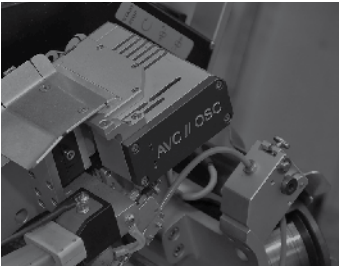
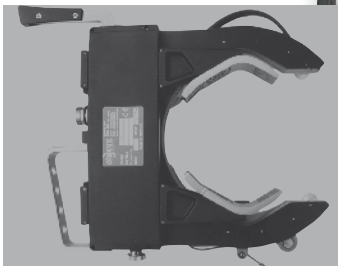




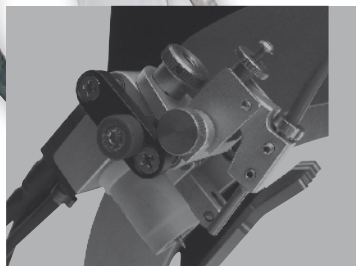
ORBIWELD TP - unique design and functionality!



Also with electronic arc voltage control (AVC) and oscillation (OSC).



Clamping mechanism and jaws move with a parallel motion..



The TIG torch is mounted on a precision slide to give precise, fine control of the electrode during welding.



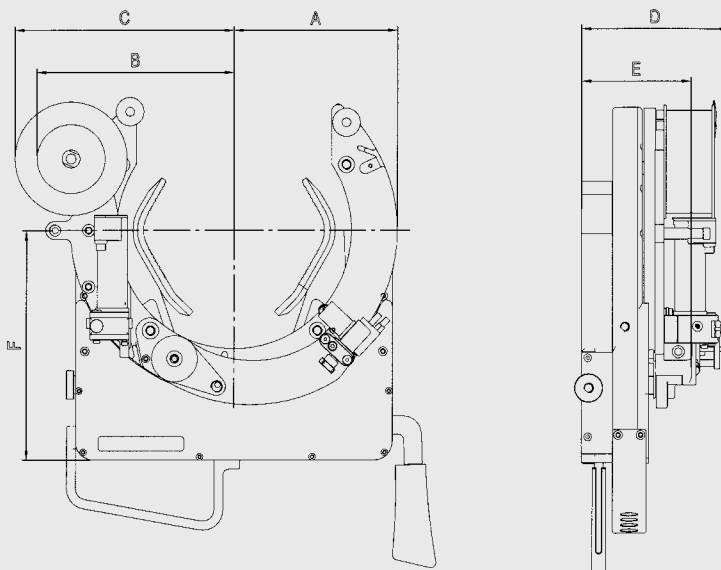
Built-in remote control panel.

