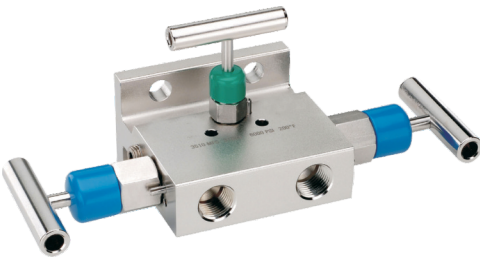
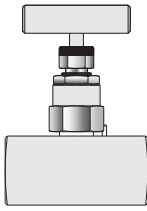


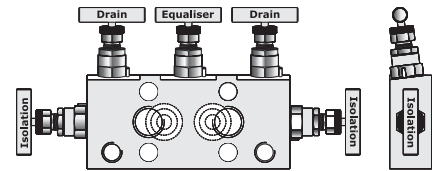
# INSTRUMENT VALVES



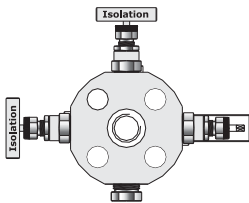
# INSTRUMENT VALVES



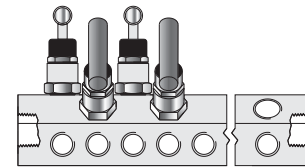
NEEDLE VALVES



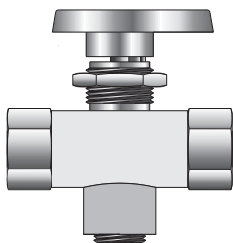
MANIFOLD VALVES



MONOFLANGE VALVES



AIR HEADER DISTRIBUTER



BALL VALVES



CHECK VALVES



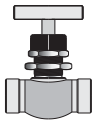
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- Integral Bonnet Needle Valves Forged-Straight pattern (6000psig / 414barg) .....pg 32

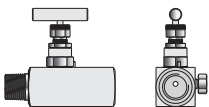


- Soft seated screwed bonnet needle valves..... pg 33



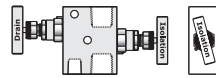
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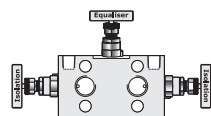
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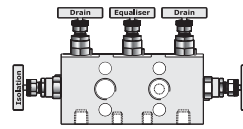
#### Two valve instrument manifolds Pressure (6000psig / 414barg)

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- Remote mounting static pressure manifolds Process 1/2"NPT (F) Instrument 1/2"NPT (F) ..... pg.37
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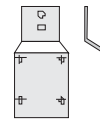
#### Two valve instrument manifolds Pressure (6000psig / 414barg)

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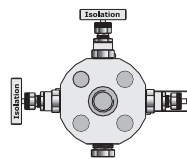


#### Five valve instrument manifolds

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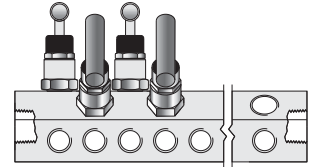


### Instrument Monoflange Valves



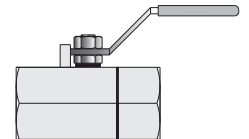
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### Air header distributor

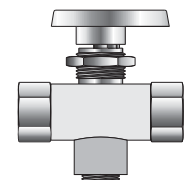


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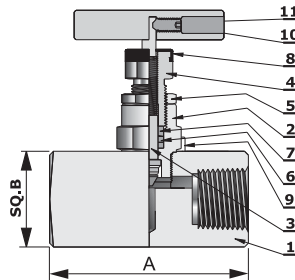
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**BAR STOCK SCREWED BONNET NEEDLE VALVES**  
(6000 psig/414 barg) -  
PRODUCT CODE : CSNVS



**Features**

- Bar stock needle valve Design with back seated blowout proof.
- Hard seat - with non-rotating stem tip , - with rotating stem tip regulating & Soft seat .
- Dust Cap on bonnet pusher protects stem threads from external contamination.
- Packing and sealing are leak tight for easy operation.
- Low torque operating T bar handle.
- Externally adjustable gland
- Bonnet lock pin fitted as standard for 6000 psig and for high pressure lock plate as per the design required.

**Specifications**

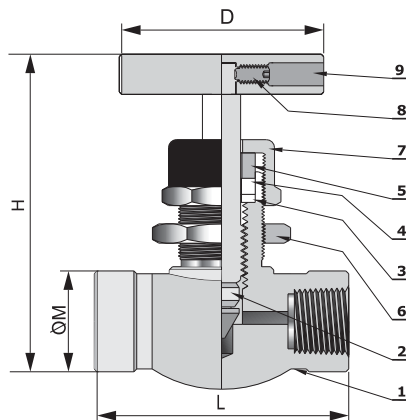
- Size - 1/8" to 1-1/2"
- End connection - NPT, BSPT, Socket weld, Butt weld, Tube fitting.
- With straight and angle pattern
- Working Pressure - 6000Psig
- Temperature Rating - PTFE 450°F, (232°C) / Grafoil 700°F (371°C)
- Material - SS 316, SS 304, C.S., F11, Hastelloy, Monel, Inconel, Valve can be supplied to meet the current revision of NACE MR-01-75 (Sour Gas service).
- Packing - PTFE, Grafoil
- Panel mounting on request.
- All valves are 100% factory tested at 1000psig.
- Lubrication - Dye molly sulphide.

Valve Size		COMFIT PRODUCT CODE	Orifice	Sq. B	A
Inlet	Outlet				
1/8" NPT(M)	1/8" NPT(M)	2NM-CSNVS	3.0	25	62
1/8" NPT(F)	1/8" NPT(F)	2NF-CSNVS	3.0	25	44
1/8" NPT(M)	1/8" NPT(F)	2NM-CSNVS-2NF	3.0	25	53
1/8" NPT(F)	1/8" NPT(M)	2NF-CSNVS-2NM	3.0	25	53
1/4" NPT(M)	1/4" NPT(M)	4NM-CSNVS	3.0	25	71
1/4" NPT(F)	1/4" NPT(F)	4NF-CSNVS	3.0	25	53
1/4" NPT(M)	1/4" NPT(F)	4NM-CSNVS-4NF	3.0	25	62
1/4" NPT(F)	1/4" NPT(M)	4NF-CSNVS-4NM	3.0	25	62
3/8" NPT(M)	3/8" NPT(M)	6NM-CSNVS	3.0	25	71
3/8" NPT(F)	3/8" NPT(F)	6NF-CSNVS	3.0	25	53
3/8" NPT(M)	3/8" NPT(F)	6NM-CSNVS-6NF	3.0	25	62
3/8" NPT(F)	3/8" NPT(M)	6NF-CSNVS-6NM	3.0	25	62
1/2" NPT(M)	1/2" NPT(M)	8NM-CSNVS	4.0	28	80
1/2" NPT(F)	1/2" NPT(F)	8NF-CSNVS	4.0	28	62
1/2" NPT(M)	1/2" NPT(F)	8NM-CSNVS-8NF	4.0	28	71
1/2" NPT(F)	1/2" NPT(M)	8NF-CSNVS-8NM	4.0	28	71
3/4" NPT(M)	3/4" NPT(M)	12NM-CSNVS	4.0	35	91
3/4" NPT(F)	3/4" NPT(F)	12NF-CSNVS	4.0	35	64
3/4" NPT(M)	3/4" NPT(F)	12NM-CSNVS-12NF	4.0	35	78
3/4" NPT(F)	3/4" NPT(M)	12NF-CSNVS-12NM	4.0	35	78
1" NPT(M)	1" NPT(M)	16NM-CSNVS	4.0	42	118
1" NPT(F)	1" NPT(F)	16NF-CSNVS	4.0	42	82
1" NPT(M)	1" NPT(F)	16NM-CSNVS-16NF	4.0	42	100
1" NPT(F)	1" NPT(M)	16NF-CSNVS-16NM	4.0	42	100

Sr. No.	Description	Qty.	Material
1	Body	1	SS 316
2	Bonnet	1	SS 316
3	Stem (non-rotating tip)	1	SS 316
4	Bonnet Pusher	1	SS 316
5	Check Nut	1	SS 316
6	Packing	2	PTFE/Graphoil
7	Washer	1	SS 316
8	Dust Cap	1	Plastic
9	Stopper Pin	1	SS 316
10	Grub Screw	1	SS
11	Handle	1	SS 304

