DESIGN & ASSEMBLY GUIDE

DME Stellar® 5000
Hot Sprue Bushings
# TABLE OF CONTENTS

## Section 1
- Hot Sprue Bushing Pre-Assembly & Machining Guidelines . . .3–15
  - General Assembly – Section View ........................ 4
  - Design Procedure/Gating Style Selection .................. 5
  - Gate Details ........................................6 - 7
  - Metric Dimensions ..................................... 8-11
    - Nozzle Selection and Stack Height Calculations (Metric) . 8-9
    - Nozzle (TCP) Plate Machining Detail (Metric) ............ 10
  - Metric Wire Pocket Machining Detail .................. 11
  - Inch Dimensions . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 12-15
    - Nozzle Selection and Stack Height Calculations (Inch) ....12-13
    - Nozzle (TCP) Plate Machining Detail (Inch) .............. 14
  - Inch Wire Pocket Machining Detail .................... 15

## Section 2
- Hot Sprue Bushing Assembly Information .............. 16-27
  - Assembly Section View .................................. 16
  - Assembly Instructions .................................... 17-18
  - Nozzle and Tip Assembly .............................. 19
  - Nozzles with Coil Heater ............................ 20-21
  - Nozzles with High Performance Heater ................. 22-23
  - Wiring Schematics ................................... 24
  - Parts List ....................................... 25-27

## Section 3
- Hot Sprue Bushing Ordering Information .................. 28
  - Ordering Procedure .................................. 28
  - Nozzle Body Information .............................. 29
  - Locating Rings ...................................... 30
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 may result in serious injury or death.

**DANGER**

Failure to comply may 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 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 may 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.
General Assembly – Section View  
(Showing Point Gate Tip Configuration)

Fig. 1-1
Gating Style Selection

Standard Point Gate Tip Sub-Assembly, SXG5110
- For use with unfilled resins up to 290°C (550°F)
- Fits Gate Details shown in Fig. 1-2

High Performance Point Gate Tip Sub-Assembly, SXG5020
- For use with unfilled and filled resins up to 330°C (625°F)
- Fits Gate Details shown in Fig. 1-2

Gating Style Selection – Item Numbers

<table>
<thead>
<tr>
<th>TIP Sub-Assembly Item Number</th>
<th>Description</th>
<th>TIP Item Number</th>
<th>TIP CTE (10^-6/°C)</th>
<th>Retainer Item Number</th>
<th>Gating Style</th>
<th>Applicable Stellar System</th>
</tr>
</thead>
<tbody>
<tr>
<td>SXG5110</td>
<td>Standard Point Gate Tip Sub-Assembly</td>
<td>SXT4010</td>
<td>17.5</td>
<td>SXF5100</td>
<td>Point Gate</td>
<td>Standard</td>
</tr>
<tr>
<td>SXG5020</td>
<td>High Performance Point Gate Tip Sub-Assembly</td>
<td>SXT5010</td>
<td>5.5</td>
<td>SXF5000</td>
<td>Point Gate</td>
<td>High Performance</td>
</tr>
<tr>
<td>SXG5201</td>
<td>High Performance Thru Hole Tip Sub-Assembly</td>
<td>SXT5200</td>
<td>5.5</td>
<td>SXF5000</td>
<td>Thru Hole Gate</td>
<td>High Performance</td>
</tr>
<tr>
<td>SXT1040</td>
<td>Sprue Gate</td>
<td>SXT1040</td>
<td>12.8</td>
<td>N/A</td>
<td>Sprue Gate</td>
<td>Standard</td>
</tr>
</tbody>
</table>

Design Procedure

1. Select the proper gating style.
2. Calculate the nozzle plate thickness. See pages 8-9 (metric) or pages 12-13 (inch).
3. Follow the machining guidelines for the nozzle plate and the manifold retainer plate for the manifold size required. See pages 8-11 (metric) or pages 12-15 (inch).
4. Add the wire channel paths, assembly bolts, alignment dowels, water lines, guide/leader pins, etc., as needed. For wire channel design, see page 11 (metric) or page 15 (inch).
Gate Details for use with Hardened Steel (50 HRC minimum)

Fig. 1-2  Gate Details for Standard Point Gate and High Performance Point Gate and Thru Hole Gate Tips (SXG5110, SXG5020, SXG5201); For gating onto a flat surface or into a recess (“dimple”).

Questions? Call DME at 1-800-626-6653 (U.S.) or 1-800-387-6600 (Canada)
NOTES for Figures 1-2 and 1-3:

1. If gate detail does not properly fit the application, contact DME for assistance about gate detail options.

2. Position gate detail within ±0.013mm/.0005in from nominal.

3. The gate diameter can be opened by the customer to suit the application. (The 90° angle must be re-machined to maintain the maximum land after increasing the gate diameter.)

4. Water lines are required in “A” plate for proper gate cooling.

5. Position water lines as close as possible but not closer than the minimum distance shown to provide a safe steel condition.

6. For faster color changes, remove (“decone”) the resin from the front of each point gate tip prior to changing colors.

7. See page 9 (Metric) and page 13 (Inch) for minimum and maximum “Z” dimensions.
### Nozzle Selection

#### Metric Dimensions

**SECTION 1**

Stellar® Hot Sprue Bushing Pre-Assembly Design & Machining Guidelines

### Tip Information for Gating Styles

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SXG5110</td>
<td>Standard Point Gate Tip Sub-Assembly</td>
<td>17.5</td>
<td>34.40</td>
<td>Standard</td>
</tr>
<tr>
<td>SXG5020</td>
<td>High Performance Point Gate Tip Sub-Assembly</td>
<td>5.5</td>
<td>34.40</td>
<td>High Performance</td>
</tr>
<tr>
<td>SXG5201</td>
<td>High Performance Thru Hole Tip Sub-Assembly</td>
<td>5.5</td>
<td>34.40</td>
<td>High Performance</td>
</tr>
<tr>
<td>SXT1040</td>
<td>Sprue Gate</td>
<td>12.8</td>
<td>34.40</td>
<td>Standard</td>
</tr>
</tbody>
</table>

