

DYNAMIC 4 in 6000 psi 7545.9 ft 4 INCH SERVICE TOP RISER**Structure Number: WSI 101.2315-RD-4043-6 R2****U. S. Units Pipe Data Sheet, 101.2315-RD-4043-6 R2****Prepared by:** Gustavo Dionisio**Checked by:** Patricia Duraes**Approved by:** Jupan Costa

Inside Diameter	4 in	Service	Dynamic	Max. Fluid Temp.	194 °F
Design Pressure	6000 psi	Conveyed Fluid	Gas / Water / Diesel	Water Depth	7545.9 ft

Layer	Material	I.D. [in]	Thick [in]	O.D. [in]	Weight [lbm/ft]
Flexbody	Duplex 2205	4.000	0.236	4.472	6.157
Flexbarrier	PA 12 Natural	4.472	0.177	4.827	1.144
Flexlok	Steel 110ksi UTS	4.827	0.250	5.327	11.351
Flextape	Tape PA 11 P20 30mil	5.327	0.060	5.446	0.461
Flextensile 1	Steel 190ksi UTS	5.446	0.197	5.840	9.751
Flextape	Tape PA 11 P20 30mil	5.840	0.060	5.960	0.505
Flextensile 2	Steel 190ksi UTS	5.960	0.197	6.354	10.680
Flextape	Polypropylene	6.354	0.012	6.377	0.094
Flextape	High Strength Glass Filament	6.377	0.048	6.473	0.546
Flextape	Polypropylene	6.473	0.012	6.497	0.095
Flextape	Tape Polyester Fabric	6.497	0.016	6.529	0.095
Flexshield	PE100 Grade GP100BK	6.529	0.217	6.962	1.944
Flextape	Tape Polyester Fabric	6.962	0.016	6.994	0.101
Abrasion	PA11 Black mix	6.994	0.217	7.427	2.211

Layer	Raw Material	Dimensions	Mfg Pitch	Wires	Angle	Filled
Flexbody	40.0mm x 1.2mm	1.575in x 0.047in			87.6	91.27%
Flexlok (Profile F)	14.4mm x 6.4mm	0.565in x 0.250in			88.6	90.90%
Flextensile 1	10.0mm x 5.0mm	0.394in x 0.197in	29.51in	34	31.0	91.34%
Flextensile 2	10.0mm x 5.0mm	0.394in x 0.197in	34.90in	38	29.0	91.42%

Outside Diameter	7.427 in	Volume (at OD)	0.301 ft³/ft
Storage Radius, SBR	4.02 ft	Volume (at ID)	0.097 ft³/ft
Operating Radius, OBR	6.03 ft	Wt, Empty in Air	45.14 lb/ft
Pipe bending stiffness at 23 °C, EI	19147 lbf ft²	S/W filled in Air	51.32 lb/ft
Spooling Tension	1185 lbf	Air filled in S/W	25.88 lb/ft
Therm. Cond./Length, C/L	3.35 BTU/hrft°F	S/W filled in S/W	32.06 lb/ft
Effective Thermal Cond, ke	0.33 BTU/hrft°F	Burst Pressure	14556 psi
OHTC, Uo {based on ID}	3.20 BTU/hrft²°F	Burst/Design	2.43
SWDR with bore empty	3.484 lbf/ft in	Collapse Pressure (Wet Flexlok)	5105 psi
SWDR with bore filled by SW	4.317 lbf/ft in	Collapse Depth (Wet Flexlok)	11485 ft
Pipe torsional stiffness (GJ) at 23 °C:		Collapse/Design (Wet Flexlok)	1.52
Limp direction	680 Kip ft²	Failure Tension	772468 lbf
Stiff direction	1436 Kip ft²		
Axial Stiffness	59373 Kip		

Data is for information only. Design is subject to change based on detailed engineering.

