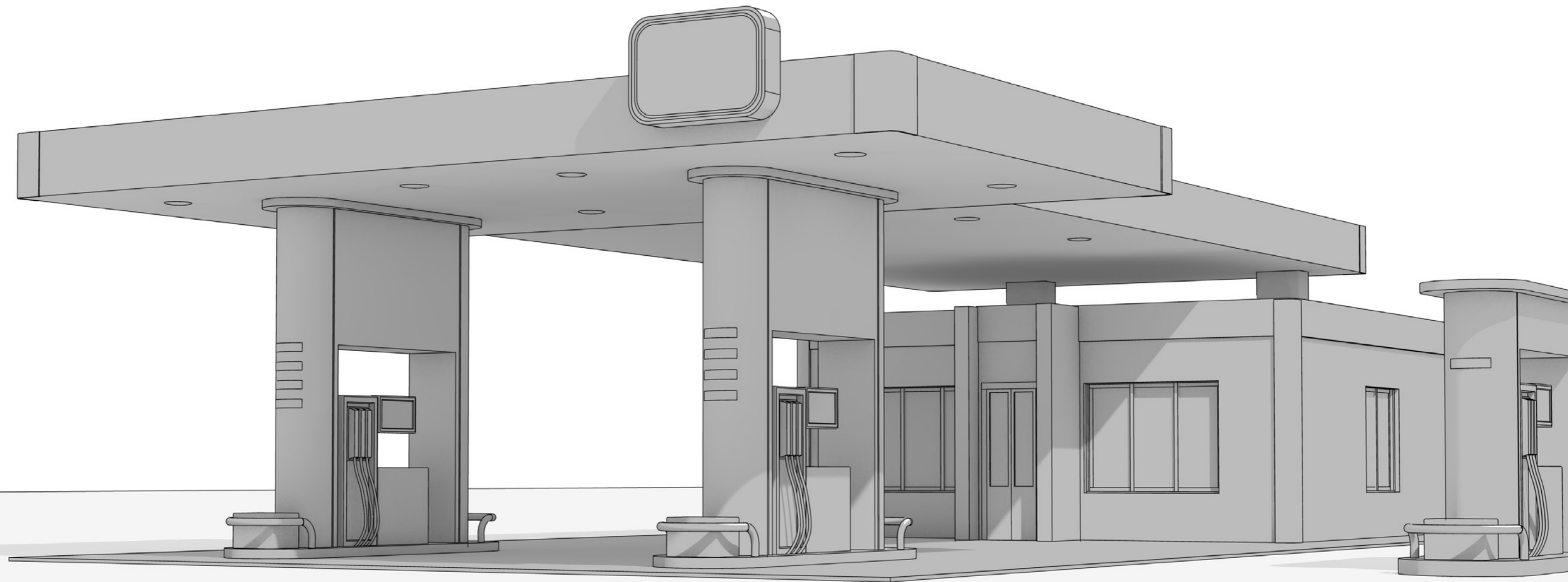


PETROL STATION TECHNOLOGY

Nozzles · Hoses
Couplings · Accessories



ELAFLEX
Group



REFUELLING WITH ELAFLEX

At a petrol station, a wide variety of expectations, requirements, needs and framework conditions come together every day. Your customers simply want to continue their journey as quickly as possible and reach their destination.

As a petrol station operator, you should therefore be cautious and prioritize making things as easy and safe as possible for your customers, while at the same time keeping a close eye on the cost/benefit ratio. In the core area of refuelling technology, ELAFLEX has been reliably at your side for decades – and is already very familiar with the fuels of the future.

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ELAFLEX – BY YOUR SIDE FOR DECADES

Since more than 100 years, ELAFLEX has developed into a recognised specialist in the handling and transporting of hazardous goods and sensitive media.

ELAFLEX sets cross-industry standards and has always played a leading role in the development and establishment of important norms and standards. Virtually everyone in the industry recognises our brand names ZVA and Slimline. The ELAFLEX Group supports you around the world. ELAFLEX combines unique selling points such as reliability, maximum safety, user-friendliness and innovation leadership with a consistent focus on service and rapid availability.

The entire ELAFLEX Group bundles its expertise, experience and market-defining inventions around the specific requirements of a wide range of fuels such as petrol, diesel, LPG, LNG, CNG or hydrogen for land, water and air vehicles. Our focus spans from production/extraction to the end user; you benefit from precisely matching expertise from a single source. Join the ELAFLEX Group on the following pages and discover the broad spectrum of solutions for your petrol stations.



FROM THE FUEL DISPENSER TO THE CUSTOMER – ZVA SLIMLINE

ELAFLEX revolutionised self-fuelling and made dispensing much easier for your customers already decades ago. At the beginning of the 1960s, ELAFLEX launched the innovative ZVA fuel dispenser nozzle with automatic shut-off into the market, making it easy to 'refuel to the penny'. With the 'Slimline' design at the early 1970s, the shape of the petrol nozzle followed the hands and needs of your customers for better ergonomics.

Since the beginning of the 1990s, ELAFLEX provides vapour recovery (VR) equipment to ensure a cleaner environment at the fuel dispenser. Today, ZVA Slimline 2 sets industry standards for gasoline and diesel nozzles throughout Europe. It just could not be simpler, safer or more durable, as demonstrated by the unique lowest Total Cost of Ownership, rapid availability from stock and practice-orientated ease of repair and maintenance. The application-oriented variety of our ZVA product range is complemented by high-quality petrol pump hoses and self-closing safety break couplings.

Gasoline & Diesel DISPENSING



ZVA SLIMLINE 2 GR

Catalogue page 513



Automatic nozzle 'ZVA Slimline 2 GR' for active vapour recovery. Suitable for all standard gasoline fuels (also with ethanol content), up to 45 l/min. Design 'GRV' with integrated vapor valve 'On/Off', Design 'GRVP' with vapour proportional valve. Working pressure 0,5 to 3,5 bar.

ZVA SLIMLINE 2

Catalogue page 517



Automatic nozzle 'ZVA Slimline 2' ID 19 mm (¾"), equipped either with a diesel spout OD 25 mm or a non-vapour recovery gasoline spout type 'R' OD 21 mm. For gasoline and diesel type fuels also with bio content. Max. flow rate 80 l/min (with diesel spout). Working pressure 0,5 to 3,5 bar.

ZVA 25

Catalogue page 525



Automatic nozzle 'ZVA 25' for flow rate up to 140 l/min, DN 25. Suitable for gasoline, diesel and fuel oil, also with bio content. Working pressure 0,5 to 3,5 bar. Special variant for 5 bar available.



Nozzle Configurator:
nozzleconfigurator.elaflex.de

Hose Assembly Configurator:
hoseconfigurator.elaflex.de



ZVA 32

Catalogue page 529



Automatic nozzle 'ZVA 32' for flow rate up to 200 l/min, DN 32. Suitable for diesel, light fuel oil and petroleum. Working pressure 1,5 to 6 bar.

SAFETY BREAKS

Catalogue page 533



Self-closing Safety Break Couplings 'SSB 16', 'SSB 25' or 'SSB 32' for nozzles, reusable or optionally available as non-reusable versions type 'NR'. To protect dispensers, hose assemblies and cars in case of drive-off incidents.

SIGHT GLASSES

Catalogue page 515



Sight glasses type 'SG' with or without vapour recovery path, with a variety of thread types to be installed at any position between nozzle and dispenser outlet, or with M34 x 1,5 thread to be fitted directly into the ZVA nozzles. Optional propeller for fuel flow visibility.

SLIMLINE HOSES

Catalogue page 111

Quality dispenser 'Slimline hoses' DN 16 to DN 25 in various colors for gasoline, diesel fuels and biodiesel or ethanol content. Cold flexible down to -30 °C (LT-type down to -40 °C). Assembly with ferrule type couplings.



ACCESSORIES

Available in a wide range of other colors.



HOSE REELS

ELAFLEX Brochure Hose Reels



ELAFLEX 'Hose Reels' are produced to the highest quality standards and naturally comply with European health, safety and environmental standards. They are equipped with various return mechanisms – manual, return spring, electric, hydraulic, pneumatic.

