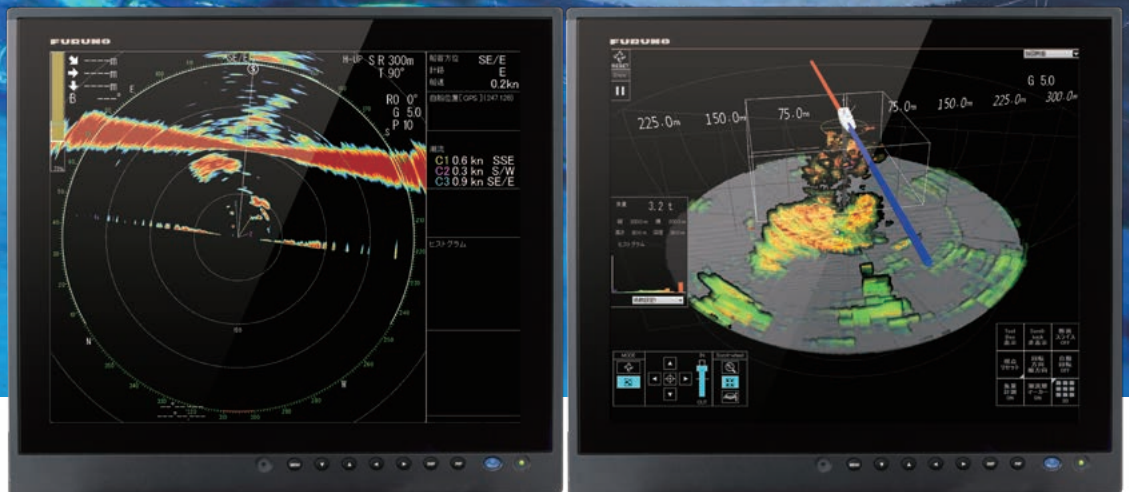
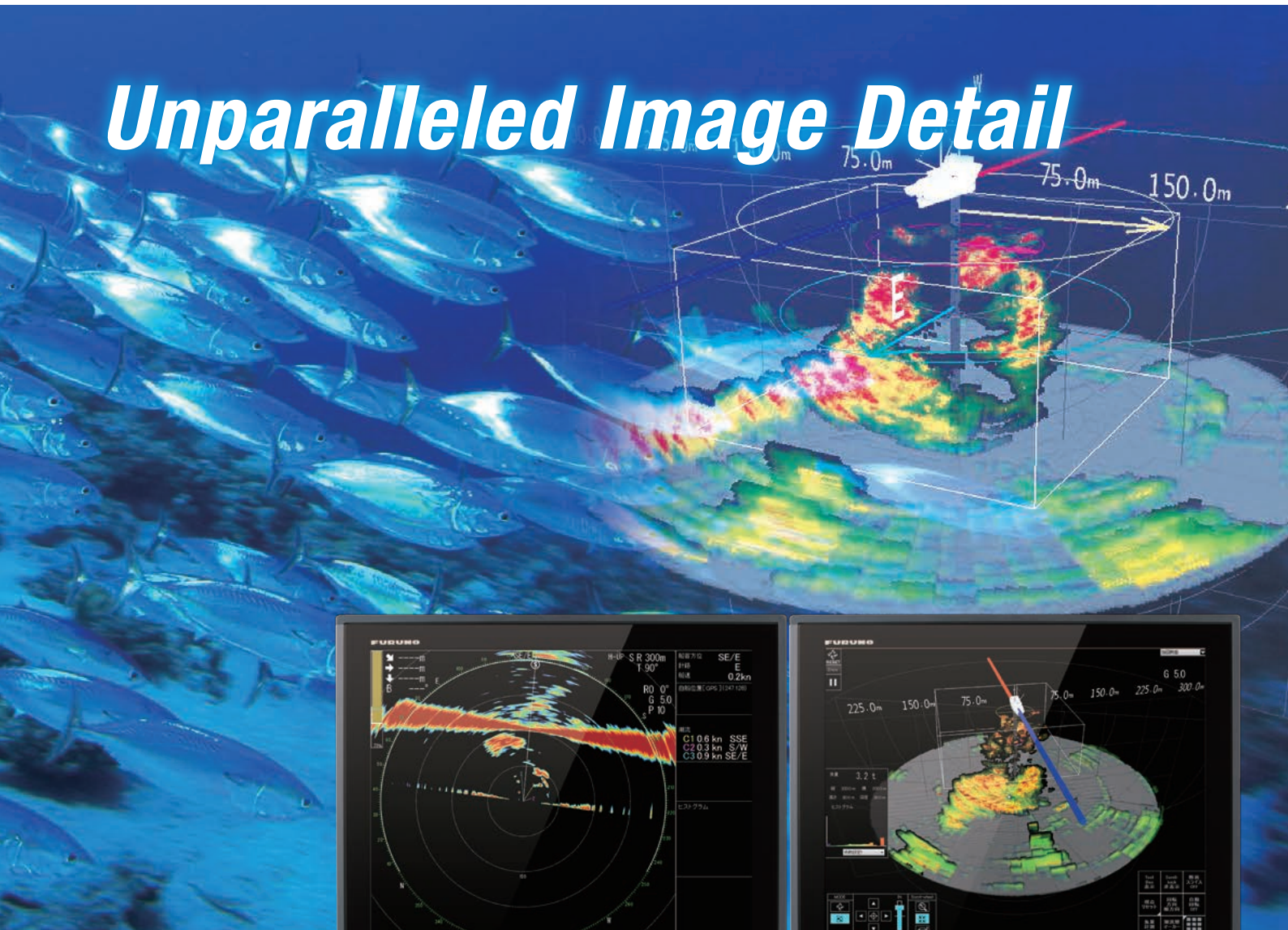


