

Since the 1950's ELAFLEX has been a leading supplier of marine hoses and accessories. Our long-lasting products conform to international standards. One of the most important international standard is the EN 1765 'Rubber hose assemblies for oil suction and discharge services'. The current version **EN 1765:2016** incorporates two important changes.

Electrical continuity: For hose assemblies type S and L, the electrically continuous versions were divided into **Grade M** ('electrically bonded', resistance $\leq 100 \Omega$) and **Grade Ω** ('electrically conductive' due to the conductive hose lining and/or cover, resistance $\leq 10^6 \Omega$). The 'electrically discontinuous' version ($\geq 25.000 \Omega$) remains unchanged. ELAFLEX supplies all required grades.

Attachment of fittings: For the assembly of the end fittings, the current standard now defines three different versions:

- **built-in** hoses nipples (vulcanised)
- **crimped or swaged** ferrules, EN 14420 fittings
- **reusable safety clamps**, EN 14420 fittings

ELAFLEX supplies all required attachment types.

Bunkering Hoses without Helix for Petroleum Based Products

ELAFLEX has adopted to the international trend towards long length collapsible bunkering hoses with 15 bar pressure rate (16 bar absolute, safety factor 4). We now offer our renowned **Type FHD** hoses with L 15 pressure rating also in **DN 200 (8")**, in **40 m lengths – ex stock**.

Our range of of FHD hoses in 40 m length comprises DN 75, 100, 125, 150 and 200.

Assembled with reusable Spannloc clamps and couplings to EN 14420, ELAFLEX is capable of manufacturing safe hose assemblies including pressure test and certificate with short lead times. The Spannloc safety clamps used are designed to perfectly fit our EN 1765 hose dimensions. With regards to safety, Spannloc clamps can be seen equal to built-in (vulcanised) hose nipples.

If damaged, FHD hoses with Spannloc clamped couplings can be shortened and re-assembled in the field, resulting in a striking economical advantage for the operator.

Alternatively, ELAFLEX also supplies the custom made **Type SBL** (L 15 pressure rating) hoses with built-in nipples.

Summary: Type FHD, collapsible hose without helix, for petroleum based products. Can be reeled up flat, takes less place to stow away and is easy to handle. Suitable for ship-to-ship (sideways or rear) bunkering operations. Sizes up to DN 200, ex stock. See catalogue page 129.

Type SBL, collapsible hose with built-in nipples, without helix, for petroleum based products. Meets category L 10 of EN 1765. Suitable for dock service bunkering operations. Sizes up to DN 350. See catalogue page 131.



Cargo Hoses with Helix for Petroleum Based Products

Due to the incorporation of a steel helix, these hoses are suitable for gravity discharge (the helix keeps the diameter round) and suction service.

They are used for dockside or ship-to-ship loading and unloading of all petroleum based products with an aromatic content up to 50%.

Type STW, suction and discharge hose for naval tanker vessels. Standard use for light bunkering, sizes up to DN 200. Hose saddles shall be used to protect the hose against kinking. Assembly with Spannloc safety clamps. See catalogue page 129.

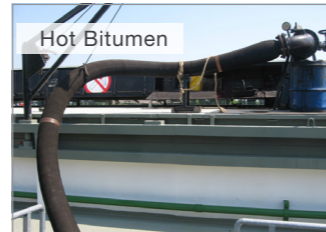
Type SBS, heavy standard bunkering / cargo hose, with built-in nipples (vulcanised). Recommended for crane operated dockside loading and unloading in harbours and refineries. Suitable for suction and discharge. Sizes up to DN 350. See catalogue p. 131.



