

FURUNO

Full-Circle Color Scanning Sonar

Model **FSV-25**

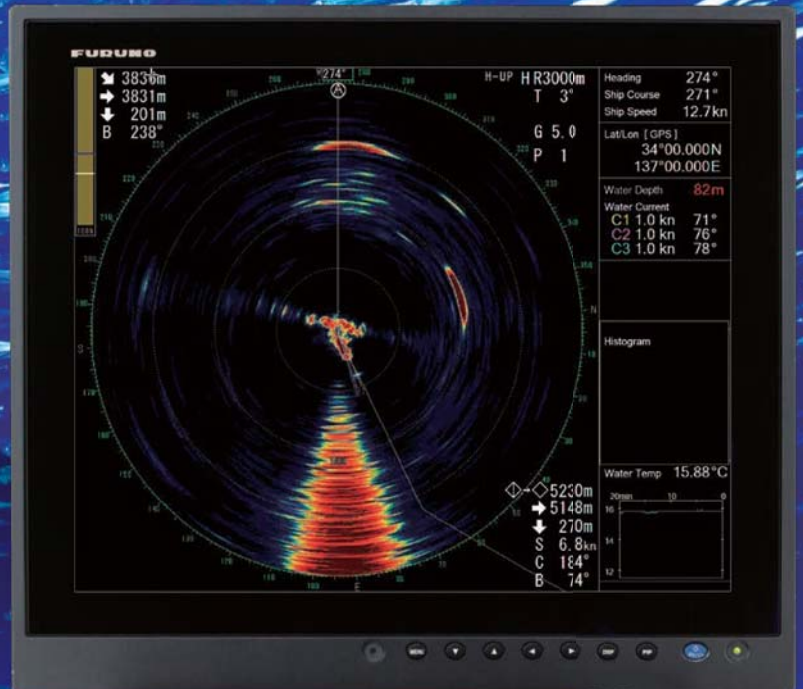


Photo: 19" Marine Display MU-190HD
(Customer Supply)

www.furuno.com

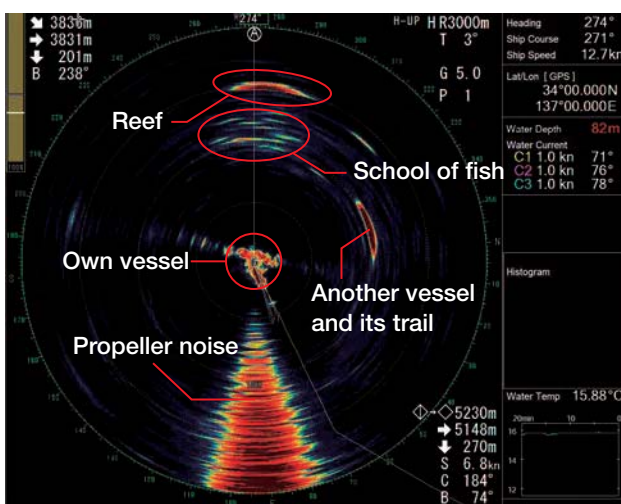
Stunning performance, amazing range with FSV-25!



Full-Circle Color Scanning Sonar

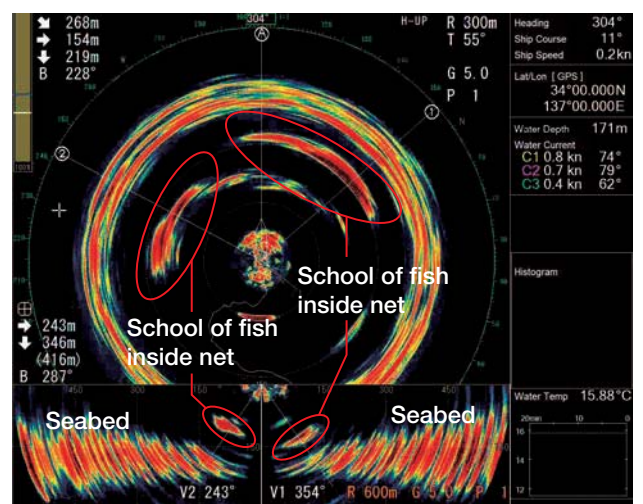
Model **FSV-25**

Long-range detection



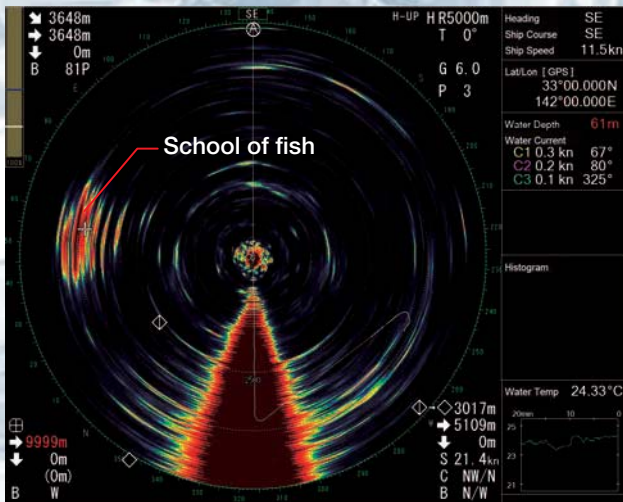
(3000m range) A school of fish 2000m ahead. The fish school appears to swim close to a reef.

Close-range detection

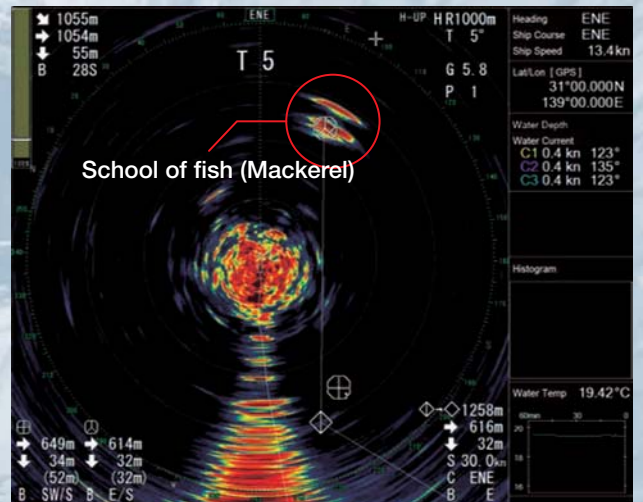


(300m range) Two schools of fish can be seen right after the purse-line has been pulled and the net has been closed.

Easily spot schools of fish far away

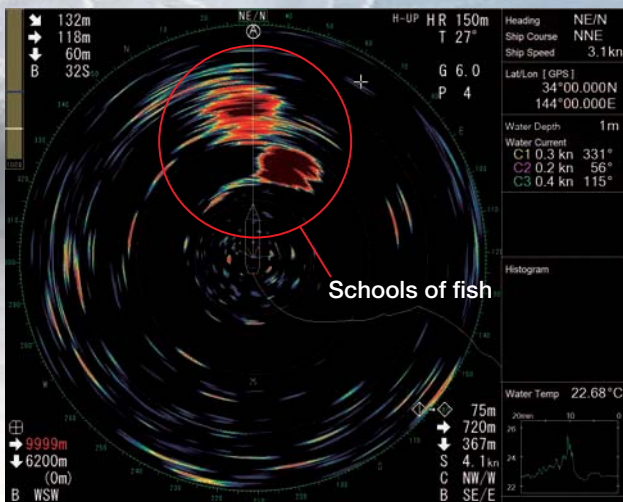


(5000 m range) A school of bait fish can be seen on the port side of the vessel.

