

ACO PowerVAC

Vacuum Generation

The ACO PowerVAC vacuum pumping unit forms the centrepiece of the centralised vacuum toilet collection and transfer system. The ACO PowerVAC unit is designed to create a powerful vacuum within the vacuum line network to ensure an efficient and reliable sewage collection and transfer direct to a wastewater treatment plant, holding tank or to shore discharge.

The ACO PowerVAC improved design consists of one or more pumps connected directly to a wastewater treatment plant or holding tank without the need for a temporary collection reservoir.

The compact, close-coupled pump design provides a small footprint, which makes the unit ideal where space is limited.

The ACO PowerVAC unit is simple to install and service thanks to its compact and well thought-out Easy-to-Maintain design.



ACO PowerVAC

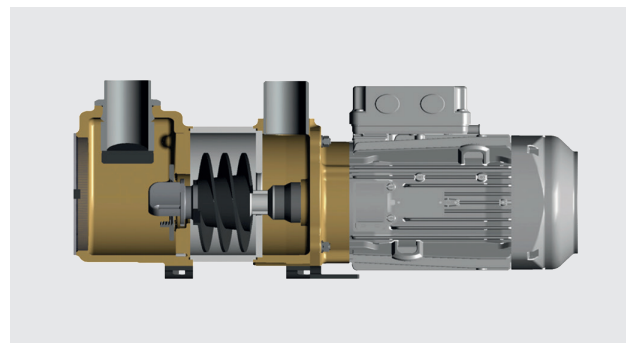
Efficient & flexible vacuum generation units for marine applications

- Designed for vacuum toilet, black water collection systems & wastewater transfer
- Optimized design of backflow flap minimizes a risk of squeezed solid parts in the backflow flap and consequently a leakage of the vacuum system.
- Powerful macerator significantly minimizes a risk of blockage of the pump
- Five connection points for emptying or additional sensors.
- Special housing of mechanical seal to avoid dirt in the gasket.
- High quality pump materials and mechanical seal system.
- Pumps are designed according to the easy-to-maintain principle. Easy access to the pumping elements, wear parts and sealing system by simply removing the 'wet end' pump cover
- Bespoke specifications are available on request to match on-board requirements.

Process description

The ACO PowerVAC Vacuum Pump is a simple and efficient vacuum pump with an integrated macerator on the same shaft. The eccentrically positioned screw shaped impeller spins pumping water around the perimeter of the pump housing and that way it creates vacuum on the suction side and simultaneously pumps waste water from the vacuum sewage system.

The backflow flap on the suction side seals the vacuum sewage system within the time when the pump does not run.



ACO PowerVAC Vacuum Pumps

Type	Operating Data								Dimensions					
	Air capacity up to		Flushing capacity up to		Nominal Power		Voltage *		L	W	H	Inlet	Outlet	Weight
	m ³ /h		flushes/h		kW		Volts		mm	mm	mm	mm	mm	kg
	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	mm	mm	mm	mm	mm	kg
15	13.7	15.0	120	150	2.2	2.6	400	460	572	212	326	Hose Ø48,3	Hose Ø48,3	35
25	22.0	25.0	190	240	3.0	3.6	400	460	704	195	381	Hose Ø60,3	Hose Ø60,3	65
25-F	22.0	25.0	190	240	3.0	3.6	400	460	704	195	275	Flange DN50, PN10	Flange DN32, PN10	65
70-F	70.0	85.0	730	800	5.5	6.4	400	460	838	252	448	Flange DN65, PN10	Flange DN50, PN10	100

* Other voltages are available on request.

ACO PowerVAC Vacuum Pumps with integrated frequency converter

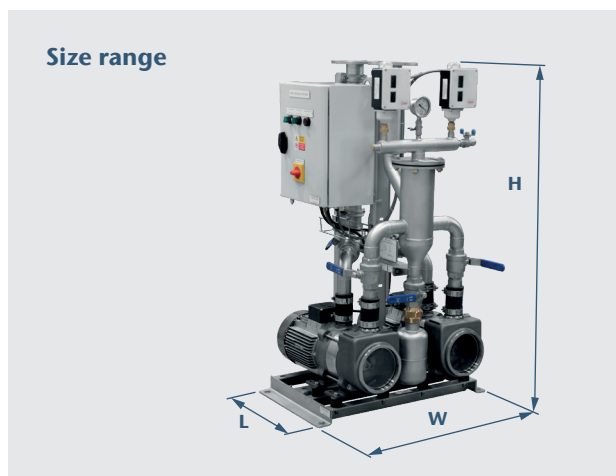
ACO PowerVAC Vacuum Pumps can be also equipped with an integrated frequency converter. This option brings following unique features:

- External control panel is not necessary. Easy control concept is directly on the frequency converter. It reduces space and costs.
- Vacuum sensor is integrated. No need additional vacuum sensor.
- Via Boost-Function it is possible to increase the power of the pump up to 25%.
- Increased durability and lifetime of the pump by the frequency converter operation.



ACO PowerVAC Vacuum Stations

Type	Operating Data								Dimensions					
	Air capacity up to		Flushing capacity up to		Nominal Power		Voltage *		L	W	H	Inlet	Outlet	Weight
	m ³ /h		flushes/h		kW		Volts		mm	mm	mm	mm	mm	kg
	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	mm	mm	mm	mm	mm	kg
2x15	2x13.7	2x15.0	2x120	2x150	2x2.2	2x2.6	400	460	590	700	1165	Flange DN50, PN10	Flange DN50, PN10	140
2x25	2x22.0	2x25.0	2x190	2x240	2x3.0	2x3.6	400	460	790	700	1405	Flange DN65, PN10	Flange DN65, PN10	215
2x70-F	2x70.0	2x85.0	2x730	2x800	2x5.5	2x6.4	400	460	840	795	1705	Flange DN80, PN10	Flange DN80, PN10	340



NOTE: * Other voltages are available on request