

FURUNO

Full-Circle Color Scanning Sonar

Model **FSV-25**

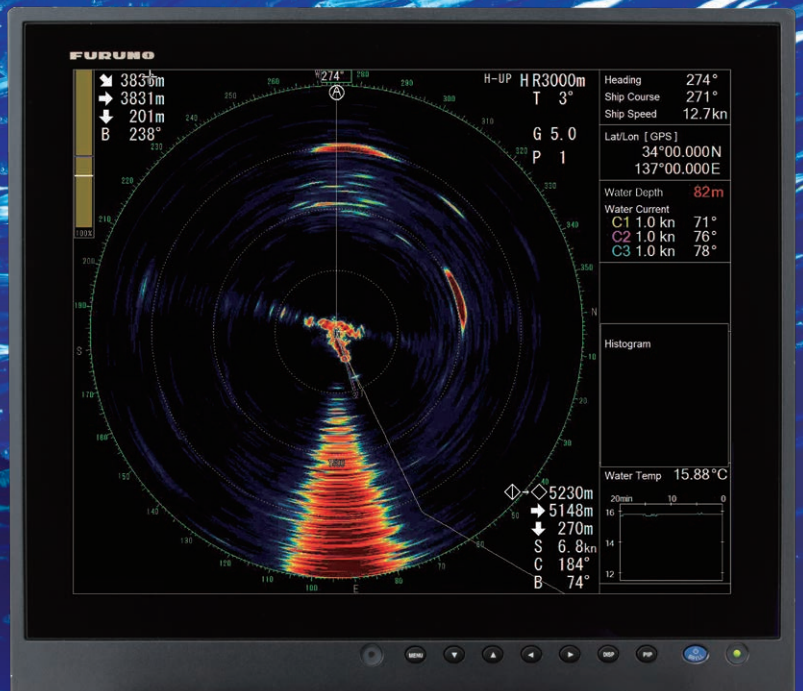
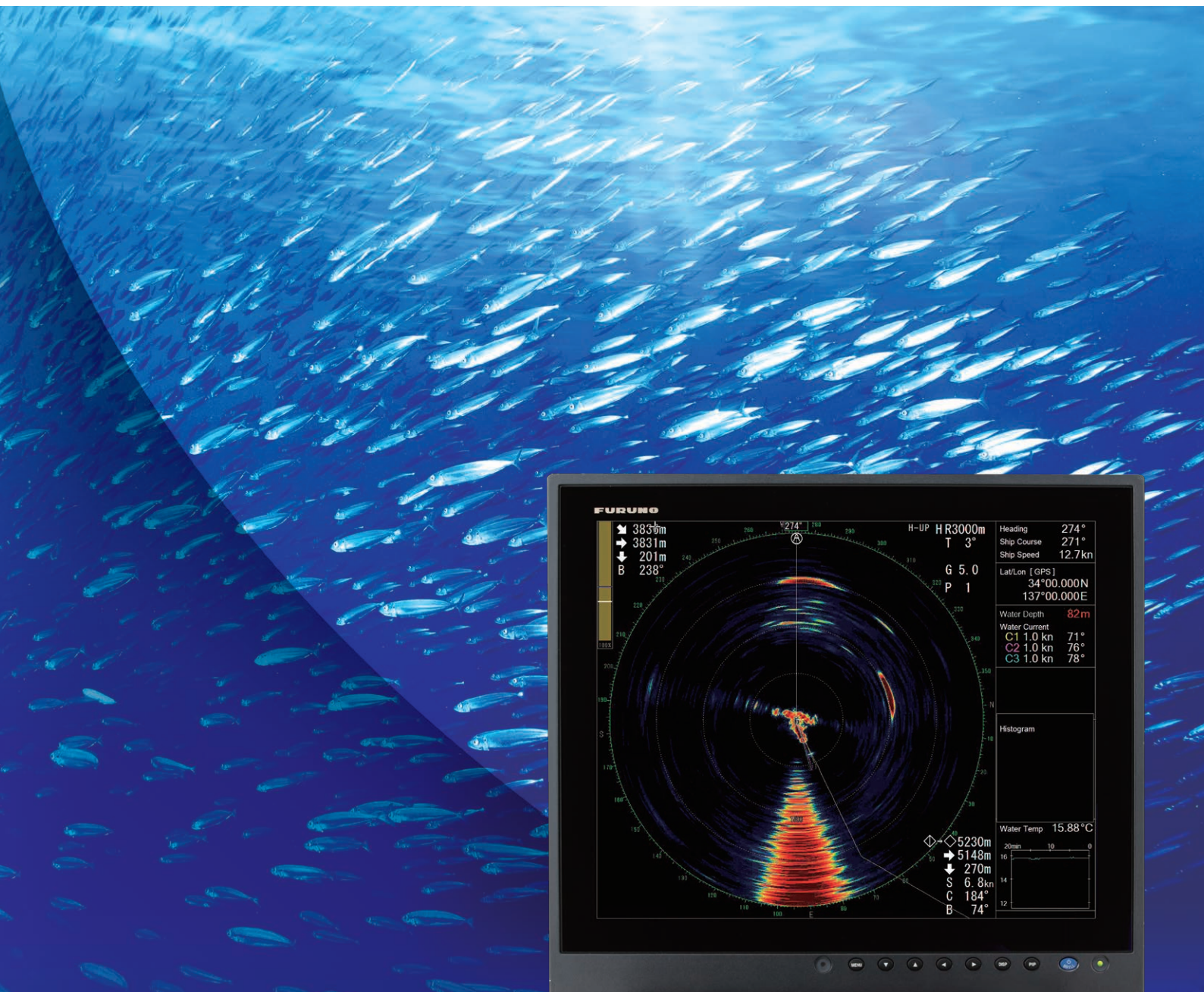


