

# SMARTFLOW® Aluminum Manifolds

## General Description

Smartflow® aluminum manifolds are constructed from unique extruded material, precision machined, then anodized for corrosion protection. Many manifold sizes are stocked, however custom manifolds can be made to your specifications.

Standard red and blue colors denote supply and return for cooling water lines. 3/4", 1", and 1 1/2" manifolds are equipped with dovetail locking channels, pre-drilled mounting holes, and bolts for ease in pairing and installation. Each manifold with NPT threads includes one bronze end plug.

## Features and Benefits

- ◆ **One-Piece Extruded Aluminum Construction** is lightweight with long-lasting durability.
- ◆ **Quality Anodizing** protects the manifolds from corrosion and signifies manifold function.
- ◆ **Different Port Size Options** provide connection flexibility.
- ◆ **Bronze End Plug** is included for customer convenience (NPT only).
- ◆ **Pre-Drilled Mounting Holes** make the manifolds ready to install.
- ◆ **3/4 thru 1-1/2 manifolds dovetail together** for ease in mounting.
- ◆ **Common Manifold Configurations Stocked** to provide quick delivery.

## Specifications

Material .....Aluminum (6000 Series)  
 Max. Pressure .....150 psi (10 bar)  
 Max. Temperature .....300°F (149°C)  
 Anodizing .....Mil Spec Type II Class 2  
 Standard Colors .....Red, Blue  
 Optional Colors .....Black, Green, Gold, Clear

## Assembly

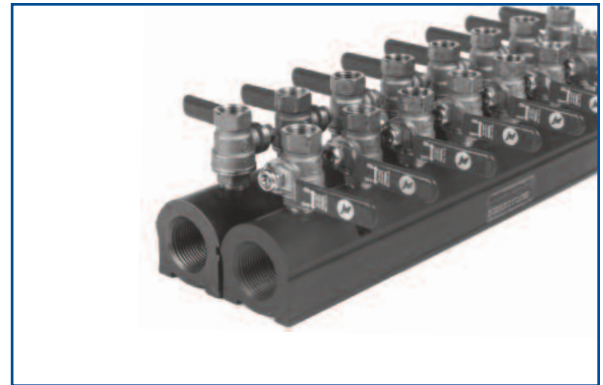
Smartflow® aluminum manifolds are the platform for control of cooling water lines in most types of industrial process cooling. Injection molding is one example and our particular area of expertise. Flowmeters, Flow Regulators, Ball Valves, Quick Disconnect Fittings and more can be added to the manifolds to improve functionality and process control. See page 12 for ordering information.

## Custom Manifolds

Special port sizes and locations are possible with Smartflow aluminum manifolds. All fabrication is done from extruded material at our factory in Kansas City. Contact your distributor for price and delivery on custom manifolds.

3D CAD Data is available on demand at  
[www.MANIFOLDBUILDER.com](http://www.MANIFOLDBUILDER.com)

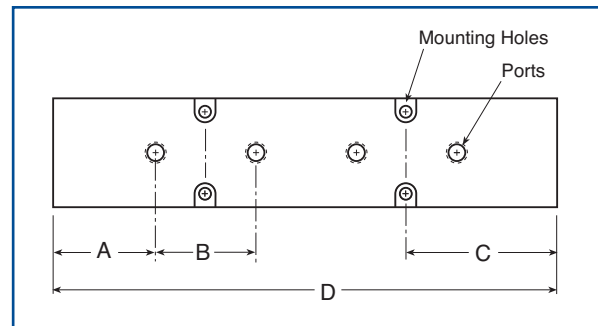
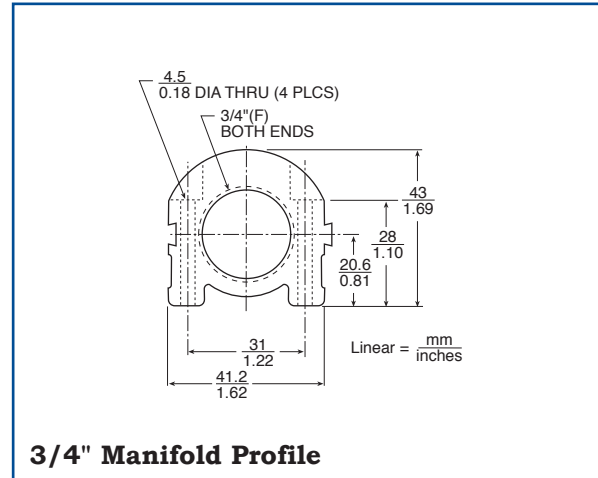
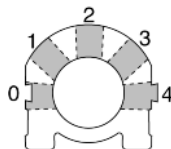
**ManifoldBuilder**



