PIRTEK
fluid transfer solutions

Flexible Metal Hose Assemblies

Features

- Temperature range -270°C to +816°C
- Stainless steel grade 316L
- Chemical resistant
- No Gas permeation through the hose wall
- Super-flexible
- Available in range of sizes from 6mm to 300mm inside diameter
- Hose manufactured to ISO 10380 - Corrugated hose and hose assemblies and tested to this standard on request
- Standard fittings manufactured to ISO 10806 - Fittings for corrugated metal hose
- Comprehensive range of standard fittings including stainless steel, mild steel, brass and copper
- Custom made end fittings
- Immediate Turn Around
- Technical Support

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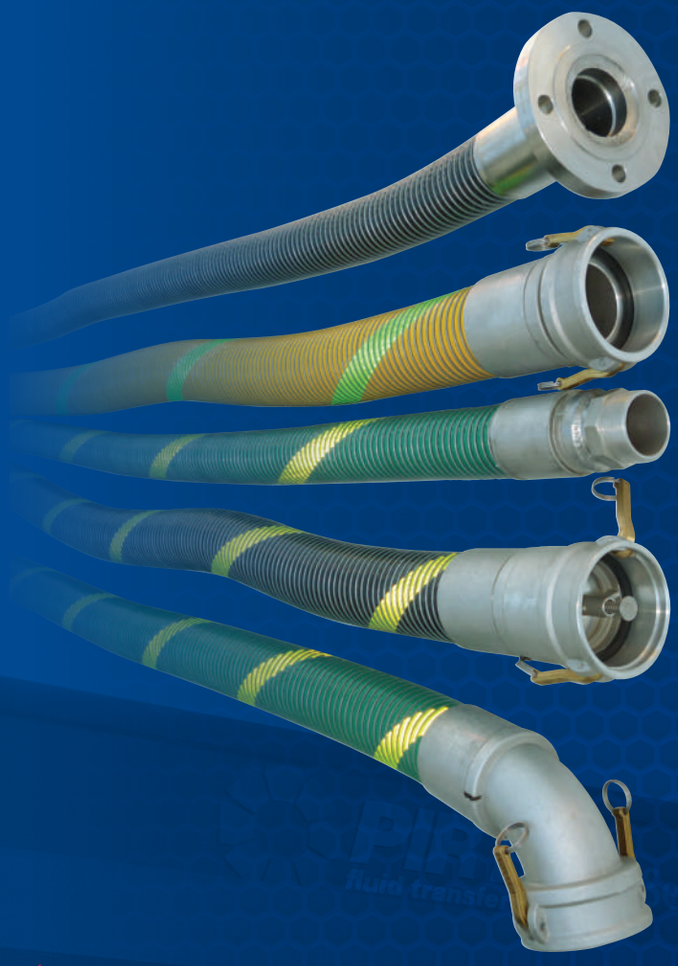
Composite Hose & Assemblies



Features

- Comprehensive range of hoses to suit most industry applications
- High Quality
- Lightweight and flexible
- Easy to identify colour coding
- Available in range of sizes from 25mm to 150mm
- Hoses manufactured to relevant standards
- Each hose tested & certified to AS 1180 or relevant standard
- Excellent chemical resistance
- Huge range of fittings available, including stainless steel, aluminium, bronze and poly
- Custom made fittings
- Technical Support

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Protective Sleeving

Features

- Protection against molten metal splash
- Heat protection for hoses and cables
- Thermal Insulation for hoses and piping
- Thermal protection against burns for employees
- Abrasive protection for hoses and cables
- Chemically resistant
- Flame resistant for a period of time
- Bundling of hoses, wires and cables
- Aerospace sleeve manufactured to AS1072
- Complies with MDG-41 for mining
- Complies with Solas for shipping

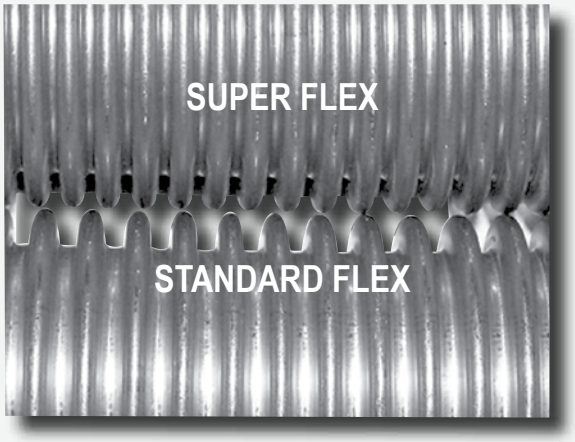
FLEXIBLE METAL HOSES
IMPORTANT TECHNICAL ASPECTS

All Pirtek convoluted stainless steel hoses feature:

- Grade 316L stainless steel corrugated inner tube
- Grade 304 stainless steel outer braiding
- Hydroformed inner tube resulting in
  uniform wall thickness
  minimal residual stress during forming of the corrugations
  better flexibility
  longer cycle life
- Superior manufacturing facilities
- Certified testing performed on request
- ISO9001:2000 Design and manufacture of flexible metal hose assemblies
- AGA 216-1998 certification to a maximum pressure rating of 1500kPa for Standard Flex and Super Flex hose assemblies from 6 mm to 200 mm ID

Hoses are normally configured as either:

- Unbraided (applications including vacuum or exhaust)
- Single wire braid (the vast majority of industrial applications)
- Double wire braid (where higher working pressures are needed)



Reference Specifications:

- ISO 10380 Corrugated metal hoses and hose assemblies
- ISO 10806 Fittings for corrugated metal hoses

End Fittings:

- A full range available in mild steel, stainless steel, brass and copper. See page I 046

Temperature Ratings:

The advantage of flexible metal hose compared to other materials is its capability to withstand a wide temperature range from -270° C to +816° C. As with most materials, elevated service temperatures will reduce the allowable maximum working pressure. The specification charts on the following 2 pages are valid for a working temperature of 20°C with no shock or impulse. Use the multiplication factor below when assessing a material's pressure capability at higher temperatures.

Temperature	Material	Material	Material	Material	Material
°C	St Steel	Steel	Monel	Bronze	Inconel
20	1.00	1.00	1.00	1.00	1.00
66	0.97	0.99	0.93	0.92	0.97
93	0.94	0.97	0.90	0.89	0.94
121	0.92	0.96	0.87	0.86	0.92
150	0.88	0.93	0.83	0.83	0.88
177	0.86	0.91	0.82	0.81	0.86
200	0.83	0.87	0.79	0.78	0.83
230	0.81	0.86	0.77	0.75	0.81
260	0.78	0.81	0.73		0.78
316	0.74	0.74	0.72		0.74
371	0.70	0.66	0.71		0.70
427	0.66	0.52	0.70		0.66
482	0.62	0.50			0.62
538	0.60				
593	0.58				
649	0.55				
704	0.50				
760	0.44				
816	0.40				

Nominal ID		Construction	OD	Pressures @ 20°C *			Min. Bend Radius	
				Max. W.P.	Test	Burst	Static	Dynamic
ins	mm		mm	bar	bar	bar	mm	mm
STANDARD FLEX - 316L TUBE								
1/4	6	Unbraided	13	22	33	-	25	100
1/4	6	Single Braid	14	180	270	720	25	100
1/4	6	Double Braid	15	288	432	1152	25	100
5/16	8	Unbraided	14	18	27	-	25	100
5/16	8	Single Braid	15.5	154	230	616	25	100
5/16	8	Double Braid	17	246	369	984	25	100
3/8	10	Unbraided	15	17	25	-	40	150
3/8	10	Single Braid	17	105	157	420	40	150
3/8	10	Double Braid	19	168	252	672	40	150
1/2	12	Unbraided	18	12	18	-	50	200
1/2	12	Single Braid	20	88	132	352	50	200
1/2	12	Double Braid	22	140	210	560	50	200
5/8	16	Unbraided	22	10	15	-	50	200
5/8	16	Single Braid	24	73	109	292	50	200
5/8	16	Double Braid	26	116	174	464	50	200
3/4	20	Unbraided	28	6	9	-	70	200
3/4	20	Single Braid	29	64	96	256	70	200
3/4	20	Double Braid	30	102	153	408	70	200
1	25	Unbraided	35	4	6	-	90	200
1	25	Single Braid	37	50	75	200	90	200
1	25	Double Braid	39	80	120	320	90	200
1.1/4	32	Unbraided	42	3	4.5	-	110	250
1.1/4	32	Single Braid	44	42	63	168	110	250
1.1/4	32	Double Braid	46	67	100	268	110	250
1.1/2	40	Unbraided	53	2.5	3.75	-	130	250
1.1/2	40	Single Braid	54	32	48	128	130	250
1.1/2	40	Double Braid	57	51	76	204	130	250
2	50	Unbraided	65	1.5	2.25	-	175	350
2	50	Single Braid	67	31	46	124	175	350
2	50	Double Braid	69	49	73	196	175	350
2.1/2	65	Unbraided	84	1.5	2.25	-	200	410
2.1/2	65	Single Braid	86	26	39	104	200	410
2.1/2	65	Double Braid	88	41	61	164	200	410
3	80	Unbraided	97	1	1.5	-	205	450
3	80	Single Braid	99	18	27	72	205	450
3	80	Double Braid	101	28	42	112	205	450
4	100	Unbraided	119	0.8	1.2	-	230	560
4	100	Single Braid	121	16	24	64	230	560
4	100	Double Braid	123	26	39	104	230	560
5	125	Unbraided	150	0.6	0.9	-	280	660
5	125	Single Braid	151	16	24	64	280	660
5	125	Double Braid	154	25	37	100	280	660
6	150	Unbraided	179	0.5	0.75	-	320	815
6	150	Single Braid	180	12	18	48	320	815
6	150	Double Braid	184	20	30	80	320	815
8	200	Unbraided	230	0.3	0.45	-	435	1015
8	200	Single Braid	234	10	16	40	435	1015
8	200	Double Braid	240	16	24	64	435	1015
10	250	Unbraided	284	0.2	0.3	-	560	1220
10	250	Single Braid	288	6.5	9.75	26	560	1220
10	250	Double Braid	295	10.5	15.75	42	560	1220

