

PRES·VAC

SERVICE & SPARE PARTS



G&O MARITIME GROUP

MARINE LIFE WITHOUT FOOTPRINTS

PRES-VAC ENGINEERING SERVICE & SPARE PARTS

Conveniently Located Service Network

Pres-Vac has established a network of Service and Repair Centers (SRC's) consisting of independent local companies, which have the technical skills, adequate training and marine experience to resolve service issues concerning your Pres-Vac products. Our SRC's are conveniently located all over the world to provide you with rapid access to spare parts and qualified service engineers. Please refer to our webpage for an updated list of PRES-VAC Service & Repair Centers (www.pres-vac.com).

Overhaul & Repair Jobs

The SRC's have the experience to deal with any service job involving Pres-Vac valves - from pre-inspection to overhauling (Special Survey Overhaul). Our SRC's have test-rigs available that can be used to provide you and the classification societies with certified test results for the opening settings of your valves.

Spare Parts & Maintenance Kits

Original Certified Spare Parts from Pres-Vac ensure that the valves will operate and comply with international rules and regulations. All PRES-VAC Spare Parts are certified to be installed in situ in accordance with IMO/MSC/Circ. 677/1009 ISO15364, without any further involvement of Recognized Organizations.

Pres-Vac has developed a series of Maintenance Kits, which enables the vessel to carry inexpensive parts on board to cover the most common valve repairs. Pres-Vac has also developed upgrade packages to handle changes in IMO-regulations or cargoes with higher vapour points.



INSPECTION & MAINTENANCE OF HIGH VELOCITY P/V VALVES

For vessels that have type approved end-of-line high speed pressure-vacuum valves (High Velocity P/V Valves) installed, it is recommended that the following inspection- /maintenance routines are implemented in order to keep the valves in proper operating condition.

Inspection & Maintenance of High Velocity P/V Valves

Procedure	Purpose	Recommended Interval
Preparation for Cargo Operation	Check for Free Movement	Before any Cargo Operation

Procedure: Preparation for Cargo Operation

The purpose of this inspection is to ensure full functionality and free movement of valve;

- Operate check-lift and ensure free movement of the pressure valve (Acc. to SOLAS Reg. 10, b (i)).
- Operate check-lift and ensure free movement of the vacuum side (Acc. to SOLAS Reg. 10, b (i)).

- Inspect the Mesh Element/Filter on the Vacuum side and Inspect Seat and Disc on the Pressure side. Clean if found necessary.

Warning: If the valve does not move freely, the cause should be determined and corrected immediately.

Inspection & Maintenance of High Velocity P/V Valves

Procedure	Purpose	Recommended Interval
Recurring On-board Inspection	Inspection for Deposits & Wear	Minimum Every 6 Months (*1)

Procedure: Recurring On-board Inspection

The purpose of this inspection is to ensure that the valve's performance have not limited due to damages, wear, deposits (cargo residues etc.). Inspection frequency depends on its operation conditions and the type of cargoes carried (*1);

- Check Free Movement according to procedure "Preparation for Cargo Operation"
- Inspect "Deposit Indicators" to estimate level of internal deposits and residues
- Clean and visually check seat and disc on the pressure side for deposits, grooves and "dent marks"

- Visually check filters/mesh element on the vacuum side for deposits and particles
- Grease the check-lift handle(s) with a minimum amount of grease (if required)
- If applicable, remove the mesh element/filter on the vacuum side and clean/inspect the vacuum seat and disc.

If the valve shows any signs of malfunction, damages in seat/disc or a significant amount of deposits/residues, a detailed inspection of the valve and necessary corrective actions must be taken (Please refer to the valve's maintenance manual).

Inspection & Maintenance of High Velocity P/V Valves

Procedure	Purpose	Recommended Interval
Special Survey Overhaul & Test	Valve Overhaul	Minimum Every 5 Years

Procedure: Special Survey Overhaul & Test

The purpose of this overhaul is to verify that the valve operates according to its specifications and type approval;

- Clean all internal and external parts of the valve
- Replace or repair any part of the valve that shows signs of substantial wear or tear
- Ensure free movement of all moving parts.
- Check and adjust the opening setting of the pressure valve by means of a Test Rig (or similar equipment)
- Check the opening setting of the vacuum valve by means of a Test Rig (or similar equipment)
- If leakage is suspected, perform a leak test

Cleaning & Repair

All parts can be cleaned by means of a cleaning pad or brush and a thin lube oil (or a suitable detergent). If required, the mesh element/filter can be "soaked" in a suitable detergent.

Lapping ("slightly") of disc and seat will generate an abrasive effect that can improve the sealing

between disc and seat. (Caution: The pressure valve must always be pressurized to at least 80 % of the nominal setting during lapping). Lapping will have little or no effect on a damaged valve seat and/or disc. Warning: Machining of the valve's seat and disc is not recommendable under any circumstances. Machining can change the valve's characteristics significantly and thus compromise the safety for vessel and crew.

Spare Parts:

In order to maintain the valve's type approval, only type approved spare parts should be used. Original PRES-VAC Spare Parts is recommended.

Test of the P/V Valve

Function Test: Both the vacuum- and pressure side must operate freely (Acc. to the procedure "Preparation for Cargo Operation").

Opening Setting (Pressure- & Vacuum Side):

The opening setting shall be within $\pm 0,5$ kPa or ± 6 % of nominal setting, whichever is the lowest.

Leakage: The leakage rate should be within the allowed limits for the specific size of P/V-Valve (Ref. PV-table no. 1192-192).

Applies for PRES-VAC valve types: PV-ECO/ECO-VAC(Superior), PV-VOC/VOC-VAC(Superior), HS-ISO/ISO-VAC, HS-IMO2/VAC-IMO2. Above is guidelines for High Velocity P/V-valves. Please refer to the Operating and Maintenance Manual for a detailed description.

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G&O Maritime Group provide value, safety and reliability to the global maritime industry through green, innovative quality solutions.