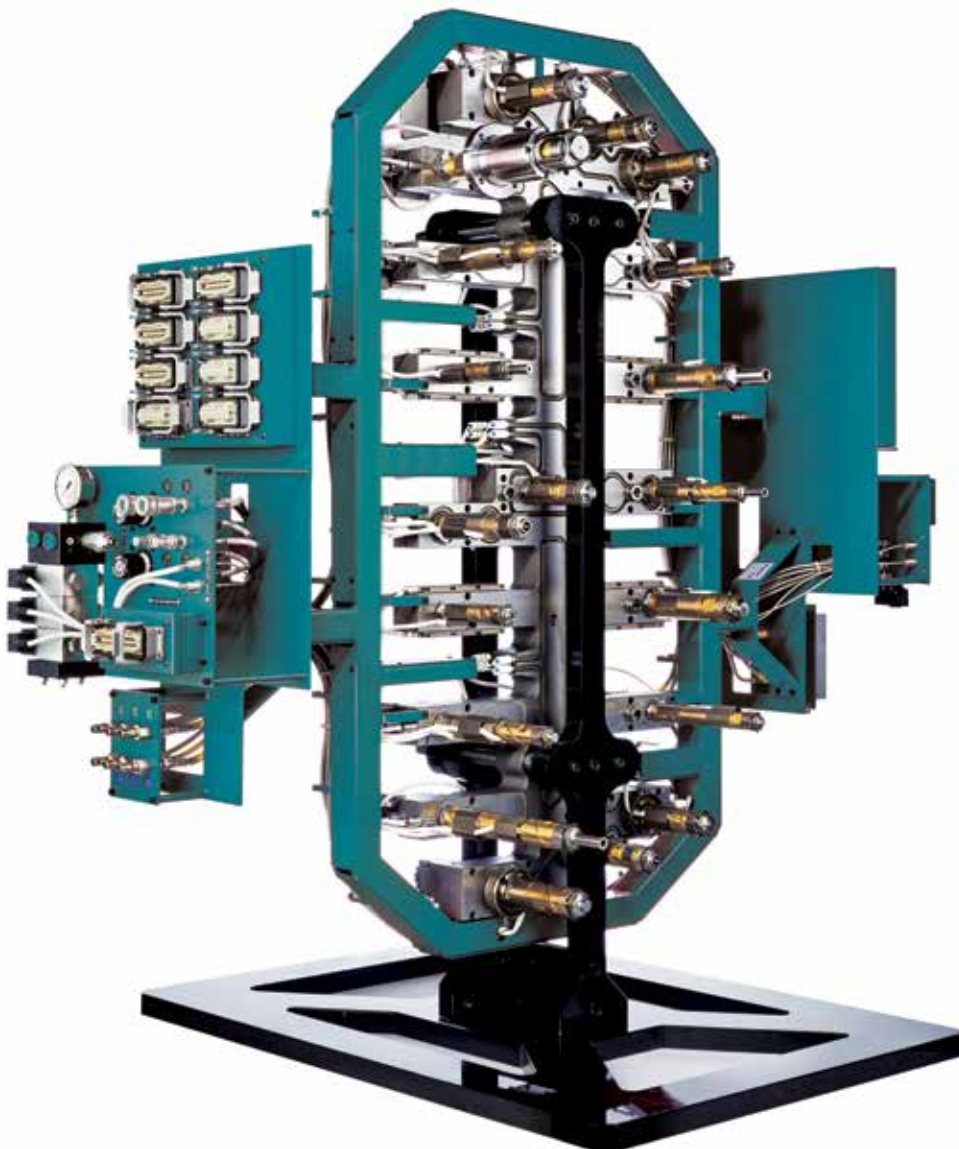




Fusion[®] series G2

Resource Guide

version 17





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Warranty Information

For current warranty information please refer to the documents available from our website:
<https://www.moldmasters.com/index.php/support/warranty> or contact your *Mold-Masters* representative.

Release Details

Table 1-1 Release Details		
Document Number	Release Date	Version
FSG2-RG-UM-EN-00-15-2	August 2019	15-2
FSG2-RG-UM-EN-00-16	January 2020	16
FSG2-RG-UM-EN-00-16-1	May 2020	16-1
FSG2-RG-UM-EN-00-16-2	June 2020	16-2
FSG2-RG-UM-EN-00-16-3	September 2020	16-3
FSG2-RG-UM-EN-00-16-4	September 2020	16-4
FSG2-RG-UM-EN-00-16-5	October 2020	16-5
FSG2-RG-UM-EN-00-16-6	October 2020	16-6
FSG2-RG-UM-EN-00-16-7	December 2020	16-7
FSG2-RG-UM-EN-00-16-8	February 2021	16-8
FSG2--RG--UM--EN--00--17	May 2021	17
FSG2--RG--UM--EN--00--17-1	May 2021	17-1
FSG2--RG--UM--EN--00--17-2	June 2021	17-2



Resource Guide Icons

Icons are used to help you navigate through the various sections of the guide. They are used to identify each section, as well as point you in the direction of other related components that you may need to reference, for instance, nozzles, manifolds or accessories.



Nozzles



Miscellaneous



Inlet Components and Auxiliary

Product Size Selection

Choose the nozzle product according to the weight of your part. If you are using more than one nozzle to fill your part, use the weight per nozzle to select the right nozzle size.

FUSION SERIES	APPROXIMATE SHOT WEIGHT PER GATE	NOZZLE LENGTHS	MELT FLOW CHANNEL IN THE NOZZLE		VALVE PIN DIAMETER
			TIP / SPRUE	VALVE	
F3000	< 20 g	60mm ~ 220mm	Ø 5mm	Ø 7mm	Ø 3mm
F4000	15g ~ 50g	60mm ~ 400mm	Ø 6mm	Ø 8mm	Ø 3mm
F5000	50g ~ 500g	80mm ~ 485mm	Ø 8mm	Ø 11mm	Ø 5mm
F6000-F5000	50g ~ 500g	189mm ~ 709mm	Ø 12mm - Ø 8mm	Ø 16mm - Ø 11mm	Ø 5mm
F6000	500g ~ 3500g	80mm ~ 700mm	Ø 12mm	Ø 16mm	Ø 6mm/Ø 8mm
F7000-F6000	500g ~ 3500g	189mm ~ 709mm	Ø 18mm - Ø 12mm	Ø 22mm - Ø 16mm	Ø 6mm/Ø 8mm
F7000	3500g ~ 5000g	80mm ~ 1000mm	Ø 18mm	Ø 22mm	Ø 8mm
F8000	5000g+	80mm ~ 1000mm	Ø 22mm	Ø 26mm	Ø 8mm/Ø 9.5mm





Properties Chart for Injection Molding Grade Plastics

Plastic Classes	Symbol	D792 Solid Density (g/cm ³)	Recommend Max Vent Depth (mm)	D648 Shrinkage (%)	Processing Temp (°C)	Recommend Processing Temp. (°C)	Mold Temp. (°C)	Recommend Mold Temp (°C)	No Flow Temp (°C)	Max L/T Ratio (1 mm Thick)	Injection Speed	Clamping (MPa=MN/m ²)	Force (Ton/in ²)	Typical Pressure (MPa=N/mm ²)
Amorphous	ABS	1 to 1.2	0.025	0.5 to 0.6	195 to 240	250	38 to 93	60	135 to 150	30 to 150	Slow, even	62 to 93	4 to 6	120 to 140
	HIPS	1 to 1.1	0.02	0.4 to 0.7	180 to 280	240	10 to 85	20	130	200 to 250	Fast	31 to 62	2 to 4	100 to 200
	PS	1.0 to 1.1	0.02	0.4 to 0.7	180 to 280	225	10 to 85	20	200 to 250		Fast	31 to 62	2 to 4	100 to 200
Crystalline/ Semi-Crystalline	LDPE	0.91 to 0.93	<0.01	1.5 to 3	170 to 240	200	10 to 50	30	100 to 110	275	Fast	23 to 31	1.5 to 2	100 to 150
	HDPE	0.93 to 0.97	0.015	1.2 to 2.2	200 to 280	240	10 to 70	20	120 to 130	250	Fast	31 to 39	2 to 2.5	100 to 200
Semi-Crystalline	PP	0.9 to 1.02	0.015	1 to 2.5	230 to 275	240	15 to 65	50	170 to 180	200 to 300	Fast	31 to 46	2 to 3	100 to 130

*** 1 MPa = 145 PSI
°F = (°C x 1.8) + 32

Common Resin Comparison Chart

Properties	HDPE	LDPE	PP
Clarity	3	2	2
Impact Strength	4	5	3
Scuffing Resistance	4	4	4
Stiffness	3	2	4
Maximum Hot Fill (°C)	80	65	115
Anti Permeability			
CO2	2	1	3
Oxygen	2	1	2
Water	5	4	5
Resistance			
Acids	3	3	3
Alkalis	4.5	4.5	5
Alcohols	4.5	3	4
Min. Temperature (°C) - Brittleness	-100	-100	0
Melt Temperature (°C)	120 to 130	100 to 110	170 to 180
Density	0.94 to 0.965	0.91 to 0.925	0.89 to 0.91

Legend	0	1	2	3	4	5
	n/a	Poor	Fair	Good	Very Good	Excellent

*This chart is a guideline only. Variables such as bottle or container weight and wall thickness may have an effect on material performance. Testing is always recommended.



Gating

Establish the Optimum Gate Size

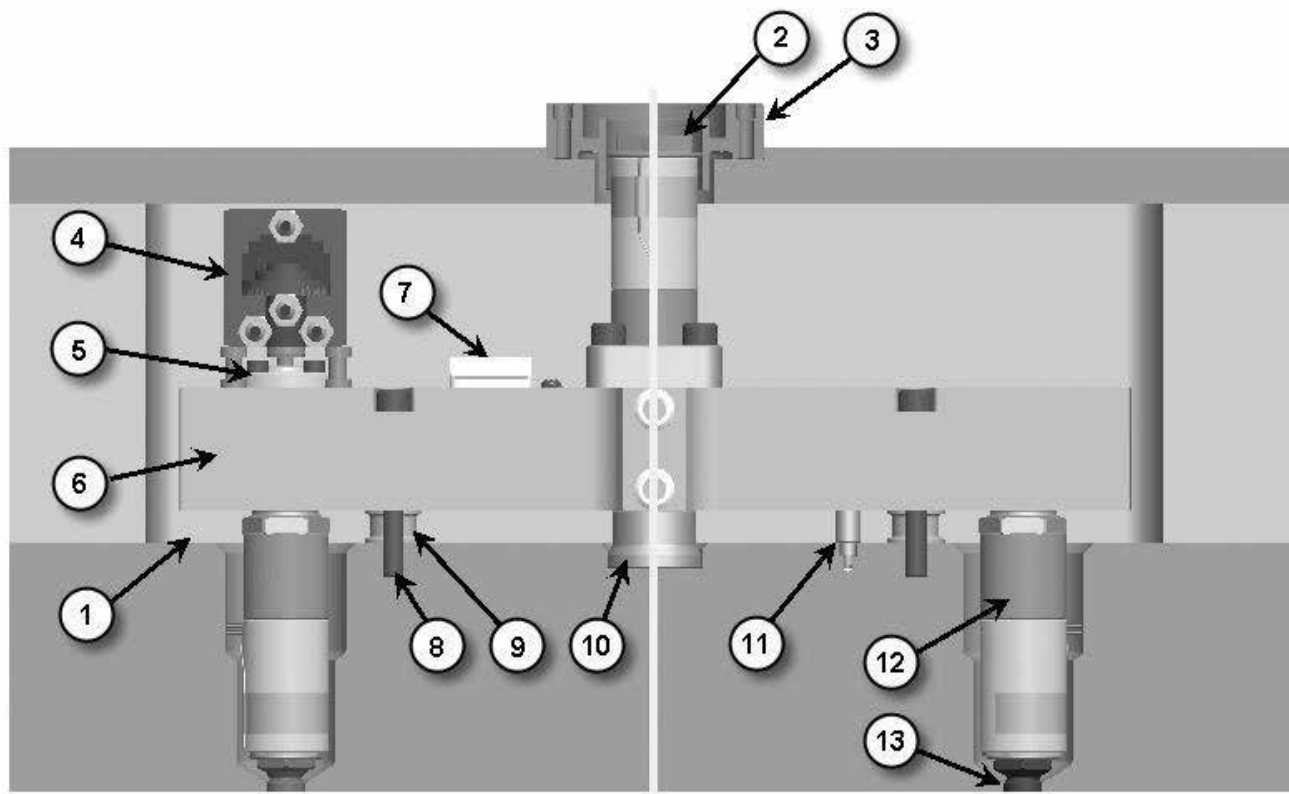
The first step in establishing the proper gate diameter is to assess whether your application requires a small, medium or large gate size. Review the Gate Sizing table shown below. Since different considerations may suggest a different optimum gate diameter, a compromise for each application is normally required. Needlessly small gates should be avoided when possible as they restrict flow and induce higher pressure losses.

	small	medium	large
material consideration			
structure	amorphous	part crystalline	crystalline
molecular weight	low	medium	high
melt flow index	high, lubricants	medium	low
reinforcements, fillers	none	low percentage	high
additive, flame retardants	without		with
heat, shear sensitivity	not feasible	acceptable	feasible
solidification rate of material	slow	medium	fast
part consideration			
shot weight	low	medium	high
wall thickness / flow length	small	medium	large
tolerances	wide	average	tight
gate mark, gate vestige	excellent	good	fair
end use	consumer-cosmetic		technical
process considerations			
temperature window	wide	medium	narrow
injection speed	low	medium	high
pressure drop created	high	normal	low
effect of holding pressure	less		more



Cutaway of a Typical FUSION SERIES® G2 System

This illustration of a typical *Mold-Masters* FUSION SERIES® G2 system is divided into two halves: the valve side and non-valve side. The terminology associated with the various components and features are listed below.



- | | |
|-------------------------|------------------------------|
| 1. Air insulation | 8. System screw |
| 2. Inlet extension | 9. Support bushing |
| 3. Locating ring | 10. Manifold locator |
| 4. Valve actuator | 11. Anti rotation step dowel |
| 5. Valve nut and insert | 12. G2 nozzle |
| 6. G2 manifold | 13. Gate seal |
| 7. Bridge plate | |



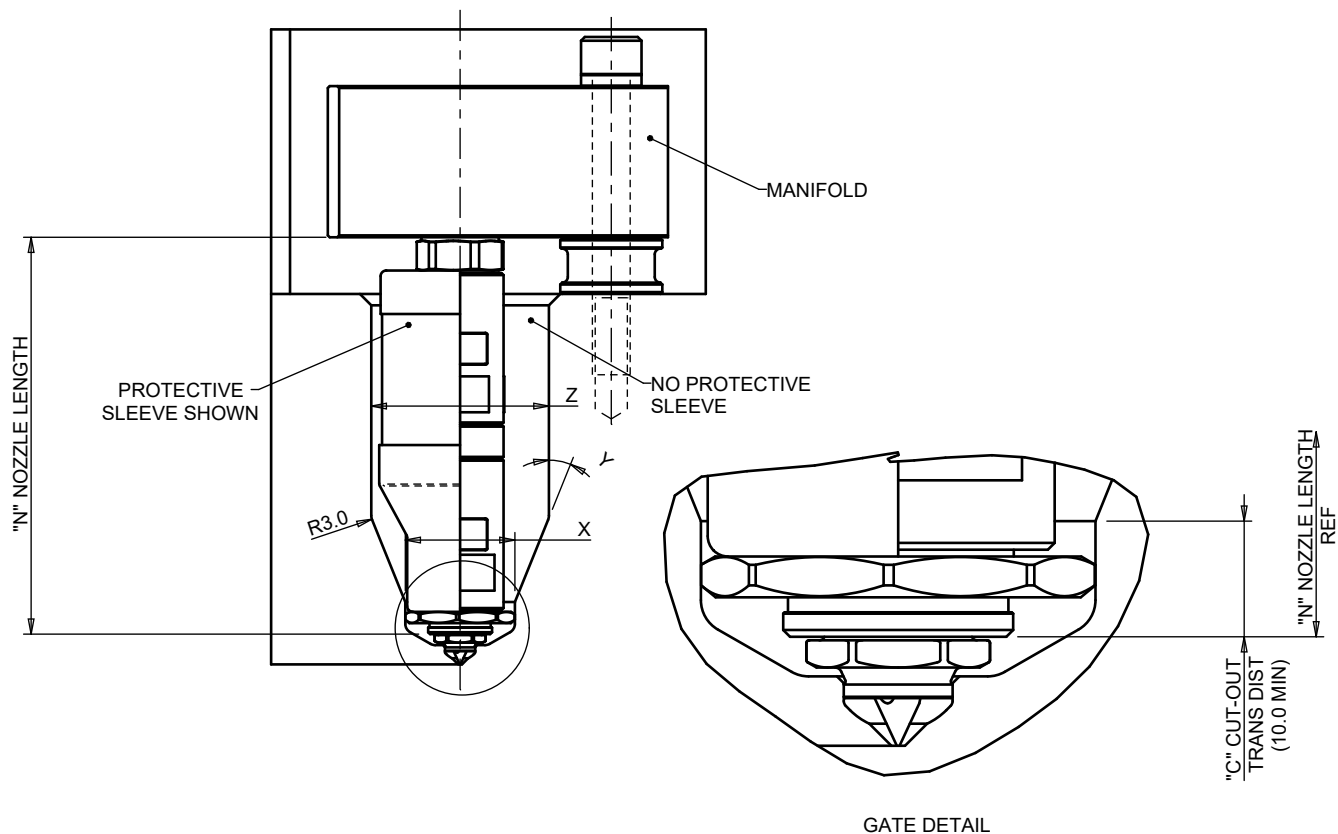
TYPICAL TORQUE VALUES

TORQUE VALUES					
DESCRIPTION	REFERENCE PART NUMBER	PRODUCT LINE	WRENCH SIZE	TORQUE VALUE	
				[Nm]	[ft·lb]
GATE SEALS	ALL	F3000	12 mm	27	20
	ALL	F4000	14 mm	45	33
	ALL	F5000	18 mm	57	42
	ALL	F6000	27 mm	88	65
	ALL	F7000	32 mm	95	70
	ALL	F8000	41 mm	270	200
NOZZLE BODY	APPLICATION DEPENDENT	F3000	21 mm	80	59
		F4000	24 mm	85	63
		F5000	27 mm	88	65
		F6000	36 mm	135	100
		F7000	41 mm	183	135
		F8000	60 mm	450	332
PISTON TOP	ALL	ALL	8mm HEX KEY (1/4 INCH HEX KEY)	10	7.5
INLET TIP	IE08TP****	F3000, F4000 F5000, F6000	36 mm	88	65
	IE09TP****				
	IE13TP****				
	IE14TP****				
	IE32TP****"				
	IE29TP****	F7000, F8000	50 mm	360	265
	IE30TP****				
	IE33TP****"				
ACTUATOR MOUNTING SCREW	SHCS M5	ALL	4 mm (HEX KEY)	9.5	7
	SHCS M6	ALL	5 mm (HEX KEY)	16	11.8
MANIFOLD MOUNTING SCREW	SHCS M10	ALL	8 mm (HEX KEY)	40	30
	SHCS M16	ALL	14 mm (HEX KEY)	145	107
HEATED FLANGE MOUNTING SCREW	SHSS M6	ALL	5 mm (HEX KEY)	14	10.3

NOTE: THE TORQUE VALUE FOR GATE SEALS, NOZZLE FLANGE AND INLET TIP ARE AT PROCESSING TEMPERATURE.



ALL DIMENSIONS
TO BE VALIDATED
UPON DESIGN
REVIEW



NOZZLE	FRONT END CAP	"N"	"C" MAX
F5000	STANDARD	<485MM	23.0MM
F5000	EXTENDED	<485MM	61.0MM
F6000	STANDARD	<700MM	30.0MM
F6000	EXTENDED	<700MM	64.0MM
F7000	STANDARD	<1000MM	20.0MM
F7000	EXTENDED	<1000MM	53.0MM
F8000	STANDARD	<1000MM	21.0MM
F8000	EXTENDED	<1000MM	55.0MM

F5000		
	NO SLEEVE	WITH SLEEVE
X	Ø 36.00	Ø 36.00
Y	59°	59°
Z	Ø 53.0	Ø 54.0

F7000		
	NO SLEEVE	WITH SLEEVE
X	Ø 53.00	Ø 53.00
Y	59°	59°
Z	Ø 68.0	Ø 82.0

F6000		
	NO SLEEVE	WITH SLEEVE
X	Ø 46.00	Ø 46.00
Y	59°	59°
Z	Ø 63.0	Ø 69.0

F8000		
	NO SLEEVE	WITH SLEEVE
X	Ø 72.00	Ø 72.00
Y	12.5°	59°
Z	Ø 87.0	Ø 94.0



GATING STYLE	PAGE	GATE SEAL DESCRIPTION	GATE Ø	EXTRA STOCK (SUPPLIED LG.)	GATE SEAL OPTIONS	GATE SEAL PACKAGES	PROCESSING TEMP.			
E-TYPE TORPEDO	03.01.015	FS3 TORP. E G=Ø0.60-Ø1.60	Ø0.60-Ø1.60	0.0	TSM195 + TPM002-2	TSM195P2	< 280° C			
					TSM195 + TPM002-1	TSM195P	> 280° C			
F-TYPE TORPEDO	03.01.020	FS3 TORP. F G=Ø0.80	Ø0.80	0.0	TSM011 + TPM003-2	TSM011P3	< 280° C			
					TSM311 + TPM082	TSM311P	> 280° C			
		FS3 TORP. F G=Ø1.00	Ø1.00		TSM053 + TPM003-2	TSM053P3	< 280° C			
					TSM312 + TPM082	TSM312P	> 280° C			
		FS3 TORP. F G=Ø1.20	Ø1.20		TSM054 + TPM003-2	TSM054P3	< 280° C			
					TSM313 + TPM082	TSM313P	> 280° C			
		FS3 TORP. F G=Ø1.40	Ø1.40		TSM055 + TPM003-2	TSM055P3	< 280° C			
					TSM314 + TPM082	TSM314P	> 280° C			
		FS3 TORP. F G=Ø1.60	Ø1.60		TSM056 + TPM003-2	TSM056P3	< 280° C			
					TSM315 + TPM082	TSM315P	> 280° C			
		EXT. F-TYPE TORPEDO	03.01.025		FS3 EXT. TORP. F G=Ø1.20 w/6° TAPER	Ø1.20	30.0	TSF090F + TPM003-2	TSF090FP	< 280° C
								TSF090F + TPM082	TSF090FP1	> 280° C
					FS3 EXT. TORP. F G=Ø1.40 w/6° TAPER	Ø1.40		TSF091F + TPM003-2	TSF091FP	< 280° C
								TSF091F + TPM082	TSF091FP1	> 280° C
		FS3 EXT. TORP. F G=Ø1.60 w/6° TAPER	Ø1.60		TSF092F + TPM003-2	TSF092FP	< 280° C			
					TSF092F + TPM082	TSF092FP1	> 280° C			
BI-METALLIC C-SPRUE	03.01.030	FS3 BI-METALLIC C-SPRUE	Ø1.0	0.0	TSM012-1 + TSLM004	TSM012P12	ALL			
		FS3 BI-METALLIC C-SPRUE	Ø1.5		TSM012-1 + TSLM005	TSM012P13				
		FS3 BI-METALLIC C-SPRUE	Ø2.0		TSM012-1 + TSLM193	TSM012P14				
HOT SPRUE	03.01.035	FS3 HOT SPRUE G=Ø1.0 w/6° TAPER	Ø1.0	6.0	TSF105F	N/A				
		FS3 HOT SPRUE G=Ø1.5 w/6° TAPER	Ø1.5		TSF106F					
		FS3 HOT SPRUE G=Ø2.0 w/6° TAPER	Ø2.0		TSF107F					
		FS3 HOT SPRUE G=Ø2.5 w/6° TAPER	Ø2.5		TSF108F					
EXTENDED HOT SPRUE	03.01.040	FS3 EXT. HOT SPRUE G=Ø1.0 w/6° TAPER	Ø1.0	30.0	TSF109F					
		FS3 EXT. HOT SPRUE G=Ø1.5 w/6° TAPER	Ø1.5		TSF110F					
		FS3 EXT. HOT SPRUE G=Ø2.0 w/6° TAPER	Ø2.0		TSF111F					
		FS3 EXT. HOT SPRUE G=Ø2.5 w/6° TAPER	Ø2.5		TSF112F					
BI-METALLIC C-VALVE	03.01.045	FS3 BI-METALLIC C-VALVE	Ø1.50-Ø2.00	0.0	TSM014-1 + TSLM006	TSM014P1				
HOT VALVE	03.01.050	FS3 HOT VALVE G=Ø1.5 FIN. GRND.	Ø1.50	0.0	TSF093F	N/A				
		FS3 HOT VALVE G=Ø2.0 FIN. GRND.	Ø2.00		TSF094F					
EXTENDED HOT VALVE	03.01.051	FS3 EXT. HOT VALVE G=Ø1.5 w/6° TAPER	Ø1.50	30.0	TSF095F					
		FS3 EXT. HOT VALVE G=Ø2.0 w/6° TAPER	Ø2.00		TSF096F					
ACCU-VALVE LX	03.01.055	FS3 CYL. HOT VALVE G=1.5 1.00 mm CONTACT	Ø1.50	0.0	TSF097F					
		FS3 CYL. HOT VALVE G=2.0 1.00 mm CONTACT	Ø2.00		TSF098F					
		FS3 CYL. HOT VALVE G=1.5 2.75 mm CONTACT	Ø1.50		TSF113F					
		FS3 CYL. HOT VALVE G=2.0 2.75 mm CONTACT	Ø2.00		TSF114F					
EXTENDED ACCU-VALVE LX	03.01.056	FS3 EXT. CYL. HV G=1.5 F=30w/6° TAPER	Ø1.50	30.0	TSF099F					
		FS3 EXT. CYL. HV G=2.0 F=30w/6° TAPER	Ø2.00		TSF100F					

NOTE:

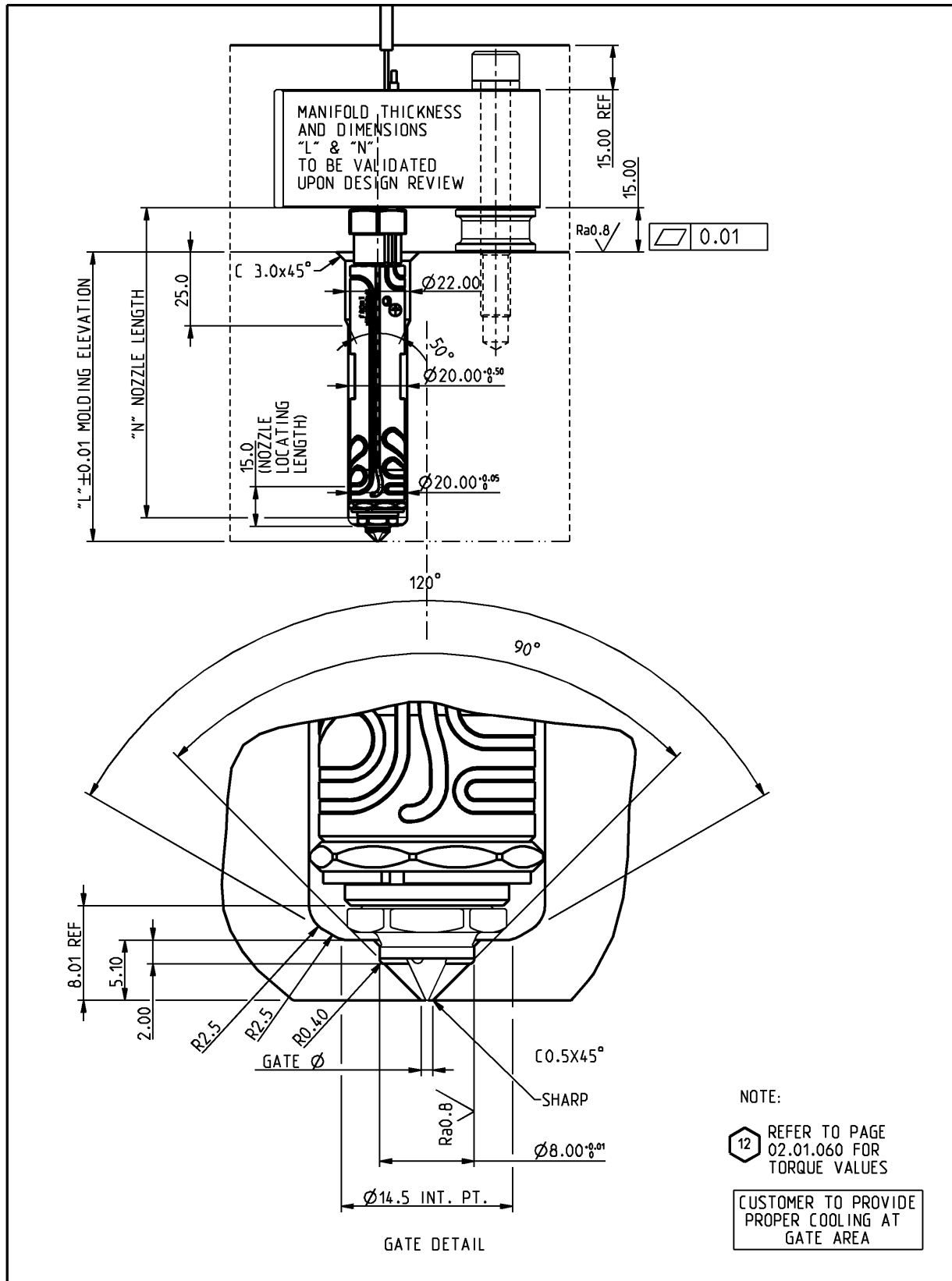
1. APPLIES TO ALL STANDARD NOZZLE LENGTH RANGES (55.0 - 200.0)
CUSTOM SEALS CAN BE MANUFACTURED WITH APPLICATION ENGINEER APPROVAL.

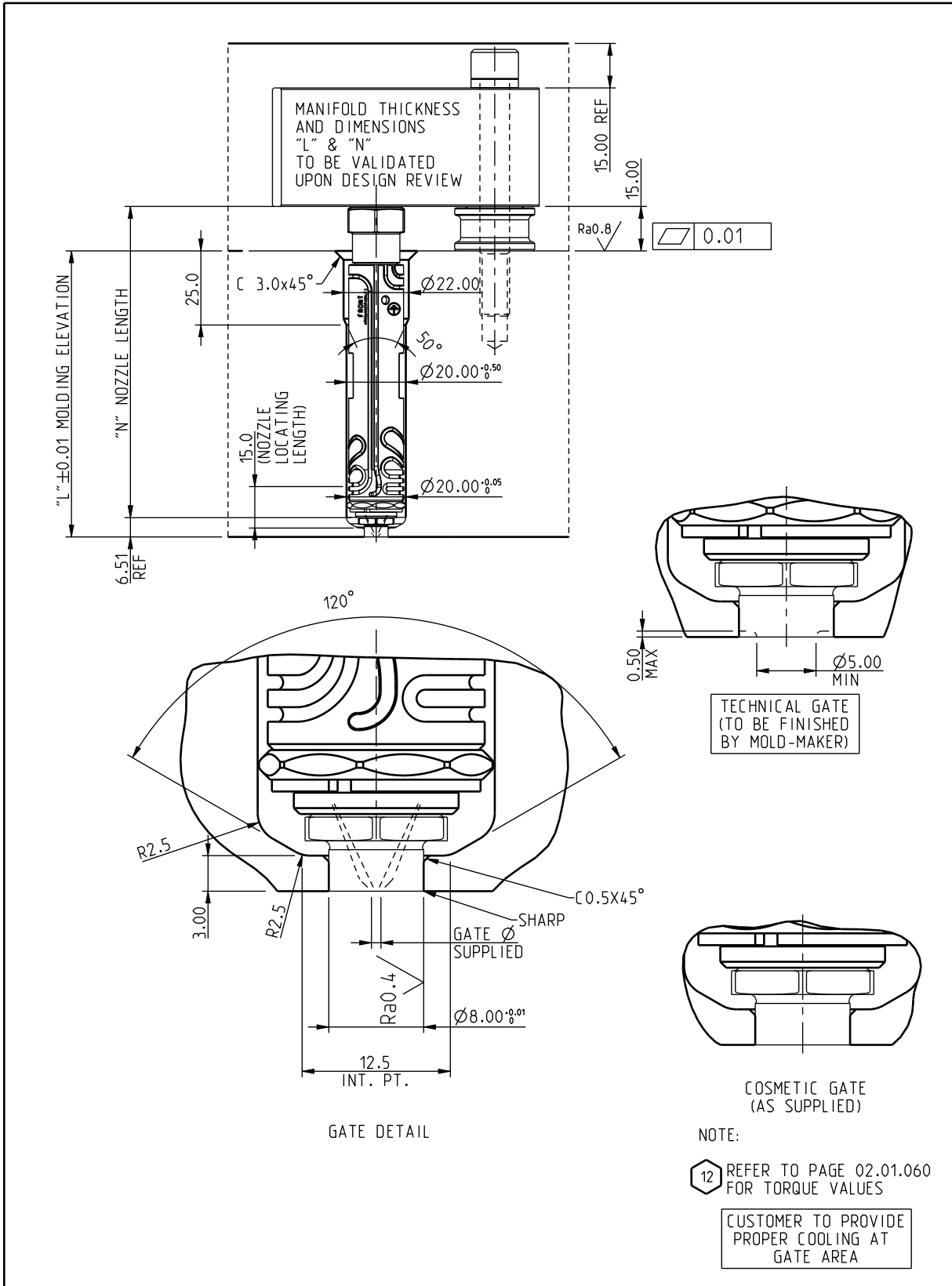


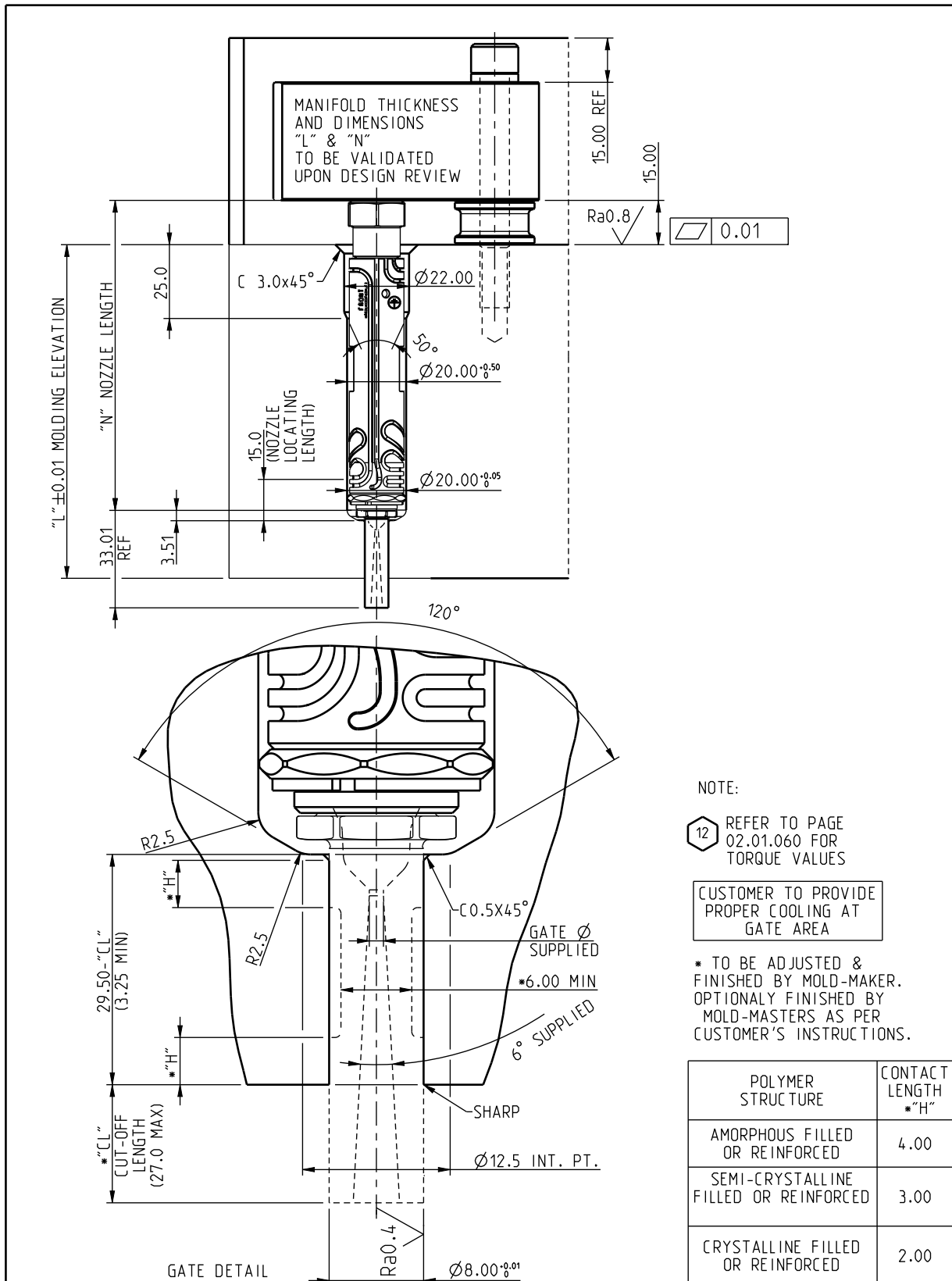
GATING STYLE	PAGE	GATE SEAL DESCRIPTION	GATE Ø	EXTRA STOCK (SUPPLIED LG.)	GATE SEAL OPTIONS	GATE SEAL PACKAGES	PROCESSING TEMP.
CYLINDRICAL HOT VALVE	03.01.057	FS3 CYL.HOT VLV G=1.50 (FIN. GRND)	Ø 1.50	0.0	TSF152F + VPG038	TSF152FP	ALL
		FS3 CYL.HOT VLV G=2.0 (FIN. GRND)	Ø 2.00		TSF154F + VPG038	TSF154FP	
EXTENDED CYLINDRICAL HOT VALVE	03.01.058	FS3 EXT.CYL.HOT VLV G=1.50 w/PILOT HOLE	Ø 1.50	30.0	TSF153 + VPG038	TSF153P	
		FS3 EXT.CYL.HOT VLV G=1.50 w/6° TAPER	Ø 1.50		TSF153F + VPG038	TSF153FP	
		FS3 EXT.CYL.HOT VLV G=2.0 w/PILOT HOLE	Ø 2.00		TSF155 + VPG038	TSF155P	
		FS3 EXT.CYL.HOT VLV G=2.0 w/6° TAPER	Ø 2.00		TSF155F + VPG038	TSF155FP	

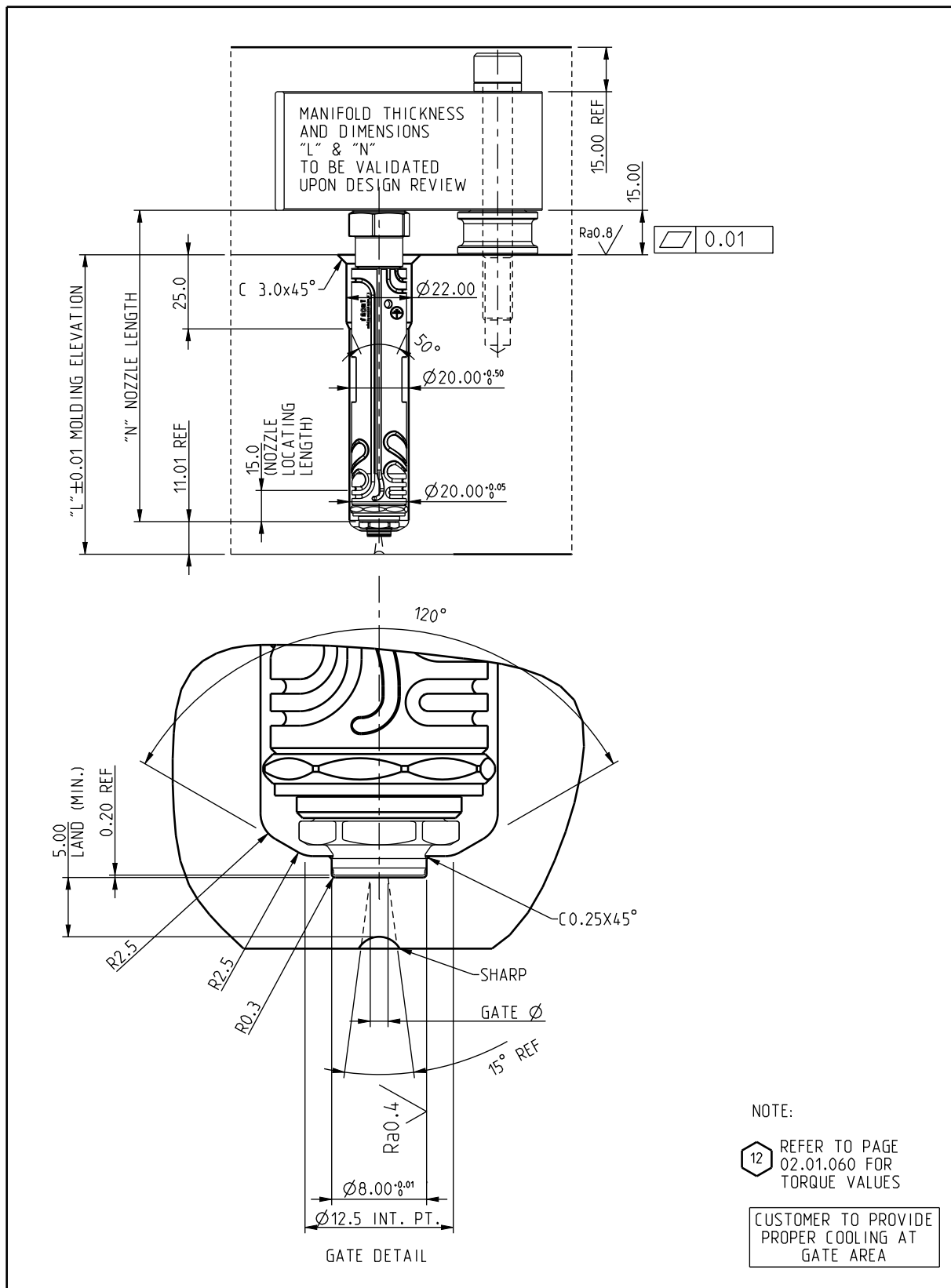
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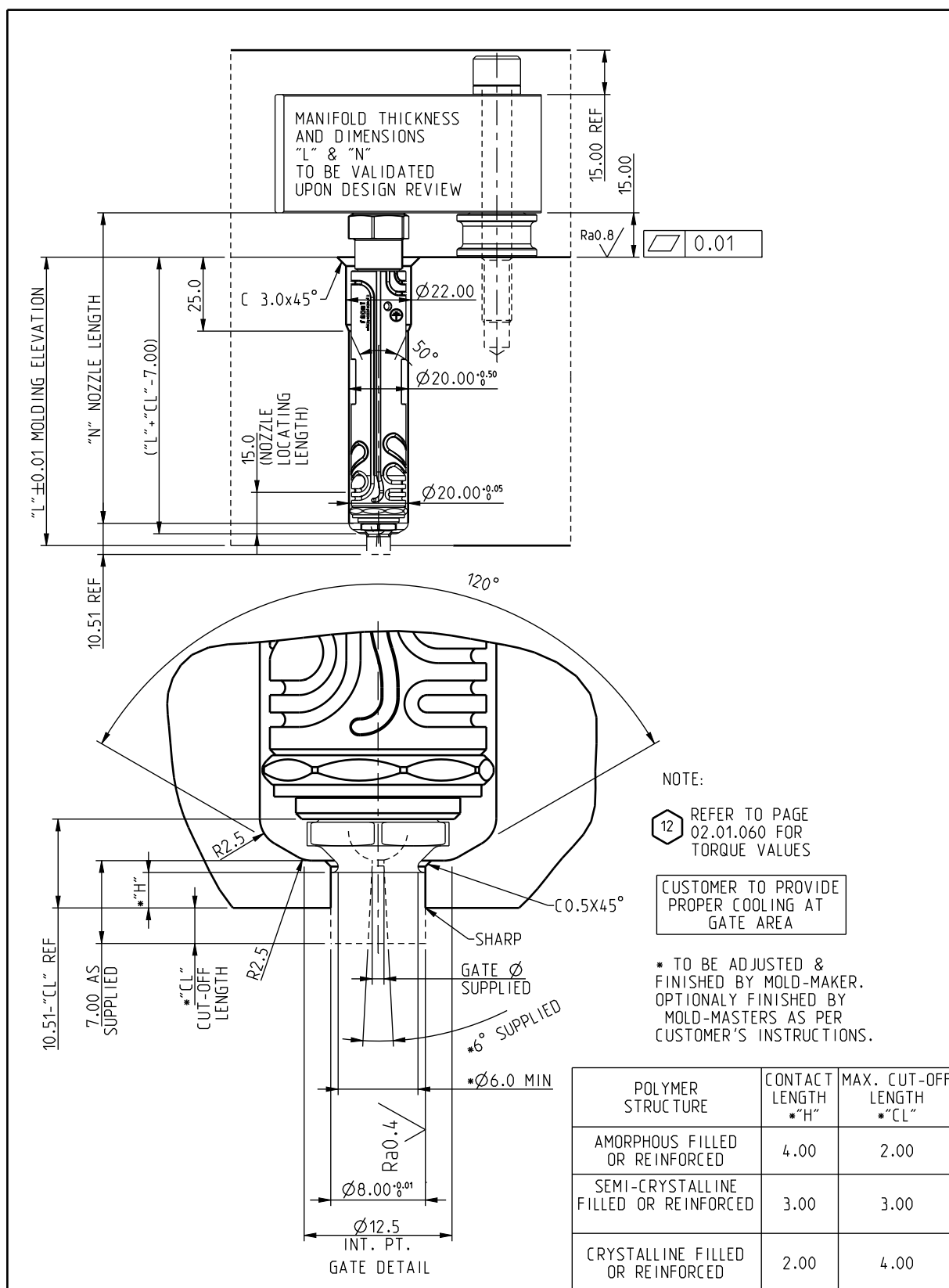
1. APPLIES TO ALL STANDARD NOZZLE LENGTH RANGES (55.0 - 200.0)
CUSTOM SEALS CAN BE MANUFACTURED WITH APPLICATION ENGINEER APPROVAL.

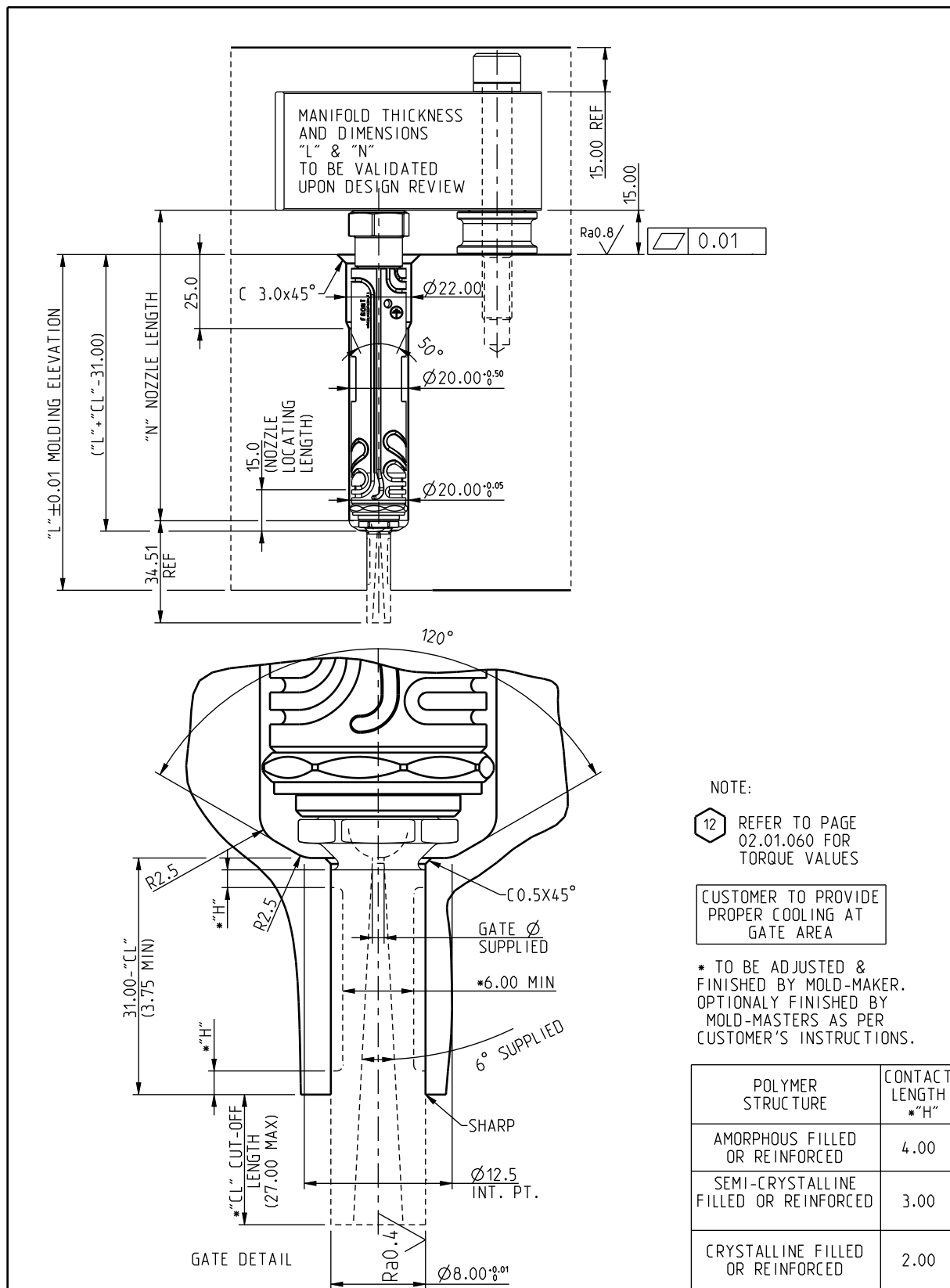


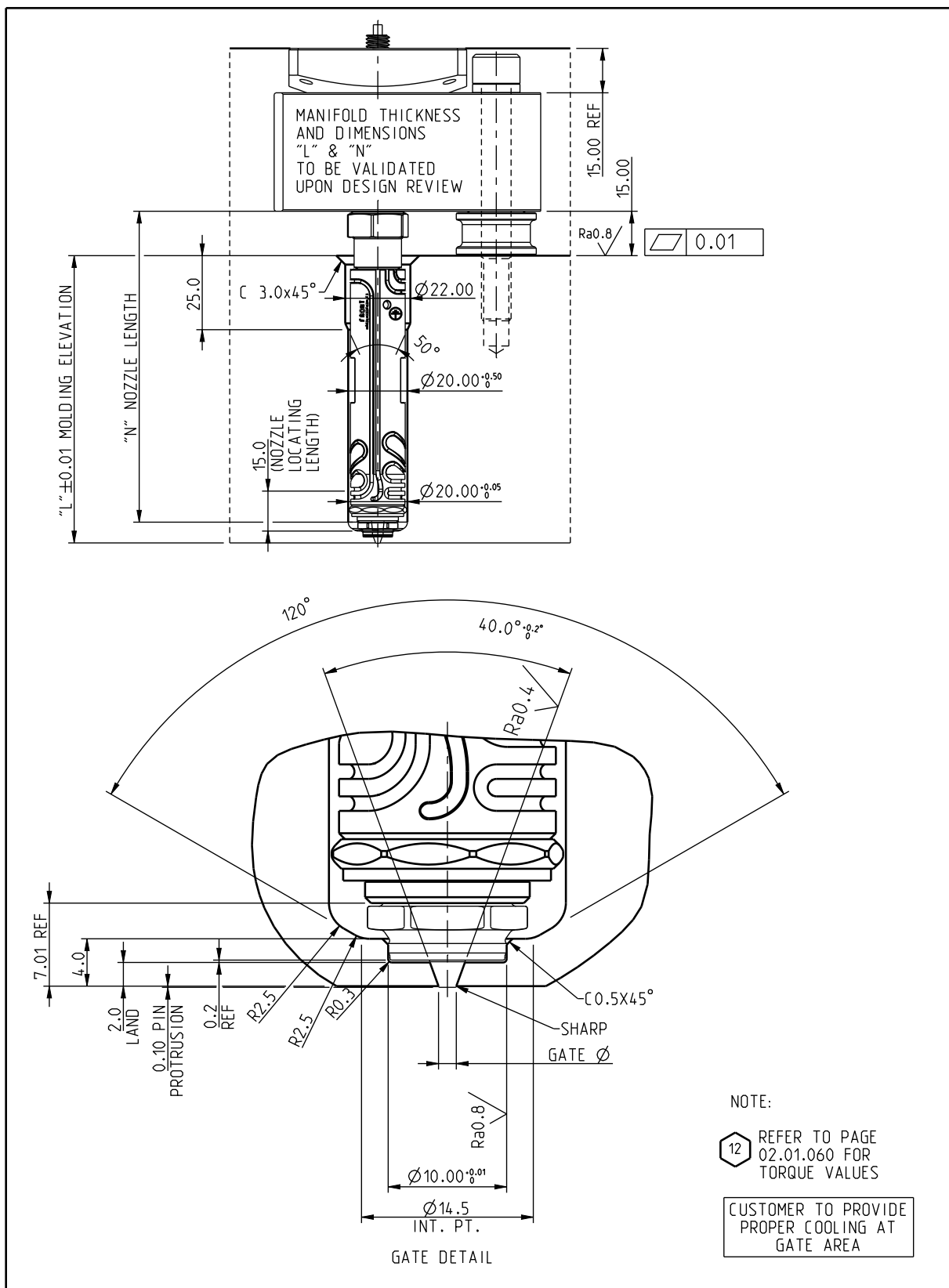


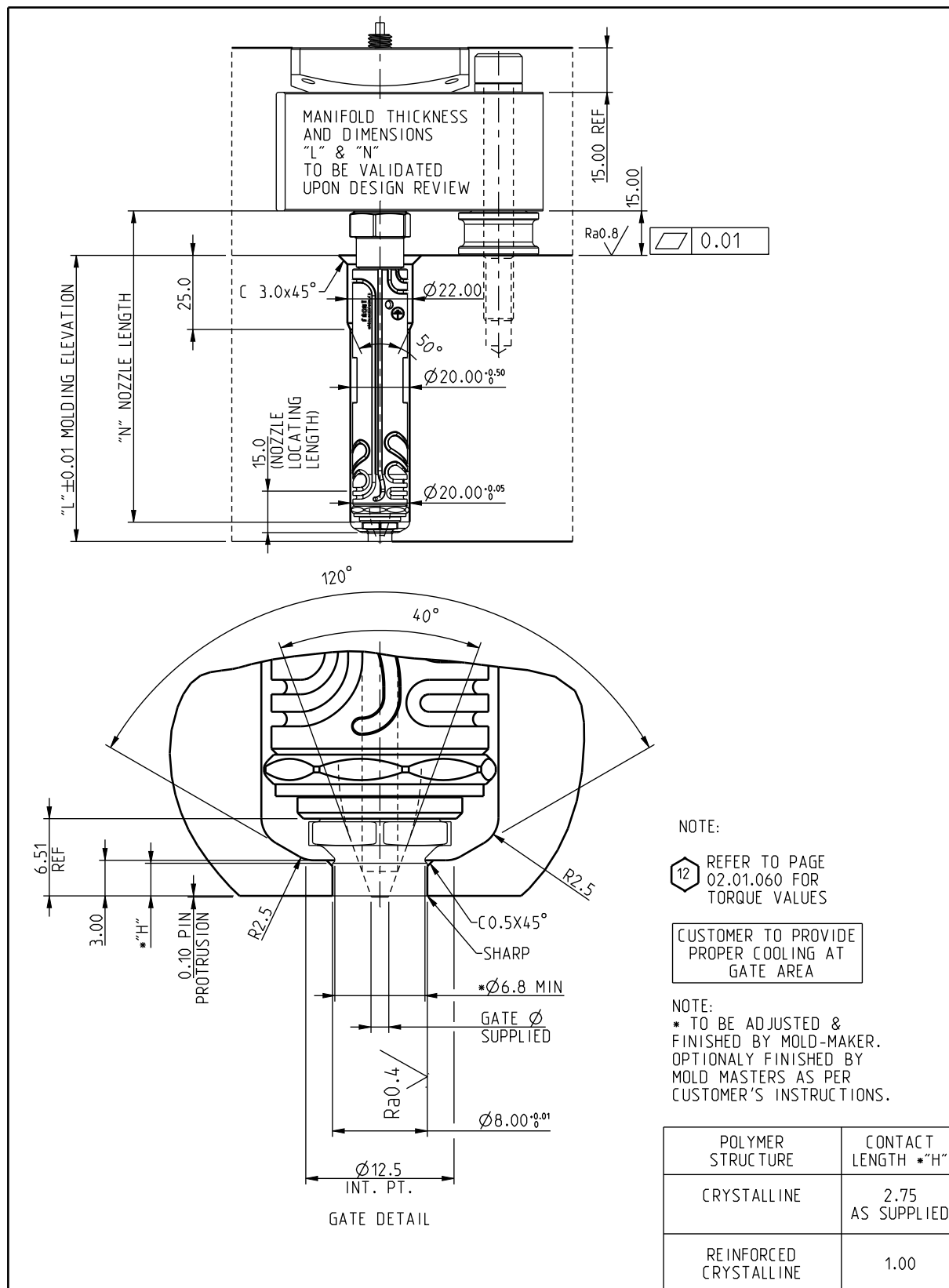


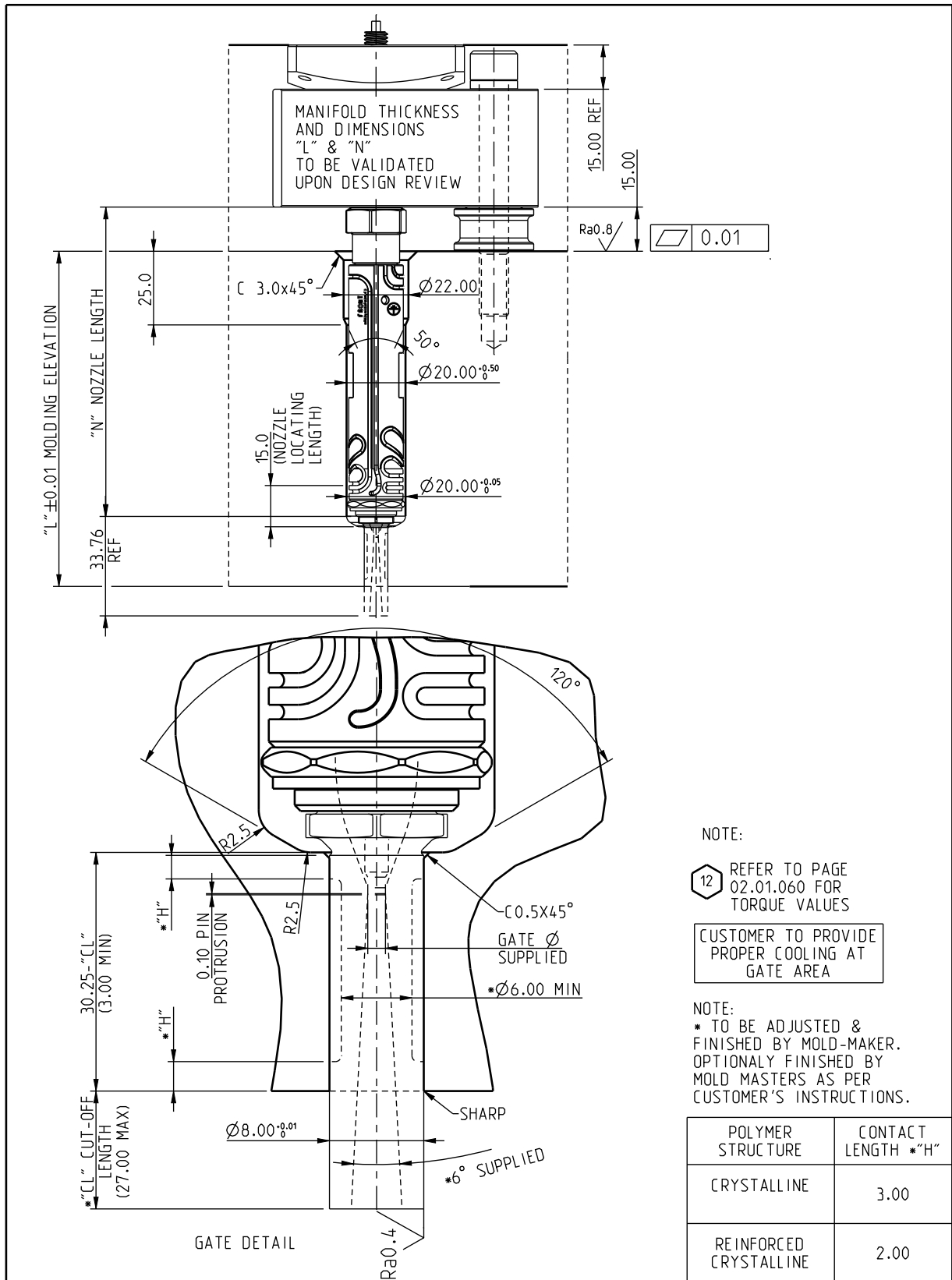


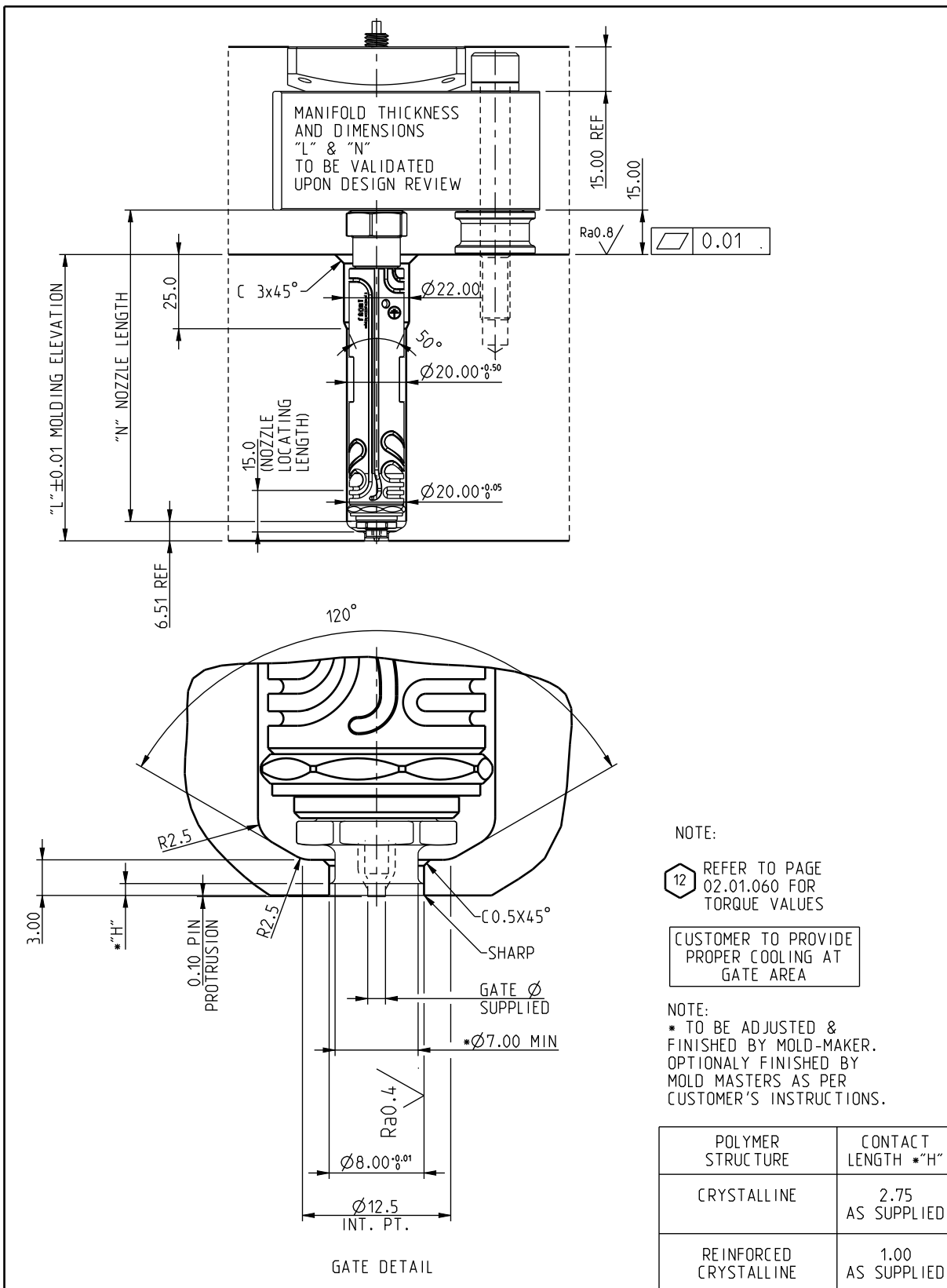


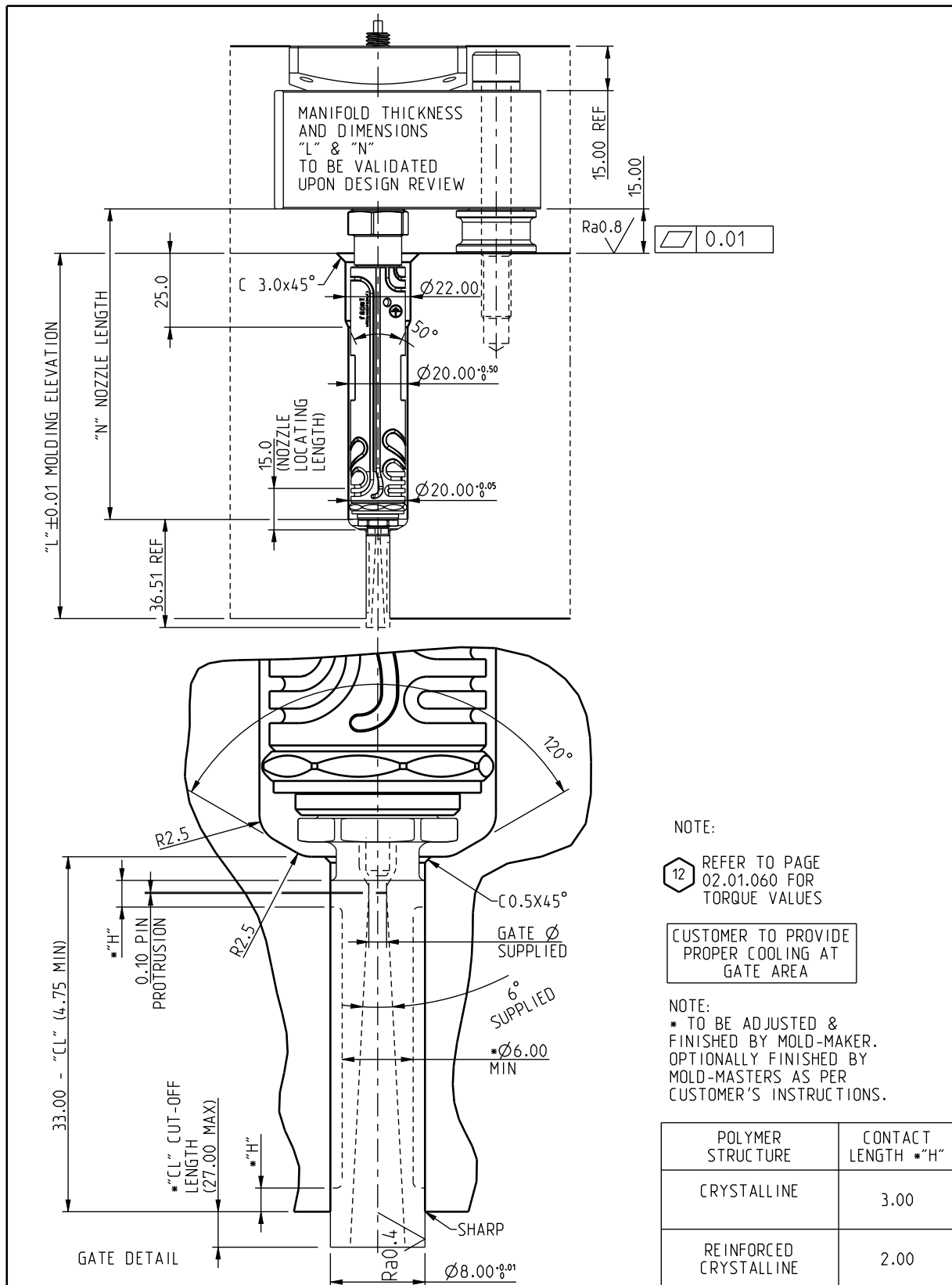


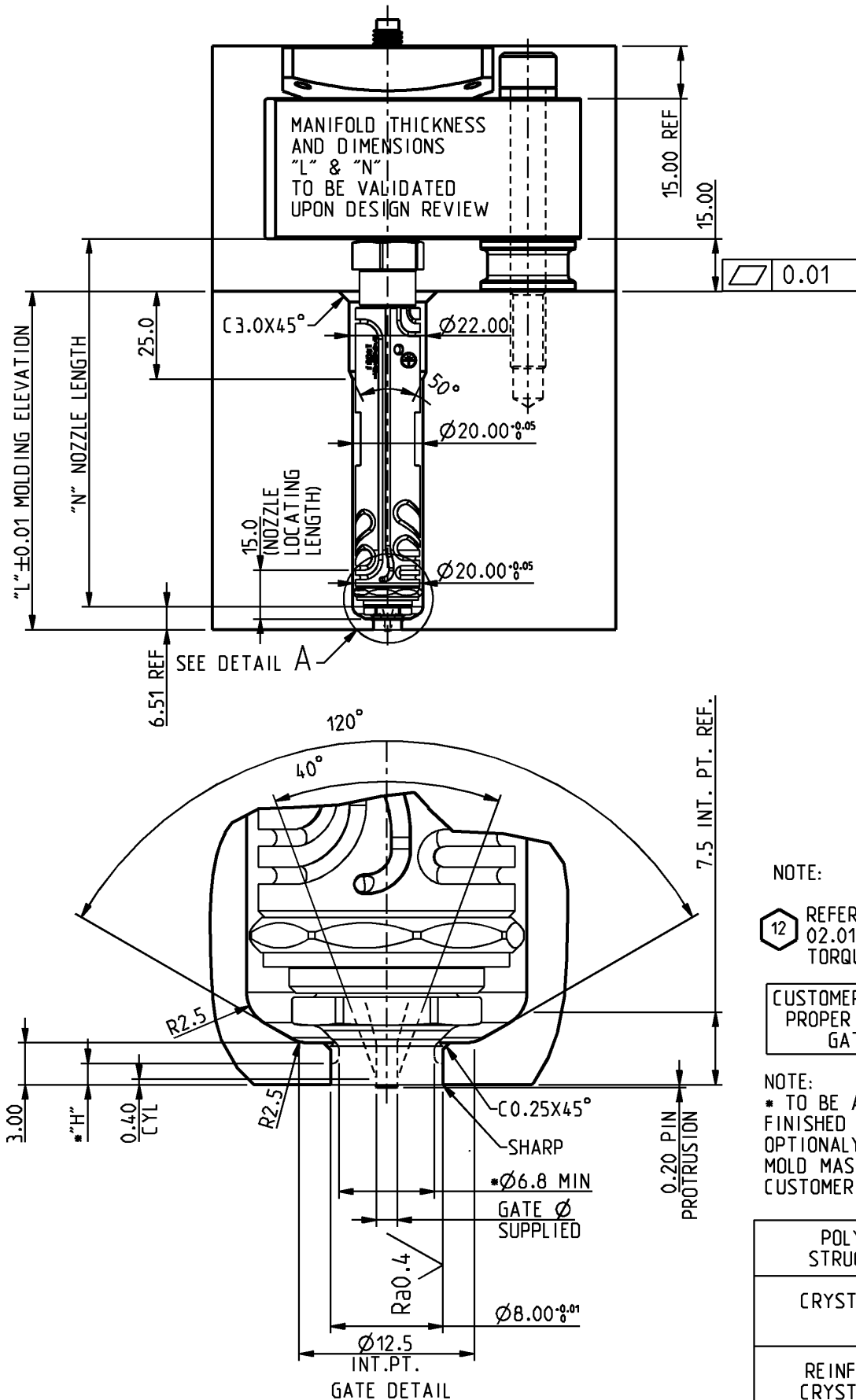












NOTE:

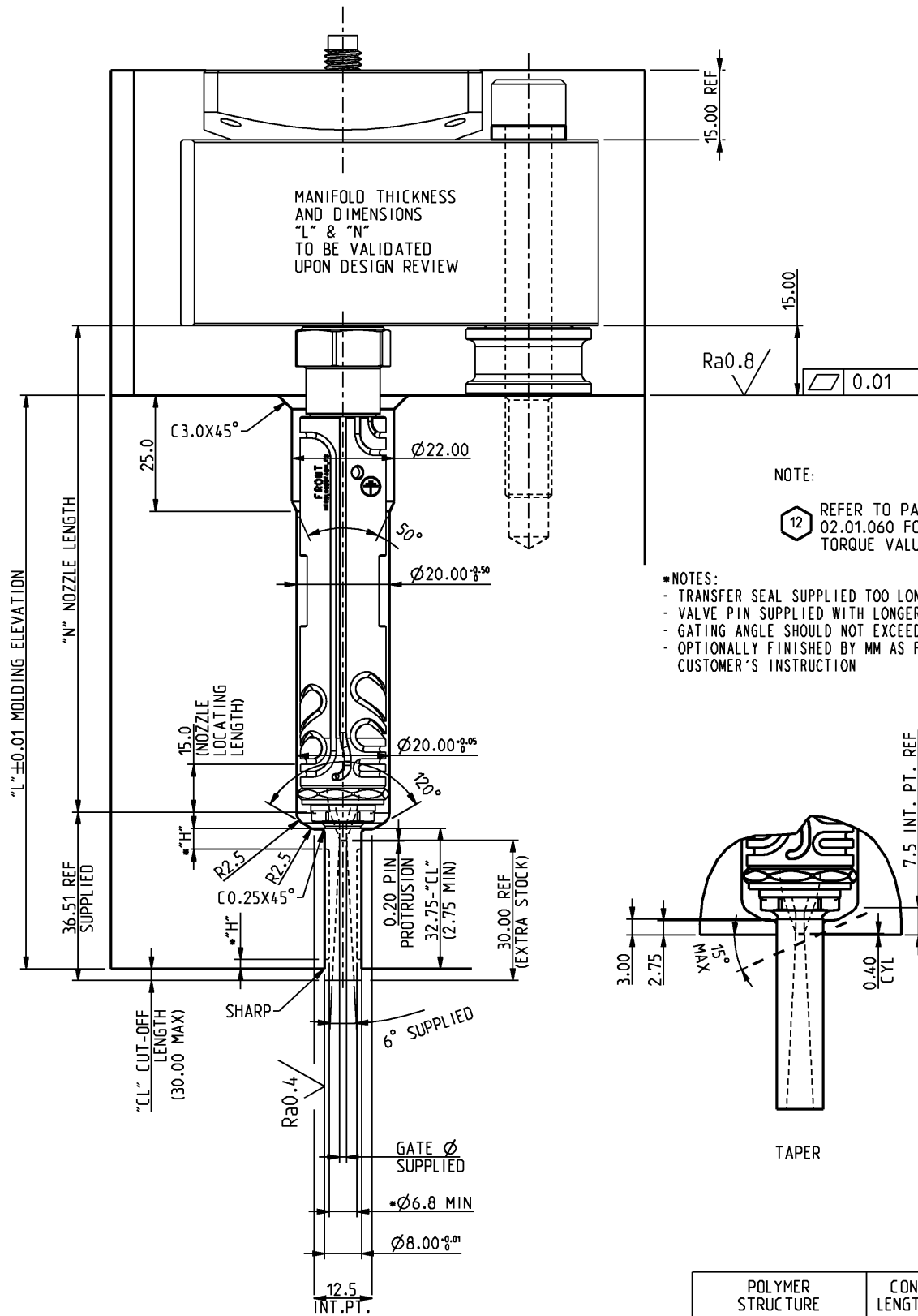
12 REFER TO PAGE 02.01.060 FOR TORQUE VALUES

CUSTOMER TO PROVIDE PROPER COOLING AT GATE AREA

NOTE:

* TO BE ADJUSTED & FINISHED BY MOLD-MAKER. OPTIONALLY FINISHED BY MOLD MASTERS AS PER CUSTOMER'S INSTRUCTIONS.

