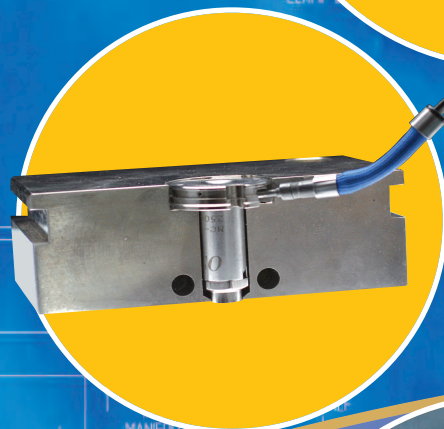
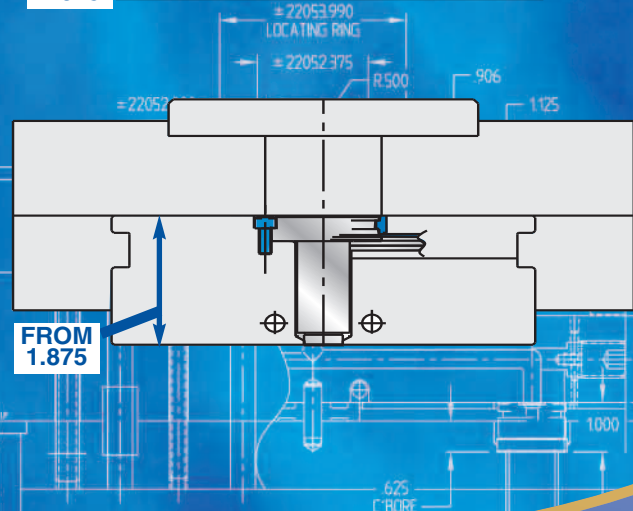
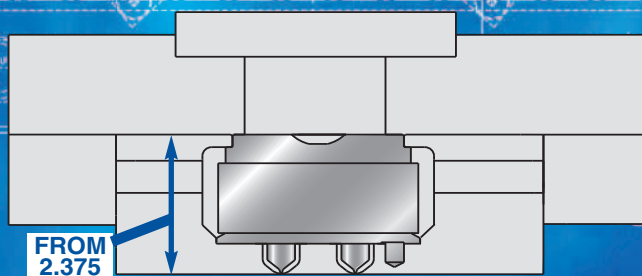


OSCO[®] inc.

RUNNERLESS MOLDING SYSTEMS

Mini Hot Runner For Unit Die Molds

Mini Hot Runner



Where Innovation Flows



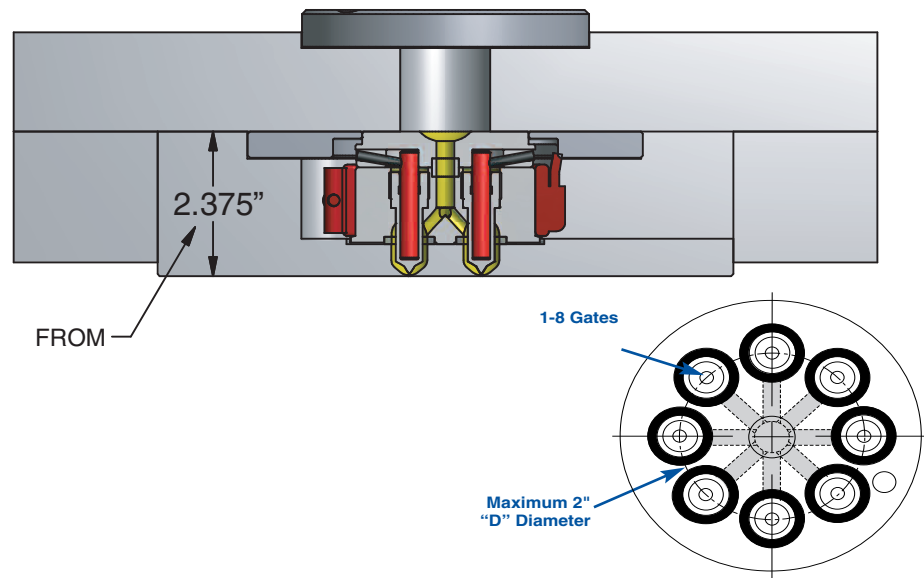
Proudly Made in the USA

INDEX

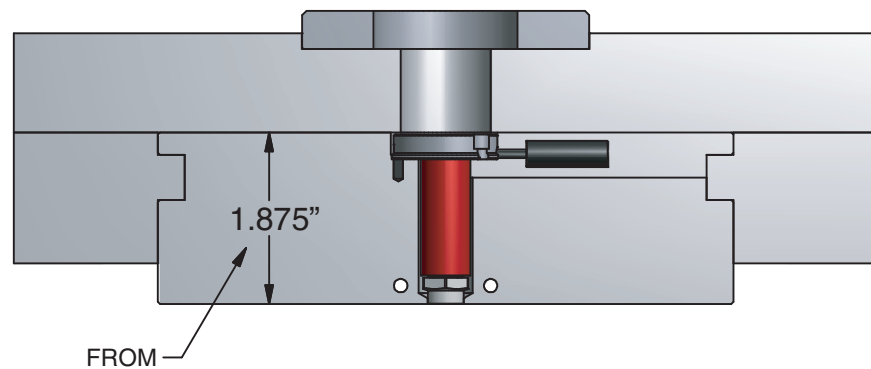
Mini Hot Runner for Unit Die Molds

	Page
☆ Features and Benefits	
☆ AFS – 20 G & H / Boring	1 - 2
☆ BLS – 20 G & H / Boring	3 - 4
☆ FBS – 20 G & H / Boring	5 - 6
☆ RGS – 20 G & H / Boring	7 - 8
☆ Mini – MGN – 1000	9
☆ Mini – MGN – 1500	10
☆ Mini – MGN – 1700	11
☆ Mini – MGN – 2000	12
☆ Mini – MGN – Boring	13

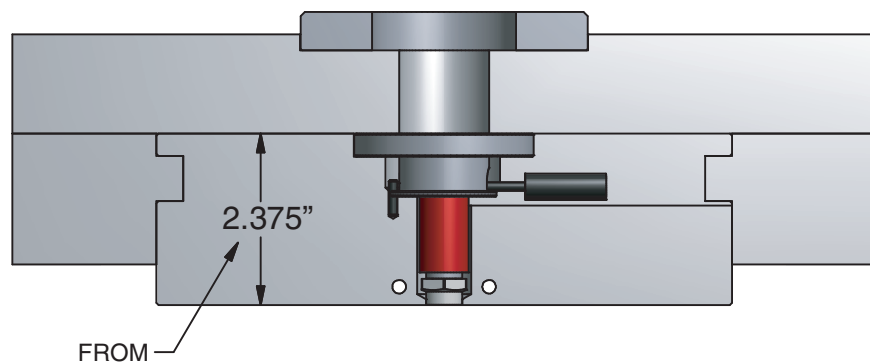
Mini-MGN (Multiple Gate Nozzle)



Mini-HSN "G" (Hot Sprue Nozzle)



Mini-HSN "H" (Hot Sprue Nozzle)



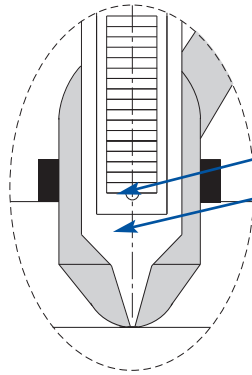
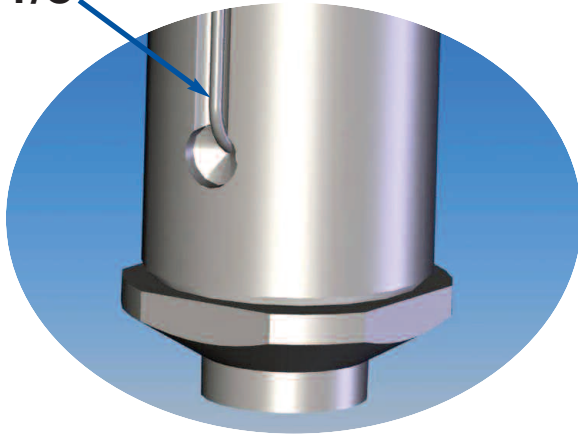
Balanced
Fill

Temperature
Control
at Each
Gate

Better
Gate
Cosmetics

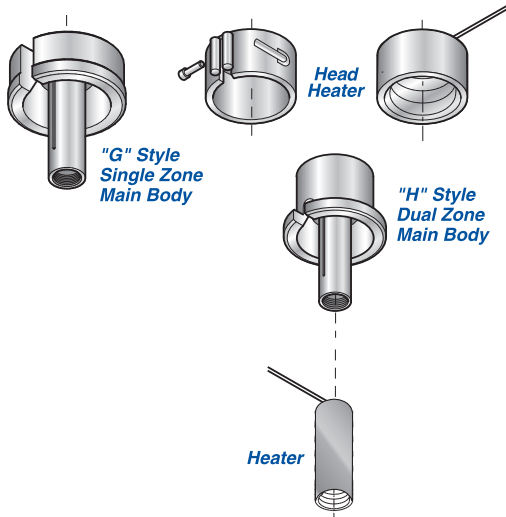
Temperature Control Each Gate

T/C

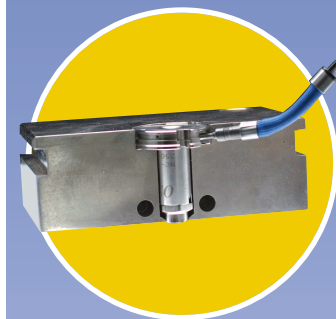
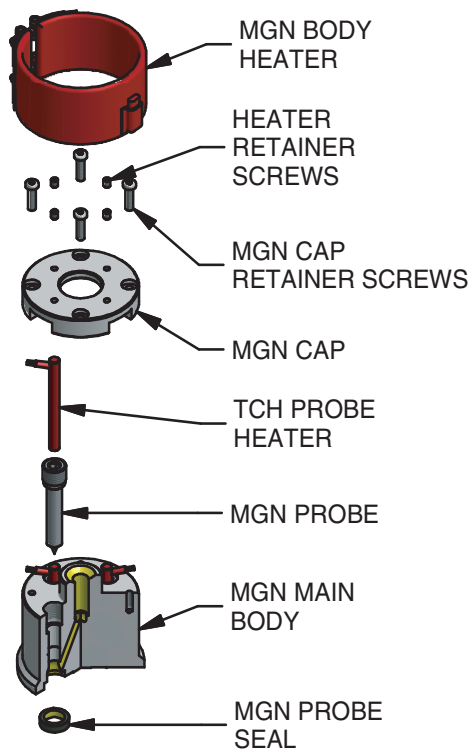
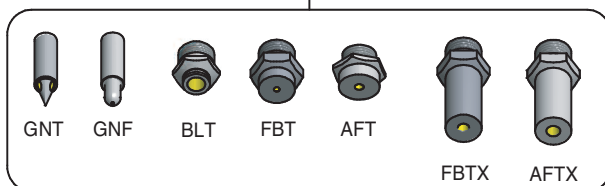


