

The first and leading manufacturer of GMPHOM 2009 Oil Hoses in China



Jiangsu CDSR Technology Co., Ltd (CDSR) is the leading manufacturer of GMPHOM 2009 oil hoses and dredging hoses in China and has over 50 years' experience in the designing and the manufacture of rubber products.

CDSR started to produce dredging hoses in 1990, and as the first in China, developed floating discharge hose in 1996. CDSR is also the first company in China that developed oil hoses(as per OCIMF-1991, 4th edition) and obtained the national patent on that in 2004, then as the first and the only company in China, CDSR had its first prototype approved and certified in 2007. Now, CDSR has had its prototypes approved as per OCIMF-GMPHOM 2009. CDSR supplied its first oil hose string in 2008, and supplied the first oil hose string with its own brand CDSR to CNOOC in the year 2016, then was awarded "The Best Contractor of HYSY162 Platform" by CNOOC in 2017.

So far, CDSR has supplied hundreds of thousands of rubber hoses both in China and abroad, many of which are of reordering. Remaining its tradition of self-improvement and adhering to the road of innovation, CDSR will strive to build itself into a world-class company specialized in high-quality rubber products.

Over 50 years experience in the designing and manufacture of rubber products



ISO 9001, ISO 45001, & ISO 14001 certified



Oil Suction & Discharge Hoses for Offshore Moorings

Jiangsu CDSR Technology Co., Ltd (with the brand of "CDSR") provides a range of high quality, high performance, oil suction and discharge hoses, which fully comply with the requirements of the "Guide to Manufacturing and Purchasing Hoses for Offshore Moorings" (GMPHOM 2009). The CDSR Oil Suction & Discharge hoses are available with rated working pressures of 15 bar, 19 bar and 21 bar or higher for special applications or specific client requirements. Two distinctive designs within the CDSR hose range are available:

- **CDSR Single Carcass Hoses** (51 Series) Floating, Submarine & Catenary Hoses
- **CDSR Double Carcass Hoses** (52 Series) Floating, Submarine & Catenary Hoses

The **CDSR Single Carcass Hose** construction consists of three main elements:

- smooth bore elastomeric lining resistant to a variety of hydrocarbons,
- a standard elastomer reinforced carcass with multi-layers of high tensile textile cords and embedded steel wire helix,
- a fiber reinforced smooth elastomer cover, resistant to ageing, abrasion, weathering, sunlight, tearing, oil and seawater penetration.

In addition to the standard hose carcass (commonly termed 'primary' carcass), **CDSR Double Carcass Hose** incorporate an additional second carcass designed to contain any product escaping from the primary carcass as a result of a slow leak or sudden failure. An effective, robust and reliable, integrated leak detection and indication system is provided.

The CDSR Single Carcass and Double Carcass hose range is complemented by a comprehensive range of Ancillary Equipment.



CDSR hoses fully comply with the requirements of the "GMPHOM 2009"



CDSR hoses are designed and manufactured under a quality system in accordance with ISO 9001.



Prototype Hose manufacture and testing witnessed and verified by Bureau Veritas and DNV.

Oil Suction & Discharge Hoses for Offshore Moorings

Jiangsu CDSR Technology Co., Ltd (with the brand of "CDSR") provides a range of high-quality, high-performance elastomer reinforced, smooth bore, oil suction and discharge hoses. The CDSR hoses fully comply with the requirements of the "GMPHOM 2009".

CDSR hose range includes Single Carcass and Double Carcass hoses construction for Submarine, Catenary and Floating applications.

CDSR hoses are designed and manufactured under a quality system in accordance with ISO 9001.

51100 - Single Carcass Floating Hose



52100 - Double Carcass Floating Hose



51200 - Single Carcass Submarine Hose



52200 - Double Carcass Submarine Hose



51300 - Single Carcass Catenary Hose



52300 - Double Carcass Catenary Hose



CDSR provides a range of high-quality, high-performance, oil suction and discharge hoses. The **CDSR Single Carcass Floating Hoses** are designed for highly integrated surface installations such as CALM, SALM offloading in addition to FPSO, FSO Tandem offloading configurations.

The CDSR hoses fully comply with the requirements of the "GMPHOM 2009", and are designed and manufactured under a quality system in accordance with ISO 9001.

51110 FSC - End Reinforced Half Floating (i.e. First off Buoy)**51130 FSC - Mainline Floating****51150 FSC - Reducing Floating****51160 FSC - Tail Floating****51170 FSC - Tanker Rail Floating**

- * Other types of **Single Carcass Floating Hoses** on request.
- * For performance characteristics and specification, please refer to "**Single Carcass Hose Specification**"

CDSR provides a range of high-quality, high-performance, oil suction and discharge hoses. The **CDSR Single Carcass Submarine Hoses** are designed for highly integrated sub-sea installations such as MBM, CALM, SALM configurations (i.e. Steep 'S', Lazy 'S', Chinese Lantern).

