



Needle Valves, Ball Valves,
Instrument Manifolds,
Monoflanges and Modular
Double Block & Bleed
Valves.

NEEDLE PATTERN INSTRUMENT VALVES, MANIFOLDS, MONOFLANGES AND DOUBLE BLOCK AND BLEED VALVES

A technically advanced superior range with many unique features.

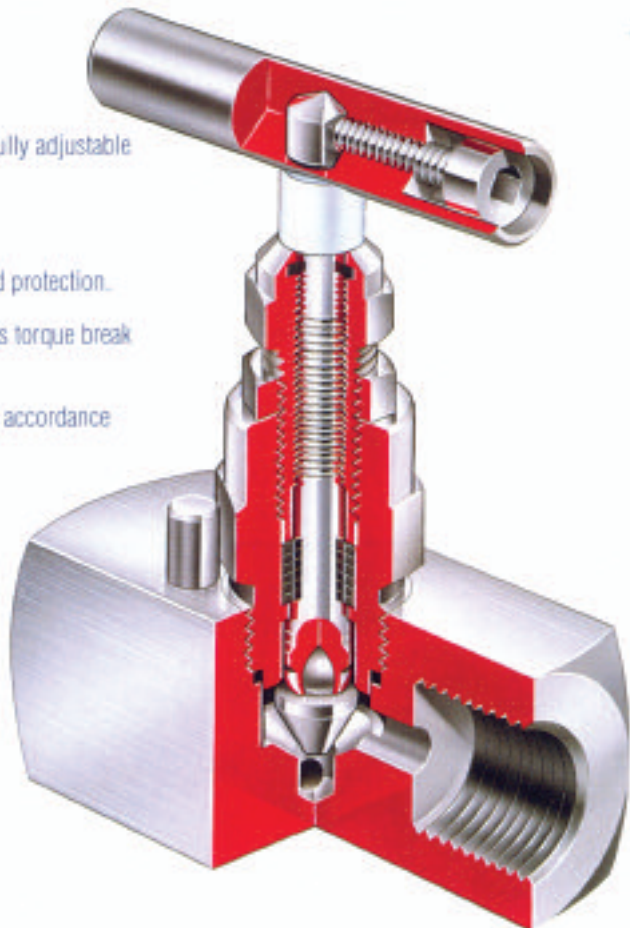
TC Fluid Control is founded on product innovation, development and quality. This is the major strength of the company today. Our quality systems have been assessed to the requirements of BSENISO9001.

Our range of level gauges, magnetic level gauges and valves are world renowned for safe and reliable operation. Backed by this experience we have introduced a unique and highly advanced range of Needle Valves, Ball Valves, Instrument Manifolds, Monoflanges and Double Block and Bleed Valves specifically designed to meet the safety requirements of the process industry.

With a class 2500 (6000 lb cwp) rating established by calculation to ASMEVIII, the product has been designed, proof tested and verified by Lloyd's Register to be in accordance with the MSS SP99 standard thus offering many user advantages over competitive equipment.

NEEDLE VALVES FEATURES.

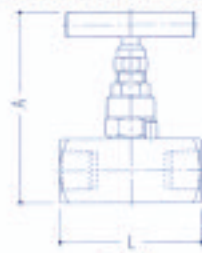
- Fully engaged rolled bonnet threads protected from process media by a metal body/bonnet seal.
- Swaged self centering non rotating Duplex stem point ensures positive seal closure under all conditions.
- Rolled stem threads protected from process media by fully adjustable 'sandwich' packed gland.
- Fully backseating – in bonnet with anti blowout stem.
- Totally encapsulated dust seal gives greater stem thread protection.
- Vibration proof handle with positive location and excess torque break feature.
- All pressure welded parts fully traceable and certified in accordance with EN10204 31B.
- NACE MR-01-75 standard.
- All manifolds suitable for use within enclosures.
- Fully developed field mounting system for all products.
- All options available. Full range of materials, thread types and sizes.
- 10,000 PSI C.W.P. option.
- Ball valves options.
- Monoflanges and Modular Double Block and Bleed Valves.