TANK COUPLINGS, HOSES AND EXPANSION JOINTS FOR LIQUIDS AND GASES

The supply of stationary consumers with conventional/alternative fuels or other sensitive, potentially flammable and explosive media by tank trucks requires equipment that meets the highest material, safety and manufacturing quality standards. For decades, ELAFLEX has been providing a portfolio of sophisticated products for these demanding conditions. They have been developed for practicality, durability and ease of use and complement each other perfectly.

Since the 1950s and 1960s, ELAFLEX has actively contributed to achieve cross-industry standardisation of tank trucks couplings in order to permanently increase the effectiveness and safety of deliveries to filling stations and other customers.

The ELAFLEX Group's expertise in the development and manufacture of dry disconnect couplings worldwide ensures that risks to health and the environment are considerably reduced. Additionally, time loading/unloading times are significantly accelerated. Tank truck hose assemblies are designed for a wide range of purposes and media. They are produced according to customers' requirements directly in the factory, tested in accordance with the applicable standards and delivered immediately.

Gasoline & Diesel TRANSFER



Hose Assembly Configurator: hoseconfigurator.elaflex.de



ERV Configurator: ervconfigurator.elaflex.de

DDC Configurator: manntekconfigurator.elaflex.de



TW COUPLINGS

Catalogue pages 311–315



'TW' road tanker couplings to EN 14420-6 (previously DIN 28450) were developed approximately fifty years ago, among other with ELAFLEX contribution. These couplings with their simple and leak-free connection substituted many non-standardised coupling types in rough conditions.

DDC-DRY DISCONNECT COUPLINGS

Catalogue pages 345–347



'DDC' MannTek Dry Disconnect Couplings with standardised interface to STANAG 3756 are used for spill free handling and transfer of liquids, gases and bulk powder in an economical, safe and environmental-friendly way. Applicable for loading/unloading and transfer at rail tankers, tank trucks, containers, blending pits, etc. The couplings are available with BSP- and NPT-threads in sizes DN 25 (1") to DN 200 (8"). Other threads are available on request (S60X6, ACME etc.), as well as flanges (EN ISO 1092-1 Typ 11 B1).

TW DUST CAPS AND PLUGS

Catalogue pages 311–313



Dust caps type 'MB' (aluminium, brass or stainless steel), type 'VB' (aluminium, polyamide, brass or stainless steel). Lockable versions are also available.

COMPOSITE HOSES

Catalogue pages 182–184



Type 'FWS' (PP, PTFE, PA, VR), flexible loading and unloading hoses for all types of petro-chemicals and chemicals. Temperature range -30 °C to +100 °C. Max. working pressure 14 bar.

HOSES

Catalogue pages 103, 105, Info 5.16



YELLOW BAND

'HD' and 'HD-RV': High pressure hoses without helix for reel operation. 'TW': Smooth bore tank truck hoses with kink resistant steel helix for all petroleum based products with an aromatic content up to 50 %. 'LTW': light weight tank truck hose with smooth bore and corrugated cover. 'LG': Lightweight and highly flexible gravity discharge hose for loading from road tankers to underground storage tanks. Various dimensions and temperature ranges are available.

EXPANSION JOINTS

Catalogue pages 407, 423



YELLOW BAND

'ERV-G' expansion joints for petroleum based products, cooling water emulsions with corrosion preventing oil. Various types, dimensions and temperature ranges are available.

SAFE AND ERROR-FREE AdBlue® REFUELLING

The 32 % urea solution AUS 32 with the brand name AdBlue® allows an uncomplicated and reliable reduction of nitrogen in diesel exhaust gases of up to 97 %. The filling of the vehicle by the motorists must be carried out safely and error-free in order to prevent misfillings and massive damages of diesel engines.

ELAFLEX addressed the AdBlue® challenge at a very early stage and developed innovative refuelling systems suitable for everyday use with proven quality, durability and operating safety. Your customers can refill synthetic AdBlue® with the well-known and intuitive ZVA nozzles without the risk of misfillings. All materials have been designed for the special requirements of urea solutions and ensure that you can establish a reliable AdBlue® value chain. The nozzle ZVA HV for AdBlue® is made for use with the ISO 22241-4 compliant ELAFIX 40 solenoid adapter. Due to its reliability, it prevents misfillings and cost-intensive consequences. With the nozzle ZVA LV for AdBlue®, ELAFLEX covers your customers vehicles that are equipped with a filler neck in accordance with ISO 22241-5.

As you would expect from ELAFLEX, high-quality and durable accessories such as various guards, matching breakaway couplings or swivels are also available for the AdBlue® products. Use the online configurators to explore all versions.

AdBlue® DISPENSING



Nozzle Configurator:
nozzleconfigurator.elaflex.de



Hose Assembly Configurator:
hoseconfigurator.elaflex.de

ZVA HV for AdBlue®

Catalogue pages 521-522



'ZVA HV for AdBlue®' nozzle for heavy vehicle refilling with AdBlue® urea solution, available either with swivel/with fixed hose inlet/or Safety Swivel Break 'SSB 16 SS'. Developed with integrated misfilling prevention for use with ELAFIX 40 Magnet Adapter/ELAFIX 40 ANTI-SIPHON for the installation into AdBlue® vehicle filler necks. Working pressure 0,5 to 3,5 bar. Flow rates up to 40 l/min.

ZVA LV for AdBlue®

Catalogue pages 521-522



'ZVA LV for AdBlue®' nozzle for the refilling with AdBlue® urea solution of light vehicles (< 3,5 t), preferably chosen with Swivel EA 075 LV or Safety Swivel Break 'SSB 16 LV'. Use for dispensing is only possible in conjunction with filling points according to ISO 22241-5 to prevent misfillings into diesel filler necks. Working pressure 1,5 to 3,5 bar. Flow rates up to 10 l/min.

SAFETY BREAKS

Catalogue page 533



Reusable, self-closing Safety Swivel Breaks 'SSB 16 LV' for ZVA LV for AdBlue® with integrated volume flow switch for calibration of the dispenser. Suitable for flow rate up to 10l/min.

'SSB 16 SS' for all nozzles for AdBlue® with flow rates up to 40 l/min.

Bodies and swivel nuts of stainless steel, inner parts AdBlue® resistant plastics, seals of FKM and NBR. Includes Break Sleeve BS 16.

SLIMLINE HOSES

Catalogue pages 111-114



Highly flexible and allows small bending radii for a comfortable and effortless dispensing in space-confined environments. Suitable also for MPD retraction systems. Combined with appropriate stainless steel hose couplings, the plasticizer-free and leaching resistant lining of 'Slimline 16 for AdBlue®' guarantees constant purity of the dispensed urea solution. FLOURLINE universal pump hoses 'EFL 16' and 'EFL 21' for highest sensitive media and flow rate requirements.

ACCESSORIES

Catalogue pages 521-522



Accessories like 'Product Badges', 'Break Sleeves' and 'Scuffguards' in blue and black available.

ELAFIX 40

Catalogue pages 521-522



The blue 'ELAFIX 40' magnet adapter which is fitted to the tank filler neck for AdBlue®. It provides the consistently strong magnetic field for the release of the misfilling prevention of ZVA HV for AdBlue® nozzles.

ADBLUE® TANK TRUCK EQUIPMENT TO AVOID CONTAMINATION

When transferring AdBlue® into the designated storage tanks on site, the same quality requirements must be met as those applying for refilling of passenger cars, trucks and busses. Chemically highly resistant hose assemblies from ELAFLEX, equipped with high-quality stainless-steel fittings, dry disconnect and breakaway couplings from MannTek ensure safe operations. This equipment for a closed wet hose system ensures that the AdBlue® does not crystallise or contaminate under all conditions. The reliable and user-safe equipment of AdBlue® tank trucks is complemented by matching PTFE-lined rubber expansion joints and custom-made hose reels.

Dry Gas Couplings (DGCs) have proven themselves in practice for decades as the fastest and safest way to fill storage tanks and containers. They safeguard a quick and clean connection without spill and product loss. With Design 2.0, the new generation of the Dry Disconnect Coupling, MannTek presents major improvements to both flow performance and user experience.



