

3/4" manifolds with ball valves



2" manifolds with and without ball valves



1" manifold with flowmeters

General Description

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

Standard red and blue anodizing denotes supply and return for cooling water lines. Green, black, clear and gold anodized manifolds are available. Call for pricing and delivery. 3/4", 1", and 1 1/2" manifolds are equipped with dovetail locking channels, pre-drilled mounting holes, and screws for ease in pairing and installation.

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.
- ◆ **Brass End Plug** is included for customer convenience.
- ◆ **Pre-Drilled Mounting Holes** make the manifolds ready to install.
- ◆ **Optional Ball Valves and Flowmeters** provide instant flow, pressure, and temperature information, plus shut off individual supply and return lines.
- ◆ **Single or Parallel Manifold Configurations** adapt to most mounting situations.
- ◆ **Common Manifold Configurations Stocked** to provide quick delivery.

Design and specifications are subject to change without notice. See the back page for special manifold pressure rating notes.

Specifications

Material

3/4", 1", 1 1/2"Aluminum (6105-T6)
 2"Aluminum (6005-T5)
 Inlet Size3/4", 1", 1 1/2" or 2"
 NPT(F) standard
 British threads optional
 Port Sizesee pages 5-8

Max. Pressure150 psig (10 bar)

Max. Temperature300°F (149°C)

Optional Ball ValvesNPT only
 to match port size

Optional Flowmeters or Flow Regulators

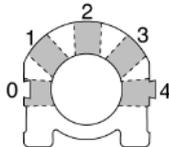
(see page 16 for flowmeter details)
 with temperature gauges
 with pressure and temperature gauges
 flow rate options:

- 1.5 gallons per minute
- 2.5 gallons per minute
- 8.0 gallons per minute
- 10 liters per minute
- 30 liters per minute

(see page 24 for flow regulator details)

Model Number

6SA - 16 - 2 - 2 - BHY

Supply Threads NPT British Parallel British Taper	6SA	Number of Ports 4 to 16	Port Locations 0 Left Side 1 Left 45° 2 Center 3 Right 45° 4 Right Side		Accessories (add accessory and anodizing designators to the end of the model number as needed) A Manifold only B Ball Valves only C Ball Valves and Plain Flowmeters * D Ball Valves and Flowmeters with Thermometers * E Ball valves and Flowmeters with Thermometers and Pressure Gauges* F Plain Flowmeters only * H Port Quick Connect Plugs J Port Hose Barbs X Special (consult the factory)
	6BSA 6TSA				

* See page 16 for flowmeter information. Specify flow rate when ordering. Custom port spacing is required when using 1/4" ports with flowmeters.

Contact the factory for other thread styles and sizes.

Quick delivery is standard for made-to-order manifolds. Please call for availability.

Stocked 3/4" Manifolds										
Number of Ports	1/4" Ports					3/8" Ports				
	model number	length		weight each		model number	length		weight each	
		mm	in.	kg	lbs.		mm	in.	kg	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

For paired installation, slide manifolds together using dovetail lock along the side of each manifold.



1" ALUMINUM MANIFOLDS

Model Number

SA - 16 - 2 - 2 - BHY

Supply Threads

NPT
British Parallel
British Taper

SA
BSA
TSA

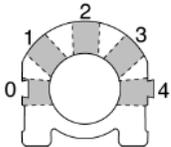
Number of Ports 4 to 16

Port Sizes

1/4"NPT(F)	2
1/4"BSPP(F)	2B
1/4"BSPT(F)	2T
3/8"NPT(F)	3
3/8"BSPP(F)	3B
3/8"BSPT(F)	3T
1/2"NPT(F)	4
1/2"BSPP(F)	4B
1/2"BSPT(F)	4T

Port Locations

0 Left Side
1 Left 45°
2 Center
3 Right 45°
4 Right Side



Accessories (add accessory and anodizing designators to the end of the model number as needed)

A Manifold only
B Ball Valves only
C Ball Valves and Plain Flowmeters *
D Ball Valves and Flowmeters with Thermometers *
E Ball valves and Flowmeters with Thermometers and Pressure Gauges*
F Plain Flowmeters only *
H Port Quick Connect Plugs
J Port Hose Barbs
X Special (consult the factory)

Anodizing

Y Red
Z Blue

* See page 16 for flowmeter information. Specify flow rate when ordering. Custom port spacing is required when using 1/4" ports with flowmeters.

Contact the factory for other thread styles and sizes.

Quick delivery is standard for made-to-order manifolds. Please call for availability.

