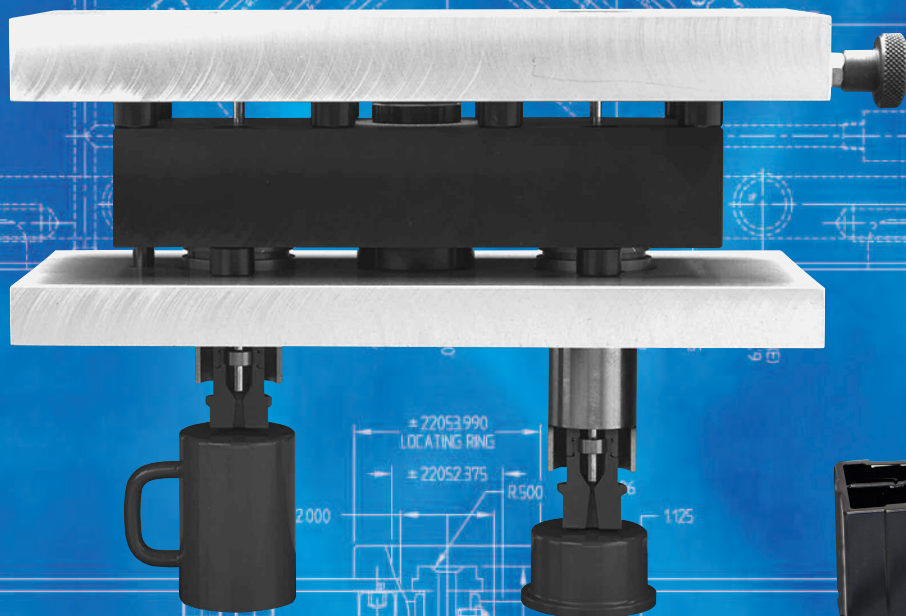


OSCO[®] inc.

RUNNERLESS MOLDING SYSTEMS

Flow Control Nozzles (FCN)



(Manual Mechanical
Mold Flow)



**Family
Mold**



**Mechanical
Gear**



**Knit Line
Placement**



**Family
Mold**



Where Innovation Flows



**Family
Mold**



Proudly Made in the USA

FCN

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Flow Control Nozzles (FCN)

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☆ 200 Series

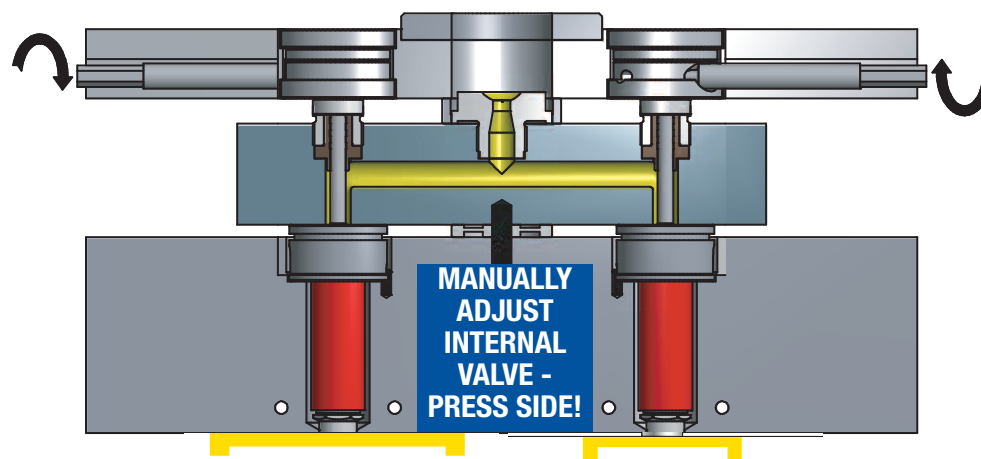
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Flow Control Nozzle - (FCN)

OSCO's patented Flow Control System "FCN" is so simple and so effective, it's just fantastic! The "FCN" allows the molder flexibility in the cavity's filling pattern which previously did not exist without manipulating heat, gate sizes or runner diameters. Now from press side, during the initial mold tryout, the optimum fill rate can be achieved through the manual Flow Control System.



Increase (or) Decrease Resin Output through Each Nozzle

WITHOUT - Raising or Lowering Temperatures
- Opening or Welding Gate Diameters

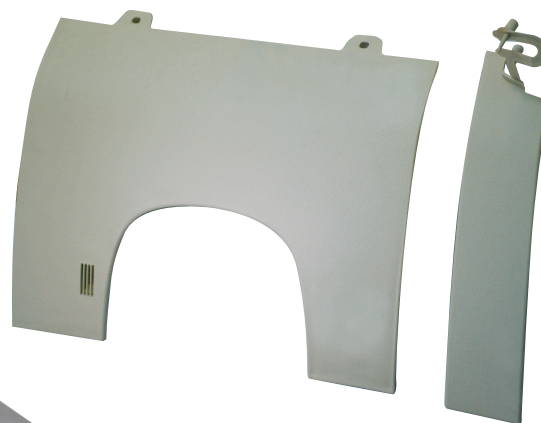
Adjusting the Fill Rate

1. Injecting a Short Shot into the Cavity (or Cavities).
2. Inspecting the fill pattern.
3. Adjusting the Flow Valve for Optimum Fill Rate into Each Cavity.

**Family Mold -
Battery Case and Lid**



**Family Mold -
Automotive Components**

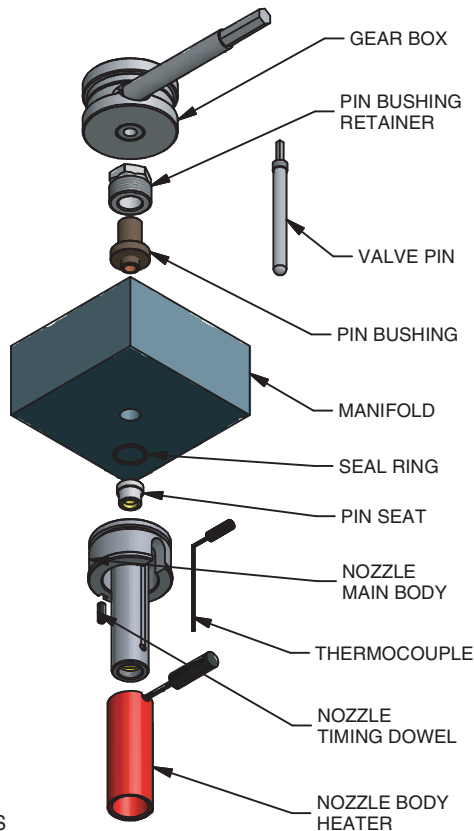


Worm Gear Assembly

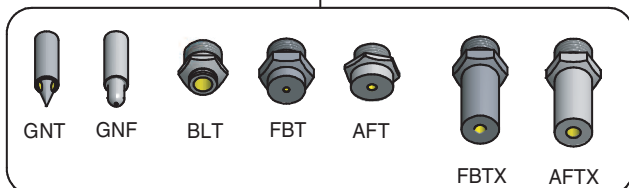
- The gear box provides a 50:1 ratio between the control rod and the valve pin. One revolution of the rod will advance the pin .002" into or out of the valve seat the nozzle tip. The gear box assembly easily fits into a clearance pocket in the mold's top clamp plate.



