

SPECIFICATIONS OF HALF-CIRCLE COLOR SCANNING SONAR FSV-75

1. GENERAL

Scanning method Full digital beam forming
 Frequency 180 kHz
 Pulse length 0.5 to 40 ms
 Range

Basic range(m)	Range (m)		Basic range(m)	Range (m)	
	Off-center 'OFF'	Off-center 'ON'		Off-center 'OFF'	Off-center 'ON'
50	0-50	0-90	800	0-800	0-1280
100	0-100	0-160	900	0-900	0-1440
150	0-150	0-240	1000	0-1000	0-1600
200	0-200	0-320	1100	0-1100	0-1760
300	0-300	0-480	1200	0-1200	0-1920
400	0-400	0-640	1400	0-1400	0-2000
500	0-500	0-800	1600	0-1600	0-2000
600	0-600	0-960	2000	0-2000	0-2000
700	0-700	0-1120			

Audio search Frequency: 1 kHz, Output 10 W (optional speaker required)

2. PROCESSOR UNIT

Orientation Head-up, North-up* and Course up* (*: sensor required)

Presentation mode Common
 Slant, Vertical combination scan, Echo sounder combination, Vertical and echo sounder combination (for dual-display)

FSV-75-3D only 3D single, 3D combination, 3D sounder combination

Marks Own ship, Bow line, Bearing/Distance, Event, Fish school, EBL, Tracking, Current, Sonde

Information Scan (Bearing/Distance), Cursor (Distance/Depth/Bearing), Event, Fish school (Position/Bearing), Own ship's location, Speed/Bearing, Water temperature, Wind speed/bearing

Features Interference rejecter, Afterglow, Noise limiter, Delete color, Automatic target tracking, Auto-retraction, Fish school alarm 1280 x 1024 (SXGA)

Resolution 32 colors (sonar pictures), 6 colors (marks)
 Picture color

3. HULL UNIT

Hull Unit stroke 800 mm or 1100 mm
 Raise/lower time 8 s (800 mm stroke), 11 s (1100 mm stroke)
 Tx beam width Horizontal: 180°, Vertical: 6° (-3 dB at 180 kHz)
 Rx beam width Horizontal: 6°, Vertical: 6° (-3 dB at 180 kHz)
 Scanning angle -175° to +175°
 Elevation angle 0° to 90° (downward)
 Ship's speed allowance 18 kn (15 kn for raise/lower operation)

4. INTERFACE

Number of port 2 ch, HDMI, SXGA
 Video output 5 ch, V1.5/2.0/3.0/4.0/4.1
 NMEA0183 1 ch, current loop or contact closure (Input: 5-15 V, Output: 12 V)
 External KP
 Voice output 1 ch, 10 W, 4 ohms, monaural
 Gyrocompass 1 ch, AD-10
 Echo sounder input 1 ch, VI-1100A analog
 Contact closure 1 ch, for external switch
 USB USB2.0: 2 ch, USB3.0: 2 ch
 LAN 2 ch, Ethernet, 1000Base-T

Data sentences Input CUR, DBS, DBT, DPT, GGA, GLL, GNS, HDG, HDM, HDT, MDA, MTW, MWV, RMC, THS, VBW*1, VDR, VHW, VTG, VWR, VWT, ZDA TLL
 Output TLL
 *1: fore-aft/port-stbd speed data required
 Output proprietary sentence PFEC evt, fkv, fmg, fvc, pidat, sht, tfm, tlm, tqm

5. POWER SUPPLY

Transceiver unit 100/110/115/220/230 VAC, 2.5 A max., 1 phase, 50-60 Hz
 Processor unit 12-24 VDC: 4.0-2.0 A
 Hull unit 200-220 VAC, 4 A max., 3 phase, 50/60 Hz
 Rectifier (RU-1746B-2, option) 100/110/115/220/230 VAC, 1 phase, 50/60 Hz

