

## Technical Specifications

### I45 Frame

72/96/130 - 70mm

		English				Metric		
Injection Unit Specifications		A	B	C		A	B	C
Injection Capacity, Max GPPS*	oz	72	96	130	gm	2,041	2,722	3,685
Theoretical Disp	in <sup>3</sup>	134.1	178.6	243.1	cm <sup>3</sup>	2,198	2,927	3,984
Injection Performance								
Max Pressure @ Rate		30,000 psi @ 24 in <sup>3</sup> /sec	23,200 psi @ 31 in <sup>3</sup> /sec	17,000 psi @ 43 in <sup>3</sup> /sec	bar	2,069 bar @ 385 cm <sup>3</sup> /sec	1,600 bar @ 513 cm <sup>3</sup> /sec	1,172 bar @ 698 cm <sup>3</sup> /sec
Max Rate @ Pressure		48.5 in <sup>3</sup> /sec @ 15,376 psi	63 in <sup>3</sup> /sec @ 11,549 psi	86 in <sup>3</sup> /sec @ 8,485 psi	cm <sup>3</sup> /sec	773 cm <sup>3</sup> /sec @ 1,060 bar	1,030 cm <sup>3</sup> /sec @ 797 bar	1,401 cm <sup>3</sup> /sec @ 585 bar
Max Injection Speed	in/sec	14.34	14.34	14.34	mm/sec	364	364	364
Max Pack Pressure	psi	30,000	23,200	17,000	bar	2,069	1,600	1,172
Max Pull Back Force	lbf	25,000	25,000	25,000	N	111,205	111,205	111,205
Plunger Stroke	in	40.75	40.75	40.75	mm	1,035	1,035	1,035
Plunger Diameter	in	2.04	2.36	2.76	mm	52	60	70
Extruder L/d Ratio - 70mm						30:1		
Extruder Performance	rpm					265		
Barrel Heat								
No. of Pyrometers (barrel/nozzle)						10/1		
Total Heat Capacity	kw					65.26		
Sled Pull in Force	ton		4.1		tonf		3.7	

Clamp Specifications					
Tonnage	ton		550	tonf	500
Maximum Daylight	in		67.72	mm	1,720
Max/Min Mold Height	in		33.09/9.84	mm	840/250
Max Mold Weight	lb		16,300	kg	7,400
Max Clamp Stroke	in		34.64	mm	880
Dry Cycle Time	sec				<2.5
Platen Size	in		50.8 × 50.8	mm	1,290 × 1,290
Tie Bar Spacing	in		36.22 × 36.22	mm	920 × 920
Tie Rod Diameter	in		6.3	mm	160
Ejector Stroke	in		7.87	mm	200
Max Ejector Force**	ton		13	tonf	11.8
Max Eject Speed**	in/sec		10.4	mm/sec	265

Machine Specifications***					
Length, see note	in		413.7	mm	10,508
Width	in		91.4	mm	2,322
Height	in		101.6	mm	2,580
Centerline Height	in		60.9	mm	1,548
Shipping Weight (machine)	lb		65,000	kg	29,484

Electrical Specifications***			
Input Power Source 460 VAC ± 10% 3 Ph 60 Hz			STD
Power Supply Capacity kVA			108.5

Machine Requirements			
Water			6 gpm @ 50psi
Air			80 psi @ 20 cfm

\*Note: Other capacities available. Please consult factory.

\*\*Note: Higher eject force and speed available. Please consult factory.

\*\*\*Note: All machine dimensions and specifications are subject to change. Values are for reference only.

