Continental
The Future in Motion

Marine Hoses

DUNLOP OIL & MARINE

www.continental-industry.com

Dunlop Oil & Marine
Complete offshore hose solutions

Dunlop Oil & Marine (DOM), part of Continental AG, is recognised as the leading supplier of offshore loading hoses to all major oil, gas and petrochemical companies worldwide.

DOM has been established in the Oil & Marine Industry since 1955 and were the first in the market to supply hoses to an offshore buoy operation in 1958. At the forefront of flexible hose technology, predominantly in the marine environment, we are proud to have led the way in offshore technology for over 70 years.

We have an unrivalled track record in the delivery of the most expansive portfolio of products and services, worldwide. And our continual drive for innovation has culminated in us having the most extensive hose supply record to offshore installations across the globe.

As the partner of choice for companies operating in the oil & marine and materials handling industries, our success is rooted in our unparalleled engineering expertise and our comprehensive understanding of the most challenging project requirements. We work closely together with our partners to provide innovative solutions and our products are found in some of the most demanding applications around the world.

All our hoses conform to relevant industry guidelines and standards such as GMPHOM and API17K. Our full range of processes; from materials and manufacturing through to testing and final qualification have all been witnessed and Type Approved by Lloyds Register. Following successful ABS Design Review being completed, we have full ABS Type approval on all our GMPHOM hose range.

Under our compliance with European Community Pressure Equipment Directive (PED) 2014/68/EU all our design procedures, materials and also our suppliers have been audited and subsequently approved by Lloyds Register. This means all our hoses are CE Branded.

DUNLOP OIL & MARINE

Contents

Marine Hoses for Offshore Applications

Introduction to Hose Applications

A solution for every application and tailor-made for your specific requirements

Standard Hose Range:

Our standard floating and submarine hoses in double and single carcass designs have an extensive track record for reliability and durability in a vast array of applications, and are designed to meet our customers' individual specifications. All our standard hoses are qualified and manufactured to meet and exceed the latest industry guidelines - GMPHOM.

System Arrangements:

Our hoses are used in some of the most diverse system arrangements and demanding enviromental conditions, requiring customised hose designs that provide outstanding durability and reliability. These include:

- CALM (Catenary Anchor Leg Mooring) systems - ease of maintenance, sound structure capable of handling very large crude carriers and designed specifically for the load requirements of each application
- SALM (Single Anchor Leg Mooring) systems - full and variably reinforced hoses with optimised stiffnesses
- Catenary Loading Systems - lightweight, flexible hoses with high tension capability, operating both in air and submerged
- Tandem Systems - special hose constructions for FPSO (Floating Production Storage and Offloading) connection service with customised buoyancy arrangements for water to air transition positions and support of heavy hardware at the hose string ends
- Reeling systems - Lighweight, strong but with high flexibility and various design options to suit varying customer specifications
- Tower Loading Systems - lightweight and highly flexible with variations for operation in environmentally mild or extreme conditions
- CBM (Conventional Buoy Mooring) - Flexible and light hose constructions with specially reinforced covers
- Long Length Midwater System - for use in specific offloading applications in deep water

Hose Applications:

Whatever the challenges you are facing, we have the capability and expertise to offer specialist hose solutions. Whether you require modifications to existing hose designs or the development of completely new hose designs, we can help you. A few examples of how our specialist hoses are used:

- Where you want to extend the life of FOB (First Off Buoy) hoses, we have developed an optimised system and hoses that can be used on a project specific basis
- In areas where your hoses experience excessive marine growth, we have developed a special environmentally friendly anti-marine growth coating that can be applied to our standard hoses
- For those who need lightweight, but stronger hoses, we have developed designs that benefit from our API 17K technology
- If you are operating in harsh environmental conditions, our fully qualified hoses which are constructed from unique materials allow for operation in the most extreme conditions
- In more extreme and deep water conditions, our API 17K hoses can replace OCIMF systems and allow for a predicted service life of up to 20 years
- For products such as MTBE, high H_2S, LPG, refined products, and more...

Selflote - Single Carcass Floating Hoses

Selflote was the first integrally floated offshore hose in the world. Originally designed back in 1968, this hose has been utilised around the globe for nearly 6 decades. The single carcass design, which is fully compliant with GMPHOM, was as unique then as the new generation of Selflote hoses is now - the standard to which others are compared.

Through continuing programmes of technical innovation, today's Selflote design combines immense strength with flexibility and is capable of withstanding the demands of the world's most exposed offshore installations.

Why choose the Selflote hose?

- High strength, combined with flexibility
- Unique patented second lining
- Excellent fatigue resistance
- Kink Resistant
- Nearly 6 decades of service history

All our Selflote hoses benefit from low stress end fittings engineered through the use of Finite Element Analysis. The hose body reinforcement materials and angles of application have been selected to give the hose long term durability and optimum performance characteristics. In addition to our standard linings we have developed and qualified a number of alternative linings which provide superior resistance to high aromatics, H_2S, MTBE and other products.