DYNAMIC 101.6 mm 41.369 MPa 2300 m 4 INCH SERVICE TOP RISER**Structure Number: WSI 101.2315-RD-4043-6 R2****S.I. Units Pipe Data Sheet, 101.2315-RD-4043-6 R2****Prepared by:** Gustavo Dionisio**Checked by:** Patricia Duraes**Approved by:** Jupán Costa

Inside Diameter	101.6 mm	Service	Dynamic	Max. Fluid Temp.	90 °C
Design Pressure	41.369 MPa	Conveyed Fluid	Gas / Water / Diesel	Water Depth	2300 m

Layer	Material	I.D. [mm]	Thick [mm]	O.D. [mm]	Weight [kg/m]
Flexbody	Duplex 2205	101.60	6.00	113.60	9.163
Flexbarrier	PA 12 Natural	113.60	4.50	122.60	1.703
Flexlok	Steel 110ksi UTS	122.60	6.35	135.30	16.892
Flextape	Tape PA 11 P20 30mil	135.30	1.52	138.34	0.686
Flex tensile 1	Steel 190ksi UTS	138.34	5.00	148.35	14.511
Flextape	Tape PA 11 P20 30mil	148.35	1.52	151.39	0.751
Flex tensile 2	Steel 190ksi UTS	151.39	5.00	161.40	15.894
Flextape	Polypropylene	161.40	0.30	161.99	0.139
Flextape	High Strength Glass Filament	161.99	1.22	164.43	0.813
Flextape	Polypropylene	164.43	0.30	165.02	0.142
Flextape	Tape Polyester Fabric	165.02	0.41	165.83	0.141
Flexshield	PE100 Grade GP100BK	165.83	5.50	176.83	2.893
Flextape	Tape Polyester Fabric	176.83	0.41	177.64	0.151
Abrasion	PA11 Black mix	177.64	5.50	188.64	3.291

Layer	Raw Material	Dimensions	Mfg Pitch	Wires	Angle	Filled
Flexbody	40.0mm x 1.2mm	1.575in x 0.047in			87.6	91.27%
Flexlok (Profile F)	14.4mm x 6.4mm	0.565in x 0.250in			88.6	90.90%
Flex tensile 1	10.0mm x 5.0mm	0.394in x 0.197in	749.5mm	34	31.0	91.34%
Flex tensile 2	10.0mm x 5.0mm	0.394in x 0.197in	886.4mm	38	29.0	91.42%

Outside Diameter	188.64 mm	Volume (at OD)	27.949 l/m
Storage Radius, SBR	1.22 m	Volume (at ID)	8.974 l/m
Operating Radius, OBR	1.84 m	Wt, Empty in Air	67.17 kg/m
Pipe bending stiffness at 23 °C, EI	7.912 kNm ²	S/W filled in Air	76.37 kg/m
Spooling Tension	5273 N	Air filled in S/W	38.51 kg/m
Therm. Cond./Length, C/L	5.80 w/m°C	S/W filled in S/W	47.71 kg/m
Effective Thermal Cond, ke	0.57 w/m°C	Burst Pressure	100.36 MPa
OHTC, Uo {based on ID}	18.16 w/m°C	Burst/Design	2.43
SWDR with bore empty	2.00 N/m mm	Collapse Pressure (Wet Flexlok)	35.2 MPa
SWDR with bore filled by SW	2.48 N/m mm	Collapse Depth (Wet Flexlok)	3501 m
Pipe torsional stiffness (GJ) at 23 °C:		Collapse/Design (Wet Flexlok)	1.52
Limp direction	281 kNm ²	Failure Tension	3436.1 kN
Stiff direction	593 kNm ²		
Axial Stiffness	264106 kN		

Data is for information only. Design is subject to change based on detailed engineering.

DYNAMIC 101.6 mm 41.369 MPa 2300 m 4 INCH SERVICE TOP RISER**Structure Number: WSI 101.2315-RD-4043-6 R2****Customer Pipe Data Sheet: 101.2315-RD-4043-6 R2****Prepared by:** Gustavo Dionisio**Checked by:** Patricia Duraes**Approved by:** Jupan Costa

Inside Diameter	101.60 mm	4.00 in	Conveyed Fluid	Gas / Water / Diesel
Outside Diameter	188.64 mm	7.427 in	Burst/Design Ratio	2.43
Water Depth	2300 m	7545.9 ft	Collapse/Design	1.52
Fluid Temperature	90 °C	194 °F	based on Wet Flexlok	

