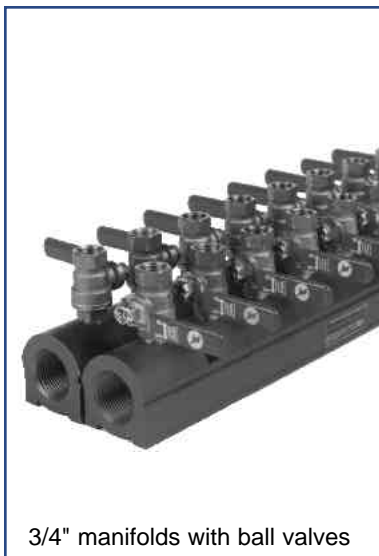


# SMARTFLOW<sup>®</sup> ALUMINUM MANIFOLDS



3/4" manifolds with ball valves



2" manifolds with and without ball valves



1" manifold with flowmeters

## General Description

Smartflow<sup>®</sup> 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. Other colors are available. 3/4", 1", and 1-1/2" NPT(F) manifolds are equipped with dovetail locking channels, pre-drilled mounting holes, and screws for ease in pairing and mounting.

## 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.

## Each manifold includes:

- NPT female threads both ends
- One threaded brass end plug
- Specified number of NPT ports

## Specifications

- Material
- 3/4", 1", 1 1/2" .....Aluminum (6105-T6)
- 2".....Aluminum (6005-T5)
- Inlet Size .....3/4", 1", 1-1/2" or 2"NPT(F)
- Port Size .....see pages 4-7
- Temperature Rating .....250°F (121°C)
- **Maximum Working Pressure Ratings**
- Gas (air, inert gas).....1,000 psig
- Liquid (hydraulic oil, water, benign fluids) .....3,500 psig

**Optional Ball Valves** .....match port size

### Optional Flowmeters

- (see page 15 for details)
- with temperature gauges
- with pressure and temperature gauges
- flowrate options:
  - 1.5 gallons per minute
  - 2.5 gallons per minute
  - 8.0 gallons per minute
  - 10 liters per minute
  - 30 liters per minute

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

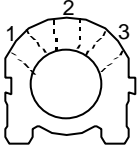
### Model Number

**6 SA - 16 - 2 - 2 - BHY**

**Manifold Styles**  
 Single SA  
 Parallel PA

**Total Number of Ports** 4 to 32

**Port Locations**  
 1 Left  
 2 Center  
 3 Right







**Port Sizes**  
 2 1/4"NPT(F)  
 3 3/8"NPT(F)

**Accessories** (add accessory and anodizing designators to the end of the model number as needed)  
 A Manifold only  
 B Ball Valves  
 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 15 for flowmeter information. Specify flowrate when ordering. Custom port spacing is required when using 1/4" ports with flowmeters. Flowmeters are installed on the return (left) side of parallel manifolds.

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

Stocked 3/4" Manifolds									
Total Number of Ports	1/4" Ports				3/8" Ports				
									
	model number	length mm	length in.	model number	length mm	length in.	model number	length mm	length in.
4	6SA- 4-2-2	190	7.5				6SA- 4-3-2	229	9
6	6SA- 6-2-2	267	10.5				6SA- 6-3-2	330	13
8	6SA- 8-2-2	343	13.5	6PA- 8-2-22	190	7.5	6SA- 8-3-2	432	17
12				6PA-12-2-22	267	10.5		6PA-12-3-22	330 13
16				6PA-16-2-22	343	13.5		6PA-16-3-22	432 17

See page 8 for complete dimensions.

## Model Number

**SA - 16 - 2 - 2 - BHY**

**Manifold Styles**

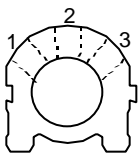
Single SA  
Parallel PA

**Total Number of Ports**

4 to 32

**Port Locations**

1 Left  
2 Center  
3 Right



**Port Sizes**

2 1/4"NPT(F)  
3 3/8"NPT(F)  
4 1/2"NPT(F)

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





A Manifold only  
B Ball Valves  
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 15 for flowmeter information. Specify flowrate when ordering. Custom port spacing is required when using 1/4" ports with flowmeters. Flowmeters are installed on the return (left) side of parallel manifolds.