# FURUNO

## Half-circle Color Scanning Sonar

Model **FSV-75**

### Unparalleled Image Detail



"Optional 3D mode image"

19" MU-190HD Display Unit  
(Sold separately)



More details on  
[www.furuno.com](http://www.furuno.com)

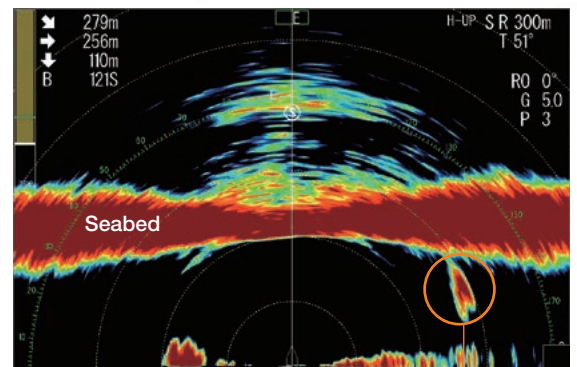


# The most advanced half-circle Sonar

## ► 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.

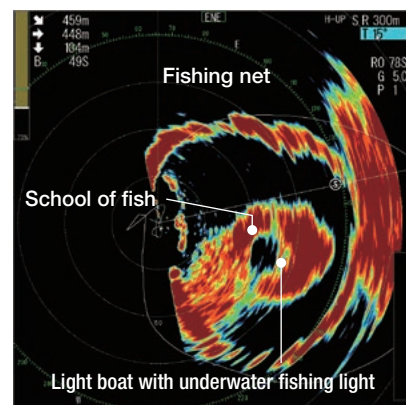
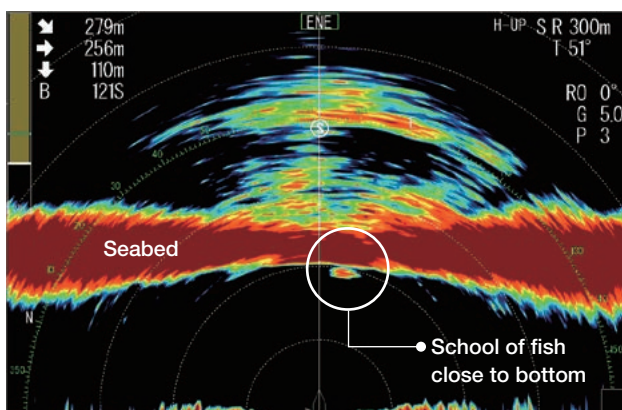
A higher resolution allows us to clearly separate the echoes from the fish and the seabed.



● 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.



