



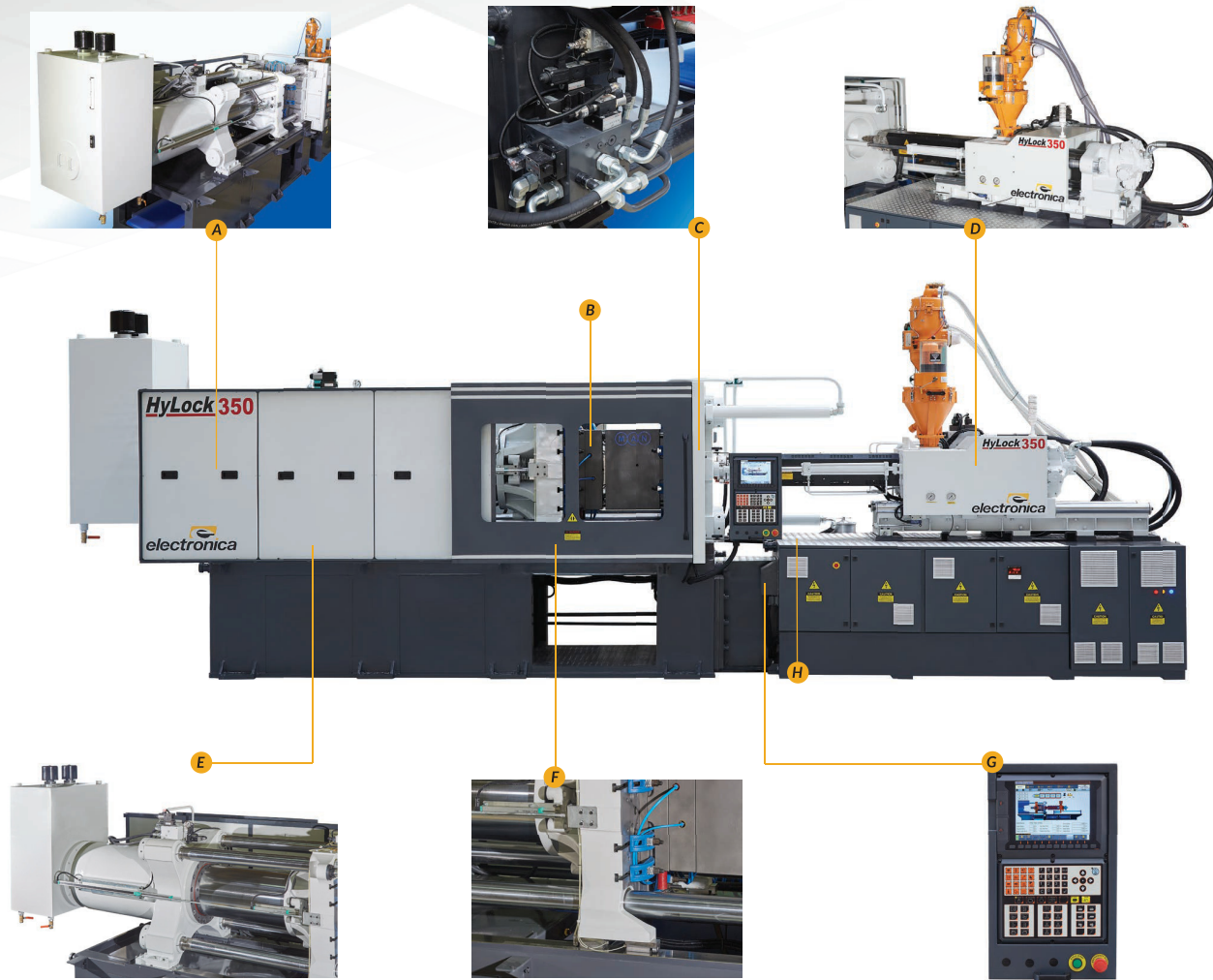
# **HyLock Series**

*Servo Hydraulic Injection Moulding Machine*



- High Performance
- High Productivity
- High Energy Efficiency
- High Precision & Consistency
- Strong & Robust Design

  
**electronica**  
Plastic Machines



**A Advanced & Latest Clamp Design**

- Large Capacity Separate Prefill Tank.
- Fast Tonnage build up and Actual Tonnage Display on screen.
- Twin Traverse Cylinders for fast mold open / close operations.
- Multipoint Ejection (Knock Out) for uniform force distribution.
- T-Slot as well as Tap Holes on Moving & Stationary platens.

**B Generous Mold Space for Accommodating Large Molds**

**C Hydraulics**

- Ergonomically designed easy to access and easy to service hydraulic circuit design.
- Valves placed near to the actuators for fast response.
- Servo motor driven Internal Gear Pump.
- Fast responding multi check hydraulic door safety inter lock.
- Continuous Oil Filtration with 10 Micron filter.

