JC Metal

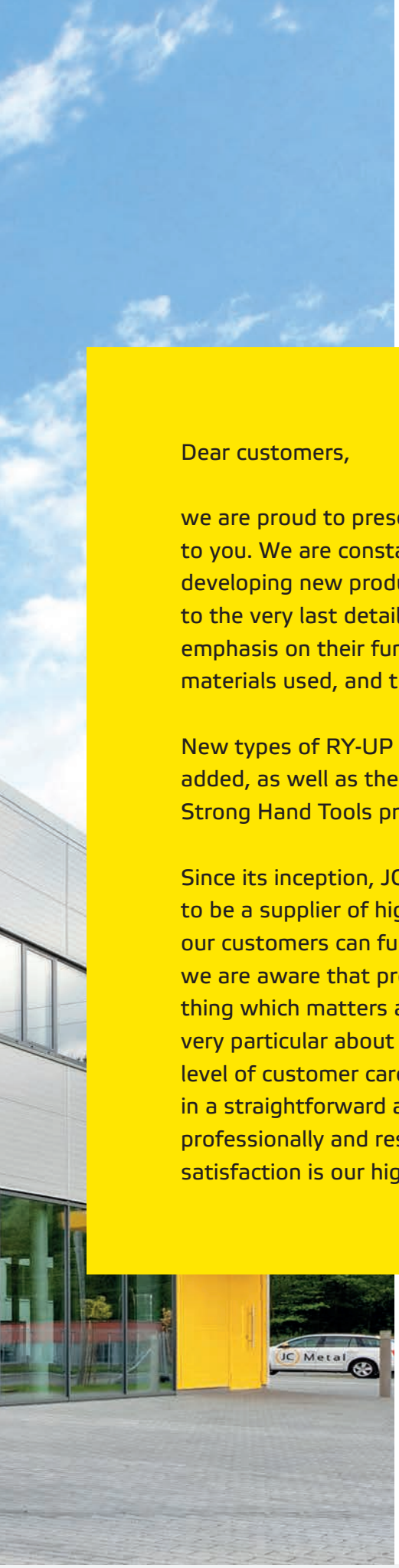
It starts with a clamp.

Catalogue

Toggle Clamps

It starts with a clamp.


JC Metal



Dear customers,

we are proud to present our current catalogue to you. We are constantly innovating and developing new products that are fine-tuned to the very last detail. We place the utmost emphasis on their functionality, selection of materials used, and the overall design quality.

New types of RY-UP toggle clamps have been added, as well as the RTU-18 spacer and the Strong Hand Tools product line.

Since its inception, JC-Metal has endeavoured to be a supplier of high-quality products that our customers can fully rely on. However, we are aware that production is not the only thing which matters and as such, we are also very particular about offering a first-class level of customer care. Everything is done in a straightforward and sincere manner, professionally and responsibly. Customer satisfaction is our highest priority.

Taťána Malá
company executive

Main goals of the JC-Metal s.r.o. company

1. Guaranteed quality standard

Thanks to careful and conscientious work at all levels, we are able to consistently maintain excellent quality.

2. Short delivery terms

Orders of stock items are dispatched within 24 hours.

3. Warranty

We guarantee the highest levels of quality-compliance throughout the entire production process. Any comments are dealt with seriously, immediately, and, where possible, even after the warranty period.

4. Expert consultancy

We employ skilled and competent staff. Our experts are always happy to deal with your problems swiftly and reliably. Just call!

5. Individual development

Should our product range not suit you, we are able to propose special product designs or even something completely new.

2019 Addition of manually and electronically driven positioners to the product range.

2017 An important milestone – the company's 20-year anniversary
Opening of new manufacturing hall in Vsetín – Bobrky,
New visual identity.

2015 Winning the Distributor roku 2015 award (Distributor of the Year 2015) Bernd Siegmund GmbH. Obtaining a favourable top-ten placement at the Vodafone Firma Roku 2015 competition (Vodafone Company of the Year 2015) in the Zlín Region.

2014 Winning the Distributor roku 2014 award (Distributor of the Year 2014) Bernd Siegmund GmbH. Obtaining a favourable top-ten placement at the Vodafone Firma Roku 2014 competition (Vodafone Company of the Year 2014) in the Zlín Region.

2011 Expansion of the Siegmund modular system services, adding jig and workstation structural designs and the production of atypical positioning components.

2005 Start of cooperation with Bernd Siegmund GmbH, consisting of the sale of modular systems for welding.

2003 Further expansion of the product range with toggle clamps. Adding a new series of pneumatic clamps.

2000 Adding Heavy-duty, precision clamps intended for the automotive industry to our product range.

1999 Change in the focus of the company – starting the production of the RY-UP mechanical toggle clamps.

1997 Jan Cetl established a manufacturing plant supplying components for textile and machine tools.

Clamp Type Series

The RY-UP toggle clamps are intended mainly for clamping in welding, assembly or gauging jigs. The advantage of the RY-UP toggle clamps is in their precise design, with an emphasis on durability. As a matter of course, both the pivots and hinged mountings of lever-system movable parts of each standard model include hardened bearing cases made of materials resistant to high clamping loads. Each type of clamp is treated with corrosion-protective galvanization and fitted with a plastic, oil-resistant, ergonomic handle in bright yellow. The handle securely helps distinguish the position of the clamping lever in the jig. The clamps can also be made in a stainless* design. An integral part of the whole product portfolio are accessories that further extend the application scope of the clamps.

The entire product range of RY-UP toggle clamps includes both manual and pneumatic models as well as vertical and horizontal iterations, offering a wide selection of designs to help you find the right solution for all your technical tasks.

Before browsing the catalogue, please devote some time to the following information, which will help you navigate the selection of the appropriate type and size of clamp.

1. To label each clamp we have used a combination of numbers and letters indicating its type, size and design – as shown in the figure opposite.

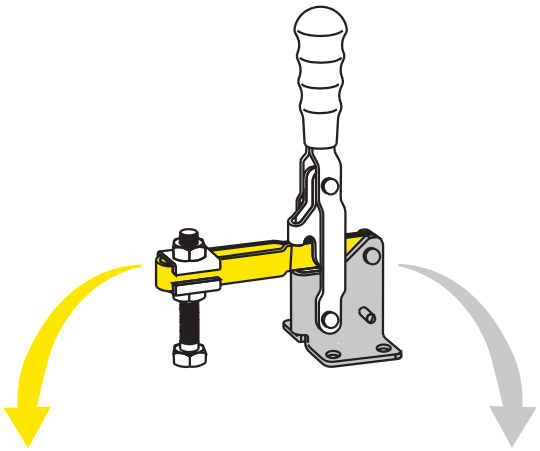
2. In the table of values, the clamping-force limit is given in the column “maximum clamping force”. At this force, irreversible damage to the weakest component of the clamp occurs. When choosing sizes, please keep this information in mind.

3. Each clamp ordered includes a thrust bolt with mounting nuts and special washers. Only in the instance of the solid “M” designs does the clamp come with a clamping bolt bush, which can be welded by jig operators according to their needs.

*please consult before ordering

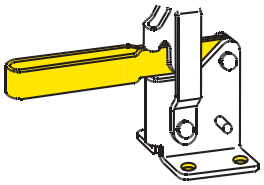
Model 240 UZ

clamp type
clamp size
standard design “U” of the clamping lever
curved fastening leg



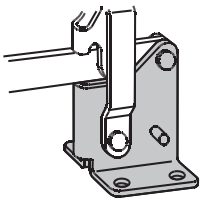
Type U

Standard design of clamping lever



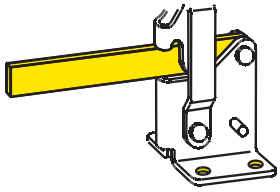
Type Z

Curved fastening leg



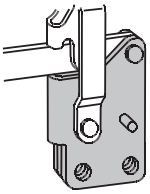
Type M

Solid design of clamping lever

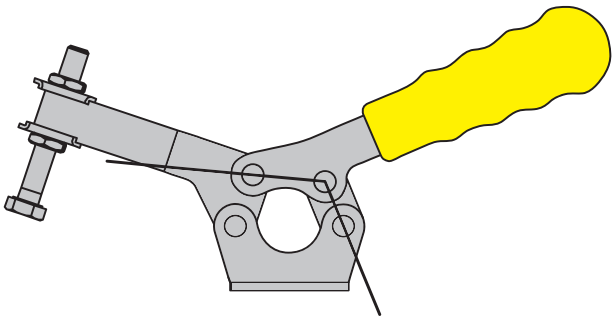


Type R

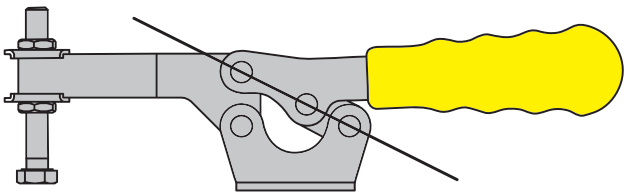
Straight fastening leg



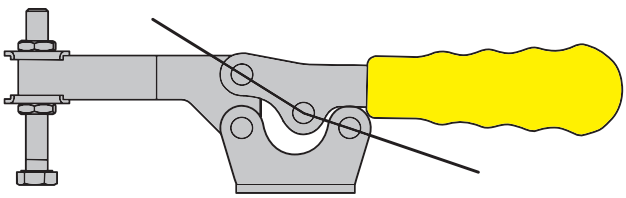
Horizontal clamp clamping process



clamp in the open position



clamp in the zero position



clamp in position beyond the dead point

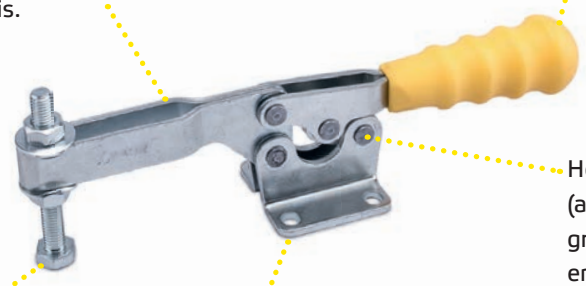
Description

Each **JC-Metal** clamp works on the principle of an articulated mechanism, which means that high clamping forces can be achieved with a relatively low control force (exerted manually or pneumatically).

At the moment of clamping, when the lever mechanism exceeds the zero position, the clamp reaches a position beyond the dead point, where the clamp levers act in a self-locking manner: the material remains firmly clamped and the clamp is closed even when there is a drop in control force.

Horizontal clamps

A standard clamping arm allows you to set the thrust bolt on two axes. With the solid lever design, the bolt can be adjusted only on one axis.



Ergonomically-shaped, oil-resistant plastic handle.

Heat-treated rivets and bushes (according to the type) are greased during installation to ensure a long service life.

Heat-treated thrust bolt with a nut and a washer.

Clamp components are made of high-quality steel sheet. They are galvanized.

Vertical clamps

Single-piece clamping arm to increase the stiffness of the clamp; the thrust bolt can be adjusted on 2 axes. With the solid lever design, the bolt can be adjusted only on one axis.

Ergonomically-shaped, oil-resistant plastic handle.

Heat-treated rivets and bushes (according to the type) are greased during installation to ensure a long service life.

Stop pin to limit travel.

Clamp components are made of high-quality steel sheet. They are galvanized.

Heat-treated thrust bolt with a nut and a washer.

Heavy duty, precision design

Heat-treated clamping lever supplied in several designs.

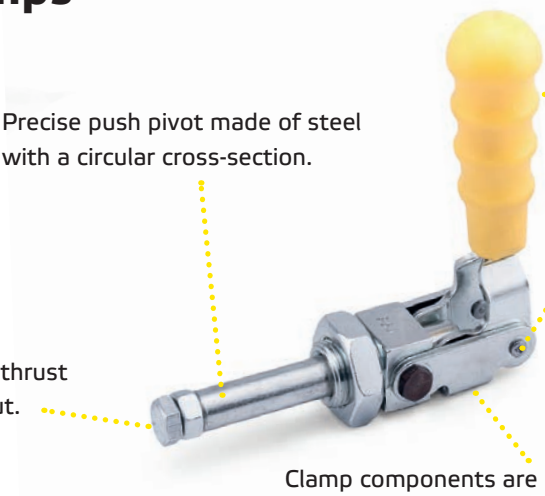
The stainless-steel control lever is heat treated.

Pivots, bolts and plugs are made of carbonitrided material.

Clamp made of carbonitrided material. They are supplied in several designs.

Clamp surface finish – blackened.

Straight clamps



Ergonomically-shaped, oil-resistant plastic handle.

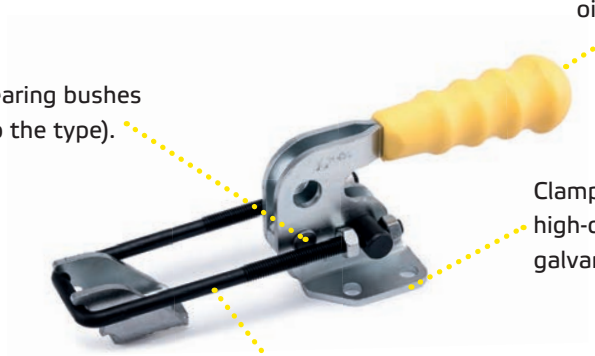
Precise push pivot made of steel with a circular cross-section.

Heat-treated rivets and screw pins (according to the type) are greased during installation to ensure a long service life.

Heat-treated thrust bolt with a nut.

Clamp components are made of high-quality, heat-treated materials. Galvanized (blackened for selected types)

Hook clamps



Ergonomically-shaped, oil-resistant plastic handle.

Hardened bearing bushes (according to the type).

Clamp components are made of high-quality steel sheet. They are galvanized.

Adjustable stirrup of alloy steel.

Pneumatic clamps

Screwed pins and plugs of hardened steel (according to the type).

Compact cylinder with a long service life.

Bronze bushes for easy operation and a long service life (according to the type).

Solid clamping lever (according to the type).

Clamp components made of alloy steel are heat-treated (according to the type).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Notes


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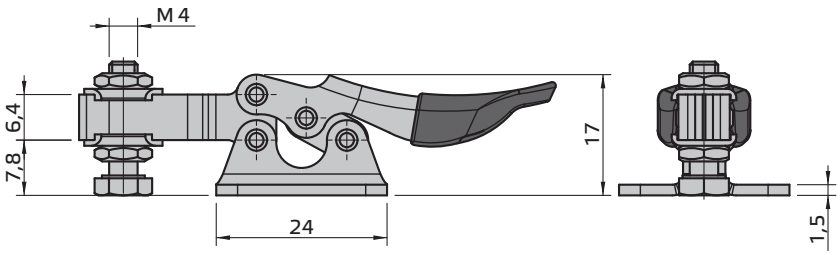
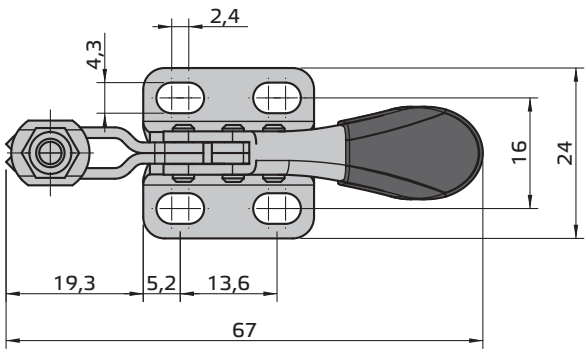
100 UZ

Miniature design

The miniature 100 UZ clamp can be applied wherever low clamping force is needed and where there are space limitations.



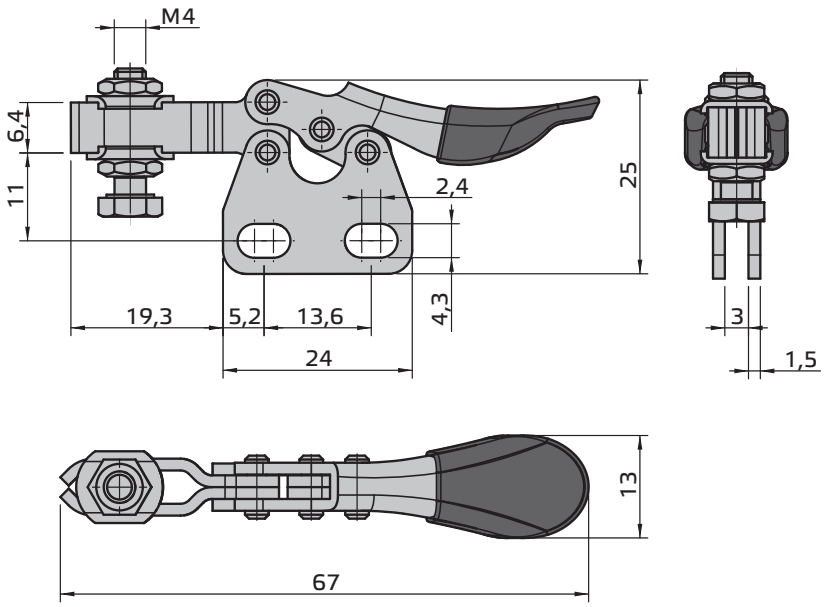


m (g)	Fmax (N)
25	250

100 UR

Miniature design

The miniature 100 UR clamp can be applied wherever low clamping force is needed and where there are space limitations.

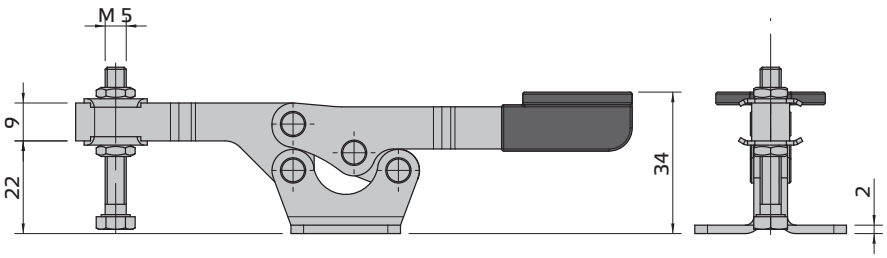


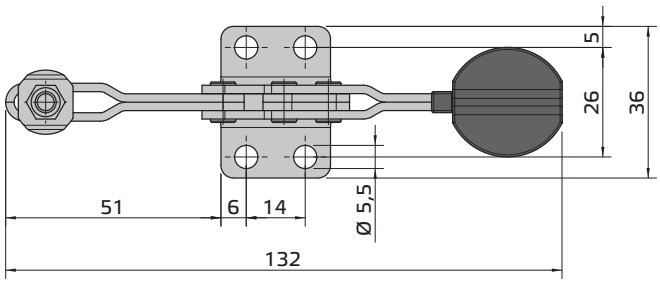
m (g)	Fmax (N)
25	250

110 UZ

Light design

The 110 UZ clamp features a horizontal structure resulting in a low build height. Its plastic-coated handle allows for easy handling in areas with a lack of space.



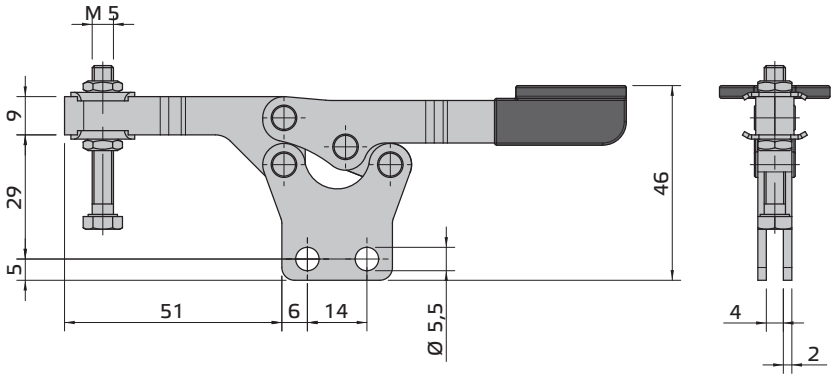


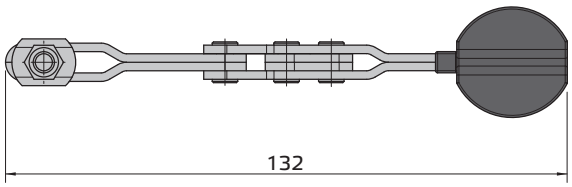
Opening angle	m (g)	Fmax (N)
95°	90	800

110 UR

Light design

The 110 UR clamp features a horizontal structure resulting in a low build height. Its plastic-coated handle allows for easy handling in areas with a lack of space.



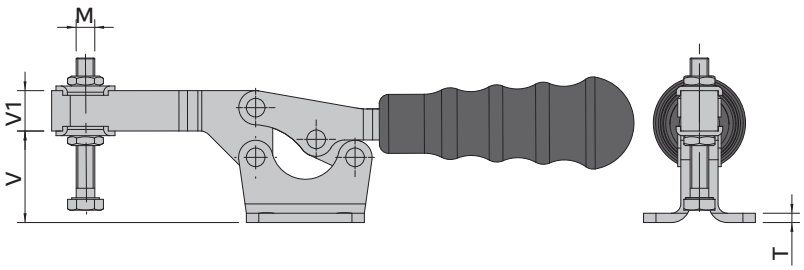


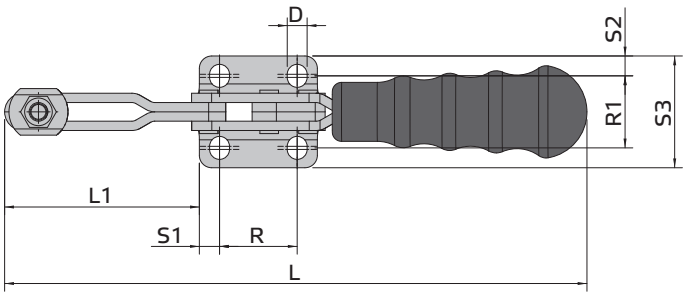
Opening angle	m (g)	Fmax (N)
95º	90	800

120 – 150 UZ

Light to medium-heavy design

Clamps in the 120 UZ – 150 UZ series feature a horizontal structure resulting in a low build height. Apart from the in 120 model, hardened bearing bushes are used in these clamps. In addition, hardened rivets are used for all models.



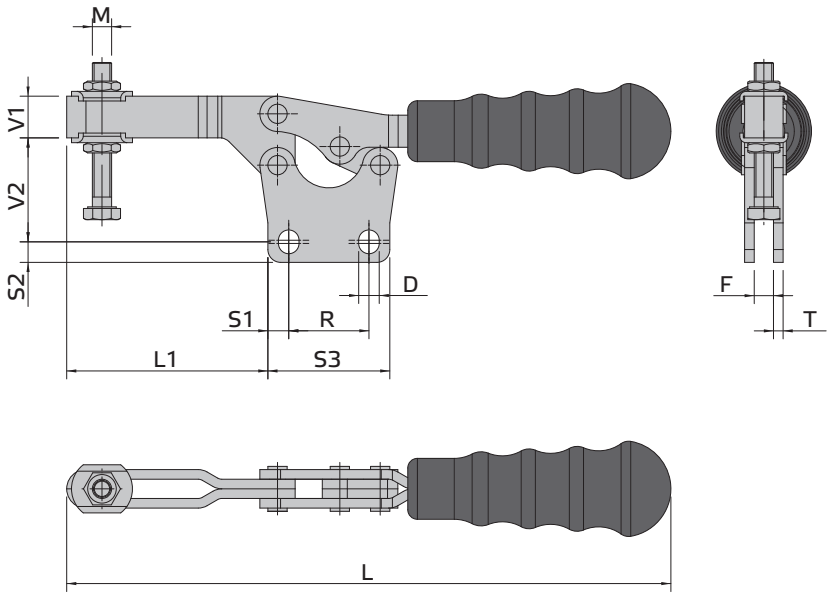


TYPE	L	L1	S1	S2	S3	D	T	M	R	R1	V	V1	Opening angle	m (g)	Fmax (N)
120 UZ	190	62,5	6,5	6,4	36	6,4	3	6	25	23	29	13	90°	350	1300
130 UZ	224	81	9	9	56	6,5	3	8	26	38	35	16	90°	500	1800
140 UZ	260	105,5	8	8	57	8,4	4	10	41,2	41	40	20	90°	750	3000
150 UZ	305	128	10	10	72	8,6	5	12	44	52	53	26	90°	950	5000

120 – 150 UR

Light to medium-heavy design

Clamps in the 120 UR – 150 UR series feature a horizontal structure resulting in a low build height. Apart from the 120 model, hardened bearing bushes are used in these clamps. In addition, hardened rivets are used for all models.



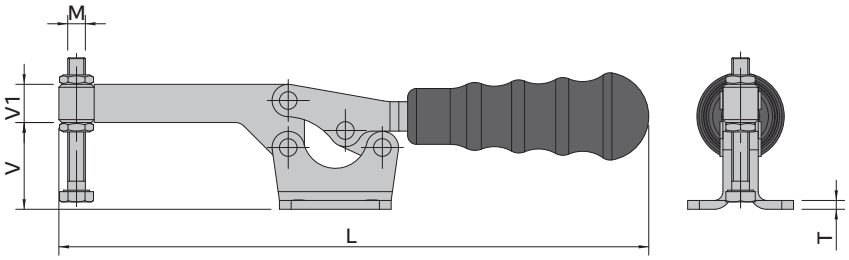
TYPE	L	L1	S1	S2	S3	D	T	M	R	V1	V2	F	Opening angle	m (g)	Fmax (N)
120 UR	190	62,5	6,5	6,4	38	6,4	3	6	25	13	33	6	90º	350	1300
130 UR	224	81	9	9	44	6,5	3	8	26	16	46,7	6	90º	500	1800
140 UR	260	105,5	8	8	57	8,4	4	10	41,2	20	49	8	90º	750	3000
150 UR	305	128	10	10	64	8,6	5	12	44	26	64	10	90º	950	5000

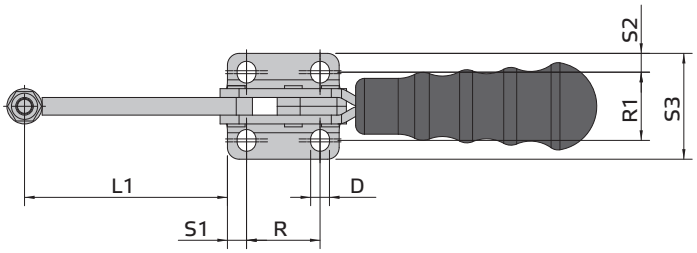
120 – 150 MZ

Light to medium-heavy design

Clamps in the 120 MZ – 150 MZ series feature a horizontal structure resulting in a low build height. Apart from the 120 model, hardened bearing bushes are used in these clamps. In addition, hardened rivets are used for all models. This type of clamp is supplied with a solid clamping lever and a bush for the clamping bolt.

The bush for the clamping bolt is included in delivery – free, unwelded.





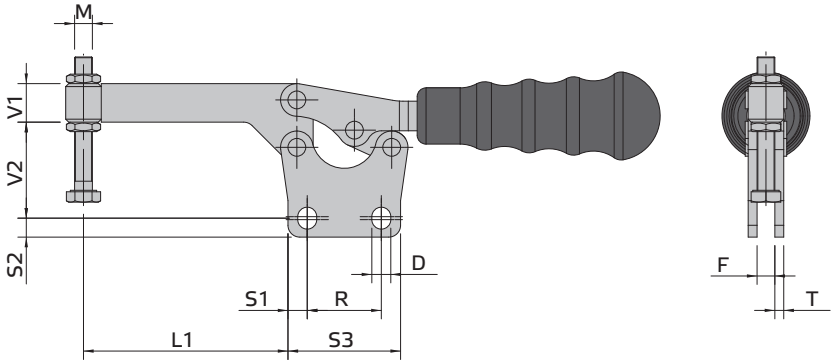
TYPE	L	L1	S1	S2	S3	D	T	M	R	R1	V	V1	Opening angle	m (g)	Fmax (N)
120 MZ	200	69	6,5	6,4	38	6,4	3	6	25	23	29	13	95º	350	1300
130 MZ	238,5	88,5	9	9	44	6,5	3	8	26	38	35	16	95º	500	1800
140 MZ	275,5	111,5	8	8	57	8,4	4	10	41,2	41	42	20	95º	750	3000
150 MZ	320	137	10	10	64	8,6	5	12	44	52	53	26	95º	950	5000

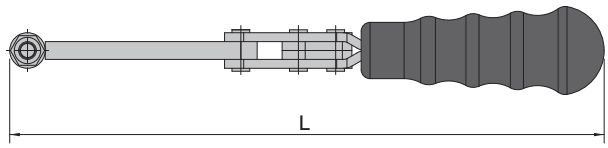
120 – 150 MR

Light to medium-heavy design

Clamps in the 120 MR – 150 MR series feature a horizontal structure resulting in a low build height. Apart from the 120 model, hardened bearing bushes are used in these clamps. In addition, hardened rivets are used for all models. This type of clamp is supplied with a solid clamping lever and a bush for the clamping bolt.

The bush for the clamping bolt is included in delivery – free, unwelded.



