

Manifold & Hot Half Technical Specifications

Manifold & Hot Half User Guide

All specifications are subject to change without notification.
Do not scale drawings.

Manifold & Hot Halves



All Heaterwerks **Manifolds** listed are machined to individual flow channel requirements based on shot size, resin type and nozzle pitch. This provides a manifold that is performance - matched to your specific application.

Heaterwerks Manifolds are manufactured from pre-hardened tool steel. All manifolds include 220 Volt tubular heating elements (for tubulars rated at 208V, consult factory), reflector plates (when required), and a wiring junction box. Locators, pressure pads, and thermocouples are also included (see pages 28-29). Every Heaterwerks manifold is tested at processing temperature prior to shipment.

All Heaterwerks **Hot Half Systems** include all of the manifold items listed above plus machined manifold and retainer mold plates that are fully assembled and wired to your choice of hot runner nozzle (drop). All that remains is to bolt the system onto your finished mold assembly.

Manifold & Hot Half Systems

Standard and Custom Pitch Configurations are available; contact Heaterwerks.



1-Drop Manifolds & Hot HalvesPg 2
Standard Configuration



2-Drop Manifolds & Hot HalvesPg 4
In-line Configuration



4-Drop Manifolds & Hot HalvesPg 6
In-line or "X" Configurations



6-Drop Manifolds & Hot HalvesPg 10
Standard Configuration



8-Drop Manifolds & Hot HalvesPg 12
"Double X" or "Double H" Configurations



12-Drop Manifolds & Hot HalvesPg 16
Standard Configuration



16-Drop Manifolds & Hot HalvesPg 18
"X" or "H" Configurations



Round Manifolds & Hot HalvesPg 22
Radius Configurations



Custom Hot HalvesPg 24
Mini, Side-Injection, Modular, Stack, and Offset systems are available.



Manifold AccessoriesPg 28
Locating rings, nozzle and manifold locators, pressure pads, and T/C's.



Design GuidelinesPg 30
Recommended design guidelines for Heaterwerks hot runner systems.



Startup ProceduresPg 32
Recommended startup procedures for Heaterwerks hot runner systems.

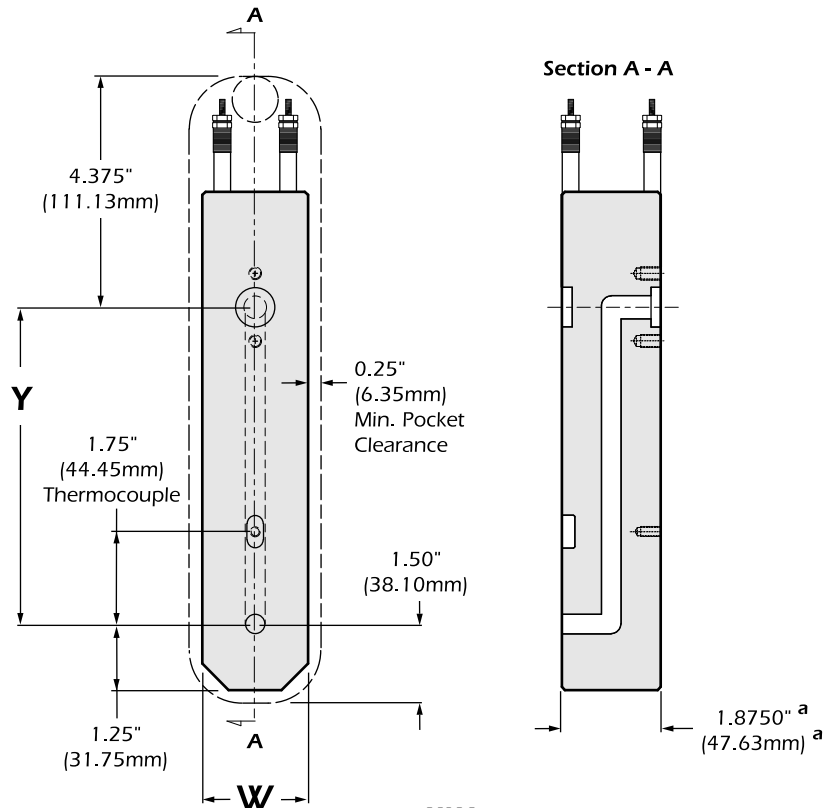
Manifold & Hot Half Technical Specifications

1-Drop Manifold

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Tol. "a" Chart

in:	+ 0.0005
	- 0
mm:	+ 0.01
	- 0



W1 = 2.00" (50.80mm) for all components.

W2 = 2.50" (63.50mm) for Precision Series 625 and 1.00" size Sensitwin bushing.

Chart A

Manifold	Y	Min. Amps**	Style Number
1-Drop 	3.00" (76.20)	1 @ 15	MM010001
	3.50" (88.90)	1 @ 15	MM010002
	4.00" (101.60)	1 @ 15	MM010003
	4.50" (114.30)	1 @ 15	MM010004
	5.00" (127.00)	1 @ 15	MM010005
	5.50" (139.70)	1 @ 15	MM010006
	6.00" (152.40)	1 @ 15	MM010007
	6.50" (165.10)	1 @ 15	MM010008
	7.00" (177.80)	1 @ 15	MM010009
	7.50" (190.50)	1 @ 15	MM010010
	8.00" (203.20)	1 @ 15	MM010011
	8.50" (215.90)	1 @ 15	MM010012
	9.00" (228.60)	1 @ 15	MM010013
	9.50" (241.30)	1 @ 15	MM010014
	10.00" (254.00)	1 @ 15	MM010015

All manifolds listed use W1 width, unless otherwise noted (W2).

NOTE: All manifolds are shipped with the following accessories: locators, pressure pads, thermocouples and tubular heaters.

Refer to pages 28-29 for Accessory machining details.

**Pressure pads must be machined by the customer to provide cold clearance per Heaterwerks drawings.*

All pitch dimensions are at operating temperature (HOT). For custom pitches consult Hot Runner Application Engineering.

* Consult Heaterwerks for tubulars rated at 208V.

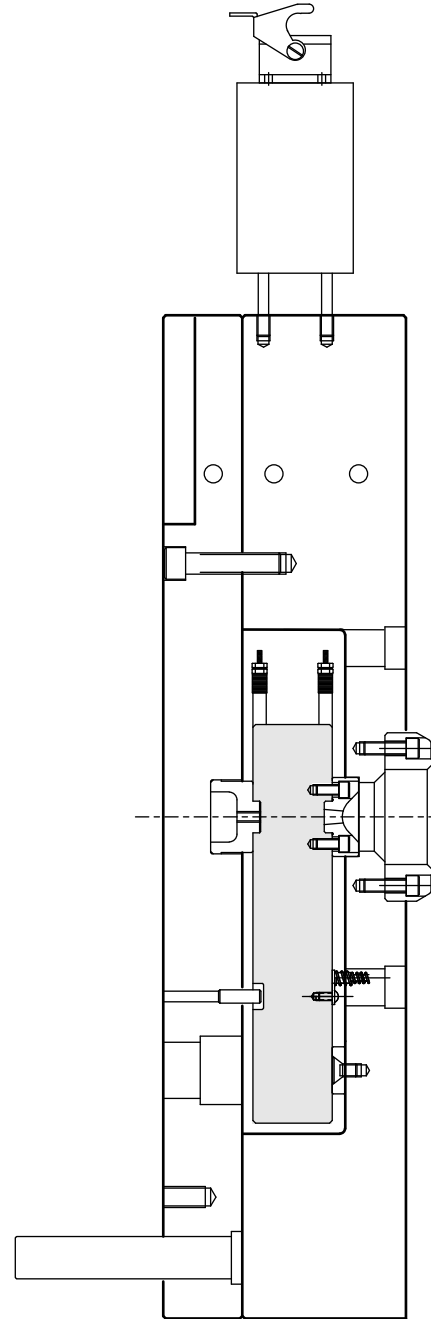
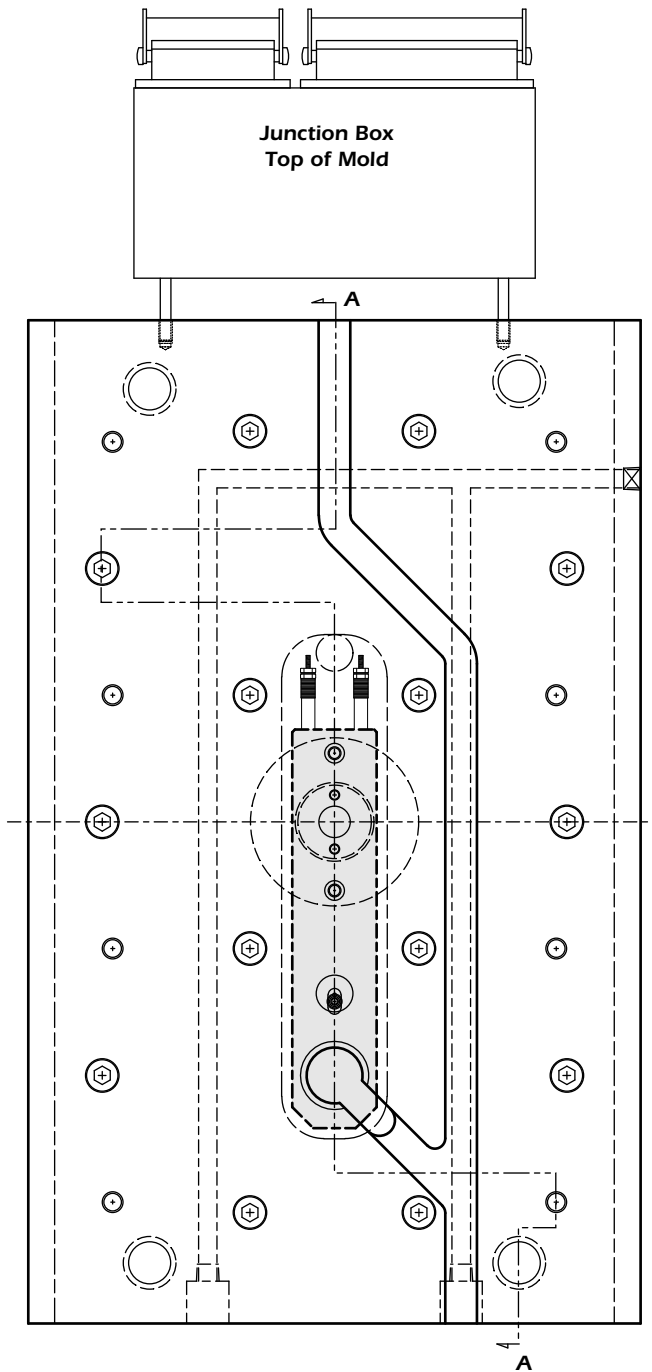
** Minimum amps listed refer to the temperature control module's rating.

Dimensions are in inches. Millimeters are in parentheses.

Manifold & Hot Half Technical Specifications

1-Drop Hot Half

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Section A - A

NOTE 1: Use .437" (11.10mm) diameter water lines with 1/4" NPT fittings.
Suggested range for the distance between the waterlines and the edge of the manifold pocket is .25" (6.35mm) to 3.00" (76.20mm).

*Drawings are for reference only; refer to pages 30-31 for design guidelines.
Routing of water lines and wire channels may be modified depending on pitch restrictions.*

Dimensions are in inches. Millimeters are in parentheses.

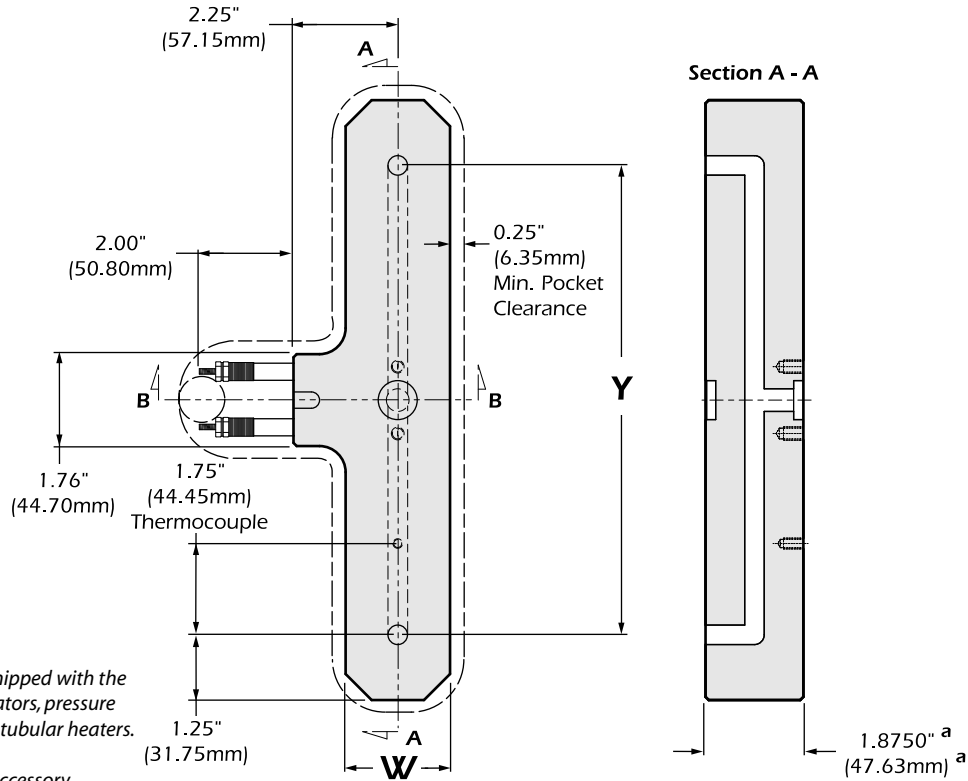
Manifold & Hot Half Technical Specifications

2-Drop Manifold

All specifications are subject to change without notification.
Do not scale drawings.

Tol. "a" Chart

in:	+ 0.0005
	- 0
mm:	+ 0.01
	- 0



NOTE: All manifolds are shipped with the following accessories: locators, pressure pads, thermocouples and tubular heaters.

Refer to pages 28-29 for Accessory machining details.

*Pressure pads must be machined by the customer to provide cold clearance per Heaterwerks drawings.

W1 = 2.00" (50.80mm) for all components.

W2 = 2.50" (63.50mm) for Precision Series 625 and 1.00" size Sensitwin bushing.

Chart A

All manifolds listed use W1 width, unless otherwise noted (W2).

Manifold	Y	Min. Amps**	Style Number	Manifold	Y	Min. Amps**	Style Number
2-Drop	2.75" (69.85)	1 @ 15	MM010016	2-Drop	13.00" (330.20)	1 @ 30 (W2)	MM010033
	3.25" (82.55)	1 @ 15	MM010017		14.00" (355.60)	1 @ 15	MM010034
	4.00" (101.60)	1 @ 15	MM010018		14.00" (355.60)	1 @ 30 (W2)	MM010035
	4.50" (114.30)	1 @ 15	MM010019		15.00" (381.00)	1 @ 30	MM010036
	5.00" (127.00)	1 @ 15	MM010020		15.00" (381.00)	1 @ 30 (W2)	MM010037
	5.50" (139.70)	1 @ 15	MM010021		16.00" (406.40)	1 @ 30	MM010038
	6.00" (152.40)	1 @ 15	MM010022		16.00" (406.40)	1 @ 30 (W2)	MM010039
	6.50" (165.10)	1 @ 15	MM010023		17.00" (431.80)	1 @ 30	MM010040
	7.00" (177.80)	1 @ 15	MM010024		17.00" (431.80)	1 @ 30 (W2)	MM010041
	8.00" (203.20)	1 @ 15	MM010025		18.00" (457.20)	1 @ 30	MM010042
	9.00" (228.60)	1 @ 15	MM010026		18.00" (457.20)	1 @ 30 (W2)	MM010043
	10.00" (254.00)	1 @ 15	MM010027		19.00" (482.60)	1 @ 30	MM010044
	11.00" (279.40)	1 @ 15	MM010028		19.00" (482.60)	1 @ 30 (W2)	MM010045
11.00" (279.40)	1 @ 30 (W2)	MM010029	20.00" (508.00)	1 @ 30	MM010046		
12.00" (304.80)	1 @ 15	MM010030	20.00" (508.00)	1 @ 30 (W2)	MM010047		
12.00" (304.80)	1 @ 30 (W2)	MM010031	21.00" (533.40)	1 @ 30	MM010048		
13.00" (330.20)	1 @ 15	MM010032	21.00" (533.40)	1 @ 30 (W2)	MM010049		

All pitch dimensions are at operating temperature (HOT). For custom pitches consult Hot Runner Application Engineering.

* Consult Heaterwerks for tubulars rated at 208V.

