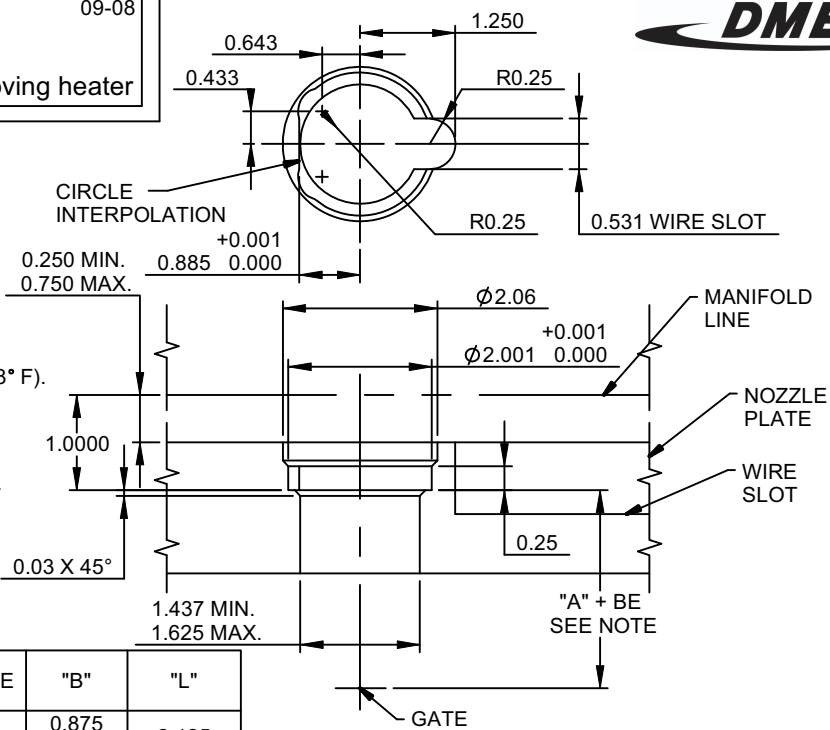




Note: Dimensions are shown in inches.



NOTE: The expansion factor must be taken into consideration prior to machining for and installing nozzle. This factor (BE) must then be added to the nominal "A" dimension.

Formula for determining this expansion is as follows:

$$BE = "A" \text{ dimension} \times 0.0000633 \times (\text{nozzle setpoint} - 68^\circ \text{ F}).$$

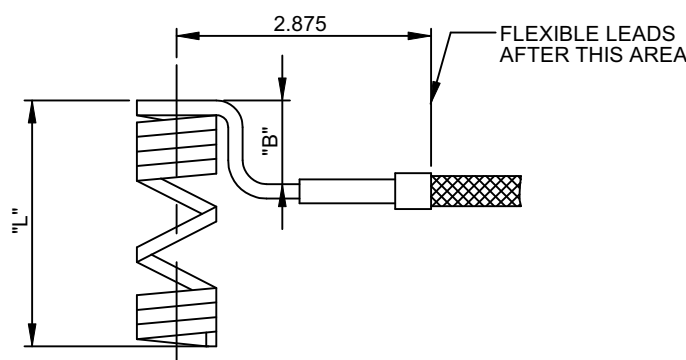
EXAMPLE: Given a 2.500 Inch "A" dimension, with a nozzle setpoint temperature of 500° F.

$$BE = 2.500 \times 0.0000633 \times (500 - 68) = 0.0068...$$

thus "A" + BE will be 2.5068.

Please note that the above information is given as an example. Variations may occur based on mold configuration and cooling factor. In some instances it may be necessary to obtain an empirical factor.

