



RT REINFORCED SINGLE CARCASS 19 bar 1000 Series

Reeling Hose



RT REINFORCED SINGLE CARCASS HOSE





RT REINFORCED SINGLE CARCASS 19 bar 1000 Series Reeling Hose

Type 1731 S RT **One Reinforced End Hose**



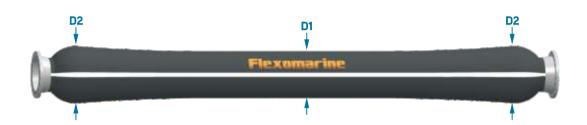
| Nominal | Outside Diameter (mm) | | | | Weight Submerged V | Minimum Bending | | |
|--------------|--------------------------|-----|-----|-----|--------------------------|--------------------------|--------------------|---------------|
| Bore (mm) | D1 | D2 | D3 | D4 | 9.1m (30ft) | 10.7m (35ft) | 12.2m (40ft) | Radius (m) |
| 300 (12") | 660 | 460 | 440 | 650 | 1542 595 | 1762 <mark>670</mark> | 1968 740 | 1.2 |
| 400 (16") | 760 | 565 | 550 | 750 | 2091 <mark>840</mark> | 2385 942 | 2661 1038 | 1.6 |
| 500 (20") | 860 | 665 | 650 | 850 | 2719 1122 | 3101 1259 | 3460 1388 | 2.0 |
| 600 (24") | 910 | 795 | 765 | 890 | 3665 1520 | 4192 1713 | 4687 1893 | 2.4 |

- Single Carcass Hose FLEXOMARINE One Reinforced End Submarine Hose to be used on FPSO connections
- Rated Working Pressure: 19 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested



RT REINFORCED SINGLE CARCASS 19 bar 1000 Series Reeling Hose

Type 1732 S RT **Mainline Hose**



| Nominal | Outside Diameter (mm) | | · · | Weight in Air Empty (kg) Submerged Weight Full of Sea Water (kg) | | | | |
|--------------|--------------------------|-----------|--------------------------|--|-----------------|---------------|--|--|
| Bore (mm) | D1 Body | D2 End | 9.1m (30ft) | 10.7m (35ft) | 12.2m (40ft) | Radius (m) | | |
| 300 (12") | 440 | 650 | 1369 4 8 9 | 1549 5 36 | 1718 579 | 1.2 | | |
| 400 (16") | 550 | 750 | 1886 7 07 | 2131 7 72 | 2362 834 | 1.6 | | |
| 500 (20") | 650 | 850 | 2477 955 | 2801 1044 | 3106 1128 | 2.0 | | |
| 600 (24") | 765 | 890 | 3377 1302 | 3835 14 <mark>3</mark> 3 | 4265 1556 | 2.4 | | |

- Single Carcass Hose FLEXOMARINE Mainline Submarine Hose for use as the main submarine hose in the string to connect between reel and Tanker on reeling systems
- Rated Working Pressure: 19 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested



RT REINFORCED SINGLE CARCASS 19 bar 1000 Series Reeling Hose

Type 1735 S RT **Tanker End Hose**



| Nominal | | | | Weight in Air Empty (kg) Submerged Weight Full of Sea Water (kg) | | | | |
|--------------|-----------|------------|--------------------------|--|-----------------|---------------|--|--|
| Bore (mm) | D1 End | D2 Body | 9.1m (30ft) | 10.7m (35ft) | 12.2m (40ft) | Radius (m) | | |
| 300 (12") | 440 | 650 | 1378 498 | 1558 544 | 1726 588 | 1.2 | | |
| 400 (16") | 550 | 750 | 1896 <mark>717</mark> | 2142 783 | 2372 844 | 1.6 | | |
| 500 (20") | 650 | 850 | 2490 <mark>967</mark> | 2814 1057 | 3118 1141 | 2.0 | | |
| 600 (24") | 765 | 890 | 3444 1315 | 3912 1448 | 4350 1572 | 2.4 | | |

- Single Carcass Hose FLEXOMARINE Tanker End Submarine Hose for use to facilitate lifting up the string
- Identified by a double circumferencial white bands at the tanker end
- This hose is extremely flexible to support the curvature demanded during offloading
- In the hose fittings are welded lifting lugs
- Each lug are tested to support Safe Working Loads as follow:

12" = 100 kN 16"

16" = 150 kN

20" = 200 kN

- Rated Working Pressure: 19 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested





RT REINFORCED SINGLE CARCASS 21 bar 1000 Series

Reeling Hose



RT REINFORCED SINGLE CARCASS HOSE





RT REINFORCED SINGLE CARCASS 21 bar 1000 Series Reeling Hose

$\label{type 1831} \textit{S} \; \textit{RT} \; \textbf{One} \; \textbf{Reinforced} \; \textbf{End} \; \textbf{Hose}$



| Nominal | Outside Diameter (mm) | | | | Weight Submerged V | Minimum Bending | | |
|--------------|--------------------------|-----|-----|-----|--------------------|--------------------------|-----------------|---------------|
| Bore (mm) | D1 | D2 | D3 | D4 | 9.1m (30ft) | 10.7m (35ft) | 12.2m (40ft) | Radius (m) |
| 300 (12") | 660 | 460 | 440 | 650 | 1550 598 | 1771 673 | 1978 744 | 1.2 |
| 400 (16") | 760 | 565 | 550 | 750 | 2101 844 | 2397 <mark>947</mark> | 2674 1043 | 1.6 |
| 500 (20") | 860 | 665 | 650 | 850 | 2732 1128 | 3117 1266 | 3477 1395 | 2.0 |
| 600 (24") | 910 | 795 | 765 | 890 | 3683 1528 | 4213 1721 | 4710 1903 | 2.4 |

- Single Carcass Hose FLEXOMARINE One Reinforced End Submarine Hose to be used on FPSO connections
- Rated Working Pressure: 21 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested



RT REINFORCED SINGLE CARCASS 21 bar 1000 Series Reeling Hose

Type 1832 S RT **Mainline Hose**



| Nominal | | Diameter nm) | Weig Submerged V | Minimum Bending | | |
|--------------|------------|-----------------|----------------------|---------------------------|-----------------|---------------|
| Bore (mm) | D1 Body | D2 End | 9.1m (30ft) | 10.7m (35ft) | 12.2m (40ft) | Radius (m) |
| 300 (12") | 440 | 650 | 1376 4 <u>9</u> 2 | 1557 538 | 1726 582 | 1.2 |
| 400 (16") | 550 | 750 | 1895 7 10 | 2142 <mark>7</mark> 76 | 2374 838 | 1.6 |
| 500 (20") | 650 | 850 | 2489 960 | 2815 1050 | 3121 1134 | 2.0 |
| 600 (24") | 765 | 890 | 3394 1309 | 3854 1440 | 4286 1564 | 2.4 |

- Single Carcass Hose FLEXOMARINE Mainline Submarine Hose for use as the main submarine hose in the string to be connected between reel and the Tanker on reeling systems
- Rated Working Pressure: 21 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested



RT REINFORCED SINGLE CARCASS 21 bar 1000 Series Reeling Hose

Type 1835 S RT **Tanker End Hose**



| Nominal | | Diameter m) | , and the second se | Weight in Air Empty (kg) Submerged Weight Full of Sea Water (kg) | | | | |
|--------------|-----------|----------------|--|--|--------------------------|---------------|--|--|
| Bore (mm) | D1 End | D2 Body | 9.1m (30ft) | 10.7m (35ft) | 12.2m (40ft) | Radius (m) | | |
| 300 (12") | 440 | 650 | 1385 501 | 1566 547 | 1735 <mark>591</mark> | 1.2 | | |
| 400 (16") | 550 | 750 | 1906 721 | 2153 787 | 2384 848 | 1.6 | | |
| 500 (20") | 650 | 850 | 2502 972 | 2828 1062 | 3134 1146 | 2.0 | | |
| 600 (24") | 765 | 890 | 3461 1322 | 3931 1455 | 4372 1580 | 2.4 | | |

- Single Carcass Hose FLEXOMARINE Tanker End Submarine Hose for use to facilitate lifting up the string
- Identified by a double circumferencial white bands at the tanker end
- This hose is extremely flexible to support the curvature demanded during offloading
- In the hose fittings are welded lifting lugs
- Each lug are tested to support Safe Working Loads as follow:

12" = 100 kN 16" =

16" = 150 kN

20" = 200 kN

- Rated Working Pressure: 21 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- = Electrical Continuity: Discontinuous or as requested





RT DOUBLE CARCASS 15 bar 7000 Series

Reeling Hose



RT DOUBLE CARCASS HOSE





RT DOUBLE CARCASS 15 bar 7000 Series

Reeling Hose

Type 7631 S RT **One Reinforced End Hose**



| Nominal | | | Diameter nm) | | Weig Submerged V | Minimum Bending | | |
|--------------|------|-----|-----------------|------|---------------------|--------------------------|-----------------|---------------|
| Bore (mm) | D1 | D2 | D3 | D4 | 9.1m (30ft) | 10.7m (35ft) | 12.2m (40ft) | Radius (m) |
| 300 (12") | 710 | 505 | 480 | 700 | 1890 595 | 2140 638 | 2374 679 | 1.2 |
| 400 (16") | 810 | 595 | 570 | 800 | 2494 854 | 2819 <mark>917</mark> | 3123 976 | 1.6 |
| 500 (20") | 920 | 710 | 685 | 900 | 3164 1100 | 3587 1190 | 3984 1275 | 2.0 |
| 600 (24") | 1070 | 840 | 820 | 1050 | 4350 1527 | 4951 1663 | 5514 1791 | 2.4 |

- Double Carcass Hose FLEXOMARINE SAFE One Reinforced End Submarine Hose to be used on FPSO connections
- Rated Working Pressure: 15 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested
- Leak Detection: In case of failure of the primary carcass, a rod installed in each hose end, that is inicially embedded will become visible after the burst of the primary carcass giving confirmation of the failure.



RT DOUBLE CARCASS 15 bar 7000 Series

Reeling Hose

Type 7632 S RT **Mainline Hose**



| Nominal | | Diameter nm) | · · | Weight in Air Empty (kg) Submerged Weight Full of Sea Water (kg) | | | | |
|--------------|------------|-----------------|----------------|--|--------------------------|---------------|--|--|
| Bore (mm) | D1 Body | D2 End | 9.1m (30ft) | 10.7m (35ft) | 12.2m (40ft) | Radius (m) | | |
| 300 (12") | 480 | 700 | 1784 568 | 2009 602 | 2220 <mark>635</mark> | 1.2 | | |
| 400 (16") | 570 | 800 | 2368 813 | 2663 8 <mark>6</mark> 2 | 2940 909 | 1.6 | | |
| 500 (20") | 685 | 900 | 3014 1036 | 3403 11 <u>0</u> 5 | 3767 1171 | 2.0 | | |
| 600 (24") | 820 | 1050 | 4167 1432 | 4726 1539 | 5249 1639 | 2.4 | | |

- Double Carcass Hose FLEXOMARINE SAFE Mainline Submarine Hose for use as the main submarine hose in the string to be connected between reel and the Tanker on reeling systems
- Rated Working Pressure: 15 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested
- Leak Detection: In case of failure of the primary carcass, a rod installed in each hose end, that is inicially embedded will become visible after the burst of the primary carcass giving confirmation of the failure.