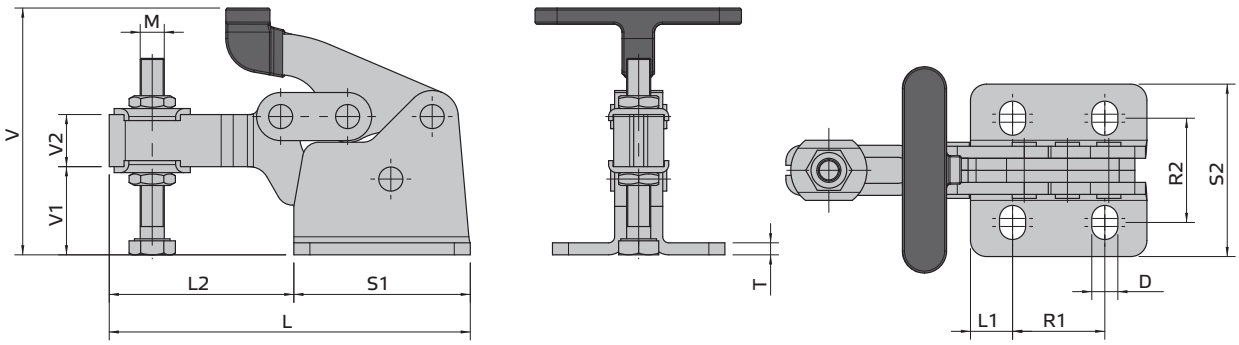


TYPE	L	L1	S1	S2	S3	D	T	M	R	V1	V2	F	Opening angle	m (g)	Fmax (N)
120 MR	200	69	6,5	6,4	38	6,4	3	6	25	13	33	6	95º	350	1300
130 MR	238,5	88,5	9	9	44	6,5	3	8	26	16	46,7	6	95º	500	1800
140 MR	275,5	111,5	8	8	57	8,4	4	10	41,2	20	51	8	95º	750	3000
150 MR	320	137	10	10	64	8,6	5	12	44	26	64	10	95º	950	5000

105 – 109

Light to medium-heavy design

The compact design of these clamps allows for use in confined areas. The handle and clamping lever move in the same direction. Despite their small structural size, their clamping force is relatively high. These clamps are for use in jigs for drilling, bonding, brazing, assembling, etc.

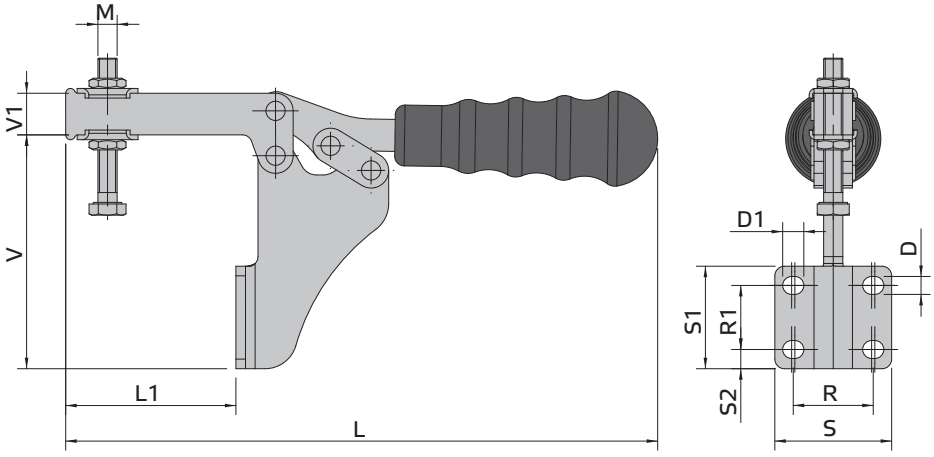


TYPE	L1	L2	L	V1	V2	V	S1	S2	R1	R2	D	T	M	Opening angle	m (g)	Fmax (N)
105	6,5	30	56,5	13	8	34	26,5	26	13,5	16	4,5	2	5	92º	60	650
107	10,5	46	90	22	13	61	44	43	23	26	6,5	3	6	92º	220	1500
109	14,5	68	132	33	19	90	64	57	35	38	8,5	3	10	90º	630	3400

121 – 141

Light to medium-heavy design

The clamps of this series are specially equipped with a curved fastening leg allowing for installation from the front of the jig.

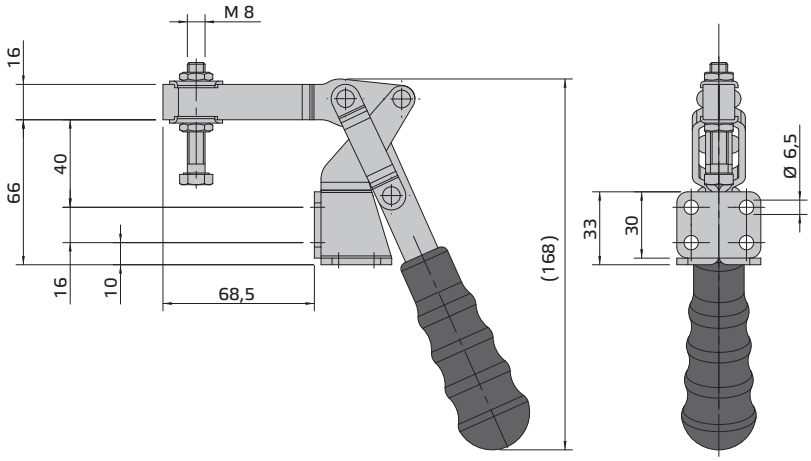


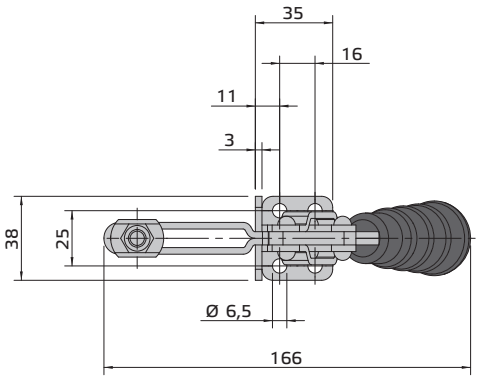
TYPE	L	L1	V	V1	M	S	S1	S2	R	R1	D	D1	Opening angle	m (g)	Fmax (N)
121	186	52	73	13	6	37	32	6	25,5	20	5,6	6,6	90º	245	1200
131	210	58,5	71	15	8	42,5	38	7	28,5	24	6,5	8,5	90º	390	2500
141	267	93	102	20	10	52	52	10	32	32	8,5	10,5	90º	730	3000

132 U

Light to medium-heavy design

This clamp can be affixed from two sides. It has a wide opening angle.





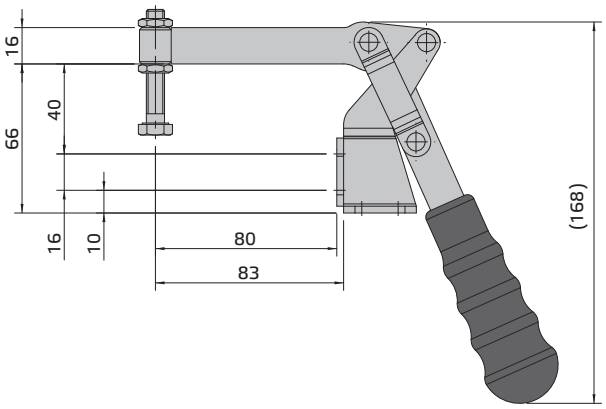
Opening angle	m (g)	Fmax (N)
185º	450	1700

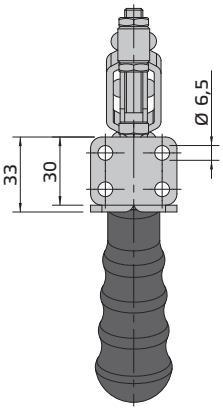
132 M

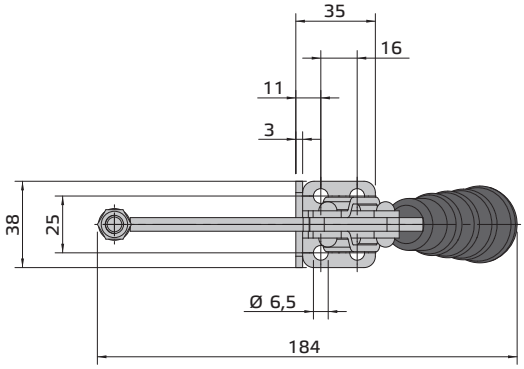
Light to medium-heavy design

This clamp can be affixed from two sides. It has a wide opening angle.

A bush for the clamping bolt is included in delivery – free, unwelded.





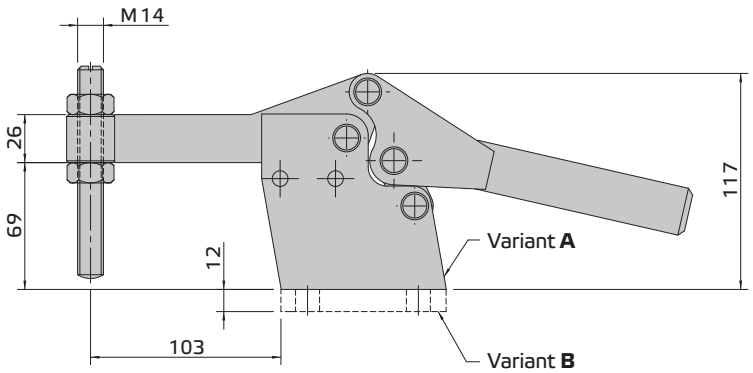


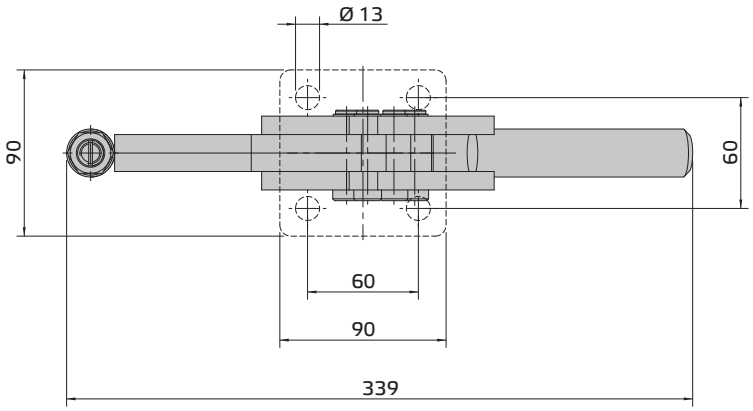
Opening angle	m (g)	Fmax (N)
185º	450	1700

160 M-A,160 M-B

Heavy design

A clamp for heavy-duty clamping. It can be used wherever a high clamping force is required or where harsh treatment cannot be avoided. The clamp is supplied in two designs, A or B.



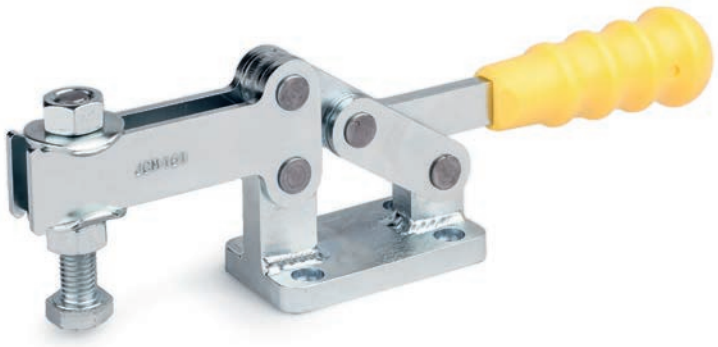


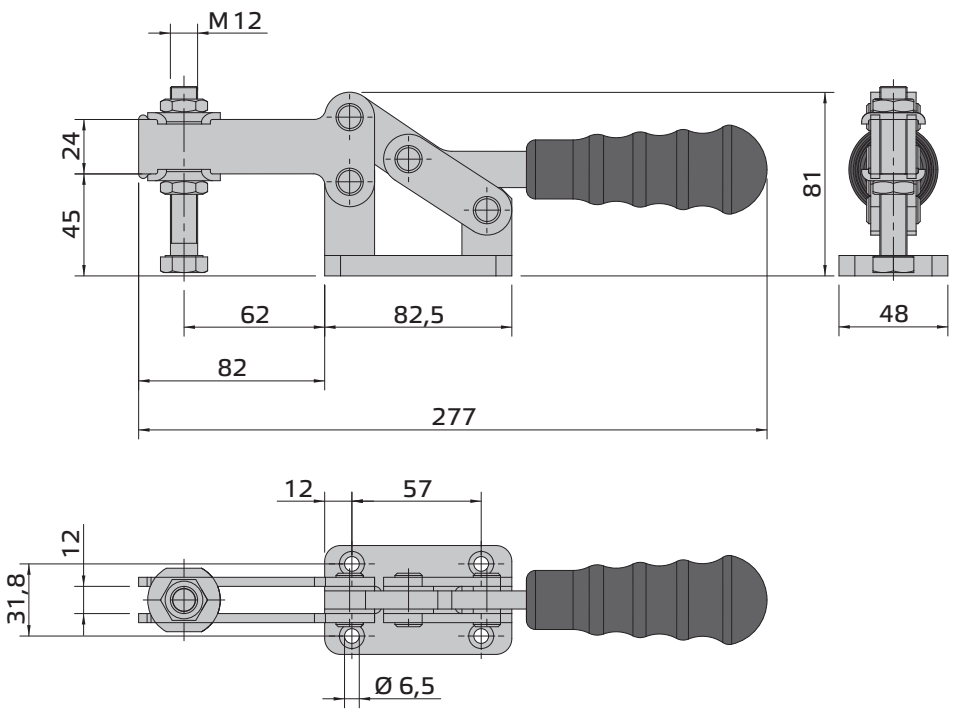
Opening angle	Surface finish	Fmax (kN)	m (g)
92°	Blackened	16	3600

161

Heavy design

A clamp for heavy-duty clamping. It can be used wherever a high clamping force is required or where harsh treatment cannot be avoided.





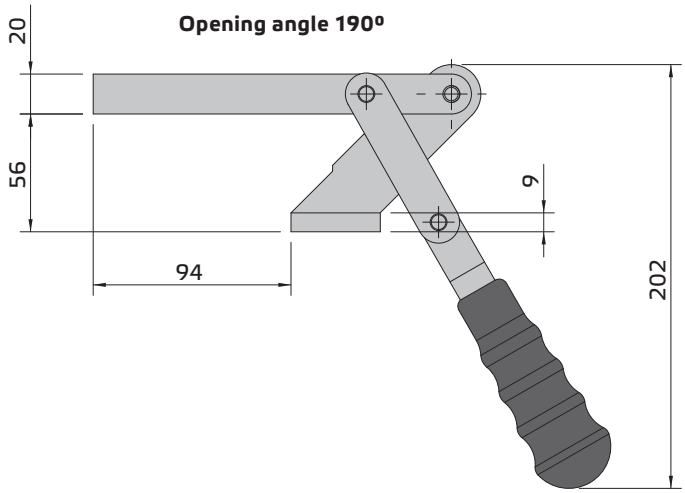
Opening angle	Fmax (N)	Weight (kg)
95°	5000	1

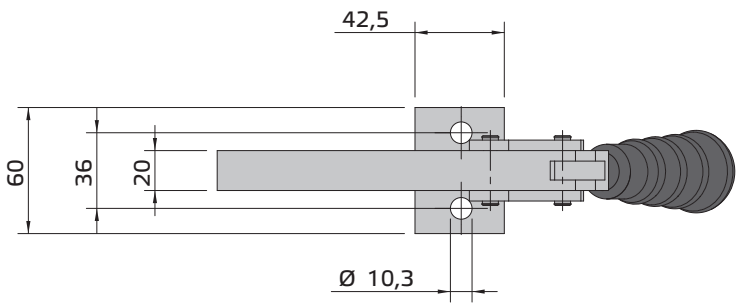
180

Heavy design

A clamp for heavy-duty clamping. It can be used wherever a high clamping force is required or where harsh treatment cannot be avoided. The advantages of this clamp are its wide opening angle and the variety of methods that can be employed to affix it. Its clamping lever can be shortened, welded or threaded for clamping elements.

The clamp rivets are hardened. The clamp features a surface finish of Fe-Zn. A black design is also available upon request.





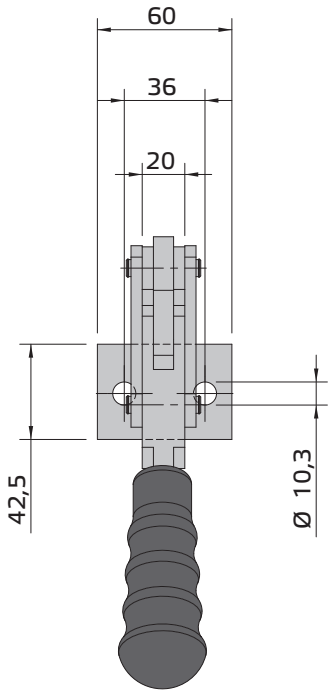
m (g)	Fmax (N)
1140	4500

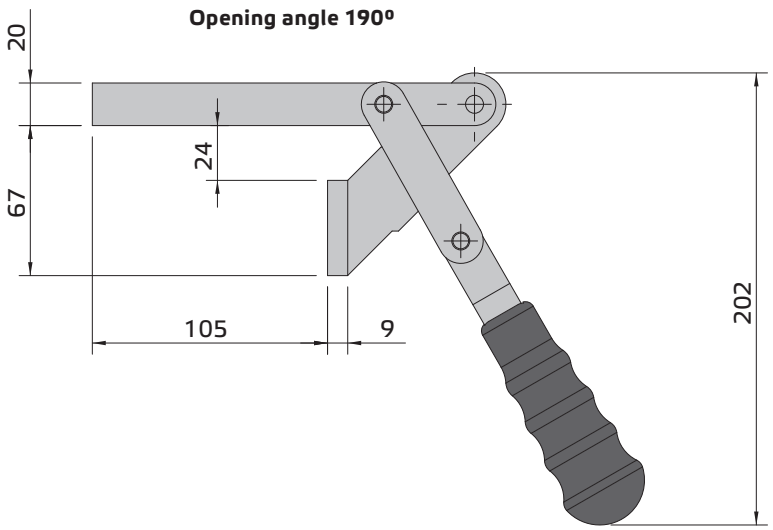
181

Heavy design

This clamp can be used wherever a high clamping force is required or where harsh treatment cannot be avoided. Its advantages include a wide opening angle and a variety of methods for affixing it. Its clamping lever can be shortened, welded or threaded for clamping elements.

The clamp rivets are hardened. The clamp features a surface finish of Fe-Zn. A black design is also available upon request.



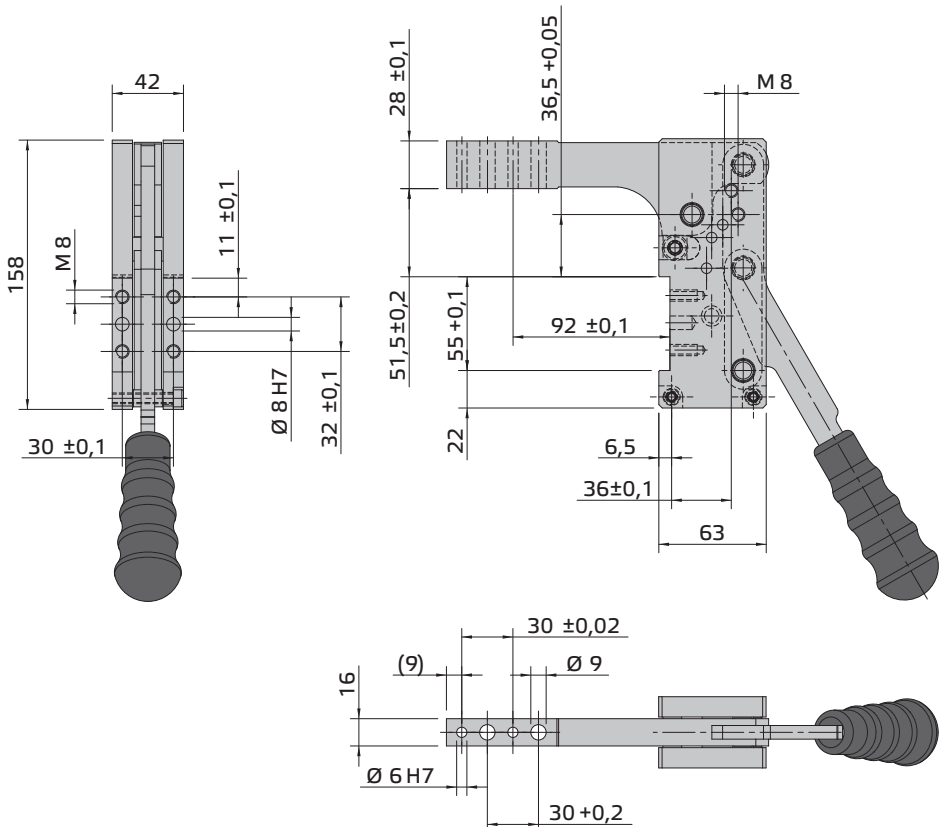


m (g)	Fmax (N)
1140	4500

185

Heavy duty, precision design

An open-designed, self-locking, clamping arm. Featuring openings for the installation of formative elements, installation from the front, and interchangeability with pneumatic clamps. Compatible with pneumatic clamps manufactured by companies such as Tünkers, Destaco and similar.

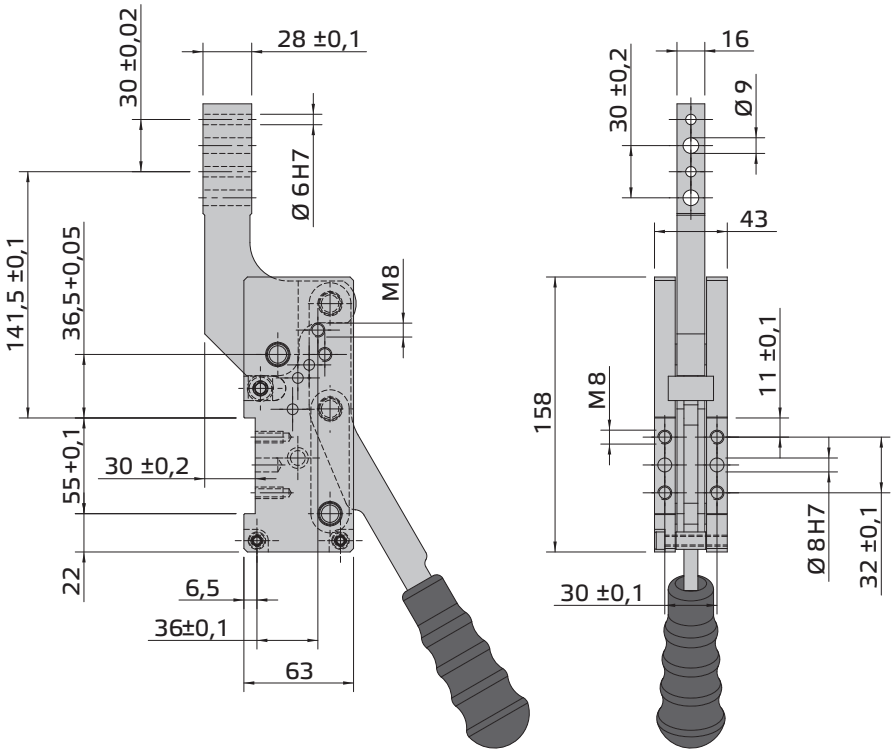


m (g)	Fmax (kN)
3100	16

186

Heavy duty, precision design

An open-designed, self-locking, clamping arm. Featuring openings for the installation of formative elements, installation from the front, and interchangeability with pneumatic clamps. Compatible with pneumatic clamps manufactured by companies such as Tünkers, Destaco and similar.



m (g)	Fmax (kN)
3100	16

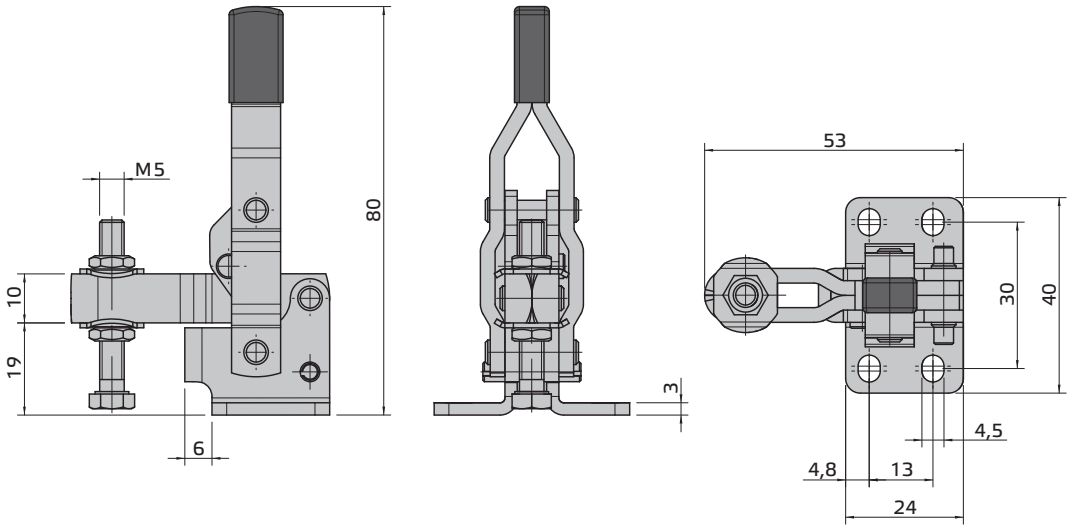
Notes


KOHTREIBER
DIN 9-13

200 UZ

Miniature design

The miniature 200 UZ clamp can be applied wherever low clamping force is needed and where there are space limitations.

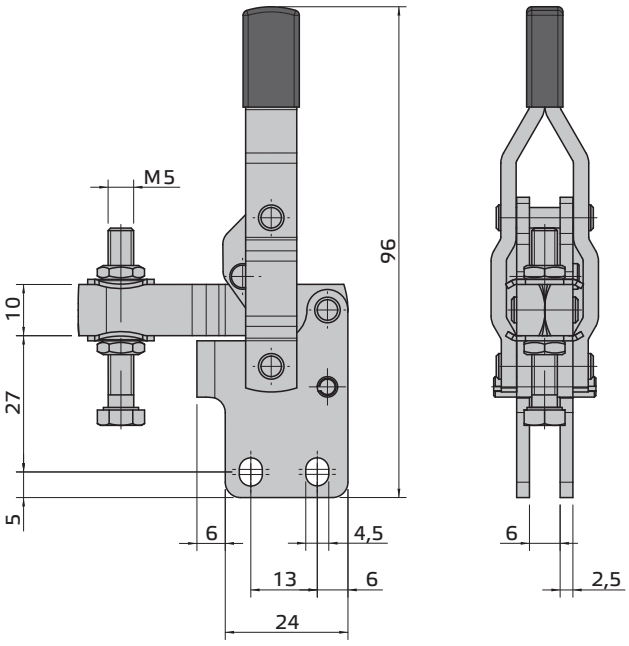


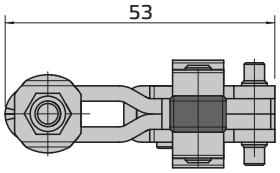
m (g)	Fmax (N)
55	250

200 UR

Miniature design

The miniature 200 UR clamp can be applied wherever low clamping force is needed and where there are space limitations.



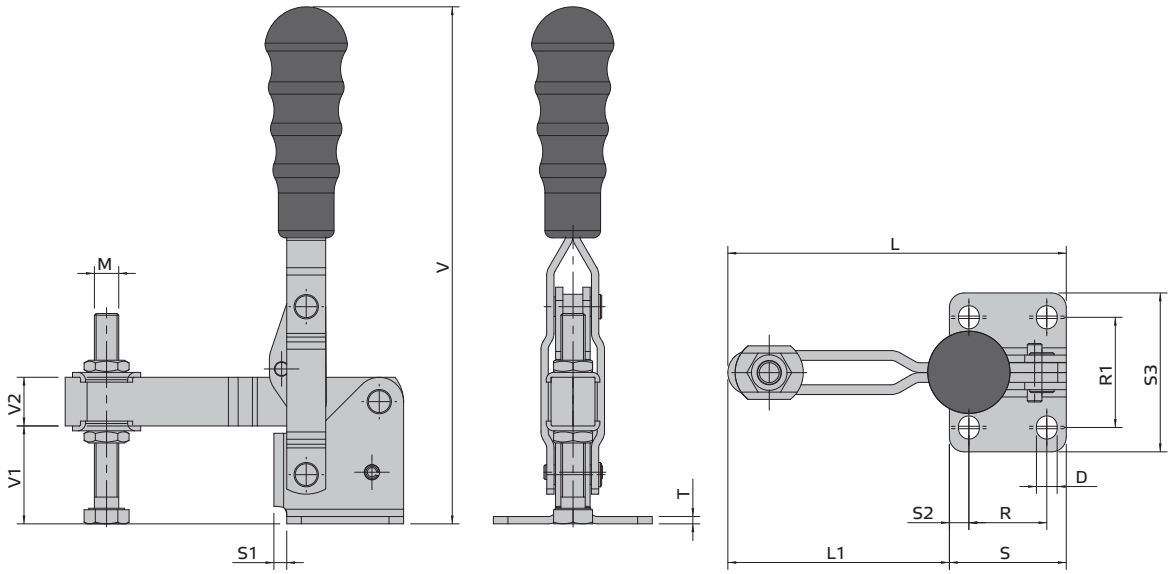


m (g)	Fmax (N)
55	250

210 – 260 UZ

Light to medium-heavy design

The handles in this clamp series are in a vertical position when closed. Apart from the 210 and 220 models, they are all equipped with hardened bearing bushes. In addition, hardened rivets are used for all models.

