Water Supply Unit

Series 355

Model 355-08

General Description

The Inbal Water Supply Unit series 355 is an auxiliary device used on the Inbal Control Valve for monitoring the water supply to the valve control. The Inbal 355 is a combination of three components built into one unit: Shut-off Valve, Strainer, and Check Valve. The Inbal Water Supply Unit is designed specifically for the purpose of the control trim to be compact, neat, and easy to operate, as well as to enable a separate access to each component. A ¼" threaded port on the top surface and a ⅛" threaded port on the bottom surface of the Inbal Water Supply Unit is provided for either pressure gauge and/or solenoid valve connections.

The Inbal Water Supply Unit 355 is rated up to 300 psi (21 bar) and is available in ½" .

The frictionless operation of the Water Supply Unit makes it suitable for use with brackish or sea water similar to those found on offshore platforms or other industrial facilities.

Features

- The Shutoff Valve, Strainer, and Check Valve, built into one unit, suggest a fit-to-the purpose product, resulting in a neat control trim.
- Compact, yet sturdy construction, resulting in minimum volume and space for valve and trim.
- Frictionless design - ensures trouble free operation for a prolonged period of time in brackish or sea water.
- A pressure gauge is connected to the same unit.
- A solenoid valve could be added at any time.
- Available in a wide range of materials.
- Easy to maintain - enables individual access to each device.

Technical Data

Model Numbers

255-08.

Ends

355-08

Inlet Port - ½" NPT, female.

Outlet Port - ½" NPT, male.

A ¼" and a ⅛" NPT, female ports are for solenoid valve and/or pressure gauge connections.

Strainer
30 Mesh, Stainless Steel screen.

PressureRating
Maximum working pressure: 300 psi (21 bar).

Temperature Range
Water: Max. +180°F (+80°C).

Materials
Standard

Brass, Nickel Chrome plated.

Optional

Bronze ;
Nickel Aluminum Bronze ;
Stainless Steel ;
Super Austenitic Stainless Steel ;
Super Duplex Stainless Steel ;
Titanium.

Flow Factors
355-08: Cv=1.0 (Kv=0.86).

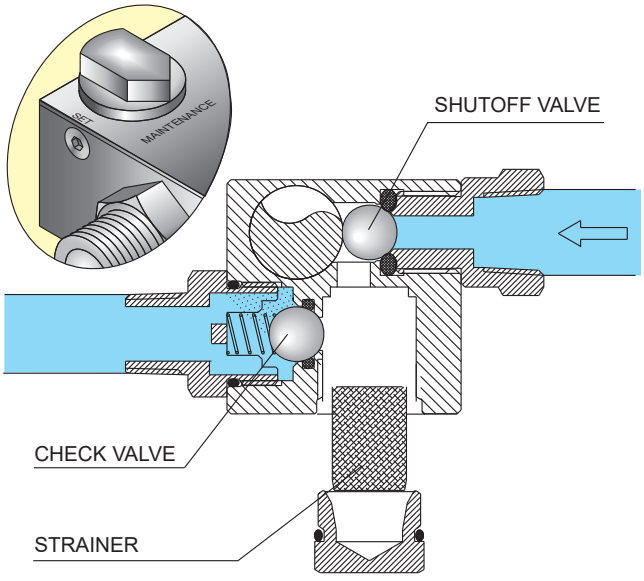
Weight
355-08: 2.3 lbs (1.05 kg).*

** standard materials*

Operation
The Inbal Water Supply Unit consists of three components:
Shutoff Valve - A quarter turn eccentric Rotor, position the Stainless Steel ball in the sealing seat, providing the trim positive isolation from the water system pressure. When the eccentric Rotor is in the normal position, the ball is allowed to take off the seat and water is permitted to flow to the control.
Check Valve - a spring loaded ball provides a precision sealing to prevent back flow.
Strainer - A Stainless Steel screen protects the trim from obstructions. An inspection plug is provided to inspect and clean the strainer when required.

