SAL speed logs & echo sounders

Consilium

When Safety Matters

A wide selection of speed logs and echo sounders simplifying installation and minimizing the total cost

Consilium - Your advisory partner!

Consilium is a well established company within the marine industry, with a long experience from developing innovative and high quality products, such as the SAL speed logs and echo sounders.

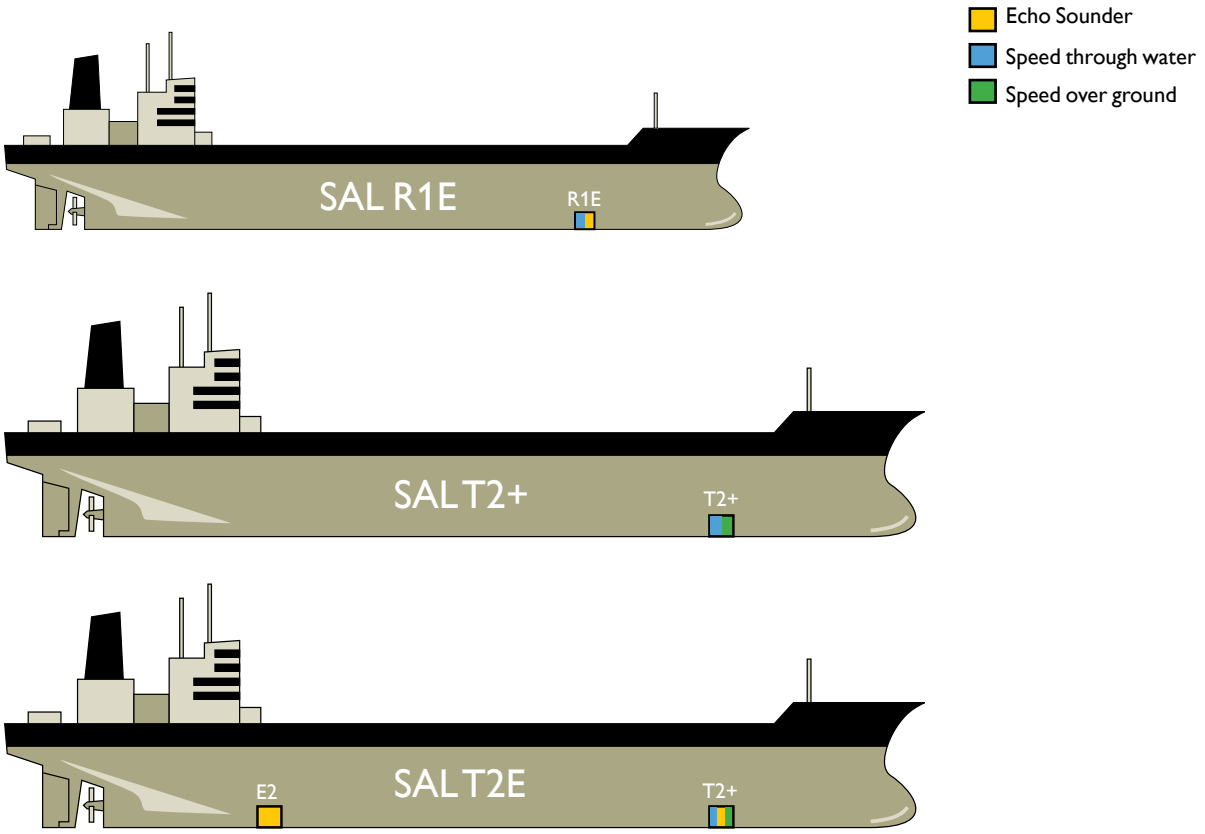
When choosing a Consilium product you will get a type approved product together with a life time commitment from an advisory partner, providing first class support and excellent service.

There is a strong demand for Consilium products within the cruise-, tanker-, LNG- and naval segments and the demand from the offshore sector is growing rapidly.

