

IPDE-IOM-EP-SERIES-PROBLOC
Effective: April 2021



Installation and Operation Manual

EP Series Pro-Bloc®



ENGINEERING YOUR SUCCESS.

Parker Hannifin

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IDENTIFICATION OF HAZARDS

NEVER adjust valves under pressure.

NEVER slacken or remove any valve parts under pressure.

NEVER use any mechanical aids i.e. wrenches, extensions to operate handles.

NEVER carry ball valves by the handle.

NEVER obscure valve body marking.

NEVER remove end connectors.

NEVER use valves outside of rated operating conditions.

INSTALLATION

Wear suitable PPE before installation and follow appropriate site safety procedures.

Before installation, ensure that all valves are in the closed position.

Parker Pro-Bloc® uses standard flange connections. For connection, please refer to the appropriate installation standard for the flange specification in question.

For non-flange end connection:

- NPT: Use standard practice for NPT taper threads. Use an appropriate thread tape or sealant to prevent galling.
- A-lok/CPI: See separate instruction sheet supplied with A-lok products.

HANDLING AND STORAGE

Handling

Larger sized Pro-Blocs may be heavy. Ensure that local manual handling requirements are followed. Do not lift or carry by the operating handles, as this may cause damage.

Storage

There is no specified shelf-life.

Boxed products should be stored in a covered area, preferably indoors, and away from excessive moisture, heat, or airborne contaminants.

The use of desiccant or corrosion inhibitors is not required during normal storage periods.



OPERATION

Ball Valve:

To close: Operate the handle until it is at 90° from the valve body centreline.

To open: Operate the handle until it is in line with the centreline of the body and reaches the stop pin.

Movement is limited to 90° (except for vent ball valves) by a mechanical stop pin.

Ball valves should always be fully open or fully closed. Do not leave in a mid-position.

Three-way vent ball valves (red handle) have no firm centre-off position and are positioned visually.

Needle Valve or Outside Screw and Yoke (vent):

To close: Rotate handle clockwise until a stop is felt.

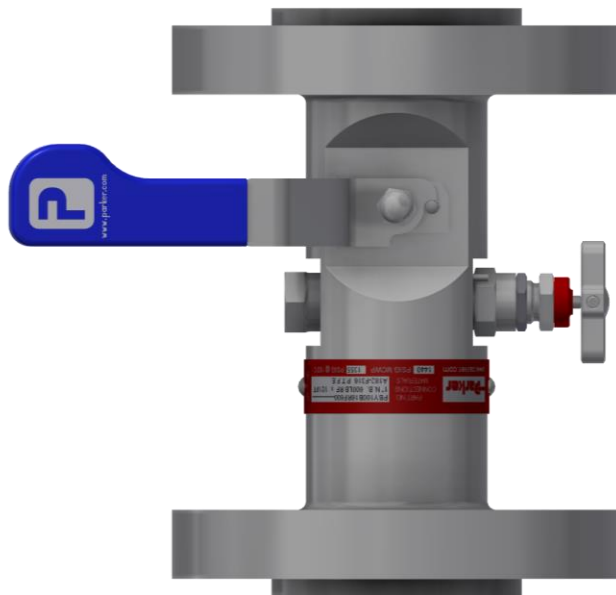
To open: Fully rotate the handle anti-clockwise until a stop is felt.

There are approximately three rotations between fully open and fully closed.

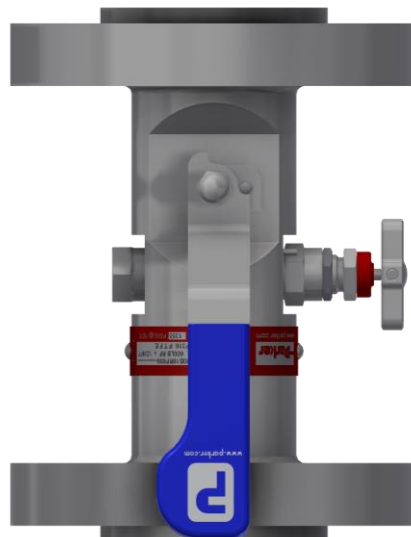
Do not force rotation past the stop, as damage may occur. Maximum torque is 6Nm

For anti-tamper designs only use the correct key for Parker manifolds.