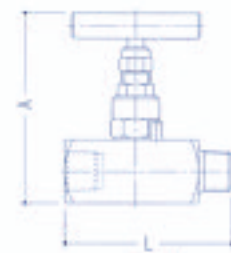
**SINGLE ISOLATING VALVES
GAUGE VENT VALVES &
GAUGE MULTI-PORT VALVES**



■ SINGLE ISOLATING VALVES



6 NF
Female x Female



6 NM
Male x Female

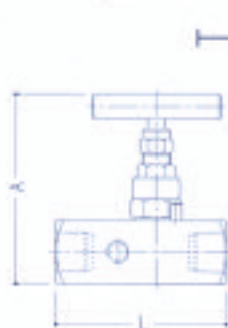
■ GAUGE VALVES

Gauge Vent Valve

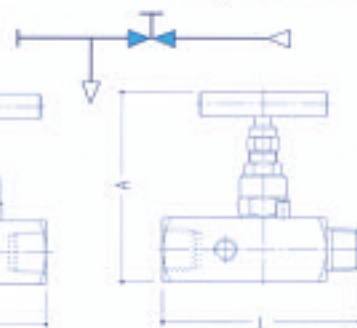
Gauge Vent Valve

Gauge Multi-Port Valve

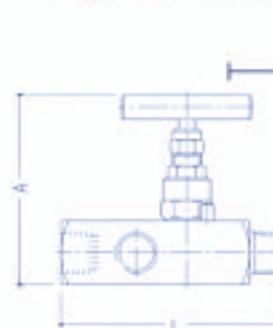
Gauge Multi-Port Valve



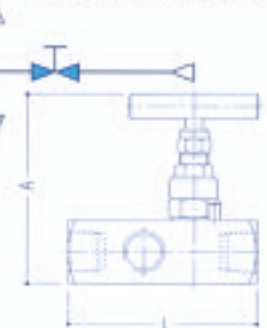
61 NVF *
Female x Female



61 NVM *
Male x Female



61 NTM
Male x Female



61 NTF
Female x Female

* SUPPLIED WITH PLUGS

Type	Connections	'L' mm	'A' mm	Weight
6NF 44	1/4" Female x 1/4" Female	57	100	0.5
6NF 88	1/2" Female x 1/2" Female	70	100	0.6
6NF 1212	3/4" Female x 3/4" Female	76	100	0.7
6NF 1616	1" Female x 1" Female	89	119	0.7
6NM 44	1/4" Male x 1/4" Female	73	100	0.5
6NM 88	1/2" Male x 1/2" Female	83	100	0.7
6NM 1212	3/4" Male x 3/4" Female	89	107	0.7
6NM 1616	1" Male x 1" Female	98	119	0.7
61 NVF 88	1/2" Female x 1/2" Female	86	100	0.7
61 NVM 88	1/2" Male x 1/2" Female	98	100	0.8
61 NTM 88	1/2" Male x 1/2" Female (3)	111	100	0.9
61 NTM 12 8	3/4" Male x 1/2" Female (3)	111	100	1.1
61 NTF 88	1/2" Female x 1/2" Female (3)	98	100	0.9

Notes:

10,000 psi options available prefix by 10 i.e. 10 NF

See page 7 for Options and Accessories

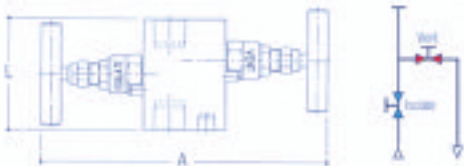
Remote Mounted Manifolds

Two, Three and Five Valve Manifolds
For remote coupling to Pressure Gauges, Pressure
Switches, Pressure Transmitters and
Differential Pressure Transmitters



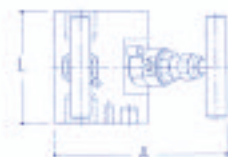
TWO VALVE GAUGE MANIFOLDS – ISOLATING & VENT/CALIBRATION

STANDARD PATTERN



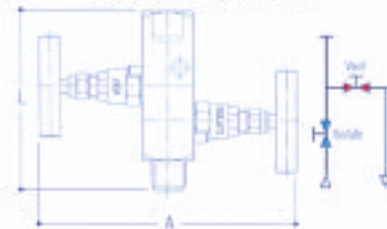
62 NRF
Female x Female

ANGLE PATTERN



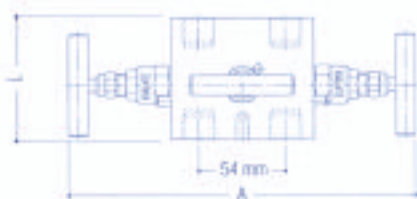
62 NRAF
Female x Female

STRAIGHT THROUGH

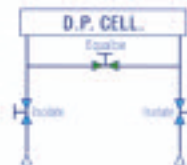


62 NRM
Male x Female

THREE VALVE MANIFOLD

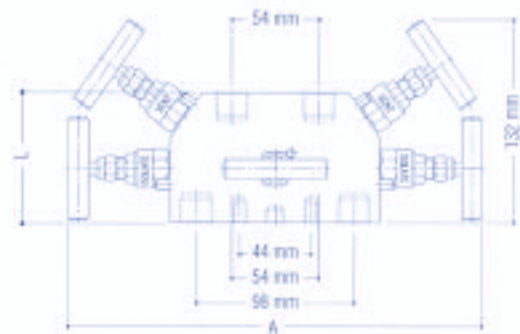


63 NR



Note: Vent & purge options available
Mounting Holes Optional

FIVE VALVE MANIFOLD



65 NR

Type	Connections	'L' mm	'A' max.mm	Weight kg
62 NRF88	1/2" Female x 1/2" Female	70	188	1.0
62 NRAF88	1/2" Female x 1/2" Female	70	131	1.0
62 NRM88	1/2" Male x 1/2" Female	114	172	1.1
62 NRM12.8	3/4" Male x 1/2" Female	117	172	1.1
63 NR88	1/2" Female x 1/2" Female	76	222	1.7
65 NR88	1/2" Female x 1/2" Female	83	270	2.6

Notes:

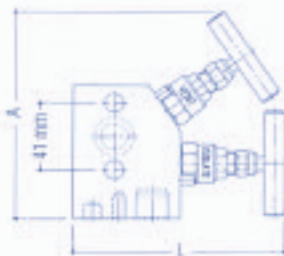
10,000 psi options available prefix by 10 i.e. 102 NRF88
See page 7 for Options and Accessories

Direct Mounted Manifolds

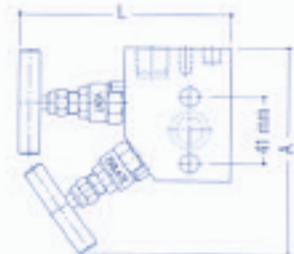
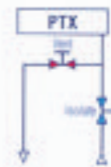
Two, Three and Five Valve Manifolds
For Direct Coupling to Differential Pressure
Transmitters, Pressure Transmitters and Switches



■ TWO VALVE MANIFOLD

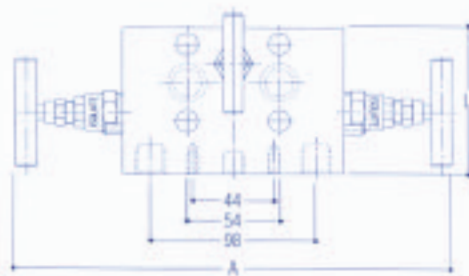


62 ND (Right Hand)
Gases and Vents

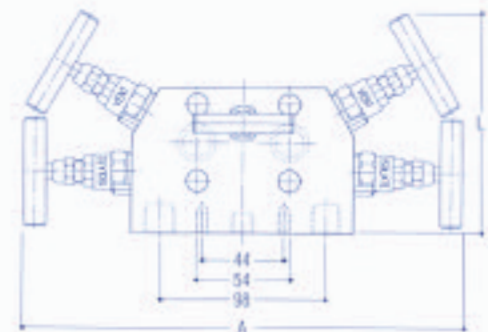
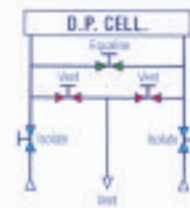


62 ND (Left Hand)
Liquids and Drains

■ THREE VALVE MANIFOLD



63 ND



65 ND

Optional mounting holes and flange to flange models.

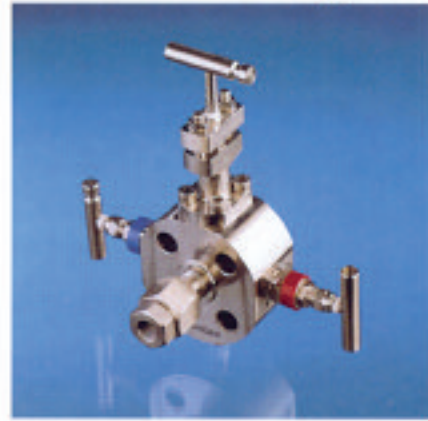
Type	Connections	'L' mm	'A' mm	Weight kg
62 ND8	1/2" Female x Flange	132	132	1.5
62 ND28	1/2" Female x DIN Flange	132	132	2.0
63 ND8	1/2" Female x Flange	150	270	2.0
63 ND28	1/2" Female x DIN Flange	150	270	2.0
65 ND8	1/2" Female x Flange	150	270	2.8
65 ND28	1/2" Female x DIN Flange	150	270	2.8

Notes:

Supplied complete with carbon steel bolts and PTFE flange seal rings – Optional mounting bracket
See page 7 for Options and Accessories

Slimline Monoflanges

- 1/2"–2" N.B Flanges
- ANSI 150 - 2500
- Slimline Design
- Compact & Lightweight
- Various Valve Option
- Fire Safe Design

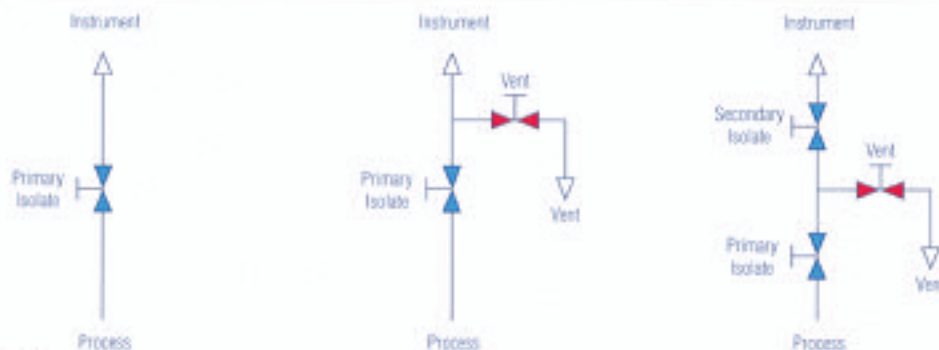
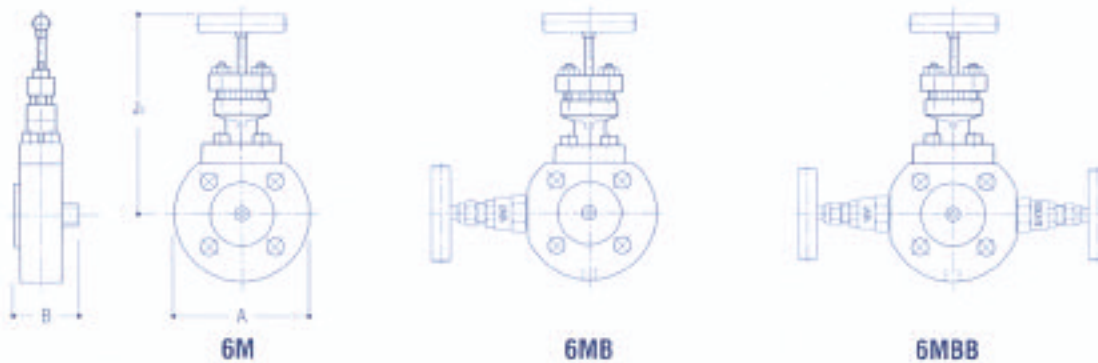


