

DME Polimax Hot Sprue Bushings- FREQUENTLY ASKED QUESTONS

NOTICE: If you have questions that are not answered by the following, please contact your DME Customer Service Representative for assistance, who will help answer your questions or put you in contact with an appropriate person who can answer your questions.

Q: I notice some Polimax thermocouples (or heaters with integral thermocouples) have different color codes for the thermocouple lead wire insulation. What do the different color code sets mean?

A: Note: The following applies to thermocouples (or heaters with integral thermocouples) sold out of the DME USA Hot Runner Catalog. It does not apply to heaters or thermocouples sold out of the DME Molding Supply Catalog.

DME has taken steps to meet the growing needs of our customers around the world. One of these steps has been to progress to an "International" thermocouple color code per IEC 584-3 (Black = positive, White = Negative):



Up to the recent past, most DME thermocouples (or heaters that have integral thermocouples) have had a color code based on the ASTM E230 standard, in which the positive thermocouple wire lead (magnetic) has a white color insulation, and the negative thermocouple lead has a red color insulation. This is traditionally common in North America:

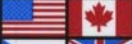






Please note that some products will continue to have the ASTM E230 standard color code (White=positive, Red = negative).

A few products may be built to the DIN 43710 (Red = positive, Blue = negative) color code specification. Over time these will be changed to the IEC 584-3 (Black = positive, White = negative) color code specification. This color code is common in Europe:



All three color codes shown above are correct. It will be important to ensure proper wire up of the thermocouple. If the thermocouple is wired up backwards (polarity of the thermocouple is reversed), the thermocouple will fail to give the temperature controller a correctly interpretable signal. For clarity, the following color code chart may be used:

J TYPE THERMOCOUPLE STANDARDS			
	STANDARD	+ LEAD (MAGNETIC)	- LEAD
INTERNATIONAL	IEC 584-3	Black	White
	ASTM E230	White	Red
	BS 1843	Yellow	Blue
	DIN 43710	Red	Blue
	JIS C 1610-1981	Red	White
	NFC 42-324	Yellow	Black

Q: Sometimes I see a grey wire and purple wire with a Polimax nozzle heater. What wires are those?

A: The wires with purple or grey color wire insulator are power wires. Typically a Polimax heater that has a specific thermocouple color code set, will be delivered with power leads that have a different color, or, have an identifying strip, mark or heat shrink to help identify the power leads. Please note that if the power leads were identified by a strip, mark or heat shrink and the leads are cut, the identifying strip, mark or heat shrink will be removed. In such cases it is recommended to add marker tape to each power lead for ease of future maintenance.

Q: I see a wire that is green with yellow tracer. Is that the ground wire?

A: Yes. If a ground wire is present, the ground wire lead color may be either be solid green, or green with a tracer.

Q: On the Polimax Hot Sprue Bushing assemblies that have heated heads (there is a heater coil on the head of the bushing), I do not see an external thermocouple. But on the main body of the bushing, there is both an external thermocouple as well as a thermocouple that is integral to the heater. Which thermocouple am I supposed to use?

A: For the head zone, use the thermocouple that is integral to the heater. For the main body heater, it is recommended to use the external thermocouple, and only use the thermocouple which is integral to the main body heater, as a back-up should the external thermocouple fail.

Q: What types of nozzle heaters are available for order as replacement items for a Polimax Hot Sprue Bushing assembly?

A: The "RBP"-type heaters used on the nozzle bodies. All suggested replacement items for any Polimax Hot Sprue Bushing assembly are shown in the associated packing slip/installation instruction. The Polimax packing slips are located in the "Resources" section of the DME Website, under "Packing Slips", and can be found [here](#).

Q: I would like some information on servicing or installing my Polimax Hot Sprue Bushing assembly. Where can I find that information?

A: The necessary information is located in the "Resources" section of the DME Website, under "Packing Slips", and can be found [here](#). If you have a question that is not covered by the product packing slip/installation instruction, please contact your DME Customer Service Representative for assistance.

Q: I am interested in a Polimax Hot Sprue Bushing, but I want to process glass-filled thermoplastic. Can I do this?

