pin.}$



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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]	Sciew	[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



No. 6830NIG

Horizontal toggle clamp with green handle



Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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

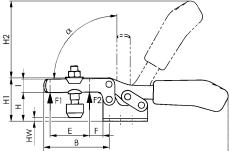
No. 6830NIT

Horizontal toggle clamp with black handle





Order	Size	F1	F2	Clamping screw	Weight
110.		[kN]	[kN]		[9]
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



Size 1

D

0

Size 2, 3, 4





Recommendations







No. 6800NI, page 78



No. 6847KNI, page 91

Dimensions:

Size	А	В	С	D	D1	Е	F	Н	H1	H2	HW min.	HW max.	I	К	L	L1	М	M1	N	Р	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°

Size 0



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.

Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[g]
555175	2	1,6	3,0	M6 x 50	450
555176	4	3,5	8,0	M10 x 76	1250





No. 68300NIY

Horizontal toggle clamp plus with yellow handle



Order no.	Size	F1	F2	Clamping screw	Weight
110.		[kN]	[kN]		[g]
557279	2	1,6	3,0	M6 x 50	450
557280	4	3,5	8,0	M10 x 76	1250

No. 68300NIJ

Horizontal toggle clamp plus with orange handle





Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[9]
557444	2	1,6	3,0	M6 x 50	450
557445	4	3,5	8,0	M10 x 76	1250

No. 68300NIE

Horizontal toggle clamp plus with blue handle





Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[g]
557765	2	1,6	3,0	M6 x 50	450
557766	4	3,5	8,0	M10 x 76	1250



No. 68300NIG

Horizontal toggle clamp plus with green handle



Order no.	Size	F1 [kN]	F2 [kN]	Clamping screw	Weight
557601	2	1,6	3,0	M6 x 50	450
557602	4	3,5	8,0	M10 x 76	1250

No. 68300NIT

Horizontal toggle clamp plus with black handle





Order no.	Size	F1	F2	Clamping screw	Weight
		[kN]	[kN]		[g]
558175	2	1,6	3,0	M6 x 50	450
558176	4	3,5	8,0	M10 x 76	1250

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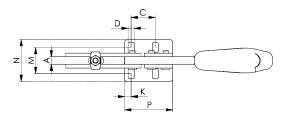


Recommendations









Dimensions:

Siz	ze	Α	В	С	D	Е	F	Н	H1	H2	HW min.	HW max.	I	К	L	М	N	Р	α
2	2	8	71	26,0	6,5	39	14	28	51	110	-1	12,0	16	7,0	224	23,5 - 34	46	52	90°
4	ı	10	120	41,5	8,6	69	23	41	77	135	-2	17,5	24	10,5	329	34,5 - 45	60	76	90°



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

No. 6841NIJ

Push-pull type toggle clamp with orange handle





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

No. 6841NIE

Push-pull type toggle clamp with blue handle





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



No. 6841NIG

Push-pull type toggle clamp with green handle

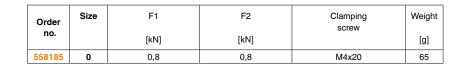


Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[g]
557610	0	0,8	0,8	M4x20	65

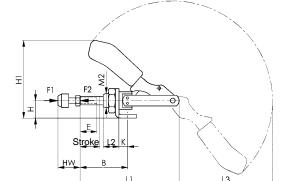
No. 6841NIT

Push-pull type toggle clamp with black handle











Recommendations



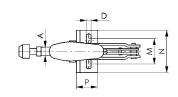
No. 6844NI, page 88



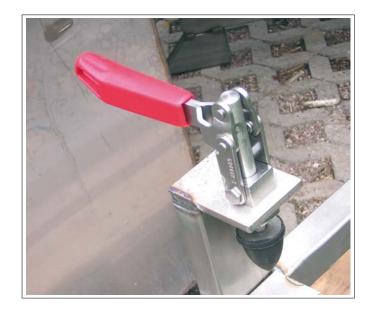
No. 6860, page 38



No. 6800NI, page 78



Si	ze	Α	B min.	B max.	D	Е	Н	H1	Stroke	HW min.	HW max.	К	L1	L2	L3	М	M2	N	Р
	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







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 prelubricated. 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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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	Size	F1	F2	Clamping screw	Weight
	no.		[kN]	[kN]		[g]
ĺ	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	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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



No. 6844NIG

Push-pull type toggle clamp with green handle



Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[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

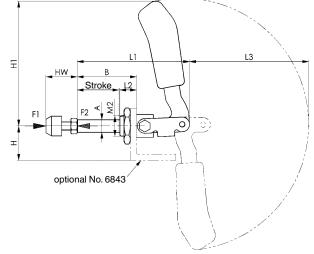
No. 6844NIT

Push-pull type toggle clamp with black handle





Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[9]
558186	2	1,0	1,0	M6x25	130
558187	3	2,5	2,5	M8x35	320
558188	5	4,0	4,0	M12x50	1200





Weight

[g]

35

170

260

Recommendations







No. 6847NI, page 90

z

В

9,0

11,0

14,5

17,0

Α

30

60

65

70

С

16

11-18

19

32

D F H

4,5 | 30 | 13 | 23

6,7 | 40 | 24 | 40

6,7 | 44 | 33 | 50

9,0

Dimensions:

Size	А	В	E	Н	H1	Stroke	HW min.	HW max.	L1	L2	L3	М	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

Size

0

3

5

Order

no.

95091

95158

95174

95190

Size 0

No. 6843NI

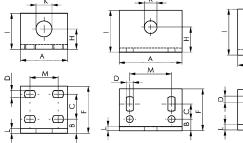
Angle base, solid

for no. 6841NI and no. 6844NI.

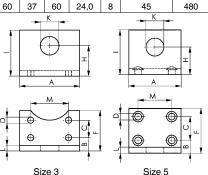
Stainless steel, polished. Increased range of application due to enlarged height of center line. Fastening by means of 4 screws.







Size 2



Κ

10,2

16,2 5

20,2 6

L

15,5-20,5

41

1







No. 6847NI

Hook type toggle clamp

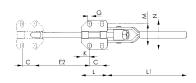
Stainless steel, polished. Rivets running in greased bushes. Handle of red high quality oil-resistant plastic. Ergonomic, oil-resistant handle with large grip surface and soft components for size 1. Suitable for use in food industry.

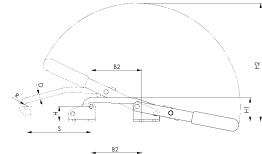


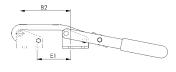
Order	Size	F1	Adjustm. distance	Weight
no.		[kN]	[mm]	[g]
95406	1	1,0	8	100
95422	3	1,5	12	270
95448	5	2,5	14	850

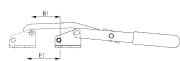












Recommendations





No. 6841NI.

No. 6841NI, page 86

Dimensions:

C	order no.	Size	B1	B2	С	D	E1	E2	G	Н	H1	H2	К	L	L1	М	N	R	S
9	5406	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
9	5422	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
9	5448	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.

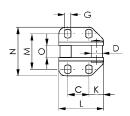


Order	Size	Height	Length	Weight
no.		[mm]	[mm]	[g]
95463	1	29	31	40
95489	3	29	40	70
95505	5	61	55	320









Dimensions:

Order no.	Size	В	С	D	G	Н	К	L	М	N	0
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



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.



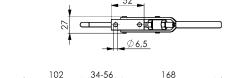
Order	Size	F1	Adjustm. distance	Weight
no.		[kN]	[mm]	[g]
95455	3	1,5	22	270

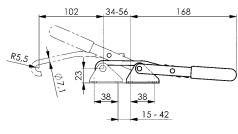
Note:

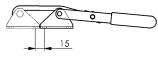
The range of movement can be adjusted by swiveling the base and repositioning the catch.

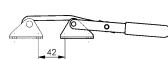




















No. 6847GKNI

Counter catch

for cylindrical mounting surfaces.

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

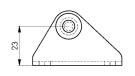


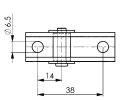


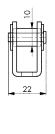
Order	Size	Height	Length	Weight
no.		[mm]	[mm]	[g]
95596	3	32	52	65

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

No. 6848HNIJ

Horizontal hook-type toggle clamp with orange handle



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



No. 6848HNIG

Horizontal hook-type toggle clamp with green handle



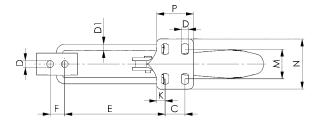
Order	Size	F1	Weight
no.		[kN]	[g]
557603	2	1,6	120
557604	3	3,2	330
557605	4	7,0	810

No. 6848HNIT

Horizontal hook-type toggle clamp with black handle



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



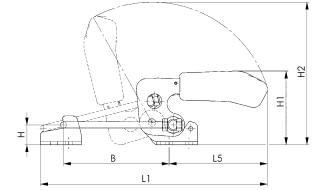


Recommendations









Dimensions:

Size	B min.	B max.	С	D	D1	E min.	E max.	F	Н	H1	H2	К	L1 min.	L1 max.	L5	М	N	Р
2	42,0	76	13	5,2	4	38,0	72	11	12	47,0	99	6,4	125	159	69	19,5-23,5	38,0	26,0
3	53,5	101	19	6,5	6	48,6	96	14	19	70,0	137	8,0	169	217	94	24,5-32,5	48,0	35,0
4	72,0	127	32	8,5	8	65,0	120	19	26	94,5	168	9,5	214	270	111	35,0-46,0	64,5	53,5



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

No. 6848HSNIY

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



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

No. 6848HSNIJ

Rost

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

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

No. 6848HSNIE

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

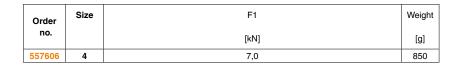


Order	Size	F1	Weight
no.		[kN]	[g]
557770	4	7,0	850



No. 6848HSNIG

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



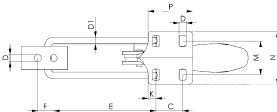


No. 6848HSNIT

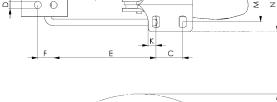
Horizontal hook-type toggle clamp with black handle and safety latch

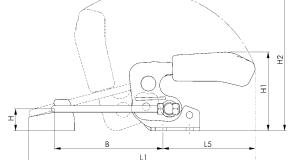


Order	Size	F1	Weight
no.		[kN]	[g]
558181	4	7,0	850









Recommendations





No. 6848VNI, page 96

No. 6848GHNI, page 155

Dimensions:

Size	B min.	B max.	С	D	D1	E min.	E max.	F	Н	H1	H2	К	L1 min.	L1 max.	L5	М	N	Р
4	72	130	32	8,5	8	65	123	19	26	94	168	9,5	215	273	111	35-46	64,5	53,5



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

No. 6848VNIJ

Vertical hook-type toggle clamp with orange handle







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



No. 6848VNIG

Vertical hook-type toggle clamp with green handle





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

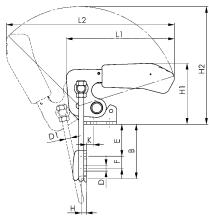
No. 6848VNIT

Vertical hook-type toggle clamp with black handle

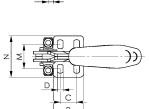




Order	Size	F1	Weight
no.		[kN]	[g]
558182	2	1,6	130
558183	3	3,2	340
558184	4	7,0	810







Recommendations







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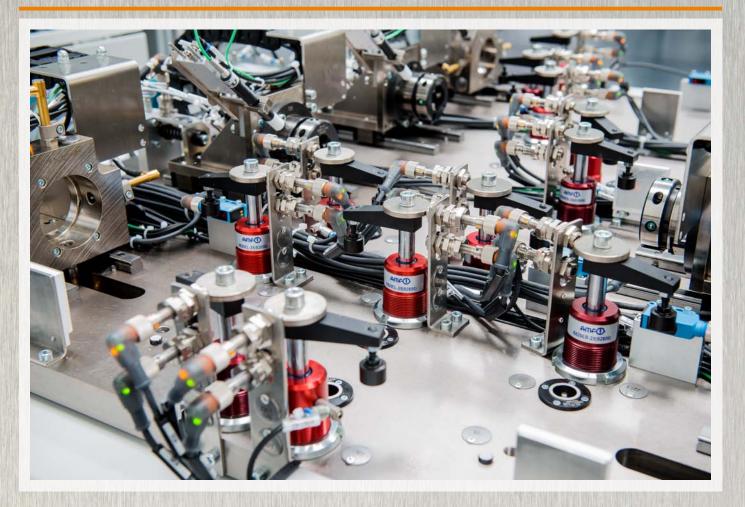