Thermocouple Control
Hardened Probe

Field Serviceable



TIPS & NEEDLES

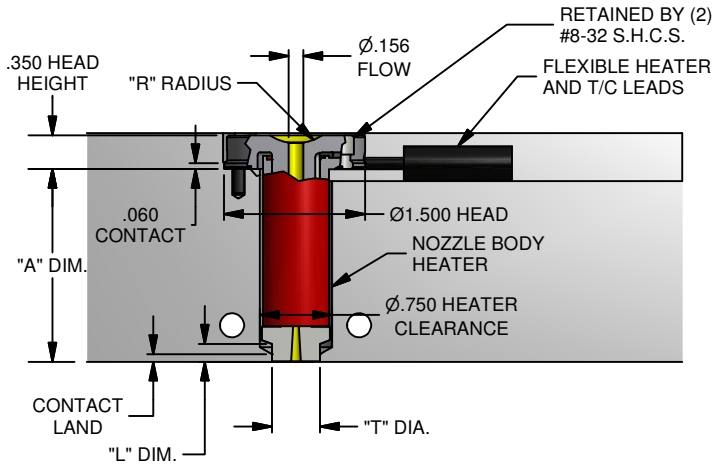


**STANDARD
COMPONENTS
IN STOCK**

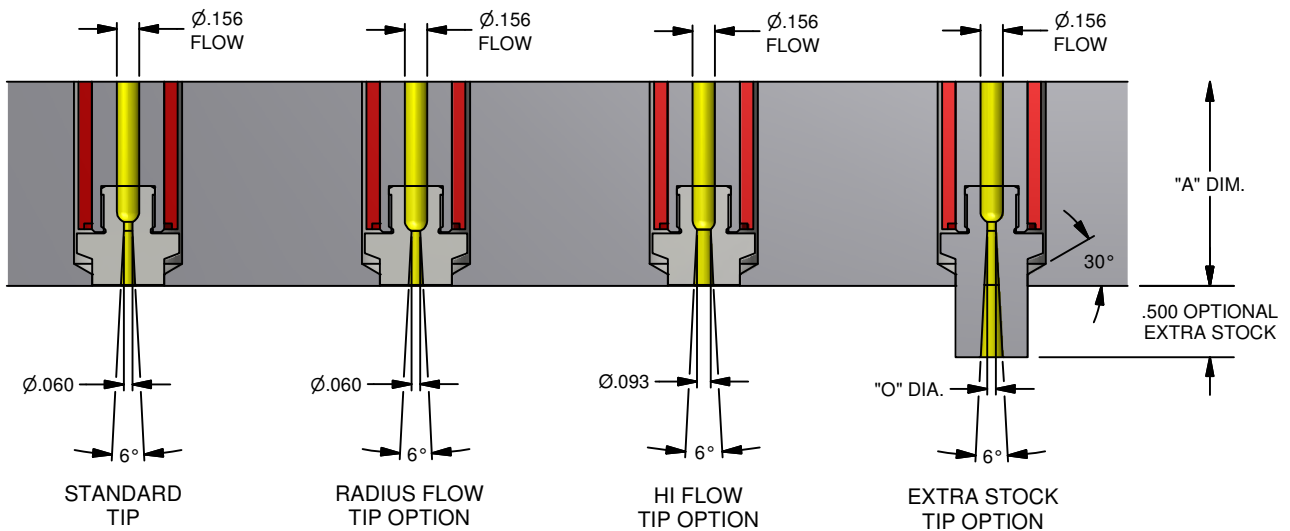
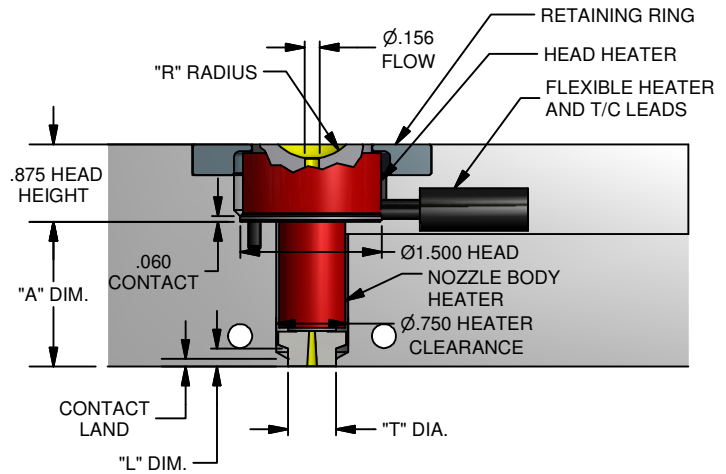
AFS-20-G/H HSN - MINI

The "AFS" Absolute Flow Style HSN MINI - 20 Series Hot Sprue Nozzle utilizes a $\varnothing.156$ resin feed. The **"G" Style Nozzle** is engineered for general purpose resins and the **"H" Style Nozzle** is engineered for the toughest High Heat / Heat Sensitive Resins.

"G" STYLE For Processing Temps (<500°F)



"H" STYLE For Processing Temps (>500°F)



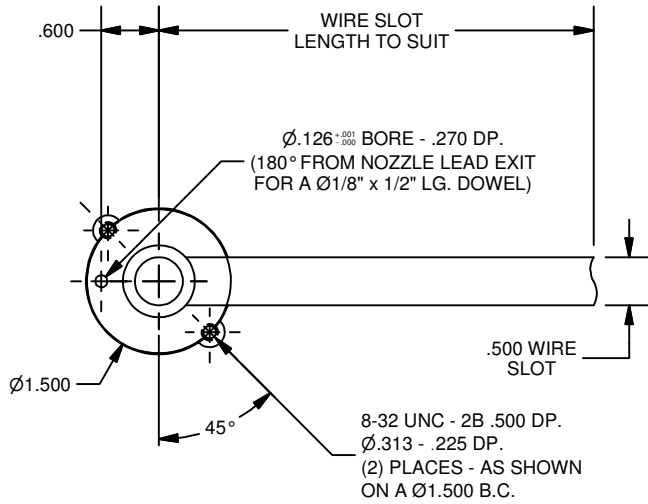
THERMAL EXPANSION NOTE

"AA" DIM. = "A" DIM. + THERMAL EXPANSION
EXPANSION = "A" DIM. X .00000633 X (PROCESSING TEMP. - 68°F)

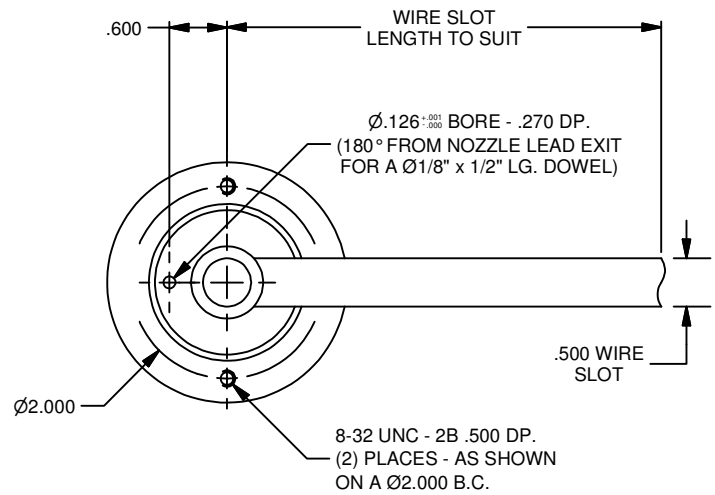
NOZZLE TYPE	"A" DIM.	STYLE	"T" TIP	"L" LAND	"O" GATE	"R" RADIUS	RETAINING RING "H" STYLE ONLY
A F S 0 2	<input type="text"/> <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/>	<input type="text"/>
	1.500" = 15 2.000" = 20 2.500" = 25 3.000" = 30	G = Style H = Style	3 = Ø.375 5 = Ø.500 7 = Ø.750	Std. = S Extra Stock = X	06 = Ø.060 09 = Ø.093	1/2 = 5 3/4 = 7	Y = Yes N = No
HOW TO ORDER: Specify dimensions by completing the following chart. Call: 1-800-499-OSCO							
				<input type="text"/> Specify resin to be processed.			

NOTE: For sizes other than shown, please contact Osco Tech Service.