We pioneered the use of integral floatation for a floating hose and this has now become standard within the industry. Today, our floatation system has been further enhanced to provide continuous operation under circumstances of typical floatation damage in service.

Various options for our leak detection systems are available

Saflote - Double Carcass Anti-Pollution Floating Hoses

Our double carcass anti-pollution hose design has a primary carcass surrounded by a secondary carcass. The primary carcass functions independently from the secondary carcass, therefore in the unlikely event that the primary carcass is compromised, the secondary carcass will remain intact, allowing continued safe operation and adequate time for change out or replacement. The benefit of this being that it will contain the product and prevent oil leakage or associated environmental damage.

A benefit of the secondary carcass is a visual signal of failure by its obvious expansion. At the hose centre, expansion has been restricted, allowing the hose geometry (after expansion) to be entirely different.

Why choose the Saflote hose?

- Even after long and arduous service, the secondary carcass can still contain a primary carcass burst or leak
- Kink Resistant
- Robust and maintenance free warning system, which provides clear evidence of primary carcass failure
- The system is not affected by marine growth

The design concept of our Saflote hoses has evolved from our original double carcass design invented in the 1970s. Primary and secondary carcasses are manufactured and inspected independently. The linings in both carcasses are the same, providing identical resistance to the product being transferred. The secondary carcass Nylon reinforcing plies have excellent fatigue resistance properties.
This ensures that secondary carcass pressure retention capability is maintained throughout the hose service life.

In full compliance with GMPHOM, all our Saflote hoses are branded 'Double Carcass'. Various options for our leak detection systems are available.

Single Carcass Submarine Hoses

Alongside our floating range of single carcass hoses, we also manufacture a range of single carcass hoses for submarine applications.

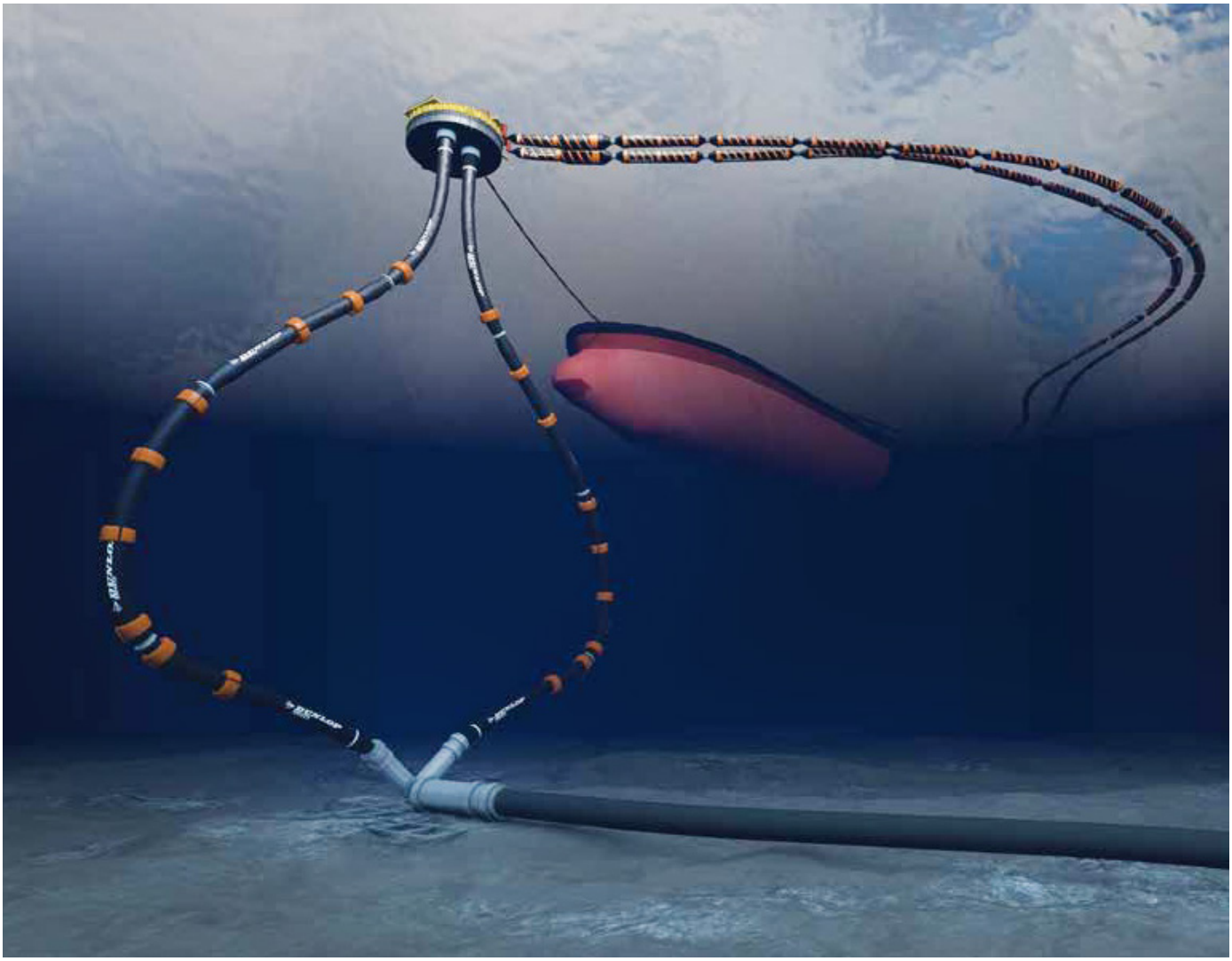
Our single carcass submarine hoses combine strength with flexibility, with a design that has taken into consideration many factors such as water depth, tide, buoy excursions and wave patterns.

