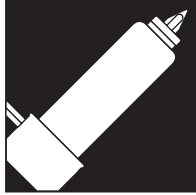


Micropoint® Series Hot Runner Nozzles



The Micropoint Hot Runner system is an exclusive close pitch, flat gate system with the ability to process engineering and glass-filled resins without deteriorating the tips. Pitch can be as small as 0.750" (19mm). Acceptable for crystalline and amorphous materials, this system relies on the gate diameter, gate area cooling and temperature control at the tip to optimize the part quality.

Micropoint "flat gating"™ leaves a small mark on the molded part surface (gate vestige). The gate can be sunk into a round depression (referred to as a "recessed gate") so that the mark does not protrude above the part surface.

Gating Options for the Micropoint® Series



Standard Pinpoint Tips – Patent Pending

Exclusive tip design exceeds minimum vestige requirements and tip life expectations. Color change capabilities are enhanced. Ideal for non-erosive commodity resins, these tips are available in 0.010" (0.25 mm) and 0.020" (0.50 mm) tip flat diameters, to better maintain minimum vestige in parts up to 50 grams (see engineering charts on page 5).



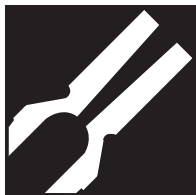
Wear Resistant Pinpoint Tips – Patent Pending

Recommended for glass-filled and other aggressive engineering grade materials, this tip has an excellent heat profile and high wear resistance characteristics. Innovative design orients molecular flow of the material, glass fibers and fillers in a linear direction. This linear orientation reduces shear which translates to longer tip life. Available in 0.010" (0.25 mm) and 0.020" (0.50 mm) tip flat diameters, to better maintain minimum vestige in parts up to 50 grams (see engineering charts on page 5).



Sprue Tips –

Tips can process all types of resins, from commodity to engineering grades, while maintaining optimal performance with minimal vestige. Ideal for retrofitting into existing molds that may have larger gates. Available in standard and wear resistant alloys, this tip is capable of processing parts up to 50 grams (see engineering charts on page 5).



Extra Stock Sprue Tips –

Identical to the Standard Sprue tip, except with 0.197" (5mm) of extra stock at the tip, which can be machined to meet customer specific requirements. Ideal for difficult access areas in the part, or for secondary runner applications. Available in standard and wear resistant alloys, this tip is capable of processing parts up to 50 grams (see engineering charts on page 5).



Extra Stock Sprue (Nylon) Tips –

Specially developed to process resins with narrow melt flow parameters, this tip design provides optimum control within the high temperature zones of the nozzle. Ideal for materials such as nylon and acetal where vestige is not critical, this wear resistant tip can process parts up to 50 grams (see engineering charts on page 5).

Micropoint® Technical Specifications

Nozzle Dimensions

All specifications are subject to change without notification.

