

oliver valves

INSTRUMENT VALVE AND DOUBLE BLOCK & BLEED VALVE SOLUTIONS

reliability
under
pressure



www.valves.co.uk



- Oliver Valves in the early 80's pioneered this concept, which has very much now become a standard world wide. Each Double Block & bleed has a unique number recording its factory history and we are now way above 100,000 of these units in installation worldwide.
- A smaller unit vs the traditional hook-up, bringing both piping and instrumentation isolation into one unit – this means;
- Less weight, which is significant on the top side of a platform, when you combine all the pressure instrument take-offs. Typical installation it is reduced from 33kg to 7kg, a weight reduction of 75%!
- Weight reduction is also an issue when take-off is horizontal, this instills a bending moment and could cause critical fracture of pipeline interface and is generally overcome by adding more stanchions & cussetting to support traditional installation, which adds even more weight.
- Cost reduction – typically 30% saving over traditional installation, which jumps up to 70% in the case of valves made from exotic materials for more exacting processes!
- Cost saving on site – the cost of one factory tested component, as opposed to different piping valves, instrument valves, flanges, connections and flanged seal rings and then the cost to raise purchase orders and expediting department to chase the parts in goods receivable, etc., and then the shipping costs are larger and weightier, specs must all be taken into account, rises in cost can be 30% of the overall cost. Coded welders could be required as well.
- Safety – including spool pieces the type of valve, i.e. standard 3-piece valve used in installation may have as many as nine additional leak points.
- Health & safety legislation is moving more and more towards testing at a considerable cost to each one of these joints after installation, cost of which can be excessive.
- Health & Safety – USA and abroad process safety management document OCEA 3132, here in the UK Health & Safety Executive application HSG253 which is readily downloadable free, states double block & bleed must be used. All these documents stem from the Piper Alpha disaster over 20 years ago and the P36 disaster in Brazil, both of which indicated double block & bleed as a marked improvement for safety.
- The 'top-hat' or T-section forging use of the body of the valve, and the H section use of flange to flange variance is upset forged, which means the grain flow of the material flows into the flange, making for a very strong body.
- First isolation is to a full piping valve ASME V111 specification, ball configurations whether they be standard 2-ball valves isolate and needle valve vent, 3-needle valves or 3-ball valves are all firesafe certified valves.
- Delivery – the DBB part machine program that was set-up many years ago, in which we machined all aspects of the double block & bleed apart from one aspect, the customer specifies which is the flange, which leads to very quick lead times.
- Any different variations, including vent and injection, ball range, exotic materials, all the options available from standard ball and needle valves.



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 BORE OF BALL VALVES

True positive 90° opening combined with clear through bores across the range allows rodding.

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

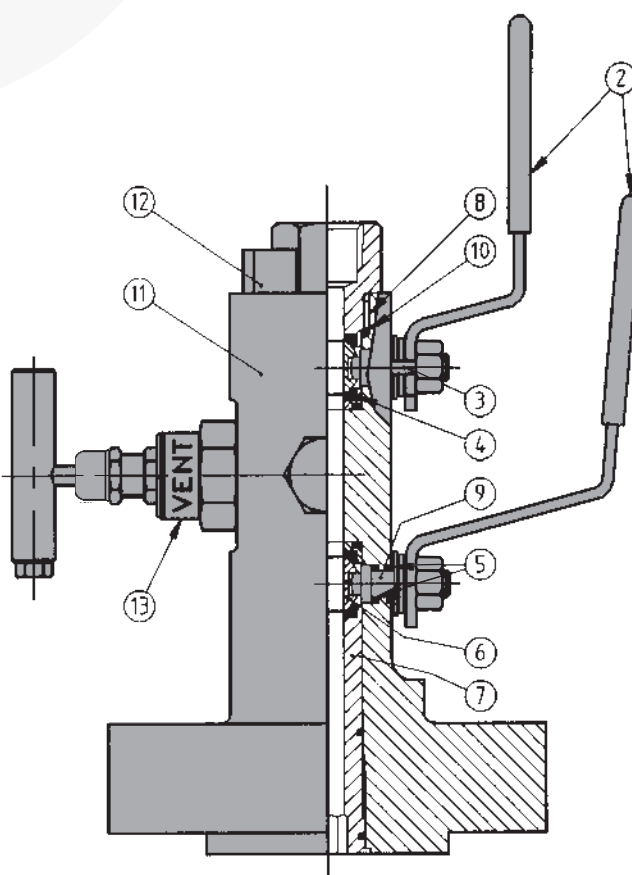
A rigid one piece drop forged body, eliminates potential leak points experienced with conventional hook ups.

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.



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.

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.