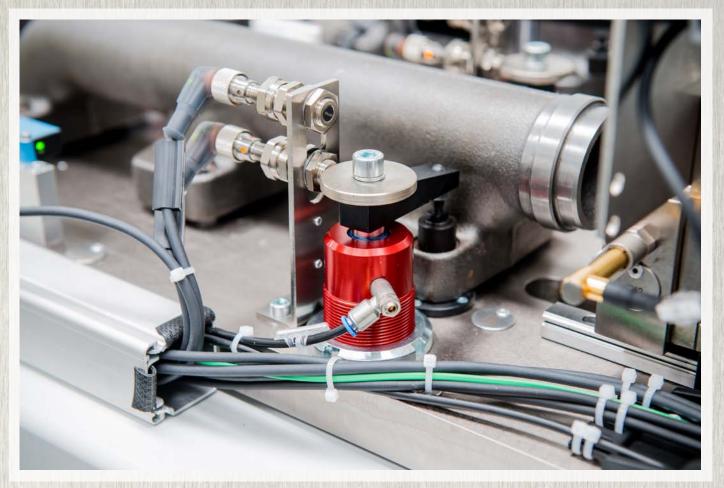
page 80

Dimensions:

Siz	е	B min.	B max.	С	D	D1	E min.	E max.	F	Н	H1	H2	К	L1 min.	L1 max.	М	N	Р
2		24	47	13	5,2	4	5,0	28	11	4,5	47,0	99	6,8	91	158	19,5-23,5	38,0	26,0
3		33	63	19	6,5	6	6,5	37	14	6,0	70,0	137	8,0	125	195	24,5-32,5	48,0	35,0
4		43	81	32	8,5	8	9,0	47	19	8,0	94,5	171	9,6	155	244	35,0-46,0	64,5	53,5









VARIABLE TOGGLE CLAMPS

The benefits at a glance:

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





Variable toggle clamps

No. 6870

Horizontal toggle clamp with variable clamping height

with open clamping arm and horizontal base.
Toggle clamp with continuous counterbalance function for

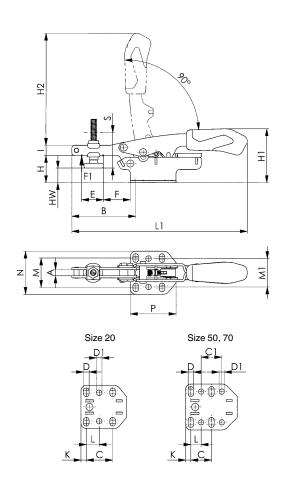
Toggle clamp with continuous counterbalance function for workpieces with different clamping heights.

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.







Recommendations



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No. 68300 page 28

Order no.	Size	Α	В	С	C1	D	D1	E	F	Н	H1	H2	HW min.	HW max.	I	К	L	L1	М	M1	N	Р
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



Variable toggle clamps

No. 6871

Horizontal toggle clamp with variable clamping height

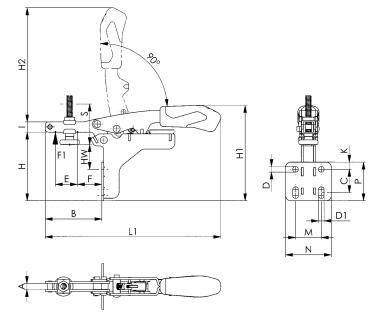
with open clamping arm and angle base.
Toggle clamp with continuous counterbalance function for workpieces with different clamping heights.

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
554881	20	2	20	35	M6 x 40	272
554882	50	3	35	40	M8 x 55	544



Dimensions:

Order no.	Size	А	В	С	D	D1	E	F	Н	H1	H2	HW min.	HW max.	I	К	L1	М	N	Р
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

50

3

554884

No. 6872

Horizontal toggle clamp with variable 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.



Recommendations



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Dimensions:

Order no.	Size	А	В	С	D	D1	E	F	Н	Н1	H2	HW min.	HW max.	I	К	L	L1	М	M1	N	0	Р
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

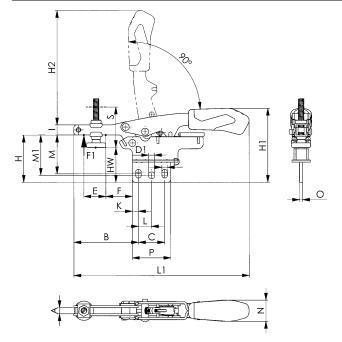
Size Automatic Maximum Clamping Weight Order height compensation S height compensation screw [kN] [mm] [mm] [g] 554883 20 2 20 35 M6 x 40 272

40

M8 x 39

544

35



Variable toggle clamps

No. 6873

Push-pull type toggle clamp with variable clamping height

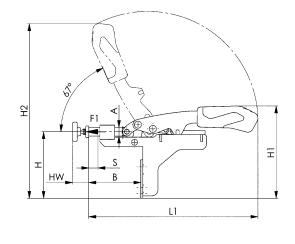
with angle base.
Toggle clamp with continuous counterbalance function for workpieces with different clamping widths.

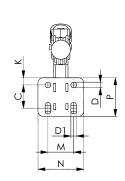
Galvanised and passivated. Ergonomic, oil-resistant handle with large grip surface and soft components. Retainer for the clamping screw at the end of the clamp arm.

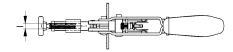
Complete with galvanised clamping screw.



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	А	В	С	D	D1	Н	H1	H2	HW min.	HW max.	I	К	L1	М	N	Р
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 variable clamping height

with 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.



Recommendations

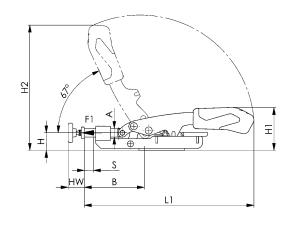


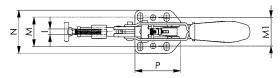


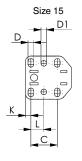


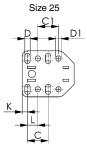


Order no.	Size	F1 [kN]	Automatic stroke compensation S [mm]	Maximum stroke compensation [mm]	Clamping screw	Weight [g]
554887	15	2	8	25	M6 x 29	272
554888	25	3	13	35	M8 x 38	499









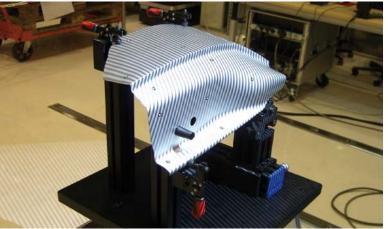
Order no.	Size	А	В	С	C1	D	D1	н	H1	H2	HW min.	HW max.	I	К	L	L1	М	M1	N	Р
554887	15	8,5	50 - 59	26,0	-	5,5	5,5	17,5	42	124	12	29	M6	5,3	12,7	167	26 - 32	28	42,5	45,0
554888	25	11,8	67 - 92	25,4	25,4	6,5	6,5	23,0	59	170	17	39	M8	6,3	12,7	236	32 - 44	38	57,0	63,5

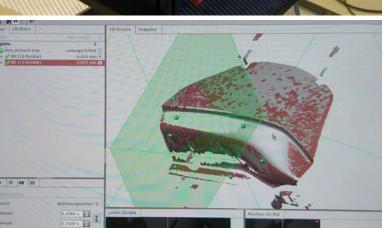


AMF TOGGLE CLAMPS FOR OPTICAL MEASUREMENT TECHNOLOGY

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 serveral 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.



Vertical toggle clamp, black

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 prelubricated.

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.

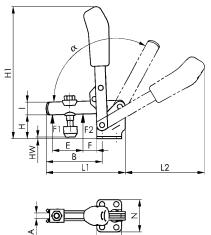
Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[g]
90167	0	0,5	0,7	M4x34,5	60
90175	1	0,6	1,1	M5x38,0	105
90183	2	0,8	1,2	M6x46,0	175
90191	3	1,2	2,5	M8x63,0	410

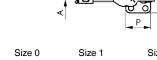
Note:

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



No. 6890B, page 149



No. 6802B, page 105



No. 6800BS, page 111

Order no.	Size	Α	В	С	D	E	F	Н	H1	HW min.	HW max.	I	К	L	L1	L2	М	M1	N	Р	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.





Vertical toggle clamp, black

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 prelubricated.

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

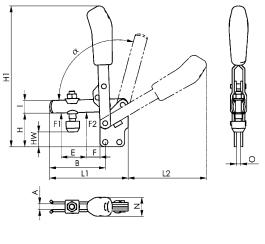
Order	Size	F1	F2	Clamping screw	Weight
110.		[kN]	[kN]		[g]
90415	1	0,6	1,1	M5x38	105
90472	2	0,8	1,2	M6x46	175
90498	3	1,2	2,5	M8x63	410

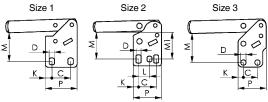
Note:

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 112



No. 6841B, page 110

Order no.	Size	А	В	С	D	E	F	Н	H1	HW min.	HW max.	I	К	L	L1	L2	М	M1	N	0	Р	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 in a stop pin.





Horizontal toggle clamp, black

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 prelubricated.

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

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

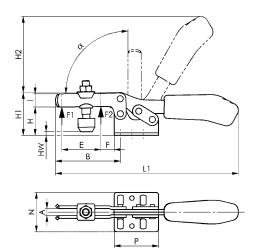
Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[g]
90423	0	0,3	0,4	M4x34,5	35
90480	1	0,8	1,1	M5x38	105
90506	2	1,0	1,2	M6x46	185
90522	3	1,8	2,5	M8x63	320

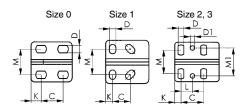
Note:

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 107



No. 6841B, page 110

Order no.	Size	A	В	С	D	D1	Е	F	Н	H1	H2	HW min.	HW max.	I	К	L	L1	М	M1	N	Р	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°





Horizontal toggle clamp, black

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 prelubricated.

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.

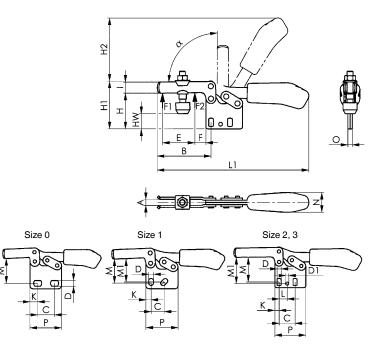
Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[g]
90290	0	0,3	0,4	M4x34,5	35
90308	1	0,8	1,1	M5x38	105
482471	1	0,8	1,1	-	95
90530	2	1,0	1,2	M6x46	185
456400	2	1,0	1,2	-	170
90381	3	1,8	2,5	M8x63	320
482497	3	1,8	2,5	-	280

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. 6830B, page 106



page 104

Order no.	Size	A	В	С	D	D1	E	F	Н	H1	H2	HW min.	HW max.	I	К	L	L1	М	M1	N	0	Р	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	- 1	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	- 1	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°





Horizontal toggle clamp, black

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.

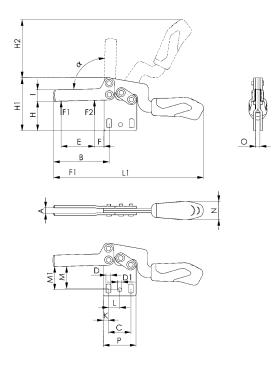
Order	Size	F1	F2	Weight
no.		[kN]	[kN]	[g]
90670	2	1,0	1,2	190

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







No. 6890B, page 149

Order no.	Size	A	В	С	D	D1	E	F	Н	H1	H2	I	K	L	L1	М	M1	N	0	Р	α
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°





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.

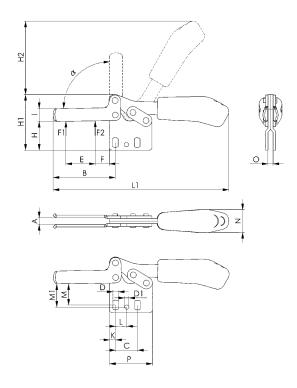
Order	Size	F1	F2	Weight
no.		[kN]	[kN]	[g]
90696	3	1,8	2,5	320

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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Order no.	Size	A	В	С	D	D1	E	F	Н	H1	H2	I	К	L	L1	М	M1	N	0	Р	α
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°



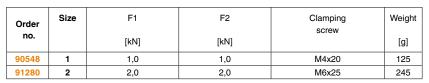


Push-pull type toggle clamp, black

No. 6841B

Push-pull type toggle clamp, black

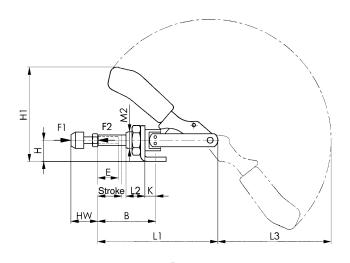
With small angle base. Push- and pull-clamping. (Equal operation of rod and lever). Long rod-guide with attaching thread and nut. Matte black surface. Stainless steel rivets. Leverparts and rod of tempered steel. Bearings are pre-lubricated. Ergonomic, oil-resistant black handle with large grip surface and soft components. Lever can be set to any angle relative to base. Complete with tempered, matte-black clamping screw no. 6880B.