**INTEGRAL BONNET NEEDLE VALVES**

Forged - Straight Pattern (6000 psig / 414 barg) -  
PRODUCT RANGE : CINVF

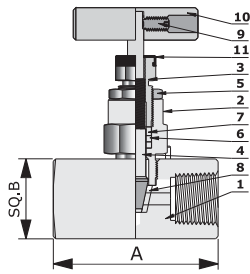


Sr. No.	Description	Material	
1	Body	SS 316/ASTM A 182	CS/ASTM A 105
2	Stem (non-rotating tip)	SS 316/ASTM A 182	SS 316/ASTM A 105
3	Washer	SS 316/ASTM A 182	SS 316/ASTM A 105
4	Packing	PTFE	PTFE
5	Gland	SS 316/ASTM A 182	CS/ASTM A 105
6	Panel nut	SS 316/ASTM A 182	CS/ASTM A 105
7	Gland nut	SS 316/ASTM A 182	CS/ASTM A 105
8	Grub Screw	SS	SS
9	Handle	SS 316/ASTM A 182	SS 316/ASTM A 276

Valve Size		COMFIT PRODUCT RANGE	Orifice	Ø M	L	H1	D
Inlet	Outlet						
1/8" NPT(F)	1/8" NPT(F)	2NF-CINVF	3.0	20	48	63	50
1/4" NPT(F)	1/4" NPT(F)	4NF-CINVF	3.0	26	54	78	50
3/8" NPT(F)	3/8" NPT(F)	6NF-CINVF	4.0	32	54	85	50
1/2" NPT(F)	1/2" NPT(F)	8NF-CINVF	4.0	32	60	85	60
3/4" NPT(F)	3/4" NPT(F)	12NF-CINVF	4.0	38	68	90	60
1" NPT(F)	1" NPT(F)	16NF-CINVF	4.0	44	70	96	60

DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.

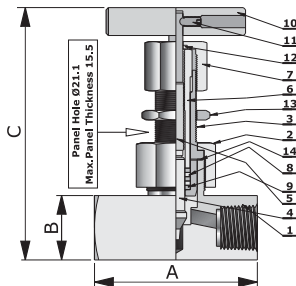
## SOFT SEATED SCREWED BONNET NEEDLE VALVES PRODUCT CODE : CSSNV



Nos.	Description	Qty.	Material
1	Body	1	SS 316
2	Bonnet	1	SS 316
3	Bonnet Pusher	1	SS 316
4	Stem	1	SS 316
5	Check Nut	1	SS 316
6	Packing	2	PTFE
7	Gland	1	SS 316
8	Seat	1	PTFE
9	Grub Screw	1	SS
10	Handle	1	SS 304
11	Dust Cap	1	Plastic

COMFIT PRODUCT RANGE	Inlet	Outlet	Orifice	A	B
4NF-CSSNV	1/4" NPT(F)	1/4" NPT(F)	4.8	62	32
6NF-CSSNV	3/8" NPT(F)	3/8" NPT(F)		62	32
8NF-CSSNV	1/2" NPT(F)	1/2" NPT(F)		72	35
4NM-CSSNV-4NF	1/4" NPT(M)	1/4" NPT(F)		62	32
6NM-CSSNV-6NF	3/8" NPT(M)	3/8" NPT(F)		62	32
8NM-CSSNV-8NF	1/2" NPT(M)	1/2" NPT(F)		72	35

## UNION BONNET NEEDLE VALVES (6000 psig / 414 barg) PRODUCT RANGE : CUBNV



Nos.	Description	Qty.	Material
1	Body	1	SS 316
2	Bonnet Nut	1	SS 316
3	Bonnet	1	SS 316
4	Lower Stem	1	SS 316
5	Upper Stem	1	SS 316
6	Stem Guide	1	PTFE
7	Packing Nut	1	SS 316
8	Packing	1	PTFE
9	Packing Washer	1	SS 316
10	Handle	1	SS 304
11	Grub Screw	1	SS
12	Dust Seal	1	Nylon
13	Locking Nut	1	SS 316
14	Bonnet Seal	1	PTFE

COMFIT PRODUCT RANGE	Inlet	Outlet	Orifice	A	B
4NF-CUBNV	1/4" NPT(F)	1/4" NPT(F)	6.4	58	30118
6NF-CUBNV	3/8" NPT(F)	3/8" NPT(F)	7.9	66	30118
8NF-CUBNV	1/2" NPT(F)	1/2" NPT(F)	7.9	76	30118

DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.

### Description

- Soft seated Needle valves are designed for operation with upto 6000 psig (414 barg) rating With Complete standard PTFE stem packing & self centering non-rotating stem, back-seated needle design, it gives complete sealing security. Stem threads above packing protects stem from media.
- This is designed for repetitive bubble-tight shut-off, safety, and a long life with easy maintenance. Online replaceable soft seats give perfect alignment positive tightness at closure.
- This is rising plug design provides good regulation.
- Valve can be supplied CS,SS & also supplied to meet the current revision of NACE MR-01-75 (Sour Gas service).

### Features

- Square body bar stock needle valve Design with back seated blowout proof.
- Dust Cap on bonnet pusher protects stem threads from external contamination.
- Packing and sealing are leak tight for easy operation & Packing below threads prevents lubricant washout, thread corrosion, and keeps solids from entering thread area causing galling. This also prevents process contamination.
- Low torque operating T bar handle.
- Bonnet Locking Pin Prevents accidental disassembly of bonnet from valve body.
- On line replacement of valve seat is allowed without removing the valve from the line which offers positive bubble-tight shut-off.

### Specifications

- Size - 1/4", 3/8", 1/2"
- End connection - NPT, BSPT, Socket weld, Butt weld, Tube fitting.
- With straight pattern
- Working Pressure - upto 6000Psig
- Temperature Rating - PTFE 450°F, (232°C) / Grafoil 700°F (371°C)
- Material - SS 316, SS 304, C.S., F11, Hastelloy, Monel, Valve can be supplied to meet the current revision of NACE MR-01-75 (Sour Gas service).
- Packing - PTFE, Grafoil
- Panel mounting on request.
- All valves are 100% factory tested at 1000 psig.
- Lubrication - Dye molly sulphide.

### Purpose

Union Bonnet Valves have been engineered for use at pressures up to 6,000 (414 bar) and temperatures as high as 1,200 °F (649 °C). A non-rotating lower stem helps to extend packing life by removing rotation from the packing area. Stem packing below the threads isolates the thread lubricant from the flow, ensuring adequate lubrication regardless of the media.

### Features

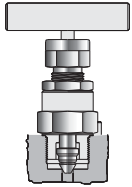
- Union bonnet design ensures high integrity seal under severe service applications
- Packing below the power threads protects thread lubricants from media and isolates the lubricants from the media
- Dust seal in the packing nut protects stem threads from external contamination
- Stem swivel above the packing eliminates entrapment area and increases packing life
- Choice of Grafoil® or PTFE packing
- Choice of Regulating or Blunt stem types. Blunt stem type helps combat wire draw which may occur when two phase flow is present (i.e. steam service)
- 316 stainless steel construction

### Specifications

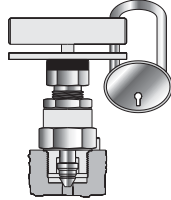
- Size - 1/4", 3/8", 1/2" NPT(F) & 1/4", 3/8", 1/2", 10mm, 12mm ODT
- End connection - NPT, Tube fitting.
- With straight and angle pattern
- Working Pressure - 6000Psig
- Temperature Rating - PTFE 450°F, (232°C) / Grafoil 700°F (371°C)
- Material - SS 316
- Packing - PTFE, Grafoil
- Panel mounting.
- Lubrication - Dye molly sulphide.
- 100% factory tested at 1000 psig.