**D Twin Cylinder Balanced Injection Unit**

- Wide choice of Injection Units with proven screw geometry.
- 7 Stage Injection Speed & Pressure Control & 4 Stage Hold-On Control.

**E Large Diameter Hydraulic Ram**

- Headless Hollow Large Ram diameter with latest Oil sealing system.
- Provides Uniform Clamping force distribution.
- Ensures Mold Squareness & Parallelism.

**F Wide & Strong Moving Platen Support**

- Four-point Precisely Adjustable Moving Platen Supports.

**G Advanced & User-Friendly Control**

- PC Based Control with high response time - Linux Kernel Base.
- 10.4" TFT Color Display with Alpha numeric key pad.
- Easy & Direct Access to Menu keys.
- Graphical Presentation of Various Machine Parameters.
- Ethernet Module for access through PC.
- Printer Interface with USB Port.
- Auto shut down based on Pre-set Time.
- Central Monitoring through LAN & Industry 4.0 compatible.

**H Temperature Control**

- Temperature Auto tuning through controller with Heater Failure Alarm.
- Close loop PID control.
- Individual Zone Current Display.

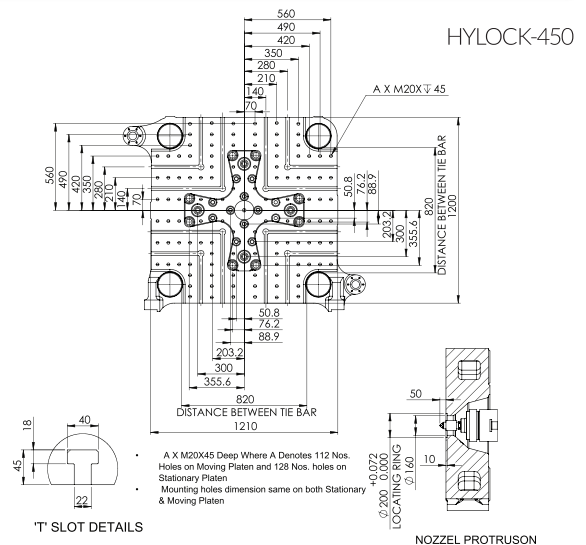
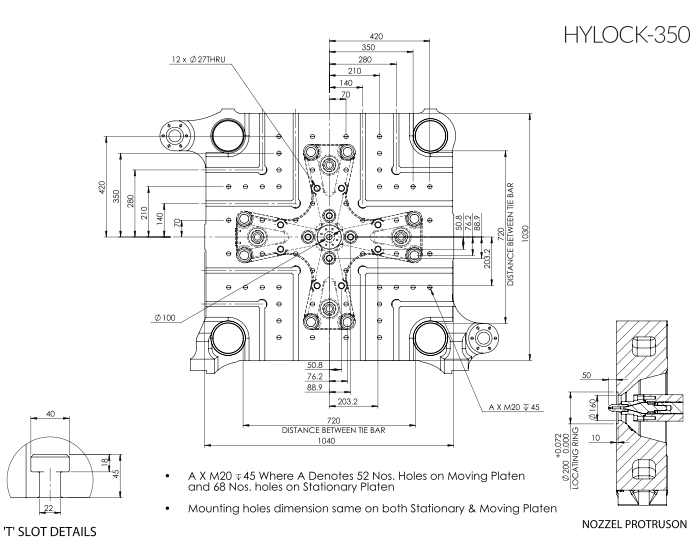
**Ejector**

- Multipoint Ejection (Knock Out) for uniform force distribution.
- Linear Transducer for accurate Ejector position control.
- Pulsating as well as Ejector Hold function.

