

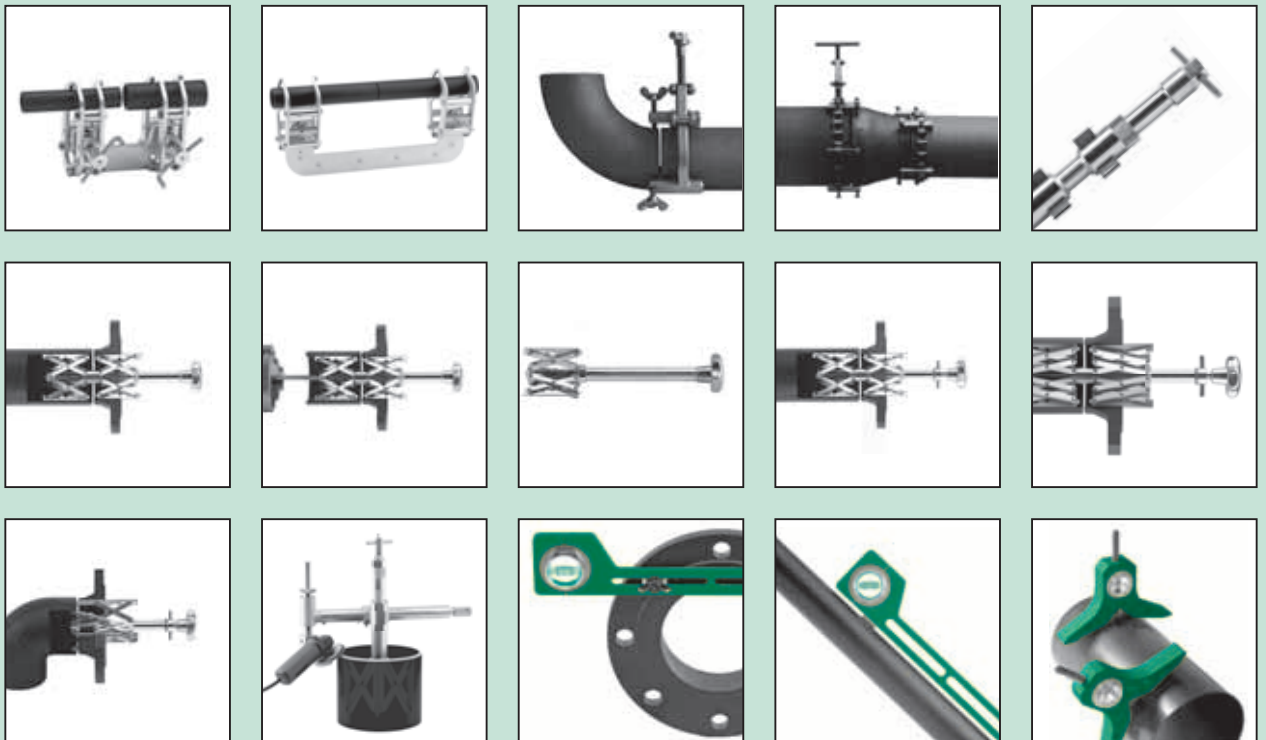
Centromat®

Hermann Rosorius

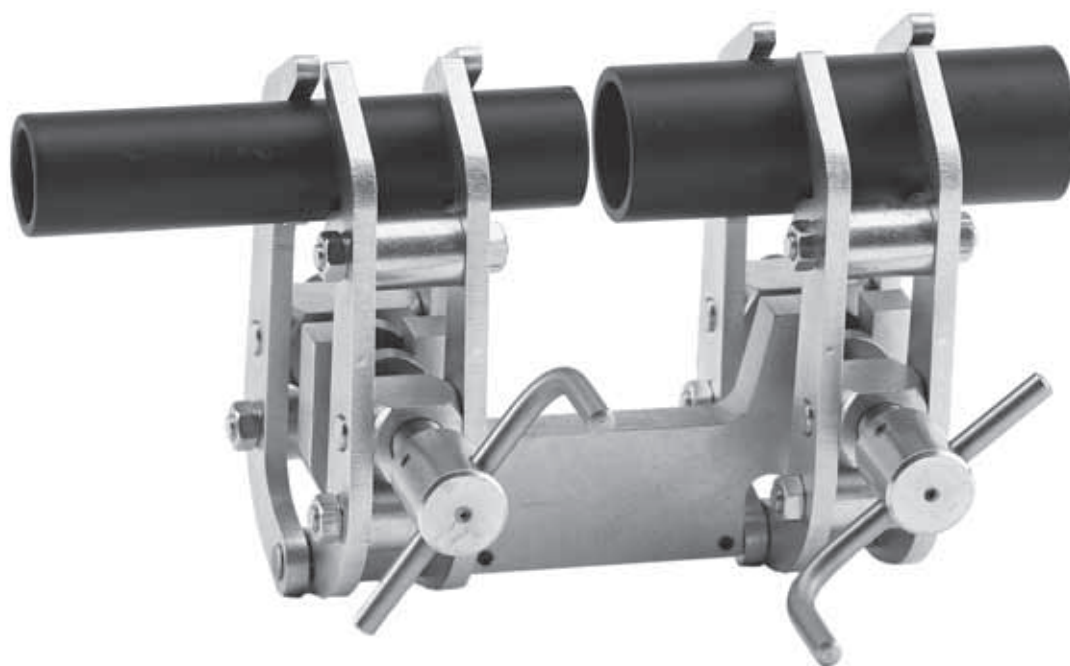
Ingenieurbüro GmbH

**Special tools
for pipeline construction,
plant engineering
and container manufacture**

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www.centromat.de

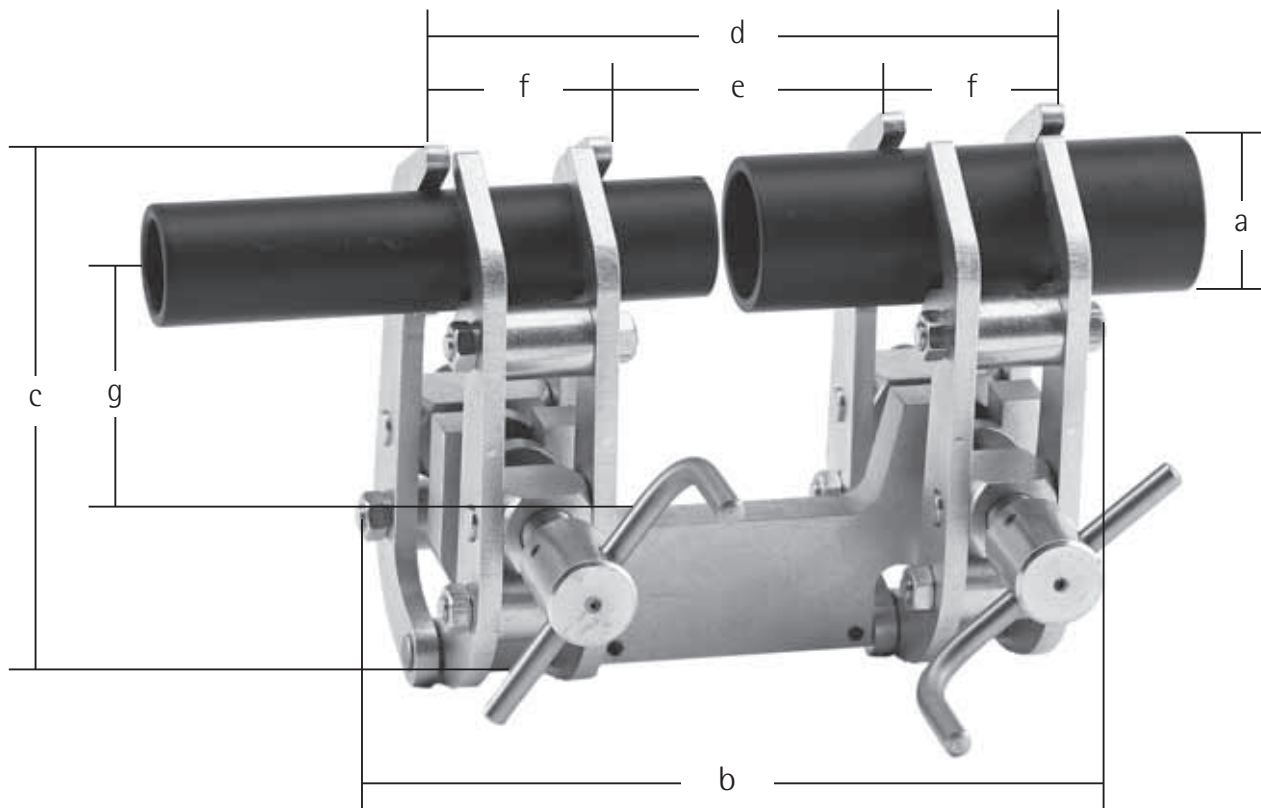


for quick and accurate alignment of pipes of **equal or differing diameters** on a common center line. **Automatic diameter compensation.** There's no need to make additional adjustments. All part stay easily accessible for welding.

In order to prevent electrolytic corrosion, we recommend the versions with stainless steel clamping arms (VA 1.4301).