Open Orbital Weld Heads

Overview of open orbital weld heads ORBIWELD TP

Open orbital weld heads ORBIWELD TP / ORBIWELD TP AVC/OSC

| Model | | TP 250 | TP 400 | TP 400 KD3-100 | TP 600 | TP 600 AVC/OSC | TP 1000 | TP 1000 AVC/OSC |
|--|--------|-------------|---------------|-------------------|-------------|-------------------|-------------|--------------------|
| Code | | 811 000 001 | 812 000 001 | 812 000 003 | 813 000 001 | 813 000 002 | 814 000 001 | 814 000 002 |
| Application range | [mm] | 20 - 77 | 30 - 115 | 30 - 115 | 70 - 170 | 70 - 170 | 120 - 275 | 120 - 275 |
| | [inch] | 1/2 - 3 | 1 1/2 - 4 1/2 | 1 1/2 - 4 1/2 | 3 - 6 | 3 - 6 | 5 - 10 | 5 - 10 |
| Dimension „A“: excluding cold wire | [mm] | 86,0 | 108,0 | 108,0 | 146,0 | - | 216,0 | - |
| | [inch] | 3.386 | 4.252 | 4.252 | 5.748 | - | 8.504 | - |
| Dimension „B“: with cold wire KD 3-62 | [mm] | x | 155,0 | 180,0 | 176,0 | - | 216,0 | - |
| | [inch] | x | 6.102 | 7.087 | 6.929 | - | 8.504 | - |
| Dimension „C“: with cold wire KD 3-100 | [mm] | x | x | 177,0 | 196,0 | 215,0 | 237,0 | 274,0 |
| | [inch] | x | x | 6.969 | 7.717 | 8.465 | 9.331 | 10.787 |
| Dimension "D" | [mm] | 85,0 | 120,0 | 182,0 | 140,0 | 186,0 | 170,0 | 206,0 |
| | [inch] | 3.346 | 4.724 | 7.165 | 4.724 | 7.323 | 6.299 | 8.110 |
| Dimension "E": electrode | [mm] | 74,0 | 90,0 | 162,0 | 97,0 | 172,0 | 146,0 | 191,0 |
| | [inch] | 2.913 | 3.543 | 6.378 | 3.819 | 6.772 | 5.748 | 7.520 |
| Dimension "F" | [mm] | 125,0 | 200,0 | 200,0 | 202,0 | 202,0 | 270,0 | 270,0 |
| | [inch] | 4.921 | 7.874 | 7.874 | 7.953 | 7.953 | 10.630 | 10.630 |
| Weight excluding cold wire feed and hose package | [kg] | 2,1 | 5,4 | - | 8,0 | - | 16,9 | - |
| | [lbs] | 4.630 | 11.905 | - | 17.637 | - | 37.258 | - |
| Weight including cold wire feed and excluding hose package | [kg] | - | - | - | - | 10,4 | - | 22,0 |
| | [lbs] | - | - | - | - | 22.928 | - | 48,500 |



Electrode lengths for TP weld heads

| Model | | TP 250 | TP 400 | TP 400 AVC/OSC | TP 600 | TP 600 AVC/OSC | TP 1000 | TP 1000 AVC/OSC |
|--------|--------|---------------|---------------|-------------------|---------------|-------------------|---------------|--------------------|
| Code | | 811 000 001 | 812 000 001 | 812 000 002 | 813 000 001 | 813 000 001 | 814 000 001 | 814 000 002 |
| Length | [mm] | 18 - 32 | 30 - 55 | 30 - 55 | 30 - 55 | 30 - 55 | 30 - 55 | 30 - 55 |
| | [inch] | 0.709 - 1.260 | 1.181 - 2.165 | 1.181 - 2.165 | 1.181 - 2.165 | 1.181 - 2.165 | 1.181 - 2.165 | 1.181 - 2.165 |

Open orbital weld heads ORBIWELD TP

Open orbital weld heads ORBIWELD TP 250-1000

The ORBIWELD TP series has a unique design and functionality. An extremely compact design has been achieved thanks to the drive motor that is fully integrated into the housing. The completely new drive concept has made the well-known large and costly drives associated with conventional weld heads unnecessary.

Features:

- Can be used with and without cold wire attachment, as the cold wire feed nozzle can be adjusted exactly in both a vertical and horizontal direction via an adjustment unit.
- Open arc system.
- The arc length is kept at a constant gap mechanically.
- Infinitely variable clamping mechanism.
- The water-cooled TIG Torch head can be swiveled in any direction and allows fillet welds or short hollowed out tubes to be welded. In the models TP 400, 600, and 1000 the TIG Torch head is secured to a slide unit that allows the position of the electrodes to be finely adjusted with great accuracy even during welding.
- With a simple to operate control knob, it is possible to adjust the clamping area across the weld head's entire nominal range.
- The ORBIWELD TP weld heads with clamping shells made from tool steel ensures optimum retention to the tube's surface (very good grip properties).
- The weld heads are easily centered to the tube and are clamped in place with the help of a tension lever. No additional remote control is required thanks to the keys integrated directly into the weld head housing.
- The standard hose package length is 7.5 m (24.6 ft). Extensions are possible. See on page 40.

Please note that the weld head needs for operation an earth cable as well as a control cable that must be ordered separately.



