# **Inline™ Manifolds Ordering Information**

Mold Mounted Manifolds provide many benefits to the operation and performance of the water cooled process. Our manifolds offer a myriad of combinations to suit your needs.

#### STANDARD MANIFOLDS

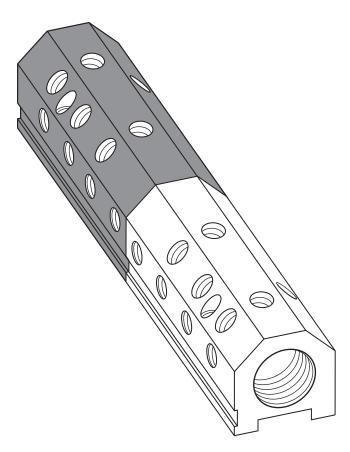
- 1. Choose your manifold from the following pages.
- 2. Stock Manifolds will ship same day or by the next business day.

#### WHEN ORDERING CUSTOM MANIFOLDS

- 1. Submit design or sketch.
- 2. Cito will make CAD drawing and submit via fax with price quote and delivery information.
- 3. Upon approval of drawing, the manifold will be shipped the following week.

#### TO ORDER YOUR DESIGN KIT FOR INLINE MANIFOLDS

Our Design Kit will assist in your mold or machine mounted design of Inline™ Manifolds — complete with CAD Patterns, and custom order forms.



Please contact our Sales Department CITO PRODUCTS INC.

N8779 County Road X • P.O. Box 90 Watertown, WI 53094 • USA Phone: (920) 261-2606

Fax: (920) 261-1350

E-mail: sales@pulsecooling.com ATTENTION: SALES DEPARTMENT

Please specify which CAD system you are using when requesting your Design Kit.

The Design Kit is available in:
.PRT (CadKey)

.DWG (AutoCad)

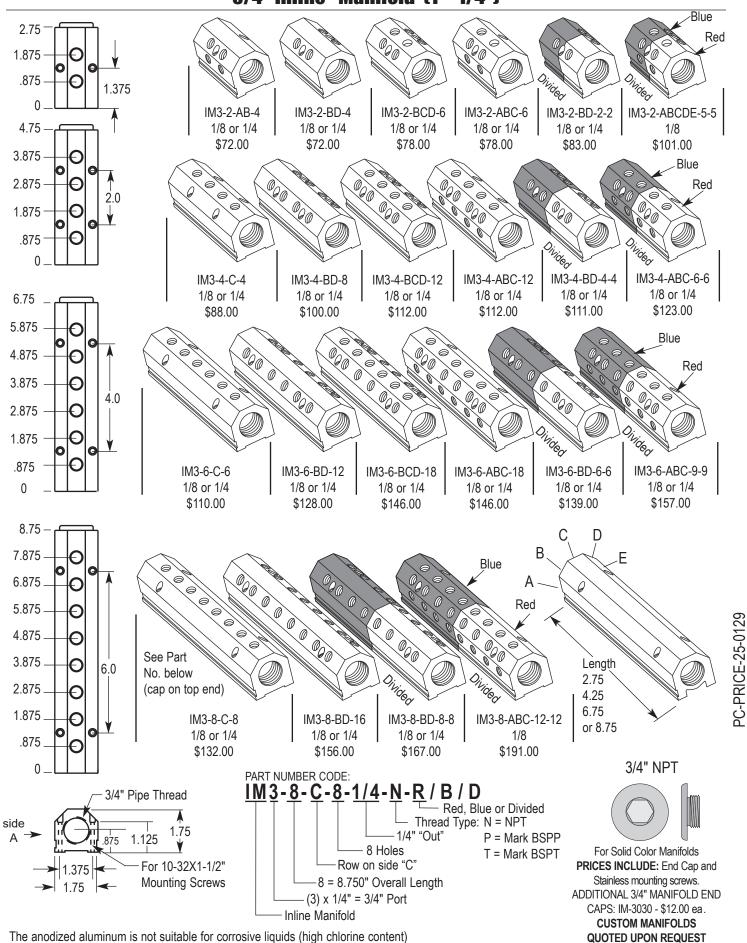
.DXF (Data Exchange Format)

.IGES (International Graphic Exchange)

