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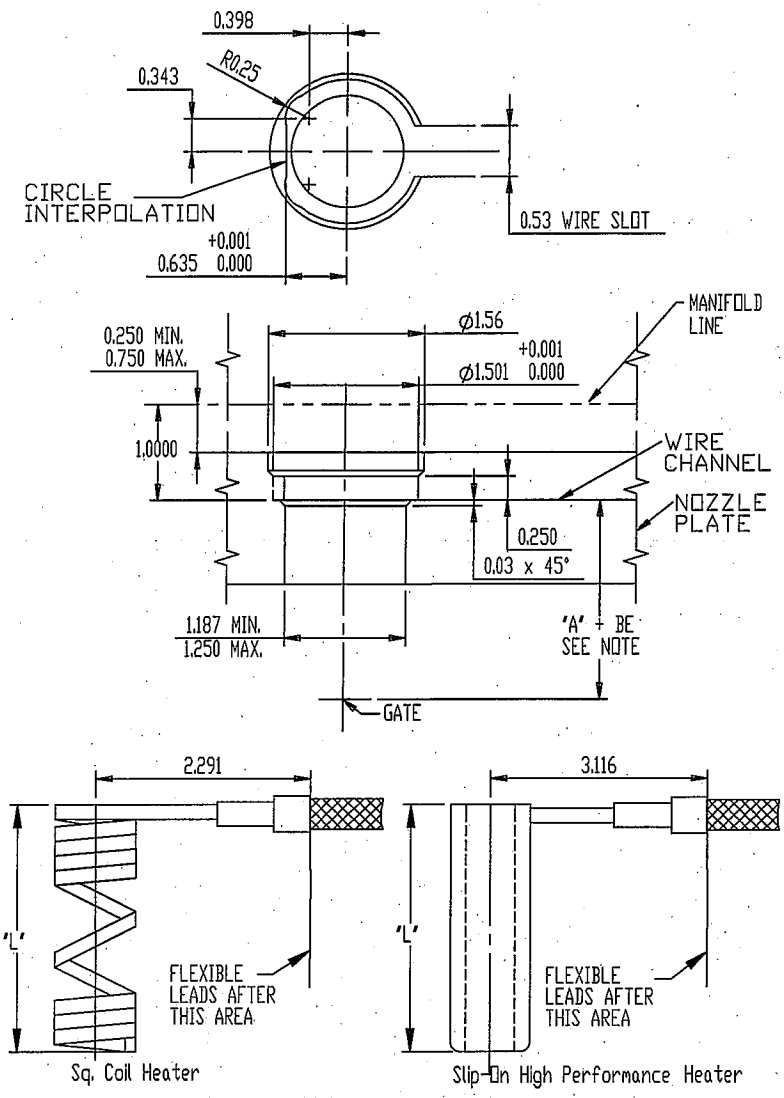
250 SERIES REAR LOAD HEATERS SQUARE COIL & SLIP-ON HIGH PERFORMANCE INSTALLATION DATA		

NOTE: Dimensions are in Inches

NOTE: The expansion factor must be taken into consideration prior to machining for and installing nozzle. This factor (BE) must then be addeed to the nominal 'A' dimension.
Formula for determining this expansion is as follows:
BE= 'A' dimension x 0.00000633 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 0.00000633 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.

"A"	SUB-ASSY ITEM #	NOZZLE BODY ITEM #	HEATER ITEM#	WATTAGE	"L"
2.000	CIA0001-S	CIB1359	CIH0081-S	400	2.00
	EHA0001		SCH0081	300	
2.500	CIA0002-S	CIB1360	CIH0082-S	350	2.50
	EHA0002		SCH0082		
3.000	CIA0003-S	CIB1361	CIH0083-S	400	3.00
	EHA0003		SCH0083		
3.500	CIA0004-S	CIB1362	CIH0084-S	565	3.50
	EHA0004		SCH0084	425	
4.000	CIA0005-S	CIB1363	CIH0085-S	500	4.00
	EHA0005		SCH0085		
5.000	CIA0006-S	CIB1364	CIH0086-S	500	5.00
	EHA0006		SCH0086		
6.000	CIA0007-S	CIB1365	CIH0087-S	550	6.00
	EHA0007		SCH0087		



Sq. Coil Heater — Slip-On High Performance Heater

OPERATING PROCEDURE
The nozzles are supplied with a Slip-on High Performance Heater or a Square (Flat) Coil Heater both with a Type J thermocouple.
It is recommended to use a DME closed loop Temperature Controller for optimum Temperature Control with Step Smart ® or Smart Step ®. These systems will allow heater to dissipate any moisture and then change automatically to set point. 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.

