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Aiming **Innovation** in Motion



mfg.  
injection  
moulding  
machine

**PARTH ENGINEERING WORKS**

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## ABOUT US

At Parth Engineering Works, we have created a work culture where precision meets innovation in the world of Injection Moulding Machine manufacturing. As a leading force in the industry, we take pride in our commitment to delivering top-notch engineering solutions.

We began our journey in 2003. In a couple of years, we expanded with the introduction of Injection Moulding Machines, ranging from 10 to 30 tons. And now we have expanded our product line 60 to 350 tons.

Currently, we are offering state-of-the-art toggle type and ram type injection moulding machines, namely SUPER SERVO of 60-350 tons & VDP SEPER PLUS of 60-180 tons.

In near future, we are planning to introduce two platen injection moulding machines to meet the diverse needs of plastic product manufacturers.

Our machines are crafted with precision and efficiency in mind, ensuring optimal performance and reliability. From small-scale production to large-scale manufacturing,

## OUR TEAM

The team at Parth Engineering Works is a dynamic and skilled group of professionals who bring a wealth of expertise to the table. Committed to excellence, our team is the backbone of our success, ensuring that every aspect of our operations meets the highest standards. Here's a glimpse into the abilities of our talented team

## STRENGTH

- QUALITY ASSURANCE
- INNOVATION AND TECHNOLOGY
- CUSTOMISATION
- GLOBAL REACH
- CUSTOMER SUPPORT
- COMPLETE CUSTOMER SATISFACTION



more than  
**1500**  
machines  
are running  
successfully



CERTIFICATE



AUTOMOTIVE

UPVC / CPVC

TOYS | AGRICULTURE

ELECTRIC | ELECTRONIC

HOUSEHOLD | FURNITURE

MEDICAL INDUSTRY

PACKAGING

## SUPER SERVO

60 to 350 TONS

Energy Efficient Saves  
30% to 50%

Faster Response Towards  
Hydraulic System

Precise and Faster Response

Reduced Heat Generation

## SUPER PLUS

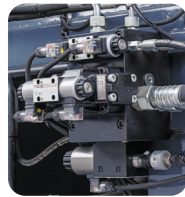
60 to 180 TONS

Energy Efficient Saves  
20% to 30%

Improved System Response

Durable Performance  
in High Pressure

Easy to Maintenance



### HYDRAULIC SYSTEM

- High Performance and Quick Response.
- Hydraulic Directional Valve With Led Indicator Connector.
- Hydraulic Clamp Sefty With Spool Monitoring Inductiv Switch Safety Valve.
- Digital Back Pressure Proportional Control Through PLC.



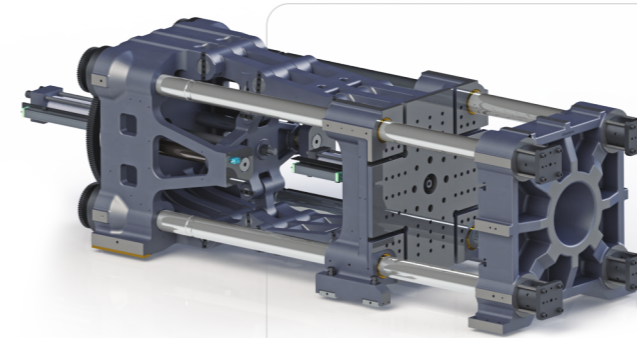
### AUTOMATIC LUBRICATION

- Circulatory Lubrication System Can Distribute Oil / Grease Equally.
- Reduce Friction And Enhance Toggle Lifetime.
- Auto Lubrication Based Shot Adjustment.



### SCREW & BARREL

- Gas Nitrided Injection Screw & Barrel For Long Life.
- Improved Product Quality.
- New Universal Screw And Barrel Unit.
- The Plasticizing Efficiency And Quality Are Enhanced To Meet Customer Needs.
- Fast Plasticization And Good Color Mixing And Easy Cleaning.
- Special Screw Design.