#### “A” and “B” Chart for Gating Styles

<table>
<thead>
<tr>
<th>Nozzle Sub-Assembly Item No.</th>
<th>Point Gate “A”</th>
<th>Sprue Gate “A”</th>
<th>“B”</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SXY0065 SXY0965</td>
<td>65.10</td>
<td>N/A</td>
<td>30.70</td>
<td>Standard coil heater; High performance heater</td>
</tr>
<tr>
<td>SXY0085 SXY0985</td>
<td>85.10</td>
<td>N/A</td>
<td>50.70</td>
<td>Standard coil heater; High performance heater</td>
</tr>
<tr>
<td>SXY0105 SXY0905</td>
<td>105.10</td>
<td>N/A</td>
<td>70.70</td>
<td>Standard coil heater; High performance heater</td>
</tr>
<tr>
<td>SXY0125 SXY0925</td>
<td>125.10</td>
<td>N/A</td>
<td>90.70</td>
<td>Standard coil heater; High performance heater</td>
</tr>
<tr>
<td>SXY0145 SXY0945</td>
<td>145.10</td>
<td>N/A</td>
<td>110.70</td>
<td>Standard coil heater; High performance heater</td>
</tr>
<tr>
<td>SXY8065</td>
<td>N/A</td>
<td>65.10</td>
<td>30.70</td>
<td>Standard coil heater with snap ring</td>
</tr>
<tr>
<td>SXY8085</td>
<td>N/A</td>
<td>85.10</td>
<td>50.70</td>
<td>Standard coil heater with snap ring</td>
</tr>
<tr>
<td>SXY8105</td>
<td>N/A</td>
<td>105.10</td>
<td>70.70</td>
<td>Standard coil heater with snap ring</td>
</tr>
<tr>
<td>SXY8125</td>
<td>N/A</td>
<td>125.10</td>
<td>90.70</td>
<td>Standard coil heater with snap ring</td>
</tr>
<tr>
<td>SXY8145</td>
<td>N/A</td>
<td>145.10</td>
<td>110.70</td>
<td>Standard coil heater with snap ring</td>
</tr>
</tbody>
</table>

---

Questions? Call DME at 1-800-626-6653 (U.S.) or 1-800-387-6600 (Canada)

**NOTE:** All units are in mm.
**Metric Calculations**

**Equations**
1. “Z” = “C” + Expansion  
   **NOTE:** The minimum “Z” dimension is 13.00 for the point gate and sprue gate.  
   The maximum “Z” dimension is 115.00 for the point gate and sprue gate.

2. Plate Thickness = 8.00 + “A” – “C,”

3. Expansion = Delta T (°C) x [0.0000115 x (30.00 + “B”) + CTE tip x “T”) – 0.09  
   + 0.0002875 x [Tmold(°C) – 20]

**Procedure and Notes**
1. Calculate expansion
2. Calculate “C”
3. Calculate plate thickness
4. Calculate upper support ring gap

The calculations may need to be repeated in order to maintain the nozzle plate thickness requirement. **NOTE:** Start with the smallest “A” dimension and increase “A” dimension as needed. This approach will generate a design with the minimum stack height.

**Design Suggestions**
The most difficult area of design will be the layout of the wire channels in the nozzle plate. Please evaluate the wire channel depth and path carefully. Three possible scenarios (1 = simplest; 2 = more difficult; 3 = most difficult):

1. If the nozzle plate thickness is >65.00, the wire channel will be 19.0 deep throughout its path.

2. If the nozzle plate thickness is 60.00 to 65.00, the wire channel will be 19.0 deep throughout its path, but the wire channel cannot cross under the support pad taps because the screws will protrude into the wire channel.

3. If the nozzle plate thickness is 55.00 to <60.00, the wire channel will be 12.7 deep underneath the manifold clearance pocket. The wire channel can be 19.0 deep only outside of the pocket. Also, the wire channel cannot cross under the support pad taps because the screws will protrude into the wire channel.

In order to avoid scenarios 2 and 3, choose the next longer “A” dimension, which will increase the stack height by approximately 20.00mm.

For an easy-to-use metric calculation table, go to: [www.dme.net/stellarcalculations](http://www.dme.net/stellarcalculations)
Nozzle Top Clamp Plate (TCP) Machining Detail

NOTES:
1. Wire channels, waterlines, lift holes shown as example only.
   7-7/8" x 11-7/8" mold shown.
2. Extra assembly screws may be required on larger molds.
3. Chamfer all taped holes.
Wire Cover Pocket Machining Details

WC0001

NOTES:
1. Use M6 x 12mm long BHCS and torque to 16 N.m (11.7 ft.-lbs.) for each wire cover.
2. To facilitate assembly place sprue bushing heater and thermocouple leads into the top wire channel and the nozzle heater leads and nozzle thermocouple leads into the bottom wire channel. Nozzle heater = 2 wires; Single Nozzle Locator heater = 2 wires (total); Nozzle thermocouple = 1 wire; Single Nozzle Locator thermocouple = 1 wire.
3. Radius all wire channels to suit.
4. For inch dimensions, see pages 12-15.
Inch Dimensions

Stellar® Hot Sprue Bushing Pre-Assembly Design & Machining Guidelines

SECTION 1

Nozzle Selection

Tip Information for Gating Styles

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SXG5110</td>
<td>Standard Point Gate Tip Sub-Assembly</td>
<td>9.72</td>
<td>1.3543</td>
<td>Standard</td>
</tr>
<tr>
<td>SXG5020</td>
<td>High Performance Point Gate Tip Sub-Assembly</td>
<td>3.06</td>
<td>1.3543</td>
<td>High Performance</td>
</tr>
<tr>
<td>SXG5201</td>
<td>High Performance Thru Hole Tip Sub-Assembly</td>
<td>3.06</td>
<td>1.3543</td>
<td>High Performance</td>
</tr>
<tr>
<td>SXT1040</td>
<td>Sprue Gate</td>
<td>7.11</td>
<td>1.3543</td>
<td>Standard</td>
</tr>
</tbody>
</table>

“T” = “A” - “B”

NOTES:

- All units are in inches.

