PSDMAX250 7-11 ME-100005-0227-(A)

250 SERIES HIGH PERFORMANCE
HOT SPRUE BUSHING

INSTALLATION DATA

NOTES:
1. All dimensions are in inches.

2. The expansion factor must be taken into consideration prior to maching ans installing bushing. This factor (BE) must then be added to the nominal "A" dimension.
Formula for determining this expansion is as follows:
BE = "A" dimension x 0.00000633 x (nozzle set point - 68°F) Assuming the mold is at 68°F during operation. If mold temperature is different, substitute 68°F with actual mold temperature.

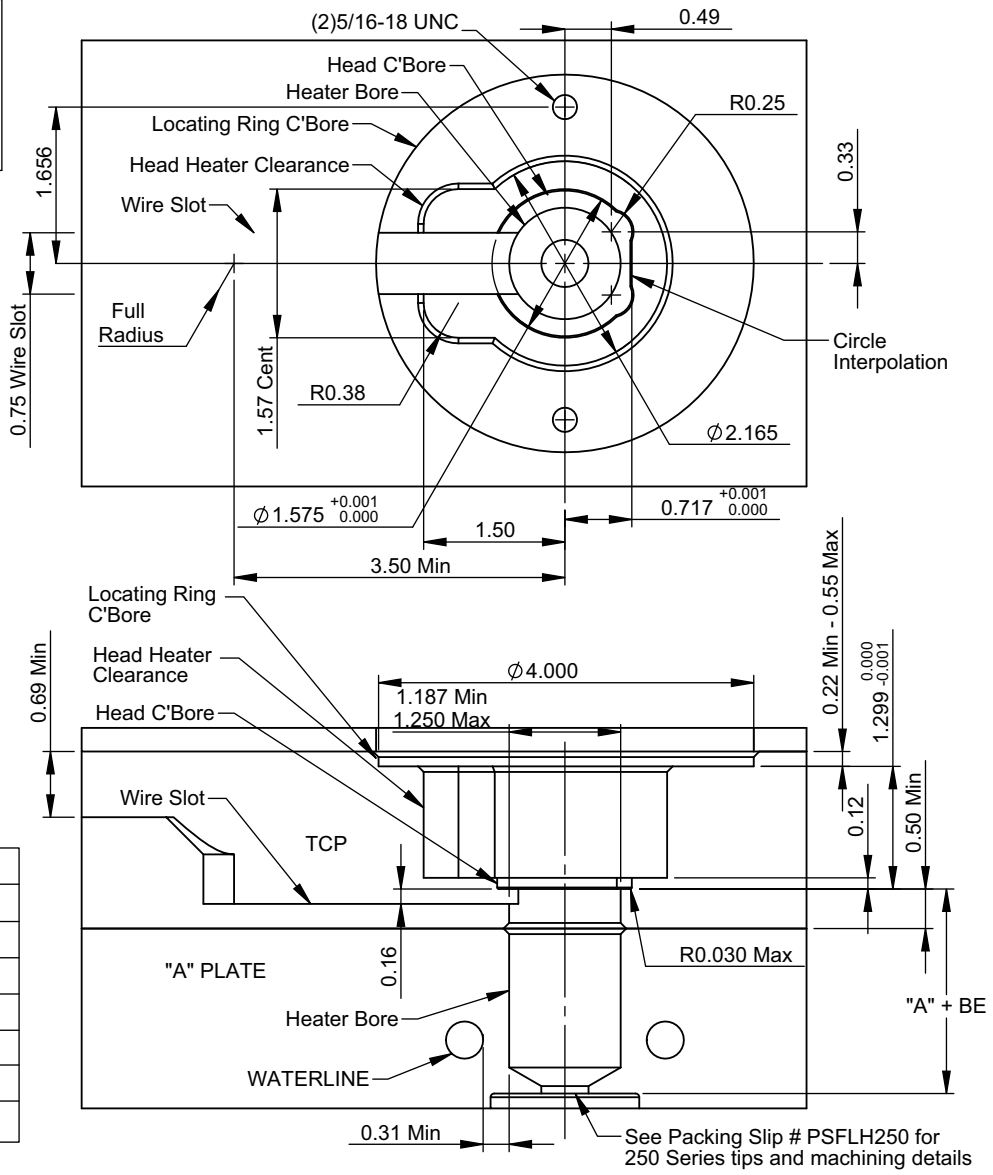
EXAMPLE: Given a 3.150 inch "A" dimension, with a set point of 500°F
BE = 3.150 x 0.00000633 x (500-68) = 0.009
Thus "A" + BE will be 3.159

The above information is only given as a example, variations may occur based on mold confiruration and cooling factor. In some instances, it may be necessary to obtain an empirical factor.

