



THE OMEGA BT



250-550 TON

THE OMEGA BT

Injection Unit Specifications

IU	70	80	90	100	110	13500	125
OMEGA BT 250							
OMEGA BT 350							
OMEGA BT 450							
OMEGA BT 550							

Clamp Specifications

MODEL	TONNAGE	PLATEN SIZE (H X V)	TIE BAR SPACING (H X V)	MAX DAYLIGHT
	tons	mm	mm	mm
OMEGA BT 250	250	880 X 880	620 X 620	1080* / 1310
OMEGA BT 350	350	1010 X 1010	710 X 710	1360* / 1660
OMEGA BT 450	450	1200 X 1200	830 X 830	1500* / 1850
OMEGA BT 550	550	1245 X 1245	870 X 870	1860* / 1944

* WITH RAM SPACER

STANDARD FEATURES

CLAMP	
Hollow Headless Ram with Mono Seal & No Piston Rings	●
Large Prefill Designed for Fast Tonnage Build-up	●
Rapid Traverse Cylinders	●
Conical Strain Rod Nuts & Controlled Stress on Tie Rods	●
Adjustable moving Platen Skates	●
Rigid Cast Platens with FEA	●
Adjustable Pressure setting of Closing & Opening Stage	●
Proportional Speed Control with 5 Closing & 5 Opening Speed	●
Adjustable 2 Stage Mold Safety Pressure & 1 Stage Speed	●
Position Based Ramping for Accurate Position Switching -	●
Precise Speed & Pressure Control	●
Linear Position Transducer for Accurate Clamp Position Control	●
Sensitive Mold Protection with Try Again Circuit	●
Stage Wise Actual Time Display	●
Insert Molding Program	●
Auto Lubrication for Clamp	●
Flash Chrome Plated Ram	●
Jam Bar	○
Part Drop Detect for Single Cavity	○
Extended Daylight with Ram Spacer	○

INJECTION	
6 Stage Injection Velocity & 15 Stage Injection Pressure Profile	●
5 Stage Screw Speed & 5 Stage Back Pressure Control (Setting) through Screen	●
Digital setting of Extruder RPM & Digital Read out of Actual RPM	●
Wide Choice of Injection Units with A-B-C Screw/Barrel Combinations	●
Easy Injection Unit Swivelling	●
Switch Over from Fill to Pack based on Position or Time	●
Linear Position Transducer for Accurate Injection Position Control	●
Injection Decompression Before/ After Refilling or Both	●
Semi-Auto Purge, Cold Slug removal & Intrusion Molding Programs	●
Chequered Plate below Purge Area	●
Sprue Break with Timer	●
Injection start, Suck-back & Melt Decompression -Delay Timer	●
Graphically Adjustable Alarm Bands for Injection Pressure	●
Nozzle Contact Force by Pressure Switch	●
Sliding Hopper	●
Bimetallic Barrel & Hardened/ Coated Screw	○

TEMPERATURE CONTROL	
Actual Current Display of Barrel Heating Zones	●
Heater Failure & Thermocouple Open Detection	●
Accurate PID Temperature Control settable on Screen	●
Feed Throat Temperature Indication	●
Auto Heat Startup & Shutdown	●
Heat Standby after set number of Cycles	●
Soak Timer for Cold Start Protection	●
High / Low Temperature Alarm	●
Set & Actual Temperature Data with Bar Graph	●
Insulated Heater Band	●
Oil Temperature Control for Heat Exchanger	●
Feed Throat Temperature Control	○
Extra Heating Zones	○

● - Standard Feature ○ - Optional Feature

HYDRAULICS	
Multiple Pump with PQ circuit	●
Pump & Motor slide out from Base for Ease of Maintenance	●
Ergonomic Hydraulic Layoutfor Easy Approach	●
Valves Placed near Actuators for Rapid Response	●
Pre-Heating Circuit for Hydraulic Oil	●
Low Oil Level Audible Alarm & Motor Shut Down	●
Continuous Oil Filtration with 10 Micron Filter	●
Audible Alarm for Filter Clogging	●

