

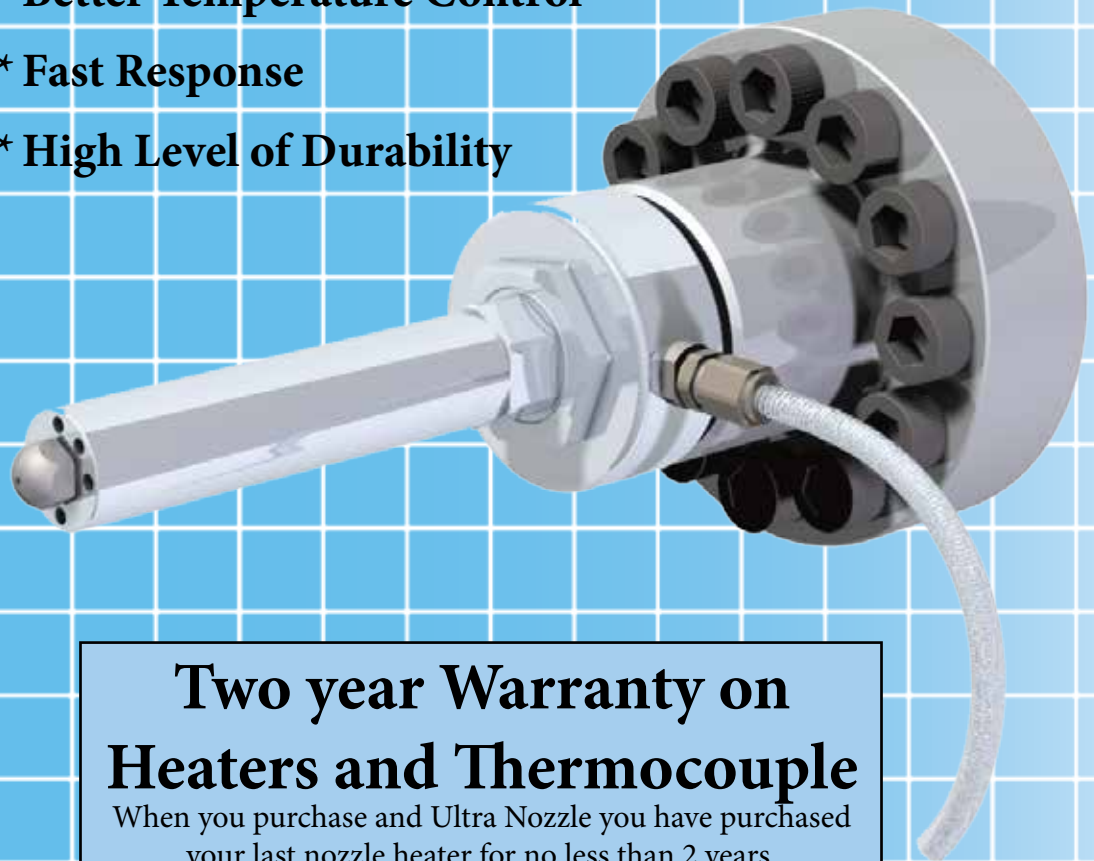
# *Ultra Series Nozzles*

## *Internally Heated Nozzle Bodies*

*The New Generation of Internally Heated Nozzles*

**Totally Sealed and Internal Heated  
with a Built in Thermocouple.**

- \* Reduces Cost Though Extended Heater Life
- \* Better Temperature Control
- \* Fast Response
- \* High Level of Durability



**Two year Warranty on  
Heaters and Thermocouple**

When you purchase and Ultra Nozzle you have purchased  
your last nozzle heater for no less than 2 years.

# *Ultra Series Nozzles*

The 'Ultra Series' internally heated nozzle systems offer many advantages over their externally heated counterparts. With no exposed components and a sealed design constructed of stainless steel they are one of the most durable nozzles available. Blowing a bonnet, or polymer buildup of the nozzle body has little to no effect on the nozzle's operation or efficiency. All of these attributes combine to provide a very real saving in time and money.

## **Maintenance Free Operation**

The precision manufacturing and stout construction provides for long term maintenance free operation, even the most challenging environments. It's completely sealed design allows for buildup of polymers around the outside with no impact to function or performance. As well, this reduces the need for maintenance personnel to perform the messy, time consuming and sometimes dangerous processes of replacing the heaters and cleaning the nozzle.

