

D-M-E Stellar<sup>®</sup> 5000  
Hot Runner Systems  
*Round and Rectangular MNAs*



# QUICK REFERENCE GUIDE

Stellar® MNAs

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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 may result in serious injury or death.



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.



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.

**This D-M-E Stellar MNAs Quick Reference Guide is intended to provide options for gating, nozzle selection, and layout. For detailed information, including item numbers, please refer to the Stellar 5000 Round or Rectangular MNA Design and Assembly Guides.**

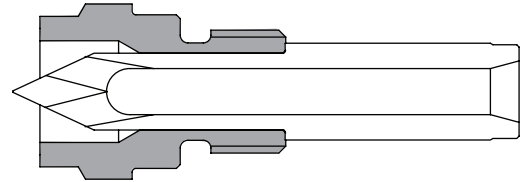
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## Gating Style Selection

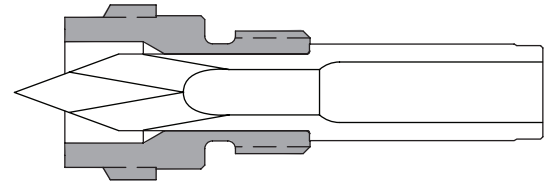
**Fig. 1 Standard Point Gate Tip Sub-Assembly, SXG5110**

- For use with unfilled resins up to 290°C (550°F)
- Fits Gate Details shown in Fig. 5



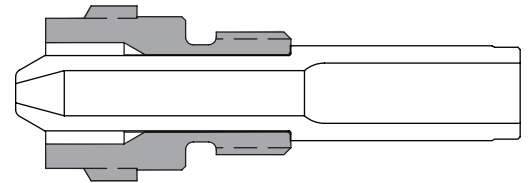
**Fig. 2 High Performance Point Gate Tip Sub-Assembly, SXG5020**

- For use with unfilled and filled resins up to 330°C (625°F)
- Fits Gate Details shown in Fig. 5



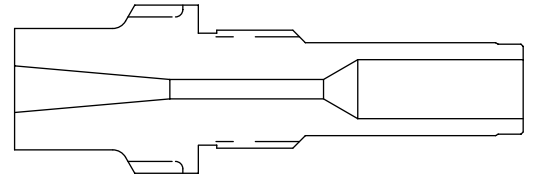
**Fig. 3 High Performance Thru Hole Tip Sub-Assembly, SXG5201**

- For use with unfilled and filled resins up to 330°C (625°F)
- Fits Gate Details shown in Fig. 5



**Fig. 4 Sprue Gate Tip, SXT1040**

- For use with unfilled and filled resins up to 330°C (625°F)
- Fits Gate Details shown in Fig. 6



**Table 1: Gating Style Item Numbers**

TIP Sub-Assembly Item Number	Description	TIP Item Number	TIP CTE (10-6/degC)	Retainer Item Number	Gating Style	Applicable Stellar System
SXG5110	Standard Point Gate Tip Sub-Assembly	SXT4010	17.5	SXF5100	Point Gate	Standard
SXG5020	High Performance Point Gate Tip Sub-Assembly	SXT5010	4.9	SXF5000	Point Gate	High Performance
SXG5201	High Performance Thru Hole Tip Sub-Assembly	SXT5200	4.9	SXF5000	Thru Hole Gate	High Performance
SXT1040	Sprue Gate	SXT1040	12.8	N/A	Sprue Gate	Standard

