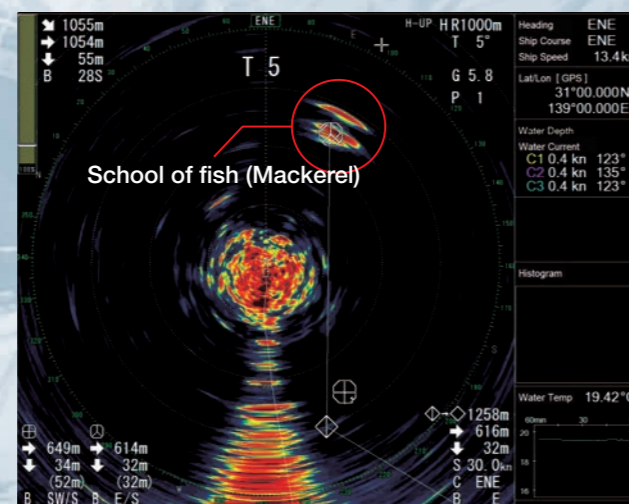
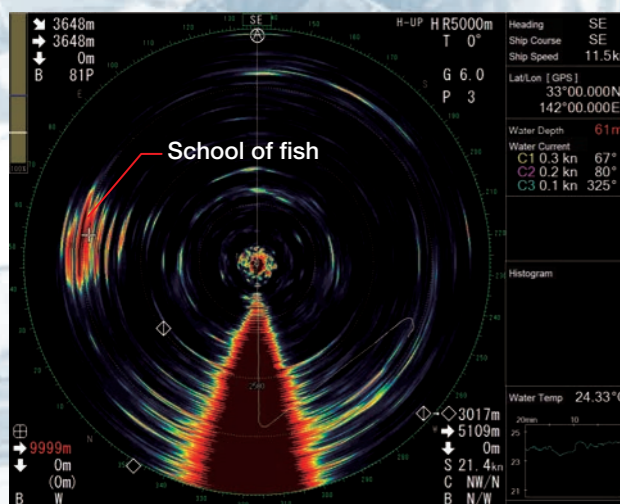
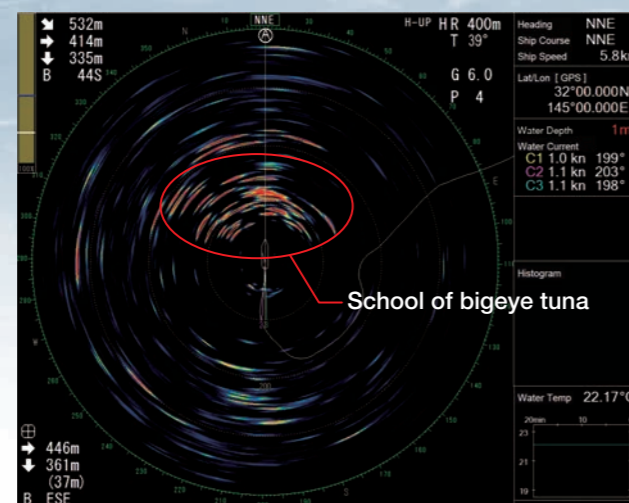
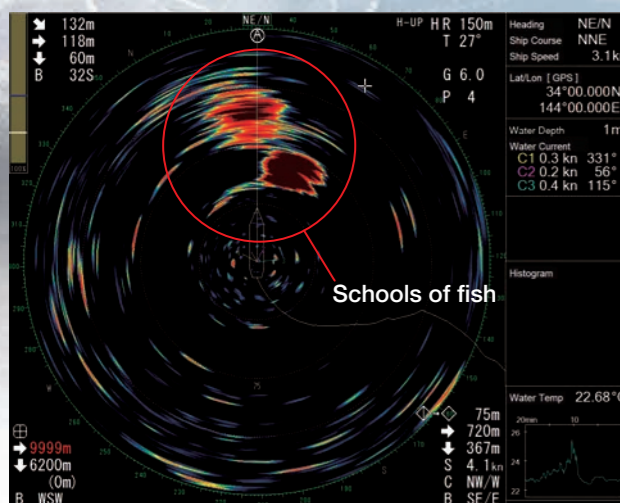