Design Pressure	41.37 MPa	6000 psi
Factory Test Pressure (1.5 * Design Pressure)	62.05 MPa	9000.1 psi
Burst Pressure	100.36 MPa	14556 psi
Collapse Pressure (Wet Flexlok)	35.2 MPa	5105 psi
Collapse Depth (Wet Flexlok)	3501 m	11485 ft
Failure Tension	3436 kN	772468 lbf
Storage Bend Radius	1.22 m	4.02 ft
Operating Bend Radius	1.84 m	6.03 ft
Pipe bending stiffness at 23 °C	7.912 kNm ²	19147 lbf ft ²
Volume (at OD)	27.949 l/m	0.301 ft ³ /ft
Volume (at ID)	8.974 l/m	0.097 ft ³ /ft
Weight Empty in Air	67.17 kg/m	45.14 lb/ft
S/W filled in Air	76.37 kg/m	51.32 lb/ft
Air filled in S/W	38.51 kg/m	25.88 lb/ft
S/W filled in S/W	47.71 kg/m	32.06 lb/ft
Therm. Cond./Length, C/L	5.80 w/m°C	3.35 BTU/hrft°F
OHTC, Uo {based on ID}	18.16 w/m ² °C	3.20 BTU/hrft ² °F
Pipe torsional stiffness (GJ) at 23 °C:		
Limp direction	281 kNm ²	680 Kip ft ²
Stiff direction	593 kNm ²	1436 Kip ft ²
Axial Stiffness	264106 kN	59373 Kip

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DYNAMIC 4 in 6000 psi 7545.9 ft 4 INCH SERVICE BOTTOM RISER**Structure Number: WSI 101.2316-RD-4042-6 R1****U. S. Units Pipe Data Sheet, 101.2316-RD-4042-6 R1****Prepared by:** Gustavo Dionisio**Checked by:** Patricia Duraes**Approved by:** Jupan Costa

Inside Diameter	4 in	Service	Dynamic	Max. Fluid Temp.	194 °F
Design Pressure	6000 psi	Conveyed Fluid	as / Water / Diesel	Water Depth	7545.9 ft

Layer	Material	I.D. [in]	Thick [in]	O.D. [in]	Weight [lbm/ft]
Flexbody	Duplex 2205	4.000	0.236	4.472	6.157
Flexbarrier	PA 12 Natural	4.472	0.177	4.827	1.144
Flexlok	Steel 110ksi UTS	4.827	0.250	5.327	11.351
Flextape	Tape PA 11 P20 30mil	5.327	0.060	5.446	0.461
Flextensile 1	Steel 190ksi UTS	5.446	0.157	5.760	7.746
Flextape	Tape PA 11 P20 30mil	5.760	0.060	5.880	0.498
Flextensile 2	Steel 190ksi UTS	5.880	0.157	6.194	8.315
Flextape	Polypropylene	6.194	0.012	6.217	0.091
Flextape	High Density Glass Filament	6.217	0.076	6.369	0.920
Flextape	Polypropylene	6.369	0.012	6.392	0.094
Flextape	Tape Polyester Fabric	6.392	0.016	6.424	0.093
Flexshield	PE100 Grade GP100BK	6.424	0.217	6.857	1.914
Flextape	Tape Polyester Fabric	6.857	0.016	6.889	0.100
Abrasion	PE100 Grade GP100BK	6.889	0.217	7.322	2.048

Layer	Raw Material	Dimensions	Mfg Pitch	Wires	Angle	Filled
Flexbody	40.0mm x 1.2mm	1.575in x 0.047in			87.6	91.27%
Flexlok (Profile F)	14.4mm x 6.4mm	0.565in x 0.250in			88.6	90.90%
Flextensile 1	8.0mm x 4.0mm	0.315in x 0.157in	24.23in	40	36.0	91.02%
Flextensile 2	8.0mm x 4.0mm	0.315in x 0.157in	28.12in	44	34.0	90.50%

