

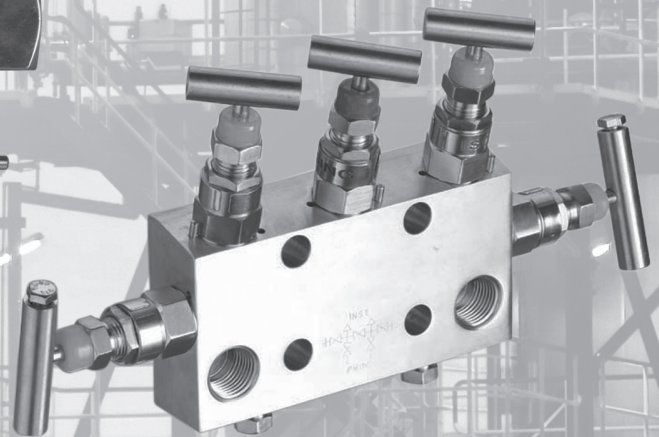
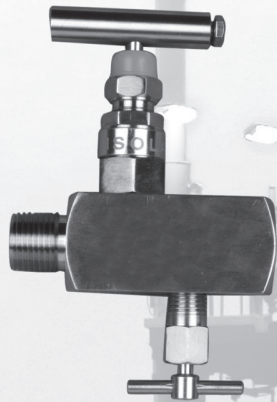
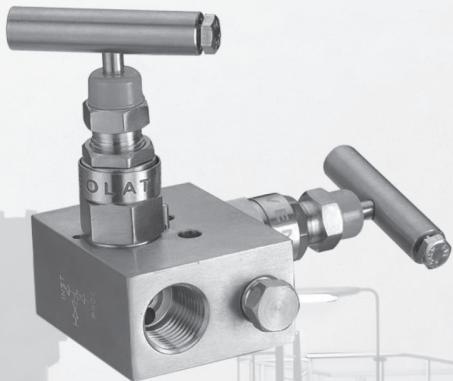
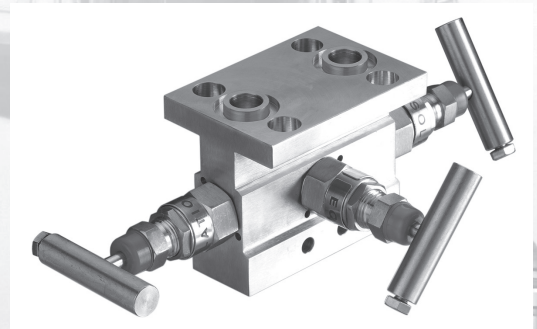
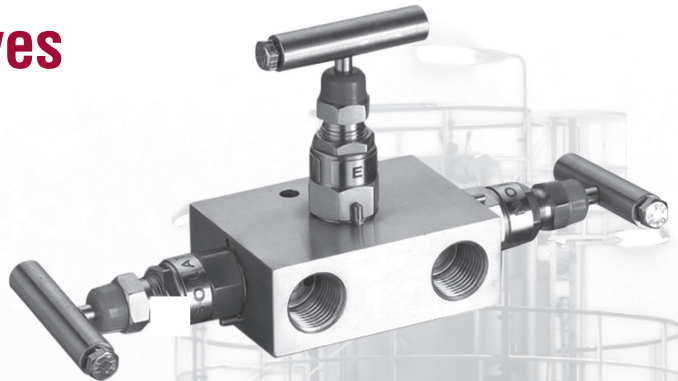
## Hand & Gauge Isolation Valves

Needle Valves  
Gauge Valves  
Block & Bleed Valves

## Manifolds

Two, Three & Five Valve Manifolds  
for Gauge and Differential Pressure Applications

Accessories



Built Hex tough for a lifetime of use. See how inside . . .

### HEXVALVE

A Division of  
Richards Industries  
3170 Wasson Road  
Cincinnati, OH 45209

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## Hex Valve History

Most Petrochemical, Refining and Upstream Oil & Gas professionals know a "Hex Valve" as a Generic description for bar stock instrument, gauge and orifice valves. That didn't happen by accident. These valves were originally developed and marketed by us decades ago as a means to simplify the piping associated with gauge and differential pressure transmitter applications.

Hex Valve has repeatedly demonstrated innovation since the company's inception. We were the first company to introduce the Non-Rotating Tip (NRT) stem technology to our industry with our conical NRT stem. The rotating conical tip end forms a lapped mate with the seat preventing galling, and the cross-section scoring that is endemic of ball tip stems.

Since our acquisition in 1985 by Richards Industries, our product line has expanded to cover almost every conceivable primary and secondary valve application for a variety of automated process industries. From small 1/4" needle valves and patented stabilized instrument platforms for the Natural Gas Industry to 2, 3, and 5 valve manifolds and high temperature primary valves and hydrocarbon sampling valves for Oil and Gas Production, Refineries and Power plants. See our website at [www.hexvalve.com](http://www.hexvalve.com) for our complete product line.

Hex does it all with one simple objective in mind . . . "Create value for the customer by simplifying the piping associated with instrumentation, and the distribution of process and utility fluids".

## Hex Value Proposition

- **Hex Valves reduce customer cost by:**
  - **Reducing installation size, material, weight and installation labor**
  - **Reducing the number of potential installation leak points**
  - **Reducing total installation weight and moment arm**
  - **Creating time saving and unique instrument valve vent and calibration access**

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## Hand - Needle Valves - EN39

### HAND/NEEDLE VALVES

The EN39 Instrument Valves are compact and economical high pressure instrument block valves.

Stem tip is non-rotating tip (NRT) style, standard.

### Product Availability

All valves are available with integral hard seats, 316-NACE stainless steel body and trim and Teflon or Graphite packing.

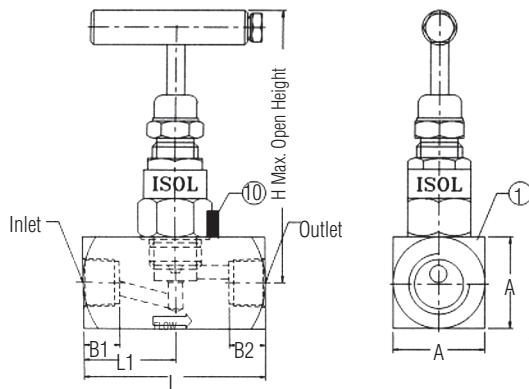
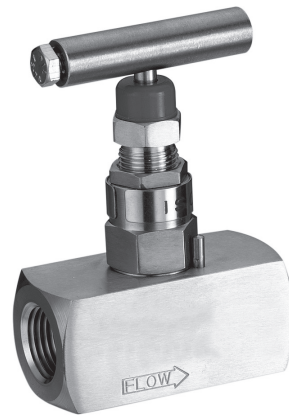
Hastelloy C, Monel models (see order grid) available upon request.

### Ratings

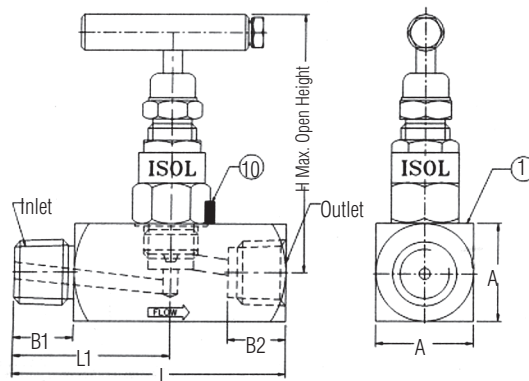
Stainless Steel with TFE Packing:

6000 psig @ 100°F (414 bar @ 38°C)

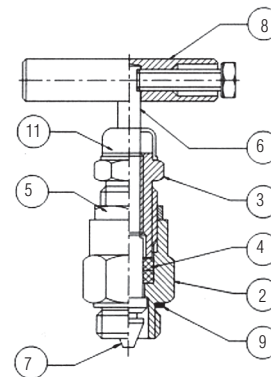
4200 psig @ 400°F (290 bar @ 204°C)



Inlet	Outlet	A	B1	B2	L	L1	H
1/2" NPT (F)	1/2" NPT (F)	32 (1.26)	19 (0.75)	19 (0.75)	68 (2.68)	34 (1.34)	89 (3.50)



Inlet	Outlet	A	B1	B2	L	L1	H
1/2" NPT (M)	1/2" NPT (F)	32 (1.26)	19 (0.75)	19 (0.75)	88 (3.46)	56 (2.20)	89 (3.50)



No.	Description	Material	Qty
1	Body	SS316/NACE	1
2	Gland Body	SS316/NACE	1
3	Gland Retainer	SS304	1
4	Gland Seal	PTFE	2
5	Check Nut	SS304	1
6	Spindle	SS316/NACE	1
7	Trim	SS316/NACE	1
8	Handle	SS304	1
9	Washer	SS	1
10	Lock Pin	SS304	1
11	Dust Cap	PVC	1

Note: Other materials and options available.

MODEL	BODY CONFIG.	BODY MAT'L	INLET SIZE	INLET TYPE	OUTLET SIZE	OUTLET TYPE	STEM/TIP	SEAT MAT'L	PACKING
EN39	1	D	1	3	1	1	3	1	2

MODEL	TYPE
EN39	Standard

10	OUTLET TYPE
1	FNPT

5	BODY
1	Hard Seat

11	STEM/TIP
3	316-NACE/316-NACE
B	Monel/Monel
D	Hastelloy C/Hastelloy C

6	BODY MATERIAL
D	316SS NACE
H	Hastelloy C
M	Monel

12	SEAT MATERIAL
1	Integral Seat

7	INLET SIZE
1	1/4"
3	1/2"

13	PACKING
2	TFE
3	Graphite

8	INLET TYPE
1	MNPT
3	FNPT

9	OUTLET SIZE
1	1/4"
3	1/2"

Note: Inlet and Outlet must be same size

**316SS configurations of 1/4" FNPT x 1/4" FNPT & 1/2" FNPT x 1/2" FNPT available for immediate shipment.** Contact your client consultant for lead time on other configurations and materials.

## Flow Schematic



## Gauge and Block & Vent Valves - EG48

### GAUGE VALVES

The EG48 gauge valve provides three outlet connections to facilitate the mounting of gauges and other gauge pressure instruments in a variety of positions. The design creates a compact installation with fewer leak points compared to conventional pipe nipple and Tee arrangements. The EG48 has an integral hard seat which matches the body material. Hand - Needle Valves can be installed in one of the three outlets to act as integral vent valves.

### Product Availability

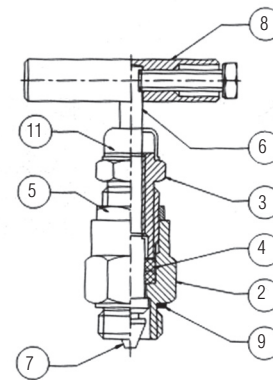
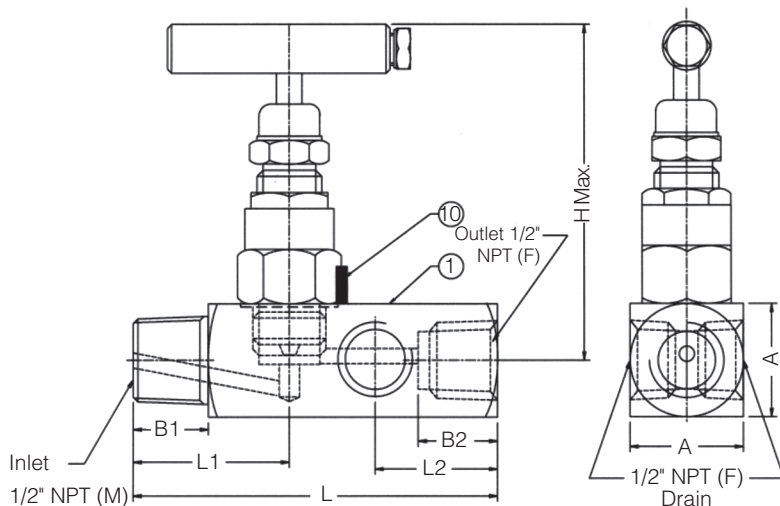
All valves are available with integral hard seats, 316-NACE stainless steel body and trim and Teflon or Graphite packing.

Hastelloy C, Monel models (see order grid) available upon request.

### Ratings

Stainless Steel with TFE Packing and Hard Seat:  
 6000 psig @ 100°F (414 bar @ 38°C)  
 4200 psig @ 400°F (290 bar @ 204°C)

Stainless Steel with TFE Packing and PEEK Seat:  
 6000 psig @ 100°F (414 bar @ 38°C)  
 1235 psig @ 450°F (85 bar @ 232°C)



Inlet	Outlet	A	B1	B2	L	L1	L2	H
1/2" NPT (M)	1/2" NPT (F)	32 (1.26)	19 (0.75)	19 (0.75)	110 (4.33)	51 (2.0)	32 (1.26)	89 (3.50)

No.	Description	Material	Qty
1	Body	SS316/NACE	1
2	Gland Body	SS316/NACE	1
3	Gland Retainer	SS304	1
4	Gland Seal	PTFE	2
5	Check Nut	SS304	1
6	Spindle	SS316/NACE	1
7	Trim	SS316/NACE	1
8	Handle	SS304	1
9	Washer	SS	1
10	Lock Pin	SS304	1
11	Dust Cap	PVC	1

Note: Other materials and options available.