Note:

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





Recommendations



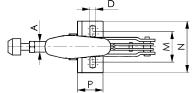
No. 6880B, page 150



No. 6800B, page 104



No. 6830B page 106



Dimensions:

Order no.	Size	A	B min.	B max.	D	E	Н	H1	Stroke	HW min.	HW max.	К	L1	L2	L3	М	M2	N	Р
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

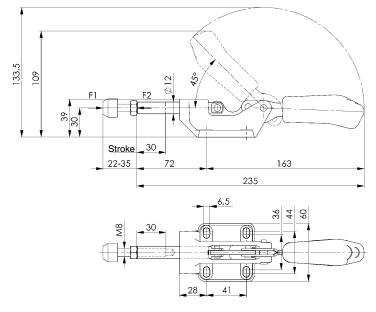
Push clamp.

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





Vertical toggle clamp, black

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.

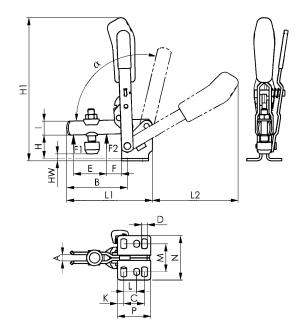
	Order	Size	F1	F2	Clamping screw	Weight
	no.		[kN]	[kN]		[g]
Ì	91348	2	1,0	1,2	M6x46	260

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



No. 6890B, page 149



No. 6800B, page 104



No. 6802B, page 105

Order no.	Size	Α	В	С	D	Е	F	Н	H1	HW min.	HW max.	ı	К	L	L1	L2	М	Ν	Р	α	α*
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°

 $^{^{\}star}\,\mbox{The}$ opening angle can be changed by pressing in a stop pin.





Vertical toggle clamp, black

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.

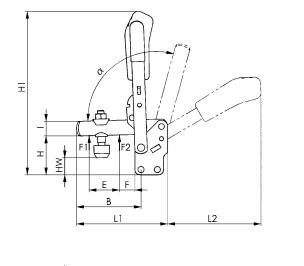
	Order	Size	F1	F2	Clamping screw	Weight
	no.		[kN]	[kN]		[g]
Ì	99689	3	1,4	2,5	M8x63	470

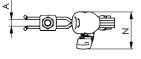
Note:

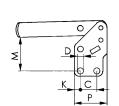
These clamps are suitable for photogrammetric use. The matte-black surface of the clamps prevents reflection while photographing.

For suitable clamping arm extension see no. 6896.









Recommendations



No. 6890B, page 149



No. 6802B, page 105



No. 6800B, page 104

Order no.	Size	Α	В	С	D	E	F	Н	H1	HW min.	HW max.	I	К	L1	L2	М	N	0	Р	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.

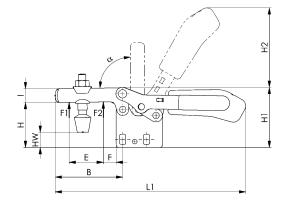
Order	Size	F1	F2	Clamping screw	Weight
no.		[kN]	[kN]		[g]
99648	3	1,8	2,5	M8x63	390

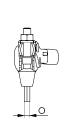
Note:

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

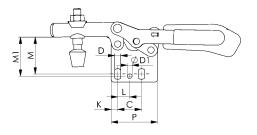
For suitable clamping arm extension see no. 6896.













Recommendations



No. 6896, page 153



No. 6890B, page 149



No. 6835BS-2, page 114

Order no.	Size	Α	В	O	D	D1	E	F	Н	H1	H2	HW min.	HW max.	_	K	L	L1	М	M1	Z	0	Р	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°





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.

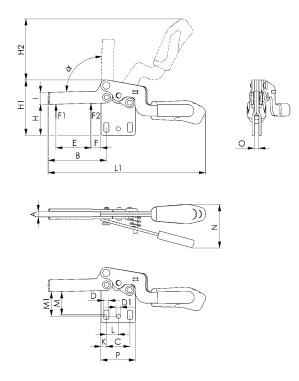
Order	Size	F1	F2	Weight
no.		[kN]	[kN]	[g]
90712	2	1,0	1,2	230

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 113

Order no.	Size	Α	В	С	D	D1	E	F	Н	H1	H2	I.	К	L	L1	М	M1	N	0	Р	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°





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

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.

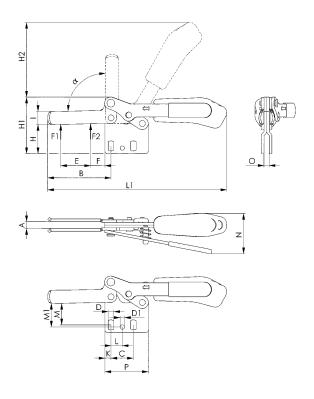
Order	Size	F1	F2	Weight
no.		[kN]	[kN]	[g]
90662	3	1,8	2,5	350

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. 6890B, page 149

Order no.	Size	A	В	С	D	D1	E	F	Н	H1	H2	I	К	L	L1	М	M1	N	0	Р	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°



AMF(3)

The most imortant ...

> 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

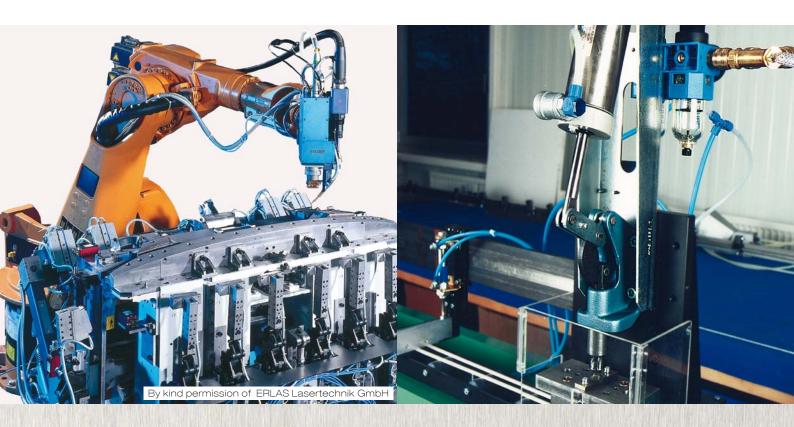
The pneumatic toggle clamp no. 6820 correspond in design and dimensions to the mechanical toggle clamp no. 6800. Therefore hand operated clamps can be replaced with pneumatic toggle clamps - if required.

Heavy duty pneumatic toggle clamps no. 6825C/CE and no. 6826C/CE are recommended to be incorporated in special and transfer machines. Tempered and ground bolts guarantee long life. The push type pneumatic toggle clamp no. 6850 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 fulcum.
- > F5 is the piston force 6 bar air pressure.





Push type pneumatic toggle clamp

No. 6850

Push type pneumatic toggle clamp

Thrust clamp

Heavy version for long working life. Fitted with double-acting FESTO pneumatic cylinder with flow-restriction drillings for reduced speed, anodised, assembled and ready to connect. Sizes 3 with magnetic piston to signal end positions, for sizes 5 and 7, end position monitoring is not possible. Materials: console galvanized and passivated, clamp body is malleable iron casting, painted. Toggle parts and push rod are heat-treated steel, galvanized and passivated. Rivet is stainless steel. Bearings are pre-lubricated.

Complete with tempered, galvanized clamping screw no. 6880.

	Order	Size	F1	F3	F5	Vn	Clamping screw	Weight
回题 性 型	no.		[kN]	[kN]	[kN]	[dm³]		[g]
ing	95034	3	4	2,5	0,75	0,8	M8x35	1800
or	95059	5	10	5,0	1,00	2,2	M12x50	3400
ect.	95075	7	25	10,0	1,80	4,5	M12x50	7680

F3 = maximum clamping force at 6 bar.

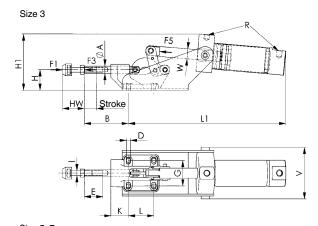
Vn = Air consumption per double stroke in dm³ at 6 bar.

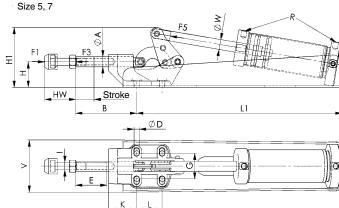
Note:

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

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







Recommendations







No. 6842, page 48

No. 6820A, page 120

No. 6825C, page 122

Dimensions:

Order no.	Size	dia. A	В	D	Е	G	Н	H1	Stroke	HW min.	HW max.	I	К	L	L1	R	V	dia.W	Piston dia.	Piston stroke
95034	3	12	71	6,5	30	41	33	91	20,0	21,5	35	8 M	28	41	253	G1/8	83	16	40	62
95059	5	16	98	8,5	50	41	41	96	29,6	30,0	50	M12	45	41	330	G1/8	80	16	50	100
95075	7	22	105	11,0	50	57	59	128	38,0	30,0	50	M12	45	70	423	G1/4	96	16	63	125



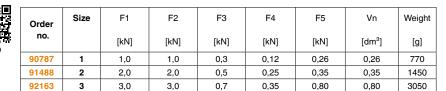
Combi-clamp, pneumatic

No. 6860P

Combi-clamp, pneumatic

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

With magnetic piston for limit position query.

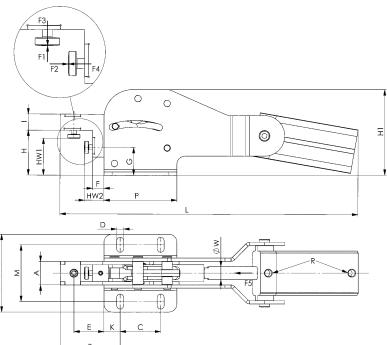


F3 or. F4 = max. achievable clamping force at 6 bar. Vn = air consumption per double stroke in dm³ at 6 bar.

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



No. 6860, page 38

Order no.	Size	Α	В	С	D	E	F	G	Н	H1	HW1 min.	HW1 max.	HW2 min.	HW2 max.	I	К
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	М	N	Р	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



Pneumatic toggle clamp

No. 6820K

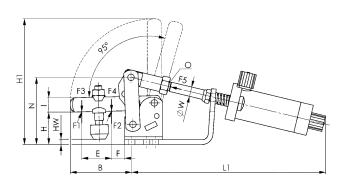
Pneumatic toggle clamp

with horizontal cylinder attachment.
Fitted with FESTO 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 bushings. Bearings are pre-lubricated. Complete with tempered, galvanized clamping screw no. 6890. The console is self-supporting and must be clear of other surfaces. The speed of operation is controlled with a valve. For sizes 2 and 3, the front air connection is on the side.

Order	Size	F1	F2	F3	F4	F5	Vn	Clamping screw	Weight
no.		[kN]	[kN]	[kN]	[kN]	[N]	[dm³]		[g]
91710	0	0,5	0,7	0,07	0,09	38	0,03	M4x25	125
91728	1	0,8	1,1	0,13	0,18	60	0,06	M5x30	400
91736	2	1,0	1,2	0,35	0,50	170	0,17	M6x35	600
91744	3	1,4	2,5	0,55	1,00	265	0,30	M8x45	800

F3+F4 = maximum clamping force at 6 bar. Vn = Air consumption per double stroke in dm³ at 6 bar.





Recommendations



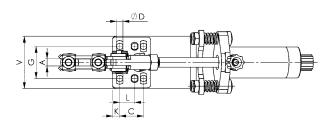
No. 6891, page 151



page 121



No. 6825CE, page 124



Dimensions:

Order no.	Size	А	В	С	dia. D	E	F	G	Н	H1	HW min.	HW max.	I	К
91710	0	4	31	13,5	4,5	16	10	23	20	70	-1	6	8	5,0
91728	1	5	38	16,0	4,5	19	14	24	23	85	-2	5	10	6,0
91736	2	6	51	20,0	5,4	27	20	27	27	105	-1	8	12	6,0
91744	3	8	80	20,0	7,1	43	27	32	40	155	2	14	18	7,5

Order no.	Size	L	L1	N	0	V	dia. W	Piston dia.	Piston stroke	Dia. of compressed-air hoses Inside dia. x Outside dia.
91710	0	-	132	40	40	33	4	10	40	3x4,3
91728	1	-	145	45	45	34	6	12	40	4x6,2
91736	2	12,5	163	56	56	44	8	20	40	4x6,2
91744	3	-	206	76	76	50	10	25	50	4x6,2

Connection for plastic tube, FESTO-NW3 for 10 mm piston dia., FESTO-NW4 for 12, 20 and 25 mm piston dias. Piston dia. = Cylinder dia. required for piston force F5 at 6 bar air pressure.



Pneumatic clamp

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.