Photo: 19" Marine Display MU-190HD
(Customer Supply)



www.furuno.com

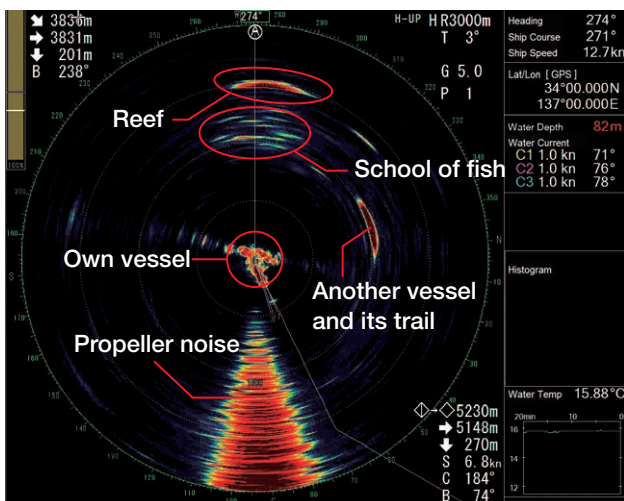
Stunning performance, amazing range with FSV-25!



Full-Circle Color Scanning Sonar

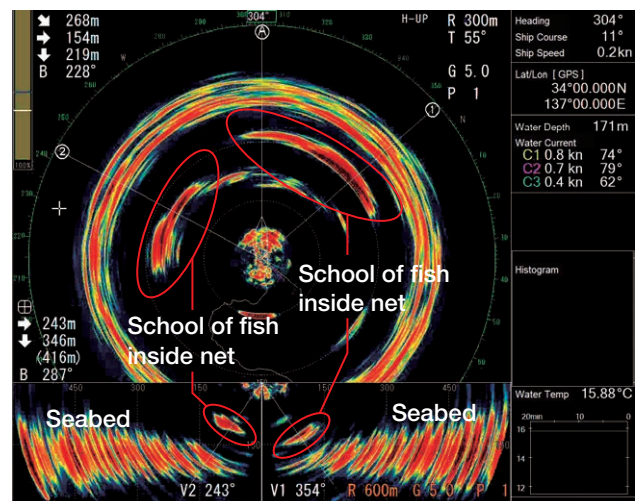
Model **FSV-25**

Long-range detection



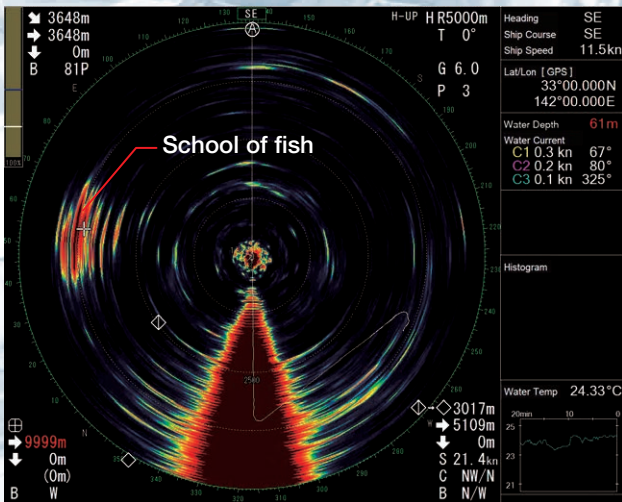
(3000m range) A school of fish 2000m ahead.
The fish school appears to swim close to a reef.

Close-range detection