Slimline Monoflanges are available in a number of options to provide a compact, lightweight low cost solution for flanged, Block and Bleed or Double Block an Bleed applications. Two primary isolate options are available, bolted bonnet O,S&Y and needle pattern.

■ PRIMARY ISOLATE INSIDE SCREWED NEEDLE PATTERN VALVES.



■ PRIMARY ISOLATE BOLTED BONNET OS&Y WITH NEEDLE PATTERN VALVES.



Notes: J₁ & J₂ shown fully open
See page 7 for Options and Accessories

Type	Size	Rating	'A' mm	'B' mm	'J ₁ ' mm	'J ₂ ' mm
6M8 150RF8	1/2"	150	98	60	114	169
6M8 300RF8	1/2"	300	98	60	114	169
6M8 600RF8	1/2"	600	98	60	114	169
6M8 1500RF8	1/2"	1500	121	60	125	178
6M8 2500RF8	1/2"	2500	140	60	135	184
6M12 150RF8	3/4"	150	98	60	114	169
6M12 300RF8	3/4"	300	121	60	125	178
6M12 600RF8	3/4"	600	121	60	125	178
6M12 1500RF8	3/4"	1500	140	60	135	184
6M12 2500RF8	3/4"	2500	140	60	135	184
6M16 150RF8	1"	150	121	60	125	178
6M16 300RF8	1"	300	127	60	129	178
6M16 600RF8	1"	600	127	60	129	178
6M16 1500RF8	1"	1500	152	60	141	184
6M16 2500RF8	1"	2500	159	60	144	197
6M24 150RF8	1 1/2"	150	127	60	129	178
6M24 300RF8	1 1/2"	300	165	60	148	203
6M24 600RF8	1 1/2"	600	165	60	148	203
6M24 1500RF8	1 1/2"	1500	178	60	154	203
6M24 2500RF8	1 1/2"	2500	203	80	167	213
6M32 150RF8	2"	150	152	60	141	184
6M32 300RF8	2"	300	165	60	148	203
6M32 600RF8	2"	600	165	60	148	203
6M32 1500RF8	2"	1500	216	80	173	226
6M32 2500RF8	2"	2500	235	80	183	235

Notes: 6MN detail as 6M.

■ ORDERING INFORMATION SPECIFY:- (1/4" NPT VENTS STANDARD)

Select Type (From Page 4)

6M, 6MN, B or BB

For Flange to Flange arrangement add suffix 'F'

Add

Process Connections

Flange 8-32 (1/2"-2")

Rating 150 - 2500

Flange Style RF or RTJ.

Instrument Connections

Standard Screwed 1/2" NPT B

Butt Weld + Schedule BW ---

Socket Weld SW

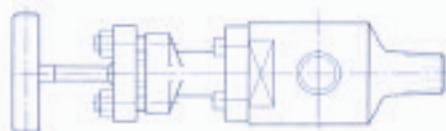
Example

Monoflange 6000 lb, OS&Y, Double Block and Bleed.

1/2" ANSI 150 RF with 1/2" Instrument Connections

6M8B8150RF8

■ MULTI PORT ORIFICE VALVE WITH BOLTED BONNET OS&Y



Notes:

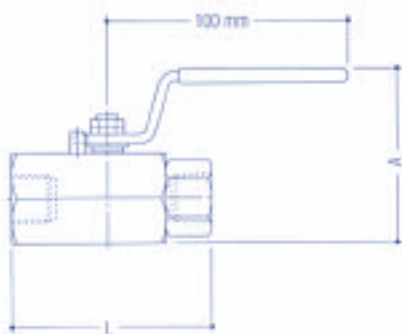
See page 7 for Options and Accessories

- Class 2500 (see graph)
- 316 Stainless Steel
- NACE MR-01-75
- Bi-Directional
- 10mm, 14mm & 20mm Bore
- Cavity Relief
- Anti Blow Out Stem
- Fully Traceable Materials
- Fire Safe Approved Option