Full-Circle Color Scanning Sonar Model **FSV-25**

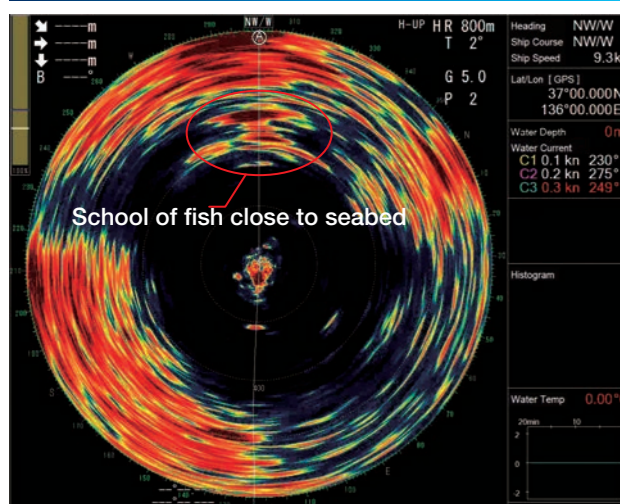
Easily spot schools of fish far away



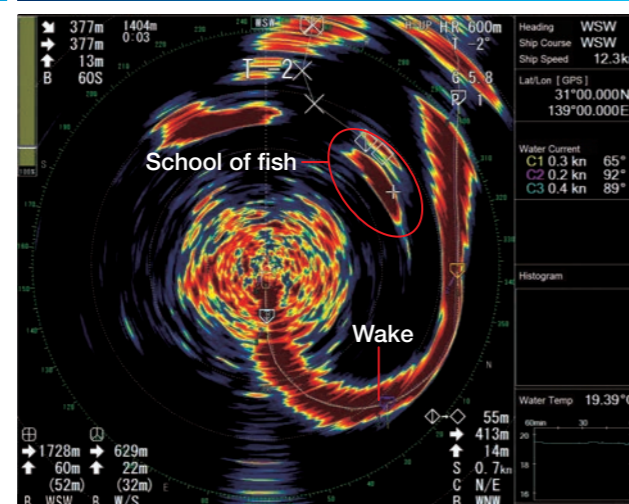
Improved resolution with new signal compression algorithms



