

GLOBAL PRESENCE



Since : 1993

GHANSHYAM ENGINEERING CO.

AN ISO 9001 : 2008 Certified Company

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Technology for
HIGH PRODUCTION
Hydraulic Injection Moulding Machine



Since : 1993



PrintDoodles- 8511156950



High Performance Delivered

NEO SMART

Hydraulic Injection Moulding Machine

50 to 185 Ton

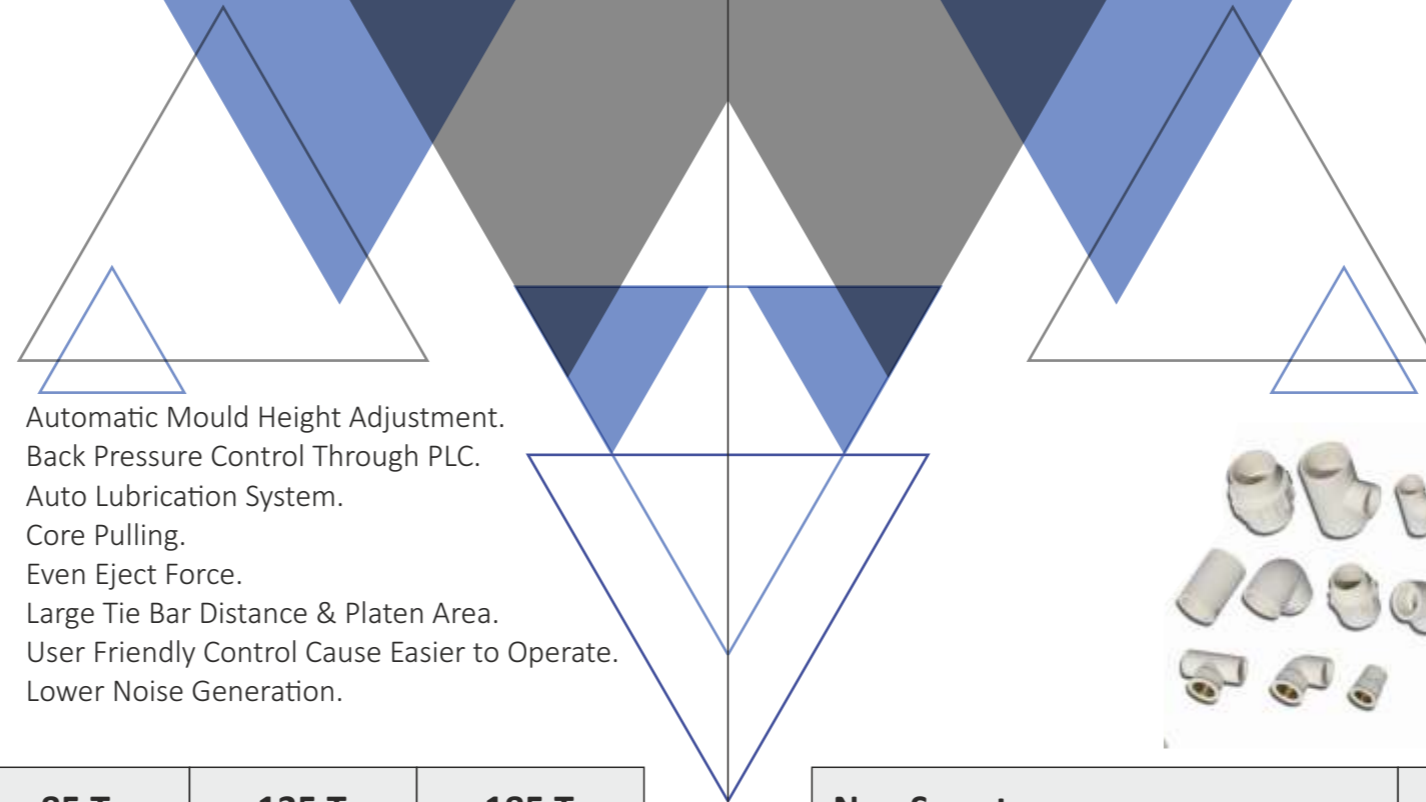


NEO Smart

Salient Features & Specification

- Save the Power Consumption up to 30 to 80%
- Rigid 5 Point Toggle Mechanism
- Micro Processor Controller
- Short Cycle time.
- High Precision Moulding.
- Five Stage Injection Pressure / Speed System.
- Hydraulic Electrical & Mechanical Safeties.
- Radial Piston Hydro Motor.