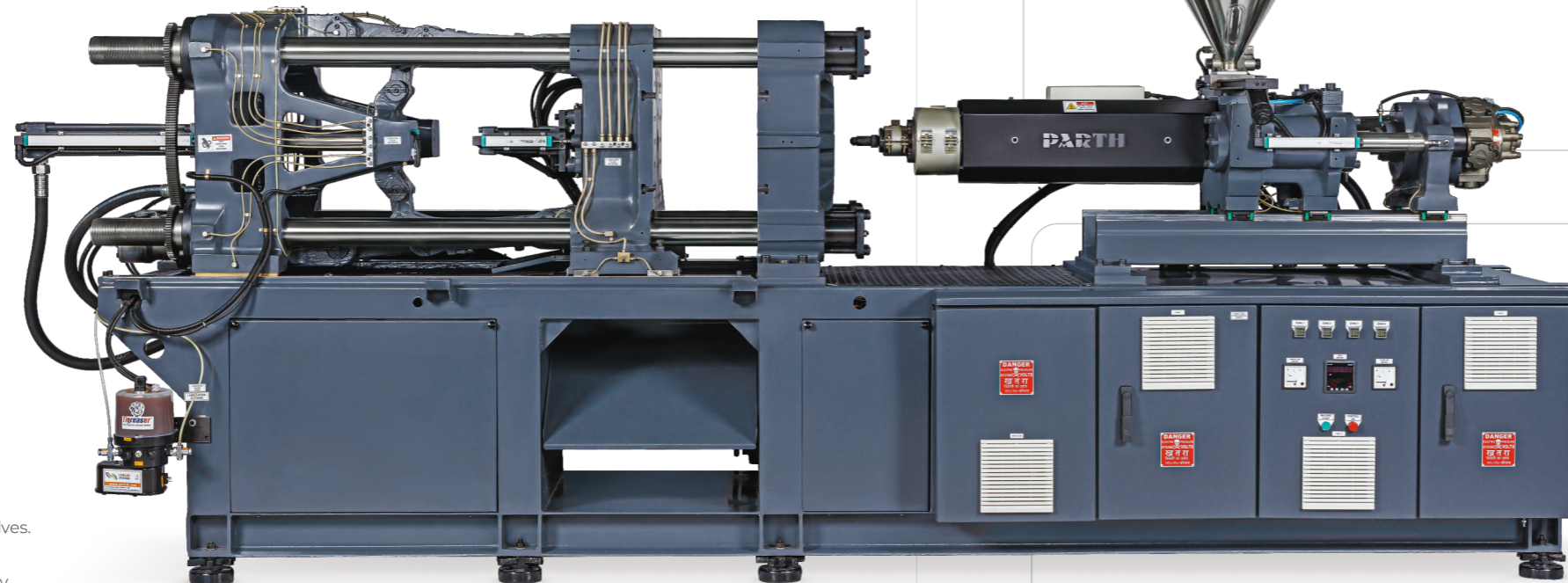
### CLAMPING UNIT

- Durable Twin Toggle Five Point Design.
- Uniform Stress Molding Technology.
- Combination Of T-slots And Bolt Holes.
- High Speed Clamping Structure.
- Platens With Euomap Standard.
- Auto Lubrication For Toggle Components.
- Rigid & Reliable Clamping Unit.
- Accurate Mold Protection.



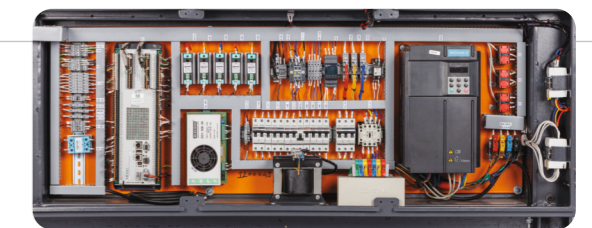
### HMI

- 8" TFT Color LCD With Independent CPU Control.
- 100 Mould Data Storage\*.
- Automatic Tuning Of Pid Settings For Barrel Temperature Control.
- Automatic Calibration Of Sensors And Valves.
- Statistical Process Control (SPC).
- Self Diagnostics & Fault Finding Capability.
- Parameter Entry In Absolute Value.
- Direct Access Menu Keys.



