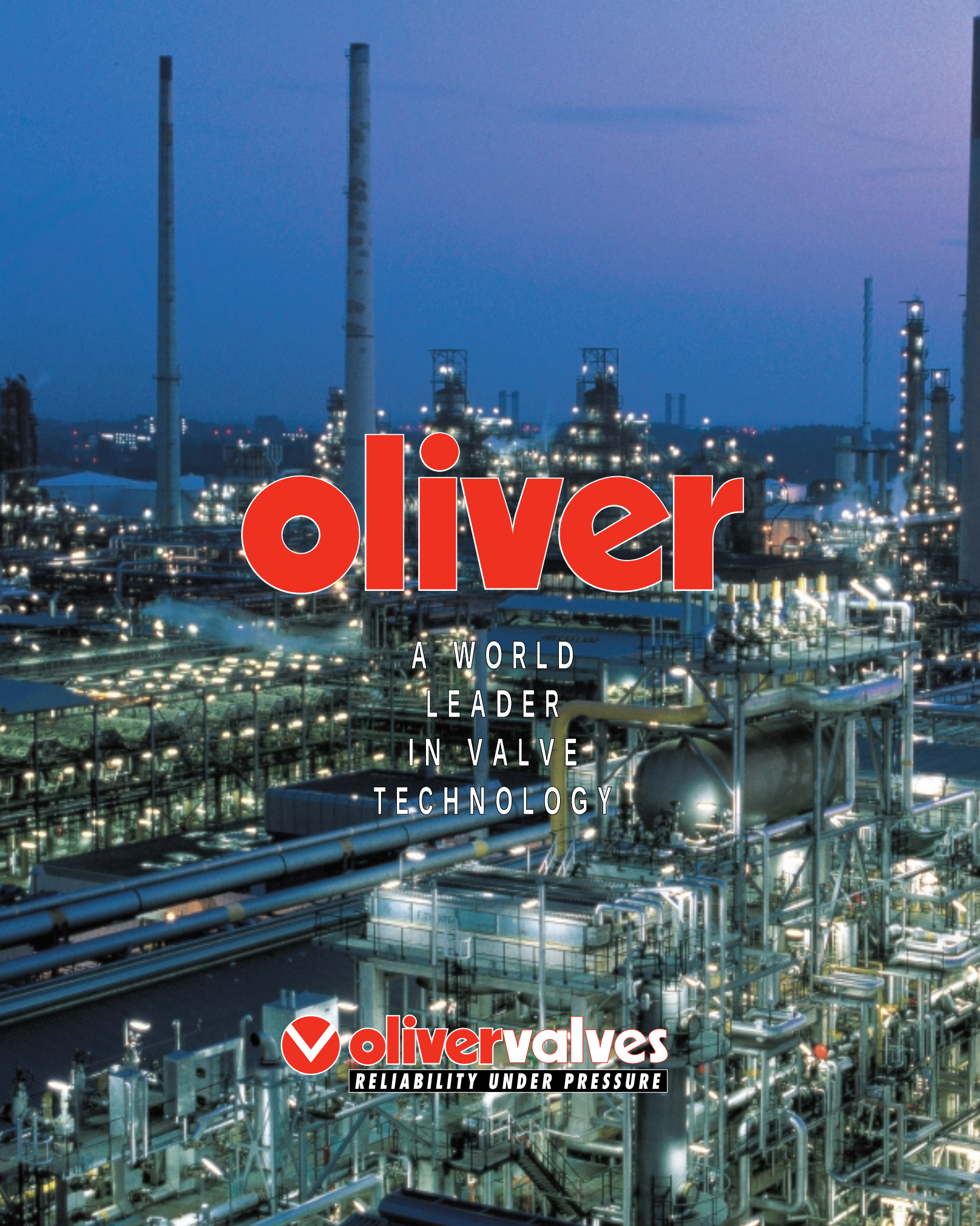
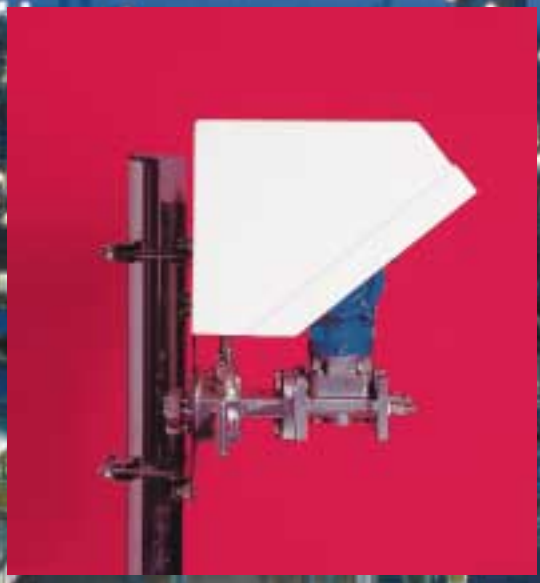
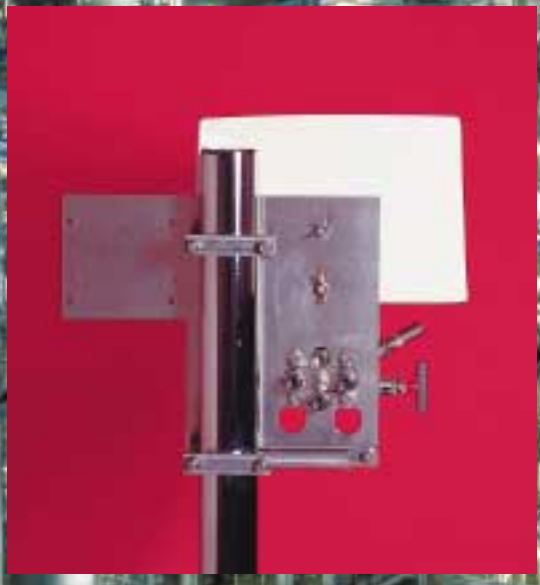

oliver
A WORLD
LEADER
IN VALVE
TECHNOLOGY
olivervalves
RELIABILITY UNDER PRESSURE

MODULAR MOUNTING SYSTEM

oliver

A WORLD LEADER IN VALVE TECHNOLOGY

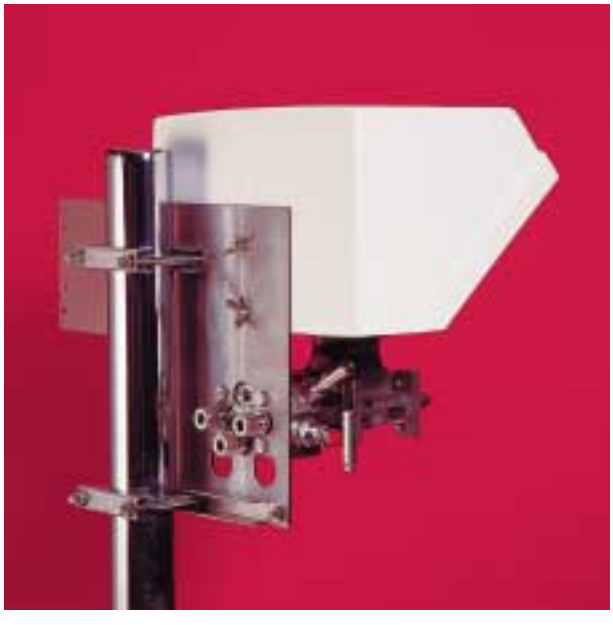




oliver valves

RELIABILITY UNDER PRESSURE

MMS SETTING THE STANDARD



The Oliver Modular Mounting System (MMS) is designed to encompass all pressure instrument needs for mounting and isolation from the process media. Based around standard mounting plate designs, the components provided in this range of equipment take a modular 'building block' approach thereby allowing ease of installation on site.

The range of manifolds have been based against the application requirements of the process and the style, and connection of the reading instrument. The range includes for instrument connections of direct mounting flanged DIN 19213 and also screwed connections which allows the fitting of Differential Pressure Transmitters/Gauge and Gauge Pressure Transmitters, Pressure Gauges and Switches. Each one of the manifolds have the identical plate mounting dimension which allow them to be mounted to either of the Mounting Plates, dependant on choice.

All the process and vent connections on the manifold and accessories typically have a compression fitting installed to ensure the ease of build utilising tubing. Provided in the main scope are two suppliers of fittings supplying both imperial, and metric sizes, but others can be provided. The standard connection provided for the tube fittings to fit are; G1/4" parallel to DIN 3852 however 1/4" NPT can also be provided.

Included in the range are the accessories which provide a complete solution to each of the instrument hook-up styles. A Filling Connector is available complete with non-return valve, Kidney Blanking Flange, Port Protector, Single and Double Venting Purge Blocks and a Sealpot. The Sealpot and Purge Blocks are used when a suitable barrier medium is required between the Instrument and the process fluid.

The MMS range provides you with the total isolation, calibration, venting and protection solution following a standard hook-up design. The range also takes into consideration the difference in world climatic conditions by providing heating accessories as well as sunshades.

Simply select your plate design, then your manifold based on the measuring instrument, select the appropriate environmental protection device, the accessories and then your tube fittings of choice. Most of all choose Oliver Valves the instrument valve manufacturer with the right solution.

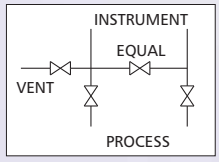
MODULAR MOU

DOUBLE ISOLATE/EQUALISE/VENT BLOCK

Used for differential pressure, this is the most commonly used four valve manifold and constitutes one isolate valve for the high side, one isolate valve for the low side, one equalise valve and one single vent valve. The isolation valves are Tee bar operable, the vent and equalise valve each have anti tamper head units. By equalising the valve you are able to vent both sides.

The Manifold is of 316 stainless steel construction, the instrument connection being flanged to DIN 19213 pt. 2 and the process and vent connections are G1/4" parallel in accordance with DIN 3852. The valve can be provided with tube fittings of choice.

The manifold is provided with 4 stainless steel transmitter mounting bolts, 4 stainless steel plate mounting bolts and also PTFE flange sealing rings (Grafoil when selected for high temperature service).



Maximum working pressure: 413 Bar
Maximum working temperature (PTFE): 200 Deg C
Maximum working temperature (Grafoil): 540 Deg C

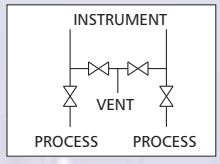
Other materials and connections are available including models to Nace MR-01-75 latest revision.

DOUBLE ISOLATE/VENT BLOCK

This four valve manifold is designed for particular applications where the contamination of both process streams are not permitted. There is no equalise valve, but in its place there is a further vent valve, to allow the isolation and venting of both sides independently. The isolation valves are Tee bar operable, the vent valves each having anti tamper head units.

The Manifold is of 316 stainless steel construction, the instrument connection being flanged to DIN 19213 pt. 2 and the process and vent connections are G1/4" parallel in accordance with DIN 3852. The valve can be provided with tube fittings of choice.

The manifold is provided with 4 stainless steel transmitter mounting bolts, 4 stainless steel plate mounting bolts and also PTFE flange sealing rings (Grafoil when selected for high temperature service).



Maximum working pressure: 413 Bar
Maximum working temperature (PTFE): 200 Deg C
Maximum working temperature (Grafoil): 540 Deg C

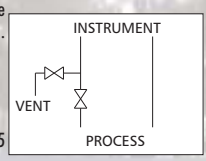
Other materials and connections are available including models to Nace MR-01-75 latest revision.

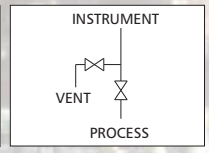
ISOLATE/VENT BLOCK

There are two versions of this manifold available, the most common is the manifold suitable for the Gauge Pressure Transmitter with traditional flanged mounting. The other manifold is provided for Differential Pressure Transmitters which are used typically in level applications where the low pressure side is vented to atmosphere. The isolation valve is Tee bar operable, the vent valve having an anti tamper head unit.

The Manifold is of 316 stainless steel construction, the instrument connection being flanged to DIN 19213 pt. 2 and the process and vent connections are G1/4" parallel in accordance with DIN 3852. The valve can be provided with tube fittings of choice.

The manifold is provided with 4 stainless steel transmitter mounting bolts, 4 stainless steel plate mounting bolts and also PTFE flange sealing rings (Grafoil when selected for high temperature service).





Maximum working pressure: 413 Bar
Maximum working temperature (PTFE): 200 Deg C
Maximum working temperature (Grafoil): 540 Deg C

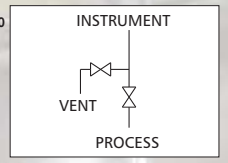
Other materials and connections are available including models to Nace MR-01-75 latest revision.

SINGLE ISOLATE/VENT BLOCK

This is the manifold which has been provided for the Gauge, Switch and Gauge Pressure Transmitters which have a screw instrument connection. There are three versions available; 1/2" NPT female, 1/2" NPT male and G1/2" parallel female. The isolation valve is Tee bar operable, the vent valve having anti tamper head unit.

The Manifold is of 316 stainless steel construction, the instrument connection being flanged to DIN 19213 pt. 2 and the process and vent connections are G1/4" parallel in accordance with DIN 3852. The valve can be provided with tube fittings of choice.

The manifold is provided with 4 stainless steel transmitter mounting bolts, 4 stainless steel plate mounting bolts and also PTFE flange sealing rings (Grafoil when selected for high temperature service).



Maximum working pressure: 413 Bar
Maximum working temperature: (PTFE) 200 Deg C
Maximum working temperature: (Grafoil) 540 Deg C

Other materials and connections are available including models to Nace MR-01-75 latest revision.

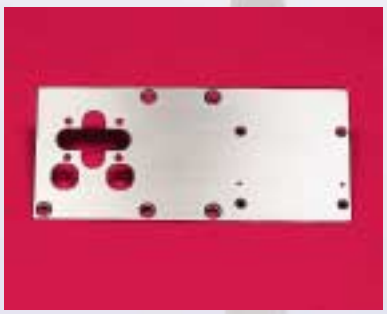
'L' SHAPED MOUNTING PLATE

The 'L' shaped mounting plate is provided as a plate which provides the option of mounting a sunshade. There are other versions which can be offered to customer specifications along the same theme.

The Plate and all fixings are all manufactured in 316 stainless steel.

UNTING SYSTEM

RECTANGULAR MOUNTING PLATE



The rectangular mounting plate is provided as a compact plate which provides the necessary size to allow the mounting of the manifold without the need for a sunshade. There are other versions which can be offered to customer specifications along the same theme.

The Plate and all fixings are all manufactured in 316 stainless steel.

ENVIRONMENT PROTECTION

For solar heating problems we provide a GRP sunshade which fits to the specification of the 'L' shaped mounting plate.

Each of the manifolds are provided with the mounting holes for steam tracing blocks and also cartridge style heating. We can supply Steam Tracing Blocks, as well as the Cartridge Heaters and Body Enclosures to keep the Transmitter and manifold at a regulated temperature. The cartridge heaters and steam Tracing Blocks are of stainless steel construction.

MONOFLANGES

Although pressure gauges could be used on the isolate/vent block as depicted earlier, commonly, pressure gauges are screwed to a Monoflange. There are two types of monoflanges, both being block and bleed and having a Tee bar operable isolation valve and an anti tamper vent valve.

Both Monoflanges have slotted bolt holes which cover the ranges between 1/2" 150lb RF through to 1/2" 2500lb RF. Also available are Gauge Adapters and Syphons to complete the package.

The Monoflange is of 316 stainless steel construction, the instrument connection being 1/2" NPT and the vent connection being G1/4" parallel in accordance with DIN 3852. The valve can be provided with tube fitting of choice.

Maximum working pressure: 413 Bar
Maximum working temperature (PTFE): 200 Deg C
Maximum working temperature (Grafoil): 540 Deg C

Other materials and connections are available including models to Nace MR-01-75 latest revision.

ACCESSORIES

A complete range of accessories are available which provide a complete solution to each of the instrument hook-up styles.

Filling Connector - Allows filling of the instrument hook-up complete with non-return valve.

Kidney Blanking Flange - Where blanking of the outlets or instruments is required.

Port Protector - To ensure no ingress of vermin, insects or dirt.

Single and Double Venting Purge Blocks - To allow cleaning of the system.

Sealpot - As part of the barrier system to provide a storage of fluid.

Orifice Plate - A regulated flow device for the purge block.

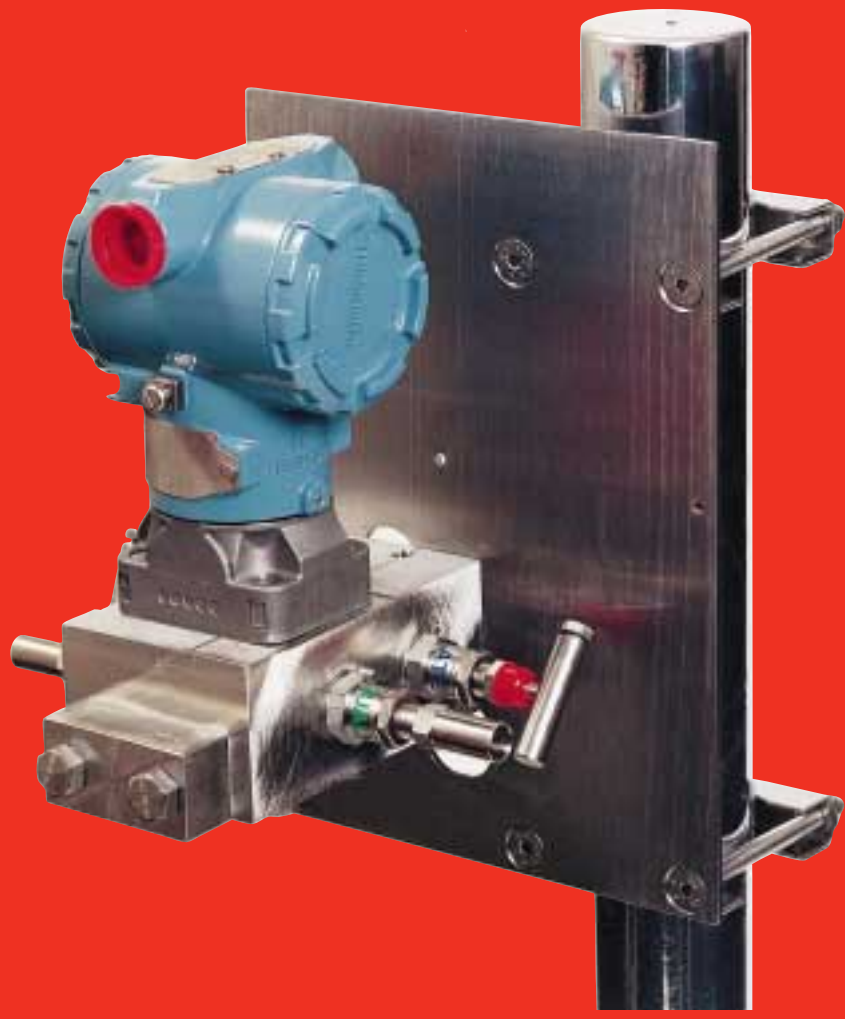
Anti Tamper Key - A removable key to provide security of operation by suitably trained personnel.

Angle Valve - For isolation and vent service.

We have supplied many differing styles, shapes or sizes of the MMS product line such as 5 Valve Manifolds in preference to the customary 4 Valve, or 1/4" NPT process and vent connections to attach tube fittings to in preference to the G1/4" (BSP.P) as the client finds NPT tube fittings more accessible.

Some Differential Pressure Transmitters and Gauges have differing centre dimensions than the common 54 mm therefore we have designs suitable for such occurrencies, and also have models suitable for remote mounted instruments.

With the advent of differing styles of transmitters we can provide novel solutions...



HOW TO ORDER MANIFOLDS

MOD	DIEV	S	25BPF–GYI	FLG	NA

MODEL

MODULAR
MOUNTING
SYSTEM

TYPE

DIEV – Double isolate/Equalise/Vent
DIDV – Double isolate/Vent block
SIV – Isolate/Vent block
SIVA – Isolate/Vent block with atmospheric connection
GT – Single isolate/Vent block

MATERIAL

S – 316S31 Stainless steel
M – Monel 400
IN625 – Inconel 625
HC – Hastelloy C276

PROCESS & VENT CONNECTIONS

25BPF – GYI – Gyrolok Imperial (3/8" OD)
25BPF – GYM – Gyrolok Metric (10 mm OD)
25BPF – SWI – Swagelok Imperial (3/8" OD)
25BPF – SWM – Swagelok Metric (10 mm OD)
*Others available

INSTRUMENT CONNECTION

FLG – DIN 19213 Kidney Flange
50M – 1/2" NPT male
50F – 1/2" NPT female
*Others available

OPTIONS

NA – NACE MR-01-75 (latest revision)
AG – Grafoil packed
OXY – Cleaned for oxygen service
AT-KEY – Anti tamper key

OTHER PRODUCTS CONSULT FACTORY

TECHNICAL EXCELLENCE

Every now and then, a product comes along that leaps beyond the expectations of its market place. It re-defines its category and, in doing so, establishes a new bench mark for the industry.

In 1980 we introduced a new concept in high pressure needle valve design, by incorporating a non-rotating spindle tip that gives a plug type closure. In doing so, we eliminated galling at the tip to body interface, a major cause of leakage on needle valves. By developing a self adjusting pressure spindle seal, we eliminated leakage even on temperature cycling applications, again a major cause of problems on other needle valve products. Also, when entering the high pressure performance ball valve business, we were determined to incorporate advanced features. Small details like stainless steel actuation handles that do not rust on installation are typical of our user consideration.

In 1990 Oliver pioneered the concept of integrating primary pipeline class isolation valves with instrument block and bleed valves – all in one forging.

This has led our company to be the foremost supplier to the worlds major oil, gas and petrochemical operators for this new style of Double Block and Bleed valve technology which offers huge savings in space, weight and cost. Our designs also lead to much improved safety.

All of Oliver Valves hundreds of combinations are possible in a wide variety of materials due to our modular approach to product design.

If you need high quality valves, from small special process connections through to 2" ANSI Class 2500lb rating and above, our team of engineers are waiting to serve you.

oliver valves

RELIABILITY UNDER PRESSURE

Parkgate Industrial Estate Knutsford Cheshire WA16 8DX England Tel: 01565 632636 (14 Lines)
Fax: 01565 654089 or 01565 650060 Email: sales@valves.co.uk WWW: valves.co.uk or olivervalves.com

The Oliver Group products are made in England and sold and supported in over 50 countries worldwide.

OUR CAPABILITIES

We supply technically advanced, high quality valve products designed for critical service in the oil, gas, petrochemical and power generation industries worldwide.

Our pipeline and instrumentation valves are available in materials of your choice, incorporating a wide variety of process connections. Our modular designs and manufacturing flexibility, guarantees short delivery times.

Our ISO 9000 Quality Product Range includes:

NEEDLE VALVES TO 15,000 PSI - (1,000 BAR)

BALL VALVES TO 15,000 PSI - (1,000 BAR)

NEEDLE AND BALL VALVE STYLE MANIFOLDS FOR ALL MAKES OF PRESSURE AND FLOW TRANSMITTERS

COMPACT, SPACE SAVING SLIMLINE VALVES AND MONO FLANGE VALVES

DOUBLE BLOCK AND BLEED VALVES

GAUGE PROTECTORS, ADAPTORS, AND A WIDE RANGE OF INSTRUMENT ACCESSORIES

SPECIAL HIGH AND LOW TEMPERATURE VALVES, OXYGEN SERVICE VALVES

CUSTOMISED VALVE PRODUCTS FOR MANY SPECIAL APPLICATIONS

PATENTED VALVE DESIGNS, FOR EXAMPLE THE TWINSAFE DOUBLE BLOCK AND BLEED VALVE THAT FITS INTO A SINGLE VALVE ANSI B16.10 LENGTH, AND THE SMART MANIFOLD THAT ISOLATES, VENTS, ZEROS EQUALISES FOR CALIBRATION OF THE DIFFERENTIAL PRESSURE TRANSMITTER IN ONE QUARTER TURN ACTION.

Wide Product Range

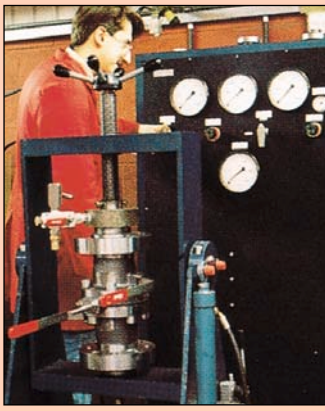
A comprehensive range of instrument and piping valves designed to meet the demands of today's international clients.

Unusual Flexibility

From standard designs to specially manufactured assemblies, we offer total flexibility and creative innovative design concepts.

Strong Worldwide Capability

Our products - designed to meet international standards - are stocked and marketed in over 50 countries worldwide by factory trained local service specialists.



Delivery Reliability

The modern modular design and "just in time" manufacturing philosophy of Oliver Valves ensuring short lead times, remain an attractive feature of doing business with our company.

oliervalves

RELIABILITY UNDER PRESSURE

Parkgate Industrial Estate Knutsford Cheshire WA16 8DX England Tel: 01565 632636 (14 Lines)
Fax: 01565 654089 or 01565 650060 Email: sales@valves.co.uk WWW: valves.co.uk or olivervalves.com

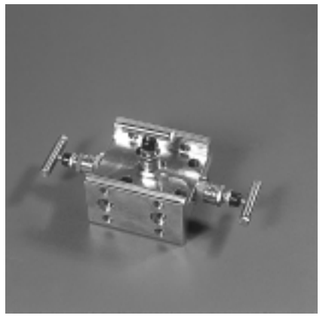
The Oliver Group products are made in England and sold and supported in over 50 countries worldwide.

ISOLATION MANIFOLD

The isolation manifold allows assembly of the first isolate valves with options for rodability and fire safe certification. The assembly is flexible and allows the user to set up in block, block and bleed or double block and bleed configurations or even be left out altogether. The Isolation module meets ANSI, ASME and API piping design codes when used with the heavy duty, fire safe bonnet.

INSTRUMENT MANIFOLD

The instrument manifold is available in equalize, isolate and equalize or isolate, equalize and vent configurations. The venting manifolds can be specified in either single or double equalize for power gas configurations.



PART NUMBER ASSEMBLER

OliverMount Assembly	OM/	SBI/	TS/	B-	HDFS/	OM01/	OXY

Installation Type

SBI	Side Entry, Bi-Planar
TBI	Top Entry, Bi-Planar
SCO	Side Entry, Co-Planar
TCO	Top Entry, Co-Planar

Orifice Connector

TS	1/2” NPTM threaded stabilized connector - 316 SS
TC	1/2” NPTM threaded stabilized connector - CS
WS	1/2” male socket weld stabilized connector - 316 SS
WC	1/2” male socket weld stabilized connector - CS

Isolation Manifold Configuration

Blank	No Isolation Manifold
B-	Dual Isolate
BB-	Block & Bleed
DBB-	Double Block and Bleed

Isolation Manifold Bonnet Type

Blank	Metal seated needle valve
HDFS	Fire safe, metal seated needle valve
RP375	3/8” Bore plug valve - Delrin Seat
RP375-PK	3/8” Bore plug valve - Peek Seat
RP375-M	3/8” Bore plug valve - Metal Seat

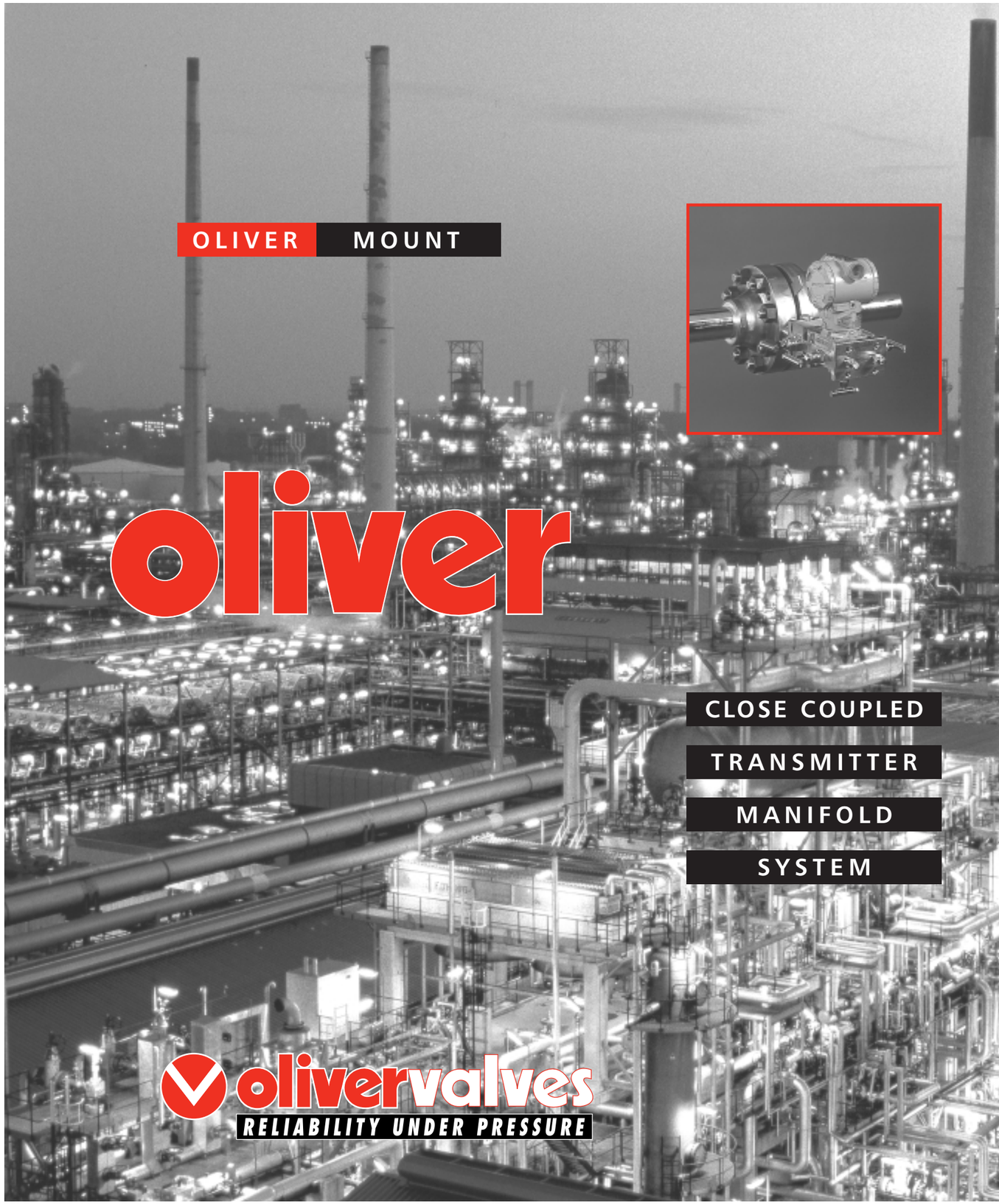
Instrument Manifold Type

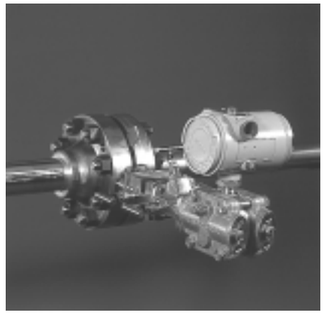
OM01	Single equalize (3/8” thru’ bore)
OM03	Single equalize, Double Vent (3/8” thru’ bore)
OM34	Dual isolate, single equalize
OM53	Dual isolate, double vent, single equalize
OMDE53	Dual isolate, double equalize, single vent

Other options available - please consult factory

Options (alpha-numeric order)

OXY	Oxygen Clean
AG	Grafoil Stem Packing
DI	Di-electric Isolation
MT	Metering tips on Instrument Manifold
SB	Static Bar - P to DP adaptor
SG	Grafoil manifold seals
SP	Special Requirements - Consult factory





INTRODUCTION / APPLICATIONS

Introduction

The OliverMount™ system is designed to allow direct mounting of differential pressure transmitters onto an orifice flange union without the need for impulse lines or separate mounting brackets and stands. Oliver Valves improved direct mounting of pressure instruments with our modular double block and bleed range and have been able to utilise much of the same field proven technology in the OliverMount™ system.

The OliverMount™ system provides piping class isolation as well as a capability to equalize and vent the transmitter within a single assembly. This results in a reduction in the number of connections and potential leak paths as well as reducing space, weight and installation costs.

OliverMount™ represents an improvement over the traditional installation by eliminating the need for impulse lines connecting a remote mounted transmitter and manifold valve to the orifice flange. Eliminating impulse lines also eliminates the problems associated with traditional transmitter installations:

- Hydrostatic head error
- Gauge line error
- Leakage through threaded connections
- High installation and maintenance costs
- Freezing
- Need for pipe stands and mounting brackets

Whilst current transmitter technology enables extreme signal accuracy, it has been shown that poorly installed or excessively long impulse lines can result in measurement errors as much as 15%. Use of OliverMount™ enables the full potential of today's transmitter technology to be realised.

Applications

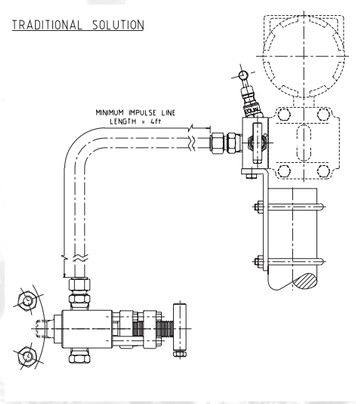
The OliverMount™ system can be used to close couple DP transmitters to orifice flange unions in gas, liquid and steam service and can be mounted either horizontally or vertically. Selection of a variety of different bonnets and manifold configurations allows specific requirements such as fire safety or full rodability to be addressed. OliverMount™ can be adapted to suit bi-planar or co-planar (Rosemount 3051) transmitters in 3 or 5 valve configuration for use in power, process or gas transmission applications.

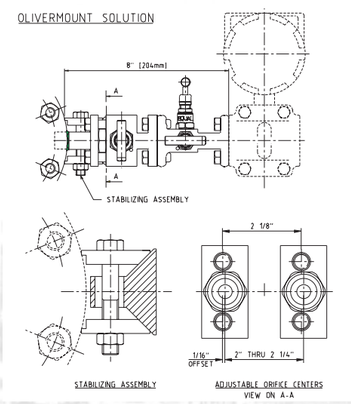
FEATURES AND BENEFITS

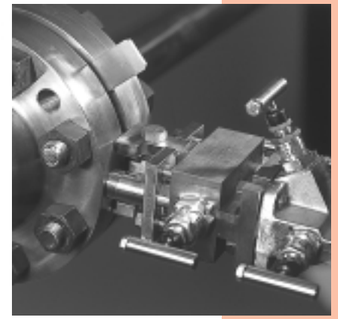
Feature	Benefit
• Close coupled installation	Direct Connection to orifice flange union No separate brackets or mounting stands
• Separate stabilized orifice connector	Provides rigidity to installation Allows easy access during installation
• Eccentric stabilized connector	Easily adjustable centres from 2" to 2 1/4"
• Flanged manifold connections	Reduced leak points Minimal or NO pressure containing threads
• Threaded or welded connection to orifice flange union option	Welded option allows full installation without use of pressure containing threads
• Mounts vertically or horizontally	Suitable for Gas or Liquid Service
• Suitable for co-planar or bi-planar configuration	Can be installed with all types of DP transmitters
• Choice of one, three and five valve instrument manifolds	Allows flexibility for calibration, maintenance and removal of transmitter whilst on stream
• Choice of isolation manifolds	Allow single block, block and bleed and double block and bleed configuration
• Static Bar available	Allows dual mounting of P and DP transmitters from one orifice tapping
•Fire safe, heavy duty bonnet available	Certified to API 607 and BS 6755 Part II fire safety codes Isolation manifolds meet API and ASME piping codes
• Fully rodable 3/8" bore manifolds available	Reduces plugging on viscous process Eliminates pulsation and square root error Increases instrument accuracy
• Isolation manifolds meet API and ASME piping codes	Installation suitable when 'piping class first isolate' is a requirement
• Can be ordered as complete assembly	Reduces installation time and cost Can be pressure tested as assembly
• Common bolt sizing used throughout	Reduced risk of installation error Eliminated risk of seal ring blow out
• Di-Electric Isolation available	Eliminates risk of transmitter damage when static build up is a problem

STABILIZED COUPLING

A pair of 1/2" male socket weld or threaded connectors allow for tapping directly into the orifice flange union. These connectors feature an eccentric design to allow installation onto tapping centres from 2" through 2 1/4" and a separated stabilizer assembly for easy installation.

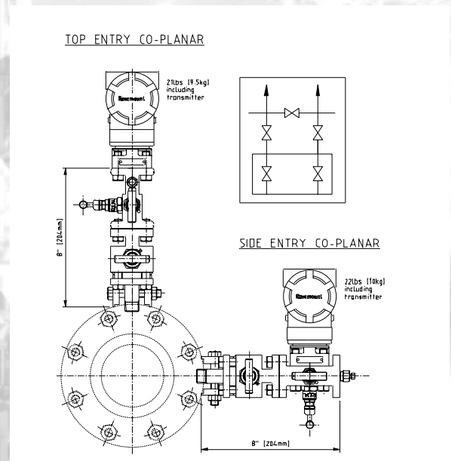


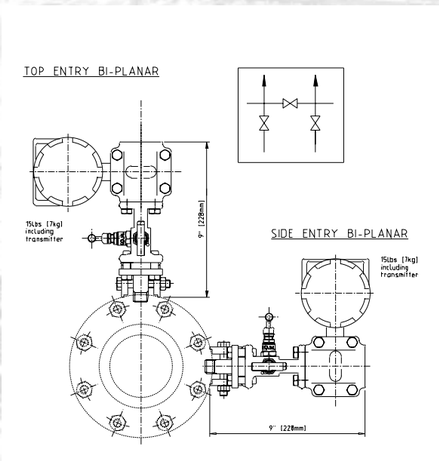




PRODUCT OVERVIEW

The OliverMount™ system combines the traditionally separate piping and instrument components of a transmitter hook up into a single, close coupled and rigid installation. The principle components included within the assembly are as follows:





OUR CAPABILITIES

We supply technically advanced, high quality valve products designed for critical service in the oil, gas, petrochemical and power generation industries worldwide.

