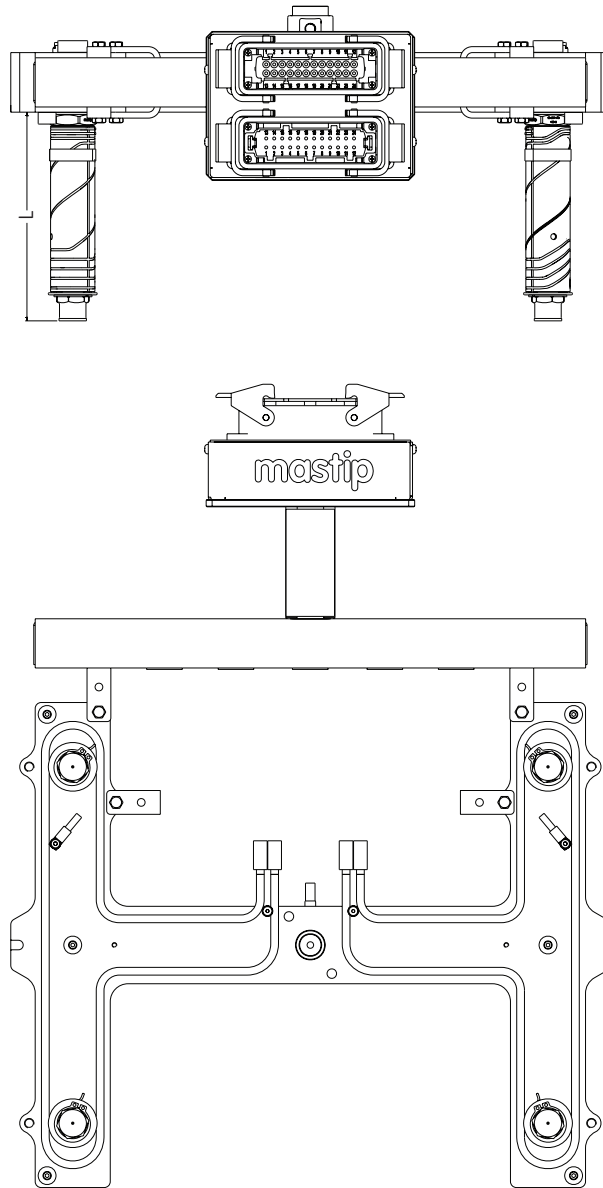


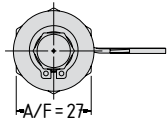
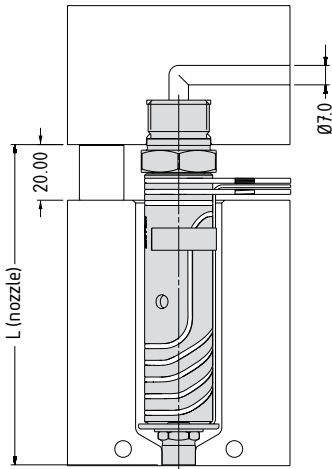
Nexus[™] Pre-Wired Hot Runner System

Assembly Overview

**Key Features**

- Fast and simple installation out of the box
- Incorporates advanced heating technology for superior thermal performance
- Fully customisable to suit your application requirements
- Able to process commodity and abrasive engineering grade polymers
- Available in 16,19 and 27 Series FlowLoc™ nozzles

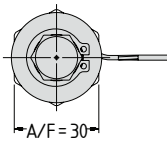
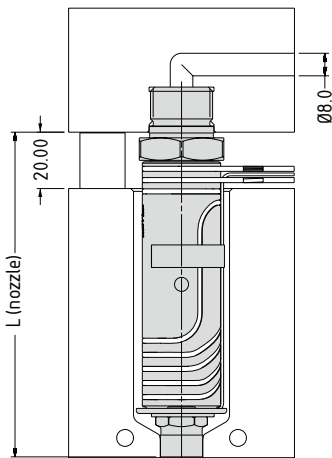
FlowLoc™ Range Series and Lengths



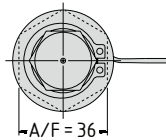
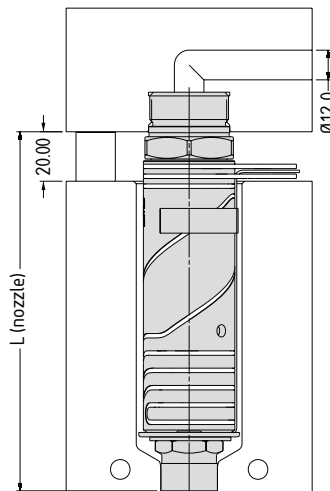
TX16

FlowLoc™ Standard Lengths																	
Series	L (nozzle)*																
16 Series	75	85	95	105	115	130	145	160	175	200	225	250					
19 Series	75	85	95	105	115	130	145	160	175	200	225	250	275	300			
27 Series	75	85	95	105	115	130	145	160	175	200	225	250	275	300	350	400	450

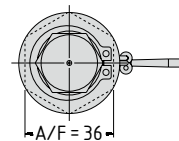
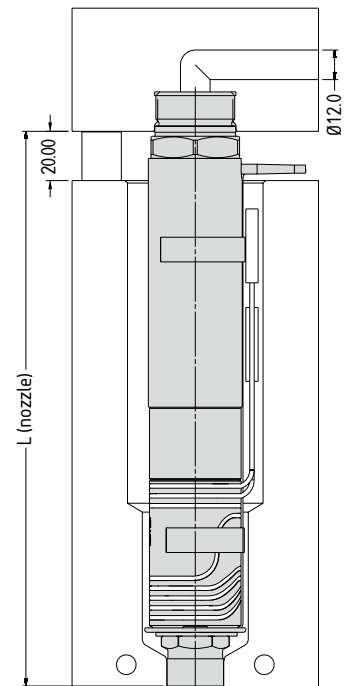
* Custom lengths available on request