** Minimum amps listed refer to the temperature control module's rating.

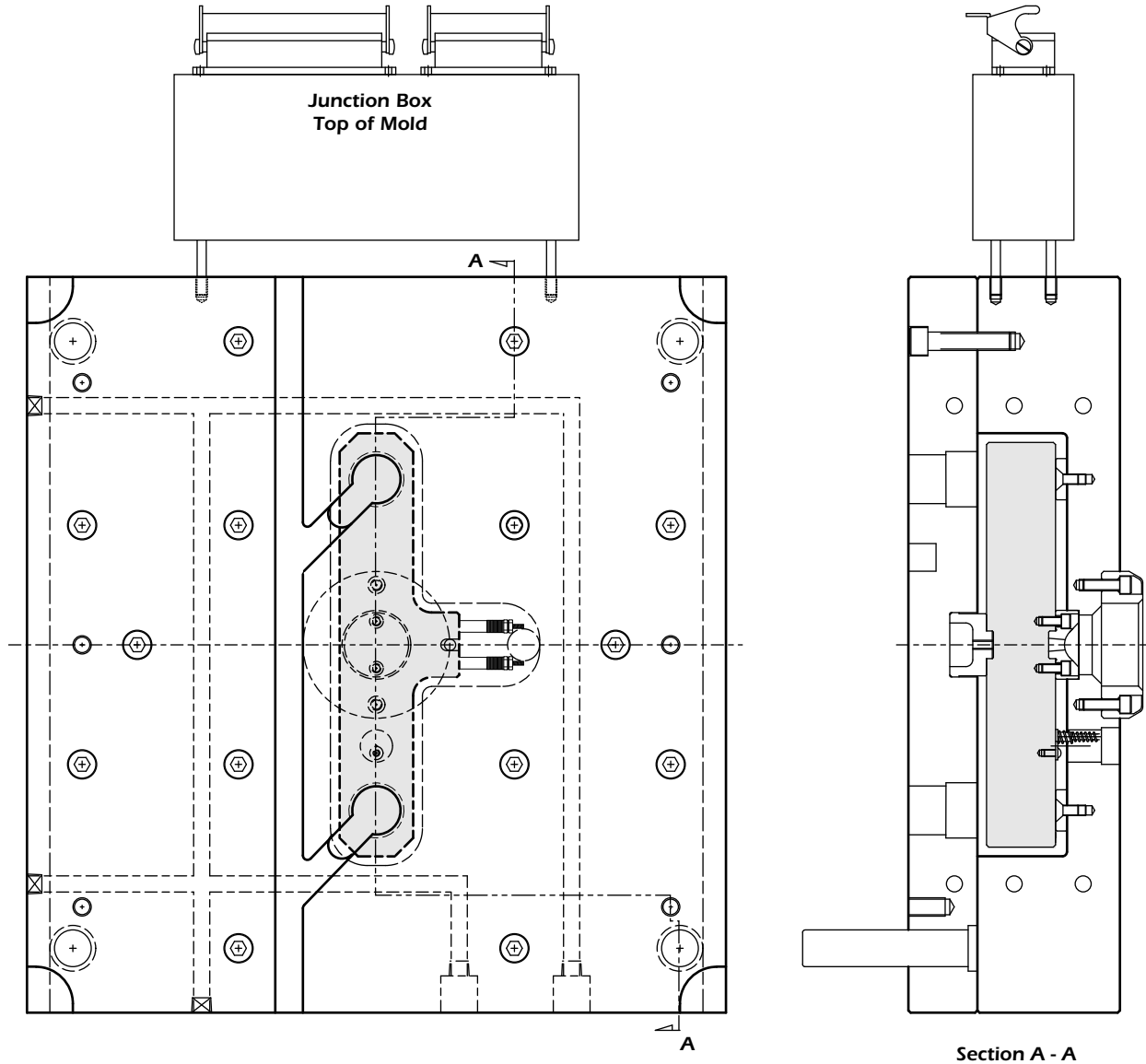
(Two 15 amp modules can be substituted for one 30 amp module)

Dimensions are in inches. Millimeters are in parentheses.

Manifold & Hot Half Technical Specifications

2-Drop Hot Half

All specifications are subject to change without notification.
Do not scale drawings.



NOTE 1: Use .437" (11.10mm) diameter water lines with 1/4" NPT fittings.
Suggested range for the distance between the waterlines and the edge of the manifold pocket is .25" (6.35mm) to 3.00" (76.20mm).

*Drawings are for reference only; refer to pages 30-31 for design guidelines.
Routing of water lines and wire channels may be modified depending on pitch restrictions.*

Dimensions are in inches. Millimeters are in parentheses.

Manifold & Hot Half Technical Specifications

4-Drop "Inline" Manifold

All specifications are subject to change without notification.
Do not scale drawings.

Tol. "a" Chart

in:	+ 0.0005
	- 0
mm:	+ 0.01
	- 0

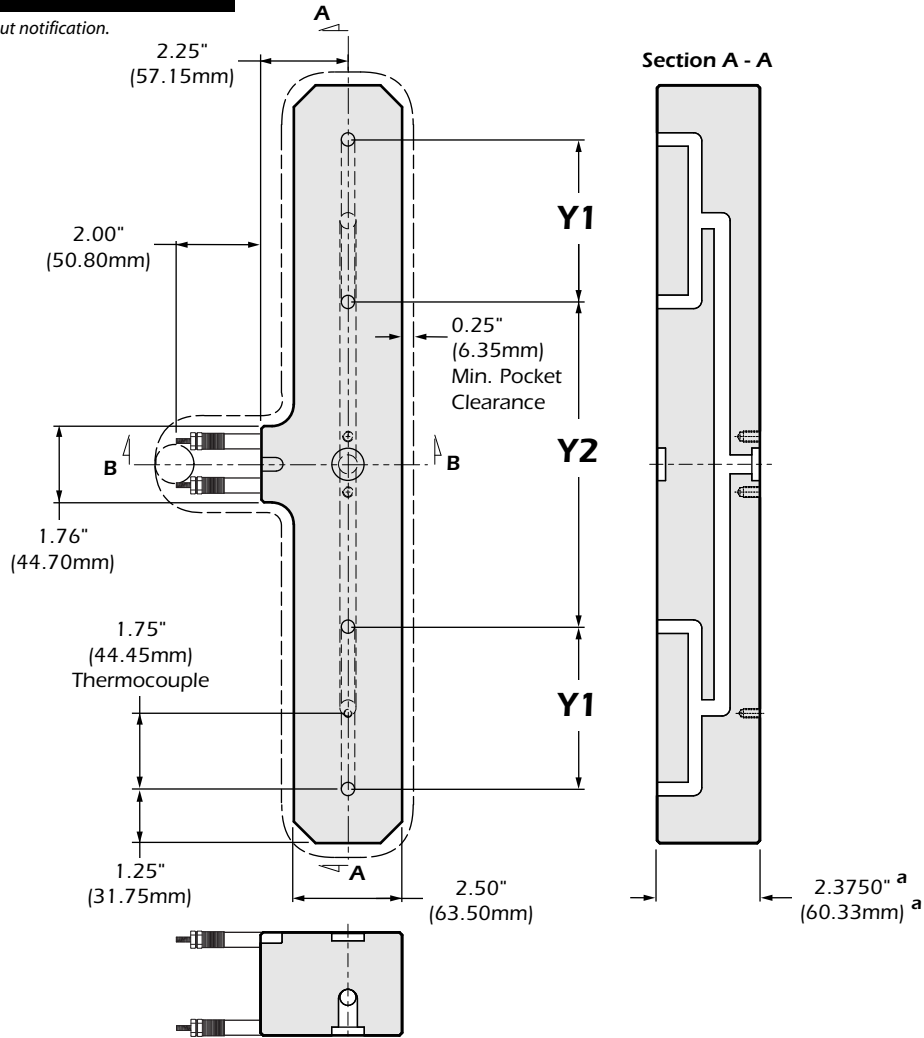


Chart A

Manifold	Y1		Y2		Min. Amps**	Style Number
4-Drop "Inline"	2.00"	(50.80)	3.00"	(76.20)	1 @ 15	MM010088
	2.50"	(63.50)	3.00"	(76.20)	1 @ 15	MM010089
	3.00"	(76.20)	3.00"	(76.20)	1 @ 30	MM010090
	3.00"	(76.20)	3.50"	(88.90)	1 @ 30	MM010091
	3.50"	(88.90)	3.50"	(88.90)	1 @ 30	MM010092
	3.50"	(88.90)	4.00"	(101.60)	1 @ 30	MM010093
	4.00"	(101.60)	4.00"	(101.60)	1 @ 30	MM010094
	4.50"	(114.30)	4.00"	(101.60)	1 @ 30	MM010095
	4.50"	(114.30)	4.50"	(114.30)	1 @ 30	MM010096
	5.00"	(127.00)	5.00"	(127.00)	1 @ 30	MM010097
	5.50"	(139.70)	5.00"	(127.00)	1 @ 30	MM010098
	5.50"	(139.70)	5.50"	(139.70)	1 @ 30	MM010099
	5.50"	(139.70)	6.00"	(152.40)	1 @ 30	MM010100
	6.00"	(152.40)	6.00"	(152.40)	1 @ 30	MM010101
7.00"	(177.80)	7.00"	(177.80)	1 @ 30	MM010102	

NOTE: All manifolds are shipped with the following accessories: locators, pressure pads, thermocouples and tubular heaters.

Refer to pages 28-29 for Accessory machining details.

*Pressure pads must be machined by the customer to provide cold clearance per Heaterwerks drawings.

All pitch dimensions are at operating temperature (HOT). For custom pitches consult Hot Runner Application Engineering.

* Consult Heaterwerks for tubulars rated at 208V.

** Minimum amps listed refer to the temperature control module's rating.

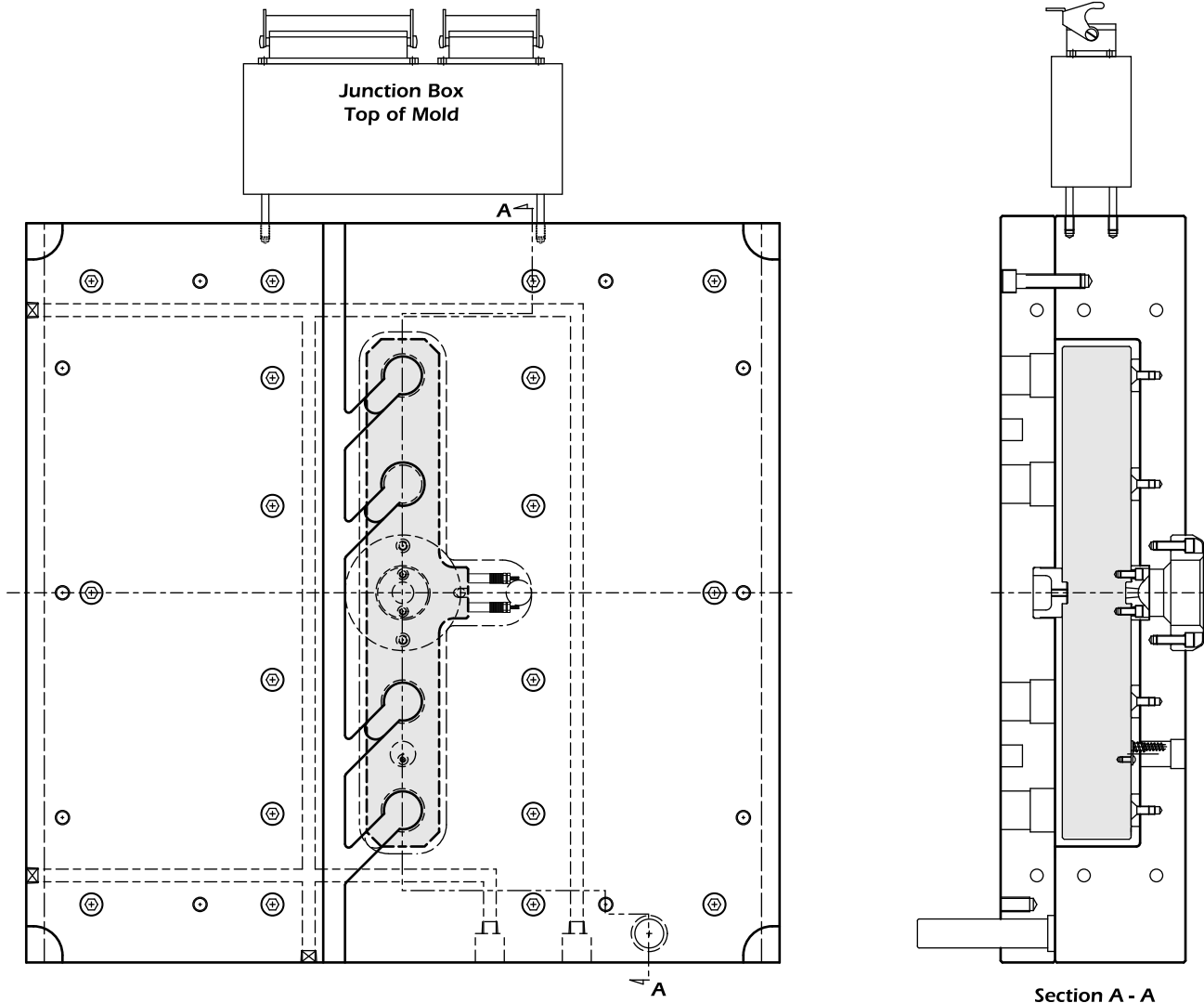
(Two 15 amp modules can be substituted for one 30 amp module)

Dimensions are in inches. Millimeters are in parentheses.

Manifold & Hot Half Technical Specifications

4-Drop "Inline" Hot Half

All specifications are subject to change without notification.
Do not scale drawings.



NOTE 1: Use .437" (11.10mm) diameter water lines with 1/4" NPT fittings.
Suggested range for the distance between the waterlines and the edge of the manifold pocket is .25" (6.35mm) to 3.00" (76.20mm).

*Drawings are for reference only; refer to pages 30-31 for design guidelines.
Routing of water lines and wire channels may be modified depending on pitch restrictions.*

Dimensions are in inches. Millimeters are in parentheses.

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MANIFOLD APPLICATIONS

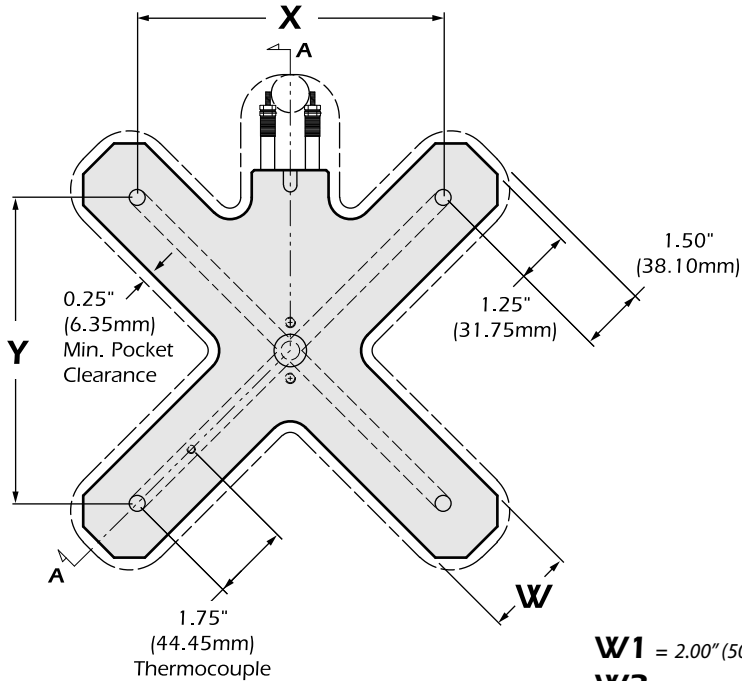
Manifold & Hot Half Technical Specifications

4-Drop "X" Manifold

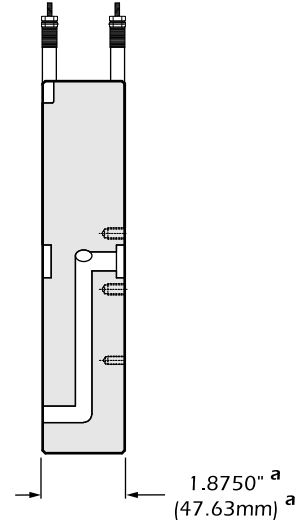
All specifications are subject to change without notification.
Do not scale drawings.

Tol. "a" Chart

in:	+ 0.0005
	- 0
mm:	+ 0.01
	- 0




Section A - A



W1 = 2.00" (50.80mm) for all components.

W2 = 2.50" (63.50mm) for Precision Series 625
and 1.00" size Sensitwin bushing.

Chart A

Manifold	X		Y		Min. Amps**	Style Number
4-Drop "X" 	3.00"	(76.20)	4.00"	(101.60)	1 @ 15	MM010064
	3.50"	(88.90)	4.00"	(101.60)	1 @ 15	MM010065
	4.00"	(101.60)	4.00"	(101.60)	1 @ 15	MM010066
	4.50"	(114.30)	4.50"	(114.30)	1 @ 15	MM010067
	5.00"	(127.00)	5.00"	(127.00)	1 @ 30	MM010068
	5.50"	(139.70)	5.50"	(139.70)	1 @ 30	MM010069
	6.00"	(152.40)	6.00"	(152.40)	1 @ 30	MM010070
	6.00"	(152.40)	6.00"	(152.40)	1 @ 30 (W2)	MM010071
	6.50"	(165.10)	6.50"	(165.10)	1 @ 30	MM010072
	6.50"	(165.10)	6.50"	(165.10)	1 @ 30 (W2)	MM010073
	7.00"	(177.80)	7.00"	(177.80)	1 @ 30	MM010074
	7.00"	(177.80)	7.00"	(177.80)	1 @ 30 (W2)	MM010075
	7.50"	(190.50)	7.50"	(190.50)	1 @ 30	MM010076
	7.50"	(190.50)	7.50"	(190.50)	1 @ 30 (W2)	MM010077
	8.00"	(203.20)	8.00"	(203.20)	1 @ 30	MM010078
	8.00"	(203.20)	8.00"	(203.20)	1 @ 30 (W2)	MM010079
9.00"	(228.60)	9.00"	(228.60)	1 @ 30	MM010080	
9.00"	(228.60)	9.00"	(228.60)	1 @ 30 (W2)	MM010081	
10.00"	(254.00)	10.00"	(254.00)	1 @ 30	MM010082	
10.00"	(254.00)	10.00"	(254.00)	1 @ 30 (W2)	MM010083	
11.00"	(279.40)	11.00"	(279.40)	1 @ 30	MM010084	
11.00"	(279.40)	11.00"	(279.40)	1 @ 30 (W2)	MM010085	
12.00"	(304.80)	12.00"	(304.80)	1 @ 30	MM010086	
12.00"	(304.80)	12.00"	(304.80)	1 @ 30 (W2)	MM010087	

All manifolds listed use W1 width, unless otherwise noted (W2).