# SMARTFLOW® 3/4" Aluminum Manifolds

**Model Number** (manifold only, see page 12 to add port valves, quick connects and flowmeters)

	<b>6SA</b>	-	<b>8</b>	-	<b>3</b>	-	<b>2</b>	-	<b>Y</b>	
<b>Supply Threads</b>										<b>Color</b>
NPT	6SA									Y Red
British Parallel	6BSA									Z Blue
British Taper	6TSA									
<b>Number of Ports</b>	4 to 16									<b>Port Locations</b>
										0 Left Side
										1 Left 45°
										2 Center
										3 Right 45°
										4 Right Side
<b>Port Sizes</b>										
1/4"NPT	2									
1/4"BSPP	2B									
1/4"BSPT	2T									
3/8"NPT	3									
3/8"BSPP	3B									
3/8"BSPT	3T									



Stocked 3/4" Manifolds										
Number of Ports	1/4" Ports A = 38.1mm/1.5", B = 38.1mm/1.5" C = 57.2mm/2.25"					3/8" Ports A = 38.1mm/1.5", B = 50.8mm/2.0" C = 63.5mm/2.5"				
	model number	length (D) mm	length (D) in.	weight each kg	weight each lbs.	model number	length (D) mm	length (D) in.	weight each kg	weight each lbs.
4	6SA- 4-2-2	190	7.5	0.5	1.1	6SA- 4-3-2	229	9	0.6	1.4
6	6SA- 6-2-2	267	10.5	0.7	1.6	6SA- 6-3-2	330	13	0.9	2.0
8	6SA- 8-2-2	343	13.5	0.9	2.0	6SA- 8-3-2	432	17	1.2	2.6

Contact your distributor for custom manifolds.



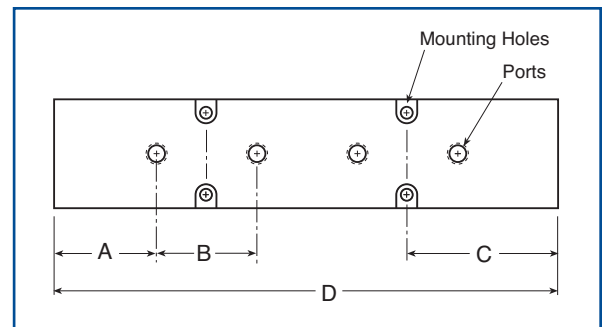
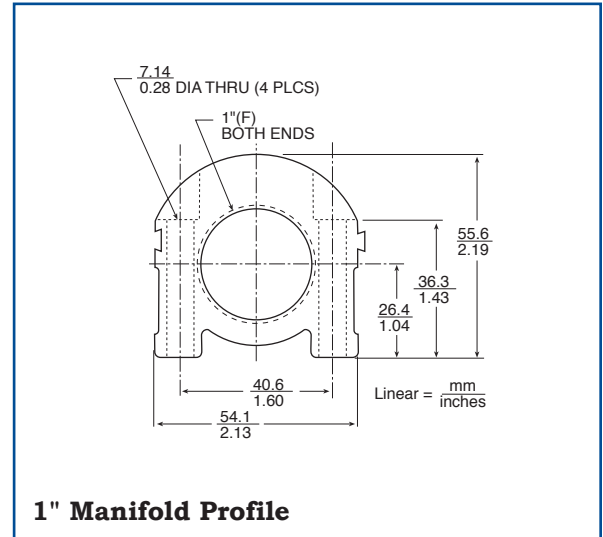
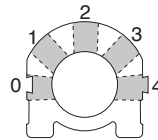
Design and specifications are subject to change without notice. See page 19 for manifold testing and use.

Galvanic corrosion may occur in anodized aluminum components when installed in electrical connection with more noble metals such as copper. Use appropriate installation practices.