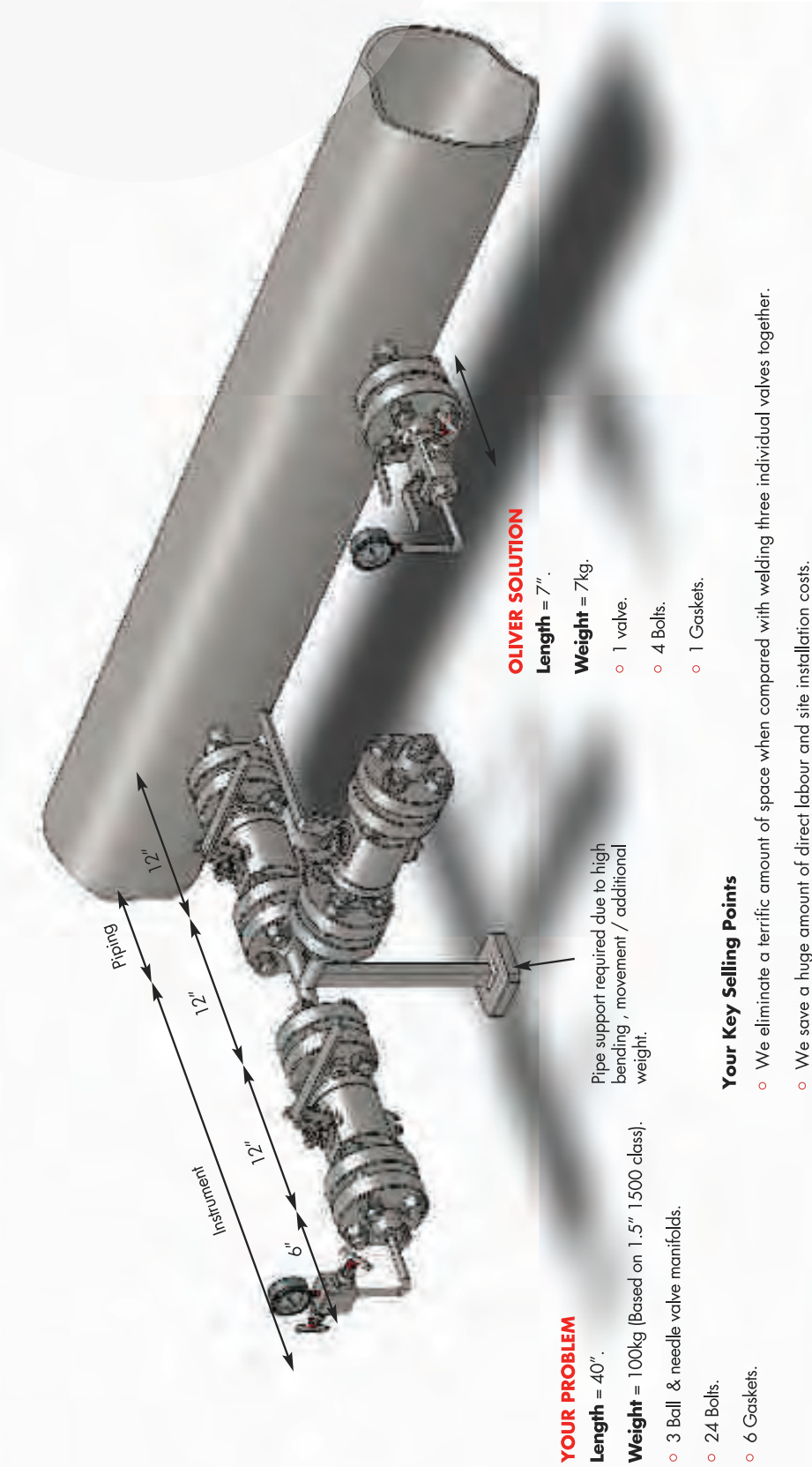
SPANNER ACTUATION - /SA Oliver tamper-proof spanner actuation – for ball valve handles only.

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 Graphite 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.





YOUR PROBLEM

Length = 40".

Weight = 100kg (Based on 1.5" 1500 class).

- o 3 Ball & needle valve manifolds.
- o 24 Bolts.
- o 6 Gaskets.

Pipe support required due to high bending, movement / additional weight.

OLIVER SOLUTION

Length = 7".

Weight = 7kg.

- o 1 valve.
- o 4 Bolts.
- o 1 Gaskets.

Your Key Selling Points

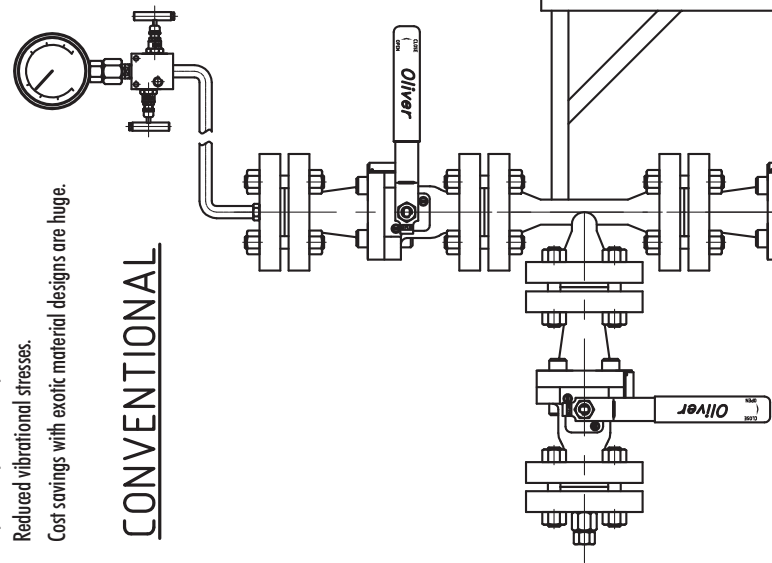
- o We eliminate a terrific amount of space when compared with welding three individual valves together.
- o We save a huge amount of direct labour and site installation costs.
- o We have reduced leakage points massively – a huge benefit as fugitive emissions are so important.
- o We have reduced costs.
- o We only have one component to be ordered, not many as in the old applications, which can save on inventory and site confusion.
- o We can get away from local site support by reducing the bending moment.
- o We can bring the pressure instrument a lot closer to the point of pressure measurement thus saving space which is most important on skip mounting applications.
- o Unique numbering system on each valve recording factory history (the "original manufacture being over 25 years and 200,000+ sold).