NOTE: All manifolds are shipped with the following accessories: locators, pressure pads, thermocouples and tubular heaters.

Refer to pages 28-29 for Accessory machining details.

**Pressure pads must be machined by the customer to provide cold clearance per Heaterwerks drawings.*

All pitch dimensions are at operating temperature (HOT). For custom pitches consult Hot Runner Application Engineering.

* Consult Heaterwerks for tubulars rated at 208V.

** Minimum amps listed refer to the temperature control module's rating.

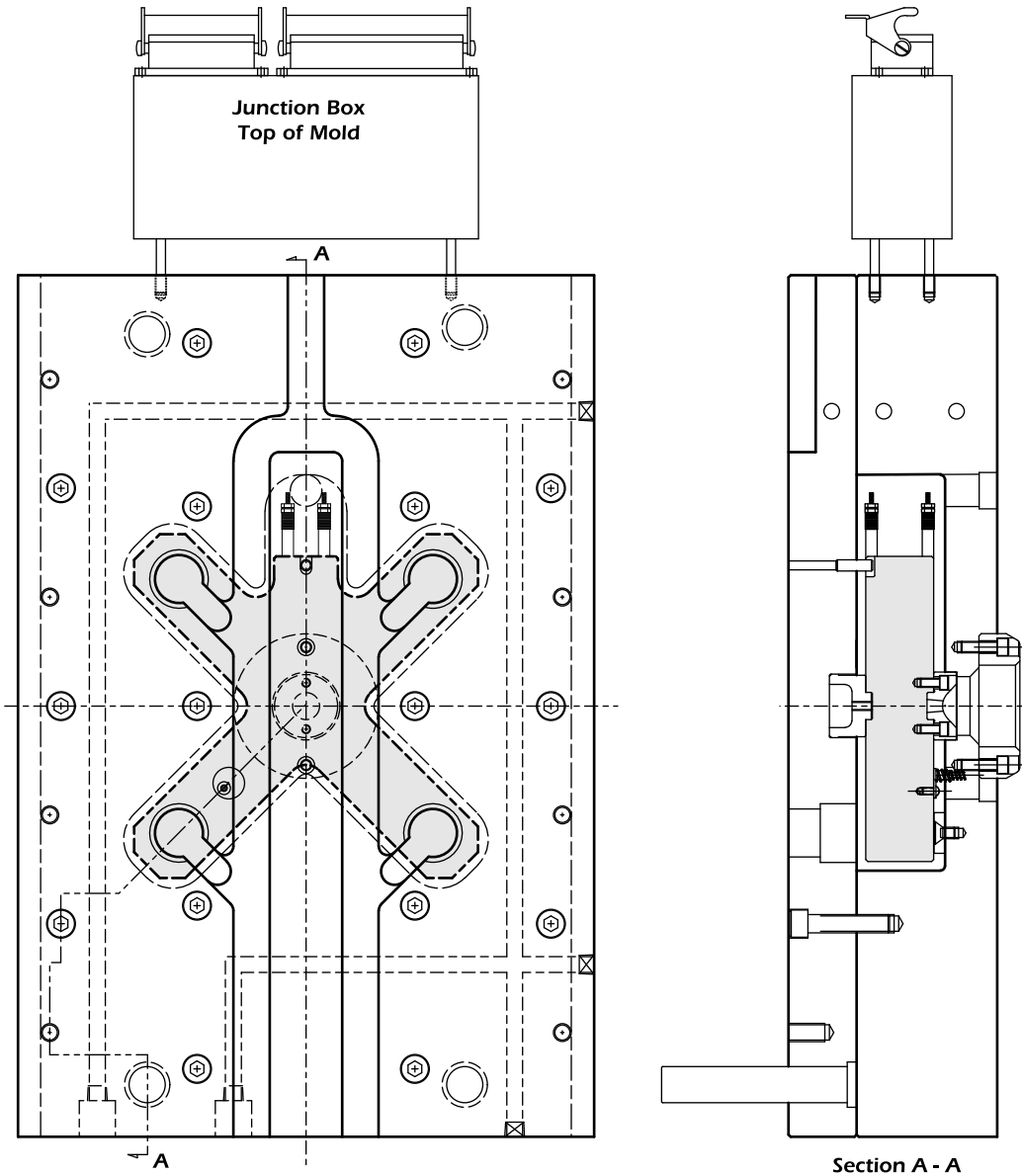
(Two 15 amp modules can be substituted for one 30 amp module)

Dimensions are in inches. Millimeters are in parentheses.

Manifold & Hot Half Technical Specifications

4-Drop "X" Hot Half

All specifications are subject to change without notification.
Do not scale drawings.



NOTE 1: Use .437" (11.10mm) diameter water lines with 1/4" NPT fittings.
Suggested range for the distance between the waterlines and the edge of the manifold pocket is .25" (6.35mm) to 3.00" (76.20mm).

Drawings are for reference only; refer to pages 30-31 for design guidelines.
Routing of water lines and wire channels may be modified depending on pitch restrictions.

Dimensions are in inches. Millimeters are in parentheses.

Manifold & Hot Half Technical Specifications

6-Drop Manifold

All specifications are subject to change without notification.
Do not scale drawings.

Tol. "a" Chart

in:	+ 0.0005
	- 0
mm:	+ 0.01
	- 0

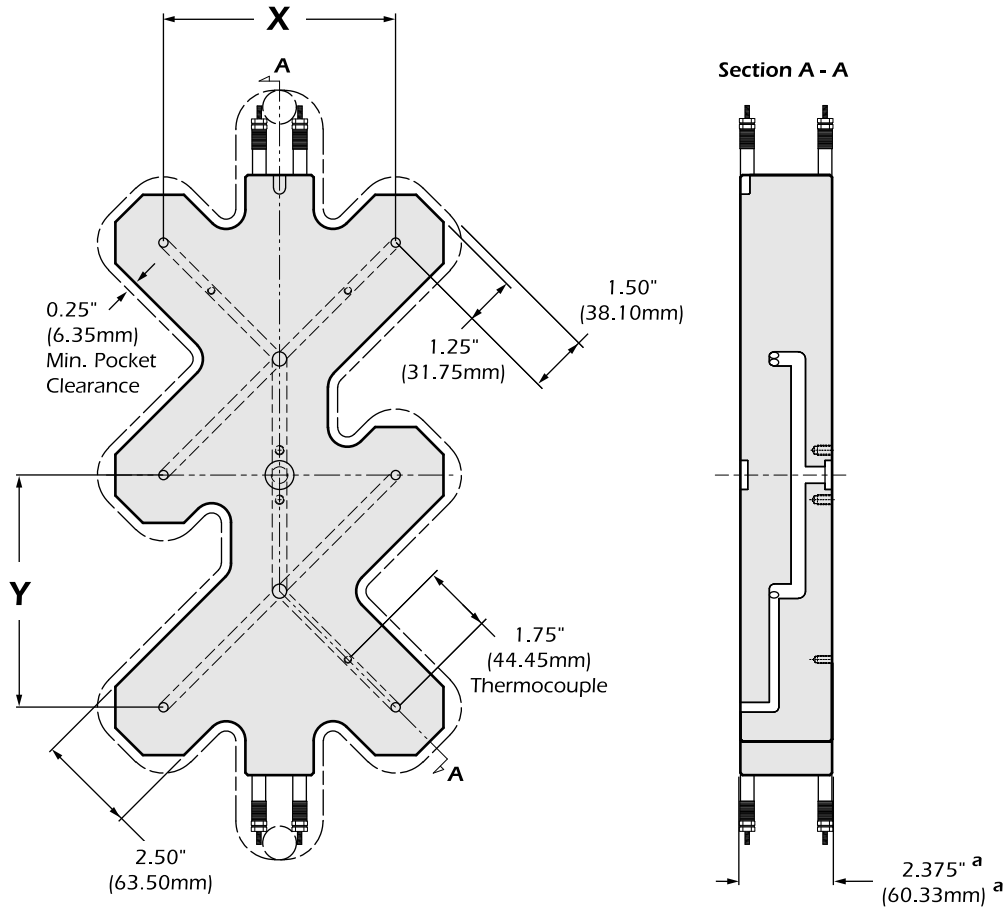



Chart A

Manifold	X		Y		Min. Amps**	Style Number
6-Drop 	3.00"	(76.20)	3.75"	(95.25)	2 @ 15	MM010103
	3.50"	(88.90)	4.00"	(101.60)	2 @ 15	MM010104
	4.00"	(101.60)	4.25"	(107.95)	2 @ 15	MM010105
	4.50"	(114.30)	4.50"	(114.30)	2 @ 15	MM010106
	5.00"	(127.00)	5.00"	(127.00)	2 @ 15	MM010107
	5.50"	(139.70)	5.50"	(139.70)	3 @ 15	MM010108
	6.00"	(152.40)	6.00"	(152.40)	3 @ 15	MM010109
	6.50"	(165.10)	6.50"	(165.10)	2 @ 30	MM010110
	7.00"	(177.80)	7.00"	(177.80)	2 @ 30	MM010111
	8.00"	(203.20)	8.00"	(203.20)	2 @ 30	MM010112
9.00"	(228.60)	9.00"	(228.60)	2 @ 30	MM010113	

NOTE: All manifolds are shipped with the following accessories: locators, pressure pads, thermocouples and tubular heaters.

Refer to pages 28-29 for Accessory machining details.

*Pressure pads must be machined by the customer to provide cold clearance per Heaterwerks drawings.

All pitch dimensions are at operating temperature (HOT). For custom pitches consult Hot Runner Application Engineering.

* Consult Heaterwerks for tubulars rated at 208V.

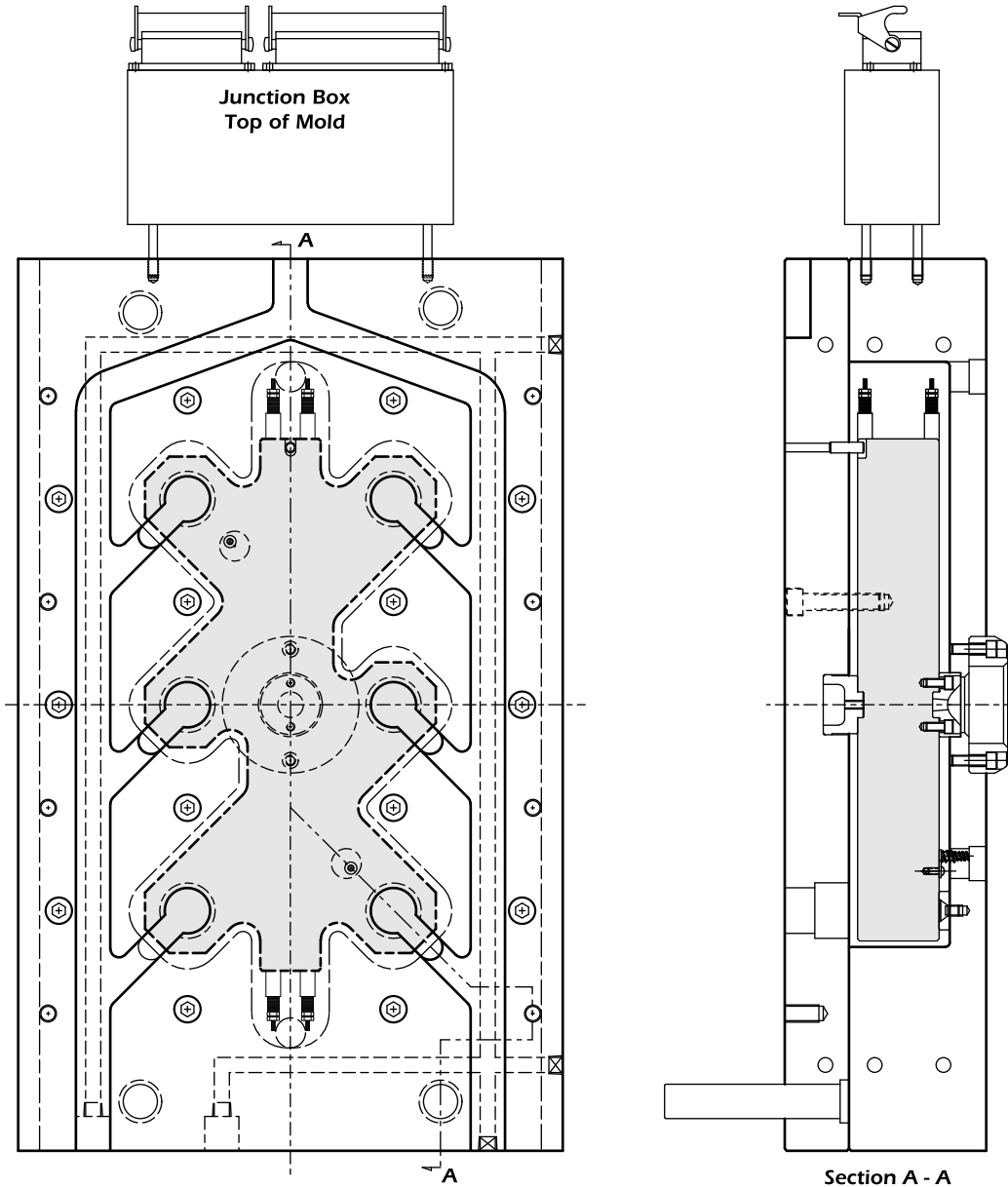
** Minimum amps listed refer to the temperature control module's rating.
(Two 15 amp modules can be substituted for one 30 amp module)

Dimensions are in inches. Millimeters are in parentheses.

Manifold & Hot Half Technical Specifications

6-Drop Hot Half

All specifications are subject to change without notification.
Do not scale drawings.



NOTE 1: Use .437" (11.10mm) diameter water lines with 1/4" NPT fittings.
Suggested range for the distance between the waterlines and the edge of the manifold pocket is .25" (6.35mm) to 3.00" (76.20mm).

*Drawings are for reference only; refer to pages 30-31 for design guidelines.
Routing of water lines and wire channels may be modified depending on pitch restrictions.*

Dimensions are in inches. Millimeters are in parentheses.

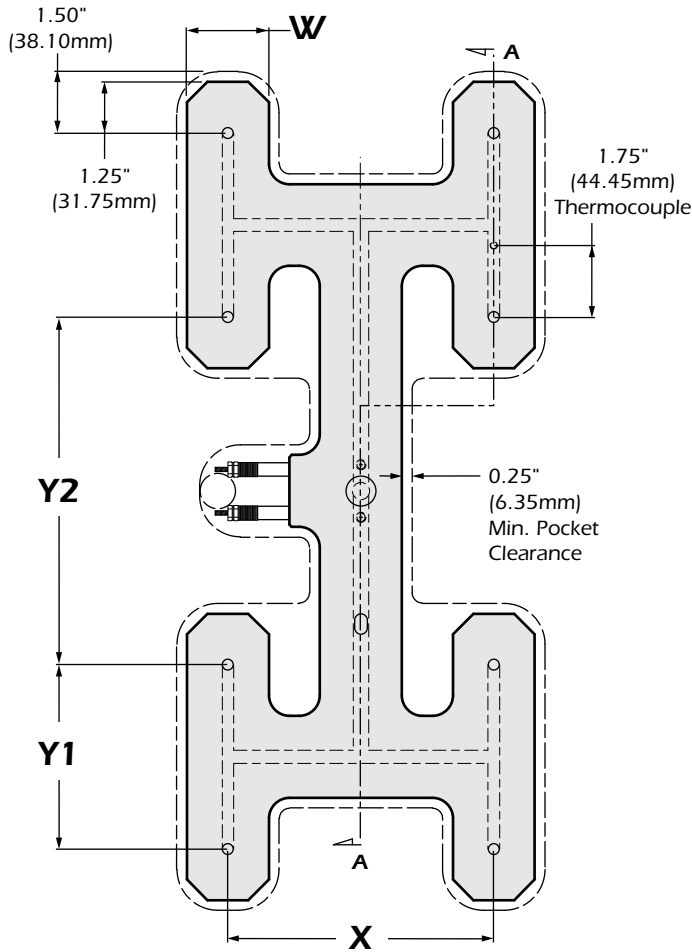
Manifold & Hot Half Technical Specifications

8-Drop "Double H" Manifold

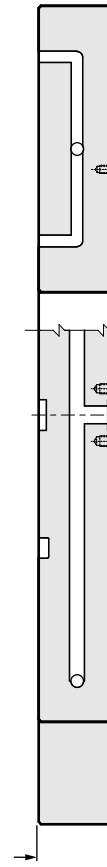
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Tol. "a" Chart

in:	+0.0005
	-0
mm:	+0.01
	-0



Section A - A




NOTE: All manifolds are shipped with the following accessories: locators, pressure pads, thermocouples and tubular heaters.

Refer to pages 28-29 for Accessory machining details.

*Pressure pads must be machined by the customer to provide cold clearance per Heaterwerks drawings.

Chart A

All manifolds listed use W1 width, unless otherwise noted (W2).