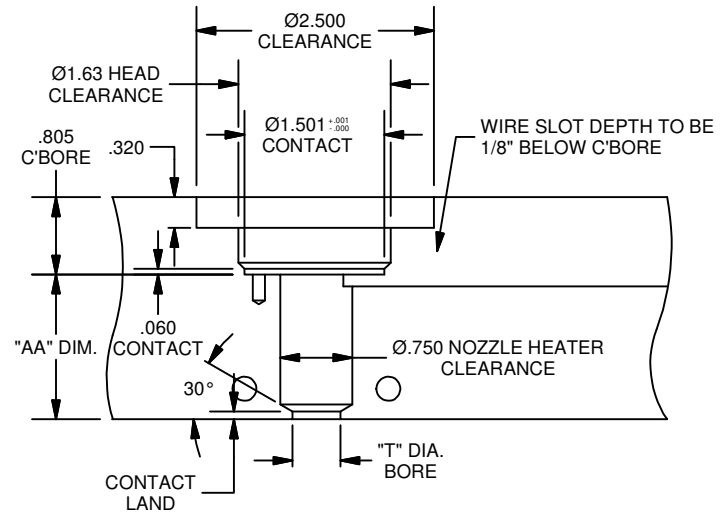
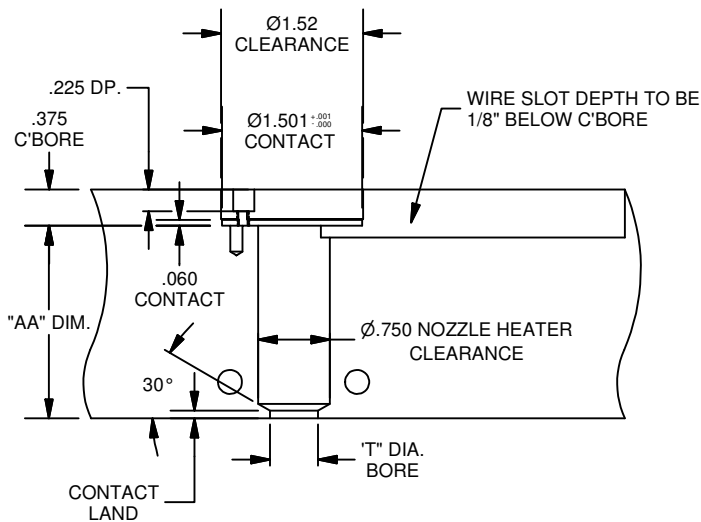
AFS-20-G/H MINI - BORING



**"G" STYLE
BORING INFORMATION**



**"H" STYLE
BORING INFORMATION**



THERMAL EXPANSION NOTE

"AA" DIM. = "A" DIM. + THERMAL EXPANSION
EXPANSION = "A" DIM. X .0000633 X (PROCESSING TEMP. - 68 °F)

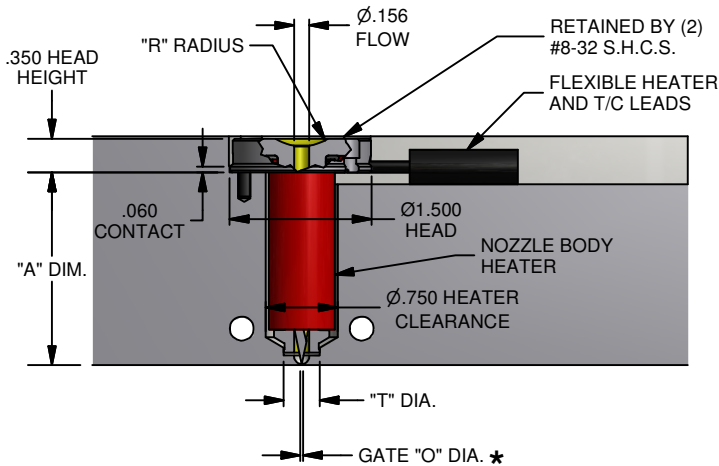
TIP INFORMATION		BORING INFORMATION	
"T" DIA.	"L" DIM.	"T" DIA. +.0005 BORE -.0000	CONTACT LAND
.375	.182	.3755	.060
.500	.182	.5005	.080
.750	.182	.7505	.080

* Note: The information given here should be used as a guide. A variation in growth of any nozzle from the formulation is possible due to cooling conditions or mold configuration. It is advisable to allow a margin of safety. For some very critical applications, an empirical factor may have to be obtained.

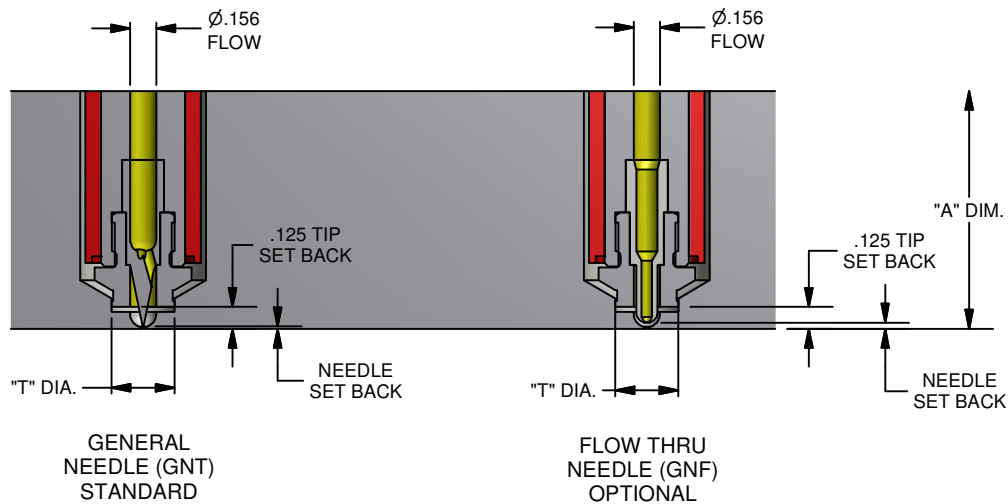
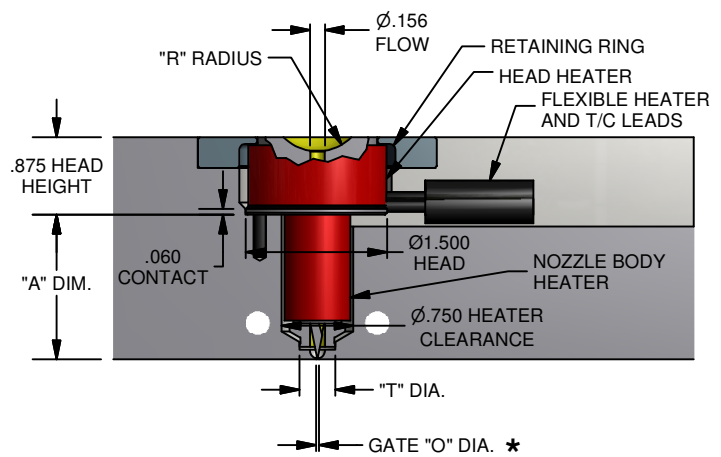
BLS-20-G/H HSN - MINI

The "BLS" Body Less Style HSN MINI - 20 Series Hot Sprue Nozzle utilizes a $\varnothing.156$ resin feed. The **"G" Style Nozzle** is engineered for general purpose resins and the **"H" Style Nozzle** is engineered for the toughest High Heat / Heat Sensitive Resins.

"G" STYLE
For Processing Temps (<500°F)



"H" STYLE
For Processing Temps (>500°F)



THERMAL EXPANSION NOTE

"AA" DIM. = "A" DIM. + THERMAL EXPANSION

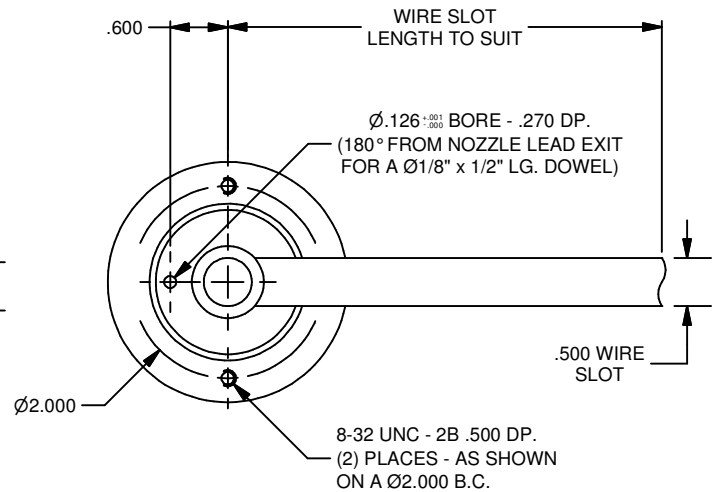
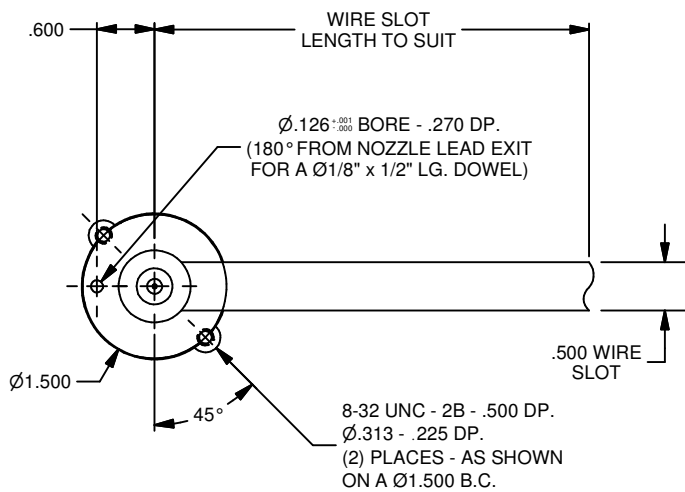
EXPANSION = "A" DIM. X .00000633 X (PROCESSING TEMP. - 68°F)

NOZZLE TYPE	"A" DIM.	STYLE	"O" GATE	"R" RADIUS	RETAINING RING "H" STYLE ONLY
B L S 0 2	<input type="text"/> <input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/>	<input type="text"/>
HOW TO ORDER: Specify dimensions by completing the following chart. Call: 1-800-499-OSCO	1.500" = 15 2.000" = 20 2.500" = 25 3.000" = 30	G = Style H = Style	*Specify "O" MIN. = .030 MAX. = .060	1/2 = 5 3/4 = 7	Y = Yes N = No
			<input type="text"/>		<input type="text"/>
					<input type="text"/>

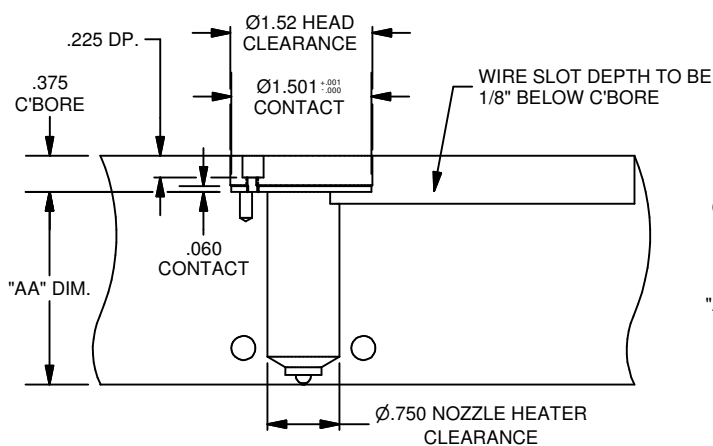
Specify resin to be processed.