6. ENVIRONMENTAL CONDITIONS

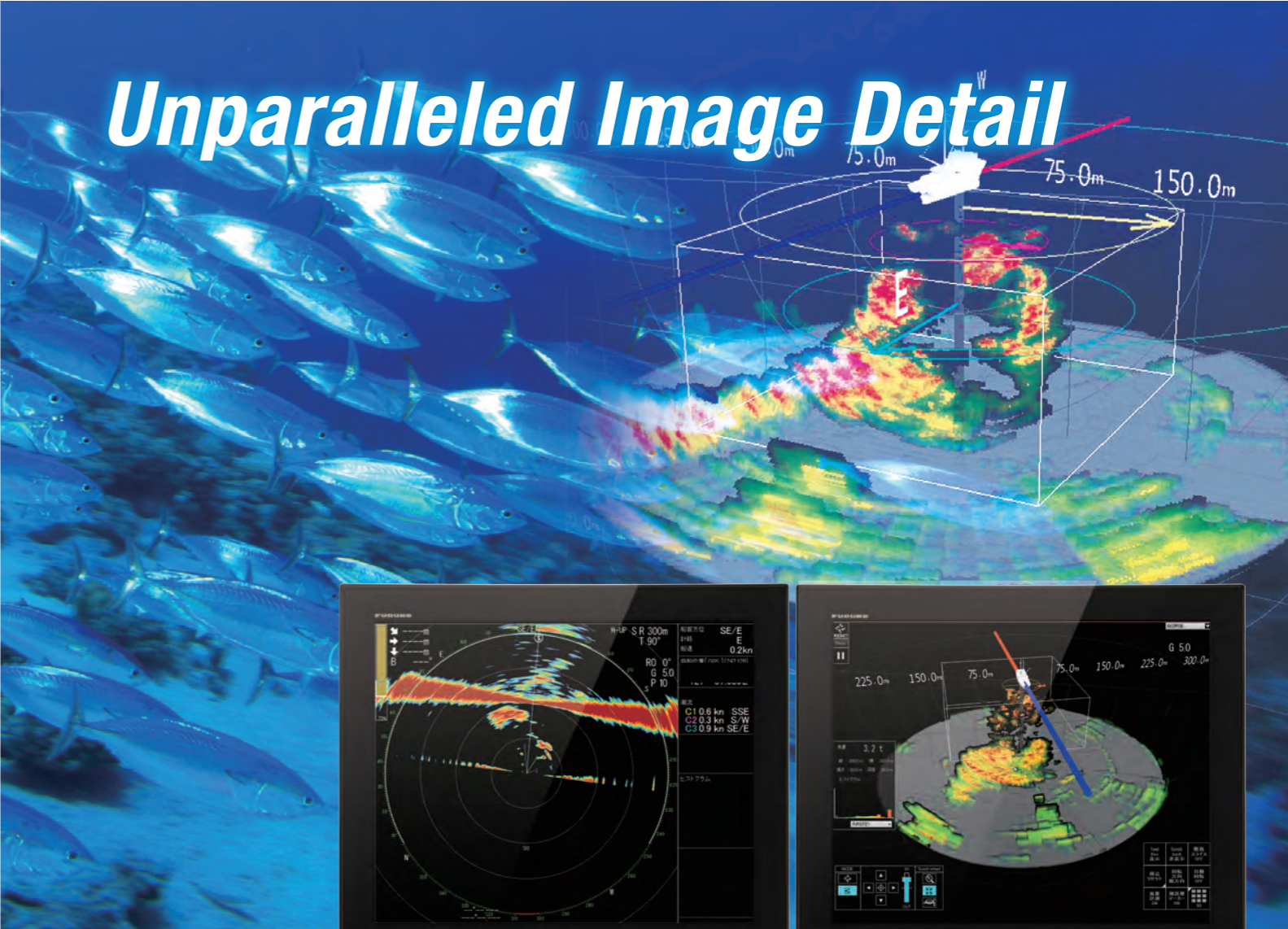
Ambient temperature Processor unit -15°C to +55°C
 Processor unit -5°C to +35°C
 Transducer 0°C to +50°C
 Matching box 0°C to +50°C
 Hull unit 0°C to +50°C
 Control unit -15°C to +55°C
 Relative humidity 93% or less at +40°C
 Degree of protection Transducer IPX8
 Control unit IP22 (panel), IP20 (chassis)
 Processor unit IP22
 Transceiver unit IP22
 Matching box IP22
 Hull unit IPX2
 Vibration IEC 60945 Ed.4

