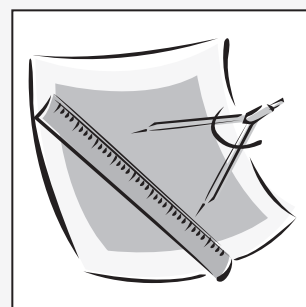


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# How to Identify a Thread

## Foreword

There are many different threads by which fluid connectors are attached to a system. These come under a variety of standards, some of which are set out below. It is obviously crucial to know what standard/style the thread or attachment is so the appropriate fluid connector components can be selected to complete or repair a circuit.

For easy identification there are four main points to look-for.

1. The general appearance of the fitting, or how it is laid out. Is the thread tapered or straight? Is the seat area concave or convex? Obviously the complementary or matching fitting will be an opposite of the other.
2. The pitch of the thread. Some thread styles look very similar to each other, only the thread pitch differs. This is an important check to make, as if the incorrect fitting is screwed in, damage to the other thread may occur, weakening it or causing irreparable damage.

3. The angle of the sealing area. As above, some styles will look

very much alike. Some even have the same thread dimension and pitch, but the seat angle is different. This is an important thing to check as the sealing of the connection is reliant on this area.

4. The thread diameter or size of the connection. The tables of sizes for the various styles will have a dimension as per the standard. Often threads will not match this dimension exactly as there are machining tolerances, but the correct size will be obvious.
5. Pressures indicated are relative to the appropriate standard for the thread indicated. There are two parts to any connection and the pressure can only be as good as the weaker one. Any hose, tube or other item in the circuit which is of a lower working pressure will dictate the maximum pressure of the circuit.

With these points in mind, and by following the steps, the correct style and standard will be easily determined. But be careful; by missing one you may get it wrong.

## Torque and Threaded Connections

BSPT and NPT tapered thread assembly requirements usually dictate a number of wrench flats from hand tight, and the hand tight position is decreed in the relevant Standard. Hand tightness should be reached at the gauge length. The Table at right summarises the recommended parameters when tightening these fittings. Note that a thread sealing compound is generally used with both these fittings in order to achieve a seal, and so the use of a torque figure for assembly can play no meaningful role.

The tables in the following pages document the recommended tightening torques for JIC and UNO type fittings, since correct torque is essential to minimize leaks from them. Too little torque will preclude proper seat contact, whilst too much can cause O-Ring extrusion (in the case of UNO), splitting of the female JIC seat, damage to the nut, or at the very least damage through cold working of the metal in the contact area. Since thread sealants are not required with these fittings, torque can adopt a more meaningful role in the assembly process. However, in field installation work, suitable torque wrenches are rarely available, and it is usual to fall back to the use of a number of wrench flats from wrench resistance to achieve the desired result. For the case of UNF style fittings, the tabulation at right may assist in achieving the correct torque during assembly if a torque wrench is unavailable during installation. The procedure is:

1. Tighten the nut with the fingers until a distinct bottoming out on the seat can be felt.
2. Use a marking system (permanent marker or centre punch) to provide reference points on the opposing flats of the nut and connector.
3. Tighten the nut with a spanner to rotate it the tabulated number of hex flats, using the reference marks as a guide.

**NOTE: The Torque values shown on the following pages are based on Carbon Steel Fittings.**

Thread UNF	Tube Size	Torque Nm	No. of Hex Flats from Wrench Resistance
7/16-20	4	15-16	2
1/2-20	5	19-21	2
9/16-18	6	24-28	1.1/2
3/4-16	8	49-53	1.1/2
7/8-14	10	77-85	1.1/2
1.1/16-12	12	107-119	1.1/4
1.3/16-12	14	127-140	1.1/4
1.5/16-12	16	147-154	1
1.5/8-12	20	172-181	1
1.7/8-12	24	215-226	1
2.1/2-12	32	332-350	1

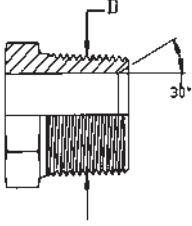
Note: Torque values given are for plated steel components without lubrication

"Thread BSPT"	"Tube Size"	Gauge Length Turns of Thread"	Max. Turns of Thread inc. Fitting Allowance"	Min. Recommended Thread Engagement mm"
1/8 - 28	2	43/8	71/8	5.8
1/4 - 19	4	41/2	71/4	6.4
3/8 - 19	6	43/4	71/2	8.6
1/2 - 14	8	41/2	71/4	8.6
3/4 - 14	12	51/4	8	11.7
1 - 11	16	41/2	71/4	11.7
1.1/4 - 11	20	51/2	81/4	17
1.1/2 - 11	24	51/2	81/4	18
2 - 11	32	67/8	101/8	19.5

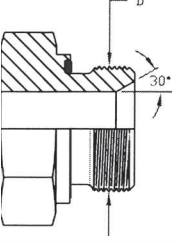
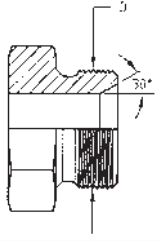
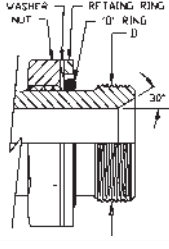
Recommended Thread Engagement lengths for NPT fittings are the same as for BSPT

# Thread Identification

## BRITISH STANDARD PIPE TAPER MALE - (BSPT)

 <p><b>Applicable Standards</b> Thread Form: AS 1722.1-1975, ISO 7</p>	Pipe Size	Dash Size	Nominal Thread Size & Pitch	Max Work Press (Bar) Adaptors	Hose Fittings Max Work Press	Thread OD 'D' on Diagram	
					Bar	mm	in
	1/8"	2	1/8" - 28	690	350	9.73	0.383
	1/4"	4	1/4" - 19	650	350	13.16	0.518
	3/8"	6	3/8" - 19	550	275	16.67	0.656
	1/2"	8	1/2" - 14	410	275	20.96	0.825
	5/8" *	10	5/8" - 14	340	210	22.91	0.902
	3/4"	12	3/4" - 14	340	210	26.45	1.041
	1"	16	1" - 11	275	210	33.25	1.309
	1 1/4"	20	1 1/4" - 11	200	140	41.91	1.650
	1 1/2"	24	1 1/2" - 11	140	140	47.81	1.882
	2"	32	2" - 11	140	140	59.62	2.347

## BRITISH STANDARD PIPE PARALLEL MALE - (BSPP)

 <p><b>Applicable Standards</b> Thread Form: AS 1722.2-1992, ISO 228 Seal: DIN 3852 Part 11 Form E</p>	 <p><b>Applicable Standards</b> Thread Form: AS 1722.2-1992, ISO 228 Seal: DIN 3852 Part 2 Form B</p>	 <p><b>Applicable Standards</b> Thread Form: AS 1722.2-1992, ISO 228 Seal: ISO 1179-3 Form G</p>
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Pipe Size	Dash Size	Correct Torque (Nm)	Nominal Thread Size & Pitch	Max Work Press (Bar) Adaptors		Hose Fittings Max Work Press	Thread OD 'D' on Diagram	
				Fixed	Adj.		mm	ins
1/8"	2	20	1/8" - 28	600	350	-	9.73	0.383
1/4"	4	50	1/4" - 19	600	400	630	13.16	0.518
3/8"	6	80	3/8" - 19	600	400	550	16.67	0.656
1/2"	8	100	1/2" - 14	400	350	430	20.96	0.825
5/8" *	10	120	5/8" - 14	400	275	420	22.91	0.902
3/4"	12	200	3/4" - 14	400	315	420	26.45	1.041
1"	16	380	1" - 11	400	250	420	33.25	1.309
1 1/4"	20	500	1 1/4" - 11	380	200	350	41.91	1.650
1 1/2"	24	600	1 1/2" - 11	380	160	350	47.81	1.882
2"	32	750	2" - 11	250	125	350	59.62	2.347

\* 5/8" Size is not subject to Standards

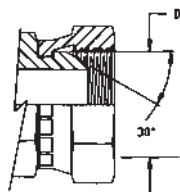
Note: The torque values given are for plated carbon steel components without lubrication.

# Thread Identification

## BRITISH STANDARD PIPE

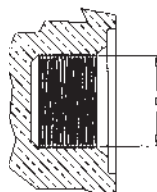
### PARALLEL FEMALE - (BSPP)

### TAPER FEMALE - (BSPT)



#### Applicable Standards

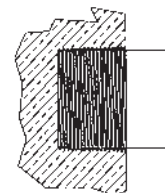
Thread Form: AS 1722.2-1992, ISO 228



#### Applicable Standards

Thread Form: AS 1722.2-1992, ISO 228

Sealing area: DIN 3852 Part 2 Form X



#### Applicable Standards

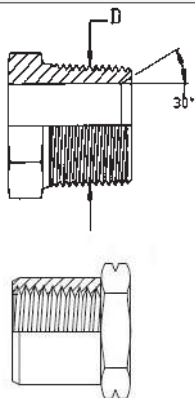
Thread Form: AS 1722.2-1992, ISO 228

Pipe Size	Dash Size	Correct Torque (Nm) BSPP	Nominal Thread Size & Pitch	Max Work Press (Bar) Adaptors		Hose Fittings Max Work Pressure Bar	Thread ID 'D' on Diagram	
				Fixed	Swivel		mm	ins
1/8"	2	20	1/8" - 28	550	550	350	8.59	0.338
1/4"	4	50	1/4" - 19	550	550	630	11.46	0.451
3/8"	6	80	3/8" - 19	520	520	550	14.96	0.589
1/2"	8	100	1/2" - 14	380	380	430	18.65	0.734
5/8" *	10	120	5/8" - 14	275	275	420	20.6	0.811
3/4"	12	200	3/4" - 14	275	275	350	24.13	0.95
1"	16	380	1" - 11	240	240	350	30.3	1.193
1 1/4"	20	500	1 1/4" - 11	200	200	250	38.97	1.534
1 1/2"	24	600	1 1/2" - 11	175	175	210	44.86	1.766

\* 5/8" Size is not subject to Standards

Note: The torque values given are for plated carbon steel components without lubrication.

## NATIONAL PIPE TAPER FUEL- (NPTF) MALE AND FEMALE FIXED



#### Applicable Standards

Thread Form: SAE J476

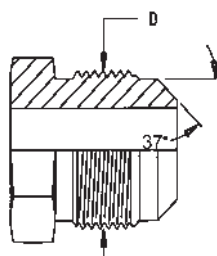
Pipe Size	Dash Size	Nominal Thread Size & Pitch	Max Work Press (Bar) Adaptors		Hose Fittings Max Work Pressure Bar	Thread OD 'D' on Diagram	
			Male	Female		mm	in
1/8"	2	1/8" - 27	689	414	350	10.32	0.406
1/4"	4	1/4" - 18	655	345	350	13.89	0.546
3/8"	6	3/8" - 18	552	275	275	17.06	0.671
1/2"	8	1/2" - 14	414	275	275	21.43	0.843
3/4"	12	3/4" - 14	345	241	210	26.98	1.062
1"	16	1" - 11. 1/2	275	207	210	33.33	1.312
1 1/4"	20	1 1/4" - 11. 1/2	207	138	150	42.46	1.671
1 1/2"	24	1 1/2" - 11. 1/2	138	103	140	48.42	1.906
2"	32	2" - 11. 1/2	138	103	140	60.32	2.375



# Thread Identification

## JOINT INDUSTRY COUNCIL - (JIC) - MALE

Dash Size	Nominal Tube Size in	Correct Torque Nm	Nominal Thread Size & Pitch	Max Work Press Adaptors	Thread OD 'D' on Diagram	
					mm	in
05	1/8"	8-9	5/16" - 24	-	7.87	.310
06	3/16"	11-12	3/8" - 24	-	9.65	.380
07	1/4"	15-16	7/16" - 20	595	11.07	.436
08	5/16"	19-21	1/2" - 20	595	12.70	.500
09	3/8"	24-28	9/16" - 18	490	14.25	.561
12	1/2"	49-53	3/4" - 16	420	19.00	.748
14	5/8"	77-85	7/8" - 14	385	22.17	.873
17	3/4"	107-119	1 1/16" - 12	280	26.95	1.061
19	7/8"	127-140	1 3/16" - 12	280	30.10	1.188
21	1"	147-154	1 5/16" - 12	245	33.30	1.311
26	1 1/4"	172-181	1 5/8" - 12	245	41.22	1.623
30	1 1/2"	215-226	1 7/8" - 12	145	47.57	1.873
40	2"	332-350	2 1/2" - 12	120	63.45	2.498



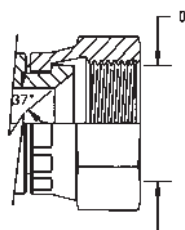
### Applicable Standards

Thread Form: SAE J514

Note: The hex flats from finger tight method is recommended for 37° and 45° flare fittings. The torque values given are for plated carbon steel components without lubrication. See page 2

## JOINT INDUSTRY COUNCIL - (JIC) - FEMALE

Dash Size	Nominal Tube Size in	Correct Torque Nm	Nominal Thread Size & Pitch	Max Work Press Adaptors	Thread ID 'D' on Diagram	
					mm	in
05	1/8"	8-9	5/16" - 24	-	6.85	.270
06	3/16"	11-12	3/8" - 24	-	8.63	.340
07	1/4"	15-16	7/16" - 20	480	10.00	.394
08	5/16"	19-21	1/2" - 20	480	11.60	.457
09	3/8"	24-28	9/16" - 18	345	13.00	.512
12	1/2"	49-53	3/4" - 16	310	17.60	.693
14	5/8"	77-85	7/8" - 14	260	20.50	.807
17	3/4"	107-119	1 1/16" - 12	240	25.00	.985
19	7/8"	127-140	1 3/16" - 12	230	28.09	1.106
21	1"	147-154	1 5/16" - 12	225	31.30	1.233
26	1 1/4"	172-181	1 5/8" - 12	170	39.20	1.544
30	1 1/2"	215-226	1 7/8" - 12	145	45.60	1.796
40	2"	332-350	2 1/2" - 12	120	61.50	2.422



### Applicable Standards

Thread Form: SAE J514

Note: The hex flats from finger tight method is recommended for 37° and 45° flare fittings. The torque values given are for plated carbon steel components without lubrication. See page 2

## JOINT INDUSTRY COUNCIL- (JIC) - PIRTEK TEST PRESSURES (HOSE FITTINGS)

Dash Size	Nominal Tube Size in	Correct Torque Nm	Nominal Thread Size & Pitch	Actual Max Work Press (Bar)	Min. Burst Press (Bar)	No. of Wrench Flats from Wrench Resistance
05	1/8"	8-9	5/16" - 24	N/A	N/A	
06	3/16"	11-12	3/8" - 24	N/A	N/A	
07	1/4"	15-16	7/16" - 20	420 *c	1680	2
08	5/16"	19-21	1/2" - 20	420 *c	1680	2
09	3/8"	24-28	9/16" - 18	420 *c	1680	1.1/2
12	1/2"	49-53	3/4" - 16	420 *c	1680	1.1/2
14	5/8"	77-85	7/8" - 14	420 *c	1680	1.1/2
17	3/4"	107-119	1 1/16" - 12	420 *c	1680	1.1/4
19	7/8"	127-140	1 3/16" - 12	420 *c	1680	1.1/4
21	1"	147-154	1 5/16" - 12	420 *w	1680	1
26	1 1/4"	172-181	1 5/8" - 12	350 *w	1400	1
30	1 1/2"	215-226	1 7/8" - 12	350 *w	1400	1
40	2"	332-350	2 1/2" - 12	250 *w	1000	1



**IMPORTANT SAFETY NOTE:** Whilst Pirtek's thread termination pressure ratings exceed those stipulated in the respective Standards, discretion must be used prior to selection for appropriate applications. These test pressures correlate to material S12L14

\*c = Crimped Nut \*w = Wire Nut

Note: The hex flats from finger tight method is recommended for 37° and 45° flare fittings. The torque values given are for plated carbon steel components without lubrication. See page 2



This page is part of a complete catalogue containing technical and safety data.  
All data must be reviewed when selecting a product.  
Pirtek reserve the right to change technical specifications without notice

# Thread Identification

## STAPLELOK

Staplelok has its origins in the German coal mining industry. It is often referred to as 'Stecko', the name given to the product by its inventor, and derived from the German verb 'stecken' meaning 'to pin', along with a truncation of 'O-Ring'.

Staplelok has become the predominant hydraulic hose fitting world wide in underground coal mining.

**Sealing and Identification:** The male spigot is equipped with an annular O-Ring with Teflon backup ring that together seal against the cylindrical machined wall of the female coupling. Retention is via a horseshoe shaped square section staple that is inserted through holes in the female socket. The holes align with an annular slot in the male fitting.

**Advantages:** Allows connections to be made in confined spaces and in difficult environments. No torsional load is applied in the fitting, and connection is easy, with no need of spanners. A combination hammer and lever tool is commonly used to facilitate insertion and removal of staples.

**Variations:** Available in the original form, and a more recent 'Super' form to cope with demands for higher working pressures. The 'Super' form employs the same design characteristics, but uses an extra wide staple (sometimes in the form of 2 standard staples laminated together) to increase the shear strength of the staple. No published Standard exists for the 'Super' form.

## STAPLELOK MALE & FEMALE

Size	Nom. Tube Size		'W' or Hole Dia mm		'D' on Diagram mm		Max. Working Pressure (bar) (Based on Use of St. Steel 'D' Staples)
	in	mm	Male	Fem	Male	Female	
6	1/4"	4	5.1	6	9.9	15.1	500
10	3/8"	6	5.1	6	13.9	20.1	420
13	1/2"	8	5.1	6	17.9	24.1	420
20	3/4"	12	5.1	6	23.9	29.1	350
25	1"	16	7.1	8.5	30.9	39.1	280
32	1.1/4"	20	7.1	8.5	37.9	46.1	210
40	1.1/2"	24	7.2	9	46.9	55.2	185
50	2"	32	7.2	9	55.9	64.2	165
63	2.1/2"	40	7.2	9	60.8	80.9	70
70	3"	48	39.4	9	85.5	86.1	67

### Applicable Standards

**Thread Form:** DIN 20 043 + SAE J1467

Pirtek Adaptors meet or exceed  
DIN20043, BS6537, and NCB638  
requirements

Stainless Steel staples of all types conform to 420S45 (1.4028) (X30Cr13) in BS EN10088-2:2005.

# Thread Identification

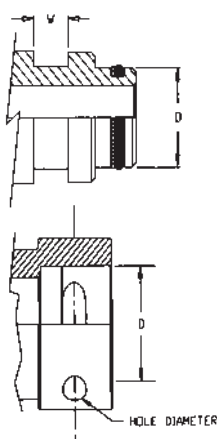
## STAPLELOK SAFETY

- The life expectancy of staples subjected to high pressures and impulses is potentially less than that of the hose and fittings combinations within the same circuit
- Failure of a staple can result in fracture of the staple, or a loss of spring tension leading to dislodgement as a result of system depressurisation followed by re-pressurisation
- **FOR THIS REASON, PIRTEK RECOMMENDS THAT STAPLES SHOULD ALWAYS BE REPLACED BY NEW STAPLES WHEN UNDERTAKING EQUIPMENT MAINTENANCE OR OVERHAULS**
- Pirtek offer a special cable tie retention strap (see page 135) to reduce the dangers associated with staple breakage



## SUPER STAPLELOK MALE & FEMALE

Size	Nom. Tube Size		'W' or Hole Dia mm		'D' on Diagram mm		Max. Working Pressure (bar) (Based on Use of St. Steel 'D' Staples)
	in	mm	Male	Fem	Male	Female	
13	1/2"	8	9.1	9.1	15.9	24.3	520
20	3/4"	12	9.1	9.1	21.9	29.3	420
25	1"	16	13.1	13.6	30.9	39.6	420
32	1.1/4"	20	13.1	13.6	37.9	46.6	420
40	1.1/2"	24	13.1	13.6	43.9	55.6	420
50	2"	32	13.1	13.6	49.9	64.6	420



**Applicable Standards**  
Not covered by Standard

- Stainless Steel staples of all types material is 420S45 (1.4028) (X30Cr13) in BS EN10088-2:2005.

# Thread Identification

## SKV / SSKV

SSKV and its lower pressure derivative SKV, like Staplelok, have their origins in Germany. Developed specifically for applications requiring secure connections without the need for special tools, and without the drawbacks associated with the older Staplelok technology (bulky profile and easily dislodged or broken staples), it finds many applications both in mining and general industry. The acronym SSKV is derived from the German language meaning 'steckschalenklemmverbindung' or 'plug shell clamp connection'.

**Sealing and Identification:** Sealing resembles Staplelok in that the male spigot is equipped with an annular O-Ring with Teflon backup ring. These seal against the cylindrical machined wall of the female coupling. Retention is however much more sophisticated than Staplelok. A spring loaded shell not unlike a Victaulic clamp is retained by means of a threaded nut that is hand tightened into position to prevent dislodgement of the shell. An (optional) removeable red coloured clip behind the threaded nut in turn prevents unplanned loosening of the nut. Size identification is best done by way of the male collar OD or female body OD (they are designed to be equal). See dimensions D and E below.

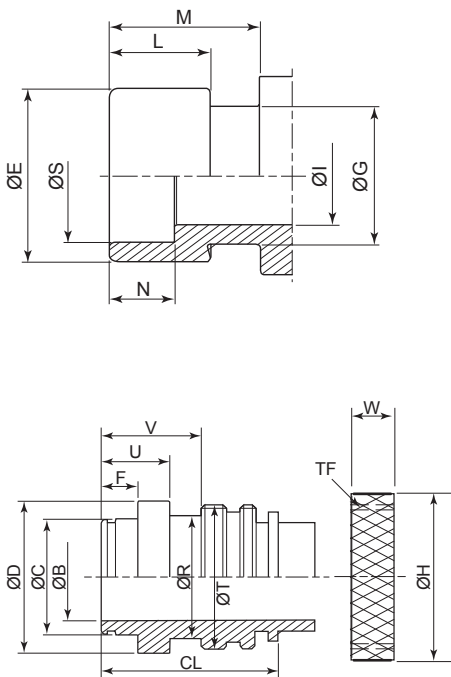
**Advantages:** Allows connections to be made in confined spaces and in difficult environments. No torsional load is applied in the fitting, and connection is easy, with no need of spanners. The slim external profile of the coupling does not protrude beyond the hose outside diameter in most cases, and overall connection length is short. There exist no projecting components to cause snagging or dislodgement.

The 2 forms of the fittings are dimensionally different to preclude accidental intermixing between different pressure circuits.

**Variations:** Available in the both medium and high pressure forms to fill the demands for a wide range of working pressures. The 'SSKV' form has been extensively tested within Australia to SAE J343 for both working pressure and impulse cycles, and has comfortably exceeded 500,000 impulses in all tests (continuing). No Standard exists for either form of the fitting at this point.

Both forms of the fitting are suited to applications where MDG 41 compliance is demanded.

## SKV MALE & FEMALE



Nom. Tube	DN	6	10	13	20	25	32	40	50	63	76	100
	ins	1/4"	3/8"	1/2"	3/4"	1"	1¼"	1½"	2"	2½"	3"	4"
	Dash	04	06	08	12	16	20	25	32	40	48	64
Pressure (bar)	Max. Working	-	-	-	-	280	210	185	165	70	70	64
	Min. Burst	-	-	-	-	1120	840	740	660	280	280	256
SKV Female (Hosetails and Adaptors)												
Dimensions (mm)	S	-	14	18	23	27	33	44	56	66	88	105
	E	-	20	22	28	33	39.8	53	65	75	99	118
	G	-	14	15.9	19.9	24.9	31.1	38.9	52.9	63.9	84.8	138
	I	-	7	9.8	15	19	24	32	44	55	67	85
	L	-	16	18	17	17	23.6	24.5	24.5	24.5	38	38
	M	-	24	26.5	27	28.5	37	37.5	38	38	54.5	60
	N	-	11.2	13.2	13.2	13.2	18.2	15.2	15.2	15.2	25.2	26
SKV Male (Hosetails)												
Dimensions (mm)	B	-	7	9.8	15	19	24	32	44	55	67	86
	C	-	14	18	23	27	33	44	56	66	88	105
	D	-	20	22	28	33	39.8	53	65	75	99.3	138
	R	-	14	15.9	19.9	24.9	31.1	38.9	52.9	63.9	84.8	101
	T	-	19	20	28	37	43	50	64	75	95	122
	F	-	11	13	13	13	18	15	15	15	25	25
	V	-	24	26.5	27	28.3	35	37.5	38	38	54.5	38
	H	-	25	28	36	42	50	62	75	85	110	138
	W	-	14	14.5	15	12.5	14	19	19.5	19.5	28	37.5
	TF	-	19	20	28	37	40/43	50	64	75	95	125
	SKV Male (Adaptors)											
	B	-	7	9.8	15	19	24	32	44	55	67	86
	C	-	14	18	23	27	33	44	56	66	88	105
	D	-	20	22	28	33	39.8	53	65	75	99.3	118
	R	-	14	15.9	19.9	24.9	31.1	38.9	52.9	63.9	84.8	101
	T	-	24	26	32	37	43	60	70	80	107	122
	F	-	11	13	13	13	18	15	15	15	25	25
	V	-	24	26.5	27	28.3	35	37.5	38	38	54.5	61
	H	-	29	33	36	42	50	70	80	90	125	138
W	-	15	14.5	15	12.5	14	22	23	25.5	28	37.5	
TF	-	24	26	32	37	40/43	60	70	80	107	125	

# Thread Identification

## SKV / SSKV ASSEMBLY PROCEDURE

### Step 1:

Ensure you have the appropriate SKV / SSKV components

The SKV / SSKV connections comprise:

- Support Clip



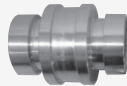
- Shell



- Male End w/- Retaining Nut



- Female End



### Step 2:

Lubricate the O-Ring and internal body of the female fitting using Pirtek Protect Lanoline Grease. Insert the male spigot into the female until the shoulders touch as can be seen in the photograph at right.



### Step 3:

Fit the spring supported Shell over the mating male and female connection and ensure that it is a snug fit into the grooves, equally ensuring that the two halves of the shell meet and align. Ensure that the split in the Shell is level, parallel and forms a complete closed diameter to ensure that it is properly engaged in the grooves as evident at right.

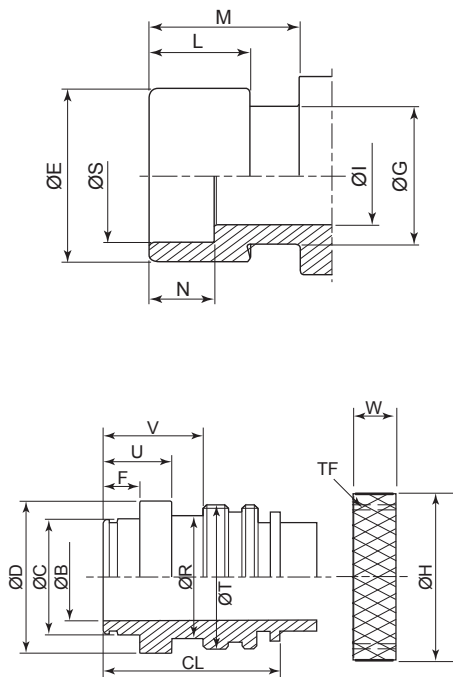


### Step 4:

Lubricate the thread of the retaining nut with Pirtek Protect Lanoline Grease. Turn the retaining nut toward the shell by hand until it meets firmly against the shoulder of the shell. A "C" Spanner may be used, but is not essential. Clip the optional plastic safety clip into position firmly at the rear of the retaining nut ensuring that it is not loose, although some sideways movement is permitted in the housing groove.



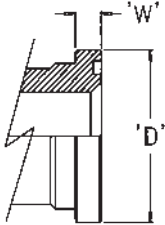
## SSKV MALE & FEMALE



Nom. Tube	DN	6	10	13	20	25	32	40	50	63	
	ins	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	
	Dash	04	06	08	12	16	20	25	32	40	
Pressure (bar)	Max. Working	-	420	420	420	420	420	420	420	350	
	Min. Burst	-	1680	1680	1680	1680	1680	1680	1400	1400	
SSKV Female (Hosetails and Adaptors)											
Dimensions (mm)	S	-	14	18	23	28	33	42	54	65	
	E	-	20	24	30	36	44	54	70	84	
	G	-	14	18	23	28	33	39	56	69	
	I	-	7	10	15	20	24	30	40	50	
	L	-	16	18	18	21	26	29.5	31	41	
	M	-	24	26.5	27	33	39	43.5	46	62.5	
	N	-	11	13	13	15	18	20	20	25	
SSKV Male (Hosetails)											
Dimensions (mm)	B	-	7	10	15	20	24	30	40	50	
	C	-	14	18	23	28	33	42	54	65	
	D	-	20	24	30	36	44	54	70	84	
	R	-	14	18	23	28	33	39	56	69	
	T	-	19	23	32	38	43	50/55	66	86	
	F	-	11	13	13	15	18	20	20	25	
	V	-	25	26.5	27	32	39	43	46	62.5	
	H	-	25	30	38	45	52	64	78	98	
	W	-	14	13.5	15	13.5	13.5	19	19.5	25	
	TF	-	20	23	32	38	43	50/55	66	86	
	SSKV Male (Adaptors)										
	B	-	7	10	15	20	24	30	40	50	
	C	-	14	18	23	28	33	42	54	65	
	D	-	20	24	30	36	44	54	70	84	
	R	-	14	18	23	28	33	39	56	69	
	T	-	24	28	34	41	50	60	76	95	
	F	-	11	13	13	15	18	20	20	25	
V	-	24	26.5	27	32	39	43	46	62.5		
H	-	29	34	40	47	64	72	85	110		
W	-	15	13	15	14.5	19	22	23	28		
TF	-	21.5	28	34	41	50	60	70	90		

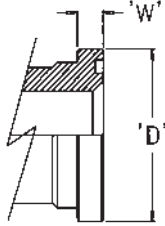
# Thread Identification

## SAE J518 CODE 61 FLANGE

 <p><b>Applicable Standards</b> Thread Form: SAE J518-1 ISO6162-1</p>	Dash Size	Nominal Tube Size		'W' on Diagram		Max Work Press. Adaptors	Hose Fittings Max Work Press	Flange OD 'D' on Diagram	
		ins	mm	ins	mm	bar	Bar	ins	mm
	8	1/2"	12.7	0.265	6.73	350	350	1.188	30.18
	10 †	5/8"	16	0.265	6.73	350	350	1.340	34
	12	3/4"	19	0.265	6.73	350	350	1.500	38.1
	16	1"	25.4	0.315	8	320	350	1.750	44.45
	20	1.1/4"	32	0.315	8	280	280	2.000	50.8
	24	1.1/2"	38	0.315	8	210	210	2.375	60.33
	32	2"	51	0.375	9.53	210	210	2.812	71.42
	40	2.1/2"	63.5	0.375	9.53	175	175	3.312	84.12
	48	3"	76	0.375	9.53	160	160	3.999	101.60
	56	3.1/2"	89	0.444	11.3	35	35	4.499	114.30
	64	4"	102	0.444	11.3	35	35	4.999	127.00

† Komatsu produce flanges to the Japanese JIS Standard. They comply with Code 61 and Code 62 in all respects except O-Ring groove dimensions. Refer to Pirtek fittings catalogue Section C for details. Never use Imperial O-Rings (Y or OKS) in Komatsu® flanges - only KY series. Dash Size 10 is unique to the JIS Standard.

## SAE J518 CODE 62 FLANGE

 <p><b>Applicable Standards</b> Thread Form: SAE J518-2 ISO6162-2</p>	Dash Size	Nominal Tube Size		'W' on Diagram		Max WP. Adaptors & Hose Fittings	Flange OD 'D' on Diagram	
		ins	mm	ins	mm	bar	ins	mm
	8	1/2"	12.7	0.305	7.75	420	1.250	31.750
	12	3/4"	19	0.345	8.76	420	1.625	41.280
	16	1"	25.4	0.375	9.53	420	1.875	47.630
	20	1.1/4"	32	0.405	10.29	420	2.125	53.980
	24	1.1/2"	38	0.495	12.57	420	2.500	63.500
	32	2"	51	0.495	12.57	420	3.125	79.380

NOTE: Komatsu use flanges that comply with Code 61 and Code 62 in all respects except O-Ring groove dimensions. Refer to Pirtek fittings catalogue Section C for details. They comply to a JIS Standard, and include a Dash 10 size.

## 'SUPERCAT' FLANGE

NOTE: This term applies to flanges with a flange head thickness of 14.2 mm, but conform in all other respects to the dimensions of SAE Code 62 flanges. They are to be found on new generation Caterpillar® equipment.

Pirtek have available a range of fittings that conform to the dimensions of the new fittings. Please refer to Fittings Catalogue Section C for detail. Product Codes follow Code 62 guidelines, but have a suffix 'C' to differentiate them eg C621C

No SAE Standard has been published as yet for the flanges

Flange Size		Associated Bolt Details for Flange Clamps									
		Code 61				Code 62 and Supercat					
		UNC Bolts Grade 8		Metric Bolts Class 10.9		UNC Bolts Grade 8		Metric Bolts Class 10.9			
Dash	Size	Thread	Length	Thread	Length	Thread	Length Code 62	Length Supercat	Thread	Length Code 62	Length Supercat
08	1/2"	5/16"-18	1 1/4"	M8 x 1.25	25	5/16"-18	1 1/4"	-	M8 x 1.25	30	-
10 *	5/8"	5/16"-18	1 1/4"	M8 x 1.25	35	-	-	-	-	-	-
12	3/4"	3/8"-16	1 1/4"	M10 x 1.5	30	3/8"-16	1 1/2"	1 1/4"	M10 x 1.5	35	45
16	1"	3/8"-16	1 1/4"	M10 x 1.5	30	7/16"-14	1 3/4"	1 3/4"	M12 x 1.75	45	45
20	1.1/4"	7/16"-14	1 1/2"	M10 x 1.5	30	1/2"-13	1 3/4"	2"	M12 x 1.75*	45	50
24	1.1/2"	1/2"-13	1 1/2"	M12 x 1.75	35	5/8"-11	2 1/4"	2 1/2"	M16 x 2	55	60
32	2"	1/2"-13	1 1/2"	M12 x 1.75	35	3/4"-10	2 3/4"	-	M20 x 2.5	70	-
40	2.1/2"	1/2"-13	1 3/4"	M12 x 1.75	40	-	-	-	-	-	-
48	3"	5/8"-11	1 3/4"	M16 x 2	50	-	-	-	-	-	-
56	3.1/2"	5/8"-11	2"	M16 x 2	50	-	-	-	-	-	-
64	4"	5/8"-11	2"	M16 x 2	50	-	-	-	-	-	-

Supercat Flange Clamps (not available from Pirtek) use the same bolt spacings as Code 62 but the bolts are generally longer to accommodate the 14.2 mm flange thickness

\*NOTE: Designs pre 2012 thread can be M14x2



This page is part of a complete catalogue containing technical and safety data.  
All data must be reviewed when selecting a product.  
Pirtek reserve the right to change technical specifications without notice



# Recommended Practices for Hydraulic Hose Assemblies – SAE J1273 2002-12

## Foreword

This SAE Recommended Practices is intended as a guide to consider when selecting, routing, fabricating, installing, replacing, maintaining, and storing hose for fluid-power systems. It is subject to change to keep pace with experience and technical advances. For those new to hose use in fluid power systems, this guide outlines practices to note during each phase of system design and use. Experienced designers and users skilled in achieving proper results, as well as the less experienced, can use this outline as a list of considerations to keep in mind.

Fluid-power systems are complex and require extensive knowledge of both the system requirements and the various types of hose. Therefore, all inclusive, detailed, step by step instructions are not practical and are beyond the scope of this document. Less experienced designers and users who need more information can consult specialists such as hose suppliers and manufacturers. This guide can improve the communication process.

## Safety Considerations

These recommended practices involve safety considerations; note these carefully during all phases of design and use of hose systems. Improper selection, fabrication, installation, or maintenance of hose and hose assemblies for fluid power systems may result in serious personal injury or property damage. These recommended practices can reduce the likelihood of component or system failure, thereby reducing the risk of injury or damage.

1. Scope – SAEJ1273 provides guidelines for selection, routing, fabrication, installation, replacement, maintenance, and storage of hose and hose assemblies for fluid-power systems. Many of these SAE Recommended Practices also may be suitable for other hoses and systems.
2. Reference
  - 2.1 Applicable publications –
 

The following publications form a part of this specification to the extent specified herein. Unless otherwise specified, the latest issue of SAE publications shall apply
  - 2.1.1 SAE publications – Available from
 

SAE, 400 Commonwealth Drive, Warrendale, PA 15096-000

SAEJ343 – Test and Procedures for SAE 100 R Series Hydraulic Hose and Hose Assemblies

SAEJ514 – Hydraulic Tube Fittings

SAEJ517 – Hydraulic Hose

SAEJ1927 – Cumulative Damage Analysis for Hydraulic Hose Assemblies
  - 2.1.2 ISO publications – Available from
 

ANSI, 11 West 42nd Street,  
New York, NY 10036-8002

ISO 3457 – Earth moving machinery – Guards and shields – definitions and specifications.

## 3. Definitions

These explanations serve only to clarify this document and are not intended to stand alone. They are presented sequentially, with the former helping to explain the latter

### 3.1 Fluid-power

Energy transmitted and controlled using pressurised hydraulic fluids or compressed air.

### 3.2 Hose – flexible conductor

In this document, the term hose also may refer to a hose assembly with related accessories used in fluid power applications

### 3.3 Hose fitting or fitting – connector which can be attached to the end of a hose

### 3.4 Hose assembly – hose with hose fittings attached

### 3.5 Hose failure – occurrence in which a hose stops meeting system requirements

### 3.6 Hose service life – length of time a hose meets system requirements without needing replacement

## 4. Safety considerations –

listed in 4.1 to 4.7 are some potential conditions and situations that may lead to personal injury and/or property damage. This list is not necessarily all inclusive. Consider reasonable and feasible means, including those described in this section, to reduce the risk of injuries or property damage. Training, including the information in this document, for operators, maintenance personnel, and other individuals working with hoses under pressure is encouraged

### 4.1 Fluid injections – fine streams of escaping pressurised fluid can penetrate skin and enter a human body. These fluid injections may cause severe tissue damage and loss of limb

Consider various means to reduce the risk of fluid injections, particularly in areas normally occupied by operators. Consider careful routing, adjacent components, warnings, guards, shields, and training programs.

Relieve pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Avoid contact with escaping fluids. Treat all leaks as though pressurised and hot enough to burn skin. Never use any part of your body to check a hose for leaks.

If a fluid-injection accident occurs, see a doctor immediately. DO NOT DELAY OR TREAT AS A SIMPLE CUT! Any fluid injected into skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should consult a knowledgeable medical source

### 4.2 Whipping hose – if a pressurised hose assembly blows apart, the fittings can be thrown off at high speed, and the loose hose can flail or whip with great force. This is particularly true in compressible-fluid systems. When the risk exists, consider guards and restraints to protect against injury

### 4.3 Burns from conveyed fluids – fluid-power media may reach temperatures that can burn human skin. If there is risk of burns from escaping fluid, consider guards and shields to prevent injury, particularly in areas normally occupied by operators

### 4.4 Fire and explosions from conveyed fluids – most fluid-power media, including fire-resistant hydraulic fluids, will burn under certain conditions. Fluids which escape from pressurised systems may form a mist or fine spray which can flash or explode upon contact with an ignition source. Consider selecting, guarding, and routing hose to minimise the risk of combustion (see Section 5 and ISO 3457).

### 4.5 Fire and explosions from static-electric discharge – fluid passing through hose can generate static electricity, resulting in static-electric discharge. This may create sparks that can ignite system fluids or gases in the surrounding atmosphere

When this potential exists, select hose specifically designed to carry the static-electric charge to ground

# (R) Test and Test Procedures for SAE 100R Series Hydraulic Hose and Hose Assemblies – SAE J343 July 2001

This document is technically equivalent to ISO 6605 except as noted in the foreword.

**Foreword** – this document has not changed other than to put it into the new SAE technical standards board format. SAE J343 has been revised to be technically equivalent to ISO 6605, except that additional tests in paragraphs 4.9 to 4.14 were included

- 1. Scope** – this SAE standard gives methods for testing and evaluation performance of the SAE 100R series of hydraulic hose and hose assemblies (hose and attached end fittings) used in hydraulic fluid power systems.

Specific tests and performance criteria for evaluating hose assemblies used in hydraulic service are in accordance with the requirements for hose in the respective specifications of SAE J517.

This document further establishes a uniform means of testing and evaluating performance of hydraulic hose assemblies

## 2. Reference

- 2.1 Applicable publications – The following publications form a part of the specification to the extent specified herein. Unless otherwise indicated the latest revision of SAE publications shall apply
- 2.1.1. SAE Publications – available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001  
SAE J517 Hydraulic hose.
- 2.1.2. ASTM publications – available from ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.  
ASTM D 380 – standard methods of testing rubber hose.
- 2.1.3 ISO publications – available from ANSI, 11 West 42nd Street, New York, NY 10036-8002.  
ISO 3448 – industrial liquid lubricants-ISO viscosity classification  
ISO 6605 – hydraulic fluid-power hose assemblies – method of test.

## 3. Test procedures

The test procedures described in the current issue of ASTM D 380 shall be followed. However, in cases of conflict between the ASTM specifications and hose described as follows, the latter shall take precedence. Unless otherwise specified in this document, or other SAE standards, tests shall be conducted at the prevailing ambient temperature of the testing facility.

- 4. Standard test warning** – water or another liquid suitable for the hose under test shall be used as the test medium. The use of air and other gaseous materials as testing media should be avoided because of the risk to operators. In special cases where such media are required for the tests, strict safety measures are imperative. Furthermore, it is stressed that when a liquid is used as the test medium, it is essential that all air is expelled from the test piece because of the risk of injury to the operator due to the sudden expansion of trapped air released when the hose bursts.

- 4.1. Dimensions check test – The hose shall be inspected for conformity to all dimensions tabulated in the applicable specification. Determine finished outside diameters and reinforcement diameters, where required, by calculation from measurement of the respective circumference. As an alternative, use a flexible tape graduated to read the diameter directly. Measure the inside diameter by means of a suitable expanding ball or telescoping gauge. Measure concentricity over both the reinforcement and the finished outside diameters using either a dial indicator gauge or a micrometer. Round the foot of the measuring instrument to conform to the inside diameter of the hose. Take reading at 90 degree intervals around the hose.

NOTE: Acceptability is based on the total variation between the high and low readings.

Take inside and outside diameter measurements at a minimum of 25mm from the hose ends and concentricity measurements at a minimum of 13 mm from the hose ends.

## 4.2 Proof test

Test the hose assemblies hydrostatically to the specified proof pressure for a period of not less than 30 s nor more than 60 s. There shall be no indication of failure or leakage

## 4.3 Change in length test

Conduct measurements for the determination of elongation or contraction on a previously untested, unaged hose assembly having at least 600 mm length of free hose between hose fittings.

Attach the hose assembly to the pressure source in an unrestricted straight position. If the hose is not straight due to its natural curvature, it may be fastened laterally to achieve a straight position. Pressurise to the specified operating pressure for a period of 30 s, then release the pressure.

Place accurate reference marks 500 mm apart on the outer cover of the hose, midway between fittings, after allowing the hose assembly to restabilise for a period of 30 s, following pressure release.

Repressurise the hose assembly to the specified operating pressure for a periods of 30 s.

Measure the final length while the hose is pressurised. The final length is the distance between reference marks while the hose is pressurised. Complete the determination of the change in length using Equation 1:

$$\Delta = \frac{l_1 - l_0}{l_0} \times 100 \quad (\text{Eq.1})$$

where:

$l_0$  is the distance between the reference marks when the hose was not pressurised following the initial pressurisation;

$l_1$  is the distance between the reference marks under pressure;

$\Delta$  is the percentage change in length, which will be positive (+) in the case of an increase in length and negative (–) in the case of a decrease in length

- 4.4 Burst test** – Subject unaged hose assemblies, on which the end fittings have been attached for not more than 30 days, to a hydrostatic pressure, increased at a constant rate so as to attain the specified minimum burst pressure within a period of not less than 15 s nor more than 60 s.

Reject hose assemblies showing leakage, hose burst or indication of failure below the specified minimum burst pressure.

NOTE: This is a destructive test. Assemblies which have been subjected to this test shall be destroyed.

- 4.5 Cold bend test** – subject hose assemblies to the specified temperature in a straight position for 24 h. Then, while still at the specified temperature, the samples shall be evenly and uniformly bent once over a mandrel having a diameter equal to twice the specified minimum bend radius. Bending shall be accomplished within a period of not less than 8 s nor more than 12 s.

In the case of hose sizes up to and including 22 mm nominal inside diameter, bend them through 180 degrees over the mandrel; in the case of hose sizes larger than 22 mm nominal inside diameter, bend them through 90 degrees over the mandrel.

After bending, allow the sample to warm to room temperature, visually examine it for cover cracks and subject it to the proof test. There shall be no cover cracks or leakage. (In lieu of the bending test, hoses larger than 22 mm nominal inside diameter may be considered acceptable if samples of tube and cover pass the Low Temperature Test on Tube and Cover of ASTM D 380).

Reject any samples with visible cracks or leakage.

NOTE: This is a destructive test. Assemblies which have been subjected to this test shall be destroyed.

**4.6 Impulse test** – test for unaged hose assemblies with end fittings which have been attached for not more than 30 days. Where the individual standard requires, also test aged hose assemblies. Apply a pulsating pressure internally to the hose assemblies at a rate between 0.5 and 1.34 Hz; record the frequency used. The pressure cycle shall fall within the shaded areas of Figure 1 of SAE J343 and conform as closely as possible to the curve shown. Select a test fluid which complies with the requirements of ISO VG 46± 4.6 at 40°C per ISO 3448, and circulate it at a rate sufficient to maintain a uniform fluid temperature within the hose assemblies. Other fluids may be used as agreed upon between the customer and the manufacturer.

Calculate the free (exposed) length of hose under test, shown on Figure 2, as follows:

- a. Hose sizes up to and including 22 mm nominal inside diameter (see Equation 3):

$$180 \text{ degrees bend free length} = \frac{\pi r + 2d}{2} \quad (\text{Eq.3})$$

- b. Hose sizes larger than 22 mm nominal inside diameter (see Equation 4):

$$90 \text{ degrees bend free length} = r + 2d \quad (\text{Eq.3})$$

where:

r = minimum bend radius

d = hose outside diameter

Connect the test pieces to the apparatus. The test pieces shall be installed according to Figure 2 of SAE J343. Test pieces of hose of nominal inside diameter up to and including 22 mm shall be bent through 180 degrees and hoses of nominal inside diameter larger than 22 mm shall be bent through 90 degrees.

Test the hose at the impulse test pressure indicated in the individual specification. The test fluid shall be circulated through the assemblies at the specified temperature with a tolerance of 3°C. Cooling or heating of the test chamber shall not be permitted, except when individual standards require testing with synthetic base test fluids at a temperature higher than 150°C. When such higher temperatures are required, the impulse test fluid need not be circulated if both the fluid and the assemblies are externally heated in the test chamber, at the specified temperature with a tolerance of 5°C.

Determine the duration of the impulse test in total number of cycles by the individual standard for the hose assemblies. Where aged samples are required, refer to the individual standards. It is recommended the test fluid be changed frequently to prevent breakdown.

NOTE: This is a destructive test. Assemblies which have been subjected to this test shall be destroyed.

- 4.7 Leakage test** – Subject unaged hose assemblies, on which the end fitting have been attached for not more than 30 days, to a hydrostatic pressure of 70% of the specified minimum burst pressure for a period of between 5.0 to 5.5 min.

Reduce the fluid pressure to 0 MPa.

Re-apply the 70% of minimum burst hydrostatic pressure for another 5.0 to 5.5 min period.

Reject assemblies showing leakage or failure.

NOTE: This is a destructive test. Assemblies which have been subjected to this test shall be destroyed.

A mercury or salt water solution electrode shall be provided at the upper end as shown, by inserting a non-metallic plug with an O-ring seal to distance of 75 mm from the end of the tubing, thus providing an average test length of 255 mm.

Mercury or salt water solution shall then be added to a level 25 mm above the plug. Any suitable conductor to this electrode may be used, including a threaded end attached to the plug if so desired. Concentration of salt water, if used, shall be 450 g NaCl per litre of H<sub>2</sub>O.

1000 V DC shall be applied between the upper electrode and the lower electrode (adaptor or male fitting hex). The current shall be measured with an instrument with a sensitivity of at least 1 µA (1 x 10<sup>-6</sup> A).

- 4.13 Resistance to vacuum test** – The hose shall not blister nor show any other indication of failure when subjected to the specified vacuum for a period of 5 min. Where practicable, one end of the hose shall be equipped with a transparent cap and electric light to permit visual examination for failure. Where the length or size of the hose precludes visual examination, failure shall be determined by inability to pass through the hose a ball or cylinder 6.5 mm less in diameter than the bore or hoses of 12.5 mm nominal inside diameter and larger. For hoses under 12.5 mm nominal inside diameter, a ball or cylinder 3.0 mm smaller in diameter than the bore shall be used.

### Hose and Fitting Compatibility

Pirtek strongly recommend that only Pirtek hose and fittings are used in an assembly. We do not condone the use of other brand hose used with our fittings, or other fittings used with our hose. Any fabrication of a hose assembly outside this is deemed to be at the fabricators risk and is not recommended.

The SAE specification for Hydraulic Hose, J517, paragraph 5 reads

**Hose Assemblies**—Hose assemblies may be fabricated by the manufacturer, an agent for, or customer of, the manufacturer, or by the user. Fabrication of permanently attached fittings to hydraulic hose requires specialised assembly equipment. Field attachable fittings (screw style and segment clamp style) can usually be assembled without specialised equipment although many manufacturers provide equipment to assist in this operation.

SAE J517 hose from one manufacturer is usually not compatible with SAE J516 fittings supplied by another manufacturer. It is the responsibility of the fabricator to consult the manufacturer's written assembly instructions of the manufacturers directly before intermixing hose and fittings from two manufacturers. Similarly, assembly equipment from one manufacturer is usually not interchangeable with that of another manufacturer. It is the responsibility of the fabricator to consult the manufacturer's written instructions or the manufacturer directly for proper assembly equipment. Always follow the manufacturer's instructions for proper preparation and fabrication of hose assemblies.

# Selection of Hose

## System type

The selection and installation of hoses must be in relation to pump pressure, operating cycle, inner diameters of pipes, type of fluid.

## Operating pressure

Hose lines are rated for continuous operation at the maximum operating pressures specified for the hose.

Generally, the operating pressure is one fourth the hose minimum burst pressure, thus meeting the SAE recommended safety factor of 4 to 1.

## Pressure surges

Almost all hydraulic systems develop pressure surges which may exceed relief valve settings and affect the service life of hose and system components. In systems where surges are severe, select a hose that will increase the safety factor.

Conversely, in systems where surges are slight or non-existent, a smaller safety factor may be used.

## Operating temperatures

Operating temperatures specified refer to maximum temperature of the fluid or gases being conveyed (with peaks up to 120°C). Continuous operation at or near maximum rated temperatures will materially reduce the service life of the hose. Refer to Pirtek for advice on permissible operating temperatures for fluids other than general purpose mineral oils in hydraulic hoses.

## Hose installation guide

Particular care must be taken to avoid certain conditions when installing hose assemblies. These conditions might arise from :

1. Changes in length
2. Proximity of high temperature sources
3. Twisting / torsion
4. Bends in tight locations
5. Rubbing / abrasion
6. Improper hose movement
7. Longitudinal pull on hose ends  
(vertical drops or spring tensioned reels)

Some situations can result in violation of the hose technical specifications unless the operating conditions of the hose are fully appreciated.

## A word about twist

Only 7° of angular twist in an assembly can reduce the expected hose life by up to 80%. Pay particular attention to factors that induce twist and learn to recognise them in the field. Take note also of the allowable tolerance for orientation of elbow fittings (page 17) when assembling hoses.

Take note of the examples given overleaf to avoid problems and premature hose failure.

## Ambient temperatures

Very high or low ambient (outside of hose) temperatures will affect cover and reinforcement materials, thus influencing the life of the hose.

## Bend radius

Recommended minimum bend radii are based on maximum operating pressures with no flexing of the hose.

## Vibration and flexing

Hose lines are designed to withstand maximum vibration and flexing.

## Volumetric expansion

Hose is normally manufactured with a neutral braid angle to reduce volumetric expansion.

## Gaseous fluid systems

High pressure gaseous systems are very hazardous. Pressurised air expands when released to atmosphere by a factor equating to the original pressure in bar (air at 350 bar expands 350 times its initial volume), and releases energy in the process (see Table below). Hose lines should be adequately protected from external shock and mechanical or chemical damage, and should also be suitably protected to prevent whiplash action in the event of failure for any reasons.

It is recommended to increase the safety factor when dealing with gaseous fluid systems.

Initial restrained pressure	Energy release from 45 litres of compressed fluid (Nm)	
	air	oil
bar		
1	0	0
6	230	0
34	1505	1
68	3254	4
136	7050	15
204	10711	33
340	18981	87
680	37963 †	312

† By way of comparison, this figure corresponds to the energy released by detonation of a stick of dynamite

Braided or spiral hoses used to conduct compressed air above 17 bar (250 psi) should be pin pricked on the external cover unless the hose cover is specifically designed to be permeable. Additionally, the maximum permissible working temperature of the hose must be reduced for use with air (typically around 70°C.)

## Hose Size

Please refer to the Table on page 17 for various hose size designations in common use



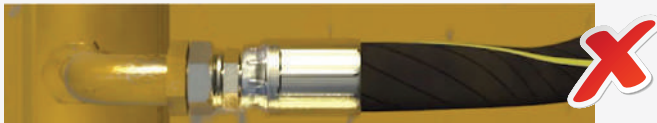
# HOSE INSTALLATION GUIDELINES



Length may vary +2% to -4% when pressure is applied.  
Allow enough slack to accommodate this movement.  
Important to note, that the metal hose fittings are not part of the flexible portion. Allow ample free length for flexing.



Avoid hot manifolds etc. where possible or isolate with Fire Sleeve or other protective means.



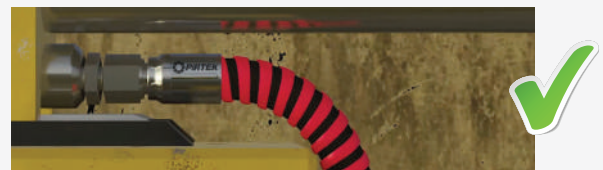
Use the layline to determine that no twist has been induced when tightening. Use 2 spanners to counteract twist.



Use elbows and adaptors to relieve strain for correct installations allowing easier access and maintenance.



Ensure that bending of a hose occurs in the same plane as the movement of the attachment point to avoid induced twist.



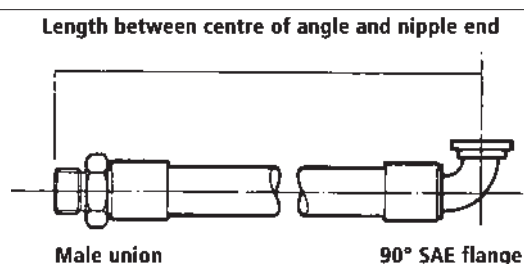
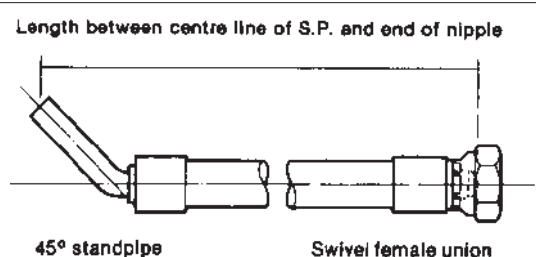
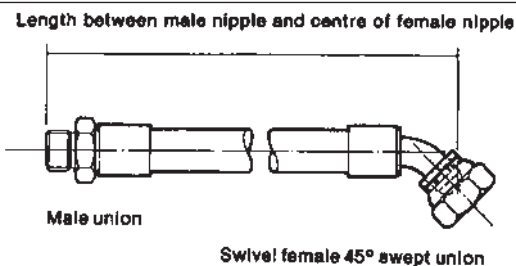
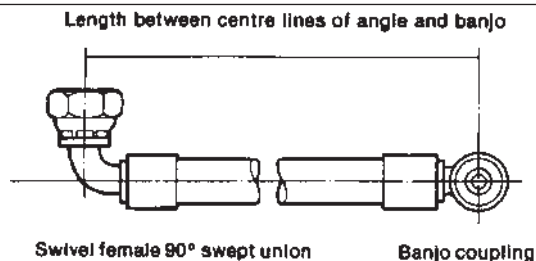
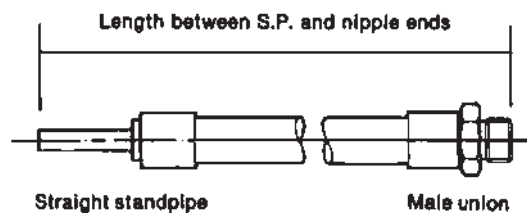
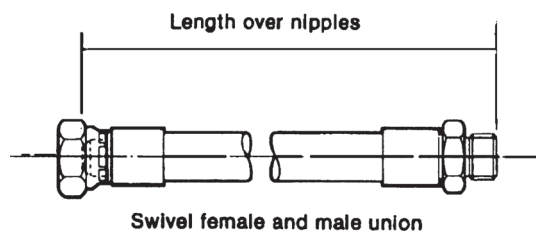
Avoid sharp corners and ensure a straight section of 1.5 the diameter before bending commences.  
Use Pirtek Spiral Guard, Das Sleeve or Steel Spring Guard to protect your hose in operating conditions.



Ensure to have a straight section before bending commences.  
Using too small a bend radius will greatly reduce flow hose life.



Use clamps to support long runs or keep the hose away from moving parts. Clamps must not be allowed to move as may cause abrasion.  
Important to note, when using clamps keep clear of bends.



#### Standard Tolerances

##### Assembly length

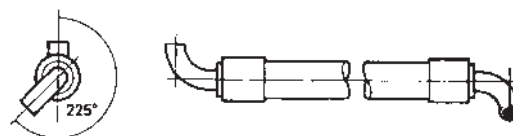
0mm – 305mm  $\pm 3$ mm

305mm – 457mm  $\pm 4$ mm

457mm – 914mm  $\pm 6$ mm

914mm upwards  $\pm 1\%$

Elbow angle  $\pm 3^\circ$



### Angular Relationships

Hold the assembly so that you can look along the length of the hose and with the fitting furthest away from you in the vertical position. Measure the angle between the vertical fitting and the one nearest to you in a clockwise direction. Relationship can then be expressed from 0° to 360°.

*If the angle is not given, the elbows are positioned at 0°.*

#### HOSE SIZE TERMINOLOGY (HOSE SIZE REFERS TO THE INSIDE DIAMETER)

HOSE SIZE	DASH SIZE	MINE TERMINOLOGY	METRIC SIZE	DN SIZE
1/4"	-04	NO 4	6 MM	DN6
3/8"	-06	NO 6	10 MM	DN10
1/2"	-08	NO 8	13 MM	DN13
5/8"	-10	NO 10	16 MM	DN16
3/4"	-12	NO 12	20 MM	DN20
1"	-16	NO 16	25 MM	DN25
1 1/4"	-20	NO 20	32 MM	DN32
1 1/2"	-24	NO 24	40 MM	DN40
2"	-32	NO 32	50 MM	DN50
2 1/2"	-40	NO 40	63.5 MM	DN63
3"	-48	NO 48	75 MM	DN75



# WARNING

## SAFETY PRECAUTIONS FOR THE USE OF PIRTEK® HOSE ASSEMBLIES

Your Personal Safety may directly or indirectly be compromised if the hose assembly is abused.

By following the INSTRUCTIONS below, the more common abuses of hose and hose assemblies can be avoided.

INSPECT the hose assembly before each use.

REPLACE the hose assembly immediately if:

- A. The cover appears abnormal
- B. You believe it may be abnormal
- C. There is any fluid leakage
- D. The fittings are damaged
- E. The hose is damaged
- F. Reinforcement is visible through the cover

DO NOT EXCEED the maximum working pressure of the hose.

DO NOT KINK the hose assembly.

DO NOT BEND beyond the specified minimum bend radius of the hose.

DO NOT EXPOSE to temperatures beyond the published maximums for the hose or fluid being conveyed.

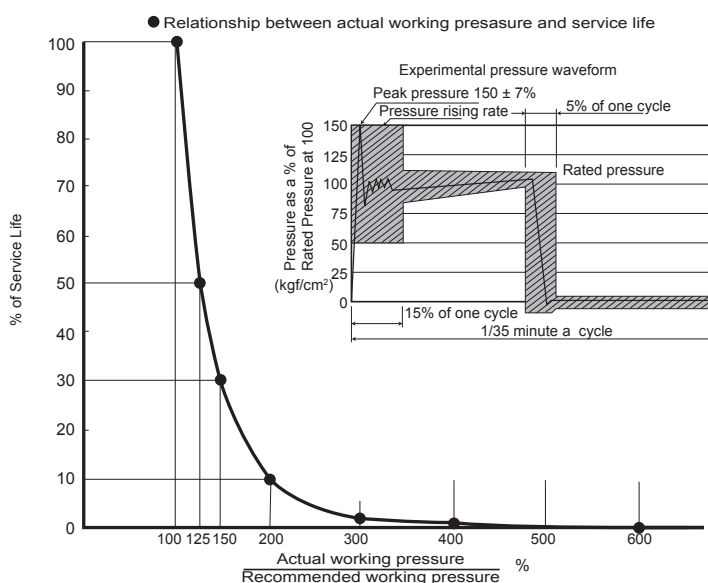
DO NOT USE AS A STRENGTH MEMBER for pulling or lifting equipment. Use support cables for vertical installations.

