

PRODUCT INDEX

The improved Stainless Steel Annular Hose from Tubest is now manufactured to the newly introduced European ISO10380 Standard. This has been produced to standardise European requirements for design, manufacture and testing of Stainless Steel Hose.

The Standard guarantees equivalent mechanical performances of two types (Type 1 and Type 2) of the braided Stainless Steel Hose assemblies, characterised by their respective dynamic bend radii.

Hose assemblies manufactured from Tubest hose are guaranteed to give a 50,000 cycle life at the maximum dynamic bend radius assuming that the hose assembly is installed correctly. This cycle life is affected by changes to either the pressure or the radius.

Type 1 hose is defined as High Flexibility, Type 2 as Standard Flexibility. Both Parnor and Parrap conform to the requirements of Type 1 hose. Parrap improves on these requirements by 25%.

All the testing of Tubest hose has been carried out under the control of Bureau Veritas - file BV.SOS.4.93.024-2/3 - to ensure compliance to the Standard. This fact has allowed Tubest to be the only manufacturer able to meet the dynamic requirements for the space station 'Freedom'.

The Hose assemblies are manufactured to Quality Control standards in accordance with BS5750 pt 2, ISO 9002 and EN29002 (Q09970) as assessed by the British Standards Institute.

All assemblies are leak tested (air pressure under water) and Test and Material Certification is available to customer requirements if requested at the time of order. Inspection by outside authorities is also possible.

The structure of the assemblies are 321 Core and 304 Braid as standard although 316 is available on request.

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Standard End Fittings

The standard range of end fittings are available in both Carbon Steel and Stainless Steel.
Certification available, please ask when ordering. Most fittings in these materials can be attached to Stainless Steel hose, please contact your local Pirtek centre.



Fixed Male
BSPT, BSPP, NPT.
Other threads available.



Swivel Female
BSPP - Cone or Flat Seat.
Also available Fixed BSPT.



Fixed Barrel Male
BSPT or NPT.



Pipe and Weld Ends
Please specify Length and Pipe
Dimensions.



Hygienic Fittings
RJT, DIN, IDF and SMS.



Cam and Groove
Couplers and Adaptors.



Fixed and Swivel Flanges
BS10, ASA or DIN. Specials also
available.

Parnor Hose Assemblies

Hose: AISI 316L/DIN 1.4404 or AISI 321/DIN 1.4541
Braid: AISI 304/DIN 1.4301
Details: Stainless Steel Annular Corrugated Hose with a standard pitch suitable for the majority of applications..



DN (mm)	Braid	Ext Dia (mm)	Min Bend Radius (mm)	Max Working Pressure	
				BAR	PSIG
6	No Braid	9.8	10	405	80
10	No Braid	16.2	16	15	220
12	No Braid	18.6	24	15	220
20	No Braid	28.3	35	6	87
25	No Braid	34.8	42	4.5	65
32	No Braid	43.4	51	4.5	65
40	No Braid	52.4	61	3.5	51
50	No Braid	64.8	73	3	44
65	No Braid	76.5	110	1	14.5
80	No Braid	89.8	130	1	14.5
100	No Braid	114.0	200	0.69	10.0
125	No Braid	126.0	250	0.69	10.0
150	No Braid	151.0	290	0.55	8.0
6	1 Braid	11.4	25	200	2900
10	1 Braid	17.8	38	131	1900
12	1 Braid	20.2	45	115	1670
20	1 Braid	29.9	70	69	1000
25	1 Braid	36.4	85	54	785
32	1 Braid	45.4	105	46	665
40	1 Braid	54.4	130	37	535
50	1 Braid	67.3	160	40	580
65	1 Braid	78.6	203	26	377
80	1 Braid	91.9	230	22	316
100	1 Braid	129.0	230	18.4	267
125	1 Braid	153.0	280	11.5	167
150	1 Braid	180.0	320	11.2	162
6	2 Braid	13	-	205	2973
10	2 Braid	19.4	-	135	1958
12	2 Braid	21.8	-	125	1813
20	2 Braid	31.5	-	87	1262
25	2 Braid	38.0	-	70	1015
32	2 Braid	47.4	-	58	841
40	2 Braid	56.4	-	44	638
50	2 Braid	69.8	-	47	682
65	2 Braid	80.7	203	46	667
80	2 Braid	94.1	230	40	580
100	2 Braid	132.0	230	33	479
125	2 Braid	156.0	280	20.7	300
150	2 Braid	183.0	320	20	290

Parrap Hose Assemblies

Hose: AISI 316L/DIN 1.4404 or AISI 321/DIN 1.4541
Braid: AISI 304/DIN 1.4301
Details: Stainless Steel Annular Corrugated Hose with a very close pitch for extreme flexibility. Exceeds the requirements of ISO 10380 Type 1 (High Flexibility) by 25%.