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

<b>Stocked 1" Manifolds</b>										
Total Number of Ports	1/4" Ports					3/8" Ports				
										
	model number	length mm in.	model number	length mm in.	model number	length mm in.	model number	length mm in.	model number	length mm in.
4	SA- 4-2-2	190 7.5			SA- 4-3-2	229 9				
6	SA- 6-2-2	267 10.5			SA- 6-3-2	330 13				
8	SA- 8-2-2	343 13.5	PA- 8-2-22	190 7.5	SA- 8-3-2	432 17	PA- 8-3-22	229 9		
10	SA- 10-2-2	419 16.5			SA- 10-3-2	533 21				
12	SA- 12-2-2	495 19.5	PA- 12-2-22	267 10.5	SA- 12-3-2	635 25	PA- 12-3-22	330 13		
16	SA- 16-2-2	648 25.5	PA- 16-2-22	343 13.5	SA- 16-3-2	838 33	PA- 16-3-22	432 17		
20			PA- 20-2-22	419 16.5			PA- 20-3-22	533 21		
24			PA- 24-2-22	495 19.5			PA- 24-3-22	635 25		
32			PA- 32-2-22	648 25.5			PA- 32-3-22	838 33		

See page 8 for complete dimensions.

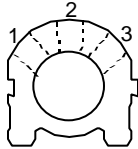
## Model Number

12 SA - 16 - 2 - 2 - BHY

**Manifold Styles**  
 Single SA  
 Parallel PA

**Total Number of Ports** 4 to 32

**Port Locations**  
 1 Left  
 2 Center  
 3 Right





**Port Sizes**  
 2 1/4"NPT(F)  
 3 3/8"NPT(F)  
 4 1/2"NPT(F)  
 6 3/4"NPT(F)

**Accessories** (add accessory and anodizing designators to the end of the model number as needed)  
 A Manifold only  
 B Ball Valves  
 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 15 for flowmeter information. Specify flowrate when ordering. Flowmeters are installed on the return (left) side of parallel manifolds.

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

Stocked 1-1/2" Manifolds						
Total Number of Ports	1/2" Ports					
						
	model number	length		model number	length	
		mm	in.		mm	in.
4	12SA- 4-4-2	254	10			
6	12SA- 6-4-2	356	14			
8	12SA- 8-4-2	457	18	12PA- 8-4-22	254	10
10	12SA- 10-4-2	559	22			
12	12SA- 12-4-2	660	26	12PA- 12-4-22	356	14
16	12SA- 16-4-2	864	34	12PA- 16-4-22	457	18
20				12PA- 20-4-22	559	22
24				12PA- 24-4-22	660	26
32				12PA- 32-4-22	864	34

See page 8 for complete dimensions.



# 2" ALUMINUM MANIFOLDS

## Model Number

A 16 - 4 - BHY

Total Number  
of Ports

4  
to  
16

4  
6  
8

### Port Sizes

1/2"NPT(F)  
3/4"NPT(F)  
1"NPT(F)

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

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

### Anodizing

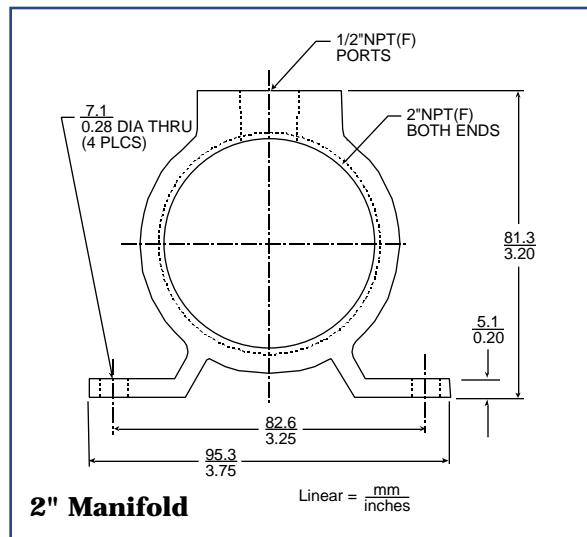
- Y** Red
- Z** Blue

\* See page 15 for flowmeter information. Specify flowrate when ordering.