Burst pressure not applicable for unbraided hoses

* See page I 040 for modifying factors with elevated temperature

Nominal ID		Construction	OD	Pressures @ 20°C *			Min. Bend Radius	
				Max. W.P.	Test	Burst	Static	Dynamic
ins	mm		mm	bar	bar	bar	mm	mm
SUPER FLEX - 316L TUBE								
1/2	**12**	Unbraided	18	12	18	-	45	180
		Single Braid	20	88	132	352	45	180
		Double Braid	22	140	210	560	45	180
5/8	**16**	Unbraided	22	10	15	-	45	180
		Single Braid	24	73	109	292	45	180
		Double Braid	26	116	174	464	45	180
3/4	**20**	Unbraided	28	6	9	-	62	180
		Single Braid	29	64	96	256	62	180
		Double Braid	30	102	153	408	62	180
1	**25**	Unbraided	35	4	6	-	82	180
		Single Braid	37	50	75	200	82	180
		Double Braid	39	80	120	320	82	180
1.1/4	**32**	Unbraided	42	3	4.5	-	100	220
		Single Braid	44	42	63	168	100	220
		Double Braid	46	67	100	268	100	220
1.1/2	**40**	Unbraided	53	2.5	3.75	-	110	220
		Single Braid	54	32	48	128	110	220
		Double Braid	57	51	76	204	110	220
2	**50**	Unbraided	65	1.5	2.25	-	160	320
		Single Braid	67	31	46	124	160	320
		Double Braid	69	49	73	196	160	320
2.1/2	**65**	Unbraided	84	1.5	2.25	-	180	370
		Single Braid	86	26	39	104	180	370
		Double Braid	88	41	61	164	180	370
3	**80**	Unbraided	97	1	1.5	-	185	410
		Single Braid	99	18	27	72	185	410
		Double Braid	101	28	42	112	185	410
4	**100**	Unbraided	119	0.8	1.2	-	200	510
		Single Braid	121	16	24	64	200	510
		Double Braid	123	26	39	104	200	510

* See page I 040 for modifying factors with elevated temperature

Pulsating or Shock Pressures

Pulsating pressure is characterised by rapid variation above and below the nominal working pressure, normally caused by the action of reciprocating pumps. Constant hose movement causes the corrugated peaks to rub against the reinforcing braid and fail prematurely. The rated working pressure of the hose assembly should be halved in these situations

Shock pressures (sudden pressure increases causing a shock wave) are less frequent but lead to rapid failure as a result of metal fatigue. Valve open and closures are common causes. *The peak* of a shock pressure so induced must not exceed 50% of the otherwise allowable working pressure. In any event, the nominal working pressure should not exceed 1/6 of the tabulated (and temperature adjusted) working pressure

Flow Velocity

To avoid premature hose failure by fatigue, do not exceed

Gas: 45 metres / sec

Liquid: 22 metres / sec

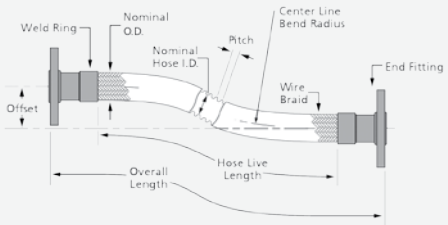
Reduce a further 25% for 45° bends, 50% for 90° bends

Where the flow velocity exceeds these rates, an interlocked metal liner or larger hose ID is recommended

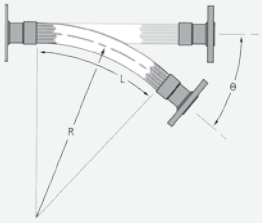
Pressure Drop

Pressure drop in a straight corrugated hose is approximately 1.5 times that of rigid pipe. If this is likely to be significant, it may be necessary to use the next larger nominal size of hose, and adapt back at the ends using rigid reducers

Consult Pirtek for specific applications



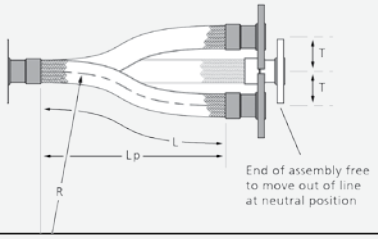
Each assembly must be sized to suit the proposed location and expected movement. Use the appropriate formula below to calculate the live length required, and add the length of fittings to derive the overall length of assembly.



Angular Motion with one end deflected in a simple bend. Ends move out of parallel

$$L = \pi R\Theta/180 + 2(S)$$

L = live length (mm)
π = 3.1416
R = Minimum dynamic bend radius
Θ = Angular deflection (°)
S = Nominal Hose OD (mm)

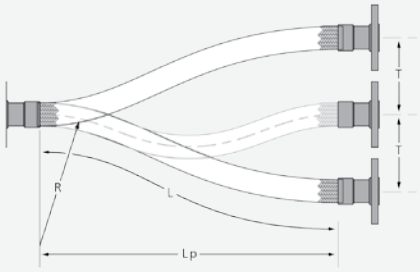


Offset Motion with one end free to move 'out of line' at the neutral position

$$L = \sqrt{6(RT) + T^2}$$

$$Lp = \sqrt{L^2 - T^2}$$

L = live length (mm)
Lp = horizontal component of L
R = Minimum dynamic bend radius
T = Travel from neutral (mm)
(T never to exceed 25% of Dynamic Bend Radius)

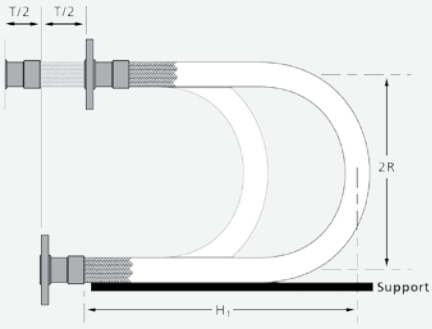


Offset Motion again but with the moving end constrained to move in line at all points

$$L = \sqrt{20(RT)}$$

$$Lp = \sqrt{L^2 - T^2}$$

L = live length (mm)
Lp = horizontal component of L
R = Minimum dynamic bend radius
T = Travel from neutral (mm)
(T never to exceed 25% of Dynamic Bend Radius)

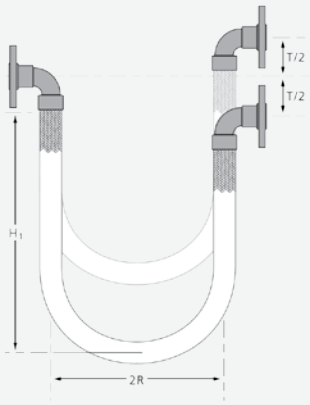


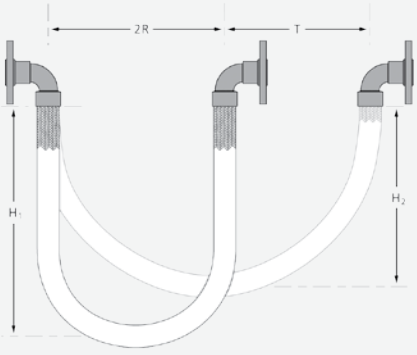
Travelling Loops of constant radius as seen at left and right are used where simple deflection of the hose cannot accommodate the movement involved

$$L = 4R + T/2$$

$$H1 = 1.43\ R + T/2$$

L and R as previous
T = Total travel (mm)
H = Hang Length of the Loop (mm)





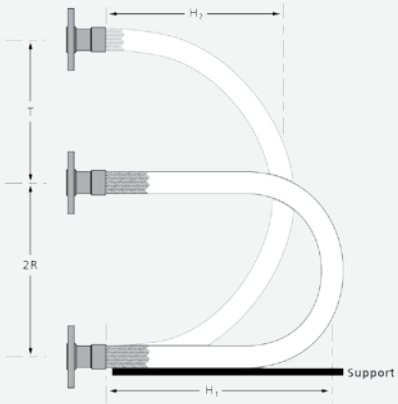
Travelling Loops of changing radius as seen at left and right are used where simple deflection of the hose cannot accommodate the movement involved. It is a more compact arrangement than a constant radius loop, but allows less movement

$$L = 4R + 1.57T$$

$$H1 = 1.43\ R + 0.79T$$

$$H2 = 1.43R + T/2$$

L and R as previous
T = Total travel (mm)
H = Hang Length of the Loop (mm)



OFFSET CHART FOR DETERMINING PERMISSIBLE LIVE LENGTH

Procedure:

To determine the required live length of an application, consult the data sheets on pages I 041 and I 042 to learn the allowable Dynamic Bend radius for the proposed hose diameter.

Locate the corresponding Dynamic Bend Radius in the left column of the Tabulation below, and look across the row until you intersect with the column that corresponds to the desired offset for the application.

The figure given at the intersecting point will be the required live length.