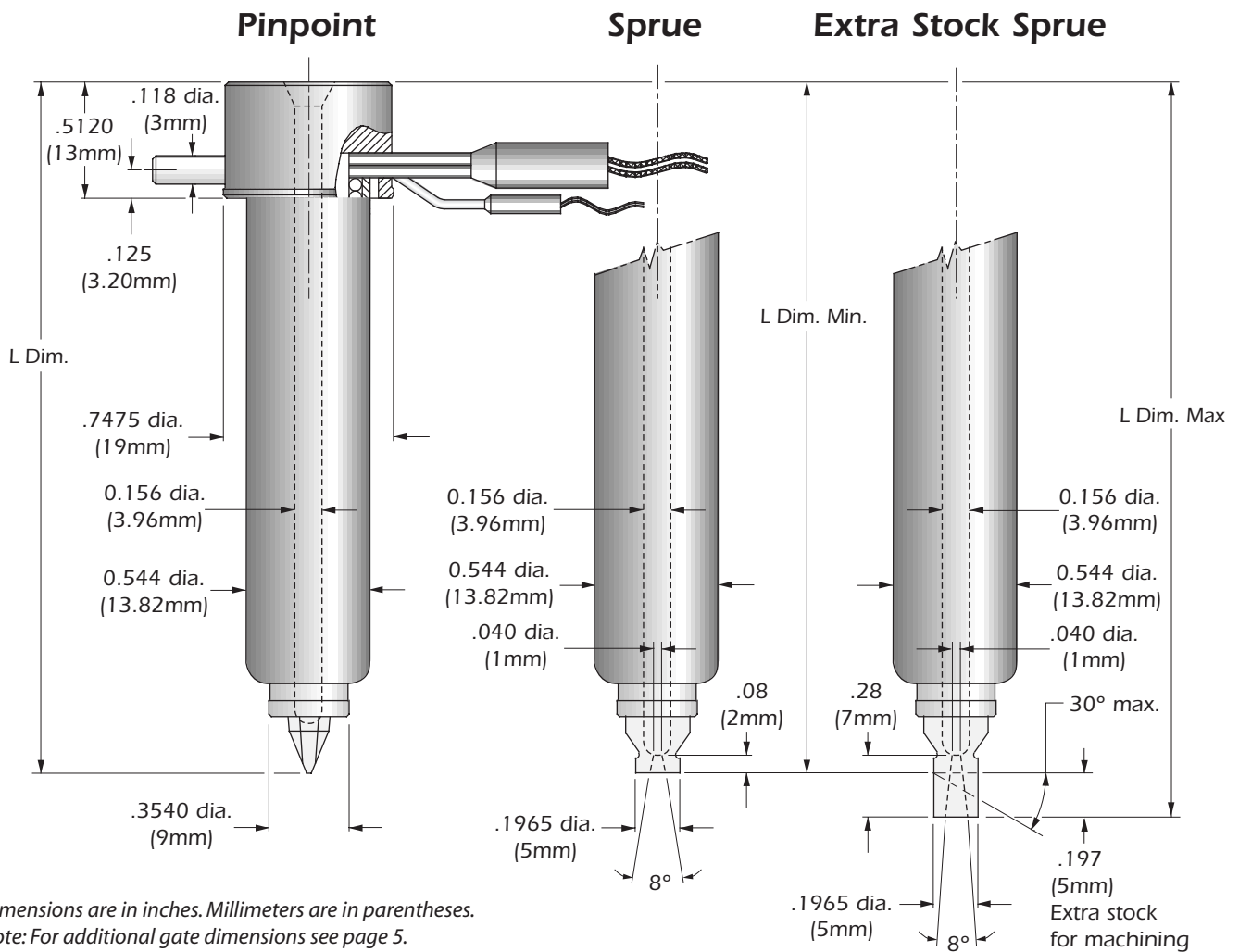


Chart A

Complete Nozzle (Includes subassembly + tip)	w /Pin-Point Tips		w / Sprue Tips		w/Extra Stock Sprue Tips	
	L Dimension		L Dim – Minimum		L Dim – Maximum	
	in	mm	in	mm	in	mm
SK030000 + TIP	2.323	59	2.323	59	2.520	64
SK030001 + TIP	3.031	77	3.031	77	3.228	82
SK030002 + TIP	3.583	91	3.583	91	3.780	96
SK030003 + TIP	4.055	103	4.055	103	4.252	108

MANIFOLD APPLICATIONS

Micropoint® Technical Specifications

Subassembly Ordering Numbers

All specifications are subject to change without notification.

Micropoint® Series Hot Runner Nozzles

The Micropoint Series has an all metric body style and a 0.156" (4mm) flow channel with replaceable heater and thermocouple. Made from pre-hardened steel for maximum high pressure resistance, the Micropoint Series has an optimum heat profile for a uniform flow.

Designed for pitches as small as 0.750" (19mm), the Micropoint has minimal contact areas for reduced heat loss and is available in 4 different nozzle lengths.

The Micropoint Series Nozzles are capable of handling up to 50 grams of resin per drop. (See chart 3 page 5 for more details.)