Cargo Hoses for Other Media

ELAFLEX supplies cargo hoses with and without helix for loading and unloading most common media, such as:

- **Type LPG** for Liquefied Petroleum Gas, PN 25, assembled with Spannloc safety clamps or built-in nipples, up to DN 200
- **Type HB**, for hot bitumen up to 180 °C, with built-in nipples, up to DN 150
- **Type UTS**, for most common chemicals – e.g. aromatics, solvents and acids, FAME / HVO etc., assembled with Spannloc safety clamps, sizes up to DN 200.
- Special type for liquid sulphur, assembled with Spannloc safety clamps
- Special types for fresh water, e.g. for German Navy and oil rig supply



Composite Cargo Hoses

ELAFLEX also supplies a full range of highly flexible and light weight marine composite hoses with crimped end fittings. They are suitable for a wide range of media – petrochemical products, oils, chemicals, acids and solvents, liquefied gas – and available in various configurations.

Conforming to EN 13765, EN 13766 or other standards. Various type approvals.

Quality production, manufactured by Dantec Ltd, sizes up to DN 250.

Further details can be found on catalogue page 181 and also on the web site of our daughter company www.dantec.com.



Hose Couplings and Accessories

ELAFLEX supplies quality hose fittings to recognised standards, perfectly adopted for the chosen hose and application. A major part of our products can be supplied ex stock with short lead times. Hoses are usually mounted with reusable Spannloc and Spannfix safety clamps, alternatively crimped. The ELAFLEX service: supply of complete hose assemblies, professionally mounted, tested and documented.

Flanged fittings to EN, ASA or IMO, special versions available, such as the 'Navy' type DFC 150 with captive seal, to VG 85289.

'Split Clamp' hose coupling system to MIL-C-24356A and VG 95970 standard, for the connection of marine hose segments.

MannTek Dry Disconnect Couplings DDC for quick connection under pressure, wet hose service.

MannTek Safety Breakaway Couplings SBC with integrated shut-off valves, to protect against excessive loads.

The Hosebun® hose saddle HSB provides a professional and material-protecting suspension of hose assemblies.

Crane Lifting Eye to improve the handling of heavy hose assemblies.

Insulating flanges available in sizes 3-4-6-8-10", electrical insulation between hose assembly segments.

Hose Reels

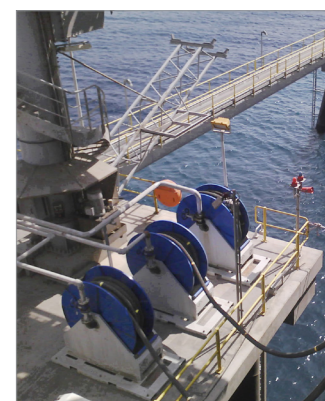
Our Hose Reels are produced in-house to a high quality level as is expected from ELAFLEX refuelling equipment.

Supplied as a complete package including our hose assemblies up to DN 200 (8") and e.g. MannTek Dry Disconnect Couplings 'DDC' or ZVA HiFlo nozzles – almost any configuration is possible.

The hose reel package of modular design and tailored to suit your space, media and operating requirements. We provide several different rewind mechanisms, e.g. manual rewind, spring rewind, with electric, hydraulic and pneumatic motors, which can also be driven with a remote control system.

Materials used in the hose reel construction are carefully chosen for each application, with options in carbon steel with polyester powder coated to any colour, aluminium or stainless steel 304 and 316L in any colour for more demanding conditions.

The robust rewind construction makes them very durable for heavy duty and intensive use, also under rough conditions at ports or terminals.



Quality and Safety

are our top priorities. This leads to our renowned product reliability and durability. Due to the close local relationship with our customers we are able to understand your issues and provide solutions. This expert knowledge flows into the continuous improvement of our products.

Reliable: Our hoses and couplings are 'Made in Germany', each marked with individual batch number and production date. Users will find many of our products have been in constant rough field use even after more than ten years.

Standard compliant: ELAFLEX supplies according to generally accepted standards such as EN, ISO and to special defence standards such as STANAG or VG.

Certified: ELAFLEX products meet the quality assurance concept according to AQAP-2130 for deliveries to NATO forces, approval no. 9779/01 VG 95922. Furthermore, our company is ISO 9001 certified, approved according European Pressure Equipment Directive 2014/68/EU for hose assemblies. Additionally, many of our products are type approved by military and civil authorities.



Application Examples