USE ONLY WITH COMPATIBLE FLUIDS as outlined in the Chemical Compatibility Charts or as specifically approved in writing by Pirtek Fluid Systems.

PIN PRICK THE COVER of hoses used for compressed air above 17 bar or 250 psi to allow the safe escape of air that permeates through the liner and reinforcement (except STH, R5HT and 3130). The maximum working pressure and temperature must also be reduced by 30%.

Use only Pirtek HOSE AND FITTINGS COMBINATIONS as designated in their current assembly guidelines. Use only Pirtek PROCEDURES and ASSEMBLY EQUIPMENT as published and maintained in their M.A.P.S. documentation.

- The use of conventional wire reinforced rubber hose often entails the pressure fluctuations of fluid.
- The factors concerned with such pressure fluctuations are generally classified into two: those stemming from the pump itself, and the others ascribable to external impacts imparted to the hose via the operating demands. The latter are considered to have the greater effect on the service life of the hose.
- External impulse pressure is estimated to be 150% of the set pressure (actual working pressure) of a relief valve, and sometimes exceeds 300%.



This page is part of a complete catalogue containing technical and safety data.  
All data must be reviewed when selecting a product.  
Pirtek reserve the right to change technical specifications without notice

## Fast Find Table

Page	Group	Product Code	Construction	Normal Usage	Features & Benefits (See main Specifications page for details and Approvals)
20	HYDRAULIC	<b>R4HT</b> Hydraulic Suction / Del.		Hydraulic suction & delivery hose for fuels & mineral oils with aromatic content ≤ 40%	Synthetic smooth oil resistant inner tube. 2 braids of textile & a metal spiral. MSHA
21		<b>R1AT</b> One wire braid		Medium pressure hose for hydraulic fluids and aqueous emulsions and water	Synthetic rubber oil resistant liner and abrasion resistant cover. 1 steel braid
22		<b>R1ATFS</b> Fire suppression		As for R1AT but with red cover to confirm suitability for use in fire suppression systems	Synthetic rubber oil resistant liner and abrasion resistant red cover. 1 steel braid
23		<b>HT1</b> High Temp. 1 wire braid		Medium pressure hose for hydraulic fluids and aqueous emulsions and water	Similar to R1AT but has increased flexibility, high temperature and also conveys air
24		<b>R2AT/2SC</b> Two wire braid		High pressure hose for hydraulic fluids and aqueous emulsions and water	Synthetic rubber oil resistant liner and abrasion resistant cover. 2 steel braids
25		<b>R2ATHT</b> High Temp. 2 wire braid		High pressure hose for hydraulic fluids and aqueous emulsions and water	As above but high temperature rubber formulation. Blue cover
26		<b>HT2</b> High Temp. 2 wire braid		High pressure hose for hydraulic fluids and aqueous emulsions and water	Similar to R2AT but has increased flexibility, high temperature and also conveys air
27		<b>LPHT</b> Textile braid High Temp		Low pressure hydraulic fluids, aqueous emulsions, air transfer and water	Low pressure high temp. hose with oil resistant liner suited to push fit fittings
28		<b>C21</b> Isobaric 210 bar		Isobaric (constant working pressure for all sizes) range of hoses exclusive to Pirtek. Simplifies hose selection in circuits of known working pressure  'PS' Suffix denotes extreme abrasion resistance of cover sheath material	Class 21 hoses suit 210 bar WP
29		<b>C25</b> Isobaric 250 bar			Class 25 hoses suit 250 bar WP
30		<b>C35</b> Isobaric 350 bar			Class 28 hoses suit 275 bar WP
31		<b>C42</b> Isobaric 420 bar			Class 35 hoses suit 350 bar WP
32		<b>JBF</b> Jumbo Ace Hose		2½" bore medium pressure hose for hydraulic fluids incl. aqueous emulsions	Class 42 hoses suit 420 bar WP
33		<b>PC25</b> Isobaric 250 bar		Isobaric (constant working pressure for all sizes) range of hoses exclusive to Pirtek for compliance to Komatsu® requirements. Simplifies hose selection in circuits of known working pressure	Spiral construction. Prolonged high temp. usage with water based fluids will corrode wire
34		<b>PC28PS</b> Isobaric 280 bar			Class PC25 hoses suit 250 bar WP
35		<b>PC35</b> Isobaric 350 bar			Class 28PS hoses suit 280 bar WP
36		<b>PC42</b> Isobaric 420 bar			Class PC35 hoses suit 350 bar WP
37		<b>3VE0</b> High Pressure Jacking		Extreme pressure hose for high pressure jacks and rescue equipment	Class PC42 hoses suit 420 bar WP
38	INDUSTRIAL RUBBER	<b>LPFRAS</b> Push-On FRAS		Push-on style hose for air/water & hydraulic oil in underground mines	Orange cover signifies electrically non conductive hose
39		<b>IRFAW</b> FRAS Air / Water		Softwall hose for arduous air/water applications in underground mining	Fire resistant, anti-static
40		<b>IRSAB</b> FRAS Super Bull Hose		FRAS high pressure air hose designed for high temperature bull hose applications	Weather resistant black cover with orange spiral. Fire resistant / anti static rating
41		<b>IRFWS/D/H</b> FRAS Suction		FRAS hardwall hose for suction or delivery of water and non corrosive fluids.	Weather resistant blue cover with green spiral. Fire resistant / antistatic rating
42		<b>IROFSD</b> Oil Fuel Suction		Tank truck suction & delivery hose for fuels & mineral oils with aromatic content ≤ 40%	Weather resistant black cover with helix wire support. Antistatic and 10/20 bar WP
43	PVC	<b>IPAF</b> Blue PVC Air-Flex		Light duty general purpose air and water hose	Synthetic smooth oil resistant inner tube. 2 braids of textile & a metal spiral. Antistatic
44		<b>IPFAW</b> PVC FRAS		Light duty general purpose FRAS air and water hose	Ribbed blue cover indicates cold weather flexibility. Pressures to 40 bar
					Ribbed safety yellow cover with black stripe. Fire resistant, anti-static

## Fast Find Table

Product Code & Hose Type		dia.	Working Pressure (bar)																		Pg.
		ins	¼	5/16	3/8	½	5/8	¾	1	1¼	1 ½	1¾	2	2½	3	3½	4	5	6	8	
		mm	-006	-008	-010	-013	-016	-019	-025	-032	-038	-045	-050	-063	-076	-090	-100	-125	-150	-200	
R4HT	Hydraulic Suction/Delivery							21	17	14	10		10	10	13	13	13				20
R1AT	1-Wire Hydraulic	225	215	180	160	130	105	88	63	50		40									21
R1ATFS	Fire Suppression	225		180	160		105														22
HT1	1-Wire High Temp						105	88													23
R2AT/2SC	2-Wire Hydraulic	400	350	330	275	250	215	165	125	90		80	70	70							24
R2ATHT	2-Wire High Temp.	400	350	330	275	250	215	165	125	90		80	69	45							25
HT2	2-Wire High Temp								125	90		80									26
LPHT	Low Pressure High Temp	21		21	21	21	21														27
C21	Isobaric 210 bar											210									28
C25	Isobaric 250 bar					250	250	250	250	250											29
C35	Isobaric 350 bar		380	350	350	350	350	350	350	350		350									30
C42	Isobaric 420 bar	420		420	420		420	420	420	420	420	420									31
JBF	Jumbo Ace												140								32
PC25	Isobaric 250 bar					250	250		250	250											33
PC28PS	Isobaric 280 bar				275		275	275													34
PC35	Isobaric 350 bar			350	350	350	350	350	350	350											35
PC42	Isobaric 420 bar	420																			36
3VEO	High Pressure Jacking	689		551																	37
LPFRAS	Push-On FRAS	21		21	21	21	21	21													38
IRFAW	FRAS Air / Water				20		20	20	20	20		20	20	20		20					39
IRSAB	Super Air Bull Hose											69									40
IRFWSD	FRAS Water Suction											10		10		10		10		10	41
IRFWSDH	FRAS Suction							20				20	20	20		20		20		20	41
IROFSD	Oil Fuel Suction						10	10	10	10	10	10	10	10		10	10				42
IPAF	Blue PVC Air Flex	16		16	16		16	16													43
IPFAW	PVC Fras				20		20	20/35	20	20		20									44

## ORDERING PIRTEK ASSEMBLIES

Should you wish to describe a Pirtek hose assembly in an abbreviated form, please use the following format. A forward slash is used to separate each field. Product Codes for fittings can be found in Pirtek Catalogue Section C (except Mining Fittings in this Section)



In the above example, a 1200 mm long assembly would be designated:

R1AT-12 / JF1-1712J / C614-1212J / 1200

If spiral guard SSG-025 were fitted over the full length, the designation would change to:

R1AT-12 / JF1-1712J / C614-1212J / 1200 / SSG-025

If both ends were fitted with the 45° flanged elbow set in alignment, the designation would appear:

R1AT-12 / C614-1212J / 1200 / 0

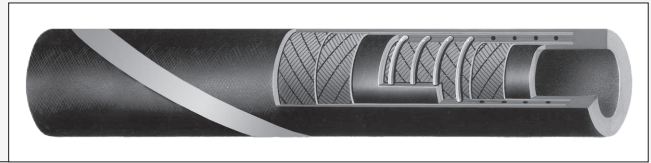
Generic Pattern : Hose / End A / End B / Length / Protection / Angle



This page is part of a complete catalogue containing technical and safety data.  
All data must be reviewed when selecting a product.  
Pirtek reserve the right to change technical specifications without notice

# R4HT

## HIGH TEMP OIL SUCTION & DELIVERY



### Construction

#### Inner Tube:

Black smooth NBR compound, oil resistant

#### Reinforcement:

High strength synthetic cord plus embedded steel helix wire

### Applications

Hardwall hose for suction and delivery of oil at high temperatures in hydraulic systems. Extremely flexible.

#### Temperature Range:

-40°C up to +135°C mineral oil  
-40°C up to +70°C water based fluids

### Reference Specifications

Tested in accordance with performance specifications:

SAE100 R4

#### Approvals:

MSHA

Prolonged usage with water based fluids at temperatures above 70°C will allow wire corrosion as a result of diffusion through the inner liner.

#### Hose Tails:

Pirtek 'J' Series & SF Series

L Series, Cam & Groove, Combination Steel (all with clamps)

#### Cover:

Black, smooth (wrapped finish) Hypalon rubber compound flame retardant, resistant to abrasion, oils and weathering

#### Comment:

Lay line example may not be a true indication of current status. Refer Pirtek for current information

**Lay line example:** Embossed text on black background. Note Comment above

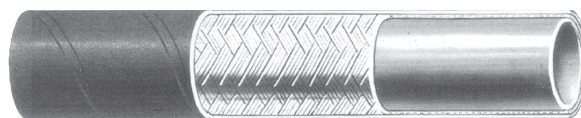
**PIRTEK** R4 HIGH TEMP R4HT-32 50.8mm (2") 10 BAR (145 PSI) MSHA

Product Code	Nominal ID		OD	Pressure bar			Min bend radius	Weight
	mm	ins		working	min burst	vacuum		
R4HT-12	20	3/4	30.5	21	83	0.9	60	0.66
R4HT-16	25	1	37	17	68	0.9	80	0.84
R4HT-20	32	1.1/4	44	14	56	0.9	100	1.02
R4HT-24	40	1.1/2	50	10	40	0.9	125	1.33
R4HT-32	50	2	63	10	40	0.9	150	1.71
R4HT-40	63	2.1/2	77	14	56	0.9	200	2.71
R4HT-48	76	3	90	13	52	0.9	240	3.28
R4HT-56	90	3.1/2	105	13	52	0.9	280	4.29
R4HT-64	100	4	116	13	52	0.9	320	4.80

# R1AT

## SINGLE WIRE BRAID

FRAS  
All Sizes



### Construction

#### Inner Tube:

Seamless synthetic rubber, resistant to oil.

#### Reinforcement:

One braid of high tensile steel wire

#### Cover:

Black synthetic rubber resistant to abrasion, oils, ozone and weathering

### Applications

Medium pressure hose for hydraulic fluids such as mineral oils, aqueous emulsions, water, air and inert gases

#### Temperature Range:

-40°C up to +100°C mineral oil

-40°C up to +60°C water based fluids

0°C up to +60°C water

0°C up to +50°C air

-40°C up to +70°C ambient

Cover must be pin pricked if hose is to be used to convey air above 17 bar

#### Comment:

Lay line example may not be a true indication of current status. Refer Pirtek for current information.

### Reference Specifications

Tested in accordance with performance specifications:

SAE100 R1AT S

EN 853 1SN

#### Approvals:

AS2660 test requirements – AS1180.10B & AS1180.13A (FRAS)

MSHA

Prolonged usage with water or water based fluids at temperatures above 70°C will allow wire corrosion as a result of diffusion through the inner liner

#### Hose Tails:

Pirtek 'K' Series to 5/8"

Pirtek 'J' Series 3/4" to 2"

Lay line example: White text on black background. Note **Comment** above

**PIRTEK** SAE100 R1AT TYPE S R1AT-04 6.4mm (1/4") 225 BAR (3263 PSI) FRAS

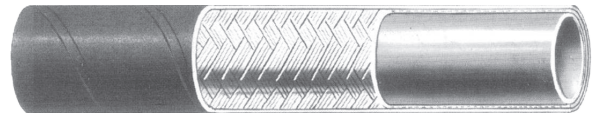
Product Code	Nominal Diameter			Reinforcement	OD Cover (AVG)	Pressure bar		Min. bend radius	Weight
	DN	ins	mm			working	burst		
R1AT-03 †	5	3/16	4.9	1 braid	11.8	250	1000	90	0.18
R1AT-04	6	1/4	6.4	1 braid	13.3	225	900	100	0.23
R1AT-05 †	8	5/16	7.9	1 braid	15.0	215	850	115	0.27
R1AT-06	10	3/8	9.5	1 braid	17.3	180	720	125	0.37
R1AT-08	13	1/2	12.7	1 braid	20.3	160	640	180	0.45
R1AT-10	16	5/8	15.9	1 braid	23.5	130	520	201	0.50
R1AT-12	20	3/4	19.1	1 braid	27.5	105	420	240	0.62
R1AT-16	25	1	25.4	1 braid	35.6	88	352	300	0.93
R1AT-20	32	1¼	31.8	1 braid	43.2	63	252	420	1.36
R1AT-24	40	1½	38.1	1 braid	50.4	50	200	500	1.70
R1AT-32	50	2	50.8	1 braid	64.3	40	160	630	2.43

† Non-standard product. Available to special order

# R1ATFS

## SINGLE WIRE BRAID

## FIRE SUPPRESSION APPROVAL



### Construction

#### Inner Tube:

Seamless synthetic rubber, resistant to oil & water based fire extinguishing agents, aqueous, foam, dry chemical powder and carbon dioxide

#### Reinforcement:

One braid of high tensile steel wire.

#### Cover:

Red synthetic rubber resistant to abrasion, oils, ozone and weathering

### Applications

Medium pressure hose with red cover for ease of identification as a fire suppression hose, ideal for use on mining equipment, off-road vehicles and stationary equipment which are commonly equipped with fire suppression systems to protect operators and help reduce extensive damage if fire occurs.

#### Temperature Range:

-40°C up to +100°C hydraulic oil

-40°C up to +60°C water based fluids

-0°C up to +60°C water

-0°C up to +50°C air

-40°C up to +70°C ambient

Prolonged usage with water or water based fluids at temperatures above 60°C will allow wire corrosion as a result of diffusion through the inner liner

#### Comment:

Lay line example may not be a true indication of current status. Refer Pirtek for current information.

### Reference Specifications

SAE J 517 (SAE 100R1AT)

EN 853 1SN

Former DIN 20022 1SN (part 3)

Meets hose requirements outlined in AS5062

#### Approvals:

**MSHA 2G** in all sizes

Approved within Australia for use on fire suppression systems

#### Hose Tails:

Pirtek 'K' Series to 5/8"

Pirtek 'J' Series 3/4"

**Lay line example:** Yellow text on red background. Note **Comment** above

**PIRTEK** FIRE SUPPRESSION - SAE 100R1AT - DIN EN 853 1SN 19.1 mm (3/4") R1ATFS-12 105 BAR (1,500 PSI) WORK. PRESS. MSHA 2GS

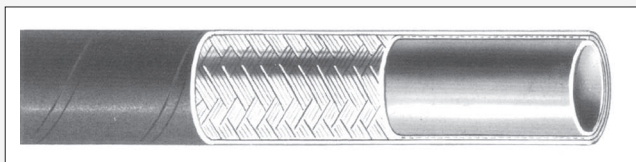
Product Code	Nominal Diameter			OD mm (avg)	Pressure bar		Min. Bend Radius	Weight
	DN	ins	mm		working	Min. burst		
R1ATFS-04	6	1/4	6.4	13.4	225	900	100	0.23
R1ATFS-04 SERIES II	6	1/4	6.4	12.8	225	900	100	0.21
R1ATFS-06	10	3/8	9.5	17.4	180	720	130	0.33
R1ATFS-06 SERIES II	10	3/8	9.5	16.9	180	720	125	0.32
R1ATFS-08	12	1/2	12.7	20.6	160	640	180	0.41
R1ATFS-08 SERIES II	12	1/2	12.7	19.9	160	640	180	0.40
R1ATFS-12	19	3/4	19.1	27.7	105	420	240	0.61
R1ATFS-12 SERIES II	19	3/4	19.1	27.1	105	420	240	0.57



# HT1

## SINGLE WIRE BRAID

## HIGH TEMPERATURE



### Construction

#### Inner Tube:

High temperature synthetic rubber, resistant. to oil.

#### Reinforcement:

One braid of high tensile steel wire.

#### Cover:

Blue synthetic rubber resistant to abrasion, oils, ozone and weathering

### Applications

High temperature hose.

Hydraulic oils, both mineral and biological;  
Polyglycol base oils, water-oil emulsions and water.

#### Temperature Range:

Hydraulic oils: -40°C up to +135°C occasional peaks up to +150°C  
Polyglycol base oils, water-oil emulsions and water: up to +85°C  
Air: (with Oil mist) up to 135°C  
Not suitable with dry air.

#### Comment:

Lay line example may not be a true indication of current status. Refer Pirtek for current information.

### Reference Specifications

Tested in accordance with performance specifications:  
SAE100 R1AT  
EN853 1SN

#### Approvals:

MSHA

#### Hose Tails:

Pirtek 'J' Series

**Lay line example:** Embossed text on blue background. Note **Comment** above

 INTERTRACO FlexIT HT1 DN25-1" - HIGH TEMP 135°C - 275°F EN853 1SN SAE100R1AT WP 88 -1250PSI MSHA

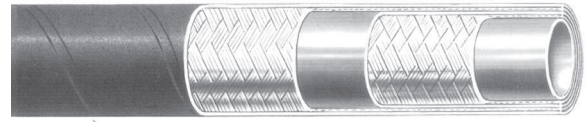
Product Code	Nominal Diameter			Reinforcement	OD mm	Pressure bar		Min. bend radius	Weight
	DN	inch	mm			working	burst		
HT1-04 †	6	1/4	6.4	1 braid	13.2	225	900	100	0.21
HT1-05 †	8	5/16	7.9	1 braid	14.5	215	860	115	0.24
HT1-06 †	10	3/8	9.5	1 braid	17.2	180	720	125	0.33
HT1-08 †	12	1/2	12.7	1 braid	20.4	160	640	180	0.41
HT1-10 †	16	5/8	15.9	1 braid	23.5	130	520	200	0.45
HT1-12	19	3/4	19.1	1 braid	27.5	105	420	240	0.58
HT1-16	25	1	25.4	1 braid	35.4	88	352	300	0.88
HT1-20 †	31	1.1/4	31.8	1 braid	43.5	63	252	420	1.23
HT1-24 †	38	1.1/2	38.1	1 braid	50.0	50	200	500	1.51
HT1-32 †	51	2	50.8	1 braid	63.6	40	160	630	1.97

† Non-standard product. Available upon request

# R2AT/2SC

## TWO WIRE BRAID

FRAS  
All Sizes



### Construction

#### Inner Tube:

Seamless synthetic rubber, oil resistant

#### Reinforcement:

Two braids of high tensile steel wire

#### Cover:

Black synthetic rubber resistant to abrasion, oils, ozone and weathering

### Applications

Medium to high pressure hose for hydraulic fluids such as mineral oils, aqueous emulsions, water, air and inert gases

#### Temperature Range:

-40°C up to +100°C mineral oil

-40°C up to +60°C water based fluids

0°C up to +60°C water

0°C up to +50°C air

-40°C up to +70°C ambient

Cover must be pin pricked if hose is to be used to convey air above 17 bar

#### Comment:

Lay line example may not be a true indication of current status. Refer Pirtek for current information.

### Reference Specifications

Tested in accordance with performance specifications:

SAE100 R2AT

EN853 2SN and former DIN 20022 2SN

#### Approvals:

AS2660 test requirements-

AS1180.10B and AS1180.13A (FRAS)

MSHA approved

Prolonged usage with water or water based fluids at temperatures above 70°C will allow wire corrosion as a result of diffusion through the inner liner

#### Hose Tails:

Pirtek 'K' Series to 5/8"

Pirtek 'J' Series 3/4" to 3"

954, 934 Series 2.1/2" to 3"

Lay line example: White text on black background. Note **Comment** above

**PIRTEK** SAE 100R2AT R2AT-1219.1 mm (3/4") 215 BAR (3118 PSI) FRAS

Product Code	Nominal Diameter			Reinforcement	OD mm (AVG)	Pressure bar		Min. bend radius	Weight
	DN	ins	mm		Cover	working	burst	mm	kg/m
R2AT-03 †	5	3/16	4.9	2 braids	13.4	415	1650	90	0.30
R2AT-04	6	1/4	6.4	2 braids	14.9	400	1600	100	0.37
R2AT-05 †	8	5/16	7.9	2 braids	16.6	350	1400	115	0.45
R2AT-06	10	3/8	9.5	2 braids	18.9	330	1320	125	0.50
R2AT-08	13	1/2	12.7	2 braids	21.9	275	1100	180	0.62
R2AT-10	16	5/8	15.9	2 braids	25.2	250	1000	205	0.68
R2AT-12	20	3/4	19.1	2 braids	29.2	215	860	240	0.89
R2AT-16	25	1	25.4	2 braids	37.9	165	660	300	1.45
R2AT-20	32	1 1/4	31.8	2 braids	48.0	125	500	420	2.25
R2AT-24	40	1 1/2	38.1	2 braids	54.4	90	360	500	2.61
R2AT-32	50	2	50.8	2 braids	67.0	80	320	630	3.31
R2AT-40	63	2 1/2	63.5	2 braids	78.0	69	276	762	3.80
2SC-40	63	2 1/2	63.5	2 braids	76.5	70	280	762	2.90
2SC-48 §	76	3	76.2	2 braids	90.5	70 §	280	900	3.98

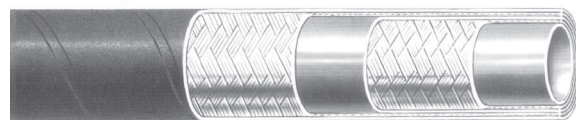
† Non standard product. Available to special order

§ Safety factor only 3.4:1 when used in conjunction with 934 Series hose tails or SS2 ferrules

Note: 2SC-40 and 2SC-48 hoses are not included in Standard EN857-2SC

# R2ATHT

## TWO WIRE BRAID HIGH TEMP.



### Construction

#### Inner Tube:

High temp. elastomer rubber, resistant to oil

#### Reinforcement:

Two braids of high tensile steel wire

#### Cover:

Blue elastomer rubber resistant to abrasion, oils, ozone and weathering

### Applications

Hydraulic system service with petroleum, fire resistant and water base fluids, fuel and lubricating systems

#### Temperature Range:

-40°C up to +150°C  
except: air not to exceed 121°C  
: water not to exceed 70°C

#### Comment:

Lay line example may not be a true indication of current status. Refer Pirtek for current information.

### Reference Specifications

Exceeds SAE J 517 (SAE 100R2AT)  
EN 853 2SN  
Former DIN 20022 2SN (part 4)

#### Approvals:

MSHA

#### Limitations:

Cover must be pin pricked if hose is to be used to conduct air above 17 bar pressure  
Not suitable for steam applications

#### Hose Tails:

Pirtek 'K' Series to 5/8"  
Pirtek 'J' Series 3/4" to 2"

**Lay line example:** White text on a dark blue layline. Note **Comment** above

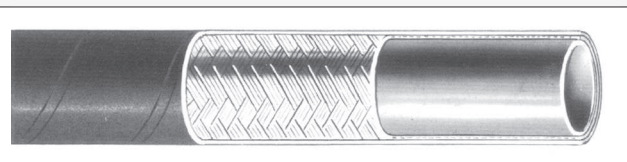
**PIRTEK** SAE 100 R2 AT — DIN EN 853 2SN "HIGH TEMP" 25mm (1") R2ATHT-16 172 BAR (2494 PSI) WORK.PRESS: 150°C MAX MSHA

Product Code	Nominal Diameter			OD mm		Pressure bar		Min. bend radius"	Weight
	DN	ins	mm	Wire	Cover	Working	Burst	mm	Kg/m
R2ATHT-04	6	1/4	6.4	12.7	15.2	400	5801	102	0.40
R2ATHT-04 SERIES II	6	1/4	6.4	12.1	15.0	400	5801	100	0.33
R2ATHT-06	10	3/8	9.5	16.7	19.2	345	5004	127	0.58
R2ATHT-06 SERIES II	10	3/8	9.5	16.7	19.0	330	4786	125	0.52
R2ATHT-08	12	1/2	12.7	19.8	22.1	293	4250	178	0.69
R2ATHT-08 SERIES II	12	1/2	12.7	19.8	21.9	275	3988	180	0.64
R2ATHT-10	16	5/8	15.9	23.0	25.1	224	3249	203	0.81
R2ATHT-10 SERIES II	16	5/8	15.9	23.0	25.2	250	3625	200	0.75
R2ATHT-12	19	3/4	19.1	27.0	29.5	207	3002	241	1.00
R2ATHT-12 SERIES II	19	3/4	19.1	27.0	29.2	215	3118	240	0.92
R2ATHT-16	25	1	25.4	34.9	37.8	172	2495	305	1.45
R2ATHT-16 SERIES II	25	1	25.4	34.9	37.5	165	2393	300	1.37

# HT2

## TWO WIRE BRAID

## HIGH TEMPERATURE



### Construction

#### Inner Tube:

High temperature synthetic rubber, resistant to oil.

#### Reinforcement:

Two braids of high tensile steel wire.

#### Cover:

Blue synthetic rubber resistant to abrasion, oils, ozone and weathering

### Applications

High temperature hose.

Hydraulic oils, both mineral and biological;  
Polyglycol base oils, water-oil emulsions and water.

#### Temperature Range:

Hydraulic oils: -40°C up to +135°C occasional peaks up to +150°C  
Polyglycol base oils, water-oil emulsions and water: up to +85°C  
Air: (with Oil mist) up to 135°C  
Not suitable with dry air.

#### Comment:

Lay line example may not be a true indication of current status. Refer Pirtek for current information.

### Reference Specifications

Tested in accordance with performance specifications:  
SAE100 R2AT  
EN853 1SN

#### Approvals:

MSHA

#### Limitations:

Cover must be pin pricked if hose is to be used to conduct air above 17 bar pressure.  
\*-24 & -32 comes pin pricked

#### Hose Tails:

Pirtek 'J' Series

Lay line example: Embossed text on blue background. Note **Comment** above

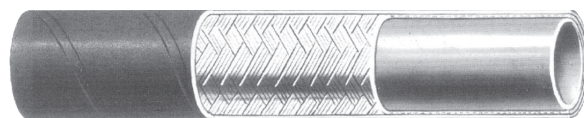
 INTERTRACO FlexIT HT2 DN32- 1.1/4" - HIGH TEMP 135°C - 275°F EN853 2SN SAE100R2AT WP 125 -1800PSI MSHA

Product Code	Nominal Diameter			Reinforcement	OD mm	Pressure bar		Min. bend radius	Weight
	DN	inch	mm			working	burst		
HT2-04 †	6	1/4	6.4	2 braid	15.0	400	1600	100	0.33
HT2-05 †	8	5/16	7.9	2 braid	16.4	350	1400	115	0.39
HT2-06 †	10	3/8	9.5	2 braid	18.8	330	1320	125	0.50
HT2-08 †	12	1/2	12.7	2 braid	22.2	275	1100	180	0.59
HT2-10 †	16	5/8	15.9	2 braid	25.2	250	1000	200	0.71
HT2-12 †	19	3/4	19.1	2 braid	29.3	215	860	240	0.86
HT2-16 †	25	1	25.4	2 braid	37.2	165	660	300	1.28
HT2-20	31	1.1/4	31.8	2 braid	47.3	125	500	420	2.02
HT2-24	38	1.1/2	38.1	2 braid	53.7	90	360	500	2.23
HT2-32	51	2	50.8	2 braid	66.7	80	320	630	2.85

† Non-standard product. Available upon request

# LPHT

## LOW PRESSURE HIGH TEMP. HOSE



### Construction

**Inner Tube:** Seamless CPE based rubber, oil resistant

### Reinforcement:

One braid of polyester

### Applications

Low pressure textile braid hose for petroleum based hydraulic oil, lubricating fluids, diesel, aqueous emulsions, water and air. Not recommended for impulse applications.

### Temperature Range:

-40°C up to +149°C hydraulic & transmission oils (petroleum based)  
 -40°C up to +100°C Diesel & B20 (biodiesel)  
 0°C up to +82°C water, water based fluid & glycol (anti-freeze)  
 0°C up to +121°C air  
 -40°C up to +121°C ambient

### Reference Specifications

### Approvals

MSHA 2G

### Cover:

Blue CPE rubber, resistant to oils, ozone, flame and weathering

### Comment:

Lay line example may not be a true indication of current status. Refer Pirtek for current information

### Hose Tails:

Pirtek 'P' Series, Hose Clamps not required and could possibly damage hose.  
 Pirtek 'T' Series

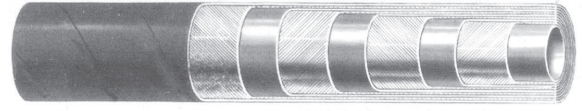
**Lay line example:** Black text on blue background. Note Comment above

**PIRTEK** LOW PRESSURE HIGH TEMP LPHT-04 6.4mm (1/4") 21 bar (304 PSI) W.P MSHA

Product Code	Nominal ID		OD	Pressure bar			Min bend radius	Weight
	mm	in		working	min burst	Vacuum		
LPHT-04	6.4	1/4	12.4	21	84	0.9	76.2	0.12
LPHT-06	9.5	3/8	16.0	21	84	0.9	76.2	0.18
LPHT-08	12.7	1/2	19.0	21	84	0.9	127.0	0.22
LPHT-10	15.9	5/8	23.1	21	84	0.6	152.4	0.31
LPHT-12	19.1	3/4	26.4	21	84	0.6	177.8	0.37

# C21

## ISOBARIC CLASS HOSE



### Construction

**Inner Tube:** Seamless synthetic rubber, resistant to oil

**Reinforcement:** 4 spirals of high tensile steel wire

**Cover:** Abrasion resistant black synthetic rubber resistant to oils, ozone and weathering.

### Applications

Isobaric (constant 210 bar working pressure across all sizes) hose for hydraulic fluids such as mineral and vegetable oils, aqueous emulsions, water and inert gases  
Prolonged usage with water or water based fluids at temperatures above 70°C will allow wire corrosion as a result of diffusion through the inner liner

### Reference Specifications

JIS K6349-3

SAE100R12

**Approvals:**

MSHA

FRAS AS1180.10B & 13A

**Hose Tails:**

Pirtek 'J' or 'X' Series

Cover loss by abrasion when tested in accordance with ISO 6945 is less than 1.0 gram after 2000 cycles.

### Temperature Range:

-40°C up to +120°C mineral oil  
-40°C up to +70°C water based fluids  
0°C up to +70°C water  
-40°C up to +70°C ambient

### Comment:

Lay line example may not be a true indication of current status. Refer Pirtek for current information.

**Lay line example:** White text on black hose. Note **Comment** above.

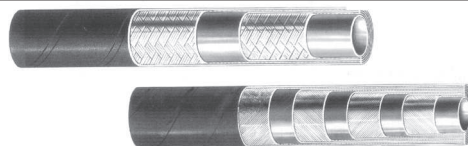
**PIRTEK** C21 50 mm (2") C21-32 210 BAR (3,000 PSI) MSHA IC-104/1 ABRASION RESISTANT

Product Code	Nominal Diameter			OD mm		Pressure bar		Min. bend radius	Weight
	DN	ins	mm	Wire	Cover	working	burst	mm	kg/m
C21-32	51	2"	50.8	63.6	66.7	210	840	500	4.20



# C25

## ISOBARIC CLASS HOSE



### Construction

**Inner Tube:** Seamless synthetic rubber, resistant to oil

**Reinforcement:** Two braids of high tensile steel wire.

**Cover:** Abrasion resistant black synthetic PVC nitrile rubber resistant to oils, ozone and weathering

### Comment:

Lay line example may not be a true indication of current status. Refer Pirtek for current information.

### Applications

Isobaric (constant 250 bar working pressure across all sizes) hose for hydraulic fluids such as mineral and vegetable oils, aqueous emulsions, water and inert gases  
Prolonged usage with water or water based fluids at temperatures above 70°C will allow wire corrosion as a result of diffusion through the inner liner

### Temperature Range:

#### Braided Hoses:

-40°C up to +100°C mineral oil  
-40°C up to +60°C water based fluids  
0°C up to +60°C water  
-40°C up to 70°C ambient

### Reference Specifications

Meets or exceeds SAE J 517 (100 R16)  
Meets or exceeds EN 857 2SC  
Tested in accordance with SAE J517, EN856, AS3791

#### Approvals:

MSHA  
FRAS AS1180.10B & 13A

#### Impulse Testing:

Braided hoses as per SAE 100 R16

#### Hose Tails:

Pirtek 'J' Series

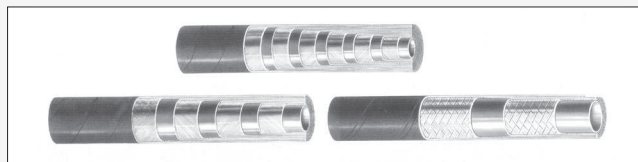
**Lay line example:** White text on black hose. Note **Comment** above

**PIRTEK** C25 SERIES III 25mm (1") C25-16 250 BAR (3,500 PSI) W.P. MSHA IC-104/1 ABRASION RESISTANT

Product Code	Nominal Diameter			Type	OD mm		Pressure bar		Min. bend radius	Weight
	DN	inch	mm		Wire	Cover	working	burst		
C25-16	25	1	25.4	2 braid	32.9	35.6	250	1000	250	1.30

## C35

## ISOBARIC CLASS HOSE

**Construction**

**Inner Tube:** Seamless synthetic rubber, resistant to oil

**Reinforcement:** Two braids of high tensile steel wire, or 4-6 spirals of high tensile steel wire

**Cover:** Abrasion resistant black synthetic rubber resistant to oils, ozone and weathering. (PVC Nitrile rubber on braided hoses)

**Comment:**

Lay line example may not be a true indication of current status. Refer Pirtek for current information.

**Applications**

Isobaric (constant 350 bar working pressure across all sizes) hose for hydraulic fluids such as mineral and vegetable oils, aqueous emulsions, water and inert gases  
Prolonged usage with water or water based fluids at temperatures above 70°C will allow wire corrosion as a result of diffusion through the inner liner

**Temperature Range:****Spiral hoses:**

-40°C up to +120°C mineral oil  
-40°C up to +70°C water based fluids  
0°C up to +70°C water  
-40°C up to 70°C air

**Braided hoses:**

-40°C up to +100°C mineral oil  
-40°C up to +60°C water based fluids  
0°C up to +60°C water  
-40°C up to 70°C ambient

**Reference Specifications**

Meets or exceeds SAE J 517 (100 R12, R13 or R16)

Meets or exceeds EN 857 2SC

Tested in accordance with SAE J 517, EN856, AS3791

**Approvals:**

MSHA

FRAS AS1180.10B & 13A

**Hose Tails:**

Pirtek 'K' Series to 5/8"

Pirtek 'J' Series 3/4", 1"

Pirtek 'X' Series 1", 1 1/4", 1 1/2", 2"

Interlock option 3/4" and above

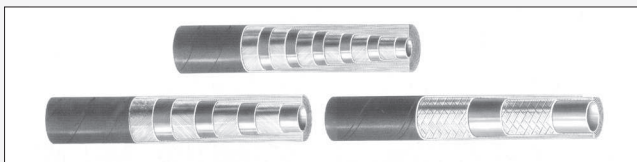
**Lay line example:** White text on braided hoses. Red text on spiral hoses. Note **Comment** above

**PIRTEK CLASS 35 9.5mm (3/8") C35-06 350 BAR (5000 PSI) MSHA IC-104/1 ABRASION RESISTANT**

Product Code	Nominal Diameter			Type	OD mm		Pressure bar		Min. bend radius	Weight
	DN	inch	mm		Wire	Cover	working	burst		
<b>C35-05</b>	8	5/16	7.9	2 braid	13.0	14.7	380	1520	85	0.34
<b>C35-08</b>	12	1/2	12.7	2 braid	20.1	22.2	350	1400	130	0.62
<b>C35-32</b>	51	2	51.2	6 spiral	68.1	71.1	350	1400	600	6.90

# C42

## ISOBARIC CLASS HOSE



### Construction

**Inner Tube:** Seamless synthetic rubber, resistant to oil

**Reinforcement:** 4-6 spirals of high tensile steel wire

**Cover:** Abrasion resistant black synthetic rubber resistant to oils, ozone and weathering (PVC nitrile rubber on braided hoses)

### Comment:

Lay line example may not be a true indication of current status. Refer Pirtek for current information.

### Applications

Isobaric (constant 420 bar working pressure across all sizes) hose for hydraulic fluids such as mineral and vegetable oils, aqueous emulsions, water and inert gases  
Prolonged usage with water or water based fluids at temperatures above 70°C will allow wire corrosion as a result of diffusion through the inner liner

### Temperature Range:

#### Spiral hoses:

-40°C up to +120°C mineral oil  
-40°C up to +70°C water based fluids  
0°C up to +70°C water  
-40°C up to 70°C air

### Reference Specifications

Tested in accordance with SAE J517, EN856, AS3791

#### Approvals:

MSHA  
FRAS AS1180.10B & 13A

#### Impulse Testing:

Spiral hoses as per SAE 100 R12, R15 C42EH 2 Million Cycles applicable only in conjunction with EH Series interlock tails

#### Hose Tails:

Pirtek 'K' Series to 1/2"  
Pirtek 'J' Series 3/8" and 1/2"  
Pirtek 'H' Series 3/4"  
Pirtek 'X' Series 3/4", 1"  
Interlock 1" to 1.1/2"

**Lay line example:** White text on braided hoses. Yellow text on spiral hoses. Note **Comment** above

**PIRTEK** CLASS 42 19 mm (3/4") C42-12 420 BAR (6,000 PSI) WORK.PRESS. MSHA IC-104/1 ABRASION RESISTANT

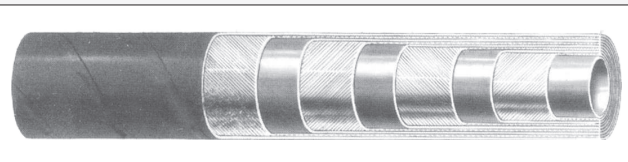
**PIRTEK** CLASS 42 SERIES EH 50MM (2") C42EH-32 420 BAR (6,000 PSI) EN856 MSHA IC-8/13 1Q09

Product Code	Nominal Diameter			Type	OD mm		Pressure bar		Min. bend radius	Weight
	DN	inch	mm		Wire	Cover	working	burst	mm	kg/m
C42-06	10	3/8	9.7	4 spiral	17.2	20.2	420	1680	125	0.70
C42-08	12	1/2	12.9	4 spiral	20.7	23.8	420	1680	180	0.90
C42-10	16	5/8"	16.0	4 spiral	24.4	26.4	420	1680	140	1.00
C42-12	19	3/4	19.2	4 spiral	28.1	32.0	420	1680	280	1.50
C42-16	25	1	25.7	4 spiral	35.1	38.2	420	1680	300	2.20
C42-20	31	1 1/4	32.2	6 spiral	46.8	49.8	420	1680	400	3.90
C42-24	38	1 1/2	38.5	6 spiral	54.0	57.2	420	1680	500	4.70
C42-32	51	2	51.2	6 spiral	70.6	75.0	420	1680	600	7.92
C42EH-20	31	1 1/4	32.2	6 spiral	46.8	49.4	420	1680	420	3.48
C42EH-24	38	1 1/2	38.5	6 spiral	53.4	57.3	420	1680	500	4.63

# JBF

## 2 1/2" HOSE

FRAS



### Construction

**Inner Tube:** Seamless synthetic rubber, resistant to oil

**Reinforcement:** Four spirals of high tensile steel wire.

**Cover:** Abrasion resistant black synthetic rubber resistant to oils, ozone and weathering

### Applications

Medium pressure hose for hydraulic fluids such as mineral and vegetable oils, aqueous emulsions and water

Prolonged usage with water or water based fluids at temperatures above 70°C will allow wire corrosion as a result of diffusion through the inner liner

Temperature Range:  
 -40°C up to +100°C mineral oil  
 -40°C up to +60°C water based fluids  
 0°C up to +60°C water  
 -40°C up to 70°C air / ambient

### Comment:

Lay line example may not be a true indication of current status. Refer Pirtek for current information.

### Reference Specifications

SAE J517 except for reinforcement OD  
 ISO 18752AS

### Approvals:

MSHA  
 FRAS AS1180.10B & 13A

### Hose Tails:

J Series

Lay line example: White text on black hose. Note **Comment** above

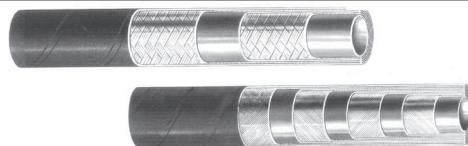
**PIRTEK** 63mm (2 1/2") JBF-40 140 BAR (2030 PSI) WP MSHA FRAS ABRASION RESISTANT

Product Code	Nominal Diameter			Type	OD mm		Pressure bar		Min. bend radius	Weight
	DN	inch	mm		Wire	Cover	working	burst	mm	kg/m
JBF-40 Series II	63	2.1/2	63.5	4 spiral	76.8	81	140	560	660	5.5

# PC25

## PIRTEK CLASS HOSE

FRAS  
All Sizes



MINING PRODUCTS

MINING HOSES

### Construction

#### Inner Tube:

Seamless synthetic rubber, oil resistant

#### Reinforcement:

Two braids, or 4 spirals of high tensile steel wire

#### Cover:

High abrasion resistance black synthetic rubber resistant to oils, ozone and weathering

### Applications

Isobaric (constant 250 bar working pressure across all sizes) hose for hydraulic fluids such as mineral oils, aqueous emulsions, water, air and inert gases

#### Excellent compact bend radius

#### Temperature Range:

##### Spiral hoses:

-40°C up to +120°C mineral oil  
-40°C up to +70°C water based fluids  
0°C up to +70°C water  
-40°C up to 70°C air

##### Braided Hoses:

-40°C up to +100°C mineral oil  
-40°C up to +60°C water based fluids  
0°C up to +60°C water  
-40°C up to 70°C ambient

#### Comment:

Lay line example may not be a true indication of current status. Refer Pirtek for current information.

### Reference Specifications

Tested in accordance with performance specifications:

SAE 100R16 (braided hose)

SAE 100R12 (spiral hose)

#### Approvals:

AS2660 test requirements-

AS1180.10B and AS1180.13A (FRAS)

MSHA

Prolonged usage with water or water based fluids at temperatures above 70°C will allow wire corrosion as a result of diffusion through the inner liner

#### Hose Tails:

Pirtek 'K' Series to 5/8"

Pirtek 'J' Series 3/4", 1"

Pirtek 'J' or 'X' Series 1 1/4", 1 1/2"

Lay line example: White text on black background. Note **Comment** above

**PIRTEK** PC25-12 19.1MM (3/4") 250 BAR (3625 PSI) W.P. FRAS ABRASION RESISTANT

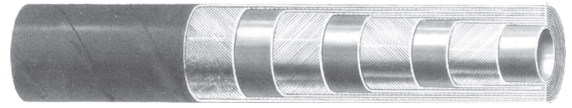
Product Code	Nominal Diameter			Reinforcement	OD (mm)	Pressure bar		Min. bend radius	Weight
	DN	ins	mm			W.P.	Min. Burst		
PC25-10	16	5/8	15.9	2 braid	26.0	250	1000	140	0.84
PC25-12	20	3/4	19.1	2 braid	29.1	250	1000	170	0.96
PC25-20	32	1 1/4	31.8	4 spiral	44.9	250	1000	280	2.36
PC25-24	40	1/2	38.1	4 spiral	52.4	250	1000	330	3.06



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# PC28PS

## ISOBARIC CLASS HOSE



### Construction

**Inner Tube:** Seamless synthetic rubber, resistant to oil

**Reinforcement:** 4 spirals of high tensile steel wire

**Cover:** Utmost abrasion resistant UHMWPE over black synthetic rubber, resistant to oils, ozone and weathering

Cover loss by abrasion when tested in accordance with ISO 6945 is 0.0 gram after 2,000 cycles

### Applications

Isobaric (constant 275 bar working pressure across all sizes) hose for hydraulic fluids such as mineral and vegetable oils, aqueous emulsions, water and inert gases  
Prolonged usage with water or water based fluids at temperatures above 70°C will allow wire corrosion as a result of diffusion through the inner liner

**Improved bending radius for underground drilling machines**

### Temperature Range:

-40°C up to +100°C mineral oil  
-40°C up to +70°C water based fluids  
0°C up to +70°C water  
-40°C up to 70°C air

### Comment:

Lay line example may not be a true indication of current status. Refer Pirtek for current information.

### Reference Specifications

Meets or exceeds SAE J 517 (100 R12) for impulse requirements

Meets or exceeds JIS K6349

Tested in accordance with SAE J517, EN856, AS3791

### Approvals:

MSHA Approval

AS2660 test requirements

FRAS AS1180.10B & 13A

### Hose Tails:

Pirtek 'J' Series 1/2", 3/4", 1"

(Refer Pirtek for current Fitting Series)

Lay line example: White text on black hose. Note **Comment** above

**PIRTEK** PC28PS 25mm (1") PC28PS-16 280 BAR (4,060 PSI) W.P. MSHA FRAS ULTRA HIGH ABRASION RESISTANT

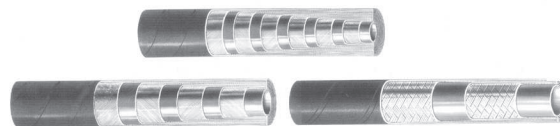
Product Code	Nominal Diameter			Type	OD mm		Pressure bar		Min. bend radius	Weight
	DN	ins	mm		Wire	Cover	working	burst		
PC28PS-08	13	1/2	12.7	4 spiral	20.0	23.0	280	1120	110	0.78
PC28PS-12	19	3/4	19.0	4 spiral	27.0	29.9	280	1120	170	1.13
PC28PS-16	25	1	25.4	4 spiral	33.9	36.8	280	1120	220	1.86



# PC35

## PIRTEK CLASS HOSE

FRAS  
All Sizes



MINING PRODUCTS

MINING HOSES

### Construction

#### Inner Tube:

Seamless synthetic rubber, oil resistant

#### Reinforcement:

Two braids, 4spirals or 6 spirals of high tensile steel wire

#### Cover:

High abrasion resistant black synthetic rubber resistant to oils, ozone and weathering

### Applications

Isobaric (constant 350 bar working pressure across all sizes) hose for hydraulic fluids such as mineral oils, aqueous emulsions, water, air and inert gases

#### Excellent compact bend radius

#### Temperature Range:

##### Spiral hoses:

-40°C up to +120°C mineral oil  
-40°C up to +70°C water based fluids  
0°C up to +70°C water  
-40°C up to +70°C ambient

##### Braided hoses:

-40°C up to +100°C mineral oil  
-40°C up to +60°C water based fluids  
0°C up to +60°C water  
-40°C up to 70°C ambient

#### Comment:

Lay line example may not be a true indication of current status. Refer Pirtek for current information.

### Reference Specifications

Tested in accordance with performance specifications:

SAE R16 (braided hose)  
SAE 100 R12 (spiral hose)  
SAE 100 R13 / R15 (spiral hose)

#### Approvals:

AS2660 test requirements-  
AS1180.10B and AS1180.13A (FRAS)  
MSHA

Prolonged usage with water or water based fluids at temperatures above 70°C will allow wire corrosion as a result of diffusion through the inner liner

#### Hose Tails:

Pirtek 'K' Series to 5/8"  
Pirtek 'J' Series 3/8" to 1"  
Pirtek 'X' Series 1" to 2"  
Pirtek Interlock Series 3/4" to 1.1/2"

Lay line example: White text on black background. Note **Comment** above

**PIRTEK** CLASS PC35-12 19.1MM (3/4") 350 BAR (5076 PSI) FRAS ABRASION RESISTANT

Product Code	Nominal Diameter			Reinforcement	O.D. mm	Pressure bar		Min. bend radius mm	Weight Kg/m
	DN	ins	mm			W.P.	Min. Burst		
PC35-06	10	3/8	9.5	2 braids	18.9	350	1400	90	0.55
PC35-08	13	1/2	12.7	4 spirals	22.2	350	1400	110	0.80
PC35-10	16	5/8	15.9	4 spirals	26.4	350	1400	140	1.00
PC35-16	25	1	25.4	4 spirals	36.6	350	1400	220	2.00
PC35-20	32	1 1/4	31.8	6 spirals	48.7	350	1400	280	3.80
PC35-24	40	1 1/2	38.1	6 spirals	55.6	350	1400	330	4.60



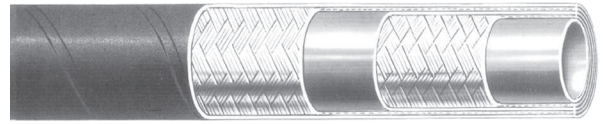
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U

# PC42

## PIRTEK CLASS HOSE

**FRAS**  
All Sizes



### Construction

#### Inner Tube:

Seamless synthetic rubber, oil resistant

#### Reinforcement:

Two braids of high tensile steel wire

#### Cover:

High abrasion resistance black synthetic rubber resistant to oils, ozone and weathering

#### Comment:

Lay line example may not be a true indication of current status. Refer Pirtek for current information.

### Applications

Isobaric (constant 420 bar working pressure across all sizes) hose for hydraulic fluids such as mineral oils, aqueous emulsions, water, air and inert gases

#### Excellent compact bend radius

#### Temperature Range:

#### Spiral hoses:

-40°C up to +120°C mineral oil  
-40°C up to +70°C water based fluids  
0°C up to +70°C water  
-40°C up to 70°C ambient

#### Braided hoses:

-40°C up to +100°C mineral oil  
-40°C up to +60°C water based fluids  
0°C up to +60°C water  
-40°C up to 70°C ambient

### Reference Specifications

Tested in accordance with performance specifications:

SAE 100 R16 (braided hose)

SAE 100 R15 (spiral hose)

#### Approvals:

AS2660 test requirements-

AS1180.10B and AS1180.13A (FRAS)

MSHA

Prolonged usage with water or water based fluids at temperatures above 70°C will allow wire corrosion as a result of diffusion through the inner liner.

#### Hose Tails:

Pirtek 'K' Series

Pirtek 'H', 'X', Interlock

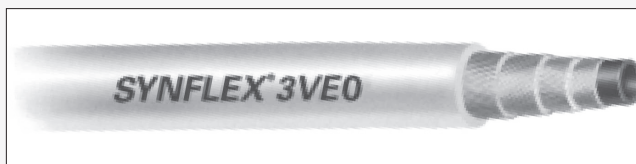
Lay line example: White text on black background. Note **Comment** above

**PIRTEK CLASS PC42-04 6.4 MM (1/4") 420 BAR (6091 PSI) FRAS ABRASION RESISTANT**

Product Code	Nominal Diameter			Reinforcement	OD (mm)	Pressure (bar)		Min. bend radius	Weight
	DN	inch	mm			W.P.	Min. Burst		
PC42-04	6	1/4	6.4	2 braids	14.9	420	1680	70	0.39
PC42-24	40	1.1/2	38.1	6 spirals	55.6	420	1680	330	4.60

# 3VEO

## NON-CONDUCTIVE JACKING HOSE



### Construction

#### Inner Tube:

smooth seamless nylon

#### Reinforcement:

spiralled high tensile aramid fibre (Kevlar)

#### Cover:

Orange non stick non-perforated polyurethane. (See note)

### Applications

General hydraulic systems that may contact high voltage sources.  
Aerial equipment.  
Mobile hydraulics.  
Rescue apparatus and tools.

#### Temperature Range:

-40°C up to +66°C

#### Comment:

Lay line example may not be a true indication of current status. Refer Pirtek for current information

### Reference Specifications

Exceeds SAE 100 R8

SAE J517 Non-Conductive Hose Construction

#### Features:

High WP 8000—10000 psi (551–689 bar)  
Compact size with low elongation  
Less than 50 microamperes leakage when subjected to 246000 volts/metre for 5 minutes.

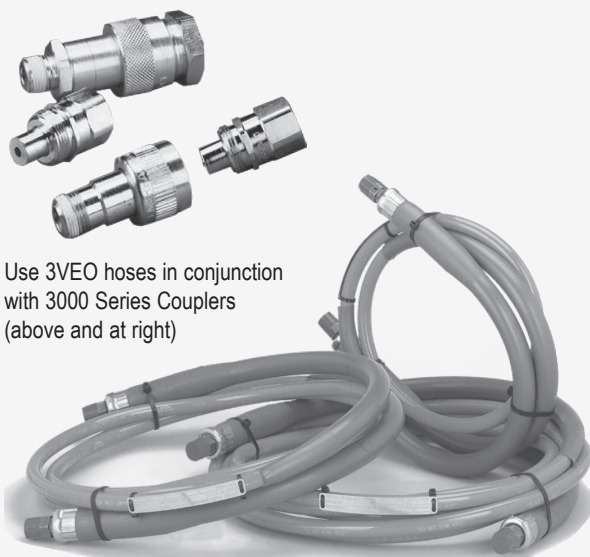
#### Hose Tails:

Pirtek 'SV' Series  
Special procedures apply. Assemblies only to be made by trained personnel listed on the Qualified Personnel Register  
Guards and warning tags are required on the completed assembly

Lay line example: White text on orange hose. Note **Comment** above

**SYNFLEX® 3VEO-04 SAE 1/4" I.D. W.P 10,000 P.S.I. (690 BAR) (NON CONDUCTIVE) PAT. NO. 4343333**

Product Code	Nominal ID			OD	Pressure bar		Min bend radius	Weight
	DN	mm	in		working	min burst		
3VEO-04	6	6.3	1/4	14.0	689	2758	64	0.158
3VEO-06	10	9.5	3/8	17.4	551	2205	76	0.244



Use 3VEO hoses in conjunction with 3000 Series Couplers (above and at right)

3VEO hose assemblies are available only as completed assemblies from accredited assemblers. Each assembly comprises :

3VEO hose  
Pirtek SV Series couplings  
Hose guard  
Identity Tag

3000 SERIES HIGH PRESSURE JACKING COUPLINGS					
Size (NPT)	Product Codes				
	Male Probe	Female Body	Cap	Plug	Seal Kit
1/4"	3001-04	3002-04	3003-04	3004-04	3009-04
3/8"	3001-06	3002-06	3003-06	3004-06	3009-06

3VEO-04 assemblies complete with 3/8" NPT male ends are available in 3 standard configurations. Other configurations upon request

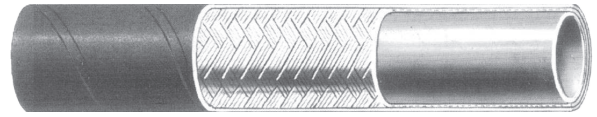
3VEO04-06-2	2 meters long
3VEO04-06-4	4 meters long
3VEO04-06-6	6 meters long



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# LPFRAS

## LOW PRESSURE PUSH-ON FRAS HOSE



### Construction

#### Inner Tube:

Black, smooth, anti-static  
(conductive), oil resistant NBR rubber

#### Reinforcement:

One high strength textile braid

#### Cover:

Black, smooth synthetic rubber, fire, anti-static,  
oil & weather resistant

### Applications

FRAS (Fire Resistant Anti-Static) & MSHA  
approved fire-resistant hose designed for air/  
water & hydraulic oil applications in underground  
coal mining and industrial applications.

#### Temperature Range:

**-40°C up to +100°C**  
(intermittent use up to +125°C hydraulic oil)

#### Comment:

Layline example may not be a true indication  
of current status. Refer to Pirtek for current  
information.

### Approvals

MSHA flame resistance  
Conforms to:  
AS1180.10B Fire resistance  
AS1180.13A Electrical resistance  
ISO 8030\* Fire resistance  
ISO 8031 Electrical resistance  
\*except -04 size

#### Hose Tails:

T series crimp  
P series "push-on"

**Lay line example:** White text on black background. Note comment above

**PIRTEK** LOW PRESSURE FIRE RESISTANT ANTI-STATIC LPFRAS-08 1/2" (12.7MM) 304 PSI (21 BAR) FRAS MSHA

"Product Code"	Nominal ID		OD (avg)	Pressure (Bar)		Bend Radius	Weight
	mm	in	mm	Working	Min. Burst	mm	Kg/mtr
LPFRAS-04	1/4	6.7	12.5	21	84	65	0.11
LPFRAS-06	3/8	9.8	15.6	21	84	75	0.15
LPFRAS-08	1/2	12.9	19.3	21	84	125	0.22
LPFRAS-10†	5/8	16.2	22.8	21	84	150	0.26
LPFRAS-12	3/4	19.2	26.1	21	84	175	0.31
LPFRAS-16†	1	25.8	33.0	21	84	200	0.44

† Not stocked, available on request

# IRFAW / HD

## FRAS AIR / WATER / STONEDUST



### Construction

#### Inner Tube:

Black smooth electrically conductive NBR oil resistant rubber compound

#### Reinforcement:

2 or 4 spiral plies of high strength synthetic cord

#### Cover:

Black smooth (wrapped finish) electrically conductive CR rubber compound with orange spiral stripe. Fire, oil and weather resistant  
Series III NBR cover electrically conductive, fire, oil and weather resistant.

### Applications

Softwall hose designed for arduous air / water applications in underground coal mining, where fire resistant anti static properties are required

#### Temperature Range:

-15°C up to +70°C

#### Comment:

Lay line example may not be a true indication of current status. Refer Pirtek for current information

#### Approvals:

Meets or exceeds AS2660 incorporating AS1180.13A and AS1180.10B FRAS

#### Hose Tails:

Industrial fittings / Ferrules  
High pressure 2 or 4 bolt clamps  
Crimp fittings

**Lay line example:** Black text on orange background. Note **Comment** above

**PIRTEK** AIR / WATER / STONEDUST FRAS IRFAW 20 BAR (290 psi) WORK. PRESS. MEETS & EXCEEDS AS 2660 "CLASS B"

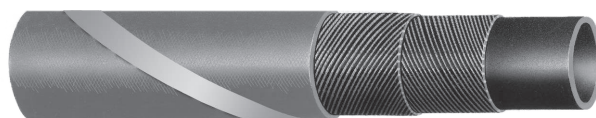
"Product Code"	Nominal ID		OD (avg)	Pressure (Bar)		Bend Radius	Weight	Vacuum
	mm	in	mm	Working	Min. Burst	mm	Kg/mtr	Bar
IRFAW-013	13	1/2	23	20	80	-	0.36	-
IRFAW-013 SERIES III	13	1/2	23	20	80	125	0.36	-
IRFAW-019	19	3/4	29	20	80	-	0.47	-
IRFAW-019 SERIES III	19	3/4	29	20	80	164	0.46	-
IRFAW-025	25	1	37	20	80	-	0.70	-
IRFAW-025 SERIES III	25	1	37	20	80	205	0.71	-
IRFAW-032	32	1.1/4"	46	20	80	-	1.02	-
IRFAW-032 SERIES III	32	1.1/4"	46	20	80	243	1.14	-
IRFAW-038	38	1.1/2	52.5	20	80	-	1.21	-
IRFAW-038 SERIES III	38	1.1/2	52.5	20	80	288	1.33	-
IRFAW-051	51	2	66	20	80	-	1.60	-
IRFAW-051 SERIES III	51	2	66	20	80	360	1.82	-
IRFAW-063	63.5	2.1/2	81	20	80	-	2.27	-
IRFAW-063 SERIES III	63.5	2.1/2	81	20	80	428	2.11	-
IRFAW-076	76	3	93	20	70	-	2.53	-
IRFAW-076 SERIES III	76	3	93	20	70	498	2.44	-
IRFAW-102	102	4	120	20	70	-	3.60	-
IRFAW-102 SERIES III	102	4	120	20	70	650	3.44	-
IRFAWHD-051	51	2	73	27	81	370	2.87	-0.6



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# IRSAB

## SUPER AIR BULL HOSE



### Construction

#### Inner Tube:

Black smooth synthetic rubber compound oil mist resistant

#### Reinforcement:

2 plies of steel wire cord

#### Cover:

Blue smooth (wrapped finish) synthetic rubber MSHA flame retardant and abrasion and oil resistant. Cover pin-pricked.

