

SINGLE CARCASS SUBMARINE HOSE

'21' SERIES

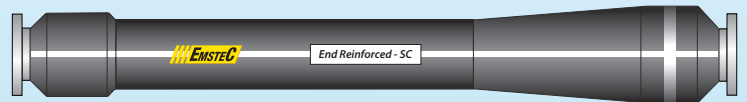
EMSTEC provide a range of high quality, high performance, oil suction and discharge hoses, extensively used at offshore moorings throughout the world. The EMSTEC **Single Carcass Submarine** hoses are utilized in high integrity sub-sea installations such as MBM, CALM, SALM configurations (i.e. Steep 'S', Lazy 'S', Chinese Lantern).

The EMSTEC hose fully complies with the requirements of the "OCIMF Guide to Purchasing, Manufacturing and Testing of Loading and Discharge Hoses for Offshore Moorings, Fourth Edition – 1991".

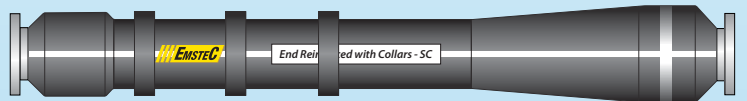
All hoses are designed and manufactured under a quality system in accordance with ISO 9001, and compliance with Pressure Equipment Directive (PED) 97/23/EC module H (hoses carry CE marking as required).

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

21210 SSC - End Reinforced without float collars (i.e. under Buoy)



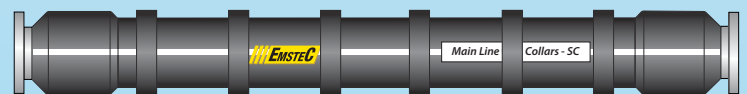
21310 SSCF – End Reinforced with float collars (i.e. under Buoy) *



21220 SSC - Main Line without float collars



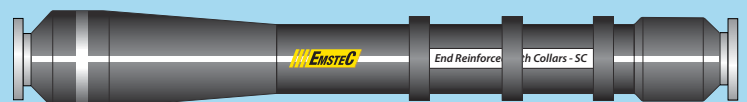
21320 SSCF - Main Line with float collars



21230 SSC - End Reinforced without float collars (i.e. off PLEM)



21330 SSCF – End Reinforced with float collars (i.e. off PLEM) *



*Note: Number and distribution of float collars can be adjusted to suit client specific requirements.

SINGLE CARCASS SUBMARINE HOSE (continuation) '21' SERIES

21240 SSC - Both Ends Reinforced without float collars



21250 SSC - Reducing Hose without float collars



21260 SSC - Tail Hose without float collars



21270 SSC - Tanker Rail



SINGLE CARCASS HOSE SPECIFICATION

'21' SERIES

EMSTEC Single Carcass Submarine, Floating & Catenary hoses fully comply with the requirements of the "OCIMF Guide to Purchasing, Manufacturing and Testing of Loading and Discharge Hoses for Offshore Moorings, Fourth Edition – 1991".

PERFORMANCE CHARACTERISTICS & CONSTRUCTION

Nominal Bore (mm):	150 (6"), 200 (8"), 250 (10"), 300 (12"), 400 (16"), 500 (20"), 600 (24")
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%. 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 – 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), Hot Dip Galvanised in accordance with BS729 Part 1. (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.

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, and is in compliance with Pressure Equipment Directive (PED) 97/23/EC module H (hoses carry CE marking as required).

Prototype Hose manufacture and testing witnessed and verified by Bureau Veritas (Certifying Authority) and GDC International (Industry Consultant).



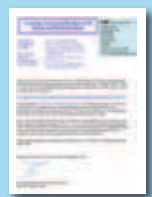
ISO 9001
Design



ISO 9001
Manufacture



Prototype Approval
(BV)



Prototype Approval
(GDC)