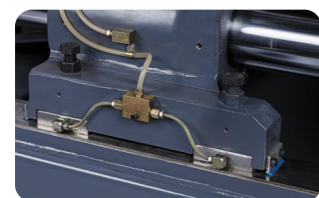
### INJECT UNIT

- Twin Cylinder Injection Unit.
- Uniform Lode Distribution Across Screw Area.
- Integrated Linear Guid Rail Structure For Screw And Barrel Alignment.
- Nozzle Forward Controlled By Pressure Sensor.
- Durable Ceramic Insulated Heater Bands.
- High Torque And Low Noise Hydro Motor.
- Screw Speed Detection.
- Cooling Temperature Control System For Barrel Outlet.



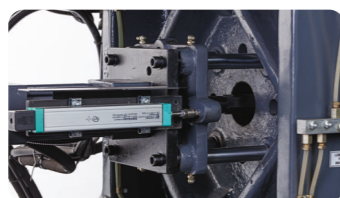
### ELECTRICAL PANEL

- High Quality Electrical Components .
- Easy In Maintenance.
- Over Voltage Under Voltage Protection.
- Phase Sequence Protection.
- All Types Of Control Protection With Earth Fault.
- Overload And Short Circuit Protection.
- 440v To 230 Vac Components Protected By Isolation Transformer.
- Ingress Protection IP-54.



### WIDE SKATES FOR PLATEN

- Reduced Platen Deflection.
- Enhances Tiebar Life.
- Highr Mould Weight Carrying Capacity.
- Anti Wear Sintered Layer Material .



### EJECTOR

- Multi Stage Ejection.
- Euomap Type Ejector Design.
- Optimized Ejection Mechanism.
- Multiple Ejection Point For Parallel Force Distribution.



### MOULD HIGHT MECHANISM

- Easy Auto Mould Height Function In Control Screen.
- Accurate Mould Height Adjustment With Sun Gear Mechanism.



### SERVO SYSTEM

- Faster Response Towards Hydraulic System.
- Low Noise Level.
- Precise And Faster Response.
- Reduced Heat Generation.
- Optimized For Precise Mold Open And Mold Close Function.



### VDP SYSTEM

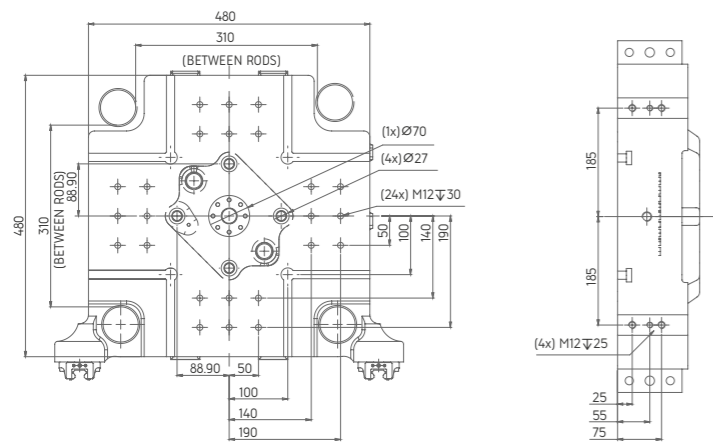
- Improved System Response
- Durable Performance In High Pressure
- Easy To Maintenance
- Lower Oil Heat Generation
- Enhanced Oil & Hydraulic Seal Life
- Less Cooling Water Consumption



### GRAPHITE IMPREGNATED BUSH

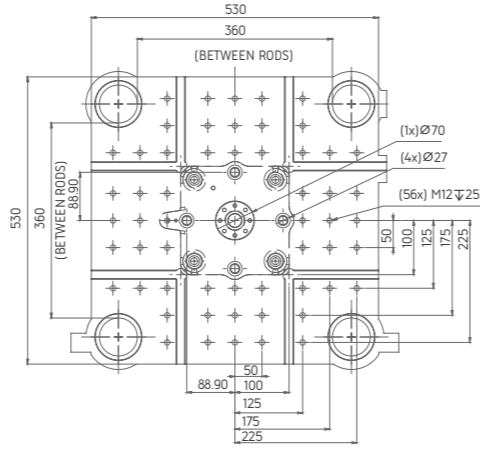
- Graphite Is A Solid Lubricant, Offering
- Excellent Self-lubricating Properties.
- High Temperature Resistance And Low Friction And Wear.
- Increased Toggle Lifespan.
- Require Less Lubrication.