The CDSR hoses fully comply with the requirements of the "GMPHOM 2009", and are designed and manufactured under a quality system in accordance with ISO 9001.

51210 SSC - End Reinforced without Float Collars (i.e. under Buoy / off PLEM)



51220 SSC - Mainline without Float Collars



51310 SSC - End Reinforced with Float Collars (i.e. under Buoy / off PLEM)



51320 SSC - Mainline with Float Collars



- * Other types of **Single Carcass Submarine Hoses** on request.
- * For performance characteristics and specification, please refer to "**Single Carcass Hose Specification**"

CDSR provides a range of high-quality, high-performance, oil suction and discharge hoses. The **CDSR Single Carcass Catenary Hoses** are designed for highly integrated floating offloading installations such as FPSO, FSO tandem offloading to Shuttle Tankers (i.e. Reel, Chute, Cantilever hang-off arrangements)

The CDSR hoses fully comply with the requirements of the "GMPHOM 2009", and are designed and manufactured under a quality system in accordance with ISO 9001.

51410 CSC - End Reinforced**51420 CSC - Mainline****51430 CSC - Controlled Buoyancy**

- * Other types of **Single Carcass Catenary Hoses** on request.
- * For performance characteristics and specification, please refer to "**Single Carcass Hose Specification**"

Performance Characteristics & Construction

Nominal Bore (mm):	150mm (6"), 200 mm (8"), 250 mm (10"), 300 mm (12"), 400 mm (16"), 500 mm (20"), 600 mm (24")
Standard Length:	9.1M (30'), 10.7M (35'), 12.2M (40') (non-standard less than 12.2M also available)
Hose Construction:	<ul style="list-style-type: none"> • Liner Tube - NBR based Rubber, resistant to hydrocarbons with aromatic content up to 60%. • Main Carcass - Elastomer reinforced with multi-layers of high tensile textile cords and embedded steel wire helix. • Floatation Material (Floating Hoses only) - Closed Cell Foam. • Outer Cover - Fiber reinforced smooth elastomer cover, resistant to ageing, abrasion, weathering, sunlight, tearing and oil and seawater penetration.
Flanges:	ANSI B16.5 Class 150 or 300 Flat Face (FF), Hot Dip Galvanized (Raised Face (RF) flange face available on request).
Pressure Rating:	15 bar, 19 bar, 21 bar (higher pressure ratings on request)
Minimum Burst Pressure:	75 bar, 95 bar, 105 bar
Flow Velocity:	Maximum of 21m/s
Fluid Product:	Crude Oil and Liquid Petroleum Products (other than liquefied petroleum gases and liquefied natural gases)
Temperature Range:	Fluid Temperature from -20°C to 82°C Ambient Temperature from -29°C to 52°C
Minimum Bend Radius:	Submarine Hose - 4 x hose Nominal Bore Diameter. Floating Hose - 6 x hose Nominal Bore Diameter.
Electrical Continuity:	Electrically Continuous or Discontinuous as required.

The CDSR hoses fully comply with the requirements of the 'GMPHOM 2009', and are designed and manufactured under a quality system in accordance with ISO 9001.

Prototype Hose manufacture and testing witnessed and verified by Bureau Veritas and DNV.

CDSR provides a range of high-quality, high-performance, oil suction and discharge hoses. The **CDSR Double Carcass Floating Hoses** are designed for high integrity surface installations such as CALM, SALM offloading in addition to FPSO, FSO Tandem offloading configurations.

In addition to the standard hose carcass (commonly termed 'primary carcass'). **CDSR Double Carcass Hose** incorporate an additional second carcass designed to contain any product escaping from the primary carcass as a result of a slow leak or sudden failure. An effective, robust and reliable, integrated leak detection and indication system is provided.

The CDSR hoses fully comply with the requirements of the "GMPHOM 2009", and are designed and manufactured under a quality system in accordance with ISO 9001.

52110 FDC - End Reinforced Half Floating (i.e. First off Buoy)



52130 FDC - Mainline Floating



52150 FDC - Reducing Floating



52160 FDC - Tail Floating



52170 FDC - Tanker Rail Floating



- * Other types of **Double Carcass Floating Hoses** on request.
- * For performance characteristics and specification, please refer to "**Double Carcass Hose Specification**"

Double Carcass Submarine Hose '52' Series

CDSR

CDSR provides a range of high-quality, high-performance, oil suction and discharge hoses. The **CDSR Double Carcass Submarine Hoses** are designed for highly integrated sub-sea installations such as MBM, CALM, SALM configurations (i.e. Steep 'S', Lazy 'S', Chinese Lantern).

In addition to the standard hose carcass (commonly termed 'primary' carcass), **CDSR Double Carcass Hose** incorporate an additional second carcass designed to contain any product escaping from the primary carcass as a result of a slow leak or sudden failure. An effective, robust and reliable, integrated leak detection and indication system is provided.