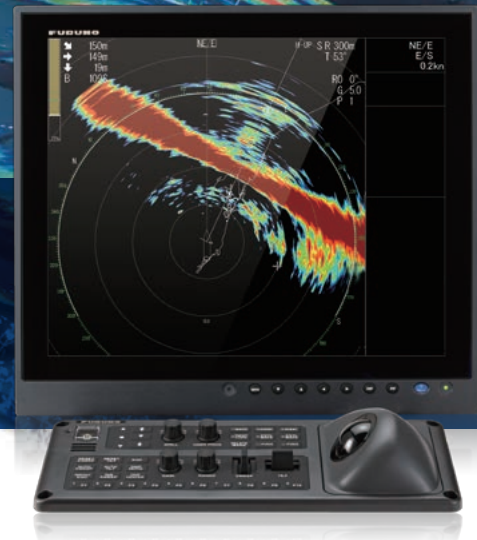
## ► Perfect to search for fish with rapid movement such as skipjack or tuna

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.



# Half-circle Color Scanning Sonar

Model **FSV-75**



▶ **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.

forward

fan-shaped beam

port

From Port to Starboard in only 8 seconds!

starboard

▶ **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.

Transducer indicators

# The underwater world in 3D!

## 3D mode (optional supply)

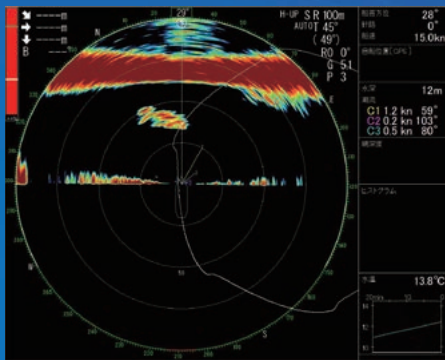
New Feature

\*Requires the purchase of a license key to activate this mode\*

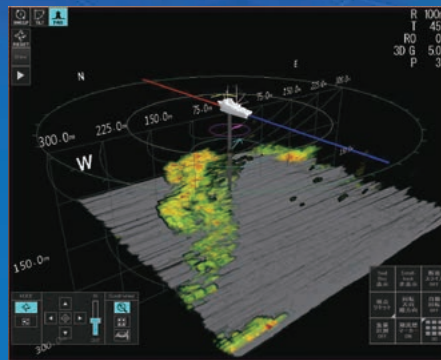
This mode allows you to monitor the location and movement of fish relative to the seabed in 3D, which makes fish detection and net casting operation more efficient.

### ▶ Forward detection history mode

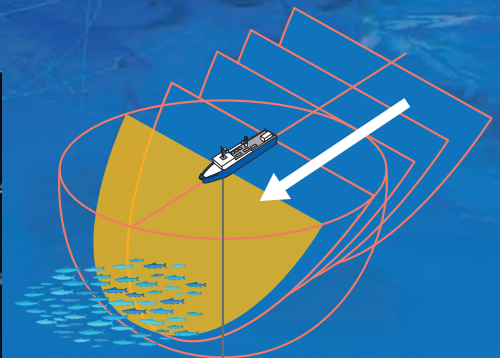
The forward detection history mode scans the forward area of own ship, and shows the Sonar echoes in 3D format. This mode is useful for estimating the profile of the seabed.



2D display



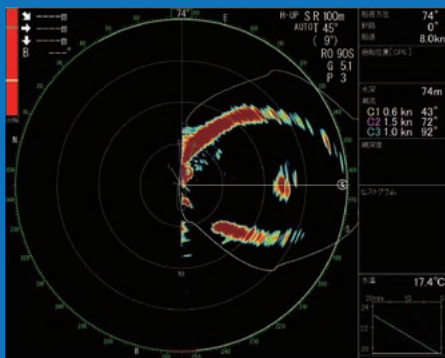
3D display



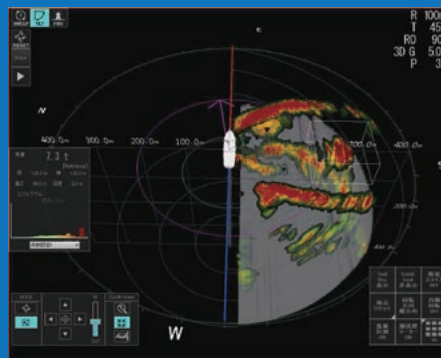
Searching image

### ▶ Tilt cross-section mode\*

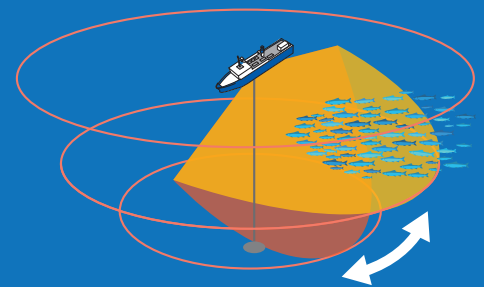
The tilt cross-section mode scans the tilt angle within the selected width, and shows the underwater Sonar echoes in 3D format. This mode is useful for seeing the shape of the fishing net in the water.



