

## **STRAIGHT LINE WIRE DRAWING MACHINE**

S M INDUSTRIES has pioneered to indigenously develop the Straight-Line Wire Drawing Machine Technology in India. Presently the range available is capstan diameter 900mm, 750mm, 600mm, 550mm, 500mm, 460mm, 400mm and 300mm for inlet wire diameter 16mm down to 0.5mm. Line speeds up to 25 Mtrs / Sec. These heavy Straight Line Wire Drawing Machines provide remarkable drawing performance for Low, Medium and High Carbon Steel Wire, Stainless Steel Wire and special Alloy Steel Wire and Non-Ferrous Alloy Steel Wire.

Straight Line Wire Drawing Machines were developed for straight or deflection free drawing of wire to provide better draw ability, lower frictional contact and lower operator interference. Theoretically there is no limit as far as the wire material or wire diameter is concerned to be drawn on these machines.

This machine has a sensor roller between the drum and the next die such that the wire passes in contact with this roller. These rollers have sensors to detect the position of the arm and maintain tension on the wire by regulating speed of the drums. The drums of this machine are inclined to the vertical axis to effect fill on the drums. Principally this machine is best suited for thick wires.

### **Features of Straight Line Wire Drawing Machine:**

- Machines are built on modular structure, in combination of Blocks and do not require any special foundation.
- Better productivity due to higher drawing speeds, twist-free operation & better cooling.
- Easy operation and faster threading.
- High pressure Narrow gap, internal water cooling for high efficiency cooling of wire.
- High degree of reliability, low downtime due to lower no. of wear parts.
- Much better finish wire quality due to a gentler handling of the wire during the drawing process (less wire deviations, low torsion etc.) as well as an optimized wire cooling.
- Highly effective pneumatic braking system in case of emergency.
- Better environmental conditions due to increased dust protection.
- Greater flexibility and lower current consumption due to modern AC drive technology and efficient power transmission system.
- PLC based control with Profibus digital communication and fault diagnostic system.

### **Optional Fitment:**

- Stripper Block
- Rotating Die Boxes
- Motorized Soap Applicator Die Boxes
- Die less drawing trough Rolling Cassette
- Laser wire diameter measurement system

- Dust Suction System
- Online Modem based PLC support

#### Special Features

- No slip and No twist Drawing → to obtain high quality Wire
- Limited Dancer / Tuner roller → High responsive support for high speed wire drawing.
- Full Dancer Arm → Controlled response for high speed Fine wire drawing.
- AC Inverter driven, Motor → Low inertia constant HP motors and sturdy drive for smooth working and Low Power consumption.
- Heavy Duty European Helical Gear Box → Employed to transmit heavy Torque with high efficiency. Bearings continuously lubricated.
- Induction Hardened Special alloy Forged Blocks → Build for High wear resistance and max heat transfer.
- High efficient Wide Gap turbulent water cooling → Special Jacket arrangement facilitating water turbulence to obtain maximum Heat transfer.
- External Air Blast cooling system → Additional Air blast surrounding the Drum through the State of the art intricate Sump.
- Cassette Die Box mechanism → Sturdy, High pressure design for better Die cooling.
- Brakes for the OTO Block and the Last Block → to facilitate stopping of the machine.
- DIN 800 Spooler - 1 tons Capacity → Heavy Duty, designed for high speed wire collection at 20 M/sec.
- In house built efficient electronic Programming → Proven Machine logics, efficiently programmed considering all the constraints of the Drawing operation.

TECHNICAL DATA- WIRE DRAWING MACHINES								
Block Dia	250	350	450	550	600/650	750		
High Carbon inlet wire size-mm	2.2	3	3.5	5.5	6.5	8		
Low Carbon inlet wire size-mm	2.5	3.5	4.5	6.5	8	10		
Machine Speed – M/sec	20	20	20	16	16	10		