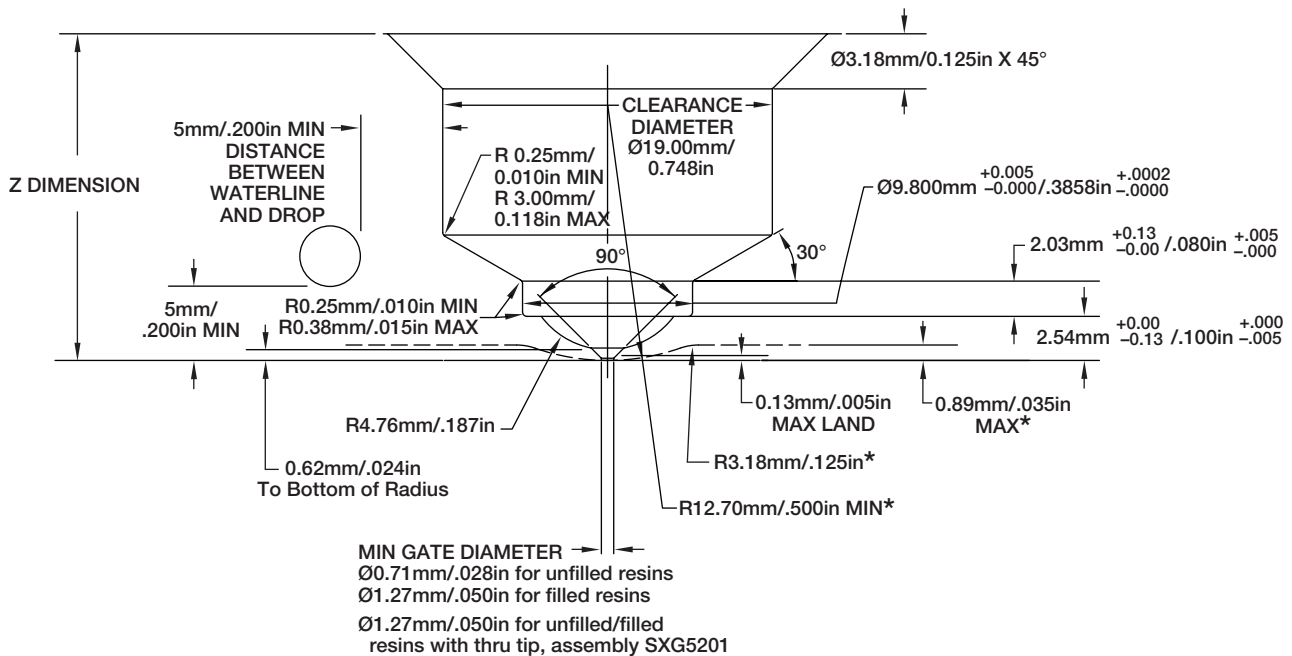
**NOTE:** All units are in mm.

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## Gate Details for use with Hardened Steel (50 HRC minimum)

**Fig. 5 Gate Details for Standard Point Gate, High Performance Point Gate and Thru Hole Point Gate Tips (SXG5110, SXG5020, SXG5200); For gating onto a flat surface or into a recess\* (“dimple”).**



### NOTES for Figure 5 & 6:

1. If gate detail does not properly fit the application, contact D-M-E for assistance about gate detail options.
2. Position gate detail within  $\pm 0.013\text{mm}/.0005\text{in}$  from nominal.
3. The gate diameter can be opened by the customer to suit the application. (The  $90^\circ$  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 8 for minimum and maximum “Z” dimensions.