Inttasllation
1. Refer to the applicable Trim Chart for piping arrangementThe female threaded port is the Inlet Port (IN is engraved), and it should be sourced from the inlet of the Inbal Valve or the Water Supply Valve if in use. The male threaded port (model 355-08) and female threaded port (model 355-06) is the Outlet Port (OUT is engraved), and must be connected to the Inbal Valve Control Chamber directly or through a manual, electric, pneumatic, or hydraulic actuator depending on the type of control.
2. Make sure that the Shutoff Valve device is in SET position.
3. Place the system in service by following the instructions applicable to the specific Inbal Valve model in use.

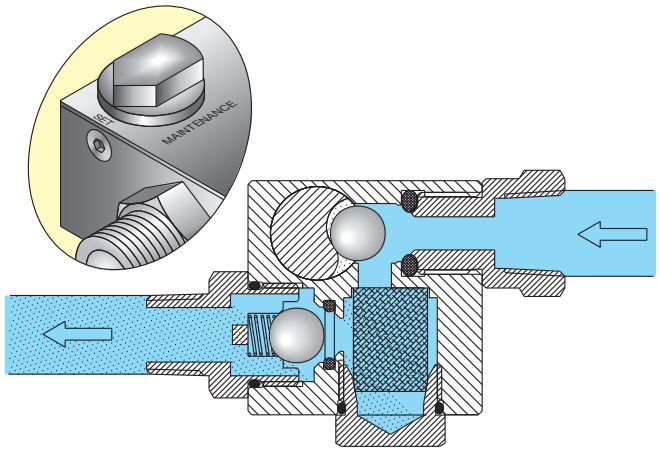
MAINTENANCE POSITION



The Rotor should be turned to MAINTENANCE position for cleaning strainer

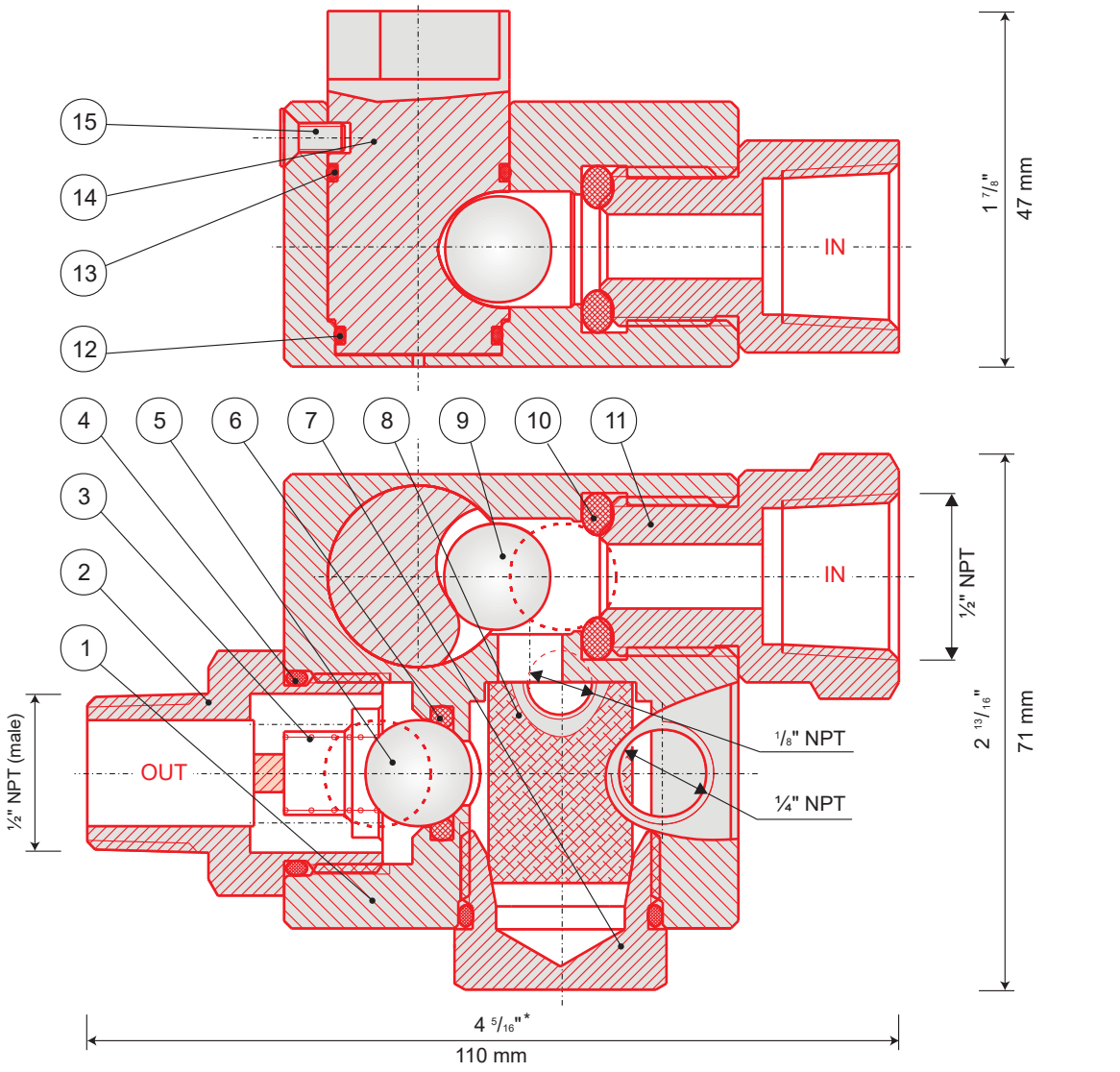
Figure (1A)

