

DME Stellar MNA Systems

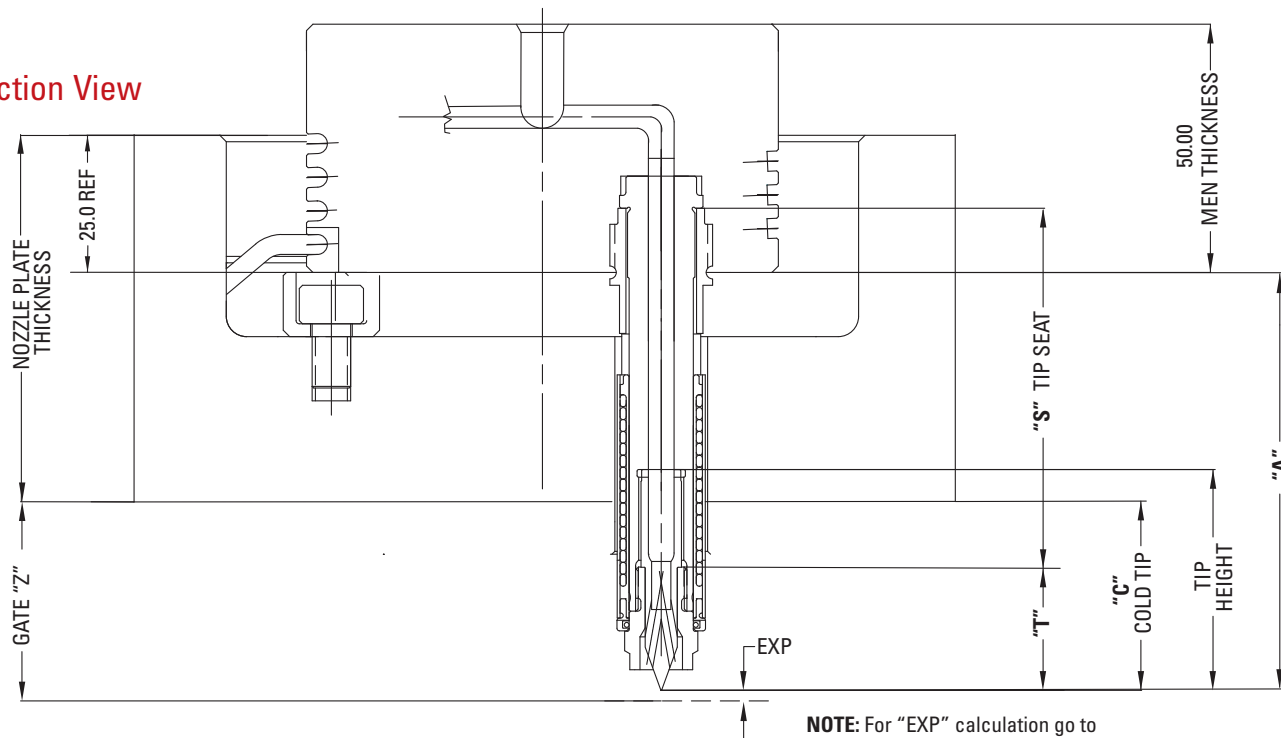
QUICK REFERENCE GUIDE
FOR MULTI-NOZZLE ASSEMBLY
DESIGN OPTIONS



Stellar MNA Systems

Nozzle Selection

Section View



NOTE: For "EXP" calculation go to www.dme.net/stellarcals

Tip Information for Gating Styles

TIP SUB-ASSEMBLY ITEM NO.	GATING STYLE	TIP CTE (10-6/degC)	"T" TIP HEIGHT	APPLICABLE STELLAR SYSTEM
SXG5110	Standard Point Gate Tip Sub-Assembly	17.5	34.40	Standard
SXG5020	High Performance Point Gate Tip Sub-Assembly	4.5	34.40	High Performance
SXG5201	High Performance Thru Hole Tip Sub-Assembly	4.5	33.40	High Performance
SXT1040	Sprue Gate	12.8	34.40	Standard