ISOLATE VALVE OPERATING POSITIONS

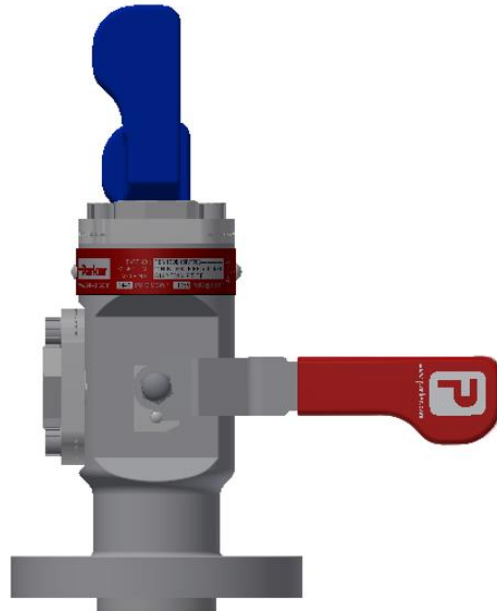


ISOLATE BALL VALVE IN CLOSED POSITION



ISOLATE BALL VALVE IN OPEN POSITION.

BALL VENT VALVE OPERATING POSITIONS



VENT BALL VALVE IN CLOSED POSITION

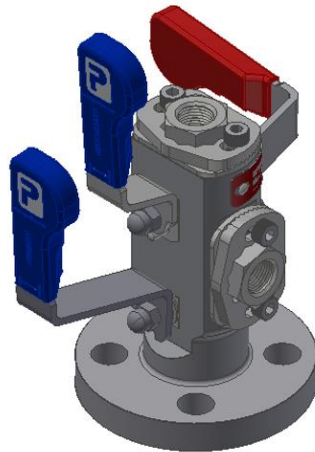


VENT BALL VALVE IN OPEN POSITION.

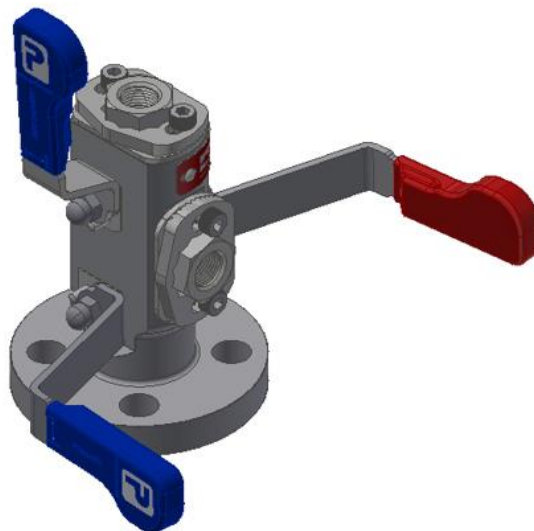
OPERATING SEQUENCE

These valves are primarily used for double isolation of an instrument, be that a gauge or a transmitter.

The primary and secondary valves are in the open position during normal operating conditions allowing the process pressure to enter the gauge or transmitter to perform its function to give a pressure reading. The words Primary and Secondary are printed on the blue vinyl sleeves to aid identification.



When the gauge or transmitter need removing for calibration in a workshop, the primary valve is closed to block the pressure, the secondary valve remains open and vent valve is opened to release the pressure within the instrument.



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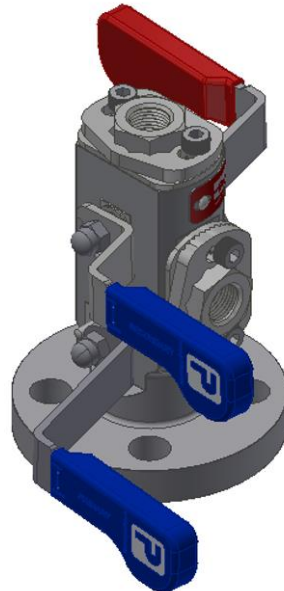
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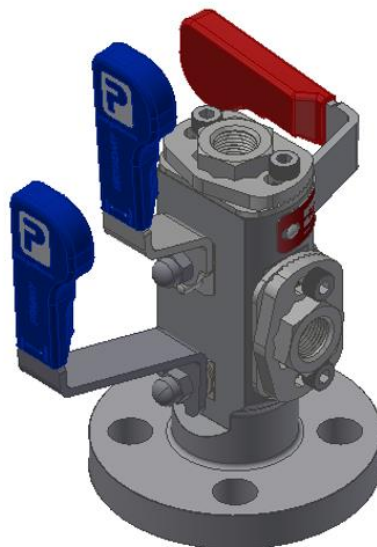
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The secondary and vent are then closed (the primary valves is already closed) and the instrument safely removed.