Our pipeline and instrumentation valves are available in materials of your choice, incorporating a wide variety of process connections. Our modular designs and manufacturing flexibility, guarantees short delivery times.

Our ISO 9000 Quality Product Range includes:

NEEDLE VALVES TO 15,000 PSI – (1,000 BAR)

BALL VALVES TO 15,000 PSI – (1,000 BAR)

NEEDLE AND BALL VALVE STYLE MANIFOLDS FOR ALL MAKES OF PRESSURE AND FLOW TRANSMITTERS

COMPACT, SPACE SAVING SLIMLINE VALVES AND MONO FLANGE VALVES

DOUBLE BLOCK AND BLEED VALVES

A WIDE RANGE OF INSTRUMENT ACCESSORIES

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CUSTOMISED VALVE PRODUCTS FOR MANY SPECIAL APPLICATIONS

PATENTED VALVE DESIGNS, FOR EXAMPLE THE TWINSAFE DOUBLE BLOCK AND BLEED VALVE THAT FITS INTO A SINGLE VALVE ANSI BI6.10 LENGTH AND THE SMART MANIFOLD THAT ISOLATES, VENTS, ZEROS, EQUALISES FOR CALIBRATION OF THE DIFFERENTIAL PRESSURE TRANSMITTER IN ONE QUARTER TURN ACTION

oliervalves
RELIABILITY UNDER PRESSURE

Parkgate Industrial Estate Knutsford Cheshire WA16 8DX England Tel: 01565 632636 (14 Lines)
Fax: 01565 654089 or 01565 650060 Email: sales@valves.co.uk WWW: valves.co.uk or olivervalves.com

The Oliver Group products are made in England and sold and supported in over 50 countries worldwide.

CAT INSTRUMENT REV 3-02

Wide Product Range

A comprehensive range of instrument and piping valves designed to meet the demands of today's international clients.

Unusual Flexibility

From standard designs to specially manufactured assemblies, we offer total flexibility and creative innovative design concepts.

Strong Worldwide Capability

Our products – designed to meet international standards – are stocked and marketed in over 50 countries worldwide by factory trained local service specialists.

Delivery Reliability

The modern modular design and "just in time" manufacturing philosophy of Oliver Valves ensuring short lead times, remain an attractive feature of doing business with our company.

INSTRUMENTATION PRODUCTS

oliver

A WORLD LEADER IN VALVE TECHNOLOGY

oliervalves
RELIABILITY UNDER PRESSURE

NEEDLE VALVES AND MANIFOLDS

HIGH PERFORMANCE BALL VALVES

SEVERE SERVICE VALVES

RISING PLUG VALVES AND MANIFOLDS

INSTRUMENT PRODUCTS

AIR HEADERS AND DISTRIBUTION MANIFOLDS

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oliervalves
RELIABILITY UNDER PRESSURE

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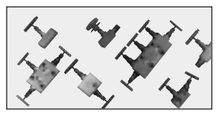


LLOYD'S 0870012/A

REGISTRATION NUMBER 40697

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OPERATION, INSTALLATION AND MAINTENANCE INSTRUCTIONS

SAFETY NOTES:
i) All adjustments should be carried out by qualified personnel with the valve at zero pressure.
ii) End connectors must not be removed from bodies.
iii) Handle wrenches/extensions must not be used to operate the valves.
iv) Vent plugs must not be removed when the isolate valve is open and under pressure.
v) Head units and locking pins must not be removed once installed.
vi) Maximum torque to be applied to tee-bars is 10lb ft.
vii) Valves must be suitably supported in service.
viii) Needle Valves; No excessive side forces (>30lb ft) to be applied to the head unit.
ix) Ball Valves: No excessive forces to be applied to the handle/handle locking arrangement, and do not carry valve by the handle.
x) Do not paint over valve body markings.
xi) Do not rod valves under pressure.

EQUIPMENT REQUIRED

HEAVY DUTY AND STANDARD NEEDLE VALVE	Tee bar bolt – 10mm A/F spanner. Pusher nut – 9/16" A/F spanner. Head Unit Cartridge – 22mm socket and torque wrench. Lock Nut – 3/4" A/F spanner.
BALL VALVE –	No maintenance required. Ball Valve spanner actuation – 1" A/F spanner.
SEVERE SERVICE – VALVE – 4mm and 6mm bore	(See Standard Needle Valve.)
SEVERE SERVICE – VALVE – 11mm bore	Tee bar bolt – 13mm A/F spanner. Pusher nut – 15/16" A/F spanner. Head Unit Cartridge 1.1" socket and torque wrench. Lock nut – 1.1" A/F spanner.
OUTSIDE SCREW AND YOKE VALVE – GAUGE SNUBBER – 1/4" VENT PLUG, PRESSURE PLUG – 1/2" VENT PLUG – PRESSURE PLUG, VENT VALVE – MOUNTING BOLTS FOR MANIFOLDS –	Tee bar bolt – 1/2" A/F spanner. Packing bolt – 1/2" A/F spanner. Lock nut – 8mm A/F spanner. 9/16" A/F spanner. 22mm A/F spanner. 5/8" A/F spanner.
OTHER EQUIPMENT NEEDED –	1. Screwdriver. 2. Hammer – to secure pin. 3. Pin Punch – to secure pin.

OPERATING INSTRUCTIONS
STANDARD NEEDLE VALVES – Approximately 6 Turns from open to closed, clockwise to close.
HEAVY DUTY NEEDLE VALVE – **4 1/2** Turns from open to closed, clockwise to close.
SEVERE SERVICE VALVE (4mm and 6mm bore) – **4 1/2** Turns from open to closed, clockwise to close.
SEVERE SERVICE VALVE (11mm bore) – 5 Turns from open to closed, clockwise to close.
MINIATURE VALVES – Approximately **4 1/2** Turns from open to closed, clockwise to close.
OUTSIDE SCREW AND YOKE VALVES – Approximately 6 Turns from open to closed, clockwise to close.
BALL VALVES – 1/4 Turn from open to closed, clockwise to close as standard, (ie Valve is closed when handle is at 90° to the valve body)
NOTE – Apart from Ball Valves, the packing on these valves is adjustable, so turns between open and closed will vary slightly from valve to valve.
All valve bodies show our company name, maximum cold working pressure, valve material, the valve part number and also a trace code number which relates to the material certificates for that particular valve.

INSTALLATION AND MAINTENANCE INSTRUCTIONS
NEEDLE VALVES – If needle valve has socket weld, stub weld or butt weld connections the needle valve will be supplied in kit form. (This means the valve head unit is supplied separately to the valve body) then after welding the valve body into the pipeline –
1. Ensure that the spindle is fully retracted into the head unit so the tip is hardly showing.
2. Place PTFE ring into the undercut at the top of the **3/4**" UNF thread.
3. If head unit is stainless steel, please ensure that a PTFE spray is applied to the **3/4**" UNF thread PRIOR to engaging it with the body.
4. Screw head unit down and Torque to:- CARBON STEEL 85lb ft; STAINLESS STEEL 135lb ft
5. Replace locking pin in either one of the 4mm holes and secure.
6. Replace Tee bar and tighten down Tee bar bolt.
7. Adjust packing if required by loosening lock nut (bottom nut on head unit). Close the valve by turning the tee bar in a clockwise direction until it stops. Open the valve one full turn (turn tee bar anti-clockwise). Tighten down the pusher (top nut on head unit) which compresses packing until the valve feels not too slack or difficult to operate, then tighten down lock nut.
8. If valve packing Grafoil wait two minutes after tightening the pusher and before checking valve operation.

IMPORTANT NOTE – If socket weld, butt weld, stub weld connections are required for Ball valve, Miniature and Outside Screw and Yoke valves then valves will include 3" extensions, so the valve can be welded into the line without destroying the seats and packing and without having to dismantle or re-build the valve.
BALL VALVE – No maintenance required. End connections must not be removed from bodies.
MINIATURE VALVES – No maintenance required. Warning: Head units/locking pins must not be removed from bodies once installed.
OUTSIDE SCREW AND YOKE VALVE – SAFETY NOTE: These operations must be carried out at zero pressure and ambient temperature.
1. To adjust PTFE packing close the valve by turning the tee bar in a clockwise direction until it stops. Do not exceed 10lb ft torque. Open the valve one full turn (turn tee bar anti-clockwise). The two packing nuts either side of the spindle must be adjusted evenly to keep the gland bridge square and compress the gland packing until the valve feels not too slack or difficult to operate.
2. If valve packing is Grafoil, wait for two minutes after tightening the two nuts before checking valve operation. Carry out operation 1 again if required.
WARNING: Bonnets and yokes must not be removed from bodies.

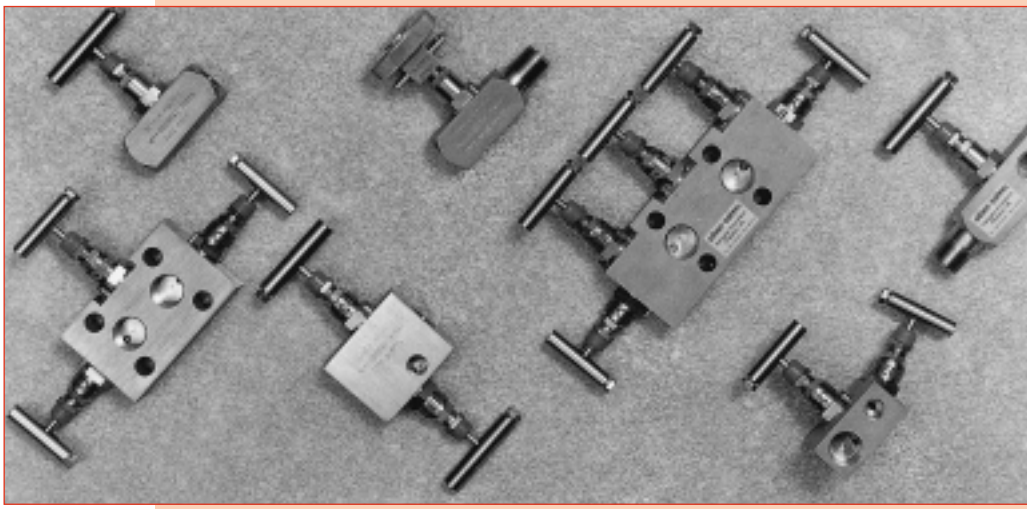
GAUGE SYPHONS AND CHECK VALVES – No maintenance required.
GAUGE SNUBBERS – SAFETY NOTE: This operation must be carried out at zero pressure and ambient temperature.
The variable orifice is adjusted by slackening off the lock nut, adjusting the screw and then retightening the nut.

SOUR GAS SERVICE
Valves can be manufactured for Sour Gas Service in accordance with NACE MR-01-75 latest revision.

OXYGEN SERVICE
Oliver Valves has in-house facilities to degrease valves and remove all dirt and hydrocarbons making valves suitable for oxygen service applications. Oliver Valves DO NOT offer the following valves for oxygen service:-
All carbon steel valves, Ball Valves, Valves with soft seats, Needle Valves with handwheel locking.

VACUUM SERVICE
Oliver Valves can supply Needle (soft and hard tip) and Ball Valves for Vacuum Service. Both have been successfully tested to a .01m bar absolute vacuum.

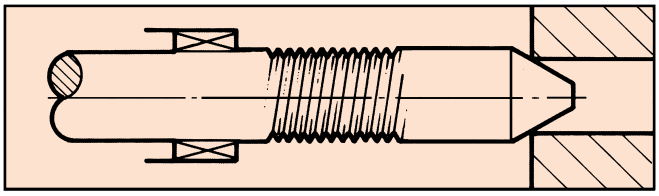
INSTRUMENT NEEDLE VALVES AND MANIFOLDS



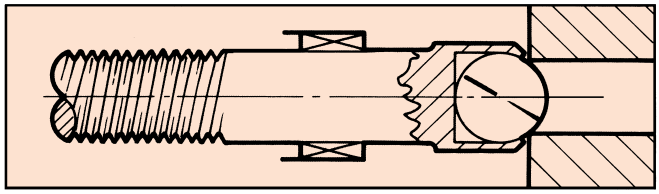
features

- Millions of successful installations worldwide.
- Worldwide stocking distributor support.
- Unique non-rotating tips – field interchangeable.
- Unique pressure compensating spindle seal.
- Actuation threads protected from the process and environment.
- Anti-blow out spindle safety feature.
- One of the very few fully fire tested, approved and certified needle valve designs available.

SOLID SPINDLE TYPE



SWAGED BALL TYPE



SOLID SPINDLE TYPE

Rotation of the spindle causes metal to metal pick-up or galling of the seat and tip on closure. The result is a leak path across the seat after only a few operations! Also the spindle threads are in contact with the process media giving potential seizure of the entire valve.

SWAGED BALL TYPE

If the swaging operation is too tight or if dirt gets behind the ball, galling occurs; a 'seating' line on the ball is also made and if the ball rotates the 'seating' line becomes a leak path. If there is a bearing flat on the ball, the ball will spin in a lateral plane inside the spindle. This spinning causes wear to the swaged portion of the spindle which in turn loosens the ball until the bearing flat of the ball is exposed. Damage to the seat and ball will occur if the ball is spinning at a high velocity or the exposed bearing flat on the ball comes into contact with the valve seat.

OLIVER SOLUTIONS

WITH MILLIONS OF SUCCESSFUL INSTALLATIONS – ALL OVER THE WORLD ON TOUGH APPLICATIONS – OUR DESIGN IS STILL UNRIVALLED. THE UNIQUE OLIVER DESIGN SOLVES THE TWO TYPICAL NEEDLE VALVE LEAKAGE PROBLEMS.

FIRST PROBLEM – Leakage across the seat

Our unique non-rotating plug type tip closure eliminates 'pick up' or galling between the spindle tip and the seat of the valve – a big problem with many competitive designs. Simple interchangeability of a range of tips gives a family of high-quality instrument valves suitable for gas (soft tip), oil (hard tip), sour gas (NACE specification tip), metering of fluids (long nose tip), or even a stellite tip if your application warrants it!

SECOND PROBLEM – Leakage from the spindle seal

Our pressure dynamic self-adjusting spindle seal addresses the traditional problems of valve spindle leakage by ensuring that as the pressure on the seal increases, the seal grip also increases in direct proportion. The higher the pressure the better the seal. All this with a valve design suitable for vacuum service, also our roller burnished spindle with rolled threads gives low torque operation making the valve easily hand operable across its pressure range. A choice of spindle seals gives a wide range of temperature choices.

TEE BAR

316 Stainless Steel for maximum corrosion resistance, fastened to spindle by anti-vibration bolt can be inter-changed with anti-tamper feature or a handwheel with or without our patented locking device.

SEAL

Precision machined, works in conjunction with a dynamic piston ring, giving leak free operation for the life of the product. Seals in alternative materials are available.

PISTON RING

Uniquely offers dynamic adjustment of the packing gland seal in response to pressure change. This feature ensures leak free spindle sealing.

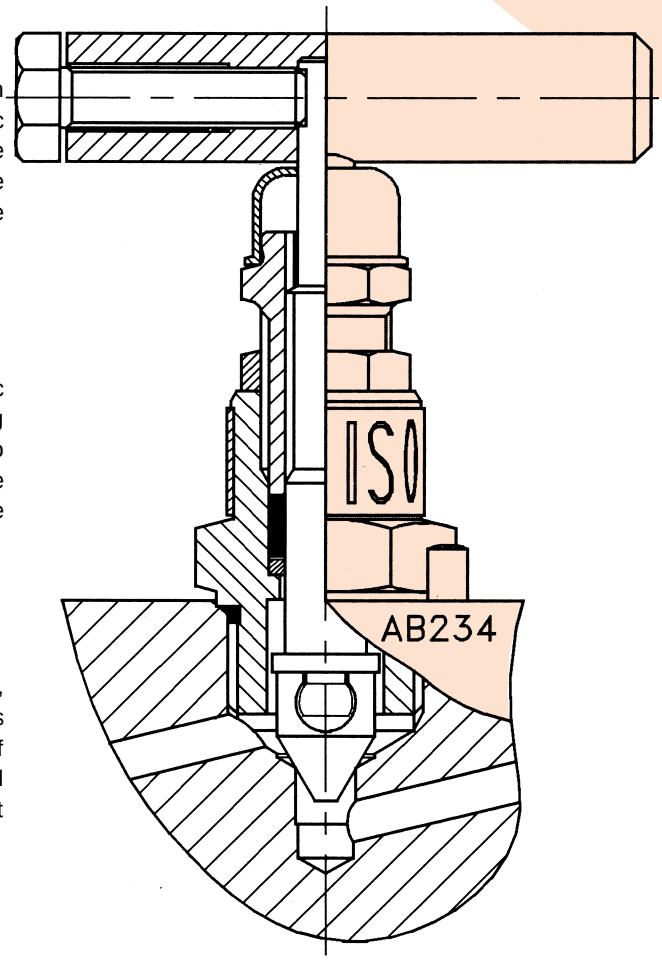
INTERCHANGEABLE TIPS

Non-rotating self-centering, anti-galling spindle tip gives positive bubble-tight shut-off self-centering closure and field inter-changeability of different tip styles is possible.

TRACEABILITY OF MATERIALS

All Oliver products have material traceability and pressure test certificates to BS EN 10204 3.1.B and controlled by QA procedures approved to BS5750/ISO9000/EN29002. A unique code is stamped on all valve bodies linking them with their material and chemical analysis certificates.

THE MOST UNIQUE NEEDLE VALVE ON THE MARKET TODAY



HOUSING

Rugged design with rolled threads in contact with body ensures high factor of safety when valve is at maximum pressure and temperature. Metal to metal, body to bonnet contact coupled with a special secondary seal offers an extremely effective leak free joint.

DUST CAP

Protects lubricated spindle threads from the ingress of dirt. Caps are colour coded to show the type of service condition the valve is suitable for – RED (standard) PTFE packed; WHITE degreased for oxygen service: BLUE to NACE specification; GREEN to NACE specification and Grafoil packed; BLACK Grafoil packed.

PUSHER & LOCK NUT

These precision machined parts adjust piston ring compression on the packing to give leak free operation, even on vacuum service.

ANTI-BLOWOUT SPINDLE

The heart of our valve. All threads are rolled and lubri-cated to eliminate galling. A special ten micro inch super finish on the seal diameter dramatically reduces operating torque. And the stem is anti-blowout/non-removable – a major safety feature.

LOCKING PIN

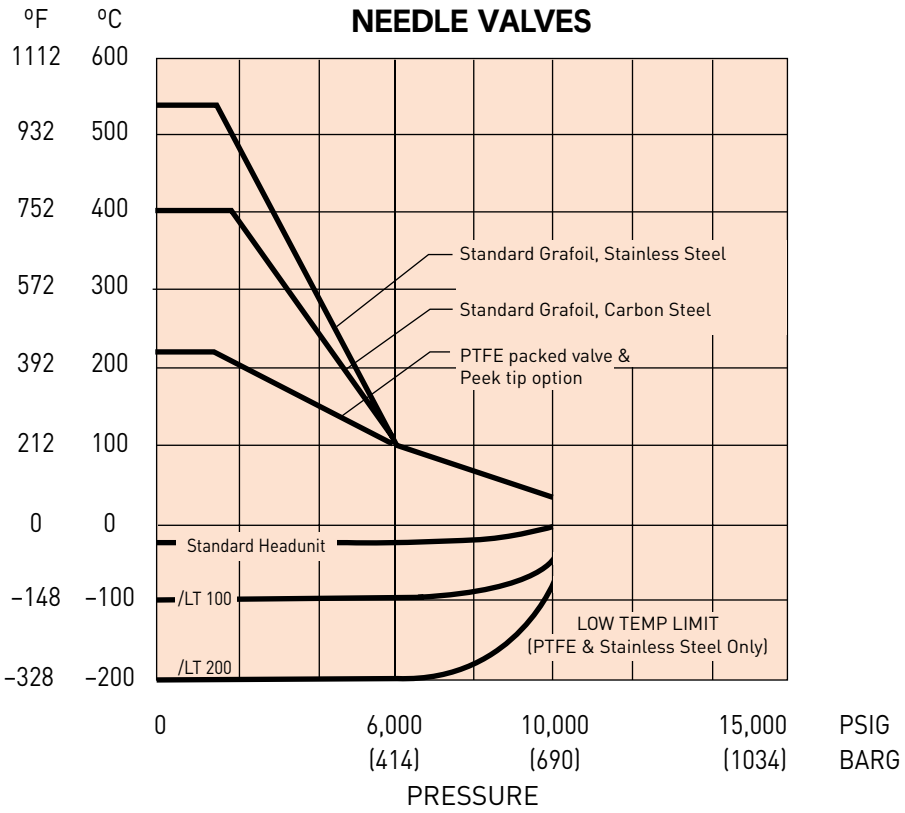
A 316 Stainless Steel pin eliminates unauthorised removal of the bonnet assembly. The pin is held by an anti-vibration spline into the body.

IDENTITY RING

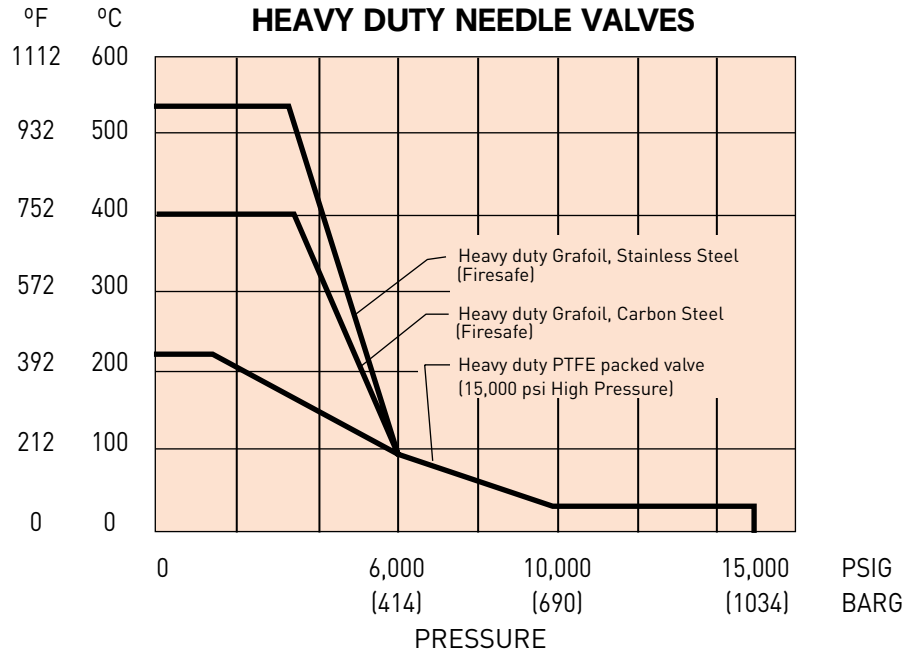
A Stainless Steel ring around the housing indicates in colour coded form the status of the valve: isolate (blue), vent (red) or equalise (green).

TECHNICAL SPECIFICATIONS

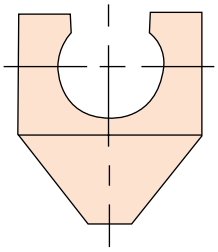
NEEDLE VALVES



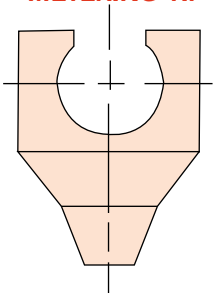
HEAVY DUTY NEEDLE VALVES



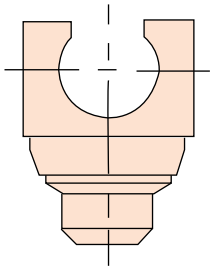
STANDARD TIP



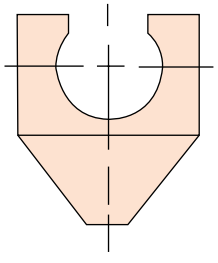
METERING TIP



PEEK SOFT TIP



STELLITE 6, ULTRA HARD TIP



STANDARD SPECIFICATION

(Oliver Valves invites enquiries for special variations on our product lines)

PRESSURE	**6,000 PSI (see graph)**
TEMPERATURE	**240° (see graph)**
PACKING	**PTFE**
THREAD FORM	**NPT**
MANIFOLD CONN SIZE	**½"**
HANDLE	**'T' BAR**
SEAT	**METAL TO METAL**
BORE	**0.21" (5.4mm)**
CV	**0.46**

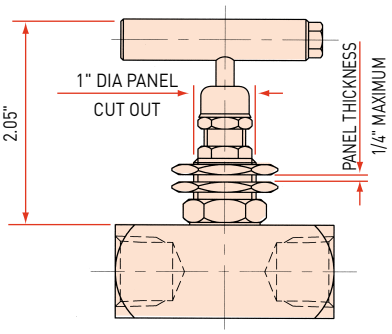
- All direct mount manifolds are supplied with Teflon gaskets and high tensile carbon steel bolts, grafoil gaskets and stainless steel bolts are available on request.
- All valves are available to NACE MR-01-75 (Latest revision) for sour service specification (add suffix /NA).
- Manifolds are not supplied with plugs unless specified.
- Manifold valves have stainless steel colour coded identity tags affixed to individual valve head units, blue for isolate, green for equalize and red for vent.
- Products may be degreased for oxygen service to Air Products AO3 standard (add suffix /OXY).
- Our 6,000 PSI needle valves and our remote mounted manifolds can be uprated to 10,000 PSI (add suffix /HP).
- Firesafe needle valves and manifolds constructed in austenitic stainless steel and Duplex stainless steel Class 150lb to 2500lb can be supplied. These products have Lloyds Register Approval certificate number 92/00140 (E2) and are to BS 6755 Part 2 (1987) with a maximum working pressure of 6,000 PSI and a maximum working temperature of 540°C (add suffix /FS).
- Standard needle valves, with PTFE packing, have been tested to full vacuum conditions

OPTIONS OF OLIVER NEEDLE VALVES

OPTIONAL BONNETS CAN BE FITTED TO ALL MANIFOLDS

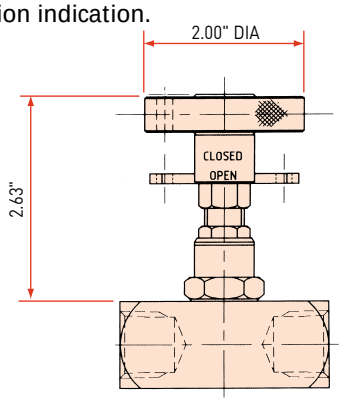
PM OPTION

'PM' panel mount.



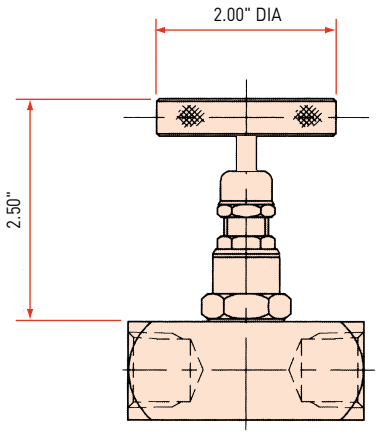
HL-PI OPTION

'HL-PI' handwheel locking and position indication.



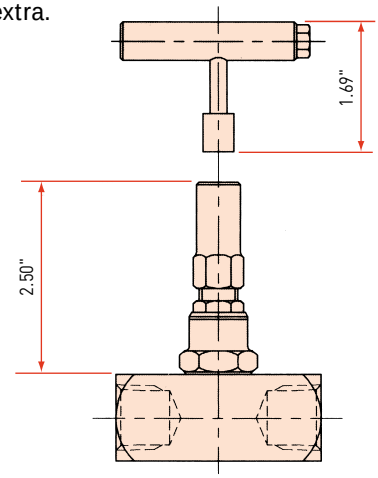
RHW/CSHW OPTION

'RHW' red nylon handwheel, 'CSHW' carbon steel handwheel.



AT OPTION

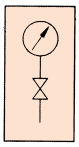
'AT' anti-tamper 'AT KEY' extra.

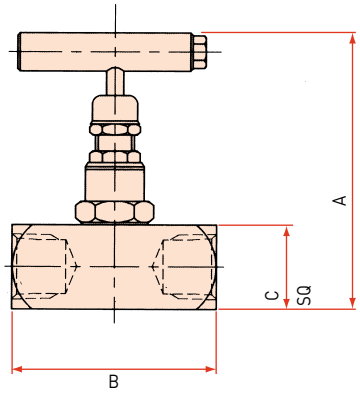


STANDARD HAND VALVES

F TYPE

Female x Female configuration
Standard = 6,000 PSI
HP = 10,000 PSI.

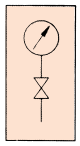


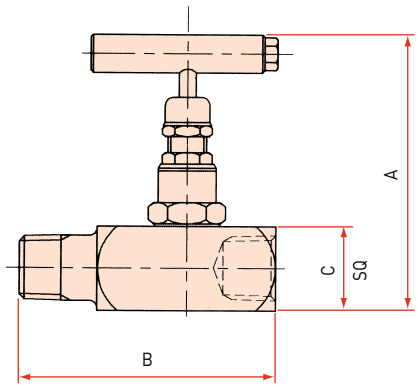


PART NO	SIZE	A	B	C	WEIGHT (KG)
F25	1/4"	3.6	2.1	1.1	0.5
F38	3/8"	3.6	2.4	1.1	0.5
F50	1/2"	3.6	2.6	1.1	0.5
F75	3/4"	4.0	2.9	1.5	0.8
F10	1"	4.5	3.2	2.0	1.4

M TYPE

Male x Female configuration
Standard = 6,000 PSI
HP = 10,000 PSI.



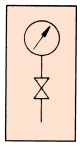


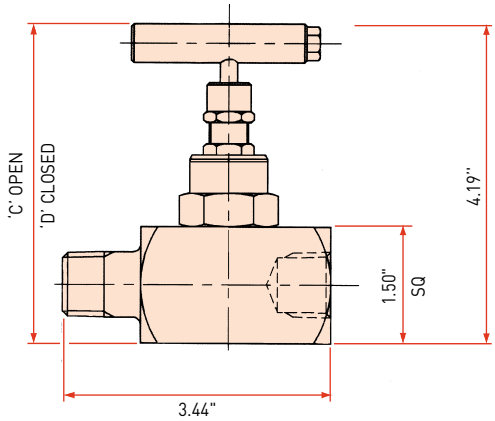
PART NO	SIZE	A	B	C	WEIGHT (KG)
M25	1/4"	3.6	2.8	1.1	0.5
M38	3/8"	3.6	2.9	1.1	0.5
M50	1/2"	3.6	3.4	1.1	0.5
M75	3/4"	4.0	3.6	1.5	0.8
M10	1"	4.5	3.3	2.0	1.4

FIRESAFE VALVES

/FS TYPE

Male or Female configuration
FIRESAFE tested 6,000 PSI
BS6755 Part 2,
Lloyds Certificate No. 92/00140.

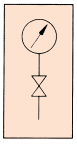


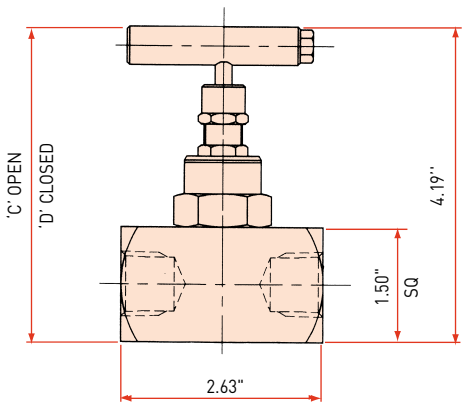


HEAVY DUTY VALVES

/HD TYPE

Male or Female configuration
HD = 6,000 PSI
HD/HP = 10,000 PSI
HD/15HP = 15,000 PSI.

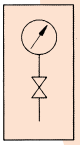


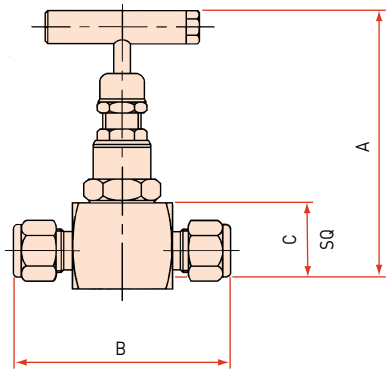


Note: 1/4", 3/8" and 1/2" NPT threads rate to 10,000 PSI only
3/4" and 1" NPT threads rate to 6,000 PSI only

BI TYPE

Twin ferrule compression fitting 6,000 PSI.

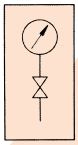


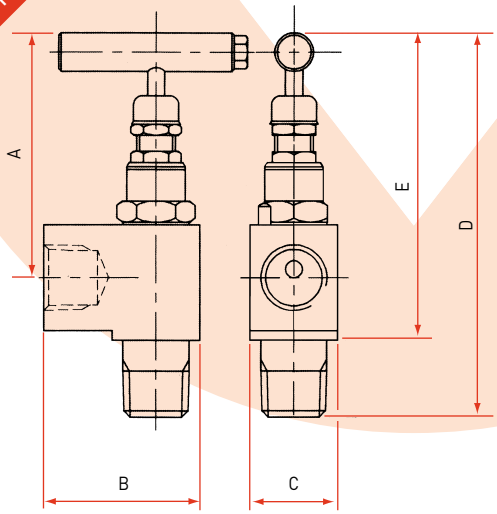


PART NO	SIZE	A	B	C	WEIGHT (KG)
BI25	1/4"	3.6	2.4	1.1	0.3
BI38	3/8"	3.6	2.9	1.1	0.4
BI50	1/2"	3.6	3.1	1.1	0.4
BI6mm	6mm	3.6	2.4	1.1	0.3
BI10mm	10mm	3.6	2.9	1.1	0.4
BI12mm	12mm	3.6	3.1	1.1	0.4

A TYPE

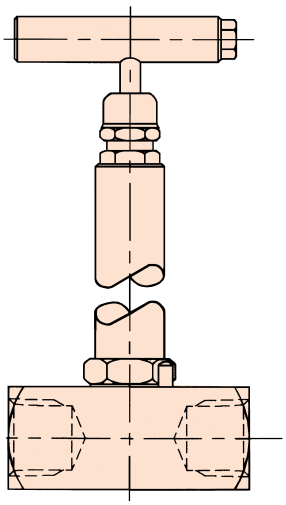
Angle Hand Valves
Standard 6,000 PSI
HP = 10,000 PSI.





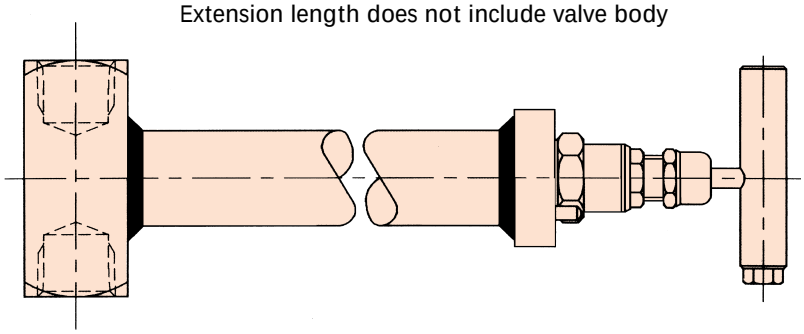
PART NO	CONNECTION TYPE	SIZE	A	B	C	D	E	WEIGHT (KG)
AF25	Female x Female	1/4"	3.0	1.5	1.1	-	4.0	0.4
AM25	Male x Female	1/4"	3.0	1.5	1.1	4.0	-	0.4
AF50	Female x Female	1/2"	3.0	2.0	1.1	-	4.5	0.5
AM50	Male x Female	1/2"	3.0	2.0	1.1	4.5	-	0.5

CRYOGENIC BONNETS



SUFFIX	EXTENSION	TEMPERATURE
LT100	5.81" (148mm)	-100ºC
LT200	12.38" (314mm)	-200ºC

Extension length does not include valve body

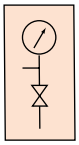


LT100 LT200

GAUGE VALVES

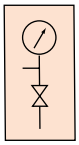
MALE AND FEMALE THREADED OR BUTTWELD INLET OPTIONS

GB1 TYPE Gauge bleed valve with ¼" UNF bleed.

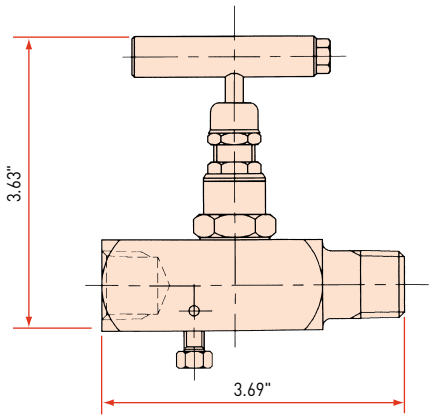


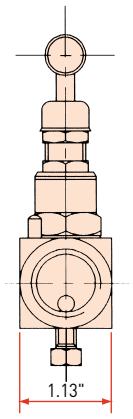
0.5kg

GV1 TYPE Gauge vent valve with ¼" NPT bleed.

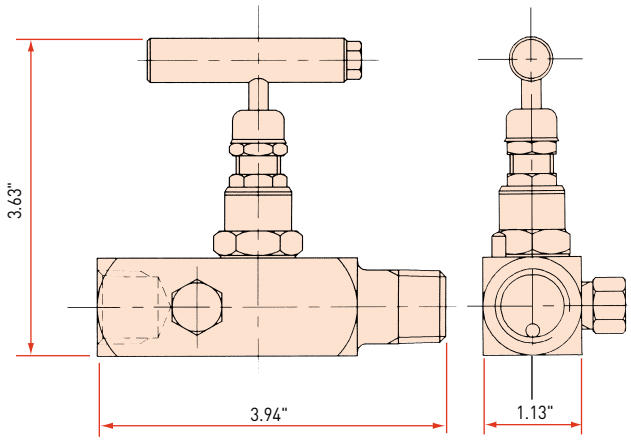


0.5kg



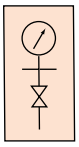


BLEED SCREW SUPPLIED



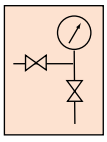
VENT PLUG SUPPLIED

GM1 TYPE Gauge multiport valve Male inlet x three Female outlets
GM150S/Ext = 3" lagging extension available on inlet
GM1-75/50S = ¾" connection available on inlet.

