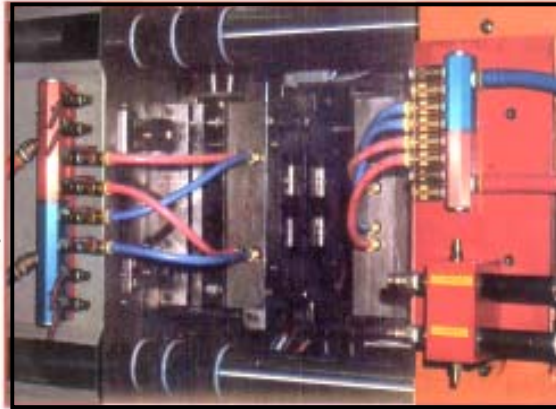


# COLOR CODED, QUICK-CHANGE ALUMINUM MANIFOLDS

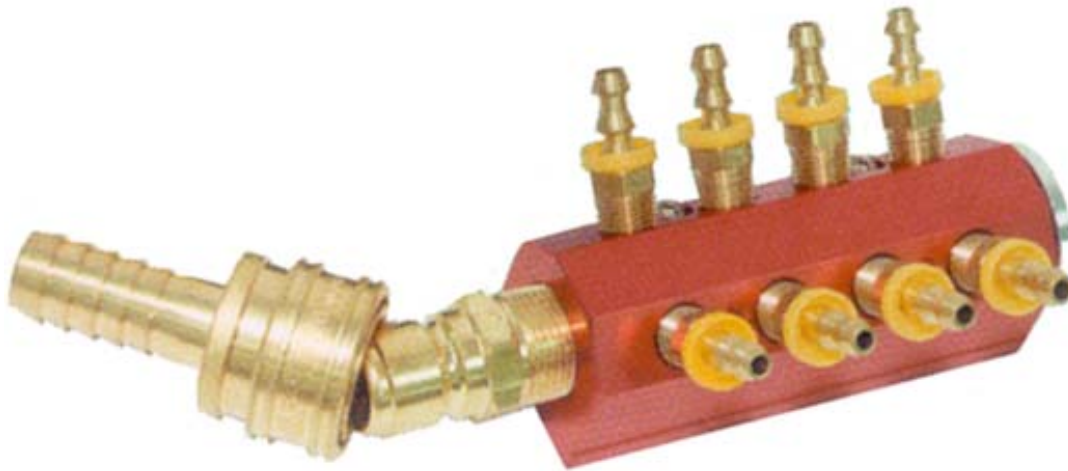
## Full flow for optimum cooling

- Pre-plumbed molds reduce set-up time, eliminate connection errors
- Low profile
- Can be equipped with quick-change connectors for fast mold changes
- Anodizing treatment inhibits corrosion



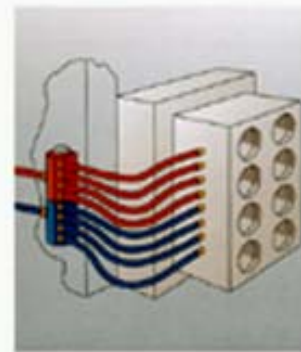
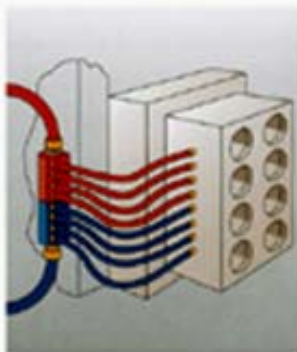
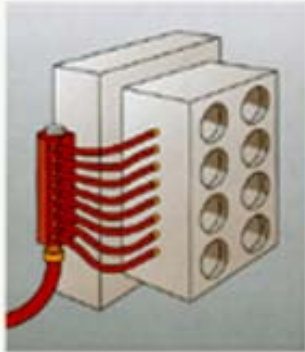
- Color coded manifolds  
Blue for Cold, Red for Hot
- Rugged design, field tested in hundreds of plants.
- 3 Volume sizes available  
3/4", 1" & 1-1/2"
- Pressure rates:  
3000 psi @ 300° F  
(200 psi On Inline & Sideline Divided Only)

The advantage of mold mounting, color coding and quick connect fittings can be readily seen above, a typical application of INLINE manifolds.