Consilium's wide selection of speed logs and echo sounders simplifies installation and minimizes the total cost

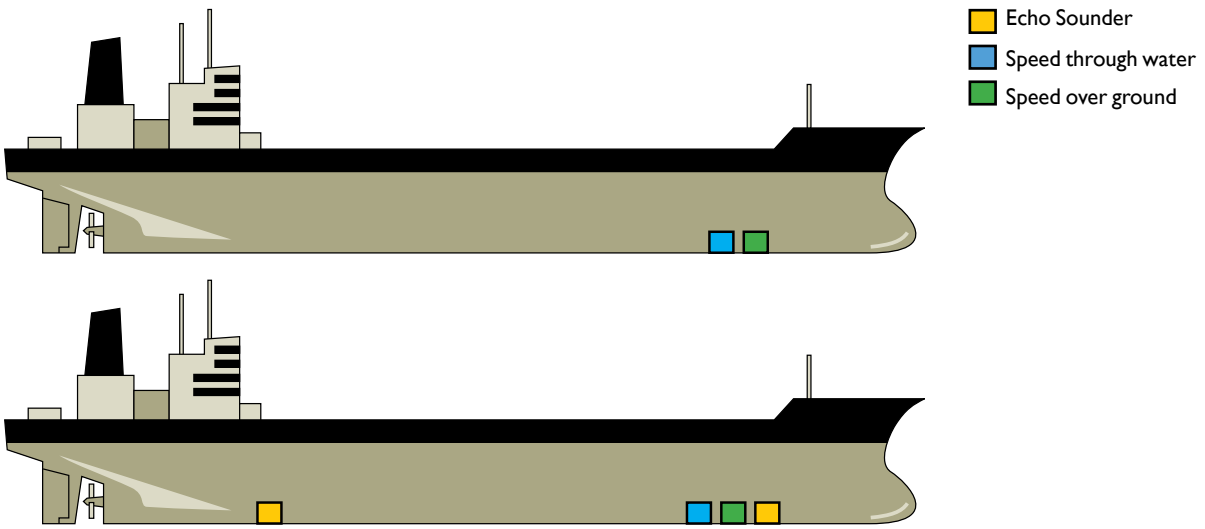
Unique solutions by Consilium

Consilium's SAL R1E, SAL T2+ and SAL T2E are unique solutions, requiring a minimized number of hull penetrations, always fulfilling the SOLAS MSC.334(90) requirement.



Traditional solutions

Traditional solutions require between two and four hull penetrations.



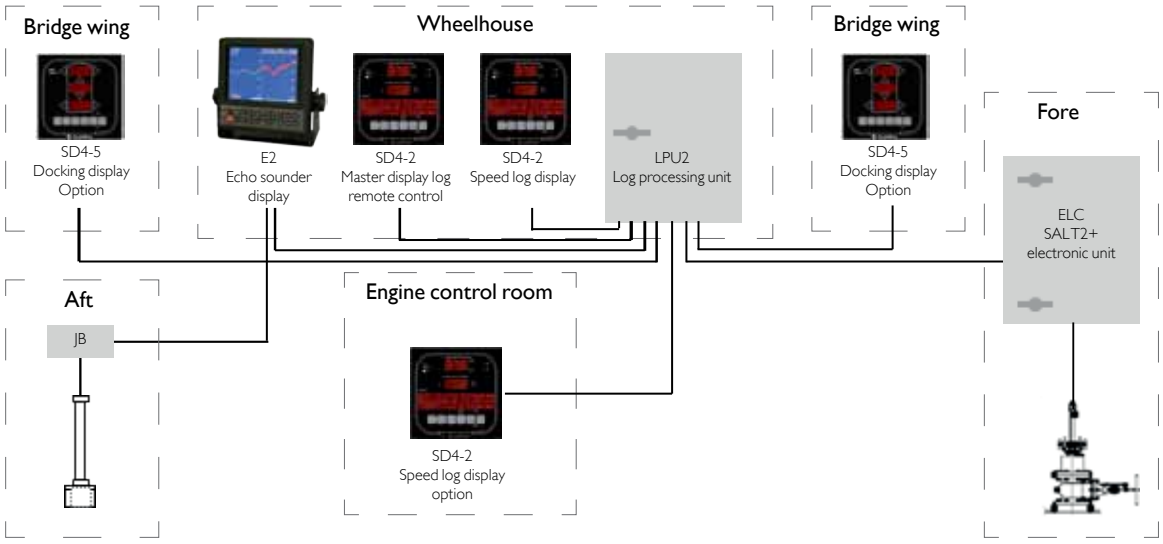
Consilium offers a wide selection of speed logs and echo sounders that fulfil all regulations and requirements

Consilium's wide selection of SAL speed logs offers both relative and true speed log versions including the world's first type approved combined speed log and echo sounder system.

