INNOVATIVE PIPING TECHNOLOGY

COMPRESSED AIR
ALUMINUM
IMPORTED FITTING • INDIGENOUS FITTING • FUSING
GALVANIZED IRON
IMPORTED FITTING • INDIGENOUS FITTING • WELDING

SIZE AVAILABLE UPTO 250 MM

WATER
MILD STEEL
GALVANIZED IRON
STAINLESS STEEL
IMPORTED FITTING • INDIGENOUS FITTING • WELDING

100% GUARANTEE
10 YEARS GUARANTEE
LEADER IN THE PRODUCTION OF PIPE & FITTINGS

AN INTERNATIONAL PRESENCE

This pipe exports in more than 90 countries thanks to an intensive distribution network and thanks to six branches located in USA, Colombia, Spain, Switzerland, Brazil and France.

The distribution network and the branch companies are always available for clients and to forward information to the Technical Dept. This Information in some cases became new products, placed on the market.

Compressed air pipe systems are quick to install and ready for immediate pressurization, components are removable interchangeable and allow immediate and easy layout modifications reducing production downtime. Unlike the performance of steel pipe, which degrades life time due to corrosion, air quality is clean with optimum flow rate performance with the use of this piping system.

ALUMINUM DIE CAST METAL FITTINGS (NO PLASTIC)
### TECHNICAL SPECIFICATION: Nickel Plated Brass Push-in Pipe Fittings ø20, ø25, ø32, ø40, ø50

<table>
<thead>
<tr>
<th>COMPONENT PARTS AND MATERIALS</th>
<th>FIRE RESISTANCE</th>
<th>TEMPERATURES</th>
<th>THREADS</th>
<th>PRESSURES</th>
<th>FLUIDS</th>
<th>SIZES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Nut made of Nickel-Plated Brass</td>
<td>The system does not stroke or propagate any fires.</td>
<td>Minimum temperature: -20°C</td>
<td>Male threads taper in conformity with ISO7</td>
<td>Minimum pressure: -0.99 bar (0.099 Mpa)</td>
<td>Compressed air, Vacuum, Inert Gas (AZOTO, ARGON)</td>
<td>Tube diameters: ø20, ø25, ø32, ø40, ø50</td>
</tr>
<tr>
<td>2. Seal made of NBR</td>
<td>Maximum temperature: +80°C</td>
<td>Female threads in conformity with ISO228</td>
<td>Maximum pressure: 16 bar (1.6 Mpa)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Clamping Washer made of Inox AISI 304</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. O-RING Seals made of NBR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Safety ring made of Technopolymeric</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Body made of Nickel-Plated Brass</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Extruded Aluminum tube calibrated and powder coated Blue Color (RAL 5010)</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Fittings of ø20 - ø25 - ø32 - ø40 - ø50 are pre-assembled.
Tubes of 4 and 6 mt are pre-coated, calibrated and burred.
Push tube into the fitting for automatic connection.

In case of fitting disassembling, use the torques to re-assemble the fitting.
Diameter ø20 - ø25 - ø32 - ø40 - ø50

### TECHNICAL SPECIFICATION: High Pressure Aluminum Die Casting Push-in Fittings ø63, ø80, ø110

<table>
<thead>
<tr>
<th>COMPONENT PARTS AND MATERIALS</th>
<th>FIRE RESISTANCE</th>
<th>TEMPERATURES</th>
<th>THREADS</th>
<th>PRESSURES</th>
<th>FLUIDS</th>
<th>SIZES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Nut made of aluminum with finished surface treatment</td>
<td>The system does not stroke or propagate any fires.</td>
<td>Minimum temperature: -20°C</td>
<td>Flanged tube DIN UNI EN 1092 - 4 Pn16</td>
<td>Minimum pressure: -0.99 bar (0.099 Mpa)</td>
<td>Compressed air, Vacuum, Inert Gas (AZOTO, ARGON)</td>
<td>Tube diameter: ø63, ø80, ø110</td>
</tr>
<tr>
<td>2. O-RING Seal made of NBR</td>
<td>Maximum temperature: +80°C</td>
<td>Female threads in conformity with ISO228</td>
<td>Maximum pressure: 16 bar (1.6 Mpa)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Body made of aluminum with finished surface treatment</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Safety Ring made of Technopolymeric</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Clamping Washer made of AISI 301</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>6. Tube-guide Ring made of Technopolymeric</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>7. Self locking Nut of Zinc-Plated Steel</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>8. TCEI Screw of Zinc-Plated Steel</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>9. Extruded Aluminum tube calibrated and painting Blue Color (RAL 5010) - Grey Color (RAL 7035)</td>
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</tr>
</tbody>
</table>