	Size A	Size B	Size C
Clamping Range	10 - 70 mm	40 - 140 mm	75 - 330 mm
Weight	2,00 kg	5,30 kg	26,00 kg

Dimensional sketch type 1a



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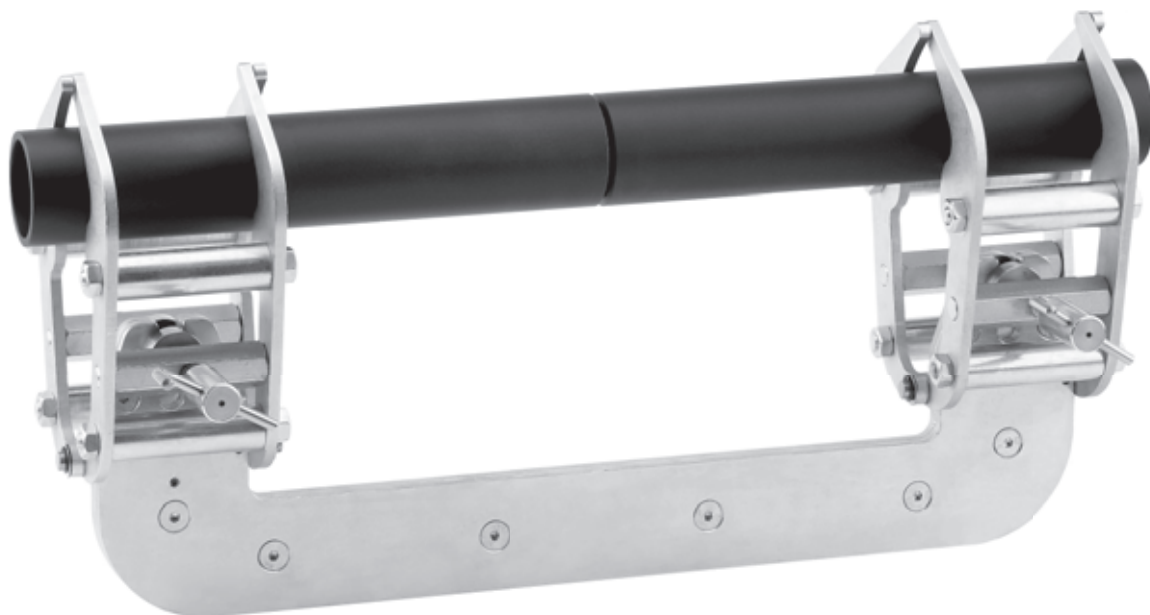
Size A		Size B		Size C	
a)	10 - 70 mm	a)	40 - 140 mm	a)	75 - 330 mm
b)	160 mm	b)	210 mm	b)	360 mm
c)	125 mm	c)	200 mm	c)	400 mm
d)	140 mm	d)	190 mm	d)	350 mm
e)	57 mm	e)	82 mm	e)	115 mm
f)	41 mm	f)	55 mm	f)	115 mm
g)	65 mm	g)	95 mm	g)	235 mm

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type 1a-Orbital

External Alignment Clamps "Orbital"



Special version for orbital welding.

To relieve pressure from a welding unit during orbital welding, we recommend type 1a-Orbital. For quick and accurate alignment of pipes of **equal or differing diameters** on a common center line. **Automatic diameter compensation.** There's no need to make additional adjustments. All part stay easily accessible for welding.

In order to prevent electrolytic corrosion, we recommend the versions with stainless steel clamping arms (VA 1.4301).

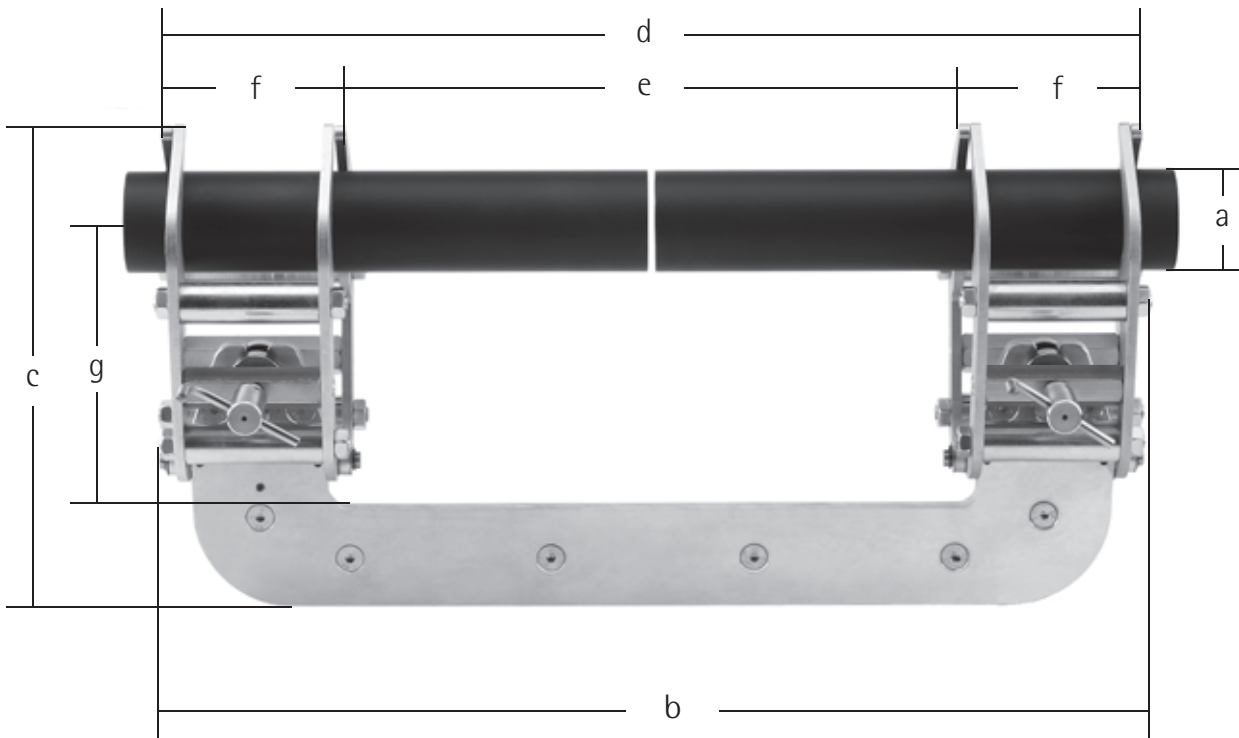
	Size 1	Size 2	Size 3	Size 4
Clamping Range	6 - 50 mm	10 - 70 mm	25 - 140 mm	75 - 330 mm
Weight	3,60 kg	5,70 kg	12,60 kg	41,00 kg

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The original

Dimensional sketch type 1a-Orbital

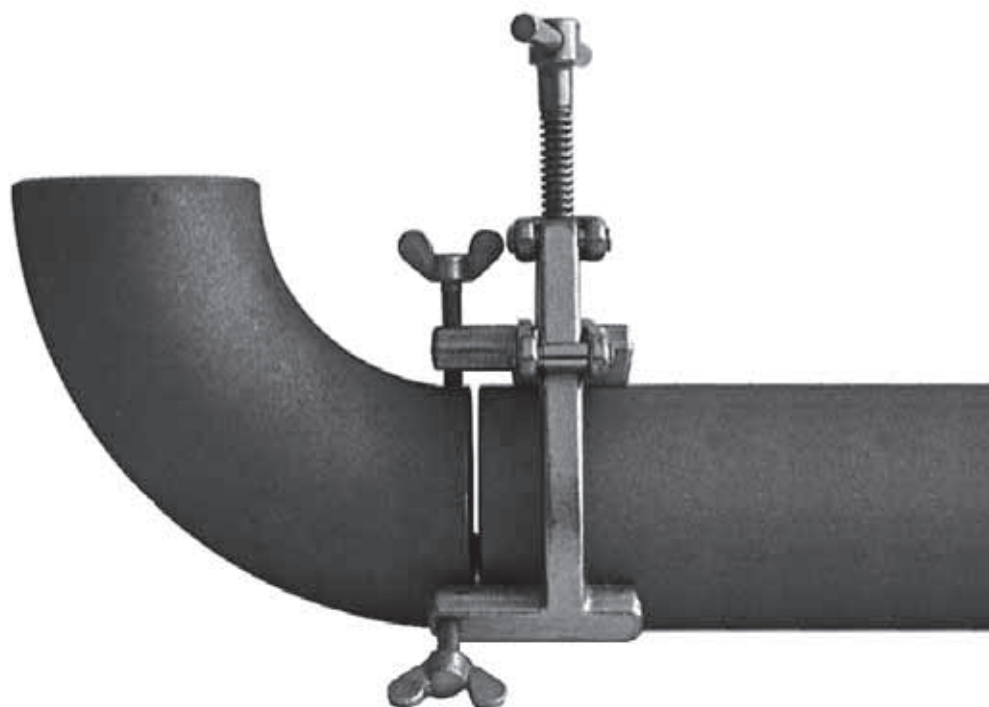


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	Size 1	Size 2	Size 3	Size 4
a)	6 - 50 mm	10 - 70 mm	25 - 140 mm	75 - 330 mm
b)	225 mm	400 mm	590 mm	720 mm
c)	175 mm	235 mm	290 mm	550 mm
d)	240 mm	387 mm	570 mm	720 mm
e)	98 mm	243 mm	360 mm	340 mm
f)	71,5 mm	71,5 mm	106 mm	168 mm
g)	110 mm	160 mm	170 mm	340 mm

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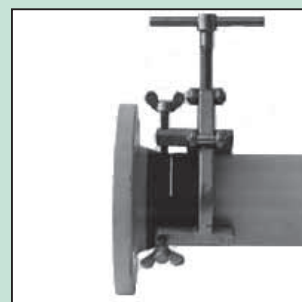
5

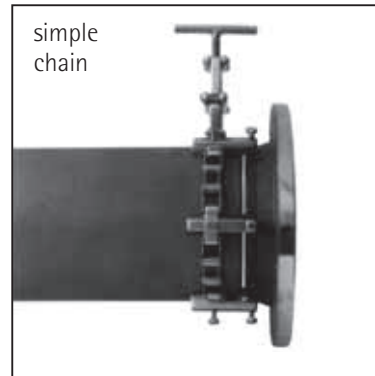
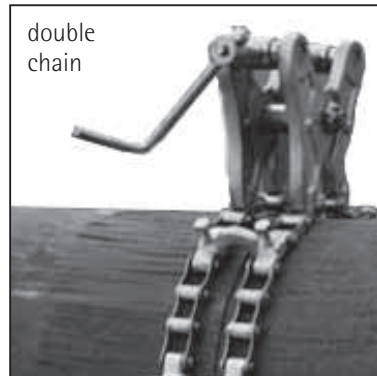
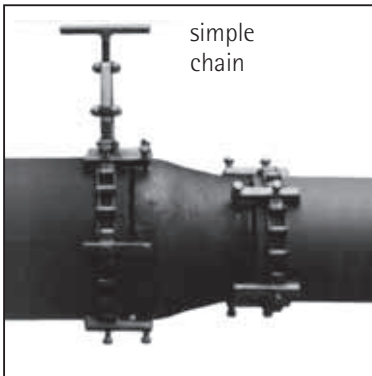


for exact centering and clamping of pipes without restriction in length. Also for curved tubes, flanges, T-shaped and other parts to pipes. The assembly of pipe-systems can be practised by only one pipefitter. Welding parts are accessible from all directions. Microadjustment device by wing-screw. To avoid corrosion we recommend stainless steel type.