NOTE: For sizes other than shown, please contact Osco Tech Service.

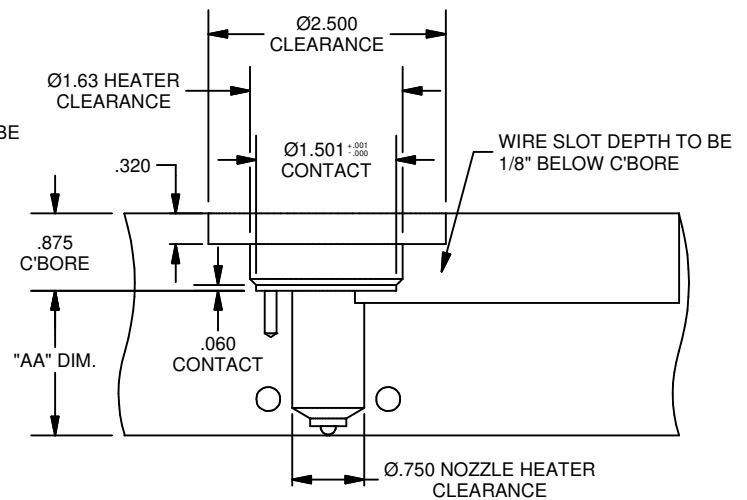
BLS-20-G/H MINI - BORING



"G" STYLE BORING INFORMATION

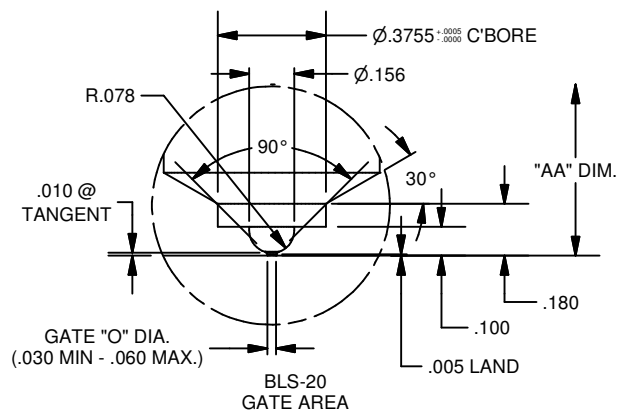


"H" STYLE BORING INFORMATION



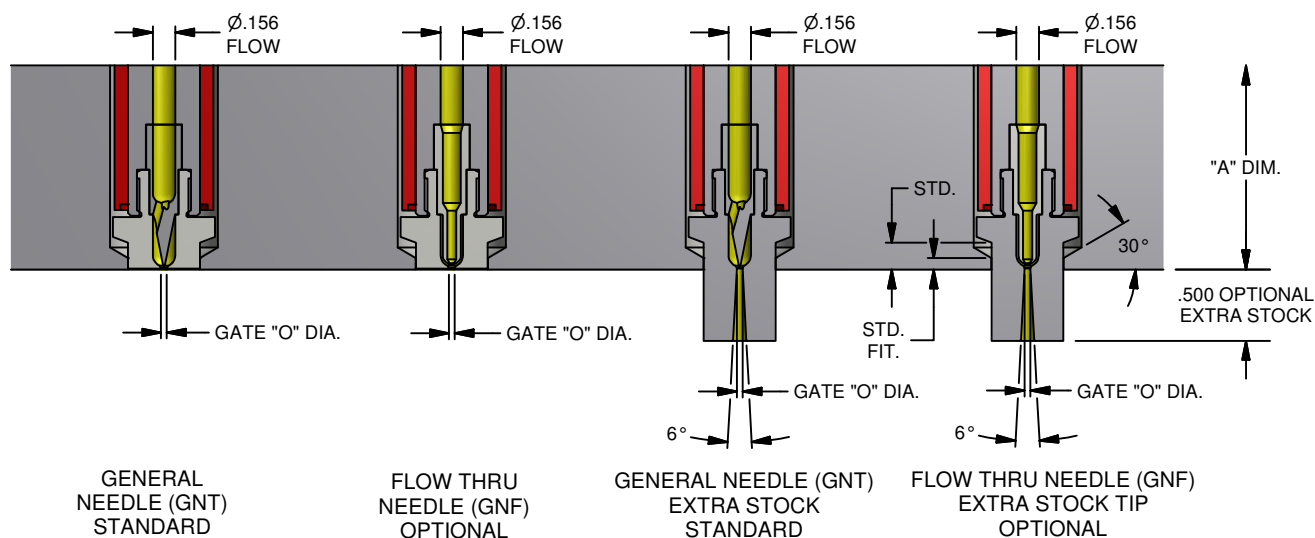
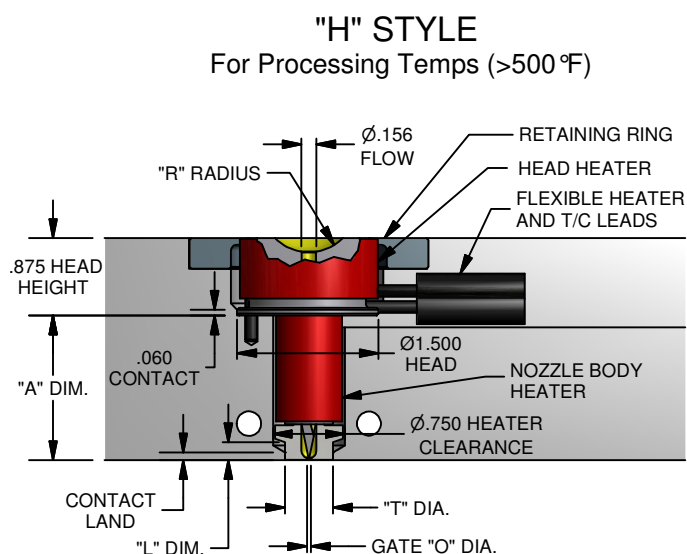
THERMAL EXPANSION NOTE

"AA" DIM. = "A" DIM. + THERMAL EXPANSION
EXPANSION = "A" DIM. X .00000633 X (PROCESSING TEMP. - 68°F)
(DUE TO THE BODY LESS NOZZLE DESIGN, THERMAL EXPANSION
DOES NOT NEED TO BE CONSIDERED FOR STD. NOZZLE LENGTH)










* *Note: The information given here should be used as a guide. A variation in growth of any nozzle from the formulation is possible due to cooling conditions or mold configuration. It is advisable to allow a margin of safety. For some very critical applications, an empirical factor may have to be obtained.*

The "FBS" Full Body Style HSN MINI - 20 Series Hot Sprue Nozzle utilizes a Ø.156 resin bore. The **"G" Style Nozzle** is engineered for general purpose resins and the **"H" Style Nozzle** is engineered for the toughest High Heat / Heat Sensitive Resins.



THERMAL EXPANSION NOTE
 "AA" DIM. = "A" DIM. + THERMAL EXPANSION
 EXPANSION = "A" DIM. X .00000633 X (PROCESSING TEMP. - 68°F)

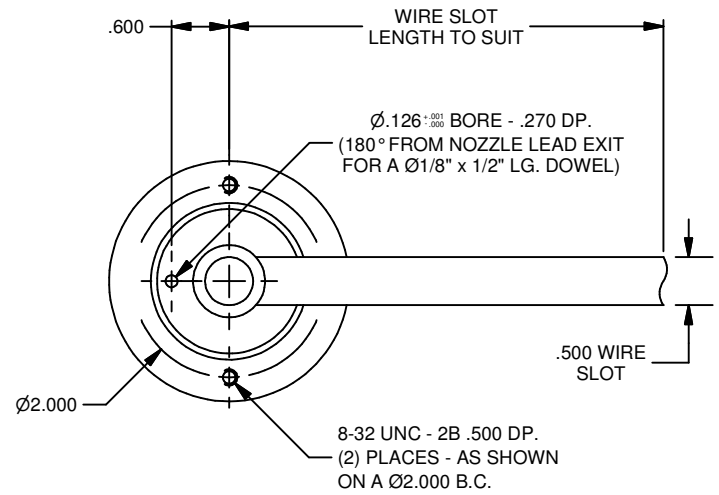
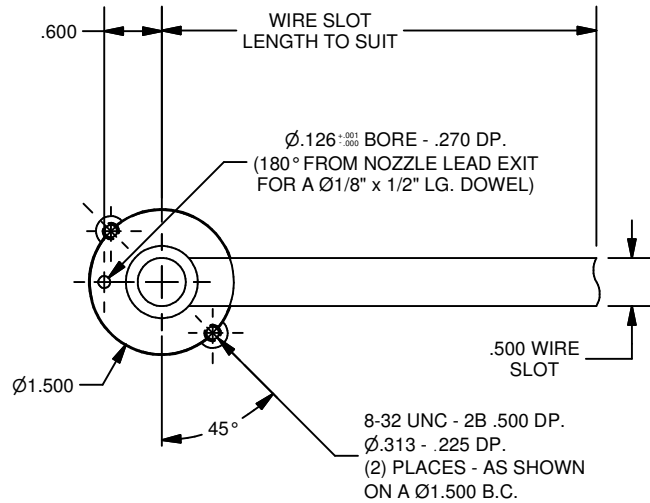
NOZZLE TYPE					"A" DIM.	STYLE	"T" TIP	"L" LAND	"O" GATE	"R" RADIUS	RETAINING RING "H" STYLE ONLY
F	B	S	0	2	 1.500" = 15 2.000" = 20 2.500" = 25 3.000" = 30	 G = Style H = Style	 3 = Ø.375 5 = Ø.500 7 = Ø.750	 Std. = S Extra Stock = X	 04 = Ø.040 06 = Ø.060	 1/2 = 5 3/4 = 7	 Y = Yes N = No

HOW TO ORDER:
Specify dimensions by completing the following chart.