TX19



TX27075 - TX27175

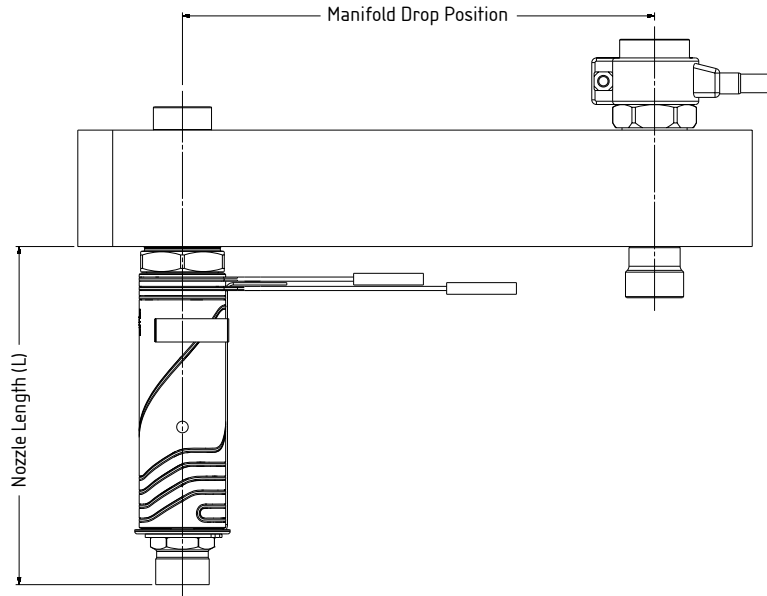


TX27225 - TX27275

Design Consideration

The threaded connection between nozzle and manifold results in a bending force over the length of the nozzle body during thermal expansion of the manifold. This bending force across the nozzle body must remain within an acceptable ratio to ensure good service life of the nozzle body.

Please refer to the graph below for Mastip's recommended ratios for manifold drop position to nozzle length when considering your mould design.