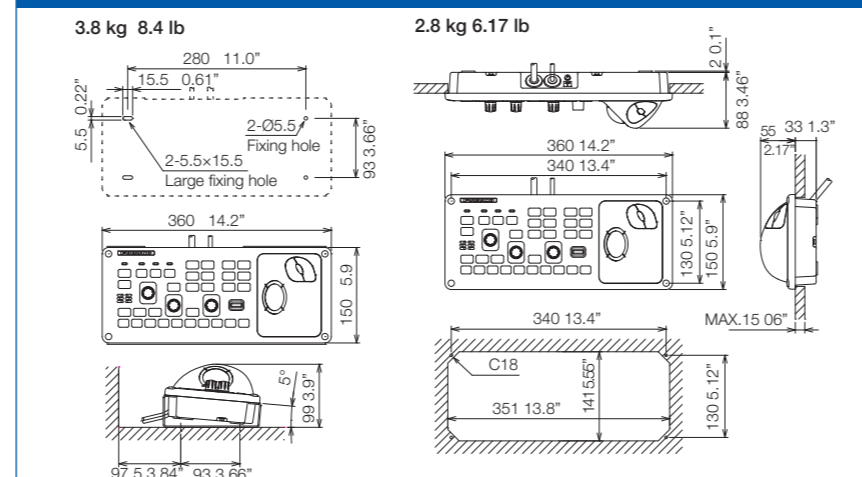
Accurately spot bottom feeders



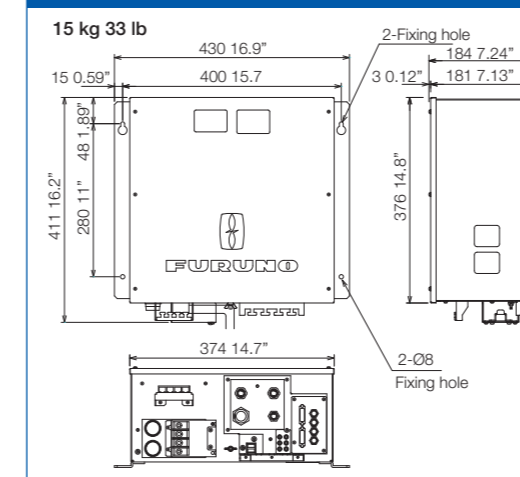
Fish movements within your net



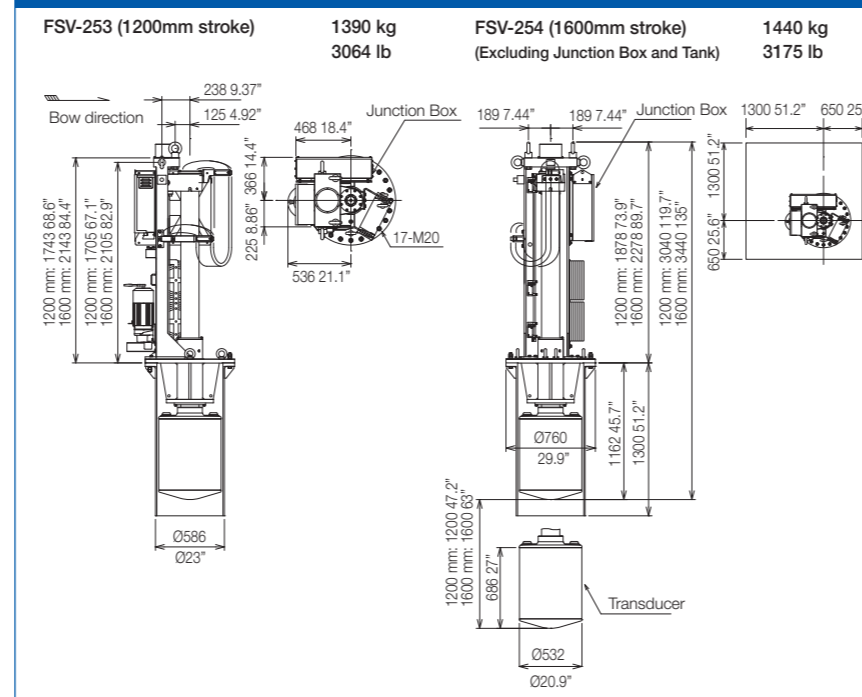
Control Unit FSV-2501



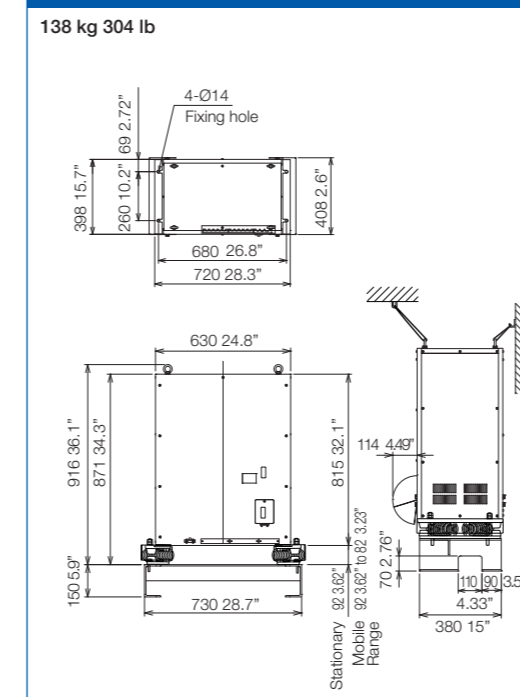
Processor Unit FSV-2503



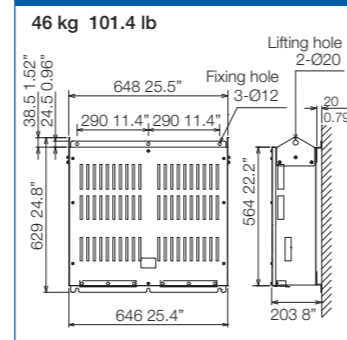
Hull Unit FSV-253/254



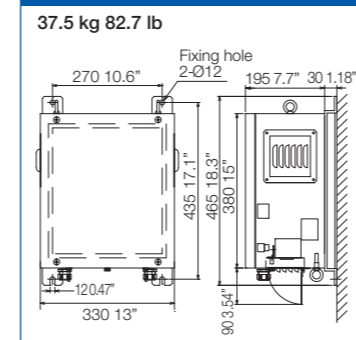
Transceiver Unit FSV-251