MODEL	BODY CONFIG.	BODY MAT'L	INLET SIZE	INLET TYPE	OUTLET SIZE	OUTLET TYPE	STEM/TIP	SEAT MAT'L	PACKING
EG48	1	D	3	1	3	1	3	1	2

MODEL	TYPE
EG48	Standard

5	BODY
1	Hard Seat
2	Soft Seat

6	BODY MATERIAL
D	316-NACE
H	Hastelloy C
M	Monel

7	INLET SIZE
3	1/2"
4	3/4"

8	INLET TYPE
1	MNPT
2	MSW

9	OUTLET SIZE
3	1/2"

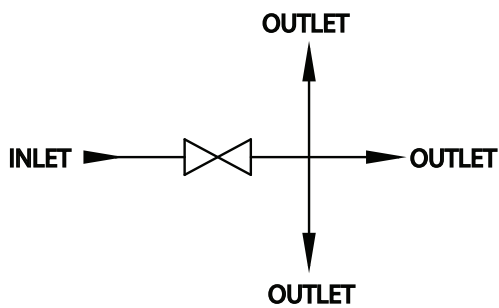
10	OUTLET TYPE
1	FNPT
7	MNPT

11	STEM/TIP
1	316-NACE (soft seat)
3	316-NACE/316-NACE
B	Monel/Monel
D	Hastelloy C/Hastelloy C

12	SEAT MATERIAL
1	Integral Seat
9	PEEK Soft Seat

13	PACKING
2	TFE
3	Graphite

## Flow Schematic



**316SS configurations of 1/2" MNPT x 1/2" FNPT, 3/4" MNPT x 1/2" FNPT, 3/4" MSW x 1/2" FNPT, 1/2" MNPT x 1/2" FNPT (soft seat) available for immediate shipment.**

Contact your client consultant for lead time on other configurations and materials.

## Gauge Valves - EG35

### GAUGE VALVES

The EG35 gauge valve, with a female or male inlet, female or male outlet and integral vent valve, meets the application requirement for a block and bleed valve without the need for a close nipple when connecting to a female port on a gauge pressure transmitter. The male outlet configuration provides one less threaded connection and therefore one less potential leak point.

Other manufacturers generally supply 1/2" NPT female instrument connections on gauge valve installations. This usually requires the installation of a 1/2" stainless steel close nipple with each gauge or pressure transmitter.

### Product Availability

All valves are available with integral hard seats, 316-NACE stainless steel body and trim and Teflon or Graphite packing.

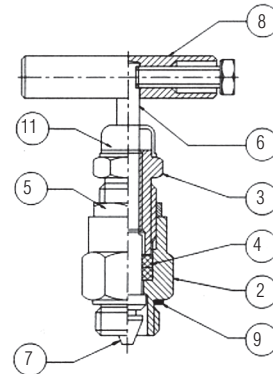
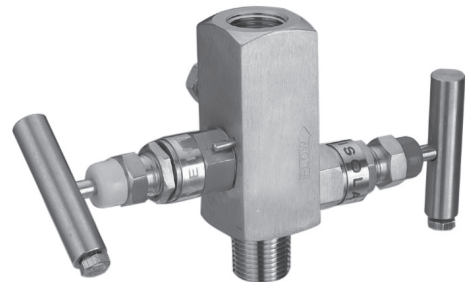
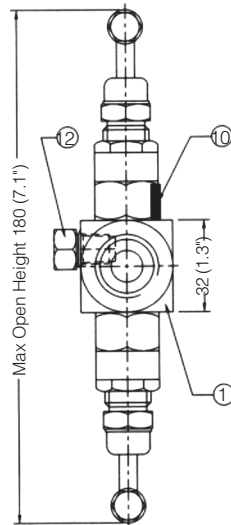
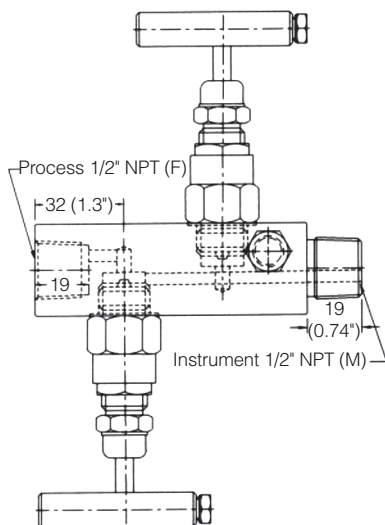
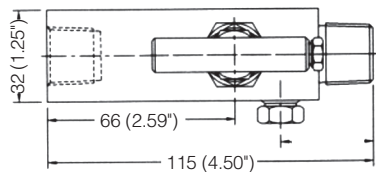
Hastelloy C, Monel models (see order grid) available upon request.

### Ratings

Stainless Steel with TFE Packing:

6000 psig @ 100°F (414 bar @ 38°C)

4200 psig @ 400°F (290 bar @ 204°C)



No.	Description	Material	Qty
1	Body	SS316/NACE	1
2	Gland Body	SS316/NACE	2
3	Gland Retainer	SS304	2
4	Gland Seal	PTFE	4
5	Check Nut	SS304	2
6	Spindle	SS316/NACE	2
7	Trim	SS316/NACE	2
8	Handle	SS304	2
9	Washer	SS	2
10	Lock Pin	SS304	2
11	Dust Cap	PVC	2
12	1/4" NPT Plug	SS316/NACE	1

Note: Other materials and options available



MODEL	BODY CONFIG.	BODY MAT'L	INLET SIZE	INLET TYPE	OUTLET SIZE	OUTLET TYPE	STEM/TIP	SEAT MAT'L	PACKING
EG35	1	D	3	1	3	7	3	1	2

MODEL	TYPE
EG35	Standard

5	BODY
1	Hard Seat

6	BODY MATERIAL
D	316-NACE
H	Hastelloy C
M	Monel

7	INLET SIZE
3	1/2"
4	3/4"

8	INLET TYPE
1	MNPT
3	FNPT

9	OUTLET SIZE
3	1/2"

10	OUTLET TYPE
1	FNPT
7	MNPT

11	STEM/TIP
3	316-NACE/316-NACE
B	Monel/Monel
D	Hastelloy C/Hastelloy C

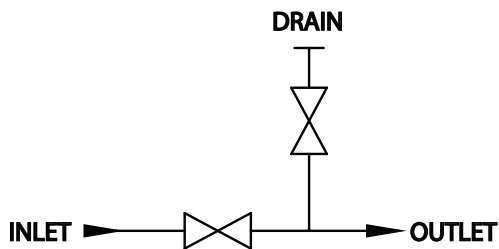
12	SEAT MATERIAL
1	Integral Seat

13	PACKING
2	TFE
3	Graphite

Note: Inlet and Outlet must be same size

**316SS configurations of 1/2" MNPT x 1/2" FNPT, 1/2" FNPT x 1/2" MNPT & 3/4" MNPT x 1/2" FNPT available for immediate shipment.** Contact your client consultant for lead time on other configurations and materials.

## Flow Schematic



## Block & Bleed Valves - EB50

### BLOCK & VENT VALVES

The economical EB50 features a fully packed and backseated block valve along with a bleed/plug. With a gauge or transmitter threaded in its outlet, the EB50 will allow pressure to be blocked and bled for convenient instrument removal. The EB50 can also be threaded into a Hex Primary Block Valve to provide secondary block and bleed functions.

### Product Availability

All valves are available with integral hard seats, 316-NACE stainless steel body and trim and Teflon or Graphite packing.

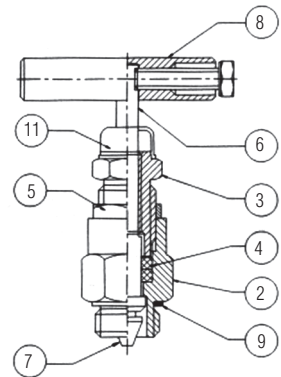
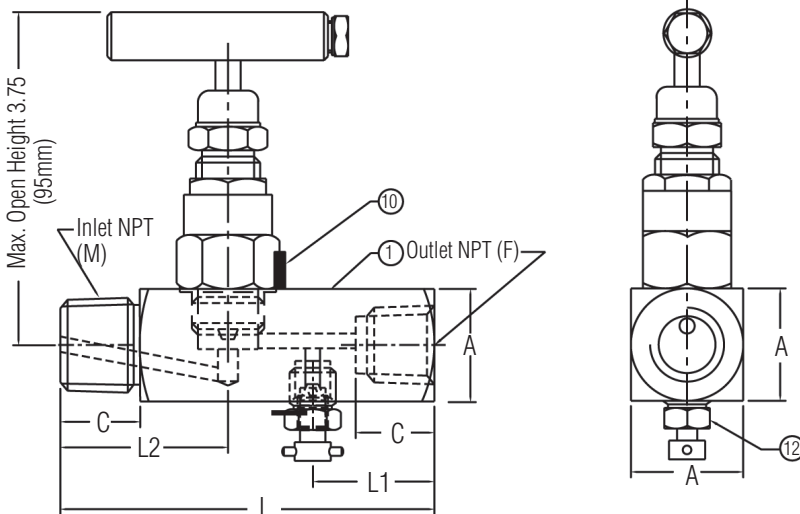
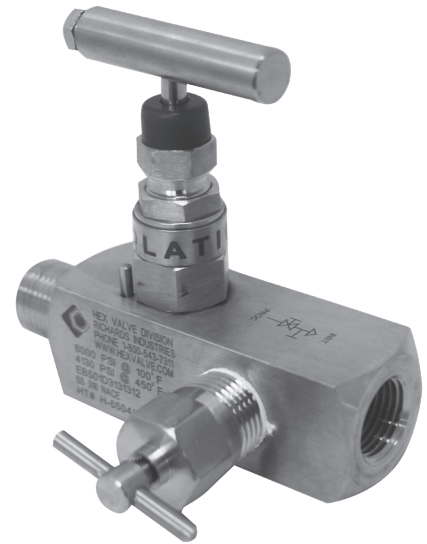
Hastelloy C, Monel models (see order grid) available upon request.

### Ratings

Stainless Steel with TFE Packing:

6000 psig @ 100°F (414 bar @ 38°C)

4200 psig @ 400°F (290 bar @ 204°C)



No.	Description	Material	Qty
1	Body	SS316/NACE	1
2	Gland Body	SS316/NACE	1
3	Gland Retainer	SS304	1
4	Gland Seal	PTFE	2
5	Check Nut	SS304	1
6	Spindle	SS316/NACE	1
7	Trim	SS316/NACE	1
8	Handle	SS304	1
9	Washer	SS	1
10	Lock Pin	SS304	1
11	Dust Cap	PVC	1
12	1/4" NPT Bleed Plug	SS316/NACE	1

Note: Other materials and options available.

Size	L	L1	L2	C	A	Test Pressure Hydro. at Room Temp
1/2" NPT (M) x 1/2" NPT (F)	88 (3.46)	30 (1.18)	40 (1.57)	19 (0.75)	32 (1.26)	6000 psi

MODEL	BODY CONFIG.	BODY MAT'L	INLET SIZE	INLET TYPE	OUTLET SIZE	OUTLET TYPE	STEM/TIP	SEAT MAT'L	PACKING
EB50	1	D	3	1	3	1	3	1	2

MODEL	TYPE
EB50	Standard

10	OUTLET TYPE
1	FNPT

5	BODY
1	Hard Seat

11	STEM/TIP
3	316-NACE/316-NACE
B	Monel/Monel
D	Hastelloy C/Hastelloy C

6	BODY MATERIAL
D	316SS-NACE
H	Hastelloy C
M	Monel

12	SEAT MATERIAL
1	Integral Seat

7	INLET SIZE
3	1/2"

13	PACKING
2	TFE
3	Graphite

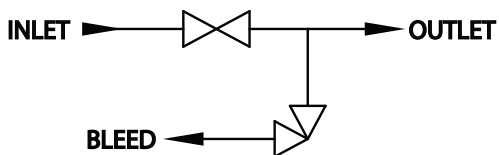
8	INLET TYPE
1	MNPT
3	FNPT

9	OUTLET SIZE
3	1/2"

Note: Inlet and Outlet must be same size

**316SS configurations of 1/2" MNPT x 1/2" FNPT available for immediate shipment.** Contact your Client Consultant for leadtime on other configurations and materials.

## Flow Schematic



## Gauge - Orifice Block Valves - EG65

### ORIFICE BLOCK VALVES

EG65 orifice block valves are designed for compact side-by-side mounting on standard orifice flanges, condensate chambers, mercury traps and seal traps. Two outlet ports are provided for impulse line connections or for pressure gauge or level gauge mounting. The EG65 is ideal for light hydrocarbons or utility service.