7. UNIT COLOR

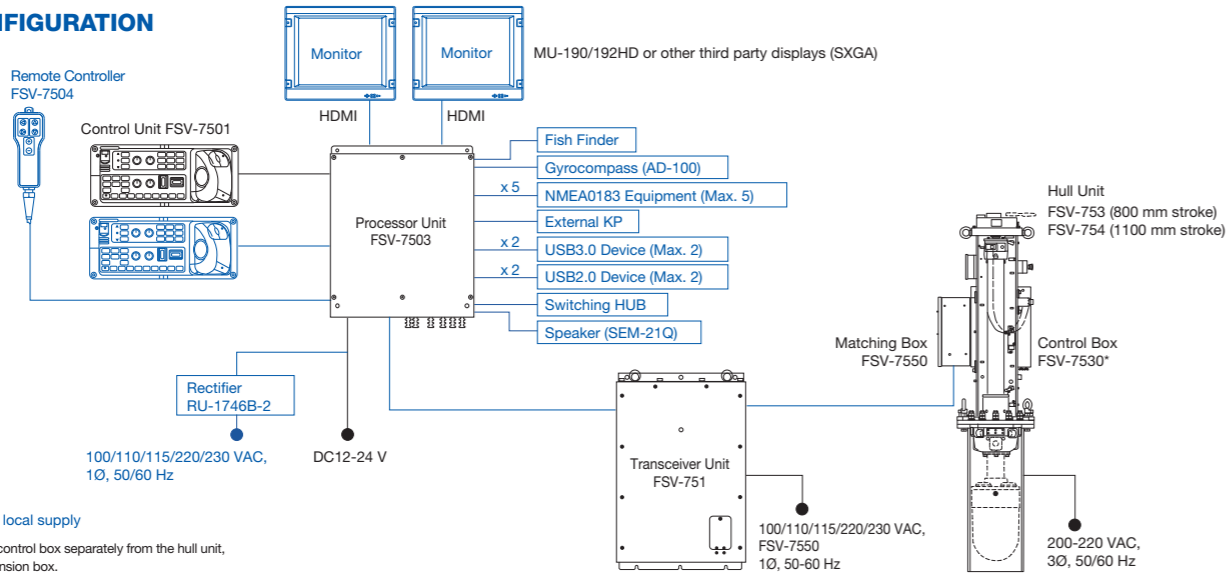
Processor unit N2.5
 Transceiver unit N2.5
 Control unit N2.5
 Hull unit 2.5G7/2

Half-circle Color Scanning Sonar

Model **FSV-75**



SYSTEM CONFIGURATION



Blue line : Option or local supply

*: When mounting the control box separately from the hull unit, use the optional extension box.

Beware of similar products

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SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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"Optional 3D mode image"

19" MU-192HD Display Unit
 (Sold separately)

The most advanced half-circle Sonar

Half-circle Color Scanning Sonar

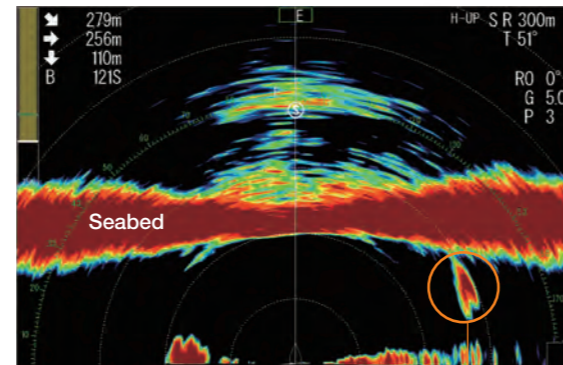
Model **FSV-75**



► Detailed echoes near the seabed thanks to enhanced detection capabilities

The adoption of innovative signal processing technology dramatically increases the sensitivity of the Sonar and provides clearer and sharper echoes.

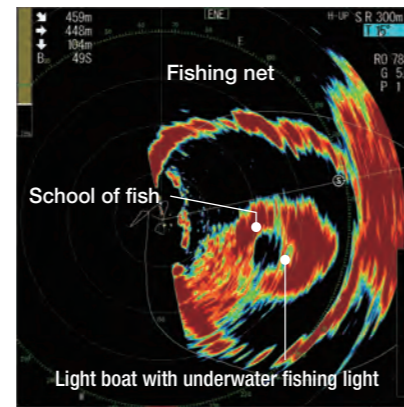
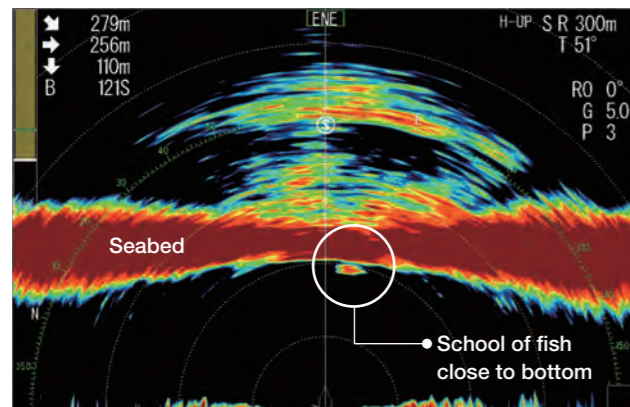
A higher resolution allows us to clearly separate the echoes from the fish and the seabed.