POLYMER STRUCTURE	CONTACT LENGTH *"H"
CRYSTALLINE	2.75 AS SUPPLIED
REINFORCED CRYSTALLINE	1.00 AS SUPPLIED



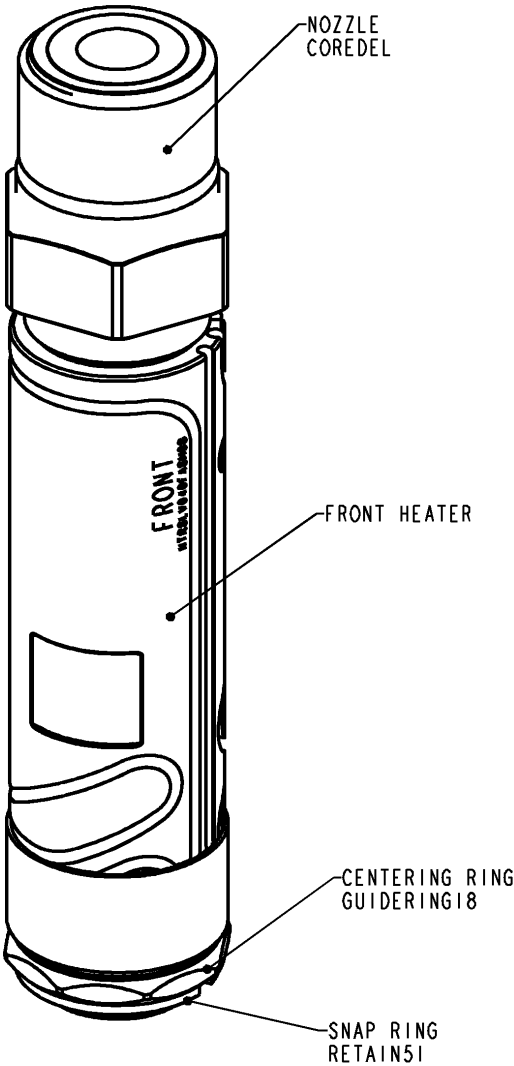
GATE DETAIL

CUSTOMER TO PROVIDE PROPER COOLING AT GATE AREA

POLYMER STRUCTURE	CONTACT LENGTH *H"
CRYSTALLINE	2.75
REINFORCED CRYSTALLINE	2.00



F3000 03



FRONT HEATER

PART	LENGTH	ID	OD	WATTAGE
HTRSLV040FASM10	40.0	14.0	18.5	135W
HTRSLV060FASM10	60.0	14.0	18.5	155W
HTRSLV080FASM10	80.0	14.0	18.5	165W
HTRSLV100FASM10	100.0	14.0	18.5	175W
HTRSLV120FASM10	120.0	14.0	18.5	190W
HTRSLV140FASM10	140.0	14.0	18.5	200W
HTRSLV160FASM10	160.0	14.0	18.5	220W
HTRSLV180FASM10	180.0	14.0	18.5	230W

NOZZLE CONFIGURATION

NOZZLE LENGTH "N" (MM)	FRONT HEATER
60.00-80.00	HTRSLV040FASM10
80.01-100.00	HTRSLV060FASM10
100.01-120.00	HTRSLV080FASM10
120.01-140.00	HTRSLV100FASM10
140.01-160.00	HTRSLV120FASM10
160.01-180.00	HTRSLV140FASM10
180.01-200.00	HTRSLV160FASM10
200.01-220.00	HTRSLV180FASM10



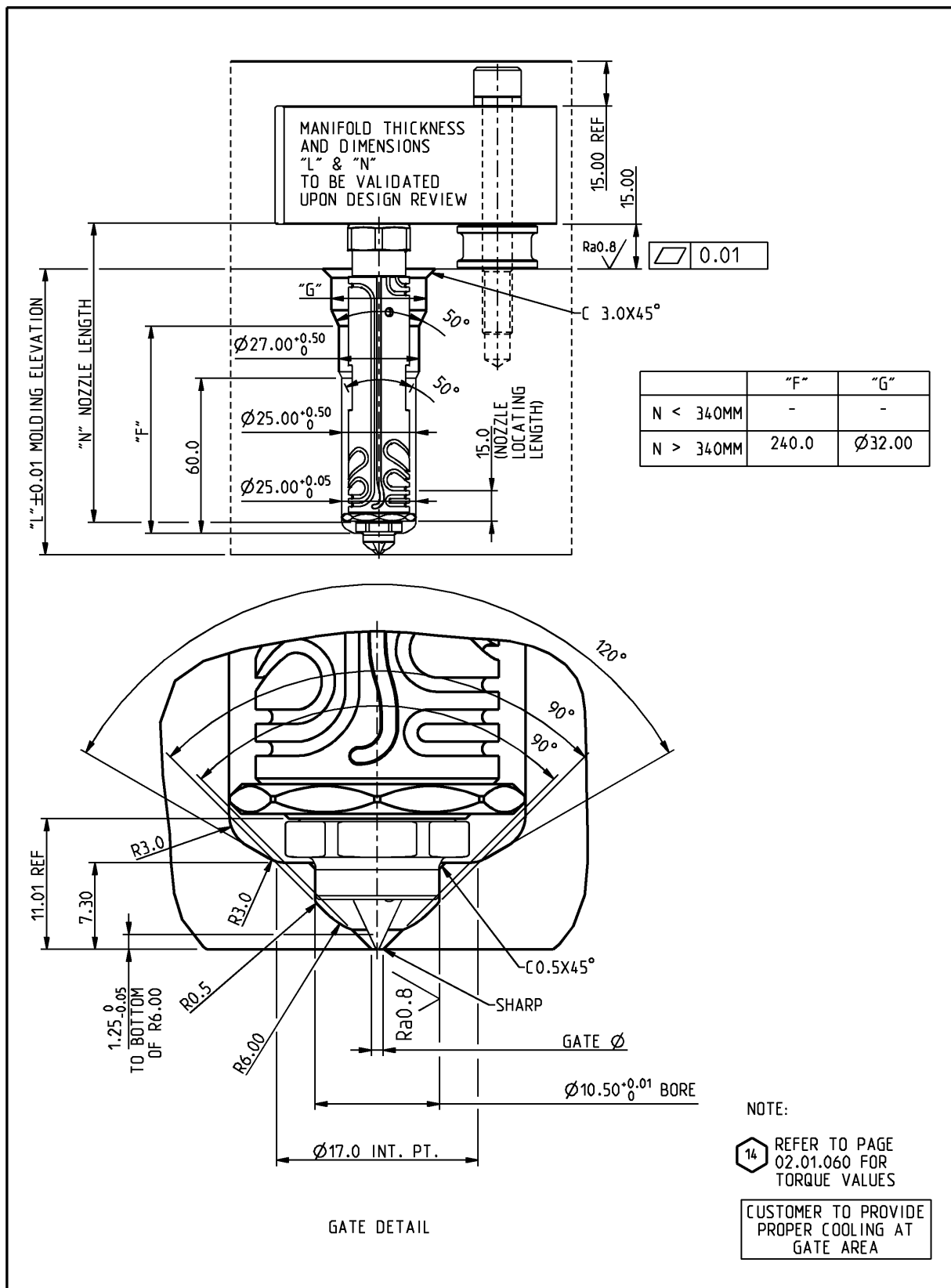
GATING STYLE	PAGE	GATE SEAL DESCRIPTION	GATE Ø	EXTRA STOCK (SUPPLIED LG.)	GATE SEAL OPTIONS	GATE SEAL PACKAGES	PROCESSING TEMP.
E-TYPE TORPEDO	04.01.015	FS4 TORP. E G=Ø 0.60Ø 1.60	Ø 0.60Ø 1.60	0.0	TSM196 + TPM004-2	TSM196P2	< 280° C
					TSM196 + TPM004-1	TSM196P	> 280° C
F-TYPE TORPEDO	04.01.020	FS4 TORP F G=Ø 1.0	Ø 1.00	0.0	TSM019 + TPM005-2	TSM019P3	< 280° C
					TSM317 + TPM084	TSM317P	> 280° C
		FS4 TORP F G=Ø 1.2	Ø 1.20		TSM057 + TPM005-2	TSM057P3	< 280° C
					TSM318 + TPM084	TSM318P	> 280° C
		FS4 TORP F G=Ø 1.4	Ø 1.40		TSM058 + TPM005-2	TSM058P3	< 280° C
					TSM319 + TPM084	TSM319P	> 280° C
		FS4 TORP F G=Ø 1.6	Ø 1.60		TSM059 + TPM005-2	TSM059P3	< 280° C
					TSM320 + TPM084	TSM320P	> 280° C
EXT. F-TYPE TORPEDO	04.01.025	FS4 EXT. TORP F G=Ø 1.2 w/Ø TAPER	Ø 1.20	40.0	TSF030F + TPM005-1	TSF030FP	> 280° C
					TSF030F + TPM005-2	TSF030FP1	< 280° C
		FS4 EXT. TORP F G=Ø 1.4 w/Ø TAPER	Ø 1.40		TSF031F + TPM005-1	TSF031FP	> 280° C
					TSF031F + TPM005-2	TSF031FP1	< 280° C
		FS4 EXT. TORP F G=Ø 1.6 w/Ø TAPER	Ø 1.60		TSF032F + TPM005-1	TSF032FP	> 280° C
		TSF032F + TPM005-2	TSF032FP1	< 280° C			
HOT SPRUE	04.01.035	FS4 HOT SPRUE G=Ø 1.0 w/Ø TAPER	Ø 1.00	6.0	TSF065F (MODIFIED FROM TSM021)	N/A	
		FS4 HOT SPRUE G=Ø 2.0 w/Ø TAPER	Ø 2.00		TSF066F (MODIFIED FROM TSM021)		
		FS4 HOT SPRUE G=Ø 2.5 w/Ø TAPER	Ø 2.50		TSF067F (MODIFIED FROM TSM021)		
EXTENDED HOT SPRUE	04.01.040	FS4 EXT. HOT SPRUE G=Ø 1.0 w/Ø TAPER	Ø 1.00	40.0	TSF068F (MODIFIED FROM TSM043)	N/A	
		FS4 EXT. HOT SPRUE G=Ø 2.0 w/Ø TAPER	Ø 2.00		TSF069F (MODIFIED FROM TSM043)		
		FS4 EXT. HOT SPRUE G=Ø 2.5 w/Ø TAPER	Ø 2.50		TSF070F (MODIFIED FROM TSM043)		
BI-METALLIC C-VALVE	04.01.045	FS4 BI-METALLIC C-VALVE	Ø 1.50Ø 2.00	0.0	TSF060 + TSLF0005	TSF060P	
HOT VALVE	04.01.050	FS4 HOT VALVE G=Ø 1.5 FIN. GRND.	Ø 1.50	0.0	TSM022F (MODIFIED FROM TSM022)	N/A	
		FS4 HOT VALVE G=Ø 2.0 FIN. GRND.	Ø 2.00		TSM023J (MODIFIED FROM TSM023)		
EXTENDED HOT VALVE	04.01.051	FS4 EXT. HOT VALVE G=Ø 1.5 w/Ø TAPER	Ø 1.50	40.0	TSF047F (MODIFIED FROM TSM047)	N/A	
		FS4 EXT. HOT VALVE G=Ø 2.0 w/Ø TAPER	Ø 2.00		TSF048F (MODIFIED FROM TSM048)		
ACCU-VALVE LX	04.01.055	FS4 CYL. HOT VALVE G=1.5 0.75mm CONTACT	Ø 1.50	0.0	TSF101F	N/A	ALL
		FS4 CYL. HOT VALVE G=2.0 0.75mm CONTACT	Ø 2.00		TSF102F		
		FS4 CYL. HOT VALVE G=1.5 3.00mm CONTACT	Ø 1.50		TSF115F		
		FS4 CYL. HOT VALVE G=2.0 3.00mm CONTACT	Ø 2.00		TSF116F		
EXTENDED ACCU-VALVE LX	04.01.056	FS4 EXT. CYL. HV G=Ø 1.5 F=30w/Ø TAPER	Ø 1.50	30.0	TSF103F		
		FS4 EXT. CYL. HV G=Ø 2.0 F=30w/Ø TAPER	Ø 2.00		TSF104F		
CYLINDRICAL HOT VALVE	04.01.057	FS4 CYL.HOT VLV G=1.50 (FIN. GRND)	Ø 1.50	0.0	TSF156F + VPG011-1	TSF156FP	
		FS4 CYL.HOT VLV G=2.0 (FIN. GRND)	Ø 2.00		TSF158F + VPG011-1	TSF158FP	
EXTENDED CYLINDRICAL HOT VALVE	04.01.058	FS4 EXT.CYL.HOT VLV G=1.50 w/PILOT HOLE	Ø 1.50	40.0	TSF157 + VPG011-1	TSF157P	
		FS4 EXT.CYL.HOT VLV G=1.50 w/Ø TAPER	Ø 1.50		TSF157F + VPG011-1	TSF157FP	
		FS4 EXT.CYL.HOT VLV G=2.0 w/PILOT HOLE	Ø 2.00		TSF159 + VPG011-1	TSF159P	
		FS4 EXT.CYL.HOT VLV G=2.0 w/Ø TAPER	Ø 2.00		TSF159F + VPG011-1	TSF159FP	

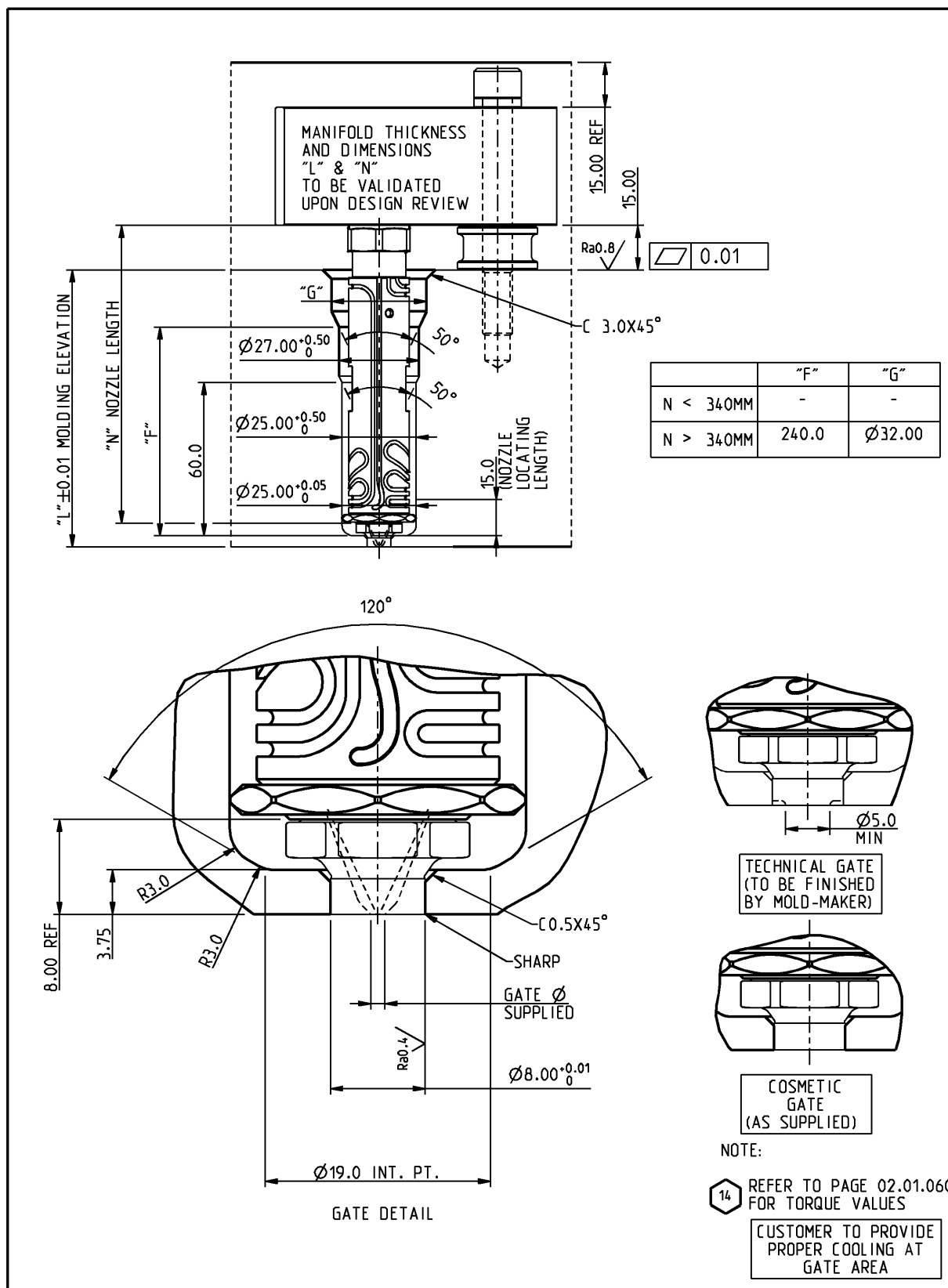
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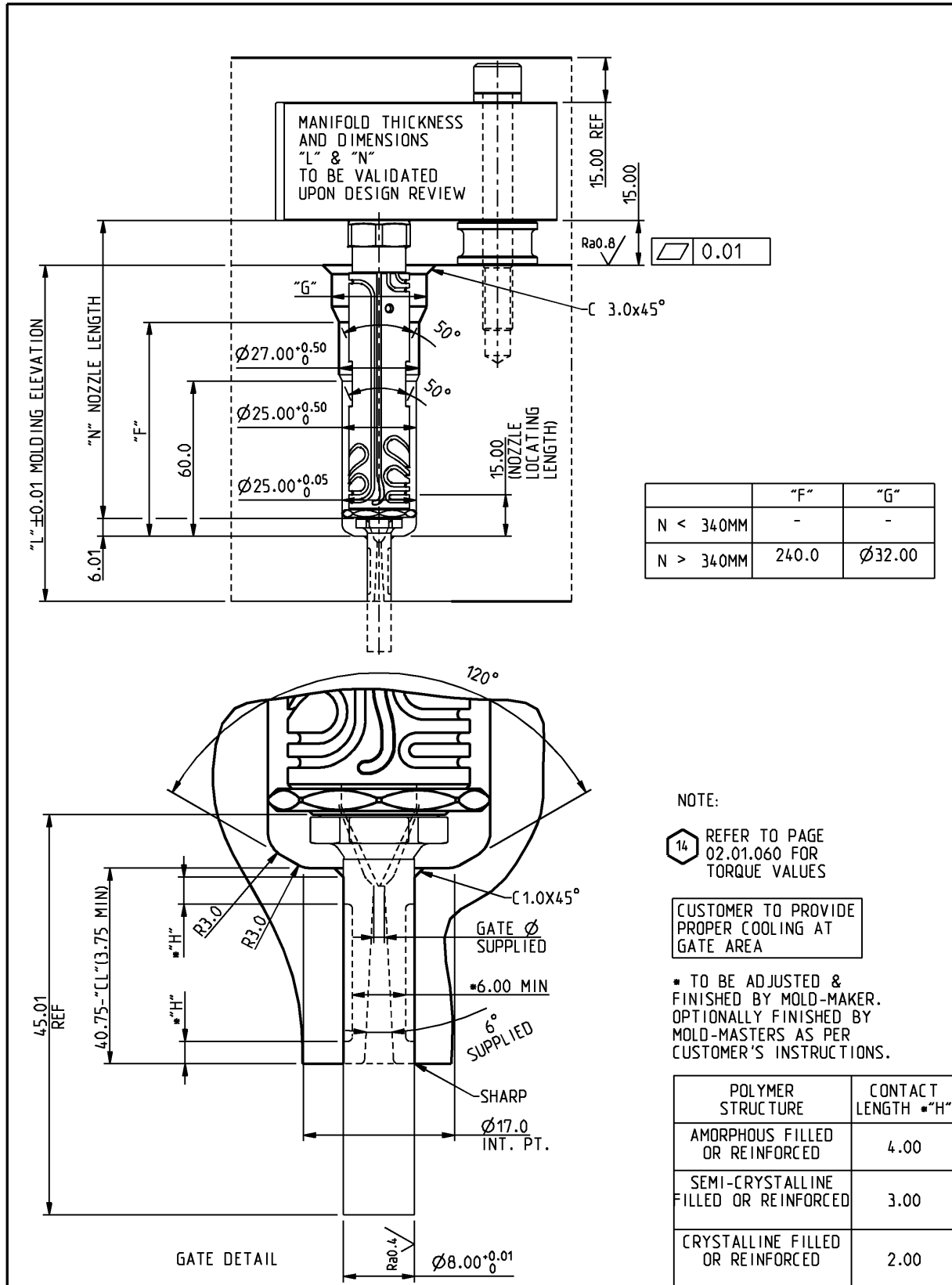
1. APPLIES TO ALL STANDARD NOZZLE LENGTH RANGES (55.0 - 300.0)
2. CUSTOM SEALS CAN BE MANUFACTURED WITH APPLICATION ENGINEER APPROVAL.

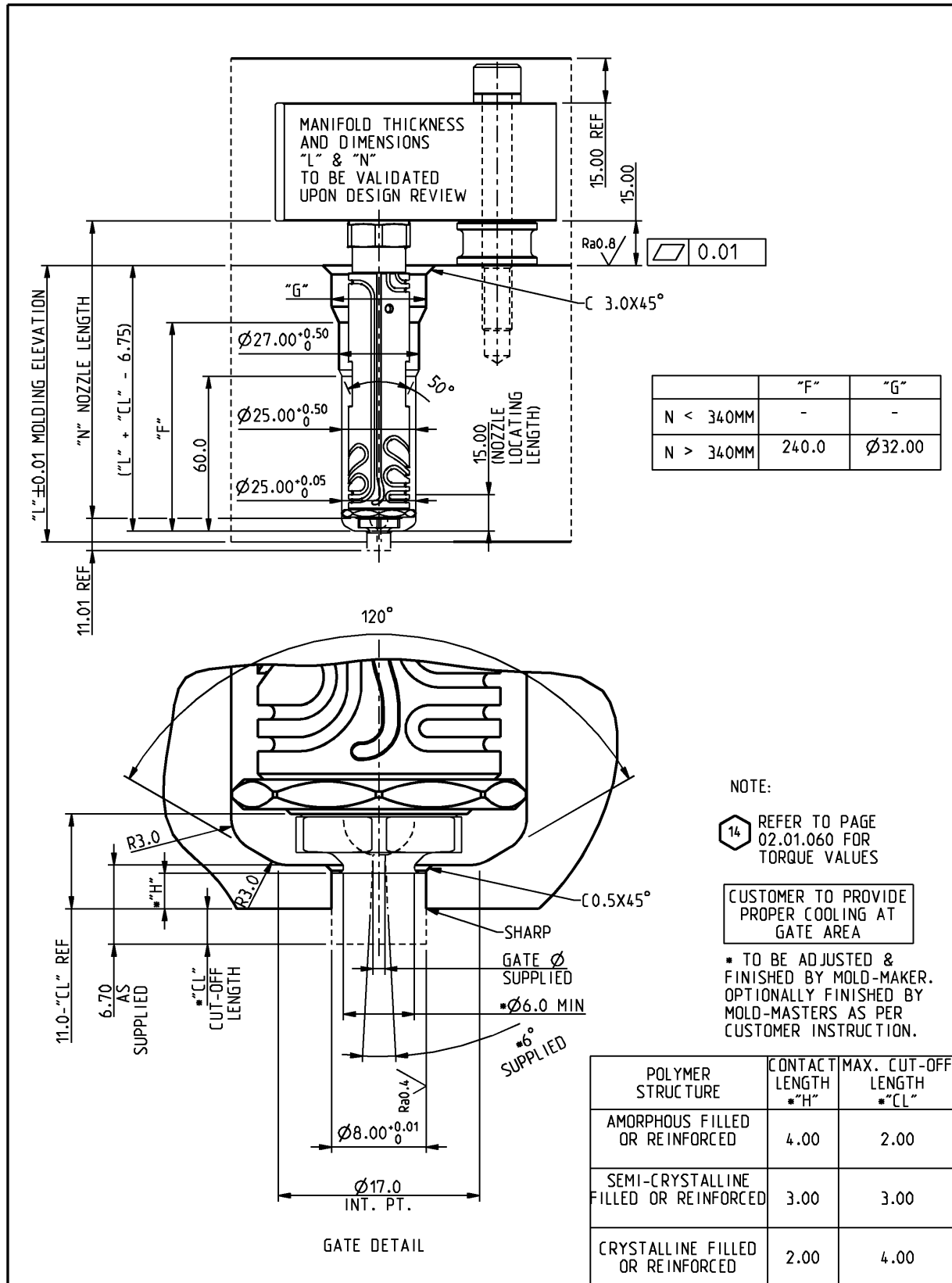


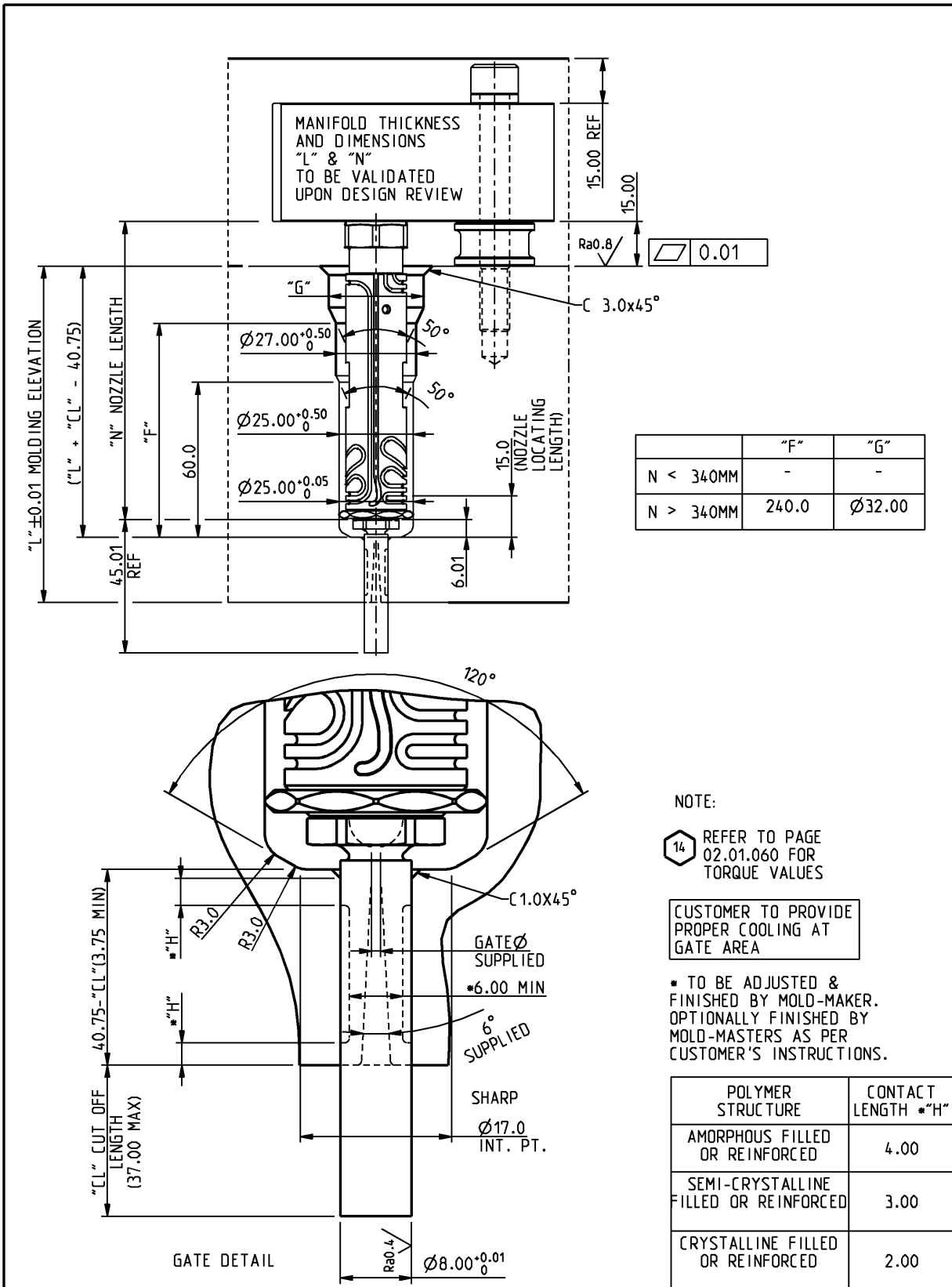
F4000 04

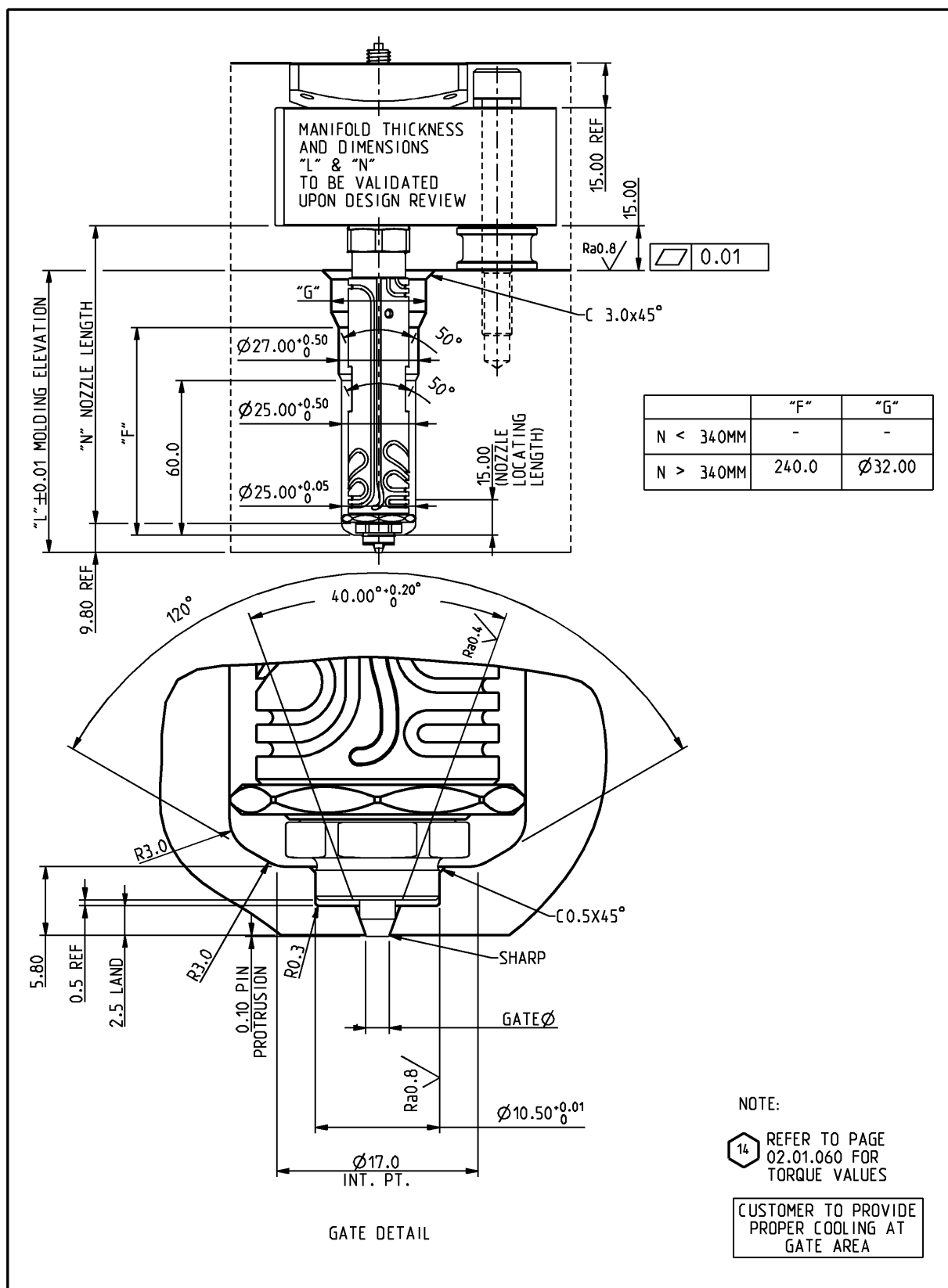


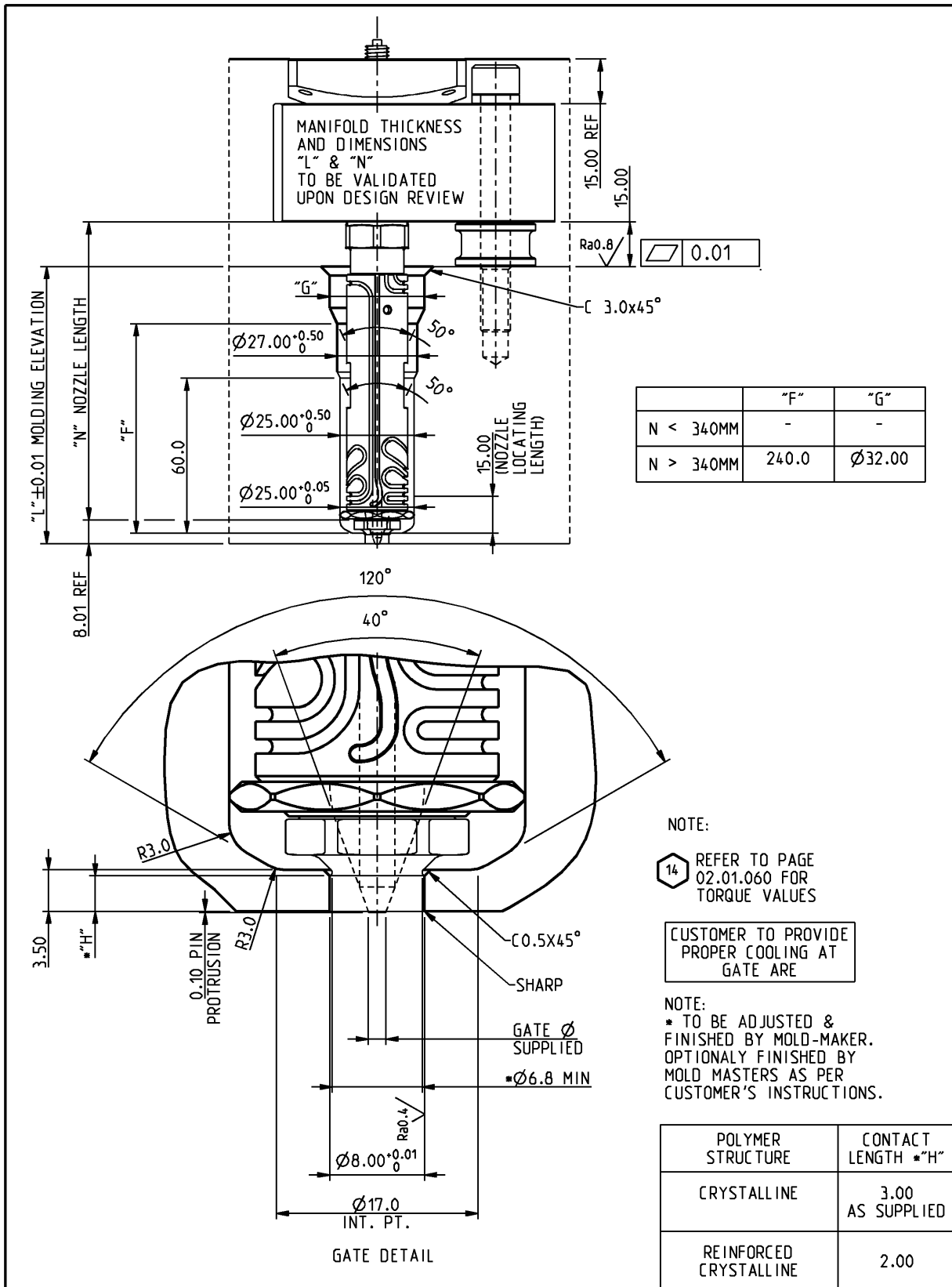


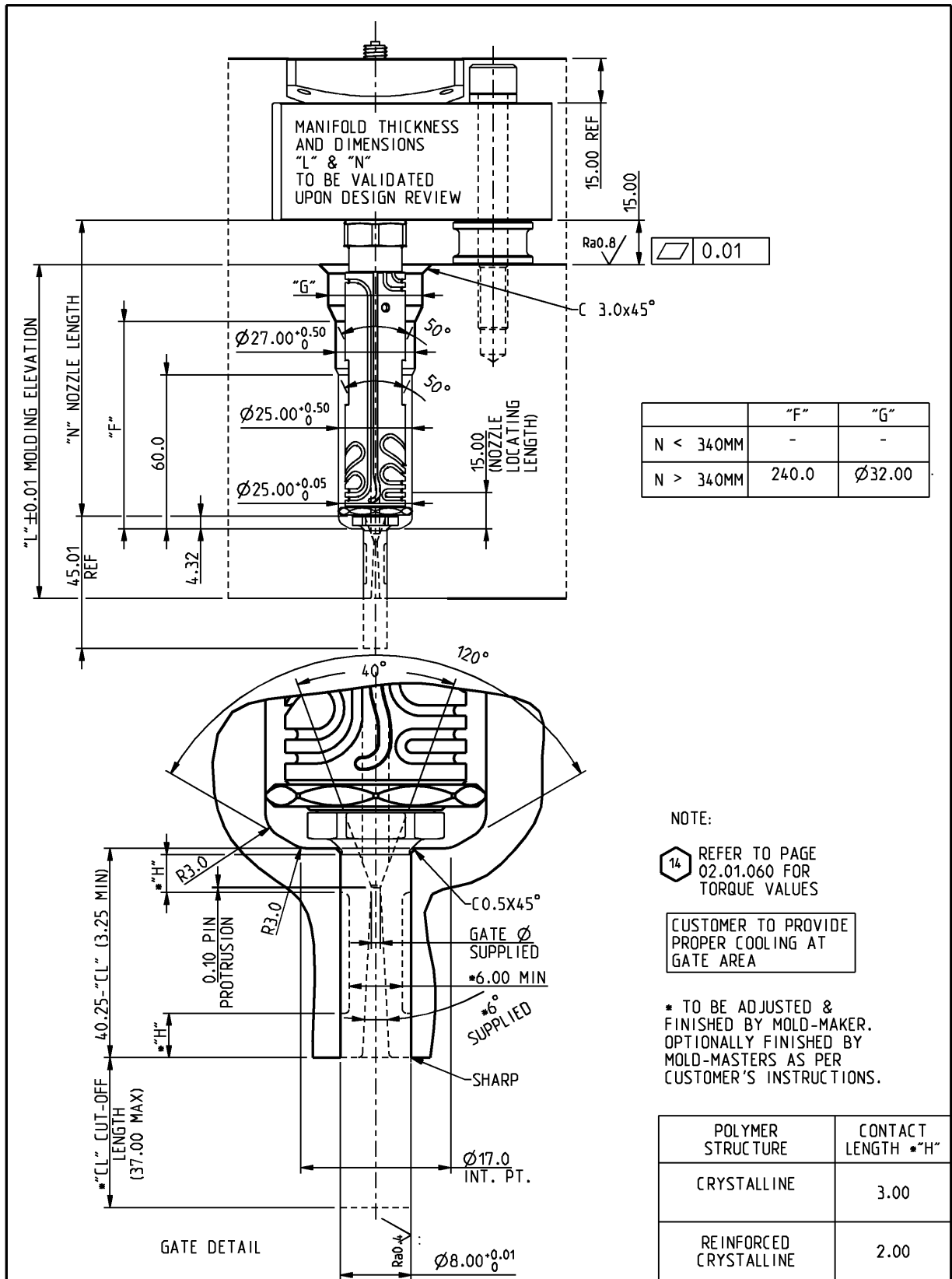


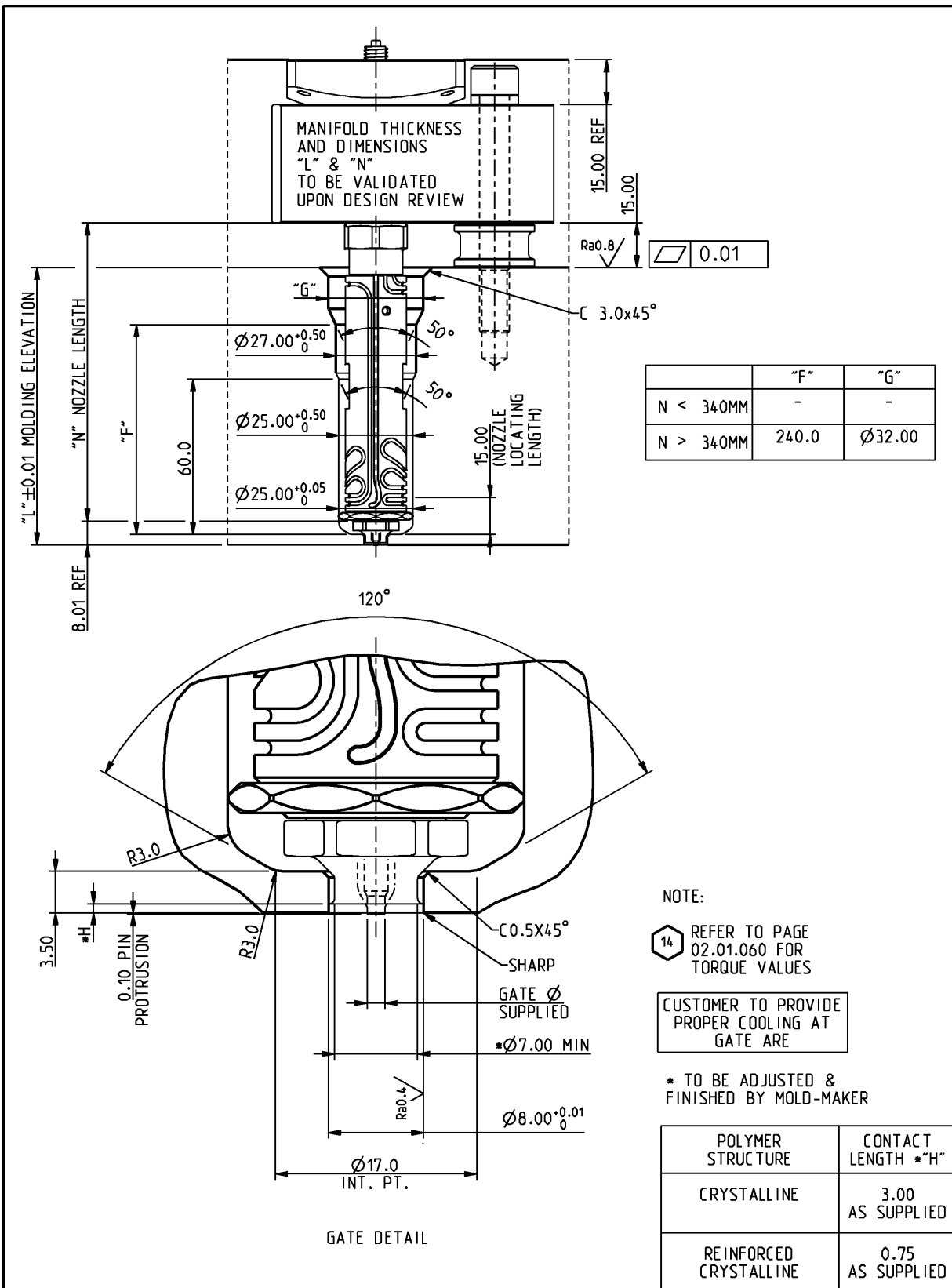


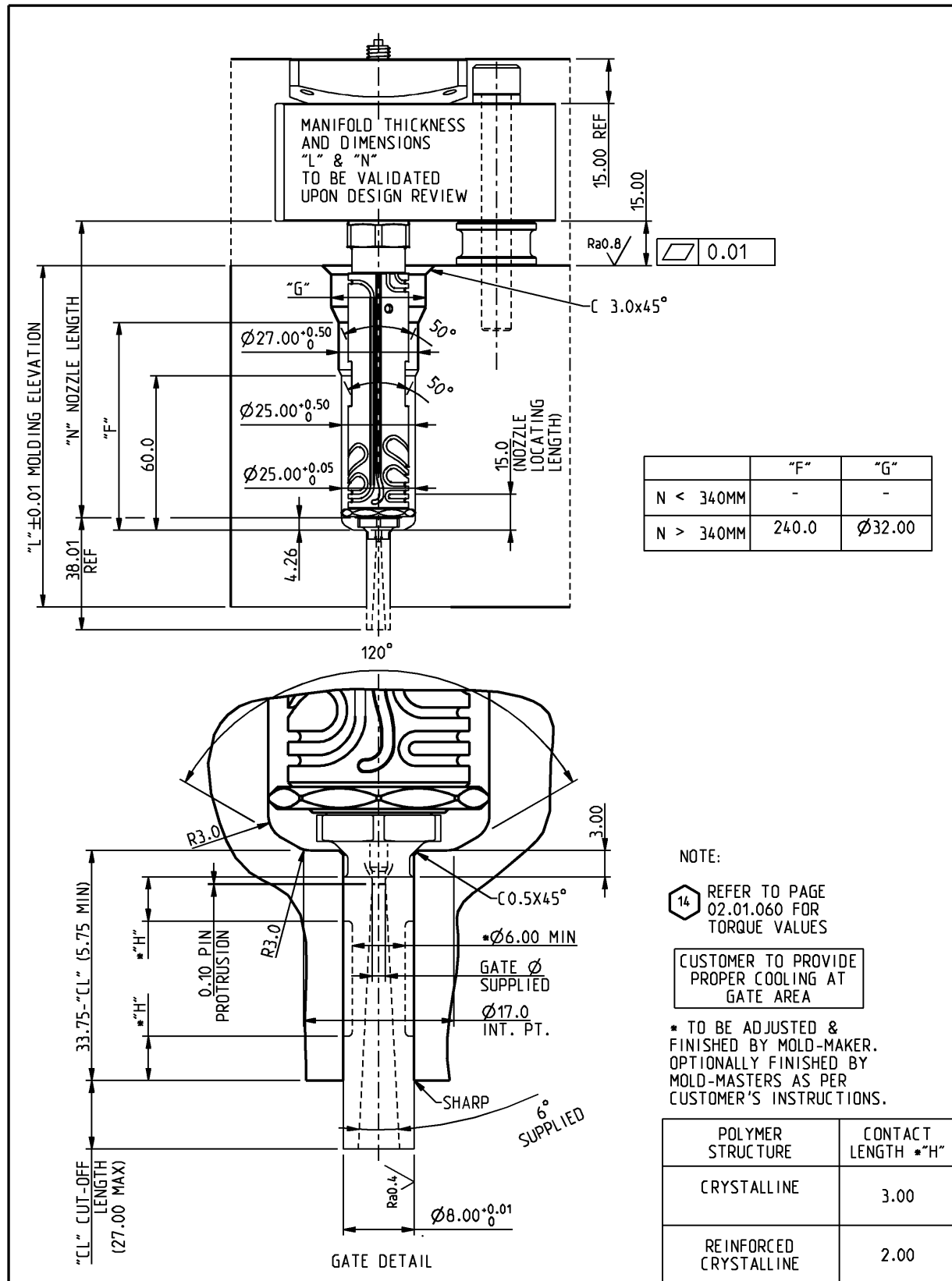


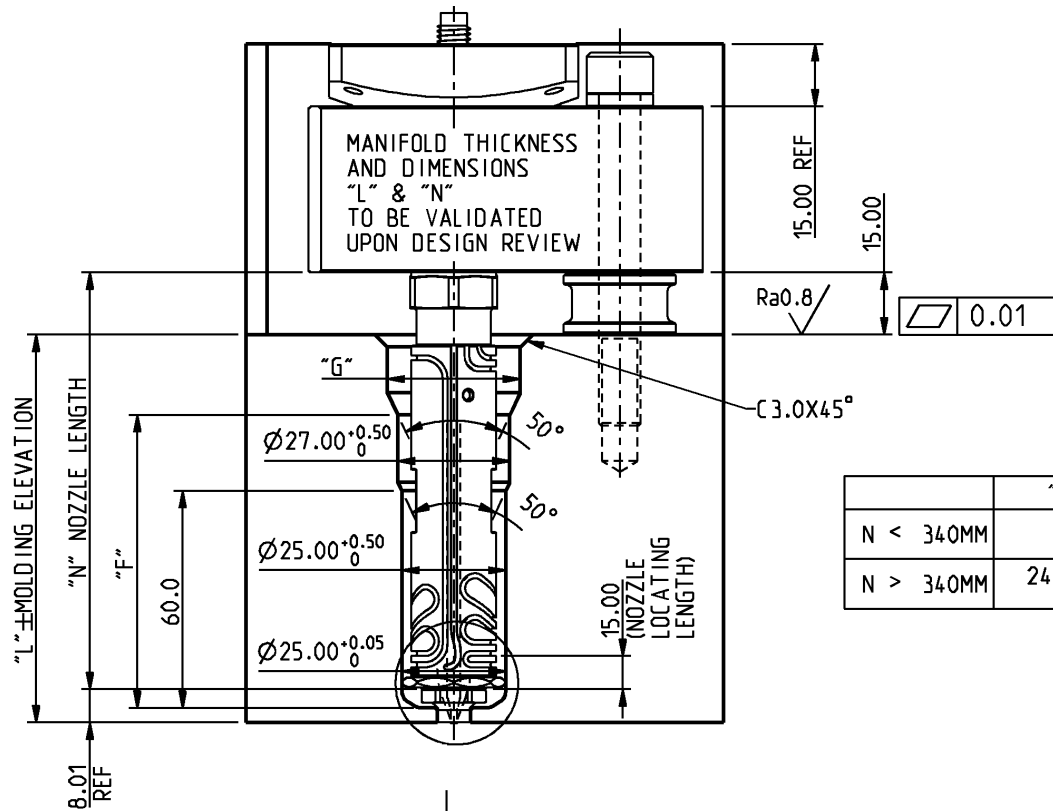




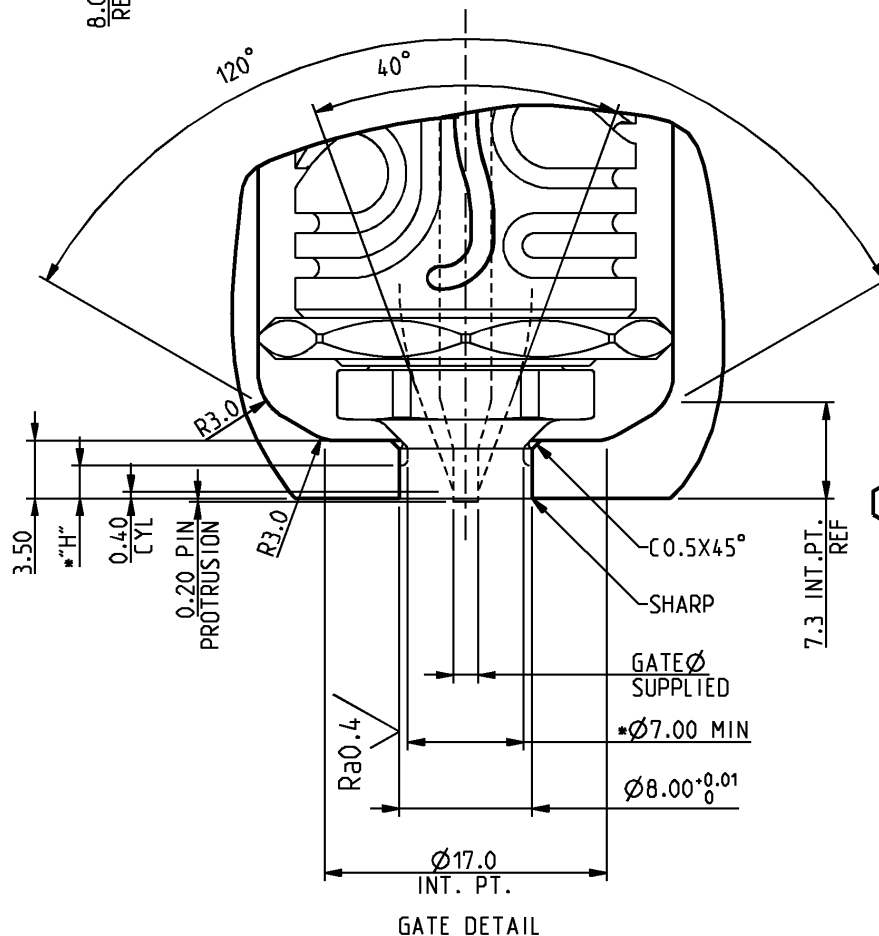








	"F"	"G"
N < 340MM	-	-
N > 340MM	240.0	Ø32.00



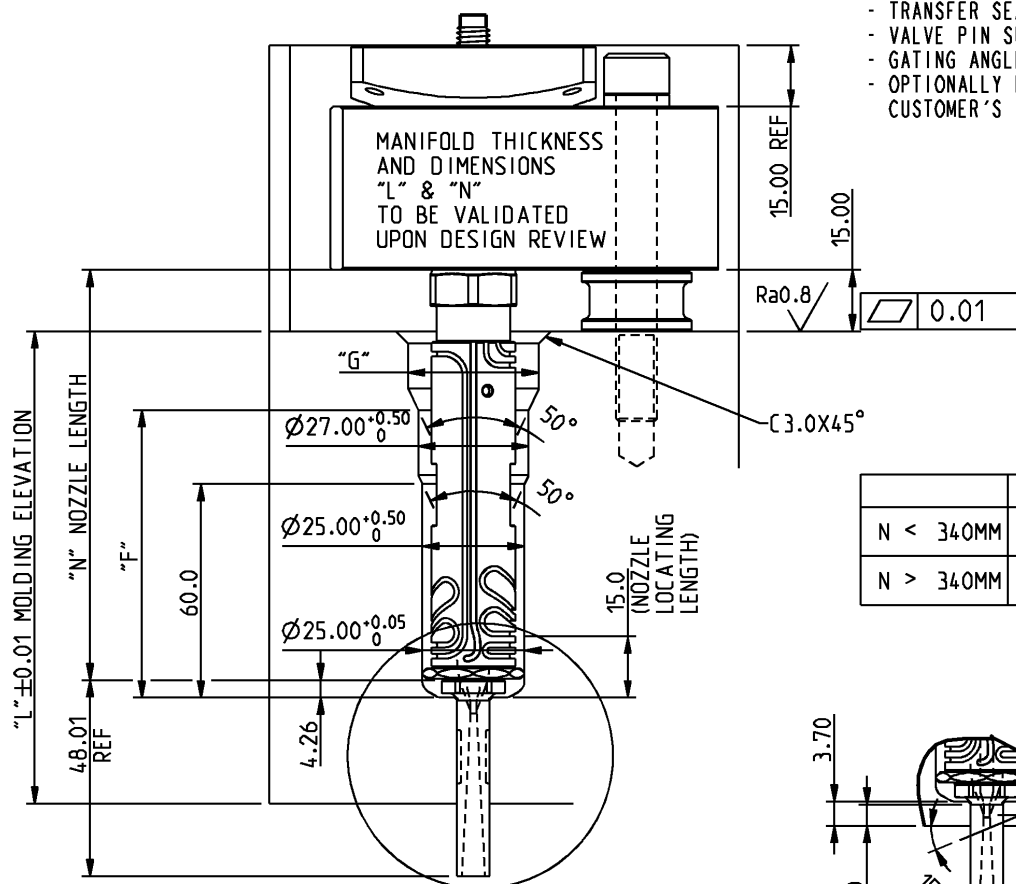
NOTE:

14 REFER TO PAGE 02.01.060 FOR TORQUE VALUES

CUSTOMER TO PROVIDE PROPER COOLING AT GATE ARE

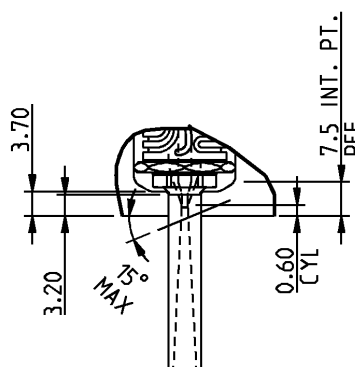
* TO BE ADJUSTED & FINISHED BY MOLD-MAKER

POLYMER STRUCTURE	CONTACT LENGTH *"H"
CRYSTALLINE	3.00 AS SUPPLIED
REINFORCED CRYSTALLINE	0.75 AS SUPPLIED

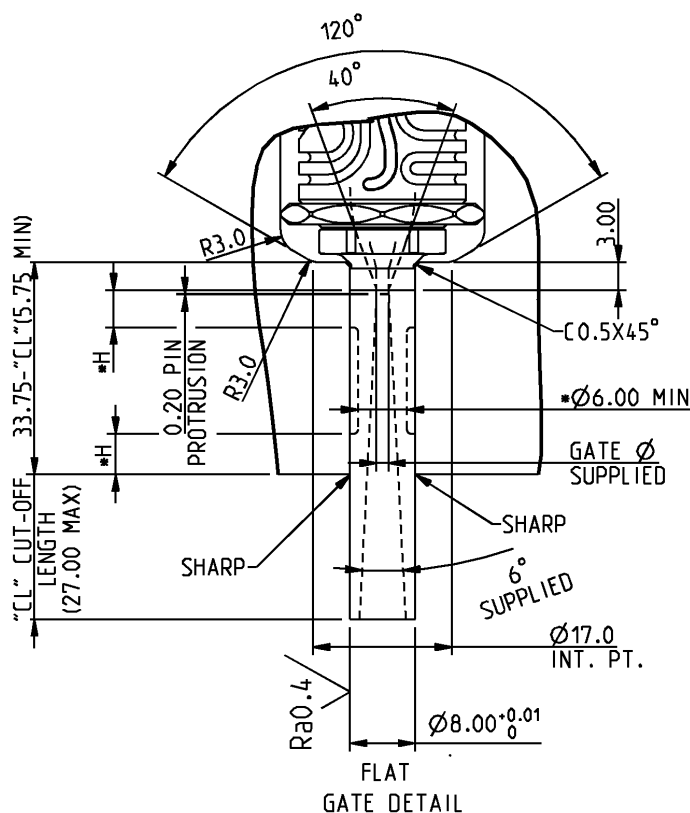


- NOTES:
- TRANSFER SEAL SUPPLIED TOO LONG
- VALVE PIN SUPPLIED WITH LONGER TIP
- GATING ANGLE SHOULD NOT EXCEED 15°
- OPTIONALLY FINISHED BY MM AS PER
CUSTOMER'S INSTRUCTION

	"F"	"G"
N < 340MM	-	-
N > 340MM	240.0	Ø32.00



TAPER



NOTE:

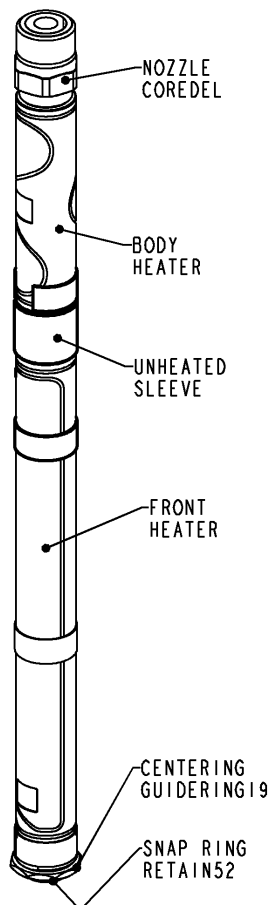


REFER TO PAGE
02.01.060 FOR
TORQUE VALUES

CUSTOMER TO PROVIDE
PROPER COOLING AT
GATE AREA

* TO BE ADJUSTED &
FINISHED BY MOLD-MAKER.
OPTIONALLY FINISHED BY
MOLD-MASTERS AS PER
CUSTOMER'S INSTRUCTIONS.

POLYMER STRUCTURE	CONTACT LENGTH *H"
CRYSTALLINE	3.00
REINFORCED CRYSTALLINE	2.00



FRONT HEATER

PART	LENGTH	ID	OD	WATTAGE
HTRSLV040FASMI I	40.0	16.0	20.5	155W
HTRSLV060FASMI I	60.0	16.0	20.5	165W
HTRSLV080FASMI I	80.0	16.0	20.5	175W
HTRSLV100FASMI I	100.0	16.0	20.5	190W
HTRSLV120FASMI I	120.0	16.0	20.5	200W
HTRSLV140FASMI I	140.0	16.0	20.5	220W
HTRSLV160FASMI I	160.0	16.0	20.5	230W
HTRSLV180FASMI I	180.0	16.0	20.5	245W
HTRSLV200FASMI I	200.0	16.0	20.5	255W

BODY HEATER

PART	LENGTH	ID	OD	WATTAGE
HTRSLV080RASMI I	80.0	16.0	20.5	135W

NOZZLE CONFIGURATION

NOZZLE LENGTH "N" [mm]	BODY HEATER	UNHEATED SLEEVE	BODY HEATER	UNHEATED SLEEVE	FRONT HEATER
60.00-80.00	N/A	N/A	N/A	N/A	HTRSLV040FASMI I
80.01-100.00	N/A	N/A	N/A	N/A	HTRSLV060FASMI I
100.01-120.00	N/A	N/A	N/A	N/A	HTRSLV080FASMI I
120.01-140.00	N/A	N/A	N/A	N/A	HTRSLV100FASMI I
140.01-160.00	N/A	N/A	N/A	N/A	HTRSLV120FASMI I
160.01-180.00	N/A	N/A	N/A	N/A	HTRSLV140FASMI I
180.01-200.00	N/A	N/A	N/A	N/A	HTRSLV160FASMI I
200.01-220.00	N/A	N/A	N/A	N/A	HTRSLV180FASMI I
220.01-240.00	N/A	N/A	N/A	N/A	HTRSLV200FASMI I
240.01-250.00	N/A	N/A	HTRSLV080RASMI I	20	HTRSLV120FASMI I
250.01-260.00	N/A	N/A	HTRSLV080RASMI I	30	HTRSLV120FASMI I
260.01-270.00	N/A	N/A	HTRSLV080RASMI I	20	HTRSLV140FASMI I
270.01-280.00	N/A	N/A	HTRSLV080RASMI I	30	HTRSLV140FASMI I
280.01-290.00	N/A	N/A	HTRSLV080RASMI I	20	HTRSLV160FASMI I
290.01-300.00	N/A	N/A	HTRSLV080RASMI I	30	HTRSLV160FASMI I
300.01-310.00	N/A	N/A	HTRSLV080RASMI I	20	HTRSLV180FASMI I
310.01-320.00	N/A	N/A	HTRSLV080RASMI I	30	HTRSLV180FASMI I
320.01-330.00	N/A	N/A	HTRSLV080RASMI I	20	HTRSLV200FASMI I
330.01-340.00	N/A	N/A	HTRSLV080RASMI I	30	HTRSLV200FASMI I
340.01-360.00	HTRSLV080RASMI I	20	HTRSLV080RASMI I	20	HTRSLV120FASMI I
360.01-380.00	HTRSLV080RASMI I	30	HTRSLV080RASMI I	30	HTRSLV120FASMI I
380.01-400.00	HTRSLV080RASMI I	30	HTRSLV080RASMI I	30	HTRSLV140FASMI I



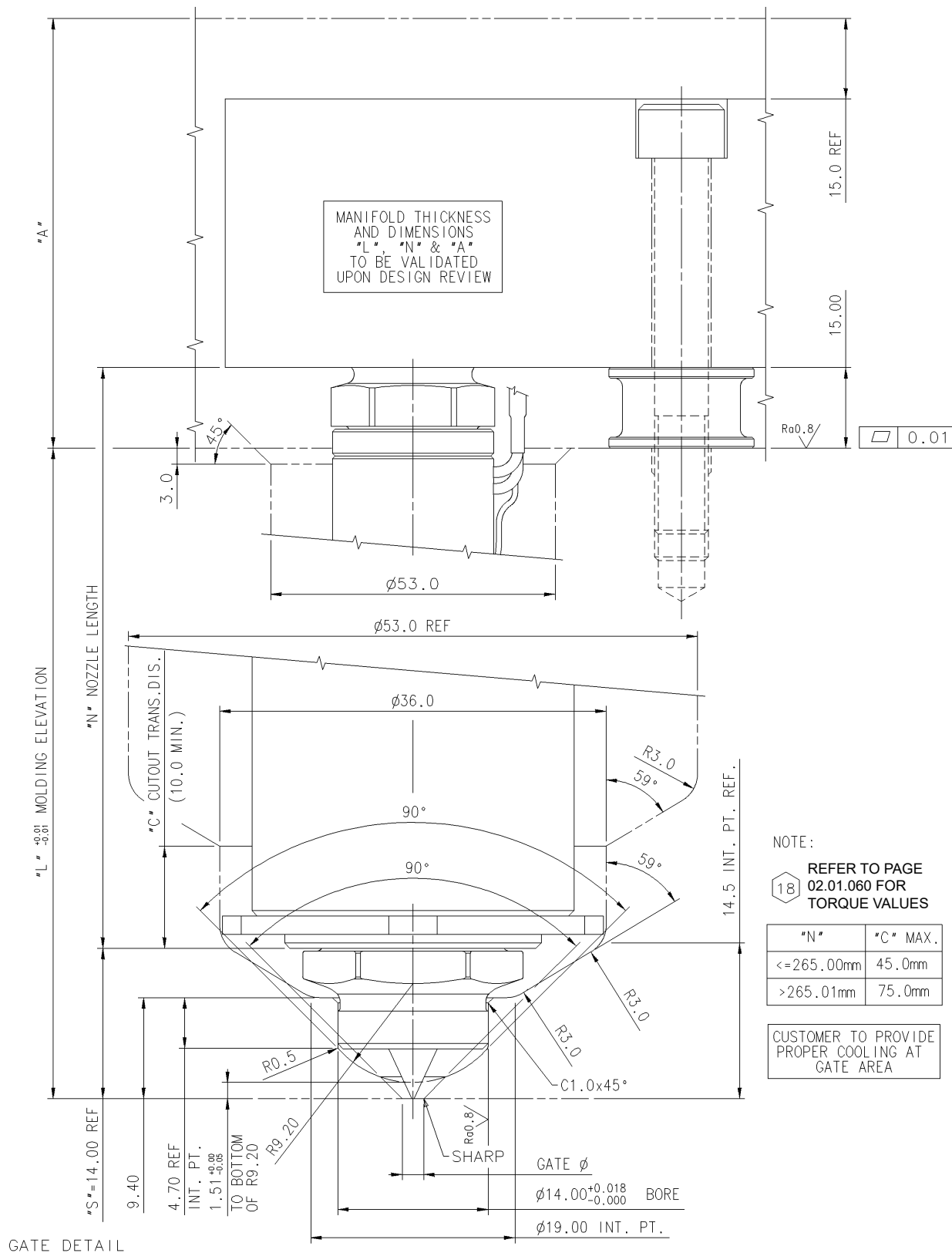
GATING STYLE	PAGE	NOZZLE LENGTH RANGE	GATE Ø	EXTRA STOCK (SUPPLIED LG.)	GATE SEAL OPTIONS	GATE SEAL PACKAGES
E-TYPE TORPEDO	05.01.015	80.0 - 485.0	Ø 1.0-Ø 2.5	0.0	TSF057 + TPF005	TSF057P
					TSF057 + TPF005H	TSF057PI
F-TYPE TORPEDO	05.01.020	80.0 - 485.0	Ø 1.50	0.25	TSF001 + TPF001	TSF001PI FOR PROCESSING TEMP. >280°C
					TSF001 + TPF001-I	TSF001P2 FOR PROCESSING TEMP. <280°C
			Ø 2.00	0.25	TSF002 + TPF001	TSF002PI FOR PROCESSING TEMP. >280°C
					TSF002 + TPF001-I	TSF002P2 FOR PROCESSING TEMP. <280°C
			Ø 2.50	0.25	TSF003 + TPF001	TSF003PI FOR PROCESSING TEMP. >280°C
					TSF003 + TPF001-I	TSF003P2 FOR PROCESSING TEMP. <280°C
EXTENDED F-TYPE TORPEDO	05.01.025	80.0 - 485.0	Ø 1.50	40.0	TSF033 + TPF001	TSF033P FOR PROCESSING TEMP. >280°C
					TSF033 + TPF001-I	TSF033PI FOR PROCESSING TEMP. <280°C
			Ø 2.00	40.0	TSF034 + TPF001	TSF034P FOR PROCESSING TEMP. >280°C
					TSF034 + TPF001-I	TSF034PI FOR PROCESSING TEMP. <280°C
			Ø 2.50	40.0	TSF035 + TPF001	TSF035P FOR PROCESSING TEMP. >280°C
					TSF035 + TPF001-I	TSF035PI FOR PROCESSING TEMP. <280°C
HOT SPRUE	05.01.030	80.0 - 485.0	Ø 2.00	38.0	TSF004	N/A
			Ø 2.50	38.0	TSF005	
			Ø 3.00	38.0	TSF006	
			Ø 3.50	38.0	TSF007	
			Ø 4.00	38.0	TSF008	
EXTENDED HOT SPRUE	05.01.035	80.0 - 485.0	Ø 2.0-Ø 4.0	40.0	TSF036 (Ø 2.0 HOLE SUPPLIED)	
BI-METALLIC C-VALVE	05.01.036	80.0 - 485.0	Ø 2.0-Ø 3.0	0.0	TSF061 + TSLF0006	TSF061P
BI-MET. BALLNOSE C-VALVE	05.01.037	80.0 - 485.0	Ø 1.9-Ø 3.6	0.0	TS010033 + TSL010022	TS010033P2
HOT VALVE	05.01.040	80.0 - 485.0	Ø 2.50	0.25	TSF009	N/A
			Ø 3.00	0.25	TSF010	
			Ø 4.00	0.25	TSF011	
EXTENDED HOT VALVE	05.01.045	80.0 - 485.0	Ø 2.50	40.0	TSF049	N/A
			Ø 3.00	40.0	TSF050	
			Ø 4.00	40.0	TSF051	
CYLINDRICAL HOT VALVE	05.01.050	80.0 - 485.0	Ø 3.00	18.5	TSF012 + VPG016-I	TSF012P
				45.0	TSF086 + VPG016-I	TSF086P
			Ø 4.00	18.5	TSF013 + VPG016-I	TSF013P
				45.0	TSF087 + VPG016-I	TSF087P

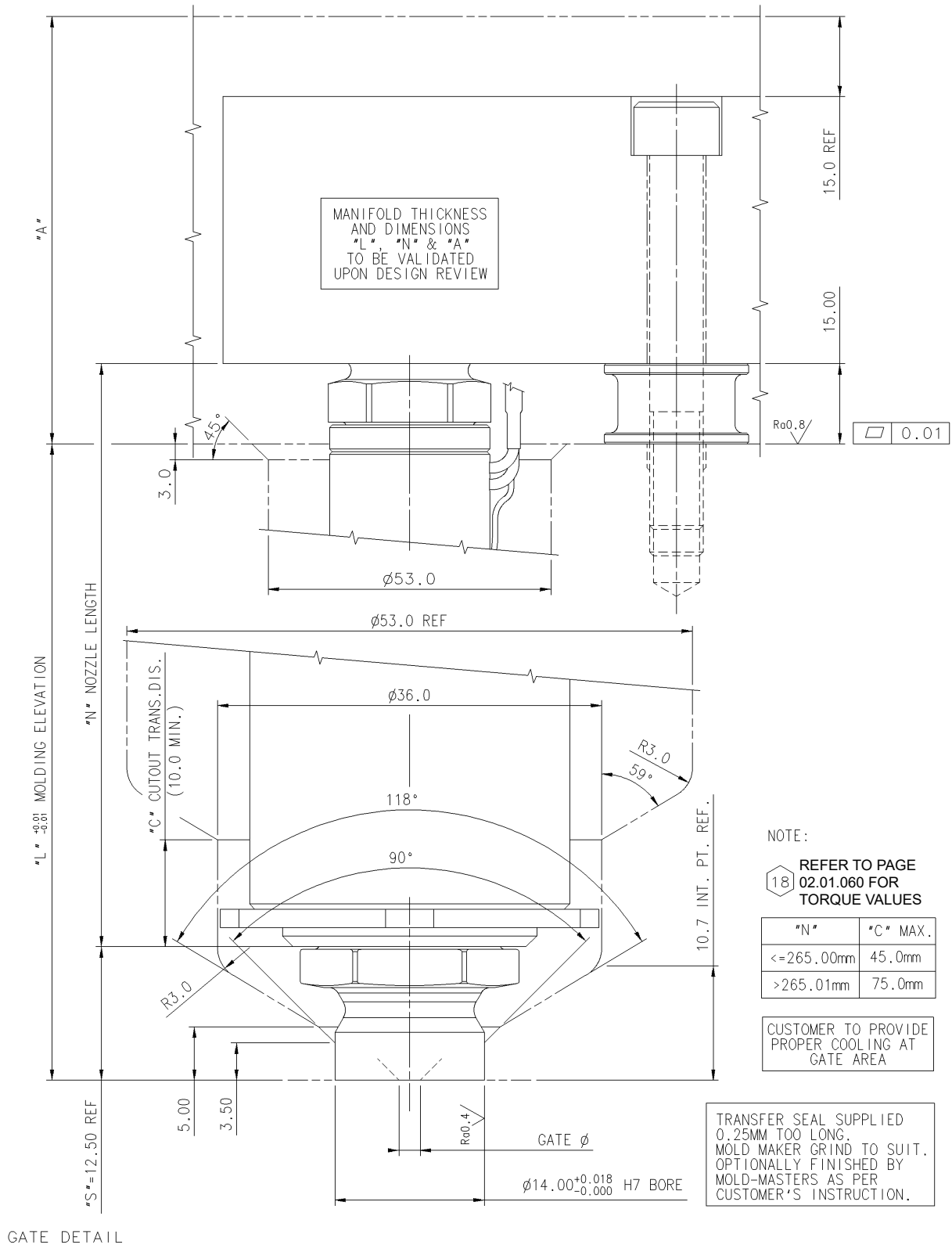
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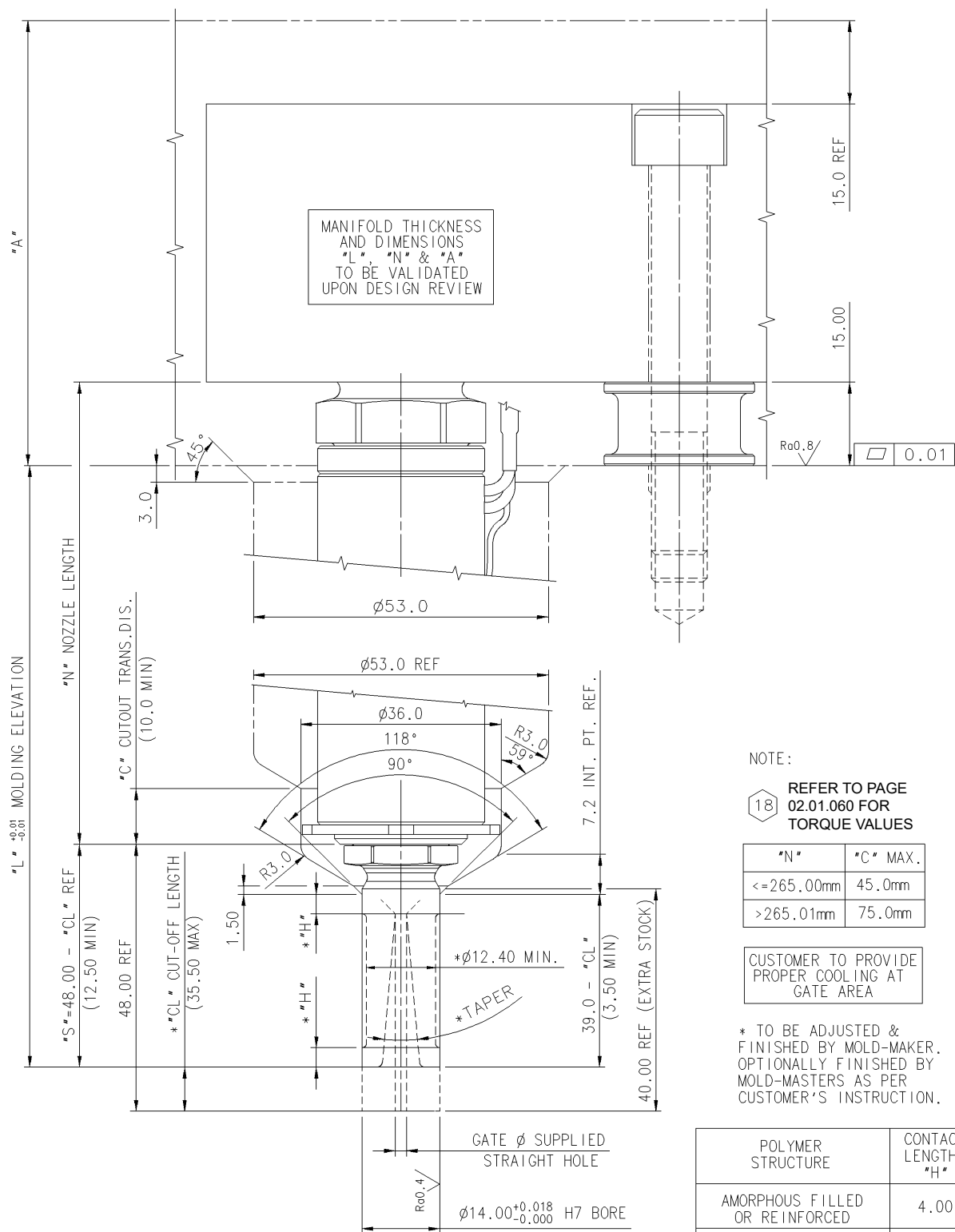
- * ORIGINAL F-TYPE TORPEDO GATE SEAL PACKAGE TSF001P, TSF002P AND TSF003P CAN BE REPLACED BY PACKAGES WITH "PI" OR "P2"
- * FINISHED GATE SEALS ARE AVAILABLE FOR F-TYPE, EXT. F-TYPE, HOT SPRUE, EXT. HOT SPRUE, HOT VALVE, EXT. HOT VALVE & CYLINDRICAL HOT VALVE
- * CONTACT MOLD-MASTERS APPLICATION ENGINEER FOR DETAIL
- * CUSTOM SEALS CAN BE MANUFACTURED WITH APPLICATION ENGINEER APPROVAL
- * SEE PG.02.01.060 FOR TYPICAL TORQUE VALUES



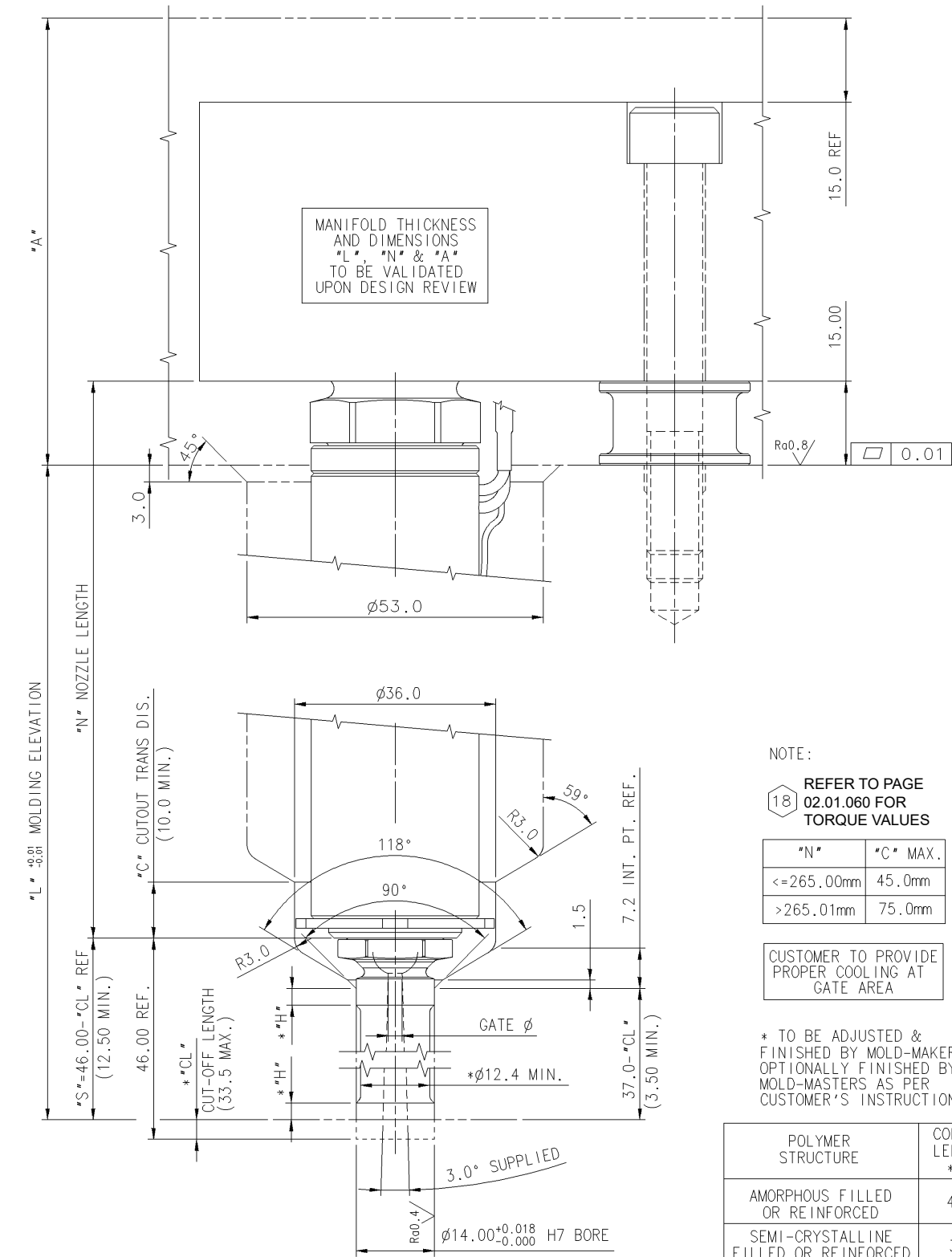
GATING STYLE	GATE Ø	GATE SEAL	GATE SEAL DESCRIPTION	GATE SEAL PACKAGES
F-TYPE TORPEDO	Ø 1.50	TSF001F (MODIFIED FROM TSF001)	FS5 TORP. F G=1.5, 0.25mm EXT STK RMVD	TSF001FP1 (TSF001F + TPF001) FOR PROCESSING TEMP. >280°C
				TSF001FP2 (TSF001F + TPF001-1) FOR PROCESSING TEMP. <280°C
	Ø 2.00	TSF002F (MODIFIED FROM TSF002)	FS5 TORP. F G=2.0, 0.25mm EXT STK RMVD	TSF002FP1 (TSF002F + TPF001) FOR PROCESSING TEMP. >280°C
				TSF002FP2 (TSF002F + TPF001-1) FOR PROCESSING TEMP. <280°C
	Ø 2.50	TSF003F (MODIFIED FROM TSF003)	FS5 TORP. F G=2.5, 0.25mm EXT STK RMVD	TSF003FP1 (TSF003F + TPF001) FOR PROCESSING TEMP. >280°C
				TSF003FP2 (TSF003F + TPF001-1) FOR PROCESSING TEMP. <280°C
EXT. F-TYPE TORPEDO	Ø 1.50	TSF033F (MODIFIED FROM TSF033)	FS5 EXT. TORP. F G=1.5 w/8° TAPER	TSF033FP (TSF033F + TPF001) FOR PROCESSING TEMP. >280°C
				TSF033FP1 (TSF033F + TPF001-1) FOR PROCESSING TEMP. <280°C
	Ø 2.00	TSF034F (MODIFIED FROM TSF034)	FS5 EXT. TORP. F G=2.0 w/8° TAPER	TSF034FP (TSF034F + TPF001) FOR PROCESSING TEMP. >280°C
				TSF034FP1 (TSF034F + TPF001-1) FOR PROCESSING TEMP. <280°C
	Ø 2.50	TSF035F (MODIFIED FROM TSF035)	FS5 EXT. TORP. F G=2.5 w/8° TAPER	TSF035FP (TSF035F + TPF001) FOR PROCESSING TEMP. >280°C
				TSF035FP1 (TSF035F + TPF001-1) FOR PROCESSING TEMP. <280°C
HOT SPRUE	Ø 2.00	TSF004F (MODIFIED FROM TSF004)	FS5 HOT SPRUE G=2.0, w/8° TAPER	N/A
	Ø 2.50	TSF005F (MODIFIED FROM TSF005)	FS5 HOT SPRUE G=2.5, w/8° TAPER	
	Ø 3.00	TSF006F (MODIFIED FROM TSF006)	FS5 HOT SPRUE G=3.0, w/8° TAPER	
	Ø 3.50	TSF007F (MODIFIED FROM TSF007)	FS5 HOT SPRUE G=3.5, w/8° TAPER	
	Ø 4.00	TSF008F (MODIFIED FROM TSF008)	FS5 HOT SPRUE G=4.0, w/8° TAPER	
EXT. HOT SPRUE	Ø 2.00	TSF072F (MODIFIED FROM TSF036)	FS5 EXT. HOT SPRUE G=2.0, w/8° TAPER	N/A
	Ø 2.50	TSF073F (MODIFIED FROM TSF036)	FS5 EXT. HOT SPRUE G=2.5, w/8° TAPER	
	Ø 3.00	TSF074F (MODIFIED FROM TSF036)	FS5 EXT. HOT SPRUE G=3.0, w/8° TAPER	
	Ø 3.50	TSF075F (MODIFIED FROM TSF036)	FS5 EXT. HOT SPRUE G=3.5, w/8° TAPER	
	Ø 4.00	TSF076F (MODIFIED FROM TSF036)	FS5 EXT. HOT SPRUE G=4.0, w/8° TAPER	
HOT VALVE	Ø 2.50	TSF009F (MODIFIED FROM TSF009)	FS5 HOT VALVE G=2.5, 0.25mm EXT STK RMVD	N/A
	Ø 3.00	TSF010F (MODIFIED FROM TSF010)	FS5 HOT VALVE G=3.0, 0.25mm EXT STK RMVD	
	Ø 4.00	TSF011F (MODIFIED FROM TSF011)	FS5 HOT VALVE G=4.0, 0.25mm EXT STK RMVD	
EXT. HOT VALVE	Ø 2.50	TSF049F (MODIFIED FROM TSF049)	FS5 EXT. HOT VALVE G=2.5 w/8° TAPER	N/A
	Ø 3.00	TSF050F (MODIFIED FROM TSF050)	FS5 EXT. HOT VALVE G=3.0 w/8° TAPER	
	Ø 4.00	TSF051F (MODIFIED FROM TSF051)	FS5 EXT. HOT VALVE G=4.0 w/8° TAPER	
ACCU-VALVE LX	Ø 3.00	TSF174F	FS5 AVLX G=3.0(FINISH GROUND)	N/A
	Ø 4.00	TSF175F	FS5 AVLX G=4.0(FINISH GROUND)	
EXTENDED ACCU-VALVE LX	Ø 3.00	TSF176F	FS5 AVLX G=3.0 EL=45 w/8° TAPER	
	Ø 4.00	TSF177F	FS5 AVLX G=4.0 EL=45 w/8° TAPER	



