

ME-0739-PS-051-C 02-10 GMN-PS  
**JUMBO GATE-MATE NOZZLE ASSEMBLIES**  
**INSTALLATION DATA**  
 Please read carefully before installing components.



Note: Dimensions shown in Inches.

JUMBO GATE-MATE NOZZLE ASSEMBLIES INCLUDES  
 1 - NOZZLE BODY  
 1 - TIP  
 1 - SQ. COIL HEATER  
 1 - THERMOCOUPLE  
 1 - SEAL RING

NOZZLE STYLE	CATALOG NUMBER	L DIM.	A DIM.	B DIA.	D DIM.	HEATER STYLE
JUMBO	GMB0019	4.562	3.500	1.2500	2.645	SQ. COIL
	GMB0018	3.562	2.500		1.645	

**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.

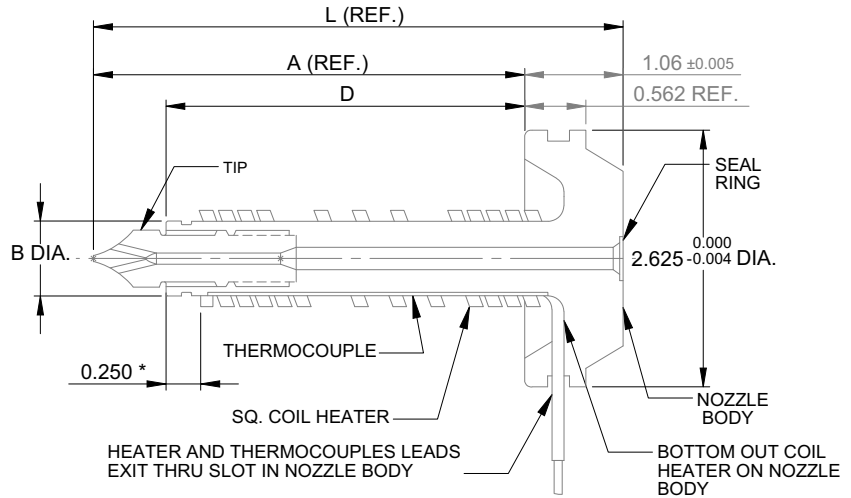


Failure to comply can result in serious injury or death:  
**STORED ENERGY AND HIGH TEMPERATURE HAZARDS**  
 This product maintains molten plastic at high pressure. Use caution when operating and servicing the system.  
 Physical contact with molten plastic may result in severe burns. Proper protective 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.

**RECOMMENDATIONS AND GUIDLINES**

- Nozzle (multiple-applications) body must be cleaned of any material in the seal off area and threaded areas before reassembling.
- 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.
- Do **NOT** lubricate or use anti-sieze compound on the threads.
- Tip must be torqued into the nozzle using a torque wrench at  $33 \pm 5$  ft-lbs. When reassembling. For protection of the tip point, use a 17 mm deep well 6 point socket.
- Careful attention should be taken to the heater and thermocouple leads as damage could occur when working on nozzle assembly.
- Seal ring for nozzle body must be replaced each time nozzle body and / or manifold are removed to ensure seal off.
- Machine the 2.626 diameter + 0.001 -0.000 directly into the nozzle plate, 0.250 minimum to 0.750 maximum deep, to fit the nozzle's head.
- Machine the "B" diameter + 0.0005 -0.0000 directly into the cavity carefully, as this is a seal-off dimension to fit the nozzle's seat.
- 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.
- Provide maximum water cooling in the nozzle plate and in cavity insert around plate.
- Route wires through wire channel in nozzle plate.
- Provide a gate dimple on core/cavity opposite gate. This will allow for best material flow.
- Wait a minimum of 5 minutes after set point has been achieved for sufficient heat to transfer into the tip before molding.

JUMBO GATE-MATE ASSEMBLY



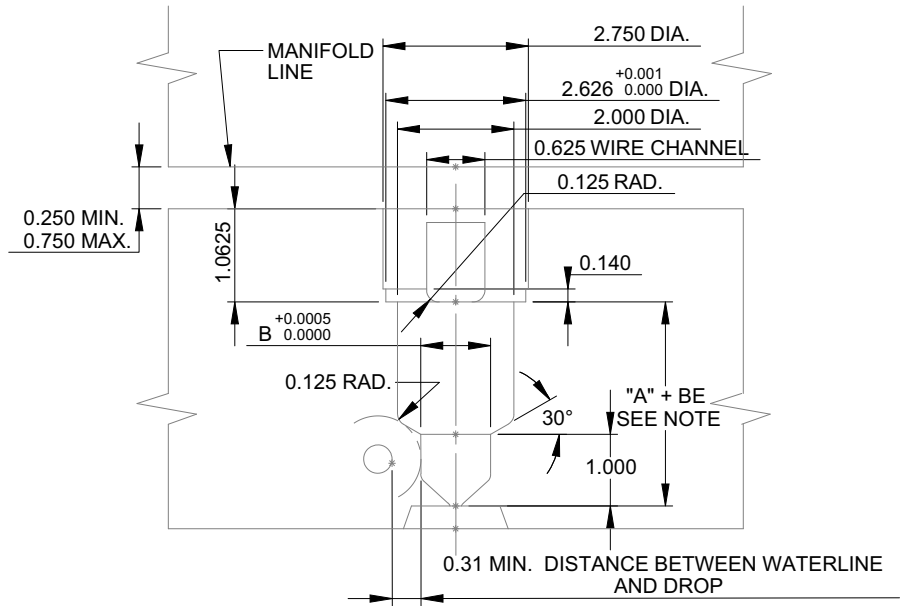
\* DIMENSION INDICATES CORRECT HEATER DISTANCE.

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JUMBO GATE-MATE MACHINING DIMENSIONS



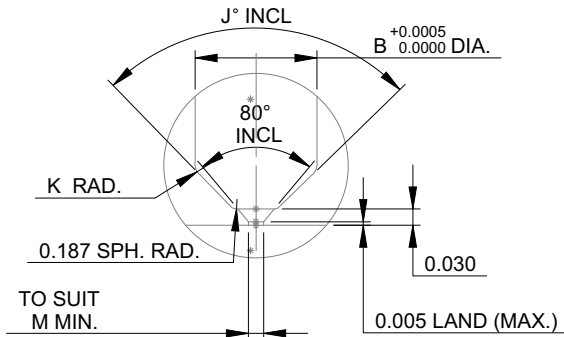
**WIRING INFORMATION**

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 BLACK or 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).



NOZZLE STYLE	CATALOG NUMBER	A DIM.	B DIM.	J°	K RAD.	M DIM.
JUMBO	GMB0019	3.500	1.2500	90°	0.375	0.070
	GMB0018	2.500				

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 0.000063 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 0.000063 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.

ASSEMBLY REFERENCE	SQUARE COIL HEATERS (240 VAC)##		THERMOCOUPLES (40" LEADS)	TIPS		SEAL RINGS (PKG OF 4)
	CATALOG NUMBER	WATTS	CATALOG NUMBER	CATALOG NUMBER	STYLE	CATALOG NUMBER
GMB0019	SCH0001	315	TC-0001	GMT0004	STANDARD	EKR0001
GMB0018	SCH0002	315	TC-0002			

## INCLUDES INSTALLATION / REMOVAL WRENCH

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