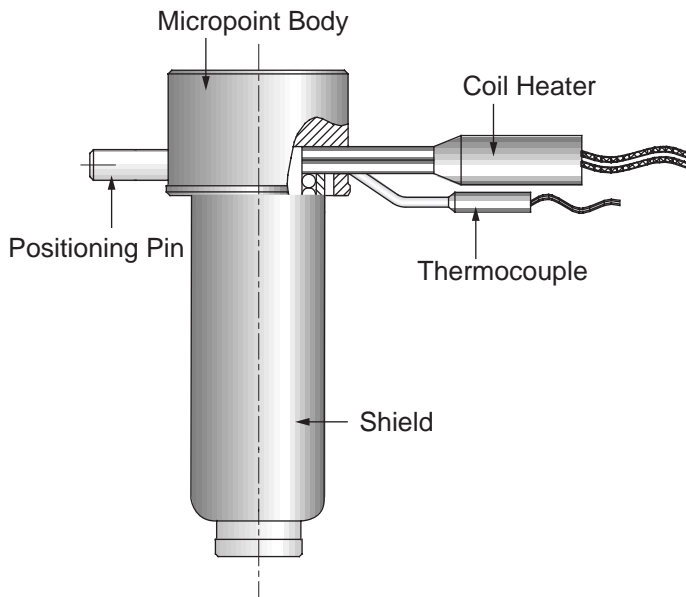


Chart B

Subassembly	Body	Heater	Watts	Thermocouple	Shield	Positioning Pin (Dia.)
SK030000	MB030000	BFX10314	150	MTO20029	MVO20000	.118" x .375" 3mm x 10mm
SK030001	MB030001	BFX10315	185	MTO20029	MVO20001	.118" x .375" 3mm x 10mm
SK030002	MB030002	BFX10316	225	MTO20030	MVO20002	.118" x .375" 3mm x 10mm
SK030003	MB030003	BFX10317	260	MTO20030	MVO20003	.118" x .375" 3mm x 10mm

Tip Ordering Numbers

Micropoint® Series Tip Options