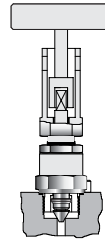
## OPTIONAL SCREWED BONNET DESIGN



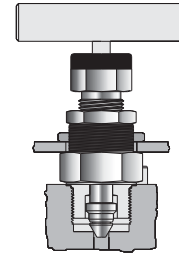
Standard Bonnet



T-Bar Locking Handle



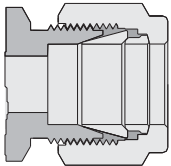
Anti Temper Stem



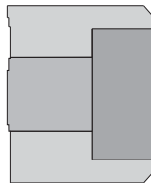
Panel Mounting

## Optional End Connection & Stem Tips for Screwed Bonnet Design

### OPTIONAL END CONNECTIONS



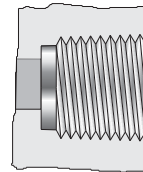
Tube Fitting



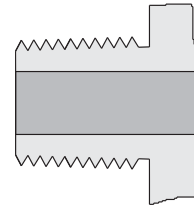
Socket Weld



Butt Weld

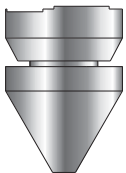


Female Thread

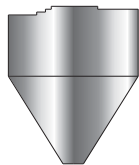


Male Thread

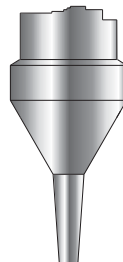
### OPTIONAL STEM TIPS



Non-Rotating



Rotating



Regulating

OPTIONAL ARRANGEMENT FOR NEEDLE VALVE, MANIFOLD, AIR HEADERS, & GAUGE VALVE

PANEL MOUNTING AVAILABLE.

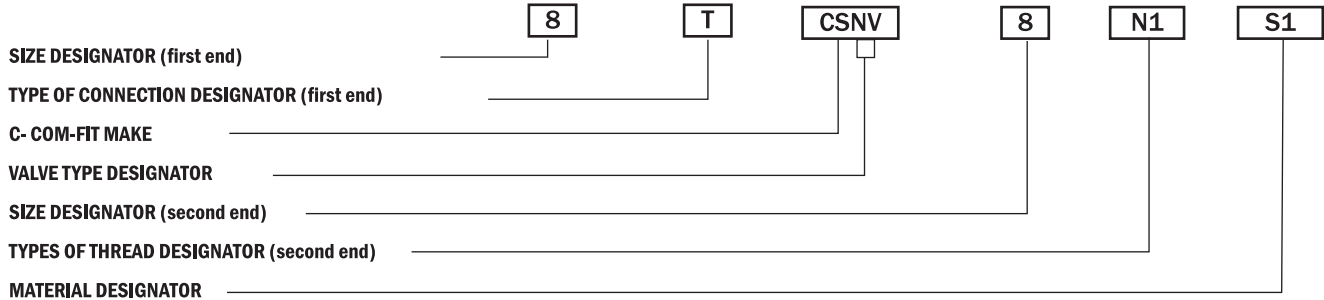
ANTI TAMPER PROOF AVAILABLE.

HANDLE LOCKING AVAILABLE.

DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.



## ORDERING CODE FOR NEEDLE VALVE



SIZE DESIGNATOR (first end)

TYPE OF CONNECTION DESIGNATOR (first end)

C- COM-FIT MAKE

VALVE TYPE DESIGNATOR

SIZE DESIGNATOR (second end)

TYPES OF THREAD DESIGNATOR (second end)

MATERIAL DESIGNATOR

VALVE TYPE	DESIGNATOR
Screwed bonnet needle valve.....	SNV

END CONNECTION	DESIGNATOR
ODT	T
NPT (male)	NM
NPT (female)	NF
BSP- Tappered (male)	RTM
BSP- Tappered (female)	RTF
BSP- Parallel (male)	RSM
BSP- Parallel (female)	RSF
Pipe - Buttweld	PB
Socketweld	SW

SIZE IN INCH	DESIGNATOR	SIZE IN METRIC	DESIGNATOR
1/8"	2	2	2M
3/16"	3	3	3M
1/4"	4	4	4M
5/16"	5	6	6M
3/8"	6	8	8M
1/2"	8	10	10M
5/8"	10	12	12M
3/4"	12	14	14M
7/8"	12	15	15M
1"	16	16	16M
1-1/4"	20	18	18M
1-1/2"	24	20	20M
		22	22M
		25	25M

BODY PATTERN	DESIGNATOR
STRAIGHT	01
ANGLE	02
CROSS	03

Add the designator suffix to the part number

PACKING	DESIGNATOR
PTFE - Temp - 250° F to +450° F	Standard by default
GRAFOIL - Temp 700° F	P1
PEEK - Temp 572° F	P2
BUNA-N- Temp 35° F to 250° F	P3
VITON - Temp 20° F to +400° F	P4

Add the designator suffix to the part number

STEM TIP	DESIGNATOR
NON - ROTATING	Standard by default
ROTATING	ST1
REGULATING	ST1
SOFT TIP	ST3
BLUNT TIP	ST4

Add the designator suffix to the part number

SEAT	DESIGNATOR
HARD SEAT	Standard by default
SOFT SEAT - with STELLITE-6	S1
SOFT SEAT - with PTFE	S2

Add the designator suffix to the part number

MATERIAL	DESIGNATOR
STEEL	S
SS 316	S1
SS 316L	S2
SS 316/SS 316L	S1S2
SS 304	S3
SS 304L	S4
CARBON STEEL	S5
P/F321	S6
SS 347	S7
P/F 11	S8
P/F 22	S9
P/F 5	S10
A105N	S11
P/F 91	S12
LF2	LF2
ALUMINIUM	AL
BRASS	B
ALLOY 20	C20
ALLOY C-276	HC
ALLOY 600	INC
ALLOY 825	INC1
ALLOY 625	INC2
TITANIUM	TI
MONEL 400	M
DUPLEX-F60 / S32205	D
DUPLEX-F51 / S31803	D1
DUPLEX-F53 / S32750	D3
DUPLEX F55 / S32760	D5
NACE MR-0175	NM
NACE MR0103	NM1

HANDLE	DESIGNATOR
T- BAR	Standard by default
ROUND HANDLE	H1

OPTIONAL	DESIGNATOR
PANEL MOUNTING	OP1
ANTITEMPER PROOF	OP2
LOCKING ARRANGEMENT	OP3

Add the designator suffix to the part number

ORIFICE	DESIGNATOR
Ø2.4mm	Ø2.4
Ø3mm	Ø3.0
Ø4.0mm	Standard by default
Ø6.0mm	Ø6.0
Ø7.0mm	Ø7.0
Ø8.0mm	Ø8.0
Ø9.0mm	Ø9.0

Add the designator (orifice size) suffix to the part number



## GAUGE VALVES

PRODUCT CODE : CGV

### Purpose

Bar stock Gauge Needle valves are designed for operation with upto 6000 psig (414 barg) rating. With Complete standard PTFE stem packing & self centering non-rotating stem, back-seated needle design, it gives complete sealing security. Stem threads above packing protects stem from media.

### Features

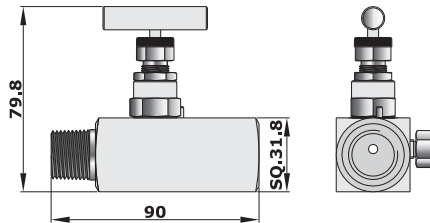
- Bar stock Gauge needle valve Design with back seated blowout proof.
- Hard seat - with non-rotating stem tip , - with rotating stem tip-regulating & Soft seat .
- Dust Cap on bonnet pusher protects stem threads from external contamination.
- Packing and sealing are leak tight for easy operation.
- Low torque operating T bar handle.
- Externally adjustable gland.
- Bonnet lock pin fitted as standard.

### Specifications

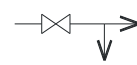
- Working Pressure - 6000 Psig
- Temperature Rating - PTFE 450°F, (232°C) / Grafoil 700°F (371°C)
- Material - SS 316, SS 304, C.S., F11, Hastelloy, Monel, Valve can be supplied to meet the current revision of NACE MR-01-75 (Sour Gas service).
- Packing - PTFE, Grafoil
- Panel mounting on request.
- All valves are 100% factory tested at 1000 psig.
- Lubrication - Dye molly sulphide.