SET POSITION



The Rotor should point to SET during normal course of operation.

Figure (1B)



Model 355-08

Figure (2)

Item	Cat. No.	Description	Standard Material	Quantity
1	322002008000	Body	Brass, Nickel Chrome plated	1
2	322702002000	Outlet Fitting	Brass, Nickel Chrome plated	1
3	224006008001	Spring	Stainless Steel AISI 302	1
4	270621170000	O-Ring	Buna N	2
5	223508002000	Check Ball	Delrin	1
6	270612367000	Check Seal	Buna N	1
7	312102001000	Plug	Brass, Nickel Chrome plated	1
8	223606001001	Strainer Screen	Stainless Steel AISI 303	1
9	223506006000	Shutoff Ball	Stainless Steel AISI 303	1
10	270623090000	Shutoff Seal	Buna N	1
11	322702001000	Inlet Fitting	Brass, Nickel Chrome plated	1
12	270620170000	O-Ring	Buna N	1
13	270621160000	O-Ring	Buna N	1
14	423203001001	Rotor	Phosphor Bronze	1
15	227006012001	Allen Bolt	Stainless Steel AISI 304	1

Inspection, Maintenance, & Testing

It is imperative that the Inbal Water Supply Unit be inspected and tested on a regular basis. The frequency of inspections may vary due to quality of water supplies and/or corrosive atmosphere. The following recommendations are the minimum requirements to keep the Inbal 355 in good working conditions.

Strainer Inspection should be done at least once every three operations or quarterly - whichever occurs earlier. To inspect the strainer, first the Shutoff Valve should be closed by turning the Rotor (14) to MAINTENANCE position (use a 9/16" or 14 mm wrench). Remove the Plug (7) and clean the Screen (8). If during Strainer Inspection a leakage from either the Shutoff Valve device or the Check Valve device is observed, the following Shutoff & Check Valves Inspection should be implemented. Otherwise, proceed along the standard requirements.

Shutoff & Check Valves Inspection should be done at least once every five years or when a leakage is observed during a Strainer Inspection. The Shutoff & Check Valves Inspection involves placing the Inbal Control Valve out of service. An appropriate precaution for effective fire protection service such as fire patrol should be taken.