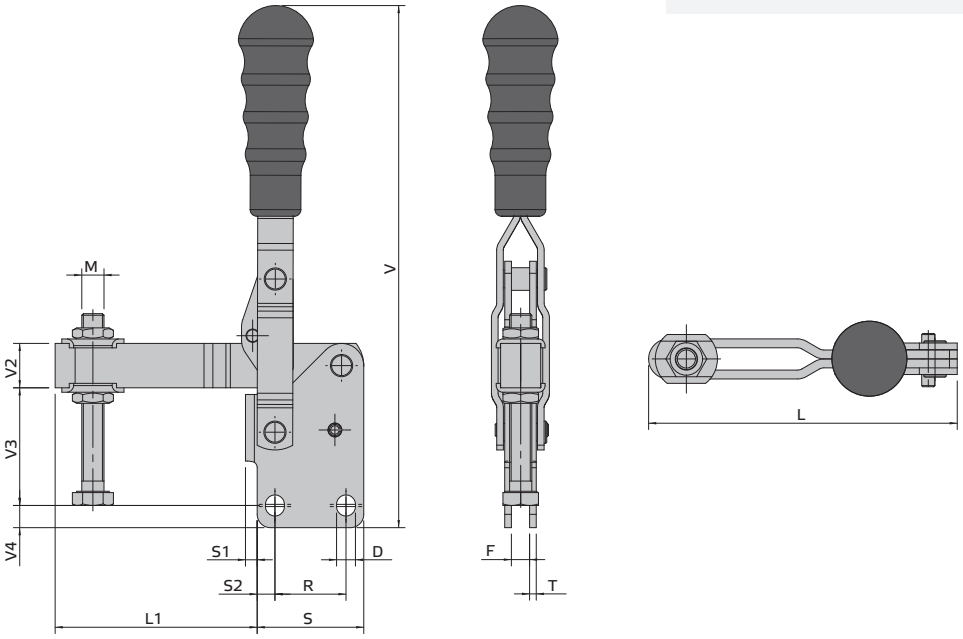


TYPE	L	L1	S	S1	S2	S3	D	T	M	R	V	V1	V2	R1	Opening angle	m (g)	Fmax (N)
210 UZ	52	28	24	6	4,8	38	4,5	2,5	5	13	143	20	10	28	100º	175	700
220 UZ	80	54,3	25,5	4,5	6,2	40	4,5	3	6	13	146	24	10	30	110º	185	1000
230 UZ	100	65	35	6	8	45	6,5	3	8	19	177	30	16	32	110º	360	1800
240 UZ	140	92	48	6	8	65	8,5	3	10	32	211	41	20	45	105º	655	2200
250 UZ	170	106,5	62	10	8	70	8,5	4	12	46	260	52	25	52	105º	910	3500
260 UZ	210	140	72	11	11	92	10,5	4	12	50	305	81,5	25	72	105º	1055	5000

210 – 260 UR

Light to medium-heavy design

The handles in this clamp series are in a vertical position when closed. Apart from the 210 and 220 models, they are all equipped with hardened bearing bushes. In addition, hardened rivets are used for all models.



TYPE	L	L1	S	S1	S2	D	T	M	R	V	V2	V3	V4	F	Opening angle	m (g)	Fmax (N)
210 UR	52	28	24	6	4,8	4,5	2,5	5	13	156	10	26	5	6	100º	175	700
220 UR	80	54,3	25,5	4,5	6,2	4,5	3	6	13	164	10	31	5	6	110º	185	1000
230 UR	100	65	35	6	8	6,5	3	8	19	190	16	37,5	6,5	6	110º	360	1800
240 UR	140	92	48	6	8	8,5	3	10	32	234	20	54	10	8	105º	655	2200
250 UR	170	106,5	62	10	8	8,5	4	12	46	283	25	67	9	8	105º	910	3500
260 UR	210	138	72	11	11	10,5	4	12	50	341	25	106,5	10	8	105º	1055	5000

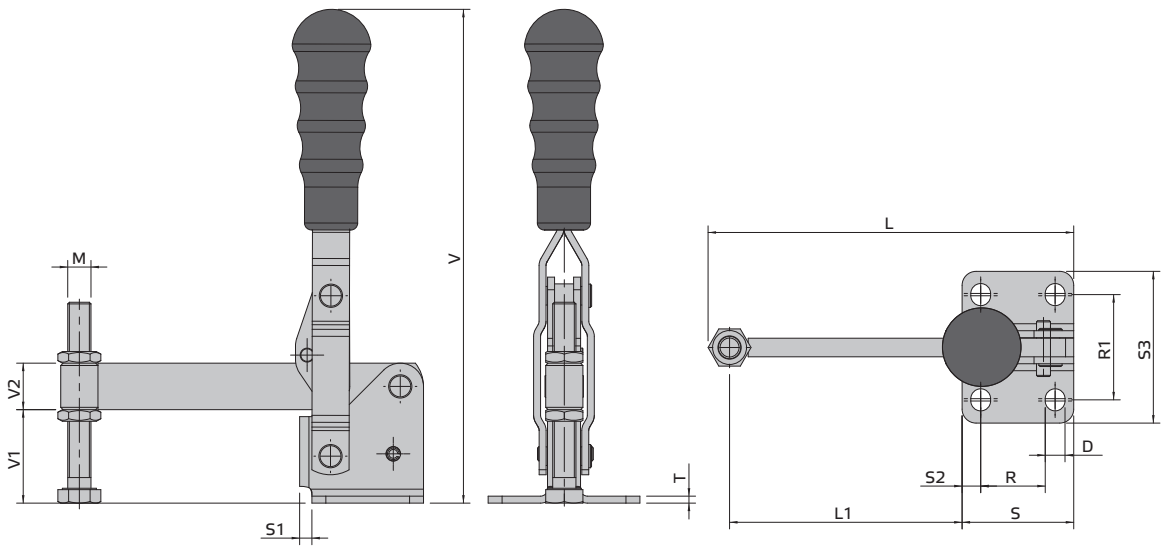
210 – 260 MZ

Light to medium-heavy design

The handles in this clamp series are in a vertical position when closed. Apart from the 210 and 220 models, they are all equipped with hardened bearing bushes. In addition, hardened rivets are used for all models.

This type of clamp is supplied with a solid clamping lever and a bush for the clamping bolt.

The bush for the clamping bolt is included in delivery – free, unwelded.



TYPE	L	L1	S	S1	S2	S3	D	T	M	R	V	V1	V2	R1	Opening angle	m (g)	Fmax (N)
210 MZ	64	34,5	24	6	4,8	38	4,5	2,5	5	13	143	20	10	28	100º	175	700
220 MZ	91,5	60,3	25,5	4,5	6,2	40	4,5	3	6	13	146	24	10	30	110º	185	1000
230 MZ	114	71,6	35	6	8	45	6,5	3	8	19	177	30	16	32	110º	360	1800
240 MZ	155	99	48	6	8	65	8,5	3	10	32	211	41	20	45	105º	655	2200
250 MZ	186,5	115,5	62	10	8	70	8,5	4	12	46	260	52	25	52	105º	910	3500
260 MZ	232	149	72	11	11	92	10,5	4	12	50	305	81,5	25	72	105º	1055	5000

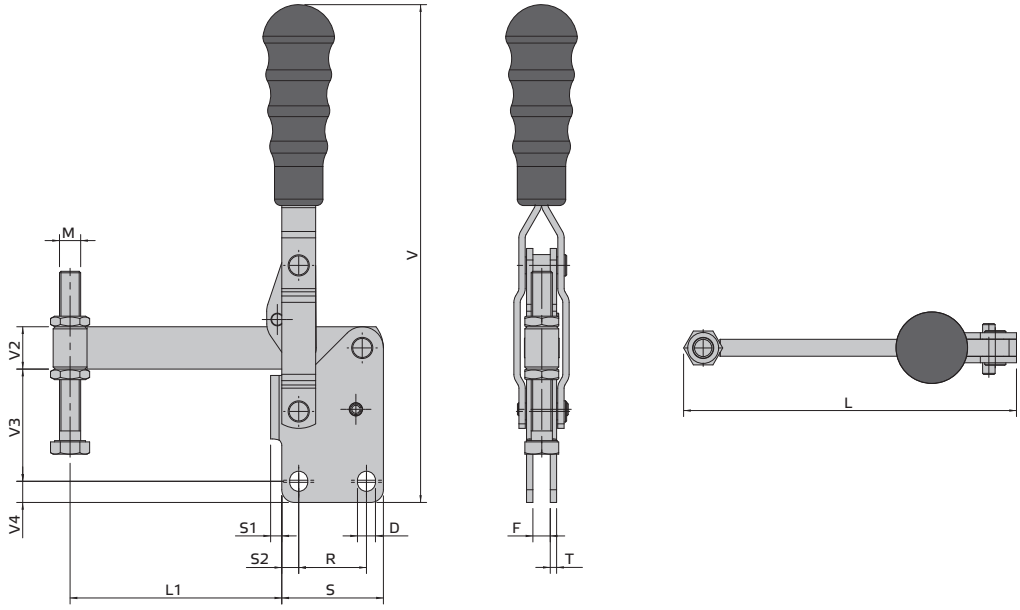
210 – 260 MR

Light to medium-heavy design

The handles in this clamp series are in a vertical position when closed. Apart from the 210 and 220 models, they are all equipped with hardened bearing bushes. In addition, hardened rivets are used for all models.

This type of clamp is supplied with a solid clamping lever and a bush for the clamping bolt.

The bush for the clamping bolt is included in delivery – free, unwelded.

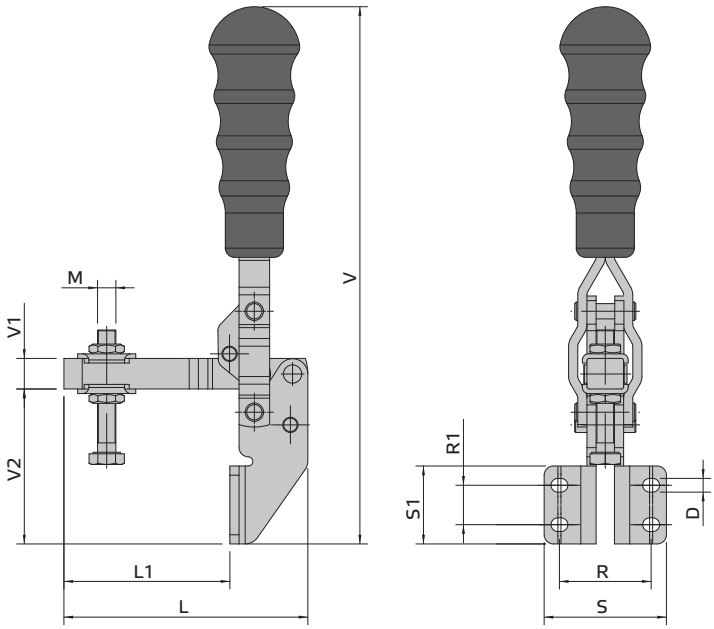


TYPE	L	L1	S	S1	S2	D	T	M	R	V	V2	V3	V4	F	Opening angle	m (g)	Fmax (N)
210 MR	64	34,5	24	6	4,8	4,5	2,5	5	13	156	10	26	5	6	100º	175	700
220 MR	91,5	60,3	25,5	4,5	6,2	4,5	3	6	13	164	10	31	5	6	110º	185	1000
230 MR	114	71,6	35	6	8	6,5	3	8	19	190	16	37,5	6,5	6	110º	360	1800
240 MR	155	99	48	6	8	8,5	3	10	32	234	20	54	10	8	105º	655	2200
250 MR	186,5	115,5	62	10	8	8,5	4	12	46	283	25	67	9	8	105º	910	3500
260 MR	232	149	72	11	11	10,5	4	12	50	341	25	106,5	10	8	105º	1055	5000

221 – 241

Light to medium-heavy design

The clamps in this range are based on the 220, 230 and 240 models. The handles in this clamp series are in a vertical position when closed. All models have hardened rivets, and the 231 and 241 models also have hardened bearing bushings. The curved fastening leg allows mounting from the front of jigs.

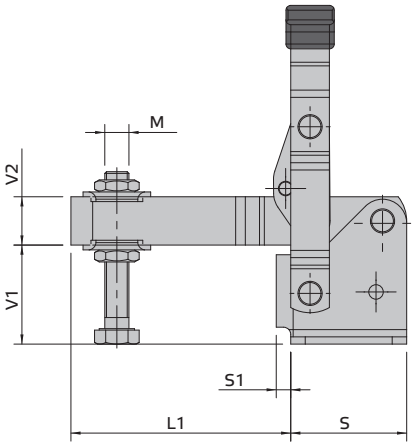


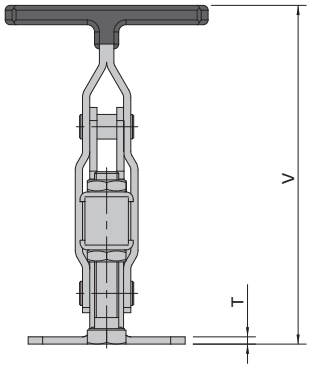
TYPE	L	L1	S	S1	D	M	R	R1	V	V1	V2	Opening angle	m (g)	Fmax (N)
221	80	54	40	25,5	4,5	6	30	13	176	51	10	110º	200	1000
231	99,5	61,5	45	35	6,5	8	32	19	211	64,5	16	110º	400	1800
241	139	85	65	48	8,5	10	45	32	259	88	20	105º	710	2200

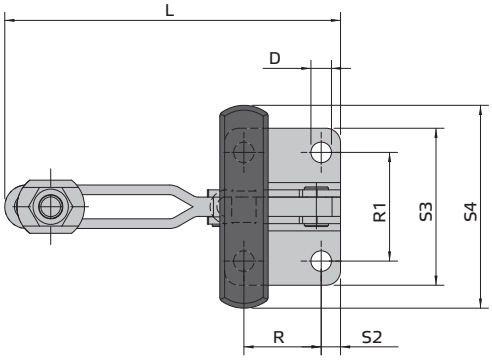
230 – 240 UZT

Light to medium-heavy design

The handles in this clamp series are in a vertical position when closed. The 230 UZT – 240 UZT clamp series features a reduced construction height. Hardened bearing bushes and hardened rivets are used in all of these clamps.







TYPE	L	L1	S	S1	S2	S3	S4	T	M	R	V	V1	V2	R1	Opening angle	m (g)	F (max)
230 UZT	100	65	35	6	8	45	76	3	8	19	106	30	16	32	110°	360	1800
240 UZT	140	92	48	6	8	65	84	3	10	32	141	41	20	45	105°	655	2200

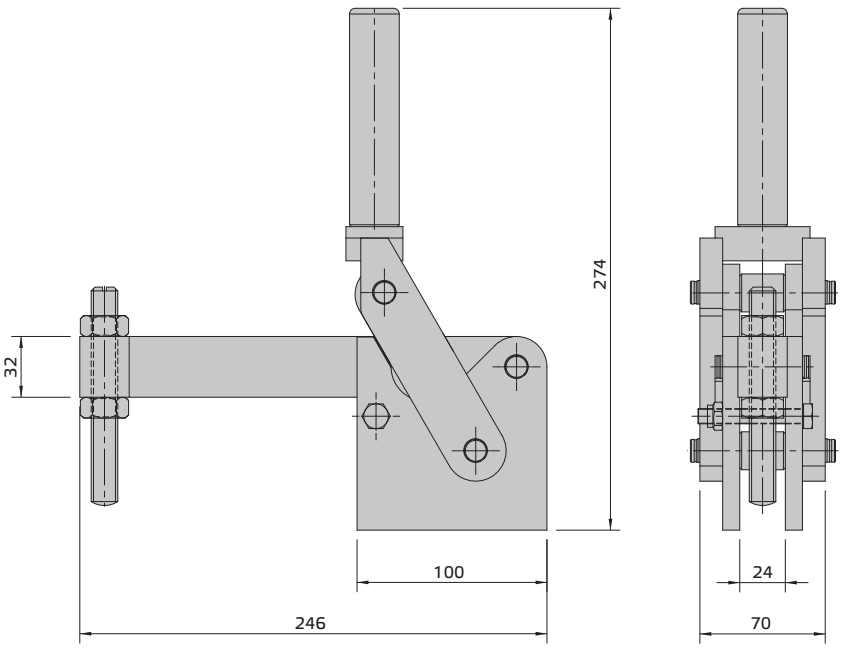
Notes

270 M

Heavy design

Suitable for demanding clamping of pieces in welding, machining and wherever a high clamping force is required.

Delivery also includes a clamping bolt with a welded bush.



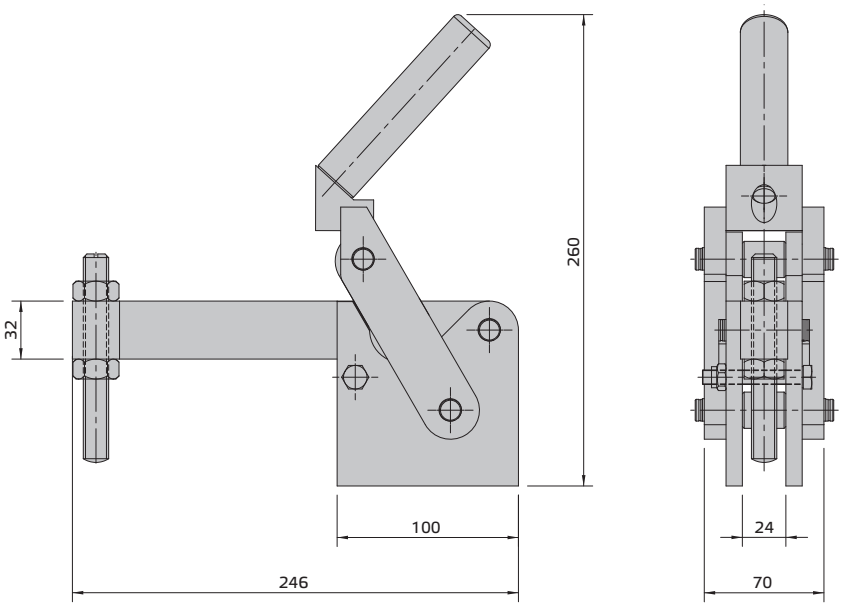
Opening angle	Surface finish	Fmax (kN)	m (g)
192°	Blackened	29	2600

270 M–A

Special heavy design

A clamp based on the 270 M model. The 270 M–A clamp handle is rotated 45⁰ compared to the 270 M, so its total construction height is reduced. It is suitable for demanding clamping of pieces in welding, machining and wherever a high clamping force is required.

Delivery also includes a clamping bolt with a welded bush.

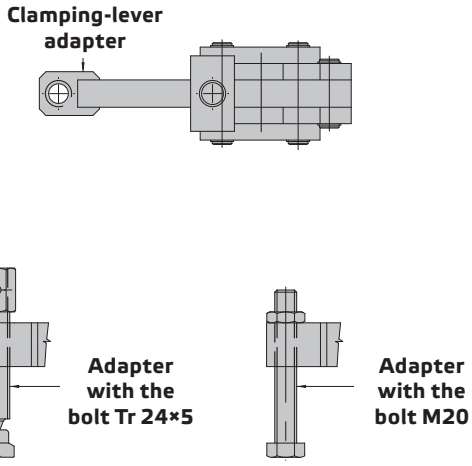


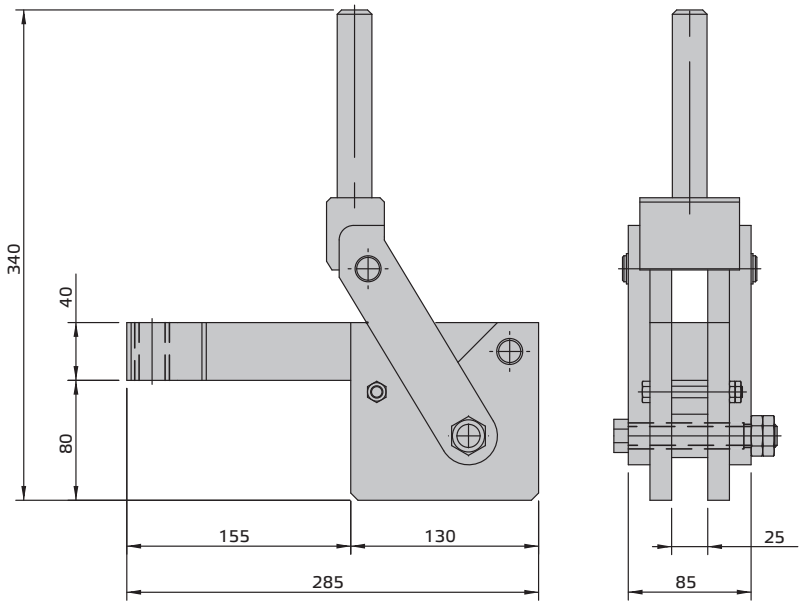
Opening angle	Surface finish	Fmax (kN)	m (g)
192⁰	Blackened	29	2600

275

Heavy duty, precision design – for extremely demanding clamping

This clamp is suitable for demanding clamping of pieces in welding, machining and wherever a high clamping force is required. Two clamping-lever adapters are available for this model.





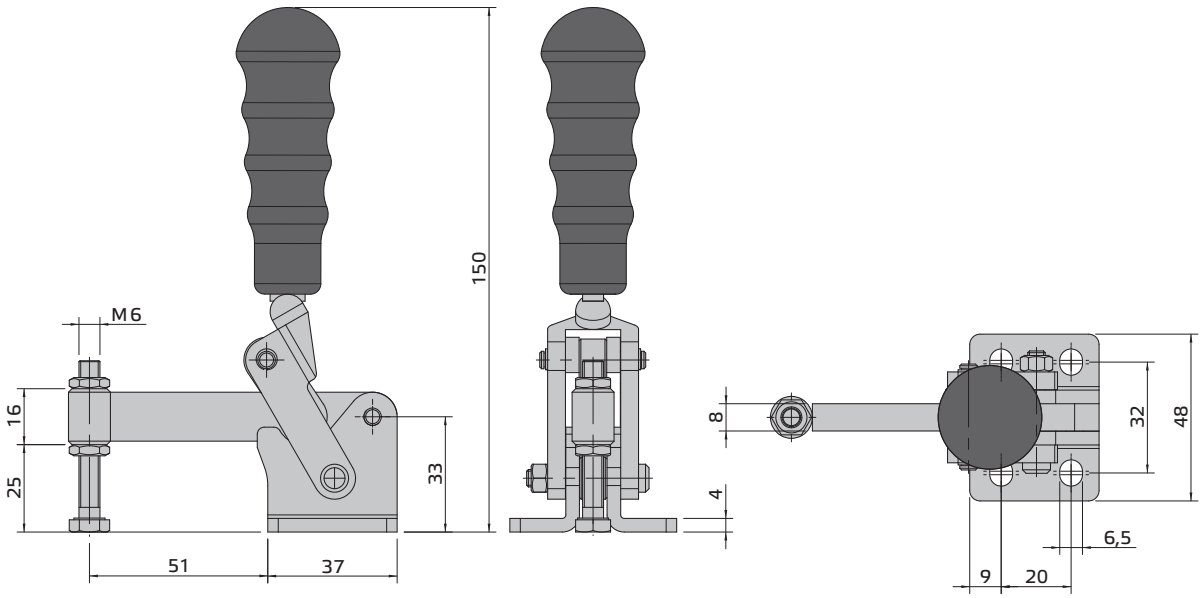
Surface finish	Fmax (kN)
Blackened	29

279

Special heavy design

This clamp is specifically designed for a long service life. Despite its small structural size, the clamping force is relatively high. The fastening legs, draw rods and pivots are made of carbonitrided material and hardened to 48 HRC. The clamp components are all blackened.

The bush for the clamping bolt is included in delivery – free, unwelded.

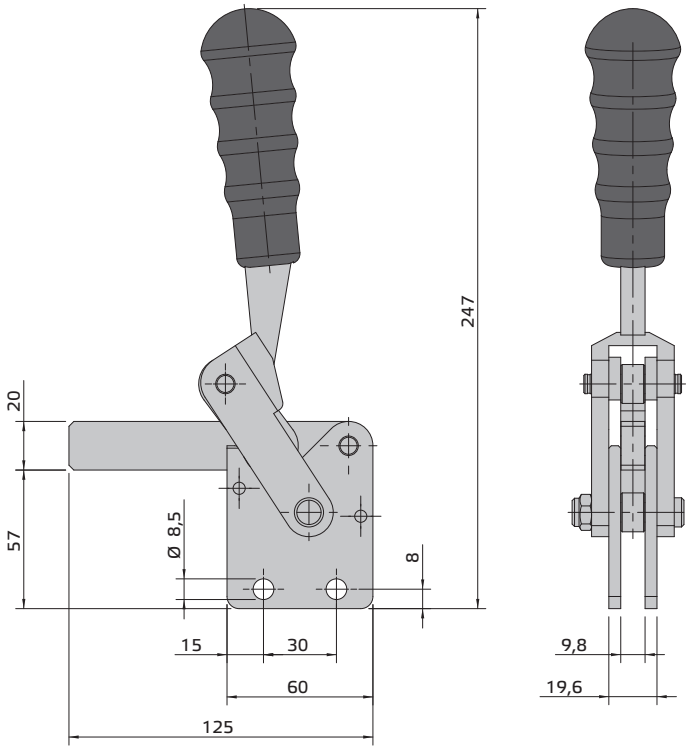


Opening angle	Fmax (N)	m (g)
120°	2500	320

280

Heavy duty, precision design

This clamp is specifically designed to provide both a high clamping force and a long service life. The handle weldment is made of carbon steel, heat-treated to 800–1000 MPa. The fastening legs, draw rods and pivots are made of carbonitrided material and hardened to 48 HRC. The clamp components are all blackened. The clamp design allows for limitation of clamping-arm play and the adjustment of the entire clamp.

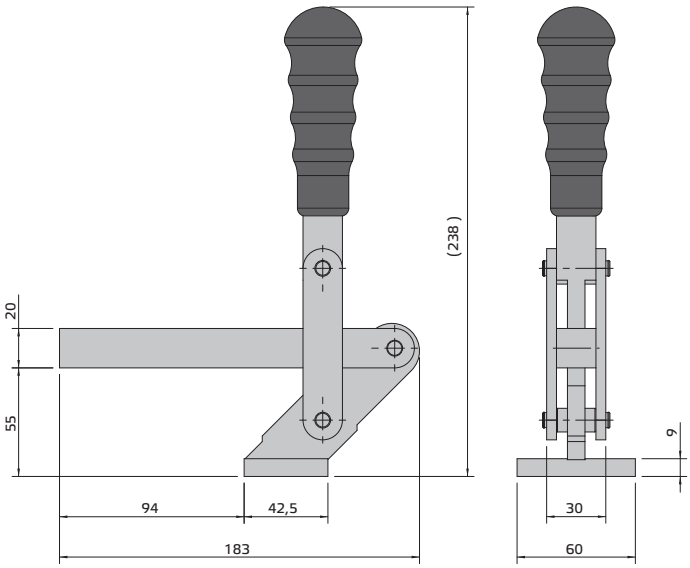


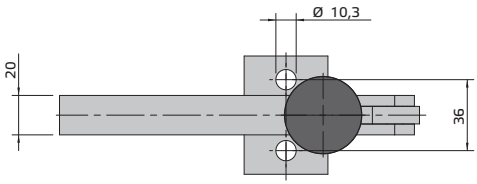
Opening angle	Fmax (N)	m (g)
130°	7000	1000

285

Heavy duty, precision design

A clamp for heavy-duty clamping. For use wherever high clamping force is required or where it is not possible to avoid rough treatment. The advantages of this clamp are its wide opening angle and the variety of methods that can be employed to affix it. The clamping lever can be shortened, welded or threaded for clamping elements.