Field Serviceable

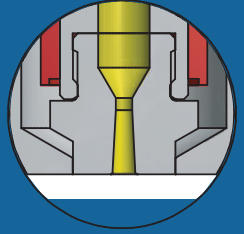


TIPS & NEEDLES

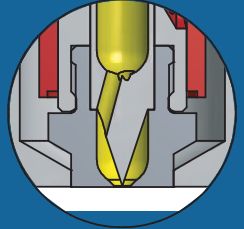


**STANDARD
COMPONENTS
IN STOCK**

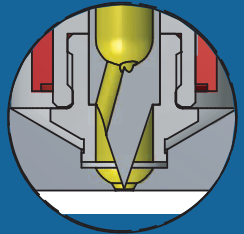
Tip Styles



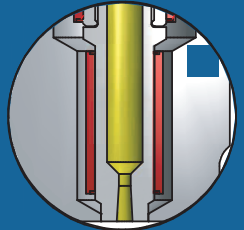
Absolute Flow



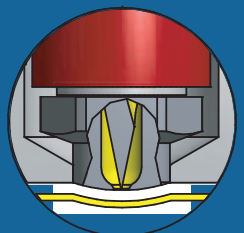
Full Body



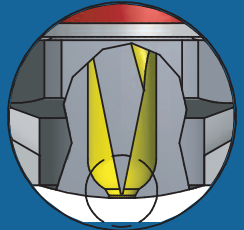
Body Less



LPT - Low Profile

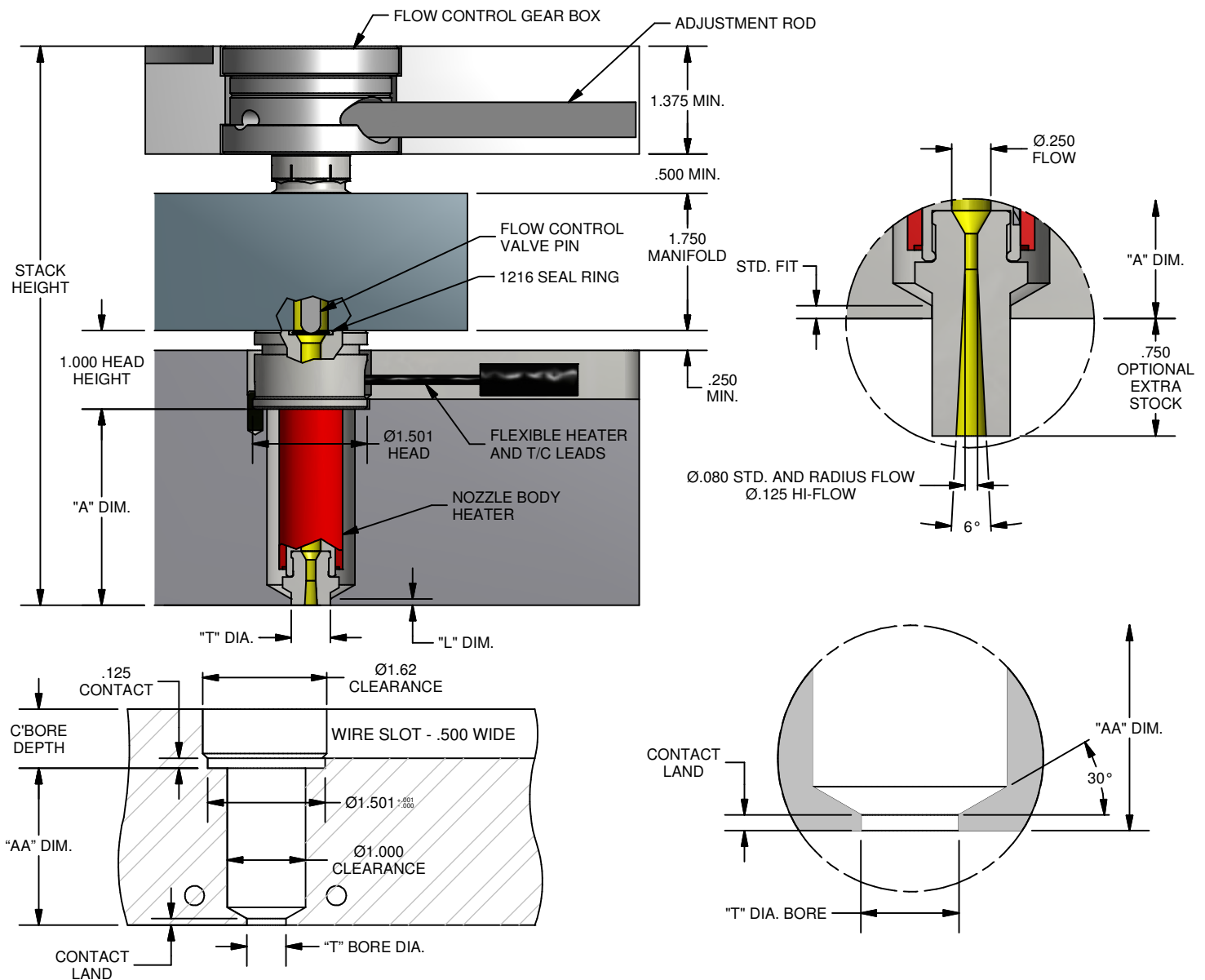


RGT - Recessed Gate



FLOW CONTROL ABSOLUTE FLOW NOZZLE SYSTEM, "FCA" SERIES 50

NOZZLE DESCRIPTION: The "FCA" Absolute Flow Type Flow Control Nozzle is designed for use with an OSCO Manifold System. The "FCA" is engineered to feed directly into the part or runner with an unrestricted channel, permitting faster fills and better quality molded parts. It is an ideal choice when a small sprue vestige and the circular nozzle tip "T" diameter witness mark is allowable.



THERMAL EXPANSION NOTE

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

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

HOW TO ORDER

CATALOG #	"A" DIM.
FCA-0520	2.000
FCA-0525	2.500
FCA-0530	3.000
FCA-0535	3.500
FCA-0540	4.000
FCA-0545	4.500
FCA-0550	5.000
FCA-0560	6.000

Specify:

- Nozzle Catalog Number
- "A" Dimension
- "T" Diameter
- Resin to be processed

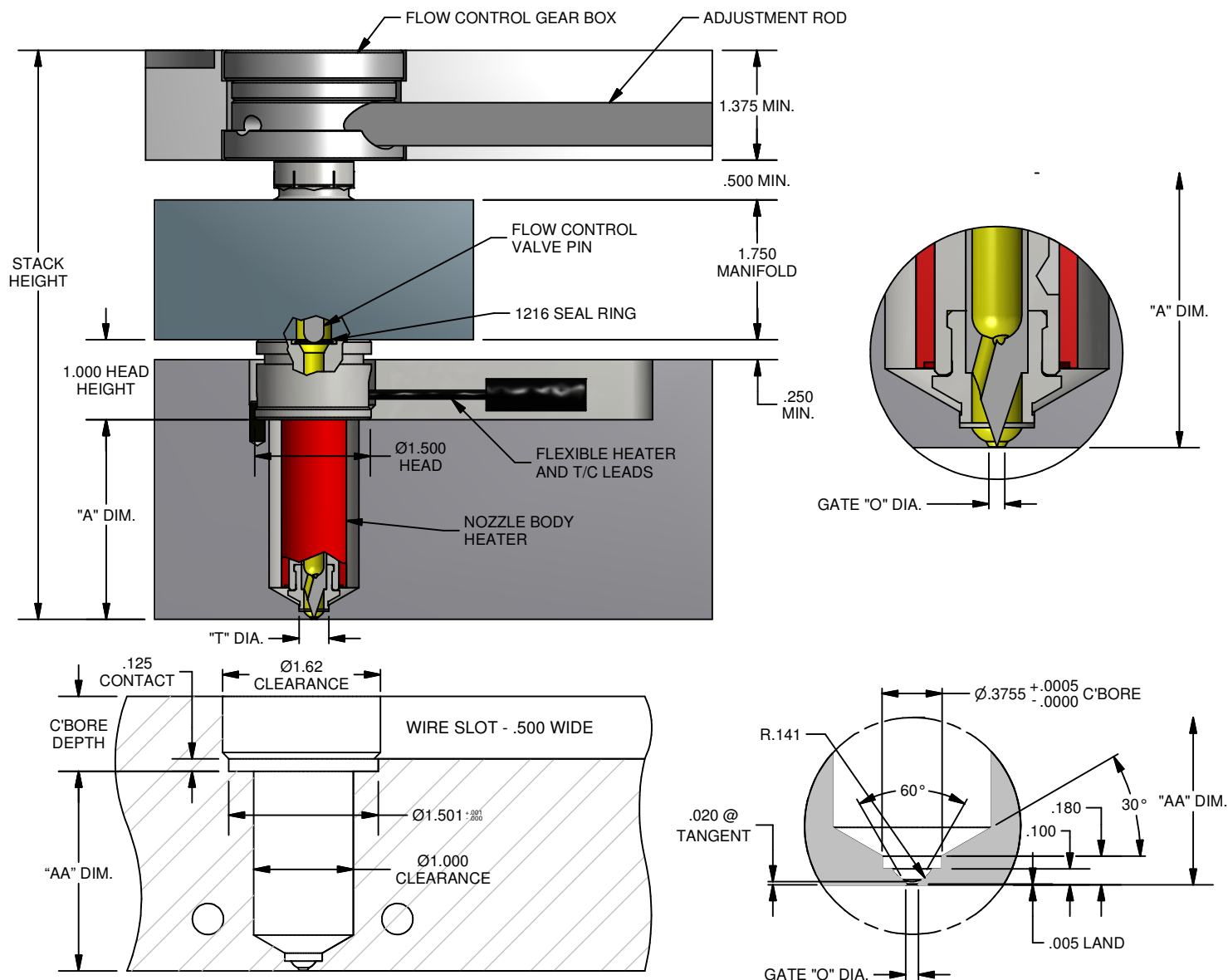
TIP INFORMATION		BORING INFORMATION	
"T" DIA.	"L" DIM.	"T" DIA. BORE +.0005 -.0000	CONTACT LAND
Ø.500	.160	Ø.5005	.080
Ø.750	.150	Ø.7505	.150
Ø1.000	.150	Ø1.0005	.150

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.

FLOW CONTROL BODY LESS NOZZLE SYSTEM, "FCB" SERIES 50

NOZZLE DESCRIPTION: The "FCB" Body Less Type Flow Control Nozzle is designed for use with an OSCO manifold system. The "FCB" is engineered to feed directly into the molded part. It is an ideal choice when a small gate vestige and the circular nozzle tip "T" diameter witness mark is not allowable.



THERMAL EXPANSION NOTE

"AA" DIM. = "A" DIM. (Due to the Body Less Nozzle Design, thermal expansion does not need to be considered.)

HOW TO ORDER

CATALOG #	"A" DIM.
FCB-0520	2.000
FCB-0525	2.500
FCB-0530	3.000
FCB-0535	3.500
FCB-0540	4.000
FCB-0545	4.500
FCB-0550	5.000
FCB-0560	6.000

Specify:

- Nozzle Catalog Number
- "A" Dimension
- Resin to be processed

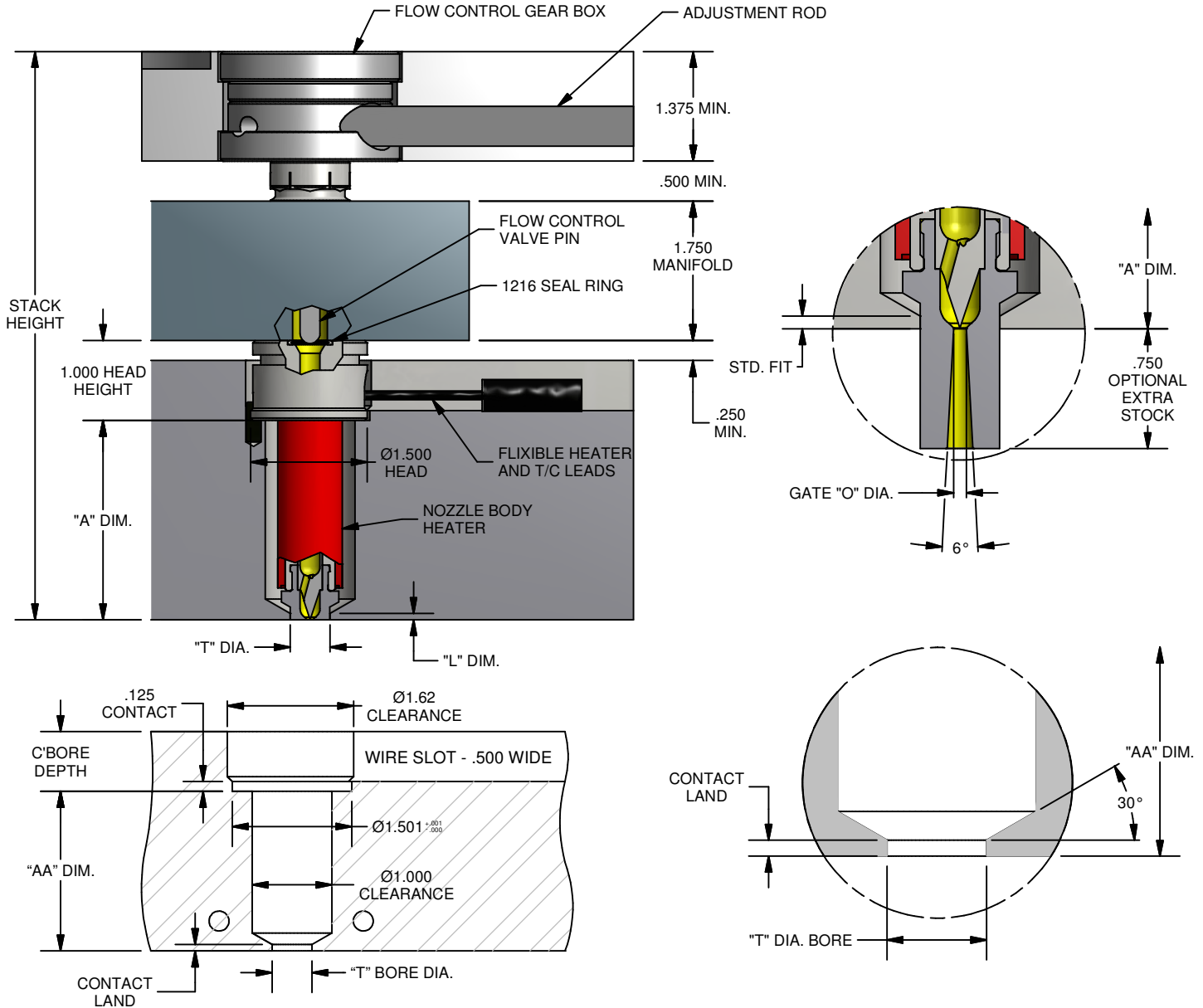
GATE "O" DIAMETER *	
MIN.	Ø.040
MAX.	Ø.080

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.

FLOW CONTROL FULL BODY NOZZLE SYSTEM, "FCF" SERIES 50

NOZZLE DESCRIPTION: The "FCF" Full Body Type Flow Control Nozzle is designed for use with an OSCO manifold system. The "FCF" is engineered to feed directly into the molded part. It is an ideal choice when a small gate vestige and the circular nozzle tip "T" diameter witness mark is allowable.