Remember that the allowable offset must never exceed 25% of the Dynamic Bend Radius

Example:

If you have chosen 2" or 50mm ID Superflex, the Dynamic Bend radius at 20°C is 300 mm.

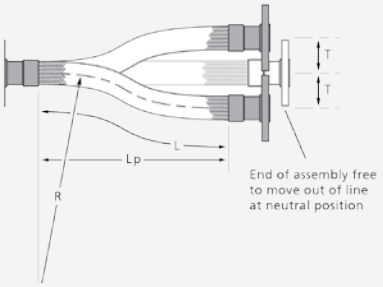
The maximum allowable offset will be 25% of 300 mm, or 75mm

Assume an offset of 50 mm

The intersection of a 300mm radius x 50 mm offset yields the required minimum live length of 304 mm

If the offset is to occur on both sides of the centreline, the offset figure must be doubled, in which case the minimum allowable Dynamic Bend Radius will be (2 x 50mm) x 4 or 400 mm

A 100mm Superflex ID hose would be needed to achieve such a radius, along with a live length of at least 500mm



$$L = \sqrt{6(RT) + T^2}$$

The chart below derives the minimum live length (mm) in accordance with the above formula

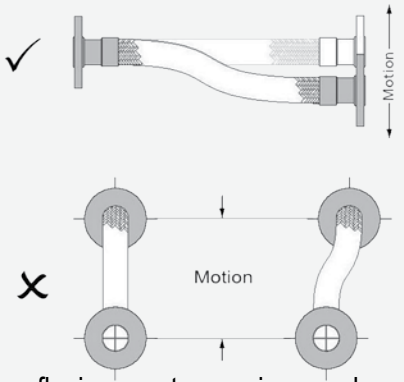
Use an offset figure of 5 mm in conjunction with the bend radius of the selected hose if you need only to cater for normal industrial vibration

Bend Radius	Offset T (mm)														
	5	**10**	**15**	**20**	**25**	**38**	**50**	**65**	**80**	**100**	**125**	**150**	**200**	**250**	**300**
mm															
12	20	29	36	43	49	65	78	94	110	131	157	182	233	284	334
25	28	40	50	58	66	85	100	118	136	158	185	212	265	316	367
50	39	56	69	80	90	113	132	154	174	200	230	260	316	371	424
75	48	68	84	97	109	136	158	183	206	235	268	300	361	418	474
100	55	78	96	111	125	156	180	208	233	265	301	335	400	461	520
125	61	87	107	124	139	173	200	230	258	292	331	367	436	500	561
150	67	95	117	136	152	189	218	250	280	316	358	397	469	536	600
175	73	103	126	146	164	203	235	269	301	339	383	424	500	570	636
200	78	110	135	156	175	217	250	287	320	361	407	450	529	602	671
225	82	117	143	166	185	230	265	303	338	381	429	474	557	632	704
250	87	123	151	174	195	242	278	319	356	400	451	497	583	661	735
300	95	135	165	191	214	264	304	348	388	436	491	541	632	716	794
350	103	145	178	206	230	285	328	375	418	469	527	581	678	766	849
400	110	155	190	220	246	304	350	400	445	500	562	618	721	814	900
450	116	165	202	233	261	323	371	424	472	529	594	654	762	859	949
500	123	173	213	246	275	340	391	446	496	557	625	687	800	901	995
550	129	182	223	258	288	356	409	468	520	583	654	719	837	942	1039
600	134	190	233	269	301	372	427	488	543	608	682	750	872	981	1082
650	140	198	242	280	313	387	444	508	564	632	709	779	906	1019	1122
750	150	212	260	301	336	415	477	545	605	678	760	835	970	1090	1200
900	164	233	285	329	368	455	522	596	662	742	831	912	1058	1188	1308
1000	173	245	300	347	388	479	550	628	697	781	875	960	1114	1250	1375
1150	186	263	322	372	416	513	589	673	747	837	937	1028	1192	1337	1470
1300	198	279	342	395	442	546	626	715	794	889	995	1092	1265	1419	1559
1450	209	295	362	418	467	576	661	755	838	938	1050	1152	1334	1496	1643
1600	219	310	380	439	491	605	695	793	880	985	1103	1209	1400	1569	1723
1750	229	324	397	459	513	633	726	829	920	1030	1152	1264	1463	1639	1800

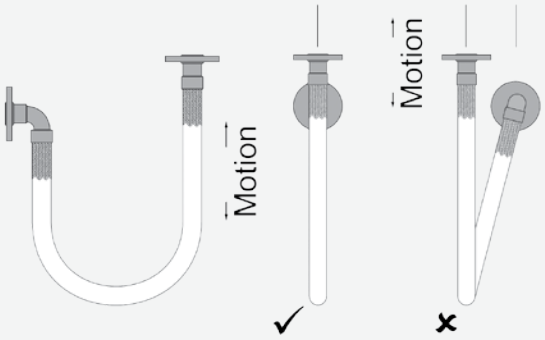
IMPORTANT INSTALLATION GUIDELINES FOR METALLIC HOSES

It is essential to avoid twist during installation.

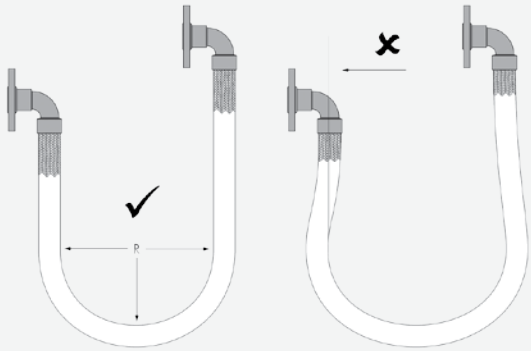
- Use rotating flanges, pipe unions or female nuts as aids
- Tighten using 2 wrenches to oppose induced torque action
- Avoid the dangers depicted in the diagrams below:



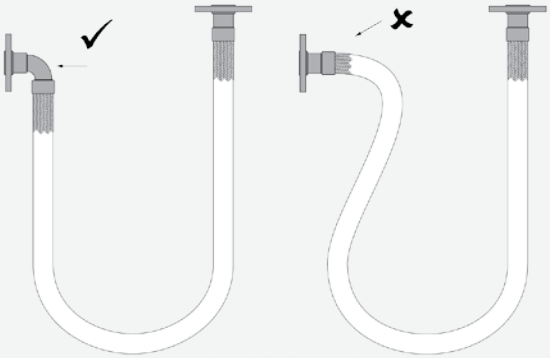
Hose flexing must occur in one plane only



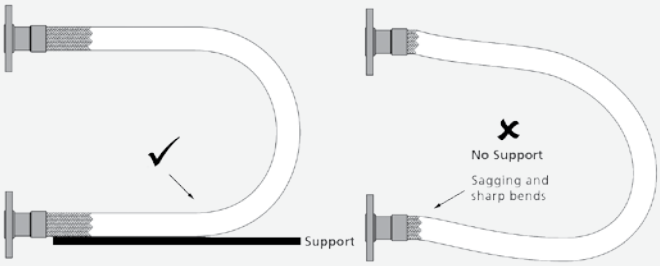
Avoid out of plane flexing



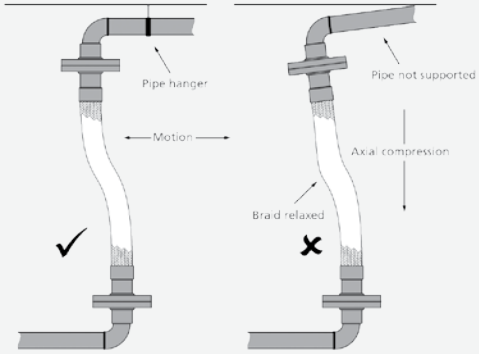
Avoid over-bending



Avoid sharp bends



Provide support



Do not extend / compress axially

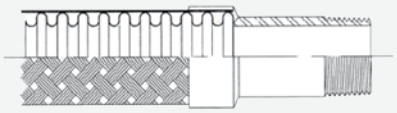
DO

- Use care when handling flexible metallic hoses
- Ensure the bend is as near central as possible
- Conform to the bend radius specifications
- Test fit threaded connectors by hand first
- Use the live length dictated by the constraints
- Apply spanners to the hex flats provided
- Take account of possible ground movement
- Allow a 50 mm straight section at each fitting
- Keep the hose clear of external objects / debris
- Allow for future disassembly
- Ensure rated pressure allows for impulse / temp.

