



THE OMEGA SB



450-910 TON



MILACRON®

THE OMEGA SB

Injection Unit Specifications

IU	3340	3480	6700	10070	13500
OMEGA SB 450					
OMEGA SB 550					
OMEGA SB 660					
OMEGA SB 775					
OMEGA SB 910					

Clamp Specifications

MODEL	TONNAGE	PLATEN SIZE (H X V)	TIE BAR SPACING (H X V)	MAX DAYLIGHT
	tons	mm	mm	mm
OMEGA SB 450	450	1200 X 1200	830 X 830	1500 # / 1850
OMEGA SB 550	550	1245 X 1245	870 X 870	1676
OMEGA SB 660	660	1400 X 1400	950 X 950	1780
OMEGA SB 775	775	1680 X 1475	1150 X 950	1920
OMEGA SB 910	910	2000 X 1600	1530 X 1120	2350

* 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	●
Part Drop Detect for Single Cavity	○
Extended Daylight with Ram Spacer	○

INJECTION	
Multi Sequence Setting of Patterns through Screen	●
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	●
Injection Unit Swiveling	●
Nozzle Contact Force by Pressure Switch	●
Switch Over from Fill to Pack based on Position or Time	●
Linear Transducer for both Injection Units for Precise Design & Pattern	●
PID Temperature control of both Injection Units through Screen	●
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	●
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	○
Feed Throat Temperature Control	○

HYDRAULICS	
Independent Power Pack for Auxiliary Injection Unit	●
Multiple Pump with PQ circuit	●
Pump & Motor slide out from Base for Ease of Maintenance	●
Ergonomic Hydraulic Layout for Easy Approach	●
Valves Placed near Actuators for Rapid Response	●
Pre-Healing 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	●
Air Ejection	○
Hydraulic Core pull	○
Eject Retract Limit Switch Verification	○

CONTROLS	
18 out of 67 Freely Selectable Parameter 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	●
Mold Spray Counter	●

ADDITIONAL FEATURES	
AC Variable Frequency Drive	○
Language Selection	○
Water Manifolds	○
Water Battery with Temperature Indicator	○
Robot Interface (SPI / EUROMAP)	○
Freely Programmable Core	○

● - Standard Feature ○ - Optional Feature

THE OMEGA SB
TONNAGE: 450

Injection Unit 3340, 3480

TECHNICAL SPECIFICATIONS

OMEGA 450 SB

INTERNATIONAL SIZE		4500-3340	240	4500-3480	240
POWER PACK		75 HP	15 HP	75 HP	15 HP
	UNIT	PRIMARY UNIT	AUXILIARY UNIT	PRIMARY UNIT	AUXILIARY UNIT
	METRIC	B80	C40	C80	C40
INJECTION UNIT SPECIFICATIONS					
INJECTION CAPACITY MAX. (GPPS)	gms	2179	280	2690	280
THEORETICAL DISPLACEMENT	cc	2290	294	2827	294
INJECTION PRESSURE MAX.	bar	1456	812	1231	812
INJECTION RATE	cc/sec	623	170	769	170
INJECTION SCREW STROKE	mm	360	150	360	150
SCREW DIAMETER	mm	90	50	100	50
SCREW L/D RATIO		20	18	20	18
SCREW SPEED	rpm	153	150	153	150
SCREW TORQUE ^	Nm	4875	833	4875	833
PLASTICIZING RATE (GPPS / STD SCOPE SCREW)	gm/sec	101	23	129	23
NO.OF PYROMETERS (BARREL+NOZZLE)		5+1	3+1	5+1	3+1
TOTAL HEAT CAPACITY	kW	40.5	13.9	42.2	13.9
CLAMP UNIT SPECIFICATIONS					
CLAMP FORCE	ton	450		450	
CLAMP STROKE	mm	1100		1100	
MAXIMUM DAYIGHT	mm	1500 ^ / 1850		1500 ^ / 1850	
MINIMUM MOULD HEIGHT	mm	400 ^ / 750		400 ^ / 750	
PLATEN SIZE (H X V)	mm	1200 x 1200		1200 x 1200	
DISTANCE BETWEEN TIE ROD	mm	830 x 830		830 x 830	
TIE ROD DIAMETER	mm	140		140	
EJECTOR STROKE	mm	200		200	
EJECTOR FORCE	ton	11.5		11.5	
MOULD WEIGHT CAPACITY (STAT. / MOVING)	kg	5500 (1833 / 3667)		5500 (1833 / 3667)	
GENERAL					
ELECTRIC MOTOR	kW (HP)	55 (75)	11 (15)	55 (75)	11 (15)
OIL TANK CAPACITY	L	1160	220	1160	220
WATER REQUIREMENT (INLET TEMP. 29°C)	lpm	180	50	180	50
CONNECTED LOAD	kW	120.4		122.1	
MACHINE DIMENSION (L X W X H)	m	9.15 X 2.30 X 3.23		9.36 X 2.30 X 3.23	
MACHINE WEIGHT	kg	25300		25500	