Call:
1-800-499-OSCO

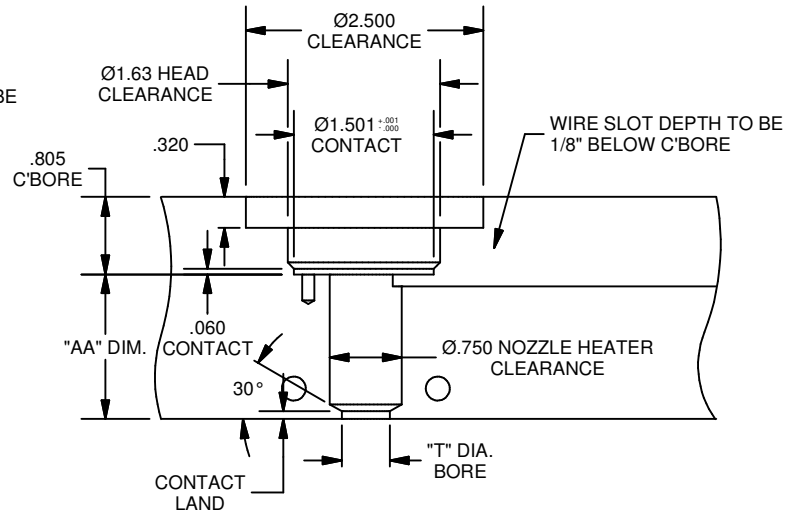
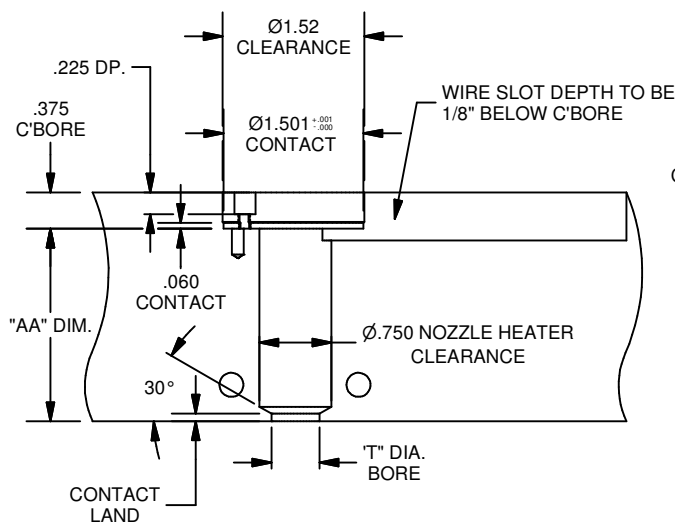
* *Note: The information given here should be used as a guide. A variation in growth of any nozzle from the formulation is possible due to cooling conditions or mold configuration. It is advisable to allow a margin of safety. For some very critical applications, an empirical factor may have to be obtained.*

FBS-20-G/H MINI - BORING



"G" STYLE BORING INFORMATION

"H" STYLE BORING INFORMATION



THERMAL EXPANSION NOTE

"AA" DIM. = "A" DIM. + THERMAL EXPANSION
EXPANSION = "A" DIM. X .0000633 X (PROCESSING TEMP. - 68 °F)

TIP INFORMATION		BORING INFORMATION	
"T" DIA.	"L" DIM.	"T" DIA. +.0005 BORE -.0000	CONTACT LAND
.375	.182	.3755	.060
.500	.182	.5005	.080
.750	.182	.7505	.080

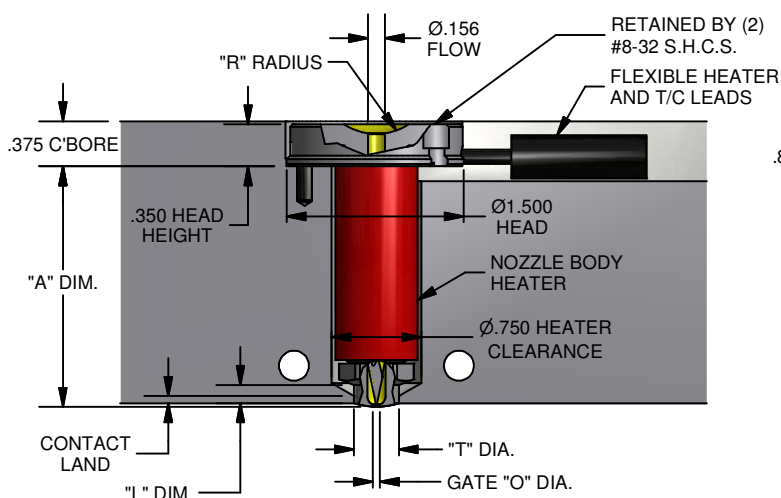
* Note: The information given here should be used as a guide. A variation in growth of any nozzle from the formulation is possible due to cooling conditions or mold configuration. It is advisable to allow a margin of safety. For some very critical applications, an empirical factor may have to be obtained.

RGS-20-G/H HSN - MINI

The "RGS" Recessed Gate Full Body Style HSN MINI - 20 Series Hot Sprue Nozzle utilizes a $\varnothing .156$ resin bore. The **"G" Style Nozzle** is engineered for general purpose resins and the **"H" Style Nozzle** is engineered for the toughest High Heat / Heat Sensitive Resins.

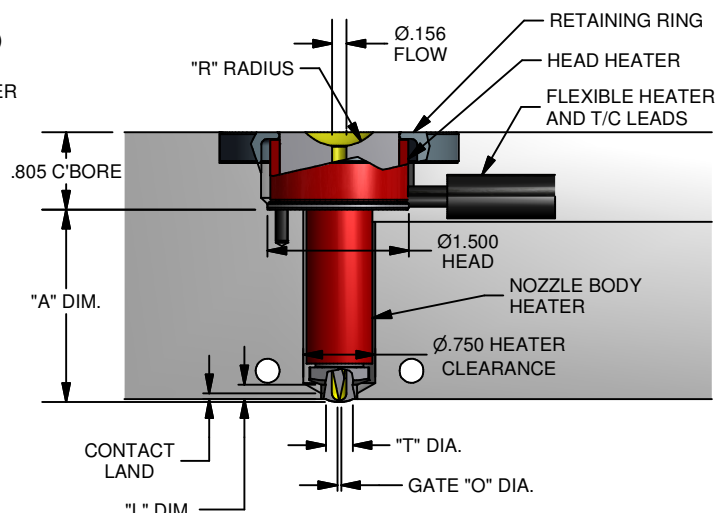
"G" STYLE

For Processing Temps (<500°F)

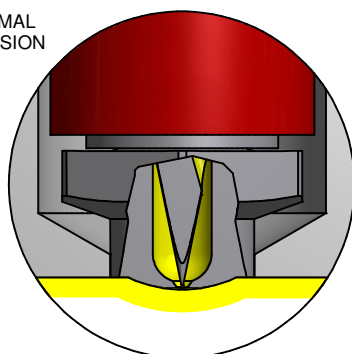
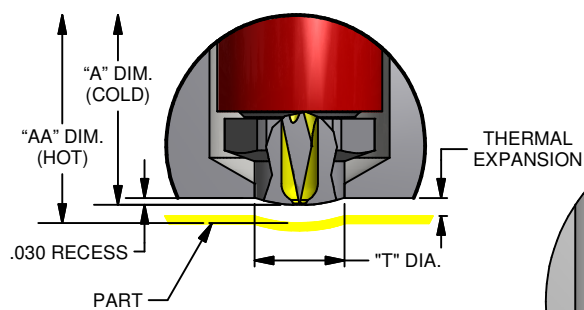


"H" STYLE

For Processing Temps (>500°F)

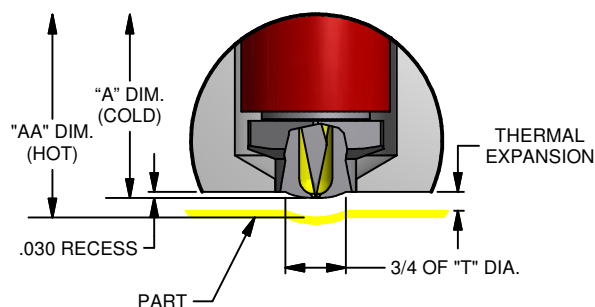


FULL TIP RADIUS



SHOWN HOT

PARTIAL TIP RADIUS



THERMAL EXPANSION NOTE

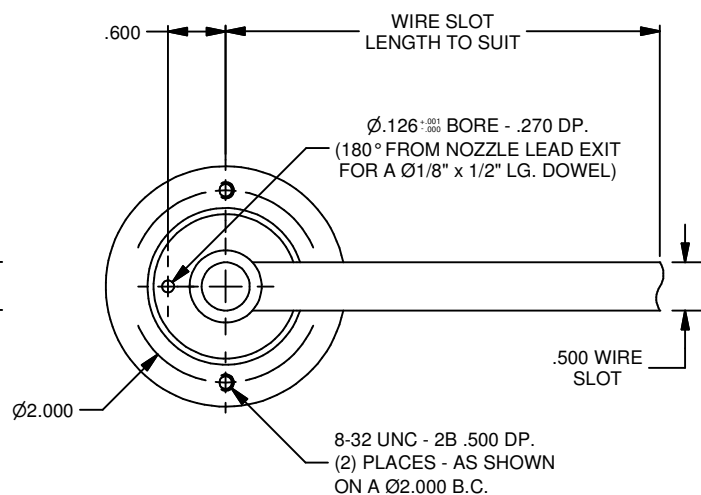
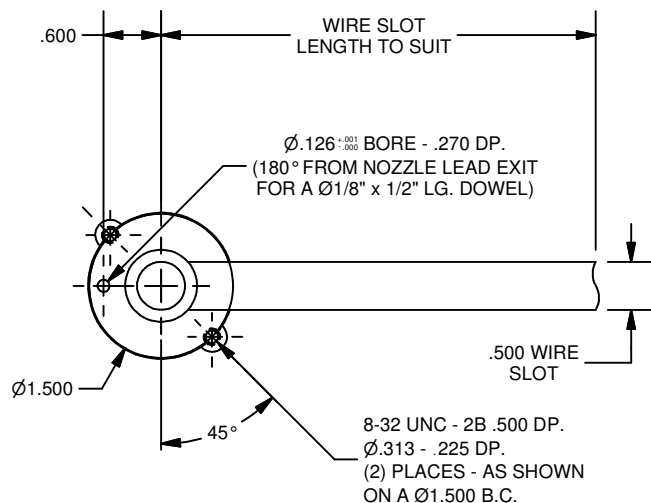
"AA" DIM. = "A" DIM. + THERMAL EXPANSION

EXPANSION = "A" DIM. X .00000633 X (PROCESSING TEMP. - 68°F)