2D display



3D display



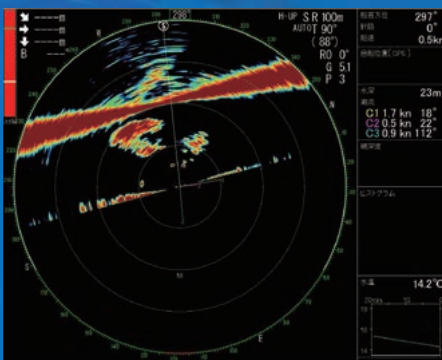
Searching image

\*The tilt is set on Auto-Tilt

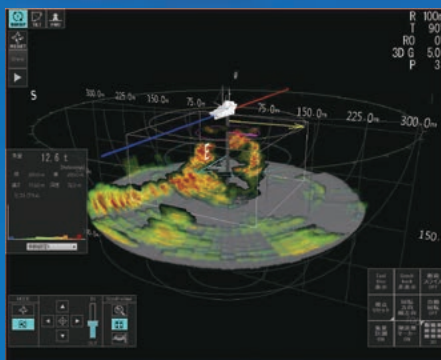


## ▶ Sweep cross-section mode\*

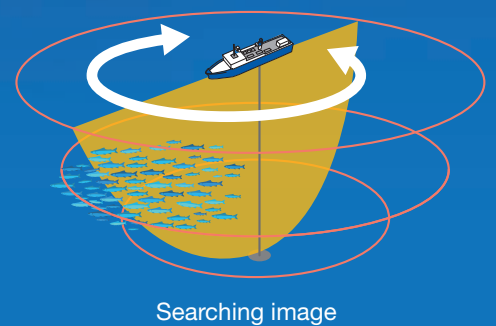
The sweep cross-section mode rotates the detection beam in a sweep (revolution) direction with the tilt angle fixed to "90 degrees", and shows the underwater Sonar echoes around own ship in 3D format. This mode is useful for finding the position of a school of fish.



2D display



3D display



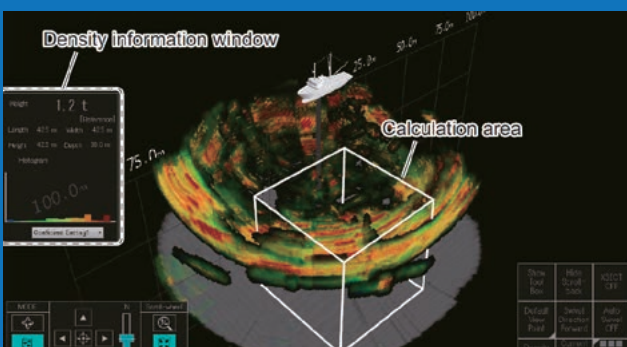
Searching image

\*Automatic sweep, Tilt angle fixed to 90°

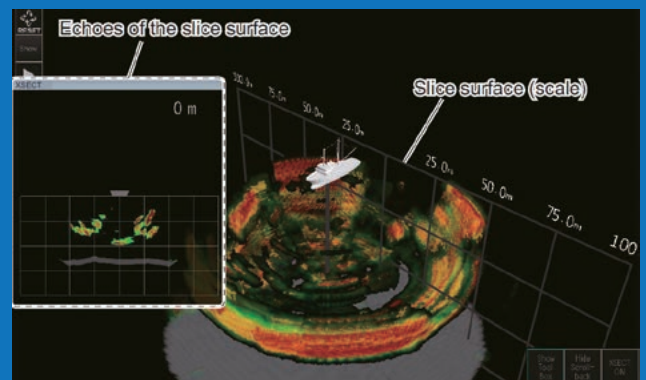
## Other functions available with the 3D mode