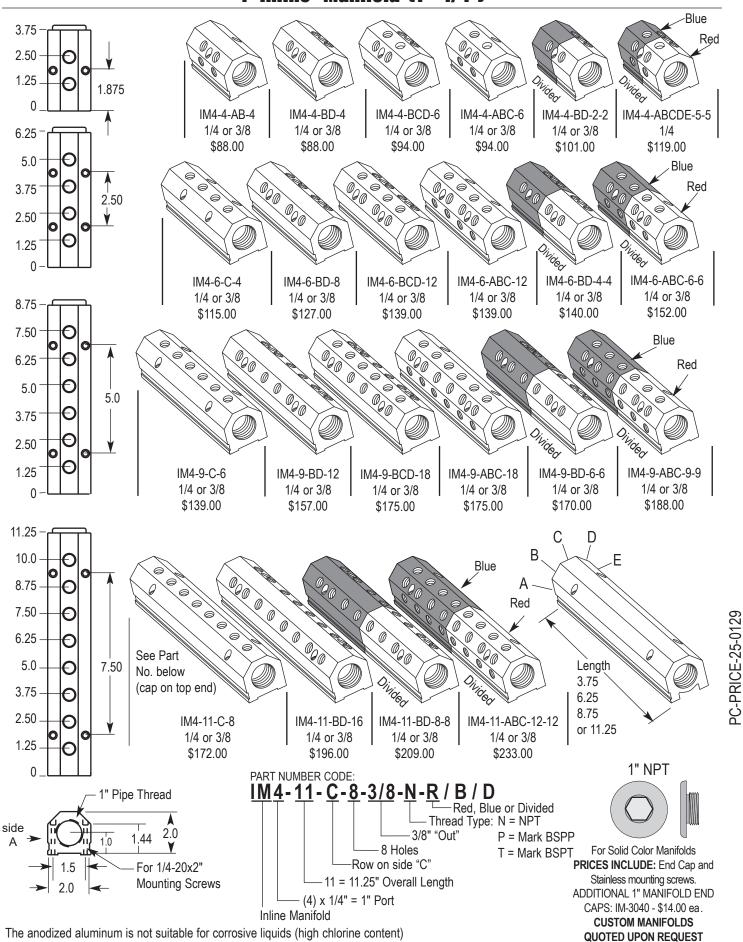
The anodized aluminum is not suitable for corrosive liquids (high chlorine content).

Brass, steel and stainless is available. Request quote.

