



# DME Hot Runner Technology Selection Guide

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## Resin Application Key

- Good
- Contact DME Applications Engineering or Technical Service for resin application guidance
- Not recommended for resin application

## Polymer Viscosity Key

- L = Low
- M = Medium
- H = High

## NOZZLE FLOW CAPACITY RECOMMENDATIONS

NOZZLE	TIP	Recommended Gate Diameter Range			Flow Capacity (Grams)			Color Change Capability
		Min (mm)	Max (mm)	Min (inch)	Max (inch)	Low MFI >16	Medium MFI 7-16	
Zenith 50 Series Valve Gate	Tipless (Boilless) Tip	1.5	2.5	0.060	0.080	100	50	25
	Standard (Full Body) Tip	1.5	2.0	0.060	0.080	100	100	25
	Extended (Sprue) Tip	1.5	2.0	0.060	0.080	100	50	25
Zenith 200 Series Valve Gate	Tipless (Boilless) Tip	2.0	4.0	0.080	0.120	125	75	50
	Standard (Full Body) Tip	2.0	3.0	0.080	0.120	125	75	50
	Extended (Sprue) Tip	2.0	3.0	0.080	0.120	125	75	50
Zenith 500 Series Valve Gate	Tipless (Boilless) Tip	2.5	5.0	0.100	0.155	250	150	90
	Standard (Full Body) Tip	2.5	4.0	0.100	0.155	250	150	90
	Extended (Sprue) Tip	2.5	4.0	0.100	0.155	250	150	90
Zenith 800 Series Valve Gate	Tipless (Boilless) Tip	2.5	6.0	0.100	0.200	800	500	250
	Standard (Full Body) Tip	2.5	5.0	0.100	0.200	800	500	250
	Extended (Sprue) Tip	2.5	5.0	0.100	0.200	800	500	250
Zenith 1000 Series Valve Gate	Tipless (Boilless) Tip	3.5	8.0	0.140	0.255	1500	800	500
	Standard (Full Body) Tip	3.5	6.5	0.140	0.255	1500	800	500
	Extended (Sprue) Tip	3.5	6.5	0.140	0.255	1500	800	500
Stellar Standard Coil Heater	Sprue Tip	2.0	2.0	0.080	0.080	40	30	20
	Standard Point Gate Tip	0.8	1.5	0.030	0.062	10	10	10
	Standard Thru-Hole Tip	0.8	1.5	0.030	0.062	10	10	10
Stellar High Performance Heater	Sprue Tip	2.0	2.0	0.080	0.080	40	30	20
	Wear Resistant Point Gate Tip	1.25	2.0	0.050	0.080	10	10	10
	Wear Resistant Thru-Hole Tip	1.0	1.5	0.040	0.060	10	10	10
Galaxy Sleeved Coil Heater	Gate Point Tip	1.0	2.0	0.040	0.080	225	125	95
	Standard Thru-Hole Tip	1.0	2.0	0.040	0.080	135	80	50
Mini Gate-Mate Cast-In Heater	Wear Resistant Point Gate Tip	1.25	2.0	0.050	0.080	85	50	30
	Standard Point Gate Tip	0.8	2.0	0.030	0.080	85	50	30
	Point Tip	1.0	2.0	0.044	0.080	225	125	95
Gate-Mate 4 Coil Heater	Thru-Hole Tip	1.0	2.0	0.030	0.050	135	80	50
	Standard Point Gate Tip	1.8	3.2	0.070	0.125	450	270	160
Jumbo Gate-Mate Coil Heater	Standard Point Gate Tip	1.8	2.5	0.070	0.100	360	215	130
	Standard Thru-Hole Tip	1.8	2.5	0.070	0.100	360	215	130

NOTE: THE CHART BELOW SHOWS COMMODITY RESINS IN BLUE TYPE. ALL OTHERS ARE ENGINEERING RESINS.

GENERIC POLYMER NAME (TRADE NAME) [A = AMORPHOUS or C = CRYSTALLINE]	L	L	H	M	H	M	H	L	M	H	L	M	H	L	M	H	L	M
TPC (Elastomer) [A]																		
PE (Polyethylene) [C]																		
PE GF (Polyethylene) [C]																		
PS GF (Polystyrene) [C]																		
PS GF (Polystyrene) [A]																		
TPQ [C]																		
PP [C]																		
PP GF (Polypropylene) [C]																		
PP GF (Polypropylene) [C]																		
ABS [A]																		
ABS/PC [A]																		
PMMA (Acrylic) [A]																		
POM (Acetal) [C]																		
PA (Nylon) [C]																		
PA GF (Nylon) [C]																		
PA MF GF (Mylon) [C]																		
PPE [A]																		
PPO (Noryl) [A]																		
PPO GF (Noryl) [A]																		
PBT Polyester [C]																		
PBT GF Polyester [C]																		
PET [C]																		
PC (Polycarbonate) [A]																		
PC GF (Polycarbonate) [A]																		
PSS [C]																		
PSU [A]																		
LCP [C]																		
PEI (Utem) [A]																		
PE GF (Utem) [A]																		
PEEK [C]																		
PUR (Urethane) [A]																		
PVC (Flex Vinyl) [A]																		

The values expressed in grams are for reference only and are determined by using a nominal wall thickness of 1.8mm (0.071") and unfilled polypropylene. Part dimension, wall thickness, length of fill within part, mold conditions and molding parameters must also be considered. NOTE: If flame retardant is present in the desired resin grade, please contact DME for product suitability or application guidance.



