SAL Speed Logs

Acoustic Correlation Principle
Makes the Difference
The SAL history
1914 to present

1914 - SAL, “Svenska Aktiebolaget Logg”
Patent on pitot tube principle and deliver the first naval SAL-log to the Royal Swedish Navy destroyer "HMS Hugin"

1918 The first civil SAL-log was installed on board the merchant ship "s/s Hypatia"

1918 Svenska Adolfsfaktor AB (later renamed to Jungner Instruments AB) acquire Svenska Aktiebolaget Logg

1914-1950 Models: SAL-12, SAL-14, SAL Selsyn, SAL-24


1972 Salén&Wicander AB acquire Jungner Instruments AB

1972 SAL ACCOR: first generation of acoustic correlation BT/WT speed log (Patent)

1983 SAL Imcor: first generation of acoustic WT speed log

1984 SAL 840: one axis BT speed with Imcor WT speed

1993 D1 and D2: Serial Digital displays with NMEA interface

1994 SAL LDU: Log Distribution Unit for multiple user connections

1997 SAL R1: new generation of WT speed log, supersedes the SAL Imcor

2002 SAL 860T: new BT main unit built on DSP-technology

2003 SAL T1: Three model one-axis BT/WT log with Echo-sounder

2003 SAL T2: The first T-series BT/WT model with modular WGU unit built on DSP-technology

2005 SAL T3: Three BT/WT model with Echo-sounder functionality based on the new ESD computer

2004 SAL R1: new WT speed log based on the WGU-Unit

2005 SAL R1/R1a: TRU improvement of the transducer unit

2005 SAL T3+ 7-series BT/WT log with Echo-sounder

2007 SAL LPU2: Log processing Unit 2nd generation, Extended functionality

Consilium Marine & Safety the supplier of SAL Speed Logs and to date has equipped well over 20,000 ships. From the beginning Consilium has placed the emphasis on product leadership through innovation and quality. Our commitment to excellence begins with the use of superior technology and culminates with unmatched build quality to provide ship owners, builders and crews with equipment that delivers a performance second to none.

Consilium’s range of SAL Speed Logs has been deliberately expanded so that Consilium is in the position to provide vessels of all size with a first class speed log system to suit its specific requirement. Using advanced technology and innovative design all users of Consilium SAL Speed Logs are able to accurately record the speed of their vessel whatever the conditions.

The pioneering spirit that personifies Consilium is clearly evident in the company’s unswerving determination to find new technological solutions. And it is this unique drive for perfection that continues to be at the heart of all marine equipment Consilium manufacturers.

Continuity through change
During the 60’s we conducted a series of rigorous sea trials to discover whether there was any significant difference in performance between equipment using the Acoustic Correlation Principle and that of equipment employing the Doppler Principle. During testing it became apparent that when the respective technologies were used in areas where reflections, temperature layers, salinity, roll and pitch came into play the equipment using the Acoustic Correlation Principle was far more effective at eliminating the influence of the prevailing conditions and maintained its accuracy at all times. The same could not be said of the equipment using the Doppler principle.

Once we had determined that ACP was unquestionably the most accurate and reliable solution we committed ourselves wholeheartedly to the technology. From those early days we have successfully introduced an impressive list of new features and functionality that have been adopted as industry standards and maintained our position as the preferred choice amongst leading ship owners and builders the world over.

In addition to great accuracy our equipment is renowned for its rugged build quality, total reliability and extreme ease of use. Indispensable qualities for equipment that is crucial to the safety of sea going crafts whether they are used for business or pleasure.

The advantages of Acoustic Correlation Principle over Doppler

The following diagrams clearly illustrate the superiority of ACP over the Doppler based alternative. In recognition of the vast superiority of Acoustic Correlation Principle over all other alternatives Consilium has developed a broad range of SAL Speed Logs so an option is available for all types and sizes of vessels.
Building on success

Consilium’s range of SAL Speed Logs offer a choice of both relative and true speed versions. In addition Consilium also offers the world’s first combined system which is type-approved and equipped with a speed log and an echo sounder.

You can choose from a comprehensive range SAL Speed Logs Consilium’s has thoughtfully extended its product range to ensure that whatever vessel you are building or is undergoing a retrofit you have the option to equipped it with a class leading product.

<table>
<thead>
<tr>
<th>Log Type</th>
<th>SAL R1</th>
<th>SAL T1</th>
<th>SAL T2</th>
<th>SAL T3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Track</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Bottom Track</td>
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<td>✓</td>
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<tr>
<td>Dual Axis Log</td>
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<td>✓</td>
<td>✓</td>
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<tr>
<td>Docking Log</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Echo Sounder</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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</tbody>
</table>

1 Smaller than 50,000 GRT. Solas requires minimum a water tracking speed log.
2 Bigger than 50,000 GRT. Solas requires a water tracking and bottom tracking dual axis speed log.

SAL R1
This system is a one-axis relative speed log – measures speed through water in longitudinal direction ahead and stern.

SAL T2
This system measures longitudinal and transversal true speed and longitudinal relative speed. This version is also available as a docking log.

SAL T3
This system combines the features of SAL T2 with echo sounder – measures relative speed as well as two axis true speed and water depth down to 250 meters. (This is the world’s first approved combined system of speed log and echo sounder in one housing using only one combined transducer.)

Consilium SAL Speed Logs give you more

As a company committed to the highest quality you’ll find all our equipment combines state-of-the-art technology with robust built quality.

Key features for the various components include:

- Transducers TRU:
  - Compact size means it requires less space.
  - Light weight ensures easy installation.
  - Flush mounted to the hull for better protection.
  - One hull penetration, one installation, common cabling mean lower installation costs.
  - Sea-valve for easy exchange while afloat.

- Electronics unit:
  - The ELC uses Digital Signal Processing (DSP) technology for superior performance.
  - Versatile displays for two-way communications.
  - Remote calibration and set-up can be accomplished from the bridge. Ideal for sea trials and speed testing.
  - Common mounting for both the wheel-house and bridge wings.
  - Comprehensive range of accessories.

- Uses standard ships cable for NMEA signalling from the ELC to the instrument room and bridge.

Advanced Functionality
- Acoustic correlation principle for highly accurate performance.
- Resistant to interferences from rolling, pitching, salinity and temperature layers.
- Integrated Echo sounder and speed log functionality.
- Capable of simultaneously measuring speed over water, speed through water and depth.
- High reliability rating.
- Low service and maintenance costs.
- Proven technology.
- Built by long-terms and highly regarded manufacturer of marine products.

For more technical information
For more detailed technical information concerning a specific model simply ask your local Consilium representative for the product brochure alternatively download a version from our website at www.consilium.se

WHEEL HOUSE

Global Service Network
Consilium Marine & Safety is represented in more than 50 countries and has a presence in the most frequently used ports around the world. Customers are able to obtain spare parts or conduct servicing via the network of subsidiaries and agents so no matter where they are they are never far from a Consilium expert.

After sales support you can rely on
Consilium prides itself on providing customers with the benefit of highly trained and resourceful after sales team. Each member of the team is fully experienced so customer have the added assurance of knowing that when they buy from Consilium complete customer satisfaction is an essential part of the deal.

Training on demand
To help customers get the most out of their equipment Consilium provides comprehensive educational courses and training seminars from their global network of offices. So should a customer have a special requirement Consilium representatives can help make all the necessary arrangements to conduct training sessions where attendees can discover everything there is to know about a particular product and its functions.