Fittings of ø63 ø80 ø110 are pre-assembled with four screws untwisted to help tube connection.
Tubes of 4 and 6 mt are pre-coated, calibrated and burred.
Push tube into the fitting for automatic connection and screw up in the suggested sequence.
Tightening torque 30Nm.
PROPER SLOPES AND DROPS
As for the slope of network pipes, either for lines running along exterior walls or within a building. It must be noted that the feeder pipe may perform both functions: air flow and the elimination of condensed liquids. Secondary pipes attached below the main pipes should include a ball valve and will help eliminate condensation at their feet by the presence of evacuation valves. Ideal for getting around obstacles with minor alignment problems.

TURBO RADIUS
Ideal for tapping air off a main line without allowing water to get into the drop. Also this will reduce major pressure drop along the system.

SPECIAL HEADER
- Safe and completely leak-proof
- Energy saving design
- Special tools for bending
- 6G position welding
- Qualified & Trained welders
- Zero pressure loss

To have energy efficient & flexible air line system we prefer galvanized iron with welding in compressor room. The advantages of GI welding line is explored below

GALVANIZED IRON

COMPRESSED AIR

GALVANIZED IRON WELDING

COMPRESSED AIR

GALVANIZED IRON
INDIGENOUS FITTING

Since introducing its first patented product, Tensor has continued to lead the way in innovative products for the water and waste water industry that are engineered to save time and money. Tensor is the manufacturer in India for Mechanical Joint Restraint. Tensor specializes in pipe restraints and flexible expansion joints and the products are 100% MADE IN INDIA.

Tensor offers the most comprehensive product lines found anywhere. Our restraint size range, available during pipeline installation or after for existing lines, are made domestically, offering an unbeatable quality.
Performance of the piping system differentiates itself through superior design, high quality materials and **OWN PRODUCTION IN INDIA.**

Aluminum pipe can be supplied **WITH FITTING** in single 20 ft lengths available from **15 mm to 250 mm.**

Instead of using standard fittings based on site condition & machinery model the fixtures can be made as per **CUSTOM DESIGN**

Cost effective installation when compared to imported products by **25 to 30%**

Energy efficient, low friction inner surface eliminates airflow restriction, significantly reducing the pressure drop.

Peace of mind knowing our system is environmentally friendly & supported with a manufacturing warranty of 10 years.

Integration with an existing compressed air main ring system is possible.

Resistant to corrosion, sparking, magnetic, vibration and heat.

Quick and easy installation.

<table>
<thead>
<tr>
<th>Pipe Dimension in MM</th>
<th>15</th>
<th>20</th>
<th>25</th>
<th>32</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>40</td>
<td>50</td>
<td>63</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>110</td>
<td>150</td>
<td>250</td>
<td></td>
</tr>
</tbody>
</table>

**FIRST TIME IN INDUSTRY**
Aluminum is quickly becoming a popular alternative to steel in the precision metal fabrication industry. It offers a number of attractive qualities for designers and metal workers.

However, despite its many advantages there are a number of challenges for aluminum fabrication shops looking to work with aluminum effectively. Steel is much simpler to join than aluminum, therefore, aluminum joining services should be handled by a shop with experience. Since aluminum is a softer metal than steel, when feeding the tool used for joining it is more susceptible to damage. More importantly, aluminum has a high thermal conductivity, meaning heat gets dissipated away from the joining area, which can result in incomplete fusion. Skilled aluminum joining services understand this and are capable of working around it to achieve high quality joints.

**FIRST TIME IN AIR INDUSTRY WITH FUSING**

- Long radius elbows give less frictional resistance to the air than short elbows.
- Long radius bends create lesser pressure drop.
- To avoid water and moisture 90° elbow bends are used.
- Special fusing machine for aluminum
Engineers typically have specified various piping materials for water and compressed air systems. These include mild steel, galvanized steel, copper, stainless steel, aluminum and even plastic.