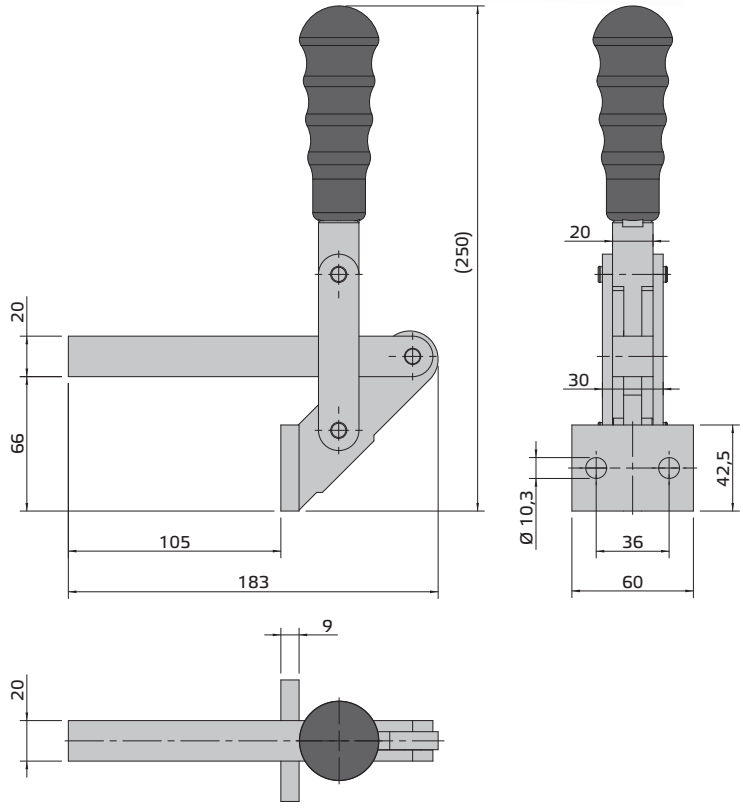


Opening angle	m (g)	Fmax (N)
180º	1350	4500

286

Heavy duty, precision design

A clamp for heavy-duty clamping. For use wherever high clamping force is required or where it is not possible to avoid rough treatment. The advantages of this clamp are its wide opening angle and the variety of methods that can be employed to affix it. The clamping lever can be shortened, welded or threaded for clamping elements.

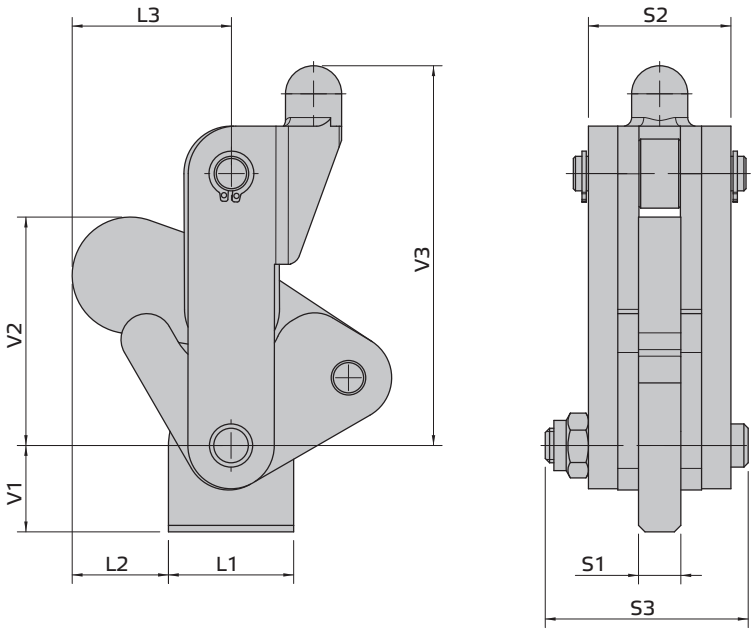


Opening angle	m (g)	Fmax (N)
180º	1350	4500

291 – 296 M

Heavy duty, precision design

These clamps are designed for both a high clamping force and a long service life. The control-lever weldment is made of carbon steel, heat-treated to 800–1000 MPa. The control-levers of the 291 and 293 models are made of cast steel. The fastening legs, draw rods and pivots are made of carbonitrided material and hardened to 48 HRC. The clamps are all blackened. The main intended application is with heavy-duty jigs for cutting or welding, for example in the automotive industry.

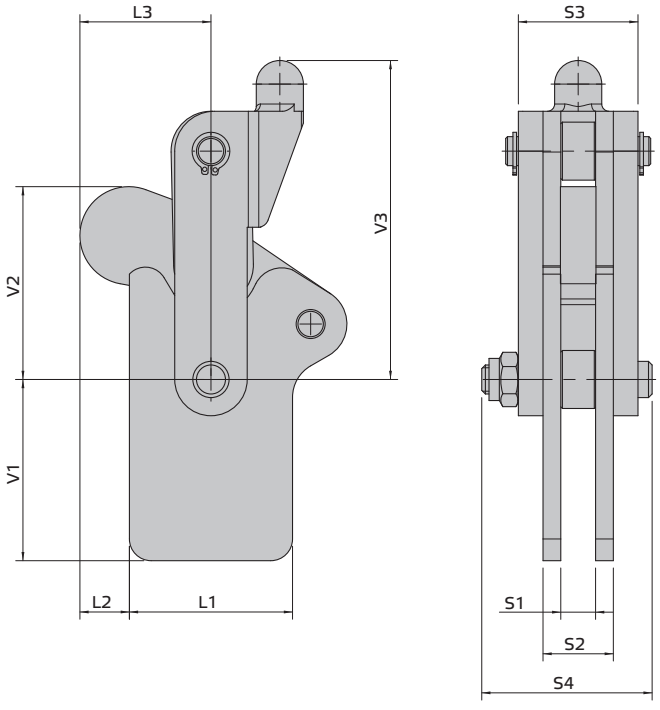


TYPE	L1	L2	L3	V1	V2	V3	S1 ±0,05	S2	S3	Opening angle	m (g)	Fmax (kN)
291 M	19	18,7	28,5	20	28	52	6,8	21	30	200°	300	2,5
293 M	29	21,5	37,5	20	54	90	9,8	33	44	200°	1100	7
295 M	35	40	57,5	28	71,5	110	11,8	40	55	200°	1900	12
296 M	51	46,9	72	33	87,6	135	15,8	55,5	75	200°	2900	24

291 – 296 R

Heavy duty, precision design

These clamps are designed for both a high clamping force and a long service life. The control-lever weldment is made of carbon steel, heat-treated to 800–1000 MPa. The control-levers of the 291 and 293 models are made of cast steel. The fastening legs, draw rods and pivots are made of carbonitrided material and hardened to 48 HRC. The clamps are all blackened. The main intended application is with heavy-duty jigs for cutting or welding, for example in the automotive industry.

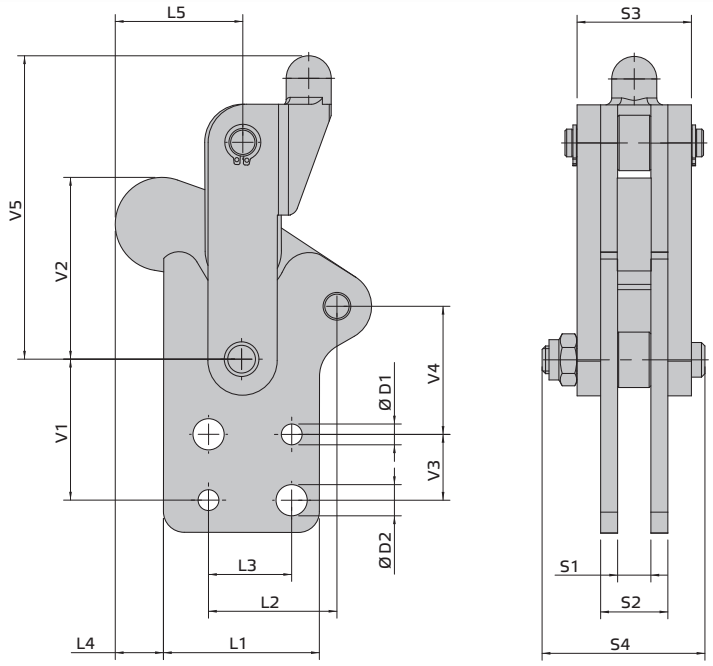


TYPE	L1	L2	L3	V1	V2	V3	S1 ±0,05	S2	S3	S4	Opening angle	m (g)	Fmax (kN)
291 R	28,5	14,5	28,5	33,5	28	52	6,8	12,8	21	30	200	300	2,5
293 R	45	13	37,5	50	51	90	9,8	20	33	44	200	1100	7
295 R	53	31	57,5	63,5	71,5	110	11,8	22	40	55	200	1900	12
296 R	66	35	72	76	91	135	15,8	27,6	55,5	75	200	2900	24

291 – 296 RO

Heavy duty, precision design

These clamps are designed for both a high clamping force and a long service life. The control-lever weldment is made of carbon steel, heat-treated to 800–1000 MPa. The control-levers of the 291 and 293 models are made of cast steel. The fastening legs, draw rods and pivots are made of carbonitrided material and hardened to 48 HRC. The clamps are all blackened. The main intended application is with heavy-duty jigs for cutting or welding, for example in the automotive industry.

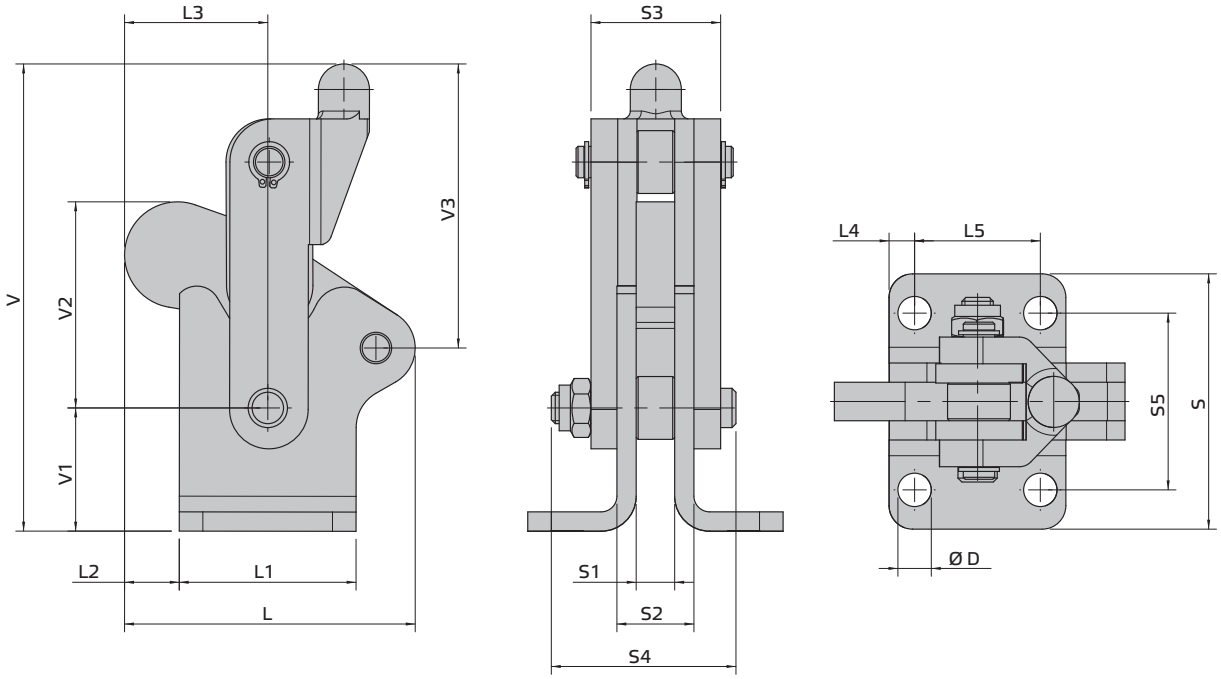


TYPE	L1	L2 ±0,05	L3	L4	L5	V1	V2	V3	V4 ±0,05	V5	S1 ±0,05	S2	S3	D1 / H7	D2	Opening angle	m (g)	Fmax (kN)
291 RO	28,5	24	15	14,5	28,5	28,3	28	15	22,8	52	6,8	12,8	21	4	5,5	200°	300	2,5
293 RO	45	37	24	13	37,5	40,5	51	19	37	90	9,8	20	33	6	9	200°	1100	7
295 RO	53	52	30	31	57,5	55,5	71,5	30	46	110	11,8	22	40	6	9	200°	1900	12
296 RO	66	61	30	35	72	68,5	91	30	64	135	15,8	27,6	55,5	6	9	200°	2900	24

291– 293 Z

Heavy duty, precision design

These clamps are designed for both a high clamping force and a long service life. The control-lever is made of cast steel. The fastening legs, draw rods and pivots are made of carbonitrided material and hardened to 48 HRC. The main intended application is with heavy-duty jigs for cutting or welding, for example in the automotive industry. The connection spacings of the 291 Z clamp correspond to the 230 UZ clamp, as do the 293 Z clamp's spacings to the 240 UZ clamp.

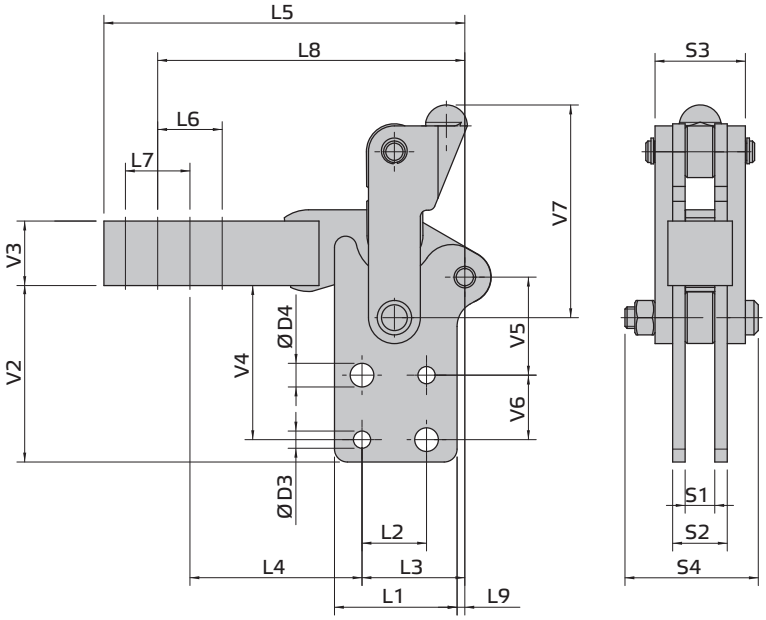


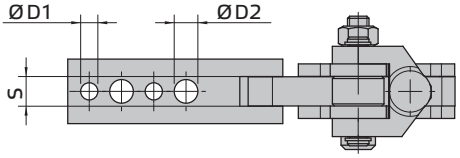
TYPE	L	L1	L2	L3	L4	L5	V	V1	V2	V3	S	S1	S2	S3	S4	S5	D	Opening angle	m (g)	Fmax (kN)
291 Z	51	28,5	14,5	28,5	4,5	19	71	21,6	28	49,4	45	6,8	12,8	21	30	32	4,5	200°	300	2,5
293 Z	74	45	13	37,5	6,5	32	123	32,7	51	90	65	9,8	20	33	44	45	8,5	200°	1100	7

291 – 296 RORS–A

Heavy duty, precision design

These clamps are designed for both a high clamping force and a long service life. The control-lever weldment is made of carbon steel, heat-treated to 800–1000 MPa. The lever of the 291 model is made of cast steel. The fastening legs, draw rods and pivots are made of carbonitrided material and hardened to 48 HRC. The clamp includes a long, solid lever with openings for the installation of formative elements. The main intended application is with heavy-duty jigs for cutting or welding, for example in the automotive industry.





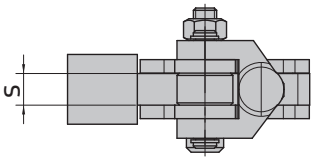
TYPE	L1	L2	L3 ±0,05	L4	L5	L6 ±0,1	L7 ±0,02	L8 ±0,3	L9	V2	V3	V4	V5 ±0,05	V6 ±0,02	V7
291	28,5	15	24	40	84	15	15	71,5	1,9	65	15	40	22,8	15	52
295	53	30	52	70	160	30	30	122	10,5	107	30	98	46	30	110
296	66	30	61	85	182,5	30	30	146	15,5	134,5	30	127	64	30	135

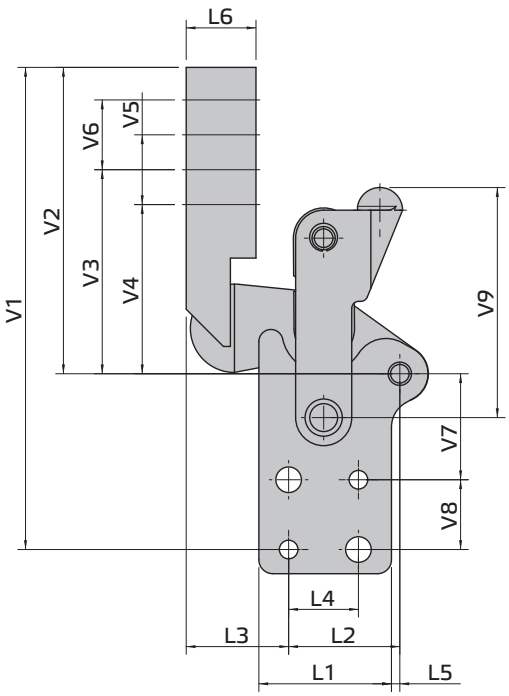
TYPE	S1 ±0,05	S2	S3	S4	D1 / H7	D2	D3 / H7	D4	S	Opening angle	m (g)	Fmax (kN)
291	6,8	12,8	21	30	4	5,5	4	5,5	15	200º	300	2,5
295	11,8	22	40	55	6	7	6	9	15	200º	1900	12
296	15,8	27,6	55,5	75	6	7	6	9	15	200º	2900	24

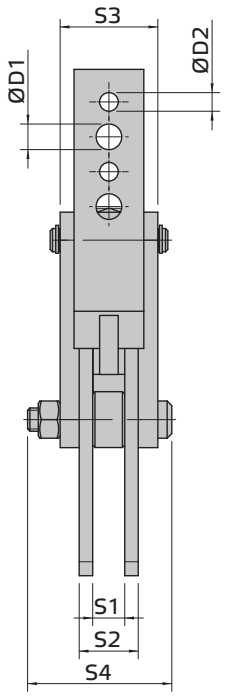
291 – 296 RORS–B

Heavy duty, precision design

These clamps are designed for both a high clamping force and a long service life. The control-lever weldment is made of carbon steel, heat-treated to 800–1000 MPa. The lever of the 291 model is made of cast steel. The fastening legs, draw rods and pivots are made of carbonitrided material and hardened to 48 HRC. The clamps are all blackened. The clamp includes a long, solid lever with openings for the installation of formative elements. The main intended application is with heavy-duty jigs for cutting or welding, for example in the automotive industry.







TYPE	L1	L2 ±0,05	L3	L4	L5	L6	V1	V2	V3 ±0,3	V4	V5 ±0,1	V6 ±0,02	V7 ±0,05	V8	V9
291	28,5	24	24	15	1,9	15	96,3	58,5	37,3	29,8	15	15	22,8	15	52
295	53	52	45	30	10,5	30	195,5	119,3	82	67	30	30	46	30	110
296	66	61	60	30	15,5	30	222	128	92	77	30	30	64	30	135

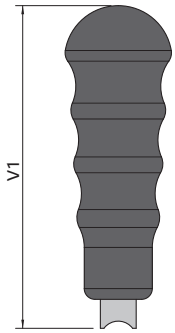
TYPE	S	S1 ±0,05	S2	S3	S4	D1 / H7	D2	D3 / H7	D4	Opening angle	m (g)	Fmax (kN)
291	15	6,8	12,8	21	30	4	5,5	4	5,5	200º	300	2,5
295	15	11,8	22	40	55	6	7	6	9	200º	1900	12
296	15	15,8	27,6	55,5	75	6	7	6	9	200º	2900	24

Accessories

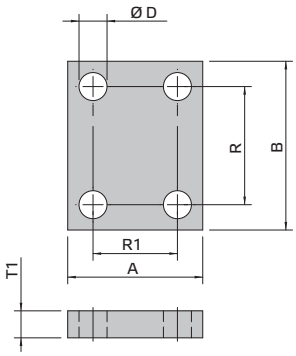
Accessories for clamp models 291, 293, 295, 296

The vertical clamps in the Heavy-duty, precision design range, models 291-296, can easily and quickly be equipped with these accessories: a handle, a baseplate, and a clamping arm. These components can be welded in any position as required.

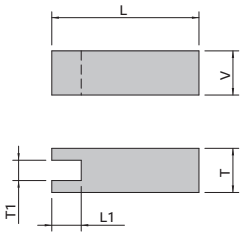
Handle



Baseplate



Clamping arm



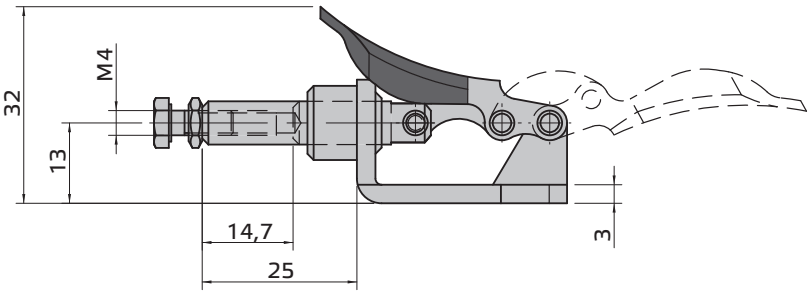
Accessories	Baseplate						Handle		Clamping arm					
TYPE	A	B	R	R1	Ø D	T1	Profile	V1	V	T	T1	L	L1	Ord. No.
291	40	50	35	25	6,3	8								291020
							10×6	90						291021
									15	15	7	40	10	291022
293	40	50	35	25	6,3	8								291020
							16×6	120						293021
									25	20	10	50	8	293022
295	60	50	30	40	8,3	8								295020
							20×10	150						295021
									30	25	12	60	12	295022
296	70	65	45	50	8,3	8								296020
							20×10	180						296021
									35	30	16	75	15	296022

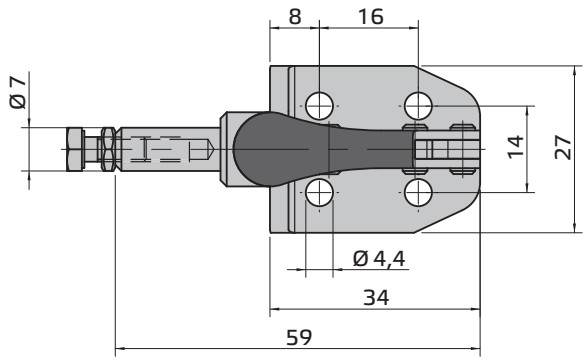
Notes

300

Miniature design

The 300 clamp is suitable for use wherever a low clamping force is required and in confined spaces.





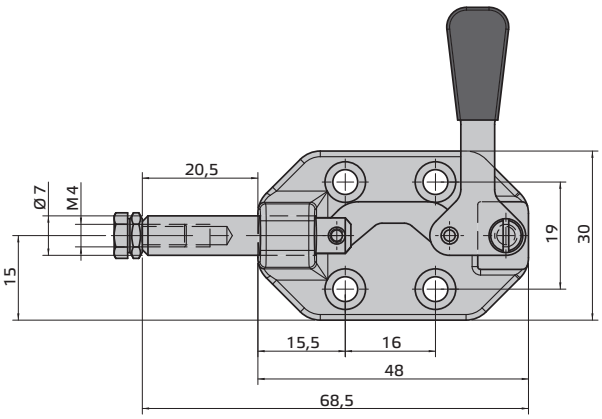
m (g)	Fmax (N)
40	250

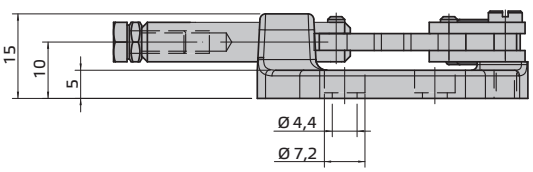
305

Miniature design

The 305 clamp is suitable for use wherever a low clamping force is required and in confined spaces.

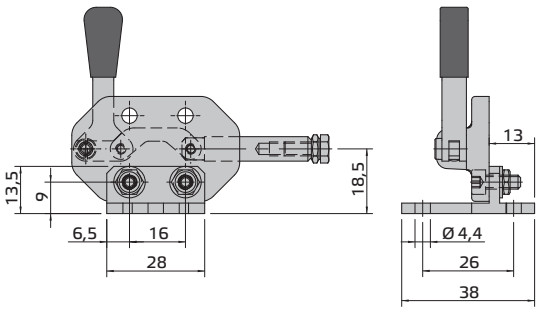
m (g)	Fmax (N)
180	400





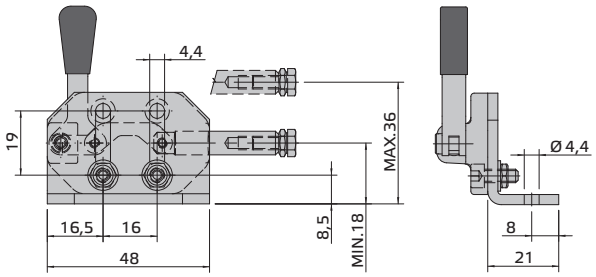
Clamp 305 with an adapter – 971 016

– allows for clamp adjustment in the vertical position



Clamp 305 with an adapter – 971 017

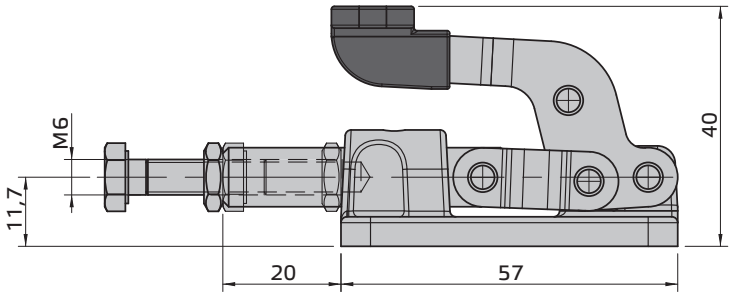
– allows for height adjustment of the clamp

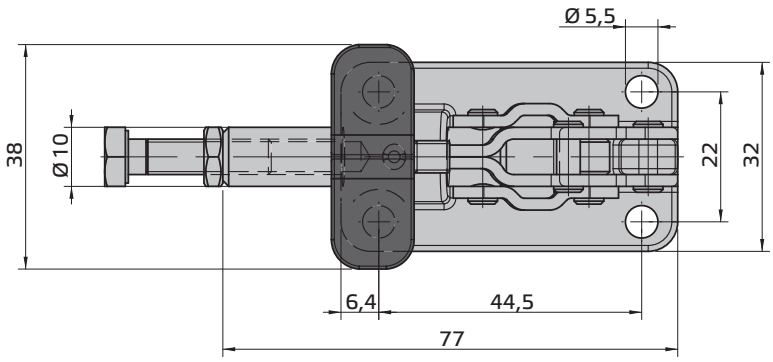


307

Light design

The 307 clamp is supplied as shown. The advantages of this clamp are its relatively high clamping force and small constructional dimensions.



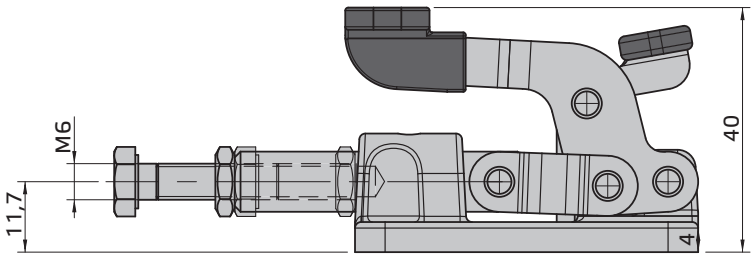


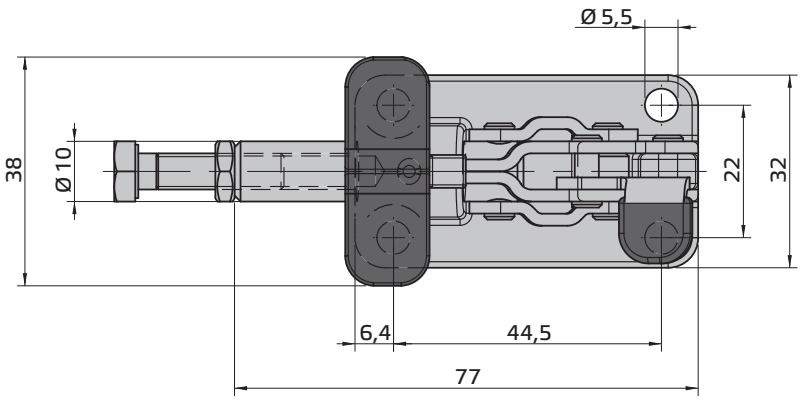
Stroke	m (g)	Fmax (N)
18	160	2000

307 Z

Light design

The 307 Z clamp is supplied as shown. The advantages of this clamp are its relatively high clamping force and small constructional dimensions. In contrast with the 307 model, the clamp is equipped with a stop to lock the mechanism in its closed position.