Outside Diameter	7.322 in	Volume (at OD)	0.292 ft³/ft
Storage Radius, SBR	3.96 ft	Volume (at ID)	0.097 ft³/ft
Operating Radius, OBR	5.95 ft	Wt, Empty in Air	40.93 lb/ft
Pipe bending stiffness at 23 °C, EI	16985 lbf ft²	S/W filled in Air	47.12 lb/ft
Spooling Tension	1082 lbf	Air filled in S/W	22.21 lb/ft
Therm. Cond./Length, C/L	3.43 BTU/hrft°F	S/W filled in S/W	28.40 lb/ft
Effective Thermal Cond, ke	0.33 BTU/hrft°F	Burst Pressure	14806 psi
OHTC, Uo {based on ID}	3.27 BTU/hrft²°F	Burst/Design	2.47
SWDR with bore empty	3.034 lbf/ft in	Collapse Pressure (Wet Flexlok)	5105 psi
SWDR with bore filled by SW	3.878 lbf/ft in	Collapse Depth (Wet Flexlok)	11485 ft
Pipe torsional stiffness (GJ) at 23 °C:		Collapse/Design (Wet Flexlok)	1.52
Limp direction	612 Kip ft²	Failure Tension	543272 lbf
Stiff direction	1293 Kip ft²		
Axial Stiffness	36064 Kip		

Notes

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DYNAMIC 101.6 mm 41.369 MPa 2300 m 4 INCH SERVICE BOTTOM RISER**Structure Number: WSI 101.2316-RD-4042-6 R1****S.I. Units Pipe Data Sheet, 101.2316-RD-4042-6 R1****Prepared by:** Gustavo Dionisio**Checked by:** Patricia Duraes**Approved by:** Jupan Costa

Inside Diameter	101.6 mm	Service	Dynamic	Max. Fluid Temp.	90 °C
Design Pressure	41.369 MPa	Conveyed Fluid	as / Water / Diesel	Water Depth	2300 m

Layer	Material	I.D. [mm]	Thick [mm]	O.D. [mm]	Weight [kg/m]
Flexbody	Duplex 2205	101.60	6.00	113.60	9.163
Flexbarrier	PA 12 Natural	113.60	4.50	122.60	1.703
Flexlok	Steel 110ksi UTS	122.60	6.35	135.30	16.892
Flextape	Tape PA 11 P20 30mil	135.30	1.52	138.34	0.686
Flextensile 1	Steel 190ksi UTS	138.34	3.99	146.32	11.527
Flextape	Tape PA 11 P20 30mil	146.32	1.52	149.36	0.741
Flextensile 2	Steel 190ksi UTS	149.36	3.99	157.33	12.374
Flextape	Polypropylene	157.33	0.30	157.92	0.136
Flextape	High Density Glass Filament	157.92	1.92	161.76	1.369
Flextape	Polypropylene	161.76	0.30	162.36	0.140
Flextape	Tape Polyester Fabric	162.36	0.41	163.17	0.139
Flexshield	PE100 Grade GP100BK	163.17	5.50	174.17	2.848
Flextape	Tape Polyester Fabric	174.17	0.41	174.98	0.149
Abrasion	PE100 Grade GP100BK	174.98	5.50	185.98	3.048

Layer	Raw Material	Dimensions	Mfg Pitch	Wires	Angle	Filled
Flexbody	40.0mm x 1.2mm	1.575in x 0.047in			87.6	91.27%
Flexlok (Profile F)	14.4mm x 6.4mm	0.565in x 0.250in			88.6	90.90%
Flextensile 1	8.0mm x 4.0mm	0.315in x 0.157in	615.4mm	40	36.0	91.02%
Flextensile 2	8.0mm x 4.0mm	0.315in x 0.157in	714.2mm	44	34.0	90.50%