# SMARTFLOW<sup>®</sup> 1" Aluminum Manifolds

**Model Number** (manifold only, see page 12 to add port valves, quick connects and flowmeters)

	<b>8SA - 16 - 2 - 2 - Y</b>	
<b>Supply Threads</b>	<b>8SA</b> 8BSA 8TSA	<b>Color</b> Y Red Z Blue
NPT British Parallel British Taper		
<b>Number of Ports</b>	<b>4 to 16</b>	<b>Port Locations</b>
<b>Port Sizes</b>		0 Left Side 1 Left 45° 2 Center 3 Right 45° 4 Right Side
1/4"NPT 1/4"BSPP 1/4"BSPT 3/8"NPT 3/8"BSPP 3/8"BSPT 1/2"NPT 1/2"BSPP 1/2"BSPT	2 2B 2T 3 3B 3T 4 4B 4T	



Stocked 1" Manifolds										
Number of Ports	1/4" Ports A = 38.1mm/1.5", B = 38.1mm/1.5" C = 57.2mm/2.25"					3/8" Ports A = 38.1mm/1.5", B = 50.8mm/2.0" C = 63.5mm/2.5"				
	model number	length (D)		weight each		model number	length (D)		weight each	
		mm	in.	kg	lbs.		mm	in.	kg	lbs.
4	8SA- 4-2-2	190	7.5	0.9	2.0	8SA- 4-3-2	229	9	1.1	2.4
6	8SA- 6-2-2	267	10.5	1.3	2.8	8SA- 6-3-2	330	13	1.6	3.5
8	8SA- 8-2-2	343	13.5	1.6	3.6	8SA- 8-3-2	432	17	2.1	4.6
10	8SA-10-2-2	419	16.5	2.0	4.5	8SA-10-3-2	533	21	2.6	5.7
12	8SA-12-2-2	495	19.5	2.4	5.3	8SA-12-3-2	635	25	3.1	6.8
16	8SA-16-2-2	648	25.5	3.1	6.9	8SA-16-3-2	838	33	4.0	8.9

**Contact your distributor for custom manifolds.**



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# SMARTFLOW® 1-1/2" Aluminum Manifolds

**Model Number** (manifold only, see page 12 to add port valves, quick connects and flowmeters)

**12SA - 16 - 4 - 2 - Y**

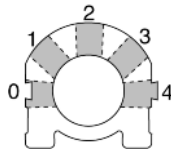
<b>Supply Threads</b>	<b>12SA</b> NPT	<b>16</b>	<b>4</b>	<b>2</b>	<b>Y</b>	<b>Color</b>
	<b>12BSA</b> British Parallel				<b>Z</b>	Red
	<b>12TSA</b> British Taper					Blue

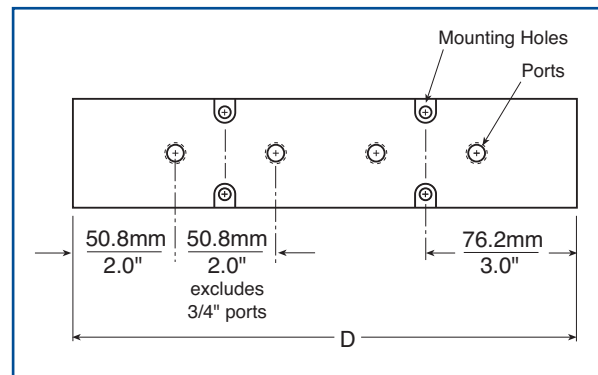
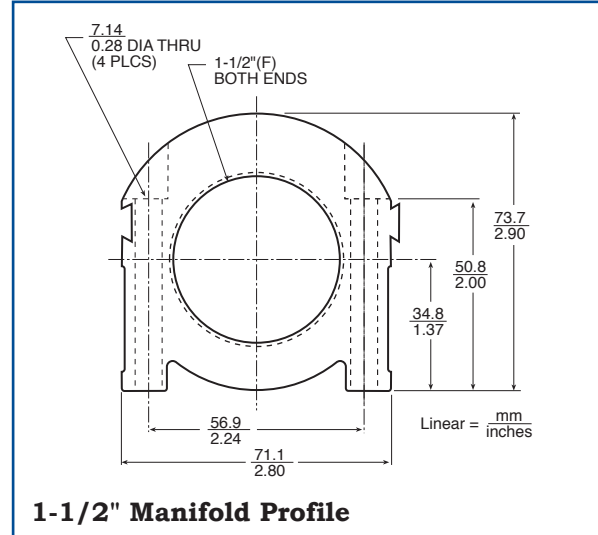
<b>Number of Ports</b>	<b>4 to 16</b>	<b>Port Locations</b>
		<b>0</b> Left Side
		<b>1</b> Left 45°
		<b>2</b> Center
		<b>3</b> Right 45°
		<b>4</b> Right Side

