TECHNOVISION ENGINEERS PVT. LTD.
Pioneers in Lean Manufacturing Solutions

TEPL is one of the leading manufacturer of material handling equipments. The core focus of the company lies in superior quality and excellent customer service. With expertise in the industry and constant innovation in the industry, the company also undertakes turnkey projects with design, manufacturing, supply, erection and commissioning activities. The company is one of the front runners in Lean Manufacturing Solutions in India with an ISO 9001-2015 certification. The production house has the capability to conduct in-house R & D and the company possesses exceptional talent for designing in terms of manpower, knowledge and technology. The company owns two manufacturing set-ups and total area of 28000 sq. ft. with all manufacturing and design equipments. TEPL is known to deliver state of the art contemporary designs with their range of material handling equipments.

Our Journey

1998  Beginning of a fascinating journey of technical expertise with machinery activity using just 100 sq. ft. of space in MIDC Bhosari, Pune.
2001  The striking start of manufacturing trolleys and pallets in Chinchwad, Pune, which led to an expansion of space to 3500 sq. ft.
2004  In order to widen horizons, the company was officially registered as a Pvt. Ltd. Company.
2005  With a vision of expansion, relocated headquarters & main production unit at Chikhali MIDC, Pune, with a large space of 16,500 sq. ft.. Also ventured into designing and manufacturing of Unit Handling Conveyor Systems.
2006  The efforts of the company were recognized and the company was awarded ISO 9001 certification.
2008  Success followed and the company invested to set up a new factory.
2010  Registered under D & B, D-U-N-S.
2011  The awards and accolades kept pouring in. The company was awarded ISO 9001:2008 by TUV.
2012  The growth curve became stronger and Technovision Engineers established a new company called Techno Pipes and Joints.
2012  In order to tap wider market, the company entered the business of Hydraulic Equipment Manufacturing.
2014  With newer technical expertise and innovations, renewed ISO 9001:2008 by TUV.
2014  The development continues with the introduction of design and manufacturing of Vertical Reciprocating Conveyor.
2017  With newer technical expertise and innovations, renewed ISO 9001:2015 by TUV.

Enter the world of solutions that lies on the next pages.
TECHNO PIPES & JOINTS SYSTEM

Technovision P.J.S Will Promptly Implement Your Ideas, Giving You The Expected Instant Effects

Technovision Pipe Joint System is an ideal material handling system that is wisely designed for all industries’ material handling needs. It is smart, dynamic and flexible. It can make various types of production of racks, trolleys, productions cell tables, viewing boards and gravity flow racks. In fact, the usage of pipe & joints system is limitless, add in your idea today!

- Simple and easy modification.
- High safety and very simple fitting, no need of welding.
- Simple assembly and easy production without special skills.
- Durable cleanliness due to coating with ABS resin.
- Easy handling of the assembled structure due to its light weight.
- Continuous improvement activities are possible.
- No need to equip special facilities for manufacturing.

ABS Resin

Adhesive (to bond ABS to steel pipe)

Steel Pipe

Interior Coating

TECHNO pipe is steel pipe with ABS resin coated on the outer surface. An adhesive bonds the resin to the pipe preventing separation. The inner surface is treated with a non-corrosive coating.

ABS COATED PIPE (STANDARD PIPE)

- Various colors
- Low cost
- Easy to cut

Avoid using the Pipes near and around solvents or oils.