RT DOUBLE CARCASS 15 bar 7000 Series

Reeling Hose

Type 7635 S RT **Tanker End Hose**

FLEXOMARINE SAFE



| Nominal | Outside ((m | | Ŭ | Weight in Air Empty (kg) Submerged Weight Full of Sea Water (kg) | | | |
|--------------|-----------------|------------|--------------------|--|-----------------|---------------|--|
| Bore (mm) | D1 End | D2 Body | 9.1m (30ft) | 10.7m (35ft) | 12.2m (40ft) | Radius (m) | |
| 300 (12") | 480 | 700 | 1793 577 | 2018 611 | 2229 644 | 1.2 | |
| 400 (16") | 570 | 800 | 2379 823 | 2674 873 | 2951 919 | 1.6 | |
| 500 (20") | 685 | 900 | 3027 1048 | 3416 1118 | 3780 1183 | 2.0 | |
| 600 (24") | 820 | 1050 | 4188 1441 | 4749 1552 | 5275 1640 | 2.4 | |

- Double Carcass Hose FLEXOMARINE Tanker End Submarine Hose for use to facilitate lifting up the string
- Identified by a double circumferencial white bands at the tanker end
- This hose is extremely flexible to support the curvature demanded during offloading
- The fittings hose are welded lifting lugs
- Each lug are tested to support Safe Working Loads as follow:

12" = 100 kN

16" = 150 kN

20" = 200 kN

- Rated Working Pressure: 15 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- = Electrical Continuity: Discontinuous or as requested
- Leak Detection: In case of failure of the primary carcass, a rod installed in each hose end, that is inicially embedded will become visible after the burst of the primary carcass giving confirmation of the failure.





RT DOUBLE CARCASS 19 bar 7000 Series

Reeling Hose



RT DOUBLE CARCASS HOSE



RT DOUBLE CARCASS 19 bar 7000 Series

Reeling Hose

Type 7731 S RT **One Reinforced End Hose**



| Nominal | Outside Diameter (mm) | | | | Weig Submerged V | Minimum Bending | | |
|--------------|--------------------------|-----|-----|------|---------------------|--------------------------|-----------------|---------------|
| Bore (mm) | D1 | D2 | D3 | D4 | 9.1m (30ft) | 10.7m (35ft) | 12.2m (40ft) | Radius (m) |
| 300 (12") | 710 | 515 | 490 | 700 | 1914 593 | 2171 637 | 2412 678 | 1.2 |
| 400 (16") | 810 | 615 | 590 | 800 | 2564 860 | 2906 <mark>925</mark> | 3227 985 | 1.6 |
| 500 (20") | 920 | 725 | 700 | 900 | 3277 1126 | 3721 1217 | 4136 1302 | 2.0 |
| 600 (24") | 1070 | 860 | 830 | 1050 | 4396 1545 | 5004 1680 | 5574 1807 | 2.4 |

- Double Carcass Hose FLEXOMARINE SAFE One Reinforced End Submarine Hose to be used on FPSO connections
- Rated Working Pressure: 19 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested
- Leak Detection: In case of failure of the primary carcass, a rod installed in each hose end, that is inicially embedded will become visible after the burst of the primary carcass giving confirmation of the failure.



RT DOUBLE CARCASS 19 bar 7000 Series

Reeling Hose

Type 7732 S RT Mainline Hose



| Nominal | | Diameter nm) | Ŭ | Weight in Air Empty (kg) Submerged Weight Full of Sea Water (kg) | | | | |
|--------------|------------|-----------------|---------------------------|--|--------------------------|---------------|--|--|
| Bore (mm) | D1 Body | D2 End | 9.1m (30ft) | 10.7m (35ft) | 12.2m (40ft) | Radius (m) | | |
| 300 (12") | 490 | 700 | 1809 <mark>5</mark> 61 | 2042 595 | 2261 <mark>628</mark> | 1.2 | | |
| 400 (16") | 590 | 800 | 2439 <mark>8</mark> 11 | 2752 <mark>862</mark> | 3046 909 | 1.6 | | |
| 500 (20") | 700 | 900 | 3129 1058 | 3538 11 <mark>2</mark> 9 | 3921 1196 | 2.0 | | |
| 600 (24") | 830 | 1050 | 4217 1449 | 4783 15 <u>5</u> 6 | 5314 1657 | 2.4 | | |

- Double Carcass Hose FLEXOMARINE Mainline Submarine Hose for use as the main submarine hose in the string to connect between reel and Tanker on reeling systems
- Rated Working Pressure: 19 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested
- Leak Detection: In case of failure of the primary carcass, a rod installed in each hose end, that is inicially embedded will become visible after the burst of the primary carcass giving confirmation of the failure.



RT DOUBLE CARCASS 19 bar 7000 Series

Reeling Hose

Type 7735 S RT **Tanker End Hose**

FLEXOMARINE SAFE



| Nominal | Outside Diameter (mm) | | , and the second se | Weight in Air Empty (kg) Submerged Weight Full of Sea Water (kg) | | | | |
|--------------|--------------------------|------------|--|--|--------------------------|---------------|--|--|
| Bore (mm) | D1 End | D2 Body | 9.1m (30ft) | 10.7m (35ft) | 12.2m (40ft) | Radius (m) | | |
| 300 (12") | 490 | 700 | 1818 574 | 2051 609 | 2270 642 | 1.2 | | |
| 400 (16") | 590 | 800 | 2449 <mark>826</mark> | 2762 <mark>877</mark> | 3056 <mark>925</mark> | 1.6 | | |
| 500 (20") | 700 | 900 | 3142 1075 | 3550 1146 | 3933 1213 | 2.0 | | |
| 600 (24") | 830 | 1050 | 4238 1446 | 4807 1564 | 5340 1665 | 2.4 | | |

- Double Carcass Hose FLEXOMARINE Tanker End Submarine Hose for use to facilitate lifting up the string
- Identified by a double circumferencial white bands at the tanker end
- This hose is extremely flexible to support the curvature demanded during offloading
- The fittings hose are welded lifting lugs
- Each lug are tested to support Safe Working Loads as follow:

12" = 100 kN

16" = 150 kN

20" = 200 kN

- Rated Working Pressure: 19 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested
- Leak Detection: In case of failure of the primary carcass, a rod installed in each hose end, that is inicially embedded will become visible after the burst of the primary carcass giving confirmation of the failure.





RT DOUBLE CARCASS 21 bar 7000 Series

Reeling Hose





Flexomarine half floating hose with one reinforced end (first off FPSO)





Flexomarine integral full-floating hose for mainline



7830F RT

Flexomarine integral full-floating hose with built-in reducer



7840F RT

Flexomarine integral full-floating hose for tail



7852F RT

Flexomarine integral full-floating tanker end hose (Jumbo)



7870BCRT

Flexomarine integral buoyancy control hose Designed upon request



7831S RT

Flexomarine submarine hose with one reinforced end for connection to the FPSO (First-Off FPSO).



7832S RT

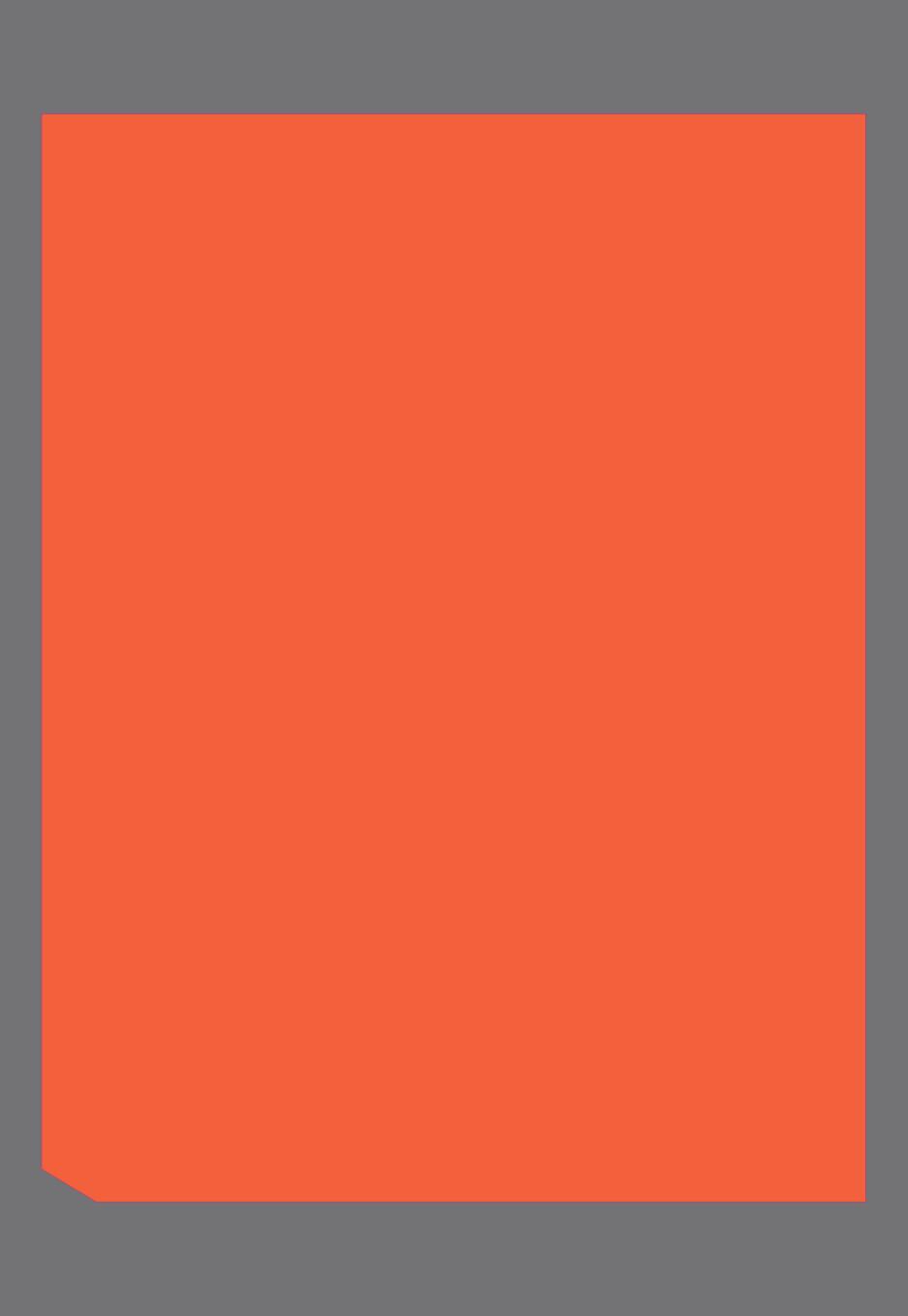
Flexomarine standard mainline submarine hose



7835S RT

Flexomarine submarine hose for tanker end

RT DOUBLE CARCASS 21 bar 7000 Series





RT DOUBLE CARCASS 21 bar 7000 Series

Reeling Hose

Type 7831 S RT **One Reinforced End Hose**



| Nominal Bore (mm) | | | Diameter m) | | Weigl Submerged V | Minimum Bending | | |
|-------------------------|------|-----|----------------|------|----------------------|--------------------------|-----------------|---------------|
| | D1 | D2 | D3 | D4 | 9.1m (30ft) | 10.7m (35ft) | 12.2m (40ft) | Radius (m) |
| 300 (12") | 710 | 515 | 490 | 700 | 1923 596 | 2182 640 | 2424 682 | 1.2 |
| 400 (16") | 810 | 615 | 590 | 800 | 2577 864 | 2921 <mark>929</mark> | 3243 990 | 1.6 |
| 500 (20") | 920 | 725 | 700 | 900 | 3294 1131 | 3739 1223 | 4157 1309 | 2.0 |
| 600 (24") | 1070 | 860 | 830 | 1050 | 4418 1553 | 5029 1688 | 5602 1816 | 2.4 |

- Double Carcass Hose FLEXOMARINE SAFE One Reinforced End Submarine Hose to be used on FPSO connections
- Rated Working Pressure: 21 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested
- Leak Detection: In case of failure of the primary carcass, a rod installed in each hose end, that is inicially embedded will become visible after the burst of the primary carcass giving confirmation of the failure.