Outside Diameter	185.98 mm	Volume (at OD)	27.166 l/m
Storage Radius, SBR	1.21 m	Volume (at ID)	8.974 l/m
Operating Radius, OBR	1.81 m	Wt, Empty in Air	60.91 kg/m
Pipe bending stiffness at 23 °C, EI	7.019 kNm ²	S/W filled in Air	70.12 kg/m
Spooling Tension	4813 N	Air filled in S/W	33.06 kg/m
Therm. Cond./Length, C/L	5.93 w/m°C	S/W filled in S/W	42.26 kg/m
Effective Thermal Cond, ke	0.57 w/m°C	Burst Pressure	102.08 MPa
OHTC, Uo {based on ID}	18.58 w/m ² °C	Burst/Design	2.47
SWDR with bore empty	1.74 N/m mm	Collapse Pressure (Wet Flexlok)	35.2 MPa
SWDR with bore filled by SW	2.23 N/m mm	Collapse Depth (Wet Flexlok)	3501 m
Pipe torsional stiffness (GJ) at 23 °C:		Collapse/Design (Wet Flexlok)	1.52
Limp direction	253 kNm ²	Failure Tension	2416.6 kN
Stiff direction	534 kNm ²		
Axial Stiffness	160420 kN		

Notes

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DYNAMIC 101.6 mm 41.369 MPa 2300 m 4 INCH SERVICE BOTTOM RISER**Structure Number: WSI 101.2316-RD-4042-6 R1****Customer Pipe Data Sheet: 101.2316-RD-4042-6 R1****Prepared by:** Gustavo Dionisio**Checked by:** Patricia Duraes**Approved by:** Jupan Costa

Inside Diameter	101.60 mm	4.00 in	Conveyed Fluid	Gas / Water / Diesel
Outside Diameter	185.98 mm	7.322 in	Burst/Design Ratio	2.47
Water Depth	2300 m	7545.9 ft	Collapse/Design	1.52
Fluid Temperature	90 °C	194 °F	based on Wet Flexlok	

Design Pressure	41.37 MPa	6000 psi
Factory Test Pressure (1.5 * Design Pressure)	62.05 MPa	9000.1 psi
Burst Pressure	102.08 MPa	14806 psi
Collapse Pressure (Wet Flexlok)	35.2 MPa	5105 psi
Collapse Depth (Wet Flexlok)	3501 m	11485 ft
Failure Tension	2417 kN	543272 lbf
Storage Bend Radius	1.21 m	3.96 ft
Operating Bend Radius	1.81 m	5.95 ft
Pipe bending stiffness at 23 °C	7.019 kNm ²	16985 lbf ft ²
Volume (at OD)	27.166 l/m	0.292 ft ³ /ft
Volume (at ID)	8.974 l/m	0.097 ft ³ /ft
Weight Empty in Air	60.91 kg/m	40.93 lb/ft
S/W filled in Air	70.12 kg/m	47.12 lb/ft
Air filled in S/W	33.06 kg/m	22.21 lb/ft
S/W filled in S/W	42.26 kg/m	28.40 lb/ft
Therm. Cond./Length, C/L	5.93 w/m°C	3.43 BTU/hrft°F
OHTC, Uo {based on ID}	18.58 w/m ² °C	3.27 BTU/hrft ² °F
Pipe torsional stiffness (GJ) at 23 °C:		
Limp direction	253 kNm ²	612 Kip ft ²
Stiff direction	534 kNm ²	1293 Kip ft ²
Axial Stiffness	160420 kN	36064 Kip

Notes

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STATIC 4 in 6000 psi 8202.1 ft 4 INCH SERVICE FLOWLINE**Structure Number: WSI 101.2511-RD-4042-X R1****U. S. Units Pipe Data Sheet, 101.2511-RD-4042-X R1****Prepared by:** Gustavo Dionisio**Checked by:** Patricia Duraes**Approved by:** Jupán Costa

Inside Diameter	4 in	Service	Static	Max. Fluid Temp.	194 °F
Design Pressure	6000 psi	Conveyed Fluid	Gas / Water / Diesel	Water Depth	8202.1 ft