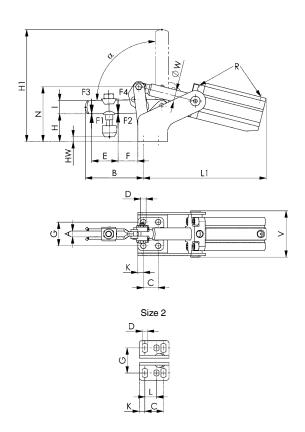
Order	Size	F1	F2	F3	F4	Vn	Clamping screw	Weight
no.		[kN]	[kN]	[kN]	[kN]	[dm³]		[g]
555061	1	0,8	1,1	0,20	0,3	0,08	M5 x 30	320
555062	2	1,0	1,2	0,70	1,0	0,26	M6 x 35	600
555063	3	1,0	2,5	0,65	1,1	0,35	M8 x 45	1005
555064	4	2,0	3,0	1,50	2,2	0,80	M8 x 65	1520

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 121

Order no.	Size	А	В	С	D	Е	F	G	Н	H1	HW min.	HW max.	I	К	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°



Pneumatic clamp

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.

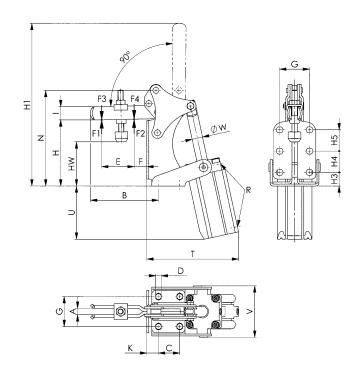


Order	Size	F1	F2	F3	F4	Vn	Clamping screw	Weight
no.		[kN]	[kN]	[kN]	[kN]	[dm³]		[g]
555065	2	1	1,2	0,70	1,0	0,26	M6 x 35	625
555066	3	1	2,5	0,65	1,1	0,35	M8 x 45	1025
555067	4	2	3,0	1,50	2,2	0,80	M8 x 65	1700

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. 6829V, page 129



No. 6826C, page 125

Order no.	Size	A	В	С	D	E	F	G	Н	H1	НЗ	H4	H5	HW min.	HW max.	1	К	N	R	Т	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



No. 6825C

Heavy pneumatic toggle clamp

with horizontal cylinder attachment.
Tempering steel, burnished. The axle bolts running in bearing bushes are tempered, ground and locked with circlips.

Magnetic piston for end-position monitoring. Clamp is ready for installation and consists of:

- toggle clamp element no. 6815C
- double acting FESTO pneumatic cylinder

Order no.	Size	F1	F2	F3	F4	F5	Vn	Weight
		[kN]	[kN]	[kN]	[kN]	[kN]	[dm³]	[g]
92205	4	6	9	1,5	2,2	0,75	1,0	4380
92213	6	12	18	2,5	3,5	1,00	1,8	7360
92221	8	20	30	4,0	6,0	1,80	4,3	16800

F3+F4 = maximum 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 intergrated into automated manufacturing.

Note:

This heavy pneumatic toggle clamp is also available in a hydraulicdrive version (article no. 6960C). In case of interest, please ask for our catalogue "Hydraulic Clamping Systems".

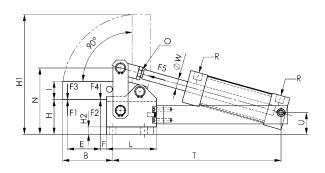
Suitable proximity switches for end-position monitoring are available using order no. 392241.

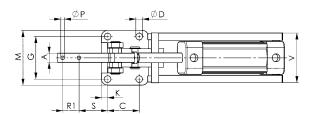
Design: PUR cable 0.3 m with M8 plug connection and rotating knurled nuts.

Switching function: NOC.

Output: PNP.







Recommendations



page 150



page 123



page 130

Dimensions:

Order no.	Size	A	В	С	dia. D	Е	F	G	Н	H1	H2	Ţ	К	L
92205	4	15	82	52	11	54	10,0	70	57	197	12	30	10,0	82
92213	6	20	90	55	11	60	10,0	83	61	220	12	40	11,0	90
92221	8	30	128	80	13	95	9,5	111	86	310	12	60	12,5	120

Order no.	Size	М	N	0	dia. P	R	R1	S	Т	U	V	dia. W	Piston dia.	Piston stroke
92205	4	90	109	M12x1,25	6,2	G1/4	27	47,0	277	35,5	82	16	40	80
92213	6	105	129	M16x1,50	8,2	G1/4	26	53,0	315	40,0	101	16	50	100
92221	8	135	176	M16x1,50	13,2	G1/4	40	69,5	383	54,0	123	20	63	120



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 no. 6815C
- double acting FESTO pneumatic cylinder
- bearing block

These cylinders are made to DIN ISO 6432.



Order	Size	F1	F2	F3	F4	F5	Vn	Weight
no.		[kN]	[kN]	[kN]	[kN]	[kN]	[dm³]	[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+F4 = maximum clamping force at 6 bar.

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

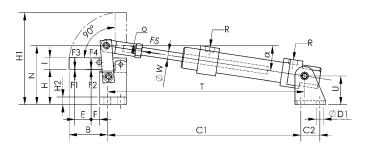
Application:

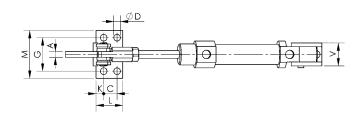
These pneumatic toggle clamps are of machine tool quality and can be installed in machines such as material handling lines and special machines. Opening and clamping position of the clamp can be controlled electrically and can be intergrated into automated manufacturing.

Note:

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







Recommendations







No. 6825C, page 122 page 124

No. 6828V, page 136

Dimensions:

Order no.	Size	А	В	С	C1	C2	dia. D	dia. D1	E	F	G	Н	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	К	L	М	N	0	R	Т	U	V	dia. W	α	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



No. 6825CE

Heavy pneumatic toggle clamp

with horizontal cylinder attachment.

With swivel mounting and adjustable end position cushioning. **Magnetic piston for end-position monitoring.** Tempering steel, burnished. The axle bolts running in bearing bushes are tempered, ground and locked with circlips.

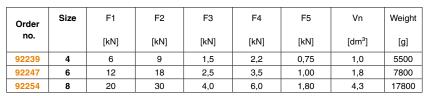
Clamp is ready for installation and consists of:

- toggle clamp element no. 6815C
- double acting FESTO pneumatic cylinder.

These cylinders are made to

- ISO 6431
- VDMA 24562
- NFE 49003.1

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F3+F4 = maximum 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 intergrated into automated manufacturing.

Note:

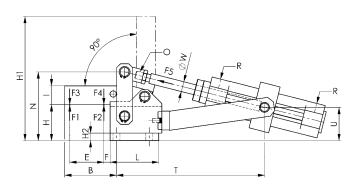
Suitable proximity switches for end-position monitoring are available using order no. 392241.

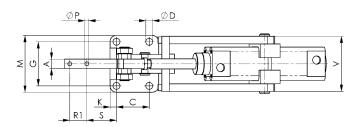
Design: PUR cable 0.3 m with M8 plug connection and rotating knurled nuts.

Switching function: NOC.

Output: PNP.







Recommendations



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No. 6825C, page 122



No. 6826CE, page 126

Dimensions:

Order no.	Size	Α	В	С	dia. D	E	F	G	Н	H1	H2	I	К	L	М
92239	4	15	82	52	11	54	10,0	70	57	197	12	30	10,0	77,0	90
92247	6	20	90	55	11	60	10,0	83	61	218	12	40	11,0	85,0	105
92254	8	30	128	80	13	95	9,5	111	86	314	12	60	12,5	112,5	135

Order no.	Size	N	0	dia. P	R	R1	S	Т	U	V	dia. W	Piston dia.	Piston stroke
92239	4	109	M12x1,25	6,2	G1/4	27	47,0	235	53	87,5	16	40	80
92247	6	129	M16x1,50	8,2	G1/4	26	53,0	280	55	101,0	20	50	100
92254	8	176	M16x1,50	13,2	G3/8	40	69,5	320	78	114,5	20	63	125



[g]

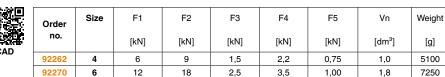
16800

No. 6826C

Heavy pneumatic toggle clamp

with vertical cylinder attachment.

Tempering steel, burnished. The axle bolts running in bearing bushes are tempered, ground and locked with circlips. With magnetic piston for end-position monitoring. The clamp is ready for installation. With double-acting FESTO pneumatic cylinder.



30

F3+F4 = maximum clamping force at 6 bar.

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

20

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 intergrated into automated manufacturing.

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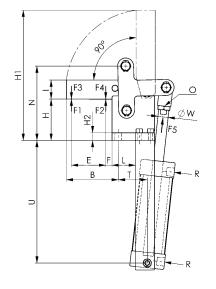
1,80

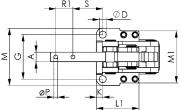
Note:

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.







Recommendations



No. 6821A, page 121



No. 6826CE, page 126



No. 6828V. page 136

Dimensions:

Order no.	Size	А	В	dia. D	E	F	G	Н	H1	H2	I	К	L	L1
92262	4	15	82	11	54	10,0	70	65	205	12	30	10	37	67,0
92270	6	20	91	13	60	10,0	83	69	226	15	40	12	32	73,5
92288	8	30	125	17	95	9,5	115	94	318	20	60	15	49	109,0

	Order no.	Size	М	M1	N	0	dia. P	R	R1	S	Т	U	dia.W	Piston dia.	Piston stroke
ĺ	92262	4	90	82	117	M12x1,25	6,2	G1/4	27	47	46	193	16	40	74
	92270	6	107	100	137	M16x1,50	8,2	G1/4	26	54	48	221	16	50	87
[92288	8	145	124	184	M16x1,50	13,2	G1/4	40	67	77	255	16	63	120



No. 6826CE

Heavy pneumatic toggle clamp

with vertical cylinder attachment.

With swivel mounting and adjustable end position cushioning. **Magnetic piston for end-position monitoring.** Tempering steel, burnished. The axle bolts running in bearing bushes are tempered, ground and locked with circlips.

Clamp is ready for installation and consists of:

- toggle clamp element no. 6816CE
- double acting FESTO pneumatic cylinder.

These cylinders are made to

- ISO 6431
- VDMA 24562
- NFE 49003.1
- UNI 10290

Order no.	Size	F1 [kN]	F2 [kN]	F3 [kN]	F4 [kN]	F5 [kN]	Vn [dm³]	Weight [g]
92296	4	6	9	1,5	2,2	0,75	1,0	5070
92304	6	12	18	2,5	3,5	1,00	1,8	7700
92312	8	20	30	4,0	6,0	1,80	4,3	17800

F3+F4 = maximum clamping force at 6 bar.

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

Application:

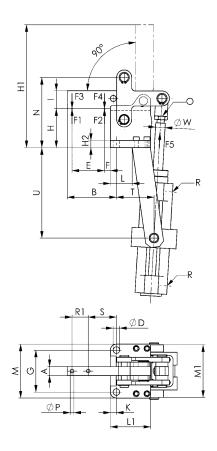
These pneumatic toggle clamps are of machine tool quality and can be installed in machines such as material handling lines and special machines. Opening and clamping position of the clamp can be controlled electrically and can be intergrated into automated manufacturing.

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.







No. 6886, page 151



No. 6815C, page 127



No. 6821A, page 121

Dimensions:

Order no.	Size	А	В	dia. D	E	F	G	Н	H1	H2	I	К	L	L1
92296	4	15	82	11	54	10,0	70	65	205	12	30	10	36	67,0
92304	6	20	91	13	60	10,0	83	69	226	15	40	12	32	73,5
92312	8	30	125	17	95	9,5	115	94	318	20	60	15	49	109,0

Order no.	Size	М	M1	N	0	dia. P	R	R1	S	Т	U	dia. W	Piston dia.	Piston stroke
92296	4	90	87,5	117	M12x1,25	6,2	G1/4	27	47	63	151	16	40	80
92304	6	107	100,0	137	M16x1,50	8,2	G1/4	26	54	64	186	20	50	100
92312	8	145	115,0	184	M16x1,50	13,2	G3/8	40	67	101	192	20	63	125



Toggle clamp element

No. 6815C

Toggle clamp element

matching with heavy pneumatic toggle clamp, with horizontal cylinder attachment no. 6825C/CE. Tempering steel, burnished. The axle bolts are tempered, ground and locked with circlips.



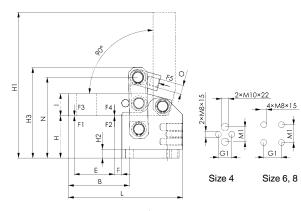
Order	Size	F1	F2	F3	F4	F5	Weight
no.		[kN]	[kN]	[kN]	[kN]	[kN]	[g]
92148	0	0,6	1,0	0,2	0,4	0,10	110
92155	1	0,8	1,2	0,6	0,8	0,19	230
92171	4	6,0	9,0	1,5	2,2	0,75	2535
92189	6	12,0	18,0	2,5	3,5	1,00	4215
92197	8	20,0	30,0	4,0	6,0	1,80	10670

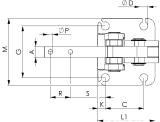
The clamping forces F3 and F4 are achieved if a cylinder with the piston force F5 is connected.

