

Injection Molding Operations in Bangalore, India

# PLASTIC INJECTION MOLDING



**ITTI, LLC**

Your Gateway to India for  
**CONTRACT MANUFACTURING AND JOINT VENTURES**

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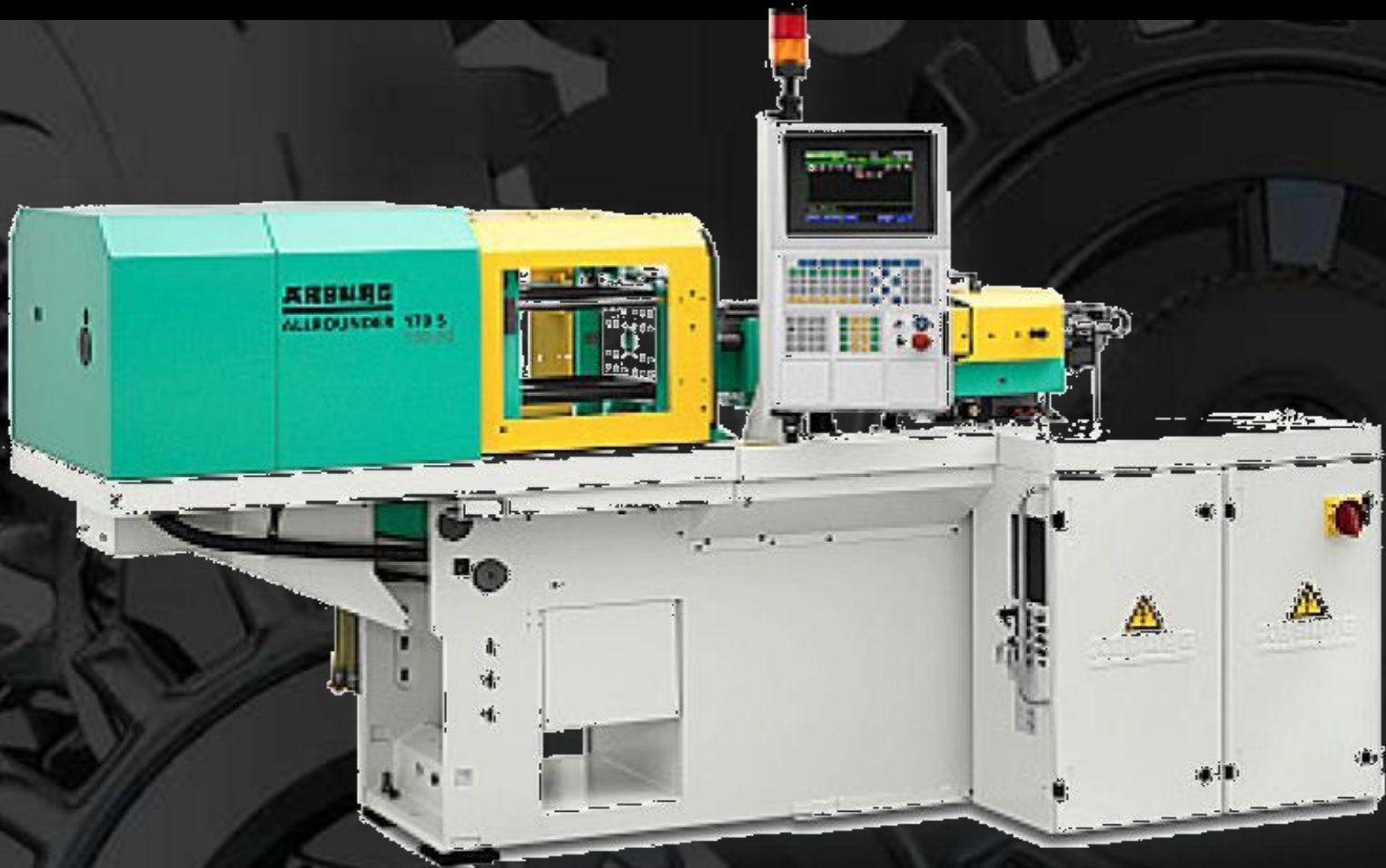
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- ITTI established Injection Molding Division in 2009 for designing and manufacturing precision insert molded components and Injection molded thermoplastic parts.
- **ITTI focuses on specialized Insert molded components for various wiring harness and sensor, as well as bringing product knowledge towards customer.**
- ITTI offers one-stop-shop solution for your molding requirements. ITTI has the ability to manufacture and supply a range of injection molded components using a wide range of polymers.
- **We have state of the art machinery, highly skilled work force and ISO 9001 Quality Management System with full participation by the entire management team including the CEO. The facility is housed in a sprawling 20000 Square foot building in India's Silicon Valley – the City of Bangalore. Needless to say, there is sufficient room to expand.**



