

OIL & GAS INDUSTRY

Quick STUDY

Hydra-Cell®
Seal-less Pumps

www.Hydra-Cell.com

Location:	United States
Application:	Reverse osmosis (RO)
Media:	• Seawater
Model No.:	D10 & D35
Flow Rate:	D10 up to 8 gpm (30 l/min) D35 up to 37 gpm (140 l/m)
Pressure:	D10 up to 1000 psi (69 bar) D35 up to 1450 psi (100 bar)
Hydra-Cell Advantages:	• Seal-less design, the ability to handle aggressive liquids with particles in suspension • Reliability



Producing Fresh Water from Seawater for Offshore Platforms

Since 2004, a manufacturer of Reverse Osmosis (RO) units designed primarily for the offshore industry in the Gulf of Mexico has been replacing the large, high-head, multi-stage centrifugal pumps previously installed in its equipment with compact, seal-less Hydra-Cell D35 or D10 pumps. The company leases both large and small RO units to operators of offshore oil platforms, enabling them to produce fresh water from seawater. Converting to Hydra-Cell has slashed repair costs, reduced callouts, and helped bring the manufacturer's entire servicing operation under control.

Without fresh water, used for everything from drinking and bathing to mixing in drilling mud, the rigs cannot operate. Platform operators have found it extremely worthwhile in terms of cost and peace of mind to rent the equipment and take up service contracts with the manufacturer. The extra outlay is usually far outweighed by the cost of hauling out fresh water. The rigs can be as far as 250 miles offshore.

For the RO manufacturer responsible for keeping the RO systems running, however, it was a different story. Repair calls, mostly resulting from shaft and seal problems experienced by the centrifugal pumps, were mounting faster than they could be handled. In addition, costs were high - in some cases as much as an entire new pump. With the Hydra-Cell D35, the repair costs dropped by 75%. The pump also could be removed and exchanged quickly if it needed service, and there have been far fewer callouts. Service engineers who had scarcely had a day off in a year now get free weekends - less stress all round, and lower payroll costs for the company.

The RO company has established a regular replacement system whereby a pump is routinely replaced after three years of service. At last count, more than 50 Hydra-Cell D35 and 30 D10 pumps had been supplied to this customer, all configured with stainless steel liquid ends.



Characteristics of Fluid Pumped:

☐ Contains Abrasives ☐ Corrosive ☒ Solids in Suspension ☐ High-temp. (>158°F/70°C) ☐ Non-lubricating ☐ High-viscosity (>500 cPs)