Table 2: "A" and "S" Chart for Gating Styles

NOZZLE SUB-ASSEMBLY ITEM NO.	POINT GATE "A"	SPRUE GATE "A"	"S"	NOTES
SXY0065 SXY0965	65.10	N/A	55.93	Standard coil heater, SHH1039 High performance heater, SXE1039
SXY0085 SXY0985	85.10	N/A	75.93	Standard coil heater, SHH1059 High performance heater, SXE1059
SXY0105 SXY0905	105.10	N/A	95.93	Standard coil heater, SHH1079 High performance heater, SXE1079
SXY0125 SXY0925	125.10	N/A	115.93	Standard coil heater, SHH1099 High performance heater, SXE1079
SXY0145 SXY0945	145.10	N/A	135.93	Standard coil heater, SHH1119 High performance heater, SXE1119
SXY8065	N/A	65.10	55.93	Standard coil heater, SHH1039 with snap ring, SXE2013
SXY8085	N/A	85.10	75.93	Standard coil heater, SHH1059 with snap ring, SXE2013
SXY8105	N/A	105.10	95.93	Standard coil heater, SHH1079 with snap ring, SXE2013
SXY8125	N/A	125.10	115.93	Standard coil heater, SHH1099 with snap ring, SXE2013
SXY8145	N/A	145.10	135.93	Standard coil heater, SHH1119 with snap ring, SXE2013

Table 3: Manifold Thickness

CONFIGURATION	MANIFOLD THICKNESS
ALL 2 DROPS, 4-DROP 17x21 4-DROP 30x30	40.00
6 DROP	45.00
4-DROP 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 115 for point gate and sprue gate tips.

Gating Style Selection

The *DME Stellar Multi-Nozzle Assembly 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 Round or Rectangular MNA Assembly Guides.

Gating Style Selection

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

- For use with unfilled resins up to 290°C (550°F)

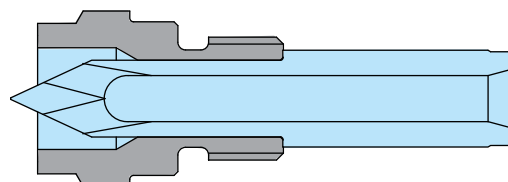


Fig. 2 High Performance Point Gate Tip Sub-Assembly, SXG5020

- For use with unfilled and filled resins up to 330°C (625°F)

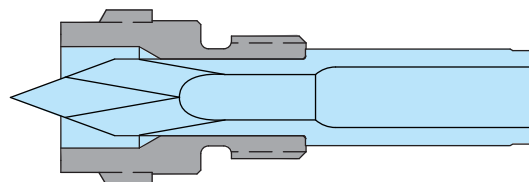


Fig. 3 High Performance Thru Hole Tip Sub-Assembly, SXG5201

- For use with unfilled and filled resins up to 330°C (625°F)

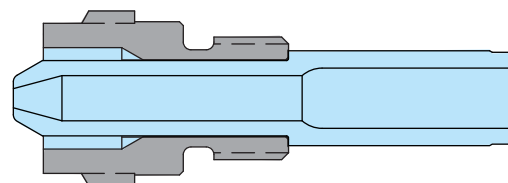


Fig. 4 Sprue Gate Tip, SXT1040

- For use with unfilled and filled resins up to 330°C (625°F)

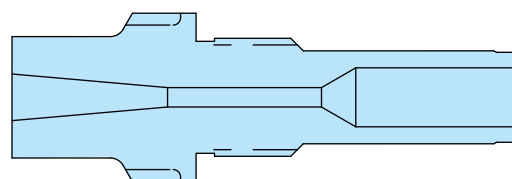


Table 1: Gating Style Item Numbers

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	4.5	SXF5000	Point Gate	High Performance
SXG5201	High Performance Thru Hole Tip Sub-Assembly	SXT5200	4.5	SXF5000	Thru Hole Gate	High Performance
SXT1040	Sprue Gate	SXT1040	12.8	N/A	Sprue Gate	Standard

NOTE: All units are in mm.