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:

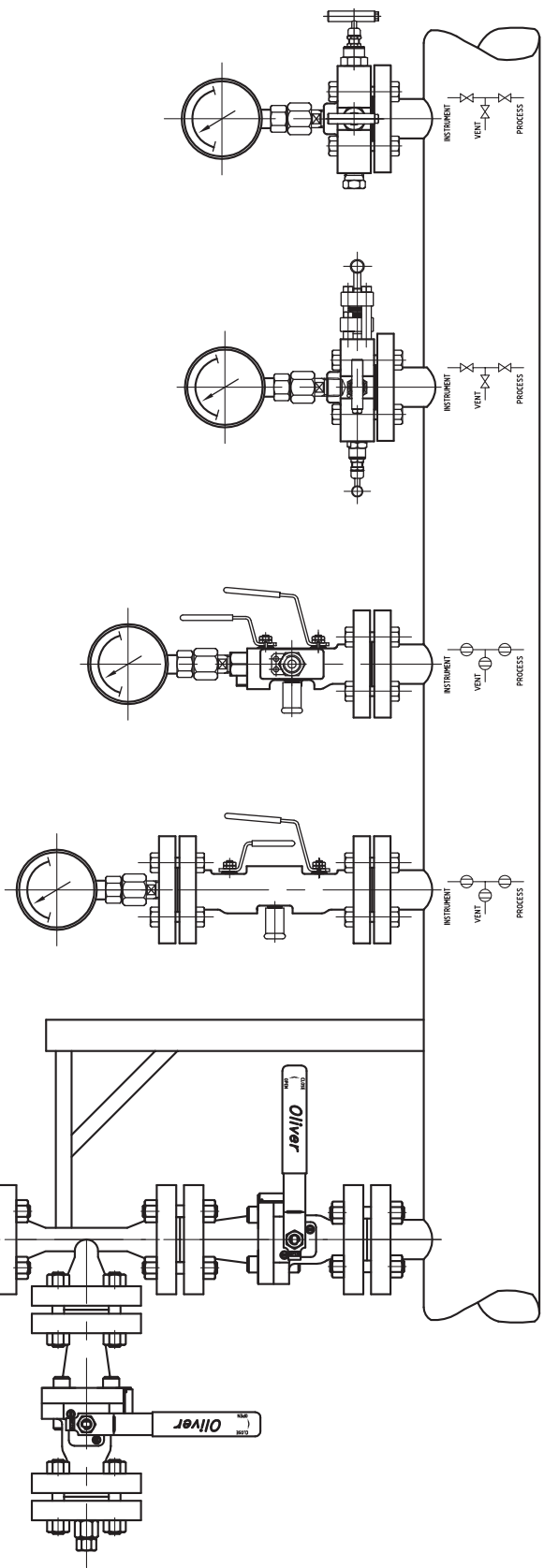
- Pressure instrument take-off points.
- Sampling systems, where a pipeline probe is integral with our valve.
- Chemical injection systems, where a check valve is part of our valve assembly.
- Drains for tanks and pipes, where space is restricted.
- High pressure firesafe diverter valves.
- Hydraulic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

CONVENTIONAL



OLIVER VALVES SOLUTIONS

- DOUBLE BLOCK AND BLEED FLANGE TO FLANGE
- DOUBLE BLOCK AND BLEED FLANGE TO SCREW
- DOUBLE BLOCK AND BLEED SLIMLINE MONO FLANGE
- DOUBLE BLOCK AND BLEED MONO FLANGE



FLANGE TO PIPE WEIGHT

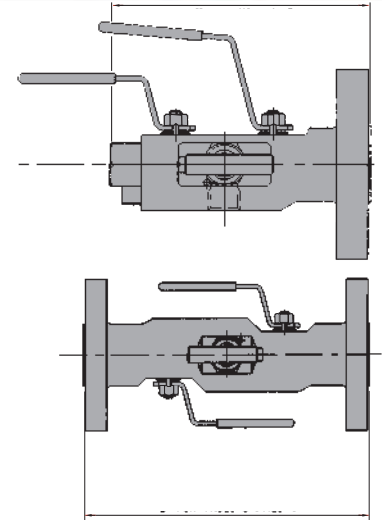
BORE		10mm	14mm	20mm
SIZE	FLANGE CLASS	kg	kg	kg
1/2"	150	3.4	-	-
	300	4	-	-
	600	4	-	-
	1500	5.2	-	-
	2500	6.4	-	-
3/4"	150	4.2	7.2	-
	300	4.7	7.7	-
	600	4.7	7.7	-
	1500	5.6	8.6	-
	2500	6.7	9.7	-
1"	150	4.4	7.4	8.2
	300	4.8	7.8	8.6
	600	5.3	8.3	9.1
	1500	7.3	10.3	11.1
	2500	10.1	13.1	14.1
1 1/2"	150	5	8	8.8
	300	7.4	10.4	11.2
	600	7.4	10.4	11.2
	1500	9.1	12.1	12.9
	2500	13.5	16.5	17.3
2"	150	7.2	10.2	11
	300	7.4	10.4	11.2
	600	7.7	10.7	11.5
	1500	14.5	17.5	18.3
	2500	20	22.1	22.9

