

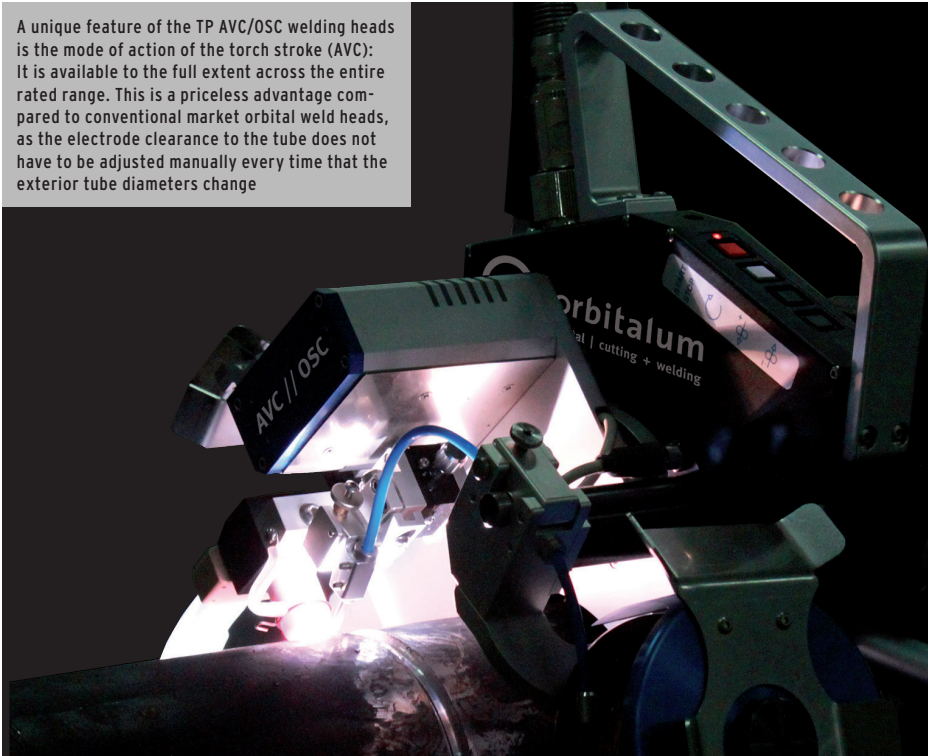
ORBIWELD TP

Open orbital weld heads

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

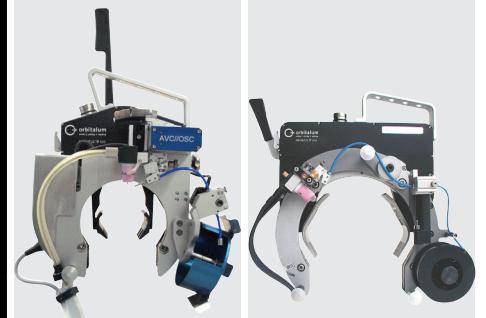
An extremely compact design has been achieved thanks to the drive motor that is fully integrated into the housing. The drive concept has made the well-known large and costly drives associated with conventional weld heads unnecessary.

A unique feature of the TP AVC/OSC welding heads is the mode of action of the torch stroke (AVC): It is available to the full extent across the entire rated range. This is a priceless advantage compared to conventional market orbital weld heads, as the electrode clearance to the tube does not have to be adjusted manually every time that the exterior tube diameters change

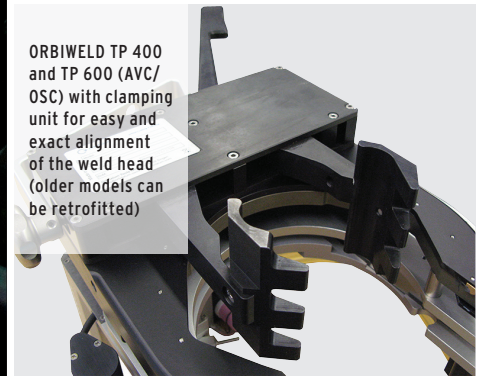


TP 400 AVC/OSC

TP 600



ORBIWELD TP 400 and TP 600 (AVC/OSC) with clamping unit for easy and exact alignment of the weld head (older models can be retrofitted)



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 KD 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
- Water-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 ORBIWELD TP 250 and TP 1000 heads include clamping plates made from tool steel which ensures optimum retention to the pipe surface (very good grip properties). The ORBIWELD TP 400 and TP 600 are equipped with clamping jaws made of tempered tool steel. 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 for stainless steel applications are optionally available. The new clamping unit can be upgraded for older 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