### Applications

Hose with steel wire plies for compressed air e in severe working conditions such as quarries, mining and heavy duty industrial applications. Heavier construction and higher temperature capability to suit bull hose applications

#### Temperature Range:

-30°C up to +135°C (peaks to 150°C)

#### Comment:

Lay line example may not be a true indication of current status. Refer Pirtek for current information. Pressure rating as per table

### Reference Specifications

Complies to MSHA IC-100/3

#### Hose Tails:

Industrial fittings  
High pressure 4 bolt air clamps  
'J' Series for some sizes

Lay line example: Blue text on blue background. Note comment above

**PIRTEK** SUPER AIR BULL IRSAB 69 BAR (1000 psi) W.P. MSHA

Product Code	Nominal ID		OD	Pressure bar		Min.Bend Radius	Weight
	mm	in		working	min burst		
IRSAB-025 †	25	1	38	69	280	175	1.13
IRSAB-032 †	32	1.1/4	45	69	280	224	1.38
IRSAB-038	38	1.1/2	58	69	280	266	2.57
IRSAB-051	51	2	69.5	69	280	357	3.29
IRSAB-063	63.5	2.1/2	84.5	69	280	445	4.67
IRSAB-076	76	3	98	69	280	532	5.75
IRSAB-102 †	102	4	129	69	280	714	9.83

† Available to order



# IRFWSD/H

## FRAS AIR / WATER

### SUCTION & DELIVERY

### 10 BAR & 20 BAR



#### Construction

##### Inner Tube:

Black, smooth, electrically conductive NBR rubber compound

##### Reinforcement:

High strength synthetic cord plus helix wire

##### Cover:

Black smooth (wrapped finish) electrically conductive CR rubber compound, fire, oil weathering and UV resistant.

10 Bar Version SBR electrically conductive, fire, weather, UV resistant.

**Lay line example:** White text on orange background. Note Comment above

#### Applications

Hardwall hose designed for arduous air / water applications in underground coal mining, where fire resistant, anti static properties are required. Commonly used for gas drainage.

##### Temperature Range:

-15°C up to +70°C ( 20 Bar Version )

-30°C up to +80°C ( 10 Bar Version )

##### Comment:

Lay line example may not be a true indication of current status. Refer Pirtek for current information

#### Reference Specifications

##### Approvals:

Meets or exceeds AS2660, incorporating AS1180.13A and AS1180.10B

##### Hose Tails:

Industrial fittings  
High pressure 2 or 4 bolt clamps  
Crimp fittings

**PIRTEK FRAS WATER SUCTION & DELIVERY IRFWSDH 20BAR (290PSI) W.P MEETS & EXCEEDS AS2660 CLASS B**

Product Code	Nominal ID			OD (avg) mm	Pressure bar			"Min. Bend Radius" mm	Weight kg/mtr
	DN	mm	ins		Working	Min. Burst	Vacuum (bar)		
IRFWSD-051	50	50.8	2	62	10	40	-1.01	230	1.57
IRFWSDH-051 SERIES II	50	50.8	2	71	20	80	-1.01	230	2.90
IRFWSDH-063	63	63.5	2.1/2	84	20	80	-0.9	320	3.27
IRFWSDH-063 SERIES II	63	63.5	2.1/2	84	20	80	-1.01	285	3.47
IRFWSD-076	75	76	3	89	10	40	-1.01	345	2.70
IRFWSDH-076 SERIES II	75	76	3	97	20	80	-1.01	345	4.36
IRFWSD-102	100	102	4	116	10	40	-1.01	455	4.00
IRFWSDH-102 SERIES II	100	102	4	124	20	70	-1.01	455	6.15
IRFWSD-152	150	152	6	172	10	40	-1.01	840	7.46
IRFWSDH-152 SERIES II	150	152	6	178	20	70	-1.01	840	10.61



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## IROFSD

## OIL / FUEL SUCTION &amp; DELIVERY

**Construction****Inner Tube:**

Black smooth NBR compound

**Reinforcement:**

High strength synthetic cord plus embedded steel helix wire and anti-static copper wire

**Cover:**

Black, smooth (wrapped finish) SBR weather resistant rubber compound

**Applications**

Light weight hardwall suction and delivery hose for fuels having an aromatic content up to 30%, and mineral oils. Suitable in hydraulic systems and for loading and unloading of tank trucks, refineries and maintenance shops

**Temperature Range:**

-20°C up to +100°C for mineral oils  
-20°C up to +70°C for fuels

**Comment:**

Lay line example may not be a true indication of current status. Refer Pirtek for current information

**Reference Specifications****Limitations:**

Not suitable for ester oils

**Hose Tails:**

Pirtek J, T, 932, 934, 954 Series crimp fittings  
L Series, Cam & Groove, Combination Steel (all with clamps)

**Lay line example:** Black text on yellow background. Note **Comment** above

**PIRTEK OIL FUEL S/D IROFSD 10 BAR (150psi) WORK.PRESS.**

Product Code	Nominal ID		OD	Pressure bar			Min bend radius	Weight
	mm	ins		working	min burst	vacuum		
IROFSD-019	19	3/4	30	10	30	0.9	80	0.67
IROFSD-025	25	1	35	10	30	0.9	105	0.80
IROFSD-032	32	1.1/4	42	10	30	0.9	135	0.98
IROFSD-038	38	1.1/2	49.5	10	30	0.9	165	1.34
IROFSD-045	45	1.3/4	57	10	30	0.9	180	1.60
IROFSD-051	51	2	63	10	30	0.9	230	1.84
IROFSD-063	63	2.1/2	78	10	30	0.9	300	2.79
IROFSD-076	76	3	89	10	30	0.9	360	2.94
IROFSD-102	102	4	118	10	30	0.9	500	4.94
IROFSD-125	125	5	145	10	30	0.9	620	7.50

# IPAF

## PVC CLASS AIR-FLEX



### Construction

#### Inner Tube:

Black smooth non toxic PVC compound

#### Reinforcement:

High strength synthetic cord

#### Cover:

Blue, smooth UV resistant PVC compound

### Applications

General purpose air, water and fluid transfer  
hose ideal for air tools

#### Temperature Range:

-15°C up to +60°C  
(See Table next page)

#### Comment:

Lay line example may not be a true indication  
of current status. Refer Pirtek for current  
information

#### Approvals:

Exceeds AS/NZ2554 Class B

#### Limitations:

Pressure rating reduces as temperature  
increases. Tabulated pressures apply at 20°C

#### Hose Tails:

Industrial fittings  
See Catalogue Sections J, K

**Lay line example:** Black text on blue background. Note **Comment** above

**PIRTEK CLASS AIR-FLEX 10mm ID IPAF-10 16 BAR (230 psi) WP AS 2554 CLASS B 2005**

Product Code	Nominal ID		OD	Pressure bar †		Weight
	mm	ins	mm	working	min burst	Kg/m
IPAF-06	6	1/4	13	16	64	0.11
IPAF-08	8	5/16	15	16	64	0.15
IPAF-10	10	3/8	16.5	16	64	0.18
IPAF-13	13	1/2	21.5	16	64	0.21
IPAF-19	19	3/4	27.5	16	64	0.51

† See Table on the next page regarding pressure limitations

3/8" X 20mtr complete assembly fitted with 3/8" BSPT Male fittings

**Product code:** IPAF-010ASS



This page is part of a complete catalogue containing technical and safety data.  
All data must be reviewed when selecting a product.  
Pirtek reserve the right to change technical specifications without notice

# IPFAW

## PVC FRAS AIR/WATER



### Construction

#### Inner Tube:

Black, smooth, conductive PVC compound

#### Reinforcement:

High strength Polyester

#### Cover:

Yellow, ribbed, fire & weather resistant PVC with conductive strip connected to inner tube  
Green Cover available on request non-stocked.

### Applications

General purpose air/water hose for use in underground mines. Excellent flexibility in cold conditions

Fire Resistant and Anti-Static

#### Temperature Range:

-5°C up to +60°C

#### Standards

Conforms to AS 2660 A and AS/NZS 2554 A

#### Comment:

Lay line example may not be a true indication of current status. Refer Pirtek for current information

#### Hose Tails:

Industrial fittings & clamps  
Refer to web catalogue  
Section J Industrial Fittings

Lay line example: Black text on yellow background.

**PIRTEK IPFAW FRAS AIR/WATER 12.5MM (1/2") 300 PSI (20 BAR) W.P SF 4:1 AS2660/A AS2554/A**

"Product Code"	Nominal ID		OD (avg)	Pressure (Bar)		Bend Radius	Weight	Coil lengths
	mm	ins	mm	Working	Min. Burst	mm	Kg/mtr	mtr
IPFAW-013	13	1/2	21	20	80	100	0.30	20/100/20 fitted assy*
IPFAW-019	19	3/4	28	20	80	150	0.42	20/100/20 fitted assy*
IPFAW-025	25	1	35	20	80	180	0.65	20/33/100/20 fitted assy*
IPFAW-025H	25	1	36	35	140	200	0.80	20/100
IPFAW-032	32	1.1/4	43	20	80	220	0.95	20/100
IPFAW-038	38	1.1/2	52	20	80	250	1.10	20/100
IPFAW-051**	51	2	63	20	80	320	1.70	20/100

\*\* Available with Green outer cover - IPFAWGN

\* 20mtr assemblies fitted with Type A claw couplings & safety claw clamps available



# FITTINGS AND ADAPTORS

## Configuration

## Appearance

### Standard Stapelok



HOSE TAILS PAGES 46



ADAPTORS INDEX PAGE 50

### Super Stapelok

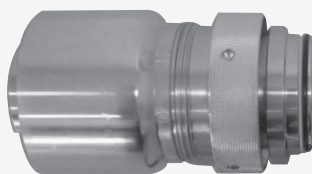


HOSE TAILS PAGE 47

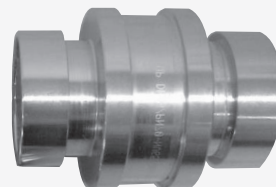
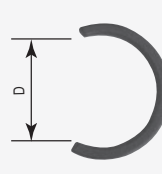


ADAPTORS INDEX PAGE 66

### SKV / SSKV

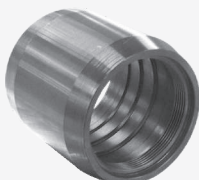


HOSE TAILS PAGE 48/49



ADAPTORS INDEXES PAGES 77/86

### Clipline (Large Bore)

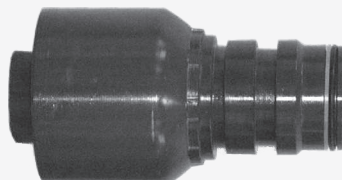


HOSE TAILS PAGE 95

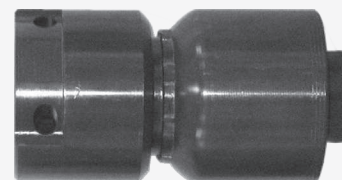


ADAPTORS PAGES 96 - 99

### Flushfit

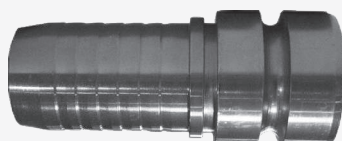


HOSE TAILS PAGES 100, 108

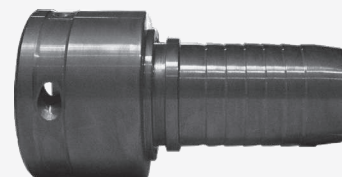


ADAPTORS PAGES 101 - 112

### Slimline



HOSE TAILS PAGES 114 - 116



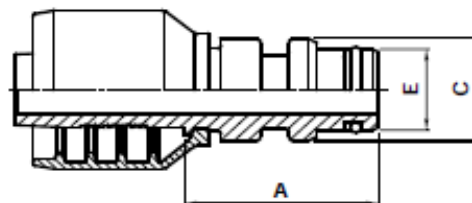
ADAPTORS PAGES 116 - 120



# STM1

## STANDARD STAPLELOK STRAIGHT

### WITH STAINLESS STEEL OPTION



Product Code	Nominal Bore Staple			Nominal Bore Hose			Dimensions mm		
	Dash	Inch	DN	Dash	Inch	DN	A	C	E
STM1-0604K	4	1/4"	6	4	1/4"	6	35.5	14.9	9.9
STM1-0604T	4	1/4"	6	4	1/4"	6	38.0	14.9	9.9
STM1-1004K	6	3/8"	10	4	1/4"	6	34.5	19.9	13.9
STM1-1006J	6	3/8"	10	6	3/8"	10	34.5	19.9	13.9
STM1-1308J	8	1/2"	13	8	1/2"	12	35.8	23.9	17.9
STM1-1308K	8	1/2"	13	8	1/2"	12	35.0	23.9	17.9
STM1-1610K	10	5/8"	16	10	5/8"	16	31.0	25.9	20.9
STM1-2012J	12	3/4"	20	12	3/4"	20	37.0	28.9	23.9
STM1-2516J	16	1"	25	16	1"	25	44.0	38.8	30.9
STM1-3220J	20	1.1/4"	32	20	1.1/4"	32	47.9	45.9	37.9
STM1-3220X	20	1.1/4"	32	20	1.1/4"	32	47.9	45.9	37.9
STM1-3220H	20	1.1/4"	32	20	1.1/4"	32	47.9	45.9	37.9
STM1-4024J	24	1.1/2"	40	24	1.1/2"	40	51.0	54.9	46.9
STM1-5032J	32	2"	50	32	2"	50	57.0	63.9	55.9
STM1-5032U	32	2"	50	32	2"	50	64.0	28.0	55.9
STM1-6340J	40	2.1/2"	63	40	2.1/2"	63	100.5	80.9	79.0
STM1-7548J	48	3"	76	48	3"	76	136.0	93.8	85.8
<b>STAINLESS STEEL FITTINGS</b>									
STM1SS-0604K	4	1/4"	6	4	1/4"	6	35.5	14.9	9.9
STM1SS-1004K	6	3/8"	10	4	1/4"	6	34.5	19.9	13.9
STM1SS-1006H	6	3/8"	10	6	3/8"	10	34.5	19.9	13.9
STM1SS-1308H	8	1/2"	13	8	1/2"	12	35.8	23.9	17.9
STM1SS-2012J	12	3/4"	20	12	3/4"	20	37.0	28.9	23.9
STM1SS-2012H	12	3/4"	20	12	3/4"	20	37.0	28.9	23.9
STM1SS-2516J	16	1"	25	16	1"	25	43.0	24.0	30.9
STM1SS-3220J	20	1.1/4"	32	20	1.1/4"	32	47.9	45.9	37.9
STM1SS-4024J	24	1.1/2"	40	24	1.1/2"	40	51.0	54.9	46.9
STM1SS-5032J	32	2"	50	32	2"	50	57.0	63.9	55.9

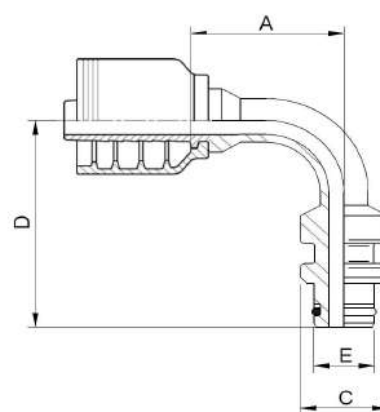
† Tail design uses a threaded latchment as seen on page 77

# STMC9

## STANDARD STAPLELOK

### COMPACT ELBOW

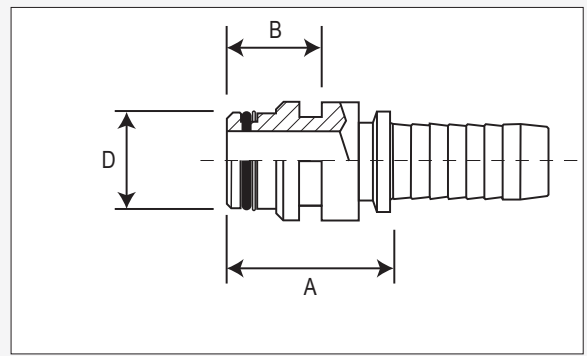
Product Code	Nominal Bore Staple			Nominal Bore Hose			Dimensions mm			
	Dash	Inch	DN	Dash	Inch	DN	A	C	D	E
STMC9-1006J	6	3/8"	10	6	3/8"	10	35.5	19.9	52.0	13.9





# ISTM1

## STANDARD STAPLELOK STRAIGHT FOR INDUSTRIAL & HYDRAULIC HOSE



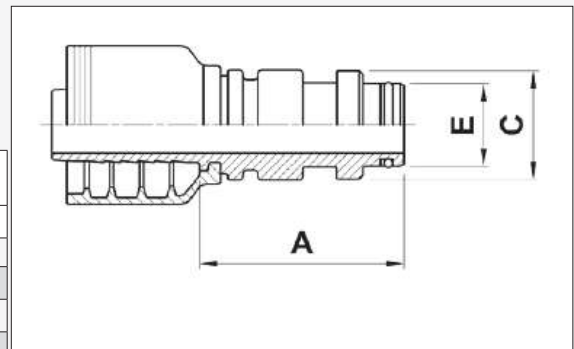
Product Code	Ferrule / Hose Combination		Nominal Bore Staple			Nominal Bore Hose			Dimensions mm		
	R2AT/2SC	IRFAW	Dash	Inch	DN	Dash	Inch	DN	A	B	D
ISTM1-5032 †	SS2-32	FFI-50	32	2"	50	32	2"	50	55	28	55.9
ISTM1-6340 †	SS2-40	FFI-63	40	2.1/2"	63	40	2.1/2"	63	90	69	78.9
ISTM1-7548	SS2-48	FFI-75 *	48	3"	75	48	3"	75	132	111	86

† Limited stock available

\* Suits IFRAS-075 Hose

# SSTM1

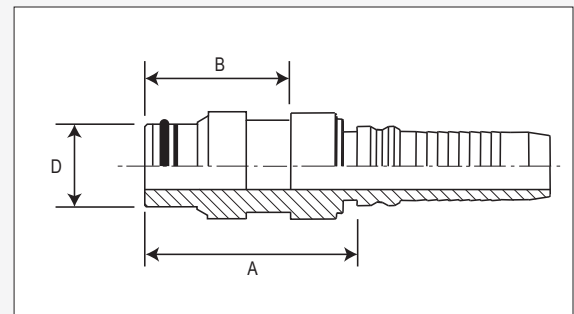
## ONE PIECE TAIL



Product Codes	Nominal Bore Staple			Nominal Bore Hose			Dimensions mm		
	Dash	Inch	DN	Dash	Inch	DN	A	C	E
SSTM1-1308J	8	1/2"	13	8	1/2"	12	56.0	23.6	15.9
SSTM1-2012J	12	3/4"	20	12	3/4"	20	56.0	28.7	22.4
SSTM1-2516J	16	1"	25	16	1"	25	74.0	38.4	30.9
SSTM1-3220X	20	1.1/4"	32	20	1.1/4"	32	80.0	45.4	37.9
SSTM1-3220H	20	1.1/4"	32	20	1.1/4"	32	80.0	45.4	37.9
SSTM1-4024X	24	1.1/2"	40	24	1.1/2"	40	82.5	54.4	43.9
SSTM1-4024H	24	1.1/2"	40	24	1.1/2"	40	82.5	54.4	43.9
SSTM1-5032X	32	2"	50	32	2"	50	95.6	63.4	49.9
SSTM1-5032H	32	2"	50	32	2"	50	95.6	63.4	49.9
STAINLESS STEEL FITTINGS									
SSTM1SS-2012J	12	3/4"	20	12	3/4"	20	56.0	28.7	22.4
SSTM1SS-2012H	12	3/4"	20	12	3/4"	20	56.0	28.7	22.4
SSTM1SS-4024X	24	1.1/2"	40	24	1.1/2"	40	82.5	54.4	43.9
SSTM1SS-4024H	24	1.1/2"	40	24	1.1/2"	40	82.5	54.4	43.9

# SSTM1

## INTERLOCK TAIL



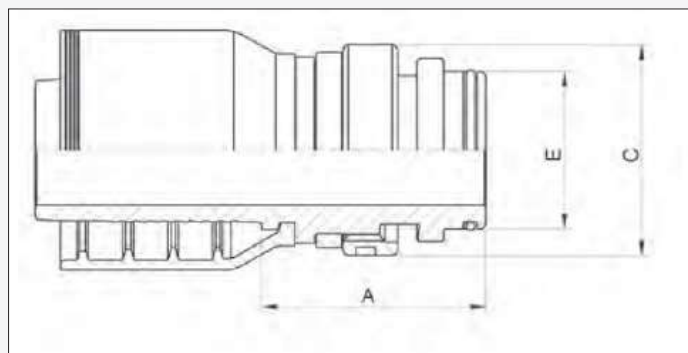
Product Code	Interlock Ferrule	Nominal Bore Staple			Nominal Bore Hose			Dimensions mm		
		Dash	Inch	DN	Dash	Inch	DN	A	B	D
SSTM1-3220I	IF13-20I	20	1.1/4"	32	20	1.1/4"	32	64.6	38.8	37.9
SSTM1BS-5032I	IFBS-32I	32	2"	50	32	2"	50	93.0	43.0	49.9



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# SKVM1

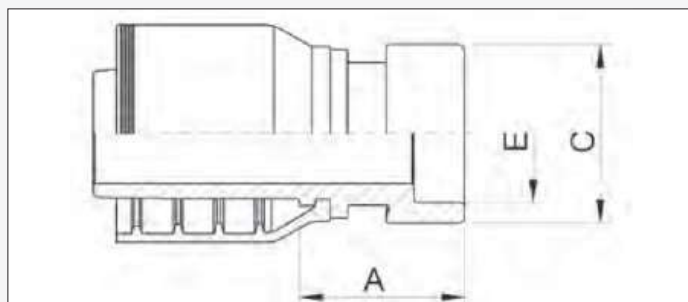
## STANDARD PRANGE MALE



Product Code	Nominal Bore SKV			Nominal Bore Hose			Dimensions mm		
	Dash	Inch	DN	Dash	Inch	DN	A	C	E
SKVM1-2516J	25	1"	25	16	1"	25	49.0	42.0	27.0
SKVM1-3220J	32	1.1/4"	32	20	1.1/4"	32	68.0	50.0	33.0
SKVM1-4024J	40	1.1/2"	40	24	1.1/2"	40	76.0	62.0	44.0
SKVM1-4024U	40	1.1/2"	40	24	1.1/2"	40	76.0	62.0	44.0
SKVM1-5032J	50	2"	50	32	2"	50	74.0	75.0	56.0
SKVM1-5032U	50	2"	50	32	2"	50	74.0	75.0	56.0
SKVM1-6340J	63	2.1/2"	63	40	2.1/2"	63	85.0	90.0	66.0
SKVM1-7548J	75	3"	75	48	3"	76	105.0	110.0	88.0
SKVM1-10064U	102	4"	102	64	4"	100	117.3	138.0	105.0

# SKVF1

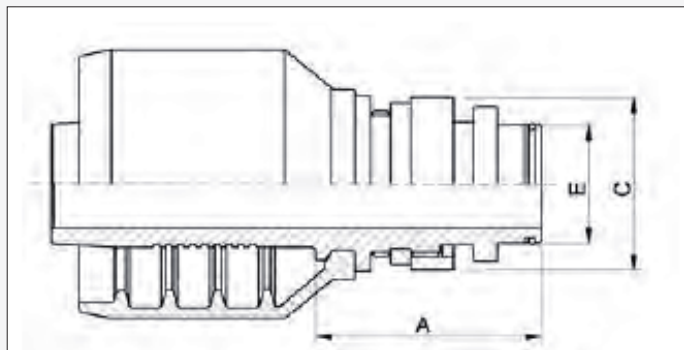
## STANDARD PRANGE FEMALE



Product Code	Nominal Bore SKV			Nominal Bore Hose			Dimensions mm		
	Dash	Inch	DN	Dash	Inch	DN	A	C	E
SKVF1-3220J	32	1.1/4"	32	20	1.1/4"	32	52	40	33
SKVF1-4024J	40	1.1/2"	40	24	1.1/2"	40	50.0	53.0	44.0
SKVF1-5032J	50	2"	50	32	2"	50	57.0	65.0	56.0
SKVF1-6340J	63	2.1/2"	63	40	2.1/2"	63	56.0	75.0	66.0
SKVF1-7548J	75	3"	75	48	3"	76	75.0	99.0	88.0

# SSKVM1

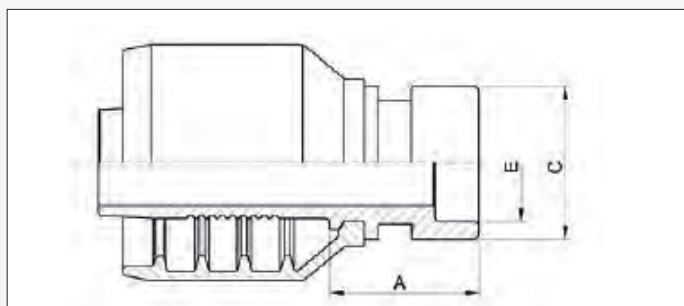
## HIGH PRESSURE PRANGE MALE



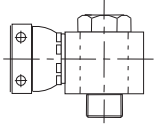
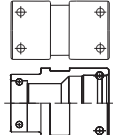
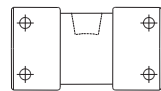
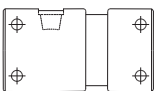
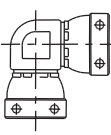
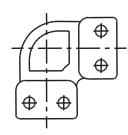
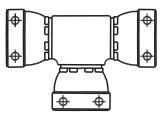
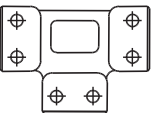
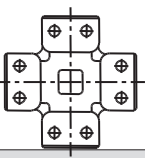
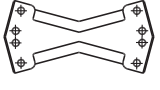
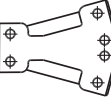
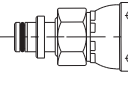
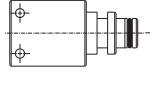
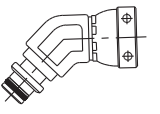
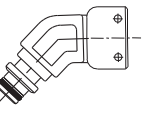

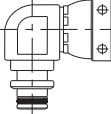
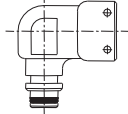
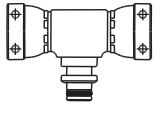
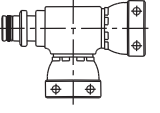
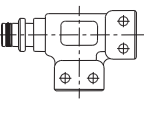
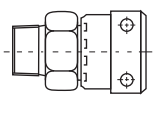
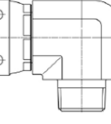
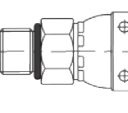
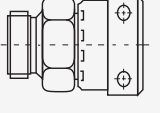
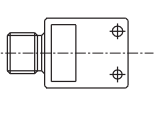
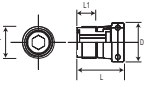
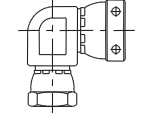
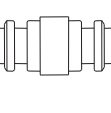
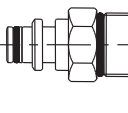
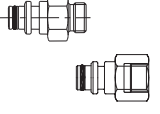
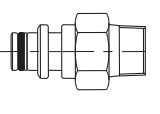
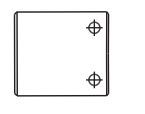
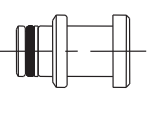
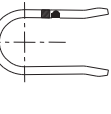
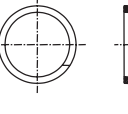

Product Code	Nominal Bore SSKV			Nominal Bore Hose			Dimensions mm		
	Dash	Inch	DN	Dash	Inch	DN	A	C	E
SSKVM1-1006J	10	3/8"	10	06	3/8"	10	45.0	25.0	14.0
SSKVM1-1308J	13	1/2"	13	08	1/2"	13	48.0	30.0	18.0
SSKVM1-2012J	20	3/4"	20	12	3/4"	20	55.0	40.0	23.0
SSKVM1-2516J	25	1"	25	16	1"	25	62.0	45.0	28.0
SSKVM1-2516X	25	1"	25	16	1"	25	63.0	45.0	28.0
SSKVM1-3220X	32	1.1/4"	32	20	1.1/4"	32	72.0	52.0	33.0
SSKVM1-3220H	32	1.1/4"	32	20	1.1/4"	32	72.0	52.0	33.0
SSKVM1-4024X	40	1.1/2"	40	24	1.1/2"	40	87.0	64.0	42.0
SSKVM1-4024H	40	1.1/2"	40	24	1.1/2"	40	87.0	64.0	42.0
SSKVM1-5032X	50	2"	50	32	2"	50	92.0	85.0	54.0
SSKVM1-5032H	50	2"	50	32	2"	50	92.0	85.0	54.0
SSKVM1-6340J	63	2.1/2"	63	40	2.1/2"	63	110.0	98.0	65.0

# SSKVF1

## HIGH PRESSURE PRANGE FEMALE

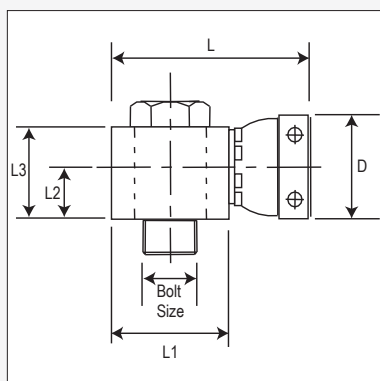


Product Code	Nominal Bore SSKV			Nominal Bore Hose			Dimensions mm		
	Dash	Inch	DN	Dash	Inch	DN	A	C	E
SSKVF1-3220X	32	1.1/4"	32	20	1.1/4"	32	54.0	44.0	33.0
SSKVF1-3220H	32	1.1/4"	32	20	1.1/4"	32	54.0	44.0	33.0
SSKVF1-5032X	50	2"	50	32	2"	50	69.2	69.8	53.9
SSKVF1-5032H	50	2"	50	32	2"	50	68.7	70.0	54.0

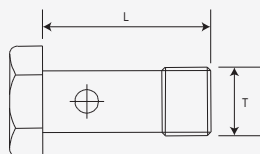
Banjo Body & Bolt  <b>PS27</b> 51	Staple Coupling Fixed Female  <b>PS30</b> 51 <b>PS30 Reducing</b> 51	Staple Coupling Fixed Fem. w/ Port  <b>PSE30</b> 51	Grooved Coupling Fixed Fem. w/ Port  <b>PSE30G</b> 52	Staple Elbow 90° Female Swivel  <b>PS40</b> 52	Staple Elbow 90° Female Fixed  <b>PS45</b> 52
Swivel Tee Equal or Unequal  <b>PS50</b> 53	Fixed Tee Equal or Unequal  <b>PS55</b> 53	4-way Cross Piece +  <b>PS60</b> 54	4-way Cross Piece X  <b>PS65</b> 54	Y-Piece  <b>PS70</b> 54	Staple Male-Female Adaptor Swivel  <b>PS72</b> 55 <b>PS72-CL</b> 55
Staple Male-Female Adaptor Fixed  <b>PS72F</b> 55	Swivel Elbow 45° Male Female  <b>PS74</b> 56	Fixed Elbow 45° Male Female  <b>PS74F</b> 56	Manifold 45° Swept Fem - Fem  <b>PSM135</b> 56	Swivel Elbow 90° Male Female  <b>PS76</b> 56	Fixed Elbow 90° Male Female  <b>PS76F</b> 57
Tee Swivel Fem - Fem - Male  <b>PS77</b> 57	L-Socket Swivel  <b>PS78</b> 57	L-Socket Fixed  <b>PS78F</b> 58	Staple Female Swivel to NPT Male  <b>PS80</b> 59	Staple Swivel Elbow 90° to NPT Male  <b>PS95</b> 59	Staple Fem Swivel to UN-O Male  <b>PS100</b> 59
Staple Female Swivel to BSPP Male  <b>PS115</b> 60	Staple Female Fixed to BSPP Male  <b>PS115F</b> 60	Staple Female Swivel to BSPP Male  <b>PS115H</b> 60 (Internal Hex)	Elbow 90° Staple to BSPP Fem - Fem  <b>PS118</b> 61	Unequal Staple Nipple  <b>PS120</b> 61	Male Staple to Male UN-O Nipple  <b>PS140</b> 61
Male Staple to BSPP Male or Female  <b>PS155 (Male)</b> 62 <b>PS157 (Female)</b> 62	Male Staple to Male BSPT Nipple  <b>PS155T</b> 62	Staple Blanking Cap  <b>PS160</b> 63	Staple Blanking Plug  <b>PS165</b> 63	Std. Staple Square / Dee Section  <b>PS170</b> 63 <b>PS175 / PS175D</b> 64 <b>PS176D</b> .....64	Staple O-Ring Seal & Back-up Washer  <b>PS180</b> 65 <b>PS195</b> 65
Pressure Gauges  <b>PG50ST</b> 65					

## PS27

### BANJO BODY C/W BOLT



Product Code	Bolt Size	Nominal Bore			Dimensions mm				
	BSPP	Dash	Inch	DN	L	L1	L2	L3	D
PS27-06-04	1/4"	4	1/4"	6	37	26	14	22	25
PS27-10-06	3/8"	6	3/8"	10	45	34	16.5	29	32
PS27-10-08	1/2"	6	3/8"	10	47	38	16.5	32	32
PS27-13-06	3/8"	8	1/2"	12	45	33	17.5	29	35
PS27-13-08	1/2"	8	1/2"	12	51	40	17.5	32	35
PS27-20-12	3/4"	12	3/4"	20	52	51	24	44.5	45

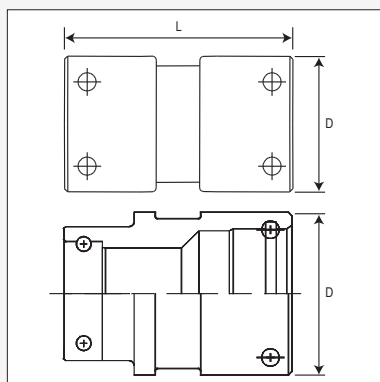


Product Code	Sealing Washer	Bolt Size T	Dimensions mm	
		BSPP	L	AF
PS29-04	Z-04	1/4"	36	18
PS29-06	Z-06	3/8"	40	23.5

Note that Bonded Washers are required for top and bottom sealing (supplied separately - see page 139)

## PS30

### STAPLE COUPLING STRAIGHT / REDUCING



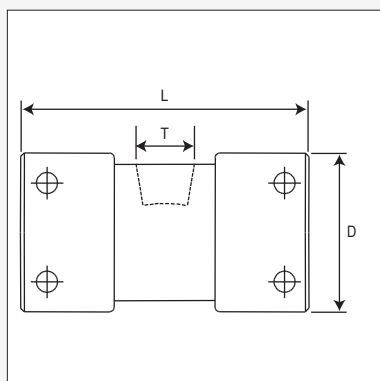
Product Code	Nominal ID			Dimensions mm		
	Dash	Inch	DN	L	D	Retaining Groove
PS30-06	4	1/4"	6	58	25	†
PS30-10	6	3/8"	10	58	32	†
PS30-13	8	1/2"	12	59	35	†
PS30-20	12	3/4"	20	59	45	†
PS30-25	16	1"	25	67	55	†
PS30-32	20	1.1/4"	32	67	60	†
PS30-40	24	1.1/2"	40	75	76	†
PS30-50	32	2"	50	75	85	†
PS30-63G	40	2.1/2"	65	136	100	†

Product Code	End A			End B			Dimensions mm		
	Dash	Inch	DN	Dash	Inch	DN	Lgth	Dia	Retaining Groove
PS30-10-13	6	3/8"	10	8	1/2"	12	58	35	†
PS30-63-50	40	2 1/2"	63	32	2"	50	140	100	†

† The retaining groove around the coupling circumference allows fast installation / removal of the adaptor using a bolted key arrangement. These fittings form part of a total bulkhead design package, and are made to order. Please contact Pirtek for details

## PSE30

### STAPLE COUPLING FEMALE FIXED TAPPED 1" BSP PORT

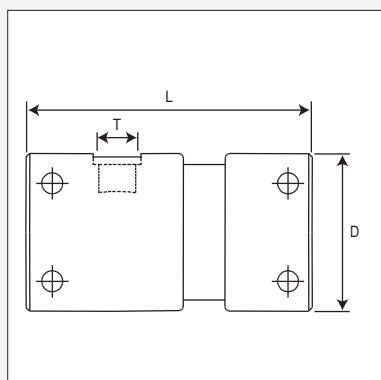


Product Code	Nominal ID			Thread T	Dimensions mm	
	Dash	Inch	DN	BSP †	L	D
PSE30-40-16T	24	1.1/2"	40	R-1"	129	76
PSE30-50-16P	32	2"	50	G-1"	129	88
PSE30-50-16T	32	2"	50	R-1"	129	88
PSE30-63-16P	40	2.1/2"	65	G-1"	185	101
PSE30-63-16T	40	2.1/2"	65	R-1"	185	101
PSE30-63-40T-16T	40	2.1/2"	65	R-1"		

† 'R' denotes tapered thread 'G' denotes parallel thread

# PSE30G

## STAPLE COUPLING EXTENDED TAPPED BSP PORT

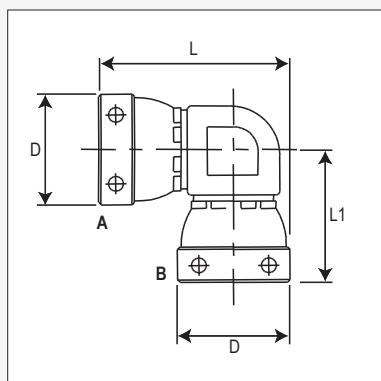


Product Code	Nominal ID			Thread †	Dimensions mm		
	Dash	Inch	DN	BSPP	L	D	Retaining Groove
PSE30G-50-08P	32	2"	50	G-1/2"	75	85	†
PSE30G-50-16P	32	2"	50	G-1"	75	85	†
PSE30G-63-08P	40	2.1/2"	65	G-1/2"	136	100	†
PSE30G-63-16P	40	2.1/2"	65	G-1"	136	100	†

† The retaining groove around the coupling circumference allows fast installation / removal of the adaptor using a bolted key arrangement. These fittings form part of a total bulkhead design package, and are made to order. Please contact Pirtek for details

# PS40

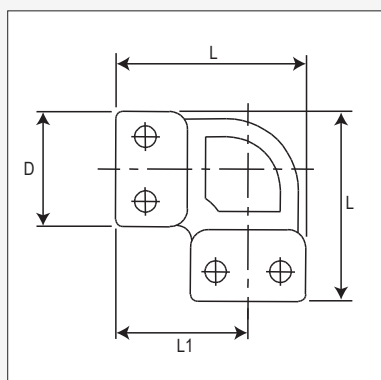
## STAPLE 90° ELBOW COUPLING SWIVEL FEMALE



Product Code	Nominal ID						Dimensions mm		
	Side A			Side B					
	Dash	Inch	DN	Dash	inch	DN	L	L1	D
PS40-06	4	1/4"	6	4	1/4"	6	57	44	25
PS40-10	6	3/8"	10	6	3/8"	10	60	44	32
PS40-13	8	1/2"	12	8	1/2"	12	72	48	35
PS40-20	12	3/4"	20	12	3/4"	20	79	57	45
PS40-25	16	1"	25	16	1"	25	97	68	60
PS40-32	20	1.1/4"	32	20	1.1/4"	32	97	68	60

# PS45

## STAPLE 90° ELBOW COUPLING FIXED FEMALE

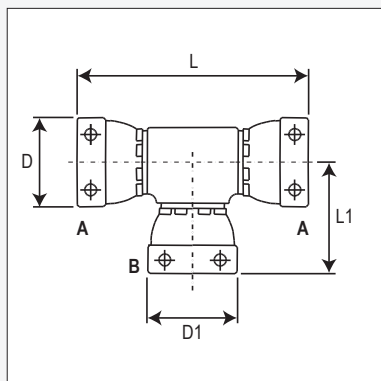


Product Code	Nominal ID			Dimensions mm		
	Dash	Inch	DN	L	L1	D
PS45-06	4	1/4"	6	53	38	32
PS45-10	6	3/8"	10	53	38	32
PS45-13	8	1/2"	12	59	41	39
PS45-20	12	3/4"	20	63	43	42
PS45-25	16	1"	25	78	51	55
PS45-32	20	1.1/4"	32	84	54	62
PS45-40	24	1.1/2"	40	102	68	70
PS45-50	32	2"	50	111	71	82



# PS50

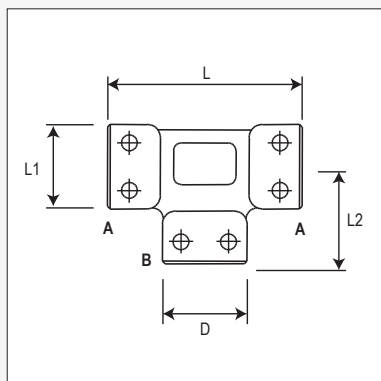
## SWIVEL TEE



Product Code	Nominal ID						Dimensions mm			
	Side A			Side B						
	Dash	Inch	DN	Dash	inch	DN	L	L1	D	D1
PS50-06	4	1/4"	6	4	1/4"	6	88	44	25	25
PS50-10	6	3/8"	10	6	3/8"	10	88	44	32	32
PS50-13	8	1/2"	12	8	1/2"	12	96	48	35	35
PS50-13-13-10	8	1/2"	12	6	3/8"	10	96	47	35	32
PS50-20	12	3/4"	20	12	3/4"	20	114	57	45	45
PS50-20-20-10	12	3/4"	20	6	3/8"	10	114	57	56	32
PS50-20-20-13	12	3/4"	20	8	1/2"	12	114	57	57	35
PS50-25	16	1"	25	16	1"	25	134	68	60	60
PS50-25-25-13	16	1"	25	8	1/2"	12	134	60	60	35
PS50-25-25-20	16	1"	25	12	3/4"	20	136	64	60	45
PS50-32	20	1.1/4"	32	20	1.1/4"	32	136	68	60	60
PS50-32-32-13	20	1.1/4"	32	8	1/2"	12	134	68	60	35
PS50-32-32-25	20	1.1/4"	32	16	1"	25	134	72	60	60

# PS55

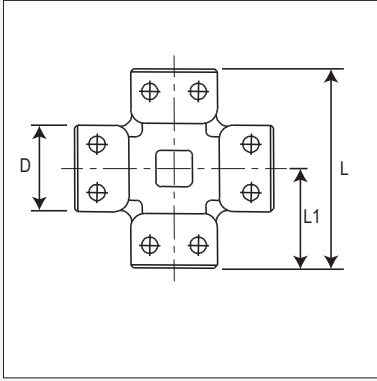
## FIXED TEE



Product Code	Nominal ID						Dimensions mm			
	Side A			Side B						
	Dash	Inch	DN	Dash	inch	DN	L	L1	L2	D
PS55-06	4	1/4"	6	4	1/4"	6	75	53	38	32
PS55-10	6	3/8"	10	6	3/8"	10	72	52	36	32
PS55-10-10-06	6	3/8"	10	4	1/4"	6	-	-	-	-
PS55-13	8	1/2"	12	8	1/2"	12	78	57	39	35
PS55-13-13-10	8	1/2"	12	6	3/8"	10	78	59	40	32
PS55-20	12	3/4"	20	12	3/4"	20	83	61	42	45
PS55-20-20-10	12	3/4"	20	6	3/8"	10	84	63	42	32
PS55-20-20-13	12	3/4"	20	8	1/2"	12	84	63	42	35
PS55-25	16	1"	25	16	1"	25	98	77	49	55
PS55-25-25-13	16	1"	25	8	1/2"	12	100	78	50	35
PS55-25-25-20	16	1"	25	12	3/4"	20	100	78	50	45
PS55-32	20	1.1/4"	32	20	1.1/4"	32	106	85	53	60
PS55-32-32-25	20	1.1/4"	32	16	1"	25	107	84	53	55
PS55-40	24	1.1/2"	40	24	1.1/2"	40	133	102	68	70
PS55-50	32	2"	50	32	2"	50	140	111	70	82
PS55-50-50-32	32	2"	50	20	1.1/4"	32	146	111	70	60
PS55F-63	40	2.1/2"	65	40	2.1/2"	65	320	210	160	100

## PS60

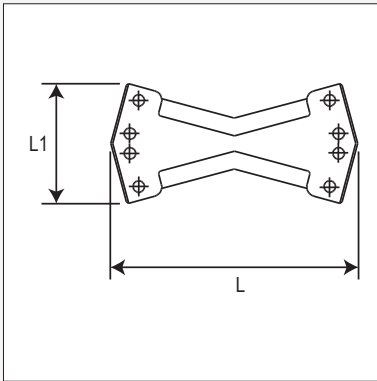
### 4-WAY CROSS



Product Code	Nominal ID			Dimensions mm		
	Dash	Inch	DN	L	L1	D
PS60-06	4	1/4"	6	68	34	25
PS60-10	6	3/8"	10	72	36	32
PS60-13	8	1/2"	12	78	39	35
PS60-20	12	3/4"	20	84	42	45

## PS65

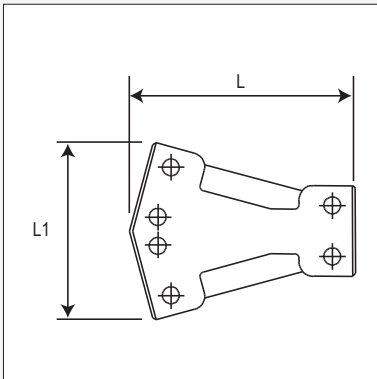
### X-SHAPED CROSS



Product Code	Nominal ID			Dimensions mm		
	Dash	Inch	DN	L	L1	
PS65-10	6	3/8"	10	128	63	

## PS70

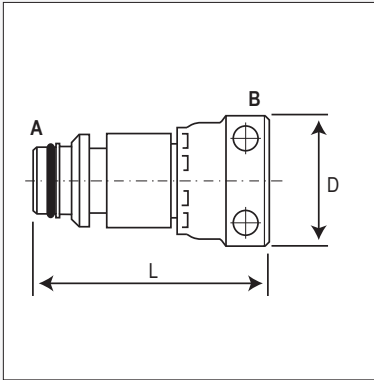
### Y-PIECE FIXED COUPLING



Product Code	Nominal ID			Dimensions mm		
	Dash	Inch	DN	L	L1	
PS70-10	6	3/8"	10	128	63	
PS70-13	8	1/2"	12	96	70	
PS70-20	12	3/4"	20			

# PS72

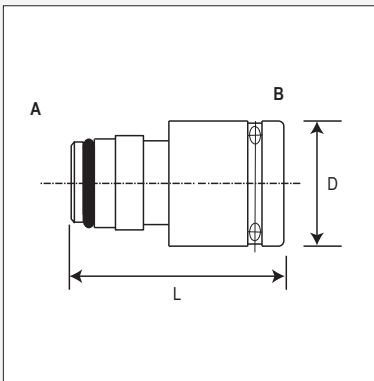
## STAPLE MALE-FEMALE COUPLING



Product Code	Nominal ID						Dimensions mm	
	Side A			Side B				
	Dash	Inch	DN	Dash	inch	DN	L	D
PS72-06-10	4	1/4"	6	6	3/8"	10	69	32
PS72-06-13	4	1/4"	6	8	1/2"	12	69	35
PS72-10-06	6	3/8"	10	4	1/4"	6	69	25
PS72-10-10	6	3/8"	10	6	3/8"	10	69	32
PS72-10-13	6	3/8"	10	8	1/2"	12	69	35
PS72-13-10	8	1/2"	12	6	3/8"	10	63	32
PS72-20-13	12	3/4"	20	8	1/2"	12	69	36
PS72-20-25	12	3/4"	20	16	1"	25	81	60
PS72-25-20	16	1"	25	12	3/4"	20	76	45
PS72-50-25	32	2"	50	16	1"	25	89	60

# PS72 - CL

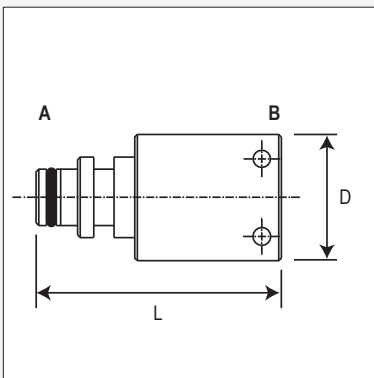
## STAPLE MALE-CLIPLINE FEMALE



Product Code	Nominal ID						Dimensions mm	
	Side A			Side B				
	Dash	Inch	DN	Dash	inch	DN	L	D
PS72-63-63-CL	40	2.1/2"	65	40	2.1/2"	65	154	109

# PS72F

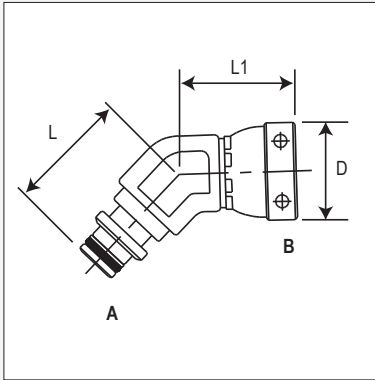
## STAPLE MALE-FEMALE FIXED COUPLING



Product Code	Nominal ID						Dimensions mm	
	Side A			Side B				
	Dash	Inch	DN	Dash	inch	DN	L	D
PS72F-10-10	6	3/8"	10	6	3/8"	10	69	32
PS72F-10-13	6	3/8"	10	8	1/2"	12	69	35
PS72F-13-10	8	1/2"	12	6	3/8"	10	63	32
PS72F-13-20	8	1/2"	12	12	3/4"	20	-	45
PS72F-20-13	12	3/4"	20	8	1/2"	12	69	36
PS72F-20-25	12	3/4"	20	16	1"	25	81	60
PS72F-25-20	16	1"	25	12	3/4"	20	76	45
PS72F-63-50	40	2 1/2"	63	32	2"	50	-	-

## PS74

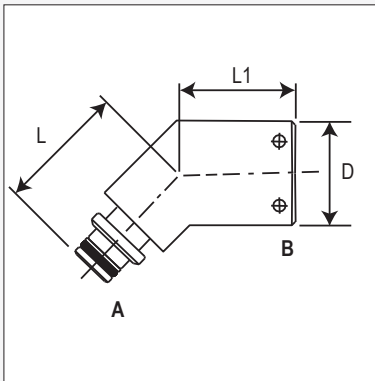
### STAPLE 45° ELBOW M-F



Product Code	Nominal ID						Dimensions mm		
	Side A			Side B					
	Dash	Inch	DN	Dash	inch	DN	L	L1	D
PS74-06	4	1/4"	6	4	1/4"	6	40	39	25
PS74-10	6	3/8"	10	6	3/8"	10	40	39	32
PS74-13	8	1/2"	12	8	1/2"	12	40	40	35
PS74-20	12	3/4"	20	12	3/4"	20	43	47	45
PS74-25	16	1"	25	16	1"	25	52	54	60
PS74-32	20	1.1/4"	32	20	1.1/4"	32	52	54	60

## PS74F

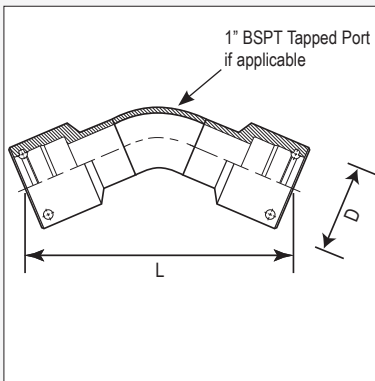
### STAPLE 45° ELBOW M-F FIXED



Product Code	Nominal ID						Dimensions mm		
	Side A			Side B					
	Dash	Inch	DN	Dash	inch	DN	L	L1	D
PS74F-10	6	3/8"	10	6	3/8"	10	40	39	25
PS74F-13	8	1/2"	12	8	1/2"	12	40	39	32
PS74F-20	12	3/4"	20	12	3/4"	20	40	40	35
PS74F-50	32	2"	50	32	2"	50	80	63	83

## PSM135

### SWEPT 45° ELBOW F-F

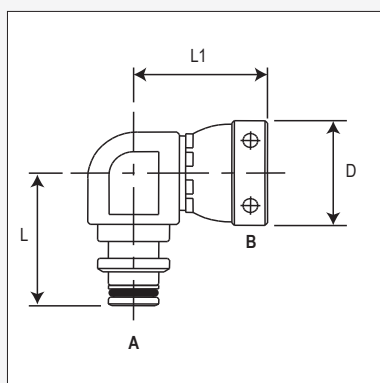


Product Code	Nominal ID						Dimensions mm		
	Side A			Side B					
	Dash	Inch	DN	Dash	inch	DN	L	D	Port
PSM135-50	32	2"	50	32	2"	50	314	82.5	
PSM135-50-16T	32	2"	50	32	2"	50	314	82.5	R-1" †
PSM135-63	40	2.1/2"	63	40	2.1/2"	63	314	106	

† 'R' denotes tapered BSP thread

# PS76

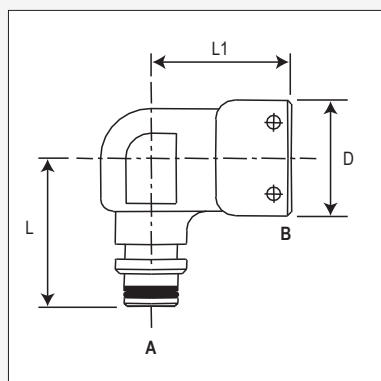
## STAPLE 90° ELBOW M-F



Product Code	Nominal ID						Dimensions mm		
	Side A			Side B					
	Dash	Inch	DN	Dash	inch	DN	L	L1	D
PS76-06	4	1/4"	6	4	1/4"	6	46	44	25
PS76-10	6	3/8"	10	6	3/8"	10	46	44	32
PS76-10-13	6	3/8"	10	8	1/2"	12	51	48	35
PS76-13	8	1/2"	12	8	1/2"	12	51	48	35
PS76-13-10	8	1/2"	12	6	3/8"	10	51	48	32
PS76-20	12	3/4"	20	12	3/4"	20	56	56	45
PS76-25	16	1"	25	16	1"	25	66	66	60
PS76-25-20	16	1"	25	12	3/4"	20	68	56	45
PS76-32	20	1.1/4"	32	20	1.1/4"	32	68	66	60

# PS76F & PS76FSS

## STAPLE 90° ELBOW M/F FIXED & STAINLESS STEEL STAPLE 90° ELBOW M/F FIXED



Product Code	Nominal ID						Dimensions mm		
	Side A			Side B					
	Dash	Inch	DN	Dash	inch	DN	L	L1	D
PS76F-10	6	3/8"	10	6	3/8"	10	47	32	30
PS76F-13 †	8	1/2"	13	8	1/2"	13			
PS76F-20 †	12	3/4"	20	12	3/4"	20			
PS76F-25 †	16	1"	25	16	1"	25			
PS76F-32 †	20	2"	32	20	2"	32			
PS76F-40	24	1.1/2"	40	24	1.1/2"	40	85	85	80
PS76F-50	32	2"	50	32	2"	50	95	95	80

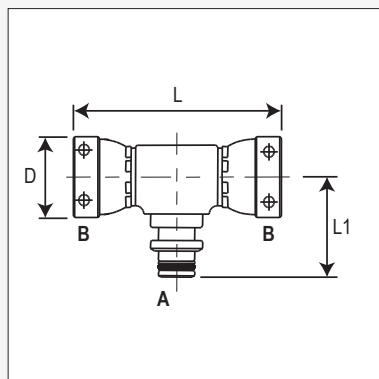
† These sizes available to order

Product Code	Nominal ID						Dimensions mm		
	Side A			Side B					
	Dash	Inch	DN	Dash	inch	DN	L	L1	D
PS76FSS-20 *	12	3/4"	20	12	3/4"	20			

\* NOTE : This item is the same as the PS76F-20 except it is made of Stainless Steel & is machined

# PS77

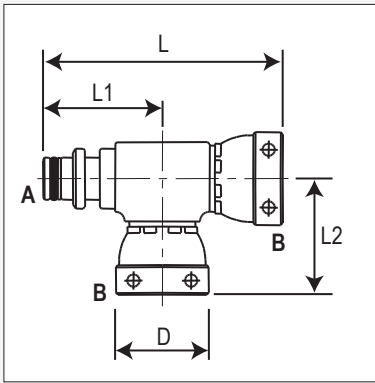
## SWIVEL TEE F-F-M



Product Code	Nominal ID						Dimensions mm		
	Side A			Side B					
	Dash	Inch	DN	Dash	inch	DN	L	L1	D
PS77-06	4	1/4"	6	4	1/4"	6	88	46	25
PS77-10	6	3/8"	10	6	3/8"	10	88	46	32
PS77-13	8	1/2"	12	8	1/2"	12	96	52	35

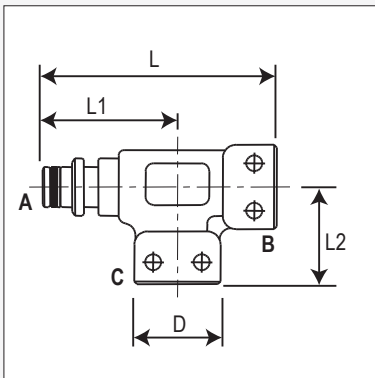
## PS78

## STAPLE TEE 'L' SWIVEL SOCKET



Product Code	Nominal ID						Dimensions mm			
	Side A			Side B						
	Dash	Inch	DN	Dash	inch	DN	L	L1	L2	D
PS78-06	4	1/4"	6	4	1/4"	6	90	46	45	25
PS78-10	6	3/8"	10	6	3/8"	10	90	46	45	32
PS78-13	8	1/2"	12	8	1/2"	12	102	52	50	35
PS78-20	12	3/4"	20	12	3/4"	20	110	55	55	45

## PS78F

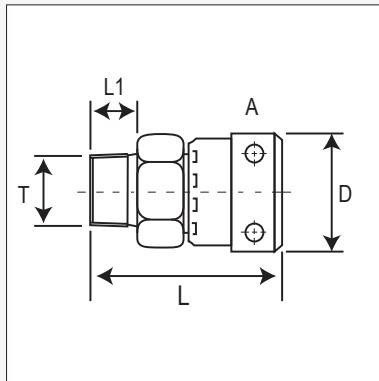
STAPLE TEE  
'L' FIXED SOCKET

Product Code	Nominal ID									Dimensions mm			
	Side A			Side B			Side C						
	Dash	Inch	DN	Dash	inch	DN	Dash	inch	DN	L	L1	L2	D
PS78F-06	4	1/4"	6	4	1/4"	6	4	1/4"	6	90	47	47	32
PS78F-10	6	3/8"	10	6	3/8"	10	6	3/8"	10	84	47	36	32
PS78F-13-13-10	8	1/2"	12	8	1/2"	12	6	3/8"	10	90	50	38	38
PS78F-20	12	3/4"	20	12	3/4"	20	12	3/4"	20	110	57	53	45
PS78F-20-20-10	12	3/4"	20	12	3/4"	20	6	3/8"	10	98	55	42	44
PS78F-25	16	1"	25	16	1"	25	16	1"	25	138	71	67	60
PS78F-25-25-10	16	1"	25	16	1"	25	6	3/8"	10	120	71	50	32



## PS80 & PS80F (Fixed)

### STAPLE SWIVEL FEMALE - NPT

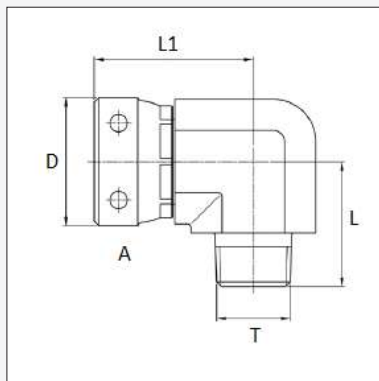


Product Code	Nominal ID			NPT Thread	Dimensions mm			
	Side A							
	Dash	Inch	DN	T	L	L1	D	AF
PS80-06-02	4	1/4"	06	1/8"	50	10	25	19
PS80-06-04	4	1/4"	06	1/4"	51	15	25	19
PS80-10-04	6	3/8"	10	1/4"	54	15	32	22
PS80-10-06	6	3/8"	10	3/8"	54	15	32	22
PS80-13-06	8	1/2"	12	3/8"	55	15	35	27
PS80-13-08	8	1/2"	12	1/2"	60	19	35	27
PS80-13-12	8	1/2"	12	3/4"	60	19	35	30
PS80-20-08	12	3/4"	20	1/2"	61	19	45	36
PS80-20-12	12	3/4"	20	3/4"	62	19	45	36
PS80-20-16	12	3/4"	20	1"	67	24	45	36
PS80-25-16	16	1"	25	1"	80	24	60	46
PS80-32-20	20	1.1/4"	32	1.1/4"	81	25	60	50
PS80F-40-24*	24	1.1/2"	40	1.1/2"	80	26	80	70
PS80F-50-32*	32	2"	50	2"	80	29	85	75

\* Female Staple is fixed

## PS95

### STAPLE SWIVEL FEMALE 90° - NPT MALE

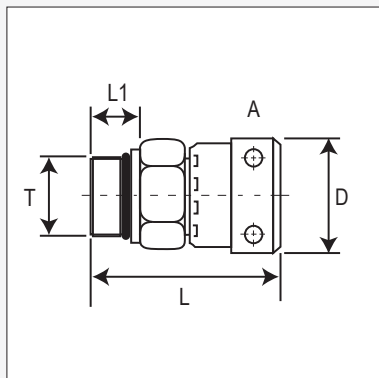


Product Code	Nominal ID			NPT Thread	Dimensions mm		
	Side A				L	L1	D
	Dash	Inch	DN	T			
PS95-06-04 †	4	1/4	06	1/4"	31	44	25
PS95-06-06 †	4	1/4	06	3/8"	31	44	25
PS95-10-06	6	3/8	10	3/8"	34	44	32
PS95-10-08 †	6	3/8	10	1/2"	36	44	32
PS95-13-06 †	8	1/2	12	3/8"	34	48	35
PS95-13-08	8	1/2	12	1/2"	40	48	35
PS95-13-12 †	8	1/2	12	3/4"	40	48	35
PS95-20-12	12	3/4	20	3/4"	44	57	45
PS95-25-16	16	1	25	1"	58	67	60

† Indent items, available on request.