● School of Fish

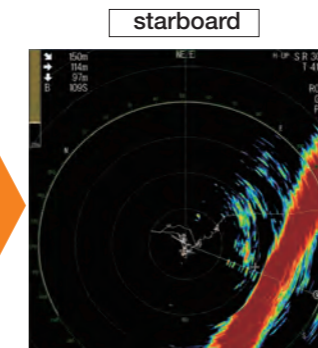
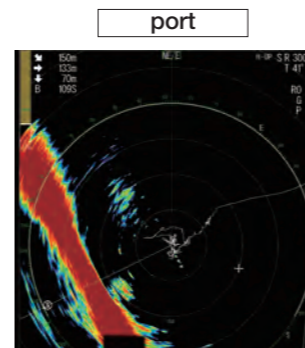
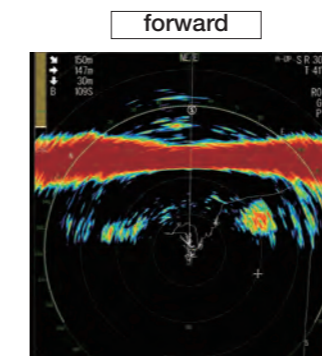
► High frequency (180 kHz) allows clear and easy discernment between fish and seabed, or fishing net and school of fish

The FSV-75 uses high frequency (180 kHz) which can easily detect fish tight on the bottom or nets. This allows you to locate and track fish on the screen with greater accuracy.

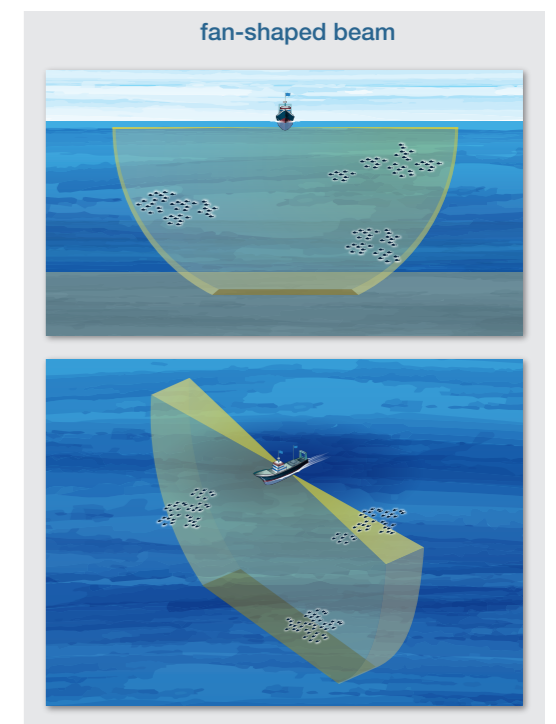


► Fan-shaped beam, higher scanning speed, wider range, the performance of half-circle Sonar taken to a whole new level

Detect fish that you might otherwise overlook thanks to the combination of 3 technical improvements, such as a unique fan-shaped beam, a greater detection range, and a higher scanning speed.



From Port to Starboard in only 8 seconds!



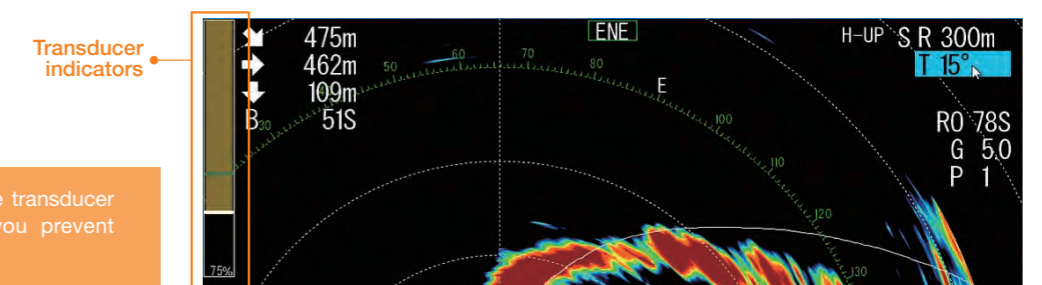
► Perfect to search for fish with rapid movement such as skipjack or tuna

The FSV-75 is particularly useful for fast moving fish such as tuna and skipjack, thanks to a fast transmitting/receiving rate at short range.

► On screen "Retract Transducer" indicator for quick adjustment and damage prevention

In the presence of close marine objects, which could potentially damage the transducer, it is useful to know the degree of retraction for quick adjustment when necessary.

■ By pressing mid protrusion key on the display, it allows the transducer to be only half-retracted.



