

TX 38P

NEW

Tube-to-tube-sheet orbital weld head

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

The new 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.



Applicable for flush tubes, slightly recessed tubes and protruding tubes



Ideal for repairing and maintaining of large-scaled heat exchanger plants



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")

Welding heat exchanger tubes particular effectively and easily: With our new 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 new 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



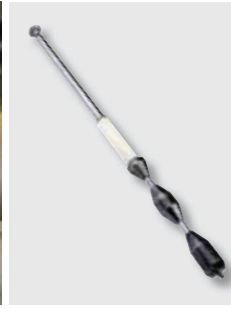
Simple and precise setting of the electrode position



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

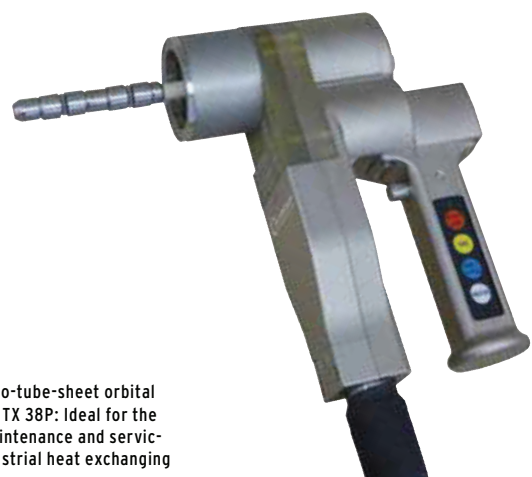
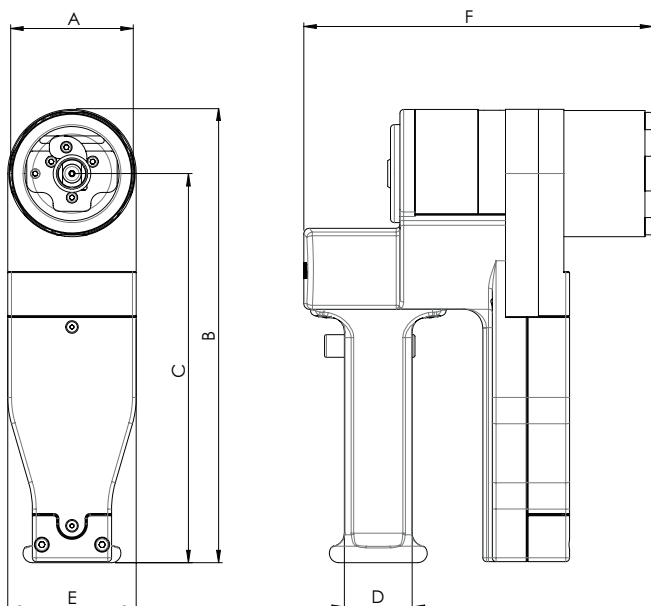


The perfect complement: Orbital welding power supplies of the ORBITAL CA series

| APPLICATION RANGE | | TX 38P | |
|---------------------------------------|----------|--|--------------|
| Code | | 830 000 005 | |
| From tube ID to tube OD | [mm] | 10 - 38 | |
| | [inch] | 0.394" - 1.500" | |
| 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 |

| SCOPE OF DELIVERY | |
|--|--|
| Including: | <ul style="list-style-type: none"> • 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 Operating instructions and spare parts list |
| The following accessories are essentially required for operating the TX38P: | |
| To be ordered separately: | <ul style="list-style-type: none"> • Arbors • Spring sleeves • Clamping segments |
| FURTHER ACCESSORIES | |
| Available option: | <ul style="list-style-type: none"> • Spring balancers • ESG Tungsten Grinders • Earth cable • Hose package extensions 5 m / 10 m / 15 m • Pressure regulator • WS2 tungsten electrodes |
| EQUIPMENT | |
| Integrated remote control, with control keys: | <ul style="list-style-type: none"> • START/STOP welding process • ON/OFF gas • Motor (rotor movement) • Approaching the end position (home position) • Activating the clamping mandrel pneumatic |

The technical data are not binding. They are not warranted characteristics and are subject to change. Please consult our general conditions of supply.



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 57.

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

- Arbors, see page 60
- Spring sleeves, see page 60
- Clamping segments, see page 60
- Earth cable, see page 82



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 60
- Spring sleeves, see page 60
- Clamping segments, see page 60
- Earth cable, see page 82
- Spring balancers, see page 82
- Hose package extensions, see page 82

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 | 830 020 020 | 0.130 |
| Arbor TX 38P, type B | Clamping segments, type B | 830 020 021 | 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 | 9.8 - 11.3 | 0.386 - 0.445 | 830 020 022 | 0.030 |
| Spring sleeve TX 38P, type A2 | 11.0 - 12.7 | 0.433 - 0.500 | 830 020 032 | 0.030 |
| Spring sleeve TX 38P, type A3 | 12.5 - 14.0 | 0.492 - 0.551 | 830 020 023 | 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 | 830 020 024 | 0.025 |
| Clamping segments TX 38P, type B2 | 16.6 - 19.6 | 0.654 - 0.772 | 830 020 025 | 0.045 |
| Clamping segments TX 38P, type B3 | 19.4 - 22.4 | 0.764 - 0.882 | 830 020 026 | 0.065 |
| Clamping segments TX 38P, type B4 | 22.2 - 25.2 | 0.874 - 0.992 | 830 020 027 | 0.085 |
| Clamping segments TX 38P, type B5 | 25.0 - 28.0 | 0.984 - 1.102 | 830 020 028 | 0.105 |
| Clamping segments TX 38P, type B6 | 28.0 - 31.0 | 1.102 - 1.220 | 830 020 029 | 0.130 |
| Clamping segments TX 38P, type B7 | 31.0 - 34.0 | 1.220 - 1.339 | 830 020 030 | 0.160 |
| Clamping segments TX 38P, type B8 | 34.0 - 37.0 | 1.339 - 1.457 | 830 020 031 | 0.200 |

Other accessories for orbital welding

- Earth cable, see page 82
- Pressure regulator, see page 83
- ESG tungsten grinders, see page 75
- WS2 tungsten electrodes, see page 83
- Torch and cold wire consumables, see page 85