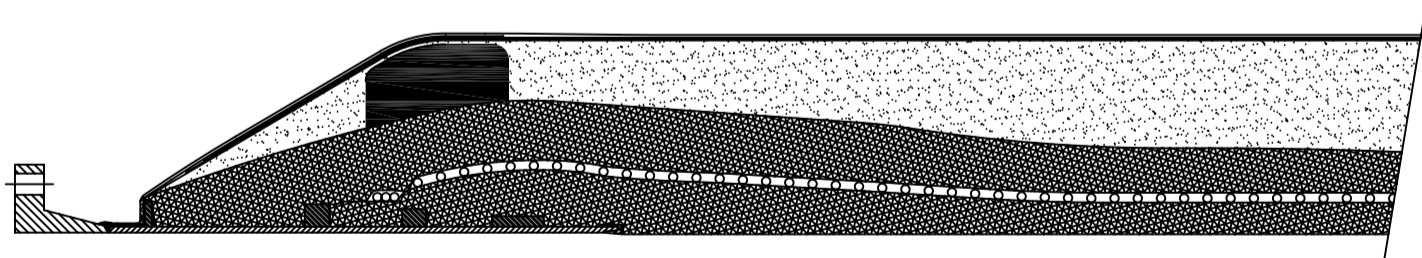


REELING HOSES TYPE



In order to prevent contact of the hose flanges with the reel, all Flexomarine reeling hoses type have a rubber ring (patented PI 1104814-0) at each end.

RT REINFORCED SINGLE CARCASS 15 bar 1000 Series **Reeling Hose**



1610F RT

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



1620F RT

Flexomarine integral full-floating hose for mainline



1630F RT

Flexomarine integral full-floating hose with built-in reducer



1640F RT

Flexomarine integral full-floating hose for tail



1652F RT

Flexomarine integral full-floating tanker end hose (Jumbo)



1670BCRT

Flexomarine integral buoyancy control hose
Designed upon request



1631S RT

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



1632S RT

Flexomarine standard mainline submarine hose



1635S RT

Flexomarine submarine hose for tanker end

RT REINFORCED SINGLE CARCASS 15 bar 1000 Series **Reeling Hose**

Type 1610 F RT **First Off FPSO HOSE**

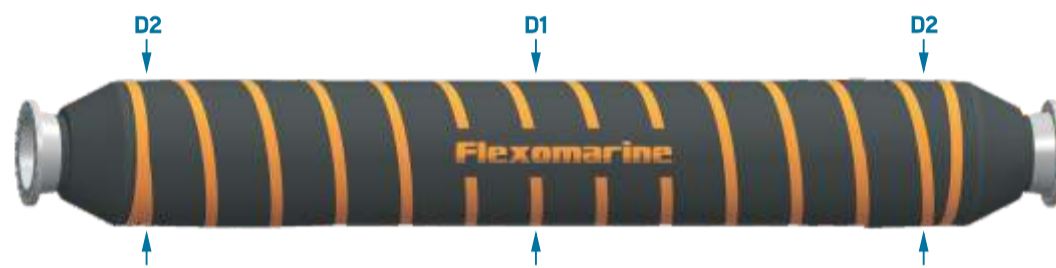


Nominal Bore (mm)	Outside Diameter (mm)				Weight in Air Empty (kg)			Minimum Bending Radius (m)
	D1 End	D2 Body	D3 Body	D4 End	Weight in Air Full of Sea Water (kg)			
					9.1m (30ft)	10.7m (35ft)	12.2m (40ft)	
300 (12")	800	730	600	620	1546 2214	1769 2555	1979 2875	1.8
400 (16")	960	890	760	780	2097 3183	2395 3672	2675 4131	2.4
500 (20")	1090	1020	890	910	2753 4476	3145 5171	3512 5822	3.0
600 (24")	1220	1200	1040	1060	3589 6096	4110 7058	4598 7959	3.6

- Single Carcass Hose FLEXOMARINE One End Reinforced to be used in the FPSO Offloading connection
- Identified by one circumferencial white band at the reinforced end
- The hose can be supplied with reinforcement at both ends or fully reinforced
- Rated Working Pressure: 15 bar
- Minimum Bending Radius: 6D (up to 2D without any permanent deformation)
- Minimum Reserve Buoyancy: 20% including the weight of ancillary equipment or as requested
- Electrical Continuity: Continuous or as requested

RT REINFORCED SINGLE CARCASS 15 bar 1000 Series **Reeling Hose**

Type 1620 F RT **Mainline Hose**



Nominal Bore (mm)	Outside Diameter (mm)		Weight in Air Empty (kg)			Minimum Bending Radius (m)
	D1 Body	D2 End	Weight in Air Full of Sea Water (kg)			
			9.1m (30ft)	10.7m (35ft)	12.2m (40ft)	
300 (12")	600	620	1337 2005	1521 2306	1693 2589	1.8
400 (16")	760	780	1905 2991	2168 3444	2414 3869	2.4
500 (20")	890	910	2569 4292	2926 4952	3261 5571	3.0
600 (24")	1040	1060	3352 5859	3829 6777	4276 7637	3.6