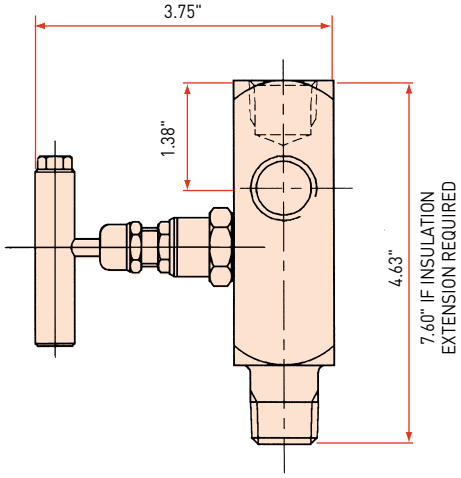


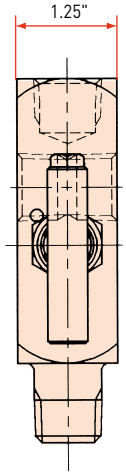
0.7kg

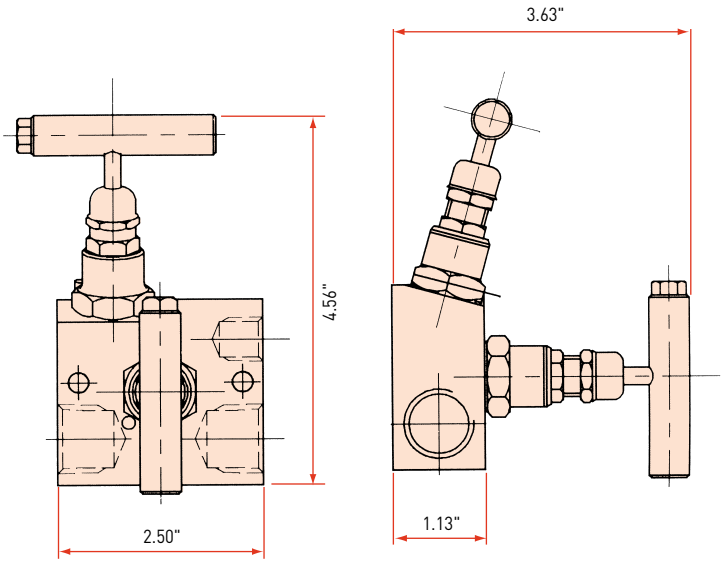
G12AF TYPE Two valve manifold Female x Female for wall mounting and bottom venting.



1.0kg



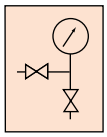




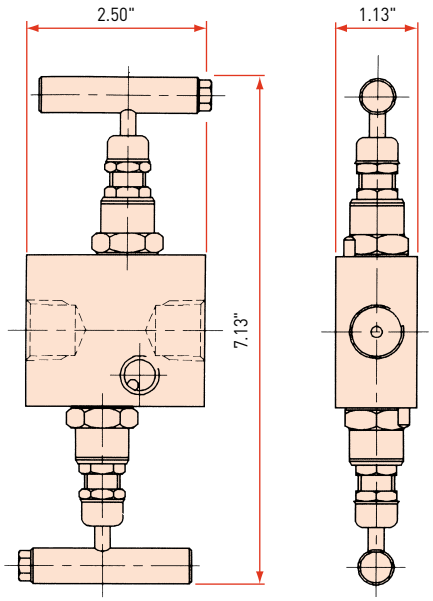
MOUNTING HOLES ARE STANDARD

G12FF TYPE

Two valve manifold Female x Female.

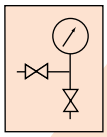


0.9kg

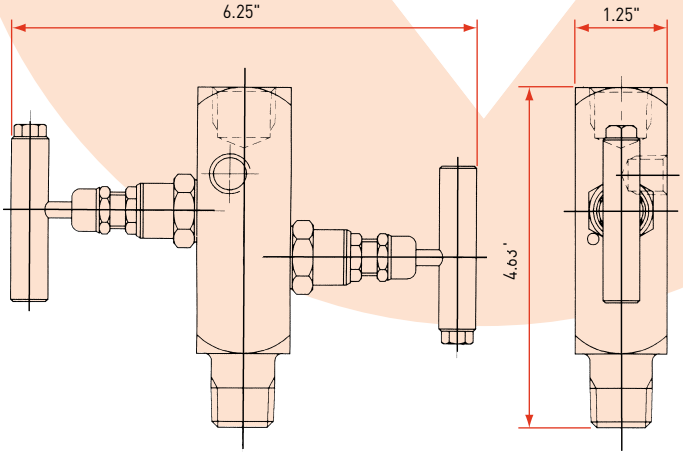


G12MF TYPE

Two valve manifold Male x Female.



0.9kg



G12FM TYPE

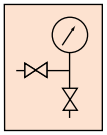
Two valve manifold Female x Male.

G12MM TYPE

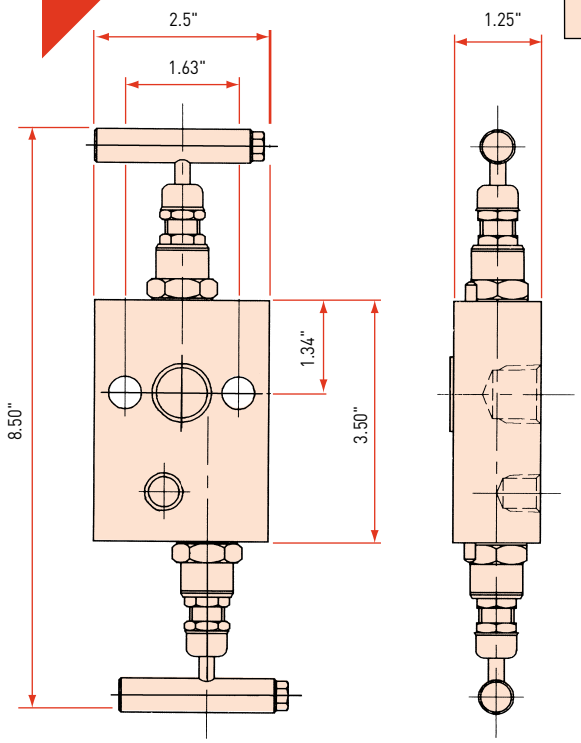
Two valve manifold Male x Male.

Y24 TYPE

Direct mounting pipe to flange two valve manifold.

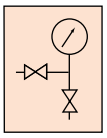


1.4kg

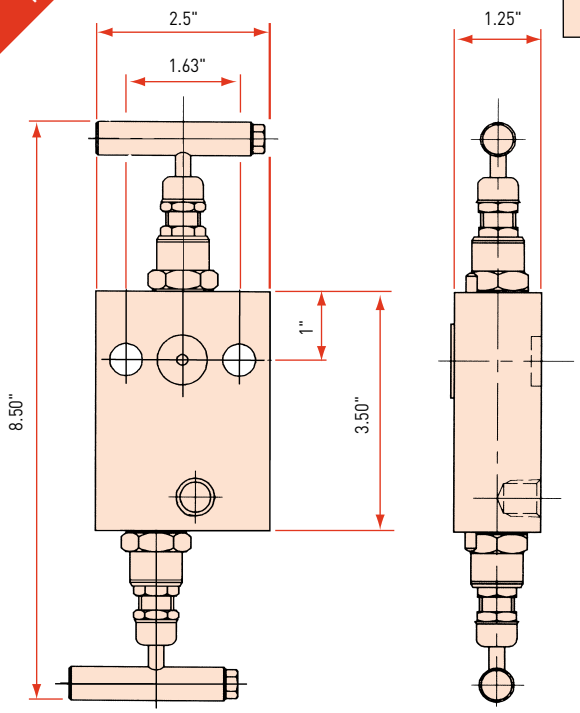


Y25 TYPE

Direct mounting flange to flange two valve manifold.



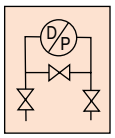
1.4kg



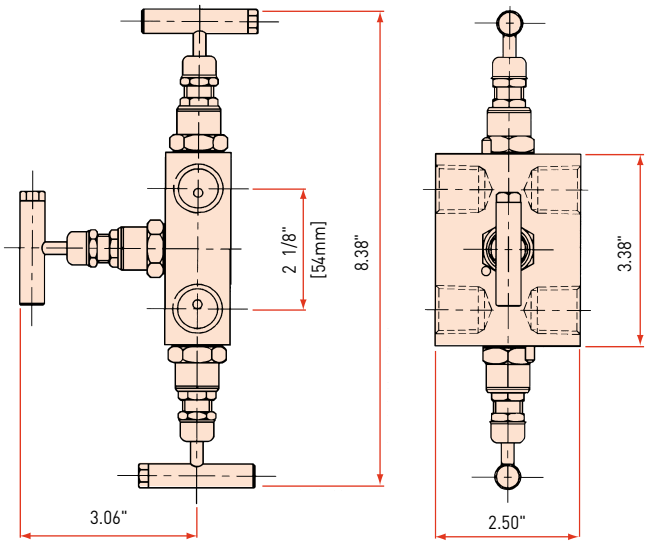
KIDNEY FLANGES IN MANY STYLES ARE OPTIONAL

THREE VALVE MANIFOLDS

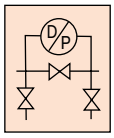
Y33 TYPE Remote mounting pipe to pipe.



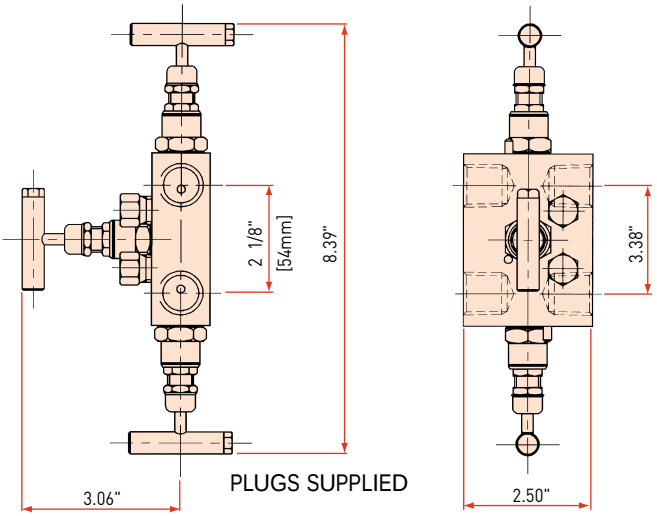
1.5kg



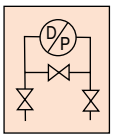
YV33 TYPE Remote mounting pipe to pipe manifold, with vent ports.



1.5kg

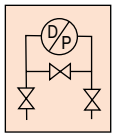


Y34 TYPE Direct mounting pipe to flange.

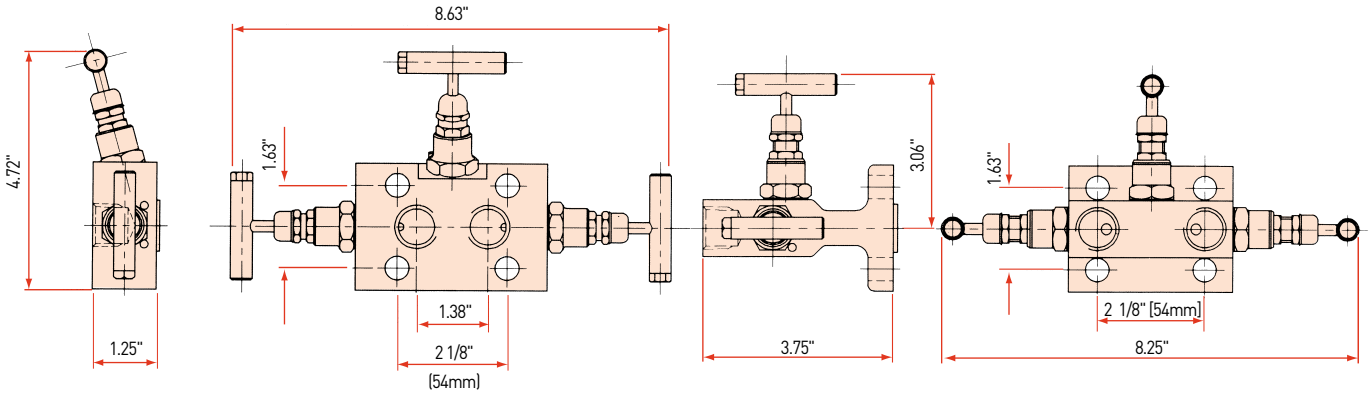


1.5kg

T34 TYPE Direct mounting pipe to flange.

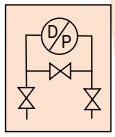


1.5kg

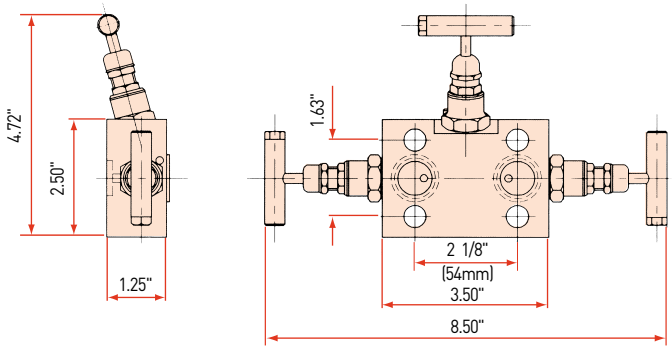


Y35 TYPE

Direct mounting flange to flange.



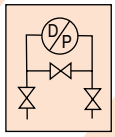
1.5kg



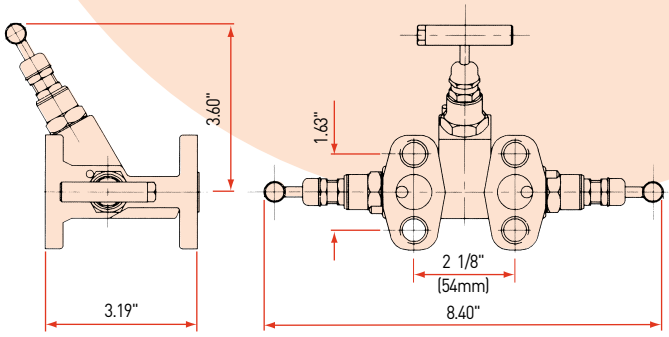
KIDNEY FLANGES IN MANY STYLES ARE OPTIONAL

H33 TYPE

Direct mounting flange to flange.



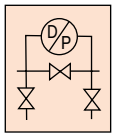
2.0kg



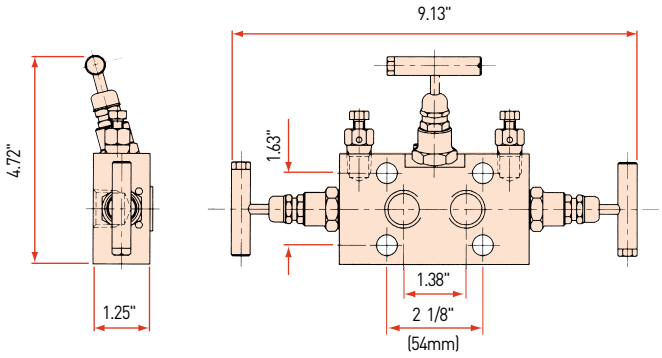
KIDNEY FLANGES IN MANY STYLES ARE OPTIONAL

YV34 TYPE

Direct mounting pipe to flange manifold, with vent ports.



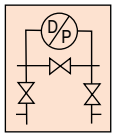
1.5kg



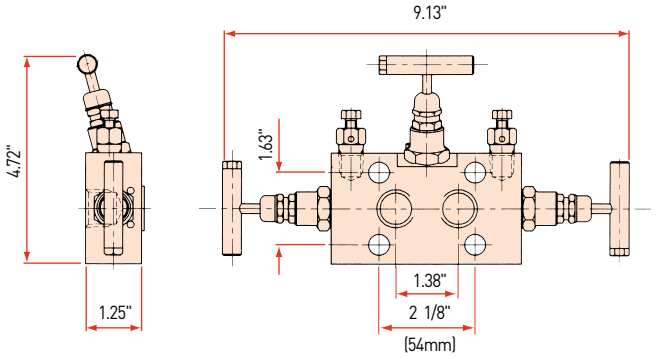
PLUGS SUPPLIED

YP34 TYPE

Direct mounting pipe to flange manifold, with purge ports.



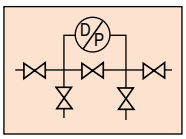
1.5kg



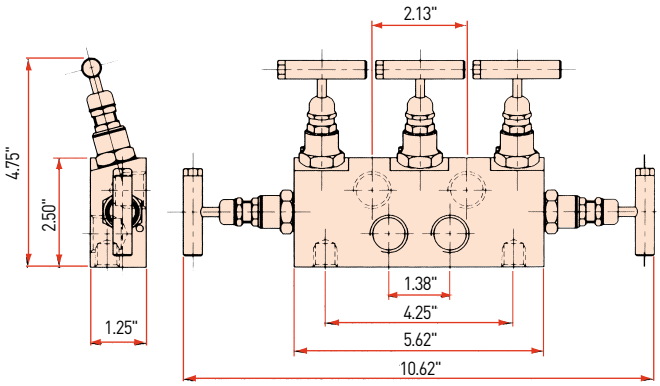
PLUGS SUPPLIED

FIVE VALVE MANIFOLDS

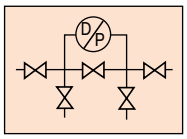
Y54 TYPE Remote mounting pipe to pipe.



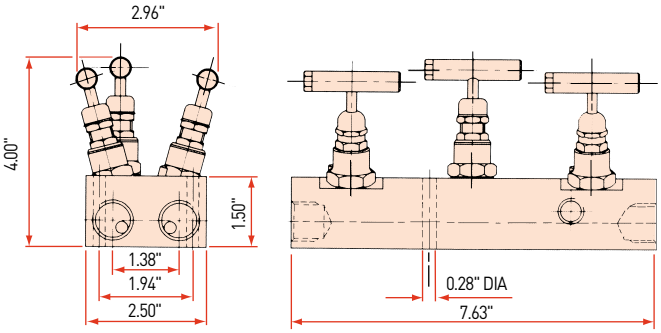
2.3kg



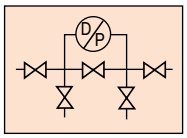
Y5PM TYPE Optional to Y54 type allows for mounting to wall or panel.



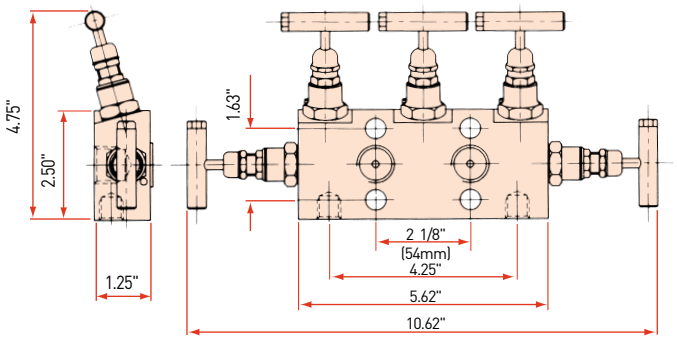
3.8kg



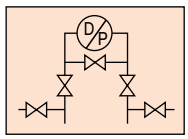
Y53 TYPE Direct mounting pipe to flange.



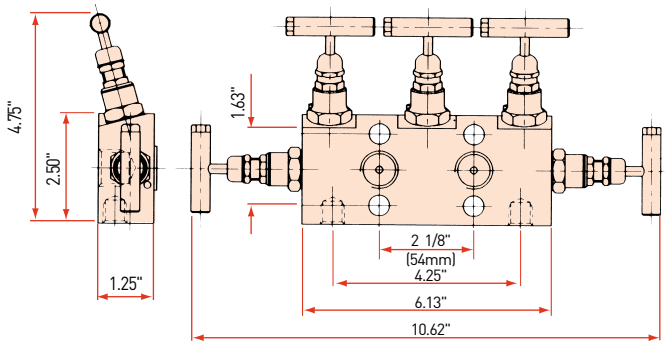
2.3kg



YP53 TYPE Direct mounting pipe to flange manifold, with purge ports.



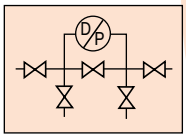
2.3kg



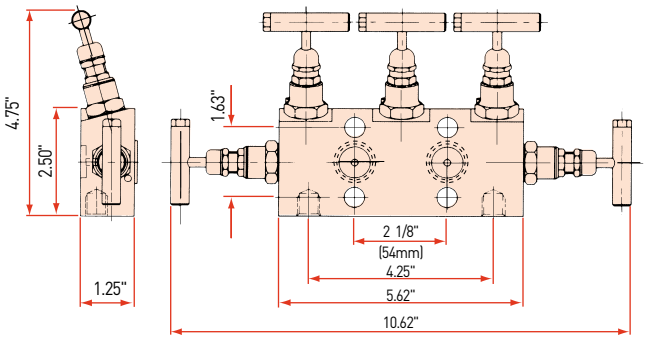
PLUGS SUPPLIED

Y52 TYPE

Direct mounting flange to flange.



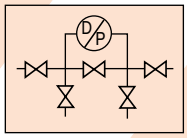
2.3kg



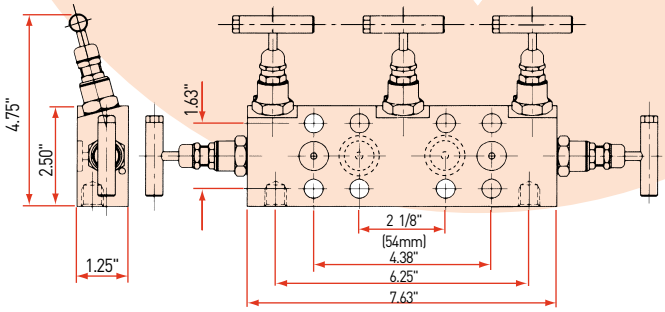
KIDNEY FLANGES IN MANY STYLES ARE OPTIONAL

Y59 TYPE

Similar to Y52 type but allows for removal of transmitter whilst manifold is fastened to impulse line flanges.



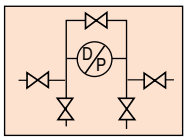
3.1kg



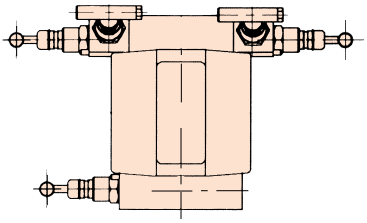
KIDNEY FLANGES IN MANY STYLES ARE OPTIONAL

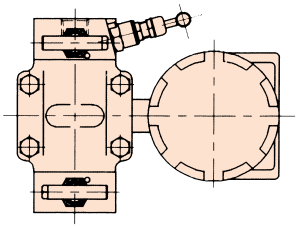
Y43 & Y12 TYPE

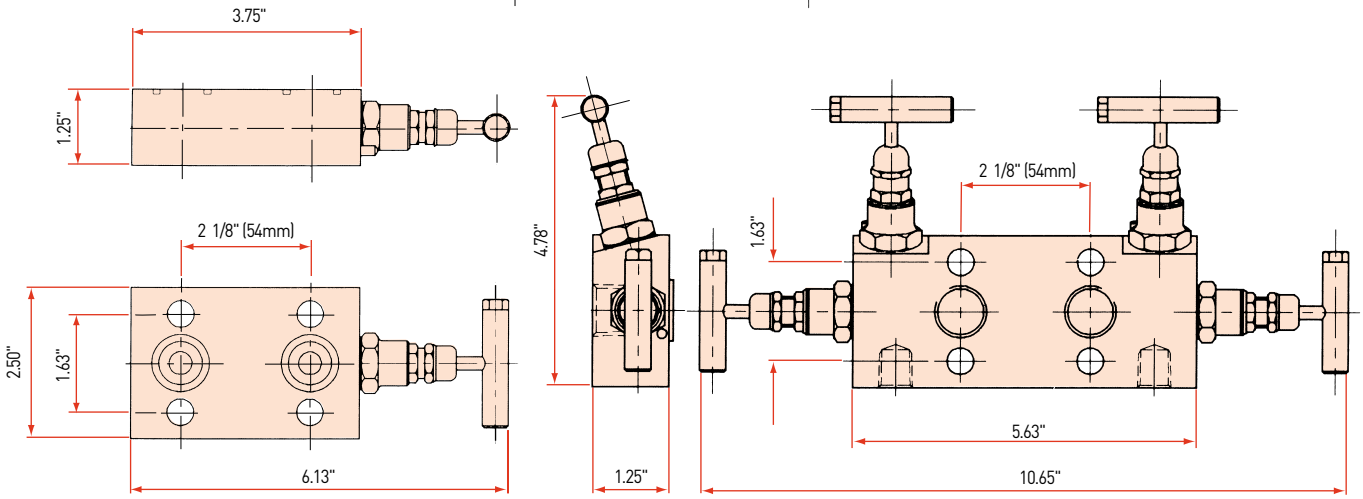
The Y43/Y12 four valve manifold and one valve equalise manifold are mounted to the back and the front faces of a Differential Pressure Transmitter to allow purging prior to removal.
TWO MANIFOLDS ASSEMBLED ONTO A DIFFERENTIAL PRESSURE TRANSMITTER.



Y43 2.3kg
Y12 1.4kg







FISHER ROSEMOUNT COPLANAR MANIFOLDS

Oliver Valves Ltd., in close co-operation with Fisher Rosemount, one of the world's leading transmitter manufacturers, has designed and developed a range of coplanar manifolds to be utilised with the Fisher Rosemount 3051 Smart pressure transmitter family.
These unique manifolds incorporate Oliver's tried, tested and field-proven needle valve design for seat and stem sealing, whilst allowing the manifold to be truly integrated with the pressure transmitter.
Whilst shown in 2-, 3- and 5-valve standard configurations, other variants are available upon request to suit your exact applications.

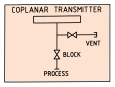
TWO VALVE INTEGRAL MANIFOLD WITH TRANSMITTER

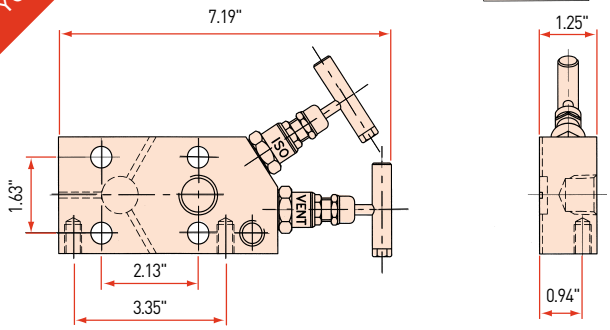
THREE VALVE INTEGRAL MANIFOLD WITH TRANSMITTER

FIVE VALVE INTEGRAL MANIFOLD WITH TRANSMITTER

YCP24

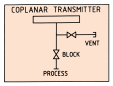
2 valve manifold, pipe to flange.

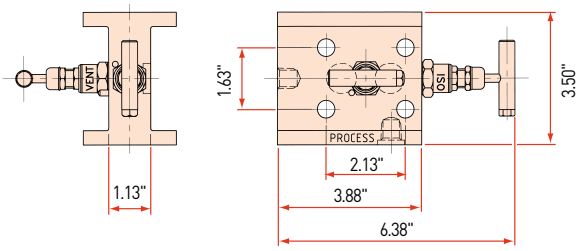




HCP29

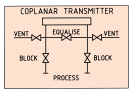
2 valve manifold, flange to flange.

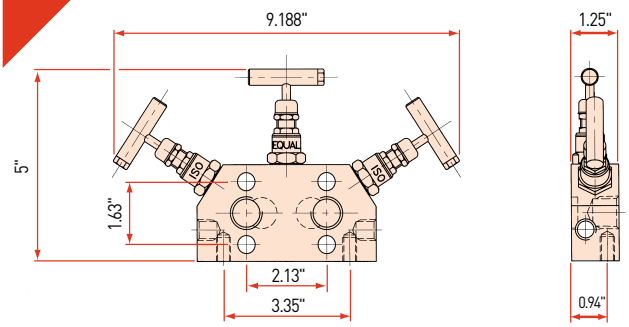




YCP34

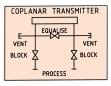
3 valve manifold, pipe to flange.

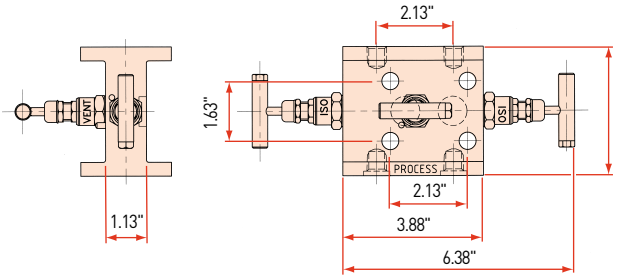




HCP33

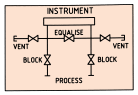
3 valve manifold, flange to flange.

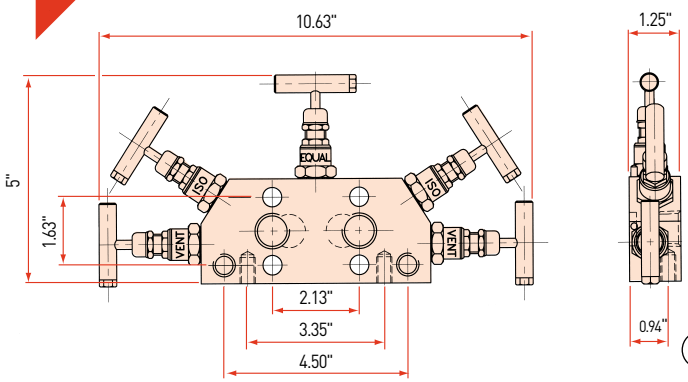




YCP53

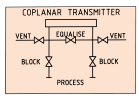
5 valve manifold, pipe to flange.

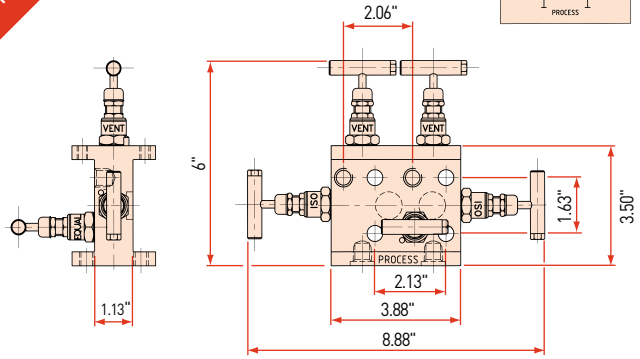




HCP53

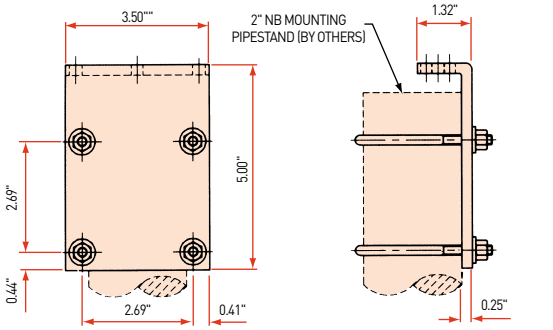
5 valve manifold, flange to flange.

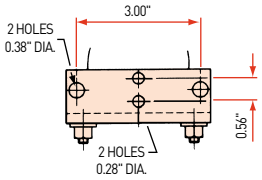




MANIFOLD ACCESSORIES

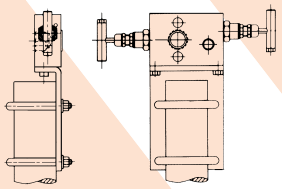
UNIVERSAL MOUNTING BRACKET



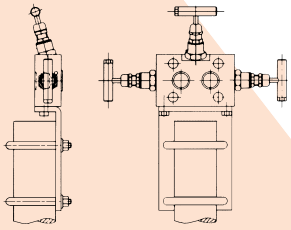


For mounting 2, 3 & 5 valve manifolds to a 2" NB pipestand. Mounting brackets supplied with "U" bolts, washers and nuts. Material of all components is zinc plated and passivated Carbon Steel. Special brackets can be supplied on request.

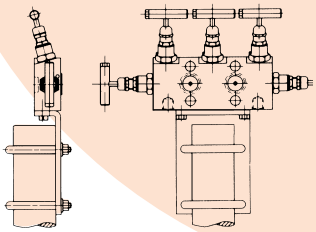
Y24/Y25



Y34/Y35

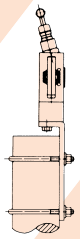


Y52/Y53



STEAM TRACE BLOCKS

The steam trace block is bolted to the manifold and because it is not an integral part of the manifold, stress levels (due to temperature cycling) are kept to a minimum. Steam trace blocks vary in size depending on manifold type.

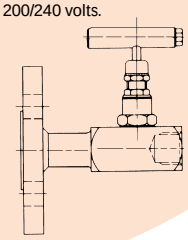


MANIFOLD HEATING, ELECTRICAL

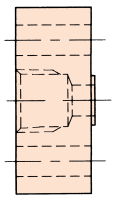
Specially designed ⅜" diameter cartridge manifold heater is available. The heater is inserted into the valve manifold and is protected by a brass cable gland and steel conduit designed for Zone 1 hazardous areas and approved to EExd and EExe IIc, BAS number: EX831220U. Output range either 25 or 50 watts, for 200/240 volts.

FLANGED VALVES

Flanged valves are available in many materials, flange sizes & configurations, please consult office stating flange class and rating.

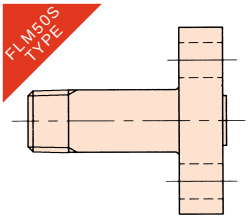


FLE50S TYPE



½" NPT female threaded. Kidney flange.

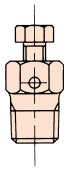
FLM50S TYPE



½" (O.D.) compression fitting. Kidney flange.

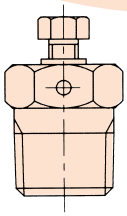
VP TYPE

Vent plugs ¼" & ½" sizes.



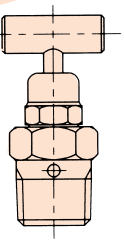
CVP TYPE

Captive vent plug ½" size.



VV TYPE

Vent valve ½" size.



OTHER OPTIONS AVAILABLE ON REQUEST

HOW TO ORDER

EASY ORDERING DESCRIPTION

Y33 S / AG

MANIFOLD TYPE

MATERIAL SELECTION

S	– 316S31 Stainless Steel standard (316)
SL	– 316S11 Stainless Steel (316L)
C	– 230M07 Carbon Steel plated (En1a)
CB	– 070M20 Carbon Steel (En3b) for NACE
M	– Monel (400)
NI	– Nickel (200)
HC	– Hastalloy (C276)
IL825	– Incoloy (825)
IN625	– Inconel (625)
FER	– Ferralium (255)
AB	– Aluminium Bronze (DGS1043)
DUP	– Duplex (UNS S31803)
TI248	– Titanium (248)
NA	– NACE MR-01-75 (latest revision)

EXAMPLE

F25S/NA/PM

F	– Female x female connections
25	– ¼" size (NPT Standard)
S	– 316 Stainless Steel
NA	– NACE specification
PM	– Panel mounting option

Process connection options

BP	BSP Parallel (top sealing standard)
BT	BSP Taper
BW-SCH***	Butt weld, Schedule 40, 80, 160, xxs (Nominal Pipe Size)
SW-SCH***	Socket weld, Schedule 40, 80, 160, xxs (Nominal Pipe Size)
SW-OD	Socket weld, outside diameter (tube)
BW-OD	Butt weld, outside diameter (tube)

Other Options: (Specify in alphabetical order)

AG	Grafoil packing
AT	Anti-tamper (e.g. AT-V if vent)
AT-KEY	Anti-tamper key
ATEQ	AT on equalise (for 3 and 5 valve manifolds)
BKTC	CS bracket complete with mounting bolts
BKTS	SS bracket complete with mounting bolts
CSHW	Carbon Steel handwheel
FS	Firesafe
HD	10,000 PSI max pressure (Heavy Duty Head Unit, for isolation valves only)
HD/15HP	15,000 PSI max pressure (Heavy Duty Head Unit, for isolation valves only)
HL	Handwheel locking (PAD - Padlock)
HL-PI	Handwheel locking and position indication
HP	10,000 PSI maximum pressure rating (except direct mount) for Standard Needle Valve
LT100	Cryogenic head unit (good for -100ºC)
LT200	Cryogenic head unit (good for -200ºC)
MTG	2 Mounting holes to mount BKT
MT	Metering tip
NA	NACE MR-01-75 latest revision
OXY	Oxygen clean degreased
PAD	Padlock (for HL option)
PK	PEEK Soft tip
PM	Panel Mount (gauge valves only)
PP	Pressure plug
RHW	Red nylon hand wheel
SG	Grafoil flange seal rings
SSB	Stainless steel bolts (rated to 4,500 PSI) for Direct Mount Manifold
SS-TAG	Stainless steel tag
ST	Stellite 6 hard tip

HIGH PERFORMANCE BALL VALVES

features

- **Instrument ball valves to 15,000 PSI (trunion mount).**
- **Instrument ball valves to 10,000 PSI (free floating).**
- **Instrument manifolds to 3,000 PSI.**
- **Actuated ball valves.**
- **Double block and bleed ball valves.**
- **Connections threaded, flanged, butt weld and socket weld ends.**
- **Severe services – Cryogenic – NACE – Firesafe – Anti-static.**

OLIVER HIGH QUALITY BALL VALVES

S P E C I F I C A T I O N S

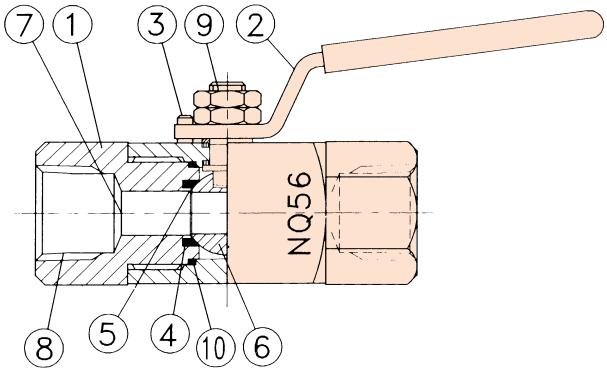
1 ADVANCED LOW TORQUE DESIGN
Our ball valves have very low operating torques, and a range of seat materials to give the ultimate in process environmental compatibility.