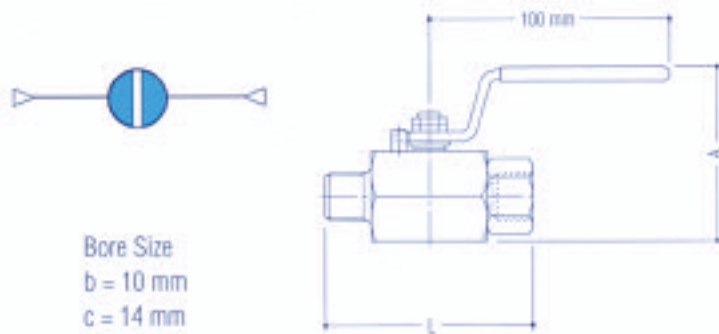


■ SINGLE ISOLATION VALVE

6BF Female x Female



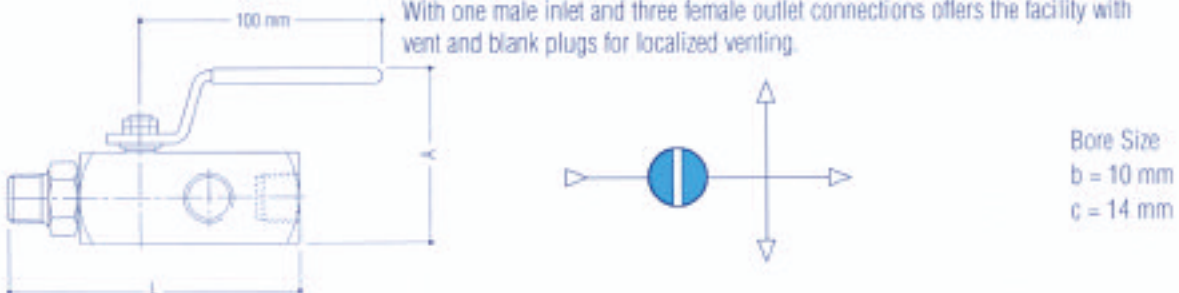
6BM Male x Female



■ GAUGE MULTI PORT VALVE

61 BTM Male/Female

With one male inlet and three female outlet connections offers the facility with vent and blank plugs for localized venting.



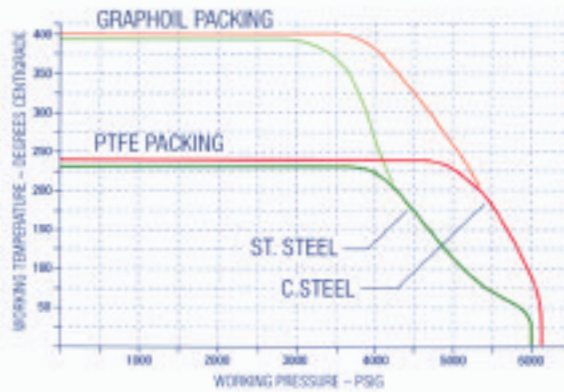
Type	Connections	'L' mm	'A' mm	Weight kg
6 BbF44	1/4" Female x 1/4" Female	70	54	0.6
6 BbF66	1/4" Female x 1/4" Female	70	54	0.6
6 BbF88	1/2" Female x 1/2" Female	83	54	0.6
6 BcF1212	1/2" Female x 1/2" Female	99	57	0.7
6BtM44	1/4" Male x 1/4" Female	76	54	0.6
6BtM66	1/4" Male x 1/4" Female	76	54	0.6
6BtM88	1/2" Male x 1/2" Female	86	54	0.6
6BcM1212	1/2" Male x 1/2" Female	111	57	0.7
61 BbTM88	1/2" Male x 1/2" Female (3)	119	54	0.7
61 BbTM128	1/2" Male x 1/2" Female (3)	127	54	0.7

Notes:

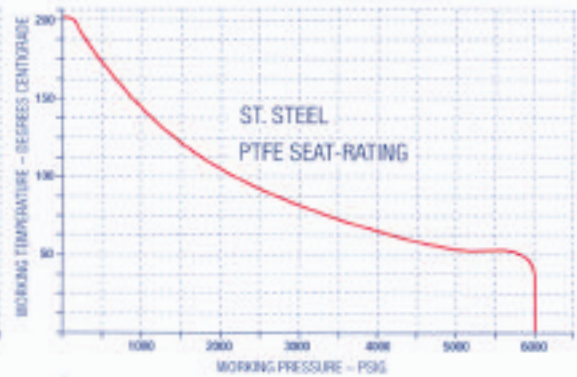
1" Ball Valve Options available on request.
See page 7 for Options and Accessories

Specifications Options & Accessories

NEEDLE VALVE



BALL VALVE



The above graphs are for guidance only. Ball valve graphs relate to 10 & 14 mm bore. For 20 mm bore de-rate to ANSI 1500. For actual pressure / temperature ratings and product suitability contact our technical department.