Gate Details for use with Hardened Steel (50HRC min.)

Fig. 6 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")

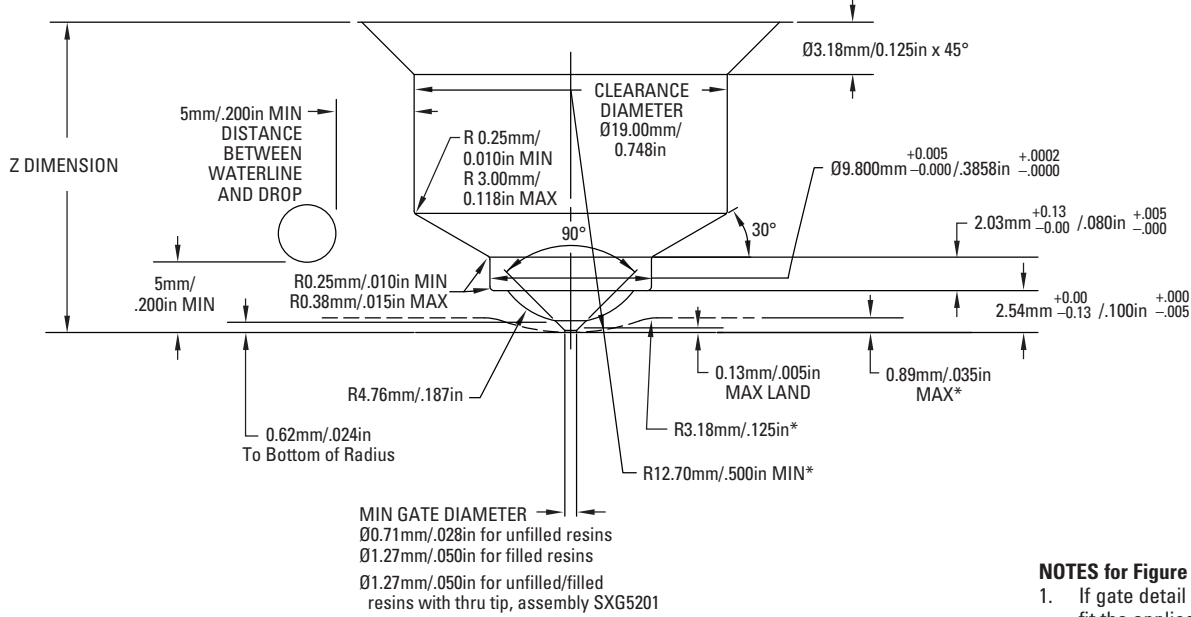
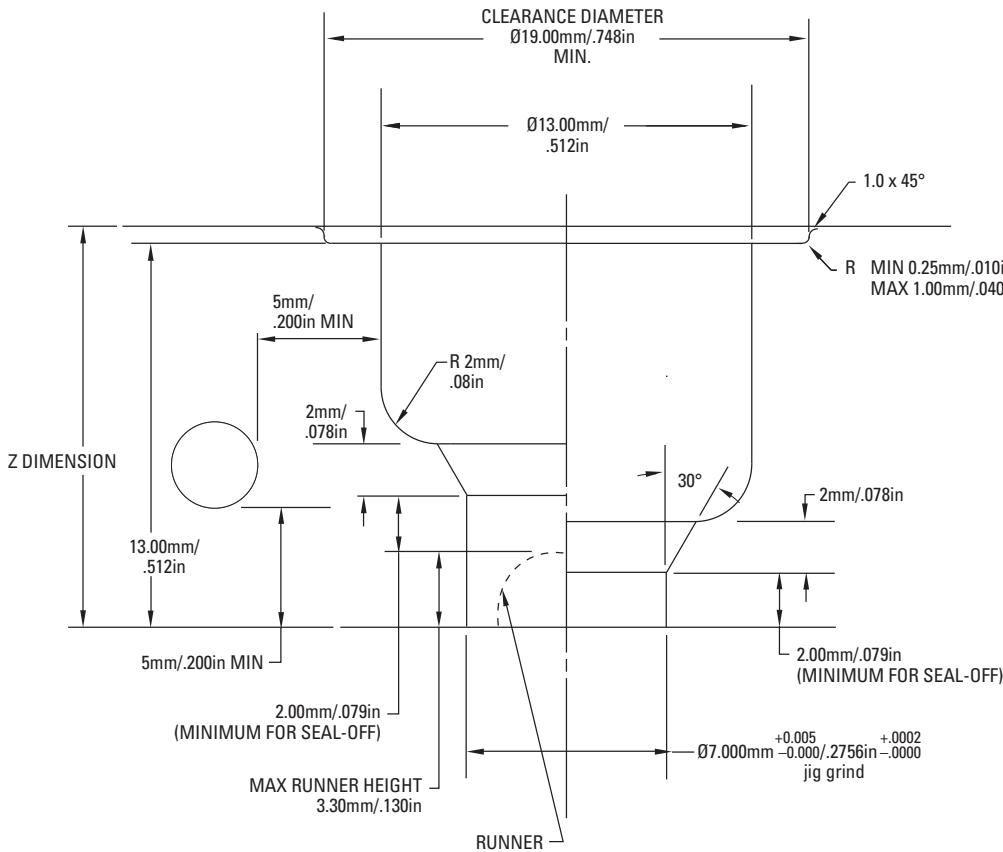