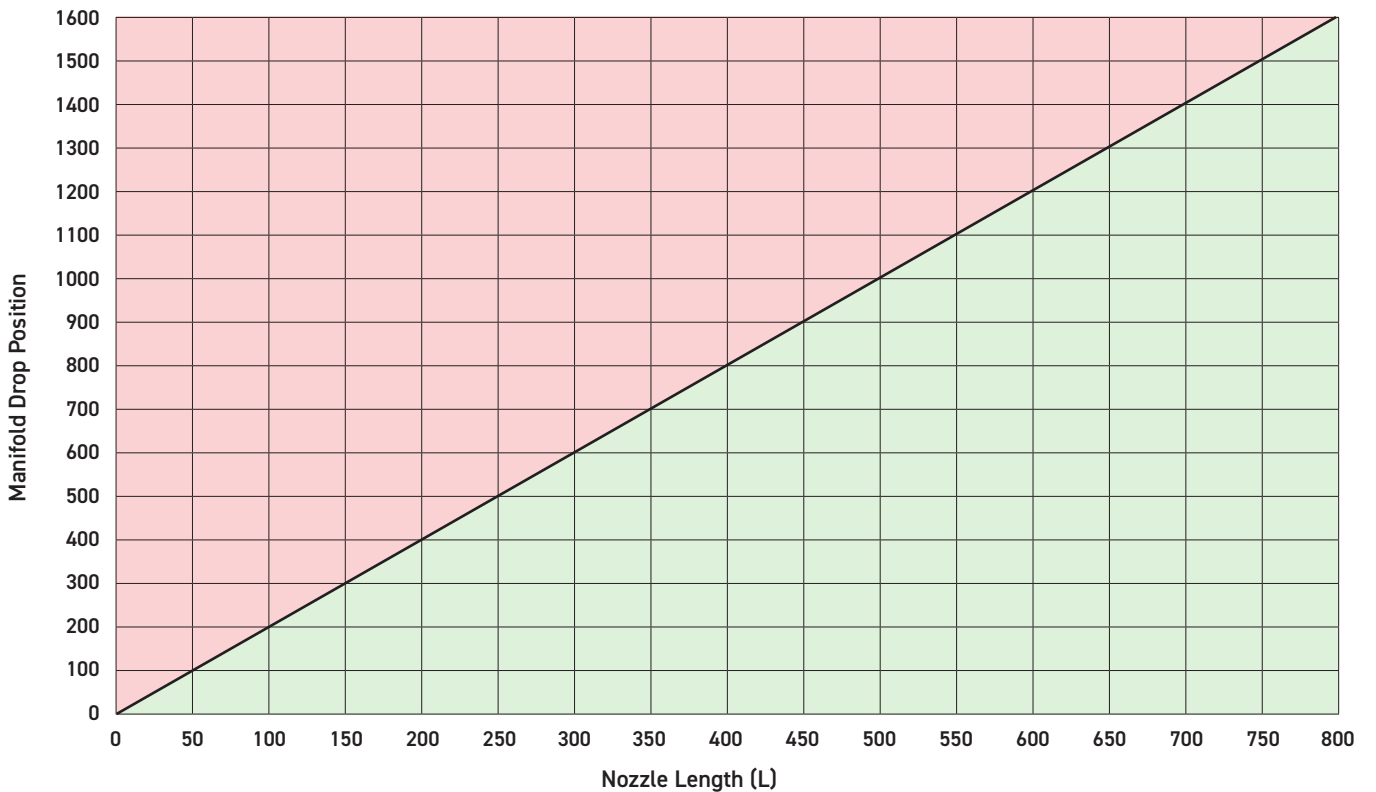


Acceptable Ratio

Manifold Drop Position = 200mm
 Nozzle Length (L) = 100mm

Unacceptable Ratio

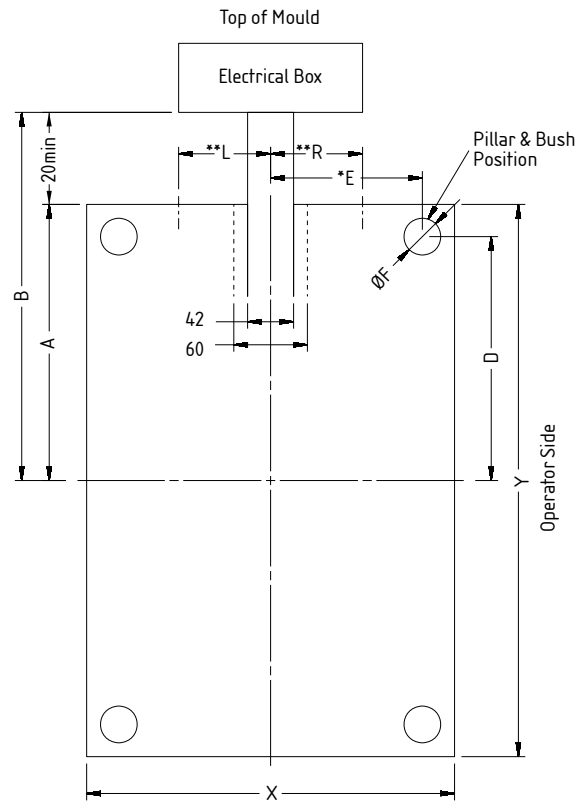
Manifold Drop Position = 400mm
 Nozzle Length (L) = 100mm



Nexus™ System Ordering Information

Note: To ensure that Mastip are able to supply system approval drawings in a timely and accurate manner, please complete the required Nexus™ System Ordering Information and supply to Mastip along with the mould design in CAD format.

Depending on the manifold configuration your preferred electrical box position may not be possible.



Nexus™ System Ordering Information		
A	Centre of mould to top	__ mm
B	Gap greater than 20mm	__ mm
D	Pillar position from centre of mould	__ mm
E	Pillar position from centre of mould	__ mm
F	Max. diameter of Pillar	__ mm
X	Mould width	__ mm
Y	Mould length	__ mm
Electrical Box Position - choose L, C or R		
L	Left	L + __ mm
C	Central	C
R	Right	R + __ mm

Note

- * If pillar and bush has an unsymmetrical position provide the closest to center line.
- ** If the lifting strap extends over the cavity plate and onto the manifold plate, this may interfere with the channel. Ensure the channel is R of L with correct offset to avoid lifting strap.

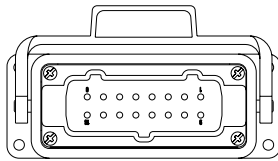
Nexus™ System Electrical Combinations

Electrical Specifications Ordering Information

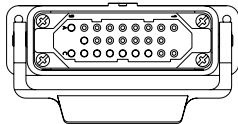
- When ordering a Nexus™ System please specify the mould side plug combination and wiring sequences.
- Below are Mastip's default options. Please tick preferences then scan and return to Mastip.
- If your preference falls outside of Mastip's default options please specify your mould side plug combination and wiring sequence with a detailed description showing zone, thermocouple and power sequence.

Default options for Mould Side Plug Combinations

Option 1 - 16 Pin Female TC, 25 Pin Male Power



SINGLE LATCH PICTURED



Zone #	TC Terminals	Power Terminals
1	1(+) - 9(-)	"A" 1 - 2
2	2(+) - 10(-)	"A" 3 - 4
3	3(+) - 11(-)	"A" 5 - 6
4	4(+) - 12(-)	"A" 7 - 8
5	5(+) - 13(-)	"B" 2 - 3
6	6(+) - 14(-)	"B" 4 - 5
7	7(+) - 15(-)	"B" 6 - 7
8	8(+) - 16(-)	"C" 1 - 2

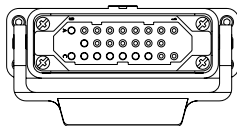
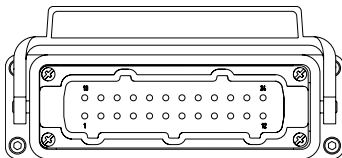
Tick required option

Single Latch

Dual Latch

Suitable for up to 8 zones

Option 2 - 24 Pin Female TC, 25 Pin Male Power



Zone #	TC Terminals	Power Terminals
1	1(+) - 13(-)	"A" 1 - 2
2	2(+) - 14(-)	"A" 3 - 4
3	3(+) - 15(-)	"A" 5 - 6
4	4(+) - 16(-)	"A" 7 - 8
5	5(+) - 17(-)	"B" 2 - 3
6	6(+) - 18(-)	"B" 4 - 5
7	7(+) - 19(-)	"B" 6 - 7
8	8(+) - 20(-)	"C" 1 - 2
9	9(+) - 21(-)	"C" 3 - 4
10	10(+) - 22(-)	"C" 5 - 6
11	11(+) - 23(-)	"C" 7 - 8
12	12(+) - 24(-)	"A" 9 - "C" 9