Why choose the single carcass submarine hose?

- High strength combined with flexibility
- Unique patented second lining
- Kink Resistant
- Excellent fatigue resistance

All our single carcass hoses benefit from low stress end fittings engineered through the use of Finite Element Analysis. The hose body reinforcement materials and angles of application have been selected to give the hose long term durability and optimum performance characteristics. In addition to our standard linings we have developed and qualified a number of alternative linings which provide superior resistance to high aromatics, H_2S, MTBE and other products.

Our submarine hoses have been designed and tested to demonstrate their compression and collapse resistance at significant depths, even when empty. The strength and flexibility of our GMPHOM hose constructions is particularly important to ensure functionality of our submarine hoses in extreme survival conditions.



Safgard - Double Carcass Submarine Hoses

Unlike the Saflote system, a Safgard hose is designed to have stable geometry so as not to disturb the subsea system configuration. In the unlikely event of primary carcass compromise, the secondary carcass will allow the passage of contained product to the hose ends where its presence can be detected through patented one-way valve systems.

In case of primary carcass failure, whether due to a leak or burst, our Safgard anti-pollution secondary carcass will contain this leak allowing operations to be continued in a safe manner.

The one-way valve system can be either mechanically operated or connected to an easy-to-use electronic telemetry leak detection system allowing remote notification.

Why choose the Safgard Double Carcass Submarine Hose?

- Even after long and arduous service the secondary carcass can still contain a primary carcass burst or leak
- Kink Resistant
- Robust and maintenance free warning system, which provides clear evidence of primary carcass failure
- The system is not affected by marine growth
- Customised and site specific alternative leak detection systems

The design concept of our Safgard hoses today, has evolved from the original design first invented in the 1980s. Primary and secondary carcasses are manufactured and inspected independently of one another. The linings in both carcasses are the same, providing identical resistance to the product passing through the hose. The secondary carcass Nylon reinforcing plies have excellent fatigue resistance properties. This ensures that secondary carcass pressure retention capability is maintained, in case of the primary carcass being compromised at any point throughout normal hose service life.

In full compliance with GMPHOM, all our Safgard hoses are branded 'Double Carcass'. Various options for our leak detection systems are available.

Hose Systems

› Catenary Anchor Leg Mooring (CALM)

Chinese lantern configuration

Lazy ‘S’ configuration

Steep ‘S’ configuration

A typical Catenary Anchor Leg Mooring (CALM) buoy system incorporates both submarine and floating hoses - the most popular means for tanker loading and discharge operations worldwide.

A CALM buoy submarine hose system, typically a Chinese Lantern, Lazy ‘S’ or a Steep ‘S’ configuration connects a seabed pipeline end manifold (PLEM) to the floating CALM Buoy. Fluid is then offloaded via a floating hose string.

The system and hose design is dependent upon a number of factors including water depth, current, tide, waves, tanker moor-ing forces and resulting buoy behaviour

› Single Anchor Leg Mooring (SALM)

The SALM hose system design requires particular consideration of hose stiffness properties for the submarine section from swivel connection up to the surface.

The hose system arrangement is a guideline only, with dedicated hose constructions often needed for a given installation.

Hose Systems

› FPSO - Catenary Loading System

Catenary loading hoses are often customised to meet particular system design requirements.

For tandem loading, the method of hose string stowing (reel, deck tray, freely suspended etc) may influence the hose construction, with additional crush resistance provided where necessary.

The offloading tanker bow connection hose may also be a different construction to that of the FPSO connection hose, particularly for bow loading with QCDC connections.

› FPSO - Floating Hose Tandem Loading

A typical tandem loading hose system has a fully floated, one-end reinforced hose at the FPSO connection, and reduced buoyancy mainline hoses in the next two or three system positions. Submarine hoses with floats are sometimes used as an alternative arrangement at this point in the hose system.

A restraining tether between FPSO and hose string is sometimes included for hose string security, and to reduce loads imposed by the hose string on the FPSO hose connection pipework.

Hose Systems

› Tower Catenary Loading System

Tower catenary loading is a system solution adopted for certain installations experiencing particularly harsh environmental conditions and ensures the hoses remain clear of the sea, and hence clear of any sea ice that may form at certain times of the year.