The Micropoint Series has nine interchangeable tip styles to accommodate most applications. Wear Resistant tips are constructed from a special tip alloy, exclusive to Fast Heat.

Chart C

Alloy	Pinpoint .010"	Pinpoint .020"	Sprue	Extra Stock Sprue	Extra Stock Sprue - Nylon
WR	TP156000	TP156002	TP156101	TP156201	TP156301
STD	TP156001	TP156003	TP156100	TP156200	

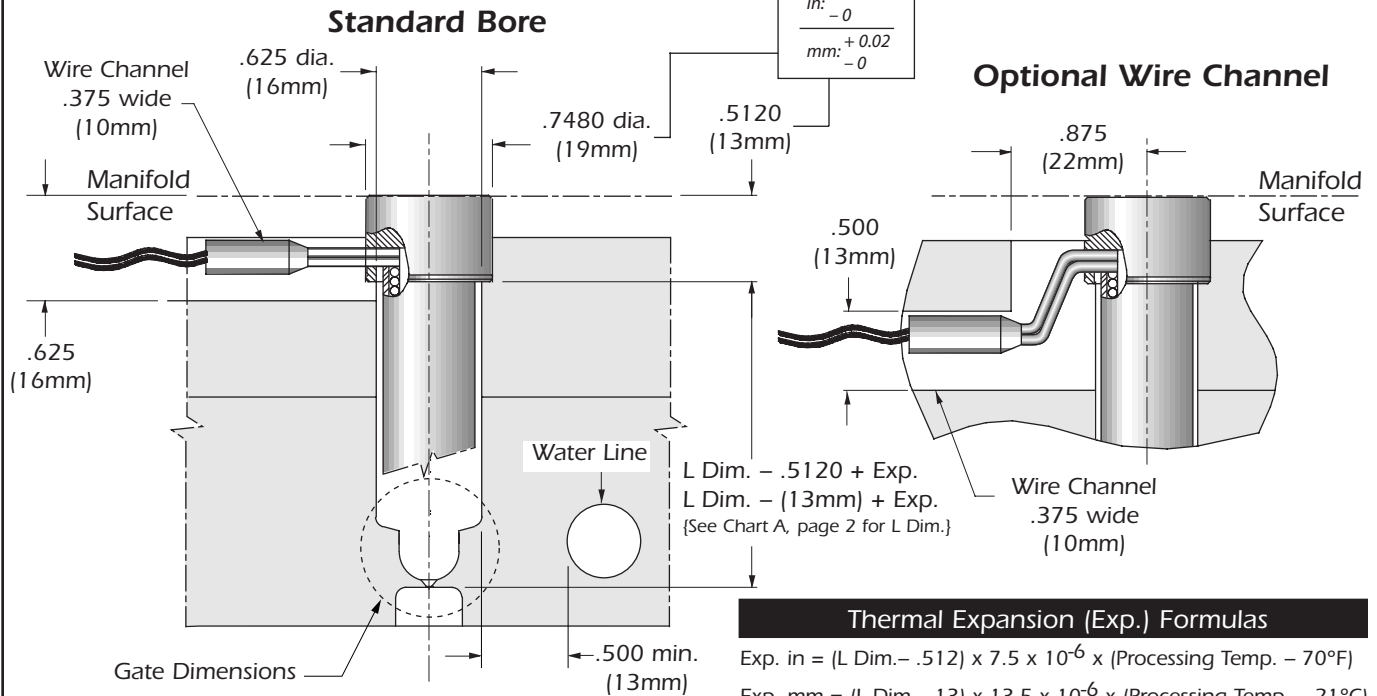
Tip Alloy Reference: STD = Standard, WR = Wear Resistant