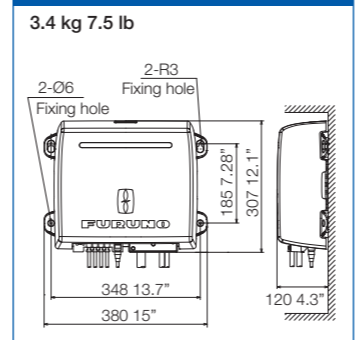
Junction Box FSV-2550



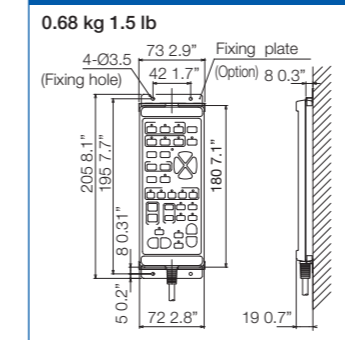
Power Supply Unit FSV-252



Interface Unit FSV-8502



Remote Control Unit FSV-2504



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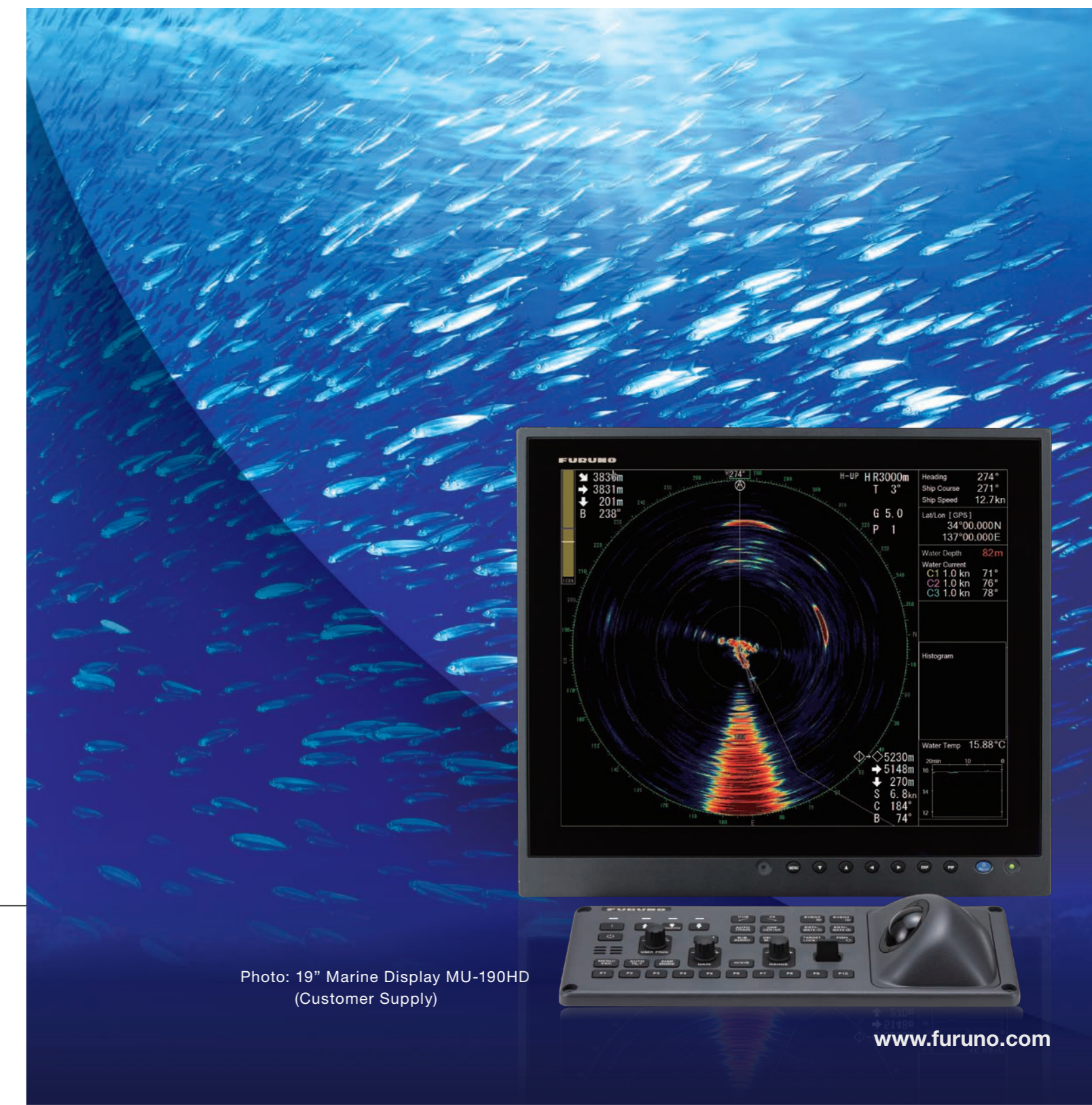
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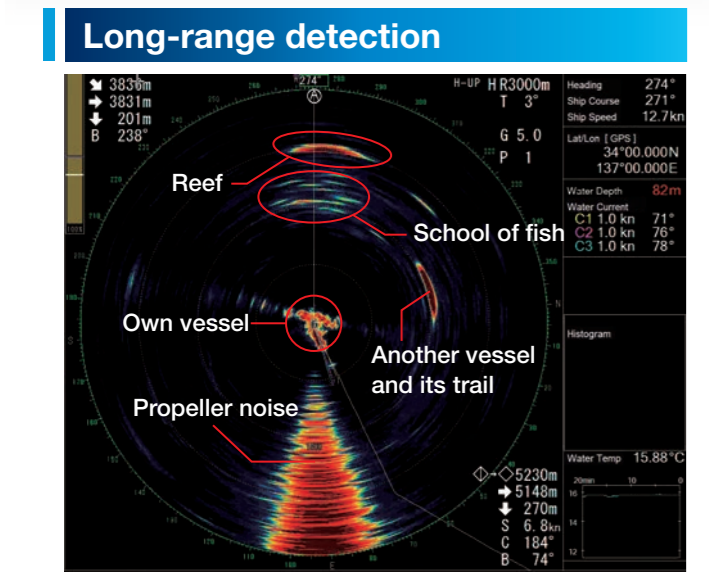
15081SS Printed in Japan
Catalogue No. E-421a