Note

Standard hydraulic and pneumatic cylinder can be connected to this clamp. In order to do so, the joint piece can be exchanged.







Recommendations



No. 6816CE, page 128



No. 6825C, page 122



No. 6820A, page 120

Order no.	Size	Α	В	С	dia. D	Е	F	G	G1	н	H1	H2	Н3	1	К	L	L1	М	M1	N	0	dia. P	R	S	Piston dia.	Piston stroke
92148	0	5	33,5	11	4,5	14	8,5	27	-	25,5	75,5	6	53,5	10	5,5	50	22,0	35	-	47,5	M6	-	-	-	16	40
92155	1	6	41,0	14	7,0	17	9,0	35	-	37,0	96,0	8	68,0	12	8,0	61	28,0	50	-	61,5	M8	-	-	-	20	40
92171	4	15	82,0	52	11,0	54	10,0	70	18	57,0	197,0	12	122,0	30	10,0	154	77,0	90	20	109,0	M12x1,25	6,2	27	47,0	40	80
92189	6	20	90,0	55	11,0	60	10,0	83	24	61,0	215,0	12	147,0	40	11,0	169	85,0	105	24	129,0	M16x1,50	8,2	26	53,0	50	100
92197	8	30	127,5	80	13,0	95	9,5	111	34	86,0	306,0	12	196,0	60	12,5	235	112,5	136	40	176,0	M16x1,50	13,0	40	69,5	63	120



Toggle clamp element

No. 6816CE

Toggle clamp element

matching with heavy pneumatic toggle clamp, with vertical CAD cylinder attachment no. 6826CE. Tempering steel, burnished. The axle bolts are tempered, ground and locked with circlips.



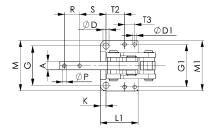
Order	Size	F1	F2	F3	F4	F5	Weight
no.		[kN]	[kN]	[kN]	[kN]	[kN]	[g]
92320	4	6	9	1,5	2,2	0,75	2400
92338	6	12	18	2,5	3,5	1,00	4300
92346	8	20	30	4,0	6,0	1,80	11000

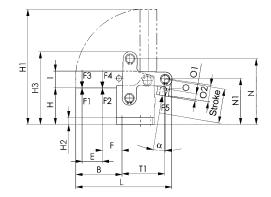
The clamping forces F3 and F4 are achieved if a cylinder with the piston force F5 is connected. Position of cylinder see article no. 6826CE.

Note:

Standard hydraulic and pneumatic cylinders can be connected to this clamp. In order to do so, the joint piece can be exchanged.







Recommendations



No. 6815C, page 127



No. 6811P, page 22



No. 6825CE, page 123

Order no.	Size	А	В	dia. D	dia. D1	E	F	G	G1	н	H1	H2	H3	I	К	L	L1
92320	4	15	82	11	6,5	54	20,0	70	75,5	65	206	12	130	30	10	172	67,0
92338	6	20	91	13	6,5	60	22,0	83	87,5	69	226	15	155	40	12	200	73,5
92346	8	30	125	13	6,5	95	24,5	115	102,5	94	318	20	204	60	15	265	109,0

Order no.	Size	М	M1	N	N1	0	O1	O2	dia. P	R	S	T1	T2	Т3	Stroke	α
92320	4	90	90	117	82	M12x1,25	14	29,5	6,2	27	47	76	33,0	18	74	9,0°
92338	6	107	100	137	92	M16x1,50	18	37,0	8,2	26	54	88	29,5	24	87	7,5°
92346	8	145	123	184	124	M16x1,50	17	32,0	13,2	40	67	120	44,0	40	120	6,5°



Link Clamp, pneumatic

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.

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):

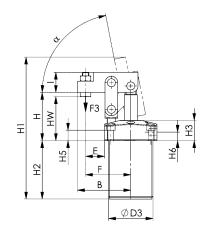
- lock nut no. 6829N
- threaded flange bi. 6829GF
- clamping screw no. 6880

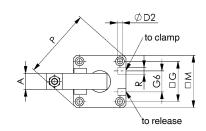
Order	Size	F3	Clamping screw	Weight
no.		[kN]	Sciew	[g]
93609	25	0,23	M 6x25	580
93617	32	0,37	M 8x35	950
93625	40	0,56	M 8x35	1200
93633	50	0,76	M12x50	1900
93641	63	1,35	M12x50	2300
Note:				

Note:

The lever mechanism can be dismantled so that it can be individually modified. The mounting holes in the flange are similar to those in threaded flange No. 6829GF. Operate only with lubricated air.







Recommendations



No. 6828M, page 130



No. 6829BR/BL, page 140

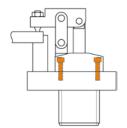


No. 6829ER/EL, page 142

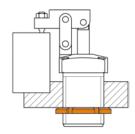
Dimensions:

Order no.	Size	A	В	dia. D2	dia. D3	E	F	G	G6	Н	H1	H2	НЗ	H5	H6	HW	I	М	Р	R	Piston dia.	α
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°

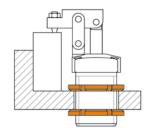
Examples of mountings



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.



Pneumatic toggle clamp

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.

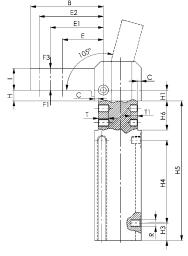


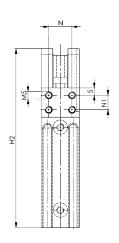
Order	Size	Clamping moment at 5 bar	Holding moment max.	Weight
no.		[Nm]	[Nm]	[g]
91843	16	8	25	300
91868	20	15	54	550
91884	25	25	75	850

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.

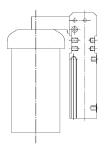


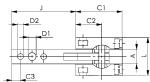




Application example:

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





Recommendations



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No. 6828V, page 136

Order no.	Size	А	В	С	C1	C2	C3	D1	D2 H7	E	E1	E2	Н	Н1	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	НЗ	H4	H5	H6 +0.1	I	J	L	N ±0.1	N1 ±0.1	R	Т	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



Pneumatic clamp with lever

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.

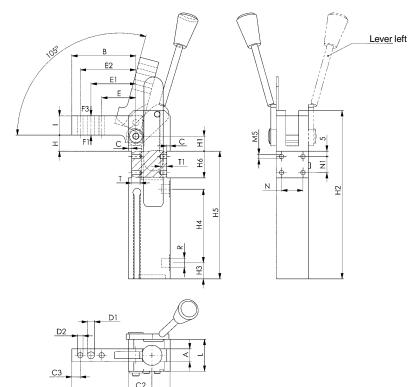




Order no.	Size	Clamping moment at 5 bar	Lever left	Lever right	Holding moment max.	Weight
		נואוון			נואווון	[g]
555083	16	8	-	•	25	320
555170	16	8	•	-	25	320
555084	20	15	-	•	54	700
555171	20	15	•	-	54	700
555085	25	25	-	•	75	920
555172	25	25	•	-	75	920

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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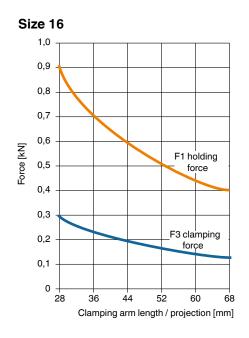
page 136

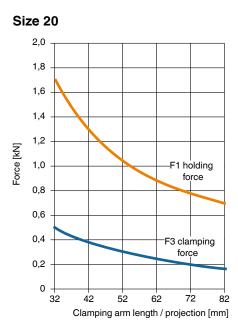
Order no.	Size	А	В	С	C1	C2	СЗ	D1	D2 H7	Е	E1	E2	Н	H1	H2	НЗ	H4	H5	H6 +0.1	I	J	L	N ±0.1	N1 ±0.1	R	Т	T1	Piston dia.
555083	16	10	50	2,5	32	18	6	5,5	4	28	36,0	44	7,5	7,5	123	12,0	57	96	20	15	44	26	16	10	M5	7	5	16
555170	16	10	50	2,5	32	18	6	5,5	4	28	36,0	44	7,5	7,5	123	12,0	57	96	20	15	44	26	16	10	M5	7	5	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	20	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	20	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	25	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	25	18	G1/8	8	6	25

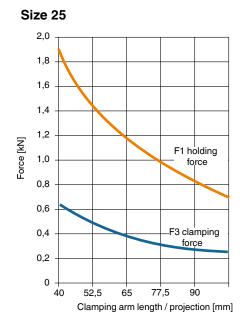




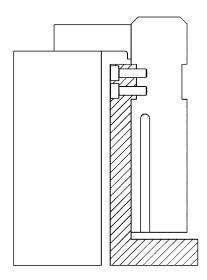
Force diagrams No. 6828M and No. 6828H

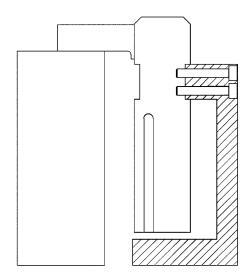


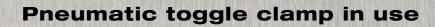




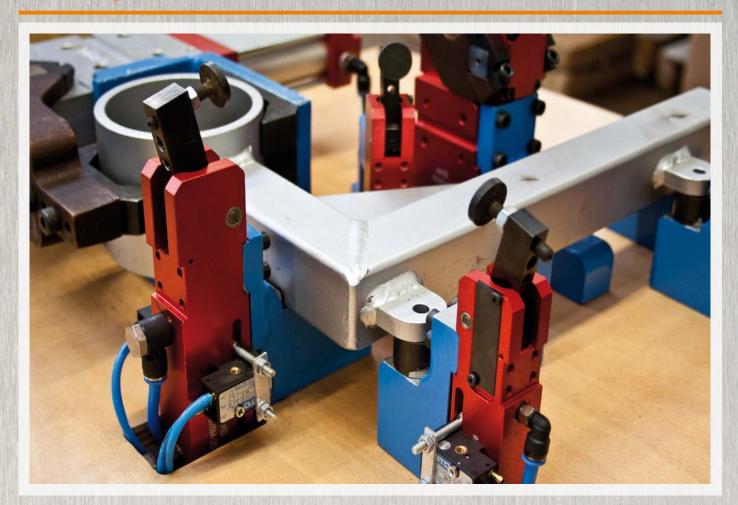
Examples of mountings:

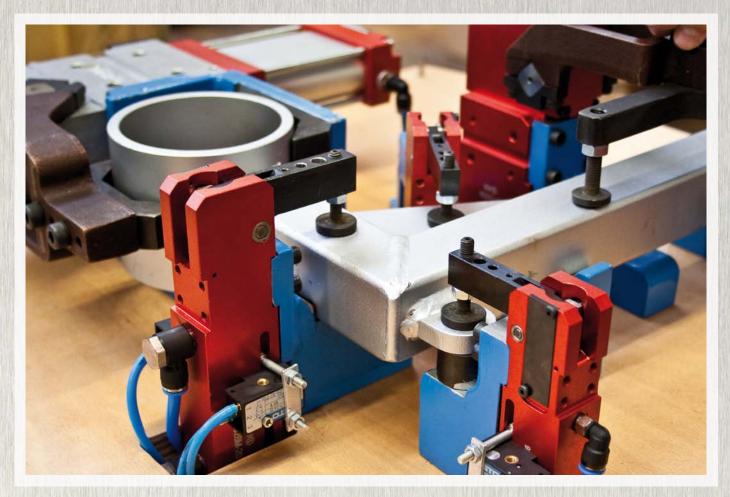














No. 6828V

Heavy pneumatic toggle clamp

Double-acting.

Max. operating pressure 6 bar.

With continuously adjustable opening angle in the range 10° to 135°. Housing is made of aluminium. Pneumatic end position cushioning, standard with inductive query 24V (Pepperl+Fuchs). Clamp arm not included.

Accessories (not included in scope of delivery):

- Clamping arm no. 6828SP centre, right and left
- Without connecting plug M12

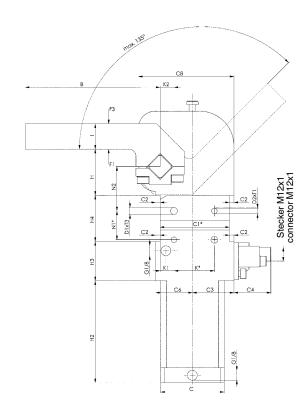


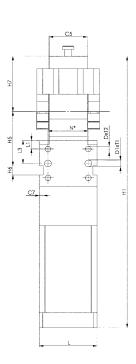
Order	Size	Clamping moment at 5 bar	Holding moment max.	Weight
no.		[Nm]	[Nm]	[Kg]
91835	40	120	380	1,4

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 intergration into automated manufacturing processes.







