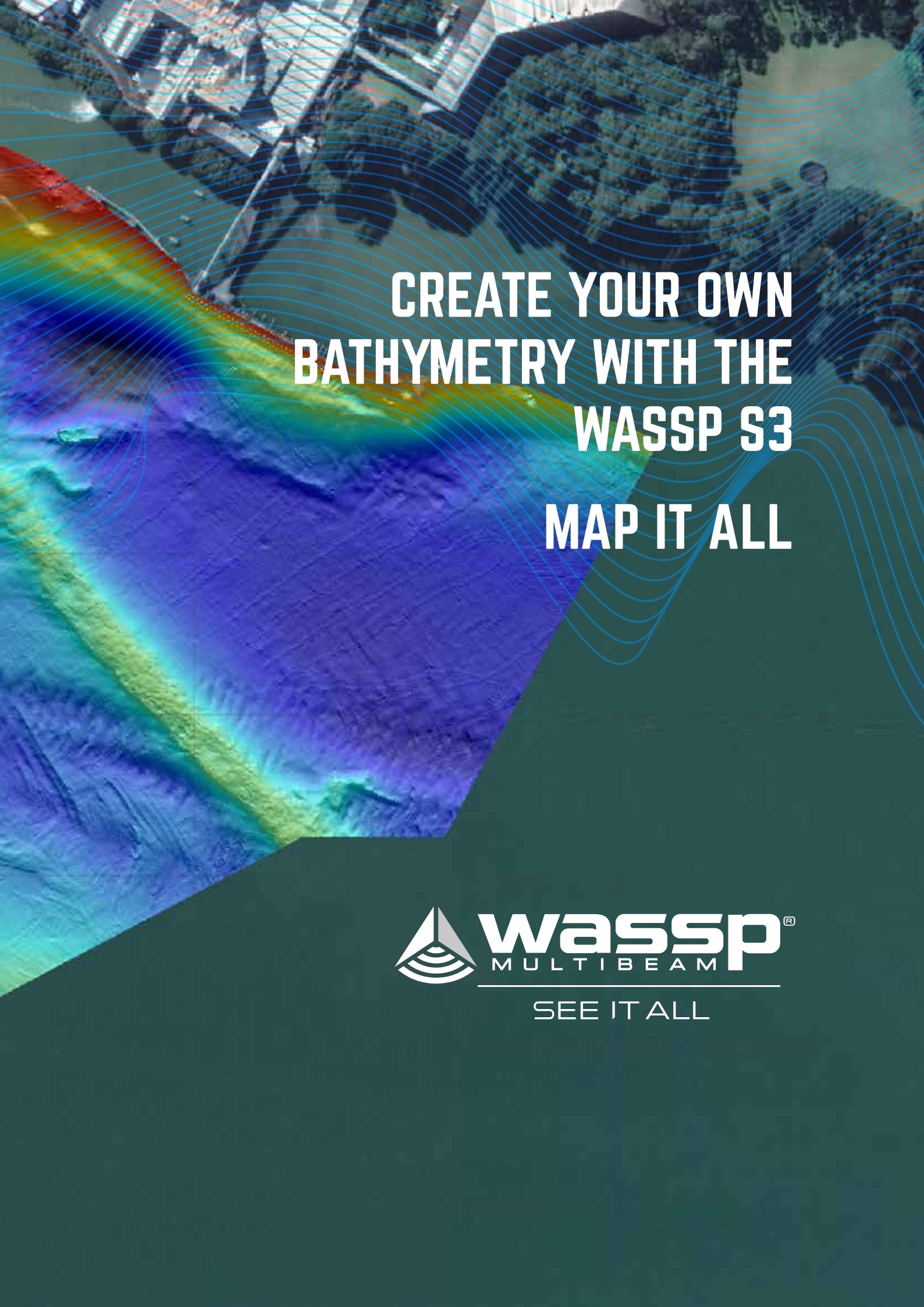


CREATE YOUR OWN BATHYMETRY WITH THE WASSP S3

MAP IT ALL

wassp® MULTIBEAM

SEE IT ALL

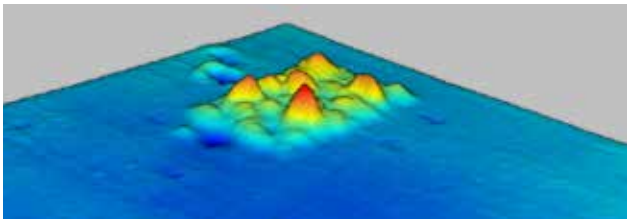
THE WASSP S3 - READY TO WORK

The WASSP S3 Multibeam Echosounder(MBES) is purpose-built for survey and mapping and has been designed with the end user in mind. Simultaneously generating 120 degree swath at up to 100 pings per second and incorporating advanced signal processing from our new Real-time Processing Module (RPM) module, you see a complete and accurate picture of underwater bathymetry with ease. The S3 is one of the world's easiest to use professional IHO S-44 Standard Order 1a and Special Order compliant survey and mapping Multibeam Echosounder solutions available and is ideal for:

- **Detailed Bathymetric Survey**
- **Dredging**
- **Wreck Exploration**
- **Port Survey and Channel Management**
- **Marine Infrastructure Inspection Planning & Inspection**
- **Search and Rescue Operations**

AFFORDABLE, PROFESSIONAL LEVEL MULTIBEAM

The S3 is one of the world's most cost effective, professional bathymetric survey and mapping multibeam echosounder solutions. Designed as a mid-level survey MBES, the S3 will meet your budget, operational needs and future technology roll-out. It lets you cover your survey area up to 100 times faster with a simple setup and intuitive user interface.



10 GREAT BENEFITS OF A WASSP S-SERIES SURVEY SYSTEM

1. Simplify your survey setup with our integrated and portable turnkey solutions
2. Ping rate of up to 100 times per second
3. Interface directly to your preferred survey software
4. IHO S-44 Standard Order 1a and Special Order Compliance