2 STAINLESS STEEL HANDLE
One piece stamped 316 Stainless Steel handle gives positive feel, quarter turn rust-free operation.

3 STOP PIN
A 316 Stainless Steel "dead stop" pin is held into the body by a machined anti-vibration spline.

4 SEATS
Our totally enclosed seats offer wide process compatibility whilst maintaining a positive sealing across the entire operating range. This high level of seat integrity allows both vacuum, and high pressure services from one valve.

5 FIRESAFE SEATS
This option, in the event of a fire, ensures the ball/seat metal to metal contact is maintained. Note that the body and stem seals are changed to grafoil.



6 BALL
This precision machined component is super finished assuring low operating torques.

7 FULL FLOW
Positive 90º travel combined with clear thru' bores, review table for full or reduced bore.

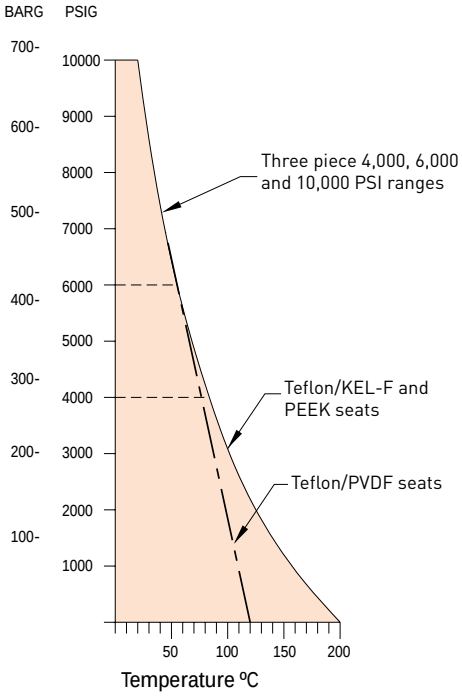
8 PROCESS THREADS
CNC super finished screw cut threads ease assembly with reduced risk of galling.

9 SPINDLE
A one piece stem incorporates an anti-blowout shoulder which maintains seal integrity at all pressures. Twin anti-vibration lock nuts are standard.

10 BODY SEALS
Totally contained PTFE 'O' ring body seals give high body integrity, and additionally protect the body threads from process media.

E N G I N E E R I N G D A T A

BALL VALVE PRESSURE vs TEMPERATURE CURVE



QUALITY ASSURANCE
BS5750, ISO 9000, EN 29002 quality systems accredited by both Lloyds Register and British Standards.

CERTIFICATION AND TRACEABILITY
All body components exhibit unique identification coding and material test certificates to BS EN 10204 3.1.B.

TESTING
All Oliver ball valves are subjected to three pressure tests, a hydrostatic test at the full rated pressure and low pressure pneumatic test at 50 PSI (3.5 bar), as well as a shell test to 1.5 times working pressure.

VACUUM SERVICE
Our ball valves are suitable for vacuum service and have been tested at 0.01mbar with no detectable leakage.

ANTI-STATIC OPTION
Can be specified with our ball valves.

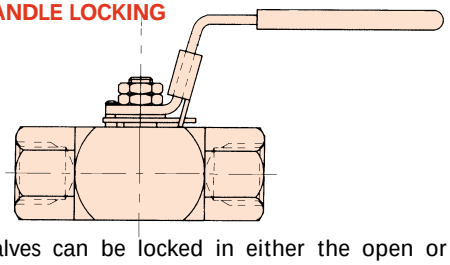
CONTINUOUS DEVELOPMENT
of existing and new ball valve products maintain the highest levels of performance and integrity for our products. Oliver Valves maintain in-house fire test, cycling and combined pressure/temperature test facilities.

CRYOGENIC
Ball valves have been cryogenically tested down to minus 196ºC please consult factory with system specifications.

SEATS
- Three piece body 10mm ball valves with unique twin seat
  120ºC (250ºF) maximum: Teflon/PVDF standard.
  200ºC (390ºF) maximum: Teflon/KEL-F add /KL.
- Three piece 14 and 20mm ball valves with solid seat
  200ºC (390ºF) maximum: PEEK.

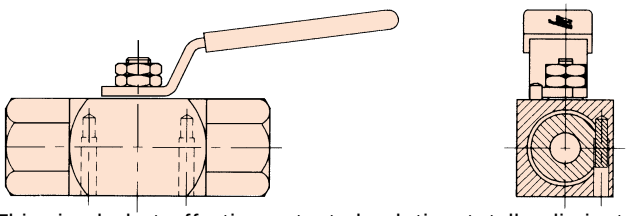
BALL VALVE OPTIONS

HANDLE LOCKING



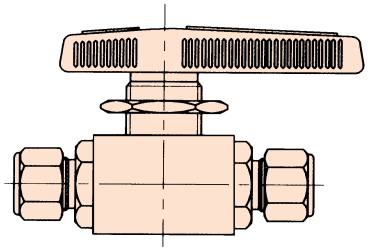
Valves can be locked in either the open or closed position with padlock available

TANGENTIAL LOCKING PIN Patent No. 8817467



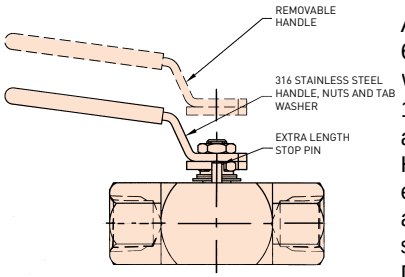
This simple but effective patented solution totally eliminates any possibility of inadvertent removal of end connector pieces by operator or vibration whilst in service.

PMB SERIES PANEL MOUNT VALVES



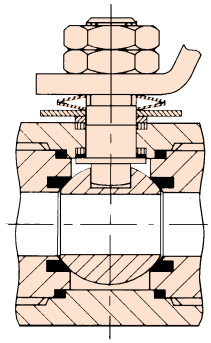
Panel mount "PMB series" three piece 6,000 PSI range ball valves. Coloured handles – black standard, options – red (RD), green (GR), blue (BL), yellow (YL), orange (OR) or stainless steel (HSS). Range of end connectors as standard and NACE option.

REMOVABLE HANDLE



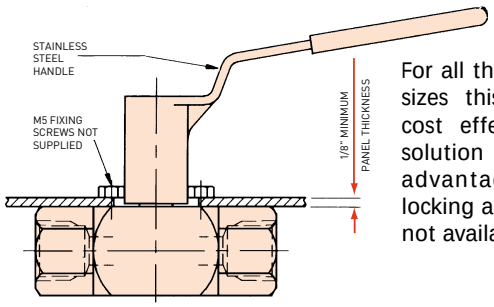
Available in 3,000 and 6,000 PSI pressure ranges, with ¼", ⅜", ½", ¾" and 1", other end options available.
Handle and lock nuts are easily removed without affecting integrity of spindle sealing assembly. Design of handle and spindle ensures handle can only be fitted in correct orientation with open/close position of ball.

FIRESAFE/ANTI-STATIC



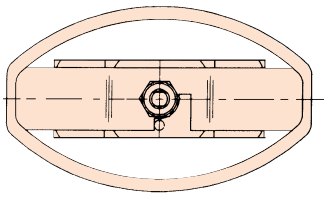
Tested to BS6755 part 2, these valves have body and stem seals in fire resistant Grafoil.
The metal lip seat is designed to ensure leak free seating when the PTFE burns in fire conditions.
The spindle disc springs ensure a positive leak-free gland.

PANEL MOUNT



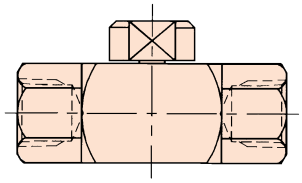
For all three piece body sizes this simple, and cost effective bossless solution is a clear advantage. Handle locking and oval handle not available.

OVAL HANDLE



An oval handle can be fitted as an option to the standard lever style (Plan view shown).

SPANNER ACTUATED



With Spanner actuation the valve is operated using a 1" A/F spanner, reducing tampering and accidental operation.

NACE SPECIFICATION

Many of our valves can be supplied to NACE MR-01-75 (latest revision). Suitable for sour service they have solution annealed 316 stainless steel balls and spindles, for NACE products ask sales.

ACTUATION

A complete range of electric or pneumatic actuators either double acting or spring return can be factory fitted. Options such as solenoid valves, open and closed indication, limit switches and stainless steel housing are available on request.

POSITION INDICATOR

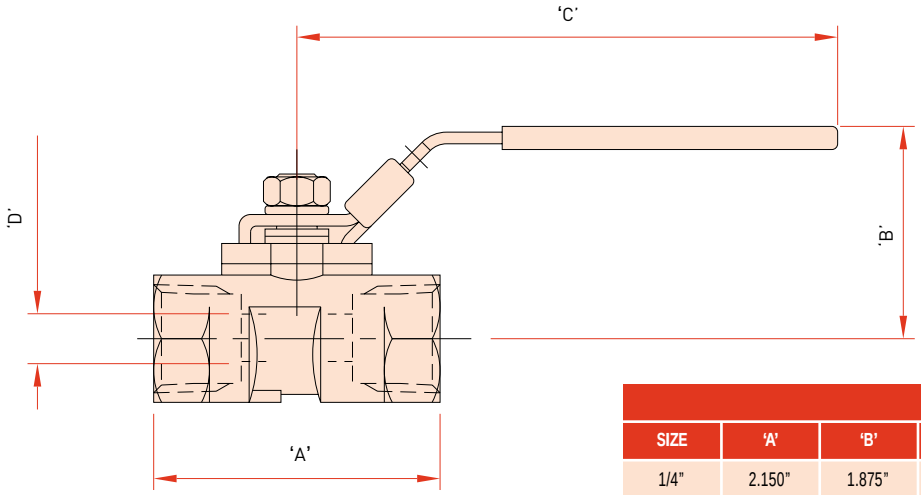
This feature indicates orientation of the ball on the valve handle showing at a glance whether the valve is opened or closed. Position indication can also be used with spanner actuation and handle locking options.

LOW PRESSURE BALL VALVES TO 1,000 PSI AND 3,000 PSI

F E A T U R E S & B E N E F I T S

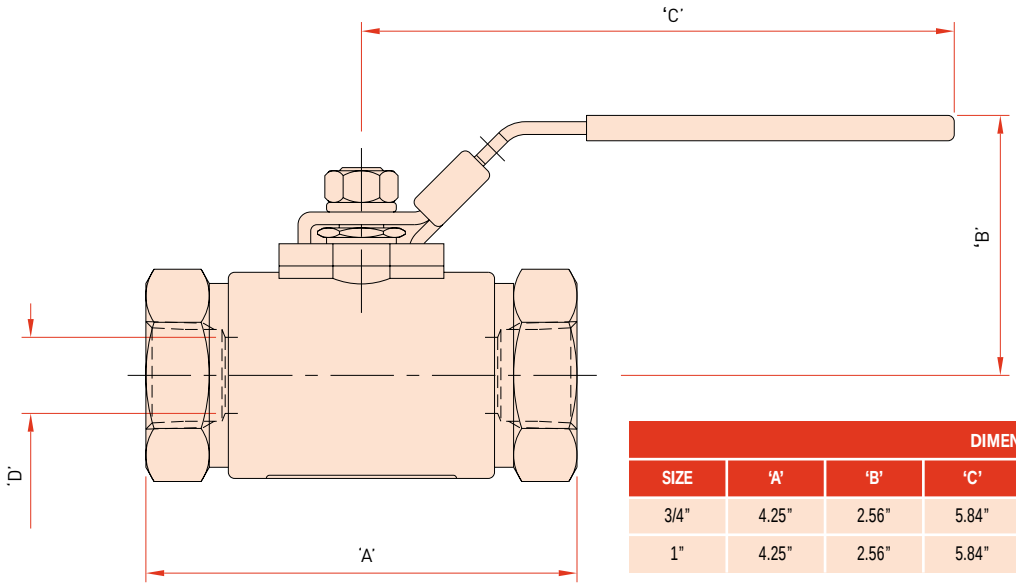
These families of high performance quality ball valve products are stocked in 316 stainless steel. Even the pressed handle on the valve is 304 stainless steel avoiding rusting on site.
Offered in pressure ranges from 1,000 PSI to 3,000 PSI and sizes from 9mm to 19mm diameter bores these valves are recommended for use in oil, gas and petrochemical applications where reliable long-term performance is essential.
Threaded connections are NPT, Handle Locking Standard, NACE Standard, Firesafe Standard (on 3,000 PSI version).

BALL VALVES TO 1,000 PSI



DIMENSION						
SIZE	'A'	'B'	'C'	'D'	PART No	Weight Kg
1/4"	2.150"	1.875"	4.250"	9mm	LPB1F25S/HL/NA	0.22
3/8"	2.150"	1.875"	4.250"	9mm	LPB1F38S/HL/NA	0.22
1/2"	2.220"	1.875"	4.250"	9mm	LPB1F50S/HL/NA	0.20
3/4"	2.420"	2.062"	4.250"	12mm	LPB1F75S/HL/NA	0.28
1"	2.930"	2.375"	5.830"	16mm	LPB1F10S/HL/NA	0.48

BALL VALVES TO 3,000 PSI



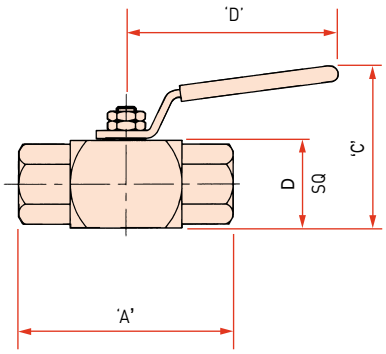
DIMENSION						
SIZE	'A'	'B'	'C'	'D'	PART No	Weight Kg
3/4"	4.25"	2.56"	5.84"	19mm	LPB3F75S/FS/HL/NA	1.32
1"	4.25"	2.56"	5.84"	19mm	LPB3F10S/FS/HL/NA	1.32

BALL VALVES TO 10,000 PSI

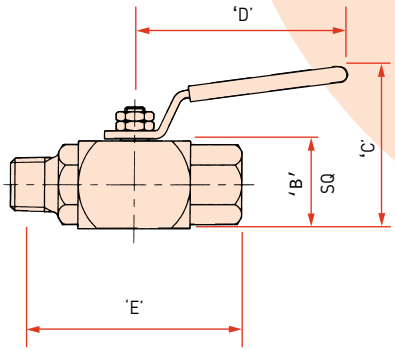
FOUR PRESSURE RANGES 3,000 PSI (200 BAR), 4,000 PSI (280 BAR), 6,000 PSI (400 BAR) AND 10,000 PSI (700 BAR). SIZES TO 2" NPT.

F E A T U R E S & B E N E F I T S

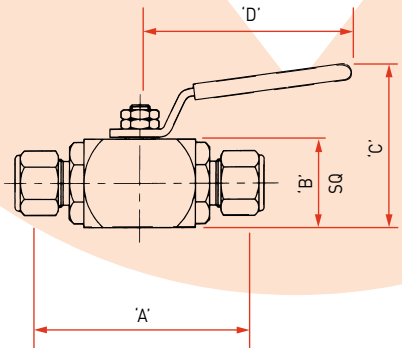
These families of high performance quality ball valve products are stocked in 316 stainless steel. Even the pressed handle on the valve is 316 stainless steel avoiding rusting on site.
Offering in pressure ranges from 3,000 PSI to 10,000 PSI (280-700 Bar) and sizes from 0.4" to 2" dia (10mm to 50mm dia) bores these valves are recommended for use in oil, gas and petrochemical applications where reliable long-term performance is essential. Compression end connections are Twin Ferrule "Bilok" type, to 6,000 PSI only.
Threaded connections are NPT.
For Male x Female valves use dimension 'E' – replace prefix 'F' with 'M' i.e. B6FX50S becomes B6MX50S.



FEMALE x FEMALE THREADED ENDS



MALE x FEMALE THREADED ENDS



INTEGRAL COMPRESSION ENDS

Style	Size	Max pressure (at 20° C)	Part number	Bore size		Dimensions (inches)					Max temperature ° C	Weight Kg
				mm	inch	A	B	C	D	E		
Twin ferrule compression fitting (Tube O.D.)	6mm	6000	B6BIX6mmS	10	0.40	3.97	1.25	2.50	3.31	-	200	0.4
	10mm	6000	B6BIX10mmS	10	0.40	3.97	1.25	2.50	3.31	-	200	0.4
	12mm	6000	B6BIX12mmS	10	0.40	4.13	1.25	2.50	3.31	-	200	0.4
	1/4"	6000	B6BIX25S	10	0.40	3.88	1.25	2.50	3.31	-	200	0.4
	3/8"	6000	B6BIX38S	10	0.40	3.88	1.25	2.50	3.31	-	200	0.4
	1/2"	6000	B6BIX50S	10	0.40	4.13	1.25	2.50	3.31	-	200	0.4
Female (NPT)	1/4"	6000	B6FX25S	10	0.40	2.38	1.25	2.50	3.31	2.94	200	0.4
		10000	B10FX25S	10	0.40	2.38	1.25	2.50	3.31	2.94	200	0.4
	3/8"	6000	B6FX38S	10	0.40	2.38	1.25	2.50	3.31	3.00	200	0.4
		10000	B10FX38S	10	0.40	2.38	1.25	2.50	3.31	3.00	200	0.4
	1/2"	6000	B6FX50S	10	0.40	3.38	1.25	2.50	3.31	3.63	200	0.5
		10000	B10FX50S	10	0.40	3.38	1.25	2.50	4.06	3.63	200	0.5
		6000	B6FY50S	14	0.55	4.07	1.50	3.00	4.06	4.50	200	1.2
	3/4"	3000	B3FY75S	14	0.55	2.94	1.62	3.12	4.06	-	80	0.8
		4000	B4FY75S	14	0.55	4.07	1.50	3.00	4.06	4.50	200	1.1
		6000	B6FY75S	14	0.55	4.07	1.50	3.00	4.06	4.75	200	1.1
		6000	B6FZ75S	20	0.80	4.83	2.00	3.50	4.06	5.56	200	2.0
	1"	3000	B3FZ10S	20	0.80	3.75	2.00	3.50	4.06	-	80	1.5
		4000	B4FZ10S	20	0.80	4.83	2.00	2.50	4.06	-	200	1.9
		6000	B6FZ10S	20	0.80	4.83	2.00	3.50	4.06	5.66	200	1.9

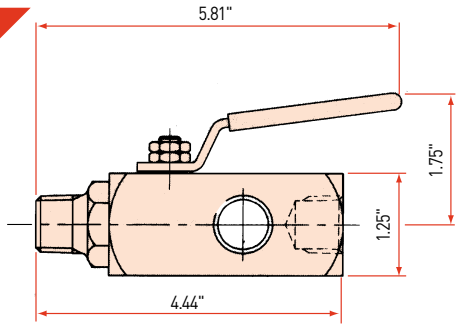
BALL VALVES TO 15,000 PSI

TRUNNION MOUNT BALL VALVES ALSO AVAILABLE - CONTACT OFFICE FOR DETAILS

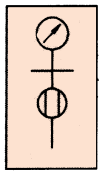
MANIFOLDS

Oliver Valves manufacture a range of instrument manifolds with 10mm bores.

B6XGMIS TYPE



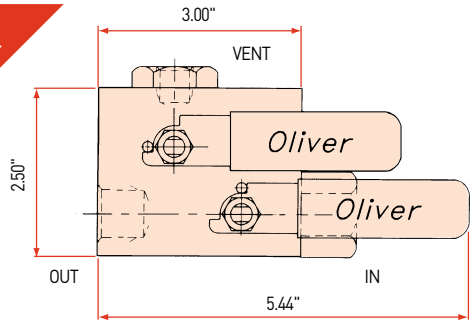
Max press PSI (at 20°C)	Bore size		Weight Kg	1/2" male inlet & three 1/2" female outlets	3/4" male inlet & three 1/2" female outlets
	mm	inches			
6000	10	0.40	0.7	B6XGM1S	B6XGM175-50S
10000	10	0.40	0.7	B10XGM1S	B10XGM175-50S



0.7kg

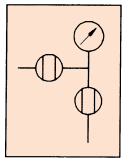
Multiport ball valves allow compact solutions to the joint mounting of remote and local indicating instruments and can be supplied with a range of blanking or venting plugs and/or swivel gauge adaptors.

B6XG12FFS TYPE



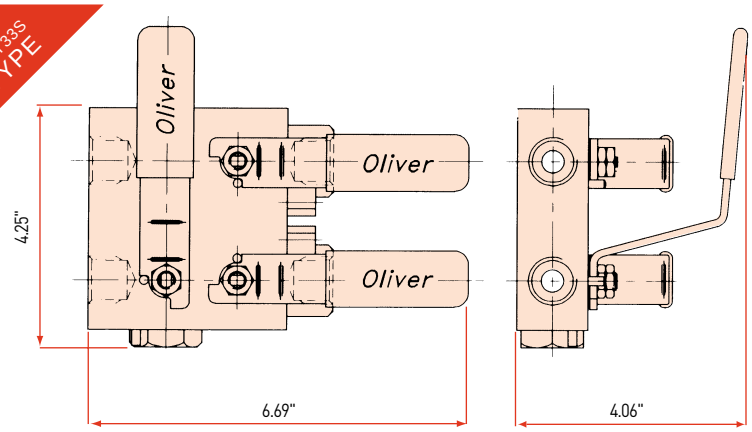
Max press PSI (at 20°C)	Bore size		Weight Kg	Remote mount 1/2" female x female connections
	mm	inches		
6000	10	0.40	1.3	B6XG12FFS

Standard connections ½" NPT (female) inlet and outlet, with ¼" NPT (female) vent.

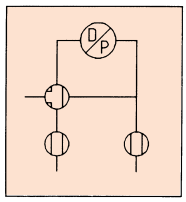


1.3kg

B3XY33S TYPE

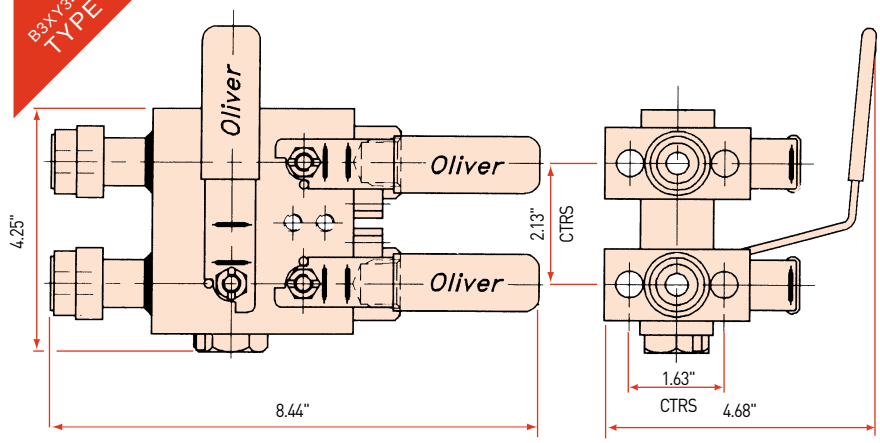


Three valve remote mount pipe to pipe manifold for isolation of process and equalising of instrument. Available in 3,000 PSI pressure range with 10mm bore. Standard connections ½" NPT (female).

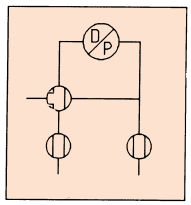


2.0kg

B3XY34S TYPE



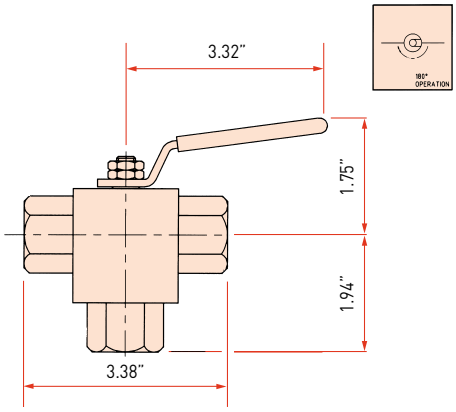
Three valve direct mount pipe to flange manifold for isolation of process and equalising of instrument. Available in 3,000 PSI pressure range with 10mm bore. Standard inlet connections ½" NPT (female).



2.7kg

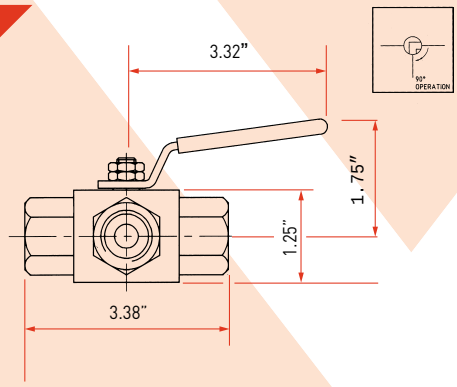
DIVERSION VALVES

B3BL TYPE



BOTTOM ENTRY TYPE B3BL

B3SL TYPE

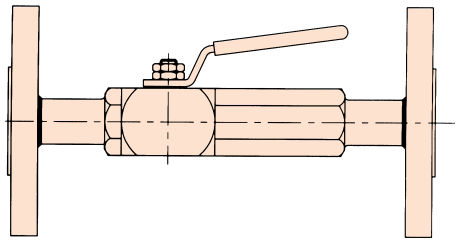


SIDE ENTRY TYPE B3SL

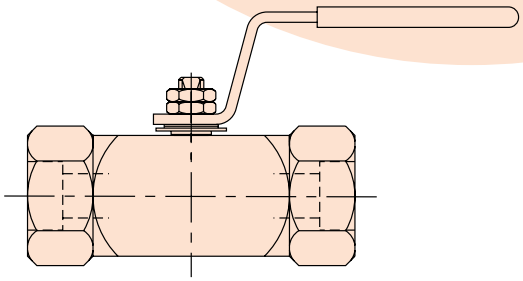
OPTIONAL END CONNECTIONS

FLANGES – Various flanged ends to your requirements.
BT – BSP taper pipe thread (BS21).
DIN – Standard available.

BP – BSP parallel pipe thread (BS2779). Top sealing only.
SW – Extended male or female socket weld.
BW – Extended butt weld.



Details available upon request, specify size, type and pressure class.



Specify pipe size and schedule.

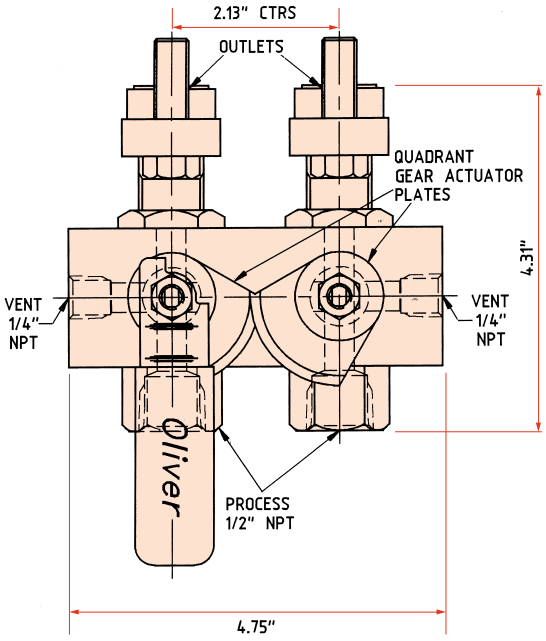
SMART MANIFOLD

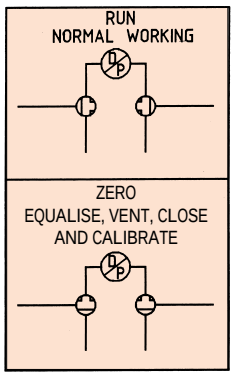
MANUAL – SMART MANIFOLD

To prevent the accidental over pressurisation of the transmitter capsule on one side by an untrained operator or after calibration of instrument leaving equalise or vent valves open or isolate valves left closed.

AUTOMATIC – SMART MANIFOLD

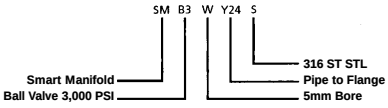
Can be operated via a single actuator from the control room allowing for remote calibration in hazardous or difficult to get to places.





Maximum Pressure 3,000 PSI
Maximum Temperature 200° C
Available actuated or manual
Air supply pressure if actuated, varies from 80 PSI to 100 PSI depending upon process static pressure

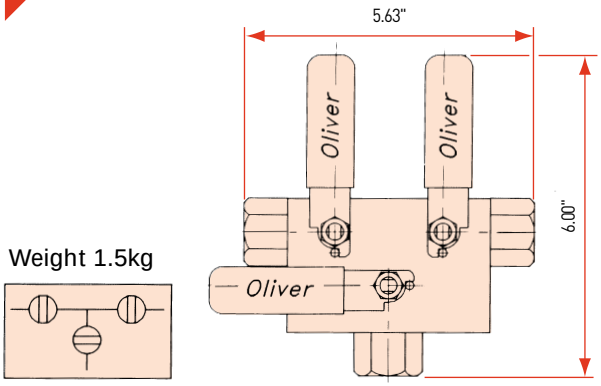
PATENT No. 2280243



BARSTOCK DOUBLE BLOCK AND BLEED MANIFOLDS

L TYPE

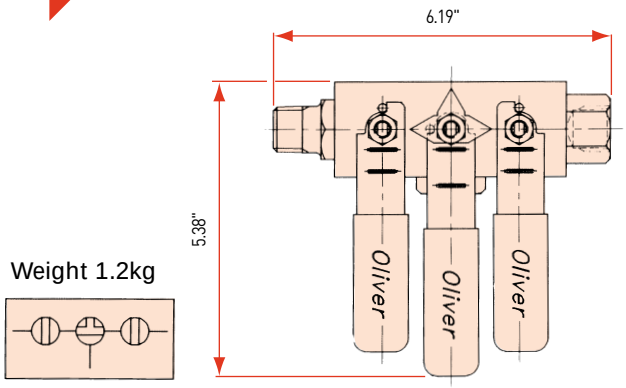
Barstock body with 3 balls arranged for sampling, chemical injection, double block and bleed of instrument.
Variety of connections, optional surface mounting & cam interlock possible.



Weight 1.5kg

T TYPE

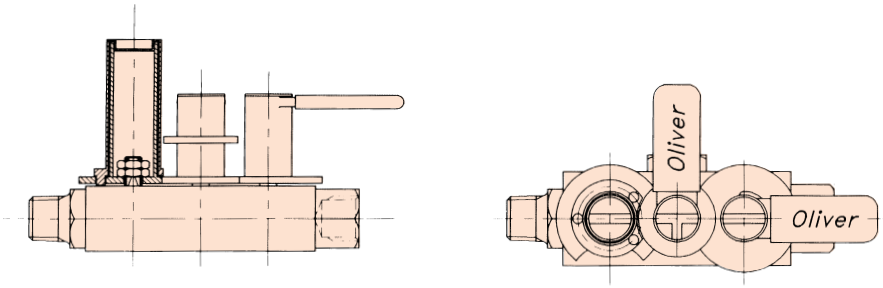
Barstock body with centre 'T' ported ball valve for compact double block and bleed, sampling or chemical injection.
Variety of connections, optional surface mounting possible.



Weight 1.2kg

SEQUENTIAL INTERLOCKING CAM SYSTEM WITH REMOVABLE HANDLE ON PRIMARY ISOLATION VALVE

With primary isolation valve in open position, vent valve is cam locked in closed position and secondary isolation valve is cam locked in open position.
Primary isolation valve handle operator can only be removed when primary isolation valve is in open position.
With primary isolation valve in closed position, vent valve can be operated to open position and secondary isolation valve can be operated to closed position.



CAM INTERLOCKING SEQUENCE FOR T TYPE

PATENT No. 9119669

HOW TO ORDER

EASY ORDERING DESCRIPTION

B 6 F X PMB 50 S / HL

BALL VALVE

PRESSURE RANGES

2	2,000 PSI (c.w.p.)
3	3,000 PSI (c.w.p.)
4	4,000 PSI (c.w.p.)
6	6,000 PSI (c.w.p.)
10	10,000 PSI (c.w.p.)

OR MANIFOLD PART NO

PMB Panel Mount Series

CONNECTIONS

F	Female x Female
M	Male x Female
BI	compression ended
SL	side entry "L" port
BL	bottom entry "L" port

CONNECTION SIZES

12 = 1⁄8" 50 = 1⁄2"
25 = 1⁄4" 75 = 3⁄4"
38 = 3⁄8" 10 = 1"
6mm = 6mm O.D. compression fitting
10mm = 10mm O.D. compression fitting
12mm = 12mm O.D. compression fitting
Manifold connections are 1⁄2" NPT STANDARD

BALL VALVE BORES

W = 0.20" (5mm)	Z = 0.80" (20mm)
X = 0.40" (10mm)	P = 1.00" (25mm)
Y = 0.55" (14mm)	Q = 1.50" (40mm)
	R = 2.00" (50mm)

MATERIAL SELECTION

S	BS970-316S11/S31 STAINLESS STEEL STANDARD
M	MONEL 400
DUP	DUPLEX STAINLESS STEEL UNS S31803 (other materials available on request)

Process Connections:

BT	BSP taper thread**
BP	BSP parallel thread** (top sealing standard)

Options: (Specify in alphabetical order)

BKTC	Bracket (carbon steel)
BKTS	Bracket (stainless steel)
FS	Firesafe (BS6755 Part 2)
HL	Handle locking (PAD = Padlock)
NA	NACE MR-01-75 latest revision
OH	Oval Handle
PE	Pinned ends
PMHT	Panel mounting (tapped holes) top
PMHB	Panel mounting (tapped holes) bottom
SA	Spanner actuation (1" A/F)
SS-TAG	Stainless steel tag

Seats

– THREE PIECE BODY 10mm Ball valves with unique twin seat – Teflon/PVDF – standard, Teflon/KEL-F-add/KF
– THREE PIECE BODY 14mm and 20mm Ball valves with solid seat PEEK – standard

IMPORTANT NOTE – Always refer to table on page 21 to make sure that the required connection size, pressure rating and bore size are available.

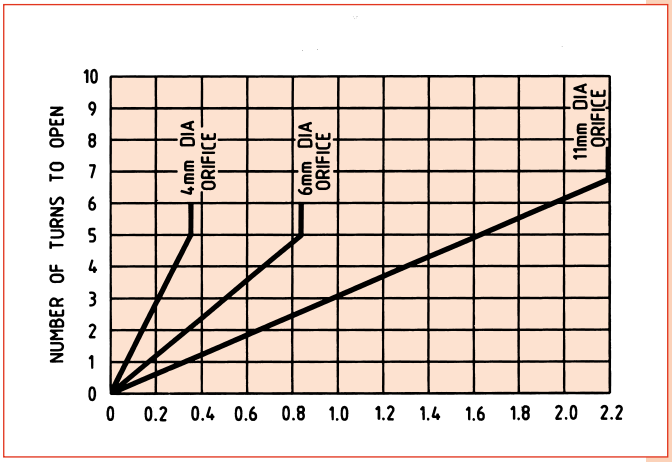
SEVERE SERVICE HIGH TEMPERATURE AND HIGH PRESSURE NEEDLE VALVES

features

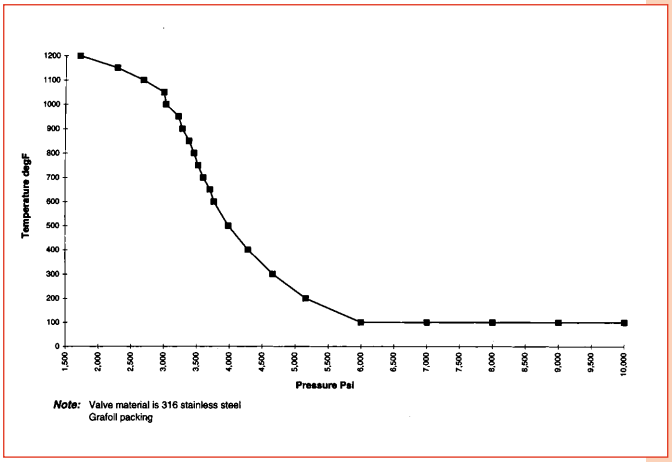
- **Pressures to 6,000 PSI.**
- **Temperatures to 650°C (1,200°F).**
- **4mm, 6mm and 11mm bore sizes.**
- **Stellite seat and tip option available.**
- **Panel mount option available.**
- **Non wetted body bonnet thread on 11mm bore valve.**
- **Compact lightweight body for 11mm bore valve.**

SEVERE SERVICE HIGH TEMPERATURE AND HIGH PRESSURE NEEDLE VALVES

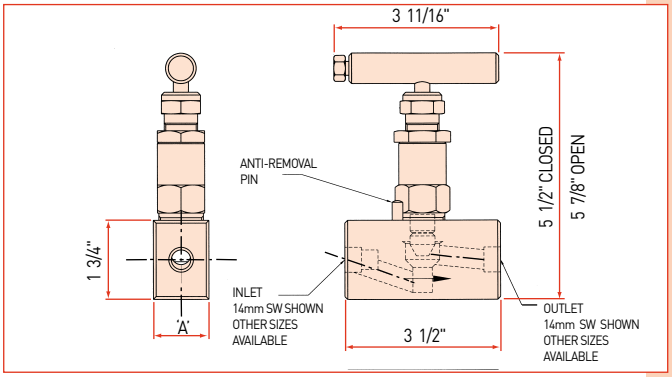
Flow coefficient Cv to turns open



High temperature – high pressure severe service valve



Drawing of 11mm bore severe service valve



PART NO	INLET (PIPE OD)	OUTLET (PIPE OD)	DIM 'A'
F5OS/SSV11/14mmSW-OD-IN/14mmSW-OD-OUT	14mm SW	14mm SW	1 1/4"
F5OS/SSV11/16mmSW-OD-IN/14mmSW-OD-OUT	16mm SW	14mm SW	1 1/4"
F5OS/SSV11/16mmSW-OD-IN/16mmSW-OD-OUT	16mm SW	16mm SW	1 1/4"
F5OS/SSV11/25mmSW-OD-IN/16mmSW-OD-OUT	25mm SW	16mm SW	1 1/2"
F5OS/SSV11/25mmSW-OD-IN/25mmSW-OD-OUT	25mm SW	25mm SW	1 1/2"

IMPORTANT NOTE
FOR STEAM BLOW DOWN APPLICATION ALWAYS USE STELLITE SEAT + TIP.