Every step of the way

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- Good
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# DME Hot Runner Technology Selection Guide

NOZZLE FLOW CAPACITY RECOMMENDATIONS

The values expressed in grams are for reference only and are determined by using a nominal wall thickness of 1.3mm (.070") and unfilled polypropylene.

Part dimension, wall thickness, length of fill within part, mold conditions and molding parameters must also be considered.

NOTE: If flame retardant is present in resin application, please contact DME for product suitability or application guidance.

NOTE: THE CHART BELOW SHOWS COMMODITY RESINS IN BLUE TYPE. ALL OTHERS ARE ENGINEERING RESINS.

NOZZLE	TIP	Min (mm)	Max (mm)	Min (inch)	Max (inch)	Low MFI >16	Flow Capacity (Grams)			High MFI .02-7
							Viscosity	Medium MFI 7-16	High MFI .02-7	
Recommended Gate Diameter Range										
Hot One 250 Series Coil Heater	Sprue Tip	2.0	3.2	0.080	0.080	625	475	315		
	Standard Point Gate Tip	0.7	2.0	0.028	0.080	200	150	100		
	Ring w/Standard Point Gate Needle	1.5	2.0	0.060	0.080	200	150	100		
Hot One 250 Series Cast-In Heater	Sprue Tip	2.0	3.2	0.080	0.080	625	475	315		
	Wear Resistant Point Tip	0.7	2.0	0.060	0.080	200	150	100		
	Ring w/Wear Resistant Point Gate Needle	1.5	2.0	0.060	0.080	200	150	100		
Hot One 375 Series Coil Heater	Sprue Tip	3.2	6.4	0.125	0.135	1000	750	450		
	Standard Point Gate Tip	0.7	2.5	0.028	0.100	310	200	130		
	Ring w/Standard Point Gate Needle	2.0	2.5	0.080	0.100	310	200	130		
Hot One 375 Series Cast-In Heater	Sprue Tip	3.2	6.4	0.125	0.250	1000	750	450		
	Wear Resistant Point Tip	0.7	2.5	0.060	0.100	310	200	130		
	Ring w/Wear Resistant Gate Needle	2.0	2.5	0.080	0.100	310	200	130		
Hot One 625 Series Coil Heater	Sprue Tip	4.7	7.9	0.187	0.187	1500	1100	750		
	Wear Resistant Point Gate Tip	3.2	4.0	0.125	0.160	800	550	400		
	Ring w/Wear Resistant Point Gate Needle	3.2	4.0	0.125	0.125	450	300	200		
Hot One 625 Series Cast-In Heater	Sprue Tip	4.7	7.9	0.187	0.187	1500	1100	750		
	Wear Resistant Point Gate Tip	3.2	4.0	0.125	0.160	800	550	400		
	Ring w/Wear Resistant Point Gate Needle	3.2	4.0	0.125	0.125	450	300	200		
Radius Hot Sprue Bushings	S-Series & T-Series	4.1	4.1	0.160	0.160	700	500	300		
	E-Series	1.5	1.5	0.060	0.060	300	150	50		
	ER-Series & TR-Series	3.2	3.2	0.125	0.125	500	300	200		
Mini Gate-Mate Cast-In Heater	High Performance Series	1.6	1.6	0.062	0.062	300	150	50		
	Wear Resistant Point Gate Tip	1.25	2.0	0.050	0.080	85	50	30		
	Standard Point Gate Tip	0.8	2.0	0.030	0.080	85	50	30		
Mini Gate-Mate Coil Heater	Point Tip	1.0	2.0	0.040	0.080	225	125	95		
	Thru-Hole Tip	1.0	2.0	0.040	0.080	135	80	50		
	Standard Point Gate Tip	1.8	2.5	0.070	0.100	450	270	160		
Medium Gate-Mate Coil Heater	Standard Thru-Hole Tip	1.8	2.5	0.070	0.100	360	215	130		
	Sprue Tip	2.0	2.0	0.080	0.080	625	475	315		
	Standard Point & Ring Gate Tip	1.25	3.0	0.050	0.120	250	150	100		
D-MAX 250 Series High Performance	WR Point & Ring Gate Tip	1.5	3.0	0.060	0.120	250	150	100		
	Sprue Tip	3.2	3.2	0.125	0.125	1000	750	450		
	Standard Point & Ring Gate Tip	1.25	3.0	0.050	0.120	350	200	130		
D-MAX 375 Series High Performance	WR Point & Ring Gate Tip	1.5	3.0	0.060	0.120	350	200	130		
	Sprue Tip	4.4	4.4	0.175	0.175	1250	850	600		
	Standard Point & Ring Gate Tip	3.0	4.4	0.120	0.175	550	375	250		
D-MAX 625 Series High Performance	WR Point & Ring Gate Tip	3.0	3.0	0.120	0.120	400	250	50		
	Sprue Tip	4.4	4.4	0.175	0.175	1425	1050	700		
	Standard Point & Ring Gate Tip	3.0	6.44	0.120	0.250	900	600	425		
D-MAX 1000 Series High Performance Special	WR Point & Ring Gate Tip	3.0	5.0	0.120	0.200	800	500	350		