THERMAL EXPANSION NOTE

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

HOW TO ORDER

CATALOG #	"A" DIM.
FCF-0520	2.000
FCF-0525	2.500
FCF-0530	3.000
FCF-0535	3.500
FCF-0540	4.000
FCF-0545	4.500
FCF-0550	5.000
FCF-0560	6.000

Specify:

- Nozzle Catalog Number
- "A" Dimension
- "O" Diameter
- "T" Diameter
- Resin to be processed

GATE "O" DIAMETER
04 = Ø.040
06 = Ø.060
08 = Ø.080

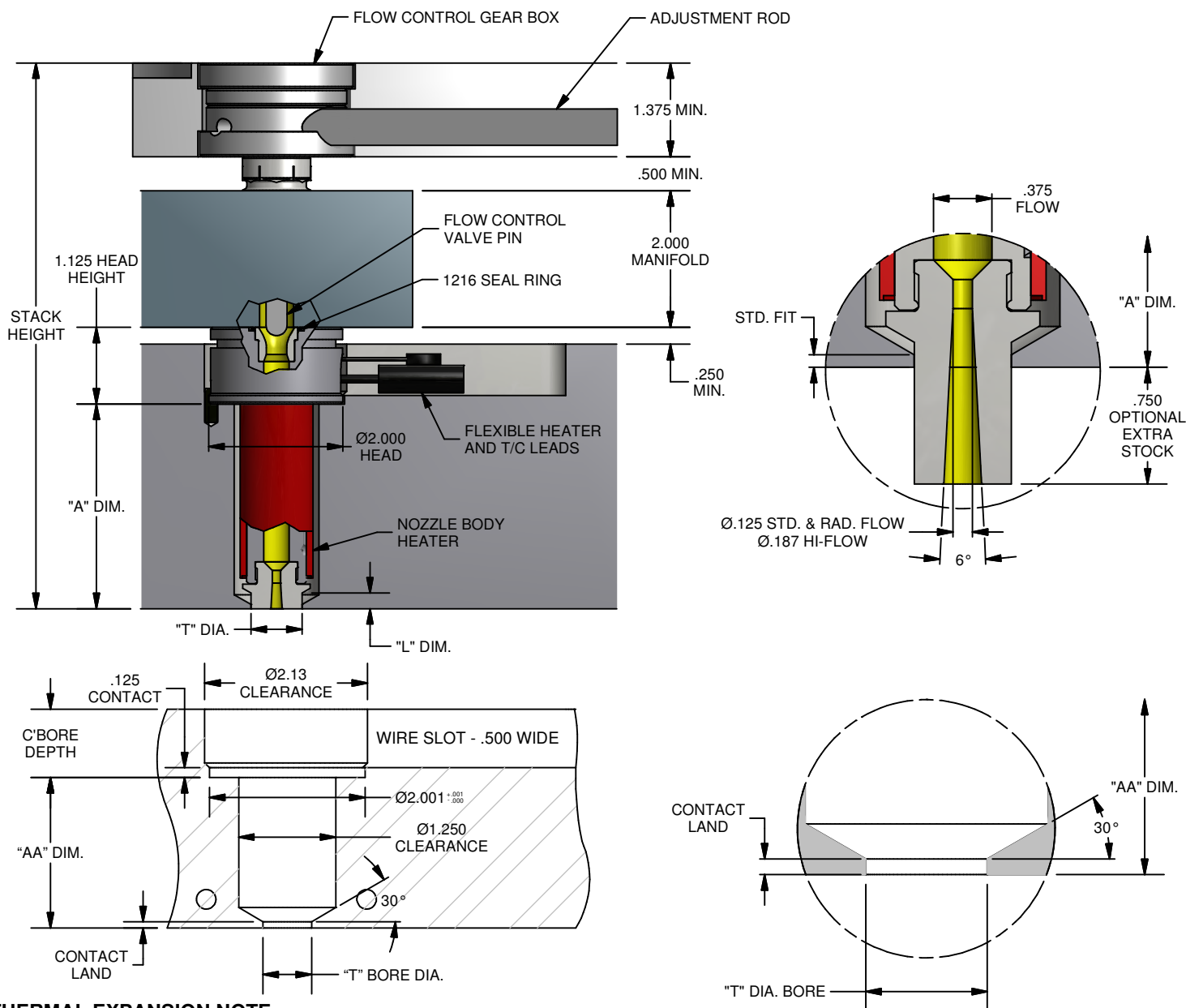
TIP INFORMATION		BORING INFORMATION	
"T" DIA.	"L" DIM.	"T" DIA. BORE	CONTACT LAND
Ø.500	.160	Ø.5005	.080
Ø.750	.160	Ø.7505	.150
Ø1.000	.150	Ø1.0005	.150

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.

FLOW CONTROL ABSOLUTE FLOW NOZZLE SYSTEM, "FCA" SERIES 100

NOZZLE DESCRIPTION: The "FCA" Absolute Flow Type Flow Control Nozzle is designed for use with an OSCO Manifold System. The "FCA" is engineered to feed directly into the part or runner with an unrestricted channel, permitting faster fills and better quality molded parts. It is an ideal choice when a small sprue vestige and the circular nozzle tip "T" diameter witness mark is allowable.



THERMAL EXPANSION NOTE

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

HOW TO ORDER

CATALOG #	"A" DIM.
FCA-1020	2.000
FCA-1025	2.500
FCA-1030	3.000
FCA-1035	3.500
FCA-1040	4.000
FCA-1045	4.500
FCA-1050	5.000
FCA-1060	6.000
FCA-1070	7.000

Specify:

- Nozzle Catalog Number
- "A" Dimension
- "T" Diameter
- Resin to be processed

TIP INFORMATION		BORING INFORMATION	
"T" DIA.	"L" DIM.	"T" DIA. $\pm .0005$ BORE $-.0000$	CONTACT LAND
Ø.500	.125	Ø.5005	.060
Ø.750	.230	Ø.7505	.080
Ø1.000	.187	Ø1.0005	.080