- Single Carcass Hose FLEXOMARINE Mainline to be used as the main floating hose in the string
- Rated Working Pressure: 15 bar
- Minimum Bending Radius: 6D (up to 2D without any permanent deformation)
- Minimum Reserve Buoyancy: 20% or as requested
- Electrical Continuity: Continuous or as requested

Type 1630 F RT **Reducer Hose**

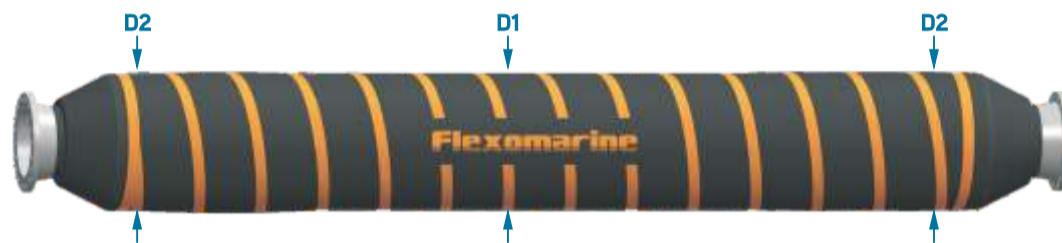


Nominal Bore (mm)	Outside Diameter (mm)			Weight in Air Empty (kg)			Minimum Bending Radius (m)
	D1	D2	D3	Weight in Air Full of Sea Water (kg)			
				9.1m (30ft)	10.7m (35ft)	12.2m (40ft)	
400/300 (16"/12")	780	600	620	1343 2011	1528 2314	1701 2597	1.8
500/400 (20"/16")	910	760	780	1939 3025	2207 3484	2458 3914	2.4
600/500 (24"/20")	1060	900	920	2601 4324	2964 4990	3303 5613	3.0

- Single Carcass Hose FLEXOMARINE Reducer Bore for use to connect larger mainline hose to smaller tail hose
- Rated Working Pressure: 15 bar
- Minimum Bending Radius: 6D (up to 2D without any permanent deformation)
- Minimum Reserve Buoyancy: 20% or as requested
- Electrical Continuity: Continuous or as requested

RT REINFORCED SINGLE CARCASS 15 bar 1000 Series **Reeling Hose**

Type 1640 F RT **Tail Hose**

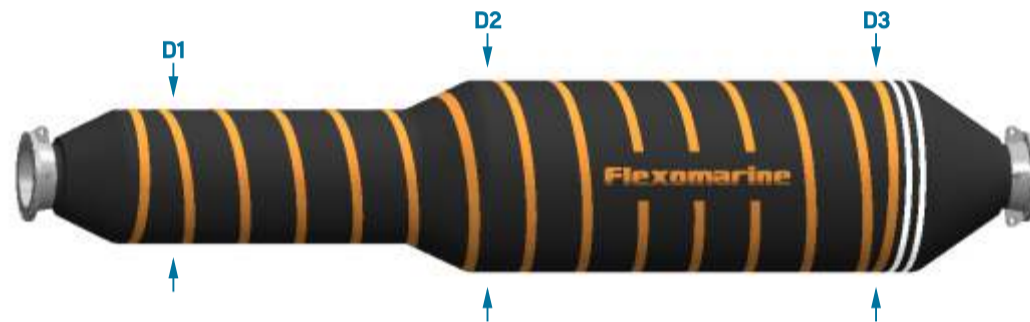


Nominal Bore (mm)	Outside Diameter (mm)		Weight in Air Empty (kg)			Minimum Bending Radius (m)
	D1 Body	D2 End	Weight in Air Full of Sea Water (kg)			
			9.1m (30ft)	10.7m (35ft)	12.2m (40ft)	
300 (12")	600	620	1397 2065	1594 2379	1778 2674	1.8
400 (16")	760	780	1924 3010	2191 3468	2442 3898	2.4
500 (20")	890	910	2559 4282	2917 4943	3252 5562	3.0
600 (24")	1040	1060	3577 6084	3975 6923	4372 7733	3.6

- Single Carcass Hose FLEXOMARINE Tail for use to connect the end connection hose and the main floating string
- This hose has flexibility enough to support seawater conditions during offloading
- Rated Working Pressure: 15 bar
- Minimum Bending Radius: 6D (up to 2D without any permanent deformation)
- Minimum Reserve Buoyancy: 20% or as requested
- Electrical Continuity: Discontinuous or as requested