Tick required option

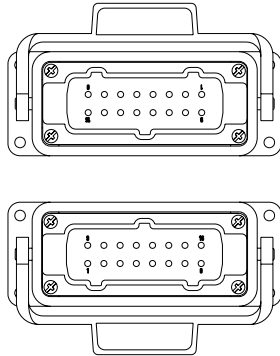
Single Latch

Dual Latch

Suitable for up to 12 zones

Nexus™ System Electrical Combinations

Option 3 - 16 Pin Female TC, 16 Pin Male Power



Suitable for up to 8 zones

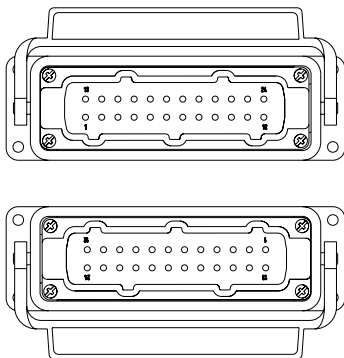
Zone #	TC Terminals	Power Terminals
1	1(+) - 9(-)	1 - 9
2	2(+) - 10(-)	2 - 10
3	3(+) - 11(-)	3 - 11
4	4(+) - 12(-)	4 - 12
5	5(+) - 13(-)	5 - 13
6	6(+) - 14(-)	6 - 14
7	7(+) - 15(-)	7 - 15
8	8(+) - 16(-)	8 - 16

Tick required option

Single Latch

Dual Latch

Option 4 - 24 Pin Female TC, 24 Pin Male Power



Suitable for up to 12 zones

Zone #	TC Terminals	Power Terminals
1	1(+) - 13(-)	1 - 13
2	2(+) - 14(-)	2 - 14
3	3(+) - 15(-)	3 - 15
4	4(+) - 16(-)	4 - 16
5	5(+) - 17(-)	5 - 17
6	6(+) - 18(-)	6 - 18
7	7(+) - 19(-)	7 - 19
8	8(+) - 20(-)	8 - 20
9	9(+) - 21(-)	9 - 21
10	10(+) - 22(-)	10 - 22
11	11(+) - 23(-)	11 - 23
12	12(+) - 24(-)	12 - 24

Tick required option

Single Latch

Dual Latch

Wiring Sequence

Nozzles - Manifold - Sprue (Mastip Default)

