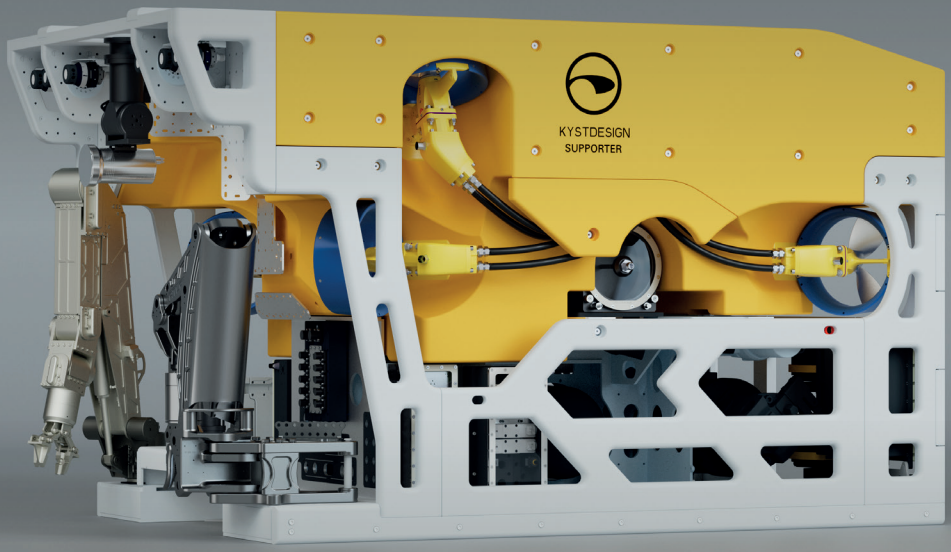
SUPPORTER 3000.

COMPACT WORK-CLASS ROV



The SUPPORTER technology is refined from years of operational and “hands-on” experience by our designers. The top-side control system for KYSTDESIGN ROV’s is designed with focus on providing an ergonomic, intuitive and efficient working environment. Single or dual operation stations can easily be configured to individual needs. Operator task priorities can be switched and shared between stations during operation.

KYSTDESIGN

The SUPPORTER ROV accommodates up to 41 electrical connectors for interface of external equipment, such as tooling, survey sensors and cameras, and all electrical power supplies are ground-fault monitored. The ROV also accommodates 24 hydraulic functions, all proportionally controlled.

The ROV control system is prepared for a variety of auto functions like AutoPOS and AutoTRACK capabilities, in addition to over-the-horizon control from a Remote Operation Center (ROC) onshore.

SPECIFICATIONS, SUPPORTER 3000

General:	
Power	115 Kw / 150 Hp
Depth rating ROV	3000 msw
Dimensions (L/W/H)	2750 / 1700 /1650 mm
Weight	3600 kg
Payload	400 kg
Through Frame Lift capacity	3000 kg
Thrusters	7 x SA300

Mechanical Capacity and Interfaces:	
Free space inside ROV for utility equipment:	Open area of approx. 350 L through the entire ROV, right in front of centre of gravity.
Interface for work modules:	Four docking receptacles underneath the ROV. Interface for Sensors and/ or modules by threaded inserts on all sides of the buoyancy element.
Manipulators:	Interface for Schilling T4, RigMaster and Atlas.

Hydraulic Capacity and Interfaces:	
Valve Pack No. 1	10 x Bi-directional Valves with proportional flow control, each with max flow 10 l/min. Pressure on VP controlled by VP No.3.
Valve Pack No. 2	10 x Bi-directional Valves with proportional flow control, each with max flow 10 l/min. Pressure on VP controlled by VP No.3.
Valve Pack No. 3	4 x Bi-directional Valves with proportional flow and pressure control, each with max flow 90 l/min.
Manifolds	Pressure and return manifolds mounted in front of the ROV. 1 x Pilot operated high flow valve with max flow 200l/min.
Aux System Capacity	220 bar 120 liter per minute

Telemetry/Sensor Capacity and Interfaces:	
Telemetry Link	By default, the control pod and telemetry system are prepared for survey operations. Up to 3x fibre optic cables are available for communication (one in use). Total capacity in a standard system is 24x (expandable to 36x) serial channels, HD IP video and 4x composite video channels (optional 4x HD SDI). Included with 4x Gb layer 1 Ethernet fibre multiplexer and optional a 10x port switch with a 10 Gb backbone fibre link. Everything runs on a single optical fibre.
Power Distribution	All power distributed to external users, such as lights, cameras and sensors can be switched on/ off from the topside computer and are equiped with individual fuses. When a sensor is switched off, it's correspond-ing subsea connector is galvanic isolated. Total available power 30A @ 115VAC. Available supplies: 115VAC, 24VDC, 48VDC, others on request.
Tool Interface	Max power consumption available is 20A @ 115VAC. Connector type: Seacon 5506-2008
Gyro Interface	Connector type: MinM-26#20.
Sensor Interface	Connectors are prewired for user/survey equipment. Connector type: Min-K-10 - wired for 24 or 48VDC. Built in CP interface. Connector type: Min-K-8 - wired for 115VAC.

Camera and Lights:	
Camera Interface	10x Camera connections for IP video (HD-SDI & PAL supported). Connector type: Min-K-10.
Pan/Tilt	Electrical
Light Interface	Capacity for ten outputs, maximum total load of 2300W. Each output secured by 6A breakers, other breakers on request. Connector type: Seacon 5506-1503

Performance:	
Bollard Pull FWD/AFT	780/770 kg
Bollard Pull LATERAL	710 kg
Bollard Pull Vertical UP	730 kg
Bollard Pull Vertical DOWN	800 kg
Speed FWD	> 1,6 m/ s
Speed LATERAL	> 0,8 m/ s

Pilot Interface:

- Two identical pilot chairs, where all necessary controls for operating the ROV, TMS and PDU are integrated in the armrests
- 1 off Multiview Controller
- Monitors
- Clearcom communication system, microphone and channel selectors integrated in pilot chair

PDU:	
Description	Two separate cabinets. One containing breakers, contactors, overload relays and signal trans-formers. The other serving as a termination and isolation point for all high voltage connections.
Input	3 phase 400-420-440VAC, 60 Hz (690VAC optional)
Output	- ROV HPU 165 KVA, 3000-3150-3300VAC - ROV Instrument 10 KVA, 3000-3150-3300VAC - TMS HPU 23 KVA, 3000-3150-3300VAC - TMS Instrument 10 KVA, 3000-3150-3300VAC

Containers (Option):	
ROV Control Container	- 20´ Container manufactured in accordance with DNV 2.7-1 Offshore Containers - Dimensions: 6058 / 2438 /3000 mm (L/W/H) - Air conditioned - Option: Zone 2 certification
ROV Workshop / PDU Container	- 20´ Container manufactured in accordance with DNV 2.7-1 Offshore Containers - Dimensions: 6058 / 2438 /3000 mm (L/W/H) - Air conditioned - Contain workshop, PDU and transformers. - Option: Zone 2 certification

TMS (Option):

Various options available. Contact Kystdesign for further information.

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