## **High Quality Construction and Materials**

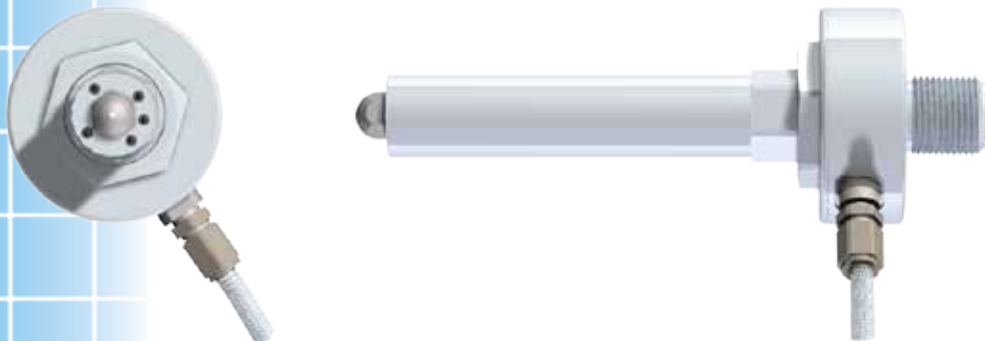
All steel parts are manufactured from Plasti-Co's "EverLast," a very tough and high strength stainless steel alloy. This alloy combined with a custom heat-treat process created an incredibly wear and corrosion resistant assembly.

## **Precision Machining**

All pieces are CNC machined with ground seating and sealing surfaces. The internal flow surface is honed and highly polished to 16/32 RMS. A smoother flow surface allows for faster purging, color changes and more consistent operation.

## **Low Profile / High Clearance Design**

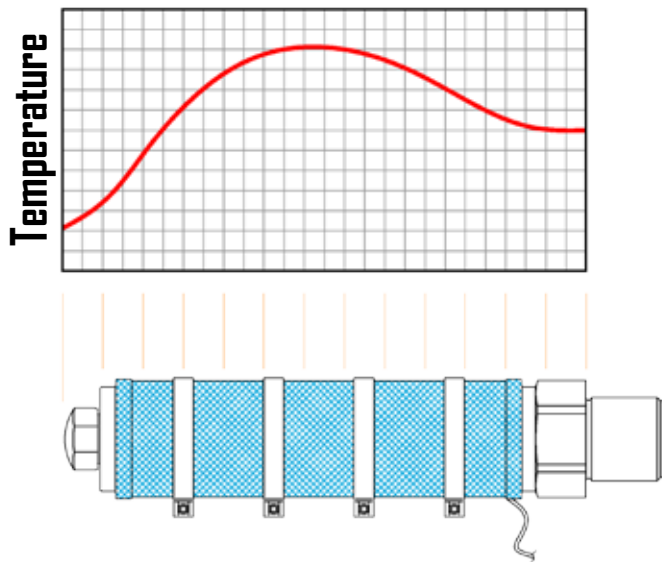
The Ultra has no forward wires and the low profile design virtually eliminates clearance problems when reaching into deep recessed tools through large fixed platens. The Ultra nozzles require 20% -30% less diameter clearance than standard externally heated nozzles. There are a variety of lengths available to suit your specific needs (see pages 4 & 5)



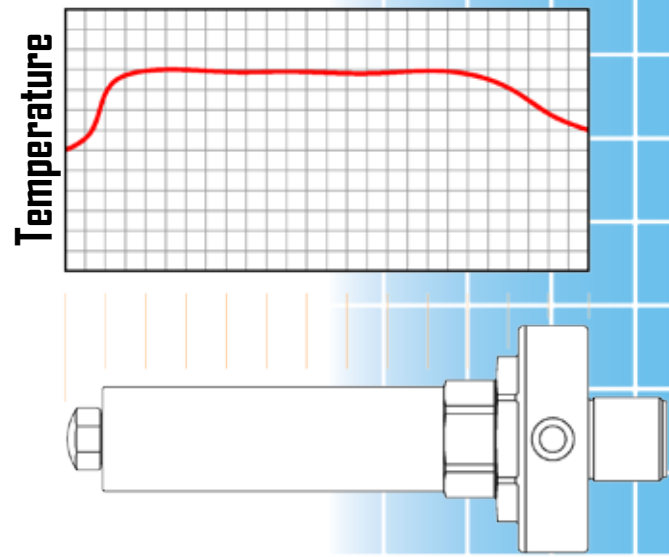
## Uniform Heating

Unlike other internally and externally heated nozzles the 'Ultra Series' nozzles provide an even heated profile. We have integrated special engineered cartridge heaters to equalize the heat transfer though the entire length of the nozzle. This even heating of the nozzle gives the control needed for difficult applications. This also prevents nozzle freeze-off and material degradation from "hot spots." See charts below.