EJECTOR	
Knock-Out Bar	●
2 Stage Programmable Ejector Forward Profile with Soft Eject	●
Ejector Speed & Pressure adjustable on Screen	●
Linear Transducer for Ejector Position	●
Pulsating Ejector Strokes upto 9 Pulses	●
Intermediate Retract Set Point	●
Ejector Stay Forward & Forward Dwell Timer	●
Ejector on Fly	●
Pilot Operated Check Valve for Ejector	●
Air Ejection	○
Hydraulic Core pull	○
Interface for Ejector Retract Verification	○

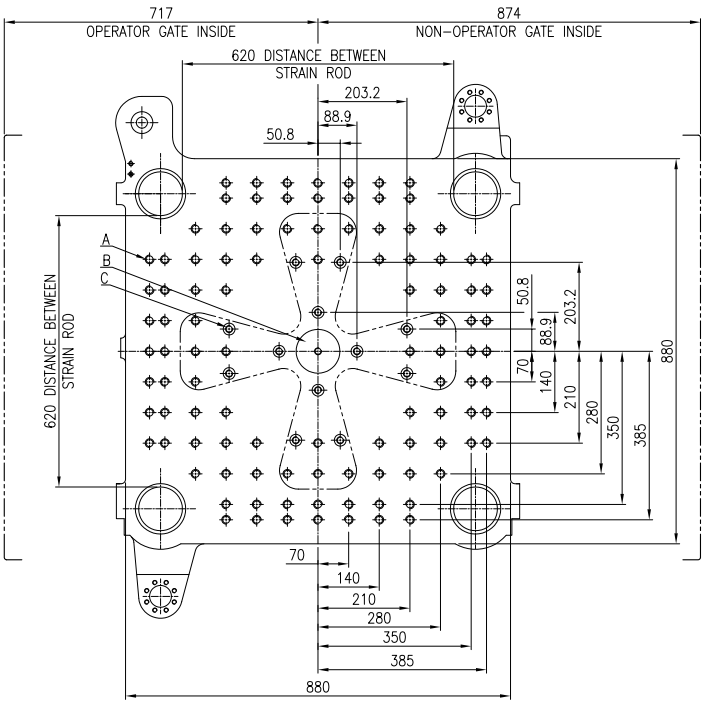
CONTROLS	
22 Parameter Monitoring for last 1000 cycles with Graphics	●
10.4" TFT Color Display with Alpha - Numeric Keypad	●
Actual Injection Speed & Pressure Graph Display	●
80 Mold Data Storage	●
Configurable Multilevel Password with Operator's Name	●
Graphical Presentation of Last 48 Hours Production	●
Customized Setup Menu	●
High / Low Limit Display for Each Adjustable Parameter	●
I / O diagnosis - Analog & Digital	●
Timer Precision in 0.01 Second	●
Change Log Menu: logs last 100 Set Points Changes with Time & Date	●
Statistical Process Control (SPC) with Graphics	●
Process Mode: Functions with its Co-functions on a Single Key Press	●
Note Pad & Maintenance Scheduling	●
Freely Programmable Smart Outputs & Inputs	●
Over View Screen with Graphical Display of Machine Functions	●
Soft Keys for Fast Access of Select Menus	●
Auto shut down	●
Visual & Audible Alarm	●
1000 Alarm History with Date & Time Log	●
Printer Interface with USB Port	●
Axis wise Graphical Cycle time Analysis	●
Batch Counter with option to turn off the motor	●
Mold data I Process data I Change log saving to External USB device	●
Freely Programmable Core Pull	●

ADDITIONAL FEATURES	
Surge Suppressor Device	●
Y Strainer in Heat Exchanger Inlet	●
UV/OV Monitoring Relay-Voltage Monitor Relay	●
Water Manifolds	○
Water Battery with Temperature Indicator	○
Robot Interface (SPI / EUROMAP)	○
AC Variable Frequency Drive	○