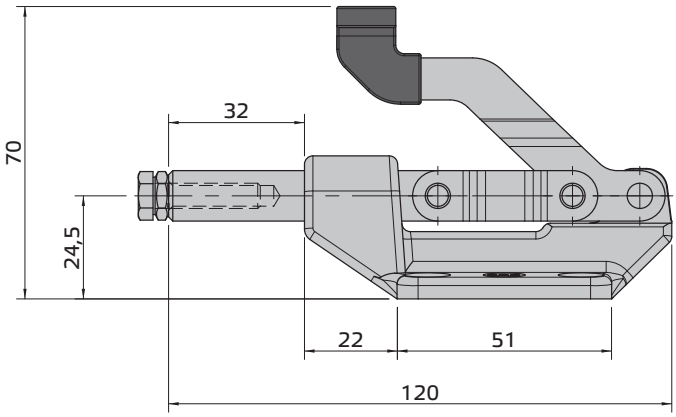


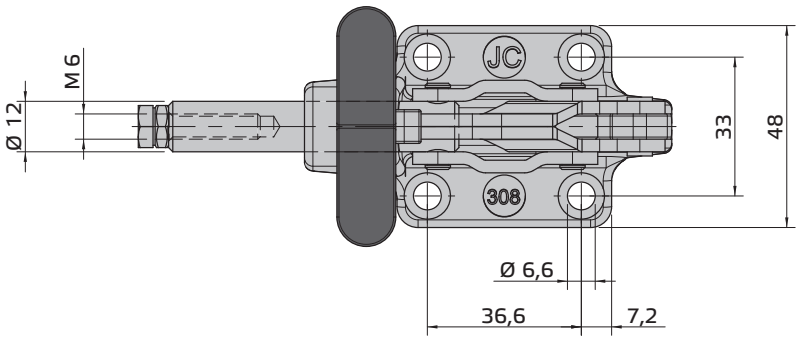
Stroke	m (g)	Fmax (N)
18	160	2000

308

Light to medium-heavy design

The 308 clamp is supplied as shown. The clamp's mechanism is designed as a push-pull mechanism, i.e. it can work at two dead points – in both the open and closed positions. It is suitable for use in assembly, test, and welding jigs.



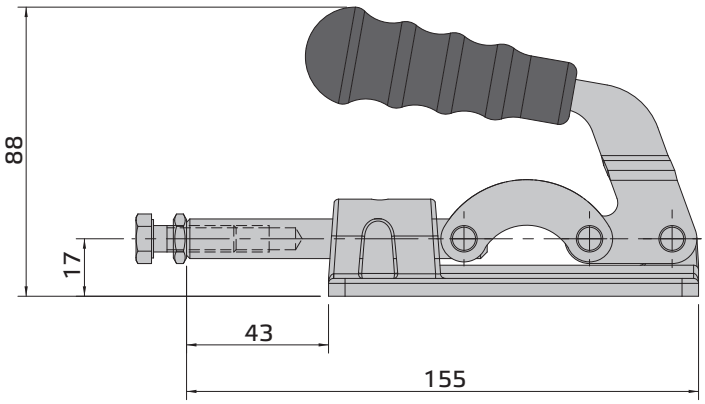


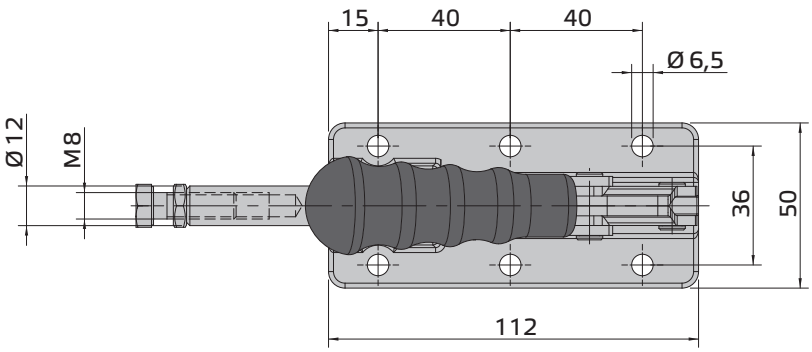
Stroke	m (g)	Fmax (N)
32	380	2600

310

Medium-heavy to heavy design

The 310 clamp is supplied as shown. Its handle and piston move in the same direction when being handled. The solid-cast baseplate of the clamp permits a high clamping force. The draw rods and lever are heat-treated to ensure a long service life.



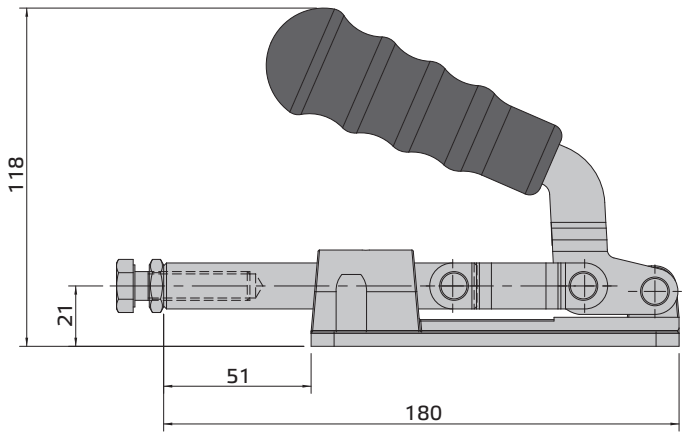


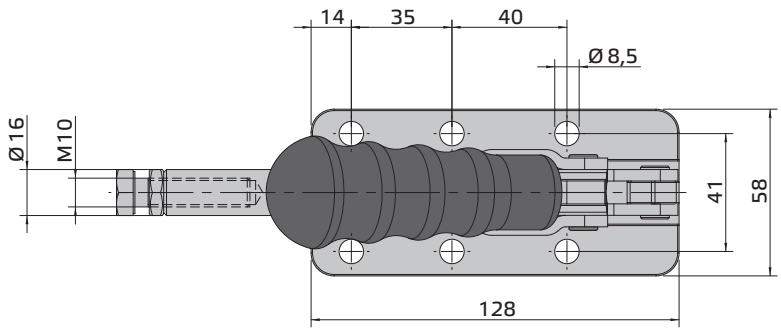
Stroke	m (g)	Fmax (N)
42	750	3800

320

Medium-heavy to heavy design

The 320 clamp is supplied as shown. It's handle and piston move in the same direction when being handled. The solid-cast baseplate of the clamp permits a high clamping force. This clamp is designed as a push-pull clamp, i.e. it is locked in both the open and in the closed positions. The hardened bushes and heat-treated draw rods ensure a long service life.



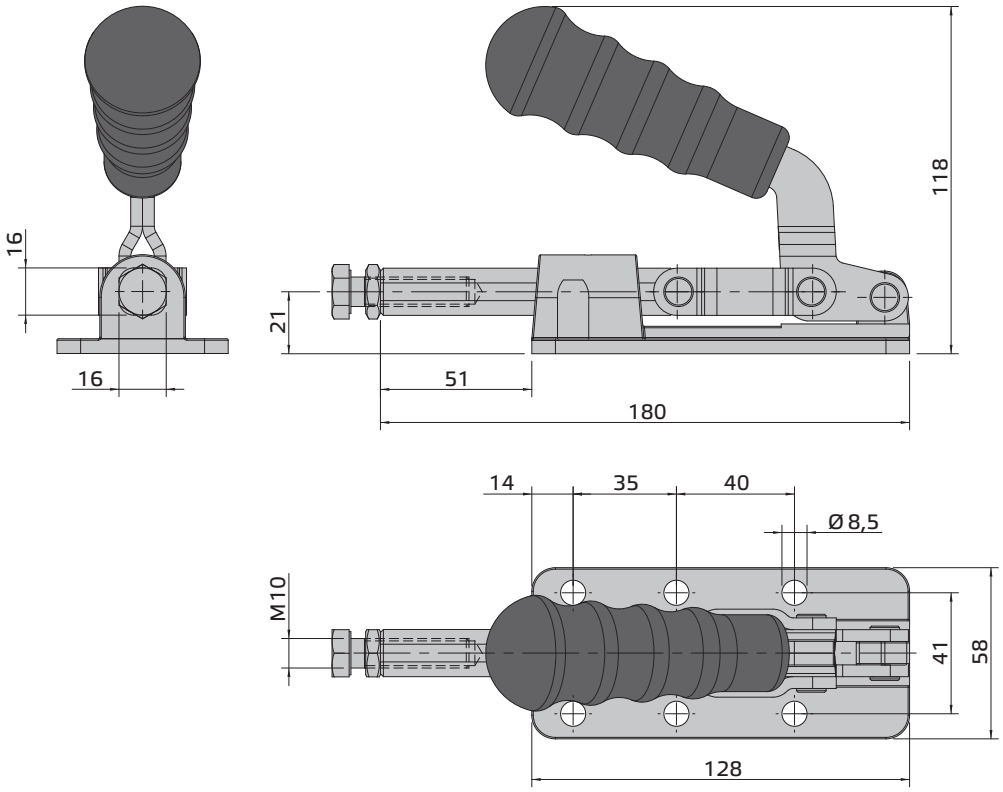


Stroke	m (g)	Fmax (N)
52	1000	10000

321

Medium-heavy to heavy design

The 321 clamp is supplied as shown. It's handle and piston move in the same direction when being handled. The solid, welded baseplate of the clamp permits a high clamping force. The square piston provides protection against turning. This clamp is designed as a push-pull clamp, i.e. it is locked in both the open and closed positions. The hardened bushes and heat-treated draw rods ensure a long service life.

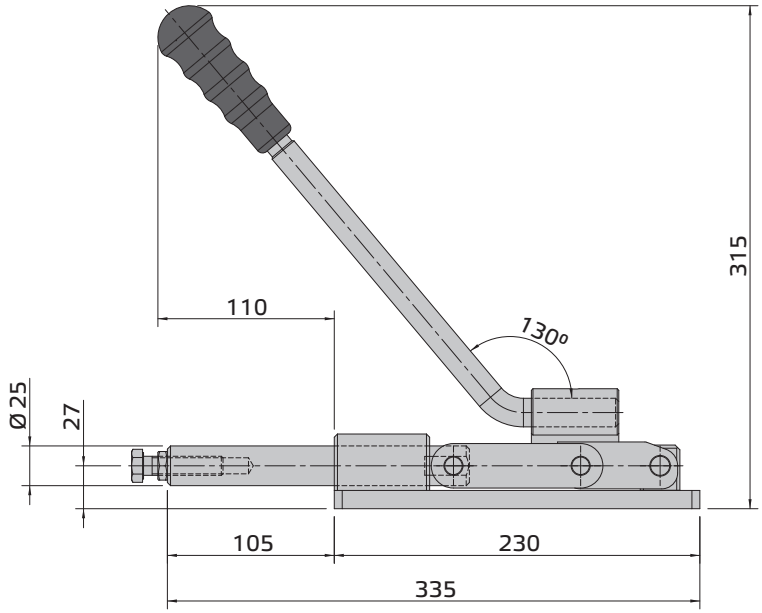


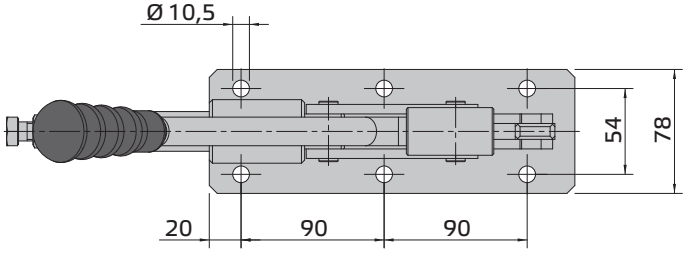
Stroke	m (g)	Fmax (N)
52	1000	10 000

330

Special heavy design

The 330 clamp is supplied as shown. It's handle and piston move in the same direction when being handled. The solid, welded baseplate of the clamp permits a high clamping force. The draw rods and the rear pivot are heat-treated to ensure a long service life. It is for use wherever a high clamping force must be exerted.





Stroke	m (g)	Fmax (N)
100	4400	30000

340 – 360 | 361

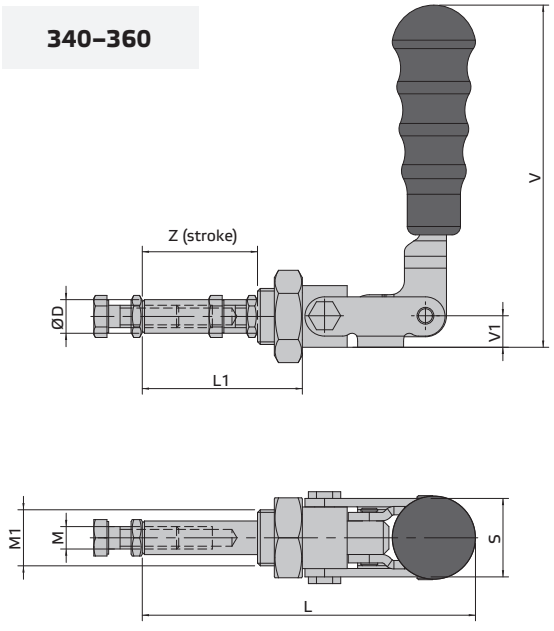
Light to medium-heavy design

The clamping mechanism of these clamps is freely adjustable around the longitudinal axis and it is designed as a push-pull system, i.e. it can work at both dead points – in both the open and closed positions. Heat-treated levers ensure a long service life.

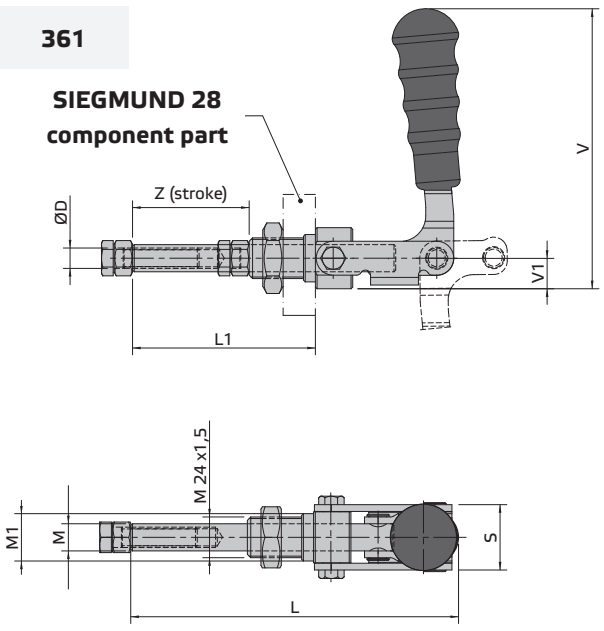
By default, these clamps are supplied without a clamping body. Upon request, they can be supplied with the “type A” or “type B” clamping bodies (see p.78).

The construction of the 361 clamp is based on the construction of the 360 clamp. In addition the 361 clamp can be inserted into the Ø 28 mm holes of the Siegmund system.

340–360



361

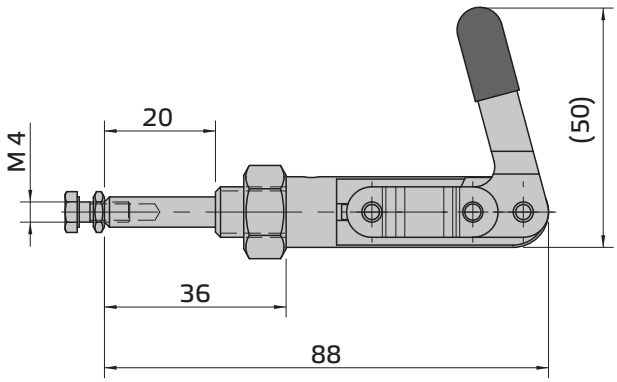


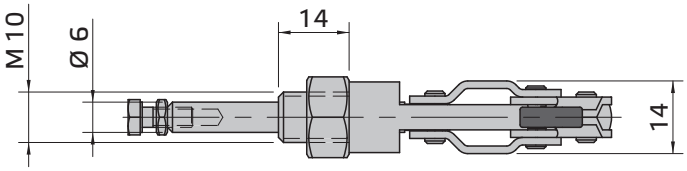
TYPE	L	L1	V	V1	M	M1	Ø D	S	Z	m (g)	Fmax (N)
340	80	36	125	11,5	6	M16×1,5	10	26	21	140	1000
350	118	57	119	11	8	M20×1,5	12	28	40	330	2500
360	178	93	164	15,8	12	M24×1,5	16	38,5	67	1200	4000
361	192	107,7	164	15	16	Ø 28	16	38,5	67	980	10000

345

Miniature design – with an extended piston guide

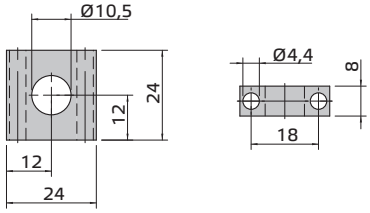
This is a special design of straight clamp with an extended clamping-piston guide. Thanks to its design, these clamps can be installed in any position. Heat-treated levers and draw rods ensure a long service life. This clamp is also suitable for use wherever only a low clamping force is required.



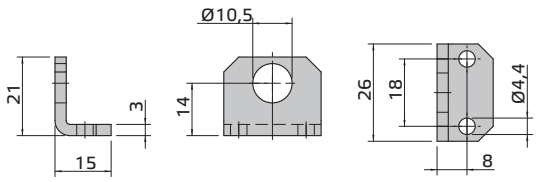


By default, these clamps are supplied without a clamping body. Upon request, they can be supplied with the 971 009 or "L" 971 018 clamping bodies.

971009



971018



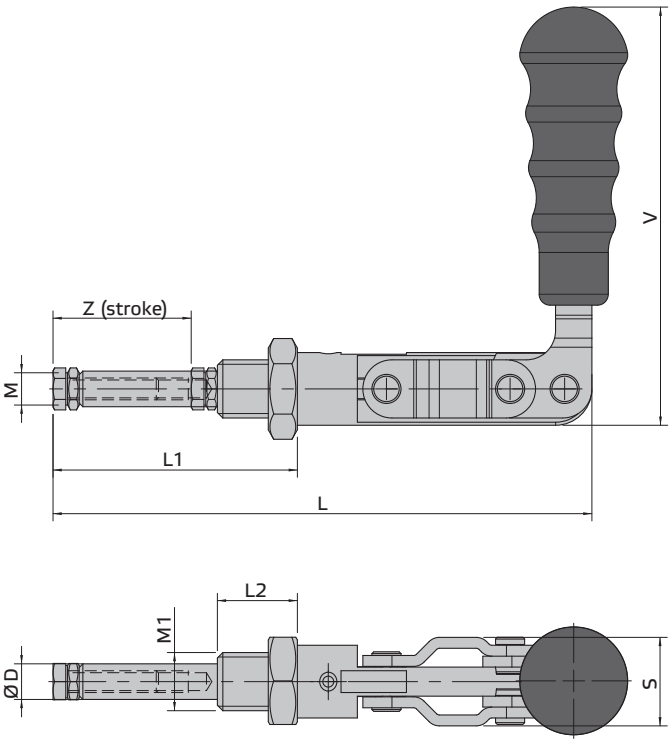
Stroke	m (g)	Fmax (N)
20	70	400

355 – 375

Light to medium-heavy design with an extended piston guide

These are clamps with an extended clamping-piston guide. Their robust, milled body allows for perfect guidance of the clamping rod. When combined with their hardened levers, draw rods and rivets, this extends the total service life of the clamp. The pivot of the control lever in the clamp body is lined with a hardened bush. The clamping mechanism is freely adjustable around the longitudinal axis and it is designed as a push-pull system, i.e. it can work at both dead points – in both the open and closed positions.

By default, these clamps are supplied without a clamping body. Upon request, they can be supplied with the “type A” or “type B” clamping bodies (see p. 78).

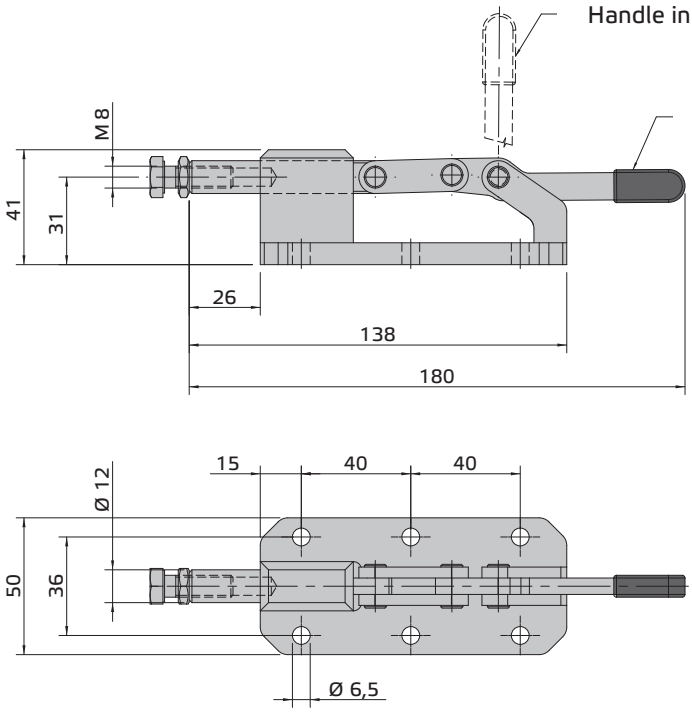


TYPE	L	L1	L2	V	M	M1	Ø D	S	Z	m (g)	Fmax (N)
355	168	65	22	115	6	16	10	24	30	400	1500
365	201	89	25	147	8	20×1,5	12	30	40	550	3300
375	225	100	30	155	12	24×2	16	32	50	750	5000

315

Light design

A special design for special clamping situations. The handle and the piston move in opposite directions.

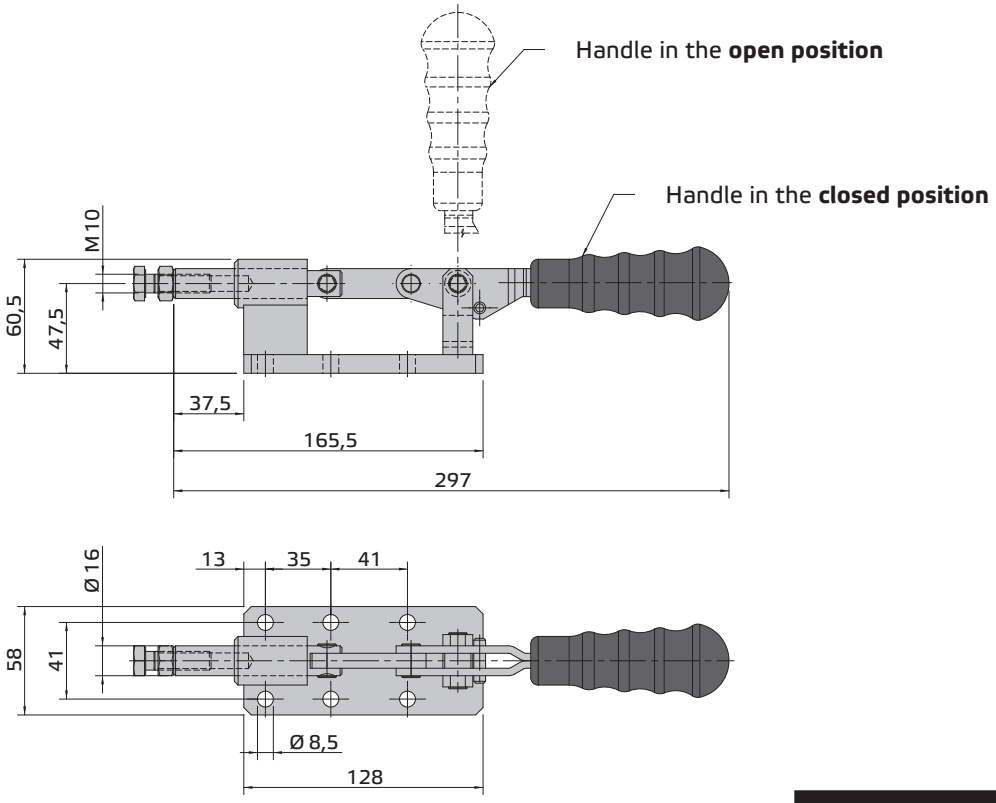


Stroke	m (g)	Fmax (N)
23	550	2600

325

Medium-heavy to heavy design

A special design for special clamping situations. The handle and the piston move in opposite directions.

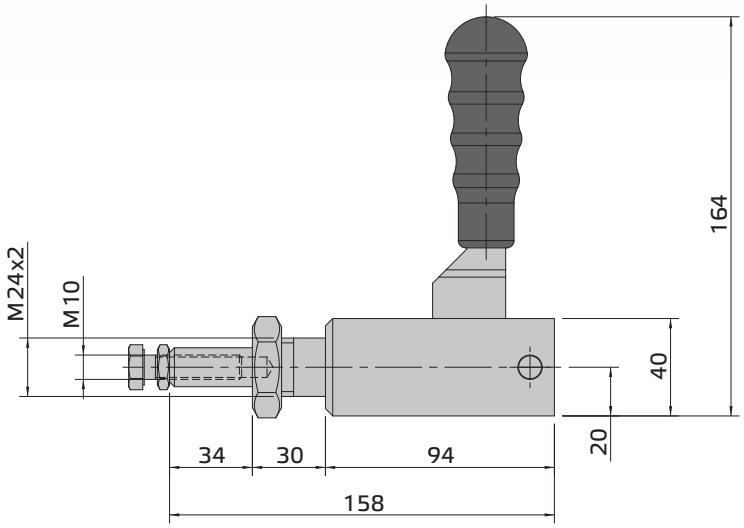


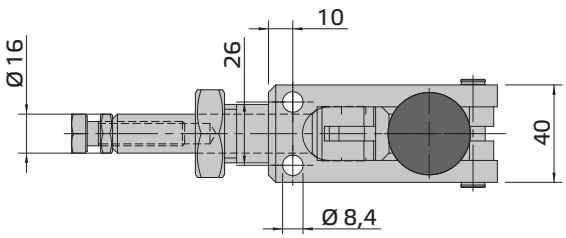
Stroke	m (g)	Fmax (N)
33	1500	10 000

380

Light to medium-heavy design

This clamp type allows for axial installation using the M24×2 thread, or installation on the surface using Ø 8.4 mm openings. The clamping mechanism is designed as a push-pull system, i.e. it can work at both dead points – in both the open and closed positions. Each component is made of heat-treated material. The piston is secured against turning. The clamp is suitable for assembly and control master jigs.



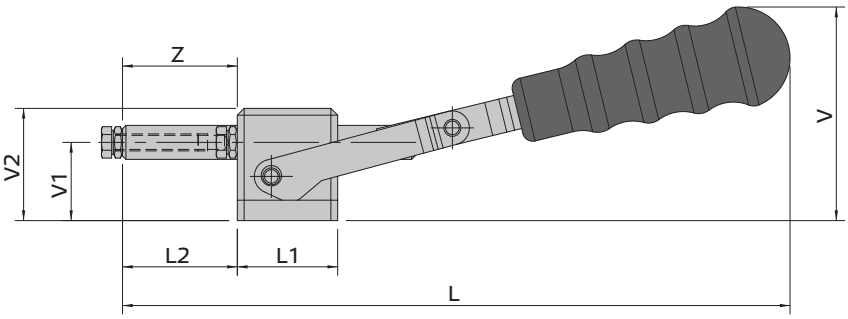


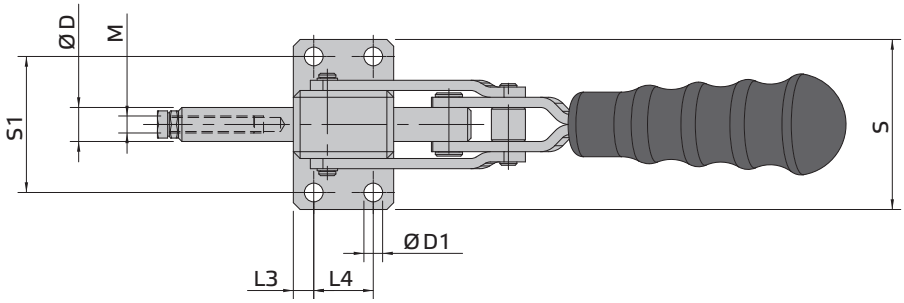
Stroke	m (g)	Fmax (N)
32	820	5000

381 – 382

Light design

A special design for special clamping situations. The handle and piston move in opposite directions. The clamps in this series feature a reduced design of the base body, thus there is a low space requirement to affix the clamp, without reducing the clamping force applied on the workpiece.