Layer	Material	I.D. [in]	Thick [in]	O.D. [in]	Weight [lbm/ft]
Flexbody	Duplex 2205	4.000	0.236	4.472	6.157
Flexbarrier	PA 12 Natural	4.472	0.177	4.827	1.144
Flexlok	Steel 110ksi UTS	4.827	0.250	5.327	11.351
Flextape	Polypropylene	5.327	0.012	5.350	0.079
Flextensile 1	Steel 190ksi UTS	5.350	0.157	5.664	7.552
Flextape	Polypropylene	5.664	0.023	5.711	0.167
Flextensile 2	Steel 190ksi UTS	5.711	0.157	6.025	8.126
Flextape	Polypropylene	6.025	0.012	6.048	0.089
Flextape	High Density Glass Filament	6.048	0.076	6.199	0.794
Flextape	Polypropylene	6.199	0.012	6.222	0.091
Flextape	Tape Polyester Fabric	6.222	0.016	6.254	0.091
Flexshield	PE100 Grade GP100BK	6.254	0.217	6.688	1.865

Layer	Raw Material	Dimensions	Mfg Pitch	Wires	Angle	Filled
Flexbody	40.0mm x 1.2mm	1.575in x 0.047in			87.6	91.27%
Flexlok (Profile F)	14.4mm x 6.4mm	0.565in x 0.250in			88.6	90.90%
Flextensile 1	8.0mm x 4.0mm	0.315in x 0.157in	23.81in	39	36.0	90.35%
Flextensile 2	8.0mm x 4.0mm	0.315in x 0.157in	27.33in	43	34.0	91.07%

Outside Diameter	6.688 in	Volume (at OD)	0.244 ft³/ft
Storage Radius, SBR	3.62 ft	Volume (at ID)	0.097 ft³/ft
Operating Radius, OBR	3.62 ft	Wt, Empty in Air	37.51 lb/ft
Pipe bending stiffness at 23 °C, EI	9519 lbf ft²	S/W filled in Air	43.69 lb/ft
Spooling Tension	727 lbf	Air filled in S/W	21.89 lb/ft
Therm. Cond./Length, C/L	4.91 BTU/hrft°F	S/W filled in S/W	28.08 lb/ft
Effective Thermal Cond, ke	0.40 BTU/hrft°F	Burst Pressure	14800 psi
OHTC, Uo {based on ID}	4.69 BTU/hrft²°F	Burst/Design	2.47
SWDR with bore empty	3.274 lbf/ft in	Collapse Pressure (Wet Flexlok)	5105 psi
SWDR with bore filled by SW	4.198 lbf/ft in	Collapse Depth (Wet Flexlok)	11485 ft
Pipe torsional stiffness (GJ) at 23 °C:		Collapse/Design (Wet Flexlok)	1.40
Limp direction	569 Kip ft²	Failure Tension	530344 lbf
Stiff direction	1202 Kip ft²		
Axial Stiffness	35744 Kip		

Data is for information only. Design is subject to change based on detailed engineering.

STATIC 101.6 mm 41.369 MPa 2500 m 4 INCH SERVICE FLOWLINE**Structure Number: WSI 101.2511-RD-4042-X R1****S.I. Units Pipe Data Sheet, 101.2511-RD-4042-X R1****Prepared by:** Gustavo Dionisio**Checked by:** Patricia Duraes**Approved by:** Jupán Costa

Inside Diameter	101.6 mm	Service	Static	Max. Fluid Temp.	90 °C
Design Pressure	41.369 MPa	Conveyed Fluid	Gas / Water / Diesel	Water Depth	2500 m

Layer	Material	I.D. [mm]	Thick [mm]	O.D. [mm]	Weight [kg/m]
Flexbody	Duplex 2205	101.60	6.00	113.60	9.163
Flexbarrier	PA 12 Natural	113.60	4.50	122.60	1.703
Flexlok	Steel 110ksi UTS	122.60	6.35	135.30	16.892
Flextape	Polypropylene	135.30	0.30	135.89	0.117
Flextensile 1	Steel 190ksi UTS	135.89	3.99	143.87	11.239
Flextape	Polypropylene	143.87	0.59	145.05	0.249
Flextensile 2	Steel 190ksi UTS	145.05	3.99	153.03	12.092
Flextape	Polypropylene	153.03	0.30	153.62	0.132
Flextape	High Density Glass Filament	153.62	1.92	157.46	1.182
Flextape	Polypropylene	157.46	0.30	158.05	0.136
Flextape	Tape Polyester Fabric	158.05	0.41	158.86	0.135
Flexshield	PE100 Grade GP100BK	158.86	5.50	169.86	2.776