Manifold	X		Y1		Y2		Min. Amps**	Style Number
8-Drop "Double H" 	3.00"	(76.20)	2.00"	(50.80)	4.00"	(101.60)	1 @ 30	MM010114
	3.00"	(76.20)	2.50"	(63.50)	4.00"	(101.60)	1 @ 30	MM010115
	3.00"	(76.20)	3.00"	(76.20)	4.00"	(101.60)	1 @ 30	MM010116
	3.50"	(88.90)	3.50"	(88.90)	4.00"	(101.60)	1 @ 30	MM010117
	4.00"	(101.60)	4.00"	(101.60)	4.00"	(101.60)	1 @ 30	MM010118
	4.50"	(114.30)	4.50"	(114.30)	4.50"	(114.30)	1 @ 30	MM010119
	5.00"	(127.00)	5.00"	(127.00)	5.00"	(127.00)	1 @ 30	MM010120
	5.50"	(139.70)	5.50"	(139.70)	5.50"	(139.70)	2 @ 30	MM010121
	5.50"	(139.70)	5.50"	(139.70)	5.50"	(139.70)	2 @ 30 (W2)	MM010122
	6.00"	(152.40)	6.00"	(152.40)	6.00"	(152.40)	2 @ 30	MM010123
	6.00"	(152.40)	6.00"	(152.40)	6.00"	(152.40)	2 @ 30 (W2)	MM010124
	6.50"	(165.10)	6.50"	(165.10)	6.50"	(165.10)	2 @ 30	MM010125
	6.50"	(165.10)	6.50"	(165.10)	6.50"	(165.10)	2 @ 30 (W2)	MM010126
	7.00"	(177.80)	7.00"	(177.80)	7.00"	(177.80)	2 @ 30	MM010127
	8.00"	(203.20)	8.00"	(203.20)	8.00"	(203.20)	2 @ 30 (W2)	MM010128

All pitch dimensions are at operating temperature (HOT). For custom pitches consult Hot Runner Application Engineering.

* Consult Heaterwerks for tubulars rated at 208V.

** Minimum amps listed refer to the temperature control module's rating.

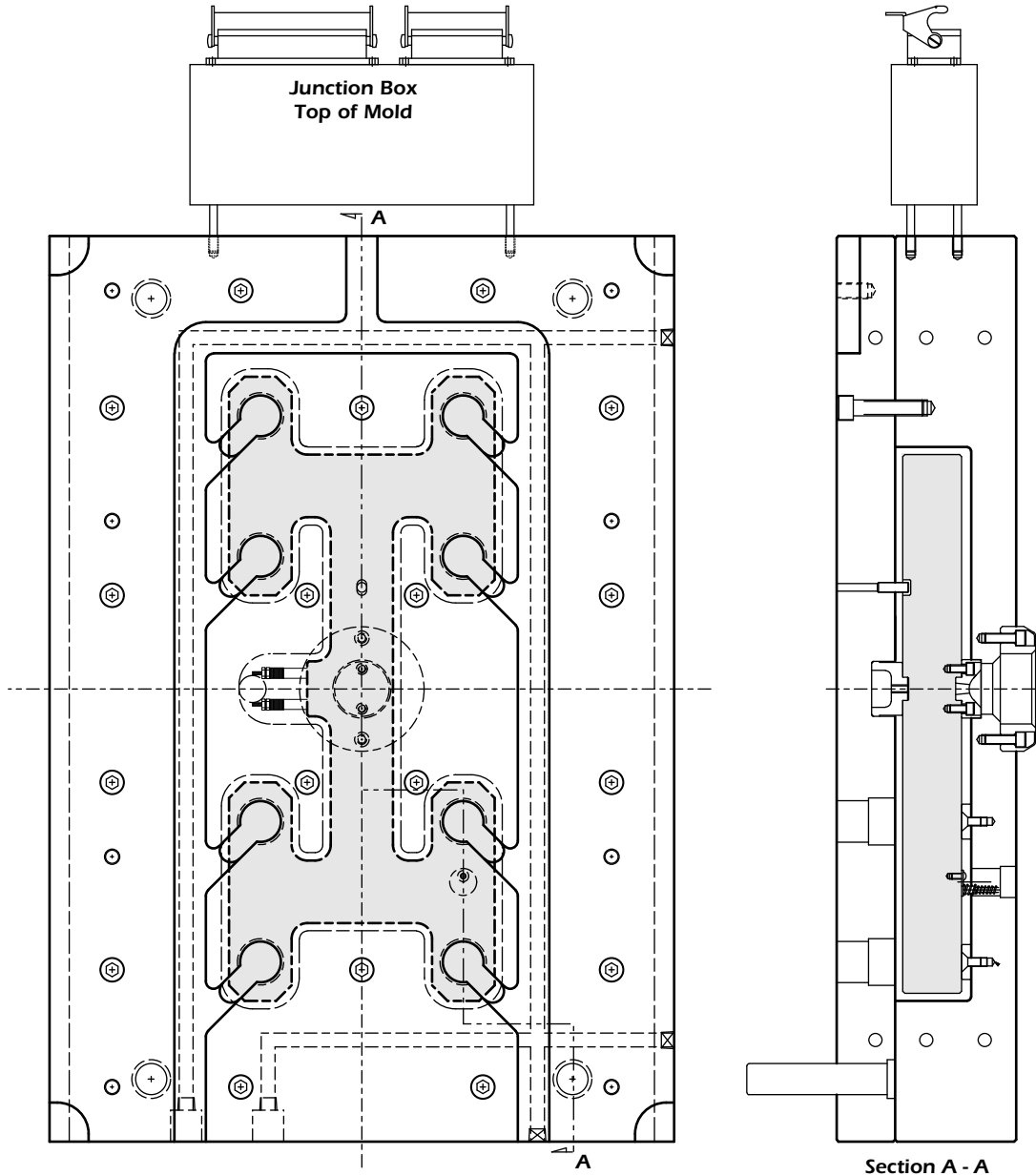
(Two 15 amp modules can be substituted for one 30 amp module)

Dimensions are in inches. Millimeters are in parentheses.

Manifold & Hot Half Technical Specifications

8-Drop "Double H" Hot Half

All specifications are subject to change without notification.
Do not scale drawings.



NOTE 1: Use .437" (11.10mm) diameter water lines with 1/4" NPT fittings.
Suggested range for the distance between the waterlines and the edge of the manifold pocket is .25" (6.35mm) to 3.00" (76.20mm).

Drawings are for reference only; refer to pages 30-31 for design guidelines.
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Dimensions are in inches. Millimeters are in parentheses.

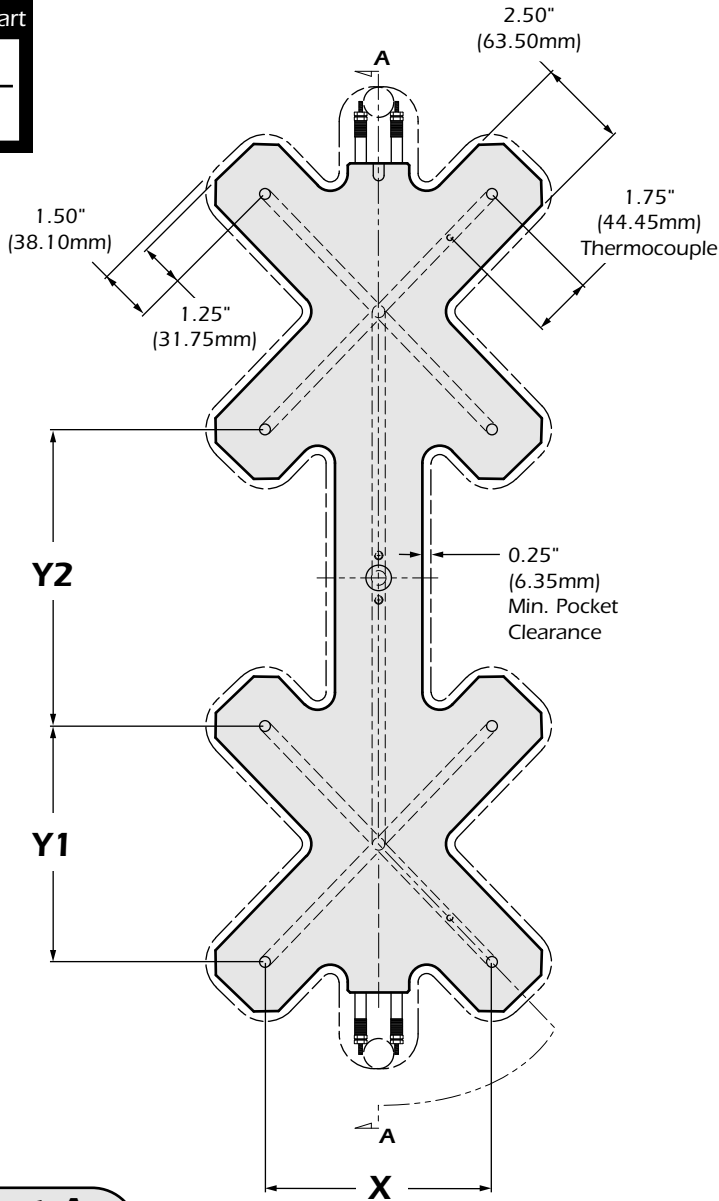
Manifold & Hot Half Technical Specifications

8-Drop "Double X" Manifold

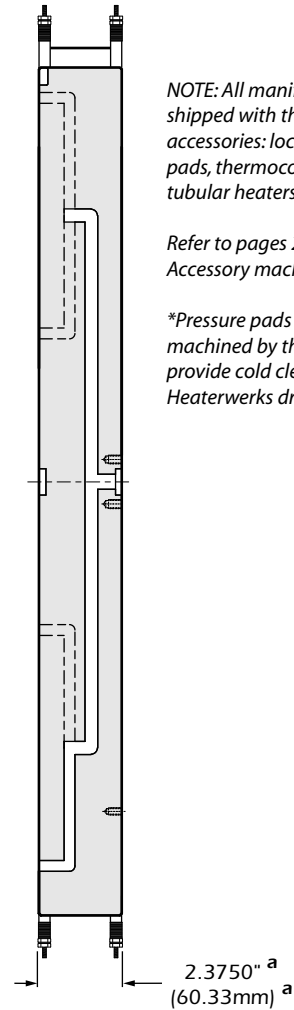
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Do not scale drawings.

Tol. "a" Chart

in:	+ 0.0005
	- 0
mm:	+ 0.01
	- 0



Section A - A




NOTE: All manifolds are shipped with the following accessories: locators, pressure pads, thermocouples and tubular heaters.

Refer to pages 28-29 for Accessory machining details.

*Pressure pads must be machined by the customer to provide cold clearance per Heaterwerks drawings.

Chart A

Manifold	X		Y1		Y2		Min. Amps**	Style Number
8-Drop "Double X" 	5.50"	(139.70)	5.50"	(139.70)	5.50"	(139.70)	2 @ 30	MM010129
	5.75"	(146.10)	5.75"	(146.10)	5.75"	(146.10)	2 @ 30	MM010130
	6.00"	(152.40)	6.00"	(152.40)	6.00"	(152.40)	2 @ 30	MM010131
	6.25"	(158.80)	6.25"	(158.80)	6.25"	(158.80)	2 @ 30	MM010132
	6.50"	(165.10)	6.50"	(165.10)	6.50"	(165.10)	2 @ 30	MM010133
	6.75"	(171.50)	6.75"	(171.50)	6.75"	(171.50)	2 @ 30	MM010134
	7.00"	(177.80)	7.00"	(177.80)	7.00"	(177.80)	2 @ 30	MM010135
	8.00"	(203.20)	8.00"	(203.20)	8.00"	(203.20)	2 @ 30	MM010136

All pitch dimensions are at operating temperature (HOT). For custom pitches consult Hot Runner Application Engineering.

* Consult Heaterwerks for tubulars rated at 208V.

** Minimum amps listed refer to the temperature control module's rating.

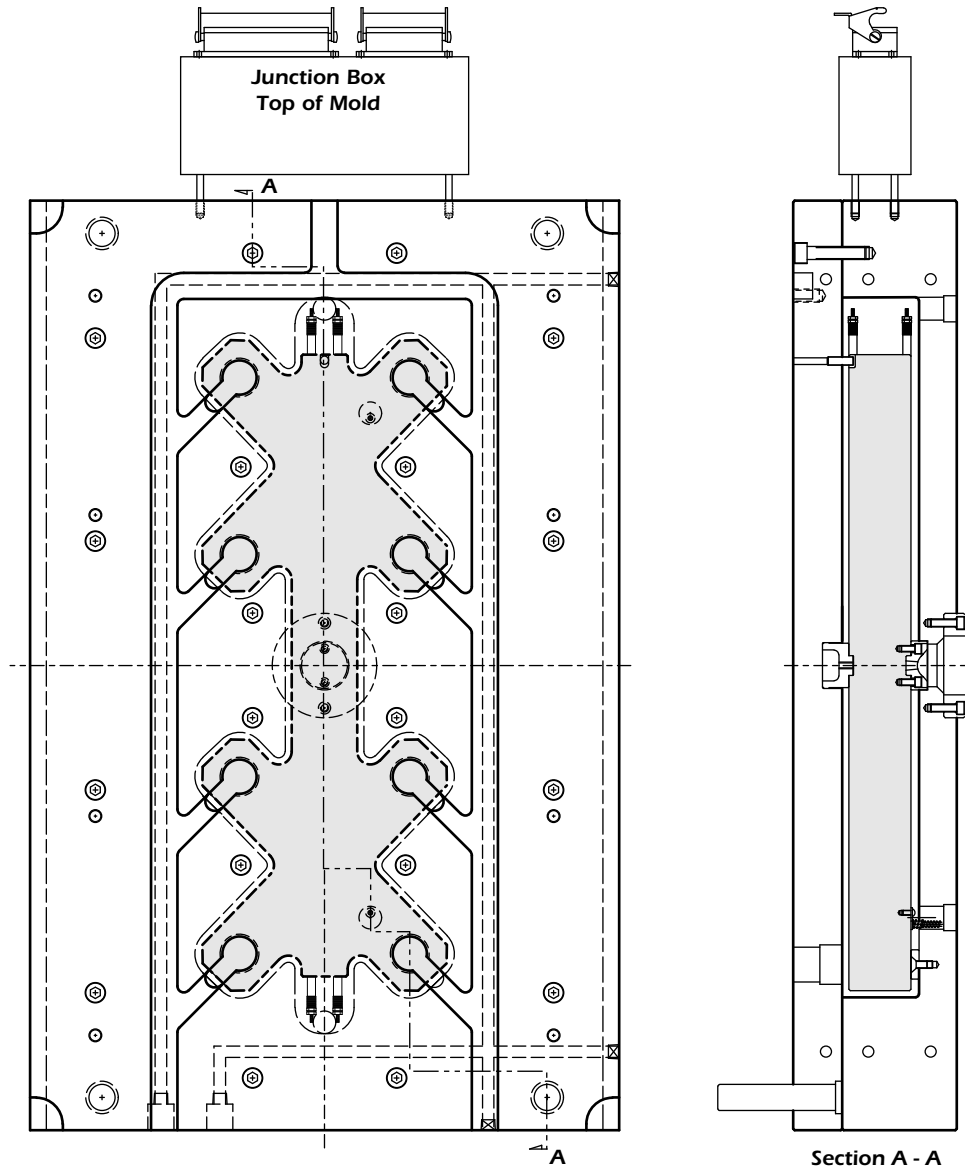
(Two 15 amp modules can be substituted for one 30 amp module)

Dimensions are in inches. Millimeters are in parentheses.

Manifold & Hot Half Technical Specifications

8-Drop "Double X" Hot Half

All specifications are subject to change without notification.
Do not scale drawings.



NOTE 1: Use .437" (11.10mm) diameter water lines with 1/4" NPT fittings.
Suggested range for the distance between the waterlines and the edge of the manifold pocket is .25" (6.35mm) to 3.00" (76.20mm).

*Drawings are for reference only; refer to pages 30-31 for design guidelines.
Routing of water lines and wire channels may be modified depending on pitch restrictions.*

Dimensions are in inches. Millimeters are in parentheses.