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

### Stocked 2" Manifolds

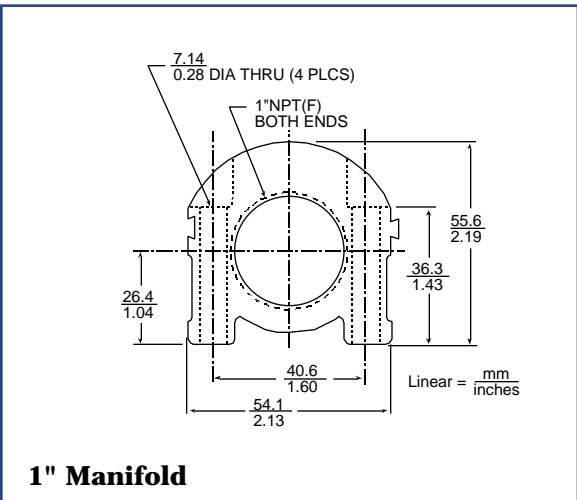
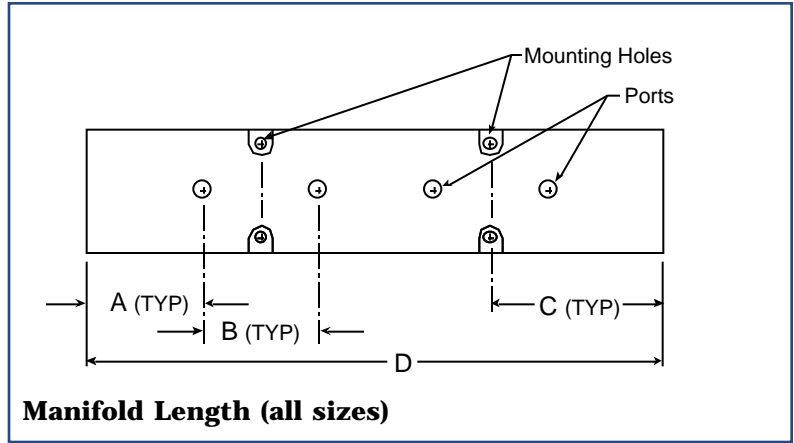
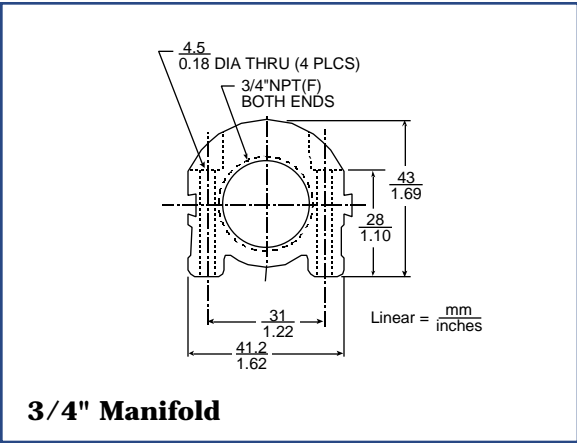
Total Number of Ports	1/2" Ports		
	model number	length	
		mm	in.
4	A4-4	254	10
6	A6-4	356	14
8	A8-4	457	18
12	A12-4	660	26
16	A16-4	864	34



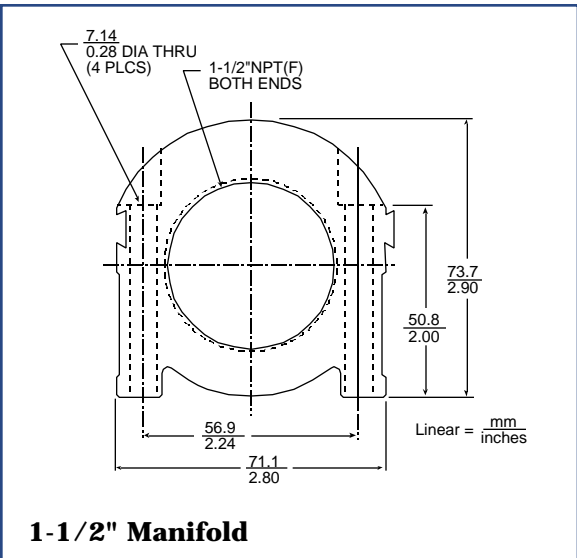
See page 8 for complete dimensions.