## TYPICAL MANIFOLD MOUNTING CONFIGURATIONS

Examples shown here are only a few of the large number of possible mounting arrangements.



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# COLOR CODED QUICK-CHANGE ALUMINUM MANIFOLDS

## SMARTFLOW<sup>®</sup>



### General Description

**SMARTFLOW<sup>®</sup> DUOFLOW<sup>™</sup>** Manifolds are robust extruded aluminum manifolds similar to the original Smartflow one-piece design. The manifolds are divided internally and anodized half red and blue to denote supply and return on a single manifold. No end plug is needed.

The Duoflow design provides a shorter footprint specifically for mounting a manifold directly to an injection mold, or where space is limited. Port spacing is narrow for installation of hose barbs or quick disconnect fittings only. Ball valves are not recommended.

Tool change time is significantly decreased by mounting manifolds directly to molds in storage. Water hookup is simplified to "Supply" and "Return" lines versus individual water lines for every circuit.

### General Description

- **Shorter Length** for easier mounting directly to injection molds
- **Mold-Mount** to speed mold changes
- **Economical, Proven Design** for reliability
- **Optional Quick Disconnect Fittings** for convenience and ease of installation

### Specifications

Inlet Size .....	3/4", 1" or 1-1/2"
	NPT(F) standard
	British threads optional
	Contract the factory for special machining requirements
Max . Pressure .....	150psi (10bar)
Max. Temperature .....	210°F (99°C)
Body Material .....	Aluminum
Divider .....	Stainless Steel
O-Ring .....	EPDM

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# 3/4 SMARTFLOW ALUMINUM MANIFOLDS

Model Number

## 6SA - 16 - 2 - 3 - AYZ

**Supply Threads**

NPT  
British Parallel  
British Taper

6SA  
6BSA  
6TSA

**Total Number of ports** 4 to 16

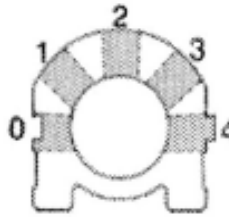
**Ports Sizes**

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

2  
2B  
2T  
3  
3B  
3T

**Ports Locations**

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

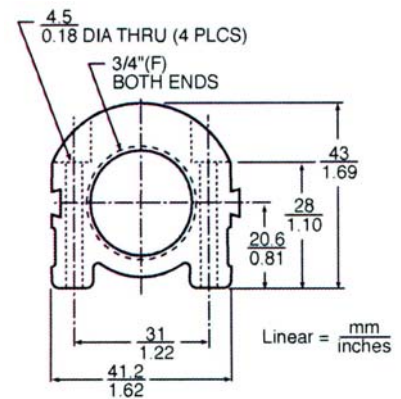


**Accessories** (add accessory and anodizing designators to the end of the model number as needed.

- A Manifold only
- B Ball Valves and Plain Flowmeters
- H Port Quick Connect Plugs
- J Port Hose Barbs
- X Special (consult the factory)

**Anodizing**

- Y Red
- Z Blue



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

3/4" Manifolds											
Number of Ports	1/4" Ports			Number of Ports	3/8" Ports						
	Model Number	Length in.	Length mm	Weight lbs.	Weight kg	Model Number	Length in.	Length mm	Weight lbs.	Weight kg	
4	6SA-4-2-2	7.5	190	1.1	0.5	4	6SA-4-3-2	9	229	1.4	0.6
6	6SA-6-2-2	10.5	267	1.6	0.7	6	6SA-6-3-2	13	330	2.0	0.9
8	6SA-8-2-2	13.5	343	2.0	0.9	8	6SA-8-3-2	17	432	2.6	1.2

