

**TOP NOTCH
DEEP-SEA
EQUIPMENT**



VYL800 ROV

Technical Specifications

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1.Product Overview

The VYL800 ROV is a highly efficient and reliable pipeline laying and maintenance robot. Equipped with a jetting system, cable detection system, 7-axis robotic arm, and working tools, it can perform tasks such as laying, inspection, and maintaining submarine cable and pipeline, with a working depth of up to 2000 meters.

The high-efficiency jetting system can be equipped with both low-pressure and high-pressure high-power jetting water pumps, and can meet the requirements of trenching operations under various complex geological conditions, from soft sand to hard clay, with a maximum burial depth of up to 3m.

The dual-station control console, combined with brand-new control software, provides operators with a superior user experience; the optimized surface power supply system ensures stable power transmission; and the stable and reliable deck deployment system guarantees the safe release and retrieval of the robot during high sea state operations.

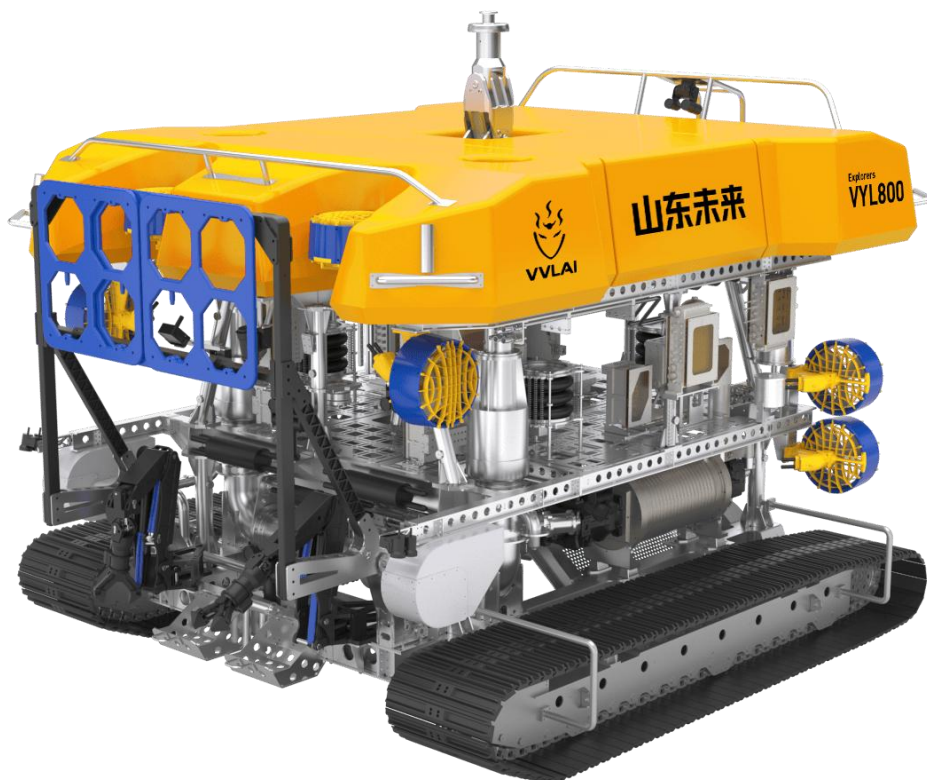


Fig. 1:VYL800 Axonometric Drawing

2. Technical Parameters

2.1 Robot System

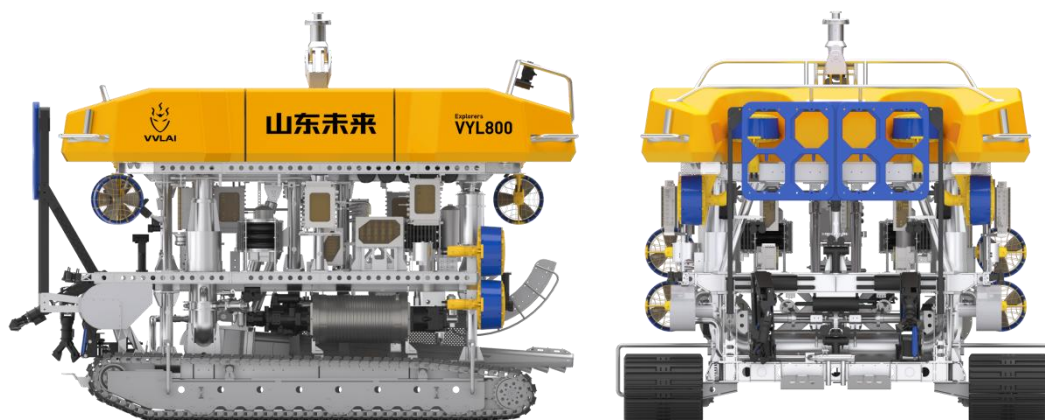


Fig.2:VYL800 Side View / Front View

Robot System	
Basic Parameters	
Power	800Hp/300kW x2
Power Supply Voltage	4400V AC
Dimensions (L×W×H)	5580×4450×3300mm
Weight	17.0t (in air)/2.0t (in water)
Hydraulic Oil	No.32 hydraulic oil (No.22 can be replaced according to the environment)
Depth rating	2000msw (option up to 3000msw)
Speed	0-2.2km/hr
Robot Performance	
Trenching Width	100mm-600mm
Trenching Depth	0-3m