### GAUGE VALVE with bleed plug

PRODUCT CODE : CGVBP



Size : 1/2" NPT(M) x 1/2" NPT (M)  
3/4" NPT(M) x 1/2" NPT(M)

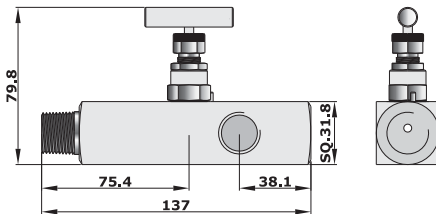


Connection : NPT, BSPT

COMFIT PRODUCT CODE	Inlet	Outlet
8NM-CGVBP-8NF	1/2"NPT(M)	1/2"NPT(F)
12NM-CGVBP-NF	3/4"NPT(M)	1/2"NPT(F)

### MULTIPOINT GAUGE VALVE

PRODUCT CODE : CGVMP



Size : 1/2" NPT(M) x 1/2" NPT(M)  
3/4" NPT(M) x 1/2" NPT(M)

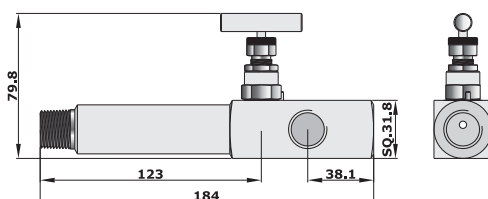


Connection : NPT, BSPT

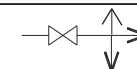
COMFIT PRODUCT CODE	Inlet	Outlet
8NM-CGVMP-8NF	1/2"NPT(M)	1/2"NPT(F)x3
12NM-VGVMP-NF	3/4"NPT(M)	1/2"NPT(F)x3

### MULTIPOINT GAUGE VALVE with lagging extension

PRODUCT CODE : CGVMPL



Size : 1/2" NPT(M) x 1/2" NPT(M)  
3/4" NPT(M) x 1/2" NPT(M)

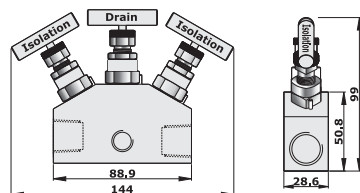
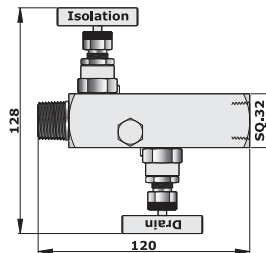
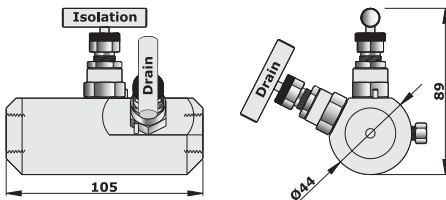
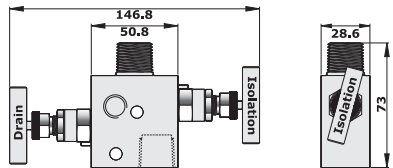
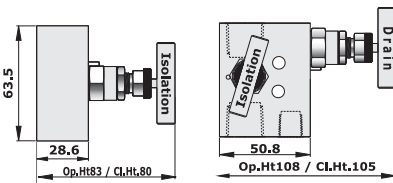
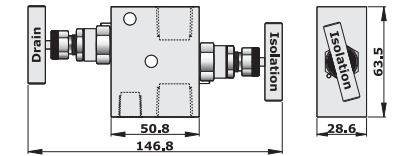


Connection : NPT, BSPT

COMFIT PRODUCT CODE	Inlet	Outlet
8NM-CGVMP-8NF	1/2"NPT(M)	1/2"NPT(F)x3
12NM-CGVNP NF	3/4"NPT(M)	1/2"NPT(F)x3

DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.

**TWO VALVE INSTRUMENT MANIFOLDS**  
 Remote / Direct Mounted Differential Pressure Manifolds  
 Low Pressure 6000 psig (414 barg)  
 \* High pressure up to 10,000 psi available on request.



**PRODUCT CODE : C2VIM RM 01**  
 Remote Mounting



Product Code	Inlet	Outlet	Bleed/Vent/Test
C2VIM RM-01	1/2" NPT(F)	1/2" NPT(F)	1/4" NPT(F)

**PRODUCT CODE : C2VIM RM 02**  
 Remote Mounting



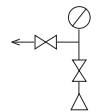
Product Code	Inlet	Outlet	Bleed/Vent/Test
C2VIM RM-02	1/2" NPT(F)	1/2" NPT(F)	1/4" NPT(F)
C2VIM RM-02A	1/2" NPT(F)	1/2" NPT(F)	1/2" NPT(F)

**PRODUCT CODE : C2VIM RM 03**  
 Remote Mounting



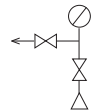
Product Code	Inlet	Outlet	Bleed/Vent/Test
C2VIM RM-03	1/2" NPT(F)	1/2" NPT(M)	1/4" NPT(F)
C2VIM RM-03A	1/2" NPT(M)	1/2" NPT(F)	1/4" NPT(F)

**PRODUCT CODE : C2VIM RM 04**  
 Remote Mounting



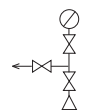
Product Code	Inlet	Outlet	Bleed/Vent/Test
C2VIM RM-04	1/2" NPT(F)	1/2" NPT(F)	1/4" NPT(F)
C2VIM RM-04A	1/4" NPT(F)	1/4" NPT(F)	1/4" NPT(F)

**PRODUCT CODE : C2VIM RM 05**  
 Remote Mounting



Product Code	Inlet	Outlet	Bleed/Vent/Test
C2VIM RM-05	1/2" NPT(M)	1/2" NPT(F)	1/4" NPT(F)
C2VIM RM-05A	1/2" NPT(F)	1/2" NPT(M)	1/4" NPT(F)
C2VIM RM-05B	1/2" SW	1/2" NPT(F)	1/4" NPT(F)
C2VIM RM-05C	1/2" NPT(F)	1/2" NPT(F)	1/4" NPT(F)
C2VIM RM-05D	1/2" NPT(M)	1/2" NPT(M)	1/4" NPT(F)

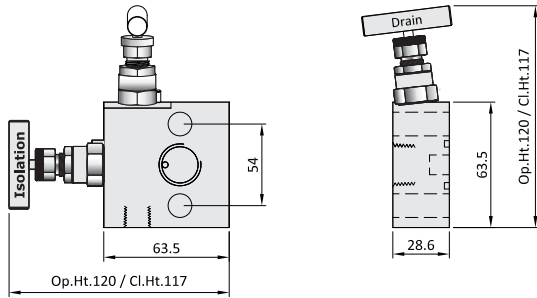
**PRODUCT CODE : C2VIM RM 06-06A**  
 Remote Mounting



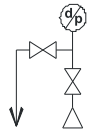
Product Code	Inlet	Outlet	Bleed/Vent/Test
C2VIM RM-06	1/2" NPT(M)	1/2" NPT(F)	1/4" NPT(F)
C2VIM RM-06A	1/2" NPT(M)	1/2" NPT(F)	1/4" NPT(F)

DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.

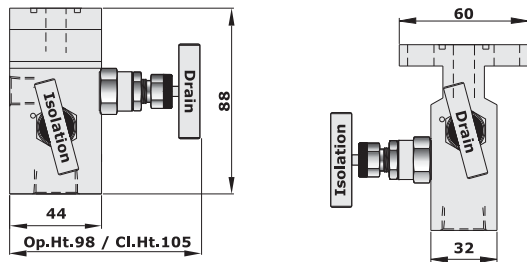
**TWO VALVE INSTRUMENT MANIFOLDS**  
 Remote / Direct Mounted Differential Pressure Manifolds  
 Low Pressure 6000 psig (414 barg)  
 \* High pressure up to 10,000 psi available on request.



