DME Stellar® 5000 Hot Runner Systems Round and Rectangular MNAs





Stellar® MNAs

TABLE OF CONTENTS

Gating Style Selection	3
Gate Details - Point Gate and Sprue Gate Tips	4-5
Manifold Options - Round MNAs	6
Manifold Options - Rectangular MNAs	7
Nozzle Selection	8
Heated and Unheated MEN Options	9
General Assembly - Round MNA Section View	10
General Assembly - Rectangular MNA Section View	11

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 DME 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.

Stellar[®] MNAs

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

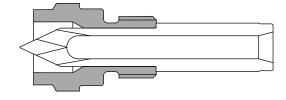


Fig. 2 High Performance Point Gate Tip Sub-Assembly, SXG5020

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

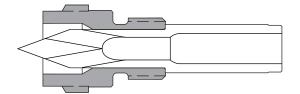


Fig. 3 High Performance Thru Hole Tip Sub-Assembly, SXG5201

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

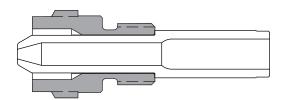


Fig. 4 Sprue Gate Tip, SXT1040

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

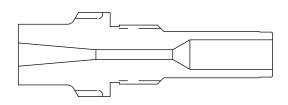


Table 1: Gating Style Item Numbers

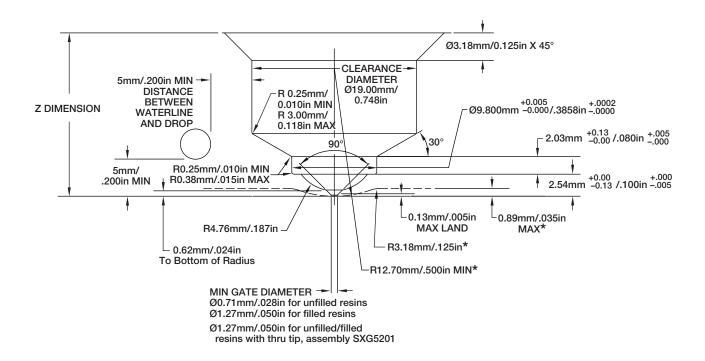
TIP Sub-Assembly Item Number	Description	TIP Item Number	TIP CTE (10-6/degC)	Retainer Item Number	Gating Style	Applicable Stellar System
SXG5110	Standard Point Gate Tip Sub-Assembly	SXT4010	17.5	SXF5100	Point Gate	Standard
SXG5020	High Performance Point Gate Tip Sub-Assembly	SXT5010	5.5	SXF5000	Point Gate	High Performance
SXG5201	High Performance Thru Hole Tip Sub-Assembly	SXT5200	5.5	SXF5000	Thru Hole Gate	High Performance
SXT1040	Sprue Gate	SXT1040	12.8	N/A	Sprue Gate	Standard

NOTE: All units are in mm.

Stellar® MNAs

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, SXG5201); For gating onto a flat surface or into a recess* ("dimple").

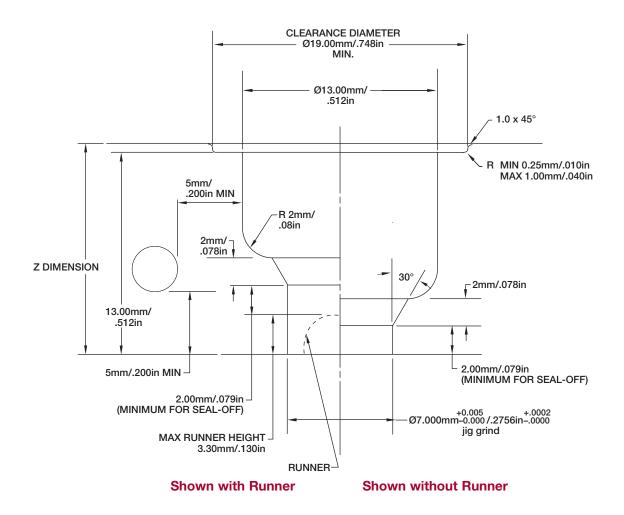


NOTES for Figure 5 & 6:

- 1. If gate detail does not properly fit the application, contact 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 8 for minimum and maximum "Z" dimensions.

Stellar® MNAs

Fig. 6 Gate Details for Sprue Gate Tips, SXT1040



Stellar[®] MNAs

Manifold Options - Round MNAs

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

Fig. 7

Number of Drops

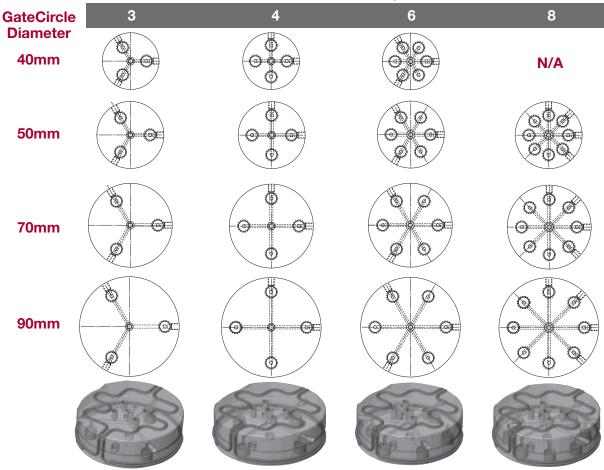


Table 2: Number of Drops for Each Gate Circle Diameter

Gate Circle	Nu	ımber	of Dro	ps
Diameter (mm)	3	4	6	8
40	1	1	1	_
50	1	1	1	1
70	1	1	1	1
90	1	1	1	1