## PS100

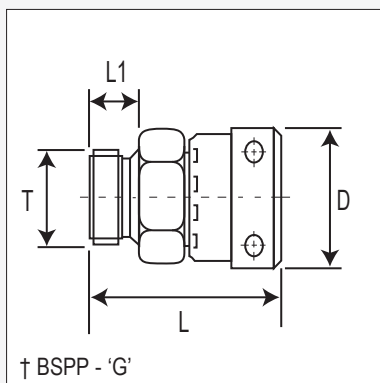
### STAPLE SWIVEL FEMALE - UNO



"Product Code"	Nominal ID			"UNO Thread"	Dimensions mm			
	Side A				L	L1	D	AF
	Dash	Inch	DN					
PS100-06-07	4	1/4"	06	7/16"-20	50	11	25	19
PS100-06-09	4	1/4"	06	9/16"-18	50	12	25	19
PS100-10-09	6	3/8"	10	9/16"-18	50	12	32	22
PS100-10-12	6	3/8"	10	3/4"-16	55	14	32	27
PS100-13-12	8	1/2"	12	3/4"-16	56	14	35	27
PS100-13-14	8	1/2"	12	7/8"-14	59	16	35	27
PS100-13-17	8	1/2"	12	1.1/16"-12	59	18	35	36
PS100-20-14	12	3/4"	20	7/8"-14	59	16	45	36
PS100-20-17	12	3/4"	20	1.1/16"-12	59	18	45	36
PS100-20-21	12	3/4"	20	1.5/16"-12	59	19	45	41
PS100-25-17	16	1"	25	1.1/16"-12	76	18	60	46
PS100-25-21	16	1"	25	1.5/16"-12	76	19	60	46

# PS115

## STAPLE SWIVEL FEMALE - BSPP



Product Code	Nominal ID			BSPP Thread ↑	Dimensions mm			
	Staple Female							
	Dash	Inch	DN		T	L	L1	D
PS115-06-04	4	1/4"	6	G-1/4"	47	10	32	22
PS115-06-06	4	1/4"	6	G-3/8"	47	9	25	22
PS115-10-04	6	3/8"	10	G-1/4"	47	10	32	22
PS115-10-06	6	3/8"	10	G-3/8"	48	10	32	22
PS115-10-08	6	3/8"	10	G-1/2"	54	13	32	27
PS115-13-06	8	1/2"	12	G-3/8"	53	10	35	27
PS115-13-08	8	1/2"	12	G-1/2"	56	13	35	27
PS115-16-10	10	5/8"	16	G-5/8"				
PS115-20-08	12	3/4"	20	G-1/2"	59	13	45	36
PS115-20-12	12	3/4"	20	G-3/4"	59	14	45	36
PS115-20-16	12	3/4"	20	G-1"	62	17	45	46
PS115-25-12	16	1"	25	G-3/4"	63	14	60	46
PS115-25-16	16	1"	25	G-1"	73	17	60	46
PS115-25-20	16	1"	25	G-1.1/4"	77	19	60	50
PS115-32-16	20	1.1/4"	32	G-1"	80	17	60	50
PS115-32-20	20	1.1/4"	32	G-1.1/4"	63	20	60	50
PS115-32-24	20	1.1/4"	32	G-1.1/2"	72	20	60	55

### STAPLE FIXED FEMALE WITH BSPP OR BSPT THREAD

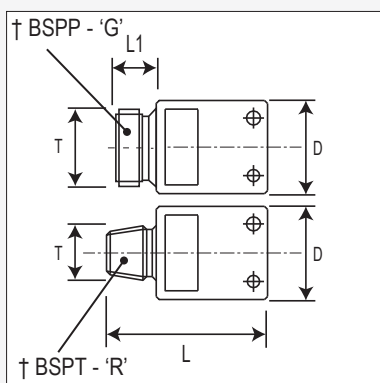
PS115F-06-04T •	4	1/4"	6	R-1/4"	47	10	32	22
PS115F-10-06T •	6	3/8"	10	R-3/8"	48	10	32	22
PS115F-13-08T •	8	1/2"	12	R-1/2"	56	13	35	27
PS115F-20-12T •	12	3/4"	20	R-3/4"	59	14	45	36
PS115F-20-16T •	12	3/4"	20	R-1"	62	17	45	46
PS115F-25-16T •	16	1"	25	R-1"	73	17	60	46
PS115F-32-20T	20	1.1/4"	32	R-1.1/4"	76	18.4	61	50
PS115F-40-24T	24	1.1/2"	40	R-1.1/2"	76	21.4	75	70
PS115F-40-24	24	1.1/2"	40	G-1.1/2"	76	21.4	75	70
PS115F-50-32T	32	2"	50	R-2"	76	23	85	75
PS115F-50-32	32	2"	50	G-2"	76	23	85	75
PS115F-63-40T •	40	2.1/2"	63	R-2.1/2"	122	24	100	88
PS115F-63-40 •	40	2.1/2"	63	G-2.1/2"	122	24	100	88
PS115F-75-48T •	48	3"	75	R-3"				

† 'R' denotes tapered thread 'G' denotes parallel thread

• These sizes available to order

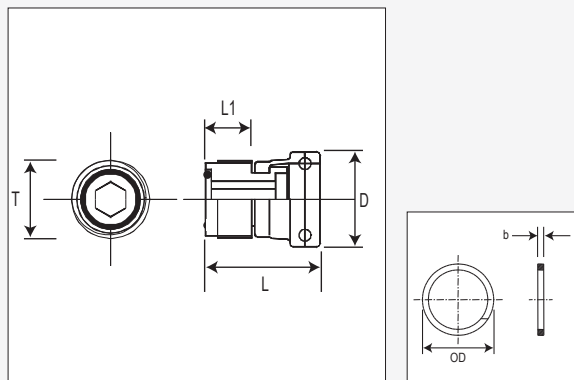
# PS115F

## STAPLE FIXED FEMALE - BSPT/G



# PS115H

## STAPLE SWIVEL FEMALE - BSPP INTERNAL HEX



Product Code	Nominal ID			BSPP Thread	Dimensions mm			
	Staple Female				L	L1	D	Hex
	Dash	Inch	DN					
PS115H-10-12	6	3/8"	10	3/4"				
PS115H-13-12	8	1/2"	12	3/4"	42	16	35	12.6
PS115H-20-12	12	3/4"	20	3/4"	57	24	44	12.6

**Note:** The primary use of this adaptor is to facilitate the installation of a female staplelok fitting into a threaded BSPP port where access would otherwise be difficult. Sealing is via the Delrin seal in the face of the thread. The internal hex is reached via the female staple end.

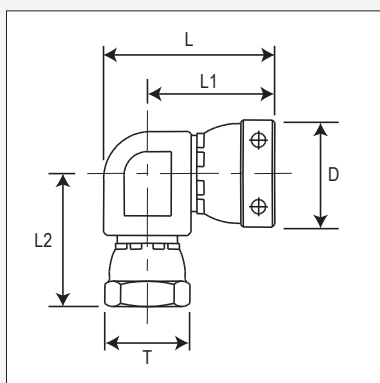
Should Seal replacement be required, please use PS115H-SEAL-12  
Shown below

Product Code	Nominal Size			Dimensions mm			
	BSPP Thread			OD	b		
	Dash	Inch	DN				
PS115-SEAL-12	12	3/4"	20	20.3	2.4	-	-

# PS118

## 90° ELBOW

### STAPLE FEMALE - BSP FEMALE

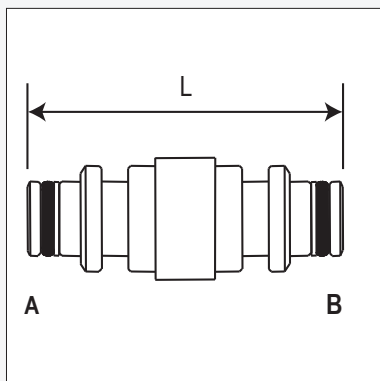


Product Code	Nominal ID			BSPP Thread	Dimensions mm			
	Side A				L	L1	L2	D
	Dash	Inch	DN					
PS118-06-04	4	1/4"	6	1/4"	53	43	34	25.1
PS118-10-06	6	3/8"	10	3/8"	53	42	37	32.1
PS118-13-08	8	1/2"	12	1/2"	60	45	41	35

# PS120

## STAPLE NIPPLE

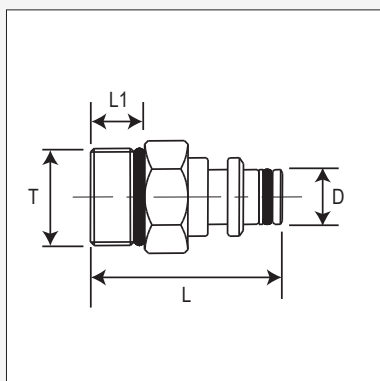
### EQUAL OR UNEQUAL



Product Code	Nominal ID						Dimensions mm	
	Side A			Side B			L	
	Dash	Inch	DN	Dash	Inch	DN		
PS120-06	4	1/4"	6	4	1/4"	6	58	
PS120-10	6	3/8"	10	6	3/8"	10	58	
PS120-10-06	6	3/8"	10	4	1/4"	6	56	
PS120-13	8	1/2"	12	8	1/2"	12	58	
PS120-13-06	8	1/2"	12	4	1/4"	6	56	
PS120-13-10	8	1/2"	12	6	3/8"	10	58	
PS120-20	12	3/4"	20	12	3/4"	20	58	
PS120-20-10	12	3/4"	20	6	3/8"	10	58	
PS120-20-13	12	3/4"	20	8	1/2"	12	58	
PS120-25	16	1"	25	16	1"	25	67	
PS120-25-13	16	1"	25	8	1/2"	12	64	
PS120-25-20	16	1"	25	12	3/4"	20	64	
PS120-32	20	1.1/4"	32	20	1.1/4"	32	67	
PS120-32-25	20	1.1/4"	32	16	1"	25	67	
PS120-40	24	1.1/2"	40	24	1.1/2"	40	80	
PS120-50	32	2"	50	32	2"	50	80	
PS120-63	40	2.1/2"	65	40	2.1/2"	65	140	

# PS140

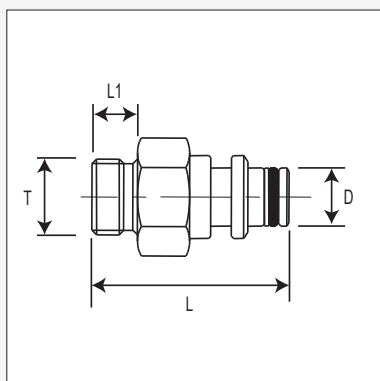
## STAPLE MALE - UNO



Product Code	Nominal ID			UNO Thread	Dimensions mm			
	Side A				L	L1	D	
	Dash	Inch	DN	T				
PS140-20-14	12	3/4"	20	7/8"-14	55	17	23.9	

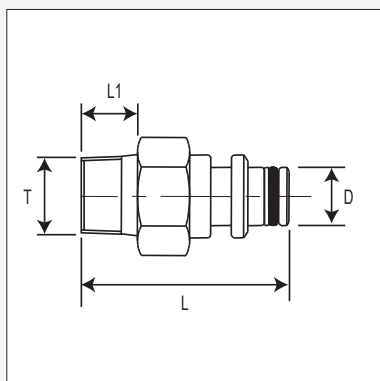
# PS155

## STAPLE MALE - BSPP MALE



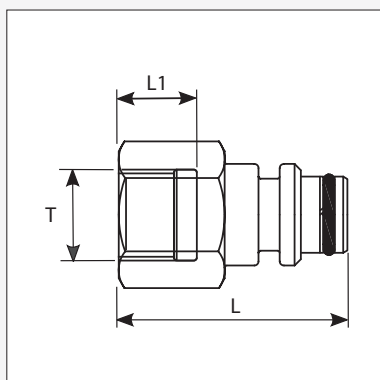
# PS155 (T)

## STAPLE MALE - BSPT MALE



# PS157

## STAPLE MALE - BSPP FEMALE



Product Code	Nominal ID			BSPP Thread	Dimensions mm			
	Side A				L	L1	D	AF
	Dash	Inch	DN					
PS155-06-04	4	1/4"	6	G-1/4"	51	9	9.9	19
PS155-06-06	4	1/4"	6	G-3/8"	50	10	9.9	22
PS155-10-04	6	3/8"	10	G-1/4"	51	8.6	13.9	22.2
PS155-10-06	6	3/8"	10	G-3/8"	51	10	13.9	22
PS155-10-08	6	3/8"	10	G-1/2"	50	13	13.9	27
PS155-13-06	8	1/2"	12	G-3/8"	50	10	17.9	27
PS155-13-08	8	1/2"	12	G-1/2"	55	13	17.9	27
PS155-13-12	8	1/2"	12	G-3/4"	58	14	17.9	36
PS155-20-12	12	3/4"	20	G-3/4"	58	14	23.9	32
PS155-20-16	12	3/4"	20	G-1"	62	17	23.9	41
PS155-25-16	16	1"	25	G-1"	72	17	30.9	46
PS155-32-20	20	1.1/4"	32	G-1.1/4"	79	18	37.9	50
PS155-40-24	24	1.1/2"	40	G-1.1/2"	82	23	46.9	65
PS155-50-32	32	2"	50	G-2"	82	23	55.9	70
PS155-63-40	40	2.1/2"	65	G-2.1/2"	124	30	79	86
STAPLE MALE - BSP TAPER								
PS155-06-04T •	4	1/4"	6	R-1/4"	51	9	9.9	19
PS155-10-06T •	6	3/8"	10	R-3/8"	51	10	13.9	22
PS155-13-08T •	8	1/2"	12	R-1/2"	55	13	17.9	27
PS155-20-12T •	12	3/4"	20	R-3/4"	58	14	23.9	32
PS155-20-16T •	12	3/4"	20	R-1"	62	17	23.9	41
PS155-25-16T •	16	1"	25	R-1"	72	17	30.9	46
PS155-50-32T	32	2"	50	R-2"	98	24	55.8	66
PS155-63-40T	40	2.1/2"	65	R-2.1/2"	130	29	79	80

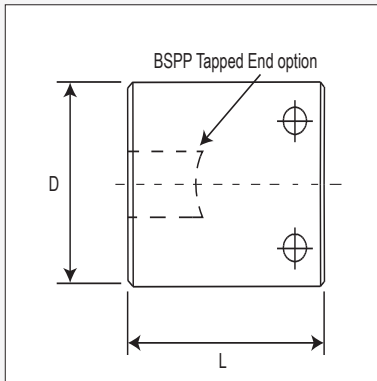
† 'R' denotes tapered thread 'G' denotes parallel thread

• These sizes available to order

Product Code	Nominal ID			BSPP Thread	Dimensions mm			
	Side A				L	L1	AF	
	Dash	Inch	DN					
PS157-13-08	13	1/2"	13	1/2"-14	54	17	30	

## PS160

### STAPLE BLANKING CAP

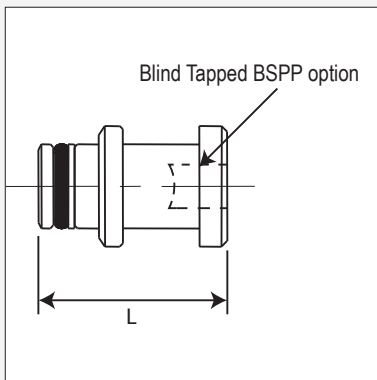


Product Code	Nominal Size			Dimensions mm			
	Staplelok			L	D		
	Dash	Inch	DN				
PS160-06	4	1/4"	6	39	25		
PS160-10	6	3/8"	10	40	32		
PS160-13	8	1/2"	12	43	35		
PS160-20	12	3/4"	20	44	45		
PS160-25	16	1"	25	52	55		
PS160-32	20	1.1/4"	32	55	60		
PS160-40	24	1.1/2"	40	80	80		
PS160-50	32	2"	50	70	85		
PS160-63	40	2.1/2"	65	118	100		

BSPP Tapped Port available for all sizes upon request. Please specify when ordering

## PS165

### STAPLE BLANKING PLUG

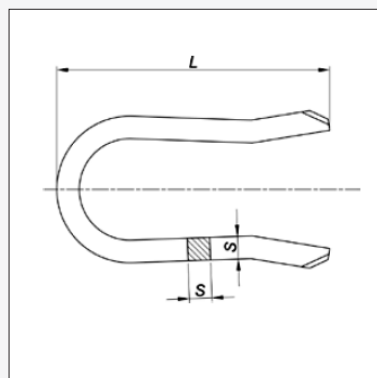


Product Code	Nominal Size			Dimensions mm			
	Staplelok			L			
	Dash	Inch	DN				
PS165-06	4	1/4"	6	34			
PS165-10	6	3/8"	10	34			
PS165B-10	6	3/8"	10	34	Staple Breather PLug		
PS165-13	8	1/2"	12	34			
PS165-20	12	3/4"	20	34			
PS165-25	16	1"	25	41			
PS165-32	20	1.1/4"	32	41			
PS165-40	24	1.1/2"	40	47			
PS165-50	32	2"	50	47			
PS165-63	40	2.1/2"	65	80			

Blind Tapped BSPP Port available for all sizes upon request. Please specify when ordering

## PS170

### STANDARD STAPLE SQUARE SECTION

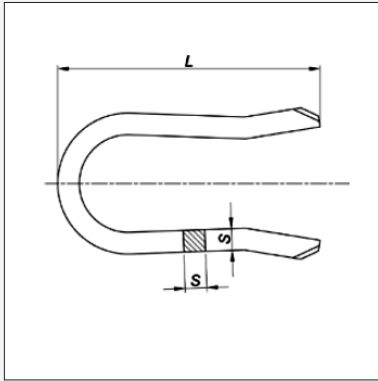


Product Code	Nominal Size			Dimensions mm	
	Staplelok			S	L
	Dash	Inch	DN		
PS170-06	4	1/4"	6	4	38
PS170-10 *	6	3/8"	10	4	42
PS170-13	8	1/2"	12	4	48
PS170-20	12	3/4"	20	4	55
PS170-25	16	1"	25	6	74
PS170-32	20	1.1/4"	32	6	83
PS170-40	24	1.1/2"	40	6	85
PS170-50	32	2"	50	6	95

\* DN10 Spring Steel Staples are rated to 400 Bar working pressure with 4:1 safety factor. When tested in accordance with DIN 20043, they exceed the 50 000 cycle impulse test requirement

# PS175

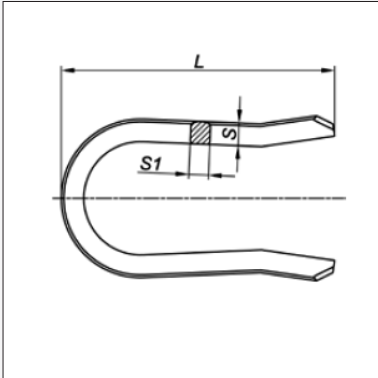
## STANDARD STAPLE SQUARE SECTION S'LESS STEEL



Product Code	Nominal Size			Dimensions mm	
	Staplelock			S	L
	Dash	Inch	DN		
PS175-06L	4	1/4"	6	4	72
PS175-20L	12	3/4"	20	4	100
PS175-25	16	1"	25	6	74
PS175-40	24	1.1/2"	40	6	85
PS175-50L	32	2"	50	6	120
PS175-75	48	3"	75	6	122

# PS175D

## STANDARD STAPLE 'D' SECTION S'LESS STEEL

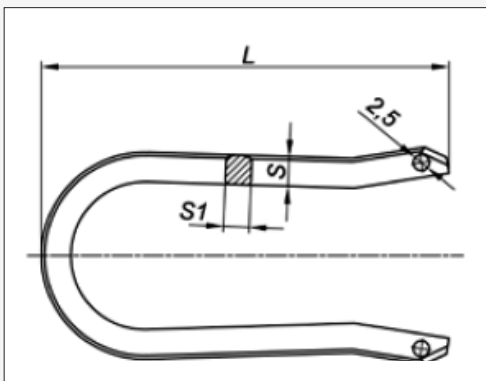


Product Code	Nominal Size			Dimensions mm		
	Staplelock			S	S1	L
	Dash	Inch	DN			
PS175D-06	4	1/4"	6	4.6	4.5	39
PS175D-06L-72	4	1/4"	6	4.6	4.5	72
PS175D-10	6	3/8"	10	4.6	4.5	42.5
PS175D-10L-78	6	3/8"	10	4.6	4.5	78
PS175D-10L-50	6	3/8"	10	4.6	4.5	50
PS175D-10L-100	6	3/8"	10	4.6	4.5	100
PS175D-13	8	1/2"	12	4.6	4.5	48.5
PS175D-20	12	3/4"	20	4.6	4.5	55.5
PS175D-20L-100	12	3/4"	20	4.6	4.5	100
PS175D-25	16	1"	25	6.6	6.5	74.5
PS175D-32	20	1.1/4"	32	6.6	6.5	83.5
PS175D-40	24	1.1/2"	40	6.6	6.5	85.5
PS175D-50	32	2"	50	6.6	6.5	95.5
PS175D-50L-123	32	2"	50	6.6	6.5	123
PS175D-63	40	2.1/2"	65	6.6	6.5	110
PS175-75	48	3"	75	6.6	6.5	120

\* DN10 Stainless Steel Staples are rated to 420 Bar working pressure with 4:1 safety factor. When tested in accordance with DIN 20043, they exceed the 50 000 cycle impulse test requirement

# PS176D

## STANDARD STAPLE - STAINLESS STEEL 'D' SECTION EXTENDED & DRILLED

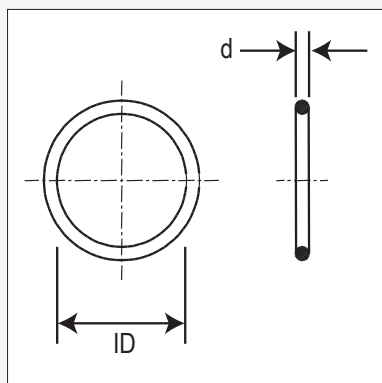


Product Code	Nominal Size			Dimensions mm		
	Staplelock			S	S1	L
	Dash	Inch	DN			
PS176D-10L-44	6	3/8"	10	4.6	4.5	44
PS176D-10L-78	6	3/8"	10	4.6	4.5	78
PS176D-10L-100	6	3/8"	10	4.6	4.5	100
PS176D-13L-52	8	1/2"	12	4.6	4.5	52
PS176D-20L-63	12	3/4"	20	4.6	4.5	63
PS176D-25L-81	16	1"	25	6.6	6.5	81
PS176D-32L-90	20	1.1/4"	32	6.6	6.5	90
PS176D-50L-106	32	2"	50	6.6	6.5	106
PS176D-50L-123	32	2"	50	6.6	6.5	123
PS176D-63L-115	40	2.1/2"	65	6.6	6.5	115
PS176D-63L-130	40	2.1/2"	65	6.6	6.5	130



# PS180

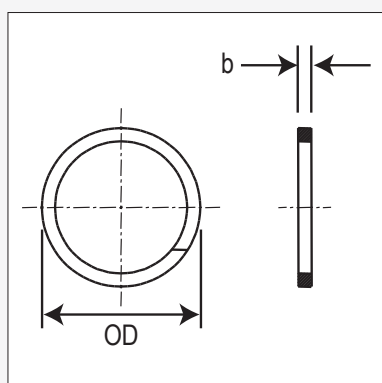
## STAPLE O-RING SEAL



Product Code	Nominal Size			Dimensions mm			
	Staplelok			ID	d		
	Dash	Inch	DN				
PS180-06	4	1/4"	6	6	2		
PS180-10	6	3/8"	10	10	2		
PS180-13	8	1/2"	12	13	2.5		
PS180-16	10	5/8"	16	17	2.5		
PS180-20	12	3/4"	20	19	2.5		
PS180-25	16	1"	25	25	2.5		
PS180-32	20	1.1/4"	32	33	2.5		
PS180-40	24	1.1/2"	40	40	3		
PS180-50	32	2"	50	49	3		
PS180-63	40	2.1/2"	65	72	3		
PS180-75	48	3"	75	80	3		

# PS195

## STAPLE BACK-UP WASHER



Product Code	Nominal Size			Dimensions mm			
	Staplelok			OD	b		
	Dash	Inch	DN				
PS195-06	4	1/4"	6	10	0.8		
PS195-10	6	3/8"	10	14	0.8		
PS195-13	8	1/2"	12	18	0.8		
PS195-16	10	5/8"	16	22	0.8		
PS195-20	12	3/4"	20	24	0.8		
PS195-25	16	1"	25	31	0.8		
PS195-32	20	1.1/4"	32	38	0.8		
PS195-40	24	1.1/2"	40	47	1.5		
PS195-50	32	2"	50	56	1.5		

# PRESSURE GAUGES

## BOURDON TUBE GENERAL PURPOSE



### Description:

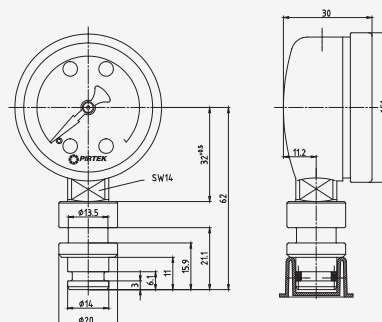
- Specifically designed for mining
- Accuracy class 2.5
- Dual scales - bar / MPa
- Pressure relief on top of case
- Hermetically sealed
- Suit all gaseous and liquid media that do not react with copper alloys
- Temperature range:
  - Max. 60°C (flow media)
  - +10°C to 60°C (ambient)
- Temperature Drift:
  - +0.3% / 10°K deviation from 20°C rising
  - 0.3% / 10°K deviation from 20°C falling

### Materials and Specifications:

- Hot forged 51 mm DN brass case and stem
- Roll formed stainless steel bezel
- Acrylic glass with white face and fluorescent pointer and red / green / yellow ranges
- Stop pin at zero
- Copper alloy helical tube movement
- 99.5% glycerine filled
- DN 10 Form A staple, bottom radial, 14 mm flats

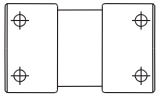
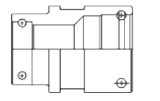
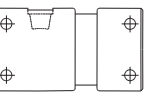
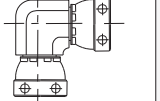
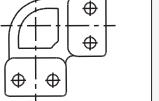
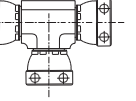
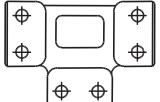
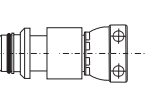
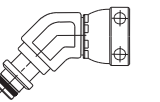
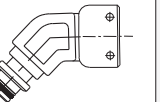
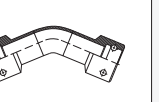
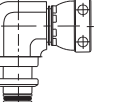
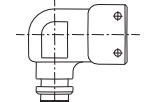
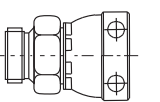
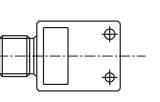
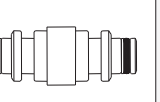
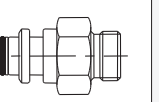
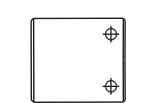
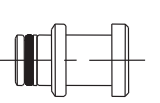
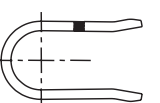
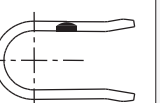
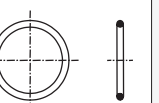
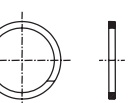
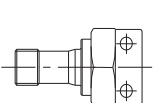
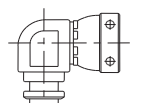

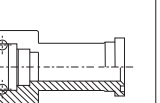
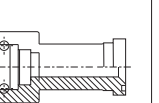
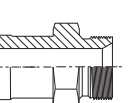
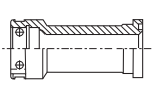
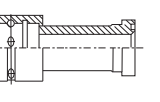
### Applications and Notes:

- Suited to high impulse loadings
- Complies with EN 837-1/S2 safety standards
- Electrical protection to IP65 (EN 60 529/IEC 529)
- Low internal wear due to glycerine fill
- Constant load: full scale value
- Dynamic (alternating) load: 0.9 full scale
- Suited to mining and hydraulic aggregates



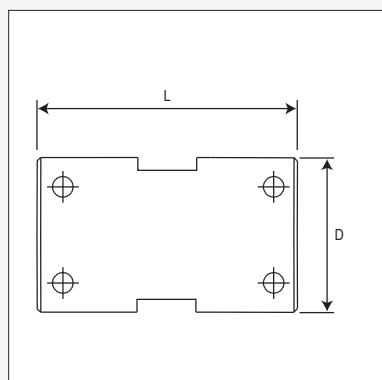
### MINING SPECIFIC PRESSURE GAUGE

Product Code	Fitting	Range
PG50ST-250	DN10 Staple Male	0-250 Bar (0-25 Mpa)
PG50ST-600	DN10 Staple Male	0-600 Bar (0-60 Mpa)
PG50ST-800	DN10 Staple Male	0-800 Bar (0-80 Mpa)

<p>Super Staple Cplg . Fixed Female</p>  <p><b>PSS30</b> 67</p>	<p>Super Staple Cplg . Fixed Reducing</p>  <p><b>PSS30 Reducing</b> 67</p>	<p>Super Staple Cplg . Tapped &amp; Grooved</p>  <p><b>PSSE30G</b> 67</p>	<p>Super Staple 90° Female Swivel</p>  <p><b>PSS40</b> 68</p>	<p>Super Staple 90° Female Fixed</p>  <p><b>PSS45</b> 68</p>	<p>S/Staple Swivel Tee Equal or Unequal</p>  <p><b>PSS50</b> 69</p>
<p>S/Staple Fixed Tee Equal or Unequal</p>  <p><b>PSS55</b> 69</p>	<p>S/Staple Male-Fem Adaptor Swivel</p>  <p><b>PSS72</b> 69</p>	<p>S/Staple Swivel 45° Male Female</p>  <p><b>PSS74</b> 70</p>	<p>S/Staple Fixed 45° Male Female</p>  <p><b>PSS74F</b> 70</p>	<p>S/Staple 45° Manifold Fixed F - F</p>  <p><b>PSSM135</b> 70</p>	<p>S/Staple Swivel 90° Male Female</p>  <p><b>PSS76</b> 71</p>
<p>S/Staple Fixed 90° Male Female</p>  <p><b>PSS76F</b> 71</p>	<p>S/Staple Female Swivel to BSPP Male</p>  <p><b>PSS115</b> 71</p>	<p>S/Staple Female Fixed to BSPP Male</p>  <p><b>PSS115F</b> 72</p>	<p>S/Staple Male Unequal Nipple</p>  <p><b>PSS120</b> 72</p>	<p>S/Staple to Male BSPP Nipple</p>  <p><b>PSS155</b> 72</p>	
<p>S/Staple Blanking Cap</p>  <p><b>PSS160</b> 73</p>	<p>S/Staple Blanking Plug</p>  <p><b>PSS165</b> 73</p>	<p>S/Steel Super Staple Square Section</p>  <p><b>PSS175</b> 73</p>	<p>S/Steel Super Staple D Section</p>  <p><b>PSS175D PSS176D</b> 73 74</p>	<p>Super Staple O-Ring Seal</p>  <p><b>PSS180</b> 74</p>	<p>Super Staple Back-up Washer</p>  <p><b>PSS195</b> 74</p>
<p>Hydrafuse Straight Male BSP</p>  <p><b>HF115</b> 75</p>	<p>Hydrafuse Forged Compact 90</p>  <p><b>HF76</b> 75</p>	<p>Diffuser</p>  <p><b>DIFFUSER</b> 76</p>	<p>Code 61 Flange - Staplelok Female</p>  <p><b>C611-xx-SF</b> 76</p>	<p>Code 62 Flange - Super Staple Female</p>  <p><b>C621-xx-SSF</b> 76</p>	<p>Code 61 Flange - BSP Male</p>  <p><b>C61-xxxxP</b> 77</p>
<p>Code 61 Flange - Slimline Female</p>  <p><b>C611-xx-SLF</b> 77</p>	<p>Code 61 Flange - Clipline Female</p>  <p><b>C611-xx-CLF</b> 77</p>				

# PSS30 & PSS30- XXG

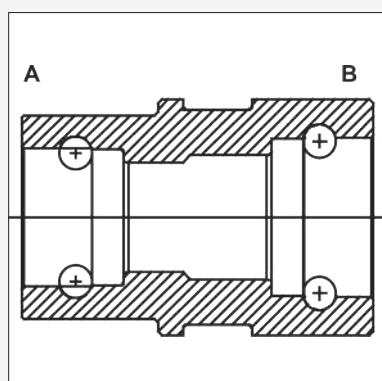
## SUPER STAPLE STRAIGHT FEMALE FIXED COUPLING



Product Code	Nominal Size			Dimensions mm	
	Dash	Inch	DN	L	D
PSS30-13	8	1/2"	12	69	38
PSS30-20	12	3/4"	20	74	45
PSS30-25	16	1"	25	104	60
PSS30-32	20	1.1/4"	32	117	70
PSS30-40	24	1.1/2"	40	117	80
PSS30-50	32	2"	50	117	90
PSS30-50G	32	2"	50	140	95

# PSS30

## SUPER STAPLE STRAIGHT REDUCING COUPLING

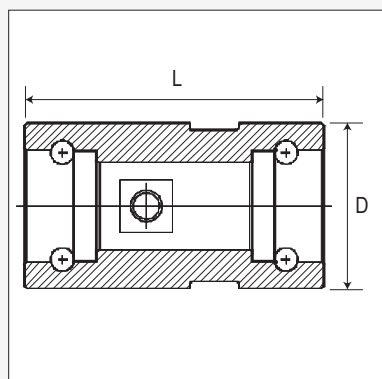


Product Code	End A			End B			Dimensions mm		
	Dash	Inch	DN	Dash	Inch	DN	Lgth	Dia	Retaining Groove
PSS30-40-25	24	1.1/2"	40	16	1"	25	117	80	†
PSS30-50-25	32	2"	50	16	1"	25	117	90	†
PSS30-50-40	32	2"	50	24	1.1/2"	40	117	90	†

† The retaining groove around the coupling circumference allows fast installation / removal of the adaptor using a bolted key arrangement. These fittings form part of a total bulkhead design package, and are made to order. Please contact Pirtek for details

# PSSE30G(P)

## SUPER STAPLE STRAIGHT BSPP TAPPED COUPLING



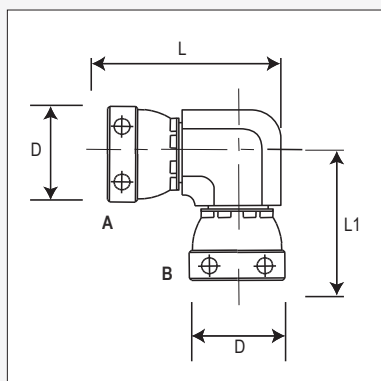
"Product Code"	Nominal Size			"Threaded Port"	Dimensions mm	
	Dash	Inch	DN	BSPP	L	D
PSSE30-25G-06P †	16	1"	25	G3/8"-19	160	60
PSSE30-40G-06P †	24	1.1/2"	40	G3/8"-19	190	82.5
PSSE30-50G-06P	32	2"	50	G3/8"-19	190	95

† Non stocked, available on request.

The retaining groove around the coupling circumference allows fast installation / removal of the adaptor using a bolted key arrangement. These fittings form part of a total bulkhead design package, and are made to order. Please contact Pirtek for details

# PSS40

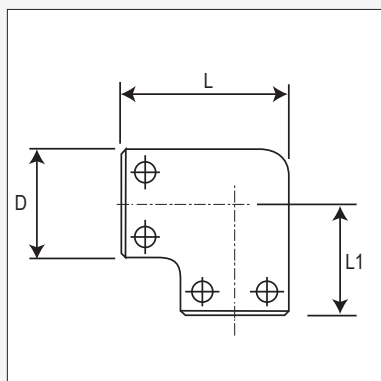
## SUPER STAPLE 90° ELBOW SWIVEL FEMALE COUPLING



Product Code	Nominal Size						Dimensions mm		
	Side A			Side B					
	Dash	Inch	DN	Dash	inch	DN	L	L1	D
PSS40-20	12	3/4"	20	12	3/4"	20	100	60	45

# PSS45

## SUPER STAPLE 90° ELBOW FIXED FEMALE COUPLING

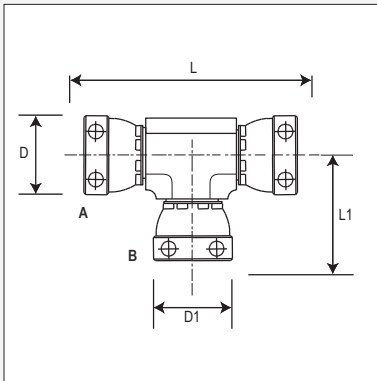


Product Code	Nominal Size			Dimensions mm		
	Dash	Inch	DN	L	L1	D
PSS45-25	16	1"	25	110	60	45
PSS45-32	20	1.1/4"	32	136	88	90
PSS45-40	24	1.1/2"	40	125	81	88
PSS45-50	32	2"	50	136	90	97

# PSS50

## SUPER STAPLE

### SWIVEL TEE

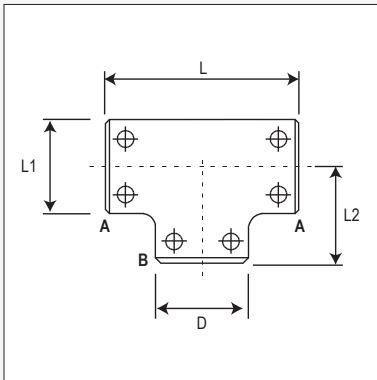


Product Code	Nominal Size						Dimensions mm			
	Side A			Side B						
	Dash	Inch	DN	Dash	inch	DN	L	L1	D	D1
PSS50-13	8	1/2"	12	8	1/2"	12	120	55	38	38
PSS50-20	12	3/4"	20	12	3/4"	20	130	60	45	45

# PSS55

## SUPER STAPLE

### FIXED TEE

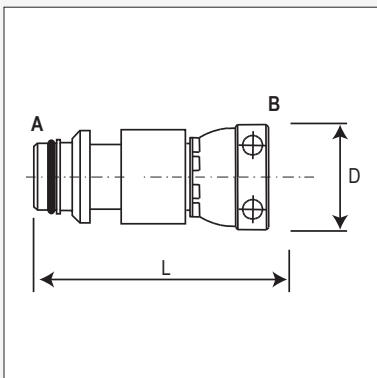


Product Code	Nominal Size						Dimensions mm			
	Side A			Side B						
	Dash	Inch	DN	Dash	inch	DN	L	L1	L2	D
PSS55-32	20	1.1/4"	32	20	1.1/4"	32	155	70	78	70
PSS55-40	24	1.1/2"	40	24	1.1/2"	40	165	80	78	80
PSS55-50	32	2"	50	32	2"	50	175	90	88	90

# PSS72F

## SUPER STAPLE - FIXED

### MALE-FEMALE COUPLING

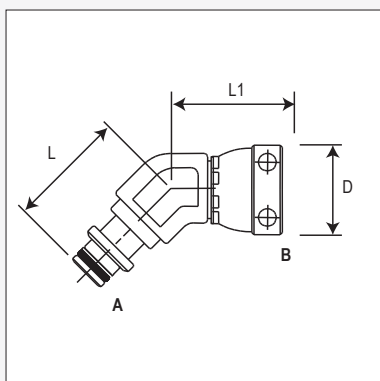


Product Code	Nominal Size						Dimensions mm		
	Side A			Side B					
	Dash	Inch	DN	Dash	inch	DN	L	D	
PSS72F-40-25	24	1.1/2"	40	16	1"	25	120	60	

# PSS74

## SUPER STAPLE

### 45° ELBOW M-F

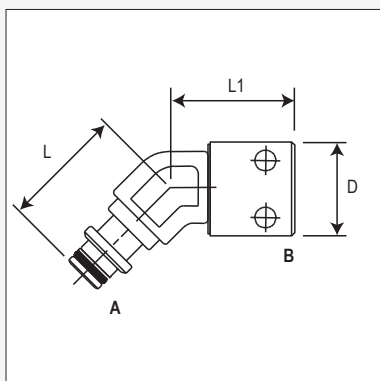


Product Code	Nominal Size						Dimensions mm		
	Side A			Side B					
	Dash	Inch	DN	Dash	inch	DN	L	L1	D
PSS74-20	12	3/4"	20	12	3/4"	20	52	53	45

# PSS74F

## SUPER STAPLE

### 45° ELBOW M-F FIXED

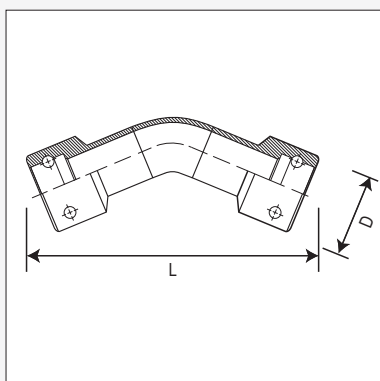


Product Code	Nominal Size						Dimensions mm		
	Side A			Side B					
	Dash	Inch	DN	Dash	inch	DN	L	L1	D
PSS74F-25	16	1"	25	16	1	25	67	55	62
PSS74F-40	24	1.1/2"	40	24	1.1/2"	40	78	64	80

# PSSM135

## SUPER STAPLE

### 45° ELBOW F-F



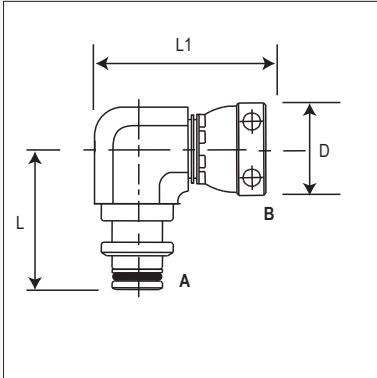
Product Code	Nominal Size						Dimensions mm		
	Side A			Side B					
	Dash	Inch	DN	Dash	inch	DN	L	D	
PSSM135-25	16	1"	25	16	1"	25	314	60	
PSSM135-32	20	1.1/4"	32	20	1.1/4"	32	314	70	
PSSM135-50	32	2"	50	32	2"	50	314	90	



# PSS76

## SUPER STAPLE

### 90° ELBOW M-F

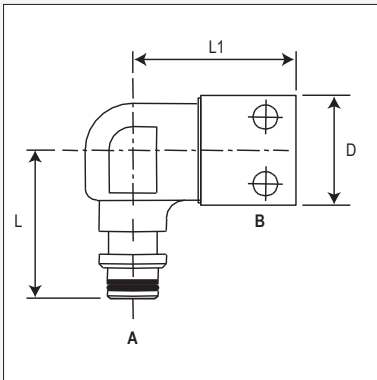


Product Code	Nominal Size						Dimensions mm		
	Side A			Side B					
	Dash	Inch	DN	Dash	inch	DN	L	L1	D
PSS76-13	8	1/2"	12	8	1/2"	12			
PSS76-20	12	3/4"	20	12	3/4"	20	85	65	45
PSS76-25	16	1"	25	16	1"	25	83	108	60

# PSS76F

## SUPER STAPLE

### 90° ELBOW M-F FIXED

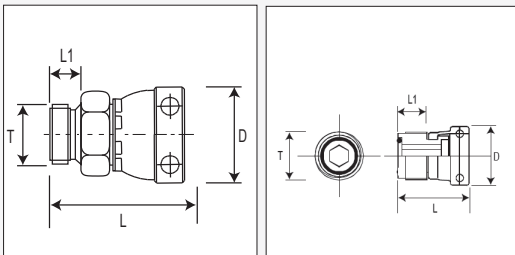


Product Code	Nominal Size						Dimensions mm		
	Side A			Side B					
	Dash	Inch	DN	Dash	inch	DN	L	L1	D
PSS76F-25	16	1"	25	16	1"	25	85	72	60
PSS76F-32	20	1.1/4"	32	20	1.1/4"	32	101	81	77
PSS76F-40	24	1.1/2"	40	24	1.1/2"	40	107	82	86
PSS76F-50	32	2"	50	32	2"	50			95

# PSS115 / PSS115H

## SUPER STAPLE

### SWIVEL FEMALE - BSPP / INTERNAL HEX



Product Code	Seal Required	Nominal Size			BSPP Thread	Dimensions mm			
		Staple Female							
		Dash	Inch	DN	T	L	L1	D	AF
PSS115-20	Z-20	12	3/4"	20	3/4"	59	14	45	36
PSS115-25	Z-25	16	1"	25	1"	73	17	60	46

These fittings require a bonded seal that needs to be ordered separately (Pirtek 'Z' Series)

Product Code	Nominal Size			BSPP Thead Internal Hex	Dimensions mm			
	Staple Female							
	Dash	Inch	DN	T	L	L1	D	HEX
PSS115H-20-12	12	3/4"	20	3/4"	69.2	24	45	14

Sealing of the BSPP port is via a Delrin seal in the face of the thread, for replacement seal use PS115H-SEAL-12

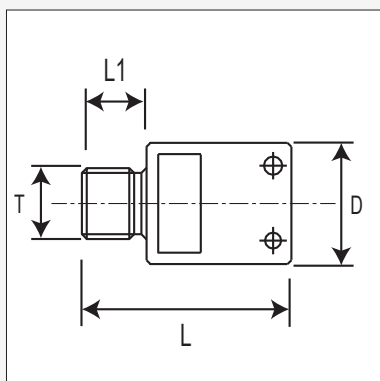


This page is part of a complete catalogue containing technical and safety data.  
All data must be reviewed when selecting a product.  
Pirtek reserve the right to change technical specifications without notice

# PSS115F

## SUPER STAPLE

### FIXED FEMALE - BSPP

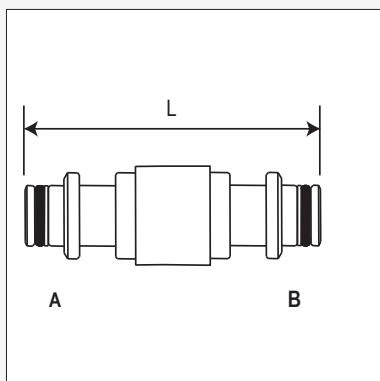


Product Code	Seal Required	Nominal Size			BSPP Thread	Dimensions mm			
		Staple Female				L	L1	D	AF
		Dash	Inch	DN					
PSS115F-32	Z-20	20	1.1/4"	32	1.1/4"	91	19	70	60
PSS115F-40	Z-24	24	1.1/2"	40	1.1/2"	100	19	83	70
PSS115F-50	Z-32	32	2"	50	2"	112	19	95	85

# PSS120

## SUPER STAPLE NIPPLE

### EQUAL OR UNEQUAL

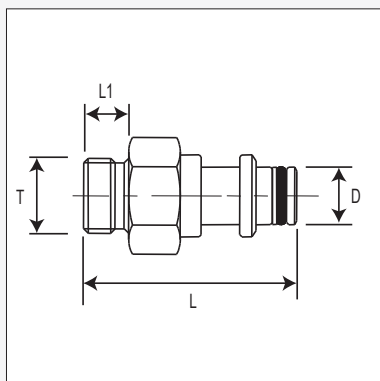


Product Code	Nominal Size						Dimensions mm	
	Side A			Side B			L	
	Dash	Inch	DN	Dash	Inch	DN		
PSS120-13	8	1/2"	12	8	1/2"	12	70	
PSS120-20	12	3/4"	20	12	3/4"	20	81	
PSS120-20-10	12	3/4"	20	6	3/8"	10		
PSS120-25	16	1"	25	16	1"	25	109	
PSS120-32	20	1.1/4"	32	20	1.1/4"	32	110	
PSS120-40	24	1.1/2"	40	24	1.1/2"	40	122	
PSS120-40-32	24	1.1/2"	40	20	1.1/4"	32	120	
PSS120-50	32	2"	50	32	2"	50	124	

# PSS155

## SUPER STAPLE

### MALE - BSPP

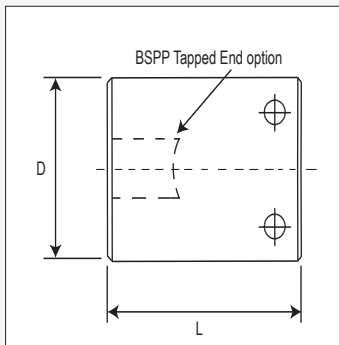


Product Code	Seal Required	Nominal Size			BSPP Thread	Dimensions mm			
		Staplelok				L	L1	D	AF
		Dash	Inch	DN					
PSS155-20-12	Z-12	12	3/4"	20	3/4"	68	14	21.9	32
PSS155-25-16	Z-16	16	1"	25	1"	87	17	27	46
PSS155-32-20	Z-20	20	1.1/4"	32	1.1/4"	90	19	37.8	50
PSS155-40-24	Z-24	24	1.1/2"	40	1.1/2"	98	20	43.9	60
PSS155-50-32	Z-32	32	2"	50	2"	105	23	49.9	70

These fittings require a bonded seal that needs to be ordered separately (Pirtek 'Z' Series)

# PSS160

## SUPER STAPLE BLANKING CAP

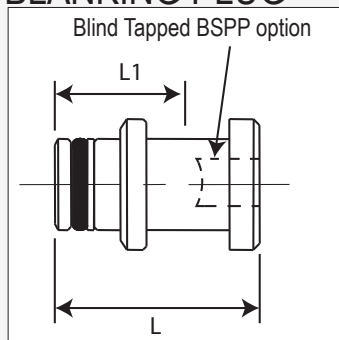


Product Code	Nominal ID			Dimensions mm			
	Staplelok			L	D		
	Dash	Inch	DN				
PSS160-13	8	1/2"	12	70	38		
PSS160-20	12	3/4"	20	75	45		
PSS160-25	16	1"	25	90	60		
PSS160-32	20	1.1/4"	32	90	70		
PSS160-40	24	1.1/2"	40	100	80		
PSS160-50	32	2"	50	112	90		

BSPP Tapped Port available for all sizes upon request. Please specify when ordering

# PSS165

## SUPER STAPLE BLANKING PLUG

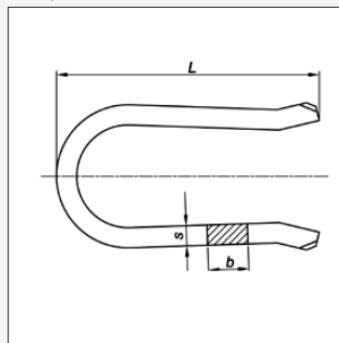


Product Code	Nominal ID			Dimensions mm			
	Staplelok			L	L1	D	
	Dash	Inch	DN				
PSS165-13	8	1/2"	12	40	32	15.9	
PSS165-20	12	3/4"	20	45	36	21.9	
PSS165-25	16	1"	25	62	51	27	
PSS165-32	20	1.1/4"	32	64	51	37.8	
PSS165-40	24	1.1/2"	40	70	57	43.9	
PSS165-50	32	2"	50	74	62	49.9	

BSPP Tapped Port available for all sizes upon request. Please specify when ordering

# PSS175

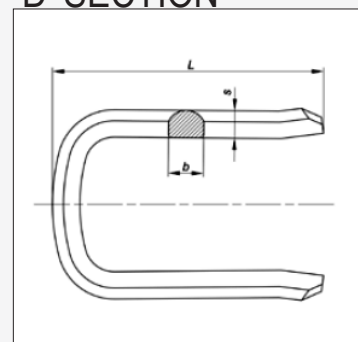
## SUPER STAPLE - STAINLESS STEEL SQUARE SECTION



Product Code	Nominal ID			Dimensions mm		
	Staplelock			s	b	L
	Dash	Inch	DN			
PSS175-13	8	1/2"	12	4	8	54
PSS175-20	12	3/4"	20	4	8	56

# PSS175D

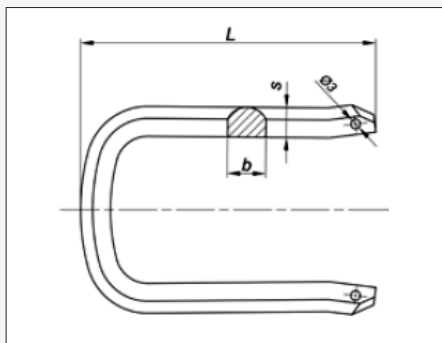
## SUPER STAPLE - STAINLESS STEEL 'D' SECTION



Product Code	Nominal ID			Dimensions mm		
	Staplelock			s	b	L
	Dash	Inch	DN			
PSS175D-13	8	1/2"	12	6.5	8	53
PSS175D-20	12	3/4"	20	6.5	8	60
PSS175D-20L-114	12	3/4"	20	6.5	8	114
PSS175D-25	16	1"	25	9.4	12	75
PSS175D-32	20	1.1/4"	32	9.4	12	85
PSS175D-40	24	1.1/2"	40	9.4	12	92
PSS175D-50	32	2"	50	9.4	12	103

## PSS176D

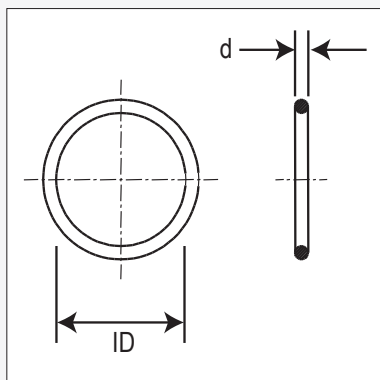
SUPER STAPLE - STAINLESS STEEL  
'D' SECTION EXTENDED & DRILLED



Product Code	Nominal ID			Dimensions mm		
	Staplelock					
	Dash	Inch	DN	s	b	L
PSS176D-20L-61	12	3/4"	20	6.5	8	61
PSS176D-25L-90	16	1"	25	9.4	12	90
PSS176D-25L-115	16	1"	25	9.4	12	115
PSS176D-50L-115	32	2"	50	9.4	12	115
PSS176D-50L-130	32	2"	50	9.4	12	130

## PSS180

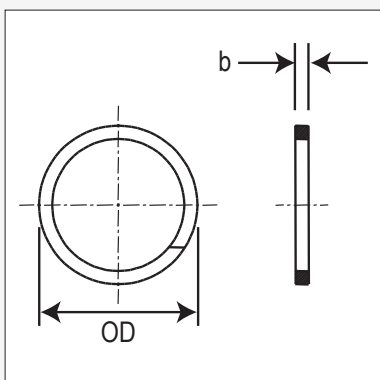
SUPER STAPLE O-RING SEAL



Product Code	Nominal Size			Dimensions mm			
	Staplelok						
	Dash	Inch	DN	ID	d		
PSS180-13	8	1/2"	12	11	2.5		
PSS180-20	12	3/4"	20	18	2.5		
PSS180-25	16	1"	25	25	2.5		
PSS180-32	20	1.1/4"	32	33	2.5		
PSS180-40	24	1.1/2"	40	38	3		
PSS180-50	32	2"	50	44	3		

## PSS195

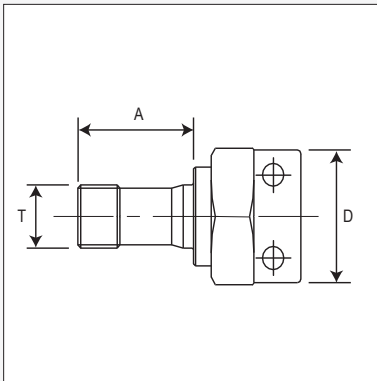
SUPER STAPLE BACK-UP WASHER



Product Code	Nominal Size			Dimensions mm			
	Staplelok						
	Dash	Inch	DN	OD	b		
PSS195-13	8	1/2"	12	16	0.8		
PSS195-20	12	3/4"	20	22	0.8		
PSS195-25	16	1"	25	31	0.8		
PSS195-32	20	1.1/4"	32	38	0.8		
PSS195-40	24	1.1/2"	40	44	1.5		
PSS195-50	32	2"	50	50	1.5		

# HF115

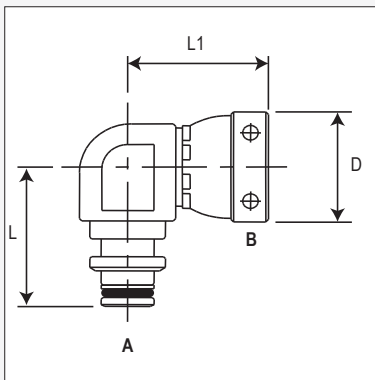
## HYDRAFUSE ADAPTOR STRAIGHT MALE BSPP



Product Code	Nominal Size			Thread T		Dimensions mm		
	Hydrafuse			BSPP				
	Dash	Inch	DN	Inch		A	D	
HF115-10-06-L	6	3/8"	10	3/8"-19		33	32	
HF115-10-06-M	6	3/8"	10	3/8"-19		23	32	
HF115-10-06-S	6	3/8"	10	3/8"-19		12	32	

# HF76

## HYDRAFUSE ADAPTOR FORGED COMPACT ELBOW M - F



Product Code	Nominal Size						Dimensions mm		
	Hydrafuse Female			Hydrafuse Male					
	Dash	Inch	DN	Dash	Inch	DN	L	L1	D
HF76-10	6	3/8"	10	6	3/8"	10	36	48	33

# DIFFUSER

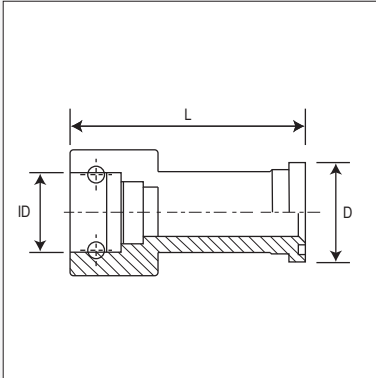
## SAFETY DEVICE FOR PRESSURE BLEED



Product Code	Nominal Size							
	Staplelok Female							
	Dash	Inch	DN					
DIFFUSER-10	6	3/8"	10					

## C611-xx-SF

FLANGE - STAPLE ADAPTOR  
CODE 61 - STANDARD FEMALE

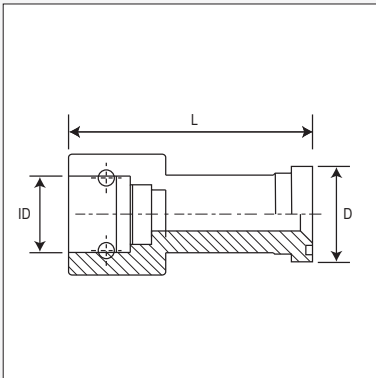


Product Code	Nominal Size						Dimensions mm		
	Code 61 Flange			Staple Female					
	Dash	Inch	DN	Dash	Inch	DN	L	ID	D
C611-32-SF	32	2"	50	32	2"	50		64	71.4
C611-40-SF	40	2.1/2"	62	40	2.1/2"	62			84.1

Step sizes available on request

## C621-xx-SSF

FLANGE - SUPER STAPLE ADAPTOR  
CODE 62 - SUPER STAPLE FEMALE



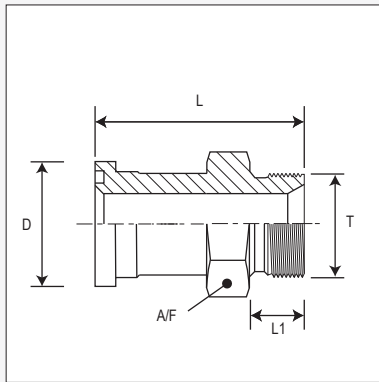
Product Code	Nominal Size						Dimensions mm		
	Code 62 Flange			Staple Female					
	Dash	Inch	DN	Dash	Inch	DN	L	ID	D
C621-20-SSF	20	1 1/4"	32	20	1 1/4"	32			
C621-24-SSF	24	1 1/2"	38	24	1 1/2"	40			
C621-32-SSF	32	2"	50	32	2"	50		65.4	32

Step sizes available on request



## C61-xxxxP

FLANGE - BSPP ADAPTOR  
CODE 61 - STRAIGHT MALE

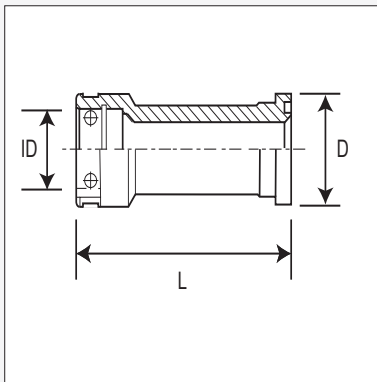


Product Code	Nominal Size			Thread T	Dimensions mm			
	Flange			BSPP				
	Dash	Inch	DN	Inch	L	D	A/F	L1
C61-5032P	32	2"	50	2"-11		71.4		
C61-6340P	40	2.1/2"	63	2.1/2"-11	126	84.1	97.2	30

'Z' Series Bonded Seal required to seal the BSPP fitting (available separately)

## C611-xx-SLF

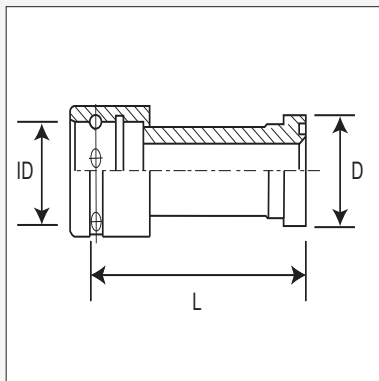
FLANGE - SLIMLINE® ADAPTOR  
CODE 61 - SLIMLINE® FEMALE



Product Code	Nominal OD						Dimensions mm		
	Code 61 Flange			Slimline Female					
	Dash	Inch	DN	Dash	Inch	DN	L	ID	D
C611-32-SLF	32	2"	50	32	2"	50			
C611-40-SLF	40	2.1/2"	62	40	2.1/2"	62			

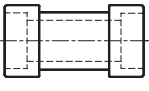
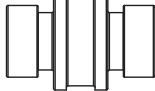
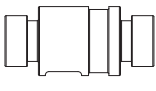
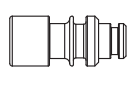
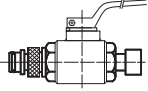
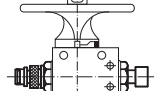
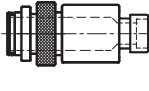
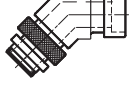
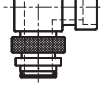
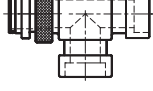
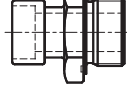

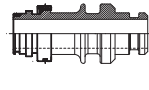
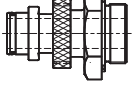
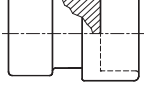
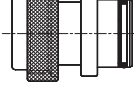
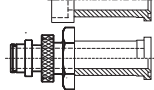

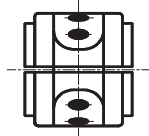


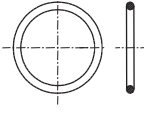
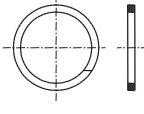
## C611-xx-CLF

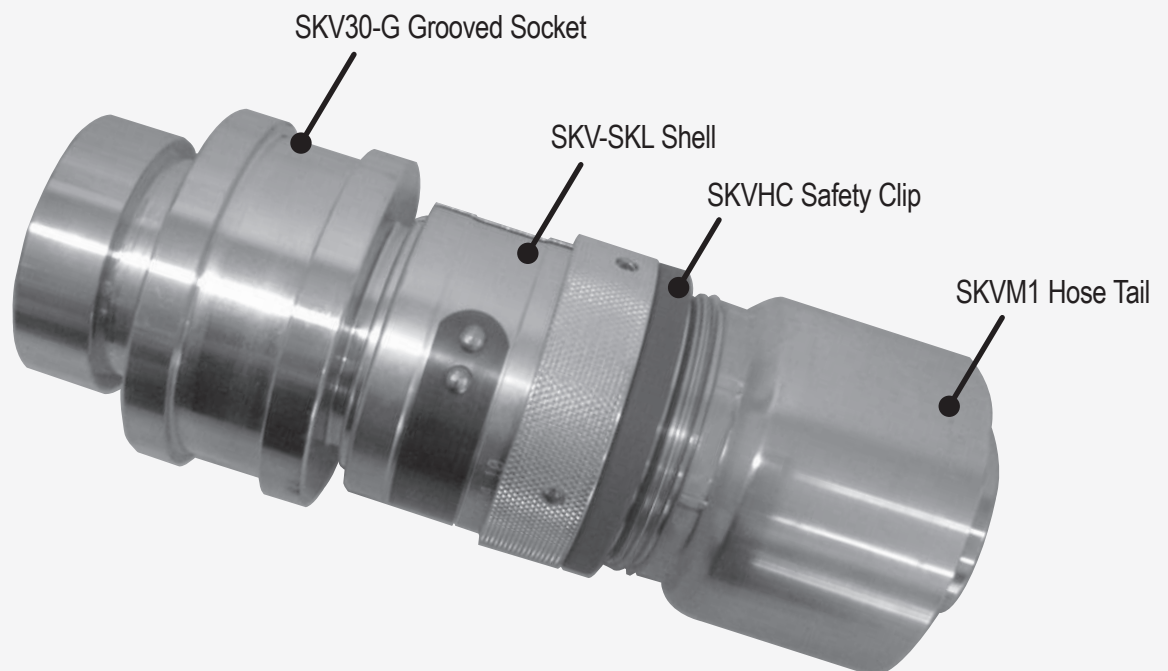
FLANGE - CLIPLINE® ADAPTOR  
CODE 61 - CLIPLINE® FEMALE



Product Code	Nominal OD						Dimensions mm		
	Code 61 Flange			Clipline Female					
	Dash	Inch	DN	Dash	Inch	DN	L	ID	D
C611-40-CLF	40	2.1/2"	62	40	2.1/2"	62			

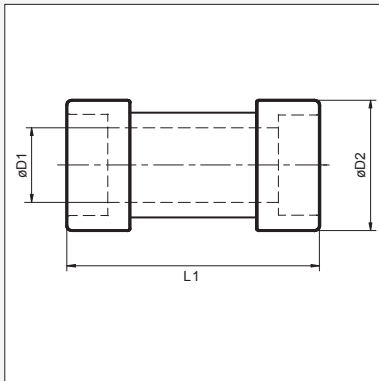
## PRANGE SKV ADAPTORS

<b>SKV Fem Socket</b>  <b>SKV30</b> 79 <b>SKVE30</b> 79	<b>SKV Grooved Socket</b>  <b>SKV30-G</b> 79	<b>SKV Grooved Socket Tapped BSPP</b>  <b>SKVE30G-16P</b> 80 <b>SKVE30G-16T</b> 80	<b>SKV Socket to Staplelok Male</b>  <b>SKV30-SM</b> 80	<b>SKV M-F Ball Valve Padlock Type</b>  <b>SKV31-PL</b> 80	<b>SKV M-F Ball Valve Red Handle Type</b>  <b>SKV31-6RD</b> 80
<b>SKV Straight Coupling Male - Fixed Female</b>  <b>SKV72F</b> 81	<b>SKV 45° Elbow Male - Fixed Female</b>  <b>SKV74F</b> 81	<b>SKV 90° Elbow Male - Fixed Female</b>  <b>SKV76F</b> 81	<b>SKV Tee Male - Fem. - Fem.</b>  <b>SKV78F</b> 82	<b>SKV Fem x BSPP M</b>  <b>SKV115</b> 82	<b>SKV Joining Nipple</b>  <b>SKV120</b> 82
<b>SKV Male x Staple M Nipple</b>  <b>SKV120SM</b> 83	<b>SKV Male x BSPP M Nipple</b>  <b>SKV155</b> 83	<b>SKV Blanking Cap</b>  <b>SKV160</b> 83	<b>SKV Blanking Plug</b>  <b>SKV165</b> 84	<b>SKV to SAE Flange Female - Code Flange</b>  <b>SKVF</b> 84 <b>SKVM</b> 84	<b>SKV Manifold 135° Swept F-F or M-M</b>  <b>SKVM135</b> 84 <b>SKVM-M</b> 84
<b>SKV Shell</b>  <b>SKV-SHL</b> 85	<b>SKV Adaptor Clip</b>  <b>SKVAC</b> 85	<b>SKV Hose Tail Clip</b>  <b>SKVHC</b> 85	<b>SKV O-Ring</b>  <b>SKV180</b> 85	<b>SKV Back-Up Washer</b>  <b>SKV195</b> 85	



# SKV30

## PRANGE SKV FEMALE SOCKET

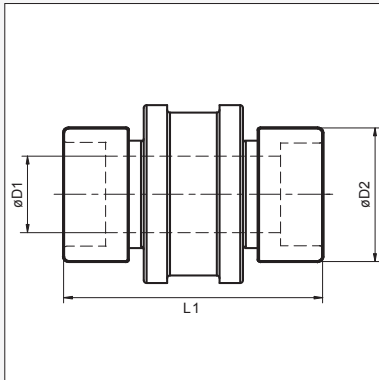


Product Code	Nominal Size						Dimensions mm		
	SKV D1			SKV D2			D1	D2	L1
	Dash	Inch	DN	Dash	Inch	DN			
SKV30-25 †	25	1"	25	25	1"	25	19	33	57
SKV30-32 †	32	1.1/4"	32	32	1.1/4"	32	24	39.8	74
SKV30-40	40	1.1/2"	40	40	1.1/2"	40	32	53	75
SKV30-50 †	50	2"	50	50	2"	50	44	65	80
SKV30-63 †	63	2.1/2"	63	63	2.1/2"	63	55	75	80

† Non stocked, available on request.