Fig. 7 Gate Details for Sprue Gate Tips, SXT1040



Shown with Runner

Shown without Runner

NOTES for Figure 6 & 7:

1. If gate detail does not properly fit the application, contact DME 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 land must be re-machined to the maximum dimension 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. The minimum "Z" dimension is 13.00 and the maximum "Z" dimension is 115 for point gate and sprue gate tips.

Manifold Options – Round MNAs

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

Fig. 8

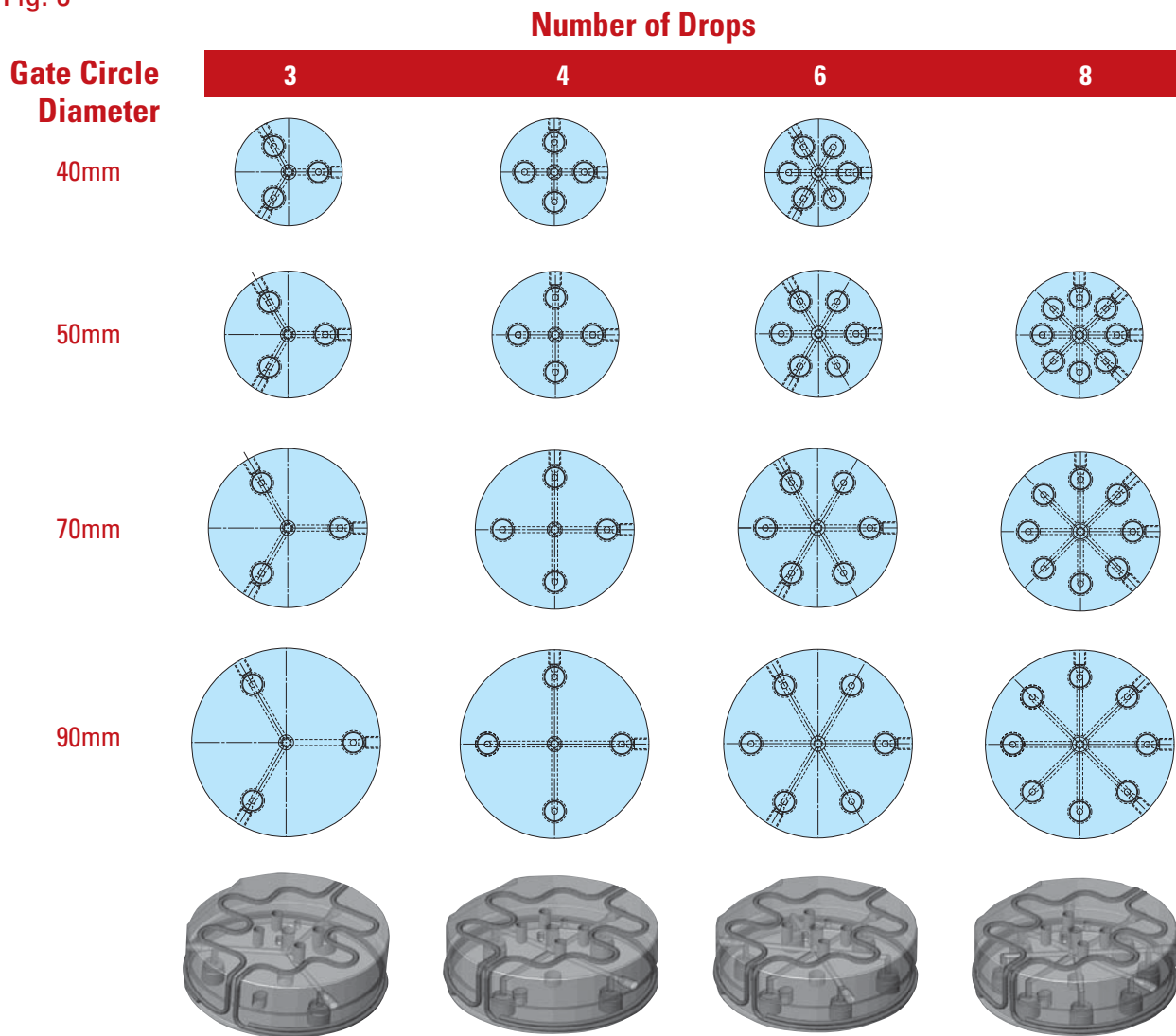


Table 4:
Drop Quantity and Outside Diameters for Each Round MNA

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]