**Questions? Call D-M-E at 1-800-626-6653 (U.S.) or 1-800-387-6600 (Canada)**



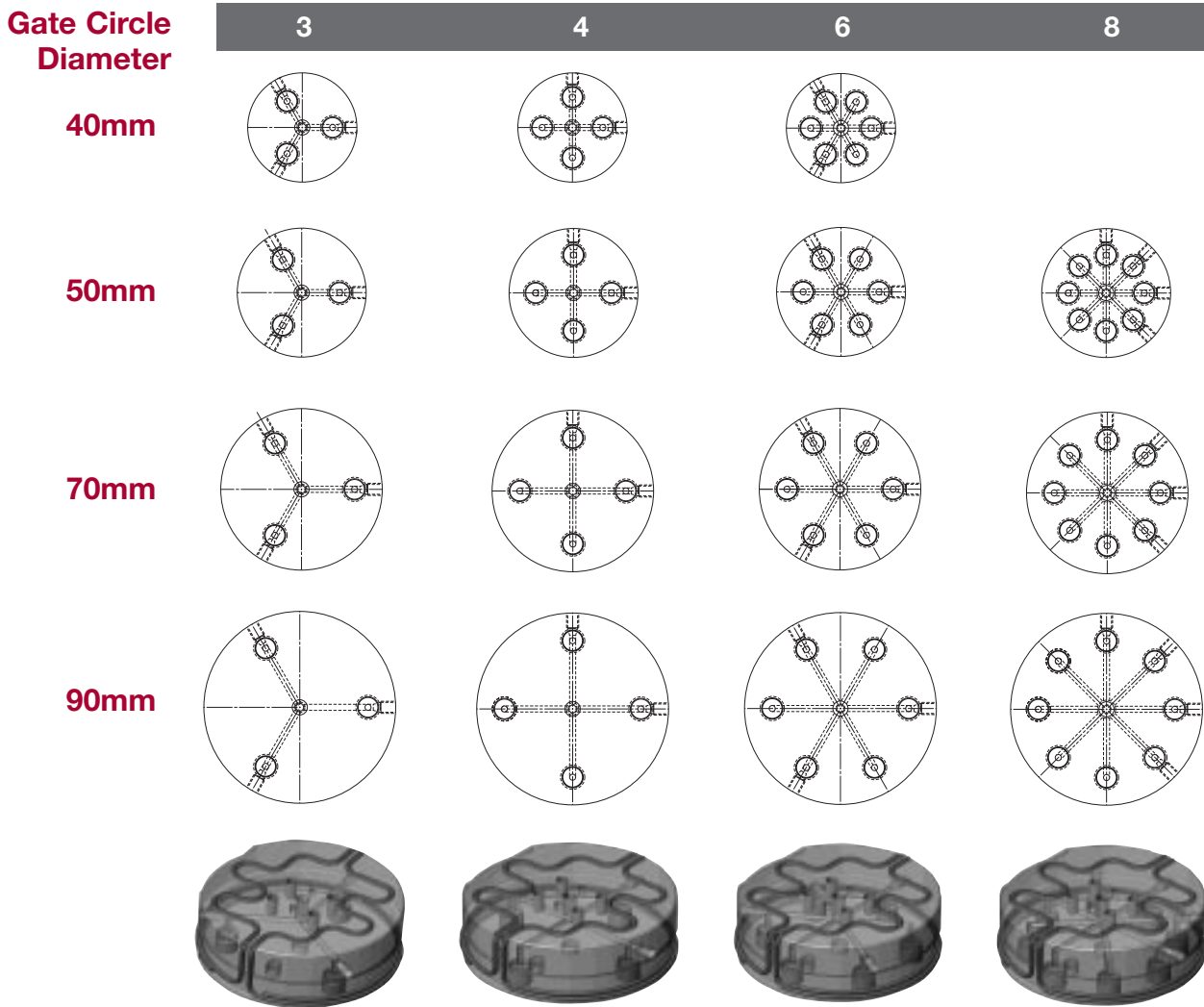
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## Manifold Options – Round MNAs

**NOTE:** Position gate detail within  $\pm 0.013\text{mm}/.0005\text{in}$  from nominal.

**Fig. 7**



**Table 2:**  
Drop Quantity and Outside Diameters for Each Round MNA

Gate Circle Diameter (mm)	Number of Drops				O.D.
	3	4	6	8	
40	✓	✓	✓	—	Ø72.00 [2.835]
50	✓	✓	✓	✓	Ø85.00 [3.346]
70	✓	✓	✓	✓	Ø106.50 [4.193]
90	✓	✓	✓	✓	Ø126.50 [4.980]