5. Choose the functions such as Backscatter or SideScan and Water Column with additional license options
6. Fast and simple configuration to reduce setup time
7. Export in WMBF, XYZ or GSF data to a large range of 3rd party software
8. Professional level Multibeam with up to 100 times coverage compared to Single beam
9. Easy to use CDX graphical user interface
10. Cost-effective solution for multiple applications

NEW RPM MODULE

The new 2021 WASSP S3 introduces RPM (Real-time Processing Module) which enhances seafloor tracking and ping rates, to give more accuracy and detail in your surveys. The RPM module works as a license, processing data via the DRX unit, and allowing higher quality data to be exported for use with 3rd party survey applications. The RPM module can be used in conjunction with WASSP's own CDX interface software or directly with 3rd party software.

ABOUT THE WASSP S3

IP66 DRX-32

The S3 is a multibeam sounder designed around the fully digital DRX transceiver with a wideband fairing transducer that can reach ranges over 350m.

Get a complete picture of the seafloor

The S3 is accurate, versatile, easy-to-use and scalable to suit your survey mapping needs. With wideband CHIRP and multibeam technology, you can scan up to 120-degrees 3.5 times the depth swath port-to-starboard for a complete picture of seafloor bathymetry giving you unprecedented clarity. With WASSP as all echosounders, performance is about energy in the water and WASSP does this with long pulses across the full CHIRP Frequency giving many hits on the target to clearly identify the Water Column Targets and Seafloor.