### 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.

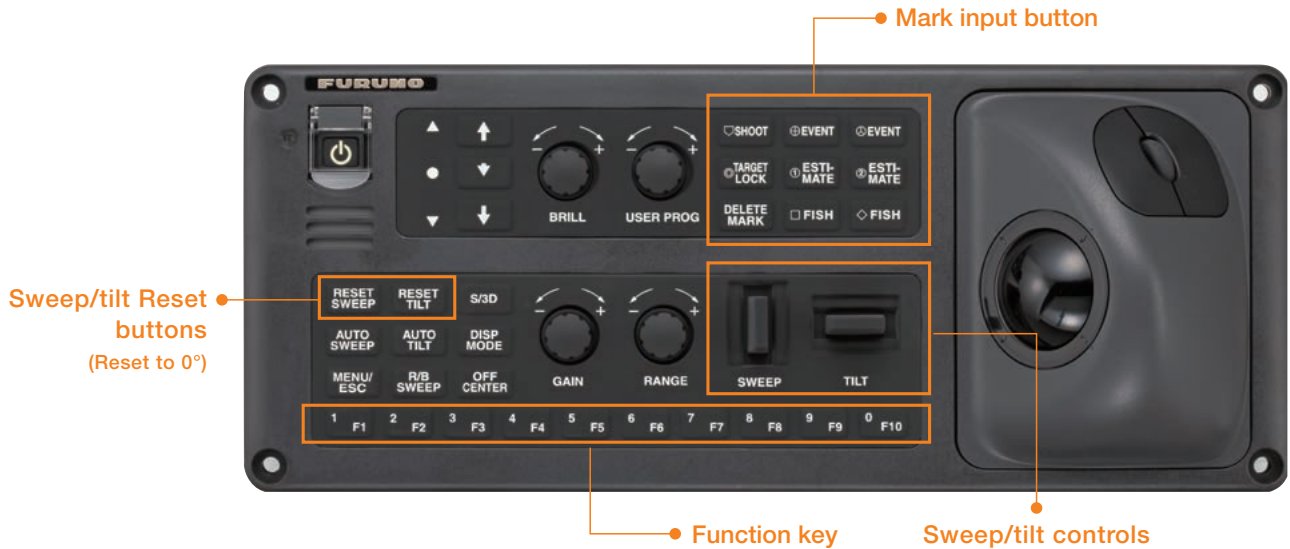


### Cross-sectional slice function

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.

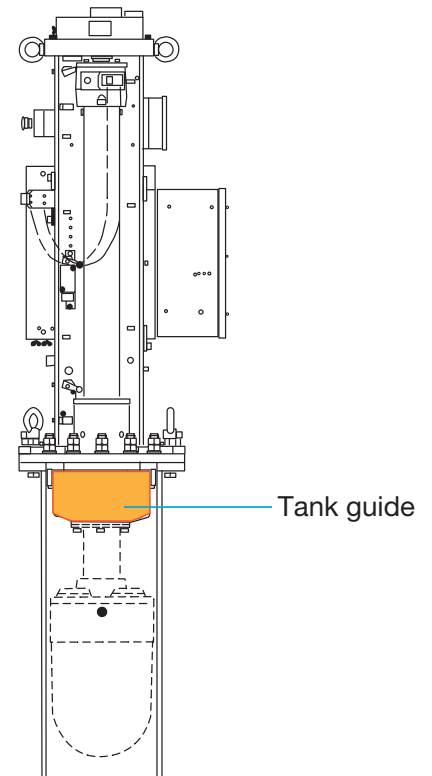


## ► Tank guide for a robust Hull Unit

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.