## Technical Specifications

### I44 Frame

50/54/66 - 120mm

		English				Metric		
<b>Injection Unit Specifications</b>								
Injection Capacity, Max GPPS*	oz	50	54	66	gm	1,418	1,531	1,871
Theoretical Disp	in <sup>3</sup>	90.7	100.1	122.3	cm <sup>3</sup>	1,486	1,640	2,004
Injection Performance								
Max Pressure @ Rate		30,000 psi @ 57 in <sup>3</sup> /sec	27,500 psi @ 64 in <sup>3</sup> /sec	23,200 psi @ 76 in <sup>3</sup> /sec		2,122 bar @ 936 cm <sup>3</sup> /sec	1,897 bar @ 1,047 cm <sup>3</sup> /sec	1,600 bar @ 1,246 cm <sup>3</sup> /sec
Max Rate @ Pressure		66 in <sup>3</sup> /sec @ 21,887 psi	75 in <sup>3</sup> /sec @ 19,564 psi	87 in <sup>3</sup> /sec @ 16,439 psi		1,076 cm <sup>3</sup> /sec @ 1,509 bar	1,204 cm <sup>3</sup> /sec @ 1,349 bar	1,433 cm <sup>3</sup> /sec @ 1,134 bar
Max Injection Speed	in/sec	20	20	20	mm/sec	506	506	506
Max Pack Pressure	psi	27,500	23,200	17,000	bar	1,897	1,600	1,172
Max Pull Back Force	lbf	22,000	22,000	22,000	N	97,860	97,860	97,860
Plunger Stroke	in	27.56	27.56	27.56	mm	700	700	700
Plunger Diameter	in	2.05	2.17	2.36	mm	52	55	60
Extruder L/d Ratio - 70mm						30:1		
Extruder Performance - 70mm	rpm					265		
Extruder L/d Ratio - 120mm						25:1		
Extruder Performance - 120mm	rpm					131		
Barrel Heat								
No. of Pyrometers (barrel/nozzle)						10/1		
Total Heat Capacity	kw					47.3		
Sled Pull in Force	ton		4.1		tonf		3.7	
<b>Clamp Specifications</b>								
Tonnage	ton		550		tonf		500	
Maximum Daylight	in		67.72		mm		1,720	
Max/Min Mold Height	in		33.09/9.84		mm		840/250	
Max Mold Weight	lb		16,300		kg		7,400	
Max Clamp Stroke	in		34.64		mm		880	
Dry Cycle Time	sec					<2.5		
Platen Size	in		50.8 × 50.8		mm		1,290 × 1,290	
Tie Bar Spacing	in		36.22 × 36.22		mm		920 × 920	
Tie Rod Diameter	in		6.3		mm		160	
Ejector Stroke	in		7.87		mm		200	
Max Ejector Force**	ton		13		tonf		11.8	
Max Eject Speed**	in/sec		10.4		mm/sec		265	
<b>Machine Specifications***</b>								
Length, see note	in		439.0		mm		11,152	
Width	in		103.9		mm		2,639	
Height	in		101.6		mm		2,580	
Centerline Height	in		60.9		mm		1,548	
Shipping Weight (machine)	lb		75,000		kg		34,020	
<b>Electrical Specifications***</b>								
Input Power Source 460 VAC ± 10% 3 Ph 60 Hz					STD			
Power Supply Capacity kVA					185			
<b>Machine Requirements</b>								
Water					6 gpm @ 50psi			
Air					80 psi @ 20 cfm			

\*Note: 90 oz shot size with 16,500 psi barrel is also available on this injection unit frame.

\*\*Note: Increased eject speed and force options available (consult factory)

\*\*\*Note: All machine dimensions and specifications are subject to change. Values are for reference only.