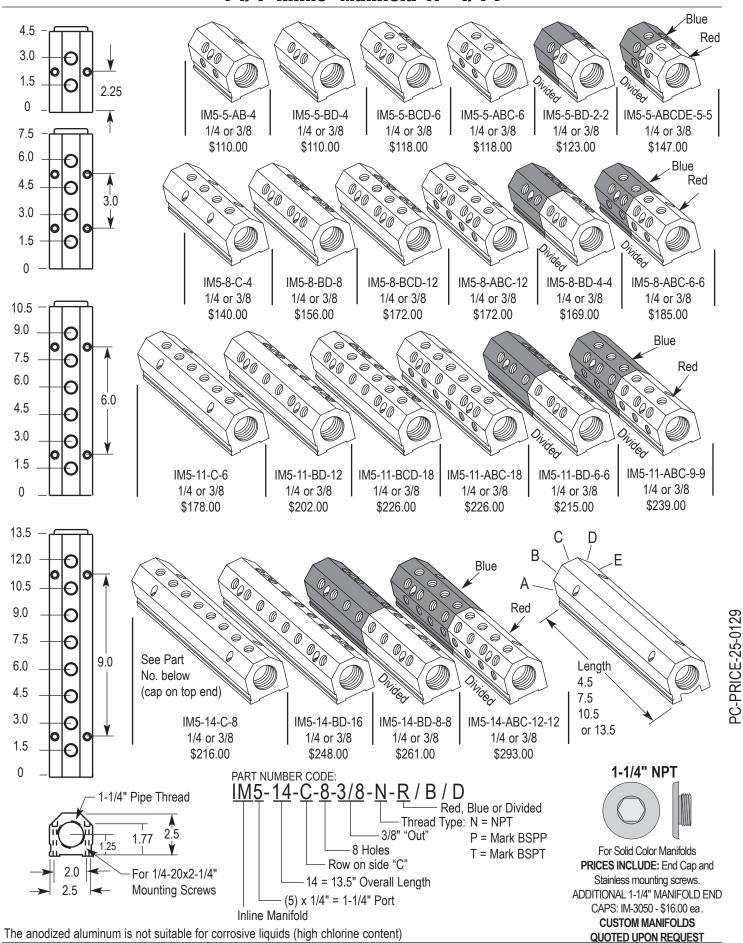
# **3/4" Inline™ Manifold (1 = 1/4")**



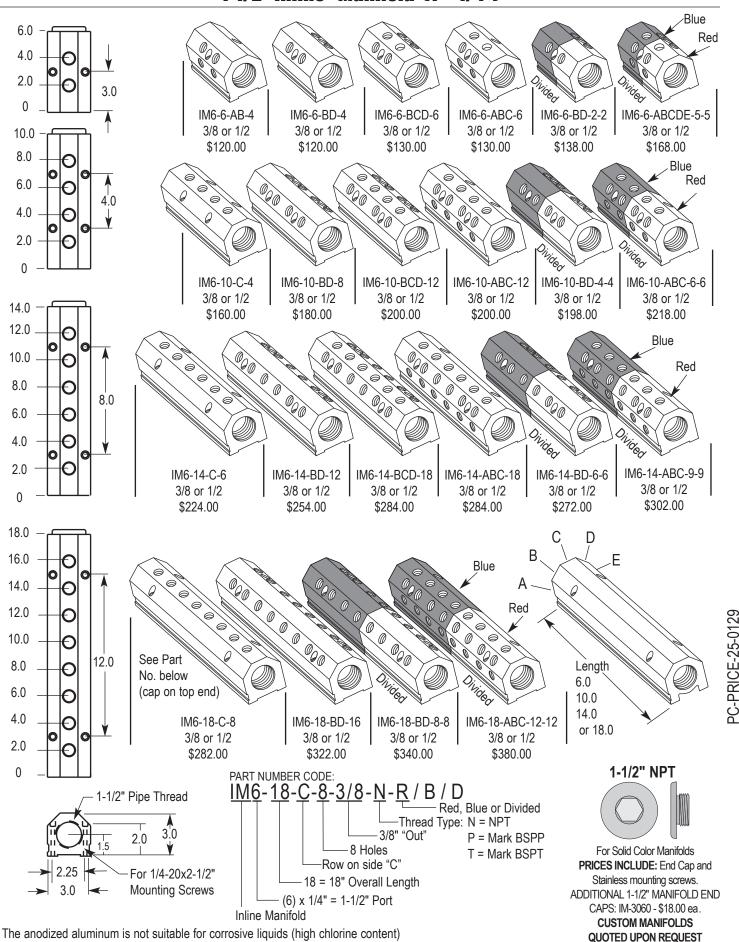
# 1" Inline™ Manifold (1 = 1/4")



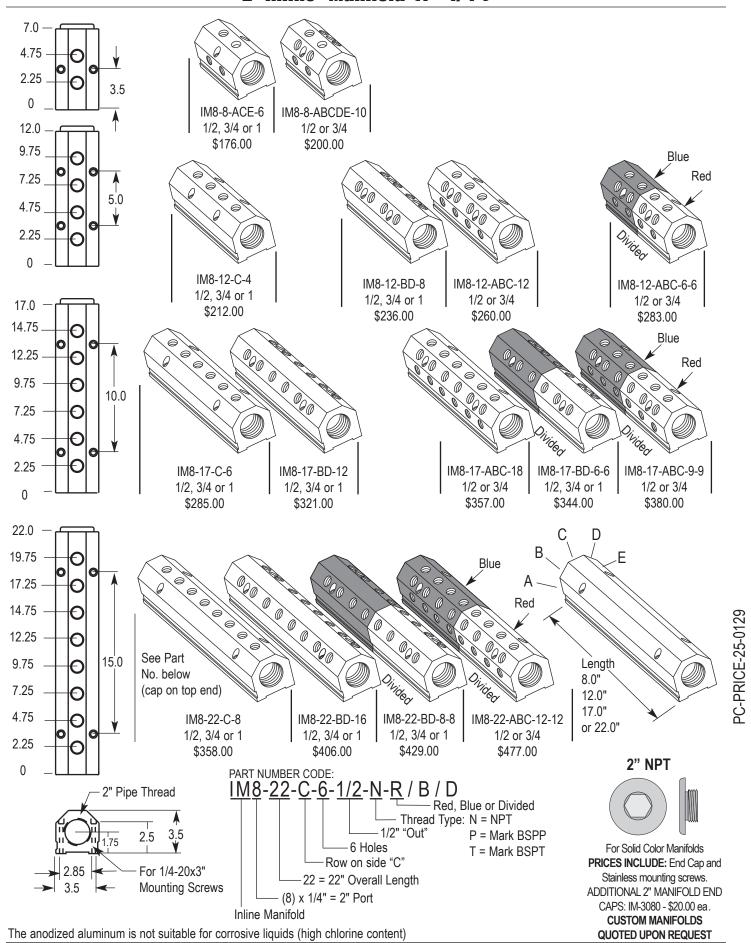
# **1-1/4" Inline™ Manifold (1 = 1/4")**