Round MNA Item Numbers

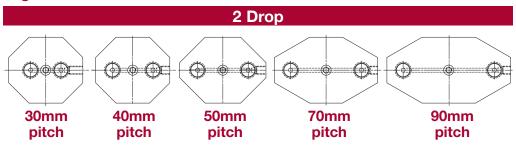
Manifold and Components Sub-Assembly Item No.	Description	O.D.
SRD4003	Ø40 3-Drop	Ø72.00
SRD4004	Ø40 4-Drop	[2.835]
SRD4006	Ø40 6-Drop	[2.000]
SRD5003	Ø50 3-Drop	
SRD5004	Ø50 4-Drop	Ø85.00
SRD5006	Ø50 6-Drop	[3.346]
SRD5008	Ø50 8-Drop	
SRD7003	Ø70 3-Drop	
SRD7004	Ø70 4-Drop	Ø106.50
SRD7006	Ø70 3-Drop	[4.193]
SRD7008	Ø70 8-Drop	
SRD9003	Ø90 3-Drop	
SRD9004	Ø90 4-Drop	Ø126.50
SRD9006	Ø90 6-Drop	[4.980]
SRD9008	Ø90 8-Drop	

Stellar® MNAs

Manifold Options - Rectangular MNAs

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

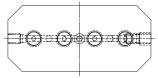
Fig. 8



4 Drop





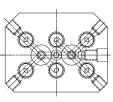


7x21mm pitch

30x30mm pitch

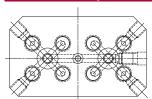
30mm pitch

6 Drop



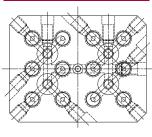
30mm pitch

8 Drop



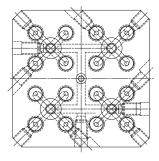
30mm pitch

12 Drop



30mm pitch

16 Drop



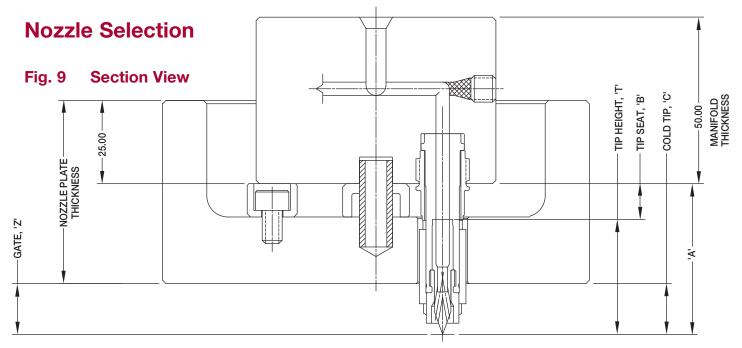
30mm pitch

Table 3: Rectangular MNA Item Numbers

Manifold and Components		Dimensions (Length x Width)		
Sub- Assembly Item No.	Description	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	4.00 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	

www.dme.net

Stellar[®] MNAs



Tip Information for Gating Styles

TIP Sub-Assembly Item No.	Gating Style	TIP CTE (10-6/degC)	"T" "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	5.5	34.40	High Performance
SXG5201	High Performance Thru Hole Tip Sub-Assembly	5.5	34.40	High Performance
SXT1040	Sprue Gate	12.8	34.40	Standard

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

Table in 7t and 2 chart is daming ctyles					
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	
SXY0125 SXY0925	125.10	N/A	90.70	Standard coil heater; High performance heater	
SXY0145 SXY0945	145.10	N/A	110.70	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	
SXY8125	N/A	125.10	90.70	Standard coil heater with snap ring	
SXY8145	N/A	145.10	110.70	Standard coil heater with snap ring	

Table 5: 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:

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

Stellar[®] MNAs

Heated and Unheated MEN Options

Fig. 10 Heated MEN Design

Preferred for most applications.