- not available

FLANGE TO FLANGE WEIGHT

BORE		10mm	14mm	20mm
SIZE	FLANGE CLASS	kg	kg	kg
1/2"	150	5.4	-	-
	300	6.6	-	-
	600	6.6	-	-
	1500	9	-	-
	2500	11.4	-	-
3/4"	150	7	10	-
	300	8	11	-
	600	8	11	-
	1500	9.8	12.8	-
	2500	12	15	-
1"	150	7.4	10.4	9.4
	300	8.2	11.2	10.2
	600	9.2	12.2	11.2
	1500	13.2	16.2	15.2
	2500	18.8	21.8	20.8
1 1/2"	150	8.6	11.6	10.6
	300	13.4	16.4	15.4
	600	13.4	16.4	15.4
	1500	16.8	19.8	18.8
	2500	25.6	27.6	27.6
2"	150	13	16	15
	300	13.4	16.4	15.4
	600	14	17	16
	1500	27.6	29.6	29.6
	2500	38	40	40

- not available



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/Graphite 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/Graphite 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.

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 dif- ferent from inlet. Vent connection: 1/2" NPT female standard.	Outlet connection: Flange size & Class can be dif- ferent 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/Graphite 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 37).
SAMPLING:	Available for sampling service (page 37).



FLANGE TO PIPE WEIGHT

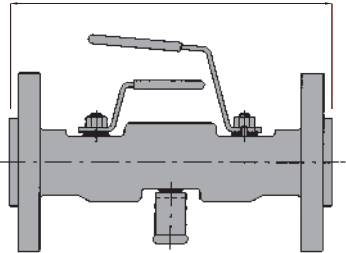
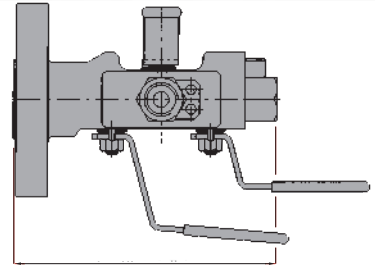
BORE		10mm	14mm
SIZE	FLANGE CLASS	kg	kg
1/2"	150	34	-
	300	4	-
	600	4	-
	1500	52	-
3/4"	2500	64	-
	150	42	7.2
	300	4.7	7.7
	600	4.7	7.7
1"	1500	5.6	8.6
	2500	6.7	9.7
	150	4.4	7.4
	300	4.8	7.8
1 1/2"	600	5.3	8.3
	1500	7.3	10.3
	2500	10.1	13.1
	150	5	8
2"	300	7.4	10.4
	600	7.4	10.4
	1500	9.1	12.1
	2500	13.5	16.5
2"	150	7.2	10.2
	300	7.4	10.4
	600	7.7	10.7
	1500	14.5	17.5
2500	20	22.1	

- not available

FLANGE TO FLANGE WEIGHT

BORE		10mm	14mm
SIZE	FLANGE CLASS	kg	kg
1/2"	150	5.4	-
	300	6.6	-
	600	6.6	-
	1500	9	-
3/4"	2500	11.4	-
	150	7	10
	300	8	11
	600	8	11
1"	1500	9.8	12.8
	2500	12	15
	150	7.4	10.4
	300	8.2	11.2
1 1/2"	600	9.2	12.2
	1500	13.2	16.2
	2500	18.8	21.8
	150	8.6	11.6
2"	300	13.4	16.4
	600	13.4	16.4
	1500	16.8	19.8
	2500	25.6	27.6
2"	150	13	16
	300	13.4	16.4
	600	14	17
	1500	27.6	29.6
2500	38	40	

- not available



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/Graphite 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/Graphite 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.

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/Graphite 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 37).
SAMPLING:	Available for sampling service (page 37).



reliability under pressure

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 DOUBLE BLOCK & BLEED

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

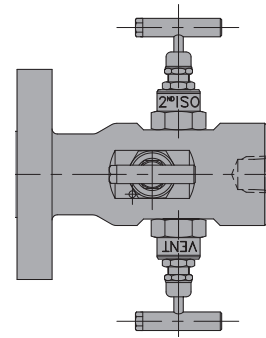
FLANGE TO PIPE WEIGHT

BORE 5.5mm		
SIZE	FLANGE CLASS	KG
1/2"	150	3.4
	300	4
	600	4
	1500	5.2
	2500	6.4
3/4"	150	4.2
	300	4.7
	600	4.7
	1500	5.6
	2500	6.7
1"	150	4.4
	300	4.8
	600	5.3
	1500	7.3
	2500	10.1
1 1/2"	150	5
	300	7.4
	600	7.4
	1500	9.1
	2500	13.5
2"	150	7.2
	300	7.4
	600	7.7
	1500	14.5
	2500	20
- not available		

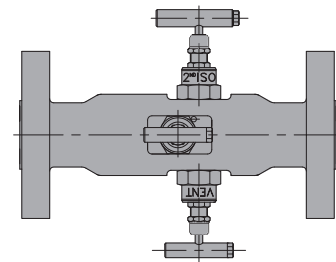
FLANGE TO FLANGE WEIGHT

BORE 5.5mm		
SIZE	FLANGE CLASS	KG
1/2"	150	3.4
	300	4
	600	4
	1500	5.2
	2500	6.4
3/4"	150	4.2
	300	4.7
	600	4.7
	1500	5.6
	2500	6.7
1"	150	4.4
	300	4.8
	600	5.3
	1500	7.3
	2500	10.1
1 1/2"	150	5
	300	7.4
	600	7.4
	1500	9.1
	2500	13.5
2"	150	7.2
	300	7.4
	600	7.7
	1500	14.5
	2500	20
- not available		

FLANGE TO PIPE – ONE BORE – THREE STANDARD MATERIALS



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 Graphite 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 Graphite seals and gland packings. Needle valves have non-rotating hard tip giving metal to metal closures 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 Graphite seals and gland packings. Needle valves have non-rotating hard tip giving metal to metal closure and screw down tee bar operators.