ANTISTATIC COLOR PIPE / CONDUCTIVE PIPE

- Antistatic Color Pipe
  Surface Resistance: $10^3 \Omega - 10^4 \Omega$
  Colors: Grey/ Ivory

- Conductive Pipe
  Surface Resistance: $10^3 \Omega - 10^4 \Omega$
  Color: Black

Avoid using the Pipes near and around solvents or oils.
### STAINLESS STEEL PIPE

- High strength and Durability
- High surface resistant to scuffing
- Conductive
- High resistant to oil and chemicals

### PIPES

#### ABS COATED PIPE

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Thickness (Steel)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TP-1</td>
<td>1t</td>
</tr>
<tr>
<td>TP-1.4</td>
<td>1.4t</td>
</tr>
<tr>
<td>TP-2</td>
<td>2t</td>
</tr>
</tbody>
</table>

#### CONDUCTIVE PIPE

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Thickness (Steel)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCP-1</td>
<td>1t</td>
</tr>
<tr>
<td>TCP-1.4</td>
<td>1.4t</td>
</tr>
<tr>
<td>TCP-2</td>
<td>2t</td>
</tr>
</tbody>
</table>

#### ANTISTATIC COLOR PIPE

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Thickness (Steel)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAP-1</td>
<td>1t</td>
</tr>
<tr>
<td>TAP-1.4</td>
<td>1.4t</td>
</tr>
<tr>
<td>TAP-2</td>
<td>2t</td>
</tr>
</tbody>
</table>

#### SLIDE PIPE

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Thickness (Steel)</th>
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<tbody>
<tr>
<td>TSL-1</td>
<td>1t</td>
</tr>
<tr>
<td>TSL-1.4</td>
<td>1.4t</td>
</tr>
<tr>
<td>TSL-2</td>
<td>2t</td>
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</tbody>
</table>

#### STAINLESS STEEL PIPE

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Thickness (Steel)</th>
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<tbody>
<tr>
<td>TSS-0.9</td>
<td>0.9</td>
</tr>
<tr>
<td>TSS-1.1</td>
<td>1.1</td>
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</table>

### Surface Resistance

- **TCP-1** 1t
- **TCP-1.4** 1.4t
- **TCP-2** 2t

**Surface Resistance**
- 10^3 Ω ~ 10^6 Ω
- 10^8 Ω ~ 10^10 Ω
**METAL JOINTS COMPONENTS**

**SURFACE TREATMENT**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>COLOR</th>
<th>TREATMENT</th>
<th>MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>BK</td>
<td>BLACK</td>
<td>Black ED Coating</td>
<td></td>
</tr>
<tr>
<td>SV</td>
<td>SILVER</td>
<td>Chrome Plating</td>
<td>DD1079</td>
</tr>
<tr>
<td>NI</td>
<td>NICKEL</td>
<td>Nickel Plating</td>
<td></td>
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</tbody>
</table>

**BLACK ED COATED**

Above products are also available in Silver Crme Plating
# PIPES & JOINTS

## NICKEL CHROME PLATED

<table>
<thead>
<tr>
<th>T - 1</th>
<th>T - 2</th>
<th>T - 3</th>
<th>T - 4</th>
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<tbody>
<tr>
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<td><img src="image3.png" alt="Image" /></td>
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<table>
<thead>
<tr>
<th>T - 6</th>
<th>T - 7A</th>
<th>T - 7B</th>
<th>T - 8</th>
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<tbody>
<tr>
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<td><img src="image6.png" alt="Image" /></td>
<td><img src="image7.png" alt="Image" /></td>
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</table>

<table>
<thead>
<tr>
<th>T - 9</th>
<th>T - 11</th>
<th>T - 12</th>
<th>T - 13A</th>
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</thead>
<tbody>
<tr>
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<td><img src="image11.png" alt="Image" /></td>
<td><img src="image12.png" alt="Image" /></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>T - 13B</th>
<th>T - 14</th>
<th>T - 15A</th>
<th>T - 15B</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image13.png" alt="Image" /></td>
<td><img src="image14.png" alt="Image" /></td>
<td><img src="image15.png" alt="Image" /></td>
<td><img src="image16.png" alt="Image" /></td>
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</tbody>
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<table>
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<tr>
<th>T - 16</th>
<th>T - 18</th>
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</thead>
<tbody>
<tr>
<td><img src="image17.png" alt="Image" /></td>
<td><img src="image18.png" alt="Image" /></td>
</tr>
</tbody>
</table>
### PIPES & JOINTS

