

EMERGENCY VESSEL ATTACHMENT & TOWING SYSTEM



When oceangoing ships become disabled at sea, the process of establishing an emergency towing connection can be extremely dangerous. Glosten, with support from Samson Rope Technologies, has developed an emergency towing solution designed to reduce risks associated with the use of conventional systems, and increase the probability of establishing and maintaining a secure connection in heavy weather.

Designed for Connecting at Sea

In 2014, Glosten was contracted by the Alaska Maritime Prevention & Response Network to lead a project to develop and test a large-scale sea anchor to reduce the probability of ship groundings in Western Alaska.

This ambitious effort ultimately led the team to develop a two-part "ship arrest system" composed of a para sea anchor (PSA) and a novel Emergency Vessel Attachment & Towing System* (EVATS™) designed for deployment from the bow of a disabled vessel. Notably, EVATS can be used independently

*Patent pending

(without the PSA) for emergency towing and nearshore salvage applications, and has unique features that set it apart from conventional emergency towing systems in terms of improved safety and reliability.

Safe, Simple, and Secure

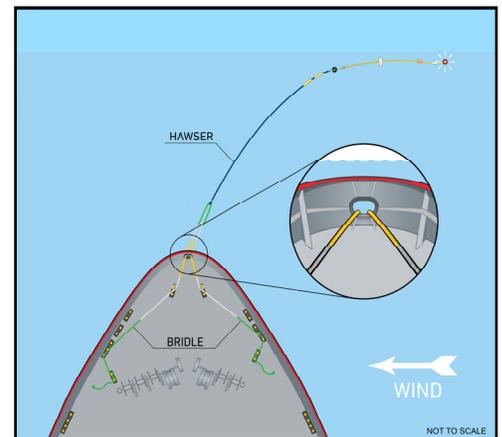
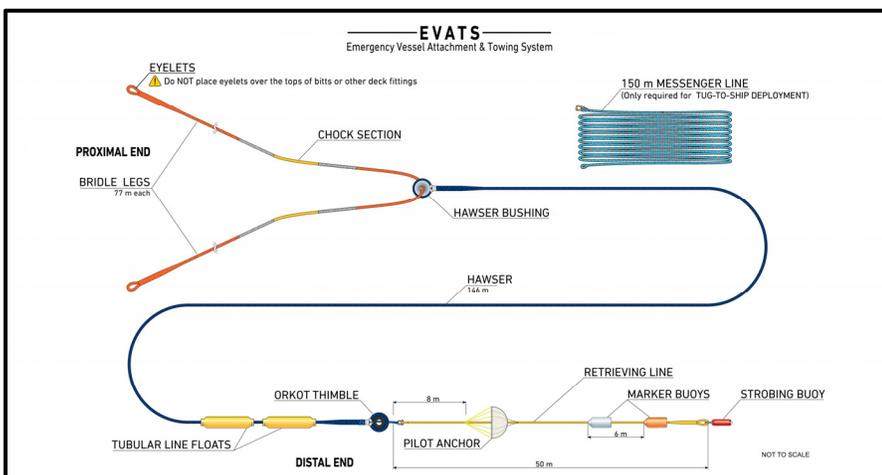
EVATS was designed to address safety and reliability concerns associated with conventional methods of connecting to the bow of a disabled vessel. EVATS achieves this goal by integrating the following design features:

- Distribution of line loads over multiple attachment points on the foc'sle deck of a disabled ship, rather than relying on a single-point connection.

EMERGENCY VESSEL ATTACHMENT & TOWING SYSTEM – APPLICATIONS

- PAIRING WITH LARGE SEA ANCHOR SYSTEMS OR OTHER DRAG DEVICES
- EMERGENCY TOWING
- NEARSHORE SALVAGE
- NEARSHORE WRECK REMOVAL

- Near-universal compatibility with a large range of ships' foc'sle deck / mooring gear arrangements.
- Depoloyability from a ship's foc'sle deck, such that the towing end is recovered from the water.
- Rapid deployability / recoverability in heavy weather and/or low-light conditions.
- Rapid deployability / recoverability in the event that a ship's deck machinery is non-functional.
- Establishment of safer distances between the disabled vessel and the towing vessel.
- Compatibility with modern ship types with covered foc'sles.



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EVATS™

EMERGENCY VESSEL ATTACHMENT & TOWING SYSTEM

Kit Includes:

- Samson Quantum-X bridle.
- Solid aluminum hawser bushing.
- Samson AmSteel®-Blue hawser.
- Tubular line floats.
- Orkot® thimble.
- Samson Yellow Quantum-12 Retrieving Line with pilot anchor and marker buoys.

All components are packaged in a 230 cm × 120 cm × 150 cm collapsible polyethylene bulk container with fork pockets.

COMPONENT	SIZE	MINIMUM BREAKING STRENGTH (MBS)	MATERIAL	LENGTH OVERALL
Bridle	68 mm	354 MT*	Samson Quantum-X	154 m
Hawser Bushing	∅ 31 cm	300 MT	Aluminum 6061-T651	-
Hawser	68 mm	300 MT	Samson AmSteel®-Blue	146 m

*Bridle configuration: Single leg MBS (266 MT) × 1.33 bridle efficiency = 354 MT

AmSteel®-Blue

AmSteel®-Blue is a torque-free, 12-strand single braid that yields the maximum in strength-to-weight ratio and, size-for-size, is the same strength as steel – yet it floats. AmSteel®-Blue is an excellent wire rope replacement with extremely low stretch, and superior flex fatigue and wear resistance.

Quantum-X

Quantum-X is a 12-strand rope that has been engineered for performance: better snag resistance, high coefficient of friction, enhanced cyclical bend over sheave (CBOS), and creep performance. It is lightweight, high-strength, floats, is flexible, and is easy to handle and splice. Quantum-X utilizes Samson's patented DPX fiber technology, resulting in a rope that maintains the advantages of Dyneema®; extreme strength and lightweight, cut and abrasion resistance, and adds a higher coefficient of friction for use where enhanced grip is critical.