RT REINFORCED SINGLE CARCASS 15 bar 1000 Series **Reeling Hose**

Type 1652 F RT **Tanker End (Jumbo) Hose**



Nominal Bore (mm)	Outside Diameter (mm)			Weight in Air Empty (kg)			Minimum Bending Radius (m)
	D1	D2	D3	Weight in Air Full of Sea Water (kg)			
				9.1m (30ft)	10.7m (35ft)	12.2m (40ft)	
300 (12")	810	1020	1180	1687 2355	1908 2694	2114 3010	1.2
400 (16")	1000	1380	1430	2317 3402	2618 3895	2900 4356	1.6
500 (20")	1080	1470	1520	3085 4809	3486 5512	3859 6169	2.0
600 (24")	1230	1555	1600	4070 6577	4523 7471	4975 8336	2.4

- Single Carcass Hose FLEXOMARINE Tanker End for use to connect the ship's manifold and the floating hose string
- Identified by a double circumferencial white bands at the tanker end
- In the hose fittings liftings lugs can be welded to attach pick up device
- 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)
- Minimum Reserve Buoyancy: 20% including the weight of NSV (North Sea Valve) up to 2,5 ton
- Electrical Continuity: Discontinuous or as requested

RT REINFORCED SINGLE CARCASS 15 bar 1000 Series **Reeling Hose**

Type 1670 BC RT **Buoyancy Control Hose**



Nominal Bore (mm)	Outside Diameter (mm)		Weight in Air Empty (kg)			Minimum Bending Radius (m)
	D1 Body	D2 End	Weight in Air Full of Sea Water (kg)			
			9.1m (30ft)	10.7m (35ft)	12.2m (40ft)	
300 (12")	500	620	1300 1968	1478 2263	1644 2540	1.8
400 (16")	610	780	1865 2951	2120 3397	2360 3815	2.4
500 (20")	710	910	2500 4223	2844 4870	3167 5477	3.0
600 (24")	840	1060	3284 5791	3748 6696	4183 7544	3.6

- Single Carcass Hose FLEXOMARINE Buoyancy Control for use as the second and third hose in the string
- Rated Working Pressure: 15 bar
- Minimum Bending Radius: 6D (up to 2D without any permanent deformation)
- Minimum Reserve Buoyancy: Neutral or as requested
- Electrical Continuity: Continuous or as requested

RT REINFORCED SINGLE CARCASS 15 bar 1000 Series **Reeling Hose**

Type 1631 S RT **One Reinforced End Hose**



Nominal Bore (mm)	Outside Diameter (mm)				Weight in Air Empty (kg)			Minimum Bending Radius (m)
	D1	D2	D3	D4	Submerged Weight Full of Sea Water (kg)			
					9.1m (30ft)	10.7m (35ft)	12.2m (40ft)	
300 (12")	660	455	430	650	1358 476	1551 536	1733 593	1.2
400 (16")	760	555	540	750	1842 698	2100 783	2342 862	1.6
500 (20")	860	655	640	850	2452 952	2797 1070	3121 1181	2.0
600 (24")	910	795	755	890	3262 1304	3731 1473	4171 1631	2.4

- Single Carcass Hose FLEXOMARINE 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

RT REINFORCED SINGLE CARCASS 15 bar 1000 Series **Reeling Hose**

Type 1632 S RT **Mainline Hose**



Nominal Bore (mm)	Outside Diameter (mm)		Weight in Air Empty (kg)			Minimum Bending Radius (m)
	D1 Body	D2 End	Submerged Weight Full of Sea Water (kg)			
			9.1m (30ft)	10.7m (35ft)	12.2m (40ft)	
300 (12")	430	650	1251 429	1420 476	1579 520	1.2
400 (16")	540	750	1716 634	1944 700	2158 762	1.6
500 (20")	640	850	2301 865	2610 957	2899 1042	2.0
600 (24")	755	890	3082 1183	3508 1315	3908 1439	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: 15 bar
- Minimum Bending Radius: 4D (up to 2D without any permanent deformation)
- Electrical Continuity: Discontinuous or as requested

RT REINFORCED SINGLE CARCASS 15 bar 1000 Series **Reeling Hose**

Type 1635 S RT **Tanker End Hose**



Nominal Bore (mm)	Outside Diameter (mm)		Weight in Air Empty (kg)			Minimum Bending Radius (m)
	D1 End	D2 Body	Submerged Weight Full of Sea Water (kg)			
			9.1m (30ft)	10.7m (35ft)	12.2m (40ft)	
300 (12")	430	650	1261 439	1430 485	1588 529	1.2
400 (16")	540	750	1727 645	1955 711	2170 772	1.6
500 (20")	640	850	2315 878	2624 969	2913 1055	2.0
600 (24")	755	890	3098 1188	3526 1321	3927 1446	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" = 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