MANIFOLD APPLICATIONS

Micropoint® Technical Specifications

Bore & Gate Dimensions

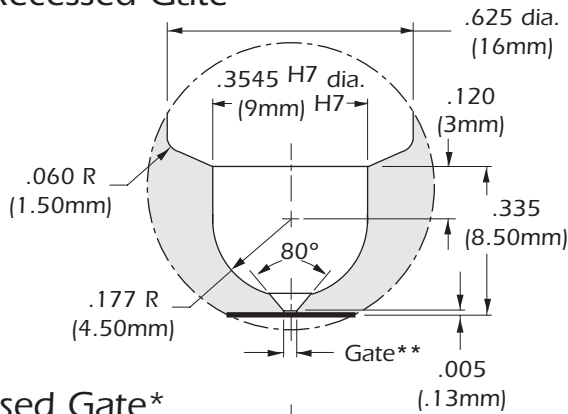
All specifications are subject to change without notification.



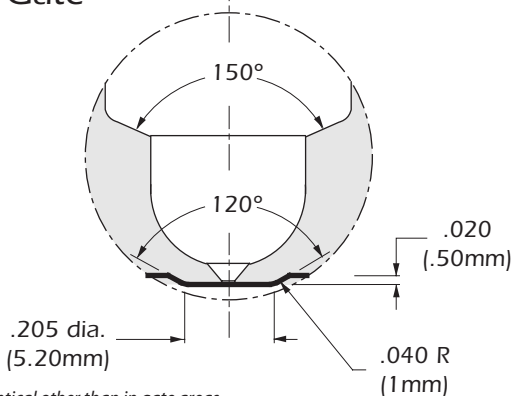
Ref: $10^{-6} = 0.000001$

Pinpoint Gate

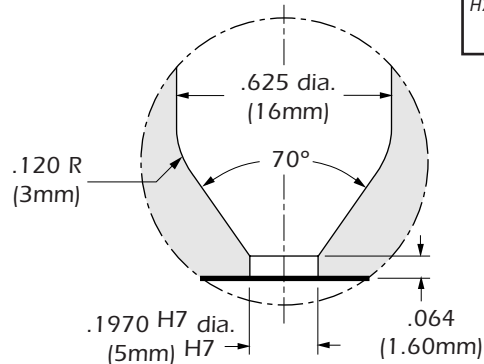
Non-Recessed Gate*



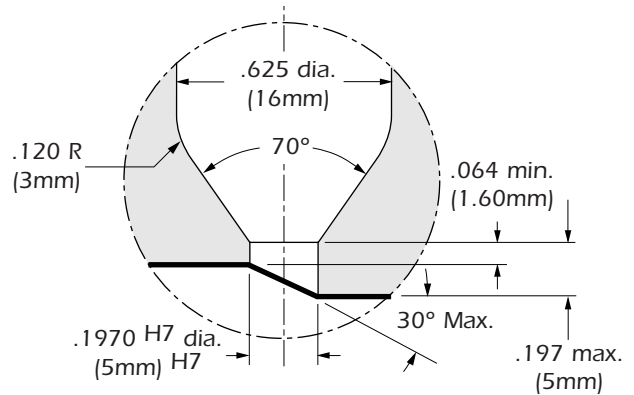
Recessed Gate*



Sprue Gate



Extra Stock Sprue Gate



$$H7 = \frac{in: +0.0005}{-0}$$

$$\frac{mm: +0.01}{-0}$$

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*Dimensions are identical other than in gate areas.
 **See Chart 2, page 5 for gate diameters.



MANIFOLD APPLICATIONS

Micropoint® Technical Specifications

Engineering Charts

All specifications are subject to change without notification.

Chart 1

Tip Alloy Reference: STD = Standard, WR = Wear Resistant

Resin Compatibility Chart					
Tip Style	Part No.	Alloy	Commodity Resin	Engineering Resin	Glass-Filled Resin
Pinpoint	TP156000	WR	○	○	○
	TP156001	STD	○	○	○
	TP156002	WR	○	○	○
	TP156003	STD	○	○	○
Sprue	TP156100	STD	○	○	○
	TP156101	WR	○	○	○
Extra Stock Sprue	TP156200	STD	○	○	○
	TP156201	WR	○	○	○
Extra Stock Sprue Nylon	TP156301	WR	○	○	○

Reference: ○ = Recommended

Chart 2

Gate Diameters				
Part No.	Alloy	Resin Viscosity		
		High	Medium	Low
TP156000	WR	.072" to .104" (1.80mm to 2.60mm)	.050" to .072" (1.30mm to 1.80mm)	.030" to .050" (.80mm to 1.30mm)
TP156001	STD			
TP156002	WR	.082" to .114" (2.10mm to 2.90mm)	.060" to .082" (1.50mm to 2.10mm)	.040" to .060" (1.00mm to 1.50mm)
TP156003	STD			
Sprue tips				
All Sprue Part Numbers	STD & WR	.040" to .060"* (1.00mm to 1.50mm)	.040" to .060"* (1.00mm to 1.50mm)	.040" to .060"* (1.00mm to 1.50mm)

Reference: High Viscosity = Melt Flow (0.02 – 6); Medium Viscosity = Melt Flow (7 – 16); Low Viscosity = Melt Flow (16 – up).
The values expressed in grams are for reference purposes only. Part dimensions, wall thickness, mold condition, and molding parameters must also be considered.

* Re-machine gate diameter, if necessary, for larger shot weights.