### Product Availability

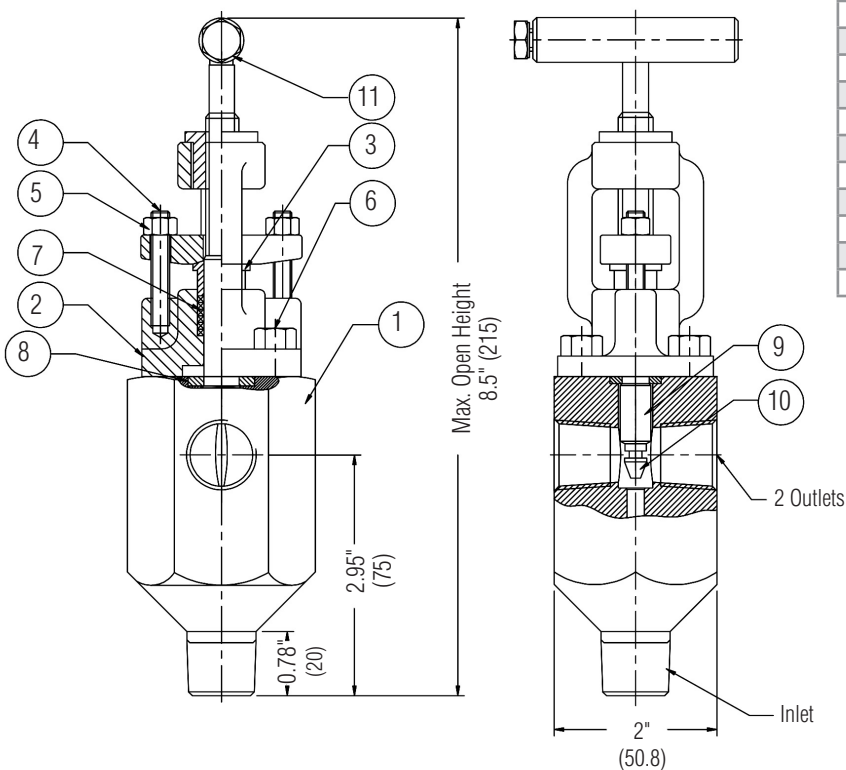
All valves are available with integral hard seats, 316-NACE stainless steel body, trim and Teflon or Graphite packing. Hastello C and Monel models available upon request.

### Ratings

Stainless Steel with Graphite Packing:

6000 psig @ 100°F (414 bar @ 38°C)

3030 psig @ 1000°F (208 bar @ 537°C)



No.	Description	Material	Qty
1	Body	SS 316/NACE	1
2	Bonnet	CF8M/SS 316 NACE	1
3	Gland	SS 316 NACE	1
4	Gland Flange Bolt	A193 Gr.B7M	2
5	Gland Flange Nut	A194 Gr.2H	2
6	Bonnet Bolt	A193 Gr.B7M	4
7	Gland Seal	Graphite	2
8	Body to Bnt. Seal	Graphite	1
9	Spindle	SS 316 NACE	1
10	Trim	SS 316 NACE	1
11	Handle	SS 304	1



MODEL	SEAT CONFIG.	BODY MAT'L	INLET SIZE	INLET TYPE	OUTLET SIZE	OUTLET TYPE	NRT STEM/TIP	SEAT MAT'L	PACKING	OPT'L ITEMS
EG65	1	D	3	1	3	1	4	1	2	2

MODEL	TYPE
EG65	Standard

9	OUTLET SIZE
3	1/2"

5	SEAT CONFIGURATION
1	Hard
3	Hard, "LG" Extension
5	Hard, "XL" Extension

10	OUTLET TYPE
1	FNPT

6	BODY MATERIAL
D	316SS - NACE
H	Hastelloy C
M	Monel

11	NRT STEM/TIP
3	316 NACE / 316 NACE

7	INLET SIZE
3	1/2"
4	3/4"

12	SEAT MATERIAL
1	Integral

8	INLET TYPE
1	MNPT
2	MSW

13	PACKING
2	TFE Chevron
3	Graphite

**1/2" MNPT x 1/2" FNPT & 3/4" MNPT x 1/2" FNPT in standard length (EG651) available for immediate shipment.** Contact your Client Consultant for leadtime on other configurations and materials.

## Gauge Pressure Manifold Valves - EM50

### TWO VALVE MANIFOLD: DIRECT MOUNT

The EM50 is a single flanged, static pressure manifold that incorporates a block valve and a vent valve into a single valve assembly. The side vent outlet (not shown in photo) is plugged, allowing removal during maintenance, or the installation of a calibration fitting.

The compact and economical EM50 features a threaded inlet and flanged outlet, allowing the transmitter to bolt directly to the manifold. The lightweight design requires two transmitter bolts permitting rapid assembly to the transmitter.

### Product Availability

All valves are available with integral hard seats, 316-NACE stainless steel body and trim and Teflon or Graphite packing.

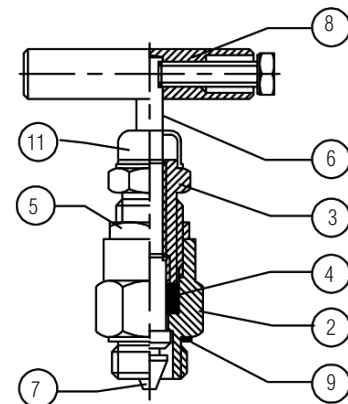
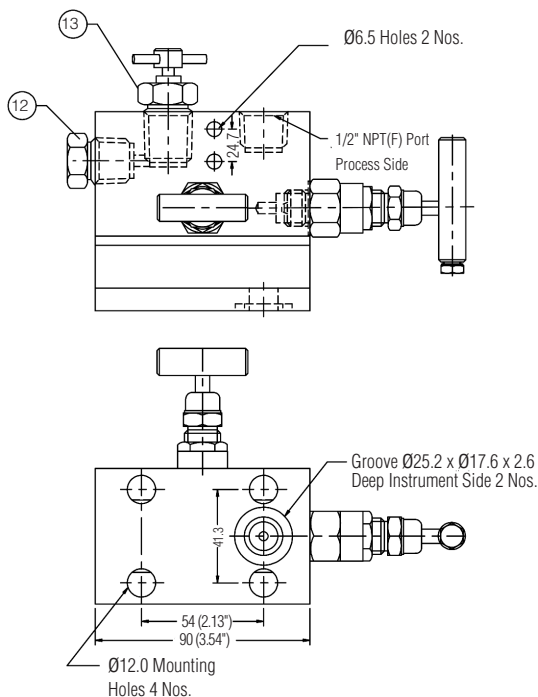
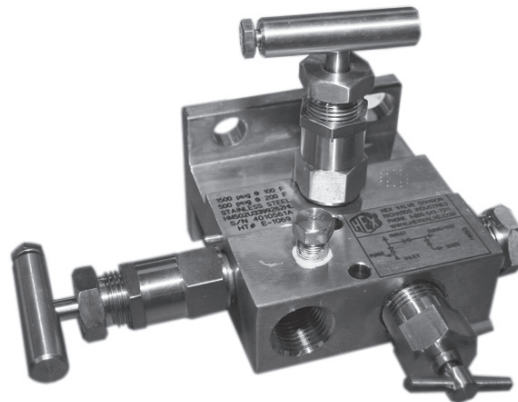
Hastelloy C, Monel models (see order grid) available upon request.

### Ratings

Stainless Steel with TFE Packing:

6000 psig @ 100°F (414 bar @ 38°C)

4130 psig @ 450°F (285 bar @ 232°C)



No.	Description	Material	Qty
1	Body	SS 316 NACE	1
2	Gland Body	SS 316 NACE	2
3	Gland Retainer	SS 304	2
4	Gland Seal	PTFE	4
5	Check Nut	SS 304	2
6	Spindle	SS 316 NACE	2
7	Trim	SS 316 NACE	2
8	Handle	SS 304	2
9	Washer	SS 316 NACE	2
10	Lock Pin	SS 304	2
11	Dust Cap	PVC	2
12	Drain Plug 1/2" NPT(M)	SS 316 NACE	1
13	Bleed Valve 1/2" NPT(M)	SS 316 NACE	1

Note: Other materials and options available

MODEL	BODY CONFIG.	BODY MAT'L	INLET SIZE	INLET TYPE	OUTLET SIZE	OUTLET TYPE	STEM/TIP	SEAT MAT'L	PACKING
EM50	1	D	3	3	9	9	3	1	2

MODEL	TYPE
EM50	Standard

10	OUTLET TYPE
9	Flanged

5	BODY
1	Hard Seat

11	STEM/TIP
3	316-NACE/316-NACE
B	Monel/Monel
D	Hastelloy C/Hastelloy C

6	BODY MATERIAL
D	316SS-NACE
H	Hastelloy C
M	Monel

12	SEAT MATERIAL
1	Integral Seat

7	INLET SIZE
3	1/2"

13	PACKING
2	TFE
3	Graphite

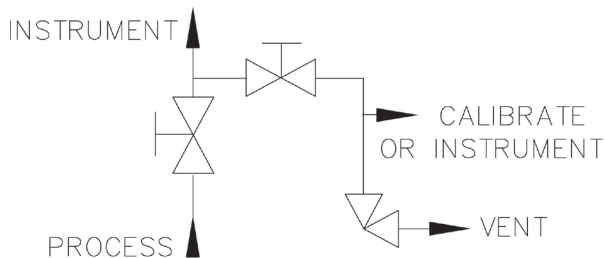
8	INLET TYPE
3	FNPT

9	OUTLET SIZE
9	Flanged

**316 NACE available for immediate shipment.**

Contact your Client Consultant for leadtime on other configurations and materials.

## Flow Schematic



## Gauge Pressure Manifold Valves - EM59

### TWO VALVE MANIFOLD: REMOTE MOUNT

The EM59 is a compact remote mounted two valve manifold that functions as a shutoff and vent valve for static pressure instrumentation. Compared to traditional piping methods that use an arrangement of pipe nipples or tubing, Tees and hand valves, the EM59 Series provides an easy-to-install unit that performs the same function for less material and labor cost. The EM59 also reduces the number of threaded connections, resulting in fewer potential leak points.

### Product Availability

All valves are available with integral hard seats, 316-NACE stainless steel body and trim and Teflon or Graphite packing.

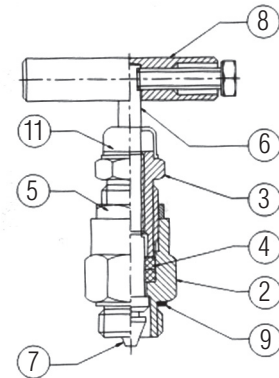
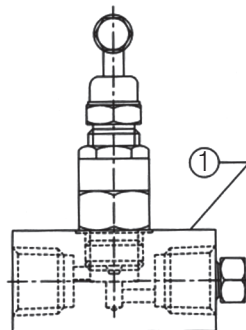
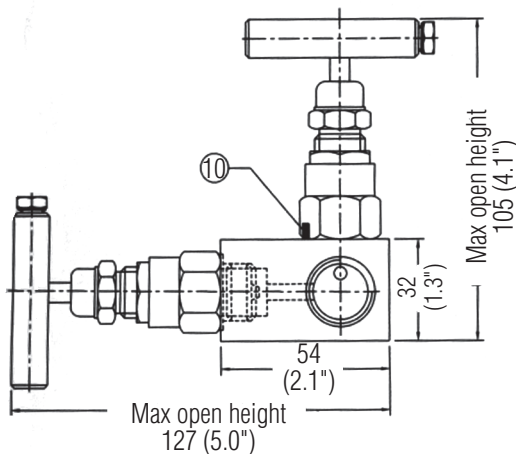
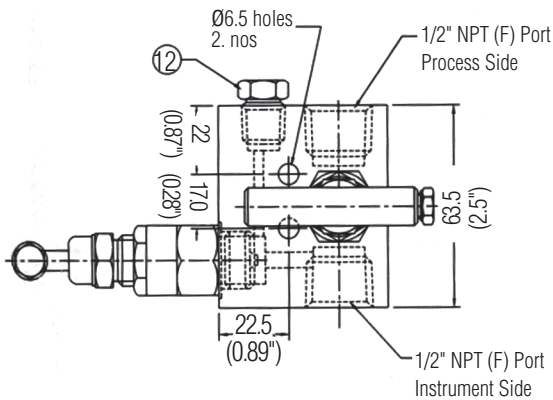
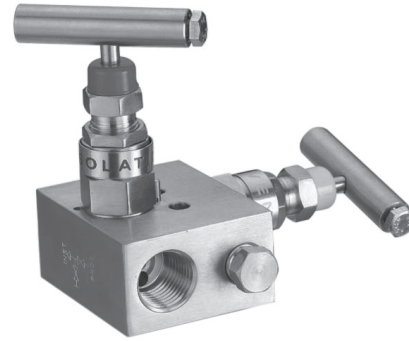
Hastelloy C, Monel models (see order grid) available upon request.