## Technical Specifications

### I78 Hybrid Frame

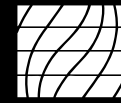
### 38/44/50 - 120mm

		English				Metric		
<b>Injection Unit Specifications</b>								
Injection Capacity, Max GPPS	oz	38	44	50	gm	1,077	1,247	1,417
Theoretical Disp	in <sup>3</sup>	68.9	80.1	91.5	cm <sup>3</sup>	1,129	1,313	1,500
Injection Performance								
Max Pressure	psi	34,800	30,000	27,500	bar	2,400	2,069	1,897
Max Rate	in <sup>3</sup> /sec	115	152	200	cm <sup>3</sup> /sec	1,884	2,490	3,276
Max Injection Speed	in/sec	22.3	25.6	29.2	mm/sec	566.4	650.2	741.7
Max Pack Pressure	psi	27,840	24,000	22,000	bar	1,920	1,655	1,518
Max Pull Back Force	lbf	22,000	22,000	22,000	N	97,860	97,860	97,860
Plunger Stroke	in	13.39	13.39	13.39	mm	340	340	340
Plunger Diameter	in	2.56	2.76	2.95	mm	65	70	75
Extruder L/d Ratio - 70mm						30:1		
Extruder Performance - 70mm	rpm					265		
Extruder L/d Ratio - 120mm						25:1		
Extruder Performance - 120mm	rpm					131		
Barrel Heat								
No. of Pyrometers (barrel/nozzle)						11/1		
Total Heat Capacity	kw					73.4		
Sled Pull in Force	ton		12		tonf		10.8	
<b>Clamp Specifications</b>								
Tonnage	ton		550		tonf		500	
Maximum Daylight	in		67.72		mm		1,720	
Max/Min Mold Height	in		33.09/9.84		mm		840/250	
Max Mold Weight	lb		16,300		kg		7,400	
Max Clamp Stroke	in		34.64		mm		880	
Dry Cycle Time	sec					<2.5		
Platen Size	in		50.8 × 50.8		mm		1,290 × 1,290	
Tie Bar Spacing	in		36.22 × 36.22		mm		920 × 920	
Tie Rod Diameter	in		6.3		mm		160	
Ejector Stroke	in		6.5		mm		165	
Max Ejector Force (hyd std)**	ton		13		tonf		11.8	
Max Eject Speed**	in/sec		20		mm/sec		510	
<b>Machine Specifications***</b>								
Length, see note	in		432.0		mm		10,970	
Width	in		106.0		mm		2,700	
Height	in		101.6		mm		2,580	
Centerline Height	in		60.9		mm		1,548	
Shipping Weight (machine)	lb		77,500		kg		35,155	
Shipping Weight (power unit)	lb		3,800		kg		1,724	
<b>Electrical Specifications***</b>								
Input Power Source 460 VAC ± 10% 3 Ph 60 Hz					STD			
Power Supply Capacity kVA					217			
<b>Machine Requirements</b>								
Water					15 gpm @ 85 F			
Air					80 psi @ 20 cfm			

\*Note: 70mm 30:1 L/d extruder also available (consult factory)