Operating via a catenary system, the hoses are attached to the tower and ready to be operated when a tanker arrives in any temperature conditions.

› Conventional Buoy Mooring (CBM)

The CBM system holds the tanker in a spread moored arrangement. It is used worldwide, but generally in relatively shallow water depths and mild to moderate environmental conditions.

The seabed pipeline terminates close to the tanker mooring. A string of submarine hoses is laid out from the PLEM along the sea bed and recovered to the tanker for fluid transfer operations.

Hose Systems

› FPSO - Floating Reeling Hose

A typical tandem loading floating reeling hose system has a fully floated, one-end reinforced hose at the FPSO connection, and reduced buoyancy mainline hoses in the next two or three system positions to promote a good lay configuration when in use. Hoses are specifically designed to accommodate the additional loadings resulting from being coiled on the reel.

› Long Length Midwater Systems

This long length midwater system is for use in specific offloading applications in deep water. This demanding application requires the use of a more rubust hose design providing optimal strength, flexibility and service life.

Our Deepflo hose range has been qualified to API 17K and developed specifically for this application.
The hoses and system are custom designed for each individual installation.

CALM BUOY Hoses

Our range of hoses for CALM Buoy operations are all fully compliant with GMPHOM and consist of Single Carcass Submarine, Selflote, Saflote and Safgard.

A typical Catenary Anchor Leg Mooring (CALM) buoy system incorporates both submarine and floating hoses - the most popular means for tanker loading and discharge operations worldwide. See page 10 for further hose system arrangements.

Why choose our hoses for your CALM Buoy Operations?

- Bespoke single or double carcass hoses designed for individual system requirements
- Up to 24" bore size for a variety of applications
- Standard pressure rating of 15, 19 or 21 bar
- Options for the use of Submarine API 17K hoses for longer underbuoy design life expectations

FPSO Production & Offshore Field Development Hoses

Hoses for FPSO Production & Offshore Field Development are typically used in locations where it's not possible to use a CALM Buoy System, for example in deep water or where the use of a processing facility onshore is inaccessible.

Why choose the FPSO Hose?

- Flexibility to be fitted to a reel
- High tensile strength
- Specifically tailored floatation solutions to suit Reeling applications
- Standard floating hoses that adhere to the latest GMPHOM guidelines, with specific alternatives to meet our customers requirements

Various options are available for floating, catenary and reeled hose applications.