### Ratings

Stainless Steel with TFE Packing:

6000 psig @ 100°F (414 bar @ 38°C)

4200 psig @ 400°F (290 bar @ 204°C)



No.	Description	Material	Qty
1	Body	SS316/NACE	1
2	Gland Body	SS316/NACE	2
3	Gland Retainer	SS304	2
4	Gland Seal	PTFE	4
5	Check Nut	SS304	2
6	Spindle	SS316/NACE	2
7	Trim	SS316/NACE	2
8	Handle	SS304	2
9	Washer	SS	2
10	Lock Pin	SS304	2
11	Dust Cap	PVC	2
12	1/4" NPT Drain Plug	SS316/NACE	1

Note: Other materials and options available.



MODEL	BODY CONFIG.	BODY MAT'L	INLET SIZE	INLET TYPE	OUTLET SIZE	OUTLET TYPE	STEM/TIP	SEAT MAT'L	PACKING
EM59	1	D	3	3	3	1	3	1	2

MODEL	TYPE
EM59	Standard

5	BODY
1	Hard Seat

6	BODY MATERIAL
D	316SS NACE
H	Hastelloy C
M	Monel

7	INLET SIZE
3	1/2"

8	INLET TYPE
3	FNPT

9	OUTLET SIZE
3	1/2"

10	OUTLET TYPE
1	FNPT

11	STEM/TIP
3	316-NACE/316-NACE
B	Monel/Monel
D	Hastelloy C/Hastelloy C

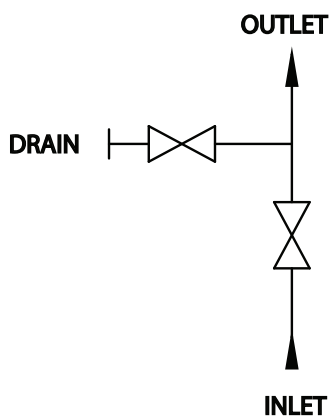
12	SEAT MATERIAL
1	Integral Seat

13	PACKING
2	TFE
3	Graphite

**316 NACE available for immediate shipment.**

Contact your Client Consultant for leadtime on other configurations and materials.

## Flow Schematic



## Differential Pressure Manifold Valves - EM45

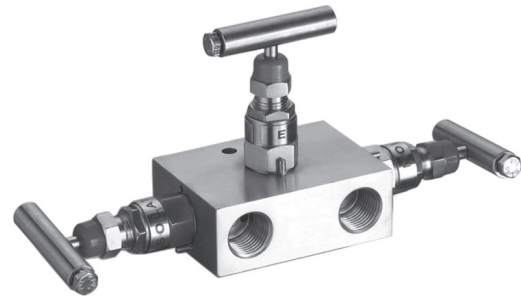
### THREE VALVE MANIFOLD: REMOTE MOUNT, THREADED

The EM45 is a general purpose instrument manifold designed for connecting differential pressure transmitters or flow recorders to impulse line tubing. Connections are 1/2" FNPT on industry standard 2-1/8" (54mm) center-to-center dimensions.

### Product Availability

All valves are available with integral hard seats, 316-NACE stainless steel body and trim and Teflon or Graphite packing.

Hastelloy C, Monel models (see order grid) available upon request.

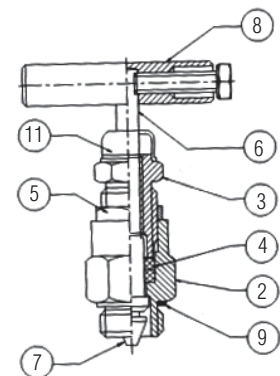
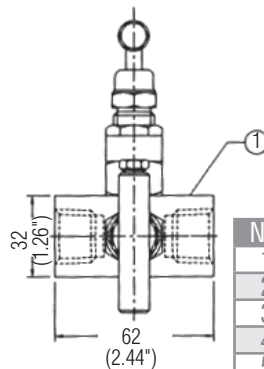
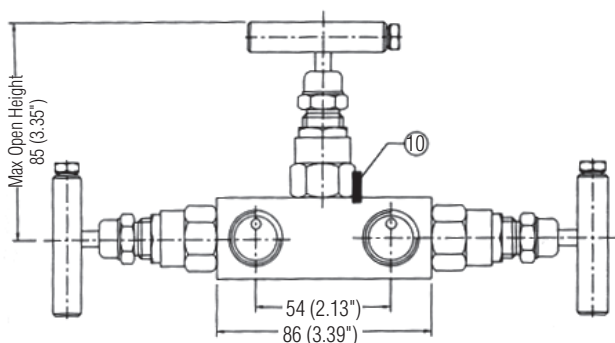
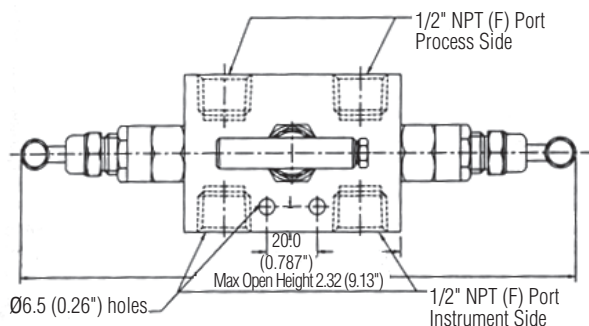


### Ratings

Stainless Steel with TFE Packing:

6000 psig @ 100°F (414 bar @ 38°C)

4200 psig @ 400°F (290 bar @ 204°C)



No.	Description	Material	Qty
1	Body	SS316/NACE	1
2	Gland Body	SS316/NACE	3
3	Gland Retainer	SS304	3
4	Gland Seal	PTFE	6
5	Check Nut	SS304	3
6	Spindle	SS316/NACE	3
7	Trim	SS316/NACE	3
8	Handle	SS304	3
9	Washer	SS	3
10	Lock Pin	SS304	3
11	Dust Cap	PVC	3

Note: Other materials and options available

MODEL	BODY CONFIG.	BODY MAT'L	INLET SIZE	INLET TYPE	OUTLET SIZE	OUTLET TYPE	STEM/TIP	SEAT MAT'L	PACKING
EM45	1	D	3	3	3	1	3	1	2

MODEL	TYPE
EM45	Standard

10	OUTLET TYPE
1	FNPT

5	BODY
1	Hard Seat

11	STEM/TIP
3	316-NACE/316-NACE
B	Monel/Monel
D	Hastelloy C/Hastelloy C

6	BODY MATERIAL
D	316SS-NACE
H	Hastelloy C
M	Monel

12	SEAT MATERIAL
1	Integral Seat

7	INLET SIZE
3	1/2"

13	PACKING
2	TFE
3	Graphite

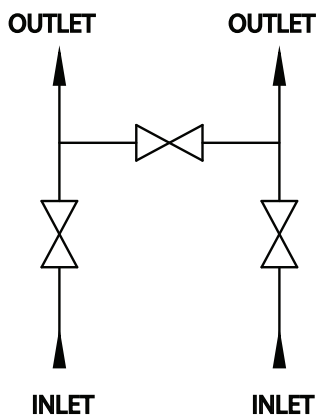
8	INLET TYPE
3	FNPT

Note: Inlet and Outlet must be same size

9	OUTLET SIZE
3	1/2"

**316 NACE available for immediate shipment.**  
Contact your Client Consultant for leadtime on other configurations and materials.

## Flow Schematic



## Differential Pressure Manifold Valves - EM53

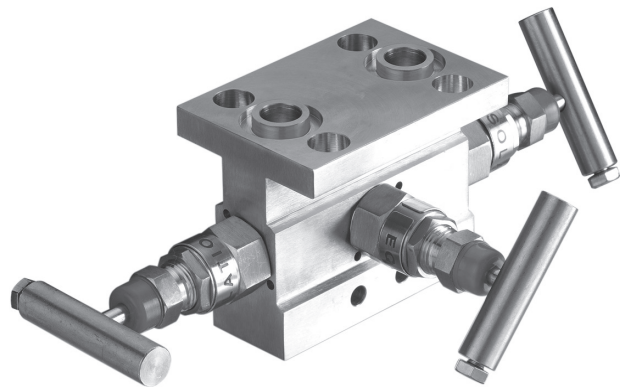
### THREE VALVE MANIFOLD: DIRECT MOUNT

The EM53 is a three valve instrument manifold used to perform the block, equalizing and vent requirements of differential pressure transmitter applications. The EM53 has a single mounting flange allowing the transmitter to bolt directly to the manifold. A mounting kit may also be specified to allow for manifold installation to a pipe stand.

### Product Availability

All valves are available with integral hard seats, 316-NACE stainless steel body and trim and Teflon or Graphite packing.

Hastelloy C, Monel models (see order grid) available upon request.

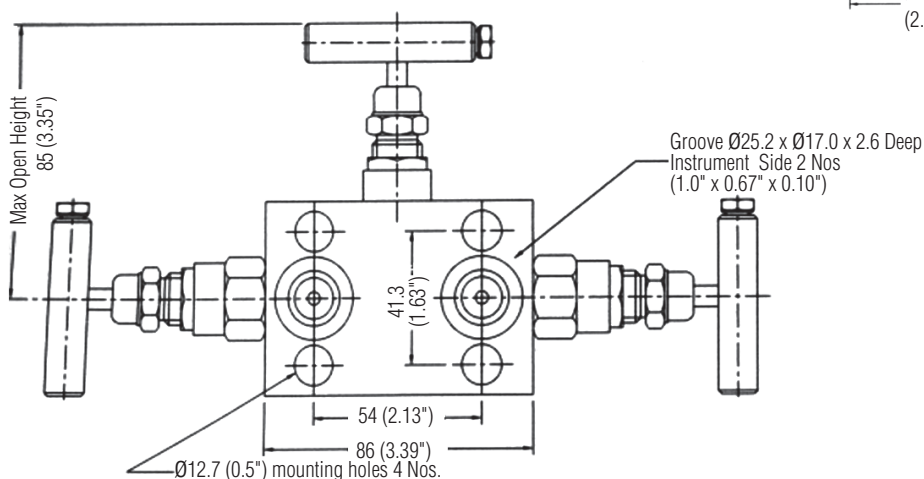
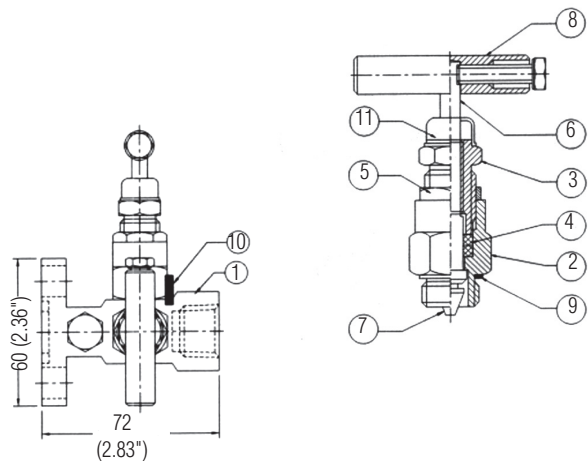
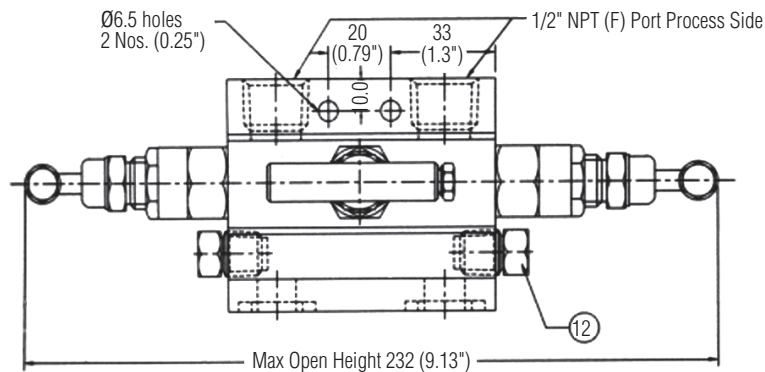


### Ratings

Stainless Steel with TFE Packing:

6000 psig @ 100°F (414 bar @ 38°C)

4200 psig @ 400°F (290 bar @ 204°C)



No.	Description	Material	Qty
1	Body	SS316/NACE	1
2	Gland Body	SS316/NACE	3
3	Gland Retainer	SS304	3
4	Gland Seal	PTFE	6
5	Check Nut	SS304	3
6	Spindle	SS316/NACE	3
7	Trim	SS316/NACE	3
8	Handle	SS304	3
9	Washer	SS	3
10	Lock Pin	SS304	3
11	Dust Cap	PVC	3
12	Drain Plug 1/4" NPT	SS316	2

Note: Other materials and options available

MODEL	BODY CONFIG.	BODY MAT'L	INLET SIZE	INLET TYPE	OUTLET SIZE	OUTLET TYPE	STEM/TIP	SEAT MAT'L	PACKING
EM53	1	D	3	3	9	9	3	1	2

MODEL	TYPE
EM53	Standard

10	OUTLET TYPE
9	Flanged

5	BODY
1	Hard Seat

11	STEM/TIP
3	316-NACE/316-NACE
B	Monel/Monel
D	Hastelloy C/Hastelloy C

6	BODY MATERIAL
D	316SS-NACE
H	Hastelloy C
M	Monel

12	SEAT MATERIAL
1	Integral Seat

7	INLET SIZE
3	1/2"

13	PACKING
2	TFE
3	Graphite

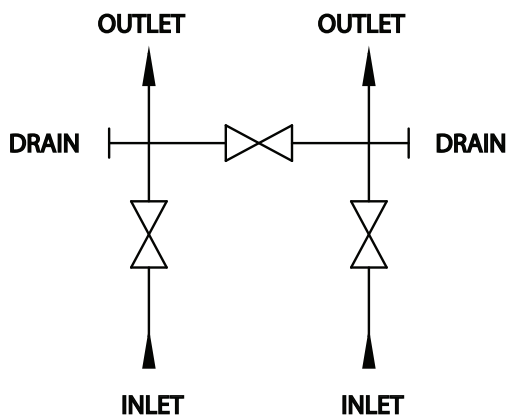
8	INLET TYPE
3	FNPT

9	OUTLET SIZE
9	Flanged

**316 NACE available for immediate shipment.**

Contact your Client Consultant for leadtime on other configurations and materials.