BORE SIZE AND Cv

11mm	(7/16")	Cv = 2.2
6mm	(1/4")	Cv = 0.86
4mm	(5/32")	Cv = 0.35

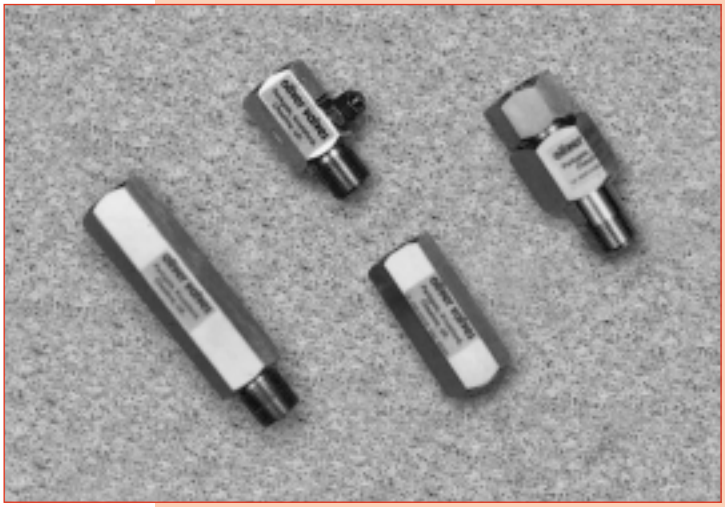
PRESSURE AND TEMPERATURE RATINGS

PRESSURE		TEMPERATURE	
6000(psig)	414(BARG)	100(ºF)	38(ºC)
1715(psig)	118(BARG)	1200(ºF)	650(ºC)

VALVE MATERIAL 316 STAINLESS STEEL

- **PRESSURES**
  Up to 6,000psig (414 barg) at 100 degrees F (38 degrees C).
  Up to 1,715psig (118 barg) at 1,200 degrees F (650 degrees C).
- **MATERIALS OF CONSTRUCTION**
  Body – 316 stainless steel.
  Gland Packing – Grafoil as standard, PTFE optional, maximum temperature 650 degrees C.
  Body Joint – Grafoil as standard. PTFE optional, maximum temperature 650 degrees C.
  Straight and angle pattern body styles with choice of end connections.
  Orifice sizes of 0.156" (4mm), 0.250" (6mm), 0.438" (11mm).
  Flow Coefficients (cv) from 0.35 to 2.2.
- **SEAT AND TIP**
  316 stainless steel seat and tip as standard. With option of stellite 12 seat and stellite 6 tip for high pressure steam blow down applications. (Note: Tip is hipped and then 100% die penetrant inspected to insure against centreline porosity, a big problem in cast stellite).
- **SPINDLE**
  One piece design with non-rotating tip and integral back seating safety feature. All threads are rolled to eliminate galling. Seal diameter is burnished to ten micro inch super finish, to reduce operating torques to a minimum. Packing is a unique three piece packing system developed alongside customers after years of constant 650ºC temperature service.
- **SEAL HOUSING**
  Rugged design with metal to metal, body to bonnet contact to achieve controlled compression of body joint seal, which with Grafoil is a fire tested proven design.
- **LOCKING PIN**
  A 316 stainless steel pin adjacent to the bonnet hexagon prevents any unscrewing of the head unit.
- **PUSHER AND LOCK NUT**
  To permit packing adjustments in open or closed positions with safety lock nut.
- **THREAD PROTECTOR SEAL**
  To stop any ingress into thread adjusting area.
- **PANEL MOUNT**
  The valve can be supplied with panel mount option, as shown in the photograph (one nut is standard, two is optional).
- **DESIGN**
  Body strength calculations have been completed in accordance with ASME VIII Division 1.
- **TESTING**
  Oliver severe service needle valves have been fully tested by the University of Leeds.
- **BUTT WELD SOCKET WELD CONNECTIONS**
  Socket Weld (SW) and Butt Weld (BW) denotes the nominal pipe size. If the connections need to fit an outside diameter tube size then add "OD", for example, F5OS/SW for pipe and F5OS/SW-OD for tube.
  Note – for metric size, quote only the size ie. 12mm in – 14mm out, (this will be taken as the tube size).
- **OPTIONS**
  /17.4T 17.4PH TIP
  /STT Stellite 6 TIP
  /STS Stellite 12 seat
  /PM Panel mount head unit
  /LTB For SSVII valve a 5 1/4" long tee bar in 316 stainless steel

INSTRUMENT PRODUCTS



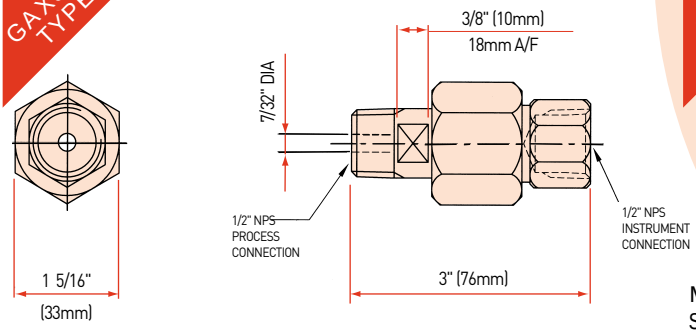
features

- A complete range of instrumentation accessory products.
- A wide choice of sizes and pressures.
- Gauge adaptors – allows 360° orientation of gauges on site.
- Gauge snubbers – protects gauges from line surges.
- Gauge syphons – protects gauges from steam.
- Check valves – flow control, in one direction only.

INSTRUMENT ACCESSORIES

GAX50S TYPE

Swivel Gauge Adaptor 0.3kg



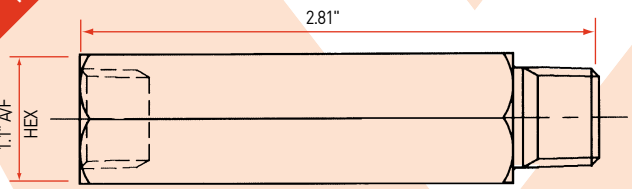
Seals	Metal
Max Temperature	540ºC
Max Pressure	10,000 PSI
Standard Material	316 stainless steel
Standard Connections	1/2" NPT Male x Female

(Alternative connection sizes and materials available upon request).

Allows 360º positioning of gauges on site.

SY50S TYPE

Gauge Syphon 0.4kg



Max Pressure	6,000 PSI
Standard Material	316 stainless steel
Standard Connections	1/2" NPT Male x Female

(Alternative connection sizes and materials available upon request).

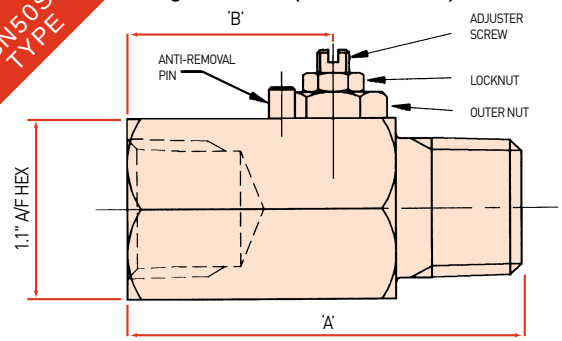
Advantages

1. More compact than "Pigtail" syphon
2. All 316 stainless steel construction

Protects gauges from steam by condensing into water via internal chambers.

SN50S TYPE

Gauge Snubber (variable orifice) 0.2kg



Seals	VITON
Max Temperature	120ºC
Max Pressure	6,000 PSI
Standard Material	316 stainless steel
Standard Connections	1/2" NPT Male x Female (SN50S)

(Alternative connection sizes and materials available upon request).

Advantages

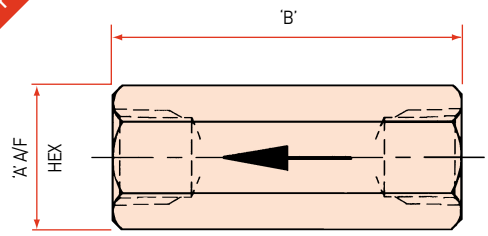
1. Only one spindle needed for all processes.
2. Snubbing rate can be altered after installation on site.
3. Anti-blowout spindle.
4. In emergency situation can be shut off.

Protects gauges from line surges by damping variations down, via a variable orifice.

SIZES	PART NO	A	B
1/4"	SN25S	1.875"	0.938"
3/8"	SN38S	2.125"	1.125"
1/2"	SN50S	2.375"	1.250"

CV TYPE

Check valve. In-line Poppet type.



Seat	VITON (VITON 90 available for NACE. KALREZ also available if required).		
Max Temperature	120ºC		
Optional Pressures*	1/4", 3/8" & 1/2"	10,000 PSI	Add suffix /HP
	3/4" & 1"	3,000 PSI	Add suffix /3K
Material & Trim	316 stainless steel	Springs 316 stainless steel	
Connections	NPT Female x Female		

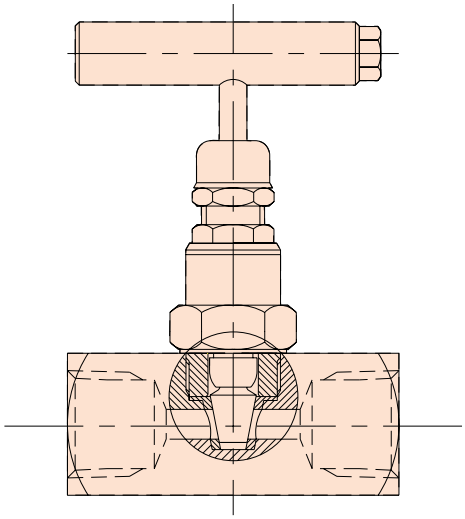
Allows flow in one direction only, closing when flow reverses.

SIZES	PART NO	MAX PRESSURE	CRACKING PRESSURE	A	B	WEIGHT	CV (MAX)
1/4"	CV25S	6,000 PSI*	7 PSI	0.87"	2.31"	0.2kg	0.7
3/8"	CV38S	6,000 PSI*	7 PSI	1.10"	2.50"	0.3kg	0.7
1/2"	CV50S	6,000 PSI*	7 PSI	1.10"	3.06"	0.3kg	2.0
3/4"	CV75S	6,000 PSI*	4 PSI	1.63"	3.63"	0.8kg	4.6
1"	CV10S	6,000 PSI*	4 PSI	2.05"	4.19"	0.9kg	7.2

RISING PLUG VALVES

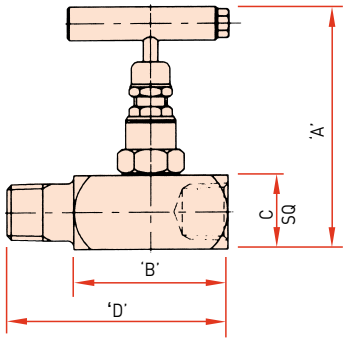
features

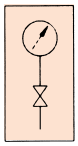
- Including straight through flow characteristics, bore size 0.24” (6mm) with a CV of 1.04.
- Non rotating tip.
- Bubble-tight soft seat closure, Delrin seat standard.
- Anti-blowout spindle safety feature.
- 6,000 PSI pressure rating, as standard. 10,000 PSI high pressure option available.
- Spindle threads are rolled and lubricated.
- Actuating threads are above the adjustable packing, which incorporates a piston ring to compress the packing under pressure ensuring a vacuum to high pressure seal.
- Removable seat locked in place to prevent rotation.
- Optionally available to NACE specification and handwheel locking and many other features.



F & M TYPES

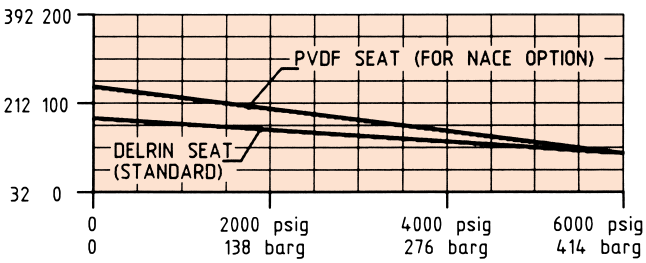
Male x Female
Female x Female





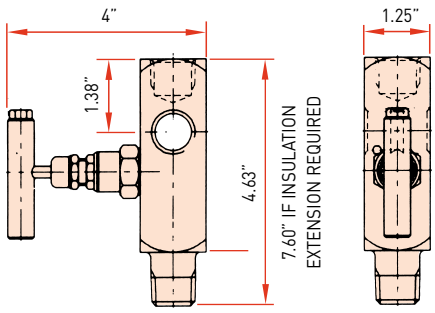
SIZE	A	B	C	D	Wt Kg
1/4”	3.8	2.1	1.1	2.7	0.5
3/8”	3.8	2.4	1.1	3.0	0.5
1/2”	3.8	2.6	1.1	3.4	0.5
3/4”	4.2	2.9	1.5	3.6	1.0
1”	4.7	3.8	2.0	4.1	2.1

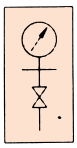
TEMPERATURE v PRESSURE



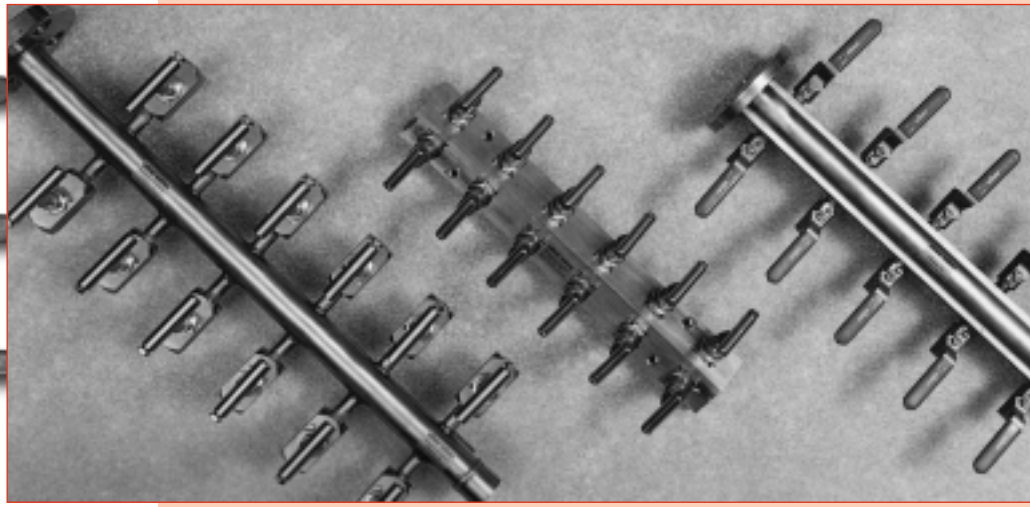
GM1 TYPE

Gauge multiport valve Male inlet x three Female outlets. 3” lagging extension, and 3/4” inlet available.





AIR HEADERS AND DISTRIBUTION MANIFOLDS



features

- Air Headers are produced from seamless tubing in carbon or stainless steel.
- Both headers and manifolds can be configured quickly in any layout to suit application, utilising standard components.
- Distribution manifolds for high pressure applications to 6,000 PSI.
- Choice of ball or needle valve isolations.
- Widely specified in the oil, gas and petrochem industries, for compact installations.
- For even more compact high pressure valving, and for ease of mounting, our compact mount distribution manifold – “CMDM Series” – is available with all the options and advantages of the Oliver Needle Valve.

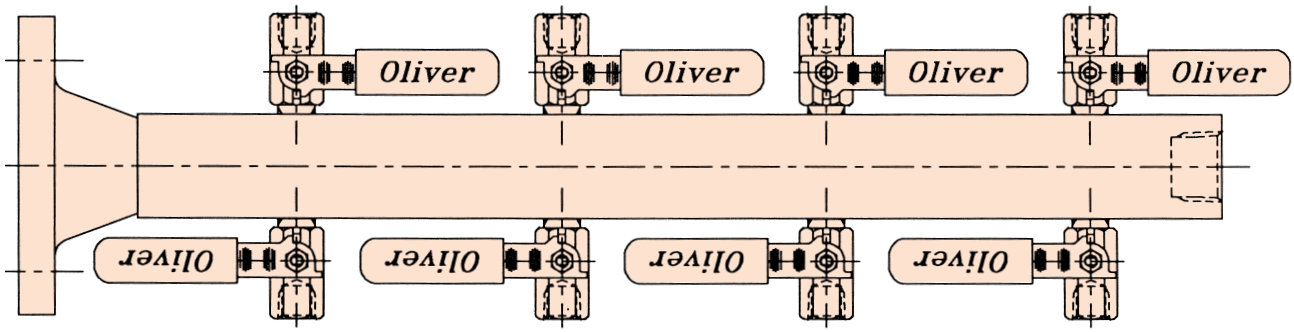
AIR HEADERS

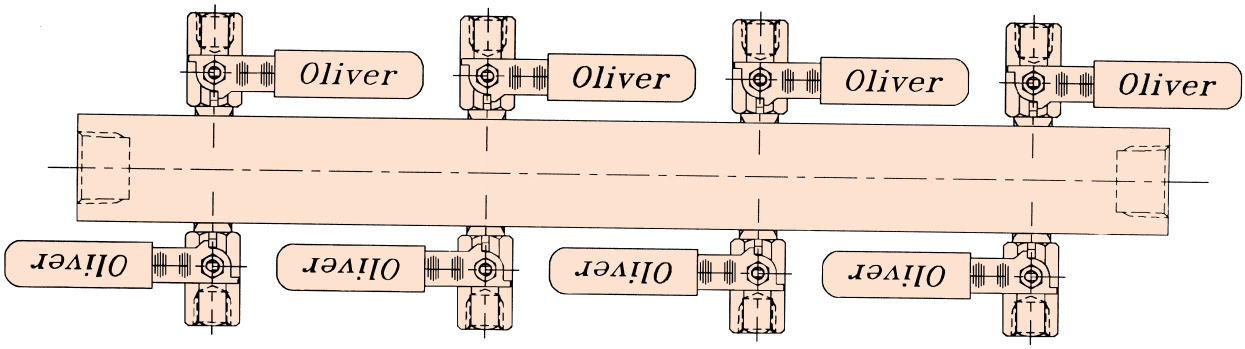
Oliver low pressure Air Headers fulfil the need for a manifold designed specifically for this pressure range. Manufactured from specially extruded section in 316 stainless or carbon steel.

Drawings show typical layouts – lengths, number of valves & flanges etc, to suit application.

See back page for how to specify.

STANDARD SPECIFICATION	
MAXIMUM WORKING PRESSURE	150 PSI
MAXIMUM TEMPERATURE	200ºC
VALVE TYPE	BALL VALVES





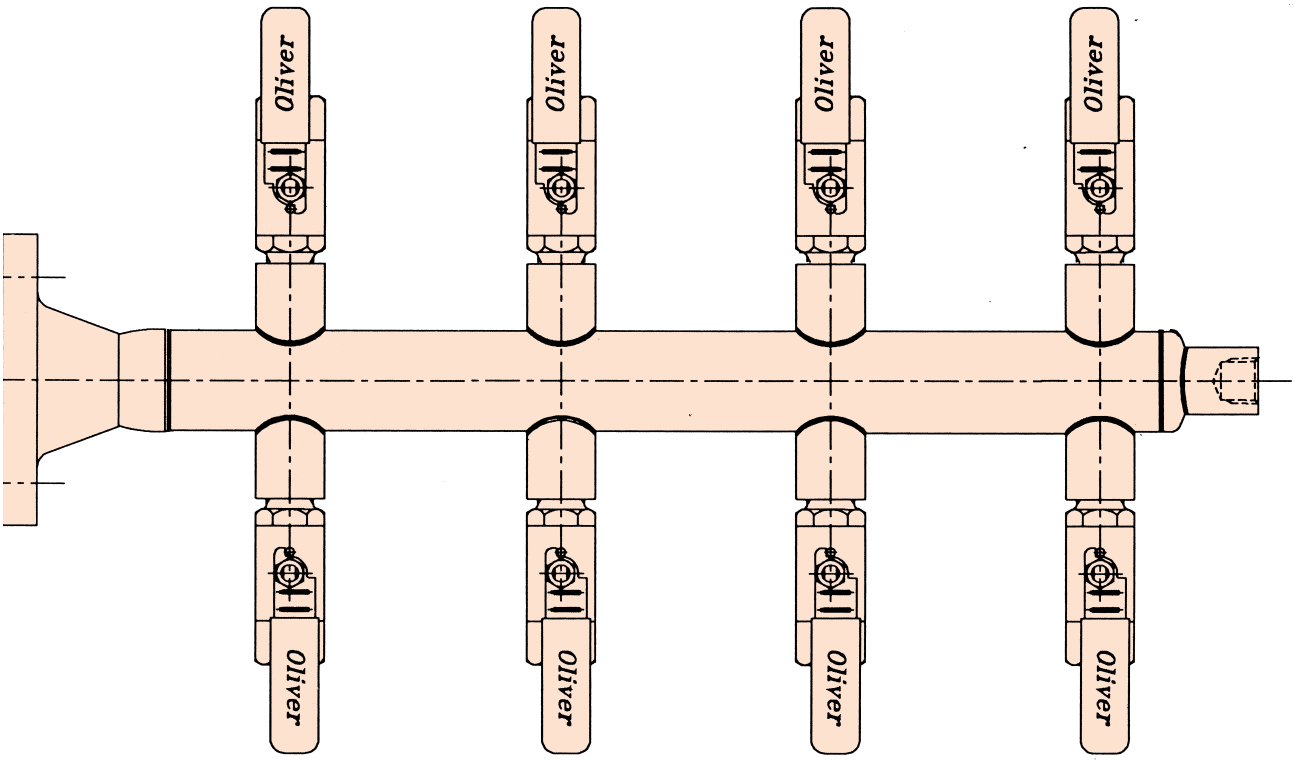
DISTRIBUTION MANIFOLDS

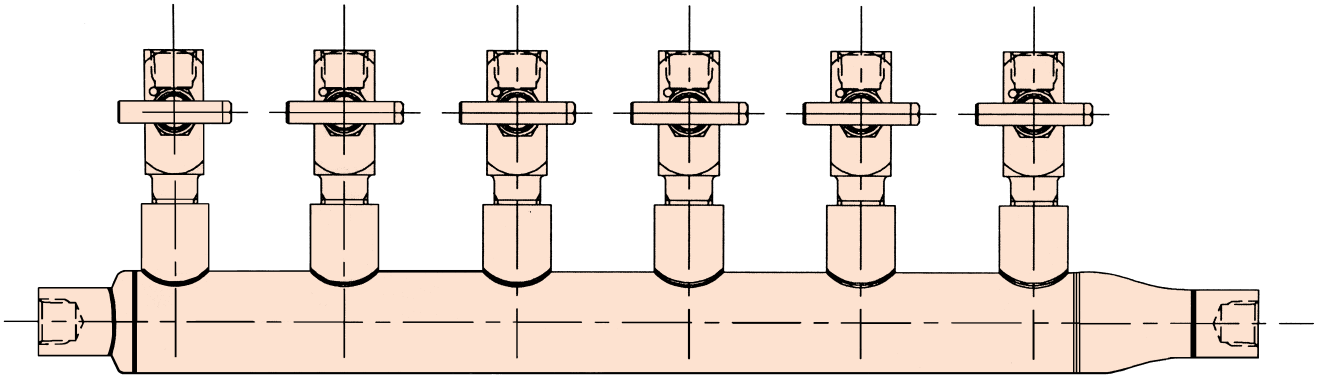
Oliver high pressure Distribution Manifolds fulfil the need for a specific manifold working at instrument pressures. Designed in conjunction with our customers' requirements.

Drawings show typical layouts – lengths, number of valves & flanges, etc. to suit application. Needle valves and ball valves shown.

See back page for how to specify.

STANDARD SPECIFICATION		
MAXIMUM WORKING PRESSURE		6,000 PSI
VALVE TYPES	BALL VALVES	NEEDLE VALVES
MAXIMUM TEMPERATURE	200ºC	240ºC





HOW TO ORDER AIR HEADERS

AH 8 / S TWO/HRB75/25S(I) / BAH25/50S(O) (V) /BKTS

AIR HEADER

TOTAL NUMBER OF OUTLET PORTS

MATERIAL
- S 316 STAINLESS STEEL
- C 220M07 CARBON STEEL

(other materials available on request).

ONE SINGLE SIDED
TWO DOUBLE SIDED
IE AH10S/TWO –
5 OUTLETS DOWN EACH SIDE
AH5S/ONE –
5 OUTLETS DOWN ONE SIDE ONLY

BALL VALVES
- BAH25S ¼" NPT FEMALE
- BAH25/50S ½" NPT FEMALE

(ball valves are stainless steel)

PORTS
- HRB75/50C ½" (F) CONNECTION CS
- HRB75/50S ½" (F) CONNECTION SS
- HRB75/25C ¼" (F) CONNECTION CS
- HRB75/25S ¼" (F) CONNECTION SS

Standard ¾" ports, inlet and vent.

LETTERS IN BRACKETS
(I) INLET PORT
(O) OUTLET PORT
(V) VENT PORT

(I)
(O) + (O)
(O) + (O)
(O) + (O)
(O) + (O)
(O) + (O)
(V)

MOUNTING
- BKTC CARBON STEEL BRACKET
- BKTS STAINLESS STEEL BRACKET

EXAMPLE: AH20C/TWO/HRB75/50C (I)/BAH25S (OV)

A 20-way double sided (10 down each side) air header in carbon steel with ½" NPT Female inlet, ¼" NPT Female ball valve outlets and a ¼" NPT Female ball valve vent. All ball valves are stainless steel.

DISTRIBUTION MANIFOLDS

DM 3 S / TWO / 75IN / M50 S / 50V / PP

INLET **OUTLET** **VENT**

DM Distribution Manifold
CMDM Compact Mount Distribution Manifold

TOTAL NUMBER OF OUTLET PORTS

ONE SINGLE SIDED
TWO DOUBLE SIDED
IE DM 10S/TWO –
5 OUTLETS DOWN EACH SIDE
DM 10S/ONE –
10 OUTLETS DOWN ONE SIDE ONLY

MATERIAL SELECTION

S	316S31 Stainless Steel standard (316)
SL	316S11 Stainless Steel (316L)
C	220M07 Carbon Steel plated (En1a)
CB	070M20 Carbon steel (En3b)
M	Monel (400)
N	Nickel (200)
HC	Hastalloy (C276)
IL	Incoloy (825)
IN	Inconel (625)

OUTLET CONNECTIONS NEEDLE VALVES

M25	¼" NPT FEMALE
M38	⅜" NPT FEMALE
M50	½" NPT FEMALE
M75	¾" NPT FEMALE
M10	1" NPT FEMALE

OUTLET CONNECTIONS BALL VALVES

B6M25	¼" NPT FEMALE
B6M38	⅜" NPT FEMALE
B6M50	½" NPT FEMALE
B6M75	¾" NPT FEMALE
B6M10	1" NPT FEMALE

INLET CONNECTIONS

25IN	¼" NPT FEMALE
38IN	⅜" NPT FEMALE
50IN	½" NPT FEMALE
75IN	¾" NPT FEMALE
10IN	1" NPT FEMALE

VENT CONNECTIONS

25V	¼" NPT FEMALE
38V	⅜" NPT FEMALE
50V	½" NPT FEMALE
75V	¾" NPT FEMALE
10V	1" NPT FEMALE

VALVE MATERIAL
See Material Selection

O P T I O N S

NA	NACE MR-01-75 (Latest revision)

CONNECTIONS

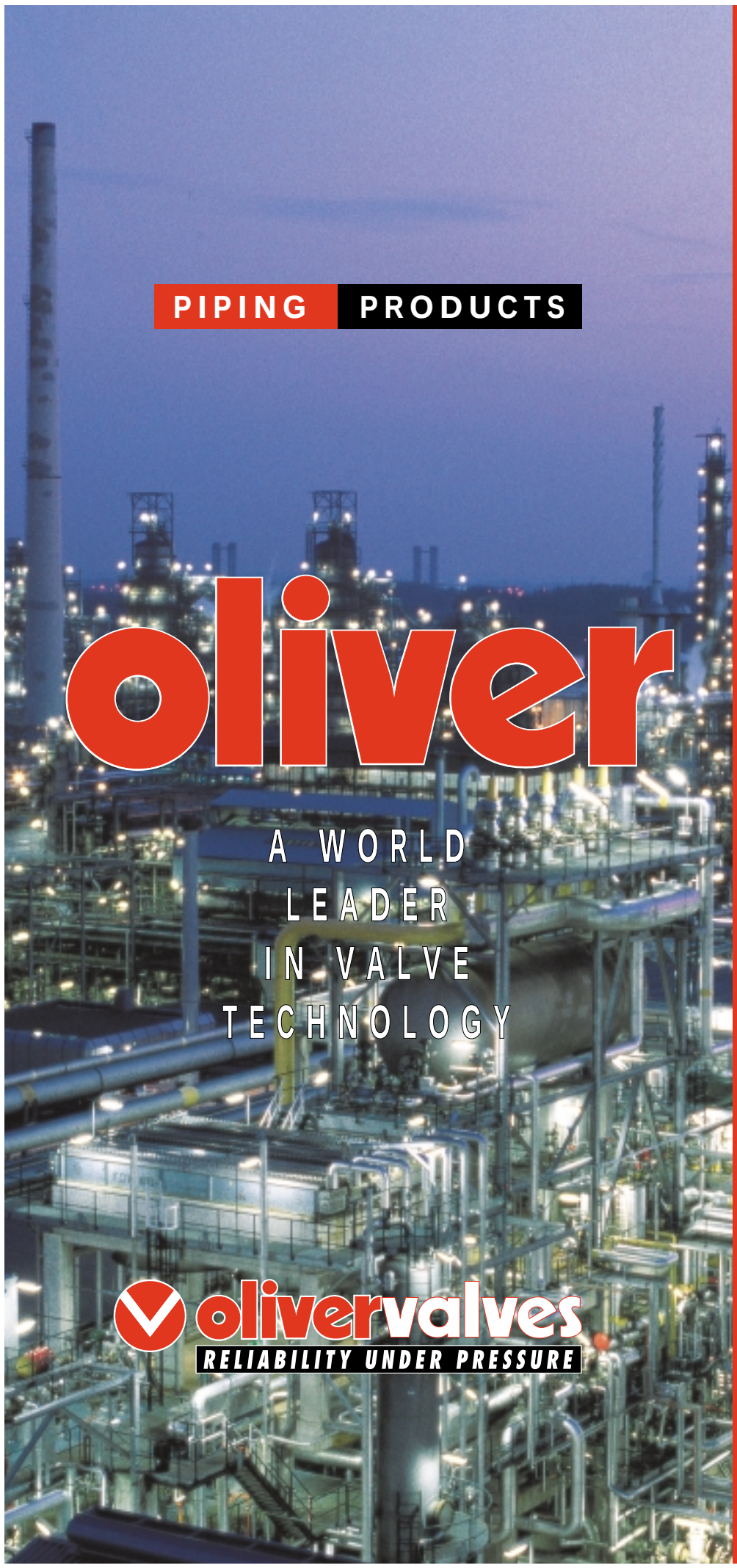
BP	BSP parallel pipe thread BS2779-1986
BT	BSP taper pipe thread BS21-1985
SW	Socket weld
BW	Butt weld

HEAD UNIT OPTIONS (specify in alphabetical order)

AT	Anti-tamper handle
AT/KEY	Anti-tamper key
BKTC	Bracket (in carbon steel)
CSHW	Carbon steel handwheel
HL	Handwheel locking
PI	Position indicator (Handwheel locking only)
PM	Panel mounting (including nuts)
PP	Pressure plug on vent
RHW	Red nylon handwheel
VP	Vent plug on vent
VV	Vent valve on vent

EXAMPLE: DM8S TWO/50IN/M38S/75V/PP

Distribution manifold with four ⅜" NPT Female Oliver Needle valves on outlets down each side with ½" NPT Female inlet and ¾" NPT Female outlet, and pressure plug on vent.



DOUBLE BLOCK AND BLEED VALVES

INJECTION AND SAMPLE VALVES

MONO FLANGE VALVES

SLIMLINE PRIMARY ISOLATE VALVES

ROOT PRIMARY ISOLATE VALVES

TWINSAFE® VALVES

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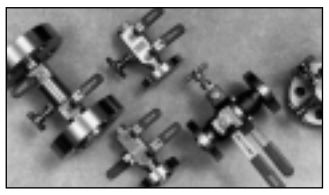
1 DOUBLE BLOCK AND BLEED INTRODUCTION
2 THE DOUBLE BLOCK AND BLEED SOLUTION
3 DOUBLE BLOCK AND BLEED SPECIFICATIONS
4 DOUBLE BLOCK AND BLEED SPECIFICATIONS
5 INSTRUMENT DOUBLE BLOCK AND BLEED VALVES
6 D TYPE DOUBLE BLOCK AND BLEED VALVES
7 F TYPE DOUBLE BLOCK AND BLEED VALVES
8 N TYPE DOUBLE BLOCK AND BLEED VALVES
9 DOUBLE BLOCK AND BLEED DIMENSION TABLES
10 SAMPLING DOUBLE BLOCK AND BLEED VALVES
11 INJECTION DOUBLE BLOCK AND BLEED VALVES
12 BOLTED CONSTRUCTION DOUBLE BLOCK AND BLEED VALVES
13 PROJECT INFORMATION DOUBLE BLOCK AND BLEEDS IN USE
14 THE TWINSAFE® SOLUTION AND SPECIFICATION
15 TWINSAFE® DIMENSIONS AND PERFORMANCE
16 HOW TO ORDER DOUBLE BLOCK AND BLEEDS, AND TWINSAFE® VALVES
17 PRIMARY ISOLATION VALVES INTRODUCTION
18 SLIMLINE PRIMARY ISOLATE VALVES
19 GAUGE BLOCK MONOFLANGE VALVES
20 ROOT VALVES FOR PRIMARY ISOLATION
21 GAUGE OUTSIDE SCREW AND YOKE VALVES
22 TECHNICAL INFORMATION
23 HOW TO ORDER PRIMARY ISOLATION VALVES
24 OLIVER PIPING SOLUTIONS
25 OPERATION, INSTALLATION AND MAINTENANCE INSTRUCTIONS



LLOYD'S 870012

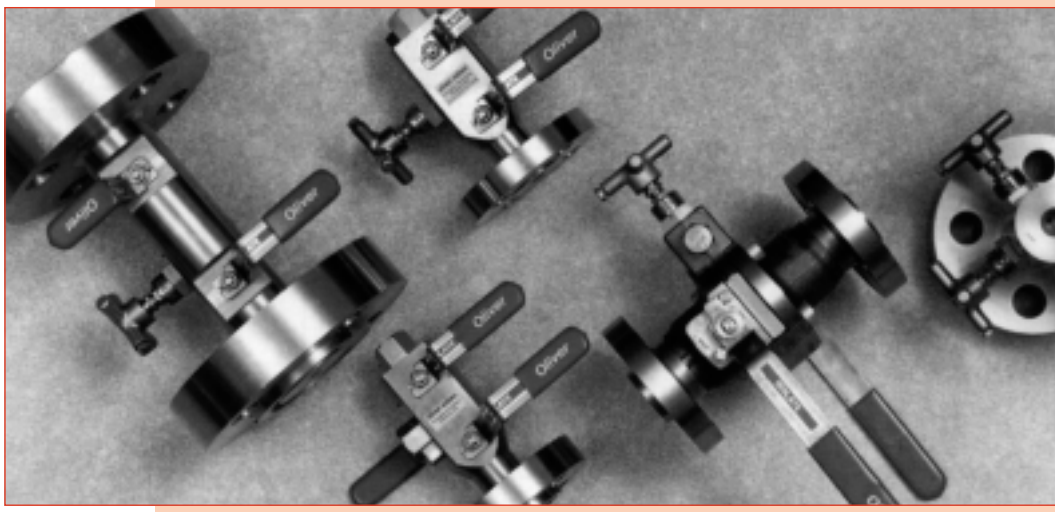
TYPE APPROVED

Parkgate Industrial Estate Knutsford Cheshire WA16 8DX England Tel: 01565 632636 (14 Lines)
Fax: 01565 654089 or 01565 650060 Email: sales@valves.co.uk WWW: valves.co.uk or olivervalves.com

The Oliver Group products are made in England and sold and supported in over 50 countries worldwide.