# STANDARD ALUMINUM MANIFOLD DIMENSIONS



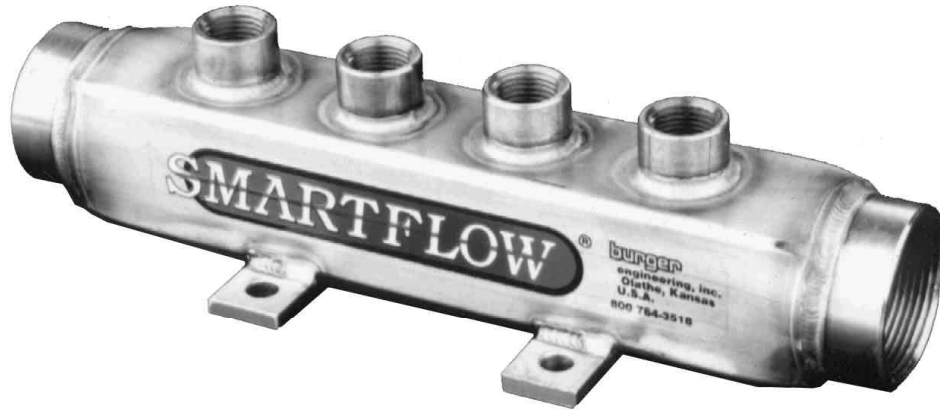
Dimension Chart (mm/inches)				
MANIFOLD SIZE	PORT SIZE (NPT)	A	B	C
3/4" & 1"	1/8"	38.1 1.5	25.4 1.0	50.8 2.0
	1/4"		38.1 1.5	57.2 2.25
	3/8"		50.8 2.0	63.5 2.5
	1/2"			
1-1/2"	1/4"	38.1 1.5	38.1 1.5	57.2 2.25
	3/8"		50.8 2.0	63.5 2.5
	1/2"	50.8 2.0	50.8 2.0	76.2 3.0
	3/4"		76.2 3.0	88.9 3.5
2"	1/2"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



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



## STAINLESS STEEL MANIFOLDS



Stainless Steel manifold

### General Description

Smartflow® stainless steel manifolds are formed and welded from 304 stainless steel. The manifolds are 100% leak tested for quality assurance before shipping.

Smartflow stainless steel manifolds are excellent for high-flow applications where durability is important. Manifold bodies are made from 1-1/2" or 2" square tube to allow maximum flow. Custom modifications are easily handled to provide the exact configuration you need.

### Features and Benefits

- **Welded Construction** ensures manifold strength and leak-tight integrity.
- **304 Stainless Steel Material** provides excellent resistance to corrosion.
- **Different Port Size Options** enable 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 the ability to shut off individual supply and return lines.
- **Single or Parallel Manifold Configuration** adapts to special supply and return situations.

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

### Each manifold includes:

- NPT female threads both ends
- One threaded brass end plug
- Specified number of NPT ports
- Mounting bracket

### Specifications

Material .....	304 Stainless Steel
Inlet Size.....	1", 1-1/2"NPT(F)
Port Size.....	1/4", 3/8", 1/2"NPT(F) 3/4", 1"NPT(F)
Temperature Rating...	up to 250°F (121°C)
<b>Maximum Working Pressure Ratings</b>	
Gas (air, inert gas).....	125 psig
Liquid (hydraulic oil, water, benign fluids) .....	250 psig

**Optional Ball Valves** ....to match port size

### Optional Flowmeters

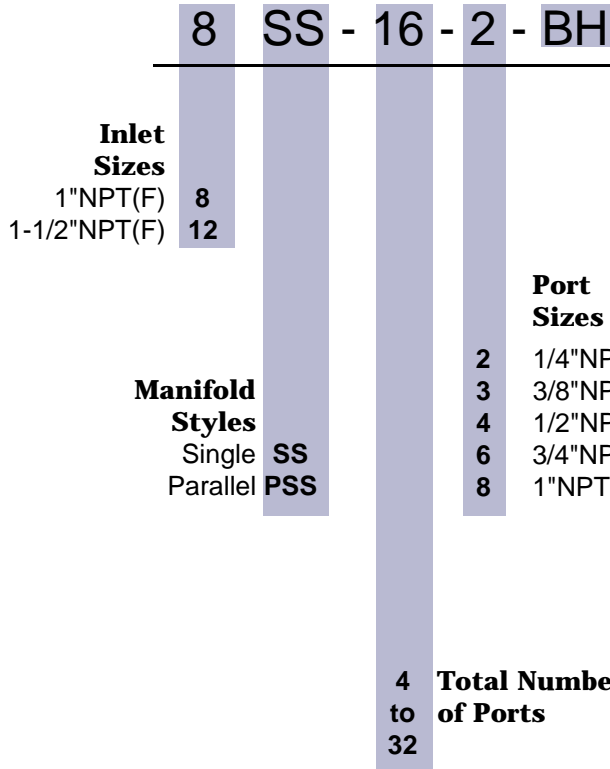
with temperature gauges  
with pressure and temperature gauges  
flowrate options:

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

Other flow rate options are available with non-standard port spacing. Please contact the factory for details.

# SMARTFLOW® STAINLESS STEEL MANIFOLDS

## Model Number



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

- A** Manifold only
- B** Ball Valves
- 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** Quick Connect Plugs, same size as manifold port
- J** Hose barbs, same size as manifold port
- X** Special

\* See page 15 for flowmeter information.  
 Specify flowrate when ordering.  
 Custom port spacing is required when using 1/4" ports with flowmeters.

