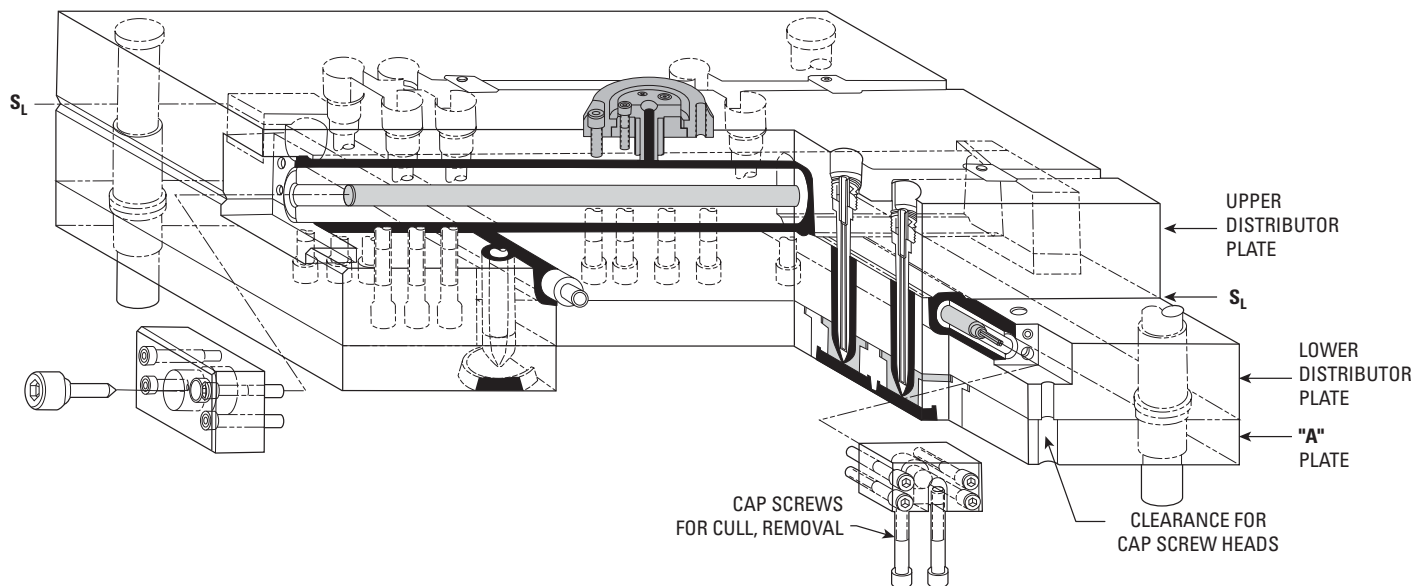


## Split Plate Design



### SPLIT PLATE CONCEPT

While DME normally recommends the solid plate approach to hot runner molding, the split plate concept will appeal to the molder who frequently has to change colors or materials in a specific molding application. The split plate concept allows for the distributor plate to be separated and the "cull" (material surrounding the distributor tubes and probes) removed.

To facilitate removal of the cull from the mold while it is in the machine, it is necessary to provide the following: 1) bolt pattern that will allow for the removal of the "A" plate from the parting line when the mold is open; 2) leader pins and bushings that maintain plate alignment when carrying the "A" plate and the "lower" distributor plate to the movable side; 3) a bolt pattern that will allow unfastening of the distributor plates, behind the "A" plate, from the parting line opening; 4) the attachment of mold straps and a bolt arrangement that will enable the operator to move the mold plates in the proper sequences with normal molding machine manual controls; 5) a method of removing the cull from the channel, in most cases from the probe side.

One method of removing the cull from the probe side is to install cap screws into the end caps, as shown above.

Provide for a 1-inch deep counterbored clearance in the lower distributor plate for these cap screw heads. This clearance will create a delay and allow the material to separate from the probe drop area, subsequently pulling the cull from the probes.

Another method of cull removal would be to drill and tap thru holes in the end caps. After the distributor plates have been separated, install threaded shafts and tighten to apply pressure on the cull. If the cull resists removal due to shrinkage around the probes, it may be necessary to apply heat to the probes by reducing the control setpoint temperature and turning the probe heaters on.

If the mold is going to be benched for cull removal, the bolts securing the split plate may be installed from the back of the mold (see optional cap screw placement, Figure #3). The probes should be removed first, then the bolts securing the distributor plates and the bolts in the end caps. After the distributor plates are split, the cull may be removed by any of the following methods: 1) threaded holes in the end caps to allow for threaded shafts to be used as jack screws or 2) pry slots in the end caps to be able to remove with pry bars.

# Split Plate Designs and Machining Guidelines – Trapezoids

## Two Level Trapezoid

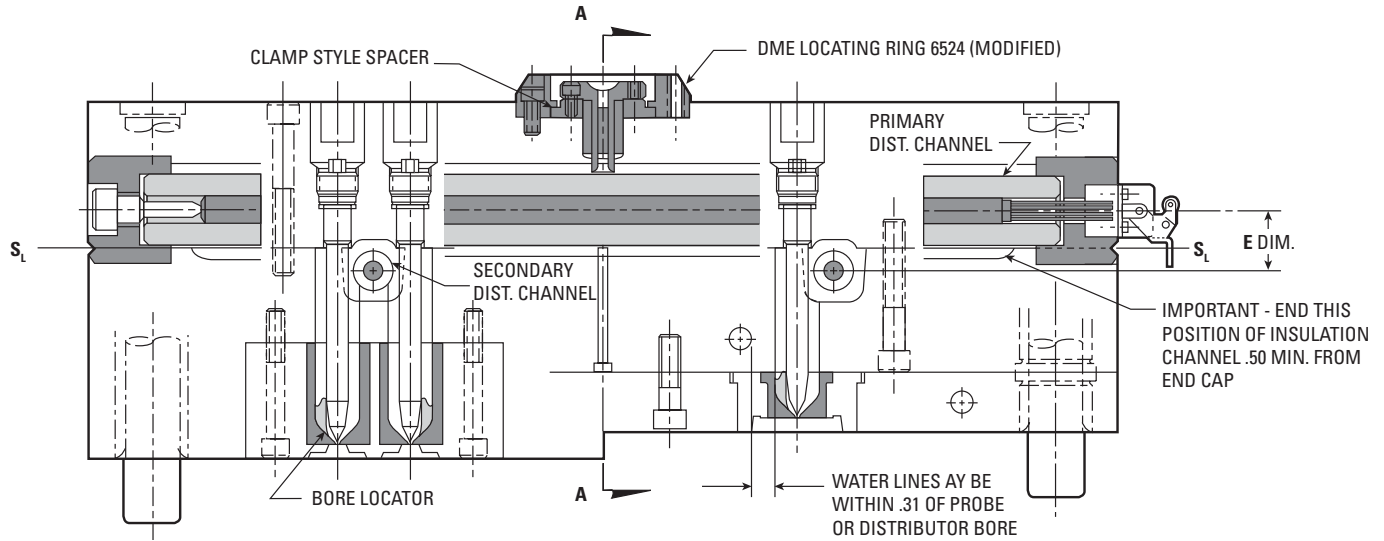


FIGURE 1

NOTE: The  $S_L$  symbol indicates the split line for split plate designs.

## Single Level Trapezoid

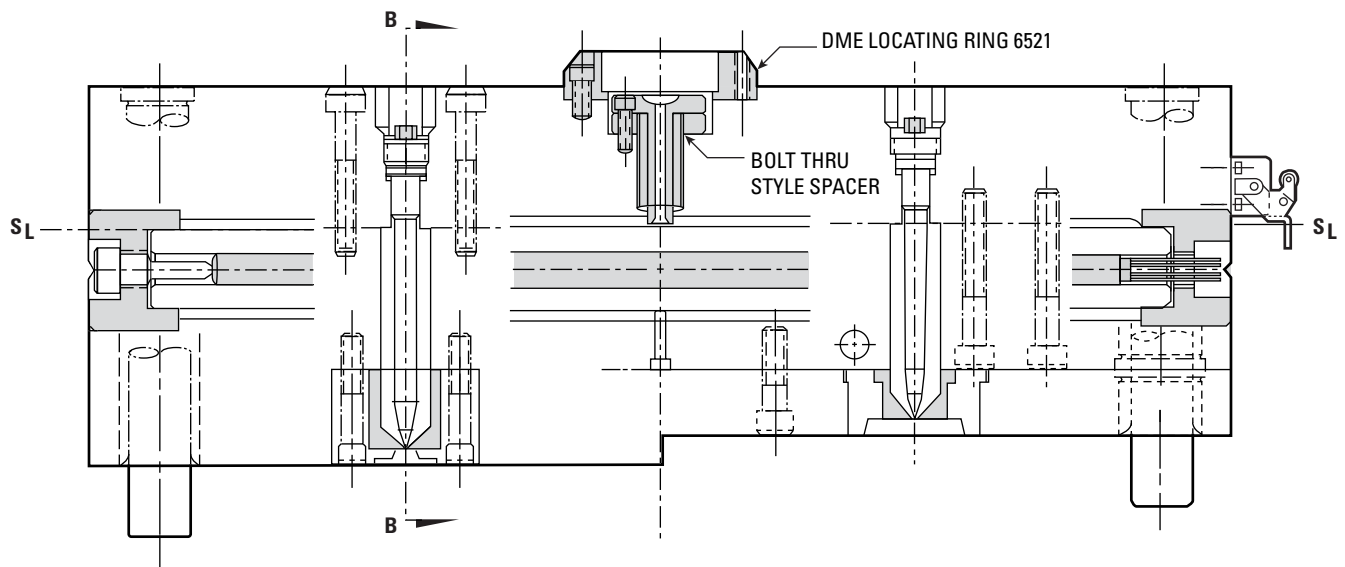


FIGURE 2

Dimensions and callouts on each side view (Figures 1, 2 and 3) can be applied to all three side views.

# Split Plate Designs and Machining Guidelines

## Single Level Round

### Single Level Round

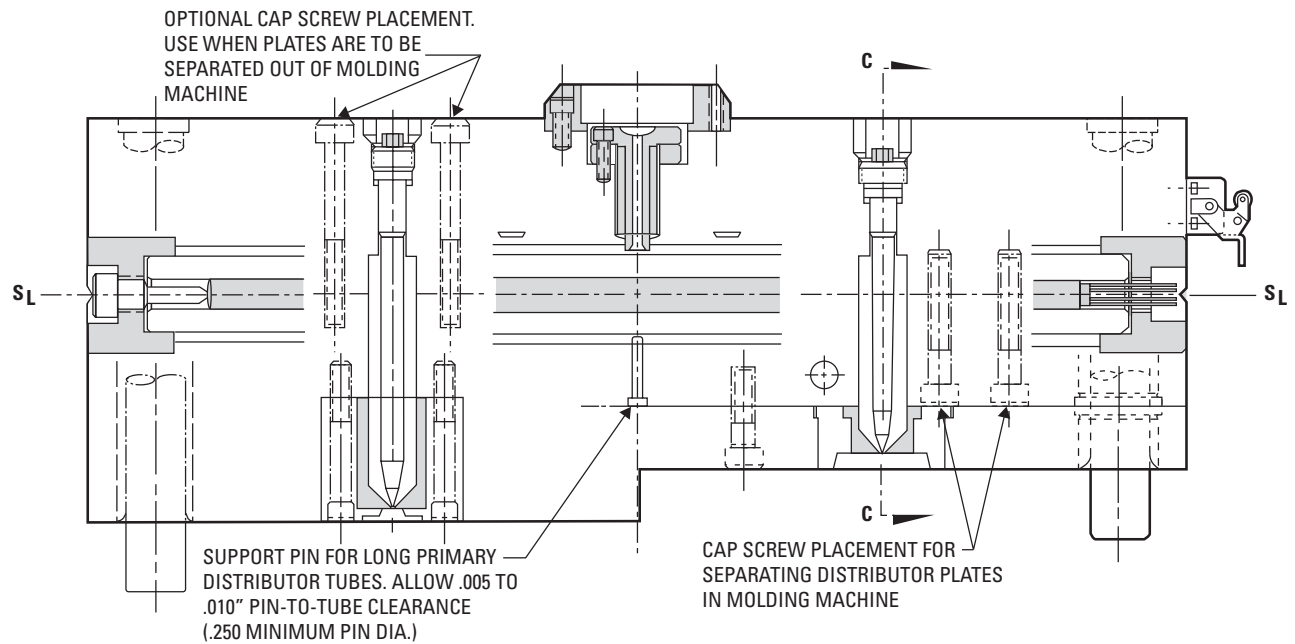
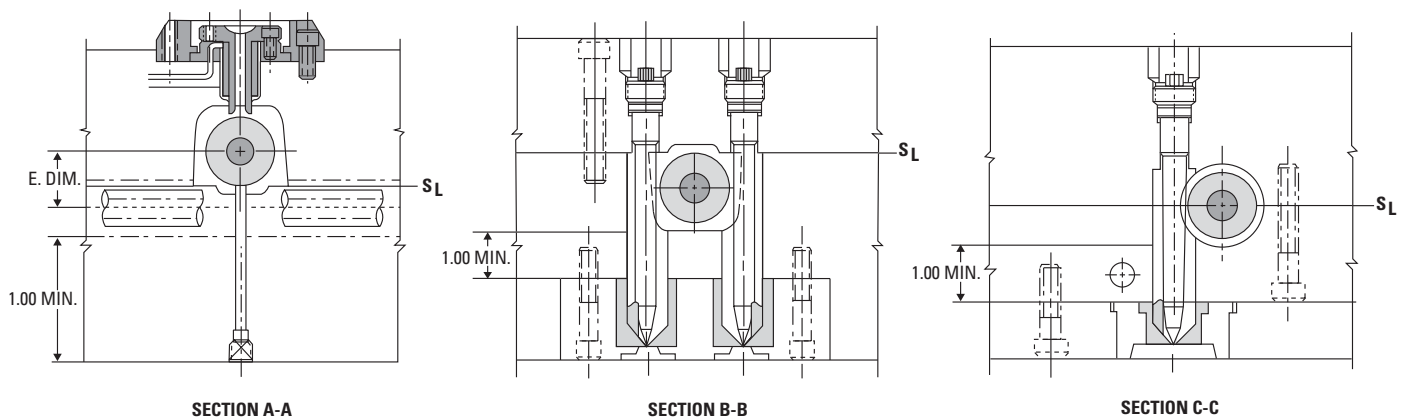


