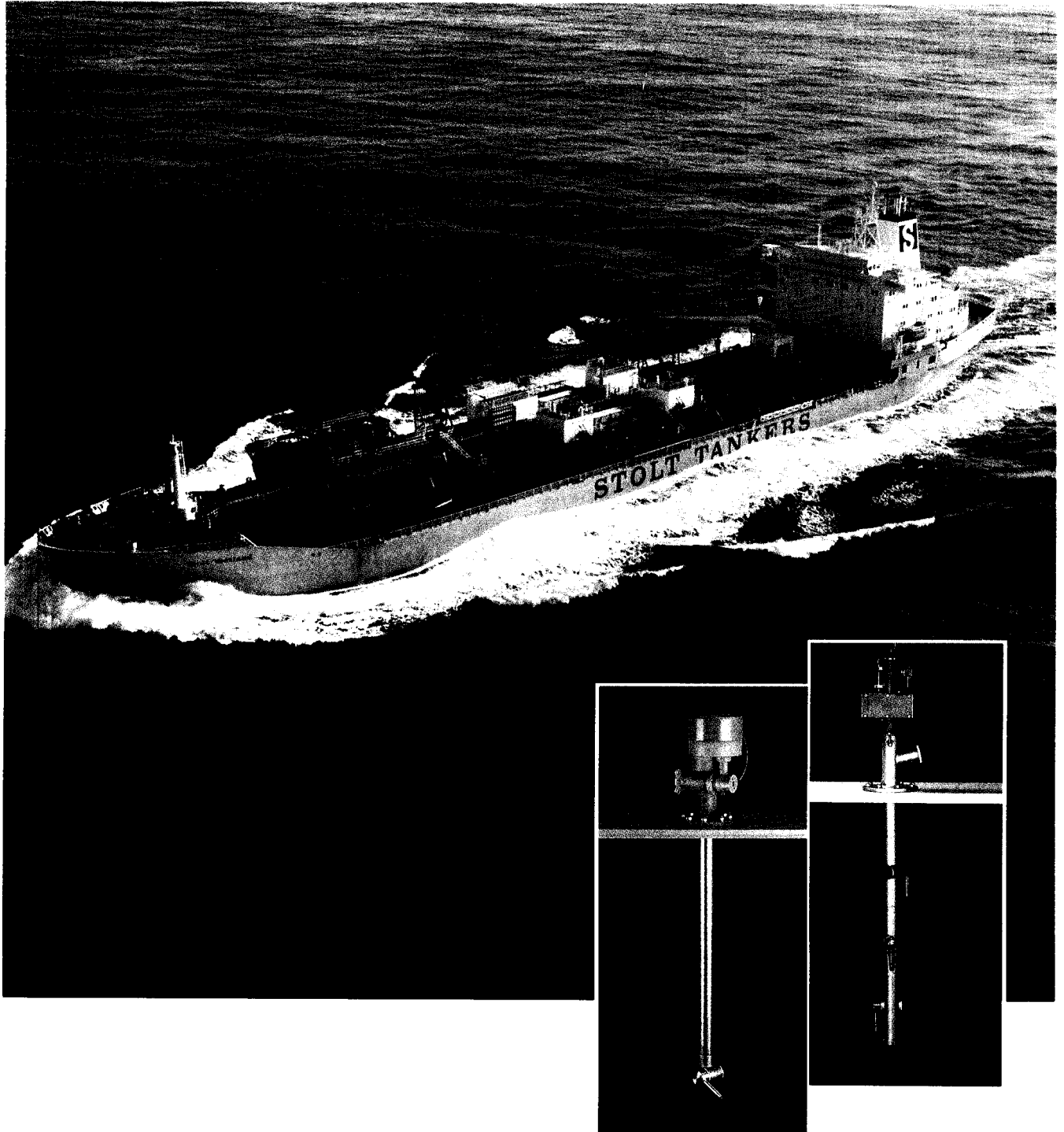


Tank Cleaning System

Gunclean 6000A and 7000FT

For small sized tankers and product/chemical carriers



 ***Consilium Marine***

A FIXED INSTALLED TANK CLEANING SYSTEM MEANS FULL CONTROL UNDER SAFE CONDITIONS

Due to the hazardous and toxic vapour generated by most chemical and product cargoes, it is essential to perform the cleaning operation under closed conditions. A fixed installed Gunclean tank cleaning system will safely and with high reliability meet the regulations of MARPOL 73/78.

Single nozzle

For maximum efficiency Gunclean tank cleaning machines use a single nozzle system with a powerful and compact jetstream. Single nozzle cleaning maximizes the effect of the cleaning fluid.