- Equipment ranging from 20 tons to 225 tons of clamping pressure. All are computer controlled molding machines and give optimal efficiency in set-up, process control and monitoring. Our machines are designed for consistent quality and repeatability to minimize labor costs and rejection rates.
- **Shot Capacity: From less than a gram up to 110 grams per cycle.**
- **Custom Colors**
- **Insert Molding: Which allows for other components (e.g. Metal parts, Molded Cables, etc.) to be completely integrated into plastic molded assembly.**
- **Over molding: This process uses different component materials and integrates them into a single part, much like what you might see on a toothbrush, where a soft elastomer material is molded onto a rigid handle.**



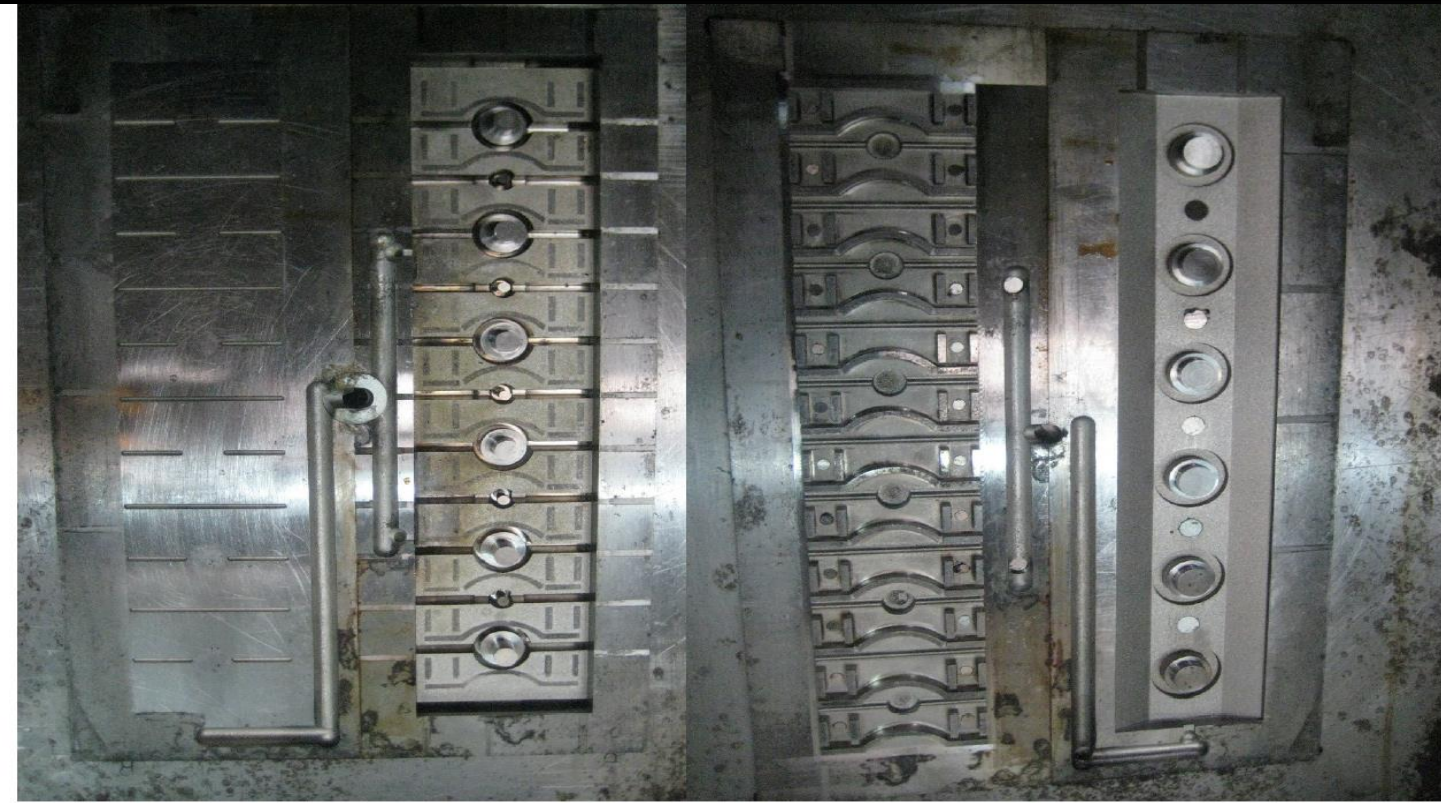
**German Made Arburg Universal Molding machine – Horizontal Mode**