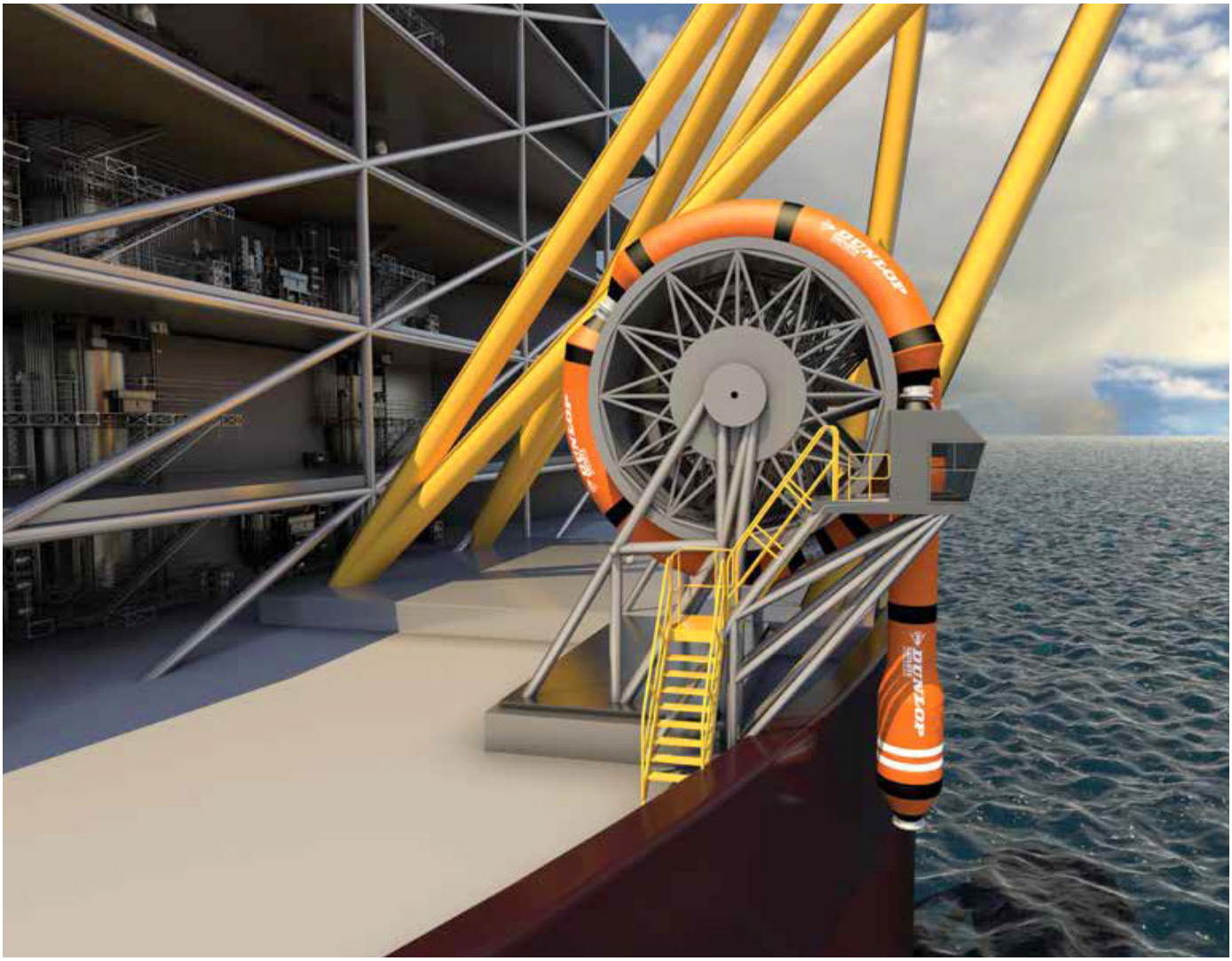
Reeling Hoses

These hoses have all the benefits of our standard product range, but are specially designed to have greater crush resistance to combat contact with the reel, allow for greater flexibility when wrapped onto the reel and possess high compression resistance in order to prevent flange contact.

Looking ahead to future trends in the industry, our reeling hoses will also offer a revolutionary construction that will benefit from our API 17K technology.

Why choose the Reeling Hose?

- Lightweight
- High tensile load capability whilst maintaining flexibility
- Compact to allow reel size to be reduced, which allows for significant capital and operational cost savings
- Designed to fully comply with GMPHOM



API 17K Hoses

The API 17K range of offshore offloading hoses is designed and manufactured to provide a solution in the most challenging environments, typically exceeding the latest industry performance parameters.

A dedicated third-party qualified design and test methodology complements our long-term field experience. This allows the hoses to be purpose designed for a specific service life in customer defined conditions.

Why choose the API 17K Hose?

- Up to 26” large bore solutions
- Up to 20 years design life
- Smooth bore design offering pumping cost savings (when compared to traditional non-bonded solutions)
- Installation cost savings (when compared to steel export lines)
- Higher design pressures

Liquified Petroleum Gas (LPG) Hoses

Offshore transfer of LPG requires hoses to operate in demanding, dynamic environments.

Hose construction for a given LPG transfer application depends upon the characteristics of the product being transferred and the operational parameters. In particular, refrigerated LPG has a different set of hose system transfer requirements to that of LPG at ambient temperatures.

Why choose the Liquified Petroleum Gas (LPG) Hose?

- End fitting materials for low temperature service
- Reinforced lining applied along the hose bore to reduce the risk of explosive decompression
- 'Bleeder cords' to exhaust any permeated gas to the hose ends

Operational considerations include the possible need for integral ballast to keep a submarine hose submerged in the case of gaseous product, and flange insulation kits to provide electrical discontinuity, if required.

We can advise on LPG hose construction features to suit your particular application.

Ship to Shore Transfer Dock Hoses

Ship to Shore Transfer applications commonly use small bore hoses that offload crude oil and petroleum products from smaller vessels at the dockside. The hoses are also used for the transfer of non-crude oil products.

Bunker or ballast lines may run alongside the crude transfer hose system and refined products such as unleaded petrol can also be imported or exported. Essential chemicals for a variety of industrial processes are also transferred by this method.

For many product applications, our standard nitrile rubber hose lining provides the required resistance to product attack. However, other grades of rubber lining. Viton, Chloroprene, Butyl etc can all be used to give best compatibility with whatever product is being transferred.

In some cases, other parts of the hose have to be considered; stainless steel fittings and/or helical wire reinforcement for low temperature service, 'bleeder' cords to exhaust gas that has permeated into the hose wall and so on.

Why choose Ship to Shore Transfer Hose?

- Robust hose design to accommodate the safe transfer of Crude Oil, Methanol, Ethanol, Benzene/Toluene (high aromatics), Petrol leaded and unleaded, Kerosene, MTBE, Naptha, Anhydrous Ammonia and Flare Gas
- Flexibile for ease of handling
- Hoses available in BS EN 1762 & BS EN1765 as appropriate

We have alternative hose linings and other hose construction features to suit your particular application.

Special Hose Linings and Materials

Viton Lining

GMPHOM specifies that all hoses meet a standard of up to 50 % aromatic resistance. Our Nitrile lining already exceeds these expectations allowing up to a maximum of 60 %. In today's market more and more applications are demanding that hoses can handle products with an aromatic content of over and above the 60% maximum standard that the Nitrile lining covers.

To meet market demands we have developed a 'Viton' lining (A trademark of The Chemours Company) for single and double carcass hoses, to handle armomatic content upto 100 %. The Viton Lining is capable of handling a wide range of chemicals, including Sulfuric Acid, with high aromatic content and can accommodate operational temperatures of up to 100 °C (and exceed for specific products).

