

TECHNICAL SPECIFICATION

Equipment Name: 12T HYDRAULIC HORIZONTAL WAX INJECTION MACHINE

Model No : WIM – P12A

Application: This is a Hydraulic, 4-pillar, down-stroking, vertical clamping, horizontal injection wax injection machine, with an automated operations.

Specifications and Salient Features:

- **Type** : Hydraulic, 4-pillar construction, vertical clamping, horizontal injection, Semi automatic operation.
- **Press** :
 - Press Design : 4-pillar, down-stroking hydraulic press
 - Clamp Force : 0-12 tons max.
 - Clamp Speed : 20mm/sec closing & 30mm/sec. opening
 - Daylight max. : 400 mm
 - Daylight min. : 100 mm.
 - Platen working area: 400mm X 400mm.
 - Die mounting holes : M8 — 75mm X 75mm grid.
 - Work table : 400 mm deep X 900 L mm
 - MOC : Work table MS
 - Work table height : 980 mm from floor

▪ Hydraulic Systems :

- Hydraulic Pumps : Polyhydron / yuken make. 210 bar max.
- Hydraulic Reservoir : 125 Lts. Max.
- Hydraulic controls : Polyhydron / Yuken make solenoid operated hydraulic control valves, with international standard, Cetop 03 sub-plate mounted, stackable modular controls.
- Motor : 5 Hp, 1440 rpm, Crompton Greaves / Siemens
- Oil Filter & breather : Hydrolin / Hydex make.
- Pressure Gauges : Glycerin filled – MASS / equivalent make.
- Cylinder seals : Polyurethane seals with pressure ring and bronze filled teflon wipers.
- Hoses : Gates make , flame resistant hoses.

▪ Injection System :

- Nozzle Tip : Spherical radius R-10mm.
- Nozzle Height : Adjustable on the Z-axis. Stroke 150mm
- Nozzle movement : The Nozzle movement on the X – axis. Hydraulically operated.
- Injection Pressure : Settable, range 0-40 Kg/ sq.cm
- Injection Rate : 0-10 lpm.
- Injection Dwell Time : Settable, range 0- 999 seconds.
- Wax Reservoir : Capacity 35 Lts. The tank is heated with heaters of reputed make. The tank is insulated on all sides with ceramic fiber and clad with powder coated steel sheet for protection. The temperature is PID controlled.
- Stirrer : Provided with an MS stirrer that ensures thorough turnover of the wax. Stirrer – 40rpm.
- Stirrer drive : 1/4th hp. REMI / Bonfiglioli make geared motor.
- Single shot size : 5000 cc.

- **Instrumentation & Controls:** The operation control switches and temperature controllers are housed in a control panel located in front of the machine and are easy to reach and operate.
 - Control Panel : Provided with 3 phase mains indicators, Power On/Off switch, Fuses, Neutral link, Motor starter's with over current protection & digital temperature controllers. All components of reputed make such as L&T or equivalent are used. The panel is designed with separate power & control circuits.
 - Temperature : Temperature control is fully automated. Temperature of tank, injection magazine, injection cylinder and nozzle are independently controlled by separate Digital temperature controllers with separate temperature sensors. The Digital temperature controllers are of the reputed SELECTRON make.
 - Operation : Dual modes of control are provided. A selector switch allows auto / manual operation modes.
 - Auto-cycle : Push to start Clamp down – Suction of wax - Nozzle forward – Injection – Nozzle Return – Declamp – Surplus wax to tank. The entire injection cycle is automated with the use of PLC. Process sensors like Photocells, Pressure switches and Proximity sensors are used appropriately at all points to smoothly regulate the injection cycle.
 - Manual mode : The cycle can be run manually by working the ergonomically positioned selector switches on the control panel.
 - Emergency : An emergency switch is provided to completely shut-off the machine.
 - Total Power : 6 Kw.