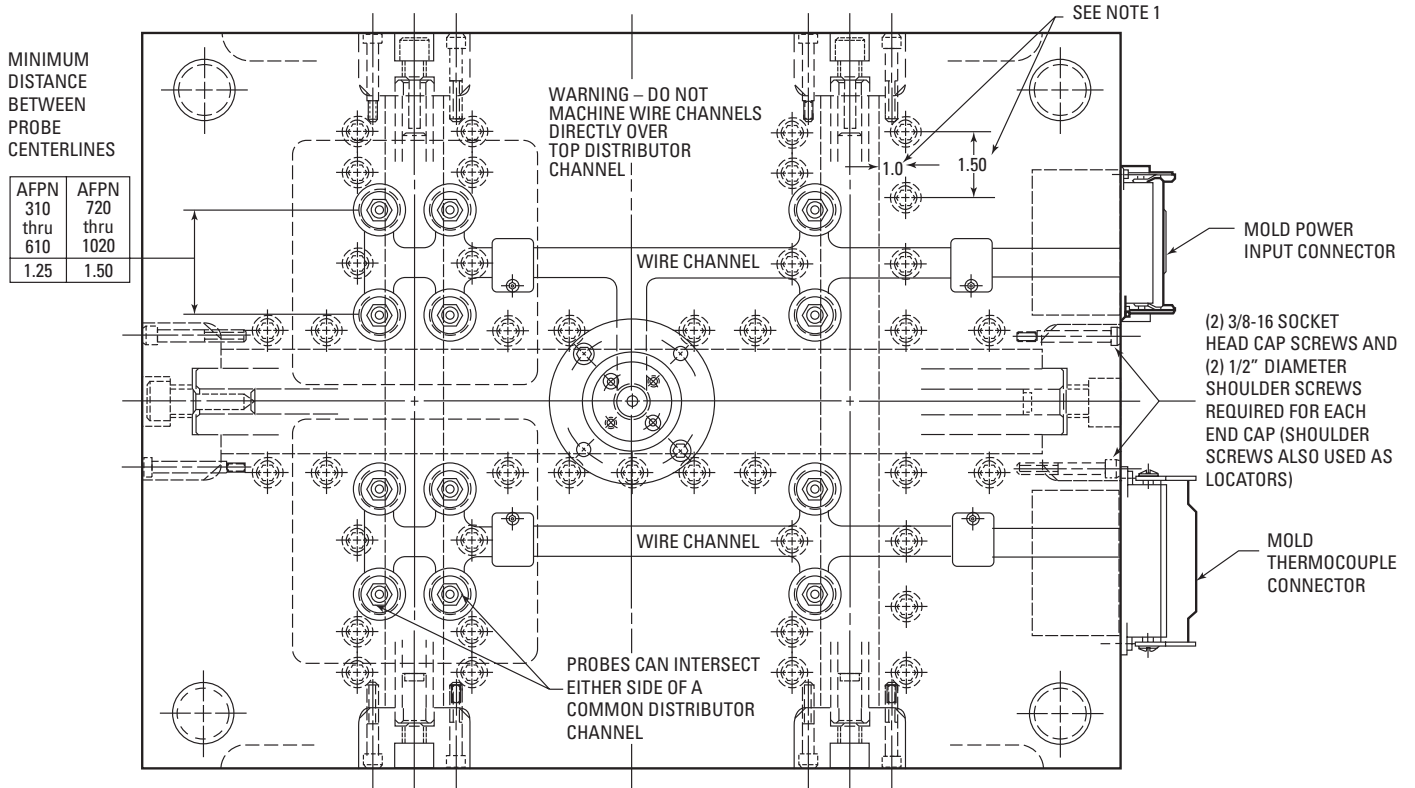
FIGURE 3

**NOTE:** The 2.00 dia. channel uses the 1.625 dia. distributor tube.  
the 1.250 dia. channel uses the .875 dia. distributor tube.



# Split Plate Design and Machining Guidelines

## Top of Mold



### INTERSECTIONS BETWEEN DISTRIBUTOR CHANNELS

PRIMARY DIST. CHANNEL	SECONDARY DIST. CHANNEL	E DIM. ( $\pm .020$ )
2.00	2.00	1.705
2.00	1.25	1.330
*1.25	1.25	.955

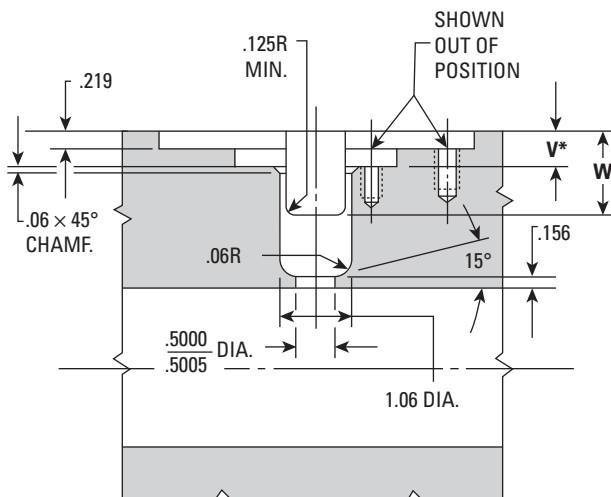
\*The 2.00" distributor channel with 1.625 dia. tube is recommended.

### NOTES:

- To secure distributor plates, the use of 1/2-13 hardened cap screws is recommended. Line both sides of the distributor channel on 1.5" centers, 1" from channel. Torque to manufacturer's recommendations (Approx. 110 foot pounds)
- Moldmaker to supply guide pins and bushings, molds straps and appropriate holes to allow plates to be split and moved when removing the cull in the molding machine
- When separating the distributor system, the cull will have the tendency to stay on the probe side. A method of extraction is suggested to facilitate removal

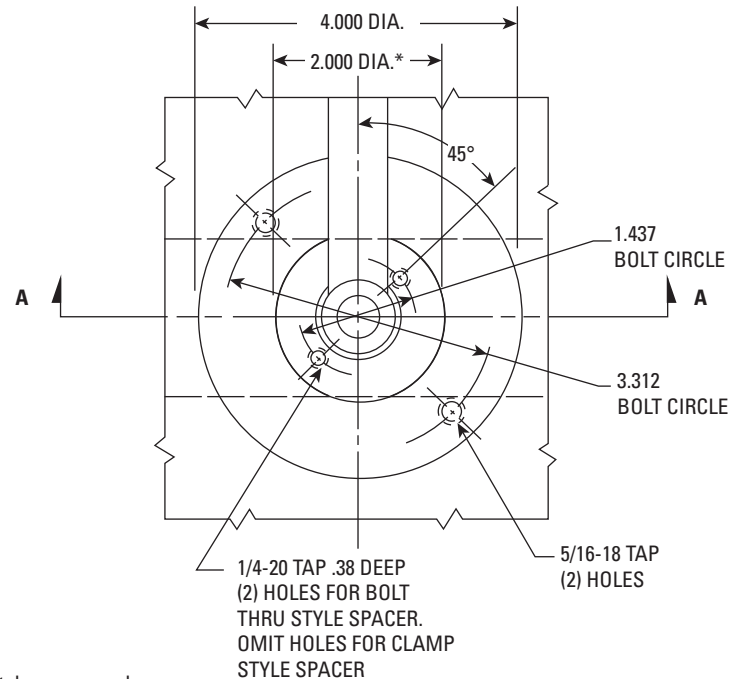
# Machining for Heated Nozzle Locator, Locating Ring and Distributor Channel

## Machining for Heated Nozzle Locator and DME 6521 or 6524 (Modified) Locating Ring — Adjust Accordingly for Other Locating Rings



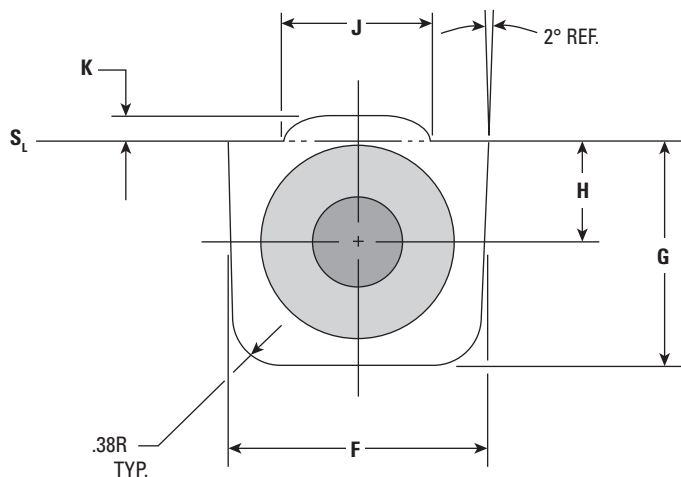
SECTION A-A

V&amp;W = Depths determined by application.



\*NOTE: Counterbore depth (V) and diameter (2.000") apply to bolt thru style spacer only.

## Machining for Trapezoidal Distributor Channel



DIM.	PRIMARY CHANNEL WITH 1.625 DIA. DIST. TUBE	SECONDARY CHANNEL WITH .875 DIA. DIST. TUBE
F	2.000	1.250
G	1.850	1.100
H	.850	.475
J	1.000	.750
K	.150	.150

NOTE: For Trapezoidal Designs, select from above to suit mold/part requirements. For single level round, use a 2" dia. bore with 1.625 O.D. distributor tube — or — 1.25 dia. bore with .875 O.D. distributor tube.

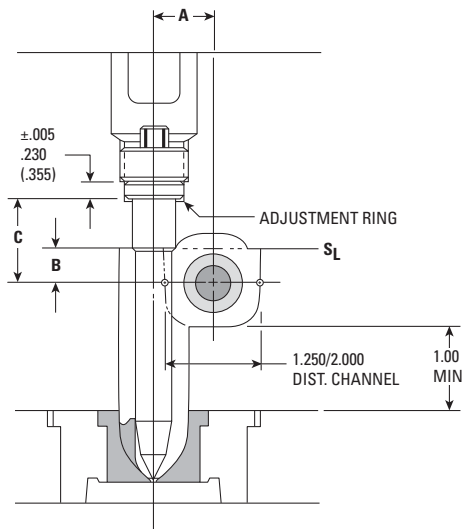
The design guidelines in this document serve as production-proven recommendations of the DME Hot Runner System, and are ONLY applicable to the current line of DME components. The guidelines and component details in this document supersede all previous documents. Due to the wide variety of plastics materials and possible molding applications available, no warranties are expressed or implied.

DME Hot Runner System Components are manufactured and sold under one or more of the following U.S. patents: 3,767,340; 3,010,155; 3,023,458; 3,231,938 and 3,758,248. Foreign patents issued and pending.

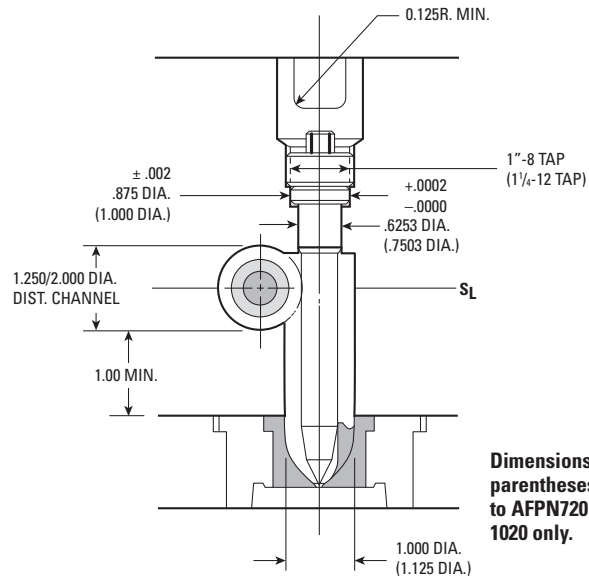
# Dimensions for Probe Machining, Probe Set-up and Gate Machining

## Probe Machining Dimensions

(NOTE: Dimensions shown are common to either round or trapezoid.)



