Mobile Shiploaders
The most comprehensive range of mobile Shiploader systems available with special features designed to speed vessel loading handling the complete range of dry bulk cargoes at rates up to 2,000 tons per hour.

Full Function Mobile Shiploaders offer a cost effective and fast track solution with complete flexibility

By combining the benefits of the Samson® Receiving Unit plus comprehensive options of travel systems and trimming equipment the Samson® Mobile Shiploader offers the level of performance normally associated with fixed installations but with complete flexibility.

Since no special civil works are required the Mobile Shiploader may operate on any suitable existing quay area or river berth using existing infrastructure thus drastically reducing the capital cost of a new export facility with the further benefit of fast track availability.

The flexibility and fast track availability offered by mobile equipment allows the port operator to react to changing market conditions taking advantage of often short term contracts. In a rapidly changing export commodity market, the mobile option may be confidently selected in the knowledge that the equipment may be easily relocated or even resold if a contract is terminated.

The strong second-hand market for these machines guarantees excellent residual values thus minimising the investment risk associated with any project however volatile the market conditions may be.

On the front cover operating at the Port of Dundee the Mobile Shiploader with independent multi-entry Samson® Material Feeders loading cereals to Handy size ships at rates up to 1,000 t.p.h. and in this application includes a variable speed radial thrower for trimming the vessel hold.
Shiploader Options

The ultimate solution for inclined boom designs available in an extended range of boom lengths and with comprehensive trimming, feeder and manoeuvring systems suitable for loading vessels through to Panamax at very high handling rates.

Belt Widths - 1000, 1200 or 1400 mm. Handling Rates up to 2,000 t.p.h.

All Samson® outloading boom designs include integral three roll troughing idlers to support the conveyor belt formed into the structure design for maximum rigidity and minimum weight.

The designs illustrated here show the most popular range of machine configurations for typical Ship Loading applications from small barges and coasters through to Panamax or even Cape size vessels using the Sterling Series.

For special applications Samson® offer a bespoke design service to satisfy the requirements of particular projects or berths.
The table of dimensions is based on a machine operating angle of 25 degrees using the maximum outreach as specified for each machine size.

Alternative configurations are possible for particular applications and increased working angles are available for some materials.

<table>
<thead>
<tr>
<th>Machine Type</th>
<th>Length</th>
<th>Outreach</th>
<th>Free-Board</th>
<th>Beam</th>
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<td>15.8 m</td>
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</table>
In-line powered travel with rear steering axles and twin tandem front axle

**Comprehensive Manoeuvring Control**

Powered travel speeds machine positioning for easy trimming and improved overall loading rate variable speed hydraulic driving systems with hydraulically operated steering provides effective control with safety when moving larger equipment.

Hydraulically released oil immersed disk type fail-safe brakes are automatically engaged when the control lever is released.

Four wheel pivoting axle assembly

Integral hydraulic hub motor

New generation wheel alignment

Twin tandem main axle
Effective ship trimming is an essential requirement for fast and efficient ship loading.

A comprehensive range of trimming options are available for all Mobile Shiploaders with either manual or electrical control systems for complete flexibility.

The variable angle chute system as illustrated opposite allows the complete chute to be raised up clear of the vessel for machine positioning.

All trimming chutes are available with radio or infrared remote control systems permitting operation from the vessel deck.

Two stage variable angle and telescopic trimming chutes including a rotating distributor allow accurate material placement within the vessel hold.

Telescopic chutes eliminate the effect of cross winds on the material inflight to reduce cargo losses and pollution and when combined with variable angle control improve the hold trimming range.

Vessel Trimming Systems

Full specification mobile Shiploader with a variable angle trimming chute and radial distributor
Enclosures and Dust Controlled Chutes

The Telescopic Cascade Trimming Chute controls the material velocity from the outloading boom head to the hold floor to prevent particulate separation and dust generation.

Comprising a stack of inclined cones the Cascade device constrains the material flow in a Zigzag pattern to limit the flow velocity.

The system is supplied with an external flexible cover to enclose the material path preventing wind blown dust generation.

In addition a rotating distributor is also available to provide ship trimming capability comprising a chute mounted to a slew ring with an electric motor drive unit.

Combined with the dust control features illustrated the Cascade system permits the handling of very dry and dusty material with minimum environmental pollution.

By significantly reducing dust generation, extraction systems may either be eliminated completely or sized at an economical level for extremely sensitive applications.

Flexible PVC covers for the Samson® Material Feeder units and the Outloading Boom Conveyor offer economical and effective dust control.

The receiving action of the Samson® design effectively draws material from the truck minimising material drop and virtually eliminating dust generation at the truck tipping point.
Comprehensive instrumentation provided both for the automatic operation of control functions and for the safety and protection of the operators and mechanical equipment.

The illustration with Twin Samson® Material Feeders typifies the larger integrated designs where automated operation is employed to gain the maximum performance from the systems with the minimum of operator intervention.

Auto-Feed-Rate controls permit random loading to each Samson® unit by controlling the Samson® output rate to maximise the available handling rate on the outloading boom conveyor.

Each Samson® may be rated at the full capacity of the outloading boom to maximise performance without risk of overloading.

For machines with multiple travel modes, Electronic Ackerman Steering is provided with rotary potentiometers fitted to each steering unit linked to the central PLC to fully automate wheel alignments in any travel direction.

Protection systems are provided to prevent damage to the sensitive hydraulic components monitoring fluid pressure, temperature and levels using instruments linked to the central PLC system.