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

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# 1" SMARTFLOW ALUMINUM MANIFOLDS

Model Number

## SA - 16 - 2 - 3 - AYZ

**Supply Threads**

NPT  
British Parallel  
British Taper

**SA**  
**BSA**  
**TSA**

**Total Number of ports**

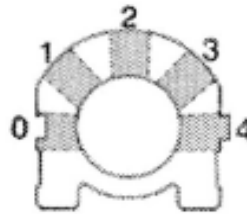
**4 to 16**

**Ports Sizes**

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

**Ports Locations**

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

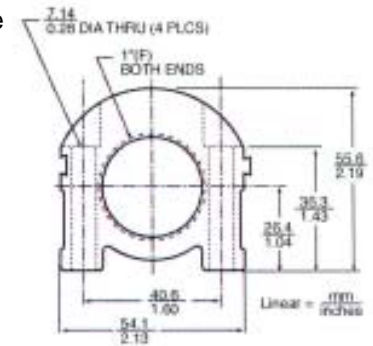


**Accessories** (add accessory and anodizing designators to the end of the model number as needed.

**A** Manifold only  
**B** Ball Valves and Plain Flowmeters  
**H** Port Quick Connect Plugs  
**J** Port Hose Barbs  
**X** Special (consult the factory)

**Anodizing**

**Y** Red  
**Z** Blue



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

1" Manifolds							
Number of Ports	1/4" Ports			Number of Ports	3/8" Ports		
	Model Number	Length in.	Weight lbs.		Model Number	Length in.	Weight lbs.
4	SA-4-2-2	7.5	2.0	4	SA-4-3-2	9	1.4
6	SA-6-2-2	10.5	2.8	6	SA-6-3-2	13	2.0
8	SA-8-2-2	13.5	3.6	8	SA-8-3-2	17	2.6
10	SA-8-2-2	16.5	4.5	10	SA-8-2-2	16.5	4.5
12	SA-12-2-2	19.5	5.3	12	SA-12-2-2	19.5	5.3
16	SA-16-2-2	25.5	6.9	16	SA-16-2-2	25.5	6.9

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



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# 1-1/2 SMARTFLOW ALUMINUM MANIFOLDS

Model Number

12SA - 16 - 2 - 3 - AYZ

**Supply Threads**

- NPT
- British Parallel
- British Taper

- 12SA
- 12BSA
- 12TSA

**Ports Locations**

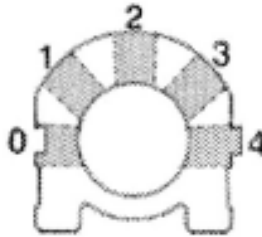
- 0 Left Side
- 1 Left 45°
- 2 Center
- 3 Right 45°
- 4 Right Side

**Total Number of ports**      4  
to      16

**Ports Sizes**

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

- 3
- 3B
- 3T
- 4
- 4B
- 4T
- 6
- 6B
- 6T

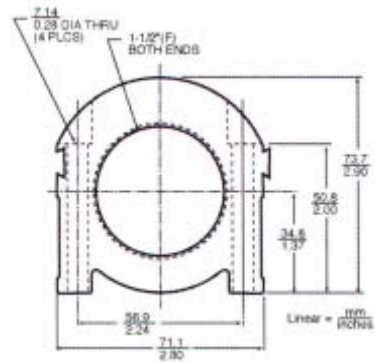


**Accessories** (add accessory and anodizing designators to the end of the model number as needed.

- A Manifold only
- B Ball Valves and Plain Flowmeters
- H Port Quick Connect Plugs
- J Port Hose Barbs
- X Special (consult the factory)