Manifold Options – Rectangular MNAs

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

Fig. 9

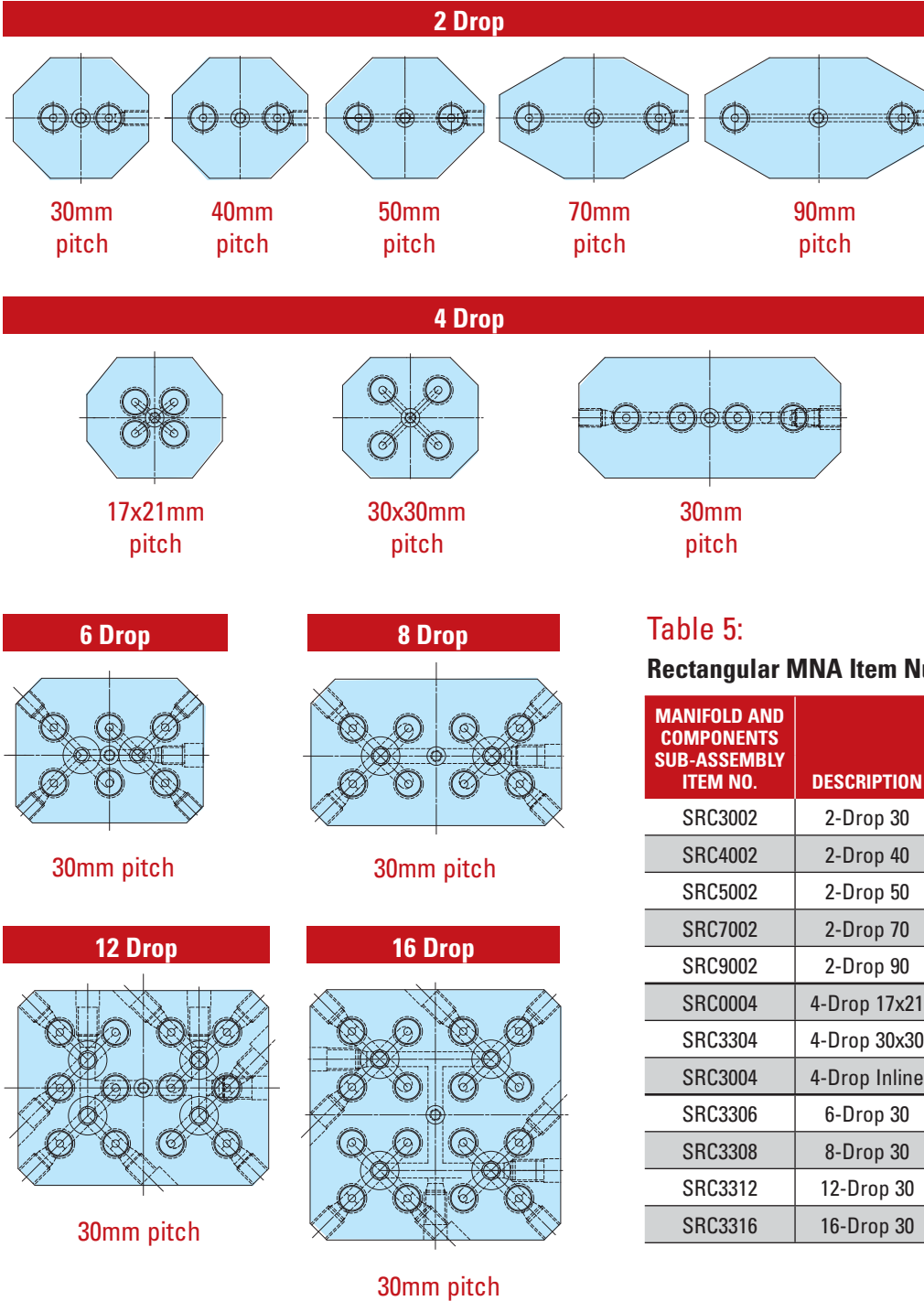


Table 5:
Rectangular MNA Item Numbers

MANIFOLD AND COMPONENTS SUB-ASSEMBLY ITEM NO.	DESCRIPTION	DIMENSIONS (LENGTH X WIDTH)	
		MILLIMETERS	INCHES
SRC3002	2-Drop 30	73.02 x 65.00	2.875 x 2.559
SRC4002	2-Drop 40	83.00 x 65.00	3.268 x 2.559
SRC5002	2-Drop 50	92.00 x 65.00	3.622 x 2.559
SRC7002	2-Drop 70	101.60 x 65.00	4.000 x 2.559
SRC9002	2-Drop 90	122.00 x 65.00	4.803 x 2.559
SRC0004	4-Drop 17x21	79.02 x 65.00	3.111 x 2.559
SRC3304	4-Drop 30x30	73.02 x 65.00	2.875 x 2.559
SRC3004	4-Drop Inline	141.00 x 65.00	5.551 x 2.559
SRC3306	6-Drop 30	101.00 x 78.00	3.976 x 3.071
SRC3308	8-Drop 30	135.00 x 79.00	5.315 x 3.110
SRC3312	12-Drop 30	135.00 x 105.00	5.315 x 4.134
SRC3316	16-Drop 30	135.00 x 135.00	5.315 x 5.315

General Assembly – MNAs Heated and Unheated MEN Options

Fig. 10 Heated MEN Design

Preferred for most applications.