Connection sketch:



C ... close



Recommendations



No. 6828SP, page 135



No. 6829V, page 129



No. 6828V, page 136

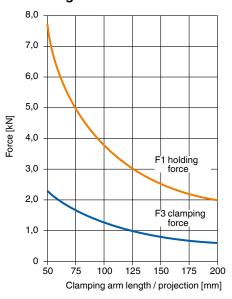
Order no.	Size	В	С	C1 *	C2	C3	C4	C5 -0.5	C6	C7	C8	D	D1 H7	D2	H±0.2	H1	H2	НЗ	H4 +0.1	H5
91835	40	117	55	60	4	36	34	33	32	3,5	83	M6	ø6	M6	40	235,5	113	34	40	25

Order no.	Size	H6 N9	H7	Н8	l ±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	Т3	Piston dia.
91835	40	8	48	35	22	35	12	12	50	7,5	25	20	50	35	25	38,5	16	8	12	6	40

 $^{^{\}star}$ Tolerance for peg holes ± 0.02 mm; for threaded holes ± 0.1 mm.



Force diagram No. 6828V-40



No. 6828SP

Clamp arm

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



6	Order	Size	Article no.	A -0.1	A1 ±0.1	A2	А3	В	Weight
	no.								[g]
9	2080	40	6828SPL-40	16	23	31	54	117	520
9	1900	40	6828SPM-40	16	23	31	54	117	520
9	2007	40	6828SPR-40	16	23	31	54	117	520

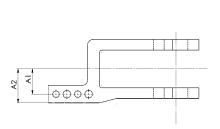
Recommendations

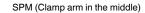


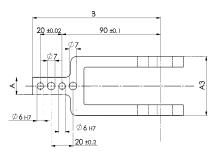
No. 6828V, page 134

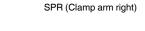
Clamp arm variants:

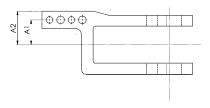
SPL (Clamp arm left)



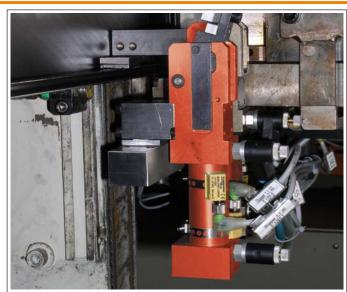












Subject to technical alterations.



No. 6828V

Heavy pneumatic toggle clamp

double-acting.

Max. operating pressure 6 bar.

With continuously adjustable opening angle in the range 5° to 135°. Housing is made of aluminium, red anodised. Pneumatic end position cushioning, **standard with inductive query 24V** (Pepperl+Fuchs). **Clamp arm not included.**

Accessories (not included in pack):

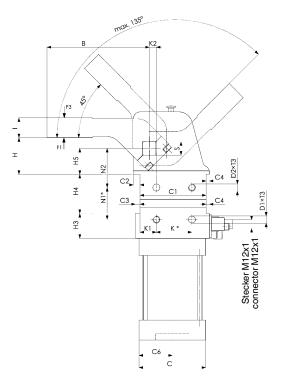
- Clamp arm no. 6828SP in the middle, right and left
- M12 connector plug

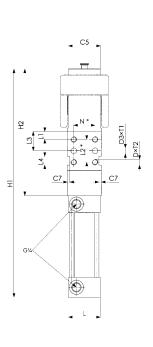
Order	Size	Clamping moment at 5 bar	Holding moment max.	Weight
no.		[Nm]	[Nm]	[Kg]
91850	50	160	800	3,5
91876	63	380	1500	4,6
91892	80	800	2500	15,6

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 intergration into automated manufacturing processes.







Recommendations

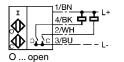






Connection sketch:

C ... close





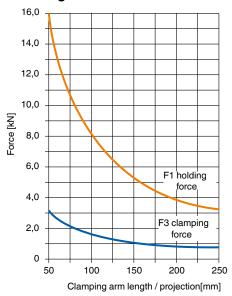
Order no.	Size	В	С	C1 *	C2	СЗ	C4	C5	C6	C7	C8	C9	C10	D	D1 H7	D2	D3 H7	H ±0.2	H1	H2	НЗ	H4 +0.1	H5 ±0.05	H6	H7	I ±0,1
91850	50	144	94	93	10,5	6,5	4,5	45	52	3,5	108,0	52	33	M8	10	M10	8	51,5	321	178	35	55	36,5	12	51,5	28
91876	63	144	106	93	12,0	7,5	7,5	52	54	3,5	112,5	54	34	M8	10	M10	8	51,5	335	185	35	55	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	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	Т3	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

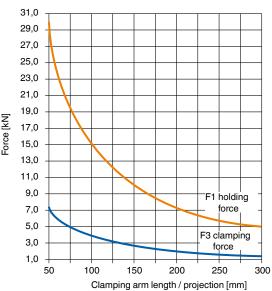
^{*} Tolerance for peg holes ±0.02 mm; for threaded holes ±0.1 mm.



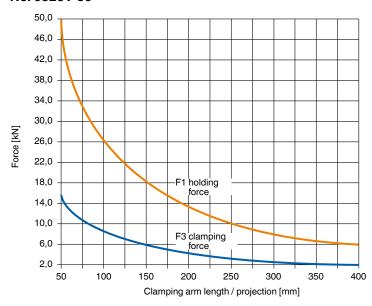
Force diagram No. 6828V-50



No. 6828V-63



No. 6828V-80



No. 6828SP

Clamp arm

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

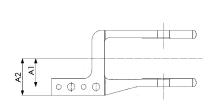


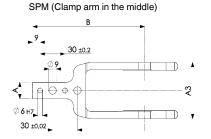


	Order	Size	Article no.	A -0.1	A1 ±0.1	A2	А3	В	Weight
	no.								[g]
ſ	92072	50	6828SPL-50	20	34,0	44	68	144	855
ſ	91959	50	6828SPM-50	20	34,0	44	68	144	855
ſ	92056	50	6828SPR-50	20	34,0	44	68	144	855
	92130	63	6828SPL-63	20	37,0	47	78	144	1150
	92098	63	6828SPM-63	20	37,0	47	78	144	1150
	92114	63	6828SPR-63	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

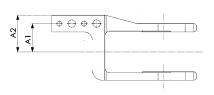
Clamp arm variants:

SPL (Clamp arm left)





SPR (Clamp arm right)





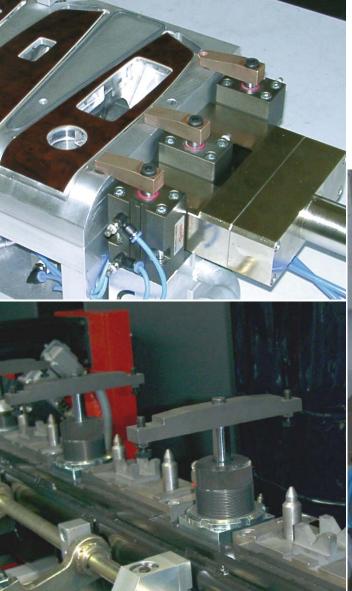
PNEUMATIC SWING CLAMPS

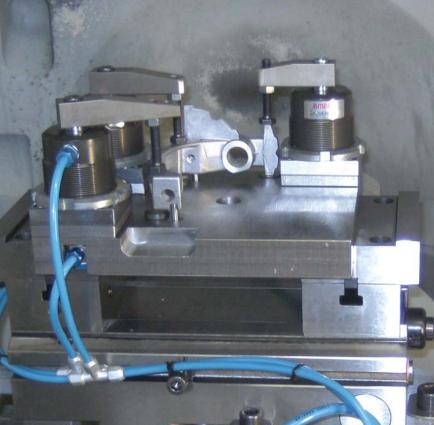
> APPLICATIONS

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.







Swing clamp, pneumatic

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

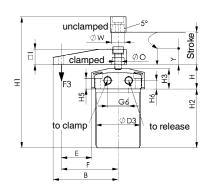
Order no.	Size	right swinging	left swinging	F3 [kN]	Connecting thread for clamping screws	Weight [g]
				[KIN]		[9]
93484	25	•	-	0,17	M 6	500
93559	25	-	•	0,17	M 6	500
93492	32	•	-	0,27	M 8	650
93567	32	-	•	0,27	M 8	650
93500	40	•	-	0,45	M 8	800
93575	40	-	•	0,45	M 8	800
93518	50	•	-	0,70	M12	920
93583	50	-	•	0,70	M12	920
93526	63	•	-	1,10	M12	1080
93591	63	-	•	1,10	M12	1080

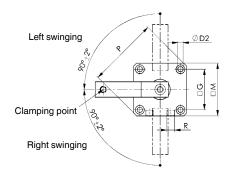
F3 = at 6 bar max. air pressure

Note:

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











No. 6829N, page 144



No. 6829GF, page 144

Examples of mountings:



with 4 cap screws from above



with grooved nut from above



with grooved nut from below

Order	Size	dia. D2	dia. D3	Е	F	G	G6	Н	H1	H2	НЗ	H5	H6	ı	М	dia. O	Р	R	dia. W	Piston dia.	Y Clamping stroke*	Stroke
no.																						
93484	25	5,5	M40x1,5	25,0	50	37	23	30	135	62	25	15	11,5	16,0	50	М8	66	M 5	14	25	13	26
93559	25	5,5	M40x1,5	25,0	50	37	23	30	135	62	25	15	11,5	16,0	50	M 8	66	M 5	14	25	13	26
93492	32	6,5	M50x1,5	30,0	60	45	23	30	152	73	25	13	10,5	19,0	60	M 8	80	G1/8	16	32	14	28
93567	32	6,5	M50x1,5	30,0	60	45	23	30	152	73	25	13	10,5	19,0	60	M 8	80	G1/8	16	32	14	28
93500	40	6,5	M55x1,5	37,5	70	50	26	30	152	73	25	13	10,5	19,0	65	M 8	87	G1/8	16	40	16	30
93575	40	6,5	M55x1,5	37,5	70	50	26	30	152	73	25	13	10,5	19,0	65	M 8	87	G1/8	16	40	16	30
93518	50	8,5	M65x1,5	42,5	80	58	32	30	164	80	25	11	10,5	25,5	75	M10	100	G1/8	20	50	16	32
93583	50	8,5	M65x1,5	42,5	80	58	32	30	164	80	25	11	10,5	25,5	75	M10	100	G1/8	20	50	16	32
93526	63	8,5	M80x1,5	45,0	90	70	35	30	164	80	25	11	10,5	25,5	90	M10	118	G1/8	20	63	14	30
93591	63	8,5	M80x1,5	45,0	90	70	35	30	164	80	25	11	10,5	25,5	90	M10	118	G1/8	20	63	14	30



Swing clamp, pneumatic, block version

No. 6829BR/BL

Swing clamp, pneumatic, block version

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	Size	right swinging	left swinging	F3	Connecting thread for clamping screws	Weight
110.				[kN]		[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.







No. 6880,

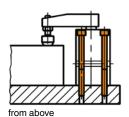


No. 6829SP, page 143

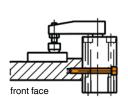


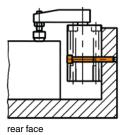
No. 6829ER/EL, page 142

Examples of mountings:



from below

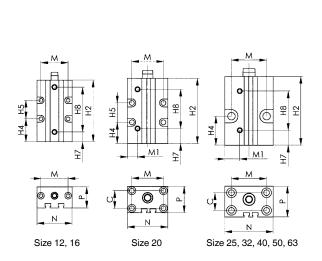


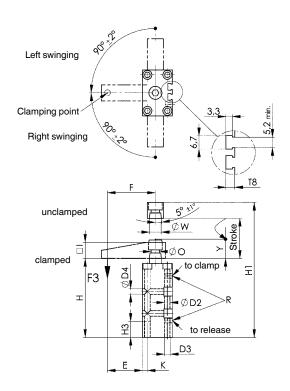






Swing clamp, pneumatic, block version





Dimensions:

Order	Size	С	dia. D2	D3	dia. D4	E	F	Н	H1	H2	Н3	H4	H5	H7	H8
no.															
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	К	М	M1	N	dia. O	Р	R	Т8	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
Г	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
L	91421	25	16	7,5	40	17,0	55	M 8	35	M 5	5,0	14	25	14,0	27,0
L	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
L	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.



Swing clamp, pneumatic, screw-in version

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

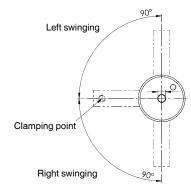
Order	Size	right swinging	left swinging	F3	Connecting thread for clamping screws	Weight
				[kN]		[g]
92809	25	•	-	0,17	M 6	450
92858	25	-	•	0,17	M 6	450
92817	32	•	-	0,27	M 8	550
92866	32	-	•	0,27	M 8	550
92825	40	•	-	0,45	M 8	700
92874	40	-	•	0,45	M 8	700
92833	50	•	-	0,70	M12	850
92882	50	-	•	0,70	M12	850
92841	63	•	-	1,10	M12	1000
92890	63	-	•	1,10	M12	1000

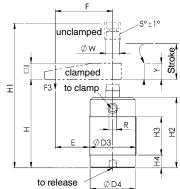
F3 = at 6 bar max. air pressure

Note:

Operate only with lubricated air.