The double block gives two isolations to prevent process escape while the instrument is removed. Once the instrument is calibrated or replaced with a new one it can be fitted back on top of the valve outlet and the primary and secondary valves opened again to allow pressure measurement to continue.



It is possible to calibrate a pressure transmitter without removing it; this is in situation calibration commonly called "in-situ" calibration. To do this you follow the above procedure to vent the valve. Then a known pressure is pumped into the open vent, a handheld device is then connected to the back of the transmitter with electrical leads after removing the cover. If the known pressure from the pump agrees with the electrical reading from the transmitter it is in calibration and the measuring equipment removed, then the valves are returned to their operating positions.

If however the readings do not agree, the measuring device has the ability to electronically change the reading to make it agree with the known pressure, this is done by turning a knob clockwise or anti

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clockwise to change the reading of the transmitter up or down to suit, this is the “in-situ” calibration completed and the valves are again returned to their operating positions.

Vent plug: The valve is shipped with a vent plug; loose or installed, as per the client’s requirements. While venting the valve this plug must be removed. The plug can be replaced for safety reasons or to prevent ingress of the environment. That is the operator’s decision and should be in their operating procedures. Parker are not responsible for this decision. It is suggested that PTFE tape or sealant is used to prevent galling of the threads.



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BALL VALVE HANDLE REMOVAL

Ball Valve handle removal/reinstallation

The ball handle may be removed without under loading the packing. To remove the handle

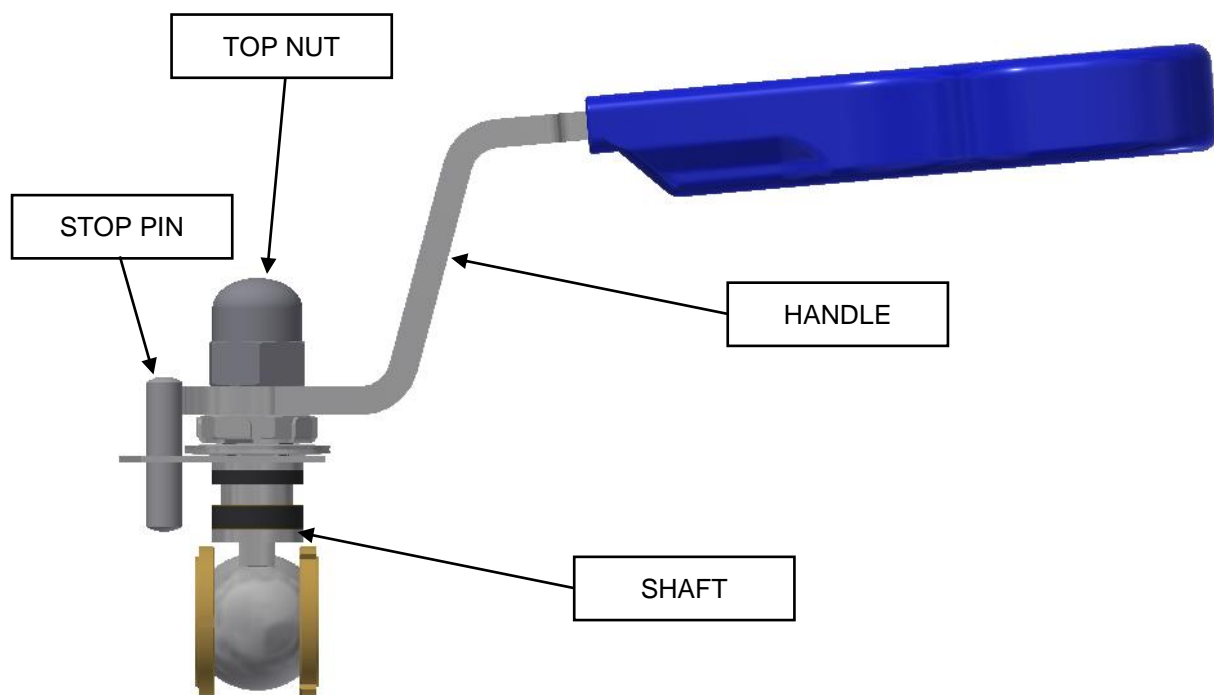
- Unscrew the top nut (Dome/handle locking nut)
- Handle may be removed.