^ AT SPECIFIED PRESSURE
^ WITH 350 MM RAM SPCAER

THE OMEGA SB
TONNAGE: 550

Injection Unit 6700

TECHNICAL SPECIFICATIONS

OMEGA 550 SB

INTERNATIONAL SIZE		5500 -6700	670
POWER PACK		100 HP	20 HP
	UNIT	PRIMARY UNIT	AUXILIARY UNIT
	METRIC	C100	C50
INJECTION UNIT SPECIFICATIONS			
INJECTION CAPACITY MAX. (GPPS)	gms	5137	789
THEORETICAL DISPLACEMENT	cc	5400	829
INJECTION PRESSURE MAX.	bar	1240	805
INJECTION RATE	cc/sec	1016	196
INJECTION SCREW STROKE	mm	440	250
SCREW DIAMETER	mm	125	65
SCREW L/D RATIO		20	16.9
SCREW SPEED	rpm	121	160
SCREW TORQUE ^	Nm	7924	936
PLASTICIZING RATE (GPPS / STD SCOPE SCREW)	gm/sec	159	47
NO.OF PYROMETERS (BARREL+NOZZLE)		6+1	3+1
TOTAL HEAT CAPACITY	kW	63.8	20.3
CLAMP UNIT SPECIFICATIONS			
CLAMP FORCE	ton	550	
CLAMP STROKE	mm	1140	
MAXIMUM DAYIGHT	mm	1676	
MINIMUM MOULD HEIGHT	mm	536	
PLATEN SIZE (H X V)	mm	1245 X 1245	
DISTANCE BETWEEN TIE ROD	mm	870 X 870	
TIE ROD DIAMETER	mm	160	
EJECTOR STROKE	mm	200	
EJECTOR FORCE	ton	12	
MOULD WEIGHT CAPACITY (STAT. / MOVING)	kg	7060 (2353 / 4707)	
GENERAL			
ELECTRIC MOTOR	kW (HP)	75 (100)	15 (20)
OIL TANK CAPACITY	L	1375	220
WATER REQUIREMENT (INLET TEMP. 29°C)	lpm	215	50
CONNECTED LOAD	kW	174.1	
MACHINE DIMENSION (L X W X H)	m	10.38 X 2.53 X 3.52	
MACHINE WEIGHT	kg	35200	