AdBlue® TRANSFER

Hose Assembly Configurator:
hoseconfigurator.elaflex.de



DDC Configurator:
manntekconfigurator.elaflex.de

DDC COUPLINGS

Catalogue page 345



'DDC' MannTek Dry Disconnect Couplings are used for spill free handling and transfer of liquids, gases and bulk powder in an economical, safe and environmental-friendly way. Applicable for loading/unloading and transfer at rail tankers, tank trucks, containers, blending pits, etc. The couplings for use with AdBlue® are available with BSP- and NPT-threads in sizes DN 25 (1") to DN 50 (2"). Other threads are available on request (S60X6, ACME etc.).

UTS/UTL HOSES

Catalogue page 121a



'UTS/UTL' Blue-white-blue universal tank hoses for almost all liquid and pasty chemical and petroleum-based products and solvents. Temperature range -40 °C up to +100 °C. Steaming out for cleaning and sterilisation permissible up to +130 °C for max. 30 minutes (open ends). Meets EN 12115, Ω/T. UTS with steel helix, UTL with galvanised double steel helix. It is the ideal solution for the transfer of AdBlue®.

SBC – CABLE RELEASE

MannTek



'SBC' – Cable Release Safety Breakaway Couplings (Emergency Release Couplings) with integrated shut-off valves to avoid spillage/damage through drive and/or pull away incidents when loading/unloading. SBC are designed to be the weakest link of the hose line or loading arm, suitable for a wide range of products including petroleum-based products, chemicals, gases and foodstuffs. Also available in breaking pin version for marine and industry applications.

ERV WITH PTFE LINING

Catalogue pages 407, 467



'ERV-R REDBAND' rubber expansion joints for water, drinking water, cold and warm waste water, sea water, cooling water, also with chemical additives for water treatment, low concentrated acids and alkalis, salt solutions, technical alcohols, esters and ketones. Temperature range (depending on medium). Also suitable for AdBlue® as type TA with white PTFE lining TA (10 bar). Electrically isolating, therefore not suitable for flammable liquids in Ex-Zones. -40 °C up to +100 °C, temporarily up to +120 °C. Electrically dissipative.

HOSE REEL

ELAFLEX Information 7.21E



'Hose Reels' for e.g. gasoline, diesel, Jet fuels, urea solution (AdBlue®), detergents, disinfectants, solvents, oils, water and gases. Operating pressures 1 to 350 bar for hose sizes DN 13 to DN 200 and any length. Depending on hose length and space, available on a 'long and low' or 'high and narrow' drum. ELAFLEX offers provide different rewind mechanisms, e.g. manual rewind, spring rewind, with electric, hydraulic and pneumatic motors with optional remote control.

EQUIPMENT FOR CONVENIENT WINDSCREEN WASHER FLUID & H₂O REFILLING

Offer your own dispensing points for windscreen washer fluid and H₂O, if you want to extend your service advantages to your customers – and truck drivers in particular. They will immensely and immediately appreciate the easy refilling of their windscreen washer system thus eliminating the inconvenience of handling bulky and dripping watering cans.

For dispensing windscreen washer fluid, ELAFLEX has developed a suitable universal non-automatic closing ZV SW nozzle, optionally with Drip Stop spout and swivel or safety swivel break. It combines long service life with a high-quality look and easy handling comparable to conventional vehicle refuelling, even in cold ambient temperatures especially for the upcoming demand of 20 l and more for autonomously driving vehicles.

The ZVA H₂O nozzle is used to inject demineralized water for gasoline vehicles in compliance with ISO 31120-1 and possibly the Euro 7 emission level or to cool the engine of high-performance vehicle in the combustion chamber. It has an automatic shut-off function and integrated misfilling prevention.



Nozzle Configurator:
nozzleconfigurator.elaflex.de



Hose Assembly Configurator:
hoseconfigurator.elaflex.de



ZV SW

Catalogue page 522



Non-automatic nozzle type 'ZV SW' equipped with a spout OD 24,3 mm for universal windscreen washer fluid filler necks. Max. flow rate 20 l/min. Working pressure 0,5 to 3,5 bar.

ZVA H₂O

Catalogue page 522



Automatic nozzle type 'ZVA H₂O' equipped with a spout OD 17 mm for tank systems to ISO 31120-1 for demineralised water. Max. flow rate 20 l/min. Working pressure 1,5 to 3 bar.

SAFETY BREAK

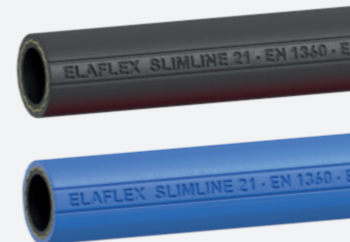
Catalogue page 533



Reusable, self-closing Safety Swivel Break 'SSB 16 SS' to EN 13617-2. Suitable for water and windscreen washer fluid. Flow rates up to 40 l/min. Body and swivel nut of stainless steel, inner parts resistant plastics, seals of FKM and NBR. Includes Break Sleeve 'BS 16'.

SLIMLINE HOSES

Catalogue page 111



'Slimline Hoses' are highly flexible and allow small bending radii for a comfortable and effortless dispensing in space-confined environments. The hoses are suitable for MPD retractions systems.

ACCESSORIES

Catalogue page 512



Accessories like 'Product Badges', 'Break Sleeves' and 'Scuffguards' in blue and grey available.

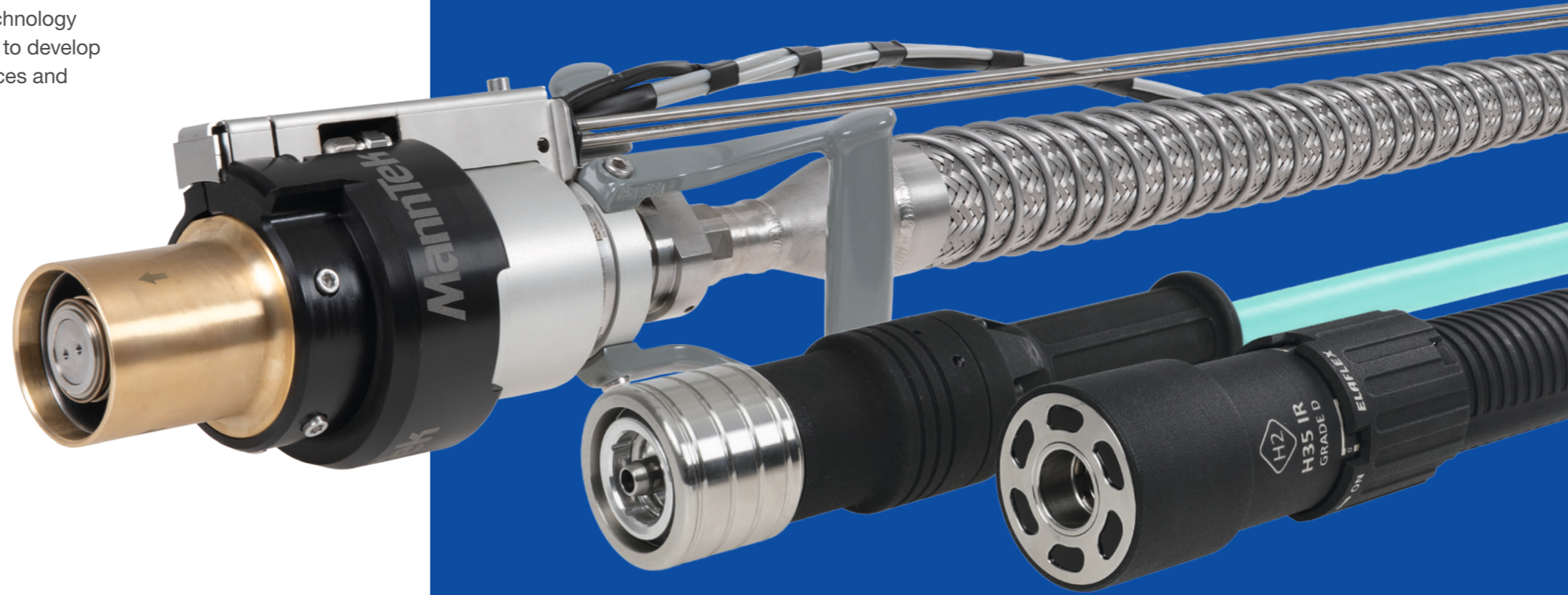
INNOVATIVE HYDROGEN DISPENSING EQUIPMENT

LIQUID

For the past 10 years, the ELAFLEX Group has been working with technology leaders in the fields of truck refuelling technology and ship bunkering to develop LH2 innovations that set global industry standards in terms of interfaces and performance.