**NOTE: ONLY AFPN Series probes are recommended for the trapezoidal and round split plate concept.**



Dimensions in parentheses apply to AFPN720 thru 1020 only.

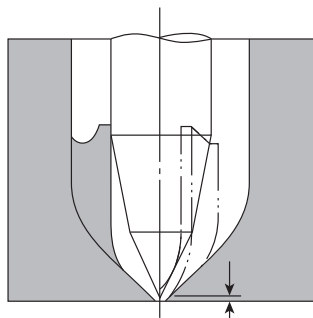
USED WITH .875 DIA. DISTRIBUTOR TUBE (1.25 CHANNEL)

PROBE ITEM NO.	A DIM.	B DIM.	C DIM.
	± .020	MIN.	MIN.
AFPN410	.796	.500	1.375
AFPN510	.796	.500	1.375
AFPN610	.796	.500	1.375
AFPN720	.861	.750	2.250
AFPN820	.861	.750	2.250
AFPN920	.861	.750	2.250
AFPN1020	.861	.750	2.250

USED WITH 1.625 DIA. DISTRIBUTOR TUBE (2.00 CHANNEL)

PROBE ITEM NO.	A DIM.	B DIM.	C DIM.
	± .020	MIN.	MIN.
AFPN410	1.171	.500	1.375
AFPN510	1.171	.500	1.375
AFPN610	1.171	.500	1.375
AFPN720	1.236	.750	2.250
AFPN820	1.236	.750	2.250
AFPN920	1.236	.750	2.250
AFPN1020	1.236	.750	2.250

## Initial Probe Set-up Dimensions



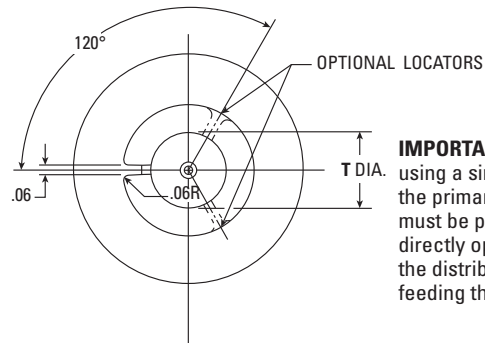
**NOTE: X Dimension is for initial probe set-up and may require further adjustment. Final position of probe tip will be determined by gate cosmetics and flow requirements.**

X DIMENSION (PROBE TIP SETTING AT ROOM TEMPERATURE)

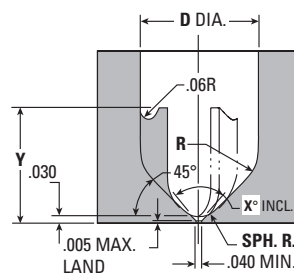
PROBE ITEM NO.	X DIM.
AFPN410	.000-.004
AFPN510	.000-.005
AFPN610	.000-.006

PROBE ITEM NO.	X DIM.
AFPN720	.000-.007
AFPN820	.000-.008
AFPN920	.000-.009
AFPN1020	.000-.010

## Gate Machining Dimensions



**IMPORTANT:** When using a single locator – the primary locator must be positioned directly opposite to the distributor tube feeding the drop.

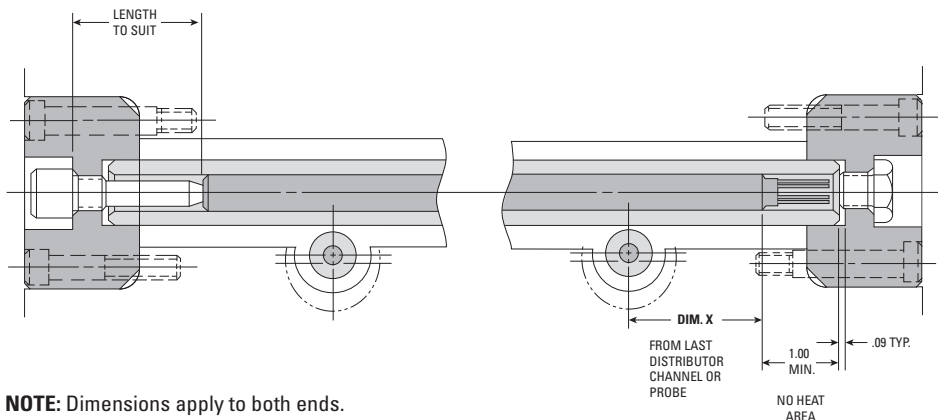


PROBE ITEM NO.	AFPN410 THRU 610	AFPN720 THRU 1020
D DIA.	1.000	1.125
T DIA.	.562	.693
Y DIM.	1.000	.850
SPH.R.	.187	.250
R	.375	.500

X° = 80° INCL. MIN.  
90° INCL. MAX.

# Split Plate Designs and Machining Guidelines

## Recommended Relationship Between Thermocouple (T/C) Distributor Tube Heaters, Distributor Tubes and Intersecting Tubes or Probes

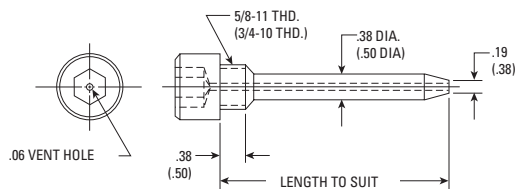


**NOTE:** Dimensions apply to both ends.

FOR PRIMARY CHANNEL WITH	DIM. X
1.625 DIST. TUBE	2.250 MIN.
.875 DIST. TUBE	1.750 MIN.

### Heater Stop

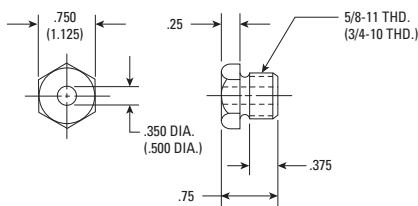
Moldmaker to supply to suit



**(NOTE:** Dimensions in parentheses apply to large distributor tube).

### Heater Lead Wire Protector

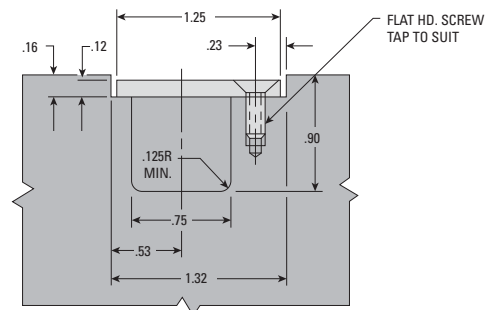
Moldmaker to supply to suit



**(NOTE:** Dimensions in parentheses apply to large distributor tube).

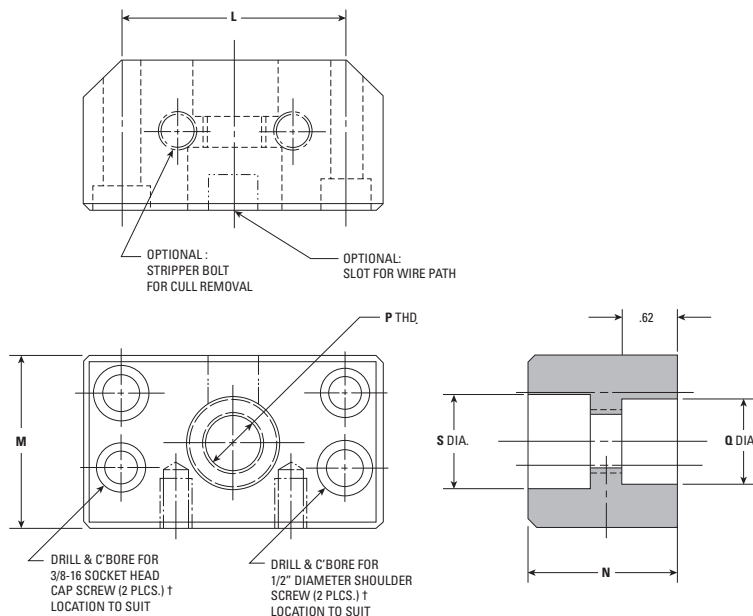
### Recommended Wire Channels and Strap

Break all sharp corners to prevent damage to heater lead wires. Moldmaker to supply to suit.



### End Cap Dimensions

(Moldmaker to supply to suit)



DIM.	USED WITH .875 DIA. DIST. TUBE (1.25 CHANNEL)	USED WITH 1.625 DIA. DIST. TUBE (2.00 CHANNEL)
<b>L</b>	2.125 MIN.	2.875 MIN.
<b>M</b>	1.500 MIN.	2.500 MIN.
<b>N</b>	1.750 MIN.	1.875 MIN.
<b>P</b>	5/8-11	3/4-10
<b>Q</b>	.875 +.002 -.000	1.625 +.002 -.000
<b>S</b>	1.000	1.500

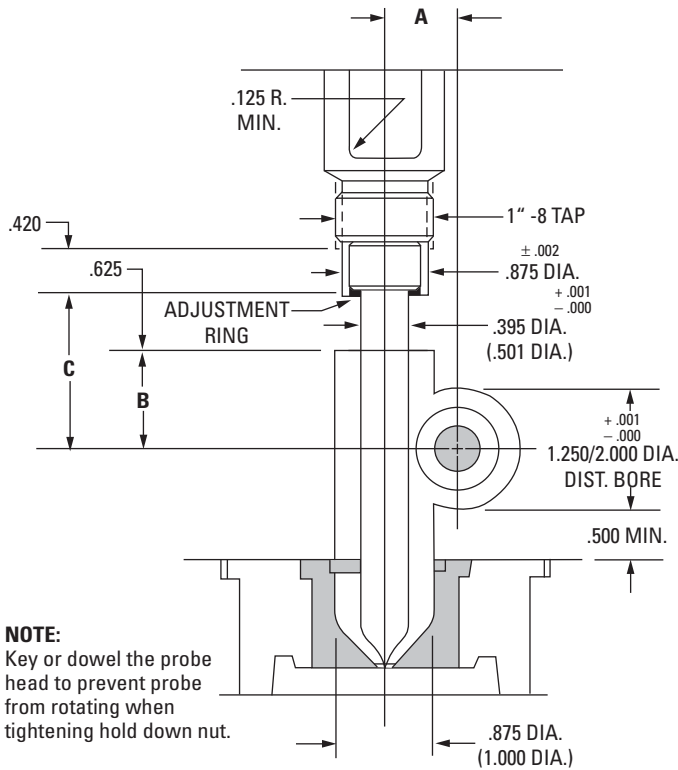
\***L** & **M** dimensions must extend .250 past channel.

†**NOTE:** 5/16-18 S.H.C.S. & 3/8 dia. locational shoulder screws may be substituted on the 1.25 distributor channel.

**DME #3 STEEL IS RECOMMENDED FOR END CAPS.**

# Dimensions for Probe Machining and Set-up Solid Block and Split Plate Designs

## Probe Machining Dimensions – Solid Block Design



**NOTE:**  
Key or dowel the probe head to prevent probe from rotating when tightening hold down nut.

USED WITH .875 DIA. DISTRIBUTOR TUBE (1.25 DIST. BORE)

PROBE ITEM NUMBER	A DIM. +.000/-020	B DIM. MIN.	C DIM. MIN.
AFIP4372(90)	.709	.788	1.413
AFIP4422(90)	.709	.788	1.413
AFIP4472(90)	.709	.788	1.413
AFIP5372(90)	.762	1.000	1.625
AFIP5422(90)	.762	1.000	1.625
AFIP5472(90)	.762	1.000	1.625
AFIP5522(90)	.762	1.000	1.625
AFIP5572(90)	.762	1.000	1.625
AFIP5622(90)	.762	1.000	1.625

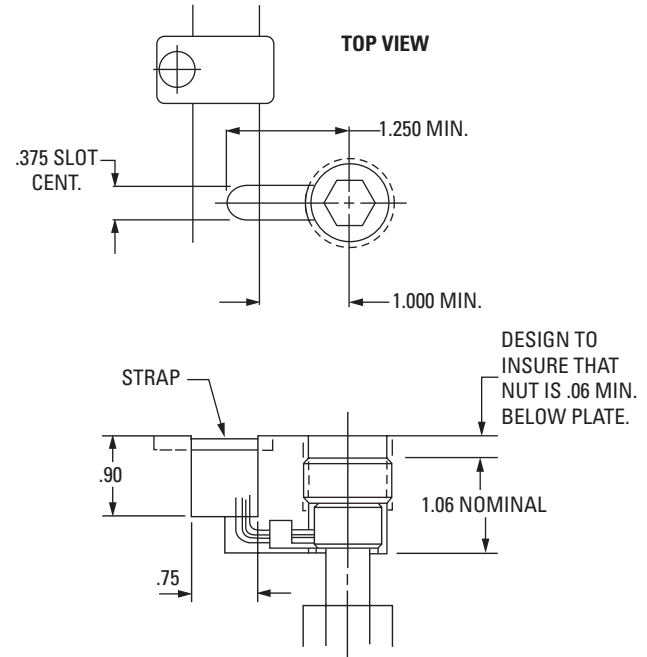
USED WITH 1.625 DIA. DISTRIBUTOR TUBE (2.00 DIST. BORE)

PROBE ITEM NUMBER	A DIM. +.000/-020	B DIM. MIN.	C DIM. MIN.
AFIP5372(90)	1.137	1.000	1.625
AFIP5422(90)	1.137	1.000	1.625
AFIP5472(90)	1.137	1.000	1.625
AFIP5522(90)	1.137	1.000	1.625
AFIP5572(90)	1.137	1.000	1.625
AFIP5622(90)	1.137	1.000	1.625

**IMPORTANT:** Dimensions shown in parentheses apply to larger probes AFIP5372 thru 5622 only. Tolerances shown also apply to dimensions in parentheses.