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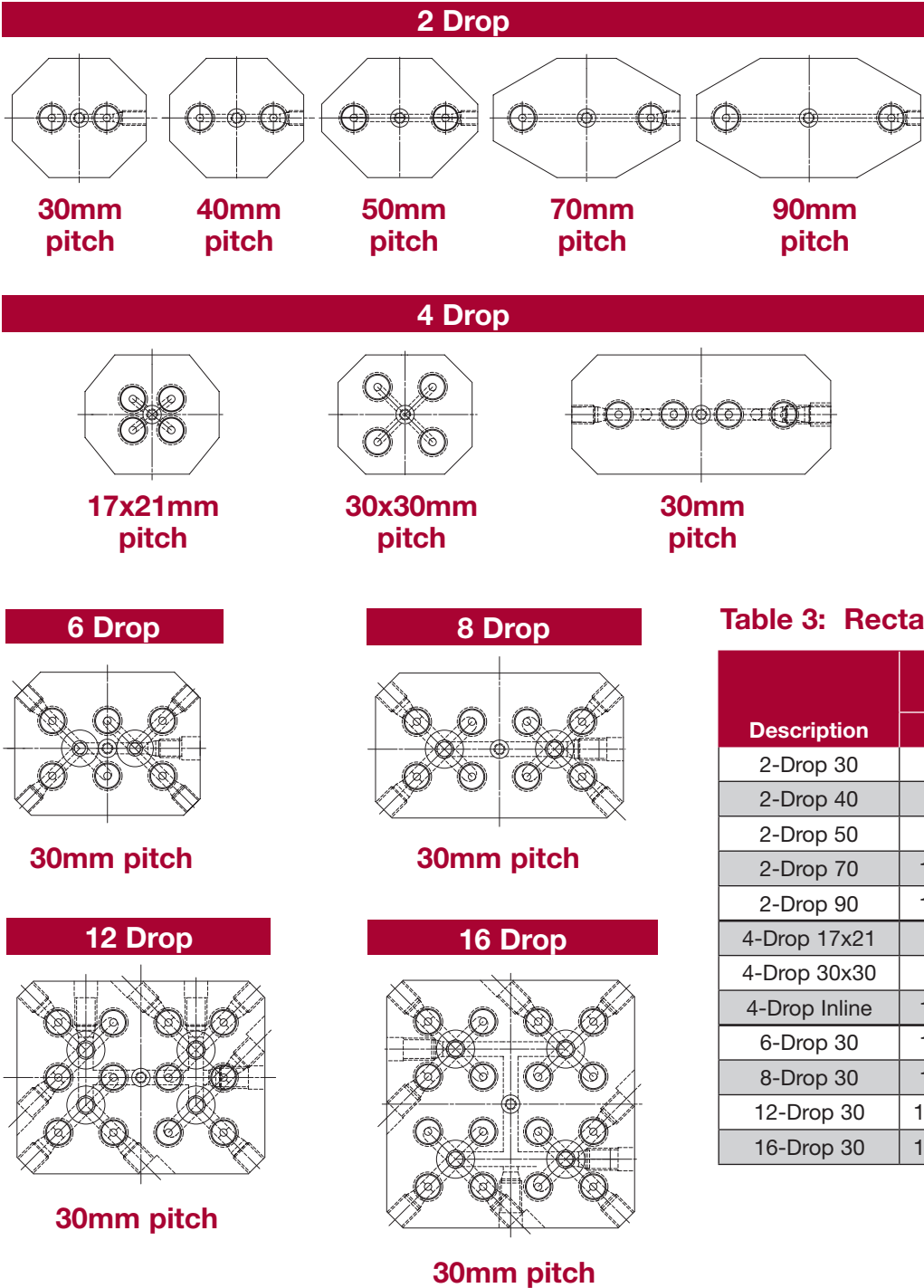
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## Manifold Options – Rectangular MNAs