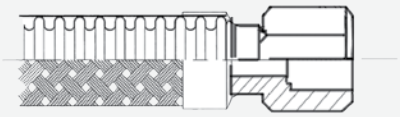
DO NOT

- Allow twist when installing or tightening
- 'Pre-flex' a hose to limber it up
- Over-bend an assembly. Use an elbow if needed
- Install with the bend adjacent to an end fitting
- Have uneven supports under the assembly
- Stretch / compress a hose to aid installation
- Allow interaction with components that would serve to inhibit flexing movements
- Allow flow velocity to exceed stated limits

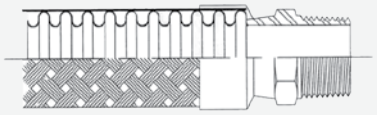
END FITTINGS



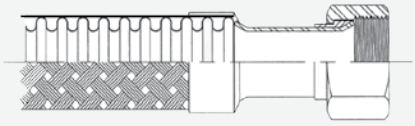
Plain Male Threaded Pipe



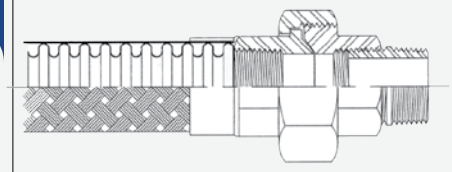
Fixed Female



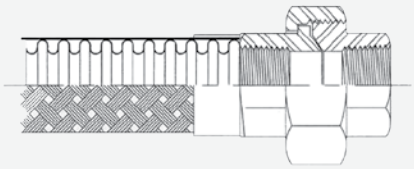
Hex Male Nipple



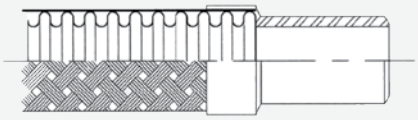
Female Swivel



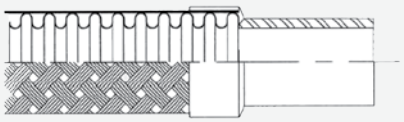
Male Swivel Union



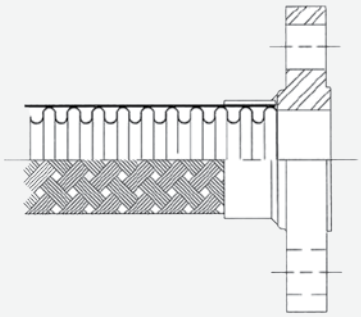
Female Union



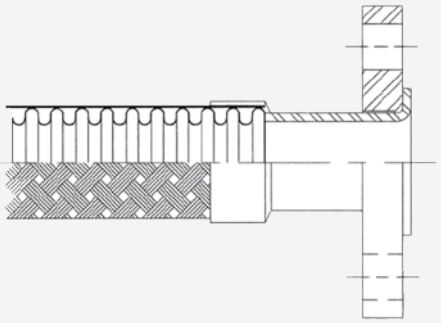
Welding Stub



Plain Pipe End



Fixed Flange



Floating Flange

Fittings of all configurations and materials are available, including

- Kamlok (Cam & Groove)
- Quick Disconnect
- Victaulic fittings
- Socket Weld
- Elbows
- Tees
- Flanged Unions
- Hydraulic

Flanged connections comply with customer requirements, including

AS 2129 Table D
AS 2129 Table E
ANSI
DIN

Common drilling patterns are to be found in the Kamlok section of the Industrial Fittings Catalogue.

SPECIAL APPLICATIONS

Jacketed (Duplex) Hose
Consisting of a hose within a hose, these allow the conduct of 2 separate media. Examples of use include:

Cryogenic applications with a vacuum in the outer skin to provide insulating properties

Steam jacketed assemblies to facilitate transport of viscous materials

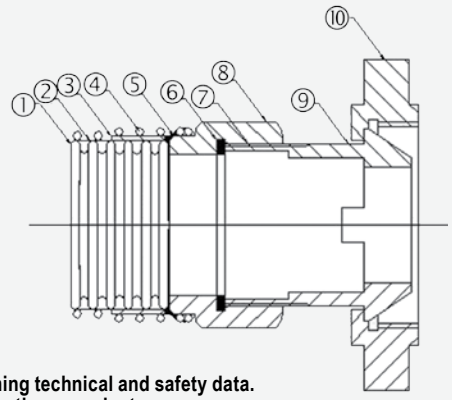
Oxygen Lance Hoses
Including the use of a liner to reduce turbulence, and reinforced ends or special fittings

Vibration Eliminators
With female copper tube ends cleaned, dehydrated and capped for refrigeration service

Bottom Loading Hoses
For road tanker service

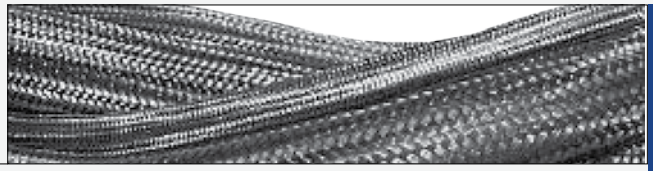
Bitumen Hoses (illustrated at right)
An economical solution using reusable AS2475 end fittings and lightweight design for superlative handling characteristics

Legend	
1	SS316 Convoluted Hose
2	SS3054 Braid
3	SS304 Weld Ring
4	Galvanised Armour Wire
5	Hose to Fitting Weld
6	High Temperature Gasket
7	High Temperature Thread Sealant
8	SS316 BSPP Female Hex Nut
9	Bronze / Aluminium Lock Cone
10	Bronze / Aluminium Swivel Nut



PIRTEK fluid transfer solutions

CTBRAID
BRAIDED STAINLESS STEEL WIRE



Construction

Braided 304 stainless steel wire

Available as full coils or cut to length

Applications

Economical hose protection resistant to molten splash, oils, most chemicals, and corrosive environments

Ideal for armoring hydraulic and industrial hoses and electrical cables without losing flexibility

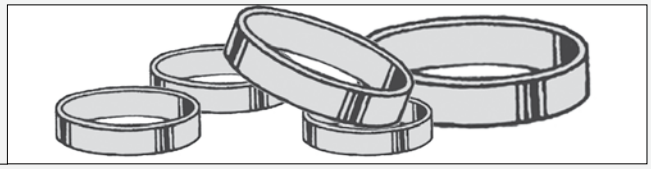
Electrical continuity between armour and end fittings is easily provided if static electricity needs to be dissipated

Reference Specifications

Attachment:
Stainless steel crimp rings (below)

Product Code	DN Dash Size	Nominal ID mm	
CTBRAID-006	6	11	
CTBRAID-008	8	14	
CTBRAID-010	10	18	
CTBRAID-012	12	21	
CTBRAID-016	16	25	
CTBRAID-020	20	30	
CTBRAID-025	25	37	
CTBRAID-032	32	44	
CTBRAID-040	40	54	
CTBRAID-050	50	68	
CTBRAID-065	65	86	
CTBRAID-080	80	99	
CTBRAID-100	100	121	

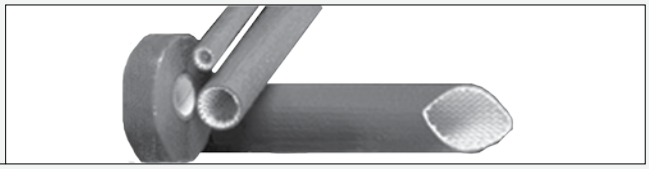
CTxWRNG
304 STAINLESS STEEL CRIMP RING



Product Code	ID mm	Width mm	Normal Application
CTSWRNG-006	11.0	20	Single layer of stainless steel braid
CTSWRNG-008	14.4	20	
CTSWRNG-010	17.8	20	
CTSWRNG-012	21.7	20	
CTSWRNG-016	25.0	20	
CTSWRNG-020	30.0	25	
CTSWRNG-025	37.8	25	
CTSWRNG-032	44.2	30	
CTSWRNG-040	54.7	30	
CTSWRNG-050	68.0	35	
CTSWRNG-065	86.7	35	
CTSWRNG-080	99.0	40	
CTSWRNG-100	121.0	50	

Product Code	ID mm	Width	Normal Application
CTDWRNG-006	14.4	20	Double layer of stainless steel braid
CTDWRNG-008	15.5	20	
CTDWRNG-010	19.0	20	
CTDWRNG-012	22.9	20	
CTDWRNG-016	26.2	20	
CTDWRNG-020	30.4	25	
CTDWRNG-025	39.8	25	
CTDWRNG-032	46.6	30	
CTDWRNG-040	57.2	30	
CTDWRNG-050	70.0	35	
CTDWRNG-065	88.0	35	
CTDWRNG-080	101.2	40	
CTDWRNG-100	123.0	50	

CTxxSL
SILCO SLEEVE
INDUSTRIAL / AEROSPACE



Construction

Industrial:

knitted fibre glass yarn in a flexible substrate coated with high grade silicone rubber

Aerospace:

braided fibre glass yarns in a flexible substrate coated with high grade silicone rubber

Applications

Designed to protect hose, wire and cable from the hazards of high heat and occasional flame

Both products will protect continuously to 260º C and withstand molten splash to 1200º C

The silicone coating is resistant to hydraulic fluids, lubricating oils, and fuels

The products insulate against energy loss from conduits, protect personnel from burns, and facilitate bundling of wire, hoses and cables

Reference Specifications

Aerospace braided silco sleeve allows qualified hose assemblies to pass AS1055D testing under stated flow and pressure conditions

Attachment & Sealing:

Silco Tape in either 25 mm or 45 mm widths

The tape has equivalent properties to the sleeving

Product Codes		SAE Dash Size	Nominal ID		Recommended Silco Tape	Weight kg / 30 metre		Box Size
Industrial	Aerospace		ins	mm		Industrial	Aerospace	m
CTINSL-006	CTAESL-006	4	1/4	6	CTSITA-025	2.90	3.57	30
CTINSL-010	CTAESL-010	6	3/8	10		3.84	4.78	30
CTINSL-013	CTAESL-013	8	1/2	13		4.69	5.76	30
CTINSL-016	CTAESL-016	10	5/8	16		5.36	6.21	30
CTINSL-019	CTAESL-019	12	3/4	19		7.05	7.19	30
CTINSL-022	CTAESL-022	14	7/8	22		7.28	8.48	30
CTINSL-025	CTAESL-025	16	1	25		7.99	9.96	30
CTINSL-029	CTAESL-029	18	1.1/8	29		9.20	10.49	30
CTINSL-032	CTAESL-032	20	1.1/4	32		10.36	11.83	30
CTINSL-035	CTAESL-035	22	1.3/8	35		11.70	13.39	30
CTINSL-038	CTAESL-038	24	1.1/2	38		12.19	14.29	30
CTINSL-041	CTAESL-041	26	1.5/8	41		14.33	15.72	30
CTINSL-044	CTAESL-044	28	1.3/4	44		15.09	19.29	30
CTINSL-051	CTAESL-051	32	2	51		15.76	20.14	30
CTINSL-057	CTAESL-057	36	2.1/4	57		18.75	22.14	30
CTINSL-064	CTAESL-064	40	2.1/2	64		20.76	22.32	30
CTINSL-070	CTAESL-070	44	2.3/4	70	CTSITA-045	21.88	26.25	30
CTINSL-076	CTAESL-076	48	3	76		24.29	30.80	30
CTINSL-083	CTAESL-083	52	3.1/4	83		25.18	34.02	30
CTINSL-089	CTAESL-089	56	3.1/2	89		27.32	35.27	30
CTINSL-095	CTAESL-095	60	3.3/4	95		29.47	40.18	30
CTINSL-102	CTAESL-102	64	4	102		31.78	42.41	30
CTINSL-114		72	4.1/2	114		43.31		30
CTINSL-127		80	5	127		51.34		30

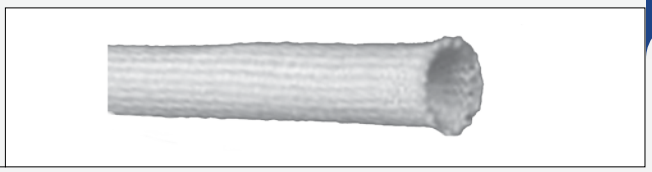
CTSISL
SILICA SLEEVE

Construction
96% pure SiO_2 braided siica fibre

Applications
The best temperature resisting characteristics of all textile sleeves
Suited to continuous exposure at 982º C, and short term exposure to 1650º C
Commonly used in conjunction with braided stainless steel sleeve when combating high temperatures in abrasive environments

Reference Specifications
Attachment:
Stainless steel crimp rings. See page E 047

CTFGSL
FIBREGLASS SLEEVE



Construction
High quality Type E braided fibreglass that will not burn.
Can withstand continuous exposure to 540ºC
Resistant to the majority of acids and alkalis
Unaffected by bleaches and solvents
Highly flexible

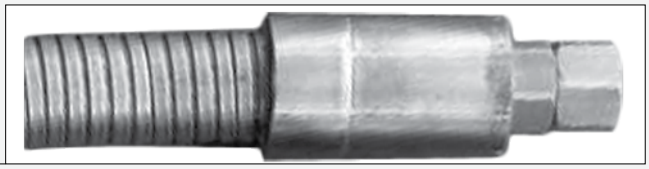
Applications
Economical hose and cable protection where exposure to molten splash, oils or moisture is not a factor
Ideal general purpose temperature insulation and protection
Applications include boiler, coke oven, industrial oven, and wood stove doors; crucible packing, pollution control equipment; and pipe wrap.
Anywhere the goal is keeping heat in its place.

Reference Specifications
ASTM D-578, ASTM committee D13, and subcommittee D13.18.

Attachment:
Stainless steel crimp rings. See page E 047

Product Codes		DN Dash Size	Nominal ID	Box Size
Silica Sleeve	Fibreglass Sleeve		mm	m
CTSISL-006	CTFGSL-006	6	6	30
CTSISL-010	CTFGSL-010	10	10	30
CTSISL-013	CTFGSL-013	13	13	30
CTSISL-016	CTFGSL-016	16	16	30
CTSISL-019	CTFGSL-019	19	19	30
CTSISL-022	CTFGSL-022	22	22	30
CTSISL-025	CTFGSL-025	25	25	30
CTSISL-032	CTFGSL-032	32	32	30
CTSISL-038	CTFGSL-038	38	38	30
CTSISL-044	CTFGSL-044	44	44	30
CTSISL-051	CTFGSL-051	51	51	30
CTSISL-064	CTFGSL-064	64	64	30
CTSISL-076	CTFGSL-076	76	76	30
CTSISL-089	CTFGSL-089	89	89	30
CTSISL-102	CTFGSL-102	102	102	30
CTSISL-127	CTFGSL-127	127	127	30

PFA
PIRTEK FIRE ARMOUR
BOP & CONTROL LINE ASSEMBLIES



Construction

Inner Tube:
Seamless synthetic rubber, reistant to oil

Reinforcement:
Braids or spirals of high tensile steel wire

Cover:
Abrasion resistant stainless steel armour resistant to oils, ozone, and weathering, and fire resistant to Lloyd and API requirements

Applications

Hydraulic control for blowout preventer (BOP) stacks
Hydraulic control lines requiring fire resistant capability up to 700 °C for 5 minutes

Temperature Range (internal hose):
-40°C up to +100°C intermittent to 125 °C

Features:
A fire resistant stainless steel armoured sleeve over high pressure braided or multispiral hydraulic hose
Stainless steel end connections of JIC Female, NPT Male, Hammer Union or to customer specifications

Reference Specifications

Spiral hoses meet or exceed SAE J 517
Braided hoses meet or exceed EN857 2SC
Tested in accordance with SAE J 517, EN 856, AS 3791

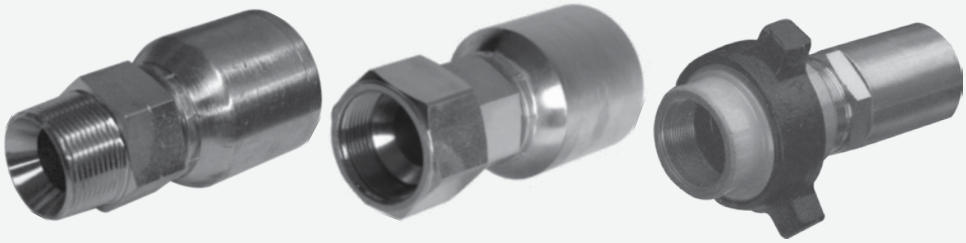
Fire Resistance Compliance:
Lloyds OD1000/499
API 16D

Lay line example: No layline

Product Code	Nominal ID		OD	Pressure (psi)			Min bend radius	Weight (hose only)
	ins	mm	mm	Max. Working	Test	Min. Burst	mm	Kg / m
PFA3000-08-XX	1/2	12.5	36	3,000	4,500	12,000	130	1.4
PFA3000-12-XX	3/4	19.0	45	3,000	4,500	12,000	220	2.8
PFA3000-16-XX	1	25.4	51	3,000	4,500	12,000	280	4.2
PFA3000-20-XX	1 1/4	32.2	66	3,000	4,500	12,000	350	5.3
PFA3000-24-XX	1 1/2	38.5	73	3,000	4,500	12,000	450	6.0
PFA3000-32-XX	2	50.8	94	3,000	4,500	12,000	500	8.6
PFA5000-08-XX	1/2	12.5	36	5,000	7,500	20,000	130	1.4
PFA5000-12-XX	3/4	19.0	45	5,000	7,500	20,000	220	2.8
PFA5000-16-XX	1	25.4	51	5,000	7,500	20,000	280	4.2
PFA5000-20-XX	1 1/4	32.2	66	5,000	7,500	20,000	420	6.3
PFA5000-24-XX	1 1/2	38.5	73	5,000	7,500	20,000	500	7.2
PFA5000-32-XX	2	51.2	94	5,000	7,500	20,000	600	11.3

XX - denotes length of hose assembly in Feet

AVAILABLE END CONFIGURATIONS (STAINLESS STEEL)



NPT Male | JIC Female | Hammer Union

Other ends to customer specification can be supplied

COMPOSITE HOSES
IMPORTANT TECHNICAL ASPECTS

COMPOSITE HOSES IN GENERAL

- Due to the nature of the construction of composite hose and the often hazardous conveyants used, it is strongly recommended that all hoses and fittings be supplied to the user as fitted assemblies

- A wide range of fittings can be supplied such as Kamloks, BSP fittings, flanges etc. Other special couplings for unusual applications can also be supplied. Refer to Section J of this Catalogue for more details

- Ohmlok couplings designed for use in the petroleum industry are available. The Ohmlok coupling has positive connection for both inside and outside wires to the coupling. The wires are secured with two grub screws and both wires can be visually checked to be secured to the anchor blocks by examining the couplings. The electrical connection is not in contact with the conveyant and there is no restriction in bore of fitting to create turbulence or restriction of product flow

SAFETY FACTOR

All hoses have 4:1 safety factor

FUEL TRANSFER HOSES

The Petrol Master range of Code hoses (Codes 901, 1000, 1003) is designed specifically for the demands of the petro-chemical industry. The polypropylene film and fabric construction handle hydrocarbon and base products. The internal and external wire helixes deliver the pressure handling characteristics and a tough PVC coated fabric forms the outer cover

Hoses specifically for the aviation industry and for vapour recovery are also available

Petrol Master Temperature Rating: -20 ºC to +80 º C

CHEMICAL TRANSFER HOSES

The Chemiflow range is suitable for the suction and delivery of chemicals. Constructed of polypropylene films and fabrics, the hoses are resistant to most acids, alkalis and solvents. Internal and external helix wires bind the hose together and deliver its pressure handling characteristics and a tough PVC coated fabric cover forms the outer cover