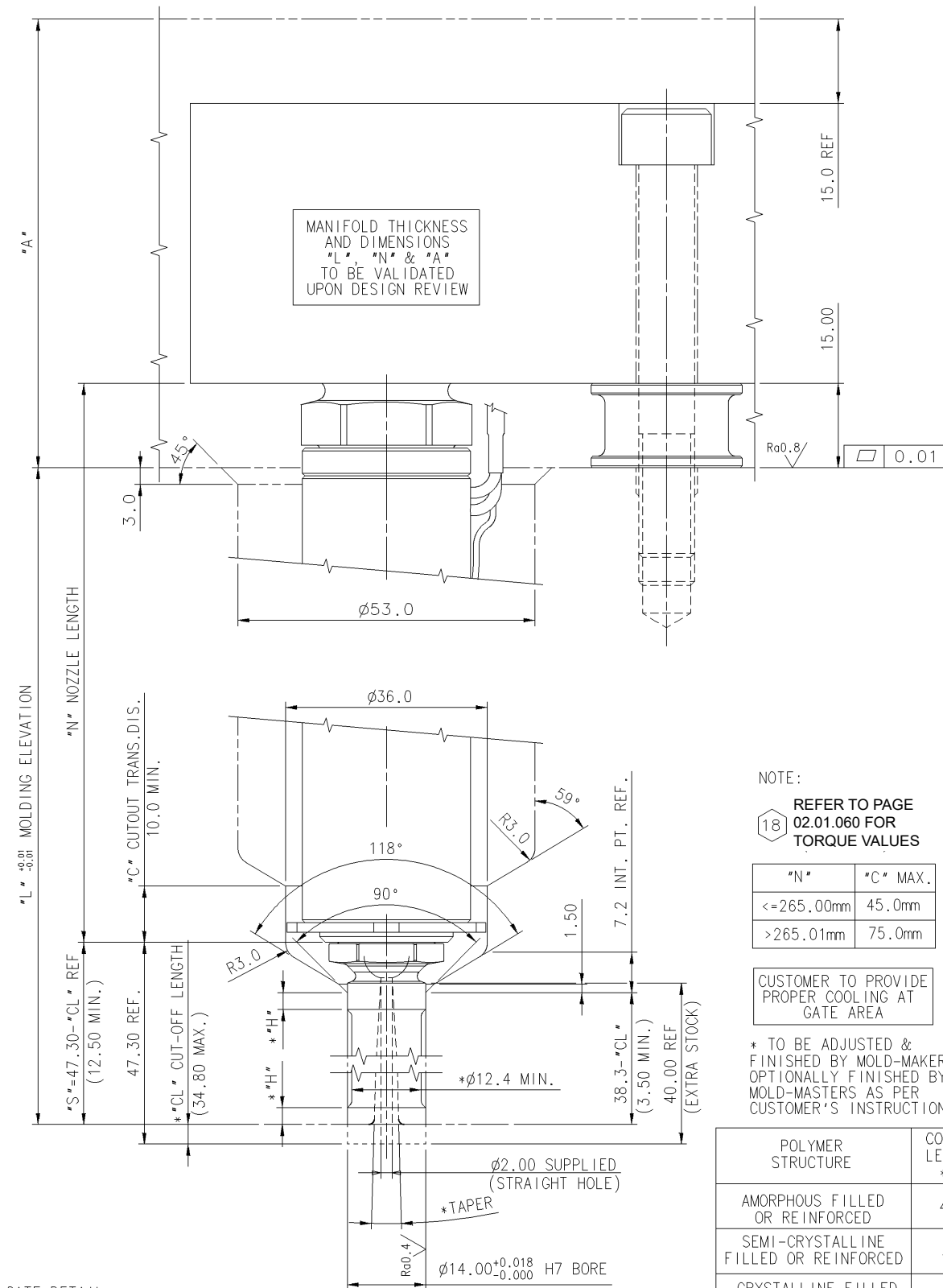




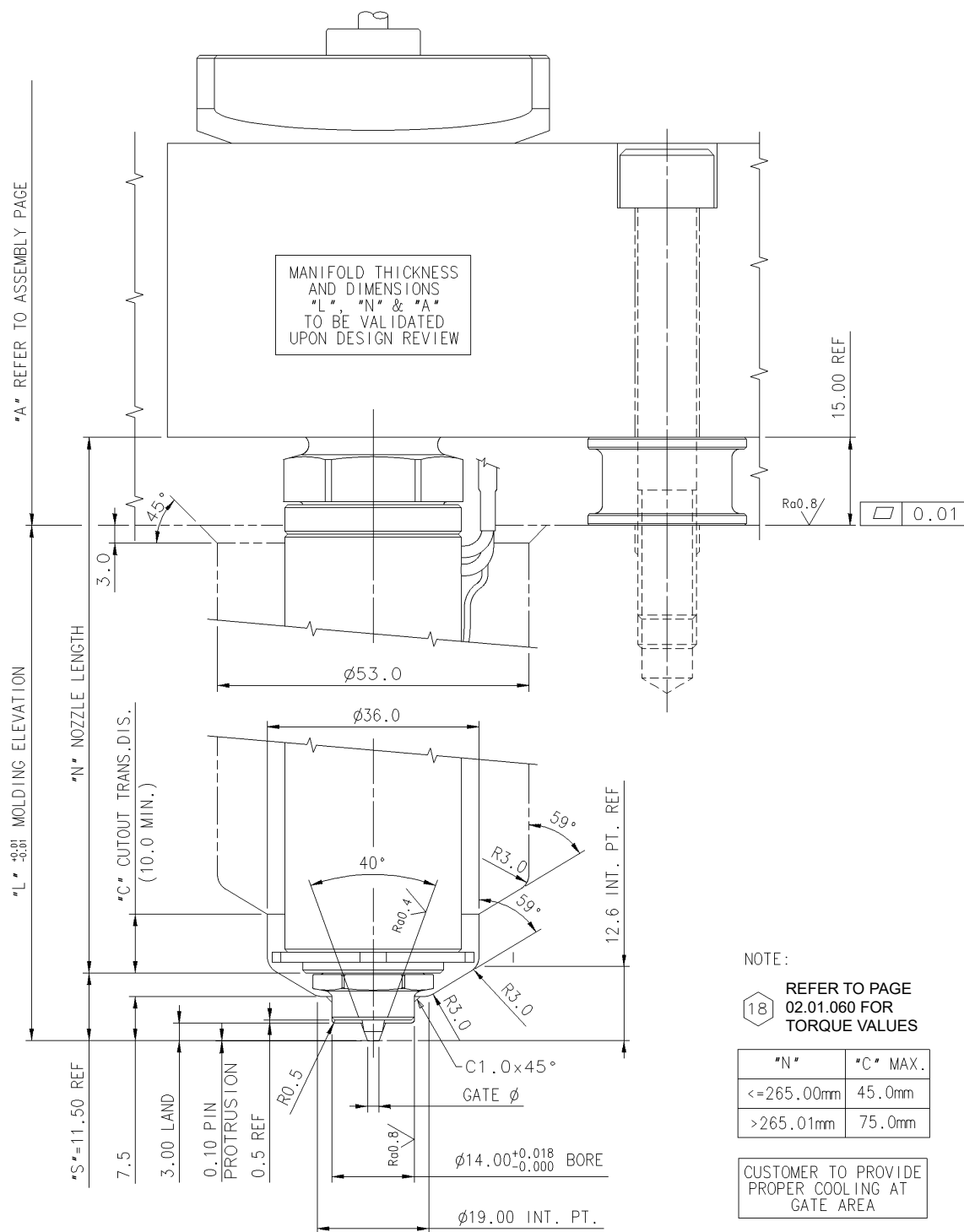
GATE DETAIL

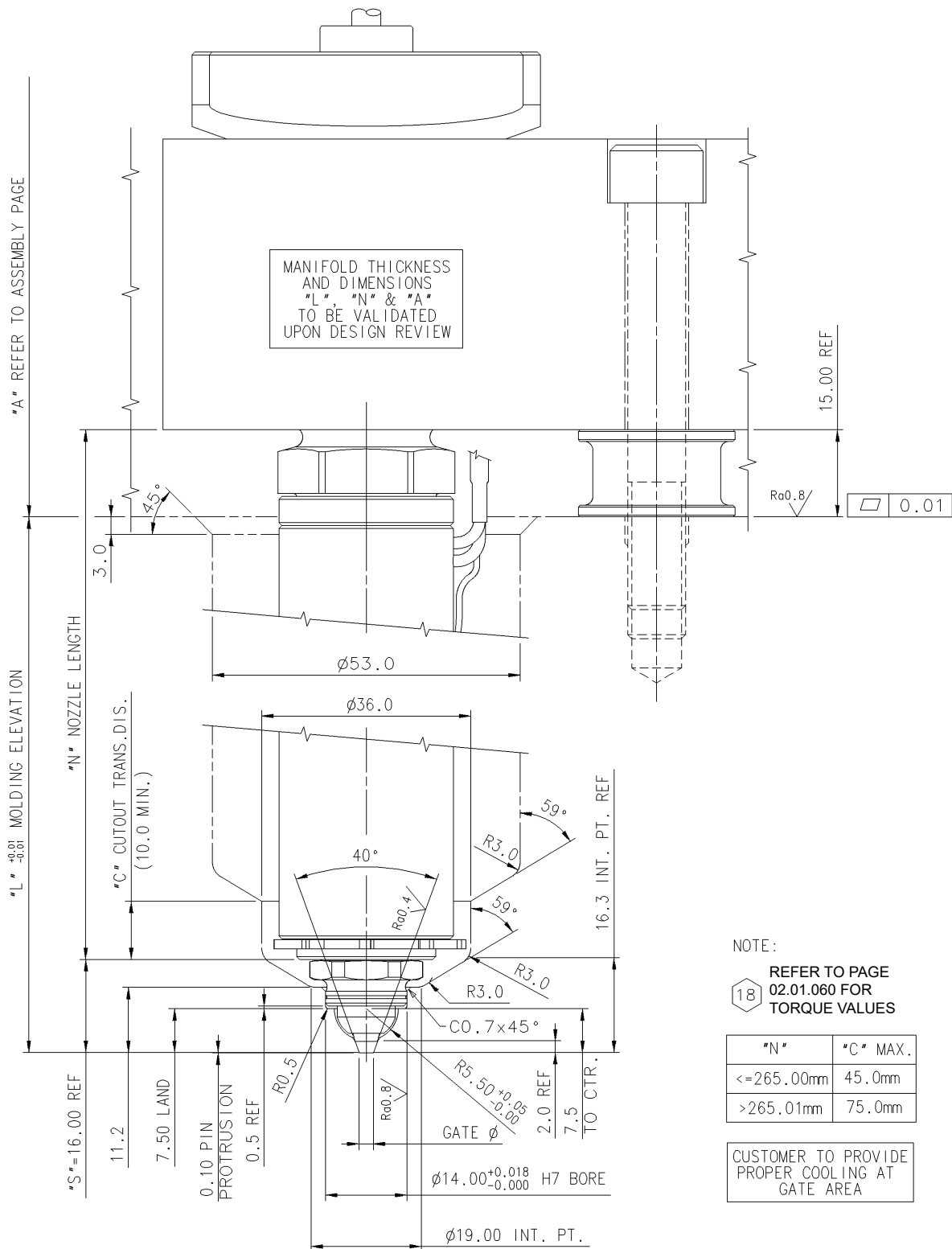


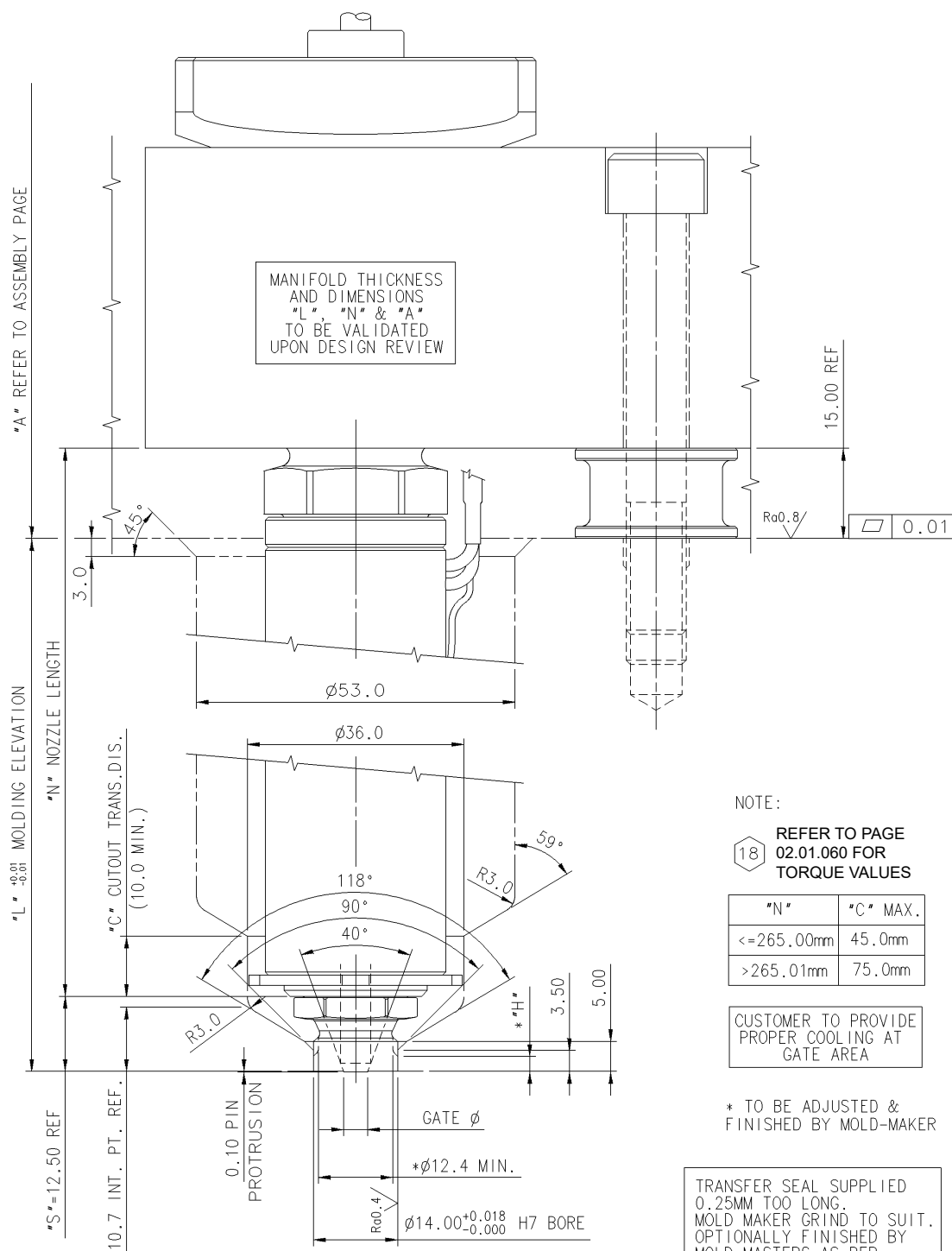
GATE DETAIL



GATE DETAIL

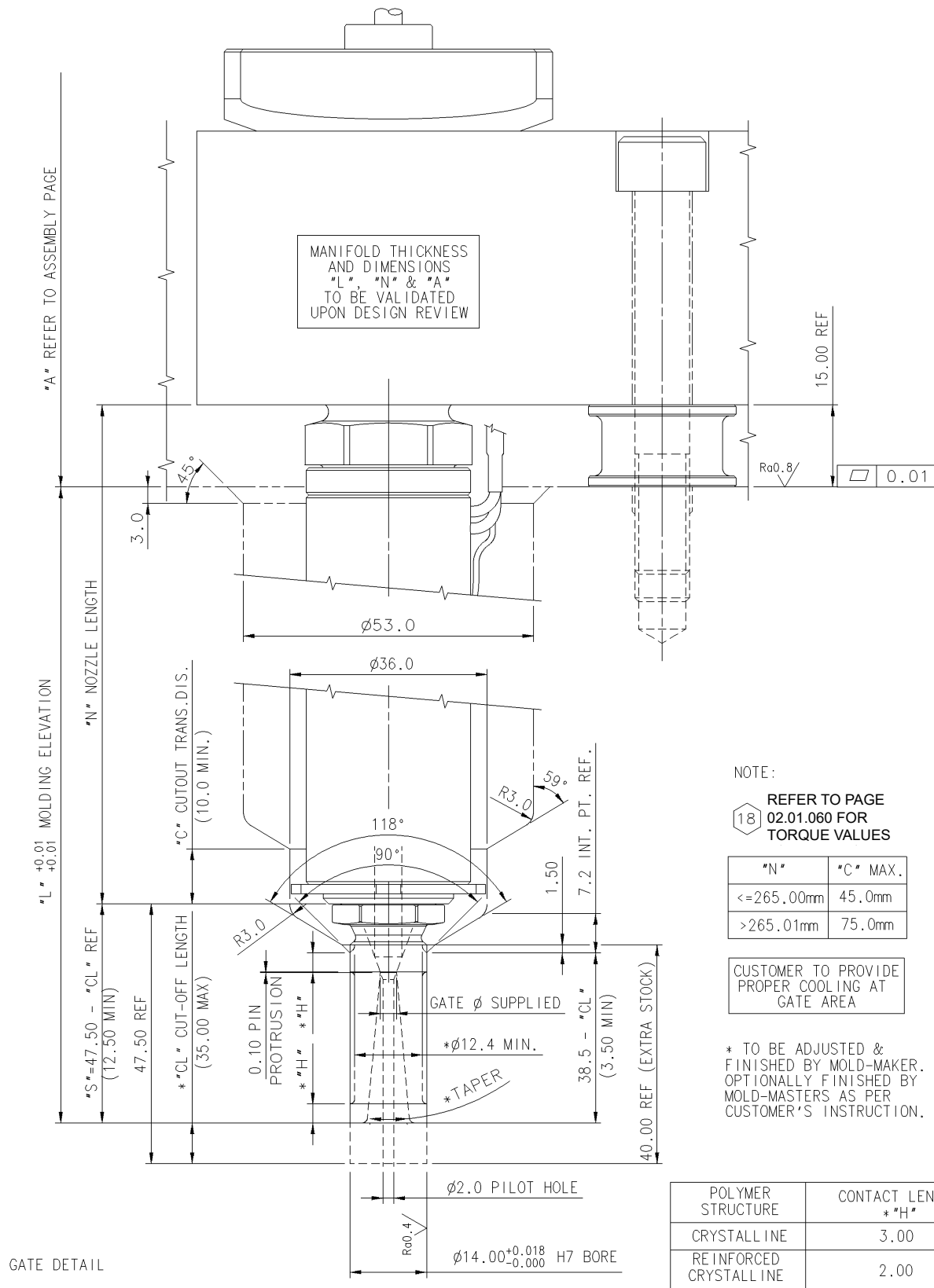


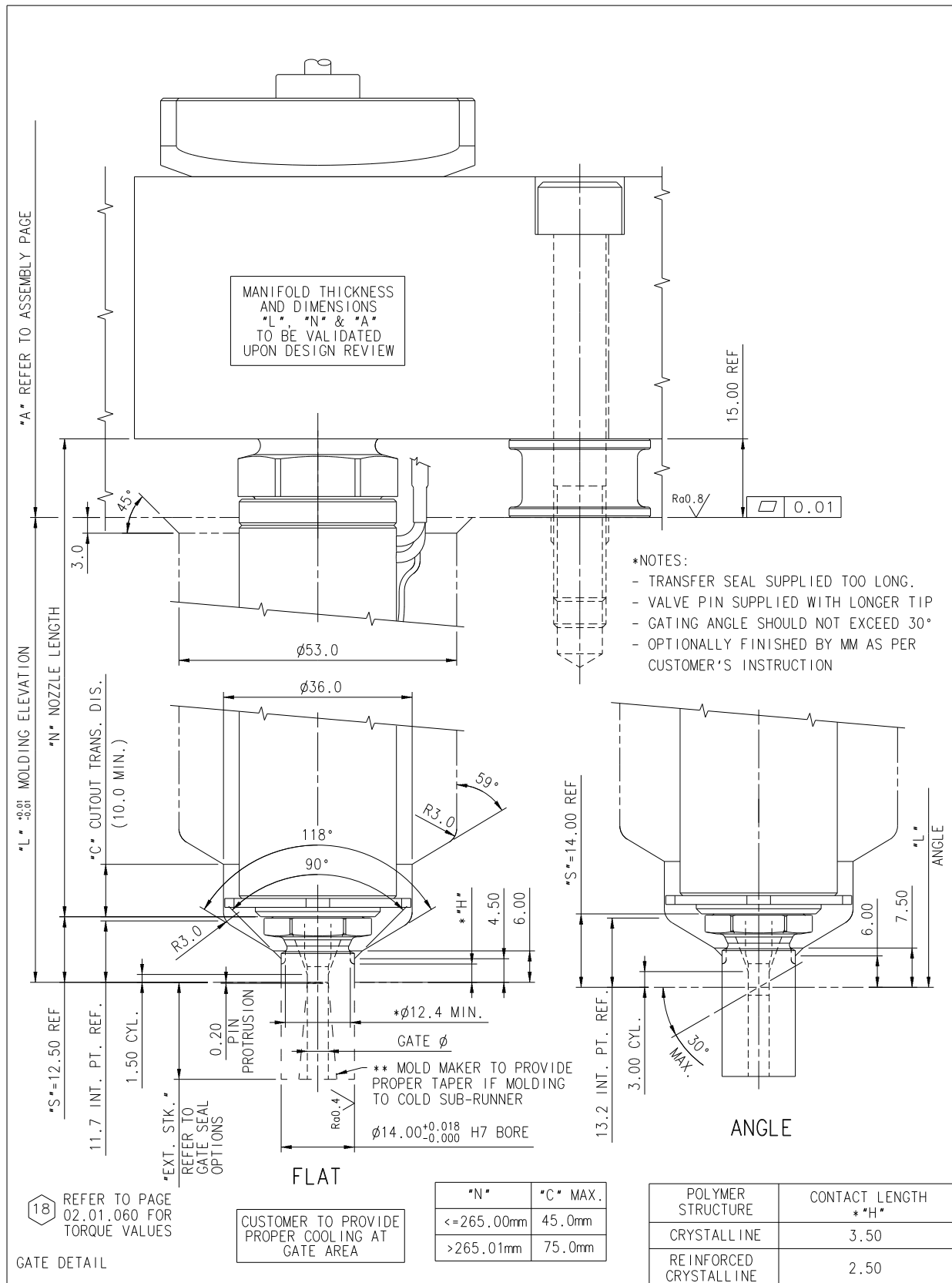


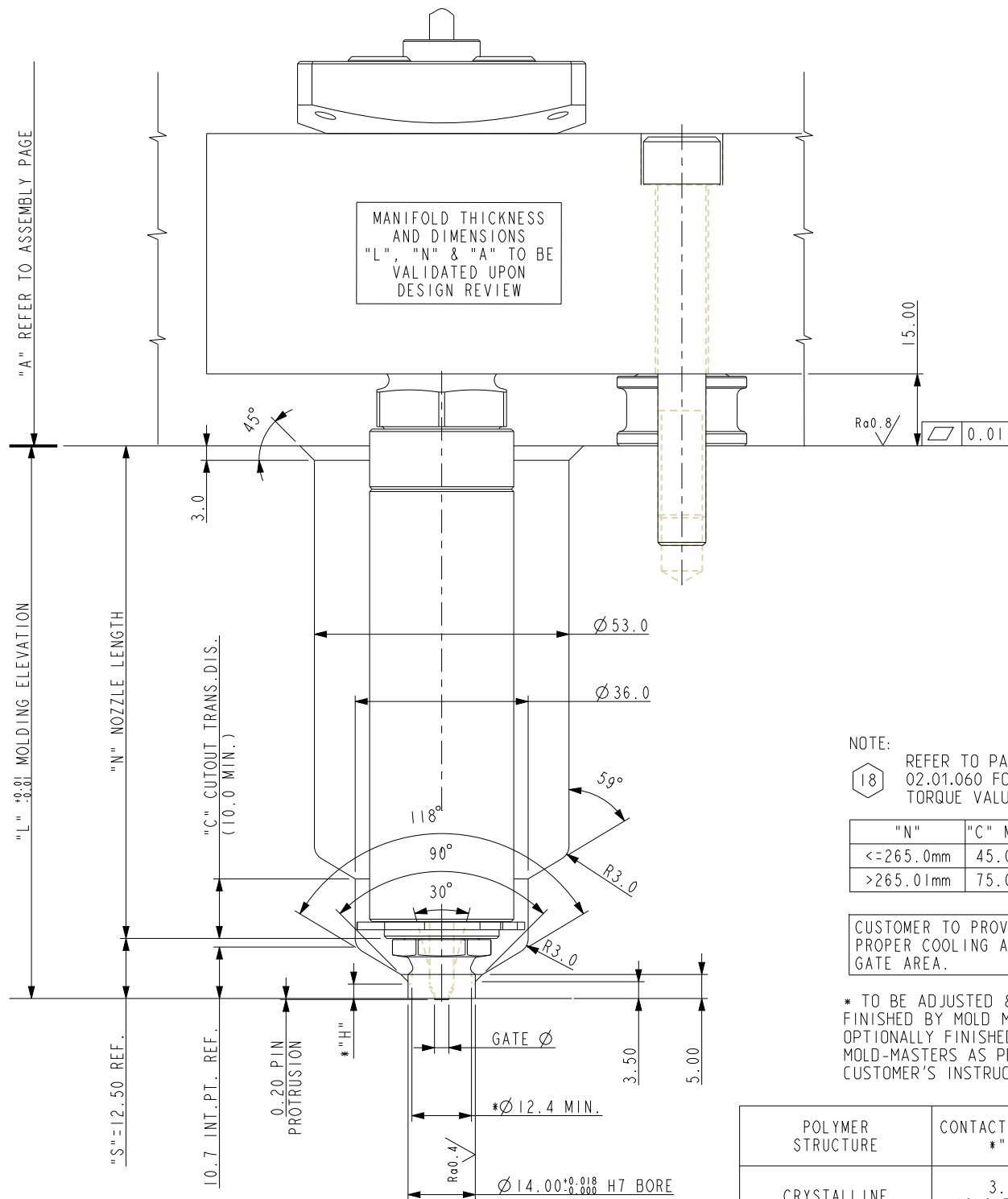


GATE DETAIL

POLYMER STRUCTURE	CONTACT LENGTH * "H"
CRYSTALLINE	3.50 AS SUPPLIED
REINFORCED CRYSTALLINE	2.50

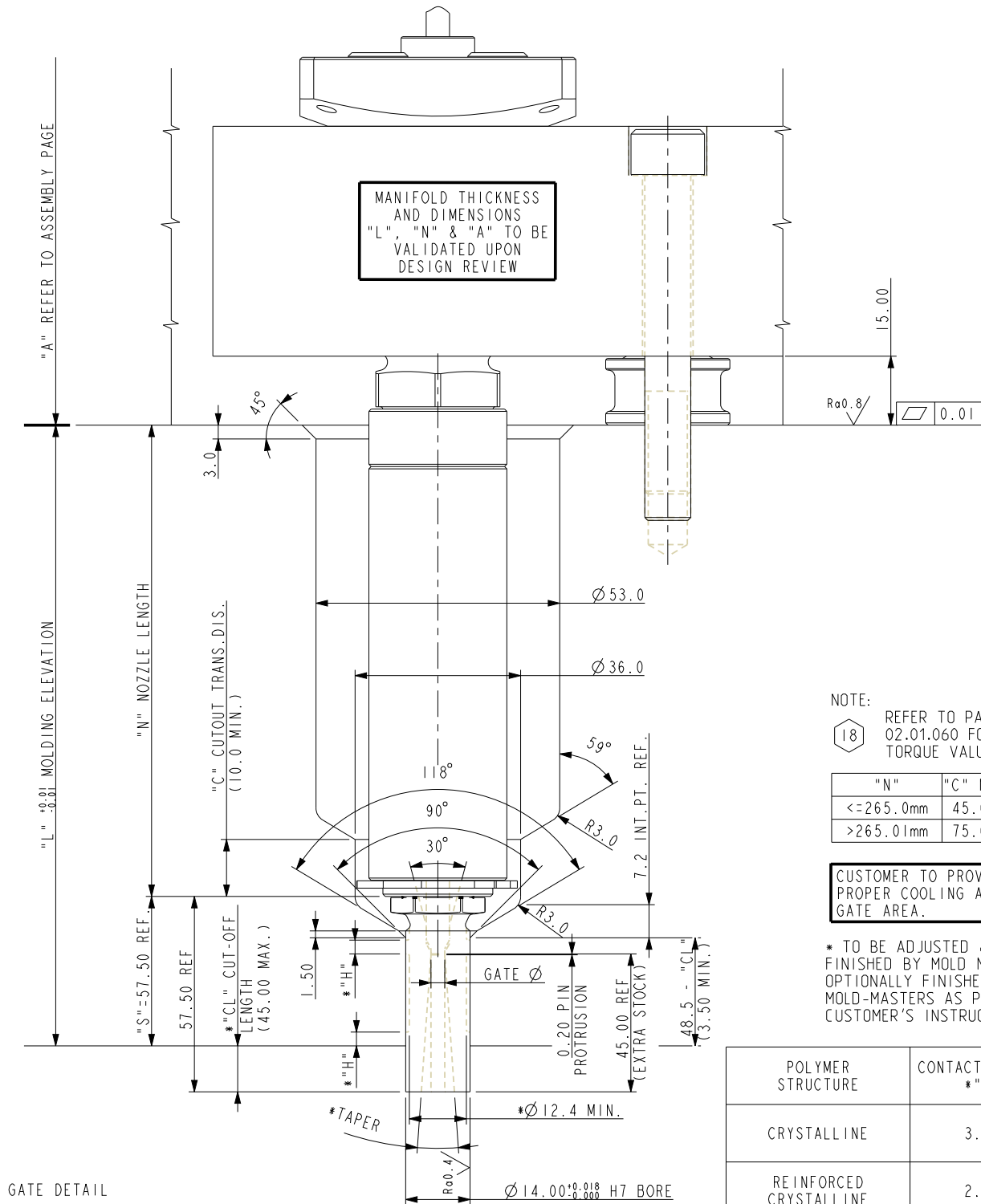






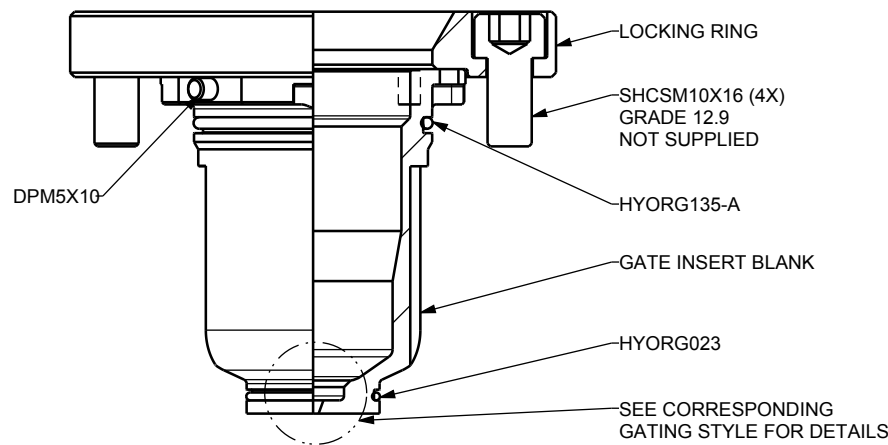
GATE DETAIL

POLYMER STRUCTURE	CONTACT LENGTH *"H"
CRYSTALLINE	3.50 AS SUPPLIED
REINFORCED CRYSTALLINE	2.50

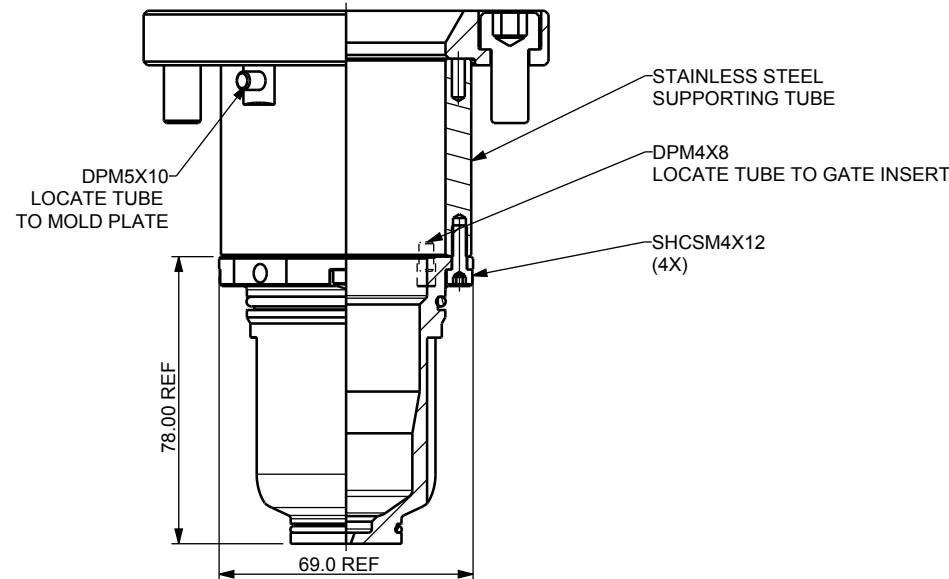




APPLICATIONS WITHOUT SUPPORTING TUBE



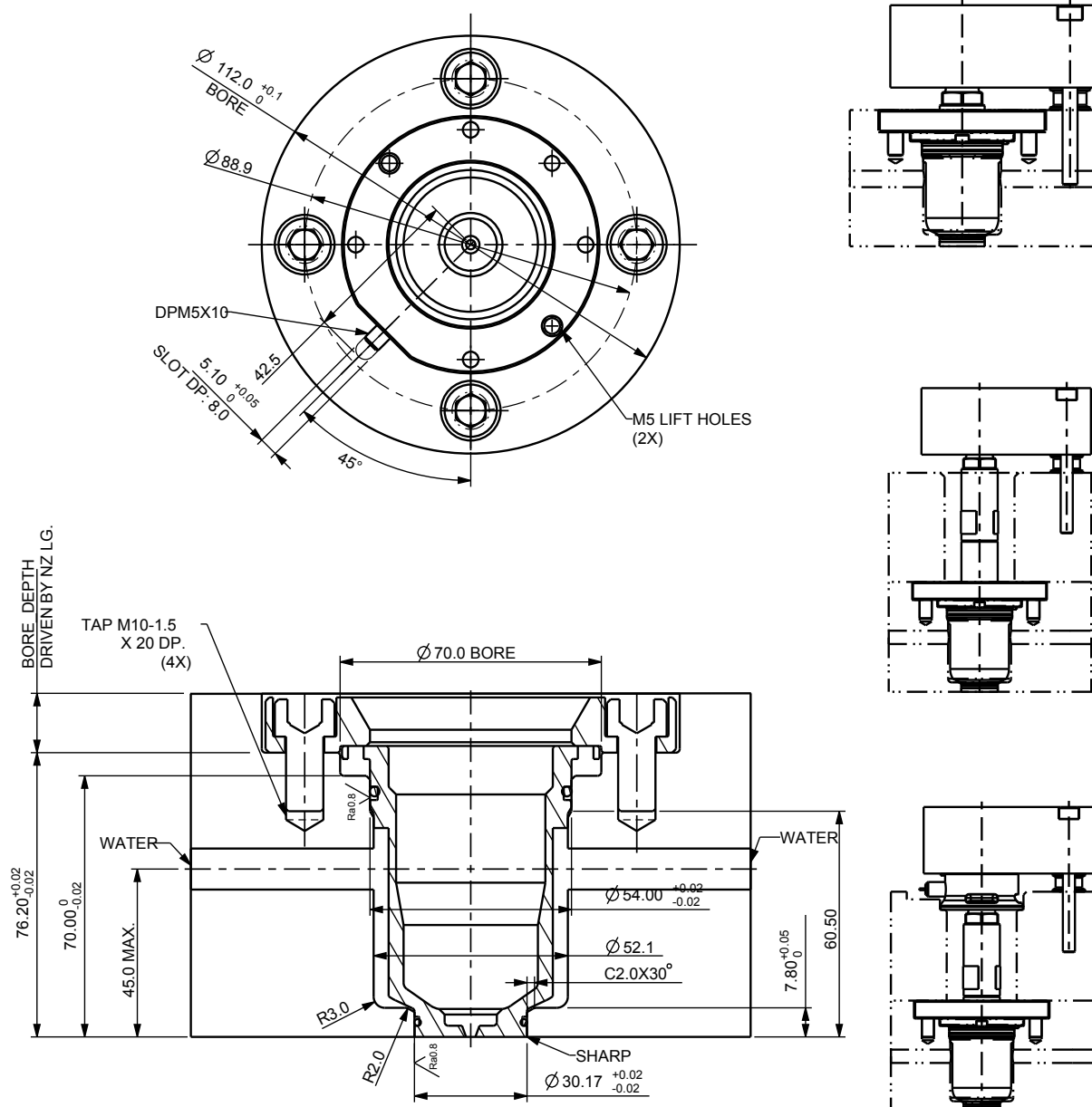
APPLICATIONS WITH SUPPORTING TUBE



WATER COOLED GATE INSERT OPTIONS		
GATE INSERT BLANK	E-TYPE TORPEDO	BI-METALLIC C-VALVE
	GIWFS5TEABLK01	GIWFS5BVABLK01
LOCKING RING	LOCKRING004	
STAINLESS STEEL TUBE RAW MATERIAL	SST304-68.0X7.0	



APPLICATIONS WITHOUT SUPPORTING TUBE

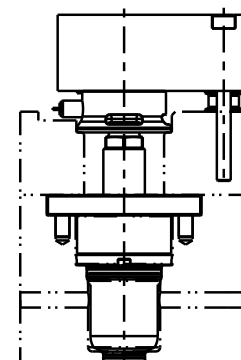
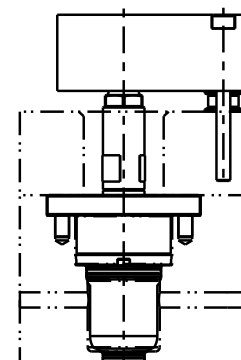
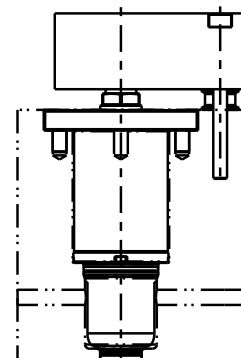
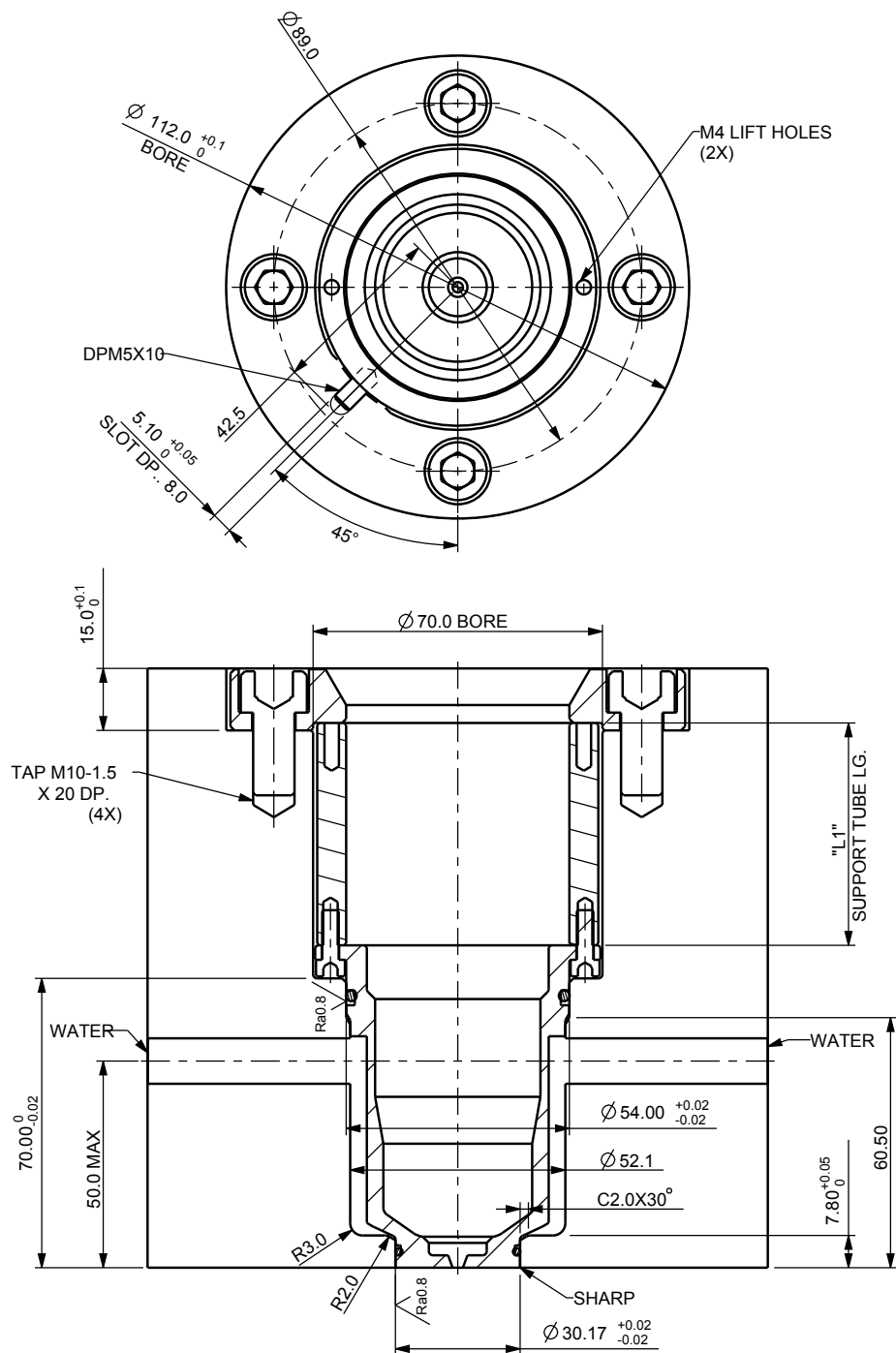


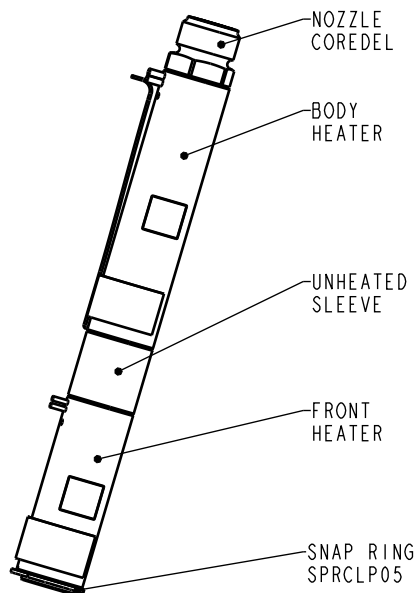
NOTE:

- * NORMALLY USED FOR APPLICATIONS WITH SHORT NOZZLE LENGTH,
- * FOR NOZZLE LENGTH SHORTER THAN 90.0mm, CONSIDER CUTTING SLOT ON LOCKING RING FOR WIRING EXIT,
- * WATER CHANNEL ELEVATION COULD BE MOVED UP TO 50.0mm BY CHANGING THE LOCKING RING ORIENTATION.



APPLICATIONS WITH SUPPORTING TUBE





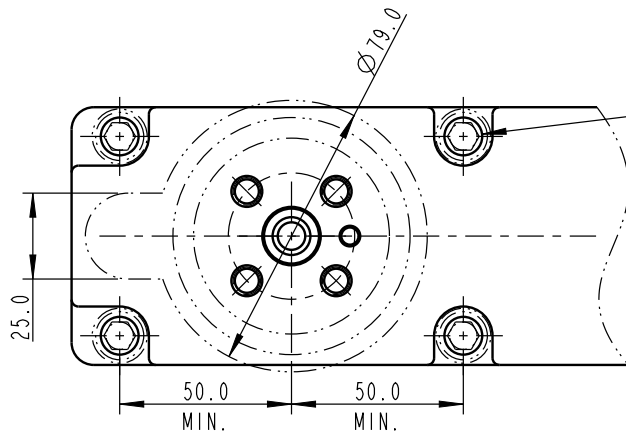
HEATER P/N	HIGH TEMP. (HT) OPTION AVAILABLE	CLASS	LENGTH [mm]	ID [mm]	OD [mm]	POWER @ 220V
HTRSLV050FASM04	YES	FRONT HEATER	50.0	Ø24.0	Ø30.0	525W
HTRSLV060FASM04	YES		60.0	Ø24.0	Ø30.0	525W
HTRSLV070FASM04	YES		70.0	Ø24.0	Ø30.0	525W
HTRSLV080FASM04	YES		80.0	Ø24.0	Ø30.0	525W
HTRSLV090FASM04	YES		90.0	Ø24.0	Ø30.0	525W
HTRSLV040RASM04	YES	BODY HEATER	40.0	Ø24.0	Ø30.0	300W
HTRSLV060RASM04	YES		60.0	Ø24.0	Ø30.0	450W
HTRSLV080RASM04	YES		80.0	Ø24.0	Ø30.0	425W
HTRSLV120RASM04	YES		120.0	Ø24.0	Ø30.0	400W

NOTE: FOR DURABILITY IN APPLICATIONS WITH PROCESS TEMPERATURES THAT EXCEED 260°C, HIGH TEMPERATURE "HT" HEATERS ARE RECOMMENDED. ADD "HT" TO STD HEATER P/N WHERE OPTION EXISTS. EX: HTRSLV050FASM04HT

MODEL FOR REFERENCE ONLY

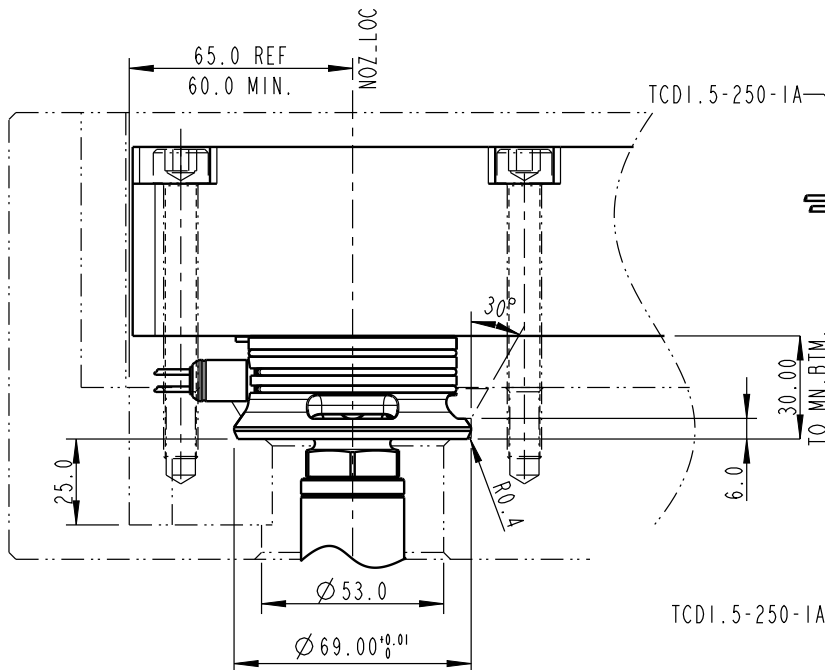
NOZZLE CONFIGURATION

NOZZLE LENGTH "N" (MM)	BODY HEATER (HTRSLV-)	UNHEATED SLEEVE	BODY HEATER (HTRSLV-)	UNHEATED SLEEVE	BODY HEATER (HTRSLV-)	UNHEATED SLEEVE	FRONT HEATER (HTRSLV-)	TOTAL POWER • 220V
80.00~90.00	N/A	N/A	N/A	N/A	N/A	5.0~15.0	060FASM04	525W
90.01~100.00	N/A	N/A	N/A	N/A	N/A	5.0~15.0	070FASM04	525W
100.01~110.00	N/A	N/A	N/A	N/A	N/A	5.0~15.0	080FASM04	525W
110.01~120.00	N/A	N/A	N/A	N/A	N/A	5.0~15.0	090FASM04	525W
120.01~135.00	N/A	N/A	N/A	N/A	040RASM04	15.0~30.0	050FASM04	825W
135.01~145.00	N/A	N/A	N/A	N/A	040RASM04	20.0~30.0	060FASM04	825W
145.01~155.00	N/A	N/A	N/A	N/A	060RASM04	20.0~30.0	050FASM04	975W
155.01~165.00	N/A	N/A	N/A	N/A	060RASM04	20.0~30.0	060FASM04	975W
165.01~175.00	N/A	N/A	N/A	N/A	060RASM04	20.0~30.0	070FASM04	975W
175.01~185.00	N/A	N/A	N/A	N/A	080RASM04	20.0~30.0	060FASM04	950W
185.01~195.00	N/A	N/A	N/A	N/A	080RASM04	20.0~30.0	070FASM04	950W
195.01~205.00	N/A	N/A	N/A	N/A	080RASM04	20.0~30.0	080FASM04	950W
205.01~215.00	N/A	N/A	N/A	N/A	120RASM04	20.0~30.0	050FASM04	925W
215.01~225.00	N/A	N/A	N/A	N/A	120RASM04	20.0~30.0	060FASM04	925W
225.01~235.00	N/A	N/A	N/A	N/A	120RASM04	20.0~30.0	070FASM04	925W
235.01~245.00	N/A	N/A	N/A	N/A	120RASM04	20.0~30.0	080FASM04	925W
245.01~255.00	N/A	N/A	N/A	N/A	120RASM04	20.0~30.0	090FASM04	925W
255.01~275.00	N/A	N/A	060RASM04	20.0~30.0	060RASM04	20.0~30.0	080FASM04	1425W
275.01~295.00	N/A	N/A	080RASM04	20.0~30.0	080RASM04	20.0~30.0	060FASM04	1375W
295.01~315.00	N/A	N/A	080RASM04	20.0~30.0	080RASM04	20.0~30.0	080FASM04	1375W
315.01~335.00	N/A	N/A	080RASM04	20.0~30.0	120RASM04	20.0~30.0	060FASM04	1350W
335.01~355.00	N/A	N/A	080RASM04	20.0~30.0	120RASM04	20.0~30.0	080FASM04	1350W
355.01~375.00	N/A	N/A	120RASM04	20.0~30.0	120RASM04	20.0~30.0	060FASM04	1325W
375.01~395.00	N/A	N/A	120RASM04	20.0~30.0	120RASM04	20.0~30.0	080FASM04	1325W
395.01~425.00	080RASM04	20.0~30.0	080RASM04	20.0~30.0	080RASM04	20.0~30.0	080FASM04	1800W
425.01~455.00	080RASM04	20.0~30.0	080RASM04	20.0~30.0	120RASM04	20.0~30.0	070FASM04	1775W
455.01~485.00	080RASM04	20.0~30.0	120RASM04	20.0~30.0	120RASM04	20.0~30.0	060FASM04	1750W

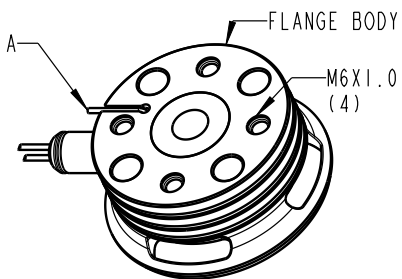


Ø 11.0 (4)
 * OVAL HOLES MIGHT BE NEEDED
 FOR LARGE PITCH APPLICATION

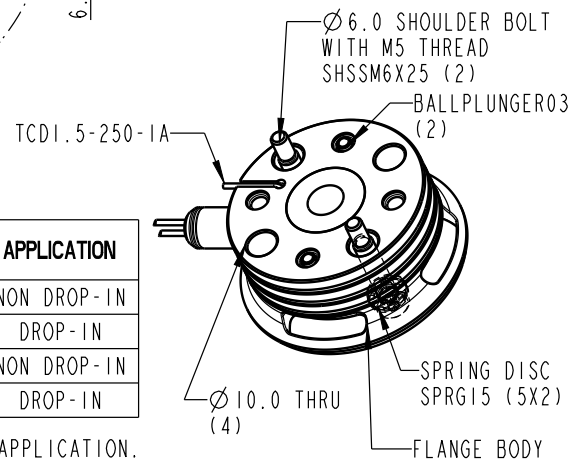
NOTE: 4X M10 or 3/8" SCREWS ARE HIGHLY
 RECOMMENDED TO BOLT MANIFOLD ONTO MOLD
 PLATE IN ORDER TO PROVIDE PROPER SEALING
 ON FLANGE CONTACT SURFACE.



NON DROP-IN VERSION

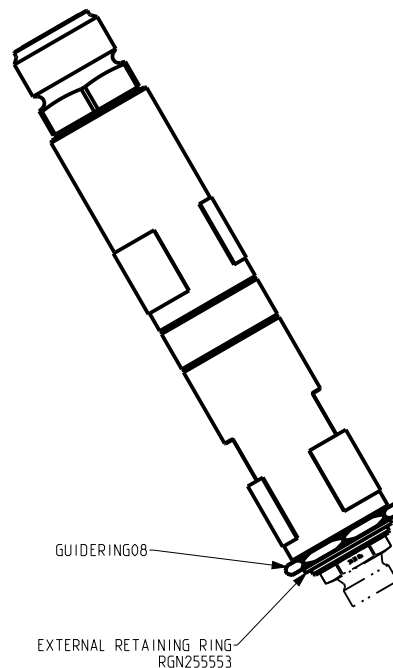
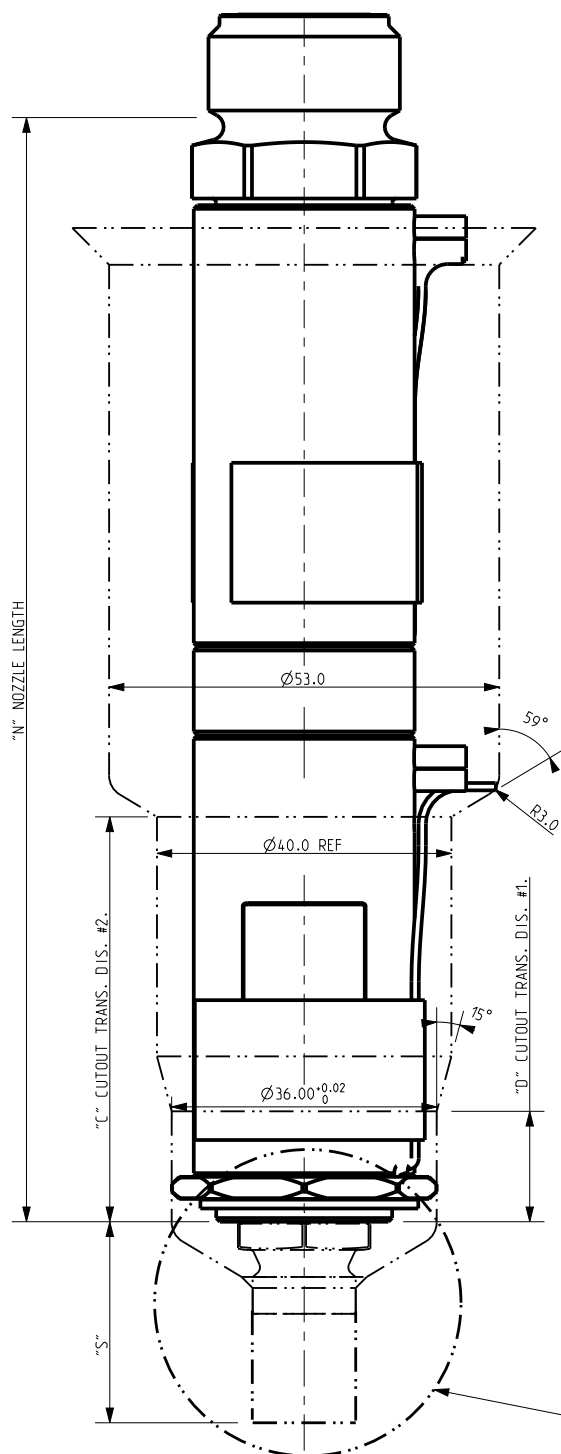


DROP-IN VERSION



FLANGE PACKAGE	FLANGE BODY	RUNNER DIA.	WATTAGE	APPLICATION
FLANGEFS09P	FLANGEFS09	Ø 8.0	525W	NON DROP-IN
FLANGEFS09PI	FLANGEFS09	Ø 8.0	525W	DROP-IN
FLANGEFS10P	FLANGEFS10	Ø 11.0	525W	NON DROP-IN
FLANGEFS10PI	FLANGEFS10	Ø 11.0	525W	DROP-IN

* CONTACT MOLD-MASTERS APPLICATION ENGINEER FOR FLANGE APPLICATION.



NOTE:

"N"	"C" MAX.
≤265.0mm	55.0mm
>265.01mm	75.0mm

GATING STYLE	"D"
NON EXT. STYLE	15.0mm
EXT. GATING STYLE	"S"-2 (mm)



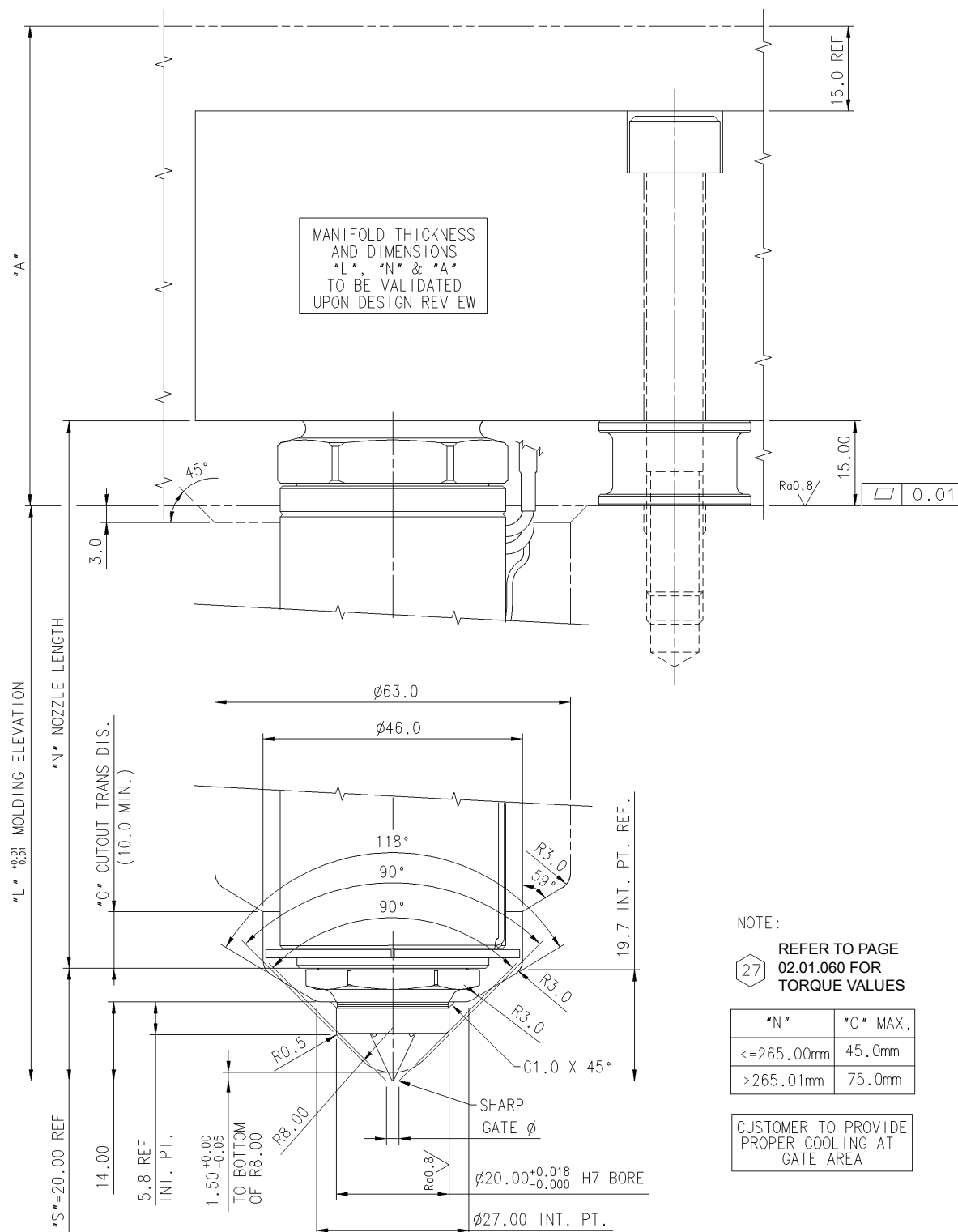
GATING STYLE	PAGE	NOZZLE LENGTH RANGE	GATE Ø	EXTRA STOCK (SUPPLIED LG.)	GATE SEAL OPTIONS	GATE SEAL PACKAGES
E-TYPE TORPEDO	06.01.015	80.0 - 700.0	Ø 1.5-Ø 2.5	0.0	TSF058 + TPF006	TSF058P
F-TYPE TORPEDO	06.01.020	80.0 - 700.0	Ø 2.00	0.25	TSF014 + TPF002	TSF014P FOR PROCESSING TEMP. >280°C
					TSF014 + TPF002-1	TSF014PI FOR PROCESSING TEMP. <280°C
			Ø 2.50	0.25	TSF015 + TPF002	TSF015P FOR PROCESSING TEMP. >280°C
					TSF015 + TPF002-1	TSF015PI FOR PROCESSING TEMP. <280°C
			Ø 3.00	0.25	TSF016 + TPF002	TSF016P FOR PROCESSING TEMP. >280°C
					TSF016 + TPF002-1	TSF016PI FOR PROCESSING TEMP. <280°C
EXTENDED F-TYPE TORPEDO	06.01.025	80.0 - 700.0	Ø 2.00	50.0	TSF037 + TPF002	TSF037P FOR PROCESSING TEMP. >280°C
					TSF037 + TPF002-1	TSF037PI FOR PROCESSING TEMP. <280°C
			Ø 2.50	50.0	TSF038 + TPF002	TSF038P FOR PROCESSING TEMP. >280°C
					TSF038 + TPF002-1	TSF038PI FOR PROCESSING TEMP. <280°C
			Ø 3.00	50.0	TSF039 + TPF002	TSF039P FOR PROCESSING TEMP. >280°C
					TSF039 + TPF002-1	TSF039PI FOR PROCESSING TEMP. <280°C
HOT SPRUE	06.01.030	80.0 - 700.0	Ø 2.50	41.5	TSF017	N/A
			Ø 3.00	41.5	TSF018	
			Ø 3.50	41.5	TSF019	
			Ø 4.00	41.5	TSF020	
			Ø 5.00	41.5	TSF021	
EXTENDED HOT SPRUE	06.01.035	80.0 - 700.0	Ø 2.5-Ø 5.0	50.0	TSF040 (Ø 2.0 HOLE SUPPLIED)	
BI-METALLIC C-VALVE	06.01.036	80.0 - 700.0	Ø 4.0-Ø 5.0	0.0	TSF062 + TSLF0007	TSF062P Ø 8.0mm VALVE PIN
					TSF062 + TSLF0008	TSF062PI Ø 6.3mm VALVE PIN
BI-MET. BALLNOSE C-VALVE	06.01.037	80.0 - 700.0	Ø 2.0-Ø 5.1	0.0	TS010018+TSL010008	TS010018P4 Ø 8.0mm VALVE PIN
		80.0 - 700.0	Ø 1.5-Ø 3.1	0.0	TS010018+TSL010018	TS010018P5 Ø 5.0mm VALVE PIN
HOT VALVE	06.01.040	80.0 - 700.0	Ø 4.00	0.25	TSF022	N/A
			Ø 4.00	0.0	TSF022F	
			Ø 5.00	0.25	TSF023	
EXTENDED HOT VALVE	06.01.045	80.0 - 700.0	Ø 4.00	50.0	TSF052	
			Ø 5.00	50.0	TSF053	
CYLINDRICAL HOT VALVE	06.01.050	80.0 - 700.0	Ø 3.00	18.5	TSF118 + VPG057	TSF118P
				18.5	TSF024 + VPG023	TSF024P
			Ø 4.00	45.0	TSF088 + VPG023	TSF088P
				18.5	TSF025 + VPG023	TSF025P
			Ø 5.00	45.0	TSF089 + VPG023	TSF089P

NOTE:

- * FINISHED GATE SEALS ("F") ARE AVAILABLE FOR F-TYPE, EXT. F-TYPE, HOT SPRUE, EXT. HOT SPRUE, HOT VALVE, EXT. HOT VALVE & CYLINDRICAL HOT VALVE
- * CONTACT MOLD-MASTERS APPLICATION ENGINEER FOR DETAIL
- * CUSTOM SEALS CAN BE MANUFACTURED WITH APPLICATION ENGINEER APPROVAL
- * SEE PG.02.01.060 FOR TYPICAL TORQUE VALUES



GATING STYLE	GATE Ø	GATE SEAL	GATE SEAL DESCRIPTION	GATE SEAL PACKAGES
F-TYPE TORPEDO	Ø 2.00	TSF014F (MODIFIED FROM TSF014)	FS6 TORP. F G=2.0, 0.25mm EXT STK RMVD	TSF014FP (TSF014F + TPF002) FOR PROCESSING TEMP. >280°C
				TSF014FP1 (TSF014F + TPF002-1) FOR PROCESSING TEMP. <280°C
	Ø 2.50	TSF015F (MODIFIED FROM TSF015)	FS6 TORP. F G=2.5, 0.25mm EXT STK RMVD	TSF015FP (TSF015F + TPF002) FOR PROCESSING TEMP. >280°C
				TSF015FP1 (TSF015F + TPF002-1) FOR PROCESSING TEMP. <280°C
	Ø 3.00	TSF016F (MODIFIED FROM TSF016)	FS6 TORP. F G=3.0, 0.25mm EXT STK RMVD	TSF016FP (TSF016F + TPF002) FOR PROCESSING TEMP. >280°C
				TSF016FP1 (TSF016F + TPF002-1) FOR PROCESSING TEMP. <280°C
EXT. F-TYPE TORPEDO	Ø 2.00	TSF037F (MODIFIED FROM TSF037)	FS6 EXT. TORP. F G=2.0 w/8° TAPER	TSF037FP (TSF037F + TPF002) FOR PROCESSING TEMP. >280°C
				TSF037FP1 (TSF037F + TPF002-1) FOR PROCESSING TEMP. <280°C
	Ø 2.50	TSF038F (MODIFIED FROM TSF038)	FS6 EXT. TORP. F G=2.5 w/8° TAPER	TSF038FP (TSF038F + TPF002) FOR PROCESSING TEMP. >280°C
				TSF038FP1 (TSF038F + TPF002-1) FOR PROCESSING TEMP. <280°C
	Ø 3.00	TSF039F (MODIFIED FROM TSF039)	FS6 EXT. TORP. F G=3.0 w/8° TAPER	TSF039FP (TSF039F + TPF002) FOR PROCESSING TEMP. >280°C
				TSF039FP1 (TSF039F + TPF002-1) FOR PROCESSING TEMP. <280°C
HOT SPRUE	Ø 2.50	TSF017F (MODIFIED FROM TSF017)	FS6 HOT SPRUE G=2.5, w/8° TAPER	N/A
	Ø 3.00	TSF018F (MODIFIED FROM TSF018)	FS6 HOT SPRUE G=3.0, w/8° TAPER	
	Ø 3.50	TSF019F (MODIFIED FROM TSF019)	FS6 HOT SPRUE G=3.5, w/8° TAPER	
	Ø 4.00	TSF020F (MODIFIED FROM TSF020)	FS6 HOT SPRUE G=4.0, w/8° TAPER	
	Ø 5.00	TSF021F (MODIFIED FROM TSF021)	FS6 HOT SPRUE G=5.0, w/8° TAPER	
EXT. HOT SPRUE	Ø 2.50	TSF077F (MODIFIED FROM TSF040)	FS6 EXT. HOT SPRUE G=2.5, w/8° TAPER	N/A
	Ø 3.00	TSF078F (MODIFIED FROM TSF040)	FS6 EXT. HOT SPRUE G=3.0, w/8° TAPER	
	Ø 3.50	TSF079F (MODIFIED FROM TSF040)	FS6 EXT. HOT SPRUE G=3.5, w/8° TAPER	
	Ø 4.00	TSF080F (MODIFIED FROM TSF040)	FS6 EXT. HOT SPRUE G=4.0, w/8° TAPER	
	Ø 5.00	TSF081F (MODIFIED FROM TSF040)	FS6 EXT. HOT SPRUE G=5.0, w/8° TAPER	
ACCU-VALVE LX	Ø 3.00	TSF178F	FS6 AVLX G=3.0(FINISH GROUND)	N/A
	Ø 4.00	TSF179F	FS6 AVLX G=4.0(FINISH GROUND)	
	Ø 5.00	TSF180F	FS6 AVLX G=5.0(FINISH GROUND)	
EXTENDED ACCU-VALVE LX	Ø 3.00	TSF181F	FS6 AVLX G=3.0 EL=45 w/8° TAPER	N/A
	Ø 4.00	TSF182F	FS6 AVLX G=4.0 EL=45 w/8° TAPER	
	Ø 5.00	TSF183F	FS6 AVLX G=5.0 EL=45 w/8° TAPER	
HOT VALVE	Ø 4.00	TSF022F (MODIFIED FROM TSF022)	FS6 HOT VALVE G=4.0, 0.25mm EXT STK RMVD	N/A
	Ø 5.00	TSF023F (MODIFIED FROM TSF023)	FS6 HOT VALVE G=5.0, 0.25mm EXT STK RMVD	
EXT. HOT VALVE	Ø 4.00	TSF052F (MODIFIED FROM TSF052)	FS6 EXT. HOT VALVE G=4.0 w/8° TAPER	N/A
	Ø 5.00	TSF053F (MODIFIED FROM TSF053)	FS6 EXT. HOT VALVE G=5.0 w/8° TAPER	
CYLINDRICAL HOT VALVE	Ø 3.00	TSF118F (MODIFIED FROM TSF118)	FS6 CYL. HOT VALVE G=3.0, 18.5mm EXT STK RMVD	TSF118FP
	Ø 4.00	TSF024F (MODIFIED FROM TSF024)	FS6 CYL. HOT VALVE G=4.0, 18.5mm EXT STK RMVD	TSF024FP
	Ø 5.00	TSF025F (MODIFIED FROM TSF025)	FS6 CYL. HOT VALVE G=5.0, 18.5mm EXT STK RMVD	TSF025FP



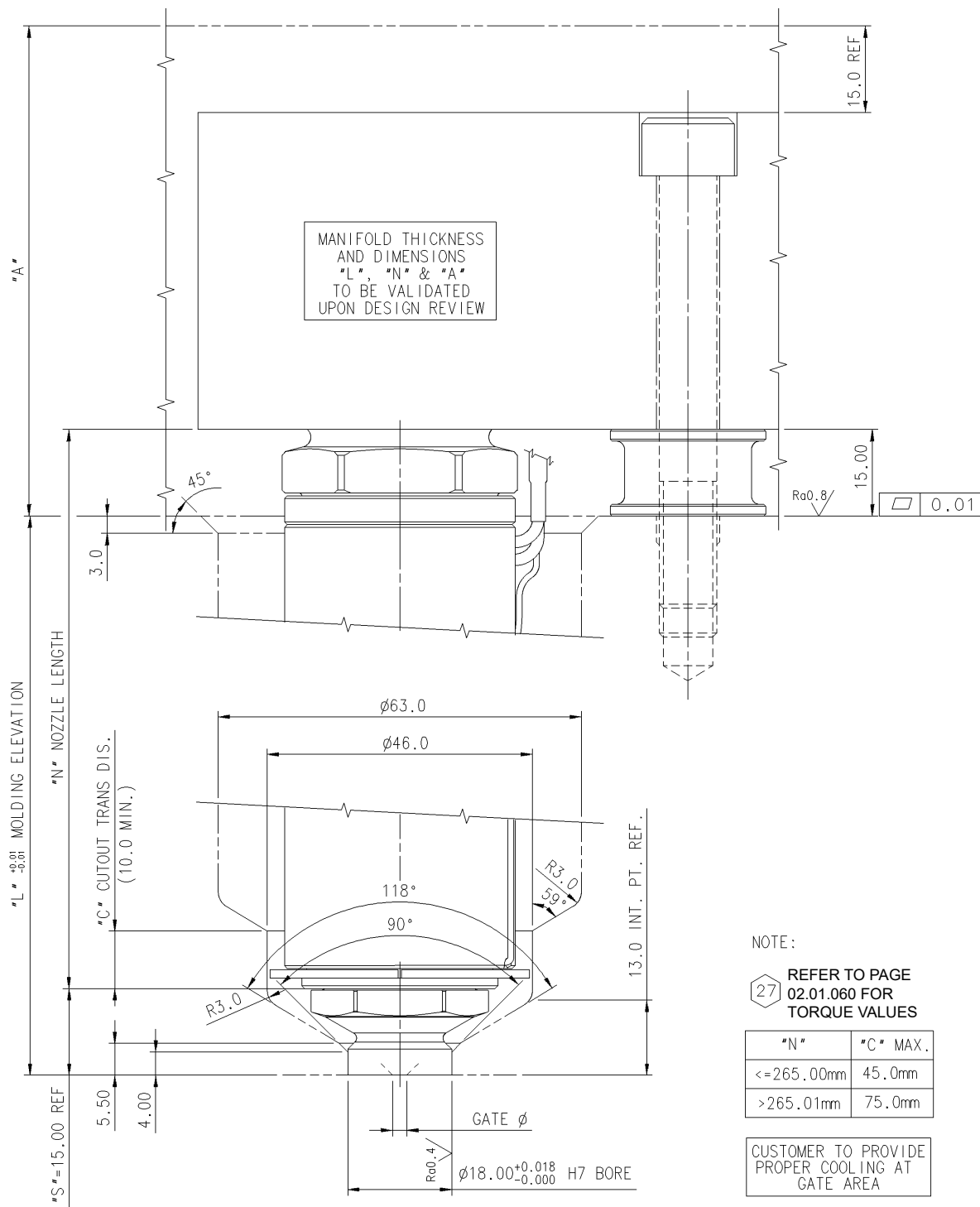
GATE DETAIL

NOTE:

27 REFER TO PAGE 02.01.060 FOR TORQUE VALUES

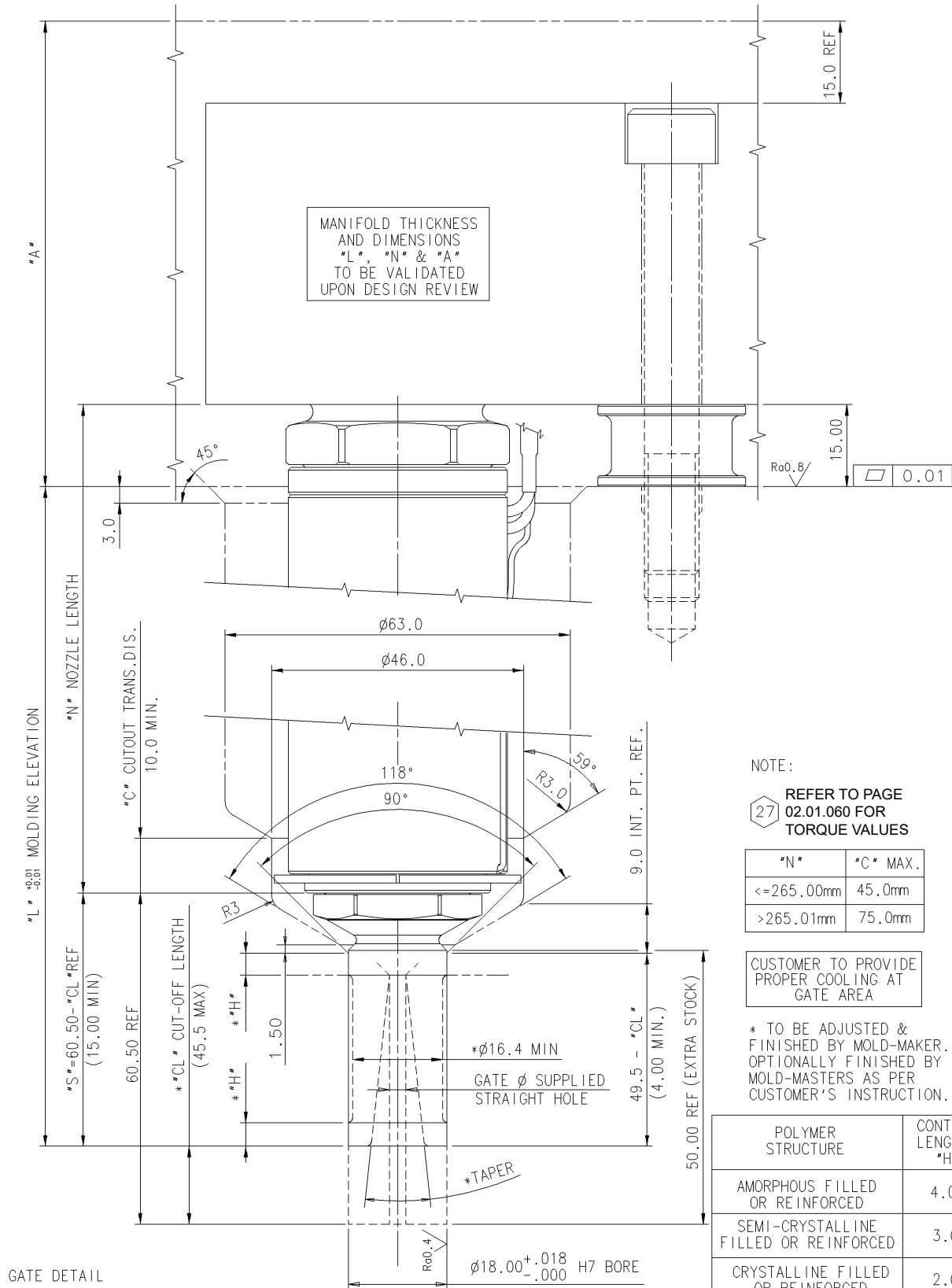
"N"	"C" MAX.
$\leq 265.00\text{mm}$	45.0mm
$> 265.01\text{mm}$	75.0mm

CUSTOMER TO PROVIDE PROPER COOLING AT GATE AREA

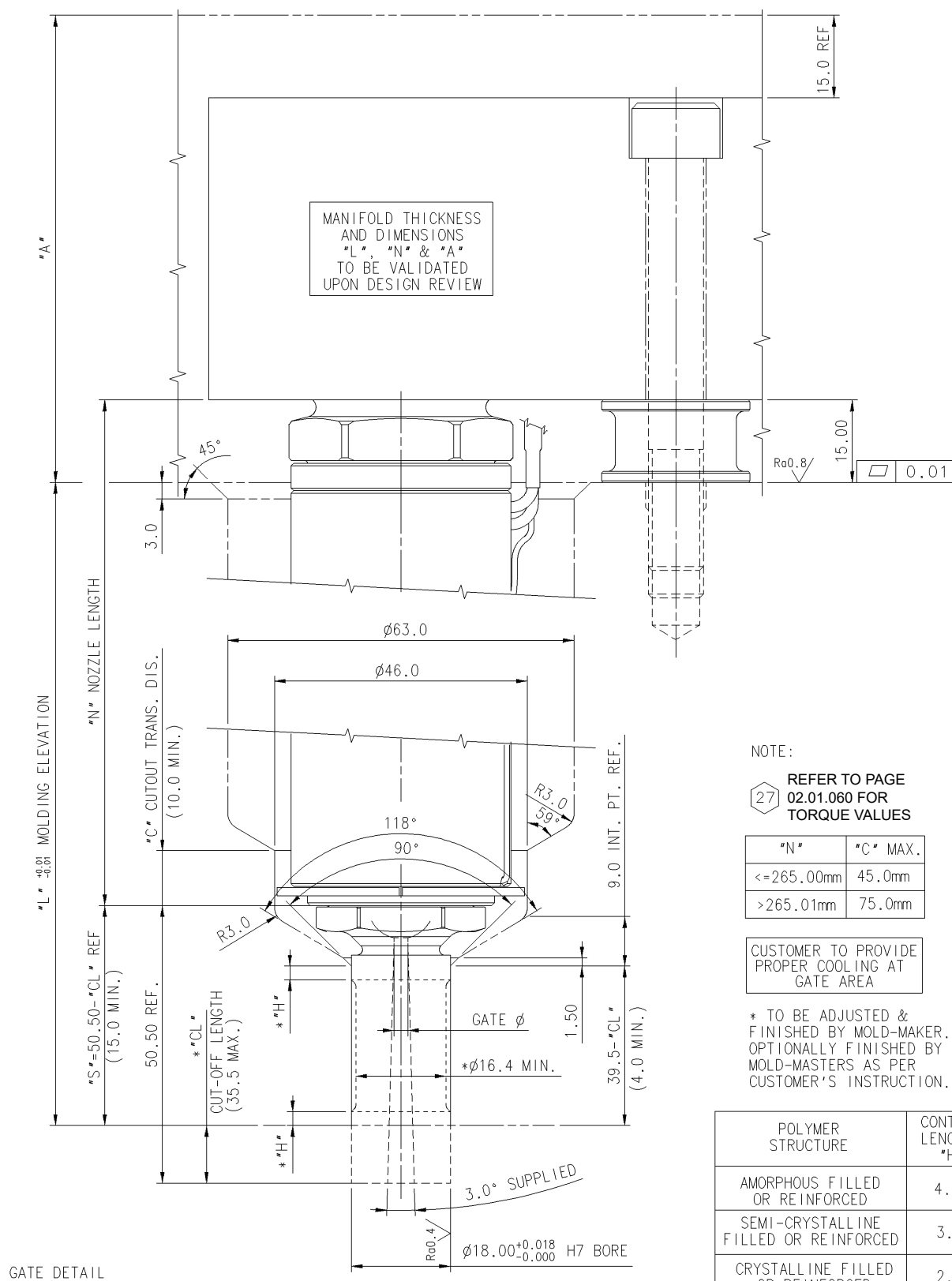


GATE DETAIL

TRANSFER SEAL SUPPLIED 0.25MM TOO LONG. MOLD MAKER GRIND TO SUIT. OPTIONALLY FINISHED BY MOLD-MASTERS AS PER CUSTOMER'S INSTRUCTION.



GATE DETAIL



NOTE:

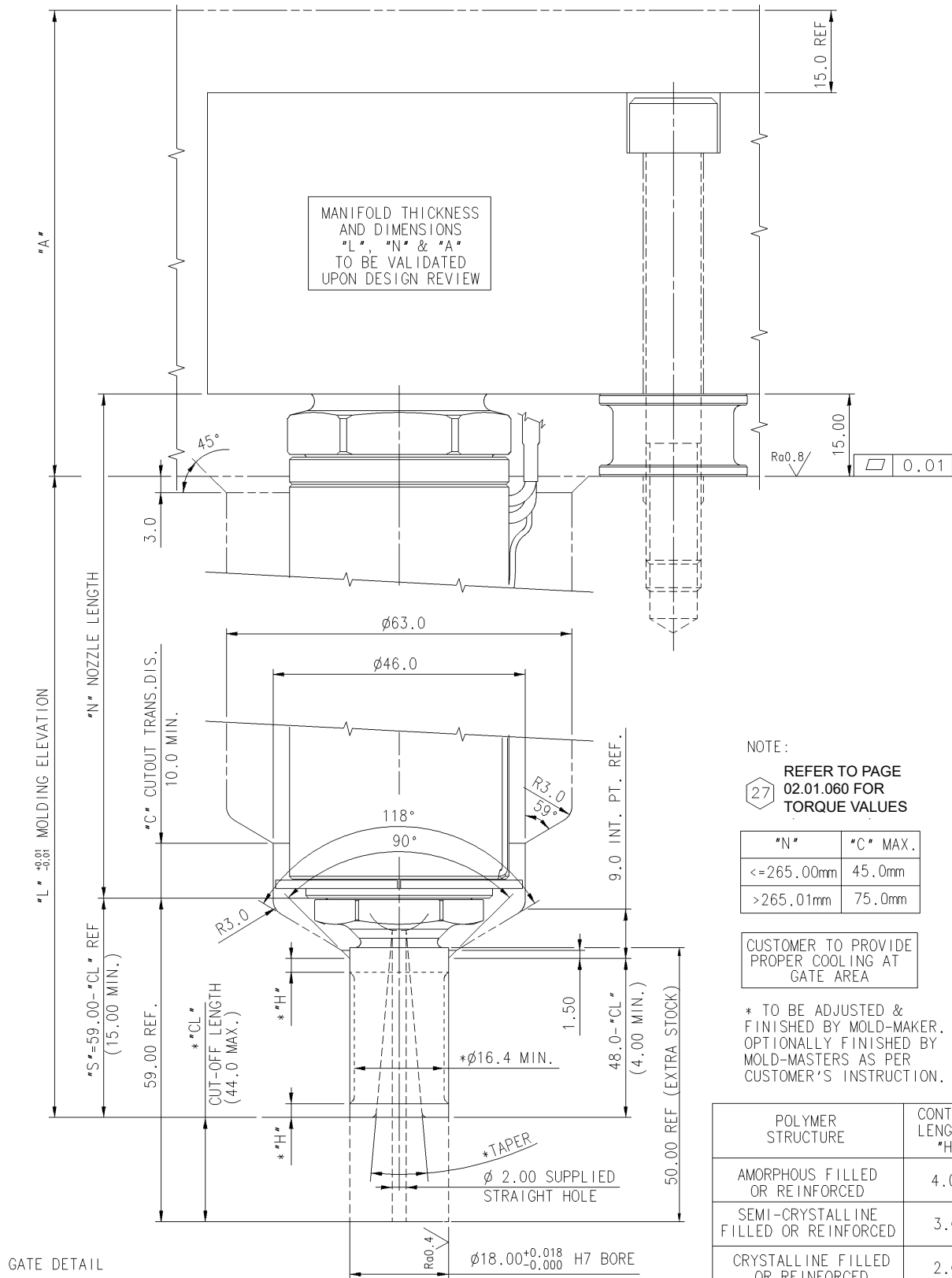
27 REFER TO PAGE 02.01.060 FOR TORQUE VALUES

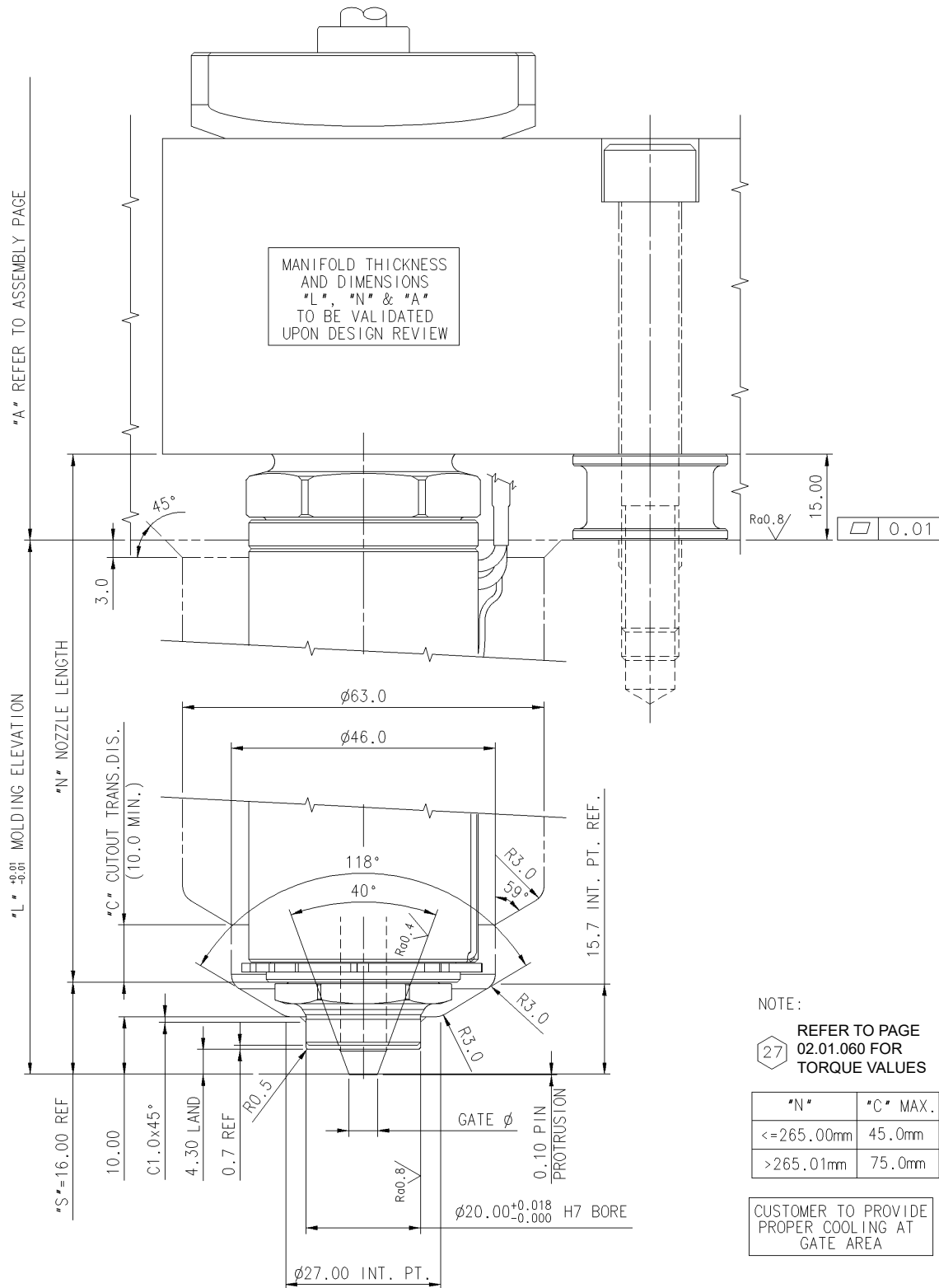
"N"	"C" MAX.
≤265.00mm	45.0mm
>265.01mm	75.0mm

CUSTOMER TO PROVIDE PROPER COOLING AT GATE AREA

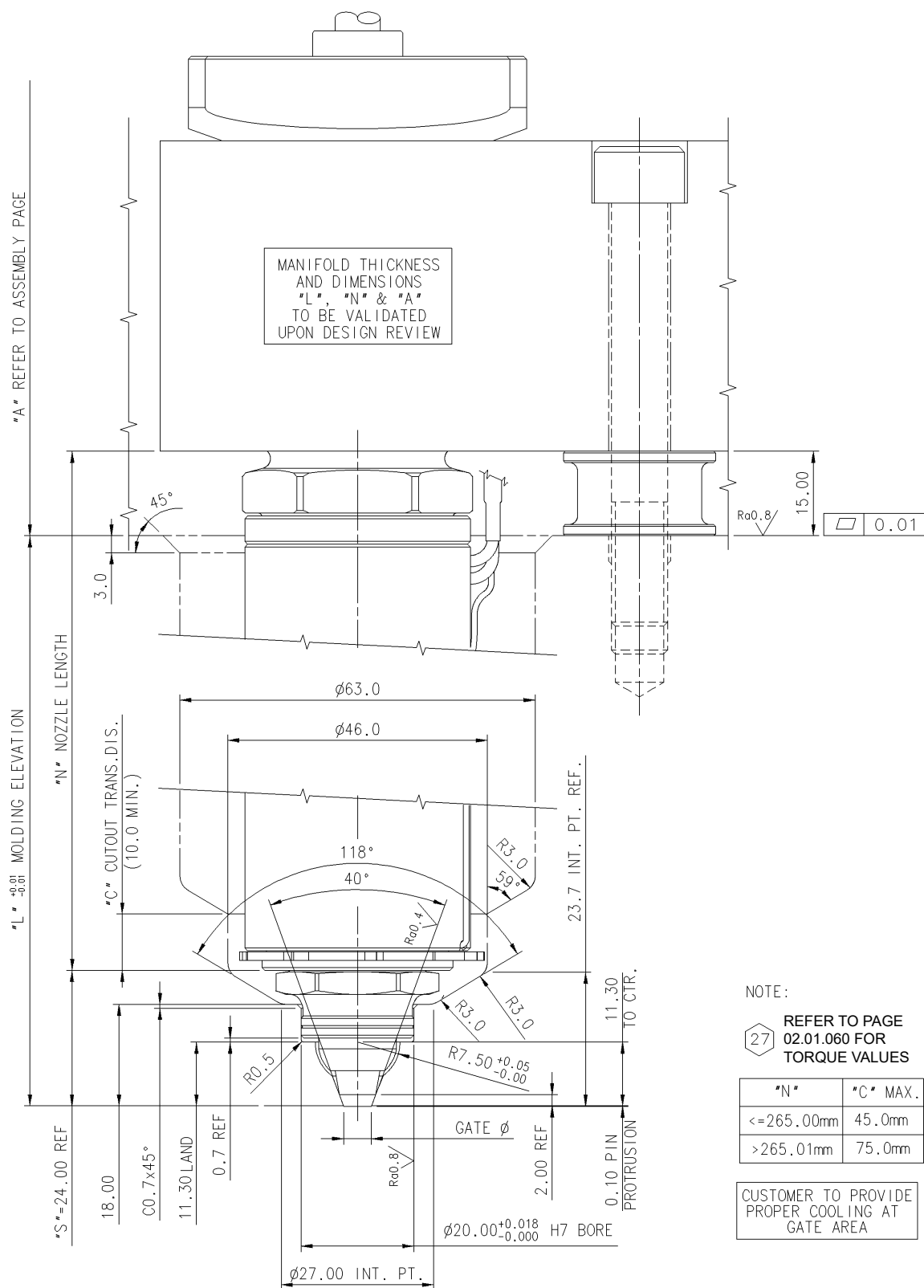
* TO BE ADJUSTED & FINISHED BY MOLD-MAKER. OPTIONALLY FINISHED BY MOLD-MASTERS AS PER CUSTOMER'S INSTRUCTION.