### Extremely Heated Nozzle



### Ultra Nozzles



## Longer Heater Life / Fast Response Time

Ultra Nozzles use custom heaters with very low watt density; this provides for a very long heater life. The number of heaters combined with the large surface area allow for higher levels of power and great efficiency than externally heated systems. Ultra nozzles are also engineered to reach operating temperature as much as 50% quicker than conventional externally heated nozzles.

## Cost Savings

With all the benefit of the Ultra nozzle you can expect to dramatically reduce maintenance cost and the related downtime. The time required to replace and re-wire a nozzle heater and thermocouple can add up to thousands of dollars each year. This is a cost measured in dollars, man hours and machine downtime.

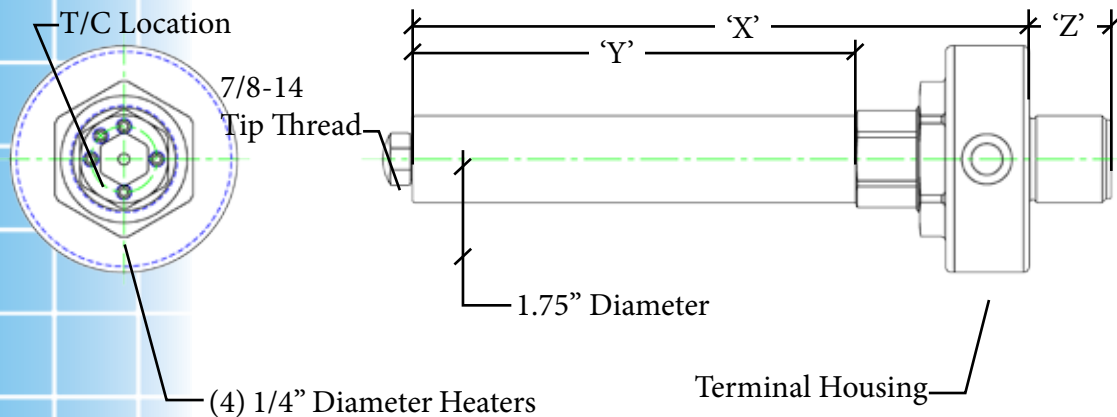
## Two Year Heater and Thermocouple Warranty

Plasti-Co's warranty covers the Ultra's heaters and thermocouple for two years against manufacturers defects/failure. Please contact Plasti-Co for warranty details.

# Ultra Series Nozzles

## Ultra-S Specifications

<b>Input Thread</b>	Built to your machine's specifications
<b>Thru Bore</b>	.500"
<b>Main Body O.D.</b>	1.750"
<b>Nozzle Tip Thread</b>	7/8-14 - Industry Standard
<b>Number of Heaters</b>	4
<b>Heater Size / Type</b>	1/4" Diameter / Special Engineered Cartridge
<b>Number of T/Cs</b>	1 - Type J or K Standard
<b>Cable Length</b>	96" Leads with 60" armor casing (Custom lengths available)