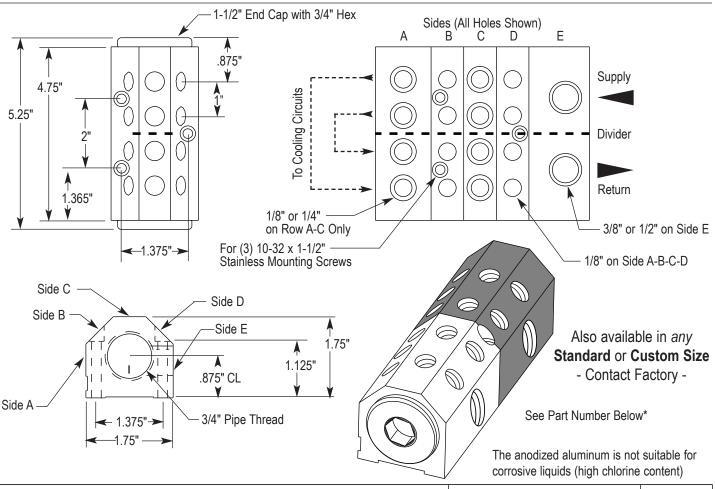
# **1-1/2" Inline™ Manifold (1 = 1/4")**



# 2" Inline™ Manifold (1 = 1/4")

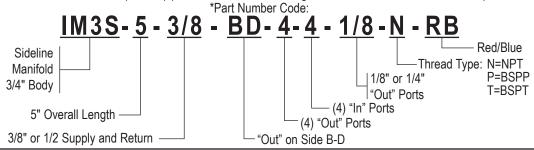


# 3/4" x 5" Sideline™ Manifold (1 = 1/4")

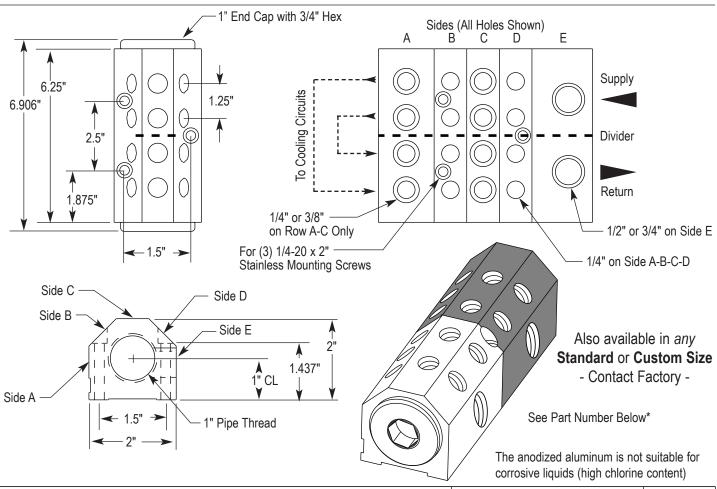


	Outgoing Ports				5 411	<b>D</b> .
Side A In/Out	Side B In/Out	Side C In/Out	Side D In/Out	Side E - Return In/Out	Part Number	Price
	(2) (2) 1/8"-1/8"			3/8"-3/8"	IM3S-5-3/8-B-2-2-1/8-N-RB	\$133.00
(2) (2) 1/8"-1/8"	(2) (2) 1/8"-1/8"			3/8"-3/8"	IM3S-5-3/8-AB-4-4-1/8-N-RB	\$145.00
	(2) (2) 1/8"-1/8"		(2) (2) 1/8"-1/8"	3/8"-3/8"	*IM3S-5-3/8-BD-4-4-1/8-N-RB	\$145.00
	(2) (2) 1/8"-1/8"	(2) (2) 1/8"-1/8"	(2) (2) 1/8"-1/8"	3/8"-3/8"	IM3S-5-3/8-BCD-6-6-1/8-N-RB	\$157.00
(2) (2) 1/8"-1/8"	(2) (2) 1/8"-1/8"	(2) (2) 1/8"-1/8"	(2) (2) 1/8"-1/8"	3/8"-3/8"	IM3S-5-3/8-ABCD-8-8-1/8-N-RB	\$169.00
	(2) (2) 1/4"-1/4"			1/2"-1/2"	IM3S-5-1/2-B-2-2-1/4-N-RB	\$133.00
	(2) (2) 1/4"-1/4"		(2) (2) 1/4"-1/4"	1/2"-1/2"	IM3S-5-1/2-BD-4-4-1/4-N-RB	\$145.00

PRICE INCLUDES: End Caps and (3) 10-32 x 1-1/2" ST. ST. Mtg. Screws. ADDITIONAL 3/4" End Caps \$12.00 ea.