A: It may be possible depending on the thermoplastic and application. If you require a recommendation, please contact your DME Customer Service Representative, who will put you in contact with a DME Technical Service Representative who will review your application requirements.

Q: What is the processing temperature upper limit that I can use with my Polimax Hot Sprue Bushing?

A: It depends on the application, as well as both the bushing assembly and the tip or tip assembly used. The Polimax unheated head hot sprue bushing assemblies are not recommended to be used with applications requiring greater than 480°F (249°C) melt processing temperature. If you have an application that exceeds 480°F (249°C) melt processing temperature, it is recommended to use a Polimax hot sprue bushing assembly with heated head.

The Polimax ring-gate and point-gate tip assemblies are available with standard needles as well as wear-resistant needles. Standard Polimax needles are not recommended to be used with any filled thermoplastic, and are not recommended to be used in applications that require greater than 480°F (249°C) melt processing temperature. Wear-resistant Polimax needles can be used with filled

thermoplastics (not recommended for thermoplastics that have greater than 30% filler including glass, mineral, talc, other), and are not recommended to be used in applications requiring greater than 635°F (335°C) melt processing temperature.

Polimax sprue tips can be used with filled thermoplastics (not recommended for thermoplastics that have greater than 30% filler including glass, mineral, talc, other) and are not recommended to be used in applications requiring greater than 635°F (335°C) melt processing temperature.

If you have an application that requires greater than 635°F (335°C) melt processing temperature, if the intended thermoplastic has greater than 30% filler, or if you would like a recommendation as to the parts best suited for your intended application, please contact your DME Customer Service Representative and you will be put in contact with a DME Technical Service Representative to review your application requirements.

Q: What is the upper limit injection pressure that I can use with my Polimax Hot Sprue Bushing assembly?

A: The Polimax Hot Sprue Bushing assembly is not to be used in applications that exceed 20000 PSI injection pressure. However please note that if you are approaching 20000 PSI injection pressure, the injection processing window for a typical injection molding machine will most likely become significantly reduced, which may affect your ability to mold good parts. In such cases it is recommended to refer to your injection molding machine specifications or to speak to a technical representative for the manufacture of your injection molding machine.

Q: I would like to download CAD files from the DME website for the Polimax Hot Sprue Bushings, but when I go to the CAD Library section of the DME Website (PARTSolutions), I do not see the CAD download data. Where can I find the data that I need?

A: The CAD download data is currently directly linked to the part number information shown in the DME Hot Runner online digital catalog. The Polimax catalog pages can be found [here](#).

Q: I would like to build my own hot runner system using Polimax nozzles, but I only see a hot sprue bushing option. Are Polimax nozzles available for placing under a manifold?

A: At this time, Polimax is available as hot sprue bushings only. You would order DME Hot One nozzle assemblies to place under a hot runner manifold. DME Hot One nozzle assemblies (for placing under a manifold) can be found at the following link [here](#).

Q: I can order CIH heaters for the DME Hot One nozzle assembly, but not for the Polimax Hot Sprue Bushing assemblies. Why can't I order a CIH heater for my Polimax Hot Sprue Bushing assembly?

A: CIH heaters are not available at this time for the Polimax Hot Sprue Bushing product family.

Q: I have purchased a DME Polimax Hot Sprue Bushing assembly and I would like to reduce the amount of heat drawn at the tip. I would like to relieve or reduce the amount of land contact between the seal off diameter of the nozzle tip and the surrounding mold steel. Where can I find instructions for this?

A: Please contact your DME Customer Service Representative, who will put you in contact with a DME Technical Service Representative to review your application with you. Because the amount that may be relieved from the seal-off diameter of a Polimax ring gate retainer, extended ring gate retainer or sprue gate tip depends on the intended application, no standard instructions are posted at this time. Do not modify or relieve the seal-off diameter of a Polimax point gate retainer.

For additional information regarding Polimax Hot Sprue Bushings, please refer to the DME Hot Runner Catalog. For other concerns regarding Polimax Hot Sprue Bushings, please contact us by visiting our website at <http://www.dme.net>, or contact your regional DME sales representative. In the USA or Canada only, please contact DME Customer Service by visiting our website at <http://www.dme.net>, or call 800-626-6653 (U.S.) or 800-387-6000 (Canada).