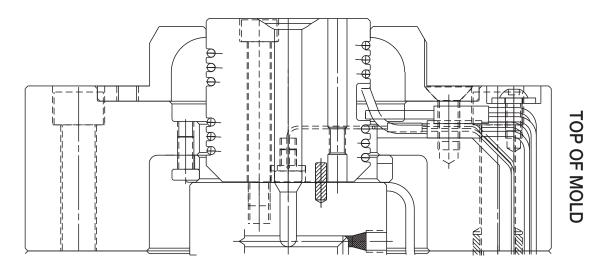
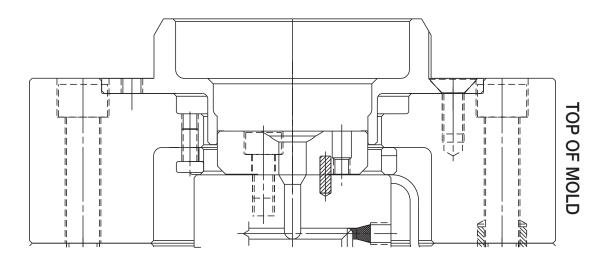


Fig. 11 Unheated MEN Design

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

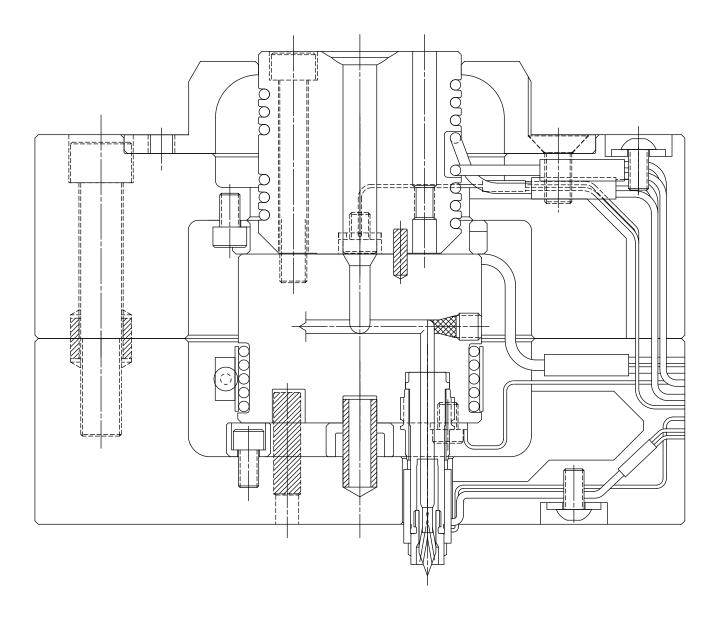


www.dme.net

Stellar[®] MNAs

General Assembly – Round MNAs

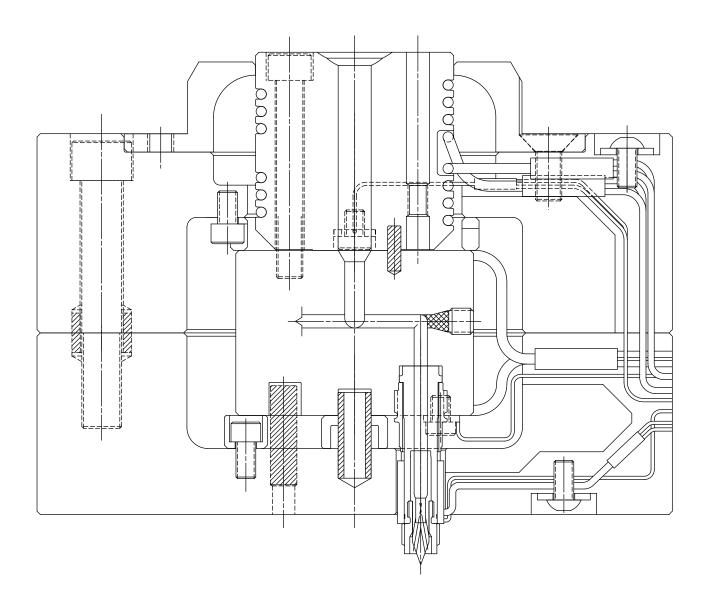
Fig. 12 Section View



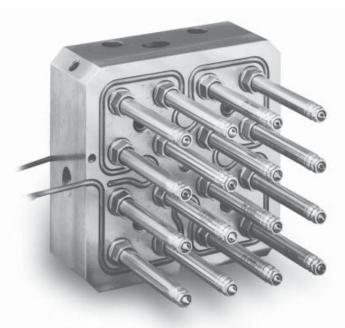
Stellar[®] MNAs

General Assembly – Rectangular MNAs

Fig. 13 Section View



www.dme.net



Stellar MNAs also available as a hot-half assembly.





World Headquarters DME Company

29111 Stephenson Highway Madison Heights, MI 48071 800-626-6653 toll-free tel 248-398-6000 tel 888-808-4363 toll-free fax www.dme.net web appl_eng@dme.net e-mail

DME of Canada, Ltd.

6210 Northwest Drive
Mississauga, Ontario
Canada L4V 1J6
800-387-6600 toll-free tel
905-677-6370 tel
800-461-9965 toll-free fax
dme_canada@dme.net e-mail

DME Europe C.V.B.A.

Industriepark Noord B-2800 Mechelen Belgium 32-15-215011 *tel* 32-15-218235 *fax* www.dmeeu.com *web* sales@dmeeu.com *e-mail*