## Flow Schematic



## Differential Pressure Manifold Valves -EH37

### FIVE VALVE MANIFOLD: BARSTOCK DIRECT MOUNT SINGLE EQUALIZER DESIGN

The EH37 is similar to the EM74 in function, but is designed for direct mounting to the transmitter with a threaded inlet and instrument flanged outlet. The unique, compact barstock design makes this an economical choice when a direct mount manifold with vent and calibration access is crucial.

### Product Availability

All valves are available with integral hard seats, 316-NACE stainless steel body and trim and Teflon or Graphite packing.

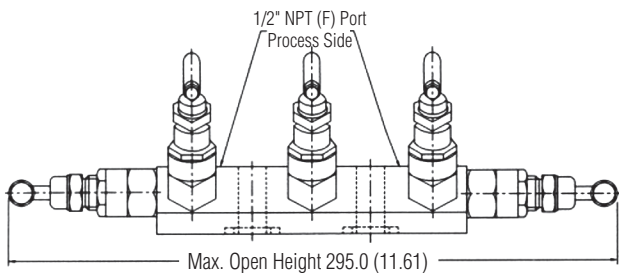
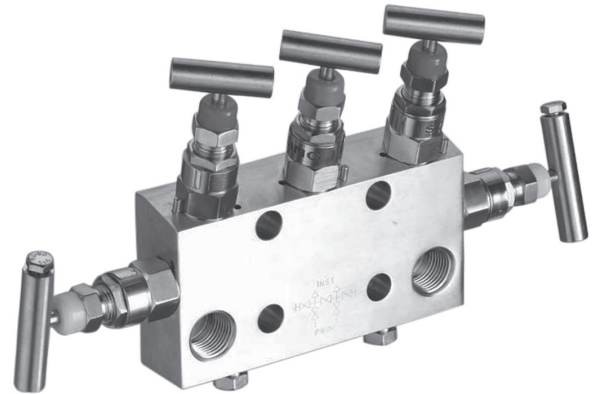
Hastelloy C, Monel models (see order grid) available upon request.

### Ratings

Stainless Steel with TFE Packing:

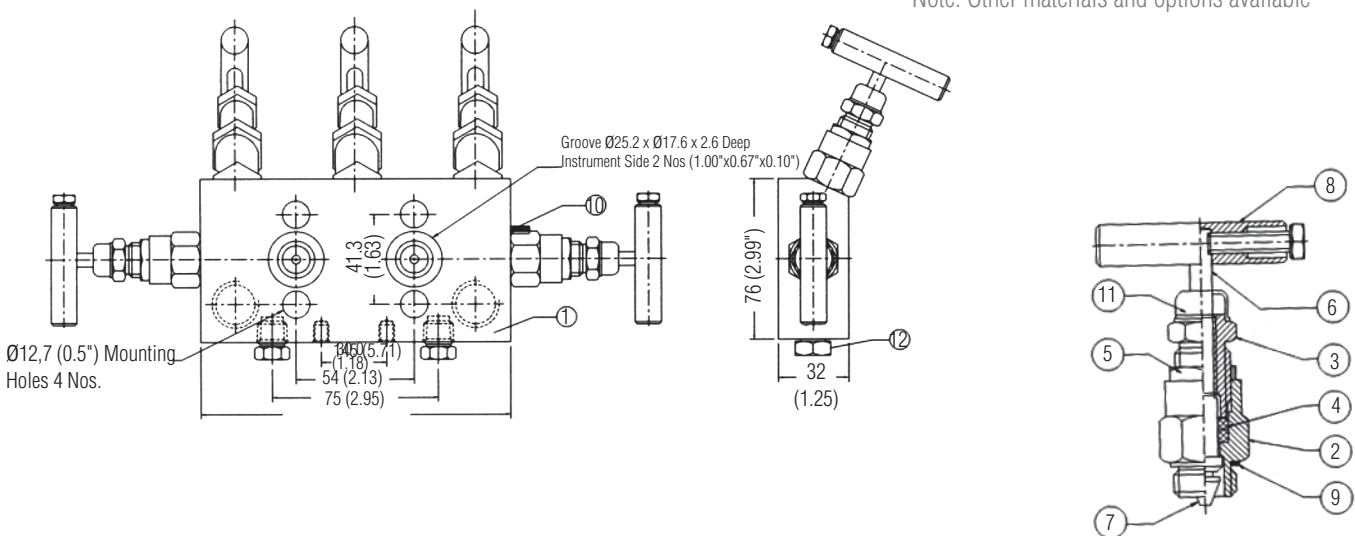
6000 psig @ 100°F (414 bar @ 38°C)

4200 psig @ 400°F (290 bar @ 204°C)



No.	Description	Material	Qty
1	Body	SS316/NACE	1
2	Gland Body	SS316/NACE	5
3	Gland Retainer	SS304	5
4	Gland Seal	PTFE	10
5	Check Nut	SS304	5
6	Spindle	SS316/NACE	5
7	Trim	SS316/NACE	5
8	Handle	SS304	5
9	Washer	SS	5
10	Lock Pin	SS304	5
11	Dust Cap	PVC	5
12	Drain Plug 1/4" NPT	SS316/NACE	2

Note: Other materials and options available



MODEL	BODY CONFIG.	BODY MAT'L	INLET SIZE	INLET TYPE	OUTLET SIZE	OUTLET TYPE	STEM/TIP	SEAT MAT'L	PACKING
EH37	1	D	3	3	9	9	3	1	2

MODEL	TYPE
EH37	Standard

10	OUTLET TYPE
9	Flanged

5	BODY
1	Hard Seat

11	STEM/TIP
3	316-NACE/316-NACE
B	Monel/Monel
D	Hastelloy C/Hastelloy C

6	BODY MATERIAL
D	316SS-NACE
H	Hastelloy C
M	Monel

12	SEAT MATERIAL
1	Integral Seat

7	INLET SIZE
3	1/2"

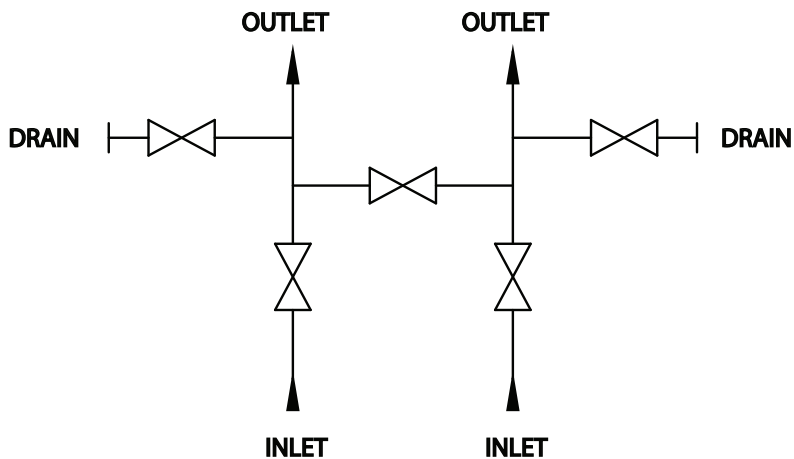
13	PACKING
2	TFE
3	Graphite

8	INLET TYPE
3	FNPT

9	OUTLET SIZE
9	Flanged

**316 NACE available for immediate shipment.**  
 Contact your Client Consultant for leadtime on other configurations and materials.

## Flow Schematic



## Non-Stocked Items (Still available for purchase)

### Gauge Pressure Manifold Valves - EH79

#### TWO VALVE MANIFOLD: DIRECT MOUNT

The EH79 offers the same function as the EM50 but in a more compact, lighter weight package for your flanged gauge pressure transmitter installations. The EH79 is made from barstock with a 1/2" FNPT inlet connection and a single instrument flange outlet. Like it's three valve barstock cousin the EM53, this lighter weight valve is an ideal candidate for use on weight sensitive offshore production platforms, or FPSO installations.

#### Product Availability

All valves are available with integral hard seats, 316-NACE stainless steel body and trim and Teflon or Graphite packing.

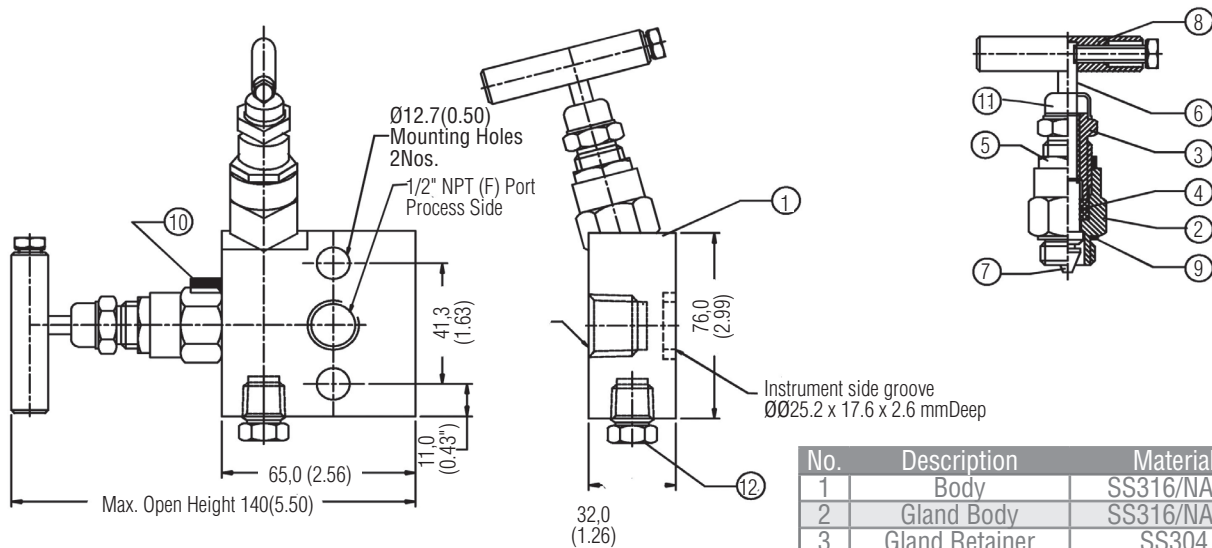
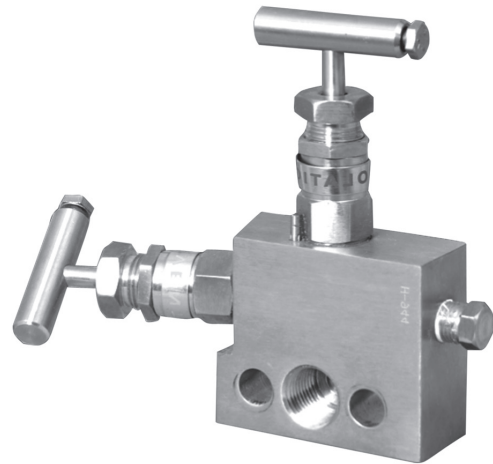
Hastelloy C, Monel models (see order grid) available upon request.