- Automatic Mould Height Adjustment.
- Back Pressure Control Through PLC.
- Auto Lubrication System.
- Core Pulling.
- Even Eject Force.
- Large Tie Bar Distance & Platen Area.
- User Friendly Control Cause Easier to Operate.
- Lower Noise Generation.



Neo Smart		50 T	85 T	135 T	185 T								
Clamping Unit													
Clamp Force	ton	50	85	135	185								
Clamp Stroke	mm	275	350	425	500								
Maximum Daylight	mm	550	700	850	1000								
Min. Mould Height	mm	100	150	180	210								
Max. Mould Height	mm	275	350	425	500								
Platen Size HxV	mm	450	550	650	750								
Dist. Bet. Tie Bar HxV	mm	275	350	425	500								
Ejector Stroke	mm	60	75	90	110								
Ejector Force	ton	2.5	2.5	3.5	3.5								
Injection Unit													
Screw Dia	mm	25	30	35	35	40	45	45	50	55	50	55	60
L/D Ratio		21.2	17.6	15	20	17.5	15.5	21	19	17.2	21.4	19.5	17.5
Screw Stroke	mm	110	110	110	140	140	140	180	180	180	220	220	220
Inj. Capacity (GPPS)	gms	40	60	85	105	140	175	250	310	380	365	440	525
Injection Pressure Max	bar	2242	1556	1143	1512	1157	914	1555	1260	1041	1524	1260	1058
Theoretical Displacement	cc	49	70	96	120	157	198	286	353	427	412	498	593
Power Unit													
Induction Motor	kw/hp	5.5/7.5		7.5/10		11/15		15/20					
Servo Drive	kw	8.8		8.8		15.4		18.8					
Total Heat Capacity	kw	5.0		6.5		8.6		10.5					
Connected Load	kw	14.0		15.5		24.0		29.5					
General Data													
Total Oil Capacity	Ltr.	150		210		300		370					
Machine Dimension LxWxH	mm	3900x1100x1800		4700x1200x1900		5850x1270x2180		6600x1360x2280					
Machine Weight (w/o oil)	Kg.	2350		3300		5000		5900					

U-PVC/C-PVC

Salient Features & Specification

- Adjustment for Precise & Consistent Tonnage.
- Knock out Bar for Multipoint Ejection.
- Higher Mould Weight Capacity.
- Closed Loop PID Temperature Controller.
- Excellent Melting Homogeneity.
- High Speed Micro Processor.
- Nozzle Tip with Taper Profile.
- Free Flow Design with Excellent Shot Repeatability.

Neo Smart		135 T	185 T		
Clamping Unit					
Clamp Force	ton	135	185		
Clamp Stroke	mm	425	500		
Maximum Daylight	mm	850	1000		
Min. Mould Height	mm	180	210		
Max. Mould Height	mm	425	500		
Platen Size HxV	mm	650	750		
Dist. Bet. Tie Bar HxV	mm	425	500		
Ejector Stroke	mm	90	110		
Ejector Force	ton	3.5	3.5		
Injection Unit					
Screw Dia	mm	55	60	60	70
L/D Ratio		18	16.5	18	15.5
Screw Stroke	mm	180	180	220	220
Inj. Capacity (GPPS)	gms	550	650	750	1000
Injection Pressure Max	bar	1555	1260	1524	1260
Theoretical Displacement	cc	286	353	412	498
Power Unit					
Induction Motor	kw/hp	11/15		15/20	
Servo Drive	kw	15.4		18.8	
Total Heat Capacity	kw	8.6		10.5	
Connected Load	kw	24.0		29.5	
General Data					
Total Oil Capacity	Ltr.	300		370	
Machine Dimension LxWxH	mm	5850x1270x2180		6600x1360x2280	
Machine Weight (w/o oil)	Kg.	5000		5900	