POLYMER STRUCTURE	CONTACT LENGTH "H"
AMORPHOUS FILLED OR REINFORCED	4.00
SEMI-CRYSTALLINE FILLED OR REINFORCED	3.00
CRYSTALLINE FILLED OR REINFORCED	2.00





GATE DETAIL



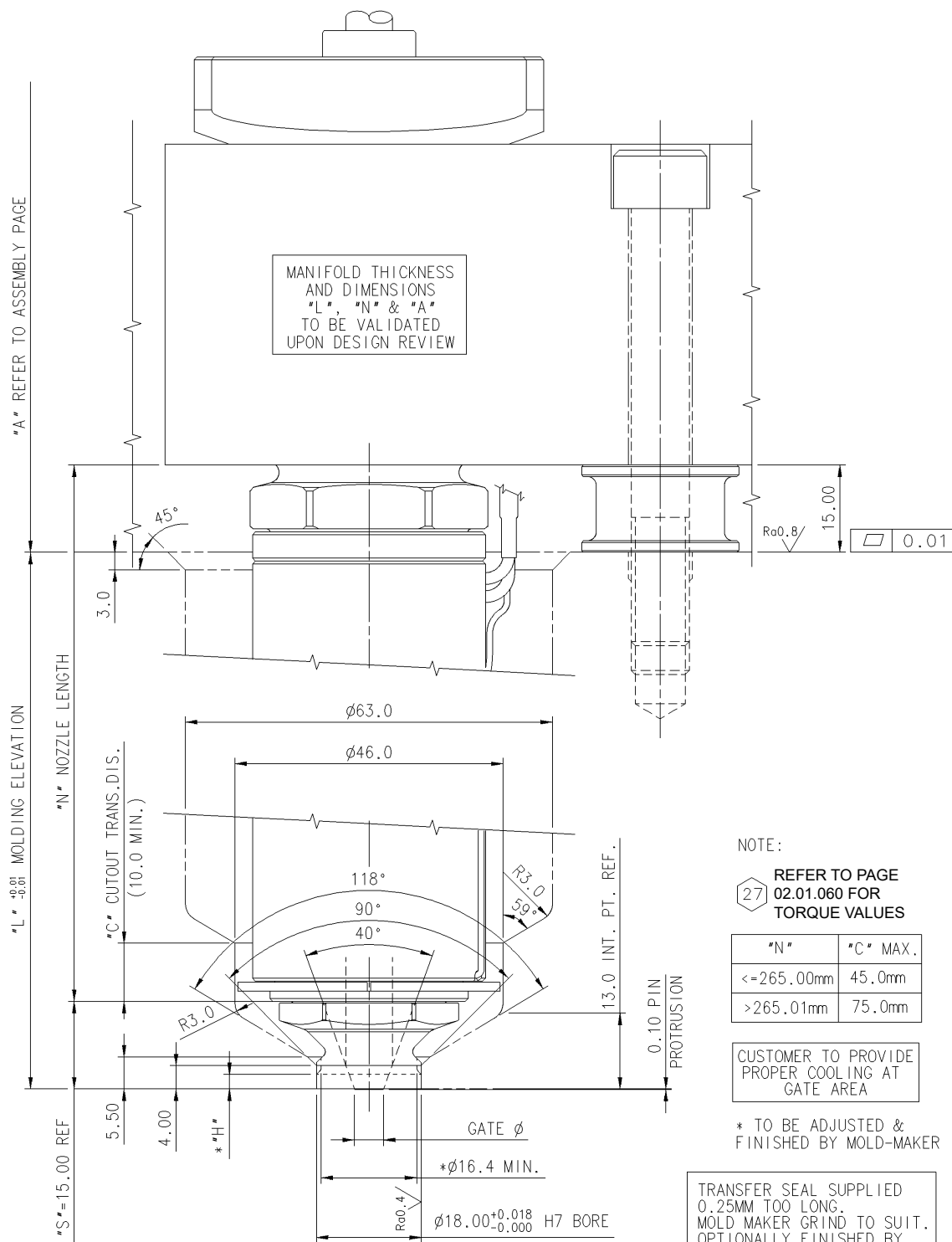
NOTE:

27 REFER TO PAGE 02.01.060 FOR TORQUE VALUES

"N"	"C" MAX.
<=265.00mm	45.0mm
>265.01mm	75.0mm

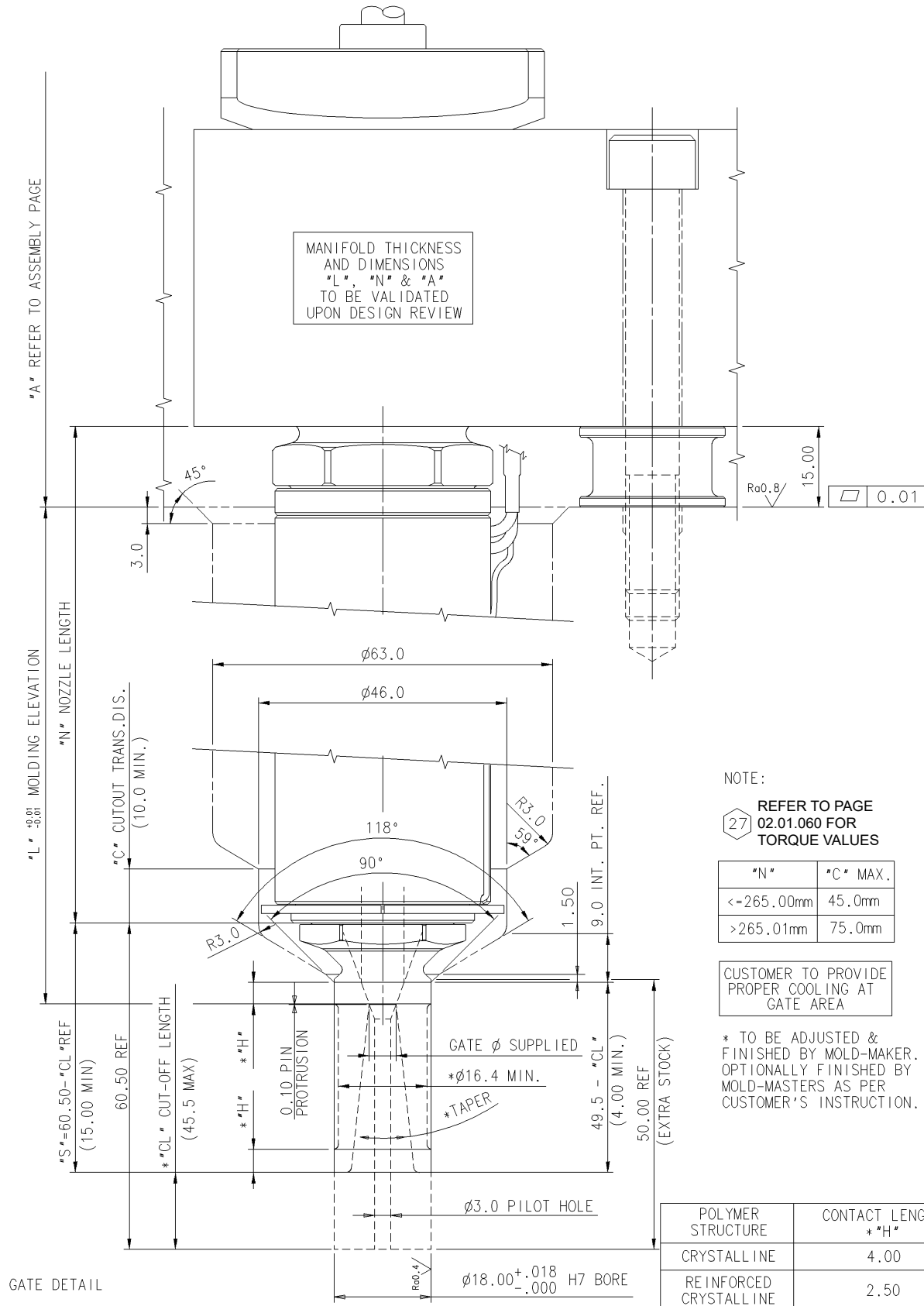
CUSTOMER TO PROVIDE PROPER COOLING AT GATE AREA

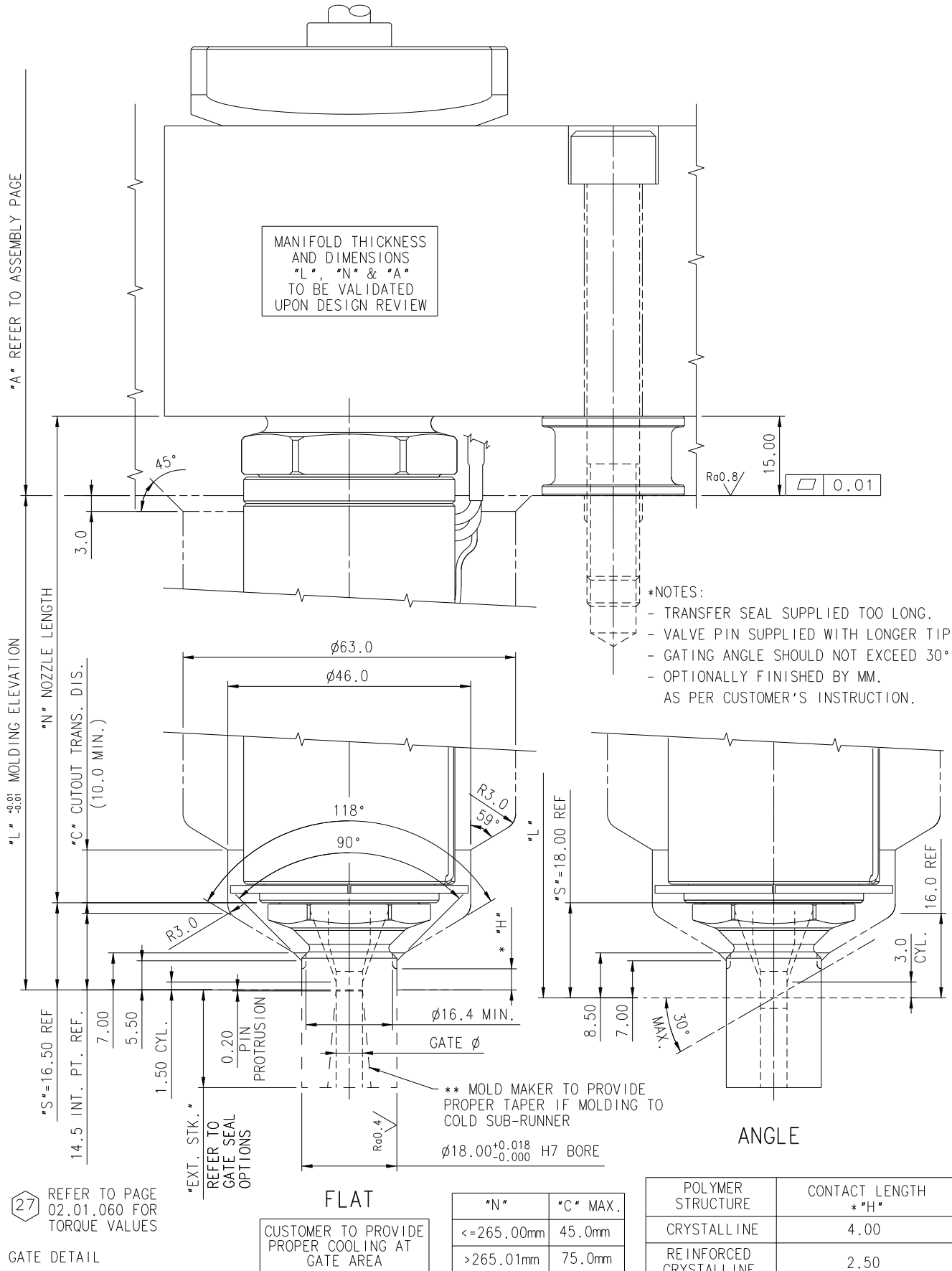
GATE DETAIL

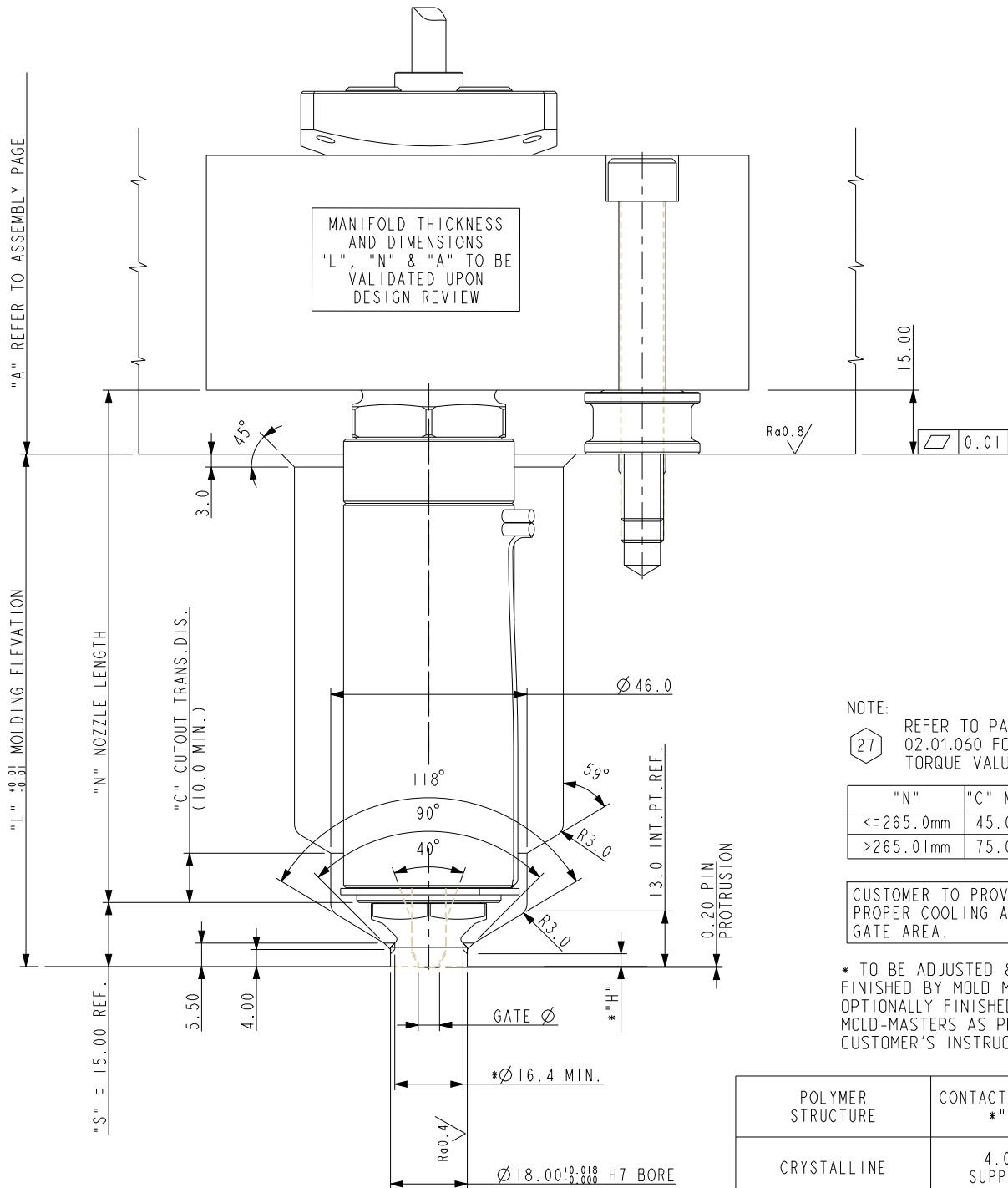


GATE DETAIL

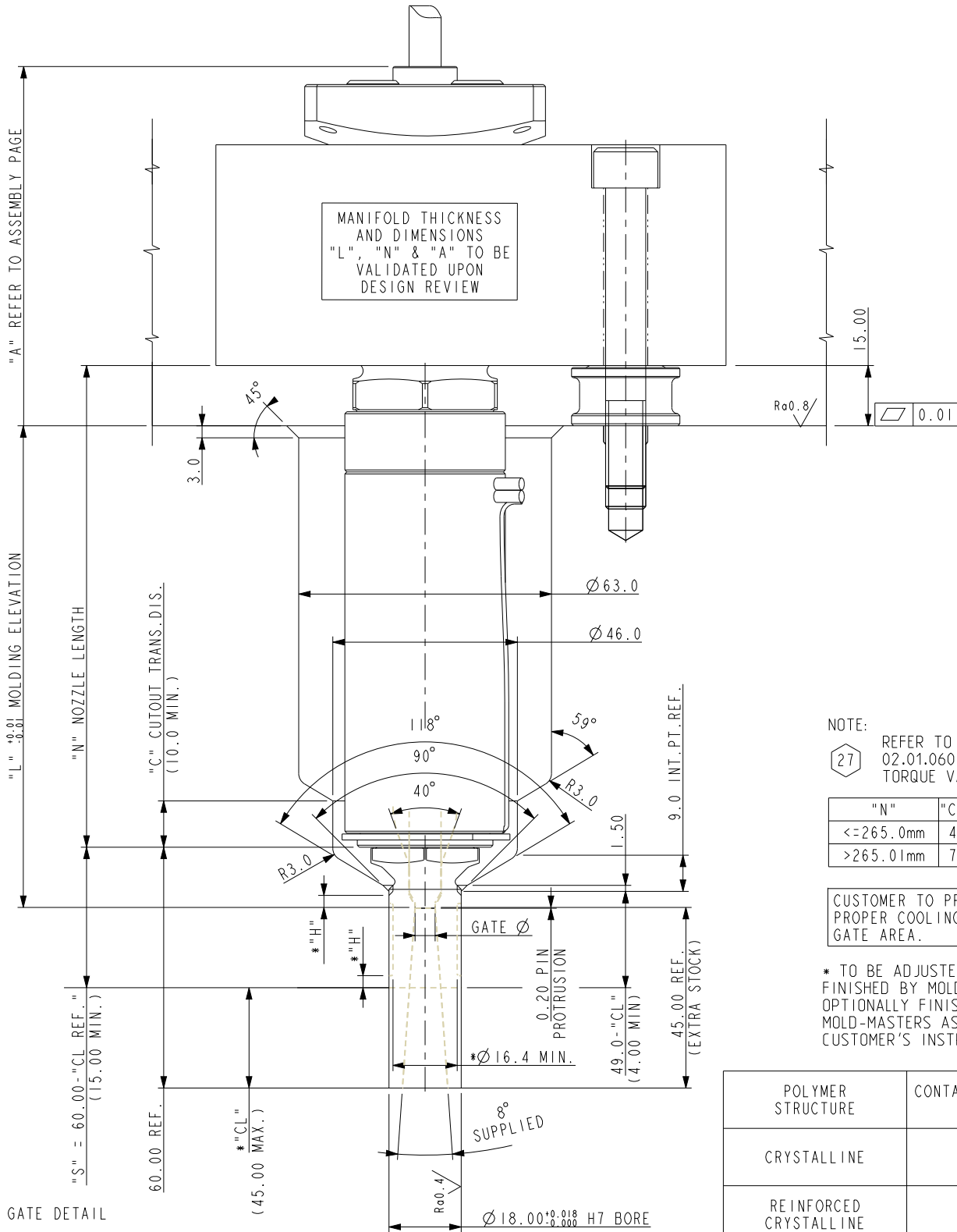
POLYMER STRUCTURE	CONTACT LENGTH *H*
CRYSTALLINE	4.00 AS SUPPLIED
REINFORCED CRYSTALLINE	2.50







GATE DETAIL



NOTE:

27

REFER TO PAGE 02.01.060 FOR TORQUE VALUES

"N"	"C" MAX.
≤265.0mm	45.0mm
>265.01mm	75.0mm

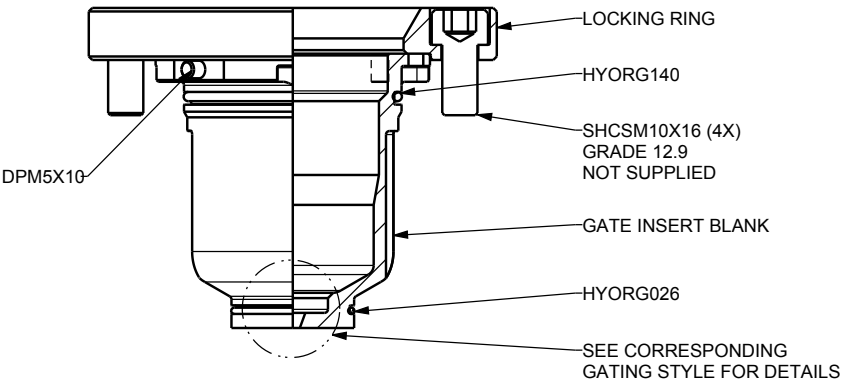
CUSTOMER TO PROVIDE PROPER COOLING AT GATE AREA.

* TO BE ADJUSTED & FINISHED BY MOLD MAKER OPTIONALLY FINISHED BY MOLD-MASTERS AS PER CUSTOMER'S INSTRUCTION.

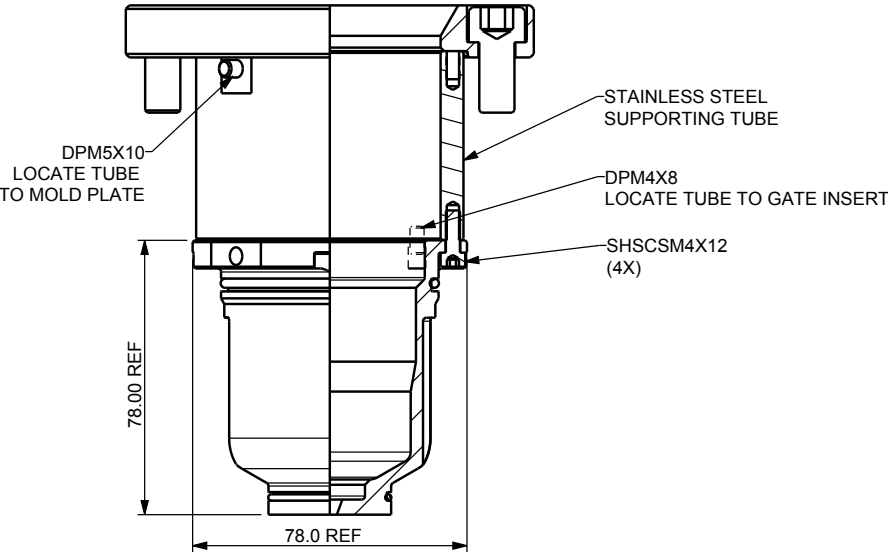
POLYMER STRUCTURE	CONTACT LENGTH * "H"
CRYSTALLINE	4.00
REINFORCED CRYSTALLINE	2.50



APPLICATIONS WITHOUT SUPPORTING TUBE



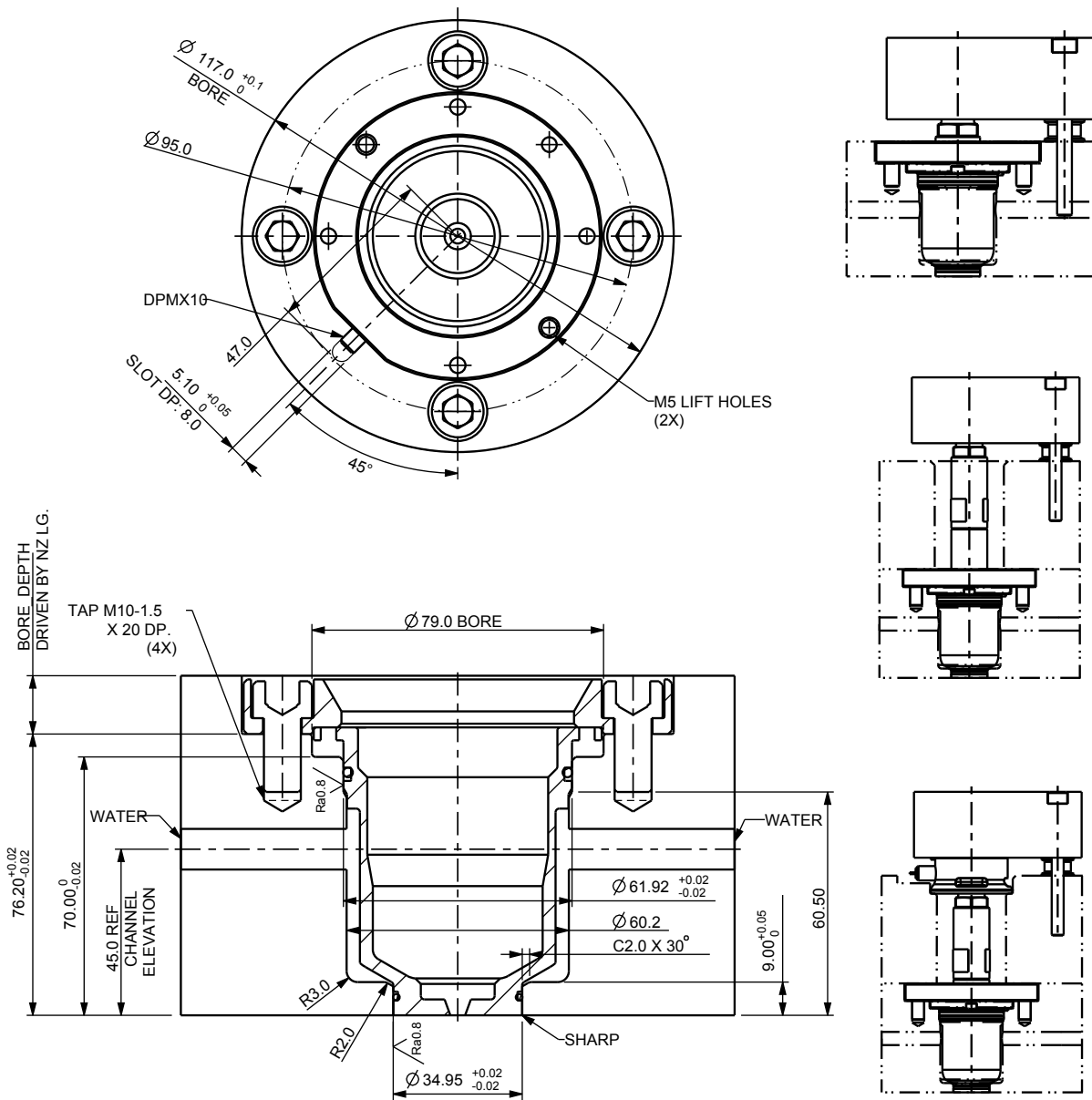
APPLICATIONS WITH SUPPORTING TUBE



WATER COOLED GATE INSERT OPTIONS		
GATE INSERT BLANK	E-TYPE TORPEDO	BI-METALLIC C-VALVE
	GIWFS6TEABLK01	GIWFS6BVABLK01
LOCKING RING	LOCKRING005	
STAINLESS STEEL TUBE RAW MATERIAL	SST304-76.0X6.5	



APPLICATIONS WITHOUT SUPPORTING TUBE

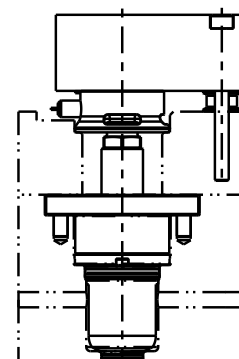
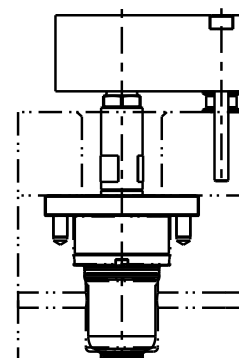
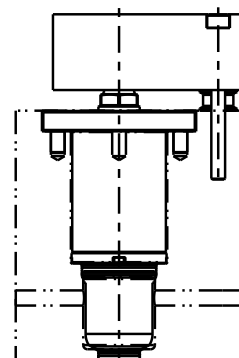
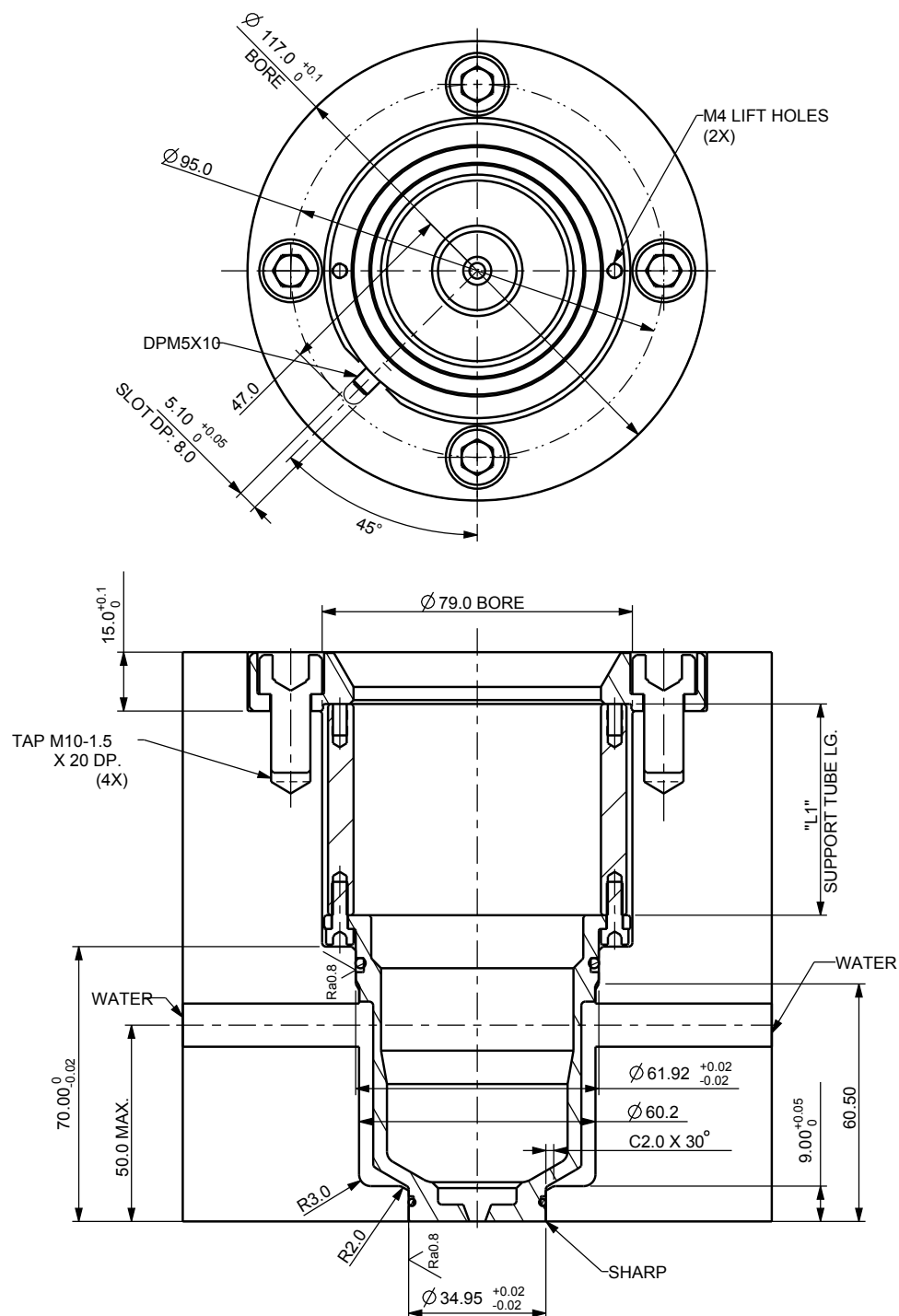


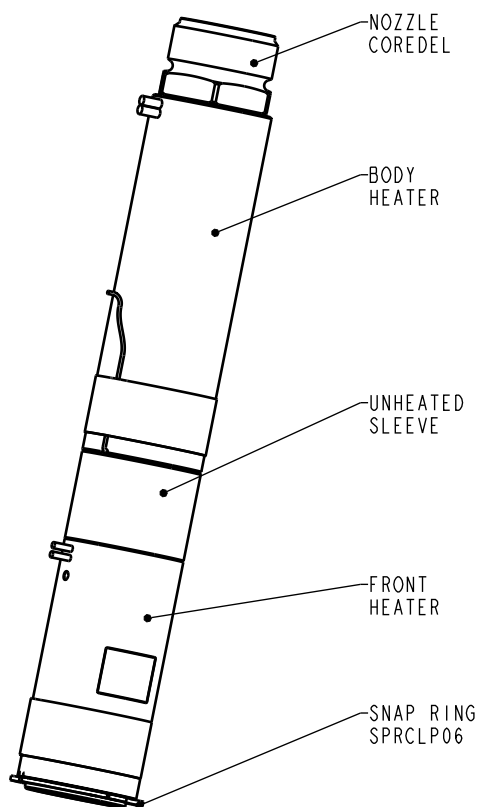
NOTE:

- * NORMALLY USED FOR APPLICATIONS WITH SHORT NOZZLE LENGTH.
- * FOR NOZZLE LENGTH SHORTER THAN 90.0mm, CONSIDER CUTTING SLOT ON LOCKING RING FOR WIRING EXIT,
- * WATER CHANNEL ELEVATION COULD BE MOVED UP TO 50.0mm BY CHANGING THE LOCKING RING ORIENTATION.



APPLICATIONS WITH SUPPORTING TUBE





MODEL FOR REFERENCE ONLY

HEATER P/N	HIGH TEMP. (HT) OPTION AVAILABLE	CLASS	LENGTH [mm]	ID [mm]	OD [mm]	POWER @ 220V
HTRSLV050FASM05	YES	FRONT HEATER	50.0	Ø34.0	Ø40.0	525W
HTRSLV060FASM05	YES		60.0	Ø34.0	Ø40.0	525W
HTRSLV070FASM05	YES		70.0	Ø34.0	Ø40.0	525W
HTRSLV080FASM05	YES		80.0	Ø34.0	Ø40.0	525W
HTRSLV090FASM05	YES		90.0	Ø34.0	Ø40.0	525W
HTRSLV040RASM05	YES	BODY HEATER	40.0	Ø34.0	Ø40.0	300W
HTRSLV060RASM05	YES		60.0	Ø34.0	Ø40.0	300W
HTRSLV080RASM05	YES		80.0	Ø34.0	Ø40.0	375W
HTRSLV120RASM05	YES		120.0	Ø34.0	Ø40.0	375W
HTRSLV240RASM05	YES		240.0	Ø34.0	Ø40.0	600W

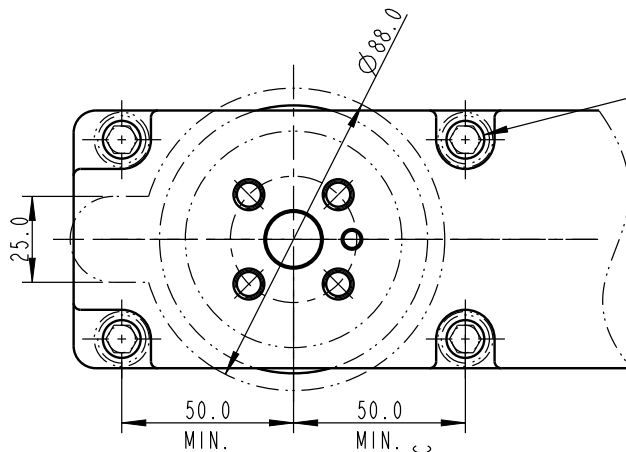
NOTE: FOR DURABILITY IN APPLICATIONS WITH PROCESS TEMPERATURES THAT EXCEED 260°C, HIGH TEMPERATURE "HT" HEATERS ARE RECOMMENDED. ADD "HT" TO STD HEATER P/N WHERE OPTION EXISTS. EX: HTRSLV050FASM05HT

SEE PAGE 06.01.061 FOR NOZZLE CONFIGURATIONS



F6000 NOZZLE CONFIGURATION

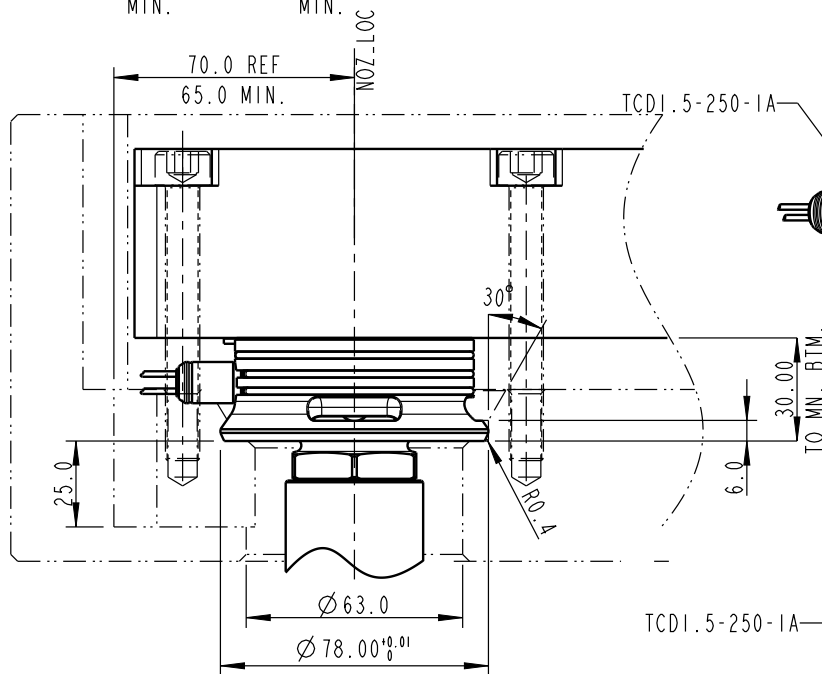
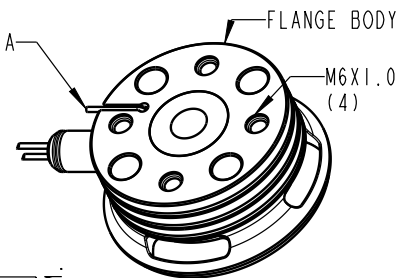
NOZZLE LENGTH "N" (MM)	BODY HEATER (HTRSLV*)	UNHEATED SLEEVE	BODY HEATER (HTRSLV*)	UNHEATED SLEEVE	BODY HEATER (HTRSLV*)	UNHEATED SLEEVE	FRONT HEATER (HTRSLV*)	TOTAL POWER @ 220V
80.00~90.00	N/A	N/A	N/A	N/A	N/A	5.0~15.0	060FASM05	525W
90.01~100.00	N/A	N/A	N/A	N/A	N/A	5.0~15.0	070FASM05	525W
100.01~110.00	N/A	N/A	N/A	N/A	N/A	5.0~15.0	080FASM05	525W
110.01~120.00	N/A	N/A	N/A	N/A	N/A	5.0~15.0	090FASM05	525W
120.01~135.00	N/A	N/A	N/A	N/A	040RASM05	15.0~30.0	050FASM05	825W
135.01~145.00	N/A	N/A	N/A	N/A	040RASM05	20.0~30.0	060FASM05	825W
145.01~155.00	N/A	N/A	N/A	N/A	060RASM05	20.0~30.0	050FASM05	825W
155.01~165.00	N/A	N/A	N/A	N/A	060RASM05	20.0~30.0	060FASM05	825W
165.01~175.00	N/A	N/A	N/A	N/A	060RASM05	20.0~30.0	070FASM05	825W
175.01~185.00	N/A	N/A	N/A	N/A	080RASM05	20.0~30.0	060FASM05	900W
185.01~195.00	N/A	N/A	N/A	N/A	080RASM05	20.0~30.0	070FASM05	900W
195.01~205.00	N/A	N/A	N/A	N/A	080RASM05	20.0~30.0	080FASM05	900W
205.01~215.00	N/A	N/A	N/A	N/A	120RASM05	20.0~30.0	050FASM05	900W
215.01~225.00	N/A	N/A	N/A	N/A	120RASM05	20.0~30.0	060FASM05	900W
225.01~235.00	N/A	N/A	N/A	N/A	120RASM05	20.0~30.0	070FASM05	900W
235.01~245.00	N/A	N/A	N/A	N/A	120RASM05	20.0~30.0	080FASM05	900W
245.01~255.00	N/A	N/A	N/A	N/A	120RASM05	20.0~30.0	090FASM05	900W
255.01~275.00	N/A	N/A	060RASM05	20.0~30.0	060RASM05	20.0~30.0	080FASM05	1125W
275.01~295.00	N/A	N/A	080RASM05	20.0~30.0	080RASM05	20.0~30.0	060FASM05	1275W
295.01~315.00	N/A	N/A	080RASM05	20.0~30.0	080RASM05	20.0~30.0	080FASM05	1275W
315.01~335.00	N/A	N/A	080RASM05	20.0~30.0	120RASM05	20.0~30.0	060FASM05	1275W
335.01~355.00	N/A	N/A	080RASM05	20.0~30.0	120RASM05	20.0~30.0	080FASM05	1275W
355.01~375.00	N/A	N/A	120RASM05	20.0~30.0	120RASM05	20.0~30.0	060FASM05	1275W
375.01~395.00	N/A	N/A	120RASM05	20.0~30.0	120RASM05	20.0~30.0	080FASM05	1275W
395.01~415.00	N/A	N/A	040RASM05	20.0~30.0	240RASM05	20.0~30.0	060FASM05	1425W
415.01~435.00	N/A	N/A	060RASM05	20.0~30.0	240RASM05	20.0~30.0	060FASM05	1425W
435.01~455.00	N/A	N/A	080RASM05	20.0~30.0	240RASM05	20.0~30.0	060FASM05	1500W
455.01~475.00	N/A	N/A	080RASM05	20.0~30.0	240RASM05	20.0~30.0	080FASM05	1500W
475.01~505.00	080RASM05	20.0~30.0	120RASM05	20.0~30.0	120RASM05	20.0~30.0	080FASM05	1650W
505.01~535.00	120RASM05	20.0~30.0	120RASM05	20.0~30.0	120RASM05	20.0~30.0	070FASM05	1650W
535.01~565.00	080RASM05	20.0~30.0	080RASM05	20.0~30.0	240RASM05	20.0~30.0	060FASM05	1875W
565.01~595.00	080RASM05	20.0~30.0	120RASM05	20.0~30.0	240RASM05	20.0~30.0	050FASM05	1875W
595.01~635.00	120RASM05	16.7~30.0	120RASM05	16.7~30.0	240RASM05	16.7~30.0	050FASM05	1875W
635.01~665.00	120RASM05	20.0~30.0	120RASM05	20.0~30.0	240RASM05	20.0~30.0	080FASM05	1875W
665.01~700.00	060RASM05	16.7~28.3	240RASM05	16.7~28.3	240RASM05	16.7~28.3	060FASM05	2025W



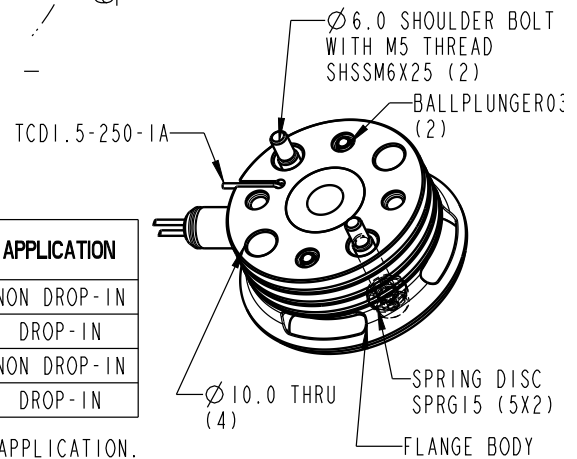
Ø11.0 (4)
 * OVAL HOLES MIGHT BE NEEDED
 FOR LARGE PITCH APPLICATION

NOTE: 4X M10 or 3/8" SCREWS ARE HIGHLY
 RECOMMENDED TO BOLT MANIFOLD ONTO MOLD
 PLATE IN ORDER TO PROVIDE PROPER SEALING
 ON FLANGE CONTACT SURFACE.

NON DROP-IN VERSION

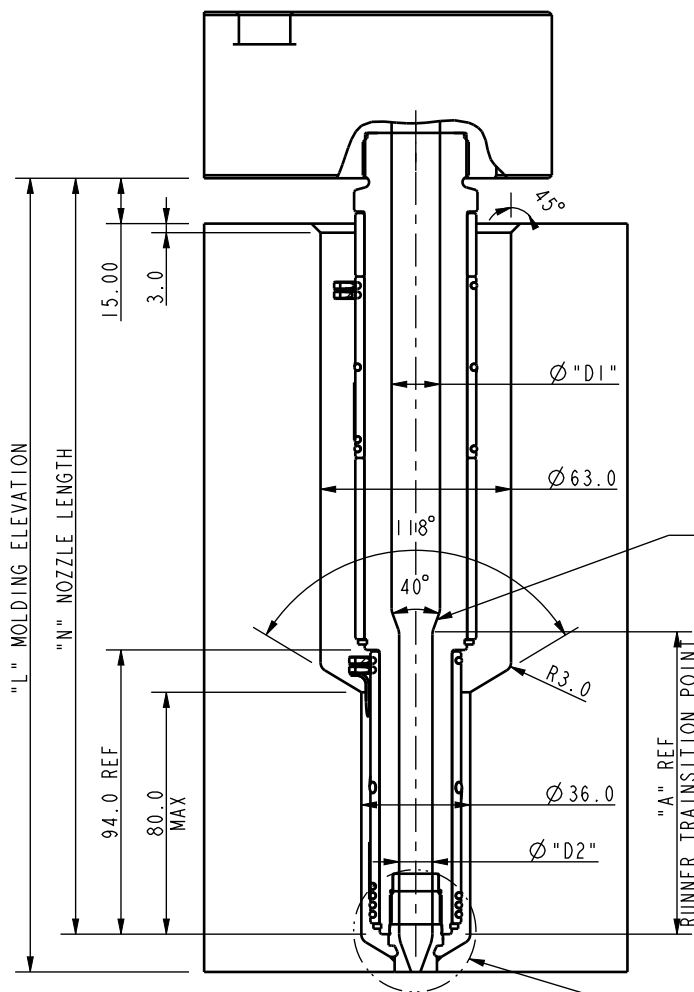


DROP-IN VERSION



FLANGE PACKAGE	FLANGE BODY	RUNNER DIA.	WATTAGE	APPLICATION
FLANGEFS11P	FLANGEFS11	Ø12.0	525W	NON DROP-IN
FLANGEFS11PI	FLANGEFS11	Ø12.0	525W	DROP-IN
FLANGEFS12P	FLANGEFS12	Ø16.0	525W	NON DROP-IN
FLANGEFS12PI	FLANGEFS12	Ø16.0	525W	DROP-IN

* CONTACT MOLD-MASTERS APPLICATION ENGINEER FOR FLANGE APPLICATION.



RUNNER SIZE

GATING TYPE	Ø "D1"	Ø "D2"	"A"
TIP/SPRUE (STD)	12.00	8.00	22.0
TIP/SPRUE *(CUSTOM)	16.00	11.00	100.0
VALVE	16.00	11.00	100.0

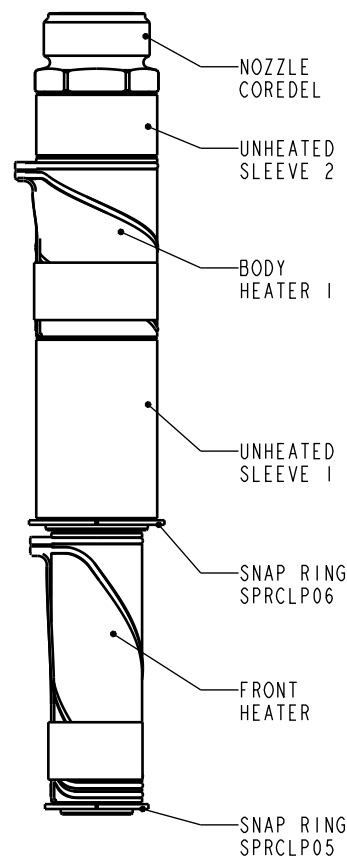
*CUSTOM GATE SEAL REQUIRED.
MUST BE REVIEWED BY MM
APPLICATION ENGINEERING.

RUNNER TRANSITION ANGLE IS CRITICAL FOR
MELT FLOW, SHOULD'N'T BE LARGER THAN 40°

REFER TO F5000
RELATED GATE
DETAIL PAGES

HEATER CONFIGURATION

CONFIG.	PART NUMBER	LENGTH	WATTAGE
F5 FRONT HEATER	HTRSLV090FASM04	90.0	525W
F6 BODY HEATER	HTRSLV040RASM05	40.0	300W
F6 BODY HEATER	HTRSLV060RASM05	60.0	300W
F6 BODY HEATER	HTRSLV080RASM05	80.0	375W
F6 BODY HEATER	HTRSLV120RASM05	120.0	375W
F6 BODY HEATER	HTRSLV240RASM05	240.0	600W

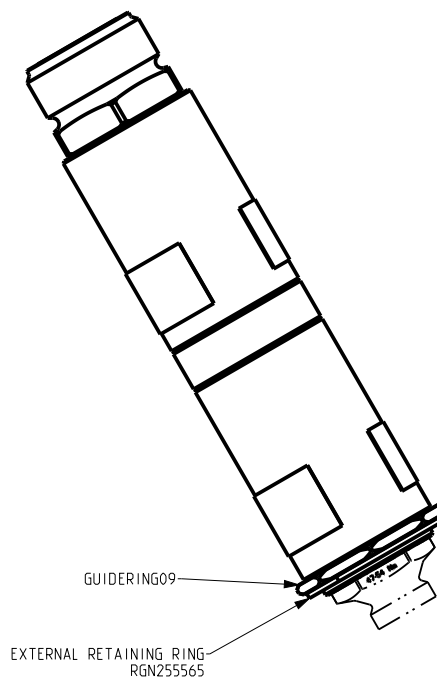
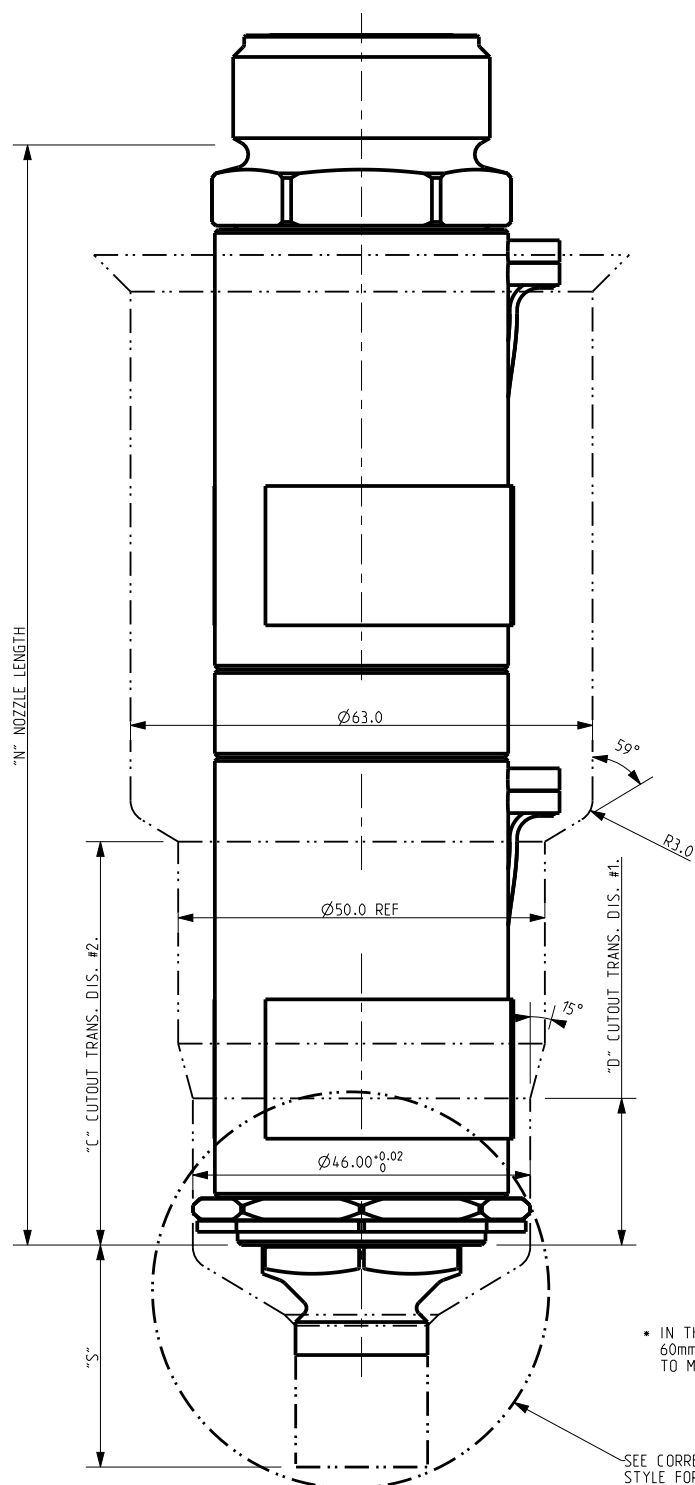




NOZZLE CONFIGURATION

NOZZLE LENGTH "N" (mm)	BODY HEATER (HTRSLV-)	UNHEATED SLEEVE	BODY HEATER (HTRSLV-)	UNHEATED SLEEVE	BODY HEATER (HTRSLV-)	UNHEATED SLEEVE	FRONT HEATER (HTRSLV-)	TOTAL POWER @220V
169.01-189.00	N/A	N/A	N/A	N/A	040RASM05	20.0-40.0	090RASM04	825W
189.01-209.00	N/A	N/A	N/A	N/A	060RASM05	20.0-40.0	090RASM04	825W
209.01-219.00	N/A	N/A	N/A	N/A	080RASM05	20.0-30.0	090RASM04	900W
219.01-249.00	N/A	N/A	040RASM05	15.0-30.0	040RASM05	15.0-30.0	090RASM04	1125W
249.01-269.00	N/A	N/A	040RASM05	20.0-30.0	060RASM05	20.0-30.0	090RASM04	1125W
269.01-289.00	N/A	N/A	040RASM05	20.0-30.0	080RASM05	20.0-30.0	090RASM04	1200W
289.01-309.00	N/A	N/A	060RASM05	20.0-30.0	080RASM05	20.0-30.0	090RASM04	1200W
309.01-329.00	N/A	N/A	040RASM05	20.0-30.0	120RASM05	20.0-30.0	090RASM04	1200W
329.01-349.00	N/A	N/A	060RASM05	20.0-30.0	120RASM05	20.0-30.0	090RASM04	1200W
349.01-369.00	N/A	N/A	080RASM05	20.0-30.0	120RASM05	20.0-30.0	090RASM04	1275W
369.01-379.00	N/A	N/A	N/A	N/A	240RASM05	20.0-30.0	090RASM04	1125W
379.01-409.00	N/A	N/A	120RASM05	15.0-30.0	120RASM05	15.0-30.0	090RASM04	1275W
409.01-449.00	N/A	N/A	040RASM05	10.0-30.0	240RASM05	10.0-30.0	090RASM04	1425W
449.01-469.00	N/A	N/A	060RASM05	20.0-30.0	240RASM05	20.0-30.0	090RASM04	1425W
469.01-489.00	N/A	N/A	080RASM05	20.0-30.0	240RASM05	20.0-30.0	090RASM04	1500W
489.01-509.00	040RASM05	20.0-26.7	040RASM05	20.0-26.7	240RASM05	20.0-26.6	090RASM04	1725W
509.01-529.00	040RASM05	20.0-26.7	060RASM05	20.0-26.7	240RASM05	20.0-26.6	090RASM04	1725W
529.01-549.00	120RASM05	20.0-26.7	120RASM05	20.0-26.7	120RASM05	20.0-26.6	090RASM04	1650W
549.01-579.00	060RASM05	20.0-30.0	080RASM05	20.0-30.0	240RASM05	20.0-30.0	090RASM04	1800W
579.01-599.00	080RASM05	23.3-30.0	080RASM05	23.3-30.0	240RASM05	23.3-30.0	090RASM04	1875W
599.01-619.00	060RASM05	23.3-30.0	120RASM05	23.3-30.0	240RASM05	23.3-30.0	090RASM04	1800W
619.01-639.00	080RASM05	23.4-30.0	120RASM05	23.3-30.0	240RASM05	23.3-30.0	090RASM04	1875W
639.01-649.00	N/A	N/A	240RASM05	25.0-30.0	240RASM05	25.0-30.0	090RASM04	1725W
649.01-679.00	120RASM05	20.0-30.0	120RASM05	20.0-30.0	240RASM05	20.0-30.0	090RASM04	1875W
679.01-719.00	040RASM05	16.7-30.0	240RASM05	16.7-30.0	240RASM05	16.7-30.0	090RASM04	2025W

* REFERENCE ONLY, ALWAYS REFER TO SYSTEM DRAWINGS TO ORDER SPARE PARTS.



NOTE:

"N"	"C" MAX.
≤265.0mm	55.0mm
> 265.01mm	75.0mm

GATING STYLE	"D"
NON EXT. STYLE	20.0mm
EXT. GATING STYLE	"S"-2 (mm)

* IN THE CASE THAT EXTENDED GATE SEAL WITH "S"> 48mm AND NOZZLE WITH 60mm LONG FRONT HEATER, NOZZLE BORE CUTOUT DESIGN SHOULD BE REVIEWED TO MAKE SURE NO INTERFERENCE BETWEEN HEATER TERMINAL AND NOZZLE BORE.

SEE CORRESPONDING GATING STYLE FOR DETAILED CUTOUT



GATING STYLE	PAGE	NOZZLE LENGTH RANGE	GATE Ø	EXTRA STOCK (SUPPLIED LG.)	GATE SEAL OPTIONS	GATE SEAL PACKAGES
E-TYPE TORPEDO	07.01.017	80.0 - 1000.0	Ø 2.0-Ø 3.0	0.0	TSF059 + TPF007	TSF059P
F-TYPE TORPEDO	07.01.018	80.0 - 1000.0	Ø 2.50	0.25	TSF041 + TPF003	TSF041P FOR PROCESSING TEMP. >280°C
					TSF041 + TPF003-1	TSF041PI FOR PROCESSING TEMP. <280°C
			Ø 3.00	0.25	TSF042 + TPF003	TSF042P FOR PROCESSING TEMP. >280°C
					TSF042 + TPF003-1	TSF042PI FOR PROCESSING TEMP. <280°C
			Ø 3.50	0.25	TSF043 + TPF003	TSF043P FOR PROCESSING TEMP. >280°C
					TSF043 + TPF003-1	TSF043PI FOR PROCESSING TEMP. <280°C
EXTENDED F-TYPE TORPEDO	07.01.019	80.0 - 1000.0	Ø 2.50	50.0	TSF044 + TPF003	TSF044P FOR PROCESSING TEMP. >280°C
					TSF044 + TPF003-1	TSF044PI FOR PROCESSING TEMP. <280°C
			Ø 3.00	50.0	TSF045 + TPF003	TSF045P FOR PROCESSING TEMP. >280°C
					TSF045 + TPF003-1	TSF045PI FOR PROCESSING TEMP. <280°C
			Ø 3.50	50.0	TSF046 + TPF003	TSF046P FOR PROCESSING TEMP. >280°C
					TSF046 + TPF003-1	TSF046PI FOR PROCESSING TEMP. <280°C
BI-METALLIC C-SPRUE	07.01.020	80.0 - 1000.0	Ø 4.00	N/A	TSF028 + TSLF0003	TSF028P4
			Ø 5.00	N/A	TSF028 + TSLF0004	TSF028P5
			Ø 6.00	N/A	TSF028 + TSLF0012	TSF028P6
EXTENDED HOT SPRUE	07.01.030	80.0 - 1000.0	Ø 3.0-Ø 6.0	50.0	TSF029 (Ø 2.0 HOLE SUPPLIED)	N/A
BI-METALLIC C-VALVE	07.01.040	80.0 - 1000.0	Ø 5.0-Ø 6.0	N/A	TSF063 + TSLF0001	TSF063P
BI-MET. BALLNOSE C-VALVE	07.01.045	80.0 - 1000.0	Ø 4.5-Ø 6.5	N/A	TS010028+TSL010011	TS010028P2
HOT VALVE	07.01.050	80.0 - 1000.0	Ø 5.00	0.25	TSF026	N/A
			Ø 6.00	0.25	TSF027	
EXTENDED HOT VALVE	07.01.051	80.0 - 1000.0	Ø 5.00	50.0	TSF054	
			Ø 6.00	50.0	TSF055	
EXTENDED CYLINDRICAL HOT VALVE	07.01.058	80.0 - 1000.0	Ø 5.00	45.0	TSFI61 + VPG058	TSFI61P
		80.0 - 1000.0	Ø 6.00		TSFI63 + VPG058	TSFI63P

NOTE:

- * FINISHED GATE SEALS ("F") ARE AVAILABLE FOR F-TYPE, EXT. F-TYPE, HOT SPRUE, EXT. HOT SPRUE, HOT VALVE, EXT. HOT VALVE.
- * CONTACT MOLD-MASTERS APPLICATION ENGINEER FOR DETAIL
- * CUSTOM SEALS CAN BE MANUFACTURED WITH APPLICATION ENGINEER APPROVAL
- * SEE PG.02.01.060 FOR TYPICAL TORQUE VALUES



GATING STYLE	GATE Ø	GATE SEAL	GATE SEAL DESCRIPTION	GATE SEAL PACKAGES
F-TYPE TORPEDO	Ø 2.50	TSF041F (MODIFIED FROM TSF041)	FS7 TORP. F G=2.5, 0.25mm EXT STK RMVD	TSF041FP (TSF041F + TPF003) FOR PROCESSING TEMP. >280°C
				TSF041FPI (TSF041F + TPF003-1) FOR PROCESSING TEMP. <280°C
	Ø 3.00	TSF042F (MODIFIED FROM TSF042)	FS7 TORP. F G=3.0, 0.25mm EXT STK RMVD	TSF042FP (TSF042F + TPF003) FOR PROCESSING TEMP. >280°C
				TSF042FPI (TSF042F + TPF003-1) FOR PROCESSING TEMP. <280°C
	Ø 3.50	TSF043F (MODIFIED FROM TSF043)	FS7 TORP. F G=3.5, 0.25mm EXT STK RMVD	TSF043FP (TSF043F + TPF003) FOR PROCESSING TEMP. >280°C
				TSF043FPI (TSF043F + TPF003-1) FOR PROCESSING TEMP. <280°C
EXT. F-TYPE TORPEDO	Ø 2.50	TSF044F (MODIFIED FROM TSF044)	FS7 EXT. TORP. F G=2.5 w/8° TAPER	TSF044FP (TSF044F + TPF003) FOR PROCESSING TEMP. >280°C
				TSF044FPI (TSF044F + TPF003-1) FOR PROCESSING TEMP. <280°C
	Ø 3.00	TSF045F (MODIFIED FROM TSF045)	FS7 EXT. TORP. F G=3.0 w/8° TAPER	TSF045FP (TSF045F + TPF003) FOR PROCESSING TEMP. >280°C
				TSF045FPI (TSF045F + TPF003-1) FOR PROCESSING TEMP. <280°C
	Ø 3.50	TSF046F (MODIFIED FROM TSF046)	FS7 EXT. TORP. F G=3.5 w/8° TAPER	TSF046FP (TSF046F + TPF003) FOR PROCESSING TEMP. >280°C
				TSF046FPI (TSF046F + TPF003-1) FOR PROCESSING TEMP. <280°C
EXT. HOT SPRUE	Ø 3.00	TSF082F (MODIFIED FROM TSF029)	FS7 EXT. HOT SPRUE G=3.0, w/8° TAPER	N/A
	Ø 4.00	TSF083F (MODIFIED FROM TSF029)	FS7 EXT. HOT SPRUE G=4.0, w/8° TAPER	
	Ø 5.00	TSF084F (MODIFIED FROM TSF029)	FS7 EXT. HOT SPRUE G=5.0, w/8° TAPER	
	Ø 6.00	TSF085F (MODIFIED FROM TSF029)	FS7 EXT. HOT SPRUE G=6.0, w/8° TAPER	
HOT VALVE	Ø 5.00	TSF026F (MODIFIED FROM TSF026)	FS7 HOT VALVE G=5.0, 0.25mm EXT STK RMVD	N/A
	Ø 6.00	TSF027F (MODIFIED FROM TSF027)	FS7 HOT VALVE G=6.0, 0.25mm EXT STK RMVD	
EXT. HOT VALVE	Ø 5.00	TSF054F (MODIFIED FROM TSF054)	FS7 EXT. HOT VALVE G=5.0 w/8° TAPER	N/A
	Ø 6.00	TSF055F (MODIFIED FROM TSF055)	FS7 EXT. HOT VALVE G=6.0 w/8° TAPER	
CYLINDRICAL HOT VALVE	Ø 5.00	TSF160F (Pg. 07.01.057)	FS7 CYL.HOT VLV G=5.0 (FINISH GROUND)	TSF160FP (TSF160F + VPG058)
	Ø 6.00	TSF162F (Pg. 07.01.057)	FS7 CYL.HOT VLV G=6.0 (FINISH GROUND)	TSF162FP (TSF162F + VPG058)
EXTENDED CYLINDRICAL HOT VALVE	Ø 5.00	TSF161F (Pg. 07.01.058)	FS7 EXT.CYL.HOT VLV G=5.0 w/8° TAPER	TSF161FP (TSF161F + VPG058)
	Ø 6.00	TSF163F (Pg. 07.01.058)	FS7 EXT.CYL.HOT VLV G=6.0 w/8° TAPER	TSF163FP (TSF163F + VPG058)
ACCU-VALVE LX	Ø 5.00	TSF184F (Pg. 07.01.046)	FS7 AVLX G=5.0 (FINISH GROUND)	N/A
	Ø 6.00	TSF185F (Pg. 07.01.046)	FS7 AVLX G=6.0 (FINISH GROUND)	
EXTENDED ACCU-VALVE LX	Ø 5.00	TSF186F (Pg. 07.01.047)	FS7 AVLX G=5.0 EL=45 w/8° TAPER	
	Ø 6.00	TSF187F (Pg. 07.01.047)	FS7 AVLX G=6.0 EL=45 w/8° TAPER	

GATE DETAIL

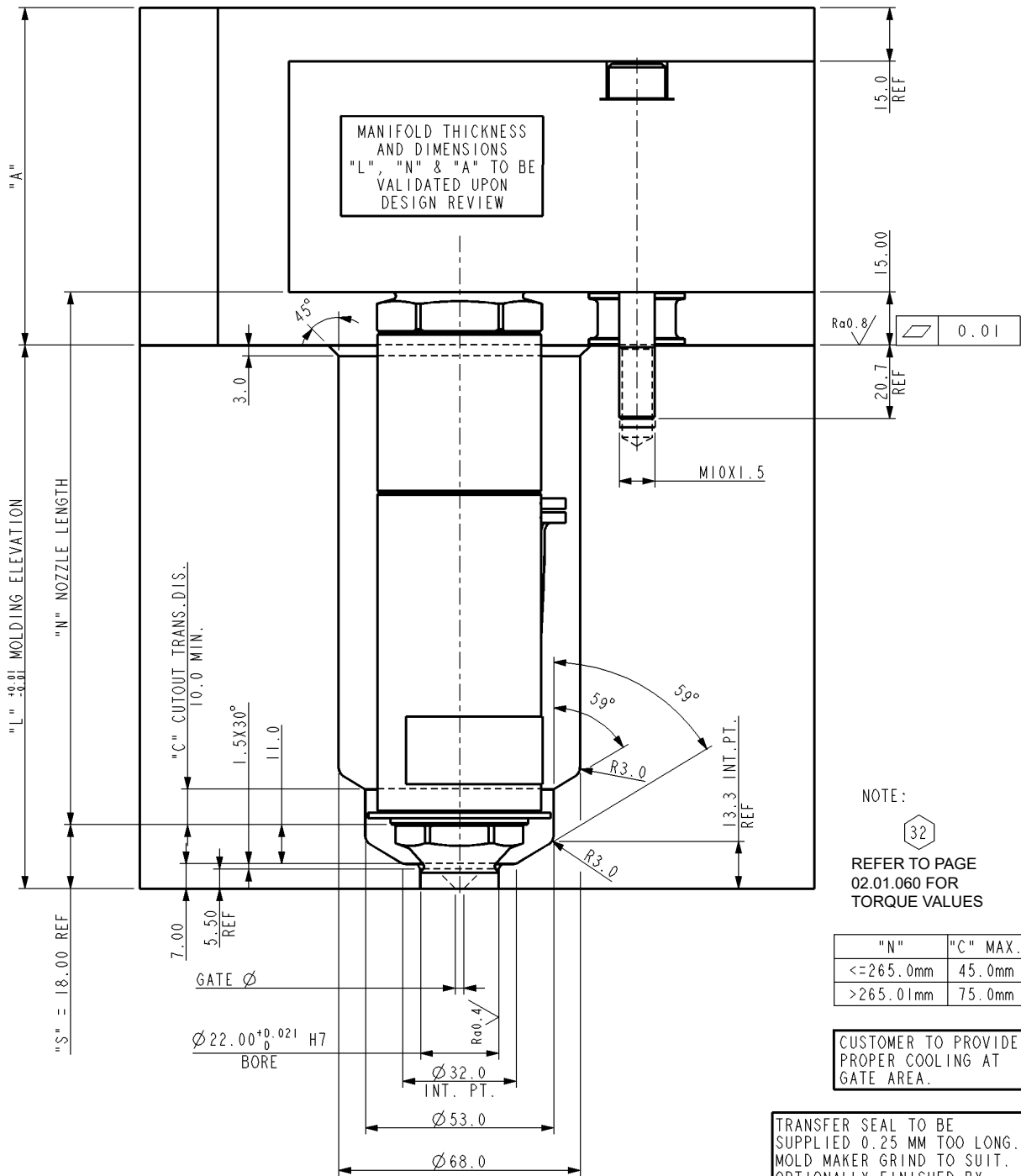
NOTE:

32

REFER TO PAGE
02.01.060 FOR
TORQUE VALUES

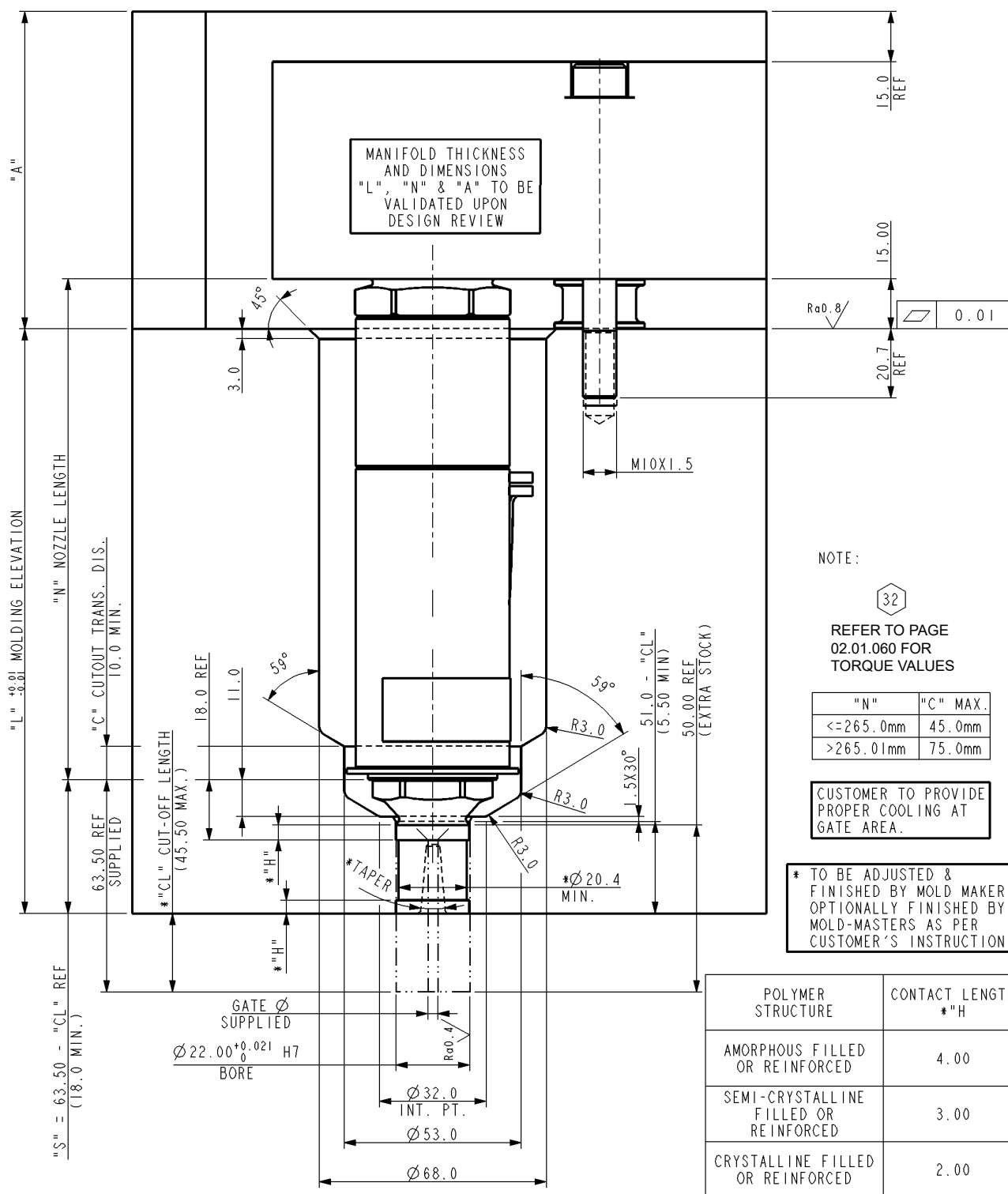
"N"	"C" MAX
<=265.0mm	45.0mm
>265.0mm	75.0mm

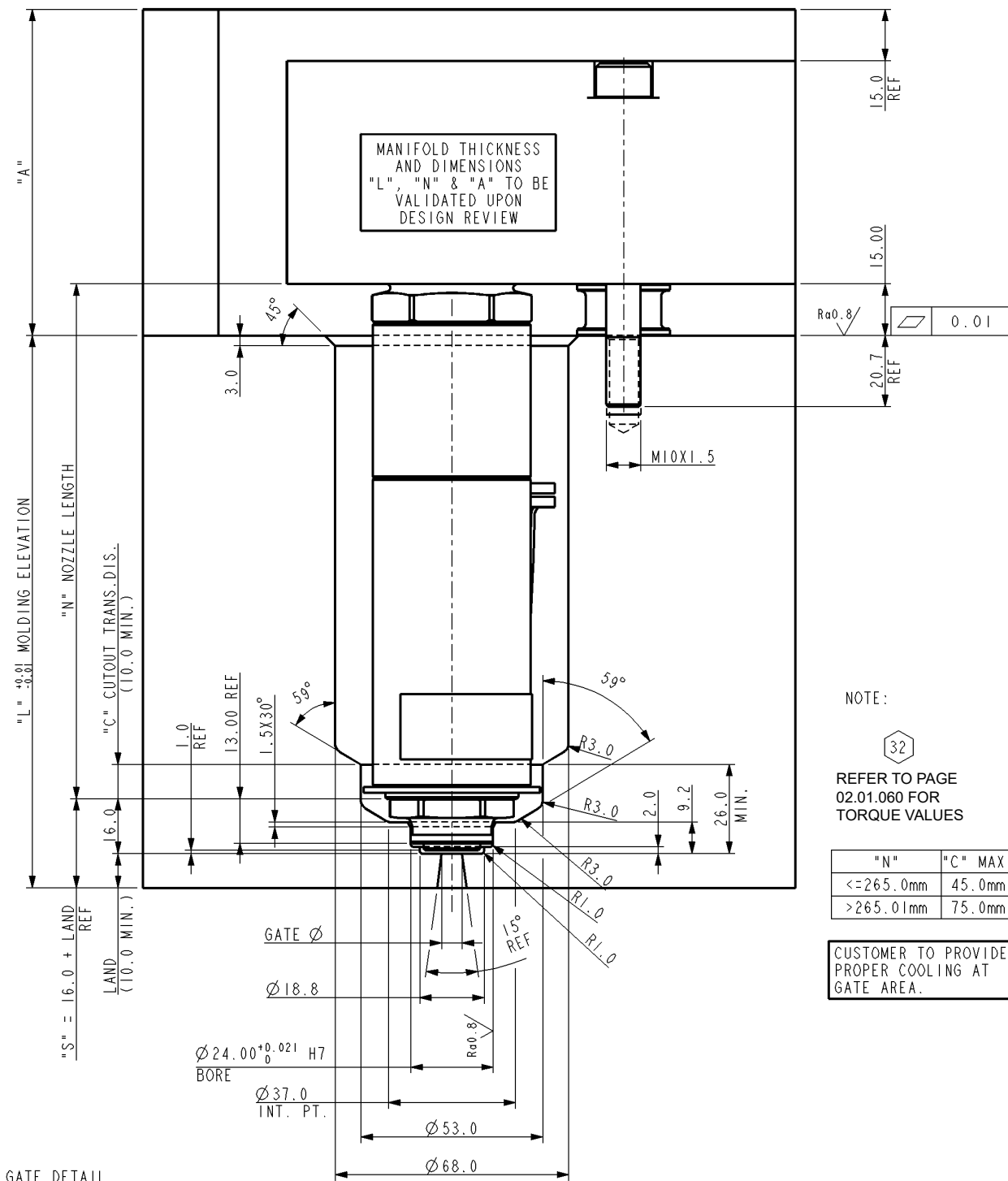
CUSTOMER TO PROVIDE
PROPER COOLING AT
GATE AREA.