MATERIAL & CONNECTION OPTIONS

Material –

- C – Carbon Steel
- S – Stainless Steel
ASTM A 276/479 GR316
- Standard – NACE MR-01-75

Gland Packing –

- Standard – PTFE
- GG – Graphoil

Connections –

- Standard – NPT
- BT – BSP Taper
- BB – BSPP Bottom Seal
- BE – BSPP End Seal
- BW160 – Butt Weld Schedule 160
- SW – Female Socket-Weld
- MSW – Male Socket-Weld

OPTIONS

Needle Valves & Manifolds –

- AT – Anti-tamper Facility
- ATK – Anti-tamper Key
- VP – Vent Plug
- PP – Pressure Blanking Plug
- CP – Countersunk Plug
- MTT – Threaded Mounting Holes
- MTH – Mounting Holes
- KF – Kidney Flanges –
Butt weld/socket weld
and threaded versions
- FS – Fire Safe

OPTIONS

Ball Valves –

- SE – Mechanical Locking Secured end
- HL – Handle Locking
- WH – Winged Handle
- PMB – Panel Mounting Bracket
- AMB – Actuator Mounting Bracket
- FS – Fire Safe
- AS – Anti Static

ACCESSORIES

- GM – Gauge Minder –
Prevents instrument overrange
- SB – Snubber
- GA – Gauge Swivel Adaptor

ACCESSORIES

- GS – Gauge Syphon –
Protects gauge from hot vapour
- CV – Check Valve
- AH – Air Headers –
to suit requirements

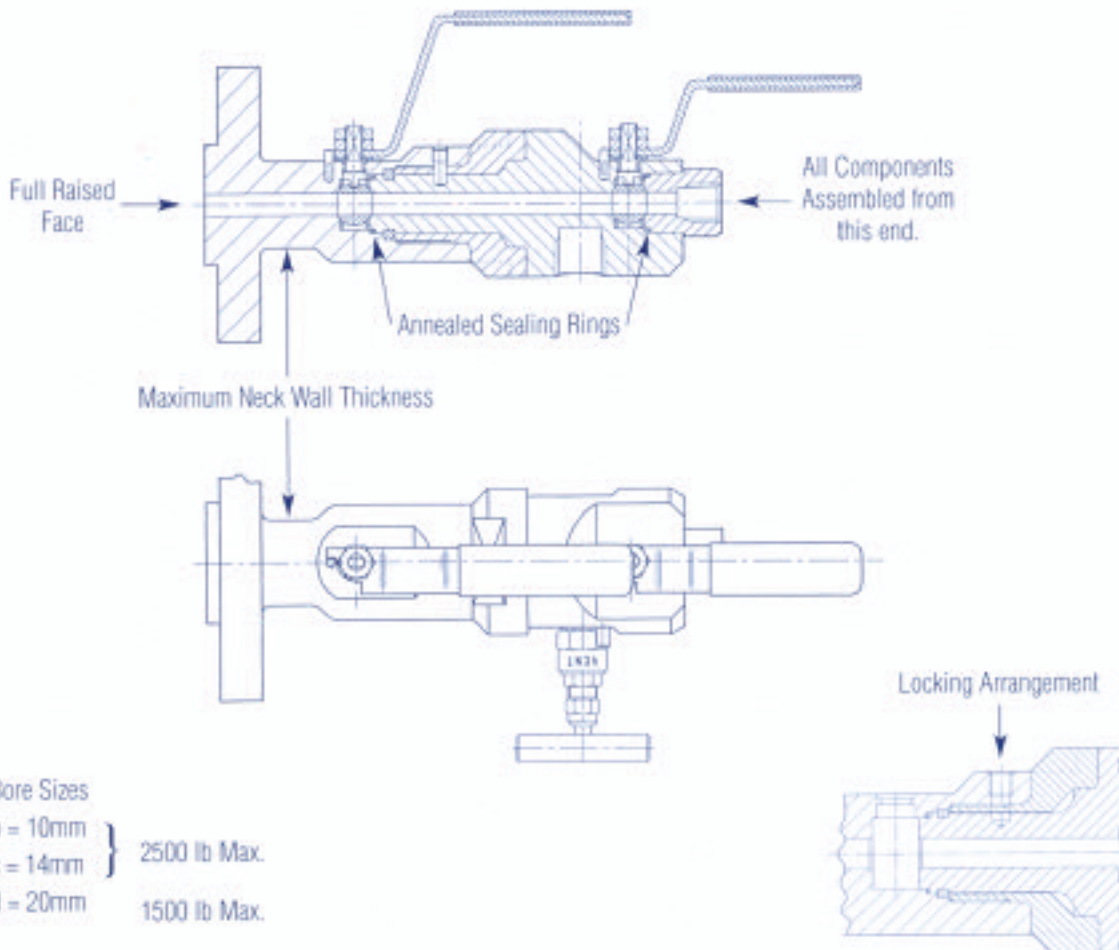
Modular Double Block and Bleed Valves

- 1/2"–2" NB Flanges
- ANSI 150–2500
- Modular Design
- 316 Stainless Steel
- NACE MR-01-75
- Primary Isolate Ball Valve
- Fire Safe Design
- 10mm, 14mm & 20mm Bore

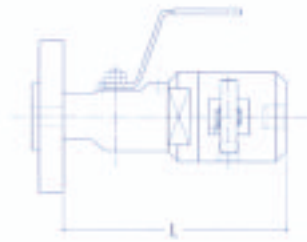


■ THE MODULAR CONCEPT

Modular Double Block and Bleed Valves incorporating all the unique Needle and Ball Valve features in one body to provide Block and Bleed or Double Block and Bleed functions. The Modular design allows for any valve or connection arrangement to be assembled together without compromising the design standards.