DN (mm)	Braid	Ext Dia (mm)	Min Bend Radius (mm)	Max Working Pressure	
				BAR	PSIG
6	No Braid	9.8	9	27	390
10	No Braid	16.2	14	10	145
12	No Braid	18.6	21	9	130
20	No Braid	28.3	32	4.5	65
25	No Braid	34.8	37	2.5	36
32	No Braid	43.4	46	2.5	36
40	No Braid	52.4	55	2	29
50	No Braid	64.8	65	1.7	25
65	No Braid	76.5	80	0.8	12
80	No Braid	89.8	97	0.8	12
100	No Braid	114.0	113	0.6	9
125	No Braid	126.0	132	0.4	6
150	No Braid	151.0	152	0.3	4
6	1 Braid	11.4	20	200	2900
10	1 Braid	17.8	20	131	1900
12	1 Braid	20.2	25	115	1670
20	1 Braid	29.9	38	69	1000
25	1 Braid	36.4	45	54	785
32	1 Braid	45.4	58	46	665
40	1 Braid	54.4	70	37	535
50	1 Braid	67.3	85	40	580
65	1 Braid	83.4	105	31	450
80	1 Braid	102.6	180	25	365
100	1 Braid	129.5	218	20	290
125	1 Braid	155.0	255	16	232
150	1 Braid	177.0	290	14	203
6	2 Braid	13	-	205.0	2973
10	2 Braid	19.4	-	135.0	1958
12	2 Braid	21.8	-	125.0	1813
20	2 Braid	31.5	-	87.0	1262
25	2 Braid	38.0	-	70.0	1015
32	2 Braid	47.4	-	58.0	841
40	2 Braid	56.4	-	44.0	638
50	2 Braid	69.8	-	47.0	682
65	2 Braid	80.7	-	46.0	667
80	2 Braid	94.1	-	40.0	580
100	2 Braid	132.0	-	33.0	479
125	2 Braid	156.0	-	20.7	300
150	2 Braid	183.0	-	20.0	290

THP Hose Assemblies

Hose: AISI 316L/DIN 1.4404
Braid: AISI 304/DIN 1.4301
Details: High pressure Stainless Steel Annular hose with a close pitch and TWO heavy braids.



DN (mm)	Braid	Ext Dia (mm)	Max Working Pressure		Min Bend Radius (mm)	Max Test Pressure		Burst Pressure	
			BAR	PSIG		BAR	PSIG	BAR	PSIG
6	2 Braid	13	293	4250	25	380	5510	1026	14875
10	2 Braid	19.4	223	3235	38	290	4205	780	11310
12	2 Braid	21.8	213	3090	45	277	4015	747	10830
20	2 Braid	30.7	147	2130	70	191	2770	513	7440
25	2 Braid	40	142	2060	85	184	2670	498	7220
32	2 Braid	49	134	1945	105	174	2525	470	6815
40	2 Braid	57.4	104	1510	130	135	1960	363	5265
50	2 Braid	69.8	92	1335	160	119	1725	321	4655



Description: Parmeca corrugated flexible metal hose assembly with parallel corrugations.
Flexible hose meeting the requirements of the class 1 of the EN-ISO-10380 standard.