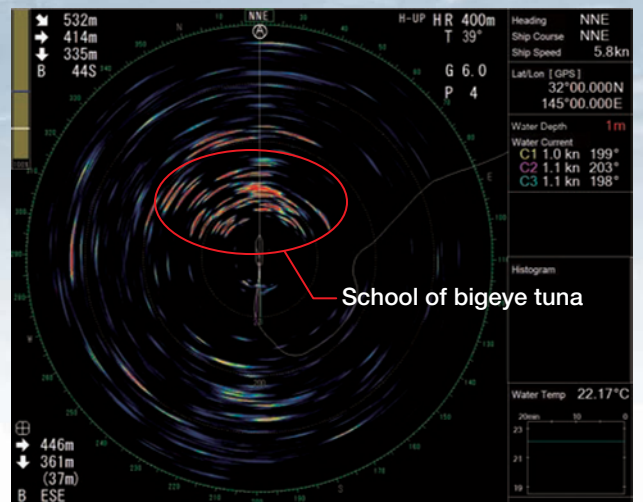


(1000 m range) Targeted school of fish 650 meters away.

Improved resolution with new signal compression algorithms

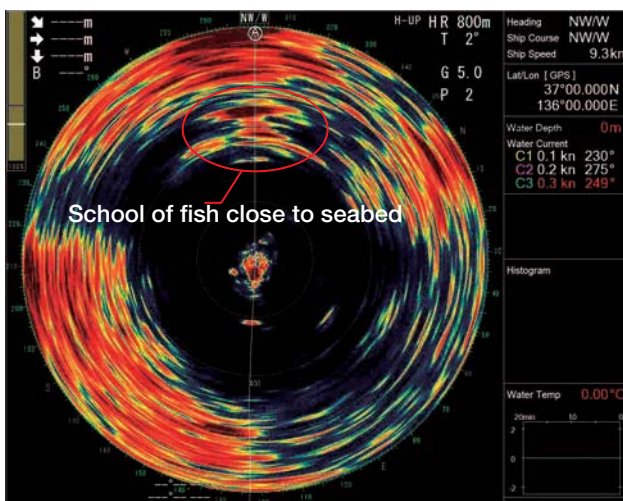


(150 m range) Schools of tuna and skipjack tuna spotted.



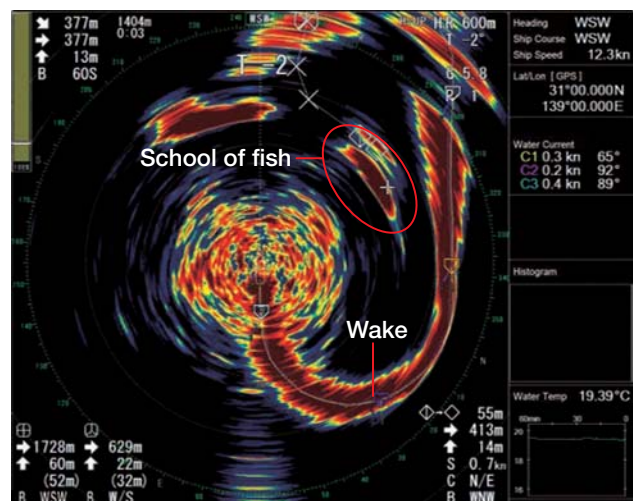
(400 m range) Individual bigeye tunas can be seen in this fish school.

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.

▶ 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.

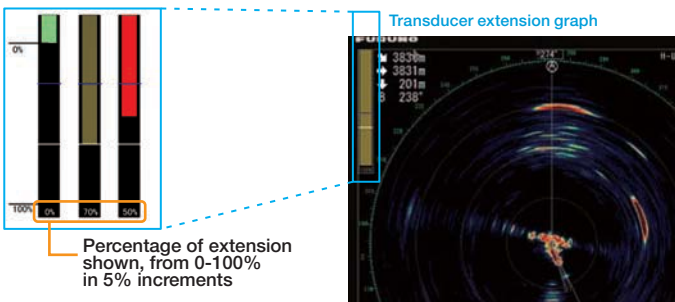
▶ Stop function when extending and retracting transducer

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.



- 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.



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)
 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

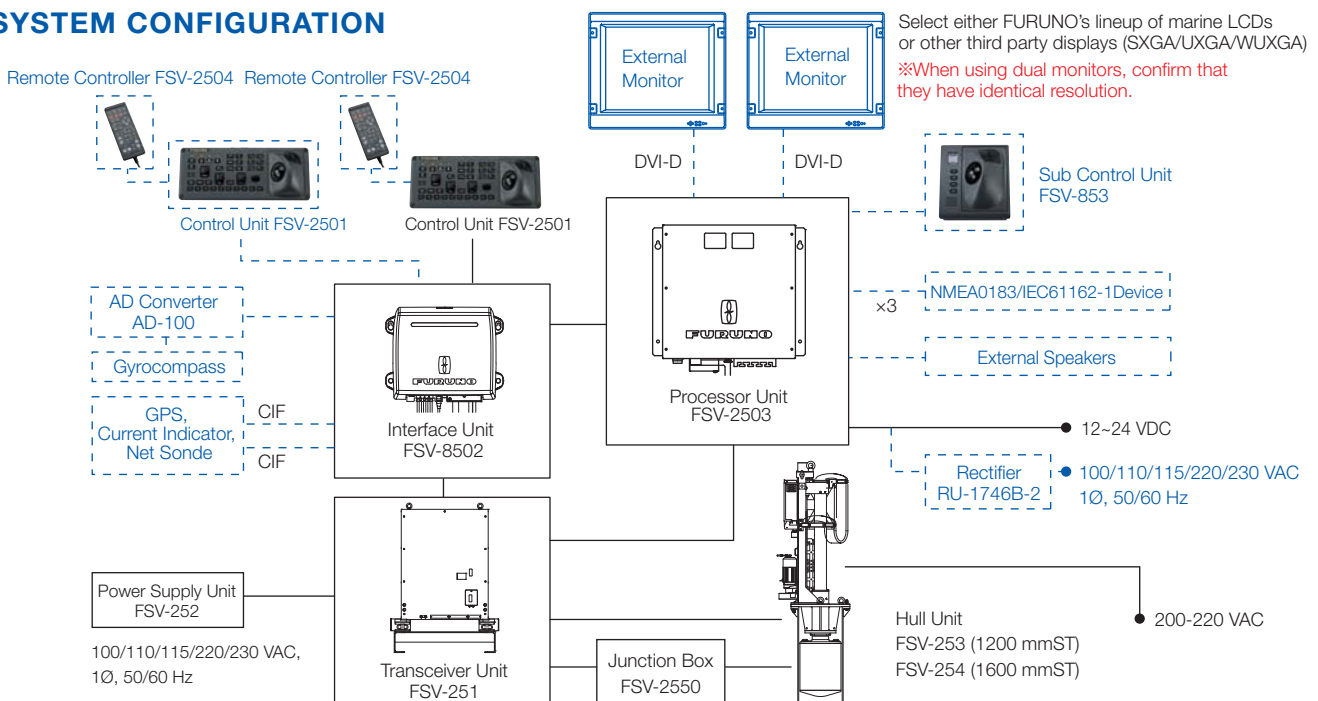
Standard

- Control Unit (Cable 5/10 m)
- Junction Box
- Interface Unit
- Hull Unit
- Processor Unit
- Transceiver Unit
- Power Supply Unit
- Installation Materials
- Spare Parts

Option

- Control Unit
- Sub Control Unit
- Rectifier
- Remote Control
- Retraction Tank
- Attachement Kit
- Attachement Flange
- Fixing Materials
- Flush Mount Kit
- Control Box Extension Box
- 8 Core Cable
- Cables
- Installation Materials (LAN cable10/20/30/50/100m)
- Junction Box

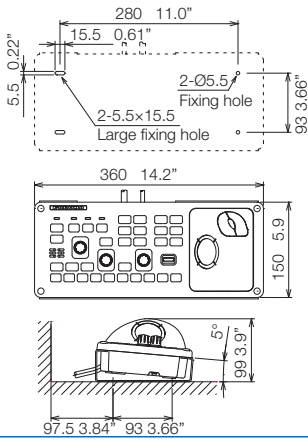
SYSTEM CONFIGURATION



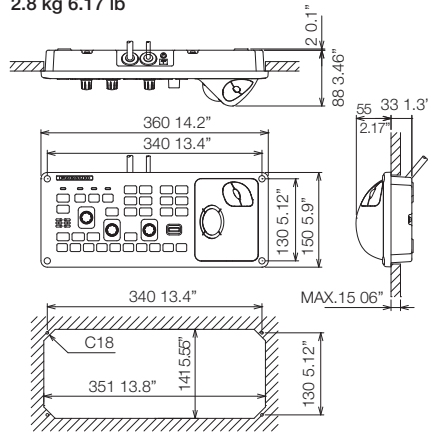
※ The distance between the Raise/Lower Control Box and the Hull Unit can be extended with the optional Control Box Extension Box FSV-2560