In its liquefied form at -253 °C LH2 puts enormous demands on materials, handling and safety. The ELAFLEX Group can fully utilise all of its expertise in this area: an innovative solution by combining dry disconnect coupling function with integrated vacuum insulation technology to ensure thermal insulation and to reduce the time for purging the system to remove ambient air. It is important that operators do not come in direct contact with cold surfaces at any time. Ensuring uncompromising safety standards, the highest material quality and consistent alignment of function and design with the expectations and background knowledge of the end user.

The newly developed and extensively tested N-LH2 dispensing valve is used to supply vehicles directly with cryogenic LH2.



LH2 NOZZLE

ELAFLEX Information 3.24



For refuelling trucks with Liquefied Hydrogen (LH2) or subcooled Liquefied Hydrogen (sLH2), ELAFLEX and MannTek have developed a nozzle as a manual 'N-LH2' and a semi-automatic version 'N-LH2-P', based on the principles of a Dry Disconnect Coupling. The system ensures an easy and safe refuelling operation without any residual gas release volume of hydrogen. Design temperature: -253 °C to +50 °C, design pressure: PN 25, flow rate: 150 l/min.

LH2 RECEPTACLE

ELAFLEX Brochure Liquid Hydrogen Refuelling



Receptacle 'R-LH2' for trucks with liquefied hydrogen (LH2) or subcooled liquid hydrogen (sLH2), safe dual-poppet design, with two welding connections for the installation at double wall tanks, for high vacuum insulation. Design temperature: -253 °C to +85 °C, design pressure: PN 25, flow rate 150 l/min. TÜV certified as compliant to EU 2021/535.

GASEOUS

Drawing on decades of experience in high-pressure refuelling technology and the handling of high-pressure hydrogen throughout the entire transport chain, the specialists of the ELAFLEX Group have collaborated to develop a completely new compressed hydrogen refuelling system, comprising a dispensing valve (including an optionally available communication interface) and matching hose assemblies.

HYDROGEN DISPENSING

H35 NOZZLE

ELAFLEX Information 3.24



For the refuelling of vehicles with 350 bar hydrogen the ELAFLEX Group offers a range of 'N-H35' Series hydrogen nozzles focusing on the heavy duty application. Designed and tested to ISO 17268-1 and SAE J2600, compatible with H35, H35MF and H70 receptacles. Nozzle and IR-module for up to Zone 1 (ATEX / IECEx). Optional: field-replaceable Infrared (IR)-module.

H70 NOZZLE

ELAFLEX Information 3.24



ELAFLEX is pushing the limits of compressed hydrogen refuelling for large heavy duty vehicles. For peak mass flow rates of 300 g hydrogen per second for 700 bar heavy duty vehicles ELAFLEX developed a nozzle as well as a receptacle. With this interface it is possible to refuel 100 kg hydrogen with a 700 bar tank pressure in less than 10 minutes. 'N-H70 HD' Nozzle compatible to H70 HF receptacles to ISO/DIS 17268-2, for up to Zone 1 (ATEX).

TIME FILL POST



'H2 Time Fill Post' for the economic and resource-efficient, high-capacity overnight refuelling of commercial fleets (buses/trucks/delivery vehicles) with 350 bar. A time fill panel automatically shuts off the system once refuelling is complete. Available as a complete system, equipped with proven and safe high quality components from ELAFLEX, Oasis and MannTek.

HANDLING GASEOUS AND LIQUID HYDROGEN

Ultra Fast Fill TPED certified Equipment for Hydrogen (H2) Transfer

Safety and efficiency are critical competitive factors in the hydrogen transportation business. Uncompromisingly secure solutions from the ELAFLEX Group for ultra fast loadings and unloadings of trailers with compressed hydrogen (CH2) are in use all around the world. In comparison to needle valves, the ball valve designs allow a much higher flow rate as well as a superior durability, since ball valves cannot get overtightened. Even from the distance, the operator can identify the 'open/closed' position of the valves due to lever position – a relevant safety factor for standard trailer operations as well as during servicing. The sophisticated full-bore design allows very high flow rates for cylinder valves, ball valves, manifolds and specific hydrogen quick connect/disconnect couplings. They are suitable for trailers/MEGCs/pressure cylinders with a WP of 385 bar or alternatively a WP of 520 bar. All ball valves, cylinder valves and manifolds are equipped with an anti-blow-out stem for an ever-safe operation. TPED certified.

QUICK COUPLERS

ELAFLEX Information 4.23



'HC404-H2' 1/2" Quick Coupler for fast flow filling systems, storage cascade to trailer/transporter, trailer/transporter connection to daughter compressor. Suitable for use with hydrogen, CNG, helium, biogas, nitrogen, air and other gases on enquiry. Male and female options available. Specifically designed for hydrogen use: all stainless steel construction giving corrosion and wear resistance, anti-leak spring loaded poppets in both male and female sections. Hardened segment connection style increases gripping surface area. This significantly reduces wear on male coupling.

GASEOUS

CYLINDER VALVES/ TANK HEAD VALVES

ELAFLEX Information 4.23



Oasis cylinder valves 'TH900 Series' and 'TH400 Series', featuring a full-bore design for the fastest possible loading and unloading – also available with ports for a temperature sensor/ thermowell integration and/or with a TPRD valve. 360° adjustable cylinder neck adapters, no clocking of cylinders needed. Cylinder valves are easy to service, with spare part readily in stock. Size 1/2", -40 °C to 65 °C / 85 °C, WP 385 / 520 bar.

BALL VALVES

ELAFLEX Information 4.23



Oasis ball valves 'BV900 Series' and 'BV400 Series' are designed as main shut-off valves as well as header or section valves for trailers, MEGCs and ship applications. For use with hydrogen, helium, CNG /rCNG, nitrogen and other compressed gases. Available from 1/4" to 1", -40 °C to 65 °C / 85 °C, WP 385 / 520 bar.

TRAILER LOAD/ UNLOAD MANIFOLD

ELAFLEX Information 4.23



To reduce space requirements and remove additional leak points/interfaces from the piping system, Oasis developed an integrated trailer manifold 'TM906' with two loading/unloading ports and integrated full bore 3/4" ball valve (to header) and 1/4" spare vent valve. Easy to service, with part kits readily available from stock. Temperature range -40 °C to 65 °C/85 °C, WP 385 bar. With PI marking to TPED / type approved to EN ISO 23826.

HYDROGEN TRANSFER



Safe and efficient transfer of Liquid Hydrogen (LH2)

To utilise its advantages – high energy density, environmental sustainability, no CO₂ emissions – the safe and efficient handling of Liquid Hydrogen (LH2) requires the highest level of material and production quality to ensure insulation and tightness. Accordingly the ELAFLEX Group has developed safe and durable products to reliably meet the special requirements of the medium (low boiling temperature of -253 °C, low ignition energy). Optional integrated breakaway couplings add another level of operational safety.

LIQUID

TRAILER/BUNKERING COUPLING (HOSE UNIT)

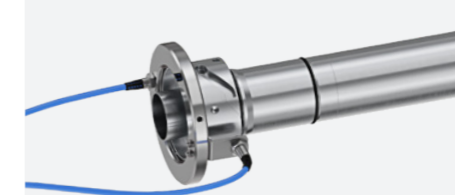
ELAFLEX Brochure Liquid Hydrogen Refuelling



Hose unit coupling 'H-LH2' for the loading and unloading of tank trucks and the refuelling of ships with liquid hydrogen (LH2) or subcooled liquid hydrogen (sLH2). Available in size DN 32 or DN 50, other sizes on request. Available as male or female version depending on application and installation angle of the matching tank unit. Design temperature: -253 °C to +50 °C, design pressure: PN 25, flow coefficient: Kv / Cv 25.6 / 31 (DN 32), Kv / Cv 50 / 58 (DN 50).