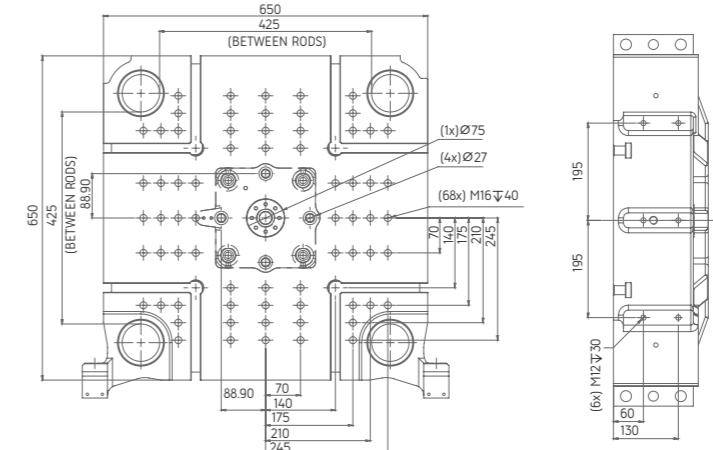
**60 TON MOVING PLATE**  
STATIONARY PLATEN  
Ø110 (+0.04/-0.0) WITH LOCATING RING

ROBOT MOUNTINGS  
ON FIXED PLATEN



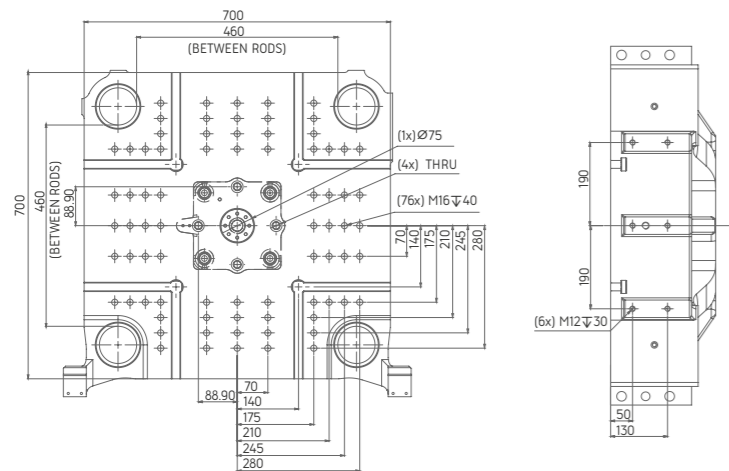
**90 TON MOVING PLATE**  
STATIONARY PLATEN  
Ø110 (+0.04/-0.0) WITH LOCATING RING

ROBOT MOUNTINGS  
ON FIXED PLATEN



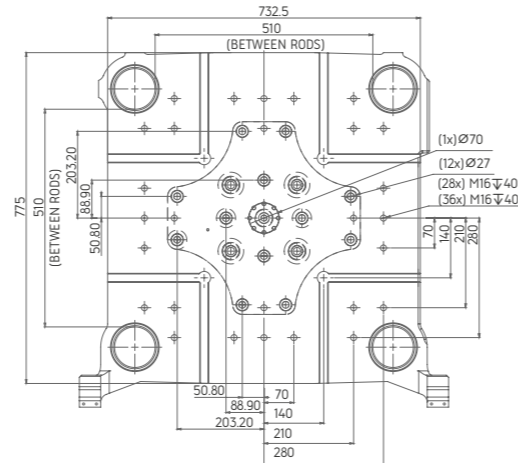
**120 TON MOVING PLATE**  
STATIONARY PLATEN  
Ø100 (+0.04/-0.0) WITH LOCATING RING  
Ø125 (+0.04/-0.0)  $\nabla$ 10 (+0.10/-0.0) WITHOUT LOCATING RING