Control Unit FSV-2501

3.8 kg 8.4 lb

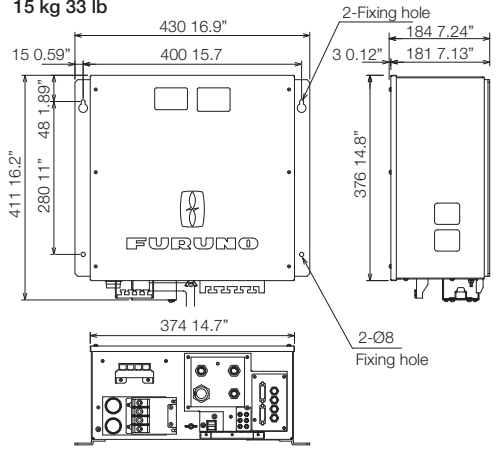


2.8 kg 6.17 lb



Processor Unit FSV-2503

15 kg 33 lb



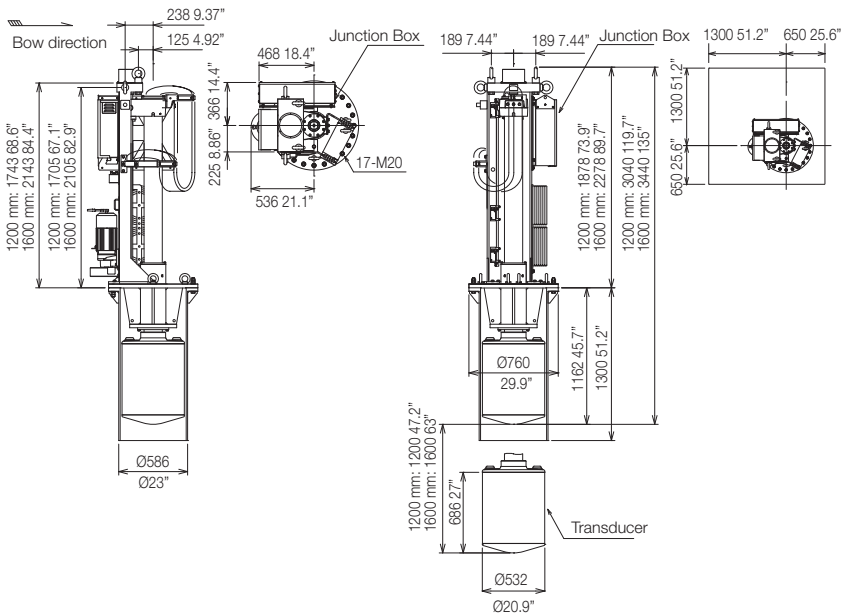
Hull Unit FSV-253/254

FSV-253 (1200mm stroke)

1390 kg
3064 lb

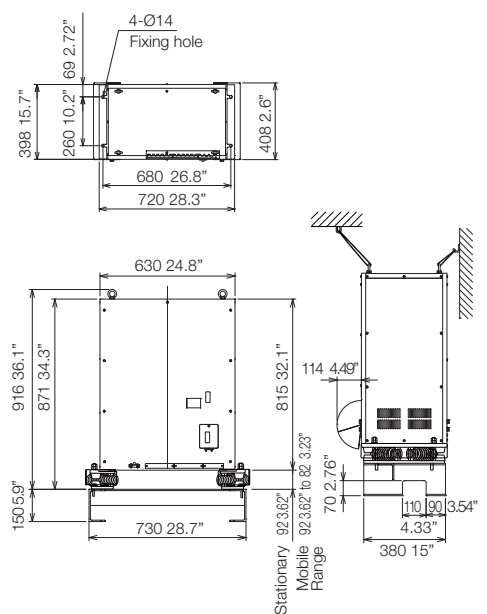
FSV-254 (1600mm stroke)
(Excluding Junction Box and Tank)

1440 kg
3175 lb



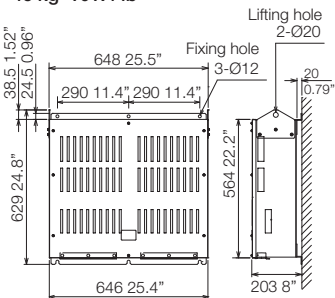
Transceiver Unit FSV-251

138 kg 304 lb



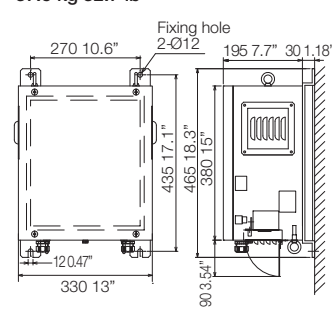
Junction Box FSV-2550

46 kg 101.4 lb



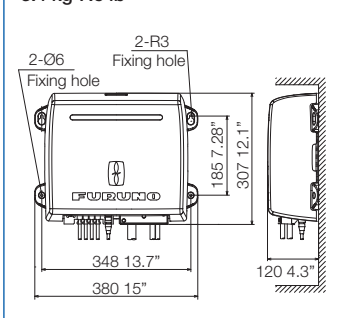
Power Supply Unit FSV-252

37.5 kg 82.7 lb



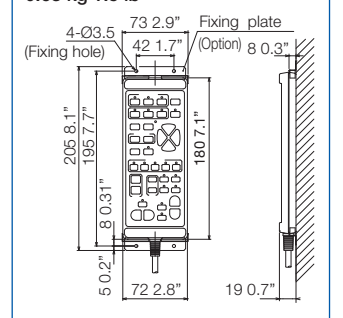
Interface Unit FSV-8502

3.4 kg 7.5 lb



Remote Control Unit FSV-2504

0.68 kg 1.5 lb



Beware of similar products

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

FULL-CIRCLE COLOR SCANNING SONAR

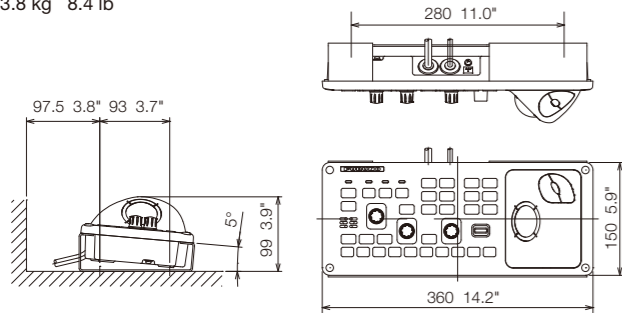
Model **FSV-85** Middle Frequency 80 kHz

FURUNO

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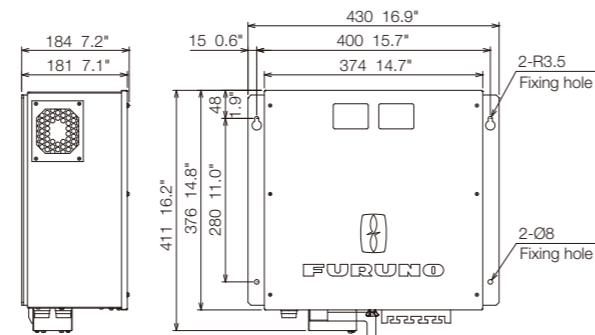
CONTROL UNIT FSV-8501

