



# FUGRO

## FCV<sup>®</sup> 4000 (200HP)

**The in-house designed and built 4000 msw rated FCV 4000 (200 HP) offers a market leading solution for ultra-deepwater intervention and support. This high specification workclass ROV demonstrates Fugro’s commitment to providing innovative solutions using internal expertise.**

As a customer focused company, Fugro understands the importance of designing, building and operating ROVs that meet the specific requirements of each project. Equally important, our ROV experts have in-depth knowledge of ROV system design, providing the superior level of competence that customers look for.

No two projects are ever the same, but because of our unique ability to control the manufacture of ROVs, we can ensure that the systems we build for a particular client can be easily adapted to suit specific project requirements. Operational, working dives have been undertaken down to 3,819 msw.

The FCV 4000 offers:

- Best-in-class components from established equipment suppliers
- Class-leading payload
- Semi-autonomous functionality
- 3D dynamic positioning
- Pilot training whilst ROV is on deck

In addition to its ability to carry a full instrumentation package, the FCV 4000 has class-leading mechanical / hydraulic tooling interfaces that include:

- Mechanical interface: Fugro proprietary 4-point
- Through frame lift: 3,000 Kg at 3 g
- Tooling: up to 430 LPM @ 210 bar

- IHPU: 90 LPM @ 210 bar
- Bi-directional solenoid: 30 solenoid valve channels
- Servo valves: 8 (7 thruster + 1 spare)
- Mini IVP: 4 x NG3 + 1 x NG6
- High Flow IVP: 4 x 90 LPM fully proportional



*FCV 4000 installed onboard Samsung 96K Drillship*

# FCV<sup>®</sup> 4000 (200 HP)

## Technical Specifications

### Dimensions

Length	3.315 m
Height	1.875 m (excl. TMS)
Width	1.76 m (excl. TMS)
Weight	4.2 Te (inc. 400 Kg payload)

### Power

Motor	1 x 2,850 VAC @ 150 kW (200 Hp)
Hydraulic pump flow	430 LPM @ 60 Hz
Hydraulic pump pressure	210 bar (main)
Single phase electric supply	10 KVA , 24 VDC & 110 VAC
Tooling	up to 430 LPM @ 60 Hz

### Speed

Forward / aft	3.9 knots (2.05 m/s)
Lateral	3 knots (1.54 m/s)
Vertical up / down	3 knots (1.54 m/s)

### Thrusters

4 x 15" vectored horizontal	Fwd/Lateral: 1,209 Kg
3 x 15" vectored	Vertical: 1,239 Kg

### Sensors

Heading	TOGSNAV
DVL	TOGSNAV
Pitch and roll	TOGSNAV
Depth	TOGSNAV
Altimeter	Simrad 1007 digital altimeter
Sonar	Simrad MS 1171 6000 m digital
Cameras	12 x SD Cameras, 8 at any one time 3 x HD Cameras (Optional)
Data	RS232, RS485 TTL Ethernet and Gb Ethernet
Lighting	12 x 24 VDC Dimmable LED lights 4 x 110 VAC Flood lights

### Manipulators

Manipulator 1	Schilling TITAN 4
Manipulator 2	Schilling RigMaster
Optional	Schilling ATLAS

### Control System

Vehicle control	Fugro proprietary ERA-004
FO multiplexer	Fugro proprietary SMFO

### Tooling

Mechanical interface	Fugro proprietary – 4 point
Through frame lift	3,000 Kg
Tooling IHPU	90 LPM @ 210 bar
Bi-directional solenoid	30 x solenoid valve channels
Servo valves	8 (7 thruster + 1 spare)
Mini IVP	4 NG3 + 1 NG6
High flow IVP	4 x 90 LPM

### Power Requirements

System (typical)	500 KVA, 380-500 VAC 3-phase supply 50/60 Hz 60 Hz for optimum performance
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### Main Lifting Umbilical

37 mm Ø double armoured  
Optimised design with single mode fibres in robust steel tube

### TMS

Type	Top hat , PSSL Type 4, 11 Te SWL
Tether	600 m of 30 mm diameter tether
Dimensions	1.8 m (Dia) x 2.0 m (H)
Weight: In Air/Water	2.5 Te / 1.5 Te (inc 600 m tether)