"A"	SUB-ASS'Y CAT.NO.	NOZZLE BODY CAT.NO.	HEATER CAT.NO.	WATTAGE	"B"	"L"
2.000	EHA1008	CIB1366	SCH1088	400	0.875	2.125
	EHA2008		SCH2088		1.375	
2.500	EHA1009	CIB1367	SCH1089	450	0.875	2.625
	EHA2009		SCH2089		1.375	
3.000	EHA1010	CIB1368	SCH1090	550	0.875	3.125
	EHA2010		SCH2090		1.375	
3.500	EHA1011	CIB1369	SCH1091	700	0.875	3.625
	EHA2011		SCH2091		1.375	
4.000	EHA1012	CIB1370	SCH1092	800	0.875	4.125
	EHA2012		SCH2092		1.375	
5.000	EHA1013	CIB1371	SCH1093	900	0.875	5.125
	EHA2013		SCH2093		1.375	
6.000	EHA1014	CIB1372	SCH1094	1000	0.875	6.125
	EHA2014		SCH2094		1.375	
7.000	EHA1015	CIB1373	SCH1095	1100	0.875	7.125
	EHA2015		SCH2095		1.375	



OPERATING PROCEDURE

The nozzles are supplied with a Square (Flat) Coil Heater equipped with Type J thermocouple. It is recommended to use a D-M-E closed loop Temperature Controller for optimum Temperature Control.

When starting the nozzle, set the temperature to 10% voltage if using in open loop manual type or to 200 °F if using closed loop automatic type. In either case this procedure will allow the heater to dissipate any moisture.

Be certain to maintain this start-up setting for 15 minutes.

Controller equipped with Step Smart ®, Smart Step ®

or other heater warm-up circuitry will change automatically.

It is essential to use controllers with the proper voltage and wattage capabilities.

The voltage and wattage of each heater is clearly marked on the heater tag.

5. Seal ring for nozzle body must be replaced each time nozzle body and / or manifold are removed to ensure seal-off.

6. Wait a minimum of 5 minutes after set point has been achieved for sufficient heat to transfer into the tip before molding.

IMPORTANT SAFETY INFORMATION

A hot-runner system includes electrical elements and may contain molten plastic at elevated temperature and pressure. To avoid injury, exercise caution by reading these instructions before servicing or operating the system.

These instructions must be passed on to the end user where they should be read before using this product. Failure to do so can result in serious injury or death.



Failure to comply will result in serious injury or death:

ELECTRICAL HAZARDS

Improper voltages or grounding can result in electrical shock. Use only with proper voltage and a proper earth ground.

To avoid electrical shock, do not operate product when wet.

Do not operate this equipment with covers or panels removed.

To avoid electrical shock, turn off main power disconnect and lockout / tag out before servicing this device. Do not connect temperature sensors to electrical power. It will damage the product and it could cause fire, severe injuries or even death.

If green ground wire present wire must be connected to the ground.

Do not rebend rigid leads. Rebending leads might result in damage to circuit.

Product might absorb moisture when cool. Use low Voltage or power to drive out residual moisture before applying full power. Failure to do so may cause damage to this product.



Failure to comply can result in serious injury or death:

STORED ENERGY AND HIGH TEMPERATURE HAZARDS

This product maintains molten plastic at high pressure. Use caution when operating and servicing the system.

Physical contact with molten plastic may result in severe burns. Proper protective equipment, including eye protection, must be worn.

This product has heated surfaces. Use caution when operating and servicing the system to avoid severe burns. Proper protective equipment should be worn.

Step Smart ®, Smart Start ® and DME ® are all registered trademarks of DME Company.