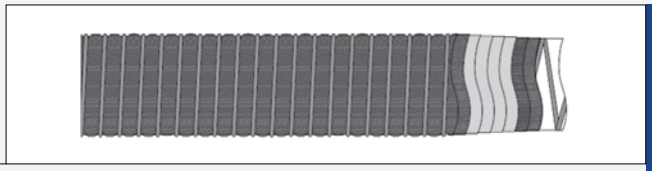
Chemiflow Temperature Rating: -20 ºC to +100 ºC

NOTE

- All hoses can be rope lagged. Please specify your requirements at time of ordering

- A chemical compatibility chart is included in the Technical Data (Section Q) of Part II of this catalogue

CH901
FUEL CODE

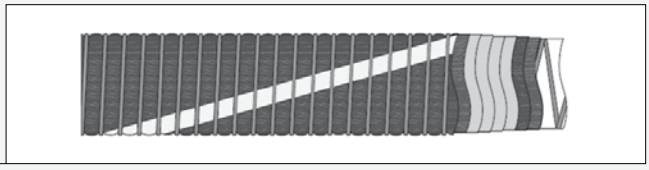


Construction
Inner Materials:
Polypropylene fabrics and film selected according to chemical resistance and strength
Reinforcement:
Internal wire of galvanised steel
External wire of galvanised steel
Outer cover:
External wire of galvanized steel
Black PVC coated Fabric with no identification stripe
Temperature Range:
-20°C up to +80°C
Reference Specifications:
Conforms to AS2117
Type 2; Grade 2; Electrical Kind 1
Pressure Capabilities: Test pessure 2:1; Burst 4:1
Application
Transfer hoses for fuel, heavy oils and lubricants; transfer from road and rail tankers, storage tanks, production plant and equipment and ship to shore.

Product Code	Nominal ID		OD	Pressure (bar) @ 20° C per AS2117			Bend radius	Weight	Coil Length
	mm	in	mm	Working	Test	Burst	mm	Kg/m	m
CH901-025-GG *	1	25	37	10	20	40	75	1.04	25
CH901-032-GG *	1 1/4	32	43	10	20	40	90	1.12	25
CH901-040-GG *	1 1/2	40	51	10	20	40	100	1.63	25
CH901-050-GG	2	50	65	10	20	40	140	1.78	25
CH901-065-GG	2 1/2	63	76	10	20	40	180	2.84	25
CH901-080-GG	3	76	90	10	20	40	210	3.41	25
CH901-100-GG	4	100	120	10	20	40	340	5.52	25

* These sizes available to special order

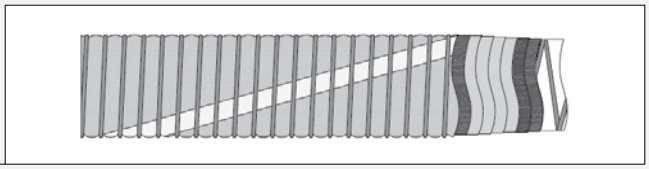
CH982
FUEL CODE



Construction
Inner Materials:
Polypropylene fabrics and film selected according to chemical resistance and strength
Reinforcement:
Internal wire of galvanised steel
External wire of galvanised steel
Outer cover:
Blue PVC coated Fabric with yellow identification stripe
Temperature Range:
-20°C up to +80°C
Reference Specifications:
Conforms to AS2117
Type 2/3; Grade 2; Electrical Kind 1
Pressure Capabilities: Test pessure 2:1; Burst 5:1
Application
Heavy duty oil transfer hose for ship to shore and dock side.

Product Code	Nominal ID		OD	Pressure (bar) @ 20° C per AS2117			Bend radius	Weight	Coil Length
	mm	in	mm	Working	Test	Burst	mm	Kg/m	m
CH982-100-GG	100	4	125	14	28	70	400	6.61	25
CH982-150-GG	under development								

CH1000
FUEL CODE

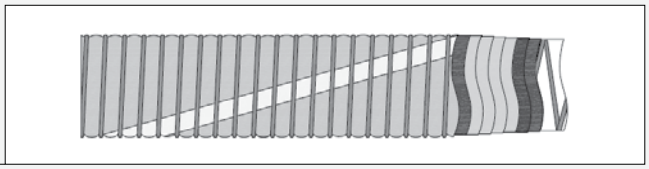


Construction
Inner Materials:
Polypropylene fabrics and film selected according to chemical resistance and strength
Reinforcement:
Internal wire of galvanised steel
External wire of galvanised steel
Outer cover:
Green PVC coated Fabric with yellow identification stripe
Temperature Range:
-20°C up to +80°C
Reference Specifications:
Complies with the AS2683 and BS3492
Type 2; Grade 3; Electrical Kind 1
Pressure Capabilities: Test pessure 2:1; Burst 6:1
Application
Transfer hoses for road and rail tankers, storage tank, production plant and equipment.

Product Code	Nominal ID		OD	Pressure (bar) @ 20° C per AS2683			Bend radius	Weight	Coil Length
	mm	in	mm	Working	Test	Burst	mm	Kg/m	m
CH1000-025-GG *	25	1	37	7	14	42	60	0.89	25
CH1000-032-GG *	32	1 1/4	43	7	14	42	75	1.03	25
CH1000-040-GG *	40	1 1/2	51	7	14	42	75	1.58	25
CH1000-050-GG	50	2	63	7	14	42	90	1.68	25
CH1000-065-GG	63	2 1/2	76	7	14	42	100	2.64	25
CH1000-080-GG	76	3	90	7	14	42	125	3.17	25
CH1000-100-GG	100	4	114	7	14	42	200	4.05	25

* These sizes available to special order

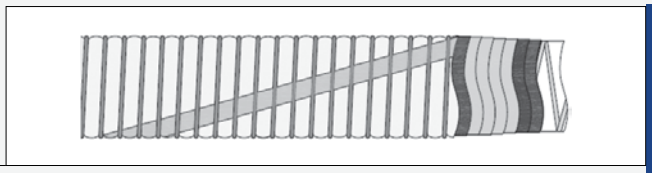
CH1001
FUEL CODE HOSE



Construction
Inner Materials:
Polypropylene fabrics and film selected according to chemical resistance and strength
Reinforcement:
Internal wire of galvanised steel
External wire of galvanised steel
Outer cover:
Yellow PVC coated Fabric with no identification stripe
Temperature Range:
-20°C up to +80°C
Reference Specifications:
Complies with the AS2683
Type 2; Grade 3; Electrical Kind 1
Pressure Capabilities: Test pessure 2:1; Burst 6:1
Application
Transfer hoses for storage tank, production plant and equipment with lower operating pressures with a higher flexibility.

Product Code	Nominal ID		OD	Pressure (bar) @ 20° C per AS2683			Bend radius	Weight	Coil Length
	mm	in	mm	Working	Test	Burst	mm	Kg/m	m
CH1001-040-GG	40	1.5	49	4	8	24	65	1.48	25
CH1001-050-GG	50	2	61	4	8	24	80	1.53	25
CH1001-065-GG	63	2.5	74	4	8	24	90	2.53	25
CH1001-080-GG	76	3	88	4	8	24	115	3.08	25
CH1001-100-GG	100	4	112	4	8	24	190	3.86	25

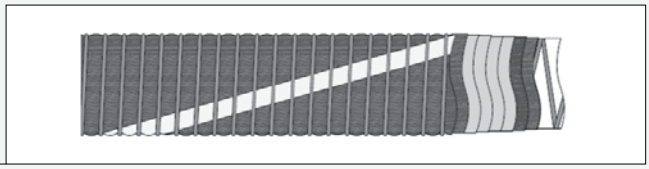
CH1003
LIGHT WEIGHT FUEL CODE



Construction
Inner Materials:
Polypropylene fabrics and film selected according to chemical resistance and strength
Reinforcement:
Internal wire of aluminium
External wire of galvanised steel
Outer cover:
Yellow PVC coated Fabric with green identification stripe
Temperature Range:
-20°C up to +80°C
Reference Specifications:
Complies with the AS2683
Type 2; Grade 3; Electrical Kind 1
Pressure Capabilities: Test pessure 2:1; Burst 6:1
Application
Light weight transfer hoses for storage tank, production plant and equipment with lower operating pressures with a higher flexibility.

Product Code	Nominal ID		OD	Pressure (bar) @ 20° C per AS2683			Bend radius	Weight	Coil Length
	mm	in	mm	Working	Test	Burst	mm	Kg/m	m
CH1003-065-AG	63	2.5	74	4	8	24	90	1.91	25
CH1003-080-AG	76	3	88	4	8	24	115	2.37	25
CH1003-100-AG	100	4	112	4	8	24	190	2.93	25

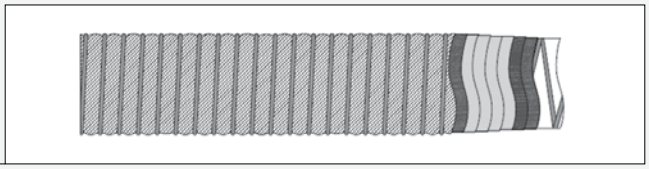
CHVRH
VAPOUR RECOVERY HOSE



Construction
Inner Materials:
Polypropylene fabrics and film selected according to chemical resistance and strength
Reinforcement:
Internal wire of galvanised steel
External wire of galvanised steel
Outer cover:
Black PVC coated Fabric with yellow identification stripe.
Temperature Range:
-20°C up to +80°C
Reference Specifications:
Conforms to AS2683
Type 2; Grade 3; Electrical Kind 1
Pressure Capabilities: Test pessure 2:1; Burst 6:1
Application
For the collection of hydrocarbon vapors within the oil industry

Product Code	Nominal ID		OD	Pressure (bar) @ 20° C per AS2683			Bend radius	Weight	Coil Length
	mm	in	mm	Working	Test	Burst	mm	Kg/m	m
CHVRH-100-GG	100	4	112	4	8	24	190	3.80	25

CHHP
HOT PRODUCTS 966 HOSE

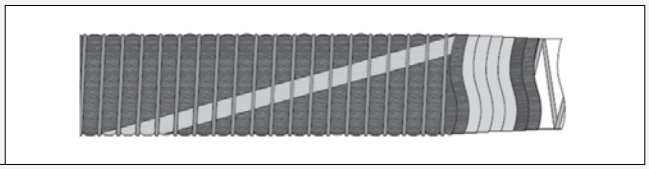


Construction
Inner Materials:
Polyamide films
Reinforcement:
Internal wire of galvanised steel
External wire of galvanised steel
Outer cover:
White Fabric with no identification stripe.
Temperature Range:
-20°C up to +180°C
Reference Specifications:
Conforms to AS2683
Type 2/3; Class B
Pressure Capabilities: Test pessure 2:1; Burst 6:1
Application
Transfer hoses suitable for the suction and delivery of hydrocarbon products at an elevated temperature such as tar and bitumen.

