

## External Alignment Clamps Type 1a

- for quick and accurate alignment of pipes of equal or differing diameters on a common center line
- automatic diameter compensation, no need for additional adjustments
- all parts stay easily accessible for welding
- jaws are available in Stainless Steel
- special types on request

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



## External Alignment Clamps for Orbital welding Type 1a Orbital

- recommended to relieve pressure from a welding unit during Orbital welding
- for quick and accurate alignment for pipes of equal or differing diameters on a common center line
- all parts stay easily accessible for welding
- no additional adjustments necessary
- automatic diameter compensation

in order to prevent electrolytic corrosion, versions with Stainless Steel support rails are recommended

	Size 1	Size 2	Size 3
Clamping Range	6 - 50 mm	10 - 70 mm	25 - 140 mm
Weight	3,60 KG	5,70 kg	12,60 kg



## External Quick Alignment Clamps Type 1b

- for exact centering and clamping of pipes of any length
- for aligning bends, tees and other fittings with pipes of the same diameter
- assembly of piping systems by only one pipe fitter
- welding parts are accessible from all directions
- micro adjustment device by wing screw
- to avoid corrosion Stainless Steel clamps are recommended

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



# Centering and Clamping Devices

## Pipe Centering Chains Type 1c

- for centering and clamping of fittings, pipes without restriction in length
- also for bended pipes, flanges, pipes and tanks
- five different types are available, choice between galvanised steel or Stainless Steel great variability by simply removing or adding chain-links
- required parts: 1 standard chain, 1 tensioner and, depending on the pipe diameters, additional chain links

### Light type single chain. Size 150

- for welding flanges, Kloepper seal-off bottom (torospherical head) etc. on pipes
- for pipes of external diameter from 168,3 mm (DN 150)
- standard length: 650 mm = 5 chain links
- additional chain link: 125 mm.



### Medium heavy type, single chain. Size 200

- for welding, fittings, Kloepper seal-off bottom (torospherical head) etc. on pipes
- for pipes of external diameter from 219,1 mm (DN 200)
- standard length: 1275 mm = 7 chain links
- additional chain link: 125 mm



### Medium heavy type, double chain. Size D 200

- for welding pipes to long pipes and fittings
- for pipes of external diameter from 323,9 mm (DN 300)
- standard length: 1275 mm = 7 chain links
- additional chain link: 177 mm



### Heavy type, single chain. Size 300

- for welding fittings, Kloepper seal-off bottom (torospherical head) etc.
- on pipes of external diameter from 323,9 mm (DN 300)
- standard length: 1920 mm = 7 chain links
- additional chain link: 265 mm



### Heavy type, double chain. Size D 300

- for welding pipes to long pipes and fittings of external diameter from 323,9 mm (DN 300)
- standard length: 1920 mm = 7 chain links
- additional chain link: 265 mm.

## Centering and Clamping Devices

### Internal Alignment Clamps Type 2

- for quick and accurate alignment and clamping of fittings, short pipe sections to pipes and cylindrical tanks
- wedge shaped clamps provide automatic compensation even for parts with greatly differing diameters
- with automatic compensation

	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

in order to prevent electrolytic corrosion, versions with Stainless Steel support rails are recommended

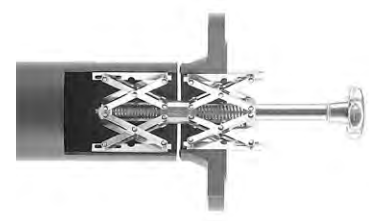


### Internal Alignment Clamps Type 3a

- for quick and accurate alignment and clamping of fittings, short pipe sections etc. to pipes and cylindrical tanks.
- locating rails for right angle abut and automatic diameter compensation, even for extremely differing pipe diameters, no need for additional adjustments
- the internal clamp allows free access. therefore all parts can be welded
- with automatic compensation