^ AT SPECIFIED PRESSURE

THE OMEGA SB
TONNAGE: 660

Injection Unit 6700

TECHNICAL SPECIFICATIONS

OMEGA 660 SB

INTERNATIONAL SIZE		6600-6700	670
POWER PACK		100 HP	20 HP
	UNIT	PRIMARY UNIT	AUXILIARY UNIT
	METRIC	C100	C50
INJECTION UNIT SPECIFICATIONS			
INJECTION CAPACITY MAX. (GPPS)	gms	5137	789
THEORETICAL DISPLACEMENT	cc	5400	829
INJECTION PRESSURE MAX.	bar	1240	805
INJECTION RATE	cc/sec	1016	196
INJECTION SCREW STROKE	mm	440	250
SCREW DIAMETER	mm	125	65
SCREW L/D RATIO		20	16.9
SCREW SPEED	rpm	121	160
SCREW TORQUE ^	Nm	7924	936
PLASTICIZING RATE (GPPS / STD SCOPE SCREW)	gm/sec	159	47
NO.OF PYROMETERS (BARREL+NOZZLE)		6+1	3+1
TOTAL HEAT CAPACITY	kW	63.8	20.3
CLAMP UNIT SPECIFICATIONS			
CLAMP FORCE	ton	660	
CLAMP STROKE	mm	1320	
MAXIMUM DAYIGHT	mm	1780	
MINIMUM MOULD HEIGHT	mm	460	
PLATEN SIZE (H X V)	mm	1400 X 1400	
DISTANCE BETWEEN TIE ROD	mm	950 X 950	
TIE ROD DIAMETER	mm	170	
EJECTOR STROKE	mm	200	
EJECTOR FORCE	ton	12	
MOULD WEIGHT CAPACITY (STAT. / MOVING)	kg	9455 (3152 / 6303)	
GENERAL			
ELECTRIC MOTOR	kW (HP)	75 (100)	15 (20)
OIL TANK CAPACITY	L	1995	220
WATER REQUIREMENT (INLET TEMP. 29°C)	lpm	215	50
CONNECTED LOAD	kW	174.1	
MACHINE DIMENSION (L X W X H)	m	11.02 X 2.57 X 3.54	
MACHINE WEIGHT	kg	37700	

^ AT SPECIFIED PRESSURE

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

THE OMEGA SB
TONNAGE: 775

Injection Unit 6700, 10070

TECHNICAL SPECIFICATIONS

OMEGA 775 SB

INTERNATIONAL SIZE		7750-6700	670	7750-10070	670
POWER PACK		100 HP	20 HP	150 HP	20 HP
	UNIT	PRIMARY UNIT	AUXILIARY UNIT	PRIMARY UNIT	AUXILIARY UNIT
	METRIC	C100	C50	B110	C50
INJECTION UNIT SPECIFICATIONS					
INJECTION CAPACITY MAX. (GPPS)	gms	5137	789	6538	789
THEORETICAL DISPLACEMENT	cc	5400	829	6872	829
INJECTION PRESSURE MAX.	bar	1240	805	1465	805
INJECTION RATE	cc/sec	1016	196	997	196
INJECTION SCREW STROKE	mm	440	250	560	250
SCREW DIAMETER	mm	125	65	125	65
SCREW L/D RATIO		20	16.9	20	16.9
SCREW SPEED	rpm	121	160	153	160
SCREW TORQUE ^	Nm	7924	936	7924	936
PLASTICIZING RATE (GPPS / STD SCOPE SCREW)	gm/sec	159	47	201	47
NO.OF PYROMETERS (BARREL+NOZZLE)		6+1	3+1	6+1	3+1
TOTAL HEAT CAPACITY	kW	63.8	20.3	63.8	20.3
CLAMP UNIT SPECIFICATIONS					
CLAMP FORCE	ton	775		775	
CLAMP STROKE	mm	1320		1320	
MAXIMUM DAYIGHT	mm	1920		1920	
MINIMUM MOULD HEIGHT	mm	600		600	
PLATEN SIZE (H X V)	mm	1680 X 1475		1680 X 1475	
DISTANCE BETWEEN TIE ROD	mm	1150 X 950		1150 X 950	
TIE ROD DIAMETER	mm	190		190	
EJECTOR STROKE	mm	200		200	
EJECTOR FORCE	ton	18.3		18.3	
MOULD WEIGHT CAPACITY (STAT. / MOVING)	kg	10820 (3607 / 7213)		10820 (3607 / 7213)	
GENERAL					
ELECTRIC MOTOR	kW (HP)	75 (100)	15 (20)	112 (150)	15 (20)
OIL TANK CAPACITY	L	1995	220	1995	220
WATER REQUIREMENT (INLET TEMP. 29°C)	lpm	215	50	300	50
CONNECTED LOAD	kW	174.1		211.1	
MACHINE DIMENSION (L X W X H)	m	11.21 X 2.95 X 3.52		11.40 X 2.95 X 3.57	
MACHINE WEIGHT	kg	43700		45200	