Chart 3

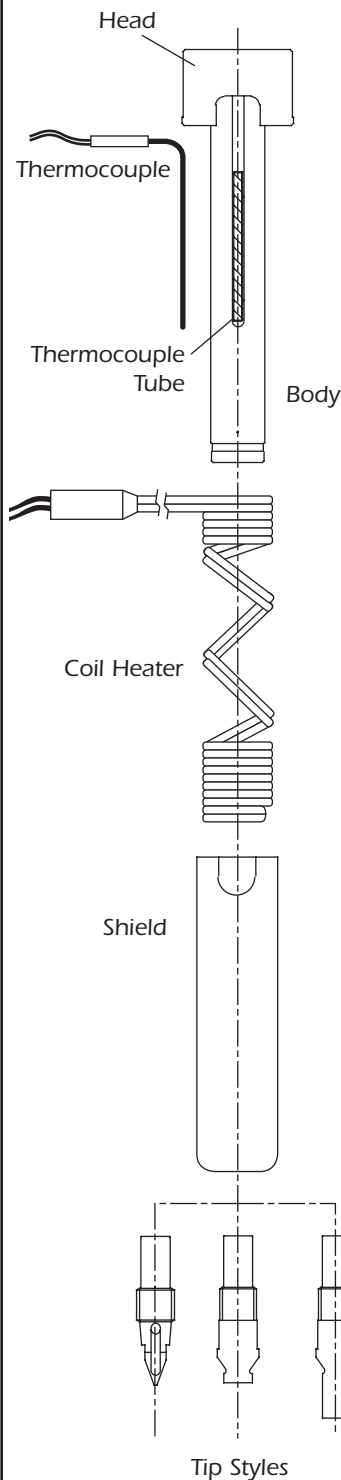
Maximum Shot Weights in Grams					
Tip Style	Part No.	Alloy	Resin Viscosity		
			High	Medium	Low
Pinpoint 0.010"	TP156000	WR	10g	20g	30g
	TP156001	STD			
Pinpoint 0.020"	TP156002	WR	25g	37g	50g
	TP156003	STD			
Sprue	TP156100	STD	10g to 30g*	20g to 40g*	30g to 50g*
	TP156101	WR			
Extra Stock Sprue	TP156200	STD	10g to 30g*	20g to 40g*	30g to 50g*
	TP156201	WR			
Extra Stock Sprue Nylon	TP156301	WR	* Must Re-Machine to larger diameter; See Chart 2.		

Consult Fast Heat Hot Runner Dept. when changing max. shot weight in Sprue style tips.

Micropoint® Technical Specifications

Operating/Service Instructions

All specifications are subject to change without notification.



Operating & Servicing Instructions

The Micropoint body designs and components are identical in diameter, and differ only in length. The Micropoint features a replaceable coil heater and replaceable Type "J" thermocouple. All Micropoint nozzle tips are interchangeable.

Start-up/Operating Procedures

If the temperature controller does not utilize "soft start" technology, set the controller to 200°F (93.3°C) in automatic or 10% in manual. Allow nozzle to "soak" for 15 minutes before increasing to processing temperature. This step will allow the unit to dissipate any moisture and prolong heater life.

Tip Removal/Installation

Removal

- 1) Secure nozzle firmly in "V" block making sure to avoid the press-fit area.
- 2) Insert Fast Heat Tip tool **M1000 (Pinpoint)** or **M1001 (Sprue)** provided over/into tip. Use a standard 1/4" Allen socket for Pinpoint tips or 1/4" socket wrench for Sprue tips and turn counterclockwise to loosen.

Installation

- 1) Secure nozzle firmly in "V" block making sure to avoid the press-fit area.
- 2) Insert Fast Heat Tip tool **M1000 (Pinpoint)** or **M1001 (Sprue)** provided over/into tip.
- 3) Apply anti-seize sparingly onto male threads of tip.
Note: excess anti-seize may contaminate the resin being processed.
- 4) Use a standard 1/4" Allen socket for Pinpoint tips or 1/4" socket wrench for Sprue tips and install tip by turning clockwise.
- 5) **Torque Sprue and Pinpoint STD tips to 30 in./lbs. (3.4 Newton-Meters)**
Torque Pinpoint Wear Resistant tips to 40 in./lbs. (4.5 Newton-Meters)

Component Disassembly/Assembly

Disassembly

- 1) Slide shield off by hand.
- 2) Remove heater by placing hand around coil and carefully turning counterclockwise applying pressure where leads meet the nozzle.
- 3) Remove thermocouple by sliding it out of the T/C tube, which is mounted on the body.


Assembly

- 1) Insert thermocouple into T/C tube until thermocouple reaches the end of the tube.
- 2) Install heater over thermocouple and unit by placing hand around coil and carefully turning counterclockwise applying pressure where leads meet the nozzle.
- 3) Slide shield over coil by hand.

Power Requirements

- 240 Volts AC – 15 amp fuse
- Grounding – Fast Heat nozzles utilize the direct contact of the nozzle, mold plates, and machine platens to establish a path for grounding.

WARNING

There must be a ground  present between the Mold "Hot Half" and the temperature control system or damage may occur to the nozzle, thermocouple and/or temperature control system.

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fastheat

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