# SKV30-G

## PRANGE SKV FEMALE SOCKET GROOVED



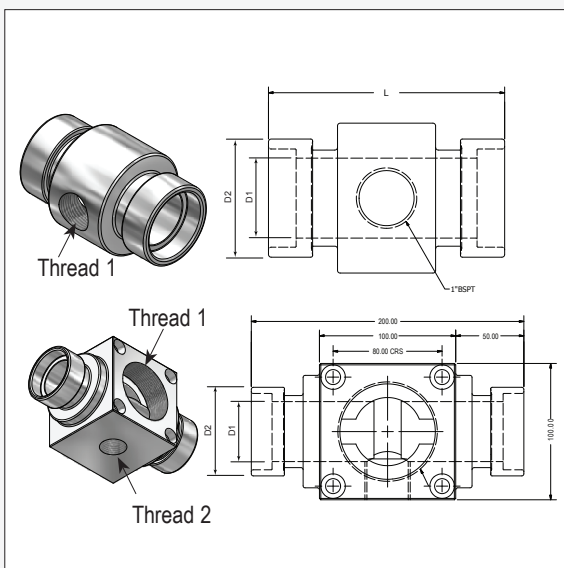
Product Code	Nominal Size						Dimensions mm		
	SKV D1			SKV D2			D1	D2	L1
	Dash	Inch	DN	Dash	Inch	DN			
SKV30-25G	25	1"	25	25	1"	25	19	33	110
SKV30-32G †	32	1.1/4"	32	32	1.1/4"	32	24	39.8	
SKV30-40G	40	1.1/2"	40	40	1.1/2"	40	32	53	128
SKV30-50-40G	50	2"	50	40	1.1/2"	40	44/32	65/53	128
SKV30-50G	50	2"	50	50	2"	50	44	65	130
SKV30-63G	63	2.1/2"	63	63	2.1/2"	63	55	75	135

This arrangement is designed for manifold mounting in conjunction with a special keyed arrangement

† Non stocked, available on request.

# SKVE30

## PRANGE SKV EXTENDED FEMALE SOCKET-BSPT PORT

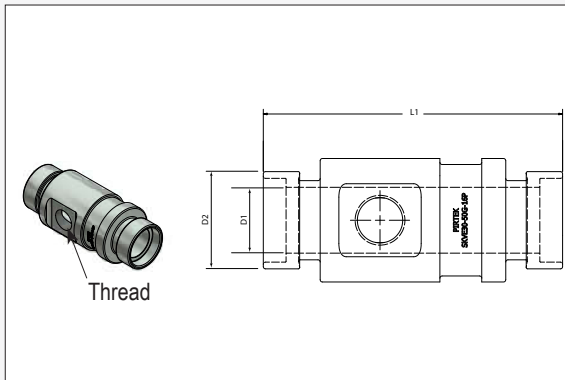


Product Code	Nominal Size						Dimensions mm			BSPT Threads	
	SKV D1			SKV D2			D1	D2	L	1	2
	Dash	Inch	DN	Dash	Inch	DN					
SKVE30-50-16T	50	2"	50	50	2"	50	44	65	130	1"-11	-
SKVE30-63-16T	63	2 1/2"	63	63	2 1/2"	63	55	75		1"-11	-
SKVE30-63-40T-16T	63	2 1/2"	63	63	2 1/2"	63	55	75	200	2 1/2"-11	1"-11
SQUARE BLOCK STYLE FOR MONORAIL MOUNTING											
SKVE30-50-40T-16T	50	2"	50	50	2"	50	44	65	200	2 1/2"-11	1"-11

The square block design with 4 mounting holes finds application on monorails. Mounting holes are 11mm dia at 80 mm square centres

# SKVE30-G

PRANGE SKV FEMALE SOCKET  
GROOVED AND TAPPED BSPP

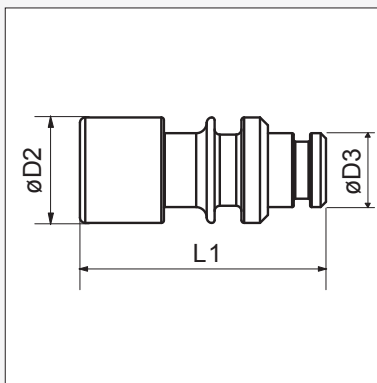


Product Code	Nominal Size						Dimensions mm		
	SKV D1			SKV D2					
	Dash	Inch	DN	Dash	Inch	DN	Thread	D1 / D2	L1
SKVE30-50G-16P	50	2"	50	50	2"	50	1" BSPP	44/65	200
SKVE30-50G-20P	50	2"	50	50	2"	50	1½" BSPP	44/65	200
SKVE30-63G-16P	63	2.1/2"	63	63	2.1/2"	63	1" BSPP	55/75	210

This arrangement is designed for manifold mounting in conjunction with a special keyed arrangement

# SKV30-SM

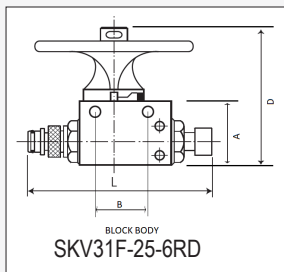
PRANGE SKV SOCKET TO STAPLELOK MALE  
ADAPTOR



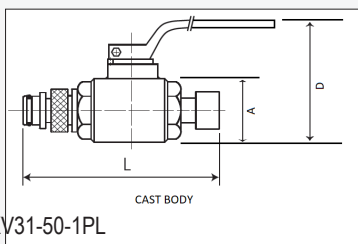
Product Code	Nominal Size						Dimensions mm		
	SKV			Staplelok					
	Dash	Inch	DN	Dash	Inch	DN	D2	D3	L1
SKV30-25-SM-25	25	1"	25	25	1"	25	33	31	65

# SKV31

SKV MEDIUM PRESSURE BALL VALVES  
MALE - FEMALE LOCKABLE



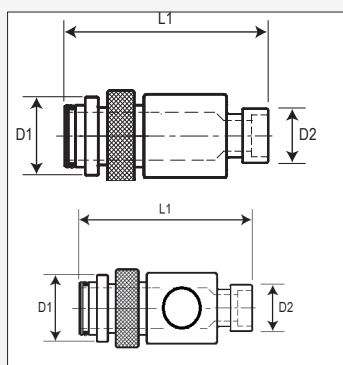
"Product Code"	"Body Type"	"No. of mounting holes"	Nominal Bore			Pressure rating (Bar)		Dimensions			
			Dash	Inch	DN	W.P	B.P	L	A	D	B
SKV31F-25-6RD	Block	2	16	1"	25	280	700	151	55	101	48
SKV31-50-1PL	Cast	N/A	32	2"	50	160	400	241	99	167	N/A



# SKV72F

## PRANGE SKV

### MALE - FEMALE STRAIGHT ADAPTOR



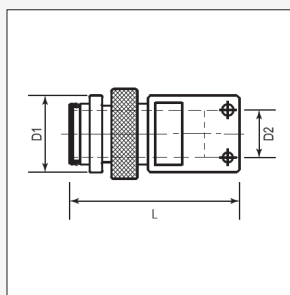
Product Code	Nominal Size						Dimensions mm		
	SKV Male			SKV Female					
	Dash	Inch	DN	Dash	Inch	DN	L1	D1	D2
SKV72F-25-20	25	1"	25	20	3/4"	20	72	33	33
SKV72F-50-40	50	2"	50	40	1.1/2"	40	104	65	53
SKV72F-63-50	63	2.1/2"	63	50	2"	50	105	75	65

With BSPP Port

Product Code	Nominal Size						Dimensions mm			BSPP Thread
	SKV Male			SKV Female						
	Dash	Inch	DN	Dash	Inch	DN	L1	D1	D2	
SKV72F-50-50-16P	50	2"	50	50	2"	50	180.1	65	65	1"
SKV72F-63-63-16P	63	2.1/2"	63	63	2.1/2"	63	234.5	75	75	1"

# SKV72F-SF

## SKV MALE TO STAPLELOCK FEMALE

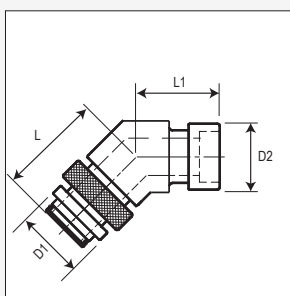


Product Code	Nominal Size						Dimensions mm		
	SKV End A (Male)			SKV End B (Female)					
	Dash	Inch	DN	Dash	Inch	DN	L	D1	D2
SKV72F-50-SF-50	50	2"	50	50	2"	50	113	65	64.2
SKV72F-63-SF-32	63	2.1/2"	63	32	1.1/4"	32	96	75	46.1
SKV72F-63-SF-63	63	2.1/2"	63	63	2.1/2"	63	140	75	80.9

# SKV74F

## PRANGE SKV

### MALE - FEMALE 45° ELBOW

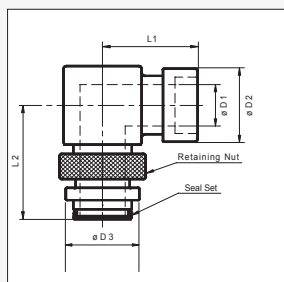


Product Code	Nominal Size						Dimensions mm		
	SKV End A (Male)			SKV End B (Female)					
	Dash	Inch	DN	Dash	Inch	DN	L	L1	D1/D2
SKV74F-25	25	1"	25	25	1"	25	63	50	33
SKV74F-32	32	1.1/4"	32	32	1.1/4"	32	77	65	39.8
SKV74F-40	40	1.1/2"	40	40	1.1/2"	40	83	68	53
SKV74F-50	50	2"	50	50	2"	50	91	83	65

# SKV76F

## PRANGE SKV

### MALE - FEMALE 90° ELBOW

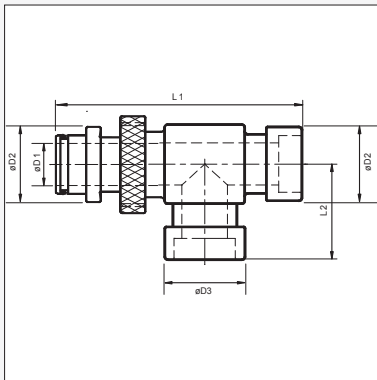


Product Code	Nominal Size						Dimensions mm				
	SKV Male			SKV Female							
	Dash	Inch	DN	Dash	Inch	DN	L1	L2	D1	D2	D3
SKV76F-25	25	1"	25	25	1"	25	50	63	19	33	33
SKV76F-32	32	1.1/4"	32	32	1.1/4"	32	63	75	24	39.8	39.8
SKV76F-40	40	1.1/2"	40	40	1.1/2"	40	75	95	32	53	53
SKV76F-50	50	2"	50	50	2"	50	82	100	44	65	65
SKV76F-63	63	2.1/2"	63	63	2.1/2"	63	84	101	55	75	75

## SKV78F

PRANGE SKV TEE

MALE - FEMALE- FEMALE

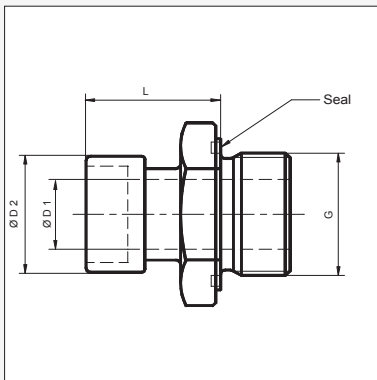


Product Code	Nominal Size										
	SKV Male / Female (Run)			SKV Female (Branch)			Dimensions mm				
	Dash	Inch	DN	Dash	Inch	DN	D1	D2	D3	L1	L2
SKV78F-25	25	1"	25	25	1"	25	19	33	33	115	51
SKV78F-25-25-10	25	1"	25	10	3/8"	10	19	36	20	103	44
SKV78F-50	50	2"	50	50	2"	50	65	44	44	176	80

## SKV115

PRANGE SKV STRAIGHT ADAPTOR

SKV FEMALE x BSPP MALE &amp; BSPT MALE



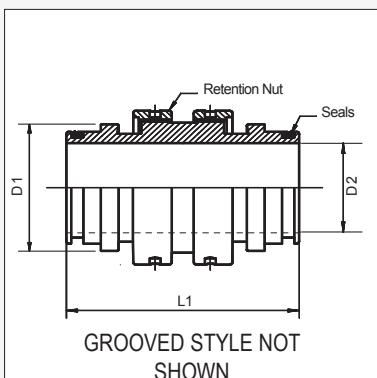
Product Code	Nominal ID			Thread G	Dimensions mm		
	SKV			BSPP			
	Dash	Inch	DN	Inch	D1	D2	L
SKV115-25-16	25	1"	25	1" - 11	19	33	44
SKV115-32-16	32	1.1/4"	32	1" - 11	24	39.8	51
SKV115-40-24	40	1.1/2"	40	1.1/2" - 11	32	53	48
SKV115-50-32	50	2"	50	2" - 11	44	65	54
SKV115-63-40	63	2.1/2"	63	2.1/2" - 11	55	75	59

"Product Code"	Nominal ID			Thread G	Dimensions		
	SKV			BSPT			
	Dash	Inch	DN	Inch	D1	D2	L
SKV115-50-32T	50	2"	50	2"	44	65	54
SKV115-63-40T	63	2.1/2"	63	2.1/2"	55	75	59

## SKV120 / SKV120G .SKV120G-P

PRANGE SKV JOINING NIPPLE

INCLUDING GROOVED STYLE (G) &amp; BSPP PORT



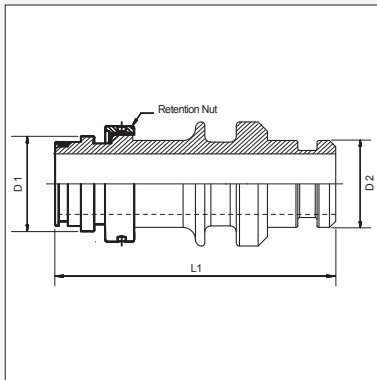
Product Code	Nominal Size						Dimensions mm			BSPP Thread
	SKV			SKV						
	Dash	Inch	DN	Dash	Inch	DN	D1	D2	L1	
SKV120-25 †	25	1"	25	25	1"	25	19	33	84	
SKV120-32 †	32	1.1/4"	32	32	1.1/4"	32	24	39.8	98	
SKV120-40 †	40	1.1/2"	40	40	1.1/2"	40	32	53	125	
SKV120-50	50	2"	50	50	2"	50	44	65	122	
SKV120-63	63	2.1/2"	63	63	2.1/2"	63	55	75	128	
SKV120-63G	63	2.1/2"	63	63	2.1/2"	63	55	75	200	
SKV120-63G-16P	63	2.1/2"	63	63	2.1/2"	63	55	75	270.5	1"

† Non-Stocked item, Available on request



# SKV120 - SM

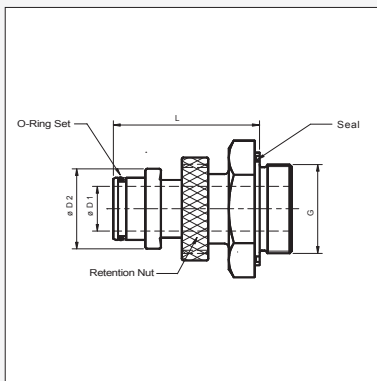
PRANGE SKV MALE TO STAPLELOK MALE  
STRAIGHT ADAPTOR



Product Code	Nominal Size						Dimensions mm		
	SKV			Staplelok					
	Dash	Inch	DN	Dash	Inch	DN	D1	D2	L1
SKV120-40-SM-40	40	1 1/2"	40	40	1 1/2"	40	53	46.9	110
SKV120-50-SM-50	50	2"	50	50	2"	50	65	55.9	109

# SKV155

PRANGE SKV STRAIGHT ADAPTOR  
SKV MALE x BSPP MALE

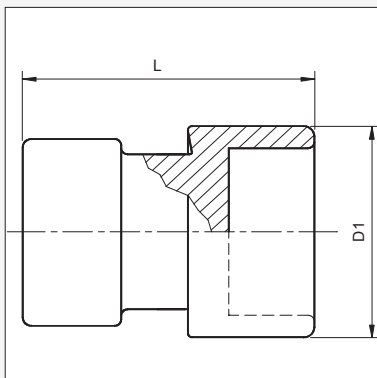


Product Code	Nominal ID			Thread G	Dimensions mm		
	SKV			BSPP			
	Dash	Inch	DN	Inch	D1	D2	L
SKV155-25-16	25	1"	25	1" - 11	19	33	57
SKV155-32-20 †	32	1.1/4"	32	1.1/4" - 11	24	39.8	78
SKV155-40-24	40	1.1/2"	40	1.1/2" - 11	32	53	77
SKV155-50-32	50	2"	50	2" - 11	44	65	76
SKV155-63-40	63	2.1/2"	63	2.1/2" - 11	55	75	60

† Non-Stocked item, Available on request

# SKV160

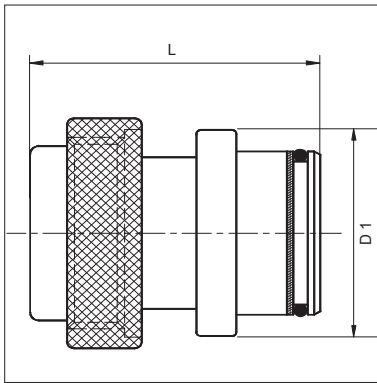
PRANGE SKV BLANKING CAP



Product Code	Nominal Size			Dimensions mm		
	SKV					
	Dash	Inch	DN	D1	L	
SKV160-25	25	1"	25	33	44	
SKV160-32	32	1.1/4"	32	39.8	52	
SKV160-40	40	1.1/2"	40	53	50	
SKV160-50	50	2"	50	65	50	
SKV160-63	63	2.1/2"	63	75	58	

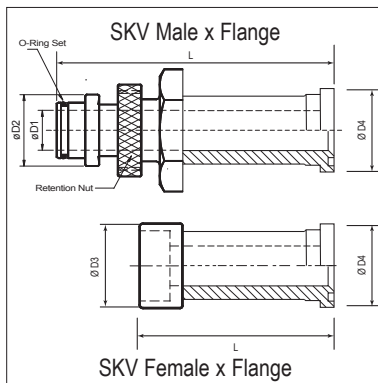
## SKV165

## PRANGE SKV BLANKING PLUG



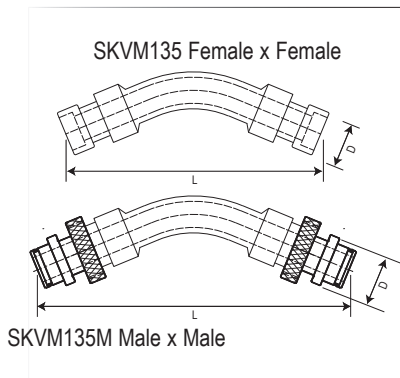
Product Code	Nominal Size			Dimensions mm		
	SKV			D1	L	
	Dash	Inch	DN			
SKV165-25	25	1"	25	33	47	
SKV165-32	32	1.1/4"	32	39.8	54	
SKV165-40	40	1.1/2"	40	53	75	
SKV165-50	50	2"	50	65	72	
SKV165-63	63	2.1/2"	63	75	75	
SKV165-100	100	4"	100	118	103	

## SKVF / SKVM

PRANGE SKV FEMALE / MALE  
x SAE CODE FLANGE

Product Code	Nominal Size						Dimensions mm				
	SKV Female			Code 61 Flange			D1	D2	D3	D4	L
	Dash	Inch	DN	Dash	Inch	DN					
SKVF-25-C611-16	25	1"	25	16	1"	25			33	44.5	100
SKVF-32-C611-20	63	2.1/2"	63	20	1.1/4"	32			39.8	50.8	120
SKVF-40-C611-24	63	2.1/2"	63	24	1.1/2"	40			53	60.3	120
SKVF-50-C611-32	50	2"	50	32	2"	50			65	71.4	120
SKVF-63-C611-40	63	2.1/2"	63	40	2.1/2"	63			75	84.1	120
SKVF-75-C611-48	75	3"	75	48	3"	76			99.3	101.6	130
SKVF-100-C611-64	100	4"	100	64	4"	102			118	127	150
Product Code	SKV Male			Code 61 Flange			D1	D2	D3	D4	L
	Dash	Inch	DN	Dash	Inch	DN					
	Dash	Inch	DN	Dash	Inch	DN					
SKVM-40-C611-24	40	1.1/2"	40	24	1.1/2"	38	32	53	-	60.3	145
SKVM-50-C611-32	50	2"	50	32	2"	51	44	65	-	71.4	125
SKVM-63-C611-40	63	2.1/2"	63	40	2.1/2"	64	55	75	-	84.1	125
SKVM-75-C611-48	75	3"	75	48	3"	76	67	99.3	-	101.6	150

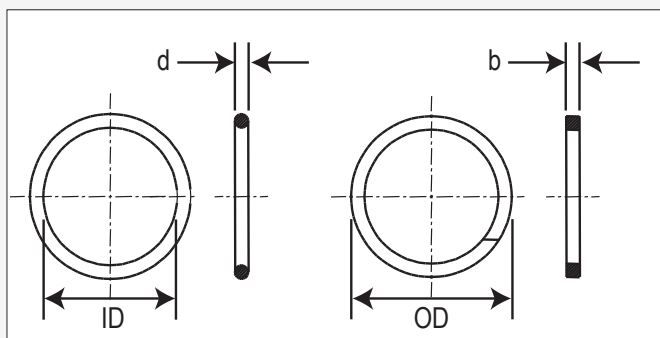
## SKVM135 / SKVM135M

PRANGE SKV MANIFOLDS  
SKV FEMALE OR SKV MALE

Product Code	Configuration	Nominal ID			Tapped Side Thread	Dimensions mm	
		SKV			BSPT		
		Dash	Inch	DN	Inch	D	L
SKVM135-40	F-F	40	1.1/2"	40	-	53	360
SKVM135-50	F-F	50	2"	50	-	65	365
SKVM135-50-16T	F-F	50	2"	50	1"-11	65	360
SKVM135-63	F-F	63	2.1/2"	63	-	75	365
SKVM135-63-16T	F-F	63	2.1/2"	63	1"-11	75	370
SKVM135M-63	M-M	63	2.1/2"	63	-	75	348

## SKVOK

## SKV O-RING AND BACK-UP WASHER KIT

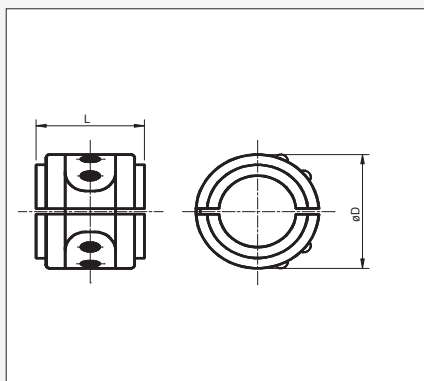


Product Code	Description
SKVOK-25	SKV 25mm Seal kit - O-ring & back-up washer
SKVOK-40	SKV 40mm Seal kit - O-ring & back-up washer
SKVOK-50	SKV 50mm Seal kit - O-ring & back-up washer
SKVOK-63	SKV 63mm Seal kit - O-ring & back-up washer
SKVOK-100	SKV 100mm Seal kit - O-ring & back-up washer

Nominal ID			Dimensions mm			
O-Ring Seal			ID	d		
Dash	Inch	DN				
25	1"	25	22	2.5		
32	1.1/4"	32	28	2.5		
40	1.1/2"	40	38	3		
50	2"	50	50	3		
63	2.1/2"	63	60	3		
Back-Up Washer			OD	b		
25	1"	25	27	1.0		
32	1.1/4"	32	33	1.0		
40	1.1/2"	40	44	1.5		
50	2"	50	56	1.5		
63	2.1/2"	63	66	1.5		

## SKV-SHL

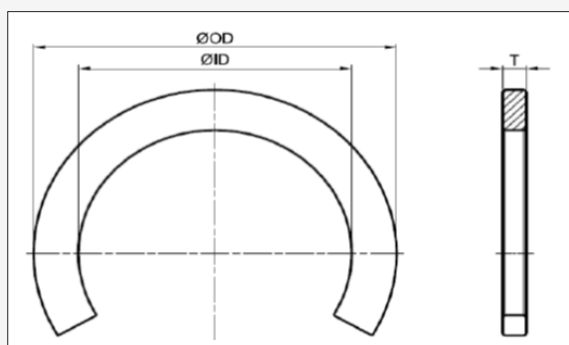
## PRANGE SKV SHELL



Product Code	Nominal Size			Dimensions mm	
	SKV			L	D
	Dash	Inch	DN		
SKV-SHL-25	25	1"	25	39	40.5
SKV-SHL-32	32	1.1/4"	32	49	48
SKV-SHL-40	40	1.1/2"	40	58	60
SKV-SHL-50	50	2"	50	58	72.5
SKV-SHL-63	63	2.1/2"	63	56	82.5
SKV-SHL-75	75	3"	75	80	110
SKV-SHL-100	100	4"	100	90	137

## SKVHC / SKVAC / SSKVC

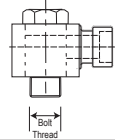
SKVHC - HOSETAIL CLIPS SKVAC - ADAPTOR CLIPS SSKVC - UNIVERSAL CLIPS



Product Code		Nominal ID			Dimension mm	
		SKV				
Suit SKV Hose Tails	Suit SKV Adaptors	DN	Inch	ID	OD	T
SSKVC-25	SSKVC-25	25	1"	34.5	45.0	7.5
SKVAC-32	SKVAC-32	32	1.1/4"	37.8	49.0	6.0
SKVHC-40		40	1.1/2"	44.0	61.0	10.0
	SKVAC-40	40	1.1/2"	54.0	69.0	12.5
SSKVC-50		50	2"	58.0	75.0	9.5
	SKVAC-50	50	2"	63.0	79.0	9.5
SKVHC-63		63	2.1/2"	70.5	84.0	10.5
	SKVAC-63	63	2.1/2"	74.0	89.0	12.5
SKVAC-100	SKVAC-100	100	4"	117.0	137.0	9.7

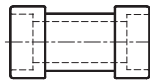
## PRANGE SSKV ADAPTORS

SSKV Female x BSPP Banjo



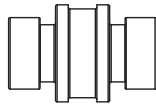
SSKV27 87

SSKV Fem Socket



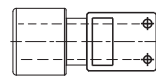
SSKV30 87

SSKVE Grooved Socket



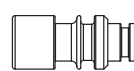
SSKV30-G 87

SSKV Socket to Staplelok Female



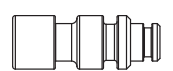
SSKV30-SF 88

SSKV Socket to Staplelok Male



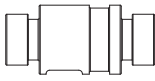
SSKV30-SM 88

SSKVE Extended Socket to Staplelok M



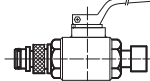
SSKVE30-SM 88

SSKVE Extended Grooved Socket BSPP



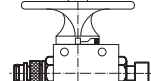
SSKVE30-G-P 89

SSKV Ball Valve Lockable M-F Padlock



SSKV31-PL 89

SSKV Ball Valve Lockable M-F



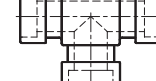
SSKV31F-6RD 89

SSKV 90° Elbow Female - Female



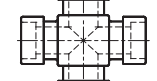
SSKV45 90

SSKV Tee Fm - Fm - Fm



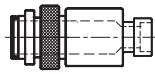
SSKV55 90

SSKV Cross Fm - Fm - Fm - Fm



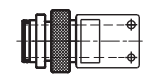
SSKV60 90

SSKfcV Straight Reducer Male - Fixed Female



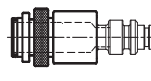
SSKV72F 91

SSKV Male to Staplelok Female



SSKV72F-SF 91

SSKV Male to Staplelok Male



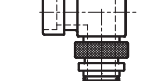
SSKV72F-SM 91

SSKV 45° Elbow Male - Fixed Female



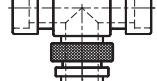
SSKV74F 92

SSKV 90° Elbow Male - Fixed Female



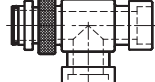
SSKV76F 92

SSKV Tee Fm - Fm - Male



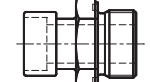
SSKV77 92

SSKV Tee Male - Fm - Fm



SSKV78F 93

SSKV Fem X BSPP M



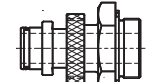
SSKV115 93

SSKV Joining Nipple



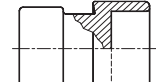
SSKV120 93

Male SSKV to Male BSPP Nipple



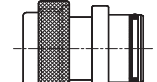
SSKV155 94

SSKV Blanking Cap



SSKV160 94

SSKV Blanking Plug



SSKV165 94

SSKV O-Ring Seal



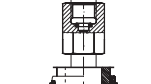
SSKV180 95

SSKV Back Up Washer



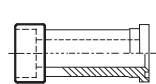
SSKV195 95

SSKV Male Gauge Adaptor



SSKVBFGA 96

SSKV to SAE Flange Female - Code Flange



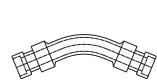
SSKVF 95

SSKV Shell



SSKV-SHL 96

SSKV Manifold 135° Swept Fem - Fem



SSKVM135 96

SSKV Adaptor Clip

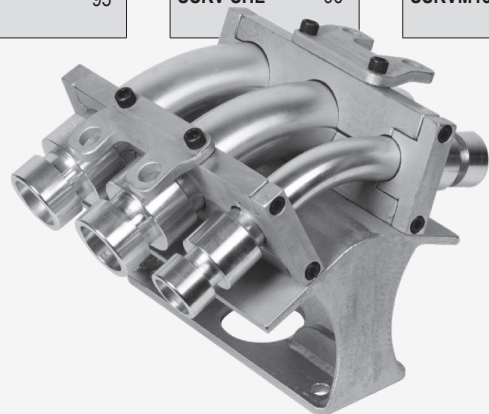


SSKVAC 96

SSKV Hose Tail Clip

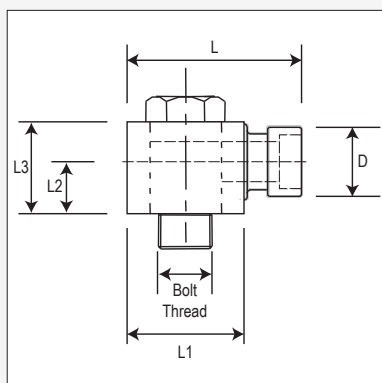


SSKVHC 96



# SSKV27

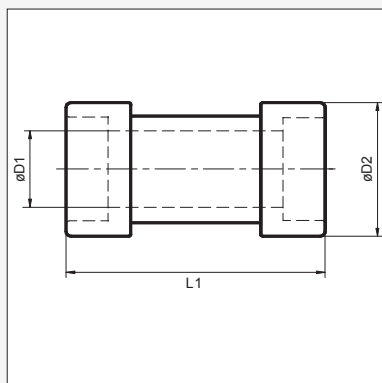
## PRANGE SSKV BANJO



Product Code	Nominal Size				Dimensions mm				
	SSKV			BSPP Thread					
	Dash	Inch	DN	Inch	L	L1	L2	L3	D
SSKV27-10-06	10	3/8"	10	3/8" - 19	65	33	14	27	18
SSKV27-10-08	10	3/8"	10	1/2" - 14	70	38	14	27	18
SSKV27-13-08	13	1/2"	13	1/2" - 14	74	40	15	32	24
SSKV27-20-12	20	3/4"	20	3/4" - 14	90	50	20	40	30

# SSKV30

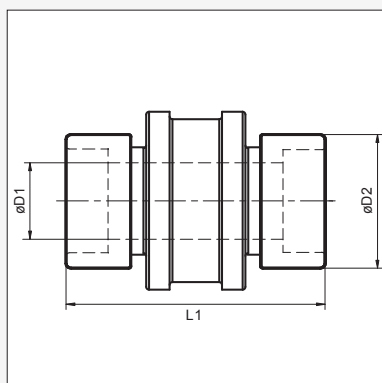
## PRANGE SSKV FEMALE SOCKET



Product Code	Nominal Size						Dimensions mm		
	SSKV D1			SSKV D2					
	Dash	Inch	DN	Dash	Inch	DN	D1	D2	L1
SSKV30-10	10	3/8"	10	10	3/8"	10	7	18	50
SSKV30-13	13	1/2"	13	13	1/2"	13	10	24	53
SSKV30-20	20	3/4"	20	20	3/4"	20	15	30	54

# SSKV30-G

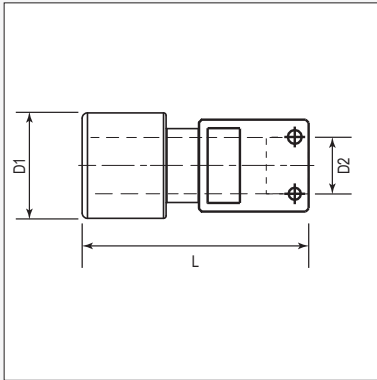
## PRANGE SSKV FEMALE SOCKET GROOVED



Product Code	Nominal Size						Dimensions mm		
	SSKV D1			SSKV D2					
	Dash	Inch	DN	Dash	Inch	DN	D1	D2	L1
SSKV30-25G	25	1"	25	25	1"	25	20	36	120
SSKV30-32G	32	1.1/4"	32	32	1.1/4"	32	24	39.8	130
SSKV30-40G	40	1.1/2"	40	40	1.1/2"	40	30	54	140
SSKV30-50G	50	2"	50	50	2"	50	40	70	160
SSKV30-63G	63	2.1/2"	63	63	2.1/2"	63	50	84	180

## SSKV30-SF

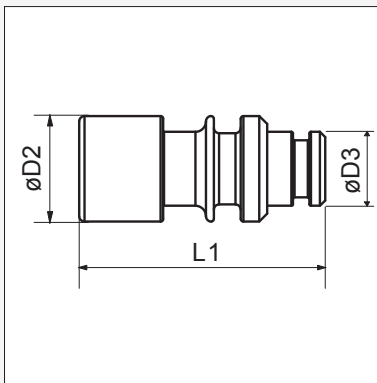
PRANGE SSKV FEMALE x  
STAPLE FEMALE ADAPTOR



Product Code	Nominal Size				Dimensions mm			
	SSKV			Staplelok				
	Dash	Inch	DN	DN	D1	D2	L	
SSKV30-10-SF-10	10	3/8"	10	10	18	20.2	60	

## SSKV30-SM

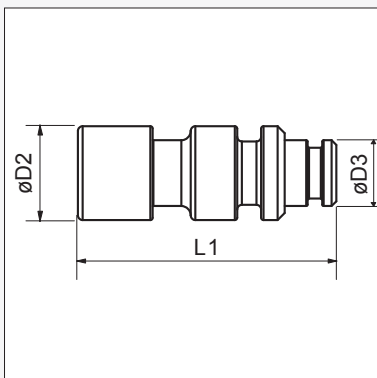
PRANGE SSKV FEMALE x  
STAPLE MALE ADAPTOR



Product Code	Nominal Size						Dimensions mm		
	SSKV			Staplelok					
	Dash	Inch	DN	Dash	Inch	DN	D2	D3	L1
SSKV30-10-SM-10	10	3/8"	10	10	3/8"	10	18	13.9	55
SSKV30-10-SM-13	10	3/8"	10	13	1/2"	13	18	17.9	55
SSKV30-10-SM-20	10	3/8"	10	20	3/4"	20	18	23.9	55
SSKV30-13-SM-10	13	1/2"	13	10	3/8"	10	24	13.9	55
SSKV30-13-SM-13	13	1/2"	13	13	1/2"	13	24	17.9	60
SSKV30-13-SM-25	13	1/2"	13	25	1"	25	24	30.9	62

## SSKVE30-SM

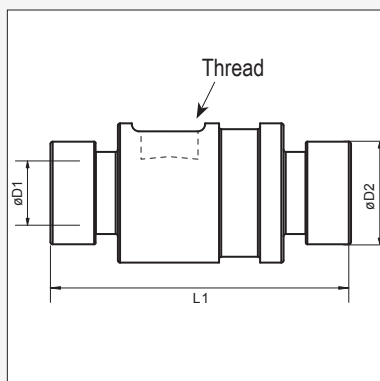
PRANGE SSKV FEMALE x  
STAPLE MALE ADAPTOR (EXTENDED)



Product Code	Nominal Size						Dimensions mm		
	SSKV			Staplelok					
	Dash	Inch	DN	Dash	Inch	DN	D2	D3	L1
SSKVE30-10-SM-10-85	10	3/8"	10	10	3/8"	10	18	13.9	85

# SSKVE30-G-P

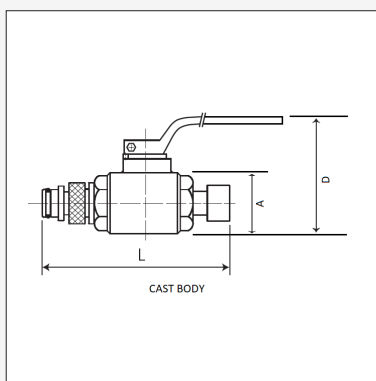
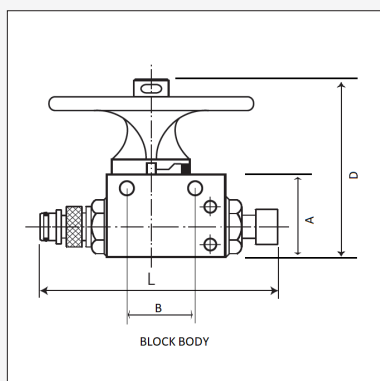
PRANGE SSKV FEMALE SOCKET  
GROOVED AND TAPPED BSP



Product Code	Nominal Size						BSPP Thread	Dimensions mm		
	SSKV D1			SSKV D2						
	Dash	Inch	DN	Dash	Inch	DN		Inch	D1	D2
SSKVE30-25G-06P	25	1"	25	25	1"	25	3/8" - 19	20	36	178
SSKVE30-40G-06P	40	1.1/2"	40	40	1.1/2"	40	3/8" - 19	30	54	198
SSKVE30-50G-06P	50	2"	50	50	2"	50	3/8" - 19	40	70	202
SSKVE30-63G-16P	63	2.1/2"	63	63	2.1/2"	63	1" - 11	50	84	250

## SSKV31

SSKV HIGH PRESSURE BALL VALVES  
MALE x FEMALE LOCKABLE

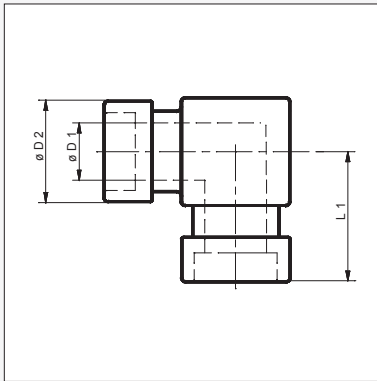


"Product Code"	"Body Type"	"No. of mounting holes"	Nominal Bore			Pressure rating (Bar)		Dimensions			
			Dash	Inch	DN	W.P	B.P	L	A	D	B
SSKV31F-10-6RD	Block	1	6	3/8"	10	420	1050	117	40	86	N/A
SSKV31F-13-6RD	Block	1	8	1/2"	13	420	1050	121	40	86	N/A
SSKV31F-20-6RD	Block	2	12	3/4"	20	420	1050	148	45	91	48
SSKV31F-25-6RD	Block	2	16	1"	25	420	1050	160	55	101	49
SSKV31-40-1PL	Cast	N/A	24	1.1/2"	40	420	1050	221	79	151	N/A
SSKV31-50-1PL	Cast	N/A	32	2"	50	420	1050	256	91	164	N/A



# SSKV45

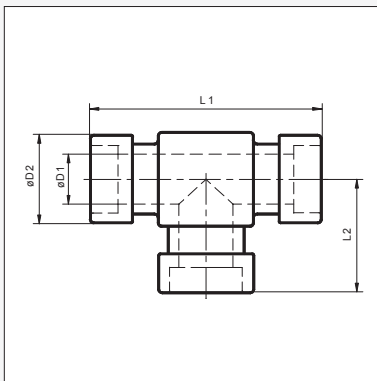
PRANGE SSKV 90° ELBOW  
FIXED EQUAL FEMALE COUPLING



Product Code	Nominal Size			Dimensions mm		
	Dash	Inch	DN	D1	D2	L1
SSKV45-10	10	3/8"	10	7	18	
SSKV45-13	13	1/2"	13	10	24	45
SSKV45-20	20	3/4"	20	15	30	49
SSKV45-25	25	1"	25	20	36	58
SSKV45-32	32	1 1/4"	32	24	44	65

# SSKV55

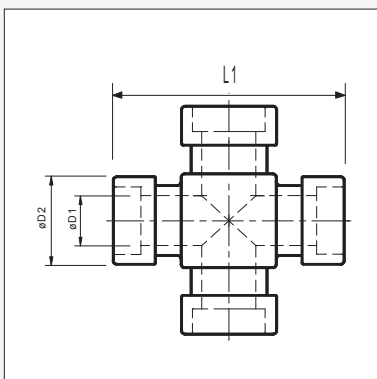
PRANGE SSKV TEE  
FIXED FEMALE COUPLING



Product Code	Nominal Size			Dimensions mm			
	Dash	Inch	DN	D1	D2	L1	L2
SSKV55-10	10	3/8"	10	7	18	76	37
SSKV55-20	20	3/4"	20	15	30	110	49
SSKV55-25	25	1"	25	20	36	120	60

# SSKV60

PRANGE SSKV CROSS  
FIXED FEMALE COUPLING

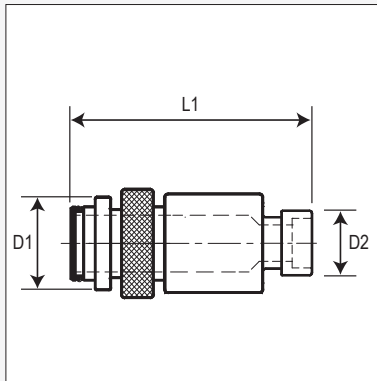


Product Code	Nominal Size			Dimensions mm			
	Dash	Inch	DN	D1	D2	L1	
SSKV60-10	10	3/8"	10	7	18	80	
SSKV60-13	13	1/2"	13	10	24	85	

# SSKV72F

## PRANGE SSKV

### MALE - FEMALE STRAIGHT COUPLING

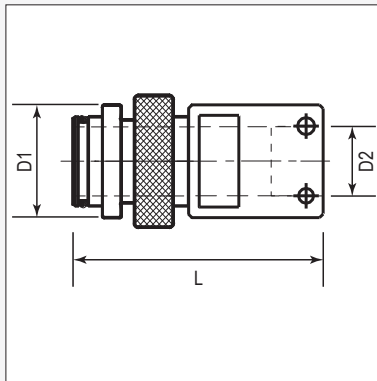


Product Code	Nominal Size						Dimensions mm		
	SSKV Male			SSKV Female					
	Dash	Inch	DN	Dash	Inch	DN	D1	D2	L1
SSKV72F-13-10	13	1/2"	13	10	3/8"	10	24	18	67
SSKV72F-13-20	13	1/2"	13	20	3/4"	20	24	30	70
SSKV72F-20-13	20	3/4"	20	13	1/2"	13	30	24	73
SSKV72F-25-20	25	1"	25	20	3/4"	20	36	30	79

# SSKV72F-SF & SSF

## PRANGE SSKV MALE x

### STAPLE FEMALE ADAPTOR & SUPER STAPLE ADAPTER



Product Code	Nominal Size Dimensions mm						Dimensions mm		
	SSKV Male			Staplelok Female					
	Dash	Inch	DN	Dash	Inch	DN	D1	D2	L
SSKV72F-10-SF-10	10	3/8"	10	10	3/8"	10	18	20.2	70

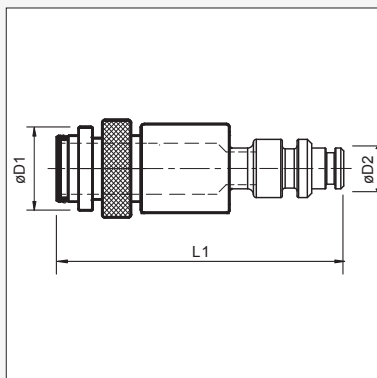
Product Code	Nominal Size Dimensions mm						Dimensions mm		
	SSKV Male			Super Staplelok Female					
	Dash	Inch	DN	Dash	Inch	DN	D1	D2	L
SSKV72F-32-SSF-32	32	1.1/4"	32	32	1.1/4"	32	44	46.6	125
SSKV72F-50-SSF-25	50	2"	50	25	1"	25	70	64.6	120
SSKV72F-50-SSF-50 †	50	2"	50	50	2"	50	70	64.6	

† Non-stocked item, available on request

# SSKV72F-SM

## PRANGE SSKV MALE x

### STAPLE MALE ADAPTOR

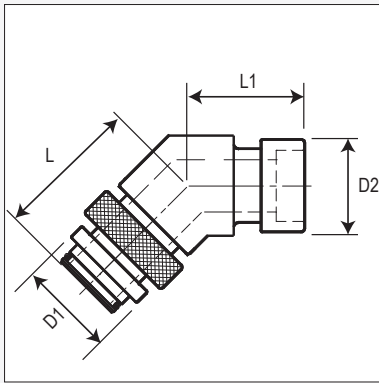


Product Code	Nominal Size						Dimensions mm		
	SSKV Male			Staplelok Male					
	Dash	Inch	DN	Dash	Inch	DN	D1	D2	L1
SSKV72F-10-SM-10	10	3/8"	10	10	3/8"	10	18	13.9	70

## SSKV74F

PRANGE SSKV

MALE - FEMALE 45° EQUAL ELBOW

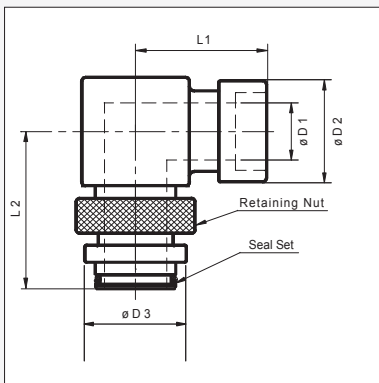


Product Code	Nominal Size						Dimensions mm		
	SSKV Male			SSKV Female					
	Dash	Inch	DN	Dash	Inch	DN	L	L1	D1/D2
SSKV74F-10	10	3/8"	10	10	3/8"	10	53	38	18
SSKV74F-13	13	1/2"	13	13	1/2"	13	54	43	24
SSKV74F-20	20	3/4"	20	20	3/4"	20	60	48	30
SSKV74F-25	25	1"	25	25	1"	25	70	59	36

## SSKV76F

PRANGE SSKV

MALE - FEMALE 90° EQUAL ELBOW

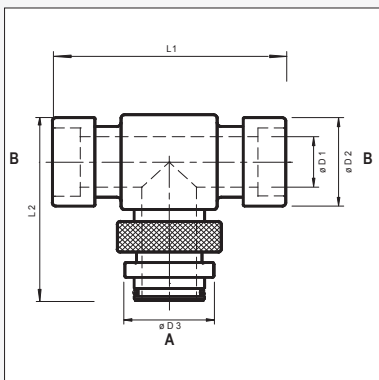


Product Code	Nominal Size						Dimensions mm				
	SSKV Male			SSKV Female							
	Dash	Inch	DN	Dash	Inch	DN	L1	L2	D1	D2	D3
SSKV76F-10	10	3/8"	10	10	3/8"	10	41	51	7	18	18
SSKV76F-13	13	1/2"	13	13	1/2"	13	45	56	10	24	24
SSKV76F-20	20	3/4"	20	20	3/4"	20	49	65	15	30	30
SSKV76F-25	25	1"	25	25	1"	25	60	75	20	36	36
SSKV76F-40	40	1.1/2"	40	40	1.1/2"	40	77	99	30	54	54
SSKV76F-50	50	2"	50	50	2"	50	97	102	40	70	70

## SSKV77

PRANGE SSKV TEE

EQUAL FM-FM-MALE COUPLING

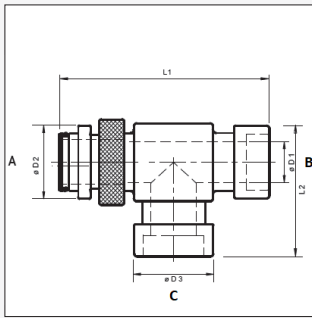


Product Code	Nominal Size			Dimensions mm				
	Dash	Inch	DN	D1	D2	D3	L1	L2
SSKV77-10	10	3/8"	10	7	18	18	80	64

# SSKV78F

## PRANGE SSKV TEE

### MALE-FM-FM COUPLING



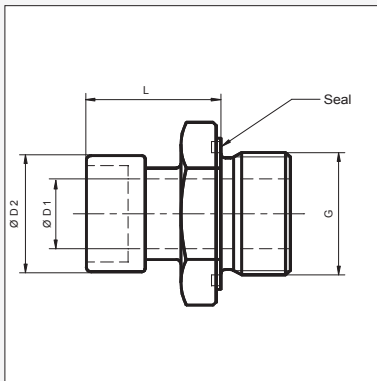
"Product Code"	Nominal Size End A			Nominal Size End B			Nominal Size End C			Dimensions mm				
	Dash	Inch	DN	Dash	Inch	DN	Dash	Inch	DN	D1	D2	D3	L1	L2
SSKV78F-10	10	3/8"	10	10	3/8"	10	10	3/8"	10	7	18	18	92	53
SSKV78F-13	13	1/2"	13	13	1/2"	13	13	1/2"	13	10	24	24	99	60
SSKV78F-13-13-10	13	1/2"	13	13	1/2"	13	10	3/8"	10	10	24	18	101	58
SSKV78F-20	20	3/4"	20	20	3/4"	20	20	3/4"	20	15	30	30	111	66
SSKV78F-20-10-20	20	3/4"	20	10	3/8"	10	20	3/4"	20	7	30	30	106	68
SSKV78F-20-20-10	20	3/4"	20	20	3/4"	20	10	3/8"	10	15	30	18	110	64
SSKV78F-25	25	1"	25	25	1"	25	25	1"	25	20	36	36	130	80
SSKV78F-25-25-10	25	1"	25	25	1"	25	10	3/8"	10	20	36	18	114	70
SSKV78F-40 †	40	1.1/2"	40	40	1.1/2"	40	40	1.1/2"	40	30	54	30	170	
SSKV78F-50	50	2"	50	50	2"	50	50	2"	50	40	70	40	192	132

† Non-stocked item, available on request

# SSKV115

## PRANGE SSKV STRAIGHT ADAPTOR

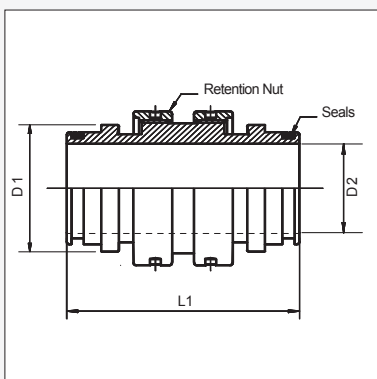
### SKV FEMALE x BSPP MALE



Product Code	Nominal ID			Thread G	Dimensions mm		
	SSKV			BSPP			
	Dash	Inch	DN	Inch	D1	D2	L
SSKV115-10-04	10	3/8"	10	1/4" - 19	7	18	31
SSKV115-10-06	10	3/8"	10	3/8" - 19	7	18	32
SSKV115-10-08	10	3/8"	10	1/2" - 14	7	18	33
SSKV115-13-08	13	1/2"	13	1/2" - 14	10	24	35
SSKV115-20-08	20	3/4"	20	1/2" - 14	15	30	38
SSKV115-20-12	20	3/4"	20	3/4" - 14	15	30	40
SSKV115-20-16	20	3/4"	20	1" - 11	15	30	43
SSKV115-25-16	25	1"	25	1" - 11	20	36	37
SSKV115-32-20	32	1.1/4"	32	1.1/4"	24	44	73
SSKV115-32-24	32	1.1/4"	32	1.1/2"	24	44	54
SSKV115-40-24	40	1.1/2"	40	1.1/2"	30	54	87
SSKV115-50-32	50	2"	50	2"	40	70	84
SSKV115-63-40	63	2.1/2"	63	2.1/2" - 11	50	84	82

# SSKV120

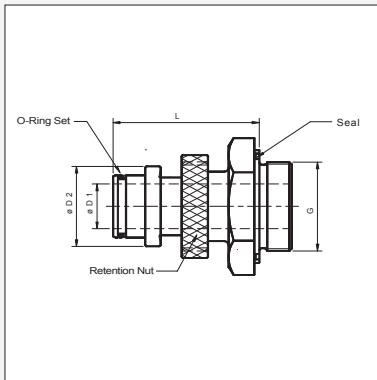
## PRANGE SSKV JOINING NIPPLE



Product Code	Nominal Size						Dimensions mm		
	SSKV			SSKV					
	Dash	Inch	DN	Dash	Inch	DN	D1	D2	L1
SSKV120-10	10	3/8"	10	10	3/8"	10	18	7	76
SSKV120-13	13	1/2"	13	13	1/2"	13	24	10	80
SSKV120-20	20	3/4"	20	20	3/4"	20	30	15	88
SSKV120-20-10	20	3/4"	20	10	3/8"	10	30/18	15/7	84
SSKV120-25	25	1"	25	25	1"	25	36	20	98
SSKV120-32	32	1.1/4"	32	32	1.1/4"	32	44	24	122
SSKV120-40	40	1.1/2"	40	40	1.1/2"	40	54	30	136
SSKV120-50	50	2"	50	50	2"	50	70	40	138
SSKV120-63	63	2.1/2"	63	63	2.1/2"	63	84	50	198