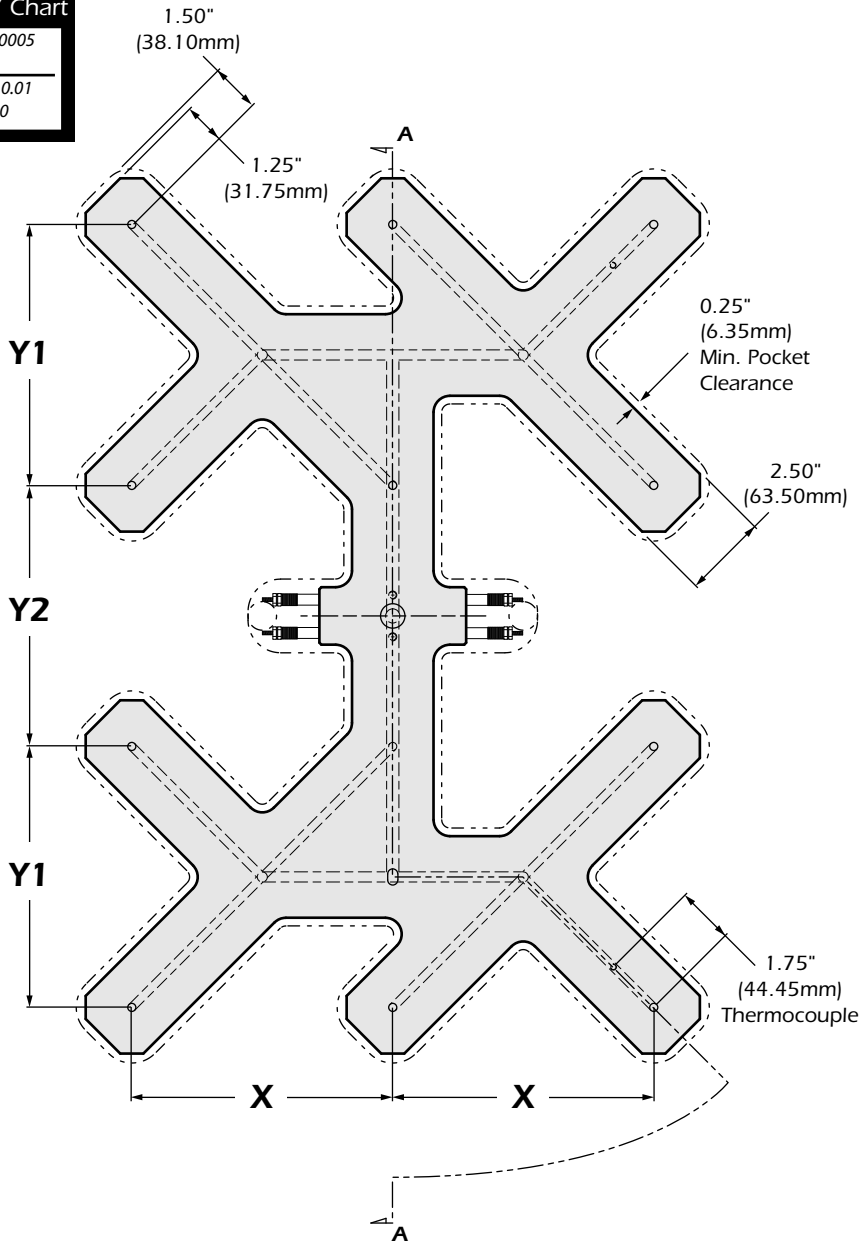
Manifold & Hot Half Technical Specifications

12-Drop Manifold

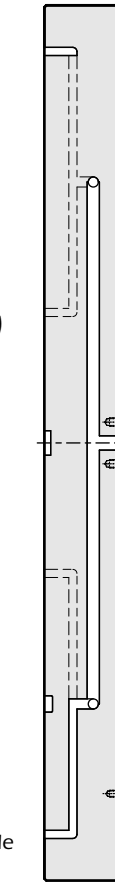
All specifications are subject to change without notification.
Do not scale drawings.

Tol. "a" Chart

in:	+ 0.0005
	- 0
mm:	+ 0.01
	- 0



Section A - A




NOTE: All manifolds are shipped with the following accessories: locators, pressure pads, thermocouples and tubular heaters.

Refer to pages 28-29 for Accessory machining details.

*Pressure pads must be machined by the customer to provide cold clearance per Heaterwerks drawings.

Chart A

Manifold	X		Y1		Y2		Min. Amps**	Style Number
12-Drop 	2.00"	(50.80)	2.00"	(50.80)	3.00"	(50.80)	2 @ 15	MM010137
	2.50"	(63.50)	2.50"	(63.50)	3.00"	(63.50)	3 @ 15	MM010138
	3.00"	(76.20)	3.00"	(76.20)	3.00"	(76.20)	2 @ 30	MM010139
	3.50"	(88.90)	3.50"	(88.90)	3.50"	(88.90)	2 @ 30	MM010140
	4.00"	(101.60)	4.00"	(101.60)	4.00"	(101.60)	2 @ 30	MM010141

All pitch dimensions are at operating temperature (HOT). For custom pitches consult Hot Runner Application Engineering.

* Consult Heaterwerks for tubulars rated at 208V.

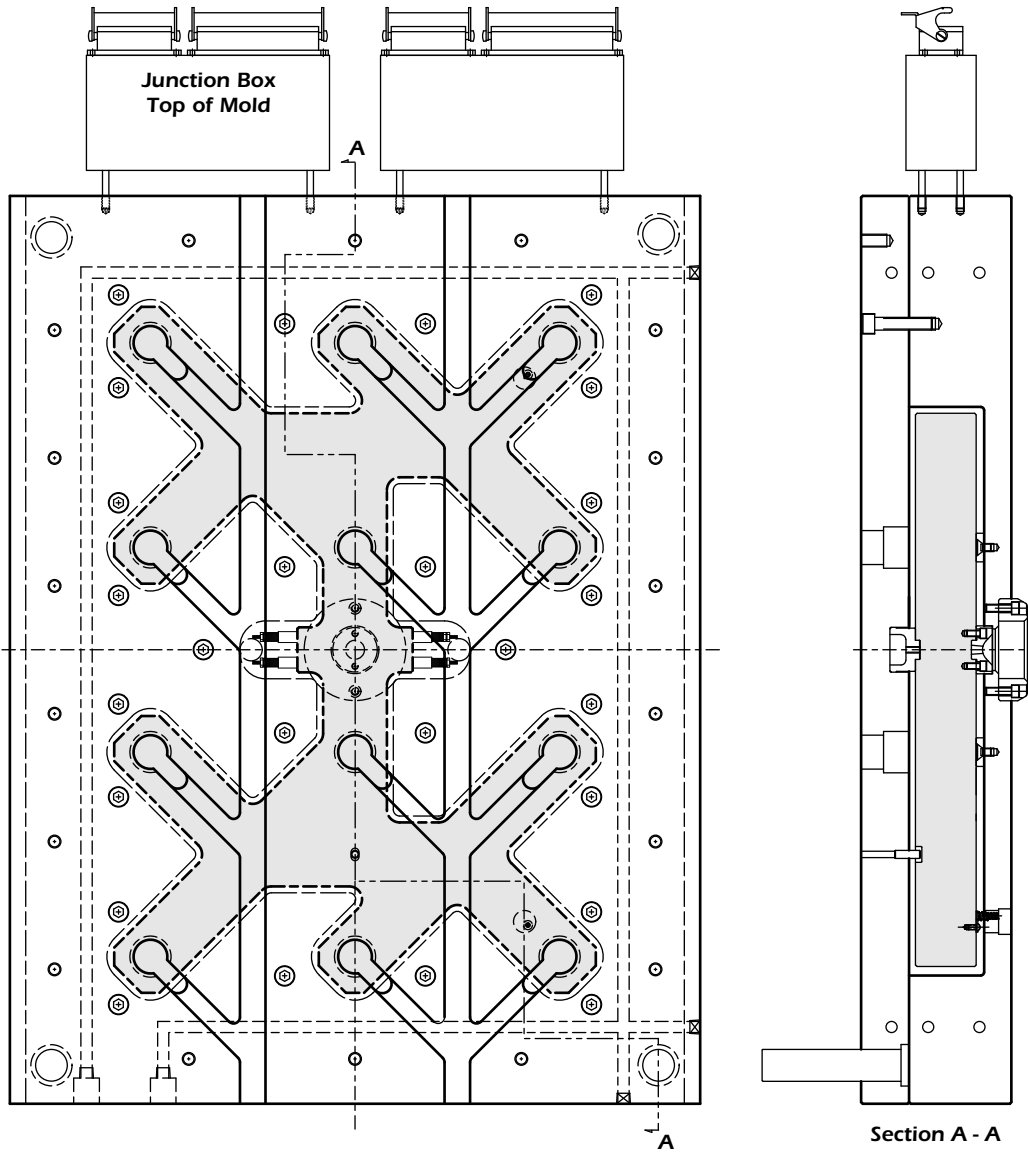
** Minimum amps listed refer to the temperature control module's rating.
(Two 15 amp modules can be substituted for one 30 amp module)

Dimensions are in inches. Millimeters are in parentheses.

Manifold & Hot Half Technical Specifications

12-Drop Hot Half

All specifications are subject to change without notification.
Do not scale drawings.



NOTE 1: Use .437" (11.10mm) diameter water lines with 1/4" NPT fittings.
Suggested range for the distance between the waterlines and the edge of the manifold pocket is .25" (6.35mm) to 3.00" (76.20mm).

*Drawings are for reference only; refer to pages 30-31 for design guidelines.
Routing of water lines and wire channels may be modified depending on pitch restrictions.*

Dimensions are in inches. Millimeters are in parentheses.

Manifold & Hot Half Technical Specifications

MANIFOLD APPLICATIONS

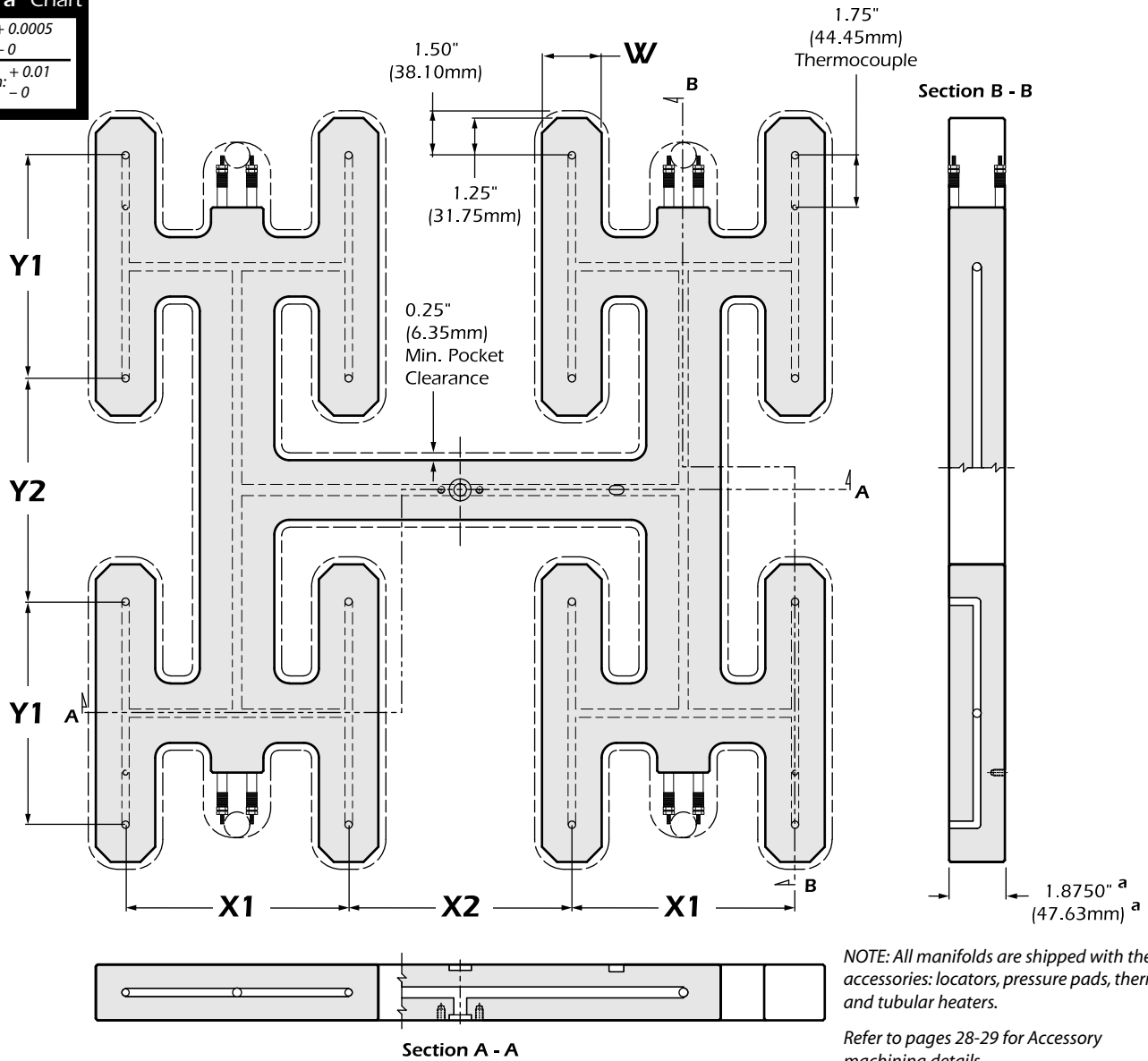
All specifications are subject to change without notification.
Do not scale drawings.

Tol. "a" Chart

in:	+0.0005
	-0
mm:	+0.01
	-0

W1 = 2.00" (50.80mm) for all components.

W2 = 2.50" (63.50mm) for Precision Series 625
and 1.00" size Sensitwin bushing.



NOTE: All manifolds are shipped with the following accessories: locators, pressure pads, thermocouples and tubular heaters.

Refer to pages 28-29 for Accessory machining details.

*Pressure pads must be machined by the customer to provide cold clearance per Heaterwerks drawings.

Chart A

All manifolds listed use W1 width, unless otherwise noted (W2).

Manifold	X1	Y1	X2	Y2	Min. Amps**	Style Number
	2.00" (50.80)	2.00" (50.80)	3.00" (76.20)	3.00" (76.20)	2 @ 30	MM010142
	2.50" (63.50)	2.50" (63.50)	3.00" (76.20)	3.00" (76.20)	2 @ 30	MM010143
	3.00" (76.20)	3.00" (76.20)	3.00" (76.20)	3.00" (76.20)	2 @ 30	MM010144
	3.50" (88.90)	3.50" (88.90)	3.50" (88.90)	3.50" (88.90)	2 @ 30	MM010145
	4.00" (101.60)	4.00" (101.60)	4.00" (101.60)	4.00" (101.60)	2 @ 30	MM010146
	4.50" (114.30)	4.50" (114.30)	4.50" (114.30)	4.50" (114.30)	2 @ 30	MM010147

All pitch dimensions are at operating temperature (HOT). For custom pitches consult Hot Runner Application Engineering.

* Consult Heaterwerks for tubulars rated at 208V.

** Minimum amps listed refer to the temperature control module's rating.

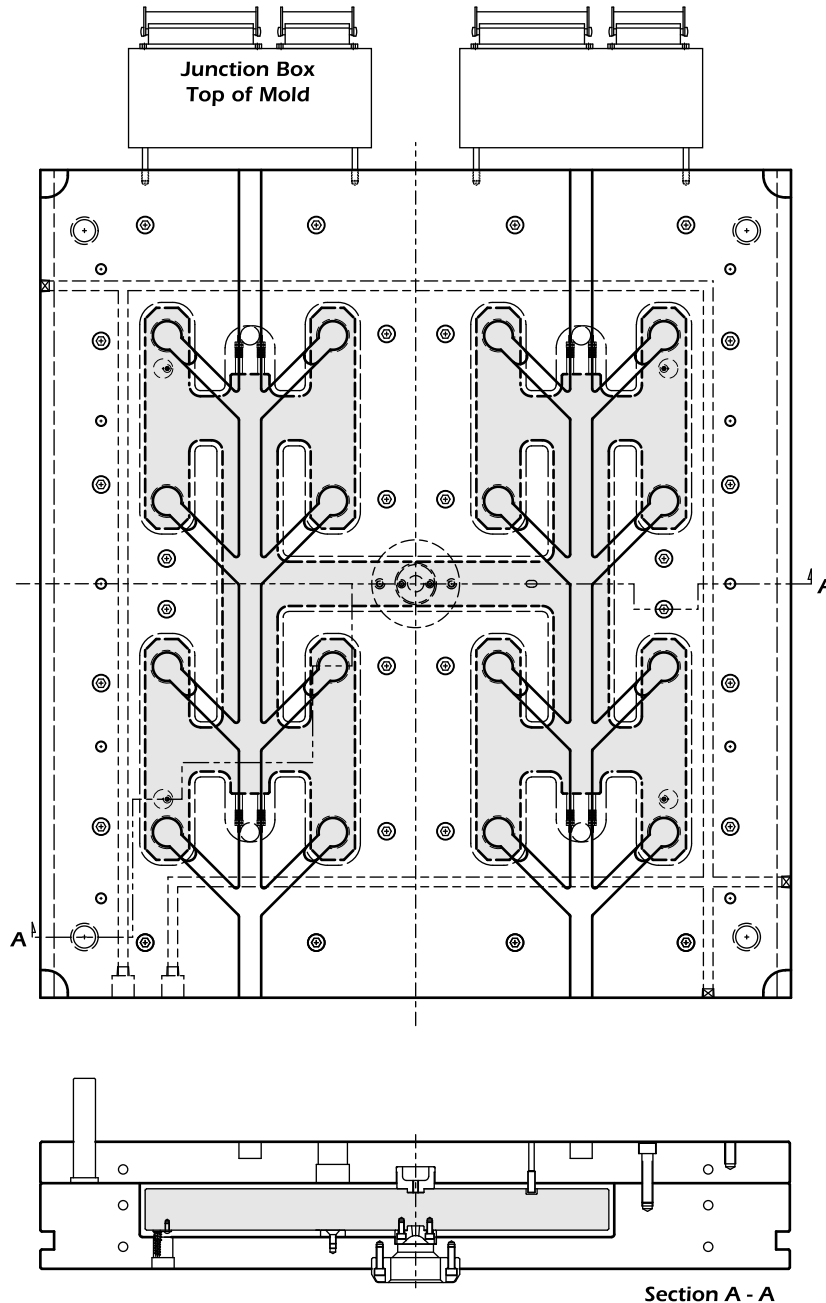
(Two 15 amp modules can be substituted for one 30 amp module)

Dimensions are in inches. Millimeters are in parentheses.

Manifold & Hot Half Technical Specifications

16-Drop "H" Hot Half

All specifications are subject to change without notification.
Do not scale drawings.



NOTE 1: Use .437" (11.10mm) diameter water lines with 1/4" NPT fittings.
Suggested range for the distance between the waterlines and the edge of the manifold pocket is .25" (6.35mm) to 3.00" (76.20mm).

