



## ORCA Offshore 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 PLC-controlled 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 5 ppm.



Orca Offshore

### Water maker type

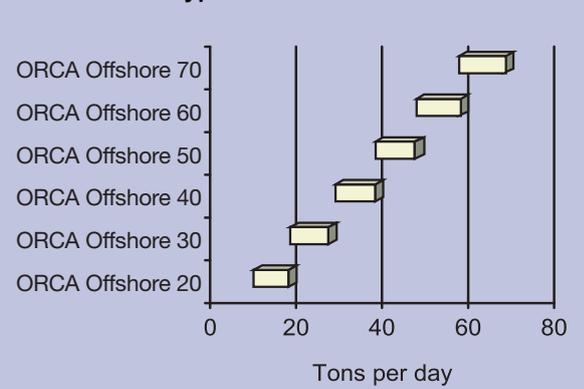


Fig. 1 Capacity range

### Features and benefits

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

The ORCA Offshore series covers a capacity range of 20–70 m<sup>3</sup>/24h. Alfa Laval water makers can be configured to suit any offshore requirement. The ORCA Offshore 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 incl. piping, PLC control panel with built-in freshwater quality monitoring system. Feed water anti-scale chemical dosing unit.

**Additional equipment**

- Seawater supply pump with offshore standard electric motor

**Optional equipment**

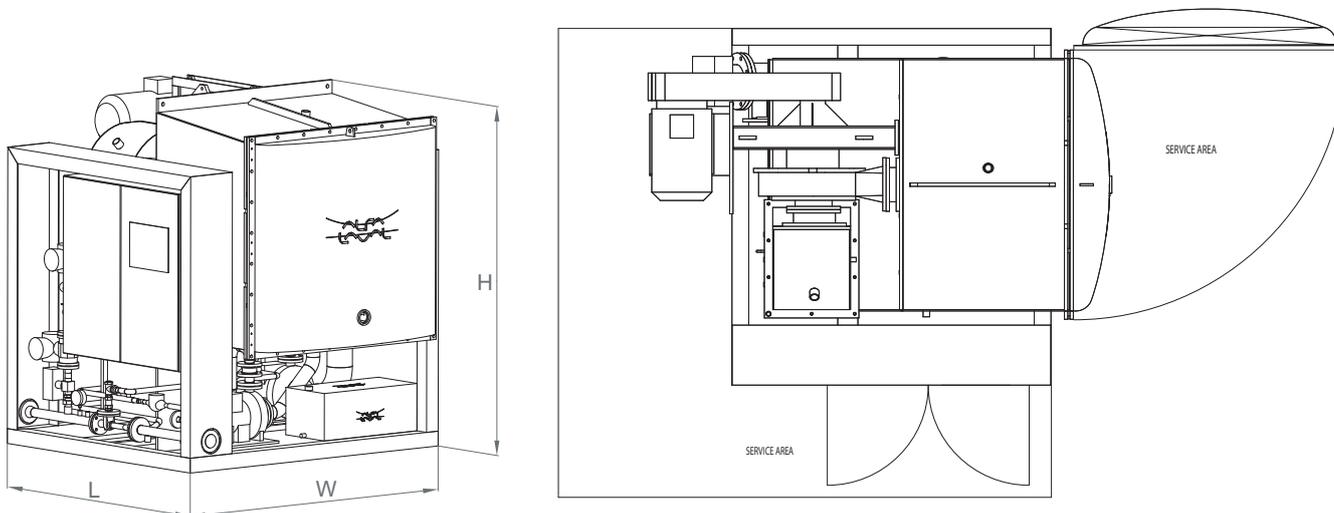
- Freshwater pH adjustment filter
- Silver-ion or UV sterilizers
- De-chlorination chemical dosing unit

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

**Technical specifications (standard units without optional equipment)**

Water maker type	ORCA Offshore 20	ORCA Offshore 30	ORCA Offshore 40	ORCA Offshore 50	ORCA Offshore 60	ORCA Offshore 70
Length (L) mm/inch		2450 / 96			2800 / 110	
Width (W) mm/inch		2150 / 85			2150 / 85	
Height (H) mm/inch		2400 / 94			2400/94	
Dry weight kg/lbs		3700 / 8175			4000 / 8818	
Operating weight kg/lbs		3865 / 8521			4185 / 9226	
FW pump motor kW/hp		1.3 / 1.7			1.3 / 1.7	
Brine pump motor kW/hp		1.3 / 1.7			1.8 / 2.4	
SW pump motor kW/hp (option)		12.5 / 1			12.5 / 17	
Circ. pump motor		1.9 / 2.6			3.6 / 4.9	
Electric power (kW installed)		78.5			81	
Power consumption kwh/m <sup>3</sup> fresh water		18			18	
Fresh water quality		WHO standard, less than 5 ppm NaCl				

**Dimensions \*)**



\*) Drawing shows ORCA Offshore without options

**How to contact Alfa Laval**

Contact details for all countries are continually updated on our website. Please visit [www.alfalaval.com](http://www.alfalaval.com) to access the information direct.