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

Non-Stocked Standard Manifolds		
Total Number of Ports	1" Inlet 3/8" Ports	1-1/2" Inlet 1/2" Ports
4	8SS- 4-3-2	12SS- 4-4-2
6	8SS- 6-3-2	12SS- 6-4-2
8	8SS- 8-3-2	12SS- 8-4-2
12	8SS-12-3-2	12PSS-12-4-2

See page 14 for complete dimensions.

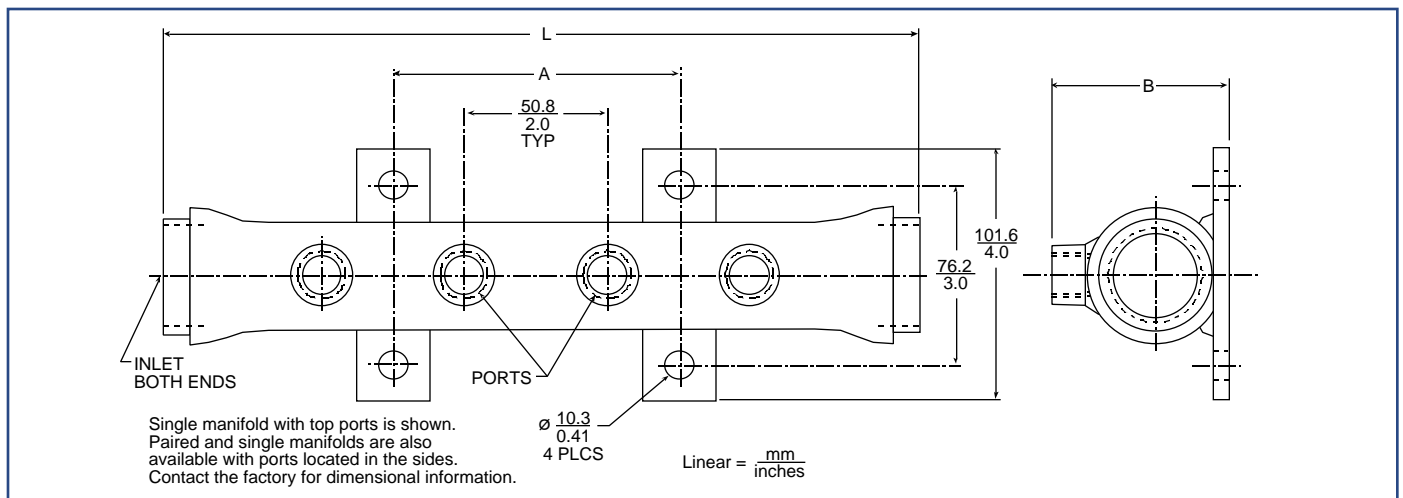


# SMARTFLOW® STAINLESS STEEL MANIFOLDS



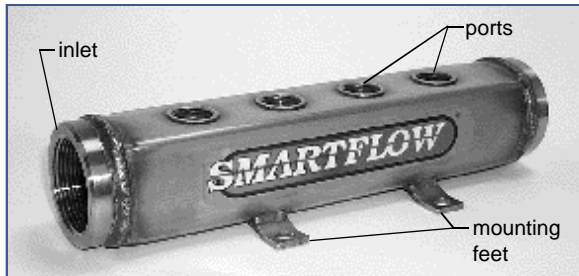
## Dimension Chart (mm/inches)

Inlet Size	Port Quantity	A	B	L
1"NPT	4	$\frac{101.6}{4.00}$	$\frac{63.5}{2.50}$	$\frac{285.8}{11.25}$
	6	$\frac{203.2}{8.00}$		$\frac{387.4}{15.25}$
	8	$\frac{304.8}{12.00}$		$\frac{488.9}{19.25}$
	12	$\frac{508.0}{20.00}$		$\frac{692.15}{27.25}$
1-1/2"NPT	4	$\frac{101.6}{4.00}$	$\frac{76.2}{3.00}$	$\frac{298.5}{11.75}$
	6	$\frac{203.2}{8.00}$		$\frac{400.1}{15.75}$
	8	$\frac{304.8}{12.00}$		$\frac{501.7}{19.75}$
	12	$\frac{508.0}{20.00}$		$\frac{704.9}{27.75}$





# STAINLESS STEEL MANIFOLDS *with Low-Profile Ports*



**SMARTFLOW**® stainless steel manifolds are suitable for a wide range of liquid handling applications with some of the largest inlet sizes available. 304 Stainless Steel material is ideal where chemical compatibility and corrosion resistance are imperative.