We have a successful track record of supplying Viton lined hoses around the world, including for applications such as CALM and CBM.

Hoses for H_2S Service

As oil wells become deeper and conditions harsher, Hydrogen Sulphide (H_2S) content in extracted product is becoming increasingly prevalent. The standard Nitrile lining has only limited resistance to H_2S and therefore we can offer hoses with a Hydrogenated Nitrile (HNBR) lining for greater H_2S resistance capability.

In accordance with the requirements of the latest industry guidelines, we have specifically type approved a range of hoses with a HNBR lining to be compatible with products with higher levels of H_2S of up to 500 ppm (liquid phase).

Reflex Hose Option

A Reflex hose does not have any helical wire reinforcement. Instead, the construction utilises separate groups of reinforcement separated by a thick rubber filler block. This arrangement serves to provide a good level of crush and kink resistance in normal service, but should a Reflex hose be accidentally kinked through overbending, then the full circular shape and performance characteristics will be regained once the kink initiating force is removed.

When a standard helical wire reinforced hose is crushed or over-bent to the point where the hose wall is flattened or kinked, the helical wire will be permanently deformed. The hose will then need to be retired from service. A Reflex hose will regain its shape and performance characteristics after such an event.

Reflex hoses can be particularly beneficial to systems where there can be a high risk of over-bending such as in a CBM system, but other systems can also benefit from Reflex designs.

The properties of a Reflex hose are different from those of a standard helical wire reinforced hose in terms of; tensile strength, bending stiffness, torsional stiffness etc. Advice should always be sought from us when considering the Reflex option.

Most hose types can be supplied with a Reflex construction, in both double and single carcass designs.

Our standard hose range are fully compliant with GMPHOM.

Ancillary Equipment

Complementing our hose manufacturing expertise, we also supply a wide range of mechanical ancillary equipment. This includes the essential items needed for making up complete hose string assemblies and for safe use of individual hoses.

With our in-house technical expertise, experienced engineers and approved suppliers we can offer standard ancillary equipment as commonly used in the make up of our marine hose strings together with customised equipment solutions to suit particular project requirements. All our equipment complies with relevant industry standards.

Below is a guide to some of the items we supply. For more information on ancillary equipment, please get in touch.

- Stud bolts & nuts
- Gaskets
- Chain assemblies - pick up chain
- Chain assemblies - snubbing chain
- Butterfly valve
- Camlock coupling
- Lightweight blind flange
- Flange insulator
- Pick up buoy
- Lifting spool piece
- Floating concentric reducer
- Floating Y piece
- Hose line marker beacon
- Submarine hose floats
- Anodes for hose flange connections
- Hose testing equipment

Hose testing equipment

Butterfly valve

Camlock

Submarine Hose Float

Datasheets available on request.

Intelligent Hoses

Position Monitoring Sensors for Marine Hose Systems

Our market leading hoses have just got even better with the addition of 'Intelligent Hoses' to our portfolio, a first in the market. Advanced sensor technology will add your hoses to a secure cloud-based system, enhancing functionality and providing an array of impressive features.

We are continually looking at ways we can improve and deliver unique solutions to the market and are very excited to be adding this service to our portfolio. The launch of 'Intelligent Hoses' will provide you with the option to purchase a package for position monitoring sensors for marine hose systems. As the name implies, this gives you the ability to track the positioning of your hoses in real time, and through the power of the cloud, this information is accessible anytime, anywhere."

Variable conditions out at sea mean that your hoses are subject to severe weather conditions, which can on occasions result in; hose string wrapping, hose over-bending, breakaway coupling activation, string auto submergence and more... The live data will alert you of such risks so that you can respond quickly, reducing; damage, downtime and costs and in turn increasing efficiency of your operations.

This is only the beginning for Continental's vision for the future of cloud connected hose technology for marine hoses. Going forward, we're looking to introduce: cradle to grave asset management, remote leak detection, remote collision detection, load monitoring and service life optimisation.

Intelligent hoses are the next generation for oil and marine hoses, with many benefits to you as a customer.

Continental's long-term goal is to extend functionalities of the cloud to benefit other products within the portfolio of the Oil and Marine Industry.

Technical Services

Our strengths and expertise are built around our team of international, highly qualified and experienced engineers, who are supported by our modern hose and system design tools and the most innovative technologies in the market.

Our Technical Support offering is inclusive of, but not limited to:

- System concept review and analysis
- Hose design
- Installation attendance
- Test and inspection
- Maintenance/repairs
- Resolving operational hose performance issues
- Lifetime evaluation and improvement
- Onsite or factory based training

For clients with whom we have a long term hose supply agreement, engineering support and service is provided as part of the contract and they also benefit from the support and advice of a dedicated engineer at any time. Site visits assist the engineer in gaining a detailed understanding of the client's operations, which in turn allows us to best assist the client in optimising hose and system usage.

