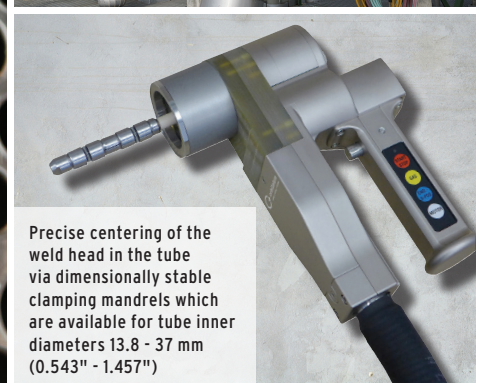


# TX 38P

Orbital TIG weld head for  
pipe-to-pipe-sheet connections

## Tube-to-tube-sheet orbital weld head

The orbital TIG weld head from Orbitalum for manufacturing pipe-to-pipe-sheet connections guarantees extremely short production times of industrial heat exchangers at constantly high reproducible quality. Also excellently suitable for repair, maintenance and servicing work.



**Welding heat exchanger tubes particular effectively and easily: With our TX 38P for automated TIG orbital welding you can now accurately and precisely weld tube sheets with heat exchanger tubes, such as thousands of welded joints on cooling tubes.**

In connection with an ORBITALUM orbital welding power supply, the user is being offered an extremely innovative and economical welding system: All ORBITALUM orbital welding power sources automatically detect the head and its properties so that the operator only has to call up his or her specified joining program and start the joining process before beginning to weld.

To increase productivity, the operator can work with the optionally available switching unit ORBITWIN with up to two weld heads on one machine in an alternating fashion, which reduces welding times and downtimes considerably.

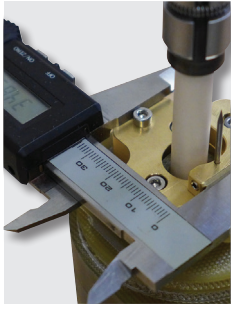
### THE ADVANTAGES AT A GLANCE:

- Lightweight, hand-held TIG orbital weld head designed for welding of tubes to tube-sheets
- Precise working in any position to achieve high-quality results on horizontal or vertical tube sheets
- Applicable for flush tubes, slightly recessed tubes and protruding tubes
- Compatible with AMI clamping mandrels, model 96
- Service friendly design of the clamping and drive system within the housing
- Self-supporting weld head at the tube sheet via stable clamping mandrels (eyelet for spring balancer available)
- Limit switch for the electrode position; thus, the start position is freely selectable
- Integrated rapid adjustment of the electrode position to the tube diameter
- Constant or pulsating rotor movement possible (CONT-STEP-Mode)
- Sturdy, speed-regulated 24-volt driving motor with a reduction gear

- Liquid-cooled slide contact for transmission of welding current prevents rotary transmission and leakages
- Including highly flexible hose package (length: 7.5 m/24.6 ft) with strain relief to the power source - optionally extendable to up to 20.0 m (64 ft)

### These are the highlights of the TX 38P:

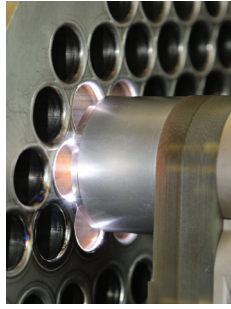
- ✓ Pneumatic clamping and centering
- ✓ Liquid-cooled welding head housing
- ✓ One-hand operation
- ✓ Quick change system for arbors
- ✓ Integrated control panel
- ✓ Chambered shielding gas cover



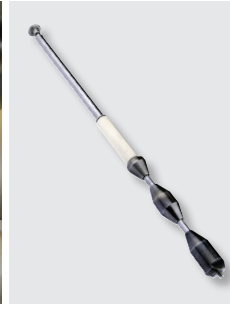
Simple and precise setting of the electrode position



One-hand operation through integrated remote control and pneumatic control via handle



High-quality results at horizontal or vertical pipe sheets



Rapid changing of clamping elements



Optionally available: Ground cable, spring sleeves and diverse clamping segment sizes

