

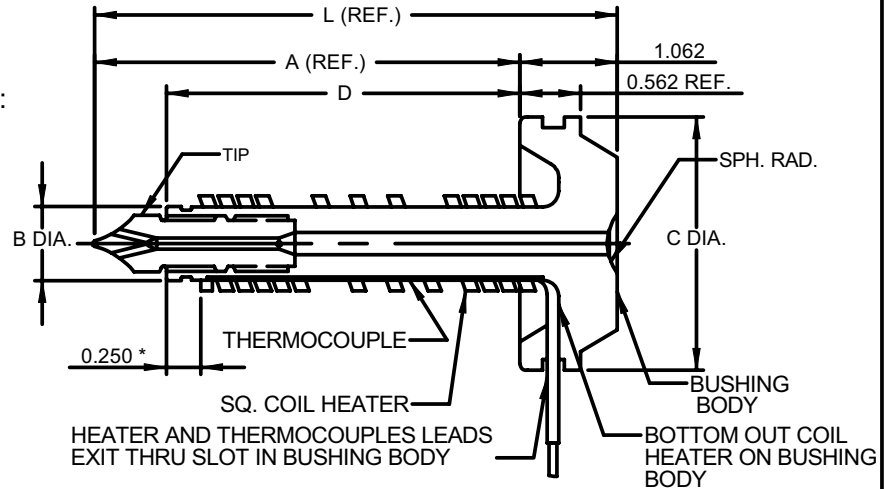
**GATE-MATE BUSHING ASSEMBLIES
INSTALLATION DATA**

Please read carefully before installing components.

MEDIUM AND JUMBO GATE-MATE ASSEMBLY

MEDIUM AND JUMBO GATE-MATE BUSHING ASSEMBLIES INCLUDES:

- 1 - BUSHING BODY
- 1 - TIP
- 1 - SQ. COIL HEATER
- 1 - THERMOCOUPLE



* DIMENSION INDICATES CORRECT HEATER DISTANCE.
Note: Dimensions shown in Inches.

L DIM.	A DIM.	B DIA.	C DIA.	D DIM.	SPH. RAD.	BUSHING STYLE	ASSEMBLY REFERENCE	SQ. COIL HEATERS (240 VAC)		THERMOCOUPLES (40" LEADS)		TIPS	
								CAT. NO	WATTS	CAT. NO	CAT. NO	STYLE	
4.562	3.500	1.2500	2.625	2.645	1/2 & 3/4	JUMBO	GMB0009	SCH0001	800	TC0001	GMT0004	STANDARD	
3.562	2.500			1.645			GMB0008	SCH0002	600	TC0002			
4.437	3.375	0.7500	2.156	2.645	1/2 & 3/4	MEDIUM	GMB-533-2	SCH3242	315	TC-9700	GMT-2	STANDARD	
3.437	2.375			1.645			GMB-523-2	SCH3142	315	TC-9600			

SQ. COIL HEATER INCLUDES INSTALLATION/REMOVAL WRENCH

RECOMMENDATIONS AND GUIDELINES

1. Bushing (single-application) body must be cleaned of any material in the seal-off area and threaded areas before reassembling.
2. Careful attention should be taken to the tip as damage could occur if tip is dropped or strikes a rigid material. Treat tip like a glass or ceramic material.
3. Do NOT lubricate or use anti-seize compound on the threads.
4. Tip must be torqued into the bushing using a torque wrench at 35 ft-lbs when reassembling. For protection of the tip point, use a 11 mm deep well 6 point socket for Medium, and 17 mm deep well 6 point socket for Jumbo.
5. Careful attention should be taken to the heater and thermocouple leads as damage could occur when working on bushing assembly.
6. Machine the "C" diameter directly into the mold to fit the bushing's head.
7. Machine the "B" diameter + 0.0005 -0.0000 directly into the cavity carefully, as this is a seal-off dimension to fit the bushing's seat.
8. For best processing and lowest gate vestige, tip must be 0.000 to 0.005 into the cavity at processing temperature. The smallest gate diameter will yield the best gate vestige. Depending on part configuration and plastic being used, the gate may have to be enlarged to achieve greater flow. This increase in diameter may result in a larger gate vestige.
9. Provide maximum water cooling in the cavity insert around gate.
10. Constrain bushing in the mold by clamping with the appropriate D-M-E locating ring. Locating rings are supplied with additional stock allowing for machining to suit application.
11. When bushing must be recessed deeper than the "W" dimension, alter the "W" and the 0.219 dimension to suit the application.
12. Route wires through wire channel in clamping plate. In the event that the bushing would extend beyond the clamping plate, add another plate to the clamp plate and route wires through that plate. A wire slot may be machined into the locating ring.
13. Provide a gate dimple on core/cavity opposite gate. This will allow for best material flow.
14. Wait a minimum of 5 minutes after set point has been achieved for sufficient heat to transfer into the tip before molding.