F7000 07



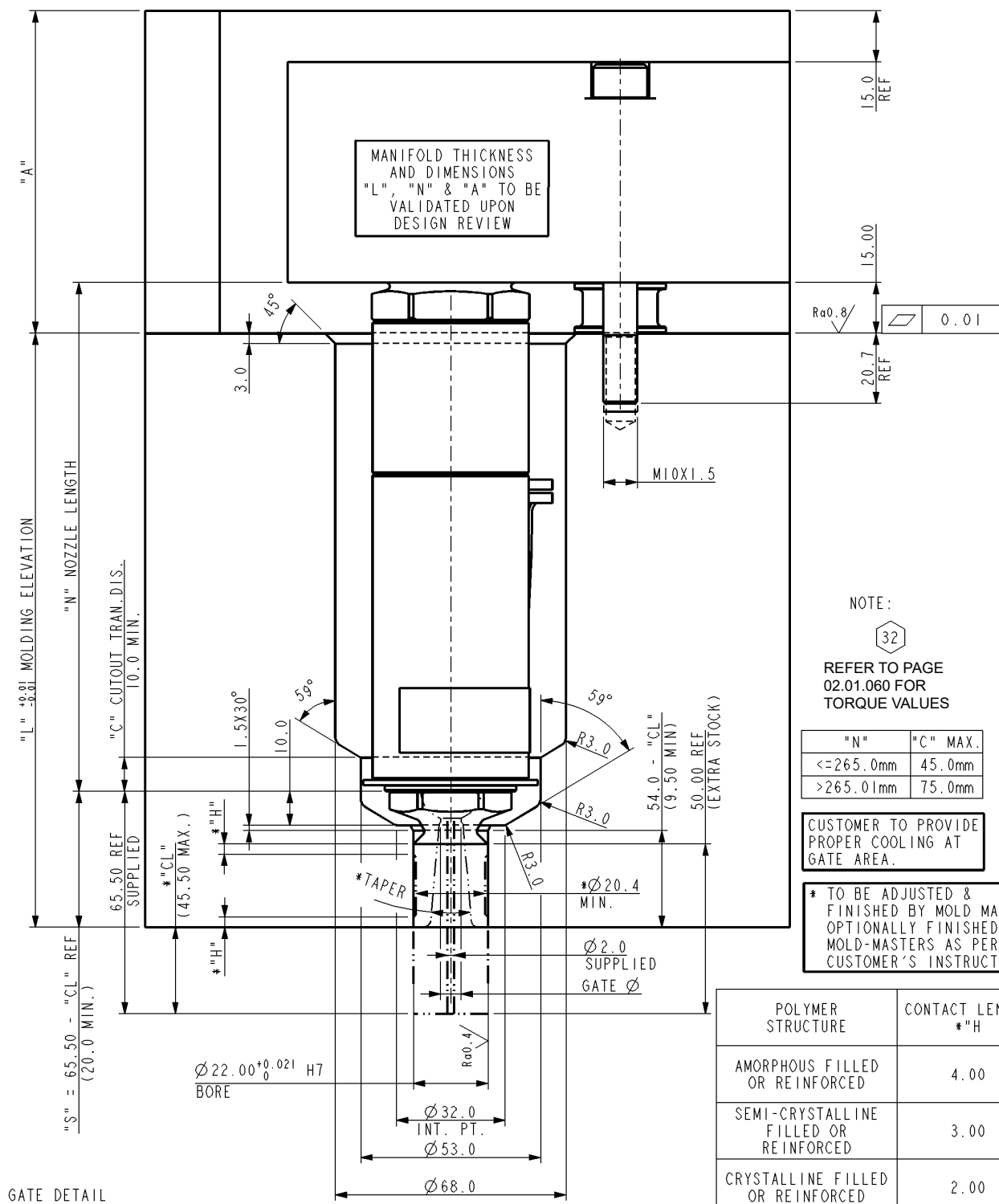


GATE DETAIL

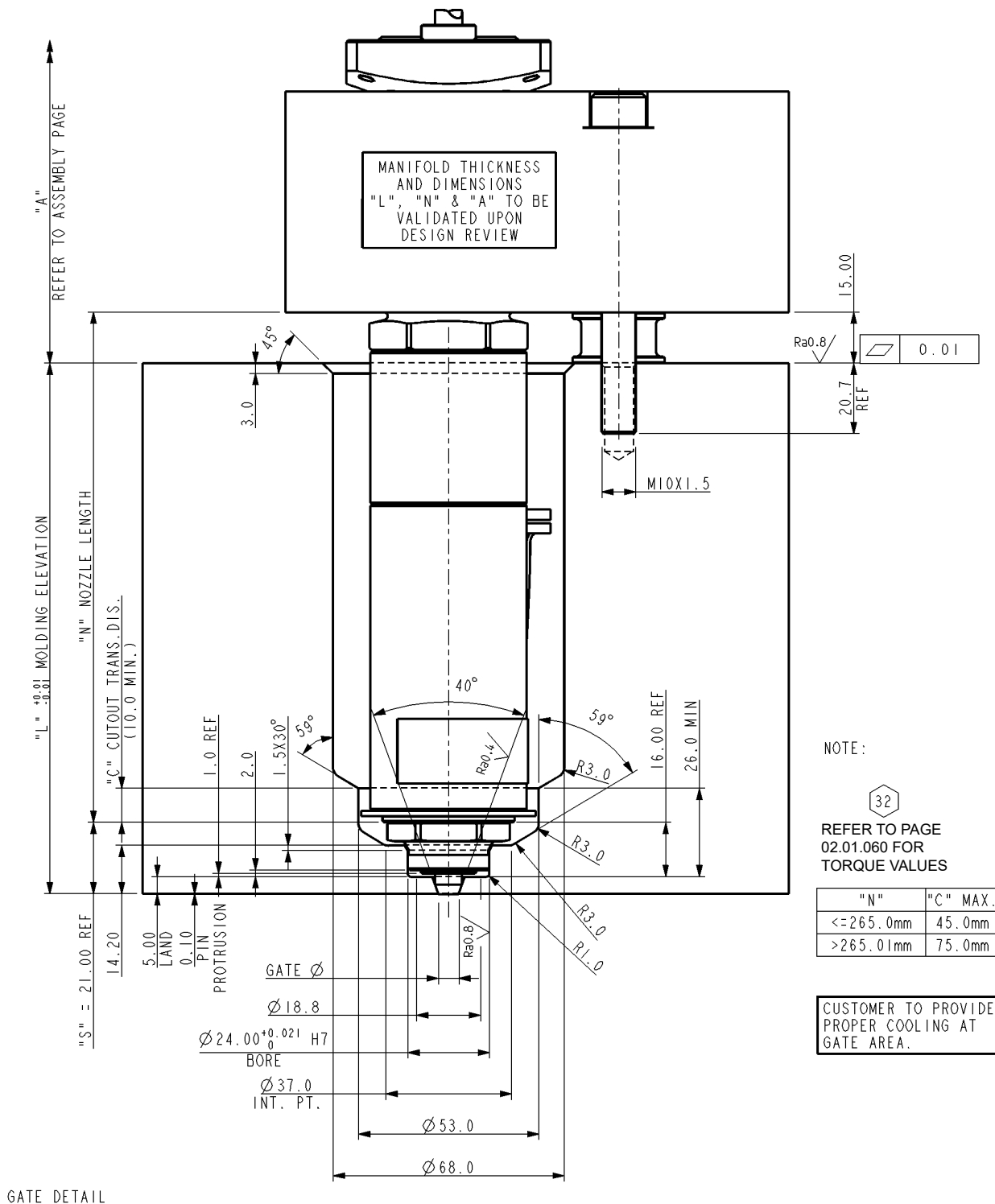
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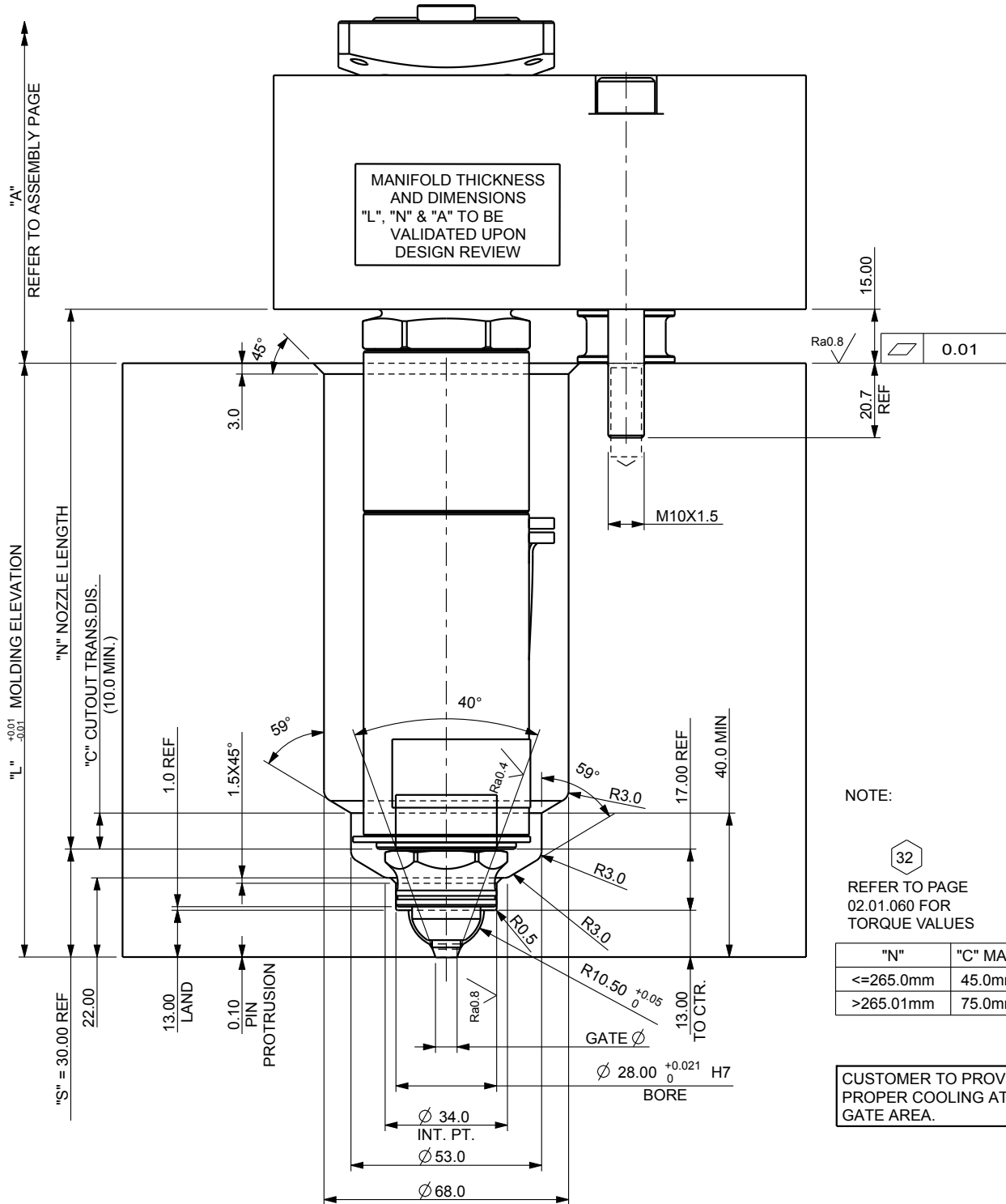


F7000 07



POLYMER STRUCTURE	CONTACT LENGTH * "H
AMORPHOUS FILLED OR REINFORCED	4.00
SEMI-CRYSTALLINE FILLED OR REINFORCED	3.00
CRYSTALLINE FILLED OR REINFORCED	2.00





NOTE:

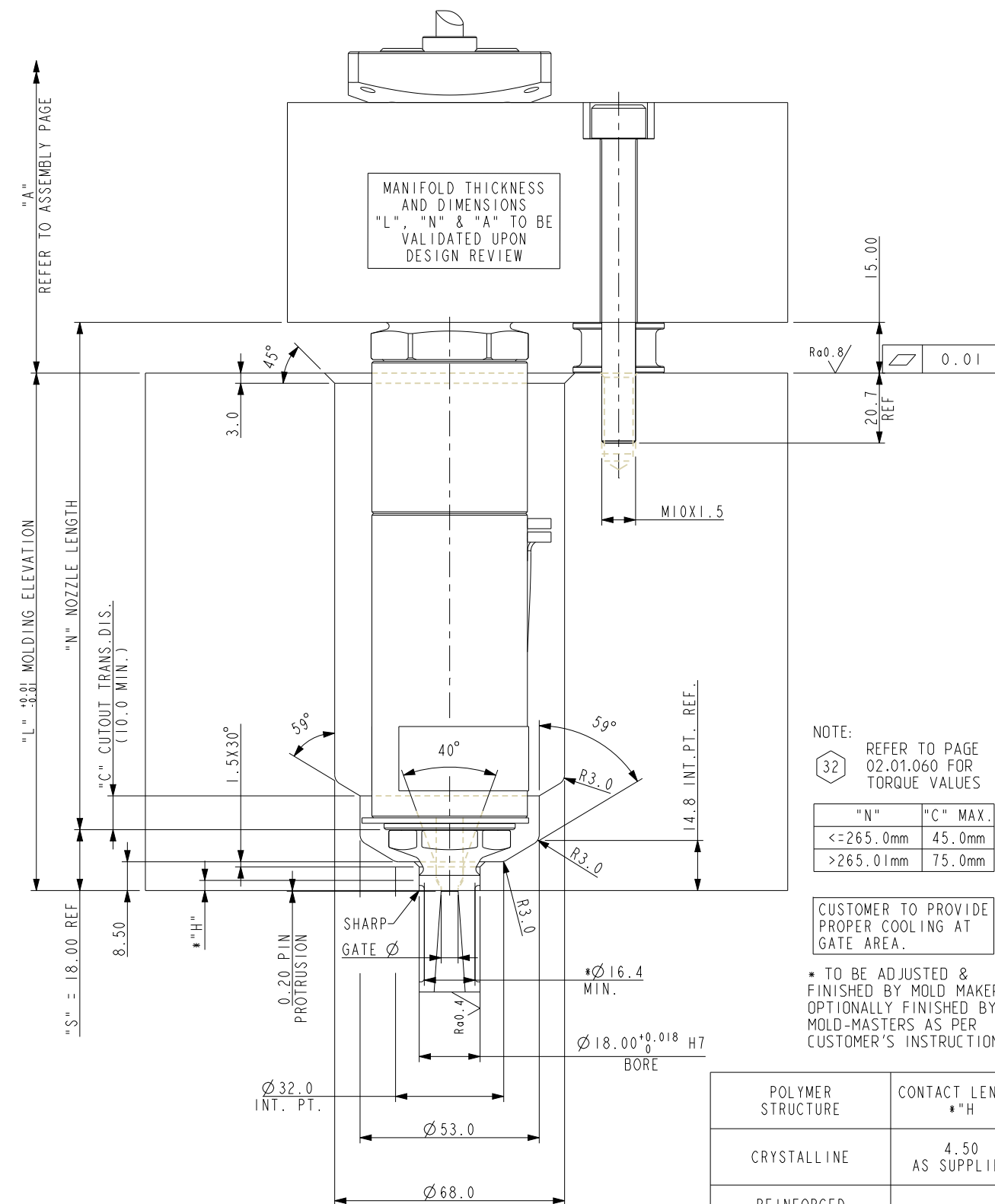


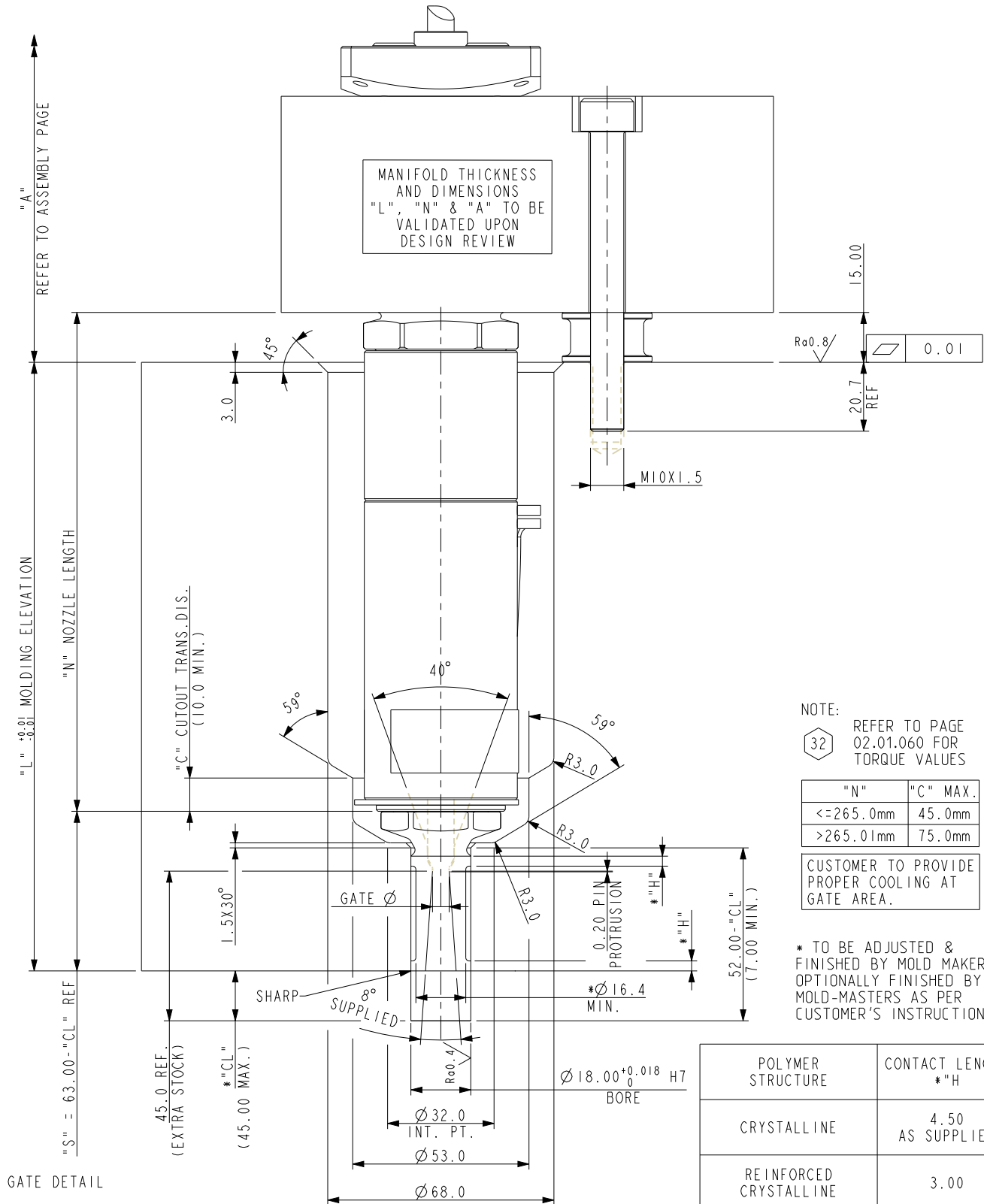
REFER TO PAGE
02.01.060 FOR
TORQUE VALUES

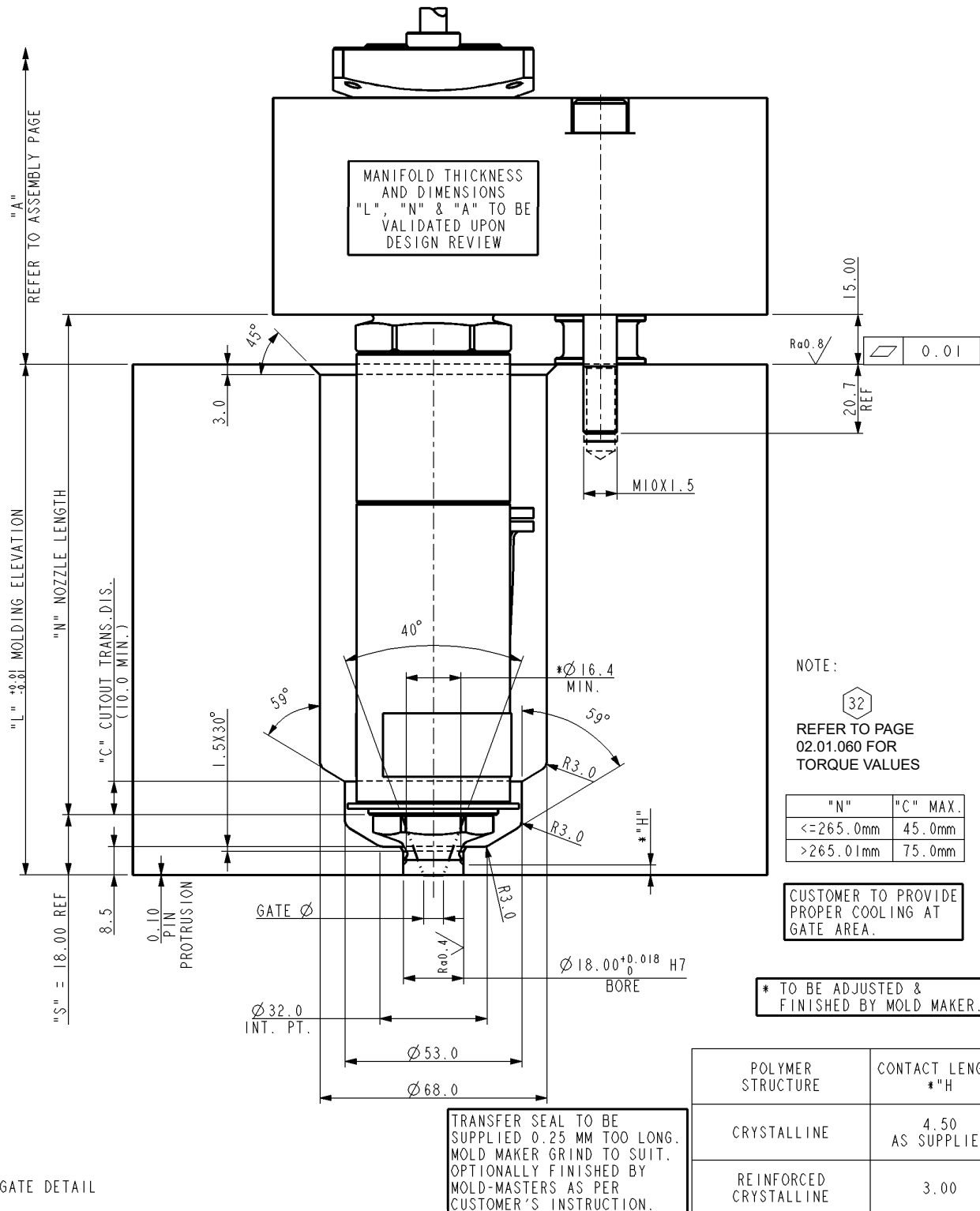
"N"	"C" MAX.
$\leq 265.0\text{mm}$	45.0mm
$> 265.01\text{mm}$	75.0mm

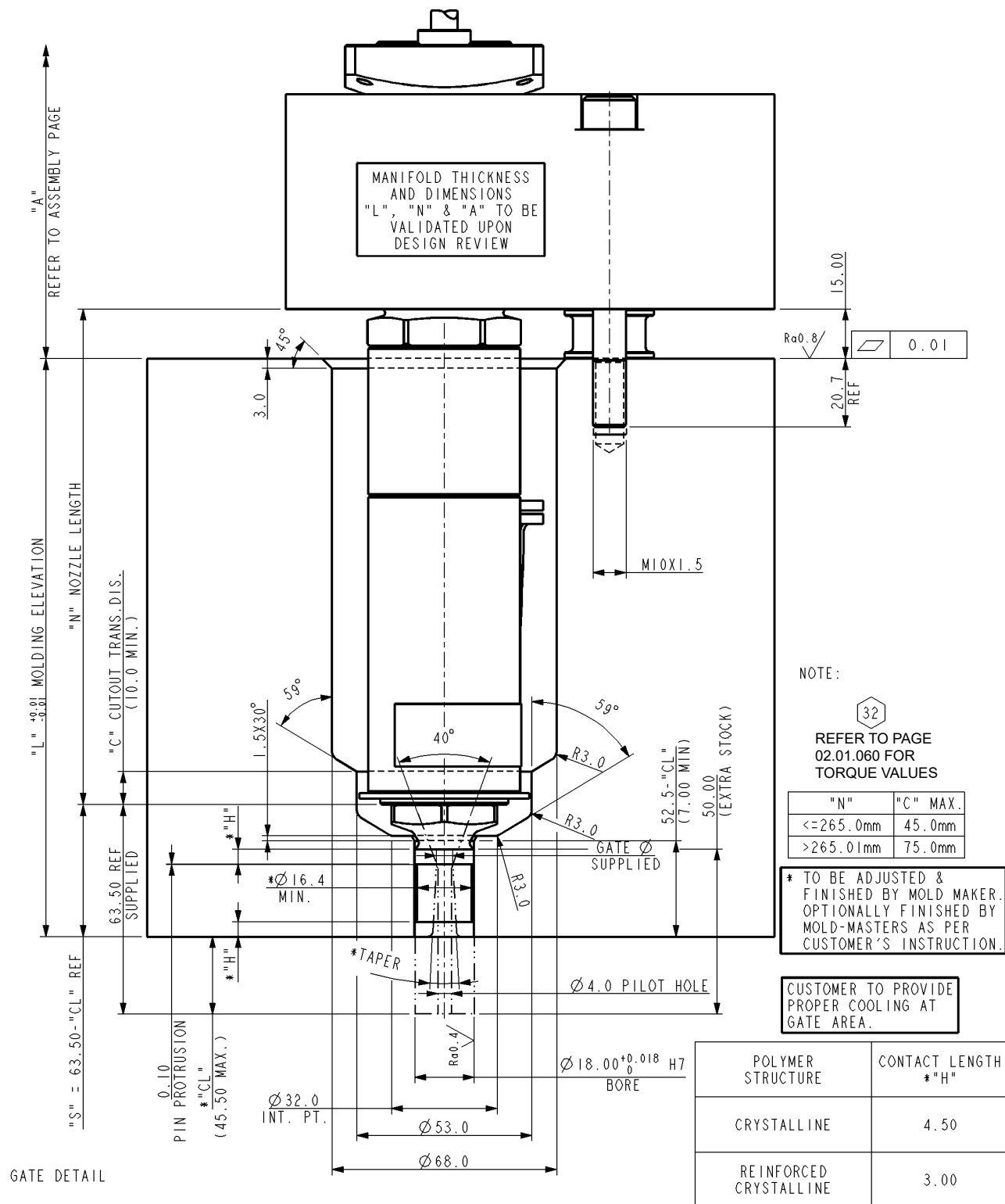
CUSTOMER TO PROVIDE
PROPER COOLING AT
GATE AREA.

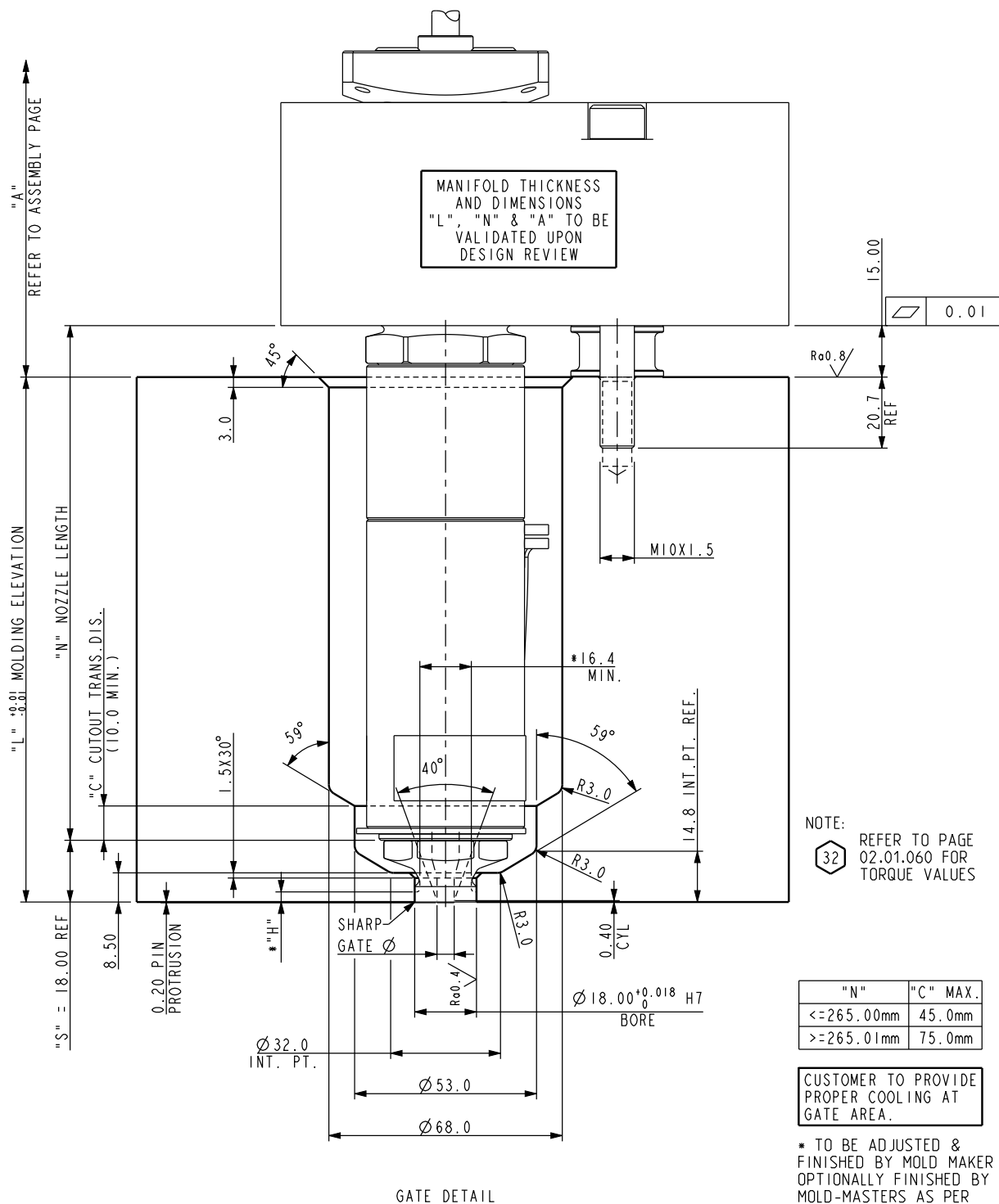
GATE DETAIL









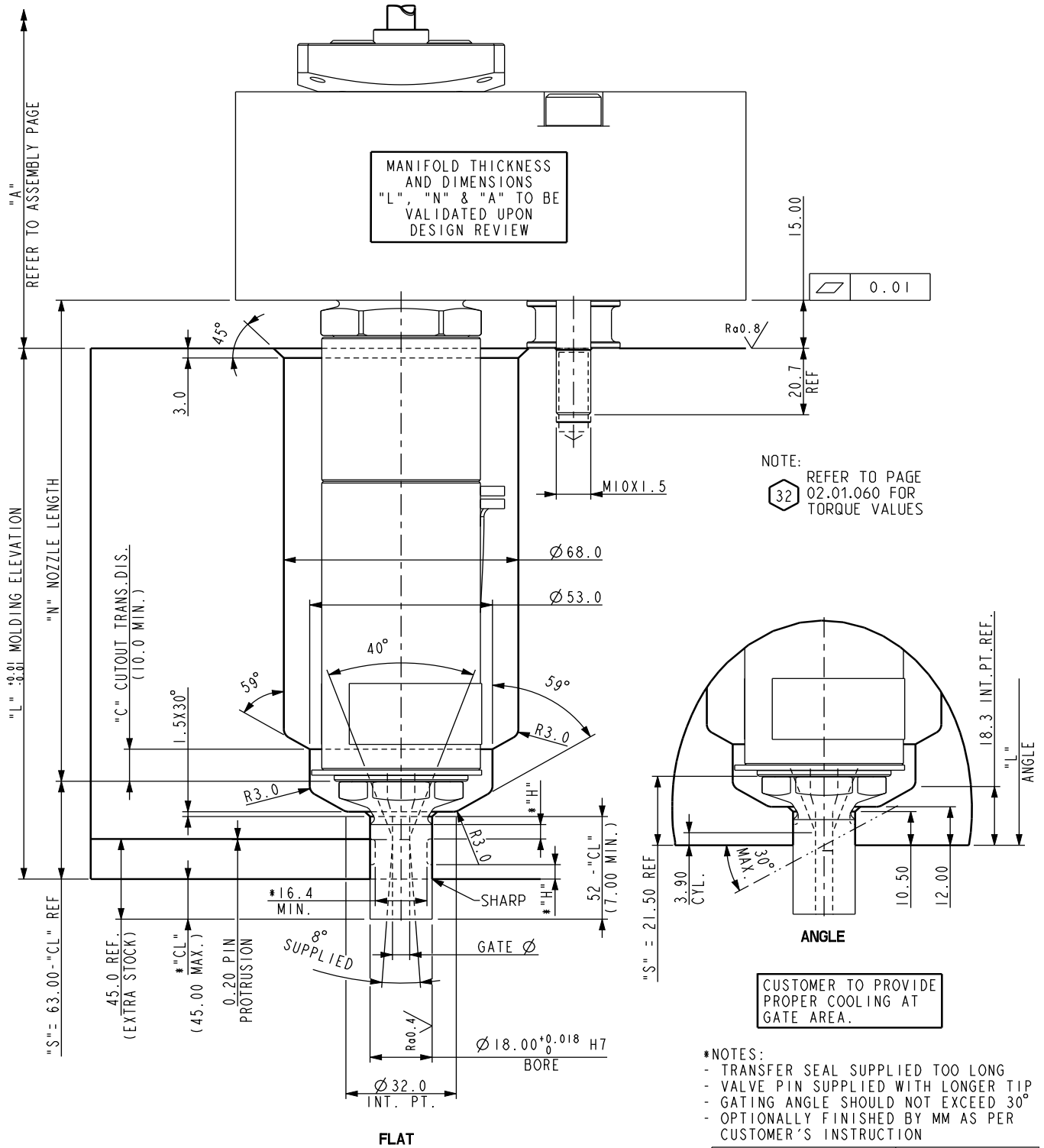


"N"	"C" MAX
<=265.00mm	45.0mm
>=265.01mm	75.0mm

CUSTOMER TO PROVIDE
PROPER COOLING AT
GATE AREA.

* TO BE ADJUSTED &
FINISHED BY MOLD MAKER
OPTIONALLY FINISHED BY
MOLD-MASTERS AS PER
CUSTOMER'S INSTRUCTION.

POLYMER STRUCTURE	CONTACT LENGTH # "H"
CRYSTALLINE	4.50 AS SUPPLIED
REINFORCED CRYSTALLINE	3.00

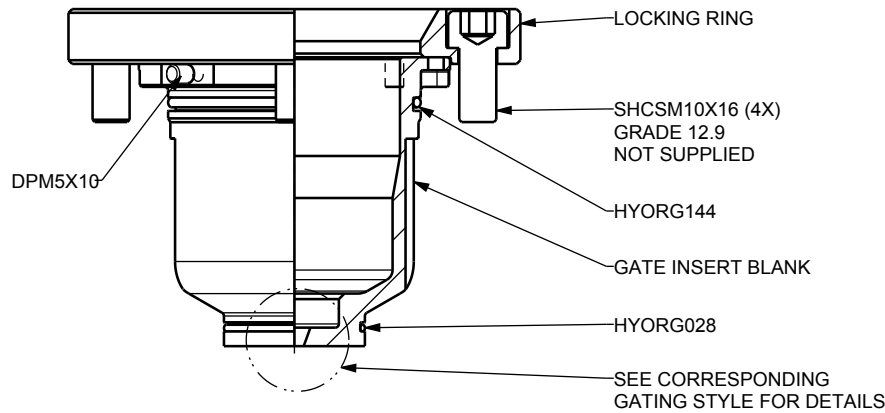


"N"	"C" MAX.
<=265.00mm	45.0mm
>=265.01mm	75.0mm

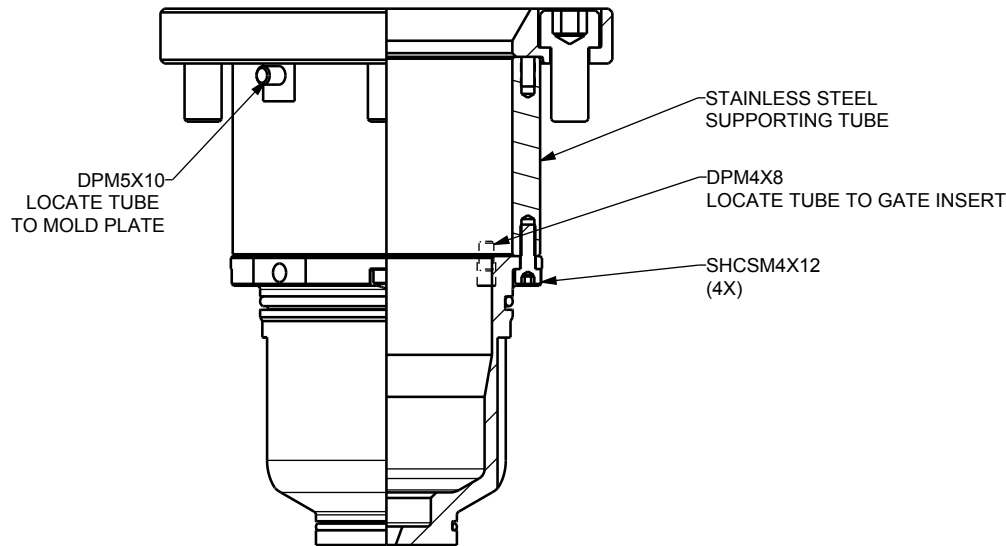
POLYMER STRUCTURE	CONTACT LENGTH *H"
CRYSTALLINE	4.50
REINFORCED CRYSTALLINE	3.00



APPLICATIONS WITHOUT SUPPORTING TUBE



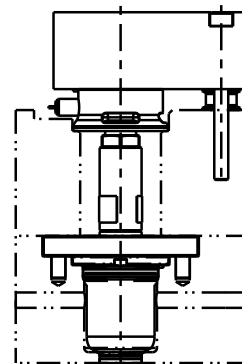
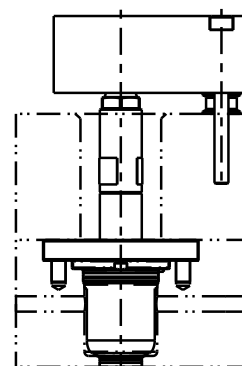
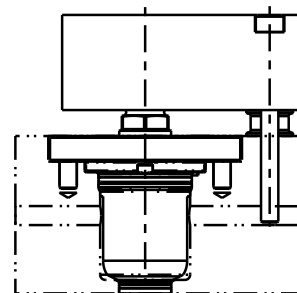
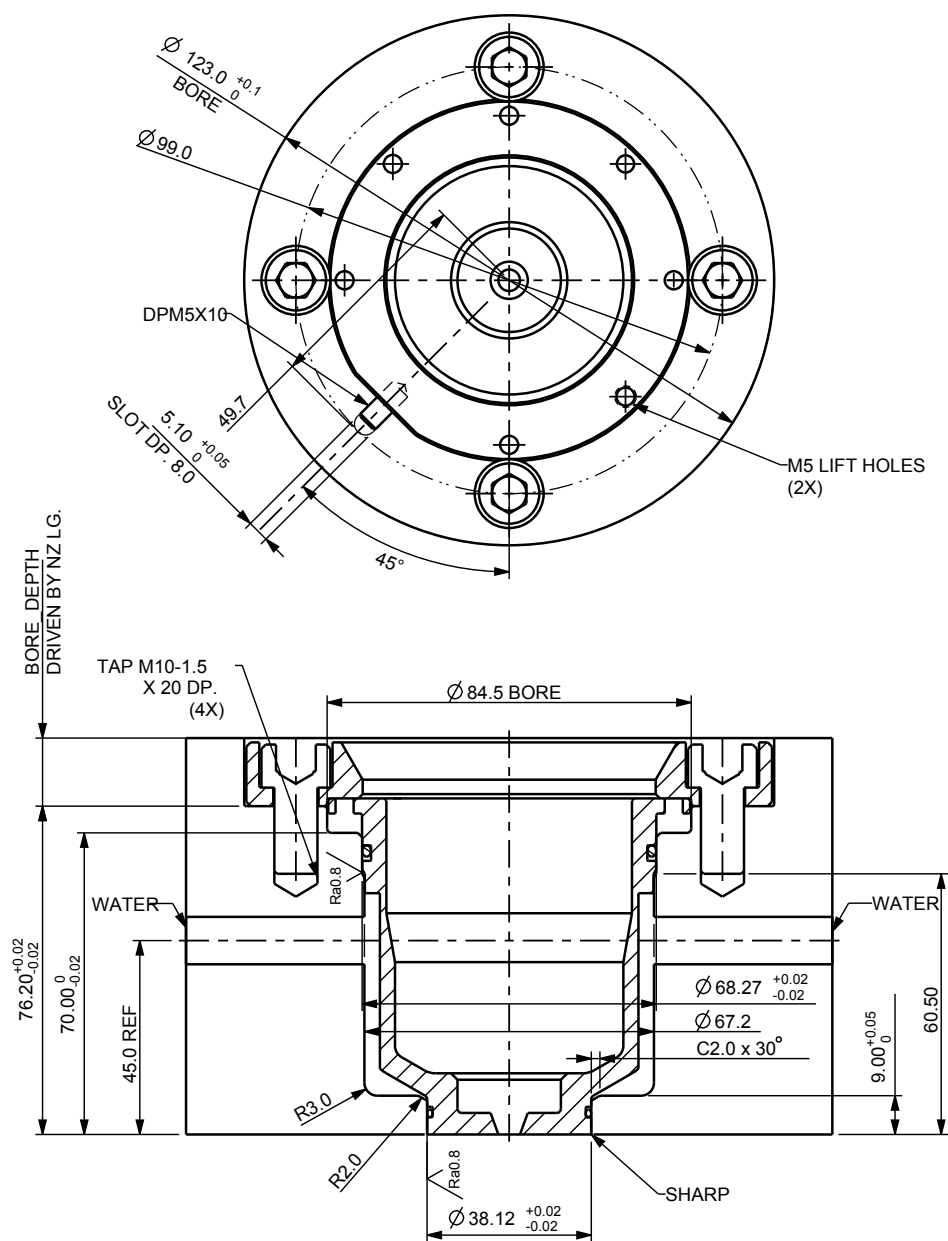
APPLICATIONS WITH SUPPORTING TUBE



WATER COOLED GATE INSERT OPTIONS		
GATE INSERT BLANK	E-TYPE TORPEDO	BI-METALLIC C-VALVE
	GIWFS7TEABLK01	GIWFS7BVABLK01
LOCKING RING	LOCKRING006	
STAINLESS STEEL TUBE RAW MATERIAL	SST304-83.0X7.5	



APPLICATIONS WITHOUT SUPPORTING TUBE

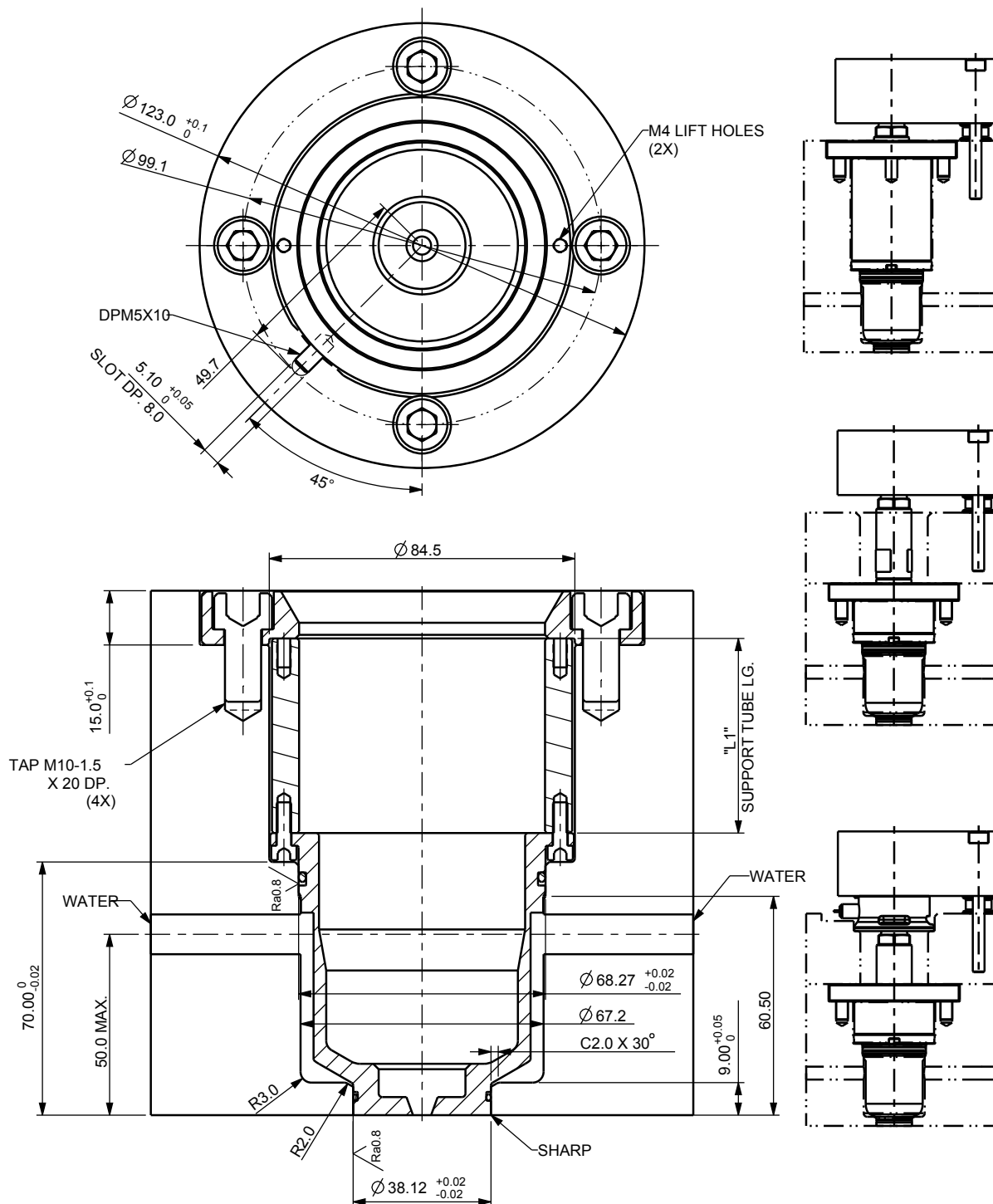


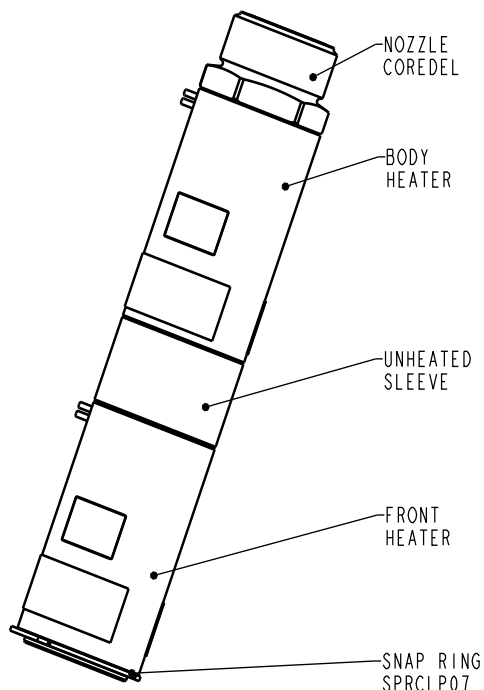
NOTE:

- * NORMALLY USED FOR APPLICATIONS WITH SHORT NOZZLE LENGTH,
* FOR NOZZLE LENGTH SHORTER THAN 90.0mm, CONSIDER CUTTING SLOT ON LOCKING RING FOR WIRING EXIT,
* WATER CHANNEL ELEVATION COULD BE MOVED UP TO 50.0mm BY CHANGING THE LOCKING RING ORIENTATION.



APPLICATIONS WITH SUPPORTING TUBE





HEATER P/N	HIGH TEMP. (HT) OPTION AVAILABLE	CLASS	LENGTH [mm]	ID [mm]	OD [mm]	POWER @ 220V
HTRSLV050FASM06	YES	FRONT HEATER	50.0	Ø39.0	Ø46.0	750W
HTRSLV060FASM06	YES		60.0	Ø39.0	Ø46.0	850W
HTRSLV070FASM06	YES		70.0	Ø39.0	Ø46.0	900W
HTRSLV080FASM06	YES		80.0	Ø39.0	Ø46.0	900W
HTRSLV090FASM06	YES		90.0	Ø39.0	Ø46.0	950W
HTRSLV040RASM06	YES	BODY HEATER	40.0	Ø39.0	Ø46.0	400W
HTRSLV060RASM06	YES		60.0	Ø39.0	Ø46.0	700W
HTRSLV080RASM06	YES		80.0	Ø39.0	Ø46.0	700W
HTRSLV120RASM06	YES		120.0	Ø39.0	Ø46.0	750W
HTRSLV240RASM06	YES		240.0	Ø39.0	Ø46.0	950W

NOTE: FOR DURABILITY IN APPLICATIONS WITH PROCESS TEMPERATURES THAT EXCEED 260°C, HIGH TEMPERATURE "HT" HEATERS ARE RECOMMENDED. ADD "HT" TO STD HEATER P/N WHERE OPTION EXISTS. EX: HTRSLV050FASM06HT

NOZZLE CONFIGURATION

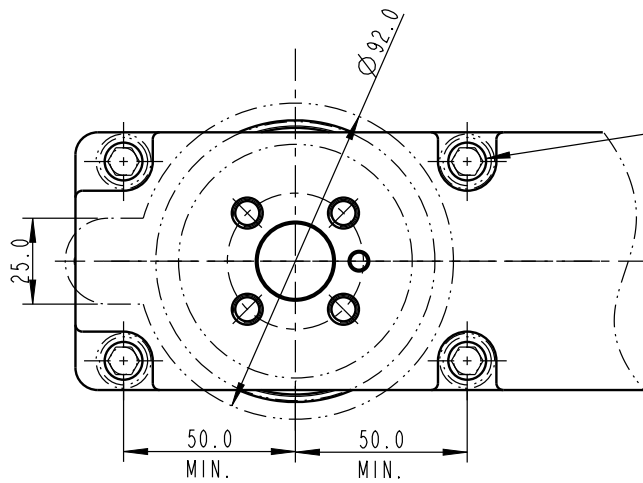
NOZZLE LENGTH "N" (MM)	BODY HEATER (HTRSLV*)	UNHEATED SLEEVE	BODY HEATER (HTRSLV*)	UNHEATED SLEEVE	BODY HEATER (HTRSLV*)	UNHEATED SLEEVE	BODY HEATER (HTRSLV*)	UNHEATED SLEEVE	FRONT HEATER (HTRSLV*)	TOTAL POWER @ 220V
80.00~90.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.0~15.0	060FASM06	850W
90.01~100.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.0~15.0	070FASM06	900W
100.01~110.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.0~15.0	080FASM06	900W
110.01~120.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.0~15.0	090FASM06	950W
120.01~135.00	N/A	N/A	N/A	N/A	N/A	N/A	040RASM06	15.0~30.0	050FASM06	1150W
135.01~145.00	N/A	N/A	N/A	N/A	N/A	N/A	040RASM06	20.0~30.0	060FASM06	1250W
145.01~155.00	N/A	N/A	N/A	N/A	N/A	N/A	060RASM06	20.0~30.0	050FASM06	1450W
155.01~165.00	N/A	N/A	N/A	N/A	N/A	N/A	060RASM06	20.0~30.0	060FASM06	1550W
165.01~175.00	N/A	N/A	N/A	N/A	N/A	N/A	060RASM06	20.0~30.0	070FASM06	1600W
175.01~185.00	N/A	N/A	N/A	N/A	N/A	N/A	080RASM06	20.0~30.0	060FASM06	1550W
185.01~195.00	N/A	N/A	N/A	N/A	N/A	N/A	080RASM06	20.0~30.0	070FASM06	1600W
195.01~205.00	N/A	N/A	N/A	N/A	N/A	N/A	080RASM06	20.0~30.0	080FASM06	1600W

SEE PAGE 07.01.061 FOR MORE NOZZLE OPTIONS



NOZZLE CONFIGURATION (CONTINUED)

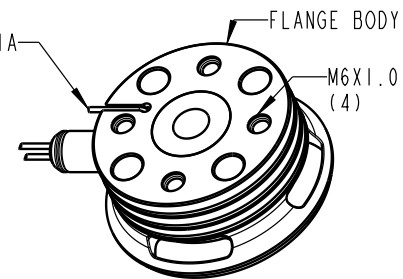
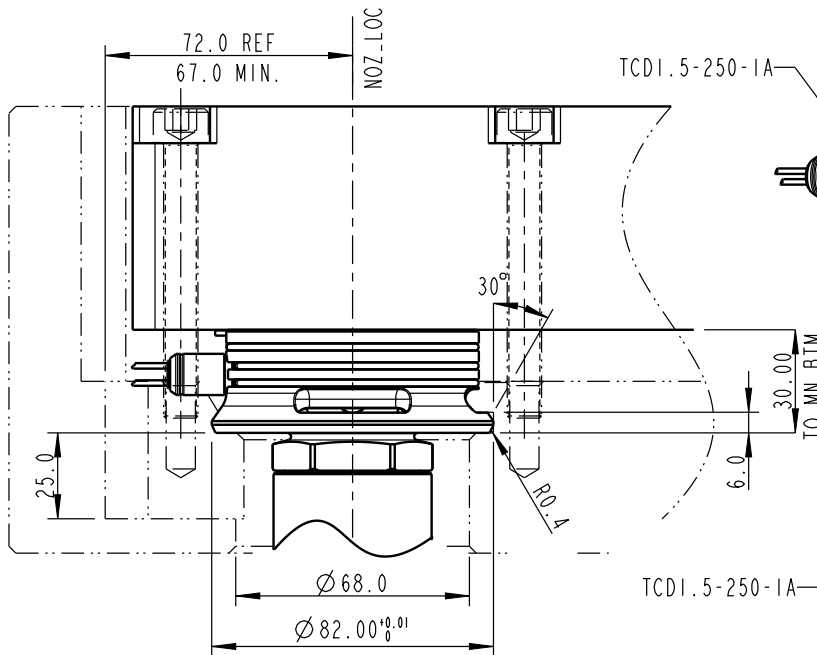
NOZZLE LENGTH "N" (MM)	BODY HEATER (HTRSLV*)	UNHEATED SLEEVE	BODY HEATER (HTRSLV*)	UNHEATED SLEEVE	BODY HEATER (HTRSLV*)	UNHEATED SLEEVE	BODY HEATER (HTRSLV*)	UNHEATED SLEEVE	FRONT HEATER (HTRSLV*)	TOTAL POWER @ 220V
205.01~215.00	N/A	N/A	N/A	N/A	N/A	N/A	080RASM06	20.0~30.0	090FASM06	1650W
215.01~225.00	N/A	N/A	N/A	N/A	N/A	N/A	120RASM06	20.0~30.0	060FASM06	1600W
225.01~235.00	N/A	N/A	N/A	N/A	N/A	N/A	120RASM06	20.0~30.0	070FASM06	1650W
235.01~245.00	N/A	N/A	N/A	N/A	N/A	N/A	120RASM06	20.0~30.0	080FASM06	1650W
245.01~255.00	N/A	N/A	N/A	N/A	N/A	N/A	120RASM06	20.0~30.0	090FASM06	1700W
255.01~275.00	N/A	N/A	N/A	N/A	060RASM06	20.0~30.0	060RASM06	20.0~30.0	080FASM06	2300W
275.01~295.00	N/A	N/A	N/A	N/A	080RASM06	20.0~30.0	080RASM06	20.0~30.0	060FASM06	2250W
295.01~315.00	N/A	N/A	N/A	N/A	080RASM06	20.0~30.0	080RASM06	20.0~30.0	080FASM06	2300W
315.01~335.00	N/A	N/A	N/A	N/A	080RASM06	20.0~30.0	120RASM06	20.0~30.0	060FASM06	2300W
335.01~355.00	N/A	N/A	N/A	N/A	080RASM06	20.0~30.0	120RASM06	20.0~30.0	080FASM06	2350W
355.01~375.00	N/A	N/A	N/A	N/A	120RASM06	20.0~30.0	120RASM06	20.0~30.0	060FASM06	2350W
375.01~395.00	N/A	N/A	N/A	N/A	120RASM06	20.0~30.0	120RASM06	20.0~30.0	080FASM06	2400W
395.01~415.00	N/A	N/A	N/A	N/A	040RASM06	20.0~30.0	240RASM06	20.0~30.0	060FASM06	2200W
415.01~435.00	N/A	N/A	N/A	N/A	060RASM06	20.0~30.0	240RASM06	20.0~30.0	060FASM06	2500W
435.01~455.00	N/A	N/A	N/A	N/A	080RASM06	20.0~30.0	240RASM06	20.0~30.0	060FASM06	2500W
455.01~475.00	N/A	N/A	N/A	N/A	080RASM06	20.0~30.0	240RASM06	20.0~30.0	080FASM06	2550W
475.01~505.00	N/A	N/A	080RASM06	20.0~30.0	120RASM06	20.0~30.0	120RASM06	20.0~30.0	080FASM06	3100W
505.01~535.00	N/A	N/A	120RASM06	20.0~30.0	120RASM06	20.0~30.0	120RASM06	20.0~30.0	070FASM06	3150W
535.01~565.00	N/A	N/A	080RASM06	20.0~30.0	080RASM06	20.0~30.0	240RASM06	20.0~30.0	060FASM06	3200W
565.01~595.00	N/A	N/A	080RASM06	20.0~30.0	120RASM06	20.0~30.0	240RASM06	20.0~30.0	050FASM06	3150W
595.01~635.00	N/A	N/A	120RASM06	16.7~30.0	120RASM06	16.7~30.0	240RASM06	16.7~30.0	050FASM06	3200W
635.01~665.00	N/A	N/A	120RASM06	20.0~30.0	120RASM06	20.0~30.0	240RASM06	20.0~30.0	080FASM06	3350W
665.01~705.00	N/A	N/A	060RASM06	16.7~30.0	240RASM06	16.7~30.0	240RASM06	16.7~30.0	060FASM06	3450W
705.01~735.00	N/A	N/A	080RASM06	20.0~30.0	240RASM06	20.0~30.0	240RASM06	20.0~30.0	070FASM06	3500W
735.01~765.00	N/A	N/A	120RASM06	20.0~30.0	240RASM06	20.0~30.0	240RASM06	20.0~30.0	060FASM06	3500W
765.01~795.00	N/A	N/A	120RASM06	20.0~30.0	240RASM06	20.0~30.0	240RASM06	20.0~30.0	090FASM06	3600W
795.01~835.00	080RASM06	20.0~30.0	080RASM06	20.0~30.0	240RASM06	20.0~30.0	240RASM06	20.0~30.0	060FASM06	4150W
835.01~875.00	080RASM06	20.0~30.0	120RASM06	20.0~30.0	240RASM06	20.0~30.0	240RASM06	20.0~30.0	060FASM06	4200W
875.01~915.00	120RASM06	20.0~30.0	120RASM06	20.0~30.0	240RASM06	20.0~30.0	240RASM06	20.0~30.0	060FASM06	4250W
915.01~955.00	040RASM06	20.0~30.0	240RASM06	20.0~30.0	240RASM06	20.0~30.0	240RASM06	20.0~30.0	060FASM06	4100W
955.01~1000.00	080RASM06	20.0~31.3	240RASM06	20.0~31.3	240RASM06	20.0~31.3	240RASM06	20.0~31.3	060FASM06	4400W



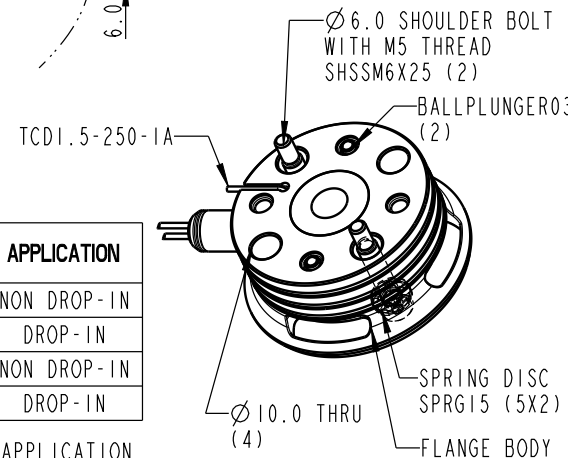
Ø11.0 (4)
* OVAL HOLES MIGHT BE NEEDED
FOR LARGE PITCH APPLICATION

NOTE: 4X M10 or 3/8" SCREWS ARE HIGHLY
RECOMMENDED TO BOLT MANIFOLD ONTO MOLD
PLATE IN ORDER TO PROVIDE PROPER SEALING
ON FLANGE CONTACT SURFACE.

NON DROP-IN VERSION

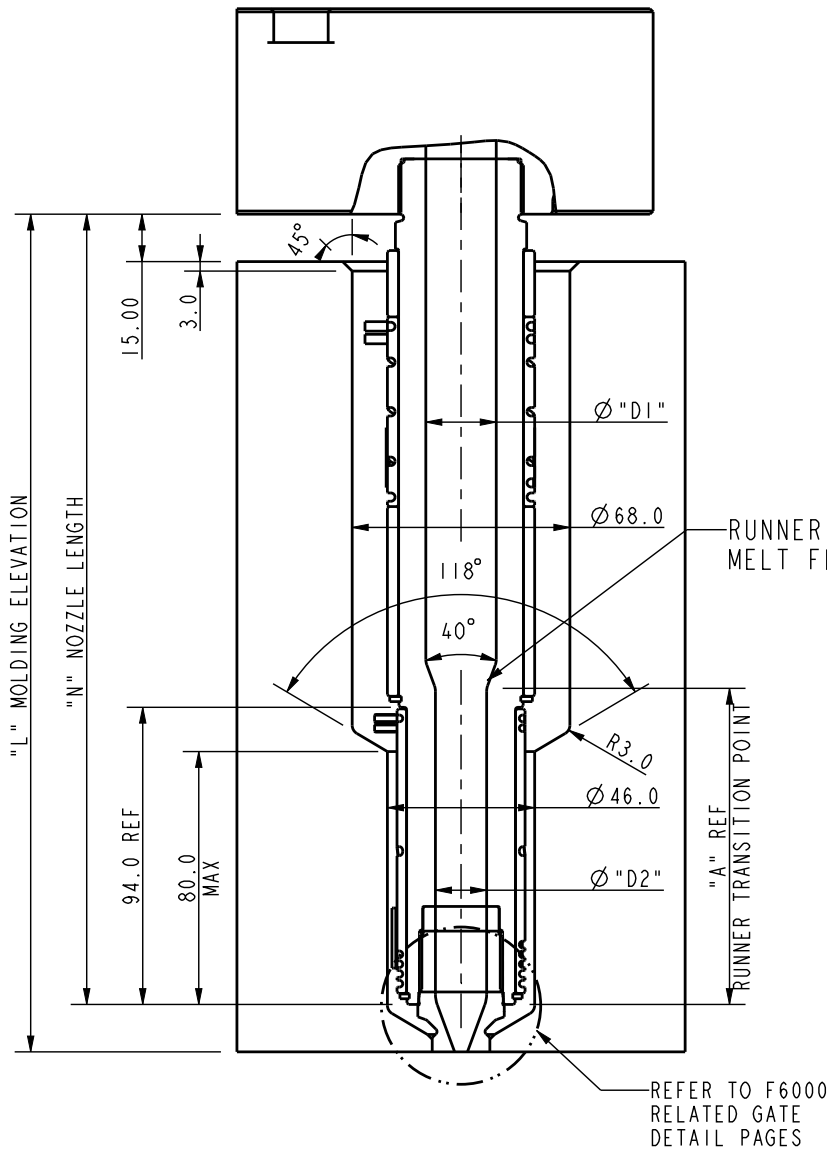


DROP-IN VERSION



FLANGE PACKAGE	FLANGE BODY	RUNNER DIA.	WATTAGE	APPLICATION
FLANGEFSI3P	FLANGEFSI3	Ø18.0	525W	NON DROP-IN
FLANGEFSI3PI	FLANGEFSI3	Ø18.0	525W	DROP-IN
FLANGEFSI4P	FLANGEFSI4	Ø22.0	525W	NON DROP-IN
FLANGEFSI4PI	FLANGEFSI4	Ø22.0	525W	DROP-IN

* CONTACT MOLD-MASTERS APPLICATION ENGINEER FOR FLANGE APPLICATION.



RUNNER SIZE

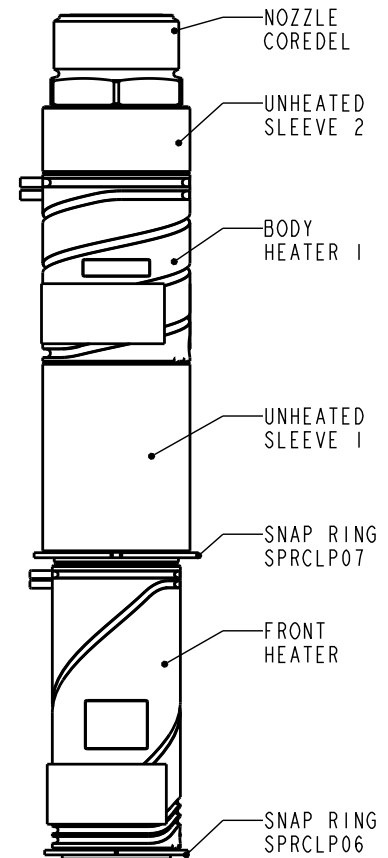
GATING TYPE	Ø "D1"	Ø "D2"	"A"
TIP/SPRUE (STD)	18.00	12.00	33.0
TIP/SPRUE * (CUSTOM)	22.00	16.00	100.0
VALVE	22.00	16.00	100.0

*CUSTOM GATE SEAL REQUIRED.
MUST BE REVIEWED BY MM
APPLICATION ENGINEERING.

RUNNER TRANSITION ANGLE IS CRITICAL FOR
MELT FLOW, SHOULDN'T BE LARGER THAN 40°

HEATER CONFIGURATION

CONFIG.	PART NUMBER	LENGTH	WATTAGE
F6 FRONT HEATER	HTRSLV090FASM05	90.0	525W
F7 BODY HEATER	HTRSLV040RASM06	40.0	400W
F7 BODY HEATER	HTRSLV060RASM06	60.0	700W
F7 BODY HEATER	HTRSLV080RASM06	80.0	700W
F7 BODY HEATER	HTRSLV120RASM06	120.0	750W
F7 BODY HEATER	HTRSLV240RASM06	240.0	950W



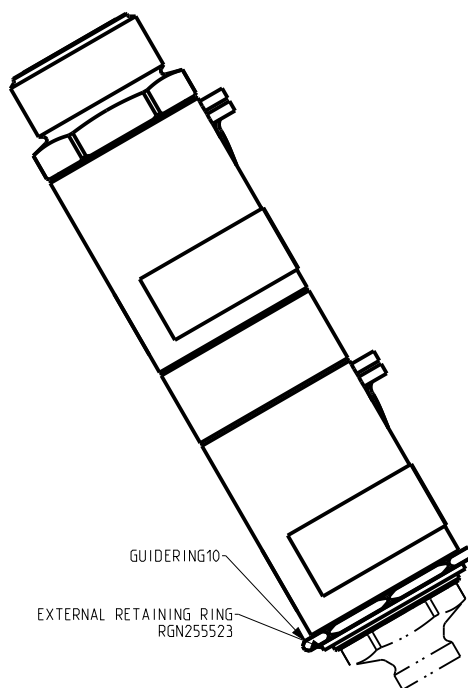
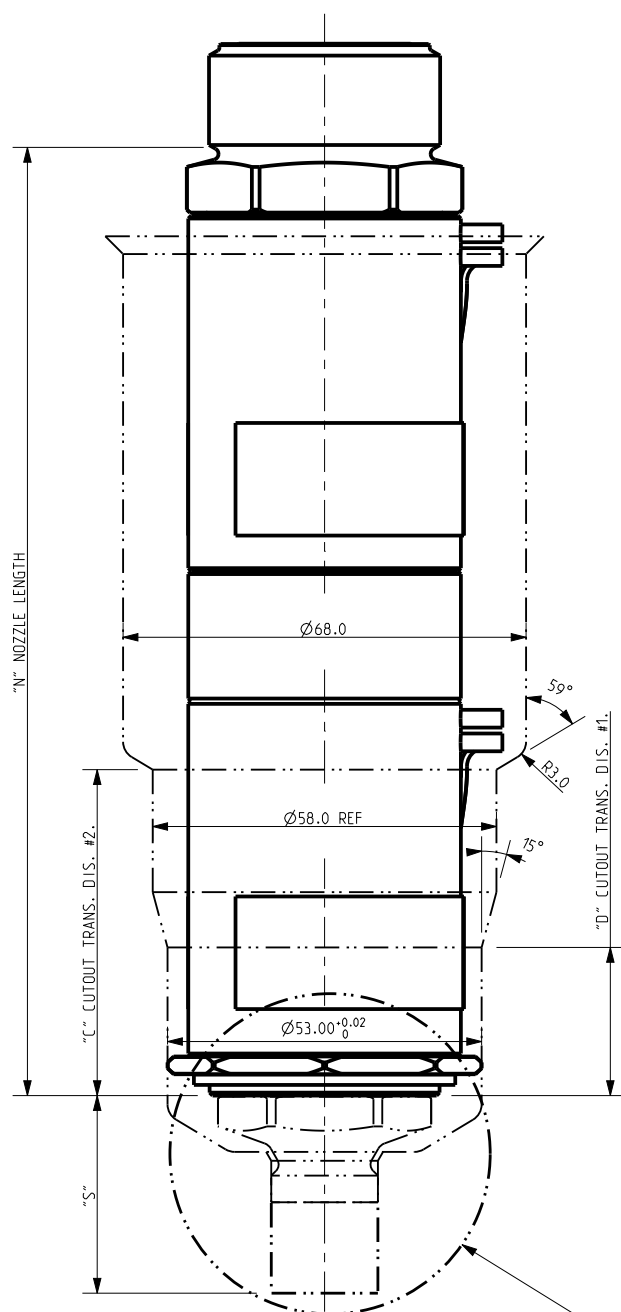
F7000 07



NOZZLE CONFIGURATION

NOZZLE LENGTH "N" (mm)	BODY HEATER (HTRSLV-)	UNHEATED SLEEVE	BODY HEATER (HTRSLV-)	UNHEATED SLEEVE	BODY HEATER (HTRSLV-)	UNHEATED SLEEVE	BODY HEATER (HTRSLV-)	UNHEATED SLEEVE	FRONT HEATER (HTRSLV-)	TOTAL POWER @220V
169.01-189.00	N/A	N/A	N/A	N/A	N/A	N/A	040RASM06	20.0-40.0	090RASM05	925W
189.01-209.00	N/A	N/A	N/A	N/A	N/A	N/A	060RASM06	20.0-40.0	090RASM05	1225W
209.01-219.00	N/A	N/A	N/A	N/A	N/A	N/A	080RASM06	20.0-30.0	090RASM05	1225W
219.01-249.00	N/A	N/A	N/A	N/A	040RASM06	15.0-30.0	040RASM06	15.0-30.0	090RASM05	1325W
249.01-269.00	N/A	N/A	N/A	N/A	040RASM06	20.0-30.0	060RASM06	20.0-30.0	090RASM05	1625W
269.01-289.00	N/A	N/A	N/A	N/A	040RASM06	20.0-30.0	080RASM06	20.0-30.0	090RASM05	1625W
289.01-309.00	N/A	N/A	N/A	N/A	060RASM06	20.0-30.0	080RASM06	20.0-30.0	090RASM05	1925W
309.01-329.00	N/A	N/A	N/A	N/A	040RASM06	20.0-30.0	120RASM06	20.0-30.0	090RASM05	1675W
329.01-349.00	N/A	N/A	N/A	N/A	060RASM06	20.0-30.0	120RASM06	20.0-30.0	090RASM05	1975W
349.01-369.00	N/A	N/A	N/A	N/A	080RASM06	20.0-30.0	120RASM06	20.0-30.0	090RASM05	1975W
369.01-379.00	N/A	N/A	N/A	N/A	N/A	N/A	240RASM06	20.0-30.0	090RASM05	1475W
379.01-409.00	N/A	N/A	N/A	N/A	120RASM06	15.0-30.0	120RASM06	15.0-30.0	090RASM05	2025W
409.01-449.00	N/A	N/A	N/A	N/A	040RASM06	10.0-30.0	240RASM06	10.0-30.0	090RASM05	1875W
449.01-469.00	N/A	N/A	N/A	N/A	060RASM06	20.0-30.0	240RASM06	20.0-30.0	090RASM05	2175W
469.01-489.00	N/A	N/A	N/A	N/A	080RASM06	20.0-30.0	240RASM06	20.0-30.0	090RASM05	2175W
489.01-509.00	N/A	N/A	040RASM06	20.0-26.7	040RASM06	20.0-26.7	240RASM06	20.0-26.6	090RASM05	2275W
509.01-529.00	N/A	N/A	040RASM06	20.0-26.7	060RASM06	20.0-26.7	240RASM06	20.0-26.6	090RASM05	2575W
529.01-549.00	N/A	N/A	120RASM06	20.0-26.7	120RASM06	20.0-26.7	120RASM06	20.0-26.6	090RASM05	2775W
549.01-579.00	N/A	N/A	060RASM06	20.0-30.0	080RASM06	20.0-30.0	240RASM06	20.0-30.0	090RASM05	2875W
579.01-599.00	N/A	N/A	080RASM06	23.3-30.0	080RASM06	23.3-30.0	240RASM06	23.3-30.0	090RASM05	2875W
599.01-619.00	N/A	N/A	060RASM06	23.3-30.0	120RASM06	23.3-30.0	240RASM06	23.3-30.0	090RASM05	2925W
619.01-639.00	N/A	N/A	080RASM06	23.4-30.0	120RASM06	23.3-30.0	240RASM06	23.3-30.0	090RASM05	2925W
639.01-649.00	N/A	N/A	N/A	N/A	240RASM06	25.0-30.0	240RASM06	25.0-30.0	090RASM05	2425W
649.01-679.00	N/A	N/A	120RASM06	20.0-30.0	120RASM06	20.0-30.0	240RASM06	20.0-30.0	090RASM05	2975W
679.01-719.00	N/A	N/A	040RASM06	16.7-30.0	240RASM06	16.7-30.0	240RASM06	16.7-30.0	090RASM05	2825W
719.01-739.00	N/A	N/A	060RASM06	23.4-30.0	240RASM06	23.3-30.0	240RASM06	23.3-30.0	090RASM05	3125W
739.01-759.00	N/A	N/A	080RASM06	23.4-30.0	240RASM06	23.3-30.0	240RASM06	23.3-30.0	090RASM05	3125W
759.01-799.00	N/A	N/A	120RASM06	16.7-30.0	240RASM06	16.7-30.0	240RASM06	16.7-30.0	090RASM05	3175W
799.01-829.00	060RASM06	22.5-30.0	060RASM06	22.5-30.0	240RASM06	22.5-30.0	240RASM06	22.5-30.0	090RASM05	3825W
829.01-869.00	080RASM06	20.0-30.0	080RASM06	20.0-30.0	240RASM06	20.0-30.0	240RASM06	20.0-30.0	090RASM05	3825W
869.01-909.00	080RASM06	20.0-30.0	120RASM06	20.0-30.0	240RASM06	20.0-30.0	240RASM06	20.0-30.0	090RASM05	3875W
909.01-949.00	120RASM06	20.0-30.0	120RASM06	20.0-30.0	240RASM06	20.0-30.0	240RASM06	20.0-30.0	090RASM05	3925W
949.01-989.00	040RASM06	20.0-30.0	240RASM06	20.0-30.0	240RASM06	20.0-30.0	240RASM06	20.0-30.0	090RASM05	3775W

* REFERENCE ONLY, ALWAYS REFER TO SYSTEM DRAWINGS TO ORDER SPARE PARTS.



NOTE:

"N"	"C" MAX.
<=265.0mm	55.0mm
> 265.01mm	75.0mm

GATING STYLE	"D"
NON EXT. STYLE	25.0mm
EXT. GATING STYLE	"S"-2 (mm)

* IN THE CASE THAT EXTENDED GATE SEAL WITH "S"> 48mm AND NOZZLE WITH 60mm LONG FRONT HEATER, NOZZLE BORE CUTOUT DESIGN SHOULD BE REVIEWED TO MAKE SURE NO INTERFERENCE BETWEEN HEATER TERMINAL AND NOZZLE BORE.

SEE CORRESPONDING GATING STYLE FOR DETAILED CUTOUT



GATING STYLE	PAGE	GATE SEAL DESCRIPTION	GATE Ø	EXTRA STOCK (SUPPLIED LG.)	GATE SEAL OPTIONS	GATE SEAL PACKAGES
F-TYPE TORPEDO	08.01.020	FS8 TORP. F G=4.0	Ø 4.00	0.0	TSFI20F + TPF008-1	TSFI20FP
		FS8 TORP. F G=5.0	Ø 5.00		TSFI21F + TPF008-1	TSFI21FP
		FS8 TORP. F G=6.0	Ø 6.00		TSFI22F + TPF008-1	TSFI22FP
EXT. F-TYPE TORPEDO	08.01.025	FS8 EXT. TORP. F G=4.0 w/8° TAPER	Ø 4.00	50.0	TSFI23F + TPF008-1	TSFI23FP
		FS8 EXT. TORP. F G=5.0 w/8° TAPER	Ø 5.00		TSFI24F + TPF008-1	TSFI24FP
		FS8 EXT. TORP. F G=6.0 w/8° TAPER	Ø 6.00		TSFI25F + TPF008-1	TSFI25FP
HOT SPRUE	08.01.035	FS8 HOT SPRUE G=3.0	Ø 3.00	6.0	TSFI26F	N/A
		FS8 HOT SPRUE G=4.0	Ø 4.00		TSFI27F	
		FS8 HOT SPRUE G=5.0	Ø 5.00		TSFI28F	
		FS8 HOT SPRUE G=6.0	Ø 6.00		TSFI29F	
		FS8 HOT SPRUE G=7.0	Ø 7.00		TSFI30F	
EXTENDED HOT SPRUE	08.01.040	FS8 EXT. HOT S G=3.0 w/8° TAPER	Ø 3.00	50.0	TSFI31F	N/A
		FS8 EXT. HOT S G=4.0 w/8° TAPER	Ø 4.00		TSFI32F	
		FS8 EXT. HOT S G=5.0 w/8° TAPER	Ø 5.00		TSFI33F	
		FS8 EXT. HOT S G=6.0 w/8° TAPER	Ø 6.00		TSFI34F	
		FS8 EXT. HOT S G=7.0 w/8° TAPER	Ø 7.00		TSFI35F	
HOT VALVE	08.01.050	FS8 HOT VALVE G=5.0	Ø 5.00	0.0	TSFI36F	N/A
		FS8 HOT VALVE G=6.0	Ø 6.00		TSFI37F	
		FS8 HOT VALVE G=7.0	Ø 7.00		TSFI38F	
		FS8 HOT VALVE G=8.0	Ø 8.00		TSFI39F	
EXTENDED HOT VALVE	08.01.051	FS8 EXT. HOT V G=5.0, w/8° TAPER	Ø 5.00	50.0	TSFI40F	N/A
		FS8 EXT. HOT V G=6.0, w/8° TAPER	Ø 6.00		TSFI41F	
		FS8 EXT. HOT V G=7.0, w/8° TAPER	Ø 7.00		TSFI42F	
		FS8 EXT. HOT V G=8.0, w/8° TAPER	Ø 8.00		TSFI43F	
ACCU-VALVE LX	08.01.055	FS8 CYL HOT VALVE G=5.0	Ø 5.00	0.0	TSFI45F	N/A
		FS8 CYL HOT VALVE G=6.0	Ø 6.00		TSFI46F	
		FS8 CYL HOT VALVE G=7.0	Ø 7.00		TSFI47F	
EXTENDED ACCU-VALVE LX	08.01.056	FS8 EXT CYL HV G=5.0 w/8° TAPER	Ø 5.00	50.0	TSFI48F	N/A
		FS8 EXT CYL HV G=6.0 w/8° TAPER	Ø 6.00		TSFI49F	
		FS8 EXT CYL HV G=7.0 w/8° TAPER	Ø 7.00		TSFI50F	
BI-METALLIC C-VALVE	08.01.045	FS8 BI-MET. C-VALVE/BALLNOSE	Ø 5.00- Ø 8.00	0.0	TSFI44 + TSLF0009	TSFI44P
EXTENDED BI-METALLIC C-VALVE	08.01.046	FS8 BI-MET. C-VALVE/BALLNOSE	Ø 5.00- Ø 8.00	0.0	TSFI44 + TSLF0010	TSFI44P1
BI-METALLIC BALLNOSE C-VALVE	08.01.047	FS8 BI-MET. C-VALVE/BALLNOSE	Ø 5.00- Ø 8.00	0.0	TSFI44 + TSLF0011	TSFI44P2

NOTE:

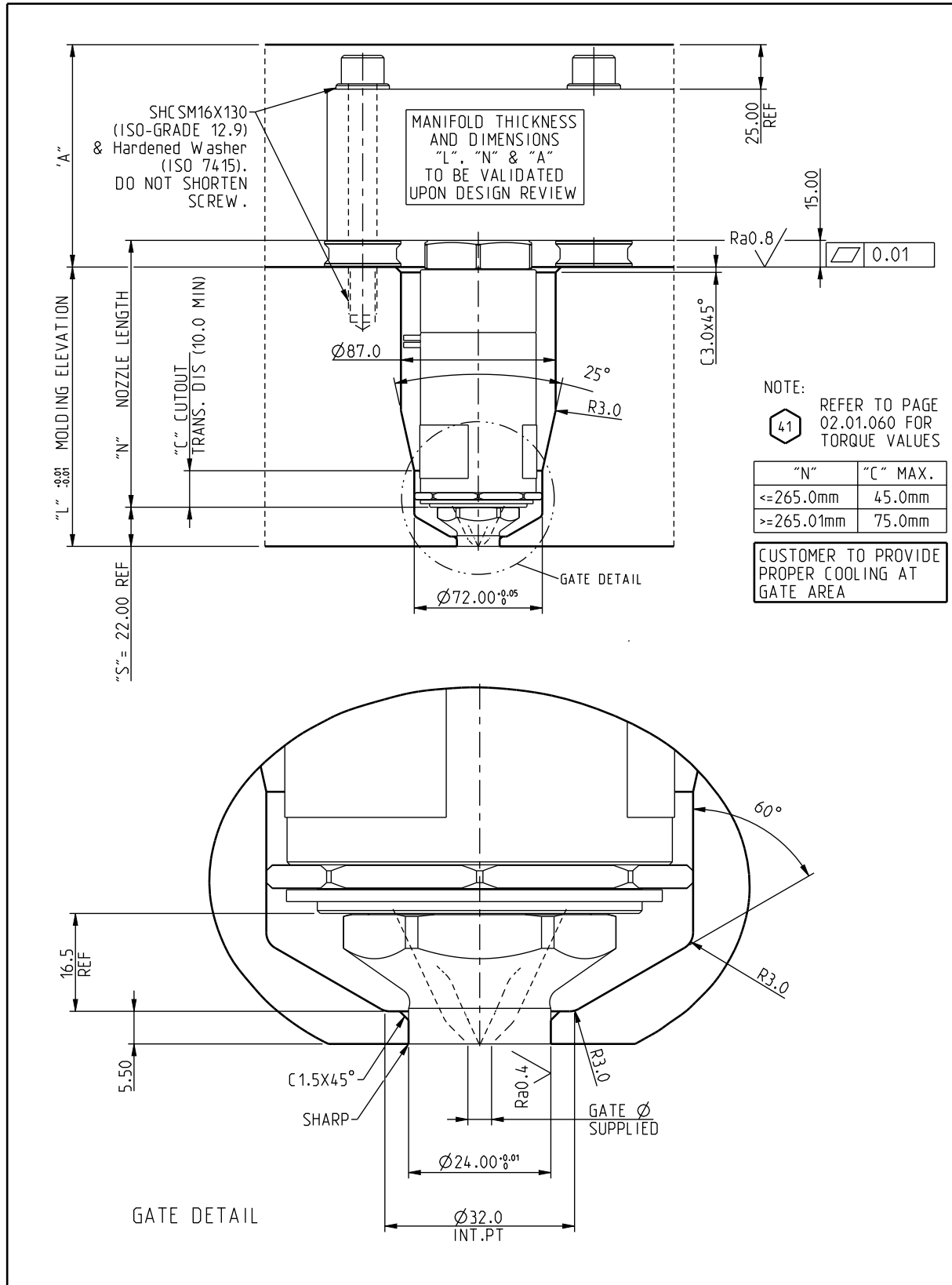
1. APPLIES TO ALL STANDARD NOZZLE LENGTH RANGES (81.0 - 976.0)
2. CUSTOM SEALS CAN BE MANUFACTURED WITH APPLICATION ENGINEER APPROVAL.