THE OMEGA BT
TONNAGE: 250, 350

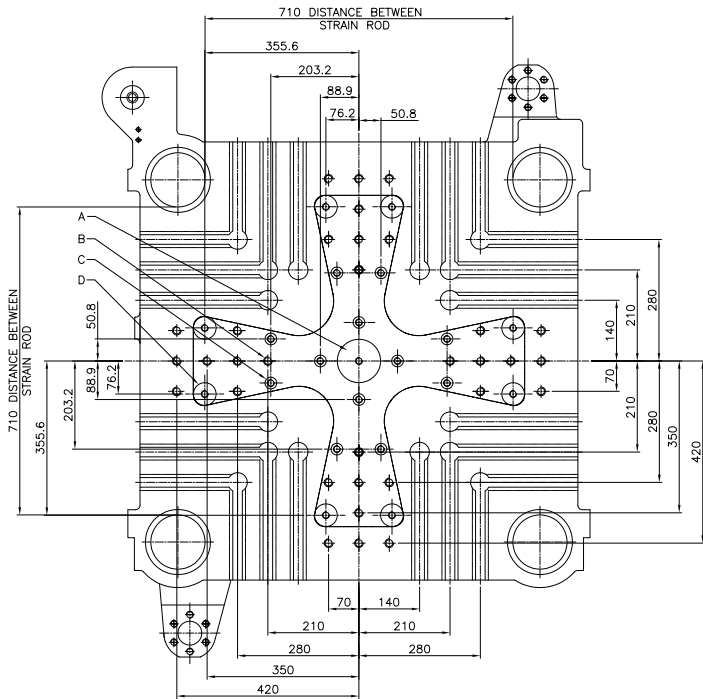
Injection Unit 70, 80, 90, 100

TECHNICAL SPECIFICATIONS



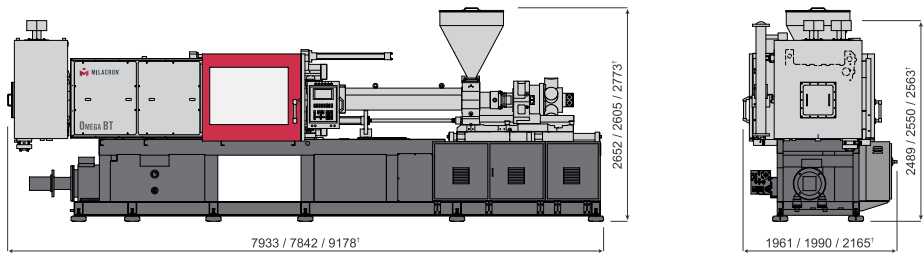
ALL DIMENSIONS ARE IN MM

- A M20x50 DEEP (104 HOLES ON MOVING PLATEN)
M20x50 DEEP (112 HOLES ON STATIONARY PLATEN)
- B MOVING PLATEN: Ø100.0 THRU BORE
K/O BAR CENTER HOLE M16x40 DEEP
- STATIONARY PLATEN:
Ø125(+0.04/0.00) WITH LOCATING RING
Ø160(+0.04/0.00) WITHOUT LOCATING RING
- C Ø27.0 THRU, (12) HOLES & K/O BAR SIDE HOLES
M16x40 DEEP (12) NOS



ALL DIMENSIONS ARE IN MM

- A MOVING PLATEN: Ø100.0 THRU BORE
K/O BAR CENTER HOLE M16x40 DEEP
STATIONARY PLATEN:
Ø160(+0.040/0.00) WITH LOCATING RING
Ø200(+0.046/0.00) WITHOUT LOCATING RING
- B M20x40 DEEP (32 HOLES)
- C Ø27.0 THRU, (12) HOLES & K/O BAR HOLES
M16x40 DEEP (20) NOS
- D Ø52.4 THRU, (8) HOLES



*TON 250 / 350(2350) / 350(4850)