Instantly spot if and how much the transducer is lowered or retracted, helping you prevent damage to the transducer.

The underwater world in 3D!

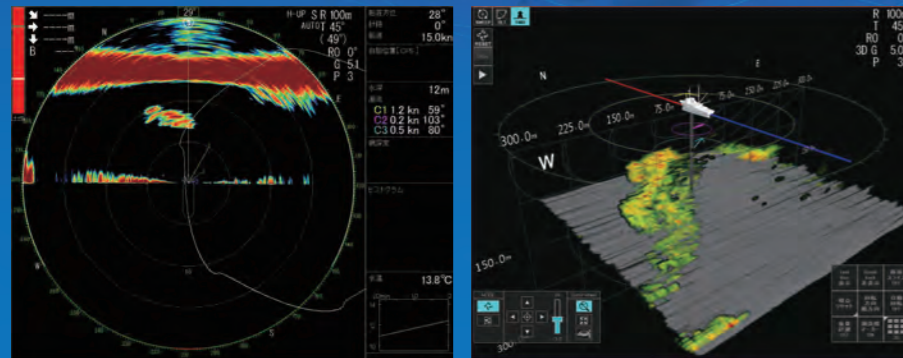
3D mode (optional supply) New Feature

Requires the purchase of a license key to activate this mode

This mode allows you to monitor the location and movement of fish relative to the seabed in 3D, which makes fish detection and net casting operation more efficient.

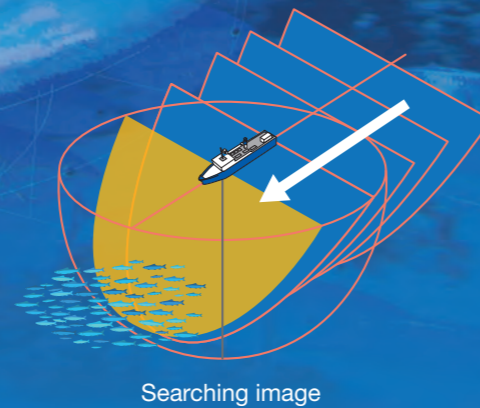
▶ Forward detection history mode

The forward detection history mode scans the forward area of own ship, and shows the Sonar echoes in 3D format. This mode is useful for estimating the profile of the seabed.



2D display

3D display



Searching image

▶ Tilt cross-section mode*

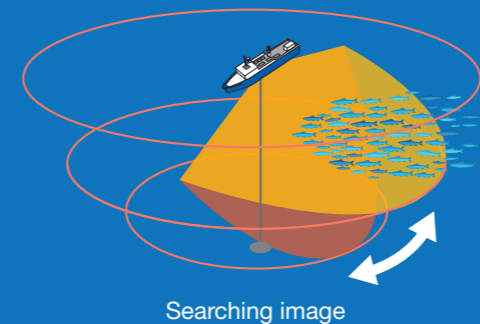
The tilt cross-section mode scans the tilt angle within the selected width, and shows the underwater Sonar echoes in the scanning area in 3D format. This mode is useful for seeing the shape of the fishing net in the water.