TANK UNIT RECEPTACLE

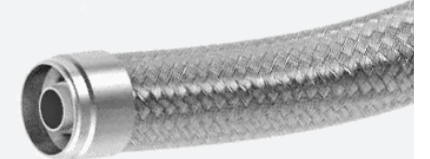
ELAFLEX Brochure Liquid Hydrogen Refuelling



Tank unit receptacle 'T-LH2' for the installation at tank trucks or ships for the use with liquid hydrogen (LH2) or subcooled liquid hydrogen (sLH2). Two welding connections for the installation at double wall tanks, for high vacuum insulation. Available in size DN 32 or DN 50, other sizes on request. Available as male or female version depending on application and installation angle. Design temperature: -253 °C to +50 °C, design pressure: PN 25, flow coefficient: Kv / Cv 25.6 / 31 (DN 32), Kv / Cv 50 / 58 (DN 50). Class approvals available.

DOUBLE WALLED HOSE

ELAFLEX Brochure Liquid Hydrogen Refuelling



The 'LH2/sLH2' transfer system is completed by a 'Double Walled Hose Assembly' with a connection to the dispensing unit, fully vacuum insulated. Size: DN 32/65 and DN 50/75. Temperature range: -253 °C to +50 °C.

CNG DISPENSING SYSTEM

The alternative fuel CNG (Compressed Natural Gas, biogas) reduces global CO₂ emissions in a less complicated way. As a gas station operator you can now enjoy all the usual ELAFLEX benefits – fast delivery from our warehouse, customer-friendly operation and uncompromising safety – for your existing and new CNG refuelling customers. The ELAFLEX Group offers durable all-in-one refuelling hardware for CNG dispensers, which ensure the best flow rates and maximum safety under pressure for a wide range of conditions and applications like public and corporate refuelling stations, for both fast or over-night filling.

The N-CNG nozzle is designed and type approved by DNV according to NGV1 and ISO 14469. It is available as N-CNG P30 for rated service pressures up to 207 bar/3.000 psi (EU standard) and as N-CNG P36 up to 250 bar/3.600 psi (US standard). The robust and durable nozzles are complemented by useful accessories such as the EA 957 scuffguard in different colours and customisable nozzle talkers (EK 024 CNG), which were developed and manufactured specifically for the challenging petrol station operation.



Blue = EU Standard

Yellow = US Standard

CNG DISPENSING

Nozzle Configurator:
nozzleconfigurator.elaflex.de



CNG SELF-SERVICE NOZZLES

Catalogue page 581a



The 'N-CNG' nozzles (Type 1) are designed for refuelling of vehicles equipped with receptacles to NGV1 and ISO 14469-1/-3 for both public and corporate CNG refuelling stations, for NGV1-P30 (200 bar/3.000 psi), NGV1-P36 (250 bar/3.600 psi). Lever-activated latching and automatic venting function when operating the lever – handling similar to standard liquid fuel nozzles for customer convenience. Swivel with fill and vent line connection included. Temperature range -40 °C to +65 °C (-40 °F to 149 °F).

CNG HEAVY DUTY FILL VALVES

Oasis Information CNG Fill Valves and Nozzles



The 'Fill Valve 100' Series for both NGV1 and NGV1-HD ("NGV2") heavy duty vehicles is our high flow, extremely robust and easy-to-service solution for corporate fleet stations. Type 2 design for two staged connection and flow activation, available in different fill valve angles (45°, 90° and straight) and with screw-on nozzles for NGV1-P30 (200 bar / 3.000 psi), NGV1-P36 (250 bar / 3.600 psi) or NGV1-HD ("NGV2") receptacles. Temperature range -40 °C to +65 °C (-40 °F to 149 °F).

CNG SAFETY BREAKS

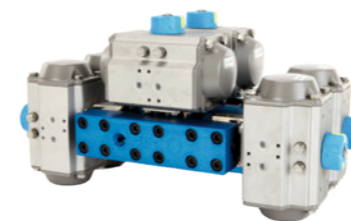
Catalogue page 581c



Reusable breakaway coupling 'SB-CNG' protects CNG dispensers from drive-away incidents by separating and isolating the hose assemblies. Light weight design with soft bump stop protects dispenser panels from damage in case of a breakaway event. Easily reconnectable after a breakaway event. For use on CNG dispensers with fill and vent line (twin-hose), each to be installed as inline breakaway between two hose assemblies ('hose break').

DISPENSER MANIFOLD

Oasis Information CNG Dispenser Manifold



Oasis 'Dispenser Manifolds' are designed with high flow rates in mind. CNC machining allows tighter tolerances to be maintained, which extends the working life of the components. The complete Oasis range has been cycle tested to ensure lowest TCO. Complies with PED 2014/68/EU.

CHECK VALVES

Oasis Information CNG Check Valves



'Gas Check Valves' for unidirectional flow applications such as CNG dispensers, fill panels, priority panels, compressors, trailers and service stations. Suitable for CNG, hydrogen, biogas, nitrogen and air. Comply to PED 2014/68/EU.

CNG TIME FILL POST



'CNG Time Fill Post' for the economic and resource-efficient, high-capacity overnight refuelling of commercial fleets (buses/trucks/delivery vehicles). A time fill panel automatically shuts off the system once refuelling is complete. Available as a complete system, equipped with proven and safe high quality components from the ELAFLEX Group.

ULTRA FAST CNG TRANSFER

For many years, CNG suppliers have been aware that the efficiency of CNG transfer is negatively affected by flow restrictions within their system. Oasis, ELAFLEX Group's specialist for high pressure industry-leading hydrogen and CNG couplings and manifolds, pioneered with the ULTRA FAST FILL SYSTEM® the use of flow-rate matched components that have been purpose-built for the higher rates of CNG transfer required for larger vehicles and CNG trailers, at appropriate temperatures and pressures.

Oasis Engineering is the first component manufacturer to take a distinct systems approach, and has developed the Oasis ULTRA FAST FILL SYSTEM® to transfer CNG fast and secure from storage and dispensers to trailers and trucks. It combines Oasis' range of tank-head valves, ball valves, manifolds, breakaways and quick couplers supplemented with ELAFLEX CNG hoses to deliver save and fast loading and unloading procedures.

CNG TRANSFER



CYLINDER VALVES

Oasis Information CNG Cylinder Valves



Oasis cylinder valves 'TH900 Series' featuring a full-bore design for the fastest possible loading and unloading – also available with ports for a temperature sensor/thermowell integration and/or with a TPRD valve. 360° adjustable cylinder neck adapters, no clocking of cylinders needed. Cylinder valves are easy to service, with spare part readily in stock. Size ½", -40 °C to +65 °C, WP 385 bar.

BALL VALVES

Oasis Information CNG Ball Valves



Oasis ball valves 'BV900 Series' are designed as main shut-off valves as well as header or section valves for trailers, MEGCs and ship applications. For use with CNG/rCNG, hydrogen, helium, nitrogen and other compressed gases. Available from ¼" to 1", -40 °C to +65 °C, WP 385 bar. Even from a distance, operators can identify whether valves are open or closed – a relevant safety factor for standard trailer operations as well as during servicing.

QUICK COUPLERS

Oasis Information CNG Quick Couplers



High flow 'HC308' Quick Connect Couplers of the Quick Coupler family specifically designed for CNG applications. Used in heavy duty CNG trailers loading and unloading application. Size available is DN 25 (1").

¾" AND 1" TRANSFER HOSE ASSEMBLIES

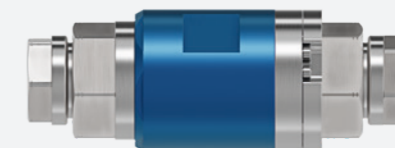
ELAFLEX Information 5.23



'CNG Transfer Hose' (MAWP 5,000 psi) for fast flow filling systems, storage cascade to trailer/transporter, trailer/transporter connection to daughter station and direct feed to CNG dispenser. Sizes ¾" and 1". Conductive inner liner to dissipate static electric build up. Robust and abrasion resistant cover, light-weight and flexible fiber braid (non-metallic) construction. Kink, crush, twist and pull resistant.

TRAILER BREAKAWAYS

Oasis Information CNG Breakaway Couplings



1" Inline 'Trailer Breakaway IB108' designed for use with high flow CNG systems such as virtual pipeline transport trailers and bulk storage. Suitable for CNG, RNG, biogas, nitrogen and air. Largest CNG inline break-away on the market. Available with SAE and NPT connections. Complies to PED 2014/68/EU and to sections of ANSI/IAS NGV4.4-1999 except separation force and removal of back flow bleed which complies with AS5092-2009.