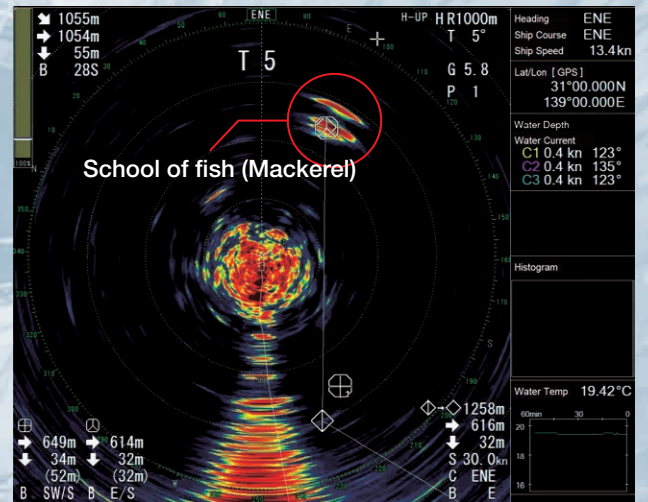


(300m range) Two schools of fish can be seen right after the purse-line has been pulled and the net has been closed.

Easily spot schools of fish far away

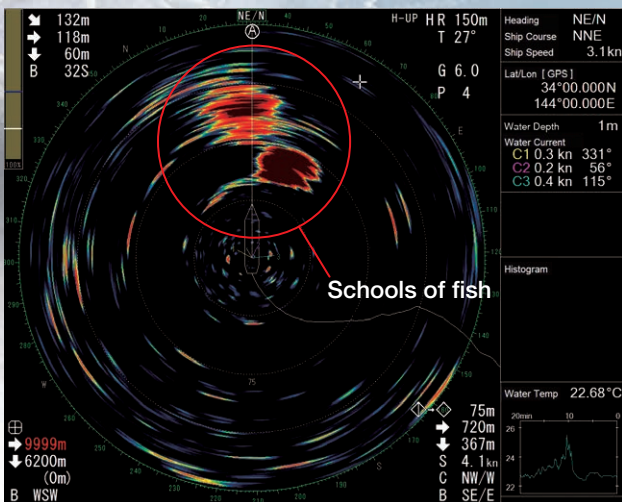


(5000 m range) A school of bait fish can be seen on the port side of the vessel.

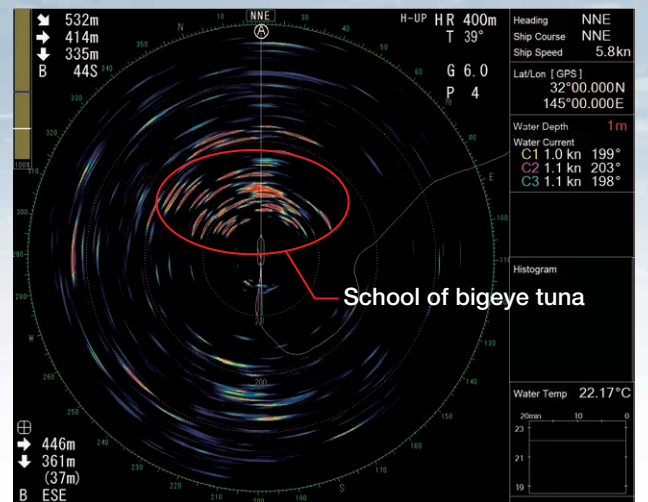


(1000 m range) Targeted school of fish 650 meters away.