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

For paired installation, slide manifolds together using dovetail lock along the side of each manifold.

See page 9 for dimensions.



1-1/2" ALUMINUM MANIFOLDS

Model Number

12SA - 16 - 2 - 2 - BHY

Supply Threads
 NPT
 British Parallel
 British Taper

12SA
 12BSA
 12TSA

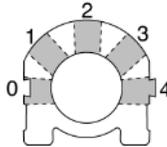
Number of Ports
 4
 to
 16

Port Sizes

3/8"NPT(F) 3
 3/8"BSPP(F) 3B
 3/8"BSPT(F) 3T
 1/2"NPT(F) 4
 1/2"BSPP(F) 4B
 1/2"BSPT(F) 4T
 3/4"NPT(F) 6
 3/4"BSPP(F) 6B
 3/4"BSPT(F) 6T

Port Locations

0 Left Side
 1 Left 45°
 2 Center
 3 Right 45°
 4 Right Side



Accessories (add accessory and anodizing designators to the end of the model number as needed)

- A Manifold only
- B Ball Valves only
- C Ball Valves and Plain Flowmeters *
- D Ball Valves and Flowmeters with Thermometers *
- E Ball valves and Flowmeters with Thermometers and Pressure Gauges*
- F Plain Flowmeters only *
- H Port Quick Connect Plugs
- J Port Hose Barbs
- X Special (consult the factory)

Anodizing

- Y Red
- Z Blue

* See page 16 for flowmeter information. Specify flow rate when ordering.

Contact the factory for other thread styles and sizes.

Quick delivery is standard for made-to-order manifolds. Please call for availability.

Stocked 1-1/2" Manifolds

Number of Ports	1/2" Ports				
	model number	length		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

For paired installation, slide manifolds together using dovetail lock along the side of each manifold.

See page 9 for dimensions.



2" ALUMINUM MANIFOLDS

Model Number

A 16 - 4 - BHY

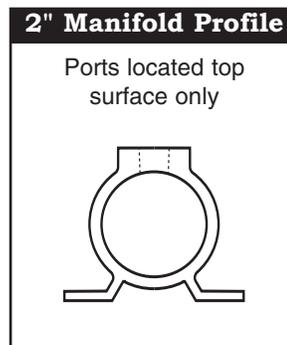
<p>Supply Threads</p> <p>NPT A</p> <p>British Parallel BA</p> <p>British Taper TA</p>	<p>Total Number of Ports</p> <p>4 to 16</p>	<p>Port Sizes</p> <p>4 1/2" NPT(F)</p> <p>4B 1/2" BSPP(F)</p> <p>4T 1/2" BSPT(F)</p> <p>6 3/4" NPT(F)</p> <p>6B 3/4" BSPP(F)</p> <p>6T 3/4" BSPT(F)</p> <p>8 1" NPT(F)</p> <p>8B 1" BSPP(F)</p> <p>8T 1" BSPT(F)</p>	<p>Accessories (add accessory and anodizing designators to the end of the model number as needed)</p> <p>A Manifold only</p> <p>B Ball Valves only</p> <p>C Ball Valves and Plain Flowmeters *</p> <p>D Ball Valves and Flowmeters with Thermometers *</p> <p>E Ball valves and Flowmeters with Thermometers and Pressure Gauges *</p> <p>F Plain Flowmeters only *</p> <p>H Quick Connect Plugs</p> <p>J Port Hose Barbs</p> <p>X Special (consult the factory)</p> <p>Anodizing</p> <p>Y Red</p> <p>Z Blue</p>
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* See page 16 for flowmeter information. Specify flow rate when ordering.

Contact the factory for other thread styles and sizes.

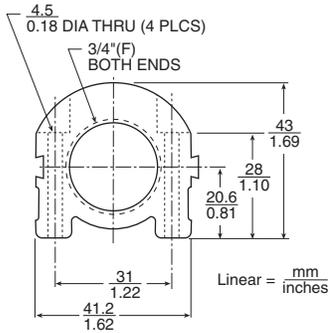
Quick delivery is standard for made-to-order manifolds. Please call for availability.