SAL speed logs and Echo sounders solutions from Consilium				
Solution	Water track	Bottom track	Docking log	Echo sounder
SAL R1a	■			
SAL R1E	■			■
SAL T3	■	■	■	■
SAL T2+	■	■	■	
SAL T2E	■	■	■	■
Echo sounder E1				■
Echo sounder E2				■

All systems are approved for vessels up to 50,000 GT
The T2+, T2E, E1 and E2 are also approved for vessels over 50,000 GT

System overview of SAL T2E



Example of a full docking log and double echo sounder functionality with the unique SALT2+ transducer in the bow for STW, SOG and navigational depth and the E2 echo sounder in the aft. Note: only two hull penetrations needed!

Consilium's products are certified by the major classification societies

Consilium speed log selection

Choose from a comprehensive range of SAL speed logs

Consilium has thoughtfully extended the speed log product range to ensure the ability to provide the right solution, regardless of if you are building a new ship or working on a retrofit. Let us be your advisory partner, providing a high quality product that fulfils your needs and values.

A complete R1a system

Type approved for vessels up to 50.000 GT

Consilium's SAL R1a is a one-axis relative speed log, measuring speed through water in longitudinal direction ahead and astern.

The SAL R1E is a cost efficient solution that fulfils the SOLAS regulation for both speed log and echo sounder (E1 version).

The SAL T3 solution combines the speed log features with echo sounding, measuring longitudinal relative speed through water as well as two-axis true speed over ground.

Type approved for all vessels

Consilium's SAL T2E is a cost efficient solution with both speed log (T2+) and echo sounder (E2). It has dual echo sounders, speed through water (STW) and speed over ground (SOG) speed logs, small bottom parts and only requires two hull penetrations. The SAL T2+ transducer also delivers approved depth information (150 kHz sounder) to the E2 echo sounder display.

The SAL T2+ solution is a unique docking and dual axis speed log. The SAL T2+ measures longitudinal relative speed through water (STW) as well as two-axis true speed over ground (SOG). The transducer has both a separate device for STW and a separate device for SOG and therefore requires only one hull penetration.

SD4-2: SOG and STW

SD4-3: STW

SD4-4: General

SD4-5: Docking

The unique SAL T2+ transducer

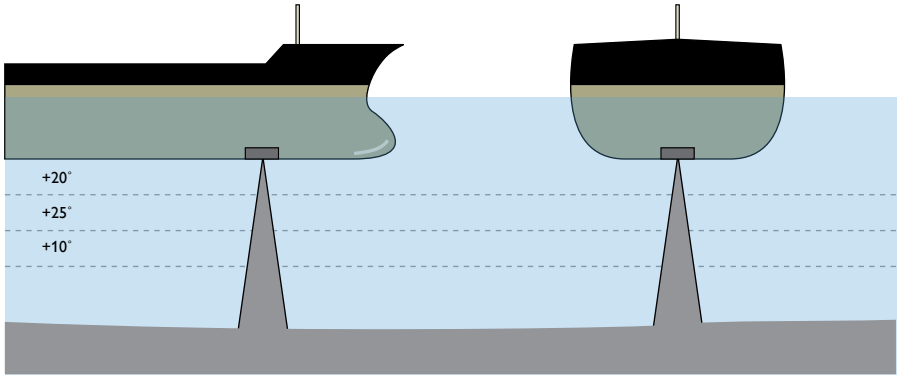
The SAL R1E transducers mounted in the same small sea valve.