Improved resolution with new signal compression algorithms

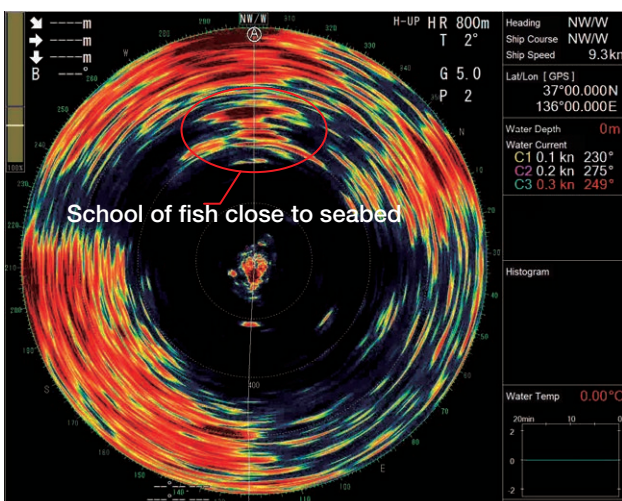


(150 m range) Schools of tuna and skipjack tuna spotted.



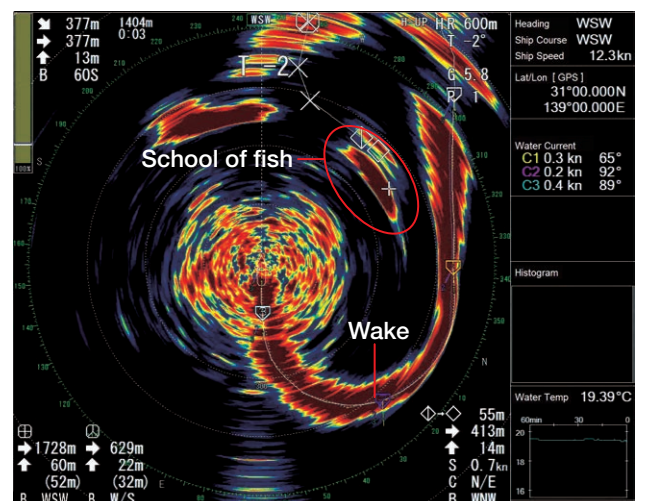
(400 m range) Individual bigeye tunas can be seen in this fish school.

Accurately spot bottom feeders



(800 m range) A school of fish close to the seabed can be distinguished clearly.

Fish movements within your net



(600 m range) Increase your catch by observing how schools of fish move within your net.

▶ Maximum detection range increased by 30%

Thanks to recent advancements in low-frequency transducer elements, signal processing and increased transmission power, detection range has been increased by a full 30%*. You can instantly spot and follow schools of fish from several kilometers away.

*Compared with FSV-24/35. Performance may vary depending on depth, range and signal frequency used.

▶ Fully extend the transducer in just 12 seconds for 1200mm stroke and in 16 seconds for 1600mm stroke

A transducer "throw" time of just 12/16 seconds (respectively) places the FSV-25 among one of the fastest hull units available. You can extend and retract the transducer rapidly for smooth operation.

▶ Echo strength distribution histogram

Upon locking the target on any given school of fish, a histogram of echo strength distribution can be displayed immediately.

▶ Improved tracking of fast-swimming fish

Accurately track fast-swimming fish such as tuna and marlin, close to your vessel.

▶ Great usability and simple customization

By using the simple user programmable dial, you can set and change the settings depending on which kind of fish you are searching for.

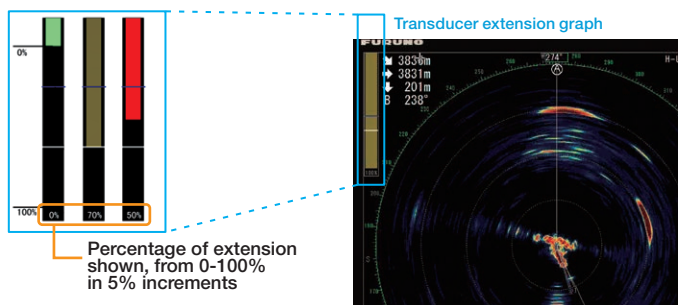
▶ Stop function when extending and retracting transducer

In order to avoid collisions with drift wood and other material, the transducer can be stopped while in motion. The transducer can be lowered to any given length until full extension.