“A” and “B” Chart for Gating Styles

<table>
<thead>
<tr>
<th>Nozzle Sub-Assembly Item No.</th>
<th>Point Gate “A”</th>
<th>Sprue Gate “A”</th>
<th>“B”</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SX0605</td>
<td>2.563</td>
<td>N/A</td>
<td>1.209</td>
<td>Standard coil heater; High performance heater</td>
</tr>
<tr>
<td>SX0805</td>
<td>3.350</td>
<td>N/A</td>
<td>1.996</td>
<td>Standard coil heater; High performance heater</td>
</tr>
<tr>
<td>SX0105</td>
<td>4.138</td>
<td>N/A</td>
<td>2.783</td>
<td>Standard coil heater; High performance heater</td>
</tr>
<tr>
<td>SX0125</td>
<td>4.925</td>
<td>N/A</td>
<td>3.570</td>
<td>Standard coil heater; High performance heater</td>
</tr>
<tr>
<td>SX0145</td>
<td>5.712</td>
<td>N/A</td>
<td>4.358</td>
<td>Standard coil heater; High performance heater</td>
</tr>
<tr>
<td>SX6005</td>
<td>N/A</td>
<td>2.563</td>
<td>1.209</td>
<td>Standard coil heater with snap ring</td>
</tr>
<tr>
<td>SX8085</td>
<td>N/A</td>
<td>3.350</td>
<td>1.996</td>
<td>Standard coil heater with snap ring</td>
</tr>
<tr>
<td>SX8105</td>
<td>N/A</td>
<td>4.138</td>
<td>2.783</td>
<td>Standard coil heater with snap ring</td>
</tr>
<tr>
<td>SX8125</td>
<td>N/A</td>
<td>4.925</td>
<td>3.570</td>
<td>Standard coil heater with snap ring</td>
</tr>
<tr>
<td>SX8145</td>
<td>N/A</td>
<td>5.712</td>
<td>4.358</td>
<td>Standard coil heater with snap ring</td>
</tr>
</tbody>
</table>

NOTE: All units are in inches.
Inch Calculations

Equations
1. \( Z = C + \text{Expansion} \)
   
   **NOTE:** The minimum \( Z \) dimension is 0.512 for the point gate and sprue gate. The maximum \( Z \) dimension is 4.528 for the point gate and sprue gate.

2. Plate Thickness = 0.315 + “A” – “C”,

3. Expansion = Delta T (°F) x \[0.00000639 \times (1.181 + “B”) + \text{CTE tip x “T”} – 0.0035 \]
   \[+ 0.00000629 \times [\text{Tmold(°F)} – 68] \]

Procedure and Notes
1. Calculate expansion
2. Calculate “C”
3. Calculate plate thickness
4. Calculate upper support ring gap

The calculations may need to be repeated in order to maintain the nozzle plate thickness requirement. **NOTE:** Start with the smallest “A” dimension and increase “A” dimension as needed. This approach will generate a design with the minimum stack height.

Design Suggestions
The most difficult area of design will be the layout of the wire channels in the nozzle plate. Please evaluate the wire channel depth and path carefully. Three possible scenarios (1 = simplest; 2 = more difficult; 3 = most difficult):

1. If the plate thickness is >2.559, the wire channel will be 0.75 deep throughout its path.
2. If the plate thickness is 2.362 to 2.559, the wire channel will be 0.75 deep throughout its path, but the wire channel cannot cross under the support pad taps because the screws will protrude into the wire channel.
3. If the plate thickness is 2.165 to <2.362, the wire channel will be .50 deep underneath the manifold clearance pocket. The wire channel can be 0.75 deep only outside of the pocket. Also, the wire channel cannot cross under the support pad taps because the screws will protrude into the wire channel.

In order to avoid scenarios 2 and 3, choose the next longer “A” dimension, which will increase the stack height by approximately 0.787 inches.
Top Clamp Plate Machining Detail

NOTES:
1. Wire channels, waterlines, lift holes shown as example only.
2. Extra assembly screws may be required on larger molds.
3. Chamfer all tapped holes.

Questions? Call DME at 1-800-626-6653 (U.S.) or 1-800-387-6600 (Canada)
NOTES:
1. Use M6 x 12mm long BHCS and torque to 11.7 N.m (105 in.-lbs.) for each wire cover.
2. To facilitate assembly place sprue bushing heater and thermocouple leads into the top wire channel and the nozzle heater leads and nozzle thermocouple leads into the bottom wire channel.
   - Nozzle heater = 2 wires (total);
   - Single Nozzle Locator heater = 2 wires (total);
   - Nozzle thermocouple = 1 wire;
   - Single Nozzle Locator thermocouple = 1 wire.
3. Radius all wire channels to suit.
4. For metric dimensions, see pages 9-11.
NOTE: Support pads, support pad screws and single nozzle locator (SAL) are included in Hot Sprue Bushing assembly (SNL). See page 27.
Inspection of the Stellar Manifold and Components

Prior to system assembly, DME strongly suggests that you complete the following inspection and establish the procedures that will facilitate proper system assembly.

1. Ensure that all components provided are the correct part numbers and quantities.

2. Check all the supplied heaters for proper resistance in ohms (Ω) and for insufficient resistance to ground conditions by doing the following:
   - Measure each heater’s resistance and determine if they are equivalent. Record on Master Inspection Sheet.
   (Insufficient resistance to ground is defined as a reading to ground of 20,000 Ω or less.)

Assembly Instructions

(Refer to numbered items in Fig 2-7 and Table 2-2)

**Nozzle(TCP) Plate**

1. Place (2) locating dowels (Item 3F) into bore in the nozzle plate.
2. Grind the support pads (Item 3G) to 10,000±0.013. Grind together to ensure even height.
3. Attach the (4) support pads (Item 3G) into the nozzle plate pocket using the support pad screws (Item 3H).
   Torque the screws equally to 16 N.m [12 ft-lbs].

**Hot Sprue Bushing**

4. Attach the Hot Sprue Bushing Thermocouple (Item 3D) using the thermocouple screw (Item 3E). Torque the screw to 16 N.m [12 ft-lbs].
5. Place the Single Nozzle Locator in a vise and mount the nozzle body (Item 1) without the heater following Nozzle Assembly Instructions (Page 19 and Fig. 2-2). Preassembling the nozzle body to the Single Nozzle Locator will prevent breaking the locating dowel pins (Item 3F) when tightening the thread.
6. Place the Hot Sprue Bushing Assembly on top of the dowel pins (Item 3F). Bend the heater and thermocouple wires into the plate channel.
7. Ensure there is no gap between the Hot Sprue Bushing Assembly and the support pads. Use a soft head hammer if needed to lower down the Hot Sprue Bushing Assembly.
8. Attach the Hot Sprue Bushing Assembly to the Nozzle Plate (TCP) with (4) SHCS (Item 3B). Torque the screws equally to 39 N.m [29 ft-lbs].
9. If applicable, tag the wires of the Hot Sprue thermocouple and heater and route into the wire channel, bending as necessary.
Assembly Instructions (continued)

(Refer to numbered items in Fig. 2-7 and Table 2-2.)

