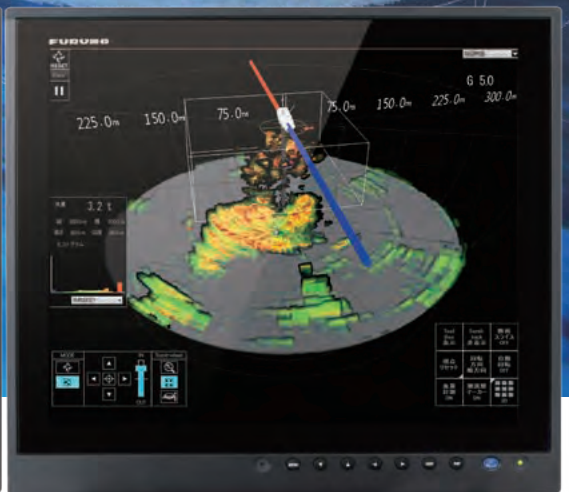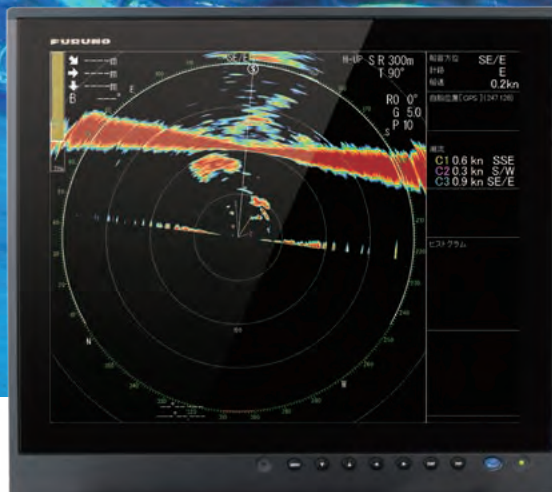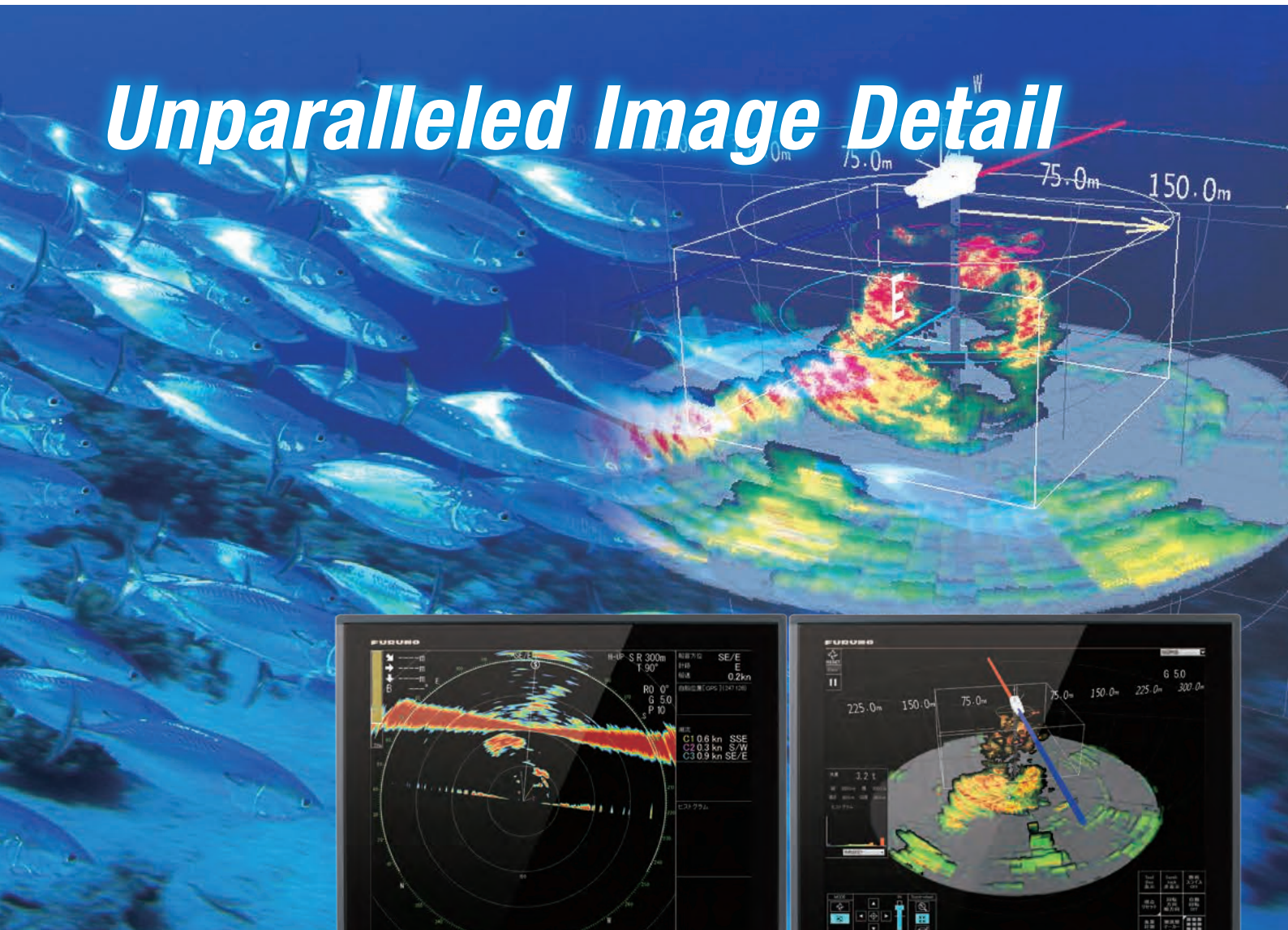# FURUNO

