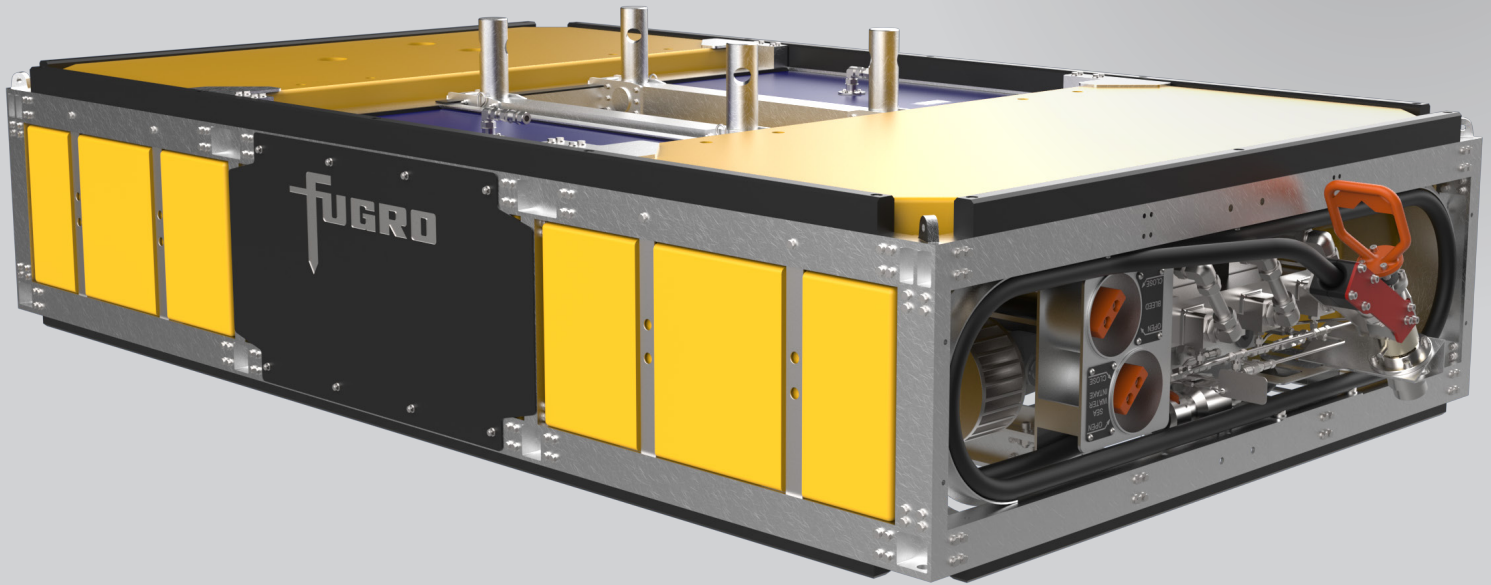




FUGRO

MkIII 450 BOP INTERVENTION SKID

Fugro's MkIII 450 blow out preventer (BOP) Intervention Skid has been designed for use with work class ROVs to provide a reliable high flow / high pressure subsea pumping system to fulfil industry requirements for BOP intervention operations. The skid is the third generation of 450 BOP intervention skids and builds on their capabilities, as such it is capable of delivering 400 bar at 150 lpm and 130 bar at 450 lpm and the on board fluid reservoir can store up to 400 litres of fluid.

The MkIII 450 BOP intervention skid differs from its predecessors in various ways, with the intention that the skid is compatible with all work class ROVs. These changes include:

- Integrated control system, allowing exchange of ROV post size, shape and pitch
- On board pressure and flow output testing
- Integrated pad eyes allowing for direct lifting with a four point sling
- Full flow recirculation port primarily allowing surface testing without loss of fluid, but also for the attachment of external reservoirs to expand the onboard supply
- Improved telemetry accessible during operations showing total pumped output volume and current flow rates and pressures
- Individual sensors that monitor and log the performance of the skid for diagnostic purposes

BENEFITS

- Reduced maintenance configuration
- Full API 53 Compliance
- Enhanced safe mechanical lifting design
- Flexible deployment options - installable on ROV of choice

SKID OPERATIONAL PROCESS

The skid delivers a reliable high flow and high pressure supply of glycol or water based fluid via a single port high flow hot stab. It is comprised of three low pressure high volume water pumps and three high pressure low volume pumps. These pumps initially draw fluid from the on board reservoirs, to be delivered by the single port high flow hot stab. Once the reservoirs are depleted the skid can continue operations by either feeding from additional external reservoirs or be set to use seawater by operating the seawater valve mounted on the front of the skid.

Technical Specifications

General

Size [l x b x h]	2921 mm x 1700 mm x 622 mm (115" x 67" x 24")
Weight in air	1135 kg (2502 lbs)
Weight in water	9 kg (20 lbs)
Maximum storage temperature	70 °C (157 °F)
Maximum working temperature (surface)	65 °C (149 °F)
Onboard reservoir capacity	400 lt (106 US Gallons)
Design life	10 years (with regular Maintenance)
Design depth	4000 MSW (13,123 ft)

Tool Supply (from ROV)

Maximum design supply pressure	230 bar (3336 psi)
Recommended supply pressure	207 bar (3002 psi)
Maximum design supply flow	360 lpm (95 gpm)
Operating fluid	Hydraulic Oil - ISO 32
Power	24V DC
Communications	RS485

Tool Output

Single port type C hot-stab	API 17H (2013)
Maximum pressure / flow (high pressure)	400 bar / 150 lpm (5800 psi / 40 gpm)
Maximum pressure / flow (high flow)	130 bar / 450 lpm (1885 psi / 119 gpm)

Tool Output

High output pressure and flows at 400 bar / 450 litres per minute
Integrated control system
Auto sequencing via the software, the software automatically switches from high flow to high pressure pumping
Modular build for ease of strip down and repair
Integrated system to accommodate, Fugro FCV, Schilling ultra heavy duty (UHD) 1 & 2 and Triton XLX & XLS series ROVs