*Drawings are for reference only; refer to pages 30-31 for design guidelines.
Routing of water lines and wire channels may be modified depending on pitch restrictions.*

Dimensions are in inches. Millimeters are in parentheses.

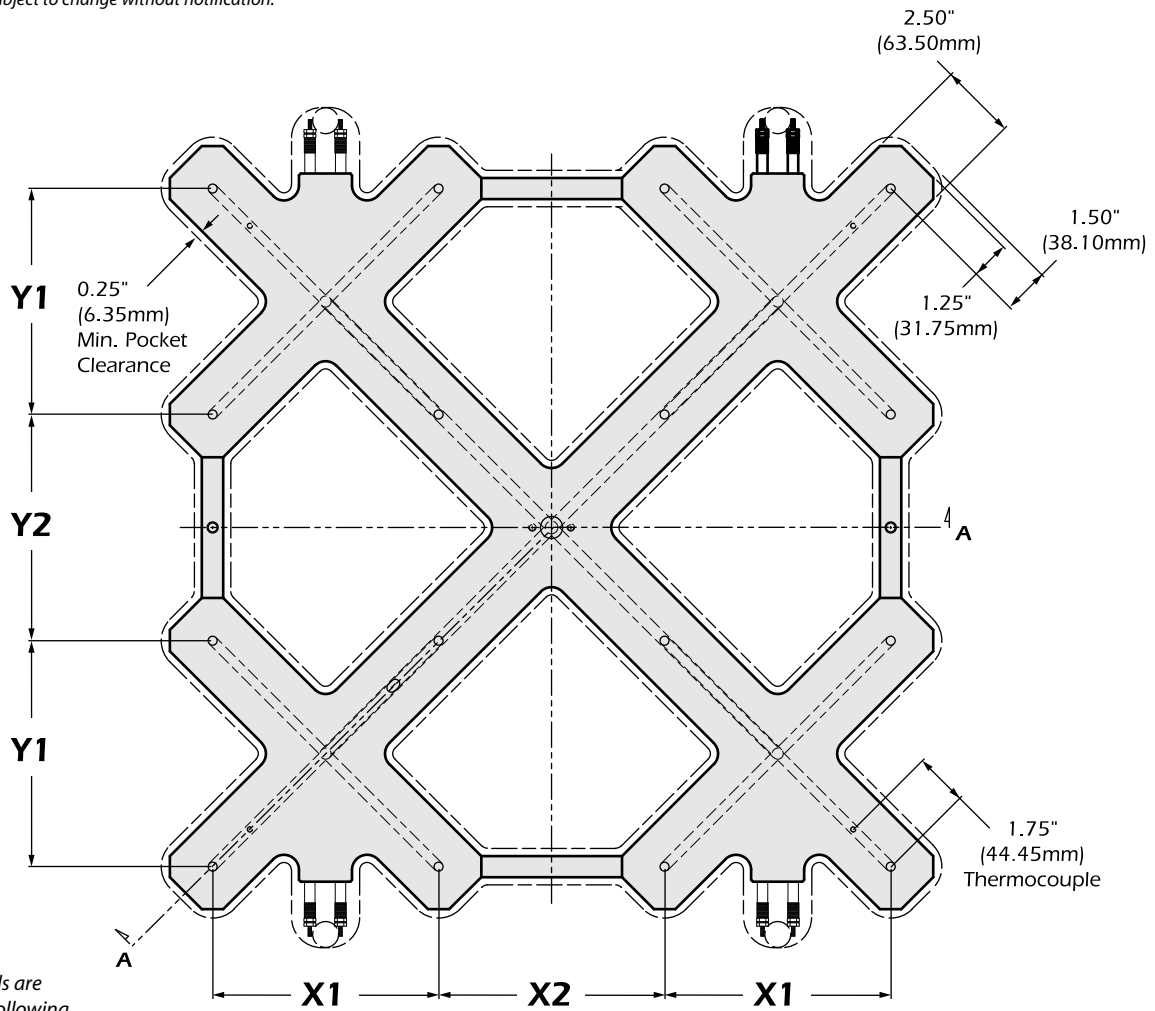
Manifold & Hot Half Technical Specifications

MANIFOLD APPLICATIONS

All specifications are subject to change without notification.
Do not scale drawings.

Tol. "a" Chart

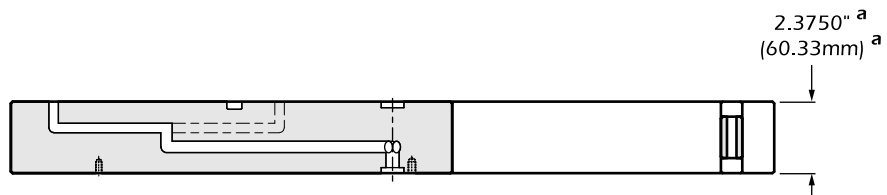
in:	+ 0.0005
	- 0
mm:	+ 0.01
	- 0



NOTE: All manifolds are shipped with the following accessories: locators, pressure pads, thermocouples and tubular heaters.

Refer to pages 28-29 for Accessory machining details.

*Pressure pads must be machined by the customer to provide cold clearance per Heaterwerks drawings.



Section A - A

Chart A

Manifold	X1		Y1		X2		Y2		Min. Amps**	Style Number
	5.00"	(127.00)	5.00"	(127.00)	5.00"	(127.00)	5.00"	(127.00)	4 @ 30	MM010148
	5.50"	(139.70)	5.50"	(139.70)	5.50"	(139.70)	5.50"	(139.70)	4 @ 30	MM010149
	6.00"	(152.40)	6.00"	(152.40)	6.00"	(152.40)	6.00"	(152.40)	4 @ 30	MM010150
	6.50"	(165.10)	6.50"	(165.10)	6.50"	(165.10)	6.50"	(165.10)	4 @ 30	MM010151
	7.00"	(177.80)	7.00"	(177.80)	7.00"	(177.80)	7.00"	(177.80)	4 @ 30	MM010152

All pitch dimensions are at operating temperature (HOT). For custom pitches consult Hot Runner Application Engineering.

* Consult Heaterwerks for tubulars rated at 208V.

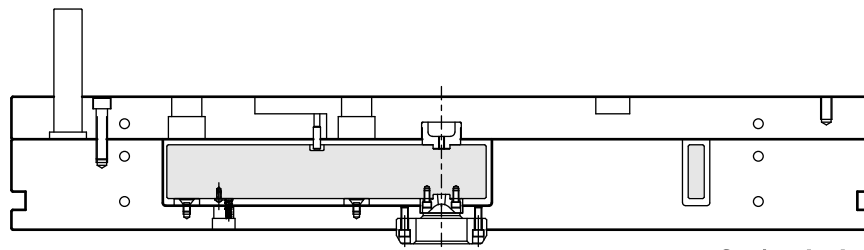
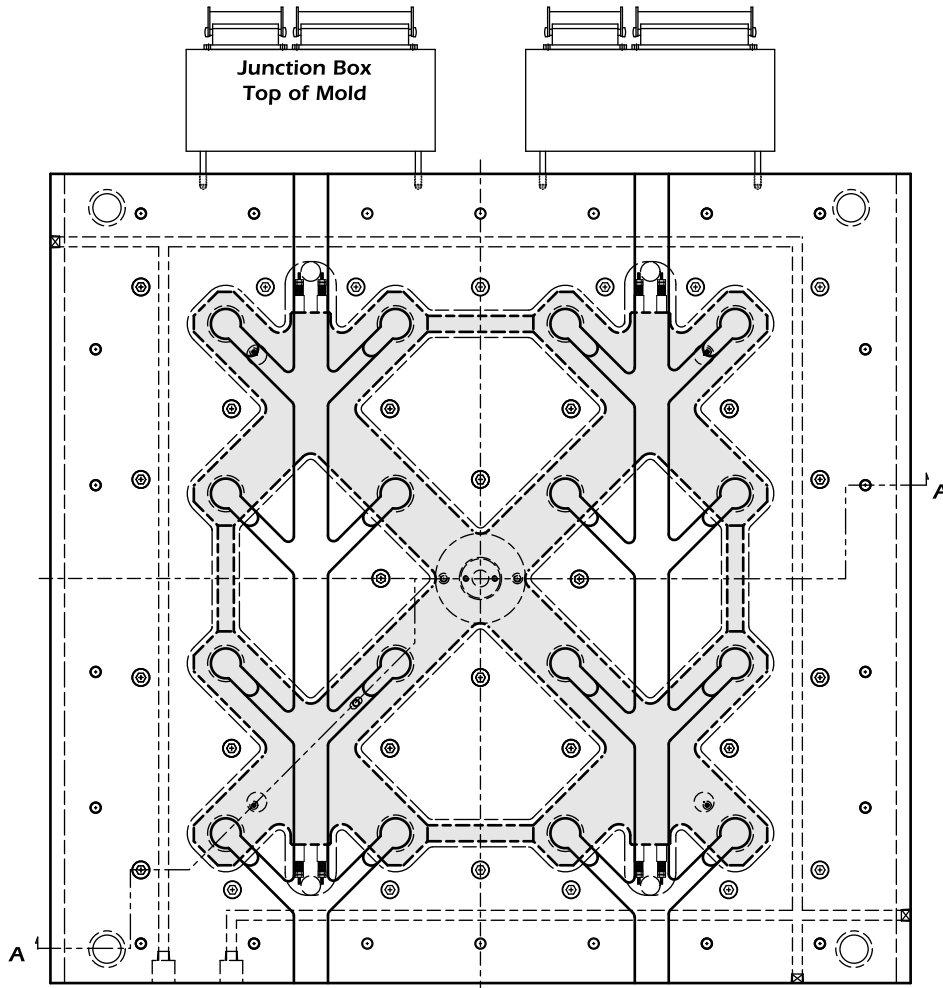
** Minimum amps listed refer to the temperature control module's rating.
(Two 15 amp modules can be substituted for one 30 amp module)

Dimensions are in inches. Millimeters are in parentheses.

Manifold & Hot Half Technical Specifications

16-Drop "X" Hot Half

All specifications are subject to change without notification.
Do not scale drawings.



Section A - A

NOTE 1: Use .437" (11.10mm) diameter water lines with 1/4" NPT fittings.
Suggested range for the distance between the waterlines and the edge of the manifold pocket is .25" (6.35mm) to 3.00" (76.20mm).

*Drawings are for reference only; refer to pages 30-31 for design guidelines.
Routing of water lines and wire channels may be modified depending on pitch restrictions.*

Dimensions are in inches. Millimeters are in parentheses.

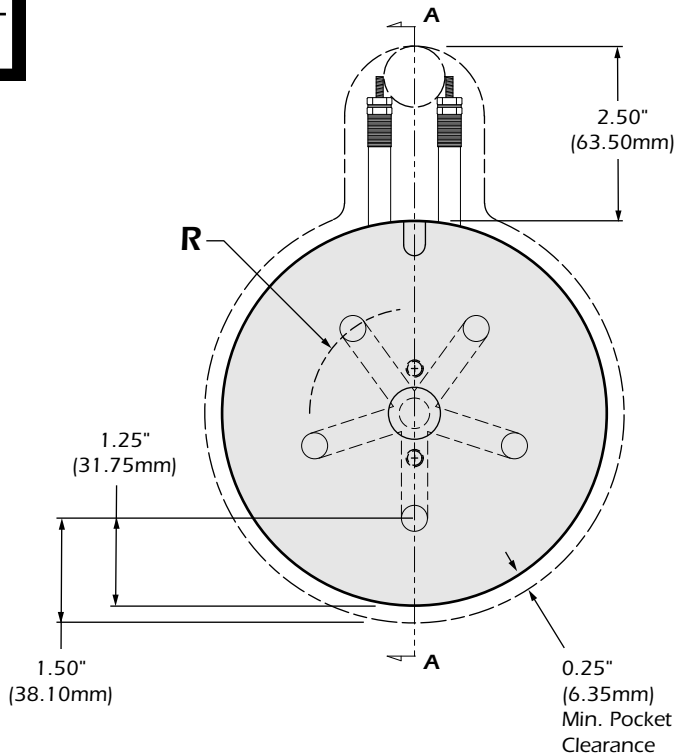
Manifold & Hot Half Technical Specifications

Round Manifolds

All specifications are subject to change without notification.
Do not scale drawings.

Tol. "a" Chart

in:	+ 0.0005
	- 0
mm:	+ 0.01
	- 0



NOTE: All manifolds are shipped with the following accessories: locators, pressure pads, thermocouples and tubular heaters.


Refer to pages 28-29 for Accessory machining details.

*Pressure pads must be machined by the customer to provide cold clearance per Heaterwerks drawings.

NOTE: 5-Drop round shown; 3,4,6,7, and 8-drop manifolds are available.

3 to 5-Drop Round Manifolds

Chart A

Manifold	R (Radius Pitch)	Min. Amps**	Style Number		
			3-Drop	4-Drop	5-Drop
Round 	1.00" (25.40)	1 @ 15	MM010310	MM010410	MM010510
	1.50" (38.10)	1 @ 15	MM010315	MM010415	MM010515
	2.00" (50.80)	1 @ 15	MM010320	MM010420	MM010520
	2.50" (63.50)	1 @ 15	MM010325	MM010425	MM010525
	3.00" (76.20)	1 @ 15	MM010330	MM010430	MM010530
	3.50" (88.90)	1 @ 15	MM010335	MM010435	MM010535
	4.00" (101.60)	1 @ 30	MM010340	MM010440	MM010540
	4.50" (114.30)	1 @ 30	MM010345	MM010445	MM010545
	5.00" (127.00)	1 @ 30	MM010350	MM010450	MM010550
	5.50" (139.70)	2 @ 30	MM010355	MM010455	MM010555
6.00" (152.40)	2 @ 30	MM010360	MM010460	MM010560	

All pitch dimensions are at operating temperature (HOT). For custom pitches consult Hot Runner Application Engineering.

* Consult Heaterwerks for tubulars rated at 208V.

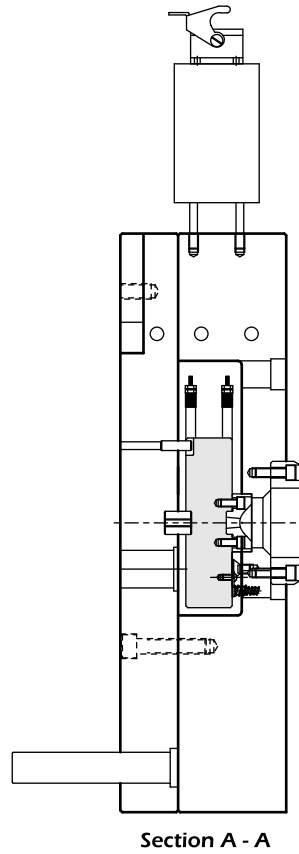
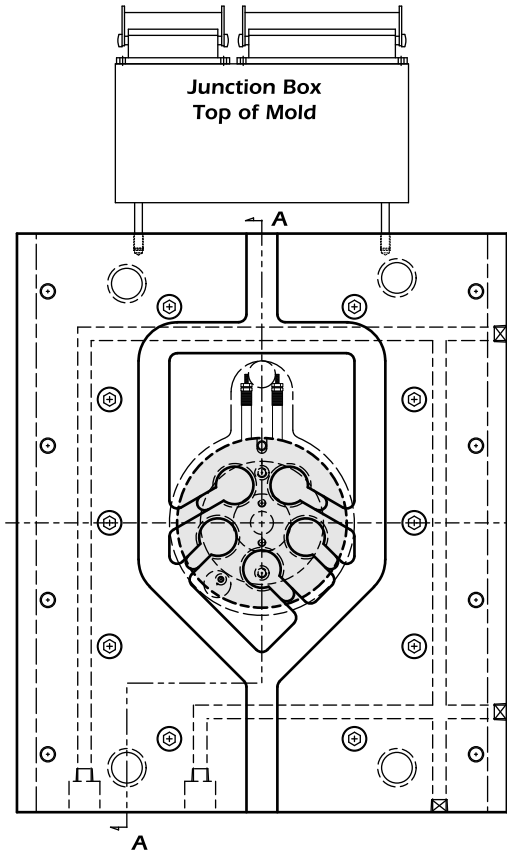
** Minimum amps listed refer to the temperature control module's rating.
(Two 15 amp modules can be substituted for one 30 amp module)

Dimensions are in inches. Millimeters are in parentheses.

Manifold & Hot Half Technical Specifications

Round Hot Halves

All specifications are subject to change without notification.
Do not scale drawings.




NOTE 1: Use .437" (11.10mm) diameter water lines with 1/4" NPT fittings.
Suggested range for the distance between the waterlines and the edge of the manifold pocket is .25" (6.35mm) to 3.00" (76.20mm).

Drawings are for reference only; refer to pages 30-31 for design guidelines.
Routing of water lines and wire channels may be modified depending on pitch restrictions.

6 to 8-Drop Round Manifolds

Chart A

Manifold	R (Radius Pitch)		Min. Amps**	Style Number		
				6-Drop	7-Drop	8-Drop
Round 	1.00"	(25.40)	1 @ 15	MM010610	MM010710	MM010810
	1.50"	(38.10)	1 @ 15	MM010615	MM010715	MM010815
	2.00"	(50.80)	1 @ 15	MM010620	MM010720	MM010820
	2.50"	(63.50)	1 @ 15	MM010625	MM010725	MM010825
	3.00"	(76.20)	1 @ 15	MM010630	MM010730	MM010830
	3.50"	(88.90)	1 @ 15	MM010635	MM010735	MM010835
	4.00"	(101.60)	1 @ 30	MM010640	MM010740	MM010840
	4.50"	(114.30)	1 @ 30	MM010645	MM010745	MM010845
	5.00"	(127.00)	1 @ 30	MM010650	MM010750	MM010850
	5.50"	(139.70)	2 @ 30	MM010655	MM010755	MM010855
6.00"	(152.40)	2 @ 30	MM010660	MM010760	MM010860	

All pitch dimensions are at operating temperature (HOT). For custom pitches consult Hot Runner Application Engineering.