We have a multi-disciplinary department, which includes hose design/development and factory hose manufacturing support as well as client support services. Conceptual hose and system design requirements can therefore include practical manufacturing considerations of the envisaged hose construction from the outset.

Basic hose design properties are determined from well proven formulae with finite element analysis enabling a detailed understanding of hose behavioural characteristics.

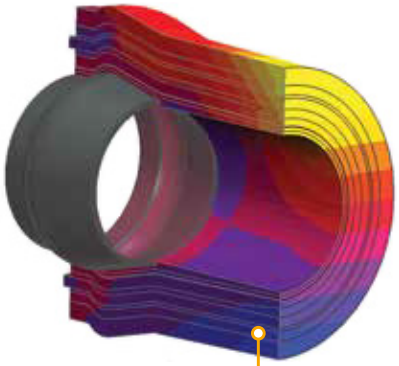
Together with extensive, destructive hose burst testing, our dynamic hose test rig has been instrumental in proving theory through long duration cyclic loading of full size hoses.

Our Chemists specialise in elastomer technology since we manufacture most of the hose elastomer compounds ourselves rather than buy them in. Extensive reinforcing cord fatigue evaluations are also performed on-site to assist component selection for assured long term performance.

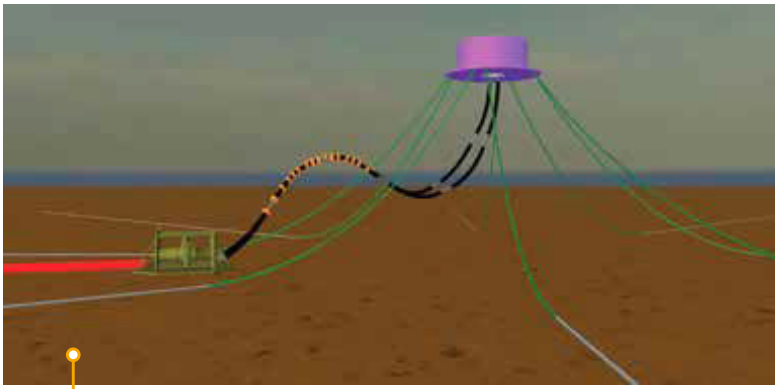
Design customisation for some clients has involved uprat-ing hose constructions for service outside recognised Standards, whilst retaining the design and manufacturing integrity demanded by those standards.

We hold in-house licenses for marine analysis programme "Orcaflex". This is typically used for conceptual system design evaluation, verification of final system design or for investigating hose system issues found in service.

In addition to the above we also host a technical seminar once a year, aimed at those who are interested in technical details of our hoses and their operations. The event is world renowned for its informative content and the opportunity it offers to network with other key players in the oil and marine industry. During the event we provide technical presentations from our expert engineers and guest speakers and provide a comprehensive tour of our manufacturing facilities.



Finite Element Analysis (FEA)



System analysis

Hose Management Services

Tailored, expert solutions for the maintenance of your flexible hose assemblies

Ensuring the safe and reliable operation of your flexible hose assemblies, whether in offshore or onshore installations, is essential. Effective hose management not only ensures your operation will continue to run smoothly, but will also eliminate any potential safety or environmental issues and reduce downtime to keep your productivity levels high.

Continental is a world leader in the manufacture of high-pressure drilling and bonded production hoses, crude oil transfer hoses as well as utility and hydraulic assemblies designed specifically for the oil and gas industry. Our expertise and knowledge in this field is unrivalled. With this in-depth capability we have helped to develop the industry standards and guidelines for best practice in the field of integrity management for flexible hose assemblies.

International oil and gas producers and operators across the globe rely on Continental throughout the lifecycle of their flexible hose assemblies, from design and specification through supply to full management of their fluid transfer systems in operation.

We can help you with a number of services, all designed to offer you peace of mind as standard. These are:

Inspection, Testing & Repair

A complete range of inspection and testing services – including:

- inspection and repair of external protection, rubber cover and end fitting painting
- high pressure hydrostatic testing,
- boroscope inspection of the internal carcass or liner
- recertification

Test and inspection can be carried out in dedicated facilities in a number of strategic locations worldwide, or we can come to your preferred location. In addition, we inspect and maintain reeling systems, such as bunker stations or offloading systems.

Inventory Management

An instant overview of all flexible hose assemblies on all of your installations worldwide: ContiConnect is a web-based inventory management program designed for your peace of mind. Being able to see the current status of your FHAs (Flexible Hose Assemblies) at the click of a button means you can schedule maintenance, order timely replacements and ensure trouble-free operations.

Installation and Commissioning

With our in-depth expertise in all aspects of fluid transfer in the oil and gas industry, we are your first-choice partner for advising and assisting in the specification, installation, commissioning and change-out of flexible hose assemblies and systems, including high-pressure drilling, production, utility, GMPHOM, turret and FPSO seawater intake hoses and also reeling stations.