**NOTE:** Position gate detail within  $\pm 0.013\text{mm}/.0005\text{in}$  from nominal.

**Fig. 8**



**Table 3: Rectangular MNA Dimensions**

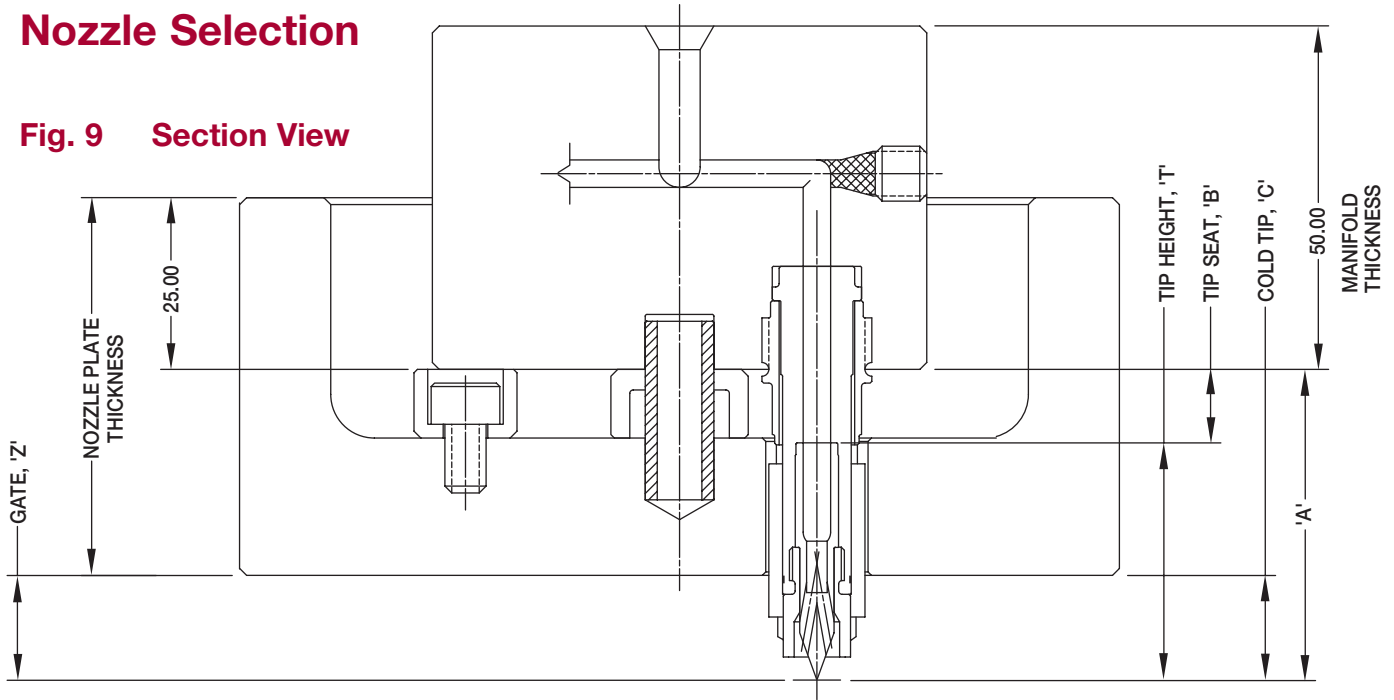
Description	Dimensions (Length x Width)	
	Millimeters	Inches
2-Drop 30	73.02 x 65.00	2.875 x 2.559
2-Drop 40	83.00 x 65.00	3.268 x 2.559
2-Drop 50	92.00 x 65.00	3.622 x 2.559
2-Drop 70	101.60 x 65.00	4.000 x 2.559
2-Drop 90	122.00 x 65.00	4.803 x 2.559
4-Drop 17x21	79.02 x 65.00	3.111 x 2.559
4-Drop 30x30	73.02 x 65.00	2.875 x 2.559
4-Drop Inline	141.00 x 65.00	5.551 x 2.559
6-Drop 30	101.00 x 78.00	3.976 x 3.071
8-Drop 30	135.00 x 79.00	5.315 x 3.110
12-Drop 30	135.00 x 105.00	5.315 x 4.134
16-Drop 30	135.00 x 135.00	5.315 x 5.315

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## Nozzle Selection

Fig. 9 Section View



## Tip Information for Gating Styles

TIP Sub-Assembly Item No.	Gating Style	TIP CTE (10-6/degC)	"T" = "A" - "B"	Applicable Stellar System
SXG5110	Standard Point Gate Tip Sub-Assembly	17.5	34.40	Standard
SXG5020	High Performance Point Gate Tip Sub-Assembly	4.9	34.40	High Performance
SXG5201	High Performance Thru Hole Tip Sub-Assembly	4.9	34.40	High Performance
SXT1040	Sprue Gate	12.8	34.40	Standard

Table 4: "A" and "B" Chart for Gating Styles

Nozzle Sub-Assembly Item No.	Point Gate "A"	Sprue Gate "A"	"B"	Notes
SXY0065 SXY0965	65.10	N/A	30.70	Standard coil heater; High performance heater
SXY0085 SXY0985	85.10	N/A	50.70	Standard coil heater; High performance heater
SXY0105 SXY0905	105.10	N/A	70.70	Standard coil heater; High performance heater
SXY8065	N/A	65.10	30.70	Standard coil heater with snap ring
SXY8085	N/A	85.10	50.70	Standard coil heater with snap ring
SXY8105	N/A	105.10	70.70	Standard coil heater with snap ring

Table 5: Manifold Thickness

CONFIGURATION	MANIFOLD THICKNESS
ALL 2 DROPS, 4 (17x21) AND 4 (30)	40.00
6 DROP	45.00
4 (30) INLINE, 8, 12 AND 16 DROP	50.00
ALL ROUND MNAS	50.00