Half-circle Color Scanning Sonar
Model FSV-75

Unparalleled Image Detail

"Optional 3D mode image"

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

BlackBox

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.
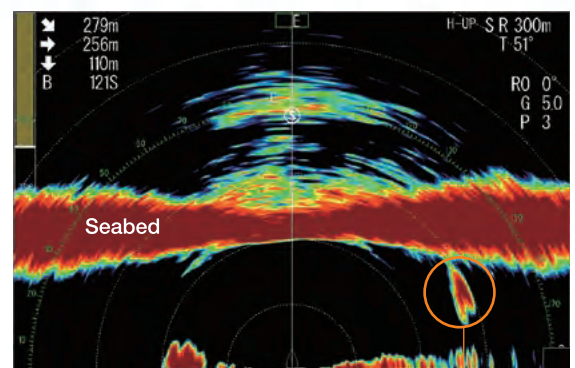
Seabed

● 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.

Seabed

● School of fish close to bottom

Fishing net

School of fish

Light boat with underwater fishing light
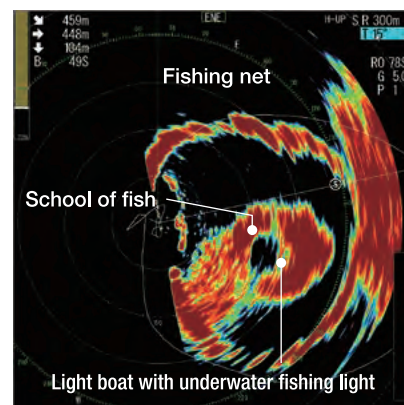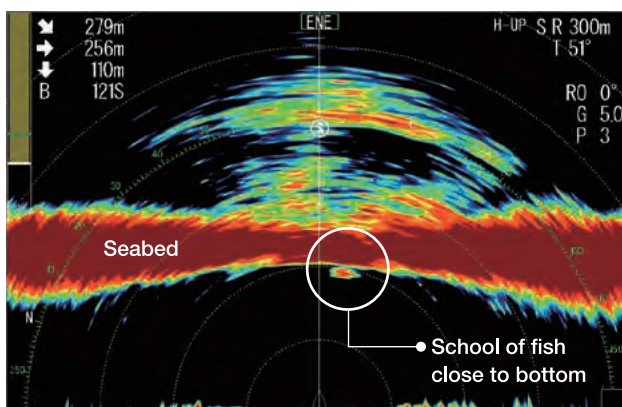
▶ **Perfect to search for fish with rapid movement** such as skipjack or tuna