▶ Accurate control with large physical control unit

▶ Graphical hull-unit indicator

See exactly how much the transducer is lowered directly on your display with a simple graphical interface. Instantly spot if and how much the transducer is lowered or retracted, helping you avoid accidents and increase the safety at sea.



Green Transducer is completely retracted
Brown Stopped in a position between "completely retracted" and "fully extended"
Red Transducer is being raised or lowered
Indicator changes color depending on position and movements of the transducer.

▶ Wired Remote and Sub Control Unit available



▶ Automatically track schools of fish with target lock function

FSV-25 will automatically lock on schools of fish found and display estimates of distance, depth, speed and angle of movement. Target lock is also available for stationary positions (speed and heading information required).

▶ Stabilization function for unwavering performance

The stabilizer ensures that echoes are stable when received, regardless of transducer attitude, counteracting the rolling and pitching motions at sea.

▶ Advanced noise reduction

Sea surface noise, noise from plankton and other weak echoes close to the seabed are effectively reduced.

▶ Auto filter for clear and uninterrupted performance

The auto filter ensures that you get clear and crisp echoes even when travelling at speed. The auto filter is also highly effective against interference from other fish finder equipped vessels.

▶ Excellent performance with FURUNO MU-190HD and MU-231 Marine Displays

With FURUNO Marine Displays you can expect unmatched quality and performance, both in tropical sunlight and in low light conditions.



Photo: 19" Marine Display MU-190HD (Customer Supply)

▶ Capture stills and video

With FSV-25, you can capture and replay both stills and video content recorded on your device. Stills and video can be saved to external USB flash memory.

▶ TLL (Target Latitude and Longitude) output

With TLL output you can save the position of your favourite fishing grounds directly to a connected chart plotter.

GENERAL

Scanning method: Full digital beam forming
Frequency: 20 kHz
Range: 60, 100, 150, 200, 300, 400, 500, 600, 800, 1000, 1200, 1600, 2000, 2500, 3000, 3500, 4000, 5000 m

Audio search: 30°, 60°, 90°, 180°, 330° (selectable)
Audio output: Audio terminal (requires speaker with amplifier)

DISPLAY UNIT (Customer Supply)

Screen resolution: SXGA(1280×1024), UXGA(1600×1200), WUXGA(1920×1200)
Picture color: 32 colors (sonar picture), 6 colors (marks)
Orientation: Head-up, North-up*, Course up* and True Motion*
 *External sensor required.

Presentation modes:

Horizontal, Horizontal combination, Vertical 1 combination, Vertical 2 combination

Features: Custom mode, Interference rejecter, After-glow, Noise limiter, Signal level, Auto-tilt, Automatic target tracking (target lock), Fish alarm, AGC, Reverberation suppression, Noise suppression, Transducer stop location control, Over-voltage warning, Unretracted transducer warning

TRANSCIVER UNIT

Transmitter: PDM half-bridge

Receiving method: Straight amplifier, full digital beam forming

H-mode beam-width:

TX: 360° x 7°, RX: 12° x 10° (-3 dB full width)
 TX: 360° x 10°, RX: 16° x 14° (-6 dB full width)

V-mode beam-width:

TX: 360° x 29°, RX: 12° x 10° (-3 dB full width)
 TX: 360° x 47°, RX: 18° x 13° (-6 dB full width)

Tilt angle: -5° to 60° (downward)

Vertical search range: 0° to 60° (downward)

HULL UNIT

Model name	FSV-253	FSV-254
Stroke	1200 mm	1600 mm
Raise/Lower time (Full)	12 sec.	16 sec.