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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.

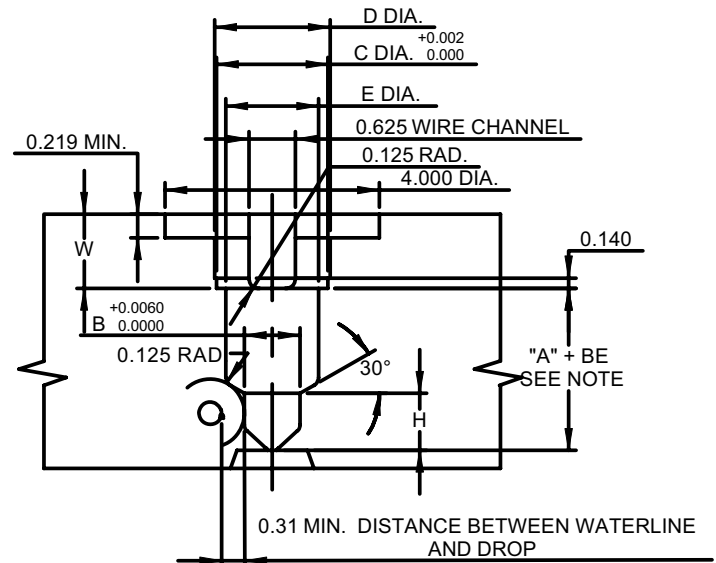


Failure to comply will result in serious injury or death:
ELECTRICAL HAZARDS
 Improper voltages or grounding can result in electrical shock. Use only with proper voltage and a proper earth ground. To avoid electrical shock, do not operate product when wet. Do not operate this equipment with covers or 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 can 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.

MEDIUM AND JUMBO GATE-MATE MACHINING DIMENSIONS



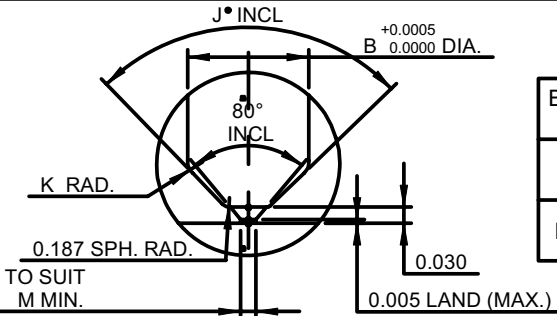
Note: Dimensions shown in Inches.

WIRING INFORMATION

Square Coil heaters are supplied with 2" prestripped 42" long leads. Heaters are 240 VAC (120 VAC square coil heaters are available on request). 2 power leads are MULTI COLOR. 1 ground lead is GREEN. Thermocouples are "J" Type. Thermocouples are supplied with 40" leads. 1 T/C lead is WHITE and negative (-) constantan (non-magnetic). 1 T/C lead is BLACK and positive (+) iron (magnetic).

GATE MACHINING DIMENSIONS

BUSHING STYLE	ASSEMBLY CAT. NO.	A DIM.	B DIA.	C DIA.	D DIA.	E DIA.	H DIM.	J°	K RAD.	M DIA.	W DIM.
JUMBO	GMB0009	3.500	1.2500	2.626	2.750	2.000	1.000	90°	0.375	0.070	0.563
	GMB0008	2.500									
MEDIUM	GMB-533-2	3.375	0.7500	2.157	2.187	1.625	0.875	90°	0.375	0.44	0.563
	GMB-523-2	2.375									



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:

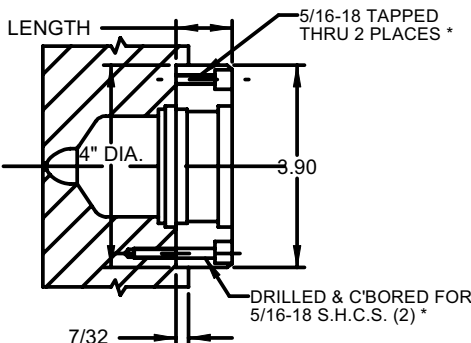
BE= "A" dimension x 0.0000633 x (nozzle setpoint - 68°F).

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

BE= 2.500 x 0.0000633 x (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.

GATE MATE LOCATING RINGS



CATALOG NUMBER	USED WITH	LENGTH
GMB0007	GMB0008 & GMB0009	1-1/2
6545	GMB-523-2 & GMB-533-2	1-25/32

(2) 5/16-18 S.H.C.S. ARE INCLUDED WITH LOCATING RINGS

* ON A 1-21/32 CIRCLE RADIUS, AND 45° FROM CENTERLINE.

D-M-E COMPANY

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