Hose failure analysis

We carry out various investigations on damaged high-pressure hoses or hose parts at our facility, to reveal the possible causes of damage and propose necessary actions to avoid similar failures in the future.

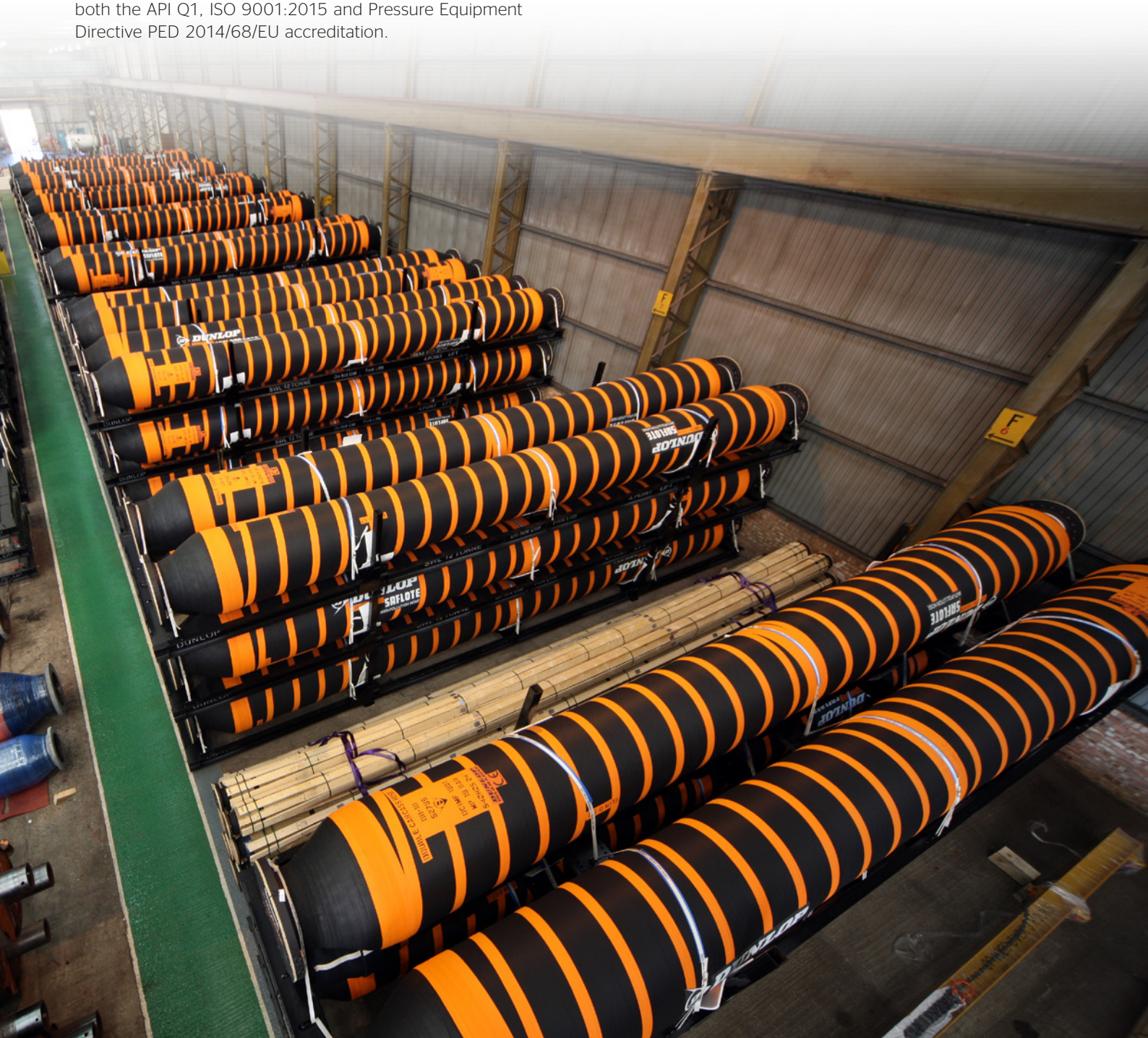
Quality

Across the business we take great pride in the quality and reliability of our products and services, and are confident they exceed the needs and requirements of the industry. Our commitment to exceeding customer expectations and providing an experience that is second to none is key to ensuring we provide clients with a strong return on their investment, which leads to a more successful partnership and complete customer satisfaction.

Because of our commitment to quality, we not only meet but exceed the standards that are used in our industry, and are proud to be the only hose manufacturer to have both the API Q1, ISO 9001:2015 and Pressure Equipment Directive PED 2014/68/EU accreditation.

Our quality system has been audited and certified by Lloyd's Register (LRQA) and is subject to regular review and audit.

The environmental thinking of the management and the employees is reflected by their daily activities and documented by the ISO 14001 environmental management system applied in the company.



Continental
Global Leader in Hose Solutions

Local Sales representation across the globe - ready to discuss your requirements.

Get more information about Continental Oil & Gas Hoses

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FHS-001-2025-V01 EN Schr