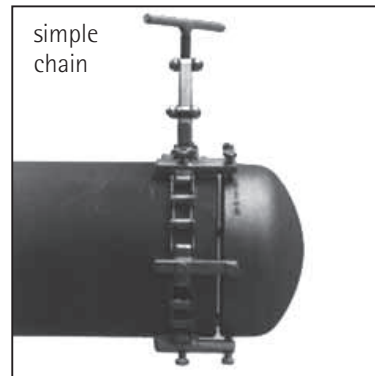
In order to prevent electrolytic corrosion, we recommend the stainless steel versions.

Size	Clamping Range	Weight
A	20 - 90 mm	1,40 kg
B	50 - 150 mm	3,00 kg
C	90 - 190 mm	3,30 kg
D	125 - 225 mm	6,80 kg
E	225 - 370 mm	8,65 kg





for centering and clamping of long pipes without restriction in length. Also for curved tubes, flanges, T-shaped parts etc. to pipes and tanks. Five different models available. Choice between galvanised steel or stainless steel. Great variability by simply taken-off or adding chain-links. For a ready-of-work centering chain is needed: 1 standard chain, 1 tensioner and may be additional chain-links.



Light model simple chain. Size 150

mainly used for welding flanges, reducing parts, form-pieces, Kloepper-seal-off-bottom etc. on pipes for pipes of external diameter from 168.3 mm.
Standard length: 650 mm = 5 chain-links
Additional chain-link: 125 mm.

Medium heavy model simple chain. Size 200

mainly used for welding flanges, reducing parts, form-pieces, Kloepper-seal-off-bottom etc. on pipes for pipes of external diameter from 219.1 mm.
Standard length: 1275 mm = 7 chain-links
Additional chain-link: 177 mm.

Heavy model simple chain. Size 300

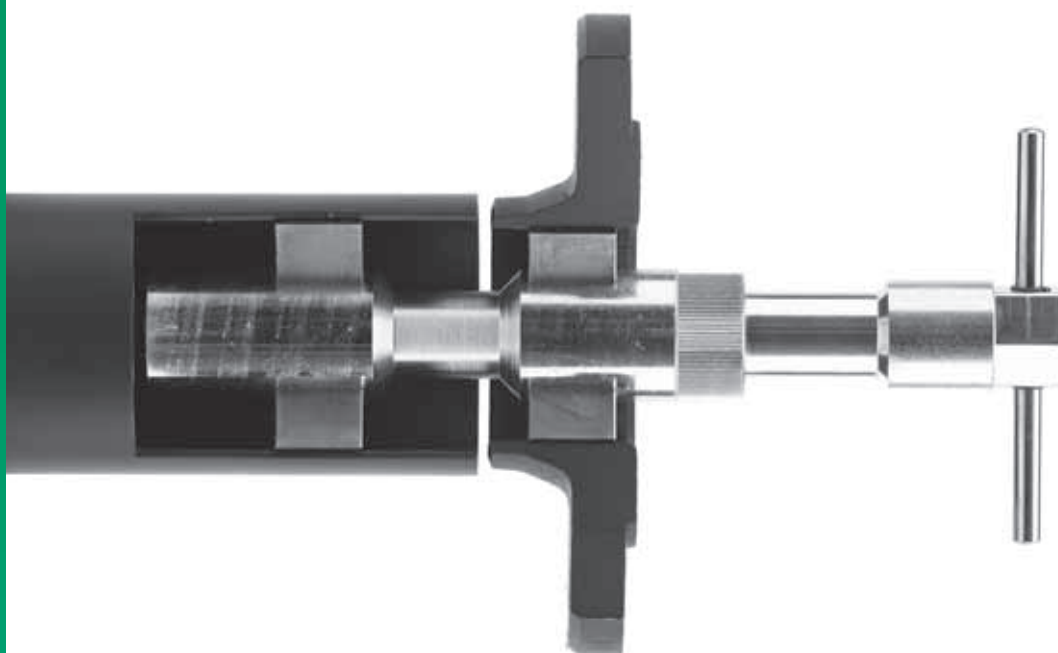
mainly used for welding flanges, reducing parts, form-pieces, Kloepper-seal-off-bottom etc. on pipes for pipes of external diameter from 323.9 mm.
Standard length: 1920 mm = 7 chain-links
Additional chain-link: 265 mm.

Medium heavy model double chain. Size D 200

used for welding pipes on long pipes and on pipe parts for pipes of external diameter from 323.9 mm.
Standard length: 1275 mm = 7 chain-links (DN 300)
Additional chain-link: 177 mm.

Heavy model, double chain. Size D 300

used for welding pipes on long pipes and on pipe parts for pipes of external diameter from 323.9 mm.
Standard length: 1920 mm = 7 chain-links (DN 300)
Additional chain-link: 265 mm.



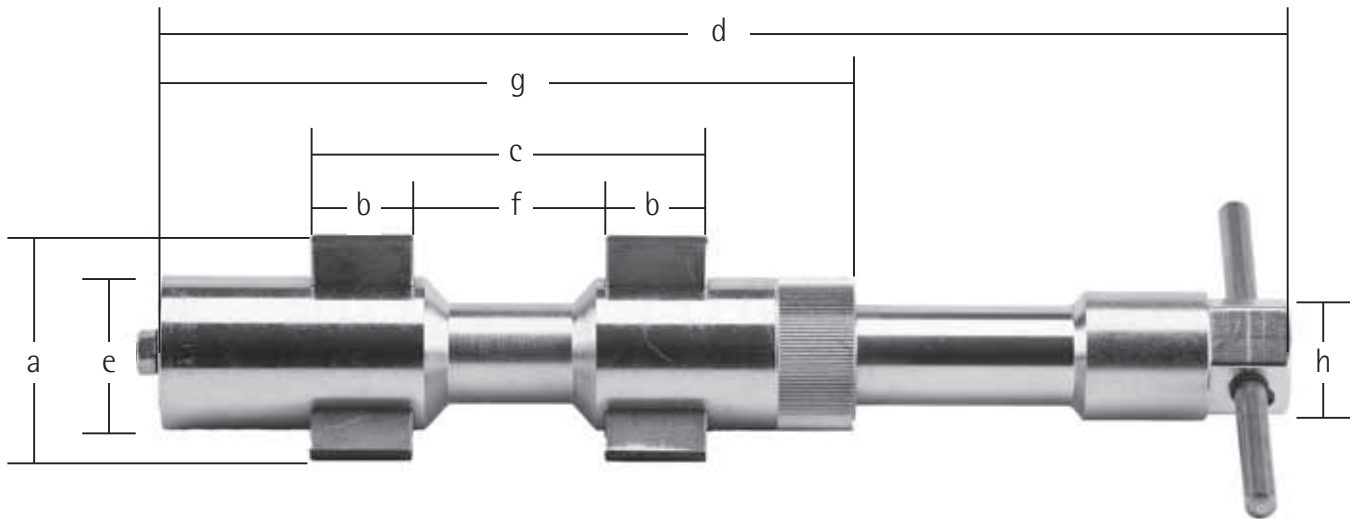
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for quick and accurate alignment and clamping of flanges, nozzles, short pipe sections to pipes and cylindrical tanks. Wedge shaped clamps provide **automatic compensation** even for parts with greatly differing diameters.

In order to prevent electrolytic corrosion, we recommend the versions with stainless steel tensioning wedge (VA 12CrNi177 1.4310).