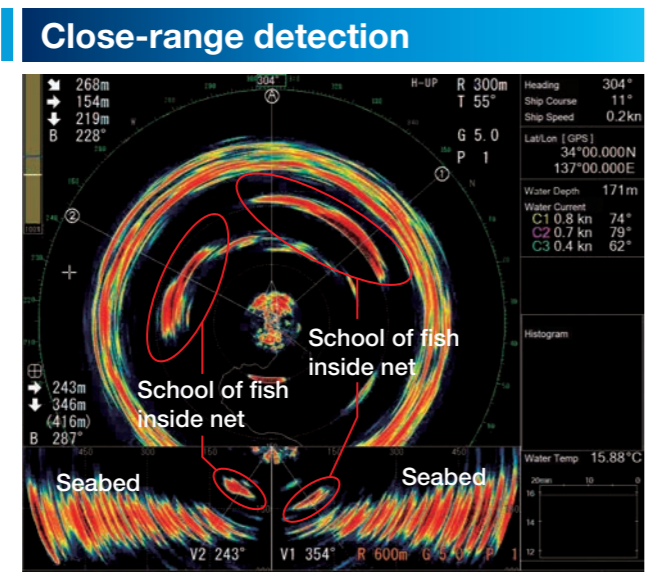
Stunning performance, amazing range with FSV-25!



Full-Circle Color Scanning Sonar Model **FSV-25**



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



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

▶ 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.

▶ Fish distribution histogram and volume estimation

Histogram of size distribution and volume estimates can be displayed immediately upon locking the target on any given school of fish.

▶ 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.

▶ 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.

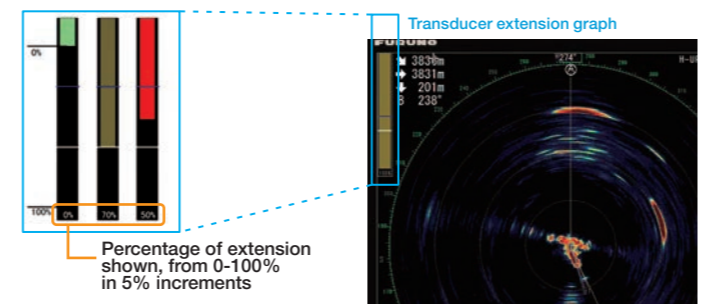
▶ Stop function when extending and retracting transducer

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.



Percentage of extension shown, from 0-100% in 5% increments

- Transducer is completely retracted
- Stopped in a position between "completely retracted" and "fully extended"
- 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.

▶ 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.

