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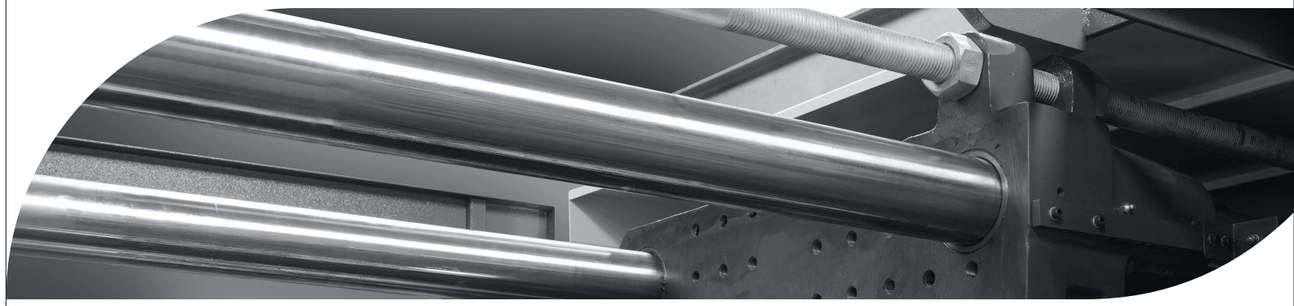
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ESEMPLAST AVINYA

Avinya Machinery International Pvt. Ltd.

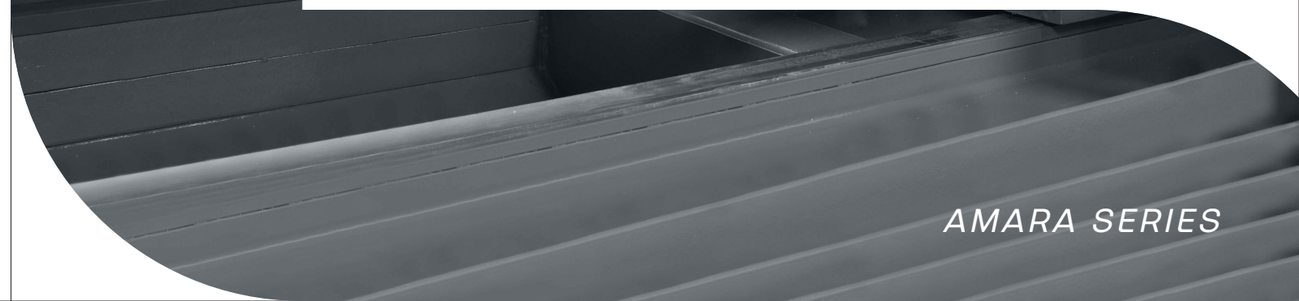
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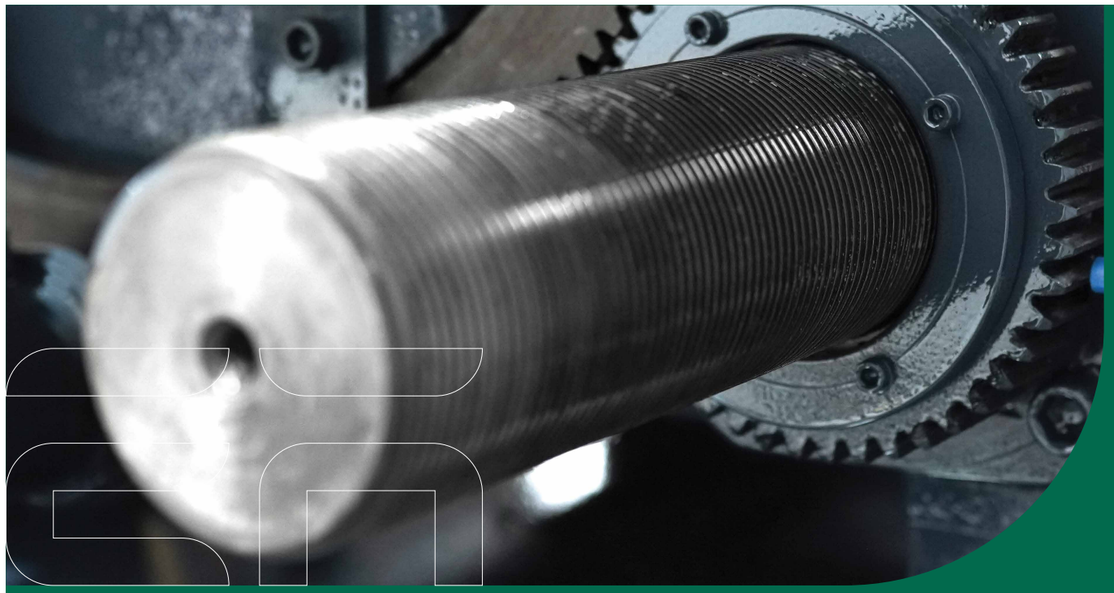


