

CLAMP		ES 450		
Clamp force	US tons	450		
Clamp opening force	US tons	57		
Clamp stroke (max)	inches	27.56		
Mold height (min - max)	inches	11.81 - 33.94		
Daylight (min - max)	inches	11.81 - 61.50		
Platen size (HxV)	Standard - inches A	N/A		
	Extended - inches B	47.24 x 47.24		
Distance between tie bars (HxV)	Standard - inches A	N/A		
	Extended - inches B	33.07 x 33.07		
Tie bar diameter	inches	5.51		
Hydraulic ejector stroke	inches	9.45		
Hydraulic ejector force	tons	8.9		
INJECTION		2050	2050	2550
Screw diameter	mm	60	70	80
Screw diameter	inches	2.362	2.756	3.150
Shot size 1+3	oz	27.5	37.5	50.5
Injection capacity	in ³	51.8	70.5	95.1
Recovery rate 1+2+3	oz/sec	2.2	3.2	3.0
Plasticizing capacity 1+2+3	lbs/hr	485	728	683
Injection rate at max. press. ⁴	in ³ /sec	16.4	22.4	24.9
Injection rate (regenerative) ⁴	in ³ /sec	19.7	26.9	29.2
Injection velocity at max. press. ⁴	in/sec	3.8	3.8	3.2
Injection velocity (regenerative) ⁴	in/sec	4.5	4.5	3.8
Screw stroke	inches	11.81	11.81	12.20
Injection pressure (max)	psi	34736	25810	23751
Injection pressure (regenerative)	psi	28923	21491	20205
Screw speed range	rpm	25-262	25-262	25-175 ⁷
Screw torque ⁵	ft-lbs	1305	1305	1950 ⁷
Screw L/D ratio		20:1		
Nozzle stroke	inches	25.59		
Nozzle force	US tons	12.4		
HYDRAULICS				
Pump capacity (required)	gpm	58.1		
Oil reservoir capacity	US gal	204		
ELECTRICS				
Power supply available	volts	460 / 575 - 3Ph / 60Hz		
Total rated horsepower	HP	60		
Number of heat control zones		4+Nozzle		
Total heating wattage	kw	25.3	29.4	33.5
GENERAL				
Dry cycle performance ⁶	sec	2.6		
Water requirements (max)	gpm	17		
Machine dimensions (LxWxH)	inches	345 x 88 x 101		
Machine weight	lbs	49000		
Hopper capacity	lbs	163		
Suitable Engel robots		ERC 53-63		