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

port   starboard

From Port to
Starboard
in only
8 seconds!

fan-shaped beam

▶ **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.

Transducer
indicators

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

475m
462m
109m
51S

The underwater world in 3D!

3D mode (optional supply)

*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.

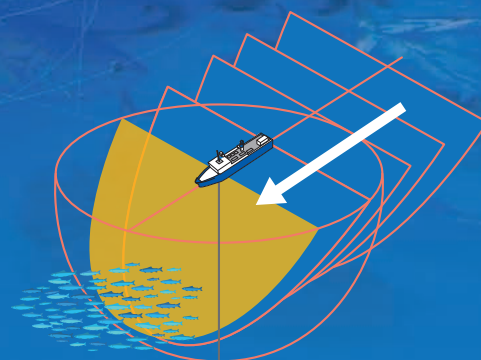### ▶ Forward detection history mode

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.
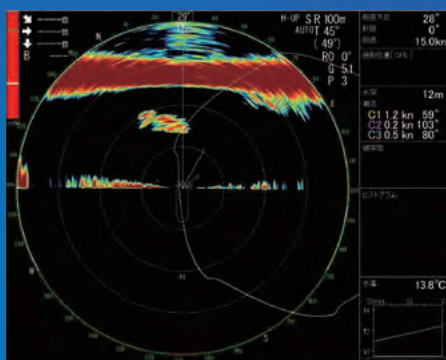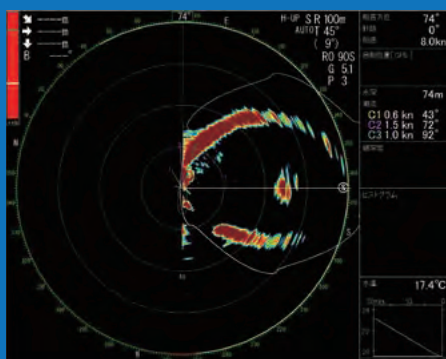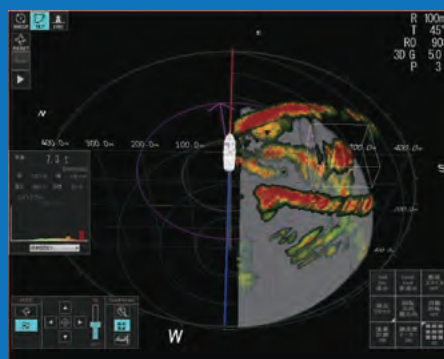
2D display   3D display
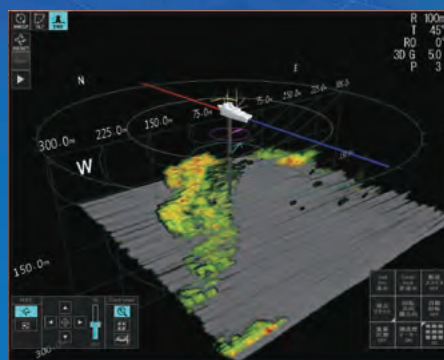
Searching image
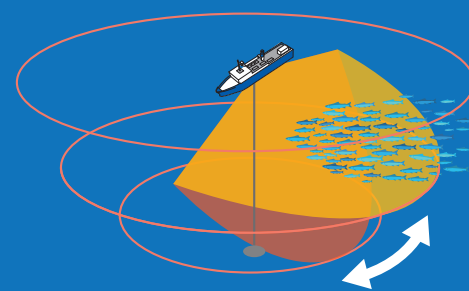
▶ Tilt cross-section mode*

