AUTOMATION SOLUTIONS FOR
WIRE DRAWING INDUSTRY

Increased Production | Repetitive Accuracy
**WIRE DRAWING APPLICATION**

In a competitive market, reducing production cost and increasing productivity are essential. The equipment installed should have maximum uptime and should be easy to maintain. In wire drawing plants the raw material is steel wire in coil form, from Wire Rod Mill. The entry block is Overhead Take-Off (OTO) where maximum reduction in size takes place, and OTO acts like an accumulator for continuous process. The number of blocks is determined based on final wire diameter required and input diameter of the wire for gradual reduction in size. While the wire is pulled through die, the wire size reduces, the speed increases in the same ratio and the tension in the wire has to be maintained by the vertical drums. Thus at every block the drum RPM has to increase with square of diameter reduction.

**APPLICATIONS IN WIRE DRAWING INDUSTRY**

| Wire Drawing machines | Super fine Wire Drawing machines | Wire Coating machines | Wire Galvanizing machines | Petanting Take-ups |

**MACHINE AUTOMATION FEATURES**

Beside entry of pass schedule from HMI, the operator needs following facilities for convenient machine operation:

- Entry inch
- Exit inch
- Individual Motor selection
- Synchronised run
- OTO Auto/Manual
- Block 1-N bypass selection (N: last Block)

**Wire Drawing Machine Automation scheme**

![Wire Drawing Machine Automation scheme diagram](image-url)
WIRE COATING APPLICATION

Tyre bead wire is a high carbon bronze coated steel wire used in tyre industry. The main function of bead wire is to hold the tyre on the rim and to resist the action of the inflated pressure, which constantly tries to force it off. The bead is the crucial link through which the vehicle load is transferred from rim to the tyre. It significantly affects the safety, strength, and the durability of tyres.

Wire coating machine is used for coating the steel wire with carbon bronze. Steel wire is the output of wire drawing machine.

Basic requirement of coating the steel wire are:
- Uniform and appropriate bronze coating
- Uniform winding and proper coil dimensions

MACHINE DESCRIPTION

<table>
<thead>
<tr>
<th>Coating &amp; annealing process</th>
<th>Dancer</th>
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<tbody>
<tr>
<td>Capstan</td>
<td></td>
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<tr>
<td>T2</td>
<td></td>
</tr>
<tr>
<td>Spooler</td>
<td></td>
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<tr>
<td>Approximately 50-75 meter</td>
<td>Un-winder</td>
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<tr>
<td>T1</td>
<td></td>
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</tbody>
</table>

PRODUCTS OFFERED BY BHARAT BIJLEE

- HMI
- KEB VFD
- KEB Motion Controller
- Servo Drives
- Motors
- PM Servo Motors

Note: For detailed technical specifications please contact our local sales representative.