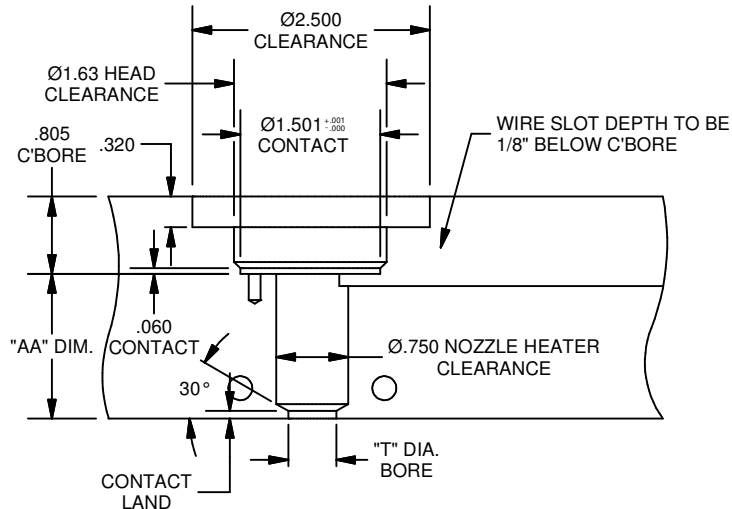
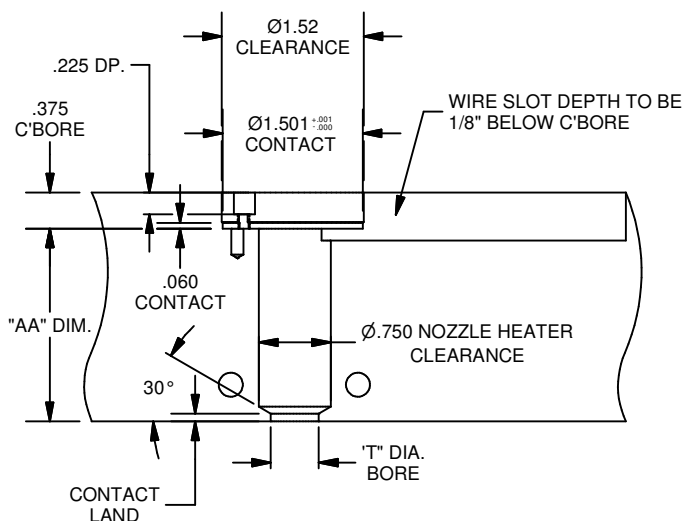
NOZZLE TYPE	"A" DIM.	STYLE	"T" TIP	DIMPLE	"O" GATE	"R" RADIUS	RETAINING RING "H" STYLE ONLY
R G S 0 2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
HOW TO ORDER: Specify dimensions by completing the following chart. Call: 1-800-499-OSCO		1.500" = 15 2.000" = 20 2.500" = 25 3.000" = 30	G = Style H = Style	3 = Ø.375 5 = Ø.500 7 = Ø.750	F = "T" DIA. P = 3/4 OF "T" DIA.	04 = Ø.040 06 = Ø.060	1/2 = 5 3/4 = 7
							Y = Yes N = No
		<input type="text"/> Specify resin to be processed.					

NOTE: For sizes other than shown, please contact Osco Tech Service.

RGS-20-G/H MINI - BORING



"G" STYLE BORING INFORMATION



THERMAL EXPANSION NOTE

"AA" DIM. = "A" DIM. + THERMAL EXPANSION
EXPANSION = "A" DIM. X .0000633 X (PROCESSING TEMP. - 68 °F)

TIP INFORMATION		BORING INFORMATION	
"T" DIA.	"L" DIM.	"T" DIA. +.0005 BORE -.0000	CONTACT LAND
.375	.182	.3755	.040 MIN.
.500	.182	.5005	.040 MIN.
.750	.182	.7505	.040 MIN.

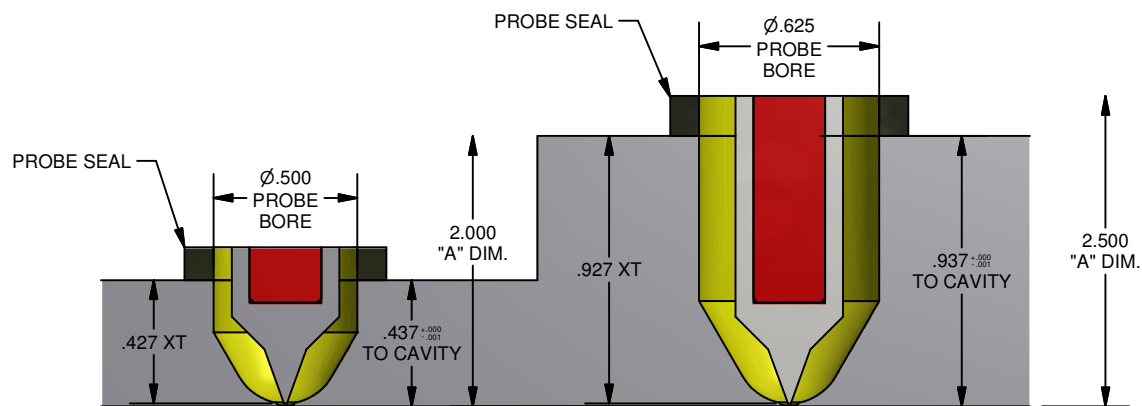
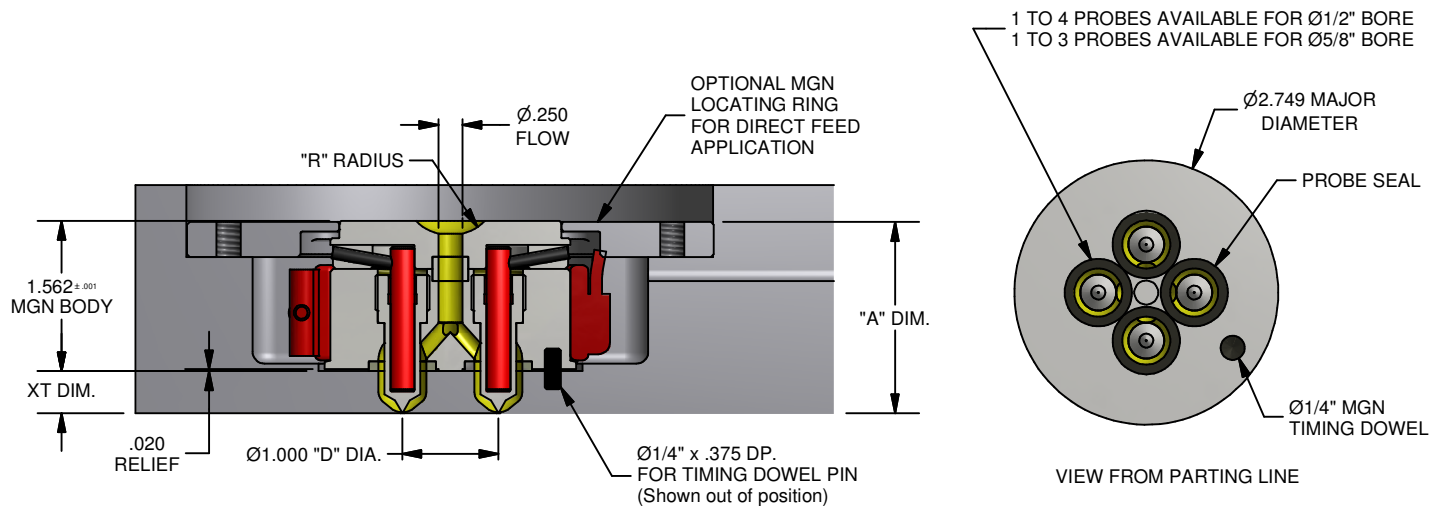
* Note: The information given here should be used as a guide. A variation in growth of any nozzle from the formulation is possible due to cooling conditions or mold configuration. It is advisable to allow a margin of safety. For some very critical applications, an empirical factor may have to be obtained.

MINI-MGN-1000

Multiple Gate Nozzle System, "MINI - MGN" SERIES 1000

NOZZLE DESCRIPTION: The "MINI-MGN" 1000 Series Multiple Gate Nozzle features up to four individually controlled probes positioned on a 1.000" "D" Diameter. The "MINI-MGN" Nozzle offers design flexibility with three standard "A" length dimensions, a 1/2" or 3/4" spherical radius for direct feed applications, or a pocket for an SR-716 seal ring for use with a manifold.

NOTE: Maximum number of probes for a Series 1000 MINI - MGN is four (4).



"A" DIM = 2.000

"A" DIM = 2.500

HOW TO ORDER

CATALOG NUMBER	NOZZLE "A" DIM.	ASSEMBLY INCLUDES			
		PROBE PART NUMBER	PROBE HEATER PART NUMBER	BODY HEATER PART NUMBER	MAX. NUMBER OF PROBES
MGN MINI -1020	2.000	PROBE-MGN-200	TCH-2150-90	MBHT-2510	4
MGN MINI -1025	2.500	PROBE-MGN-250	TCH-2200-90	MBHT-2510	3

Specify:

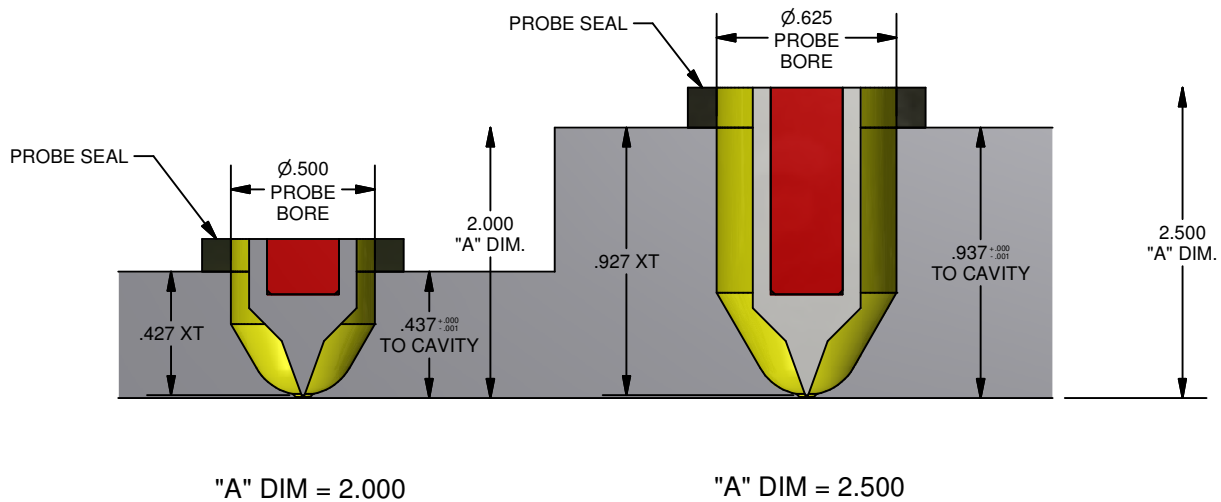
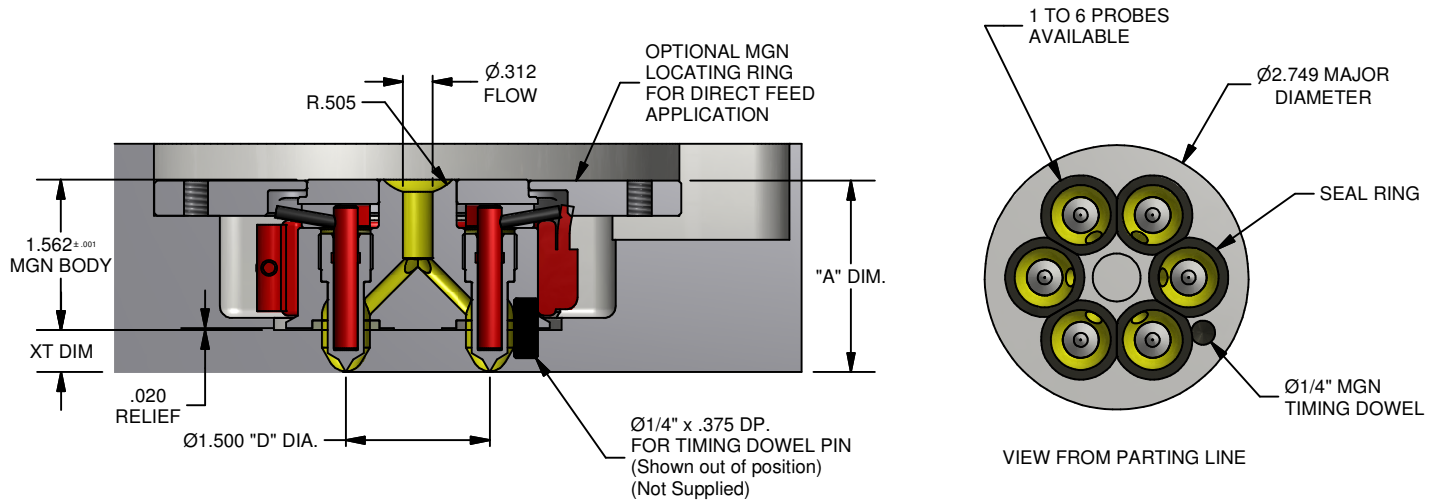
- Nozzle Catalog Number
- "D" Diameter
- Number of Probes
- Application Pocket
 - 1/2" or 3/4" Radius for Direct feed Application
- Resin to be Processed

NOTE: For sizes other than shown, please contact Osco Tech Service.

Multiple Gate Nozzle System, "MINI-MGN" SERIES 1500

NOZZLE DESCRIPTION: The "MINI-MGN" 1500 Series Multiple Gate Nozzle features up to six individually controlled probes positioned on a 1.500" "D" Diameter. The "MINI-MGN" Nozzle offers design flexibility with three standard "A" length dimensions, a 1/2" or 3/4" spherical radius for direct feed applications, or a pocket for an SR-716 seal ring for use with a manifold.

NOTE: Maximum number of probes for a Series 1500 MGN is six (6).



HOW TO ORDER

Specify:

- Nozzle Catalog Number
- "D" Diameter
- Number of Probes
- Application Pocket
 - 1/2" or 3/4" Radius for Direct feed Application
- Resin to be Processed

CATALOG NUMBER	NOZZLE "A" DIM.	ASSEMBLY INCLUDES			
		PROBE PART NUMBER	PROBE HEATER PART NUMBER	BODY HEATER PART NUMBER	MAX. NUMBER OF PROBES
MGN-MINI-1520	2.000	PROBE-MGN-200	TCH-2150-90	MBHT-2510	6
MGN-MINI-1525	2.500	PROBE-MGN-250	TCH-2200-90	MBHT-2510	6

★ Note: The information given here should be used as a guide. A variation in growth of any nozzle from the formulation is possible due to cooling conditions or mold configuration. It is advisable to allow a margin of safety. For some very critical applications, an empirical factor may have to be obtained.

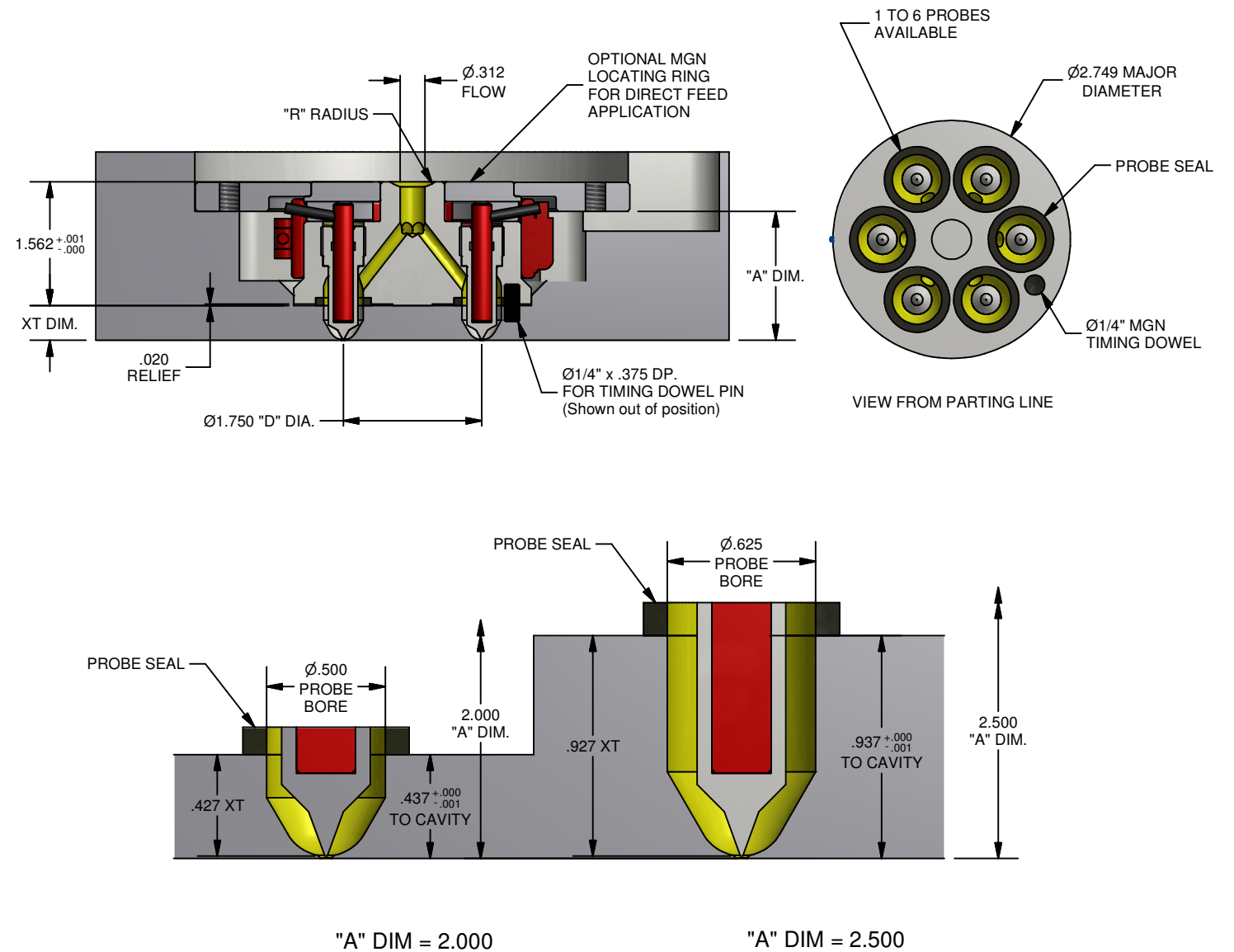
NOTE: For sizes other than shown, please contact Osco Tech Service.

MINI-MGN-1700

Multiple Gate Nozzle System, "MINI-MGN" SERIES 1700

NOZZLE DESCRIPTION: The "MINI-MGN" 1700 Series Multiple Gate Nozzle features up to six individually controlled probes positioned on a 1.750" "D" Diameter. The "MINI-MGN" Nozzle offers design flexibility with three standard "A" length dimensions, a 1/2" or 3/4" spherical radius for direct feed applications, or a pocket for an SR-916 seal ring for use with a manifold.

NOTE: Maximum number of probes for a Series 1700 MGN is six (6).