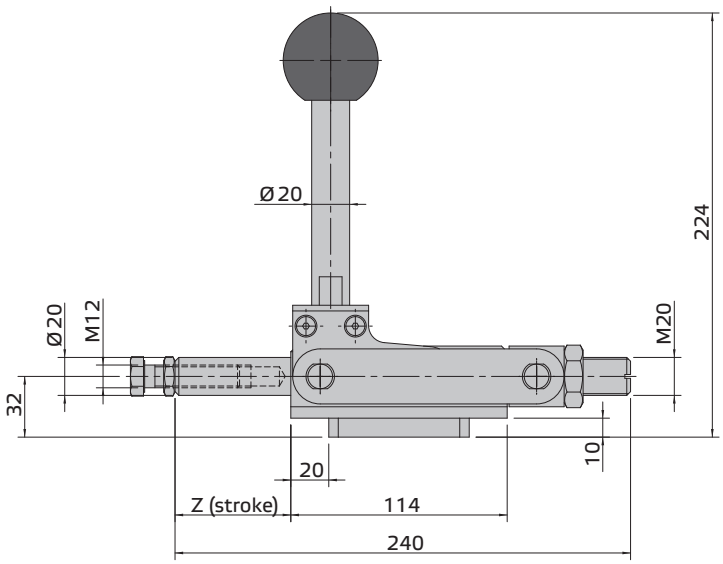


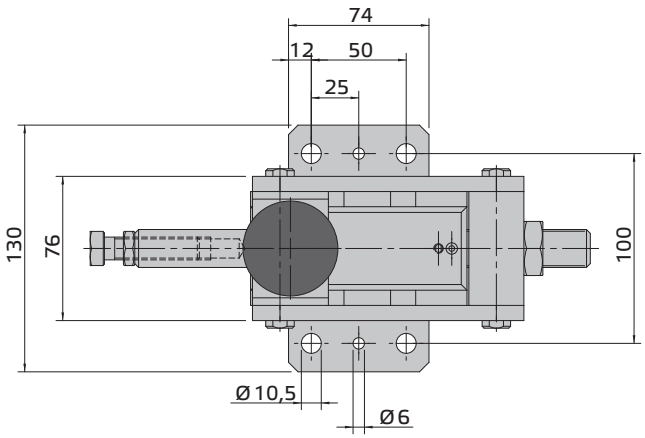
TYPE	L	L1	L2	L3	L4	V	V1	V2	S	S1	M	D	D1	Z	m (g)	Fmax (N)
381	194	29,5	40	6	17,5	63	23	33	50	40	6	10	5,5	30	330	3000
382	230	40	34,5	7,5	25	65	28	40	70	55	8	12	6,5	32,5	800	8900

390

Special heavy design

The handle and piston move in the same direction when being handled. Using the M20 thread, the protrusion of the “X” piston can be adjusted through a range of 10 to 86 mm. It is for use wherever a high clamping force must be exerted.



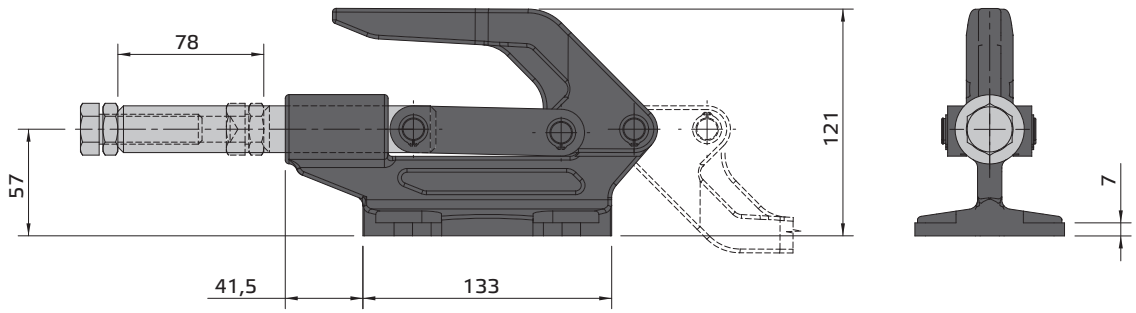


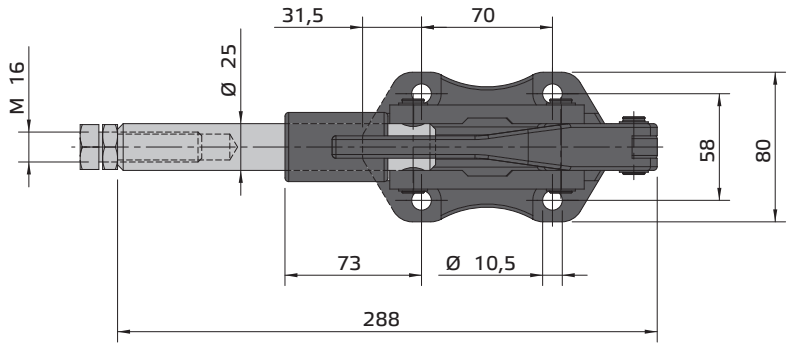
Stroke	m (g)	Fmax (N)
54	4300	15000

395

Heavy design

The 395 clamp is supplied as shown. Its solid-cast body and control lever permit a high clamping force. As a result, the clamps are suitable for heavy-duty applications, such as on assembly and welding jigs. The clamping mechanism is designed as a push-pull system, i.e. it can work at both dead points – in both the open and closed positions.





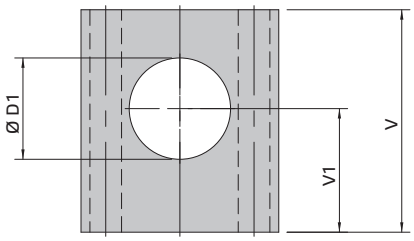
Stroke	m (g)	Fmax (N)
78	3200	70 000

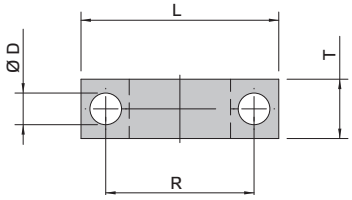
Accessories

Clamping bodies

For clamp models: 340, 350, 355, 365, 375

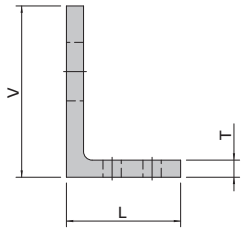
type A – material: steel / blackened or galvanized

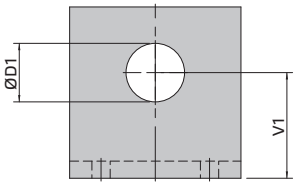


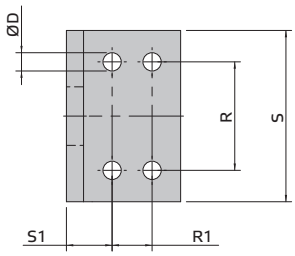


TYPE A	Ord. No.	L	V	V1	R	D	D1	T	For the clamps
	971 010	40	32	16	25	6,4	16,5	12	355
	971 011	40	45	25	30	6,4	20,5	12	365
	971 012	60	40	23	40	8,4	24,5	20	375

type B – material: steel / painted







TYPE B	Ord. No.	L	V	V1	R	R1	D	D1	T	S	S1	For the clamps
	971 013	25	40	24	40		6,4	16,5	5	60	15	340, 355
	971 014	40	60	37	38	14	6,4	20,5	6	60	16	350, 365
	971 015	40	60	37	38	14	6,4	24,5	6	60	16	360, 375

410 – 430

Stirrup hook design

Hook clamps with a stirrup exert a high clamping force. Their use is highly diverse. They can be used, for example, in the foundry industry as a closing or a tightening mechanism. These clamps also allow for clamping at a right angle.

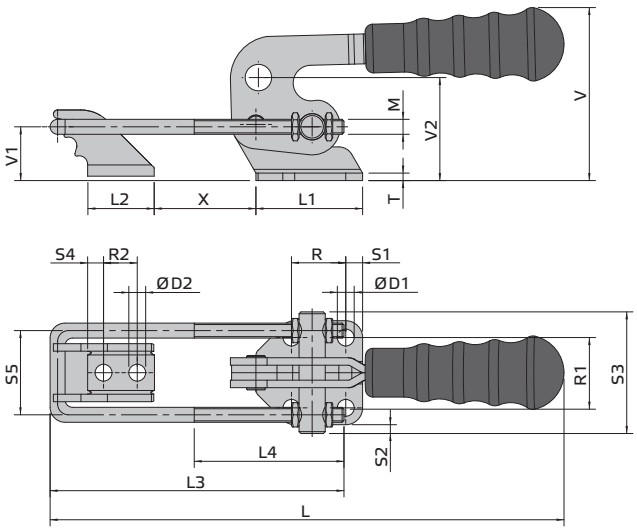
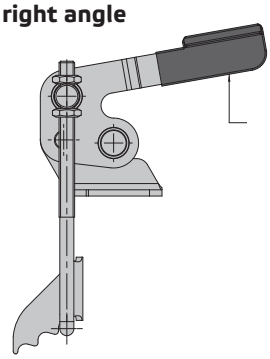


Figure of clamping at right angle



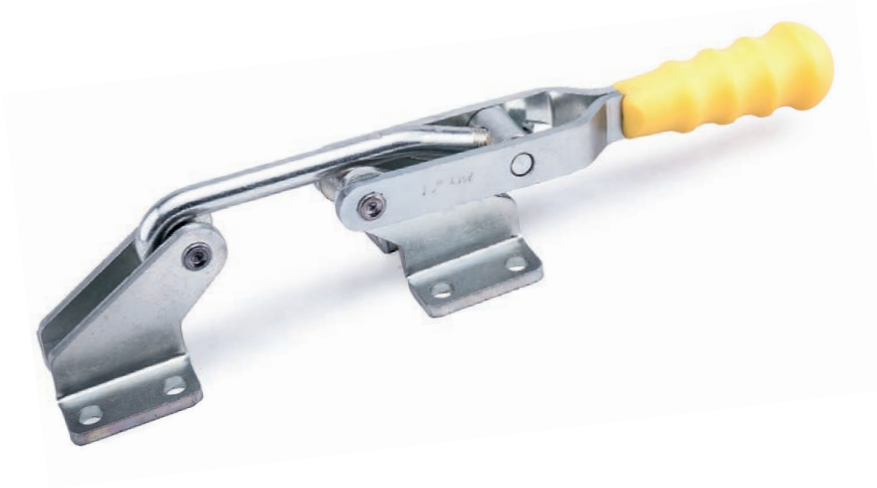
The 410 design features a plastic-coated handle.

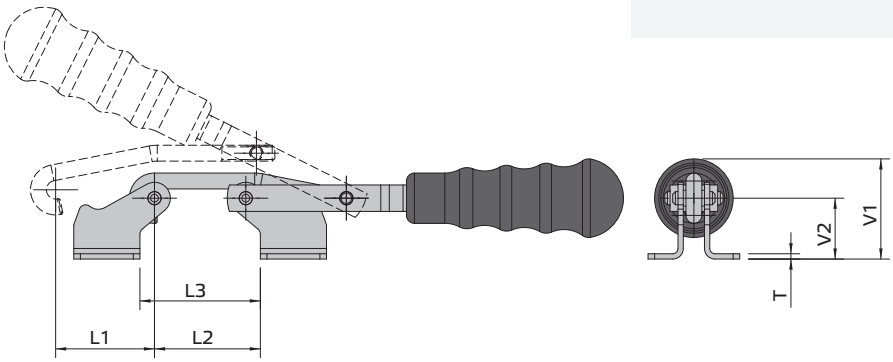
TYPE	L	L1	L2	L3	L4	S1	S2	S3	S4	S5	D1	D2	T	M	V	V1	V2	R	R1	R2	X	m (g)	Fmax (N)
410	137	30	20	88	50	5	5	32	5	22	5	5	2	5	53	18	32	13	18	9	0–34	100	1500
420	219	42	32	120	65	8	10	48	6	31	6,5	6,2	3	6	60	20	40	19	29	14	25–72	400	3000
430	251	57	36	157	80	9	9	65	8,5	45	9	9	4	8	105	26	55	29	40	18	0–60	1100	7000

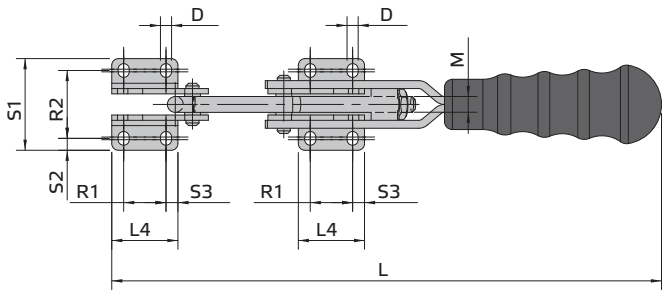
415 – 435

Design with a simple clamping hook

Hook clamps with a simple design of clamping hook are for use as light devices with low spatial requirements. They can be applied as a closing or tightening mechanism. They can be used, for example, in mold closing.





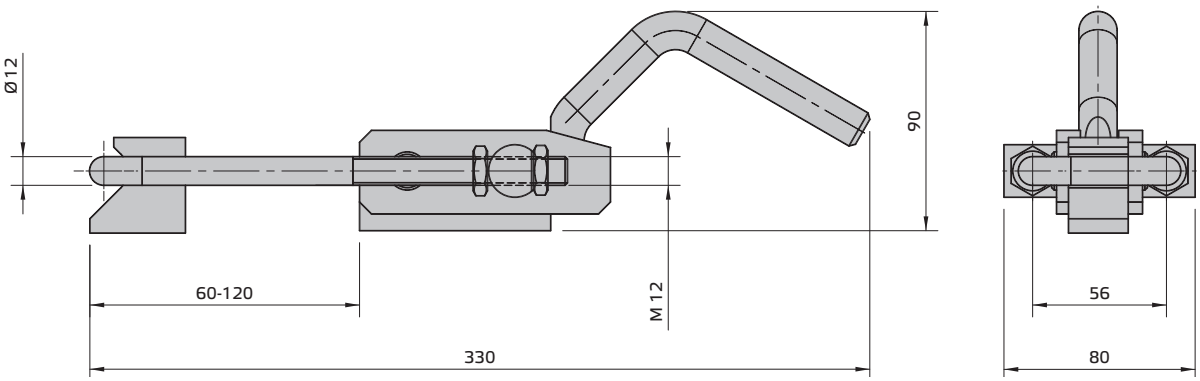


TYPE	L	L1	L2	L3	L4	S1	S2	S3	D	T	M	R1	R2	V1	V2	m (g)	Fmax (N)
415	208	62	45	51	25	35	5	5	4,2	2	6	16	26	37	23	100	1500
425	256	83	60	68	34	46	6	6	5,5	3	8	22	34	46	30	350	2500
435	385	124	80	101	50	73	9	9	8,4	5	12	32	55	69	45	1000	4200

440

Heavy duty design

Hook clamp designed for applications where a high clamping force must be exerted.

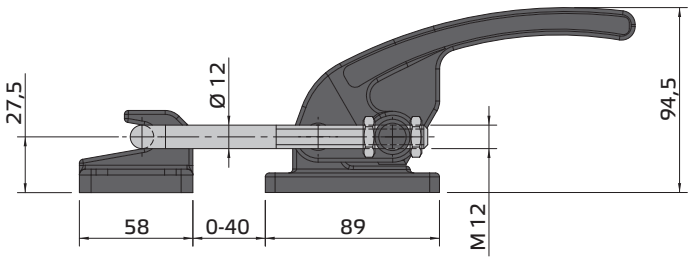


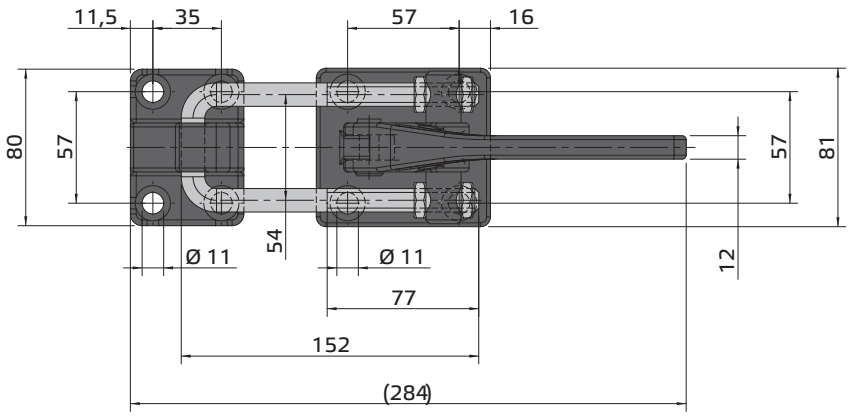
Surface finish	m (g)	Fmax (kN)
Fe / Zn	2600	42

450

Heavy duty design

A robust design of hook clamp with a stirrup, a solid-cast body, a counterpart, and a control lever, which is suitable for use wherever a high clamping force must be exerted.



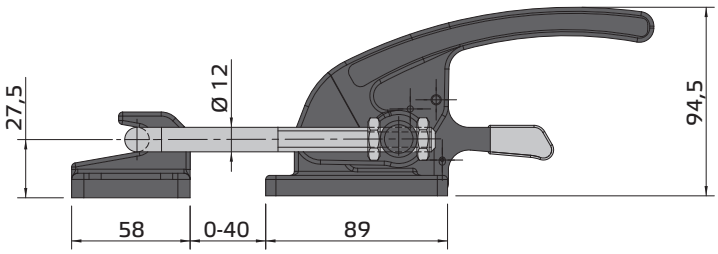


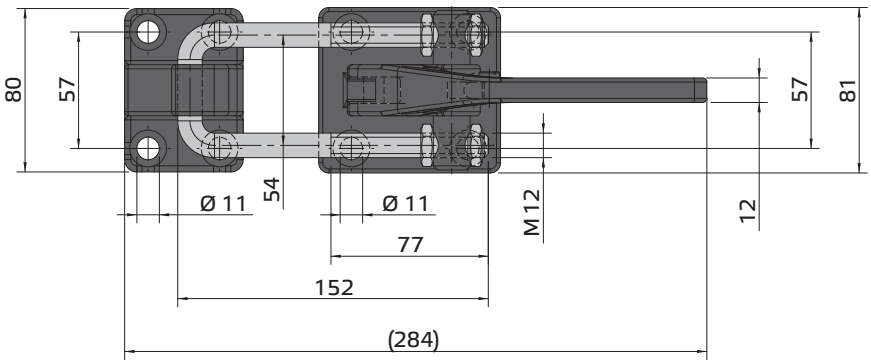
m (g)	Fmax (N)
2200	33000

450 Z

Heavy duty design

This clamp is based on the 450 model and comes in the same dimensions. The 450 Z clamp is fitted with a stop to lock the mechanism in the closed position.



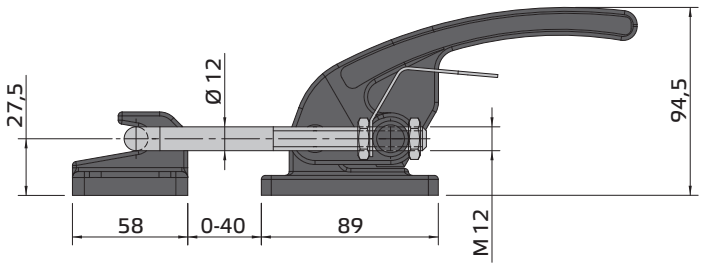


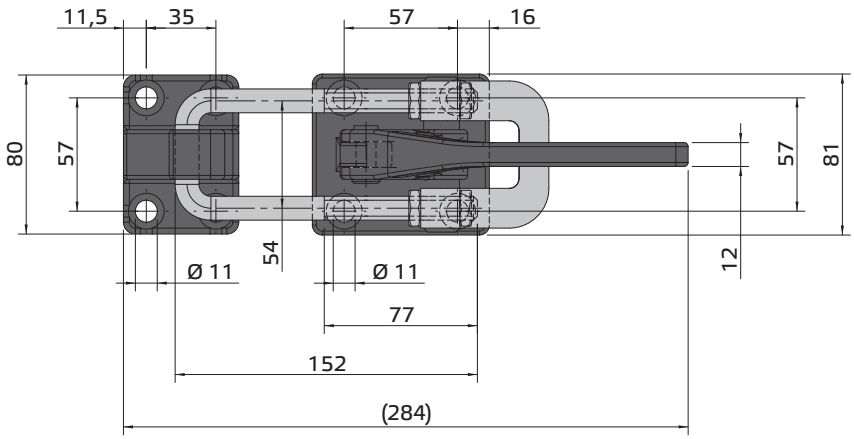
m (g)	Fmax (N)
2200	33000

450 R

Heavy duty design

This clamp is based on the 450 model and comes in the same dimensions. It is fitted with an arm allowing for single-handed operation.



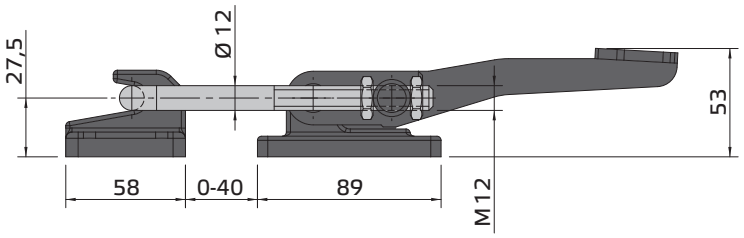


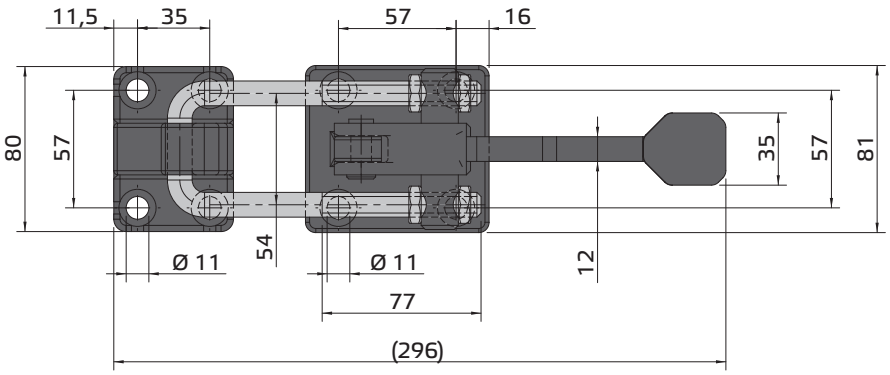
m (g)	Fmax (N)
2200	33000

451

Heavy duty design

A robust design of hook clamp based on the 450 model with a stirrup, a solid-cast body, a counterpart, and a reduced-height control lever, which is suitable for use in confined spaces and wherever a high clamping force must be exerted.





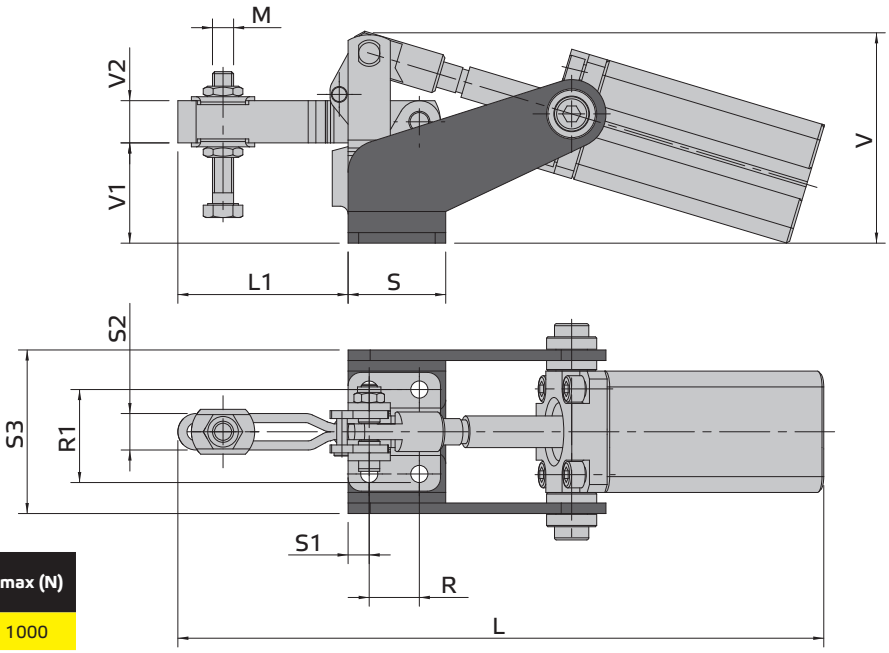
m (g)	Fmax (N)
2200	33000

220 – 240 P

Light to medium-heavy design

A clamp series based on the manually-operated 220, 230 and 240 UZ clamps. They preserve the same basic dimensions and spacings to affix the clamps.

Upon request, these clamps can be delivered with magnetic position sensors.



TYPE	Parameters of cylinder	Thread	Opening angle	Fmax (N)
220 P	Ø 25 mm, Stroke 30 mm	M5	95º	1000
230 P	Ø 32 mm, Stroke 42 mm	G1/8	95º	1800
240 P	Ø 40 mm, Stroke 70 mm	G1/8	95º	2200

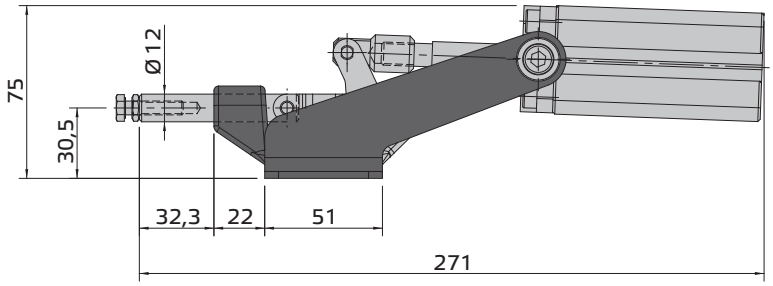
TYPE	L	L1	S	S1	S2	S3	R	R1	V	V1	V2	M	m (g)
220 P	201	54,3	26,5	6,2	12	52	13	30	61	30	10	6	600
230 P	245	64,5	37	8	14	62	19	32	80	38	16	8	1100
240 P	324	91	52	11	18	76	32	45	104	47	20	10	1650

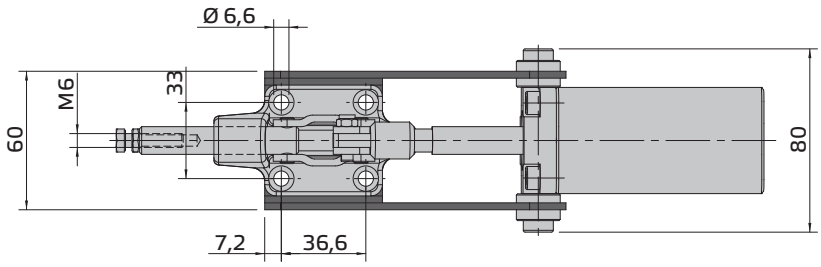
308 P

Light to medium-heavy design

A clamp based on the manually-operated 308 clamp. It preserves the same basic dimensions and spacings to affix the clamp.

Upon request, these clamps can be delivered with magnetic position sensors.





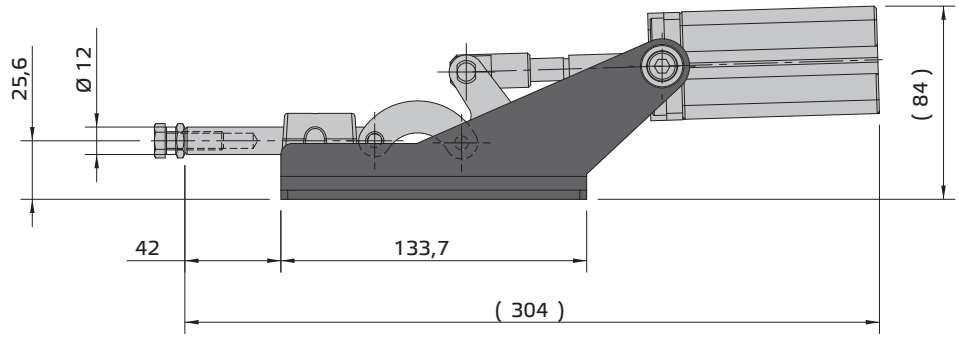
Stroke	Parameters of cylinder	Thread	m (g)	Fmax (N)
20	Ø 32 mm, Stroke 46 mm	G1/8	1200	2600

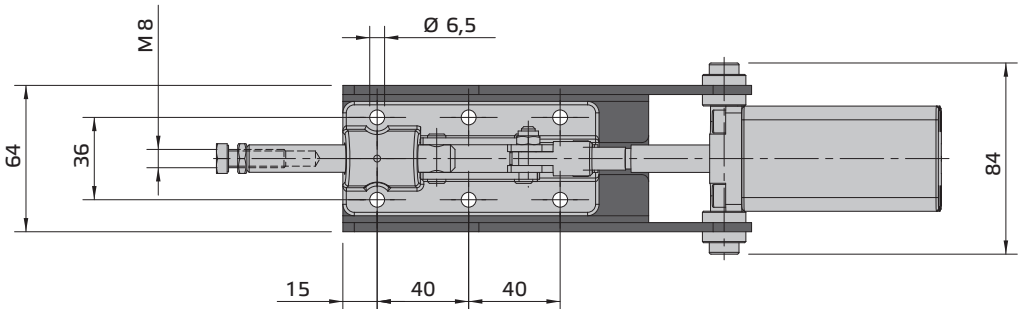
310 P

Light to medium-heavy design

A clamp based on the manually-operated 310 clamp. It preserves the same basic dimensions and spacings to affix the clamp.