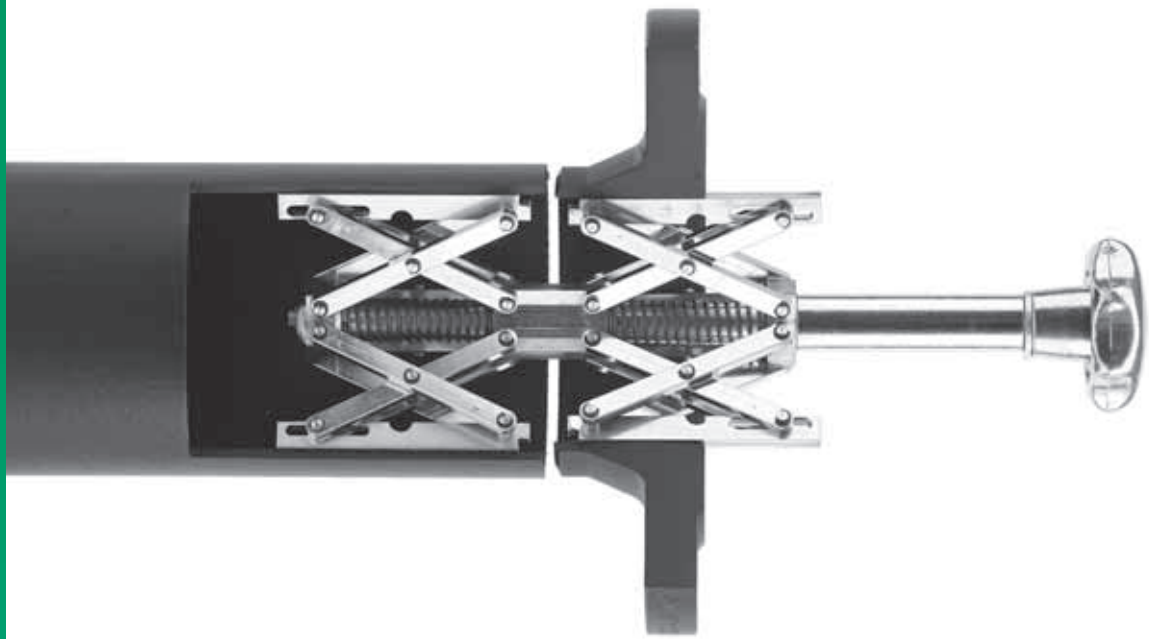
	Clamping Range	Weight
Size 004	15 - 19 mm	0,20 kg
Size 003	16 - 20 mm	0,20 kg
Size 002	19 - 25 mm	0,25 kg
Size 001	24 - 32 mm	0,50 kg
Size 01	31 - 40 mm	0,50 kg
Size 0	38 - 52 mm	1,25 kg
Size 00	51 - 64 mm	1,25 kg

Dimensional sketch type 2



	Size 004	Size 003	Size 002	Size 001
a)	15 - 19 mm	16 - 20 mm	19 - 25 mm	24 - 32 mm
b)	15 mm	15 mm	15 mm	20 mm
c)	50 mm	50 mm	54 mm	84 mm
d)	154 - 170 mm	154 - 170 mm	154 - 170 mm	200 - 225 mm
e)	15 mm	16 mm	19 mm	24 mm
f)	20 mm	20 mm	24 mm	44 mm
g)	100 mm	100 mm	100 mm	149 mm
h)	SW 12	SW 12	SW 12	SW 15
	Size 01	Size 0	Size 00	
a)	31 - 40 mm	38 - 52 mm	51 - 64 mm	
b)	20 mm	25 mm	25 mm	
c)	84 mm	97 mm	97 mm	
d)	200 - 225 mm	247 - 278 mm	247 - 278 mm	
e)	24 mm	38 mm	38 mm	
f)	44 mm	47 mm	47 mm	
g)	149 mm	170 mm	170 mm	
h)	SW 15	SW 27	SW 27	

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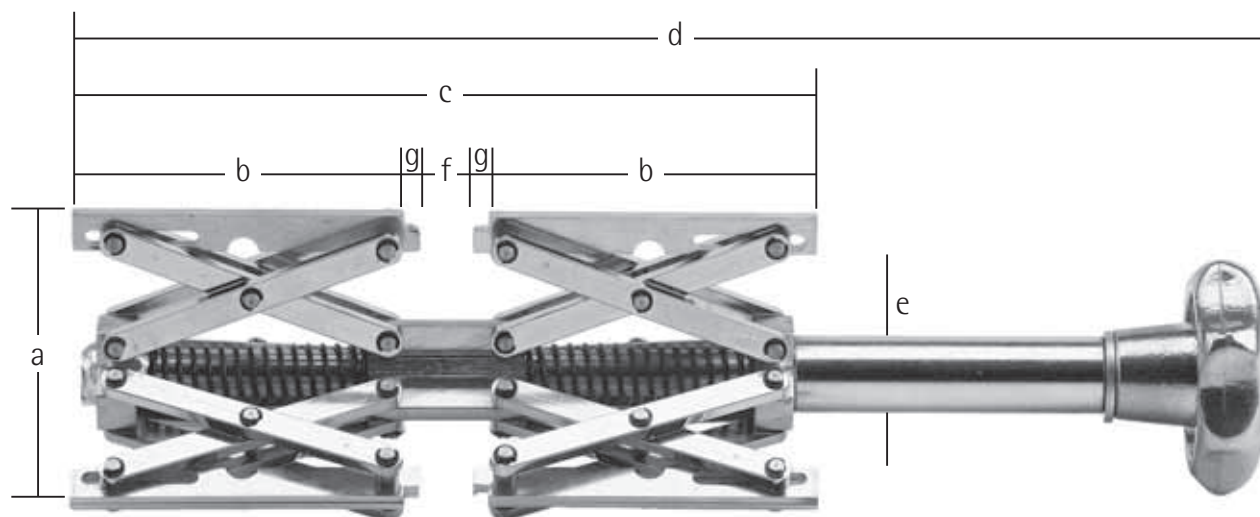
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for quick and accurate alignment and clamping of flanges, nozzles, short pipe sections, etc. to pipes and cylindrical tanks. Locating rails for right angle abutments and **automatic diameter compensation** even for extremely differing pipe diameters. There's no need for additional adjustments. The internal clamp allows free access so that all parts can be welded.

In order to prevent electrolytic corrosion, we recommend the versions with stainless steel support rails (VA 1.4301).

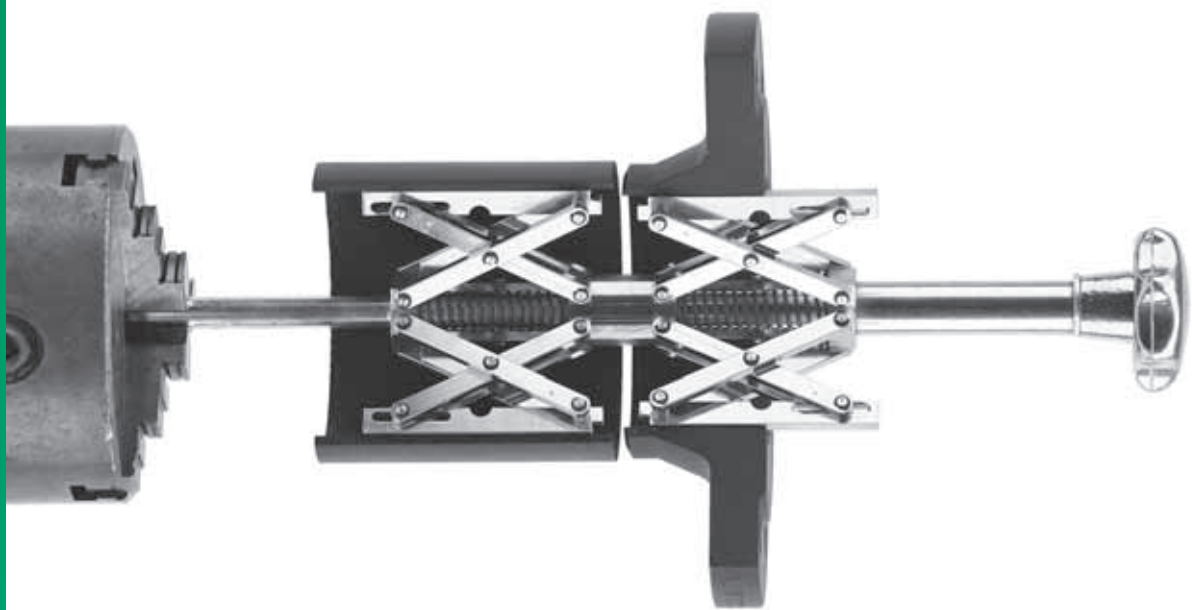
	Clamping Range	Weight
Size 1	54 - 140 mm	1,25 kg
Size 2	85 - 220 mm	3,35 kg
Size 3	see type 4, Size 3e	

Dimensional sketch type 3a



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Size 1	Size 2	Size 3
a) 54 - 140 mm	a) 85 - 220 mm	see type 4, Size 3e
b) 88 mm	b) 144 mm	
c) 190 mm	c) 309 mm	
d) 290 - 310 mm	d) 445 - 505 mm	
e) 20 mm	e) 26 mm	
f) 14 mm	f) 21 mm	
g) 4 mm	g) 5 mm	