	Clamping Range	Weight
Size 1	54-140 mm	1,25 kg
Size 2	85-220 mm	3,35 kg
Size 3	120-350 mm	11,5 kg

in order to prevent electrolytic corrosion, versions with Stainless Steel support rails are recommended



### Internal Alignment Clamps Type 3b

- for use on rotating welding tables and revolving devices
- equipped with an elongated center shaft
- with automatic diameter compensation

	Clamping Range	Weight
Size 1	54-140 mm	1,40 kg
Size 2	85-220 mm	4,20 kg
Size 3	120-350 mm	12,80kg

Size 1	shaft length	120 mm
Size 2	shaft length	150 mm
Size 3	shaft length	190 mm

in order to prevent electrolytic corrosion, versions with Stainless Steel support rails are recommended



## Centering and Clamping Devices

### Internal Alignment Clamps Type 3c

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

	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 4s	400-940 mm	20,00 kg

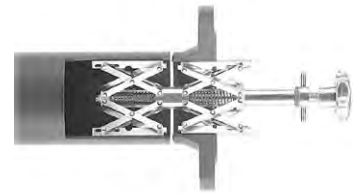
in order to prevent electrolytic corrosion, versions with Stainless Steel support rails are recommended



### Internal Alignment Clamps Type 4

- with 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 to type 3a, this type is especially suited for heavy parts
- with automatic diameter compensation

	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
Size 4/e/s	400-940 mm	39,00 kg

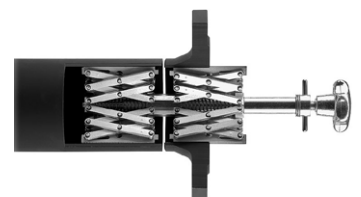


### Internal Alignment Clamps Type 4s

- for 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 centring device is fixed with the lower expansion element in the pipe, the flange or similar attached and finally centred and by using the upper expansion element.

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

	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

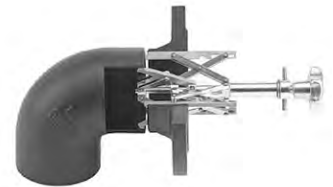


# Centering and Clamping Devices

## Internal Alignment Clamp Type 5

- with two independent clamps, suitable for clamping flanges of all kinds and similar parts to elbows and 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
- with automatic diameter compensation

	Clamping Range	Weight
Size 1/b-e	54-115 mm	1,00 kg
Size 2/b-e C	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



## Spirit Level Type 9

- this tool allows for accurate flange alignment
- (fixing by slip-in pivots) with adjustable slip-in pivots which fit flange bolt holes of various diameters
- the adjustable spirit level is surrounded by a scale
- the scale has degree as well as inclination percentage markings
- any angle of degree or inclination can easily be set and read without additional calculation
- made from anodized aluminum

### Size 1

- length 300 mm
- for flange hole distances 35 - 190 mm
- with standard slip-in-pivots 13 - 22 mm Ø
- weight 0,30 kg

### Size 1a

- like size 1, but with magnetic pads for fixing an extra inclination level
- weight 0,32 kg

### Size 2

- length 400 mm
- for flange hole distances 35 - 290 mm
- with standard slip-in-pivots 13 - 22 mm Ø
- weight 0,35 kg

### For all tools 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)



## Centering and Clamping Devices

### Pipe Inclination Level Type 10

- with this tool a pipeline's inclination can easily be checked
- magnetic inclination level with adjustable water level surrounded by a scale
- the scale has degree marking and inclination percentage
- any degree or inclination percentage can be set and read without additional calculation
- made from anodized aluminum

Size 1	length	300 mm
	weight	0,20 kg



### Centering Head Type 11

- provides a quick and accurate means of establishing pipe centreline, locating points on tanks or pipes, measuring slope, establishing angles and laying keyways
- can be used to measure and mark different points around the pipe, flange or fitting
- diameters leg's length 12 mm to approx. 1000 mm
- weight 0,60 kg