<b>Port Sizes</b>	<b>3</b>	<b>3</b>
3/8"NPT	3	3B
3/8"BSPP	3B	3T
3/8"BSPT	3T	4
1/2"NPT	4	4B
1/2"BSPP	4B	4T
1/2"BSPT	4T	6
*3/4"NPT	6	6B
*3/4"BSPP	6B	6T
*3/4"BSPT	6T	



\*76.2mm/3" port center spacing



Stocked 1-1/2" Manifolds					
Number of Ports	1/2" Ports				
	model number	length (D)		weight each	
		mm	in.	kg	lbs.
4	12SA- 4-4-2	254	10	2.0	4.4
6	12SA- 6-4-2	356	14	2.8	6.2
8	12SA- 8-4-2	457	18	3.6	7.9
10	12SA-10-4-2	559	22	4.4	9.7
12	12SA-12-4-2	660	26	5.1	11.4
16	12SA-16-4-2	864	34	6.7	15.0

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# SMARTFLOW<sup>®</sup> 2" Aluminum Manifolds

**Model Number** (manifold only, see page 12 to add port valves, quick connects and flowmeters)

**16SA - 16 - 4 - 2 - Y**

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**Supply Threads**

NPT      **16SA**

British Parallel      **16BSA**

British Taper      **16TSA**

**Color**

Y      Red

Z      Blue

**Port Sizes**

4      1/2" NPT

4B      1/2" BSPP

4T      1/2" BSPT

6      \*3/4" NPT

6B      \*3/4" BSPP

6T      \*3/4" BSPT

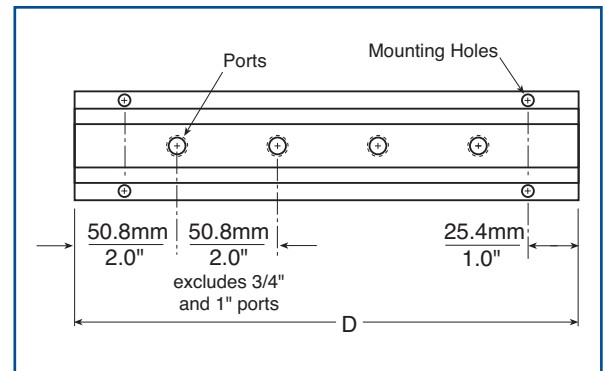
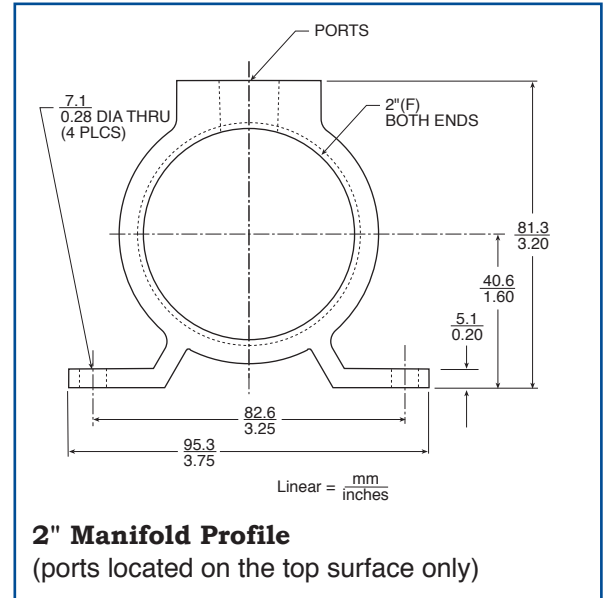
8      \*1" NPT

8B      \*1" BSPP

8T      \*1" BSPT

**Total Number of Ports**      4 to 16

\*76.2mm/3" port center spacing



Stocked 2" Manifolds					
Number of Ports	1/2" Ports				
	model number	length (D)		weight each	
		mm	in.	kg	lbs.
4	16SA- 4-4-2	254	10	1.3	2.9
6	16SA- 6-4-2	356	14	1.8	4.1
8	16SA- 8-4-2	457	18	2.4	5.2
12	16SA-12-4-2	660	26	3.4	7.5
16	16SA-16-4-2	864	34	4.5	9.9

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