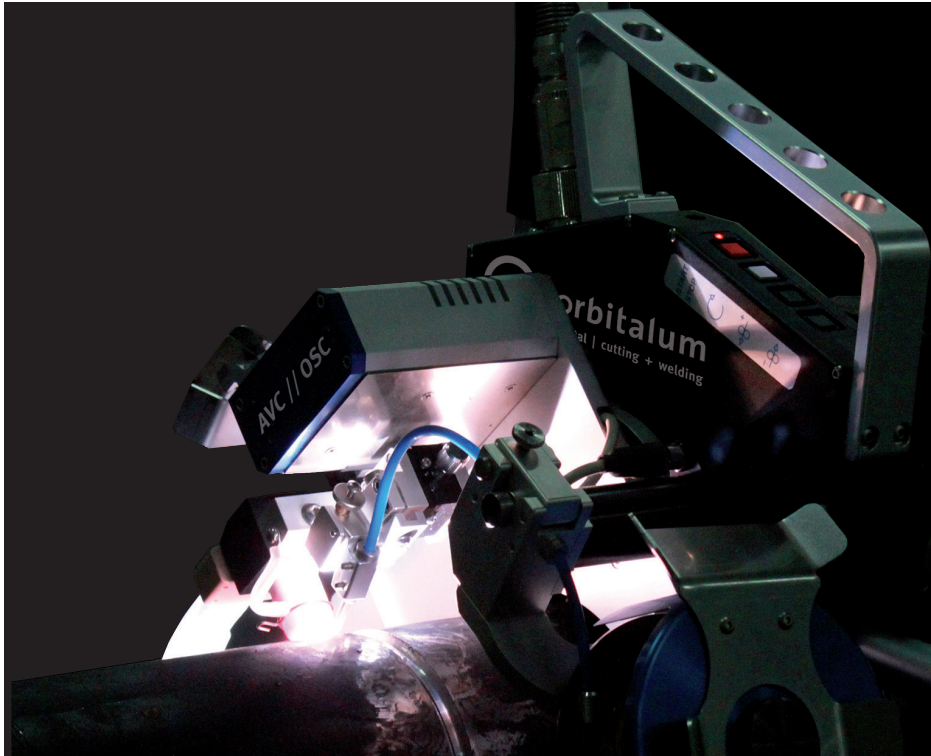


ORBIWELD TP

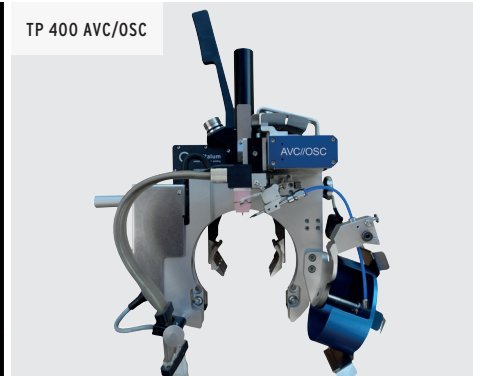
Open orbital weld heads

The ORBIWELD TP series offers outstanding features in terms of design and functionality:

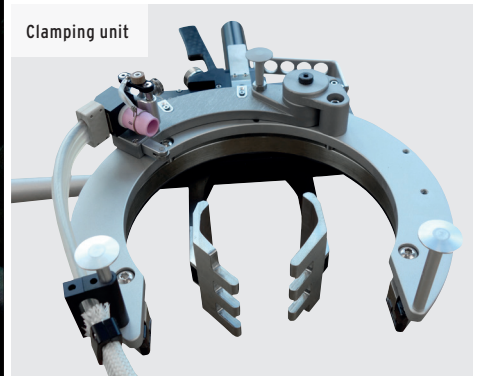
An extremely compact design has been achieved thanks to the drive motor that is fully integrated into the housing. The drive concept has made the well-known large and costly drives associated with conventional weld heads unnecessary. For field applications the compact wire feeder on the weld head is more comfortable than a separate, heavy wire feeder.



TP 400 AVC/OSC



Clamping unit



FEATURES OF THE TP SERIES:

- Compact design without any protrusions that would be disturbing in practice
- Applicable with and without cold wire unit
- Cold wire unit retrofittable for all TP weld heads
- With the KD3 versions, the reel for holding the additional wire during TIG cold wire welding is also mounted on the weld head housing. This prevents an irritating twisting of the wire during the joining process
- The cold wire feed nozzle can be adjusted exactly in both a vertical and horizontal direction
- Open arc system
- Infinitely variable clamping mechanism
- Liquid-cooled, continuously adjustable TIG torch head allows fillet welds or short hollowed out tubes to be welded
- 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