**Anodizing**

- Y Red
- Z Blue



1-1/2" Manifolds					
Number of Ports	Model Number	1/2" Ports		Weight	
		Length in.	Length mm	lbs.	kg
4	12SA-4-2-2	10	254	4.4	2.0
6	12SA-6-2-2	14	356	6.2	2.8
8	12SA-8-2-2	18	457	7.9	3.6
10	12SA-10-4-2	22	559	9.7	3.6
12	12SA-12-4-4-2	26	660	11.4	5.1
16	16SA-16-4-4-2	34	864	15.0	6.7

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

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

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# 2" SMARTFLOW INLINE MANIFOLDS

Model Number

A - 16 - 2 - AYZ

**Supply Threads**  
 NPT  
 British Parallel  
 British Taper

**Total Number of ports**

**Ports Sizes**

**A**  
**BA**  
**TA**

**4**  
**to**  
**16**

**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**  
**1" NPT(F)** **8**  
**1" BSPP(F)** **8B**  
**1" BSPT(F)** **8T**

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

**A** Manifold only  
**B** Ball Valves and Plain Flowmeters  
**H** Port Quick Connect Plugs  
**J** Port Hose Barbs  
**X** Special (consult the factory)

**Anodizing**

**Y** Red  
**Z** Blue

2" Manifolds					
Number of Ports	Model Number	1/2" Ports		Weight	
		in.	mm	lbs.	kg
4	A-4-4	10	254	2.9	2.9
6	A-6-4	14	356	4.1	1.8
8	A-8-4	18	457	5.2	2.4
12	A-12-4	26	660	7.5	3.4
16	A-16-4	34	864	9.9	4.5

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

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



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# 3/4" DUOFLOW ALUMINUM MANIFOLDS

Model Number

## 6SA - 16 - 2 - 13 - AYZ

**Supply Threads**

NPT  
British Parallel  
British Taper

**6SA**  
**6BSA**  
**6TSA**

**Total Number of ports**

**4 to 16**

**Ports Sizes**

1/4" NPT(F)  
1/4" BSPP(F)  
1/4" BSPT(F)

**2**  
**2B**  
**2T**

**13**  
**024**

**Accessories**

**A** Manifold only  
**H** Port Quick Connect Plugs  
**J** Port Hose Barbs  
Quick connect plugs and hose barbs are sized to match the ports. Contact factory if different sizes or options recommended.

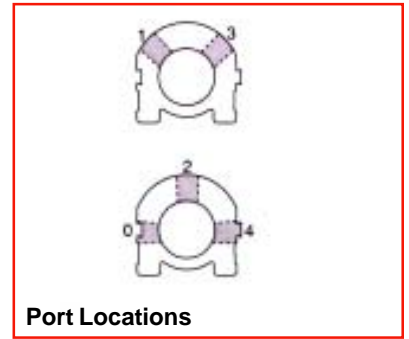
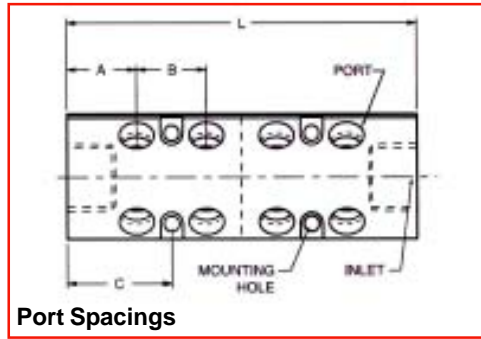
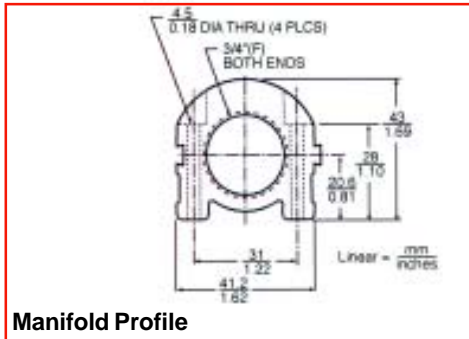
**Anodizing**

**Y** Red  
**Z** Blue

**Ports Locations**

Left & Right 45°  
Left, Center & Right

**NOTE:** For 3/4" and 1" Manifolds, use port location 1 & 3 or 0, 2, & 4 in combination for proper port spacing. See diagram below.



