

# Single Carcass Floating Hose

## ‘21’ 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 **Single 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.

The EMSTEC hose fully complies with the requirements of the “Guide to Manufacturing and Purchasing Hoses for Offshore Moorings, **OCIMF/GMPHOM 2009 - 5th Edition**”.

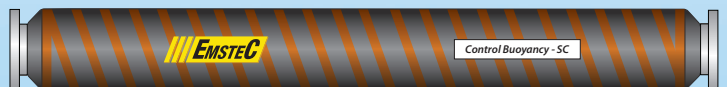
All hoses are designed and manufactured under a quality system in accordance with ISO 9001.

For performance characteristics and specification, please refer to EMSTEC data sheet ‘Single Carcass Hose Specification’.

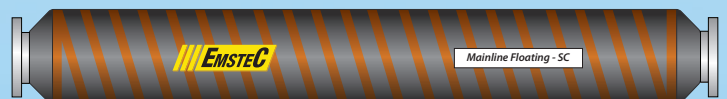
### 21110 FSC - End Reinforced Half Floating (ie. First off Buoy)



### 21120 FSC - Controlled Buoyancy



### 21130 FSC - Main Line Floating



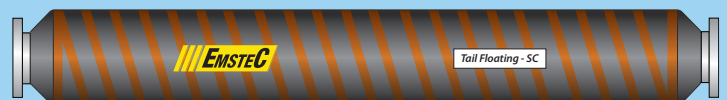
### 21140 FSC - Main Line Half Floating



### 21150 FSC - Reducing Floating



### 21160 FSC - Tail Floating



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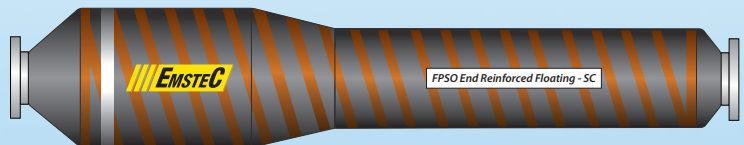
# Single Carcass Floating Hose (continuation)

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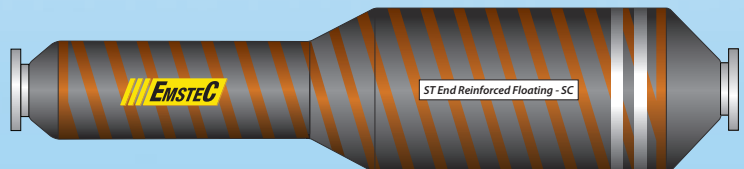
### 21170 FSC - Tanker Rail Floating



### 21180 FSC - FPSO - End Reinforced High Buoyancy Floating (ie. First off FPSO to support ERC) \*



### 21190 FSC - ST End Reinforced High Buoyancy Floating (ie. Shuttle Tanker connection to support HEV) \*



#### \* NOTE

The **EMSTEC Single 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 'Single Carcass Hose Specification'.*

# Single Carcass Hose Specification

## '21' SERIES

EMSTEC Single 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

|                                |  |
|--------------------------------|--|
| <b>Nominal Bore (mm):</b>      | 150 (6"), 200 (8"), 250 (10"), 300 (12"), 400 (16"), 500 (20"), 600 (24")<br>(non-standard diameters available on request)   |
| <b>Standard Length:</b>        | 9.1M (30'), 10.7M (35') & 12.2M (40') (non-standard less than 12.2M also available)  |
| <b>Hose Construction:</b>      | Liner Tube – NBR based Rubber, resistant to hydrocarbons with aromatic content up to 60%.<br>Main Carcass – Elastomer reinforced with multi-layers of high tensile textile cords and embedded steel wire helix.<br>Floatation Material (Floating Hoses only) – Closed Cell Foam<br>Outer Cover – Fibre reinforced smooth elastomer cover, resistant to ageing, abrasion, weathering, sunlight, tearing and oil and seawater penetration.<br>(Polyurethane coating available on request). |
| <b>Flanges:</b>                | ANSI B16.5 Class 150 or 300 Flat Face (FF) or Raised Face (RF),<br>Hot Dip Galvanisation in accordance with BS729 Part 1, EN ISO 1461  |
| <b>Pressure Rating:</b>        | 15 BAR (225 PSI), 19 BAR (275 PSI), 21 BAR (305 PSI) (higher pressure ratings on request)  |
| <b>Minimum Burst Pressure:</b> | 75 BAR (1090 PSI), 95 BAR (1375 PSI), 105 BAR (1525 PSI)   |
| <b>Flow Velocity:</b>          | Maximum of 21m/s   |
| <b>Fluid Product:</b>          | Crude Oil and Liquid Petroleum Products<br>(other than liquefied petroleum gases and liquefied natural gases).   |
| <b>Temperature Range:</b>      | Fluid Temperature from -20°C to 82°C.<br>Ambient Temperature from -29°C to 52°C.   |
| <b>Minimum Bend Radius:</b>    | Submarine Hose - 4 x hose Nominal Bore Diameter.<br>Floating Hose – 6 x hose Nominal Bore Diameter   |
| <b>Electrical Continuity:</b>  | Electrically Continuous or Discontinuous as required.  |

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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