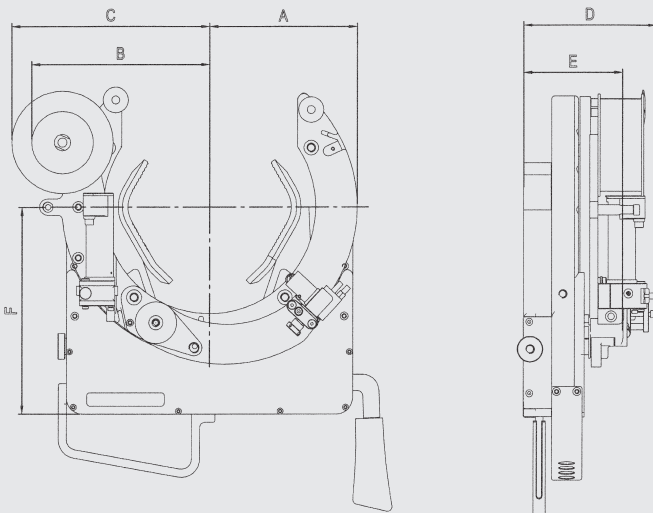
ADDITIONAL FEATURES OF THE TP AVC/OSC:

- 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 400	TP 600	TP 600	TP 600	TP 1000	TP 1000	TP 1000	
With cold wire unit (KD):		KD4		KD3-100	KD3-62	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	812 000 001	812 000 006	812 000 005	812 000 002	813 000 001	813 000 005	813 000 002	814 000 001	814 000 005	814 000 002	
Application range	[mm]	(12)*/22 - 77	(12)*/22 - 77	(15)*/30 - 115	(15)*/30 - 115	(15)*/30 - 115	(15)*/30 - 115	70 - 170	70 - 170	70 - 170	120 - 275	120 - 275	120 - 275
	[inch]	(0.472)*/ 0.866 - 3.031	(0.472)*/ 0.866 - 3.031	(0.591)*/ 1.181 - 4.528	(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 without hose package	[kg]	10.5	12.5	12.5	12.5	18.7	12.7	13.8	22.4	15.5	19.0	40.9	27.5
	[lbs]	23.15	27.56	27.56	27.56	41.23	27.99	30.42	49.38	34.17	41.89	90.17	60.63
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	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	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	155.00	175.00	-	196.00	215.00	-	237.00	274.00
	[inch]	-	-	-	7.087	6.102	6.890	-	7.717	8.465	-	9.331	10.787
Dimension "D":	[mm]	85.00	85.00	120.00	182.00	120.00	182.00	140.00	140.00	186.00	170.00	170.00	206.00
	[inch]	3.346	3.346	4.724	7.165	4.724	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	90.00	165.00	97.00	97.00	172.00	146.00	146.00	191.00
	[inch]	2.913	2.913	3.543	6.496	3.543	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	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	7.874	7.953	7.953	7.953	10.630	10.630	10.630
Integrated remote control	●	●	●	●	●	●	●	●	●	●	●	●	
Water-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***	○	○	○	○	○	○	○	○	○	○	○	○	

● = feature included ○ = feature not included ● = feature limited included (retrofitable) * with accessories ** KD retrofit kits optionally available (page 48) *** only applicable in combination with the orbital welding power supply ORBIMAT 300 CA AVC/OSC

DIMENSIONS (VALUES, SEE TABLE):



SCOPE OF DELIVERY

- Including:
- 1 Open orbital weld head ORBIWELD TP
 - 1 Durable storage and shipping case
 - 1 Handle (TP 1000: 2 handles)
 - 1 Tool set
 - 1 Operating instructions and spare parts list
- Suitable accessories (available option):
- Clamping units "V2" (retrofit kits)
 - Cold wire feed units "KD" (retrofit kits)
 - Extension kits for clamping plates
 - Form-fitting clamping jaws
 - Additional clamping plates made from stainless steel
 - Clamping jaws made from stainless steel
 - Extension kits for clamping jaws made from steel and stainless steel
 - Control cable
 - Remote control
 - ESG tungsten grinders
 - ORBmax residual oxygen meter
 - ORBIPURGE forming set
 - Earth cable
 - Hose package extensions
 - Inspection set
 - WS2 tungsten electrodes

OPEN ORBITAL WELD HEADS