## SSKV155

PRANGE SSKV STRAIGHT ADAPTOR  
SSKV MALE x BSPP MALE

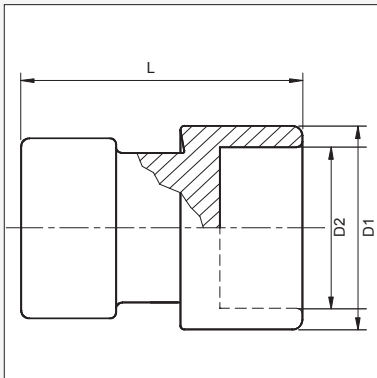


Product Code	Nominal ID			Thread G	Dimensions mm		
	SSKV			BSPP			
	Dash	Inch	DN	Inch	D1	D2	L
SSKV155-10-04	10	1/4"	10	1/4" - 19	7	18	46
SSKV155-10-06	10	3/8"	10	3/8" - 19	7	18	47
SSKV155-10-08	10	3/8"	10	1/2" - 14	7	18	47
SSKV155-13-08	13	1/2"	13	1/2" - 14	10	24	48
SSKV155-20-08	20	3/4"	20	1/2" - 14	15	30	58
SSKV155-20-12	20	3/4"	20	3/4" - 14	15	30	58
SSKV155-20-16	20	3/4"	20	1" - 11	15	30	58
SSKV155-25-16	25	1"	25	1" - 11	20	36	63
SSKV155-32-24	32	1.1/4"	32	1.1/2" - 11	24	44	75
SSKV155-40-24 †	40	1.1/2"	40	1.1/2" - 11	30	54	
SSKV155-50-32	50	2"	50	2" - 11	40	70	85
SSKV155-63-40	63	2.1/2"	63	2.1/2" - 11	50	84	113

† Non-stocked item, available on request

## SSKV160

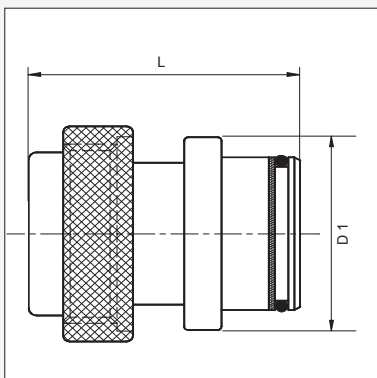
PRANGE SSKV BLANKING CAP



Product Code	Nominal Size			Dimensions mm		
	SSKV					
	Dash	Inch	DN	D1	D2	L
SSKV160-10	10	3/8"	10	18	7	31
SSKV160-13	13	1/2"	13	24	10	34
SSKV160-20	20	3/4"	20	30	15	42
SSKV160-25	25	1"	25	36	20	46
SSKV160-32	32	1.1/4"	32	44	24	59
SSKV160-40	40	1.1/2"	40	54	30	63
SSKV160-50	50	2"	50	70	40	66
SSKV160-63	63	2.1/2"	62	84	50	82.5

## SSKV165

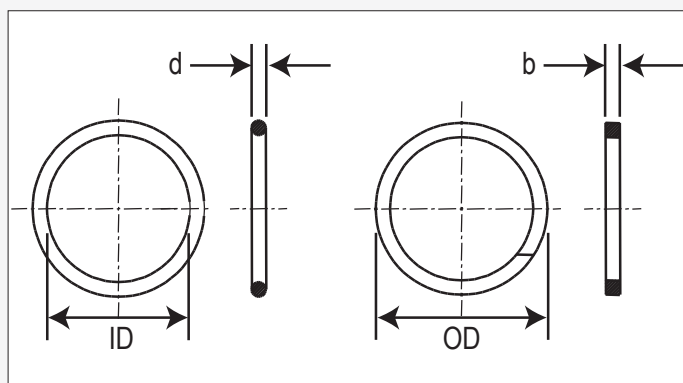
PRANGE SSKV BLANKING PLUG



Product Code	Nominal Size			Dimensions mm		
	SSKV					
	Dash	Inch	DN	D1	L	
SSKV165-10	10	3/8"	10	18	48.5	
SSKV165-13	13	1/2"	13	24	50	
SSKV165-20	20	3/4"	20	30	51.5	
SSKV165-25	25	1"	25	36	59	
SSKV165-32	32	1.1/4"	32	44	66	
SSKV165-40	40	1.1/2"	40	54	79.5	
SSKV165-50	50	2"	50	70	79	
SSKV165-63	63	2.1/2"	63	84	105	

# SSKVOK

## SSKV O-RING AND BACK-UP WASHER KIT

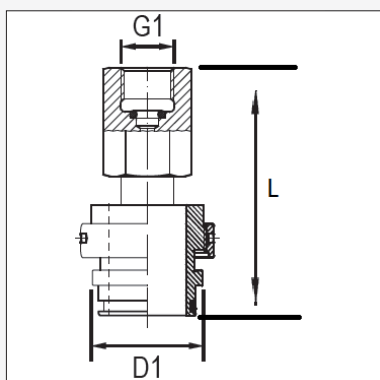


Product Code	Description
SSKVOK-10	SSKV 10mm Seal kit - O-ring & back-up washer
SSKVOK-13	SSKV 13mm Seal kit - O-ring & back-up washer
SSKVOK-20	SSKV 20mm Seal kit - O-ring & back-up washer
SSKVOK-25	SSKV 25mm Seal kit - O-ring & back-up washer
SSKVOK-32	SSKV 32mm Seal kit - O-ring & back-up washer
SSKVOK-40	SSKV 40mm Seal kit - O-ring & back-up washer
SSKVOK-50	SSKV 50mm Seal kit - O-ring & back-up washer
SSKVOK-63	SSKV 63mm Seal kit - O-ring & back-up washer

Nominal ID			Dimensions mm			
O-Ring Seal			ID	d		
Dash	Inch	DN				
10	3/8"	10	10	2		
13	1/2"	13	13	2.5		
20	3/4"	20	18	2.5		
25	1"	25	23	2.5		
32	1.1/4"	32	28	2.5		
40	1.1/2"	40	36	3		
50	2"	50	48	3		
63	2.1/2"	63	59	3		
Back-Up Washer			OD	b		
10	3/8"	10	14.1	0.8		
13	1/2"	13	18.1	0.8		
20	3/4"	20	23	1.0		
25	1"	25	28	1.0		
32	1.1/4"	32	33	1.0		
40	1.1/2"	40	42	1.5		
50	2"	50	54	1.5		
63	2.1/2"	63	65	1.5		

# SSKVBFGA

## PRANGE SSKV GAUGE ADAPTOR



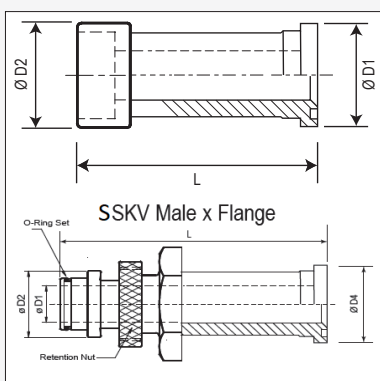
Product Code	Nominal Size			BSPP Female G1	Dimensions mm		
	SSKV						
	Dash	Inch	DN	Inch	D1	L	
SSKVBFGA-1004	10	3/8"	10	1/4" - 19	18	48	

Note: Sealing O-ring for gauge required.  
Part no. AAMGOR-04 ( O-ring type ) or PGS-04P ( Copper Seal Type )

# SSKVF / SSKVM

## PRANGE SSKV FLANGE ADAPTOR

### SSKV FEMALE x CODE FLANGE / SSKV MALE x CODE FLANGE



Product Code	Nominal ID			Code Flange	Dimensions mm		
	SSKV Female						
	Dash	Inch	DN	Size	D1	D2	L
SSKVF-25-C621-24	25	1"	25	Code 62 -24	63.5	36	120
SSKVF-32-C621-20	32	1.1/4"	32	Code 62 -20	54	44	120
SSKVF-40-C621-24	40	1.1/2"	40	Code 62 -24	63.5	54	120
SSKVF-50-C621-32	50	2"	50	Code 62 -32	79.5	70	130
SSKVF-63-C611-40	63	2.1/2"	63	Code 61 -40	84.1	84	130

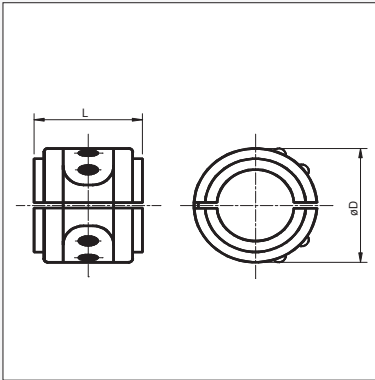
"Product Code"	Nominal Size						Dimensions			
	SSKV Male			Code 62 Flange						
	Dash	Inch	DN	Dash	Inch	DN	D1	D2	D4	L
SSKVM-32-C621-20	32	1.1/4"	32	20	1.1/4"	32	24	44	54	126
SSKVM-50-C621-32	50	2"	50	32	2"	51	40	70	79	130



This page is part of a complete catalogue containing technical and safety data.  
All data must be reviewed when selecting a product.  
Pirtek reserve the right to change technical specifications without notice

# SSKV-SHL

## PRANGE SSKV SHELL

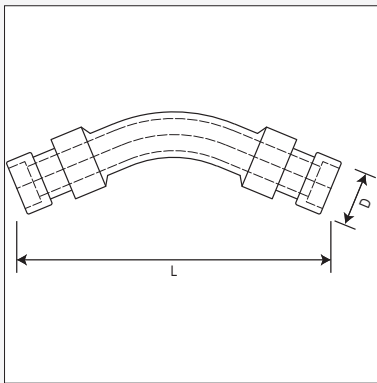


Product Code	Nominal Size			Dimensions mm	
	SSKV				
	Dash	Inch	DN	L	D
SSKV-SHL-10	10	3/8"	10	35	25
SSKV-SHL-13	13	1/2"	13	40	28
SSKV-SHL-20	20	3/4"	20	39	36
SSKV-SHL-25	25	1"	25	43	45
SSKV-SHL-32	32	1.1/4"	32	57	52
SSKV-SHL-40	40	1.1/2"	40	63	64
SSKV-SHL-50	50	2"	50	69	78
SSKV-SHL-63	63	2.1/2"	63	97	97

# SSKVM135

## PRANGE SSKV MANIFOLD

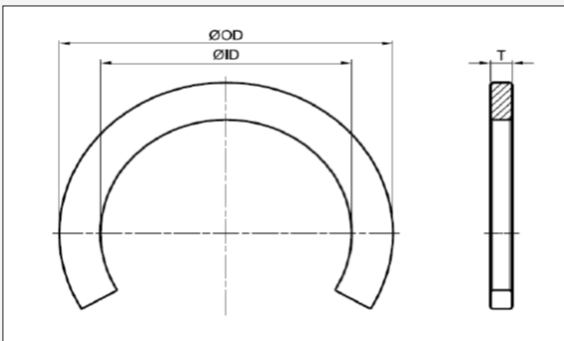
### SKV FEMALE x BSPP MALE



Product Code	Nominal ID			Dimensions mm	
	SSKV				
	Dash	Inch	DN	D	L
SSKVM135-40	40	1.1/2"	40	54	360
SSKVM135-50	50	2"	50	70	360
SSKVM135-63	63	2.1/2"	63	84	360

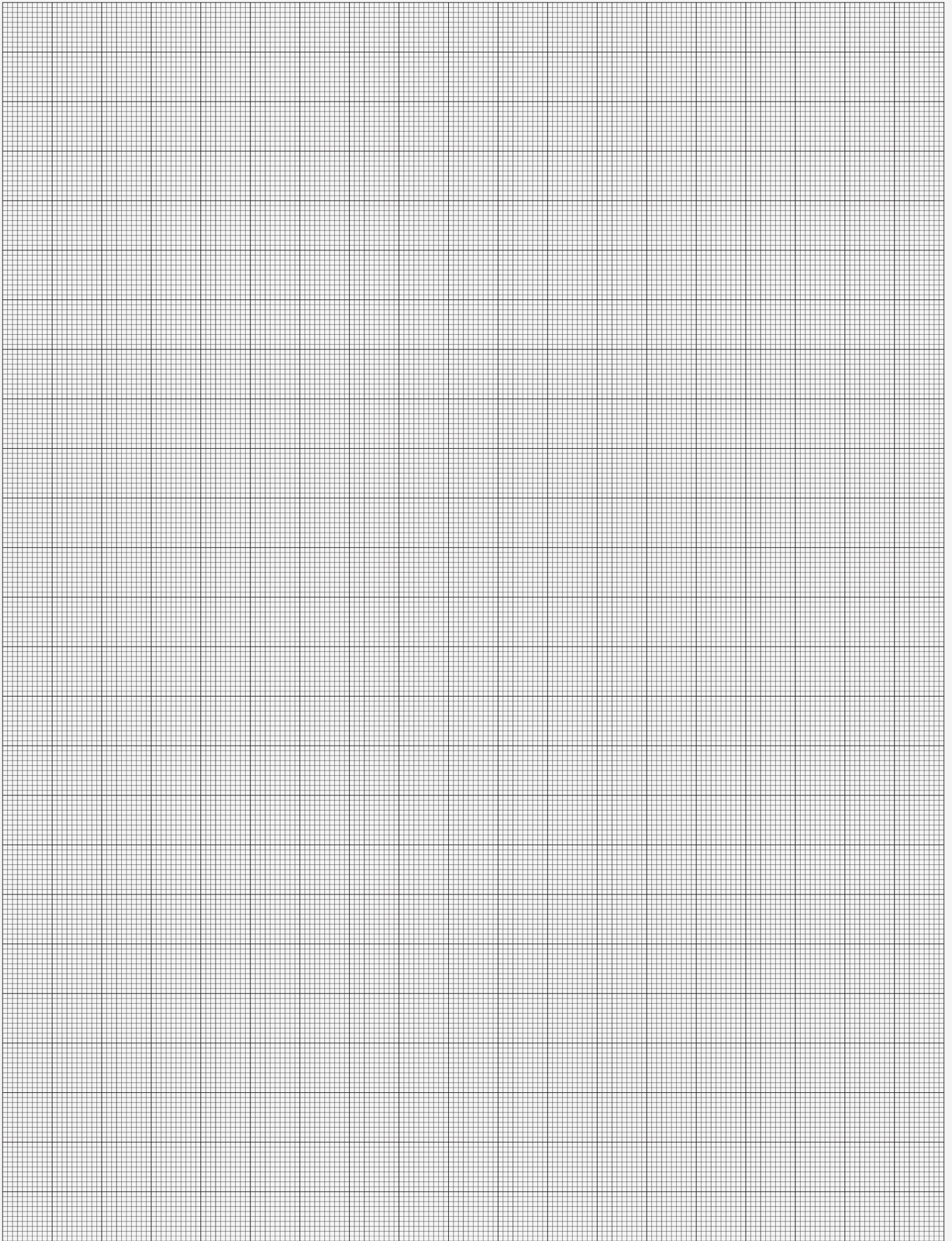
# SSKVHC / SSKVAC

SSKVHC - HOSETAIL CLIPS SSKVAC - ADAPTOR CLIPS SSKVC - UNIVERSAL CLIPS



Product Code		Nominal ID			Dimension mm	
		SSKV				
Suit SSKV Hose Tails	Suit SSKV Adaptors	DN	Inch	ID	OD	T
SSKVHC-10		10	3/8"	15.0	24.0	7.0
	SSKVAC-10	10	3/8"	18.5	28.0	7.0
SSKVHC-13		13	1/2"	18.6	29.0	5.0
	SSKVAC-13	13	1/2"	23.0	33.0	6.0
SSKVC-20	SSKVC-20	20	3/4"	29.5	39.0	6.5
SSKVC-25	SSKVC-25	25	1"	34.5	45.0	7.5
SSKVC-32	SSKVC-32	32	1.1/4"	35.5	52.0	5.5
SSKVHC-40		40	1.1/2"	44.6	63.0	15.5
	SSKVAC-40	40	1.1/2"	53.5	70.0	14.0
SSKVC-50		50	2"	58.0	75.0	9.5
	SSKVAC-50	50	2"	69.0	84.0	11.0
SSKVHC-63		63	2.1/2"	79.0	94.0	13.7
	SSKVAC-63	63	2.1/2"	88.0	109.0	14.0





# CLIPLINE

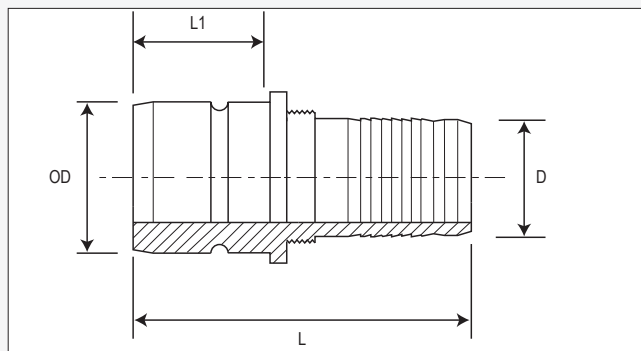
## LOW PROFILE COUPLING MEDIUM PRESSURE



The threaded latch design of the hose tail / ferrule combination is suited only to use with hose Product Code JBF-40

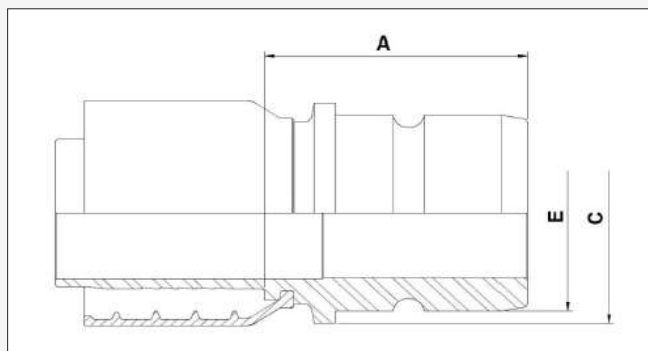
\* Maximum Working Pressure 140 bar  
4:1 Safety Factor

## CLM1 TWO PIECE FITTING CLIPLINE MALE HOSE TAIL



Product Code	Nominal Bore Staple			Nominal Bore Hose			Dimensions mm			
	Dash	Inch	DN	Dash	Inch	DN	L	L1	D	OD
CLM1-63-40	40	2.1/2"	63	40	2.1/2"	63	180	74	62.5	81.8
BSMS-40	Ferrule to suit above fitting			40	2.1/2	63	94.9	-	-	93.3

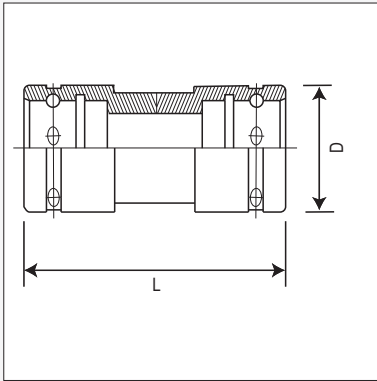
## CLM1 ONE PIECE FITTING CLIPLINE MALE HOSE TAIL



Product Code	Nominal Bore Staple			Nominal Bore Hose			Dimensions mm		
	Dash	Inch	DN	Dash	Inch	DN	A	C	E
CLM1-6340J	40	2.1/2"	63	40	2.1/2"	63	100	92	81.9

## CL30

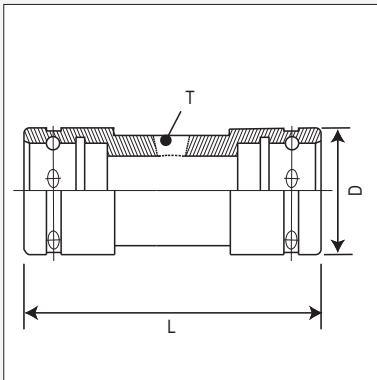
### CLIPLINE FEMALE SOCKET



Product Code	Nominal Bore Staple			Nominal Bore Staple			Dimensions mm		
	Dash	Inch	DN	Dash	Inch	DN	L	D	ID
CL30-63	40	2.1/2"	63	40	2.1/2"	63	150	109	82

## CLE30

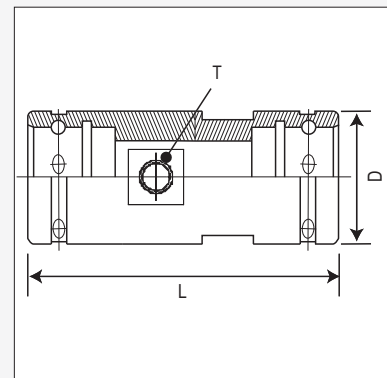
### CLIPLINE EXTENDED BSPT TAPPED COUPLING



Product Code	Nominal Bore Cline			Nominal Bore Cline			Dimensions mm		
	Dash	Inch	DN	Dash	Inch	DN	L	D	T
CLE30-63-16T	40	2.1/2"	63	40	2.1/2"	63		109	R-1"

## CLE30G

### CLIPLINE EXT. & GROOVED BSPP TAPPED COUPLING



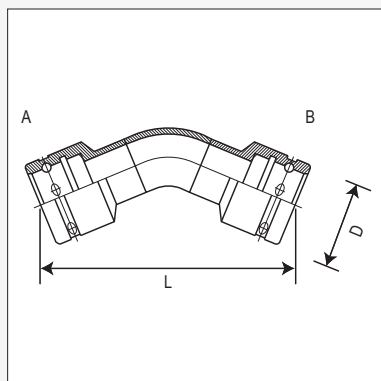
Product Code	Nominal ID			Thread T	Dimensions mm		
	Dash	Inch	DN	BSPP	L	D	Retaining Groove
CLE30G-63-16P	40	2.1/2"	65	G-1"		109	†

† The retaining groove around the coupling circumference allows fast installation / removal of the adaptor using a bolted key arrangement. These fittings form part of a total bulkhead design package, and are made to order. Please contact Pirtek for details

# CLM135

## CLIPLINE MANIFOLD

### 45° ELBOW F-F

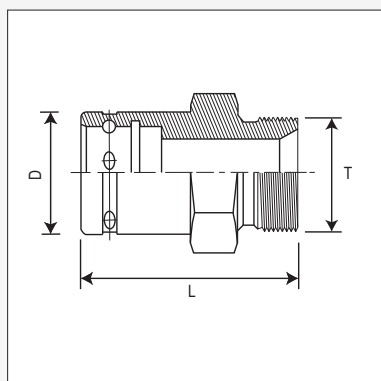


Product Code	Nominal Size						Dimensions mm		
	Side A			Side B					
	Dash	Inch	DN	Dash	inch	DN	L	D	
CLM135-63	40	2.1/2"	63	40	2.1/2"	63	314	110	

# CL115

## ADAPTOR

### CLIPLINE FEMALE x BSPP MALE

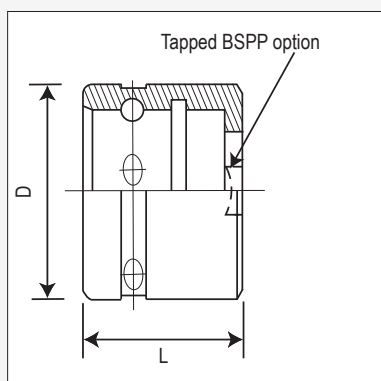


Product Code	Nominal Size			BSPP Thread	Dimensions mm			
	Clipline Female				T	L	D	T
	Dash	Inch	DN					
CL115-63-32P	40	2.1/2"	63	2"	121	109	G-2"	
CL115-63-40P	40	2.1/2"	63	2.1/2"	125	109	G-2.1/2"	

BSPP End requires the use of a 'Z' Series Bonded Seal available separately. See page 139

# CL160

## CLIPLINE CAP



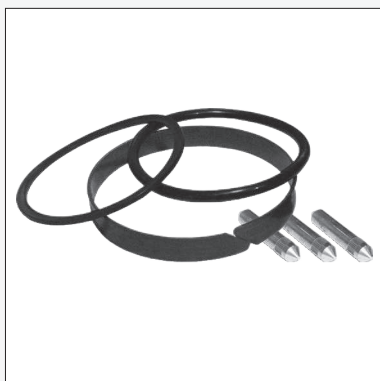
Product Code	Nominal Size			Dimensions mm			
	Dash	Inch	DN	L	D	ID	
CL160-63	40	2.1/2"	65	91.5	109	82	

BSPP Tapped Port available for all sizes upon request. Please specify when ordering

# CLK

## CLIPLINE PIN KIT

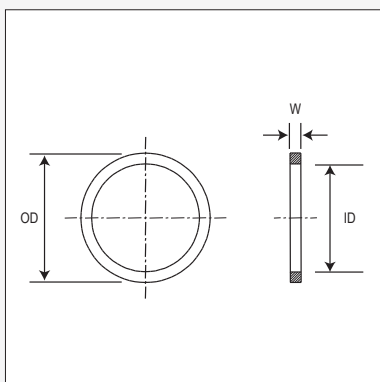
### O-RING, BACKUP, PINS & RETAINER



Product Code	Nominal ID			Kit Includes
	Dash	Inch	DN	
CLK-63	40	2.1/2"	63	1 x O-Ring (CLO-63) 1 x Back-up Ring (CLB-63) 1 x Spring Clip (CLC-63) 3 x Retaining Pins (CLP-63)

# CLB

## CLIPLINE BACKUP RING

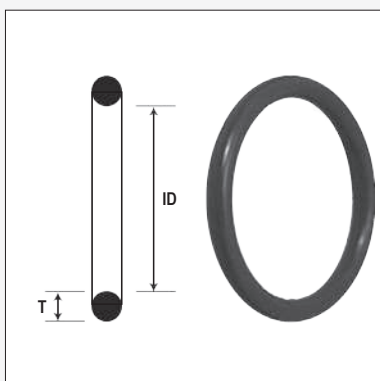


Product Code	Dimensions mm			BS
	OD	ID	Width W	
CLB-63	92	82.8	1.8	339BUR

This product is shown for technical reference only. It is available only as part of the complete kit **CLK-63**

# CLO

## O-RING SEAL



Product Code	Dimensions mm			BS
	OD	ID	Thickness T	
CLO-63	92	82	5	339D90

This product is shown for technical reference only. It is available only as part of the complete kit **CLK-63**

# CLP

## CLIPLINE SECURING PIN



Product Code	Dimensions mm		
	Length	OD	OD Milled Section
CLP-63	58	10.9	11.3

This product is shown for technical reference only. It is available only as part of the complete kit **CLK-63**

# CLC

## CLIPLINE RETAINING CLIP



Product Code	Dimensions mm		
	OD	ID	Width W
CLC-63	107	104.2	11.7

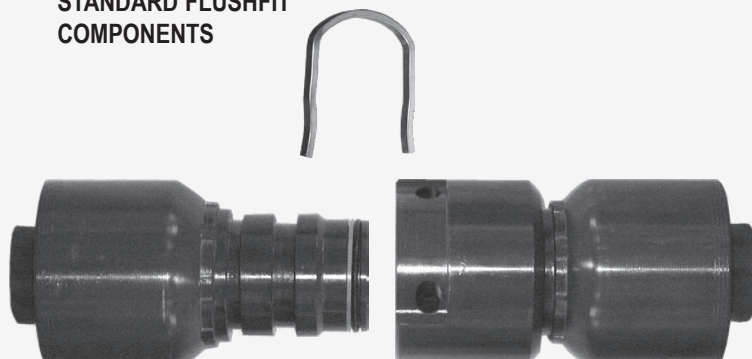
This product is shown for technical reference only. It is available only as part of the complete kit **CLK-63**

# FLUSHFIT

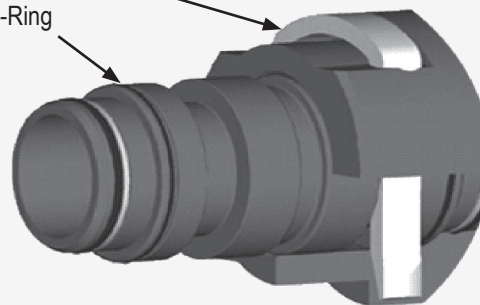
## LOW PROFILE COUPLING

### STANDARD AND SUPER

#### STANDARD FLUSHFIT COMPONENTS



Double width staple  
Secondary O-Ring



CUTAWAY OF SUPER FLUSHFIT ASSEMBLED JOINT

#### Description:

- Steel bodied low profile coupling system for full bore internal flow path with smallest possible exterior dimensions
- The staple is retained fully within the coupling profile to be snag-free
- Available in standard and super configurations (Standard configuration design varies according to fitting size)
- The Super form embodies a secondary O-Ring to maintain a clean environment in the main bore
- A clearance area simplifies staple extraction
- Fewer loose parts than similar designs

#### Materials and Specifications:

- Flat Teflon backup ring
- Nitrile O-Rings
- Free cutting steel body
- Hardened staple in either single width (Standard design) or double width (Super design)
- 2" material conforms to ( BS 970-080M47) (UNI EN C45)
- 2 1/2" material 50 D (BS 4360-90) (UNI EN S355J2G3 extruded tube). Alternatively material conforms to ( BS 970-230M07) (UNI EN 11SMnPb30)

#### Applications:

- Standard Series: low to medium pressure large bore lines (pressure and return) where the application requires a smooth exterior profile to avoid snagging
- Super Series: extra high pressure large bore lines where the application requires a smooth exterior profile to avoid snagging
- Refer Pirtek for selection of suitable hoses to use with Flushfit Standard and Super fittings

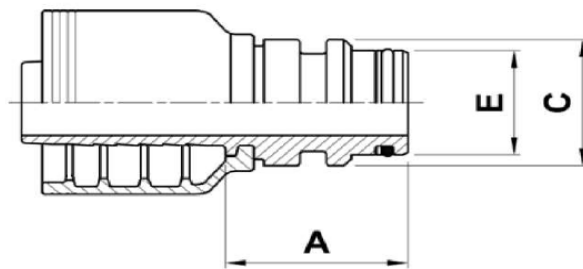
## NOMINAL WORKING PRESSURES

### FLUSHFIT STANDARD AND SUPER

Size			Standard Flushfit - bar		Super Flushfit - bar	
Dash	Inch	DN	Working Pressure	Burst Pressure	Working Pressure	Burst Pressure
24	1.1/2"	40	146	584	420	1680
32	2"	50	112	448	420	1680
40	2.1/2"	63	69	276	350	1400



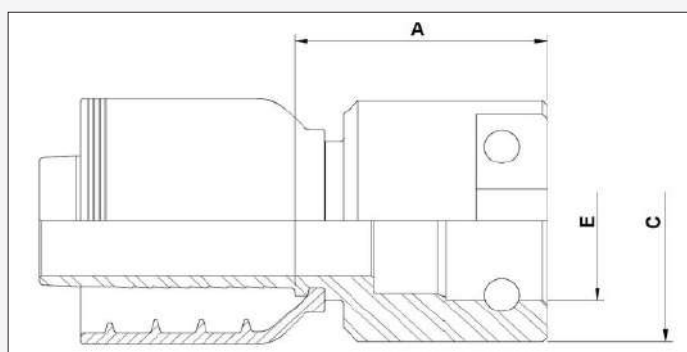
## FFM1

FLUSH FIT STANDARD  
MALE HOSE TAIL

Product Code	Nominal Bore Flush Fit			Nominal Bore Hose			Dimensions mm		
	Dash	Inch	DN	Dash	Inch	DN	A	C	E
FFM1-4024J	40	1.1/2"	24	40	1.1/2"	24	65	45.9	41.9
FFM1-5032J	51	2"	32	51	2"	32	64	55.9	55.9
FFM1-5032U	51	2"	32	51	2"	32	64	55.9	55.9
FFM1-6340J	63	2.1/2"	40	63	2.1/2"	40	85	76	76

Note: O-ring & back-up only found on 1.1/2" male termination, 2" & 2.1/2" are on the female termination.

## FFF1

FLUSH FIT STANDARD  
FEMALE HOSE TAIL

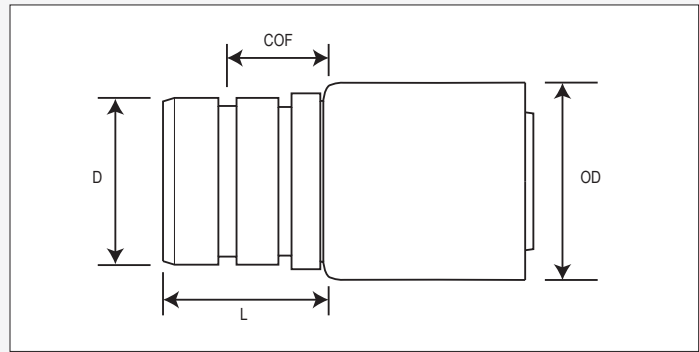
Product Code	Nominal Bore Flush Fit			Nominal Bore Hose			Dimensions mm		
	DN	Inch	Size	DN	Inch	Size	A	C	E
FFF1-4024J	40	1.1/2"	24	40	1.1/2"	24	67	70	46.1
FFF1-5032J	51	2"	32	51	2"	32	64	76	59.2
FFF1-6340J	63	2.1/2"	40	63	2.1/2"	40	80	106.5	77.2

# FFIM1

## FLUSH FIT STANDARD MALE INDUSTRIAL HOSE TAIL

Ferrule supplied with hose tail

Suited to use with FRAS rated air / water hose IRFAW



Product Code	Nominal Bore Flush Fit			Nominal Bore Hose			Dimensions Hose Tail mm			Dimensions Ferrule mm	
L Series	Dash	Inch	DN	Dash	Inch	DN	L	D	COF	Length	OD
FFIM1-5032L	32	2"	50	32	2"	50	57.1	55.9	33.3		
FFIM1-6340L	40	2.1/2"	63	40	2.1/2"	63	79.1	76.1	50.4	91.2	90.2

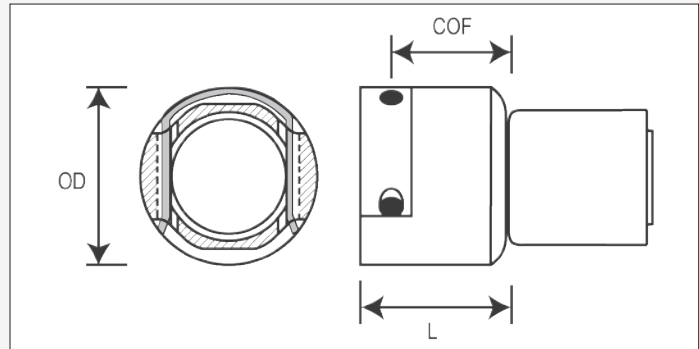
# FFIF1

## FLUSH FIT STANDARD FEMALE INDUSTRIAL HOSE TAIL

Ferrule supplied with hose tail

Internal O-Ring not shown

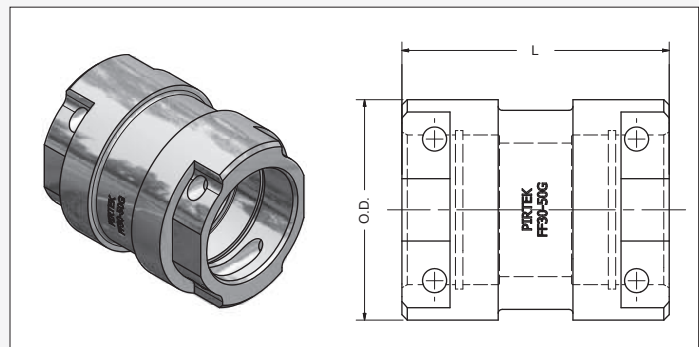
Suited to use with FRAS rated air / water hose IRFAW



Product Code	Nominal Bore Flush Fit			Nominal Bore Hose			Dimensions Hose Tail mm			Dimensions Ferrule mm	
L Series	Dash	Inch	DN	Dash	Inch	DN	L	OD	COF	Length	Ø
FFIF1-5032L	32	2"	50	32	2"	50	55.8	76	40.2		
FFIF1-6340L	40	2.1/2"	63	40	2.1/2"	63	65.4	106	44.8	91.2	90.2

# FF30-G

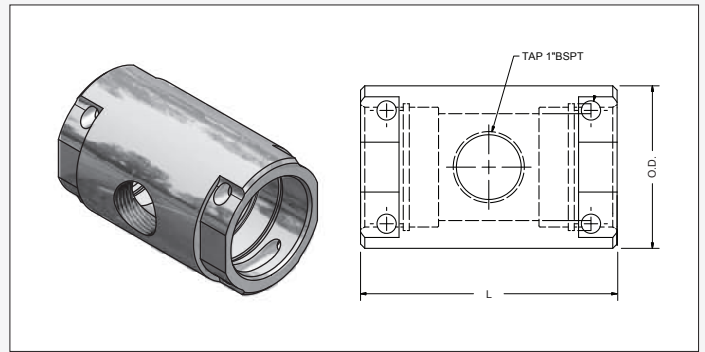
## FLUSH FIT STANDARD FEMALE SOCKET (GROOVED)



Product Code	Nominal Bore End 1			Nominal Bore End 2			Dimensions mm				
	Dash	Inch	DN	Dash	Inch	DN	L	OD			
FF30-50G	32	2"	50	32	2"	50		76			
FF30-63G	40	2.1/2"	63	40	2.1/2"	63		106			

# FFE30-T

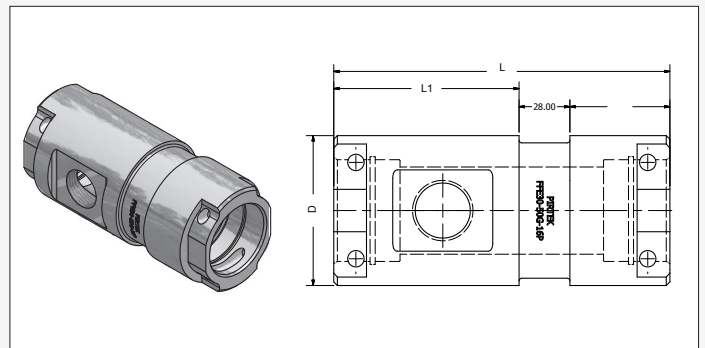
FLUSH FIT STANDARD  
SOCKET C/W BSPT SIDE PORT



Product Code	Nominal Bore End 1			Nominal Bore End 2			Dimensions mm		Thread		
	Dash	Inch	DN	Dash	Inch	DN	L	OD	BSPT		
FFE30-40-16T	24	1.1/2"	40	24	1.1/2"	40			1" - 11		
FFE30-50-16T	32	2"	50	32	2"	50		76	1" - 11		
FFE30-63-16T	40	2.1/2"	63	40	2.1/2"	63		106	1" - 11		

# FFE30-G-P

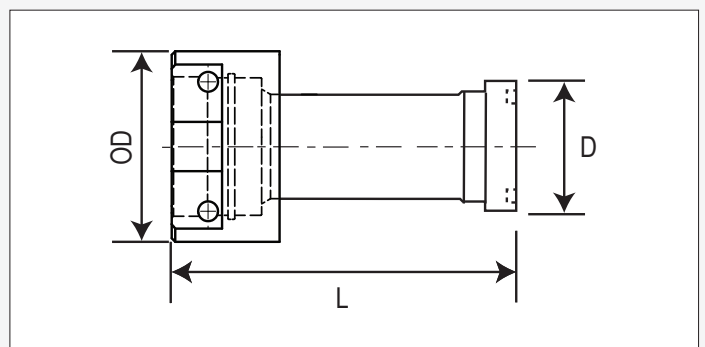
FLUSH FIT STANDARD  
FEMALE SOCKET (GROOVED)  
TAPPED BSPP



Product Code	Nominal Bore End 1			Nominal Bore End 2			Dimensions mm			Tapped Thread
	Dash	Inch	DN	Dash	Inch	DN	L	L1	D	BSPP
FFE30-50G-16P	32	2"	50	32	2"	50			76	1" - 11
FFE30-63G-16P	40	2.1/2"	63	40	2.1/2"	63			106	1" - 11

# FFF-xx-C611

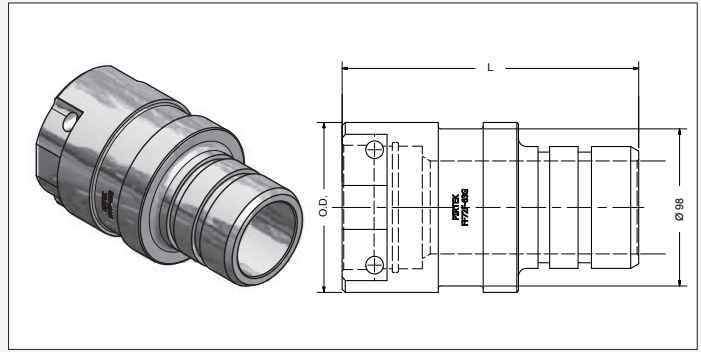
FLUSHFIT STD - CODE 61 FLANGE  
STRAIGHT ADAPTOR



Product Code	Nominal OD						Dimensions mm		
	Flushfit			Code 61 Flange					
	Dash	Inch	DN	Dash	Inch	DN	L	OD	D
FFF-50-C611-32	32	2"	50	32	2"	50		76	71.4
FFF-63-C611-40	40	2.1/2"	63	40	2.1/2"	63		106	84.1

# FF72F

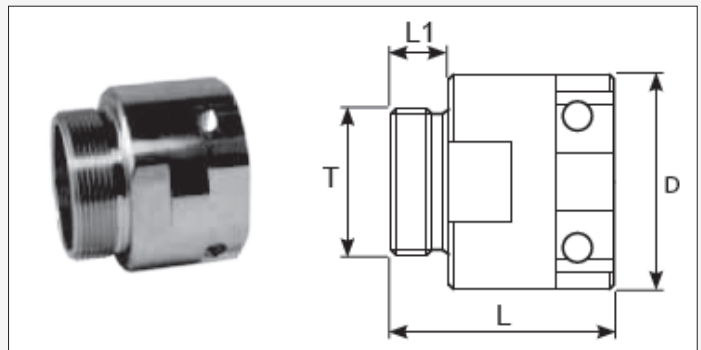
## FLUSH FIT STANDARD MALE-FEMALE COUPLING (GROOVED)



Product Code	Nominal Bore End 1			Nominal Bore End 2			Dimensions mm				
	Dash	Inch	DN	Dash	Inch	DN	L	OD			
FF72F-50G-40G	32	2"	50	24	1.1/2"	40		76			
FF72F-63G	40	2.1/2"	63	40	2.1/2"	63		106			

# FF115F

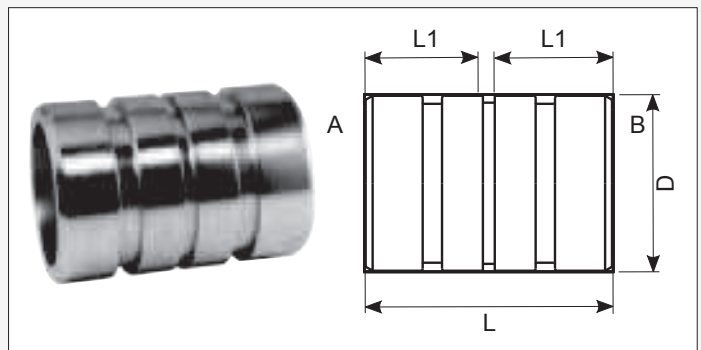
## FLUSH FIT STANDARD FIXED FEMALE - BSPP MALE



Product Code	Nominal Bore Flush Fit			Nominal Size T BSPP			Dimensions mm			
	Dash	Inch	DN	Dash	Inch	DN	L	L1	D	BSPP Thread
FF115F-40-24P	24	1.1/2"	40	24	1.1/2"	40	77	20	70	1.1/2" - 11
FF115F-50-32P	32	2"	50	32	2"	50	72	23	76	2" - 11
FF115F-63-40P	40	2.1/2"	63	40	2.1/2"	63	94	27	106	2.1/2" - 11

# FF120

## FLUSH FIT JOINING NIPPLE



Product Code	Nominal ID						Dimensions mm		
	Side A			Side B					
	Dash	Inch	DN	Dash	inch	DN	L	L1	D
FF120-50-40	32	2"	50	24	1.1/2"	40			
FF120-50	32	2"	50	32	2"	50			55.9
FF120-63	40	2.1/2"	63	40	2.1/2"	63			76.1

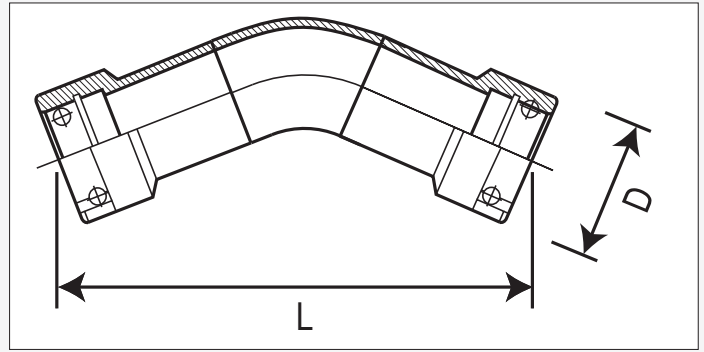
## FFM135

## FLUSH FIT MANIFOLD

## 45° ELBOW F-F

Internal O-Ring not shown

This fitting is made to order

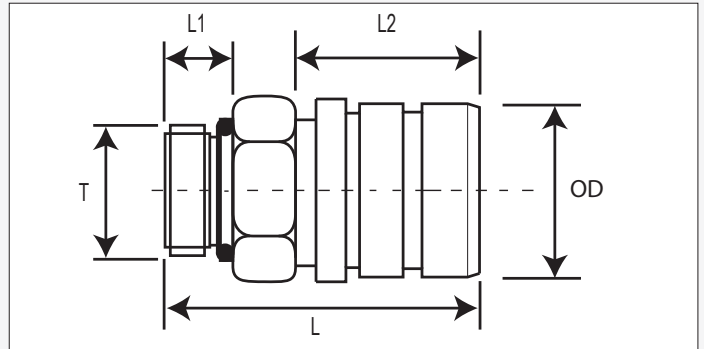


Product Code	Nominal ID						Dimensions mm		
	Side A			Side B					
	Dash	Inch	DN	Dash	inch	DN	L	D	
FFM135-50	32	2"	50	32	2"	50	315	76	
FFM135-63	40	2.1/2"	63	40	2.1/2"	63	315	106	
FFM135-50-16T	32	2"	50	32	2"	50	315	76	1" BSPT Tapped Side Port
FFM135-63-16T	40	2.1/2"	63	40	2.1/2"	63	315	106	

## FF155

## FLUSH FIT STANDARD

## MALE - BSPP

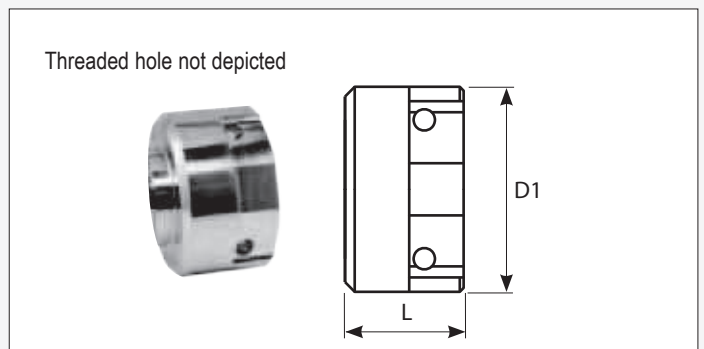


Product Code	Nominal Bore Flush Fit			Nominal Size T BSPP			Dimensions mm				
	Dash	Inch	DN	Dash	Inch	DN	L	L1	L2	OD	
FF155-40-24P	24	1.1/2"	40	24	1.1/2"-11	40					
FF155-50-32P	32	2"	50	32	2"-11	50		23	57.1	55.9	
FF155-63-40P	40	2.1/2"	63	40	2.1/2"-11	63		30	79.1	76.1	

## FF160 TH

## FLUSH FIT CAP

## 8 mm THREADED HOLE

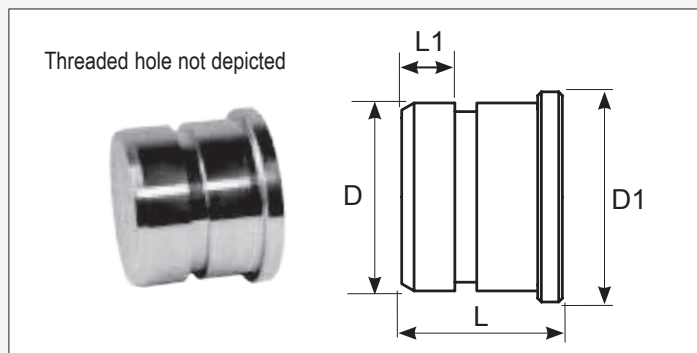


Product Code	Nominal ID						Dimensions mm		
	Side A			Side B					
	Dash	Inch	DN	Dash	inch	DN	L	D1	Thread
FF160TH-40	24	1.1/2"	40	24	1.1/2"	40			M8x1.5
FF160TH-50	32	2"	50	32	2"	50		76	M8x1.5
FF160TH-63	40	2.1/2"	63	40	2.1/2"	63		106	M8x1.5

# FF165 TH

## FLUSH FIT PLUG

### 8 mm THREADED HOLE



Product Code	Nominal ID						Dimensions mm				
	Side A			Side B							
	Dash	Inch	DN	Dash	inch	DN	L	L1	D	D1	Thread
FF165TH-40	24	1.1/2"	40	24	1.1/2"	40	44	28	46	56	M8x1.5
FF165TH-50	32	2"	50	32	2"	50	48	28	55.9	65	M8x1.5
FF165TH-63	40	2.1/2"	63	40	2.1/2"	63	67	25	76.1	85	M8x1.5

# FF175

## FLUSH FIT STANDARD

### SECURING STAPLE

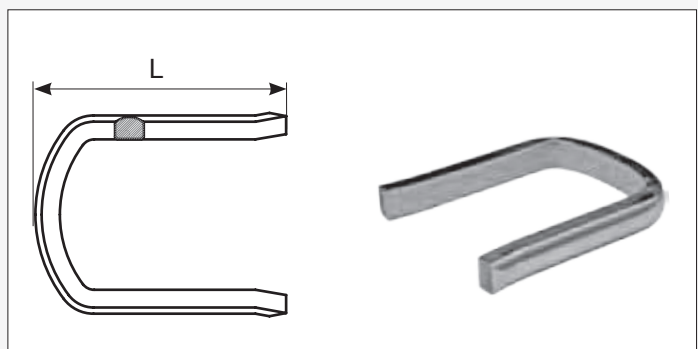


Product Code	Nominal Size Flush Fit			Staple Profile	Dimensions mm		
	Dash	Inch	DN		Length	Staple Thickness	Staple Width
FF175-40	24	1.1/2"	40	Rectangular	59	4	8.1
FF175-50	32	2"	50	Rectangular	63	3	8.1
FF175-63	40	2.1/2"	63	Rectangular	85	5	8.1

# FF175D

## FLUSH FIT STANDARD

### 'D' SECTION SECURING STAPLE

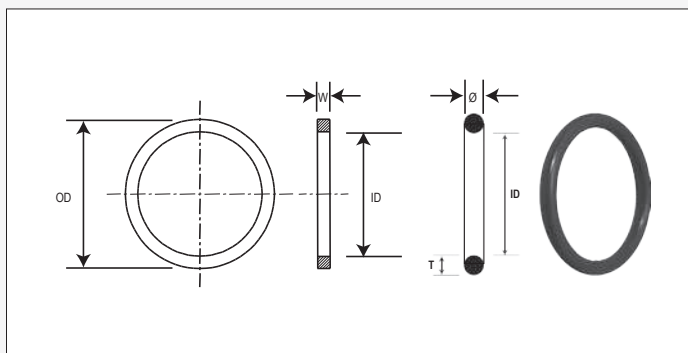


Product Code	Nominal Size Flush Fit			Dimensions mm		
	Dash	Inch	DN	Length	Staple Thickness	Staple Width
FF175D-63	40	2.1/2"	63	85	5	8.1

# FF180 / FF195

## FLUSH FIT STANDARD

### O-RING & BACKUP - DURO 90

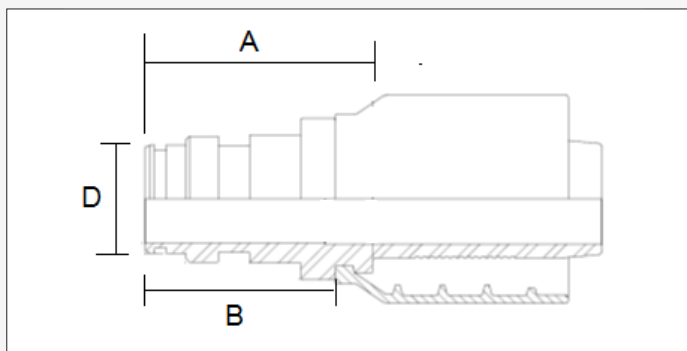


Product Codes		Location	Nominal Size Flush Fit			Dimensions O-Ring mm			Dimensions Backup mm		
O-Ring	Backup		Dash	Inch	DN	OD	ID	Ø	OD	ID	W
FF180-40	FF195-40	Male	24	1.1/2"	40	42.4	37.6	2.4	42	38	1.5
FF180-50	FF195-50	Female	32	2"	50	60.0	56.0	2.0	N/A	N/A	N/A
FF180-63	FF195-63	Female	40	2.1/2"	63	81.00	75.00	3.0	N/A	N/A	N/A



# FFSM1

## FLUSH FIT SUPER MALE HOSE TAIL

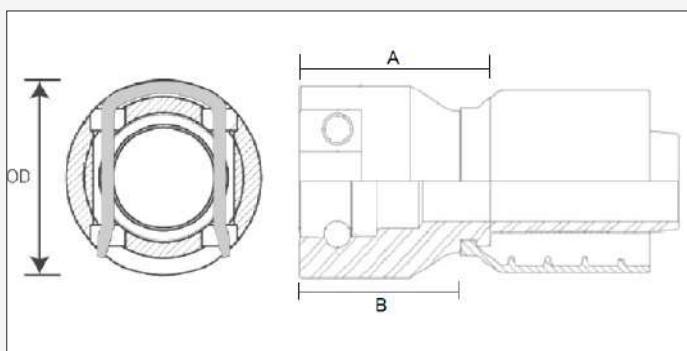


Product Code	Nominal Bore Flush Fit Super			Nominal Bore Hose			Dimensions mm		
	Dash	Inch	DN	Dash	Inch	DN	A	B	D
FFSM1-5032J	32	2"	50	32	2"	50	90	76.8	46.9
FFSM1-5032X	32	2"	50	32	2"	50	99.5	82.7	46.9
FFSM1-5032H	32	2"	50	32	2"	50	97.8	93.7	46.9
FFSM1-63-40*	40	2.1/2"	63	40	2.1/2"	63	103	86.4	64.9

\* FFSM1-63-40 use with BSMS-40 ferrule

# FFSF1

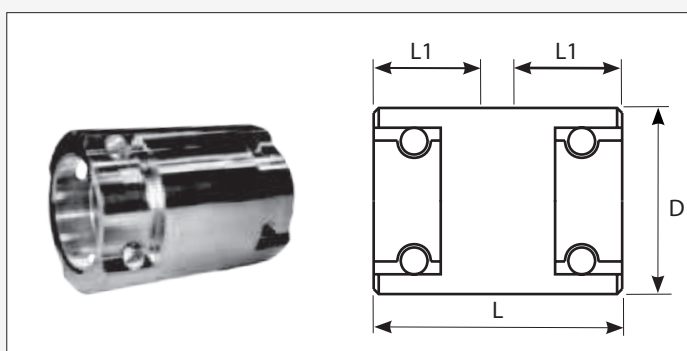
## FLUSH FIT SUPER FEMALE HOSE TAIL



Product Code	Nominal Bore Flush Fit Super			Nominal Bore Hose			Dimensions Hose Tail mm		
	Dash	Inch	DN	Dash	Inch	DN	A	B	OD
FFSF1-4024X	24	1.1/2"	40	24	1.1/2"	38	95.9	78.5	89
FFSF1-4024H	24	1.1/2"	40	24	1.1/2"	38	93	78.9	89
FFSF1-5032J	32	2"	50	32	2"	50	107.4	89.6	95.3
FFSF1-5032X	32	2"	50	32	2"	50	100.8	85.3	95.3
FFSF1-5032H	32	2"	50	32	2"	50	100.5	85	95.3

# FFS30

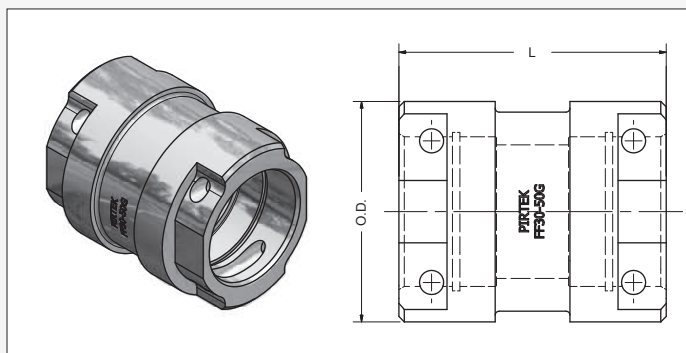
## FLUSH FIT SUPER FEMALE SOCKET



Product Code	Nominal Bore End 1			Nominal Bore End 2			Dimensions mm			
	Dash	Inch	DN	Dash	Inch	DN	L	L1	D	
FFS30-50	32	2"	50	32	2"	50			95.2	

## FFS30-G

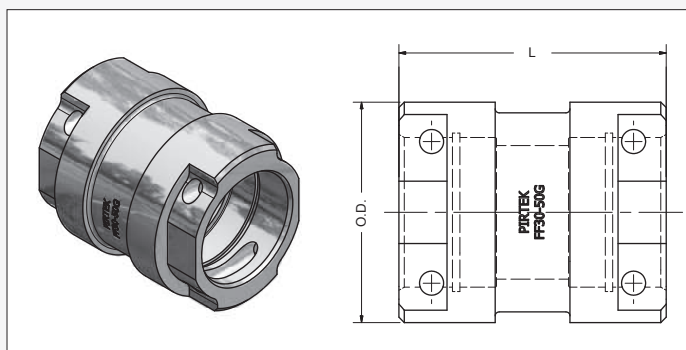
FLUSH FIT SUPER  
FEMALE SOCKET (GROOVED)



Product Code	Nominal Bore End 1			Nominal Bore End 2			Dimensions mm			BSPP Tapped Port (not shown)
	Dash	Inch	DN	Dash	Inch	DN	L	OD		
FFS30-50G	32	2"	50	32	2"	50		95.2		
FFS30-50G-06P	32	2"	50	32	2"	50		95.2		Side Tapped 3/8" BSPP
FFS30-63G	40	2.1/2"	63	40	2.1/2"	63				
FFS30-63G-16P	40	2.1/2"	63	40	2.1/2"	63				Side Tapped 1" BSPP

## FFSE30-G-P

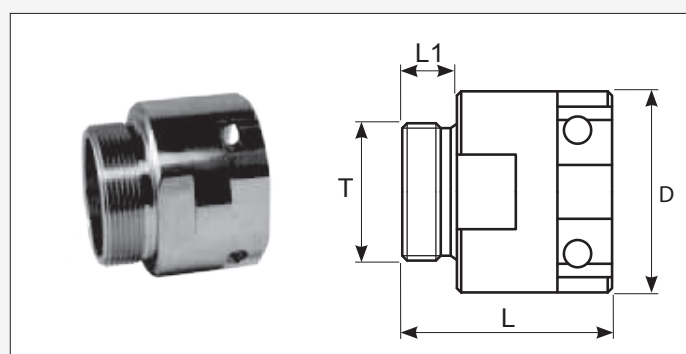
FLUSH FIT SUPER  
FEMALE SOCKET (GROOVED)  
TAPPED BSPP



Product Code	Nominal Bore End 1			Nominal Bore End 2			Dimensions mm			BSPP Tapped Port (not shown)
	Dash	Inch	DN	Dash	Inch	DN	L	OD		
FFSE30-63G-16P	40	2.1/2"	63	40	2.1/2"	63				1" - 11

## FFS115F

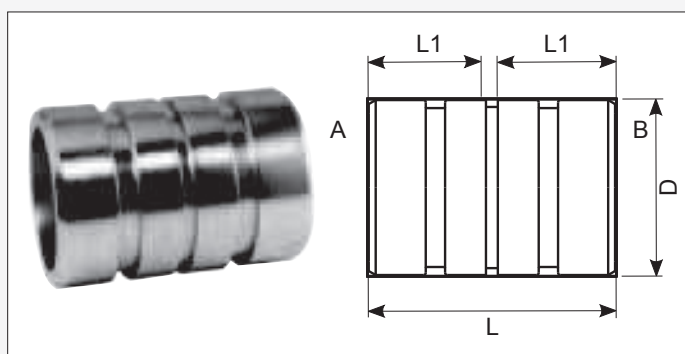
FLUSH FIT SUPER  
FIXED FEMALE - BSPP MALE



Product Code	Nominal Bore Flush Fit			Nominal Size T BSPP			Dimensions mm			Thread
	Dash	Inch	DN	Dash	Inch	DN	L	L1	OD	BSPP
FFS115F-50-32P	32	2"	50	32	2"	50			95.2	2" - 11
FFS115F-63-40P	40	2.1/2"	63	40	2.1/2"	63				2.1/2" - 11

# FFS120

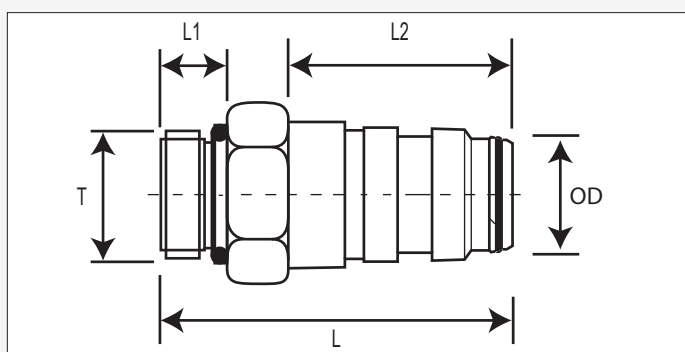
## FLUSH FIT SUPER MALE NIPPLE



Product Code	Nominal Bore Flush Fit End A			Nominal Bore Flush Fit End B			Dimensions mm				
	Dash	Inch	DN	Dash	Inch	DN	L	L1	OD		
FFS120-50	32	2"	50	32	2"	50					
FFS120-63	40	2.1/2"	63	40	2.1/2"	63					