ROBOT MOUNTINGS  
ON FIXED PLATEN



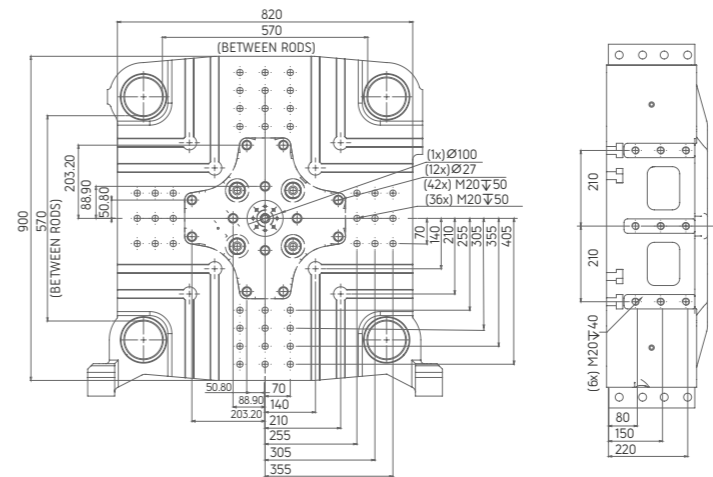
**150 TON MOVING PLATE**  
STATIONARY PLATEN  
Ø125 (+0.04/-0.0) WITH LOCATING RING

ROBOT MOUNTINGS  
ON FIXED PLATEN



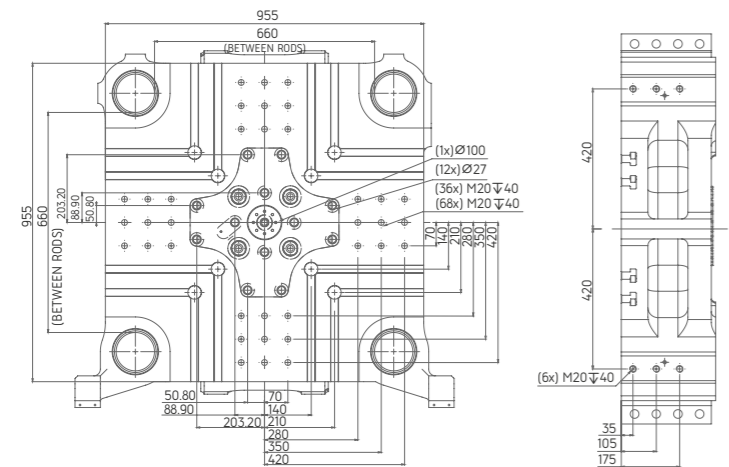
**180 TON MOVING PLATE**  
STATIONARY PLATEN  
Ø125 (+0.04/-0.0) WITH LOCATING RING  
Ø160 (+0.04/-0.0)  $\nabla$ 10 (+0.10/-0.0) WITHOUT LOCATING RING

ROBOT MOUNTINGS  
ON FIXED PLATEN



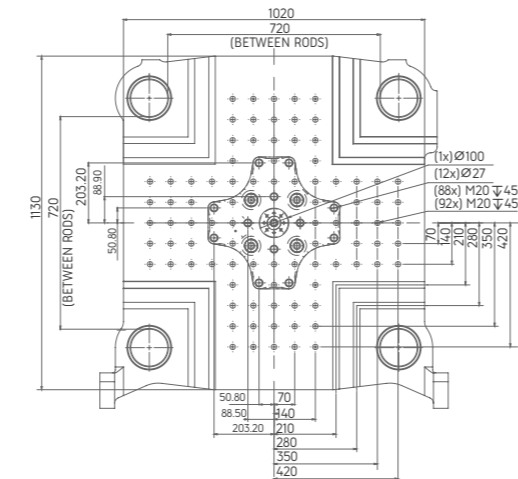
**220 TON MOVING PLATE**  
STATIONARY PLATEN  
Ø125 (+0.04/-0.0) WITH LOCATING RING  
Ø160 (+0.04/-0.0)  $\nabla$ 10 (+0.10/-0.0) WITHOUT LOCATING RING