These economical manifolds feature:

- 1" or 1-1/2"NPT(F) inlet/outlet
- 3/8" or 1/2"NPT(F) ports
- 4, 6, 8, 10, 12, 14, or 16 ports per manifold section
- Single or parallel mounting
- Integral mounting brackets
- Leak-free operation
- Optional ball valves and flowmeters
- Fast delivery

You will achieve optimal fluid flow in your applications with these durable, leak-tested manifolds. The **SMARTFLOW** name is your guarantee of quality, ease of installation, and worry-free dependability.

## Specifications

Material .....304 Stainless Steel  
 Inlet/Outlet Sizes.....1" or 1-1/2"NPT(F)  
 Port Sizes.....3/8" or 1/2"NPT(F)  
 Max Temperature.....250°F (121°C)  
 Optional Ball Valves.....Large Port Brass

### Max Working Pressure Ratings:

Gas (air, inert gas) .....125 psig  
 Liquid (water, benign fluids).....250 psig

## Model Number

		8	SL	-	8	-	3	-	A		
<b>Inlet Sizes</b>	1"NPT(F)	8					3			<b>Port Sizes</b>	3/8"NPT(F)
	1-1/2"NPT(F)	12					4				1/2"NPT(F)
<b>Manifold Styles</b>	Single		SL							<b>Total Number of Ports</b>	4
	Parallel		PSL								6
											8
											10
											12
											14
											16
											20 parallel only
											24 parallel only
											28 parallel only
											32 parallel only

### Accessories

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

- Manifold only **A**
- Ball valves **B**
- \*Ball valves and plain flowmeters **C**
- \*Ball valves and flowmeters with thermometers **D**
- \*Ball valves and flowmeters with thermometers and pressure gauges **E**
- Ball valves and flowmeters with thermometers and liquid-filled pressure gauges **EL**
- \*Plain flowmeters only **F**
- Quick connect plugs, same size as manifold port **H**
- Hose barbs, same size as manifold port **J**

\* Contact customer service for flowmeter details

## Ask us about custom configurations!

*Design and specifications are subject to change without notice.*



1700 E. 123rd Street  
 Olathe, Kansas 66061  
 Tel. 800-764-3518  
 Fax 913-764-1714  
 www.smartflow-usa.com

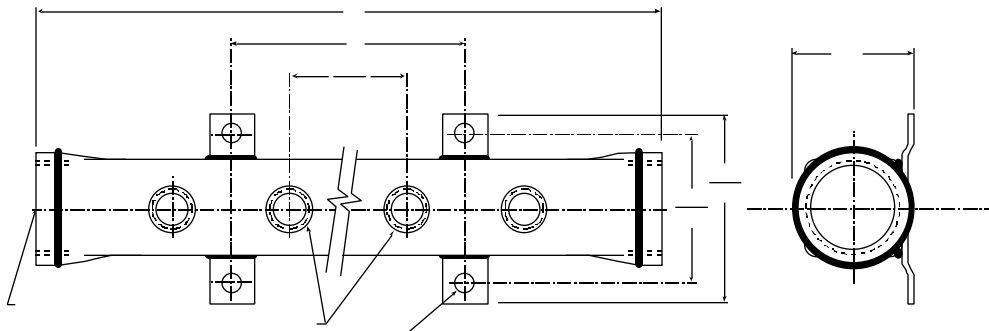
## STAINLESS STEEL MANIFOLDS with low-profile ports