# FFS155

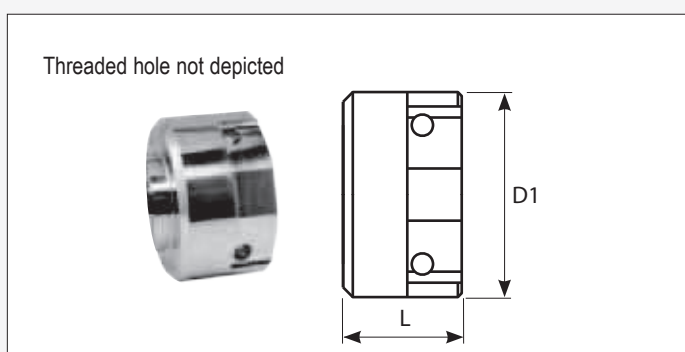
## FLUSH FIT SUPER MALE - BSPP



Product Code	Nominal Bore Flush Fit			Nominal Size T BSPP			Dimensions mm				Thread
	Dash	Inch	DN	Dash	Inch	DN	L	L1	L2	OD	BSPP
FFS155-50-32P	32	2"	50	32	2"	50					2" - 11
FFS155-63-40P	40	2.1/2"	63	40	2.1/2"	63					2.1/2" - 11

# FFS160TH

## FLUSH FIT SUPER CAP 8 mm THREADED HOLE



Product Code	Nominal ID						Dimensions mm		
	Side A			Side B			L	D1	Thread
	Dash	Inch	DN	Dash	inch	DN			
FFS160TH-50	32	2"	50	32	2"	50		95.2	M8x1.5
FFS160TH-63	40	2.1/2"	63	40	2.1/2"	63			M8x1.5

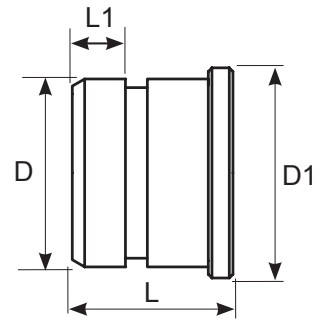


This page is part of a complete catalogue containing technical and safety data.  
All data must be reviewed when selecting a product.  
Pirtek reserve the right to change technical specifications without notice

## FFS165TH

FLUSH FIT SUPER PLUG  
8 mm THREADED HOLE

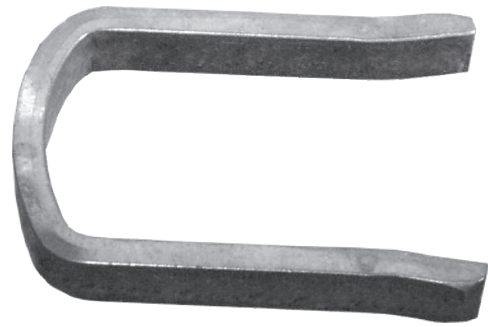
Threaded hole not depicted



Product Code	Nominal ID						Dimensions mm				
	Side A			Side B							
	Dash	Inch	DN	Dash	inch	DN	L	L1	D	D1	Thread
FFS165TH-50	32	2"	50	32	2"	50	48	28	46.9	65	M8x1.5
FFS165TH-63	40	2.1/2"	63	40	2.1/2"	63	67	25	76	85	M8x1.5

## FFS175D

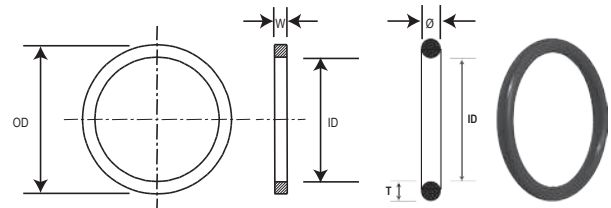
FLUSH FIT SUPER  
SECURING STAPLE  
'D' SECTION



Product Code	Nominal Size Flush Fit			Profile	Dimensions mm		
	Dash	Inch	DN	Length	Length	Staple Thickness	Staple Width
FFS175D-40	24	1.1/2"	40	'D' Section	78	9.5	12
FFS175D-50	32	2"	50	'D' Section	94	9.5	12
FFS175D-63	40	2.1/2"	63	'D' Section	107	10.5	14

## FFS180 &amp; FFS195

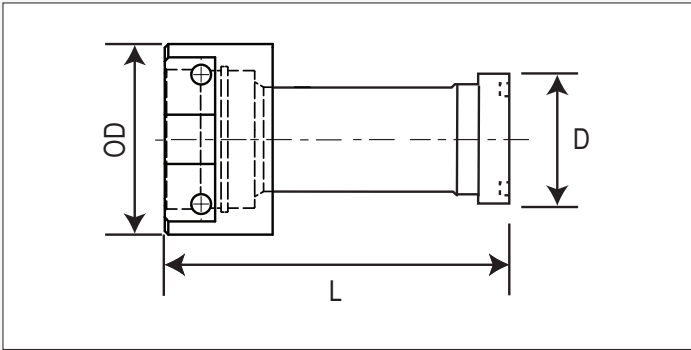
FLUSH FIT SUPER  
O-RING & BACK-UP - DURO 90



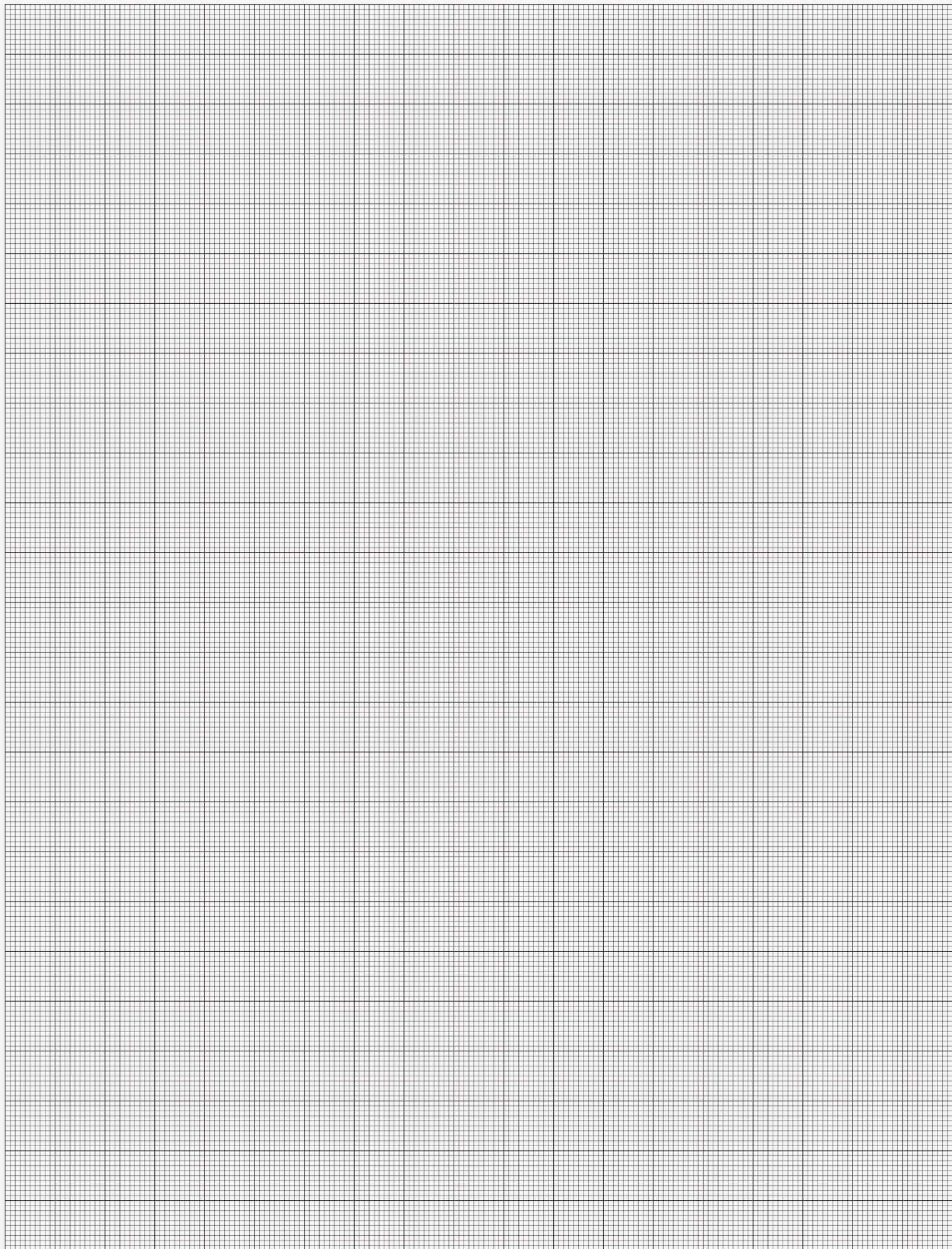
Product Codes		Location	Nominal Size Flush Fit			Dimensions O-Ring mm			Dimensions Backup mm		
O-Ring	Backup		Dash	Inch	DN	OD	ID	Ø	OD	ID	W
FFS180-50	FFS195-50	Male	32	2"	50	46.0	40.0	3.0	47.0	42.0	1.5
FFS180-63	FFS195-63	Male	40	2.1/2"	63	66.00	59.00	3.0	65.00	59.0	1.5

# FFSF-xx-C6x1

## FLUSH FIT SUPER - CODE FLANGE STRAIGHT ADAPTOR



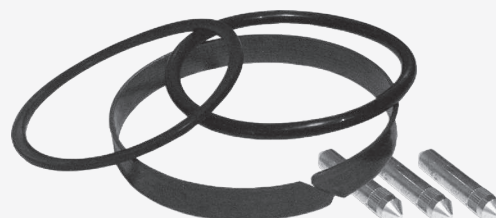
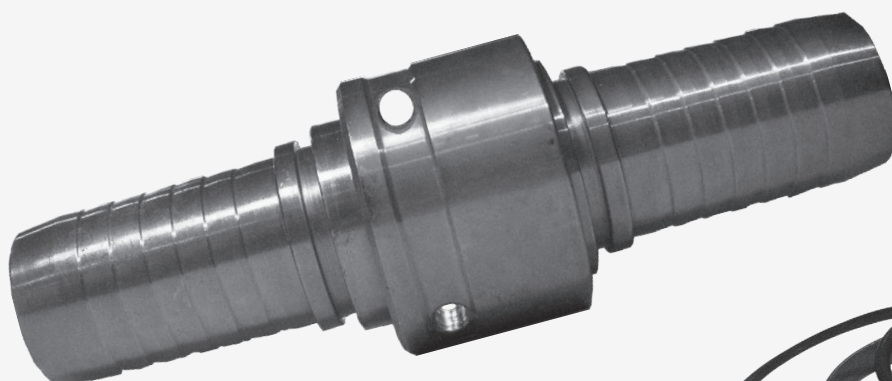
Product Code	Nominal OD						Dimensions mm		
	Flushfit Super			Code Flange					
	Size	Inch	DN	Type	Dash	Inch	L	OD	D
FFSF-50-C621-32	50	2"	50	Code 62	32	2"		95.2	79.5
FFSF-63-C611-40	63	2.1/2"	63	Code 61	40	2.1/2"			84.1



# SLIMLINE® ORIGINAL

## LOW PRESSURE COUPLING

### LOW PROFILE



#### Description:

- Steel bodied hose tail originally developed for use in Australian underground coal mines
- Intended to provide a full bore internal flow path with smallest possible exterior dimensions
- Retention system uses 2 or 3 shear pins and a pin retaining clip in spring steel
- 'Snag free' external profile

#### Materials and Specifications:

- Free cutting steel body and pins
- Flat Teflon or NBR backup ring
- Nitrile O-Ring

#### Applications:

- Low to medium pressure large bore return lines where the application requires a smooth exterior profile to avoid snagging
- Two piece ferrule and tail types using the FFI ferrule are suited to industrial hose only

#### Note:

This design has evolved into 3 variations of differing pressure capabilities, and differentiated by the pin size and clip width

Consult Pirtek for availability

## NOMINAL WORKING PRESSURES

### SLIMLINE ORIGINAL

Size			Slimline Low Pressure (SLL) - Bar		Slimline Med Pressure ( SLM ) Bar		Slimline High Pressure ( SLH ) Bar	
Dash	Inch	DN	Working Pressure	Burst Pressure	Working Pressure	Burst Pressure	Working Pressure	Burst Pressure
24	1.1/2"	40	-	-	100	400	140	560
32	2"	50	17	68	70	280	140	560
40	2.1/2"	63	70	280				



This page is part of a complete catalogue containing technical and safety data.  
All data must be reviewed when selecting a product.  
Pirtek reserve the right to change technical specifications without notice

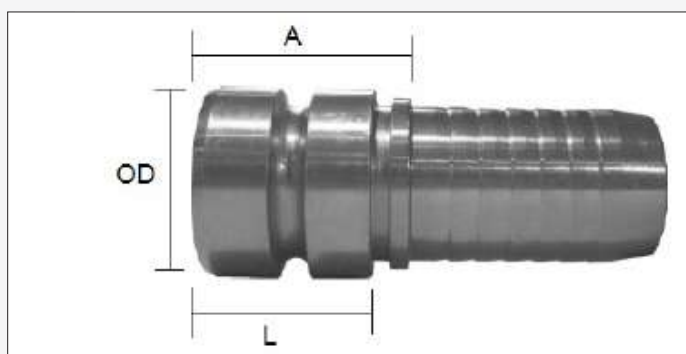


# ISLM1

## INDUSTRIAL SLIMLINE

### MALE HOSE TAIL

Requires FFI-xx ferrule



Product Code	Nominal Bore Slimline			Nominal Bore Hose			Dimensions mm		
	Dash	Inch	DN	Dash	Inch	DN	L	OD	A
ISLM1-4024	24	1.1/2"	40	24	1.1/2"	40	45	47.4	41

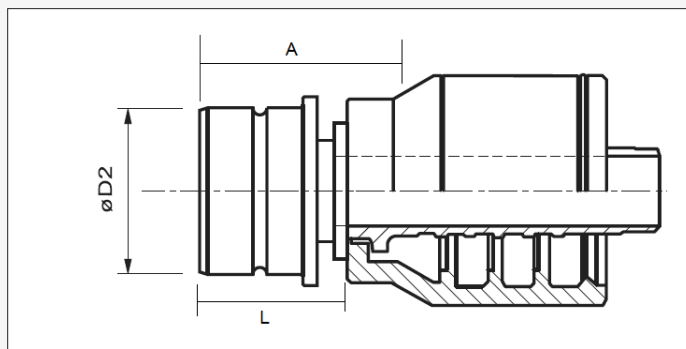
\* Sealing point for cut off factor is at the midpoint of the leading land area

# SLM1

## SLIMLINE

### MALE HOSE TAIL

U Series Lightweight is to suit FRAS hose



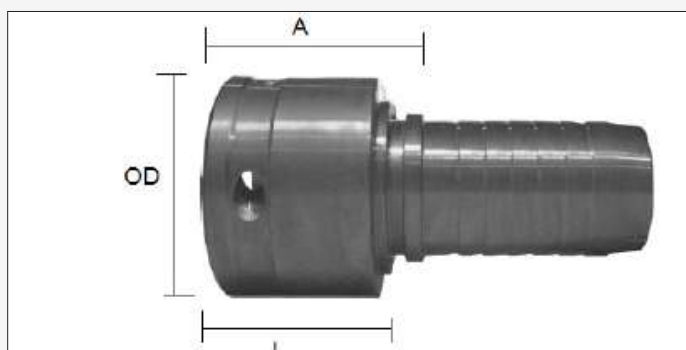
Product Code	Slimline Type	Nominal Bore Slimline			Nominal Bore Hose			Dimensions mm		
		Dash	Inch	DN	Dash	Inch	DN	A	L	OD
SLMM1-5032J	MEDIUM	32	2"	50	32	2"	50	61.4	48.5	60.2
SLMM1-5032U	MEDIUM	32	2"	50	32	2"	50	61.0	49.4	60.2
SLHM1-5032J	HIGH	32	2"	50	32	2"	50	66.4	52.8	60.6
SLLM1-6340J	LOW	40	2.1/2"	63	40	2.1/2"	63	77.5	62.0	76.2

# ISLF1

## INDUSTRIAL SLIMLINE

### FEMALE HOSE TAIL

Requires FFI-xx ferrule

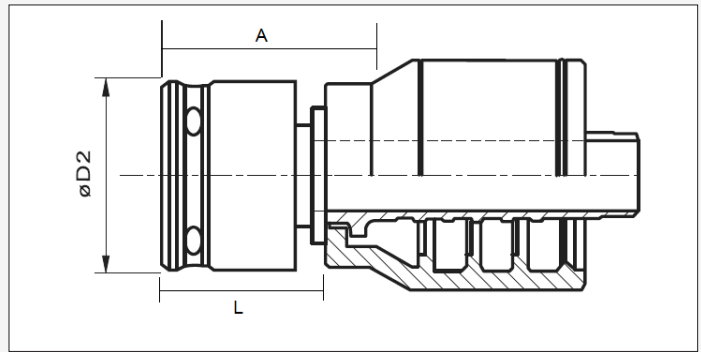


Product Code	Nominal Bore Slimline			Nominal Bore Hose			Dimensions mm		
	Dash	Inch	DN	Dash	Inch	DN	L	OD	A
ISLF1-4024	24	1.1/2"	40	24	1.1/2"	40	42	63.4	53
ISLF1 - 6340	40	2.1/2"	63	40	2.1/2"	63	58.6	98.5	74

# SLF1

## SLIMLINE

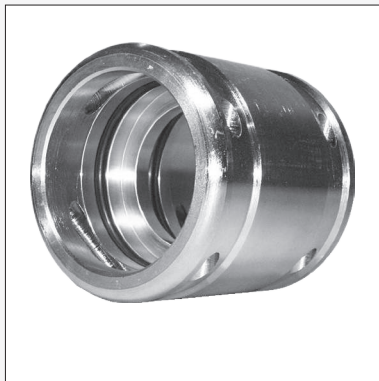
### FEMALE HOSE TAIL



Product Code	Slimline Type	Nominal Bore Slimline			Nominal Bore Hose			Dimensions mm		
		Dash	Inch	DN	Dash	Inch	DN	A	L	OD
SLMF1-5032J	Medium	32	2"	50	32	2"	50	58.1	42.7	76.2
SLHF1-5032J	How	32	2"	50	32	2"	50	71.2	53.8	82.7
SLLF1-6340J	Low	40	2.1/2"	63	40	2.1/2"	63	76.1	59.0	98.5

# SL30

## SLIMLINE FEMALE SOCKET



Product Code	Nominal Bore Staple			Nominal Bore Hose			Dimensions mm		
	Dash	Inch	DN	Dash	Inch	DN	L	OD	ID
SLM30-40	24	1.1/2"	40	24	1.1/2"	40			
SLM30-50	32	2"	50	32	2"	50	85.0	76.8	60.8
SLL30-63	40	2.1/2"	63	40	2.1/2"	63	100	99	76.8

# SLE30

## SLIMLINE COUPLING FEMALE FIXED

### TAPPED 1" BSP PORT



Product Code	Nominal Bore Flush Fit			Nominal Bore Hose			Dimensions mm		
	Dash	Inch	DN	Dash	Inch	DN	Length	OD	BSP Thread †
SLME30-50-16P	32	2"	50	32	2"	50	113.7	76.5	G-1"
SLME30-50-16T	32	2"	50	32	2"	50	113.7	76.5	R-1"
SLE30-63-16P	40	2.1/2"	63	40	2.1/2"	63	132	98.5	G-1"
SLE30-63-16T	40	2.1/2"	63	40	2.1/2"	63	132	98.5	R-1"

† 'G' denotes parallel thread (requires use of a 'Z' Series bonded seal available separately - see page 141)  
 'R' denotes tapered thread

## SL115

## SLIMLINE FEMALE x BSP MALE

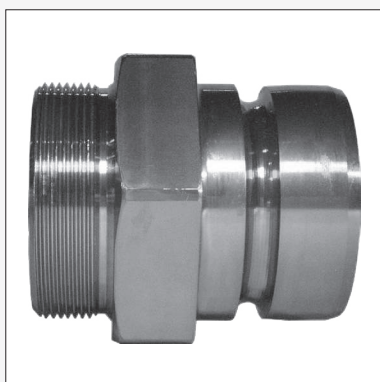


Product Code	Nominal ID			BSP Thread †	Dimensions mm			
	Slimline Female							
	Dash	Inch	DN	T	L	Thread Length	OD	Hex AF
SL115-40-24P	24	1 1/2"	40	G-1 1/2"				
SLM115-50-32P	32	2"	50	G-2"	90	28	76	76
SLM115-50-32T	32	2"	50	R-2"	93	30	76	76
SLM115-50-40P	32	2"	50	R-2"				
SLL115-63-40P	40	2.1/2"	63	G-2.1/2"	100	25	98.5	98
SLL115-63-40T	40	2.1/2"	63	R-2.1/2"	105	30	98.5	98

† 'R' denotes tapered thread 'G' denotes parallel thread. (The parallel thread requires use of a 'Z' Series bonded seal available separately - see page 141)

## SL155

## SLIMLINE MALE x BSPP MALE



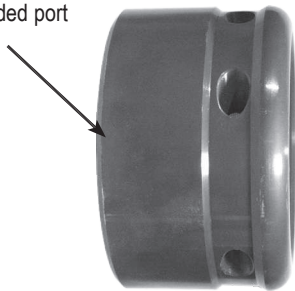
Product Code	Nominal ID			BSPP Thread	Dimensions mm			
	Slimline Male							
	Dash	Inch	DN	T	L	Thread Length	Staple OD	Hex AF
SL155-40-24P	24	1.1/2"	40	G-1.1/2"				
SLM155-50-32P	32	2"	50	G-2"	85	25	66	76
SLL155-63-40P	40	2.1/2"	63	G-2.1/2"	100	25	83	87.5

† 'G' denotes parallel thread (requires use of a 'Z' Series bonded seal available separately - see page 141)

## SL160

### SLIMLINE CAP

Optional BSPP  
threaded port



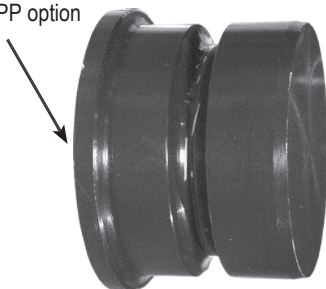
Product Code	Nominal Bore Slimline			Dimensions mm		
	Dash	Inch	DN	L	OD	ID
SL160-40	24	1 1/2"	40	42	77	
SLM160-50	32	2"	50	60	76	60.6
SLL160-63	40	2 1/2"	63	79	100	76.5

BSPP Tapped Port available for all sizes upon request. Please specify when ordering

## SL165

### SLIMLINE MALE PLUG

Blind tapped  
BSPP option



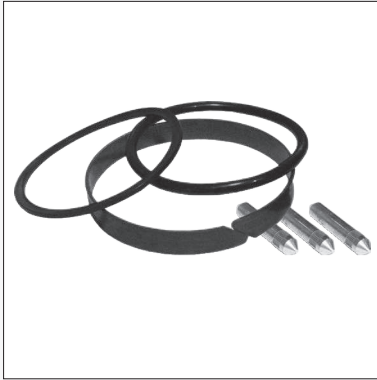
Product Code	Nominal Bore Slimline			Dimensions mm		
	Dash	Inch	DN	Length	Slimline OD	Max. OD
SL165-40	24	1 1/2"	40			
SLM165-50	32	2"	50	47	60	68
SL165-63	40	2 1/2"	63	47	60	68

BSPP Tapped Port available for all sizes upon request. Please specify when ordering

# SLK

## SLIMLINE PIN KIT

### O-RING, BACKUP, PINS & RETAINER

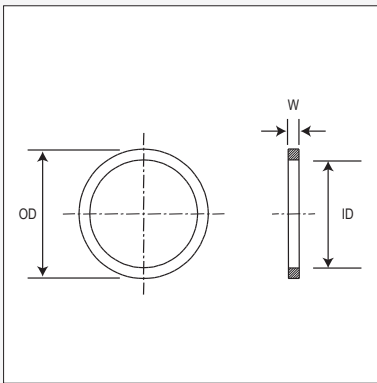


Product Code	Nominal ID			Kit Includes
	Dash	Inch	DN	
SLMK-40	24	1.1/2"	40	1 x O-Ring (SLO-40) 1 x Back-up Ring (SLB-40) 1 x Spring Clip (SLC-40) 2 x Retaining Pins (SLP-40)
SLMK-50	32	2"	50	1 x O-Ring (SLO-50) 1 x Back-up Ring (SLB-50) 1 x Spring Clip (SLC-50) 2 x Retaining Pins (SLP-50)
SLHK-50	32	2"	50	1 x O-Ring 1 x Back-up Ring 1 x Spring Clip 3x Retaining Pins
SLLK-63	40	2.1/2"	63	1 x O-Ring (SLO-63) 1 x Back-up Ring (SLB-63) 1 x Spring Clip (SLC-63) 3 x Retaining Pins (SLP-63)

Note that only 2 retaining pins are required in the original Slimline® design

# SLB

## SLIMLINE BACKUP RING

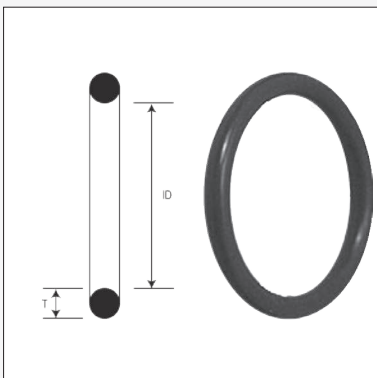


Product Code	Dimensions mm		
	OD	ID	Width W
SLB-40	57.3	48.2	1.88
SLB-50	68.8	60.4	1.93
SLB-63	86	76.2	2.0

This product is shown for technical reference only. It is available only as part of the complete kit

# SLO

## O-RING SEAL



Product Code	Dimensions mm		
	OD	ID	Thickness T
SLO-40	56.7	47.5	5.35
SLO-50	70.3	60.4	5.35
SLO-63	85.5	75.5	5.35

This product is shown for technical reference only. It is available only as part of the complete kit

# SLP

## SLIMLINE SECURING PIN



Product Code	No. of Pins	Dimensions mm		
		Length	OD	OD Milled Section
SLP-40	2	34.6	7.9	8.1
SLP-50	2	41.2	7.9	8.3
SLHP-50	3	45.5	9.5	9.8
SLP-63	3	52.6	9.5	9.8

This product is shown for technical reference only. It is available only as part of the complete kit

# SLC

## SLIMLINE RETAINING CLIP



Product Code	Dimensions mm		
	OD	ID	Width W
SLC-40	61.6	58.2	7.9
SLC-50	76.5	72.9	7.9
SLC-63	93.8	89.8	11.6

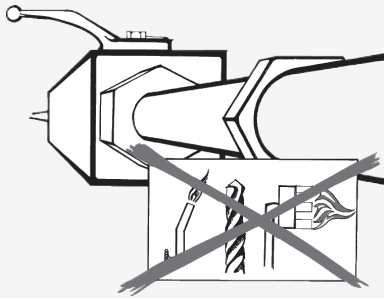
This product is shown for technical reference only. It is available only as part of the complete kit

# HIGH PRESSURE BALL VALVES

## SAFE PRACTICE REQUIREMENTS

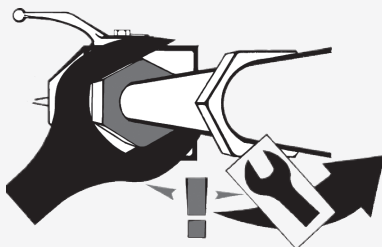
### GENERAL INSTRUCTION

- Ball valves must be operated only at the positions of the stop pins ie fully open or fully closed
- Never use a ball valve to control or throttle flow - seals and seats will be damaged and heat will be induced to the system
- Do not use mechanical aids to assist turning ball valves (gripping jaws on spindles, levers, pipe extensions, hammers etc)
- Ensure all special operating conditions concerning the application are communicated to the supplier before selecting a ball valve (including criteria such as humidity, vibrations, operation frequency, electromagnetic fields, explosive zones, anti-static etc)
- Store valves as supplied in a dry area free of contamination and with protective caps in place
- Do not operate ball valves more than 10 times per minute in explosive zones, as induced heat may create a dangerous situation
- Always wear protective gloves - the handle will adopt the temperature of the fluid
- Never modify a ball valve by drilling mounting holes, welding etc



### INSTALLATION

- Use only a ball valve that is correctly matched to the intended application with regard to pressure rating, materials of construction, operating temperature, port configuration and lock out capabilities
- EN ISO 5211.8 stipulates that a ball valves must turn 1/4 turn clockwise to close the valve, and incorporate a notch on the spindle to show the current ball position
- Installation should be by qualified people and in a totally depressurised pipe system
- Clean thoroughly all system components prior to installation to prevent damage to the sealing elements
- Always hold any end adaptors securely to counter torque loads when tightening fittings
- Do not tighten or loosen the end adaptors from their factory settings in any way
- Always drain a valve and the complete system before dismantling if dealing with toxic, combustible or explosive media



- With flanged valves, ensure flange connection bolts are properly centred with the opposing flange before tightening bolts in a crosswise procedure
- Use only clean undamaged seals of the correct Standard between flanges
- Use correct size and strength of bolts, and heed length of engagement requirements in tapped holes
- Heed good welding practice when using welded end valves
- Eliminate any welding residue to ensure a clean internal space of the valve
- Ensure the ball cavity remains within tolerable limits during the welding process to prevent distortion and seat / seal damage
- Ensure the installed valve meets with the requirements of the pipe layout to ensure proper accessibility

### INITIAL OPERATION

- Reread all instructions and operational requirements prior to commissioning, and gain any necessary approvals
- Use only qualified personnel for initial commissioning of the system
- Note that the operating torque of a valve that has been in storage or has been in the same operating position for a prolonged period will be noticeably higher than published breakaway torques
- Fully bleed the pipeline system before initial operation

**ALL AIR BUBBLES MUST BE REMOVED PRIOR TO FULL PRESSURISATION. RISK OF EXPLOSION!!**

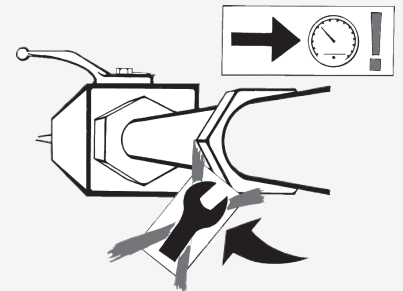
- Build the pressure up slowly
- If a ball valve is used as a pipe line termination point, the open end adaptor must be properly closed to prevent any internal debris being expelled unexpectedly

### MAINTENANCE & SURVEYS

- When draining a system to prevent frost damage or for cleaning, drain the ball cavity by opening the ball to the 45° position
- Do not disassemble ball valves
- Poor quality sealants must not be used for storage
- Inspect valves regularly for proper operating function (6 monthly minimum)
- Replace corroded, leaking or immovable ball valves without delay

### REMOVAL FROM SERVICE

- Never remove a ball valve without first relieving system pressure
- Always turn a valve to the mid position to properly relieve the internal cavity pressure
- Drain the system of fluid completely
- Wear personal protective equipment as necessary





# SLV / SSV

## LOCKABLE BALL VALVES

### STANDARD AND SUPER STAPLE



Spindle removal is impossible when a 38mm dia scissor lock is in place, allowing tamper-proof operation

Male - Female or  
Female - Female  
configurations

#### Description:

- Steel bodied ball valve with either fixed female or male - female configurations
- Patented safety locking design that is fully compliant with padlock and scissor lock in common use, **refer to note**.
- Able to be configured to the customer requirement as to handle position (standard configuration is for the valve to be closed when the handle is in the pictured position)

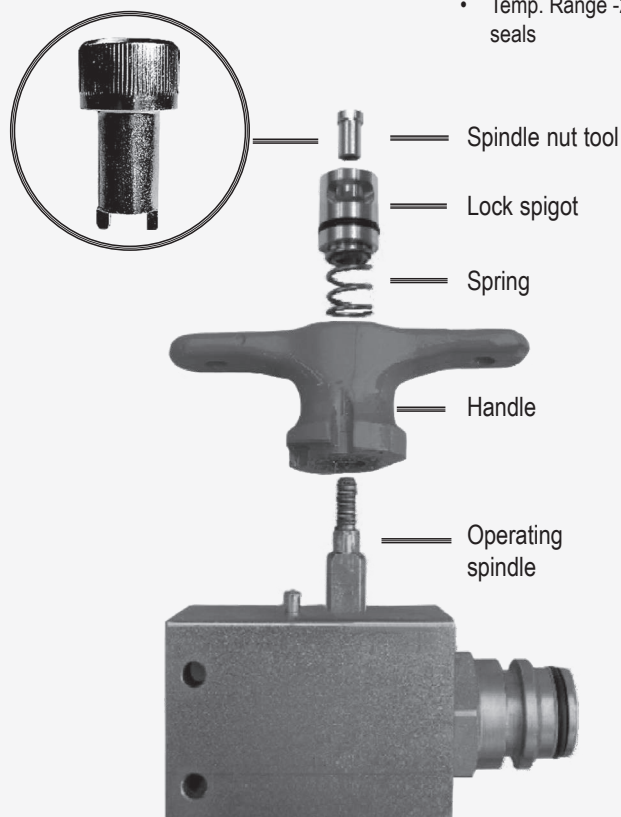
#### Materials and Specifications:

- Passivated zinc corrosion protection
- All steel construction
- Nitrile seals
- High working pressures
- Handle movement involves a lift and twist operation, preventing tampering or disassembly when a padlock is in place (the lifting action is prevented by the presence of a padlock)
- Temp. Range -20 to +100°C with standard seals

#### Features:

- Handles can be colour coded to customer request (red is standard)
- Mounting holes are incorporated in some styles - Refer Pirtek

**NOTE: 38mm dia. Safety lockout jaws and / or 6mm dia. shackle safety padlock to be used only.**



#### PROCEDURE TO ALTER THE LOCK FUNCTION

1. Start with the handle in the open position
2. Unscrew the spindle nut at the top of the handle (use the tool circled at left)
3. Remove the lock spigot and spring before sliding the handle vertically clear of the operating spindle
4. Rotate the handle through 1/2 turn anti-clockwise
5. Refit the handle in the new position
6. Replace the spring and lock spigot
7. Secure the handle using the spindle nut tool

#### REPLACEMENT HANDLE REPAIR KIT

The components shown at left (excluding the valve body and spindle nut tool) can be ordered using Product Code **SV-HD6RD-KIT**

#### SPINDLE NUT TOOL

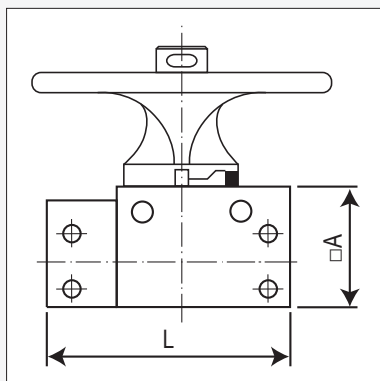
Available to order using Product Code **SLV-TOOL**



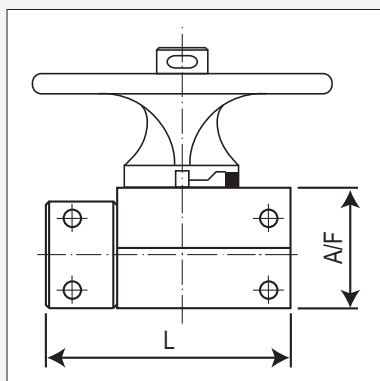
## SLV01

## LOCKABLE BALL VALVE

## FEMALE - FEMALE STD. STAPLE



Config. 1 Square



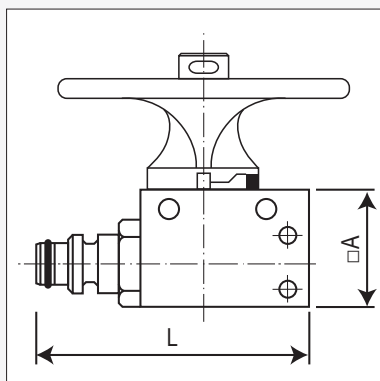
Config. 2 Hexagonal

Product Code	Configuration	Nominal Bore			Pressure Rating bar		Dimensions mm		
		Dash	Inch	DN	Working	Burst	L	A	AF
SLV01-06-6RD	1	6	3/8"	10	500	1250	88	40	-
SLV01-08-6RD	1	8	1/2"	12	500	1250	112	40	-
SLV01-12-6RD	1	12	3/4"	20	500	1250	115	50	-
SLV01-16-6RD	2	16	1"	25	400	1000	135	-	60

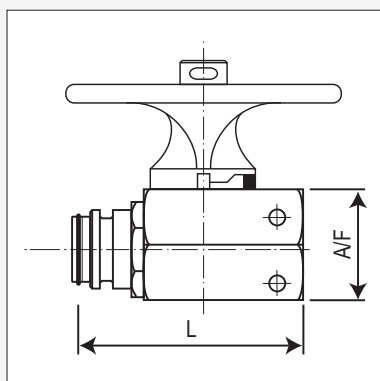
## SLV31F

## LOCKABLE BALL VALVE

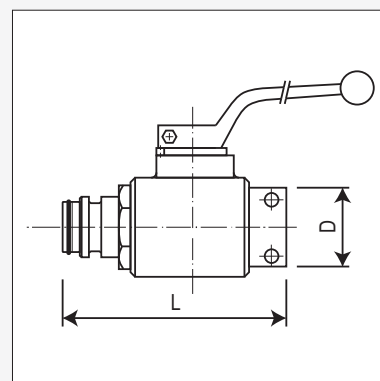
## MALE - FEMALE STD. STAPLE



Config. 1 Square



Config. 2 Hexagonal



Config. 3 Round

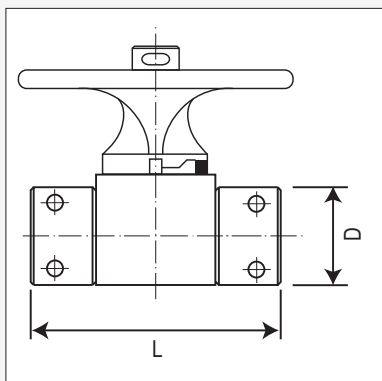
Product Code	Configuration	Nominal Bore			Pressure Rating bar		Dimensions mm			
		Dash	Inch	DN	Working	Burst	L	A	AF	D
SLV31F-06-6RD	1	6	3/8"	10	500	1250	88	40	-	-
SLV31F-08-6RD	1	8	1/2"	12	500	1250	112	40	-	-
SLV31F-12-6RD	1	12	3/4"	20	500	1250	115	50	-	-
SLV31F-16-6RD	2	16	1"	25	400	1000	135	-	60	-
SLV31F-20-6RD	2	20	1.1/4"	32	300	600	145	-	60	-
SLV31F-24-1PL †	3	24	1.1/2"	40	250	500	190	-	-	70
SLV31F-32-1PL †	3	32	2"	50	200	400	200	-	-	82

† See next page for Configuration 3 padlock arrangement (1PL suffix)

# SSV01

## LOCKABLE BALL VALVE

### FEMALE - FEMALE SUPER STAPLE

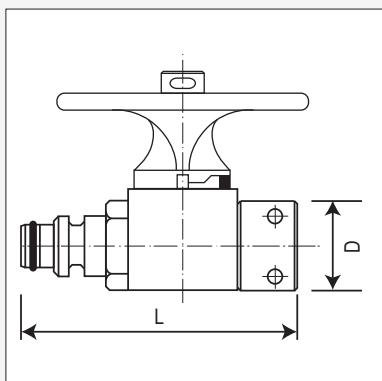


Product Code	Configuration	Nominal Bore			Pressure Rating bar		Dimensions mm		
		Dash	Inch	DN	Working	Burst	L	D	
SSV01-20-6RD	1	20	1.1/4"	32	350	700	195	70	

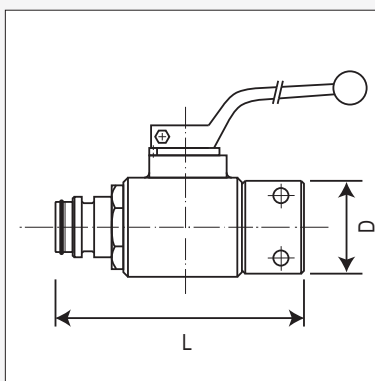
# SSV31

## LOCKABLE BALL VALVE

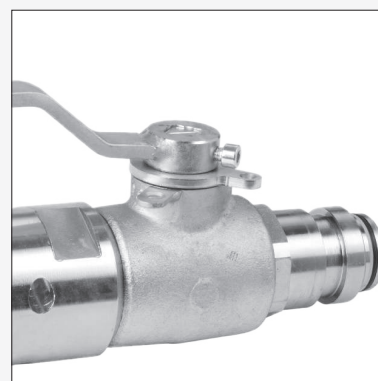
### MALE - FEMALE SUPER STAPLE



Config. 1 Square



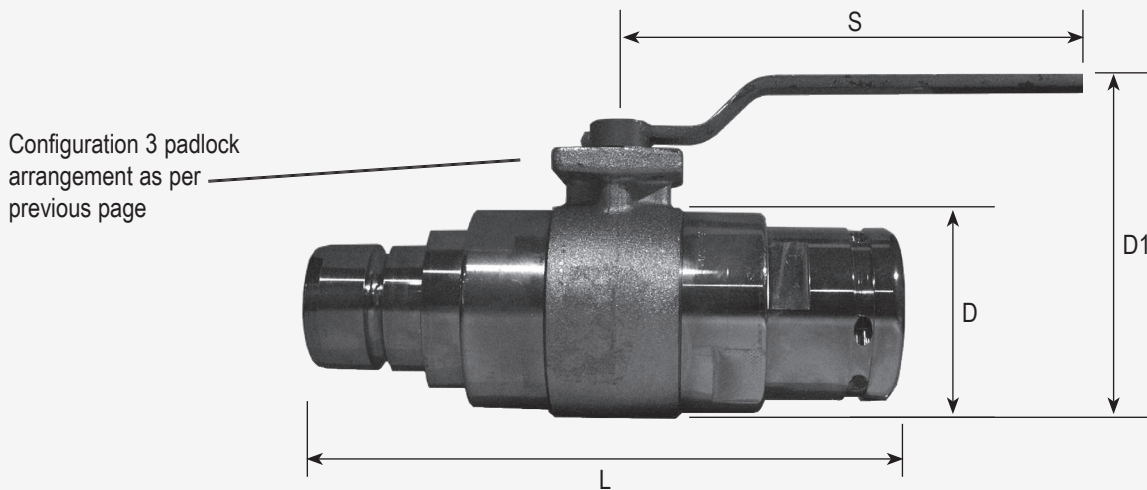
Config. 3 Round



Config. 3 Padlock Arrangement

Product Code	Configuration	Nominal Bore			Pressure Rating bar		Dimensions mm		
		Dash	Inch	DN	Working	Burst	L	D	
SSV31-12-6RD	1	12	3/4"	20	500	1250	160	45	
SSV31-16-6RD	1	16	1"	25	420	1000	205	60	
SSV31-20-6RD	1	20	1.1/4"	32	420	700	205	95	
SSV31-20-1PL	3	20	1.1/4"	32	420	700	205	82	
SSV31-24-1PL	3	24	1.1/2"	40	420	700	235	82	
SSV31-32-1PL	3	32	2"	50	350	700	260	95	

## CLBV

LOCKABLE BALL VALVE  
CLIPLINE MALE - FEMALE**Description:**

- Steel bodied ball valve with fixed male - female configuration
- Lockable lever handle with positive stop points at the open and closed positions
- Lever can be removed (Allen key required) and repositioned as desired

**Materials and Specifications:**

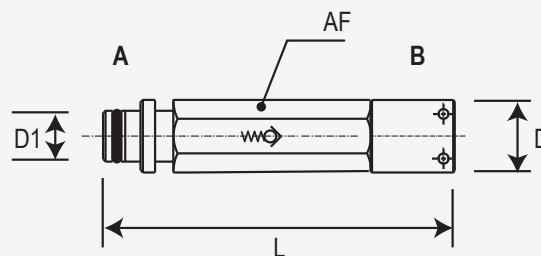
- Passivated zinc corrosion protection
- All steel construction
- Nitrile seals
- 140 bar working pressure
- Temp. Range -20 to +100°C with standard seals

**Features:**

- Allows lockable valve installation on Cliquine circuits

Product Code	Configuration	Nominal Bore			Pressure Rating bar		Dimensions mm			
		Dash	Inch	DN	Working	Burst	L	D	D1	S
CLBV-63	3	63	2.1/2"	65	140	280	370	125	215	300

## SCV

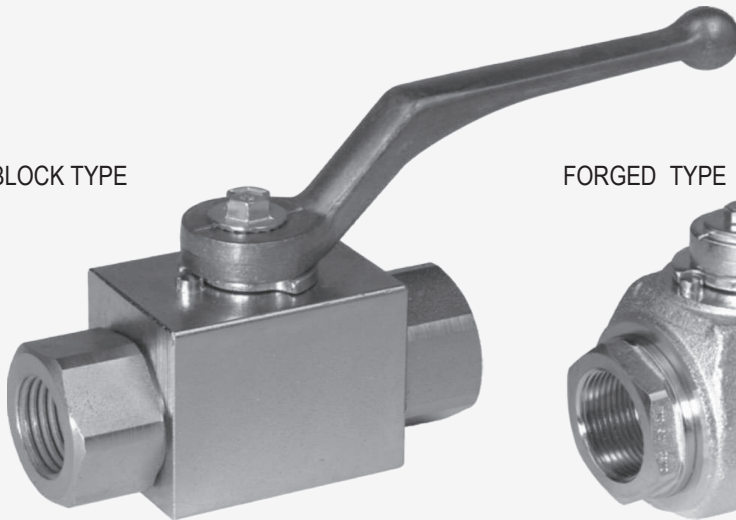
STAPLELOK CHECK VALVE  
STANDARD STAPLELOK M-F

Product Code	Nominal Bore			Pressure Rating bar			Dimensions mm			
	Dash	Inch	DN	Cracking	Working	Burst	D	D1	L	AF
SCV-10	6	3/8"	10	0.5	420	700	30	14	132	36

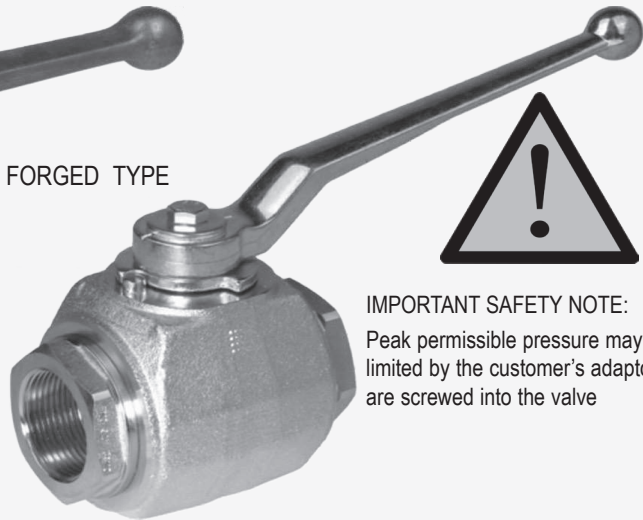
# SPBV

## HIGH PRESSURE BALL VALVES CONVENTIONAL BSPP FEMALE ENDS

BLOCK TYPE



FORGED TYPE



**IMPORTANT SAFETY NOTE:**

Peak permissible pressure may be limited by the customer's adaptors that are screwed into the valve

**Description:**

- Steel bodied ball valve in either block style or forged steel
- Pressure balanced floating ball between seals ensures a maintenance free life
- Pre-loaded ball seats guarantee tightness even in vacuum
- Stem fitted from within the housing prevents blow-off of the stem
- Block type comes with mounting holes  
-04 = 4.5mm -06 through -20 = 6.5mm

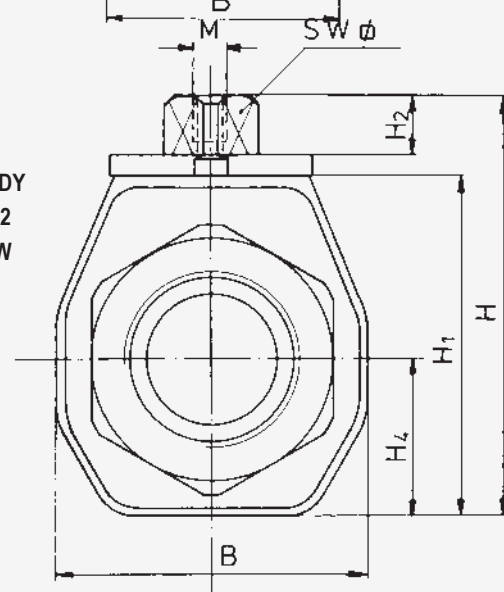
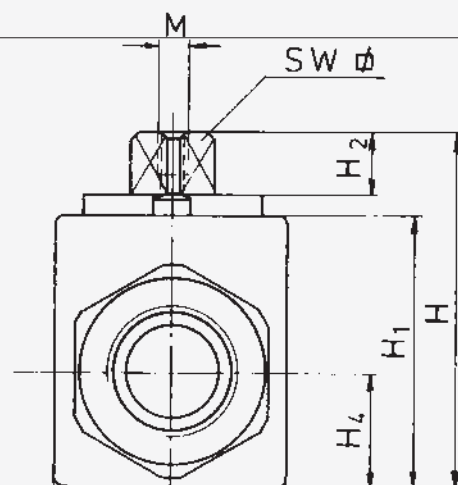
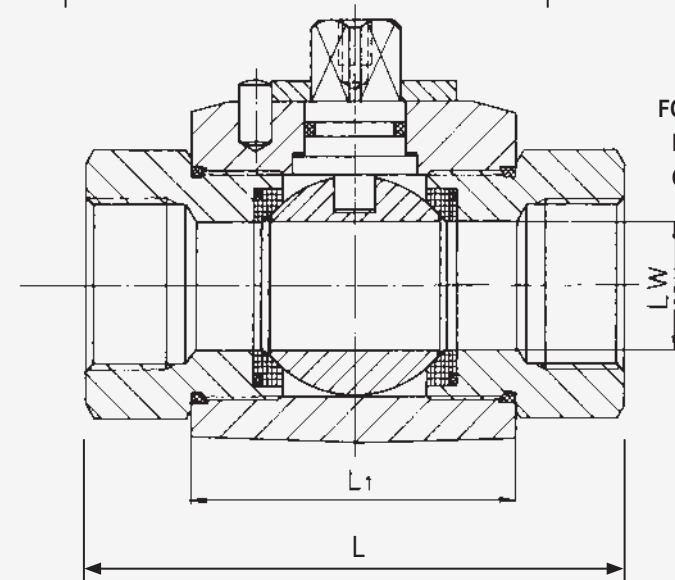
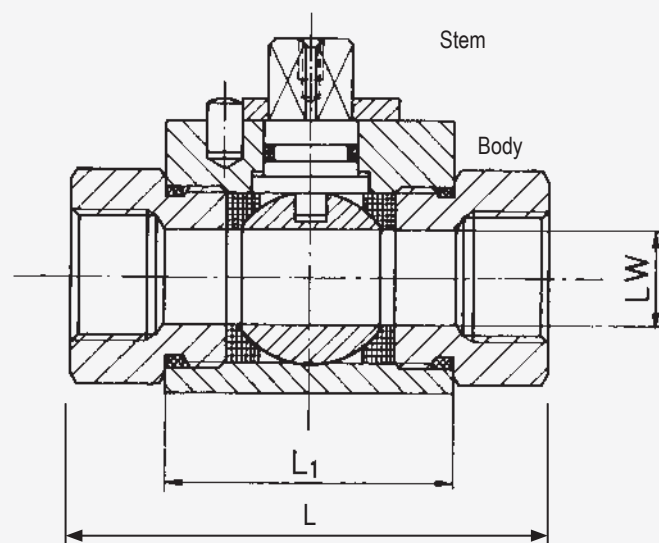
**Materials and Specifications:**

- Free cutting steel body, ball, seat and stem
- Polyamide ball seat
- Perbunan NBR O-rings
- CR6 free corrosion protection
- Steel handle for block type
- Zinc alloy handles for forged type
- Temp. Range -20 to +100°C with standard seals

**Applications:**

- General hydraulics
- steam
- paint
- thermo oil
- Special seals may be required in some applications. Please advise if planning an application other than normal hydraulics

## SPBV

HIGH PRESSURE BALL VALVES  
CONVENTIONAL BSPP FEMALE ENDS

PIRTEK SPBV HIGH PRESSURE BALL VALVES

"Product Code"	"Body Type"	Nominal Size			"Valve W.P."*	Dimensions mm									
		Dash	BSPP	DN		LW	L1	L	B	H	H1	H2	H4	SW	M
SPBV-04	Block	04	1/4"	6	500	6	40	69	26	46.5	33	13.5	12	9	M6
SPBV-06	Block	06	3/8"	10	500	10	42	71	33	54	38	16	14.4	9	M6
SPBV-08	Block	08	1/2"	13	500	13	48	82	36	57.5	40	17.5	14.3	9	M6
SPBV-12	Block	12	3/4"	20	400	20	62	96	49	81.5	57	24.5	17.5	14	M6
SPBV-16	Block	16	1"	25	400	25	66	113	58	94.5	65	29.5	17.7	14	M6
SPBV-16G	Forged	16	1"	25	400	24	65	113	58	79.4	63	16	28.2	14	M6
SPBV-20	Block	20	1.1/4"	32	400	25	66	120	58	94.5	65	29.5	17.7	14	M6
SPBV-20A	Forged (Black)	20	1.1/4"	32	400	32	80	110	80	104.4	85.4	18.5	39.5	17	M8
SPBV-20G	Forged	20	1.1/4"	32	400	32	80	110	80	104.4	85.4	18.5	39.5	17	M8
SPBV-24	Forged (Black)	24	1.1/2"	40	400	38	85	120	84	111.4	92.4	18.5	42	17	M8
SPBV-24G	Forged	24	1.1/2"	40	400	38	85	120	84	111.4	92.4	18.5	42	17	M8
SPBV-32	Forged (Black)	32	2"	50	400	47.5	100	140	104	129	110	18.5	52	17	M8
SPBV-32G	Forged	32	2"	50	400	47.5	100	140	104	129	110	18.5	52	17	M8
SPBV-40PL	Forged	40	2.1/2"	63	160	65	122	185	141	172	154	16.4	71	17	-

\* Peak permissible pressure is limited by the customers adaptors screwed into the valves.

# SHBV

## HANDLES TO SUIT

### HIGH PRESSURE BALL VALVES



Product Code	To suit Product Codes				Material	Dimensions mm		
	Conventional	Stainless Steel	Flanged	3-Way		Valve Stem	L	Offset
SHBV-06	SPBV-04, -06, -08	SSBV-04, -06, -08		STBV-04, -06, -08	Steel Plated	9	110	36
SHBV-16	SPBV-12, -16, -20	SSBV-12, -16	FBVC62-16		Steel Plated	14	165	65
SHBV-24	SPBV-20A/G, -24, -24A/G, -32/G	SSBV-20, -24, -32	FBVC62-20, -24, -32		Zinc alloy	17	280	16

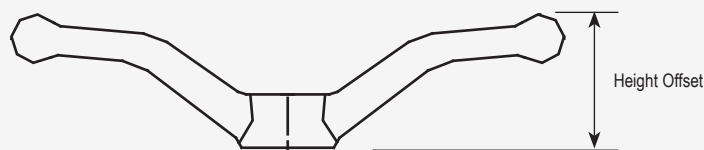
#### PLEASE NOTE

Zinc alloy handles contain no aluminium and are suited for use in underground coal mines. Steel handles for the same purpose are available to special request. Please contact your nearest Pirtek Centre

# SHTV

## BUTTERFLY HANDLES TO SUIT

### BALL VALVES



Product Code	To suit Product Codes	Material	Dimensions mm		
			Valve Stem	Width	Height Offset
SHTV-06	SPBV-04, -06, -08 SSBV-04, -06, -08 STBV-04, -06, -08	Zinc alloy	9	116.5	27.8
SHTV-12	SPBV-12, -16, -20 SSBV-12, -16, -20 STBV-12, -16, -20	Zinc alloy	14	116.5	27.8

\* Note Handle is not compatible with BVPK locking plate.

# SKBV

## O-RING KITS TO SUIT HIGH PRESSURE BALL VALVES



### IMPORTANT SAFETY NOTE:

Ball Valve overhaul using these kits should be performed by authorised personnel only. Please consult important safety notes concerning ball valves on page 87



Kit consists of :-

For -04 to -16

- 2 x Ball Seats (POM material)
- 2 x Adaptor O-rings (NBR material)
- 1 x Stem O-ring (NBR material)
- 1 x Thrust ring (POM material)

For -20 to -32

Kits include the above plus :-

- 2 x Seat O-rings (NBR material)

Product Code	To suit Product Codes	
	Conventional BSPP	Flanged
SKBV-04	SPBV-04	
SKBV-06	SPBV-06	
SKBV-08	SPBV-08	
SKBV-12	SPBV-12	
SKBV-16	SPBV-16, -20	FBVC62-16
SKBV-20	SPBV-20A	FBVC62-20
SKBV-24	SPBV-24	FBVC62-24
SKBV-32	SPBV-32	FBVC62-32

# BVPK *(replaces VLP)*

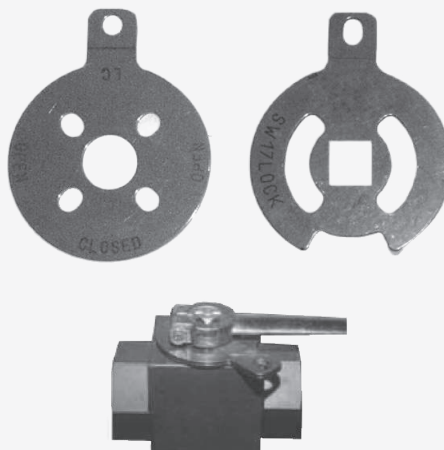
## STEEL LOCK PLATES TO SUIT MOST BALL VALVES

Easily fitted locking device for Pirtek ball valves bearing

Product Codes:

SPBV / SSBV / STBV / FBVC62

These lock plates are not compatible with SHTV butterfly handle.