RT DOUBLE CARCASS 21 bar 7000 Series

Reeling Hose

Type 7832 S RT **Mainline Hose**



| Nominal | | Diameter nm) | Weig Submerged V | Minimum Bending | | | |
|--------------|------------|-----------------|---------------------------|----------------------------|--------------|---------------|--|
| Bore (mm) | D1 Body | D2 End | 9.1m (30ft) | | | Radius (m) | |
| 300 (12") | 490 | 700 | 1818 5 6 3 | 2053 598 | 2273 631 | 1.2 | |
| 400 (16") | 590 | 800 | 2451 <mark>8</mark> 15 | 2776 <mark>8</mark> 66 | 3061 914 | 1.6 | |
| 500 (20") | 700 | 900 | 3145 1063 | 3555 11 <mark>35</mark> | 3940 1202 | 2.0 | |
| 600 (24") | 830 | 1050 | 4238 14 <u>5</u> 6 | 4807 1564 | 5341 1665 | 2.4 | |

- Double Carcass Hose FLEXOMARINE Mainline Submarine Hose for use as the main submarine hose in the string to connect between reel and Tanker on reeling systems
- Rated Working Pressure: 21 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested
- Leak Detection: In case of failure of the primary carcass, a rod installed in each hose end, that is inicially embedded will become visible after the burst of the primary carcass giving confirmation of the failure.



RT DOUBLE CARCASS 21 bar 7000 Series

Reeling Hose

Type 7835 S RT **Tanker End Hose**

FLEXOMARINE SAFE



| Nominal | Outside (m | Diameter m) | Weig Submerged V | Minimum Bending | | |
|--------------|-------------------|----------------|---------------------|--------------------|--------------------------|---------------|
| Bore (mm) | D1 D2 End Body | | 9.1m (30ft) | 10.7m (35ft) | 12.2m (40ft) | Radius (m) |
| 300 (12") | 490 | 700 | 1827 577 | 2062 612 | 2282 645 | 1.2 |
| 400 (16") | 590 | 800 | 2461 830 | 2766 881 | 3071 <mark>929</mark> | 1.6 |
| 500 (20") | 700 | 900 | 3158 1080 | 3568 1152 | 3953 1219 | 2.0 |
| 600 (24") | 830 | 1050 | 4323 1471 | 4904 1580 | 5448 1682 | 2.4 |

- Double Carcass Hose FLEXOMARINE Tanker End Submarine Hose for use to facilitate lifting up the string
- Identified by a double circumferencial white bands at the tanker end
- This hose is extremely flexible to support the curvature demanded during offloading
- The fittings hose are welded lifting lugs
- Each lug are tested to support Safe Working Loads as follow:

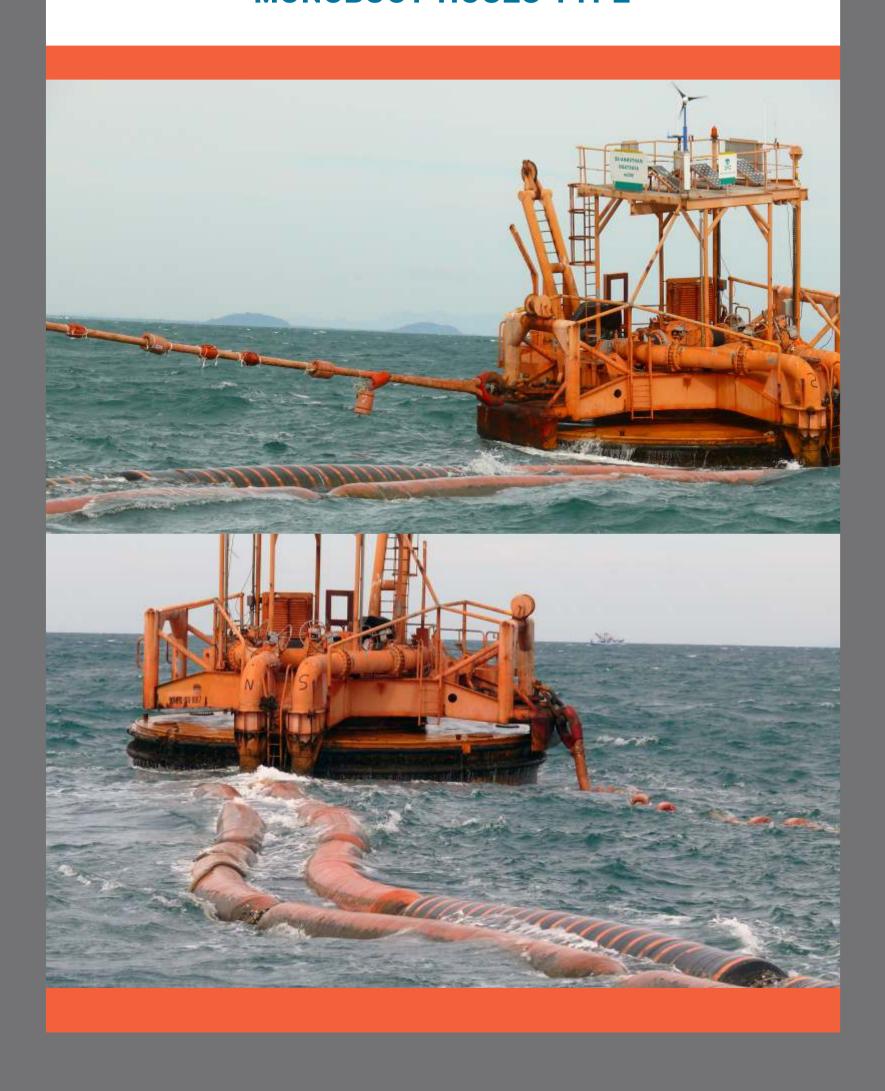
12" = 100 kN 16" = 150 kN 20" = 200 kN

- Rated Working Pressure: 21 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested
- Leak Detection: In case of failure of the primary carcass, a rod installed in each hose end, that is inicially embedded will become visible after the burst of the primary carcass giving confirmation of the failure.



| | Polyurethane Cover | PU | • | • | • | • | • | • | • | • | • | • | • | • |
|---------------------|---|---------------------------------------|---|--|--|---|---|---|--|--|--|---|--|---|
| | Both Ends Reinforced or Fully Reinforced | H | • | | • | | | | | • | | • | | • |
| | Buoyancy Control | BC | • | | | • | | | | | | | | |
| × | High Flex | 生 | • | • | • | • | • | • | • | • | • | • | • | • |
| SUFFIX | Extra Buoyancy | EB | • | • | • | • | | | | | | | | |
| | Catenary | S | • | • | | • | • | • | | • | • | • | • | • |
| | Reeling Type | RT | • | • | • | • | • | • | • | | | • | • | • |
| | Submarine | S | | | | | | | | • | • | • | • | • |
| | Floating | ш | • | • | • | • | • | • | • | | | | | |
| ARCASS | | 21 bar 7800 | 7810 | 7820 | 7830 | 7840 | 7850 | 7852 | 7870 | 7821 | 7822 | 7831 | 7832 | 7835 |
| SAFE DOUBLE CARCASS | 7000 Series | 19 bar 7700 | 7710 | 7720 | 7730 | 7740 | 7750 | 7752 | 7770 | 7721 | 7722 | 7731 | 7732 | 7735 |
| SAFE | | 15 bar 7600 | 7610 | 7620 | 7630 | 7640 | 7650 | 7652 | 7670 | 7621 | 7622 | 7631 | 7632 | 7635 |
| SS | | 21 bar 1800 | 1810 | 1820 | 1830 | 1840 | 1850 | 1852 | 1870 | 1821 | 1822 | 1831 | 1832 | 1835 |
| SINGLE CARCASS | 1000 Series | 19 bar 1700 | 1710 | 1720 | 1730 | 1740 | 1750 | 1752 | 1770 | 1721 | 1722 | 1731 | 1732 | 1735 |
| Nis | | 15 bar 1600 | 1610 | 1620 | 1630 | 1640 | 1650 | 1652 | 1670 | 1621 | 1622 | 1631 | 1632 | 1635 |
| | Buoy and Reeling System | Drawings | Chresin | | | | | | | | | | | 0 |
| Research, | Development and Quality Assurance. Buoy | Flexomarine Standard Product Range | Flexomarine (first off the Reel) or half floating hose with one reinforced end (first off the buoy) | Flexomarine integral full-floating hose for mainline | Flexomarine integral full-floating hose with built-in reducer | Flexomarine integral full-floating hose for tail | Flexomarine integral full-floating tanke r rail hose (Dumbell or Barbell type) | Flexomarine integral full-floating tanker rail hose (Jumbo type) | Flexomarine integral buoyancy control hose. Designed for buoy or Reeling systems | Flexomarine submarine hose with one reinforced end and location collars for connection to the buoy or PLEM | Flexomarine standard mainline submarine hose with location collars | Flexomarine submarine hose with one reinforced end for connection to the buoy or PLEM | Flexomarine standard mainline submarine hose | Flexomarine submarine hose for tanker rail |

MONOBUOY HOSES TYPE





SINGLE CARCASS 15 bar 1000 Series



SINGLE CARCASS HOSE





SUBMARINE SINGLE CARCASS 15 bar 1000 Series

Type 1621S One Reinforced End Hose With Location Collars



| Nominal Bore (mm) | | Outside [(m | | | Weig Submerged V | Minimum Bending | | |
|-------------------------|---------------------------|-----------------|------|----------------|---------------------|--------------------------|--------------------------|---------------|
| | D1 ^{Col} Body | lar D2 End | D3 H | ose D4 Body | 9.1m (30ft) | 10.7m (35ft) | 12.2m (40ft) | Radius (m) |
| 150 (6") | 310 | 420 | 350 | 275 | 610 197 | 698 221 | 776 242 | 0.6 |
| 200 (8") | 370 | 471 | 405 | 330 | 788 262 | 902 293 | 1001 321 | 0.8 |
| 250 (10") | 420 | 581 | 470 | 385 | 1043 364 | 1188 404 | 1317 441 | 1.0 |
| 300 (12") | 471 | 581 | 530 | 440 | 1308 507 | 1490 565 | 1654 <mark>619</mark> | 1.2 |
| 400 (16") | 581 | 697 | 625 | 535 | 1803 744 | 2050 <mark>826</mark> | 2269 90 1 | 1.6 |
| 500 (20") | 697 | 799 | 740 | 645 | 2396 1013 | 2726 1127 | 3020 1232 | 2.0 |
| 600 (24") | 799 | 946 | 855 | 755 | 3118 1360 | 3551 1520 | 3940 1668 | 2.4 |

- Single Carcass Hose FLEXOMARINE One Reinforced End Submarine Hose for use to connect sea bed manifold or buoy connection used on monobuoy systems
- Supplied with float location collars
- Rated Working Pressure: 15 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested



Type 1622S Mainline Hose With Location Collars

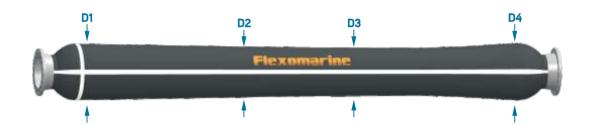


| | | | | | Weig | ht in Air Empty | / (kg) | |
|-----------------|--------|---------------------|---|---|-------------------|--------------------|---------------|--------------------|
| Nominal Bore | | ide Diameter nm) | | | Submerged V | leight Full of S | ea Water (kg) | Minimum Bending |
| (mm) | D1 (II | D2 | | | 9.1m | 10.7m | 12.2m | Radius (m) |
| | Body | End | | | (30ft) | (35ft) | (40ft) | (III) |
| 150 (6") | 310 | 420 | - | - | 572 175 | 646 191 | 715 207 | 0.6 |
| 200 (8") | 370 | 471 | - | - | 744 233 | 841 255 | 931 276 | 0.8 |
| 250 (10") | 420 | 581 | - | - | 997 329 | 1122 358 | 1239 386 | 1.0 |
| 300 (12") | 471 | 581 | - | - | 1239 461 | 1398 505 | 1548 547 | 1.2 |
| 400 (16") | 581 | 697 | - | - | 1737 683 | 1955 747 | 2161 806 | 1.6 |
| 500 (20") | 697 | 799 | - | - | 2316 929 | 2612 1017 | 2890 1099 | 2.0 |
| 600 (24") | 799 | 946 | - | - | 3024 1246 | 3416 1370 | 3784 1487 | 2.4 |

- Single Carcass Hose FLEXOMARINE Mainline Standard Submarine Hose for use as the main submarine hose in the string to connect between sea bed manifold and buoy connection used on monobuoy systems
- Supplied with float location collars
- Rated Working Pressure: 15 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested



Type 1631S **One Reinforced End Hose**



| Nominal | | Outside ((m | Diameter m) | | Weigl | Minimum Bending | | |
|--------------|-----|-----------------|----------------|-----|-------------------|--------------------|-------------------|---------------|
| Bore (mm) | D1 | D2 | D3 | D4 | 9.1m | 10.7m | 12.2m | Radius (m) |
| | End | Body | Body | End | (30ft) | (35ft) | (40ft) | (III) |
| 150 (6") | 350 | 275 | 250 | 340 | 583 193 | 666 216 | 744 238 | 0.6 |
| 200 (8") | 405 | 330 | 305 | 395 | 755 257 | 861 288 | 960 316 | 0.8 |
| 250 (10") | 470 | 385 | 360 | 460 | 998 358 | 1135 397 | 1264 434 | 1.0 |
| 300 (12") | 530 | 440 | 415 | 520 | 1272 502 | 1446 559 | 1610 613 | 1.2 |
| 400 (16") | 625 | 535 | 505 | 615 | 1745 736 | 1978 816 | 2198 892 | 1.6 |
| 500 (20") | 740 | 645 | 620 | 730 | 2326 1004 | 2639 1116 | 2933 1221 | 2.0 |
| 600 (24") | 855 | 755 | 730 | 840 | 3036 1349 | 3451 1507 | 3840 1655 | 2.4 |

- Single Carcass Hose FLEXOMARINE One Reinforced End Submarine Hose for use to connect sea bed manifold or buoy connection
- Rated Working Pressure: 15 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested



Type 1632S **Mainline Hose**



| Nominal | | | Diameter nm) | | Weig Submerged V | Minimum Bending | | |
|--------------|------------|-----------|-----------------|---|---------------------|--------------------|--------------------|---------------|
| Bore (mm) | D1 Body | D2 End | | | 9.1m (30ft) | 10.7m (35ft) | 12.2m (40ft) | Radius (m) |
| 150 (6") | 250 | 340 | - | - | 519 168 | 587 184 | 651 199 | 0.6 |
| 200 (8") | 305 | 395 | - | - | 678 225 | 767 246 | 850 266 | 0.8 |
| 250 (10") | 360 | 460 | - | - | 908 318 | 1025 346 | 1135 373 | 1.0 |
| 300 (12") | 415 | 520 | - | - | 1169 452 | 1320 495 | 1461 536 | 1.2 |
| 400 (16") | 505 | 615 | - | - | 1621 669 | 1826 731 | 2019 788 | 1.6 |
| 500 (20") | 620 | 730 | - | - | 2178 912 | 2457 997 | 2718 1077 | 2.0 |
| 600 (24") | 730 | 840 | - | - | 2860 1226 | 3235 1348 | 3585 1462 | 2.4 |

- Single Carcass Hose FLEXOMARINE Mainline Submarine Hose for use as the main submarine hose in the string to connect between sea bed manifoldand buoy connection used on monobuoy systems
- Rated Working Pressure: 15 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested



SUBMARINE SINGLE CARCASS 15 bar 1000 Series

Type 1635S **Tanker Rail Hose**



| | | Outside | Diameter | | Weig | Minimum Bending | | |
|--------------|-----|---------|----------|---|-------------------|--------------------|--------------------|---------------|
| Nominal | | (m | nm) | | Submerged V | | | |
| Bore (mm) | D1 | D2 | | | 9.1m | 10.7m | 12.2m | Radius (m) |
| | End | Body | | | (30ft) | (35ft) | (40ft) | (III) |
| 150 (6") | 250 | 340 | - | - | 519 168 | 587 184 | 651 199 | 0.6 |
| 200 (8") | 305 | 395 | - | - | 678 225 | 767 246 | 850 266 | 0.8 |
| 250 (10") | 360 | 460 | - | - | 908 318 | 1025 346 | 1135 373 | 1.0 |
| 300 (12") | 415 | 520 | - | - | 1169 452 | 1320 495 | 1461 536 | 1.2 |
| 400 (16") | 505 | 615 | - | - | 1621 669 | 1826 731 | 2019 788 | 1.6 |
| 500 (20") | 620 | 730 | - | - | 2178 912 | 2457 997 | 2718 1077 | 2.0 |

- Single Carcass Hose FLEXOMARINE Tanker Rail Submarine Hose for use to facilitate lifting up the string
- Identified by a double circumferencial white bands at the tanker end
- This hose is extremely flexible to support the curvature demanded during offloading
- The fittings hose are welded lifting lugs
- Each lug are tested to support Safe Working Loads as follow:

6" = 40 kN 8" = 50 kN 10" = 70 kN 12" = 100 kN 16" = 150 kN 20" = 200 kN

- Rated Working Pressure: 15 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested





SINGLE CARCASS 19 bar 1000 Series

| | 1710F | Flexomarine half floating hose with one reinforced end (first off the buoy) |
|--|--------|--|
| The same of the sa | 1720F | Flexomarine integral full-floating hose for mainline |
| | 1730F | Flexomarine integral full-floating hose with built-in reducer |
| | 1740F | Flexomarine integral full-floating hose for tail |
| Pier sumortine in 1 1 1 1 | 1750F | Flexomarine integral full-floating tanker rail hose (Dumbell or Barbell type) |
| | 1770BC | Flexomarine integral buoyancy control hose. Designed upon request |
| Fireconsaring | 17218 | Flexomarine submarine hose with one reinforced end and location collars for connection to the buoy or PLEM |
| Pierca serios | 17228 | Flexomarine standard mainline submarine hose with location collars |
| Fiexaronine | 17318 | Flexomarine submarine hose with one reinforced end for connection to the buoy or PLEM |
| Fin securities | 1732\$ | Flexomarine standard mainline submarine hose |
| Flexamarine | 1735\$ | Flexomarine submarine hose for tanker rail |

SINGLE CARCASS HOSE





$Type\ 1721S\ \textbf{One}\ \textbf{Reinforced}\ \textbf{End}\ \textbf{Hose}\ \textbf{With}\ \textbf{Location}\ \textbf{Collars}$



| Nominal | | | Diameter im) | | | ht in Air Empty /eight Full of S | | Minimum Bending |
|--------------|-------|------------|-----------------|-----------|--------------|-------------------------------------|--------------------|--------------------|
| Bore (mm) | D1 Co | llar D2 | D3 H | ose D4 | 9.1m | 10.7m | 12.2m | Radius (m) |
| | Body | End | End | Body | (30ft) | (35ft) | (40ft) | |
| 150 (6") | 310 | 420 | 350 | 275 | 610 197 | 698 221 | 776 242 | 0.6 |
| 200 (8") | 370 | 471 | 415 | 335 | 818 268 | 936 300 | 1041 329 | 0.8 |
| 250 (10") | 420 | 581 | 475 | 390 | 1076 370 | 1227 412 | 1362 450 | 1.0 |
| 300 (12") | 471 | 581 | 535 | 445 | 1346 515 | 1535 574 | 1706 629 | 1.2 |
| 400 (16") | 581 | 697 | 630 | 540 | 1848 751 | 2103 835 | 2330 912 | 1.6 |
| 500 (20") | 697 | 799 | 745 | 650 | 2449 1022 | 2789 1138 | 3093 1245 | 2.0 |
| 600 (24") | 799 | 946 | 860 | 765 | 3184 1375 | 3627 1537 | 4029 1687 | 2.4 |

- Single Carcass Hose FLEXOMARINE One Reinforced End Submarine Hose for use to connect sea bed manifold or buoy connection used on monobuoy systems
- Supplied with float location collars
- Rated Working Pressure: 19 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested



Type 1722S **Mainline Hose With Location Collars**



| | | | | | Weig | ht in Air Empty | y (kg) | Minimum |
|-----------------|------------------------------|-----|---|---|--------------------|--------------------------|---------------------|---------------|
| Nominal Bore | Collar Outside Diameter (mm) | | | | Submerged V | iea Water (kg) | Bending | |
| (mm) | D1 | D2 | | | 9.1m | 10.7m | 12.2m | Radius (m) |
| | Body | End | | | (30ft) | (35ft) | (40ft) | |
| 150 (6") | 310 | 420 | - | - | 572 175 | 646 191 | 715 207 | 0.6 |
| 200 (8") | 370 | 471 | - | - | 770 238 | 871 <mark>261</mark> | 966 282 | 0.8 |
| 250 (10") | 420 | 581 | - | - | 1027 334 | 1156 364 | 1279 3 92 | 1.0 |
| 300 (12") | 471 | 581 | - | - | 1273 467 | 1439 <mark>512</mark> | 1594 555 | 1.2 |
| 400 (16") | 581 | 697 | - | - | 1776 689 | 2002 753 | 2214 814 | 1.6 |
| 500 (20") | 697 | 799 | - | - | 2363 936 | 2668 1024 | 2954 1108 | 2.0 |
| 600 (24") | 799 | 946 | - | - | 3082 1257 | 3484 1383 | 3862 1501 | 2.4 |

- Single Carcass Hose FLEXOMARINE Mainline Standard Submarine Hose for use as the main submarine hose in the string to connect between sea bed manifold and buoy connection used on monobuoy systems
- Supplied with float location collars
- Rated Working Pressure: 19 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested



Type 1731S One Reinforced End Hose



| Nominal | | | Diameter m) | | Weig Submerged V | Minimum Bending | | |
|--------------|-----|------|----------------|-----|--------------------------|--------------------------|--------------------------|---------------|
| Bore (mm) | D1 | D2 | D3 | D4 | 9.1m | 10.7m | 12.2m | Radius (m) |
| | End | Body | Body | End | (30ft) | (35ft) | (40ft) | |
| 150 (6") | 350 | 275 | 250 | 340 | 583 193 | 666 216 | 744 238 | 0.6 |
| 200 (8") | 415 | 335 | 310 | 400 | 787 264 | 898 295 | 1003 324 | 0.8 |
| 250 (10") | 475 | 390 | 365 | 465 | 1034 <mark>365</mark> | 1178 405 | 1313 443 | 1.0 |
| 300 (12") | 535 | 445 | 420 | 525 | 1314 510 | 1496 569 | 1666 <mark>624</mark> | 1.2 |
| 400 (16") | 630 | 540 | 515 | 620 | 1793 744 | 2036 <mark>826</mark> | 2263 903 | 1.6 |
| 500 (20") | 745 | 650 | 625 | 735 | 2384 1013 | 2708 1127 | 3012 1234 | 2.0 |
| 600 (24") | 860 | 765 | 735 | 850 | 3107 1364 | 3535 1524 | 3936 1674 | 2.4 |