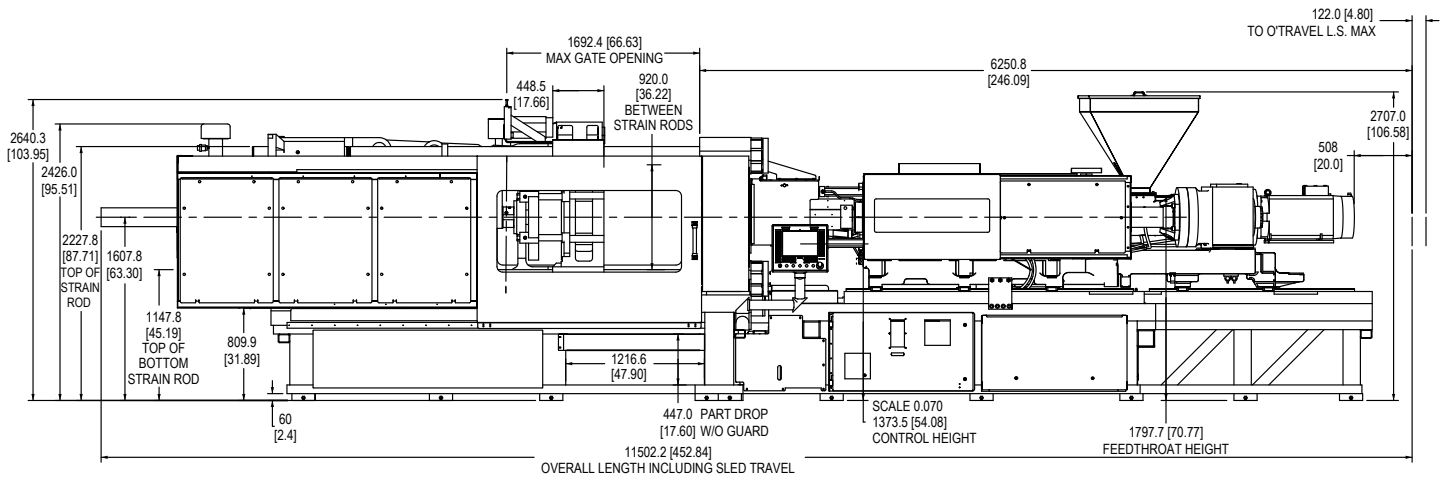
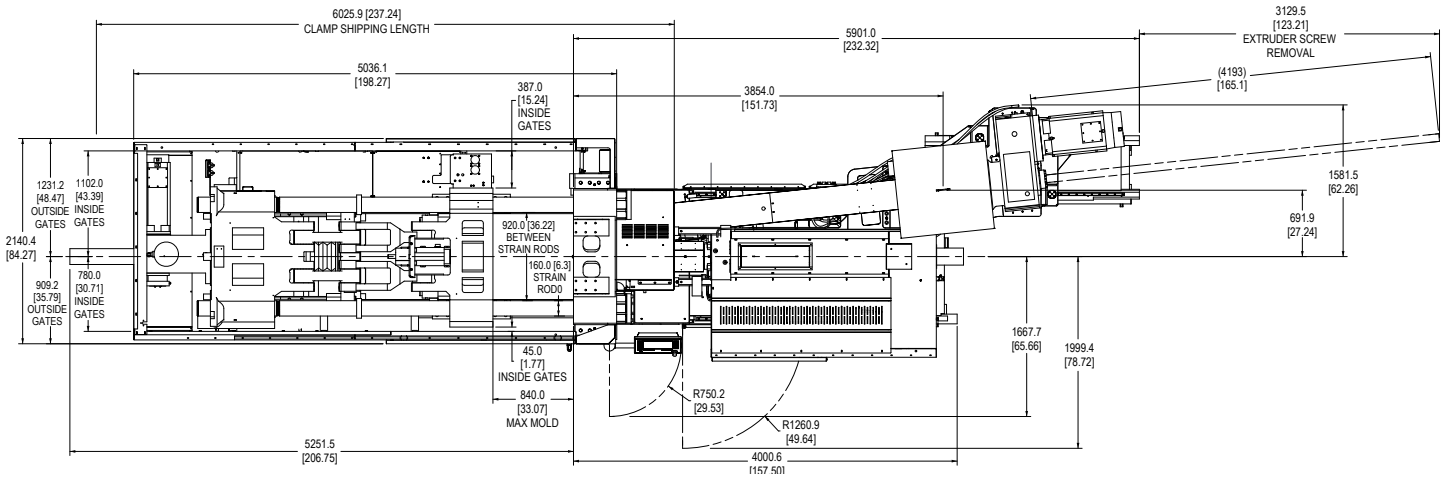
\*\*Note: Higher eject force and speed available (consult factory)

\*\*\*Note: All machine dimensions and specifications are subject to change. Values are for reference only.