No. 6829N, page 144



No. 6829GF, page 144

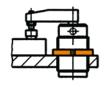
Dimensions:

Order no.	Size	D3	dia. D4	E	F	Н	H1	H2	НЗ	H4	I	dia. M	0	R	dia.W	Piston dia.	Y Clamping stroke*	Stroke
92809	25	M40x1,5	38	30,0	50	73	118	70	35	10	16,0	M 6	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 6	М8	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	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	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	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	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	M12	M10	G1/8	20	50	14,0	30,0
92882	50	M65x1,5	62	47,5	80	92	148	87	50	15	25,5	M12	M10	G1/8	20	50	14,0	30,0
92841	63	M80x1,5	77	50,0	90	98	153	92	56	15	25,5	M12	M10	G1/8	20	63	13,5	29,5
92890	63	M80x1,5	77	50,0	90	98	153	92	56	15	25,5	M12	M10	G1/8	20	63	13,5	29,5

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.

CAD



Clamping arm

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.

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

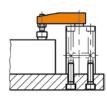






Application example:

Clamping arm with clamping screw no. 6880.

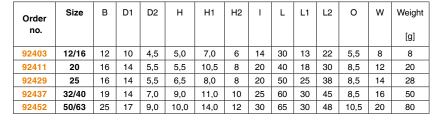




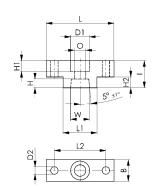
No. 6829AD

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.

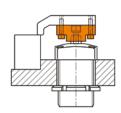






Application example:

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







Grooved nut (DIN 70852)

No. 6829N

Grooved nut (DIN 70852)

Steel, galvanized.

Use hook spanner for tightening (see AMF catalogue "Hand Tools").

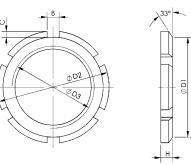
Order	Size	В	С	dia. D1	dia. D2	dia. D3	Н	Weight
no.								[g]
92924	25	7	3,3	49	56	M40x1,5	8	63
92932	32	8	3,8	60	68	M50x1,5	8	84
92940	40	8	3,8	67	75	M55x1,5	8	106
92957	50	11	4,3	76	85	M65x1,5	9	132
92973	63	11	4,3	91	100	M80x1,5	10	180

Application example:

Grooved nut from above for locking swing clamp in a fixture.









No. 6829GF

Threaded flange

Steel, zinc-plated.

With four counterbored mounting holes. Female screw-in thread for swing clamp. Use grooved nut to lock in desired.

Order no.	Size	С	dia. D1	dia. D2	dia. D3	Н	H1	L	Weight
110.									[g]
93062	25	37	9	5,5	M40x1,5	9	6	50	80
93070	32	45	11	6,5	M50x1,5	12	7	60	100
93088	40	50	11	6,5	M55x1,5	12	7	65	120
93096	50	58	13	8,5	M65x1,5	15	9	75	150
93104	63	70	13	8,5	M80x1,5	15	9	88	200

Advantage:

Avoids cutting a large thread in the fixture.

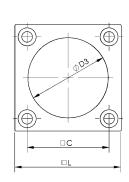
Note:

The mounting holes in the flange are the same as in pneumatic clamp flange no. 6829K and 6829V.



Swing clamp screwed into threaded flange.











Swing Clamp with welding protection

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



Recommendations



No. 6829WS page 146

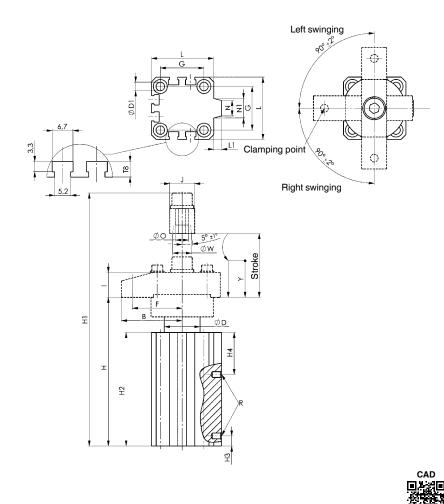


No. 6829WSP, page 146

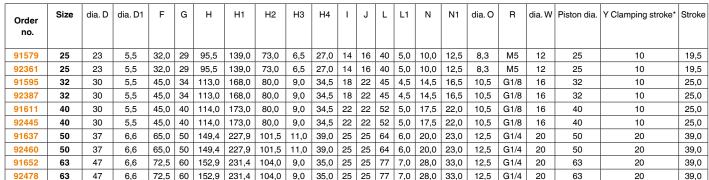
Order	Size	right swinging	left swinging	F3	Weight
no.				[kN]	[g]
91579	25	•	-	0,2	326
92361	25	-	•	0,2	326
91595	32	•	-	0,3	537
92387	32	-	•	0,3	537
91611	40	•	-	0,6	680
92445	40	-	•	0,6	680
91637	50	•	-	0,9	1160
92460	50	-	•	0,9	1160
91652	63	•	<u>-</u>	1,4	1520
92478	63	-	•	1,4	1520

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.



Dimensions:



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



No. 6829WS

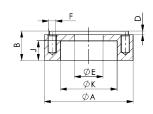
Welding protection

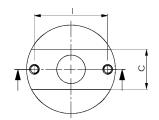
for piston rod

for swing clamp with welding protection no. 6829W for protection of the piston rod against weld spatter. High-strength aluminium alloy, anodised.

Order	Size	dia. A	В	С	D	dia. E	F	ı	J	dia. K	Weight
no.											[g]
91645	25	40	14,5	16,4	2,0	12,1	M4	32,0	10,5	25	32
91660	32	50	16,5	22,6	3,0	16,1	M5	41,3	11,0	32	55
91686	40	50	17,9	22,6	3,8	16,1	M6	41,4	11,0	32	58
91702	50	59	33,0	25,8	5,1	20,1	M6	46,5	25,0	39	122
91793	63	69	33,0	25,8	5,1	20,1	M6	59,5	25,0	50	160







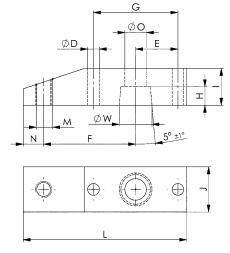
No. 6829WSP

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.

Order	Size	dia. D	Е	F	G	Н	ı	J	L	М	N	dia. O	dia.	Weight
no.													w	[g]
91678	25	4,8	16,00	32,0	32,0	5,5	14	16	63,5	M6	7	8,3	12	36
91694	32	5,7	20,70	45,0	41,3	9,0	18	22	80,0	M8	10	10,5	16	83
91751	40	6,4	20,70	45,0	41,4	9,0	22	22	82,0	M8	10	10,5	16	84
91603	50	6,4	23,25	65,0	46,5	12,0	25	25	105,0	M10	10	12,5	20	144
91629	63	6,4	29,75	72,5	59,5	12,0	25	25	120,0	M10	10	12,5	20	168







No. 6897S

Sensor monitor

for manual clamps.

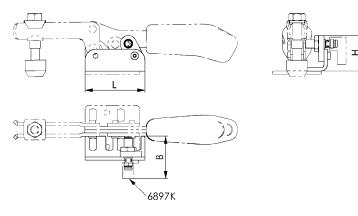
For monitoring the closed position of the toggle clamp. Complete with inductive sensor M8x1 for ambient temperatures from 0° to 60° C. Matching plug connection no. 6897K.



Order	Size	LxWxH	Weight
no.			[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.





No. 6897K

Plug connection for sensor monitor

for sensor monitor no. 6897S.
Angled plug connection, cable permanently injection-moulded

Order no.	Size	Cable length	Weight
		[m]	[g]
90613	1	2	75
90639	2	5	150

Note:

IP68 acc. to IEC 529, silicone-free, halogen-free, gold-plated contacts.





No. 6898V

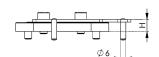
Rotatable base unit

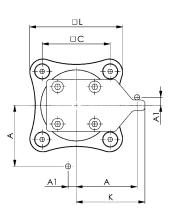
incl. stop pin for limiting the opening position of 90°

Order	Size	Weight
no.		[g]
555182	1	430
555183	2	915
555184	3	430
555185	4	922

Note:

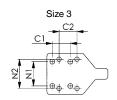
Order no. 555182 for toggle clamp 6830 Size 2 and 3 Order no. 555183 for toggle clamp 6830 Size 4 and 5 Order no. 555184 for toggle clamp 6800 Size 2 and 3 Order no. 555185 for toggle clamp 6800 Size 4 and 5

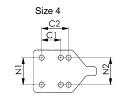






Size 1, 2







Dimensions:

Order no.	Size	А	A1	С	C1	C2	Н	К	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



Clamping screw

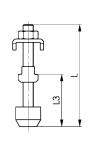
No. 6890

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.





Order	Size	Screw DIN 933	T-Nut DIN 508	Washer size	L	L3	Weight
no.							[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



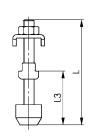
No. 6890NI

Clamping screw

for open clamping arms, stainless steel. Size 4 with 2 washers.







Order	Size	Screw DIN 933	Washer size	L	L3	Weight
no.						[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



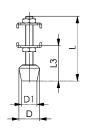
No. 68301

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	Size	MxL	D	D1	L3	Weight
no.						[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



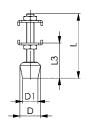


Clamping screw

for horizontal toggle clamp plus, stainless steel.







Order no.	Size	MxL	D	D1	L3	Weight
555177	2	M6 x 50	16	12	17 - 29	20
555178	4	M10 x 76	26	20	28 - 44	95





Clamping screw

L3

17 - 35

21 - 31

21 - 42

L3

13 - 25

16 - 35

Weight

[g]

23

51

55

Weight

[g]

16

41

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.



Order no.	Size	MxL	D	D1	L3	Weight
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

D

19

27

27

D

19

19



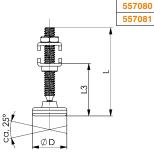


Clamping screw

for open clamping arms, galvanised. For variable toggle clamps.







Size

1

2

3

Order

557079

Order

no.

557086

557087

2

MxL

M6 x 50

M8 x 50

M8 x 65

 $M \times L$

M6 x 37

M8 x 50

N	EV	<u>/!</u>



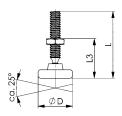
No. 6876

Clamping screw

for push-pull type toggle clamps, galvanised. For variable toggle clamps.

SIEW!
NEV







No. 6880

Clamping screw

for push-pull type clamps,

tempered, tensile strength class 8.8, galvanized and passivated, with nut and removable rubber nose.





Order	Size	Screw DIN 933	L	L3	Weight
no.					[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 M10x50		66	30-52	57
98061	61 7 M12x50		68	30-50	82
98475	5 8 M16x80		90	25-70	220





Clamping screw

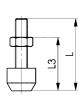
No. 6880NI

Clamping screw

for push-pull type clamps, stainless steel







Order	Size	Screw DIN 933	L	L3	Weight
no.	no.				[g]
96008	0+1	M 4x20	27	12-20	4
96016	2	M 6x25	35	18-27	15
96024	024 3 M 8x35		48	22-35	26
96032	7	M12x50	68	30-50	82



No. 6880B

Clamping screw, black

for push-pull type clamps, matte-black, with nut and bonded pressure pad, strength class

Order Size		Screw DIN 933	L	L3	Weight
110.					[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







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.

51

Order	Size	Screw DIN 933	L	L3	Weight
no.					[g]
98517	17 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	58 5 M12x 80		98	30-60	130
98566	6 6 M12x110		128	30-88	160
98582	8	M16x120	130	25-84	280



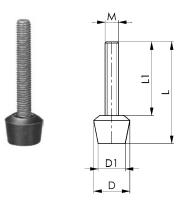


Self-aligning clamping screw

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	MxL	D	D1	L1	Weight
110.					[9]
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



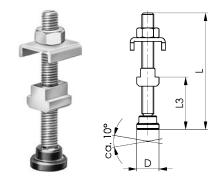
No. 6891

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	Size	Screw DIN 6332	T-Nut DIN 508	Washer size	D	L	L3	Weight
no.								[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





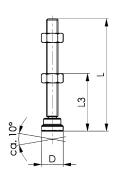
No. 6886

Self-aligning clamping screw

for solid and closed clamping arms, tempered, galvanized and passivated.

Order no.			D	L	L3	Weight [g]
98616	1	M 5x 35	12	37	8-23	9
98632	632 4 M 8x 75		16	78	16-52	42
98665	6 M12x100		25	105	30-61	138









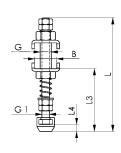
No. 6892

Spring loaded screw

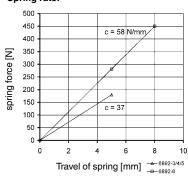
for open ended clamping arms, tempered, galvanized and passivated.