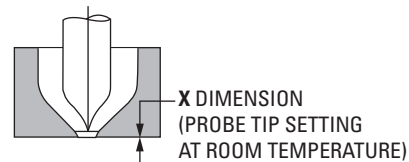
## Recommended Wire Channels and Strap (Solid Block or Split Plate Design)

Break all sharp corners to prevent damage to heater lead wires



PARTIAL SIDE VIEW SHOWING INSTALLATION OF PROBE WITH 90° LEADS

## Initial Probe Set-up Dimensions (Solid Block or Split Plate Design)



PROBE ITEM NUMBER	X DIM.	PROBE ITEM NUMBER	X DIM.
AFIP4372(90)	.000-.004	AFIP5472(90)	.000-.005
AFIP4422(90)	.000-.004	AFIP5522(90)	.000-.005
AFIP4472(90)	.000-.005	AFIP5572(90)	.000-.006
AFIP5372(90)	.000-.004	AFIP5622(90)	.000-.006
AFIP5422(90)	.000-.004		

**NOTE:** X dimension is for initial probe set-up and may require further adjustment. Final position of probe tip will be determined by gate cosmetics and flow requirements.

## Gate Machining Dimensions (Solid Block Design)

Refer to drawing on next page for Auto-Fixed Finless Probes and apply the following:

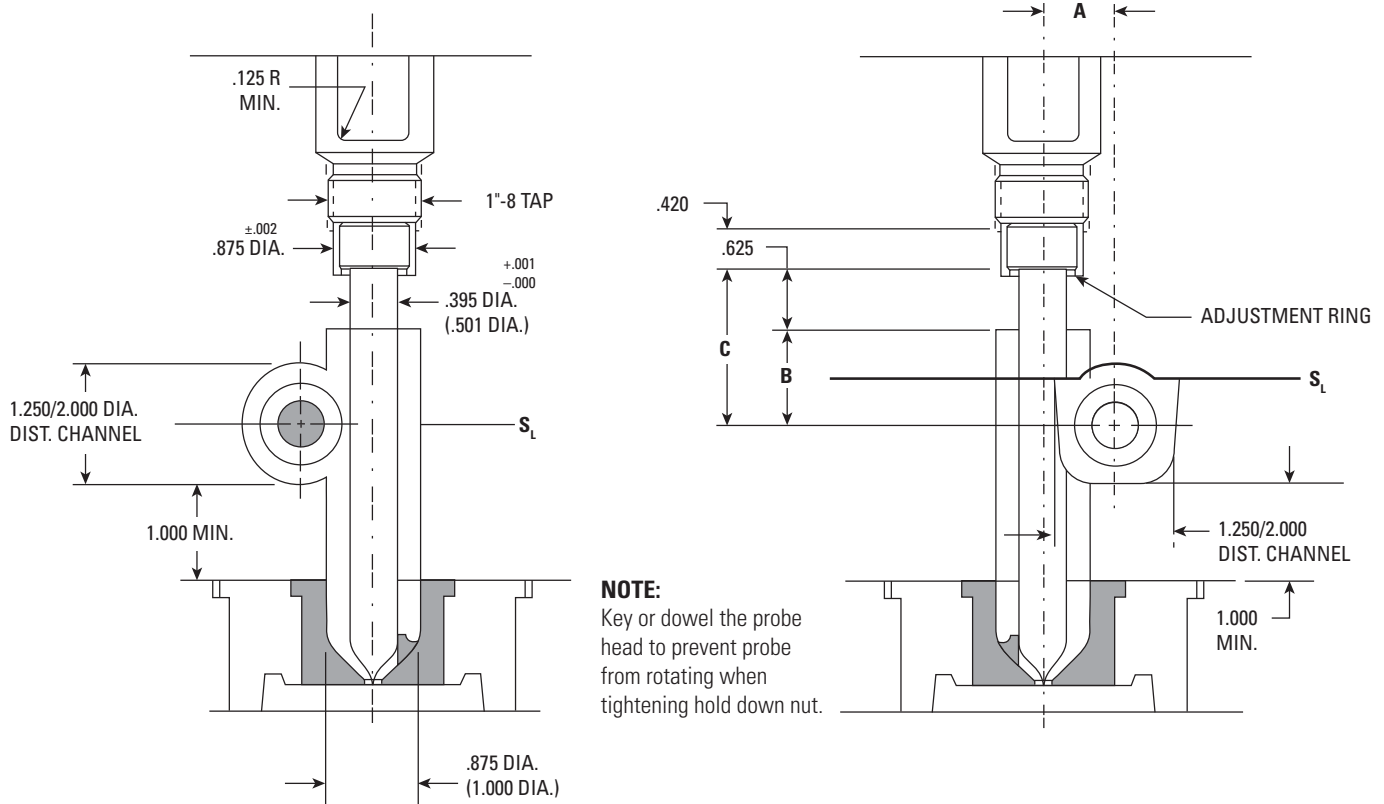
PROBE SERIES	D DIA.	SPH. R.	R
AFIP4	.875	.187	.38
AFIP5	1.000		



# Probe Machining Dimensions – Split Plate Design

## Probe Machining Dimensions – Split Plate Design

(See previous page for initial probe set-up dimensions and wire channels)



USED WITH .875 DIA. DISTRIBUTOR TUBE (1.25 DIST. BORE)

PROBE ITEM NUMBER	A DIM. +.000/-020	B DIM. MIN.	C DIM. MIN.
AFIP4372(90)	.709	.788	1.413
AFIP4422(90)	.709	.788	1.413
AFIP4472(90)	.709	.788	1.413
AFIP5372(90)	.762	1.000	1.625
AFIP5422(90)	.762	1.000	1.625
AFIP5472(90)	.762	1.000	1.625
AFIP5522(90)	.762	1.000	1.625
AFIP5572(90)	.762	1.000	1.625
AFIP5622(90)	.762	1.000	1.625

USED WITH 1.625 DIA. DISTRIBUTOR TUBE (2.00 DIST. BORE)

PROBE ITEM NUMBER	A DIM. +.000/-020	B DIM. MIN.	C DIM. MIN.
AFIP5372(90)	1.137	1.000	1.625
AFIP5422(90)	1.137	1.000	1.625
AFIP5472(90)	1.137	1.000	1.625
AFIP5522(90)	1.137	1.000	1.625
AFIP5572(90)	1.137	1.000	1.625
AFIP5622(90)	1.137	1.000	1.625

**IMPORTANT:** Dimensions shown in parentheses apply to larger probes AFIP5372 thru 5622 only. Tolerances shown also apply to dimensions in parentheses.

**NOTE:** The symbol "S<sub>L</sub>" is used to show the split line. Dimensions shown are common to either round or trapezoid applications.

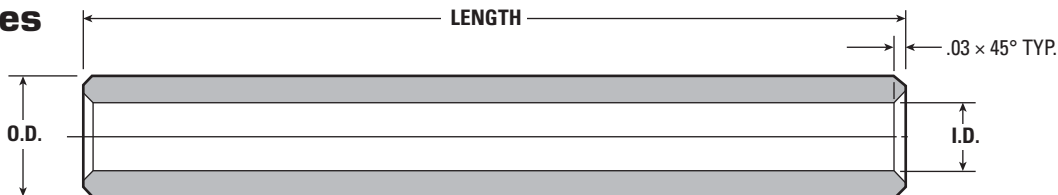
## Gate Machining Dimensions (Split Plate Design)

PROBE SERIES	AFIP4	AFIP5
D DIA.	.875	1.000
T DIA.	.390	.496
Y DIM.	.480	.530
SPH.R.	.187	.187
R	.375	.375

# Distributor Tubes and Heaters

## Distributor Tubes

MATERIAL: AISI P-20 STEEL  
HARDNESS: 28-35 HRC



USED WITH 1.250 DIST. BORE

ITEM NO.	O.D.	I.D.	LENGTH
HT07046	.875	.500	6"
HT070410			10"
HT070416			16"
HT070420			20"
HT070424			24"
HT070429			29"
HT070434			34"

USED WITH 2.000 DIST. BORE

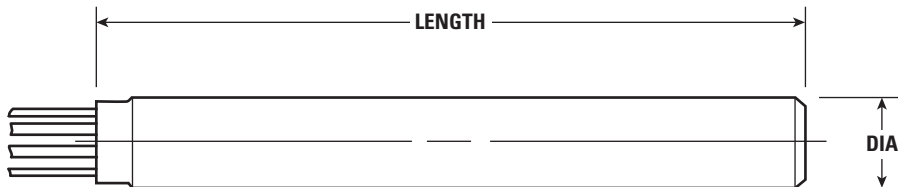
ITEM NO.	O.D.	I.D.	LENGTH
HT150510	1.625	.625	10"
HT150518			18"
HT150524			24"
HT150529			29"
HT150534			34"
HT150540			40"
HT150546			46"

## Thermocouple (T/C) Distributor Tube Heaters

240 VAC, T/C type J grounded, 34" leads

### WIRING INFORMATION

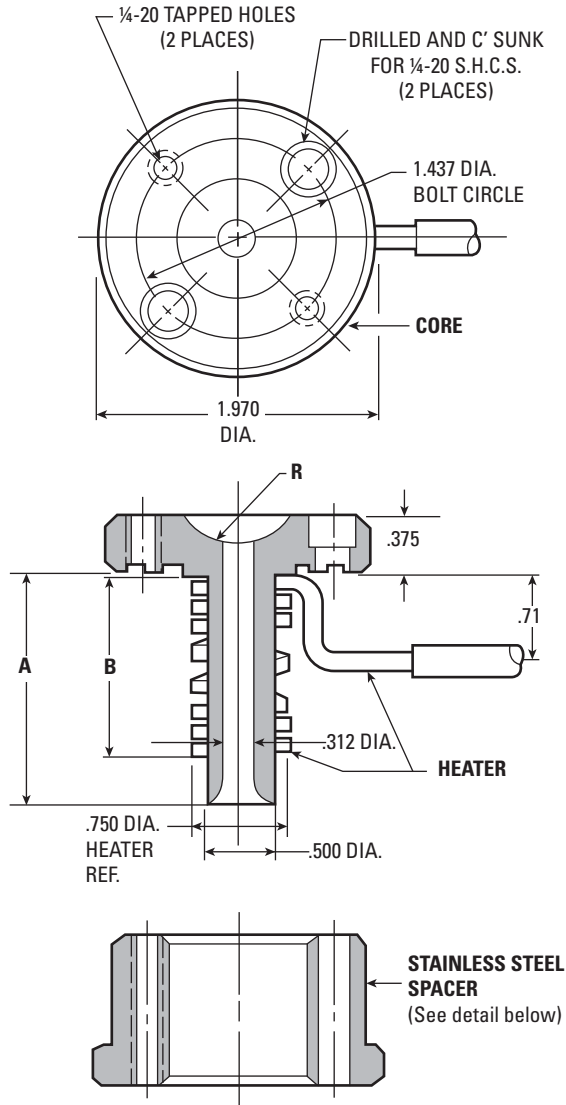
Power leads — BLACK OR MULTI-COLORED  
T/C leads — RED & WHITE  
RED is negative (-)  
WHITE is positive (+)