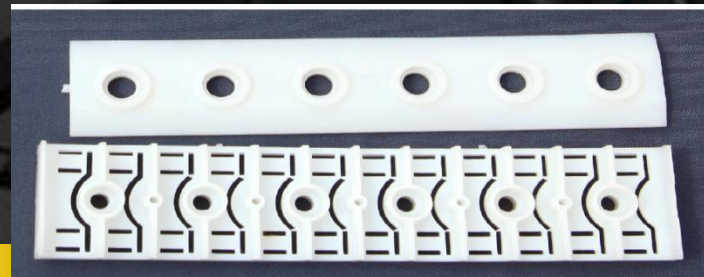
**German Made Arburg Universal Molding machine – Vertical Mode**



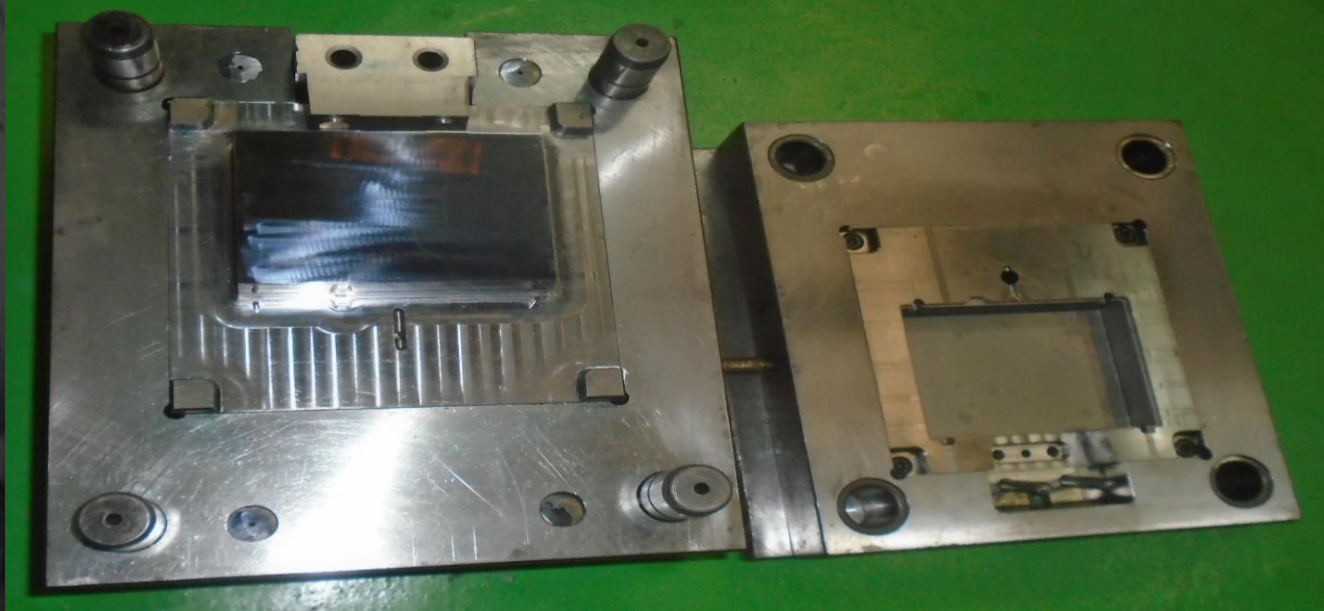
Machine model		370 S	370 S	370 S
EUROMAP size indication <sup>1)</sup>		500-100   600-100   700-100	500-170   600-170   700-170	600-290   700-290
<b>Clamping unit</b>				
Clamping force	max. kN	500   600   700	500   600   700	600   700
Closing force	max. kN	38	38	38
Opening force / increased	max. kN	24 / 160	24 / 160	24 / 160
Opening stroke	max. mm	400	400	400
Mould height	min. mm	200	200	200
Daylight	max. mm	600	600	600
Distance between tie bars	mm	370 x 370	370 x 370	370 x 370
Platen size (hor. x vert.)	mm	510 x 510	510 x 510	510 x 510
Weight of mov. mould half	max. kg	360	360	360
Ejector force	max. kN	30	30	30
Ejector stroke	max. mm	125	125	125
<b>Hydraulics, drive, general</b>				
Drive power of the hydraulic pump	kW	11   11   15	11   15   15	15   15
Dry cycle time for opening stroke <sup>4)</sup>	s/mm	2,1 (1,3)-259   2,0 (1,3)-259   1,4-259	2,1 (1,3)-259   1,9 (1,3)-259   1,4-259	1,9 (1,3)-259   1,4-259
Total connected load <sup>2)</sup>	kW	18,4   18,4   22,4	22,9   26,9   26,9	23,9   23,9
Colour: plastic coated, structure light grey / mint green / canary yellow				
<b>Control cabinet</b>				
Safety standard according to		DIN EN 60204	DIN EN 60204	DIN EN 60204
Socket combination (1 single phase, 1 three-phase)		1 x 16 A	1 x 16 A	1 x 16 A
<b>Injection unit</b>		100	170	290
Screw diameter	mm	20 / 25 / 30	25 / 30 / 35	30 / 35 / 40