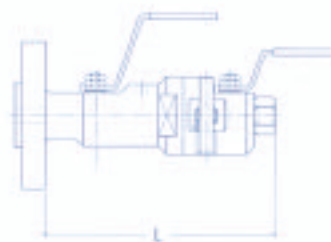


BALL + NEEDLE + NEEDLE



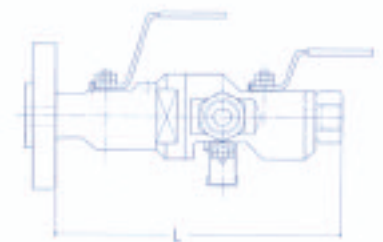
95Bb... N8.N8
95Bc... N8.N12
95Bd... N8.N16

BALL + NEEDLE + BALL

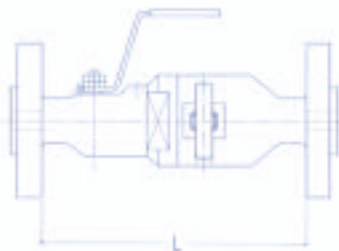


95Bb... N8.Bb8
95Bc... N8.Bc12
95Bd... N8.Bd16

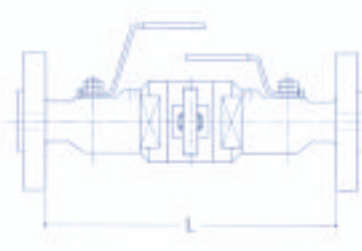
BALL + BALL + BALL



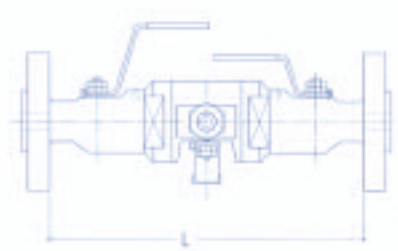
95Bb... Bb8.Bb8
95Bc... Bc8.Bc12
95Bd... Bd8.Bd16



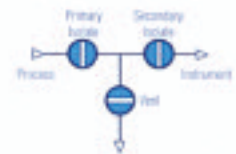
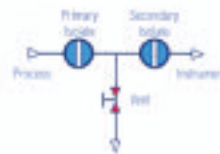
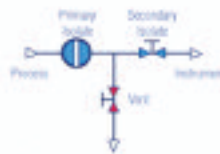
95Bb... N8.N8...
95Bc... N8.N8...
95Bd... N8.N8...



95Bb... N8.Bb8...
95Bc... N8.Bc8...
95Bd... N8.Bd8...



95Bb... Bb8.Bb...
95Bc... Bc8.Bc...
95Bd... Bd8.Bd...



Ordering Specify ... Flange Size Rating.

Example

Ball Needle Ball -, Process 1/2" Class 300 Vent 1/2"NPT Instrument 1/2"NPT = 95Bb 8-300 RF N8 Bb8

Ball, Ball, Ball -, Process 1/2" CL 300, Vent 1/2"NPT Instrument 1/2" CL 300 = 95 Bb 8-300 RF Bb8Bb8-300RF

Type	Size/Flange Rating	'L' mm
Flange By Screwed		
95Bb N8N8	1/2" CL 150 - 2" CL 600	157
	1 1/2", 2" CL 1500 & 2500	163
95Bc N8N12	1/2" CL 150 - 2" CL 600	178
	1 1/2", 2" CL 1500 & 2500	184
95Bd N8N16	1" CL 150 - 2" CL 2500	214
95Bb N8Bb8	1/2" CL 150 - 2" CL 600	185
	1 1/2", 2" CL 1500 & 2500	191
95Bc N8Bc12	1/2" CL 150 - 2" CL 600	216
	1 1/2", 2" CL 1500 & 2500	222
95Bd N8Bd16	1" CL 150 - 2" CL 2500	257
95Bb Bb8Bb8	1/2" CL 150 - 2" CL 600	204
	1 1/2", 2" CL 1500 & 2500	210
95Bc Bc8Bc12	1/2" CL 150 - 2" CL 600	238
	1 1/2", 2" CL 1500 & 2500	242
95Bd Bd8Bd16	1" CL 150 - 2" CL 2500	286