STANDARD

NACE: Conformance to NACE MR-01-75 (latest revision).

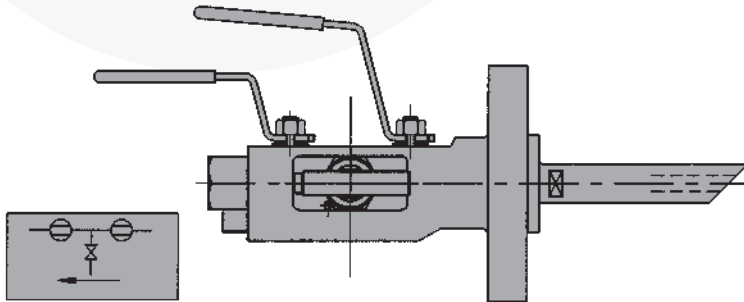
FIRESAFE: Firesafe construction.



SAMPLING DOUBLE BLOCK & 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:-



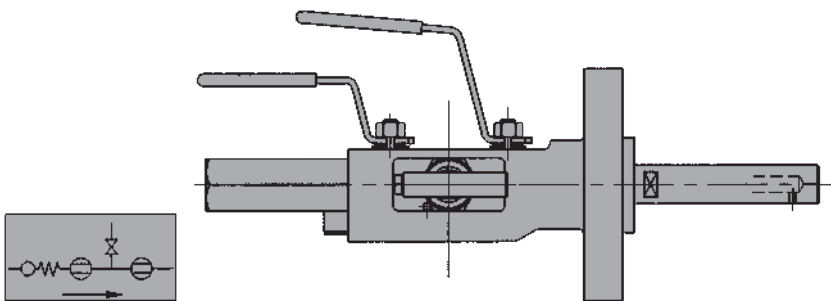
Two in-line ball pattern primary and secondary isolating valves with a heavy duty needle valve vent. D type DBB pattern.

INJECTION DOUBLE BLOCK & 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.



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

FLANGE SIZE 1 1/2" 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.

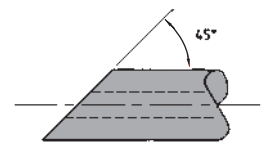
INJECTION NOZZLES:

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.

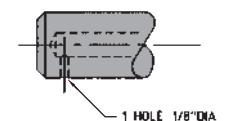
CHECK VALVE:

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 120°C) can be furnished. For Methanol injection specify Kalrez 'O' ring material for check valve seat.

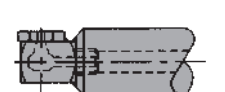
SAMPLE
NOZZLE



INJECTION
NOZZLE



INJECTION
SWIRL
PATTERN
NOZZLE

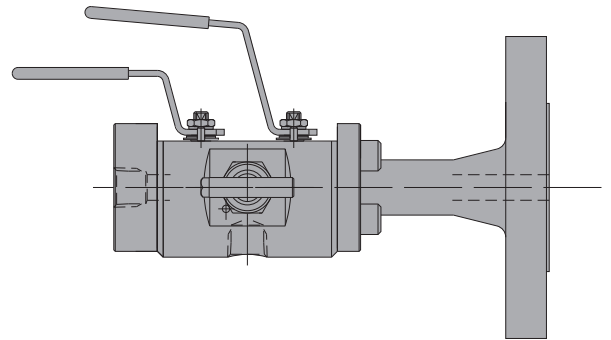


reliability under pressure

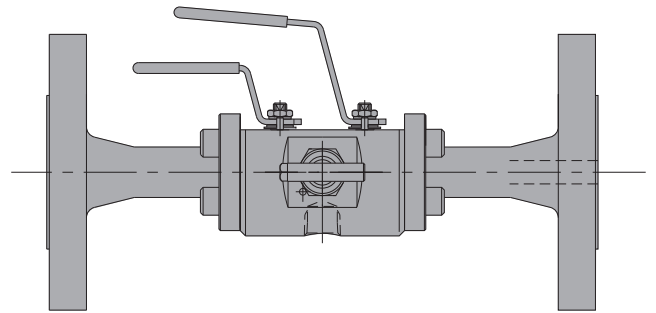
BOLTED CONSTRUCTION DOUBLE BLOCK & BLEED

- 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 1/2" class 150 through to 2" 2500.
- Materials from carbon steel, stainless steel to more exotic alloys.