High reliability

Gunclean tank cleaning machines require only a minimum of service. All parts below deck are service free.

Helical cleaning pattern

The nozzle performs a slow horizontal rotation combined with an even slower vertical oscillation, resulting in a helical cleaning pattern.

Programming

For full flexibility, Gunclean tank cleaning machines are programmable for all cleaning demands.

Custom designed installations

Each Gunclean tank cleaning machine is custom made to achieve optimal cleaning result. Due to our engineering experience and unique computer system for shadow diagrams, we can calculate your system so accurately that you can judge the cleaning result in advance.

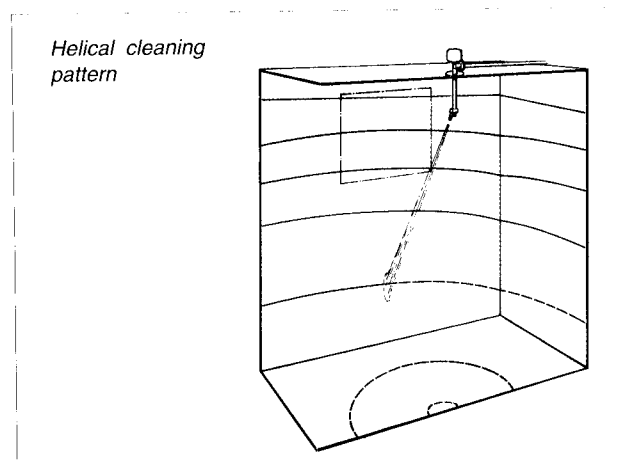
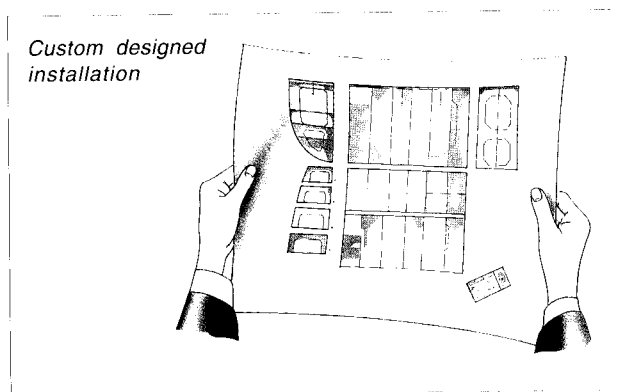
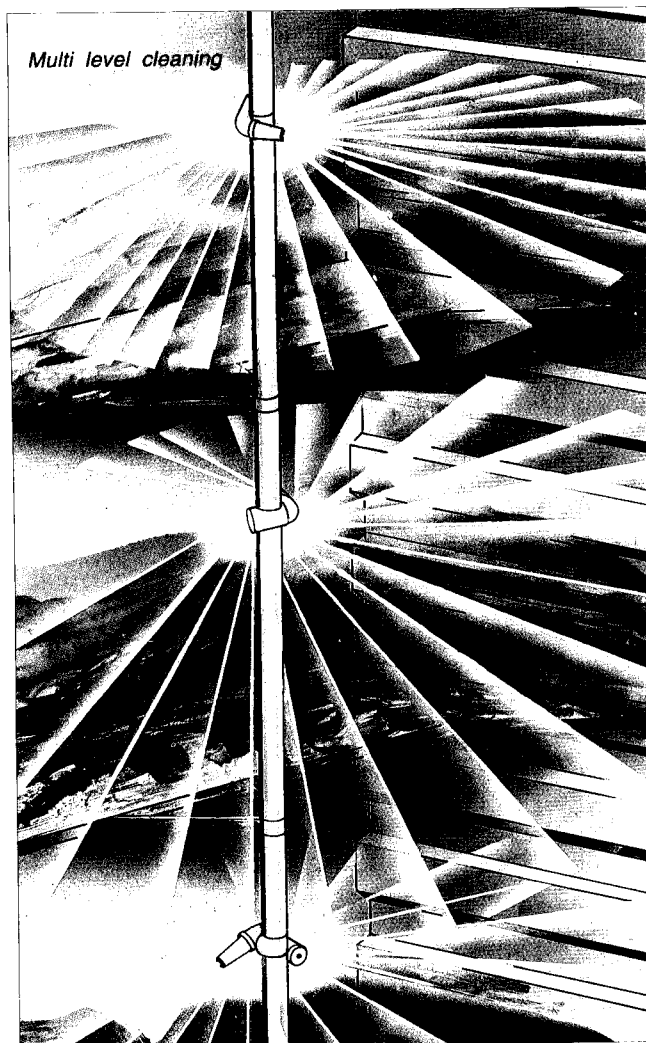
Multi-level cleaning

Some tank constructions call for the possibility of cleaning from either one level close to the tank bottom, or two or three different levels with synchronized nozzle motions, to reach the underside of stringer platforms and deep horizontal corrugated bulkheads.