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

DISASSEMBLY PROCEDURE
1. Nozzle has been designed to have the tip removed in the press. See Recommendations and Guidelines Note # 1 for keying nozzle to keep from rotating.
2. Careful attention should be taken to the heater / thermocouple leads as damage could occur when working on nozzle assembly.
3. 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.
4. For removal of heater see Recommendations and Guidelines Note # 4 & 6.

ASSEMBLY PROCEDURE
1. Tip and nozzle threaded area must be clean of any material before reassembling.
2. Apply an anti-seize compound on the tip threads.
3. 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.
4. For assembly of heater see Recommendations and Guidelines Note # 3 & 54.
5. Seal ring for nozzle body must be relaced 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.

⚠ DANGER

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.

⚠ WARNING

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.

DME
Every step of the way

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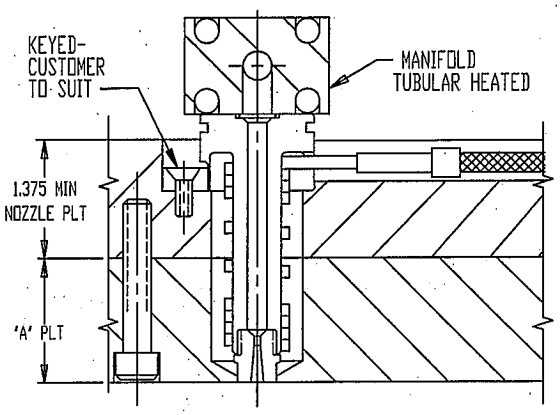
SECTION SHOWING NOZZLE BODY KEYED FOR REAR LOAD SQ. COIL AND SLIP-ON HIGH PERFORMANCE HEATERS



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 vestiage, 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 manufacturer's literature for further information regarding material to be molded.

RECOMMENDATIONS AND GUIDELINES

1. The nozzle head must be held in such a manner in the 1.375 min. nozzle plate to keep it from rotating upon installation of the tip assembly. This maybe done by making a key for the head to match the flat on the nozzle's head or by circle interpolation.
2. Nozzle plate must be designed so that the heads of the socket head cap screws are exposed when the mold is split on the parting line.

Rear Load Sq. Coil Heaters

3. Before the nozzle has been located and positioned in the nozzle plate the heater can be installed on the nozzle body as follows:
   a. Place heater within the Square Coil Heater Wrench (Wrench is included with rplacement heater)
   b. Slip heater over nozzle body aligning leads of heater into center of slot in nozzle body head.
   c. Remove Square Coil Heater Wrench from heater.
4. To remove a Rear-Load Sq. Coil Heater, reverse the procedure discribed in Recommendations and Guidelines Note # 3.

Slip-On, Rear-Load High Performance Heaters

5. Before the nozzle has been located and positioned in the nozzle plate the heater can be installed on the nozzle body as follows:
   a. Slide heater (lead end towards nozzle head) onto nozzle body.
   b. Align leads of heater into center of slot in nozzle body head.
   c. Snap tip end of heater onto nozzle body.
6. To remove a Rear-Load, Slip-On High Performance Heater, reverse the procedure described in Recommendations and Guidelines Note # 5.

All Heaters

7. The power and thermocouple leads may be spliced in the wire channel for ease of heater replacement. Leads may be spliced using Thomas & Betts PA plactic insulated disconnects.
   Male Cat. No. 18RA-251T
   Female Cat. No.: 18RA-2577
8. Secure wires in nozzle plate wire channel with DME Wire Covers.

WIRING INFORMATION

Square Coil Heaters are supplied with 2' prestripped 36' long leads.
Heaters are 240 VAC.
2 power leads are MultiColor.
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).

Note.
Thermocouple color code described above follows international IEC 584-3 convention. Thermocouple is 'J' Type. The white (negative) wire used in IEC584-3 convention is REVERSE of the white (positive) wire used in ASTM E230 (white = positive, red = negative) convention.

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