### NOTES:

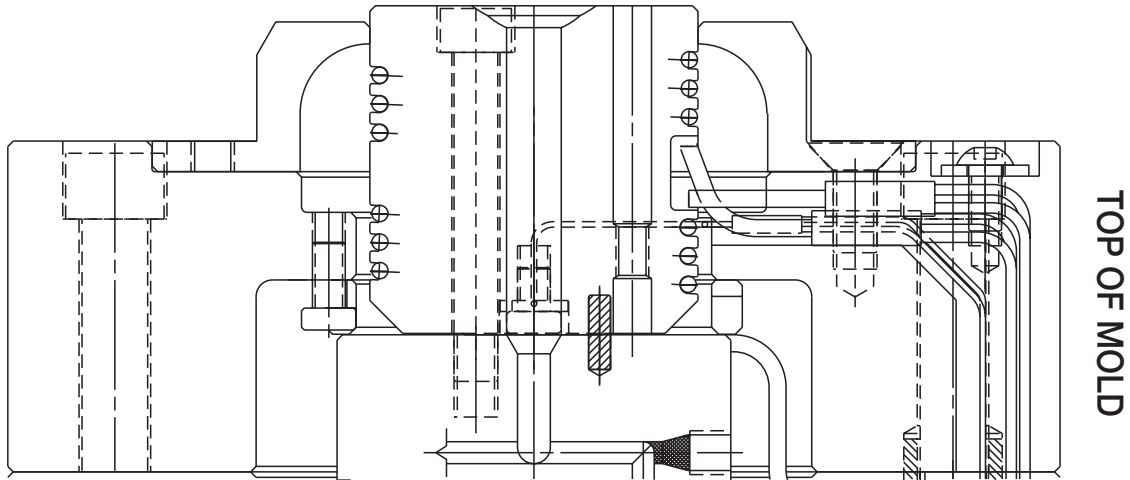
- All units are in mm.
- The minimum "Z" dimension is 13.00 and the maximum "Z" dimension is 75.00 for point gate and sprue gate tips.

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

## Heated and Unheated MEN Options

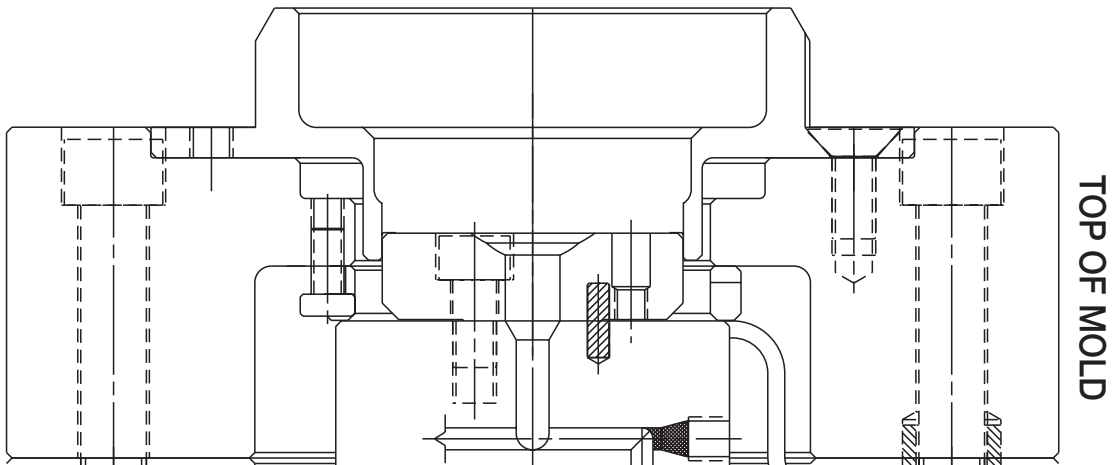
**Fig. 10 Heated MEN Design**

Preferred for most applications.