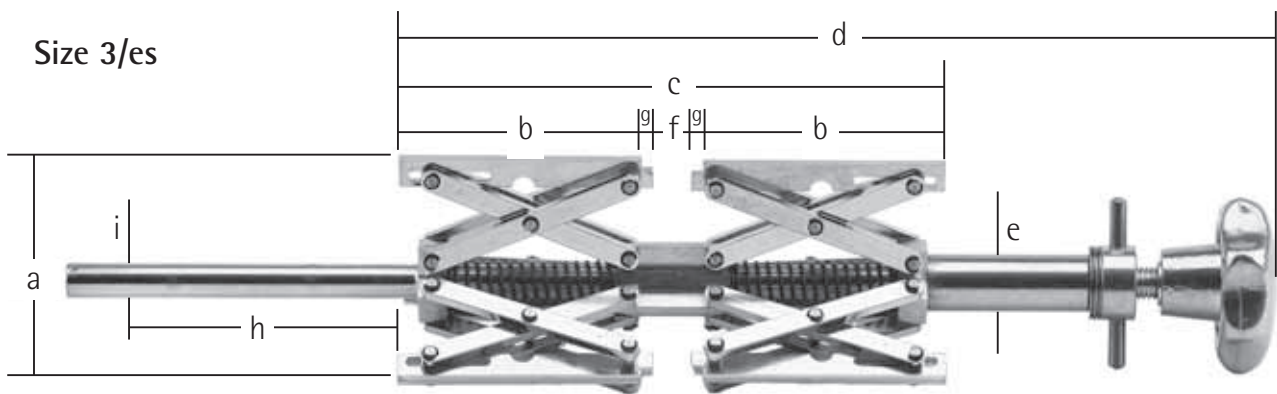
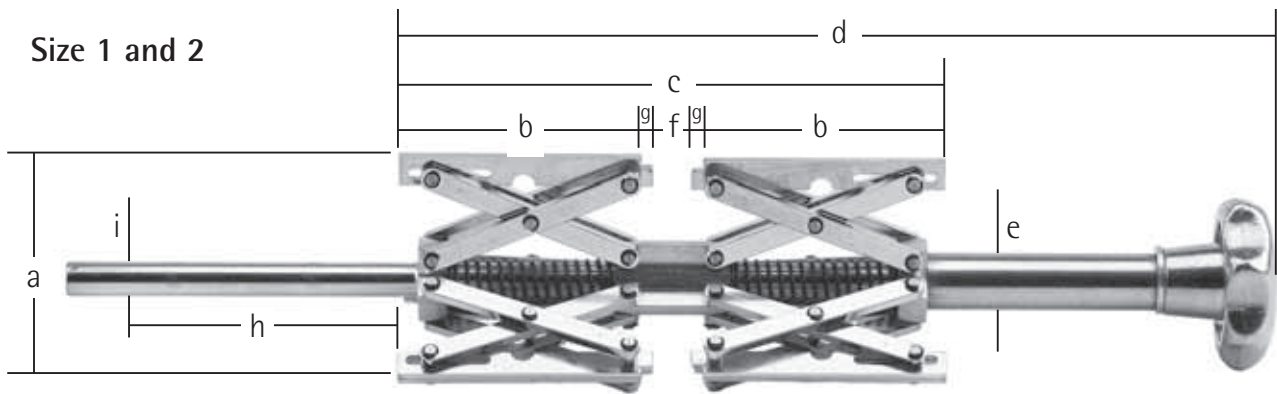


for use on rotating welding-tables and revolving devices. This model is equipped with elongated center shaft. **Automatic diameter compensation** even for extremely differing pipe diameters.

In order to prevent electrolytic corrosion, we recommend the versions with stainless steel support rails (VA 1.4301).

	Clamping Range	Shaft-Length	Weight
Size 1	54 - 140 mm	120 mm	1,40 kg
Size 2	85 - 220 mm	150 mm	4,20 kg
Size 3e/s	120 - 350 mm	190 mm	12,50 kg

Dimensional sketch type 3b



Size 1	Size 2	Size 3/es
a) 54 - 140 mm	a) 85 - 220 mm	a) 120 - 350 mm
b) 88 mm	b) 144 mm	b) 233 mm
c) 190 mm	c) 309 mm	c) 491 mm
d) 290 - 310 mm	d) 445 - 505 mm	d) 745 - 790 mm
e) 20 mm	e) 26 mm	e) 34 mm
f) 14 mm	f) 21 mm	f) 25 mm
g) 4 mm	g) 5 mm	g) 6 mm
h) 120 mm	h) 150 mm	h) 190 mm
i) 12 mm	i) 20 mm	i) 26 mm

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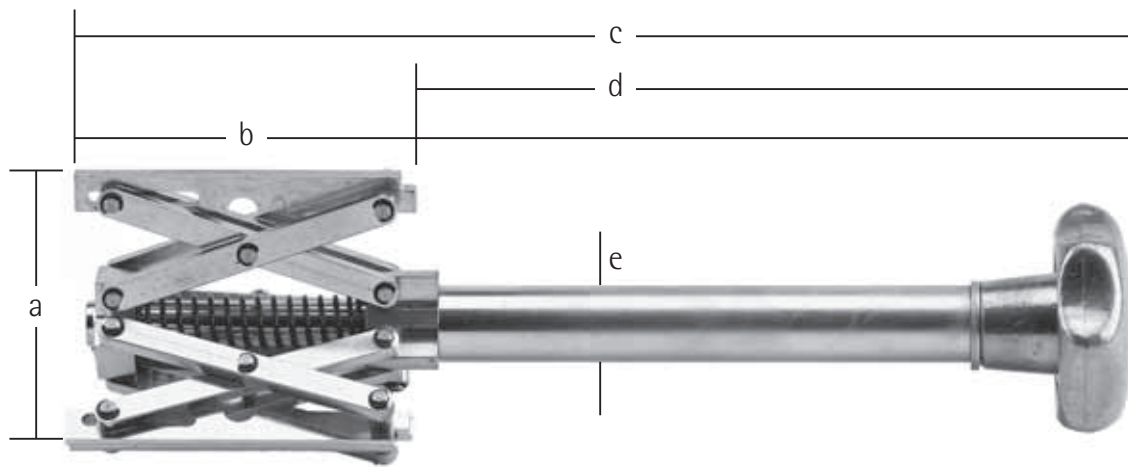


for clamping pipes of equal diameter or as a clamp with only one expanding clamping part.

In order to prevent electrolytic corrosion, we recommend the versions with stainless steel support rails (VA 1.4301).

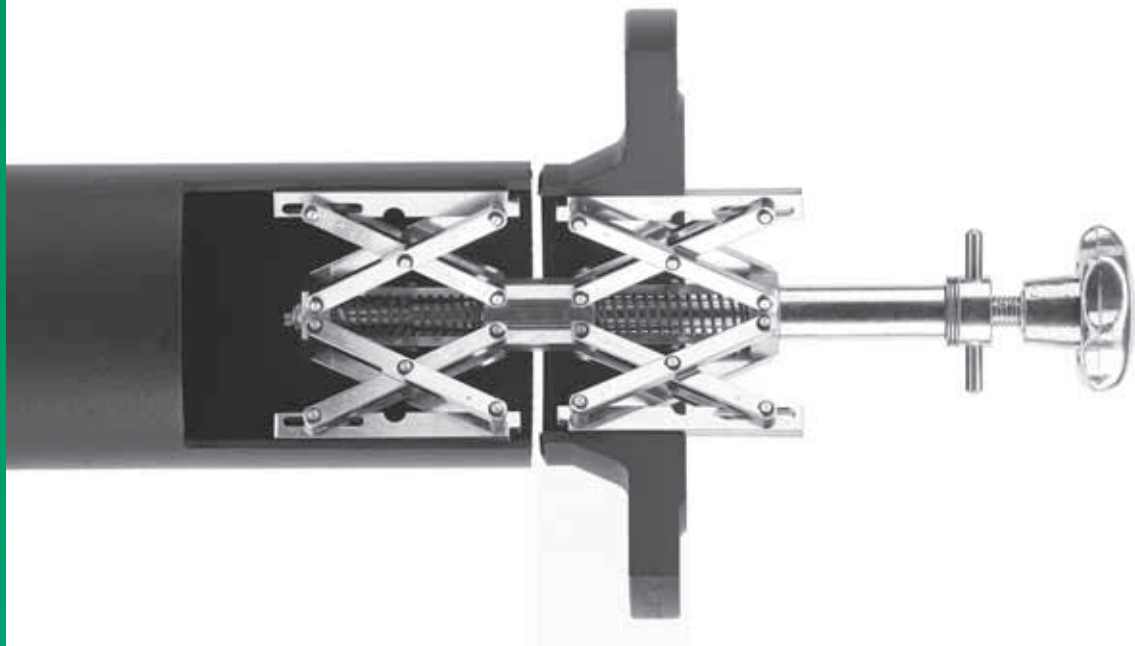
	Clamping Range	Weight
Size 1	54 - 140 mm	1,00 kg
Size 2	85 - 220 mm	2,40 kg
Size 3	120 - 350 mm	6,00 kg
Size 4	180 - 520 mm	14,00 kg
Size 4/s	400 - 940 mm	20,00 kg

Dimensional sketch type 3c



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	Size 1	Size 2	Size 3	Size 4	Size 4/s
a)	54 - 140 mm	85 - 220 mm	120 - 350 mm	180 - 520 mm	400 - 940 mm
b)	88 mm	144 mm	233 mm	300 mm	300 mm
c)	305 mm	480 mm	540 mm	630 mm	630 mm
d)	220 mm	335 mm	300 mm	325 mm	325 mm
e)	20 mm	26 mm	34 mm	36 mm	36 mm

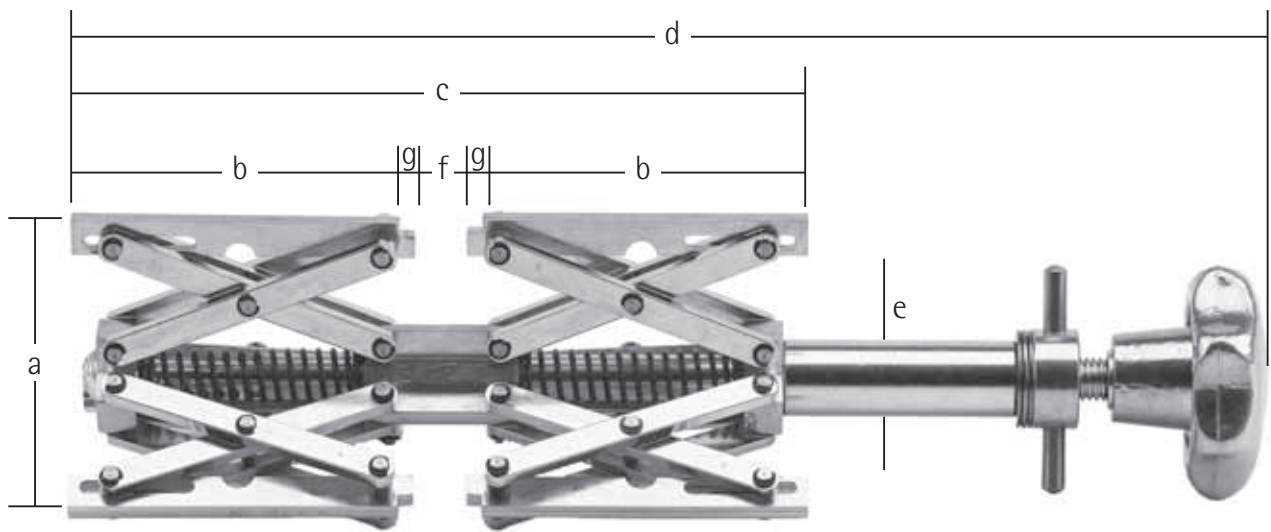


this model has two independent expanding clamps, allowing coaxial alignment of two hollow cylindrical components of different diameters. The bottom expanding clamp is inserted and clamped in the pipe by means of the knob. Then the other part (e.g. a flange) is placed over the top expanding clamp and clamped by means of the hand-bar. Compared with model 3a. This model is specially suited for heavy parts. **Automatic diameter compensation.**

In order to prevent electrolytic corrosion, we recommend the versions with stainless steel support rails (VA 1.4301).