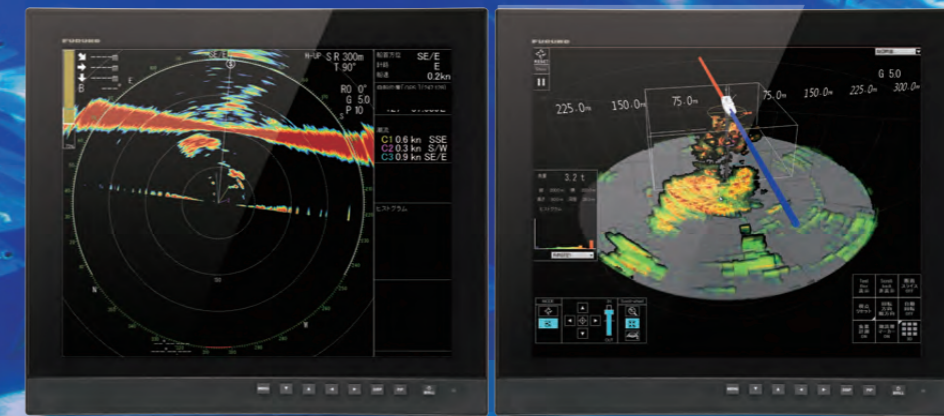
2D display

3D display

*The tilt is set on Auto-Tilt

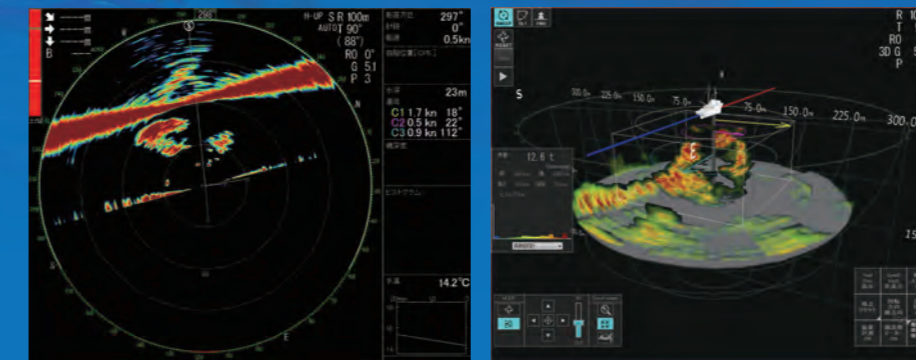


Searching image



▶ Sweep cross-section mode*

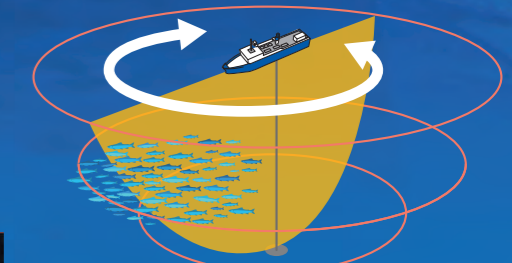
The sweep cross-section mode rotates the detection beam in a sweep (revolution) direction with the tilt angle fixed to "90 degrees", and shows the underwater Sonar echoes around own ship in 3D format. This mode is useful for finding the position of a school of fish.



2D display

3D display

*Automatic sweep, Tilt angle fixed to 90°

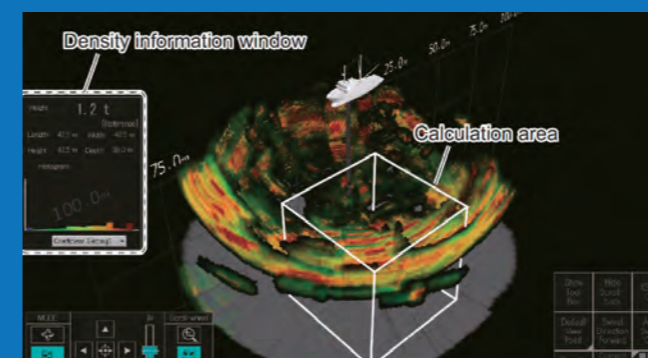


Searching image

Other functions available with the 3D mode

Density calculation function

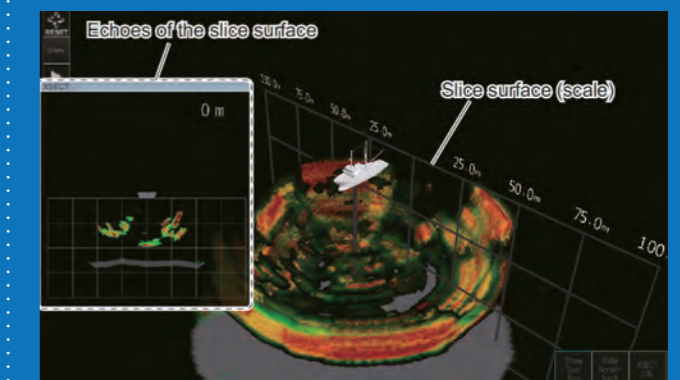
This function displays a virtual "basket" measuring the approximate volume of fish in the selected area. The amount of fish expected in the measurement zone is displayed in the "density information window". Knowing in real time the fish volume in the target area allows the fisherman to determine the best time to start fishing operation.



The density information window shows fish density in the calculation area.