HOW TO ORDER

CATALOG NUMBER	NOZZLE "A" DIM.	ASSEMBLY INCLUDES			
		PROBE PART NUMBER	PROBE HEATER PART NUMBER	BODY HEATER PART NUMBER	MAX. NUMBER OF PROBES
MGN-MINI-1720	2.000	PROBE-MGN-200	TCH-2150-90	MBHT-2710	6
MGN-MINI-1725	2.500	PROBE-MGN-250	TCH-2200-90	MBHT-2710	6

- Specify:**
- Nozzle Catalog Number
 - "D" Diameter
 - Number of Probes
 - Application Pocket
 - 1/2" or 3/4" Radius for Direct feed Application
 - Resin to be Processed

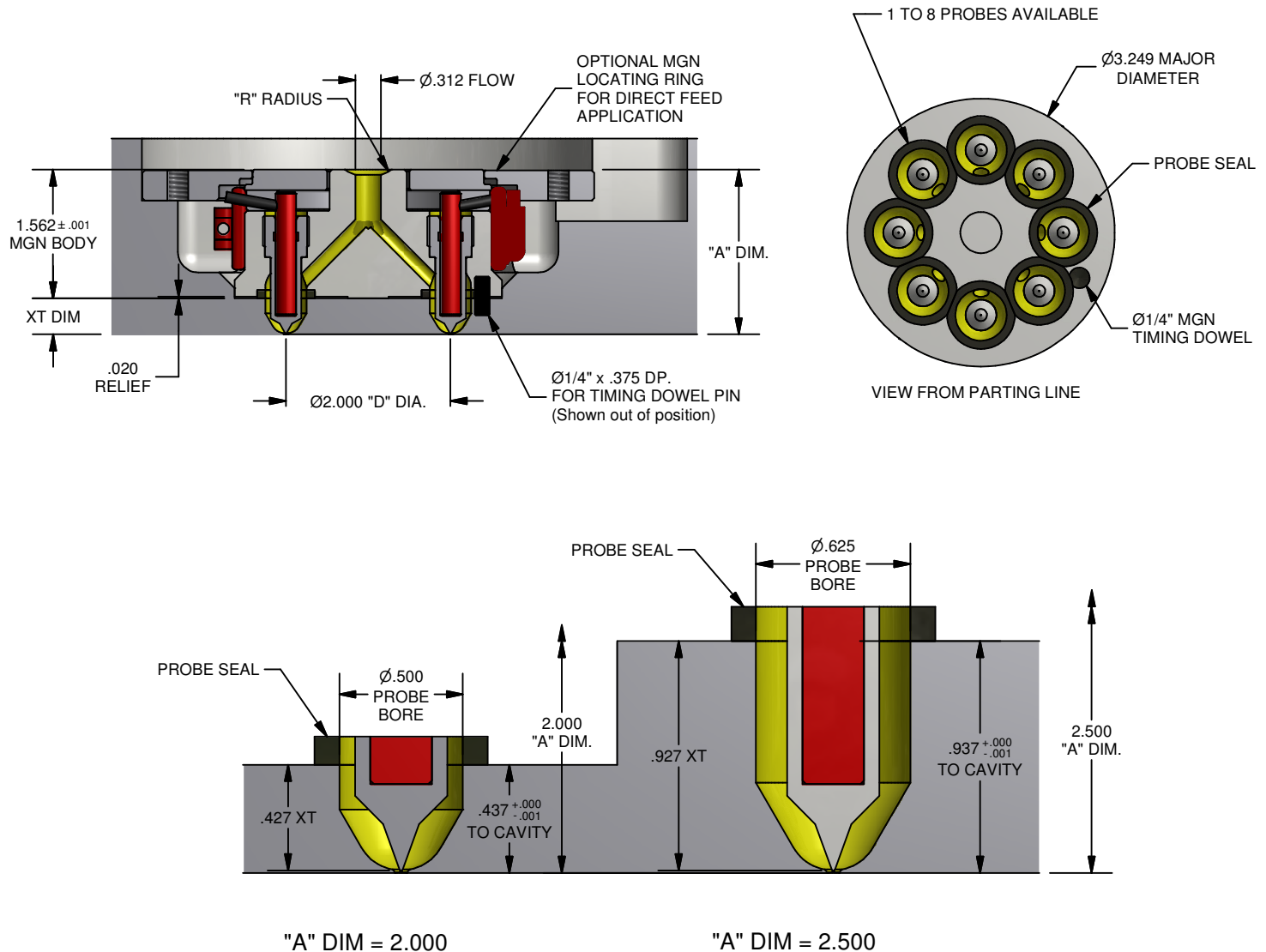
NOTE: For sizes other than shown, please contact Osco Tech Service.

* Note: The information given here should be used as a guide. A variation in growth of any nozzle from the formulation is possible due to cooling conditions or mold configuration. It is advisable to allow a margin of safety. For some very critical applications, an empirical factor may have to be obtained.

Multiple Gate Nozzle System, "MINI-MGN" SERIES 2000

NOZZLE DESCRIPTION: The "MINI-MGN" 2000 Series Multiple Gate Nozzle features up to eight individually controlled probes positioned on a 2.000" "D" Diameter. The "MINI-MGN" Nozzle offers design flexibility with three standard "A" length dimensions, a 1/2" or 3/4" spherical radius for direct feed applications, or a pocket for an SR-916 seal ring for use with a manifold.

NOTE: Maximum number of probes for a Series 2000 MGN is eight (8).



HOW TO ORDER

Specify:

- Nozzle Catalog Number
- "D" Diameter
- Number of Probes
- Application Pocket
 - 1/2" or 3/4" Radius for Direct feed Application
- Resin to be Processed

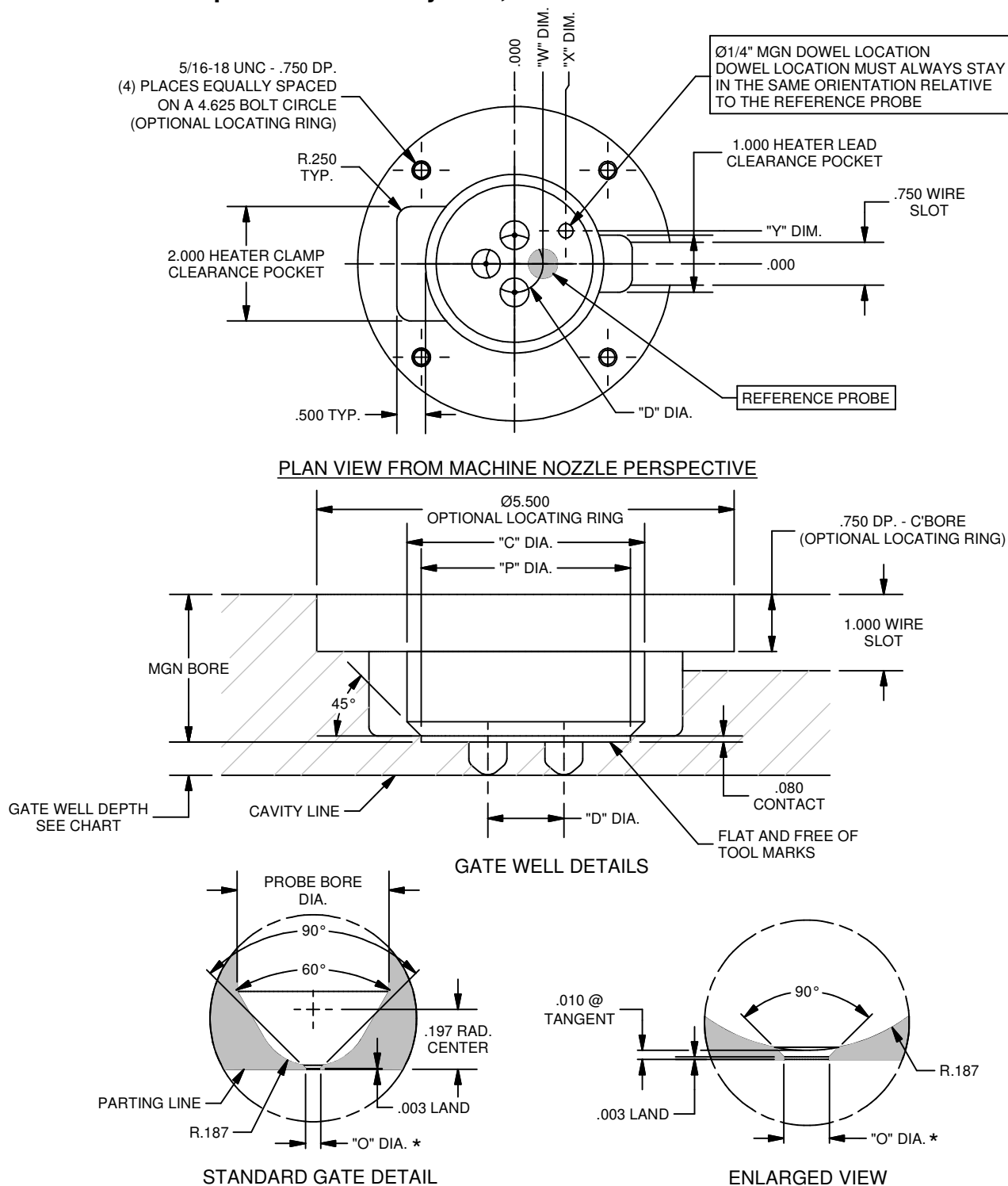
CATALOG NUMBER	NOZZLE "A" DIM.	ASSEMBLY INCLUDES			
		PROBE PART NUMBER	PROBE HEATER PART NUMBER	BODY HEATER PART NUMBER	MAX. NUMBER OF PROBES
MGN-2020	2.000	PROBE-MGN-200	TCH-2150-90	MBHT-3010	8
MGN-2025	2.500	PROBE-MGN-250	TCH-2200-90	MBHT-3010	8

* Note: The information given here should be used as a guide. A variation in growth of any nozzle from the formulation is possible due to cooling conditions or mold configuration. It is advisable to allow a margin of safety. For some very critical applications, an empirical factor may have to be obtained.

NOTE: For sizes other than shown, please contact Osco Tech Service.

MINI - MGN - BORING

Multiple Gate Nozzle System, "MINI-MGN" / MACHINING DETAILS



*NOTE: MINIMUM GATE DIAMETERS ARE NOT ACCEPTABLE WITH ALL MATERIALS OR APPLICATIONS.

HOW TO ORDER

NOZZLE "A" DIM.	NOZZLE XT DIM.	GATE WELL DEPTH +.000 -.001	PROBE BORE DIA.
2.000	.427	.437	Ø.500
2.500	.927	.937	Ø.625

GATE "O" DIA. *	
MIN.	Ø.025
MAX.	Ø.125

OSCO INC. MGN NOZZLE ASSEMBLY BORING INFORMATION							MAXIMUM NUMBER OF GATE PROBES	
"D" DIA.	"P" DIA.	"C" DIA.	"W" DIM.	"X" DIM.	"Y" DIM.	"A" = 3	"A" > 3	
1.000	2.751	3.125	.500	.900	.575	4	3	
1.500	2.751	3.125	.750	.900	.575	6	6	
1.750	3.000	3.375	.875	1.050	.550	6	6	
2.000	3.250	3.625	1.000	1.195	.550	8	8	

NOTE: For sizes other than shown, please contact Osco Tech Service.