

Helix IROV 1

Subsea Intervention Tool



Helix's new in-house designed **IROV 1 Tool** provides a crucial asset for the increasing offshore renewables market.

In recent years, we have seen an increasing demand for our services from the offshore renewable energy market.

As part of our energy transition model and in response to the increased demand for our renewable's services, Helix designed, developed and built the new Helix **IROV 1** subsea tool. This new asset expands our service offerings in support of the offshore wind and power generation and distribution industry and can be used for a variety of offshore operations including boulder relocation, subsea debris clearance and more.

The **IROV 1** tool when configured in boulder relocation mode includes a grab with a through frame lift capacity to relocate 3m boulders weighing up to 20 tonnes. For projects that require a larger capacity grab, a vessel with a suitably sized crane is required. The spread includes a control cabin, workshop and spares to support the system offshore and is operated by a highly skilled and experienced team of ROV pilots and technicians to perform subsea operations safety and cost- effectively.

The 5-tine, orange peel style grab features a powerful hydraulic system to help keep any heavy load secure during transfer. The multi-functional subsea tool hangs vertically in the water and is operated by the ROV pilot who can finitely position the **IROV 1** using the on board, thrusters and sensors that include an OSS sonar and four cameras. Positioning is accomplished using a survey transponder that gives the **IROV 1** position relative to the seabed feature and deployment position.



Experience

Helix Robotics Solutions operate a fleet of ROVs worldwide, trenching systems, boulder grabs and several multi-purpose ROV and construction support vessels via strategic offices in key areas of the world.



Innovation

Helix Robotics Solutions works closely with our clients and vendors to seek and resolve complex technical developments to engineer practical solutions and implement in the most efficient, safe and economical ways possible.



Value

Helix Robotics Solutions is one of the most innovative and reliable specialty marine contractors in the world. Focusing on providing leading edge underwater, unmanned services in extreme environments, Helix strives to deliver the highest value to its customers.

TECHNICAL SPECIFICATIONS

Helix IROV 1 specifications

Dimensions	2,400mm x 2,400mm x 1,500mm High
Depth Rating	3,000m rated system
Weight In Air	~ 2,500 kg*
Weight In Sea Water	~ 2,200 kg*
Through Frame Lift	~ 30,000 kg*

IROV 1 HPU/hydraulics

Motor	100 Hp Impaq, 4 Pole, 3000VAC
Pump	Kawasaki K3VL 140
Output	~ 200 lpm*
Operating Pressure (bar)	~ 210-240 Bar*
Tooling Valve (Grab Open/Close)	Pilot Operated NG6 supplying ~60 lpm & ~210 bar*
Solenoid Valve Pack	1 x 10 Way NG3 Solenoid Valve Manifold. 15 lpm per valve
Pan & Tilt Units	2 x Sub Atlantic, Hydraulically Driven
Thrusters	4 x Horizontally Mounted Rotary Power A200
Max Thrust FWD / AFT / Lateral	~800 Kgf *
Hydraulic Oil / JB Compensation	Environmentally Friendly Panolin Synth 32

Boulder grab specifications

Type	5 Tine, Orange Peel Style
Capacity	~ 20,000 kg SWL
Weight In Air	~ 5,750 kg
Weight In Seawater	~ 5,000 kg
Dimensions Closed	3,048mm W x 3,800mm H
Dimensions Open	4,300mm W x 2,800mm H
Max Opening / Span	~ 3,300mm internal
Operation	5 x Hydraulic Cylinder Actuation. IROV 1 On-board Hydraulics

Support vans / equipment

Control Van	Standard 20ft, A60 Offshore ISO Container 6,040mm x 2,430mm x 2,600mm. 12,000Kg *
Workshop Van	Standard 20ft, A60 Offshore ISO Container 6,040mm x 2,430mm x 2,600mm. 12,000Kg *
IROV 1 Transport Frame	2,900mm x 2,900mm x 615mm, ~ 2,000Kg*
IROV 1 Deck Power Pack	Dynacon 30hp Hydraulic charge cart 2,140mm x 860mm x 1,370mm, ~ 1,000Kg*

IROV 1 power distribution

Control Van	440VAC / 60Hz / 200A
Workshop Van	440VAC / 60Hz / 32A
Charge Cart	440VAC / 60Hz / 32A

Standard equipment

Lights	4 in Total, Bowtech LED
Camera	4 in Total Comprising: Kongsberg 15-100 Low light, 14-366 Colour Zoom & 15-358 B&W CCD, 1 channel SD DVR
Sonar	Kongsberg MS1000
Gyro	Tritech IFG-ICG
Altimeter	Kongsberg 1007 Series
Ethernet Ports	2 x 1 Gig, 10/100 Delta T