3.8 kg 8.4 lb



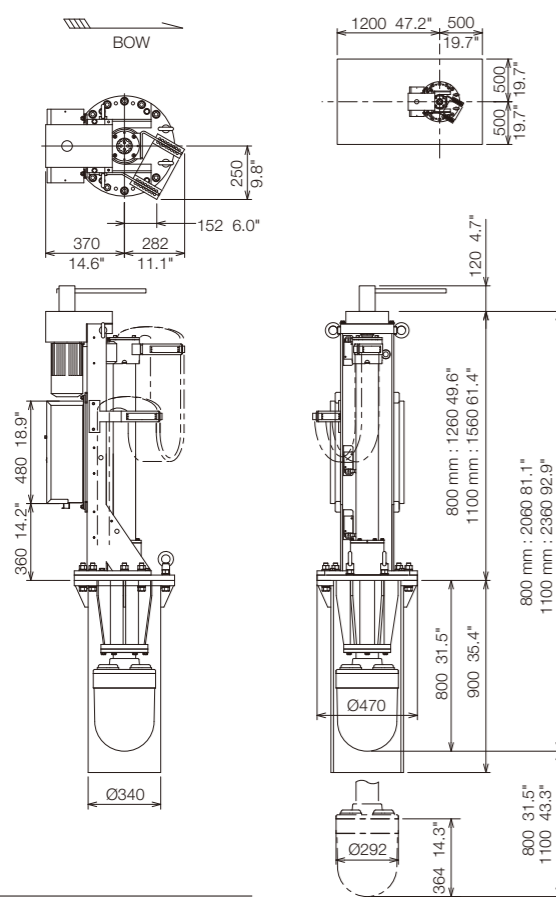
PROCESSOR UNIT FSV-8503

15 kg 33.1 lb



HULL UNIT FSV-8432/8442

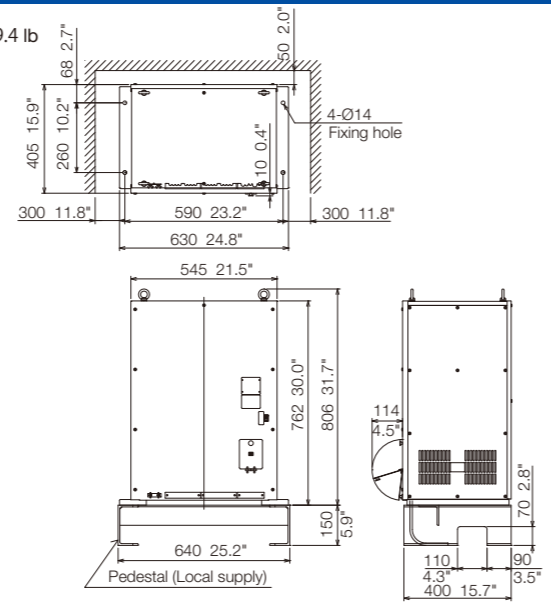
800 mm: 370 kg 815.7 lb
1100 mm: 390 kg 859.8 lb
(With tank)



800 mm FSV-8432 With motion sensor
1100 mm FSV-8442 With motion sensor

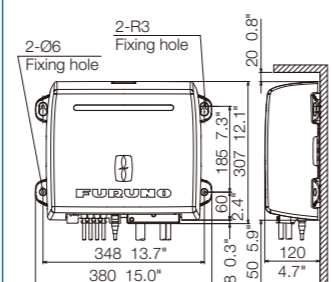
TRANSCIVER UNIT FSV-851

95 kg 209.4 lb



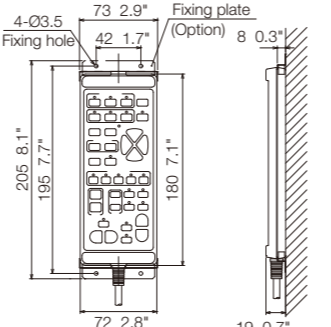
INTERFACE UNIT FSV-8502

3.4 kg 7.5 lb



REMOTE CONTROLLER FSV-854

0.68 kg 1.5 lb



FULL-CIRCLE COLOR SCANNING SONAR

Model **FSV-35**
Low Frequency 24 kHz

Model **FSV-85**
Middle Frequency 80 kHz

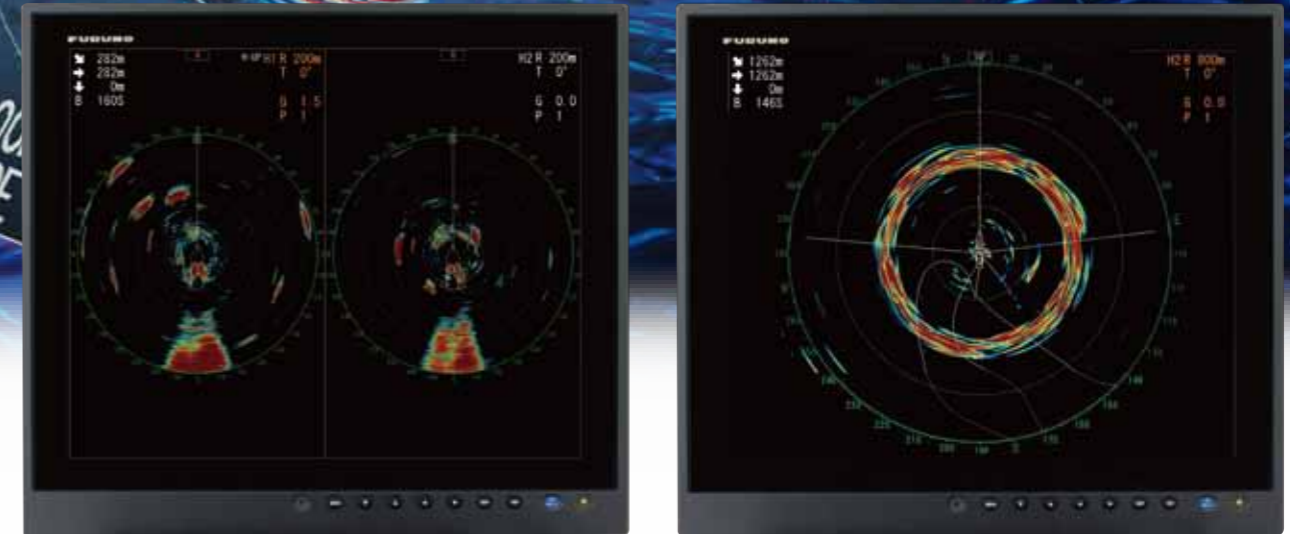
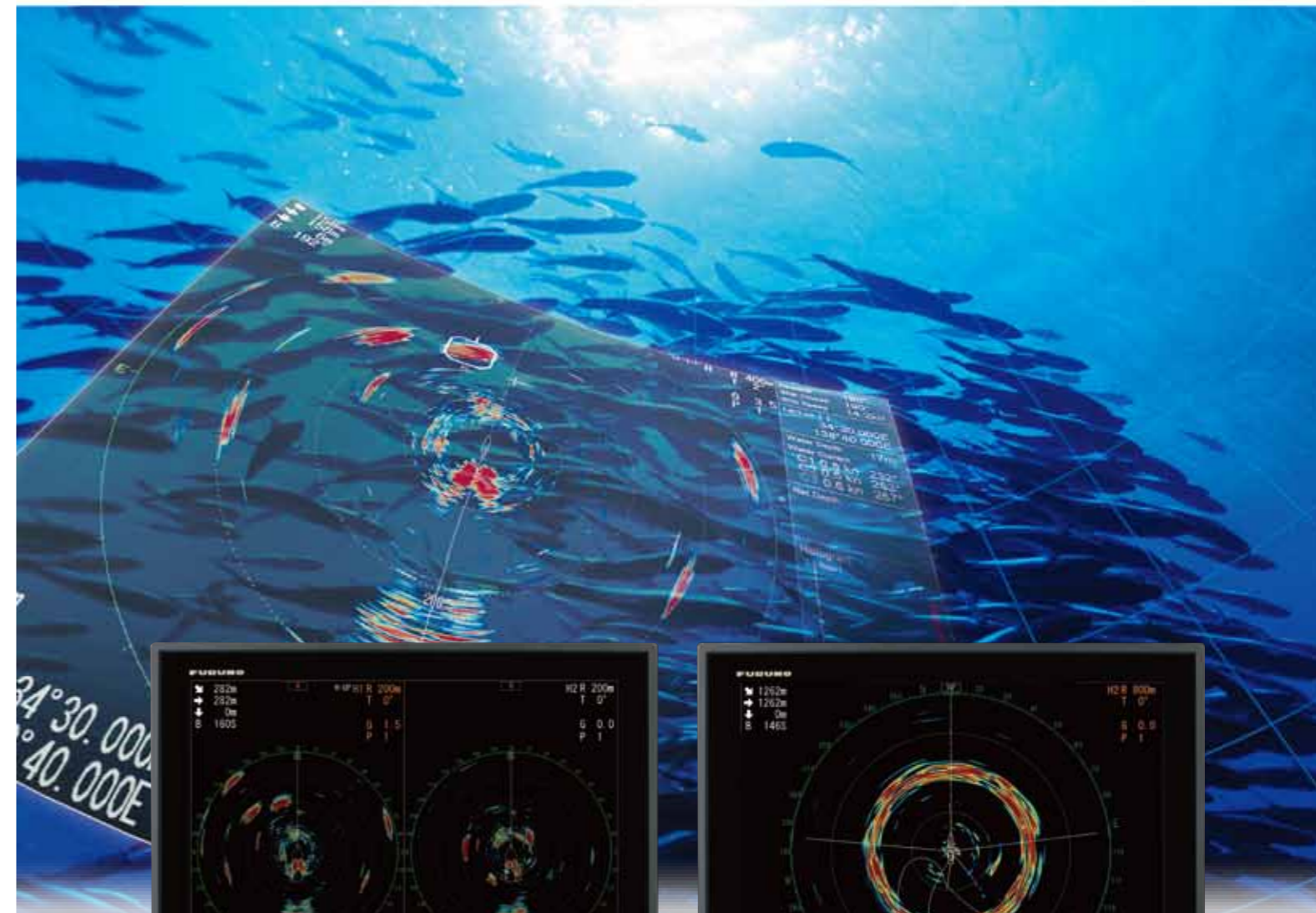