#### Ratings

Stainless Steel with TFE Packing:

6000 psig @ 100°F (414 bar @ 38°C)

4200 psig @ 400°F (290 bar @ 204°C)



No.	Description	Material	Qty
1	Body	SS316/NACE	1
2	Gland Body	SS316/NACE	1
3	Gland Retainer	SS304	2
4	Gland Seal	PTFE	4
5	Check Nut	SS304	2
6	Spindle	SS316/NACE	2
7	Trim	SS316/NACE	2
8	Handle	SS304	2
9	Washer	SS	2
10	Lock Pin	SS304	2
11	Dust Cap	PVC	2
12	1/4" NPT Drain Plug	SS316/NACE	1

Note: Other materials and options available



MODEL	BODY CONFIG.	BODY MAT'L	INLET SIZE	INLET TYPE	OUTLET SIZE	OUTLET TYPE	STEM/TIP	SEAT MAT'L	PACKING
EH79	1	D	3	3	9	9	3	1	2

MODEL	TYPE
EH79	Standard

10	OUTLET TYPE
9	Flanged

5	BODY
1	Hard Seat

11	STEM/TIP
3	316-NACE/316-NACE
B	Monel/Monel
D	Hastelloy C/Hastelloy C

6	BODY MATERIAL
D	316SS-NACE
H	Hastelloy C
M	Monel

12	SEAT MATERIAL
1	Integral Seat

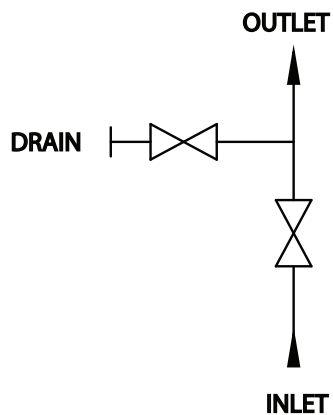
7	INLET SIZE
3	1/2"

13	PACKING
2	TFE
3	Graphite

8	INLET TYPE
3	FNPT

9	OUTLET SIZE
9	Flanged

## Flow Schematic



## Differential Pressure Manifold Valves - EM54

### THREE VALVE MANIFOLD: DIRECT MOUNT (DOUBLE FLANGED)

The EM54 is a double flanged instrument manifold that is used to perform the block, equalizing and vent requirements of differential pressure transmitters. For compact, close-coupled installations, the manifold bolts directly to the instrument and can be mated directly to the orifice flange using futbol flanges and short nipples. For remote installation, flange adaptors (futbols) can be used, making the installation similar to the EM53.

### Product Availability

All valves are available with integral hard seats, 316-NACE stainless steel body and trim and Teflon or Graphite packing.

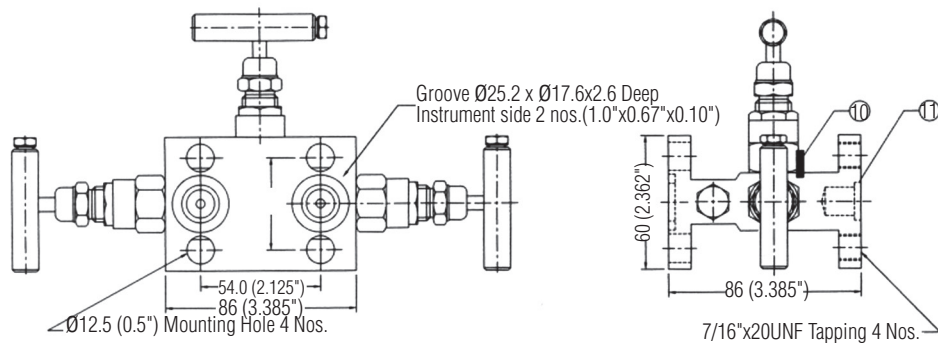
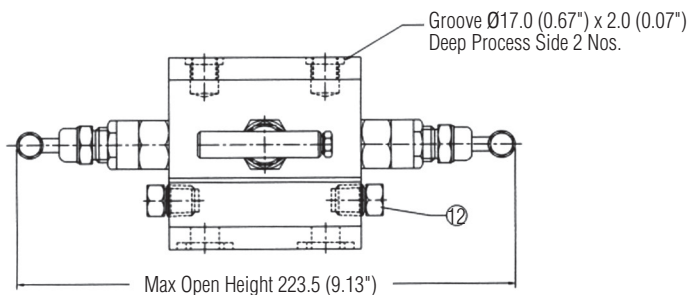
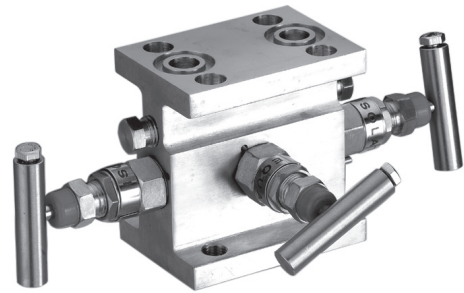
Hastelloy C, Monel models (see order grid) available upon request.

### Ratings

Stainless Steel with TFE Packing:

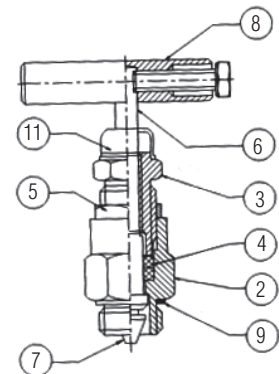
6000 psig @ 100°F (414 bar @ 38°C)

4200 psig @ 400°F (290 bar @ 204°C)



No.	Description	Material	Qty
1	Body	SS316/NACE	1
2	Gland Body	SS316/NACE	3
3	Gland Retainer	SS304	3
4	Gland Seal	PTFE	6
5	Check Nut	SS304	3
6	Spindle	SS316/NACE	3
7	Trim	SS316/NACE	3
8	Handle	SS304	3
9	Washer	SS	3
10	Lock Pin	SS304	3
11	Dust Cap	PVC	3
12	Drain Plug 1/4" NPT	SS316/NACE	3

Note: Other materials and options available



MODEL	BODY CONFIG.	BODY MAT'L	INLET SIZE	INLET TYPE	OUTLET SIZE	OUTLET TYPE	STEM/TIP	SEAT MAT'L	PACKING
EM54	1	D	9	9	9	9	3	1	2

MODEL	TYPE
EM54	Standard

10	OUTLET TYPE
9	Flanged

5	BODY
1	Hard Seat

11	STEM/TIP
3	316-Nace/316-NACE
B	Monel/Monel
D	Hastelloy C/Hastelloy C

6	BODY MATERIAL
D	316SS-NACE
H	Hastelloy C
M	Monel

12	SEAT MATERIAL
1	Integral Seat

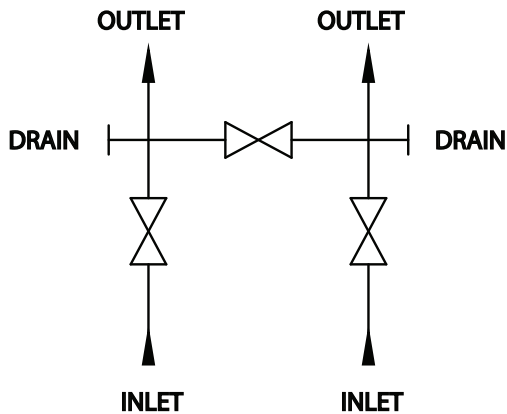
7	INLET SIZE
9	Flanged

13	PACKING
2	TFE
3	Graphite

8	INLET TYPE
9	Flanged

9	OUTLET SIZE
9	Flanged

## Flow Schematic



## Differential Pressure Manifold Valves - EH33

### THREE VALVE MANIFOLD: DIRECT MOUNT, BAR STOCK STYLE

The EH33 is a three valve instrument manifold used to perform the block and equalizing requirement of differential pressure transmitter applications. Of importance in this design, is the inclusion of a single mounting flange in its compact barstock construction. A mounting kit may also be specified to allow for installation to a pipe stand.

### Product Availability

All valves are available with integral hard seats, 316-NACE stainless steel body and trim and Teflon or Graphite packing.

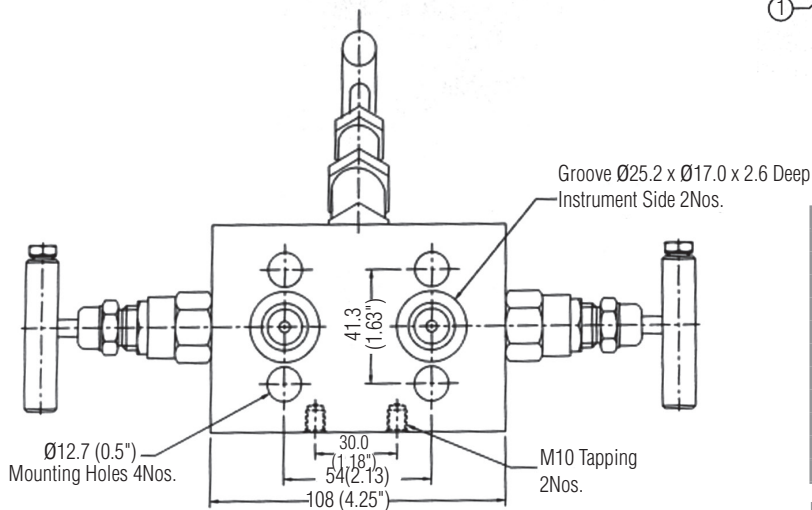
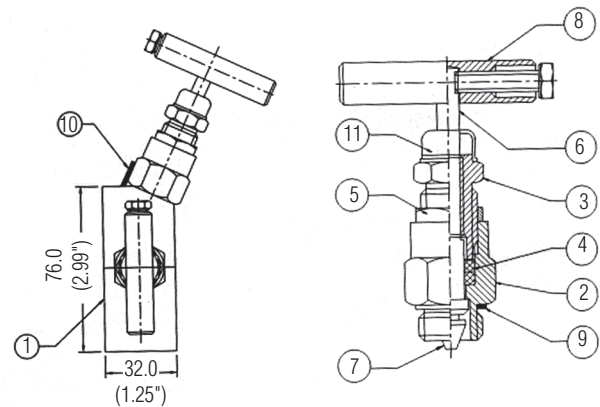
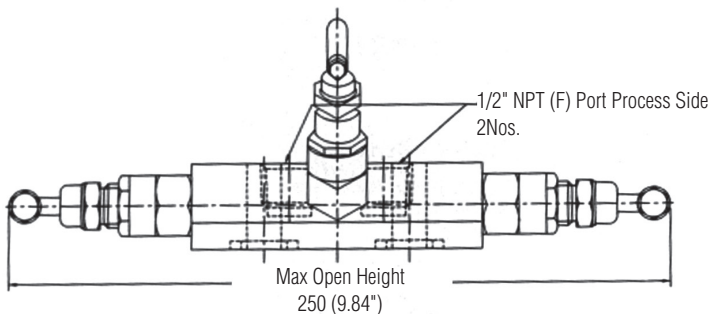
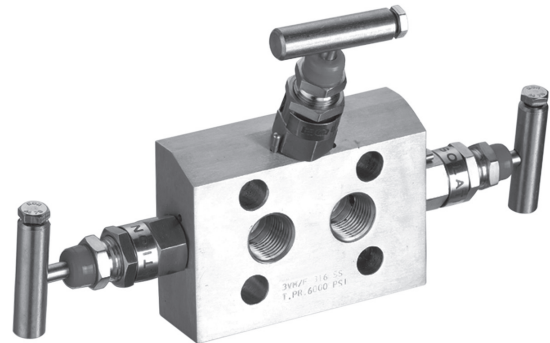
Hastelloy C, Monel models (see order grid) available upon request.

### Ratings

Stainless Steel with TFE Packing:

6000 psig @ 100°F (414 bar @ 38°C)

4200 psig @ 400°F (290 bar @ 204°C)



No.	Description	Material	Qty
1	Body	SS316/NACE	1
2	Gland Body	SS316/NACE	3
3	Gland Retainer	SS304	3
4	Gland Seal	PTFE	6
5	Check Nut	SS304	3
6	Spindle	SS316/NACE	3
7	Trim	SS316/NACE	3
8	Handle	SS304	3
9	Washer	SS	3
10	Lock Pin	SS304	3
11	Dust Cap	PVC	3

Note: Other materials and options available

MODEL	BODY CONFIG.	BODY MAT'L	INLET SIZE	INLET TYPE	OUTLET SIZE	OUTLET TYPE	STEM/TIP	SEAT MAT'L	PACKING
EH33	1	D	3	3	9	9	3	1	2

MODEL	TYPE
EH33	Standard

10	OUTLET TYPE
9	Flanged

5	BODY
1	Hard Seat

11	STEM/TIP
3	316-NACE/316-NACE
B	Monel/Monel
D	Hastelloy C/Hastelloy C

6	BODY MATERIAL
D	316SS-NACE
H	Hastelloy C
M	Monel

12	SEAT MATERIAL
1	Integral Seat

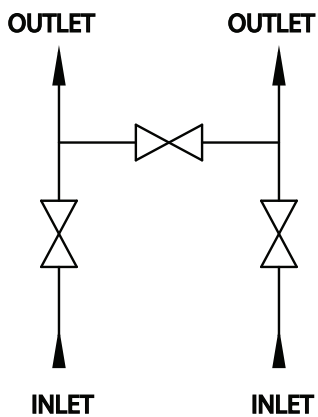
7	INLET SIZE
3	1/2"

13	PACKING
2	TFE
3	Graphite

8	INLET TYPE
3	FNPT

9	OUTLET SIZE
9	Flanged

## Flow Schematic



## Differential Pressure Manifold Valves - EM57

### FIVE VALVE MANIFOLD: REMOTE MOUNT DOUBLE EQUALIZER DESIGN

The EM57 five valve manifold combines two shutoff valves, two equalizing valves, and a vent/calibration valve into a single, compact assembly. The double equalizing arrangement insures against measurement error that can occur from equalizer leakage between high and low pressure connections, making the EM57 ideal for custody transfer applications.

When expensive liquid or gas changes ownership, precise measurement is critical. The smallest leakage from the high side of the manifold to the low side of the manifold can lead to lost revenue due to inaccurate measurement. Therefore, when dealing with custody transfer or other critical flows, a five valve manifold should be used to achieve more accurate measurement.