PRIORITY MANIFOLD

Oasis Information CNG Manifolds



'Priority Manifold' designs for high flow gas applications, ideally suited to minimising potential leak points and installation time. Suitable for use in CNG service stations, compression plants and dispensers. Custom made priority manifolds on request.

ROBUST LNG REFUELLING SYSTEMS

The liquefaction of natural gas or biogas reduces the volume to one six-hundredth and qualifies LNG (Liquid Natural Gas) as an economical and more environmental friendly alternative to diesel, for heavy goods transportation as part of the energy transition.

Thanks to this property, this energy source is a flexible and attractive technology, allowing similar refuelling times compared to diesel. Accordingly, more and more oil companies are offering LNG for commercial and heavy goods vehicles such as lorries and buses.

As a leading specialist for refuelling technology, the ELAFLEX Group fully exploited its well-known competencies: consistent orientation of function and design towards the end user, uncompromising manufacturing and material quality, while ensuring fast and direct availability. The ELAFLEX LNG Refuelling System was developed explicitly for the LNG truck refuelling environment – its design details are validated in the rough everyday refuelling station environment.

The system consists of the N-LNG nozzle (push coupling process) or the alternative FC-LNG fill coupling (twist and push coupling process), supplemented with LNG 25 hose assemblies. The VC-LNG vent coupling is used for the venting of LNG fuel tanks and is supplemented with the LNG 13 hose assembly. The SB-LNG Safety Break protects the vehicle and LNG dispenser from drive-away incidents by separating and isolating the dispenser from the fill or vent hose assemblies.

LNG DISPENSING



N-LNG

Catalogue page 579



LNG nozzle type 'N-LNG' for refuelling of heavy vehicles (trucks) with refuelling interface to EN ISO 12617. For use with liquefied natural gas 'LNG' (or liquid nitrogen for calibration purposes) with a media low temperature down to -196 °C. Flow rate up to 190 l/min (50 GPM). Maximum working pressure 34 bar.

FC-LNG

Catalogue page 579



Alternative LNG nozzle 'FC-LNG' for push and twist coupling process. Specifically designed for back to back high frequency refuelling of heavy vehicles (trucks) with refuelling interface to EN ISO 12617 with integrated guide for rotation coupling process. For use with liquefied natural gas 'LNG' (or liquid nitrogen for calibration purposes) with a media low temperature down to -196 °C. Flow rate up to 190 l/min (50 GPM). Maximum working pressure 34 bar.

VC-LNG

Catalogue page 579



Vent Coupling 'VC-LNG' with bayonet connection. For use with liquefied natural gas (or liquid nitrogen) with a low media temperature down to -163 °C. For venting of LNG fuel tanks of heavy vehicles with an LNG engine. Flow rate up to 38 l/min (10 GPM). Maximum working pressure 34 bar. Installation on Vent Line of LNG dispensers.

LNG HOSES

Catalogue page 579



'LNG 13' for venting and 'LNG 25' for refuelling of heavy vehicles (trucks) with LNG. Suitable for installation with nozzle, vent coupling or safety break on LNG dispensers. For use with LNG (or liquid nitrogen for calibration purposes) with a low media temperature down to -196 °C.

SB-LNG VL

Catalogue page 579



'SB-LNG FL (Fill Line)' and 'SB-LNG VL (Vent Line)' protects LNG dispensers from drive-away incidents by separating and isolating dispenser from fill or vent line. Stops the flow of fuel on both ends at separation. Reconnectable after breakaway event by replacing breaking bolts EB 544-3. For installation on LNG dispensers.

TRANSFERRING LNG

Dry Cryogenic Couplings allow a connection within seconds, tight through the entire unloading process and no spill upon uncoupling. You can save even more time since a purging is not necessary in most tank truck designs. At the ELAFLEX Group, experts with decades of experience and comprehensive know-how work together on the LNG supply chain. Dantec's composite hoses, equipped with dry cryogenic couplings and breakaway couplings from MannTek, guarantee maximum transfer safety. MannTek is a recognised pioneer in the development and implementation of ISO 21593 and ISO TS 18683 standards, the most important international standards for LNG couplings. The Powered Emergency Release Coupling (PERC) system ensures highest safety level under rough conditions via three ways of release.

LNG TRANSFER



DCC-DRY CRYOGENIC COUPLING

ELAFLEX Brochure CO₂ Carbon Capture



The Dry Cryogenic Coupling 'DCC' is suitable for the loading and unloading of cryogenic liquefied gases, such as LNG, nitrogen, oxygen, argon, ethylene, down to -196 °C. A quick and safe connection of hoses and loading arms under pressure and with minimized product loss. During the cool down phase no retightening of the connection is necessary as practiced with flanged or threaded connections. Dry Cryogenic Couplings according to ISO 21593 and ISO TS 18683.

CBC

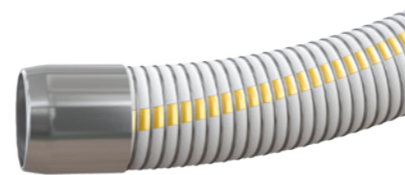
MannTek Brochure Gas Handling



Cryogenic Breakaway Couplings 'CBC' are used to avoid spillage and damage associated with drive and/or pull away incidents when loading and unloading. The couplings are designed to be the weakest link of the hose line or loading arm. The cryogenic breakaway couplings are suitable for cryogenic liquefied gases, such as LNG, nitrogen, oxygen, argon, ethylene, down to -196 °C.

DANCHEM PA HOSES

Dantec datasheet Danchem PA Range



'Danchem PA Hoses' for liquified low temperature gas, manufactured from multiple layers of polymers, with a stainless steel 316 inner and outer helix. The composite hoses are used for ship to shore transfer, ship to ship, road tanker, rail tanker and in plant applications requiring low temperature flexibility, strength, safety and reliability. Manufactured in accordance with EN 13766:2018 for suction and pressure service. Nominal sizes from DN 25 (1") to DN 250 (10"), with a working pressure of PN 25 bar.



DCC Configurator:
manntekconfigurator.elaflex.de

ELAFLEX QUALITY FOR LPG REFUELLING

You can offer your customers all the usual ELAFLEX benefits whether you supply LPG via an ACME, DISH, K or EURO connection: simple operation, high operational reliability and low weight.

As a forward-thinking gas station operator, you also profit from the renowned ELAFLEX durability, a modular design, low expansion volume when uncoupling and fast availability. As experience shows, ELAFLEX repair partners rarely get to see the ELAFLEX products – but when they do, they always appreciate the outstanding material quality and service-friendly design. The ELAFLEX LPG dispensing system includes the ergonomic ZVG 2 nozzle in ACME, DISH, K or EURO versions, the highly flexible, polymer-free LPG 16 hose (can be configured as an LPG hose line with matching LPG fittings on request) and the optional ARK 19 Mod. 2 breakaway coupling (can be reassembled without tools after a drive-away accident).

ZVG 2 COUPLING TYPES

Catalogue page 561



LPG nozzle family 'ZVG 2' for vehicle refuelling up to 50 l/min and WP 20 bar and low discharge volumes.

ACME 1 1/4" Threaded Coupling (EN 12806)
DISH "Italian" Claw Coupling (EN 12806)
EURO (UL) Push-In-Coupling (EN 13760)
K Push-In-Coupling (ISO 19825)

NOZZLE BOOT

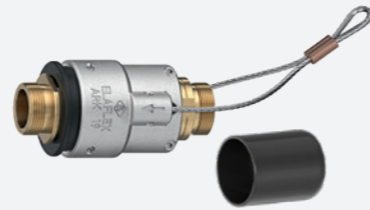
Catalogue page 116



The complete kit for LPG dispensers incl. connectors, nozzle boot 'NB-ZVG' for ZVG 2 and 'NB-GG' for GasGuard nozzle types.

SAFETY BREAK COUPLING ARK 19 MOD. 2

Catalogue page 563



'ARK 19' Mod. 2 Safety Break for LPG hoses. Safe and functional – easy reconnection after drive-off incidents, without the need to purge the system. This must only be done by a suitably trained person.

LPG HOSE DN 13–19

Catalogue page 116



'LPG 13', 'LPG 16 – 19' hoses meet EN 1762 standard. For propane, butane and their mixtures. Highly flexible and long-lasting construction, sizes from DN 13 to DN 19. Burst pressure >100 bar. DVGW and AS 1869 approved.