ENGINEERING WITH PRECISION





AMARA SERIES



MORE STABLE & IMPROVED APPLICABILITY

- Improvement of clamping technology: Rigidity of clamping mechanism is increased to apply clamping force uniformly. Boost the central force to increase longevity and dependability.
- Plasticizing and Structure of Injection Units Components: Product defect is decreased by a new liner guide design.
- Control system: New series controller with smoother page switching implemented.
- Offers more specifications, more speed, faster response, and more precise stage control.
- Wider range of product and raw material applications.

MORE ENERGY -SAVING

- Optimised adaptable design of oil valves and control lines reduces pressure loss in the new hydraulic circuit design.
- Optimised injection unit's structure with high pressure liner guiding rails for carriage and injection to reduce resistance and increase energy efficiency. To lessen friction resistance, low friction oil seals are used.
- Upgraded servo system for increased energy efficiency: Use a larger pump in a newer generation of servo systems for faster rotational speeds and less energy usage.

ABOUT US

With a strong foundation of technical expertise and Integrity, we at Esemplast Avinya were incorporated in 1993 with an aim to provide value-adding marvels that can help our esteemed clientele in optimizing production processes. We understand the critical role that advanced machinery plays in modern production and thus we strive to deliver the same. Our team of skilled engineers and technicians work tirelessly to design and manufacture cutting-edge Injection Moulding Machines that meet the highest industry standards. Our machines are built to optimize productivity and reduce downtime. We offer a comprehensive range of models, tailored to meet the diverse needs and requirements of various industries.

WHY US?

ESEMPLAST AVINYA serves plastic industries since the last 30 years. Our values are driven by satisfied customers and growth is recorded by happy smiles.

• MECHANICAL COMPONENTS

All mechanical components like castings, machine parts and mainframe that go into our IMM and IBM are manufactured in fully integrated facilities.

• STRIVE FOR EXCELLENCE

Continuous improvement with customer communication for optimized growth.

• TIE ROD & GUIDE BAR

Generous designed high strength alloy steel with thick hard chrome plated tie bars with collocated bronze bushes provide smooth motion, excellent life and stable operations.

• PROFESSIONAL SERVICES

Prompt and efficient service support.

• OILLESS BUSHES

Self Lubrication graphite non ferrous bushes assure the lower coefficient of the friction and reduces the worn out in the toggle mechanism even after long years of service.

• STRONG FLEXIBILITY

Modular machine design with variable machine configurations.

AMARA T - Machine Specifications

1 Toggle Mechanism
- Robust and rugged toggle mechanism for positive and uniform force distribution

2 Wide Skates for Platen Supports
- Eccentric Roller Bearing Guide for Platen Support
- Reduced Platen Deflection
- Enhanced Life of Tie-Bars
- High Mould Carrying Capacity

3 Generous Mould Space
- Accommodates Large Moulds

4 Advanced User-Friendly Controller
- Ergonomic Layout
- High Speed Microprocessor
- Direct Access Keypad
- Graphical Presentation of Machine Features
- USB Interface



5 Twin Cylinder Injection Unit
- Uniform load distribution across screw centreline

6 Guide Rod Ways
- Hard chromed plated guide rod with Self Lubrication system reduce motion friction
- LM guide Base in the new design increases injection accuracy and enhances plasticizing efficiency

7 Temperature Zone
- Accurate Temperature Control
- Insulated Heater for Energy Savings

8 Multi-Stage Ejection
- Smooth & Fast Ejection
- Easy Access to Ejector Area
- Pulsating Ejector

9 Servo Motor & Drive
- Optimum Energy Savings
- Faster Response Towards Hydraulic System
- Excellent Shot Weight Consistency
- Reduced Noise levels

10 Automatic PLC Controlled Lubrication System
- The clamping unit is optimized for precise lubrication of all moving parts.

