

DOUBLE BLOCK & BLEED VALVE SOLUTIONS

reliability
under
pressure



- 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 instils 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.



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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

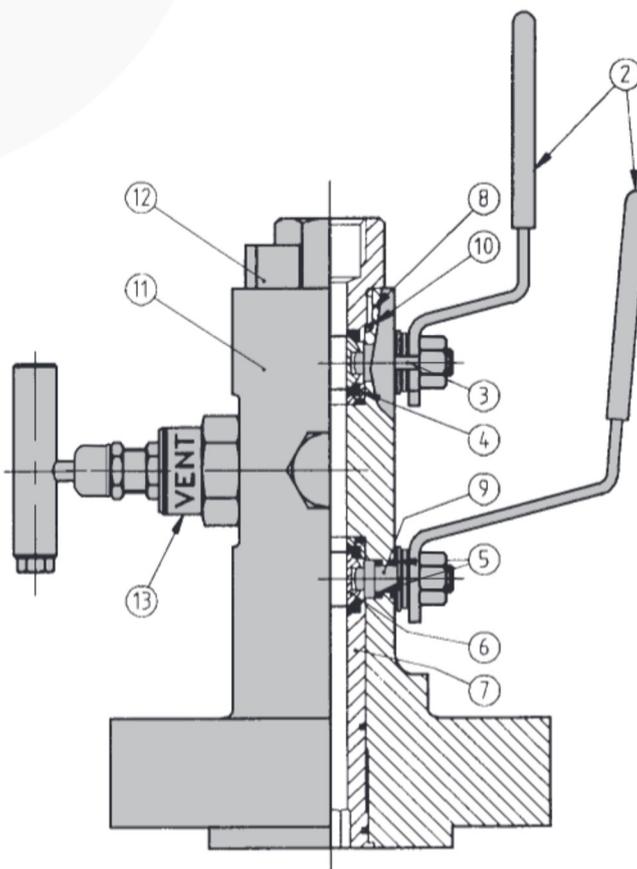
Go metal to metal in a fire to reduce leakage due to seat destruction.

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

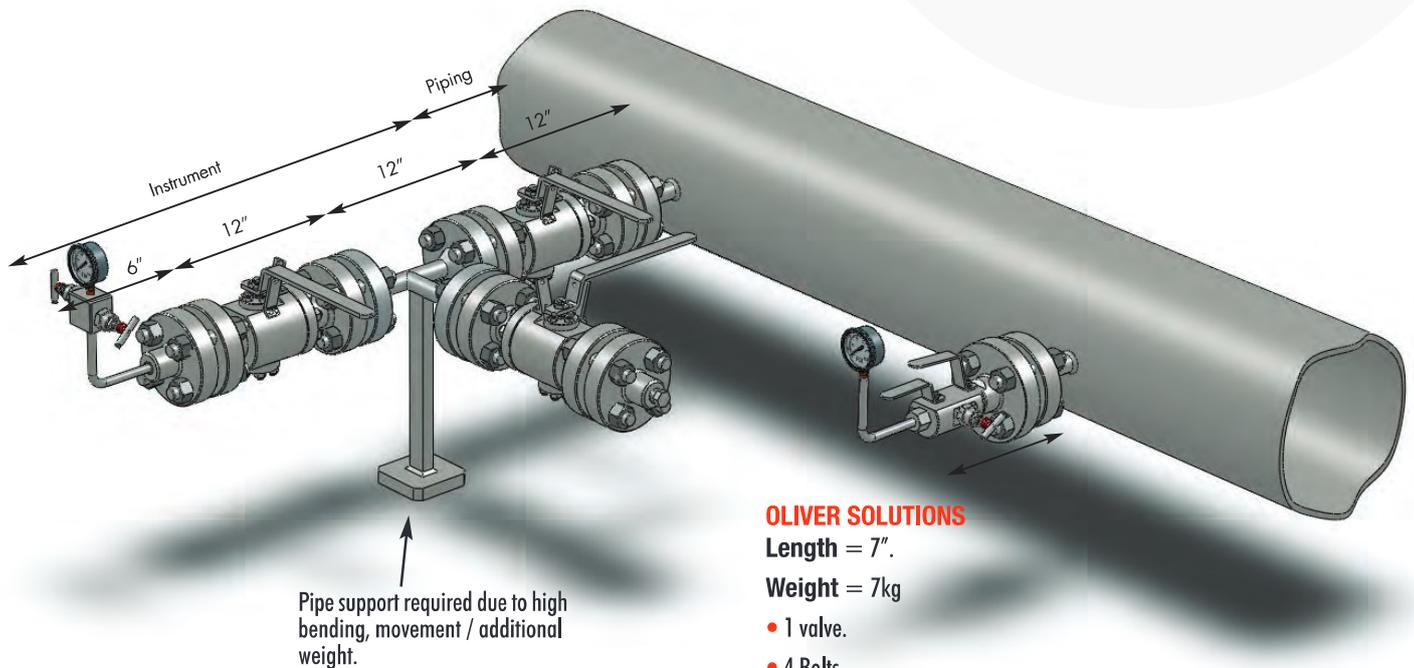
FIRESAFE - /FS Firesafe construction compliant with BS 6755 part 2, API 607 and API 6FA. Fully certified to Lloyds type approval certificate numbers 88/0345, 91/0117, 92/0140 and 93/00068. High temperature Graphite replaces PTFE for seals.

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.



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OLIVER SOLUTIONS

Length = 7".

Weight = 7kg

- 1 valve.
- 4 Bolts.
- 1 Gasket.

YOUR PROBLEM

Length = 42".

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

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

Your Key Selling Points

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



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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.