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.
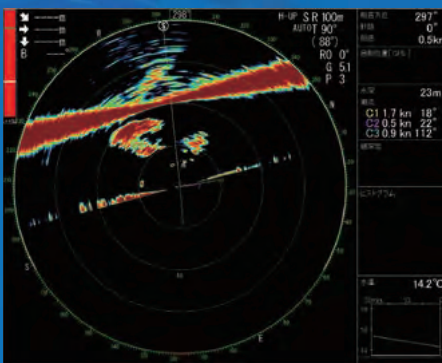
2D display   3D display

Searching image
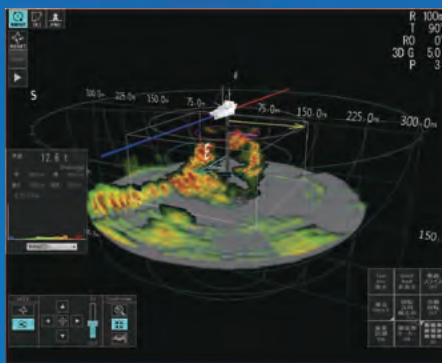
*The tilt is set on Auto-Tilt
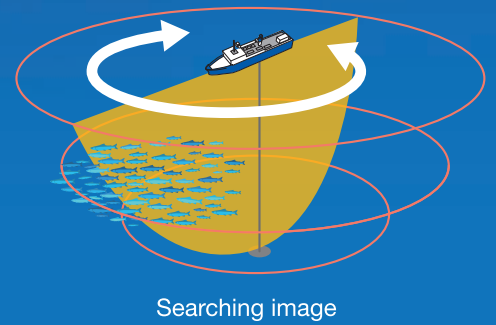
▶ Sweep cross-section mode*

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.
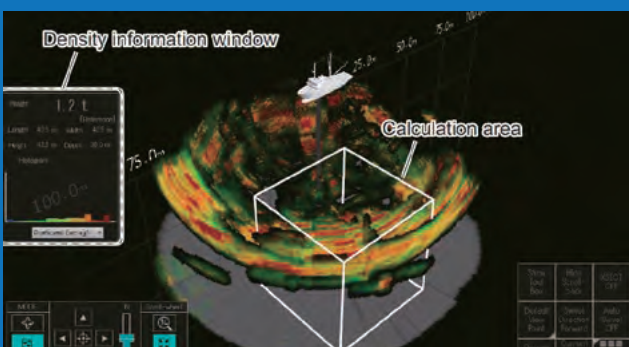
The density information window shows fish density in the calculation area.
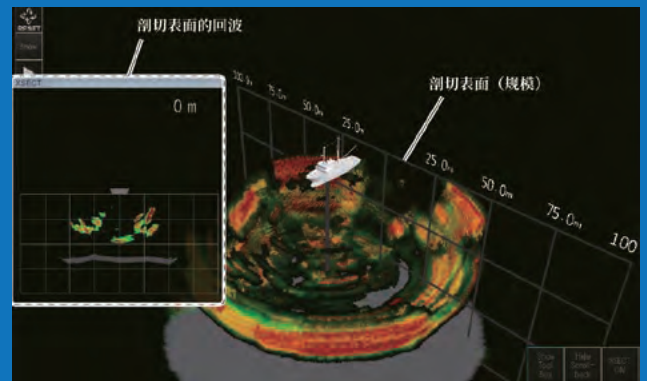
Cross-sectional slice function

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.