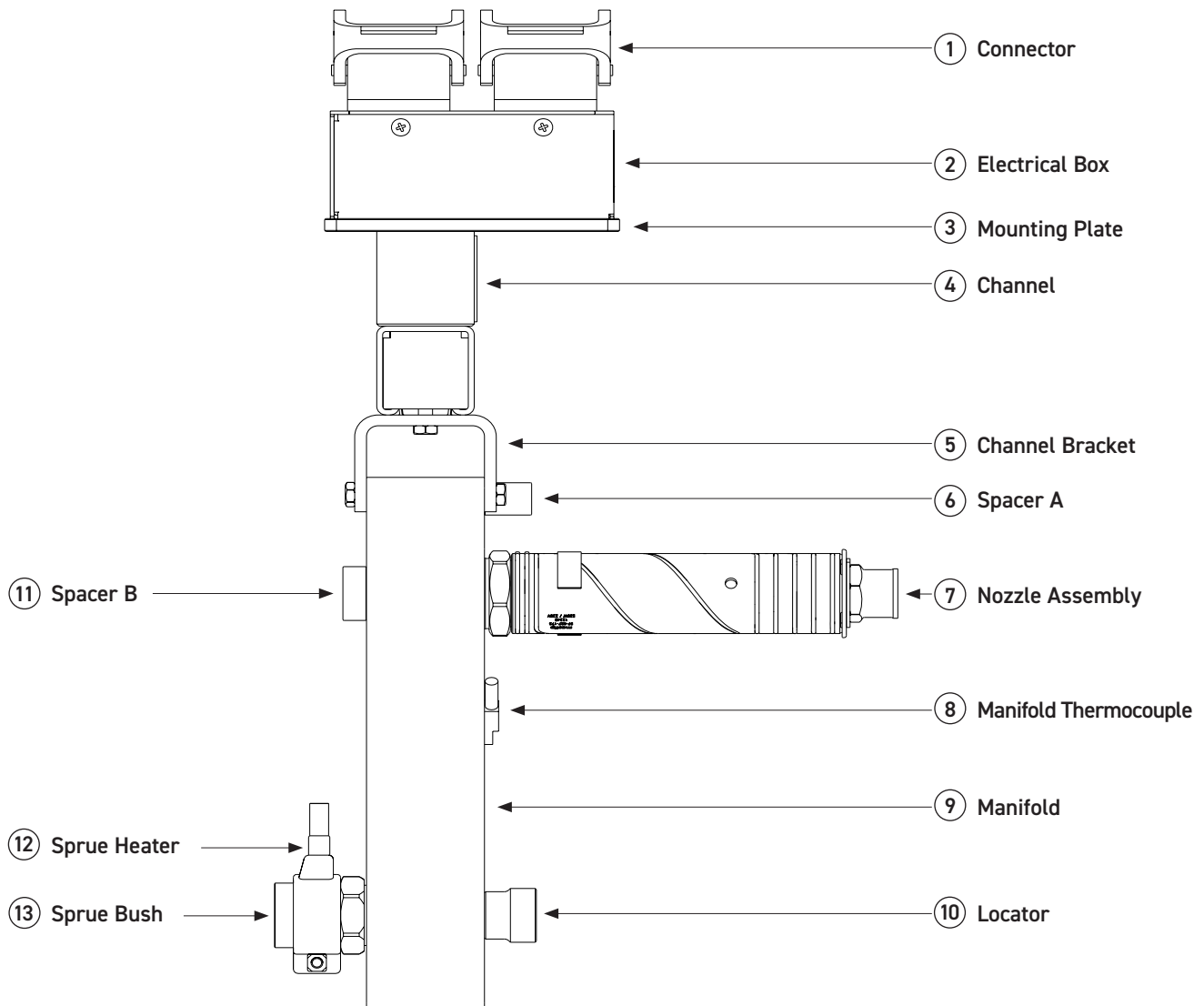
Tick if required

Sprue - Manifold - Nozzles

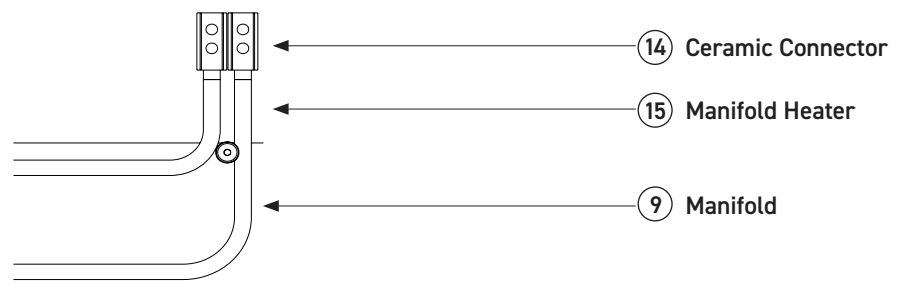
Manifold - Nozzles - Sprues

Manifold Assembly and Components

MANIFOLD COMPONENTS

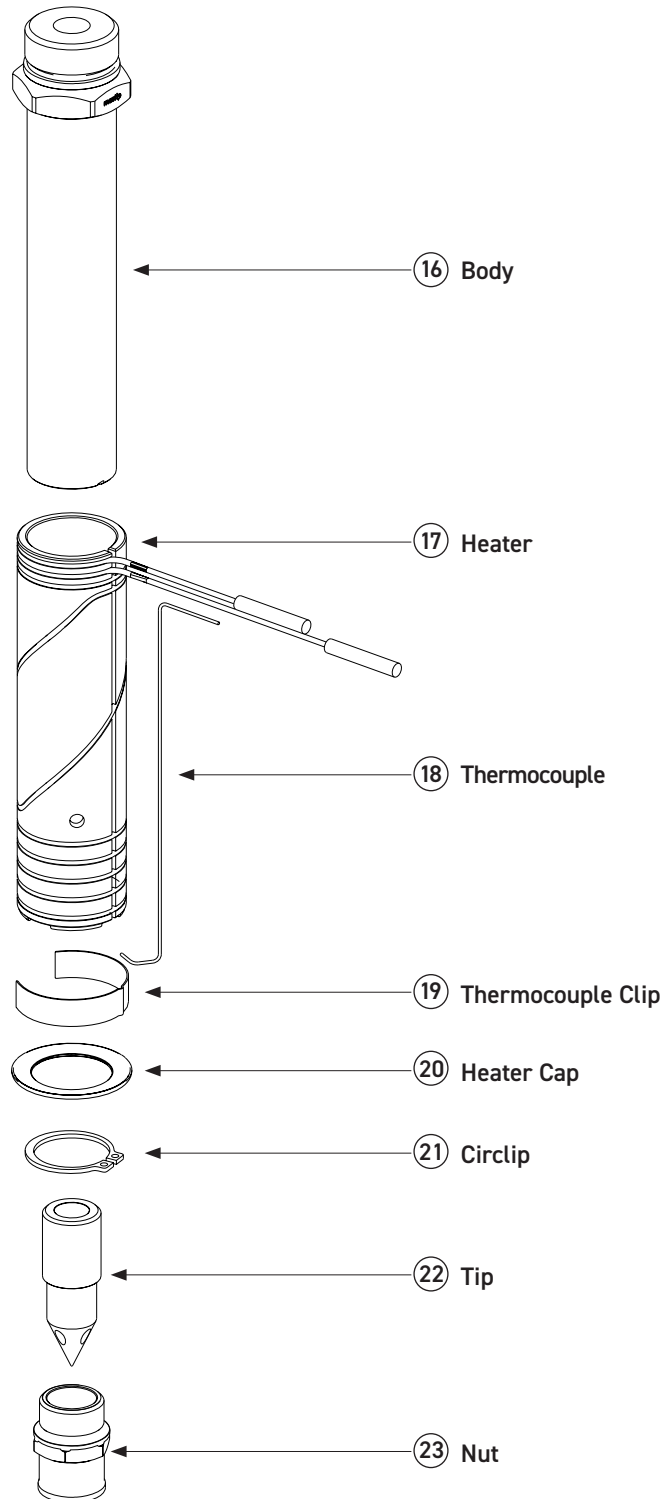


MANIFOLD HEATER



FlowLoc™ Nozzle Assembly and Components

NOZZLE COMPONENTS

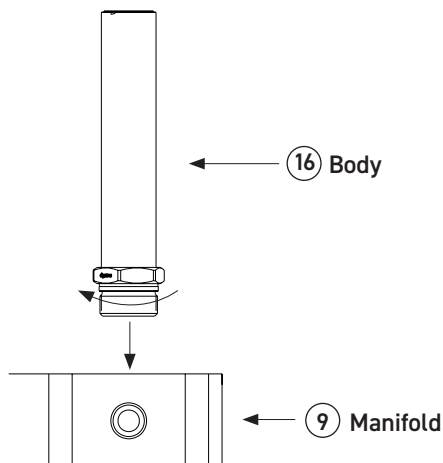


Maintenance Reassembly Procedure

- Heat resistance nickel grease (58-001-001) is supplied with all systems. Ensure all screw threads and the male threads on the **Body (16)**, **Nut (23)** and **Sprue Bush (13)** are wiped with a small amount of heat resistant nickel grease.
- Ensure the gate pocket detail is machined to Mastip's recommendations and all edges are radiused with the specified dimension to aid in the installation of the system.
- Ensure fixed half plates are machined to the correct height to allow for thermal expansion. Refer to the supplied approval drawing.

INSTALLATION

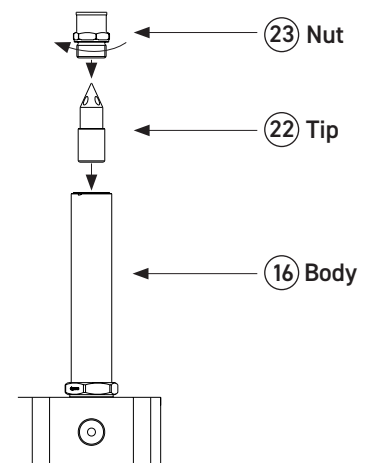