CONFORMANCE

The WASSP S3 with suitable sensor package conforms to the standards for hydrographic survey execution needed to achieve:

- **IHO S-44 1A**
- **IHO S-44 Special Order**

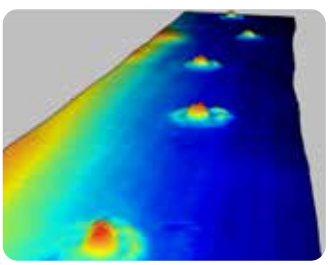
SOFTWARE INTEGRATION

WASSP systems have been designed to seamlessly integrate with 3rd party industry leading hydrographic software including:

- HYPACK
- BeamworX
- EIVA
- QINSy
- SonarWiz

Export to / Compatible with:

- Echoview
- CT Systems Viking
- Tower
- GSF, XYZ & more

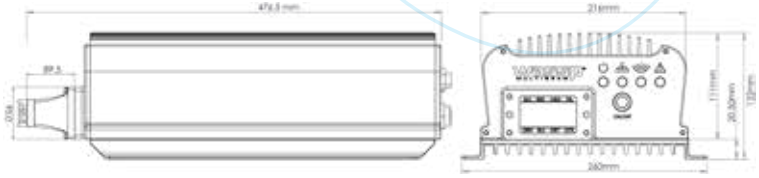


WIDEBAND FAIRING TRANSDUCER

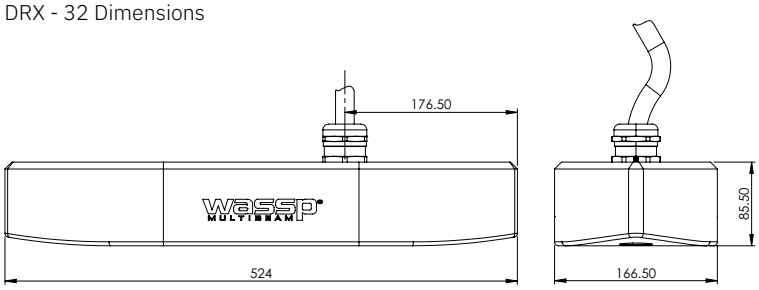
The highly sensitive WASSP Wideband Fairing Transducer has a user variable centre frequency and CHIRP bandwidth. With processing from very low comparable transmission power WASSP transducers give you very good clarity in both deep and shallow water. It can be mounted externally to many hull types with or without a fairing block (no custom-built box is needed). With its bolt-on design and drag-resistant shape, it's also a perfect solution for external over-the-side pole mounting allowing WASSP operation up to 20kn.

WIDEBAND FAIRING TRANSDUCER

DIMENSIONS:



DRX - 32 Dimensions



Wideband Fairing Transducer – Dimensions

PACKAGE OPTIONS

The WASSP S3 is highly flexible in its ability to integrate with your existing setup or software systems. In addition to the basic S3 setup, there is also a range of options to allow you to choose your required combination of equipment and licenses from a standard processing unit to a full turnkey solution that can easily be deployed, no matter the vessel.

S3r INTEGRATED

The S3r integrated solution provides you with a dual antenna RTK GNSS receiver with INS processing built in and SVS sensor for enhanced position and motion accuracy. With this system you can achieve compliantce with IHO S-44 Standard and Special Order performance standards.

S3Pr POLE KIT

Our portable pole kit combines with the S3r integrated package to provide a solution for portable setup on small vessels, all within a pair of transportable cases designed for ease of use while surveying in any location.

FULL SPECIFICATIONS*	S3
Transceiver type	IP66 DRX-32
Current transducer support	Wideband Fairing Transducer
Swath coverage (up to)	120°
Beams	224 (0.54° over 120°)
Default centre frequency	160kHz
Centre Frequency range	120-200kHz
Bandwidth (up to)	60kHz
Range resolution (max)	2cm
Beam width port/starboard	4.5° (3.6° @200kHz)
Beam width fore/aft	3.2° (2.6° @200kHz
Signal type	FM
Minimum depth/m	1m
Typical depth (90° or 2:1)	300m
Max depth (53° or 1:1)	350m
DC input	9-32V
Operating power consumption (average)	30W / 2.5Ah @12Vdc
Transducer cable length options	5m, 10m or 20m
Data connection	GbE
Operating temperature	0° to 50°
Environmental standards	IEC60945, MIL-STD-901
DRX mounted in Pelican case with IP66 sleeve	Optional
Transducer IP66 connectors	Optional
Integrated Survey Kit	Optional
Survey Pole Kit	Optional

