



Installation, Operation, and Maintenance Manual

Bleed Valves



ITT





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1 Introduction and Safety

1.1 Safety message levels

Definitions

Safety message level	Indication
 DANGER:	A hazardous situation which, if not avoided, will result in death or serious injury
 WARNING:	A hazardous situation which, if not avoided, could result in death or serious injury
 CAUTION:	A hazardous situation which, if not avoided, could result in minor or moderate injury
 ELECTRICAL HAZARD:	The possibility of electrical risks if instructions are not followed in a proper manner
NOTICE:	<ul style="list-style-type: none"> • A potential situation which, if not avoided, could result in an undesirable result or state • A practice not related to personal injury

1.2 User health and safety

General precautions

This product is designed and manufactured using good workmanship and materials, and meets all applicable industry standards. This product should be used only as recommended by ITT.



WARNING:

- Misapplication of the valve can result in injury or property damage. Select valves and valve components of the proper materials and make sure that they are consistent with your specific performance requirements. Incorrect application of this product includes but is not limited to:
 - Exceeding the pressure or temperature rating
 - Failing to maintain this product according to the recommendations
 - Using this product to contain or control media that is incompatible with the materials of construction

Qualifications and training

The personnel responsible for the assembly, operation, inspection, and maintenance of the valve must be appropriately qualified. The operating company must do the following tasks:

- Define the responsibilities and competency of all personnel handling this equipment.
- Provide instruction and training.

- Ensure that the contents of the operating instructions have been fully understood by the personnel. Instruction and training can be carried out by

Non-compliance risks

Failure to comply with all safety precautions can result in the following conditions:

- Death or serious injury due to electrical, mechanical, and chemical influences
- Environmental damage due to the leakage of dangerous materials
- Product damage
- Property damage
- Loss of all claims for damages

Operational safety precautions

Be aware of these safety precautions when operating this product:

- Do not hang items from the product. Any accessories must be firmly or permanently attached.
- Do not use the product as a step or hand hold.
- Do not paint over the identification tag, warnings, notices, or other identification marks associated with the product.

Maintenance safety precautions

Be aware of these safety precautions when performing maintenance on this product:

- You must decontaminate the product if it has been exposed to harmful substances such as caustic chemicals.

Use of unauthorized parts

Reconstruction or modification of the product is only permissible after consultation with ITT. Genuine spare parts and accessories authorized by ITT serve to maintain safety. Use of non-genuine ITT parts can annul liability of the manufacturer for the consequences. ITT parts are not to be used in conjunction with products not supplied by ITT as this improper use can annul all liability for the consequences.

Unacceptable modes of operation

The operational reliability of this product is only guaranteed when it is used as designated. The operating limits given on the identification tag and in the data sheet may not be exceeded under any circumstances. If the identification tag is missing or worn, contact for specific instructions.

2 Transportation and Storage

2.1 Handling and unpacking guidelines



CAUTION:

Always observe the applicable standards and regulations regarding the prevention of accidents when handling the product.

Handling guidelines

Follow these guidelines when handling the product to prevent damage:

- Use care when handling the product.
- Leave protective caps and covers on the product until installation.

Unpacking guidelines

Follow these guidelines when unpacking the product:

1. Inspect the package for damaged or missing items upon delivery.
2. Note any damaged or missing items on the receipt and freight bill.
3. Do not lift or pull on the electrical conduit lines. Doing so may cause the POC switches to come out of calibration.

2.2 Storage, disposal, and return requirements

Storage

If you are not immediately installing the product after delivery, store it as follows:

- Store the product in a dry room that maintains a constant temperature.
- Make sure that the products are not stacked on top of one another.

Disposal

Dispose of this product and associated components in compliance with federal, state, and local regulations.

Return

Ensure these requirements are met before you return a product to ITT:

- Contact ITT for specific instructions on how to return the product.
- Clean the valve of all hazardous material.
- Complete a Material Safety Data Sheet or Process Data Sheet for any process fluid that could remain on the valve.
- Obtain a Return Material Authorization from the factory.

3 Installation

3.1 Install the valve

1. Bleed valves may be installed in any orientation.
2. In order for the bleed valve to fully drain, install the valve in a vertical orientation with the barbed or outlet portion of the stem pointing down.