TECHNICAL SPECIFICATIONS

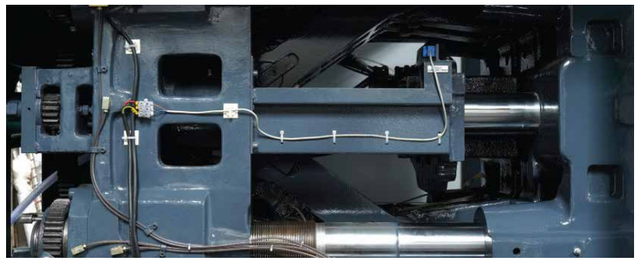
		AMARA SERIES									AMARA SERIES																	
DESCRIPTION	**UNIT**	**15**	**30**		**50**			**75**			**100**			**125**			**160**			**175**			**220**			**275**			**350**		
INJECTION UNIT		**20**	**150**		**150**			**300**			**300**			**420**			**575**			**575**			**980**			**1490**			**2100**		
Screw Type		A	A	B	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Screw Diameter	mm	20	25	30	25	30	35	30	35	40	30	35	40	35	40	45	40	45	50	40	45	50	45	50	55	55	60	65	60	70	80
Stroke Volume	cc	31	54	78	54	78	106	113	154	201	113	154	201	178	232	294	257	326	402	257	326	402	397	491	594	712	848	995	989	1346	1758
Max. Injected Weight (GPPS)	gms	30	51	74	51	74	100	107	146	191	107	146	191	169	221	279	245	310	382	245	310	382	378	466	564	677	805	945	940	1279	1670
Injection Rate (GPPS)	cc/sec	18	43	61	43	61	84	65	88	115	81	110	144	113	148	188	150	190	234	150	190	234	162	200	242	229	273	320	250	340	444
Injection Pressure	bar	625	2816	1956	2816	1956	1437	2640	1940	1485	2640	1940	1485	2351	1800	1422	2240	1770	1434	2240	1770	1434	2470	2001	1654	2095	1760	1500	2133	1567	1200
Injection Screw Stroke	mm	100	110	110	110	110	110	160	160	160	160	160	160	185	185	185	205	205	205	205	205	205	250	250	250	300	300	300	350	350	350
Plasticizing Rate	g/sec	3	7	11	7	11	15	10	14	19	12	17	22	14	19	25	18	24	34	18	24	34	20	33	50	22	35	52	40	55	70
Screw Speed	rpm	130	280		280			350			375			350			300			300			250			200			180		
Heating Capacity	kw	4	4.8		5.2			7.9			7.9			10			12.5			12.5			16.4			24.8			35.1		
CLAMPING UNIT																															
Clamping Force	ton	15	30		50			75			100			125			160			175			220			275			350		
Mould Opening Stroke	mm	110	230		250			280			320			380			400			460			550			650			740		
Max. Daylight	mm	260	480		550			630			720			830			900			1010			1250			1400			1540		
Mould Height (Min-Max)	mm	100-150	150-250		180-300			180-350			180-400			150-450			200-500			200-550			200-700			250-750			300-800		
Distance Between Tie Bars	mm	170 x 170	260 x 260		310 x 250			360 x 270			410 x 300			430 x 430			510 x 410			520 x 520			570 x 570			660 x 660			720 x 720		
Clamping Platens (H X V)	mm	300 x 300	390 x 390		460 x 430			530 x 470			610 x 530			670 x 670			740 x 650			750 x 750			820 x 820			955 x 955			1030 x 1030		
Tie Bar Diameter	mm	30	42		50			58			66			75			85			85			100			115			130		
Ejector Stroke	mm	-	50		70			75			100			130			150			160			160			180			200		
Ejector Force	ton	-	1.7		2.8			3.7			4.4			3.7			5.2			4.8			6			6.5			9.2		
GENERAL																															
Electric Motor	kw	2.2	3.7		5.6			12			18			18			23			23			28			41			42		
Total Connected Load	kw	6.2	8.5		10.8			19.9			25.9			28			35.5			35.5			44.4			65.8			77.1		
Machine Dimension	L x W x H	2.0 x 0.5 x 1.0	2.5 x 0.9 x 1.2		2.9 x 1.0 x 1.5			3.8 x 1.2 x 1.7			4.0 x 1.2 x 1.7			4.9 x 1.7 x 2.2			5.12 x 1.2 x 2.01			5.7 x 1.6 x 2.2			5.84 x 1.36 x 2.22			5.92 x 1.36 x 2.22			7.06 x 1.53 x 2.28		
Oil Tank Capacity	ltr	70	140		150			150			200			250			300			300			400			450			500		
Machine Weight	ton	1	1.8		2.2			3			4			4.5			6			7			9.5			12			15.5		