Effective screw length	L/D	25 / 20 / 16,7	24 / 20 / 17	23,3 / 20 / 17,5
Screw stroke	max. mm	100	120	150
Calculated injection volume	max. cm <sup>3</sup>	31 / 49 / 71	59 / 85 / 115	106 / 144 / 188
Shot weight	max. g PS	29 / 45 / 65	54 / 77 / 105	97 / 132 / 172
Material throughput <sup>3)</sup>	max. kg/h PS	5,5 / 8 / 9,5	10 / 13,5 / 16	17 / 20,5 / 24,5
	max. kg/h PA 6.62,8 / 4 / 4,9		5 / 7 / 8	8,5 / 10,5 / 12,5
Injection pressure <sup>3)</sup>	max. bar	2500 / 2000 / 1390	2500 / 2000 / 1470	2500 / 2000 / 1530
Injection flow <sup>3)</sup>	max. cm <sup>3</sup> /s	64 / 100 / 146   90 / 142 / 204	66 / 96 / 132   94 / 136 / 186	102 / 140 / 182
		90 / 142 / 204	94 / 136 / 186	
Injection flow with accumulator	max. cm <sup>3</sup> /s	172 / 268 / 388	216 / 312 / 424	316 / 430 / 562
Back pressure positive/negative	max. bar	350 / 200	350 / 200	350 / 200
Circumferential screw speed	max. m/min	28 / 35 / 42   39 / 49 / 59   39 / 49 / 59	35 / 42 / 49   49 / 59 / 69   49 / 59 / 69	46 / 54 / 62
Screw torque	max. Nm	120 / 150 / 180	210 / 250 / 290	320 / 380 / 430
Nozzle contact force	max. kN	50	50	60
Nozzle retraction stroke	max. mm	180	210	240
Installed cylinder heating power / heating zones	kW	4,3 / 4	8,8 / 4	5,8 / 4
Installed nozzle heating power	kW	0,6	0,6	0,6
Material hopper capacity	l	50	50	50
Horizontal injection position	max. mm	125	125	125
<b>Machine dimensions and weights of the basic machine</b>				
Oil capacity	l	135	135	135
Net weight	approx. kg	3200	3250	3300
Electrical connection <sup>2)</sup>	A	63	63   80   80	80