Photo: Control unit with optional monitor MU-190

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12073SK Printed in Japan
Catalogue No. E-413



www.furuno.com

The FSV series of Furuno Scanning Sonar has long been a favorite among commercial fishermen, and the FSV-35/85 carries on that tradition. The FSV series provides reliable and consistent detection of fish and seabed conditions with revolutionary, enhanced signal processing technology.

To make operation even easier while underway, you can assign frequently used features to the FSV-35/85's dedicated Function keys. Preset modes are also provided for instant setup of the equipment according to fishing ground or target species.

Advanced Solutions Built on World-Proven Sonar Technology

Dual Monitors For Increased Productivity

The FSV-35/85 has an ability to use a dual monitor setup to extend your sonar display across two screens. Comparing horizontal and vertical modes is easier when you have dual monitors. You can show two display modes, comparing horizontal and vertical section side by side in separate full-size windows, for example.



Photo: Flush mount installation



Photo: Bracket type with fixing plate



FULL-CIRCLE COLOR SCANNING SONAR

Model **FSV-35** Low Frequency 24 kHz Model **FSV-85** Middle Frequency 80 kHz

Horizontal Display Combinations (H2 mode)

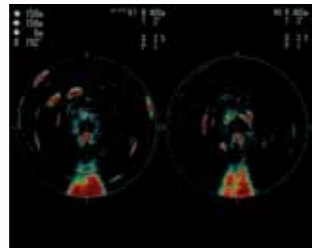
The horizontal display mode provides a 360 degree picture around the vessel. The H2 mode shows one of four kinds of horizontal display combinations: LANDSCAPE, PORTRAIT, RIGHT INSET and LEFT INSET. The range, tilt, gain and user program are set independently, for each display.

PORTRAIT

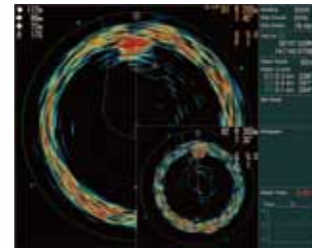


Horizontal scan 1 | Horizontal scan 2
 Range: 150 m | Range: 300 m
 Tilt: 45 degrees | Tilt: 20 degrees
 Gain: 5.0 | Gain: 5.0

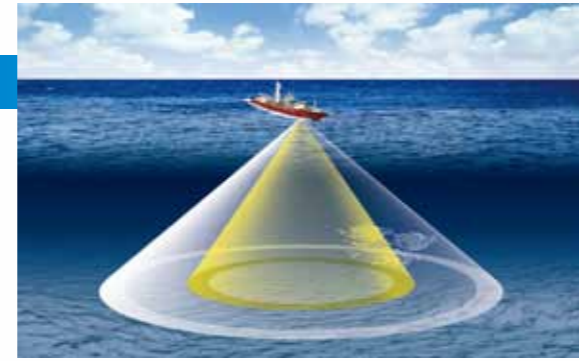
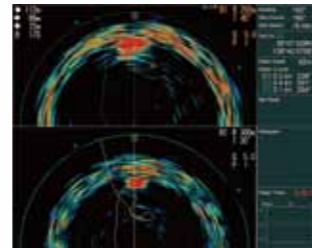
FULL SCREEN PORTRAIT



RIGHT INSET

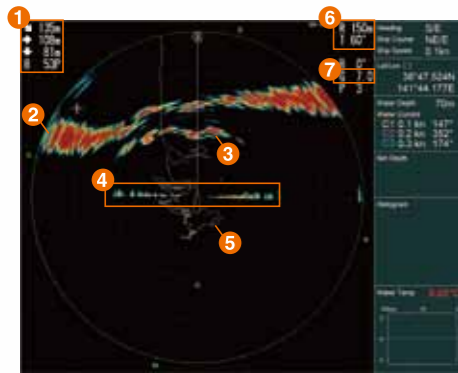


LANDSCAPE

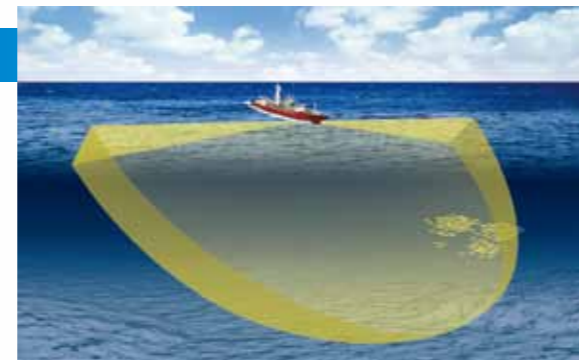


Slant Mode Scan (For FSV-85 only)

The slant mode provides a half-circle (180 degree) picture, with own ship at the center.

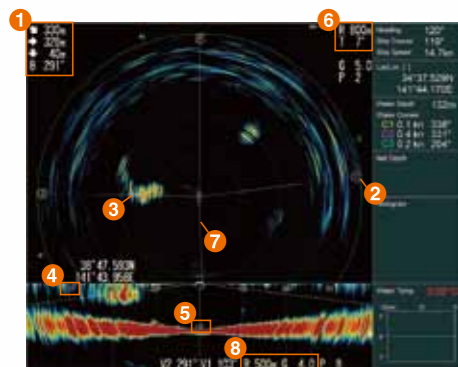


1. Direct distance, horizontal distance, water depth and bearing to the cursor
2. Seabed
3. School of fish
4. Sea surface reflection
5. Ship's track
6. Range and tilt
7. Gain

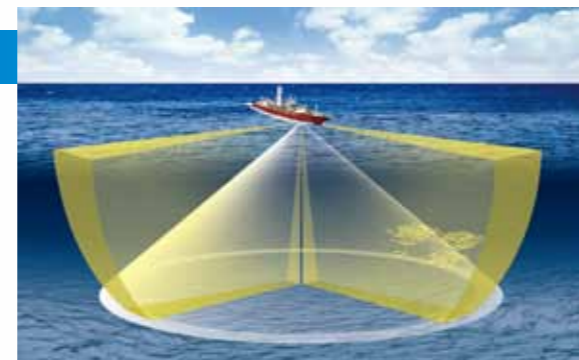


Horizontal And Vertical Display Combinations

A horizontal and two vertical scans can be displayed simultaneously. By utilizing both scans, the skipper can locate a school of fish and its distribution in horizontal and vertical perspectives at the same time.