Layer	Raw Material	Dimensions	Mfg Pitch	Wires	Angle	Filled
Flexbody	40.0mm x 1.2mm	1.575in x 0.047in			87.6	91.27%
Flexlok (Profile F)	14.4mm x 6.4mm	0.565in x 0.250in			88.6	90.90%
Flextensile 1	8.0mm x 4.0mm	0.315in x 0.157in	604.8mm	39	36.0	90.35%
Flextensile 2	8.0mm x 4.0mm	0.315in x 0.157in	694.2mm	43	34.0	91.07%

Outside Diameter	169.86 mm	Volume (at OD)	22.662 l/m
Storage Radius, SBR	1.10 m	Volume (at ID)	8.974 l/m
Operating Radius, OBR	1.10 m	Wt, Empty in Air	55.82 kg/m
Pipe bending stiffness at 23 °C, EI	3.934 kNm ²	S/W filled in Air	65.02 kg/m
Spooling Tension	3233 N	Air filled in S/W	32.58 kg/m
Therm. Cond./Length, C/L	8.50 w/m°C	S/W filled in S/W	41.78 kg/m
Effective Thermal Cond, ke	0.70 w/m°C	Burst Pressure	102.04 MPa
OHTC, Uo {based on ID}	26.64 w/m ² °C	Burst/Design	2.47
SWDR with bore empty	1.88 N/m mm	Collapse Pressure (Wet Flexlok)	35.2 MPa
SWDR with bore filled by SW	2.41 N/m mm	Collapse Depth (Wet Flexlok)	3501 m
Pipe torsional stiffness (GJ) at 23 °C:		Collapse/Design (Wet Flexlok)	1.40
Limp direction	235 kNm ²	Failure Tension	2359.1 kN
Stiff direction	497 kNm ²		
Axial Stiffness	158998 kN		

Data is for information only. Design is subject to change based on detailed engineering.

STATIC 101.6 mm 41.369 MPa 2500 m 4 INCH SERVICE FLOWLINE Structure Number: WSI 101.2511-RD-4042-X R1 Customer Pipe Data Sheet: 101.2511-RD-4042-X R1
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Prepared by: Gustavo Dionisio

Checked by: Patricia Duraes

Approved by: Jupan Costa

Inside Diameter	101.60 mm	4.00 in	Conveyed Fluid	Gas / Water / Diesel
Outside Diameter	169.86 mm	6.688 in	Burst/Design Ratio	2.47
Water Depth	2500 m	8202.1 ft	Collapse/Design	1.40
Fluid Temperature	90 °C	194 °F	based on Wet Flexlok	

Design Pressure	41.37 MPa	6000 psi
Factory Test Pressure (1.3 * Design Pressure)	53.78 MPa	7800.09 psi
Burst Pressure	102.04 MPa	14800 psi
Collapse Pressure (Wet Flexlok)	35.2 MPa	5105 psi
Collapse Depth (Wet Flexlok)	3501 m	11485 ft
Failure Tension	2359 kN	530344 lbf
Storage Bend Radius	1.10 m	3.62 ft
Operating Bend Radius	1.10 m	3.62 ft
Pipe bending stiffness at 23 °C	3.934 kNm ²	9519 lbf ft ²
Volume (at OD)	22.662 l/m	0.244 ft ³ /ft
Volume (at ID)	8.974 l/m	0.097 ft ³ /ft
Weight Empty in Air	55.82 kg/m	37.51 lb/ft
S/W filled in Air	65.02 kg/m	43.69 lb/ft
Air filled in S/W	32.58 kg/m	21.89 lb/ft
S/W filled in S/W	41.78 kg/m	28.08 lb/ft
Therm. Cond./Length, C/L	8.50 w/m°C	4.91 BTU/hrft°F
OHTC, Uo {based on ID}	26.64 w/m ² °C	4.69 BTU/hrft ² °F
Pipe torsional stiffness (GJ) at 23 °C:		
Limp direction	235 kNm ²	569 Kip ft ²
Stiff direction	497 kNm ²	1202 Kip ft ²
Axial Stiffness	158998 kN	35744 Kip

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