	Clamping Range	Weight
Size 1/e	54 - 140 mm	1,30 kg
Size 2/e	85 - 220 mm	3,90 kg
Size 3/e	120 - 350 mm	11,50 kg
Size 4/e	180 - 520 mm	27,00 kg

Dimensional sketch type 4

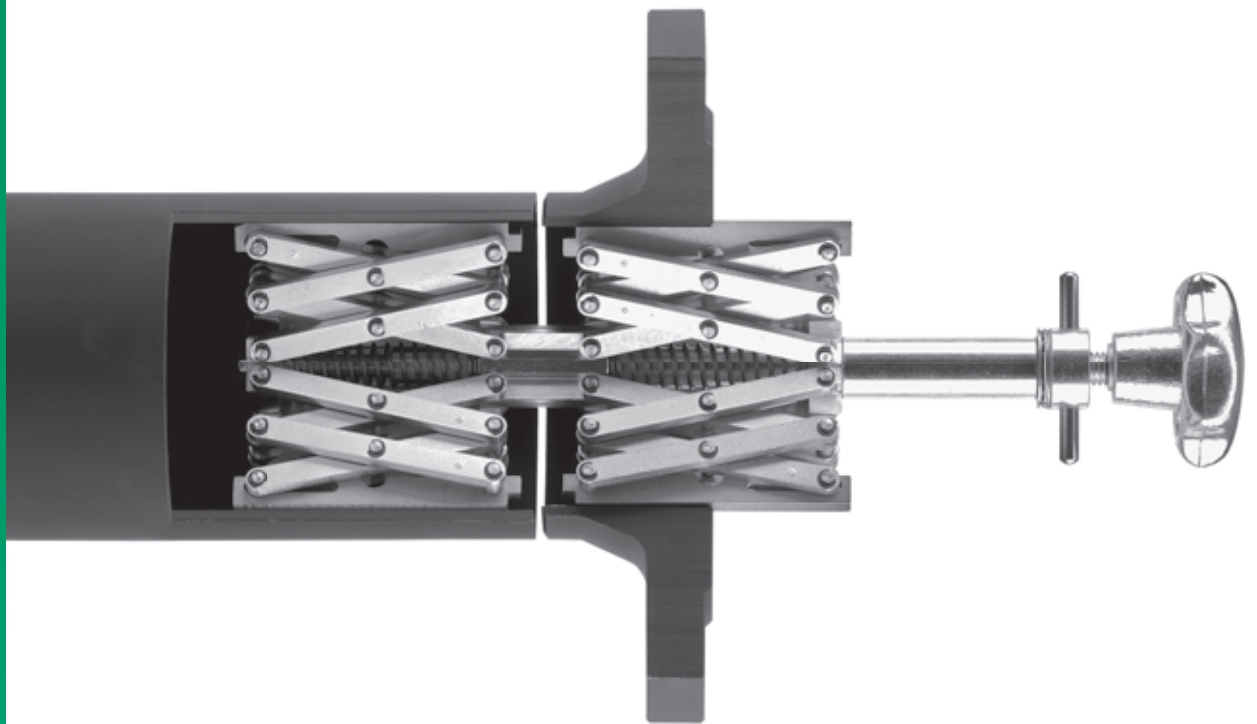


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	Size 1/e	Size 2/e	Size 3/e	Size 4/e
a)	54 - 140 mm	85 - 220 mm	120 - 350 mm	180 - 520 mm
b)	88 mm	144 mm	233 mm	300 mm
c)	190 mm	309 mm	491 mm	636 mm
d)	290 - 310 mm	445 - 505 mm	745 - 790 mm	850 - 960 mm
e)	20 mm	26 mm	34 mm	36 mm
f)	14 mm	21 mm	25 mm	36 mm
g)	4 mm	5 mm	6 mm	8 mm

type 4s

Internal Alignment Clamp



Immediate fast, safe and exact centring and tensioning of flanges, brackets, rings, etc. on pipes and cylindrical tanks. Comes with contact surface for smooth flanges. **Automatic diameter compensation** even for extremely varied diameters via independently tensible bracing elements. The CENTROMAT® centring device is fixed with the lower expansion element in the pipe, the flange or similar attached and finally centred and clamped using the upper expansion element.

In order to prevent electric corrosion, we recommend the versions with stainless steel support rails (VA 1.4301).

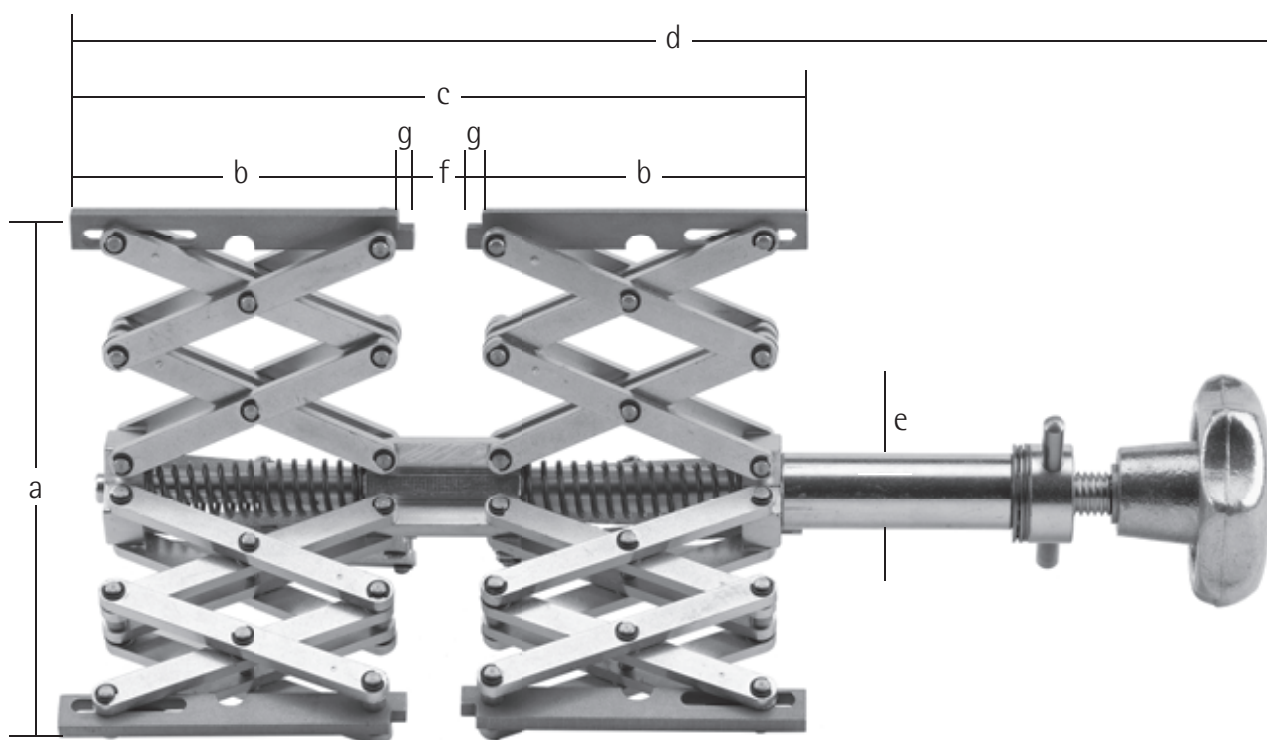
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	Clamping range	Weight
Size 1/es	120 - 250 mm	1,80 kg
Size 2/es	220 - 400 mm	5,20 kg
Size 3/es	300 - 640 mm	16,40 kg
Size 4/es	400 - 940 mm	39,00 kg