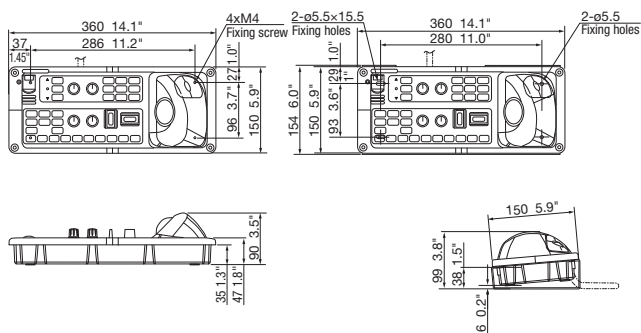


# Half-circle Color Scanning Sonar

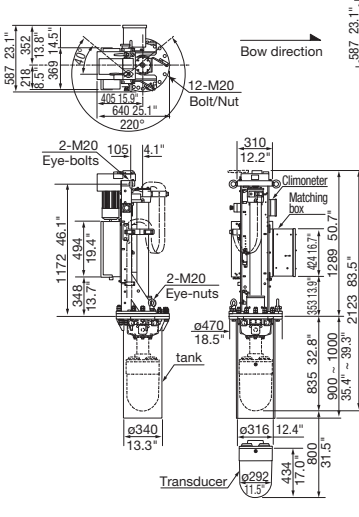
Model **FSV-75**

## Control Unit

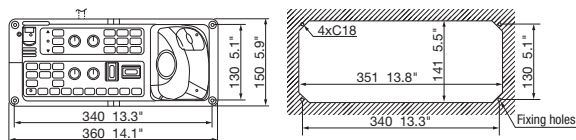
**FSV-7501** Table top mount  
1.8 kg 4.0 lb



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

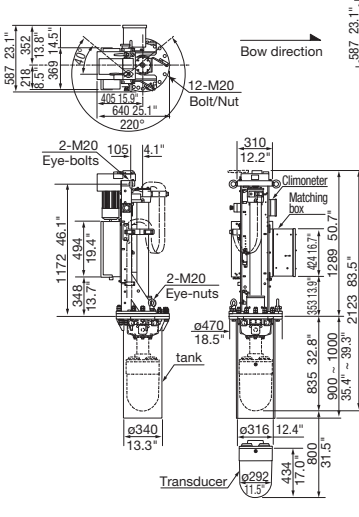


**FSV-7501** Flush mount  
1.8 kg 4.0 lb

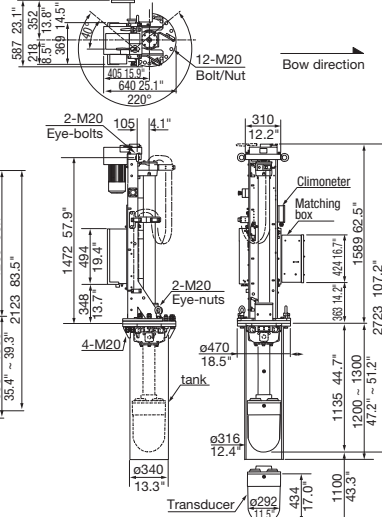


## Hull Unit

**FSV-753** (800 Stroke)  
340 kg 749 lb

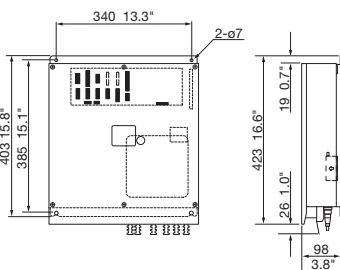


**FSV-754** (1100 Stroke)  
360 kg 794 lb



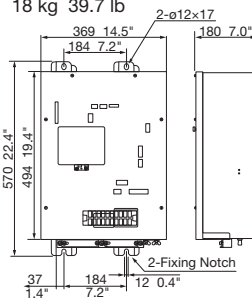
## Processor Unit

**FSV-7503** Floor mount  
8 kg 17.6 lb



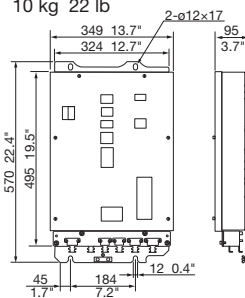
## Control Box

**FSV-7530**  
18 kg 39.7 lb



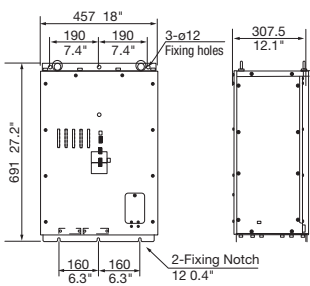
## Extension Box (Option)