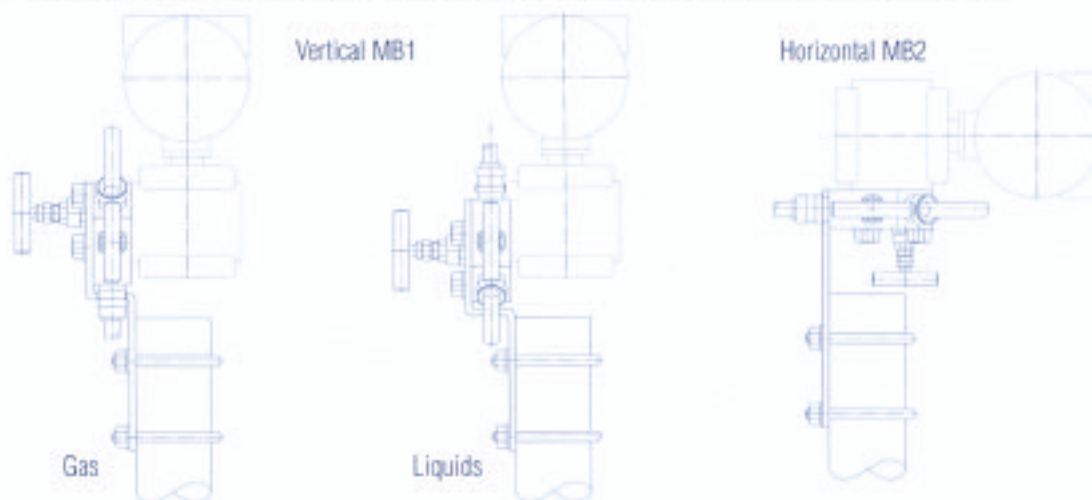
Overall Length 'L' mm + Flange Thickness.

Notes:

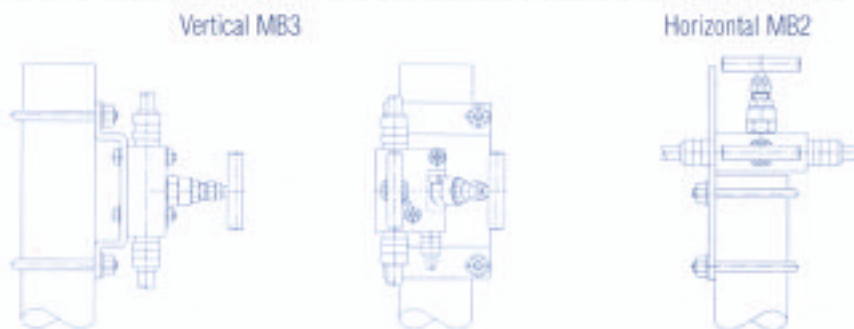
See page 7 for Options and Accessories

Type	Size/Flange Rating	'L' mm
Flange By Flange		
95Bb N8N8	1/2" CL 150 - 2" CL 600	181
	1 1/2", 2" CL 1500 & 2500	187
95Bc N8N12	1/2" CL 150 - 2" CL 600	206
	1 1/2", 2" CL 1500 & 2500	212
95Bd N8N16	1" CL 150 - 2" CL 2500	238
95Bb N8Bb8	1/2" CL 150 - 2" CL 600	242
	1 1/2", 2" CL 1500 & 2500	254
95Bc N8Bc12	1/2" CL 150 - 2" CL 600	268
	1 1/2", 2" CL 1500 & 2500	280
95Bd N8Bd16	1" CL 150 - 2" CL 2500	312
95Bb Bb8Bb8	1/2" CL 150 - 2" CL 600	264
	1 1/2", 2" CL 1500 & 2500	276
95Bc Bc8Bc12	1/2" CL 150 - 2" CL 600	292
	1 1/2", 2" CL 1500 & 2500	304
95Bd Bd8Bd16	1" CL 150 - 2" CL 2500	340

■ MOUNTING BRACKETS MB1 AND MB2 FOR DIRECT MOUNTED MANIFOLD



■ MOUNTING BRACKETS MB2 AND MB3 FOR REMOTE MOUNTED MANIFOLDS



Manifold Mounting Bracket Kits and Housings

- Mounting Plates in 316 Stainless Steel, Carbon Steel, Bright Zinc & Clear Plated
- M8 "U" bolts, nuts and washers in Carbon Steel & A4 Stainless Steel
- M8 manifold fixing screws in Carbon Steel & A4 Stainless Steel
- Instrument housings with EExd heaters and thermostats available on request.

Other Fluid Control Products

- Liquid Level Gauges
- Magnetic Level Gauges
- Level Transmitters
- Piston Valves
- Sleeve Packed Plug Valves
- Ball Valves

All information and recommendations contained in this publication are to the best of our knowledge correct.

Since conditions of use are beyond our control users must satisfy themselves that products are suitable for the intended processes and uses. No warranty is given or implied in respect of information or recommendations or that any use of products will not infringe rights belonging to other parties. In any event or occurrence our liability is limited to our invoice value of the goods delivered by us to you. We reserve the right to change product design and properties without notice.



**TC Fluid Control Limited
Instrumentation Division**
Unit 49A, Victoria Industrial Park, Victoria Road
Dartford, Kent DA1 5AJ
Telephone: +44(0)1322 622400
Fax: +44(0)1322 285660
e-mail: instruments@tc-fluidcontrol.com
web site: www.tc-fluidcontrol.com

**TC Fluid Control Limited
Valves and Steam Division**
Broughton House, Broadgate, Broadway Business Park
Chadderton, Oldham, Lancashire OL9 9XA.
Telephone: +44(0)161 684 7488
Fax: +44(0)161 684 7487
e-mail: energy@tc-fluidcontrol.com
web site: www.tc-fluidcontrol.com