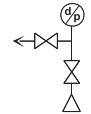
**PRODUCT CODE : C2VIM DM 01**  
 Direct Mounting



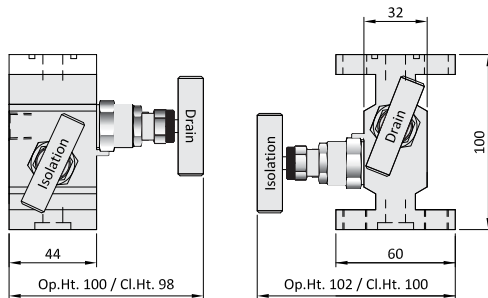
Product Code	Inlet	Outlet	Bleed/Vent/Test
C2VIM DM-01	1/2" NPT(F)	Flanged	1/4" NPT(F) with two plug



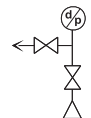
**PRODUCT CODE : C2VIM DM 02**  
 Direct Mounting



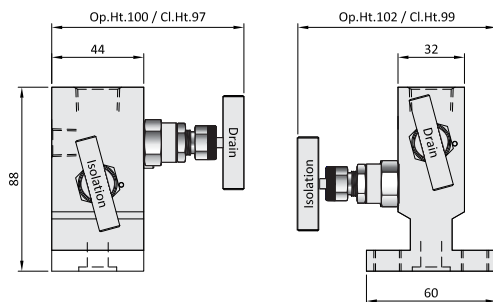
Product Code	Inlet	Outlet	Bleed/Vent/Test
C2VIM DM-02	1/2" NPT(F)	Flanged	1/4" NPT(F) with two plug



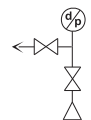
**PRODUCT CODE : C2VIM DM 03**  
 Direct Mounting



Product Code	Inlet	Outlet	Bleed/Vent/Test
C2VIM DM-03	1/2" NPT(F)	Flanged	1/4" NPT(F) with two plug



**PRODUCT CODE : C2VIM DM 04**  
 Direct Mounting

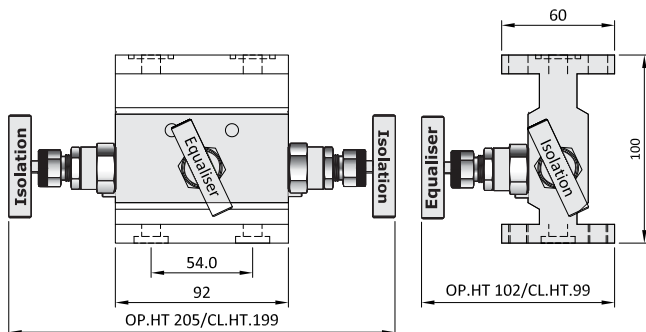
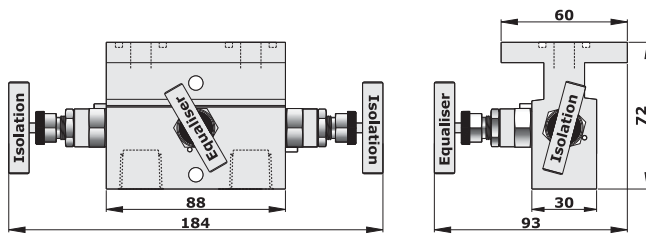
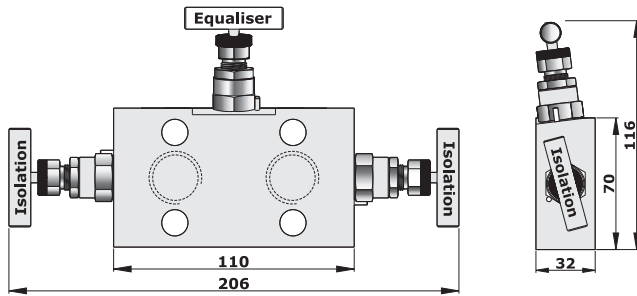
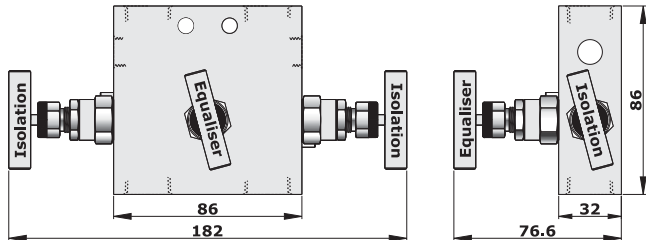


Product Code	Inlet	Outlet	Bleed/Vent/Test
C2VIM DM-04	Flanged	1/2" NPT(F)	1/4" NPT(F)
C2VIM DM-04A	Flanged	1/2" NPT(M)	1/4" NPT(F)

## THREE VALVE INSTRUMENT MANIFOLDS

Remote / Direct Mounted Differential Pressure Manifolds Low Pressure 6000 psig (414 barg)

\* High pressure up to 10,000 psi available on request.



**PRODUCT CODE :**  
Remote Mounting



C3VIM RM 01



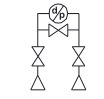
C3VIM RM 01A



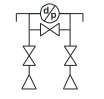
C3VIM RM 01B

Product Code	Inlet	Outlet	Bleed/Vent/Test
C3VIM RM-01	1/2" NPT(F)	1/2" NPT(F)	-----
C3VIM RM-01	1/2" NPT(F)	1/2" NPT(F)	1/4" NPT(F) with two plug
C3VIM RM-01	1/2" NPT(F)	1/2" NPT(F)	1/4" NPT(F) with two plug

**PRODUCT CODE :**  
Direct Mounting



C3VIM DM-01



C3VIM DM-01A



C3VIM DM-01B

Product Code	Inlet	Outlet	Bleed/Vent/Test
C3VIM DM-01	1/2" NPT(F)	Flanged	-----
C3VIM DM-01A	1/2" NPT(F)	Flanged	1/4" NPT(F) With two plug
C3VIM DM-01B	1/2" NPT(F)	Flanged	1/4" NPT(F) With two plug

**PRODUCT CODE :**  
Direct Mounting



C3VIM DM-02



C3VIM DM-02A



C3VIM DM-02B

Product Code	Inlet	Outlet	Bleed/Vent/Test
C3VIM DM-02	1/2" NPT(F)	Flanged	-----
C3VIM DM-02A	1/2" NPT(F)	Flanged	1/4" NPT(F) With two plug
C3VIM DM-02B	1/2" NPT(F)	Flanged	1/4" NPT(F) With two plug

**PRODUCT CODE :**  
Direct Mounting



C3VIM DM 03



C3VIM DM 03-A



C3VIM DM 03-B

Product Code	Inlet	Outlet	Bleed/Vent/Test
C3VIM DM-03	Flanged	Flanged	-----
C3VIM DM-03A	Flanged	Flanged	1/4" NPT(F) With two plug
C3VIM DM-03B	Flanged	Flanged	1/4" NPT(F) With two plug

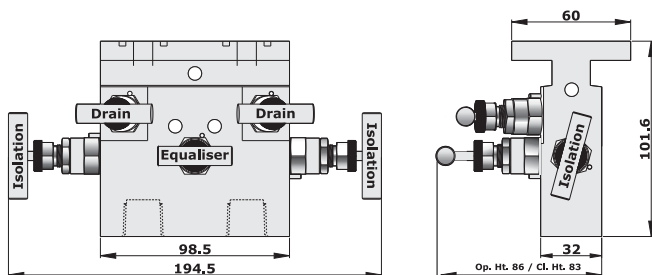
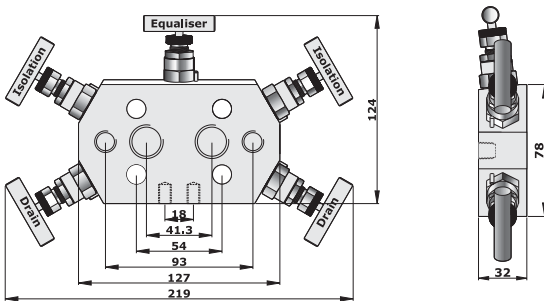
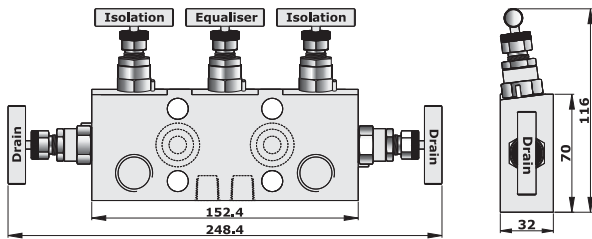
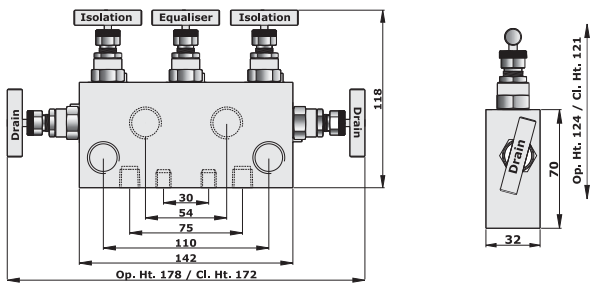
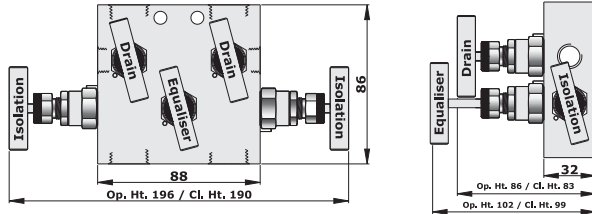
DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.