ITEM NO.	DIA.	LENGTH	WATTS	CONTROL	ITEM NO.	DIA.	LENGTH	WATTS	CONTROL	ITEM NO.	DIA.	LENGTH	WATTS	CONTROL	
HCTC044	.500	4"	380	15 AMP	HCTC055	.625	5"	620	15 AMP	HCTC0527	.625	27"	3620	30 AMP	
HCTC045		5"	500		HCTC056		6"	750		HCTC0528		28"	3750		
HCTC046		6"	600		HCTC057		7"	880		HCTC0529		29"	3900		
HCTC047		7"	700		HCTC058		8"	1020		HCTC0530		30"	4020		
HCTC048		8"	820		HCTC059		9"	1160		HCTC0531		31"	4160		
HCTC049		9"	920		HCTC0510		10"	1300		HCTC0532		32"	4300		
HCTC0410		10"	1030		HCTC0511		11"	1430		HCTC0533		33"	4430		
HCTC0411		11"	1140		HCTC0512		12"	1570		HCTC0534		34"	4570		
HCTC0412		12"	1250		HCTC0513		13"	1700		HCTC0535		35"	4710		
HCTC0413		13"	1350		HCTC0514		14"	1840		HCTC0536		36"	4840		
HCTC0414		14"	1460		HCTC0515		15"	1980		HCTC0537		37"	4980		
HCTC0415		15"	1570		HCTC0516		16"	2110		HCTC0538		38"	5120		
HCTC0416		16"	1680		HCTC0517		17"	2250		HCTC0539		39"	5250		
HCTC0417		17"	1780		HCTC0518		18"	2390		HCTC0540		40"	5390		
HCTC0418		18"	1900		HCTC0519		19"	2520		HCTC0541		41"	5520		
HCTC0419		19"	2010		HCTC0520		20"	2660		HCTC0542		42"	5520		
HCTC0420		20"	2110		HCTC0521		21"	2800		HCTC0543		43"	5520		
HCTC0421		21"	2220		HCTC0522		22"	2930		HCTC0544		44"	5520		
HCTC0422		22"	2330		HCTC0523		23"	3070							
HCTC0423		23"	2400		HCTC0524		24"	3200							
HCTC0424		24"	2400		HCTC0525		25"	3340							
HCTC0425		25"	2400		HCTC0526		26"	3480							
HCTC0426		26"	2400												
HCTC0427		27"	2400												
HCTC0428		28"	2400												
HCTC0429		29"	2400												
HCTC0430		30"	2400												

# Nozzle Locator Assemblies, Cores and Heaters

## Heated Nozzle Locator Assemblies



ITEM NO.		A DIM.	B DIM.
R = 1/2	R = 3/4		
HNL462	HNL662	1.809	1.450
HNL472	HNL672	2.309	1.950

HNL462 and HNL662 assemblies include:

- HNC46 or HNC66 core, respectively
- SSTC6290 heater
- HNS67 spacer (stainless steel)

HNL472 and HNL672 assemblies include:

- HNC47 or HNC67 core, respectively
- SSTC7290 heater
- HNS67 spacer (stainless steel)

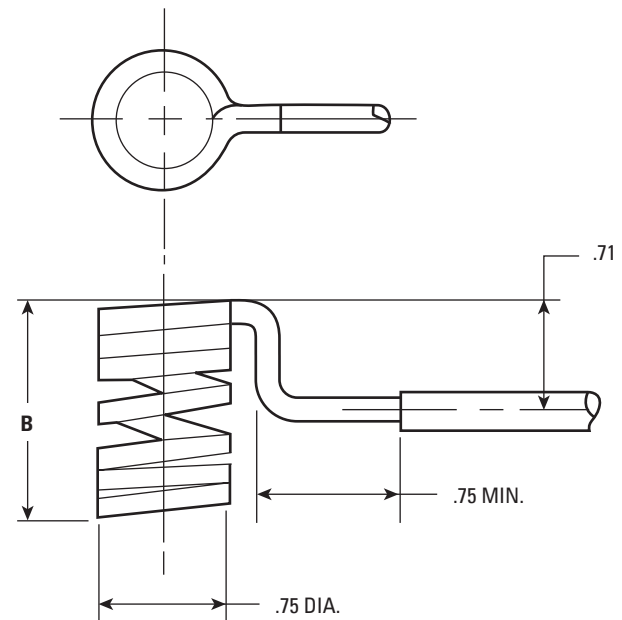
## Replacement Nozzle Locator Cores

(See drawing at left for A Dim. reference and detail)

ITEM NUMBER		A DIM.
R = 1/2	R = 3/4	
HNC46	HNC66	1.809
HNC47	HNC67	2.309

## Replacement Thermocouple (T/C) Square Coil Nozzle Locator Heaters

(240 VAC, 250 Watts, T/C type J grounded, 34" leads)



ITEM NO.	B DIM.	USED WITH
SSTC6290	1.450	HNC46 & HNC66 Cores
SSTC7290	1.950	HNC47 & HNC67 Cores

### WIRING INFORMATION

Power leads — BLACK OR MULTI-COLORED

T/C leads — RED & WHITE

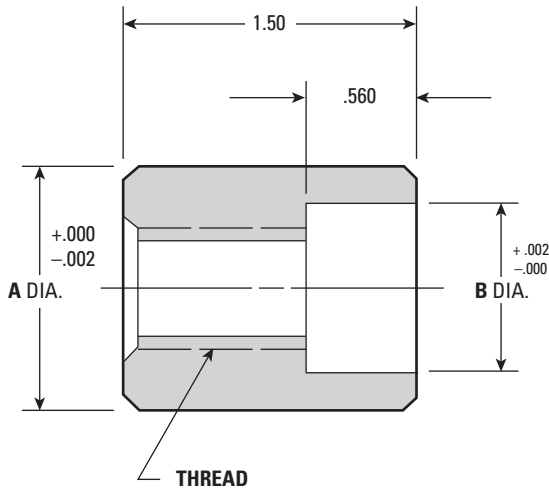
RED is negative (-)

WHITE is positive (+)

# End Caps, Nozzle Locators and Spacer

## End Caps

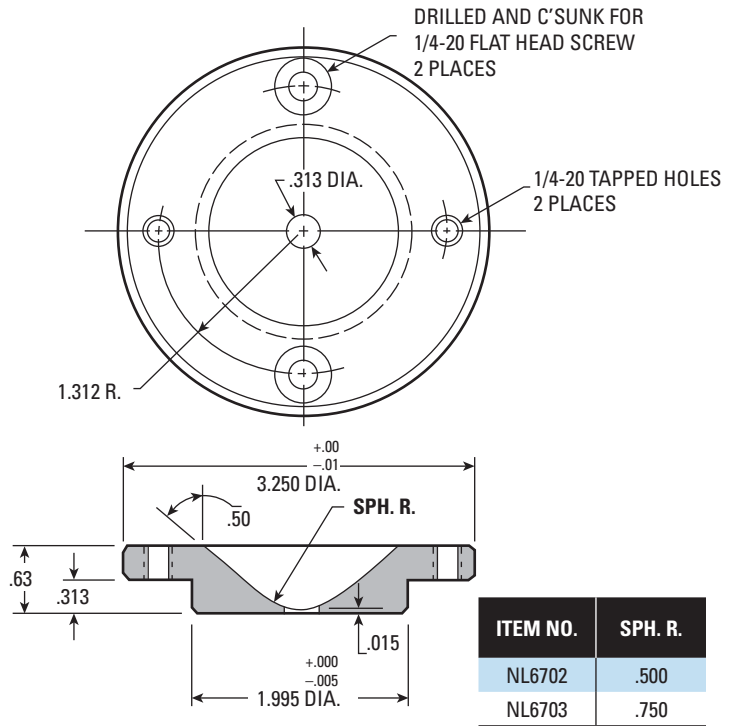
MATERIAL: AISI 4140 STEEL



ITEM NO.	A DIA.	B DIA.	THREAD	USED WITH
EC1207	1.249	.875	5/8"-11	1.250 DIST. BORE
EC2015	1.999	1.625	3/4"-10	2.000 DIST. BORE

## Nozzle Locators (Optional)

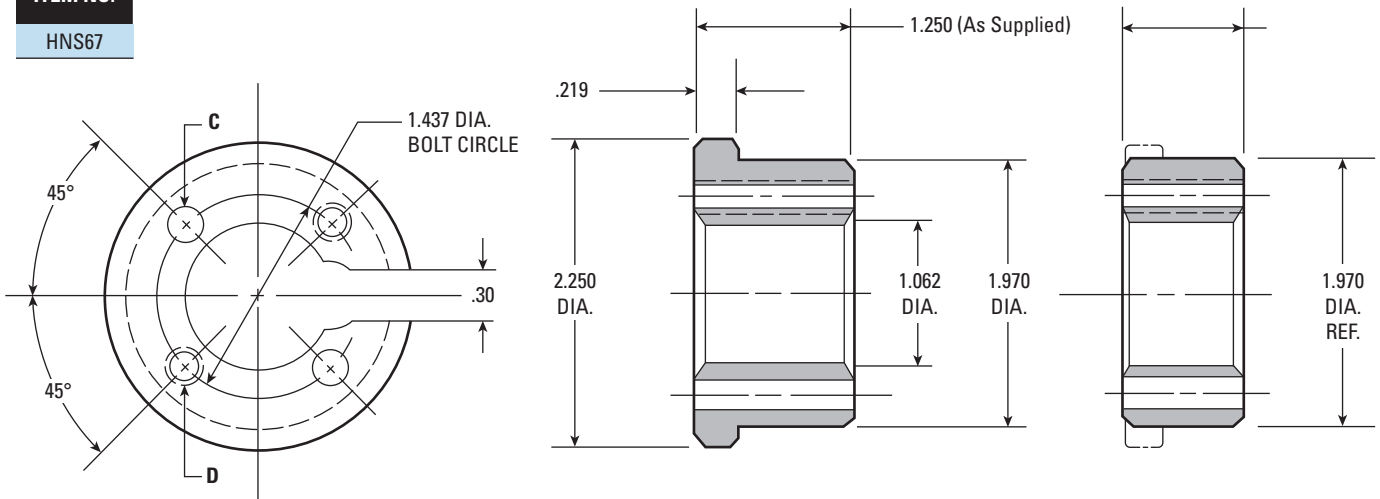
Heated Nozzle Locator is Recommended



ITEM NO.	SPH. R.
NL6702	.500
NL6703	.750

## Replacement Nozzle Locator Spacer

ITEM NO.
HNS67



C = .312 Dia. thru Hole (2 Places), Used with Bolt-Thru Style Application.  
 D = 1/4-20 Tapped Hole (2 Places), Used with Clamp Style Application.

**NOTE:** For bolt-thru style remove 2.250 dia. flange and adjust 1.250 height to suit application.

# Probes and Gate Insert Applications

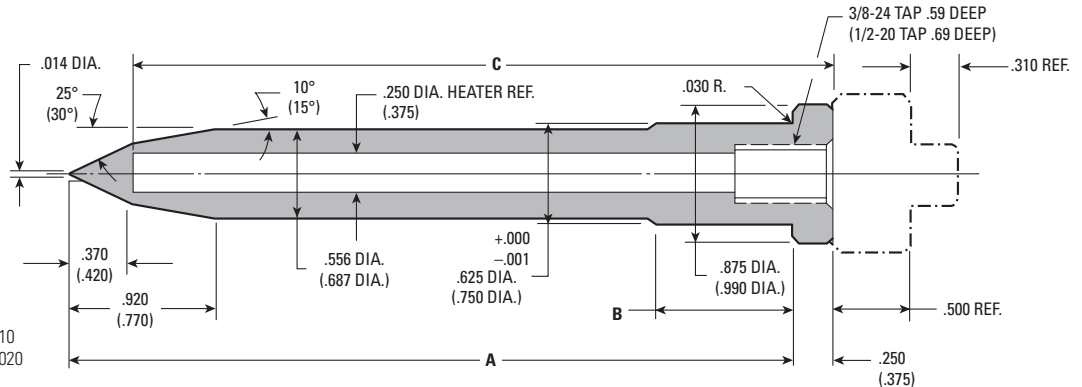
## Auto-fixed® Finless Probe (Item Nos. AFPN410, 510, and 610) (Item Nos. AFPN720, 820, 920, and 1020)

**MATERIAL:** AISI D-2 STEEL  
**HARDNESS:** 50-55 HRC

**Important:** Dimensions shown in parentheses apply to longer probes AFPN720 thru 1020 only. Tolerances shown also apply to dimensions in parentheses.

**Example:**

+ .000 ← FOR ALL PROBES  
- .001  
.625 DIA. ← FOR AFPN410 THRU 610  
(.750 DIA.) ← FOR AFPN720 THRU 1020

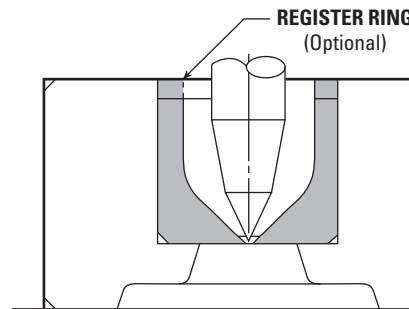
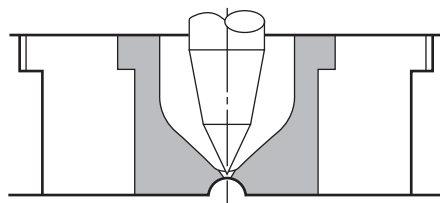


ITEM NO.	A DIM.	B DIM.	C DIM.	T/C HEATER NO.*
AFPN410	3.625	.875	3.470	AFTC2142
AFPN510	4.625	.875	4.470	AFTC2152
AFPN610	5.609	.875	5.450	AFTC2162

ITEM NO.	A DIM.	B DIM.	C DIM.	T/C HEATER NO.
AFPN720	7.000	1.500	6.925	AFTC3272
AFPN820	8.000	1.500	7.925	AFTC3282
AFPN920	9.000	1.500	8.925	AFTC3292
AFPN1020	10.000	1.500	9.925	AFTC32102

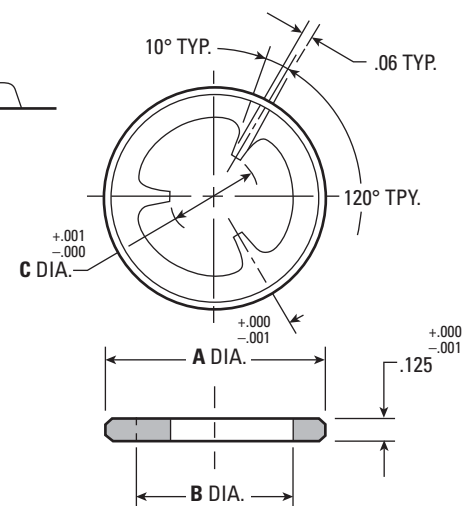
\*OMIT "T" From T/C Heater Number When Ordering Non-T/C Heaters.