**Mold for B.D. Kit Assy.**  
**Tool Size: L 15.5" X W 11.5" X H 8"**



**Components made from Nylon shot weight 93 Grams.**

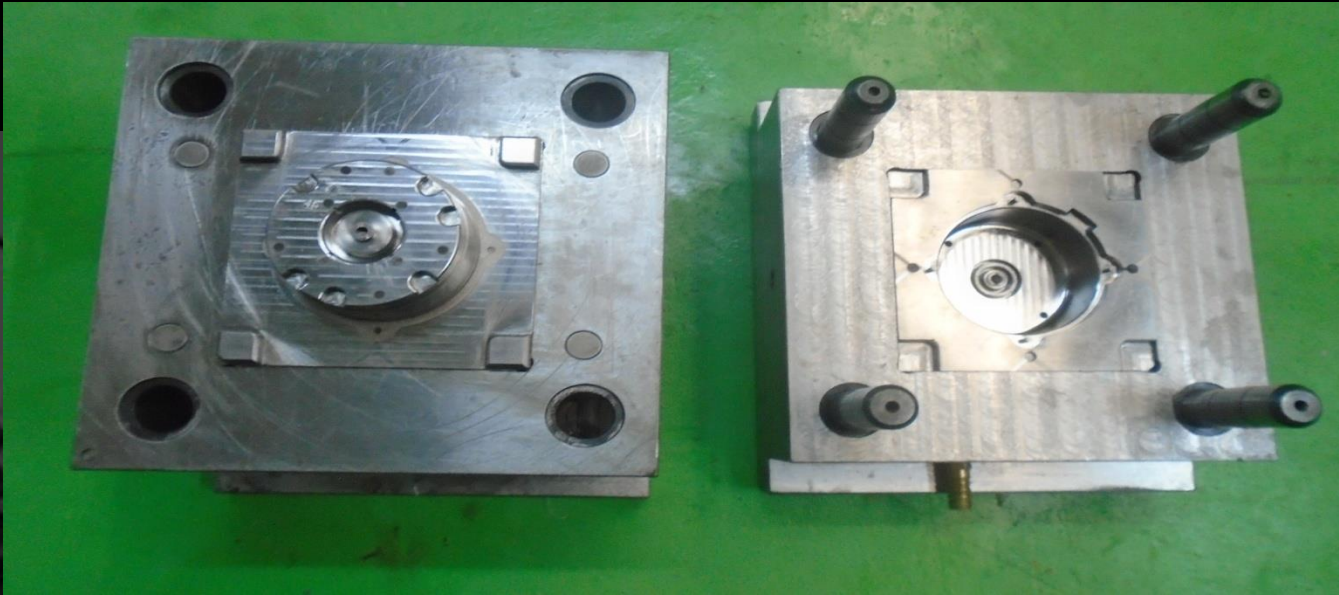


**Mold for Molded Top cover 100 X 150 ( Clear ).  
Tool Size: L 14" X W 10" X H 11"**



**Components made from PC shot weight 90 Grams.**

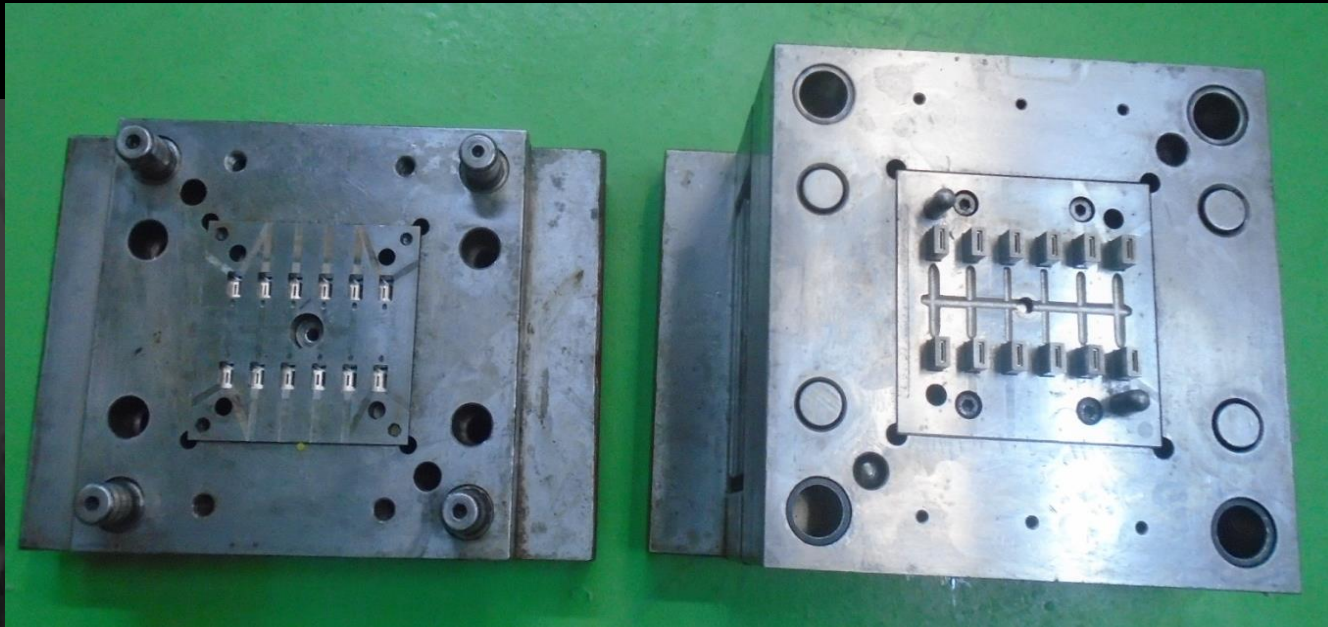




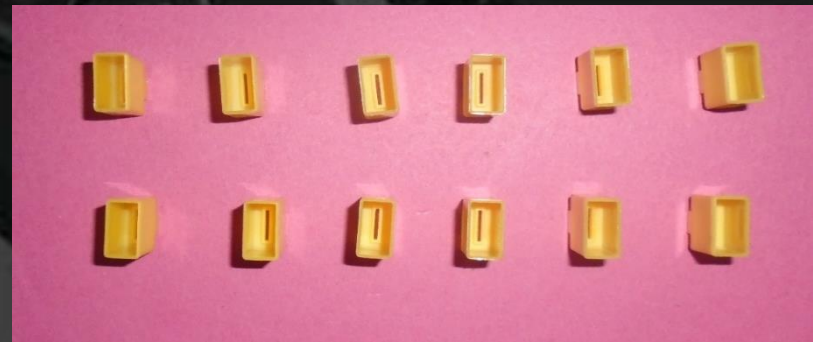
**Mold for End Cover**  
**Tool Size: L 11.5" X W 10" X H 12"**



**Components made from Noryl shot weight 98 Grams.**



**Mold for Housing Terminal Brush Free Yellow**  
**Tool Size in Inches : L 11" X W 8" X H 9"**



**Components made from Nylon with thin wall thickness shot weight 0.60 Grams.**

## Mold Temperature Controller (MTC)



**Temperature Control Unit TT-188 is constructed for water operation up to maximum +90°C and Oil operation up to maximum +150°C**

## Mobile Compact Dryer LMD 50/80 with Drying Bin



The LMD 50 and LMD 80 mobile compact dryers are used exclusively to generate dry air which is used to dry hygroscopic, free-flowing plastics granulates.  
The compact dryer operates between ..... 5°C and 35°C

## Vacuum loader HLB-E



**The Vacuum loader HLB-E is exclusively used to feed plastics material in granular form to plastics processing machines, drying bins, or storage bins.**

## Sprue Granulator



The granulator granulates sprues from the injection molding process. This is used as a “by-the-machine” sprue granulator which enables the use of regrind immediately after its regeneration

# Quality assurance



Quality assurance for our Molding Operations has three distinct phases in full compliance with ISO 9001 QMS (Latest Version).

1. Process Parameters are documented and operator training is monitored.
2. Visual inspection is performed by our trained machine operator on every part that is made the moment it comes out of the machine using the parameters and critical dimensions set by customer.
3. Parts are then randomly inspected once again by QA personnel at the machine once every hour and rejections are logged.
4. Finally the acceptable parts are boxed, counted, and moved to our quality control department, where they are randomly inspected once again and the count is verified. The parts are then ready for shipment.
5. Machine maintenance is done as per Preventative Maintenance Program.



# ITTI Contact for Canada

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