Locating Ring
10. Attach the single nozzle locating ring (item 4) to the manifold retainer plate with (2) M8 flat head cap screws (item 9). Torque the screws equally to 39 N.m [29 ft. lbs].

Nozzles
11. Verify gate detail dimensions as shown in Figs. 1-2 and 1-3.
12. With the nozzle body already mounted on the Hot Sprue Bushing Assembly, place the nozzle heater and nozzle thermocouple tip and retainer on the nozzle body. For high performance heaters the thermocouple is already attached to the heater. Tag and place wires into the lower plate wire channel.
13. Install wire covers (item 5) to retain wires into the channel using wire covers screws (item 6).
14. Connect all wires to electrical connectors in the terminal mounting box. See wire schematics, Table 2-1.
Steps 1 through 6 (Nozzle to Manifold)

1. Safety glasses should be worn when assembling components.
2. Threads and counterbore of manifold must be clean of any plastic.
3. Place nozzle body into manifold.
4. Apply high temperature anti-seize compound to nut threads to prevent galling or seizing. Use Fel-Pro C5-A or equivalent anti-seize compound.
5. Hold nozzle body down by threading nut into manifold.
6. Torque nut to 81 N.m [60 ft. lbs.] using nut socket tool (SXW0002).

Steps 7 through 11 (Tip Sub-assembly and Retainer to Nozzle)

7. Safety glasses should be worn when assembling components.
8. Threads and counterbore of nozzle must be clean of any plastic.
9. Slide tip into nozzle body.
10. Thread retainer into nozzle body.
11. Place socket tool carefully over retainer so as to not damage tip. Torque retainer to 11.3 N.m [100 in. lbs.] using a 10mm deep well 6-point socket tool and torque wrench.

NOTE: For Thru Hole Tip follow same instructions as for Point Gate Tip.

Steps 12 through 15 (Sprue Gate Tip to Nozzle)

12. Safety glasses should be worn when assembling components.
13. Threads and counterbore of nozzle must be clean of any plastic.
14. Thread sprue gate tip into nozzle body.
15. Place socket tool carefully over tip so as to not damage front surface and edge of tip. Torque tip to 14 N.m [125 in. lbs.]. For sprue gate tip, use socket tool (SXW0003).
Nozzles with Standard Coil Heater and Point Gate Tip
Tip, Retainer, Heater and Thermocouple Removal Instructions

1. Stellar nozzle sub-assembly with tip sub-assembly (see Fig. 2-3a). Threaded style nozzle with SXF5100 Retainer and SXT4010 Tip shown. Same instructions apply to SXT5010 or SXT5200 tips using SXF5000 Retainer.
2. Safety glasses and gloves should be worn when working on the mold.
3. Turn nozzle heater on, and set at 10-38°C (50-100°F) below set point of processing temperature to allow for easier tip removal.
4. Carefully clean plastic material from around tip and retainer.
5. Remove retainer with 10mm deep well 6-point socket turning counterclockwise (see Fig. 2-3b). Socket will fit over the front seal-off area when placed on retainer hex. DO NOT DAMAGE SEAL-OFF AREA.
6. Carefully remove tip from retainer (see Fig. 2-3c). Inspect seal-off area for out of roundness and/or score marks on seal area, and replace retainer if either condition occurs. Inspect tip for any wear and replace if wear has occurred.
7. Clean plastic material from thread and counterbore areas in nozzle body to ensure proper assembly (see Fig. 2-3d).
8. Turn off nozzle heater and disconnect heater and thermocouple leads from connectors on mold. Allow nozzle time to cool down.
9. Remove heater, thermocouple and spacer from nozzle body (see Fig. 2-3e).
10. Measure thermocouple leads “X” (see Fig. 2-3f).
11. Remove thermocouple from heater end cap groove (see Fig. 2-3g).
12. Carefully place new thermocouple into heater end cap groove with lead coming out the slot. Use an 8mm (5/16”) point diameter drift punch by hand to spread the thermocouple into the heater end cap groove. This will allow the heater with thermocouple to slide onto nozzle body (see Fig. 2-3h).
13. Bend thermocouple lead 90° along the length of the heater (see Fig. 2-3i). Bend heater and thermocouple leads to the correct “X” length at 90° angle to the heater. Do not rebend rigid leads. Rebending leads can result in damage to circuit.
14. Slide spacer and heater with thermocouple over nozzle body (see Fig. 2-3e).
15. DO NOT LUBRICATE OR USE ANTI-SEIZE ON RETAINER THREADS.
16. Assemble tip into retainer.
17. Thread retainer clockwise into the nozzle body and torque to 11.3N.m (8.3 ft-lbs/100 in-lbs) using a 10mm deep well 6-point socket tool and torque wrench (see Fig. 2-3b).
18. Wire heater and thermocouple leads to connectors on mold. Do not connect thermocouple leads to electric power.
19. Product may absorb moisture when cool. Use low voltage or power to drain out residual moisture before applying full power. Failure to do so may cause damage to this product.

NOTE: Drift Punch not supplied by DME.