Upon request, these clamps can be delivered with magnetic position sensors.





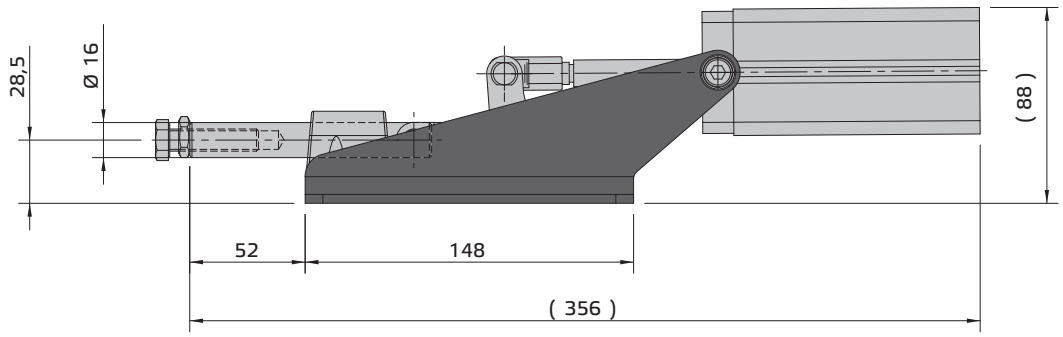
Stroke	Parameters of cylinder	Thread	m (g)	Fmax (N)
27	Ø 32 mm, Stroke 52 mm	G1/8	1800	3800

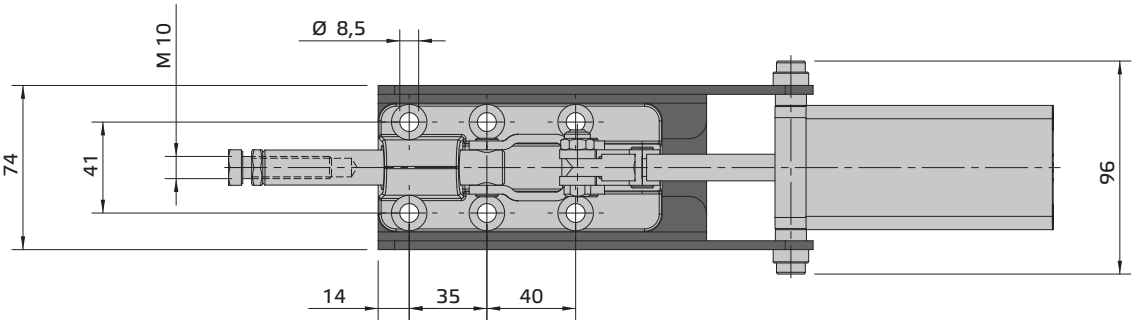
320 P

Medium-heavy to heavy design

A clamp based on the manually-operated 320 clamp. It preserves the same basic dimensions and spacings to affix the clamp.

Upon request, these clamps can be delivered with magnetic position sensors.





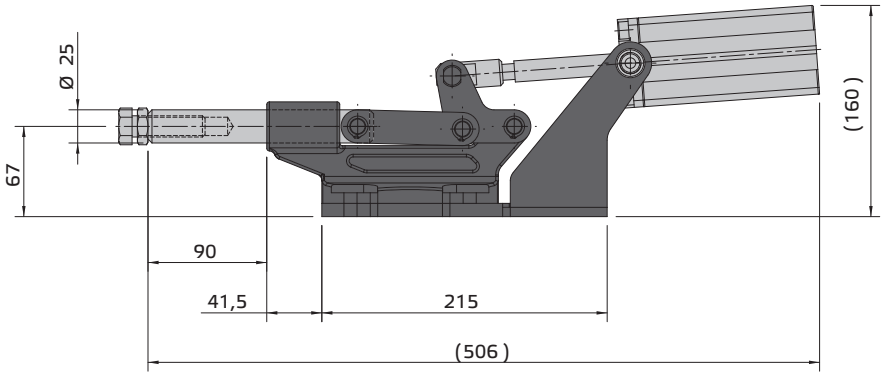
Stroke	Parameters of cylinder	Thread	m (g)	Fmax (N)
32	Ø 40 mm, Stroke 64 mm	G1/8	2400	10000

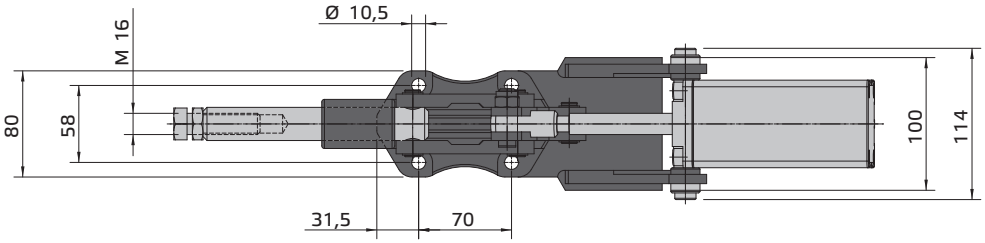
395 P

Heavy design

A clamp for heavy-duty clamping. It is designed for use wherever a high clamping force must be exerted.
A clamp based on the manually-operated 395 clamp. It preserves the same basic dimensions and spacings to affix the clamp.

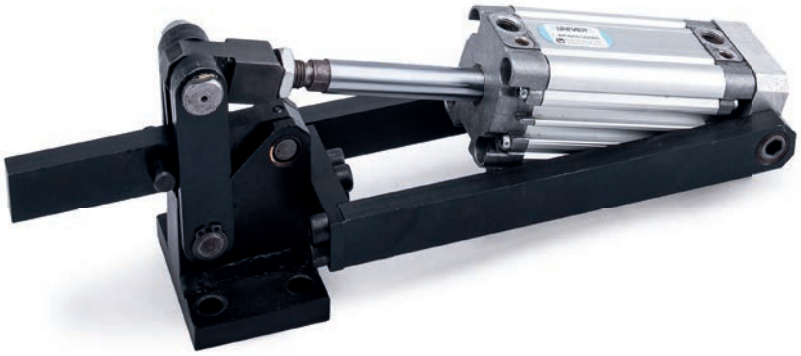
Upon request, these clamps can be delivered with magnetic position sensors.





Stroke	Parameters of cylinder	Thread	m (g)	Fmax (N)
27	Ø 50 mm, Stroke 88 mm	G1/8	6400	70000

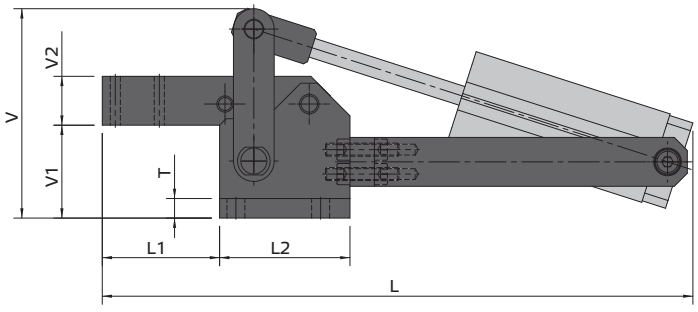
740 – 750

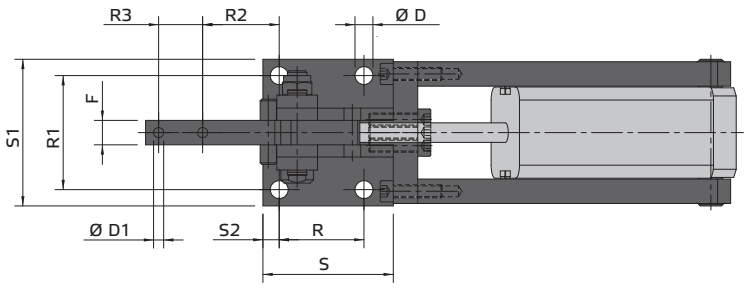


Solid design with horizontal mounting of cylinder

These vertical clamps are manufactured with engineering-grade quality, and they are suitable for installation in flow-line facilities and special machines. Heat-treated components and bronze bushes increase the service life of these clamps.

Upon request, these clamps can be delivered with magnetic position sensors.





TYPE	Parameters of cylinder	Thread	m (g)	Fmax (N)
740	Ø 32 mm, Stroke 60 mm	G1/8	2900	2500
750	Ø 40 mm, Stroke 80 mm	G1/8	4400	3700

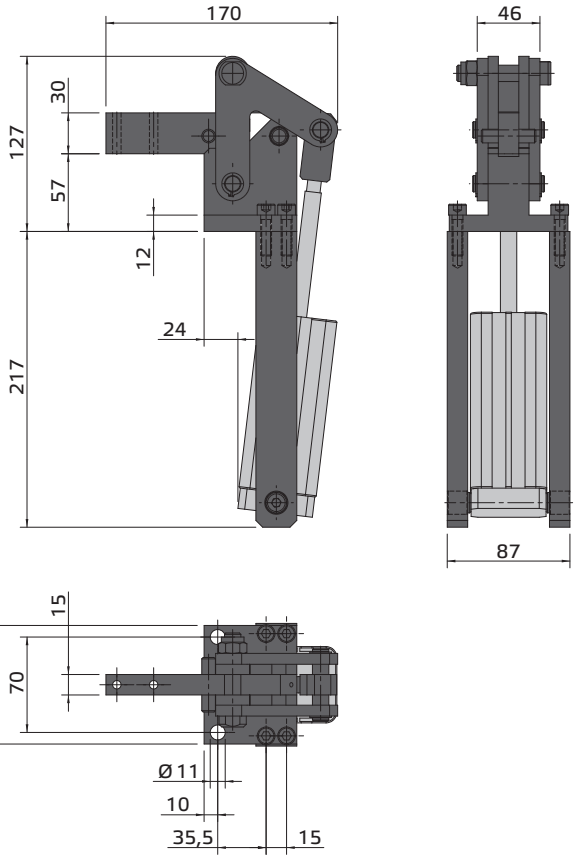
TYPE	L	L1	L2	V	V1	V2	R	R1	R2	R3	S1	S2	D	D1	T	F
740	297	55	48	100	47	20	32	45	–	–	65	8	8,5	–	10	10
750	360	72	80	127	57	30	52	70	37	27	90	10	11	6,2	6,2	12

751

Solid design with vertical mounting of cylinder

A vertical clamp manufactured with engineering-grade quality. Suitable for installation in flow-line facilities and special machines. Heat-treated components and bronze bushes increase the clamp's service life.

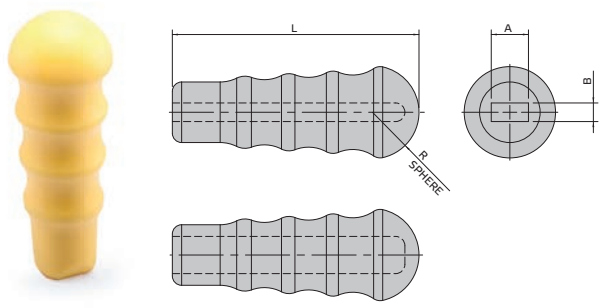
Upon request, these clamps can be delivered with magnetic position sensors.



Parameters of cylinder	Thread	m (g)	Fmax (N)
Ø 40 mm, Stroke 85 mm	G1/8	4400	3700

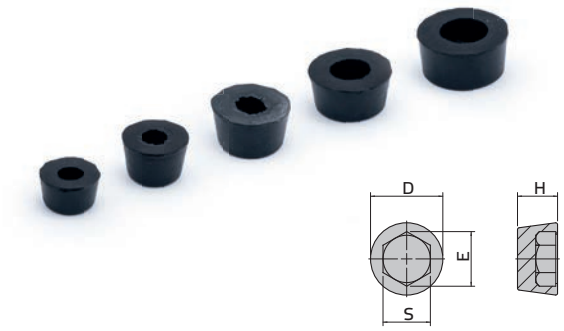
Upon request, the following components can be supplied:

Plastic handles



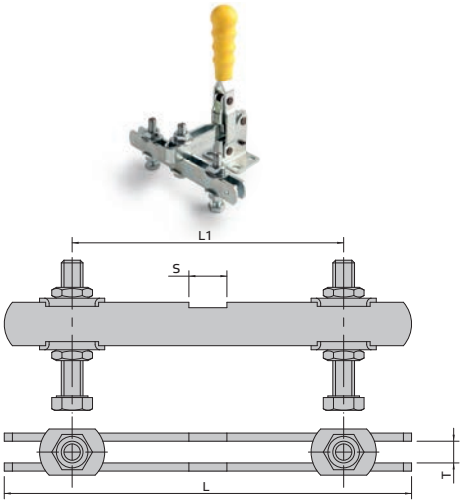
Ord. No.	L	R	A	B
940002	82	15	10	6
940003	94	17	16	6
940004	105	20	16	8
940005	105	20	20	10

Rubber cap



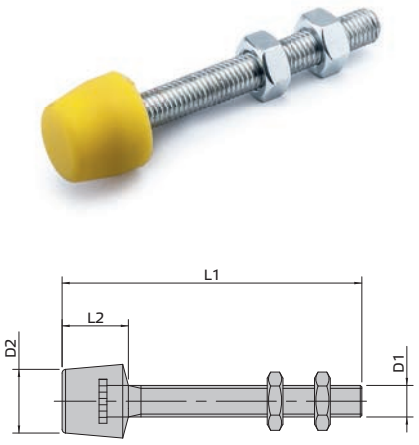
Ord. No.	for M	S	E	D	H
960001	5	8	9,2	15	8,5
960002	6	10	11,5	17	9
960003	8	13	15	20	11
960004	10	16	18,5	26	12
960005	12	18	21,6	29	13

Cross brace



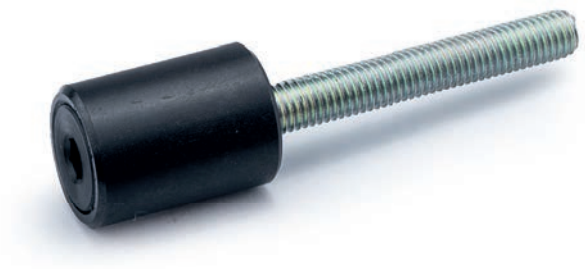
Ord. No.	S	L1	L	T	for the clamp
995001	15	30–115	150	8	230
995002	16	30–115	150	8	130
995003	18	50–150	180	10	240, 140
995004	20	50–150	180	12	250, 260
995005	22	50–150	180	12	150

Clamping bolt with a vulcanized head

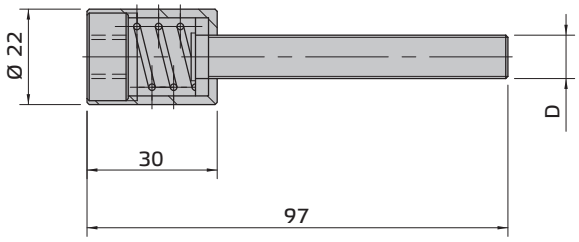


Ord. No.	D1	L1	D2	L2	kg
910000	M4	35	8	9	0,006
910001	M5	42	10	11	0,009
910002	M6	55	13	12	0,016
910003	M8	72	16	18	0,033
910004	M10	95	20	21	0,064
910005	M12	120	24	25	0,13

Spring adapter

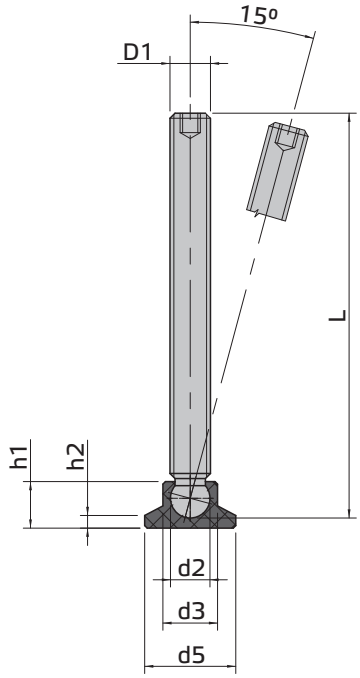


These adapters are intended for use with the mechanical RY-UP toggle clamps instead of the clamping bolt. The spring inside the adapter compensates for the differing tolerances of the parts subject to clamping. Each component is made of steel. Their surfaces are protected with blackening and galvanizing.



Ord. No.	D	F (N)
701	M10	300
702	M8	300

Clamping bolt with a polyamide swivel head



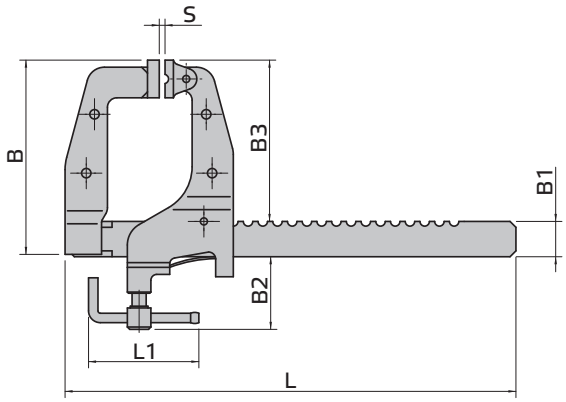
– Used for clamping of workpieces with angular faces.
– Its plastic head prevents damage to the clamped part.

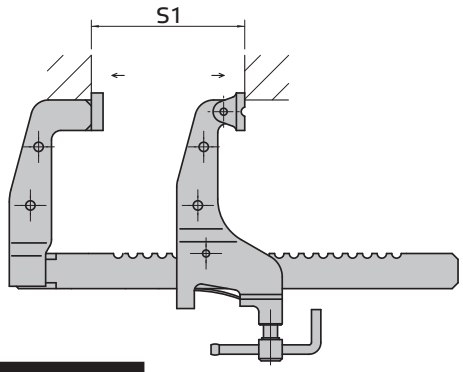
Ord. No.	d2	d3	d5	h1	h2	D1	L
971 001	6,1	8,6	15	7,6	2,5	M8	63
971 002	7,8	10,8	18	9,2	2,5	M10	73
971 003	9,4	12,8	21	10	3	M12	100

Notes

510 – 530

These clamps allow for clamping of pieces with a high force using a lever-mechanism controlled by a hardened bolt. The 510 clamp bodies with moving arms are made from cast steel and heat-treated accordingly. The 520 and 530 clamp bodies are made of C45 material. The moving arms are made of cast steel. The arms can be fitted in two positions, as clamping or stretching arms.



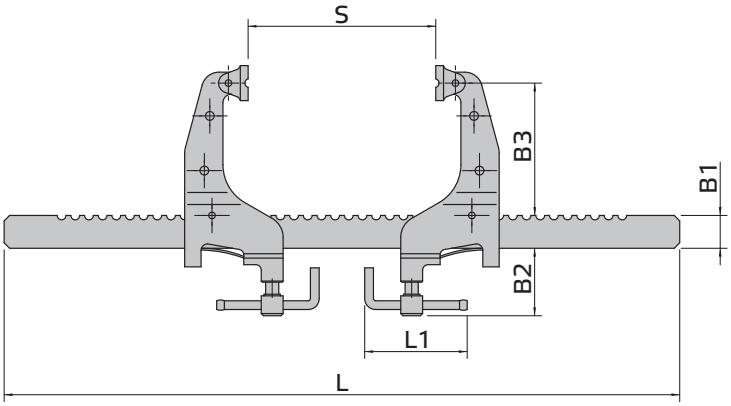


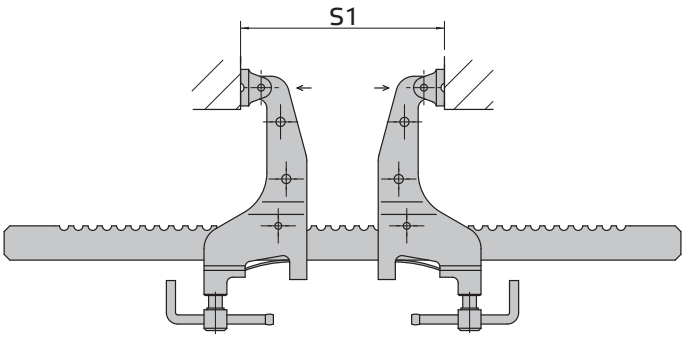
Surface treatment: Powder paint

TYPE	L	L1	B	B1	B2	B3	S (MAX)	S1 (MAX)	S1 (MIN)	Fmax (N)	m (g)
510	380	80	165	32	62	121	227	291	55	3000	1,9
520	650	80	165	32	62	121	497	561	55	3000	3,3
530	915	80	165	32	62	121	762	826	55	3000	4,0

550 – 560

These clamps allow for clamping of pieces with a high force using a lever-mechanism controlled by a hardened bolt. The 550 and 560 clamp bodies are made of C45 material. The moving arms are made of cast steel. The arms can be fitted in two positions, as clamping or stretching arms.





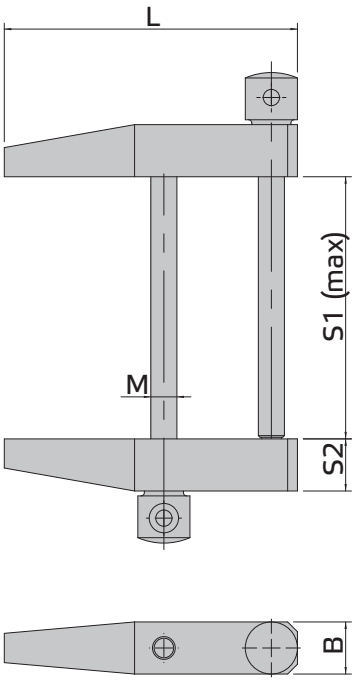
Surface treatment: Powder paint

TYPE	L	L1	B1	B2	B3	S (MAX)	S (MIN)	S1 (MAX)	S1 (MIN)	Fmax (N)	m (g)
550	560	80	32	62	121	414	64	546	105	3000	3,3
560	710	80	32	62	121	564	64	696	105	3000	3,7

501 – 503

Parallel screw clamp

Parallel settings using two threaded bolts.



TYPE	L	S1 (max)	S2	M	B	m (g)
501	60	50	12	6	12	0,16
502	90	80	16	8	16	0,4
503	120	90	20	10	20	0,8

UP125M – UP605M

Heavy duty

- Clamping force: 2200 kg
- Reach: 180 mm
- Replaceable heavy-duty pressure pads

Part No.	Capacity (mm)	Throat Depth (mm)	Clamping Pressure (kg)	Rail Size (mm)	Thread	Weight (kg)
UP125M	320	180	2200	40×19	M10	5,6
UP165M	420	180	2200	40×19	M10	6,2
UP205M	520	180	2200	40×19	M10	6,8
UP245M	622	180	2200	40×19	M10	7,5
UP405M	1.020	180	2200	40×19	M10	10,0
UP605M	1.537	180	2200	40×19	M10	12,7

UM85M – UM205M

Regular duty

- Clamping force: 1100 kg
- Reach: 140 mm
- Replaceable heavy-duty pressure pads

Part No.	Capacity (mm)	Throat Depth (mm)	Clamping Pressure (kg)	Rail Size (mm)	Thread	Weight (kg)
UM85M	216	140	1100	30×14	M10	2,7
UM125M	320	140	1100	30×14	M10	3,2
UM165M	420	140	1100	30×14	M10	3,5
UM205M	520	140	1100	30×14	M10	4,0

UM85PM – UM125PM

Medium duty

- Clamping force: 1100 kg
- Throat Depth: 140 mm
- Standard pressure pads

Part No.	Capacity (mm)	Throat Depth (mm)	Clamping Pressure (kg)	Rail Size (mm)	Thread	Weight (kg)
UM85PM	216	140	1 100	30×14	M10	2,9
UM105PM	267	140	1 100	30×14	M10	3,0
UM125PM	320	140	1 100	30×14	M10	3,1

UD45M – UG1657M

UD series equipped with a key ring stop

UE, UF, UG series equipped with a spring stop

Light to medium-heavy duty

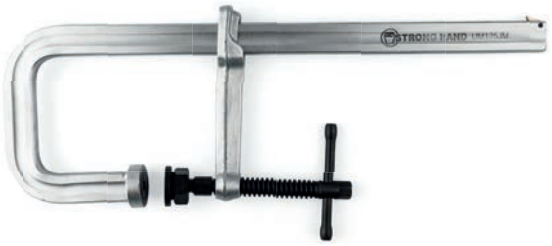
- Clamping force: 230–550 kg
- Throat Depth: 83–180 mm
- Standard pressure pads

Part No.	Capacity (mm)	Throat Depth (mm)	Clamping Pressure (kg)	Rail Size (mm)	Thread	Weight (kg)
UD45M	114	83	230	16×8	M8	0,4
UD85M	216	83	230	16×8	M8	0,6
UF65M	165	120	450	22×11	M10	1,1
UF100M	254	120	450	22×11	M10	1,3
UG85M	216	120	550	25×12	M10	1,6
UG125M	320	120	550	25×12	M10	1,8
UG205M	520	120	550	25×12	M10	2,2
UG1257M	320	180	360	25×12	M10	2,7
UG1657M	420	180	360	25×12	M10	3,0

UF100JM – UM205JM

J-Clamp Step-Over

Replaceable heavy-duty pressure pads.



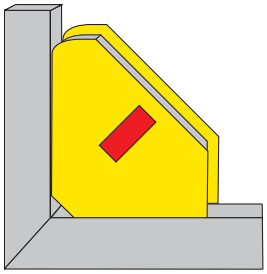
Part No.	Capacity (mm)	Throat Depth (mm)	Clamping Pressure (kg)	Rail Size (mm)	Thread	Weight (kg)
UF100JM	254	120 (75)	450	22×11	M10	1,5
UG105JM	267	120 (75)	550	25×12	M10	2,3
UM125JM	320	140 (120)	1.100	30×14	M10	3,7
UM205JM	520	140 (120)	1.100	30×14	M10	4,2

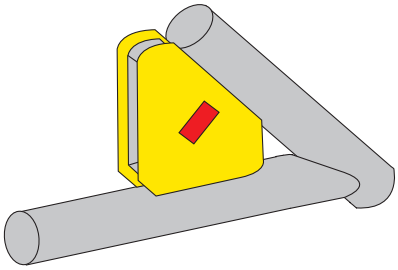
MSA46-HD – MSA53-HD

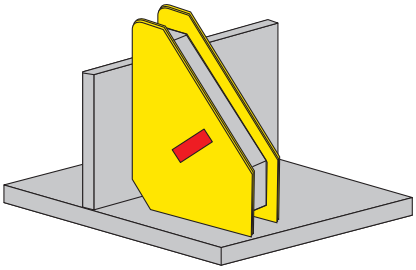
Magnet squares Adjust™

Fast and easy way to clamp metal workpieces at 30º, 60º, 45º, and 90º.

- Turn the magnet Off when setting up, turn it On when you are ready to work. Fast and safe set up.
- Suitable for round and square tubing, angled or flat stock.
- Easy to clean. Wipe after turning Off.







* Magnetic force capacity is measured on the longest side of the magnet with 10 mm thick steel.

Part No.	Load capacity (kg)	Measurements (mm)	Weight (kg)
MSA46-HD	40	111×95×29	0,7
MSA48-HD	75	152×130×35	1,4
MSA53-HD	65	152×130×35	1,4

MS2-80 – MS2-90

Adjust™ 90º Dual Switch Magnet Squares

For professional tasks requiring high adhesion power. Clamping flat or round stock.

- Two On/Off switches for independent operation.
- Turn the magnets Off when setting up. Turn them On when you are ready to work. Easy and safe set-up!
- Precision-machined flat and V-surfaces are ideal for round and square tubing, angled or flat stock.
- Choose from 55–120 kg pull force.

Part No.	Load capacity (kg)	Measurements (mm)	Weight (kg)
MS2-80	55	152×152×38	1,2
MS2-90	120	197×197×48	2,7

* Magnetic force is applicable to 10 mm thick steel.

MAV120

Adjust-O™ Angle Magnet Squares

- Adjustable through a range of 30º–275º, two On/Off switches
- Precision-machined flat surfaces and nickel/chrome body.
- V-groove surfaces securely hold round and square tubing, angled or flat stock.

Part No.	Angle	Load capacity (kg)	Measurements (mm)	Weight (kg)
MAV120	30º–275º	50	197×197×95	2,4

* Magnetic force is applicable to 10 mm thick steel.