- Single Carcass Hose FLEXOMARINE One Reinforced End Submarine Hose for use to connect sea bed manifold or buoy connection
- Rated Working Pressure: 19 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested



Type 1732S **Mainline Hose**



| Nominal | | | Diameter nm) | | Weig Submerged V | Minimum Bending | | |
|--------------|------|-----|-----------------|---|--------------------------|--------------------|-------------------------|---------------|
| Bore (mm) | D1 | D2 | | | 9.1m | 10.7m | 12.2m | Radius (m) |
| | Body | End | | | (30ft) | (35ft) | (40ft) | |
| 150 (6") | 250 | 340 | - | - | 519 168 | 587 184 | 651 199 | 0.6 |
| 200 (8") | 310 | 400 | - | - | 709 231 | 803 252 | 891 273 | 0.8 |
| 250 (10") | 365 | 465 | - | - | 943 324 | 1066 353 | 1181 380 | 1.0 |
| 300 (12") | 420 | 525 | - | - | 1209 459 | 1367 504 | 1515 545 | 1.2 |
| 400 (16") | 515 | 620 | - | - | 1668 676 | 1882 738 | 2082 79 7 | 1.6 |
| 500 (20") | 625 | 735 | - | - | 2234 <mark>920</mark> | 2523 1007 | 2794 1088 | 2.0 |
| 600 (24") | 735 | 860 | - | - | 2930 1238 | 3316 1362 | 3679 1478 | 2.4 |

- Single Carcass Hose FLEXOMARINE Mainline Submarine Hose for use as the main submarine hose in the string to connect between sea bed manifold and buoy connection used on monobuoy systems
- Rated Working Pressure: 19 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested



SUBMARINE SINGLE CARCASS 19 bar 1000 Series

Type 1735S **Tanker Rail Hose**



| Nominal | | | Diameter nm) | | Weig Submerged V | Minimum Bending | | |
|--------------|-----|------|-----------------|---|-------------------------|--------------------|--------------------|---------------|
| Bore (mm) | D1 | D2 | | | 9.1m | 10.7m | 12.2m | Radius (m) |
| | End | Body | | | (30ft) | (35ft) | (40ft) | |
| 150 (6") | 250 | 340 | - | - | 519 168 | 587 184 | 651 199 | 0,6 |
| 200 (8") | 310 | 400 | - | - | 709 231 | 803 252 | 891 273 | 0.8 |
| 250 (10") | 365 | 465 | - | - | 943 324 | 1066 353 | 1181 380 | 1.0 |
| 300 (12") | 420 | 525 | - | - | 1209 459 | 1367 504 | 1515 545 | 1.2 |
| 400 (16") | 515 | 620 | - | - | 1668 676 | 1882 738 | 2082 797 | 1.6 |
| 500 (20") | 625 | 735 | - | - | 2234 92 0 | 2523 1007 | 2794 1088 | 2.0 |

- Single Carcass Hose FLEXOMARINE Tanker Rail Submarine Hose for use to facilitate lifting up the string
- Identified by a double circumferencial white bands at the tanker end
- This hose is extremely flexible to support the curvature demanded during offloading
- The fittings hose are welded lifting lugs
- Each lug are tested to support Safe Working Loads as follow: 6" = 40 kN 8" = 50 kN 10" = 70 kN 12" = 100 kN 16" = 150 kN 20" = 200 kN
- Rated Working Pressure: 19 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested





SINGLE CARCASS 21 bar 1000 Series

| | 1810F | Flexomarine half floating hose with one reinforced end (first off the buoy) |
|--|--------|--|
| TATA TATA TATA TATA TATA TATA TATA TAT | 1820F | Flexomarine integral full-floating hose for mainline |
| | 1830F | Flexomarine integral full-floating hose with built-in reducer |
| | 1840F | Flexomarine integral full-floating hose for tail |
| PHO NUMBER THE PROPERTY OF THE | 1850F | Flexomarine integral full-floating tanker rail hose (Dumbell or Barbell type) |
| MANAGE TO THE STATE OF THE STAT | 1870BC | Flexomarine integral buoyancy control hose. Designed upon request |
| Flexomarine | 1821\$ | Flexomarine submarine hose with one reinforced end and location collars for connection to the buoy or PLEM |
| Merca series | 1822\$ | Flexomarine standard mainline submarine hose with location collars |
| Fiexanorine | 1831\$ | Flexomarine submarine hose with one reinforced end for connection to the buoy or PLEM |
| Electronical and | 1832\$ | Flexomarine standard mainline submarine hose |
| Fle.nmarine | 1835\$ | Flexomarine submarine hose for tanker rail |

SINGLE CARCASS HOSE







| Nominal | | | Diameter im) | | · · | ht in Air Empty Veight Full of S | | Minimum Bending |
|--------------|------|------------|-----------------|---------|---------------------|-------------------------------------|--------------|--------------------|
| Bore (mm) | DI | llar D2 | D3 Ho | D4 I | 9.1m | 10.7m | 12.2m | Radius (m) |
| | Body | End | End | Body | (30ft) | (35ft) | (40ft) | |
| 150 (6") | 310 | 420 | 355 | 280 | 635 202 | 727 227 | 809 249 | 0.6 |
| 200 (8") | 370 | 471 | 415 | 335 | 818 268 | 936 300 | 1041 329 | 0.8 |
| 250 (10") | 420 | 581 | 475 | 390 | 1076 370 | 1227 412 | 1362 450 | 1.0 |
| 300 (12") | 471 | 581 | 540 | 455 | 1384 521 | 1580 582 | 1757 638 | 1.2 |
| 400 (16") | 581 | 697 | 635 | 545 | 1895 76 1 | 2158 <mark>846</mark> | 2393 925 | 1.6 |
| 500 (20") | 697 | 799 | 750 | 655 | 2505 1034 | 2854 1151 | 3169 1260 | 2.0 |
| 600 (24") | 799 | 946 | 870 | 775 | 3311 1399 | 3778 1566 | 4203 1720 | 2.4 |

- Single Carcass Hose FLEXOMARINE One Reinforced End Submarine Hose for use to connect sea bed manifold or buoy connection used on monobuoy systems
- Supplied with float location collars
- Rated Working Pressure: 21 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested



Type 1822S **Mainline Hose With Location Collars**



| | Callar Outo | de Diameter | | | | ht in Air Empty | | Minimum |
|-----------------|-------------|-------------|---|---|---|--------------------------|--------------------------|-------------------|
| Nominal Bore | (m | ım) | | 1 | Submerged Weight Full of Sea Water (kg) | | | Bending Radius |
| (mm) | D1 | D2 I | | | 9.1m | 10.7m | 12.2m | (m) |
| | Body | End | | | (30ft) | (35ft) | (40ft) | |
| 150 (6") | 310 | 420 | - | - | 594 179 | 671 196 | 744 212 | 0.6 |
| 200 (8") | 370 | 471 | - | - | 770 238 | 871 <mark>261</mark> | 966 282 | 0.8 |
| 250 (10") | 420 | 581 | - | - | 1027 334 | 1156 364 | 1279 392 | 1.0 |
| 300 (12") | 471 | 581 | - | - | 1306 472 | 1478 <mark>518</mark> | 1639 <mark>561</mark> | 1.2 |
| 400 (16") | 581 | 697 | - | - | 1817 697 | 2051 762 | 2270 823 | 1.6 |
| 500 (20") | 697 | 799 | - | - | 2412 945 | 2726 1035 | 3022 1120 | 2.0 |
| 600 (24") | 799 | 946 | - | - | 3195 1276 | 3619 1405 | 4018 1526 | 2.4 |

- Single Carcass Hose FLEXOMARINE Mainline Standard Submarine Hose for use as the main submarine hose in the string to connect between sea bed manifold and buoy connection used on monobuoy systems
- Supplied with float location collars
- Rated Working Pressure: 21 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested



Type 1831S **One Reinforced End Hose**



| Nominal | | | Diameter nm) | | Weig Submerged V | Minimum Bending | | |
|--------------|-----|------|-----------------|-----|---------------------------|------------------------|--------------------|---------------|
| Bore (mm) | D1 | D2 | D3 | D4 | 9.1m | 10.7m | 12.2m | Radius (m) |
| | End | Body | Body | End | (30ft) | (35ft) | (40ft) | |
| 150 (6") | 355 | 280 | 255 | 345 | 610 199 | 698 223 | 780 245 | 0.6 |
| 200 (8") | 415 | 335 | 310 | 400 | 787 264 | 898 295 | 1003 324 | 0.8 |
| 250 (10") | 475 | 390 | 365 | 465 | 1034 365 | 1178 405 | 1313 443 | 1.0 |
| 300 (12") | 540 | 455 | 425 | 530 | 1355 <mark>5</mark> 17 | 1544 577 | 1722 634 | 1.2 |
| 400 (16") | 635 | 545 | 520 | 625 | 1844 754 | 2096 838 | 2332 917 | 1.6 |
| 500 (20") | 750 | 655 | 630 | 740 | 2445 1026 | 2780 1141 | 3094 1250 | 2.0 |
| 600 (24") | 870 | 775 | 750 | 860 | 3246 1391 | 3700 1555 | 4126 1710 | 2.4 |

- Single Carcass Hose FLEXOMARINE One Reinforced End Submarine Hose for use to connect sea bed manifold or buoy connection
- Rated Working Pressure: 21 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested



Type 1832S **Mainline Hose**



| Nominal | | | Diameter nm) | | | (kg) sea Water (kg) | Minimum Bending | |
|--------------|------------|-----------|-----------------|---|-------------------|------------------------|--------------------|---------------|
| Bore (mm) | D1 Body | D2 End | | | 9.1m (30ft) | 10.7m (35ft) | 12.2m (40ft) | Radius (m) |
| 150 (6") | 255 | 345 | - | - | 545 173 | 617 189 | 685 205 | 0.6 |
| 200 (8") | 310 | 400 | - | - | 709 231 | 803 252 | 891 273 | 0.8 |
| 250 (10") | 365 | 465 | - | - | 943 324 | 1066 353 | 1181 380 | 1.0 |
| 300 (12") | 425 | 530 | - | - | 1249 465 | 1414 510 | 1569 553 | 1.2 |
| 400 (16") | 520 | 625 | - | - | 1718 684 | 1940 7 48 | 2149 808 | 1.6 |
| 500 (20") | 630 | 740 | - | - | 2294 930 | 2593 1019 | 2874 1101 | 2.0 |
| 600 (24") | 750 | 860 | - | - | 3066 1260 | 3478 1387 | 3864 1507 | 2.4 |

- Single Carcass Hose FLEXOMARINE Mainline Submarine Hose for use as the main submarine hose in the string to connect between sea bed manifold and buoy connection used on monobuoy systems
- Rated Working Pressure: 21 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested



SUBMARINE SINGLE CARCASS 21 bar 1000 Series

Type 1835S **Tanker Rail Hose**



| Nominal | | | Diameter nm) | | | ht in Air Empty Veight Full of S | | Minimum Bending |
|--------------|-----------|------------|-----------------|---|--------------------|-------------------------------------|-----------------|--------------------|
| Bore (mm) | D1 End | D2 Body | | | 9.1m (30ft) | 10.7m (35ft) | 12.2m (40ft) | Radius (m) |
| 150 (6") | 255 | 345 | - | - | 545 173 | 617 189 | 685 205 | 0,6 |
| 200 (8") | 310 | 400 | - | - | 709 231 | 803 252 | 891 273 | 0.8 |
| 250 (10") | 365 | 465 | - | - | 943 32 4 | 1066 353 | 1181 380 | 1.0 |
| 300 (12") | 425 | 530 | - | - | 1249 465 | 1414 510 | 1569 553 | 1.2 |
| 400 (16") | 520 | 625 | - | - | 1718 684 | 1941 7 48 | 2149 808 | 1.6 |
| 500 (20") | 630 | 740 | - | - | 2294 930 | 2593 1019 | 2874 1101 | 2.0 |