Questions? Call DME at 1-800-626-6653 (U.S.) or 1-800-387-6600 (Canada)
Nozzles with Standard Coil Heater and Sprue Gate Tip
Tip, Retainer, Heater and Thermocouple Removal Instructions

1. Stellar nozzle sub-assembly with tip sub-assembly (see Fig. 2-4a). Threaded style nozzle with sprue gate tip shown.
2. Safety glasses and gloves should be worn when working on the mold.
3. Turn nozzle heater on, and set at 10-38°C (50-100°F) below set point of processing temperature to allow for easier tip removal.
4. Carefully clean plastic material from around tip and retainer.
5. Remove sprue gate tip with a 8mm deep well socket turning counterclockwise. Do not damage 7mm diameter seal-off area or front molding surface (see Fig. 2-4b).
6. Clean plastic material from nozzle and tip threads. Also, clean plastic material from tip counterbore in nozzle body to ensure proper assembly.
7. Turn off nozzle heater and allow to cool down (see Fig. 2-4c).
8. Remove heater, snap ring, thermocouple and spacer from nozzle body (see Fig. 2-4d).
9. Measure thermocouple leads "X" (see Fig. 2-4e).
10. Remove thermocouple from heater end cap groove (see Fig. 2-4f).
11. Carefully place new thermocouple into heater end cap groove with lead coming out the slot. Use an 8mm (5/16") point diameter drift punch by hand to spread the thermocouple into the heater end cap groove. This will allow the heater with thermocouple to slide onto nozzle body (see Fig. 2-4g).
12. Bend thermocouple lead 90° along the length of the heater (see Fig. 2-4h). Bend heater and thermocouple leads to the correct "X" length at 90° angle to the heater. Do not rebend rigid leads. Rebending leads can result in damage to circuit.
13. Slide spacer and heater with thermocouple over nozzle body (see Fig. 2-4d). Add snap ring.
14. DO NOT LUBRICATE OR USE ANTI-SEIZE ON THREADS.
15. Thread tip clockwise into the nozzle body and torque to 14 N.m [10.42 ft-lbs/125 in-lbs] using an 8mm deep well socket tool (see Fig 2-4b).
16. Wire heater and thermocouple leads to connectors on mold. Do not connect thermocouple leads to electric power.
17. Product may absorb moisture when cool. Use low voltage or power to drain out residual moisture before applying full power. Failure to do so may cause damage to this product.

NOTE: Drift Punch not supplied by DME.
Nozzles with High Performance Heater and Point Gate Tip
Tip, Retainer and Heater Removal Instructions

Fig. 2-5

1. Stellar nozzle sub-assembly with tip sub-assembly (see Fig. 2-5a). Threaded style nozzle with SXF5000 retainer and SXT5010 tip shown. Same instructions apply to SXT5200 Tips.

2. Safety glasses and gloves should be worn when working on the mold.

3. Turn nozzle heater on, and set at 10-38°C (50-100°F) below set point of processing temperature to allow for easier tip removal.

4. Carefully clean plastic material from around tip and retainer.

5. Remove retainer with 10mm deep well 6-point socket turning counterclockwise (see Fig. 2-5b). Socket will fit over the front seal-off area when placed on retainer hex. DO NOT DAMAGE SEAL-OFF AREA.

6. Carefully remove tip from retainer (see Fig. 2-5c). Inspect seal-off area for out of roundness and/or score marks on seal area, and replace retainer if either condition occurs. Inspect tip for any wear and replace if wear has occurred.

7. Clean plastic material from thread and counterbore areas in nozzle body to ensure proper assembly (see Fig. 2-5d).

8. Turn off nozzle heater and disconnect heater and thermocouple leads from connectors on mold. Allow nozzle time to cool down.

9. Remove heater and spacer from nozzle body (see Fig. 2-5e).

10. If the heater is hard to remove use the removal holes placed 180° apart on the heater body (see Fig. 2-5d). Do not use the leads to pull the nozzle off.

11. Bend heater and thermocouple leads only if needed to better fit in the wire channel. For most cases, the heater leads will exit into the wire channel. CAUTION: REPEATED BENDING OF THE HEATER AND THERMOCOUPLE LEADS CAN FRACTURE LEAD WIRES.

12. Slide spacer and heater with thermocouple over nozzle body (see Fig. 2-5e).

13. DO NOT LUBRICATE OR USE ANTI-SEIZE ON RETAINER THREADS.


15. Thread retainer clockwise into the nozzle body and torque to 11.3 N.m (8.3 ft-lbs/100 in-lbs) using a 10mm deep well 6-point socket tool and torque wrench (see Fig. 2-5b).

16. Wire heater and thermocouple leads to connectors on mold. Do not connect thermocouple leads to electric power.

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

Questions? Call DME at 1-800-626-6653 (U.S.) or 1-800-387-6600 (Canada)
Nozzle Body (Threaded Style) Removal Instructions

Fig. 2-6

1. Stellar nozzle sub-assembly with tip sub-assembly (see Fig. 2-6a). Threaded style nozzle with SXF5000 Retainer and SXT5010 Tip shown. Instructions also apply to SXT5200 Tip.
2. Safety glasses and gloves should be worn when working on the mold.
3. Turn nozzle heater on, and set at 10-38°C (50-100°F) below set point of processing temperature to allow for easier tip removal.
4. Carefully clean plastic material from around tip and retainer.
5. Remove retainer with 10mm deep well 6-point socket turning counterclockwise (see Fig. 2-6b). Socket will fit over the front seal-off area when placed on retainer hex. DO NOT DAMAGE SEAL-OFF AREA.
6. Carefully remove tip from retainer (see Fig. 2-6c). Inspect seal-off area for out of roundness and/or score marks on seal area, and replace retainer if either condition occurs. Inspect tip for any wear and replace if wear has occurred.
7. Clean plastic material from thread and counterbore areas in nozzle body to ensure proper assembly (see Fig. 2-6d).
8. Turn off nozzle heater and disconnect heater and thermocouple leads from connectors on mold. Allow nozzle time to cool down.
9. Remove heater, thermocouple and spacer from nozzle body (see Fig. 2-6e).
10. Remove nut counterclockwise with socket tool DME Item No. SXW0002 (see Fig. 2-6f).
11. Remove nozzle body from manifold.
12. Clean plastic material from thread and counterbore areas in manifold to ensure proper assembly.
13. Place nozzle body into manifold.
14. Thread nut clockwise into the manifold and torque to 81N.m (60 ft-lbs) using nut socket tool and torque.
15. Slide spacer and heater with thermocouple over nozzle body (see Fig. 2-6e).
16. DO NOT LUBRICATE OR USE ANTI-SEIZE ON RETAINER THREADS.
17. Assemble tip into retainer.
18. Thread retainer clockwise into the nozzle body and torque to 11.3 Nm (8.3 ft-lbs/100 in-lbs) using a 10mm deep well 6-point socket tool and torque wrench (see Fig. 2-6b).
19. Wire heater and thermocouple leads to connectors on mold. Do not connect thermocouple leads to electric power.
20. Product may absorb moisture when cool. Use low voltage or power to drain out residual moisture before applying full power. Failure to do so may cause damage to this product.
Wiring Schematics

Wiring into the terminal box to be as shown in the table below.