* Consult Heaterwerks for tubulars rated at 208V.

** Minimum amps listed refer to the temperature control module's rating.

(Two 15 amp modules can be substituted for one 30 amp module)

Dimensions are in inches. Millimeters are in parentheses.

Manifold & Hot Half Technical Specifications

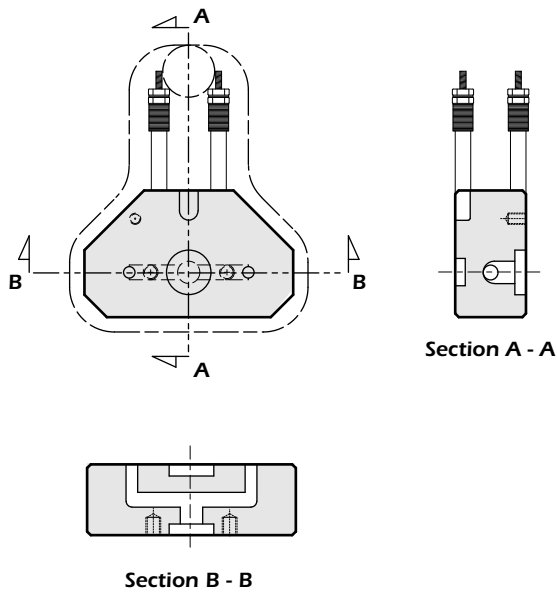
Mini-Manifolds

All specifications are subject to change without notification.
Do not scale drawings.

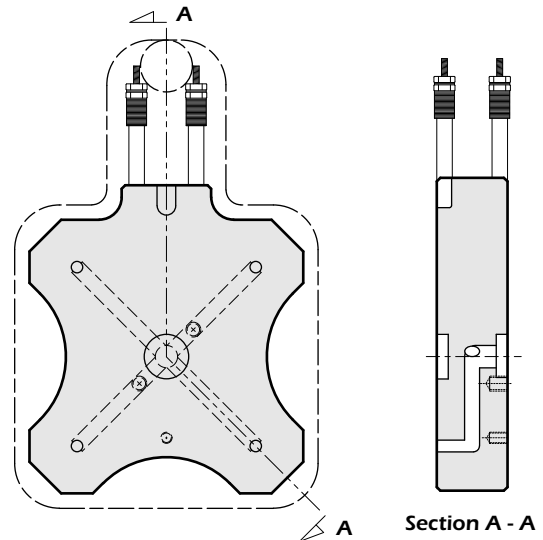
Mini-Manifolds & Hot Halves –

When your application requires the latest in close pitch technology, Heaterwerks responds with the Mini-Manifold product line. Developed around our Micropoint and Precision Series hot runner nozzles, these systems are available with pitches as small as .750" (19.05mm). We offer a variety of standard and custom pitches and configurations. Some samples are shown below.

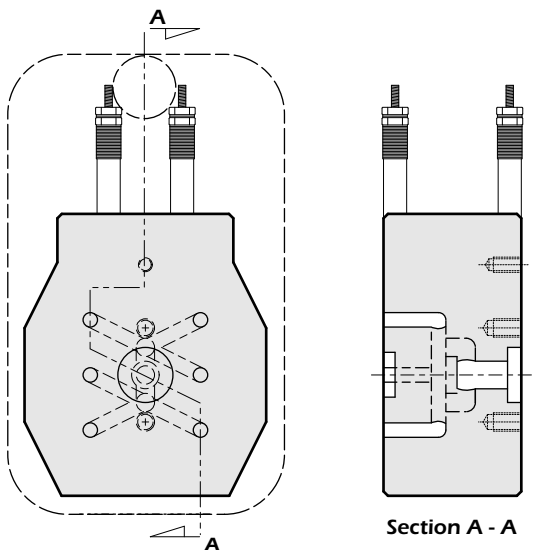
2-Drop Mini-Manifolds



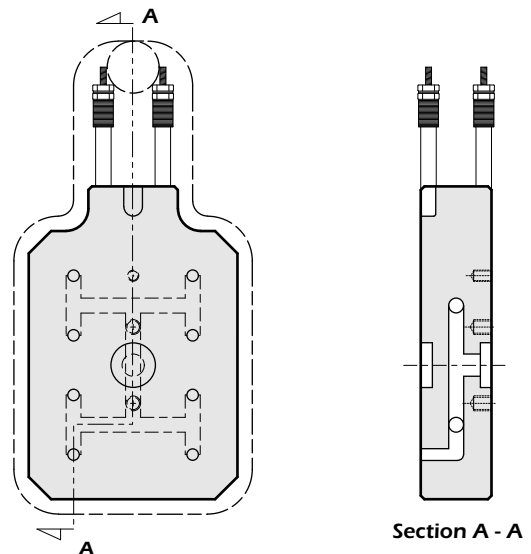
4-Drop Mini-Manifolds



6-Drop Mini-Manifolds



8-Drop Mini-Manifolds



Drawings are for reference only.
Dimensions are in inches. Millimeters are in parentheses.

Manifold & Hot Half Technical Specifications

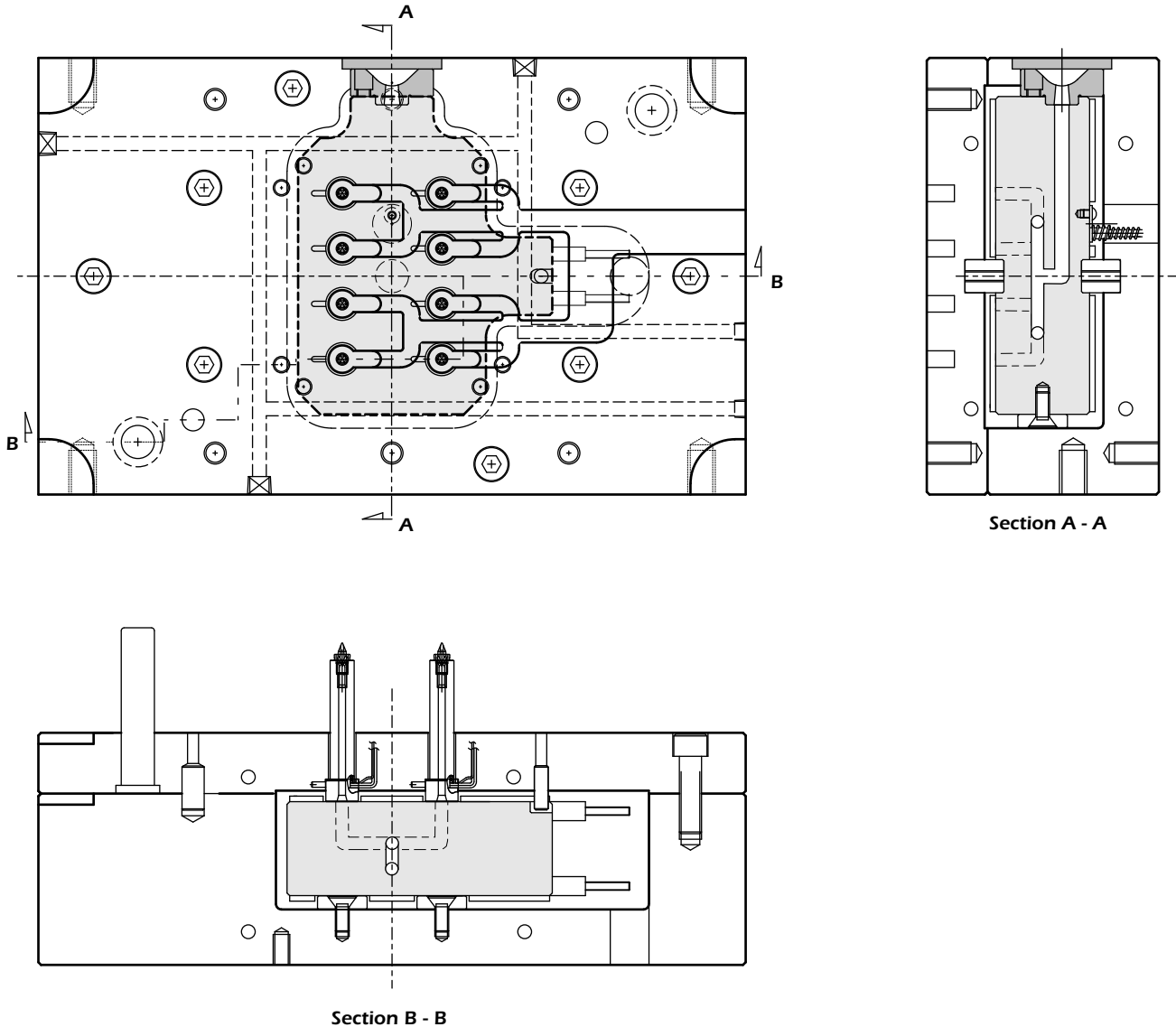
Side-Injection Hot Halves

All specifications are subject to change without notification.
Do not scale drawings.

Side-Injection Hot Halves –

Applications such as insert molding and overmolding often require vertical or side-injection systems. This line is designed around the rotary and shuttle presses which utilize this configuration. Available with 1 to 16 drops, Heaterwerks offers a variety of side-injection solutions.

8-Drop Mini Side-Injection



NOTE 1: Use .437" (11.10mm) diameter water lines with 1/4" NPT fittings.
Suggested range for the distance between the waterlines and the edge of the manifold pocket is .25" (6.35mm) to 3.00" (76.20mm).

Drawings are for reference only; refer to pages 30-31 for design guidelines.
Routing of water lines and wire channels may be modified depending on pitch restrictions.

Dimensions are in inches. Millimeters are in parentheses.

Manifold & Hot Half Technical Specifications

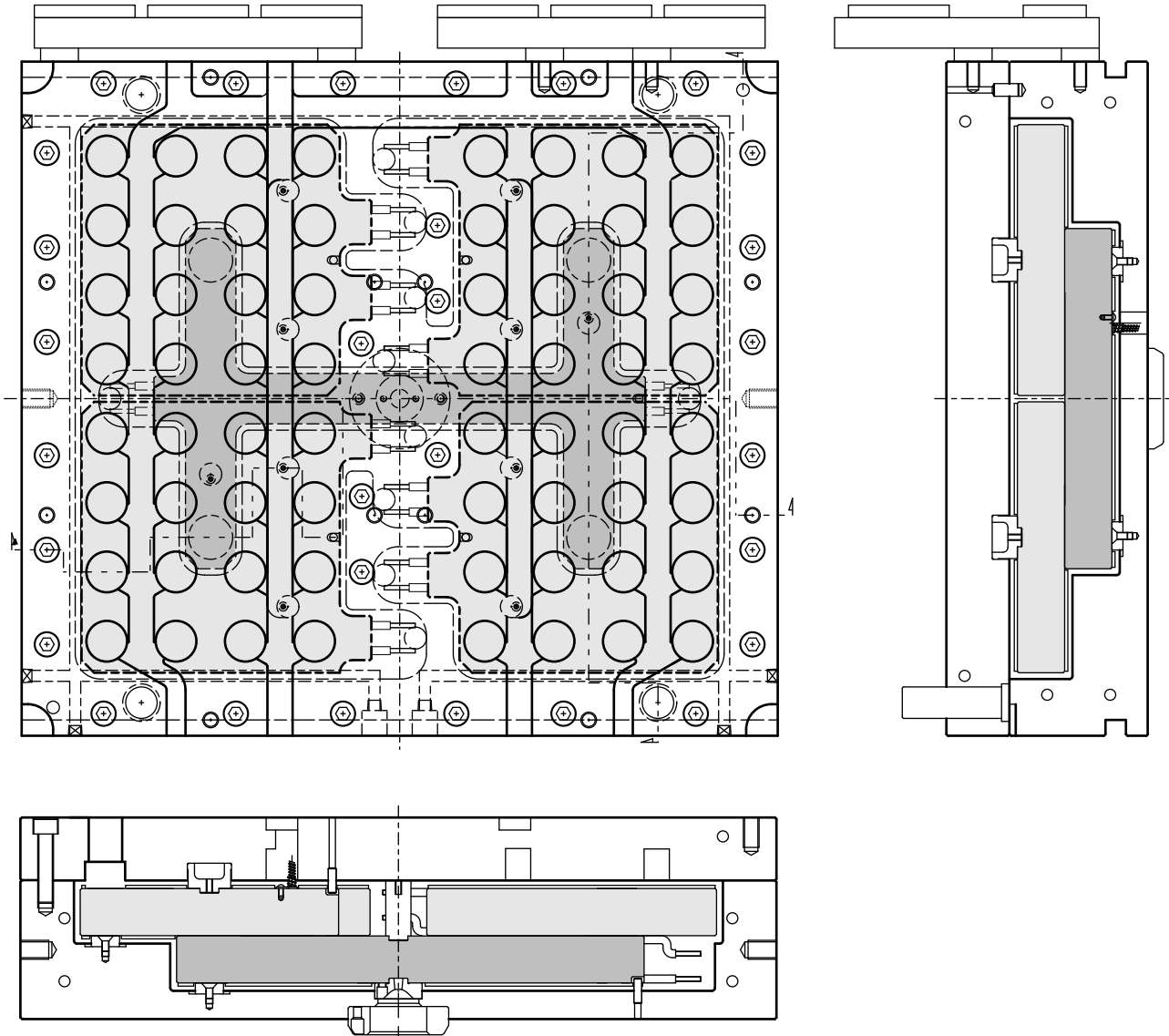
MANIFOLD APPLICATIONS

All specifications are subject to change without notification.
Do not scale drawings.

Modular Hot Halves –

Offering superior systems for high cavitation, Heaterwerks provides modular systems available with any of our standard or custom primary manifolds, secondary manifolds and Heaterwerks hot runner nozzles. All modular systems are completely balanced and precisely machined to your requirements.

64-Drop Modular



NOTE 1: Use .437" (11.10mm) diameter water lines with 1/4" NPT fittings.
Suggested range for the distance between the waterlines and the edge of the manifold pocket is .25" (6.35mm) to 3.00" (76.20mm).

Drawings are for reference only; refer to pages 30-31 for design guidelines.
Routing of water lines and wire channels may be modified depending on pitch restrictions.

Dimensions are in inches. Millimeters are in parentheses.

Manifold & Hot Half Technical Specifications

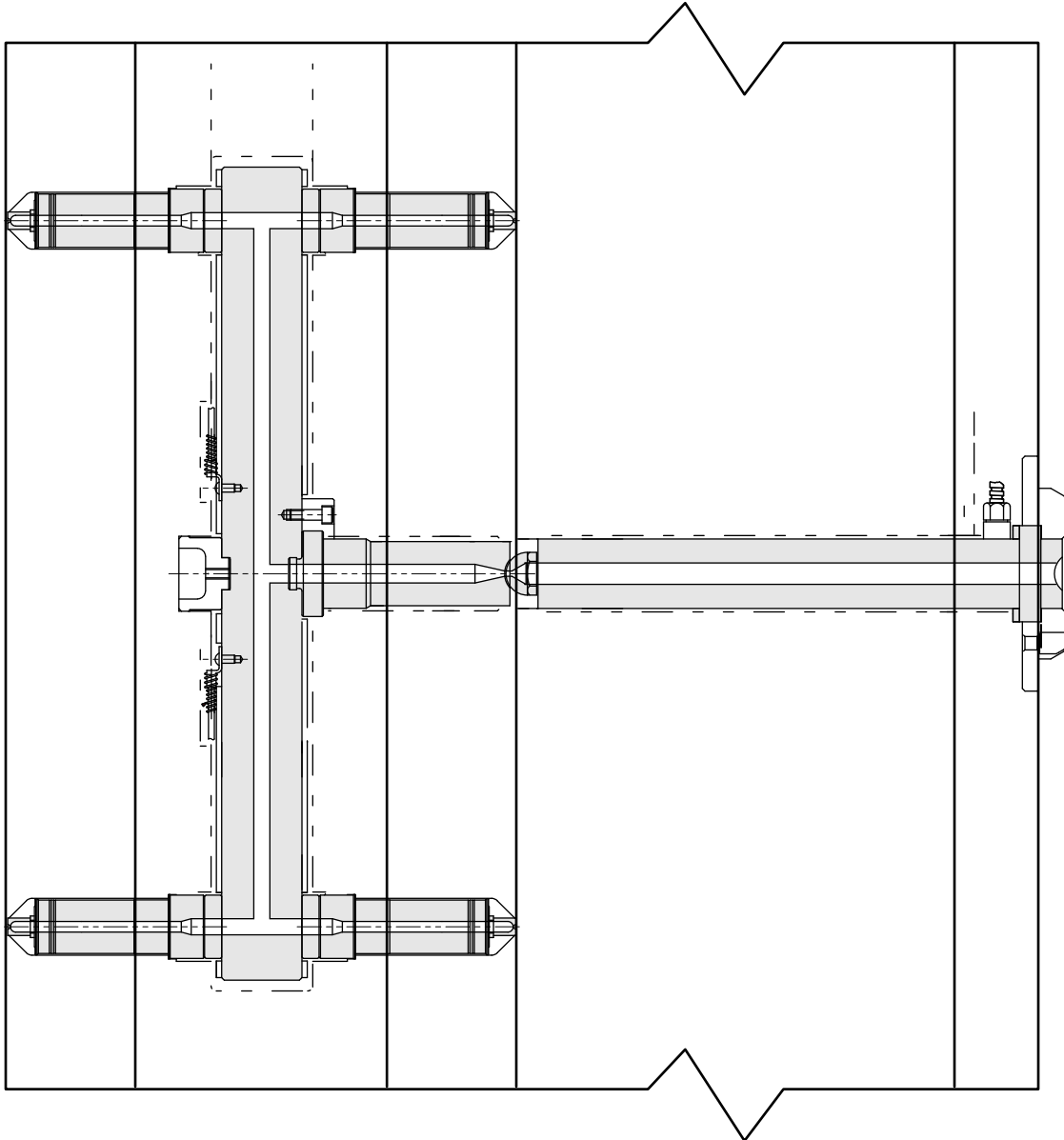
Stack Hot Halves

All specifications are subject to change without notification.
Do not scale drawings.

