



ORCA series

Vacuum vapour compression water makers for the oil and gas industry

Vacuum vapour compression water makers

Fresh water is one of the main utilities required on board any offshore facility. Alfa Laval provides a range of solutions for converting seawater into fresh water. Alfa Laval equipment is designed for automatic operation with continuous control and monitoring of fresh water quality. Built using titanium and other seawater-resistant materials, the generators feature a simple, compact design that ensures long working life and low operation and maintenance costs.

Vacuum vapour compression plants are a simple, efficient method of producing a constant supply of high quality fresh water for both drinking and process use. Using the vacuum distillation process, they convert seawater into fresh water using electricity, but with only minimal power consumption. The process ensures fresh water with salinity levels below 2 ppm.



Orca 20 with options

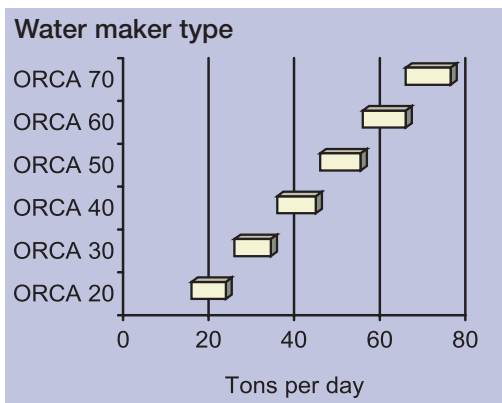


Fig. 1 Capacity range

Features and benefits

- Simple, compact design
- Titanium heat exchanger plates, along with other seawater-resistant materials
- Combined ejector water and feed water system
- Freshwater control system
- High quality fresh water
- Low operating cost
- "Start and forget" operation
- Easy maintenance
- Reliability and long working life

The ORCA series covers a capacity range of 20–70 m³/24h. Alfa Laval water makers can be configured to suit any off-shore requirement. The ORCA series is optimized for use on board offshore drilling rigs and production facilities.

Basic equipment

Water maker unit including titanium plate heat exchanger for combination evaporator and condenser, stainless steel distiller shell, air ejector, freshwater pump, compressor, UL-approved control panel with built-in freshwater quality monitoring system.

Additional equipment

- Seawater supply pump with offshore standard electric motor
- Feed water anti-scale chemical dosing unit

Optional equipment

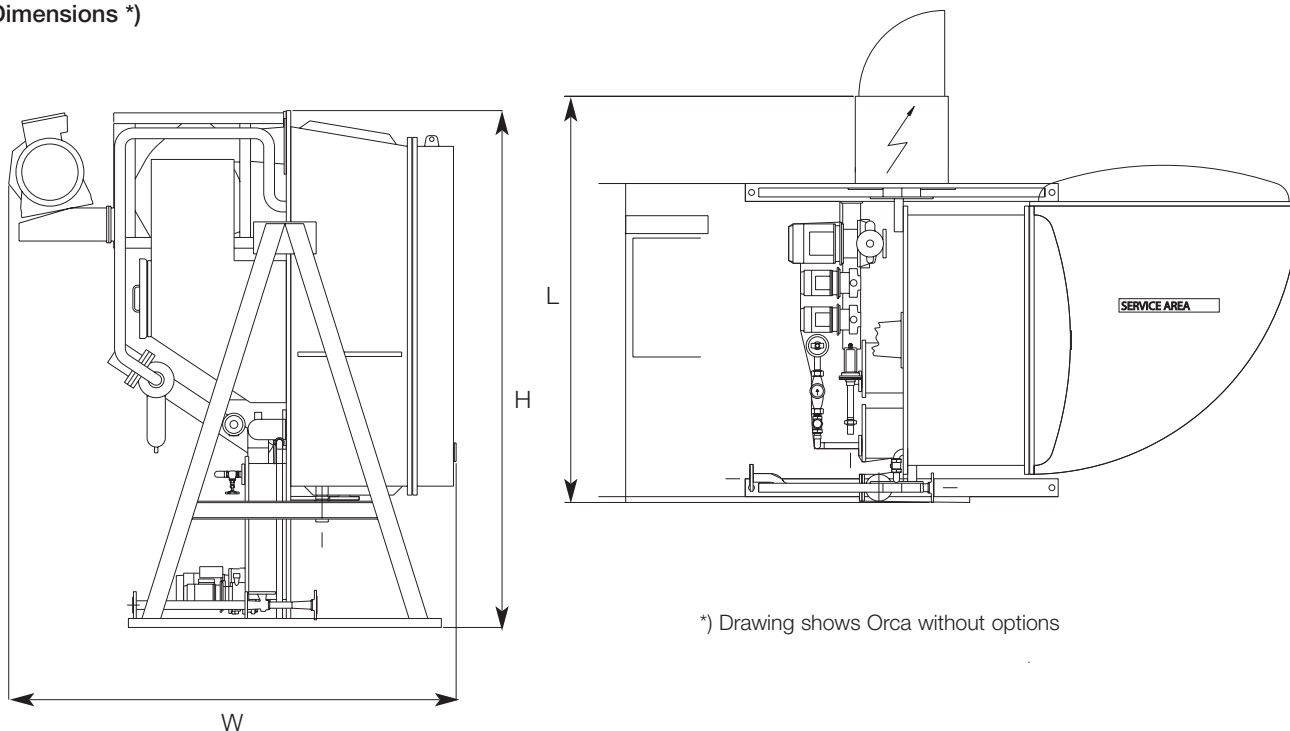
- Freshwater pH adjustment filter
- Silver-ion or UV sterilizers

All the above can be pre-piped, pre-wired and skid mounted.

Technical specifications (standard units without optional equipment)

Water maker type	ORCA 20	ORCA 30	ORCA 40	ORCA 50	ORCA 60	ORCA 70
Length (L) mm/inch	2200 / 87					
Width (W) mm/inch	2525 / 100			2700 / 107		
Height (H) mm/inch	2900 / 115					
Dry weight kg/lbs	4500 / 9923				4800 / 10584	
Operating weight kg/lbs	4665 / 10286				4985 / 10992	
FW pump motor kW/hp	1.3 / 1.7					
Brine pump motor kW/hp	1.3 / 1.7					
SW pump motor kW/hp	8.6 / 11.4					
Circ. pump motor	2.5 / 3.3				3.7 / 4.9	
Electric power	71				78	
Fresh water quality	WHO standard, less than 2 ppm NaCl					

Dimensions *)



*) Drawing shows Orca without options

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Alfa Laval reserves the right to change specifications without prior notification.

How to contact Alfa Laval

Contact details for all countries are continually updated on our website. Please visit www.alfalaval.com to access the information direct.