- Single Carcass Hose FLEXOMARINE Tanker Rail Submarine Hose for use to facilitate lifting up the string
- Identified by a double circumferencial white bands at the tanker end
- This hose is extremely flexible to support the curvature demanded during offloading
- The fittings hose are welded lifting lugs
- Each lug are tested to support Safe Working Loads as follow: 6" = 40 kN 8" = 50 kN 10" = 70 kN 12" = 100 kN 16" = 150 kN 20" = 200 kN
- Rated Working Pressure: 21 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested





DOUBLE CARCASS 15 bar 7000 Series







SUBMARINE DOUBLE CARCASS 15 bar 7000 Series

Double Leak Detection System

Double carcass hose developed and tested for offshore mooring applications

Type 7621S One Reinforced End Hose



| Nominal | | Outside I (m | | | The state of the s | ht in Air Empty Veight Full of S | | Minimum |
|--------------|------|-----------------|-----|--------|--|-------------------------------------|--------------------------|--------------------------|
| Bore (mm) | DI | llar D2 | D3 | ose D4 | 9.1m | 10.7m | 12.2m | Bending Radius (m) |
| | Body | End | End | Body | (30ft) | (35ft) | (40ft) | |
| 150 (6") | 370 | 471 | 420 | 315 | 827 215 | 940 229 | 1037 <mark>241</mark> | 0.6 |
| 200 (8") | 420 | 581 | 490 | 380 | 1119 304 | 1270 323 | 1403 <mark>341</mark> | 0.8 |
| 250 (10") | 471 | 581 | 550 | 435 | 1399 410 | 1587 438 | 1755 462 | 1.0 |
| 300 (12") | 581 | 697 | 630 | 505 | 1872 593 | 2128 637 | 2351 <mark>677</mark> | 1.2 |
| 400 (16") | 697 | 799 | 725 | 595 | 2478 851 | 2814 <mark>916</mark> | 3104 974 | 1.6 |
| 500 (20") | 799 | 876 | 840 | 710 | 3113 1092 | 3546 1184 | 3924 1267 | 2.0 |
| 600 (24") | 946 | 1050 | 985 | 845 | 4282 1516 | 4893 1654 | 5429 1779 | 2.4 |

- Double Carcass Hose FLEXOMARINE SAFE One Reinforced End Submarine Hose for use to connect sea bed manifold or buoy connection used on monobuoy systems
- Supplied with float location collars
- Rated Working Pressure: 15 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested
- Leak Detection: In case of failure of the primary carcass, a rod installed in each hose end, that is inicially
 embedded will become visible after the burst of the primary carcass giving confirmation of the failure.



SUBMARINE DOUBLE CARCASS 15 bar 7000 Series

Double Leak

Double carcass hose developed and tested for offshore mooring applications

Type 7622S Mainline Hose With Location Collars FLEXOMARINE SAFE



| | Callan Outsi | de Diemeter | | | | ht in Air Empty | | Minimum |
|--------------|--------------|-------------|---|---|--------------------------|--------------------------|--------------------------|---------|
| Bore | | | | | Submerged V | Bending Radius | | |
| (mm) | D1 | D2 I | | | 9.1m | 10.7m | 12.2m | (m) |
| | Body | End | | | (30ft) | (35ft) | (40ft) | |
| 150 (6") | 370 | 471 | - | - | 801 209 | 900 21 9 | 993 229 | 0.6 |
| 200 (8") | 420 | 581 | - | - | 1088 <mark>291</mark> | 1222 306 | 1348 320 | 0.8 |
| 250 (10") | 471 | 581 | - | - | 1346 391 | 1514 <mark>411</mark> | 1672 430 | 1.0 |
| 300 (12") | 581 | 697 | - | - | 1841 569 | 2073 605 | 2293 639 | 1.2 |
| 400 (16") | 697 | 799 | - | - | 2457 <mark>817</mark> | 2765 869 | 3056 <mark>918</mark> | 1.6 |
| 500 (20") | 799 | 876 | - | - | 3070 1036 | 3468 1108 | 3844 1175 | 2.0 |
| 600 (24") | 946 | 1050 | - | - | 4246 1435 | 4815 1544 | 5351 1647 | 2.4 |

- Double Carcass Hose FLEXOMARINE SAFE Mainline Standard Submarine Hose for use as the main submarine hose in the string to connect between sea bed manifold and buoy connection used on monobuoy systems
- Supplied with float location collars
- Rated Working Pressure: 15 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested
- Leak Detection: In case of failure of the primary carcass, a rod installed in each hose end, that is inicially embedded will become visible after the burst of the primary carcass giving confirmation of the failure.



SUBMARINE DOUBLE CARCASS 15 bar 7000 Series

Double Leak Detection System

Double carcass hose developed and tested for offshore mooring applications

Type 7631S One Reinforced End Hose



| Nominal | | | Diameter m) | | Ĭ | ht in Air Empty Veight Full of S | | Minimum Bending |
|--------------|-----|------|----------------|-----|--------------|-------------------------------------|--------------|--------------------|
| Bore (mm) | D1 | D2 | D3 | D4 | 9.1m | 10.7m | 12.2m | Radius (m) |
| | End | Body | Body | End | (30ft) | (35ft) | (40ft) | |
| 150 (6") | 420 | 315 | 290 | 410 | 792 211 | 896 223 | 993 235 | 0.6 |
| 200 (8") | 490 | 380 | 355 | 480 | 1075 298 | 1218 <mark>317</mark> | 1351 334 | 0.8 |
| 250 (10") | 550 | 435 | 410 | 540 | 1365 406 | 1544 432 | 1712 457 | 1.0 |
| 300 (12") | 630 | 505 | 480 | 620 | 1800 583 | 2038 <mark>625</mark> | 2261 665 | 1.2 |
| 400 (16") | 725 | 595 | 570 | 715 | 2376 838 | 2685 899 | 2975 957 | 1.6 |
| 500 (20") | 840 | 710 | 685 | 830 | 3013 1079 | 3416 1167 | 3795 1250 | 2.0 |
| 600 (24") | 985 | 845 | 820 | 975 | 4143 1497 | 4715 1631 | 5252 1756 | 2.4 |

- Double Carcass Hose FLEXOMARINE SAFE One Reinforced End Submarine Hose for use to connect sea bed manifold or buoy connection
- Rated Working Pressure: 15 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested
- Leak Detection: In case of failure of the primary carcass, a rod installed in each hose end, that is inicially
 embedded will become visible after the burst of the primary carcass giving confirmation of the failure.



SUBMARINE DOUBLE CARCASS 15 bar 7000 Series

Double Leak

Double carcass hose developed and tested for offshore mooring applications

Type 7632S Mainline Hose



| Nominal | | | Diameter nm) | | The state of the s | ht in Air Empty Veight Full of S | | Minimum Bending |
|--------------|------------|-----------|-----------------|---|--|-------------------------------------|-----------------|--------------------|
| Bore (mm) | D1 Body | D2 End | | | 9.1m (30ft) | 10.7m (35ft) | 12.2m (40ft) | Radius (m) |
| 150 (6") | 290 | 410 | - | - | 732 204 | 822 213 | 906 222 | 0.6 |
| 200 (8") | 355 | 480 | - | - | 1002 285 | 1127 298 | 1245 311 | 0.8 |
| 250 (10") | 410 | 540 | - | - | 1279 387 | 1439 406 | 1588 424 | 1.0 |
| 300 (12") | 480 | 620 | - | - | 1699 557 | 1913 591 | 2114 622 | 1.2 |
| 400 (16") | 570 | 715 | - | - | 2255 797 | 2537 845 | 2800 891 | 1.6 |
| 500 (20") | 685 | 830 | - | - | 2871 1015 | 3241 1084 | 3587 1148 | 2.0 |
| 600 (24") | 820 | 975 | - | - | 3969 1404 | 4501 1509 | 4999 1607 | 2.4 |

- Double Carcass Hose FLEXOMARINE SAFE Mainline Submarine Hose for use as the main submarine hose
 in the string to connect between sea bed manifold and buoy connection used on monobuoy systems
- Rated Working Pressure: 15 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested
- Leak Detection: In case of failure of the primary carcass, a rod installed in each hose end, that is inicially
 embedded will become visible after the burst of the primary carcass giving confirmation of the failure.



SUBMARINE DOUBLE CARCASS 15 bar 7000 Series

Double Leak

Double carcass hose developed and tested for offshore mooring applications

Type 7635S **Tanker Rail Hose**



| Nominal | | | Diameter nm) | | | ht in Air Empty Veight Full of S | | Minimum Bending |
|--------------|-----|------|-----------------|---|--------------|-------------------------------------|--------------------------|--------------------|
| Bore (mm) | D1 | D2 | | | 9.1m | 10.7m | 12.2m | Radius (m) |
| | End | Body | | | (30ft) | (35ft) | (40ft) | (III) |
| 150 (6") | 290 | 410 | - | - | 736 208 | 826 218 | 911 226 | 0,6 |
| 200 (8") | 355 | 480 | - | - | 1007 290 | 1133 304 | 1250 <mark>316</mark> | 0.8 |
| 250 (10") | 410 | 540 | - | - | 1285 393 | 1445 412 | 1594 430 | 1.0 |
| 300 (12") | 480 | 620 | - | - | 1708 565 | 1922 599 | 2123 631 | 1.2 |
| 400 (16") | 570 | 715 | - | - | 2266 807 | 2547 <mark>856</mark> | 2811 901 | 1.6 |
| 500 (20") | 685 | 830 | - | - | 2883 1028 | 3253 1096 | 3600 1160 | 2.0 |

- Double Carcass Hose FLEXOMARINE SAFE Tanker Rail Submarine Hose for use to facilitate lifting up the string
- Identified by a double circumferencial white bands at the tanker end
- This hose is extremely flexible to support the curvature demanded during offloading
- The fittings hose are welded lifting lugs
- Each lug are tested to support Safe Working Loads as follow: 6" = 40 kN 8" = 50 kN 10" = 70 kN 12" = 100 kN 16" = 150 kN 20" = 200 kN
- Rated Working Pressure: 15 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested
- Leak Detection: In case of failure of the primary carcass, a rod installed in each hose end, that is inicially
 embedded will become visible after the burst of the primary carcass giving confirmation of the failure.