Clamping Unit

- Heavy duty 5-point double toggle mechanism with large mould opening stroke.
- High wear resistance & high strength gear nut (tie bar nut) gives rigid & positive clamping force.
- High stiffness platen design with large mould mounting area.
- Five stage mould close / open speed & pressure.
- Computer aided design toggle mechanism gives optimal mould closing and opening speed profits.
- Multi stage digital speed and pressure setting to operate the mould.
- Linear transducer for accurate clamp position.
- Mould protection with repeat again option.
- Hard-chrome plated high-tensile steel tie-bars with stress relieve design.
- Auto-mould height adjustment with hydraulic motor.
- Hydraulic ejector with multiple selection.
- Auto-lubrication based on shot adjustment.
- Linear transducer on ejector cylinder.
- Platen casting design with finite element analysis for maximum rigidity.
- Hydraulic & electrical safety interlocks during moving platen movements for moulds & operator safety.
- Mould platen with t-slots (135 Tons & above).
- All casting passed through strict ultrasonic test and tensile testing process.
- Separate pressure & speed setting for mould set-up.
- High wear resistant skate-pad for heavy mold loading.
- Core pulling system.

Hydraulic System

- Energy efficient variable displacement pump and servo control system.
- Direct reading hydraulic pressure.
- Compact, easily accessible injection and clamping valves to minimize the heat generation.
- Contamination free oil tank with feeler cum-breather.
- Provides high safety as main motor shuts down on opening rear gate.
- Hydraulic directional valve on/ off indicator connector.

Advantages & Features



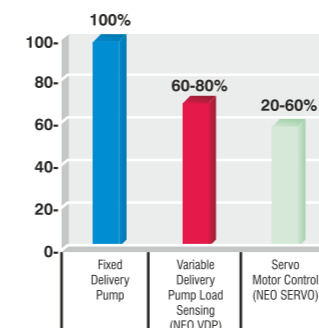
Injection Unit

- Gas nitride hardened screw and barrel, for wear resistance and long life.
- Screw for homogenous plasticizing with modern design.
- Screw back pressure with pressure gauge provision.
- High torque hydraulic motor for better plasticization.
- 5-stage injection speed pressure & position control.
- 3-stage injection holding speed pressure & position control.
- Hopper sliding arrangement for material removal.
- Intrusion moulding program.
- Selection of injection time & position both.
- Pre-suck back function and after plasticizing suck back.
- Heater failure & thermocouple failure detector.
- High / low temperature alarm. (suitable low-high limit)
- Linear potentiometer for injection / plasticizing.
- Auto purging facility.
- Ceramic bands heaters for instant heating.
- Barrel heater safety cover.

Control System

- Energy meter.
- Multi password facility for operators.
- M.C.C.B. Operating Mechanism.
- SMPS- Switched Mode Power Supply gives linear power supply.
- Star delta motor starter.
- M.C.B. for each heating zone.
- PID temp controller for accurate control.
- Dedicated microprocessor control system with led input/ output indicator for simplified checking
- MPCB for motor protection.
- Pressure & flow for each function control by Microprocessor.
- Linear scale for injection, clamping & ejector cylinder.
- Alarm history page.
- Production / hour in vertical-bar for year.
- Easy export/ import of mould & machine data.
- Hourly energy consumption statics page (Product cost calculator)

Advantage to Use SERVO PUMP



Safety Features

- Electric Safety on both front & rear door.
- Magnetic grills in hopper.
- Provision for M.C.C.B.
- Over load circuit breaker.
- Under voltage-over voltage protection.
- Reverse phase, single phase protection.

PLASTIC DISCHARGE FACTORS AT MELT TEMP.		
Types of Plastics	Discharge Factors	Melt Temp. C
ABS	0.92	240
ABS / PC	0.95	260
PA 6	0.96	260
PA 66	0.96	280
PA 66 GF 35	1.15	280
PBT	1.07	260
PBT GF 30	1.36	260
PC	1.04	300
PC GF 30	1.30	300
PC / PBT	1.04	265
PE-HD	0.72	220
PE-LD	0.70	220
PET	1.10	260
PMMA	1.04	240
POM	1.15	220
PP	0.73	220
PP T 20	0.87	230
PS	0.95	220
PVC	1.12	200
SAN	0.95	240
TPE-S	0.98	210
TPE-U	0.99	200
TPE-V	0.72	210