Benifits with a solution from Consilium

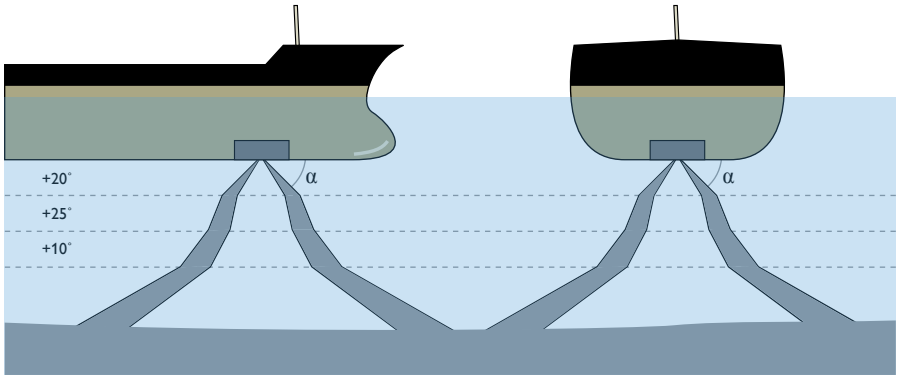
- A minimum of hull penetrations
- Fulfil the new SOLAS 2014 MSC.334(90)
- Small transducers
- Cost efficient solutions
- Easy to install
- No divers needed during retrofit
- Low maintenance
- High quality
- High accuracy by correlation principle
- Non reliant on easily interfered satellite systems
- Flexible retrofit solutions
- 24/7 worldwide support

Advantages of correlation technique

As Consilium uses correlation technique in the speed logs, the accuracy of the measurements is not affected by conditions such as temperature or salinity.

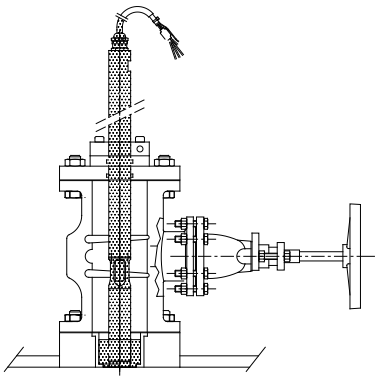


Correlation principle
Correlation logs measure speed (SOG and STW) vertically and are not affected by temperature, salinity or the speed of sound.



Doppler principle
Doppler logs measure speed (SOG and STW) in an angle and are affected by temperature layers and salinity layers that change the angle and the speed of sound.

Consilium log adapters



No dry-docking or divers needed

Consilium's wide range of conversion adapters simplifies replacing existing speed logs, from our own as well as from other brands. The approved acoustic correlation speed log simplifies replacement without requiring dry-docking or divers.

The SOLAS regulation 2014, MSC 334(90)

SOLAS Speed Log Requirements, regarding SOG and STW separate devices, MSC.334(90) adopted May 22nd 2012, comes into force July 1st 2014 and applies to vessels over 50 000 GT and other vessels with a dual axis SOG requirement.

"5.3 If ships are required to carry speed logs measuring speed through the water and speed over the ground, these speed logs should be provided by two separate devices."

Consilium navigational echo sounder selection

Consilium offers two types of reliable and low cost navigational echo sounders, the E1 and the E2. They are both easy to install and to operate and have been approved according to MED and found to be in compliance with IMO regulations.The E1 echo sounder is included in the SAL R1E package and the E2 in the SAL T2E package.