MS346AT – MS346AK

Mini Magnet Squares

- At just 60 mm in height, Mini Magnets provide low-profile holding of stock in tight, hard-to-reach areas.
- Use as many as needed for light-duty holding of stock at multiple points for greater accuracy in dealing with atypically shaped stock.
- Ideal for use around the workshop, and compact enough to carry along for use out in the field.

* Magnetic force is applicable to 10 mm thick steel.

Part No.	Angle	Load capacity (kg)	Measurements (mm)	Weight (kg)
MS346AT set 2 pcs	30º, 60º, 45º, 90º	10	59×50×16	0,3
MS346AK set 6 pcs	30º, 60º, 45º, 90º	10	59×50×16	0,8

MST348 – MS350

Magnet Squares XYZ

- Quickly and easily set-up of 2- or 3-axis workpieces.
- New Magnetic Face Plate features two rare earth disc magnets for 3rd axis holding. Turn the Magnetic Face Plate with your finger to the desired position. Quickly snap together 2- or 3-axis set-ups for tack welding.
- When connecting a four-sided tube and sheet stock, use the rotatable magnetic face plate as a guiding tool on the edges.

* Magnetic force is applicable to 10 mm thick steel.

Part No.	Load capacity (kg)	Measurements (mm)	Weight (kg)
MST348 set 2 pcs	10	59×50×22	0,3
MS350	13.6	86×75×16	0,34

MS346C

Standard Magnet Squares

- Holding at multiple angles while soldering and welding at 30º, 45º, 60º, and 90º.
- Compact size makes carrying, storage and transportation easy.
- Center hole for easy handling.
- Easier cleaning thanks to a fully enclosed unit.

Part No.	Angle	Load capacity (kg)	Measurements (mm)	Weight (kg)
MS346C	30º, 60º, 45º, 90º	40	140×111×19	0,5

* Magnetic force is applicable to 10 mm thick steel.

MST327

Corner Magnets

Create connections by holding from the outside, providing you with an unobstructed area for inside tack welds.

Part No.	Angle	Load capacity (kg)	Measurements (mm)	Weight (kg)
MST327 set 2 pcs	90º & 60º	14	83×95×16	0,4

MS2-300

A-frame HD Magnet

A new tool for holding metal sheets and other bigger workpieces. The tool is able to hold the workpiece in an upright position.

Machined flat and V-shaped faces are able to hold round, square, flat, and angled stock.

Three independent ON/OFF switches.

Aluminium body

PR6 – PR18S

Locking Pliers

The model is chrome/nickel plated, made of heat-treated steel, which makes it strong and durable.

Updated features will help you to work swiftly, safely, and more efficiently.

Part No.	Length (mm)	Throat Depth (mm)	MAX Clamping Capacity (mm)	Weight (kg)
PR6 Round Tip	165	46	56	0,2
PR18 Round Tip	450	254	114	1,4
PR6S Swivel Pad	165	46	56	0,3
PR18S Swivel Pad	450	254	114	1,4

PG634 – PG114M

Multi-purpose pliers

A flexible hold is possible with a swivel pad spindle and a fixed head spindle. Threaded jaw holes allow for the installation of accessories.

Part No.	Length (mm)	Throat Depth (mm)	MAX Clamping Capacity (mm)	Thread	Weight (kg)
PG634	216	76	100	M8	0,5
PG114M	280	89	100	M10	0,9

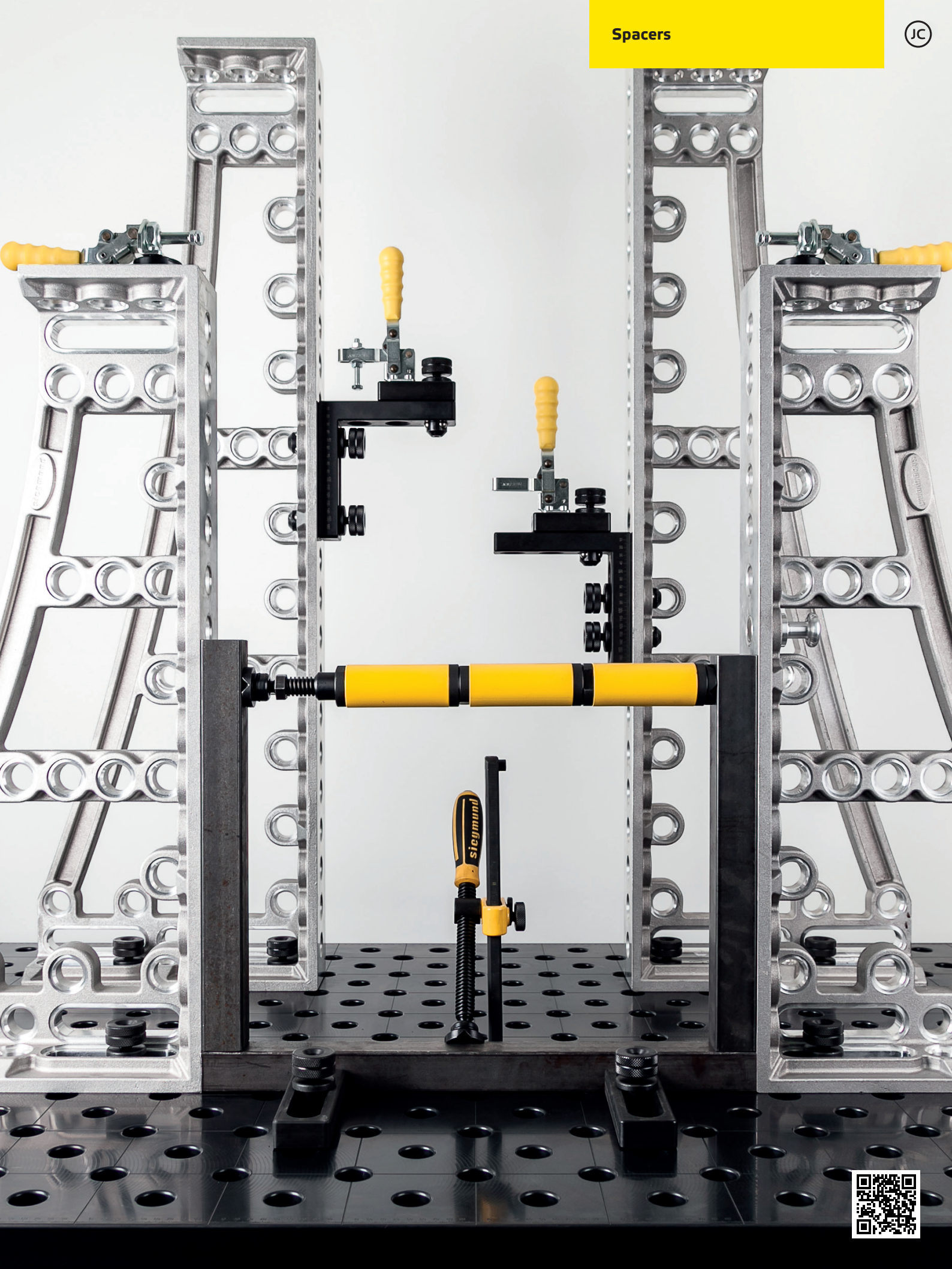
PG622V – PG115VM

Locking Pipe Pliers

V-pads on this locking pipe clamp can adjust to many different shapes and sizes.

Part No.	Length (mm)	Top V-Pad	Bottom V-Pad	Throat Depth (mm)	MAX Clamping Capacity (mm)	Thread	Weight (kg)
PG622V	150	Fixed	Fixed	50	25–50	M8	0,4
PG634V	216	Fixed	Fixed	76	50–80	M8	0,5
PG635V	216	Adjustable	Magnetic 0º & 45º rotatable	76	38–64	M8	0,5
PG635VS	216	Adjustable Stainless Steel	Stainless Steel 0º & 45º rotatable	76	38–64	M8	0,5
PG114VM	280	Fixed	Fixed	89	38–64	M10	1,3
PG115VM	280	Adjustable	Fixed	89	38–64	M10	1,3

Notes


siegmund

RTU-18 Spacer

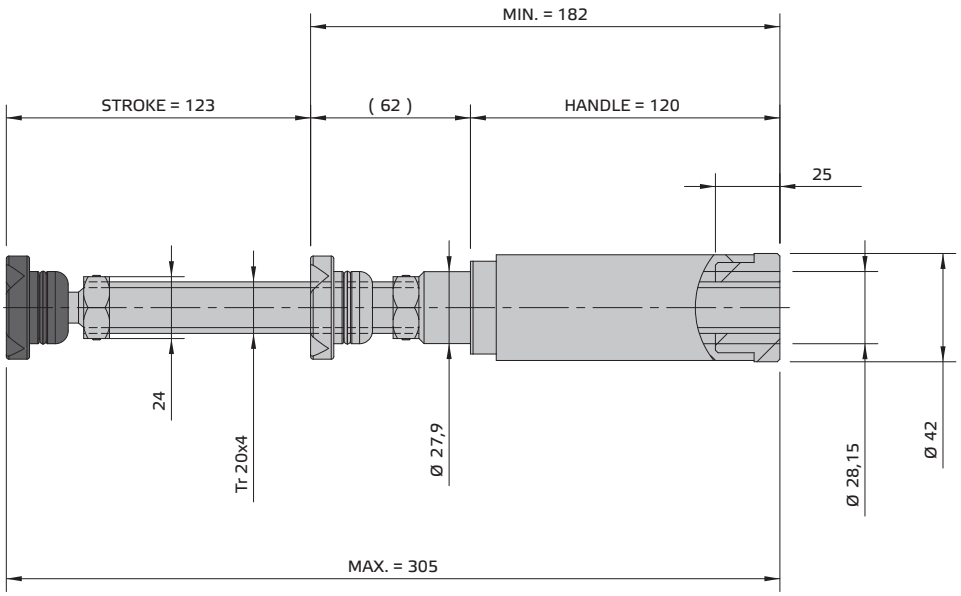
This spacer is designed to be placed between welded stock. It stabilizes the position, when there is no possibility to use clamps.

The spacer is compatible with the Siegmund 28 system.

The main body consists of a static part and an adjusting bolt with a prismatic cap and can be joined with a connecting joint and an M16 screw. The spacer is compatible with Siegmund system holes, Ø 28 mm.

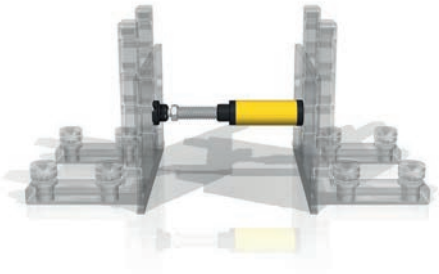
The ratio of the main body to the spacer's adjusting bolt is designed for the purpose of making the clamping pressure adjustment smooth through a range of 182–665 mm.

Maximum number of connected parts: 4

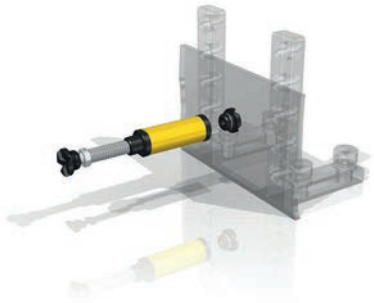


Specific usage

Without prismatic cap



With prismatic cap



Installation into Siegmund system holes, Ø 28 mm

Adjusting bolt
RTU-18-03-S

Body
RTU-18-02-S

Pivot
RTU-18-01-05

M16 Screw
RTU-18-01-06

Notes

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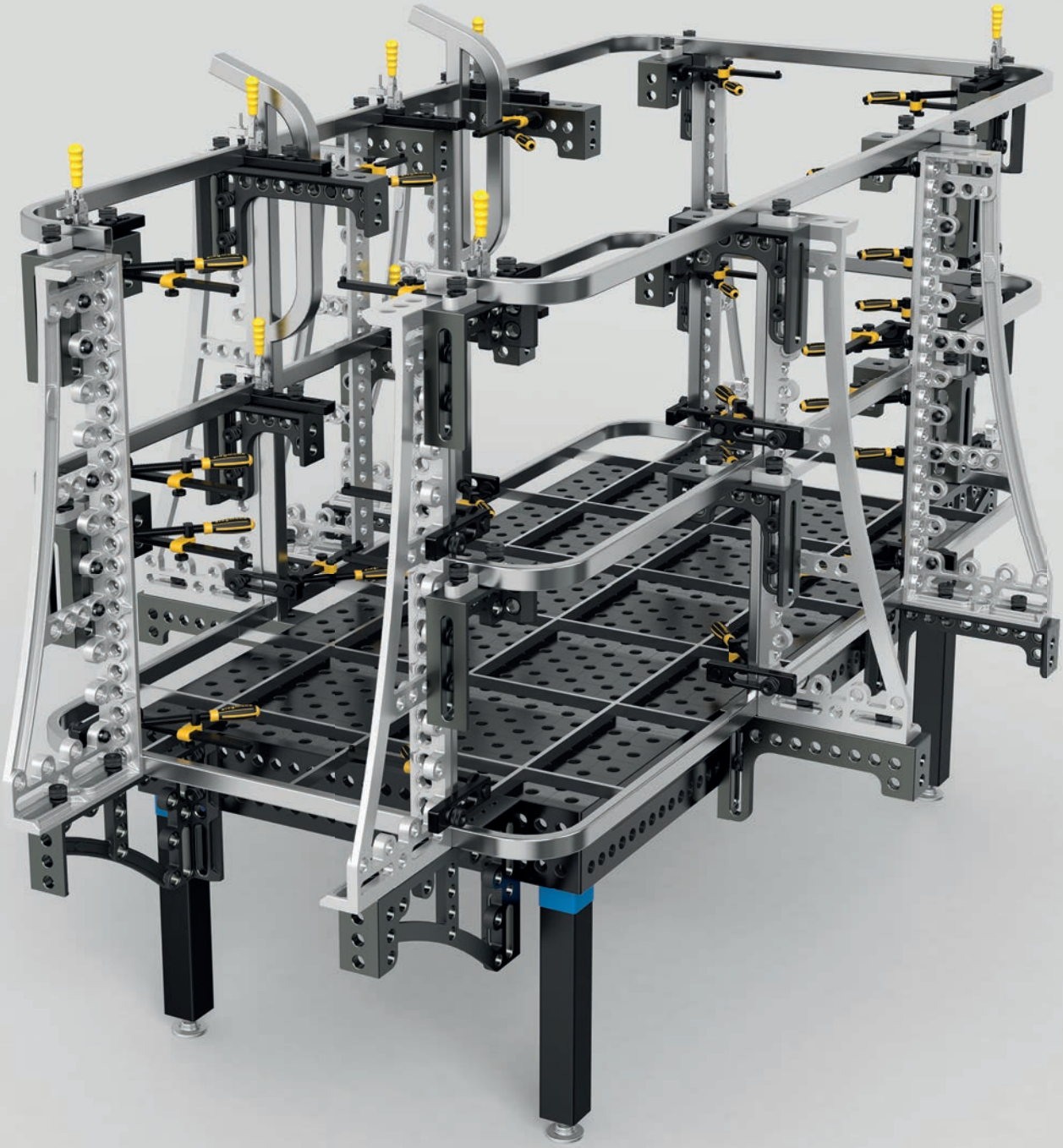


Clamping systems for welding Siegmund – sophisticated and flexible modular systems

Thanks to the sophisticated and flexible modular Siegmund system, based on the combination of a grid of system holes and an extensive set of compatible clamping components, you can perform even the most complex applications with minimal time spent on assembling the jig.

There are more than 10,000 welding table combinations possible.

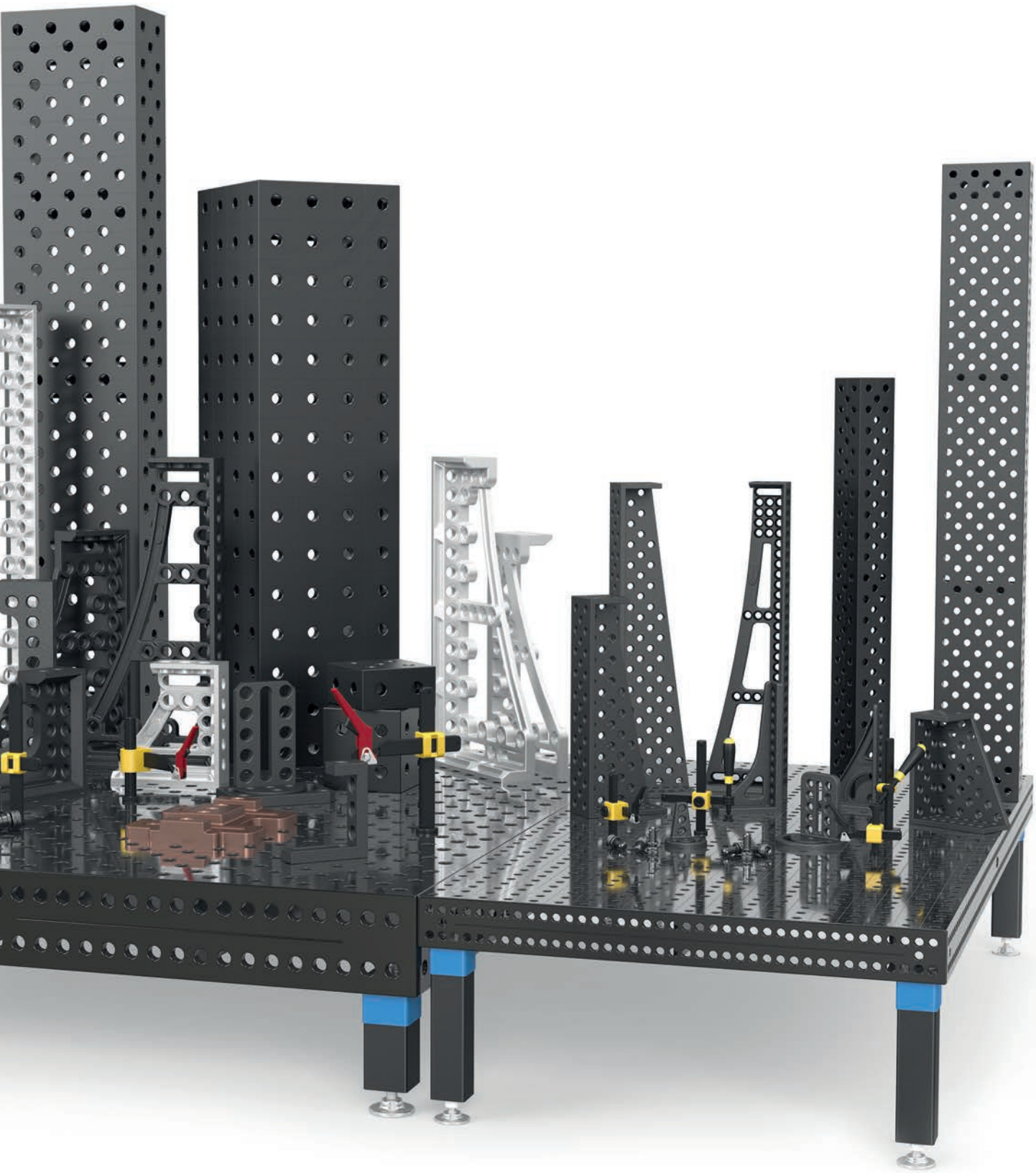
A high-quality table is the core for each jig. The Siegmund clamping systems offer a variety of table sizes, leg designs and materials, from which you can choose the right table to perfectly suit your wishes and requirements.

The Siegmund modular systems are made in three series of differing sizes, with Ø 16 mm holes (System 16), Ø 22 mm holes (System 22) and Ø 28 mm holes (System 28). The large number of commonly-manufactured size variants of tables in all size ranges, together with a number of leg designs, and a variety of materials, allows you to choose from almost 10,000 design variants, without any need to manufacture special sizes.

Since 2009, the Siegmund welding tables have been plasma-nitrided, which increases their surface hardness. As a result, they are more resistant to wear and tear and corrosion. Some other clamping components are also processed using this thermochemical method.

Request the Siegmund Welding and Clamping Systems catalogue.

siegmund®



SYSTEM 16

1. MATERIAL

· special tool steel, plasma-nitrided, max. hardness **750 Vickers**
· material thickness approx. 11.5–13 mm

2. SYSTEM HOLES Ø 16

· the hardened surface protects the holes from deformation caused by handling the clamps

Radius R2 from the outside of the system holes:

· it reduces the risk of damage to the table, Siegmund accessories and customer components
· easier introduction of pivots and other accessories
· even lower adhesion of welding beads on the edges of the holes
· less damage to the hole edges when moving heavy pieces
· large chamfer from the bottom of the holes for optimum pivot clamping force

3. SOPHISTICATED RADIUS

· 3 mm radius on horizontal edges of the worktop reduce the risk of damage to the table and accessories
· 6 mm radius on vertical edges lower the risk of injury

4. RIBS

· ribs on the bottom of the table for optimum stability and precision

5. TABLE SIDE

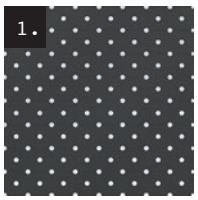
· height 100 mm
· an extended grid of holes offers the possibility of clamping in a spacing of 25 mm

6. LEGS

For your safety: Solid internal leg supports for low deformation at high loads.

· tube 70×70 mm
· internal leg support Ø 70 mm (one piece)

SYSTEM 22



1. MATERIAL

· steel S355J2 + N, plasma-nitrided, max. hardness **550 Vickers**
· material thickness approx. 17–19 mm

2. SYSTEM HOLES Ø 22

· radius R2 from the outside of the system holes

3. SOPHISTICATED RADIUS

· 3 mm radius on horizontal edges of the worktop reduce the risk of damage to the table and accessories
· 6 mm radius on vertical edges lower the risk of injury

4. RIBS

· ribs on the bottom of the table for optimum stability and precision

5. TABLE SIDE

· height 150 mm
· an extended grid of holes offers the possibility of clamping in a spacing of 50 mm

6. LEGS

For your safety: Solid internal leg supports for low deformation at high loads.
· tube 80×80 mm
· internal leg support Ø 80 mm (one piece)

SYSTEM 28

1. MATERIAL

· special tool steel, plasma-nitrided, max. hardness **750–850 Vickers**
· material thickness approx. 24.5–27 mm

2. SYSTEM HOLES Ø 28

The radius R3 from the outside of the system holes:
· it reduces the risk of damage to the table, Siegmund accessories and customer components
· easier introduction of pivots and other accessories
· even lower adhesion of welding beads on the edges of the holes
· less damage to the hole edges when moving heavy pieces
· large chamfer from the bottom of the holes for optimum pivot clamping force

3. SOPHISTICATED RADIUS

· 3 mm radius on horizontal edges of the worktop reduce the risk of damage to the table and accessories
· 6 mm radius on vertical edges lower the risk of injury

4. RIBS

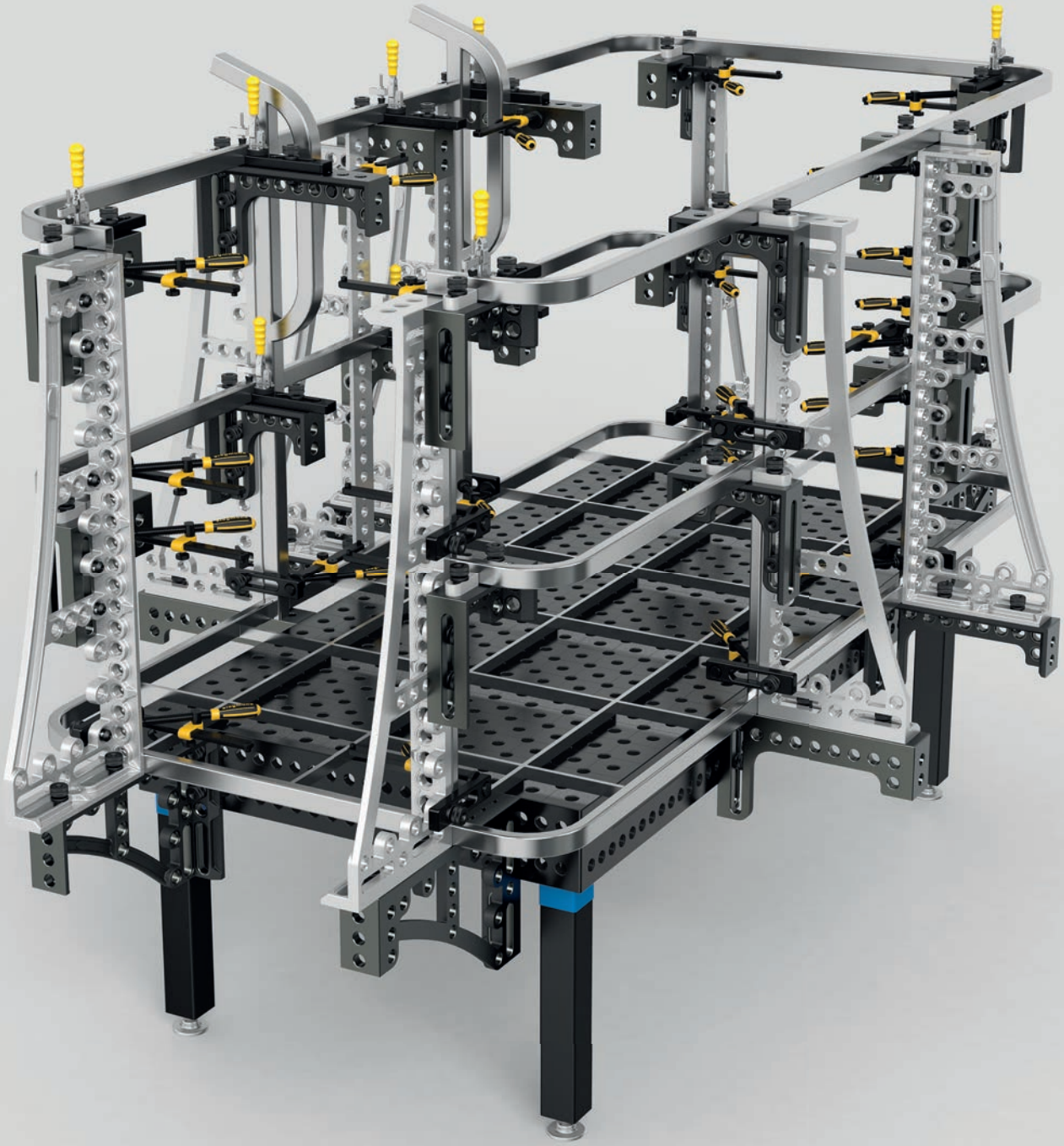
· ribs at a distance of 500–600 mm
· higher ribs

5. TABLE SIDE

· height 200 mm
· an extended grid of holes offers the possibility of clamping in a spacing of 50 mm

6. LEGS

For your safety: Solid internal leg supports for low deformation at high loads.
· tube 90×90 mm
· internal leg support Ø 90 mm (one piece)



WORKSTATION

Thanks to the sophisticated concept of the Siegmund Workstation, all your tools are always reachable. Workstation makes the workplace spacious, tidy and organized.

1.

1. PERFORATED PLATE (1200×800)

· high quality steel S355J2 + N + plasma-nitrided
· special tool steel
· special tool steel + plasma-nitrided

2.

2. DIRT PROTECTION

Accessories are protected from welding spatter and other dirt by the two metal sheets. The sheets are located under the working desk. The sheets can be pulled out as a drawer in order to be cleaned.

3.

3. LEGS

A combination of legs and castors makes the Siegmund Workstation mobile.
The stationary leg base pads are adjustable in order to keep the workplace even.
(Castors are optional)

4.

4. LOAD CAPACITY

The load capacity of the Siegmund Workstation with solid legs is approx. 1000 kg.
The load capacity diminishes with the castors to approx. 400 kg.

5.

5. MAGNIFICENT STORAGE SPACE

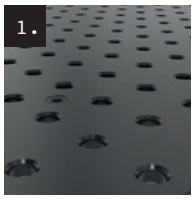
Numerous Siegmund parts can be stored in the Siegmund Workstation. The racks are very suitable for numerous accessories. Thanks to which, everything is within arm's reach. Optional extras include practical drawers in an array of sizes. The drawers are therefore suitable for all tool types. With a space of 600 mm for installation on both the table's left- and right-hand sides, there are plenty of possible drawer configurations wherever you need them.


siegmund

MOBILE LIFTING TABLE

Siegmund Tables offer a wide range of uses e.g. as an assembly table, a clamping table, or an additional working space.

1.



1. PERFORATED SHEET (1200×800)

· bore holes: Ø 16 mm, Ø 22 mm or Ø 28 mm
· premium steel S355J2 + N + plasma nitration
· tool steel + plasma nitration
· perforated plate with screws for fine adjustment

2.

2. BASE FRAME

· steel construction
· powder coated
· will be delivered pre-assembled

3.

3. HEIGHT ADJUSTMENT

· manual hydraulic pump
· working height from approx. 700 mm to 1000 mm

4.

4. CASTORS

· two castors for heavy weight with brake
· two castors for heavy weight

5.

5. LOAD CAPACITY

· maximum load capacity is 500 kg (with plate)

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