- Simple adjustment of the clamping unit to the pipe diameter without the need for any tools
- The standard equipment of the TP 1000 heads include clamping plates made from tool steel which ensures optimum retention to the pipe surface. The ORBIWELD TP 250, TP 400 and TP 600 are equipped with clamping jaws made of stainless steel (1.4305). Besides increased clamping force, this new clamping system offers improved handling and easier and more precise alignment of the weld head on the pipe. Clamping jaws to extend the clamping range (TP 400) are optionally available. The new clamping unit can be upgraded for older TP 250, TP 400 and TP 600 models.
- TP weld heads are easily centered to the tube and clamped in place with the help of a clamping lever
- No additional remote control is required thanks to the keys integrated directly into the weld head housing

ADDITIONAL FEATURES OF THE TP AVC/OSC:

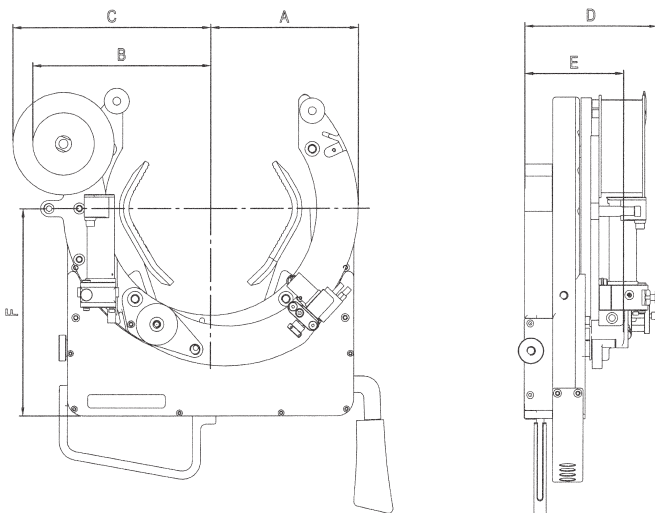
- With oscillation (OSC) and arc voltage control (AVC) - only applicable in combination with the orbital welding power supply ORBIMAT 300 CA AVC/OSC
- The arc length is kept at a constant gap mechanically; with AVC/OSC versions the constant gap is kept automatically
- Can be used for thick wall pipes (multiple layer welds)
- Including 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
- Max. oscillation of the torch: 20 mm (0.787")
- Directly on the weld head mounted cold wire feed unit with retainer for Ø 100 mm/1 kg (3.937"/2.2 lbs) wire coil

