MARINE • QUICK-CLOSING VALVE • IOM

Installation, operation and maintenance

Instructions for transport, storage, inspection, installation, operation, maintenance and disposal.



QUICK-CLOSING VALVE

English instruction manual
PPS International

Technical instructions reproduced from the supplied manufacturer IOM.

Transport & storage

1 Transport

Packaging	Use original packaging. Keep upright; fragile.
Environment	Maximum 40°C • 30-80% relative humidity. Keep in the shade and in a clean environment.
Lifting	Fasten the lifting rope to the lifting rings. Do not fasten it to the handwheel or stem.
Protection	Protect the paintwork, nameplate and flange sealing faces during transport. Do not drag the valve on the ground or allow either end sealing face to contact the ground while moving.

2 Storage

Environment	Maximum 40°C • 30-80% relative humidity. Keep in the shade and in a clean environment.
Disc position	Keep the disc in the closed position.
Flange protection	Protect the valve bore and flange ends with caps or discs secured with straps.

3 Inspection

Transport damage	Inspect the valve for damage. Notify any damage within 10 days after arrival.
Application	Check that the valve materials are suitable for the fluid.
Manual device	Check that the manual operating device moves freely without obstruction.
Pressure & temperature	Check the maximum working pressure (PS max) and the minimum and maximum working temperatures (TS min / TS max).
Pipe flanges	Check the suitability of the mating pipe flanges.
Flange sealing faces	Check for burrs, radial grooves, weld spatter, sharp edges, oil and other contamination.
Valve interior	Check that the interior is free from damage and foreign matter.

4 Installation

Dangerous fluids	Avoid contact with the fluid. Clean out in accordance with the user specification or local legislation.
Exposure to fire	Tightness is not guaranteed when the valve is in contact with or near fire.
Explosive gas	Check the condition of the grounding wire regularly.
Flow direction	Verify that flow in the line corresponds to the arrow on the valve body.
Stem position	Valves are normally installed in horizontal pipework with the stem vertical.
Flange gaskets	Gaskets are required.
Centring	Install the valve in the centre of the pipeline.
Bolt tightening	Tighten bolts in a criss-cross sequence.
Tightening torque	"Until leakage stops." (Manufacturer source wording.)
Flange welding	Welding and heat treatment should be carried out according to ASME B31.3.

5.1 Normal Operation (Opening the Valve)

5.1.1 Ensure that the system's power, pneumatic, or hydraulic supply is connected.

5.1.2 Confirm that the valve is in the closed position.

5.1.3 Actuate the mechanism-using either the control box or a manual pump-to open the valve to its fully open position.

5.1.4 Verify that the release cylinder pushrod has engaged against the spring force, locking the valve in the open position.

5.1.5 Check the valve position indicator to confirm that the valve is fully open.

5.2 Remote Rapid Closure (Emergency Operation)

5.2.1 Locate the remote release mechanism for the corresponding quick-closing valve at a safe position outside the machinery space;

5.2.2 Pull the release lever or press the release button;

5.2.3 Verify that the valve is fully closed (via the position indicator or by direct on-site inspection);

5.2.4 Record the time of closure and the details of the operation.

5.3 Manual Emergency Operation

In the event that the remote control system fails, the valve can be closed via manual operation:

5.3.1 Open the control box door;

5.3.2 Push the ball valve handle to close the quick-closing valve;

5.3.3 Alternatively, rotate the handwheel clockwise until resistance is felt to achieve manual closure;

5.3.4 Confirm that the valve is fully closed.

5.4 Valve Reset (Reopening)

If the valve needs to be reopened after closure, follow these steps:

5.4.1 Confirm that the cause of the trigger has been resolved and the system has returned to normal;

5.4.2 Ensure that the power supply or air supply to the actuator is connected;

5.4.3 Rotate the handwheel (clockwise) until resistance is felt;

5.4.4 Pull the actuator lever so that the release cylinder pushrod once again counters the spring force;

5.4.5 Operate the valve via the control box to the fully open position;

5.4.6 Verify that the valve is locked in the open position and check for any leaks.

6 Maintenance • qualified personnel

6.1 Weekly routine checks

Appearance	Check the external condition of the valve body, piping and control box; ensure there are no leaks.
Indicator	Check that the valve position indication is normal.
Air / hydraulic pressure	Check that the pressure is within the specified range.
Control box	Check the tank interior for accumulated water or impurities and verify that instrument readings are normal.
Air receiver	Periodically open the drain valve at the bottom of the air receiver to discharge accumulated water and impurities.

6.2 Maintenance precautions

6.2.1 Before replacing hydraulic components, piping or seals, release the pressure in the accumulator to prevent pressurised oil from spraying out and causing injury.

6.2.2 Replacement seals must be made of corrosion-resistant fluororubber.

6.2.3 After replacing seals, perform a leak test to ensure correct installation and the absence of leaks.

6.2.4 If a solenoid valve becomes stuck, disassemble and clean it; replace any damaged parts if necessary.

6.2.5 For long-term storage, keep valves in the closed position. Lubricate all moving parts, store in a dry environment and do not store outdoors.

7 Disposal

Dispose of the product in accordance with applicable local and national legislation.

8 Safety • where ATEX is applicable

Coating thickness	The coating thickness must be less than 0.2 mm.
Working atmosphere	Do not strike external parts with metallic objects.
Maximum surface temperature	According to liner material: NBR: II 2GD c Tmax = 80°C PTFE: II 2GD c Tmax = 200°C METAL: II 2GD c Tmax = 425°C

Manufacturer's declaration • source text

According Appendix IIB of the Machinery Directive 98/37/EC We hereby declare that this product does satisfy fully the conditions set out in the Machinery Directive. The products conforms to the standards EN 558, EN 19, ISO 5752, GB11691. It is prohibited to utilize the machine in which our product has been integrated before the former has been certified as complying with the conditions of the Machinery Directive.