Speed limitations

Transducer extension	Stable	Raising/Lowering
0 to 1100 mm	20.0 kn	14.5 kn
1100 to 1300 mm	18.0 kn	13.5 kn
1300 mm and longer	16.0 kn	12.0 kn

INTERFACE

(1)Ports

IEC61162-1/2: 3 Ports (NMEA0183 Ver1.5/2.0/3.0)
 CIF: 2 Ports (input, current)
 External KP: Input:1 Port, Output: 3 ports, TTL level
 USB: 2 Ports (USB2.0)

(2) I/O sentences

Input: CUR, DBS, DBT, DPT, GGA, GLL, GNS, HDG, HDM, HDT, MDA, MTW, MWV, RMA, RMC, VBW*1, VDR, VHW, VTG, VWR, VWT, ZDA
 *1 Fore-aft and port-stbd speeds required.

Output: TLL

(3) CIF sentences: System clock, Position, Bearing, First layer current data, Water depth, Water temperature, Sonde depth, Ship's speed/course data, Multi-layer current data, Net depth, Wind speed/direction, Sonde number

POWER SUPPLY

Processor unit: 12-24 VDC:10-5 A

Power supply unit: 100/110/115/220/230 VAC: 14 A max, 1 phase, 50/60 Hz
 Output for transceiver unit: 200 VAC, 1 phase, 50/60 Hz

Raise/lower control box:

200 - 220 VAC:16 A max, 3 Phase, 50/60 Hz

Rectifier (option): 100/110/115/220/230 VAC, 1 Phase, 50/60 Hz

ENVIRONMENTAL CONDITIONS

Ambient temperature:

Processor Unit: 0°C to +45°C

Transducer: -5°C to +35°C

Control Unit: -15°C to +55°C

Others: 0°C to +50°C

Relative humidity: 93% max at +40°C

Waterproofing:

Control Unit: IPX2 (panel), IPX0 (chassis)