ONE



Lay the **Manifold (9)** flat on a work bench and secure. Wipe a small amount of the supplied heat resistant nickel grease on the thread of the **Body (16)**. Screw the **Body (16)** into the **Manifold (9)**. Tighten the **Body (16)** to the relevant torque setting according to nozzle series:

- X16 – 180 Nm
- X19 – 180 Nm
- X27 – 220 Nm

TWO



Insert the **Tip (22)** into the **Body (16)**. Wipe a small amount of the supplied heat resistant nickel grease on the thread of the **Nut (23)** and place over the **Tip (22)**. Tighten the **Nut (23)** to the relevant torque setting according to nozzle series:

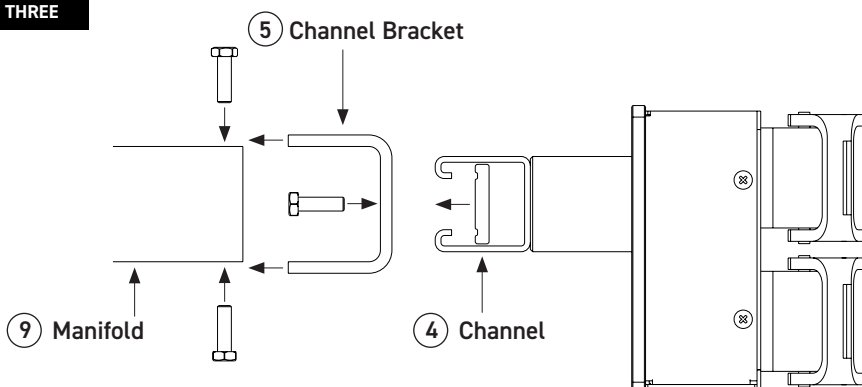
G1 Tip

- X16 – 20 Nm
- X19 – 25 Nm
- X27 – 30 Nm

G5 Tip YCN Nut

- X16 – 40 Nm
- X19 – 50 Nm
- X27 – 60 Nm

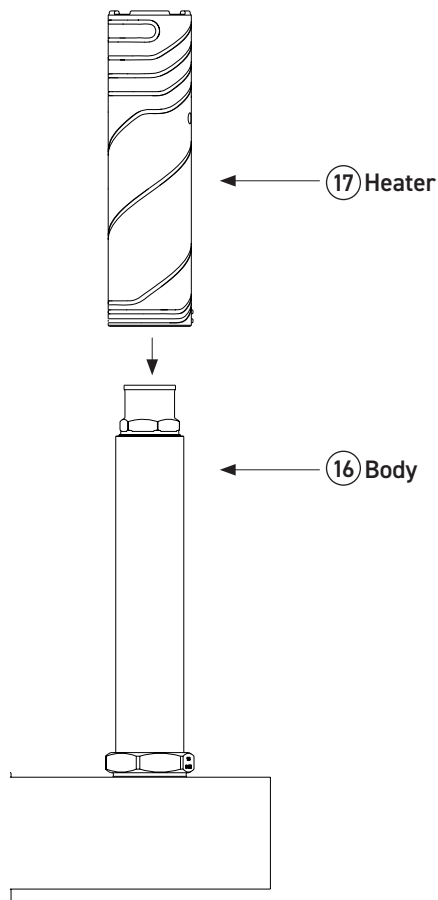
THREE



Assemble the **Channel Brackets (5)** and **Channel (4)** to the **Manifold (9)** as per the system approval drawing that was supplied at time of order.