PC	RECOMMENDED (RPM)
OS	Windows 10
CPU	2.2Ghz, i5 6 Core
	or i7 4 Core/8 Threads
Memory	8GB
Graphics	DirectX11
Screen resolution	FHD-1920 x 1080
HDD/SSD	2TB
Network	Ethernet-GbE
Dual screen support	Yes
FEATURES	**S3**
Included	2D/3D Bathymetric Mapping
	Sonar View
	3rd Party Survey Software Interface
Optional Licenses (indicative list only)	CDX (Required for RPM module)
	Backscatter
	Sidescan
	Water column targets
Datamanager	WMBF
File Types	XYZ
	GSF
	Echoview Data Export
Interfaces	PPS
	RS232
	RS422
	NMEA0183
	Ethernet (Client connection)

Specifications dependant on variety of external factors, please see product manual for full technical specifications

S3r
AN INTEGRATED SOLUTION

The WASSP S3r Solution is a fully integrated kit which includes all the core components required for a Multibeam Survey operation, designed to ensure functionality, ease of use and cost effectiveness, all while achieving accuracies required by international survey standards.

The S3r kit is an integrated option which includes the following components:

COMPONENT	OVERVIEW
Multibeam Echosounder Transducer	WASSP Wideband Fairing Transducer
MBES Processor (DRX)	WASSP IP66 DRX-32
RTK INS Sensor	Position, Heading, Pitch, Roll & Heave
Antenna	Dual Antenna GNSS RTK
SVS Antenna	Sound Velocity
UI	WASSP CDX with RPM
System Wiring Cables	Power, Ethernet, Sensor & Antenna

The WASSP S3r Solution integrates with a range of 3rd party software platforms including: Beam worX, EIVA, HYPACK a xylem brand, Qinsy, SONARWIZ

THE WASSP S3r PACKAGE SPECIFICATIONS

IP66 DRX-32		Water resistant IP66 black box processor 9-12VDC 30w/2.5Ah consumption @12VDC Ping Rate upto 100 times per second	Depth range 1-300m IP66 Gland Attachment included Includes Cabling
WIDEBAND FAIRING TRANSDUCER		Centre Frequency adjustable by kHz from 120-200kHz Chirp Range upto +/- 30kHz WASSP Operation up to 20kn	Optional Fairing block for Hull fitting Cable Optional Plate for Pole fitting Cable Length - 5m/10m/20m
RTK INS SBG SYSTEMS		Ellipse Dual Antenna RTK GNSS / INS 0.05° Roll and Pitch (RTK) 0.2° Heading (Dual Antenna RTK GNSS L1/ L2) Heave accuracy – 5cm or 5%	Immune to magnetic distortions 1 cm RTK GNSS Position
SVS VALEPORT		Range: 1375 - 1900m/s Resolution: 0.001m/s 100mm: Total max theoretical error ±0.017m/s	Voltage: 9 - 28V DC Power: 0.25W (SV) 0.35W (SV+Pressure)
CDX WITH RPM		Visualisation, Data processing & Control UI Data management Automatic inbuilt Notification system	RPM module can be run standalone with 3rd party software
SURVEY LICENSE		Includes an uncorrected data format that is required for interfacing to third party software such as HYPACK, BeamworX, QINSy, EVIA and WASSP Data Manager GSF output.	

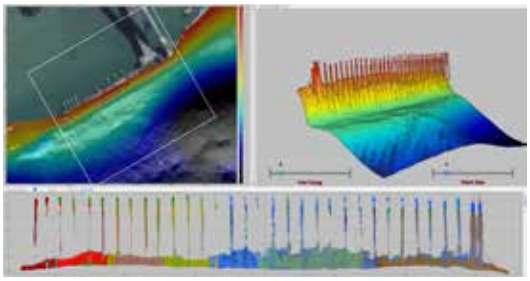
PACKAGE OPTIONS

The S3r solution package can be configured with a number of different options depending on your current component and boat configuration. Contact us to discuss a tailored package according to your needs

S3Pr
THE PORTABLE POLE KIT

The WASSP S3Pr pole kit takes portable surveying to a whole new level. A full kit is combined within 2 rugged cases allowing for easy transportation, but still giving the power and accuracy you would expect from a professional survey system.

