

Application story



Evacuating Submarine Ballast Tanks

Location	UK	Hydra-Cell model	G10XKSTSFEHB
Type of application	Pumping Seawater at High Pressure	Flow rate	30 l/min (8 gpm)
Liquid	Seawater	Pressure	70 bar (1000 psi)
Application details	A specialist designer and builder of subsea equipment in the UK (builder of the world's biggest unmanned sea-going submarine) is using Hydra-Cell G10 pumps to pump salt water from ballast tanks at depths down to 300 metres below the surface. Controlling the 'trim', angle in the water, of the submarine is a vital function enabling it to manoeuvre, dive or rise, and the action is performed by selectively expelling and taking water into the ballast tanks. To expel water when below surface depth the pump must overcome the pressure of water on the craft's hull. At a depth of 300 metres, it must overcome external pressure of approximately 30 bar. MSubs has tested Hydra-Cell G10 pumps on this application with great success, mentioning its compact build – space in a submersible craft is always at a premium – and the company is impressed with the pump's flow rate in relation to its size. Reliability is also helpful to the wary submariner!		
Advantages of Hydra-Cell pump on this application	High pressure capability. Flow rate not affected by pressure. High pumping efficiency (up to 90%). Seal-less design – ability to handle salt water. Reliability record.		

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