Processor Unit, Interface Unit, Remote control Unit: IPX0

Transceiver Unit, Power Supply Unit, Junction Box: IPX2

Hull Unit: IPX2

Transducer: IPX8

Vibration: IEC60945 Ed.4

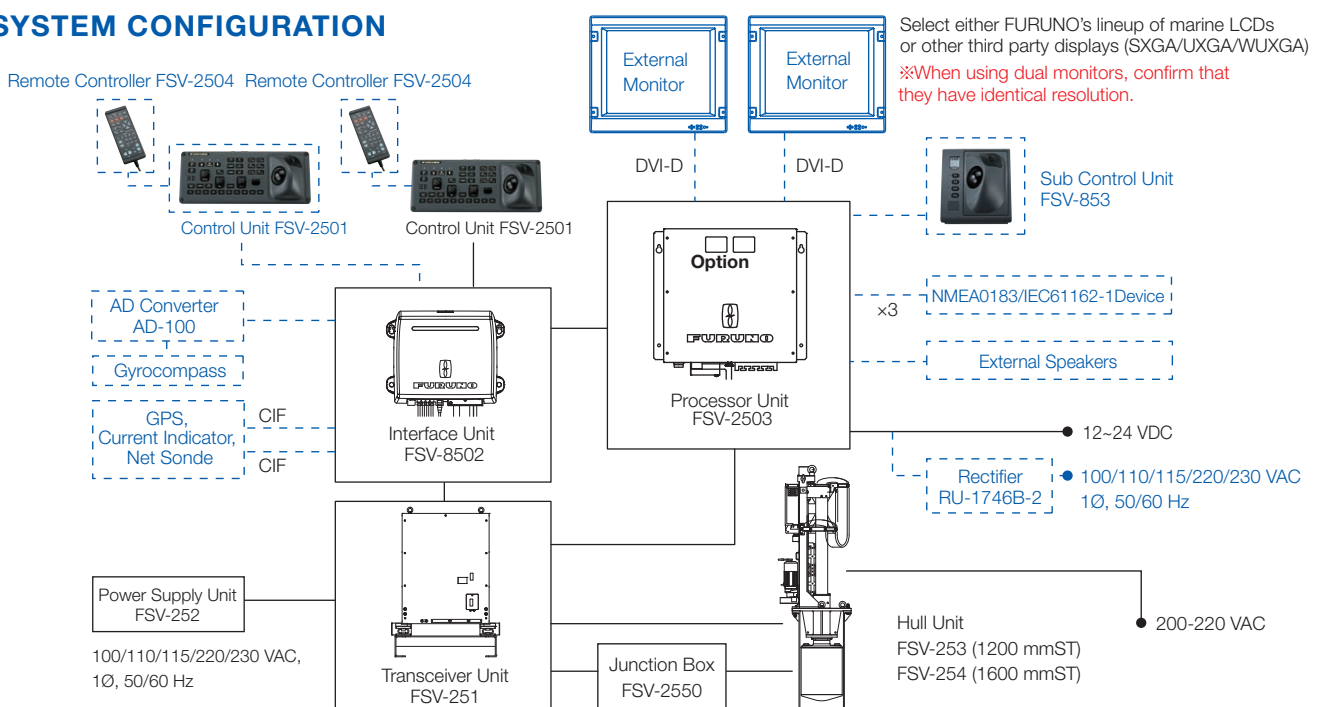
EQUIPMENT LIST

Standard

1. Control Unit
(Cable 5/10 m)
2. Junction Box
3. Interface Unit
4. Hull Unit
5. Processor Unit
6. Transceiver Unit
7. Power Supply Unit
8. Installation Materials
9. Spare Parts

1. Control Unit
2. Sub Control Unit
3. Rectifier
4. Remote Control
5. Retraction Tank
6. Attachment Kit
8. Attachment Flange
9. Fixing Materials
10. Flush Mount Kit
11. Control Box Extension Box
12. 8 Core Cable
13. Cables
14. Installation Materials
(LAN cable10/20/30/50/100m)
15. Junction Box

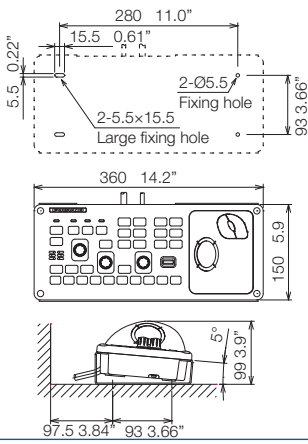
SYSTEM CONFIGURATION



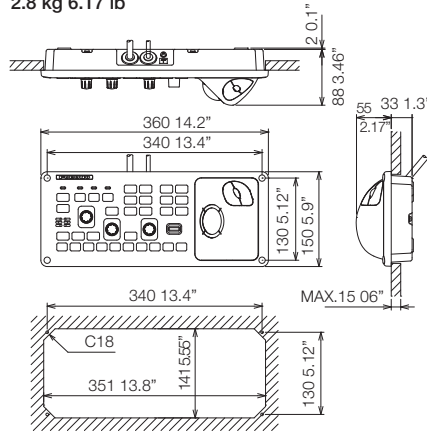
※ The distance between the Raise/Lower Control Box and the Hull Unit can be extended with the optional Control Box Extension Box FSV-2560