Mark input button

Sweep/tilt Reset buttons
(Reset to 0°)

Function key

Sweep/tilt controls
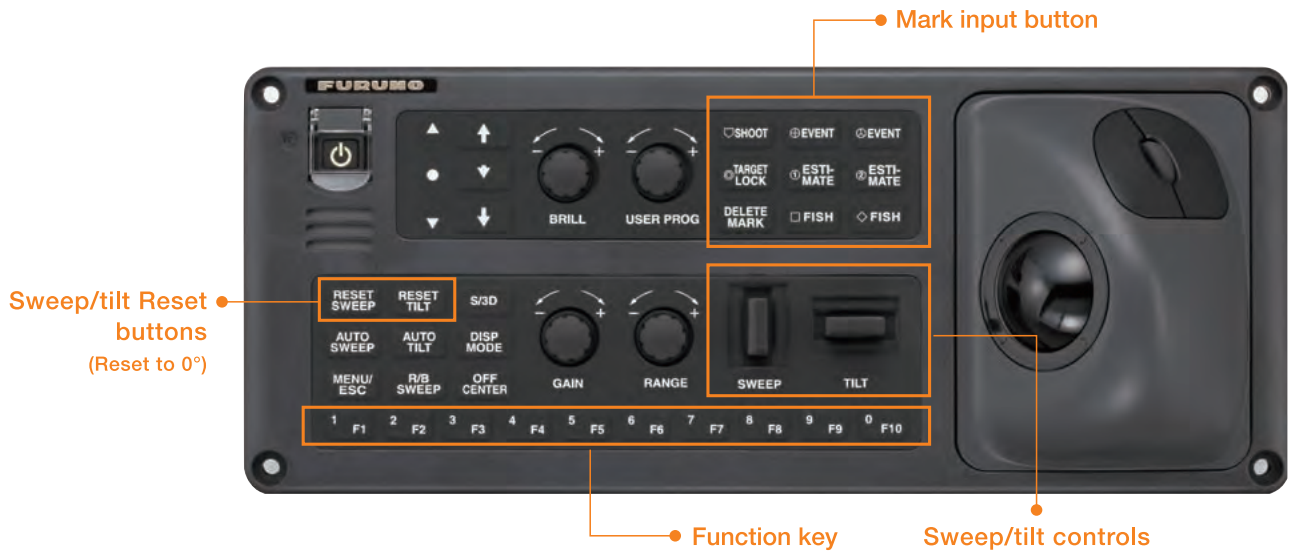
▶ Tank guide for a robust Hull Unit

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

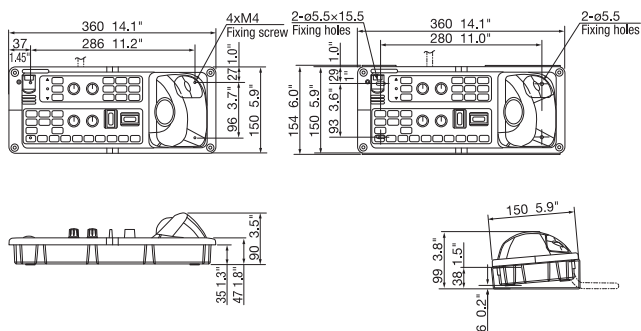The transducer can be deployed and retracted in 11 seconds (1100 mm), it's half the time of current Sonar models.

