...your innovative provider of high integrity equipment.

Double Carcass Floating Hose

'22' SERIES

EMSTEC provide a range of high quality, high performance, oil suction and discharge hoses, extensively used at offshore moorings throughout the world. The *EMSTEC* **Double Carcass Floating** hoses are utilized in high integrity surface installations such as EPS, SBM, CALM, SALM offloading in addition to FPSO, FSO Tandem offloading configurations.

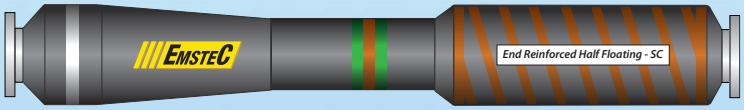
In addition to the standard hose carcass (commonly termed 'primary' carcass), *EMSTEC* **Double Carcass Floating** hoses incorporate an additional second carcass designed to contain any product escaping from the standard carcass as a result of a slow leak or sudden failure. An effective, robust and reliable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

EMSTEC Double Carcass Submarine hoses fully comply with the requirements of the "Guide to Manufacturing and Purchasing Hoses for Offshore Moorings, **OCIMF/GMPHOM 2009 - 5th Edition**".

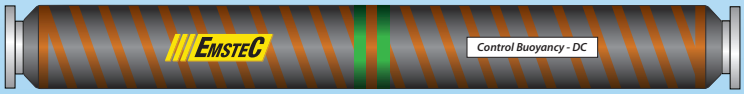
All hoses are designed and manufactured under a quality system in accordance with ISO 9001.

For performance characteristics and specification, please refer to EMSTEC data sheet 'Double Carcass Hose Specification'.

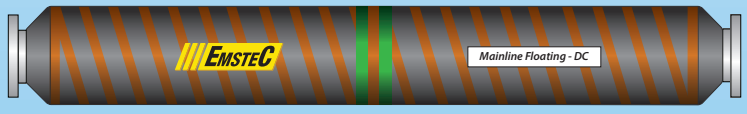
22110 FDC - End Reinforced Half Floating (ie. First off Buoy)



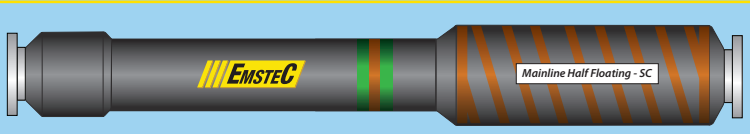
22120 FDC - Controlled Buoyancy



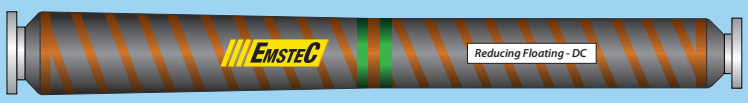
22130 FDC - Main Line Floating



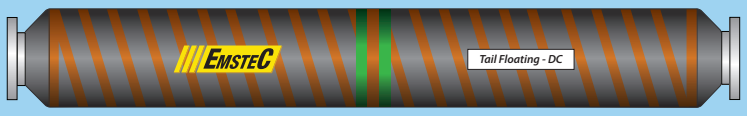
22140 FDC - Main Line Half Floating



22150 FDC - Reducing Floating



22160 FDC - Tail Floating



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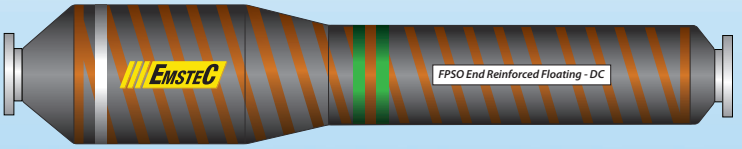
Double Carcass Floating Hose (continuation)

'22' SERIES

22170 FDC - Tanker Rail Floating

22180 FDC - FPSO - End Reinforced High Buoyancy Floating (ie. First off FPSO to support ERC) *



22190 FDC – ST End Reinforced High Buoyancy Floating (ie. Shuttle Tanker connection to support HEV) *

* NOTE:

The *EMSTEC* **Doublee Carcass Floating** hoses designed for **special end connection applications** are utilized in high integrity surface installations such as FPSO, FSO Tandem offloading configurations offshore Brazil.

The special hoses are installed at the ends of the floating hose string, connected to the FPSO/FSO hang-off Emergency Release Coupling (ERC) and the Shuttle Tanker bow loading system Hose End Valve (HEV).

The additional buoyancy within the special FPSO end hose will support the ERC on the surface of the sea, if released in an emergency. The Shuttle Tanker end hose will support the HEV on the surface of the sea, during hose transfer and / or emergency release

For performance characteristics and specification, please refer to EMSTEC data sheet 'Double Carcass Hose Specification'.

EMSTEC

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Double Carcass Hose Specification

'22' SERIES

EMSTEC Double Carcass Submarine, Floating & Catenary hoses fully comply with the requirements of the "Guide to Manufacturing and Purchasing Hoses for Offshore Moorings, **OCIMF/GMPHOM 2009 - 5th Edition**".

PERFORMANCE CHARACTERISTICS & CONSTRUCTION

Nominal Bore (mm):	*150 (6"), 200 (8"), 250 (10"), 300 (12"), 400 (16"), 500 (20"), 600 (24")* *(non-standard diameters available on request)*
Standard Length:	*9.1M (30'), 10.7M (35') & 12.2M (40')* *(non-standard less than 12.2M also available)*
Hose Construction:	Liner Tube – *NBR based Rubber, resistant to hydrocarbons with aromatic content up to 60%* Primary 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* Floatation Material (Floating Hoses only) – *Closed cell foam* Outer Cover – *Fibre reinforced smooth elastomer cover, resistant to ageing, abrasion, weathering, sunlight, tearing and oil and seawater penetration.* *(Polyurethane coating available on request).*
Flanges:	*ANSI B16.5 Class 150 or 300 Flat Face (FF) or Raised Face (RF),* *Hot Dip Galvanisation in accordance with BS729 Part 1, EN ISO 1461*
Pressure Rating:	*Primary Carcass - 15 BAR (225 PSI), 19 BAR (275 PSI), 21 BAR (305 PSI)* *(higher pressure ratings on request)* *Secondary Carcass - 15 BAR (225 PSI), 19 BAR (275 PSI), 21 BAR (305 PSI)*
Minimum Burst Pressure:	Primary Carcass - *75 BAR (1090 PSI), 95 BAR (1375 PSI), 105 BAR (1525 PSI)* Secondary Carcass - *30 BAR (435 PSI), 38 BAR (550 PSI), 42 BAR (610 PSI)*
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 Hoses - *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.*

For information regarding hose types and applications, please refer to relevant EMSTEC hose data sheets.

DESIGN APPROVAL & QUALITY ASSURANCE

All of the 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 & Det Norske Veritas (Certifying Authorities) and GDC International (Industry Consultants).


ISO 9001
Design

ISO 9001
Manufacture


Prototype Approval
(BV)


Prototype Approval
(DNV)


Prototype Approval
(GDC)

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