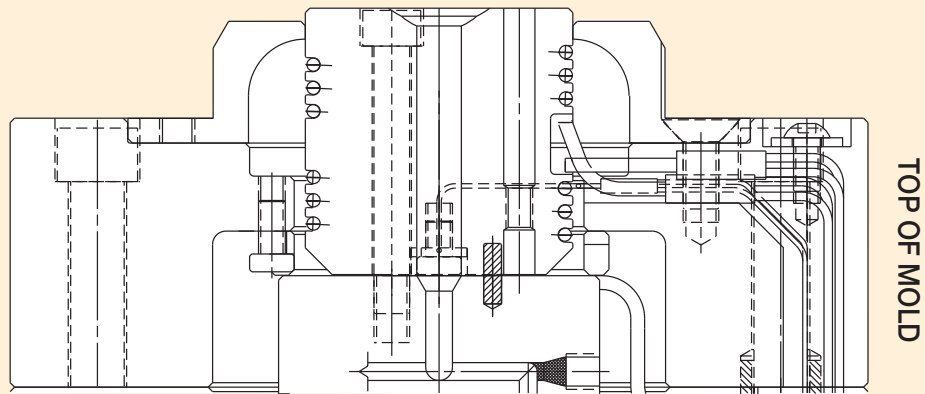
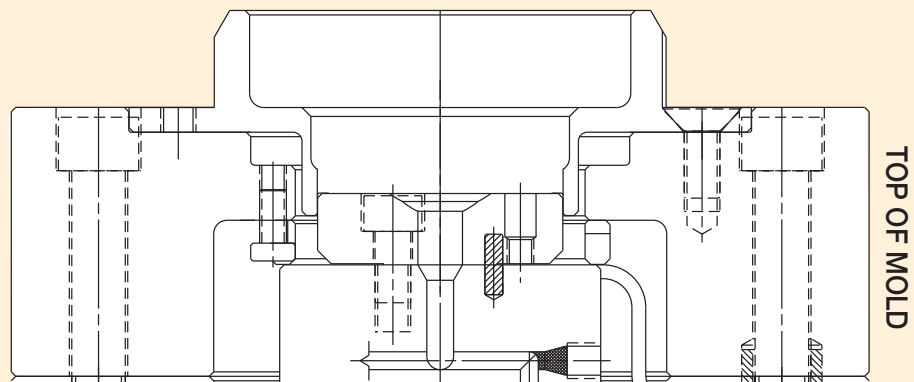


Fig. 11 Unheated MEN Design

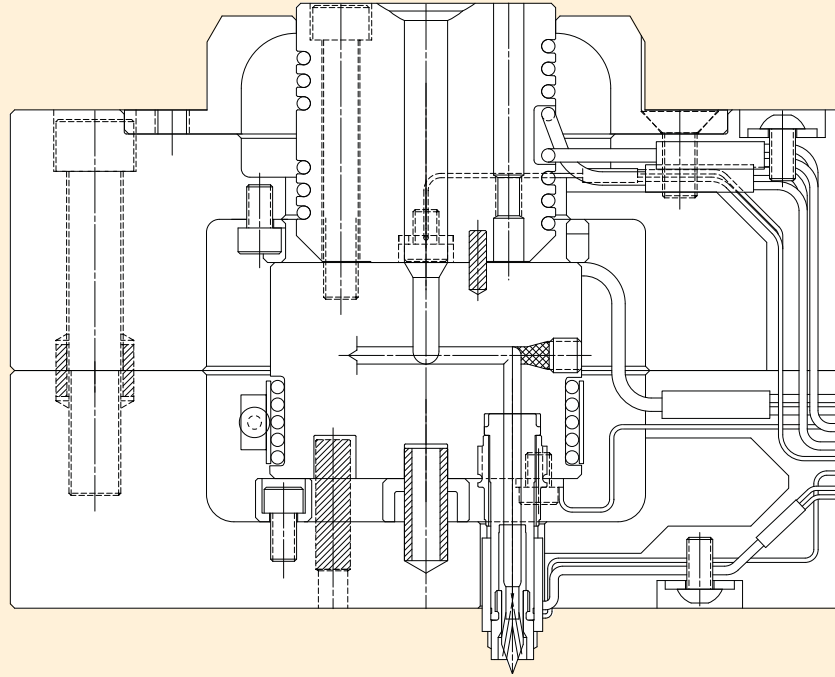
For use with commodity resins only;
i.e., PE, PP, PS.



General Assembly – MNAs Heated and Unheated MEN Options

General Assembly Round MNAs

Fig. 12 Section View



General Assembly Rectangular MNAs

Fig. 13 Section View