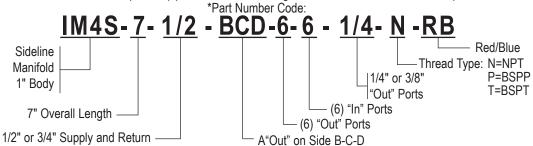


# 1" x 7" Sideline™ Manifold (1 = 1/4")

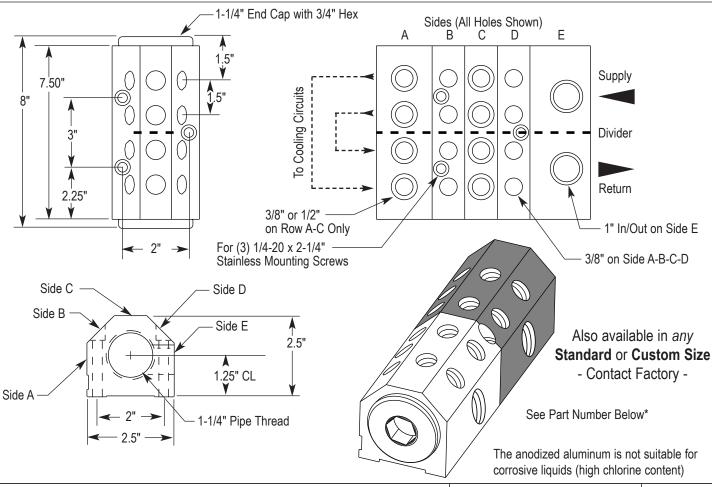


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		Outgoing Ports	5 4 11 1	D :		
Side A In/Out	Side B In/Out	Side C In/Out	Side D In/Out			Price
	(2) (2) 1/4"-1/4"			1/2"-1/2"	IM4S-7-1/2-B-2-2-1/4-N-RB	\$166.00
(2) (2) 1/4"-1/4"	(2) (2) 1/4"-1/4"			1/2"-1/2"	IM4S-7-1/2-AB-4-4-1/4-N-RB	\$178.00
	(2) (2) 1/4"-1/4"		(2) (2) 1/4"-1/4"	1/2"-1/2"	IM4S-7-1/2-BD-4-4-1/4-N-RB	\$178.00
	(2) (2) 1/4"-1/4"	(2) (2) 1/4"-1/4"	(2) (2) 1/4"-1/4"	1/2"-1/2"	*IM4S-7-1/2-BCD-6-6-1/4-N-RB	\$190.00
(2) (2) 1/4"-1/4"	(2) (2) 1/4"-1/4"	(2) (2) 1/4"-1/4"	(2) (73 1/4"-1/4"	1/2"-1/2"	IM4S-7-1/2-ABCD-8-8-1/4-N-RB	\$202.00
	(2) (2) 3/8"-3/8"			3/4"-3/4"	IM4S-7-3/4-B-2-2-3/8-N-RB	\$166.00
	(2) (2) 3/8"-3/8"		(2) (2) 3/8"-3/8"	3/4"-3/4"	IM4S-7-3/4-BD-4-4-3/8-N-RB	\$178.00

PRICE INCLUDES: End Caps and (3) 1/4-20x2" ST. ST. Mtg. Screws. ADDITIONAL1" End Caps \$14.00 ea.