Corrugated hose: AISI: 316L DIN: 1.4404 EN: X2 Cr Ni Mo 17-12-2

AISI: 321 DIN: 1.4541 EN: X6 Cr Ni Ti 18-10

Braid: AISI: 304 DIN: 1.4031 EN: X5 Cr Ni 18-10

ND (mm)	Braid (t)	o.d. (mm)	PMA (Bars)	Dyn R (mm)	Stat R (mm)	GD	GND	LD	LND
6 (0.25in)	T0 T1	9.8 11.4	36 158	- 110	9 25	Y	Y	Y	Y
8 (0.35in)	T0 T1	11.9 13.5	23 115	- 130	11 32	Y	Y	Y	Y
10 (0.35in)	T0 T1	14.5 16.1	16 85	- 150	14 38	Y	Y	Y	Y
12 (0.5in)	T0 T1	16.6 18.2	16 75	- 165	16 45	Y	Y	Y	Y
15 (0.59in)	T0 T1	19.5 21.1	10 56	- 195	18 58	Y	Y	Y	Y
20 (0.75in)	T0 T1	25.4 27.0	10 50	- 225	25 70	Y	Y	Y	Y
25 (1in)	T0 T1	30.8 32.4	6.6 38	- 260	30 85	Y	Y	Y	Y

PED Pressure Equipment Directive

GD Dangerous Gas LD Dangerous Liquid
GND Non dangerous Gas LND Non Dangerous Liquid

Requirements related to the PED, according to Pr EN 14585.

X PS ≤ 0.5 b Not subject to.
Y Subject to, and meeting the requirements of the EN ISO 10380 std (rules of art).
Z Cat. 1 & 2 Subject to, refer to the standard or the Tubest technical guide.
Cat. 3 On request.

Temperature:

Determination of the PED category: Do not take the working temperature into account.

PMA calculation: refer to the derating factors of the EN ISO 10380 standard.

Suparflex

Description: Parnor corrugated flexible metal hose assembly with close pitch annular corrugations, obtained by hydroforming. Flexible hose meeting the requirement of the class 1 of the EN-ISO-10380 standard.

Corrugated hose: AISI: 316L DIN: 1.4404 EN: X2 Cr Ni Mo 17-12-2
 AISI: 321 DIN: 1.4541 EN: X6 Cr Ni Ti 18-10

Braid: AISI: 304 DIN: 1.4031 EN: X5 Cr Ni 18-10

ND (mm)	Braid (t)	o.d. (mm)	PMA (Bars)	Dyn R (mm)	Stat R (mm)	PED CATEGORY: X Y CAT1 - CAT2 According to Pressure (Bar)			
						GD	GND	LD	LND
6 (0.25in)	T0 T1	9.8 11.4	18 140	- 110	10 23	Y	Y	Y	Y
10 (0.35in)	T0 T1	16.2 17.8	10 100	- 150	16 32	Y	Y	Y	Y
12 (0.5in)	T0 T1	18.6 20.2	12 80	- 165	24 39	Y	Y	Y	Y
20 (0.75in)	T0 T1	28.3 29.9	4.3 50	- 225	35 60	Y	Y	Y	Y
25 (1in)	T0 T1	34.8 36.4	3 40	- 260	42 73	Y	Y	Y	Y
32 (1.25in)	T0 T1	43.4 45.4	3.3 40	- 300	51 90	Cat 1 PS ≤ 31.2 PS ≤ 31.2	Y	Y	Y
40 (1.5in)	T0 T1	52.4 54.4	2.2 32	- 340	61 115	Cat 1 PS ≤ 25 PS ≤ 25	Y	Y	Y
50 (2in)	T0 T1	64.8 67.3	2.1 32	- 390	73 140	Cat 1 PS ≤ 20 PS ≤ 20	Y	Y	Y
65 (2.5in)	T0 T1	80.9 83.4	1.3 25	- 460	89 175	Cat 1 PS ≤ 15.4 PS ≤ 15.4	Y	Y	Y
80 (3in)	T0 T1	99.6 102.6	1.4 23	- 660	108 240	Cat 1 PS ≤ 12.5 PS ≤ 12.5	Y	Y	Y
100 (4in)	T0 T1	126.5 129.5	0.5 15	- 750	126 290	X PS ≤ 10 PS ≤ 10	Y	X	X
125 (5in)	T0 T1	152.0 155.0	0.4 13	- 1000	147 340	X Cat 2	Y	X	X
150 (6in)	T0 T1	174.0 177.0	0.3 11	- 1250	169 390	X Cat 2	Y	X	X

PED Pressure Equipment Directive

GD Dangerous Gas LD Dangerous Liquid
 GND Non dangerous Gas LND Non Dangerous Liquid

Requirements related to the PED, according to Pr EN 14585.