Product Code	Nominal ID		OD	Pressure (bar) @ 20° C per AS2117			Bend radius	Weight	Coil Length
	mm	in	mm	Working	Test	Burst	mm	Kg/m	m
CHHP-020-GG	under development								
CHHP-025-GG	25	1	37	10	20	60	75	0.96	25
CHHP-032-GG	32	1¼	43	10	20	60	90	1.16	25
CHHP-040-GG	40	1½	51	10	20	60	100	1.62	25
CHHP-050-GG	50	2	65	10	20	60	140	1.78	25
CHHP-065-GG	63	2½	76	10	20	60	180	2.62	25
CHHP-080-GG	76	3	90	10	20	60	210	3.39	25
CHHP-100-GG	100	4	120	10	20	60	340	4.30	25

Please Note: Elevated temperatures (above 100°C) reduce the working pressure by 50%

CHAV
AVIATION HOSE 700SG



Construction
Inner Materials:
Polypropylene fabrics and film selected according to chemical resistance and strength
Reinforcement:
Internal wire of stainless steel
External wire of galvanised steel
Outer cover:
Black PVC coated Fabric with green identification stripe
Temperature Range:
-20°C up to +80°C
Reference Specifications:
Complies with the AS2683
Type 1; Grade 1,2,3; Electrical Kind 1
Pressure Capabilities: Test pessure 2:1; Burst 6:1
Application
Transfer hoses suitable for the suction and delivery of aviation fuels.

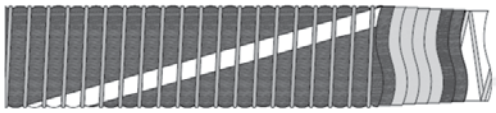
Product Code	Nominal ID		OD	Pressure (bar) @ 20° C per AS2683			Bend radius	Weight	Coil Length
	mm	in	mm	Working	Test	Burst	mm	Kg/m	m
CHAV-040-SG	40	1½	51	7	14	42	75	1.58	25
CHAV-050-SG	50	2	63	7	14	42	90	1.71	25
CHAV-065-SG	63	2½	76	7	14	42	100	2.64	25
CHAV-080-SG	76	3	90	7	14	42	125	3.19	25
CHAV-100-SG	100	4	114	7	14	42	200	4.10	25

CHAV
AVIATION HOSE 700SS

Construction
Inner Materials:
Polypropylene fabrics and film selected according to chemical resistance and strength
Reinforcement:
Internal wire of stainless steel
External wire of stainless steel
Outer cover:
Black PVC coated Fabric with blue identification stripe
Temperature Range:
-20°C up to +80°C
Reference Specifications:
Complies with the AS2683
Type 1; Grade 1,2,3; Electrical Kind 1
Pressure Capabilities: Test pessure 2:1; Burst 6:1
Application
Transfer hoses suitable for the suction and delivery of aviation fuels.

Product Code	Nominal ID		OD	Pressure (bar) @ 20° C per AS2683			Bend radius	Weight	Coil Length
	mm	in	mm	Working	Test	Burst	mm	Kg/m	m
CHAV-040-SS	40	1½	51	7	14	42	75	1.61	25
CHAV-050-SS	50	2	63	7	14	42	90	1.74	25
CHAV-065-SS	63	2½	76	7	14	42	100	2.69	25
CHAV-080-SS	76	3	90	7	14	42	125	3.20	25
CHAV-100-SS	100	4	114	7	14	42	200	4.15	25

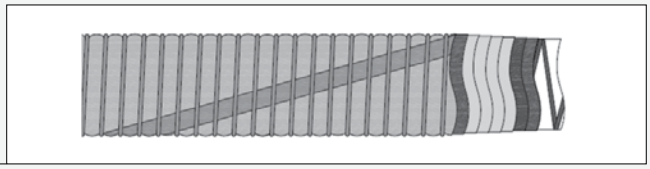
CHAV
LIGHT WEIGHT AVIATION HOSE 700AG



Construction
Inner Materials:
Polypropylene fabrics and film selected according to chemical resistance and strength
Reinforcement:
Internal wire of aluminium
External wire of galvanised steel
Outer cover:
Black PVC coated Fabric with white identification stripe
Temperature Range:
-20°C up to +80°C
Reference Specifications:
Complies with the AS2683
Type 1; Grade 1,2,3; Electrical Kind 1
Pressure Capabilities: Test pessure 2:1; Burst 6:1
Application
Light weight transfer hoses suitable for the suction and delivery of aviation fuels.

Product Code	Nominal ID		OD	Pressure (bar) @ 20° C per AS2683			Bend radius	Weight	Coil Length
	mm	in	mm	Working	Test	Burst	mm	Kg/m	m
CHAV-065-AG	63	2½	76	4	8	24	90	1.94	25
CHAV-080-AG	76	3	88	4	8	24	115	2.37	25
CHAV-100-AG	100	4	112	4	8	24	190	2.93	25

CH951
CHEMICAL HOSE

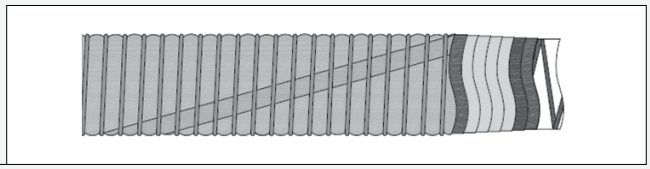


Construction
Inner Materials:
Polypropylene fabrics and film selected according to chemical resistance and strength
Reinforcement:
Internal wire of polypropylene coated steel
External wire of galvanised steel
Outer cover:
Grey PVC coated Fabric with red identification stripe.
Temperature Range:
-20°C up to +80°C
Reference Specifications:
Conforms to AS2117
Type 2/3; Grade 2
Pressure Capabilities: Test pessure 2:1; Burst 4:1
Application
Transfer hoses suitable for the suction and delivery of chemicals like acids, alkalies and solvents, where the outside of the assembly is not in contact with the media.
Refer to chemical data for specific applications.

Product Code	Nominal ID		OD	Pressure (bar) @ 20° C per AS2117			Bend radius	Weight	Coil Length
	mm	in	mm	Working	Test	Burst	mm	Kg/m	m
CH951-025-PG	25	1	37	10	20	40	75	1.44	25
CH951-032-PG	32	1¼	43	10	20	40	90	1.65	25
CH951-040-PG	40	1½	51	10	20	40	100	1.89	25
CH951-050-PG	50	2	65	10	20	40	140	2.20	25
CH951-065-PG	63	2½	76	10	20	40	180	3.28	25
CH951-080-PG	76	3	90	10	20	40	210	3.85	25
CH951-100-PG	100	4	120	10	20	40	340	5.32	25

Please Note: This hose is not ideally suited for highly viscous products or where static electricity is a possibility due to the polypropylene coated inner wire.

CH952
CHEMICAL HOSE

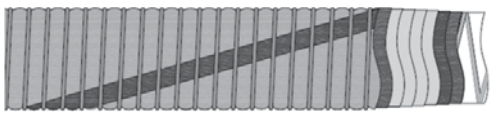


Construction
Inner Materials:
Polypropylene fabrics and film selected according to chemical resistance and strength
Reinforcement:
Internal wire of polypropylene coated steel
External wire of stainless steel
Outer cover:
Grey PVC coated Fabric with orange identification stripe.
Temperature Range:
-20°C up to +80°C
Reference Specifications:
Conforms to AS2117
Type 2/3; Grade 2
Pressure Capabilities: Test pessure 2:1; Burst 4:1
Application
Transfer hoses suitable for the suction and delivery of chemicals like acids, alkalies and solvents, even where the outside of the assembly is in contact with the media.
Refer to chemical data for specific applications.

Product Code	Nominal ID		OD	Pressure (bar) @ 20° C per AS2117			Bend radius	Weight	Coil Length
	mm	in	mm	Working	Test	Burst	mm	Kg/m	m
CH952-025-PS	25	1	37	10	20	40	75	1.47	25
CH952-032-PS	32	1¼	43	10	20	40	90	1.74	25
CH952-040-PS	40	1½	51	10	20	40	100	1.87	25
CH952-050-PS	50	2	65	10	20	40	140	2.34	25
CH952-065-PS	63	2½	76	10	20	40	180	3.38	25
CH952-080-PS	76	3	90	10	20	40	210	3.98	25
CH952-100-PS	100	4	120	10	20	40	340	4.57	25

Please Note: This hose is not ideally suited for highly viscous products or where static electricity is a possibility due to the polypropylene coated inner wire.

