

CSIP launches new electric underwater manipulator arm

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CSIP has launched the ARM 5E, a five-function electric underwater manipulator arm. ARM 5E has a minimum lift capacity of 25 kg (55 lb) and can be mounted in the same footprint as a conventional hydraulic arm but does not require the use of a skid, valve pack, or hydraulic pump. This saves weight and allows greater vehicle maneuverability, the company says. ARM 5E uses a digital positioning feature to achieve accuracy of 0.5 mm and the computer control electronics use position feedback to detect where the arm is at all times. ARM 5E also features a learning function which stores the maneuvers performed by the arm and combines with a memory function for repeated actions.

A keynote of the design is its modularity, according to CSIP. If a part should break, spares can be used to repair the arm or a specific modular section can be flown out and fitted on site rather than returning the arm to a central repair base. Rated for use in up to 3,000 m (9,843 ft) of water, the new electric arm has a radius of 1.044 m reach and a slew of 120° and is constructed of HE30 hard anodized aluminum, 316 stainless steel, and nickel aluminum bronze.

The electric motors are brushless and will operate in oil, all the actuator and junction box voids are oil-filled and pressure compensated to 0.4 Bar above ambient, with 7,500 m (24,606 ft) rated seals. In the unlikely event of a seal breach, oil may leak out but water cannot leak in. The surface control comprises a joystick for left/right (slew) controls and up/down movement. A twist function operates jaw rotate and a thumbwheel controls the jaw open/close.

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