ROBOT MOUNTINGS  
ON FIXED PLATEN



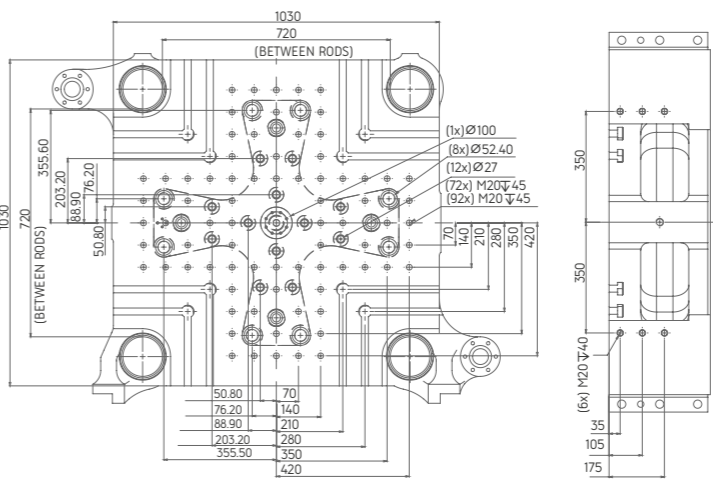
**280 TON MOVING PLATE**  
STATIONARY PLATEN  
Ø125 (+0.04/-0.0) WITH LOCATING RING  
Ø160 (+0.63/-0.0)  $\nabla$ 12 (+0.10/-0.0) WITHOUT LOCATING RING

ROBOT MOUNTINGS  
ON FIXED PLATEN



**350 TON MOVING PLATE**  
STATIONARY PLATEN  
Ø160 (+0.04/-0.0) WITH LOCATING RING  
Ø200 (+0.07/-0.0)  $\nabla$ 10 (+0.10/-0.0) WITHOUT LOCATING RING

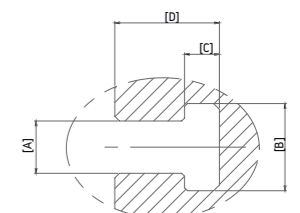
ROBOT MOUNTINGS  
ON FIXED PLATEN



**CL 350 TON MOVING PLATE**  
STATIONARY PLATEN  
Ø160 (+0.04/-0.0) WITH LOCATING RING  
Ø200 (+0.07/-0.0)  $\nabla$ 10 (+0.10/-0.0) WITHOUT LOCATING RING

ROBOT MOUNTINGS  
ON FIXED PLATEN

**T-SLOT DETAILS OF STATIONARY PLATEN AND MOVING PLATEN**



MACHINE	A	B	C	D
60 TON	14	23	9	24
90 TON				
120 TON				
150 TON	18	30	12	36
180 TON				
220 TON				
280 TON	22	40	18	45
350 TON				
CL-350 TON				

SR.NO.	CLAMPING UNIT	STANDARD	OPTIONAL
1	Durable Twin Toggle Five Point Design	●	
2	Uniform Stress Molding Technology	●	
3	High Speed Clamping Structure	●	
4	Platens With Euromap Standard	●	
5	Rigid & Reliable Clamping Unit	●	
6	Accurate Mold Protection	●	
7	Five Stage Mould Close / Open Speed	●	
8	Adjustable 1 Stage Mould Safty Pressure & Velocity	●	
9	Position Based Ramping For Accurate Position Switching, Precise Velocity & Pressure Control	●	
10	Linear Transducer For Accurate Clamp Position	●	
11	Anti Wear Sintered Layer Material For Skates Enhances Tiebar Life	●	
12	Wide Skates For Moving Platen Reduced Platen Deflection	●	
13	Combination Of T-slots And Bolt Holes	●	
14	Auto Lubrication For Toggle Components	●	
15	Easy Auto Mould Height Function In Control Screen	●	
16	Separate Pressure & Speed Setting For Mould Set-up	●	
17	Grease/oil Collection Trays Below Toggle Area And Moving Plate	●	
18	Use Graphite Impregnated Bush Offering Excellent Self-lubricating Properties Increased Toggle Lifespan	●	
19	Hydraulic & Electrical Safety Interlocks During Moving Plate Movements	●	
20	Automatic Centralized Grease Lubrication System 180ton & Above	●	
21	Proportional Valve For Higher Accuracy During Open And Close Function		●