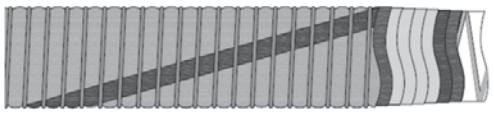
CH969
CHEMICAL HOSE



Construction
Inner Materials:
Polypropylene fabrics and film selected according to chemical resistance and strength
Reinforcement:
Internal wire of stainless steel
External wire of galvanised steel
Outer cover:
Orange PVC coated Fabric with blue identification stripe.
Temperature Range:
-20°C up to +80°C
Reference Specifications:
Conforms to AS2117
Type 2/3
Pressure Capabilities: Test pessure 2:1; Burst 4:1
Application
Transfer hoses suitable for the suction and delivery of chemicals like acids, alkalies and solvents, even where the outside of the assembly is in contact with the media.
Refer to chemical data for specific applications.

Product Code	Nominal ID		OD	Pressure (bar) @ 20° C per AS2117			Bend radius	Weight	Coil Length
	mm	in	mm	Working	Test	Burst	mm	Kg/m	m
CH969-025-SG	25	1	37	10	20	40	75	1.25	25
CH969-032-SG	32	1¼	43	10	20	40	90	1.43	25
CH969-040-SG	40	1½	51	10	20	40	100	1.78	25
CH969-050-SG	50	2	65	10	20	40	140	1.95	25
CH969-065-SG	63	2½	76	10	20	40	180	3.02	25
CH969-080-SG	76	3	90	10	20	40	210	3.57	25
CH969-100-SG	100	4	120	10	20	40	340	5.11	25
CH969-150-SG	under development								

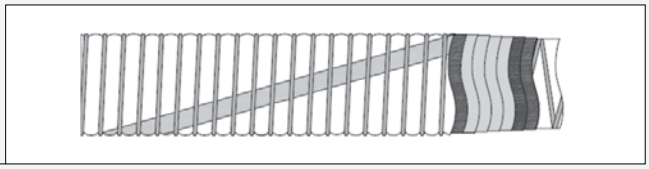
CH969
CHEMICAL HOSE (ALL STAINLESS)



Construction
Inner Materials:
Polypropylene fabrics and film selected according to chemical resistance and strength
Reinforcement:
Internal wire of stainless steel
External wire of stainless steel
Outer cover:
Orange PVC coated Fabric with blue identification stripe.
Temperature Range:
-20°C up to +80°C
Reference Specifications:
Conforms to AS2117
Type 2/3
Pressure Capabilities: Test pessure 2:1; Burst 4:1
Application
Transfer hoses suitable for the suction and delivery of chemicals like acids, alkalies and solvents, where the outside of the assembly is not in contact with the media.
Refer to chemical data for specific applications.

Product Code	Nominal ID		OD	Pressure (bar) @ 20° C per AS2117			Bend radius	Weight	Coil Length
	mm	in	mm	Working	Test	Burst	mm	Kg/m	m
CH969-025-SS	25	1	37	10	20	40	75	1.27	25
CH969-040-SS	40	1½	51	10	20	40	100	1.81	25
CH969-050-SS	50	2	65	10	20	40	140	1.98	25
CH969-065-SS	63	2½	76	10	20	40	180	3.05	25
CH969-080-SS	76	3	90	10	20	40	210	3.61	25
CH969-100-SS	100	4	120	10	20	40	340	4.26	25
CH969-150-SS	under development								

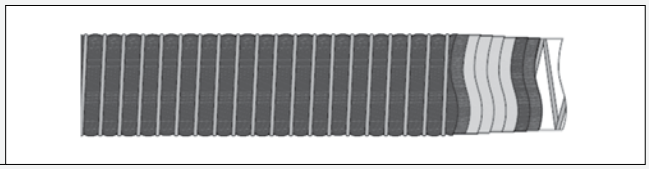
CH940
CRYOGENICS HOSE



Construction
Inner Materials:
Polyamide films
Reinforcement:
Internal wire of stainless steel
External wire of stainless steel
Outer cover:
White Fabric with green identification stripe.
Temperature Range:
-50°C up to +65°C
Reference Specifications:
Conforms to AS1869
Class E
Pressure Capabilities: Test pessure 2:1; Burst 4:1
Application
Transfer hoses suitable for the delivery of gases, organic solvents, and alkalies
Refer to chemical data for specific applications.

Product Code	Nominal ID		OD	Pressure (bar) @ 20° C per AS2117			Bend radius	Weight	Coil Length
	mm	in	mm	Working	Test	Burst	mm	Kg/m	m
CH940-025-SS	25	1	39	25	50	100	105	2.13	25
CH940-032-SS	32	1.25	45	25	50	100	120	2.30	25
CH940-040-SS	40	1.5	53	25	50	100	130	2.45	25
CH940-050-SS	50	2	67	25	50	100	170	2.74	25
CH940-065-SS	63	2.5	79	25	50	100	210	3.74	25
CH940-080-SS	76	3	93	25	50	100	240	4.35	25
CH940-100-SS	100	4	123	21	42	84	370	8.52	25
CH940-150-SS	under development								

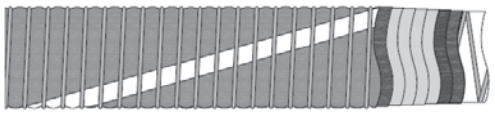
CH970
CHEMICAL MARINE HOSE



Construction
Inner Materials:
Polypropylene fabrics and film selected according to chemical resistance and strength
Reinforcement:
Internal wire of stainless steel
External wire of stainless steel
Outer cover:
Blue PVC coated Fabric with no identification stripe.
Temperature Range:
-20°C up to +80°C
Reference Specifications:
Conforms to AS2117 and IMO BCH Code
Type 2/3; Grade 2; Electrical Kind 1
Pressure Capabilities: Test pessure 2:1; Burst 5:1
Application
Heavy duty chemical transfer hose for ship to shore and dock side
Refer to chemical data for specific applications.

Product Code	Nominal ID		OD	Pressure (bar) @ 20° C per AS2117			Bend radius	Weight	Coil Length
	mm	in	mm	Working	Test	Burst	mm	Kg/m	m
CH970-100-SS	100	4	125	14	28	70	400	7.88	25
CH970-150-SS	under development								

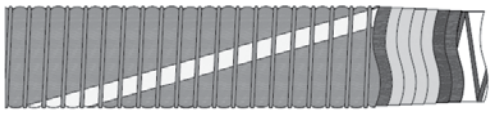
CH971
PTFE CHEMICAL HOSE (ALL STAINLESS)



Construction
Inner Materials:
PTFE, polymeric fabrics and film selected according to chemical resistance and strength
Reinforcement:
Internal wire of stainless steel
External wire of stainless steel
Outer cover:
Red PVC coated Fabric with white identification stripe.
Temperature Range:
-20°C up to +80°C
Reference Specifications:
Conforms to AS2117
Type 2/3
Pressure Capabilities: Test pessure 2:1; Burst 4:1
Application
Transfer hoses suitable for the suction and delivery of aggressive chemicals, searching solvents, and high viscosity products such as paint.
Refer to chemical data for specific applications.

Product Code	Nominal ID		OD	Pressure (bar) @ 20° C per AS2117			Bend radius	Weight	Coil Length
	mm	in	mm	Working	Test	Burst	mm	Kg/m	m
CH971-025-SS	25	1	39	14	28	56	105	1.60	25
CH971-032-SS	32	1.25	45	14	28	56	120	1.82	25
CH971-040-SS	40	1.5	53	14	28	56	130	2.07	25
CH971-050-SS	50	2	67	14	28	56	170	2.40	25
CH971-065-SS	63	2.5	79	14	28	56	210	3.54	25
CH971-080-SS	76	3	93	14	28	56	240	4.14	25
CH971-100-SS	100	4	123	14	28	56	370	4.55	25
CH971-150-SS	under development								

CH998
PTFE CHEMICAL HOSE



Construction
Inner Materials:
PTFE, polymeric fabrics and film selected according to chemical resistance and strength
Reinforcement:
Internal wire of polypropylene coated steel
External wire of stainless steel
Outer cover:
Red PVC coated Fabric with yellow identification stripe.
Temperature Range:
-20°C up to +80°C
Reference Specifications:
Conforms to AS2117
Type 2/3
Pressure Capabilities: Test pessure 2:1; Burst 4:1
Application
Transfer hoses suitable for the suction and delivery of aggressive chemicals, searching solvents, and high viscosity products such as paint.
Refer to chemical data for specific applications.

Product Code	Nominal ID		OD	Pressure (bar) @ 20° C per AS2117			Bend radius	Weight	Coil Length
	mm	in	mm	Working	Test	Burst	mm	Kg/m	m
CH998-025-PS	25	1	37	10	20	40	75	1.62	25
CH998-032-PS	32	1.25	43	10	20	40	90	1.87	25
CH998-040-PS	40	1.5	51	10	20	40	100	2.10	25
CH998-050-PS	50	2	65	10	20	40	140	2.48	25
CH998-065-PS	63	2.5	76	10	20	40	180	3.52	25
CH998-080-PS	76	3	90	10	20	40	210	4.17	25
CH998-100-PS	100	4	120	10	20	40	340	4.81	25

Please Note: This hose is not ideally suited for applications where static electricity is a possibility due to the polypropylene coated inner wire.