MARINE HOSES FLOATING & SUBMARINE

DOUBLE CARCASS 19 bar 7000 Series



DOUBLE CARCASS ANTI-POLLUTION HOSE



SUBMARINE DOUBLE CARCASS 19 bar 7000 Series

Double Leak Detection System

Double carcass hose developed and tested for offshore mooring applications

Type 7721S One Reinforced End Hose With Location Collars FLEXOMARINE SAFE



| Nominal | | Outside l (m | | | Weight in Air Empty (kg) Submerged Weight Full of Sea Water (kg) | | | Minimum Bending |
|--------------|---------------|-----------------|-------|--------|---|--------------------------|-----------------|--------------------|
| Bore (mm) | D1 Co Body | llar D2 End | D3 Ho | DSE D4 | 9.1m (30ft) | 10.7m (35ft) | 12.2m (40ft) | Radius (m) |
| 150 (6") | 370 | 471 | 435 | 330 | 850 212 | 967 225 | 1070 237 | 0.6 |
| 200 (8") | 420 | 581 | 495 | 385 | 1112 298 | 1264 318 | 1398 336 | 0.8 |
| 250 (10") | 471 | 697 | 570 | 450 | 1468 417 | 1662 443 | 1837 467 | 1.0 |
| 300 (12") | 581 | 697 | 640 | 515 | 1890 581 | 2152 <mark>625</mark> | 2383 665 | 1.2 |
| 400 (16") | 697 | 876 | 740 | 615 | 2557 <mark>844</mark> | 2907 <mark>910</mark> | 3214 968 | 1.6 |
| 500 (20") | 799 | 946 | 860 | 725 | 3233 1100 | 3681 1191 | 4078 1274 | 2.0 |
| 600 (24") | 946 | 1050 | 1000 | 855 | 4321 1507 | 4936 1642 | 5482 1764 | 2.4 |

- Double Carcass Hose FLEXOMARINE SAFE One Reinforced End Submarine Hose for use to connect sea bed manifold or buoy connection used on monobuoy systems
- Supplied with float location collars
- Rated Working Pressure: 19 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested
- Leak Detection: In case of failure of the primary carcass, a rod installed in each hose end, that is inicially
 embedded will become visible after the burst of the primary carcass giving confirmation of the failure.



SUBMARINE DOUBLE CARCASS 19 bar 7000 Series

Double Leak

Double carcass hose developed and tested for offshore mooring applications

Type 7722S Mainline Hose With Location Collars FLEXOMARINE SAFE



| | | | | | Weig | ht in Air Empty | / (kg) | |
|--------------|---|------|---|---|--------------|--------------------------|--------------------------|---------------|
| Nominal | Nominal Collar Outside Diameter Bore (mm) | | | | Submerged V | Minimum Bending | | |
| (mm) | D1 (II | D2 | | | 9.1m | 10.7m | 12.2m | Radius (m) |
| | Body | End | | | (30ft) | (35ft) | (40ft) | (III) |
| 150 (6") | 370 | 471 | - | - | 818 204 | 922 215 | 1019 224 | 0.6 |
| 200 (8") | 420 | 581 | - | - | 1078 285 | 1213 300 | 1339 <mark>314</mark> | 0.8 |
| 250 (10") | 471 | 697 | - | - | 1431 401 | 1605 422 | 1769 441 | 1.0 |
| 300 (12") | 581 | 697 | - | - | 1851 556 | 2090 <mark>592</mark> | 2314 625 | 1.2 |
| 400 (16") | 697 | 876 | - | - | 2542 809 | 2864 <mark>861</mark> | 3167 910 | 1.6 |
| 500 (20") | 799 | 946 | - | - | 3190 1046 | 3604 1117 | 3994 1185 | 2.0 |
| 600 (24") | 946 | 1050 | - | - | 4268 1428 | 4843 1536 | 5384 1637 | 2.4 |

- Double Carcass Hose FLEXOMARINE SAFE Mainline Standard Submarine Hose for use as the main submarine hose in the string to connect between sea bed manifold and buoy connection used on monobuoy systems
- Supplied with float location collars
- Rated Working Pressure: 19 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested
- Leak Detection: In case of failure of the primary carcass, a rod installed in each hose end, that is inicially embedded will become visible after the burst of the primary carcass giving confirmation of the failure.



SUBMARINE DOUBLE CARCASS 19 bar 7000 Series

Double Leak Detection System

Double carcass hose developed and tested for offshore mooring applications

Type 7731S One Reinforced End Hose



| Nominal | | | Diameter m) | | Ĭ | ht in Air Empty Veight Full of S | | Minimum Bending |
|--------------|------|------|----------------|-----|--------------|-------------------------------------|--------------------------|--------------------|
| Bore (mm) | D1 | D2 | D3 | D4 | 9.1m | 10.7m | 12.2m | Radius (m) |
| | End | Body | Body | End | (30ft) | (35ft) | (40ft) | |
| 150 (6") | 435 | 330 | 300 | 425 | 821 208 | 931 220 | 1034 232 | 0.6 |
| 200 (8") | 495 | 385 | 360 | 485 | 1073 293 | 1217 312 | 1351 329 | 0.8 |
| 250 (10") | 570 | 450 | 420 | 560 | 1419 411 | 1606 436 | 1781 460 | 1.0 |
| 300 (12") | 640 | 515 | 490 | 630 | 1829 573 | 2075 <mark>615</mark> | 2305 <mark>655</mark> | 1.2 |
| 400 (16") | 740 | 615 | 590 | 730 | 2450 830 | 2778 892 | 3084 <mark>951</mark> | 1.6 |
| 500 (20") | 860 | 725 | 700 | 850 | 3132 1087 | 3556 1175 | 3953 1257 | 2.0 |
| 600 (24") | 1000 | 855 | 830 | 990 | 4201 1491 | 4783 1622 | 5328 1744 | 2.4 |

- Double Carcass Hose FLEXOMARINE SAFE One Reinforced End Submarine Hose for use to connect sea bed manifold or buoy connection
- Rated Working Pressure: 19 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested
- Leak Detection: In case of failure of the primary carcass, a rod installed in each hose end, that is inicially
 embedded will become visible after the burst of the primary carcass giving confirmation of the failure.

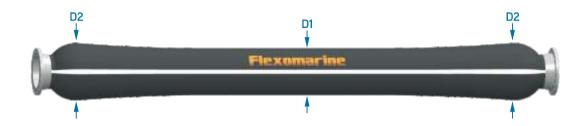


SUBMARINE DOUBLE CARCASS 19 bar 7000 Series

Double Leak Detection System

Double carcass hose developed and tested for offshore mooring applications

Type 7732S Mainline Hose



| Nominal | | | Diameter nm) | | Weig Submerged V | Minimum Bending | | |
|--------------|------|-----|-----------------|---|--------------------------|--------------------------|--------------|---------------|
| Bore (mm) | D1 | D2 | | | 9.1m | 10.7m | 12.2m | Radius (m) |
| | Body | End | | | (30ft) | (35ft) | (40ft) | |
| 150 (6") | 300 | 425 | - | - | 761 197 | 857 207 | 948 215 | 0.6 |
| 200 (8") | 360 | 485 | - | - | 1000 <mark>276</mark> | 1127 289 | 1247 302 | 0.8 |
| 250 (10") | 420 | 560 | - | - | 1334 389 | 1501 409 | 1658 427 | 1.0 |
| 300 (12") | 490 | 630 | - | - | 1729 <mark>541</mark> | 1952 <mark>575</mark> | 2161 606 | 1.2 |
| 400 (16") | 590 | 730 | - | - | 2331 782 | 2630 832 | 2911 878 | 1.6 |
| 500 (20") | 700 | 850 | - | - | 2991 1021 | 3381 1090 | 3747 1154 | 2.0 |
| 600 (24") | 830 | 990 | - | - | 4030 1399 | 4572 1502 | 5079 1599 | 2.4 |

- Double Carcass Hose FLEXOMARINE SAFE Mainline Submarine Hose for use as the main submarine hose
 in the string to connect between sea bed manifold and buoy connection used on monobuoy systems
- Rated Working Pressure: 19 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested
- Leak Detection: In case of failure of the primary carcass, a rod installed in each hose end, that is inicially
 embedded will become visible after the burst of the primary carcass giving confirmation of the failure.



SUBMARINE DOUBLE CARCASS 19 bar 7000 Series

Double Leak Detection System

Double carcass hose developed and tested for offshore mooring applications

Type 7735S **Tanker Rail Hose**



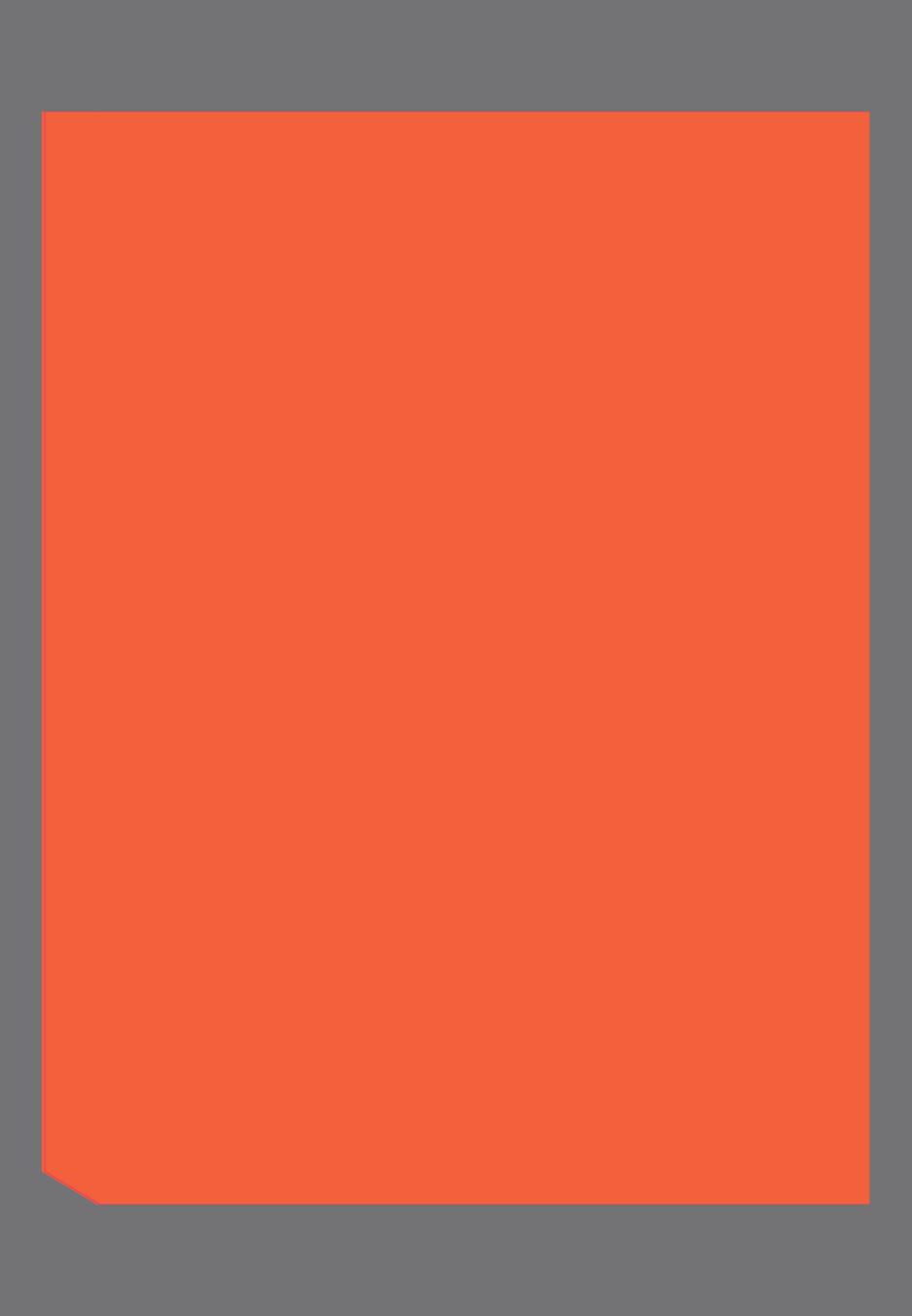
| Nominal | | | Diameter nm) | | Weig Submerged V | Minimum Bending | | |
|--------------|------|-----|-----------------|---|---------------------|--------------------------|--------------------------|---------------|
| Bore (mm) | D1 | D2 | | | 9.1m | 10.7m | 12.2m | Radius (m) |
| | Body | End | | | (30ft) | (35ft) | (40ft) | (III) |
| 150 (6") | 300 | 425 | - | - | 765 205 | 862 215 | 952 223 | 0,6 |
| 200 (8") | 360 | 485 | - | - | 1005 285 | 1132 298 | 1252 <mark>311</mark> | 0.8 |
| 250 (10") | 420 | 560 | - | - | 1340 400 | 1507 <mark>419</mark> | 1664 437 | 1.0 |
| 300 (12") | 490 | 630 | - | - | 1738 554 | 1961 588 | 2170 <mark>620</mark> | 1.2 |
| 400 (16") | 590 | 730 | - | - | 2341 797 | 2640 <mark>846</mark> | 2921 893 | 1.6 |
| 500 (20") | 700 | 850 | - | - | 3003 1038 | 3393 1106 | 3759 1171 | 2.0 |

- Double Carcass Hose FLEXOMARINE SAFE Tanker Rail Submarine Hose for use to facilitate lifting up the string
- Identified by a double circumferencial white bands at the tanker end
- This hose is extremely flexible to support the curvature demanded during offloading
- The fittings hose are welded lifting lugs
- = Each lug are tested to support Safe Working Loads as follow: 6" = 40 kN 8" = 50 kN 10" = 70 kN 12" = 100 kN 16" = 150 kN 20" = 200 kN
- Rated Working Pressure: 19 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested
- Leak Detection: In case of failure of the primary carcass, a rod installed in each hose end, that is inicially
 embedded will become visible after the burst of the primary carcass giving confirmation of the failure.