## Gate Insert Applications



### REGISTER RINGS

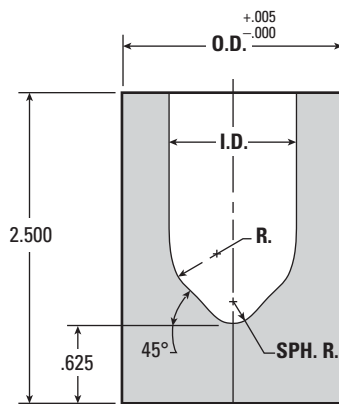
**MATERIAL:** AISI H-13 STEEL  
**HARDNESS:** 48-52 HRC



### GATE INSERTS (For Finless Probes)

**MATERIAL:** AISI S-7 STEEL (pre-hardened)  
**HARDNESS:** 30-34 HRC

Hardness can be increased to a higher value by heat treatment, if desired.



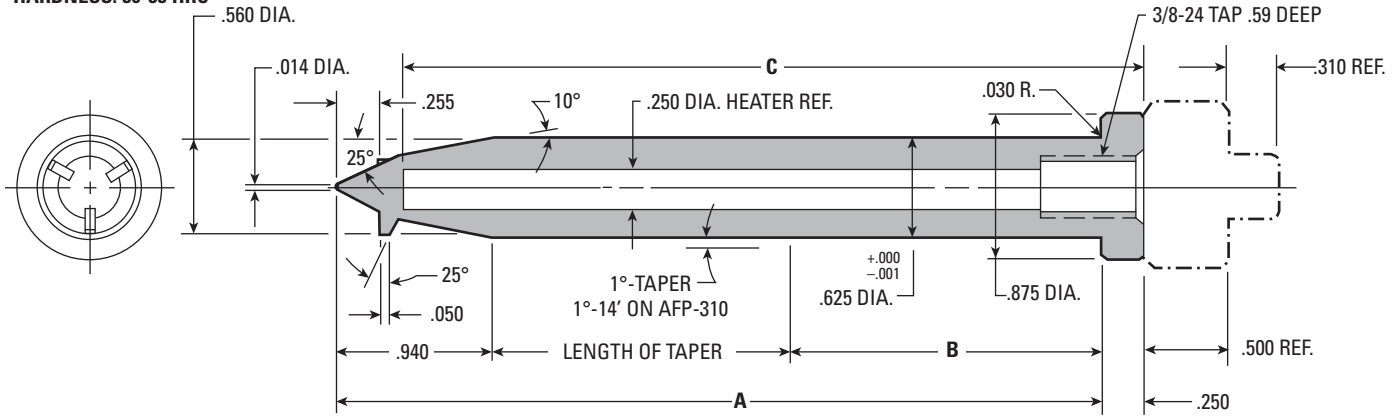
ITEM NO.	O.D.	I.D.	SPH. R.	R.	USED WITH
AFGI10N	1.750	1.000	.187	.375	AFPN410 THRU 610
AFGI20N	2.000	1.125	.250	.500	AFPN720 THRU 1020

ITEM NO.	A DIA.	B DIA.	C DIA.	USED WITH
AFRR10N	1.375	1.000	.562	AFPN410 THRU 610
AFRR20N	1.500	1.125	.693	AFPN720 THRU 1020

# Probes and Gate Insert Applications

## Auto-fixed® Probe (Item Nos. AFP410, 510, and 610)

MATERIAL: AISI D-2 STEEL  
HARDNESS: 50-55 HRC



ITEM NO.	A DIM.	B DIM.	C DIM.	T/C HEATER NO.*
AFP410	3.625	.890	3.470	AFTC2142
AFP510	4.625	1.890	4.470	AFTC2152
AFP610	5.609	2.900	5.450	AFTC2162

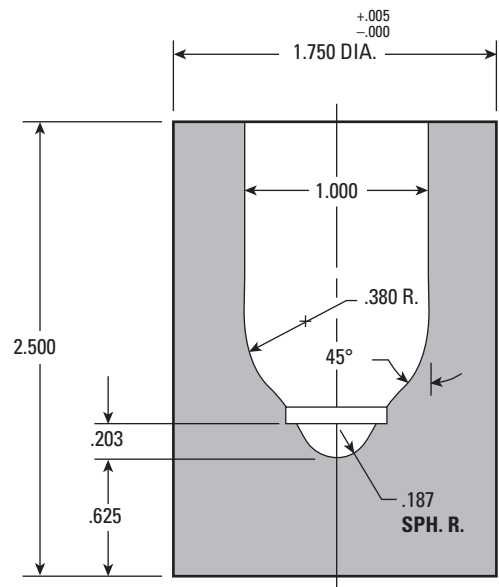
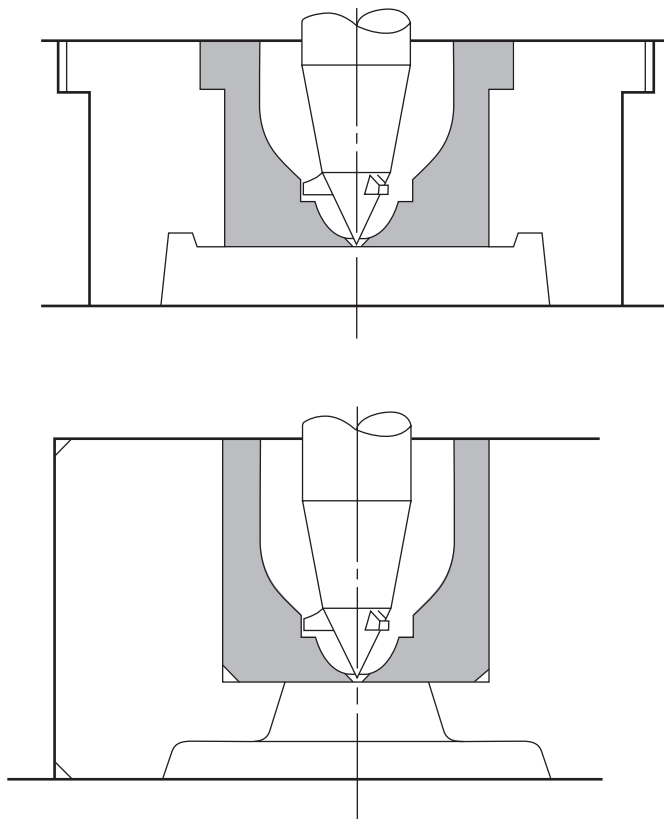
\*OMIT "T" From T/C Heater Number When Ordering Non-T/C Heaters.

## Gate Insert Applications

### GATE INSERTS (ITEM NO. AFG110)

MATERIAL: AISI S-7 STEEL (pre-hardened)  
HARDNESS: 30-34 HRC

Hardness can be increased to a higher value by heat treatment, if desired.

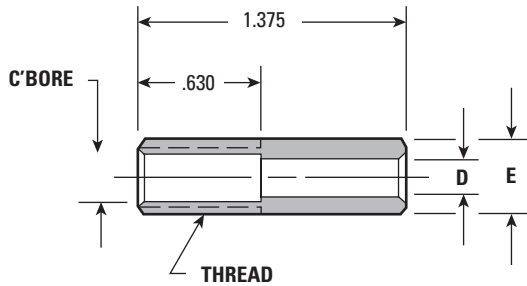


ITEM NO.	O.D.	USED WITH
AFG110	1.750	AFP410 THRU 610

# Probe Heaters and Components

## Stop Sleeves

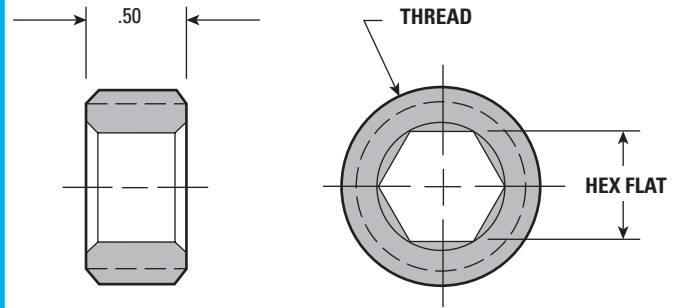
Packaged with all Probes



ITEM NO.	D	E	C'BORE	THREAD	USED WITH
AFSS38	.187	.375	.265 DIA.	3/8"-24	AFP(N)410 THRU 610
AFSS12	.300	.500	.390 DIA.	1/2"-20	AFPN720 THRU 1020

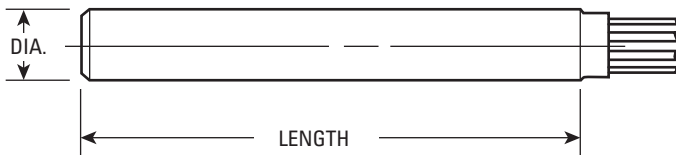
## Hold-Down Nuts

Packaged with all Probes



ITEM NO.	THREAD	HEX FLAT	USED WITH
AFN100	1"-8	9/16	AFP(N)410 THRU 610
AFN125	1 1/4"-12	5/8	AFPN720 THRU 1020

## Thermocouple (T/C) Probe Heaters



### WIRING INFORMATION

Power leads — BLACK OR MULTI-COLORED

T/C leads — RED & WHITE

RED is negative (-)

WHITE is positive (+)

### .250 DIA.

(240 VAC, T/C type J grounded, 34" leads)

ITEM NUMBER*	FOR PROBE	WATTS	LENGTH
AFTC2142	AFP(N)410	220	3.75
AFTC2152	AFP(N)510	275	4.75
AFTC2162	AFP(N)610	350	5.75

\*OMIT "T" From T/C Heater Number When Ordering Non-T/C Heaters.

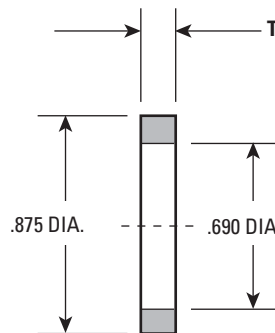
### .375 DIA.

(240 VAC, T/C type J grounded, 48" leads)

ITEM NUMBER	FOR PROBE	WATTS	LENGTH
AFTC3272	AFPN720	645	7.15
AFTC3282	AFPN820	760	8.15
AFTC3292	AFPN920	870	9.15
AFTC32102	AFPN1020	980	10.15