Table 2-1

<table>
<thead>
<tr>
<th>LAYOUT</th>
<th>DME-CONTROLLER</th>
<th>Zone #1</th>
<th>Zone #2</th>
<th>Zone #3</th>
<th>Zone #4</th>
<th>Zone #5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Drop</td>
<td>2 Zones</td>
<td>Nozzle</td>
<td>Bushing Head</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Designed to operate on a 230-volt supply.
2. Thermocouple leads are black and white. White is negative (-); black is positive (+).

J TYPE THERMOCOUPLE STANDARDS

<table>
<thead>
<tr>
<th>STANDARD</th>
<th>+ LEAD (MAGNETIC)</th>
<th>− LEAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTERNATIONAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IEC 584-3</td>
<td>Black</td>
<td>White</td>
</tr>
<tr>
<td>ASTM E230</td>
<td>White</td>
<td>Red</td>
</tr>
<tr>
<td>BS 1843</td>
<td>Yellow</td>
<td>Blue</td>
</tr>
<tr>
<td>DIN 43710</td>
<td>Red</td>
<td>Blue</td>
</tr>
<tr>
<td>JIS C 1610-1981</td>
<td>Red</td>
<td>White</td>
</tr>
<tr>
<td>NFC 42-324</td>
<td>Yellow</td>
<td>Black</td>
</tr>
</tbody>
</table>
Parts List
Fig. 2-7
## Parts List

<table>
<thead>
<tr>
<th>CALLOUT NO.</th>
<th>DESCRIPTION</th>
<th>QTY</th>
<th>ITEM NO.</th>
<th>CALLOUT NO.</th>
<th>DESCRIPTION</th>
<th>QTY</th>
<th>ITEM NO.</th>
<th>CALLOUT NO.</th>
<th>DESCRIPTION</th>
<th>QTY</th>
<th>ITEM NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nozzle sub-assembly (A = 65) (standard heater)</td>
<td>1</td>
<td>SXY0065</td>
<td>1</td>
<td>Nozzle sub-assembly (A = 65) (high performance heater)</td>
<td>1</td>
<td>SXY0965</td>
<td>1</td>
<td>Nozzle sub-assembly (A = 65) (standard heater)</td>
<td>1</td>
<td>SXY8065</td>
</tr>
<tr>
<td></td>
<td>Nozzle body</td>
<td>1</td>
<td>SXB4068</td>
<td></td>
<td>Nozzle body</td>
<td>1</td>
<td>SXB4068</td>
<td></td>
<td>Nozzle body</td>
<td>1</td>
<td>SXB4068</td>
</tr>
<tr>
<td></td>
<td>Nozzle heater</td>
<td>1</td>
<td>SHH1039</td>
<td></td>
<td>Nozzle heater</td>
<td>1</td>
<td>SHH1039</td>
<td></td>
<td>Nozzle heater</td>
<td>1</td>
<td>SHH1039</td>
</tr>
<tr>
<td></td>
<td>Nozzle body nut*</td>
<td>1</td>
<td>SXE2013</td>
<td></td>
<td>Nozzle body nut*</td>
<td>1</td>
<td>SXE2013</td>
<td></td>
<td>Nozzle body nut*</td>
<td>1</td>
<td>SXE2013</td>
</tr>
<tr>
<td></td>
<td>Nozzle thermocouple</td>
<td>1</td>
<td>SXC1001</td>
<td></td>
<td>Nozzle thermocouple</td>
<td>1</td>
<td>SXC1001</td>
<td></td>
<td>Nozzle thermocouple</td>
<td>1</td>
<td>SXC1001</td>
</tr>
<tr>
<td></td>
<td>Nozzle heater stop*</td>
<td>1</td>
<td>SXD6501</td>
<td></td>
<td>Nozzle heater stop*</td>
<td>1</td>
<td>SXD6501</td>
<td></td>
<td>Nozzle heater stop*</td>
<td>1</td>
<td>SXD6501</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CALLOUT NO.</th>
<th>DESCRIPTION</th>
<th>QTY</th>
<th>ITEM NO.</th>
<th>CALLOUT NO.</th>
<th>DESCRIPTION</th>
<th>QTY</th>
<th>ITEM NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nozzle sub-assembly (A = 85) (standard heater)</td>
<td>1</td>
<td>SXY0085</td>
<td>1</td>
<td>Nozzle sub-assembly (A = 85) (high performance heater)</td>
<td>1</td>
<td>SXY0985</td>
</tr>
<tr>
<td></td>
<td>Nozzle body</td>
<td>1</td>
<td>SXB4088</td>
<td></td>
<td>Nozzle body</td>
<td>1</td>
<td>SXB4088</td>
</tr>
<tr>
<td></td>
<td>Nozzle thermocouple</td>
<td>1</td>
<td>SXC1001</td>
<td></td>
<td>Nozzle thermocouple</td>
<td>1</td>
<td>SXC1001</td>
</tr>
<tr>
<td></td>
<td>Nozzle heater</td>
<td>1</td>
<td>SHH1059</td>
<td></td>
<td>Nozzle heater</td>
<td>1</td>
<td>SHH1059</td>
</tr>
</tbody>
</table>

| CALLOUT NO. | DESCRIPTION | QTY | ITEM NO. | CALLOUT NO. | DESCRIPTION | QTY | ITEM NO. |
|-------------|-------------|-----|---------|-------------|-------------|-----|---------|-------------|-------------|-----|---------|
| 1           | Nozzle sub-assembly (A = 105) (standard heater) | 1   | SXY0105 | 1           | Nozzle sub-assembly (A = 105) (high performance heater) | 1   | SXY0905 | 1           | Nozzle sub-assembly (A = 105) (standard heater) | 1   | SXY8105 |
|             | Nozzle body                                        | 1   | SXB4108 |             | Nozzle body                                         | 1   | SXB4108 |             | Nozzle body                                         | 1   | SXB4108 |
|             | Nozzle thermocouple                                 | 1   | SXC1001 |             | Nozzle thermocouple                                   | 1   | SXC1001 |             | Nozzle thermocouple                                   | 1   | SXC1001 |
|             | Nozzle heater                                       | 1   | SHH1079 |             | Nozzle heater                                        | 1   | SHH1079 |             | Nozzle heater                                        | 1   | SHH1079 |