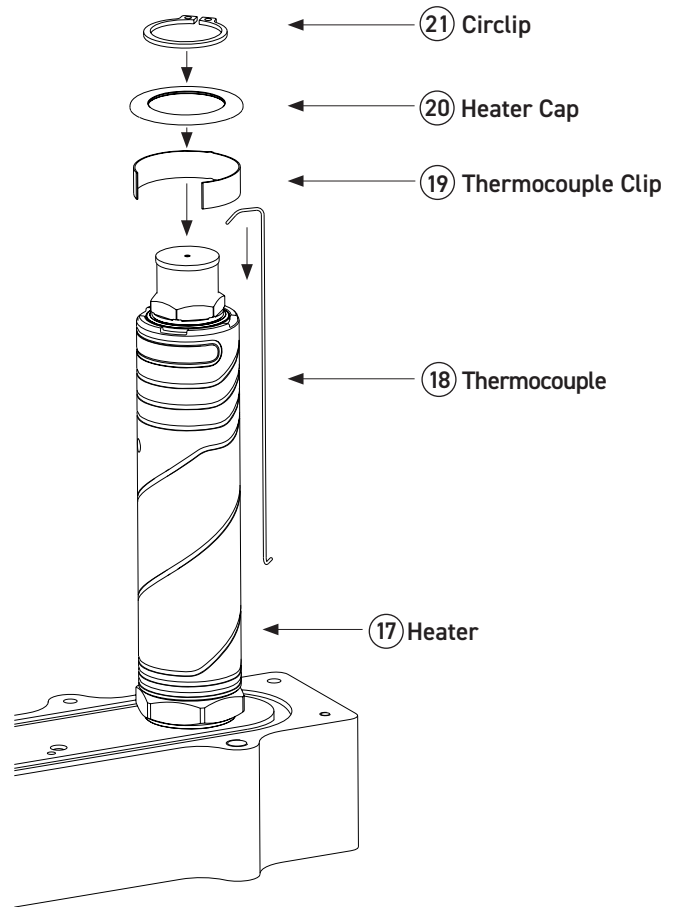
INSTALLATION CONT.....

FOUR



Slide the Heater (17) onto the Body (16) and orientate so the wiring is aligned with the Channel Brackets (5) and Channel (4).

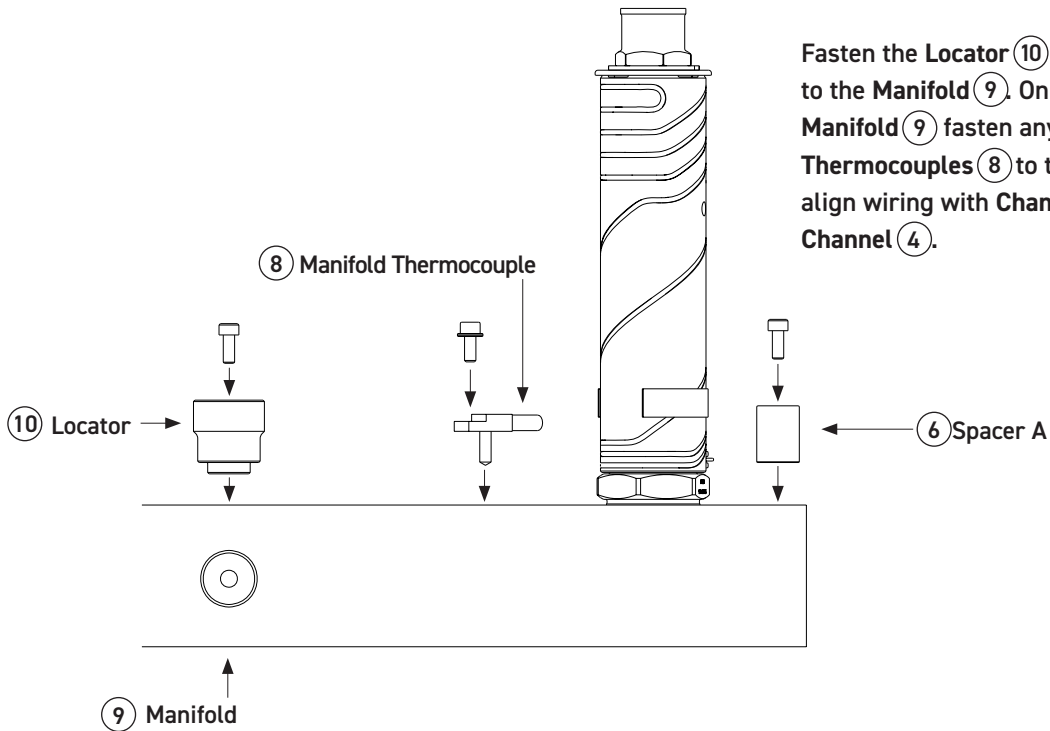
FIVE



Place the Thermocouple (18) into the hole at the front of the Body (16). Ensure the Thermocouple (18) has reached the bottom of the hole and then bend downwards so the thermocouple wire is against the Heater (17). Secure the Thermocouple (18) with the Thermocouple Clip (19). The Heater (17) may need to be rotated slightly to ensure the thermocouple hole in the Body (16) aligns with one of the four recesses in the Heater (17). Secure the Thermocouple (18) by positioning the Heater Cap (20) onto the step of the Body (16). Secure the Heater Cap (20) with Circlip (21). Align the thermocouple wiring with the nozzle heater wiring.

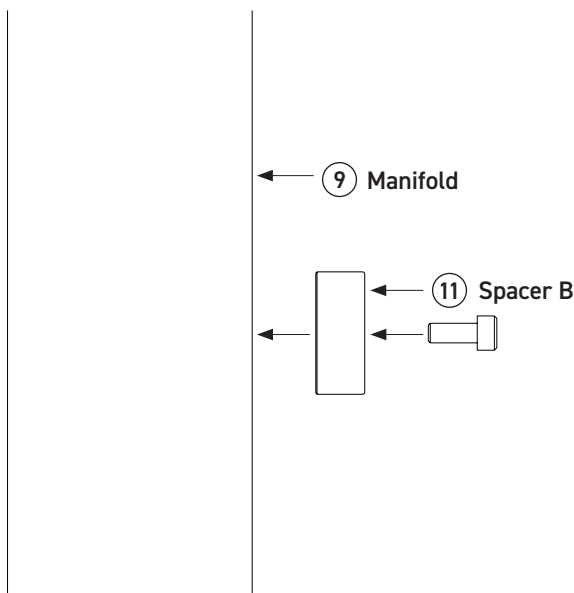
INSTALLATION CONT.....