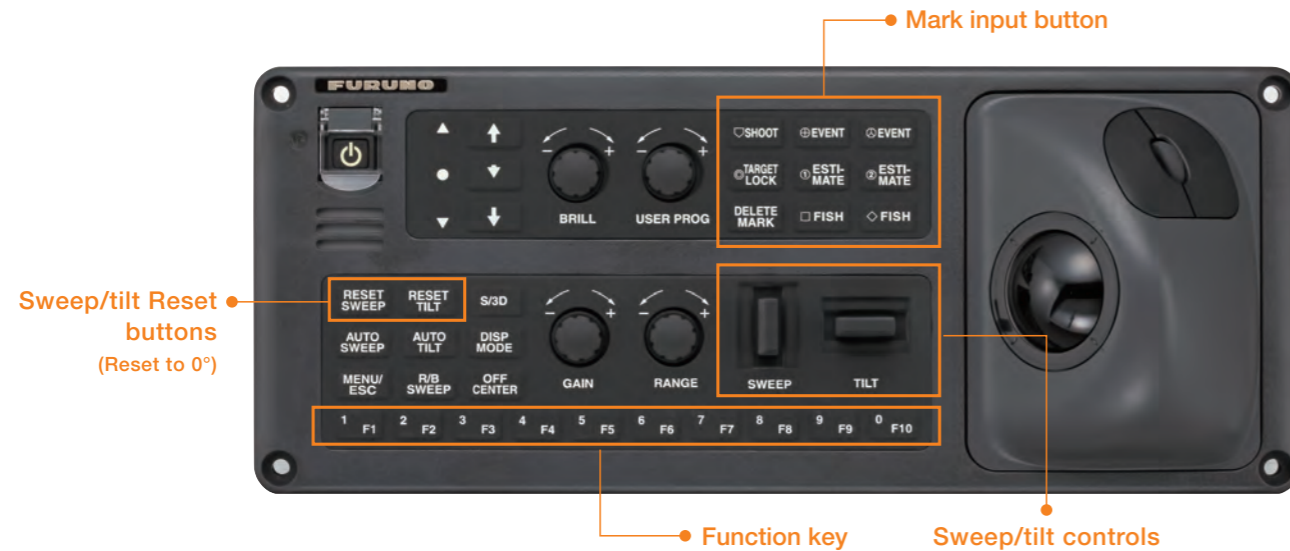
Cross-sectional slice function

The cross-sectional slice function allows you to see echoes of the cross-section of a 3D model sliced in a vertical and horizontal plane.



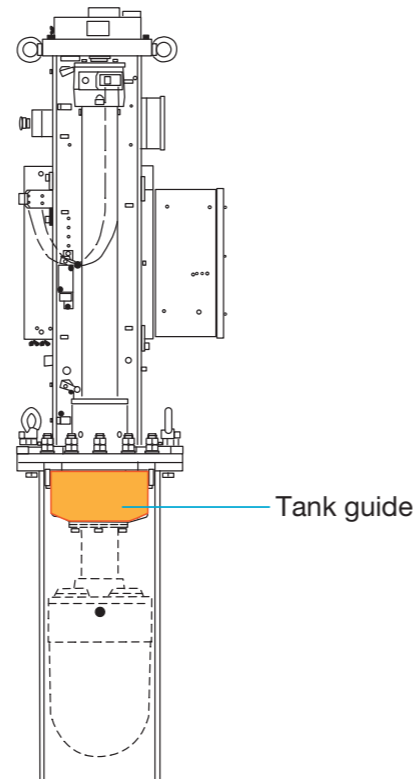
► Quick and secure operation

Thanks to a control panel specially designed for Half-circle Sonars, all operations allowing fish search and tracking, such as adjusting the Sonar rotation parameters or tilting, can be performed simply and efficiently. This control panel comes with 10 of the most popular function keys among the current FSV Sonar series, and it is possible to register your favorite functions from 40 available functions. A convenient one-click delete button is also included.



► Tank guide for a robust Hull Unit

Thanks to a "Tank Guide" mechanism, the transducer is protected from vibrations and impact, which considerably improves the stability and durability of the Sonar.



► Shorter lowering/retracting time

The transducer can be deployed and retracted in 11 seconds (1100 mm), it's half the time of current Sonar models.