### Model Numbers and Dimensions

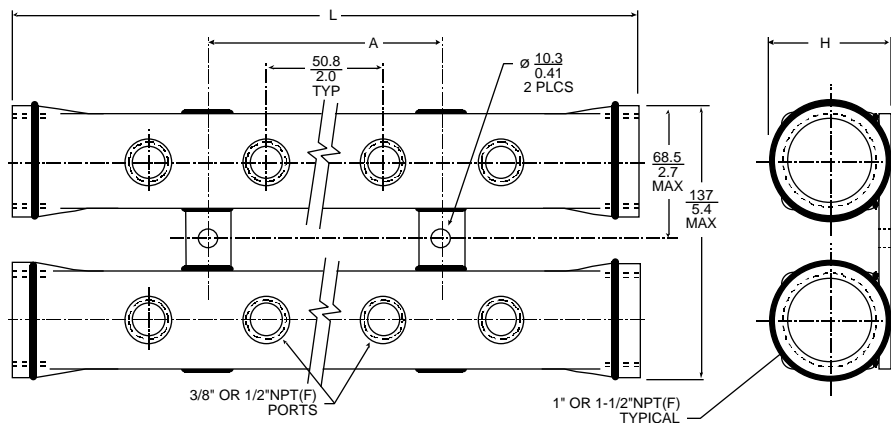
	Single Manifolds	Parallel Manifolds	Dimension A	Dimension L	Dimension H
1" Inlet	8SL - 4 - □ - A	8PSL - 8 - □ - A	102mm / 4"	283mm / 11.13"	51mm 2" max.
	8SL - 6 - □ - A	8PSL - 12 - □ - A	203mm / 8"	384mm / 15.13"	
	8SL - 8 - □ - A	8PSL - 16 - □ - A	305mm / 12"	486mm / 19.13"	
	8SL - 10 - □ - A	8PSL - 20 - □ - A	406mm / 16"	587mm / 23.13"	
	8SL - 12 - □ - A	8PSL - 24 - □ - A	508mm / 20"	689mm / 27.13"	
	8SL - 14 - □ - A	8PSL - 28 - □ - A	610mm / 24"	791mm / 31.13"	
1-1/2" Inlet	12SL - 4 - □ - A	12PSL - 8 - □ - A	102mm / 4"	283mm / 11.13"	64mm 2.5" max.
	12SL - 6 - □ - A	12PSL - 12 - □ - A	203mm / 8"	384mm / 15.13"	
	12SL - 8 - □ - A	12PSL - 16 - □ - A	305mm / 12"	486mm / 19.13"	
	12SL - 10 - □ - A	12PSL - 20 - □ - A	406mm / 16"	587mm / 23.13"	
	12SL - 12 - □ - A	12PSL - 24 - □ - A	508mm / 20"	689mm / 27.13"	
	12SL - 14 - □ - A	12PSL - 28 - □ - A	610mm / 24"	791mm / 31.13"	
12SL - 16 - □ - A	12PSL - 32 - □ - A	711mm / 28"	892mm / 35.13"		

□ = port thread size [3 = 3/8"NPT(F) or 4 = 1/2"NPT(F)]

### Dimensions



### Single Manifold

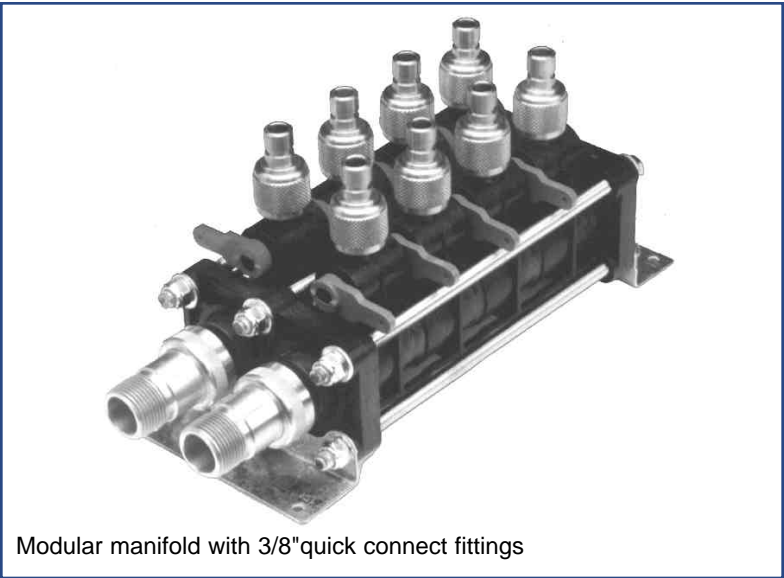


### Parallel Manifold

Linear =  $\frac{\text{mm}}{\text{inches}}$

---

# SMARTFLOW<sup>®</sup> MODULAR MANIFOLDS



Modular manifold with 3/8" quick connect fittings

## General Description

Smartflow<sup>®</sup> modular manifolds, made of fiberglass-reinforced nylon, are economical and resistant to corrosion. The modular design makes these manifolds flexible and easy to use.

Each port has a built-in valve for easy shut-off. The manifolds are 100% leak-tested to assure excellent quality. Smartflow modular manifolds are superior for economical liquid flow handling.

## Features and Benefits

- **Fiberglass-Reinforced Nylon** body prevents rust in liquid lines.
- **Different Valve Fitting Options** (hose barb or quick change plugs) provide connection flexibility.
- **Mounting Brackets** allow easy installation.
- **Built-in Valves** are replaceable and allow users the ability to shut off individual flow lines.
- **Parallel Manifold Configuration** gives the user integral supply and return capability in one unit.
- **All Configurations Stocked** for immediate shipment.