ORBIWELD TP 600
with KD 3-100 cold wire feed



ORBIWELD TP 250
with external cold wire feed KD 4



ORBIWELD TP 400
with KD 3-62 cold wire feed

ORBIWELD TP 250 - 100 without cold wire unit

| Article | Tube OD [mm] | Tube OD [inch] | Code | Weight weld head [kg] | Dispatch weight [kg] |
|-------------------------|-----------------|----------------|-------------|-----------------------|----------------------|
| Open weld head TP 250* | 22,00 - 77,00 | 1/2 - 3 | 811 000 001 | 10,500 | 18,000 |
| Open weld head TP 400* | 30,00 - 115,00 | 1 1/2 - 4 1/2 | 812 000 001 | 12,500 | 20,000 |
| Open weld head TP 600* | 70,00 - 170,00 | 3 - 6 | 813 000 001 | 13,800 | 21,350 |
| Open weld head TP 1000* | 120,00 - 275,00 | 5 - 10 | 814 000 001 | 19,000 | 36,500 |

* Without cold wire unit (for retrofit see following page).

ORBIWELD TP 250 - 100 with cold wire unit

| Article | Tube OD [mm] | Tube OD [inch] | Code | Gewicht Schweißzange [kg] | Versandgewicht [kg] |
|--------------------------------------|-----------------|----------------|-------------|---------------------------|---------------------|
| Open weld head TP 250 with KD 4 | 22,00 - 77,00 | 1/2 - 3 | 811 000 005 | 12,500 | 20,000 |
| Open weld head TP 400 with KD 3-62 | 30,00 - 115,00 | 1 1/2 - 4 1/2 | 812 000 005 | - | - |
| Open weld head TP 400 with KD 3-100 | 30,00 - 115,00 | 1 1/2 - 4 1/2 | 812 000 006 | - | - |
| Open weld head TP 600 with KD 3-100 | 70,00 - 170,00 | 3 - 6 | 813 000 005 | - | - |
| Open weld head TP 1000 with KD 3-100 | 120,00 - 275,00 | 5 - 10 | 814 000 005 | - | - |



ORBIWELD TP 400
with KD 3-100 cold wire feed

Open Orbital Weld Heads

Open orbital weld heads ORBIWELD TP AVC/OSC

Open orbital weld heads ORBIWELD TP AVC/OSC with oscillation OSC and arc voltage control AVC

Can be used for thick wall tubes (multiple layer welds).

As ORBIWELD TP (see p. 43). The weld heads of the ORBIWELD TP AVC/OSC series are also provided with a motorized travel option for the TIG Torch across the nominal diameter, so that no additional mechanical basic presetting is required for any change in the tube diameter.

Additional properties of the tube-to-tube weld heads ORBIWELD TP AVC/OSC with oscillation OSC and arc voltage control AVC:

- The oscillation width is 20 mm (0.787 inch).
- Cold feed wire feed unit with mount for D 100/1kg (3.937 Inch) wire reels fitted directly on the weld head.
- With a simple to operate control knob, it is possible to adjust the clamping area across the weld head's entire nominal range.

Please note that the weld head needs for operation an earth cable as well as a control cable that must be ordered separately.



ORBIWELD TP 400 AVC/OSC

| Article | Tube OD [mm] | Tube OD [inch] | Code | Weight weld head [kg] | Dispatch weight [kg] |
|---------------------------------|-----------------|----------------|-------------|-----------------------|----------------------|
| Open weld head TP 400 AVC/OSC* | 30,00 - 115,00 | 1 ½ - 4 ½ | 812 000 002 | 12,700 | 24,800 |
| Open weld head TP 600 AVC/OSC* | 70,00 - 170,00 | 3 - 6 | 813 000 002 | 15,500 | 33,300 |
| Open weld head TP 1000 AVC/OSC* | 120,00 - 275,00 | 5 - 10 | 814 000 002 | 27,500 | 45,300 |

* Only usable with an ORBIMAT CA AVC/OSC orbital welding power supply. See page 10.