Stocked 2" Manifolds					
Number of Ports	model number	1/2" Ports		weight each	
		length mm	length in.	kg	lbs.
4	A4-4	254	10	1.3	2.9
6	A6-4	356	14	1.8	4.1
8	A8-4	457	18	2.4	5.2
12	A12-4	660	26	3.4	7.5
16	A16-4	864	34	4.5	9.9

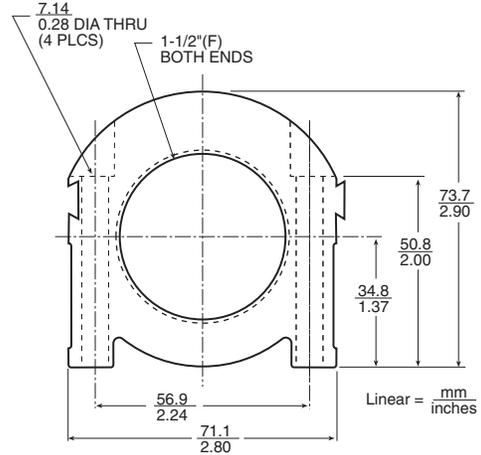


See page 9 for dimensions.

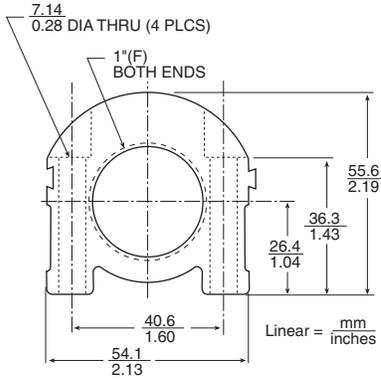
STANDARD ALUMINUM MANIFOLD DIMENSIONS



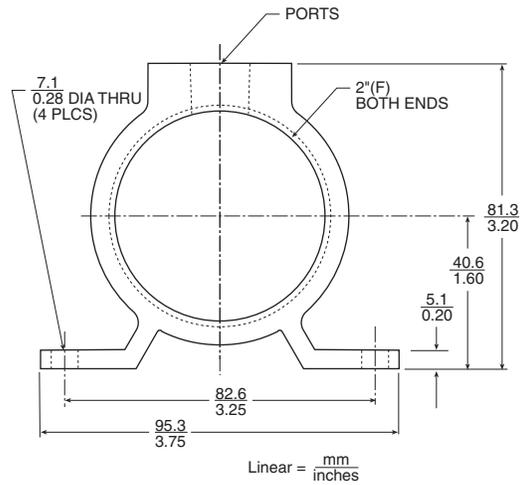
3/4" Manifold



1-1/2" Manifold



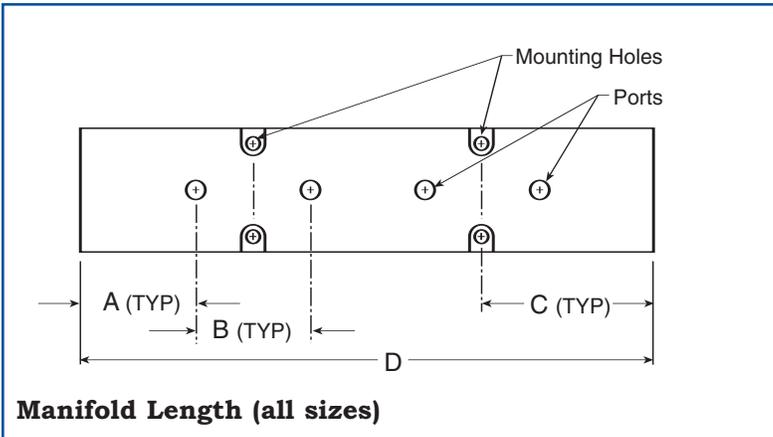
1" Manifold



2" Manifold



STANDARD ALUMINUM MANIFOLD DIMENSIONS



Dimension Chart (mm/inches)				
MANIFOLD SIZE	PORT SIZE	A	B	C
3/4" & 1"	1/8"	38.1 1.5	25.4 1.0	50.8 2.0
	1/4"		38.1 1.5	57.2 2.25
	3/8"		50.8 2.0	63.5 2.5
	1/2"			
1-1/2"	1/4"	38.1 1.5	38.1 1.5	57.2 2.25
	3/8"		50.8 2.0	63.5 2.5
	1/2"	50.8 2.0	50.8 2.0	76.2 3.0
	3/4"		76.2 3.0	88.9 3.5
2"	1/2"	50.8 2.0	50.8 2.0	25.4 1.0
	3/4"		76.2 3.0	
	1"			

Total Manifold Length

$$D = [(number\ of\ ports - 1) \times B] + (2 \times A)$$

Manifold Weight		
3/4"	.15 lbs/in	2.65 g/mm
1"	.27 lbs/in	4.78 g/mm
1-1/2"	.44 lbs/in	7.79 g/mm
2"	.29 lbs/in	5.13 g/mm