#### METAL JOINTS SETS

##### JOINTING METHODS

| TS | T-1: 2 Pieces  
Bolts and nuts: 1 unit  
| TS | T-2: 1 Piece  
| TS | T-3: 1 Piece  
Bolts and nuts: 2 unit  
| TS | T-4: 1 Pieces  
Bolts and nuts: 3 unit  
| TS | T-5: 4 Pieces  
Bolts and nuts: 4 units  
| TS | T-6: 2 Pieces  
Bolts and nuts: 1 unit  
| TS | T-7A: 2 Pieces  
T-7B: 2 Pieces  
Bolts and nuts: 2 units  
| TS | T-8: 2 Pieces  
Bolts and nuts: 1 units  

**METAL JOINTS SETS**
## JOINTING METHODS

### TS - 11

- T-11: 2 Pieces
- Bolts and nuts: 2 units

### TS - 13

- T-13A: 1 Piece
- T-13B: 1 Piece
- Bolts and nuts: 1 unit

### TS - 14

- T-14: 2 Pieces
- T-7B: 4 Pieces
- Bolts and nuts: 4 units

### TS - 15

- T-15A: 1 Piece
- T-15B: 1 Piece
- Bolt: 1 unit (WB-0610)

### TS - 16

- T-16: 2 Pieces

## PLASTIC JOINTS

### TE CAP 01 (IV, GR, BK)

- PIPE INNER CAP

### TE 111 (IV, BK)

- NAME PLATE HANGER

### TE 112 (IV, GR, BK)

- SLIDING HOLDER

### TE 113 (IV)

- PLASTIC JOINT PIPE CLAMP

### TE 114 (IV, GR, BK)

- PIPE OUTER CAP
PIPES & JOINTS

PLACONS

40 SERIES

Roller Material - Delrin

PLACON 80 SERIES

Roller Material - Delrin
ROLLER TRACK MOUNT BRACKET

PLACON MOUNT - GPA

PLACON MOUNT GP - B

PLACON MOUNT GP - C

PLACON MOUNT GP - C1

PLACON MOUNT GP - H

ACCESSORIES

TRACTION HOOK-A

GAS SPRING

SLIDE PIPE MOUNTS

SLIDE BRACKET

SLIDE BRACKET - A

SLIDE BRACKET - B
ACCESSORIES

ADJUSTERS

ADJUSTER (½”) SMALL

ADJUSTER LARGE

PIPE LINKING METAL

BOARD FIXING-B

TRACTION ARM-B

CASTER STRAP Cm100

INSERT NUT (½”) -

TAG HOLDER

NP-0120

NP-0152

NP-0180

NP-0220

NP-0215

NP-0300

NP-0307

NP-0430

SIZE: 130 x 50

SIZE: 150 x 70

SIZE: 185 x 85

SIZE: 220 x 100

SIZE: 215 x 160

SIZE: 300 x 120

SIZE: 310 x 220

SIZE: 430 x 310
In order to manufacture pipe & joints’ materials, piling-up vehicles, piling-up stand and sliding rack, etc as per customer’s purpose and concept. It’s necessary to keep sequence and check points as follows;
CALCULATING THE LENGTHS OF PIPES

How to calculate practical length of pipe is mentioned as below in consideration of length of pipe to be inserted into joint. Take into consideration length between the centers of two pipes, calculate practical pipe's length.

Length Between The External Two Ends : 833mm
Length Between The Both Centers : 800mm

- **Horizontal**
  - Calculating: 800 - Length between the two centers
  - Calculating: -70 - Total length between each end and of the pipe and each center of the joint (35mmx2)
  - The Lengths: 730 - The practical length of the pipe to be cutted

- **Vertical**
  - Calculating: 800 - Length between the two centers
  - Calculating: -25 - Length between the end of pipe and the end of adjuster
  - The Lengths: 16.5 - Length between the center and the surface of joint
  - The Lengths: 522 - The practical length of the pipe to be cutted

TECHNICAL SPECIFICATIONS

AN EXAMPLE OF A SHELF

- The under mentioned picture is a real drawing of the structure indicating pipe’s length and composed factor of joints
- The sizes of structure: 800(Width) X 1000(Length) X 1200(Height) [H means real length of pipe]
CAPACITY

Like other materials such as steel and SUS, the strength of TECHNO PJS structures rely on the design and assembly techniques. In case of establishing structures with TECHNO PJS, proper strength to fit its utility objective and safety must be considered to design.