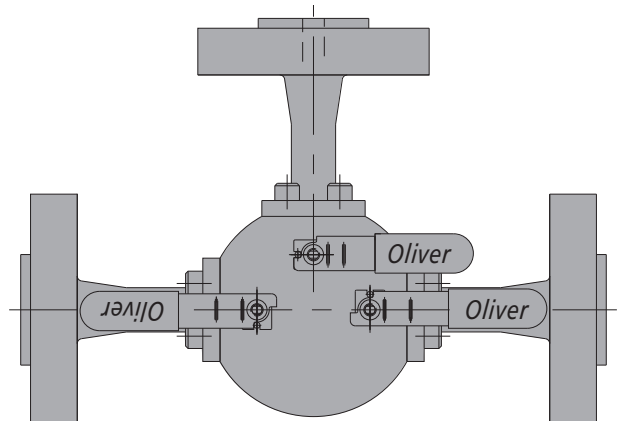
FLANGE TO PIPE



FLANGE TO FLANGE



FLANGE X FLANGE X FLANGE

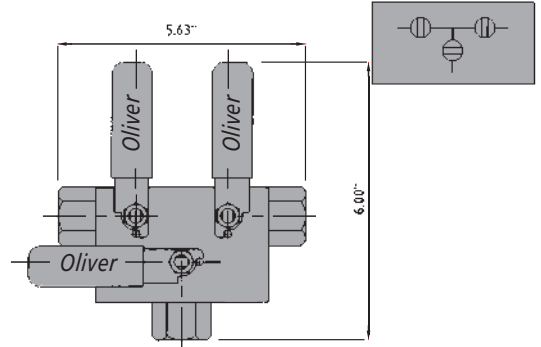


INSTRUMENT DOUBLE BLOCK & BLEED VALVES

L TYPE



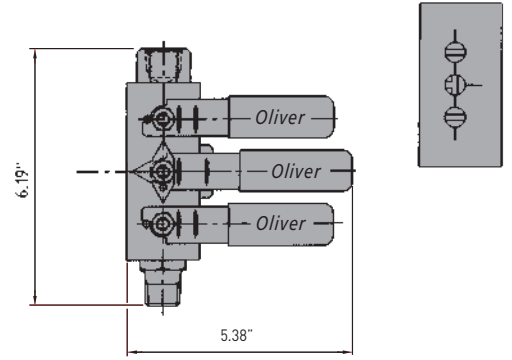
Barstock body with three balls arranged for sampling, chemical injection and double block and bleed of instrument. Surface mounting option available. Cam Interlock option available to allow only the correct sequence of operation and to prevent accidental opening of the vent valve when the first isolation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



T TYPE



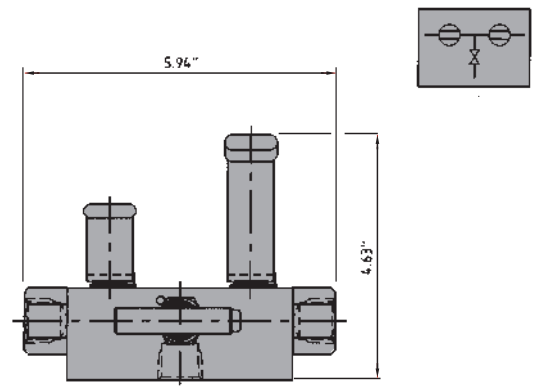
Barstock body with central 'T' ported ball valve for compact double block and bleed, sampling or chemical injection. Surface mounting and Cam Interlock options available.



ID TYPE



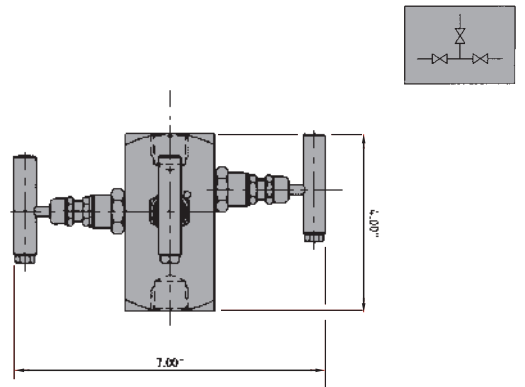
Barstock body with ball pattern primary isolating valve with two needle pattern valves for secondary isolating valve and vent valve.



IN 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.