Stocked 3/4" NPT Manifolds										
Model	Port Size	Total Ports	Ports Per End	A	B	C	Length L		Weight	
							mm	in.	kg	lbs.
6SDA-8-2-13-AYZ	1/4"	8	4	25.4mm	25.4mm	38mm	127	5	.3	.75
6SDA-8-2-13-AYZ	NPT	12	6	1"	1"	1.5"	178	7	.5	1.1
6SDA-8-2-13-AYZ		16	8				229	9	.6	1.4

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# 1" DUOFLOW ALUMINUM MANIFOLDS

## 8SDA - 16 - 2 - 13 - A YZ

1" Manifolds					
# of Parts	1/4" Ports				
	Model#	Length		Weight	
		in.	mm	lbs.	kg
4	8SA-4-2-2	7.5	190	1.1	0.5
6	8SA-6-2-2	10.5	267	1.6	0.7
8	8SA-8-2-2	13.5	343	2.0	0.9
10	8SA-10-2-2	16.5	419	4.5	2.0
12	8SA-12-2-2	19.5	498	5.3	2.4
16	8SA-16-2-2	25.5	648	6.9	3.1

# of Ports	3/8" Ports				
	Model#	Length		Weight	
		in.	mm	lbs.	kg
4	8SA-4-3-2	9	229	1.4	0.6
6	8SA-6-3-2	13	330	2.0	0.9
8	8SA-8-3-2	17	432	2.6	1.2
10	8SA10-3-2	21	533	5.7	2.6
12	8SA12-3-3	25	635	6.8	3.1
16	8SA16-3-6	33	838	8.9	4.0

**Supply Threads**  
 NPT  
 British Parallel  
 British Taper

**8SDA**  
**8BSDA**  
**8TSDA**

**Accessories**

- A** Manifold only
  - H** Port Quick Connect Plugs
  - J** Port Hose Barbs
- Quick connect plugs and hose barbs are sized to match the ports. Contact factory if different sizes or options are required. Ball valves are not recommended.

**Ports**

**Locations**  
 Left & Right 45°  
 Left, Center & Right

**NOTE:** For 3/4" and 1" Manifolds, use port locations 1 & 3 or 0, 2, & 4 in combination for proper port spacing. See diagram below.

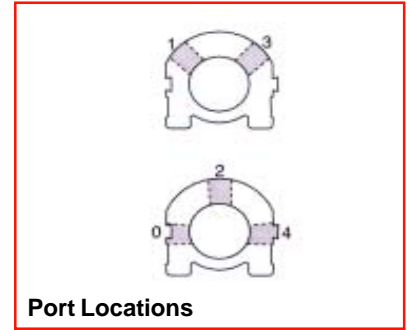
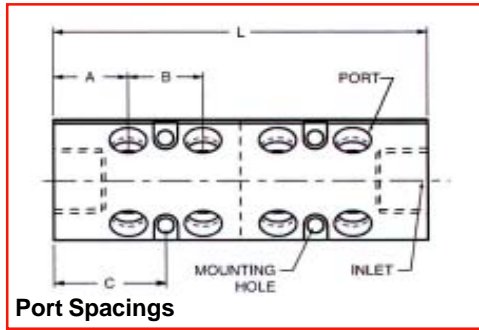
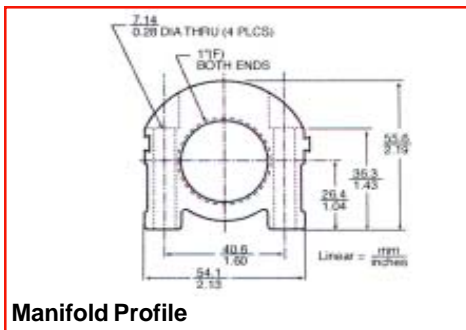
**Total Number of ports** 4 to 16