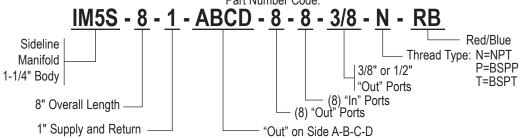


#### **1-1/4"** x 8" **Sideline™ Manifold** (1 = **1/4"**)

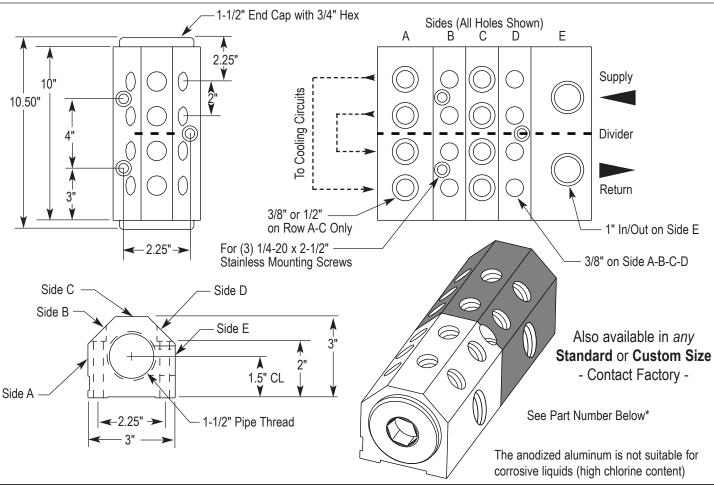


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		Outgoing Ports	5 411			
Side A In/Out	Side B In/Out	Side C In/Out	Side D In/Out	Side E - Return In/Out		Price
	(2) (2) 3/8"-3/8"			1"-1"	IM5S-8-1-B-2-2-3/8-N-RB	\$207.00
(2) (2) 3/8"-3/8"	(2) (2) 3/8"-3/8"			1"-1"	IM5S-8-1-AB-4-4-3/8-N-RB	\$223.00
	(2) (2) 3/8"-3/8"		(2) (2) 3/8"-3/8"	1"-1"	IM5S-8-1-BD-4-4-3/8-N-RB	\$223.00
	(2) (2) 3/8"-3/8"	(2) (2) 3/8"-3/8"	(2) (2) 3/8"-3/8"	1"-1"	IM5S-8-1-ABC-6-6-3/8-N-RB	\$239.00
(2) (2) 3/8"-3/8"	(2) (2) 3/8"-3/8"	(2) (2) 3/8"-3/8"	(2) (2) 3/8"-3/8"	1"-1"	*IM5S-8-1-ABCD-8-8-3/8-N-RB	\$255.00
	(2) (2) 1/2"-1/2"			1"-1"	IM5S-8-1-B-2-2-1/2-N-RB	\$207.00
	(2) (2) 1/2"-1/2"		(2) (2) 1/2"-1/2"	1"-1"	IM5S-8-1-BD-4-4-1/2-N-RB	\$223.00

PRICE INCLUDES: End Caps and (3) 1/4-20 x 2-1/4" ST. ST. Mtg. Screws. ADDITIONAL 1-1/4" End Caps \$16.00 ea. \*Part Number Code:

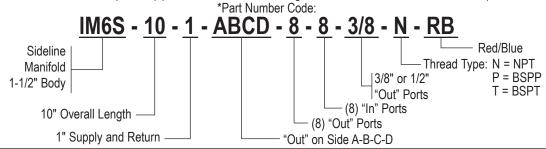


# 1-1/2" x 10" Sideline™ Manifold (1 = 1/4")



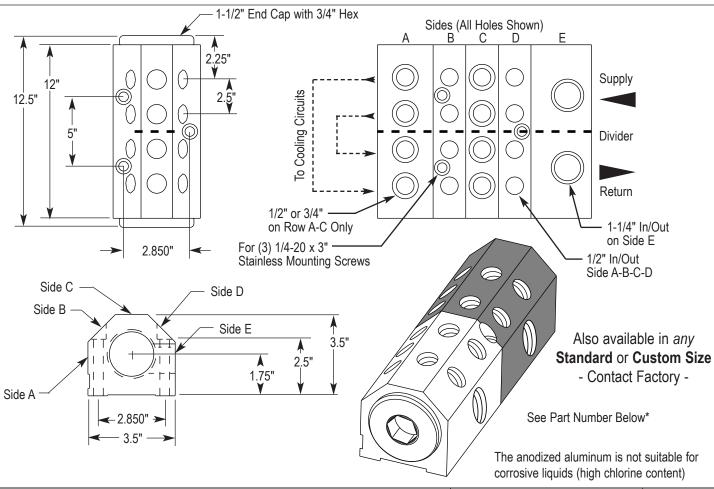
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Outgoing Ports					5 411	
Side A In/Out	Side B In/Out	Side C In/Out	Side D In/Out	Side E - Return In/Out	Part Number	Price
	(2) (2) 3/8"-3/8"			1"-1"	IM6S-10-1-B-2-2-3/8-N-RB	\$224.00
(2) (2) 3/8"-3/8"	(2) (2) 3/8"-3/8"			1"-1"	IM6S-10-1-AB-4-4-3/8-N-RB	\$244.00
	(2) (2) 3/8"-3/8"		(2) (2) 3/8"-3/8"	1"-1"	IM6S-10-1-BD-4-4-3/8-N-RB	\$244.00
	(2) (2) 3/8"-3/8"	(2) (2) 3/8"-3/8"	(2) (2) 3/8"-3/8"	1"-1"	IM6S-10-1-ABC-6-6-3/8-N-RB	\$264.00
(2) (2) 3/8"-3/8"	(2) (2) 3/8"-3/8"	(2) (2) 3/8"-3/8"	(2) (2) 3/8"-3/8"	1"-1"	*IM6S-10-1-ABCD-8-8-3/8-N-RB	\$284.00
	(2) (2) 1/2"-1/2"			1"-1"	IM6S-10-1-B-2-2-1/2-N-RB	\$224.00
	(2) (2) 1/2"-1/2"		(2) (2) 1/2"-1/2"	1"-1"	IM6S-10-1-BD-4-4-1/2-N-RB	\$244.00

PRICE INCLUDES: End Caps and (3) 1/4-20 x 2-1/2" ST. ST. Mtg. Screws. ADDITIONAL 1-1/2" End Caps \$18.00 ea.