| CALLOUT NO. | DESCRIPTION | QTY | ITEM NO. | CALLOUT NO. | DESCRIPTION | QTY | ITEM NO. |
|-------------|-------------|-----|---------|-------------|-------------|-----|---------|-------------|-------------|-----|---------|
| 1           | Nozzle sub-assembly (A = 125) (standard heater) | 1   | SXY0125 | 1           | Nozzle sub-assembly (A = 125) (high performance heater) | 1   | SXY0925 | 1           | Nozzle sub-assembly (A = 125) (standard heater) | 1   | SXY8125 |
|             | Nozzle body                                        | 1   | SXB4128 |             | Nozzle body                                         | 1   | SXB4128 |             | Nozzle body                                         | 1   | SXB4128 |
|             | Nozzle thermocouple                                 | 1   | SXC1001 |             | Nozzle thermocouple                                   | 1   | SXC1001 |             | Nozzle thermocouple                                   | 1   | SXC1001 |
|             | Nozzle heater                                       | 1   | SHH1099 |             | Nozzle heater                                        | 1   | SHH1099 |             | Nozzle heater                                        | 1   | SHH1099 |

| CALLOUT NO. | DESCRIPTION | QTY | ITEM NO. | CALLOUT NO. | DESCRIPTION | QTY | ITEM NO. |
|-------------|-------------|-----|---------|-------------|-------------|-----|---------|-------------|-------------|-----|---------|
| 1           | Nozzle sub-assembly (A = 145) (standard heater) | 1   | SXY0145 | 1           | Nozzle sub-assembly (A = 145) (high performance heater) | 1   | SXY0945 | 1           | Nozzle sub-assembly (A = 145) (standard heater) | 1   | SXY8145 |
|             | Nozzle body                                        | 1   | SXB4148 |             | Nozzle body                                         | 1   | SXB4148 |             | Nozzle body                                         | 1   | SXB4148 |
|             | Nozzle thermocouple                                 | 1   | SXC1001 |             | Nozzle thermocouple                                   | 1   | SXC1001 |             | Nozzle thermocouple                                   | 1   | SXC1001 |
|             | Nozzle heater                                       | 1   | SHH1119 |             | Nozzle heater                                        | 1   | SHH1119 |             | Nozzle heater                                        | 1   | SHH1119 |

* Common for all Stellar nozzle sub-assemblies in each individual column.

**NOTE:** Items SXY8065, SXY8085, SXY8105, SXY8125 and SXY8145 for Sprue Gate only.
# Parts List

<table>
<thead>
<tr>
<th>CALLOUT NO.</th>
<th>DESCRIPTION</th>
<th>QTY</th>
<th>ITEM NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Point gate tip sub-assembly - standard</td>
<td>1</td>
<td>SXG5110</td>
</tr>
<tr>
<td>2</td>
<td>Point gate tip sub-assembly - high</td>
<td>1</td>
<td>SXG5020</td>
</tr>
<tr>
<td>2</td>
<td>Thru hole tip sub-assembly - high</td>
<td>1</td>
<td>SXG5201</td>
</tr>
<tr>
<td>2</td>
<td>Sprue gate tip</td>
<td>1</td>
<td>SXT1040</td>
</tr>
<tr>
<td>3</td>
<td>Heated MEN sub-assembly (Hot Sprue</td>
<td>1</td>
<td>SNL 1004 SNL 2004</td>
</tr>
<tr>
<td></td>
<td>bushing sub-assembly)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3A</td>
<td>Single nozzle locator</td>
<td>1</td>
<td>SAL 1004 SAL 1004</td>
</tr>
<tr>
<td>3B</td>
<td>Locator screws</td>
<td>4</td>
<td>M845 M845</td>
</tr>
<tr>
<td>3C</td>
<td>Locator heater</td>
<td>1</td>
<td>MH0012 MH0012</td>
</tr>
<tr>
<td>3D</td>
<td>Locator thermocouple</td>
<td>1</td>
<td>SXC2001 SXC2001</td>
</tr>
<tr>
<td>3E</td>
<td>Locator thermocouple screw</td>
<td>1</td>
<td>M68LH M68LH</td>
</tr>
<tr>
<td>3F</td>
<td>Locator dowels</td>
<td>2</td>
<td>DP432 DP432</td>
</tr>
<tr>
<td>3G</td>
<td>Support pads</td>
<td>4</td>
<td>SXS3030 SXS3030</td>
</tr>
<tr>
<td>3H</td>
<td>Support pad screws</td>
<td>4</td>
<td>M610 M610</td>
</tr>
<tr>
<td>4</td>
<td>Locating ring</td>
<td>1</td>
<td>GXL2001 GXL2001</td>
</tr>
<tr>
<td>5</td>
<td>Wire covers</td>
<td>X</td>
<td>WC0001, WC0002 &amp; WC0003 WC0001, WC0002 &amp; WC0003</td>
</tr>
<tr>
<td>6</td>
<td>Wire cover screws</td>
<td>X</td>
<td>M612BHCS M612BHCS</td>
</tr>
<tr>
<td>7</td>
<td>Nut socket tool</td>
<td>1</td>
<td>SXW0002 SXW0002</td>
</tr>
<tr>
<td>8</td>
<td>Sprue gate tip socket tool</td>
<td>1</td>
<td>SXW0003 SXW0003</td>
</tr>
<tr>
<td>9</td>
<td>Locating screws</td>
<td>2</td>
<td>SM820 SM820</td>
</tr>
</tbody>
</table>

**NOTE:** X item quantities to be determined by customer.
## Ordering Procedure

### REQUIRED ORDERING INFORMATION:

1. **Hot Sprue Bushing Sub-Assembly:**
   Select an appropriate gating method. For quick reference see pages 5, 8 (metric) or 12 (inch), “Nozzle Selection.”

2. **Nozzle Tip or Nozzle Tip Sub-Assembly:**
   Determine the nozzle body sub-assembly item number required from the calculation sheets. For quick reference see pages 8 (metric) or 12 (inch), “Nozzle Selection” and page 29 “Nozzle Body Information.” Determine nozzle heater type: Coil Heater or High Performance Embedded Heater.