**Ports Sizes**  
 1/2" NPT(F)  
 1/4" BSPP(F)  
 1/4" BSPT(F)

2  
**2B**  
**2T**

Model#	Color	Inlet/Outlet NPT	Port NPT	# of Ports	Price
<b>Single Manifolds</b>					
8SA-4-2-2-AY	Red	1"	1/4"	4	\$ 60.00
8SA-4-2-2-AZ	Blue	1"	1/4"	4	\$ 60.00
8SA-6-2-2-AY	Red	1"	1/4"	6	\$ 75.00
8SA-6-2-2-AZ	Blue	1"	1/4"	6	\$ 75.00
8SA-8-3-2-AY	Red	1"	1/4"	8	\$ 90.00
8SA-8-3-2-AZ	Blue	1"	1/4"	8	\$ 90.00
8SA-10-2-2-AY	Red	1"	1/4"	10	\$105.00
8SA-10-2-2-AZ	Blue	1"	1/4"	10	\$105.00
8SA-12-2-2-AY	Red	1"	1/4"	12	\$120.00
8SA-12-2-2-AZ	Blue	1"	1/4"	12	\$120.00
8SA-16-2-2-AY	Red	1"	1/4"	16	\$180.00
8SA-16-2-2-AZ	Blue	1"	1/4"	16	\$180.00

Model#	Color	Inlet/Outlet NPT	Port NPT	# of PORT	Price
<b>Single Manifolds</b>					
8SA-4-3-2-AY	Red	1"	3/8"	4	\$ 66.00
8SA-4-3-2-AZ	Blue	1"	3/8"	4	\$ 66.00
8SA-6-3-2-AY	Red	1"	3/8"	6	\$ 84.00
8SA-6-2-2-AY	Red	1"	3/8"	4	\$ 84.00
8SA-8-2-2-AZ	Blue	1"	3/8"	4	\$102.00
8SA-8-3-2-AZ	Blue	1"	3/8"	6	\$102.00
8SA-10-3-2-AY	Red	1"	3/8"	8	\$120.00
8SA-10-3-2-AZ	Blue	1"	3/8"	8	\$120.00
8SA-12-3-2-AY	Red	1"	3/8"	10	\$138.00
8SA-12-3-2-AZ	Blue	1"	3/8"	10	\$138.00
8SA-16-3-2-AY	Red	1"	3/8"	12	\$174.00
8SA-16-3-2-AZ	Blue	1"	3/8"	12	\$174.00



Stocked 1" NPT Manifolds										
Model	Port Size	Total Ports	Ports Per End	A	B	C	Length L		Weight	
							mm	in.	kg	lbs.
8SDA-8-2-13AYZ	3/8"	8	4	32mm	32mm	47.6mm	159	6.3	.8	1.7
8SDA-8-2-13AYZ	NPT	12	6	1.25"	1.25"	1.88"	222	8.8	1.1	2.7
8SDA-8-2-13 AYZ		16	8				286	11.3	1.4	3.1

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# 1-1/2" DUOFLOW ALUMINUM MANIFOLDS

1-1/2" Manifolds					
# of Parts	Model#	1/4" Ports		Weight	
		Length		lbs.	kg
4	12SA-4-4-2	10	254	4.4	2.0
6	12SA-6-4-2	14	356	6.2	2.8
8	12SA-8-4-2	18	457	7.9	3.6
10	12A-10-4-2	22	559	9.7	4.4
12	12SA-12-4-2	26	660	11.4	5.1
16	12SA-16-4-2	34	864	15.0	6.7

**12SDA - 16 - 2 - 13 - A YZ**

**Supply Threads**  
 NPT  
 British Parallel  
 British Taper

**12SDA**  
**12BSDA**  
**12TSDA**

**Total Number of ports** 4 to 16

**Accessories**  
**A** Manifold only  
**H** Port Quick Connect Plugs  
**J** Port Hose Barbs  
 Quick connect plugs and hose barbs are sized to match the ports. Contact factory if different sizes or options are required. Ball valves are not recommended.