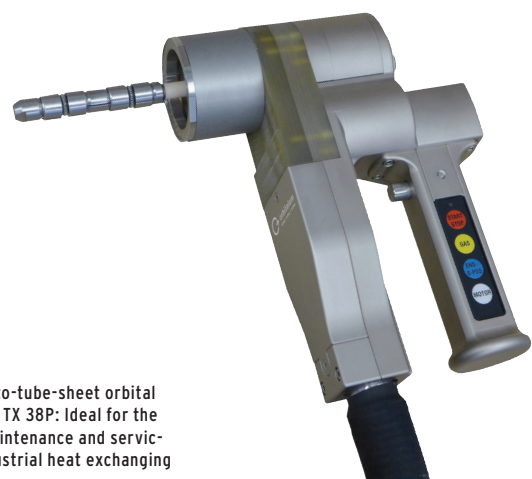
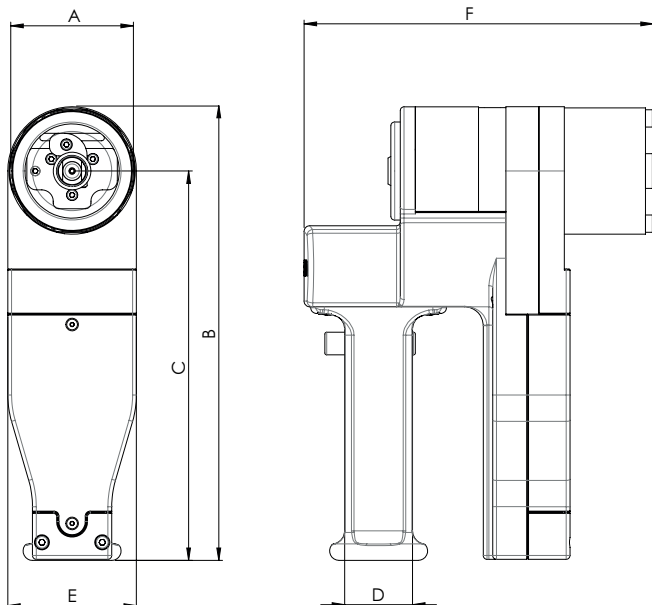


The perfect complement: Orbital welding power supplies of the ORBIMAT series sizes

APPLICATION RANGE		TX 38P	
Code		830 000 005	
Tube ID, min. - max.	[mm]	10 - 40	
	[inch]	0.394" - 1.575"	
TECHNICAL DATA			
Welding current, max.,	[Amp DC]	150	
Rotation speed, max.	[U/min]	10	
Drive motor with tachometer	[VDC]	24	
Electrode Ø	[mm]	1.6 (available option: 2.4)	
	[inch]	0.063 (available option: 0.094)	
Gas flow	[l/min]	5 - 20	
Gas type		Argon/Argon-Helium/Argon-Hydrogen	
Water pressure, max.	[bar]	2,5	
Air pressure	[bar]	5 - 7	
Hose package length	[m]	7,5	
	[ft]	25	
Machine weight including hose package	[kg]	7,5	
	[lbs]	16,5	
Type of connection		Fully compatible with all Orbitalum power supplies	
DIMENSIONS			
Dimension "A"	[mm]	65,0	[inch] 2.559
Dimension "B"	[mm]	241,0	[inch] 9.488
Dimension "C"	[mm]	207,0	[inch] 8.150
Dimension "D"	[mm]	36,0	[inch] 1.417
Dimension "E"	[mm]	68,0	[inch] 2.677
Dimension "F"	[mm]	185,0	[inch] 7.283

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

SCOPE OF DELIVERY	
Including:	<ul style="list-style-type: none"> <li>• 1 Tube-to-tube-sheet orbital weld head TX 38P</li> <li>• 1 Hose package, length 7.5 m (25 ft)</li> <li>• 1 Integrated remote control</li> <li>• 1 Durable storage and shipping case</li> <li>• 1 Tool set</li> <li>• 1 Operating instructions and spare parts list</li> </ul>
<b>The following accessories are essentially required for operating the TX38P:</b>	
To be ordered separately:	<ul style="list-style-type: none"> <li>• Arbors</li> <li>• Spring sleeves</li> <li>• Clamping segments</li> </ul>
FURTHER ACCESSORIES	
Available option:	<ul style="list-style-type: none"> <li>• Spring balancers</li> <li>• ESG Tungsten Grinders</li> <li>• Earth cable</li> <li>• Hose package extensions 5 m / 10 m / 15 m</li> <li>• Pressure regulator</li> <li>• WS2 tungsten electrodes</li> </ul>
EQUIPMENT	
Integrated remote control, with control keys:	<ul style="list-style-type: none"> <li>• START/STOP welding process</li> <li>• ON/OFF gas</li> <li>• Motor (rotor movement)</li> <li>• Approaching the end position (home position)</li> <li>• Activating the clamping mandrel pneumatic</li> </ul>