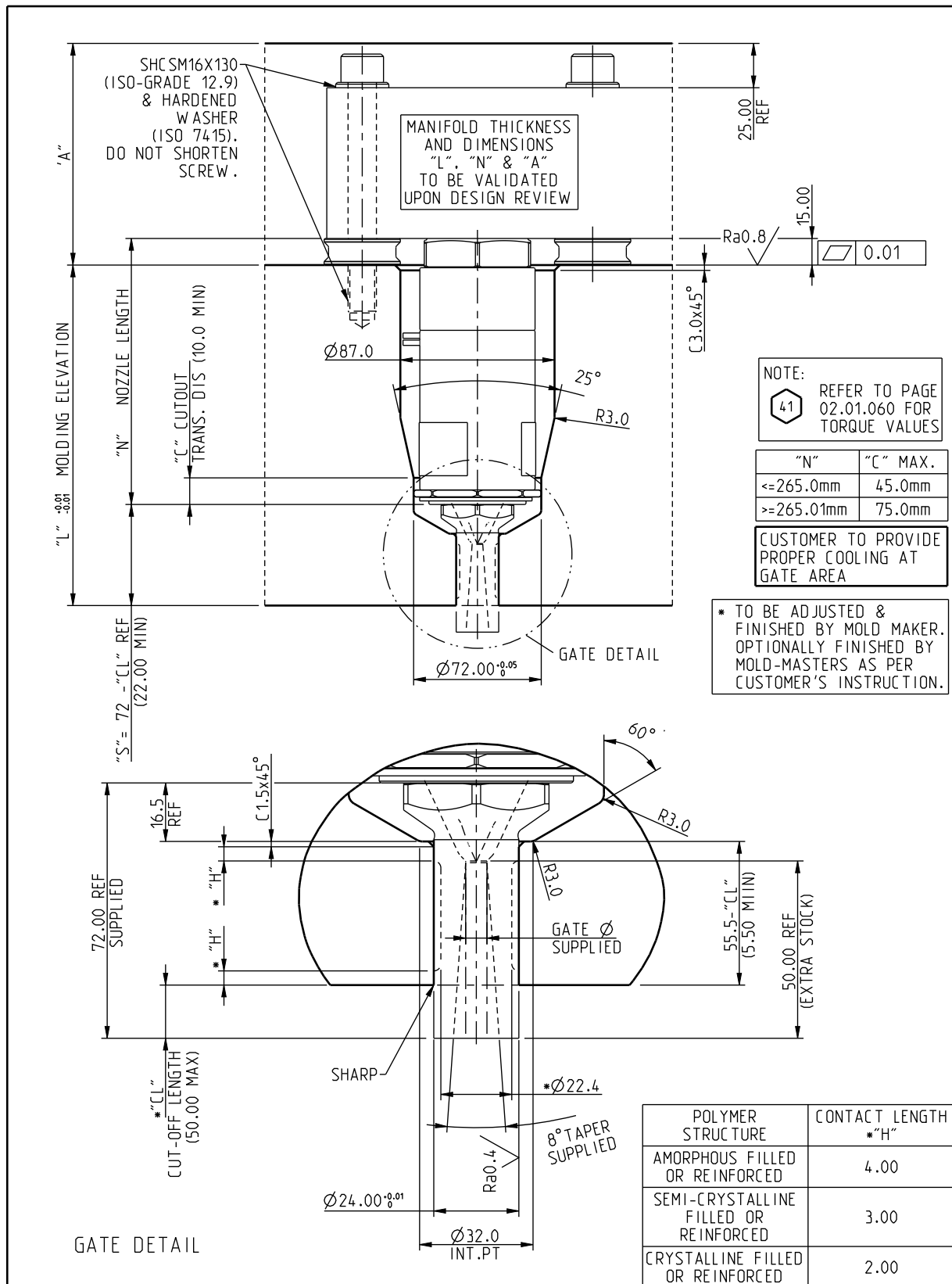


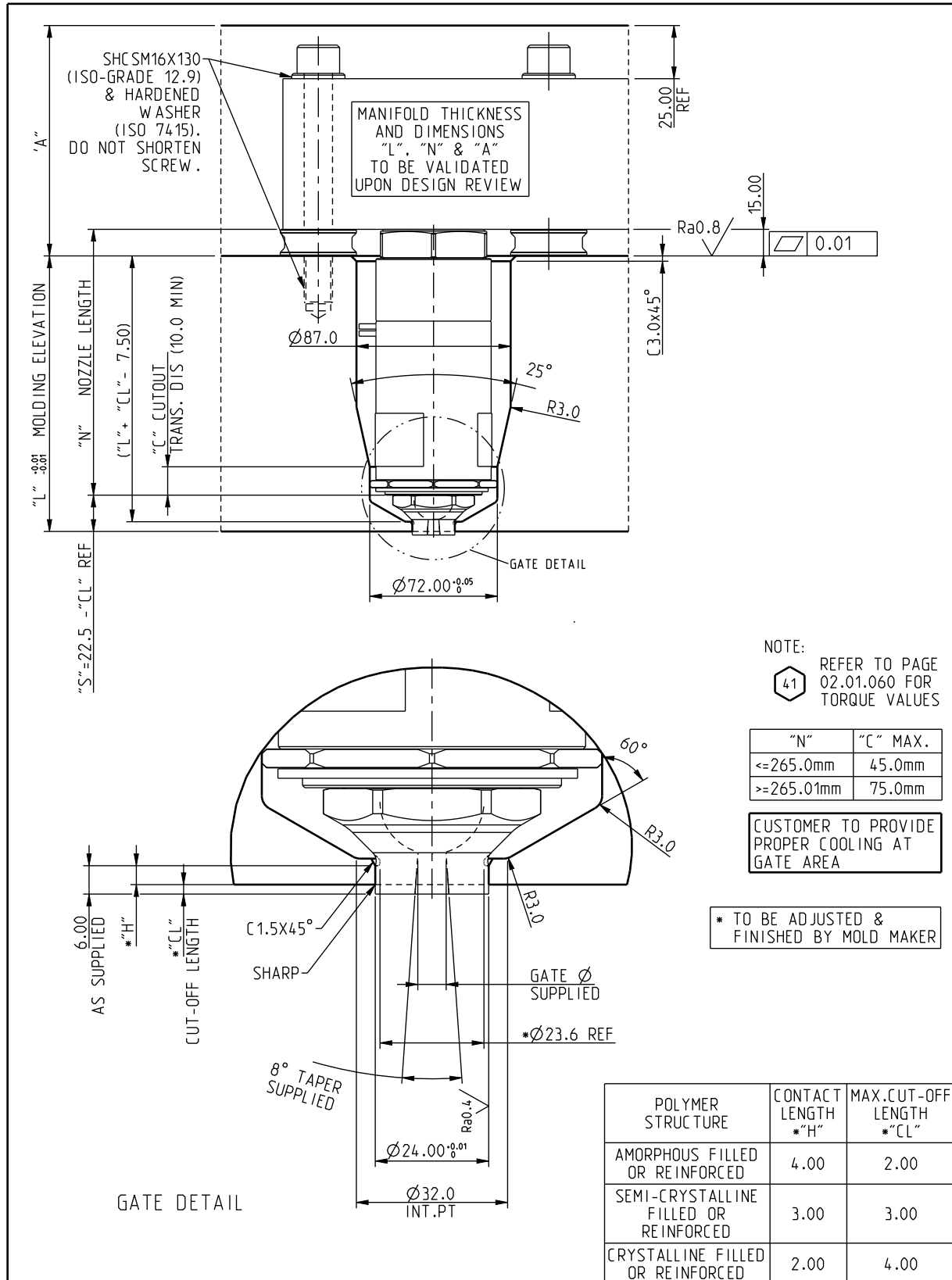
GATING STYLE	PAGE	GATE SEAL DESCRIPTION	GATE Ø	EXTRA STOCK (SUPPLIED LG.)	GATE SEAL OPTIONS	GATE SEAL PACKAGES
CYLINDRICAL HOT VALVE	08.01.057	FS8 CYL.HOT VLV G=5.0 (FINISH GROUND)	Ø 5.00	0.0	TSF I64F + VPG059	TSF I64FP
		FS8 CYL.HOT VLV G=6.0 (FINISH GROUND)	Ø 6.00		TSF I66F + VPG059	TSF I66FP
		FS8 CYL.HOT VLV G=7.0 (FINISH GROUND)	Ø 7.00		TSF I68F + VPG059	TSF I68FP
		FS8 CYL.HOT VLV G=8.0 (FINISH GROUND)	Ø 8.00		TSF I70F + VPG060	TSF I70FP
		FS8 CYL.HOT VLV G=9.0 (FINISH GROUND)	Ø 9.00		TSF I72F + VPG060	TSF I72FP
EXTENDED CYLINDRICAL HOT VALVE	08.01.058	FS8 EXT. CYL.HOT VLV G=5.0 w/PILOT HOLE	Ø 5.00	50.0	TSF I65 + VPG059	TSF I65P
		FS8 EXT. CYL.HOT VLV G=5.0 w/8° TAPER	Ø 5.00		TSF I65F + VPG059	TSF I65FP
		FS8 EXT. CYL.HOT VLV G=6.0 w/PILOT HOLE	Ø 6.00		TSF I67 + VPG059	TSF I67P
		FS8 EXT. CYL.HOT VLV G=6.0 w/8° TAPER	Ø 6.00		TSF I67F + VPG059	TSF I67FP
		FS8 EXT. CYL.HOT VLV G=7.0 w/PILOT HOLE	Ø 7.00		TSF I69 + VPG059	TSF I69P
		FS8 EXT. CYL.HOT VLV G=7.0 w/8° TAPER	Ø 7.00		TSF I69F + VPG059	TSF I69FP
		FS8 EXT. CYL.HOT VLV G=8.0 w/PILOT HOLE	Ø 8.00		TSF I71 + VPG060	TSF I71P
		FS8 EXT. CYL.HOT VLV G=8.0 w/8° TAPER	Ø 8.00		TSF I71F + VPG060	TSF I71FP
		FS8 EXT. CYL.HOT VLV G=9.0 w/PILOT HOLE	Ø 9.00		TSF I73 + VPG060	TSF I73P
		FS8 EXT. CYL.HOT VLV G=9.0 w/8° TAPER	Ø 9.00		TSF I73F + VPG060	TSF I73FP

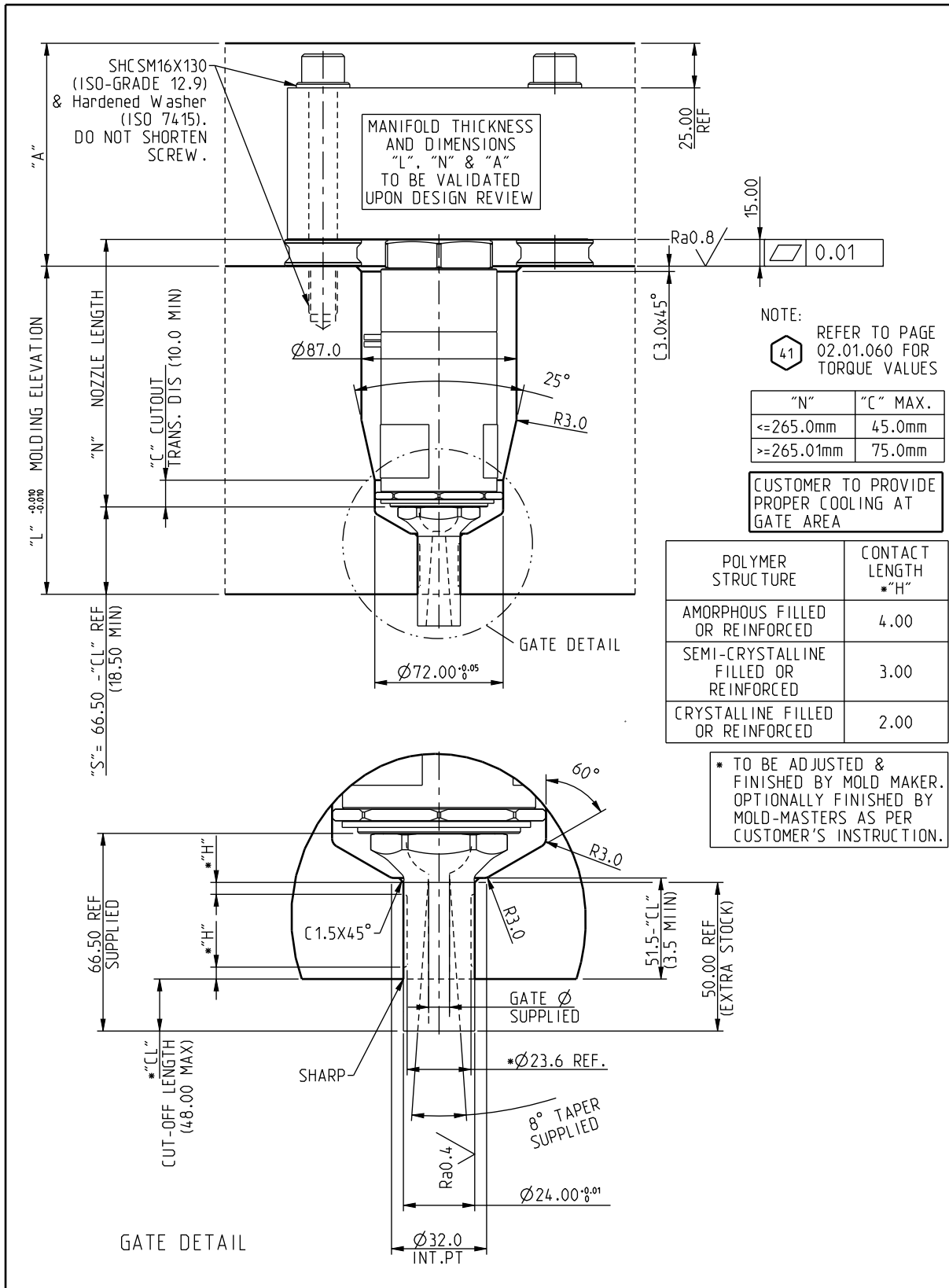
NOTE:

1. APPLIES TO ALL STANDARD NOZZLE LENGTH RANGES (81.0 - 976.0)
2. CUSTOM SEALS CAN BE MANUFACTURED WITH APPLICATION ENGINEER APPROVAL.

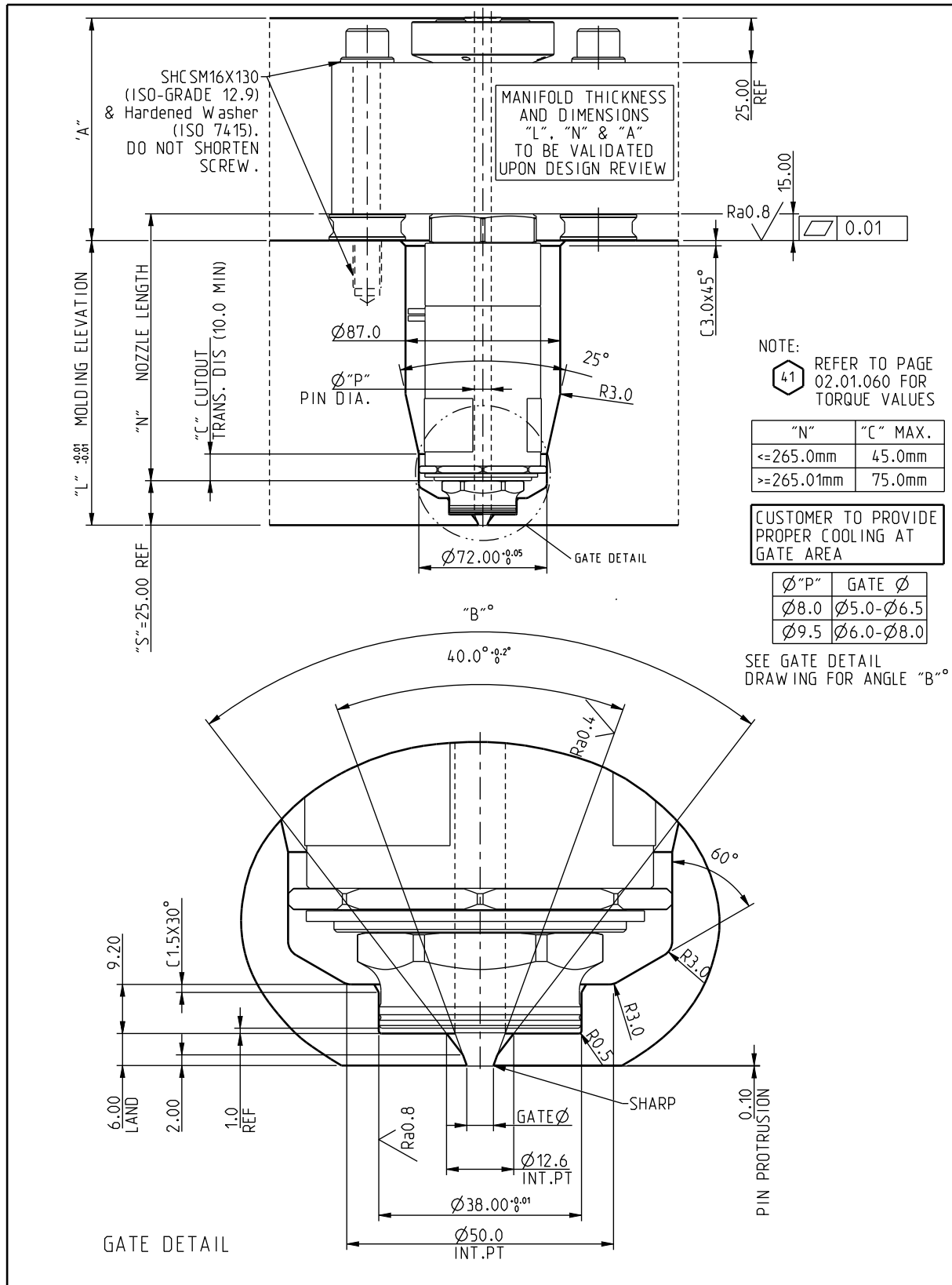


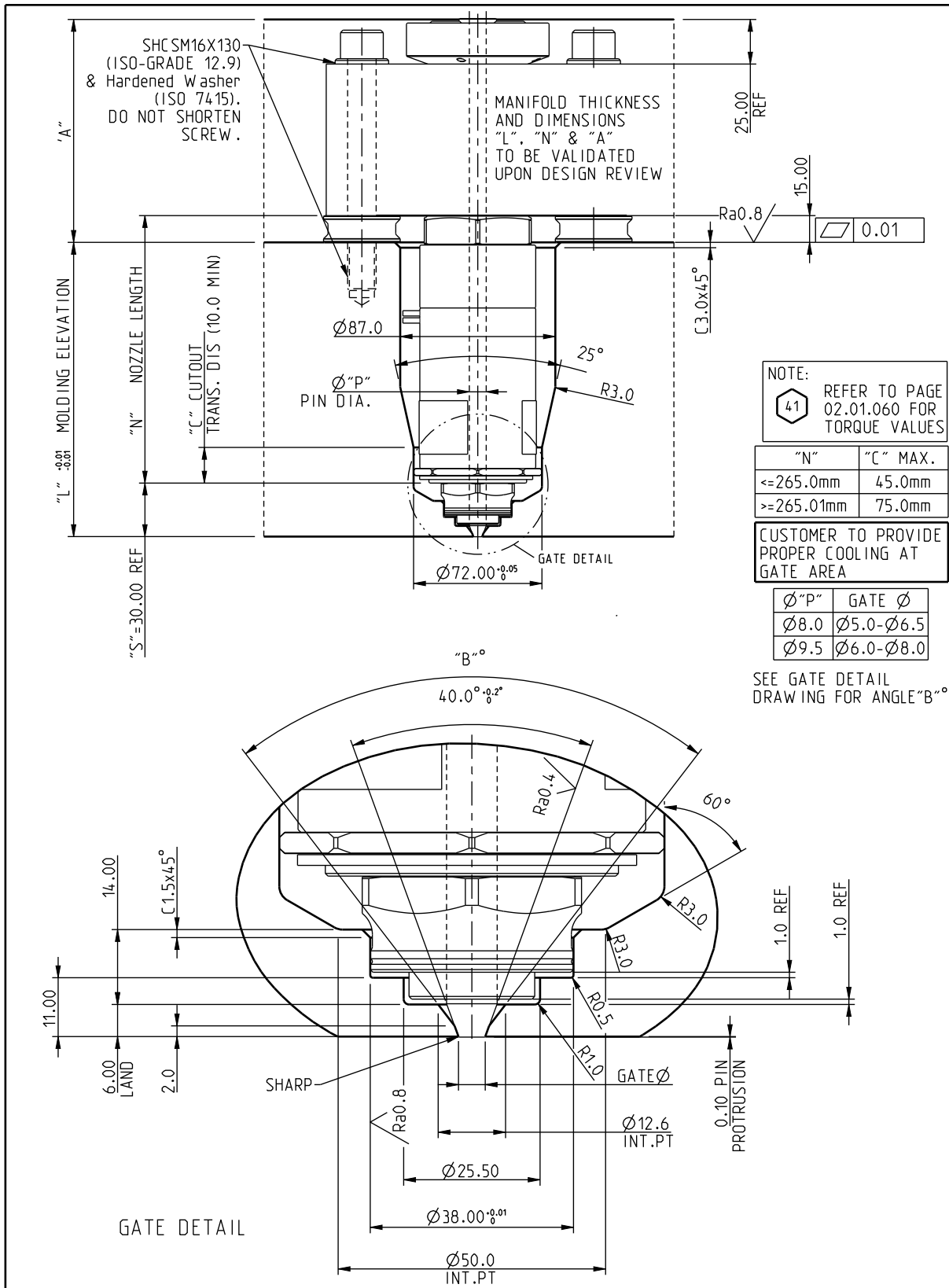


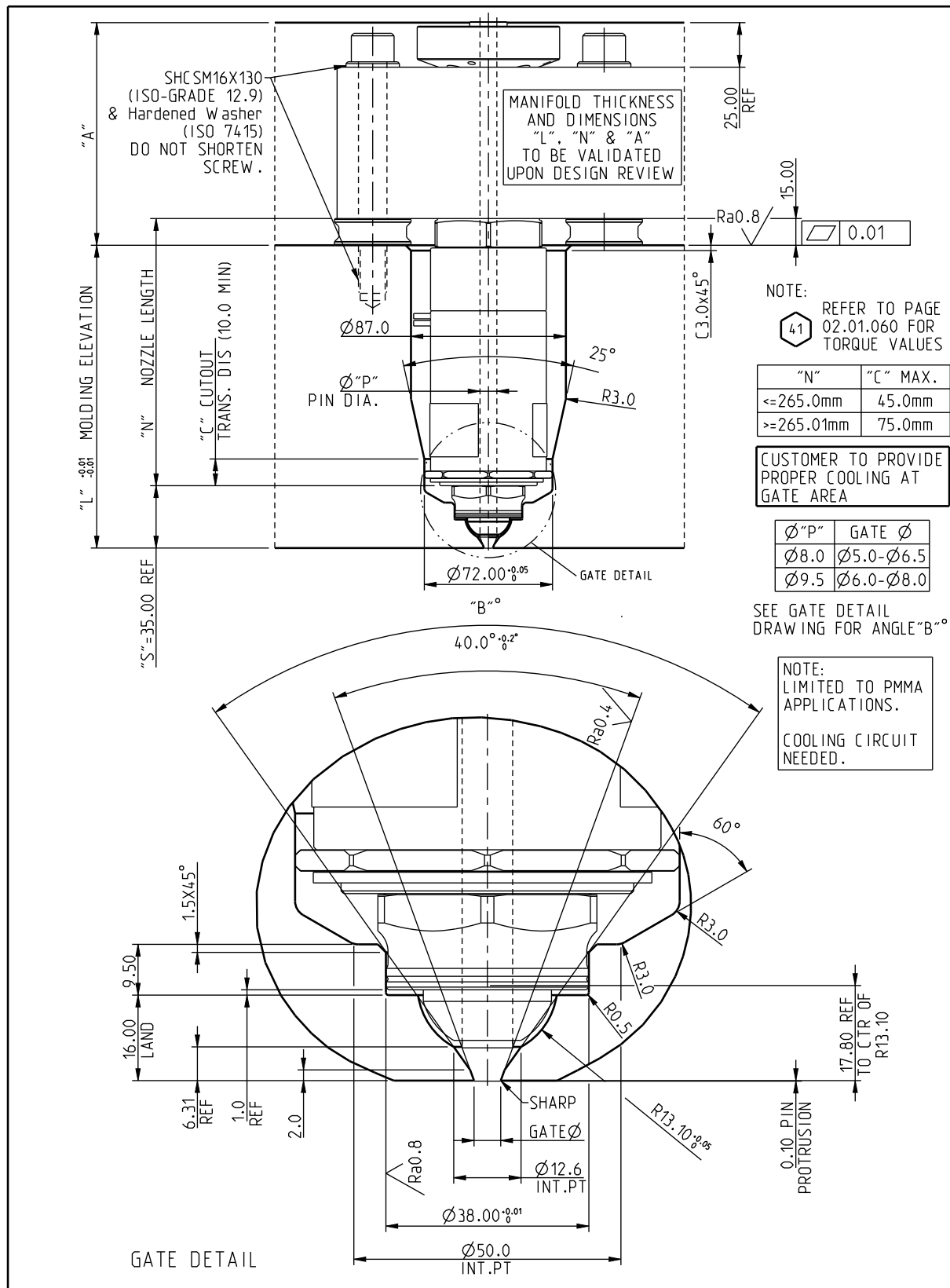


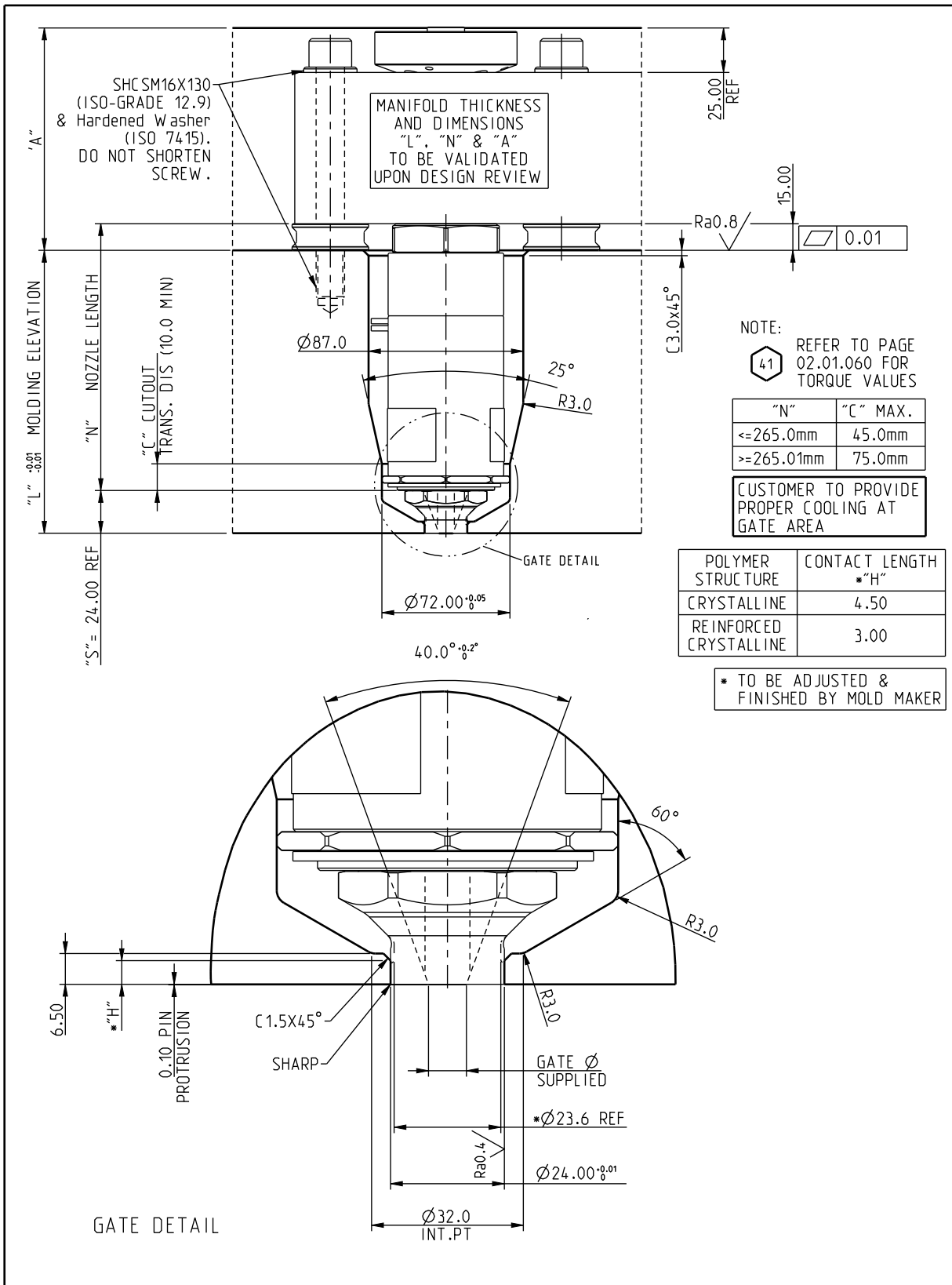


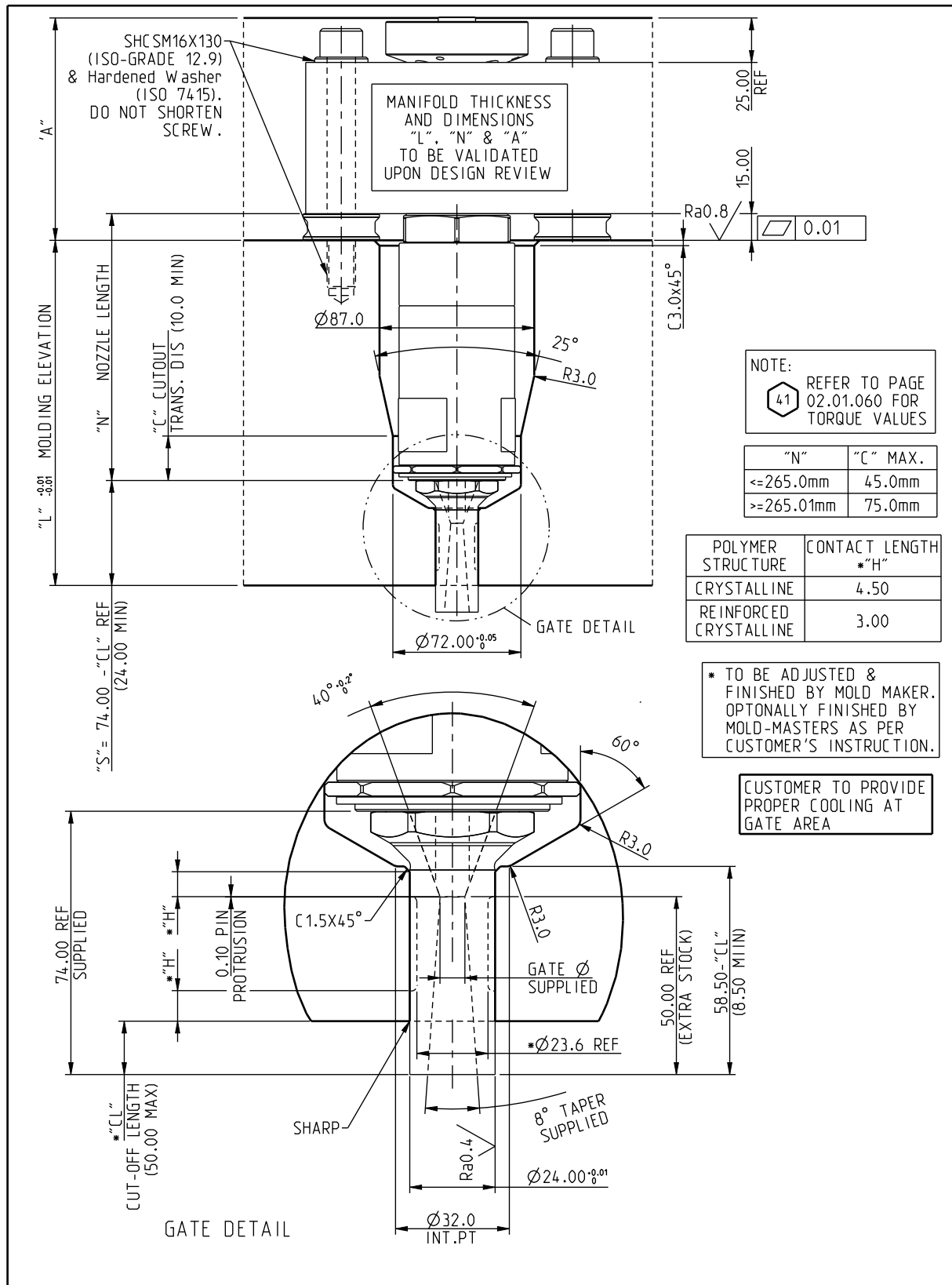
F8000 08

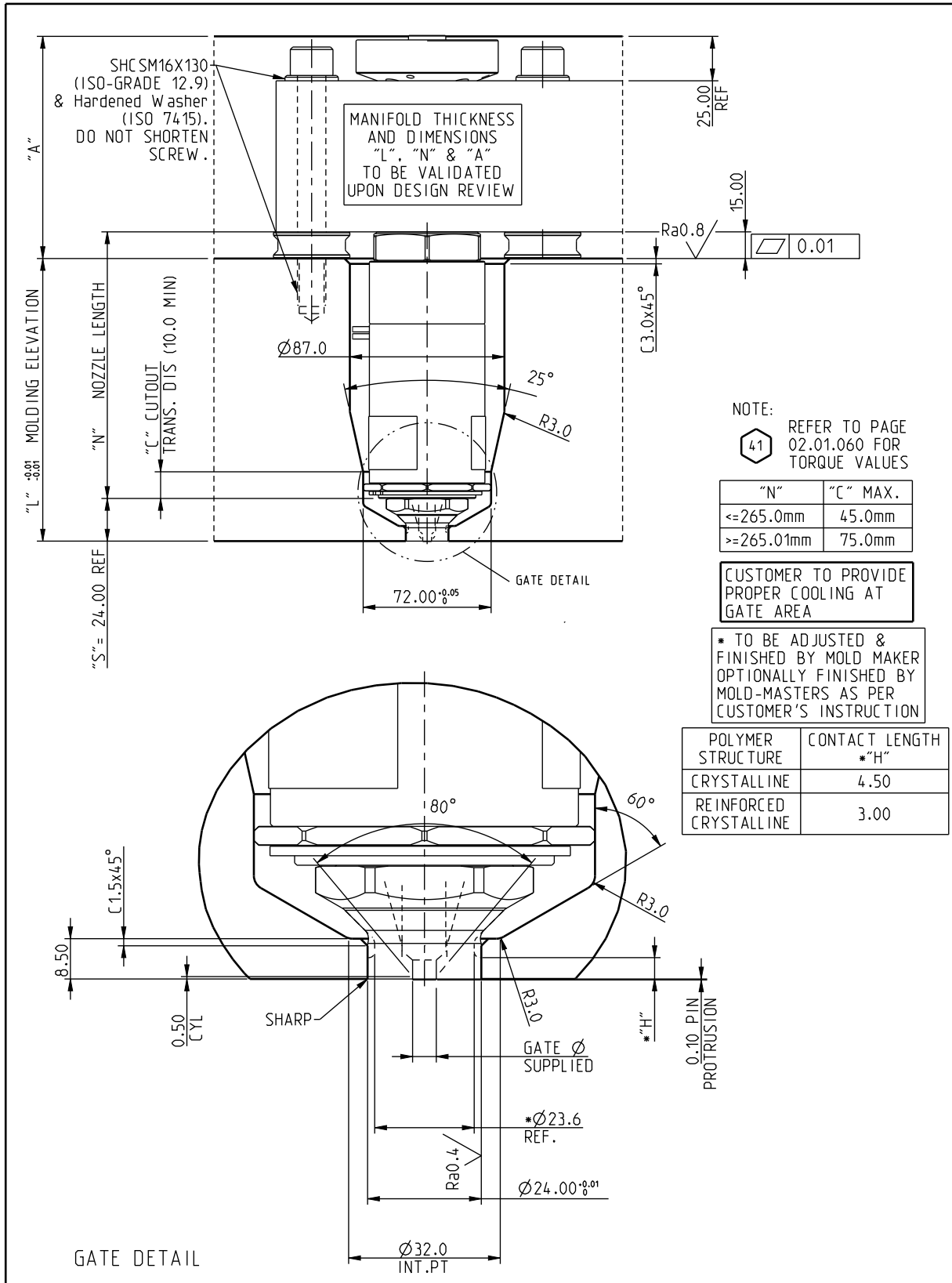


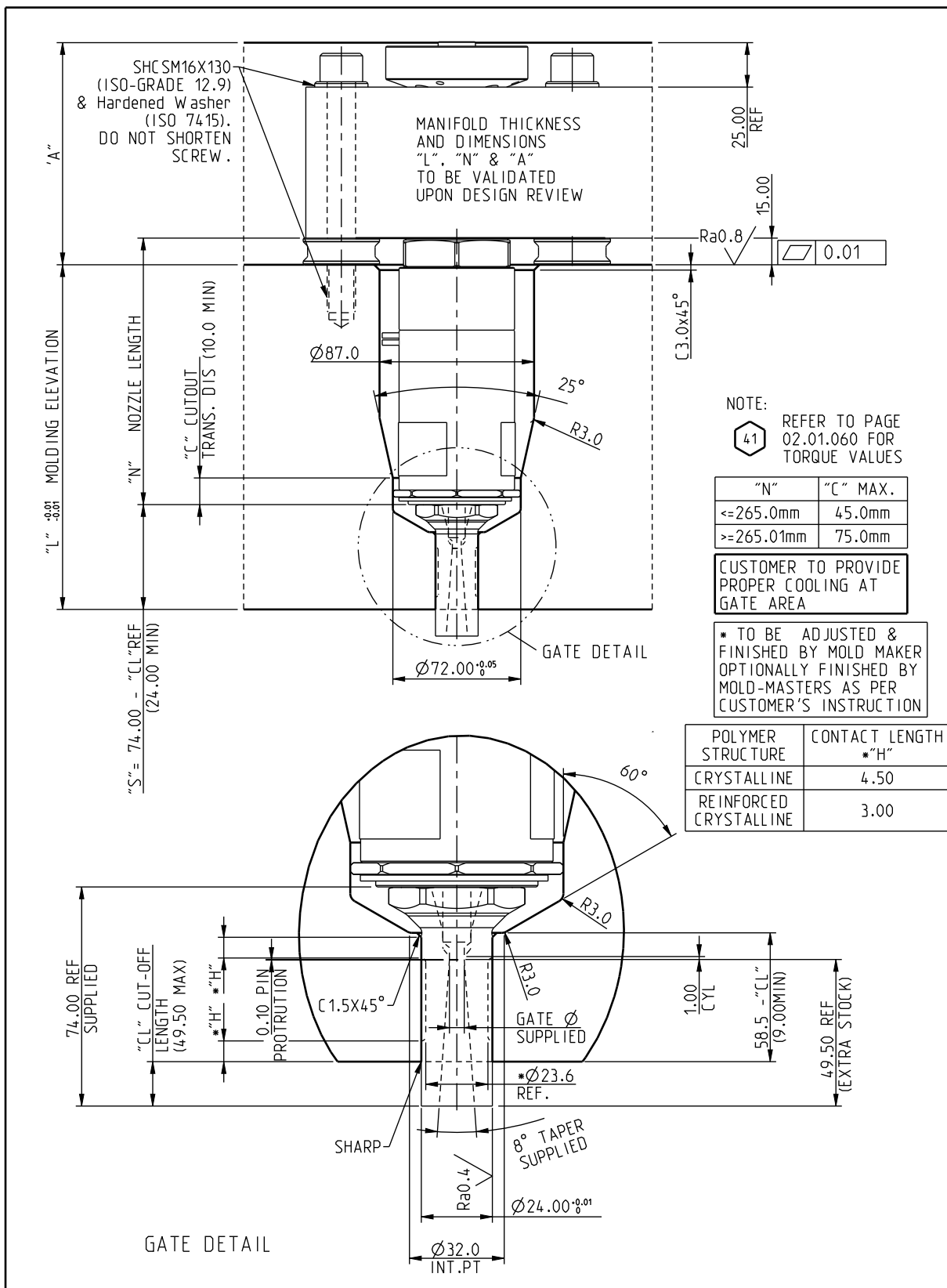


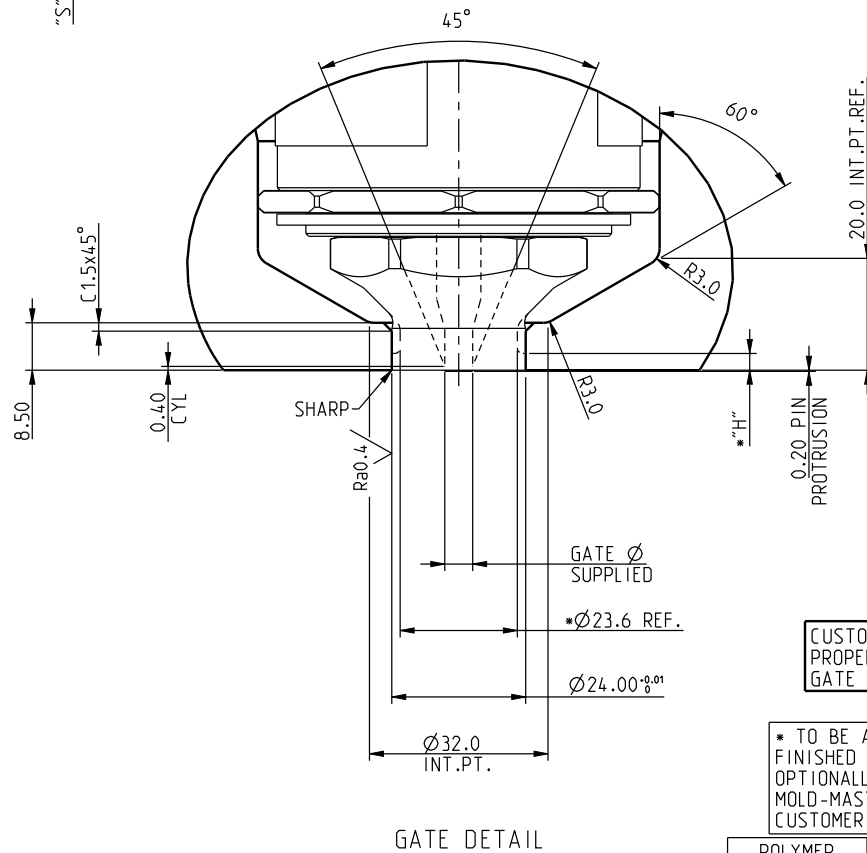
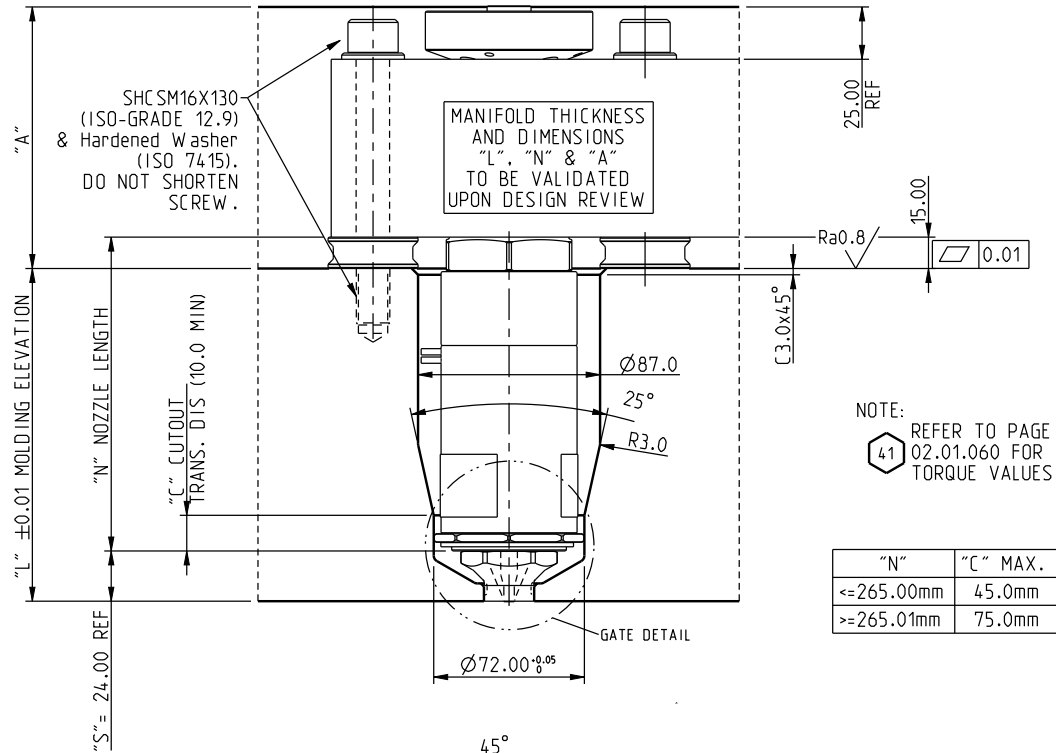


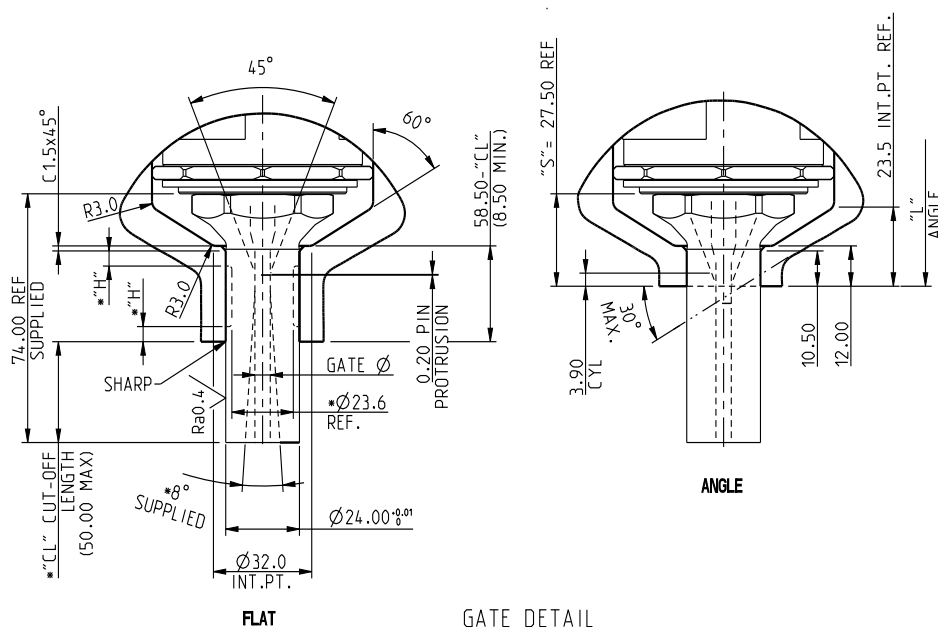
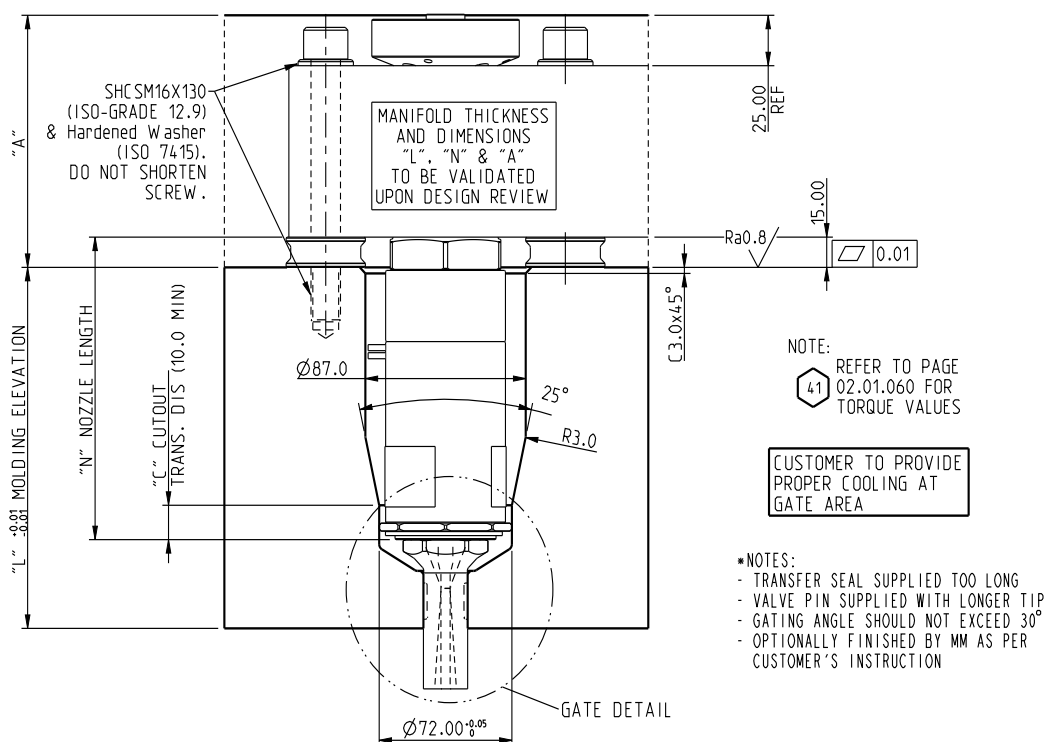




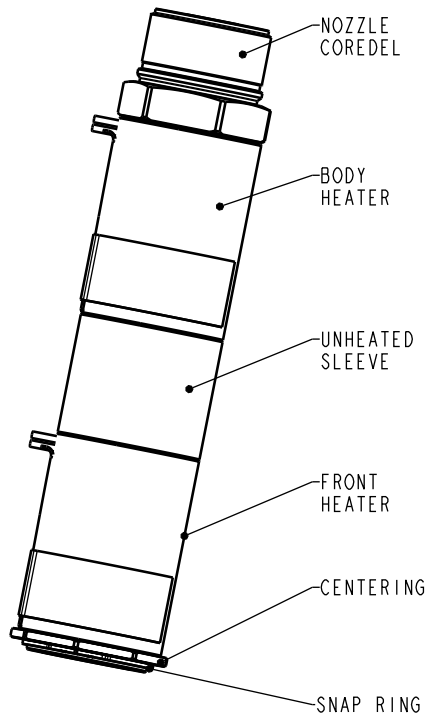








		POLYMER STRUCTURE	CONTACT LENGTH "H"
"N"	"C" MAX.	CRYSTALLINE	4.50
<=265.0mm	45.0mm	REINFORCED CRYSTALLINE	3.00
>265.01mm	75.0mm		



HEATER P/N	HIGH TEMP. (HT) OPTION AVAILABLE	CLASS	LENGTH [mm]	ID [mm]	OD [mm]	POWER @ 220V
HTRSLV050FASM07	YES	FRONT HEATER	50.0	Ø 55.0	Ø 65.0	1100
HTRSLV060FASM07	YES		60.0	Ø 55.0	Ø 65.0	1100
HTRSLV070FASM07	YES		70.0	Ø 55.0	Ø 65.0	1200
HTRSLV080FASM07	YES		80.0	Ø 55.0	Ø 65.0	1200
HTRSLV090FASM07	YES		90.0	Ø 55.0	Ø 65.0	1200
HTRSLV040RASM07	YES	BODY HEATER	40.0	Ø 55.0	Ø 65.0	700
HTRSLV060RASM07	YES		60.0	Ø 55.0	Ø 65.0	900
HTRSLV080RASM07	YES		80.0	Ø 55.0	Ø 65.0	900
HTRSLV120RASM07	YES		120.0	Ø 55.0	Ø 65.0	900
HTRSLV240RASM07	YES		240.0	Ø 55.0	Ø 65.0	1200

NOTE: FOR DURABILITY IN APPLICATIONS WITH PROCESS TEMPERATURES THAT EXCEED 260°C, HIGH TEMPERATURE "HT" HEATERS ARE RECOMMENDED. ADD "HT" TO STD HEATER P/N WHERE OPTION EXISTS. EX: HTRSLV050FASM07HT

NOZZLE CONFIGURATION

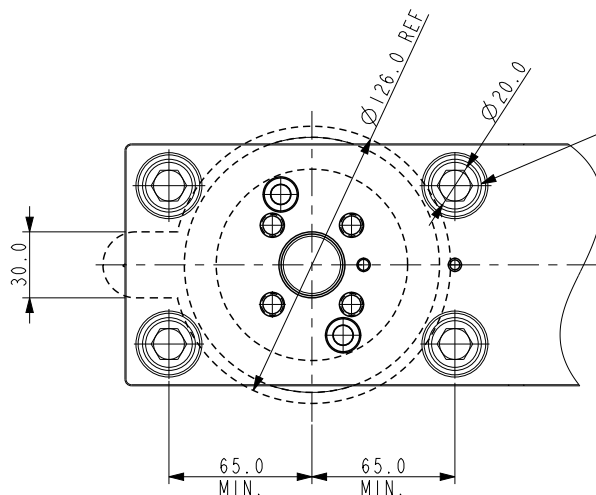
NOZZLE LENGTH "N" [mm]	BODY HEATER (HTRSLV-)	UNHEATED SLEEVE [mm]	BODY HEATER (HTRSLV-)	UNHEATED SLEEVE [mm]	BODY HEATER (HTRSLV-)	UNHEATED SLEEVE [mm]	BODY HEATER (HTRSLV-)	UNHEATED SLEEVE [mm]	FRONT HEATER	TOTAL POWER [W] @ 220V
81.00-91.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.0-15.0	050FASM07	1100
91.01-101.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.0-15.0	060FASM07	1100
101.01-111.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.0-15.0	070FASM07	1200
111.01-121.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.0-15.0	080FASM07	1200
121.01-136.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.0-20.0	090FASM07	1200
136.01-146.00	N/A	N/A	N/A	N/A	N/A	N/A	040RASM07	20.0-30.0	050FASM07	1800
146.01-156.00	N/A	N/A	N/A	N/A	N/A	N/A	040RASM07	20.0-30.0	060FASM07	1800
156.01-166.00	N/A	N/A	N/A	N/A	N/A	N/A	060RASM07	20.0-30.0	050FASM07	2000
166.01-176.00	N/A	N/A	N/A	N/A	N/A	N/A	060RASM07	20.0-30.0	060FASM07	2000
176.01-186.00	N/A	N/A	N/A	N/A	N/A	N/A	060RASM07	20.0-30.0	070FASM07	2100

SEE PAGE 08.01.061 FOR MORE NOZZLE OPTIONS

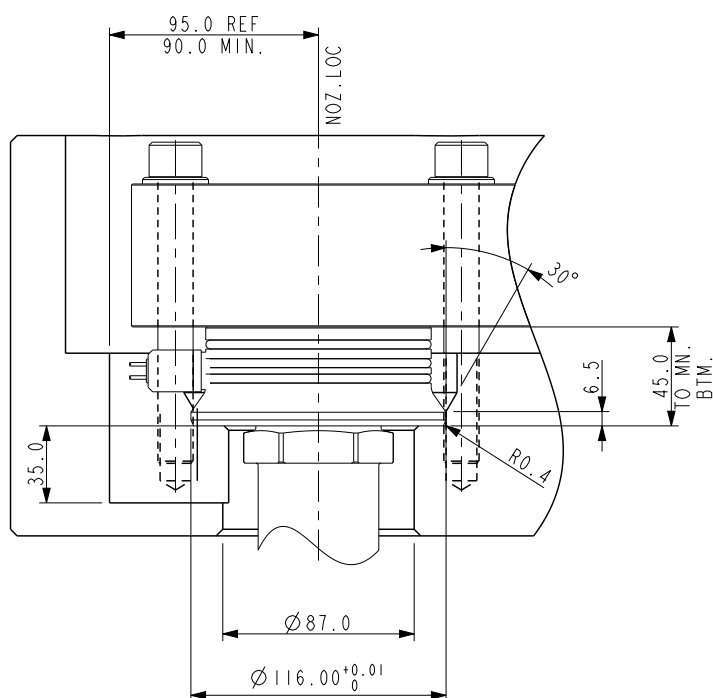


NOZZLE CONFIGURATION (CONTINUED)

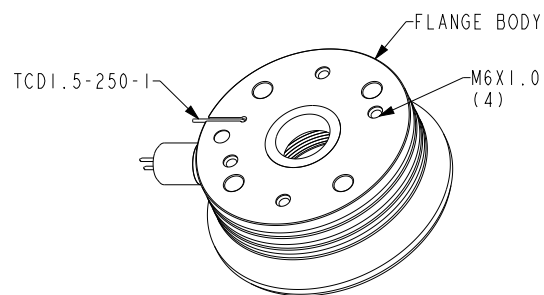
NOZZLE LENGTH "N" [mm]	BODY HEATER (HTRSLV*)	UNHEATED SLEEVE [mm]	BODY HEATER (HTRSLV*)	UNHEATED SLEEVE [mm]	BODY HEATER (HTRSLV*)	UNHEATED SLEEVE [mm]	BODY HEATER (HTRSLV*)	UNHEATED SLEEVE [mm]	FRONT HEATER	TOTAL POWER [W] @ 220V
186.01-196.00	N/A	N/A	N/A	N/A	N/A	N/A	080RASM07	20.0-30.0	060FASM07	2000
196.01-206.00	N/A	N/A	N/A	N/A	N/A	N/A	080RASM07	20.0-30.0	070FASM07	2100
206.01-216.00	N/A	N/A	N/A	N/A	N/A	N/A	080RASM07	20.0-30.0	080FASM07	2100
216.01-226.00	N/A	N/A	N/A	N/A	N/A	N/A	080RASM07	20.0-30.0	090FASM07	2100
226.01-236.00	N/A	N/A	N/A	N/A	N/A	N/A	120RASM07	20.0-30.0	060FASM07	2000
236.01-246.00	N/A	N/A	N/A	N/A	N/A	N/A	120RASM07	20.0-30.0	070FASM07	2100
246.01-256.00	N/A	N/A	N/A	N/A	N/A	N/A	120RASM07	20.0-30.0	080FASM07	2100
256.01-276.00	N/A	N/A	N/A	N/A	060RASM07	20.0-30.0	060RASM07	20.0-30.0	070FASM07	3000
276.01-296.00	N/A	N/A	N/A	N/A	080RASM07	20.0-30.0	080RASM07	20.0-30.0	050FASM07	2900
296.01-316.00	N/A	N/A	N/A	N/A	080RASM07	20.0-30.0	080RASM07	20.0-30.0	070FASM07	3000
316.01-336.00	N/A	N/A	N/A	N/A	060RASM07	20.0-30.0	120RASM07	20.0-30.0	070FASM07	3000
336.01-356.00	N/A	N/A	N/A	N/A	080RASM07	20.0-30.0	120RASM07	20.0-30.0	070FASM07	3000
356.01-376.00	N/A	N/A	N/A	N/A	120RASM07	20.0-30.0	120RASM07	20.0-30.0	050FASM07	2900
376.01-396.00	N/A	N/A	N/A	N/A	120RASM07	20.0-30.0	120RASM07	20.0-30.0	070FASM07	3000
396.01-416.00	N/A	N/A	N/A	N/A	040RASM07	20.0-30.0	240RASM07	20.0-30.0	050FASM07	3000
416.01-436.00	N/A	N/A	N/A	N/A	040RASM07	20.0-30.0	240RASM07	20.0-30.0	070FASM07	3100
436.01-456.00	N/A	N/A	N/A	N/A	080RASM07	20.0-30.0	240RASM07	20.0-30.0	050FASM07	3200
456.01-476.00	N/A	N/A	N/A	N/A	080RASM07	20.0-30.0	240RASM07	20.0-30.0	070FASM07	3300
476.01-506.00	N/A	N/A	080RASM07	20.0-30.0	120RASM07	20.0-30.0	120RASM07	20.0-30.0	070FASM07	3900
506.01-536.00	N/A	N/A	120RASM07	20.0-30.0	120RASM07	20.0-30.0	120RASM07	20.0-30.0	060FASM07	3800
536.01-566.00	N/A	N/A	080RASM07	20.0-30.0	080RASM07	20.0-30.0	240RASM07	20.0-30.0	050FASM07	4100
566.01-596.00	N/A	N/A	060RASM07	20.0-30.0	120RASM07	20.0-30.0	240RASM07	20.0-30.0	060FASM07	4100
596.01-626.00	N/A	N/A	080RASM07	20.0-30.0	120RASM07	20.0-30.0	240RASM07	20.0-30.0	070FASM07	4200
626.01-656.00	N/A	N/A	120RASM07	20.0-30.0	120RASM07	20.0-30.0	240RASM07	20.0-30.0	060FASM07	4100
656.01-686.00	N/A	N/A	040RASM07	20.0-30.0	240RASM07	20.0-30.0	240RASM07	20.0-30.0	050FASM07	4700
686.01-716.00	N/A	N/A	060RASM07	20.0-30.0	240RASM07	20.0-30.0	240RASM07	20.0-30.0	060FASM07	4700
716.01-746.00	N/A	N/A	080RASM07	20.0-30.0	240RASM07	20.0-30.0	240RASM07	20.0-30.0	070FASM07	4500
746.01-776.00	N/A	N/A	120RASM07	20.0-30.0	240RASM07	20.0-30.0	240RASM07	20.0-30.0	060FASM07	4400
776.01-816.00	040RASM07	20.0-30.0	080RASM07	20.0-30.0	240RASM07	20.0-30.0	240RASM07	20.0-30.0	070FASM07	5200
816.01-856.00	080RASM07	20.0-30.0	080RASM07	20.0-30.0	240RASM07	20.0-30.0	240RASM07	20.0-30.0	070FASM07	5400
856.01-896.00	080RASM07	20.0-30.0	120RASM07	20.0-30.0	240RASM07	20.0-30.0	240RASM07	20.0-30.0	070FASM07	5400
896.01-936.00	120RASM07	20.0-30.0	120RASM07	20.0-30.0	240RASM07	20.0-30.0	240RASM07	20.0-30.0	070FASM07	5400
936.01-976.00	120RASM07	25.0-35.0	120RASM07	25.0-35.0	240RASM07	25.0-35.0	240RASM07	25.0-35.0	090FASM07	5400
976.01-1000.00	040RASM07	25.0-31.0	240RASM07	25.0-31.0	240RASM07	25.0-31.0	240RASM07	25.0-31.0	090FASM07	5500



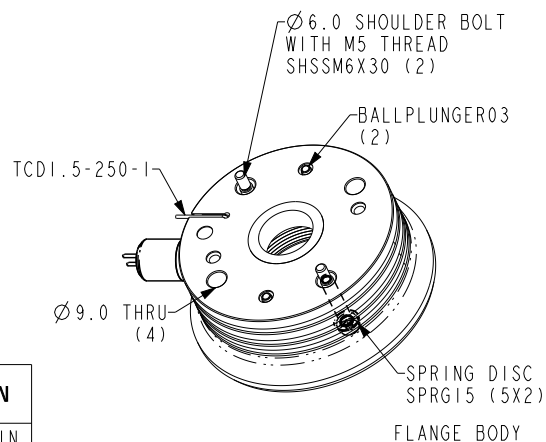
NOTE: 4X SHCSM16X130 CLASS12.9
AND HARD M16 WASHERS (ISO 7415)
SUPPLIED BY MOLD-MASTERS.



NON DROP-IN VERSION

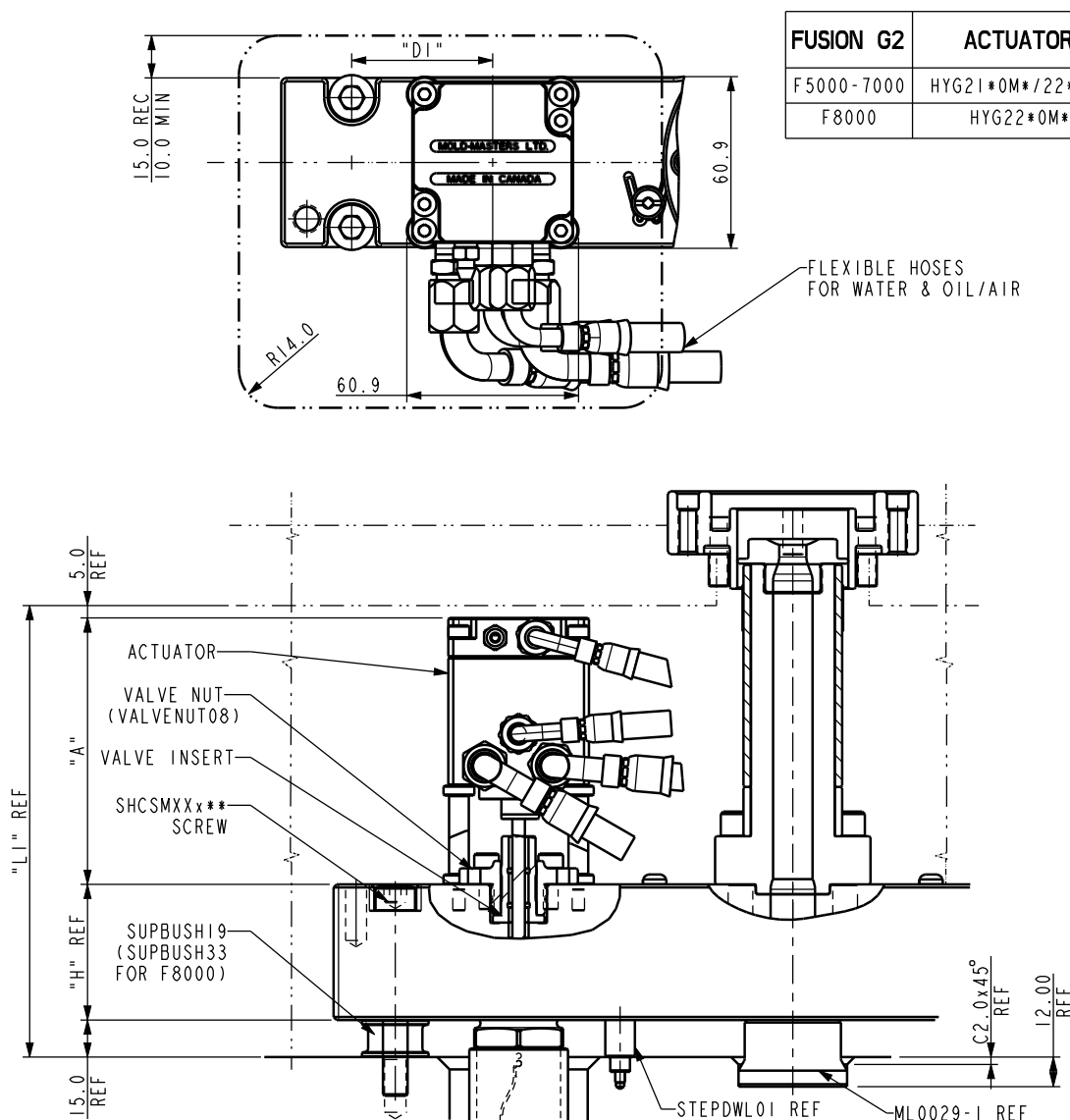


DROP-IN VERSION



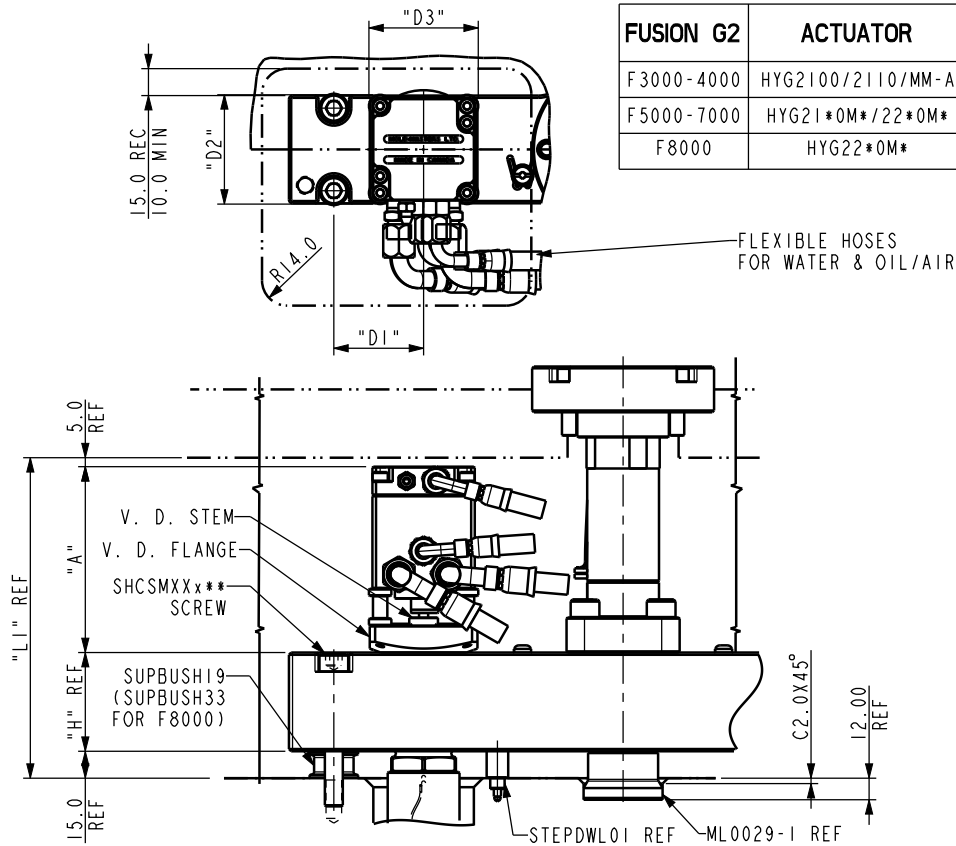
FLANGE NOZZLE	FLANGE BODY	RUNNER DIA. [MM]	WATTAGE [W]	APPLICATION
FLANGEFS15P	FLANGEFS15	Ø22.0	1650W	NON DROP-IN
FLANGEFS15PI	FLANGEFS15	Ø22.0	1650W	DROP-IN
FLANGEFS16P	FLANGEFS16	Ø26.0	1650W	NON DROP-IN
FLANGEFS16PI	FLANGEFS16	Ø26.0	1650W	DROP-IN

*CONTACT MOLD-MASTERS APPLICATION ENGINEER FOR FLANGE APPLICATION.



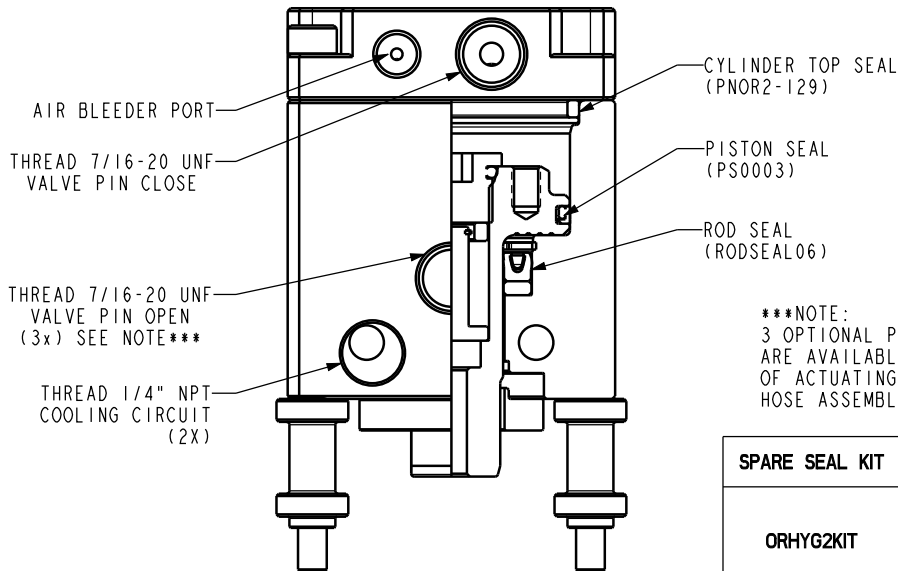
FUSION G2	ACTUATOR	"DI"
F5000-7000	HYG21*0M*/22*0M*	50.0
F8000	HYG22*0M*	65.0

FUSION G2	ACTUATOR		STROKE	" H " REF	" A " REF	" L1 " REF	VALVE INSERT	SCREW
	WITH SPACER	WITH SPRING						
F5000	HYG2100MH	HYG2110MH	12.5	50.00	88.5	158.5	VI0018-5.0	SHCSM10X70
F5000	HYG2100MHAR	HYG2110MHAR		50.00	108.0	178.0	VI0018-5.0	SHCSM10X70
F6000	HYG2100MI	HYG2110MI		55.00	88.5	163.5	VI0018-8.0	SHCSM10X75
F6000	HYG2100MIAR	HYG2110MIAR		55.00	108.0	183.0	VI0018-8.0	SHCSM10X75
F6000 & F7000	HYG2200MA	HYG2210MA	25.0	65.00	113.5	198.5	VI0018-8.0	SHCSM10X90
F6000 & F7000	HYG2200MAAR	HYG2210MAAR		65.00	136.0	221.0	VI0018-8.0	SHCSM10X90
F8000	HYG2200MA	HYG2210MA		85.00	113.5	218.5	VI0018-8.0	SHCSM16X130
F8000	HYG2200MAAR	HYG2210MAAR		85.00	136.0	241.0	VI0018-8.0	SHCSM16X130
F8000	HYG2200MB	HYG2210MB		85.00	113.5	218.5	VI0018-9.5	SHCSM16X130
F8000	HYG2200MBAR	HYG2210MBAR		85.00	136.0	241.0	VI0018-9.5	SHCSM16X130



FUSION G2	ACTUATOR	"D1"	"D2"	"D3"
F3000-4000	HYG2100/2110/MM-A	50.0	48.0	38.0
F5000-7000	HYG21*0M*/22*0M*	50.0	60.9	60.9
F8000	HYG22*0M*	65.0	60.9	60.9

FUSION G2	ACTUATOR		STROKE	" H " REF	" A " REF	" L1 " REF	V. D. STEM (BLANK, TO BE FINISHED)	V. D. FLANGE	SCREW
	WITH SPACER	WITH SPRING							
F3000	HYG2100ML-A	HYG2110ML-A	10.0	40.00	86.0	146.0	VDSTEM046B	VDFLANGE014	SHCSM10X70
F3000	HYG2100MLAR-A	HYG2110MLAR-A		40.00	101.0	161.0	VDSTEM046B		SHCSM10X70
F3000	HYG2100MM-A	N/A		40.00	65.0	125.0	VDSTEM046B	VDFLANGE015	SHCSM10X70
	N/A	HYG2110MM-A		40.00	72.5	132.5	VDSTEM046B		SHCSM10X70
F4000	HYG2100ML-A	HYG2110ML-A		40.00	86.0	146.0	VDSTEM047B	VDFLANGE014	SHCSM10X70
F4000	HYG2100MLAR-A	HYG2110MLAR-A		40.00	101.0	161.0	VDSTEM047B		SHCSM10X70
F4000	HYG2100MM-A	N/A	12.5	40.00	65.0	125.0	VDSTEM047B	VDFLANGE015	SHCSM10X70
	N/A	HYG2110MM-A		40.00	72.5	132.5	VDSTEM047B		SHCSM10X70
F5000	HYG2100MH-A	HYG2110MH-A		50.00	88.5	158.5	VDSTEM010B	VDFLANGE004	SHCSM10X70
F5000	HYG2100MHAR-A	HYG2110MHAR-A		50.00	103.5	173.5	VDSTEM010B		SHCSM10X70
F6000	HYG2100MJ-A	HYG2110MJ-A		55.00	88.5	163.5	VDSTEM011B		SHCSM10X75
F6000	HYG2100MJAR-A	HYG2110MJAR-A		55.00	103.5	178.5	VDSTEM011B		SHCSM10X75
F6000	HYG2100MI-A	HYG2110MI-A		55.00	88.5	163.5	VDSTEM012B		SHCSM10X75
F6000	HYG2100MIAR-A	HYG2110MIAR-A		55.00	103.5	178.5	VDSTEM012B		SHCSM10X75
F7000	HYG2200MA-A	HYG2210MA-A	25.0	65.00	116.0	201.0	VDSTEM013B	VDFLANGE005	SHCSM10X90
F7000	HYG2200MAAR-A	HYG2210MAAR-A		65.00	135.5	220.5	VDSTEM013B		SHCSM10X90
F8000	HYG2200MA-A	HYG2210MA-A		85.00	124.0	229.0	VDSTEM066B	VDFLANGE022	SHCSM16X130
F8000	HYG2200MAAR-A	HYG2210MAAR-A		85.00	143.5	248.5	VDSTEM066B		SHCSM16X130
F8000	HYG2200MB-A	HYG2210MB-A		85.00	124.0	229.0	VDSTEM067B		SHCSM16X130
F8000	HYG2200MBAR-A	HYG2210MBAR-A		85.00	143.5	248.5	VDSTEM067B		SHCSM16X130



***NOTE:
3 OPTIONAL PLUMPING PORTS
ARE AVAILABLE ON 3 SIDES
OF ACTUATING UNIT TO SIMPLIFY
HOSE ASSEMBLY.

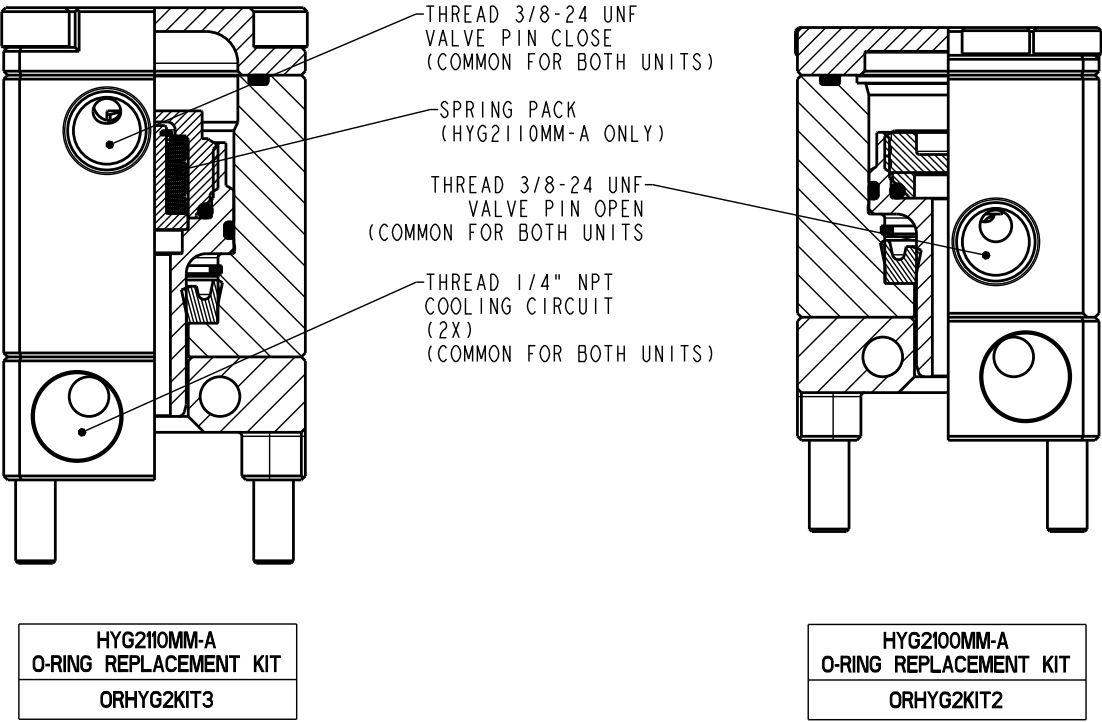
SPARE SEAL KIT	COMPONENTS INCLUDED	
ORHYG2KIT	PNOR2-129	I
	PS0003	I
	RODSEAL06	I

* SEE SYSTEM HYDRAULIC DRAWING FOR MORE DETAILS

FUSION G2	ACTUATOR		STROKE	PIN SIZE	RECOMMENDED MIN. CLEARANCE BETWEEN ACTUATORS AND INLETS
	WITH SPACER	WITH SPRING			
F 3000	HYG2100ML**	HYG2110ML**	10.0	3.0	ACTUATORS: 65.0 X 65.0 IE13-IE15: 65.0 X 65.0 IE29-IE33: 75.0 X 75.0
F 3000	HYG2100MLAR**	HYG2110MLAR**		3.0	
F 4000	HYG2100ML**	HYG2110ML**		3.0	
F 4000	HYG2100MLAR**	HYG2110MLAR**		3.0	
F 5000	HYG2100MH**	HYG2110MH**	12.5	5.0	ACTUATORS: 65.0 X 65.0 IE13-IE15: 65.0 X 65.0 IE29-IE33: 75.0 X 75.0
F 5000	HYG2100MHAR**	HYG2110MHAR**		5.0	
F 6000	HYG2100MJAR**	HYG2110MJAR**		6.3	
F 6000	HYG2100MJAR**	HYG2110MJAR**		6.3	
F 6000	HYG2100MI**	HYG2110MI**		8.0	
F 6000	HYG2100MIAR**	HYG2110MIAR**		8.0	
F6000, F7000 & F8000	HYG2200MA**	HYG2210MA**	25.0	8.0	ACTUATORS: 65.0 X 65.0 IE13-IE15: 65.0 X 65.0 IE29-IE33: 75.0 X 75.0 IE35-IE36: 75.0 X 75.0
F6000, F7000 & F8000	HYG2200MAAR**	HYG2210MAAR**		8.0	
F8000	HYG2200MB**	HYG2210MB**		9.5	
F8000	HYG2200MBAR**	HYG2210MBAR**		9.5	

NOTE:

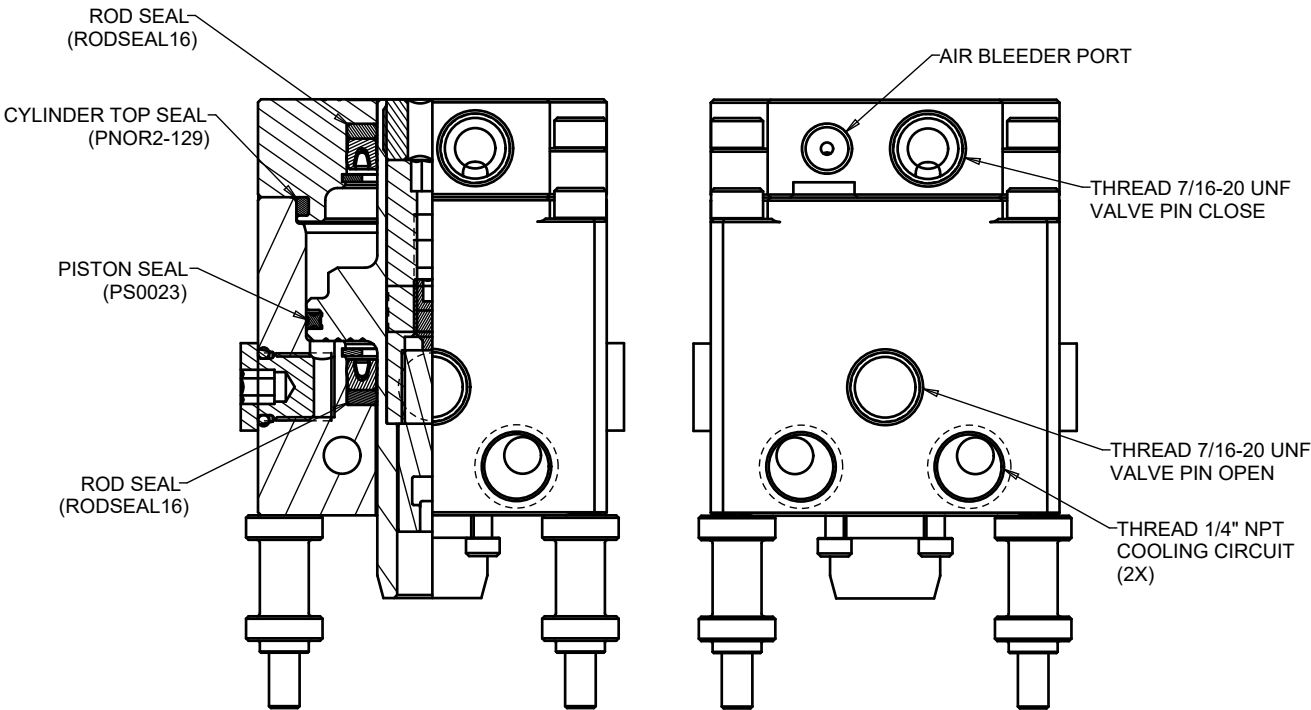
1. ALL CYLINDERS WITH ACRONYM "AR" ARE WITH ANTI-ROTATION FUNCTION - HIGHER ASSEMBLY
2. USE HYDRAULIC ACTUATORS WITH SPRING PACK FOR CONICAL GATES, FOR BETTER GATE STEEL PROTECTION
3. RECOMMEND WORKING PRESSURE: REFER TO CUSTOMER'S HOTRUNNER SYSTEM GENERAL ASSEMBLY DRAWING
4. TO ENSURE PROPER COOLING ON ACTUATORS, THE RECOMMENDED EXIT TEMPERATURE OF COOLING WATER CITCUIT IS NOT TO EXCEED 60°C
5. VALVE PIN POSITION MONITORING SOLUTION IS AVAILABLE FOR CUSTOM DESIGN
6. 25mm STROKE ACTUATORS CAN BE USED FOR F6000 AS WELL, JUST NEED TO SELECT THE PROPER VALVE DISK.



* SEE SYSTEM HYDRAULIC DRAWING FOR MORE DETAILS

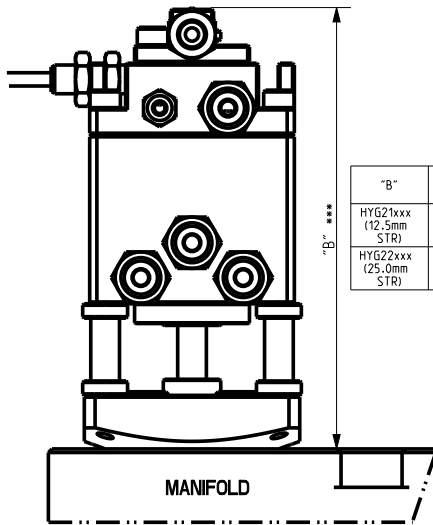
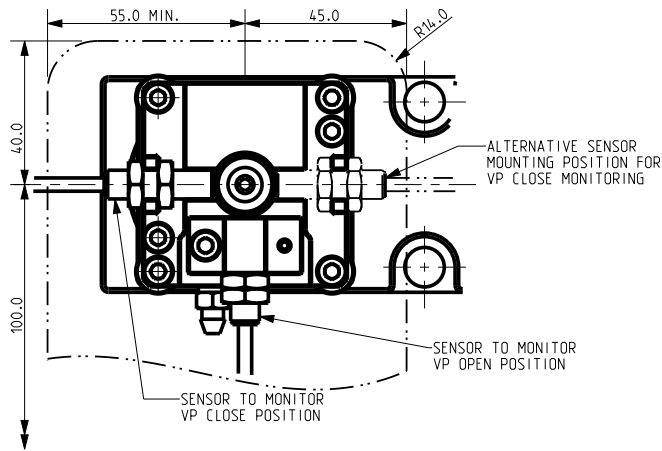
FUSION G2	ACTUATOR		STROKE	PIN SIZE	RECOMMENDED MIN. CLEARANCE BETWEEN ACTUATORS AND INLETS
	w/SPRING PACK	w/oSPRING PACK			
F 3000	HYG2110MM-A	HYG2100MM-A	10.0	3.0	ACTUATORS: 43.0 X 53.0 1E08-1E09: 48.0 X 53.0 1E11-1E12: 48.0 X 53.0
F 4000					

- NOTE:
- 1. USE HYDRAULIC ACTUATORS WITH SPRING PACK FOR CONICAL GATES, FOR BETTER GATE STEEL PROTECTION
 - 2. RECOMMEND WORKING PRESSURE: REFER TO MAIN SYSTEM GENERAL ASSEMBLY DRAWING
 - 3. TO ENSURE PROPER COOLING ON ACTUATORS, THE RECOMMENDED EXIT TEMPERATURE OF COOLING WATER CIRCUIT IS NOT TO EXCEED 60°C



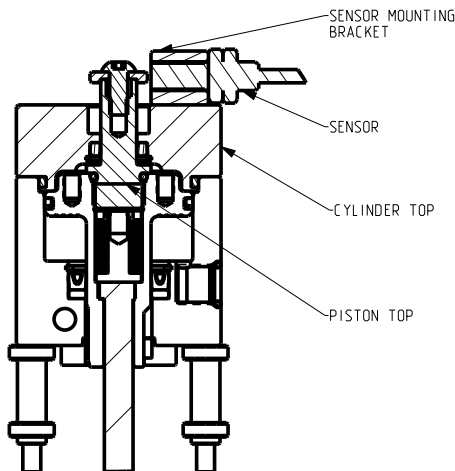
SPARE SEAL KIT	COMPONENTS INCLUDED	
ORHYG2KIT4	PNOR2-129	1
	PS0023	1
	RODSEAL16	2
	RGN130028	2

FUSION G2	ACTUATOR	STROKE	PIN SIZE	RECOMMENDED MIN. CLEARANCE BETWEEN ACTUATORS AND INLETS
F4000	HYG2120MGAR-A	12.5	3.0	ACTUATORS: 65.0 X 65.0 IE13 - IE15: 65.0 X 65.0 IE29 - IE33: 75.0 X 75.0
F5000	HYG2120MHAR-A	12.5	5.0	ACTUATORS: 65.0 X 65.0 IE13 - IE15: 65.0 X 65.0 IE29 - IE33: 75.0 X 75.0
F5000 F6000	HYG2120MJAR-A	12.5	6.3	ACTUATORS: 65.0 X 65.0 IE13 - IE15: 65.0 X 65.0 IE29 - IE33: 75.0 X 75.0



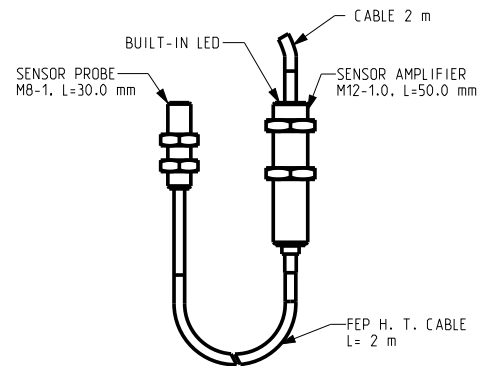
"B"	CLOSE POS.	OPEN&CLOSE POS.
HYG21xxx (12.5mm STR)	"A"=16.0	"A"=19.0
HYG22xxx (25.0mm STR)	"A"=28.0	"A"=31.0

***. ACCORDING TO THE SELECTED STANDARD PACKAGE, REFER BACK TO PG.08.01.010&011 FOR VALUE "A".



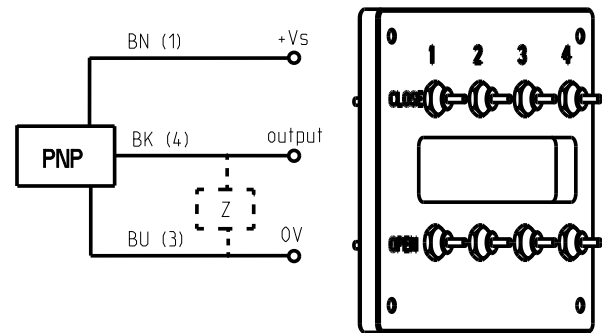
* PACKAGES SHOWN WITH HATCH.