*Modular manifolds are designed for pressure applications less than 150psi.*

*Not intended for use in potable water systems.*

*Design and specifications are subject to change without notice.*

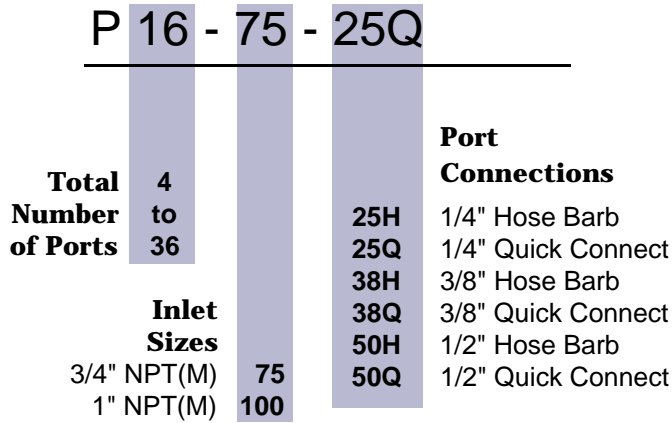
## Each manifold includes:

- 3/4" or 1"NPT male fittings on both ends
- Specified number of ports
- Mounting bracket

## Specifications

- Material.....Fiberglass-reinforced nylon
- Inlet Size .....3/4" or 1"NPT(M)
- Fitting Size.....1/4", 3/8" or 1/2"
- Temperature Rating  
.....up to 240°F (115.5°C)
- Pressure Rating.....150 psi

### Model Number

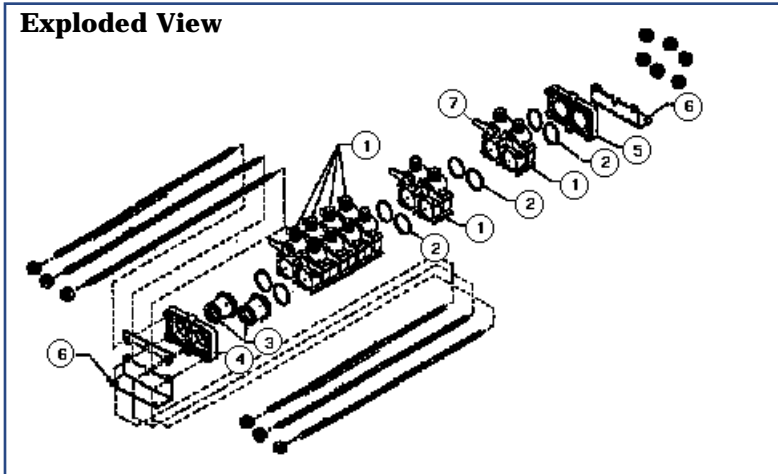


### Stocked Modular Manifolds

Port Qty	length A		length B	
	mm	in.	mm	in.
4	165	6.5	184	7.25
6	210	8.25	229	9.0
8	254	10.0	273	10.75
10	298	11.75	318	12.5
12	343	13.5	362	14.25
16	432	17.0	451	17.75
20	521	20.5	540	21.25
24	610	24.0	629	24.75
28	699	27.5	718	28.25
32	787	31.0	806	31.75
36	876	34.5	895	35.25

Modular manifolds are stocked for same-day shipment.

### Exploded View



### Replacement and Spare Parts

Item	Description	Part Number
1	Port Body	MP-200-001
2	O-Ring	MPO-R50
3	Inlet Coupler	MIC-50
4	End plate	MEP-200
5	Cap Plate	MCP-200
6	Mounting Bracket Set	MMB-10
7	Blue Handle	MHB-50
7	Red Handle	MHR-50

### Brass Inlet Fittings

1" NPT(M) Inlet (1 piece)	MI-100
3/4" NPT(M) Inlet (1 piece)	MI-75

### Female Brass Couplers

1" NPT(F) Inlet (1 piece)	BC-8FX8F
3/4" NPT(F) Inlet (1 piece)	BC-6FX6F

### Brass Port Fittings

1/4" Hose Barb	MANA-2HB
1/4" Quick-Connect Plug	MANA-2Q
3/8" Hose Barb	MANA-3HB
3/8" Quick-Connect Plug	MANA-3Q
1/2" Hose Barb	MANA-4HB
1/2" Quick-Connect Plug	MANA-4Q