Disassemble the Water Supply Unit from the Inbal control trim. Remove Inlet Fitting (11), Shutoff Seal (10), and Shutoff Ball (9). Loosen Allen Bolt (15) and remove Rotor (14). Remove Outlet Fitting (2), O-Ring (4), Check Ball (5) and Check Seal (6). Inspect O-Rings (4), (6), (10), (12), & (13), replace if necessary. Reassemble and test the unit .

Testing of the Inbal Supply Unit is done by applying water pressure to the Inlet Port (IN), verifying that there is a steady stream released from the Outlet Port (OUT). Close the Shutoff Valve, the flow should stop. Observe for leakage from the Outlet Port. Disconnect the pressure source from the Inlet Port, and connect it to the Outlet Port. The Check Valve should prevent the flow. Observe for leakage from the Inlet Port . As soon as the testing is completed, place the Water Supply Unit back in the control trim by following the instructions in Installation.

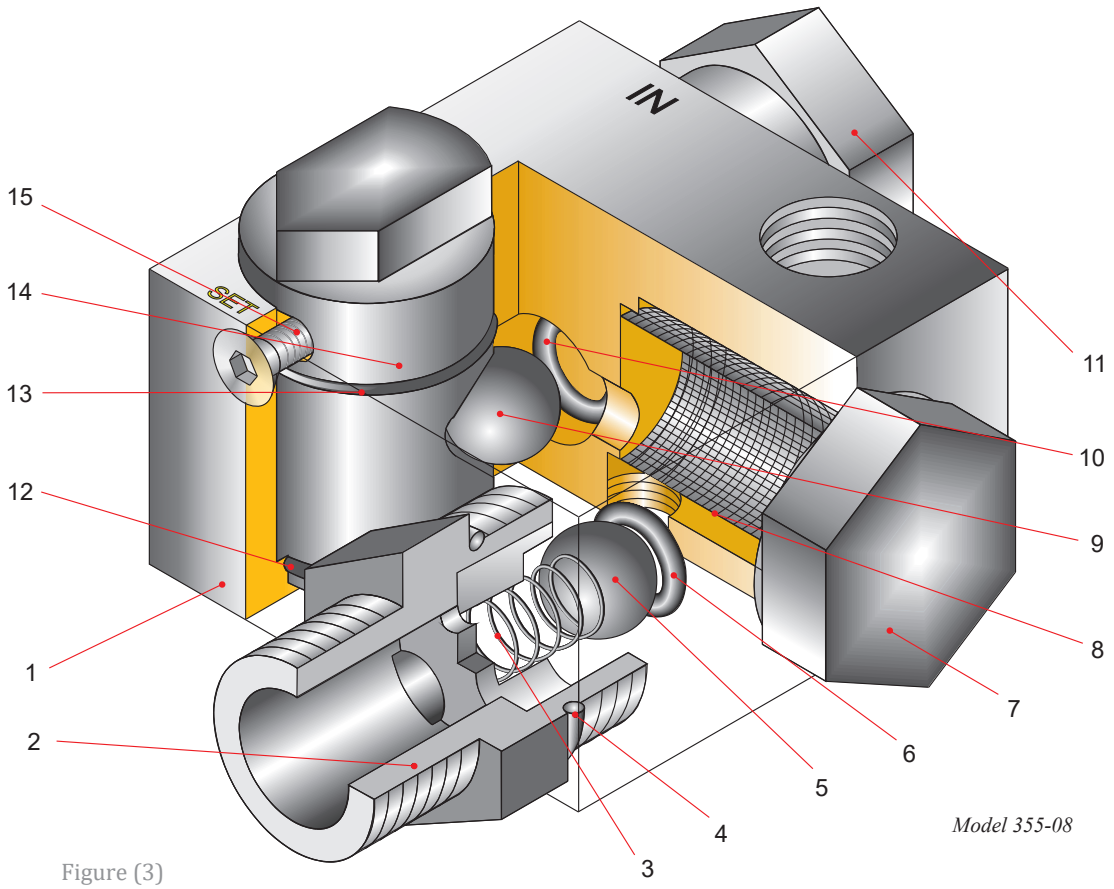


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Figure (3)