HIGH OPERATING TEMPERATURE INDUCTIVE SENSOR (PNP,NO)



NOTE:

- FLUSH MOUNTING TYPE SENSOR, NORMAL SENSING DISTANCE S_n : 1.5mm
- ONLY THE SENSOR PROBE AND THE 2 METER FEP CABLE ARE DESIGNED FOR HIGH TEMPERATURE ENVIRONMENT
- AMPLIFIER MOUNTING/RECESSING POSITION MUST BE CONSIDERED TO BE FAR AWAY FROM HEAT SOURCE DURING SYSTEM DESIGN
- MAXIMUM INSTALLATION TORQUE: M8 = 10 Nm; M12 = 20Nm
- THERE IS A BUILT-IN LED LIGHT ON THE AMPLIFIER END FACE TO SHOW THE STATUS OF THE SENSOR. A DISPLAY PLATE/BOX MUST BE DESIGNED FOR AMPLIFIER MOUNTING IF LED DISPLAY FEATURE IS REQUIRED. OR, THE AMPLIFIER CAN BE RECESSED IN WIRE CHANNEL OR ELECTRICAL BOX.

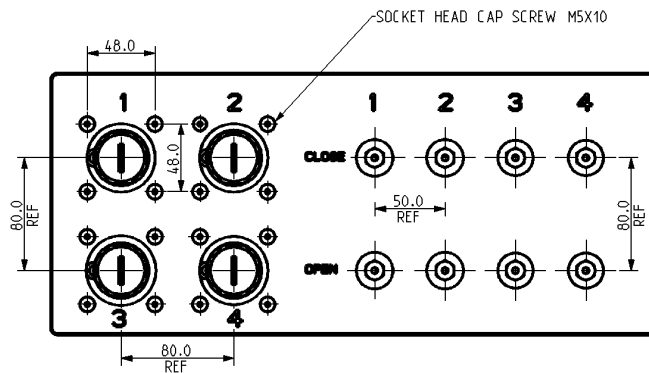
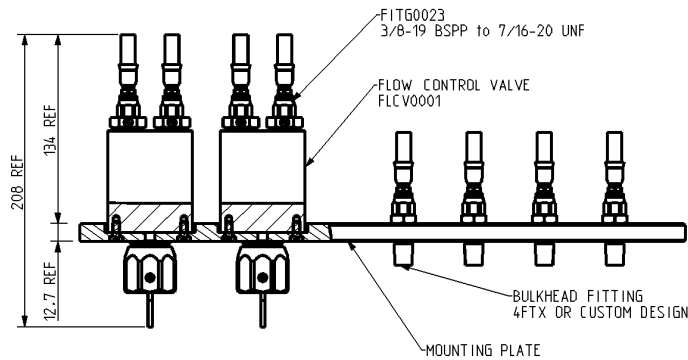


PACKAGES	SENSOR QUANTITY	MONITORING POSITION	USED FOR ACTUATORS
LIMSW0002P	SINGLE SENSOR	CLOSE ONLY	HYG21xxx UNITS. w/ 12.5mm STR
LIMSW0003P	DOUBLE SENSORS	OPEN & CLOSE	
LIMSW0004P	SINGLE SENSOR	CLOSE ONLY	HYG22xxx UNITS. w/ 25.0mm STR
LIMSW0005P	DOUBLE SENSORS	OPEN & CLOSE	

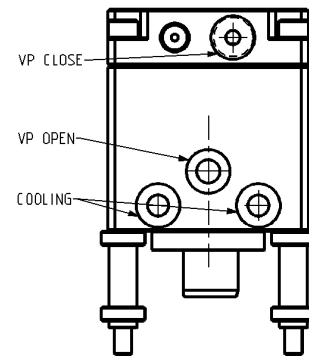
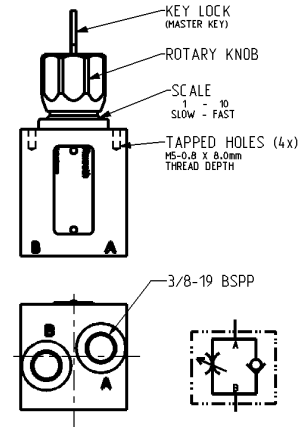
NOTE:

- TO USE THE POSITION SENSOR OPTION, FIRST SELECT THE STANDARD ACTUATOR PACKAGE BASED ON SYSTEM DESIGN, REFERRING TO ACTUATOR SELECTION PAGES THEN, BUILD CUSTOM ACTUATOR PACKAGE BY REPLACING THE PISTON TOP AND CYLINDER TOP WITH SELECTED PACKAGE (ABOVE CHART)
- IF CUSTOM STROKE IS NEEDED, MODIFY THE SENSOR MOUNTING BRACKET OR MAKE CUSTOM BRACKET
- CUSTOMER TO DETERMINE THE REQUIRED SIGNALS FOR VALVE PIN POSITION: FULLY OPEN, FULLY CLOSE, OR BOTH SIGNALS.

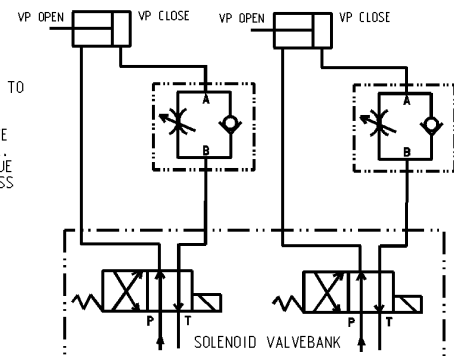
CONTACT MOLD-MASTERS ENGINEERING FOR APPLICATION GUIDELINES



FLVC0001
BOSCH REXROTH 2-WAY FLOW CONTROL VALVE
2FRM6SB36-3X/160RV



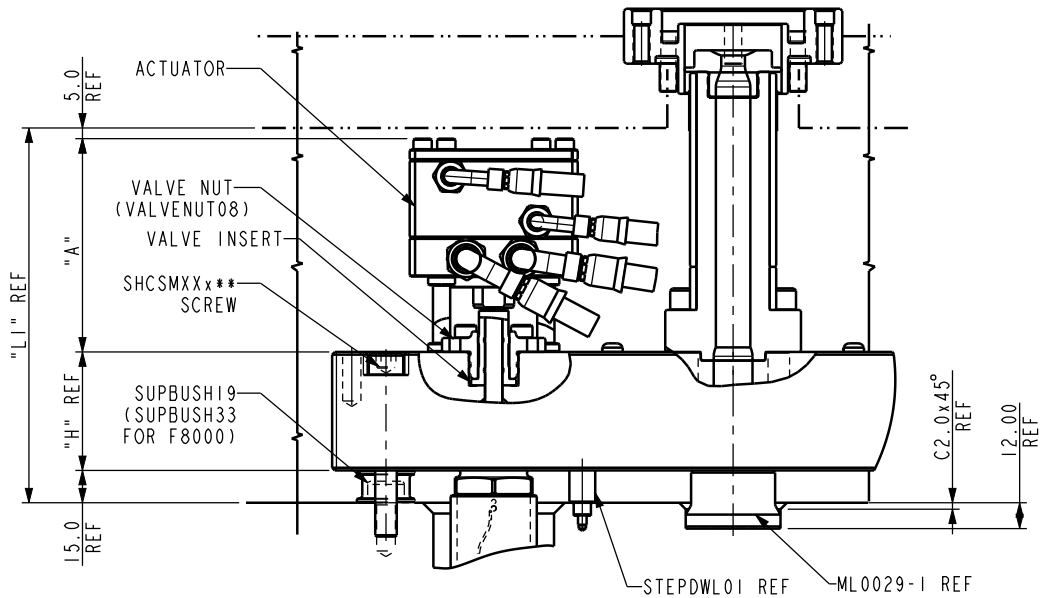
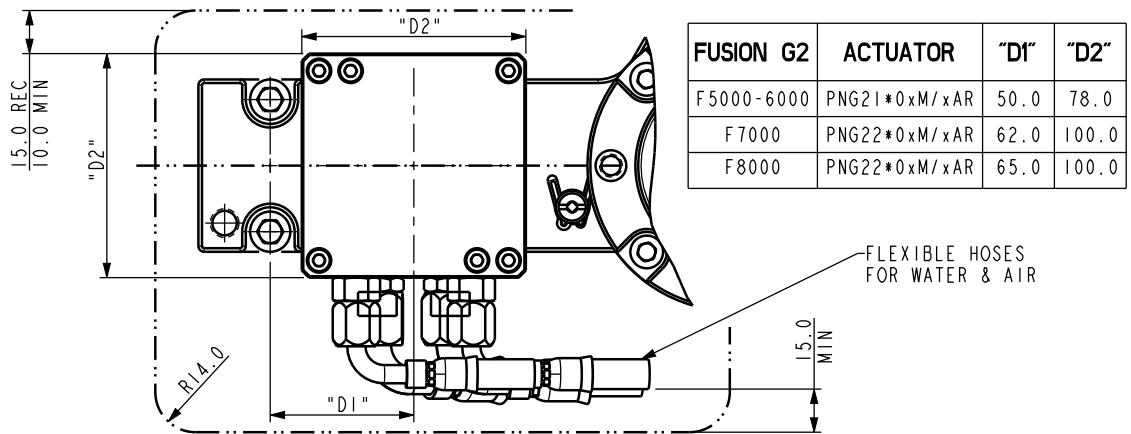
HYDRAULIC DIAGRAM



NOTE:

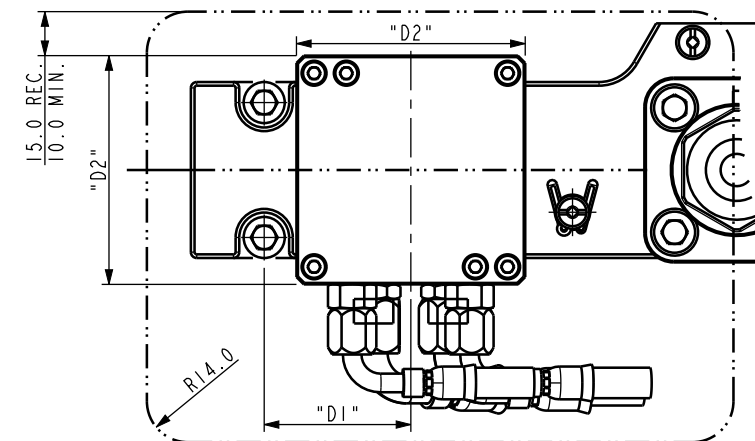
1. THIS FLOW CONTROL VALVE CONCEPT ALLOWS TO MANUALLY ADJUST VALVE PIN OPEN SPEED ONLY, (NO EFFECT TO VALVE PIN CLOSING SPEED)
2. PORT "A" CONNECTED TO THE CLOSING PORT OF ACTUATOR, WHILE PORT "B" DIRECTLY CONNECTED TO SOLENOID VALVE CLOSING PORT
3. RECOMMEND ONE FLOW CONTROL VALVE FOR ONE ACTUATOR ONLY; IF MULTIPLE ACTUATORS MUST BE CONNECTED IN SERIES, CONNECT THE FLOW CONTROL VALVE IN THE END, CLOSE TO SOLENOID VALVE
4. THE SCALE DIVISIONS ON THE KNOB REFLECT TO THE OIL FLOW RATE THROUGH THE VALVE CHANNEL. BIGGER NUMBER MEANS HIGHER FLOW RATE AND FASTER VALVE PIN OPEN SPEED. THE SETTING VALUE SHOULD BE TUNED DURING PROCESS OPTIMIZATION, AND MIGHT HAVE TO BE READJUSTED IF PROCESS OR EQUIPMENTS CHANGE.

CONTACT MOLD-MASTERS ENGINEERING FOR APPLICATION GUIDELINES

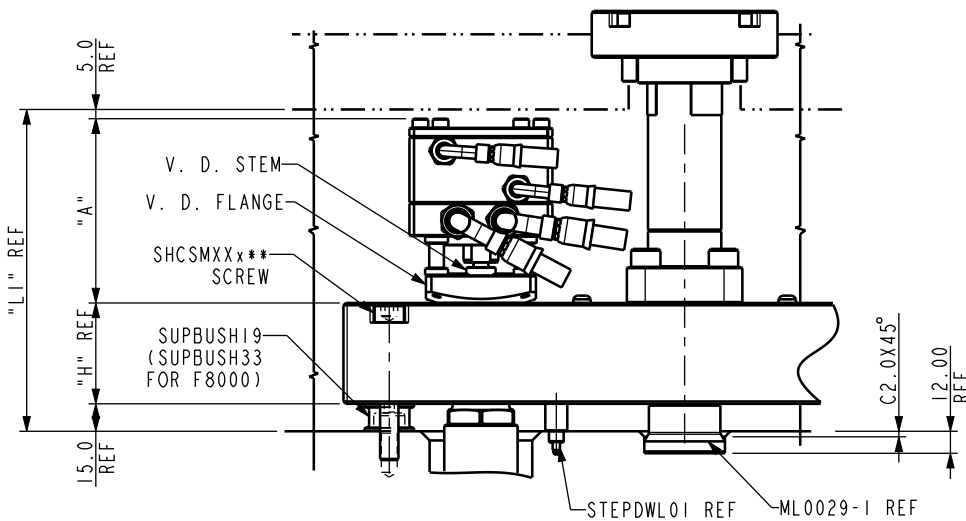


FUSION G2	ACTUATOR		STROKE	" H "	" A "	" L1 "	VALVE INSERT	SCREW
	WITH SPACER	WITH SPRING						
F5000	PNG2100MG*	PNG2110MG	12.5	50.00	*82.5/89.5	*152.5/159.5	VI0018-5.0	SHCSM10X70
F5000	PNG2100MGAR*	PNG2110MGAR		50.00	99.0	169.0	VI0018-5.0	SHCSM10X70
F6000	PNG2100MH*	PNG2110MH		55.00	*82.5/89.5	*157.5/164.5	VI0018-8.0	SHCSM10X75
F6000	PNG2100MHAR*	PNG2110MHAR		55.00	99.0	174.0	VI0018-8.0	SHCSM10X75
F6000 & F7000	PNG2200MA	PNG2210MA	25.0	65.00	128.5	213.5	VI0018-8.0	SHCSM10X90
F6000 & F7000	PNG2200MAAR	PNG2210MAAR		65.00	156.5	241.5	VI0018-8.0	SHCSM10X90
F8000	PNG2200MA	PNG2210MA		85.00	128.5	233.5	VI0018-8.0	SHCSM16X130
F8000	PNG2200MAAR	PNG2210MAAR		85.00	156.5	261.5	VI0018-8.0	SHCSM16X130
F8000	PNG2200MB	PNG2210MB		85.00	128.5	233.5	VI0018-9.5	SHCSM16X130
F8000	PNG2200MBAR	PNG2210MBAR		85.00	156.5	261.5	VI0018-9.5	SHCSM16X130

* WITHOUT SPACER/SPRING

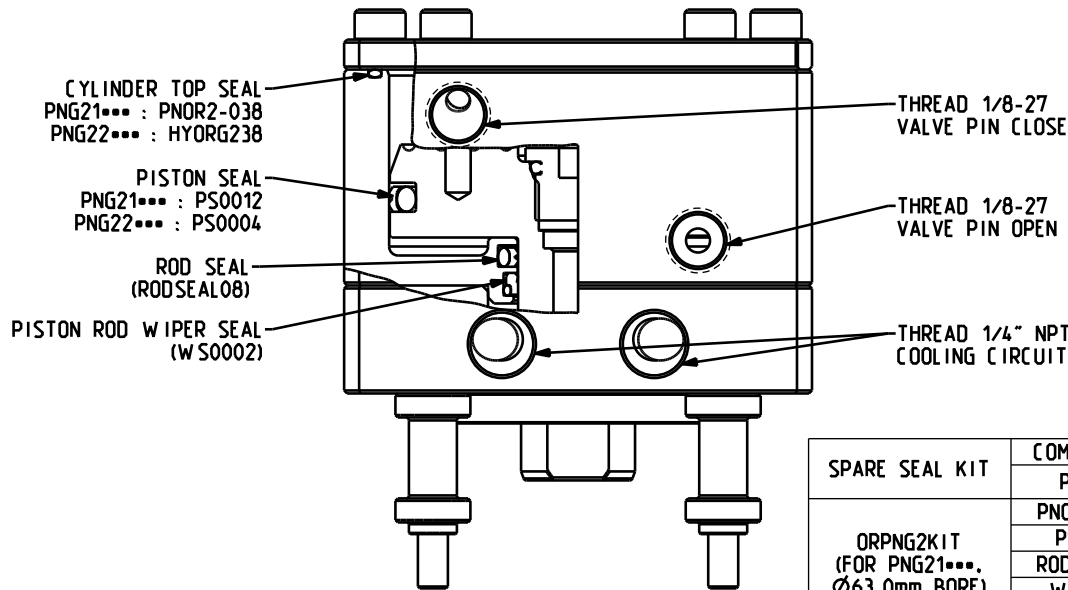


FUSION G2	ACTUATOR	"D1"	"D2"
F5000-6000	PNG21*0Mx/xAR-I	50.0	78.0
F7000	PNG22*0Mx/xAR-I	62.0	100.0
F8000	PNG22*0Mx/xAR-I	65.0	100.0



FUSION G2	ACTUATOR		STROKE	" H "	" A "	" L1 "	V. D. STEM (BLANK, TO BE FINISHED)	V. D. FLANGE	SCREW
	WITH SPACER	WITH SPRING							
F3000	HYG2100ML-A	HYG2110ML-A	10.0	40.00	86.0	146.0	VDSTEM046B	VDFLANGE014	SHCSM10X70
F3000	HYG2100MLAR-A	HYG2100MLAR-A		40.00	101.0	161.0	VDSTEM046B		SHCSM10X70
F4000	HYG2100ML-A	HYG2110ML-A		40.00	86.0	146.0	VDSTEM047B		SHCSM10X70
F4000	HYG2100MLAR-A	HYG2110MLAR-A		40.00	101.0	161.0	VDSTEM047B		SHCSM10X70
F5000	PNG2100MG-A*	PNG2110MG-A	12.5	50.00	89.5	159.5	VDSTEM010B	VDFLANGE004	SHCSM10X70
F5000	PNG2100MGAR-A*	PNG2110MGAR-A		50.00	100.5	170.5	VDSTEM010B		SHCSM10X70
F6000	PNG2100MH-A*	PNG2110MH-A		55.00	89.5	164.5	VDSTEM012B		SHCSM10X75
F6000	PNG2100MHAR-A*	PNG2110MHAR-A		55.00	100.5	175.5	VDSTEM012B		SHCSM10X75
F6000	PNG2100MI-A*	PNG2110MI-A		55.00	89.5	164.5	VDSTEM011B		SHCSM10X75
F6000	PNG2100MIAR-A*	PNG2110MIAR-A		55.00	100.5	175.5	VDSTEM011B		SHCSM10X75
F7000	PNG2200MA-A	PNG2210MA-A	25.0	65.00	132.5	217.5	VDSTEM013B	VDFLANGE005	SHCSM10X90
F7000	PNG2200MAAR-A	PNG2210MAAR-A		65.00	157.0	242.0	VDSTEM013B		SHCSM10X90
F8000	PNG2200MA-A	PNG2210MA-A		85.00	140.5	245.5	VDSTEM066B	VDFLANGE022	SHCSM16X130
F8000	PNG2200MAAR-A	PNG2210MAAR-A		85.00	165.0	270.0	VDSTEM066B		SHCSM16X130
F8000	PNG2200MB-A	PNG2210MB-A		85.00	140.5	245.5	VDSTEM067B		SHCSM16X130
F8000	PNG2200MBAR-A	PNG2210MBAR-A		85.00	165.0	270.0	VDSTEM067B		SHCSM16X130

* WITHOUT SPACER/SPRING



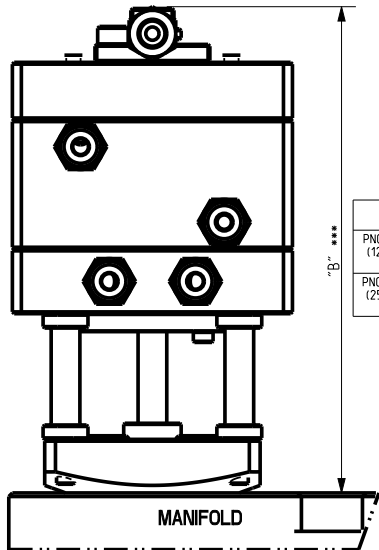
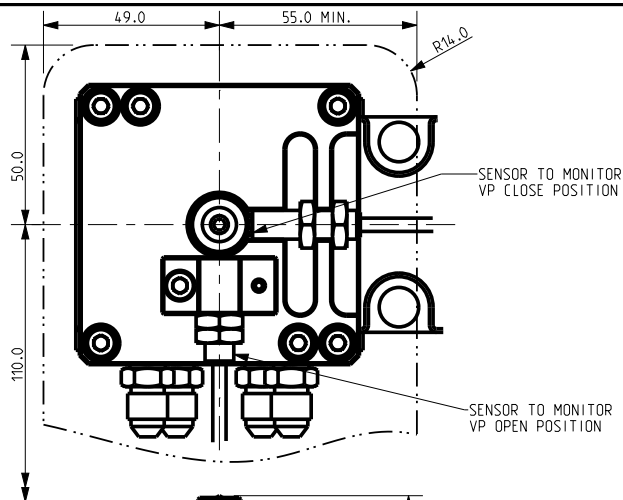
SPARE SEAL KIT	COMPONENTS INCLUDED	
	PART #	QTY
ORPNG2KIT (FOR PNG21***, Ø63.0mm BORE)	PNOR2-038	1
	PS0012	1
	RODSEAL08	1
	WS0002	1
	ORG3-906V90	1
ORPNG2KIT1 (FOR PNG22***, Ø80.0mm BORE)	HYORG238	1
	PS0004	1
	RODSEAL08	1
	WS0002	1
	ORG3-906V90	1

• SEE SYSTEM HYDRAULIC DRAWING FOR MORE DETAILS

FUSION G2	ACTUATOR		STROKE	PIN SIZE	RECOMMENDED CLEARANCE BETWEEN ACTUATORS AND INLETS
	WITH SPACER	WITH SPRING			
F3000	HYG2100ML**	HYG2110ML**	10.0	3.0	ACTUATORS: 65.0 x 65.0 IE13-IE15: 75.0 x 75.0 IE29-IE33: 85.0 x 85.0
F3000	HYG2100MLAR**	HYG2110MLAR**		3.0	
F4000	HYG2100ML**	HYG2110ML**		3.0	
F4000	HYG2100MLAR**	HYG2110MLAR**		3.0	
F5000	PNG2100MG** (WITHOUT SPCR/SPRG)		12.5	5.0	ACTUATORS: 85.0 x 85.0 IE13-IE15: 75.0 x 75.0 IE29-IE33: 85.0 x 85.0
F5000	PNG2100MGAR** (WITHOUT SPCR/SPRG)			5.0	
F6000	PNG2100MH** (WITHOUT SPCR/SPRG)			8.0	
F6000	PNG2100MHAR** (WITHOUT SPCR/SPRG)			8.0	
F6000	PNG2100MI** (WITHOUT SPCR/SPRG)			6.3	
F6000	PNG2100MIAR** (WITHOUT SPCR/SPRG)			6.3	
F6000, F7000 & F8000	PNG2200MA**	PNG2210MA**	25.0	8.0	ACTUATORS: 105.0 x 105.0 IE13- IE15: 85.0 x 85.0 IE29- IE33: 95.0 x 95.0 IE35- IE36: 95.0 x 95.0
F6000, F7000 & F8000	PNG2200MAAR**	PNG2210MAAR**		8.0	
F8000	PNG2200MB**	PNG2210MB**		9.5	
F8000	PNG2200MBAR**	PNG2210MBAR**		9.5	

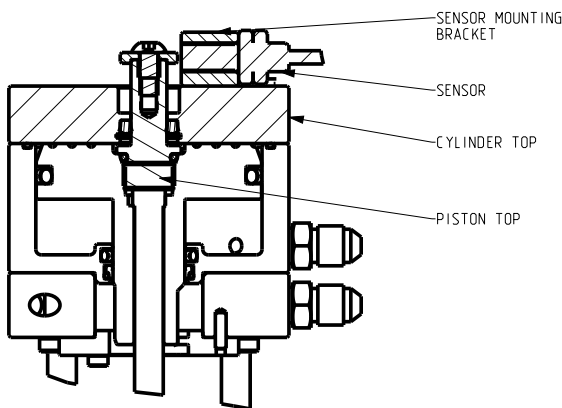
NOTE:

1. ALL CYLINDERS WITH ACRONYM "AR" ARE WITH ANTI-ROTATION FUNCTION - HIGHER ASSEMBLY
2. USE HYDRAULIC ACTUATORS WITH SPRING PACK FOR CONICAL GATES, FOR BETTER GATE STEEL PROTECTION
3. RECOMMEND WORKING PRESSURE: REFER TO CUSTOMER'S HOTRUNNER SYSTEM GENERAL ASSEMBLY DRAWING
4. TO ENSURE PROPER COOLING ON ACTUATORS, THE RECOMMENDED EXIT TEMPERATURE OF THE COOLING WATER CIRCUIT IS NOT TO EXCEED 60°C
5. VALVE PIN POSITION MONITORING SOLUTION IS AVAILABLE FOR CUSTOM DESIGN
6. 25mm STROKE ACTUATORS CAN BE USED FOR F6000 AS WELL, JUST NEED TO SELECT THE PROPER VALVE DISK



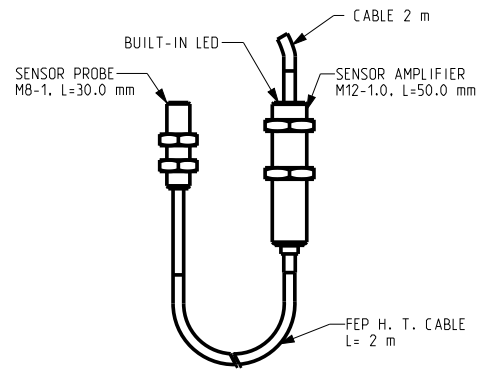
"B"	CLOSE POS.	OPEN&CLOSE POS.
PNG21xxx (12.5mm STR)	"A" + 18.0	"A" + 21.0
PNG22xxx (25.0mm STR)	"A" + 30.0	"A" + 33.0

***, ACCORDING TO THE SELECTED STANDARD PACKAGE. REFER BACK TO PG.08.01.020&021 FOR VALUE "A".



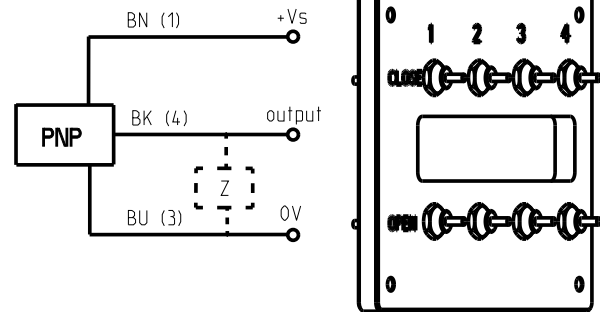
• PACKAGES SHOWN WITH HATCH.

HIGH OPERATING TEMPERATURE INDUCTIVE SENSOR (PNP,NO)



NOTE:

- FLUSH MOUNTING TYPE SENSOR, NOMINAL SENSING DISTANCE S_n : 1.5mm
- ONLY THE SENSOR PROBE AND THE 2 METER FEP CABLE ARE DESIGNED FOR HIGH TEMPERATURE ENVIRONMENT
- AMPLIFIER MOUNTING/RECESSING POSITION MUST BE CONSIDERED TO BE FAR AWAY FROM HEAT SOURCE DURING SYSTEM DESIGN
- MAXIMUM INSTALLATION TORQUE: M8 = 10 Nm; M12 = 20Nm
- THERE IS A BUILT-IN LED LIGHT ON THE AMPLIFIER END FACE TO SHOW THE STATUS OF THE SENSOR. A DISPLAY PLATE/BOX MUST BE DESIGNED FOR AMPLIFIER MOUNTING IF LED DISPLAY FEATURE IS REQUIRED. OR, THE AMPLIFIER CAN BE RECESSED IN WIRE CHANNEL OR ELECTRICAL BOX.

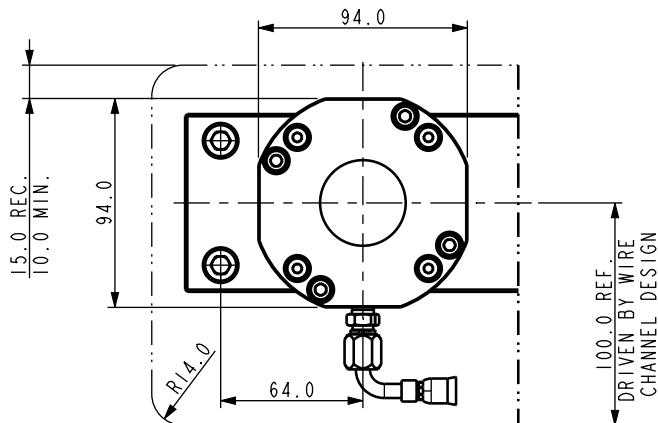


PACKAGES	SENSOR QUANTITY	MONITORING POSITION	USED FOR ACTUATORS
LIMSW0006P	SINGLE SENSOR	CLOSE ONLY	PNG21xxx UNITS, w/ 12.5mm STR
LIMSW0007P	DOUBLE SENSORS	OPEN & CLOSE	
LIMSW0008P	SINGLE SENSOR	CLOSE ONLY	PNG22xxx UNITS, w/ 25.0mm STR
LIMSW0009P	DOUBLE SENSORS	OPEN & CLOSE	

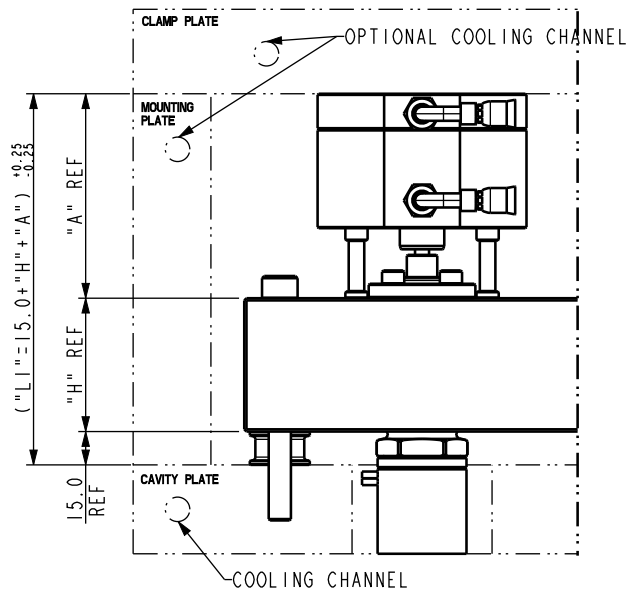
NOTE:

- TO USE THE POSITION SENSOR OPTION, FIRST SELECT THE STANDARD ACTUATOR PACKAGE BASED ON SYSTEM DESIGN. REFERRING TO ACTUATOR SELECTION PAGES THEN, BUILD CUSTOM ACTUATOR PACKAGE BY REPLACING THE PISTON TOP AND CYLINDER TOP WITH SELECTED PACKAGE (ABOVE CHART)
- IF CUSTOM STROKE IS NEEDED, MODIFY THE SENSOR MOUNTING BRACKET OR MAKE CUSTOM BRACKET
- CUSTOMER TO DETERMINE THE REQUIRED SIGNALS FOR VALVE PIN POSITION: FULLY OPEN, FULLY CLOSE, OR BOTH SIGNALS.

CONTACT MOLD-MASTERS ENGINEERING FOR APPLICATION GUIDELINES



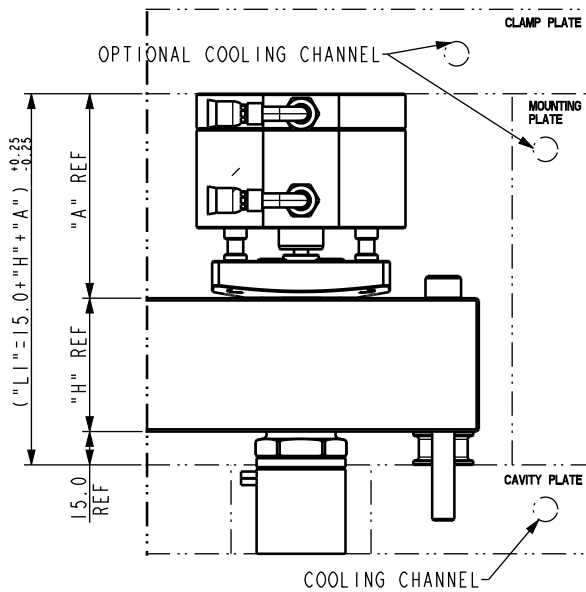
VALVE INSERT DESIGN



APPLICATIONS:

1. THE WATERLESS ACTUATOR IS NOT RECOMMENDED FOR APPLICATIONS WITH PROCESS TEMPERATURE ABOVE 280°C AND COOLING CIRCUIT TEMPERATURE HIGHER THAN 60°C.
2. COOLING ON CAVITY PLATE IS REQUIRED TO COOL DOWN THE ACTUATOR. HOWEVER, IF COOLING CHANNEL CAN BE BUILT INTO EITHER MOUNTING PLATE OR EVEN CLAMP PLATE, IT WILL BE AN IDEAL SITUATION FOR WATERLESS ACTUATOR.
3. SEPARATE COOLING CIRCUIT FOR RELATED MOULD PLATE WITH COOLING TEMPERATURE LOWER THAN 40°C IS HIGHLY RECOMMENDED.

VALVE DISK DESIGN



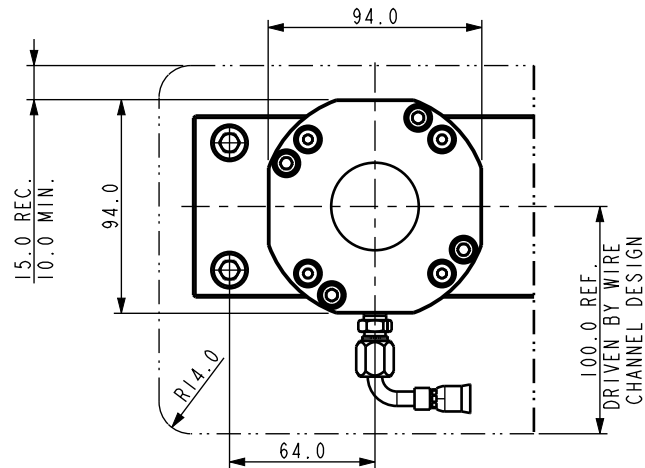
PRO. LINE	ACTUATOR	STROKE	PIN SIZE	"H" REF	"A" REF"	"LI" REF	PIN GUIDE
F 5000	PNG2120DG	12.5	5.0	50.00	92.0	157.0	V10018-5.0 + VALVENUT08
	PNG2120DG-A						VDSTEM010B + VDFLANGE030
	PNG2120DGR						V10018-5.0 + VALVENUT08
	PNG2120DGR-A	25.0	5.0	50.00	97.0	162.0	VDSTEM010B + VDFLANGE030
	PNG2121DGR-A						V10018-5.0 + VALVENUT08
	PNG2121DGR						VDSTEM010B + VDFLANGE030
F 6000	PNG2120DI	12.5	6.3	55.00	92.0	162.0	V10018-6.0 + VALVENUT08
	PNG2120DI-A						VDSTEM011B + VDFLANGE030
	PNG2120DIAR						V10018-6.0 + VALVENUT08
	PNG2120DIAR-A	25.0	6.3	55.0	97.0	167.0	VDSTEM011B + VDFLANGE030
	PNG2121DIAR-A						V10018-6.0 + VALVENUT08
	PNG2121DIAR						VDSTEM011B + VDFLANGE030
F 6000	PNG2120DH	12.5	8.0	55.00	92.0	162.0	V10018-8.0 + VALVENUT08
	PNG2120DH-A						VDSTEM012B + VDFLANGE030
	PNG2120DHR						V10018-8.0 + VALVENUT08
	PNG2120DHR-A	25.0	8.0	55.00	97.0	167.0	VDSTEM012B + VDFLANGE0030
	PNG2121DHR-A						V10018-8.0 + VALVENUT08
	PNG2121DHR						V10018-8.0 + VALVENUT08

NOTE: ALL DIEMNSIONS SHOWN ABOVE ARE IN FINAL INSTALLATION STATUS.
ALL CYLINDERS WITH ACRONYM "AR" ARE WITH ANTI-ROTATION FUNCTION - HIGHER ASSEMBLY

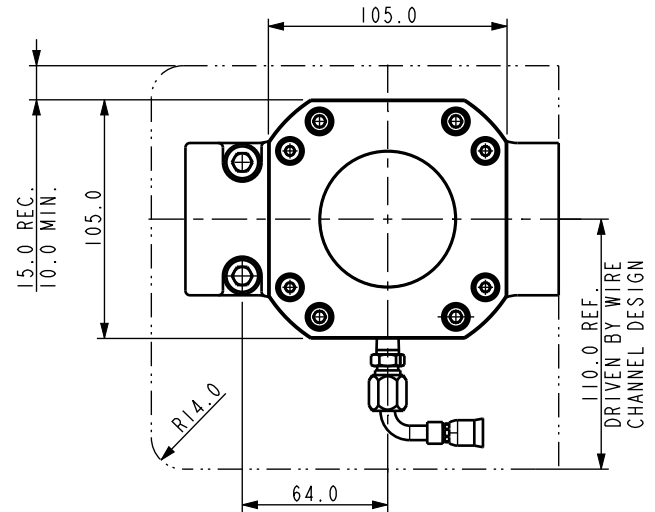


20.01.024-1 Ø63 mm and Ø80 mm Waterless Pneumatic Actuators

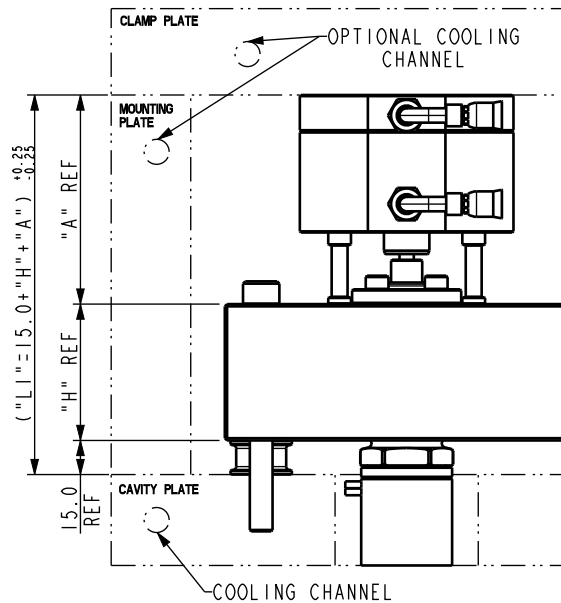
Ø63mm ACTUATOR



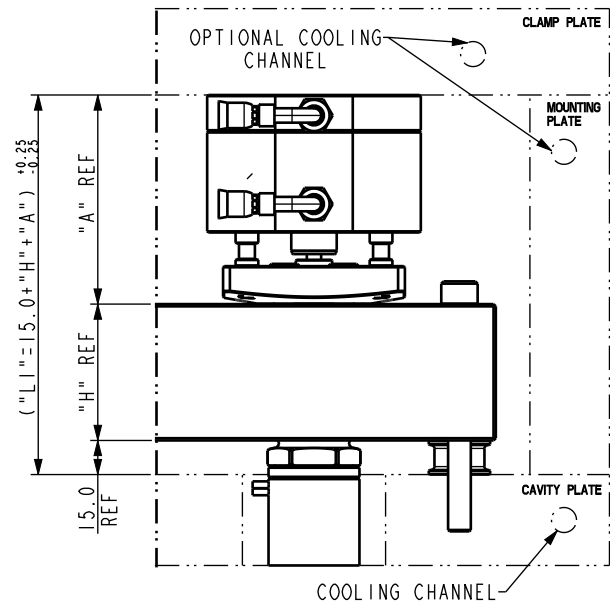
Ø80mm ACTUATOR



VALVE INSERT DESIGN



VALVE DISK DESIGN



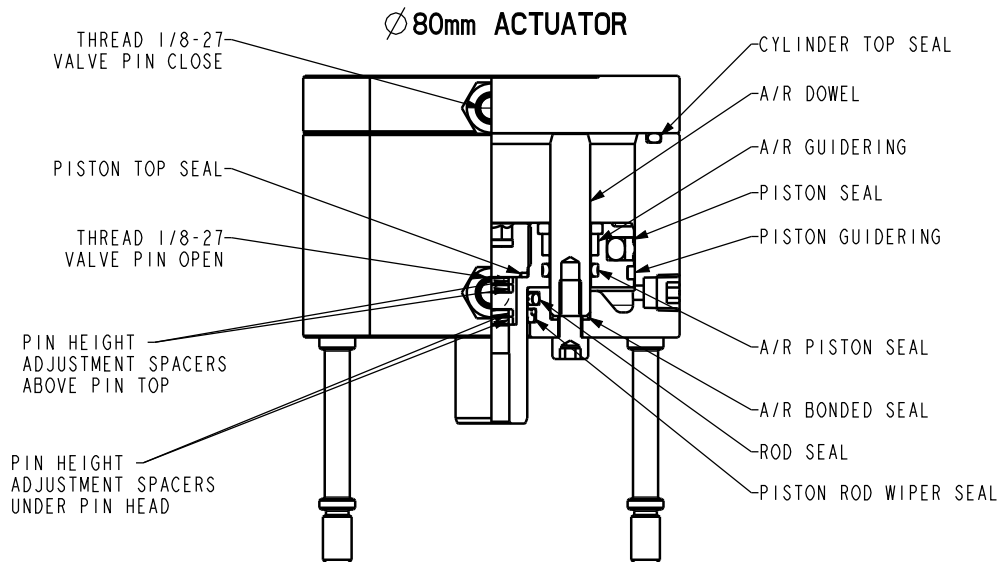
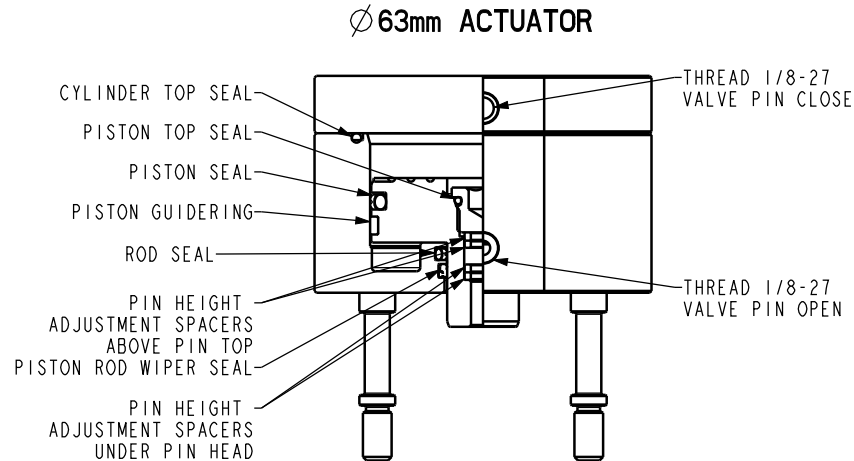
APPLICATIONS:

1. THE WATERLESS ACTUATOR IS NOT RECOMMENDED FOR APPLICATIONS WITH PROCESS TEMPERATURE ABOVE 280°C AND COOLING CIRCUIT TEMPERATURE HIGHER THAN 60°C.
2. COOLING ON CAVITY PLATE IS REQUIRED TO COOL DOWN THE ACTUATOR. HOWEVER, IF COOLING CHANNEL CAN BE BUILT INTO EITHER MOUNTING PLATE OR EVEN CLAMP PLATE, IT WILL BE AN IDEAL SITUATION FOR WATERLESS ACTUATOR.
3. SEPARATE COOLING CIRCUIT FOR RELATED MOULD PLATE WITH COOLING TEMPERATURE LOWER THAN 40°C IS HIGHLY RECOMMENDED.


20.01.024-2 Ø63 mm and Ø80 mm Waterless Pneumatic Actuators

PRO. LINE	ACTUATOR	ACTUATOR SIZE	STROKE	PIN SIZE	"H" REF	"A" REF	"L1" REF	PIN GUIDE
F5000	PNG2120DG	Ø63	12.5	5.0	50.00	92.0	157.0	VI0018-5.0 + VALVENUT08
	PNG2120DG-A							VDSTEM010B + VDFLANGE030
	PNG2120DGAR					97.0	162.0	VI0018-5.0 + VALVENUT08
	PNG2120DGAR-A							VDSTEM010B + VDFLANGE030
	PNG2121DGAR-A	Ø63	25.0	5.0	50.00	147.0	212.0	VI0018-5.0 + VALVENUT08
	PNG2121DGAR							VDSTEM010B + VDFLANGE030
F6000	PNG2120DI	Ø63	12.5	6.3	55.00	92.0	162.0	VI0018-6.0 + VALVENUT08
	PNG2120DI-A							VDSTEM011B + VDFLANGE030
	PNG2120DIAR					97.0	167.0	VI0018-6.0 + VALVENUT08
	PNG2120DIAR-A							VDSTEM011B + VDFLANGE030
	PNG2121DIAR-A	Ø63	25.0	6.3	55.0	147.0	217.0	VI0018-6.0 + VALVENUT08
	PNG2121DIAR							VDSTEM011B + VDFLANGE030
F6000	PNG2120DH	Ø63	12.5	8.0	55.00	92.0	162.0	VI0018-8.0 + VALVENUT08
	PNG2120DH-A							VDSTEM012B + VDFLANGE030
	PNG2120DHAR					97.0	167.0	VI0018-8.0 + VALVENUT08
	PNG2120DHAR-A							VDSTEM012B + VDFLANGE0030
	PNG2121DHAR-A	Ø63	25.0	8.0	55.00	147.0	217.0	VI0018-8.0 + VALVENUT08
	PNG2121DHAR							VDSTEM012B + VDFLANGE0030
F6000	PNAC	Ø80	25.0	6.3	55.00	121.0	191.0	VI0018-6.0 + VALVENUT08
	PNAC							VDSTEM011B + VDFLANGE039
F6000 F7000	PNAC	Ø80	25.0	8.0	55.00	121.0	191.0	VI0018-8.0 + VALVENUT08
	PNAC							VDSTEM012B + VDFLANGE039
F8000	PNAC	Ø80	25.0	9.5	55.00	121.0	191.0	VI0018-9.5 + VALVENUT08
	PNAC					127.5	197.5	VDSTEM067B + VDFLANGE040

NOTE: ALL DIMENSIONS SHOWN ABOVE ARE IN FINAL INSTALLATION STATUS.
ALL CYLINDERS WITH ACRONYM "AR" ARE WITH ANTI-ROTATION FUNCTION - HIGHER ASSEMBLY



SPARE SEAL KIT DETAILS FOR WATERLESS ACTUATORS		
ACTUATOR SIZE	PIN SIZE	KIT NAME
Ø63mm-WITH & WITHOUT A/R	Ø 5, 6.3, 8mm	ORPNG2KIT4
Ø80mm-WITHOUT A/R	Ø 6.3, 8mm	ORPNG2KIT5
Ø80mm-WITHOUT A/R	Ø 9.5mm	ORPNG2KIT6
Ø80mm-WITH A/R	Ø 6.3, 8mm	ORPNG2KIT7
Ø80mm-WITH A/R	Ø 9.5mm	ORPNG2KIT8

NOTE:

1. SPARE SEAL KIT INCLUDES ALL SEALS AND GUIDE RING (SHOWN ABOVE).
2. VALVE PIN HEIGHT ADJUSTMENT RANGE: $\pm 0.20\text{mm}$ (INCREMENT OF 0.1mm).

RECOMMENDED MIN. PITCH BETWEEN ACTUATORS AND INLET

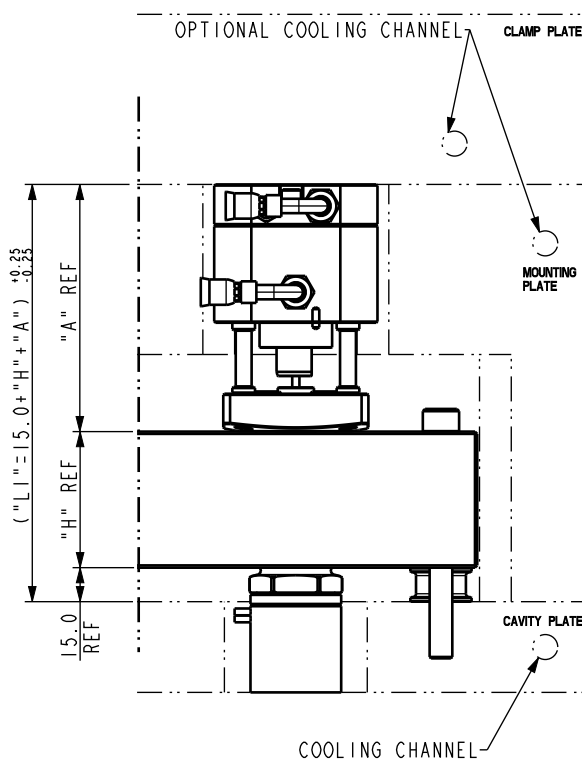
PRO. LINE	ACTUATOR	1E11-1E12	1E13-1E15	1E29-1E33	WATERLESS ACTUATOR
F5000	PNG2120D*	75.0X75.0	83.0X83.0	N/A	94.0X94.0
F6000	PNG2121D*	N/A	83.0X83.0	93.0X93.0	
F6000,F7000,F8000	PNAC	N/A	88.5X88.5	98.5X98.5	105.0X105.0

NOTE:FOR SPECIAL DESIGN REQUIREMENT, PLEASE CONTACT MOLD-MASTERS APPLICATION ENGINEER.

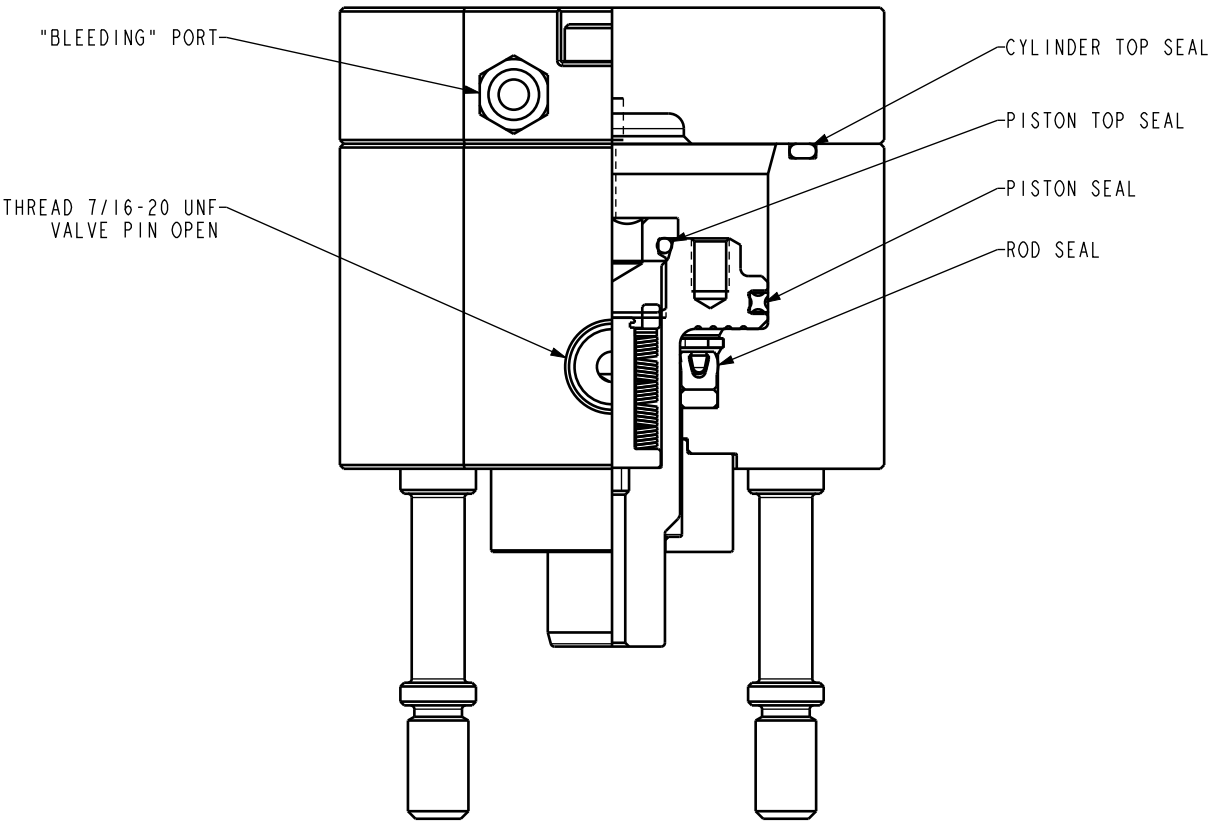


1. THE WATERLESS ACTUATOR IS NOT RECOMMENDED FOR APPLICATIONS WITH PROCESS TEMPERATURE ABOVE 280°C AND COOLING CIRCUIT TEMPERATURE HIGHER THAN 50°C.
2. COOLING ON CAVITY PLATE IS REQUIRED TO COOL DOWN THE ACTUATOR. HOWEVER, IF COOLING CHANNEL CAN BE BUILT INTO EITHER MOUNTING PLATE OR EVEN CLAMP PLATE, IT WILL BE AN IDEAL SITUATION FOR WATERLESS ACTUATOR.
3. SEPARATE COOLING CIRCUIT FOR RELATED MOULD PLATE WITH COOLING TEMPERATURE LOWER THAN 40°C IS HIGHLY RECOMMENDED.

VALVE DISK DESIGN



Miscellaneous 20



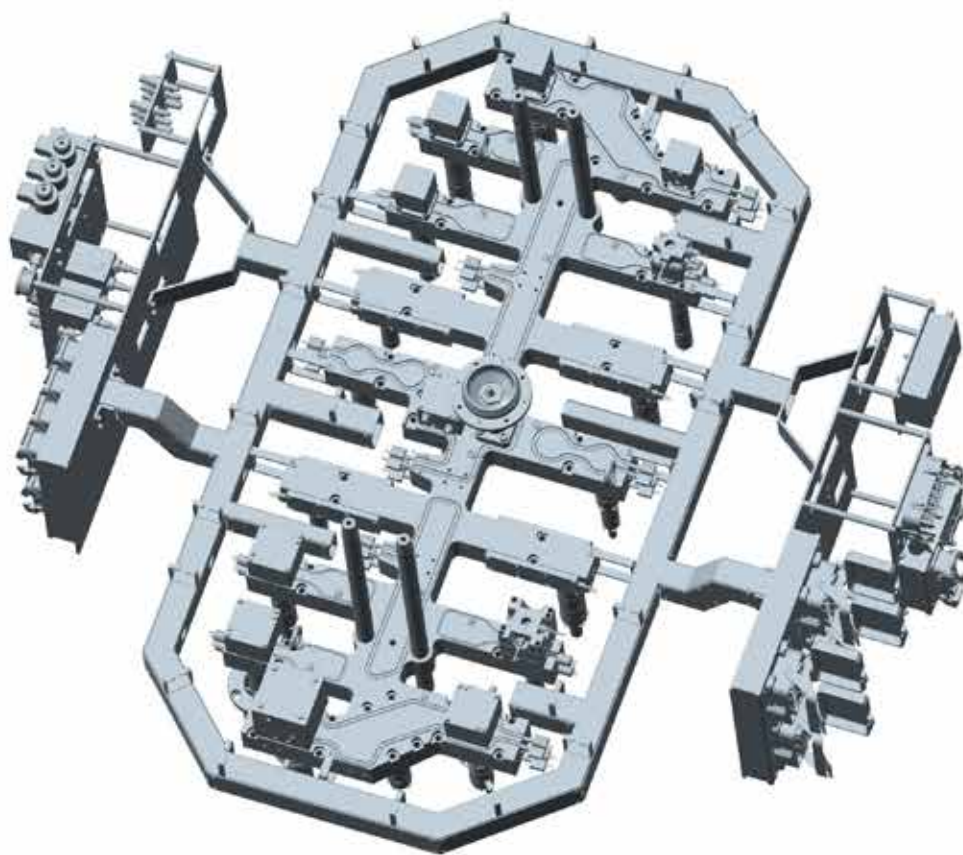
NOTE: SPARE SEAL KIT: ORHYG2KIT5, INCLUDES ALL SEALS SHOWN ABOVE

RECOMMENDED MIN. PITCH BETWEEN ACTUATORS AND INLET

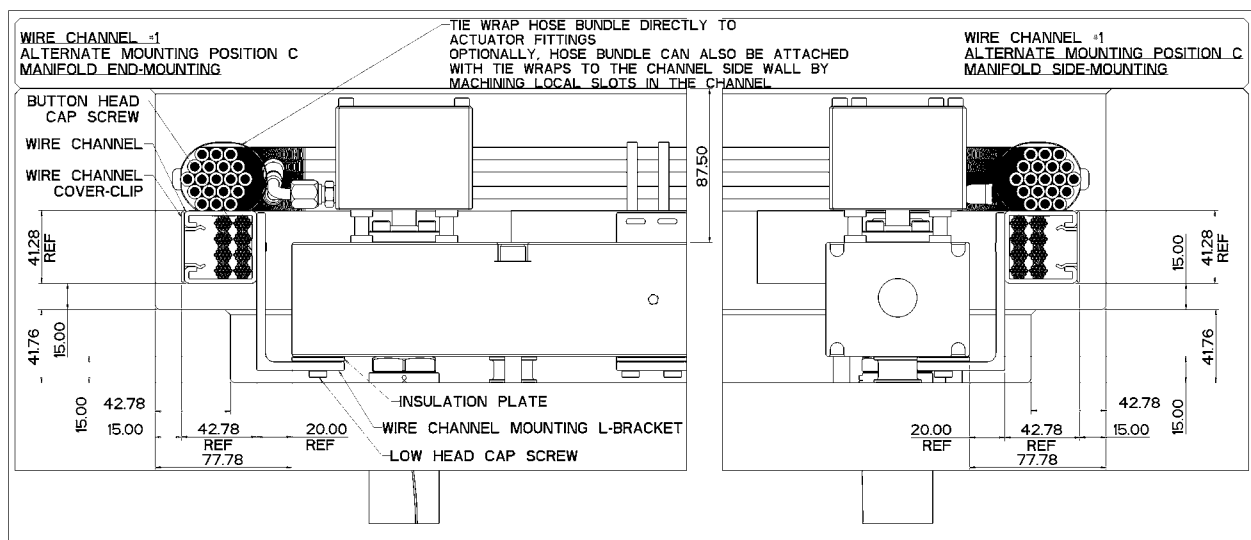
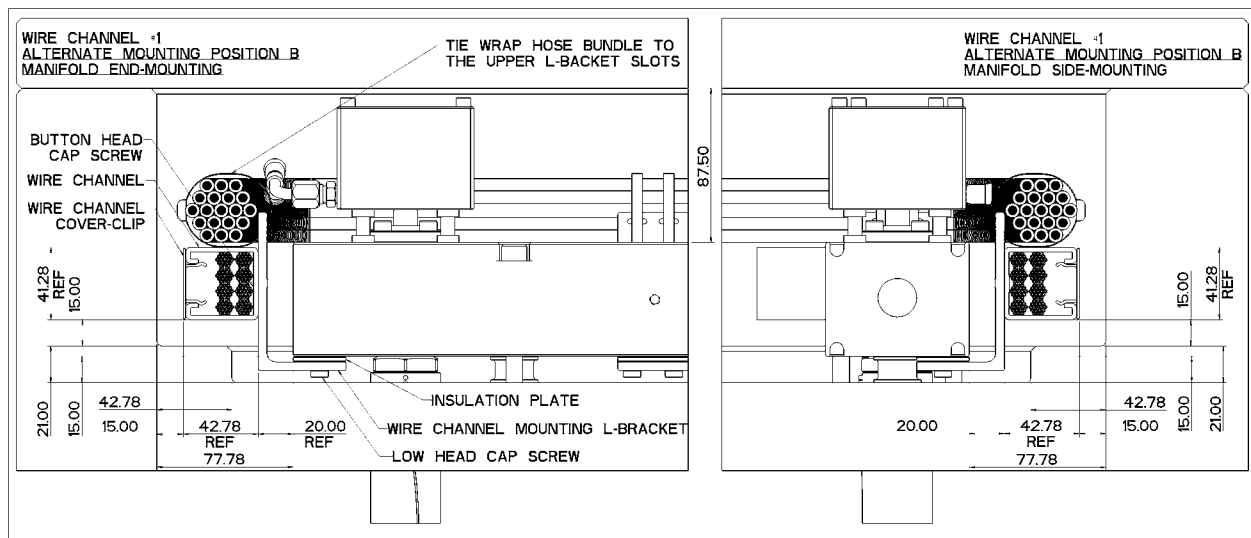
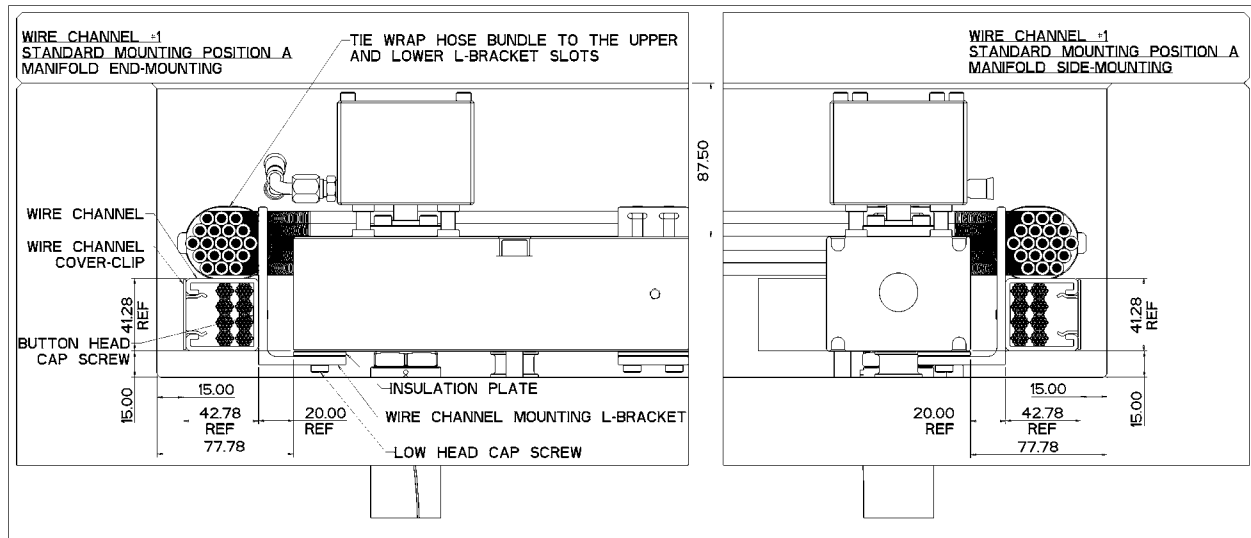
PROD. LINE	ACTUATOR	1E11-1E12	1E13-1E15	1E29-1E33	HYG2**0D*
FUSION G2	HYG2**0D*	69.0X69.0	77.0X77.0	87.0X87.0	82.0X82.0

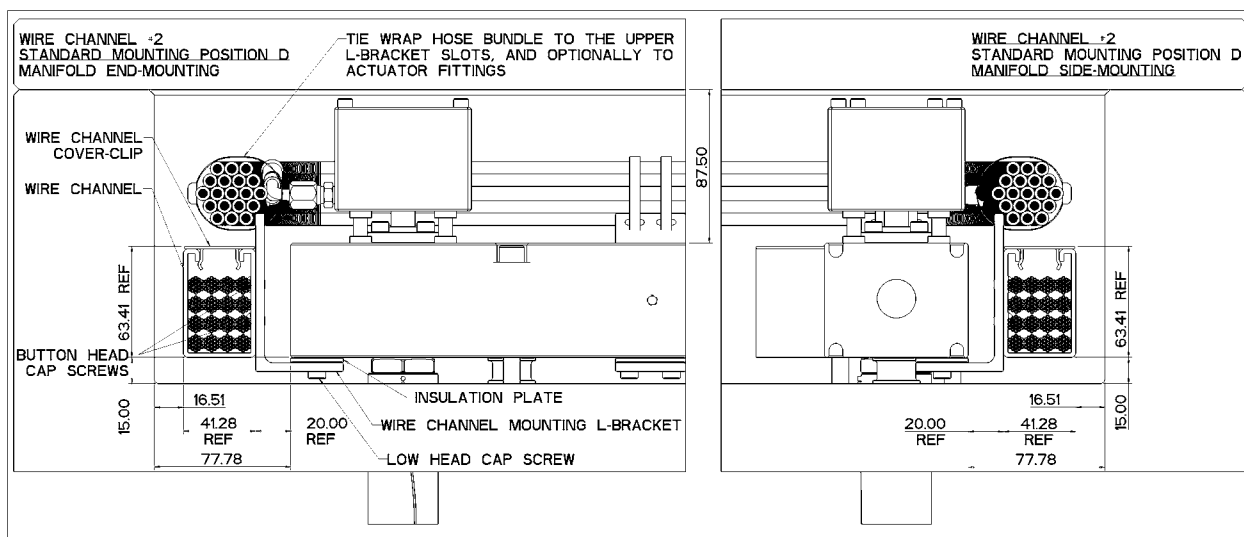
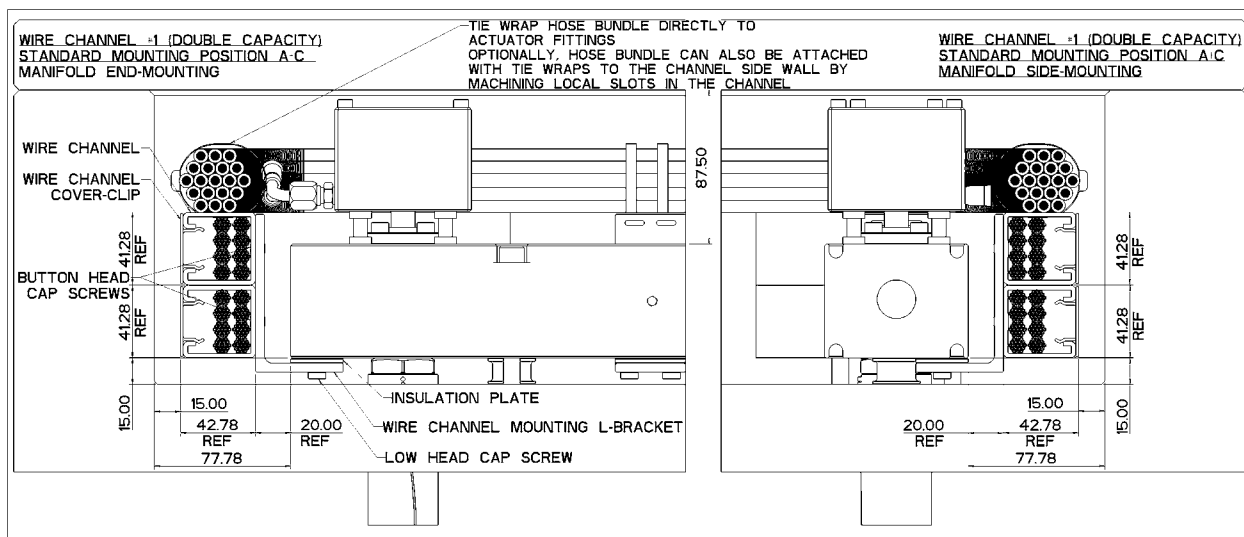
NOTE:FOR SPECIAL DESIGN REQUIREMENT, PLEASE CONTACT MOLD-MASTERS APPLICATION ENGINEER.

WATERLESS HYDRAULIC ACTUATOR "FEATURES & OPTIONS"														
PROD. LINE	STROKE			VALVE PIN P Ø					VALVE PIN GUIDE		VP ROTATION		PISTON ARRANGEMENTS	
FUSION G2	10.0	12.5	25.0	3.2	5.0	6.3	8.0	9.5	V. DISK	V. INSERT	STANDARD	ANTI-ROT	SPACER	SPRING
F3000	X			X					X		X	X	X	X
F4000	X	X		X					X	X	X	X	X	X
F5000		X			X				X	X	X	X	X	X
F6000		X				X	X		X	X	X	X	X	X
F7000			X				X	X	X	X	X	X	X	X
F8000			X				X	X	X	X	X	X	X	X



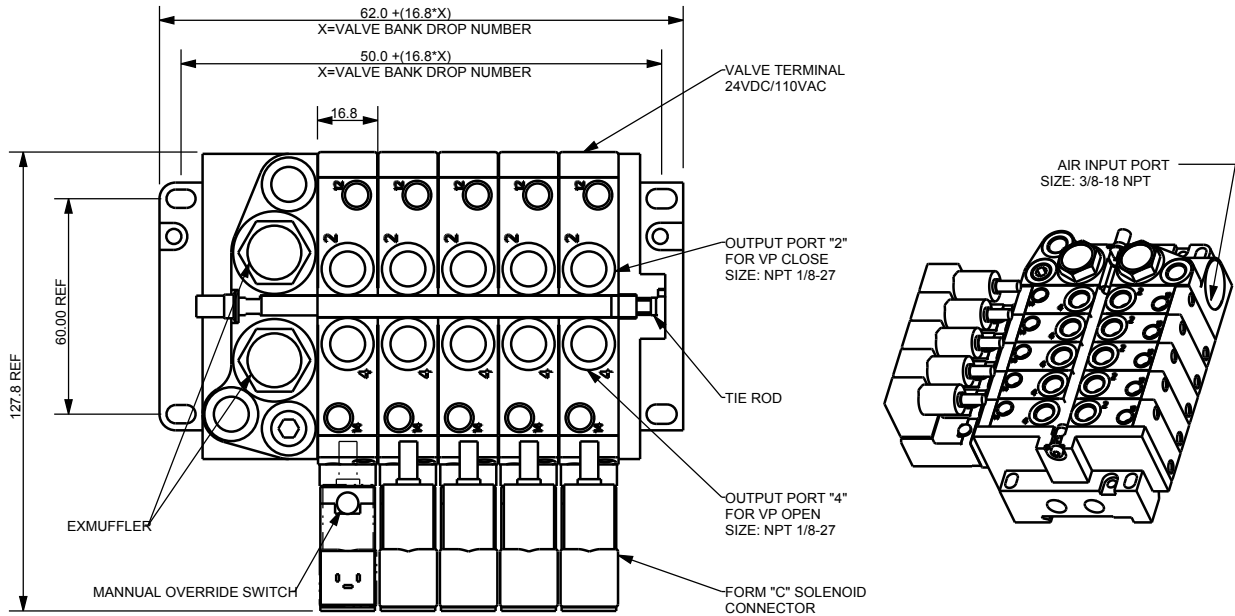
NOTE: THIS IS A DESIGN CONCEPT DRAWING.



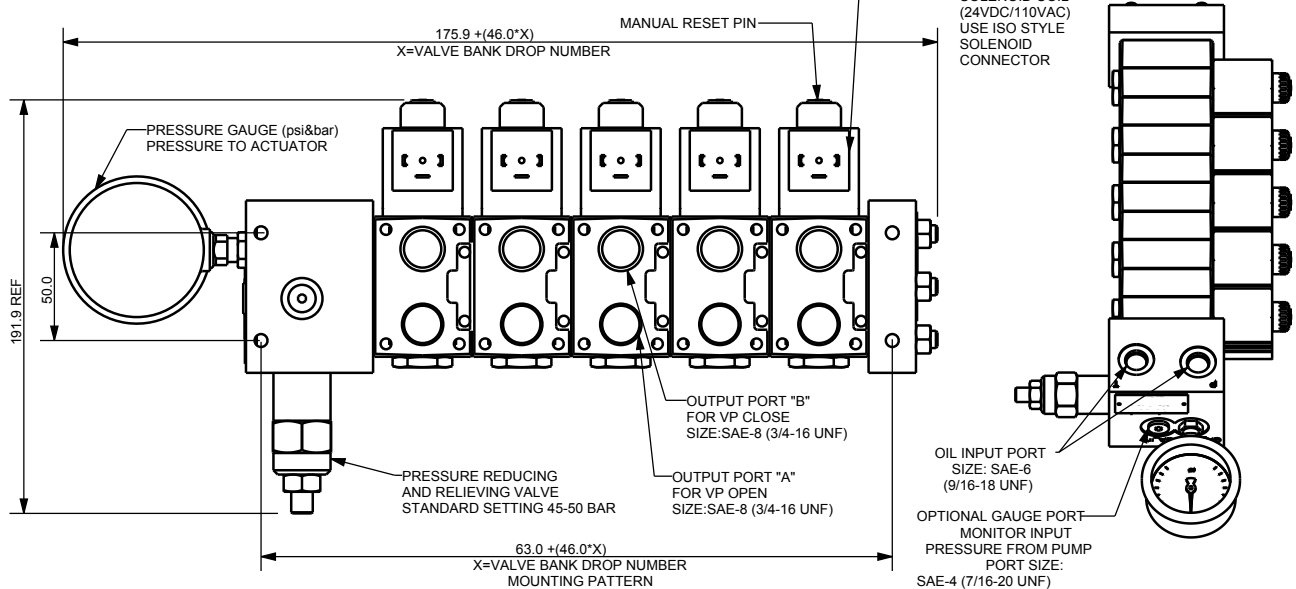




PNEUMATIC ACTUATOR SOLENOID VALVE BANK: VLVBANKG2PNXXX

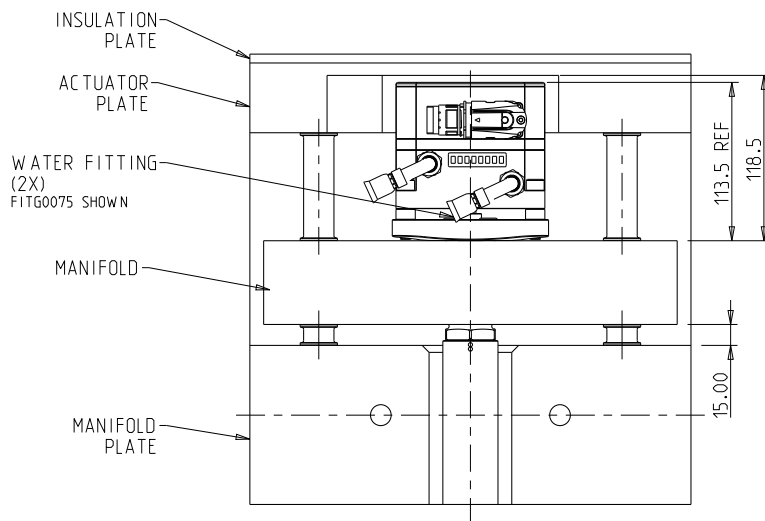
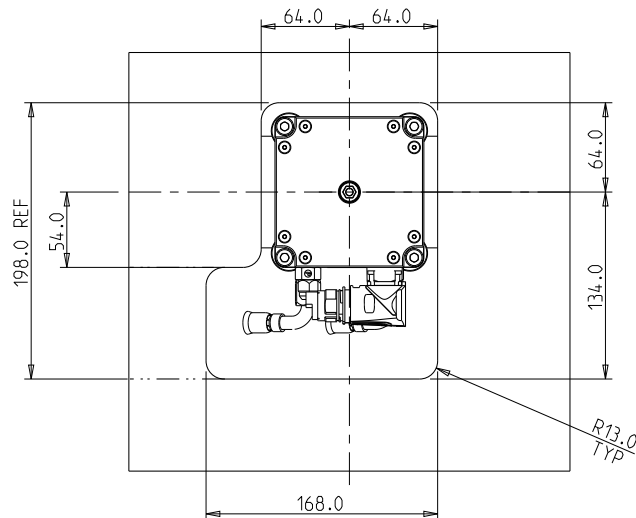


HYDRAULIC ACTUATOR SOLENOID VALVE BANK: VLVBANKG2HYXXAG



NOTE:

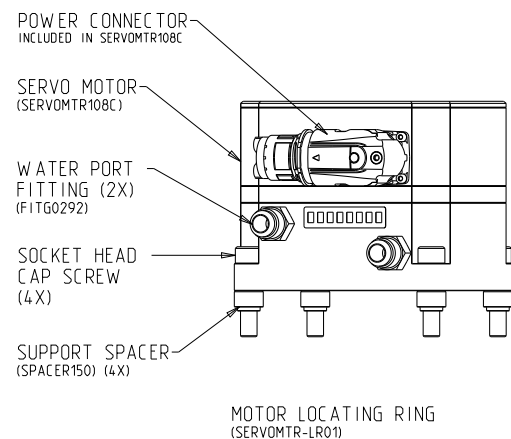
- *. STANDARD SOLENOID VALVEBANK, AVAILABLE CONFIGURATION: 2-10 UNITS FOR HYDRAULIC AND 2-12 UNITS FOR PNEUMATIC
- *. OPERATING VOLTAGE OPTION: "A" - 24VDC; "B" - 110 VAC. FOR HYDRAULIC VALVE BANK, 110VAC IS OPTIONAL
FOR EXAMPLE, VLVBANKPNG205A: A 5-UNITS PNEUMATIC SOLENOID VALVEBANK WITH 24VDC OPERATING VOLTAGE
- *. REFER TO GA DRAWING FOR RECOMMENDED WORKING PRESSURE. HYDRAULIC VALVE BANK DEFAULT SETTING: 45-50 BAR.
- *. CUSTOM FITTING FOR EXTERNAL INTERFACE ARE AVAILABLE AS PER REQUEST
- *. SOLENOID CONNECTORS WITH LED LIGHT AND HIGH TEMPERATURE CABLES ARE AVAILABLE AS OPTION



APPLICATIONS:

- *. VALVE PIN Ø OPTIONS - Ø3.0 TO Ø9.5
- *. MAXIMUM VALVE PIN STROKE - 18mm
- *. MAXIMUM MOLD TEMPERATURE: 130°C
- *. CONNECTOR ON MOTOR IS 180° ROTATABLE, MORE FLEXIBLE FOR WIRE CHANNEL DESIGN
- *. MOTOR POWER CABLE WITH SINGLE CONNECTOR, CONNECT TO MOLD E-BOX OR INTERFACE PLATE.
- *. MOTOR CABLE AVAILABLE IN MULTIPLE LENGTHS:
 - . SERVOCABLE03, 50mm LONG
 - . SERVOCABLE04, 1000mm LONG
 - . SERVOCABLE05, 1500mm LONG
- *. ONE EXTERNAL CABLE TO CONTROLLER IS REQUIRED PER MOTOR:
 - . SERVOCABLE06, 5 METERS LONG
 - . SERVOCABLE07, 10 METERS LONG
- *. TORQUE SETTING:
 - . WATER FITTING: 35 N.m MAX.
 - . PIN HOLDER: 8.0 N.m, MAX.
 - . M8 MOUNTING BOLTS: 24 N.m MAX.
- *. COOLING WATER TEMPERATURE NOT TO EXCEED 50°C, FLOW RATE 3L/Min MIN
- *. INDIVIDUAL COOLING CIRCUIT FOR EACH MOTOR IS HIGHLY RECOMMENDED, MAX. 2 MOTORS IN A LOOP.