To re-install the handle for valve operation:

- Ensure shaft and nut threads are free from contaminants (including any used thread locker)
- Replace handle
- Apply Bondloc B272 or equivalent to nut threads ensuring good coverage.
- Torque nut as follows:

Pro-Bloc Size:	Top Nut Torque (Nm)
10mm (EPBY), 15mm (EPBW), 20mm (EPBV)	23 Nm
25mm (EPBV)	31 Nm

WARNING: Ensure handle is correctly installed before operation of valve



EEMUA Ball valve

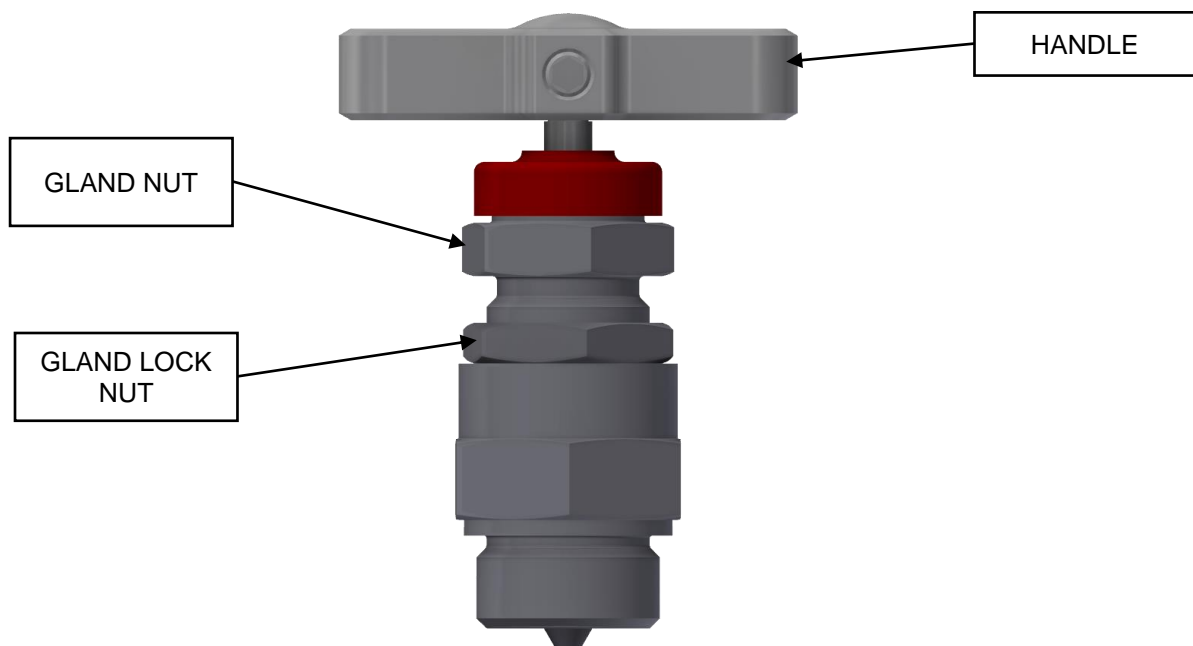
MAINTENANCE

Parker Pro-Blocs are not user-serviceable, except for gland adjustment of the vent needle valve. Gland adjustment becomes necessary when the valve is visibly leaking through the spindle just below the operating handle, or prior to operation when no torque or resistance is evident when operating the valve handle. Adjustment to the gland can be carried out to prevent leakage. Replacement bonnets are available.