Control Unit FSV-2501

3.8 kg 8.4 lb

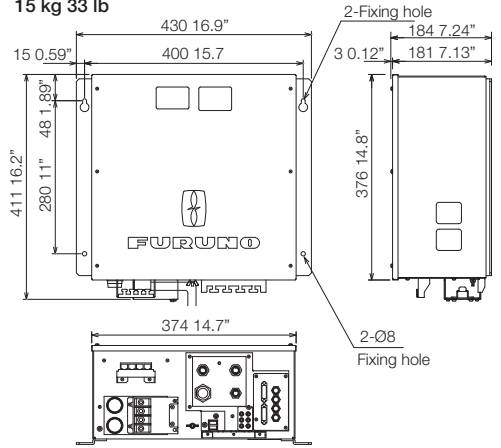


2.8 kg 6.17 lb



Processor Unit FSV-2503

15 kg 33 lb



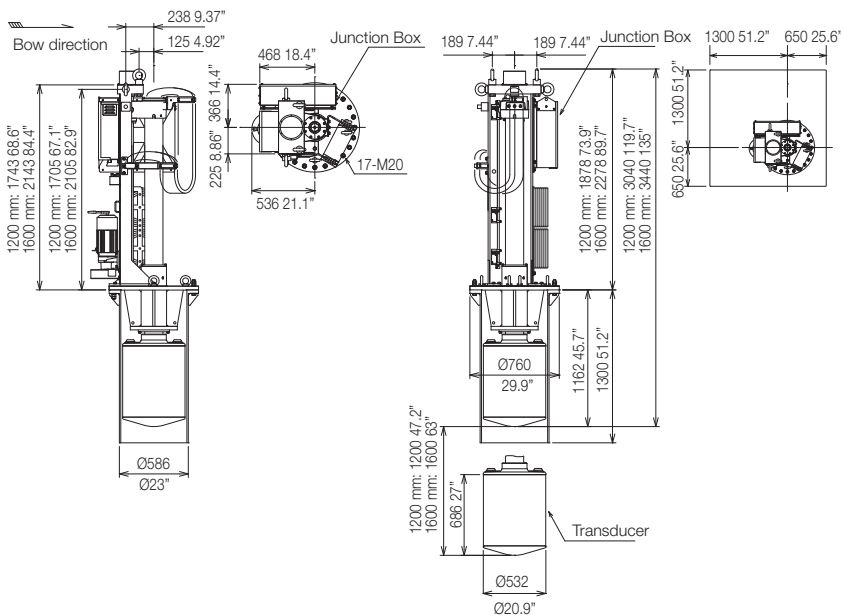
Hull Unit FSV-253/254

FSV-253 (1200mm stroke)

1390 kg
3064 lb

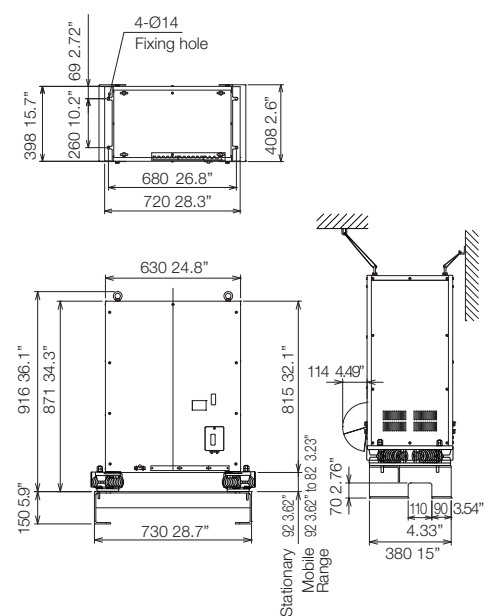
FSV-254 (1600mm stroke)
(Excluding Junction Box and Tank)

1440 kg
3175 lb



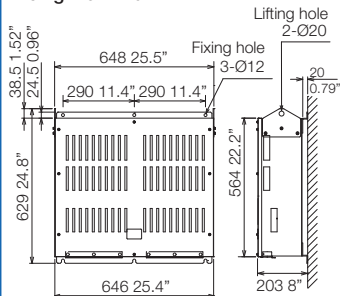
Transceiver Unit FSV-251

138 kg 304 lb



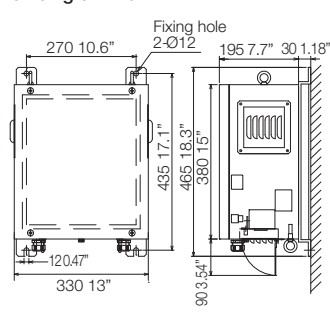
Junction Box FSV-2550

46 kg 101.4 lb



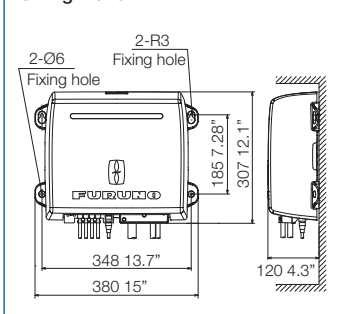
Power Supply Unit FSV-252

37.5 kg 82.7 lb



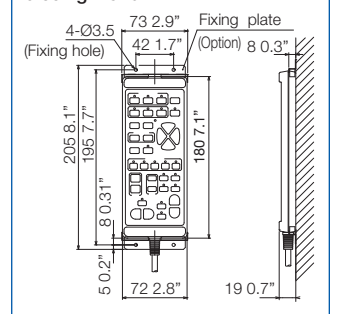
Interface Unit FSV-8502

3.4 kg 7.5 lb



Remote Control Unit FSV-2504

0.68 kg 1.5 lb



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