### Product Availability

All valves are available with integral hard seats, 316-NACE stainless steel body and trim and Teflon or Graphite packing.

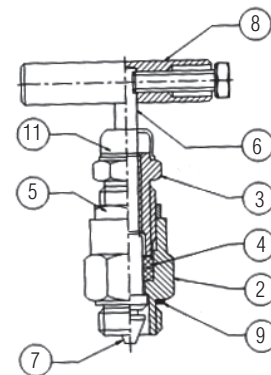
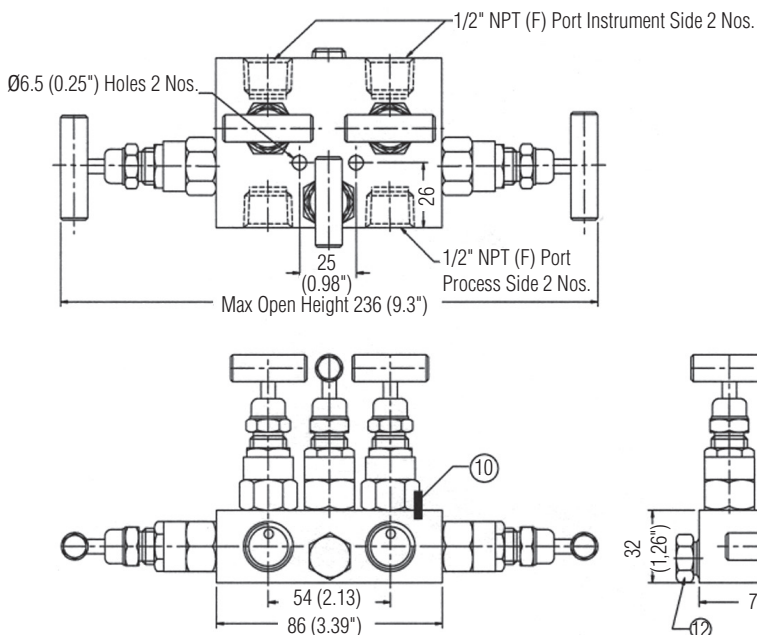
Hastelloy C, Monel models (see order grid) available upon request.

### Ratings

Stainless Steel with TFE Packing:

6000 psig @ 100°F (414 bar @ 38°C)

4200 psig @ 400°F (290 bar @ 204°C)



No.	Description	Material	Qty
1	Body	SS316/NACE	1
2	Gland Body	SS316/NACE	5
3	Gland Retainer	SS304	5
4	Gland Seal	PTFE	10
5	Check Nut	SS304	5
6	Spindle	SS316/NACE	5
7	Trim	SS316/NACE	5
8	Handle	SS304	5
9	Washer	SS	5
10	Lock Pin	SS304	5
11	Dust Cap	PVC	5
12	Drain Plug 1/4" NPT	SS316/NACE	1

Note: Other materials and options available

MODEL	BODY CONFIG.	BODY MAT'L	INLET SIZE	INLET TYPE	OUTLET SIZE	OUTLET TYPE	STEM/TIP	SEAT MAT'L	PACKING
EM57	1	D	3	3	3	1	3	1	2

MODEL	TYPE
EM57	Standard

10	OUTLET TYPE
1	FNPT

5	BODY
1	Hard Seat

11	STEM/TIP
3	316-NACE/316-NACE
B	Monel/Monel
D	Hastelloy C/Hastelloy C

6	BODY MATERIAL
D	316SS-NACE
H	Hastelloy C
M	Monel

12	SEAT MATERIAL
1	Integral Seat

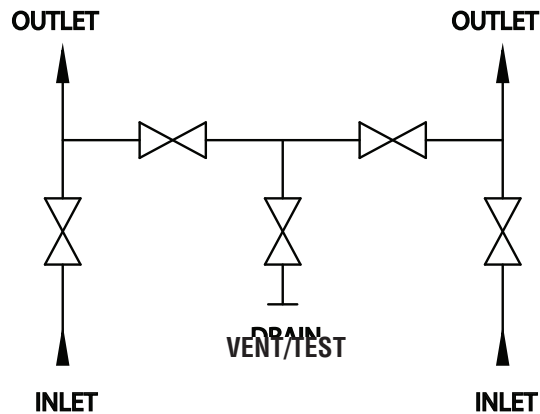
7	INLET SIZE
3	1/2"

13	PACKING
2	TFE
3	Graphite

8	INLET TYPE
3	FNPT

9	OUTLET SIZE
3	1/2"

## Flow Schematic



## Differential Pressure Manifold Valves - EM74

### FIVE VALVE MANIFOLD: REMOTE MOUNT SINGLE EQUALIZER DESIGN

The EM74 is similar to the EM57 but is designed with two vent valves and one equalizer.

The two vent valves can be used for transmitter calibration and venting. This can be a convenient feature if the transmitter is located in a difficult to access place.

### Product Availability

All valves are available with integral hard seats, 316-NACE stainless steel body and trim and Teflon or Graphite packing.

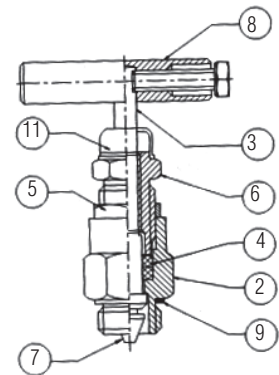
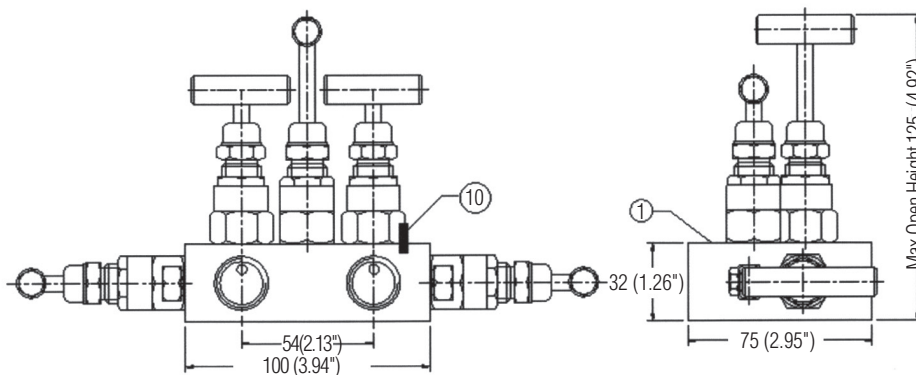
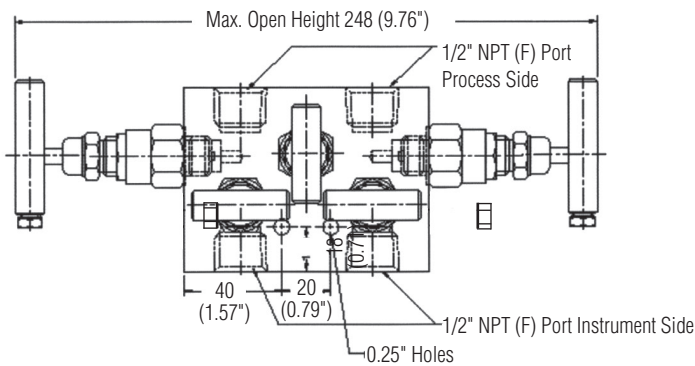
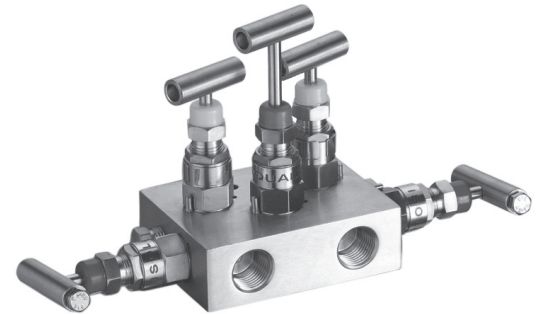
Hastelloy C, Monel models (see order grid) available upon request.

### Ratings

Stainless Steel with TFE Packing:

6000 psig @ 100°F (414 bar @ 38°C)

4200 psig @ 400°F (290 bar @ 204°C)



No.	Description	Material	Qty
1	Body	SS316/NACE	1
2	Gland Body	SS316/NACE	5
3	Gland Retainer	SS304	5
4	Gland Seal	PTFE	10
5	Check Nut	SS304	5
6	Spindle	SS316/NACE	5
7	Trim	SS316/NACE	5
8	Handle	SS304	5
9	Washer	SS	5
10	Lock Pin	SS304	5
11	Dust Cap	PVC	5
12	Drain Plug 1/4" NPT	SS316/NACE	2

Note: Other materials and options available



MODEL	BODY CONFIG.	BODY MAT'L	INLET SIZE	INLET TYPE	OUTLET SIZE	OUTLET TYPE	STEM/TIP	SEAT MAT'L	PACKING
EM74	1	D	3	3	3	1	3	1	2

MODEL	TYPE
EM74	Standard

10	OUTLET TYPE
1	FNPT

5	BODY
1	Hard Seat

11	STEM/TIP
3	316-NACE/316-NACE
B	Monel/Monel
D	Hastelloy C/Hastelloy C

6	BODY MATERIAL
D	316SS-NACE
H	Hastelloy C
M	Monel

12	SEAT MATERIAL
1	Integral Seat

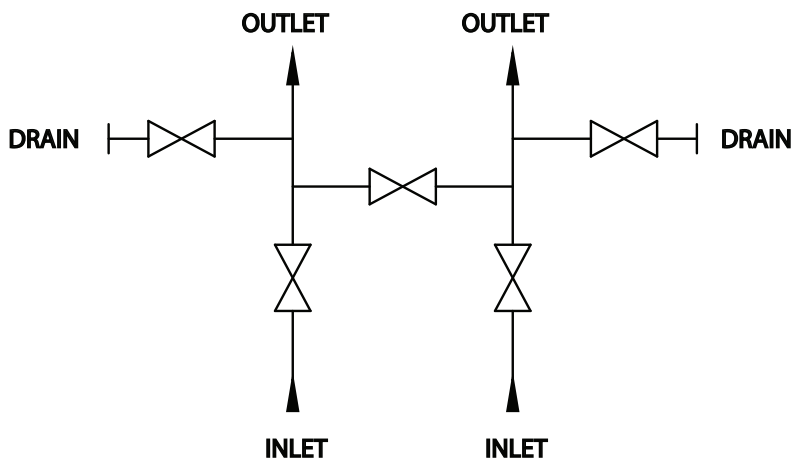
7	INLET SIZE
3	1/2"

13	PACKING
2	TFE
3	Graphite

8	INLET TYPE
3	FNPT

9	OUTLET SIZE
3	1/2"

## Flow Schematic



## Differential Pressure Manifold Valves - EH39

### FIVE VALVE MANIFOLD: BARSTOCK DIRECT MOUNT SINGLE EQUALIZER DESIGN

The EH39 is similar to the EM74 in function, but is designed for direct mounting to the transmitter with a threaded inlet and instrument flanged outlet. The unique, compact barstock design makes this an economical choice when a direct mount manifold with vent and calibration access is crucial.

### Product Availability

All valves are available with integral hard seats, 316-NACE stainless steel body and trim and Teflon or Graphite packing.

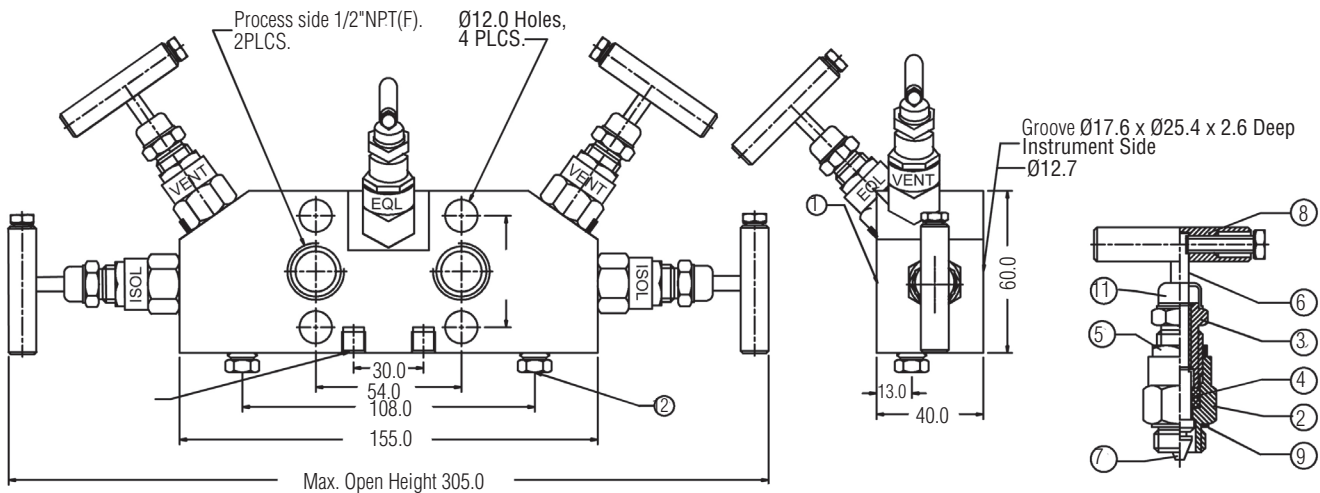
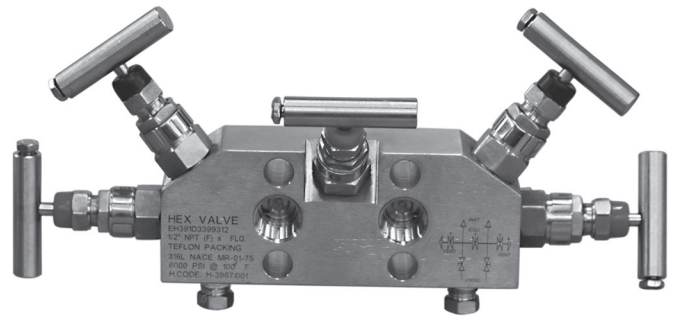
Hastelloy C, Monel models (see order grid) available upon request.