# Technical Specifications:

Model		HyLock 350-IU 363 SERVO			HyLock 350-IU 400 SERVO			HyLock 450-IU 360 SERVO			HyLock 450-IU 405 SERVO		
Clamp Force	Ton	350			350			450			450		
Clamp Stroke	mm	1100			1100			1100			1100		
Distance bet Tie Bars	mm	720 x 720			720 x 720			820 x 820			820 x 820		
Mould Height (Min-Max)	mm	300/600*			300/600*			350 / 800*			350 / 800*		
Maximum Daylight	mm	1400/1700*			1400/1700*			1450 / 1900*			1450 / 1900*		
Platen Size (HxV)	mm	1030 x 1030			1030 x 1030			1200 x 1200			1200 x 1200		
Tie Bar Diameter	mm	125			125			140			140		
Ejector Stroke	mm	200			200			200			200		
Ejector Force	Ton	11.4			11.4			11.4			11.4		
<b>Injection unit Number</b>		2821			3705			IU-3025			IU-4020		
Screw Version	-	A	B	C	A	B	C	A	B	C	A	B	C
Screw Diameter	mm	70	75	80	75	80	85	70	80	90	80	90	100
L/D Ratio	-	21.4	20	18.8	23.5	22	20.7	25	22.5	20	24.8	22	19.8
Stroke Volume	cm <sup>3</sup>	1396	1603	1824	1786	2010	2269	1385	1810	2290	2036	2576	3181
Injection Weight max (GPPS)	grams	1326	1523	1733	1676	1909	2155	1316	1719	2176	1934	2448	3022
Injection Rate	cm <sup>3</sup> /sec	327	375	427	358	407	459	433	566	716	478	605	747
Plasticising Rate (GPPS) @ max speed	g/sec	60	64.5	68.9	53	56.2	60.1	80	100	115	100	115	140
Screw Stroke	mm	363	363	363	400	400	400	360	360	360	405	405	405
injection Pressure	Bar	2020	1760	1547	2098	1844	1633	2182	1671	1320	1975	1560	1264
Screw Speed	RPM	166	166	166	136	136	136	195	195	195	155	155	155
<b>General</b>													
Servo Power unit (KW)	kw	67.0 (45.5)	67.0 (45.5)	67.0 (45.5)	67.0 (45.5)	67.0 (45.5)	67.0 (45.5)	67.0 (45.5)	67.0 (45.5)	67.0 (45.5)	67.0 (45.5)	67.0 (45.5)	67.0 (45.5)
Heating Capacity	kw	21	21	21	30	30	30	30	30	30	41.5	41.5	41.5
Connected Load	kw	88.0 (66.50)	88.0 (66.50)	88.0 (66.50)	97.0 (75.50)	97.0 (75.50)	97.0 (75.50)	97.0 (75.50)	97.0 (75.50)	97.0 (75.50)	108.5 (87.0)	108.5 (87.0)	108.5 (87.0)
Oil Tank Capacity	litrs	1400	1400	1400	1400	1400	1400	1600	1600	1600	1600	1600	1600

\* With Ram Spacer



## Clamping Unit

- Advanced Clamping Design.
- Generous mold space for accommodating large molds.
- Headless Hollow Large Ram diameter with latest Oil sealing system.
- Fast Tonnage build up and Actual Tonnage Display on screen.
- Twin Traverse Cylinders for fast mold open / close operations
- Conical Tie Rod Nuts.
- Four Point Precisely Adjustable Moving Platen Supports.
- 5 Stage Proportional Speed Control for Opening and Closing.
- Linear Position Transducer for Accurate Clamp Position Control.
- T-slot as well as Tap Holes on Moving & Stationary platens.

## Injection

- Twin Cylinder Injection Unit Design.
- Wide Choice of Injection Units with proven screw geometry.
- 7 Stage Injection Speed & Pressure Control & 4 Stage Hold-on Control.
- PID controlled Injection Barrel Ceramic Heater bands.

## Controls

- PC Based Control with high response time - Linux Kernel Base.
- Backup of complete Parameters & I/O Mapping can be taken in USB Pen drive.
- 10.4" TFT Color Display with Alpha numeric keypad.
- Configurable multilevel password for Operator, Manager, OEM & System.
- Temperature Autotuning through controller with Heater Failure Alarm.
- Easy swapping of Digital Inputs & Outputs, Analog I/O, T/C, through the controller display with diagnosis.
- Electrical Cabinet temperature indication on screen.
- Display of Energy Consumption in kWh for last 24hrs. or for 365 days with RS485 enable energy meters.
- Production history on Per Hour Basis for 365days in Tabular form as well as Histogram.
- Unlimited Mold Data Storage. Also, Backup in pendrive possible.
- SPC Monitoring for more than 30 process parameters with High-Low tolerance band with Alarm / Warning function selection.
- Last 2000+ shots history for process parameters with Graph.
- Log Menu for last 200+ setpoint changes, with Time & Date.
- Mold Open / Close Velocity & Pressure Graph.
- Injection Pressure & Velocity Graph. Back Pressure Graph.
- Process parameters settable in absolute values also, i.e. Pressure in Bar, Speed in mm/s, Screw Rotation in RPM, etc.
- Ethernet Module for access through PC. Printer interface with USB port.
- Machine Maintenance scheduling.
- Auto shut down based on Pre-set Time.
- Central Monitoring through LAN & Industry 4.0 compatible.
- Other Optional programs like Mold Gate Valve, Accumulator, Nozzle Shut Off Valve, Sequential Valve Gate, Mold Spray Alarm, etc. are available as a standard scope of supply.

## Nationwide Sales & Service Network

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