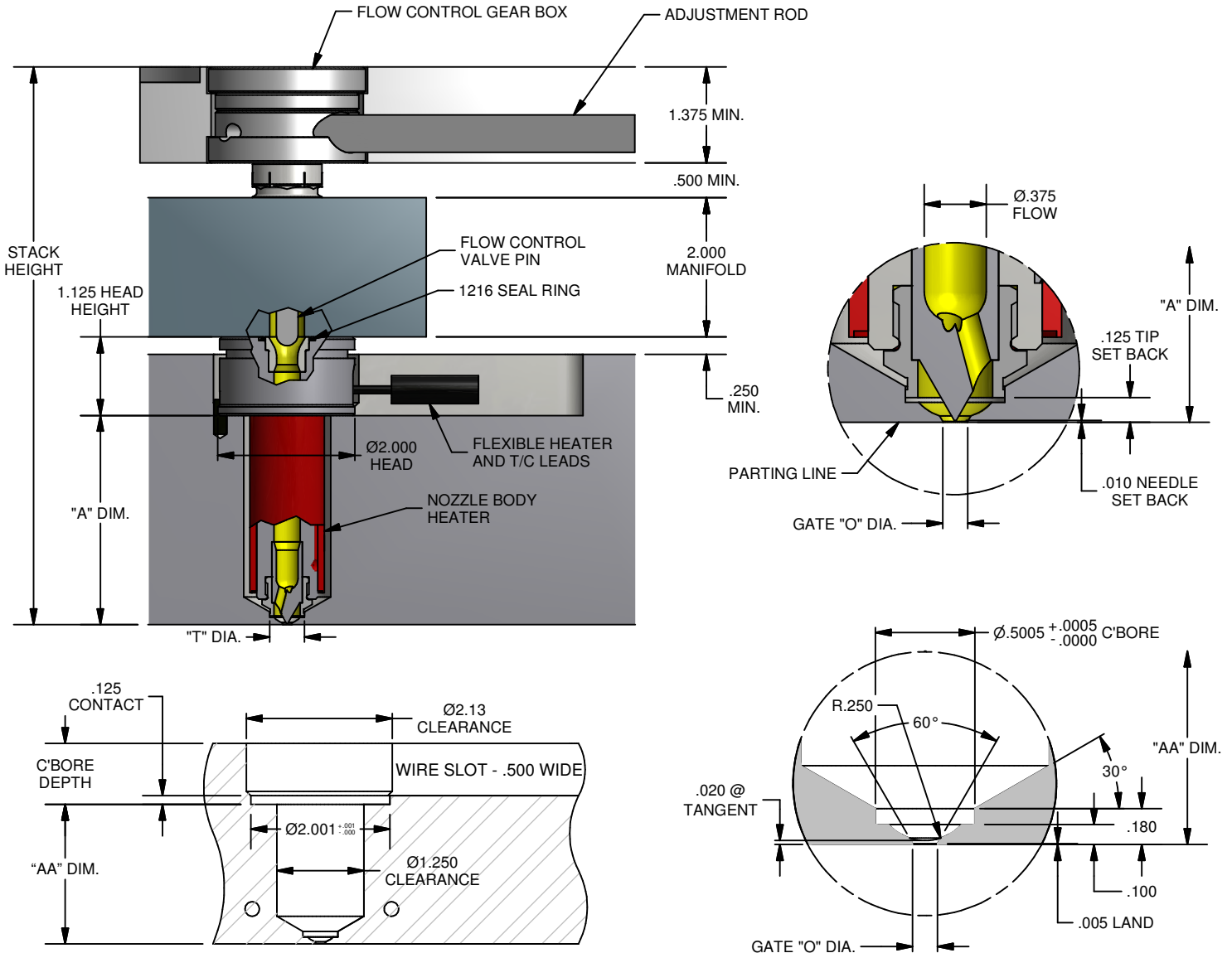
* Note: The information given here should be used as a guide. A variation in growth of any nozzle from the formulation is possible due to cooling conditions or mold configuration. It is advisable to allow a margin of safety. For some very critical applications, an empirical factor may have to be obtained.

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

FCB-100

FLOW CONTROL BODY LESS NOZZLE SYSTEM, "FCB" SERIES 100

NOZZLE DESCRIPTION: The "FCB" Body Less Type Flow Control Nozzle is designed for use with an OSCO manifold system. The "FCB" is engineered to feed directly into the molded part. It is an ideal choice when a small gate vestige and the circular nozzle tip "T" diameter witness mark is not allowable.



THERMAL EXPANSION NOTE

"AA" DIM. = "A" DIM. (Due to the Body Less Nozzle Design, thermal expansion does not need to be considered.)

HOW TO ORDER

CATALOG #	"A" DIM.
FCB-1020	2.000
FCB-1025	2.500
FCB-1030	3.000
FCB-1035	3.500
FCB-1040	4.000
FCB-1045	4.500
FCB-1050	5.000
FCB-1060	6.000
FCB-1070	7.000

Specify:

- Nozzle Catalog Number
- "A" Dimension
- Resin to be processed

GATE "O" DIAMETER *

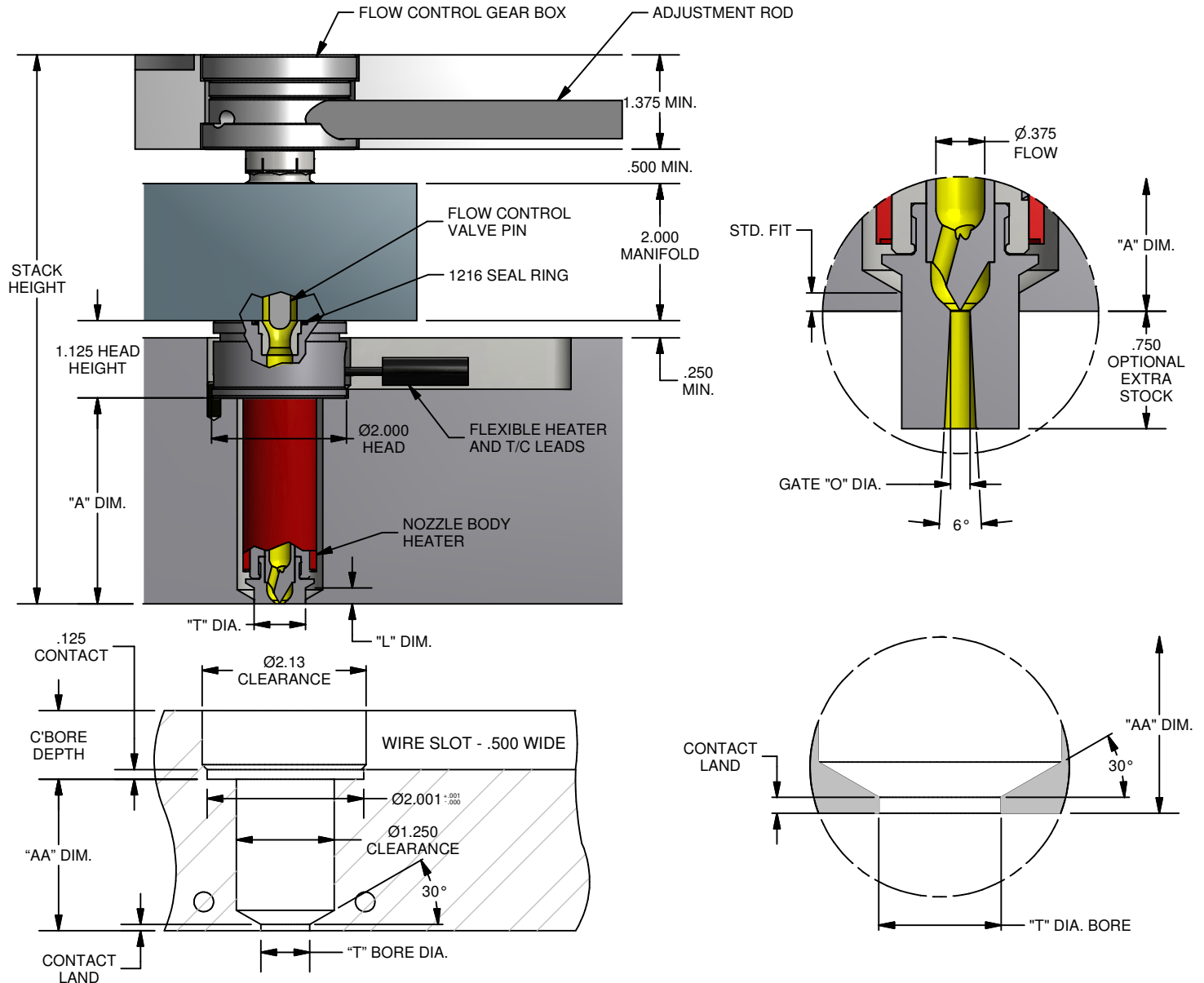
MIN.	Ø.050
MAX.	Ø.125

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.