DOUBLE BLOCK AND BLEED VALVES

- ADDITIONAL BENEFITS ON ALL DOUBLE BLOCK AND BLEED TWINSAFE® VALVES
- CONFORM TO NACE MR-01-75 LATEST REVISION
- FIRESAFE TO BS 6755 PART 2
- FULLY MATERIAL TRACEABLE, UNIQUE NUMBER SYSTEM



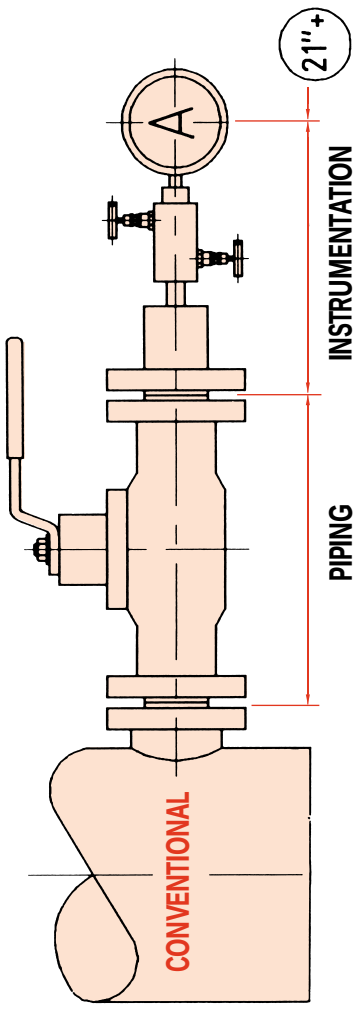
features

- **Styles:** Needle and ball valve combinations.
- **Valve Sizes:** 1/2" to 2" nominal bores.
- **Design Codes:** API 6D and ANSI B16.34 & all others (page 4).
- **Pressure Ratings:** Class 150 to 2,500.
- **Connections:** Flanged, Threaded, Pipe Clamp Lock Hubs, Buttweld, Socketweld, Special end profiles.
- **Materials of Construction as Standard:** Forged bodies in Carbon Steel, Stainless Steel and Duplex Steel.
- **Firesafe:** Lloyds Register type approved in accordance with BS 6755 part 2.

YOUR PROBLEM

In the conventional "HOOK UP" of pressure instruments both the piping and instrument departments are involved in ordering and stocking separate valves, gaskets and other fittings. Assembling so many components suggests many potential leak points. This costly and time-consuming "HOOK UP" has the further disadvantage of taking up working space, and produces a large bending moment. The higher mass induces vibration stress failures. It is also expensive, particularly if welding of joints is required.

WEIGHT A	40Kg
OVERHANG A	21"

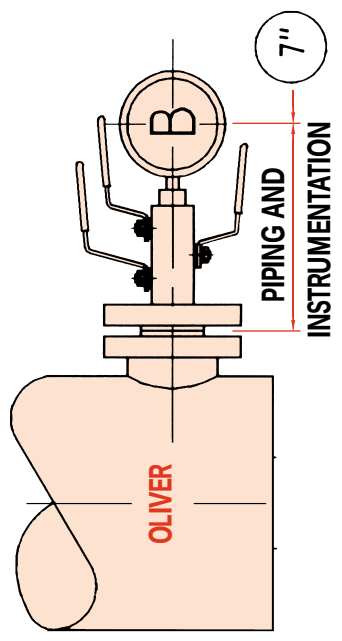


OUR SOLUTION

Oliver's unique approach offers the designer of sampling, draining, injection and pressure instrument take-off points a simple, rigid, compact, safe, low-cost option to "CONVENTIONAL PRACTICE". Our double block and bleed valves are used in critical applications, where cost, weight and space saving are paramount for:

- **Pressure instrument take-off points.**
- **Sampling systems, where a pipeline probe is integral with our valve.**
- **Chemical injection systems, where a check valve is part of our valve assembly.**
- **Drains for tanks and pipes, where space is restricted.**
- **High pressure firesafe diverter valves.**
- **Hydraulic power unit systems.**
- **Reduced vibrational stresses.**
- **Cost savings with exotic material designs are huge.**

WEIGHT B	7Kg
SAVING	33Kg
OVERHANG B	7"
SAVING	14"



DOUBLE BLOCK AND BLEED VALVE

SPECIFICATIONS

1 ADVANCED DESIGNS
Our products conform to the latest international design specifications and are approved by leading companies.

2 TOUGH HANDLES
Rugged, 316 stainless steel, low torque, quarter turn handles will not rust in offshore service.

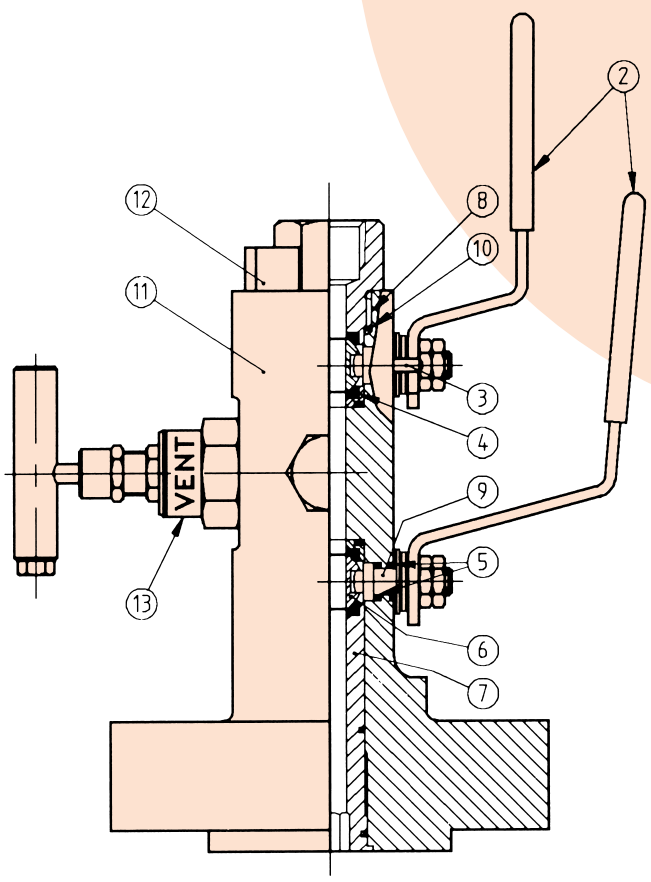
3 POSITIVE STOP PINS
A 316 stainless steel pin held into the body by a machined anti-vibration spline assures an absolute 90° turn.

4 HIGH PERFORMANCE SEATS
Unique enclosed seats offer great process compatibility but restrict creep or distortion in service. Our approach achieves high levels of seat integrity at low and high pressures.

5 FIRESAFE BALL VALVES
Go metal to metal in a fire to reduce leakage due to seat destruction.

6 BALL
This precision machined component is super finished assuring low operating torques.

7 THROUGH RODABILITY OF BALL VALVES
True positive 90° opening combined with clear through bores across the range allows rodding.



EXPLOSIVE DECOMPRESSION
Explosive decompression occurs when gas at high pressure permeates into seal materials. When the gas pressure is reduced the absorbed gas expands which can cause the seals to swell and blister. Oliver Valves only use seal material within their 'Double Block and Bleed Valve' range that are resistant to explosive decompression.

8 PRECISION PROCESS THREADS
Super finished screwcut – not tapped threads – using advanced CNC machines ensure easy assembly and leak tight threads with reduced risk of galling.

9 SOLID BACKSEATED ANTI-BLOWOUT SPINDLE
Precision, rugged one piece stem incorporates anti-blow out feature and maintains seal integrity at all pressures. Anti-vibration lock nuts are standard to all products.

10 BODY SEALS
Totally contained 'O' ring type body seals for body integrity and additionally protecting internal body threads from process media.

11 DROP FORGED BODY
A rigid one piece drop forged body, eliminates potential leak points experienced with conventional hook ups.

12 'BLOK-LOK' (PATENT PENDING)
Anti-removable pin, non-welded connector locking system which prevents accidental disassembly when in service.

13 HEAVY DUTY FIRESAFE NEEDLE VALVES
Oliver's proven heavy duty needle pattern head unit features a rugged firesafe and tested construction.

OPTIONS

CARBON STEEL DOUBLE BLOCK AND BLEED VALVES have stainless steel end adaptors, seal housings and inserts as standard construction. The parts mentioned can also be made from carbon steel if specifically requested. Plating as standard with painting options available.

HANDLE LOCKING - /HL Oliver unique handle locking system will prevent accidental operation – tamper-proof.

SPANNER ACTUATION - /SA Oliver tamper-proof spanner actuation – for ball valve handles only.

STANDARD

FIRESAFE - /FS Firesafe construction compliant with BS 6755 part 2. API 607 and API 6FA. Fully certified to Lloyds type approval certificate numbers 88/0345, 91/0117, 92/0140 and 93/00068. High temperature Grafoil replaces PTFE for seals.

NACE - /NA Compliance to NACE specification MR-01-75 latest revision – suitable for sour service – resistant to sulphide stress corrosion cracking. 316 stainless steel is solution annealed for trims.

FLANGED VALVE RATINGS
comply with, and are affected by, the material class pressures and temperatures of ANSI B16.5 unless the temperature limitations above apply. For clarification consult Oliver Valves.

QUALITY ASSURANCE
BS EN ISO 9002: 1994 quality systems accredited by Lloyds Register Institution ensure confidence. Oliver holds certificate number 0870012/A.

CERTIFICATION AND TRACEABILITY
All major pressure containing components exhibit unique identification coding and material test certificates, to BS EN 10204 3.1.B which are available for a nominal charge. All our double block and bleed products carry unique serial numbers against which a lifetime factory history is maintained.
(3.I.C. certification available on request)

Note: See page 22 for needle and ball valve pressure v temperature.

TESTING
All products receive hydrostatic testing at the full rated pressure with proof shell test at 1.5 times full rated pressure and pneumatic test of the seats at 80 psi thereby ensuring suitability for use across a wide operating range. And a 1.1 times full rated hydrostatic seat test.

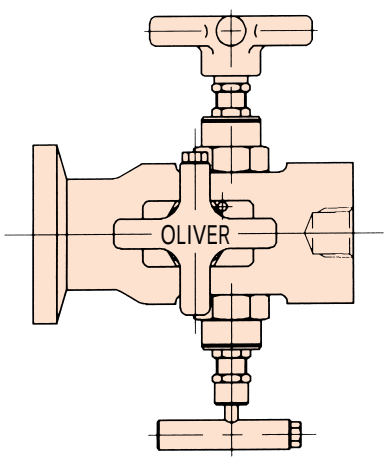
DESIGN
Our DBB products meet the relevant code requirements of ASME VIII, ANSI B16.34/B16.5, ANSI B31.3 and API 6D.

VACUUM SERVICE
All of our valves are suitable for use in vacuum service and have passed helium leak testing at 0.01 m bar.

DEVELOPMENT
Continuous development maintains the highest levels of performance and integrity for our valves. Oliver Valves maintains its own in-house fire testing facilities and constantly performs cycling and combined pressure temperature test programmes. All aimed at the ultimate product specification.

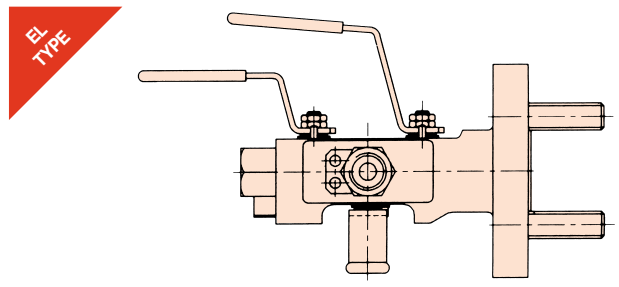
DOUBLE BLOCK AND BLEED - OPTIONAL END CONNECTIONS

HUB CONNECTION



Any make or size of “Pipe Clamp Lock Connection” can be accommodated on the standard D, F or N type Double Block and Bleed Valves (N type shown) and also on the larger Twinsafe Valves.

FLANGE/STUD CONNECTION



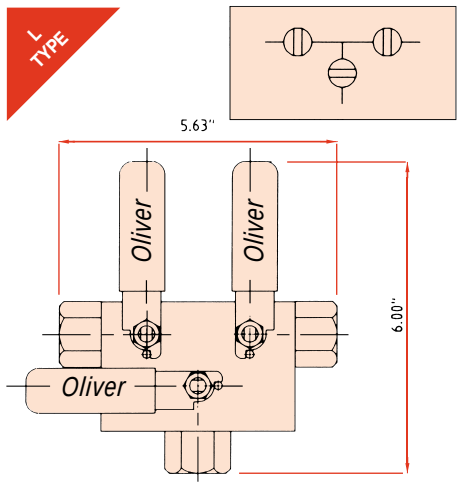
EL TYPE
Integrally flanged one piece body forging machined to ANSI B16.5 flange dimensions fitted with corresponding studs and nuts. The studs are locked in position with stainless steel pins. This style of body does not have to be necked at the back of the flange to suit standard bolting configurations and therefore it has greater strength to withstand higher external and connecting pipework forces.
The EL Type can be provided in the following styles:-
i) Two in-line ball pattern primary and secondary isolating valves with a heavy duty needle valve vent, offering ‘through to process’ rodding in bore sizes from 10mm to 20mm.
ii) Three ball pattern primary and secondary isolating valves and vent valve, offering ‘through to process’ rodding in 10mm and 14mm bore sizes.
iii) Three heavy duty metal seated Needle primary and secondary isolating valves and vent valve with 5.4mm bores.

INSTRUMENT DOUBLE BLOCK AND BLEED VALVES

INSTRUMENTATION VALVES

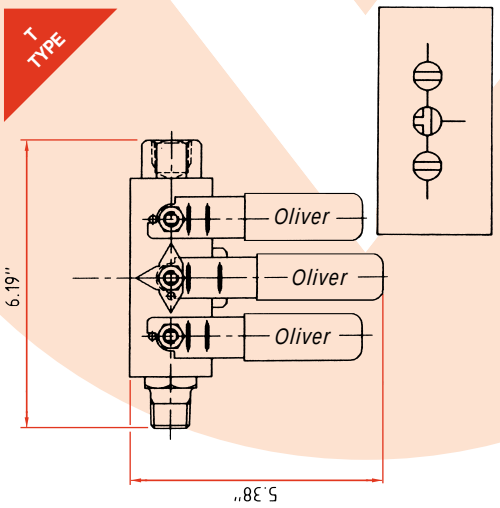
These valves are double block and bleed type with different combinations of ball pattern and needle pattern valves in various configurations.

L TYPE



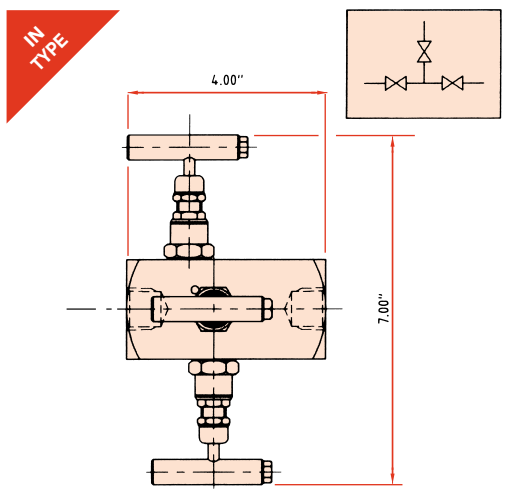
L TYPE
Barstock body with three rodable balls arranged for sampling, chemical injection and double block and bleed of instrument. Surface mounting option available.
Cam Interlock option available to allow only the correct sequence of operation and to prevent accidental opening of the vent valve when the first isolation valve is open.

T TYPE



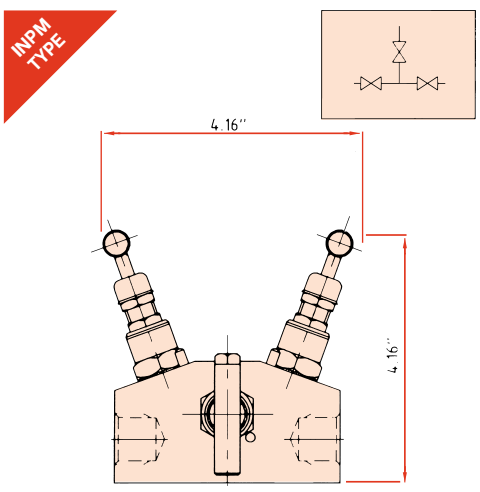
T TYPE
Barstock body with rodable central 'T' ported ball valve for compact double block and bleed, sampling or chemical injection. Surface mounting and Cam Interlock options available.

IN TYPE



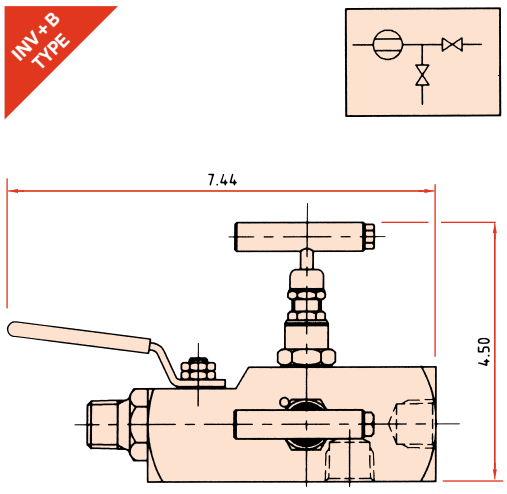
IN TYPE
Barstock body with three needle pattern valves arranged for double block and bleed of instrument.

INPM TYPE



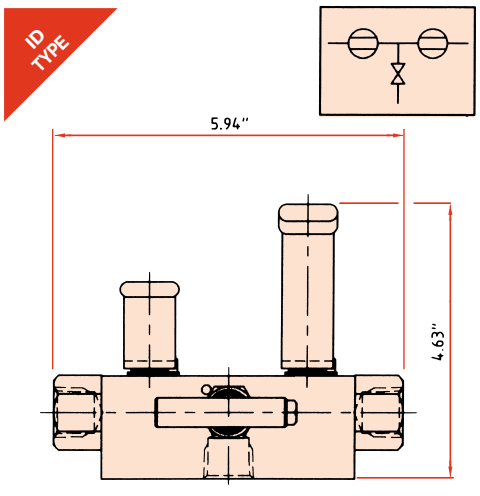
INPM TYPE
Barstock body with three needle pattern valves in different configuration to achieve panel surface mounting for double block and bleed of instrument.

INV + B TYPE



INV + B TYPE
Barstock body with ball pattern primary isolating valve with two needle pattern valves for secondary isolating valve and vent valve.

ID TYPE



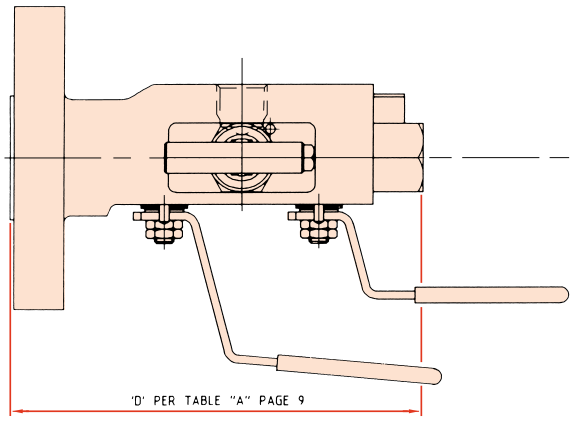
ID TYPE
Barstock body with two in-line ball pattern primary and secondary isolating valves with a needle pattern valve vent, offering 'through to process' rodding in 10mm bore size.

NOTE – On instrument double block and bleeds Firesafe & NACE specifications are options.

DOUBLE BLOCK AND BLEED VALVES

Machined from a single piece 'grain flow controlled' forging. This valve features two in-line ball pattern primary and secondary isolating valves with a heavy duty needle valve vent, offering 'through to process' rodding in bore sizes from 10mm to 20mm (0.4" to 0.8").

D TYPE



FLANGE TO PIPE – THREE BORES – THREE STANDARD MATERIALS

SIZE RANGES		
BALL VALVE BORE 0.40"/10mm CV 6.3	**BALL VALVE BORE 0.55"/14mm CV 11.7**	**BALL VALVE BORE 0.80"/20mm CV 27.9**
Flange size 1/2" NB to 2" NB, Flange Classes 150 to 2500 RF & RTJ	Flange size 3/4" NB to 2" NB, Flange Classes 150 to 2500 RF & RTJ	Flange size 1" NB to 2" NB, Flange Classes 150 to 2500 RF & RTJ Option – 3" NB, 150 to 2500
Outlet connection: 1/2" NPT female standard. Vent connection: 1/2" NPT female standard.	Outlet connection: 3/4" NPT female standard. Vent connection: 1/2" NPT female standard.	Outlet connection: 1" NPT female standard. Vent connection: 1/2" NPT female standard.

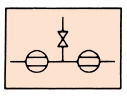
CARBON STEEL

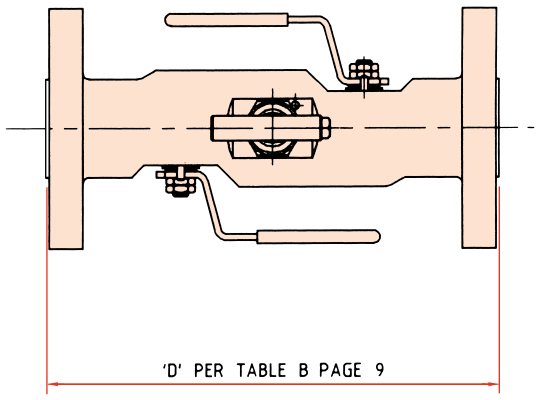
Standard specification – ASTM A350 LF2 body material with BS970 316 S11/S31 barstock stainless steel trims, Inserts, End adaptors and head units, with PTFE/Grafoil seals and gland packings. Needle valves have non-rotating hard tip giving metal to metal closure. Standard 1/4 turn lever and screw down tee bar operators. All end adaptors have Oliver BLOK-LOK protection against accidental disassembly.

DUPLEX STAINLESS STEEL

Standard specification – ASTM A182 F51 body material with UNS S31803 barstock steel trims, Inserts, End adaptors and head units, with PTFE/Grafoil seals and gland packings. Needle valves have non-rotating hard tip giving metal to metal closure. Standard 1/4 turn lever and screw down tee bar operators. All end adaptors have Oliver BLOK-LOK protection against accidental disassembly.

This all forged manifold comprises two in-line ball primary and secondary isolating valves with a heavy duty needle valve vent. Offering through to process rodding in bore sizes from 10mm to 14mm (0.4" to 0.55").





FLANGE TO FLANGE – THREE BORES – THREE STANDARD MATERIALS

SIZE RANGES		
BALL VALVE BORE 0.40"/10mm CV 6.3	**BALL VALVE BORE 0.55"/14mm CV 11.7**	**BALL VALVE BORE 0.80"/20mm CV 27.9**
Flange size 1/2" NB to 2" NB, Flange Classes 150 to 2500 RF & RTJ Outlet connection: Flange size & Class can be different from inlet. Vent connection: 1/2" NPT female standard.	Flange size 3/4" NB to 2" NB, Flange Classes 150 to 2500 RF & RTJ Outlet connection: Flange size & Class can be different from inlet. Vent connection: 1/2" NPT female standard.	Flange size 1" NB to 2" NB, Flange Classes 150 to 2500 RF & RTJ Outlet connection: 1" NPT female standard. Vent connection: 1/2" NPT female standard.

STAINLESS STEEL

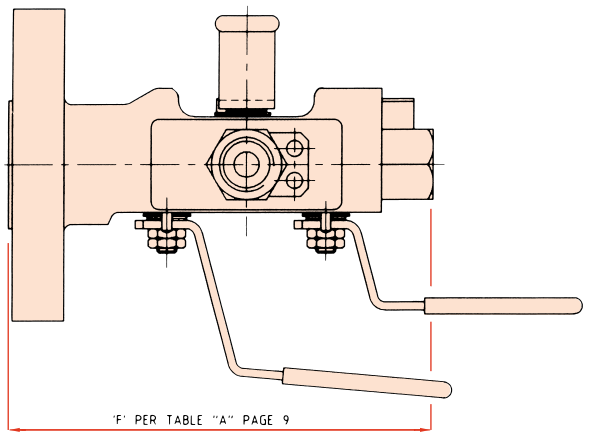
Standard specification – ASTM A182 F316 body material with BS970 316S11/S31 barstock stainless steel trims, Inserts, End adaptors and head units, with PTFE/Grafoil seals and gland packings. Needle valves have non-rotating hard tip giving metal to metal closure. Standard 1/4 turn lever and screw down tee bar operators. All end adaptors have Oliver BLOK-LOK protection against accidental disassembly.

STANDARD	
NACE:	Conformance to NACE MR-01-75 (latest revision).
FIRESAFE:	Firesafe construction.

OPTIONS	
INJECTION:	Available for chemical injection service (page 11).
SAMPLING:	Available for sampling service (page 10).

Machined from a single piece ‘grain flow controlled’ forging. This valve features two in-line ball pattern primary and secondary isolating valves with ball valve vent, offering ‘through to process’ rodding in bore sizes from 10mm to 14mm (0.4” to 0.55”).

F TYPE



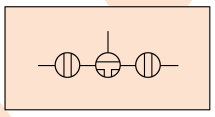
FLANGE TO PIPE – TWO BORES – THREE STANDARD MATERIALS

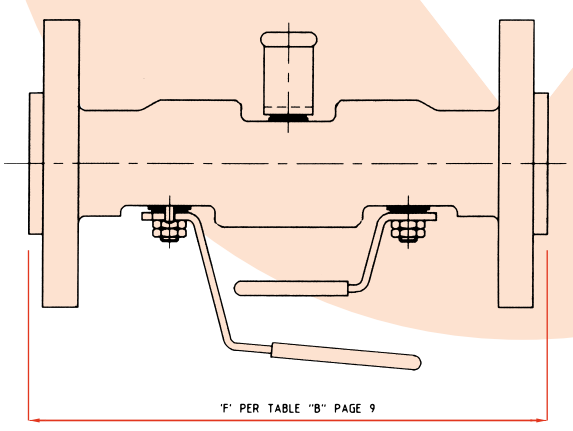
SIZE RANGES	
BALL VALVE BORE 0.40”/10mm CV 6.3	**BALL VALVE BORE 0.55”/14mm CV 11.7**
Flange size 1/2” NB to 2” NB, Flange Classes 150 to 2500 RF & RTJ	Flange size 3/4” NB to 2” NB, Flange Classes 150 to 2500 RF & RTJ
Outlet connection: 1/2” NPT female standard. Vent connection: 1/2” NPT female standard.	Outlet connection: 3/4” NPT female standard. Vent connection: 1/2” NPT female standard.

CARBON STEEL
Standard specification – ASTM A350 LF2 body material with BS970 316 S11/S31 barstock stainless steel trims, Inserts. End adaptors with PTFE seats and PTFE/Grafoil seals and gland packings. Standard 1/4 turn lever 1/2 turn to vent. All end adaptors have Oliver BLOK-LOK protection against accidental disassembly.

DUPLEX STAINLESS STEEL
Standard specification – ASTM A182 F51 body material with UNS S31803 barstock steel trims, Inserts, End adaptors with PTFE seats and PTFE/Grafoil seals and gland packings. Standard 1/4 turn lever 1/2 turn to vent. All end adaptors have Oliver BLOK-LOK protection against accidental disassembly.

This all forged manifold comprises two in-line ball primary and secondary isolating valves with ball valve vent. Offering through to process rodding in bore sizes from 10mm to 14mm (0.4” to 0.55”).





FLANGE TO FLANGE – TWO BORES – THREE STANDARD MATERIALS

SIZE RANGES	
BALL VALVE BORE 0.40”/10mm CV 6.3	**BALL VALVE BORE 0.55”/14mm CV 11.7**
Flange size 1/2” NB to 2” NB, Flange Classes 150 to 2500 RF & RTJ	Flange size 3/4” NB to 2” NB, Flange Classes 150 to 2500 RF & RTJ
Outlet connection: Flange size & Class can be different from inlet. Vent connection: 1/2” NPT female standard.	Outlet connection: Flange size & Class can be different from inlet. Vent connection: 1/2” NPT female standard.

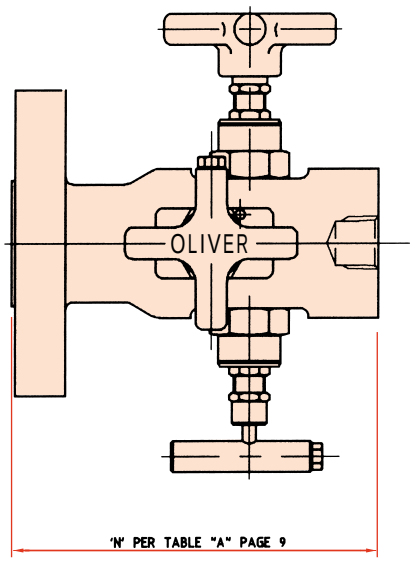
STAINLESS STEEL
Standard specification – ASTM A182 F316 body material with BS970 316S11/S31 barstock stainless steel trims, Inserts, End adaptors with PTFE seats and PTFE/Grafoil seals and gland packings. Standard 1/4 turn lever 1/2 turn to vent. All end adaptors have Oliver BLOK-LOK protection against accidental disassembly.

STANDARD	
NACE:	Conformance to NACE MR-01-75 (latest revision).
FIRESAFE:	Firesafe construction.

OPTIONS	
INJECTION:	Available for chemical injection service (page 11).
SAMPLING:	Available for sampling service (page 10).

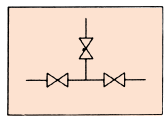
Machined from a single piece ‘grain flow controlled’ forging. This valve features primary and secondary valve & vent with heavy duty needle valves, offering 5.4mm (0.23”) bores and metal seated valves.

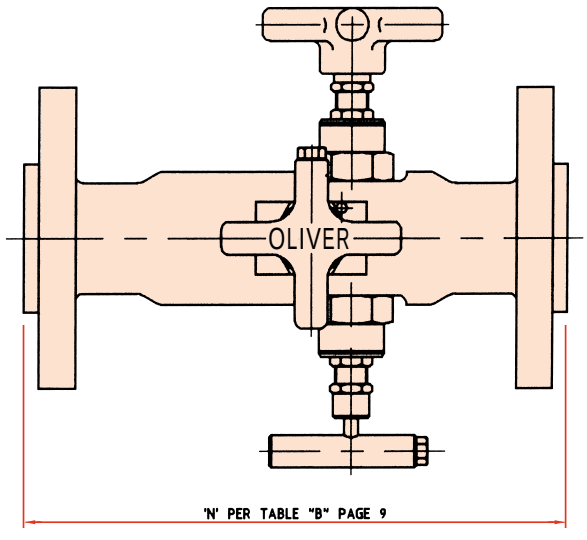
N TYPE



FLANGE TO PIPE – ONE BORE – THREE STANDARD MATERIALS

This all forged manifold comprises three heavy duty needle valves. Offering 5.4mm (0.23”) bores and metal seated valves.





FLANGE TO FLANGE – ONE BORE – THREE STANDARD MATERIALS

Valves have three heavy duty metal seated needle valves with 5.4mm (0.23”) bores.

CARBON STEEL
Standard specification – ASTM A350 LF2 body material with BS970 316 S11/S31 barstock stainless steel trims and head units with Grafoil seals and gland packings. Needle valves have non-rotating hard tip giving metal to metal closure and screw down tee bar operators.

STAINLESS STEEL
Standard specification – ASTM A182 F316 body material with BS970 316S11/S31 barstock stainless steel trims and head units with Grafoil seals and gland packings. Needle valves have non-rotating hard tip giving metal to metal closure and screw down tee bar operators.

DUPLEX STAINLESS STEEL
Standard specification – ASTM A182 F51 body material with UNS S31803 barstock steel trims and head units with Grafoil seals and gland packings. Needle valves have non-rotating hard tip giving metal to metal closures and screw down tee bar operators.

STANDARD	
NACE:	Conformance to NACE MR-01-75 (latest revision).
FIRESAFE:	Firesafe construction.

FLANGE TO PIPE (TABLE A)

BORE			7/32"		5.5mm	3/8"		10mm	9/16"		14mm	13/16"		20mm
SIZE	FLANGE CLASS	RF/RTJ FLANGE TYPE	N inch	mm	kg	D & F inch	mm	kg	D & F inch	mm	kg	D inch	mm	kg
1/2"	150	Y/N	5.88	149	3.4	6.69	170	3.4	–	–	–	–	–	–
	300	Y/Y	5.88	149	4	6.69	170	4	–	–	–	–	–	–
	600	Y/Y	5.88	149	4	6.69	170	4	–	–	–	–	–	–
	1500	Y/Y	6.25	159	5.2	7.06	179	5.2	–	–	–	–	–	–
	2500	Y/Y	6.5	165	6.4	7.31	186	6.4	–	–	–	–	–	–
3/4"	150	Y/N	5.88	149	4.2	6.69	170	4.2	8.19	208	7.2	–	–	–
	300	Y/Y	5.88	149	4.7	6.69	170	4.7	8.19	208	7.7	–	–	–
	600	Y/Y	5.88	149	4.7	6.69	170	4.7	8.19	208	7.7	–	–	–
	1500	Y/Y	6.25	159	5.6	7.06	179	5.6	8.56	218	8.6	–	–	–
	2500	Y/Y	6.5	165	6.7	7.31	186	6.7	8.81	224	9.7	–	–	–
1"	150	Y/Y	5.88	149	4.4	6.69	170	4.4	8.19	208	7.4	9.25	235	8.2
	300	Y/Y	5.88	149	4.8	6.69	170	4.8	8.19	208	7.8	9.25	235	8.6
	600	Y/Y	6.25	159	5.3	7.06	179	5.3	8.56	218	8.3	9.62	244	9.1
	1500	Y/Y	6.5	165	7.3	7.31	186	7.3	8.81	224	10.3	9.88	251	11.1
	2500	Y/Y	6.5	165	10.1	7.31	186	10.1	8.94	227	13.1	9.88	251	14.1
1 1/2"	150	Y/Y	5.88	149	5	6.69	170	5	8.19	208	8	9.25	235	8.8
	300	Y/Y	6.25	159	7.4	7.06	179	7.4	8.56	218	10.4	9.62	244	11.2
	600	Y/Y	6.25	159	7.4	7.06	179	7.4	8.56	218	10.4	9.62	244	11.2
	1500	Y/Y	6.5	165	9.1	7.31	186	9.1	8.81	224	12.1	9.88	251	12.9
	2500	Y/Y	7.06	179	13.5	7.87	200	13.5	9.38	238	16.5	10.43	265	17.3
2"	150	Y/Y	6.25	159	7.2	7.06	179	7.2	8.56	218	10.2	9.62	244	11
	300	Y/Y	6.25	159	7.4	7.06	179	7.4	8.56	218	10.4	9.62	244	11.2
	600	Y/Y	6.5	165	7.7	7.31	186	7.7	8.81	224	10.7	9.88	251	11.5
	1500	Y/Y	7.06	179	14.5	7.87	200	14.5	9.38	238	17.5	10.43	265	18.3
	2500	Y/Y	7.38	187	20	8.19	208	20	9.68	246	22.1	10.75	273	22.9
– not available														

FLANGE TO FLANGE (TABLE B)

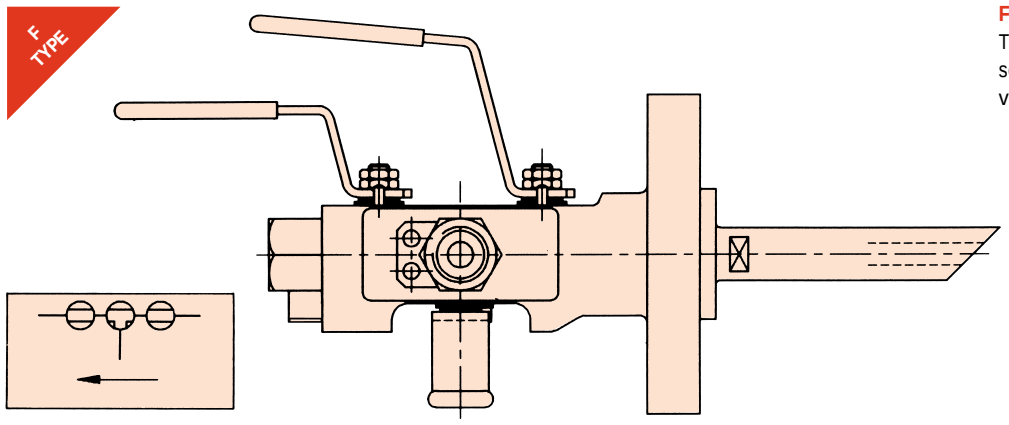
BORE			3/8"		10mm	9/16"		14mm	9/16"		14mm	13/16"		20mm
SIZE	FLANGE CLASS	RF/RTJ FLANGE TYPE	D & F inch	mm	kg	D inch	mm	kg	F inch	mm	kg	D inch	mm	kg
1/2"	150	Y/N	9.25	235	5.4	–	–	–	–	–	–	–	–	–
	300	Y/Y	9.25	235	6.6	–	–	–	–	–	–	–	–	–
	600	Y/Y	9.25	235	6.6	–	–	–	–	–	–	–	–	–
	1500	Y/Y	10	254	9	–	–	–	–	–	–	–	–	–
	2500	Y/Y	10.5	267	11.4	–	–	–	–	–	–	–	–	–
3/4"	150	Y/N	9.25	235	7	9.25	235	9	10.5	267	10	–	–	–
	300	Y/Y	9.25	235	8	9.25	235	10	10.5	267	11	–	–	–
	600	Y/Y	9.25	235	8	9.25	235	10	10.5	267	11	–	–	–
	1500	Y/Y	10	254	9.8	10	254	11.8	10.5	267	12.8	–	–	–
	2500	Y/Y	10.5	267	12	10.5	267	14	11	279	15	–	–	–
1"	150	Y/Y	9.25	235	7.4	9.25	235	9.4	10.5	267	10.4	9.25	235	9.4
	300	Y/Y	9.25	235	8.2	9.25	235	10.2	10.5	267	11.2	9.25	235	10.2
	600	Y/Y	10	254	9.2	10	254	11.2	10.5	267	12.2	10	254	11.2
	1500	Y/Y	10.5	267	13.2	10.5	267	15.2	11	279	16.2	10.5	267	15.2
	2500	Y/Y	10.5	267	18.8	10.75	273	20.8	11	279	21.8	10.75	273	20.8
1 1/2"	150	Y/Y	9.25	235	8.6	9.25	235	10.6	10.5	267	11.6	9.25	235	10.6
	300	Y/Y	10	254	13.4	10	254	15.4	10.75	273	16.4	10	254	15.4
	600	Y/Y	10	254	13.4	10	254	15.4	11	279	16.4	10	254	15.4
	1500	Y/Y	10.5	267	16.8	10.5	267	18.8	11	279	19.8	10.5	267	18.8
	2500	Y/Y	12.38	314	25.6	13.13	334	27.6	13.13	334	27.6	13.13	334	27.6
2"	150	Y/Y	10	254	13	10	254	15	10.75	273	16	10	254	15
	300	Y/Y	10	254	13.4	10	254	15.4	10.75	273	16.4	10	254	15.4
	600	Y/Y	10.5	267	14	10.5	267	16	11	279	17	10.5	267	16
	1500	Y/Y	12.38	314	27.6	13.13	334	29.6	13.13	334	29.6	13.13	334	29.6
	2500	Y/Y	13.13	334	38	13.13	334	40	13.13	334	40	13.13	334	40
– not available														

SAMPLING DOUBLE BLOCK AND BLEED VALVES

Sampling the process stream can be accomplished with this valve design, where a sample can be taken even at full system pressure directly from the process line. The product allows double isolation from process for safety. The orientation of the sample nozzle is fixed at the assembly stage and can be specified to suit the application.