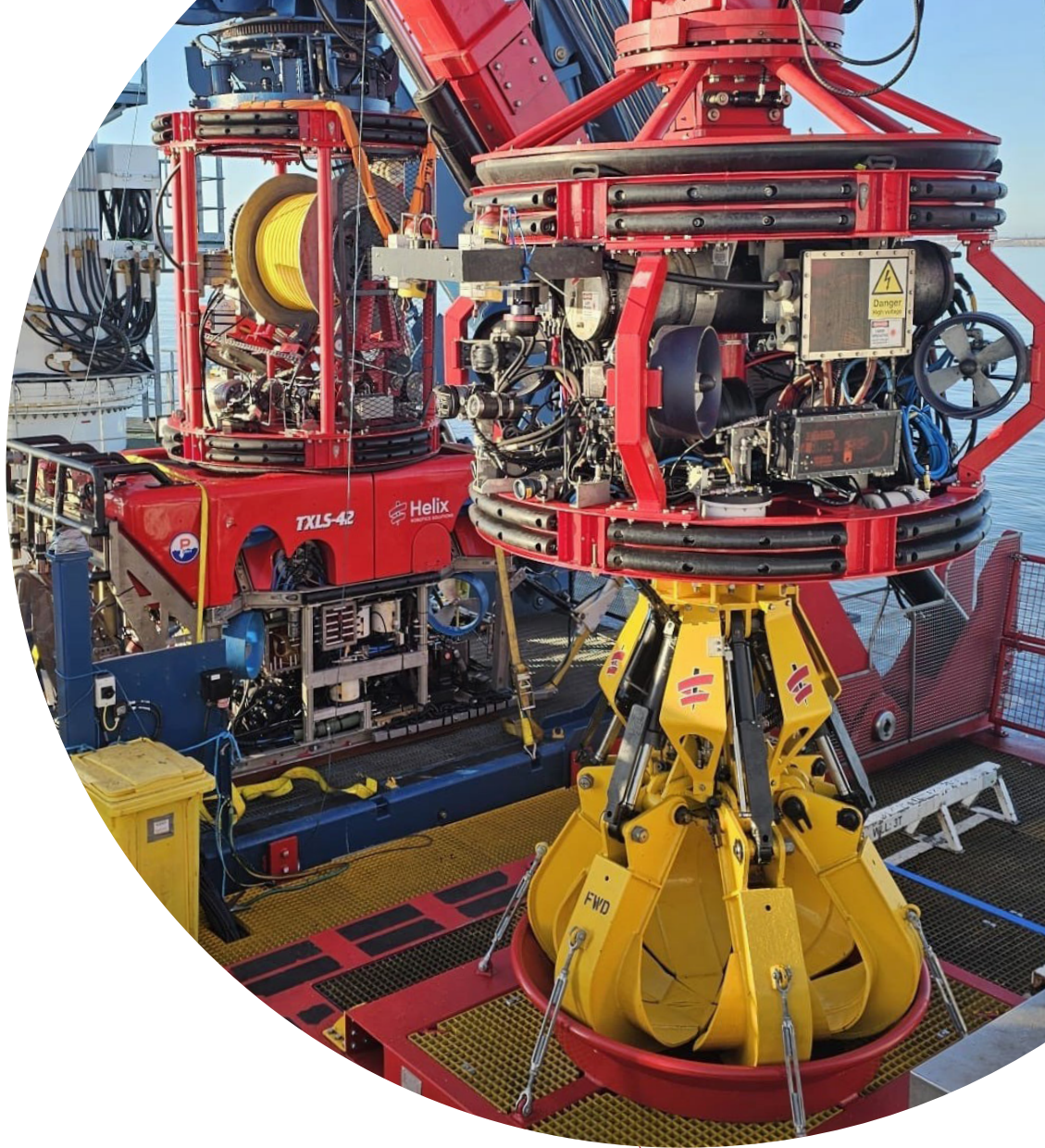
*All onboard sensors for pilot navigation only.



IROV 1 - Tines Closed



IROV 1 - Tines Open



Corporate Headquarters

3505 W. Sam Houston
Parkway North
Suite 400
Houston, Texas
77043 USA

T (281) 618 0400

**Helix Robotics Solutions
(Europe/West Africa)**

Helix House, Kirkton Drive,
Pitmedden Industrial Estate,
Dyce, Aberdeen
AB21 0BG, UK

T +44 (0) 1224 351800

**Helix Robotics Solutions
(Asia Pacific)**

5 Loyang Crescent
Loyang Offshore Supply Base
Block 603, Tops Ave 6, Unit 1,
Box 5009 Singapore 508988

T +44 (0) 1224 351800