Order	Size	В	G	G1	Rubber nose	L	L3	L4	Weight
no.									[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:



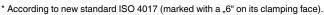


No. 6893

Rubber nose

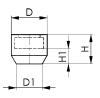
Made of oil resistant neoprene to prevent damage to delicate components. Hardness 70 Shore A. Fits the clamping screws no. 6880, no. 6885, no. 6890 and no. 6892, for placement on hexagon screw head ISO 272. Minimum order quantity is 10 pieces per size.

Order	Size	SW	D	D1	н	H1	Weight
no.							[g]
99309	M4	7	11,0	7	8,5	4,2	1
99325	M5	8	12,5	8	10,0	5,0	1
99333	M6	10	15,0	10	12,0	6,0	2
99341	M8	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 old norm DIN 933.







CAD

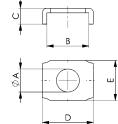
No. 6887

U-washer

galvanised and passivated.







Order	Size	dia. A	В	С	D	E	Weight
no.							[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



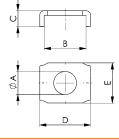


U-washer

matte-black.







Order	Size	dia. A	В	С	D	E	Weight
no.							[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





No. 6899

Clamping arm extension

for manual clamps,
Aluminium. Complete with fastening bolt. Without clamping screw.

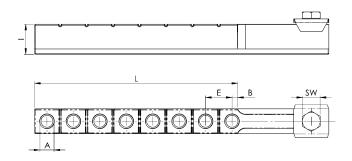


Order no.	Size	А	В	E	I	L	sw	Weight
110.								[g]
557094	1	5 x M5	6	12	11	61	7	24
557095	2	6 x M6	8	15	14	90	8	47
557096	3	8 x M8	3	15	17	115	10	92

Note:

Can be shortened to desired length.







No. 6896

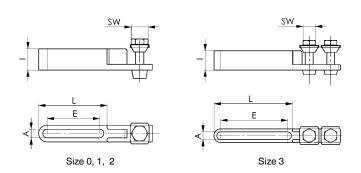
Clamping arm extension

for manual clamps,

steel, blued. Complete with fastening screw. Without clamping screw.

	Order no.	Size	Clamping screw	А	E	I	L	sw	Weight
Ī	94045	0	M4	4,2	25	10	32,5	7	15
ſ	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









No. 6895

Supporting arm for toggle clamps

Galvanized and passivated, complete with two tempered clamping screws no. 6890 and fastening screw.

Order	Size	Screw DIN 933	Distance between screws	Length	Weight
no.				[mm]	[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	M12x80	54-200	240	985







Application possibilities, in relation to toggle clamp size:

Item no.	Size of supporting arm									
of toggle clamp	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	-	-			



No. 6820SIS

Proximity switch

	Prox
	No
	PUF Swit
	Out
)	

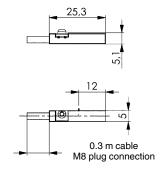
Order	Cable length	Weight
no.	[m]	[g]
392241	0,3	15

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.





Counter catch

No. 6848GH

Counter catch

for no. 6848H. Galvanized and passivated.

Order no.	Size	F	dia. G	Н	H1	К	L	N	Weight
110.									[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



No. 6848GHNI

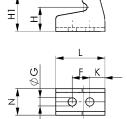
Counter catch

for no. 6848HNI. Polished stainless steel.





Order no.	Size	F	dia. G	Н	H1	К	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





No. 6848GV

Counter catch

for no. 6848V. Galvanized and passivated.

	Order no.	Size	F	dia. G	Н	Н1	К	L	N	Weight
Ī	94854	2	11	5,2	5	12	5	26	18	14
ſ	94862	3	14	6,5	6	16	7	36	23	30
	94870	4	19	8,5	8	22	9	48	30	66



No. 6848GVNI

Counter catch

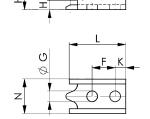
for no. 6848VNI. Polished stainless steel.





Order no.	Size	F	dia. G	Н	H1	К	L	N	Weight
110.									[9]
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









... BY ITEM NO.

No. 68 No. 68 No. 68 No. 68 No. 68 No. 68	00 00B 1	10	Article no. No. 6804Y	Page 16	Article no. No. 68300G	Page 29	Article no. No. 6841B	Page 110	Article no. No. 6848HSJ	Page 76
No. 68 No. 68 No. 68	00B 1			16	No. 68300G	29	No. 6841B	110	No. 6848HSJ	76
No. 68 No. 68)4						1		
No. 68	00BS 1		No. 6805	20	No. 68300J	28	No. 6841E	40	No. 6848HSNI	94
	1	11	No. 6805E	20	No. 68300NI	84	No. 6841G	41	No. 6848HSNIE	94
No 68	00E	10	No. 6805G	21	No. 68300NIE	84	No. 6841J	40	No. 6848HSNIG	95
140.00	00G	11	No. 6805J	20	No. 68300NIG	85	No. 6841NI	86	No. 6848HSNIJ	94
No. 68	00J	10	No. 6805T	21	No. 68300NIJ	84	No. 6841NIE	86	No. 6848HSNIT	95
No. 68	00NI	78	No. 6805Y	20	No. 68300NIT	85	No. 6841NIG	87	No. 6848HSNIY	94
No. 68	00NIE	79	No. 6806	18	No. 68300NIY	84	No. 6841NIJ	86	No. 6848HST	77
No. 68	00NIG	79	No. 6806E	18	No. 68300T	29	No. 6841NIT	87	No. 6848HSY	76
No. 68	00NIJ	78	No. 6806G	19	No. 68300Y	28	No. 6841NIY	86	No. 6848HT	55
No. 68	00NIT	79	No. 6806J	18	No. 68301	148	No. 6841T	41	No. 6848HY	54
No. 68	00NIY	78	No. 6806T	19	No. 68301NI	148	No. 6841Y	40	No. 6848V	56
No. 68	00S	30	No. 6806Y	18	No. 6832	30	No. 6842	48	No. 6848VE	56
No. 68	00SE	31	No. 6809P	24	No. 6832B	107	No. 6842E	48	No. 6848VG	57
No. 68	00SG	31	No. 6810P	25	No. 6832BS	113	No. 6842G	49	No. 6848VJ	56
No. 68	00SJ	60	No. 6811P	22	No. 6832E	30	No. 6842J	48	No. 6848VNI	96
No. 68		31	No. 6812P	23	No. 6832G	31	No. 6842PK	50	No. 6848VNIE	96
No. 68		30	No. 6815C	127	No. 6832J	30	No. 6842PL	51	No. 6848VNIG	97
No. 68		11	No. 6816CE	128	No. 6832S	70	No. 6842T	49	No. 6848VNIJ	96
No. 68		10	No. 6820A	120	No. 6832SE	70	No. 6842Y	48	No. 6848VNIT	97
No. 68		12	No. 6820K	119	No. 6832SG	71	No. 6843	46	No. 6848VNIY	96
No. 68		05	No. 6820SIS	154	No. 6832SJ	70	No. 6843NI	89	No. 6848VT	57
No. 68		12	No. 6821A	121	No. 6832ST	71	No. 6844	44	No. 6848VY	56
No. 68		12	No. 6825C	122	No. 6832SY	70	No. 6844E	44	No. 6849PH	58
No. 68		13	No. 6825CE	123, 124	No. 6832T	31	No. 6844G	45	No. 6850	117
No. 68		12	No. 6826C	125, 124	No. 6832Y	30	No. 6844J	44	No. 6860	38
No. 68		52	No. 6826CE	126	No. 6833	34	No. 6844NI	88	No. 6860E	39
No. 68		52	No. 6828H	131	No. 6833E	34	No. 6844NIE	88	No. 6860G	39
No. 68		33	No. 6828M	130	No. 6833G	35	No. 6844NIG	89	No. 6860J	38
No. 68		52	No. 6828SP	135, 137	No. 6833J	34	No. 6844NIJ	88	No. 6860P	118
No. 68		33	No. 6828V	134, 136	No. 6833T	35	No. 6844NIT	89	No. 6860T	39
		52	No. 6829AD	143		34	No. 6844NIY	88	No. 6860Y	I .
No. 68					No. 6833Y					38
No. 68		13	No. 6829BR/BL	140	No. 6834	32	No. 6844T	45	No. 6870	100
No. 68		12	No. 6829ER/EL	142	No. 6834E	32	No. 6844Y	44	No. 6871	101
No. 68		14	No. 6829GF	144	No. 6834G	33	No. 6845	46	No. 6872	101
No. 68		14	No. 6829KR/KL	139	No. 6834J	32	No. 6845B	110	No. 6873	102
No. 68		15	No. 6829N	144	No. 6834S	72	No. 6847	52	No. 6874	102
No. 68		14	No. 6829SP	143	No. 6834SE	72	No. 6847G	52	No. 6875	149
No. 68		30	No. 6829V	129	No. 6834SG	73	No. 6847GK	53	No. 6876	149
No. 68		30	No. 6829W	145	No. 6834SJ	72	No. 6847GKNI	91	No. 6880	149
No. 68		31	No. 6829WS	146	No. 6834ST	73	No. 6847GNI	90	No. 6880B	150
No. 68		30	No. 6829WSP	146	No. 6834SY	72	No. 6847K	53	No. 6880NI	150
No. 68		31	No. 6830	26	No. 6834T	33	No. 6847KNI	91	No. 6885	150
No. 68	03NIY	30	No. 6830B	106	No. 6834Y	32	No. 6847NI	90	No. 6886	151
No. 68		64	No. 6830E	26	No. 6835BS-2	114	No. 6847S	75	No. 6887	152
No. 68		64	No. 6830G	27	No. 6835BS-3	115	No. 6847SU	75	No. 6887B	152
No. 68		35	No. 6830J	26	No. 6835B-2	108	No. 6848GH	155	No. 6890	148
No. 68	03SJ	64	No. 6830NI	82	No. 6835B-3	109	No. 6848GHNI	155	No. 6890B	149
No. 68	03ST	35	No. 6830NIE	82	No. 6837H	36	No. 6848GV	155	No. 6890NI	148
No. 68	03SY	64	No. 6830NIG	83	No. 6837HE	37	No. 6848GVNI	155	No. 6891	151
No. 68	03T	15	No. 6830NIJ	82	No. 6837HG	37	No. 6848H	54	No. 6892	152
No. 68	03Y	14	No. 6830NIT	83	No. 6837HJ	37	No. 6848HE	54	No. 6893	152
No. 68	04	16	No. 6830NIY	82	No. 6837HT	37	No. 6848HG	55	No. 6894	151
No. 68	04E	16	No. 6830S	68	No. 6837HY	36	No. 6848HJ	54	No. 6895	154
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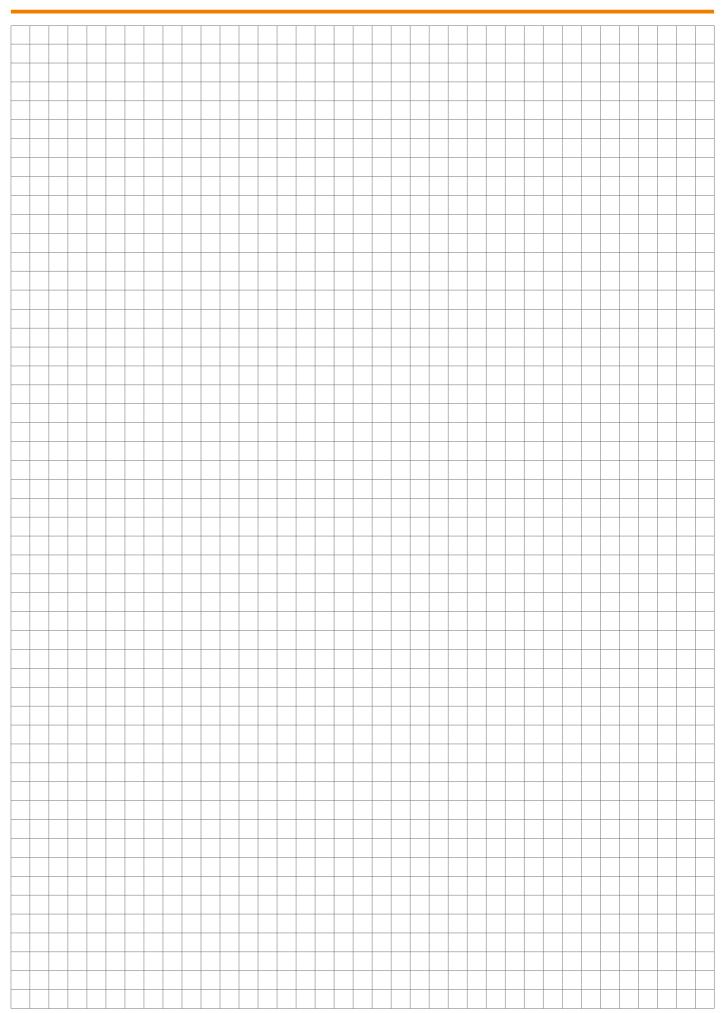


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Terms of Sale, Delivery and Payment

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. Paymen

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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