1. Direct distance, horizontal distance, water depth and bearing to the cursor
2. Bearing mark for vertical scan 1 (V1)
3. Cursor
4. Range distance of vertical scan
5. Water depth under the boat
6. Range, tilt, and display mode of Horizontal scan
7. Ship's track
8. Range and gain of vertical scan

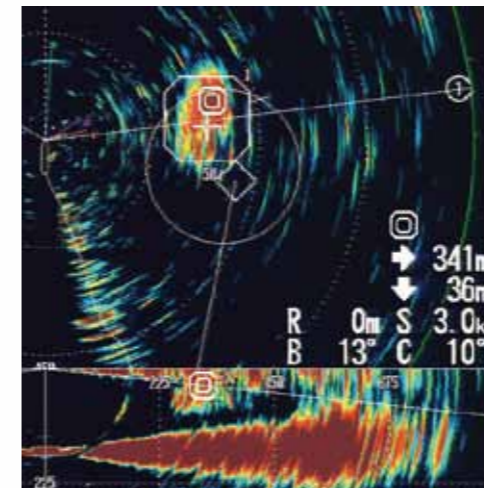


High Resolution, Long Range Detection Capability

Combining the latest digital technology with a high-sensitivity transducer, the FSV-35/85 provides long-range detection capability and high resolution sonar imagery.

Automatic Target Lock

The echo target lock function automatically tracks the operator-selected fish school so you won't lose sight of it on the display. The range and tilt are automatically controlled according to the fish position.



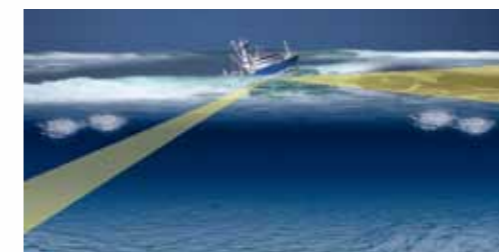
The target's range, course, and speed are automatically estimated and shown in display.

Filtering For Noise Reduction

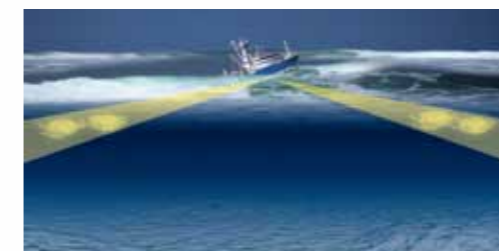
The FSV-35/85's detecting system incorporates a digital filter responsive to the interfering noise, providing a clear view of the display at high speed (at 18 knots) without affecting the sonar.

Beam Stabilization

The beam stabilization mode maintains the sonar beam at required tilt by compensating for ship's pitching and rolling. This gives an unwavering presentation of the echo images even in rough seas.



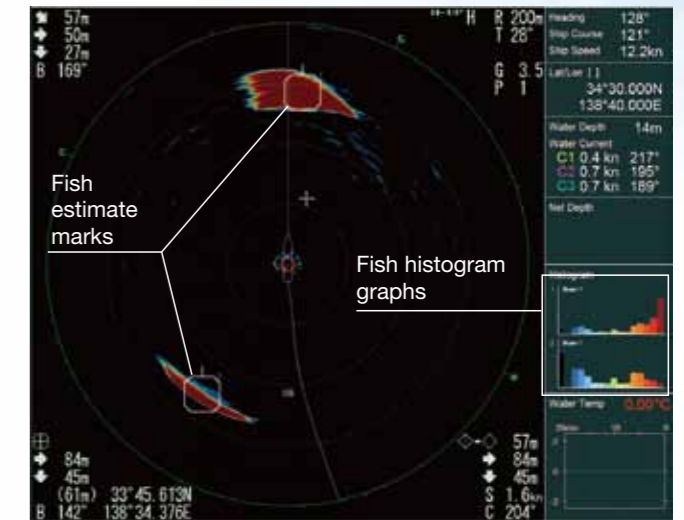
Stabilization OFF



Stabilization ON

Fish Histogram

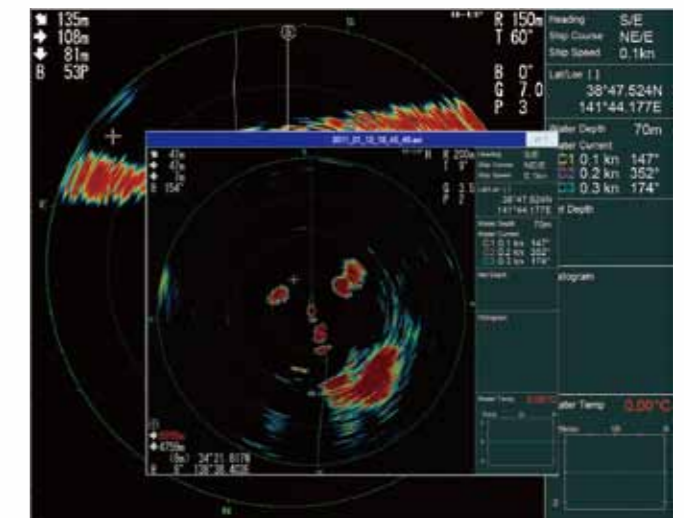
The fish histogram shows, in graph form, signal strength distribution for the school(s) of fish marked with an estimate mark on the horizontal and echo sounder displays.



In the histogram graph at the right side of the display, the horizontal axis shows signal strength in 16 colors, and the vertical axis shows the concentration of the school of fish inside the fish estimate mark.

Digital Recording Playback

FSV-35/85 allows you to capture a screenshot of a sonar echo and GPS details to playback and observe targets.



Screenshot of sonar image shown in a pop-up window.

User-Friendly, Programmable, Intelligent Controls

The User Program Control provides for instant setup of the equipment according to fishing ground or target fish. Ten programs may be set up, and vertical and horizontal display settings may be programmed together or individually. In addition, there are Function Keys at the bottom row of the control unit that let you assign up to 10 frequently used functions to them.



The menu setting allows you to customize the program menu you use most frequently.

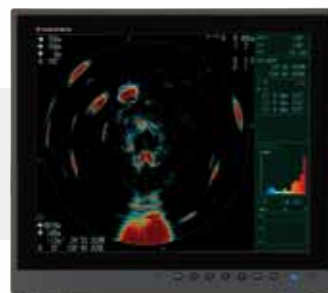
Control Unit Options

To enhance operator usability, a sub control unit and a wired remote controller are optionally available. Additionally, the FSV-35/85 also allows the operator to use a USB wireless mouse.



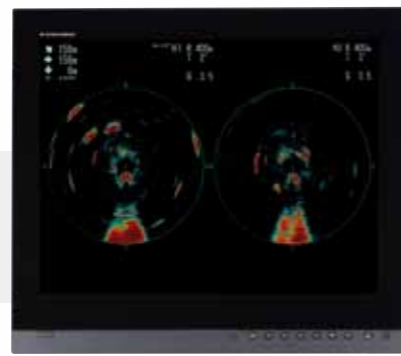
Need a bright idea? How about using FURUNO marine grade monitors in your helm?

You can select either FURUNO's lineup of marine LCDs or other third party displays.