**FSV-7560**  
10 kg 22 lb

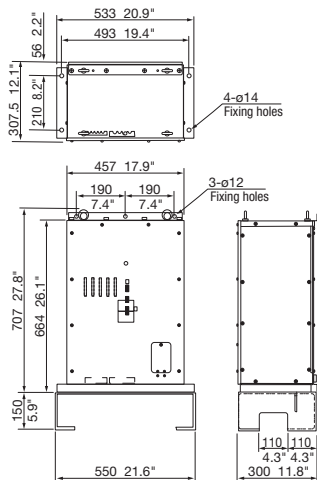


## Transceiver Unit

**FSV-751** Bulkhead mount  
51 kg 112 lb

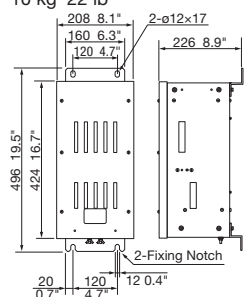


**FSV-751** Floor mount  
55 kg 121 lb

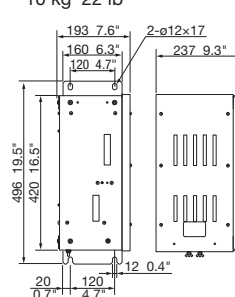


## Matching Box

**FSV-7550** Bulkhead mount  
10 kg 22 lb

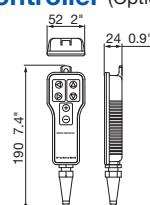


**FSV-7550** Side mount  
10 kg 22 lb



## Remote Controller (Option)

**FSV-7504**  
0.3 kg 0.7 lb



# 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  
 Common Slant, Vertical combination scan, Echo sounder combination, Vertical and echo sounder combination  
 FSV-75-3D only 3D single, 3D combination, 3D sounder combination (for dual-display)  
 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  
 Resolution 1280 x 1024 (SXGA)  
 Picture color 32 colors (sonar pictures), 6 colors (marks)

## 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  
 Video output 2 ch, HDMI, SXGA  
 NMEA0183 5 ch, V1.5/2.0/3.0/4.0/4.1  
 External KP 1 ch, current loop or contact closure (Input: 5-15 V, Output: 12 V)  
 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 \*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

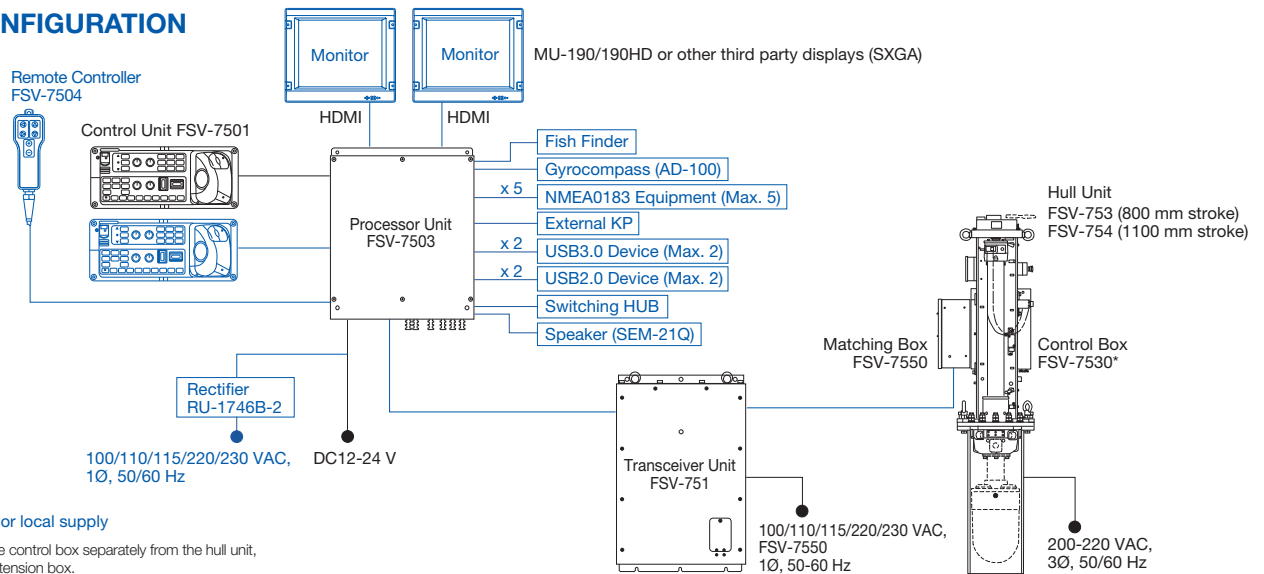
## 6. ENVIRONMENTAL CONDITIONS

Ambient temperature  
 Processor unit -15°C to +55°C  
 Transducer -5°C to +35°C  
 Transceiver unit 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

## SYSTEM CONFIGURATION



Blue line : Option or local supply

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

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