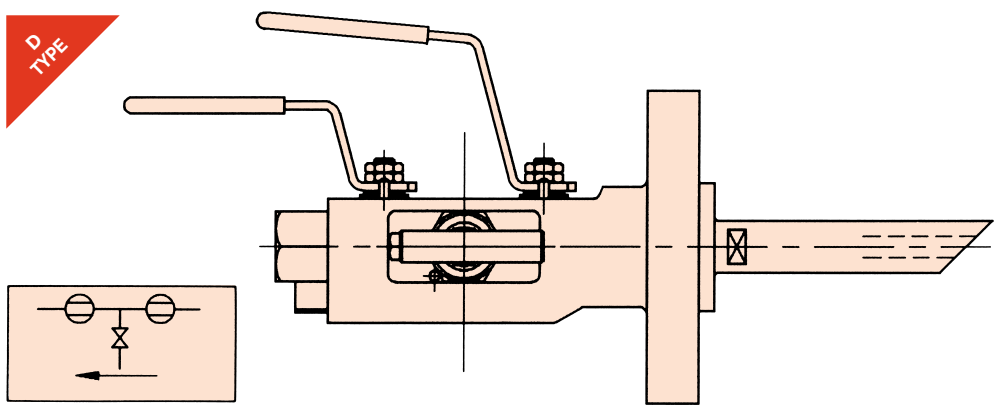
The flanged body drop forging is machined to ANSI B16.5 flange dimensions with the forged body section incorporating two isolation valves and one bleed valve. A custom designed sampling probe extends from the flange connection into the process media for correct removal of the sample. If projections into the process line cannot be allowed the valve can be supplied without a probe. Sampling valves can be provided with either a single flange connection and screwed connection or double flange connections in the following styles:-

F TYPE



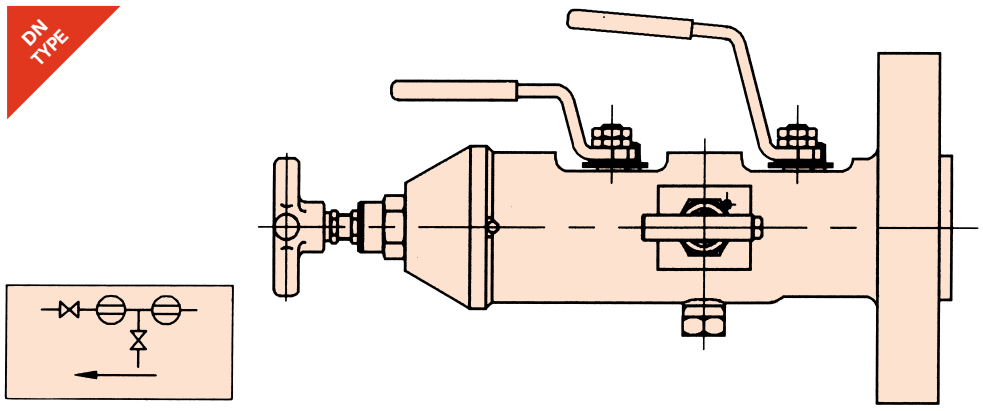
F TYPE
Three ball pattern primary and secondary isolating valves and vent valve.

D TYPE



D TYPE
Two in-line ball pattern primary and secondary isolating valves with a heavy duty needle valve vent.

DN TYPE



DN TYPE
Two in-line ball pattern with primary and secondary isolating valves incorporating a heavy duty needle valve vent and an additional heavy duty needle isolation valve on the outlet. With this construction a sample is produced in the cavity between the ball valves and the needle isolation valve. Exact trapped volume ensures precise repetitive sampling.

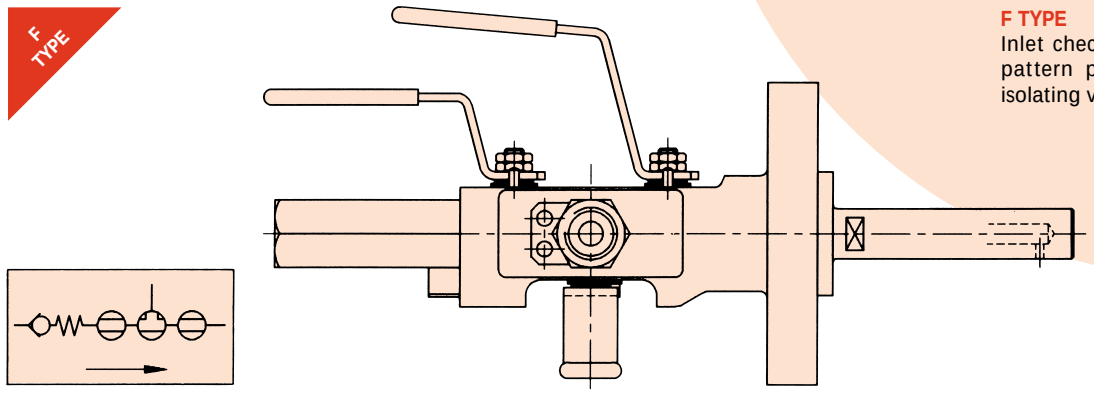
FLANGE SIZE 1½" NB, FLANGE CLASSES 150 TO 2500 RF & RTJ.
OPTION, FLANGE SIZE 2" NB, FLANGE CLASSES 150 to 2500 RF & RTJ.
OTHER BALL VALVE BORE SIZES AND FLANGE SIZES CAN BE ACCOMMODATED.

INJECTION DOUBLE BLOCK AND BLEED VALVES

Injection of chemicals and other media onto the process stream can be accomplished with this valve design. The valve inlet houses a one way check valve which opens for injection and goes normally closed to eliminate process fluid outflow. The orientation of the injection nozzle is fixed at the assembly stage and can be specified to suit the application.

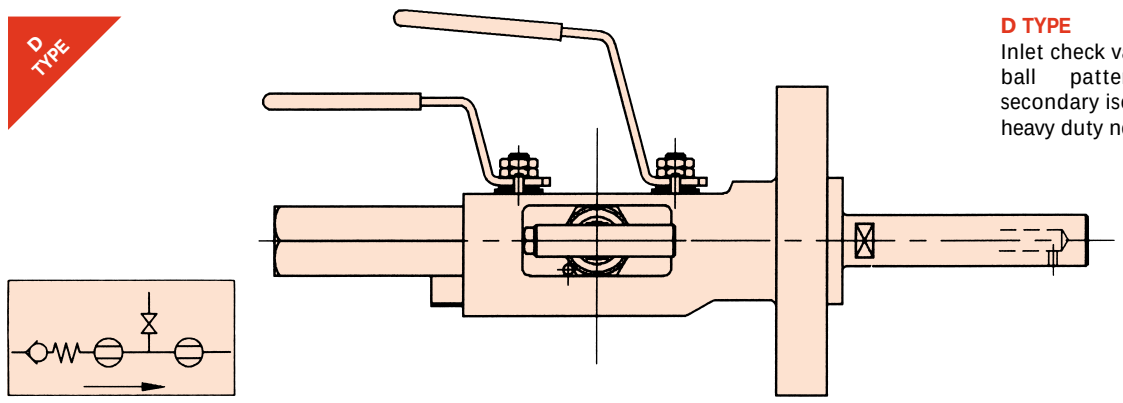
The flanged body forging is machined to ANSI B16.5 flange dimensions and incorporates two isolating valves and a bleed needle valve. The injection probe extends from the flange connection into the centre of the process stream for the correct positioning of the injection media. Injection valves can be provided with either a single flange connection and screwed connection or double flange connections in the following styles:-
The N Type double block and bleed with injection facility is also available.

F TYPE



F TYPE
Inlet check valve with three ball pattern primary and secondary isolating valves and vent valve.

D TYPE



D TYPE
Inlet check valve with two in-line ball pattern primary and secondary isolating valves with a heavy duty needle valve vent.

FLANGE SIZE 1½" NB, FLANGE CLASSES 150 TO 2500 RF & RTJ. OPTION, FLANGE SIZE 2" NB, FLANGE CLASSES 150 TO 2500 RF & RTJ. OTHER BALL VALVE BORE SIZES AND FLANGE SIZES CAN BE ACCOMMODATED.

NOZZLE TECHNICAL INFORMATION

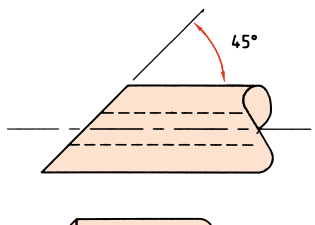
PROBE LENGTH:
This length is manufactured to suit customer requirements for the correct positioning of the injection orifice, up to a maximum length of 24". The position of the injection orifice can also be rotated at assembly to suit orientation relative to the valve handles.

PROBE MATERIALS:
The standard material is 316 stainless steel but other materials can be used to suit customer requirements.

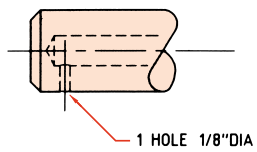
INJECTION NOZZLES:
The standard orifice is a 0.125" (3mm) diameter hole but other arrangements can be accommodated including swirl pattern spray nozzles to improve dispersion of the media.

CHECK VALVE:
This poppet type spring return valve has a Viton soft seat, and offers bore sizes of 10mm (CV2.0) or 12mm (CV4.6) or 16mm (CV7.2). Alternatively flange to flange styles of 6mm (CV2.0) max or 10mm (CV2.0) (maximum temperature 120ºC) can be furnished. For Methanol injection specify Kalrez 'O' ring material for check valve seat.

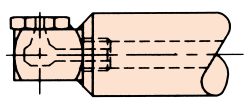
SAMPLE NOZZLE



INJECTION NOZZLE



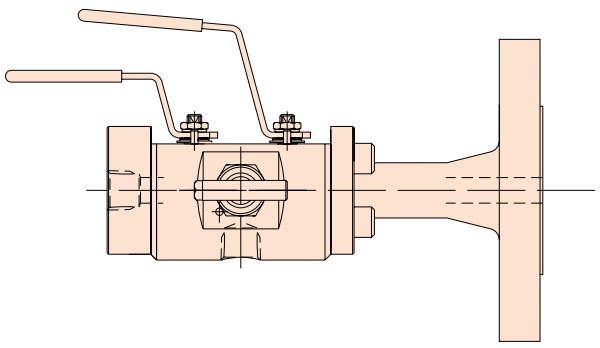
INJECTION SWIRL PATTERN NOZZLE



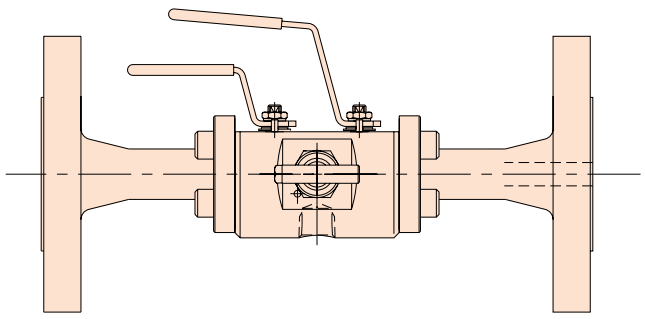
BOLTED CONSTRUCTION DOUBLE BLOCK AND BLEED

- **Increased speed of delivery.**
- **Proven manufacturing performance.**
- **Flexible choice of end connectors at a significantly reduced lead time.**
- **Designed to ASME VIII & ANSI B16.34.**
- **Complements the existing one piece range.**
- **NACE & firesafe to API 607 REV 4 and BS 6755 Part 2 as standard.**
- **From ½" class 150 through to 2" 2500.**
- **Materials from carbon steel, stainless steel to more exotic alloys.**

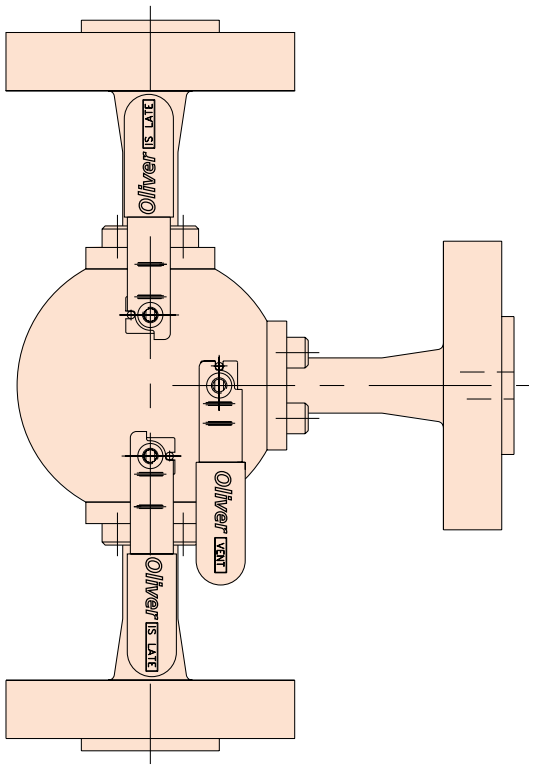
FLANGE TO PIPE



FLANGE TO FLANGE



FLANGE x FLANGE x FLANGE



DOUBLE BLOCK AND BLEED VALVES IN USE

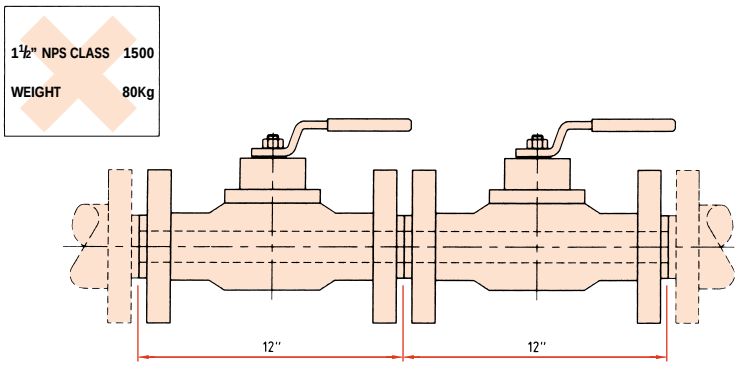
- With every double block and bleed product coded with its own unique number, quality and traceability right through the product's factory history is assured.
- With more experience in the double block and bleed market than any other company, Oliver Valves' proven product range is used on thousands of applications worldwide.
- Listed below are some of those areas.

AMERADA HESS	AH001 – SCOTT
AMOCO	BESSEMER – CATS – DAVY & BESSEMER
ARCO	TRENT & TYNE
BHP (HAMILTON)	JOHNSON – LIVERPOOL BAY
BP	EASINGTON SITE – FORTIES – DIMLINGTON SITE – MILLER – ANDREW – CUSIANA – CUPIAGUA – WYTCH FARM – MILLER AGI – SCHIEHALLION – ETAP – BRUCE
BRITISH GAS	MORECAMBE BAY – ARMADA – KARACHAGANAK
CHEVRON	NINIAN THIRD PARTY – ALBA – NORTH NEMBA – LL652 VENEZUELA
CONOCO	LOGGS RISER – CAISTER MURDOCK (CMS) – HUTTON – THEDDLETHORPE GAS TERMINAL – MURCHISON – JUPITER – MACCULLOCH – BANFF – VIKING – PHOENIX – VAMPIRE – BOULTON – VIXEN
ELF	CALEDONIA – CLAYMORE – NORGE – FRØY
EXXON/ESSO	BREAM – EPMI – JOTUN – WEST DELTA
MAERSK	TYRA WEST – QATAR – DAN
MARATHON	WEST BRAE – KINGFISHER
MOBIL	EXCALIBUR – MOBILE BAY – GALAHAD – BERYL – SAGE – NSOA – BUCKLAND
OCCIDENTAL	IDD EL SHARGI (PS1)
ORYX	NINIAN – HUTTON – MURCHISON
PDO	OMAN LNG – MUHKESNYA – ATHEL
PHILLIPS	EKOFISK
QGPC	DUKHAN – RAS LAFFAN – RAG GAS – ARAB-D
SAGA	SNORRE B
SHELL	LEMAN – BRENT – DUNLIN – GRIFFIN – M1/M3 – ALPHA 95 – GABON – PELICAN – WEST URDANETA – TERN – ELDER – FULMAR – CORMORANT – MALLARD – KINGFISHER – GANNET – CURLEW – ANASURIA – MOSSMORRAN SITE – ST FERGUS SITE – KETCH – SHEARWATER – CORVETTE – SPOTS
STATOIL	VESSLEFRIK – GULFAKS – GULFAKS SATELLITES – ASGARD-B
TEXACO	CAPTAIN
TOTAL	ALWYN NORTH – DAMS – DUNBAR – QATAR GAS – TUNU – PECIKO

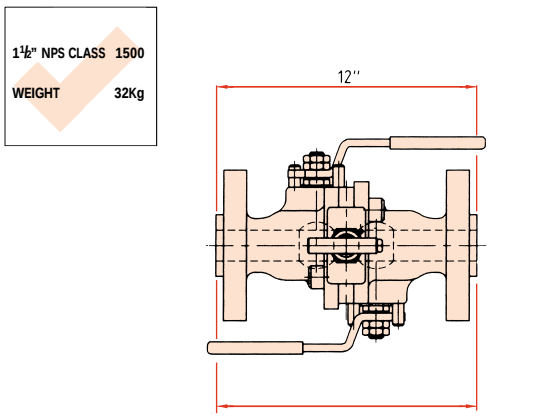
THE TWINSAFE® ADVANTAGE

PATENT NO. GB2271164B

TRADITIONAL DOUBLE VALVE PIPELINE ISOLATION
Current working practices frequently demand that double isolation of the pipeline be provided, the conventional solution being the installation of two gate or ball valves.



2 x ANSI B16.10 LENGTHS



ANSI B16.10 LENGTH IS MAINTAINED

Twinsafe® DBB can be retrofitted in the space of a single ANSI standards length valve.
Oliver double block and bleed isolating valves offer the same solution at dramatically REDUCED COST with the equivalent benefit of LOW WEIGHT and SPACE SAVING, added to the EASE OF INSTALLATION and potential for direct replacement in existing installations without the need for pipework modifications or lengthy and expensive plant shutdowns

TWO VALVES IN ONE BODY UNIQUELY REPLACING A SINGLE BALL STYLE ISOLATION VALVE, WITHIN A SINGLE VALVE STANDARD ANSI LENGTH.

This valve incorporates two in-line ball valves allowing full rodability to process, 1", 1½", 1¾" and 2" NPS bore sizes contained in a two piece forged flanged body having a unique centre joint arrangement. Valve includes a centre joint bleed for venting of inter ball cavity.

S T A N D A R D

NACE -/NA – Compliance to NACE specification MR-01-75 (latest revision) – suitable for sour service, resistant to sulphide stress corrosion cracking.

FIRESAFE -/FS – Firesafe construction compliant with BS 6755 part 2, API 607 and API 6FA.

DESIGN – Double block and bleed valve products comply with the relevant code requirements of ASME VIII, ANSI B16.34, ANSI B16.5 and API 6D.

OPTION – Of end connections include butt weld, socket weld, hub connections and threaded connections.

TESTING – Each double block and bleed valve product is individually tested hydrostatically and pneumatically as follows: Shell Test to 1.5 x full rated pressure; Seat test to 1.1 x full rated pressure and pneumatic seat test to 80 PSIG.

QUALITY ASSURANCE – BS 5750, ISO 9000 and EN 29002 quality systems accredited by both Lloyds Register and British Standards Institution ensure confidence.

CERTIFICATION AND TRACEABILITY – All valves exhibit unique identification coding and material test certificates to BS EN 10204 3.1.B as well as lifetime factory history being available.

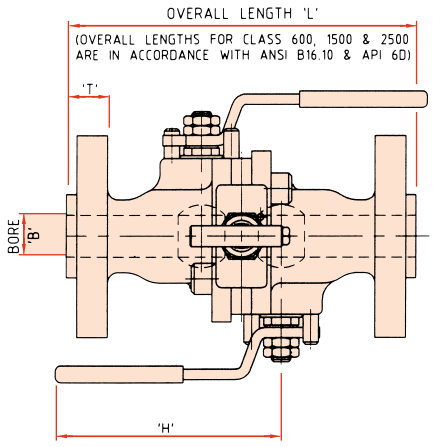
DEVELOPMENT – Continual Development maintains the highest levels of performance and integrity for our double block and bleed valves. Oliver Valves maintains in-house performance and fire test facilities.

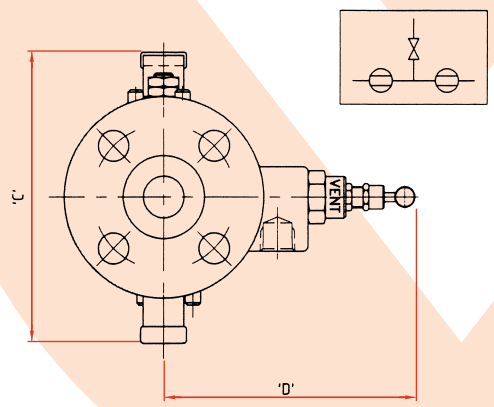
OPTIONS

HANDLE LOCKING -/HL – Oliver unique handling locking system to prevent unauthorised/accidental operation.

STAINLESS STEEL CENTRE JOINT BOLTS -/SSB – Centre joint bolts manufactured in 316 stainless steel material specification ASTM A193 B8T CL2.

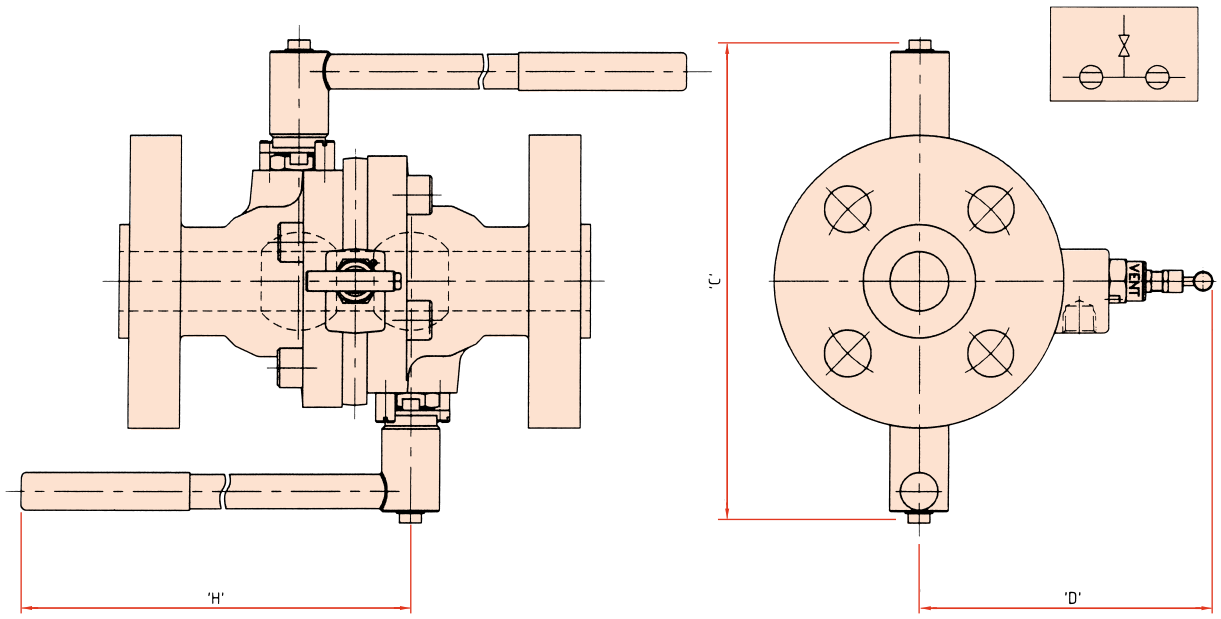
1" to 2" DOUBLE BLOCK AND BLEED VALVES TO ANSI





NPS	ANSI B16.5 BS 1560 CLASS	LENGTH 'L'		THICKNESS 'T'		BORE 'B'	DIM'N 'D'	DIM'N 'C'	DIM'N 'H'	WEIGHT	
		RF	RTJ	RF	RTJ					lb	kg
1"	150	7.75"	8.25"	0.62"	0.87"	1.00"	6.43"	8.75"	8"	27	12
1"	300	8.12"	8.50"	0.81"	1.00"	1.00"	6.43"	8.75"	8"	27	12
1"	600	8.50"	8.50"	1.00'	1.00"	1.00"	6.43"	8.75"	8"	27	12
1"	1500	10.00"	10.00"	1.44"	1.44"	1.00"	6.53"	8.75"	12"	47	21
1"	2500	12.12"	12.12"	1.63"	1.63"	1.00"	7.09"	9.38"	12"	70	32
1½"	150	8.62"	9.00"	0.75"	0.94"	1.50"	6.69"	9.88"	12"	44	20
1½"	300	9.12"	9.50"	1.00"	1.19"	1.50"	6.69"	9.88"	12"	44	20
1½"	600	9.50"	9.50"	1.19"	1.19"	1.50"	6.69"	9.88"	12"	44	20
1½"	1500	12.00"	12.00"	1.56"	1.56"	1.50"	6.94"	12.06"	20"	70	32
1½"	2500	15.12"	15.25"	2.06"	2.12"	1.50"	8.25"	13.19"	20"	140	63
2"	150	10.50"	10.87"	0.81"	1.00"	2.00"	7.38"	10.56"	12"	60	27
2"	300	11.12"	11.62"	1.12"	1.38"	2.00"	7.38"	10.56"	12"	60	27
2"	600	11.50"	11.62"	1.31"	1.38"	2.00"	7.38"	10.56"	12"	60	27
2"	1500	14.50"	14.62"	1.81"	1.88"	1.75"	8.12"	12.75"	20"	124	56
2"	2500	17.75"	17.87"	2.31"	2.38"	1.50"	8.25"	13.19"	20"	187	85

HEAVY DUTY DESIGN FOR BIGGER BORES/HIGHER RATINGS 1½" - 1500, 1½" - 2500, 2" - 1500, 2" - 2500



HOW TO ORDER

	MODEL	/TYPE	/MATERIAL	/BORE	/CONNECTIONS		/OPTIONS
EXAMPLE	DBB	/D	/S	/X	/10-1500 RTJ	/50F /25F	/FS/HL/NA

Model
DBB Double block and bleed

Type

D	Integral flange 2 ball in line & needle vent
N	Integral flange, 3 needle valves
F	Integral flange, 3 ball in line pattern
A	Integral flange, 2 balls in line
L	Barstock, 3 ball oblique pattern
T	Barstock, 3 ball in line pattern
IN	Barstock, 3 needle valves
INPM	Barstock, 3 needle valves, panel mount
INV+B	Barstock, 1 ball first isolate, 2 needle valves isolate and vent
ID	Barstock, 2 ball in line & needle vent

Material Selection

C	Carbon steel (barstock) EN1A
	Carbon steel (forged) ASTM A350LF2
S	Stainless steel (barstock) 316SS/BS970-316S11
	Stainless steel (forged) ASTM A182 F316
DUP	Duplex ASTM A182 F51 UNS S31803
SUP-DUP	Super Duplex UNS S32760
M	Monel 400
FER	Ferralium 255

Other materials available on request

Bolts/Gaskets
Flange bolts and gaskets are not provided

Patent application
No 88 17668

Process | Instrument | Vent

Ball Bores

X	= 0.40"(10mm)
Y	= 0.55"(14mm)
Z	= 0.80"(20mm)
P	= 1.00"(25mm)
Q	= 1.50"(40mm)
R	= 2.00"(50mm)

"Twinsafe" Available only in D Type 1" to 2" bore, 3 piece body only

Flange Details

Select flange size

50	1/2"
75	3/4"
10	1"
150	1 1/2"
200	2"
300	3"

Followed by class

150	150lb
300	300lb
600	600lb
900	900lb
1500	1500lb
2500	2500lb

Followed by flange type

RTJ	Ring type joint
RF	Spiral finish raised face
SRF	Smooth spiral finish raised face

Options (specify in alphabetical order)

HL	Handle locking
IL	Cam interlocking (on T and L types only)
IP	Injection probe
SA	Spanner actuation
SP	Sample probe

Standard

NA	NACE MR-01-75 (latest revision) (EN1A Carbon steel to NACE not available)
FS	Firesafe to API 607 and API 6FA and BS 6755 Part 2

Connections Details

Connection size

25	1/4" (Std vent)
38	3/8"
50	1/2" (Std Process/Instrument)
75	3/4"
10	1"

Process connection

	NPT STANDARD
BP	BSP parallel pipe thread BS2779-1986
BT	BSP taper pipe thread BS21-1985
BW	Butt weld (4" extensions)
BI	Twin Ferrule, Compression fitting
SW	Socket weld (4" extensions)

Connection type

F	Female thread (Std instrument/vent)
M	Male thread

For Actuation Options
Consult factory

PRIMARY ISOLATION VALVES

features

SLIMLINE PRIMARY ISOLATE VALVES

- Double Block and Bleed valves.
- Designed in accordance with ASME VIII Division 1.
- Primary isolate:- Outside screw and Yoke type construction.
- Secondary isolate:- Needle pattern.
- Bleed valve:- Needle pattern.
- Horizontal and vertical instrument connections.
- Valves designed to connect with ANSI B16.5 flanges.

GAUGE BLOCK MONO FLANGE VALVES

- Double Block and Bleed valves.
- Block and Bleed valves.
- Single Block valve.
- Primary isolate:- Needle pattern.
- Secondary isolate:- Needle pattern.
- Bleed valve:- Needle pattern.
- Horizontal and vertical instrument connections.
- Valves designed to connect with ANSI B16.5 flanges.

PRIMARY ISOLATION ROOT VALVES

- Valves weldable directly onto pipelines.
- Double Block and Bleed valves.
- Block and Bleed valves.
- Single Block valves.
- Ball and Needle pattern valve configurations.

PRIMARY ISOLATION GAUGE OUTSIDE SCREW AND YOKE VALVES

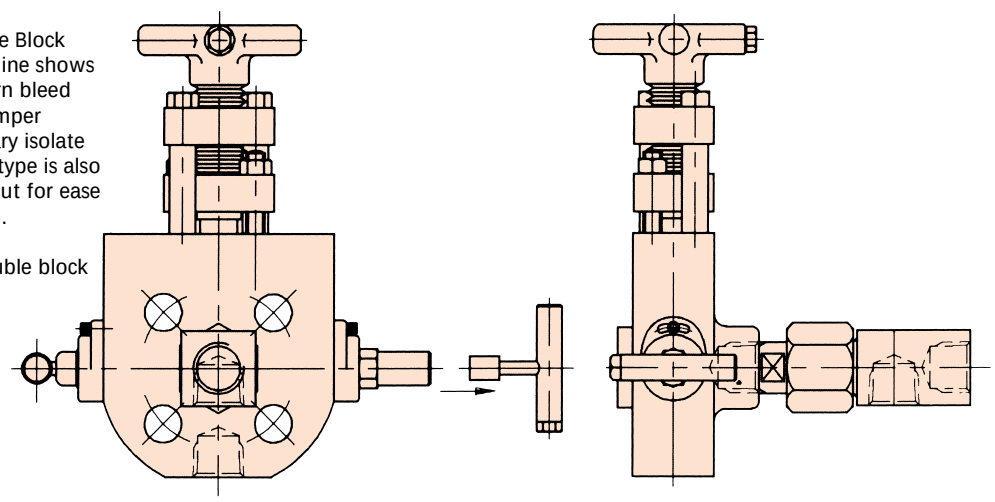
- Single Block valves.
- Outside screw and Yoke type construction.
- Orifice valves.
- Cyrogenic valves.

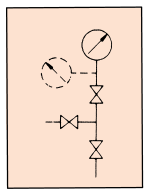
SLIMLINE PRIMARY ISOLATE VALVES

"Slimlines" incorporate a primary isolate piping valve and combine also the instrument Block and Bleed functions. They are designed to replace the traditional primary isolate valve. Our primary isolate valve is of outside screw and yoke construction and is designed to ASME VIII specifications. First isolation outside screw and yoke valves can be supplied to NACE & Firesafe specifications.

This "EL" Type Double Block and Bleed Style Slimline shows special needle pattern bleed (shown with anti-tamper option) and secondary isolate valves. This Slimline type is also shown with gauge nut for ease of gauge orientation.

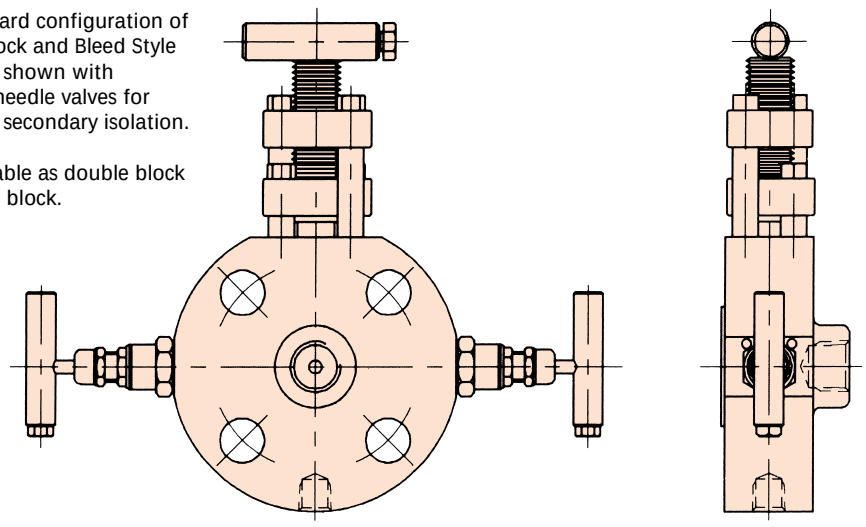
Also available as double block and single block.

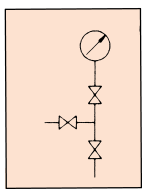


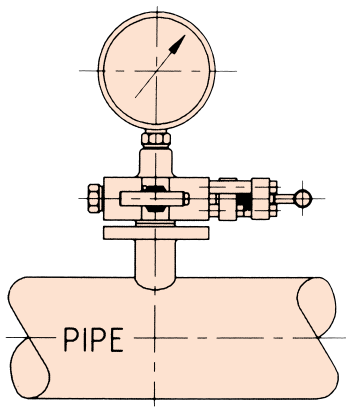


This standard configuration of Double Block and Bleed Style Slimline is shown with standard needle valves for bleed and secondary isolation.

Also available as double block and single block.

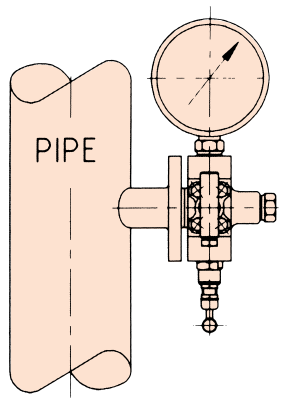






HORIZONTAL PIPING PRESSURE MEASUREMENT

Slimline can be installed as the primary isolate valve, in either single block, block and bleed or double block and bleed versions. Dual instrument connections enable instrument to be mounted vertically on either horizontal or vertical line mounting application.