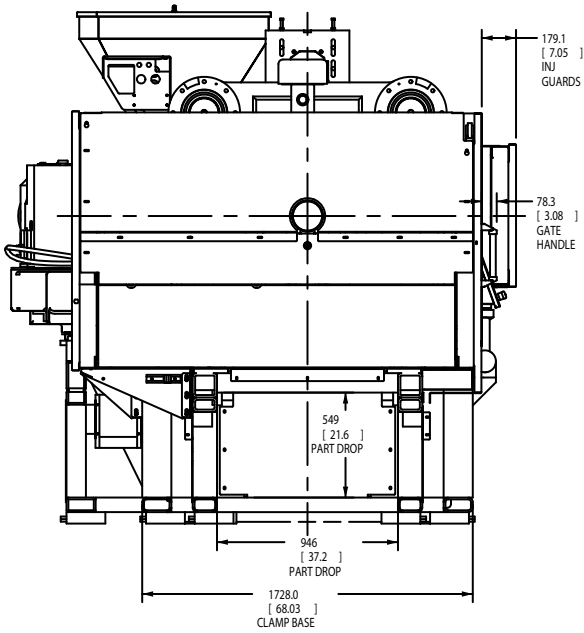
## Templates

### Top View

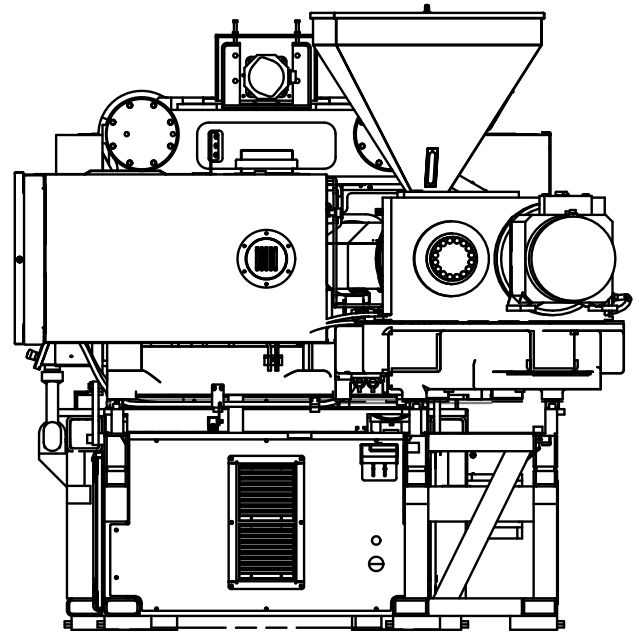


### Front View

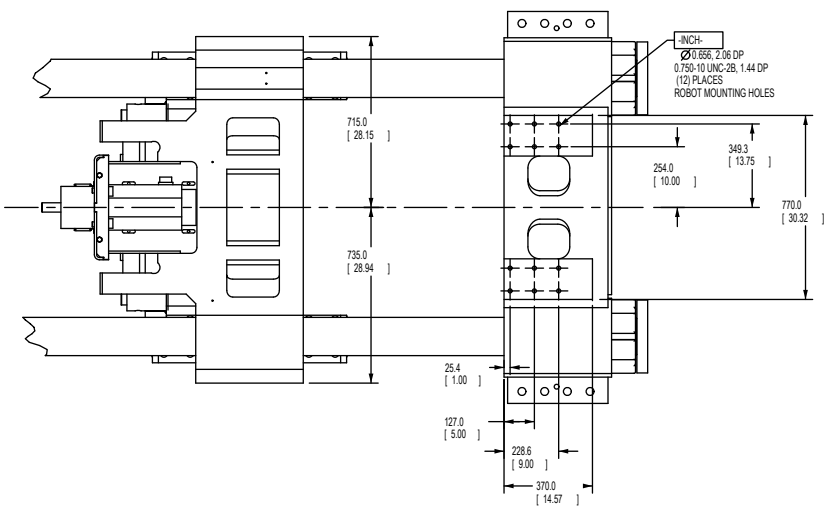
## Templates



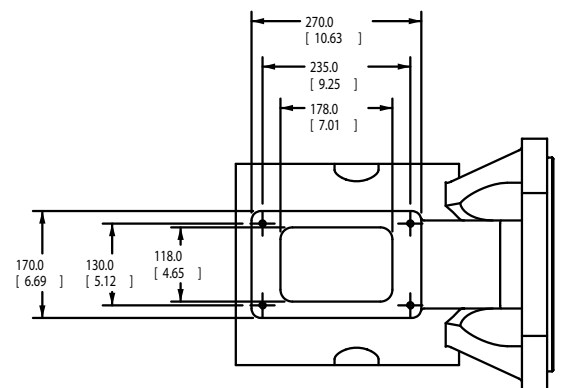
Clamp End



Injection End

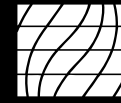


Robot Mounting

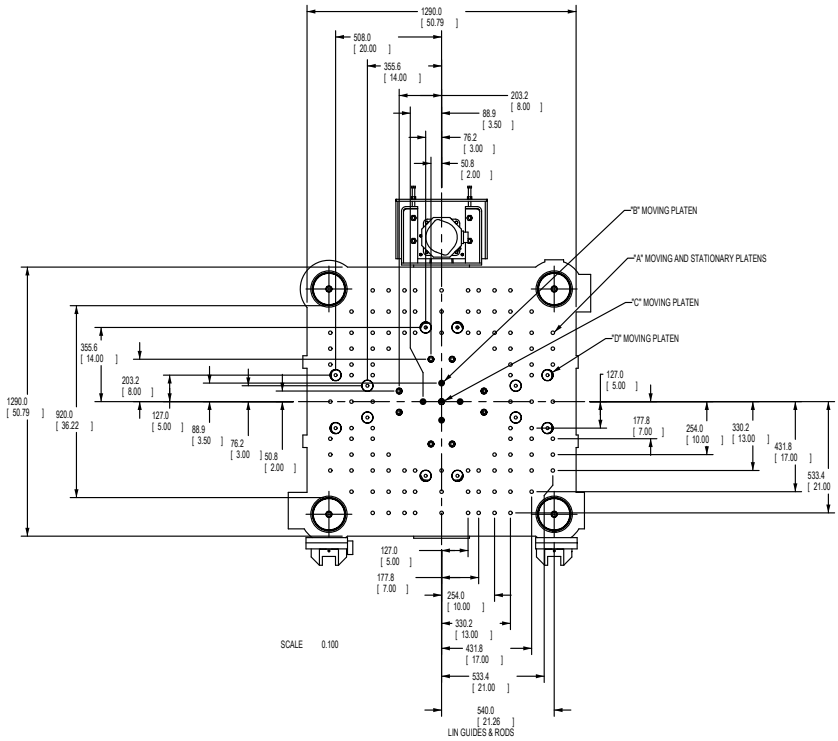


Feed Throat

Feed throat dimensions can change based on injection frame. Consult factory for specific details.