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The original

Dimensional sketch type 4s

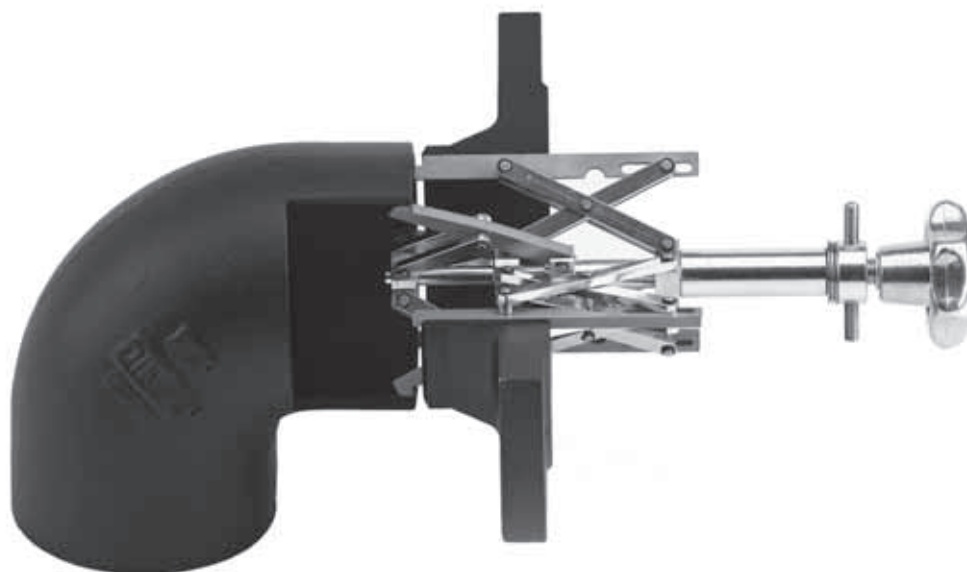


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	Size 1/es	Size 2/es	Size 3/es	Size 4/es
a)	120 - 250 mm	220 - 400 mm	300 - 640 mm	400 - 940 mm
b)	88 mm	144 mm	233 mm	300 mm
c)	190 mm	309 mm	491 mm	636 mm
d)	290 - 310 mm	445 - 505 mm	745 - 790 mm	850 - 960 mm
e)	20 mm	26 mm	34 mm	36 mm
f)	14 mm	21 mm	25 mm	36 mm
g)	4 mm	5 mm	6 mm	8 mm

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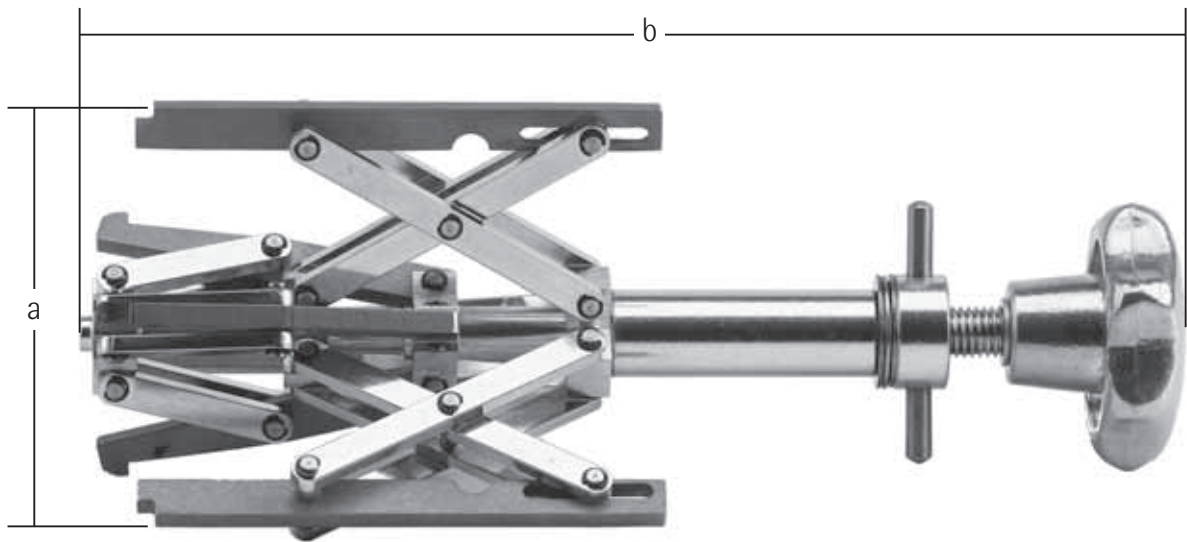


this model with two independent clamps is used for clamping flanges of all kinds and similar parts to elbows and pipe-bends of various diameters. The lower expanding clamp has strong gripping feet which insert into the bend and are tightened by means of the knob. The top expanding clamp is tightened by means of the hand-bar in the flange. **Automatic diameter compensation.**

In order to prevent electrolytic corrosion, we recommend the versions with stainless steel support rails (VA 1.4301).

	Clamping Range	Weight
Size 1/b-e	54 - 115 mm	1,00 kg
Size 2/b-e	85 - 195 mm	3,10 kg
Size 3/b-e	120 - 315 mm	9,30 kg
Size 4/b-e	180 - 520 mm	23,10 kg

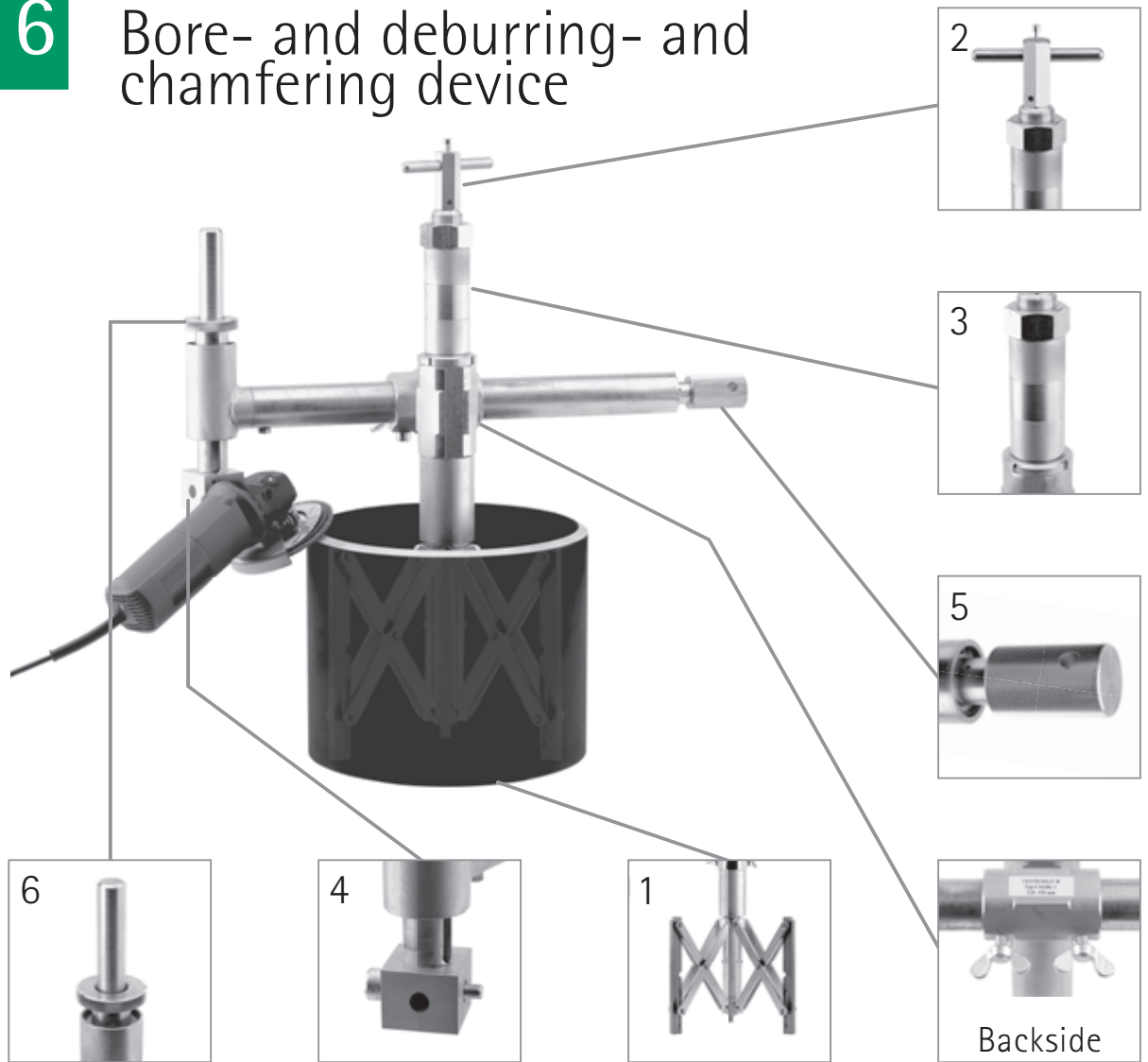
Dimensional sketch type 5



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	Size 1/b-e	Size 2/b-e	Size 3/b-e	Size 4/b-e
a)	54 - 115 mm	85 - 195 mm	120 - 315 mm	180 - 520 mm
b)	250 mm	395 mm	660 mm	940 mm

Bore- and deburring- and chamfering device



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Horizontally and vertically adjustable swivel unit as mounting for a grinding machine for the machining of pipe ends at any angles (e.g. single V), for separation of rings and for subsequent machining of uneven pipe ends. This device can be used internally and externally in the pipe for machining.