The tube-to-tube-sheet orbital weld head TX 38P: Ideal for the repair, maintenance and servicing of industrial heat exchanging systems

## Tube-to-tube-sheet orbital weld head

### TX 38P

Features, application range, technical data and scope of delivery, see page 61.

**The following accessories are essentially required for operating the tube-to-tube-sheet orbital weld head and must be ordered separately:**

- Arbors, see page 64
- Spring sleeves, see page 64
- Clamping segments, see page 64
- Earth cable, see page 86



TX 38P

ARTICLE	CODE	WEIGHT OF MACHINE KG*	DISPATCH WEIGHT KG
Tube-to-tube-sheet orbital weld head TX 38P	830 000 005	7.500	15.600

\* Machine weight including hose package

### Suitable accessories (available option):

- Arbors, see page 64
- Spring sleeves, see page 64
- Clamping segments, see page 64
- Earth cable, see page 86
- Spring balancers, see page 86
- Hose package extensions, see page 86
- Power connector adapter set, see page 87

#### TUBE-TO-TUBE-SHEET ORBITAL WELD HEADS

## Accessories for tube-to-tube-sheet orbital weld head TX 38P

### Arbors

Base mandrel including insulation sleeve and clamping cone.



Arbor TX 38P

ARTICLE	SUITABLE FOR	CODE	KG
Arbor TX 38P, type A	Spring sleeves, type A	<b>830 020 020</b>	0.130
Arbor TX 38P, type B	Clamping segments, type B	<b>830 020 021</b>	0.130

### Spring sleeves

Suitable for arbor, type A.



Spring sleeve

ARTICLE	PIPE ID [MM]	PIPE ID [INCH]	CODE	KG
Spring sleeve TX 38P, type A1	10.0 - 11.3	0.394 - 0.445	<b>830 020 022</b>	0.030
Spring sleeve TX 38P, type A2	11.0 - 12.7	0.433 - 0.500	<b>830 020 019</b>	0.030
Spring sleeve TX 38P, type A3	12.5 - 14.0	0.492 - 0.551	<b>830 020 023</b>	0.030

### Clamping segments

Suitable for arbor, type B.  
Each set includes a pair of clamping segments.  
Differing dimensions on request.



Clamping segments

ARTICLE	PIPE ID [MM]	PIPE ID [INCH]	CODE	KG
Clamping segments TX 38P, type B1	13.8 - 16.8	0.543 - 0.661	<b>830 020 024</b>	0.025
Clamping segments TX 38P, type B2	16.6 - 19.6	0.654 - 0.772	<b>830 020 025</b>	0.045
Clamping segments TX 38P, type B3	19.4 - 22.4	0.764 - 0.882	<b>830 020 026</b>	0.065
Clamping segments TX 38P, type B4	22.2 - 25.2	0.874 - 0.992	<b>830 020 027</b>	0.085
Clamping segments TX 38P, type B5	25.0 - 28.0	0.984 - 1.102	<b>830 020 028</b>	0.105
Clamping segments TX 38P, type B6	28.0 - 31.0	1.102 - 1.220	<b>830 020 029</b>	0.130
Clamping segments TX 38P, type B7	31.0 - 34.0	1.220 - 1.339	<b>830 020 030</b>	0.160
Clamping segments TX 38P, type B8	34.0 - 37.0	1.339 - 1.457	<b>830 020 031</b>	0.200
Clamping segments TX 38P, type B9	37.0 - 40.0	1.457 - 1.575	<b>830 020 032</b>	0.200

### Other accessories for orbital welding

- Earth cable, see page 86
- Pressure regulator, see page 87
- ESG tungsten grinders, see page 79
- WS2 tungsten electrodes, see page 87
- Torch and cold wire consumables, see page 89
- Power connector adapter set, see page 87