3. **Nozzle Body Sub-Assembly:**

4. **Machine Nozzle Spherical Radius:**
   Specify 1/2 in [12.7 mm] or 3/4 in [19.05 mm]

### First-Time Customers Will Need:

5. **Sprue Gate Tip Socket Tool** (see Fig. 3-5):

6. **Nut Socket Tool** (see Fig. 3-6):

### Additional Items:

7. **Power and Thermocouple Connectors:**
   (5-zone optional)

8. **Combination Terminal Mounting Box with Terminal Strip:**
   (5-zone optional)

---

### Worksheet

<table>
<thead>
<tr>
<th>Worksheet</th>
<th>Example:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ________</td>
<td>________</td>
</tr>
<tr>
<td>1. ________</td>
<td>SSL1004</td>
</tr>
<tr>
<td>2. ________</td>
<td>________</td>
</tr>
<tr>
<td>2. ________</td>
<td>SXT1040</td>
</tr>
<tr>
<td>3. ________</td>
<td>________</td>
</tr>
<tr>
<td>3. ________</td>
<td>SXY8085</td>
</tr>
<tr>
<td>4. ________</td>
<td>________</td>
</tr>
<tr>
<td>4. ________</td>
<td>1/2 in</td>
</tr>
<tr>
<td>5. ________</td>
<td>________</td>
</tr>
<tr>
<td>5. ________</td>
<td>SXW0003</td>
</tr>
<tr>
<td>6. ________</td>
<td>________</td>
</tr>
<tr>
<td>6. ________</td>
<td>SXW0002</td>
</tr>
<tr>
<td>7. ________</td>
<td>________</td>
</tr>
<tr>
<td>7. ________</td>
<td>5-Zone</td>
</tr>
<tr>
<td>8. ________</td>
<td>________</td>
</tr>
<tr>
<td>8. ________</td>
<td>5-Zone</td>
</tr>
</tbody>
</table>
## Nozzle Body Information

### Section 3

**Ordering Information**

**Fig. 3-2**

**Fig. 3-3**

**Fig. 3-4**

### Item Numbers for Threaded Style Standard Heater Nozzle Assemblies

<table>
<thead>
<tr>
<th>SUB-ASSEMBLY COMPONENT</th>
<th>CALLOUT NO.</th>
<th>ITEM NO.</th>
<th>ITEM NO.</th>
<th>ITEM NO.</th>
<th>ITEM NO.</th>
<th>ITEM NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nozzle Body</td>
<td>SXB4xxx</td>
<td>SXB4068</td>
<td>SXB4088</td>
<td>SXB4108</td>
<td>SXB4128</td>
<td>SXB4148</td>
</tr>
<tr>
<td>Nut</td>
<td>1</td>
<td>SXE2013</td>
<td>SXE2013</td>
<td>SXE2013</td>
<td>SXE2013</td>
<td>SXE2013</td>
</tr>
<tr>
<td>Heater Stop</td>
<td>2</td>
<td>SXD6501</td>
<td>SXD6501</td>
<td>SXD6501</td>
<td>SXD6501</td>
<td>SXD6501</td>
</tr>
<tr>
<td>Nozzle Heater</td>
<td>3</td>
<td>SHH1039</td>
<td>SHH1059</td>
<td>SHH1079</td>
<td>SHH1099</td>
<td>SHH1119</td>
</tr>
<tr>
<td>Nozzle Thermocouple</td>
<td>4</td>
<td>SXC1001</td>
<td>SXC1001</td>
<td>SXC1001</td>
<td>SXC1001</td>
<td>SXC1001</td>
</tr>
</tbody>
</table>

### Item Numbers for Threaded Style High Performance Heater Nozzle Assemblies

<table>
<thead>
<tr>
<th>SUB-ASSEMBLY COMPONENT</th>
<th>CALLOUT NO.</th>
<th>ITEM NO.</th>
<th>ITEM NO.</th>
<th>ITEM NO.</th>
<th>ITEM NO.</th>
<th>ITEM NO.</th>
<th>ITEM NO.</th>
<th>ITEM NO.</th>
<th>ITEM NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nozzle Body</td>
<td>SXB4xxx</td>
<td>SXB4068</td>
<td>SXB4088</td>
<td>SXB4108</td>
<td>SXB4128</td>
<td>SXB4148</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nut</td>
<td>1</td>
<td>SXE2013</td>
<td>SXE2013</td>
<td>SXE2013</td>
<td>SXE2013</td>
<td>SXE2013</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heater Stop</td>
<td>2</td>
<td>SXD6501</td>
<td>SXD6501</td>
<td>SXD6501</td>
<td>SXD6501</td>
<td>SXD6501</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nozzle Heater</td>
<td>3</td>
<td>SHH1039</td>
<td>SHH1059</td>
<td>SHH1079</td>
<td>SHH1099</td>
<td>SHH1119</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snap Ring</td>
<td>4</td>
<td>SXE1039</td>
<td>SXE1059</td>
<td>SXE1079</td>
<td>SXE1099</td>
<td>SXE1119</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Notes:
- For high performance heater, thermocouple is embedded in the heater body.
- Tip information and Gating Styles are provided on page 5, Section 1.

### Assembly Tools

#### Fig. 3-5
- Sprue Gate Tip Socket Tool (SXW0003)

#### Fig. 3-6
- Nut Socket Tool (SXW0002)
Locating Rings

Fig. 3-9
Locating Ring for Hot Sprue Bushing

<table>
<thead>
<tr>
<th>LOCATING RING</th>
<th>ITEM NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>For Hot Sprue Bushing</td>
<td>GXL2001</td>
</tr>
</tbody>
</table>

Questions? Call DME at 1-800-626-6653 (U.S.) or 1-800-387-6600 (Canada)
Excellent Results with Engineering Thermoplastics

The complexity of today’s very small part molding applications demands the added properties of high performance engineered materials. Stellar was designed for outstanding processing of these materials. Challenging amorphous materials such as PET or crystalline materials including PBT and PA are easily processed with the Stellar Hot Sprue Bushing. Highly conductive tip designs and precise heat profiling in all nozzle lengths ensure consistent processing temperatures.

Modularity Increases Application Flexibility

The Stellar Hot Sprue Bushing System from DME is built on a standardized architecture of modular components. Key features include:

- Choice of standard or high performance nozzle heaters
- Three different “A” dimensions from 65-105mm are available for threaded style nozzles
- Three interchangeable tip styles – Point Gate, Thru Hole Gate and Sprue Gate