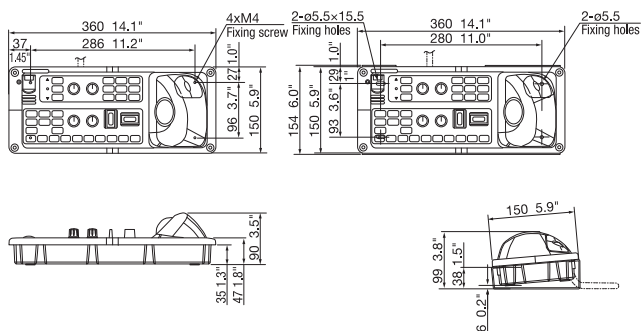Tank guide
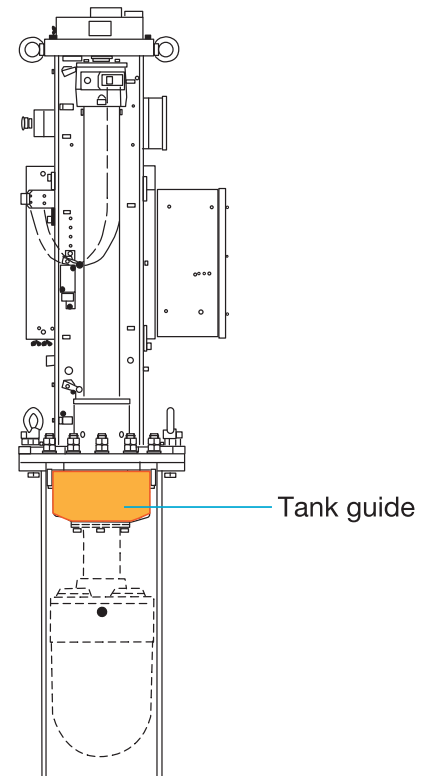
Half-circle Color Scanning Sonar

FSV-75

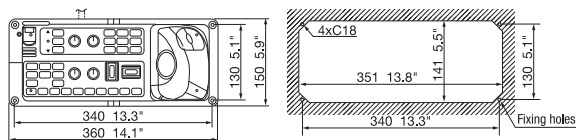## Control Unit

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)
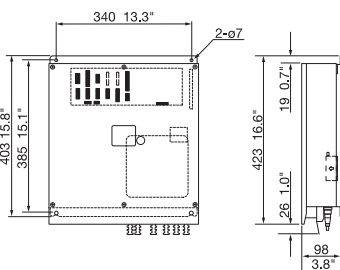
FSV-7560
10 kg 22 lb

Transceiver Unit

FSV-751 Bulkhead mount
51 kg 112 lb
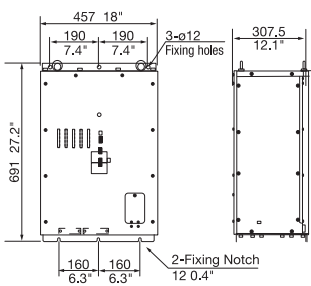
FSV-751 Floor mount
55 kg 121 lb
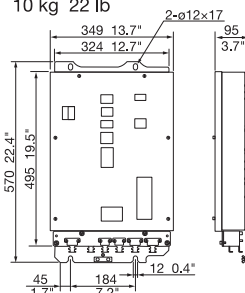
Matching Box

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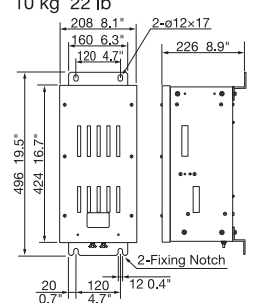
FSV-7550 Side mount
10 kg 22 lb

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

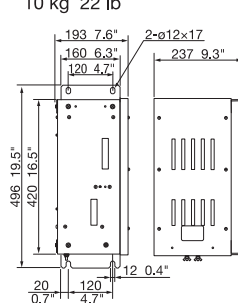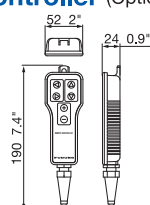| Basic range(m)	Range (m)		Basic range(m)	Range (m)	
	Off-center 'OFF'	Off-center 'ON'		Off-center 'OFF'	Off-center 'ON'
50	0-50	0-90	800	0-800	0-1280
100	0-100	0-160	900	0-900	0-1440
150	0-150	0-240	1000	0-1000	0-1600
200	0-200	0-320	1100	0-1100	0-1760
300	0-300	0-480	1200	0-1200	0-1920
400	0-400	0-640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