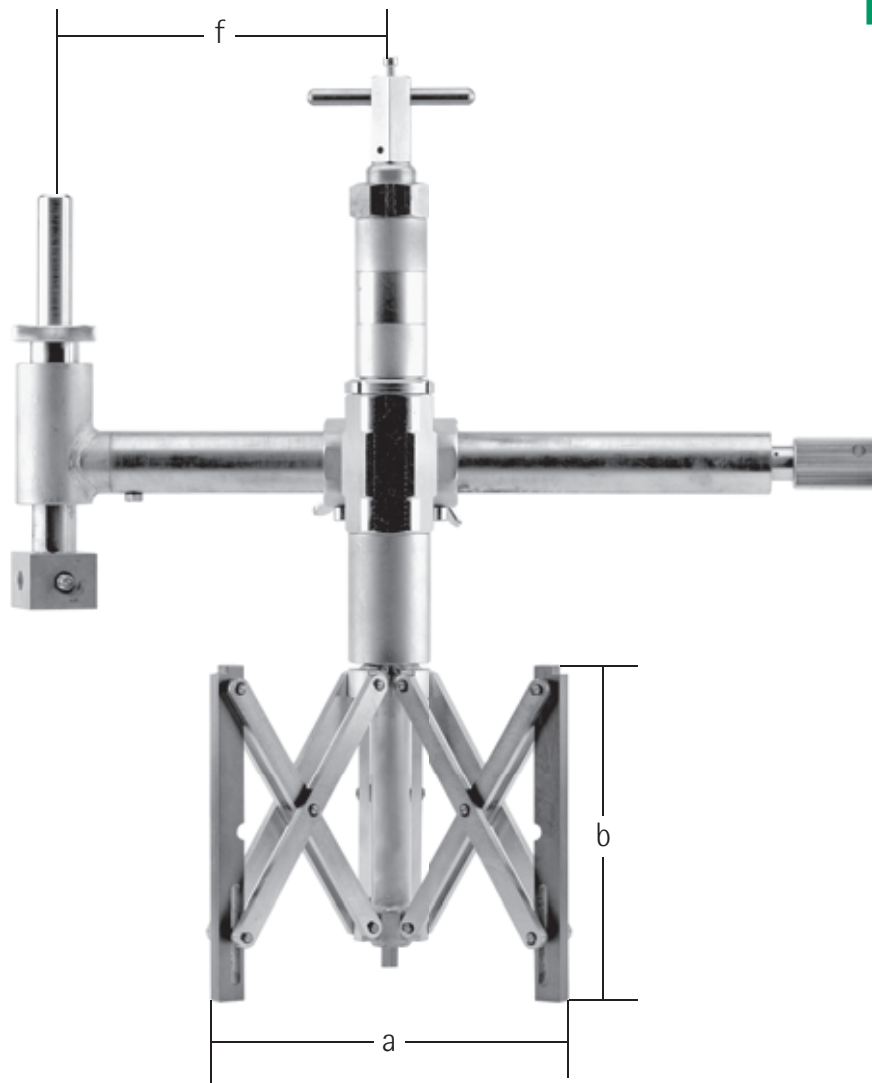
Insert tensioning device **(1)** into pipe and tension. Remove the hexagonal nut located on the shaft of the tensioning device **(2)**, attach the rotating arm **(3)** to the tensioning device **(1)** and secure with the nut at hand **(2)**. Screw the angle grinder tight into the required position using the hexagon socket screw located in the square **(4)**. Set the relevant diameter of the pipe on the straight-knurled handle **(5)**. The infeed of the angle grinder is carried out on the knurled screw.

The additional device can be used horizontally and vertically as well as for internal and external machining. Commercially available angle grinders can be used but are not included.

Safety note:

Please observe general safety regulations when working with an angle grinder and wear appropriate protective clothing.

Dimensional sketch type 6

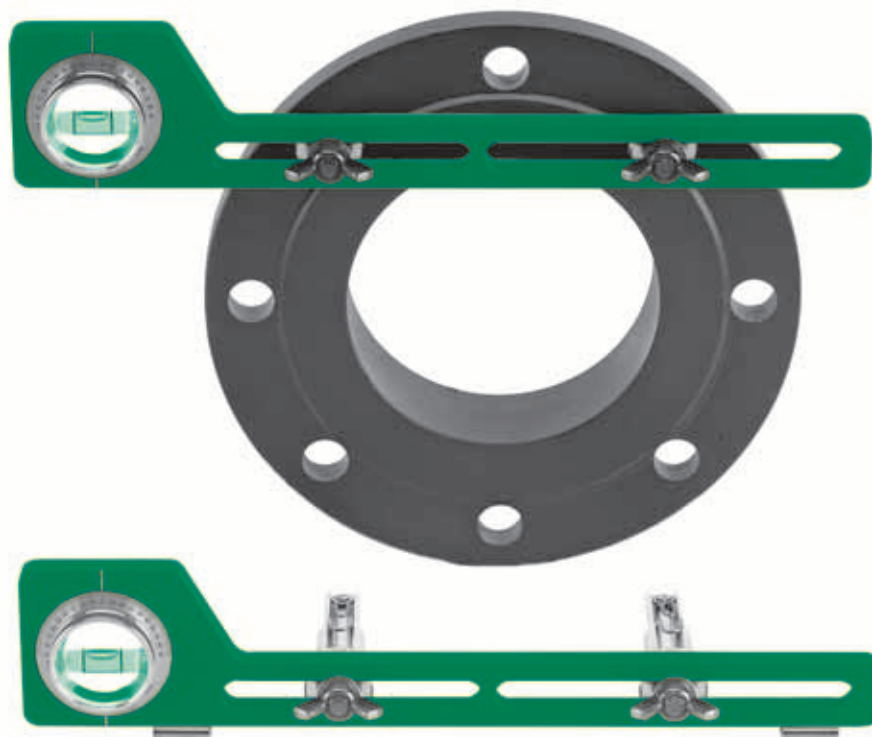


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	Size 3	Size 4	Size 4s
a)	120 - 350 mm	180 - 520 mm	400 - 940 mm
b)	233 mm	300 mm	300 mm
f)	140 - 430 mm	140 - 430 mm	250 - 550 mm
	19,90 kg	26,50 kg	35,00 kg

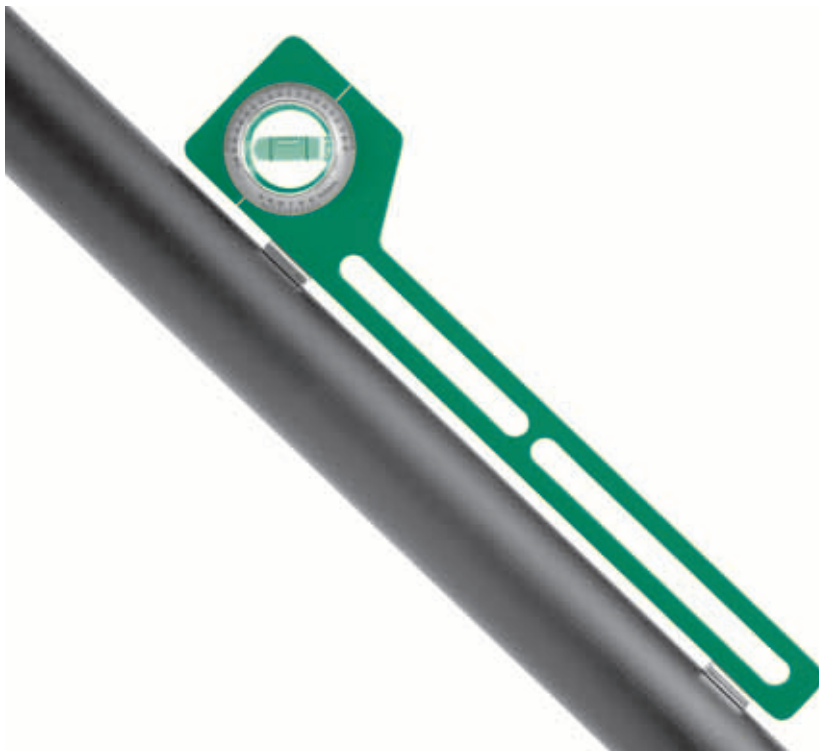
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(fixing by slip-in pivots) this spirit level has adjustable slip-in pivots which fit flange bolt holes of various diameters. The adjustable water-level is surrounded by a scale. The scale has both: Degree and inclination-percentage markings. Any angle of degree or inclination can easily be set and read without the need for additional calculation. In this way flanges can be aligned with great accuracy. Material: Anodized aluminium.

Size 1	Size 1a	Size 2
Length 300 mm, for flange hole distances 35 - 190 mm, with stand- ard slip-in-pivots 13 - 22 mm Ø Weight: 0,30 kg	like size 1, but with mag- netic pads for fixing an extra inclination level. Weight: 0,32 kg	Length 400 mm, for flange hole distances 35 - 290 mm, with stand- ard slip-in-pivots 13 - 22 mm Ø Weight: 0,35 kg
For all tools even available: Slip-in-pivots 12 - 18 mm Ø Hulls* 25 - 30 mm Ø *Plug-in-Pipe to be fixed into standard slip-in-pivots for flange holes 25 - 30 mm Ø		



magnetic inclination level with adjustable water-level surrounded by a scale. The scale has degree marking and inclination- percentage. Any degree or inclination-percentage is easily to set and read without the need for additional calculation. In this way a pipeline's inclination can easily be checked. Material: Anodized aluminium.

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	Length	Weight
Size 1	300 mm	0,20 kg

type 11

Center Punch



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The Centering Head provides a quick and accurate means of establishing pipe centreline, locating points on tanks or pipes, **measuring slope, establishing angles** and **laying keyways**. The Centering Head Tool can be used to measure and mark different points around the pipe, flange or fitting. Material: Anodized aluminium. Punch: Tool steel, hardened

Size 1

Weight

Diameters leg's length from 12 mm to ca. 1000 mm

0,60 kg

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The original



Certification

for the company of Hermann Rosorius GmbH
Lohheckenweg 35
53347 Alfter

The special tools distributed under the trade name "Centromat®" by the company Rosorius GmbH for pipeline- and tank construction are meaningful devices which can provide various types of support to the welder when welding. The devices are of mechanically clean design and good quality production. They completely meet the legal requirements and after brief training can also be used by semi-skilled personnel.

CE marking is neither necessary nor possible for these devices since they are not machines in the sense of the EU machine directive and none of the other EU directives currently in force apply.

The possible dangers arising from the devices and in particular the energies stored in the spring are negligible with intended use, so that no serious dangers can arise to the user from the devices.

Cologne, 12 February 1998

TÜV Rheinland Product Safety GmbH

Dr. R. Scheffel

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