SIX



Fasten the Locator (10) and Spacer A (6) to the Manifold (9). On the same side of the Manifold (9) fasten any supplied Manifold Thermocouples (8) to the Manifold (9) and align wiring with Channel Brackets (5) and Channel (4).

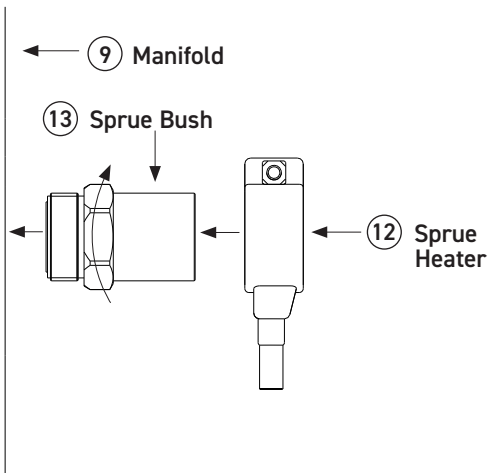
SEVEN



Raise the Manifold (9) up vertically. Do not place on nozzles. Ensure the Manifold (9) is secure before commencing remainder of assembly. Fasten Spacer B (11) to the Manifold (9).

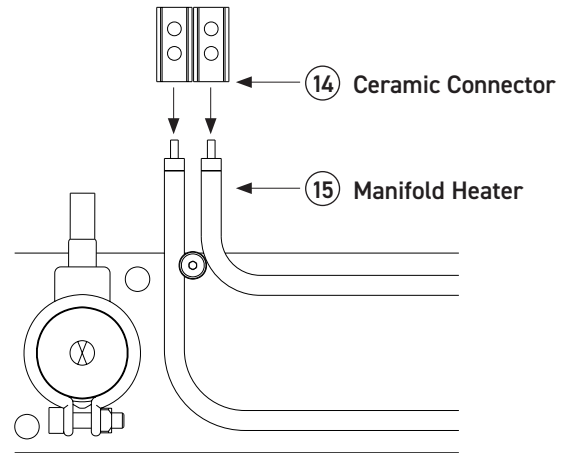
INSTALLATION CONT.....

EIGHT



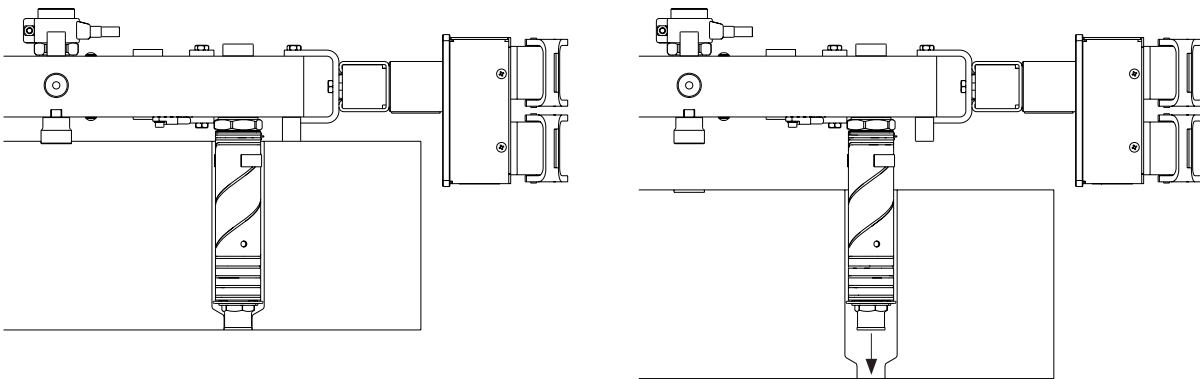
Wipe a small amount of heat resistant nickel grease onto the thread of the Sprue Bush (13) screw into the Manifold (9) and tighten to 250 Nm. Place the Sprue Heater (12) over the Sprue Bush (13) and align the wiring with the Channel Brackets (5) and Channel (4). Fasten Sprue Heater (12) in place.

NINE



Fasten the remaining Manifold Thermocouples (8) to the Manifold (9) and align wiring with Channel Brackets (5) and Channel (4). Fasten Ceramic Connectors (14) to Manifold Heaters (15). Connect manifold heater wires to Ceramic Connectors (14) and align wiring with Channel Brackets (5) and Channel (4). Ensure any wiring that passes over Manifold (9) is protected with glass sleeve. Connect all wiring to Connectors (1) and wire according to supplied wiring diagram.

TEN



Lift the completed manifold assembly ensuring the nozzles are facing down. Using the lifting holes in the Manifold (9) orientate and align the nozzles with the pockets in the cavity plate. Slowly lower the manifold assembly allowing the Heater Caps (20) to act as a guide until the Nuts (23) start to locate with the sealing diameter. Ensure the Locator (10) is aligning with its pocket in the cavity plate. Guide the system into place ensuring Spacer A (6) and the Locator (10) are firmly down against the cavity plate.



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