4 Operation

4.1 Operate the valve



CAUTION:

1. This unit is to be operated by hand. Use of a wrench may yield excessive torque levels, which could damage the valves.
 2. When the process fluid is hazardous or corrosive, extra precautions should be taken. The user should employ appropriate safety devices and should be prepared to control the flow of material through the outlet port.
 3. This valve was not intended for continuous exposure to steam, metering of steam may cause rapid erosion of the seat o-ring seal, leading to shut-off failure. Check regularly for seal wear and replace when necessary.
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NOTICE:

Maximum temperature/pressure rating is 275°F (135°C) at 100 psi (6.9 bar).

1. The valve is closed by turning the valve handle in a clockwise rotation until it stops.
2. Rotate the valve handle counter-clockwise to open. This will allow fluid flow through the outlet port

The valve is fully open after 1 1/8 turns.

5 Maintenance

5.1 Inspection

Inspection area	What to look for	Action if problem is found
Internal and external valve parts	Excessive wear, corrosion or cracking	Replace the affected parts
Around the valve stem retainer	Leakage	Replace the stem o-ring
Valve body	Fluid continues to flow through the valve when it is completely closed	Check and replace the seat o-ring

5.2 Disassemble the valve

1. Remove the handle by loosening the set screw and pressing or pulling the handle off the hose barb end of the stem.
2. Unscrew stem retainer clockwise (left-hand threads) to remove.
3. Unscrew the stem counter-clockwise and remove from body and remove the stem and seat o-rings as required.

5.3 Assemble the valve

1. Place the stem o-ring (item 3) and the seat o-ring (item 2) on the valve stem (item 49). Use deionized water to aid o-ring insertion.
2. Push the stem into the bleed valve body (item 1) until the stem threads engage with the body threads, and then turn the stem by hand clockwise until the stem is seated in the body. Use deionized water to aid stem insertion in the body.
3. Place the bleed valve stem retainer (item 5) over the stem and thread counter-clockwise (left-hand threads) on to the valve body. Hand tighten until the Retainer bottoms out on the body.



WARNING:

Do not over tighten retainer

Flats are provided on the retainer for tightening and loosening with a wrench. When tightening, only a very light pressure should be applied to make sure the retainer is completely seated (<5 in/lbs.).

The treads on the body should be completely covered.

4. Slip the bleed valve handle (item 6) over the top of the stem and align the set screw hole with the set screw recess in the stem. Then press the handle on over the stepped or raised area of the stem until it reaches the stop.

The set screw recess should be visible through the set screw hole.

5. Insert the handle set screw (item 7) in the set screw hole and tighten until the screw just hits the stem.



WARNING:

Do not over tighten handle set screw.

6. Open and close the valve to ensure smooth operation.

6 Parts List and Cross-Sectionals

6.1 Bleed valve

List of parts

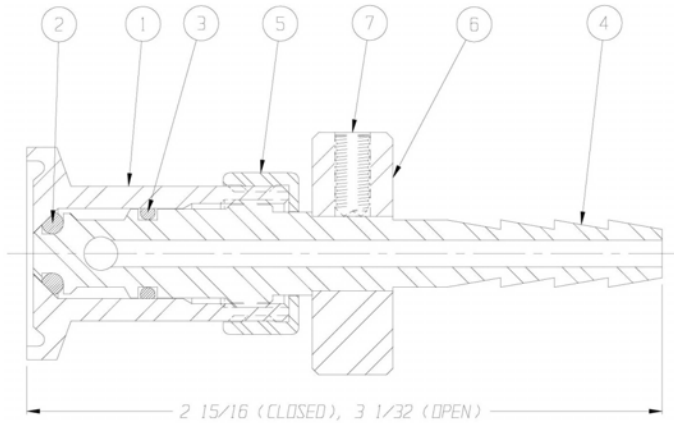


Table 1:

Item	Description	Quantity
1	1/2 TC x 1/4" bleed valve body	1
2	FDA approved EPDM seat o-ring	1
3	FDA approved EPDM stem o-ring	1
4	1/4" bleed valve stem, hose barb	1
5	1/4" bleed valve stem retainer	1
6	1/4" bleed valve handle	1
7	bleed valve set screw	1

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Form IOM-Bleed-en_US-2022-11