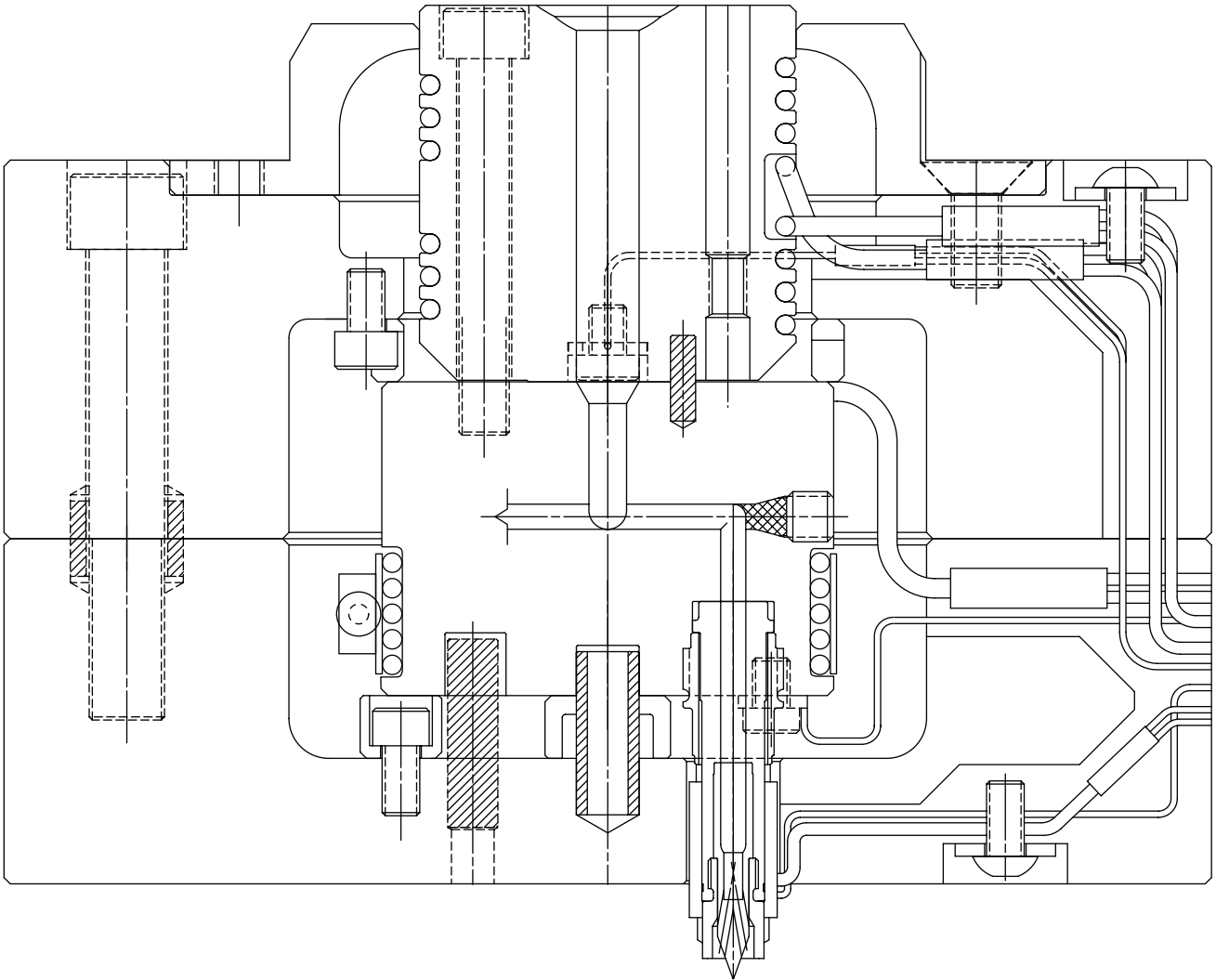
**Fig. 11 Unheated MEN Design**

For use with commodity resins only; i.e., PE, PP, PS.