Stack Hot Halves –

Stack systems offer exceptional improvements in productivity and are becoming an increasingly popular option. Heaterwerks offers custom stack systems designed around your application. The patented 1 and 2 piece sprue bar design provides an exceptional heat profile in this critical mid-section. Please contact the Hot Runner Application Engineering for more information.

8-Drop Stack



NOTE 1: Use .437" (11.10mm) diameter water lines with 1/4" NPT fittings.
Suggested range for the distance between the waterlines and the edge of the manifold pocket is .25" (6.35mm) to 3.00" (76.20mm).

Drawings are for reference only; refer to pages 30-31 for design guidelines.
Routing of water lines and wire channels may be modified depending on pitch restrictions.

Dimensions are in inches. Millimeters are in parentheses.

Manifold & Hot Half Technical Specifications

Locating Ring

All specifications are subject to change without notification.
Do not scale drawings.

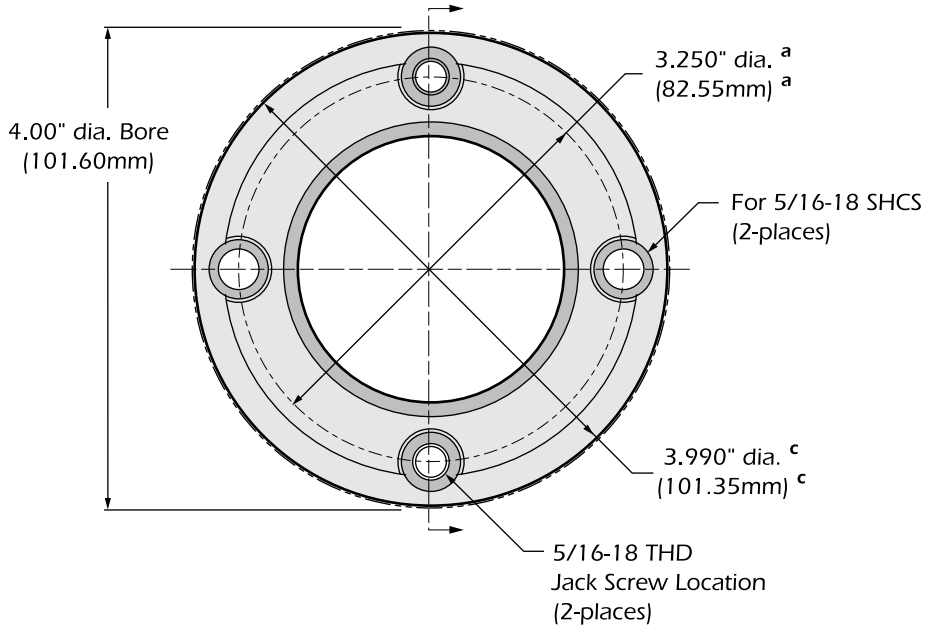
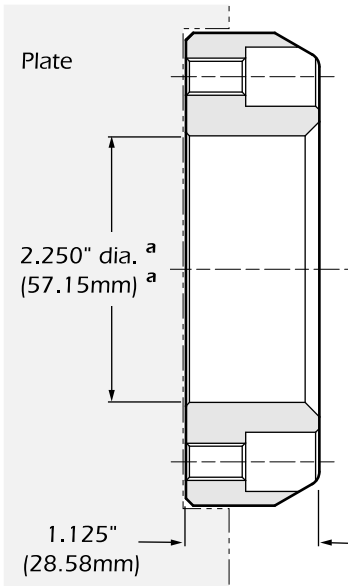


Chart 1

Accessory	Part Number
Locating Ring	LR00034

Dimensions are in inches. Millimeters are in parentheses.

Tol. "a" Chart
in: $\frac{+0.005}{-0.005}$
mm: $\frac{+0.10}{-0.10}$

Tol. "b" Chart
in: $\frac{+0.001}{-0}$
mm: $\frac{+0.03}{-0}$

Tol. "c" Chart
in: $\frac{+0.003}{-0}$
mm: $\frac{+0.08}{-0}$

Nozzle Locator

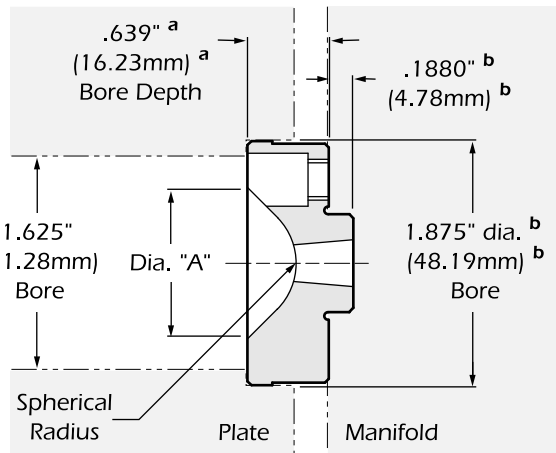
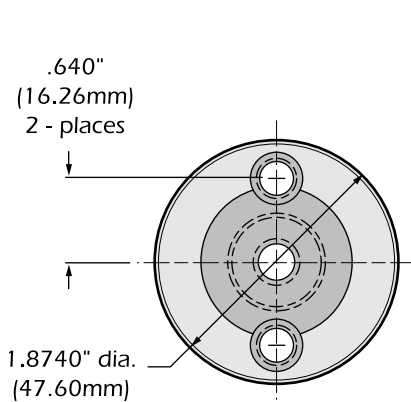


Chart 2

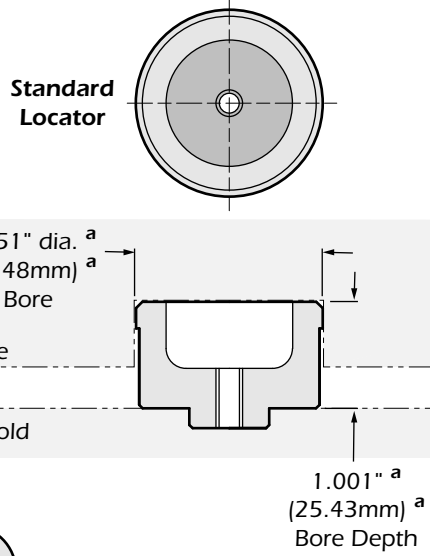
Accessory	Part Number	Spherical Radius	Dia. A
Nozzle Locator	HA10009	.500"	1.16" (29.46)
	HA10010	.750"	1.37" (34.80)

Dimensions are in inches. Millimeters are in parentheses.

Manifold & Hot Half Technical Specifications

Manifold Locator

All specifications are subject to change without notification.
Do not scale drawings.



Tol. "a" Chart

in:	+0.001
	-0
mm:	+0.03
	-0

Chart 3

Accessory	Standard	Reduced
Manifold Locators	HA10002	HA10008

Dimensions are in inches. Millimeters are in parentheses.

Titanium Pressure Pad

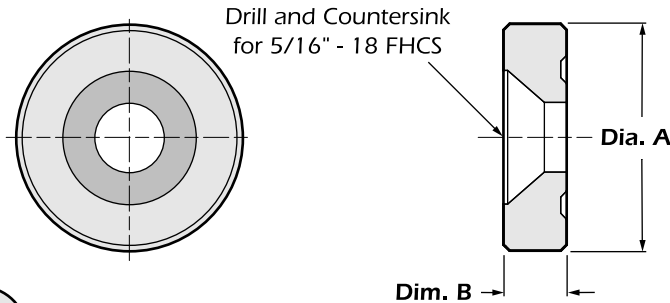


Chart 4

Accessory	Part Number	Dia. A	Dim. B
Pressure Pads	HA10004	2.00" (50.80)	.312" (7.92)
	H010005	2.00" (50.80)	.625" (15.88)
	H010006	1.12" (28.45)	.312" (7.92)
	HA10007	1.12" (28.45)	.625" (15.88)

NOTE: Dimension "B" to be machined by customer to provide cold clearance per Heaterwerks drawings.

Dimensions are in inches. Millimeters are in parentheses.

Manifold Thermocouple

Screw 10-32 Tap, 3/8" Long

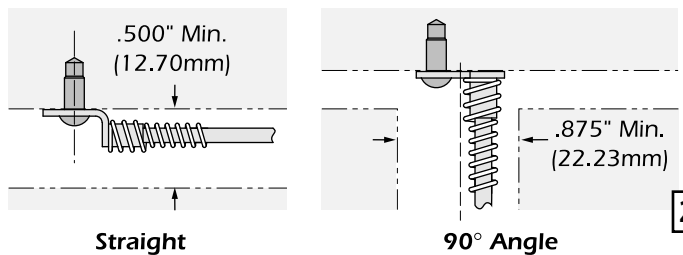


Chart 5

Accessory	Straight	90° Angle
Manifold T/C's	TCM1071	TCM1037

Dimensions are in inches. Millimeters are in parentheses.

Manifold & Hot Half Technical Specifications

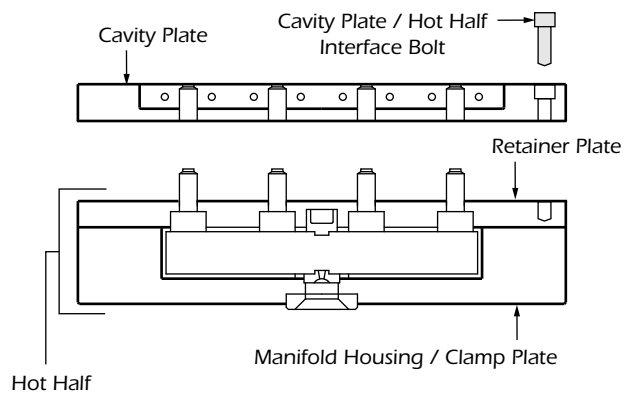
All specifications are subject to change without notification.
Do not scale drawings.

Hot Half Design

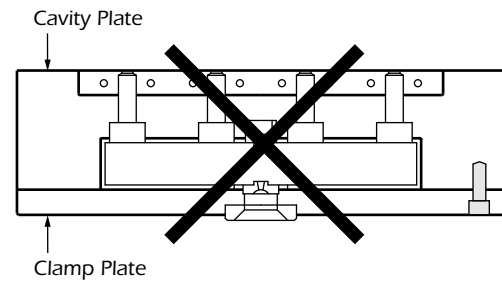
The Cavity or "A" side of the mold should consist of 2 plates encapsulating the manifold system. These plates are independent of the cavity plate. The cavity plate/ hot half interface bolts should be installed from the parting line.

This design significantly reduces maintenance costs, although the initial cost is greater. The design enables the cavity plate to be pulled away from the hot half within the press, providing quick access to the nozzles and tips for various standard maintenance procedures.

Hot Half Design (Heaterwerks Standard)



Backloaded Design (Not Recommended)

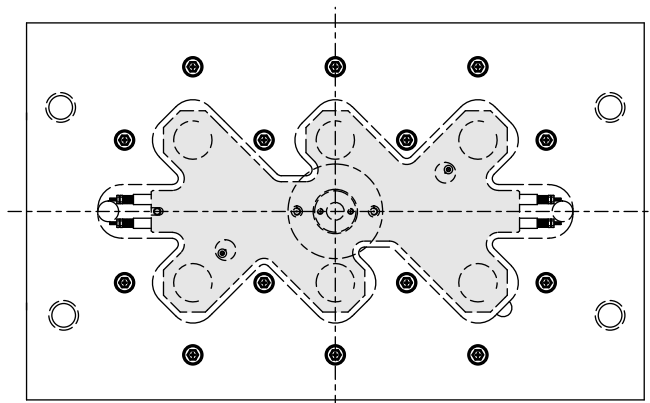


Steel

AISI 420 Stainless steel is the recommended material that is used by Heaterwerks for manifold housing plates. Stainless steel offers the best combination of corrosion resistance and dimensional stability. If other steels are selected, a minimum hardness of 35-40 RC is required to maintain seals and prevent system leakage.

Hot Half Bolting

Substantial separating force is exerted on the plates due to the thermal expansion and preload of the manifold. The plate design provides maximum cavity support, as well as adequate bolts and bolt locations to securely fasten the manifold housing/clamp plate to the retaining plate. Two to three bolts per drop (with a minimum of eight) can be used as a general rule of thumb. Please consult Heaterwerks design engineering before machining.



Design Guidelines

All specifications are subject to change without notification.
Do not scale drawings.

Cooling

Despite the limited contact, air gaps and insulative materials, Manifold systems still transfer heat to the plates that house them. It is necessary to remove this heat to maintain a consistent plate temperature. Cooling water channels should be present in all plates surrounding the manifold. (Refer to odd numbered pages 3-23 for water channel diagrams). Water channels should be no closer than .250" from other mold components and edges. Water entry points on the top of mold should be avoided to eliminate the risk of water entering the wire channels.

Air Gap

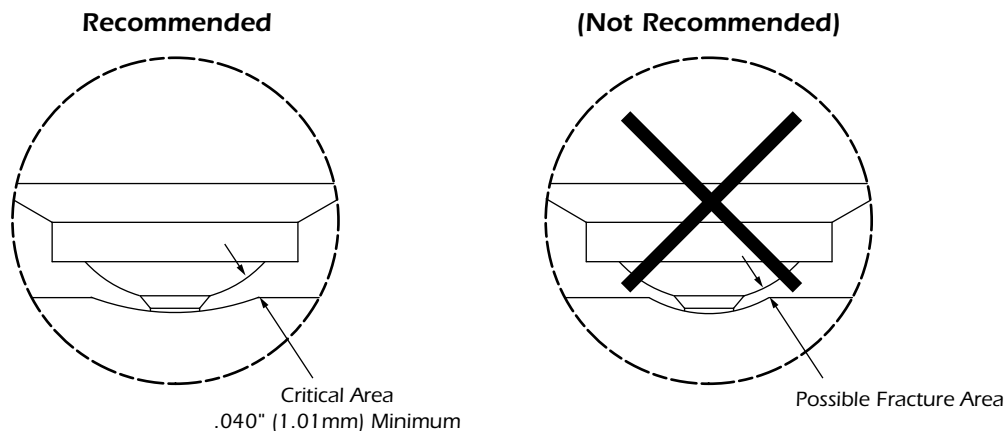
The manifold housing plate should be manufactured with pockets closely contoured to the shape of the manifold, while still maintaining the specified air gap around the manifold and components. Excessive air gaps, as well as insufficient air gaps, can be detrimental to a system's performance.

Gate Cooling

Water lines should be located between .250" and .875" from the gate. This will enable the most efficient cycle, maintain small gate vestiges and provide a consistent part surface finish.

Dimples/Recessed Gates

Recessed gates can weaken the cavity and should be designed with sufficient strength in the critical area in order to minimize the risk of cavity failure. (See diagram below)



Drawings

All manifold systems and components are available in a variety of electronic formats, including IGES, DWG, or DXF.

Spare Parts

All normal wear and replacement parts are specified and quoted with Heaterwerks hot runner systems. In order to keep downtime due to normal maintenance at a minimum, Heaterwerks recommends stocking spare parts.

Temperature Controllers

Separate closed-loop control of individual nozzles is required due to the thermal variations that can exist within a mold. A Heaterwerks Hot Runner Temperature Controller is strongly recommended.

Manifold & Hot Half Technical Specifications

Operating Instructions

All specifications are subject to change without notification.
Do not scale drawings.

Heaterwerks Hot Runner Systems - Start-up Procedures

1. **WATER** - Turn on manifold / clamp plate and cavity water to stabilize temperature.
2. **MANIFOLD** - Set to processing temperature and turn on controller zones for MANIFOLD ONLY.
3. **WAIT** - Allow 30 minutes for manifold to stabilize.
4. **NOZZLES** - Turn on nozzles and wait 5 minutes after they reach setpoint before purging / processing.

NOTE: These procedures are specified on every manifold and hot half system shipped. An example of the plate is shown below. For detailed information concerning the start-up procedures, contact the factory.

HEATERWERKS HOT RUNNER SYSTEMS - STARTUP PROCEDURES

1. **WATER** - Turn on manifold/clamp plate and cavity water to stabilize temperatures.
2. **MANIFOLD** - Set to processing temperature and turn on controller zones for MANIFOLD ONLY.
3. **WAIT** - Allow 30 minutes for manifold to stabilize.
4. **NOZZLES** - Turn on nozzles and wait 5 minutes after they reach setpoint before purging/processing.

This system is designed to process at a temperature of \star °F + / - 50°F.
Operating outside of this range may result in system failure and/or leakage.


★ Process temperature is defined and approved by the customer on all preliminary drawings.

DISCLAIMER: OPERATING OUTSIDE OF THE APPROVED TEMPERATURE RANGE MAY RESULT IN SYSTEM FAILURE AND/OR LEAKAGE.

Power Requirements

- 240 Volts AC – 15 or 30 amp
- Grounding – Heaterwerks 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.

MANIFOLD APPLICATIONS