| MODEL | TP 250 | TP 250 | TP 400 | TP 400 | TP 400 | TP 600 | TP 600 | TP 600 | TP 1000 | TP 1000 | TP 1000 | |
|---|-------------|--------------------------------|--------------------------------|----------------------------|----------------------------|----------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| With cold wire unit (KD): | | KD4 | | KD3-100 | KD3-100 | | KD3-100 | KD3-100 | | KD3-100 | KD3-100 | |
| With arc voltage control (AVC) and oscillation (OSC): | | | | | AVC/OSC | | | AVC/OSC | | | AVC/OSC | |
| Code | 811 000 001 | 811 000 005 | 812 000 010 | 812 000 011 | 812 000 012 | 813 000 001 | 813 000 005 | 813 000 002 | 814 000 001 | 814 000 005 | 814 000 002 | |
| Application range | [mm] | 8 - 28 28 - 76.2 | 8 - 28 28 - 76.2 | (15)*/30 - 115 | (15)*/30 - 115 | (15)*/30 - 115 | 70 - 170 | 70 - 170 | 70 - 170 | 120 - 275 | 120 - 275 | 120 - 275 |
| | [inch] | 0.315 - 1.102 1.102 - 3.000 | 0.315 - 1.102 1.102 - 3.000 | (0.591)*/ 1.181 - 4.528 | (0.591)*/ 1.181 - 4.528 | (0.591)*/ 1.181 - 4.528 | 2.756 - 6.693 | 2.756 - 6.693 | 2.756 - 6.693 | 4.724 - 10.827 | 4.724 - 10.827 | 4.724 - 10.827 |
| Electrode lengths | [mm] | 18 - 32 | 18 - 32 | 30 - 55 | 30 - 55 | 30 - 55 | 30 - 55 | 30 - 55 | 30 - 55 | 30 - 55 | 30 - 55 | 30 - 55 |
| | [inch] | 0.709 - 1.260 | 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 | 1.181 - 2.165 | 1.181 - 2.165 | 1.181 - 2.165 |
| Wire diameter* | [mm] | 0.8/ 1.0** | 0.8/ 1.0** | 0.8/ 1.0** | 0.8/ 1.0** | 0.8/ 1.0** | 0.8/ 1.0** | 0.8/ 1.0** | 0.8/ 1.0** | 0.8/ 1.0** | 0.8/ 1.0** | 0.8/ 1.0** |
| | [inch] | 0.031/ 0.039** | 0.031/ 0.039** | 0.031/ 0.039** | 0.031/ 0.039** | 0.031/ 0.039** | 0.031/ 0.039** | 0.031/ 0.039** | 0.031/ 0.039** | 0.031/ 0.039** | 0.031/ 0.039** | 0.031/ 0.039** |
| Weight of machine with hose package | [kg] | 7.0 | 8.9 | 11.0 | 12.5 | 15.2 | 13.7 | 15.2 | 18.9 | 22.5 | 24.0 | 28.7 |
| | [lbs] | 15.4 | 19.6 | 24.3 | 27.6 | 33.5 | 30.2 | 33.5 | 41.7 | 49.6 | 52.9 | 63.3 |
| Hose package length | [m] | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 |
| | [ft] | 24.6 | 24.6 | 24.6 | 24.6 | 24.6 | 24.6 | 24.6 | 24.6 | 24.6 | 24.6 | 24.6 |
| Dimension "A": | [mm] | 86.00 | 86.00 | 108.00 | 108.00 | 150.00 | 147.00 | 147.00 | 185.00 | 215.00 | 215.00 | 245.00 |
| | [inch] | 3.386 | 3.386 | 4.252 | 4.252 | 5.906 | 5.787 | 5.787 | 7.283 | 8.465 | 8.465 | 9.646 |
| Dimension "B" without cold wire unit KD: | [mm] | 86.00 | 86.00 | 108.00 | - | - | 147.00 | - | - | 215.00 | - | - |
| | [inch] | 3.386 | 3.386 | 4.252 | - | - | 5.787 | - | - | 8.465 | - | - |
| Dimension "C" with cold wire unit KD: | [mm] | - | - | - | 180.00 | 175.00 | - | 196.00 | 215.00 | - | 237.00 | 274.00 |
| | [inch] | - | - | - | 7.087 | 6.890 | - | 7.717 | 8.465 | - | 9.331 | 10.787 |
| Dimension "D": | [mm] | 85.00 | 85.00 | 120.00 | 182.00 | 182.00 | 140.00 | 140.00 | 186.00 | 170.00 | 170.00 | 206.00 |
| | [inch] | 3.346 | 3.346 | 4.724 | 7.165 | 7.165 | 5.512 | 5.512 | 7.323 | 6.693 | 6.693 | 8.110 |
| Dimension "E": | [mm] | 74.00 | 74.00 | 90.00 | 165.00 | 165.00 | 97.00 | 97.00 | 172.00 | 146.00 | 146.00 | 191.00 |
| | [inch] | 2.913 | 2.913 | 3.543 | 6.496 | 6.496 | 3.819 | 3.819 | 6.772 | 5.748 | 5.748 | 7.520 |
| Dimension "F": | [mm] | 125.00 | 125.00 | 200.00 | 200.00 | 200.00 | 202.00 | 202.00 | 202.00 | 270.00 | 270.00 | 270.00 |
| | [inch] | 4.921 | 4.921 | 7.874 | 7.874 | 7.874 | 7.953 | 7.953 | 7.953 | 10.630 | 10.630 | 10.630 |
| Integrated remote control | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Liquid-cooled torch body | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Pivoting torch body | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Precise adjustment of the electrode position | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Coupling for manual rotation of the rotor | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Infinitely variable clamping mechanism | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Optional extension of the clamping range | ● | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Integrated cold wire feed | ○ | ○ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| External cold wire feed | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Fine adjustment of the wire position | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| AVC arc voltage control*** | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| OSC oscillation*** | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

The technical data are not binding. They are not warranted characteristics and are subject to change.

● = feature included ○ = feature not included ● = feature limited included (retrofittable) * with accessories ** KD retrofit kits optionally available (page 54) *** only applicable in combination with the orbital welding power supply ORBITAT 300 CA AVC/OSC

DIMENSIONS (VALUES, SEE TABLE):



| SCOPE OF DELIVERY | |
|--|---|
| Including: | <ul style="list-style-type: none"> 1 Open orbital weld head ORBIWELD TP 1 Durable storage and shipping case 1 Handle (TP 1000: 2 handles) 1 Expansion jaw set of size 8 - 28 mm/0.315" - 1.102" (TP 250 only) 1 Tool set 1 Power connector adapter 1 Operating instructions and spare parts list |
| Suitable accessories (available option): | <ul style="list-style-type: none"> Clamping units "V2" (retrofit kits) Cold wire feed units "KD" (retrofit kits) Extension kits for for TP 400 Control cable Remote control ESG tungsten grinders ORBmax residual oxygen meter ORBIPURGE forming set Earth cable Hose package extensions WS2 tungsten electrodes |