General Assembly – Round MNAs

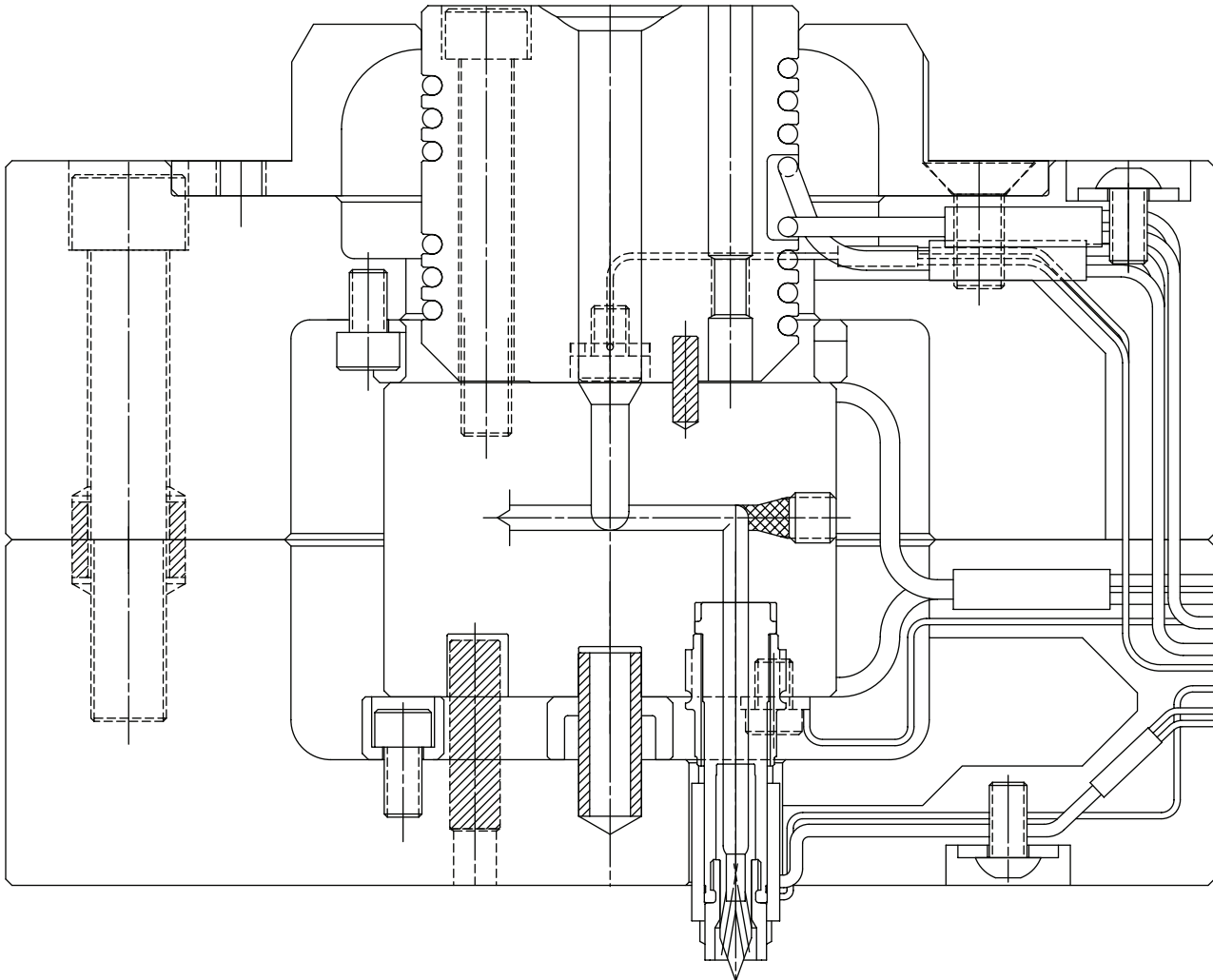
Fig. 12 Section View

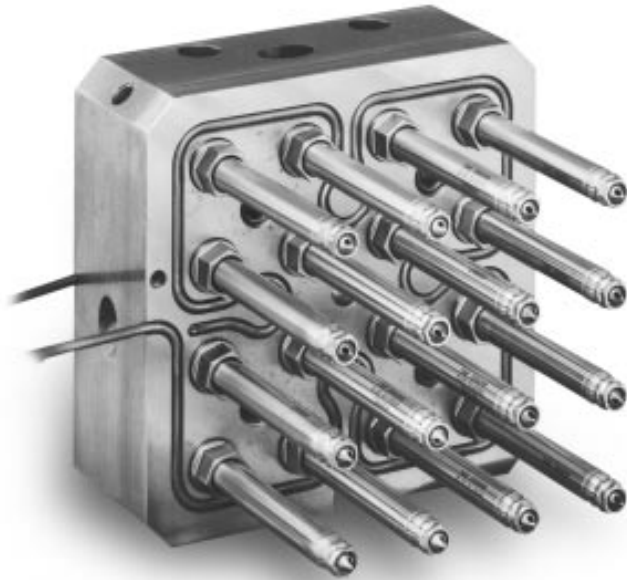


Questions? Call D-M-E at 1-800-626-6653 (U.S.) or 1-800-387-6600 (Canada)

## General Assembly – Rectangular MNAs

Fig. 13 Section View





Stellar MNAs also  
available as a  
hot-half assembly.



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