SPECIFICATIONS OF **FSV-25**

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(1280x1024), UXGA(1600x1200), WUXGA(1920x1200)
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)
 Contact Signal: 1 Port (input, speed)
 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, MWW, RMA, RMC, VBW, VDR, VHW, VTG, VWR, VWT, ZDA
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

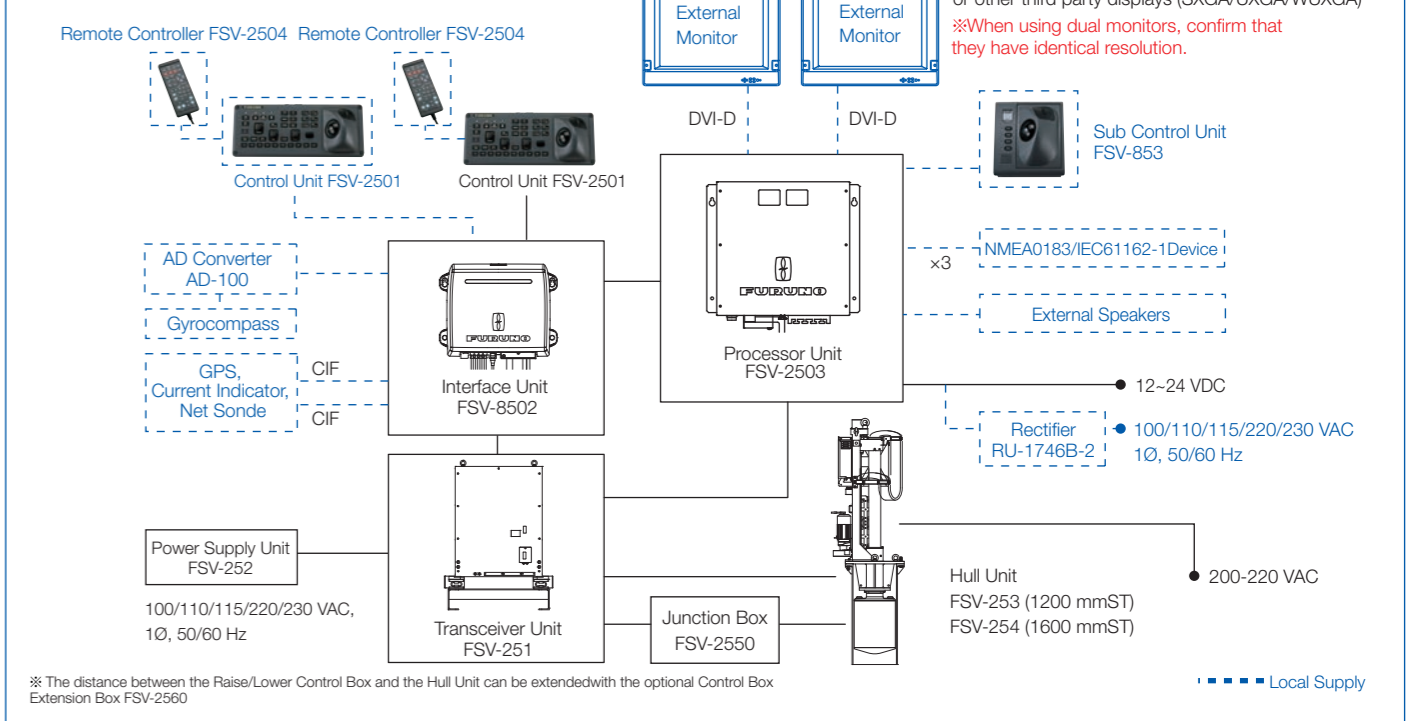
ENVIRONMENTAL CONDITIONS

Ambient temperature:
 Processor Unit: 0°C to +45°C
 Transducer: -5°C to +35°C
 Control Unit: 0°C to +50°C
 Others: 0°C to +50°C
 Relative humidity: 93% max at +40
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 | Option |
| 1. Control Unit (Cable 5/10 m) | 1. Control Unit |
| 2. Junction Box | 2. Sub Control Unit |
| 3. Interface Unit | 3. Rectifier |
| 4. Hull Unit | 4. Remote Control |
| 5. Processor Unit | 5. Retraction Tank |
| 6. Transceiver Unit | 6. Attachment Kit |
| 7. Power Supply Unit | 8. Attachment Flange |
| 8. Installation Materials | 9. Fixing Materials |
| 9. Spare Parts | 10. Flush Mount Kit |
| | 11. Control Box Extension Box |
| | 12. 8 Core Cable |
| | 13. Cables |
| | 14. Installation Materials (LAN cable 10/20/30/50/100m) |
| | 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