reliability
under
pressure

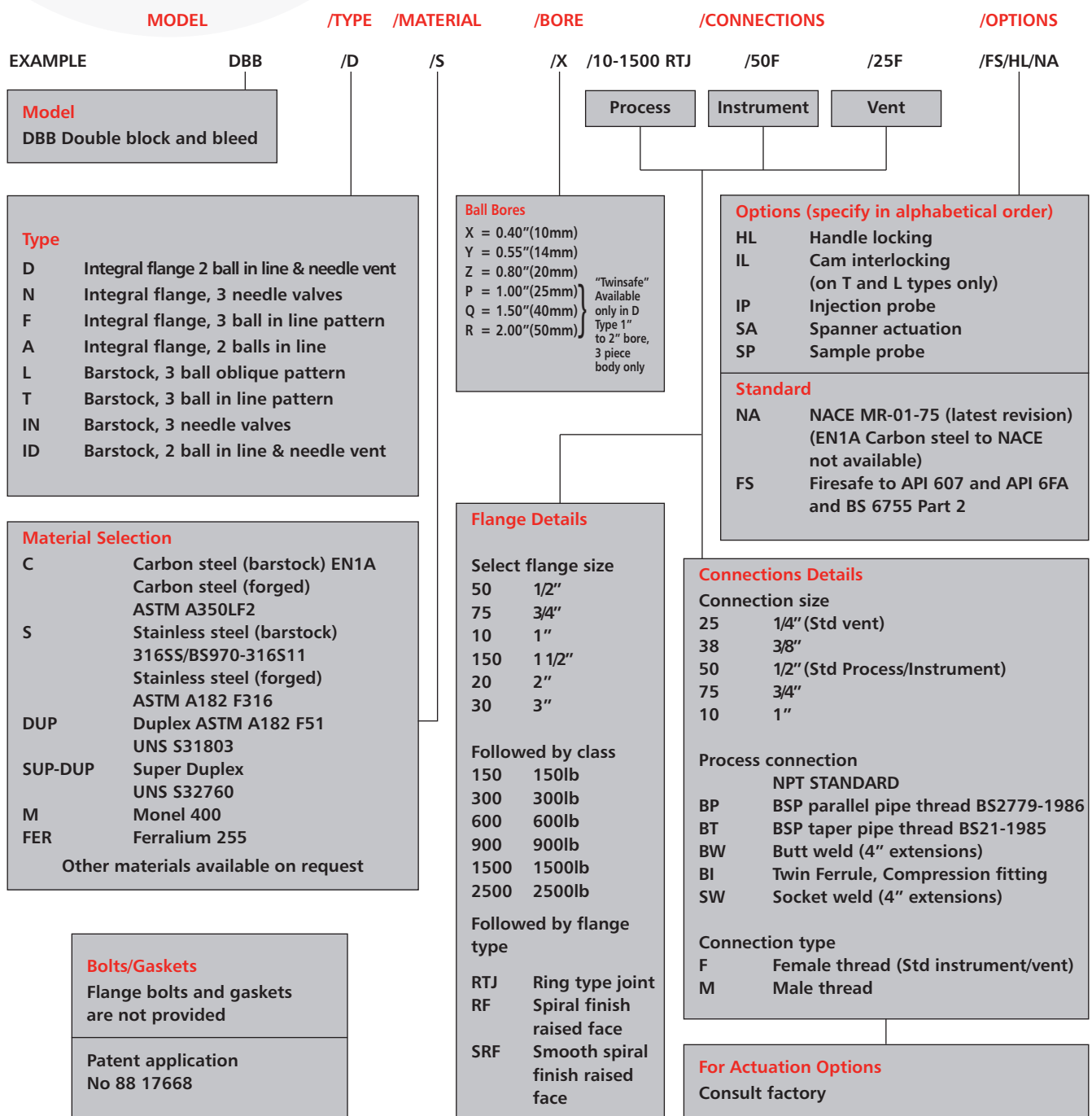
people creating positive change with valve solutions in the global energy sector

The three Oliver Valves companies have a reputation for innovative design and technical excellence, gained over many years of supplying into the harsh and hostile environment of the North Sea and beyond. Many of the world's principal operators and contractors are regular users of our well proven products.

The preceding descriptions represent the basis of our product lines but other options are available, and we would welcome the opportunity of discussing your specific requirements with you. Please contact our experienced sales team with any queries.

safety
delivery
relationship
innovation
improvement





Storage

If the valves are not required for immediate use then they should be stored in their original packaging and end protectors should not be disturbed. Storage should be off the ground in a clean, dry indoor area. If storage period exceeds 12 months then items should be inspected by Oliver Valve personnel prior to installation.

Warning Notice:

For Safety reasons it is important that the following precautions are taken before starting work on the valve.

1. That personnel instructed to carry out any necessary work are familiar with this type of valve and have read and understood the information provided in this instruction.
2. That the materials of construction of the valve and pressure/temperature limits shown on the valve nameplate are suitable for the process fluid and conditions.
3. Personnel should use suitable protective equipment and clothing that is appropriate for the area in which the valve is to be installed.
4. That the line is depressurised, drained and vented before installing/removing the valve.
5. Flange covers or end protectors should be removed before installation and the valve inspected internally to ensure that it is free from foreign matter.

Installation

1. Single Block, Block & Bleed, Double Block and Double Block & Bleed ball valve internals are bi-directional; the body configuration usually determines the orientation of the valve. If the valve is fitted with an injection quill or sample probe please ensure that it is fitted correctly in relation to the direction of the pipeline flow.
2. For Needle Valves, ensure that the flow arrow on the valve body is pointing in the direction of the flow.
3. Do not carry or lift valves by the handle.
4. For flanged joints ensure that mating flanges and gaskets are clean and undamaged.
5. Ensure that mating flanges are aligned correctly; bolting should be inserted through the bolt-holes without interference. Bolting should be tightened evenly in a diagonal pattern
6. For pipe threads requiring a pressure tight joint first ensure that the mating threads are clean and free from damage. Add a suitable sealant to the threads and wrench-tighten. On certain materials such as stainless steels the sealant should contain a lubricant to prevent galling.
7. To prevent body distortion and leakage ensure that the pipe-work is correctly supported and no undue stress is placed on the body.
8. Prior to operating the valve ensure that there is no possibility of abrasive particles such as weld slag or sand within the piping system. The system needs to be thoroughly flushed clean prior to operation.
9. It is the user's responsibility to ensure that Injection and Sampling operations are carried out using appropriate safeguards to minimise all risks associated with pressure and the media concerned.