X PS ≤ 0.5 b Not subject to.
 Y Subject to, and meeting the requirements of the EN ISO 10380 std (rules of art).
 Z Cat. 1 & 2 Subject to, refer to the standard or the Tubest technical guide.
 Cat. 3 On request.

Temperature: Determination of the PED category: Do not take the working temperature into account.
 PMA calculation: refer to the derating factors of the EN ISO 10380 standard.

Hyparflex

Description: Parrap corrugated flexible metal hose assembly with close pitch annular corrugations, obtained by hydroforming. Flexible hose meeting the requirement of the class 1 of the EN-ISO-10380 standard.

Corrugated hose: AISI: 316L DIN: 1.4404 EN: X2 Cr Ni Mo 17-12-2

AISI: 321 DIN: 1.4541 EN: X6 Cr Ni Ti 18-10

Braid: AISI: 304 DIN: 1.4301 EN: X5 Cr Ni 18-10

ND (mm)	Braid (t)	o.d. (mm)	PMA (Bars)	Dyn R (mm)	Stat R (mm)	PED CATEGORY: X Y CAT1 - CAT2 According to Pressure (Bar)			
						GD	GND	LD	LND
6 (0.25in)	T0	9.8	18	-	9				
	T1	11.4	150	110	20	Y	Y	Y	Y
10 (0.35in)	T0	16.2	6	-	14				
	T1	17.8	115	150	20	Y	Y	Y	Y
12 (0.5in)	T0	18.6	6	-	21				
	T1	20.2	80	124	25	Y	Y	Y	Y
20 (0.75in)	T0	28.3	2.2	-	32				
	T1	29.9	55	169	38	Y	Y	Y	Y
25 (1in)	T0	34.8	1.8	-	37				
	T1	36.4	40	195	45	Y	Y	Y	Y
32 (1.25in)	T0	43.4	1.6	-	46	Cat 1			
	T1	45.4	40	225	58	PS ≤ 31.2 PS ≤ 31.2	Y	Y	Y
40 (1.5in)	T0	52.4	1.2	-	55	Cat 1			
	T1	54.4	32	225	70	PS ≤ 25 PS ≤ 25 PS ≤ 25 PS ≤ 25	Y	Y	Y
50 (2in)	T0	64.8	1	-	65	Cat 1			
	T1	67.3	32	293	85	PS ≤ 20 PS ≤ 20 PS ≤ 20 PS ≤ 20	Y	Y	Y
65 (2.5in)	T0	80.9	0.5	-	80	Cat 1			
	T1	83.4	25	345	105	PS ≤ 15.4 PS ≤ 15.4 PS ≤ 15.4 PS ≤ 15.4	Y	Y	Y
80 (3in)	T0	99.6	0.7	-	97	Cat 1			
	T1	102.6	23	495	180	PS ≤ 125 PS ≤ 125 PS ≤ 125 PS ≤ 125	Y	Y	Y
100 (4in)	T0	126.5	0.4	-	113	X			
	T1	129.5	15	563	218	PS ≤ 10 PS ≤ 10 PS ≤ 10 PS ≤ 10	Y	Y	Y
125 (5in)	T0	152.0	0.25	-	132	X			
	T1	155.0	13	1000	255	Cat 2 PS ≤ 8 PS ≤ 8	Y	Y	Y
150 (6in)	T0	174.0	0.2	-	152	X			
	T1	177.0	11	1250	290	Cat 2 PS ≤ 6.6 PS ≤ 6.6	Y	Y	Y

PED Pressure Equipment Directive

GD Dangerous Gas LD Dangerous Liquid
GND Non dangerous Gas LND Non Dangerous Liquid

Requirements related to the PED, according to Pr EN 14585.

X PS ≤ 0.5 b

Not subject to.

Y Subject to, and meeting the requirements of the EN ISO 10380 std (rules of art).

Z Cat. 1 & 2

Subject to, refer to the standard or the Tubest technical guide.

Cat. 3

On request.

Temperature: Determination of the PED category: Do not take the working temperature into account.
PMA calculation: refer to the derating factors of the EN ISO 10380 standard.