MODEL		OMEGA BT 250 (2 CAVITY)	OMEGA BT 350 (2 CAVITY)	OMEGA BT 350 (4 CAVITY)
INTERNATIONAL SIZE		2500-2350	3500-2350	3500-4850
POWER PACK		60 HP	60 HP	75 HP
	UNIT	B70	B70	C90
INJECTION UNIT SPECIFICATIONS				
INJECTION CAPACITY MAX. (PET)	gms	1898	1898	4486
THEORETICAL DISPLACEMENT	cc	1608	1608	3801
INJECTION PRESSURE MAX.	bar	1462	1462	1276
INJECTION RATE	cc/sec	458	458	692
INJECTION SCREW STROKE	mm	320	320	400
SCREW DIAMETER	mm	80	80	110
SCREW L/D RATIO		24	24	20
SCREW SPEED	rpm	95	95	68
SCREW TORQUE @ 172 BAR	Nm	4856	4856	7924
PLASTICIZING RATE (PET)	gm/sec	85	85	152
NO.OF PYROMETERS (BARREL+NOZZLE)		5+1	5+1	5+1
TOTAL HEAT CAPACITY	kW	36.4	36.4	55.9
CLAMP UNIT SPECIFICATIONS				
CLAMP FORCE	ton	250	350	350
CLAMP STROKE	mm	830	1060	1060
MAXIMUM DAYLIGHT	mm	1080* / 1310	1360* / 1660	1360* / 1660
MINIMUM MOULD HEIGHT	mm	250* / 480	300* / 600	300* / 600
PLATEN SIZE (H X V)	mm	880 X 880	1010 X 1010	1010 X 1010
DISTANCE BETWEEN TIE ROD	mm	620 X 620	710 X 710	710 X 710
TIE ROD DIAMETER	mm	100	125	125
EJECTOR STROKE	mm	160	200	200
EJECTOR FORCE	ton	8.9	8.9	8.9
MOULD WEIGHT CAPACITY (STAT. / MOVING)	kg	1680 (560 / 1120)	2900 (967 / 1933)	2900 (967 / 1933)
GENERAL				
ELECTRIC MOTOR	kW (HP)	45 (60)	45 (60)	55 (75)
OIL TANK CAPACITY	L	820	905	1130
WATER REQUIREMENT (INLET TEMP. 29°C)	lpm	180	180	180
CONNECTED LOAD	kW	81.4	81.4	110.9
MACHINE DIMENSION (L X W X H)	m	7.93 X 1.96 X 2.73	8.62 X 2.06 X 2.70	9.45 X 2.17 X 2.78
MACHINE DIMENSION (L X W X H)	m	-	-	9.45 X 2.74 X 2.78
MACHINE WEIGHT	kg	12500	17200	18800

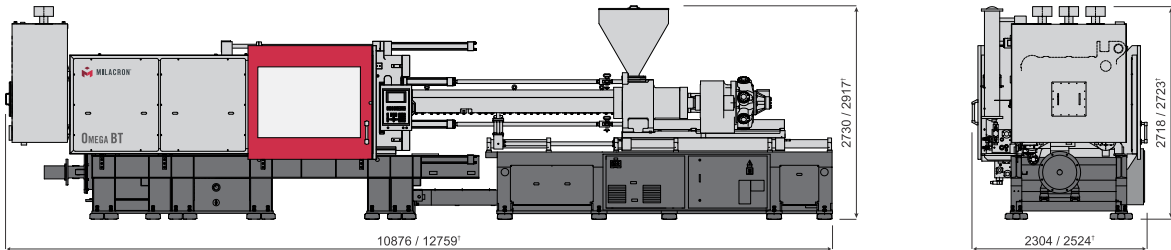
* WITH RAM SPACER

All machine dimensions and specifications are subject to change. Values are for reference only. These values are for standard machine power.