## Templates

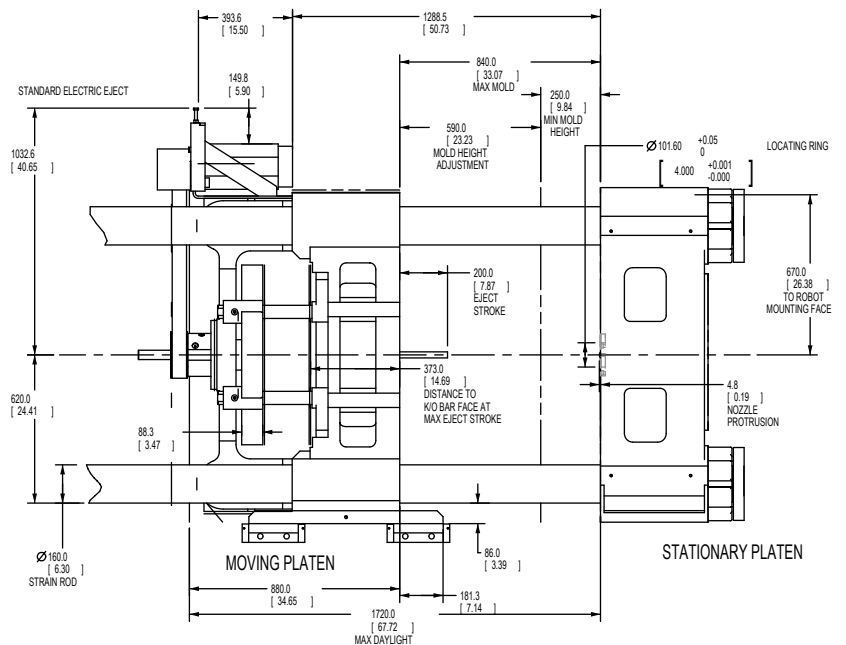


SCALE 0.100

Die Space

### HOLE DESCRIPTION

- "A" 0.75-10 UNC-2B 1.44" DEEP (108) HOLES EACH PLATEN
- "B" Ø27.0 THRU (12) HOLES  
CORRESPONDING HOLES IN K/O BAR Ø0.562" THRU
- "C" Ø27.0 THRU (1) HOLE  
CORRESPONDING HOLE IN K/O BAR Ø0.500-13 UNC-2B, THRU
- "D" Ø52.4 THRU (12) HOLES  
CORRESPONDING HOLES IN K/O BAR Ø0.562" THRU



Platen Area