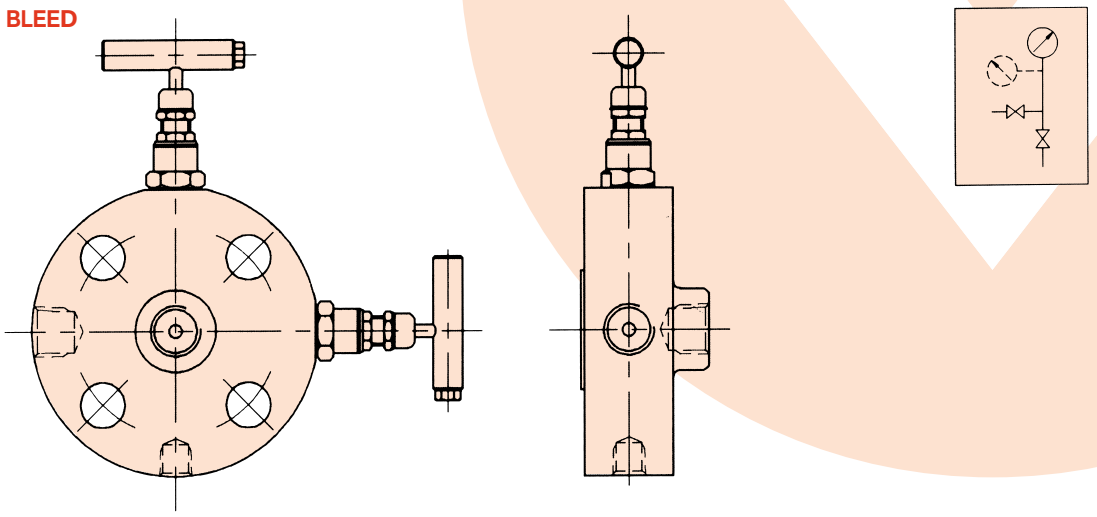


VERTICAL PIPING PRESSURE MEASUREMENT

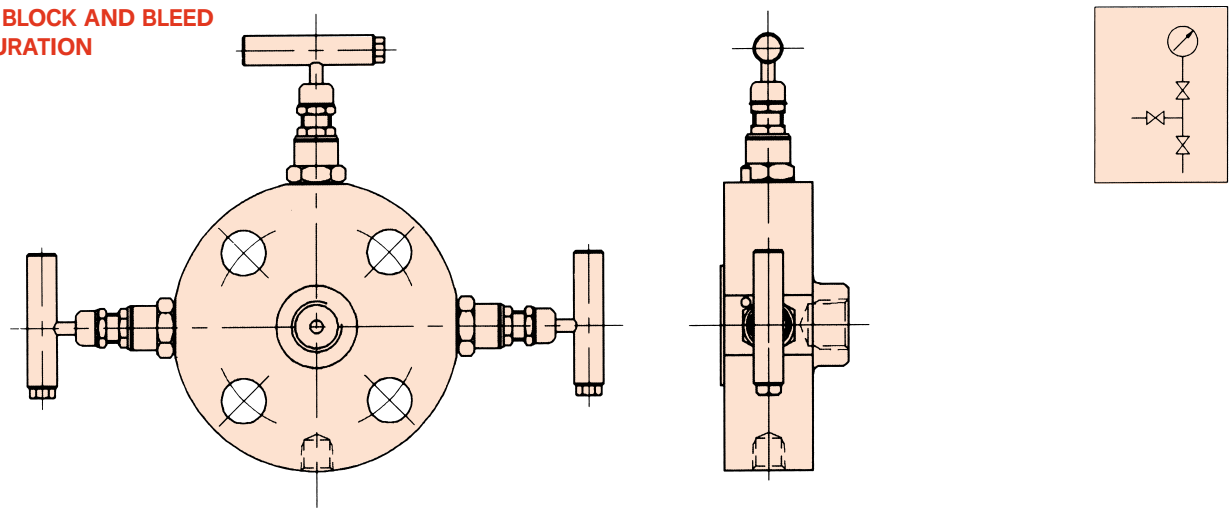
GAUGE BLOCK MONOFLANGE VALVES

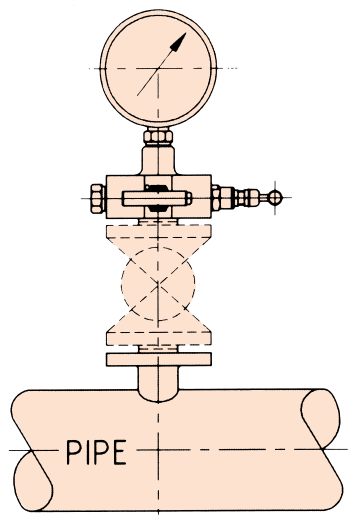
Gauge block monoflange valves work in conjunction with a pre-installed primary isolate valve. They provide very compact instrument Double Block and Bleed valving. This range is also available in a single block configuration.

SINGLE BLOCK AND BLEED CONFIGURATION



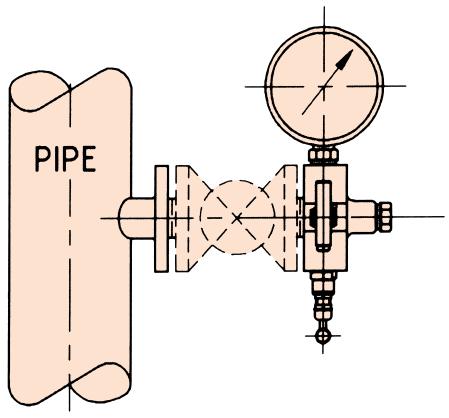
DOUBLE BLOCK AND BLEED CONFIGURATION





HORIZONTAL PIPING PRESSURE MEASUREMENT

Modular construction allows easy installation after an existing primary isolate valve. Dual instrument connections enable instrument to be mounted vertically on either horizontal or vertical line mounting application

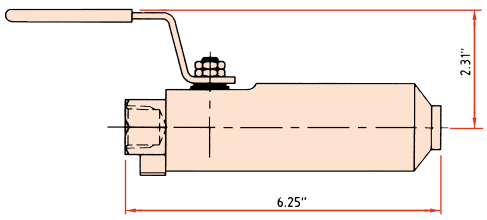


VERTICAL PIPING PRESSURE MEASUREMENT

ROOT VALVES FOR PRIMARY ISOLATION

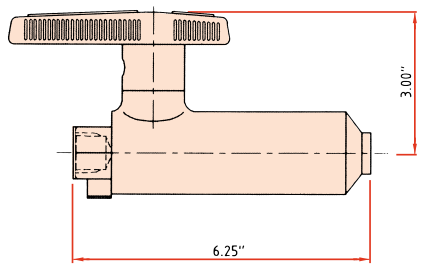
This family of valves is designed for welding into a process line. Offered in many configurations with heavy duty needle valves or rodable ball valves.

SINGLE BLOCK
(BALL VALVE)



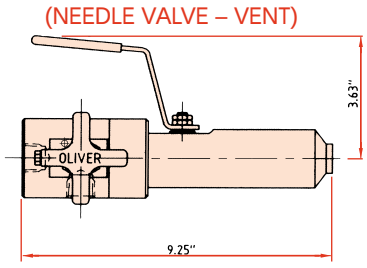
OTHER OPTIONS Heavy duty Needle valve as isolate.

SINGLE BLOCK
('PMB' STYLE BALL VALVE)



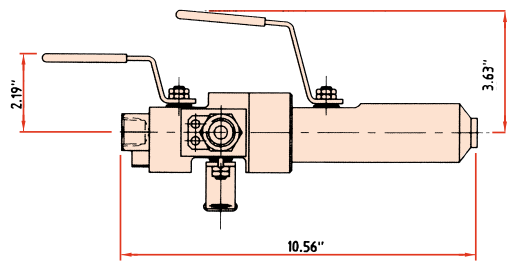
OTHER OPTIONS Available with handle locking.

BLOCK AND BLEED
(BALL VALVE – ISOLATE)
(NEEDLE VALVE – VENT)



OTHER OPTIONS Ball valve as isolate and Ball valve as vent.

DOUBLE BLOCK AND BLEED
(ALL BALL VALVES)



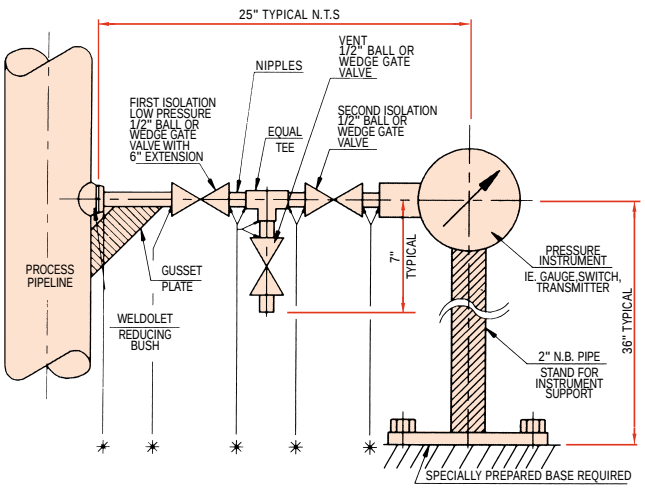
OTHER OPTIONS Two Ball valves as blocks and one Needle valve as vent. Three Needle valves as blocks and vent.

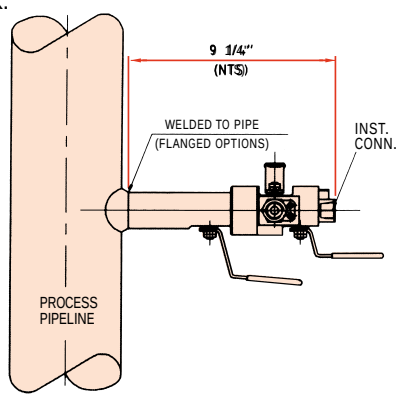
Major Weaknesses with Traditional Installation

- Cost of installation.
- Overall Size.
- Increased Gland Emission Risk.
- High bending moments hence need for gusset plates.
- Large number of potential leak points within assembly.
- Increased installation time due to complex arrangement.
- On-site welding due to gusset plates.
- Large number of items to stock and to purchase.

Major Advantages of Oliver Solution

- Safe Hook Up by Elimination of many potential leak points.
- Very cost competitive installation.
- Major space saving.
- Major weight saving.
- Compact/lightweight significantly reduces bending moments and pipework stresses.
- Firesafe to BS 6755 Pt 2, API 607 and API 6FA.
- Simplification of installation – direct labour time savings.
- Wide range of 6000 PSI, Ball, Needle and Check Valve styles.
- Wide range of materials and configurations (including NACE) on fast deliveries.
- One item only to stock.
- Greatly reduced maintenance.

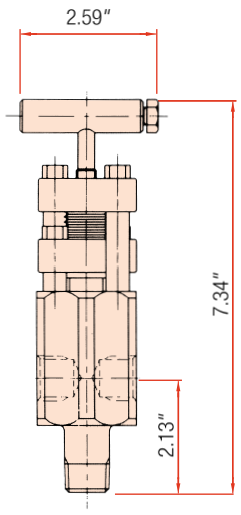




OUTSIDE SCREW AND YOKE CONSTRUCTION VALVES FOR PRESSURE AND FLOW APPLICATIONS

OR50S -OSY TYPE

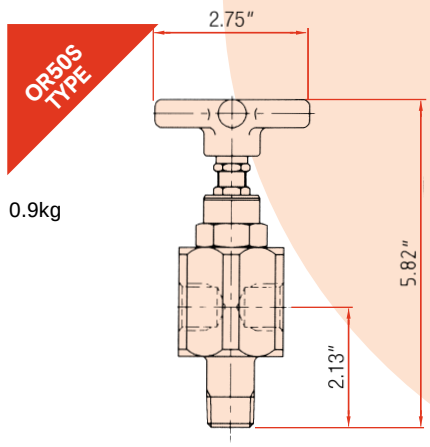
1.4kg



Male x two Female outlet connections.

OR50S TYPE

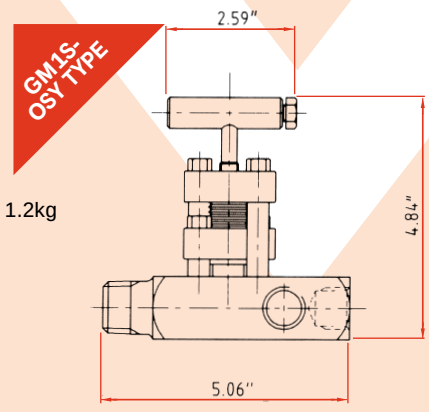
0.9kg



A primary isolation valve utilizing a heavy duty Needle valve Bonnet.

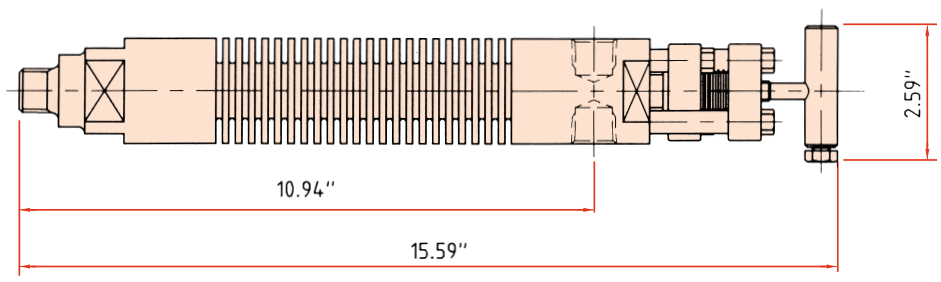
GM1S-OSY TYPE

1.2kg



A gauge multiport Male x three Female outlet connections.

OR50S -OSY-EXT TYPE

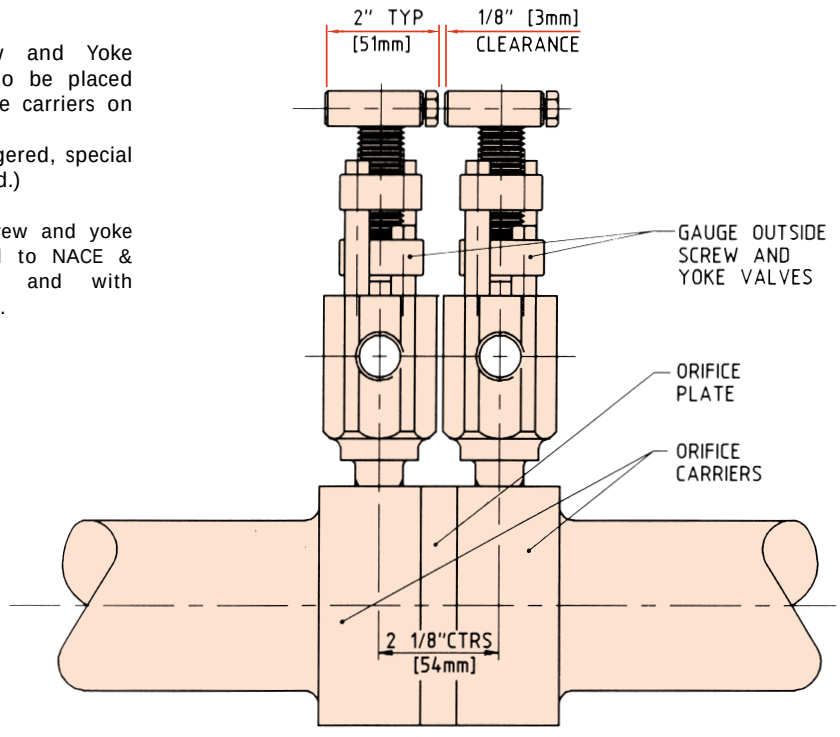


Cryogenic extension for low temperature.

APPLICATION

Oliver Outside Screw and Yoke Valves are designed to be placed directly into the orifice carriers on 2⅛” (54mm) centres.
(If valves are not staggered, special 2” T-bars will be required.)

Please note outside screw and yoke valves can be supplied to NACE & Firesafe specifications, and with handwheel locking option.



TECHNICAL INFORMATION

NEEDLE VALVE SPECIFICATION

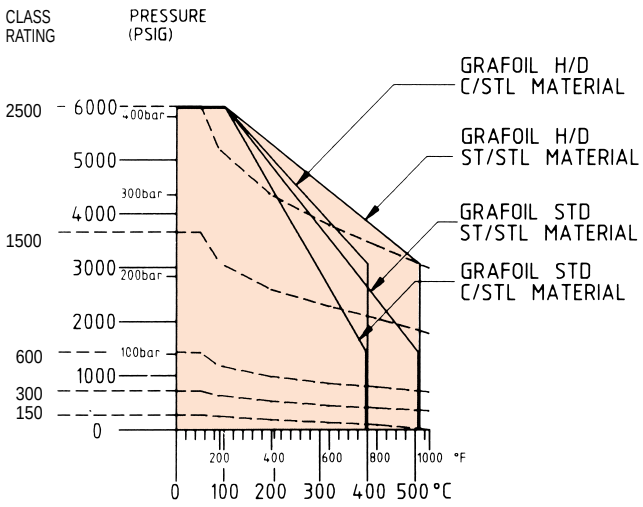
Oliver needle valve bonnet assemblies can be provided to NACE or FIRESAFE specifications, as an option.
Wide variety of flange sizes and classes.
Needle valve bore size 5.4mm (0.23”).
Vent connection ¼” NPT female standard.
Process connections ANSI ½” to 3”, 150lb to 2500lb.

Maximum Pressure	6,000 PSI	(414 BAR G)
Temperature (heavy duty)	540ºC	(1000ºF)
Temperature (standard PTFE)	240ºC	(460ºF)

Cross bar handle (XB), optional on heavy duty style. Flange to Flange, or Flange to Threaded options.

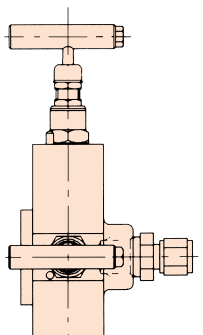
NEEDLE VALVE PRESSURE v TEMPERATURE

Needle Valves are used on Mono Flanges, Gosy Valves, Root Valves and Slimline configurations.

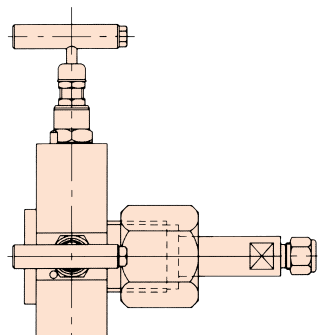


MONO FLANGES – OPTIONAL CONNECTIONS

INTEGRAL INSTRUMENT COMPRESSION FITTING

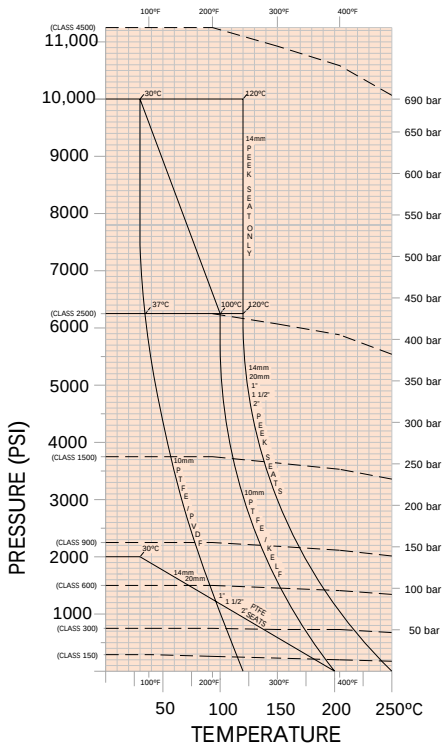


INTEGRAL LAP JOINT TUBE ADAPTOR



BALL VALVE SPECIFICATION

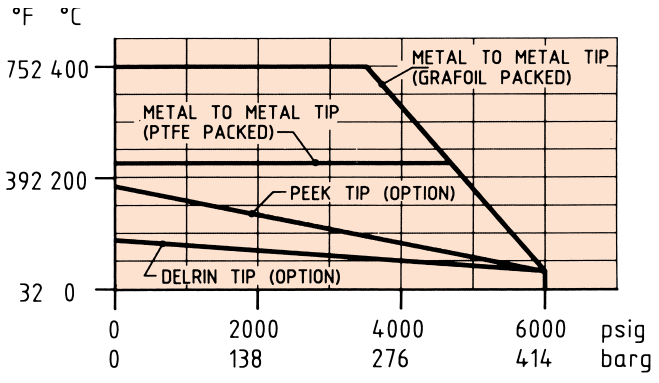
Covers piping products that have ball valves in the configuration such as twinsafe valves, double block and bleed valves and root valves.



GOSY VALVE SPECIFICATION

Maximum Pressure	6,000 PSI
Maximum Temperature	See table
Packing	See table
Seat	Metal to Metal
Standard Connections	½” or ¾” NPT
Material	316 Stainless Steel
Bore	0.23” (5.4mm)
CV	0.46

Ratings comply with and are affected by the material class pressures and temperature per ANSI B16.5. And can be supplied to NACE & Firesafe specifications.



HOW TO ORDER

SLIMLINE/MONO FLANGE

MONO /BK / EL S /50F-150RF /50F /25F /HL/NA

MONO / SLIM — MONO FLANGE / SLIMLINE

Model
- BK Block
- BB Block and Bleed
- DBB Double Block and Bleed

ADD "EL" IF SPECIAL SLIMLINE REQUIRED

Material Selection
- C — O8OM 40 Carbon steel (barstock) (En 8); Carbon steel (forged) ASTM A350 LF2
- S — Stainless steel (barstock) 316SS/BS970-316S11; Stainless steel (forged) ASTM A182 F316
- DUP — Duplex ASTM A182 F51 UNS S31803
- SUP-DUP — Super Duplex UNS S32760
- M — Monel 400
- FER — Ferralium 255

(other materials available on application)

Process / Instrument / Vent

Flange Details
Select flange size
- 50 ½"
- 75 ¾"
- 100 1"
- 150 1½"
- 200 2"
- 300 3"

Followed by class
- 150
- 300
- 600
- 900
- 1500
- 2500

Followed by flange
- RTJ Ring type joint
- RF Spiral finish raised face
- SRF Smooth spiral finish raised face

Options (specify in alphabetical order)
- ATV Anti-tamper on vent
- FS Firesafe to API 607 and API 6FA
- HD Heavy Duty bonnets
- HL Handle locking
- NA NACE MR-01-75 (latest revision)

Connection Details

Connection size
- 25 ¼" (Std vent)
- 38 ⅜"
- 50 ½" (Std Process/Instrument)

Instrument connections
- NPT STANDARD
- BP BSP parallel pipe thread BS2779-1986
- BT BSP taper pipe thread BS21-1985
- CE Compression Fitting
- LJTA Lap Joint Tube Adaptor
- GA Swivel Gauge Adaptor

ROOT VALVES

RT DBB N S /75M /50F /25F /HL/NA

RT — ROOT VALVE

Model
- BK Block
- BB Block and Bleed
- DBB Double Block and Bleed

Type
- D 2 ball valves in line & needle vent
- N 3 needle valves
- F 3 ball valves in line pattern

Material Selection
- C — Carbon steel (forged) ASTM A350 LF2
- S — Stainless steel (barstock) 316SS/BS970-316S11; Stainless steel (forged) ASTM A182 F316
- DUP — Duplex ASTM A182 F51 UNS S31803
- SUP-DUP — Super Duplex UNS S32760
- M — Monel 400
- FER — Ferralium 255

(other materials available on application)

Process / Instrument / Vent

Options (specify in alphabetical order)
- FS Firesafe to API 607 and API 6FA
- HL Handle locking
- NA NACE MR-01-75 (latest revision) (En 1a Carbon steel to NACE not available)
- OH Oval Handle
- SA Spanner actuation

Connection Details

Connection size
- 25 ¼" (Std vent)
- 38 ⅜"
- 50 ½" (Std Process/Instrument)
- 75 ¾"
- 10 1"

Connection type NPT STANDARD
- BP BSP parallel pipe thread BS2779-1986
- BT BSP taper pipe thread BS21-1986
- BW Butt weld (4" extensions)
- BI Compression fitting
- SW Socket weld (4" extensions)

GAUGE OUTSIDE SCREW AND YOKE VALVES

OR50 S OSY / SWIN AG

Valve Type
- OR50 Orifice Carrier Valve (½" NPT Male inlet)
- OR75 Orifice Carrier Valve (¾" NPT Male inlet)
- GM1 Gauge Multiport Valve
- F50 Female x female ½" NPT isolate valve
- M50 Male x female ½" NPT isolate valve

Primary Isolation Outside Screw & Yoke Valve

Process connections
- BP BSP parallel pipe thread BS2779 (ISO 228)
- BT BSP taper pipe thread BS21 (ISO 7)
- SWIN Socket weld on inlet
- BWIN Butt weld on inlet

Material selection
- S 316S31 Stainless Steel standard (316)
- SL 316S11 Stainless Steel (316L)
- C 230M07 Carbon Steel plated (En1a)

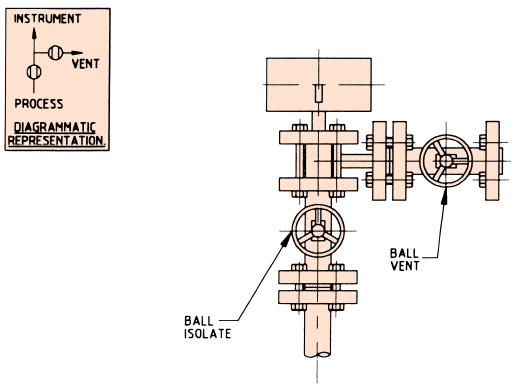
(other materials available on request)

Options (specify in alphabetical order)
- AG Grafoil high temp gland seal
- CSHW Carbon Steel handwheel
- DL Delrin soft tip
- HD Heavy Duty Bonnet
- KF Kel-f Soft tip
- MT Metering tip
- NA NACE MR-01-75 (latest revision)
- PK Peek soft tip
- RHW Red nylon handwheel
- SST Stellite seat insert
- XB Cross Bar Handle
- 2T 2" long T bar

QUICK REFERENCE OLIVER PIPING SOLUTIONS

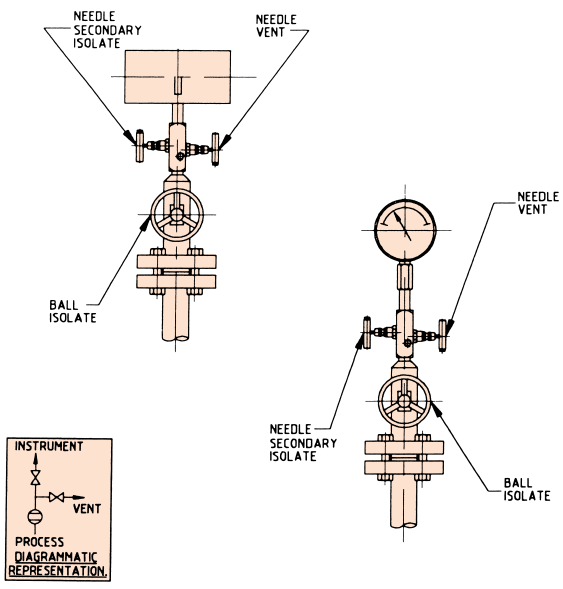
TRADITIONAL INSTALLATION

CATEGORY 'A' INSTALLATION
LIQUID/GAS/CONDENSATE FLANGED TRANSMITTER



Used in conjunction with piping valves

CATEGORY 'B' & 'C' INSTALLATION
LIQUID/GAS SCREWED TRANSMITTER AND GAUGE

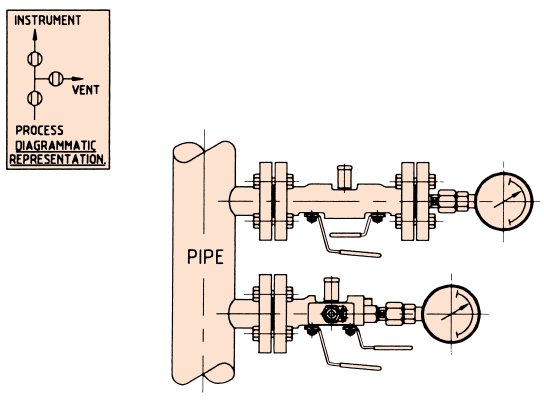


MAJOR WEAKNESSES WITH TRADITIONAL INSTALLATION

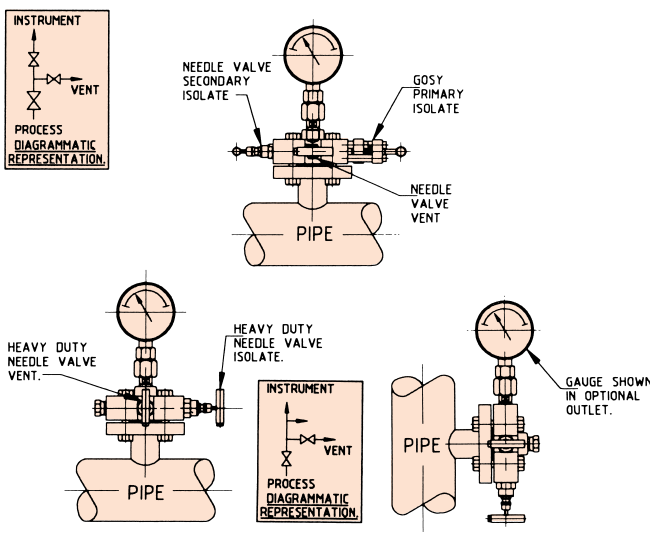
1. Cost of installation
2. Overall size
3. Increased gland emission risk
4. High bending moments and high pipework stresses
5. Large number of potential leak points within assembly
6. Increased installation time due to complex arrangement
7. Large number of items to stock and to purchase

OLIVER SOLUTION

CATEGORY 'A' INSTALLATION



CATEGORY 'B' & 'C' INSTALLATION
WITH AND WITHOUT FIRST ISOLATION



MAJOR ADVANTAGES OF OLIVER SOLUTION

1. Safe hook up by elimination of many potential leak points
2. Very cost competitive installation
3. Major space saving
4. Major weight saving
5. Compact/Lightweight, significantly reduces bending moments & pipework stresses
6. Firesafe to BS6755 Pt 2, API 607 and API 6FA options available
7. Simplification of installation – direct labour time savings
8. Wide range of 6000 PSI ball and needle valve styles
9. Wide range of materials and configurations (incl. NACE) on fast delivery
10. One item only to stock

Note
Heavy duty needle valves are required for firesafe applications

OPERATION, INSTALLATION AND MAINTENANCE INSTRUCTIONS

SAFETY NOTES:

i) All adjustments should be carried out by qualified personnel with the valve at zero pressure.
ii) End connectors must not be removed from bodies.
iii) Handle wrenches/extensions must not be used to operate the valves.
iv) Vent plugs must not be removed when the isolate valve is open and under pressure.
v) Head units and locking pins must not be removed once installed.
vi) Maximum torque to be applied to tee-bars is 10lb ft.
vii) Valves must be suitably supported in service.
viii) Needle Valves: No excessive side forces (>30lb ft) to be applied to the head unit.
ix) Ball Valves: No excessive forces to be applied to the handle/handle locking arrangement, and do not carry valve by the handle.
x) Do not paint over valve body markings.

EQUIPMENT REQUIRED

HEAVY DUTY AND STANDARD NEEDLE VALVE	Tee bar bolt – 10mm A/F spanner. Pusher nut – 9/16" A/F spanner. Head Unit Cartridge – 22mm socket and torque wrench. Lock Nut – 3/4" A/F spanner.
BALL VALVE –	No maintenance required. Ball Valve spanner actuation – 1" A/F spanner.
SEVERE SERVICE – VALVE – 4mm and 6mm bore	(See Heavy Duty and Standard Needle Valve.)
SEVERE SERVICE – VALVE – 11mm bore	Tee bar bolt – 13mm A/F spanner. Pusher nut – 7/8" A/F spanner. Head Unit Cartridge 13/8" socket and torque wrench. Lock nut – 1.1" A/F spanner.
MINIATURE VALVE –	Tee bar grubscrew – 3mm A/F hex key. Head unit – 9/16" A/F spanner.
OUTSIDE SCREW AND YOKE VALVE –	Tee bar bolt – 1/2" A/F spanner. Packing bolt – 1/2" A/F spanner.
GAUGE SNUBBER – 1/4" VENT PLUG, PRESSURE PLUG – 1/2" VENT PLUG – PRESSURE PLUG, VENT VALVE –	Lock nut – 8mm A/F spanner. 9/16" A/F spanner. 22mm A/F spanner.
MOUNTING BOLTS FOR MANIFOLDS –	5/8" A/F spanner.
OTHER EQUIPMENT NEEDED –	1. Screw driver. 2. Hammer – to secure pin. 3. Pin Punch – to secure pin.

OPERATING INSTRUCTIONS

STANDARD NEEDLE VALVES – Approximately 6 Turns from open to closed, clockwise to close.
HEAVY DUTY NEEDLE VALVE – 4 1/2 Turns from open to closed, clockwise to close.
SEVERE SERVICE VALVE (4mm and 6mm bore) – 4 1/2 Turns from open to closed, clockwise to close.
SEVERE SERVICE VALVE (11mm bore) – 5 Turns from open to closed, clockwise to close.
MINIATURE VALVES – Approximately 4 1/2 Turns from open to closed, clockwise to close.
OUTSIDE SCREW AND YOKE VALVES – Approximately 6 Turns from open to closed, clockwise to close.
BALL VALVES – 1/4 Turn from open to closed, clockwise to close as standard (ie Valve is closed when handle is at 90° to the valve body).
NOTE – Apart from Ball Valves, the packing on these valves is adjustable, so turns between open and closed will vary slightly from valve to valve.
All valve bodies show our company name, maximum cold working pressure, valve material, the valve part number and also a trace code number which relates to the material certificates for that particular valve.

INSTALLATION AND MAINTENANCE INSTRUCTIONS

NEEDLE VALVES – If needle valve has socket weld, stub weld or butt weld connections the needle valve will be supplied in kit form. (This means the valve head unit is supplied separately to the valve body) then after welding the valve body into the pipeline –

1. Ensure that the spindle is fully retracted into the head unit so the tip is hardly showing.
2. Place PTFE ring into the undercut at the top of the 3/4" UNF thread.
3. If head unit is stainless steel, please ensure that a PTFE spray is applied to the 3/4" UNF thread PRIOR to engaging it with the body.
4. Screw head unit down and Torque to:-

CARBON STEEL	85lb ft
STAINLESS STEEL	135lb ft

5. Replace locking pin in either one of the 4mm holes and secure.
6. Replace Tee bar and tighten down Tee bar bolt.
7. Adjust packing if required by loosening lock nut (bottom nut on head unit). Close the valve by turning the tee bar in a clockwise direction until it stops. Open the valve one full turn (turn tee bar anti-clockwise). Tighten down the pusher (top nut on head unit) which compresses packing until the valve feels not too slack or difficult to operate, then tighten down lock nut.
8. If valve packing Grafoil wait two minutes after tightening the pusher and before checking valve operation.

IMPORTANT NOTE – If socket weld, butt weld, stub weld connections are required for Ball valve, Miniature and Outside Screw and Yoke valves then valves will include 3" extensions, so the valve can be welded into the line without destroying the seats and packing and without having to dismantle or re-build the valve.
BALL VALVE – No maintenance required. End connections must not be removed from bodies.
MINIATURE VALVES – No maintenance required. Warning: Head units/locking pins must not be removed from bodies once installed.
OUTSIDE SCREW AND YOKE VALVE – SAFETY NOTE: These operations must be carried out at zero pressure and ambient temperature.

1. To adjust PTFE packing close the valve by turning the tee bar in a clockwise direction until it stops. Do not exceed 10lb ft torque. Open the valve one full turn (turn tee bar anti-clockwise). The two packing nuts either side of the spindle must be adjusted evenly to keep the gland bridge square and compress the gland packing until the valve feels not too slack or difficult to operate.
2. If valve packing is Grafoil, wait for two minutes after tightening the two nuts before checking valve operation. Carry out operation 1 again if required.
   WARNING: Bonnets and yokes must not be removed from bodies.

GAUGE PROTECTORS AND RELIEF VALVES – Are preset in our premises and must not be adjusted or interfered with in any way.
GAUGE SYPHONS AND CHECK VALVES – No maintenance required.
GAUGE SNUBBERS – SAFETY NOTE: This operation must be carried out at zero pressure and ambient temperature.
The variable orifice is adjusted by slackening off the lock nut, adjusting the screw and then retightening the nut.

SOUR GAS SERVICE
Valves can be manufactured for Sour Gas Service in accordance with NACE MR-01-75 latest revision.

OXYGEN SERVICE
Oliver Valves has in-house facilities to degrease valves and remove all dirt and hydrocarbons making valves suitable for oxygen service applications.
Oliver Valves DO NOT offer the following valves for oxygen service:-
All carbon steel valves, Ball Valves, Valves with soft seats, Needle Valves with handwheel locking.

VACUUM SERVICE
Oliver Valves can supply Needle (soft and hard tip) and Ball Valves for Vacuum Service. Both have been successfully tested to a .01m bar absolute vacuum.

OUR CAPABILITIES

We supply technically advanced, high quality valve products designed for critical service in the oil, gas, petrochemical and power generation industries worldwide.

Our pipeline and instrumentation valves are available in materials of your choice, incorporating a wide variety of process connections. Our modular designs and manufacturing flexibility, guarantees short delivery times.

Our ISO 9000 Quality Product Range includes:

NEEDLE VALVES TO 15,000 PSI - (1,000 BAR)

BALL VALVES TO 15,000 PSI - (1,000 BAR)

NEEDLE AND BALL VALVE STYLE MANIFOLDS FOR ALL MAKES OF PRESSURE AND FLOW TRANSMITTERS

COMPACT, SPACE SAVING SLIMLINE VALVES AND MONO FLANGE VALVES

DOUBLE BLOCK AND BLEED VALVES

GAUGE PROTECTORS, ADAPTORS, AND A WIDE RANGE OF INSTRUMENT ACCESSORIES

SPECIAL HIGH AND LOW TEMPERATURE VALVES, OXYGEN SERVICE VALVES

CUSTOMISED VALVE PRODUCTS FOR MANY SPECIAL APPLICATIONS

PATENTED VALVE DESIGNS, FOR EXAMPLE THE TWINSAFE DOUBLE BLOCK AND BLEED VALVE THAT FITS INTO A SINGLE VALVE ANSI B16.10 LENGTH, AND THE SMART MANIFOLD THAT ISOLATES, VENTS, ZEROS EQUALISES FOR CALIBRATION OF THE DIFFERENTIAL PRESSURE TRANSMITTER IN ONE QUARTER TURN ACTION.

Wide Product Range

A comprehensive range of instrument and piping valves designed to meet the demands of today's international clients.

Unusual Flexibility

From standard designs to specially manufactured assemblies, we offer total flexibility and creative innovative design concepts.

Strong Worldwide Capability

Our products - designed to meet international standards - are stocked and marketed in over 50 countries worldwide by factory trained local service specialists.

Delivery Reliability

The modern modular design and "just in time" manufacturing philosophy of Oliver Valves ensuring short lead times, remain an attractive feature of doing business with our company.

oliver valves
RELIABILITY UNDER PRESSURE

Parkgate Industrial Estate Knutsford Cheshire WA16 8DX England Tel: 01565 632636 (14 Lines)
Fax: 01565 654089 or 01565 650060 Email: sales@valves.co.uk WWW: valves.co.uk or olivervalves.com

The Oliver Group products are made in England and sold and supported in over 50 countries worldwide.

CAT PIPING REV 2-00