TX 38P
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 exchanges at constantly high reproducible quality. Also excellently suitable for repair, maintenance and servicing work.

Welding heat exchanger tubes particularly 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 dimensionally stable clamping mandrels which are available for tube inner diameters 13.8 - 37 mm (0.543” - 1.457”)
- Precise centering of the weld head in the tube via dimensionally stable clamping mandrels which are available for tube inner diameters 13.8 - 37 mm (0.543” - 1.457”)
- 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

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**APPLICATION RANGE TX 38P**

<table>
<thead>
<tr>
<th>Code</th>
<th>830 000 005</th>
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<tbody>
<tr>
<td>Tube ID, min. - max. [mm]</td>
<td>10 - 40</td>
</tr>
<tr>
<td>[inch]</td>
<td>0.394” - 1.575”</td>
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**TECHNICAL DATA**

<table>
<thead>
<tr>
<th>Welding current, max. [Amp DC]</th>
<th>150</th>
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<tbody>
<tr>
<td>Rotation speed, max. [U/min]</td>
<td>10</td>
</tr>
<tr>
<td>Drive motor with tachometer [VDC]</td>
<td>24</td>
</tr>
<tr>
<td>Electrode Ø [mm]</td>
<td>1.6 (available option: 2.4)</td>
</tr>
<tr>
<td>[inch]</td>
<td>0.063 (available option: 0.094)</td>
</tr>
<tr>
<td>Gas flow [l/min]</td>
<td>5 - 20</td>
</tr>
<tr>
<td>Gas type</td>
<td>Argon/Argon-Helium/Argon-Hydrogen</td>
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<tr>
<td>Water pressure, max. [bar]</td>
<td>2.5</td>
</tr>
<tr>
<td>Air pressure [bar]</td>
<td>5 - 7</td>
</tr>
<tr>
<td>Hose package length [m]</td>
<td>25</td>
</tr>
<tr>
<td>[ft]</td>
<td>82</td>
</tr>
<tr>
<td>Machine weight including hose package [kg]</td>
<td>7.5</td>
</tr>
<tr>
<td>[lbs]</td>
<td>16.5</td>
</tr>
<tr>
<td>Type of connection</td>
<td>Fully compatible with all Orbitalum power supplies</td>
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**DIMENSIONS**

<table>
<thead>
<tr>
<th>Dimension “A” [mm]</th>
<th>65.0 (inch) 2.559</th>
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<tbody>
<tr>
<td>Dimension “B” [mm]</td>
<td>241.0 (inch) 9.488</td>
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<tr>
<td>Dimension “C” [mm]</td>
<td>207.0 (inch) 8.150</td>
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<tr>
<td>Dimension “D” [mm]</td>
<td>36.0 (inch) 1.417</td>
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<td>Dimension “E” [mm]</td>
<td>68.0 (inch) 2.677</td>
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<tr>
<td>Dimension “F” [mm]</td>
<td>185.0 (inch) 7.283</td>
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<tr>
<td>Dimension “G” [mm]</td>
<td>110.0 (inch) 4.331</td>
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</tbody>
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**SCOPE OF DELIVERY**

Including:

• 1 Tube-to-tube-sheet orbital weld head TX 38P
• 1 Hose package, length 7.5 m (25 ft)
• 1 Integrated remote control
• 1 Durable storage and shipping case
• 1 Tool set
• 1 Power connector adapter
• 1 Operating instructions and spare parts list

The following accessories are essentially required for operating the TX38P:

To be ordered separately:

• Arbors
• Spring sleeves
• Clamping segments

**FURTHER ACCESSORIES**

Available option:

• Spring balancers
• ESG Tungsten Grinders
• Earth cable
• Hose package extensions 5 m / 10 m / 15 m
• Pressure regulator
• WSZ tungsten electrodes

**EQUIPMENT**

Integrated remote control, with control keys:

• START/STOP welding process
• ON/OFF gas
• Motor (rotor movement)
• Approaching the end position (home position)
• Activating the clamping mandrel pneumatic

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

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

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