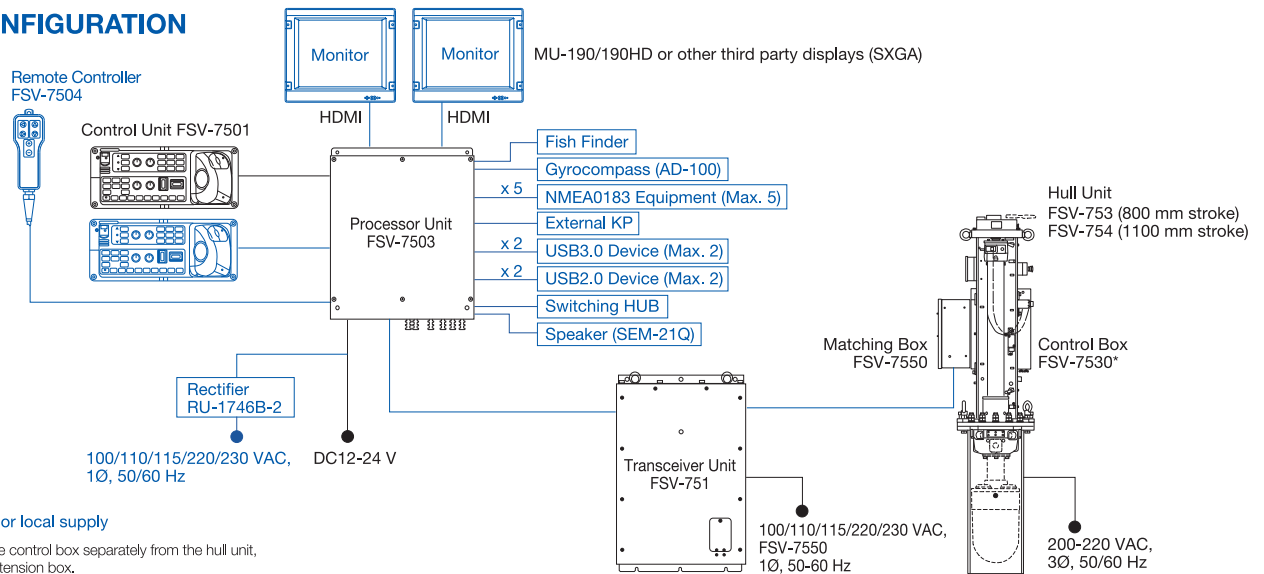| Transceiver unit	100/110/115/220/230 VAC, 2.5 A max., 1 phase, 50-60 Hz
Processor unit	12-24 VDC: 4.0-2.0 A
Hull unit	200-220 VAC, 4 A max., 3 phase, 50/60 Hz
Rectifier (RU-1746B-2, option)	100/110/115/220/230 VAC, 1 phase, 50/60 Hz

6. ENVIRONMENTAL CONDITIONS

Ambient temperature

Processor unit	-15°C to +55°C
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

MU-190/190HD or other third party displays (SXGA)

Remote Controller FSV-7504

Control Unit FSV-7501

Monitor — HDMI
Monitor — HDMI

Processor Unit FSV-7503
- Fish Finder
- Gyrocompass (AD-100)
- NMEA0183 Equipment (Max. 5) x 5
- External KP
- USB3.0 Device (Max. 2) x 2
- USB2.0 Device (Max. 2) x 2
- Switching HUB
- Speaker (SEM-21Q)

Rectifier RU-1746B-2

100/110/115/220/230 VAC, 1Ø, 50/60 Hz

DC12-24 V

Transceiver Unit FSV-751

100/110/115/220/230 VAC, FSV-7550 1Ø, 50-60 Hz

Hull Unit FSV-753 (800 mm stroke) FSV-754 (1100 mm stroke)

Matching Box FSV-7550

Control Box FSV-7530*

200-220 VAC, 3Ø, 50/60 Hz

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