19" Marine Display
MU-190

Resolution : 1280 x 1024 pixels (SXGA)
Brightness : Max. 450 cd/m²
Interface : Analog RGB x 1
DVI x 2
Composite Video x 1



23.1" Marine Display
MU-231

Resolution : 1600 x 1200 pixels (UXGA)
Brightness : Max. 400 cd/m²
Interface : Analog RGB x 1
DVI x 2
Composite Video x 1

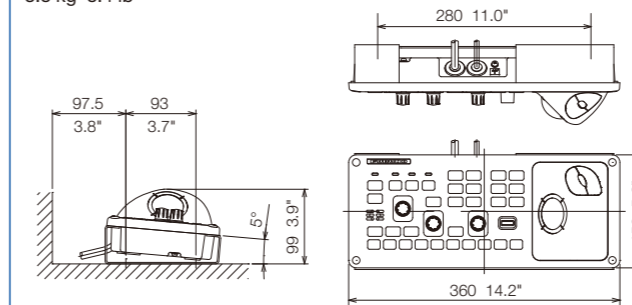
Note: When inputting SXGA, a circle may be displayed as an ellipse because the aspect ratio differs.

FULL-CIRCLE COLOR SCANNING SONAR

Model **FSV-35** Low Frequency 24 kHz

CONTROL UNIT FSV-8501

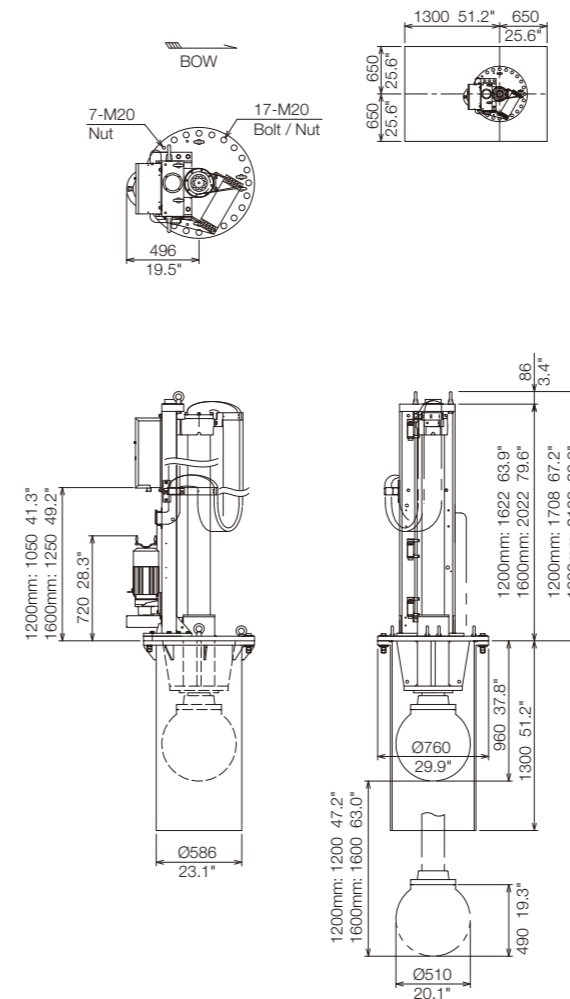
3.8 kg 8.4 lb



Dimensions for hanger type installation with fixing plate.
Please read installation manual for flush mount installation.

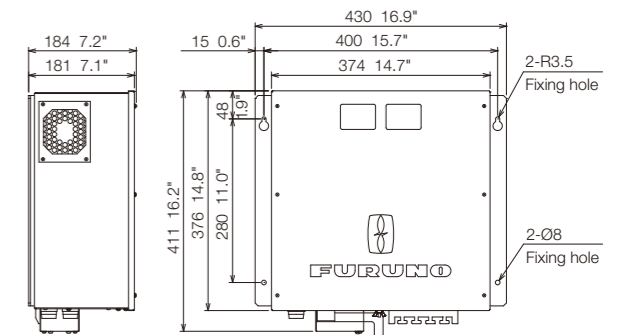
HULL UNIT FSV-303/304

1200 mm: 880 kg 1940 lb
1600 mm: 930 kg 2050 lb
(Without tank)



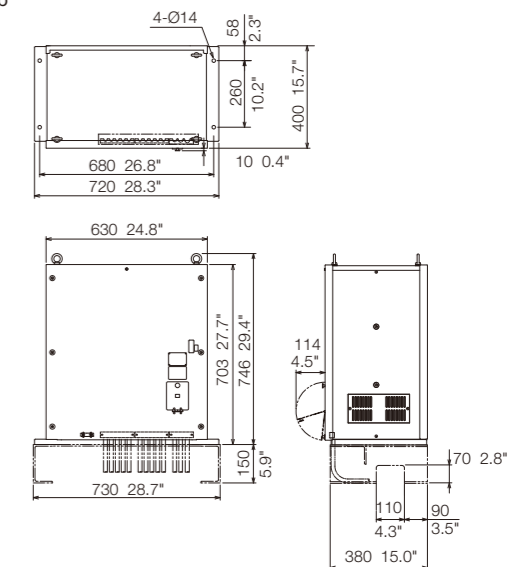
PROCESSOR UNIT FSV-3503

15 kg 33.1 lb



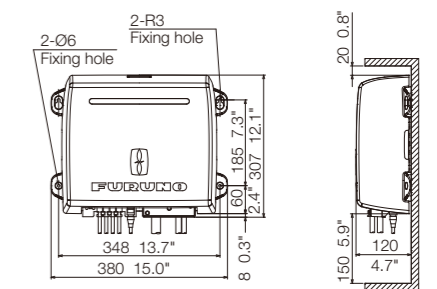
TRANSCIVER UNIT FSV-351

98 kg 216 lb



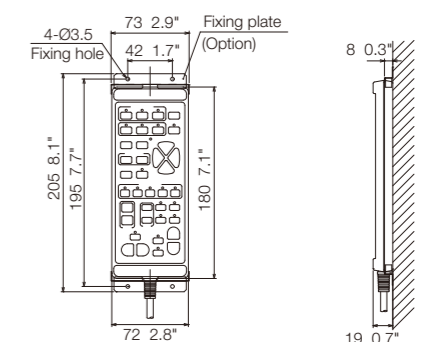
INTERFACE UNIT FSV-8502

3.4 kg 7.5 lb



REMOTE CONTROLLER FSV-854

0.68 kg 1.5 lb



FULL-CIRCLE COLOR SCANNING SONAR

Model **FSV-35** Low Frequency 24 kHz

SPECIFICATIONS

1. GENERAL

Scanning method Full digital beam forming
 Frequency 24 kHz
 Range 60, 100, 150, 200, 300, 400, 500, 600, 800, 1000, 1200, 1600, 2000, 2500, 3000, 3500, 4000, 5000
 Audio search 30°, 60°, 90°, 180°, 330°, selectable
 Audio output Audio terminal (requires speaker with amplifier)

2. DISPLAY UNIT*

* Monitors not included as standard supply
 Screen resolution 1280(H) x 1024(V) pixels, SXGA
 Presentation colors 32 colors (sonar picture), 6 colors (marks)
 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, Over-voltage warning, Unretracted transducer warning

3. TRANSCIEVER UNIT

Transmitter PDM half-bridge
 Receiving method Straight amplifier, full digital beam forming
 H-mode beam-width TX: 360° x 18°, RX: 18° x 18° (-6 dB full width)
 V-mode beam-width TX: 18° x 105°, RX: 18° x 18° (-6 dB full width)
 Tilt angle -5° to 90°
 Vertical search range 0° to 90°

4. HULL UNIT

Type	FSV-303	FSV-304
Travel	1200 mm	1600 mm
Raise/Lower time	22 sec	29 sec
Allowable ship's speed (Raise/lower operation)	18 knots (15 knots)	15 knots (12 knots)

5. DATA Input/Output

Input (NMEA 0183) CUR, DBS, DBT, DPT, GGA, GLL, GNS, HDG, HDM, HDT, MDA, MTW, MWV, RMA, RMC, VBW, VDR, VHW, VTG, VWR, VWT, ZDA
 CIF input 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
 Output (NMEA 0183) TLL

6. POWER SUPPLY

Processor unit: 12-24 VDC: 8.7 – 4.4 A (I/F unit included)
 Interface unit: 48 VDC: 2.7 A or less (from Processor unit)
 Transceiver unit: 100/110/115/220/230 VAC: 15 A, 1 phase, 50-60Hz
 Hull unit: 220 VAC: 12 A, 3 phase, 50-60Hz