The Gunclean 7100FT and Gunclean 6100A are models available with custom designed nozzle levels for these purposes.

Fixed installation advantages

- Quicker cleaning contributing to the ships turnover.
- Minimized cleaning fluid consumption.
- Manpower used for cleaning can be drastically reduced.
- Improved safety while cleaning.



RECOMMENDED OIL AND GREASE

MANUFACTURER	TYPE OF OIL	TEMPERATURE	GREASE
BP	ENERGOL RD-E 46 ENERGOL HLP 10	ABOVE 0°C BELOW 0°C	ENERGREASE LS EP 2
CASTROL	RD OIL 32	ALL TEMPERATURES	SPHEEROL EPL 2
CHEVRON	MECHANISM LPS 45 MECHANISM LPS 15	ABOVE 0°C BELOW 0°C	DURA-LITH GREASE EP 2
ELF	PERFORA PERFORA G	ABOVE 0°C BELOW 0°C	EPEXA 2
EXXON/ESSO	AROX EP 68 AROX EP 45	ABOVE 0°C BELOW 0°C	CAZAR K2
KUWAIT PETROLEUM	Q8 CHOPIN 46 Q8 HAYDN 10	ABOVE 0°C BELOW 0°C	Q8 REMBRANDT EP 2
MOBIL	ALMO OIL 525 DTE 11 M	ABOVE 0°C BELOW 0°C	MOBILUX EP 2
SHELL	TORKULA OIL 58 TORKULA OIL 32	ABOVE 0°C BELOW 0°C	RHODINA 2
TEXACO	ARIES 100 ARIES XLX 32	ABOVE 0°C BELOW 0°C	MULTIFAX EP 2
TOTAL	PNEUMA 46 AZOLLA 15	ABOVE 0°C BELOW 0°C	MULTIS EP 2
VALVOLINE	ATO 46 ATO 10	ABOVE 0°C BELOW 0°C	VAL-PLEX EP 2

1993-09-17

Grease gears every six month.

Gunclean 7000FT

The state of the art of tank cleaning

Gunclean 7000FT has an integrated power unit with few moving parts, which is easily accessible above deck for service and maintenance.

Turbine driven

The Gunclean 7000FT is powered by the cleaning fluid by means of a small, easily driven full-flow turbine for capacities from 10 m³/h and above.

Programmable Cleaning Pattern

The Gunclean 7000FT is working with a highly efficient helical double cleaning pattern. With the modern built-in programming facilities it is possible to vary the density of this cleaning pattern to match changing cleaning needs.

Easy operation

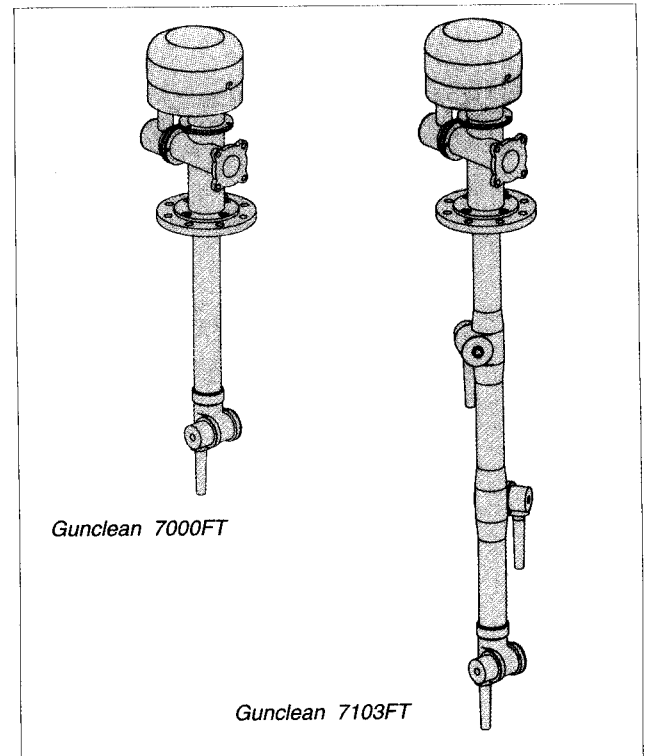
The Gunclean 7000FT will immediately be in operation for cleaning by just opening the supply valve. An easy selection between four different cleaning programmes is offered, from prewash or quick cleaning to tight pitch cleaning. Just turn the knob on the power unit for a prewash or one of the other programmes.