### Ratings

Stainless Steel with TFE Packing:

6000 psig @ 100°F (414 bar @ 38°C)

4200 psig @ 400°F (290 bar @ 204°C)



No.	Description	Material	Qty
1	Body	SS316/NACE	1
2	Gland Body	SS316/NACE	3
3	Gland Retainer	SS304	3
4	Gland Seal	PTFE	6
5	Check Nut	SS304	3
6	Spindle	SS316/NACE	3
7	Trim	SS316/NACE	3
8	Handle	SS304	3
9	Washer	SS	3
10	Lock Pin	SS304	3
11	Dust Cap	PVC	3

Note: Other materials and options available

MODEL	BODY CONFIG.	BODY MAT'L	INLET SIZE	INLET TYPE	OUTLET SIZE	OUTLET TYPE	STEM/TIP	SEAT MAT'L	PACKING
EH39	1	D	3	3	9	9	3	1	2

MODEL	TYPE
EH39	Standard

10	OUTLET TYPE
9	Flanged

5	BODY
1	Hard Seat

11	STEM/TIP
3	316-NACE/316-NACE
B	Monel/Monel
D	Hastelloy C/Hastelloy C

6	BODY MATERIAL
D	316SS-NACE
H	Hastelloy C
M	Monel

12	SEAT MATERIAL
1	Integral Seat

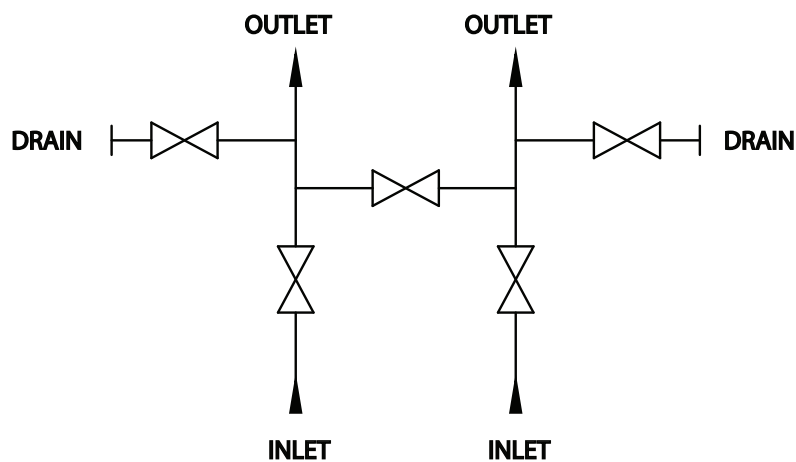
7	INLET SIZE
3	1/2"

13	PACKING
2	TFE
3	Graphite

8	INLET TYPE
3	FNPT

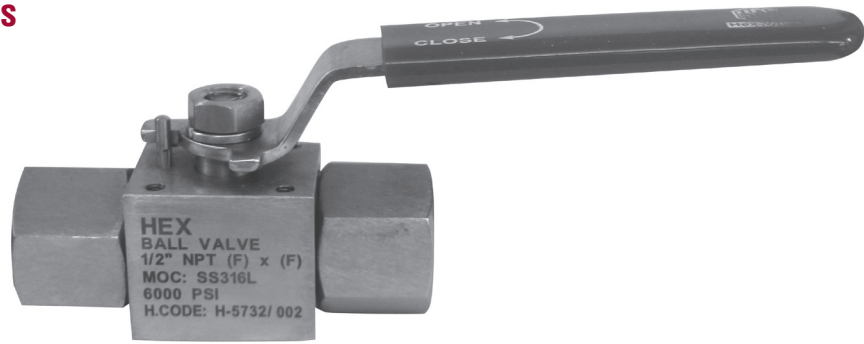
9	OUTLET SIZE
9	Flanged

## Flow Schematic



## Instrument Grade Ball Valves - IBV Series

Instrument Grade Ball Valves are primarily used as a block valve for instruments, drain valves, on/off valves for panel and systems, and many other applications and OEM equipment. This cost effective line of ball valves offer several pressure ratings, end connection options (upon request) and sizes.



### SPECIFICATIONS

**Size:** 1/4", 3/8", 1/2", 3/4", 1"

**End Connections:** NPT (Male & Female)

**Body Style:** 3 piece body

**Body Material:** 316SS

**Seat Material:** PTFE standard

**Packing:** Delrin standard

**Handle:** Stainless Steel with cover

**Panel Mount Standard**

### Options

- Cleaned for oxygen service
- NACE-MR-01-75
- Additional end connections available upon request

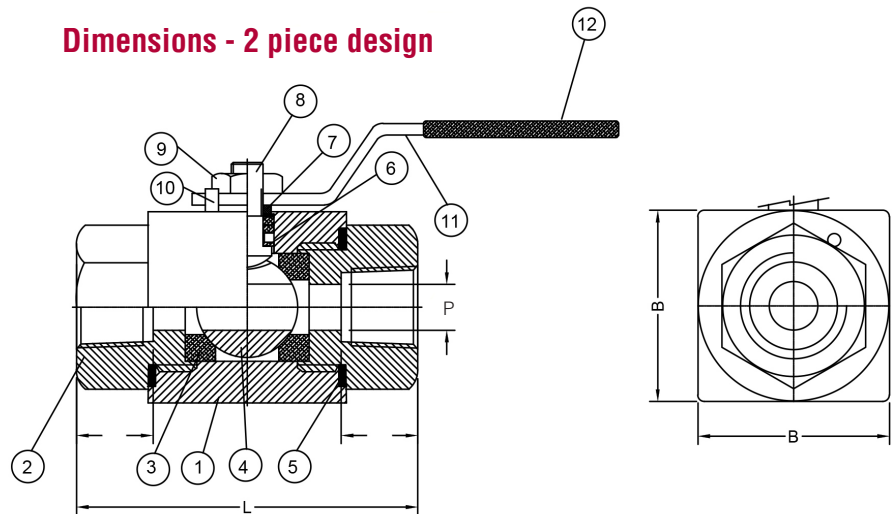
### Pressure Ratings at room temperature

- 3000 psi
- 6000 psi
- 10,000 psi

### Industry Standards and Testing

- ANSI
- ASME

### Dimensions - 2 piece design



Part No.	Part Description	Material	Qty
1	Body	SS 316L	1
2	Adaptor	SS 316L	2
3	Seat Ring	Delrin	2
4	Ball	SS 316L	1
5	Gasket	PTFE	2
6	Gland Seal	PTFE	2
7	Gland Bush	SS 316L	1
8	Stem	SS 316L	1
9	Lock Nut	SS 304	1
10	Stopper Pin	SS 304	3
11	Handle	S.S.	1
12	Handle Sleeve	P.V.C.	1
P	L +2.0	B +2.0	
1/2" NPT (F)	83.0	32.0	

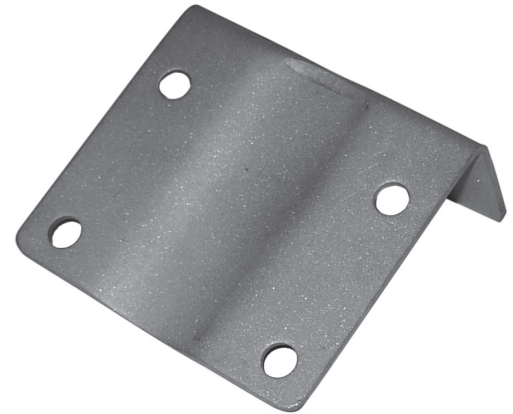
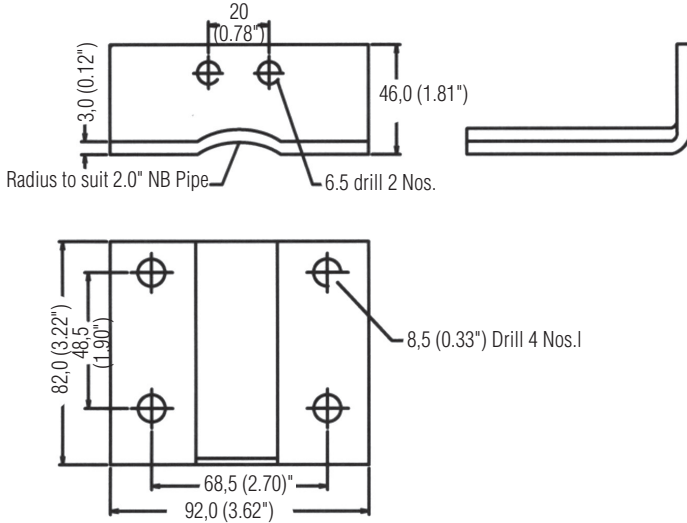
### How to Order

Model Number	Inlet Size	Inlet Type	Outlet Size	Outlet Type	Pressure
IBV	1 = 1/4"	1 = FNPT	1 = 1/4"	1 = FNPT	3K = 3000 psi
	2 = 3/8"		2 = 3/8"		6K = 6000 psi
	3 = 1/2"		3 = 1/2"		10K = 10000 psi
	4 = 3/4"		4 = 3/4"		
	5 = 1"		5 = 1"		
	6 = 1-1/2"		6 = 1-1/2"		

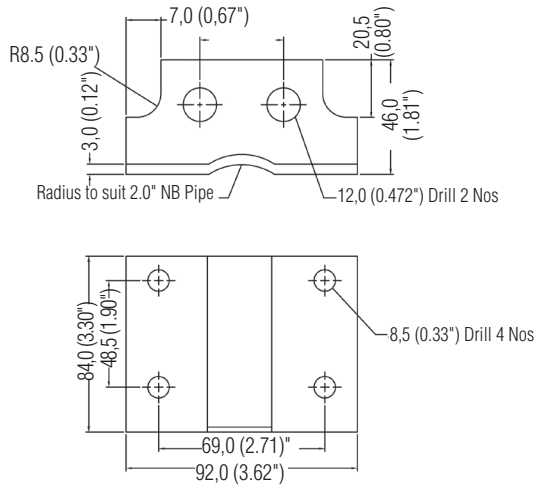
Standard body material is 316SS

## Manifold Mounting Brackets

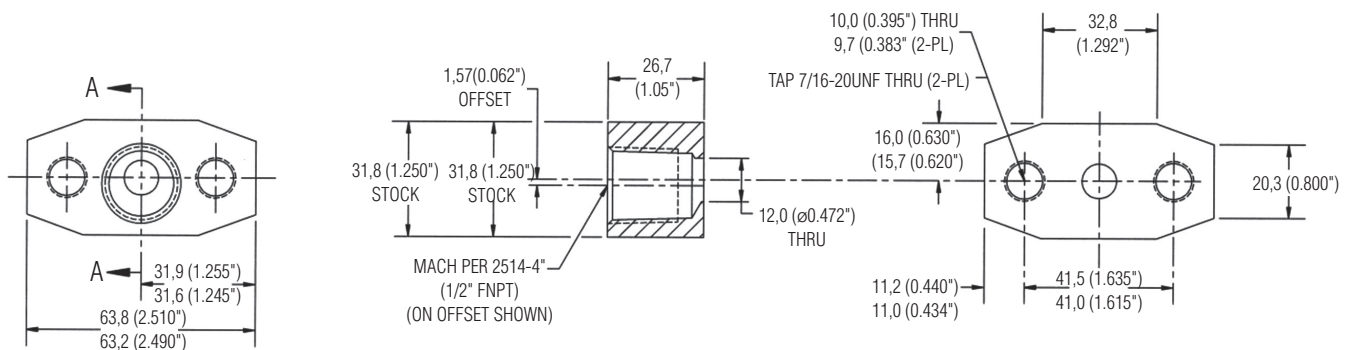
**MB001 - 316SS MOUNTING BRACKET FOR MODELS EM53, EM45 & EM74; INCLUDES 2 SS U-BOLTS & FASTENERS**



**MB002 - 316SS MOUNTING BRACKET FOR MODELS EH37; INCLUDES 2 SS U-BOLTS & FASTENERS**



## OVAL FLANGE ADAPTOR — 10007-030-147



SECTION A-A