The CDSR hoses fully comply with the requirements of the "GMPHOM 2009", and are designed and manufactured under a quality system in accordance with ISO 9001.

52210 SDC - End Reinforced without Float Collars (i.e. under Buoy / off PLEM)



52220 SDC - Mainline without Float Collars



52310 SDC - End Reinforced with Float Collars (i.e. under Buoy / off PLEM)



52320 SDC - Mainline with Float Collars



- * Other types of **Double Carcass Submarine Hoses** on request.
- * For performance characteristics and specification, please refer to "**Double Carcass Hose Specification**"

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CDSR provides a range of high-quality, high-performance, oil suction and discharge hoses. The **CDSR Double Carcass Catenary Hoses** are designed for highly integrated floating offloading installations such as FPSO, FSO tandem offloading to Shuttle Tankers (i.e. Reel, Chute, Cantilever hang-off arrangements).

In addition to the standard hose carcass (commonly termed 'primary' carcass), **CDSR Double Carcass Hose** incorporate an additional second carcass designed to contain any product escaping from the primary carcass as a result of a slow leak or sudden failure. An effective, robust and reliable, integrated leak detection and indication system is provided.

The CDSR hoses fully comply with the requirements of the "GMPHOM 2009", and are designed and manufactured under a quality system in accordance with ISO 9001.

52410 CDC - End Reinforced



52420 CDC - Mainline



52430 CDC - Controlled Buoyancy



- * Other types of **Double Carcass Catenary Hoses** on request.
- * For performance characteristics and specification, please refer to "**Double Carcass Hose Specification**"

Performance Characteristics & Construction

Nominal Bore (mm):	150mm (6"), 200 mm (8"), 250 mm (10"), 300 mm (12"), 400 mm (16"), 500 mm (20"), 600 mm (24").
Standard Length:	9.1M (30'), 10.7M (35'), 12.2M (40') (non-standard less than 12.2M also available).
Hose Construction:	<ul style="list-style-type: none"> Liner Tube - NBR based Rubber, resistant to hydrocarbons with aromatic content up to 60%. Main Carcass - Elastomer reinforced with multi-layers of high tensile textile cords and embedded steel wire helix. Secondary Carcass - Elastomer reinforced with multi-layers of high tensile textile cords. Floataction Material (Floating Hoses only) - Closed Cell Foam. Outer Cover - Fiber reinforced smooth elastomer cover, resistant to ageing, abrasion, weathering, sunlight, tearing and oil and seawater penetration.
Flanges:	ANSI B16.5 Class 150 or 300 Flat Face (FF), Hot Dip Galvanized (Raised Face (RF) flange face available on request).
Pressure Rating:	Primary Carcass - 15 bar, 19 bar, 21 bar (higher pressure ratings on request) Secondary Carcass - 15 bar, 19 bar, 21 bar.
Minimum Burst Pressure:	Primary Carcass - 75 bar, 95 bar, 105 bar. Secondary Carcass - 30 bar, 38 bar, 42 bar.
Flow Velocity:	Maximum of 21m/s
Fluid Product:	Crude Oil and Liquid Petroleum Products (other than liquefied petroleum gases and liquefied natural gases)
Temperature Range:	Fluid Temperature from -20°C to 82°C Ambient Temperature from -29°C to 52°C
Minimum Bend Radius:	Submarine Hose - 4 x hose Nominal Bore Diameter Floating Hose - 6 x hose Nominal Bore Diameter
Electrical Continuity:	Electrically Continuous or Discontinuous as required
Leak Detection:	Pressure compensated leak detection system for Floating, Submarine & Catenary applications.

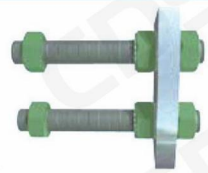
The CDSR hoses fully comply with the requirements of the "GMPHOM 2009", and are designed and manufactured under a quality system in accordance with ISO 9001.

Prototype Hose manufacture and testing witnessed and verified by Bureau Veritas and DNV.

The CDSR Single Carcass and Double Carcass hose range is complemented by a range of **Ancillary Equipment** in addition to equipment to aid Transportation, Handling and Testing.

Flange Jointing

- 53511 - Studs and Nuts
- 53512 - Gaskets



Chain Assemblies

- 53521 - Pick-up Chain
- 53522 - Snubbing Chain



Hose End Fittings

- 53531 - Butterfly Valve
- 53532 - Lifting Spool Piece
- 53533 - Camlock Coupling
- 53534 - Lightweight Blind Flange



Buoyancy Equipment

- 53541 - Pick-up Buoy
- 53542 - Floating Concentric Reducer
- 53543 - Floating 'Y' Piece
- 53544 - Hose Floats



Hose Marker Lights

- 53551 - Winker Light