MAXIMUM HOLDING STRENGTH OF JOINTS


- Test Condition
  - Test Speed : 5mm/min
  - Temperature : 23°C

<table>
<thead>
<tr>
<th>Direction</th>
<th>Coated Pipes</th>
<th>Stainless Pipes</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>75 Kg</td>
<td>75 Kg</td>
</tr>
<tr>
<td>Y</td>
<td>85 Kg</td>
<td>85 Kg</td>
</tr>
</tbody>
</table>

Proportional margin Load of Pipes

<table>
<thead>
<tr>
<th>TECHNO PJS Pipe (T1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>( d = \text{m} )</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>LOAD</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TECHNO PJS Pipe (T2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>( d = \text{m} )</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>LOAD</td>
</tr>
</tbody>
</table>

The proportional margin load means the maximum load within which an original shape can be recovered by removing the load.

Maximum Permissible Loads of PLACONS

Bending Strength

<table>
<thead>
<tr>
<th>PRODUCT CODE</th>
<th>LOAD CAPACITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 Series</td>
<td>220 Kg/m</td>
</tr>
<tr>
<td>80 Series</td>
<td>350 Kg/m</td>
</tr>
</tbody>
</table>

Strength of Wheel

<table>
<thead>
<tr>
<th>PRODUCT CODE</th>
<th>LOAD CAPACITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 Series</td>
<td>150 Kg/m</td>
</tr>
<tr>
<td>80 Series</td>
<td>200 Kg/m</td>
</tr>
</tbody>
</table>

Limits of temperature for actual use

The temperature for actual use of ABS Resin utilized at PIPE & JOINT is limited within -10~80°C, therefore please avoid where the temperature extents its limits, or heat or fire.
CASTERS

100X38 FIX TYPE LIGHT DUTY NYLON PU
100X38 SWIVEL TYPE LIGHT DUTY NYLON PU
100X38 LOCK TYPE LIGHT DUTY NYLON PU
100X50 FIX TYPE LIGHT DUTY NYLON PU

100X50 LOCK TYPE LIGHT DUTY NYLON PU
150X50 SWIVEL TYPE LIGHT DUTY NYLON PU
150X50 LOCK TYPE LIGHT DUTY NYLON PU
200X50 FIX TYPE WITH SPRING LOADED NYLON PU WHEEL

200X50 SWIVEL TYPE WITH SPRING LOADED NYLON PU WHEEL
200X50 LOCK TYPE WITH SPRING LOADED CIPU WHEEL
200X50 SWIVEL TYPE WITH SPRING LOADED CIPU WHEEL

PIPE INSERTED WHEEL NYLON PU 4" X 2" SWIVEL WITH BREAK
PIPE INSERTED WHEEL NYLON PU 3" X 1.25" SWIVEL
APPLICATIONS
APPLICATIONS
Our wide range of trolleys is used to handle the material on shop-floor. The trolleys are designed and manufactured as per the shape, size, weight & overall dimensions of the components to be handled. Trolleys provide simple solution of handling the component on floor level. Used in material handling in plastic, metallic, ceramic, rubber & all types of components. Trolley / Pallets serves various industries including automobile, pharmaceutical, plastic and paint and domestic-appliances industry. It is the best suitable solution for transport of material. Our simple-designed trolley requires less space. Transportation cost of component will be reduced by using the easy operated trolley which is suitable for heavy material.
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Website: www.technovisionengineers.net, www.technovisionengrs.com