^ AT SPECIFIED PRESSURE

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THE OMEGA SB

TONNAGE: 910

Injection Unit 10070, 13500

TECHNICAL SPECIFICATIONS

OMEGA 910 SB

INTERNATIONAL SIZE		9100-10070	670	9100-13500	670
POWER PACK		150 HP	20 HP	150 HP	20 HP
	UNIT	PRIMARY UNIT	AUXILIARY UNIT	PRIMARY UNIT	AUXILIARY UNIT
	METRIC	B110	C50	B13500	C50
INJECTION UNIT SPECIFICATIONS					
INJECTION CAPACITY MAX. (GPPS)	gms	6538	789	8295	789
THEORETICAL DISPLACEMENT	cc	6872	829	8731	829
INJECTION PRESSURE MAX.	bar	1465	805	1542	805
INJECTION RATE	cc/sec	997	196	1024	196
INJECTION SCREW STROKE	mm	560	250	610	250
SCREW DIAMETER	mm	125	65	135	65
SCREW L/D RATIO		20	16.9	20	16.9
SCREW SPEED	rpm	153	160	123	160
SCREW TORQUE ^	Nm	7924	936	10972	936
PLASTICIZING RATE (GPPS / STD SCOPE SCREW)	gm/sec	201	47	204	47
NO.OF PYROMETERS (BARREL+NOZZLE)		6+1	3+1	6+1	3+1
TOTAL HEAT CAPACITY	kW	63.8	20.3	64.7	19.5
CLAMP UNIT SPECIFICATIONS					
CLAMP FORCE	ton	910		910	
CLAMP STROKE	mm	1600		1600	
MAXIMUM DAYIGHT	mm	2350		2350	
MINIMUM MOULD HEIGHT	mm	750		750	
PLATEN SIZE (H X V)	mm	2000 X 1600		2000 X 1600	
DISTANCE BETWEEN TIE ROD	mm	1530 X 1120		1530 X 1120	
TIE ROD DIAMETER	mm	190		190	
EJECTOR STROKE	mm	210		210	
EJECTOR FORCE	ton	18.3		18.3	
MOULD WEIGHT CAPACITY (STAT. / MOVING)	kg	19045 (6348 / 12697)		19045 (6348 / 12697)	
GENERAL					
ELECTRIC MOTOR	kW (HP)	112 (150)	15 (20)	112 (150)	15 (20)
OIL TANK CAPACITY	L	2900	220	2900	220
WATER REQUIREMENT (INLET TEMP. 29°C)	lpm	300	50	300	50
CONNECTED LOAD	kW	211.1		211.2	
MACHINE DIMENSION (L X W X H)	m	12.84 X 3.37 X 3.72		13.27 X 3.37 X 3.77	
MACHINE WEIGHT	kg	63700		66200	

^ AT SPECIFIED PRESSURE

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NOTES

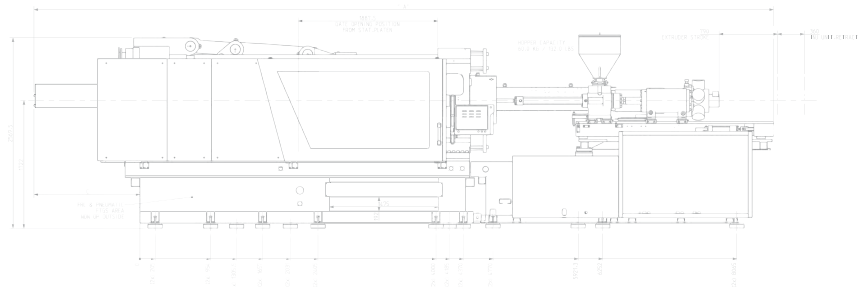
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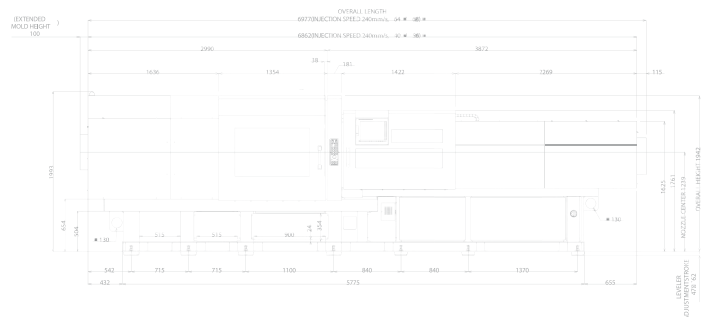
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All specifications reflect average values based on typical machine layouts. Actual figures will vary depending on final machine configuration. Performance specifications are based on theoretical data. Photograph may show attachments or accessories, 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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