7. ENVIRONMENTAL CONDITIONS

Ambient Temperature
 Processor unit: 0°C to +45°C
 Transducer: -5°C to +35°C
 Other units: 0°C to +50°C
 Relative humidity: 93% at 40°C
 Vibration: IEC 60945 4 ed.
 Waterproofing (IEC60529)
 Control unit: IP22 (panel), IP20 (chassis)
 Processor unit: IP20
 Interface unit: IP20
 Transceiver unit: IPX0
 Transducer: IPX8

EQUIPMENT LIST

Standard

- Control Unit (w/5 or 10 m cable) FSV-8501
- Interface Unit FSV-8502
- Processor Unit FSV-3503
- Transceiver Unit FSV-351
- Hull Unit (specify when ordering) FSV-303 or FSV-304
- Installation materials and spare parts

Option

- Rectifier
- Control Unit (w/5 or 10 m cable)
- Sub Control Unit FSV-853
- Remote Controller FSV-854-E
- Cable (5P, 100 m) 10S2380
- Installation Materials (LAN cable)
- 8-core Cable
- Cable Assy. (6P-6P, 5/10 m)
- Attachment Kit
- Hull Unit Processor Extension Kit

FULL-CIRCLE COLOR SCANNING SONAR

Model **FSV-85** Middle Frequency 80 kHz

SPECIFICATIONS

1. GENERAL

Scanning method Full digital beam forming
 Frequency 80 kHz
 Range 60, 100, 150, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200, 1400, 1600, 2000 m
 Audio search 30°, 60°, 90°, 180°, 330°, selectable
 Audio output Audio terminal (requires speaker with amplifier)

2. DISPLAY UNIT*

Monitors not included as standard supply
 Screen resolution 1280(H) x 1024(V) pixels, SXGA
 Presentation colors 32 colors (sonar picture), 6 colors (marks)
 Presentation modes Horizontal, S-scan, Horizontal combination, S-scan 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, Over-voltage warning, Unretracted transducer warning

3. TRANSCIEVER UNIT

Transmitter PDM half-bridge
 Receiving method Straight amplifier, full digital beam forming
 H-mode beam-width TX: 360° x 10.7°, RX: 12.6° x 10.1° (-6 dB full width)
 V-mode beam-width TX: 12.7° x 118.2°, RX: 12.6° x 12.1° (-6 dB full width)
 S-mode beam-width TX: 206.7° x 12.1°, RX: 12.6° x 12.0° (-6 dB full width)
 Tilt angle -5° to 90° (downward)
 Vertical search range 0° to 90° (downward)

4. HULL UNIT

Type	FSV-8432	FSV-8442
XDCR travel	800 mm	1100 mm
Raise/Lower time	21 sec	28 sec
Allowable ship's speed (Raise/lower operation)	18 knots (18 knots)	15 knots (15 knots)

5. DATA Input/Output

Input (NMEA 0183) CUR, DBS, DBT, DPT, GGA, GLL, GNS, HDG, HDM, HDT, MDA, MTW, MWV, RMA, RMC, VBW, VDR, VHW, VTG, VWR, VWT, ZDA
 CIF input 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
 Output (NMEA 0183) TLL

6. POWER SUPPLY

Processor unit: 12-24 VDC: 10-5 A
 Interface unit: 48 VDC: 1 A or less (from Processor unit)
 Transceiver unit: 100/110/115/220/230 VAC: 15 A, 1 phase, 50/60Hz
 Hull unit: 200-220 VAC: 4 A, 3 phase, 50/60Hz

7. ENVIRONMENTAL CONDITIONS

Ambient Temperature
 Processor unit: 0°C to +45°C
 Transducer: -5°C to +35°C
 Other units: 0°C to +50°C
 Relative humidity: 93% max. at 40°C
 Vibration: IEC 60945 4 ed.
 Waterproofing (IEC 60529)
 Control unit: IP22 (panel), IP20 (chassis)
 Processor unit: IP20
 Interface unit: IP20
 Transceiver unit, others: IPX0
 Transducer: IPX8

EQUIPMENT LIST

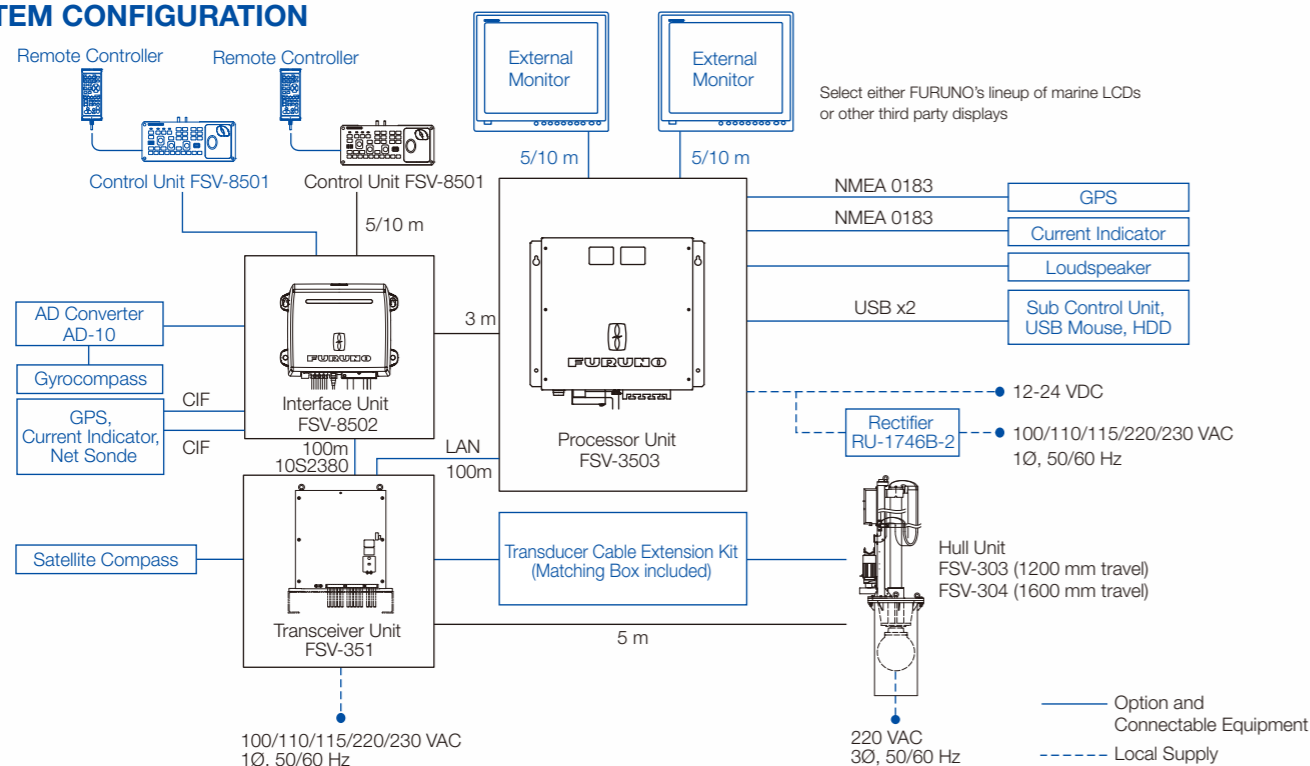
Standard

- Control Unit (w/5 or 10 m cable) FSV-8501
- Interface Unit FSV-8502
- Processor Unit FSV-8503
- Transceiver Unit FSV-851A
- Hull Unit (specify when ordering) FSV-8432-T or FSV-8442-T
- Installation materials and spare parts

Option

- Rectifier
- Control Unit (w/5 or 10 m cable)
- Remote Controller FSV-854-E
- Cable (5P, 100 m) 10S2380
- Installation Materials (LAN cable)
- 8-core Cable (6m)
- Cable Assy. (6P-6P, 5/10 m)
- Retraction Tank
- Attachment Kit
- Junction Box (NMEA0183)
- Sub Control Unit

SYSTEM CONFIGURATION



SYSTEM CONFIGURATION