**Ports Locations**  
**0** Left Side  
**1** Left 45°  
**2** Center  
**3** Right 45°  
**4** Right Side

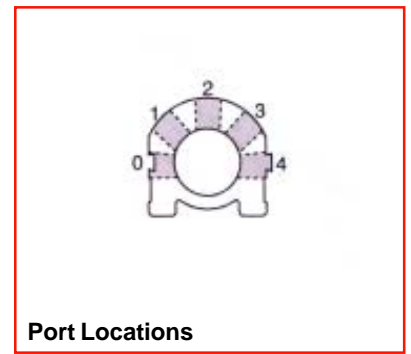
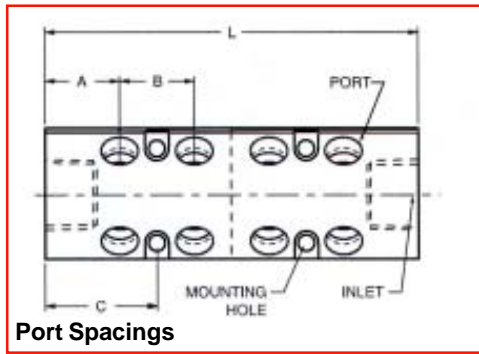
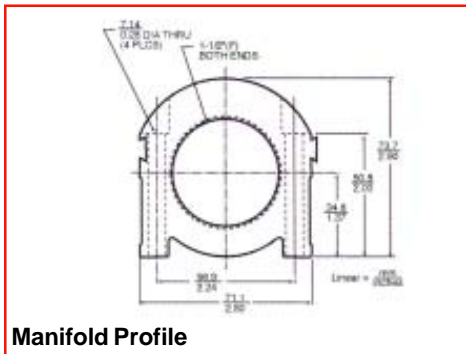
**Ports Sizes**  
 1/2" NPT(F)  
 1/4" BSPP(F)  
 1/4" BSPT(F)

**4**  
**4B**  
**4T**

**NOTE:** For 3/4" and 1" Manifolds, use port location for proper port spacing. See diagram below.

Model#	Color	Inlet/Outlet NPT	Port NPT	# of Ports	Price
<b>Single Manifolds</b>					
12SA-4-4-2-AY	Red	1-1/2"	1/2"	4	\$ 96.00
12SA-4-4-2-AZ	Blue	1-1/2"	1/2"	4	\$ 96.00
12SA-6-4-2-AY	Red	1-1/2"	1/2"	6	\$124.00
12SA-6-4-2-AZ	Blue	1-1/2"	1/2"	6	\$124.00
12SA-8-4-2-AY	Red	1-1/2"	1/2"	8	\$152.00
12SA-8-4-2-AZ	Blue	1-1/2"	1/2"	8	\$152.00

Model#	Color	Inlet/Outlet NPT	Port NPT	# of Ports	Price
<b>Single Manifolds</b>					
12SA-10-4-2-AY	Red	1-1/2"	1/2"	10	\$180.00
12SA-10-4-2-AZ	Blue	1-1/2"	1/2"	10	\$180.00
12SA-12-4-2-AY	Red	1-1/2"	1/2"	12	\$208.00
12SA-12-4-2-AZ	Blue	1-1/2"	1/2"	12	\$208.00
12SA-16-4-2-AY	Red	1-1/2"	1/2"	16	\$264.00
12SA-16-4-2-AZ	Blue	1-1/2"	1/2"	16	\$264.00