SCUFFGUARD WITH NOZZLETALKER

Catalogue page 561, 573, ELAFLEX Inform. 4.17



'Scuffguards EA 866' for ZVG 2 ACME, DISH, K or EURO in black or orange incl. nozzle talkers with fuel grade identification and a large printing/advertising space.

GASGUARD NOZZLES, SPLASHGUARD

Catalogue page 571



The comprehensive 'GasGuard Nozzle Family' offers a big range of nozzles with ACME, DISH, EURO and Korea 'K' couplings. UL approved. 'Splashguard' protects the customer's hand against physically gas release phase after nozzle valve has shut down.

LPG DISPENSING



Nozzle Configurator:
nozzleconfigurator.elaflex.de

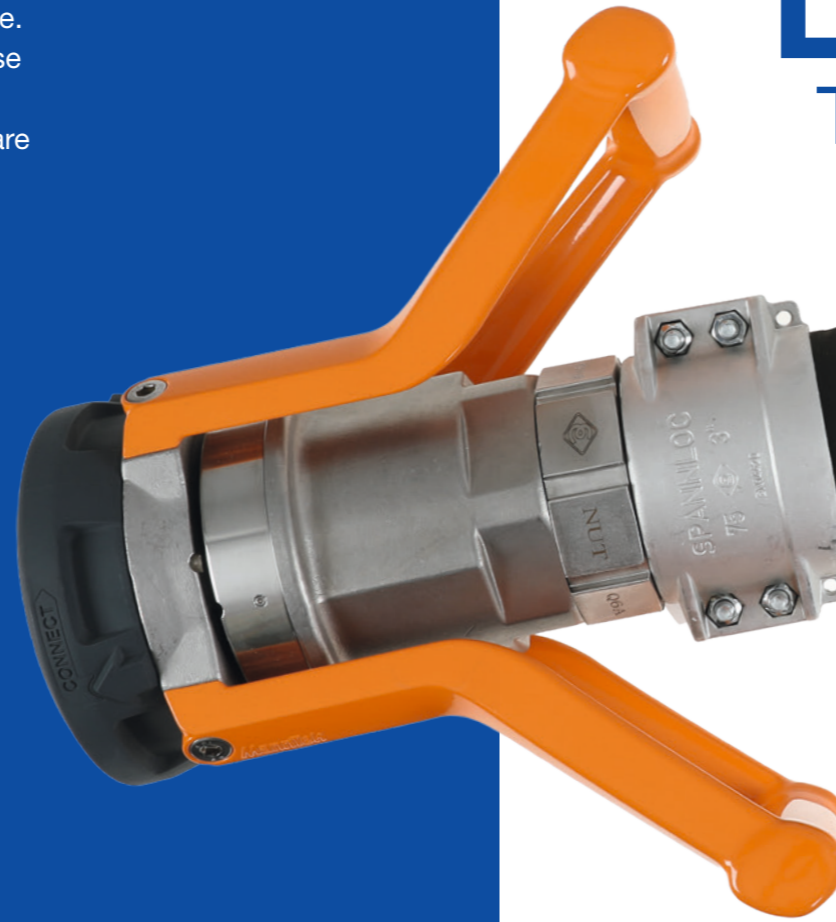


Hose Assembly Configurator:
hoseconfigurator.elaflex.de

A SAFER SYSTEM FOR LPG TRANSFER

Equipment for the transfer of LPG must provide a high level of safety over the whole transport chain – from the refinery to the final point of use. Operators require that their equipment works reliably, and without the risk of cold burns or unwanted product release. ELAFLEX Group's product and solution range for LPG meets or exceeds these requirements. ELAFLEX Orange Band LPG hoses cover a temperature range from -40 °C up to +70 °C, Dantec's Danchem PA range of composite hoses are certified for transferring LPG at -50 °C. Dry Gas Couplings (DGCs) have proven themselves in practice for decades as the fastest and safest way to fill storage tanks and containers. They safeguard a quick and clean connection without spill and product loss. With Design 2.0, the new generation of the Dry Gas Coupling, MannTek present major improvements to both flow performance and user experience. ELAFLEX hose reels for LPG applications are precisely tailored to the specific challenges of this medium and are custom-made to meet the individual requirements of the intended purpose.

LPG TRANSFER



LPG HOSE DN 19-200

Catalogue pages 115-116



'Orange Band' Liquefied Petroleum Gas hoses to EN 1762. For propane, butane and their mixtures to EN 589. Due to the very low permeability of the lining the hose is also suitable for natural gas (H₂-content max. 5 %). With or without helix. Temperature range -40 - 70 °C, not suitable for DME.

MANNTEK DRY GAS COUPLINGS

ELAFLEX Brochure MannTek DGC – Design 2.0



MannTek self locking Dry Gas Couplings 'DGC' for LPG, Design 2.0. Used for loading/unloading of propane, butane and their mixtures. Enhanced design results in performance gains above 45 % for flow capacity and above 40 % for connect forces. Working pressure 25 bar. Temperature range -40 °C up to +80 °C. Certificates to European Pressure Equipment Directive PED, ATEX EX II 2G, ADR, RID, IMDG and TDT. Couplings correspond to EN 13760 (DN 25) respectively EN 13175 (DN 50 and 80).

HOSE REEL TANK TRUCK

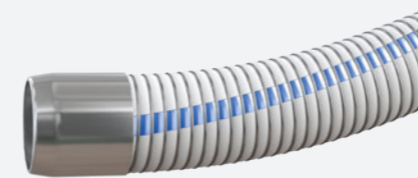
ELAFLEX Brochure Hose Reels



'ELAFLEX Hose Reels' are suitable for a wide range of media incl. gases. They cover operating pressures from 1 to 25 bar and can be built to hold hose sizes from DN 13 to DN 200 and any length. Depending on hose length and available space, they can be designed on a 'long and low' or 'high and narrow' drum to suit the individual application. Hose reels for LPG are usually delivered in stainless steel, swivels equipped with FKM (FPM) seals.

DANTEC HOSES

Dantec datasheet Danchem PA Range



'Danchem PA' low temperature liquified gas hoses, made from multiple layers of polymers, with a stainless steel 316 inner and outer wire helix. For ship to shore transfer, ship to ship, road tanker, rail tanker, plant applications. According to EN 13766:2018 for suction and pressure service. From DN 25 (1") to DN 250 (10"), with a working pressure up to 25 bar. Certified to transfer LPG down to -50 °C, versions also available for transfer of liquid CO₂, ammonia or liquid ethylene for temperatures down to -104 °C.

SBC

MannTek Brochure Gas Handling



'SBC' Safety Breakaway Couplings (Emergency Release Couplings) with integrated shut-off valves to avoid spillage/damage through drive and/or pull away incidents when loading/unloading. SBC are designed to be the weakest link of the hose line or loading arm, suitable for a wide range of products including petroleum-based products, chemicals, gases and foodstuffs. Also available with cable release and in breaking pin version for marine and industry applications.