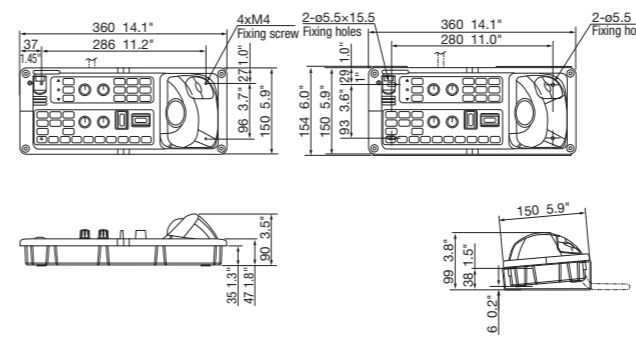
Half-circle Color Scanning Sonar

Model **FSV-75**

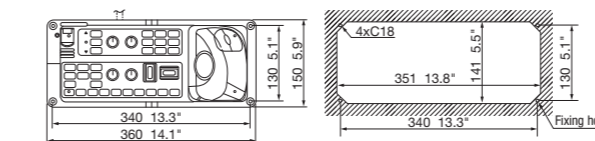
Control Unit

FSV-7501 Table top mount
1.8 kg 4.0 lb

FSV-7501 Table top mount (bracket type)
2.9 kg 6.4 lb

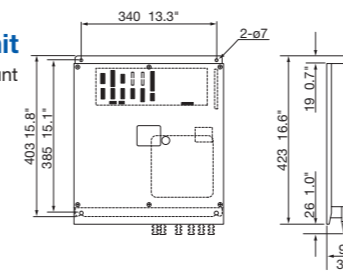


FSV-7501 Flush mount
1.8 kg 4.0 lb



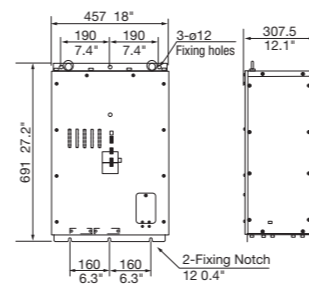
Processor Unit

FSV-7503 Floor mount
8 kg 17.6 lb

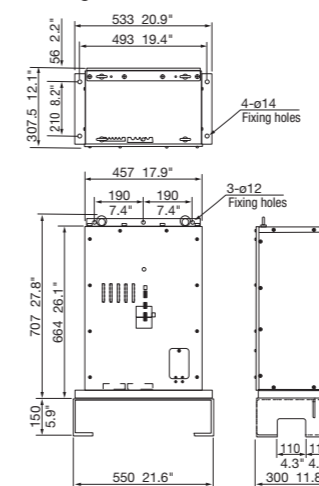


Transceiver Unit

FSV-751 Bulkhead mount
51 kg 112 lb



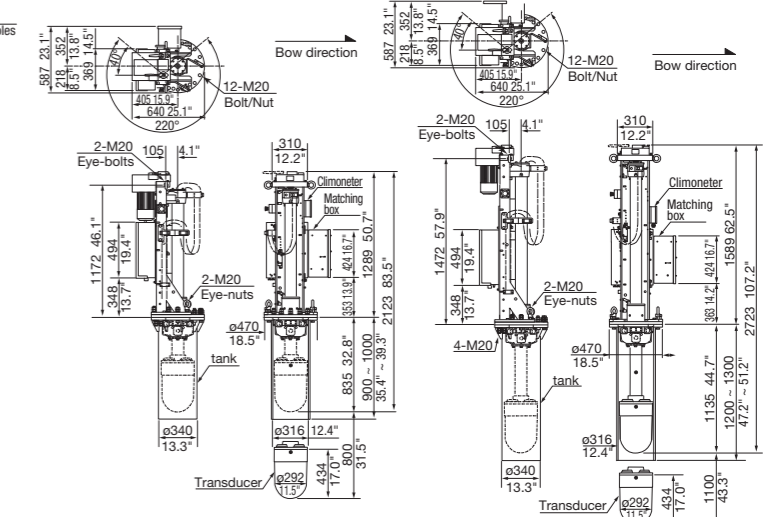
FSV-751 Floor mount
55 kg 121 lb



Hull Unit

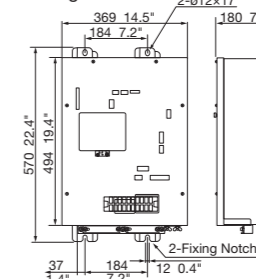
FSV-753 (800 Stroke)
340 kg 749 lb

FSV-754 (1100 Stroke)
360 kg 794 lb



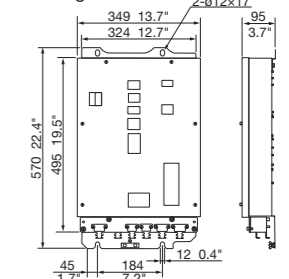
Control Box

FSV-7530
18 kg 39.7 lb



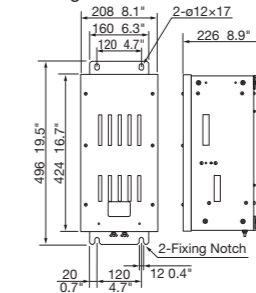
Extension Box (Option)

FSV-7560
10 kg 22 lb

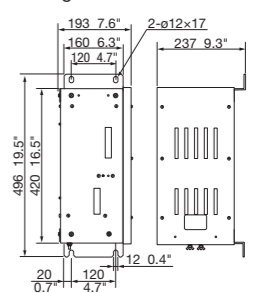


Matching Box

FSV-7550 Bulkhead mount
10 kg 22 lb



FSV-7550 Side mount
10 kg 22 lb



Remote Controller (Option)

FSV-7504
0.3 kg 0.7 lb