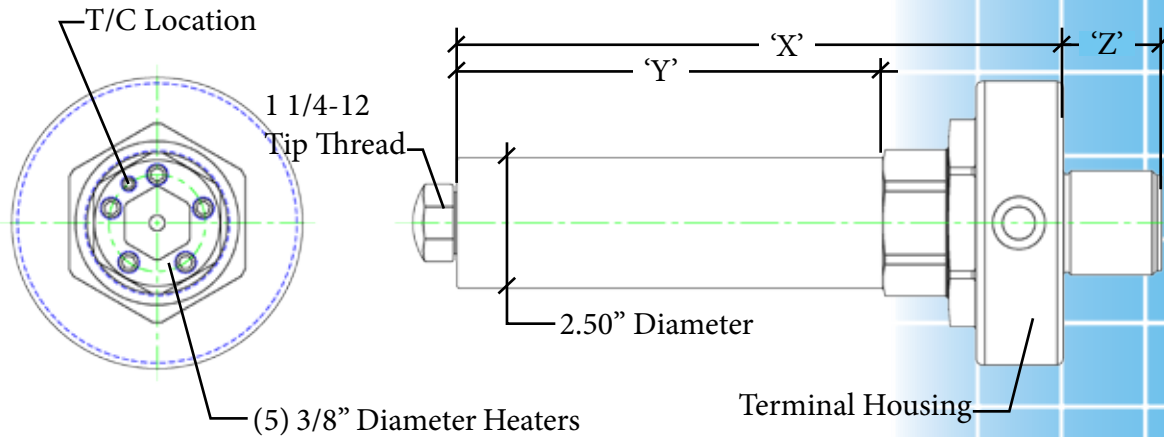
Nozzle Model	Variable "X"	Variable "Y"	Max Amperage	Max Amperage	Heater Wattage (Total 4 Heaters)
ULTS-8	5.69"	2.24"	6.6	3.3	800
ULTS-9	6.69"	3.24"	9.2	4.6	1100
ULTS-10	7.69"	4.24"	10.8	5.4	1200
ULTS-12	9.69"	6.24"	14.2	7.1	1700
ULTS-14	11.69"	8.24"	18.4	9.2	2200
ULTS-16	13.69"	10.24"	21.6	10.8	2600
ULTS-18	15.69"	12.24"	N/A	12.5	3000
ULTS-20	17.69"	14.24"	N/A	14.6	3500

Variable 'Z' denotes input thread length, standard is 1.63" for 1-3/4"-8 thread.  
Custom input threads and lengths are available.

# Ultra-M

## Specifications

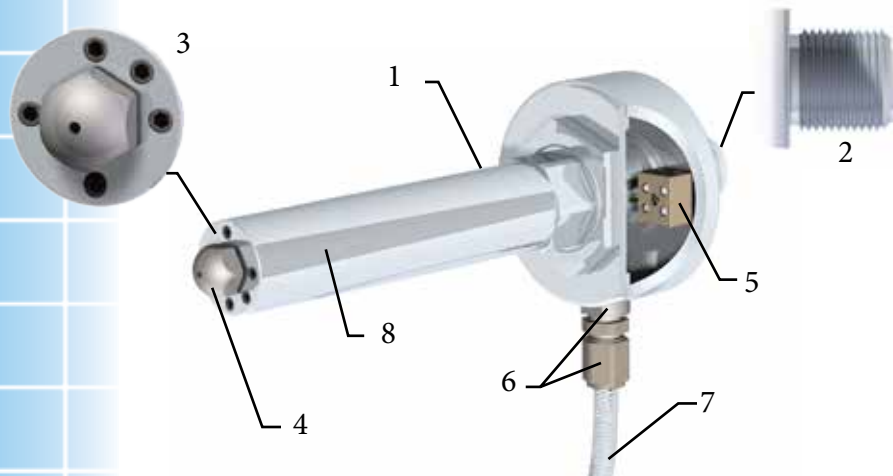
<b>Input Thread</b>	Built to your machine's specifications
<b>Thru Bore</b>	.750"
<b>Main Body O.D.</b>	2.500"
<b>Nozzle Tip Thread</b>	1 1/4-12 - Industry Standard
<b>Number of Heaters</b>	5
<b>Heater Size / Type</b>	3/8" Diameter / Special Engineered Cartridge
<b>Number of T/Cs</b>	1 - Type J or K Standard
<b>Cable Length</b>	96" Leads with 60" armor casing (Custom lengths available)



Nozzle Model	Variable "X"	Variable "Y"	Max Amperage	Max Amperage	Heater Wattage (Total 4 Heaters)
ULTM-10	7.58"	4.14"	10.4	5.5	1250
ULTM-12	9.58"	6.14"	14.6	7.3	1750
ULTM-14	11.58"	8.14"	18.8	9.4	2250
ULTM-16	13.58"	10.14"	20.8	10.4	2500
ULTM-18	15.58"	12.14"	N/A	13.5	3250
ULTM-20	17.58"	14.14"	N/A	15.6	3750
ULTM-22	19.58"	15.14"	N/A	17.7	4250
ULTM-24	21.58"	18.14"	N/A	19.8	4750

Variable 'Z' denotes input thread length, standard is 1.63" for 1-3/4"-8 thread.  
Custom input threads and lengths are available.

