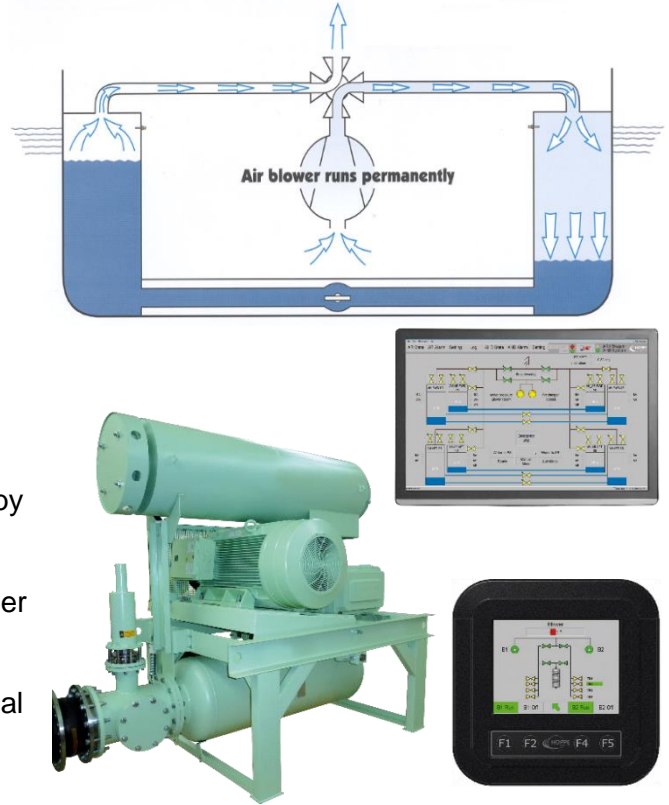


SYSTEM

The Hoppe Blower Anti-Heeling System is designed for fast loading and discharging with high flexibility and short reaction time, supporting heavy load operations. These systems can be combined with a U-Tank Roll-Damping System to enable the roll damping tank to be used for heel compensation and/or ice-heeling purposes.

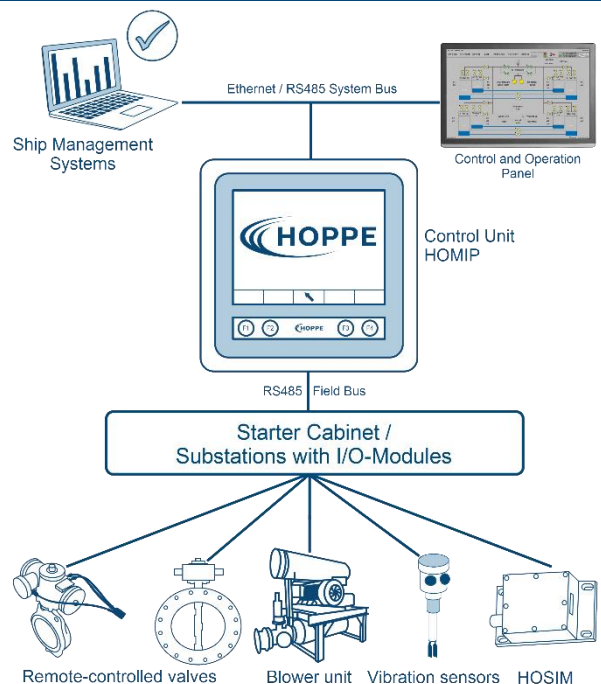
The closed system consists of one or more side tank pairs, which are connected with air pipes on the top and water cross pipes close to the bottom. The compressed air from the blower unit(s) is used to shift the water between the side tanks and maintain the water level during operation. The air at opposite side to which the water is deflected is led to atmosphere via exhaust silencer.

The system status pressures and levels are monitored by in-house designed sensor units. All system data are processed in the HOMIP PLC and displayed on the larger touch screens of the remote operation panels. The control system is designed for either automatic or manual operation and variable flow rates for Load Moment Control for on- and offshore operations.



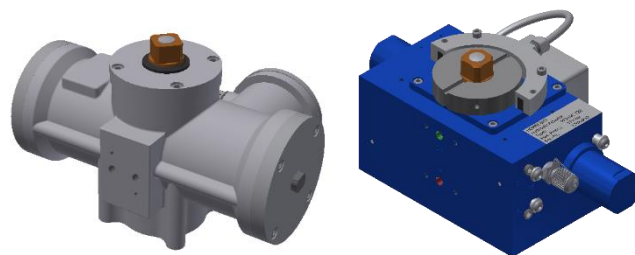
FACTS, FEATURES & DIMENSIONS

- one blower unit
200-1,800tm/min compensation rate
500-4500m³/h flow rate
 - several parallel operated blower units for higher flow and compensation rates
 - Unlimited change of water flow direction
 - Fast reaction time for immediate counter action against unsymmetrical loads
-
- Systems monitoring and control via powerful Soft-PLC unit and Panel-PC
-
- Tank sensors for water level and flow measuring
-
- Control and measuring devices are class type-approved



TECHNICAL DATA REMOTE-CONTROLLED VALVES

Working type	Double-acting, single-acting (various types, pneumatic and hydraulic)
Working locations	Dry, temporarily submerged
Valve range	DN50-DN500
Material	Aluminum
Emergency functions	Close function avail. for single-acting



TECHNICAL DATA BLOWER UNIT

Power consumption	12-250 kW
Voltage	230-690 V
Frequency	50Hz/60Hz
Synchronous speed	1,500RPM (50Hz) / 1,800RPM (60Hz)
Suction rates	10-125 m³/min



TECHNICAL DATA LEVEL SWITCH & LEVEL SENSOR

Level switch features	Flameproof, chemical duty
Level switch degree of protection	IP66
Level sensor measuring range	0mbar – 4000mbar
Level sensor output signal	Analog 4...20mA, or Bus signal RS485 half-duplex
Level sensor degree of protection	IP 68; submersible up to 10 bar



TECHNICAL DATA HOSIM 2

Measuring principle	Acceleration- and temperature-compensated position measurement
Roll/Pitch angle accuracy (static)	0.07° RMS
List/Trim angle accuracy (5 min. average)	0.09° RMS
Linear temperature influence (angles)	± 0.02°/°C
Interfaces	RS422, RS485, Ethernet
Housing and protection class	Aluminum, IP68