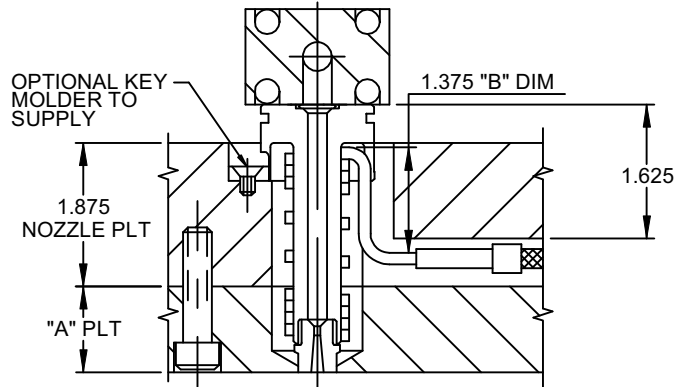
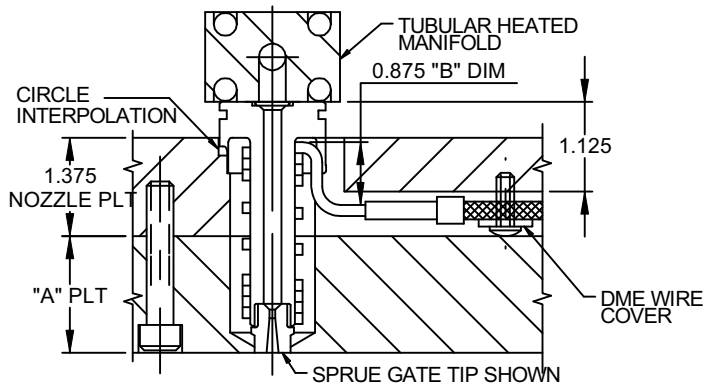
DISASSEMBLY PROCEDURE

- Nozzle has been designed to have the tip removed in the press. See recommendations and guidelines Note # 2 for keying nozzle to keep from rotating.
- Careful attention should be taken to the heater / thermocouple leads as damage could occur when working on nozzle assembly.
- For removal of tip from nozzle, a six point deep well socket is recommended. The nozzle must be at processing temperature and the heater should be turned off when removing tip counter-clockwise from the nozzle.
- For removal of heater recommendations and guidelines Note # 4.

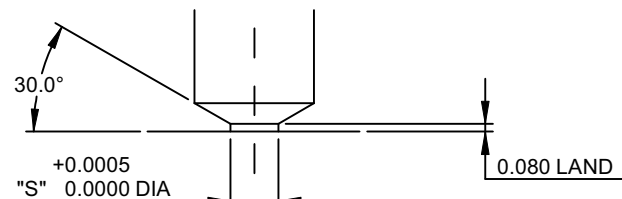
ASSEMBLY PROCEDURE

- Tip and nozzle threaded area must be clean of any material before reassembling.
- Apply an anti-seize compound on the tip threads.
- Firmly screw the tip into the shank of the nozzle body. Tighten and untighten two or three times making sure there is a good contact between the tip and the nozzle. Torque the tip into the nozzle using 30 ± 5 ft-lbs. For protection of the tip, a six point deep well socket is recommended.
- For removal of heater recommendations and guidelines Note # 4.

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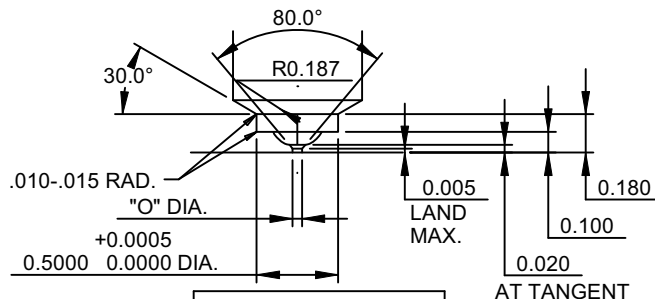