Manual operation

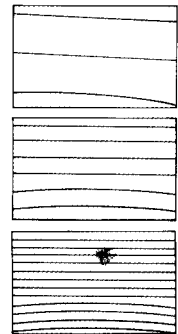
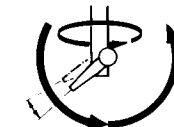
The Gunclean 7000FT also offers the possibility of manually selecting the vertical movements of the nozzle.

Nozzle position indication

The elevation of the nozzle is shown by an angle indicator and the horizontal direction of the nozzle is shown by a pointer, both located on top of the power unit.



Programmable cleaning pattern



Gunclean 6000A

The well-proven classic

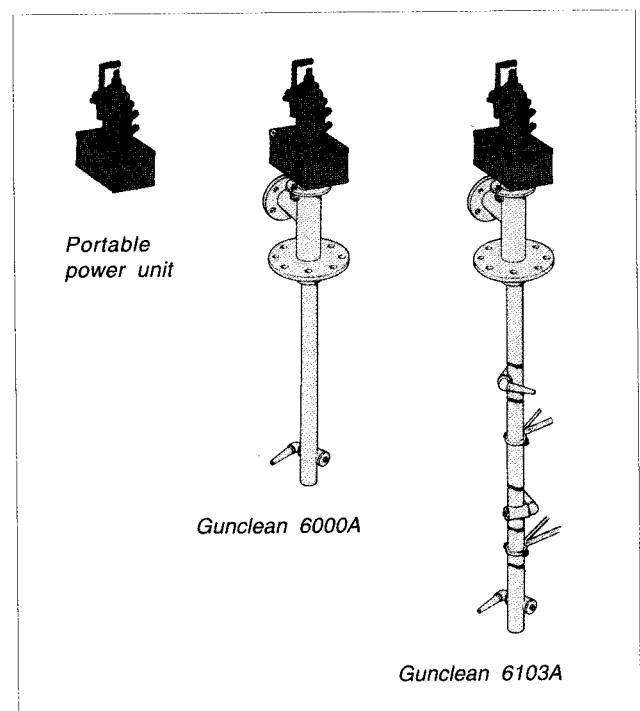
The Gunclean 6000A is driven by a portable power unit. Since only a few power units are needed, total installation costs can be kept at a minimum.

Air-driven

The portable power unit is driven by air and is programmable for controlling the nozzle movement. Selection of the vertical movement can also be made manually. A special power unit for automatic prewash programmes is also available.

Easy operation

With its reliable and simple design Gunclean 6000A is so easy to operate that any member of the crew can easily handle it.



Portable power unit

Gunclean 6000A

Gunclean 6103A

Consilium Marine

Consilium Marine develops and manufactures marine equipment and instrumentation under the trade names SAL, Neptumatic, Gunclean and Salwico. The equipment is sold worldwide in large numbers and to all types of vessels, to shipyards, shipowners and navies.

Consilium Marine has subsidiaries in Germany, United Kingdom, Japan, Korea and China as well as agents and representatives in more than 40 countries.

Service is provided by a network of agents in all major maritime countries.

The **Consilium Marine** product range includes:

- **SAL** **Speed logs**
- **Salwico** **Fire detection systems**
- **Salwico** **Gas detection systems**
- **Gunclean** **Tank cleaning systems**
- **Neptumatic** **Waste water and sewage treatment plants**

The concept of **Gunclean Tank Cleaning Systems**, i.e. permanently installed programmable tank cleaning machines, was introduced in 1967. Since then more than 1,000 vessels have been equipped with our **Gunclean Systems**, which means that over 65,000 tank cleaning guns have been installed to date.

Gunclean single nozzle machines minimize the amount of cleaning liquid. The programmable power unit allows a continuous modification of the cleaning program. By adapting it to each specific cargo, the crew can minimize both cleaning time and cleaning costs.

Our **Salwico Fire Alarm Systems** are supplied to all major cruise and ferry lines as well as to other ships, offshore constructions, industries, hospitals etc. More than 5,500 ships have been equipped with **Salwico Fire Alarm Systems**.

The **Salwico Gas Alarm Systems** comprise both scanning gas sampling types and point detection types for the detection of both explosive and toxic gases.

The **SAL Speed Logs** have been well known to the marine industry since 1912. More than 5,000 systems are in operation. The present range of **SAL Speed Logs** are based on the sonar correlation principle, which was originally developed by our company. The principle, combined with the latest computer technology, makes **SAL Speed Logs** the most reliable on the market.

Neptumatic Waste Water and Sewage Treatment Plants has been supplied to more than 800 ships. The largest units, delivered to ferries and cruise liners, have capacities for up to 3,500 passengers.



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