DOUBLE CARCASS 21 bar 7000 Series







SUBMARINE DOUBLE CARCASS 21 bar 7000 Series

Double Leak Detection System

Double carcass hose developed and tested for offshore mooring applications

Type 7821S One Reinforced End Hose With Location Collars FLEXOMARINE SAFE



| Nominal | | Outside I (m | | | Weight in Air Empty (kg) Submerged Weight Full of Sea Water (kg) | | | Minimum Bending |
|--------------|---------------------------|-----------------|--------------|-------------|--|-------------------|-----------------|--------------------|
| Bore (mm) | D1 ^{Col} Body | lar D2 End | D3 Ho End | DSe D4 Body | 9.1m (30ft) | 10.7m (35ft) | 12.2m (40ft) | Radius (m) |
| 150 (6") | 370 | 471 | 435 | 330 | 876 218 | 997 232 | 1103 244 | 0.6 |
| 200 (8") | 420 | 581 | 495 | 385 | 1147 308 | 1303 328 | 1441 346 | 0.8 |
| 250 (10") | 471 | 697 | 570 | 450 | 1513 430 | 1713 457 | 1894 482 | 1.0 |
| 300 (12") | 581 | 697 | 640 | 515 | 1949 599 | 2219 645 | 2456 686 | 1.2 |
| 400 (16") | 697 | 876 | 740 | 615 | 2636 870 | 2997 938 | 3313 998 | 1.6 |
| 500 (20") | 799 | 946 | 860 | 725 | 3333 1134 | 3795 1228 | 4204 1313 | 2.0 |
| 600 (24") | 946 | 1050 | 1000 | 855 | 4455 1554 | 5089 1693 | 5651 1819 | 2.4 |

- Double Carcass Hose FLEXOMARINE SAFE One Reinforced End Submarine Hose for use to connect sea bed manifold or buoy connection used on monobuoy systems
- Supplied with float location collars
- Rated Working Pressure: 21 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested
- Leak Detection: In case of failure of the primary carcass, a rod installed in each hose end, that is inicially
 embedded will become visible after the burst of the primary carcass giving confirmation of the failure.



SUBMARINE DOUBLE CARCASS 21 bar 7000 Series

Double Leak

Double carcass hose developed and tested for offshore mooring applications

Type 7822S Mainline Hose With Location Collars FLEXOMARINE SAFE



| | | | | | Weig | ht in Air Empty | / (kg) | |
|--------------|------|--------------------|---|---|--------------|--------------------------|---------------|--------------------|
| Nominal | | de Diameter nm) | | | Submerged V | Veight Full of S | ea Water (kg) | Minimum Bending |
| Bore (mm) | D1 | D2 | | | 9.1m | 10.7m | 12.2m | Radius (m) |
| | Body | End | | | (30ft) | (35ft) | (40ft) | (III) |
| 150 (6") | 370 | 471 | - | - | 843 211 | 950 221 | 1051 231 | 0.6 |
| 200 (8") | 420 | 581 | - | - | 1112 294 | 1250 309 | 1381 323 | 0.8 |
| 250 (10") | 471 | 697 | - | - | 1475 414 | 1655 435 | 1823 454 | 1.0 |
| 300 (12") | 581 | 697 | - | - | 1908 573 | 2154 <mark>610</mark> | 2386 645 | 1.2 |
| 400 (16") | 697 | 876 | - | - | 2620 834 | 2952 887 | 3265 938 | 1.6 |
| 500 (20") | 799 | 946 | - | - | 3289 1078 | 3716 1152 | 4118 1221 | 2.0 |
| 600 (24") | 946 | 1050 | - | - | 4400 1472 | 4992 1583 | 5550 1687 | 2.4 |

- Double Carcass Hose FLEXOMARINE SAFE Mainline Standard Submarine Hose for use as the main submarine hose in the string to connect between sea bed manifold and buoy connection used on monobuoy systems
- Supplied with float location collars
- Rated Working Pressure: 21 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested
- Leak Detection: In case of failure of the primary carcass, a rod installed in each hose end, that is inicially embedded will become visible after the burst of the primary carcass giving confirmation of the failure.



SUBMARINE DOUBLE CARCASS 21 bar 7000 Series

Double Leak Detection System

Double carcass hose developed and tested for offshore mooring applications

Type 7831S One Reinforced End Hose



| Nominal | | | Diameter m) | | Weig Submerged V | Minimum Bending | | |
|--------------|------|------|----------------|-----|-------------------------|--------------------|-------------------------|---------------|
| Bore (mm) | D1 | D2 | D3 | D4 | 9.1m | 10.7m | 12.2m | Radius (m) |
| | End | Body | Body | End | (30ft) | (35ft) | (40ft) | |
| 150 (6") | 435 | 330 | 300 | 425 | 846 214 | 960 227 | 1066 239 | 0.6 |
| 200 (8") | 495 | 385 | 360 | 485 | 1106 302 | 1254 322 | 1393 340 | 0.8 |
| 250 (10") | 570 | 450 | 420 | 560 | 1463 423 | 1656 450 | 1836 474 | 1.0 |
| 300 (12") | 640 | 515 | 490 | 630 | 1885 5 90 | 2139 634 | 2377 675 | 1.2 |
| 400 (16") | 740 | 615 | 590 | 730 | 2526 855 | 2864 920 | 3180 98 1 | 1.6 |
| 500 (20") | 860 | 725 | 700 | 850 | 3229 1120 | 3666 1211 | 4076 1296 | 2.0 |
| 600 (24") | 1000 | 855 | 830 | 990 | 4331 1537 | 4931 1672 | 5493 1798 | 2.4 |

- Double Carcass Hose FLEXOMARINE SAFE One Reinforced End Submarine Hose for use to connect sea bed manifold or buoy connection
- Rated Working Pressure: 21 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested
- Leak Detection: In case of failure of the primary carcass, a rod installed in each hose end, that is inicially
 embedded will become visible after the burst of the primary carcass giving confirmation of the failure.

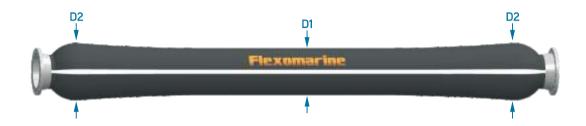


SUBMARINE DOUBLE CARCASS 21 bar 7000 Series

Double Leak

Double carcass hose developed and tested for offshore mooring applications

Type 7832S Mainline Hose



| Nominal | | | Diameter nm) | | Weig Submerged V | Minimum Bending | | |
|--------------|------------|-----------|-----------------|---|---------------------|--------------------|-----------------|---------------|
| Bore (mm) | D1 Body | D2 End | | | 9.1m (30ft) | 10.7m (35ft) | 12.2m (40ft) | Radius (m) |
| 150 (6") | 300 | 425 | - | - | 784 203 | 884 213 | 977 222 | 0.6 |
| 200 (8") | 360 | 485 | - | - | 1031 284 | 1162 298 | 1285 312 | 0.8 |
| 250 (10") | 420 | 560 | - | - | 1375 401 | 1547 421 | 1709 440 | 1.0 |
| 300 (12") | 490 | 630 | - | - | 1783 558 | 2012 592 | 2228 625 | 1.2 |
| 400 (16") | 590 | 730 | - | - | 2403 807 | 2711 857 | 3001 905 | 1.6 |
| 500 (20") | 700 | 850 | - | - | 3083 1053 | 3486 1123 | 3863 1190 | 2.0 |
| 600 (24") | 830 | 990 | - | - | 4155 1442 | 4713 1548 | 5236 1648 | 2.4 |

- Double Carcass Hose FLEXOMARINE SAFE Mainline Submarine Hose for use as the main submarine hose in the string to connect between sea bed manifold and buoy connection used on monobuoy systems
- Rated Working Pressure: 21 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested
- Leak Detection: In case of failure of the primary carcass, a rod installed in each hose end, that is inicially embedded will become visible after the burst of the primary carcass giving confirmation of the failure.



SUBMARINE DOUBLE CARCASS 21 bar 7000 Series

Double Leak Detection System

Double carcass hose developed and tested for offshore mooring applications

Type 7835S **Tanker Rail Hose**



| Nominal | | | Diameter nm) | | Weight in Air Empty (kg) Submerged Weight Full of Sea Water (kg) | | | Minimum Bending |
|--------------|------|-----|-----------------|---|--|--------------|--------------------------|--------------------|
| Bore (mm) | D1 | D2 | | | 9.1m | 10.7m | 12.2m | Radius (m) |
| | Body | End | | | (30ft) | (35ft) | (40ft) | (III) |
| 150 (6") | 300 | 425 | - | - | 789 211 | 888 221 | 981 230 | 0,6 |
| 200 (8") | 360 | 485 | - | - | 1036 293 | 1167 308 | 1290 <mark>321</mark> | 0.8 |
| 250 (10") | 420 | 560 | - | - | 1381 412 | 1553 432 | 1715 451 | 1.0 |
| 300 (12") | 490 | 630 | - | - | 1791 572 | 2021 606 | 2237 639 | 1.2 |
| 400 (16") | 590 | 730 | - | - | 2413 822 | 2722 873 | 3011 920 | 1.6 |
| 500 (20") | 700 | 850 | - | - | 3096 1070 | 3498 1141 | 3875 1207 | 2.0 |

- Double Carcass Hose FLEXOMARINE SAFE Tanker Rail Submarine Hose for use to facilitate lifting up the string
- Identified by a double circumferencial white bands at the tanker end
- This hose is extremely flexible to support the curvature demanded during offloading
- The fittings hose are welded lifting lugs
- Each lug are tested to support Safe Working Loads as follow:
 6" = 40 kN
 8" = 50 kN
 10" = 70 kN
 12" = 100 kN
 16" = 150 kN
 20" = 200 kN
- Rated Working Pressure: 21 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested
- Leak Detection: In case of failure of the primary carcass, a rod installed in each hose end, that is inicially
 embedded will become visible after the burst of the primary carcass giving confirmation of the failure.



Rua Dias da Silva, 17 CEP 02114-000 São Paulo - SP Brazil

Tel: +55 11 2633-8611 Fax: +55 11 2633-8612