Robot System	
Water Pump Flow Rate	1000m ³ /h x2 (at 6.5bar pressure) low-pressure pump unit 400m ³ /h x2 (at 15bar pressure) - high-pressure pump unit
Water Pump Pressure	6.5bar (at 1000m ³ /h x2 flow rate) - low-pressure pump unit 15bar (at 400m ³ /h x2 flow rate) - high-pressure pump unit
Thruster	10 ×THR.Y420
Bollard Pull Forward/aft	≥2.0t
Bollard Pull Lateral	≥0.7t
Bollard Pull Vertical	≥1.4t
Mechanical Interfaces	
7-axis manipulator (right)	On-off control (analog control optional); arm span 2m, maximum lifting capacity 240kg,maximum clamping force 400kg
7-axis manipulator (left)	On-off control (analog control optional); arm span 2m, maximum lifting capacity 240kg,maximum clamping force 400kg
Jetting at the front	DN40/DN50 nozzle
Skids	2 equal-width skids
Armored Cable Cutting Tool	Cutting range: 38mm-100mm armored cables Working pressure: 20MPa (with external booster)
Flexible Cable Cutting Tool	Cutting range: 38mm-100mm cables/ropes Working pressure: 20MPa
Electrical Interfaces	
Sensor Interface	Customize interfaces (including INS, DVL, sonar, baseline, depth gauge, altimeter, etc.)
PTZ	5 ×2-axis gimbals, horizontal adjustment ±60°, vertical adjustment ±60°
Camera	14 camera input interfaces Connector type: VVLJXT series
Light	Capacity for 20 dimmable lights, maximum total load of 1500W Connector type: VVLJXT series

Robot System**Upgrade Options**

TSS 350+440	1 set (optional)
USBL	1 set (optional)
Flowmeter	1 set(optional)
Altimeter	1 set
Depth Gauge	1 set
Inertial Navigation System	1 set
DVL	1 set
Collision Avoidance Sonar	1 set
Forward-Looking Sonar	1 set

2.2 Deck Support Unit



Fig. 3:Control System



Fig.4:Power supply system

Deck Support Unit	
Control Cabinet	
Dimensions (L×W×H)	6.1m x2.45m x2.9m
Weight	4t
System Composition	Network switch, refrigeration system, dehumidification system, alarm system, emergency escape system, etc.
Control System	
System Composition	Two identical pilot seats, with all necessary controls for operating the ROV and PDU integrated into the console.

	•2 touch controllers •2 48" video monitors •6 24" video monitors
Operating Software	Switchable between Chinese and English, Russian
High-Voltage Control Cabinet	
Dimensions (L×W×H)	12.2m x2.45m x2.9m
Weight	15t
Power Supply System	
System Composition	An integrated independent power distribution cabinet, including circuit breakers, contactors, overload relays, signal transformers, as well as terminals and isolation points for all high-voltage connections
Spare Parts Container	
Dimensions (L×W×H)	6.1m x2.45m x2.9m
System Composition	Spare parts shelves, crane, air conditioner, emergency and escape systems
Maintenance Container	
Dimensions (L×W×H)	6.1m x2.45m x2.9m
System Composition	Operation desk, air conditioner, emergency and escape systems

2.3 LARS



Fig. 5:LARS System



Fig. 6:Cable Winch



Fig. 7:Hydraulic power unit



Fig. 8:LARS Control Room

LARS	
A-Frame	
Safe Working Load (SWL)	185kN (in air)
Operating Sea State	Sea State 5
Horizontal Distance of A-Frame	8.5m

Clear Width of A-Frame	7.0m
Luffing Time (Average)	~120s
Swing Angle	100° overboard, 40° inboard
Anti-Sway Device Telescopic Distance	2.8m
Anti-Sway Device Rotation Angle	270°
Cable Winch	
Safe Working Load	22t (outer layer)
Deployment/Recovery Speed	30m/min
Cable Length	1300m
Operating Sea State	Suitable for operation in Sea State 5, emergency recovery in Sea State 6
HPU	
System Power	2x132kW
System Pressure	28Mpa
Hydraulic Oil Type	L-HM46 (No.22 can be replaced according to the environment)
Weight	5000kg (excluding hydraulic oil)

3. Relevant Picture



Explorers VYL800 Actual Product Picture



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