Frese Dynamic Valves
Marine & Industry
Recommended Maintenance Plan

This document outlines the recommended maintenance and spare parts related to Frese OPTIMA Compact, SIGMA Compact and ALPHA valves installed in Marine & Industrial Installations.

System categorisation

Frese distinguish between critical systems and comfort systems, when defining recommended maintanence and recommended available spareparts. The two type of systems are defined as below:

Critical systems

- A failure of the valve may affect the continued operation of the vessel or production plant.
- A critical system on a ship could be tank heating in engine room, low temperature fresh water cooling system in engine room and similar systems.

Comfort systems

- Comfort systems are typically HVAC systems, with the pure intention to satisfy the need for comfort, but the safe operation of the vessel or production plant will be unaffected by a valve failure.

Recommended maintenance

Frese Valve Type	System Category	
	Critical	Comfort
SIGMA/OPTIMA Compact DN10-32 (Threaded)	Inspect every 5 year Replace every 10 year	Inspect every 15 year
SIGMA/OPTIMA Compact DN40-50 (Threaded)	Inspect every 5 year Replace every 10 year	Inspect every 15 year
SIGMA/OPTIMA Compact DN50-300 (Flanged)	Inspect every 5 year Overhaul or replace every 10 year	Inspect every 15 year
ALPHA DN10-50 (Threaded)	Inspect every 5 year Overhaul or replace every 10 year	Inspect every 15 year
ALPHA Wafer DN50-800	Inspect every 5 year Replace cartridges every 10 year	Inspect every 15 year
ALPHA Wafer HCR DN50-450 (For sea water)	Replace cartridges every 5 year	Replace cartridges every 5 year

General Conditions of Sale and Delivery

Our General Conditions of Sale and Delivery apply in all respects.

These are available on request or they can be downloaded from our website www.frese.eu/marine.

Recommended available spare parts (Onboard or consigment)

Frese Valve Type	System Category	
	Critical	Comfort
OPTIMA Compact DN10-32 (Threaded)	1 valve and actuator for every 20 valves installed of same type. Min 1 complete valve and actuator	None
OPTIMA Compact DN40-50 (Threaded)		None
OPTIMA Compact DN50-300 (Flanged)		None
ALPHA DN10-50 (Threaded)	1 cartridge of each type/flow	None
ALPHA Wafer DN50-800	1 complete cartridge set covering all necessary flows in installation (Customized)	None
ALPHA Wafer HCR DN50-450 (For sea water)	1 complete cartridge set	None

Above recommendations are based on that the media is water operated in a closed loop with strainers and water treatment as per Frese General documentation.

Valve inspection guideline

Below tables outline the recommended checks to be done at inspection of valves.

If the expected result is not observed and the corrective actions do not lead to the expected result please contact your Frese valve supplier for ordering of replacement valves and or actuators.

Frese OPTIMA Compact and Frese SIGMA Compact DN10-300

	Item	Expected result	Corrective actions
1	OPTIMA Compact DN40-300 only: Check valve stroke visually by means of the installed actuator	Valve can travel full stroke according to valve type	Dismount valve, check for any obstructions inside valve
2	Check presetting according to original	Presetting of flow according to original documentation	Adjust to required preset value
3	Check for visual leakages	No leakages	Contact your Frese valve supplier
4	OPTIMA Compact only: Check wiring on actuator and damages on cable insulations	No dust and dirt near cable connections, insulation in intact condition, on all wires	Remove dust, tighten cable connections, replace cables if needed
5	OPTIMA Compact only: Check mechanical connection between actuator and valve	Tight bolts connection without slack	Retighten bolts. Evaluate if vibration securing with Loctite or similar is needed
6	Measure differential pressure across valve	Above minimum differential pressure for valve and presetting	Check for other flow obstructions in piping system, like filters, partly open valves etc. Adjust pump speed to ensure minimum differential pressure for the valve

Frese ALPHA Valves

	Item	Expected result	Corrective actions
1	Wafer style only: Unmount valve and inspect cartridges for physical damages Threaded valves: Open top of valve housing and take out cartridge	Cartridges can be compressed by hand – no physical damages	Replace cartridges
2	Wafer style DN100-800 only: Check correct tightening of bolts holding cartridges	Bolts tightened with 10 Nm	Retighten if needed
3	Check for visual leakages	No leakages	Contact your Frese valve supplier
4	Measure differential pressure according to flow	Above minimum differential pressure for valve and presetting	Check for other flow obstructions in piping system, like filters, partly open valves etc. Adjust pump speed to ensure minimum differential pressure for valve

KNOWLEDGE

QUALITY

INNOVATION

MANUFACTURING EXCELLENCE

CUSTOMER FOCUS

www.frese.eu

Denmark - Main Office
Frese A/S
Tel: +45 58 56 00 00

Germany
Frese Armaturen GmbH
Tel: +49 (0)241 475 82 333

United Kingdom
Frese Ltd
Tel: +44 (0) 1704 896 012

Turkey
Frese Eurasia DIS TIC. LTD. STI.
Tel: +90 216 580 93 60

China
Frese Valves (Ningbo) Co., Ltd.
Tel: +86 (21) 5110 3212

Saudi Arabia
Frese Saudi Arabia
Tel: +966 5410 25 405

Australia & New Zealand
Frese Asia Pacific
Tel: +61431 794 414

South Africa
Frese Asia Pacific
Tel: +61431 794 414