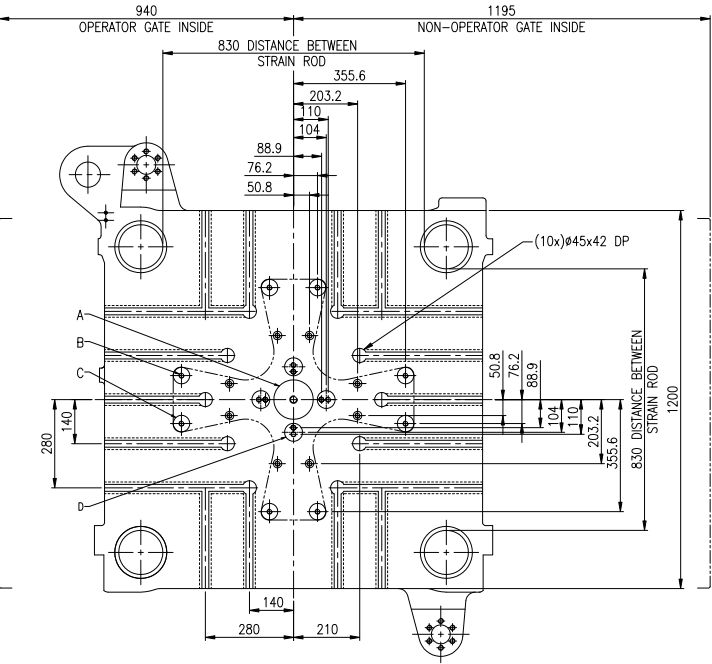
THE OMEGA BT
TONNAGE: 450, 550

Injection Unit 70, 80, 90, 100

TECHNICAL SPECIFICATIONS

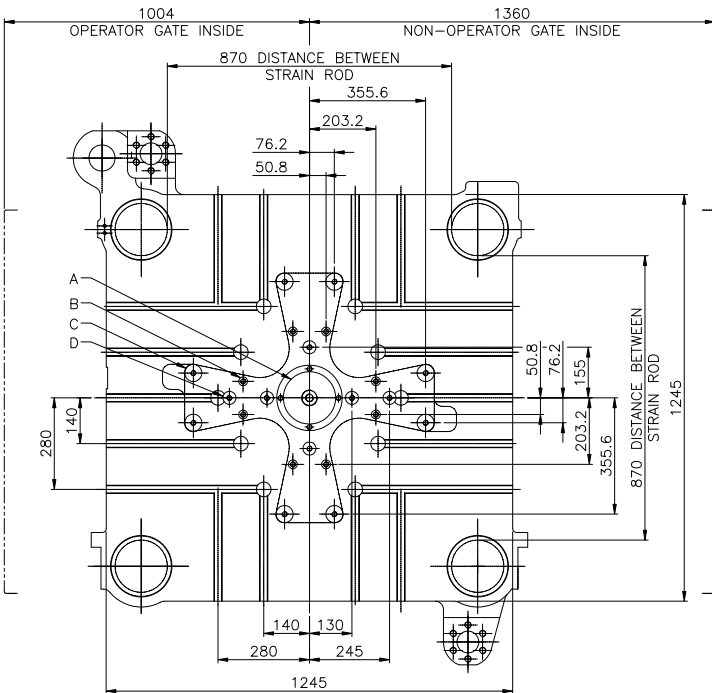


TON 450 / 550



ALL DIMENSIONS ARE IN MM

- A MOVING PLATEN: Ø125.0 THRU BORE
K/O BAR CENTER HOLE M24x40mm DEEP
- STATIONARY PLATEN:
Ø160(+0.040/0.00) WITH LOCATING RING
Ø200(+0.046/0.00) WITHOUT LOCATING RING
- B Ø27.0 THRU, (8) HOLES & K/O BAR HOLES
M16x40 DEEP (20) NOS
- C Ø52.4 THRU, (8) HOLES
- D Ø57.0 THRU, (4) HOLES & K/O BAR HOLES
M16x40 DEEP (4) HOLES