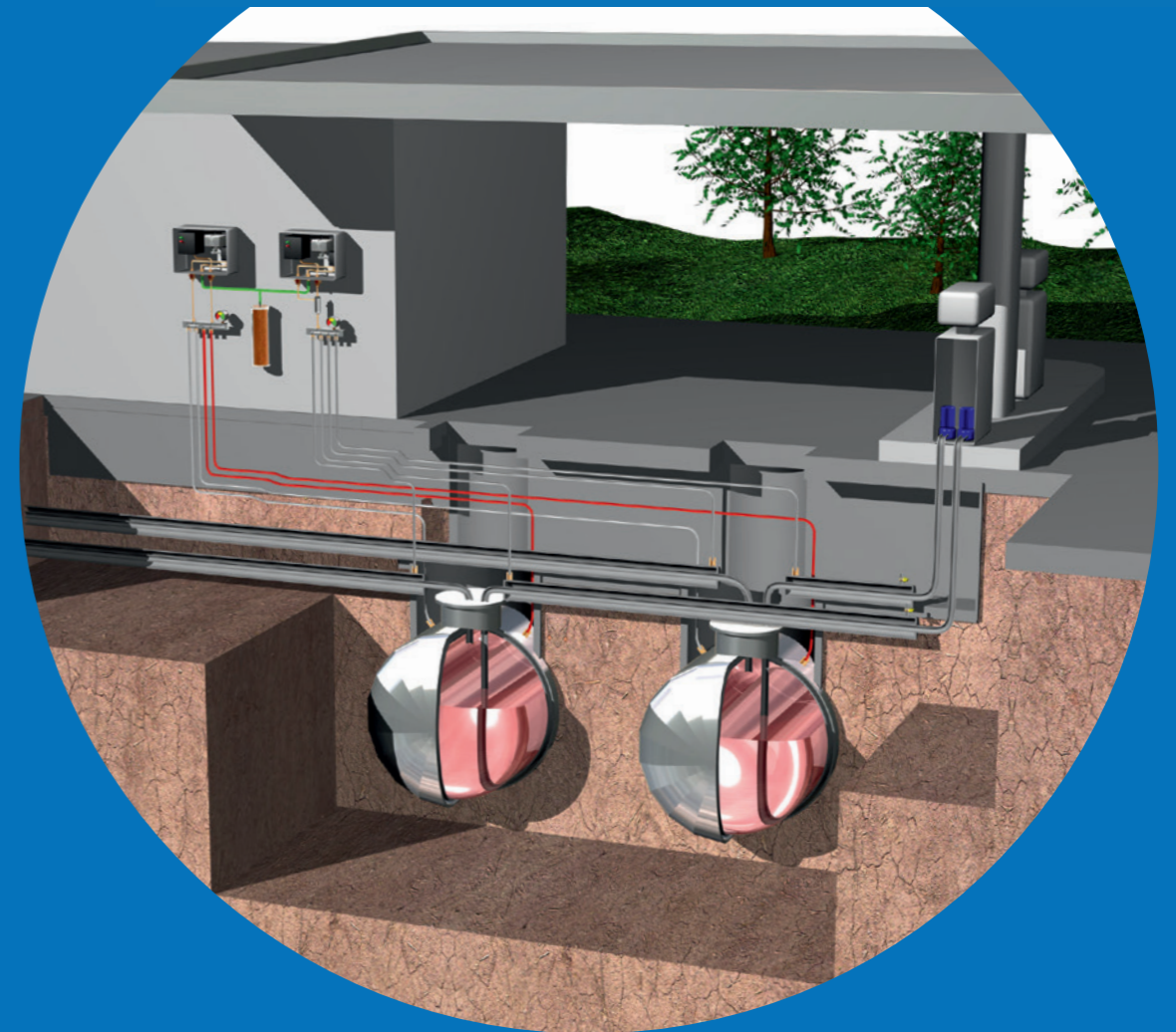
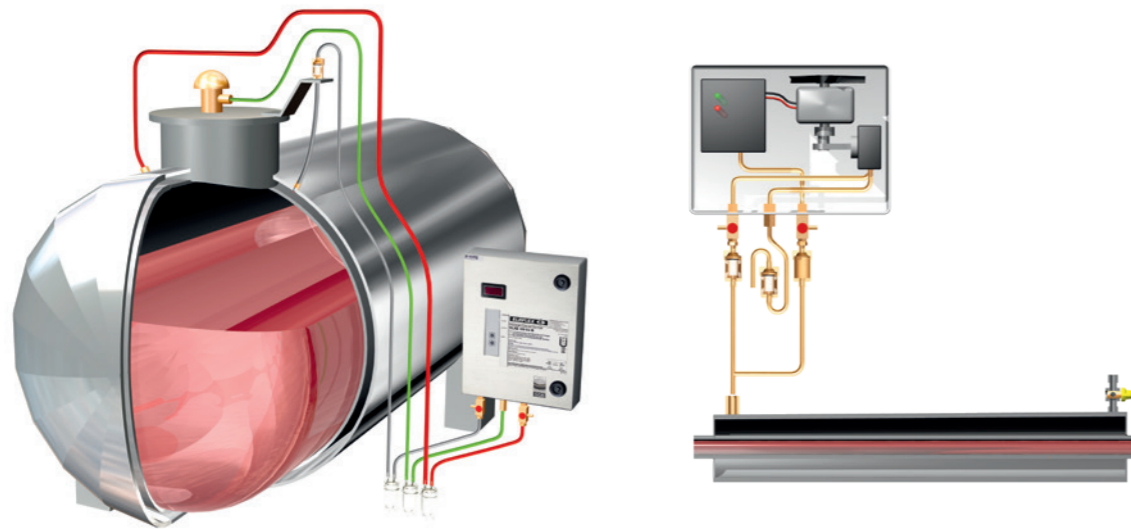
SGB LEAK PREVENTION TECHNOLOGY – FOR A CLEAN AND PROTECTED ENVIRONMENT

Safe leak monitoring and prevention that works under all environmental and weather conditions is a fundamental part of a petrol station's environmental and safety management concept. If the protection of people and the environment is clearly a legal priority, the prevention of soil and groundwater damage naturally also goes hand in hand with the avoidance of investment-sensitive losses of the stored fuels.

These requirements must be clearly and reliably covered – the selection, acquisition and installation of the necessary technology present those responsible with tasks that should not be underestimated. The preparatory work has been already done, the ELAFLEX Group relies on SGB GmbH as a proven and experienced specialist, who has developed innovative, tried-and-tested and exceptionally robust solutions for different tank and pipe systems and geographical specifications.



Leak Prevention



PRESSURE AND VACUUM LEAK MONITORING



'SGB Leak Detectors' realize highest environmental protection and safety according to EN 13160 (class I) for double-walled pipes and tanks: Both inner and outer wall are monitored 100 % continuously conveyed or stored and reliably for leaks. Loss of the conveyed product is excluded due to the pneumatic monitoring principle.

EXPLOSION PROTECTED LEAK MONITORING



'Vacuum leak detector VLXE .. M' is used for monitoring double-walled tanks or pipes when basic explosion protection is required. To be mounted outside Ex areas. Fully explosion protected: VLXE .. Ex M as shown above. Suitable for installation in Ex zone I or II. Both EN 13160 class I requirements.

COMBINED TANK AND PIPE MONITORING



Monitoring tanks and pipes with only one device. Either based on positive air pressure (LDU22) or on negative air pressure (VLXE-SAB T/P). Both for outdoor installation. Both EN 13160 class I requirements.

COILED, CLEAN & TIDY

The ELAFLEX philosophy involves always looking at the big picture and thinking in cross-product solution contexts. Accordingly, the ELAFLEX Group also offers suitable hose reels manufactured to customer specifications for our hose lines used all over the world, to offer the complete package of nozzle or coupling, hose assembly and hose reel for various applications.

They are equipped with various return mechanisms – manual, return spring, electric, hydraulic or pneumatic. ELAFLEX hose reels are produced to the highest quality standards and naturally comply with European health, safety and environmental standards. The materials are selected to match the application: Steel with polyester powder coating or stainless steel for demanding operating conditions. The colour can also be freely selected.

MANUAL REWIND

ELAFLEX Information 7.21E



'Hose Reel with Handle'. Also available with chain transmission for lower gear ratios.

SPRING REWIND

ELAFLEX Information 7.21E



'Hose Reel with Automatic Spring-loaded Rewind System'. Suitable for retraction of hoses up to 25 m in DN 50.

ELECTRIC REWIND

ELAFLEX Information 7.21E



'Hose Reel with Electric Motor'. Electric motors available: AC = 230/400 V DC = 12 V/24 V Optionally with ATEX certified motors.

HYDRAULIC REWIND

ELAFLEX Information 7.21E



'Hose Reel with Hydraulic Motor'. The motor is always provided with levers to operate.

PNEUMATIC REWIND

ELAFLEX Information 7.21E



'Hose Reel with Pneumatic Motor'. Optionally available with 'ON/OFF' kit to operate the hose reel.

BONDING REEL

ELAFLEX Information 7.21E



'Bonding Reel with Spring Rewind Mechanism'. Frame available in polyester powder coated steel, UV resistant or stainless steel and any colour. High visibility grounding cable, up to 30 m, DN 6 and different types of clamps.

Hose Reels



THE ELAFLEX GROUP

// Air Traffic Trade

Aljac

DANTEC

ditec

Oasis

ELAFLEX

MannTek

SGB

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Contact data of our approximately
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