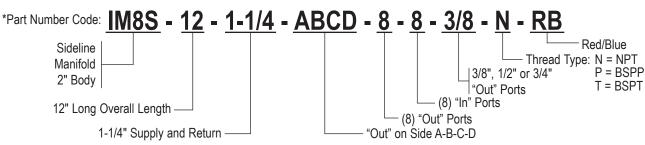
# PC-PRICE-25-0129

# 2" x 12" Sideline™ Manifold (1 = 1/4")

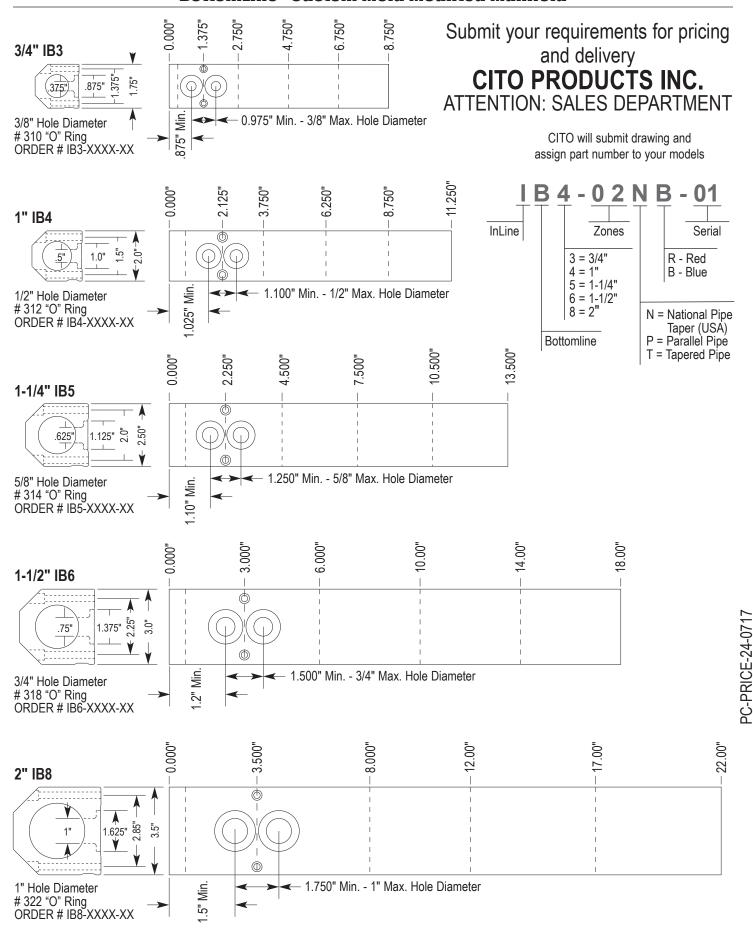


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		Outgoing Ports	D. (N. I				
Side A In/Out	Side B In/Out	Side C In/Out	Side D In/Out	Side E - Return In/Out	Part Number	Price	
	(2) (2) 1/2"-1/2"			1-1/4"-1-1/4"	IM8S-12-1-1/4-B-2-2-1/2-N-RB	\$287.00	
(2) (2) 1/2"-1/2"	(2) (2) 1/2"-1/2"			1-1/4"-1-1/4"	IM8S-12-1-1/4-AB-4-4-1/2-N-RB	\$311.00	
	(2) (2) 1/2"-1/2"		(2) (2) 1/2"-1/2"	1-1/4"-1-1/4"	IM8S-12-1-1/4-BD-4-4-1/2-N-RB	\$311.00	
	(2) (2) 1/2"-1/2"	(2) (2) 1/2"-1/2"	(2) (2) 1/2"-1/2"	1-1/4"-1-1/4"	IM8S-12-1-1/4-BCD-6-6-1/2-N-RB	\$335.00	
(2) (2) 1/2"-1/2"	(2) (2) 1/2"-1/2"	(2) (2) 1/2"-1/2"	(2) (2) 1/2"-1/2"	1-1/4"-1-1/4"	*IM8S-12-1-1/4-ABCD-8-8-1/2-N-RB	\$359.00	
	(2) (2) 3/4"-3/4"			1-1/4"-1-1/4"	IM8S-12-1-1/4-B-2-2-3/4-N-RB	\$287.00	
	(2) (2) 3/4"-3/4"		(2) (2) 3/4"-3/4"	1-1/4"-1-1/4"	IM8S-12-1-1/4-BD-4-4-3/4-N-RB	\$311.00	