FLOW CONTROL FULL BODY NOZZLE SYSTEM, "FCF" SERIES 100

NOZZLE DESCRIPTION: The "FCF" Full Body Type Flow Control Nozzle is designed for use with an OSCO manifold system. The "FCF" is engineered to feed directly into the molded part. It is an ideal choice when a small gate vestige and the circular nozzle tip "T" diameter witness mark is allowable.



THERMAL EXPANSION NOTE

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

HOW TO ORDER

CATALOG #	"A" DIM.
FCF-1020	2.000
FCF-1025	2.500
FCF-1030	3.000
FCF-1035	3.500
FCF-1040	4.000
FCF-1045	4.500
FCF-1050	5.000
FCF-1060	6.000
FCF-1070	7.000

Specify:

- Nozzle Catalog Number
- "A" Dimension
- "O" Diameter
- "T" Diameter
- Resin to be processed

GATE "O" DIAMETER
05 = Ø.050
08 = Ø.080
12 = Ø.125

TIP INFORMATION		BORING INFORMATION	
"T" DIA.	"L" DIM.	"T" DIA. +.0005 BORE -.0000	CONTACT LAND
Ø.500	.160	Ø.5005	.080
Ø.750	.150	Ø.7505	.150
Ø1.000	.150	Ø1.0005	.150

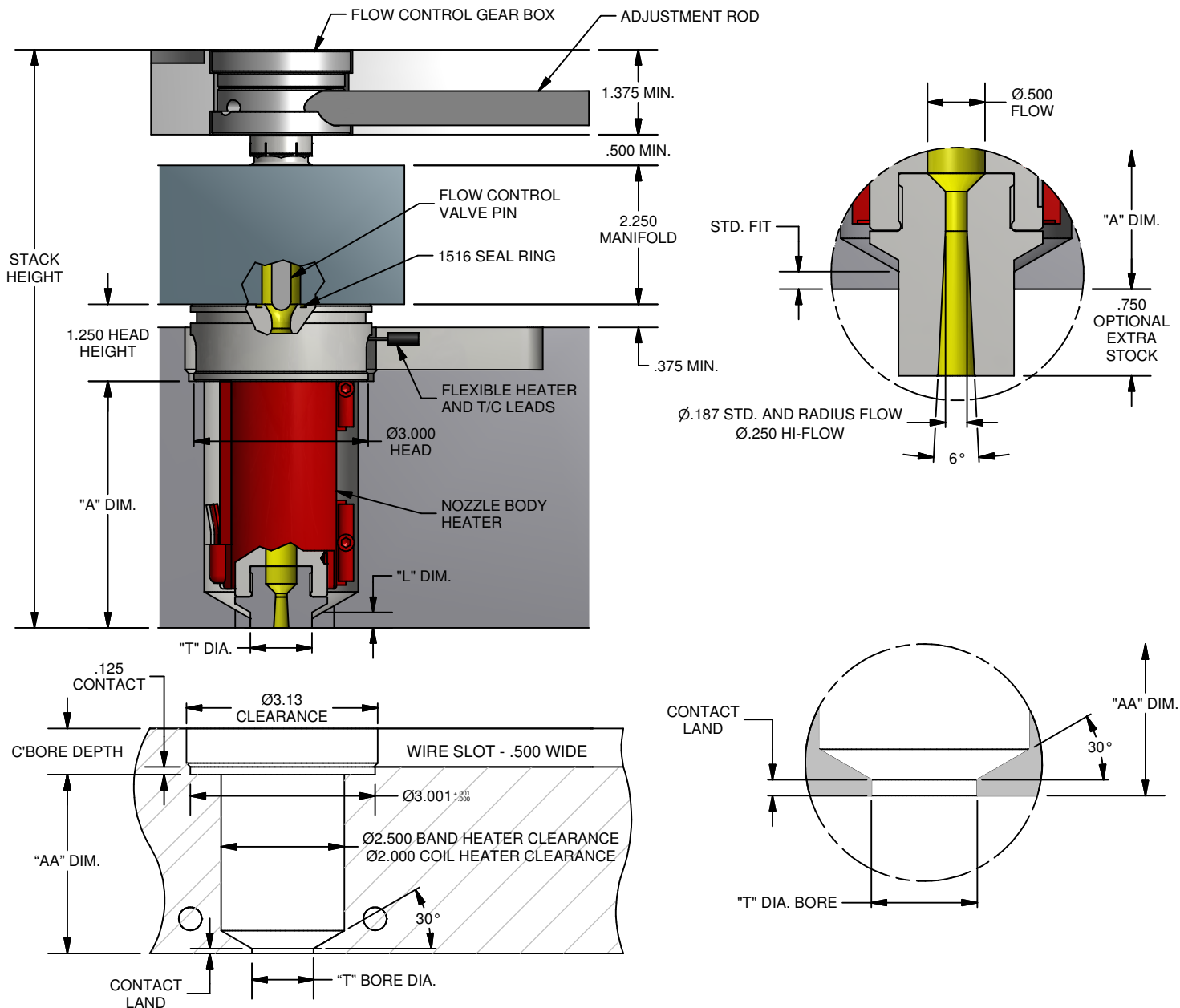
NOTE: For sizes other than shown, please contact Osco Tech Service.

* 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.

FCA-200

FLOW CONTROL ABSOLUTE FLOW NOZZLE SYSTEM, "FCA" SERIES 200

NOZZLE DESCRIPTION: The "FCA" Absolute Flow Type Flow Control Nozzle is designed for use with an OSCO Manifold System. The "FCA" is engineered to feed directly into the part or runner with an unrestricted channel, permitting faster fills and better quality molded parts. It is an ideal choice when a small sprue vestige and the circular nozzle tip "T" diameter witness mark is allowable.



THERMAL EXPANSION NOTE

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

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

HOW TO ORDER

CATALOG #	"A" DIM.
FCA-2040	4.000
FCA-2050	5.000
FCA-2060	6.000
FCA-2070	7.000
FCA-2080	8.000
FCA-2090	9.000
FCA-2100	10.000

Specify:

- Nozzle Catalog Number
- "A" Dimension
- "T" Diameter
- Resin to be processed

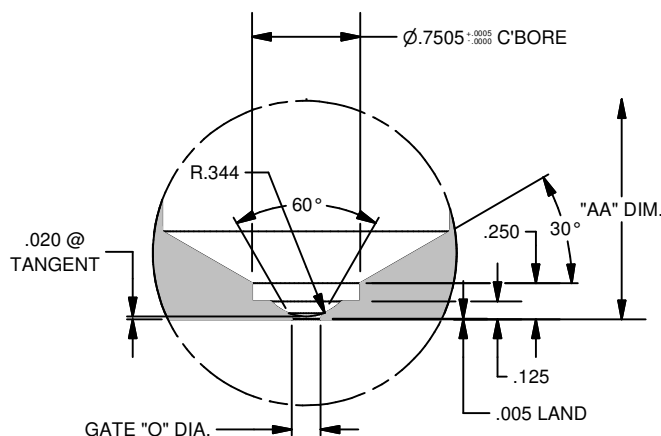
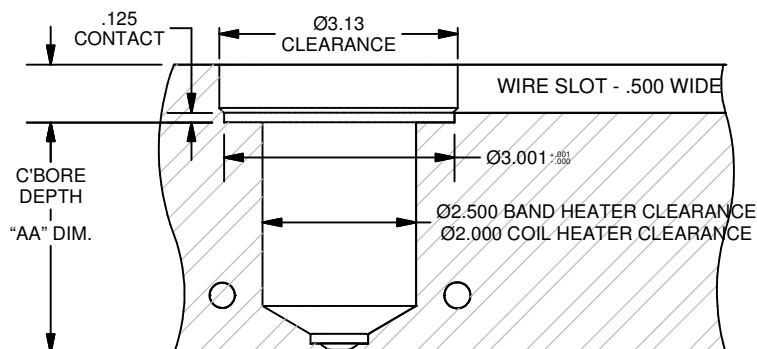
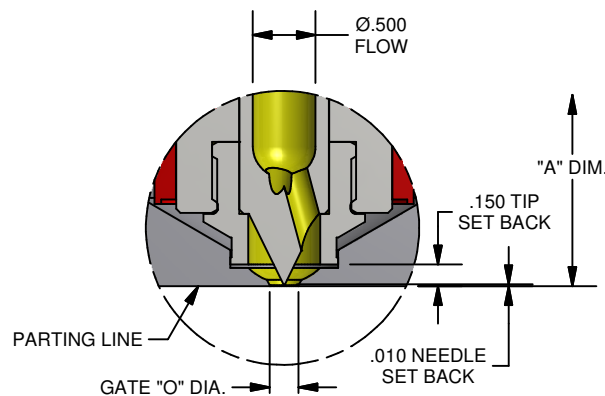
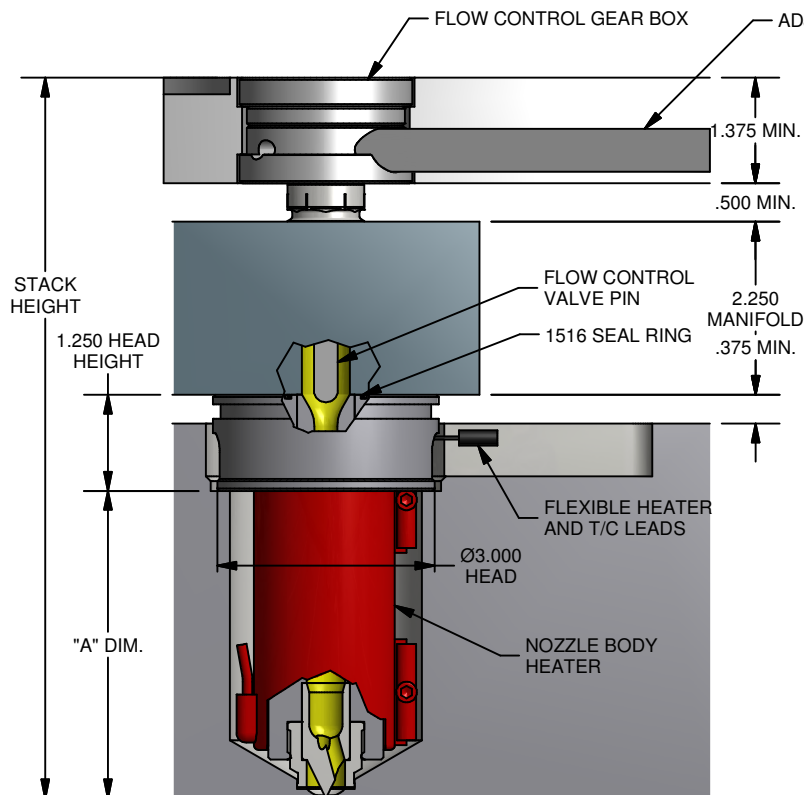
TIP INFORMATION		BORING INFORMATION	
"T" DIA.	"L" DIM.	"T" DIA. +.0005 BORE -.0000	CONTACT LAND
Ø.750	.187	Ø.7505	.100
Ø1.000	.250	Ø1.0005	.150

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.

FLOW CONTROL BODY LESS NOZZLE SYSTEM, "FCB" SERIES 200

NOZZLE DESCRIPTION: The "FCB" Body Less Type Flow Control Nozzle is designed for use with an OSCO manifold system. The "FCB" is engineered to feed directly into the molded part. It is an ideal choice when a small gate vestige and the circular nozzle tip "T" diameter witness mark is not allowable.



THERMAL EXPANSION NOTE

"AA" DIM. = "A" DIM. (Due to the Body Less Nozzle Design, thermal expansion does not need to be considered.)

HOW TO ORDER

CATALOG #	"A" DIM.
FCB-2040	4.000
FCB-2050	5.000
FCB-2060	6.000
FCB-2070	7.000
FCB-2080	8.000
FCB-2090	9.000
FCB-2100	10.000

Specify:

- Nozzle Catalog Number
- "A" Dimension
- Resin to be processed

GATE "O" DIAMETER *	
MIN.	Ø.080
MAX.	Ø.200

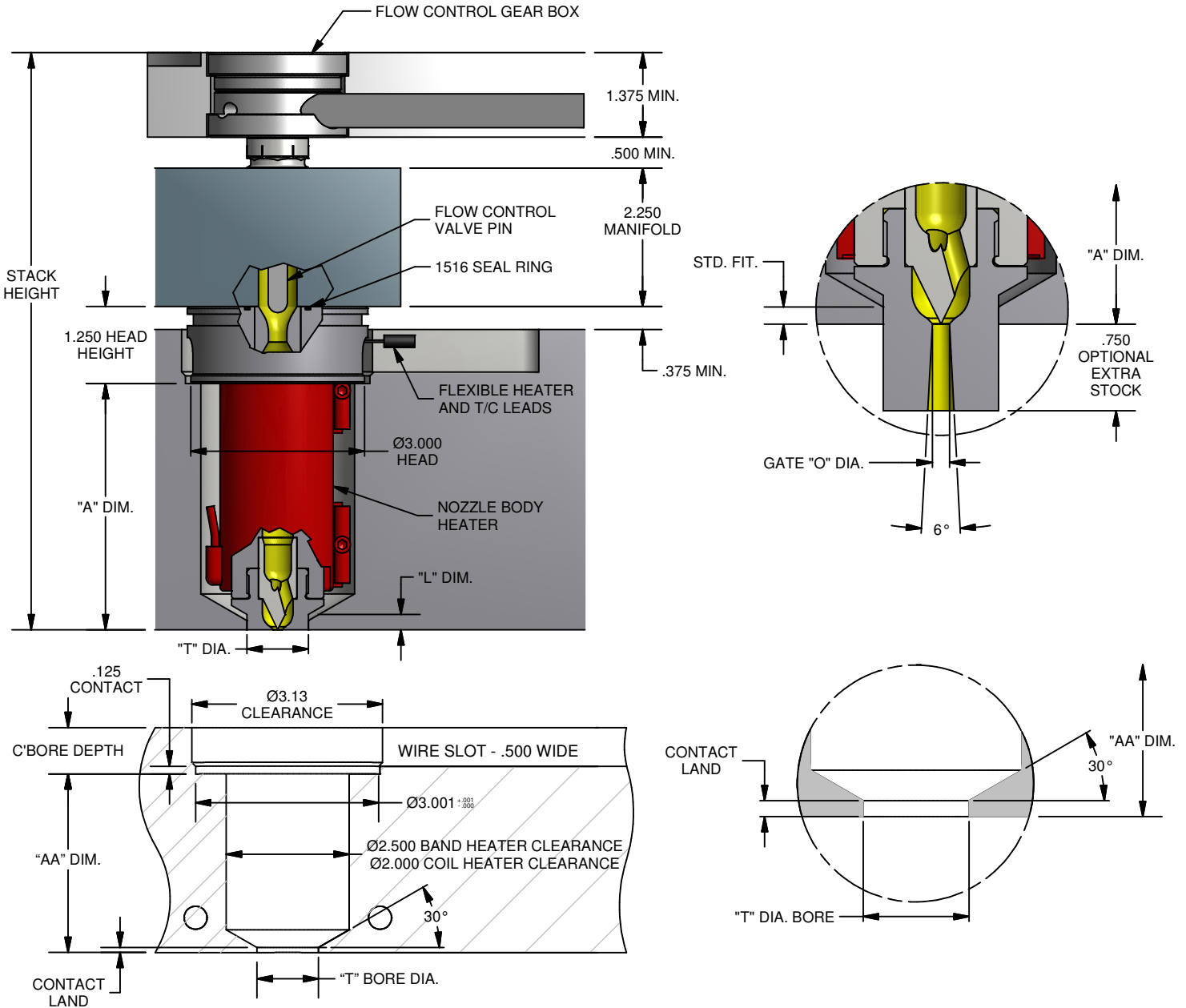
* Note: The information given here should be used as a guide. A variation in growth of any nozzle from the formulation is possible due to cooling conditions or mold configuration. It is advisable to allow a margin of safety. For some very critical applications, an empirical factor may have to be obtained.