**Specifications are subject to change without prior notice.

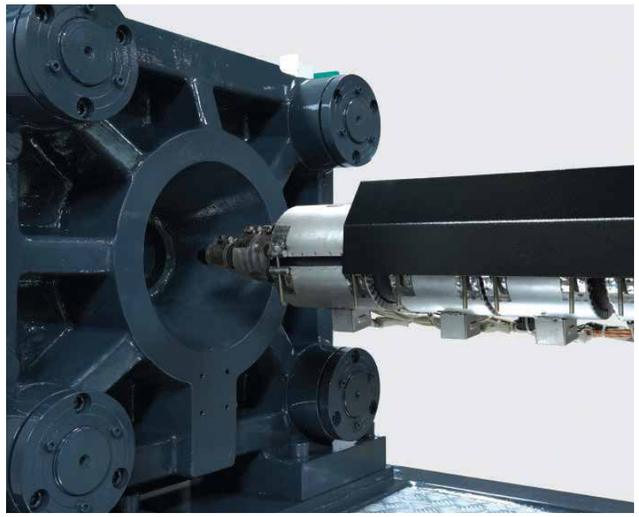
PRODUCT SHOWCASE











SUITABLE FOR PRECISION PRODUCTS





















STANDARD AND OPTIONAL FEATURES

	Standard	Optional
INJECTION UNIT		
• Injection unit support with liner guides 125T and above	●	
• Injection unit on guide rod ways below 100T	●	
• Parallel double cylinder injection system	●	
• Nitride alloy steel screw and barrel	●	
• Multi Stage PID barrel temperature control	●	
• Precision transducer for injection / plasticizing stroke control	●	
• Cold start protection	●	
• Automatic purging	●	
• Selectable suck back before or after plasticizing	●	
• 5 stage injection control (speed, pressure, position)	●	
• 5 stage holding pressure control (speed, pressure, position)	●	
• 3 stage storage control (speed, pressure, position)	●	
• Digital Readout of Actual RPM	●	
• Semi-Auto Purge & Intrusion Moulding Programs	●	
• Stainless Steel Hopper	●	
• Sliding Hopper	●	
• Extended nozzle		○
• Dedicated barrel Unit		○
• Bi metallic Screw Barrel		○
• One Size Larger or Smaller Injection Unit		○
CLAMPING UNIT		
• Unique 5 point twin toggle clamp mechanism	●	
• Graphite Impregnated Oil-less Bushes	●	
• Clamp Tonnage with Pressure setting on screen	●	
• Adjustable Pressure setting of Closing / Opening Stage	●	
• Precision transducer for Clamping / ejector stroke control	●	
• 2 stage ejector forward / backward control	●	
• Hydraulic mould height adjustment device	●	
• Automatic centralized grease lubrication system	●	
• Multi ejector function setting	●	
• Low pressure mould protection	●	
• Stage wise actual time Display	●	
• Platen with T-slots and screw holes	●	
• Hydraulic / electrical safety device		○
• EUROMAP-based robot mounting holes		○
• Special mould mounting holed		○
• Increase ejector force and stroke		○
• Increase mould thickness		○
• Magnetic Platen		○
• Proportional Speed Control with Closing / Opening Speed		○

STANDARD AND OPTIONAL FEATURES

	Standard	Optional
HYDRAULIC SYSTEM		
• Fourth generation servo motor system	●	
• Low noise energy efficient hydraulic circuit	●	
• High Performance hydraulic valves	●	
• External Cooler	●	
• Automatic calibration of pressure and flow	●	
• Plasticizing back pressure adjustment device	●	
• Low Friction Seal	●	
• Automatic oil temperature detection and alarm	●	
• Low oil level audible alaram and motor shutdown	●	
• Variable Displacement Pump system		○
• Enlarge oil pump and motor		○
• Synchronized ejection, core pulling and plasticizing system		○
• Proportional valve for mould opening and closing		○
CONTROL SYSTEM		
• 8” TFT Colour Display with Alpha Numeric Keypad	●	
• 120 mould Data Storage	●	
• Configurable multi-level password with operator name.	●	
• Customized setup Menu	●	
• High / Low limit Display for each Adjustable parameter	●	
• I/O Diagnosis Analog & Digital	●	
• Mould Data/process Data/Change Log Saving External USB Device	●	
• Key Lock for Parameter	●	
• Time / Position / time + position-controlled switchover from injection holding	●	
• Separate adjustment of motion slope	●	
• Automatic clamping force adjustment	●	
• Multiple Operating Language	●	
• Emergency Stop Button for front Side gate	●	
• Hot runner interface		○
• Pneumatic sequence valve		○
• Air Blowing with Valve		○
• Display of overall energy consumption		○
OTHER		
• Levelling Pad	●	
• A Standard Tool Kit	●	
• Water manifold 5 in / out	●	
• Auxiliary		○