SR.NO	CONTROLLER	STANDARD	OPTIONAL
1	8" Tft Color Lcd With Independent Cpu Control	●	
2	100 Mould Data Storage*	●	
3	Automatic Tuning Of Pid Settings For Barrel Temperature Control	●	
4	Automatic Calibration Of Sensors And Valves	●	
5	Statistical Process Control (spc)	●	
6	Self Diagnostics & Fault Finding Capability	●	
7	Parameter Entry In Absolute Value	●	
8	Direct Access Menu Keys	●	
9	Printer Interface With Usb Port	●	
10	Graphical Presentation Of Last 24 Hours Production	●	
11	Emergency Stop Buttons	●	
12	Disply Of Overall Energy Consumption	●	
13	Heater Failure And Thermocuple Open Detection	●	
14	Auto Heat Startup And Sutdown	●	
15	Accurate Pid Temperature Controller On Screen	●	
16	High / Low Temperature Alarm	●	
17	Extra Electric Power Supply Socket Three Phase For Auxiliary Equipment	●	
18	high Quality Electrical Components	●	
19	All Types Of Control Protection With Earth Fault	●	
20	Overload And Short Circuit Protection	●	
21	440v To 230 Vac Components Protected By Isolation Transformer	●	
22	Ingress Protection Ip-54	●	
23	M.c.b For Each Heating Zone	●	
24	Robot Interface Euromap-12 & 67		●
25	Plc Remote Monitoring For Product Analysis		●

SR.NO	EJECTOR	STANDARD	OPTIONAL
1	Multi Stage Ejection	●	
2	Euromap Type Ejector Design	●	
3	Pilot Operated Check Valve For Ejector	●	
4	2-stage Programmable Forward & Retract Speeds	●	
5	Linear Transducer On Ejector Cylinder	●	
6	Pulsating, Ejector Stroke Up To 20 Strock	●	
7	Hydraulic Core Pull-single	●	
8	Air Eject Double	●	
9	Eject Retract Verification By Limit Switch		●
10	Multiple Two Or More Core Puller		●
11	Air Eject-4 Air Blast		●

SR.NO	INJECTION UNIT	STANDARD	OPTIONAL
1	5-stage Injection Velocity & 5 Stage Injection Pressure Profile	●	
2	5-stage Injection Holding Velocity & Pressure Profile	●	
3	Gas Nitrided Injection Screw & Barrel For Long Life	●	
4	Twin Cylinder Injection Unit	●	
5	Uniform Lode Distribution Across Screw Area	●	
6	Integrated Linear Guid Rail Structure For Screw And Barrel Alignment	●	
7	Nozzle Forward Controlled By Pressure Sensor	●	
8	Durable Ceramic Insulated Heater Bands	●	
9	High Torque And Low Noise Hydro Motor	●	
10	Digital Setting Of Extruder Rpm And Digital Readout Of Actual RPM	●	
11	Cooling Temperature Control System For Barrel Outlet	●	
12	New Universal Screw And Barrel Unit	●	
13	Fast Plasticization And Good Color Mixing And Easy Cleaning	●	
14	Precision Transducer For Injection / Plasticizing Strock Control	●	
15	Cold Start Protection	●	
16	Automatic Purging	●	
17	Barrel Heater Safety Cover	●	
18	Layin Hopper Magnet	●	
19	Digital Back Pressure Proportional Control Through PLC	●	
20	Bi-metallic Screw Barrel For Long Life Span		●
21	High-response Servo Injection System With Accumlator		●
22	Proportional Valve For Higher Accuracy During Injection Short		●

NO	HYDRAULIC SYSTEM	STANDARD
1	Energy Efficient Servo System / Vdp System	●
2	Faster Response Towards Hydraulic System	●
3	Digital Oil Tempreature Through Plc	●
4	Valves Placed Near Actuators For Rapid Response	●
5	Continuous Oil Filtration With Filter	●
6	High-performance Hydraulic Valve	●
7	Lower-noise Hydraulic System	●
8	Hydraulic Directional Valve With Led Indicator Connector	●
9	Hydraulic Clamp Sefty With Spool Monitoring Inductiv Switch Safety Valve	●
10	Return-line Filters With Clogging Indicators Switche	●
11	Hydraulic Circuit Design For Low Pressure Drop	●