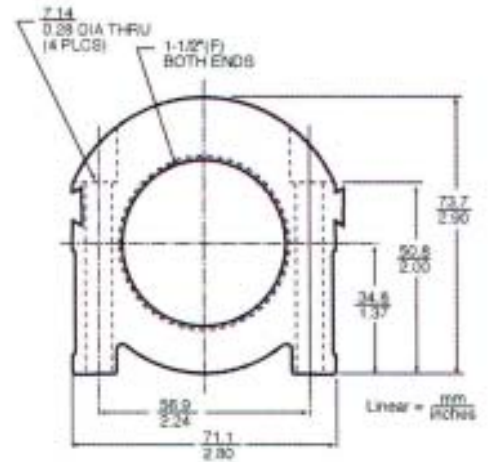
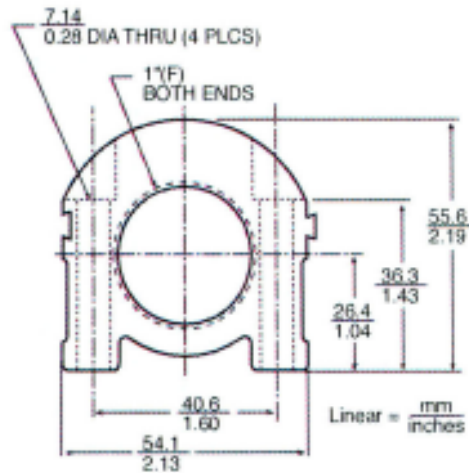
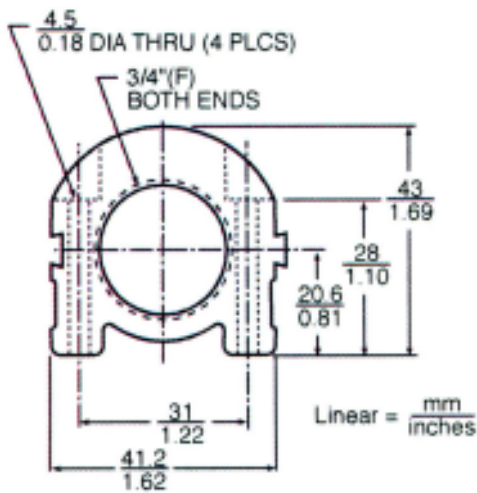
Stocked 1-1/2" NPT Manifolds										
Model	Port Size	Total Ports	Ports Per End	A	B	C	Length L		Weight	
							mm	in.	kg	lbs.
12SDA-8-4-13AYZ	1/2"	8	4	44.5mm	38mm	63.5mm	203	8	1.6	3.5
12SDA-8-4-13AYZ	NPT	12	6	1.75"	1.5"	2.5"	279	11	2.2	4.9
12SDA-8-4-13AYZ		16	8				356	14	2.8	6.2

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# 2" DUOFLOW ALUMINUM MANIFOLDS



Dimension Chart (inches/mm)				
MANIFOLD SIZE	PORT SIZE	A	B	C
3/4" & 1"	1/8"	1.5" 38.1mm	1.0" 25.4mm	2.0" 50.8mm
	1/4"		1.5" 38.1mm	2.25" 57.2mm
	3/8"		2.0" 50.8mm	2.5" 63.5mm
	1/2"		2.0" 50.8mm	3.0" 76.2mm
1-1/2"	1/4"	1.5" 38.1mm	1.5" 38.1mm	2.5" 63.5mm
	3/8"		2.0" 50.8mm	2.5" 63.5mm
	1/2"	2.0" 50.8mm	2.0" 50.8mm	3.0" 76.2mm
	3/4"		3.0" 76.2mm	3.0" 76.2mm
2"	1/2"	2.0" 50.8mm	76.20mm	76.2mm
	3/4"		2.0" 50.8mm	3.5" 88.9mm
	1"		3.0" 76.2mm	1.0" 25.4mm

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