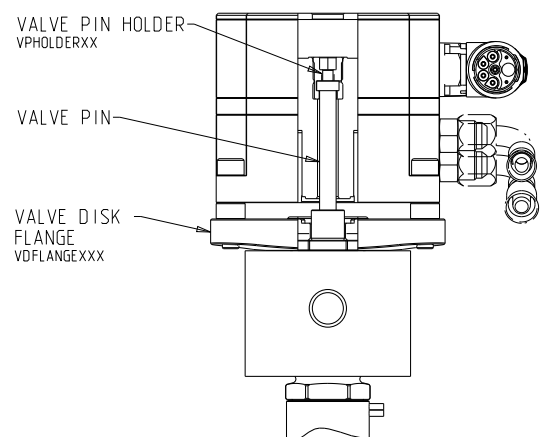
MAIN COMPONENTS FOR MANIFOLD MOUNTED

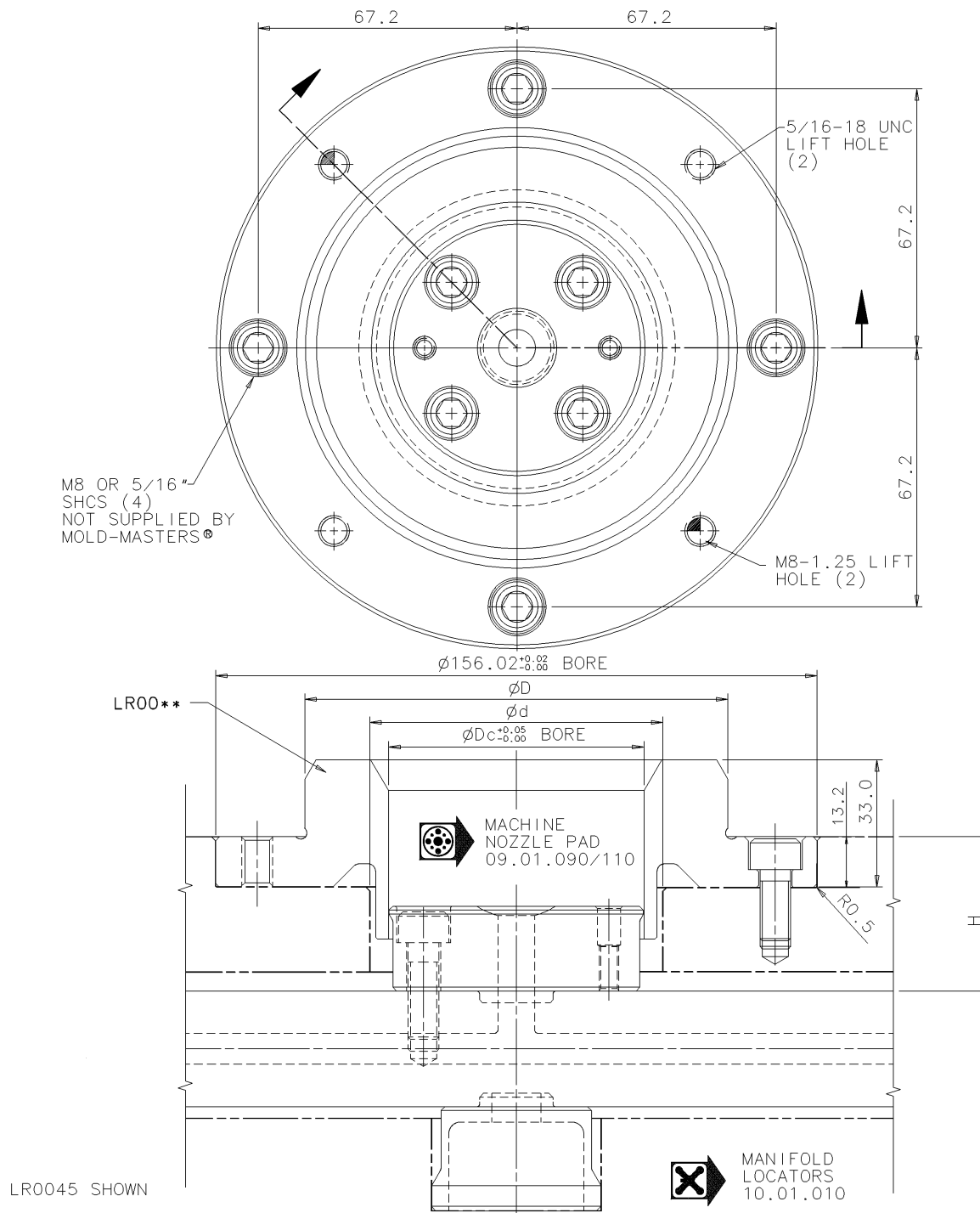


SERVOMTR0008 (DA108) USED FOR BOTH VALVE DISK AND VALVE INSERT DESIGN
SELECT PROPER V.D. STEM OR VALVE INSERT, PLUS BELOW V.D. FLANGE

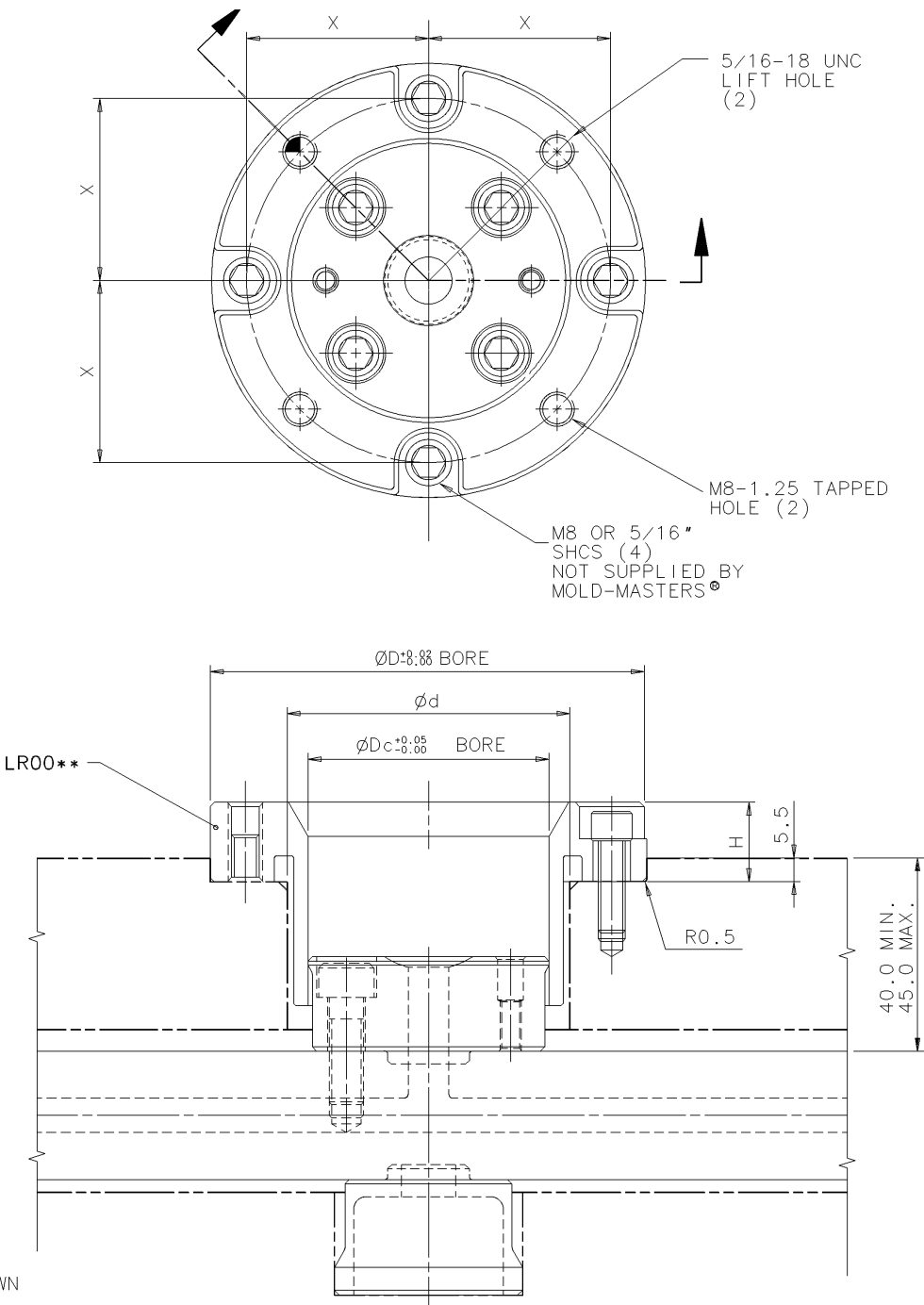
PRO. LINE	VALVE PIN Ø	PIN HOLDER	V. D. FLANGE (FOR VD DESIGN)	V. D. FLANGE (FOR VI DESIGN)
F3000	3.0	VPHOLDER53	VDFLANGE041	USED VALVENUT12 TOGETHER WITH VDFLANGE042
F4000	3.0	VPHOLDER53	VDFLANGE041	
F5000	5.0	VPHOLDER55	VDFLANGE042	
F6000	6.3	VPHOLDER56	VDFLANGE042	
	8.0	VPHOLDER57		
F7000	8.0	VPHOLDER57	VDFLANGE043	
F8000	8.0	VPHOLDER57	VDFLANGE044	
	9.5	VPHOLDER57		

NOTE: FOR APPLICATIONS WITH Ø9.5 VALVE PIN, MODIFICATION ON VALVE PIN HEAD IS REQUIRED, USE Ø8.0 PIN AS REFERENCE.

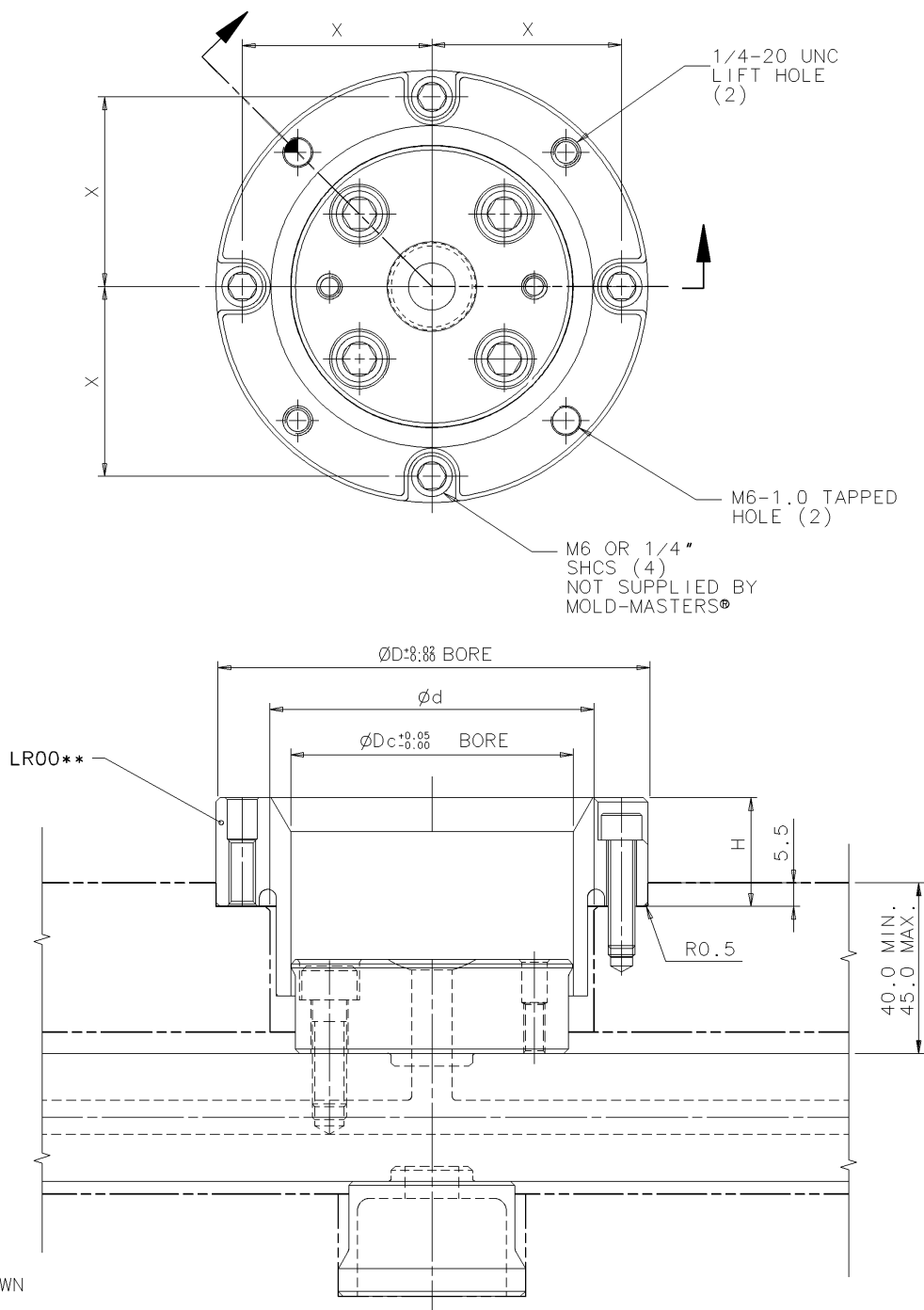




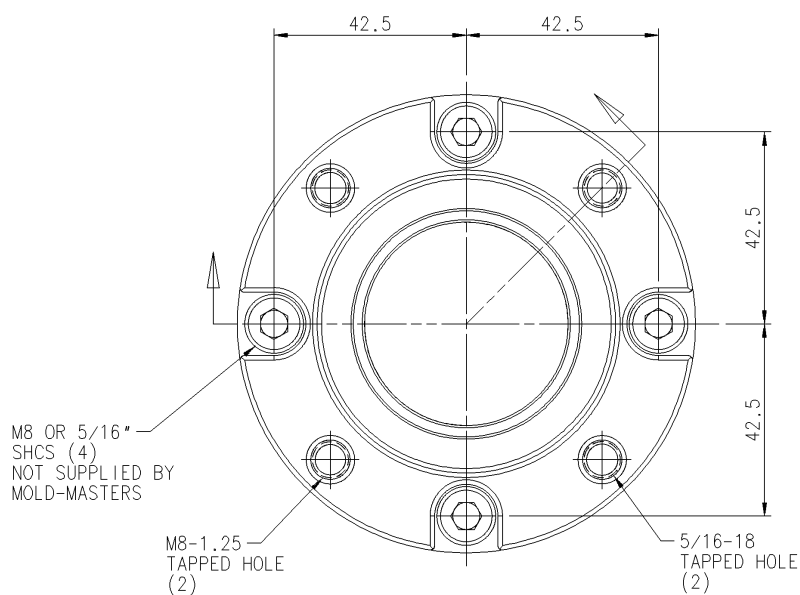
LOCATING RING OPTIONS					
LOCATING RING #	ϕD	ϕd	ϕD_c	H	USED WITH MACHINE NOZZLE PAD #
LR0045	109.75	76.0	66.25	40.0	BP22**** OR BP23****
LR0046	101.34	76.0	66.25	45.0	
LR0070	101.34	93.0	81.25	70.0	BP58**** OR BP64****
LR0071	109.75	93.0	81.25	75.0	



LOCATING RING OPTIONS						
LOCATING RING #	øD	ød	øDc	X	H	USED WITH MACHINE NOZZLE PAD #
LR0031	101.36	66.0	56.25	42.5	18.5	BP25/27**** OR BP67****
LR0032	109.77	66.0	56.25	42.5	18.5	BP25/27**** OR BP67****
LR0033	101.36	66.0	56.25	42.5	25.5	BP25/27**** OR BP67****



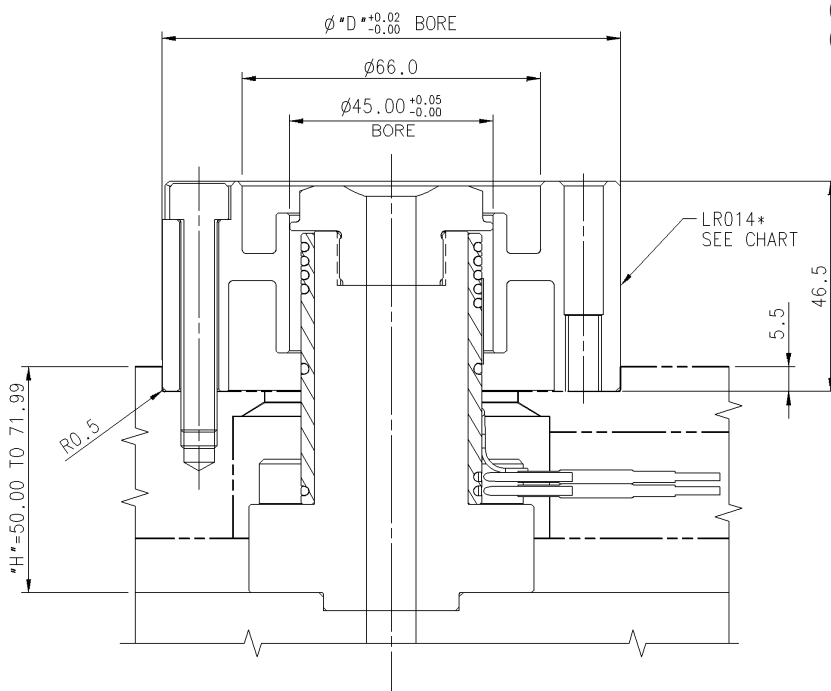
LOCATING RING OPTIONS						
LOCATING RING #	ϕD	ϕd	ϕD_c	X	H	USED WITH MACHINE NOZZLE PAD #
LR0051	101.36	76.0	66.25	44.5	25.5	BP22/23**** OR BP57/68****
LR0052	109.77	76.0	66.25	44.5	25.5	BP22/23**** OR BP57/68****



INLET EXTENSIONS

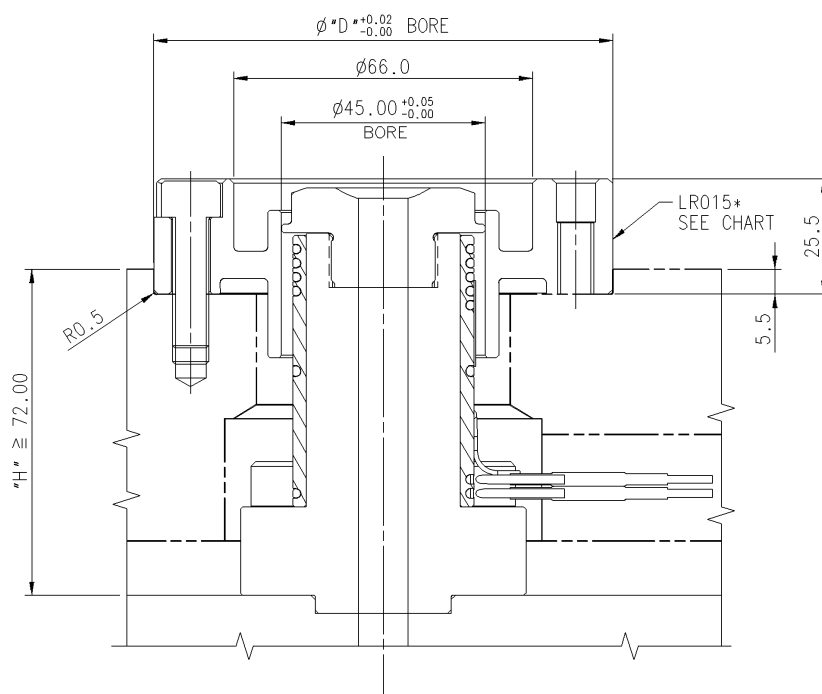
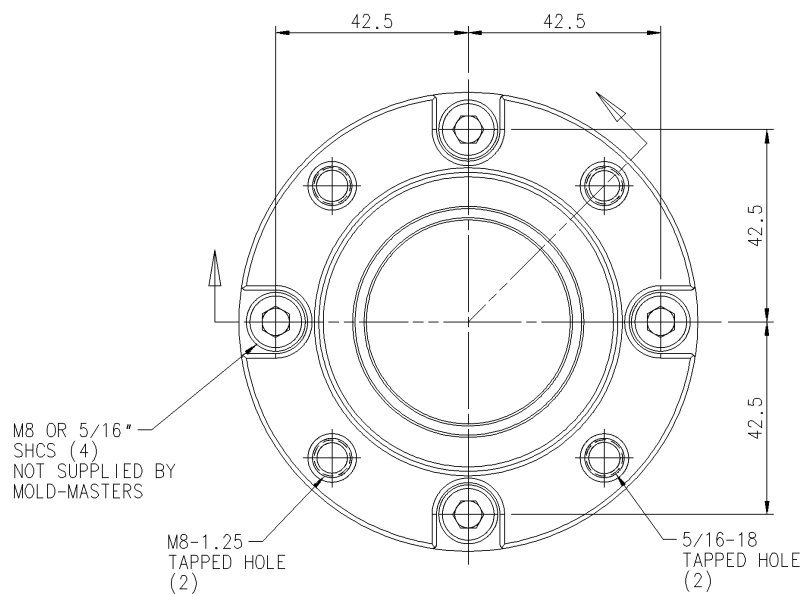
09.01.120

09.01.125



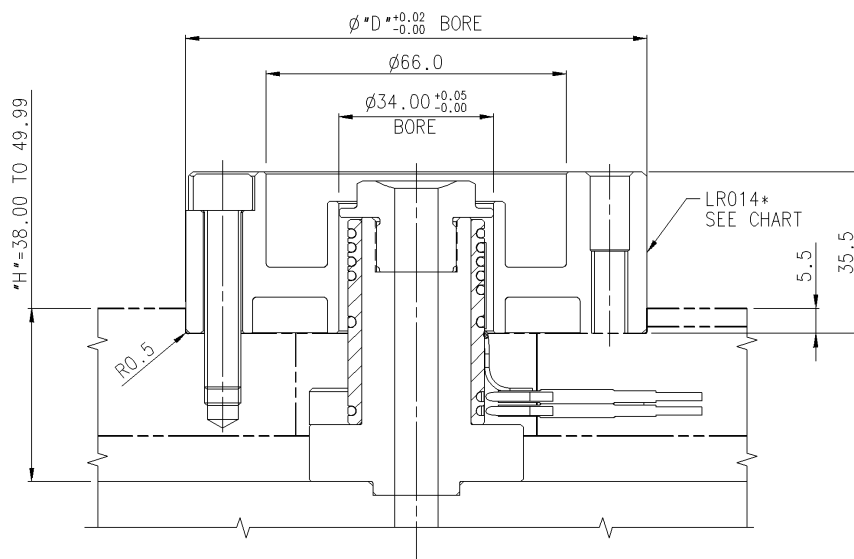
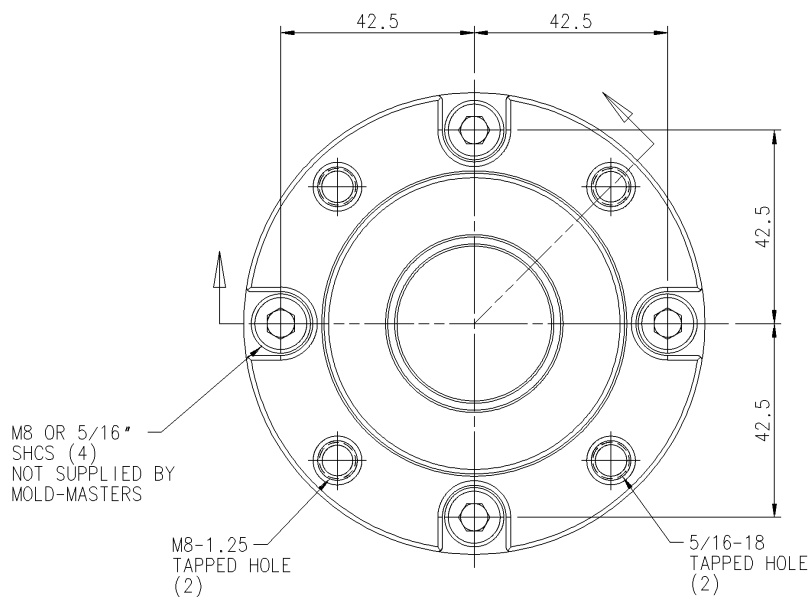
LR0146 SHOWN

LOCATING RING OPTIONS		
LOCATING RING #	ØD	USED WITH
LR0146	101.36	INLET EXTENSIONS IE13080, IE14080 OR IE15080 (FOR 50.00mm ≤ "H" ≤ 71.99mm)
LR0147	126.77	
LR0148	109.77	
LR0149	99.77	



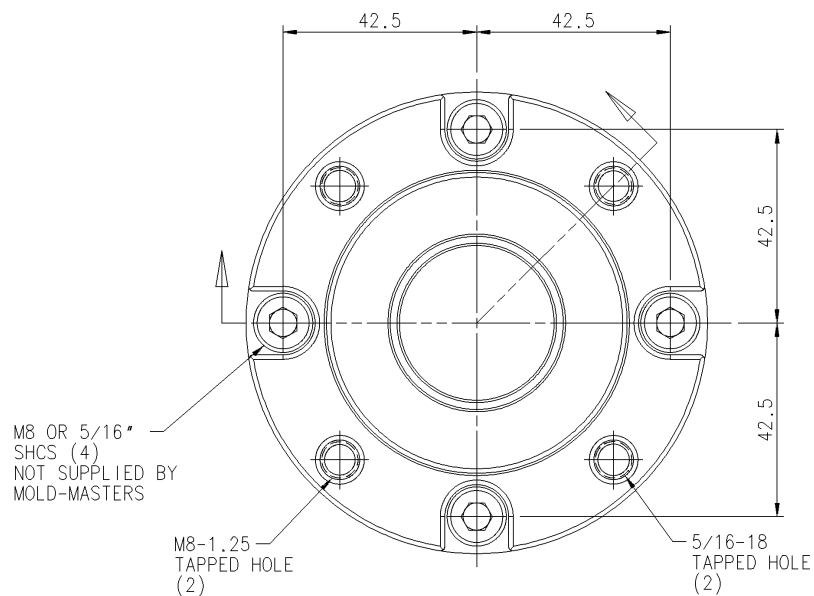
LR0150 SHOWN

LOCATING RING OPTIONS		
LOCATING RING #	ϕD	USED WITH
LR0150	101.36	INLET EXTENSIONS IE13xxx, IE14xxx OR IE15xxx (FOR "H" $\geq$ 72.00mm)
LR0151	126.77	
LR0152	109.77	
LR0153	99.77	

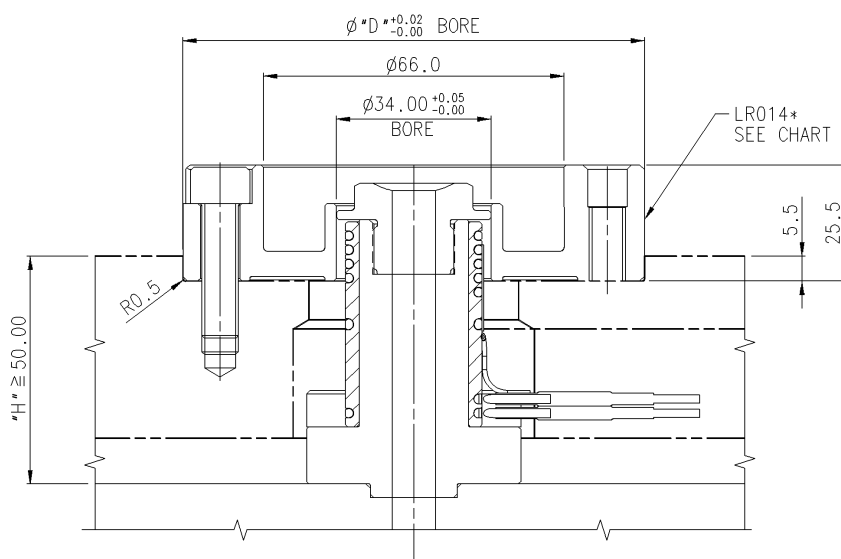


LR0140 SHOWN

LOCATING RING OPTIONS		
LOCATING RING #	ϕD	USED WITH
LR0140	101.36	INLET EXTENSIONS IE11058, OR IE12058 (FOR $38.00\text{mm} \leq H \leq 49.99\text{mm}$)
LR0141	109.77	
LR0142	99.77	

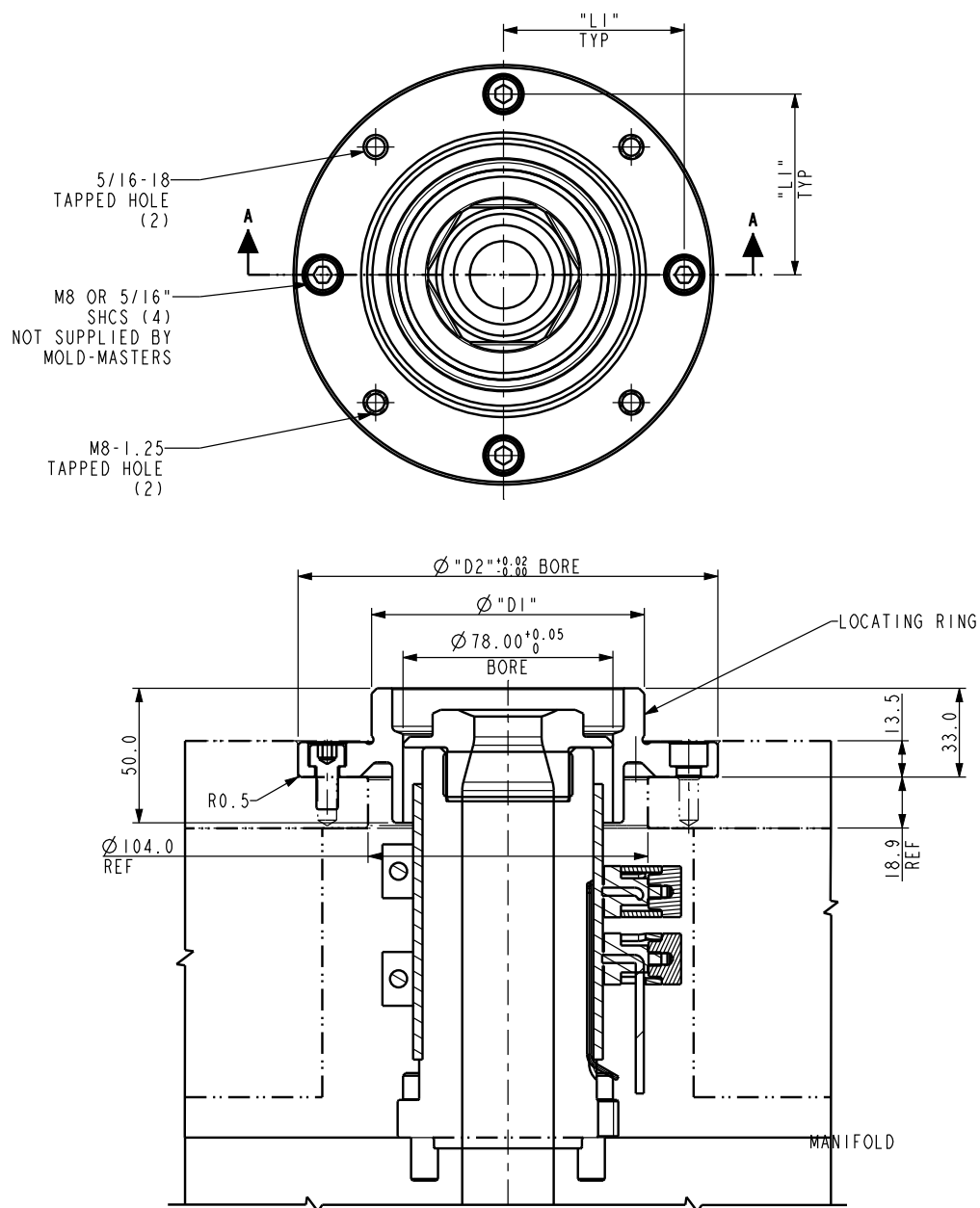


INLET
EXTENSIONS
09.01.130
09.01.135



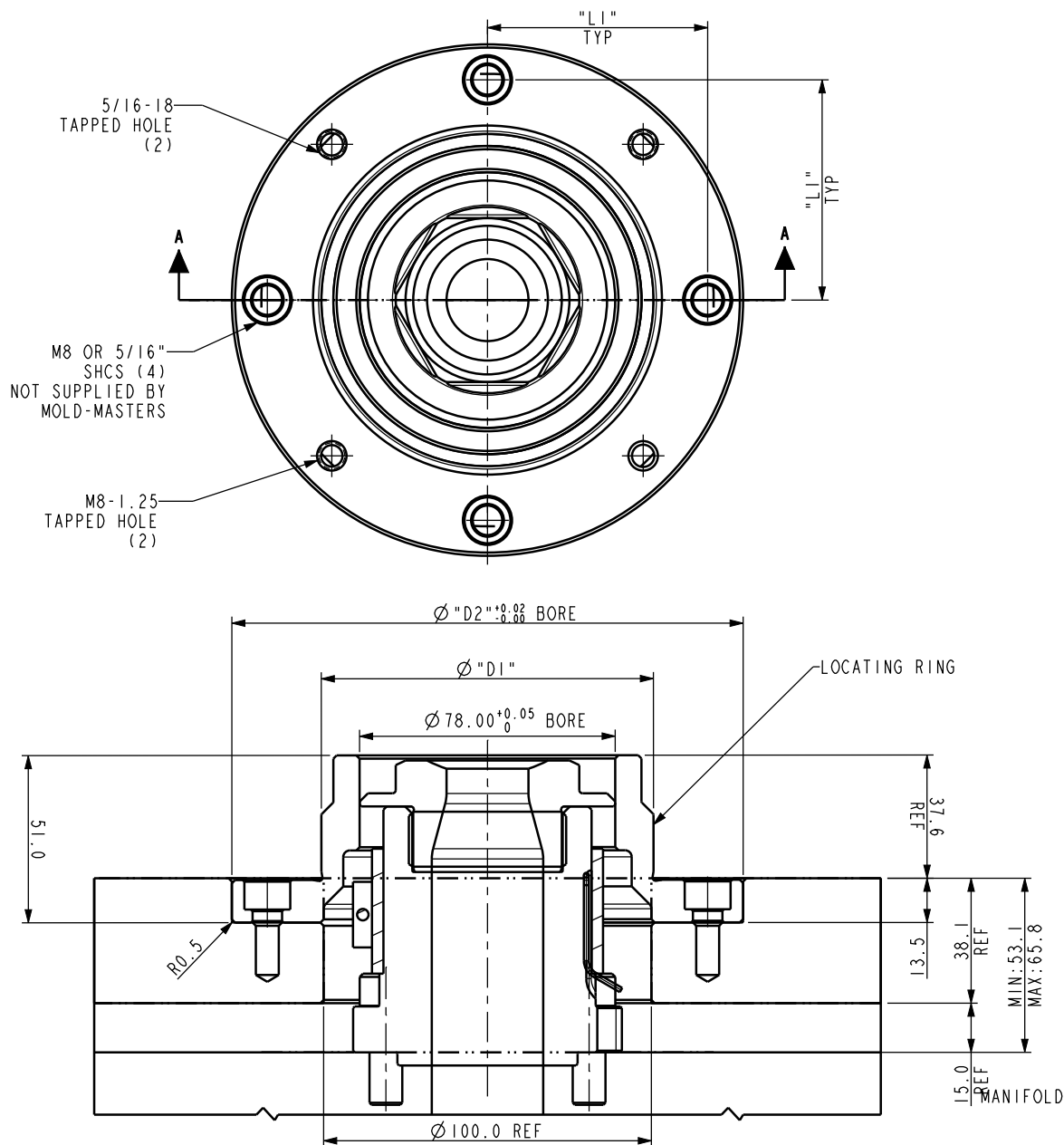
LR0143 SHOWN

LOCATING RING OPTIONS		
LOCATING RING #	øD	USED WITH
LR0143	101.36	INLET EXTENSIONS IE11xxx, OR IE12xxx (FOR "H" ≥ 50.00mm)
LR0144	109.77	
LR0145	99.77	

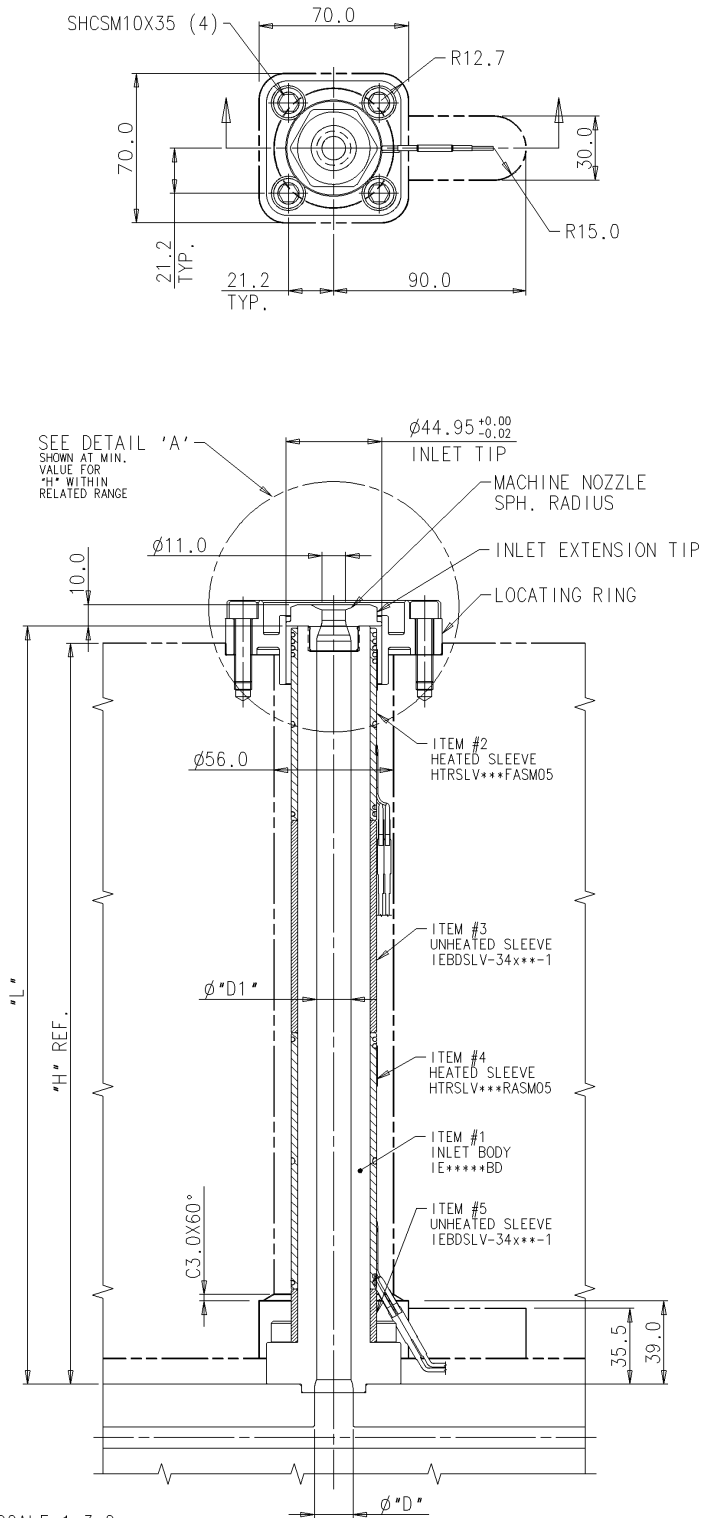


LOCATING RING OPTIONS

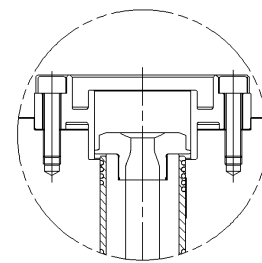
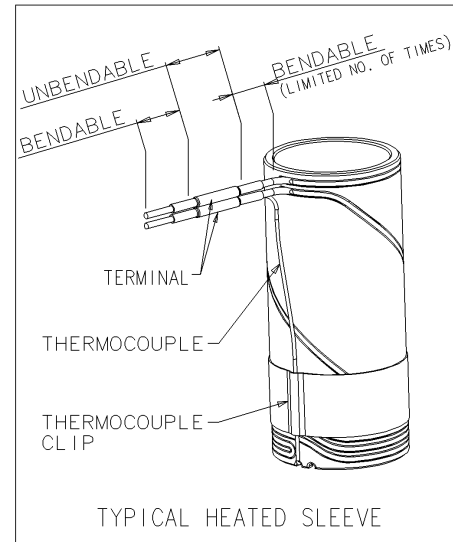
LOCATING RING #	" D I "	" D2 "	" LI "	USED WITH
LR0169	$\varnothing$ 101.34	$\varnothing$ 156.02	67.2	INLET EXTENSIONS IE29xxx, IE30xxx, IE31xxx OR IE33xxx, IE35xxx, IE36xxx
LR0170	$\varnothing$ 109.75	$\varnothing$ 156.02	67.2	
LR0171	$\varnothing$ 126.75	$\varnothing$ 165.02	72.8	



LOCATING RING OPTIONS				
LOCATING RING #	" D 1 "	" D2 "	" LI "	USED WITH
LR0172	Ø 101.34	Ø 156.02	67.2	INLET EXTENSIONS IE29075, IE30075, IE31075 OR IE33075
LR0173	Ø 109.75	Ø 156.02	67.2	
LR0174	Ø 126.75	Ø 165.02	72.8	



SCALE 1:3.2
IE15355xxxxP1 SHOWN
SEE PG. 09.01.125 FOR
AVAILABLE LENGTHS
& RELATED COMPONENTS



DETAIL 'A'
SHOWN AT MAX. VALUE
FOR "H" WITHIN
RELATED RANGE



LOCATING RINGS
09.01.050
09.01.055



PACKAGE COMPONENTS FOR:

IE13xxx***P1

IE14xxx***P1

IE15xxx***P1

PACKAGE SELECTION CRITERIAS

OTHER INFORMATION

INLET EXIT RUNNER DIAMETER "D" mm	MANIFOLD TO TOP OF CLAMP PLATE "H" mm	INLET TIP (SEE OPTIONS)	PACKAGE NAME	INLET HEIGHT "L" mm	MAIN RUNNER DIAMETER "DI" mm	**TOTAL POWER WATTAGE AT 220V (W)	NUMBER OF ZONES
11.0	50.00 - 71.99		IE13080xxxxP1	80.0	11.0	525	1
11.0	72.00 - 96.99		IE13080xxxxP1	80.0	11.0	525	1
11.0	97.00 - 121.99		IE13105xxxxP1	105.0	11.0	525	1
11.0	122.00 - 146.99		IE13130xxxxP1	130.0	11.0	525	1
11.0	147.00 - 171.99		IE13155xxxxP1	155.0	11.0	525	1
11.0	172.00 - 196.99		IE13180xxxxP1	180.0	11.0	825	2
11.0	197.00 - 221.99		IE13205xxxxP1	205.0	11.0	825	2
11.0	222.00 - 246.99		IE13230xxxxP1	230.0	11.0	900	2
11.0	247.00 - 271.99		IE13255xxxxP1	255.0	11.0	900	2
11.0	272.00 - 296.99		IE13280xxxxP1	280.0	11.0	900	2
11.0	297.00 - 321.99		IE13305xxxxP1	305.0	11.0	900	2
11.0	322.00 - 346.99		IE13330xxxxP1	330.0	11.0	900	2
11.0	347.00 - 371.99		IE13355xxxxP1	355.0	11.0	900	2
16.0	50.00 - 71.99	IE14TP***-1	IE14080xxxxP1	80.0	16.0	525	1
16.0	72.00 - 96.99		IE14080xxxxP1	80.0	16.0	525	1
16.0	97.00 - 121.99		IE14105xxxxP1	105.0	16.0	525	1
16.0	122.00 - 146.99		IE14130xxxxP1	130.0	16.0	525	1
16.0	147.00 - 171.99		IE14155xxxxP1	155.0	16.0	525	1
16.0	172.00 - 196.99		IE14180xxxxP1	180.0	16.0	825	2
16.0	197.00 - 221.99		IE14205xxxxP1	205.0	16.0	825	2
16.0	222.00 - 246.99		IE14230xxxxP1	230.0	16.0	900	2
16.0	247.00 - 271.99		IE14255xxxxP1	255.0	16.0	900	2
16.0	272.00 - 296.99		IE14280xxxxP1	280.0	16.0	900	2
16.0	297.00 - 321.99		IE14305xxxxP1	305.0	16.0	900	2
16.0	322.00 - 346.99		IE14330xxxxP1	330.0	16.0	900	2
16.0	347.00 - 371.99		IE14355xxxxP1	355.0	16.0	900	2
18.0	50.00 - 71.99	IE14TP***-1	IE15080xxxxP1	80.0	16.0	525	1
18.0	72.00 - 96.99		IE15080xxxxP1	80.0	16.0	525	1
18.0	97.00 - 121.99		IE15105xxxxP1	105.0	16.0	525	1
18.0	122.00 - 146.99		IE15130xxxxP1	130.0	16.0	525	1
18.0	147.00 - 171.99		IE15155xxxxP1	155.0	16.0	525	1
18.0	172.00 - 196.99		IE15180xxxxP1	180.0	16.0	825	2
18.0	197.00 - 221.99		IE15205xxxxP1	205.0	16.0	825	2
18.0	222.00 - 246.99		IE15230xxxxP1	230.0	16.0	900	2
18.0	247.00 - 271.99		IE15255xxxxP1	255.0	16.0	900	2
18.0	272.00 - 296.99		IE15280xxxxP1	280.0	16.0	900	2
18.0	297.00 - 321.99		IE15305xxxxP1	305.0	16.0	900	2
18.0	322.00 - 346.99		IE15330xxxxP1	330.0	16.0	900	2
18.0	347.00 - 371.99		IE15355xxxxP1	355.0	16.0	900	2

INLET TIP SPH. RADIUS OPTIONS:

**** = MACHINE NOZZLE
 = SPHERICAL RADIUS
 = .500 (FOR 0.0 R)
 = .750 (FOR 1/2" R)
 = 15.5 (FOR 3/4" R)
 = 15.5 (FOR 15.5mm R)
 = 20.0 (FOR 20.0mm R)
 = 25.0 (FOR 25.0mm R)
 = 40.0 (FOR 40.0mm R)

LOCATING RING OPTIONS:

FOR "H" ≤ 71.99mm
 USE LR0146, LR0147, LR0148 OR LR0149
 (SEE PAGE. 09.01.050)

FOR "H" ≥ 72.00mm
 USE LR0150, LR0151, LR0152 OR LR0153
 (SEE PAGE. 09.01.055)



PACKAGE COMPONENTS FOR:

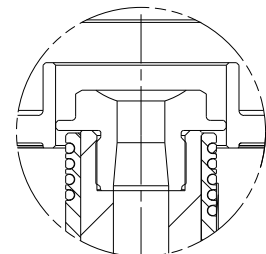
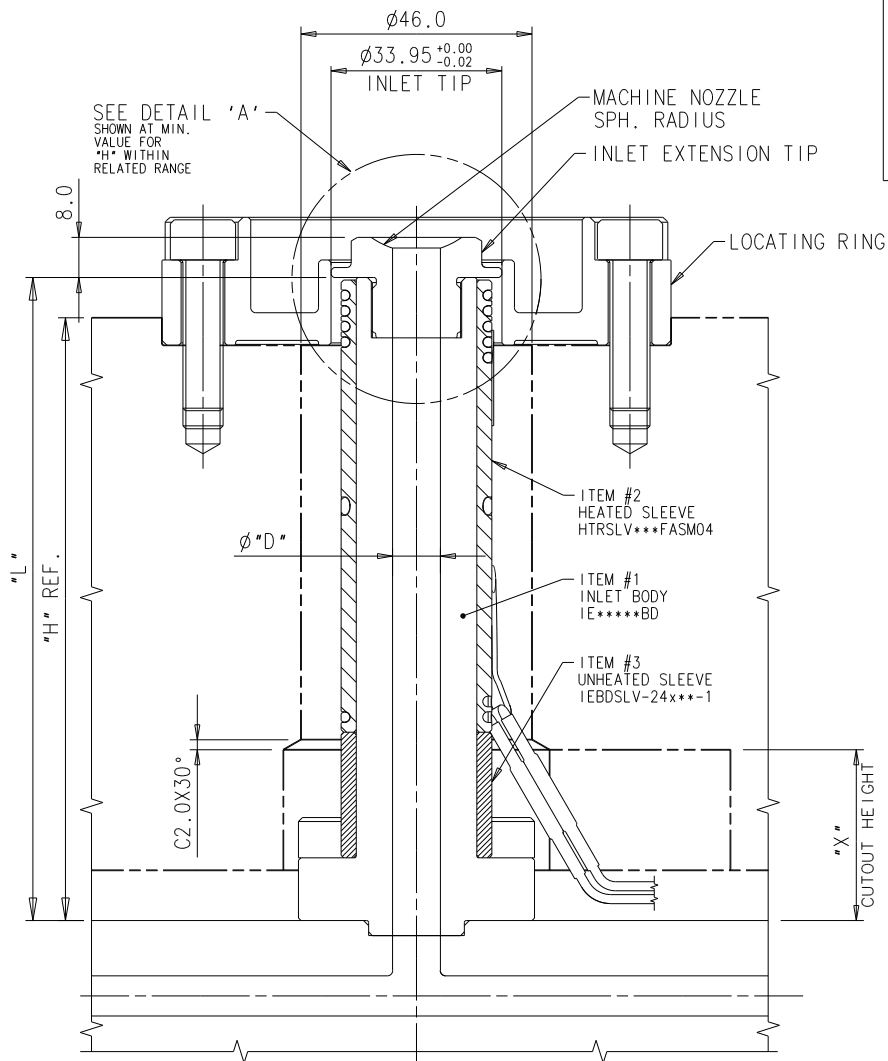
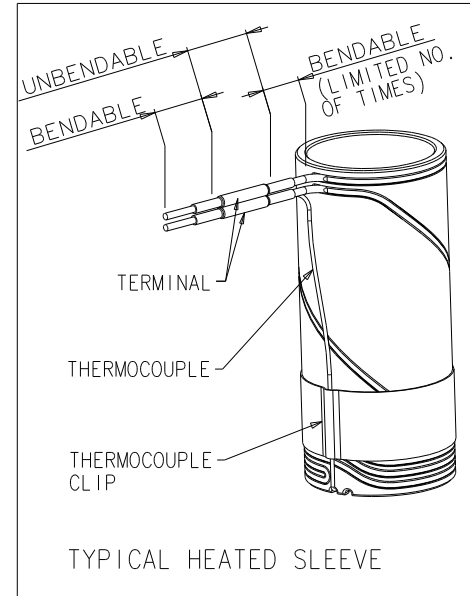
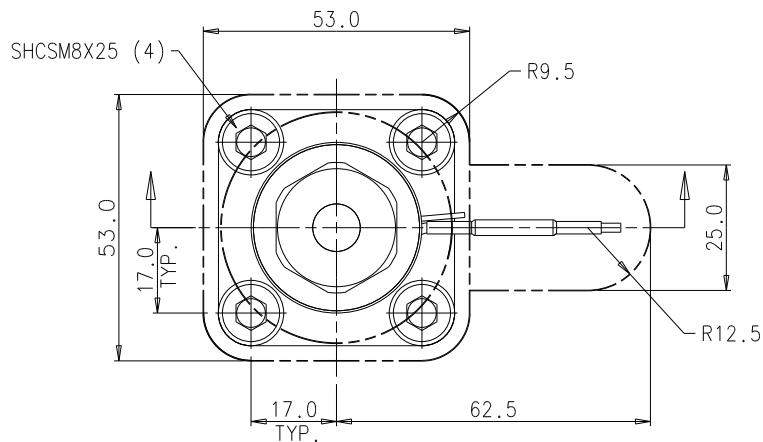
IE13xxxx**P1

IE14xxxx**P1

IE15xxxx**P1

MAIN ITEMS IN THE PACKAGE

PACKAGE NAME	ITEM #1	ITEM #2	ITEM #3	ITEM #4	ITEM #5
	INLET BODY	HEATED SLEEVE 'A'	UNHEATED SLEEVE 'A'	HEATED SLEEVE 'B'	UNHEATED SLEEVE 'B'
IE13080xxxxP1	IE13080BD	HTRSLV060FASM05	NA	NA	NA
IE13080xxxxP1	IE13080BD	HTRSLV060FASM05	NA	NA	NA
IE13105xxxxP1	IE13105BD	HTRSLV060FASM05	IEBDSLV-34X25-1	NA	NA
IE13130xxxxP1	IE13130BD	HTRSLV090FASM05	IEBDSLV-34X20-1	NA	NA
IE13155xxxxP1	IE13155BD	HTRSLV090FASM05	IEBDSLV-34X45-1	NA	NA
IE13180xxxxP1	IE13180BD	HTRSLV090FASM05	IEBDSLV-34X10-1	HTRSLV060RASM05	NA
IE13205xxxxP1	IE13205BD	HTRSLV090FASM05	IEBDSLV-34X35-1	HTRSLV060RASM05	NA
IE13230xxxxP1	IE13230BD	HTRSLV090FASM05	NA	HTRSLV120RASM05	NA
IE13255xxxxP1	IE13255BD	HTRSLV090FASM05	EBDSLV-34X24.5-1	HTRSLV120RASM05	NA
IE13280xxxxP1	IE13280BD	HTRSLV090FASM05	EBDSLV-34X49.5-1	HTRSLV120RASM05	NA
IE13305xxxxP1	IE13305BD	HTRSLV090FASM05	EBDSLV-34X74.5-1	HTRSLV120RASM05	NA
IE13330xxxxP1	IE13330BD	HTRSLV090FASM05	EBDSLV-34X99.5-1	HTRSLV120RASM05	NA
IE13355xxxxP1	IE13355BD	HTRSLV090FASM05	EBDSLV-34X99.5-1	HTRSLV120RASM05	IEBDSLV-34X25-1
IE14080xxxxP1	IE14080BD	HTRSLV060FASM05	NA	NA	NA
IE14080xxxxP1	IE14080BD	HTRSLV060FASM05	NA	NA	NA
IE14105xxxxP1	IE14105BD	HTRSLV060FASM05	IEBDSLV-34X25-1	NA	NA
IE14130xxxxP1	IE14130BD	HTRSLV090FASM05	IEBDSLV-34X20-1	NA	NA
IE14155xxxxP1	IE14155BD	HTRSLV090FASM05	IEBDSLV-34X45-1	NA	NA
IE14180xxxxP1	IE14180BD	HTRSLV090FASM05	IEBDSLV-34X10-1	HTRSLV060RASM05	NA
IE14205xxxxP1	IE14205BD	HTRSLV090FASM05	IEBDSLV-34X35-1	HTRSLV060RASM05	NA
IE14230xxxxP1	IE14230BD	HTRSLV090FASM05	NA	HTRSLV120RASM05	NA
IE14255xxxxP1	IE14255BD	HTRSLV090FASM05	EBDSLV-34X24.5-1	HTRSLV120RASM05	NA
IE14280xxxxP1	IE14280BD	HTRSLV090FASM05	EBDSLV-34X49.5-1	HTRSLV120RASM05	NA
IE14305xxxxP1	IE14305BD	HTRSLV090FASM05	EBDSLV-34X74.5-1	HTRSLV120RASM05	NA
IE14330xxxxP1	IE14330BD	HTRSLV090FASM05	EBDSLV-34X99.5-1	HTRSLV120RASM05	NA
IE14355xxxxP1	IE14355BD	HTRSLV090FASM05	EBDSLV-34X99.5-1	HTRSLV120RASM05	IEBDSLV-34X25-1
IE15080xxxxP1	IE15080BD	HTRSLV060FASM05	NA	NA	NA
IE15080xxxxP1	IE15080BD	HTRSLV060FASM05	NA	NA	NA
IE15105xxxxP1	IE15105BD	HTRSLV060FASM05	IEBDSLV-34X25-1	NA	NA
IE15130xxxxP1	IE15130BD	HTRSLV090FASM05	IEBDSLV-34X20-1	NA	NA
IE15155xxxxP1	IE15155BD	HTRSLV090FASM05	IEBDSLV-34X45-1	NA	NA
IE15180xxxxP1	IE15180BD	HTRSLV090FASM05	IEBDSLV-34X10-1	HTRSLV060RASM05	NA
IE15205xxxxP1	IE15205BD	HTRSLV090FASM05	IEBDSLV-34X35-1	HTRSLV060RASM05	NA
IE15230xxxxP1	IE15230BD	HTRSLV090FASM05	NA	HTRSLV120RASM05	NA
IE15255xxxxP1	IE15255BD	HTRSLV090FASM05	EBDSLV-34X24.5-1	HTRSLV120RASM05	NA
IE15280xxxxP1	IE15280BD	HTRSLV090FASM05	EBDSLV-34X49.5-1	HTRSLV120RASM05	NA
IE15305xxxxP1	IE15305BD	HTRSLV090FASM05	EBDSLV-34X74.5-1	HTRSLV120RASM05	NA
IE15330xxxxP1	IE15330BD	HTRSLV090FASM05	EBDSLV-34X99.5-1	HTRSLV120RASM05	NA
IE15355xxxxP1	IE15355BD	HTRSLV090FASM05	EBDSLV-34X99.5-1	HTRSLV120RASM05	IEBDSLV-34X25-1



DETAIL 'A'
SHOWN AT MAX. VALUE
FOR 'H' WITHIN
RELATED RANGE



LOCATING RINGS
09.01.060
09.01.065

SCALE 1:1.5
IE11128xxxxP2 SHOWN
SEE PG. 09.01.135 FOR
AVAILABLE LENGTHS
& RELATED COMPONENTS


21.01.135 Inlet Component

PACKAGE COMPONENTS FOR:

IE11xxx**P2

IE12xxx**P2

PACKAGE SELECTION CRITERIAS			OTHER INFORMATION				MAIN ITEMS IN THE PACKAGE		
INLET MAIN RUNNER DIAMETER "D" mm	MANIFOLD TO TOP OF CLAMP PLATE "H" mm	INLET TIP (SEE OPTIONS)	PACKAGE NAME	INLET HEIGHT "L" mm	CUTOUT HEIGHT "X" mm	**TOTAL POWER WATTAGE AT 220V (W)	ITEM #1	ITEM #2	ITEM #3
							INLET BODY	HEATED SLEEVE	UNHEATED SLEEVE
9.5	38.00 - 49.99	IE08TP****	IE11058xxxxP2	58.0	34.0	300	IE11058BD	HTRSLV045FASM02	NA
9.5	50.00 - 59.99		IE11058xxxxP2	58.0	34.0	300	IE11058BD	HTRSLV045FASM02	NA
9.5	60.00 - 69.99		IE11068xxxxP2	68.0	34.0	300	IE11068BD	HTRSLV045FASM02	IEBDSLV-24X10-1
9.5	70.00 - 79.99		IE11078xxxxP2	78.0	40.0	300	IE11078BD	HTRSLV045FASM02	IEBDSLV-24X20-1
9.5	80.00 - 89.99		IE11088xxxxP2	88.0	35.0	525	IE11088BD	HTRSLV060FASM04	IEBDSLV-24X15-1
9.5	90.00 - 99.99		IE11098xxxxP2	98.0	45.0	525	IE11098BD	HTRSLV060FASM04	IEBDSLV-24X25-1
9.5	100.00 - 109.99		IE11108xxxxP2	108.0	34.0	525	IE11108BD	HTRSLV090FASM04	IEBDSLV-24X5-1
9.5	110.00 - 119.99		IE11118xxxxP2	118.0	36.0	525	IE11118BD	HTRSLV090FASM04	IEBDSLV-24X15-1
9.5	120.00 - 129.99		IE11128xxxxP2	128.0	45.0	525	IE11128BD	HTRSLV090FASM04	IEBDSLV-24X25-1
11.0	38.00 - 49.99	IE09TP****	IE12058xxxxP2	58.0	34.0	300	IE12058BD	HTRSLV045FASM02	NA
11.0	50.00 - 59.99		IE12058xxxxP2	58.0	34.0	300	IE12058BD	HTRSLV045FASM02	NA
11.0	60.00 - 69.99		IE12068xxxxP2	68.0	34.0	300	IE12068BD	HTRSLV045FASM02	IEBDSLV-24X10-1
11.0	70.00 - 79.99		IE12078xxxxP2	78.0	40.0	300	IE12078BD	HTRSLV045FASM02	IEBDSLV-24X20-1
11.0	80.00 - 89.99		IE12088xxxxP2	88.0	35.0	525	IE12088BD	HTRSLV060FASM04	IEBDSLV-24X15-1
11.0	90.00 - 99.99		IE12098xxxxP2	98.0	45.0	525	IE12098BD	HTRSLV060FASM04	IEBDSLV-24X25-1
11.0	100.00 - 109.99		IE12108xxxxP2	108.0	34.0	525	IE12108BD	HTRSLV090FASM04	IEBDSLV-24X5-1
11.0	110.00 - 119.99		IE12118xxxxP2	118.0	36.0	525	IE12118BD	HTRSLV090FASM04	IEBDSLV-24X15-1
11.0	120.00 - 129.99		IE12128xxxxP2	128.0	45.0	525	IE12128BD	HTRSLV090FASM04	IEBDSLV-24X25-1

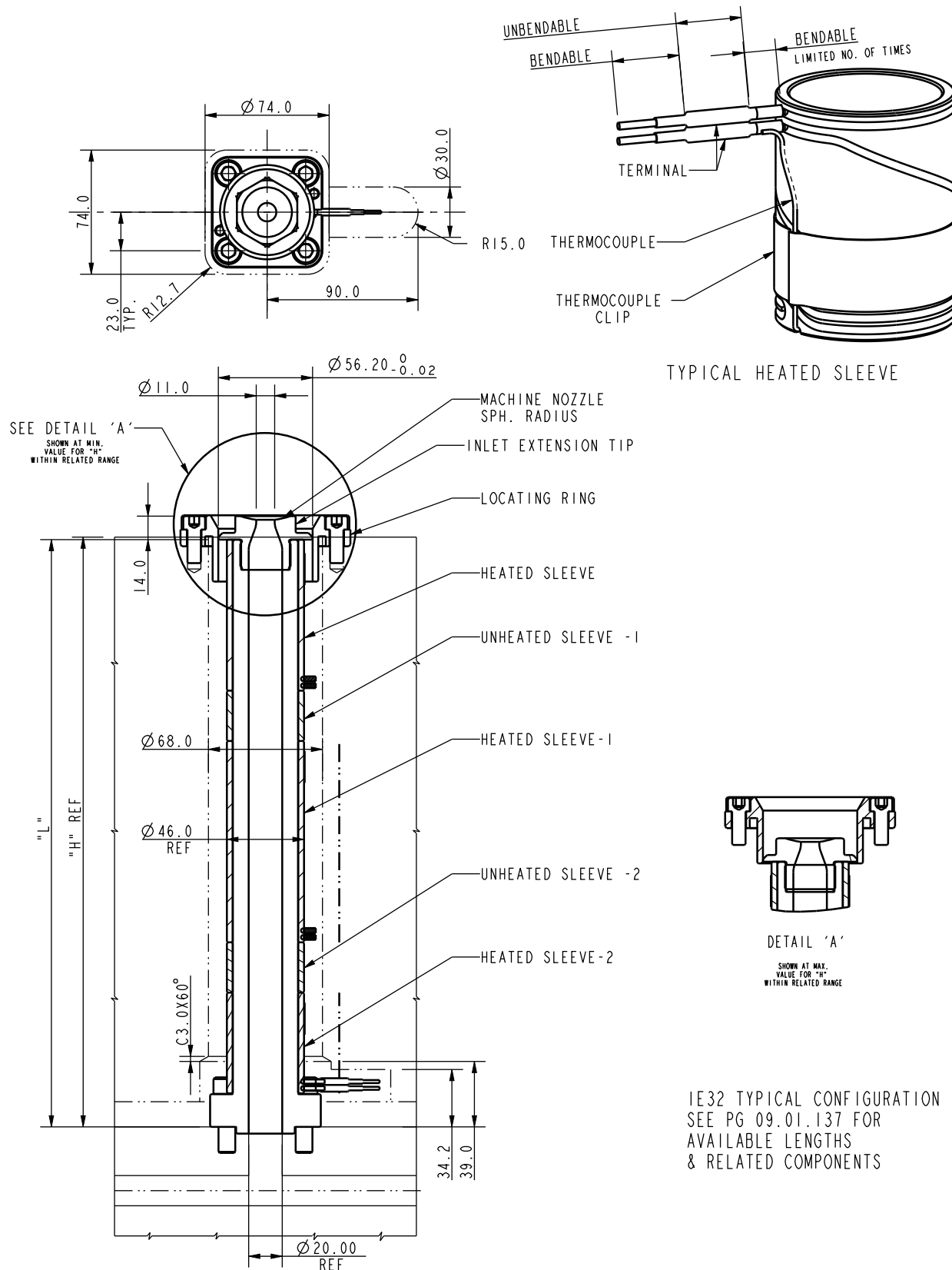

INLET TIP SPH. RADIUS OPTIONS:

*** = MACHINE NOZZLE
 SPHERICAL RADIUS
 = BL (FOR 0.0 R)
 = .500 (FOR 1/2" R)
 = .750 (FOR 3/4" R)
 = 15.5 (FOR 15.5mm R)
 = 20.0 (FOR 20.0mm R)
 = 25.0 (FOR 25.0mm R)
 = 40.0 (FOR 40.0mm R)

LOCATING RING OPTIONS:

FOR "H" ≤ 49.99mm
 USE LR0140, LR0141 OR LR0142
 (SEE PAGE. 09.01.060)

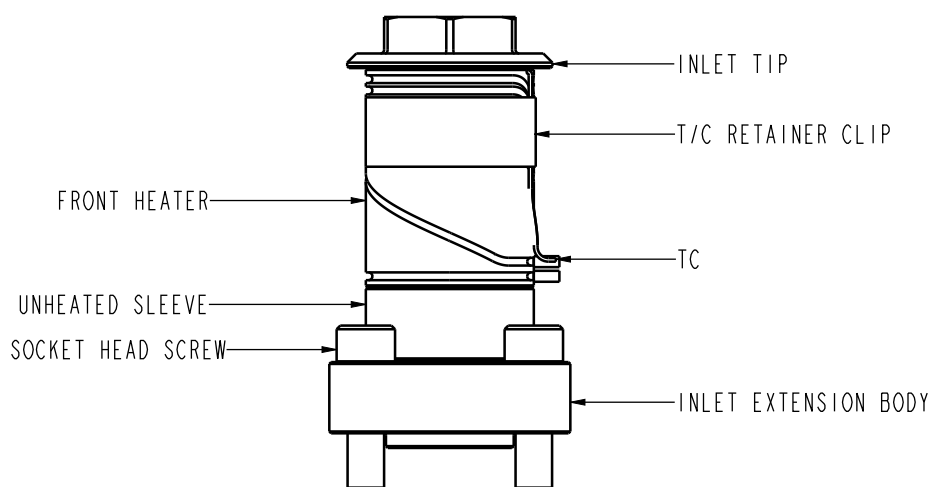
FOR "H" ≥ 50.00mm
 USE LR0143, LR0144 OR LR0145
 (SEE PAGE. 09.01.065)



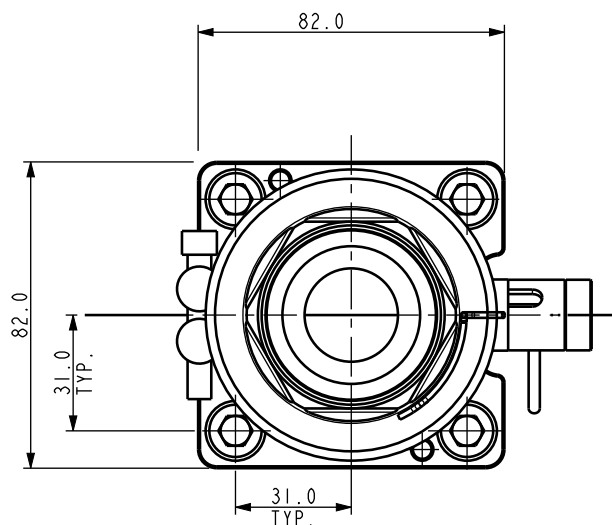


IE32 CONFIGURATION

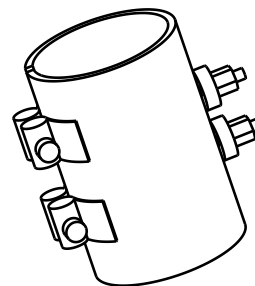
IE LENGTH "L" (mm)	BODY HEATER	UNHEATED SLEEVE - 2	BODY HEATER	UNHEATED SLEEVE - 1	FRONT HEATER
80.00	N/A	N/A	N/A	N/A	HTRSLV060FASM06
85.00-115.00	N/A	N/A	N/A	5.0-35.0	HTRSLV060FASM06
115.01-145.00	N/A	N/A	N/A	5.0-35.0	HTRSLV090FASM06
145.01-210.00	N/A	N/A	HTRSLV060RASM06	5.0-70.0	HTRSLV060FASM06
210.01-270.00	N/A	N/A	HTRSLV120RASM06	10.0-70.0	HTRSLV060FASM06
270.01-300.00	N/A	N/A	HTRSLV120RASM06	40.0-70.0	HTRSLV090FASM06
300.01-335.00	N/A	5.0-35.0	HTRSLV120RASM06	65.0-70.0	HTRSLV090FASM06
335.01-360.00	HTRSLV060RASM06	22.5-35.0	HTRSLV120RASM06	22.5-35.0	HTRSLV090FASM06



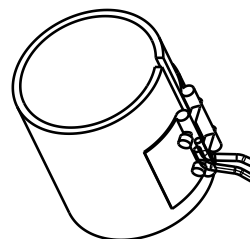
**** = MACHINE NOZZLE
 SPHERICAL RADIUS
 = BL (FOR 0.0 R)
 = .750 (FOR 3/4" R)
 = 15.5 (FOR 15.5 R)
 = 20.0 (FOR 20.0mm R)
 = 25.0 (FOR 25.0mm R)
 = 40.0 (FOR 40.0mm R)
 = 45.0 (FOR 45.0mm R)



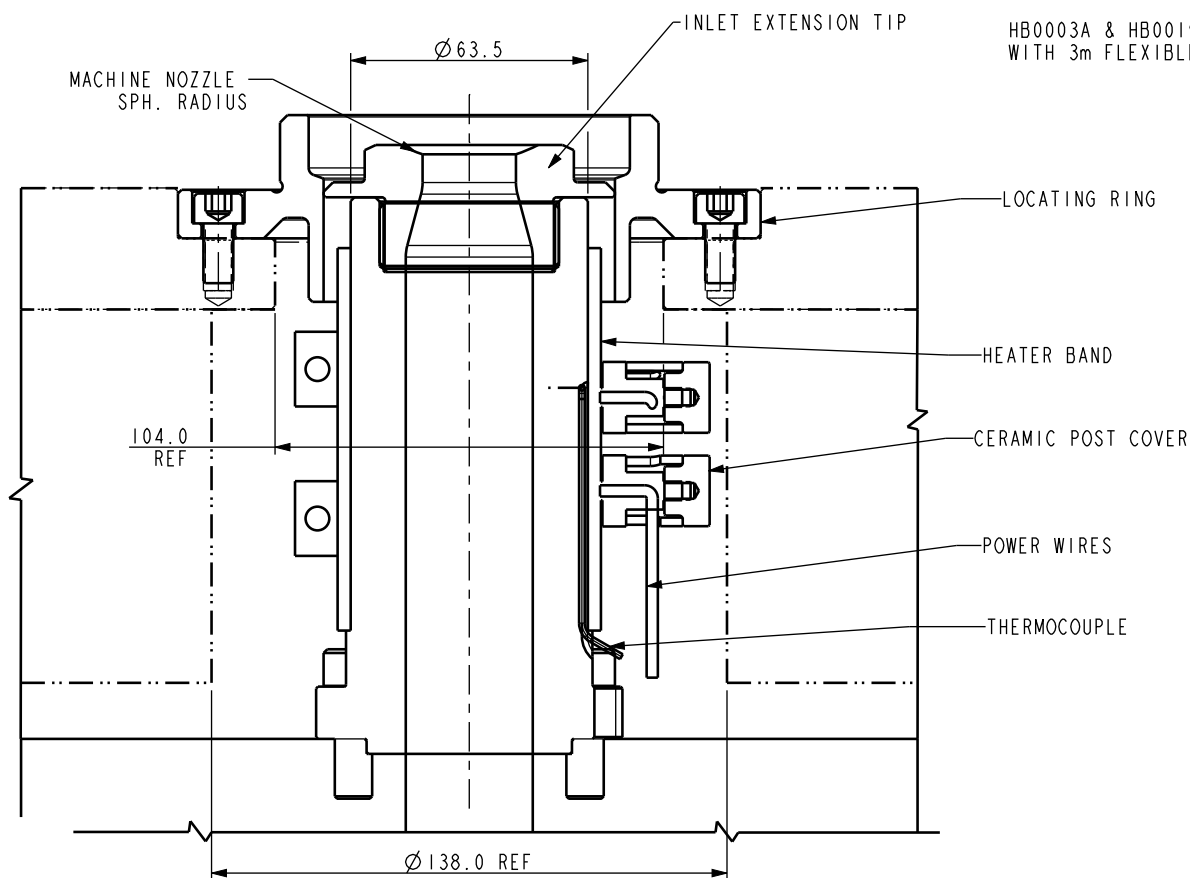
HB00XXX CONFIGURATION:



HB0002 & HB0011
COME WITH POST TERMINALS



HB0003A & HB0019A
WITH 3m FLEXIBLE LEADS



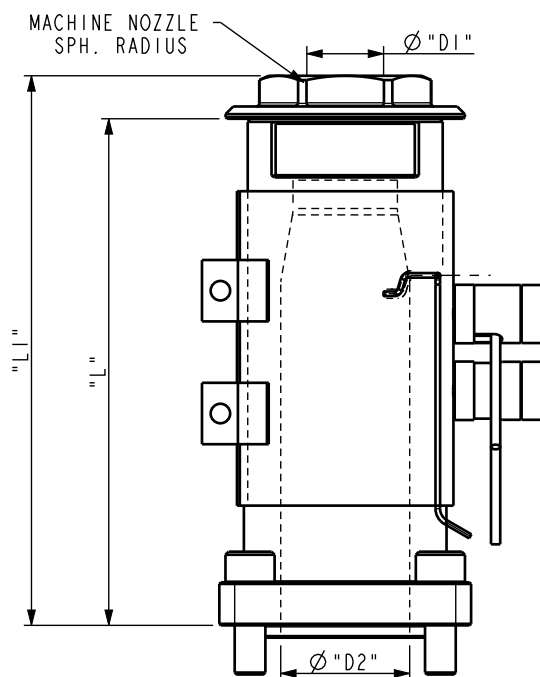
SEE PG.09.01.145
FOR AVAILABLE LENGTHS
& RELATED COMPONENTS

NOTE:
FOR IE**185****, IE**165****, IE**145****, RECOMMENDED CUTOUT Ø138mm
FOR IE**120****, IE**075****, RECOMMENDED CUTOUT Ø100mm

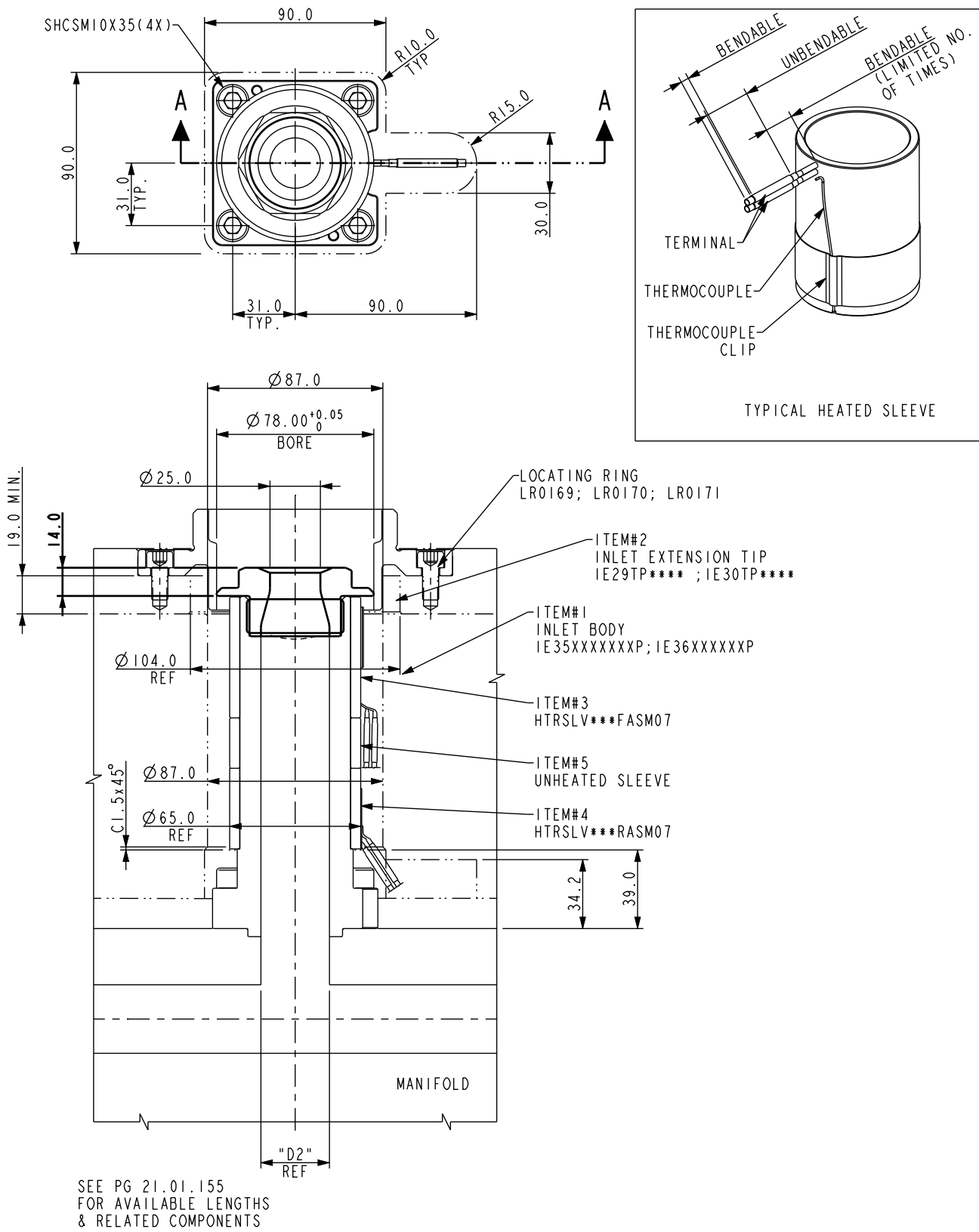


PACKAGE COMPONENTS FOR:
 IE29xxx****P; IE30xxx****P
 IE31xxx****P; IE33xxx****P

PACKAGE NAME	INLET RUNNER Ø "D1"	INLET RUNNER Ø "D2"	INLET LENGTH "L" (mm)	TOTAL LENGTH "Lt" (mm)	POWER WATTAGE AT 220V (W)
IE29075****P	25.00	28.00	75.0	89.0	300
IE29120****P			120.0	134.0	590
IE29145****P			145.0	159.0	710
IE29165****P			165.0	179.0	710
IE29185****P			185.0	199.0	960
IE30075****P	25.00	34.00	75.0	89.0	300
IE30120****P			120.0	134.0	590
IE30145****P			145.0	159.0	710
IE30165****P			165.0	179.0	710
IE30185****P			185.0	199.0	960
IE31075****P	25.00	42.00	75.0	89.0	300
IE31120****P			120.0	134.0	590
IE31145****P			145.0	159.0	710
IE31165****P			165.0	179.0	710
IE31185****P			185.0	199.0	960
IE33075****P	11.00	24.00	75.0	89.0	300
IE33120****P			120.0	134.0	590
IE33145****P			145.0	159.0	710
IE33165****P			165.0	179.0	710
IE33185****P			185.0	199.0	960



**** = MACHINE NOZZLE
 SPHERICAL RADIUS
 = BL (FOR 0.0 R)
 = .750 (FOR 3/4" R)
 = 20.0 (FOR 20.0mm R)
 = 25.0 (FOR 25.0mm R)
 = 40.0 (FOR 40.0mm R)
 = 45.0 (FOR 45.0mm R)



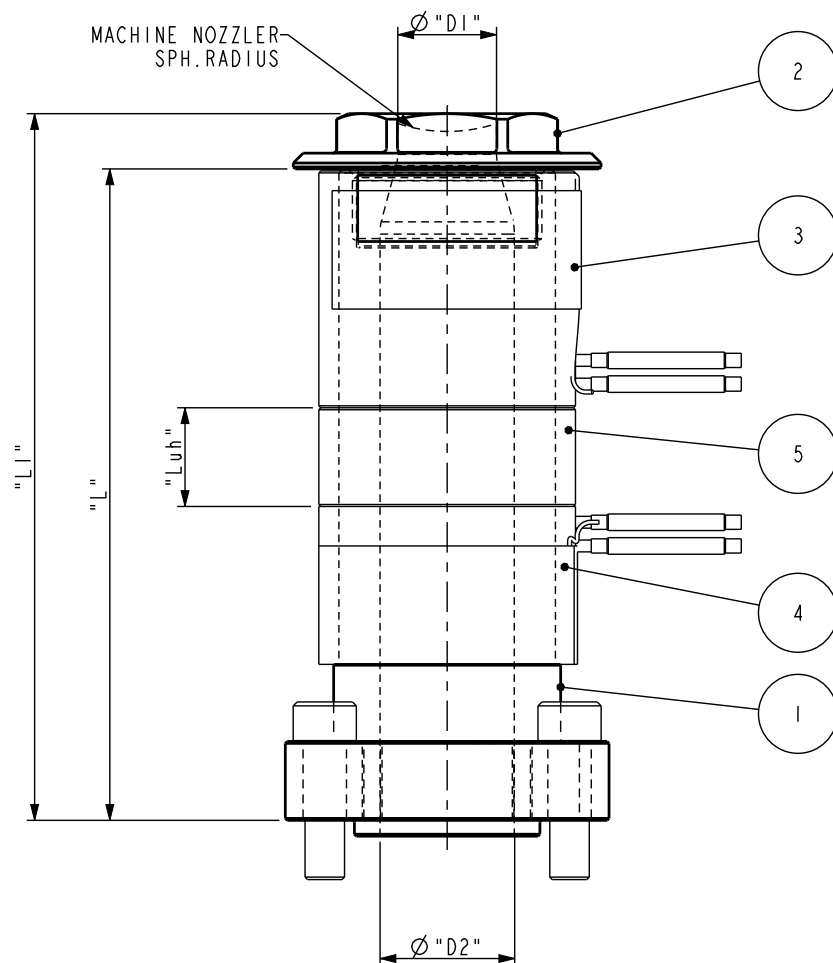


PACKAGE COMPONENTS FOR:
IE35XXXXXXP; IE36XXXXXXP

PACKAGE NAME	INLET RUNNER Ø "D1"	INLET RUNNER Ø "D2"	INLET LENGTH "L" (MM)	INLET LENGTH "L1" (MM)	INLET BODY "I"	INLET TIP "2"	SLEEVE HEATER (*3, *4 - SEE PART LIST) WATTAGE [W]	UNHEATED SLEEVE (*5) Luh (mm)
IE35075****P	25.00	28.00	75.0	89.0	IE35075BD	IE29TP****	1100	N/A
IE35120****P	25.00	28.00	120.0	134.0	IE35120BD		1200	N/A
IE35145****P	25.00	28.00	145.0	159.0	IE35145BD		1800	25.0
IE35165****P	25.00	28.00	165.0	179.0	IE35165BD		1800	25.0
IE35185****P	25.00	28.00	185.0	199.0	IE35185BD		2000	25.0
IE36075****P	25.00	34.00	75.0	89.0	IE36075BD	IE30TP****	1100	N/A
IE36120****P	25.00	34.00	120.0	134.0	IE36120BD		1200	N/A
IE36145****P	25.00	34.00	145.0	159.0	IE36145BD		1800	25.0
IE36165****P	25.00	34.00	165.0	179.0	IE36165BD		1800	25.0
IE36185****P	25.00	34.00	185.0	199.0	IE36185BD		2000	25.0

ITEM* (INLET TIP) OPTION CHART:

**** = MACHINE NOZZLE
SPHERICAL RADIUS
= BL (FOR 0.0 R)
= .750 (FOR 3/4" R)
= 20.0 (FOR 20.0mm R)
= 25.0 (FOR 25.0mm R)
= 40.0 (FOR 40.0mm R)
= 45.0 (FOR 45.0mm R)





CERTIFICATE OF REGISTRATION

This is to certify that

Mold-Masters (2007) Limited

233 Armstrong Avenue Georgetown, Ontario L7G 4X5 Canada

Refer to Attachment to Certificate of Registration dated March 26, 2018 for additional certified sites

operates a

Quality Management System

which complies with the requirements of

ISO 9001:2015

for the following scope of certification

Design and manufacture of processing systems (hot runners), temperature controllers, full mold or hot half solutions, PET systems, and related auxiliary components used in plastic injection molds.

Certificate No.: CERT-0116319
File No.: 002260
Issue Date: March 26, 2018

Original Certification Date: September 3, 1993
Certification Effective Date: March 25, 2018
Certification Expiry Date: March 24, 2021

Nicole Grantham
General Manager SAI Global Certification Services



Registered by:
QMI-SAI Canada Limited (SAI Global), 20 Carlson Court, Suite 200, Toronto, Ontario M9W 7K6 Canada. This registration is subject to the SAI Global Terms and Conditions for Certification. While all due care and skill was exercised in carrying out this assessment, SAI Global accepts responsibility only for proven negligence. This certificate remains the property of SAI Global and must be returned to them upon request.
To verify that this certificate is current, please refer to the SAI Global On-Line Certification Register: www.qmi-saiglobal.com/qmi_companies/





CERTIFICAT

CERTIFICADO

СЕРТИФИКАТ

證明書

CERTIFICATE

ZERTIFIKAT



Management Service

CERTIFICATE

The Certification Body
of TÜV SÜD Management Service GmbH
certifies that



Mold-Masters Europa GmbH
Neumatttring 1 • 76532 Baden-Baden
Germany

has established and applies
a Quality Management System for

**Production and Sales of
Standard/ Custom Hot Runner Systems,
Temperature Controllers, Hot Halves, and
Related Auxiliary Components for Use in the
Plastic Injection Molding Process.**

An audit was performed, Report No. **70045133**.

Proof has been furnished that the requirements
according to

ISO 9001:2015

are fulfilled.

The certificate is valid from **2017-04-13** until **2020-04-12**.

Certificate Registration No.: **12 100 28325 TMS**.

M. Wegmann

Product Compliance Management
Munich, 2017-04-13



TÜV SÜD Management Service GmbH • Zertifizierungsstelle • Ridlerstraße 65 • 80339 München • Germany
www.tuev-sued.de/certificate-validity-check

TÜV®



CERTIFICATE OF REGISTRATION

This is to certify that:

MOLD-MASTERS KUNSHAN LIMITED

2# ZhaoTian Rd. East Jing Yang Rd., Lu Jia Town, Kunshan, Jiangsu, 215300,
China

operates a
QUALITY MANAGEMENT SYSTEM

which complies with the requirements of

ISO 9001:2015

For the following scope

**Designing and Manufacturing of processing systems (hot runners)
temperature controllers hot halves and nozzle sprue technology.**

Certificate No: QEC26152

Issued: 10 January 2017

Originally Certified: 5 February 2007

Expires: 9 January 2020

Current Certification: 10 January 2017

Nicole Grantham
General Manager Certification Services



Registered by:
SAI Global Certification Services Pty Ltd (ACN 108 716 660) 680 George Street, Sydney, NSW, 2000 Australia with SAI Global
Limited 680 George Street Sydney NSW 2000 Australia ("SAI Global") and subject to the SAI Global Terms and Conditions for
Certification. While all due care and skill was exercised in carrying out this assessment, SAI Global accepts responsibility only
for proven negligence. This certificate remains the property of SAI Global and must be returned to SAI Global upon its request.
To verify that this certificate is current please refer to SAI Global On-Line Certification register at <http://www.sai-global.com>





Certificate

Standard **ISO 9001:2015**

Certificate Registr. No. **01 100 1837578**

Certificate Holder:



**MILACRON India Private Limited
(Mold-Masters Division)**

Site 1 : Design Office
No.6, Mettupalayam Road, Kavundampalayam,
Coimbatore – 641 030.

Site 2: Plant 1
No: 3b, Gandhiji Salai, Nallampalayam, Rathinapuri Post,
Coimbatore – 641 027.

Site 3: Plant 2
No.7/2, Athipalayam Road, Chinnavedampatti,
Coimbatore – 641 006.

Scope: **Design and Manufacture of Processing Systems (Hot Runners), Hot half Solutions, Temperature Controllers and Related Auxiliary Components used in Plastic Injection Molds.**

Validity: Proof has been furnished by means of an audit that the requirements of ISO 9001:2015 are met.
The certificate is valid from 2019-03-07 until 2022-03-06.

Handwritten signature: AWSON 21

2019-03-07



TÜV Rheinland Cert GmbH
Am Grauen Stein · 51105 Köln

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