H-series Needle Valve Gland Adjustment.

CAUTION: Adjustment of the gland must be carried out at zero pressure

1. Fully close the valve by turning the handle in a clockwise direction to stop lightly on seat (max. 2 Nm).
 2. Open the valve one full turn by rotating the handle in a counter-clockwise direction.
 3. Loosen gland lock nut.
 4. Tighten gland nut to 11 Nm
 5. Re-tighten gland lock nut to 25 Nm
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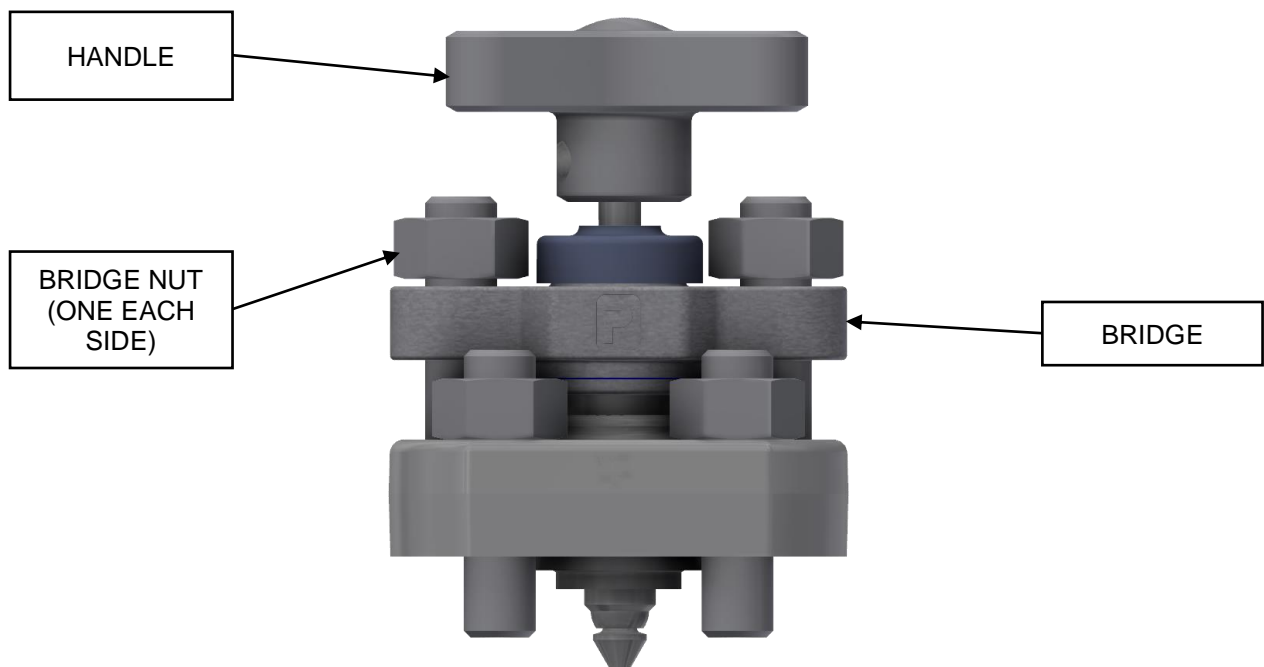


H-Series Bonnet

Outside Screw and Yoke Valve Gland Adjustment.

CAUTION: Adjustment of the gland must be carried out at zero pressure

1. Fully close the valve by turning the handle in a clockwise direction to stop lightly on seat (max. 2 Nm).
2. Open the valve one full turn by rotating the handle in a counter-clockwise direction.
3. The two bridge-nuts on either side of the spindle must be tightened evenly, keeping the bridge parallel to the body, to a torque of 5Nm.



Outside Screw and Yoke (OS&Y) Bonnet

FURTHER INFORMATION

Cv values:

- 10mm bore (PBY): 6.4
- 15mm bore (PBX): 15
- 20mm bore (PBW): 31
- 25mm bore (PBV): 39

Needle valve seat:

- 6mm

Cross hole drillings:

- 5mm