# Ultra Series Nozzles



1. Plasti-Co's highest quality 'EverLast' stainless steel construction throughout.
2. Manufactured to fit your machines specific nozzle adapter / endcap thread and inside diameter for smooth trouble free installation.
3. Socket head cap screws protect the heaters and thermocouple from plastic and are easily removable for nozzle service, heater replacement.
4. Ultra nozzles are manufactured for use with industry standard nozzle tips. 7/8-14 thread for Ultra-S and 1-1/4-12 thread for Ultra-M.
5. Internal connections are achieved through high quality, high temperature resistance ceramic terminal blocks. This allows for simplified user serviceability.
6. Fittings and couplings are constructed of high grade stainless steel.
7. All-in-one stainless steel flex armor casing safely carries power and T/C wires away from the nozzle. 96" leads length with 60" armor standard. Custom lengths and/or terminations are available.
8. Nozzle Internal flow surface is honed and highly polished to 16/32 RMS. This allows for faster purging, color changes and more consistent flow.

# *Ultra Series*

## *Internally Heated Nozzles*

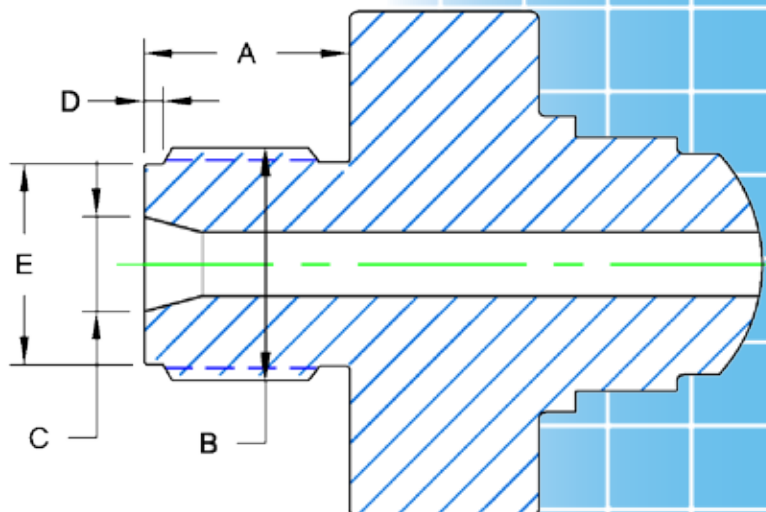
### Ordering Specifications / Information

Please Have the following information available when placing your order.

Nozzle Specifications	
<b>Ultra Nozzle Model</b>	<input type="checkbox"/> Ultra-S (7/8-14 tip thread) <input type="checkbox"/> Ultra-M (1 1/4-12 tip thread)
<b>Nozzle Size (length)</b>	_____ Ultra-S (8-12), Ultra-M (10-24) (see pgs. 4-5)
<b>Nozzle Heater Voltage</b>	<input type="checkbox"/> 120V <input type="checkbox"/> 240V <input type="checkbox"/> Other:
<b>Thermocouple Type</b>	<input type="checkbox"/> Type J <input type="checkbox"/> Type K <input type="checkbox"/> Other:
<b>Nozzle Tip Radius</b>	<input type="checkbox"/> 1/2" <input type="checkbox"/> 3/4" <input type="checkbox"/> Other:

Input Details - Machine Side of Unit		
<b>A</b>	Thread Length	This length must be longer than the depth of the machines nozzle adapter/endcap thread.
<b>B</b>	Thread Size	If unsure of thread size, provide a major O.D. of the tops of the threads. Thread pitch should be verified using thread pitch gauge only.
	Thread Pitch	
<b>C</b>	Rear Opening	Rear opening size should match adapter/endcap I.D.
<b>D</b>	Pilot Length	Some machine makes will have long pilot relief areas or counter-bores for added sealing/alignment.
<b>E</b>	Pilot Diameter	

Additional Information:





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