Our low-cost adjustable and removable mounting kit is flexible enough to offer a range of mounting options for small boats giving you the flexibility you need when doing on-location mapping or utilising with a vessel of opportunity. Side-mounting or cross-boat mounting, you can do it all with a single pole package for the adaptability you need when surveying.



COMPONENT	DETAIL
S3r Kit	DRX-32, Wideband Fairing Transducer, RTK
	GNSS / INS Receiver, GNSS RTK Antenna,
	SVS, CDX UI Exterior: 62.9 x 39.3 x 20.9 cm
Anodised Aluminium Pole Tubes	50 x 1.1m (x 7)
	50 x 1.0m (x 1)
	50 x 0.5m (x 2)
	50 x 0.4m (x 1)
	50 x 0.3m (x 2)
Pelican 1555 Air Case	Exterior: 62.9 x 39.3 x 20.9 cm
Pelican 1745 Air Case	Exterior: 118.6 x 49.2 x 22.2 cm
Clamps	T Clamp (x 5)
	Sleeve Clamp (x 2)
	X Mount Clamp (x 2)
Mounting Plate	For Wideband Fairing Transducer

IHO COMPLIANCE

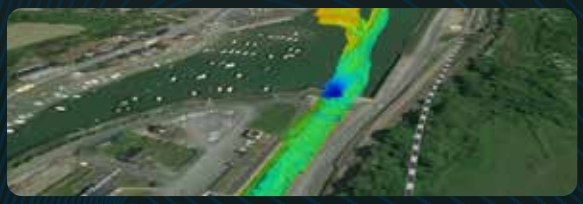
- IHO S-44 Standard 1B
- IHO S-44 Standard 1A
- IHO S-44 Special Order

COMMON DEPLOYMENT METHODS

Gunnel Mount	Over-the -side attachment, utilises single gunnel and clamps
Crossbar Mount	Cross Boat installation, requires using supplied straps underneath boat
Transom Mount	Attachment to transom with supplied clamps and straps

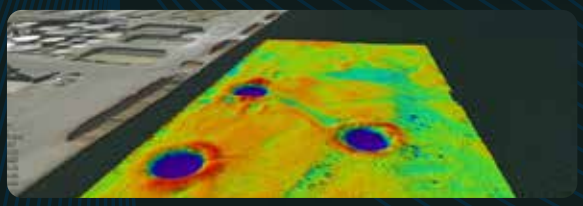
Please see product manual for full technical specifications

S3 SURVEY APPLICATIONS



HYDROGRAPHIC

WORKBOAT



CONSTRUCTION

DREDGING

"During initial trials, the WASSP Multibeam was able to profile ripples on the estuary floor up to 15cm in distance apart."

– Kristopher Krasnosky, University of Rhode Island PHD student and researcher

THE FASTER AND MORE ACCURATE WASSP S3!

To add WASSP S -Series technology to your survey operations, contact your local dealer or email sales@wassp.com

wassp® MULTIBEAM

SEE IT ALL

ALWAYS GOING BEYOND

WASSP is part of the ENL Group. With more than 75 years' experience, we're world leaders in marine sounder, radar and communications.

Based in the marine nation of New Zealand, which has one of the world's largest marine economic zones, ENL invests heavily in R&D to constantly push the boundaries. We develop software and hardware solutions for seabed surveying and mapping, defence, superyachts, commercial fishing and workboats.

Our passion and commitment to real innovation is what sets us apart. We consistently bring game-changing technology to market, with cost-effective products that are easy to operate to make your life at sea easier.

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