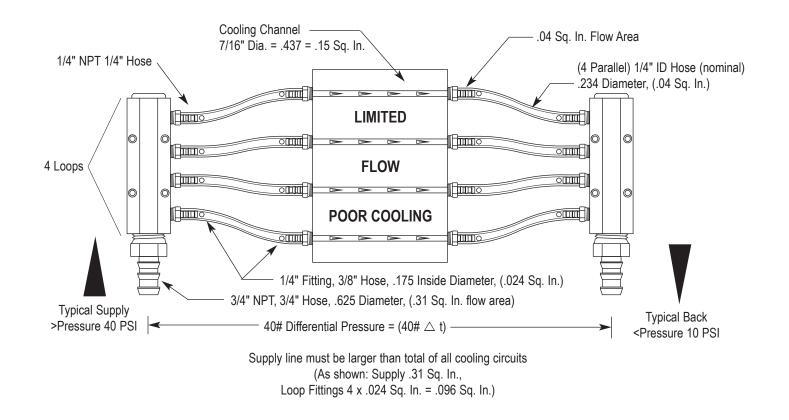
PRICE INCLUDES: End Caps and 1/4 - 20 x 3" ST. ST. Mtg. Screws. ADDITIONAL 2" End Caps \$20.00 ea.



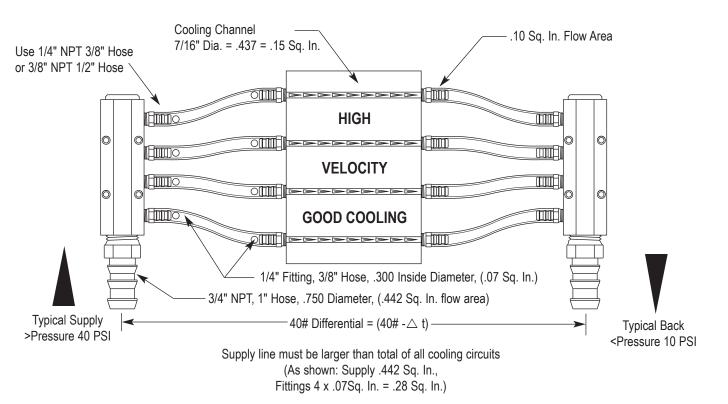
# BottomLine™ Custom Mold Mounted Manifold



#### **Flow Restrictions**

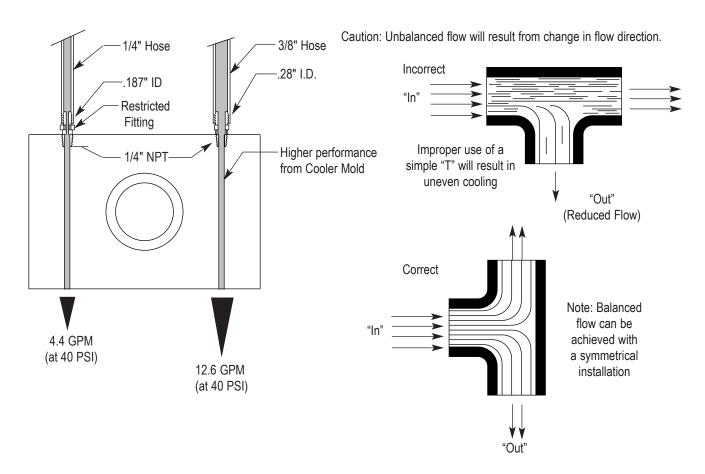


# HIGH PERFORMANCE COOLING USE OF FULL FLOW FITTINGS



#### **Flow Considerations**

#### Flow Restriction (or Unbalanced) Hook Ups Will Increase Cycle Time



#### 200% More Flow Area with High Flow Fittings

A mold will always be limited by its least cooled cavity. Coolant supply area should always be more than total mold ports area to avoid starving the mold of pressure and flow. Pressure difference across the mold should be no less than 40 P.S.I.

Avoid kinked hoses and any other restrictions.

Hose	Fitting Orifice	Area Square	Supply area should exceed total of outlets (area square inch)							
1.0.	Size	Inch	2 Ports	4 Ports	6 Ports	8 Ports	10 Ports	12 Ports	16 Ports	
1/4"	.19"	.03	.06"	.12	.18	.24	.30	.36	.48	
3/8"	.28"	.06	.12"	.24	.36	.48	.60	.72	.96	
1/2"	.40"	.12	.24"	.48	.72	.96	1.20	1.44	1.92	
3/4"	.56"	.25	.50"	1.0	1.50	2.00	2.50	3.00	4.00	
1"	.87"	.59								
1-1/4"	1.0"	.78								
1-1/2"	1.25"	1.23								
2"	1.88"	2.7								

Example: Supply 1" .59 sq. inch

3/8" waterlines = .06 square inches

.56 divided by .06 = up to 9 waterlines

Note: supply .48 sq. in. exceeds total hold cooling channel area

A typical mold with 8 (3/8) cooling circuits can be supplied with a 1" manifold.