## FIVE VALVE INSTRUMENT MANIFOLDS

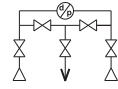
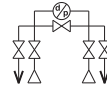
Remote / Direct Mounted Differential Pressure Manifolds

Low Pressure 6000 psig (414 barg)

\* High pressure up to 10,000 psi available on request.



Remote Mounting



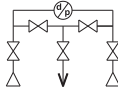
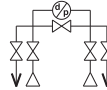
PRODUCT CODE :

C5VIM RM-01

C5VIM RM-01A

Product Code	Inlet	Outlet	Bleed/ Vent/ Test
C5VIM RM-01	1/2" NPT(F)	1/2" NPT(F)	-----
C5VIM RM-01A	1/2" NPT(F)	1/2" NPT(F)	1/4" NPT(F) With two plug

Remote Mounting



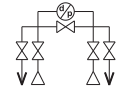
PRODUCT CODE :

C5VIM RM-02

C5VIM RM-02A

Product Code	Inlet	Outlet	Bleed/ Vent/ Test
C5VIM RM-02	1/2" NPT(F)	1/2" NPT(F)	1/4" NPT(F) With two plug
C5VIM RM-02A	1/2" NPT(F)	1/2" NPT(F)	1/4" NPT(F) With two plug

Remote Mounting

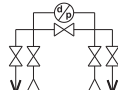


PRODUCT CODE :

C5VIM DM-01

Product Code	Inlet	Outlet	Bleed/ Vent/ Test
C5VIM DM-01	1/2" NPT(F)	Flanged	1/4" NPT(F) With two plug

Direct Moulding

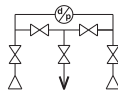
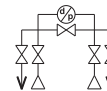


PRODUCT CODE :

C5VIM DM-02

Product Code	Inlet	Outlet	Bleed/ Vent/ Test
C5VIM DM-02	1/2" NPT(F)	Flanged	1/4" NPT(F) With two plug

Direct Moulding



PRODUCT CODE :

C5VIM DM-03

C5VIM DM-03A

Product Code	Inlet	Outlet	Bleed/ Vent/ Test
C5VIM DM-03	1/2" NPT(F)	Flanged	1/4" NPT(F) With two plug
C5VIM DM-03A	1/2" NPT(F)	Flanged	1/4" NPT(F) With one plug

DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.

# Instrument Valves

Comfit & Valves Pvt. Ltd.

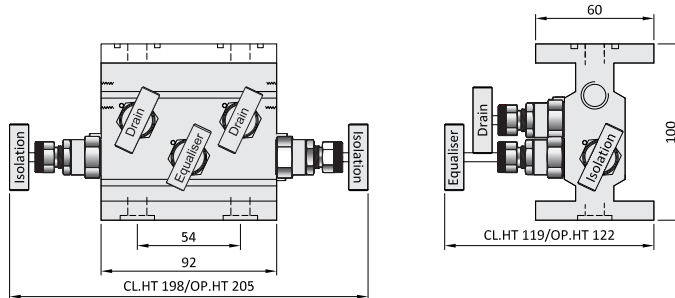


## FIVE VALVE INSTRUMENT MANIFOLDS

Remote / Direct Mounted Differential Pressure Manifolds

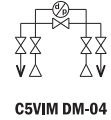
Low Pressure 6000 psig (414 barg)

\* High pressure up to 10,000 psi available on request.

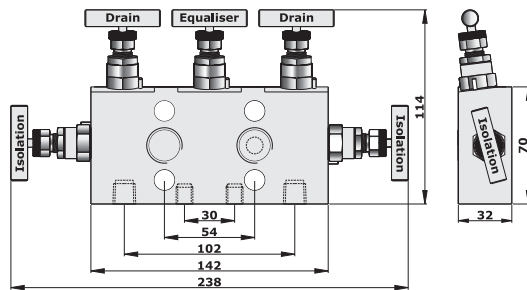


Direct Mounting

PRODUCT CODE :

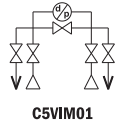


Product Code	Inlet	Outlet	Bleed/Vent/Test
C5VI DM-04	Flanged	Flanged	1/4" NPT(F) With two plug
C5VIM DM-04A	Flanged	Flanged	1/4" NPT (F) With one plug



Standard

PRODUCT CODE :



Product Code	Inlet	Outlet	Bleed/Vent/Test
C5VI DM-05	Pipe	Flange	1/4" NPT(F) With two plug

## MOVNTING KIT

Brackets, U-Bolts, nuts, Washer and Bolts are included in the Kit

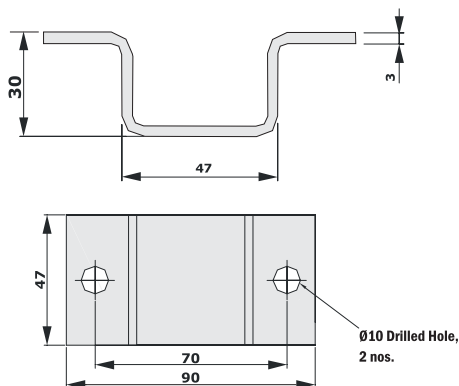
Simple to install bracket for horizontal/vertical 2" stand pipe, wall, panel or base mounting & suitable for all direct & remote Mounting manifolds.

Bracket stand-off prevents handle obstruction & design enables horizontal or vertical instrument positioning

## BRACKETS

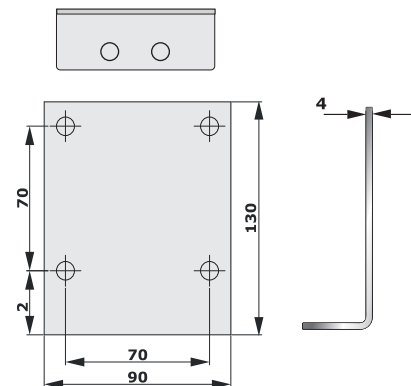
Product Code :

BKT001



Product Code :

BKT003

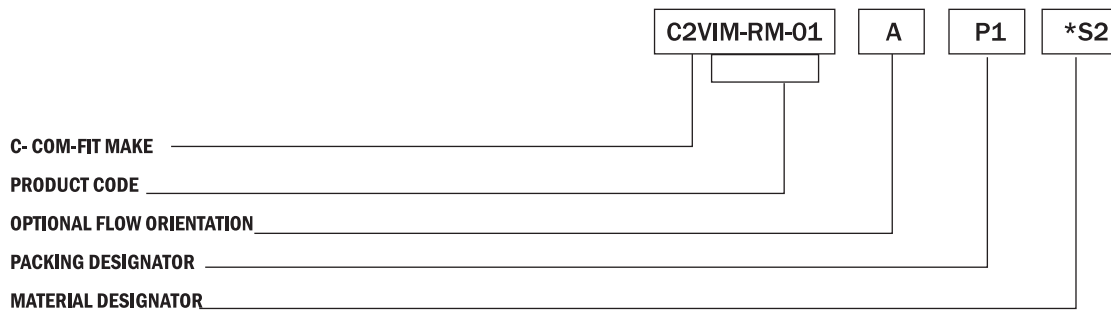


Selection of movnting kit depends on the type of manifold valve and it's position (Vertical or Horizontal)

DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.