Echo sounder E1 display

Echo sounder E2 display

Technical information

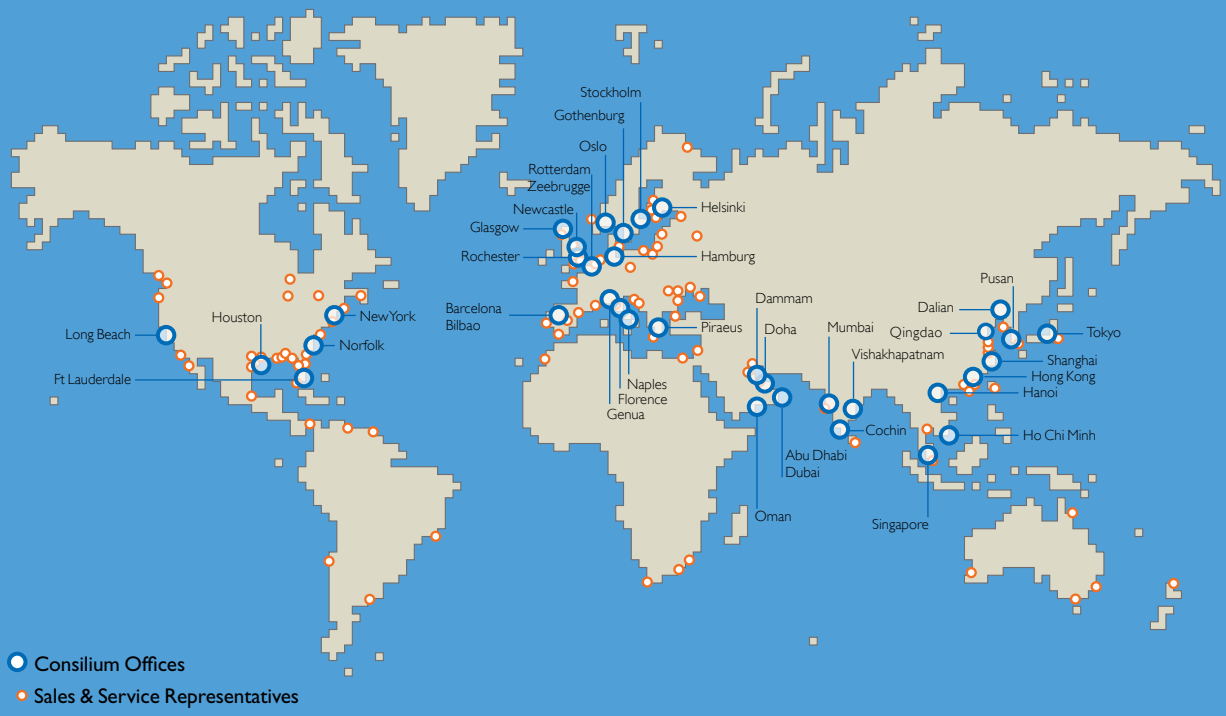
SAL speed logs - Speed Through Water (STW)	
Speed range:	±50 knots sensed water speed
Speed inaccuracy:	0.1 knot or 0.5% whichever is greater
Distance inaccuracy:	<±0.5% of travelled distance in water
Minimum water depth:	3 m below transducer
SAL speed logs - Speed Over Ground (SOG)	
Speed range:	±40 knots in any direction
Depth range:	2-250 m below transducer
Speed inaccuracy:	0.1 knot or 0.5% whichever is greater
Travelled Distance Inaccuracy:	2-10 NM ±0.2%, 10-50 NM ±0.1%, >50 NM ±0.05%
E1 - single-frequency navigation sounder	
Transducer frequencies:	50 or 200 kHz (to be user-specified)
Screen:	5.7" LED-backlit LCD, daylight viewing
Depth ranges:	5 to 1000m in 8-range steps
Transmit power:	600W RMS
Data storage:	Up to 12 hours
E2 - compact high-end, two unit model	
Transducer frequencies:	50 kHz + 200 kHz
Display:	8" VGA TFT-LCD, daylight viewing
Depth ranges:	5 to 1000m in 8-range steps
Transmitter:	1 kW max
Data storage:	Up to 24 hours

History

Consilium's technology evolves in a unique combination of long history and experience in the field of cutting edge technology.

1914 The first SAL speed log. SAL – "Svenska Aktiebolaget Logg" patented the pitot tube principle and made the first delivery to the Royal Swedish Navy destroyer "HMS Hugin"
1918 The first civil SAL log was installed onboard s/s Hyperion
1972 Patent of SAL ACCOR first generation of acoustic correlation SOG/STW speed log
1983 SAL Imcor, the first generation of acoustic correlation STW speed log
1988 SAL 860, new generation of SOG and STW log
1997 SAL R1, new generation of STW speed log
2003 SAL T2, new generation of SOG and STW log
2003 SAL T3, the first solution of SOG, STW and echo sounder combined in one system and one hull penetration.
2013 New solution approved by all major societies (R1E,T2+ and T2E)

You find us worldwide



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www.consilium.se