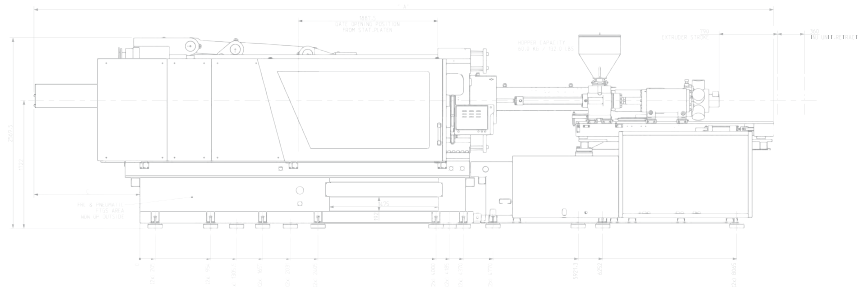
ALL DIMENSIONS ARE IN MM

- A MOVING PLATEN: Ø160 THRU BORE &
Ø200(+0.072/0.00)x20.15 DEEP C'BORE
K/O BAR CENTER HOLE M24
- STATIONARY PLATEN:
Ø160(+0.062/0.00) WITH LOCATING RING
Ø265(+0.052/0.00) WITHOUT LOCATING RING
- B Ø27 THRU, (8) HOLES & K/O BAR HOLES
M16x40 DEEP (20) NOS.
- C Ø52.40 THRU, (8) HOLES
- D Ø40 THRU, (6) HOLES & K/O BAR HOLES
M16x40 DEEP (6) NOS.
*DEPENDENT ON GATE OPTIONS

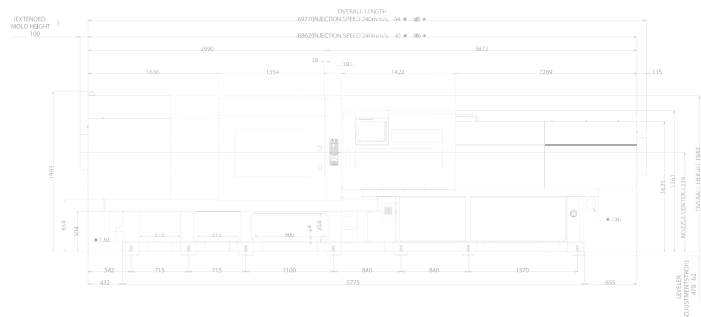
MODEL		OMEGA BT 450 (8 CAVITY)	OMEGA BT 550 (12 CAVITY)
INTERNATIONAL SIZE		4500-8210	5500-13200
POWER PACK		100 HP	140 HP
	UNIT	B110	B13200
INJECTION UNIT SPECIFICATIONS			
INJECTION CAPACITY MAX. (PET)	gms	8109	12715
THEORETICAL DISPLACEMENT	cc	6872	10776
INJECTION PRESSURE MAX.	bar	1196	1228
INJECTION RATE	cc/sec	959	1151
INJECTION SCREW STROKE	mm	560	700
SCREW DIAMETER	mm	125	140
SCREW L/D RATIO		24	24
SCREW SPEED	rpm	55	54
SCREW TORQUE @ 172 BAR	Nm	13657	22073
PLASTICIZING RATE (PET)	gm/sec	156	199
NO.OF PYROMETERS (BARREL+NOZZLE)		6+1	6+1
TOTAL HEAT CAPACITY	kW	79.6	79.7
CLAMP UNIT SPECIFICATIONS			
CLAMP FORCE	ton	450	550
CLAMP STROKE	mm	1100	1140
MAXIMUM DAYLIGHT	mm	1500* / 1850	1860* / 1944
MINIMUM MOULD HEIGHT	mm	400* / 750	720* / 804
PLATEN SIZE (H X V)	mm	1200 X 1200	1245 X 1245
DISTANCE BETWEEN TIE ROD	mm	830 X 830	870 X 870
TIE ROD DIAMETER	mm	140	160
EJECTOR STROKE	mm	200	200
EJECTOR FORCE	ton	15	21
MOULD WEIGHT CAPACITY (STAT. / MOVING)	kg	4800 (1600 / 3200)	7060 (2353 / 4707)
GENERAL			
ELECTRIC MOTOR	kW (HP)	75 (100)	105 (140)
OIL TANK CAPACITY	L	1415	1835
WATER REQUIREMENT (INLET TEMP. 29°C)	lpm	215	300
CONNECTED LOAD	kW	154.6	184.7
MACHINE DIMENSION (L X W X H).	m	11.14 X 2.43 X 2.81	12.76 X 2.67 X 3.00
MACHINE DIMENSION (L X W X H)	m	11.14 X 3.21 X 2.81	12.76 X 3.21 X 3.00
MACHINE WEIGHT	kg	26200	42500

* WITH RAM SPACER

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All specifications reflect average values based on typical machine layouts. Actual figures will vary depending on final machine configuration. Performance specifications are based on theoretical data. Photograph may show attachments or accessories, which may not be part of the standard scope of supply. Due to continual improvements, specifications & some components are subject to change without notice.



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