Two common types of pipe used for water and compressed air systems are black iron and galvanized steel pipe. Due to a variety of factors, more than 60 to 70 percent of all water and compressed air systems installed today use Mild Steel or galvanized pipe WITH WELDING ONLY.

But we come out with new technology of connecting mild steel and galvanized iron with METAL FITTINGS

**FIELDS OF APPLICATION**
- Where water quality and hygiene are issues.
- Heating & chilled water applications.
- Low temperature hot water heating.
- Pressurized, vented and unvented heating systems.
- Textiles, Engineering, Food, Pharmaceutical, Chemicals. For any other sector, please refer with us.

**ADVANTAGES**
- Corrosion retarding push fit
- Special tested fittings for high pressures above 25 bar.
- No welding or threading, zero leakage, less mess, no risk of heat exchanging.
- Easy to install and modify, labor and cost saving, connection are made in fraction of time.
- Energy efficient & reusable.

**TECHNICAL DATA**
- Material of Construction: CF8/CF8M
- Connection type: Push to fit
- Max.Working pressure: 30 bar
- Cont. Service Temp Limit: upto 200°C
- Max Peak Temp: 200°C-Viton
- Clamp ring: SS / Industrial Plastic
- Thread Standard: BSP (metric) / NPT.
- Mfg. with safety norms: CE self declared.
- Range: 20mm-200m-3/4”-8”
- Temperature range: -20°C to 200°C
- Surface: Electro polished
- Plant Testing Pressure 1hr at 20 degree c: 40 bar
- Quality testing pressure 1hr at 20 degree C: 40 bar

**DO’S & DON’TS OF PIPING SYSTEMS**
- Use Long Elbows for turns.
- Use 45° directional (to flow) connection for two conjoining air lines.
- 90° Turns
- Crossing ‘T’
- Dead Head
# OTHER INNOVATIVE PRODUCTS / SERVICES OF TENSOR

<table>
<thead>
<tr>
<th>S.NO</th>
<th>PRODUCT / SERVICES DETAILS</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TENSOR AIR TURBINE</td>
<td>Exclusive cleaning system for Machines up to 10 bars pressure</td>
</tr>
<tr>
<td>2</td>
<td>H₂O ENERGIZER</td>
<td>To improve the water quality for factory and also improve the agriculture yield</td>
</tr>
<tr>
<td>3</td>
<td>AIR AMPLIFIER</td>
<td>Solve the pressure variation issue, will improve the pressure by two times without power</td>
</tr>
<tr>
<td>4</td>
<td>SPECIAL AIR NOZZLES</td>
<td>Customized and high efficient air nozzle to improve the cleaning efficiency</td>
</tr>
<tr>
<td>5</td>
<td>FIRE HYDRANT &amp; SPRINKLER SYSTEMS</td>
<td>Turnkey project with customized design</td>
</tr>
<tr>
<td>6</td>
<td>AIR RECEIVER TANK</td>
<td>Specialized &amp; Customized tank</td>
</tr>
<tr>
<td>7</td>
<td>REFRIGERATION AIR DRYER</td>
<td>Glycol series technology with 25% - 30% energy saving compared to conventional model</td>
</tr>
<tr>
<td>8</td>
<td>ENERGY AUDITING</td>
<td>Exclusive audit for Textile &amp; Engineering Industry</td>
</tr>
<tr>
<td>9</td>
<td>SAFETY AUDITING</td>
<td>Auditing will be done by qualified &amp; experienced technicians</td>
</tr>
<tr>
<td>10</td>
<td>CUSTOMIZED PRODUCT DEVELOPMENT</td>
<td>According to customer requirement any sheet metal and R&amp;D Works</td>
</tr>
<tr>
<td>11</td>
<td>IMPORTED FITTINGS &amp; VALVES</td>
<td>Imported fittings for all type of textile &amp; engineering machinery</td>
</tr>
<tr>
<td>12</td>
<td>SOLAR SYSTEMS</td>
<td>Cost effective solar system for domestic &amp; industrial use</td>
</tr>
</tbody>
</table>