Operation

1. All valves are hand operated and are clockwise to close as standard
2. Ball Valves are ¼ turn (90°) from Open to Close with the exception of the Vent feature shown in **Figure 1**
3. With the exception of the Vent feature shown in **Figures 1 & 2** when the Ball Valve lever is parallel to the Valve centre line (C/L) the valve is open
4. With the exception of the Vent feature shown in **Figures 1 & 2** when the Ball Valve lever is perpendicular to the Valve centre line (C/L) the valve is closed
5. Ball Valves are intended for On-Off duty and should not be used for regulating flow. Please ensure that valve is either in the fully open or fully closed positions
6. Needle Valves are approximately 6 turns from fully open to fully closed.
7. Do not use excessive force to operate the valve, if the valve is difficult to operate consult factory.

The Vent feature on Valves with a Bleed option can be used for the following:

- a) In closed coupled systems such as instrument isolation it can be used to vent pressure to enable maintenance or inspection of instrumentation to be undertaken.
- b) To determine if seat leakage is present between 1st & 2nd isolates

Note: Due to the small size of the vent orifice it is not recommended that valves with this feature are used to depressurise long pipe runs.

To vent a close-coupled system proceed as follows:

1. Close 1st Isolation Valve see **Figures 1 & 2**. If checking for seat leakage close 2nd Isolate also.
2. If a pressure plug is fitted ensure the Vent valve is in the closed position before unscrewing the pressure plug slowly to release any trapped pressure.

Note: If the process fluid is hazardous then it should be vented to a safe location

3. Open Vent valve slowly, standing clear of the vent port while venting is in progress.
4. When venting is complete close Vent Valve & 2nd Isolate.
5. Refit Pressure Plug if supplied.
6. Valve can be returned to normal operating position when it is safe to do so.

Figure 1
'F' type with in-line vent

90° Open to Closed.
Ball shown in closed position. In this position handle is at a right angle to the valve C/L

180° Open (Venting) to Closed.
Ball shown in venting position. In this position direction arrow is pointing towards vent port

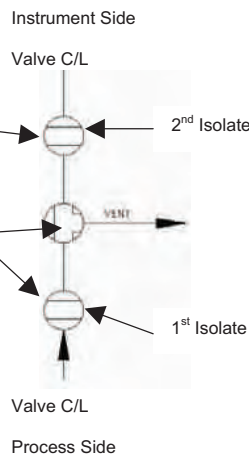
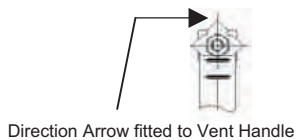
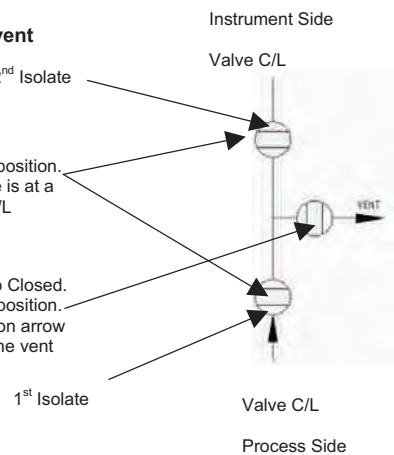


Figure 2
'F' type with offset vent

90° Open to Closed.
Ball shown in closed position. In this position handle is at a right angle to valve C/L

90° Open (Venting) to Closed.
Ball shown in closed position. In this position direction arrow is at a right angle to the vent port



Maintenance

- Other than periodic inspection to ensure satisfactory operation & sealing no routine maintenance is necessary.
- On Needle Valves any gland leakage should be addressed by first depressurising the valve and tightening the pusher clockwise gradually until the leakage stops.
- If no further adjustment is possible or seat leakage is suspected then the valve will require a complete overhaul and should be returned to Oliver Valves Ltd.
- Head Units & End Connectors are fitted with anti-tamper pins to prevent unauthorised removal. Under no circumstances should these pins be removed without the prior written consent of Oliver Valves Ltd.
- No attempt to remove or dismantle the Valve should be undertaken without first ensuring that the line is depressurised, drained and vented.

Inspection

- Valves should be at zero pressure and ambient temperature prior to any inspection.
- Maintenance Engineers & Operators are reminded to use correct tools and equipment.
- A full risk assessment and methodology statement must be compiled prior to any maintenance work.
- The risk assessment must consider the possibility of the allowable limits being exceeded resulting in a potential hazard.
- Maintenance programme should include checks on the development of unforeseen conditions which could lead to failure.
- In systems where corrosion could be a potential hazard checks on the body and body seals should be made. If corrosion or leakage is present then the valve should be replaced.



reliability
under
pressure

quality

Accredited to ISO9001:2000, The Oliver Valve companies are able to offer complete component traceability across a wide range of instrumentation, pipeline valves and accessories. Comprehensive in-house facilities satisfy both production and special testing requirements including:

- Hydrostatic testing
- Nitrogen gas testing
- Cryogenic testing
- High temperature testing
- Helium leak detection
- L.P.I. & M.P.I. NDT methods
- Fire testing BS6755 Pt2, API607/4
- Oxygen clean facilities
- Low pressure testing
- Blasting and painting facilities



LLOYD'S 0870012/A



REGISTRATION NUMBER 40697



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Oliver Valves Limited Parkgate Industrial Estate
Knutsford Cheshire WA16 8DX England
T +44 (0)1565 632 636 F +44 (0)1565 654 089
E sales@valves.co.uk www.valves.co.uk



www.valves.co.uk

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