SPRUE AND RING GATE MACHINING DIMENSIONS



"T" DIA.	"S" DIA.
.500	.5005
.750	.7505
1.000	1.0005

POINT GATE MACHINING DIMENSIONS



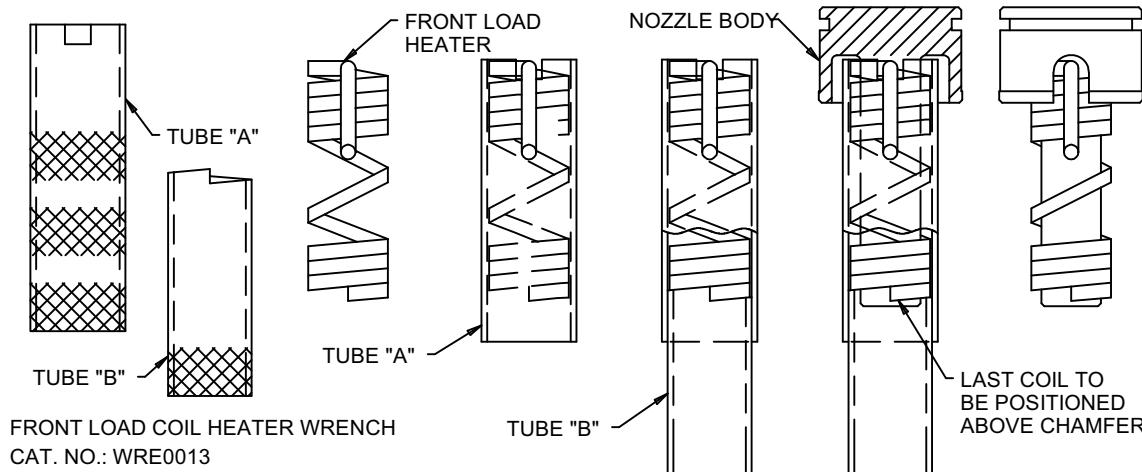
"O" DIA.	
UNFILLED RESIN	FILLED RESIN
.028 MIN.	.060 MIN.

For selection of tips and gate diameters it is important to take into consideration the materials flow characteristic, shear rate of resin, molding conditions, fill time requirements, gate vestige, wall thickness and configuration of part to be molded. Situations requiring high injections velocities must be considered when selecting small gate diameters. High injection rates may require larger gates due to shear heat build up (e.g. high weight thin wall applications). See material manufactures literature for further information regarding material to be molded.

RECOMMENDATIONS AND GUIDELINES

1. Front Load Coil Heaters are designed to be used with 375 Series Nozzles.
2. The nozzle head must be held in such a manner to keep it from rotating upon installation of the Front Load Heater. This may be done by making a key for the head to match the flat on the nozzle's head or by circle interpolation.
3. Nozzle plate must be designed so that the heads of the socket head cap screws are exposed when the mold is split on the on the parting line.
4. After the nozzle has been located and positioned in the nozzle plate with manifold secured in place and "A" plate removed, the heater can be installed on the nozzle body as follows:
 - a. Place heater within Tube "A" so that the bending exit lead lies within the slot of the tube.

- b. Insert Tube "B" with angle cut within Tube "A" so that the angle of the tube mates with the last coil of the heater.
 - c. Rotate Tube "A" counterclockwise while at the same time rotate Tube "B" clockwise. This action will spring open the coils enough to slide the heater onto the shaft of the nozzle body.
 - d. Slide the heater onto the nozzle body shaft aligning the heater exit lead within the relief slot in the nozzle's head.
 - e. Position heater so that the end of the last coil is above the chamfer.
5. The power and thermocouple leads may be spliced in the wiring channel for ease of heater replacement. Leads may be spliced using Thomas & Betts nylon insulated disconnects.
 Male Cat. No.: 18RA-251T
 Female Cat. No.: 18RA-2577
 6. Secure wires in wire channel with D-M-E Wire Covers before assembling "A" plate to mold.



WIRING INFORMATION

Square Coil Heaters are supplied with 2' prestripped 36" long leads. Heaters are 240 VAC. 2 power leads are Multi Color. 1 ground lead is GREEN. Thermocouple is "J" Type. Thermocouple is supplied with 36" leads. 1 T/C lead is WHITE and negative (-) constantan (non-magnetic). 1 T/C lead is BLACK and positive (+) iron (magnetic).

D-M-E COMPANY

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