3. For protection of heater leads, use wire covers to contain leads in wire channel 3.00 minimum between covers.

4. Break all sharp edges in wire channel for protection of heater leads.

ASSEMBLY	"A"
DMAX06055	2.165in (55.00mm)
DMAX06067	2.638in (67.00mm)
DMAX06080	3.150in (80.00mm)
DMAX06092	3.622in (92.00mm)
DMAX06105	4.134in (105.00mm)
DMAX06130	5.118in (130.00mm)
DMAX06155	6.102in (155.00mm)



IMPORTANT SAFETY INFORMATION
The High performance Hot Sprue Bushing 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 results in serious injury or death.
ELECTRICAL HAZARDS
Improper voltages or grounding can result in electrical shock. Use only with proper voltage and 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 power. It will damage the prodcut and could cause fire, servere 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 this system.
This product has heated surfaces. Use caution when operating and servicing the system to avoid servere burns. Proper protective equipment should be worn.

DME
Every step of the way

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OPERATING PROCEDURE

The bushings are supplied with a High Performance heater with Type "J" thermocouple.
It is recommended to use a DME closed loop Temperature Controller for opimum temperature controll with Step Smart or Smart Start . 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 ans wattage of each heater is clearly marked on the heater tag.
Step Smart , Smart Start and DME are all registed trademarks of DME Co. LLC.

RECOMMENDATION AND GUIDELINES

1. Proper protective equipment, including eye protection and gloves, must be worm.
2. Bushing head must be held in such a manner to keep it from rotating. Aligning heater leads into wire channel and if tip has runner or angle aligning these to cavity surface. This may be done by machining the Top Clamp Plate for a key (customer to suit) to align with the flat on the bushing head or circle interpola the plate for the flat.
3.Tip and bushing threaded area must be clean of any material before assembly.
4.Apply an anti-seize compound on the tip thread.
5.Screw tip into shank of the bushing. Torque and loosen tip from the bushing 3 times making sure that there is good contact between the tip and the bushing and that the tip will not rotate any more when torqued. Use 30 ±5 ft. lbs. of torque with a six point deep well socket. If applicable, after assembled into mold , customer can then mark tip for runner or angle. Upon removal of tip and runner or angle is machined onto tip, the tip can then be retorqued and assembled back into mold. Insuring alignment between runner or angle in the tip and runner or angle in mold.
6. Carefull attention should be taken to the heater/thermocouple leads as damage could occur when working on the bushing assembly.
7. Slip-On Rear-Load High Performance Heaters must be installed on the bushing before installing bushing in the mold as follows:
a.Slide heater (lead end towards head) onto the bushing body.
b. Align heater leads within the center of bushing head wire slot.
c. Snap end of heater onto bushing body.
8. Place bushing into mold aligning heater leads into wire channel of Top Clamp Plate.
9. Secure locating ring over bushing onto Top Clamp Plate.
10. Wire heater power and thermocouple leads into DME electrical connector (see Wiring Information)
11. The power and thermocouple leads may be spliced in wiring channel for ease oh heater replacement. Leads may be spliced using Thomas & Betts PA plastic insulated disconnects:
Male Cat# 18RA-251T
Female Cat# 18RA-2577
12. Sercure wires in Top Clamp Plate wire channel with DME Wire overs.
13. For removal of bushing from mold, follow these steps:
a. Remove DME connector from power.
b. Remove mold form press.
c. Remove locating ring and wire covers.
d. Unwire heater and thermocouple leads from DME connector or unplug insulated disconnects.
e.Remove bushing from mold.
14. Place bushing head into a vise with copper jaw caps. Caution do not over tighten.
15. For removal of tip from bushing, a six point deep well socket is recommended. The bushing must be at processing temperature and the heater should be turned off before removing tip counter-clockwise from bushing.
16. For safety, heater should only be removed when cooled down to room temperature.
17. Grip end of heater by hand and pull heater off bushing shank. Caution do not twist heater off bushing body, this can damage heater leads that are still in the bushing head wire slot. If heater will not slip off, place the tip end of a small flat screw drive behind the clip of the heater, which is at the tip end of the heater. Carefully remove the pressure of the clip allowing the heater to slip off the body. Do not bend clip.

WIRING INFORMATION

Heaters are supplied with 2" prestripped 36" long leads.
Heaters are 240 VAC
2 power leads are milticolor
1 ground lead is Green color

Thermocouple is "J" Type.
Thermocouple is supplied with 36" long 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. The thermocouple is "J" Type. The white (negative) wire used in IEC 584-3 convention is REVERSE of the white (positive) wire used in ASTM E230 (white = positive, red = negative) convention.

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DME
Every step of the way