

# Double Block and Bleed



## Double Block and Bleed Valves

Both in valves adopting the single piston effect or double piston effect seat design, UA Trunnion Mounted ball valves permit the body cavity to be bled through the drain plug valve with the ball in the fully closed or fully open position.

This permits the checking of the seating integrity without the need to turn the ball in its fully closed position, this avoided out generating troubles for the operation of the line.

The range can be integrated with a range of pneumatic / electric actuators and complete flow control packages.

These valves service a wide spectrum of industries such as chemical, petrochemical, oil, gas and pharmaceutical industries and provide an easy and convenient way of providing 2 separate isolations and a visual confirmation of a tight seal.

<b>Size Range</b>	1/2" - 56" (DN 25 - DN 1400) Double Block and Bleed Valves
<b>Design / Features</b>	Gate Type, Ball Type, Floating & Trunnion Mounted, End Entry, Top Entry, Subsea, Full / Reduced Bore, Cryogenic, Firesafe Certified, Anti-static, Blow-out proof stems.
<b>Design Codes</b>	API 6D, API 6A, BS5351, BS 6755 / BS EN 12266, NACE MR 01 75, ANSI, ISO & API standards
<b>End Connections</b>	Flanged, Screwed, Butt Weld, Hub, SW
<b>Pressure Class</b>	ANSI 150 lbs - 4500 lbs
<b>Seat Design</b>	Soft Seated, Metal to Metal, Single & Double Piston effect.
<b>Operator</b>	Lever / Gear / Pneumatic / Hydraulic / Electric / Gas over Oil / Quarter Turn / Rack and Pinion / Scotch Yoke.

### Why a Double Block and Bleed Valves?

The Double Block and Bleed Valve can perform the tasks of 3 separate valves (2 separate isolations and 1 drain valve) which apart from being hugely Space saving can also save on weight and time due to Installation and Maintenance practices requiring much less work and the operator being able to locate and operate all 3 valves in one location.

It has been customary for manifold systems and other process piping, where inter-contamination of products was undesirable, to position two valves back to back with a small

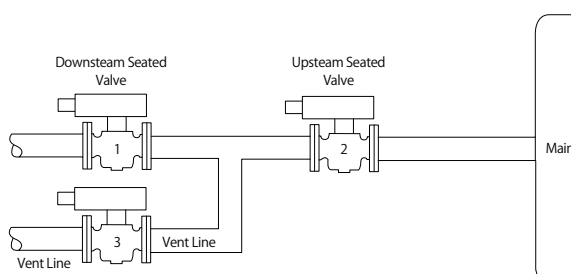
bleed valve located between them. This is commonly referred to as a "Double Block and Bleed System" or "Block and Bleed Service." Using TFE or RTFE as a seat material has permitted the substitution of a single valve for the two valves which made up the previous system.

A bleed valve is required and is connected to the body cavity around the ball of the ball valve. A Double Block and Bleed application requires that both seats be tight and act as upstream seals when there is pressure on one or both sides of the valve, with the cavity

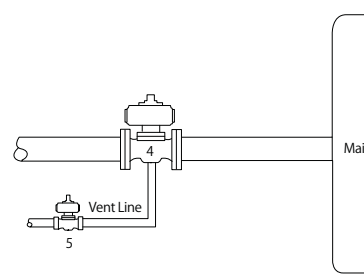
around the ball being bled to atmosphere by opening the body drain valve. Design Features A special Block and Bleed seat design has been developed in valve sizes 3/4" through 8" inclusive, which will act as an upstream seat without impairing its ability to act also as a downstream seat. Refer to Figure 3 (back) for a cross-sectional view of this design. In a standard floating ball type of valve such as the McCannaseal, it is always the downstream seat which is tight.

The line pressure provides the necessary seating force by pressing the ball

**Fig. 1 Traditional Shutoff System**



**Fig. 2 UA Valves Shutoff System**



Double block and bleed ball valve with upstream and downstream seats