

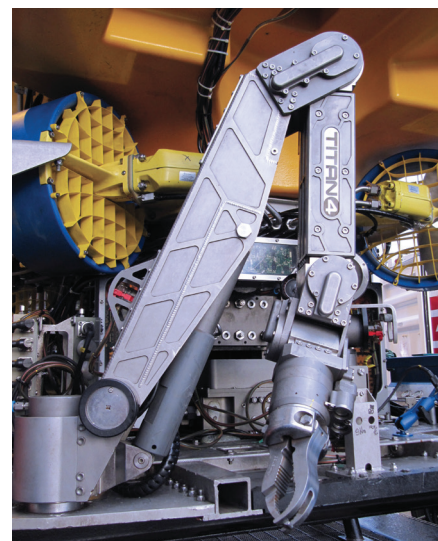


HD WROV SYSTEM

Class III Remotely Operated Vehicle

Innovative features in the frame design and modular subsystems produce a high performance vehicle suitable for IMR, drill support, and construction operations, while maintaining a compact system footprint.

HD WROV SYSTEM



150HP OF HYDRAULIC POWER

- Separate hydraulic circuits: main for propulsion and manipulators, auxiliary for tooling
- Automatic heading, depth, altitude, attitude, auto-tuning, and StationKeep
- AutoTrack utility to control vehicle through survey coordinates
- Digital Telemetry System: serial, video, Ethernet through Gigabit backbone
- Optional 1080i FULL-HD video capability on multiple cameras
- New-generation FMC Schilling "Hammerhead" operating system

GENERAL SPECIFICATIONS

Depth rating (msw):	3000
Dimensions (L x W x H - m):	2.5 x 1.7 x 1.9
Weight in air (Ton):	3.4
Through-frame lift (Ton):	up to 3.0

PERFORMANCE

Power (hp):	150
Thrusters (horizontal/vertical):	4 x SA380 / 3 x SA380
Forward, Aft, Lateral bollard (Kgf):	750
Vertical down/up bollard (Kgf):	750 / 720
Forward, aft speed (knots):	3.0
Lateral, vertical speed (knots):	2.2

AUTO FUNCTION CONTROL

Auto heading (deg):	± 2
Auto depth (cm):	± 15
Auto altitude (cm):	± 15
Station keep (m):	± 0.3
Displacement (m):	± 0.15

SENSORS

Fibre optic gyro heading sensor:	CDL TOGS 0.5 deg accuracy 0.1 deg RMS pitch / roll
Depth Sensor:	Digiquartz 8000 1 x 10-8 resolution
DVL:	1200KHz Workhorse ±0.2% bottom velocity
Sonar:	Tritech Super Seaking

CAMERAS AND LIGHTS

First Pan & Tilt unit:	1 x electric FMC Schilling
Second Pan & Tilt unit:	Optional
Low light B/W:	1
Color CCD zoom:	1
Color CCD fixed focus:	1
Titan 4 wrist camera:	Optional
LED lights:	8

HYDRAULIC SPECIFICATIONS

Maximum main/aux pressure (bar):	207 / 207
Maximum main/aux flow (lpm):	240 / 80
8-F valve packs:	2 x Sub-Atlantic GFV*
8-F valve packs max flow (lpm):	12
8-F valve packs max pressure (bar):	207
3-F manifold:	1 x FMC Schilling
3-F manifold max flow (bar):	160**
3-F manifold max pressure (bar):	207

*5 functions are reserved for Rig-Master movements

**Limited by aux circuit flow

MANIPULATORS

7 functions:	FMC Schilling Titan 4
5 functions grabber:	FMC Schilling Rig-Master

TELEMETRY SYSTEM

Standard channel types*:	10 / 100 Ethernet, RS232, PAL video, 1080p HD-video
Subsea power outputs:	110VAC, 48VDC, 24VDC
Gigabit multiplexer:	Optional

*Setup and quantity may be reconfigured

TOP HAT TETHER MANAGEMENT SYSTEM

Dimensions (Ø x H - m)*:	1.9 x 2.2 / 2.3 x 2.2
Weight in air (Ton):	3.0 / 3.1
Tether length max capacity (m)*:	425 / 850
Pan & Tilt:	1 x electric Schilling
Depth Sensor:	Digiquartz 8000
Color CCD Zoom Camera:	2
HID lights:	2

*Actual specifications may vary depending on ROV unit

CONTROL VAN, WORKSHOP AND STORAGE

2 x ISO 20' containers + 1 x 10' container

TELESCOPIC LAUNCH & RECOVERY SYSTEM

Telescoping A-Frame (L x W x H - m):	8.3 x 2.5 x 3.1
A-frame maximum height (m):	9.6
A-Frame weight (Ton):	22
Winch (L x W x H - m):	3.8 x 2.2 x 3.0
Winch weight (Ton):	22
Levelwind (L x W x H - m):	3.8 x 2.2 x 2.0
Levelwind weight (Ton):	7
Levelwind + winch (L x W x H - m):	3.8 x 2.2 x 5.0*
Levelwind + winch weight (Ton):	29*
Winch max umbilical capacity (m):	3300
HPU (L x W x H - m):	1.4 x 2.4 x 2.4
HPU weight (Ton):	4.2

*Not meant to be lifted as a single piece. Figures to be used for deck layout only.

STANDARD OPERATIONAL LIMITS

Beaufort:	6
-----------	---

ELECTRICAL REQUIREMENTS

ROV, control van:	380 / 480 VAC, 50 / 60Hz, 3PH, 630A
LARS:	440 VAC ±10%, 60Hz, 3PH, 400A

ROAD TRANSPORTATION

Number of trucks:	5 (approximately)
-------------------	-------------------