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

FCF-200

FLOW CONTROL FULL BODY NOZZLE SYSTEM, "FCF" SERIES 200

NOZZLE DESCRIPTION: The "FCF" Full Body Type Flow Control Nozzle is designed for use with an OSCO manifold system. The "FCF" is engineered to feed directly into the molded part. It is an ideal choice when a small gate vestige and the circular nozzle tip "T" diameter witness mark is allowable.



THERMAL EXPANSION NOTE

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

HOW TO ORDER

CATALOG #	"A" DIM.
FCF-2040	4.000
FCF-2050	5.000
FCF-2060	6.000
FCF-2070	7.000
FCF-2080	8.000
FCF-2090	9.000
FCF-2100	10.000

Specify:

- Nozzle Catalog Number
- "A" Dimension
- "O" Diameter
- "T" Diameter
- Resin to be processed

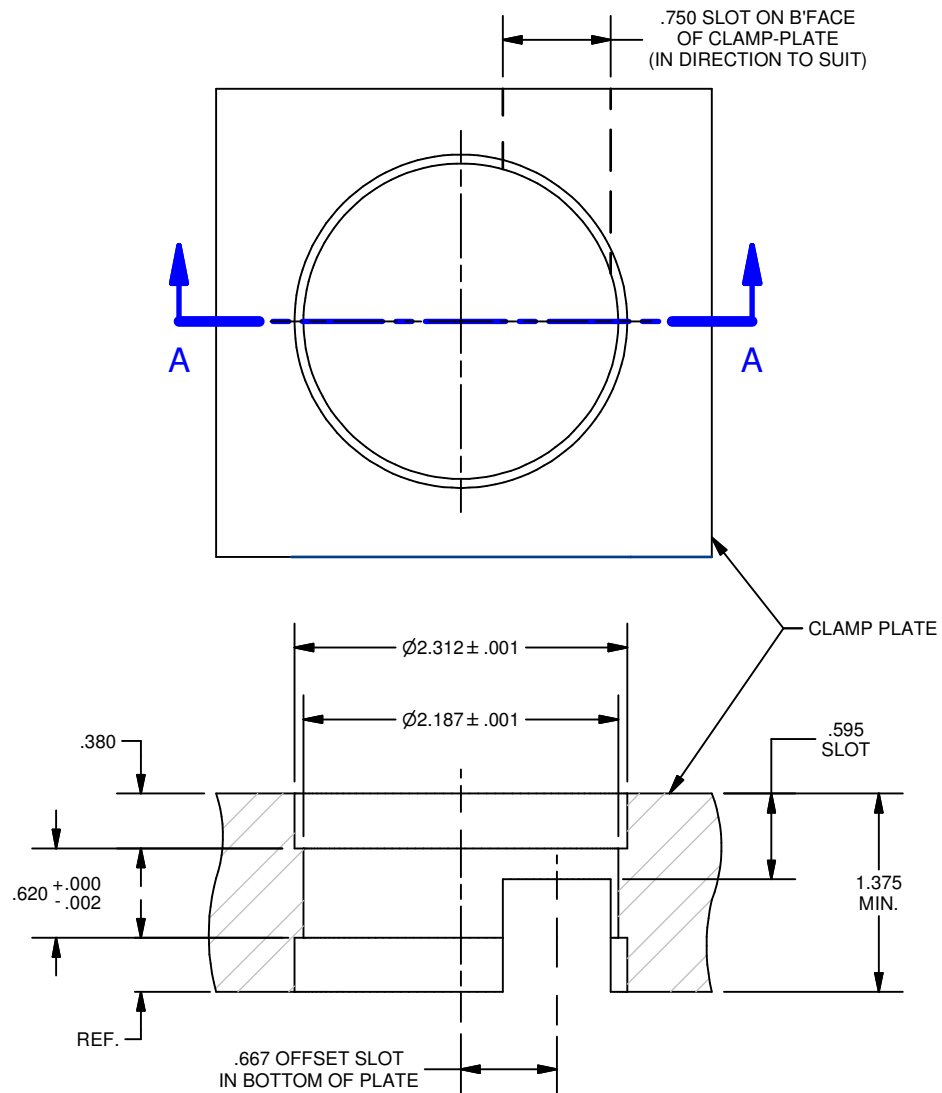
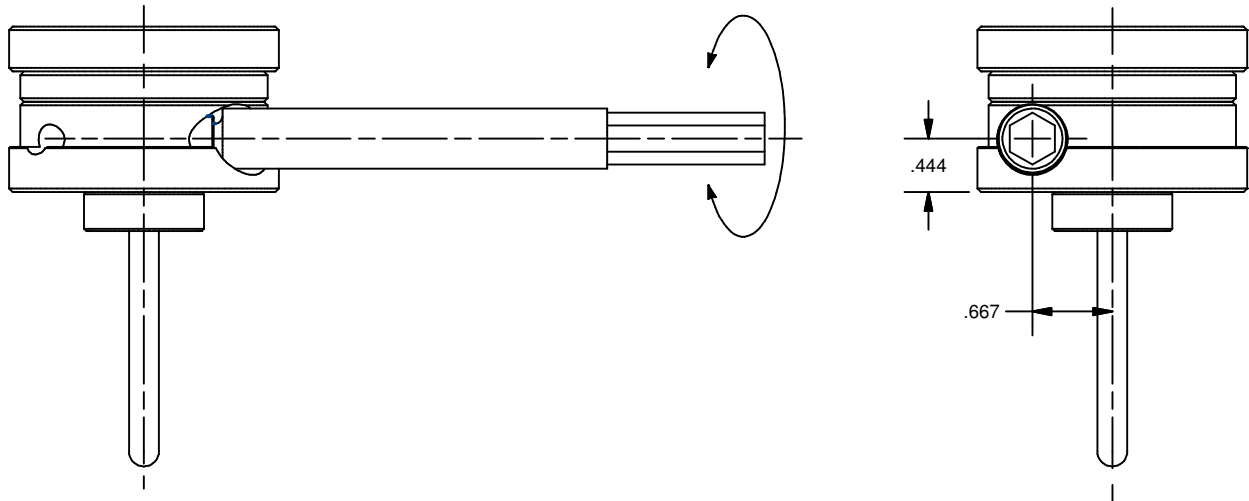
GATE "O" DIAMETER
12 = Ø.120
15 = Ø.150

TIP INFORMATION		BORING INFORMATION	
"T" DIA.	"L" DIM.	"T" DIA. $\begin{smallmatrix} +.0005 \\ -0.0000 \end{smallmatrix}$ BORE	CONTACT LAND
Ø.750	.187	Ø.7505	.100
Ø1.000	.250	Ø1.0005	.150

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.

GEAR BOX - BORING



SECTION A-A