## Adjustment Rings

For AFP(N)410 Thru 610

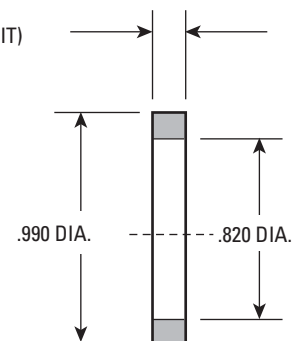


ITEM NUMBER	T DIM.
RAF002	.002
RAF003	.003
RAF005	.005
RAF007	.007
RAF032	.032
RAF062	.062
RAF125	.125

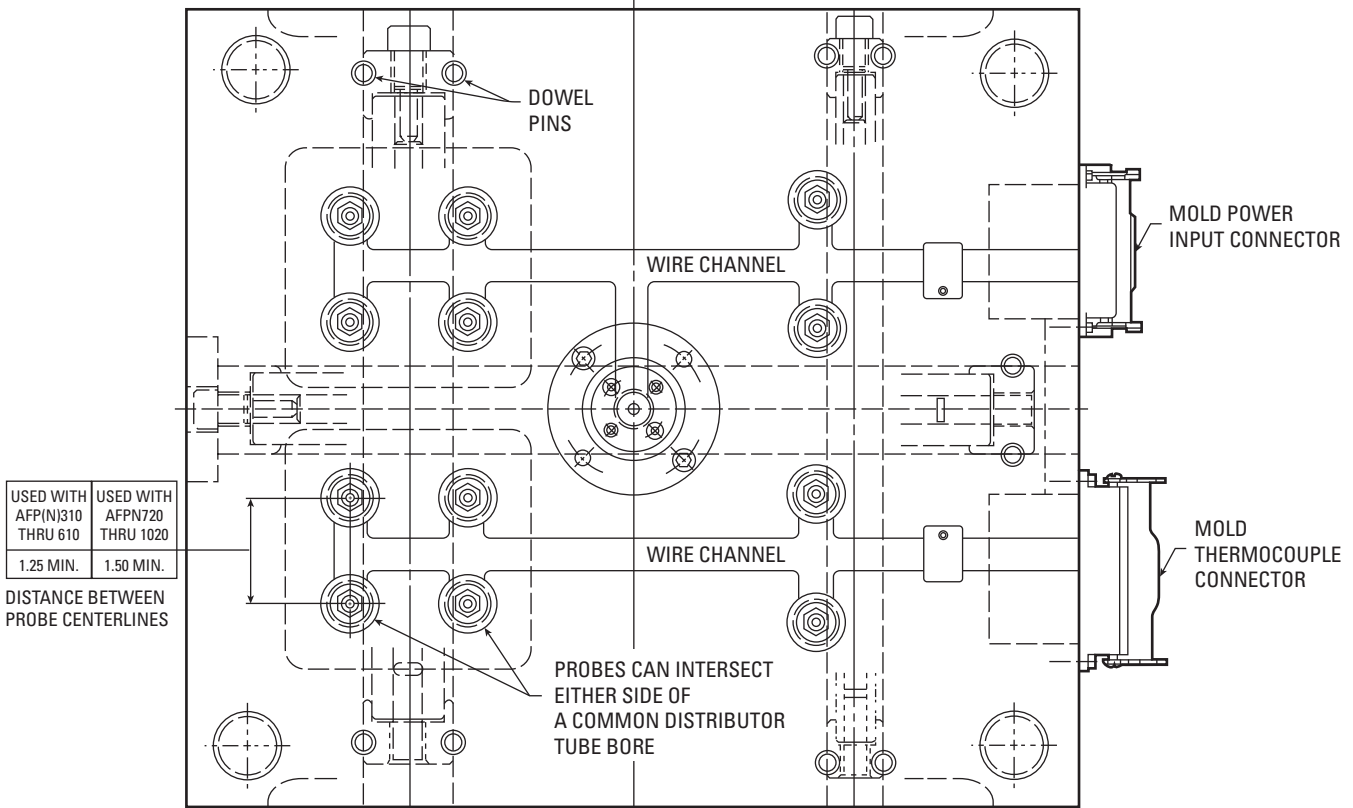
For AFP(N)720 Thru 1020

**MOLDMAKER TO SUPPLY TO SUIT:**

(MOLDMAKER TO SUIT)



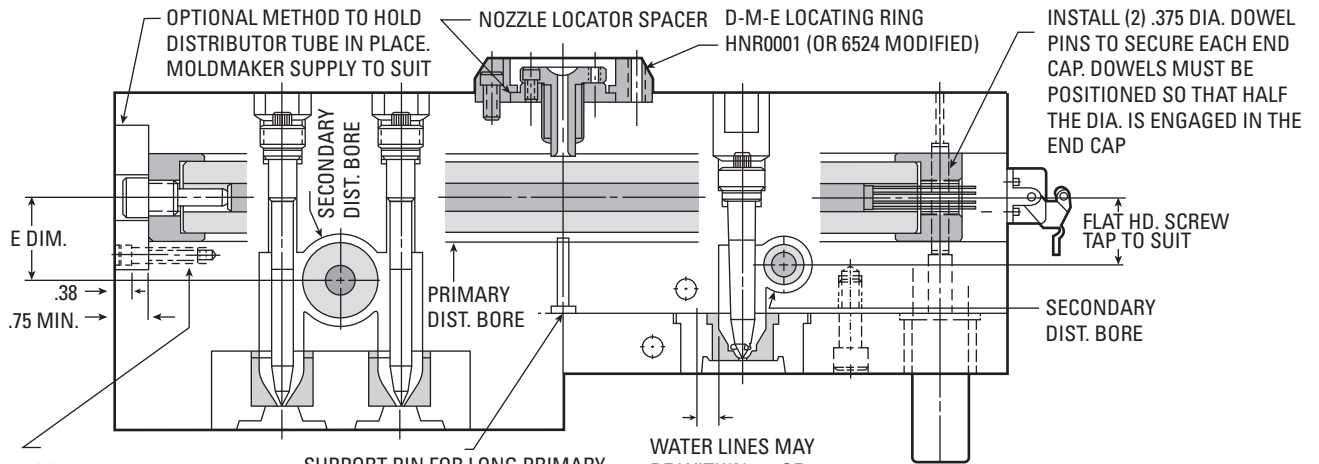
# Solid Distributor Block Design and Machining Guidelines



USED WITH AFP(N)310 THRU 610	USED WITH AFP(N)720 THRU 1020
1.25 MIN.	1.50 MIN.

DISTANCE BETWEEN  
PROBE CENTERLINES

TOP OF MOLD



USE (4) 3/8-16 HARDENED SOCKET HEAD CAP SCREWS. THREAD 1.00 INTO MOLD. TORQUE EVENLY TO 25-30 FT. LBS.

SUPPORT PIN FOR LONG PRIMARY DISTRIBUTOR TUBES. ALLOW 0.005 TO 0.010" PIN-TO-TUBE CLEARANCE. (.250 MINIMUM PIN DIA.)

INSTALL (2) .375 DIA. DOWEL PINS TO SECURE EACH END CAP. DOWELS MUST BE POSITIONED SO THAT HALF THE DIA. IS ENGAGED IN THE END CAP

### INTERSECTIONS BETWEEN DISTRIBUTOR BORES

PRIMARY DIST. BORE	SECONDARY DIST. BORE	E DIM. (± .020)
2.00	2.00	1.705
2.00	1.25	1.330
*1.25	1.25	.955

\*The 2.00" distributor bore with 1.625 dia. tube is recommended.

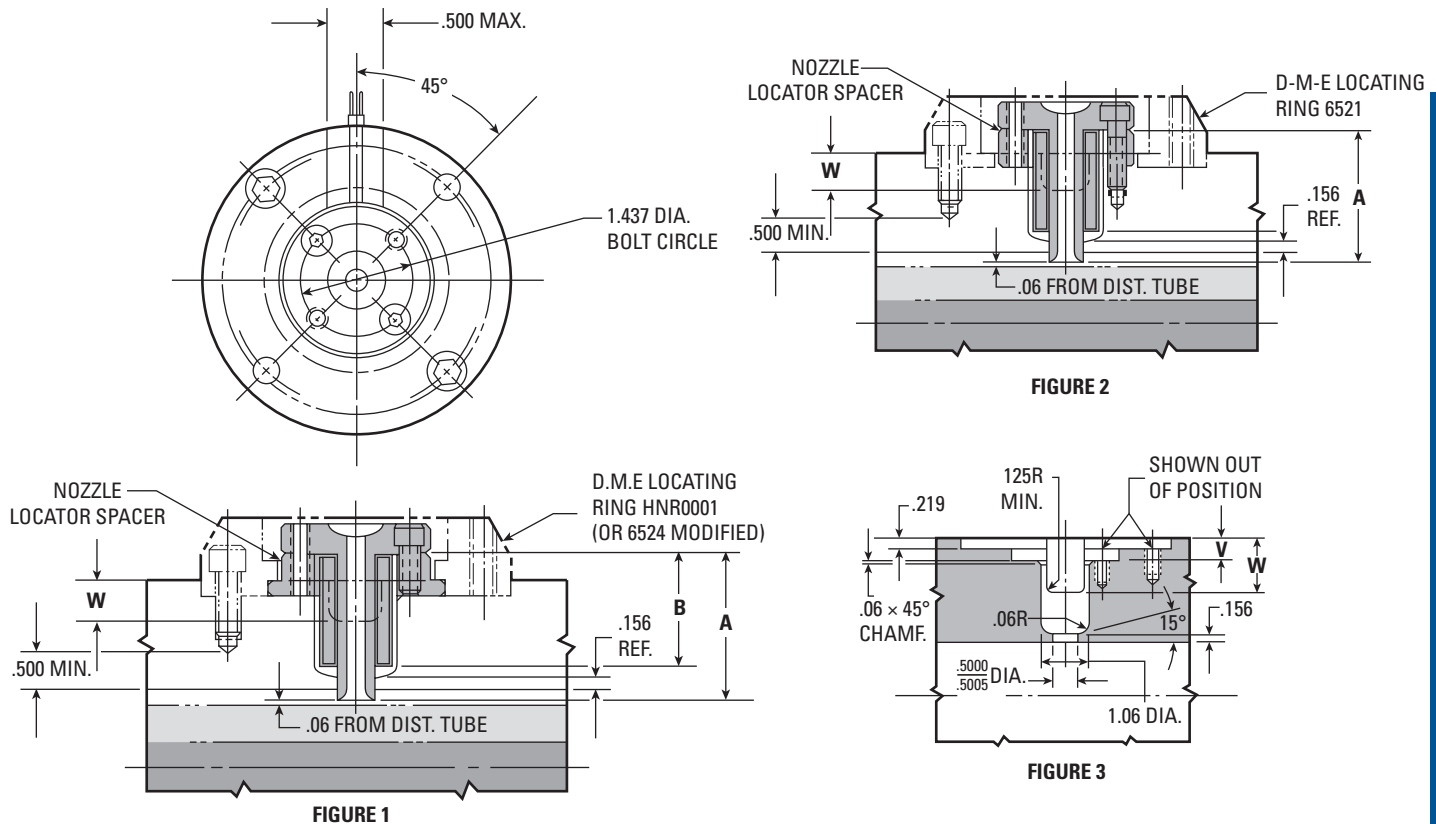
NOTE: Finned and finless probes shown together for illustration purposes only.

DME #3 STEEL IS RECOMMENDED FOR DISTRIBUTOR PLATES.



# Solid Distributor Block Design and Machining Guidelines

## Heated Nozzle Locator



### ALL APPLICATIONS

The locator's core tip should be positioned 0.060 from the top of the distributor tube, establishing the "A" dimension. In most cases, the dimension from the bottom of the core head to the locating ring counterbore will equal the adjusted height of the spacer. (The "B" dimension, for reference, is the heater length of 1.450 or 1.950, depending on core length being used.)

### CLAMP STYLE SPACER APPLICATION (Figure 1)

The spacer is supplied with a flange and a 1.250 height. The flange may be used in conjunction with a DME HNR0001 or modified 6524 locating ring to form a clamp-style spacer. To modify the locating ring, enlarge its 2.00 diameter counterbore to 2.281 (0.219 deep) and its 1.75 I.D. to 2.00. The core is secured to the spacer with two 1/4-20 S.H.C.S.

### BOLT THRU STYLE SPACER APPLICATION (Figure 2)

Another option is to remove the flange and adjust the spacer height to the desired dimension, then secure the Heated Nozzle Locator through the spacer with two 1/4-20 S.H.C.S.

into the mold plate. Use caution to insure that the tapped holes are 0.500 minimum from the distributor channel.

Spacer thickness should never be less than 0.250. However, if a condition results where the spacer would be less than 0.250, counterbore a 2.00 diameter into the plate to a "V" depth that will accept the 0.250 spacer (see Figure 3).

### ALL APPLICATIONS

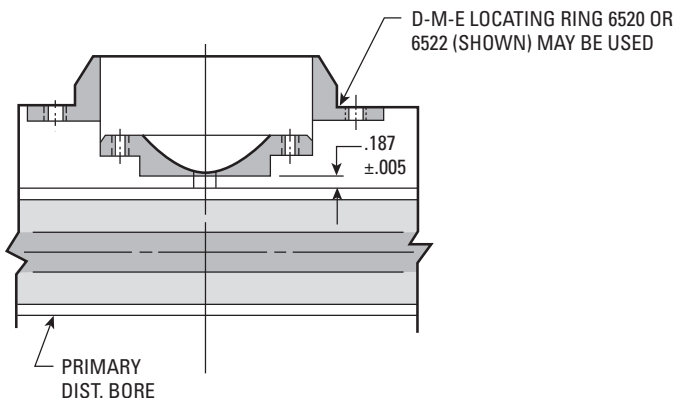
In order to maintain plate strength, the depth of the lead wire channel, dimension "W", must be no deeper than required to contain the heater leads. The distance from the bottom of the core head to the bottom of the heater leads is 0.800. Channel depth can be determined accordingly, based on the distance between the core head and the top of the mold.

If a condition occurs where the Heated Nozzle Locator would extend above the standard locating ring, a special locating ring with extended flange for protecting the Heated Nozzle Locator should be constructed.