## ORDERING CODE FOR INSTRUMENT MANIFOLD VALVE

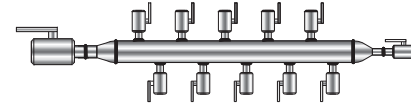
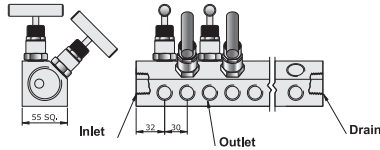


PACKING	DESIGNATOR
PTFE - Temp - 250° F to +450° F _____ Standard by default	
GRAFOIL - Temp 700° F _____	P1
PEEK - Temp 572° F _____	P2
BUNA-N- Temp 35° F to 250° F _____	P3
VITON - Temp 20° F to +400° F _____	P4

Note : \* No need to designate 'S1' for SS 316 material.

MATERIAL	DESIGNATOR
STEEL	S
SS 316	S1
SS 316L	S2
SS 316/SS 316L	S1S2
SS 304	S3
SS 304L	S4
CARBON STEEL	S5
P/F321	S6
SS 347	S7
P/F 11	S8
P/F 22	S9
P/F 5	S10
A105N	S11
P/F 91	S12
Lf2	LF2
ALUMINIUM	AL
BRASS	B
ALLOY 20	C20
ALLOY C-276	HC
ALLOY 600	INC
ALLOY 825	INC1
ALLOY 625	INC2
TITANIUM	TI
MONEL 400	M
DUPLEX-F60 / S32205	D
DUPLEX-F51 / S31803	D1
DUPLEX-F53 / S32750	D3
DUPLEX F55 / S32760	D5
NACE MR-0175	NM
NACE MR0103	NM1

**AIR HEADER DISTRIBUTERS PRODUCT CODE : CAHD**



Inlet	Drain	Outlet	Product Code
1/2"	1/4"	1/2"	CAHDB-8F-4F-8F
3/4"	1/4"	3/4"	CAHDB-12F-4F-12F
1/2"	1/2"	1/2"	CAHDB-8F-8F-8F
3/4"	1/2"	3/4"	CAHDB-12F-8F-12F

Pipe Sch.	Inlet	Drain	Outlet	Product Code
40	3/4"	1/4"	1/2'	CAHDP40-12F-4F-8F
	3/4"	1/2'	3/4"	CAHDP40-12F-8F-12F
	1"	1/4"	1/2'	CAHDP40-16F-4F-8F
	1"	1/2"	3/4"	CAHDP40-16F-8F-12F
80	3/4"	1/4"	1/2'	CAHDP80-12F-4F-8F
	3/4"	1/2'	3/4"	CAHDP80-12F-8F-12F
	1"	1/4"	1/2'	CAHDP80-16F-4F-8F
	1"	1/2"	3/4"	CAHDP80-16F-8F-12F
160	3/4"	1/4"	1/2'	CAHDP160-12F-4F-8F
	3/4"	1/2'	3/4"	CAHDP160-12F-8F-12F
	1"	1/4"	1/2'	CAHDP160-16F-4F-8F
	1"	1/2"	3/4"	CAHDP160-16F-8F-12F
XXS	3/4"	1/4"	1/2'	CAHDPXXS-12F-4F-8F
	3/4"	1/2'	3/4"	CAHDPXXS-12F-8F-12F
	1"	1/4"	1/2'	CAHDPXXS-16F-4F-8F
	1"	1/2"	3/4"	CAHDPXXS-16F-8F-12F

**DESCRIPTION**

● Air headers are mainly used for Air distribution and to centralized several connections. It uses in refineries, liquid petroleum gas processing plant, petro-chemical plants, systems difficult to shut off due to solid contents dust, rust, dirt etc.

**FEATURES**

- Size - Inlet 1/2" x Outlet 1/2", Inlet 3/4" x Outlet 3/4"
- End connections - NPT, BSPT, SW
- Working pressure - 6000 psig (413 bar)
- Temperature rating - PTFE 450°F (232°C), Grafoil - 700°F (371°C)
- Material - SS 316, SS 304, C.S.
- Optional Sour Gas service valves are available confirming to NACE Std.

**BONNET DESIGN**

- Screwed Bonnet Design.
- Hard seat : - with non-rotating stem tip.  
- with rotating stem tip-regulating & Soft seat .
- Dust Cap on bonnet pusher protects stem threads from external contamination.

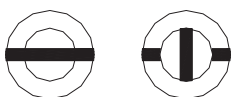
**DESCRIPTION**

● Air headers are mainly used for Air distribution and to Centralized several connections. It uses in refineries, liquid petroleum gas processing plant, petro-chemical plants, systems difficult to shur off due to solid contents dust, rust, dirt etc.

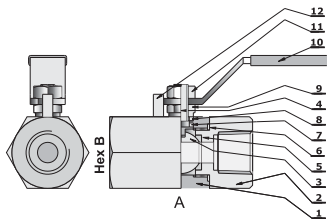
**FEATURES**

- Size - Inlet 1/2" x Outlet 1/2", Inlet 3/4" x Outlet 3/4", Inlet 1" x Outlet 1"
- End connections - NPT, BSPT, flange
- Working pressure - 6000 psig (413 bar)
- Temperature rating - PTFE 450°F (232°C), Grafoil -00°F(371°C)
- Material - SS 316, SS 304, C.S.
- Optional Sour Gas service valves are available confirming to NACE Std. MR - 01 75
- Packing - PTFE, Grafoil

**GENERAL BALL VALVES**



PRODUCT CODE : CGBV



Comfit low pressure Ball Valve offer quick, quarter turn shut off for chemical, petrochemical, oil & gas, pulp & paper, and instrumentation applications. With its blow out resistant stem, The Low-Series is an excellent, cost effective choice for tubing applications ranging in size from 1/4" to

**FEATURES**

- Blow-out resistant stem
- Positive handle stops
- Straight through flow path
- Stainless steel construction

**SPECIFICATIONS**

- Pressure rating: 2000 psig (137.9 bar) CWP
- Temperature rating: -65 °F to 350 °F (-54 °C to 177 °C)
- Orifice: 6 mm to 20 mm
- Body material: Stainless steel
- Body configuration: Inline
- Port connections: ODT, Male Thread, Female Thread, SW, BW.
- Port size: 1/4" to 1"

DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.

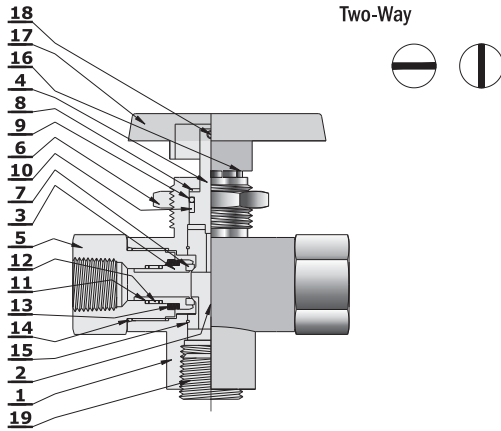
## INSTRUMENT BALL VALVES (High pressure - series)

### TWO-WAY/THREE-WAY

PRODUCT CODE : CHPBV

PRODUCT CODE : C2HPBV

Two-Way



23 : Panel Hole DIA  
9.6 : Max. Panel Thickness

Sr. No.	Description	Material
1	BODY	ASTM A 276 TYPE 316
2	BALL TRUNNION	ASTM A 479 TYPE 316
3	SEAT RETAINER	ASTM A 276 TYPE 316
4	STEM	ASTM A 479 TYPE 316
5	END CONNECTOR	ASTM A 479 TYPE 316
6	PANEL NUT	SS 316
7	SEAT	PEEK
8	STEM WASHER	PEEK
9	STEM O-RING BACKUP	PTFE
10	STEM O-RING	FLUOROCARBON RUBBER
11	SEAT RETAINER O-RING BACKUP	PTFE
12	SEAT RETAINER O-RING	FLUOROCARBON RUBBER
13	CUP WASHER SPRING	SS 316 / INCONEL
14	CONNECTOR SEAL	PTFE/PEEK
15	TRUNNION BEARING	VITON/PEEK
16	HANDLE STOP PIN	SS 304
17	HANDLE	NYLON
18	HANDLE SET SCREW	SS
19	PIPE PLUG	SS 316

#### FEATURES

- Compact, maximum flow design
- Low operating torque
- Panel mounting
- ball valves are designed to be operated in a fully open or fully closed position.
- PEEK trunnion bearings for longer cycle life.
- For 2way 90° actuation & for 3way 180° actuation.
- Blow-out resistant two-piece ball /stem.
- For 2way 3 piece & for 3way 3 piece body design for easy maintenance.
- Heat code traceability

#### SPECIFICATION

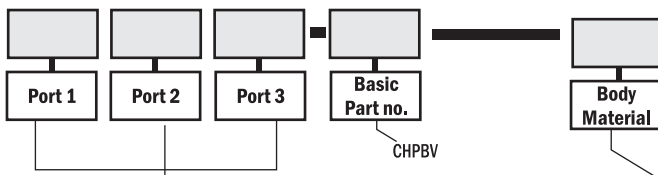
- port connection : Tube compression Female NPT
- 1/8"-1/2" (6mm to 12mm).
- Orifice : for 2way Ø4,8, for 3way Ø4,8.
- Pressure rating 6000 psig.
- SS 316 material Testing

#### TESTING

- Standard production testing : valves are 100% factory tested with nitrogen at 1000 psig (69bar) for leakage at the seats and body seals. Both areas are required to have less than 0.1 SCCM leakage. Optional testing is available upon request.