# Solid Distributor Block Design and Machining Guidelines

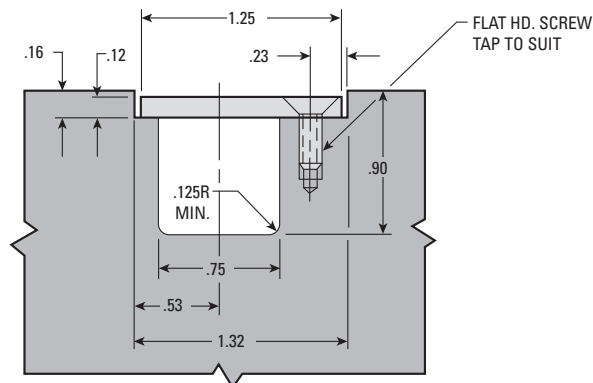
## Nozzle Locator (Optional)

HEATED NOZZLE LOCATOR IS RECOMMENDED

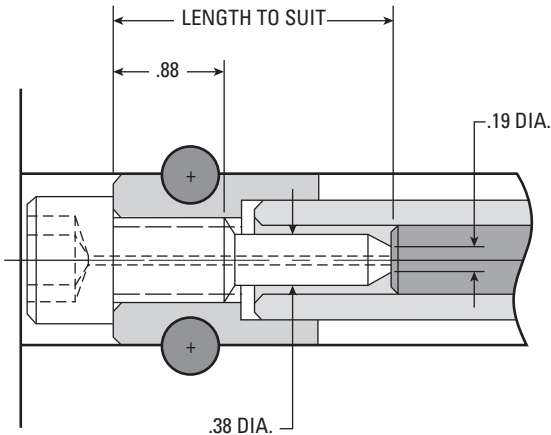


## Recommended Wire Channels and Strap

Break all sharp corners to prevent damage to heater lead wires. Moldmaker to supply to suit.



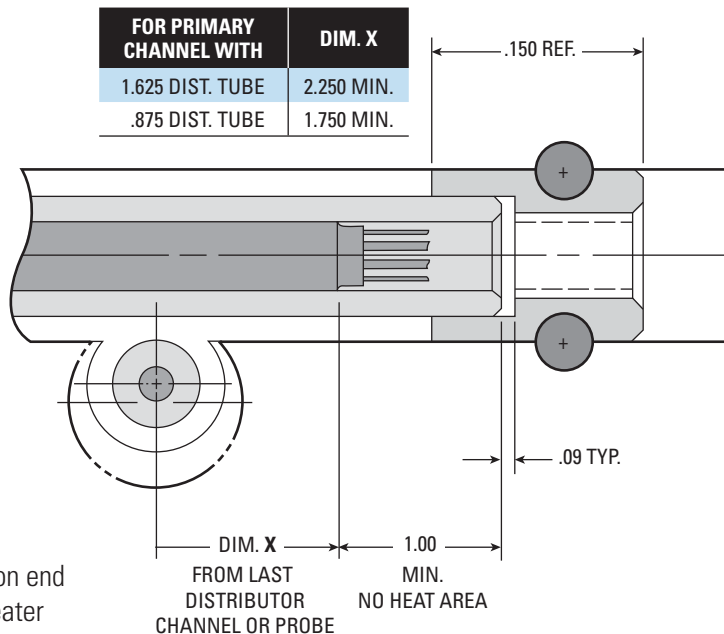
## Recommended Relationship Between Thermocouple (T/C) Distributor Tube Heaters, Distributor Tubes and Intersecting Tubes or Probes



**NOTE:** Dimensions apply to both ends.

### T/C DISTRIBUTOR TUBE HEATER STOP

A 5/8-11 or 3/4-10 socket head cap screw (thread based on end cap being used) is recommended to serve as a positive heater stop. One stop is required for each T/C distributor tube heater. Moldmaker supply to suit.



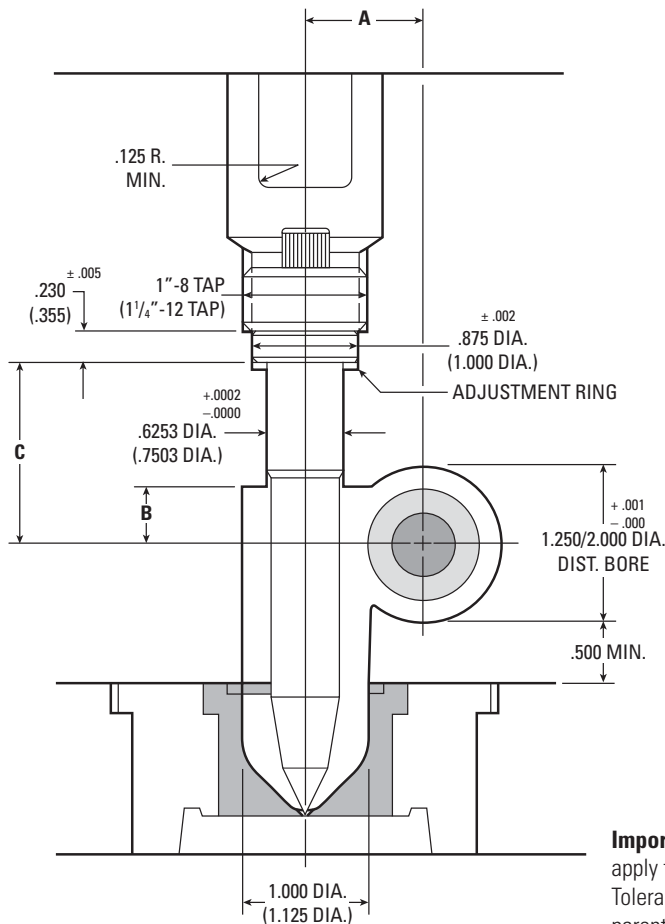
The design guidelines in this document serve as production-proven recommendations of the DME Hot Runner System, and are ONLY applicable to the current line of DME components. The guidelines and component details in this document supersede all previous documents. Due to the wide variety of plastics materials and possible molding applications available, no warranties are expressed or implied.

DME Hot Runner System Components are manufactured and sold under one or more of the following U.S. patents: 3,767,340; 3,010,155; 3,023,458; 3,231,938 and 3,758,248. Foreign patents issued and pending.

# Solid Distributor Block Machining Guidelines

## Auto-Fixed® Finless Probes (AFPN410 thru 610)

### Probe Machining Dimensions



USED WITH .875 DIA. DISTRIBUTOR TUBE  
(1.25 DIST. BORE)

PROBE ITEM NO.	A DIM. ± .020	B DIM. MIN.	C DIM. MIN.
AFPN410	.796	.500	1.375
AFPN510	.796	.500	1.375
AFPN610	.796	.500	1.375
AFPN720	.861	.750	2.250
AFPN820	.861	.750	2.250
AFPN920	.861	.750	2.250
AFPN1020	.861	.750	2.250

USED WITH 1.625 DIA. DISTRIBUTOR TUBE  
(2.00 DIST. BORE)

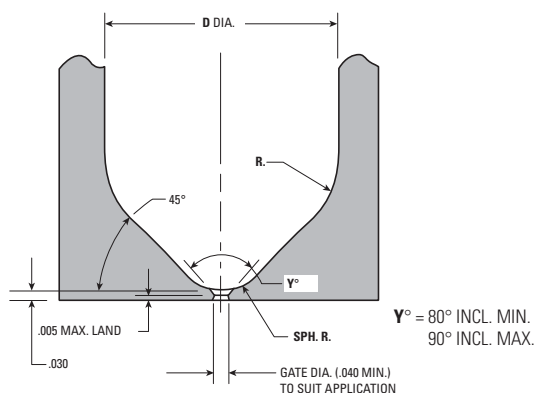
PROBE ITEM NO.	A DIM. ± .020	B DIM. MIN.	C DIM. MIN.
AFPN410	1.171	.500	1.375
AFPN510	1.171	.500	1.375
AFPN610	1.171	.500	1.375
AFPN720	1.236	.750	2.250
AFPN820	1.236	.750	2.250
AFPN920	1.236	.750	2.250
AFPN1020	1.236	.750	2.250

**Important:** Dimensions shown in parentheses apply to longer probes AFPN720 thru 1020 only. Tolerances shown also apply to dimensions in parentheses.

**Example:**

± .002 ← FOR ALL PROBES  
.875 DIA. ← FOR AFPN410 THRU 610  
1.000 DIA. ← FOR AFPN720 THRU 1020

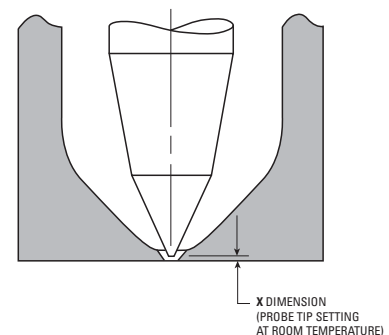
### Gate Machining Dimensions



PROBE ITEM NO.	D DIA.	SPH. R	R
AFPN410 THRU 610	1.000	.187	.38
AFPN720 THRU 1020	1.125	.250	.50

### Initial Probe Set-up Dimensions

PROBE ITEM NO.	X DIM.
AFPN410	.000-.004
AFPN510	.000-.005
AFPN610	.000-.006
AFPN720	.000-.007
AFPN820	.000-.008
AFPN920	.000-.009
AFPN1020	.000-.010



**NOTE:** X dimension is for initial probe set-up and may require further adjustment. Final position of probe tip will be determined by gate cosmetics and flow requirements.

# Solid Distributor Block Machining Guidelines

## Auto-Fixed® Probes (AFP410 thru 610)

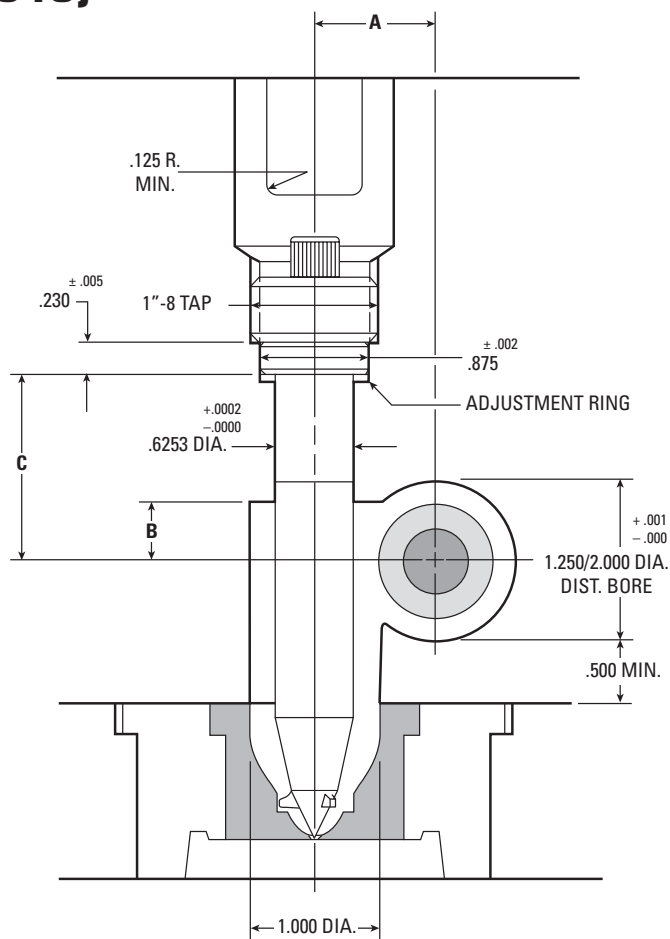
### Probe Machining Dimensions

USED WITH .875 DIA. DISTRIBUTOR TUBE  
(1.25 DIST. BORE)

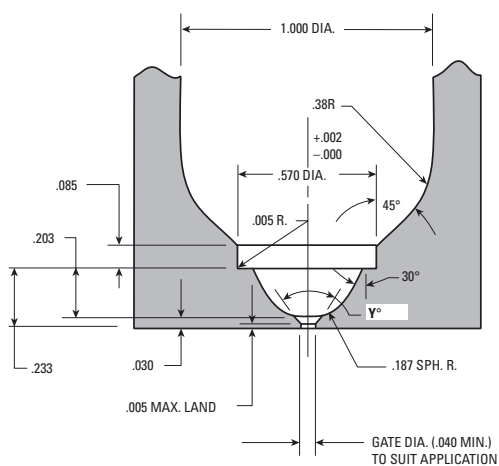
PROBE ITEM NO.	A DIM. ± .020	B DIM. MIN.	C DIM. MIN.
AFP410	.830	.500	1.375
AFP510	.830	.500	1.375
AFP610	.830	.500	1.375

USED WITH 1.625 DIA. DISTRIBUTOR TUBE  
(2.00 DIST. BORE)

PROBE ITEM NO.	A DIM. ± .020	B DIM. MIN.	C DIM. MIN.
AFP410	1.205	.500	1.375
AFP510	1.205	.500	1.375
AFP610	1.205	.500	1.375

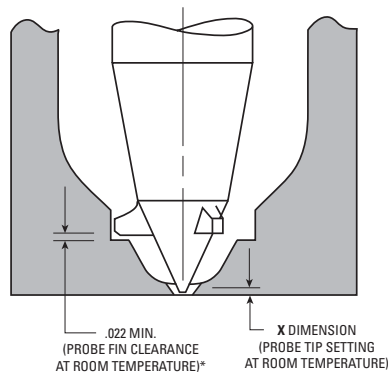


### Gate Machining Dimensions



Y° = 80° INCL. MIN.  
90° INCL. MAX.

### Initial Probe Set-up Dimensions



PROBE ITEM NO.	X DIM.
AFP410	.000-.004
AFP510	.000-.005
AFP610	.000-.006

\*Some clearance must also be maintained at operating temperature (i.e. no metal to metal contact between fin and counterbore).

**NOTE:** X dimension is for initial probe set-up and may require further adjustment. Final position of probe tip will be determined by gate cosmetics and flow requirements.