SIZE INLET/OUTLET T	PART NO.	A	B
1/8" NPT(F)	2NF-C2HPBV	37.3	37.3
1/4" NPT(F)	4NF-C2HPBV	37.3	37.3
1/4" ODT(F)	4T-CHPBV	52.6	52.6
3/8" ODT	6T-CHPBV	55.6	55.6
1/2" ODT	8T-CHPBV	58.4	58.4
6MM ODT	6MT-CHPBV	52.6	52.6
8MM ODT	8MT-CHPBV	52.6	52.6
8MM ODT	8MTS-C2HPBV	52.6	52.6
10MM ODT	10MM ODT	55.9	55.9
12MM ODT	12MT-CHPBV	58.4	58.4

## ORDERING CODE FOR INSTRUMENT BALL VALVE



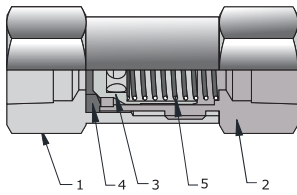
1/8" NPTF	2NF
1/4" NPTF	4NF
1/4" ODT	4T
6MM ODT	6MTD
3/8" ODT	6T
1/2" ODT	8T
8mm ODT	8MTD
10mm ODT	10MTD
12mm ODT	12MTD

MATERIAL	DESIGNATOR	MATERIAL	DESIGNATOR
STEEL	S	ALUMINIUM	AL
SS 316	S1	BRASS	B
SS 316L	S2	ALLOY 20	C20
SS 316/SS 316L	S1S2	ALLOY C-276	HC
SS 304	S3	ALLOY 600	INC
SS 304L	S4	ALLOY 825	INC1
CARBON STEEL	S5	ALLOY 625	INC2
P/F321	S6	TITANIUM	TI
SS 347	S7	MONEL 400	M
P/F 11	S8	DUPLEX-F60 / S32205	D
P/F 22	S9	DUPLEX-F51 / S31803	D1
P/F 5	S10	DUPLEX-F53 / S32750	D3
A105N	S11	DUPLEX F55 / S32760	D5
P/F 91	S12	NACE MR-0175	NM
LF2	LF2	NACE MR0103	NM1

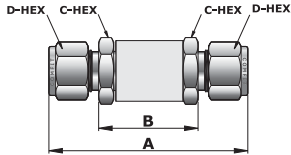
DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.

## CHECK VALVES

PRODUCT CODE : CCHKV



Sr. No.	Description	Qty.	Material
1	Inlet Body	1	SS 316
2	Outlet Body	1	SS 316
3	Poppet	1	SS 316
4	Seat	1	Viton
5	Spring	1	SS 316



### SPECIFICATIONS

- Size - 1/8" to 1"
- End connection - NPT, BSP & ODT
- Material - SS 316 & BRASS
- Optional Sour Gas service valves are available conforming to NACE Std. MR - 01 - 75
- Pressure Rating : SS 316 - size 1/8" to 3/4" - 6000 psig (414bar) CWP  
size 1" - 5000 psig (345 bar) CWP  
Brass - size 1/8" to 1" - 3000 psig (207bar) CWP
- Temperature Rating :  
Fluorocarbon Rubber -15 °F to 400 °F (-26 °C to 204 °C)  
Buna-N Rubber -30 °F to 275 °F (-34 °C to 135 °C)  
Ethylene Propylene Rubber -70 °F to 275 °F (-57 °C to 135 °C)  
Neoprene Rubber -45 °F to 250 °F (-43 °C to 121 °C)  
PTFE -65 °F to 400 °F (-54 °C to 204 °C)
- Orifice : 2.0 mm to 16.7 mm

### APPLICATION

- Check valves are designed for uni-directional flow control of fluids & gases in industries such as chemical processing , oil & gas production, power, paper & pulp.

### FEATURES

- Resilient, custom molded, blow-out resistant seat design
- Back stopped poppet minimizes spring stress
- Back pressure may be required to reseal the valve with nominal cracking pressure.
- Cracking pressures include: 1/3, 1, 5, 10, 25, 50, 75, and 100 psi.
- Lubrication : Dye molly sulphide lubricant is used for outer body, Silicon based lubricant is used for poppet.
- 100% factory tested for both crack and reseal.
- Heat code traceability
- It uses in refineries, liquid petroleum gas processing plant, petro-chemical plants, systems difficult to shut off due to solid contents dust, rust, dirt etc.

Valve Size		Product Code	Orifice	A	C
Inlet	Outlet				
1/8" NPT(F)	1/8" NPT(F)	2NF - CCHKV	3.2	47.2	15.9
1/8" BSPT(F)	1/8" BSPT(F)	2RTF - CCHKV	3.2	47.2	15.9
1/4" NPT(F)	1/4" NPT(F)	4NF - CCHKV	4.7	61.0	19.1
1/4" BSPT(F)	1/4" BSPT(F)	4RTF - CCHKV	4.7	61.0	19.1
3/8" NPT(F)	3/8" NPT(F)	6NF - CCHKV	9.1	67.0	25.4
3/8" BSPT(F)	3/8" BSPT(F)	6RTF - CCHKV	9.1	67.0	25.4
1/2" NPT(F)	1/2" NPT(F)	8NF - CCHKV	11.5	85.0	31.8
1/2" BSPT(F)	1/2" BSPT(F)	8RTF - CCHKV	11.5	85.0	31.8
3/4" NPT(F)	3/4" NPT(F)	12NF - CCHKV	15.1	91.0	34.9
3/4" BSPT(F)	3/4" BSPT(F)	12RTF - CCHKV	15.1	91.0	34.9
1" NPT(F)	1" NPT(F)	16NF - CCHKV	16.7	110.0	41.3

## ORDERING CODE FOR CHECK VALVES



### CHECK VALVES PRODUCT CODE

SELECT FROM PAGE NO. 3

### CRACK PRESSURE

5 psi	CP5
10 psi	CP10
25 psi	CP25

### SEAT MATERIAL

Fluorocarbon Rubber	P6
Buna-N Rubber	P4
Ethylene Propylene Rubber	P7
PTFE	P1

### MATERIAL

- STEEL
- SS 316
- SS 316L
- SS 316/SS 316L
- SS 304
- SS 304L
- CARBON STEEL
- P/F321
- SS 347
- P/F 11
- P/F 22
- P/F 5
- A105N
- P/F 91
- LF2
- ALUMINIUM
- BRASS

### DESIGNATOR

- S
- S1
- S2
- S1S2
- S3
- S4
- S5
- S6
- S7
- S8
- S9
- S10
- S11
- S12
- LF2
- AL
- B

### MATERIAL

- ALLOY 20
- ALLOY C-276
- ALLOY 600
- ALLOY 825
- ALLOY 625
- TITANIUM
- MONEL 400
- DUPLEX-F60 / S32205
- DUPLEX-F51 / S31803
- DUPLEX-F53 / S32750
- DUPLEX F55 / S32760
- NACE MR-0175
- NACE MR0103

### DESIGNATOR

- C20
- HC
- INC
- INC1
- INC2
- TI
- M
- D
- D1
- D3
- D5
- NM
- NM1

DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.