Product Code	Description
BVPK-08	Suits -04, -06, -08 Ball Valves
BVPK-16	Suits -12, -16 Ball Valves
BVPK-32	Suits -20, -24, -32 Ball Valves

# SSBV

## HIGH PRESSURE BALL VALVES

### STAINLESS STEEL



**IMPORTANT SAFETY NOTE:** Refer also to the BSPP Thread Table on page 92 when determining the pressure rating of threaded adaptors in combination with SSBV Ball Valves

#### Description:

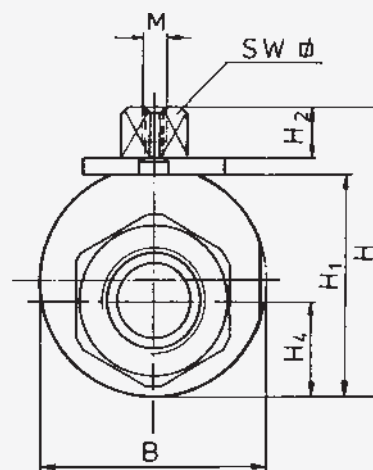
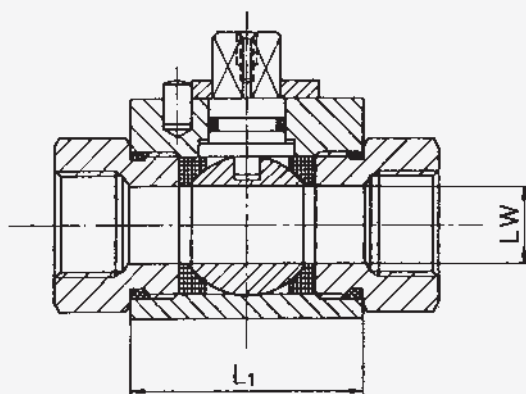
- 1.4571 Stainless steel ball valve
- Pressure balanced floating ball between seals ensures a maintenance free life
- Pre-loaded ball seats guarantee tightness even in vacuum
- Stem fitted from within the housing prevents blow-off of the stem

#### Materials and Specifications:

- SS316Ti steel body, ball, and stem
- Polyamide ball seat
- Perbunan NBR O-ring
- ball seats and seals must be chosen as appropriate to the intended application
- Zinc alloy handles
- Temp. Range -20 to +100°C with standard seals

#### Applications:

- Chemicals
- Petrochemical
- Environmental technologies
- Offshore
- High pressure cleaning equipment



PIRTEK SSBV STAINLESS STEEL BALL VALVES

Product Code	Body Type	Screwed Ends	Nominal Size			Peak WP	Dimensions mm								
		BSPP	Dash	Inch	DN	bar	LW	L1	B	H	H1	H2	H4	M	SW□
SSBV-04	Round Bar	1/4"	06	1/4"	6	400	6	36.2	35	43.6	32.2	11	13	M5	9
SSBV-06	Round Bar	3/8"	06	3/8"	10	400	10	43.2	42	49.5	38.25	10.9	16.5	M5	9
SSBV-08	Round Bar	1/2"	08	1/2"	13	400	13	48.2	45	52	40.75	10.9	18	M5	9
SSBV-12	Round Bar	3/4"	12	3/4"	20	350	20	62.2	60	74.4	57.8	16	25.5	M6	14
SSBV-16	Round Bar	1"	16	1"	25	350	24	66.2	65	79.2	62.8	16	28	M6	14
SSBV-20	Round Bar	1.1/4"	20	1.1/4"	32	250 †	32	81.6	90	103	84	18.5	38.1	M8	17
SSBV-24	Round Bar	1.1/2"	24	1.1/2"	32	250 †	38	86.6	100	114.9	95.9	18.5	45.5	M8	17
SSBV-32	Round Bar	2"	32	2"	32	250 †	47.5	101.6	115	129.5	110.5	18.5	52.5	M8	17

† Peak permissible pressure limited by BSPP thread capability

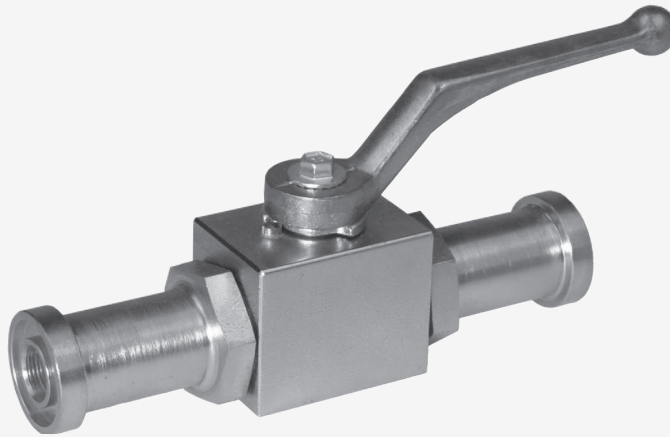


This page is part of a complete catalogue containing technical and safety data.  
All data must be reviewed when selecting a product.  
Pirtek reserve the right to change technical specifications without notice



# FBVC62

## HIGH PRESSURE BALL VALVES SAE CODE 62 FLANGED ENDS



### Description:

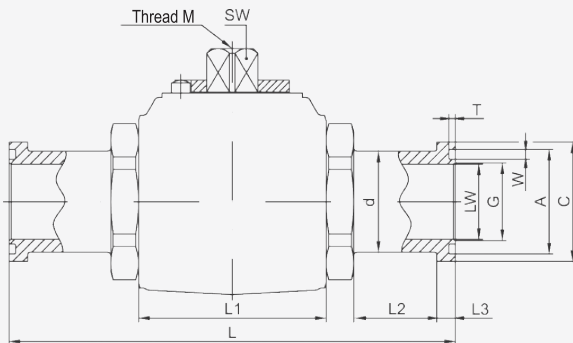
- Steel bodied ball valve in either block style or forged steel (block style depicted)
- Pressure balanced floating ball between seals ensures a maintenance free life
- Pre-loaded ball seats guarantee tightness even in vacuum
- Stem fitted from within the housing prevents blow-off of the stem

### Materials and Specifications:

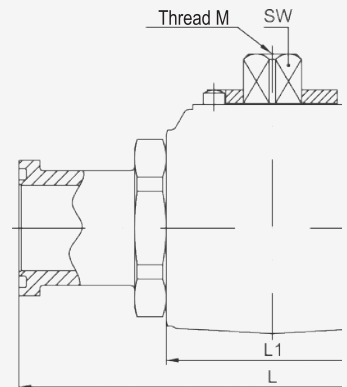
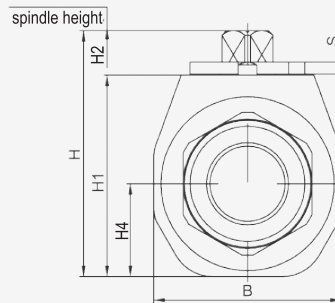
- Free cutting steel body, ball, seat and stem
- Polyamide ball seat
- Perbunan NBR O-rings
- CR6 free corrosion protection
- Zinc alloy handles
- Temp. Range -20 to +100°C with standard seals

### Applications:

- hydraulics
- ship building
- engineering
- mining
- Special seals may be required in some applications. Please advise if planning an application other than normal hydraulics



Forged



Block

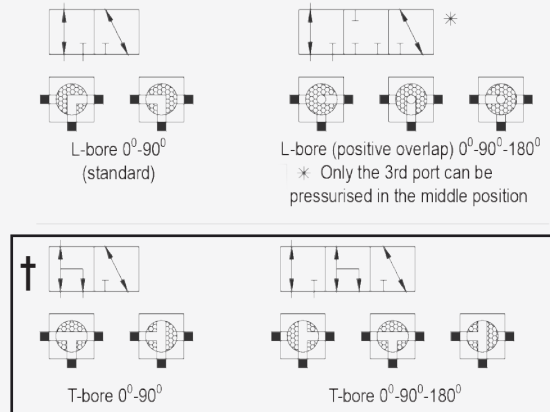
### PIRTEK FPBVC62 HIGH PRESSURE FLANGED BALL VALVES

Product Code	Body Type	Surface Finish	Nominal Size			Peak WP	Dimensions mm																	
			Dash	Inch	DN		LW	L1	B	H	H1	H2	H4	SW	M	S	L	L2	L3	d	C	A	W	T
FBVC62-16	Block	Pass. zinc	16	1"	25	350	24	66.2	60	76.6	60	16	26.5	14	M6	4	199	40	9.5	38	47.6	39.7	4.2	2.8
FBVC62-20	Forged	Pass. zinc	20	1.1/4"	32	400	32	80	80	104	85.4	18.5	39.5	17	M8	5	223	45	10.3	44	54	44.5	4.2	2.8
FBVC62-24	Forged	Pass. zinc	24	1.1/2"	40	400	38	85	84	111	92.4	18.5	42	17	M8	5	281	70	12.6	51	63.5	53.7	4.2	2.8
FBVC62-32	Forged	Pass. zinc	32	2"	50	400	47.5	100	104	129	110	18.5	52	17	M8	5	316	80	12.6	67	79.4	63.3	4.2	2.8

# STBV

## HIGH PRESSURE BALL VALVES

### 3-WAY



#### Description:

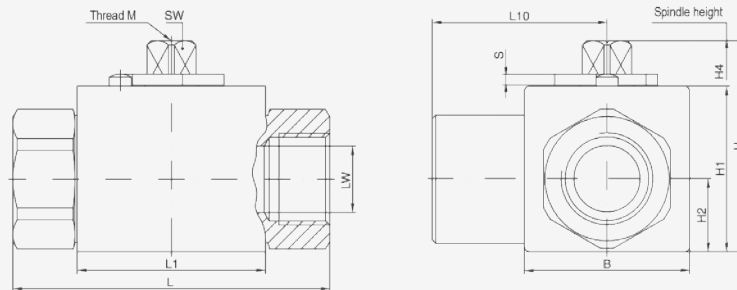
- Pressure balanced floating ball between seals ensures a maintenance free life
- Pre-loaded ball seats guarantee tightness even in vacuum (see applications note)
- Stem fitted from within the housing prevents blow-off of the stem
- L pattern standard
- † T Pattern Available to special order
- Comes with mounting holes  
- 04 = 4.5mm  
- 06 through -16 = 6.5mm

#### Materials and Specifications:

- Steel body, ball, and stem
- POM ( Derlin ® ) ball seat
- Surface treatment: Zinc plating Cr3 Silver
- NBR O-ring
- ball seats and seals must be chosen as appropriate to the intended application
- Steel handle
- Temp. Range -20°C to 120°C with standard seals

#### Applications:

- general hydraulics
- construction & agriculture
- mining
- the third port cannot be closed
- *the blocked port pressure must be zero or at least lower than the other ports for sealing to be effective*

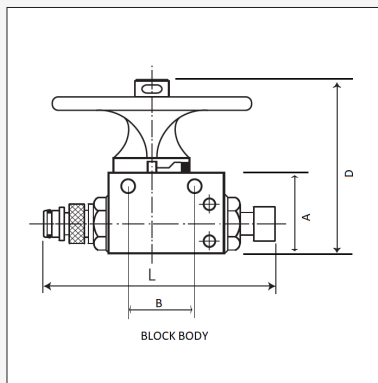
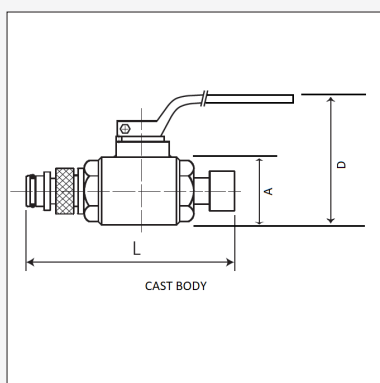


Product Code	Body Type	Screwed Ends	Nominal Size			Peak W.P	DIMENSIONS mm											
		BSPP	Dash	Inch	DN		L	L1	LW	L10	B	H	H1	H2	H4	S	SW	M
STBV-04	Block	1/4"	04	1/4"	6	500	69	40	6	35	29	45	33	13	12	3	9	M6
STBV-06	Block	3/8"	06	3/8"	10	500	71	42	10	36	35	52	38	17	14.5	4.2	9	M6
STBV-08	Block	1/2"	08	1/2"	13	500	82	48	13	41	38	53.6	40	18.5	14	3	9	M6
STBV-12	Block	3/4"	12	3/4"	20	400	95.5	62	20	47	52	74	57	25	17.5	4.7	14	M6
STBV-16	Block	1"	16	1"	25	400	113	66	25	56	61	82.5	65	30	17.6	4.4	14	M6

# SKV31

## SKV MEDIUM PRESSURE BALL VALVES

### MALE x FEMALE LOCKABLE

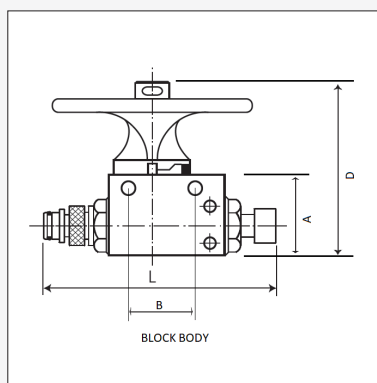
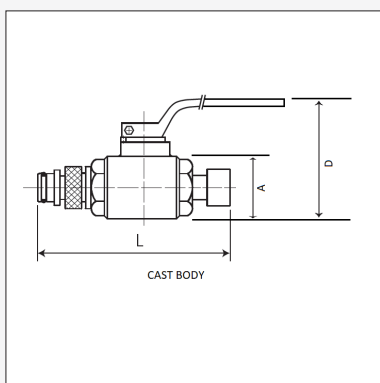


"Product Code"	"Body Type"	"No. of mounting holes"	Nominal Bore			Pressure rating (Bar)		Dimensions			
			Dash	Inch	DN	W.P	B.P	L	A	D	B
SKV31F-25-6RD	Block	2	16	1"	25	280	700	151	55	101	48
SKV31-50-1PL	Cast	N/A	32	2"	50	160	400	241	99	167	N/A

# SSKV31

## SSKV HIGH PRESSURE BALL VALVES

### MALE x FEMALE LOCKABLE



"Product Code"	"Body Type"	"No. of mounting holes"	Nominal Bore			Pressure rating (Bar)		Dimensions			
			Dash	Inch	DN	W.P	B.P	L	A	D	B
SSKV31F-10-6RD	Block	1	6	3/8"	10	420	1050	117	40	86	N/A
SSKV31F-13-6RD	Block	1	8	1/2"	13	420	1050	121	40	86	N/A
SSKV31F-20-6RD	Block	2	12	3/4"	20	420	1050	148	45	91	48
SSKV31F-25-6RD	Block	2	16	1"	25	420	1050	160	55	101	49
SSKV31-40-1PL	Cast	N/A	24	1.1/2"	40	420	1050	221	79	151	N/A
SSKV31-50-1PL	Cast	N/A	32	2"	50	420	1050	256	91	164	N/A

# FLOW RATES

## HIGH PRESSURE BALL VALVES

All Pirtek ball valves are full flow designs. A ball valve should never be used as a flow regulating device - ie it should always be either fully open or fully closed. As such, a ball valve can be treated as simply part of the conduit in which it is installed. It is common practice to treat hydraulic components such as ball valves as an equivalent length of straight pipe to allow for turbulence associated with entrance and exit losses.

Catalogue Section E (pages E2 through E6) details recommended flow velocities for a wide range of hydraulic conduits, but the flow nomograph (Fig.1) and selector graph (Fig. 2) below may be helpful for less rigorous assessments. For information concerning the empirical formulae and design charts that form the basis of hydraulic flow theory, the reader is referred to Pirtek Technical Catalogue Section Q

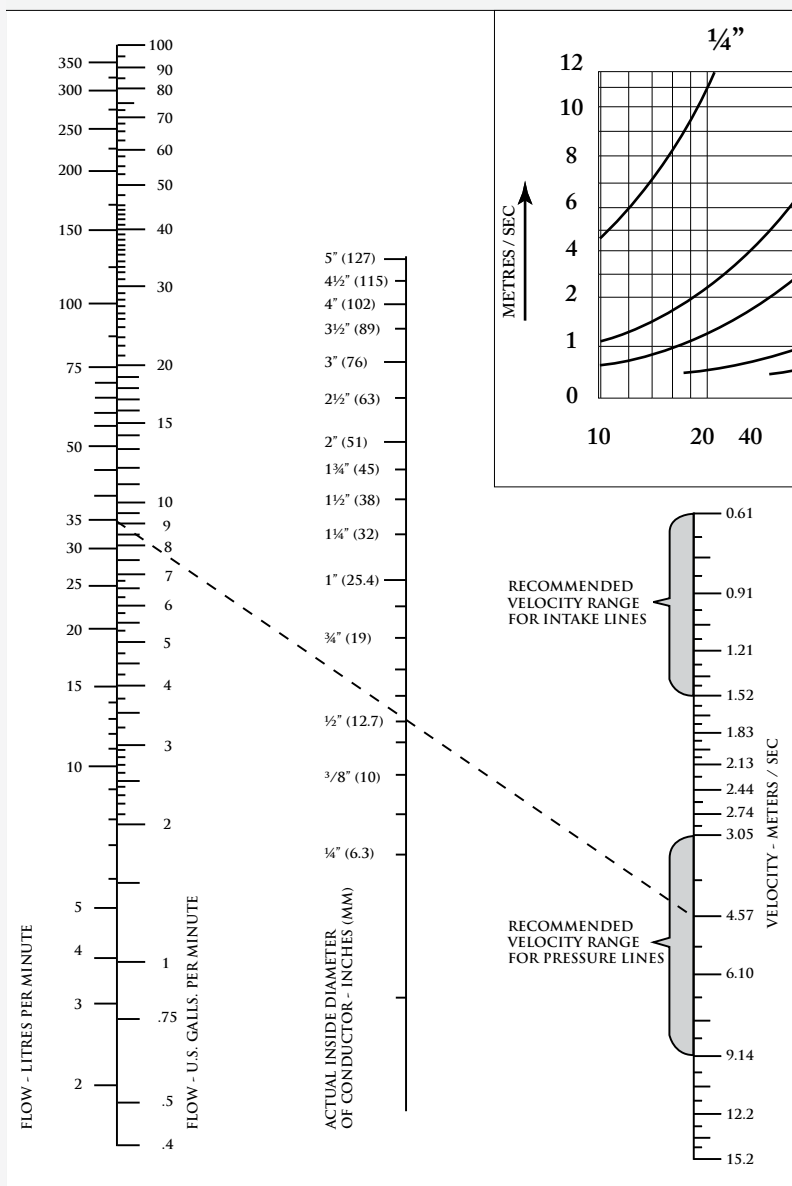


Fig.1 Flow Nomograph

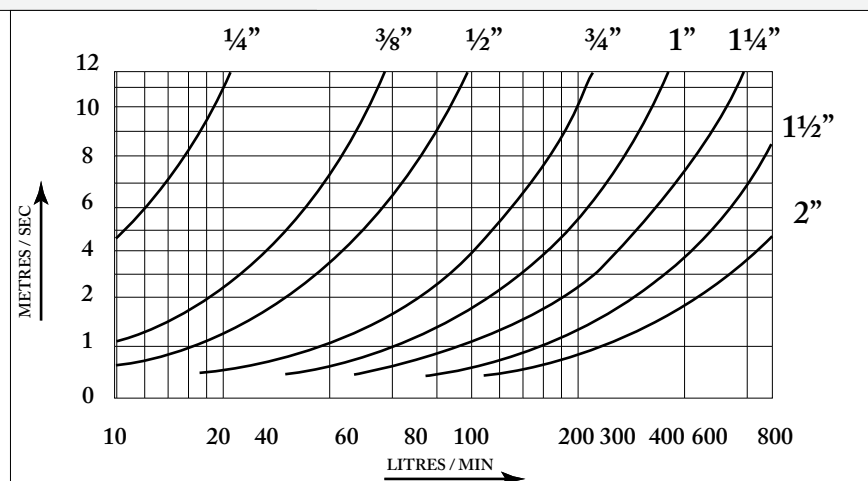


Fig. 2 Ball Valve Selector

Component	Loss coefficient K	L/D
Ball Valve fully open	0.05	1.75
Globe Valve fully open	10	350
Tee, through side outlet	2	70
Tee (Run)	0.9	31.5
Elbow - medium radius	1.5	52.5
Elbow - long radius	0.7	24.5
Elbow 45°	0.4	14

Minor pressure loss in pipe and tube systems can be expressed as:

$$h_{\text{minor\_loss}} = K * v^2 / (2 * g)$$

Where:

$$h_{\text{minor\_loss}} = \text{minor head loss (m)}$$

K = minor loss coefficient (dimension-less)

v = flow velocity (m/s)

g = acceleration of gravity (m/s<sup>2</sup>) - use 9.806 m/s<sup>2</sup>

The ratio L/D is used where the designer wishes to express the losses as an equivalent length of pipe. Multiply the tabulated L/D ratio by the internal diameter of the component to determine the equivalent length of conduit that the component represents

# FCS

## STEEL SPRING GUARD

Galvanised steel wire



Provides support to bends

### Description:

- Wound heavy gauge galvanised wire ideal for the protection of hose exposed to severe operating conditions
- The wire helps to distribute a bending radius on curved hoses, and reduces the likelihood of kinking
- Helps prevent abrasion and resists deep cuts

### Materials and Specifications:

- Galvanised steel wire

### Applications:

- Common in quarries as protection from flying stones

STEEL SPRING GUARD						Suits Hose Type & Dash Size				
Product Code	Dimensions mm				Box Quantity	R1AT/PE2	R2AT	C25 / PC25	C35 / PC35/PE435	C42 / PC42/PE442/PE642
	ID	OD	Wire Ø	Pitch						
FCS-00	7	9.5	1.25	4	10 x 5 m	Suits DN2 Mini test hose and 3x6mm Lubrication tube				
FCS-01	10.8	13.2	1.2	5	10 x 5 m	Intended for use with small diameter Thermoplastic, STH hose and PCLH Lube Hose				
FCS-02	13	15.2	1.2	5	4 x 5 m	Intended for use with Bridgestone® hose PLT-04 (Komatsu® specific)				
FCS-03	15	18.2	1.6	5.5	10 x 5 m	-03, -04	-03			
FCS-04	16	19.2	1.6	5.5	10 x 5 m	-05	-04		-05	-04
FCS-06	20	23.2	1.6	5.5	8 x 5 m	-06	-05, -06		-06	
FCS-08	23.5	27.5	2	6	6 x 5 m	-08	-08		-08	-06
FCS-10	26.5	30.5	2	6	5 x 5 m	-10	-10	-10		-08
FCS-11	30	34	2	6	5 x 5 m	-12		-12	-10, -12	
FCS-12	33	37	2	6	4 x 5 m		-12			-12
FCS-14	38	43	2.5	7.5	3 x 5 m	Used in conjunction with DAS sleeve on -12 sizes				
FCS-16	41	46	2.5	7.5	3 x 5 m	-16	-16	-16	-16	-16
FCS-20	48.5	53.5	2.5	7.5	2 x 5 m	-20	-20	PC25-20	PC35-20 PE435-20	
FCS-24	54	59.6	2.8	9	2 x 5 m	-24		C25-20	-20	-20
FCS-30	59.5	65.1	2.8	7.5	2 x 5 m		-24	-24	-24	-24
FCS-32	69	75.3	3.15	8	2 x 5 m	-32	-32			
FCS-36	75	81.3	3.15	7.5	1 x 5 m				C35-32	C42EH-32
FCS-38	83	89.3	3.15	12	1 x 5 m	Suits R4HT-40/R2AT-40				

# DAS

## DIFFUSION ABRASION SLEEVE



### Description:

- Black or red textile (Polyamide 6) sleeve for the assistance in protection of people and machinery via protection and bundling of hose, hose assemblies, cables, wires etc.
- Dense yet not bulky protection is achieved through
  1. protection of the encased product from abrasion
  2. being very effective in reducing the concentrated stream of pin hole leaks
- Burst resistant
- The smooth surface facilitates sliding over even very long assemblies, and use of talcum powder or compressed air will further facilitate the process
- Offers good leakage containment in the event of hose failure

### Materials and Specifications:

- De-aerated compact woven nylon fibres (Polyamide 6)
- In test conditions the sleeve contained the sharp stream of hydraulic oil passing through a 0.8 mm Ø pre-drilled hole when the pressure was raised to 800 bar and held for 1 minute
- Abrasion resistance exceeds the requirements of ISO 6945 (holds up to 50,000 cycles)
- Oil retention capability of 100 psi pressure for 3 minutes when tested to SAE J343
- Approved by USMSHA fire resistance for the use in mines.
- Tested to ISO 8031 for electrical conductivity (anti-static)
- Working temperature -60°C to 125°C
- Melting point 225°C +/- 10°C

### Applications:

- Widely used as abrasion protection wherever hoses and cables may be exposed to damage through rubbing
- Gaining widespread acceptance as an effective (though not total) barrier to the dangers of hydraulic hose leaks in the vicinity of personnel, especially in underground coal mining
- Additional protection can be achieved using two layers of DAS sleeve
- The sleeve must be securely fixed to the ferrule of the hose fitting if effective protection is to be achieved at the hose to fitting interface. Epoxied heat shrink is preferred, although other methods may be adopted
- A loose fit is preferred when seeking to gain protection against a hose leak
- Meets MDG41 requirements



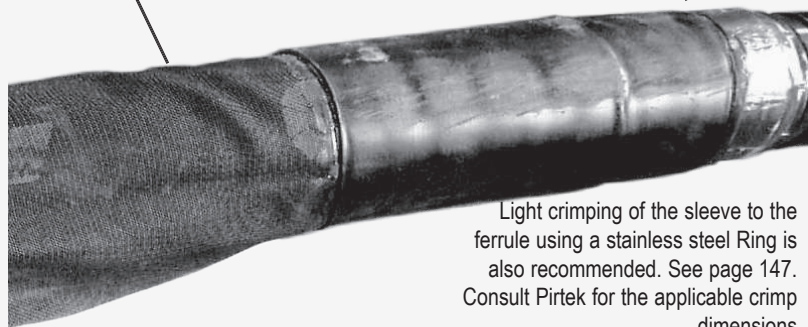
### IMPORTANT SAFETY NOTE:

Diffusion Abrasion Sleeve (DAS) is a diffusion device and conditionally a burst suppression device

### PIRTEK DIFFUSION ABRASION SLEEVE

Product Code		Nominal ID mm		Coil Length
		Flat	Round Ø	m
Black	Red			
DAS-20	DAS-20RD	31	20	50
DAS-25	DAS-25RD	39	25	50
DAS-31	DAS-31RD	49	31	50
DAS-40	DAS-40RD	63	40	50
DAS-53	DAS-53RD	83	53	50
DAS-60	DAS-60RD	94	60	50
DAS-73	DAS-73RD	115	73	50
DAS-93	DAS-93RD	146	93	50
DAS-112	DAS-112RD	176	112	50

Note the loose fit



This page is part of a complete catalogue containing technical and safety data. All data must be reviewed when selecting a product. Pirtek reserve the right to change technical specifications without notice



# SSG / FRASG

## SPIRAL SAFETY GUARD AND FRAS GUARD

High abrasion resistance

Larger sizes ideal for bundling hoses

Rounded edges

FRAS rated option



### Description:

- High density polyethylene with a domed centre and rounded edges strip wound
- An ideal and economical hose wrap for individual hoses or for use in bundling
- Available as normal safety wrap, and also in an approved fire resistant and anti-static (FRAS) form for use in underground coal mines
- UV resistant
- Rounded edges prevent industrial injury
- Can be retrofitted on site to existing hoses and bundles while in place
- Self lubricating properties
- Exceptional anti-crushing and abrasion resistance

### Materials and Specifications:

- High density polyethylene copolymer
- ASTM D792 density 1.03 g/cm<sup>2</sup>
- ASTM D648 temperature 103°C
- ASTM D2863 Oxygen Index 26%
- International compliance to EN ISO 6805 tests 8030 and 8031
- FRAS version Approval No. MSHA IC-213/2
- *Not approved for use on electrical cables*
- Working temperature -100°C to +100°C
- Vicat softening temperature +130°C (Pin Penetration Test)

### Applications:

- Agricultural equipment
- Mining and quarrying
- Oil and gas distribution
- Forestry (colour coding available to order)
- Welding hose protection
- Robotic arms and booms
- Transport
- *Not approved for use on electrical cables*

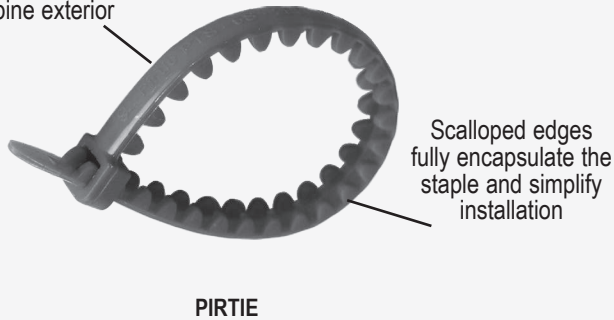
PIRTEK SAFETY SPIRAL GUARD & FRAS GUARD							Hose Dash Size	Hose Type				Range of Hose OD
Product Code				Dimensions mm		Coil Length		R1AT / PE2	R2AT	C-PC25/ C-PC35/ PE435	C-PC42/ PE442/ PE642	
Safety Spiral Guard		FRAS Guard										
Black	Red	Black	Red †	OD	ID	mtr						mm
SSG-012BL	SSG-012RD	-	-	12	8.5	20	-03	●	●			9-12
SSG-016BL	SSG-016RD	FRASG-016BL	-	14.5	12	20	-04	●	●		●	12-17
SSG-020BL	SSG-020RD	FRASG-020BL	-	18	15	20	-04 to -08	●	●	●	●	16-22
SSG-025BL	SSG-025RD	FRASG-025BL	-	22	19	20	-08 to -10	●	●	●	●	22-28
SSG-032BL	SSG-032RD	FRASG-032BL	FRASG-032RD	27	23	20	-12	●	●	●	●	27-33
SSG-040BL	-	FRASG-040BL	FRASG-040RD	37	32.5	20	-16	●	●	●	●	33-43
SSG-050BL	-	FRASG-050BL	FRASG-050RD	48	43.5	20	-20 to -24	●	●	●	●	44-55
SSG-063BL	-	FRASG-063BL	FRASG-063RD	58	52.5	20	-24 to -32		●	●	●	54-65
SSG-075BL	-	FRASG-075BL	FRASG-075RD	69	63	10	-32 to -40	●	●	●	●	65-80
SSG-090BL	-	FRASG-090BL	-	83.5	76.5	10	-					80-150
SSG-110BL	-	FRASG-110BL	-	99	91.5	10	-					150-170

† Available on request

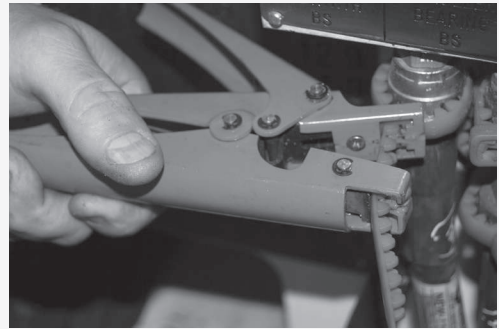
# PIRTIE

## PIRTEK STAPLE RETENTION STRAP

Embossed identification data on spine exterior



PIRTIE



The cutting tool in action. Note teeth removed from adjacent ties to enable their use in tight situations

### Description - Original Design:

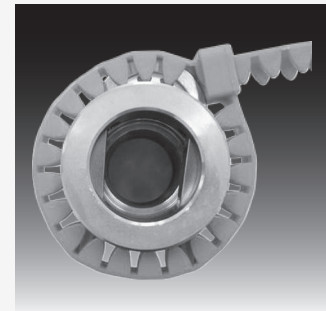
- Robust construction.
- Easy installation due to design.
- Can be located at any position. No start point.
- Designed to suit the staple widths and height.
- The tie fully encapsulates the staple.
- Staples are held tight in the fittings to eliminate staple float.
- Tooth design allows the Pir-Tie to fit closely around sockets and manifolds or odd shapes.
- Ties can be joined together to increase the length.
- All 3 sizes are able to be tensioned tightly then trimmed using one Tensioner / Cutter Tool.
- In tight areas the Pir-Tie can be turned inside out and have teeth strategically removed, to reduce the height to that similar to a standard cable tie. This feature allows ties to be installed in tight situations.
- Small pack quantities to reduce wastage.
- The red colour is easier to see in an underground coal environment

### Materials Specifications:

- Made from Red Du-pont UV stabilised virgin flame resistant rated nylon (as required by "MSHA") to a Pirtek registered design (Patent Pending)



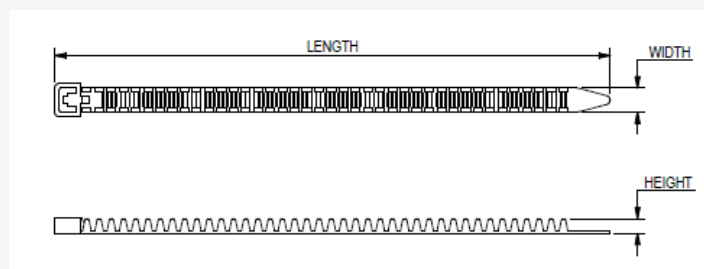
**IMPORTANT SAFETY NOTE:**  
Periodic staple inspection should still be conducted as part of general maintenance and a staple audit process



Combination tightening and cutting snips

Product Code:

**PTS-CUTTER**



Product Code	Description	Suits Staple Type		Dimensions (mm)			"Pack Qty"
		Standard	Super	Length	Width	Height	
PTS06S-20S	Secures DN6 through DN20 staple	.		250	10.8	7.5	50
PTS-25S-75S	Secures DN25 through DN75 staple	.		500	14.2	9.6	20
PTS-25SS-63SS	Secures DN25 through DN63 staple		.	500	18.8	12.2	20
PTS-CUTTER	Combination tensioner & cutter						1

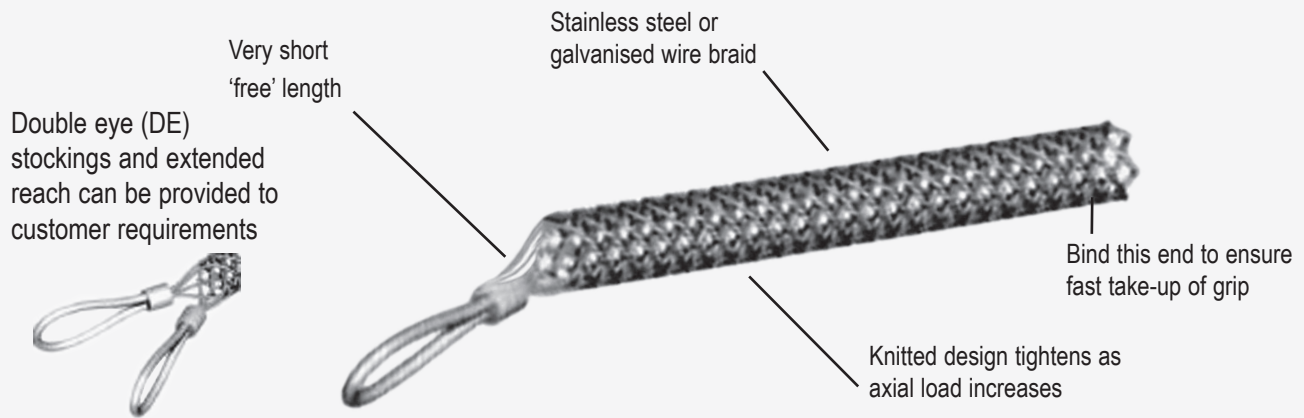


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# GRIP-CHEK

## BRAIDED STEEL WIRE STOCKING



### Description:

- Hand made stainless steel or galvanised wire mesh stocking designed to afford maximum grip to a rubber hydraulic hose assembly in the event of fitting failure, thereby minimising uncontrolled whip of the assembly
- Developed to industry requirements in response to increasing demand for higher safety levels in underground mining applications
- Reusable many times (subject to a maintenance schedule)

### Materials and Specifications:

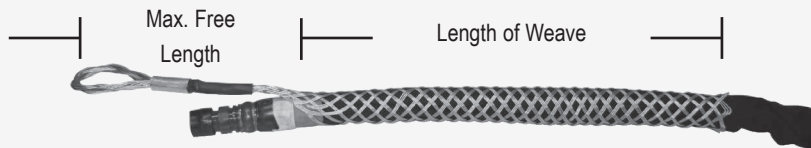
- Stainless steel or galvanised wire strands in various configurations to achieve strength requirements
- Copper ferrules (stainless steel on request)
- Special configurations such as double looped ends and extended reach can be provided to order (**DE** as a suffix signifies double ended types with alloy ferrule. Copper and stainless steel ferrules are available on request)

### Applications and Notes:

- Can be used in conjunction with Diffusion Abrasion Sleeve (DAS)
- Provides a closer and stronger grip on the hose than is possible with whip checks
- enables almost direct restraint along the longitudinal axis of the hose to minimise uncontrolled flailing of the hose end

#### Installation:

- Bind the free end of the weave tightly with tape to ensure a more rapid grip response where initial slipping may otherwise occur
- Must always be affixed to a suitable load bearing attachment point - NOT hose to hose (use Pir-Chek for hose to hose restraint - see page 73)
- The use of Pir-Chek is preferred in the hose size ranges from DN6 to DN20 (-04 to -12. Refer page 73)
- Shackle strength to exceed rated wire breaking strain
- 13 to 40mm "slack" over shackle bolt is recommended. It must not be tight to the shackle bolt



### GRIP-CHEK

Product Code	Dimensions mm				Strands in Weave & Wires / Strand	Total Strands	Aggregate Wire Breaking Strain	To Suit Pirtek Hose Product	
								Medium Pressure	High Pressure
Galvanised	Suits Outside Ø	Max. Free Length	I.D. of Eye	Length of Weave	Qty. x No.	No.	kN	R2AT / 2SC	C-PC35/C42/ PE442/PE642
GRIP-CHEKGAL-25	34 - 44	460	62	650	6 x 3	18	53.1	R2AT-16, PE225-16	-16
GRIP-CHEKGAL-32	45 - 55	515	62	650	6 x 3	18	53.1	R2AT-20, R2AT-24	-20
GRIP-CHEKGAL-40	56 - 66	640	75	650	5 x 2	10	75.1	-	-24
GRIP-CHEKGAL-50	67 - 82	720	95	650	5 x 2	10	75.1	R2AT-32, 2SC-40	-32
GRIP-CHEKGAL-63	83 - 100	780	100	650	5 x 3	15	108	2SC-48, JBF-40	-
Stainless Steel									
GRIP-CHEKSS-25	34 - 44	460	62	650	5 x 3	15	53.1	R2AT-16, PE225-16	-16
GRIP-CHEKSS-32	45 - 55	515	62	650	5 x 3	15	53.1	R2AT-20, R2AT-24	-20
GRIP-CHEKSS-40	56 - 66	640	75	650	6 x 2	12	75.1	-	-24
GRIP-CHEKSS-50	67 - 82	720	95	650	6 x 2	12	75.1	R2AT-32, 2SC-40	-32
GRIP-CHEKSS-63	83 - 100	780	100	650	6 x 3	18	108	2SC-48, JBF-40	-
Double Eye Styles Galvanised									
GRIP-CHEKGAL-10-DE	19 - 28	190	15	500	6 x 2	12	38	Polyflex-06	-
GRIP-CHEKGAL-13-DE	28 - 40	230	18	600	6 x 2	12	57	-	WB1100-08
GRIP-CHEKGAL-50-DE	60 - 70	330	22	900	6 x 2	12	100		IRSAB-051

# PIR-CHEK

## PIRTEK WHIP CHECK FOR HOSES



### WHIP CHECK HOSE SAFETY

This safety product has been designed for the high pressure hydraulic hose industry. Risk Assessment surveys have identified the danger of hose failure leading to potential serious injury from a "whipping hose".

This product helps eliminate that potential danger. Constructed from galvanised wire or stainless steel (on request), nickel plated bronze or stainless steel crimps.



### RETROFIT WHIP CHECK HOSE SAFETY

Pirtek Retrofit Whip-Checks offer the same features and safety characteristics as our standard Whip-Checks with the advantage of being able to be placed onto hose assemblies already in-situ on circuits. Simply pass the Whip-Check around the hose making a figure 8 then feed the wire cable through the slot, tighten the cable then secure the cable by tightening the grub screw. Attach the end to a suitable anchor point.

For securing two hose assemblies, use the double loop retrofit whip checks, which has the grub screw anchor slot at each end.

### DESCRIPTION

A specially fabricated high strength wire assembly (4mm or 6mm stainless steel) designed to prevent uncontrolled flaying of a hose in the event of fitting blow off or accidental disconnection.

- For effective implementation, each assembly must be custom made to suit the specific requirements ) including Retrofit styles
- Products have been tested by Test Safe Australia for use at 450 bar working pressure and flow rates to 400 litres per minute (dependent on hose diameter)
- A durable plastic tag with installation instructions is attached to each cable
- Customer specific colour codes and other information can be added on request.

### MATERIALS SPECIFICATIONS

- Available in 2 gauges of stainless steel high strength wire, 4mm for hoses up to 1" or 6mm for hoses above 1".
- Terminating loops sized to suit hose type and ferrule dimensions
- Clamps of nickel plated copper or stainless steel

### MADE TO ORDER - DETERMINING THE REQUIRED LENGTH:

- Measure hose OD
- Measure ferrule/ fitting OD
- For hose to fixed point applications measure from the proposed anchor point to a point 150 mm beyond the ferrule and add 200mm. Document the anchor point
- For hose to hose applications measure from a point 150mm beyond the ferrule of one hose to the corresponding point of the second hose and add 200mm
- Specific requirements of colour codes etc.

### APPLICATIONS

- Used whenever the occurrence of hose fitting blow-off or accidental disconnection of a hose end could endanger the lives of personnel working nearby
- Primarily intended for use in underground mines where confined spaces make hydraulic hose failures potentially very dangerous
- Good also for securing compressed air and steam hoses where sudden expansion of released gas can cause severe whipping, although Pirtek's cable stocking style Gripchek may be better suited to these applications

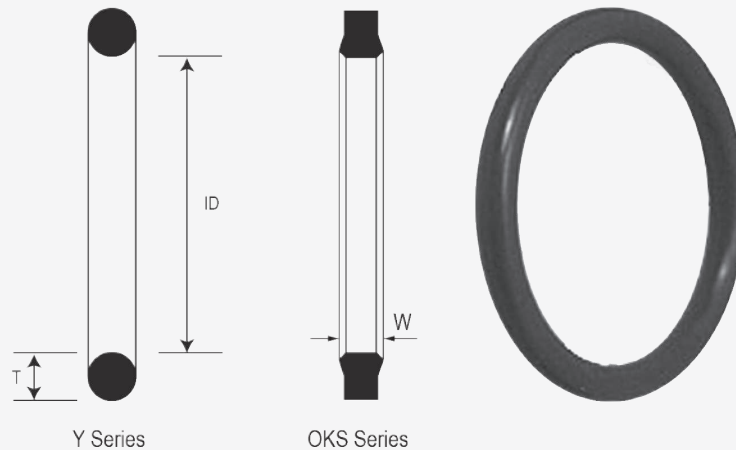
PART NUMBERS	DESCRIPTION
PIR-CHEK	Basic 4mm S/S Whip-check up to 2000mm
PIR-CHEK-C	Colour coded 4mm S/S Whip-check up to 2000mm
PIR-CHEK-X	Basic 6mm S/S Whip-check up to 2000mm
PIR-CHEK-X-C	Colour coded 6mm S/S Whip-check up to 2000mm
PIR-CHEK-R	Retrofit 4mm S/S Whip-check single loop up to 2000mm
PIR-CHEK-R-D	Retrofit 4mm S/S Whip-check double loop up to 2000mm
PIR-CHEK-X-R	Retrofit 6mm S/S Whip-check single loop up to 2000mm
PIR-CHEK-X-R-D	Retrofit 6mm S/S Whip-check double loop up to 2000mm



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# O-RINGS

## NITRILE AND POLYURETHANE AND CAT® D SECTION



### Description (Y Series):

- Standard O-Ring for SAE Flanges
- Conforms to BS Code dimensions (except Y-10 which is exclusive to Komatsu flanges)
- YD Series conforms to Caterpillar specifications

### Materials and Specifications:

- NBR Nitrile
- Duro 90 hardness
- Conform to BS1806

### Applications:

- O Ring seal for use with SAE Code 61 and Code 62 flanges (ISO / DIS 6162)
- For extreme conditions or to make installation easier, OKS O-Rings are preferred

### Description (OKS Series):

- A general purpose compound suitable for applications requiring resistance to high temperatures and compression set
- Recommended for use in SAE flanges (especially Code 62) where elevated temperatures and arduous conditions are expected
- Special profile prevents seal 'pumping' to provide reliable flange sealing

### Materials and Specifications:

- 93IRHD Polyester Polyurethane (AU)
- Temperature range -30° to 100°C
- Durometer hardness: 93
- Color: Blue

### Applications:

- Outstanding resistance to blended aromatic fuels and straight aromatics as well as halogenated hydrocarbons
- 600 bar maximum working pressure
- Good resistance to strong acids and steam

#### Y SERIES NITRILE SEAL

Product Code	BS Code	Dimensions mm		
		OD	ID	Thickness T
Y-08	210	25.7	18.64	3.53
Y-10 †		29.0	21.8	3.60
Y-12	214	32.05	24.99	3.53
Y-16	219	39.98	32.92	3.53
Y-20	222	44.75	37.69	3.53
Y-24	225	54.28	47.22	3.53
Y-32	228	63.8	56.74	3.53
Y-40	232	76.5	69.44	3.53
Y-48	237	92.38	85.32	3.53
Y-56	241	105	98	3.53
Y-64	245	117.7	110.7	3.53

#### OKS SERIES POLYESTER POLYURETHANE

Product Code	Dimensions mm		
	OD	ID	Thickness W
OKS-12	31.75	23.37	3.50
OKS-16	39.62	31.24	3.50
OKS-20	44.45	36.07	3.50
OKS-24	53.98	45.34	3.50
OKS-32	63.5	54.86	3.50

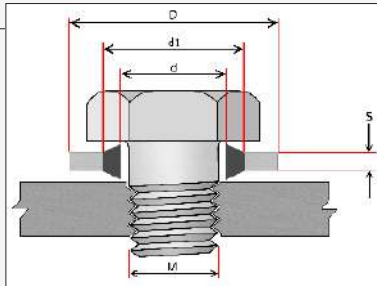
#### YD SERIES CATERPILLAR® D SECTION

Product Code	Dimensions mm		
	OD	ID	Thickness W
YD-12	Caterpillar® Dimensions		
YD-16			
YD-20			
YD-24			
YD-32			

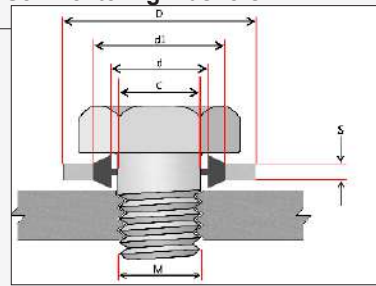
† Suits Komatsu Flange Size 10 - not covered by ISO / DIS 6162

# BONDED / DOWTY WASHERS

## Standard Washers



## Self Centering Washers



### Q SERIES - METRIC

"Product Code"	"Thread Size (M)"	"BS Number"	Dimensions (mm)			
			D	d1	d	S
Q-10	M10	217	16	12.4	10.7	1.5
Q-12	M12	222	18	14.4	12.7	1.5
Q-14	M14	227	22	16.4	14.7	1.5
Q-16	M16	229	24	18.4	16.7	1.5
Q-18	M18	232	26	20.4	18.7	1.5
Q-20	M20	233	28	22.5	20.7	1.5
Q-22	M22	236	30	24.4	22.7	2
Q-26	M26	239	35	26.7	28.4	2
Q-27	M27	240	36	29	27.2	2
Q-30	M30	242	39	33	31	2
Q-33	M33	243	42	35.8	33.7	2
Q-42	M42	247	53	44.4	42.7	3
Q-48	M48	248	59	50.8	48.7	3

"Product Code"	"Thread Size (M)"	"BS Number"	Dimensions (mm)				
			D	d1	d	S	C
QC-10	M10	217	16	12.4	10.7	1.5	8.1
QC-12	M12	222	18	14.4	12.7	1.5	9.7
QC-14	M14	227	22	16.4	14.7	1.5	11.38
QC-16	M16	229	24	18.4	16.7	1.5	13.41
QC-18	M18	232	26	20.4	18.7	1.5	14.76
QC-20	M20	233	28	22.5	20.7	1.5	16.76
QC-22	M22	236	30	24.4	22.7	2	18.74
QC-26	M26	239	35	26.7	28.4	2	22.3
QC-27	M27	240	36	29	27.2	2	23.3
QC-30	M30	242	39	33	31	2	25.7
QC-33	M33	243	42	35.8	33.7	2	28.7
QC-42	M42	247	53	44.4	42.7	3	36.5
QC-48	M48	248	59	50.8	48.7	3	

### Z SERIES - BSPP Mild Steel & Stainless Steel

#### MILD STEEL ZINC PLATED

"Product Code"	"Thread Size (M)"	"BS Number"	Dimensions (mm)			
			D	d1	d	S
Z-02	1/8" - 28	020	15.88	11.84	10.37	2
Z-04	1/4" - 19	021	20.57	15.21	13.74	2
Z-06	3/8" - 19	023	23.8	18.75	17.28	2
Z-08	1/2" - 14	025	28.58	23.01	21.54	2.34
Z-10	5/8" - 14	026	31.75	24.97	23.49	2.34
Z-12	3/4" - 14	027	34.93	28.53	27.05	2.34
Z-16	1" - 11	030	42.8	36.88	33.89	3.25
Z-20	1.1/4" - 11	032	52.38	45.93	42.93	3.25
Z-24	1.1/2" - 11	033	58.6	51.39	48.44	3.25
Z-32	2" - 11	036	73.03	63.63	60.58	3.25
Z-40	2.1/2" - 11	039	90.17	79.38	76.08	3.25

"Product Code"	"Thread Size (M)"	"BS Number"	Dimensions (mm)				
			D	d1	d	S	C
ZC-02	1/8" - 28	020	15.88	11.84	10.37	2	8.3
ZC-04	1/4" - 19	021	20.57	15.21	13.74	2	11.2
ZC-06	3/8" - 19	023	23.8	18.75	17.28	2	14.76
ZC-08	1/2" - 14	025	28.58	23.01	21.54	2.34	18.24
ZC-10	5/8" - 14	026	31.75	24.97	23.49	2.34	20.27
ZC-12	3/4" - 14	027	34.93	28.53	27.05	2.34	23.83
ZC-16	1" - 11	030	42.8	36.88	33.89	3.25	29.92
ZC-20	1.1/4" - 11	032	52.38	45.93	42.93	3.25	38.45
ZC-24	1.1/2" - 11	033	58.6	51.39	48.44	3.25	44.45
ZC-32	2" - 11	036	73.03	63.63	60.58	3.25	56.26
ZC-40	2.1/2" - 11	039	90.17	79.38	76.08	3.25	71.5

#### 304 STAINLESS STEEL

SSZ-04	1/4" - 19	021	20.57	15.21	13.74	2
SSZ-06	3/8" - 19	023	23.8	18.75	17.28	2
SSZ-08	1/2" - 14	025	28.58	23.01	21.54	2.34
SSZ-12	3/4" - 14	027	34.93	28.53	27.05	2.34
SSZ-16	1" - 11	030	42.8	36.88	33.89	3.25

SSZC-04	1/4" - 19	021	20.57	15.21	13.74	2	11.2
SSZC-06	3/8" - 19	023	23.8	18.75	17.28	2	14.76
SSZC-08	1/2" - 14	025	28.58	23.01	21.54	2.34	18.24
SSZC-12	3/4" - 14	027	34.93	28.53	27.05	2.34	23.83
SSZC-16	1" - 11	030	42.8	36.88	33.89	3.25	29.92

### Bonded Dowty Washers

Two versions: Mild steel zinc plated and 304 Stainless Steel

Steel BS1449 Part 1: 1983 CS4 BRH 5

Tensile strength of steel 540 MN/m<sup>2</sup> min.

Zinc plated to DEF STAN 03-20/1

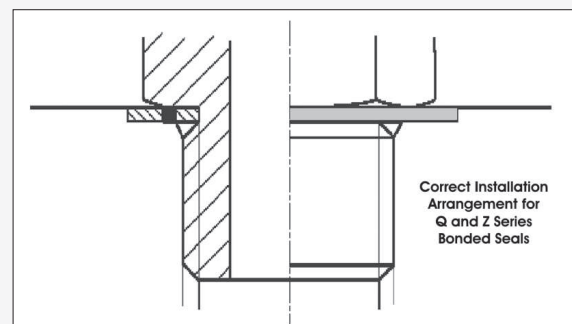
Colour passivated to DEF 03-33

Rubber: NBR nitrile

A rectangular section, metal washer, with a trapezoidal shaped ring of vulcanised nitrile rubber bonded to the inside.

The seal is for use in high pressure environments where copper washers are unsuitable.

Sometimes equipped with a thin additional membrane to assist in self centralising the seal over the BSPP thread during installation.



# TOOLS

## INTERNAL HOSE CLEANING KIT



### IMPORTANT USAGE NOTE:

Hoses must be cleaned  
FROM BOTH ENDS by use  
of the appropriate pellet  
BEFORE installing the fittings

### Description:

The Pirtek hose cleaning kit is the ideal choice for high volume cleaning of hydraulic pipes and hoses, as well as dry and liquid flow lines. The unit shoots oversized foam projectiles to clean straight, curved and coiled tubes, pipes and hoses 3/16"-2" (4.8-51mm) I.D. A hinged nozzle housing allows rapid loading of projectiles for fast throughput of large cleaning jobs

### Mobile Solution:

For applications where larger hose and tube sizes are not encountered, a smaller kit catering for sizes up to 1.1/4" is available

### Special Situations:

A wide range of special projectiles are available to special order for special situations

Examples include:

Abrasive: Hose, tube or pipe with build up of contamination, surface rust or scale.

Grinding: Straight lengths of tube or pipe with greater build up of contamination, surface rust or scale

### PIRTEK CLEANING KITS - Comes in lockable, sturdy carry case & quick connect air couplings

Product Code	Description
VKIT	Cleaning of hose, tube & pipe range between 5mm to 32mm (3/16" to 1.1/4") 8 x hose (white) nozzles, 12 x Tube/JIC (green) nozzles. AM-1 hand piece.
FKIT	Cleaning of hose, tube & pipe range between 5mm to 50mm (3/16" to 2") 10 x hose (white) nozzles, 14 x Tube/JIC (green) nozzles. A-2 hand piece.

### REPLACEMENT PARTS

Product Code	Description
PJ-32H	32mm launcher head for nozzles up to 32mm. Suits AM-1 hand piece
PJ-HA1	AM-1 hand piece
PJ-50H	50mm launcher head, comes with adaptor ring to suit smaller nozzles. Suits A-2 hand piece
PJ-AR	Adaptor ring suit PJ-50H launcher head for nozzles up to 32mm
PJ-HA2	A-2 hand piece
PJ-HN06	Nozzle (white) suits 1/4" hose
PJ-HN08	Nozzle (white) suits 5/16" hose
PJ-HN10	Nozzle (white) suits 3/8" hose
PJ-HN13	Nozzle (white) suits 1/2" hose
PJ-HN16	Nozzle (white) suits 5/8" hose
PJ-HN19	Nozzle (white) suits 3/4" hose
PJ-HN25	Nozzle (white) suits 1" hose
PJ-HN32	Nozzle (white) suits 1.1/4" hose
PJ-HN38	Nozzle (white) suits 1.1/2" hose
PJ-HN50	Nozzle (white) suits 2" hose



Launcher head (PJ-50H shown)



Adaptor ring



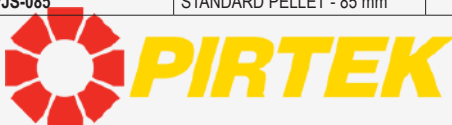
Hand piece (PJ-HA1 shown)



Hose Nozzle

### STANDARD HOSE PELLETS

Product Code	Description	Qty per Bag	Suits Pipe ID	Suits Hose ID
			mm	ins
PJS-007	STANDARD PELLET - 7 mm	300	6	1/4"
PJS-010	STANDARD PELLET - 10 mm	300	8	5/16"
PJS-012	STANDARD PELLET - 12 mm	300	10	3/8"
PJS-016	STANDARD PELLET - 16 mm	300	13	1/2"
PJS-020	STANDARD PELLET - 20 mm	300	16	5/8"
PJS-022	STANDARD PELLET - 22 mm	300	19	3/4"
PJS-033	STANDARD PELLET - 33 mm	50	25	1"
PJS-040	STANDARD PELLET - 40 mm	50	32	1.1/4"
PJS-050	STANDARD PELLET - 50 mm	40	38	1.1/2"
PJS-060	STANDARD PELLET - 60 mm	30	50	2"
PJS-070	STANDARD PELLET - 70 mm	10	63	2.1/2"
PJS-075	STANDARD PELLET - 75 mm	10	70	
PJS-085	STANDARD PELLET - 85 mm	10	80	3"



This page is part of a complete catalogue containing technical and safety data.  
All data must be reviewed when selecting a product.  
Pirtek reserve the right to change technical specifications without notice



# TOOLS

## STAPLE REMOVAL TOOLS



- Simple longwall tools for removing and replacing staples
- Available in 2 styles - short or long
- Either style easily carried in a tool bag
- Tools are supplied to order. Please contact Pirtek



# STAINLESS STEEL CRIMP RINGS

## 304 GRADE STAINLESS STEEL



Circular rings used to secure Diffusion Abrasion Sleeve (DAS) along with fire sleeve and braided stainless steel sleeve. Can also be used on low pressure PVC & rubber textile braided hoses in replace of hose clamps.

"Product Code"	Dimensions (mm)		
	"ID (mm)"	"OD (mm)"	"Width (mm)"
CR-025	25	28	25
CR-029	29	32	25
CR-031	31	34	30
CR-035	35	38	30
CR-039	39	42	30
CR-048	48	51	30
CR-057	57	60	30
CR-072	72	76	35
CR-085	85	89	35
CR-098	98	102	40
CR-104	104	108	40

# HOSE TIE STRAPS



FRAS treated nylon

"Product Code"	Dimensions (mm)
Polyester FRAS	
HTS-800	800mm x 25mm
HTS-1500	1500mm x 25mm

Bundling straps ideal for bundling hoses, pipes, tubes.

Coiling of hose in service vans or workshops.

Maximum tensile strength 330 Kg.

25mm wide

Buckle material Zinc Alloy (<4.1% Aluminium content by weight)

- Pirtek branded Black fire retardant Polyester thermal dyed with antistatic chemical (FRAS), ideal for mining (underground)

Available in 800mm and 1500mm lengths, other lengths & widths available on request



This page is part of a complete catalogue containing technical and safety data. All data must be reviewed when selecting a product. Pirtek reserve the right to change technical specifications without notice

# LANOLIN PROTECT

## LANOLIN LUBRICANT



Lanolin is a totally natural wax (wool grease). Pirtek's formulation enhances this non-toxic product providing long term protection on any surface against rust, acids, alkaline and salts. Our Lanolin Lubricant range is available in both liquid sprayable and grease form.

**Pirtek Protect Lanolin Lubricant Aerosol** is a general purpose sprayable form of Protect grease which dries to a fine grease "wet" film offering the same characteristics as the grease on exterior surfaces for multi-purpose use as a lubricant for moving parts, protectant against corrosion, fluid displacement and a penetrant to free up rusted parts.

**Pirtek Protect Lanolin Lubricant Liquid** is a heavy duty, higher lanolin content, thick sprayable form of Protect grease which dries to a heavy duty grease "wet" Pirtek Protect Lanolin Lubricant Liquid is a heavy duty, higher lanolin content, thick sprayable form of Protect grease which dries to a heavy duty grease "wet" lubricant for moving parts, protectant against corrosion, fluid displacement and a penetrant to free up rusted parts.

### Features & Benefits:

- Long-lasting lubrication for all moving parts
- Protects equipment from atmospheric acid and salt corrosion
- Displaces moisture from surfaces, protecting them from corrosion
- Penetrates metal surfaces preventing wear and providing extended protection
- Penetrates seized parts for easing releasing
- High thermal and mechanical stability. Resists breakdown in high temperatures and temperature variations
- Non-conductive /Di electric up to 70kV, **do not apply to live electrical equipment.** Non Flammable
- Protects electrical applications and appliances from moisture and corrosion
- Resists breakdown in high temperatures and temperature variations
- Resistant to wash off
- Food safe, suitable for use around food preparation and processing machinery
- Environmentally friendly and Biodegradable

### Common Uses:

- Lubricates moving parts, chains and blocks
- Lubricates O-rings, linkages, pivot pins and bushes
- Penetrates rusted surfaces to free nuts and tools
- Protects exterior surfaces from surface rust
- Lubricates and protects chains and boat trailer springs
- Protects metal fastenings and fittings from corrosion
- Ideal for marine applications and outboard motors to protect against salt spray

**Pirtek Protect Lanolin Lubricant Grease** is a thick, tacky grease with high load capabilities that will not wash out under most conditions, from underwater to general applications. Lanolin lubricant grease is an all-round product that provides excellent results as a lubricant, anti-corrosive and thread anti-seize.

### Features & Benefits:

- Excellent anti-seize compound with exceptional lubricity in order to prevent wear-reducing galling, fretting, seizing and corrosion
- Protection between all metals from galvanic corrosion
- Acid and salt resistant
- Assists in lubricating for ease of disassembly of parts
- Displaces moisture, lubricates all surfaces and will not wash off
- High thermal and mechanical stability. Resists breakdown in high temperatures and temperature variations
- Non-conductive /Di electric up to 70kV, **do not apply to live electrical equipment.** Non Flammable
- Food safe, suitable for use around food preparation and processing machinery
- Environmentally friendly and Biodegradable

### Common Uses:

- Lanolin grease acts as anti-seize for threaded rod, shackles, nuts and bolts
- Stops galling of Stainless Steel and Aluminium threads
- Stops electrolysis due to dissimilar metal contact
- Lubricates rubber o-rings, gaskets, seals, linkages, pivot pins and bushes. **\*Not to be used as a high speed bearing lubricant.**
- Lubricates and protects chains and boat trailer springs
- Protects metal fastenings, fittings, wire rope, propellers and skegs from corrosion
- Seals timber joints, bridge bearers and timber ends

Product Code	Description
PIR300C	300GM AEROSOL WITH UNI SMART STRAW CORROSION PROTECTOR
PIR750ML	750ML TRIGGER PACK CORROSION PROTECTOR
PIR5L	5LTR JERRY LIQUID LANOLIN LUBRICANT
PIR20L	20LTR DRUM WITH TAP LIQUID LANOLIN LUBRICANT
PIR200L	200LTR DRUM WITH AERATOR LIQUID LANOLIN LUBRICANT
PIRG165ML	165ML TOTTLE BOTTLE GREASE LANOLIN LUBRICANT
PIRG1LP	1LTR PAIL GREASE LANOLIN LUBRICANT
PIRG4LP	4LTR PAIL GREASE LANOLIN LUBRICANT

# LANOLIN PROTECT

## CORROSION PROTECTOR



Pirtek Protect Corrosion Protector is a high-performance lanolin film that forms a low tack “dry” coating that resists build up while forming a moisture tight seal around substrates that will resist corrosion.

Corrosion Protector is highly robust when dry and will not flake or chip and will retain its elasticity.

### Features & Benefits:

- The ultimate in lanolin barrier film coating for exterior and interior corrosion protection.
- Quick to dry and forms a low tack, moisture tight seal that resists acids, alkali, fertilizers, highly corrosive environments, moisture ingress and salt corrosion.
- Protects metals and all alloy surfaces.
- High wash-out water resistance.
- Environmentally safe, biodegradable, eco-friendly and suitable for applications around waterways and sensitive environments.
- Dielectric tested to 40kV for electrical applications.
- Non toxic, suitable for use around food preparation areas.
- Aerosol can with handy flip-up uni smart straw for wide fan coverage or direct spray.

### Common Uses:

- Protecting exterior surfaces, metal fasteners and fittings from rust during storage.
- Penetrates rusted surfaces to free up nuts and tools.
- Moisture proofs and protects electrical components, switchgears and circuit boards.
- Ideal for marine applications to protect from salt spray.
- Anti-spatter protection when welding
- Protects under-bodies of 4WD off-road vehicles, along with protects trucks, trailers, bikes and agricultural vehicles including boom sprays.

Product Code	Description
PIRCP300C	300GM AEROSOL WITH UNI SMART STRAW CORROSION PROTECTOR
PIRCP750ML	750ML TRIGGER PACK CORROSION PROTECTOR
PIRCP5L	5LTR JERRY CAN CORROSION PROTECTOR



# PROTECT

## HIGH STRENGTH CITRUS DEGREASER



Pirtek Protect Citrus degreaser is a powerful, fast acting natural degreaser derived from citrus ingredients with low acidity and pH neutral. Ideal for the removal of glues, fats, grease, bitumen, oils, waxes and carbon deposits. Citrus degreaser provides an effective cleaning solution which can be diluted providing superior cleaning of Stainless Steel and Aluminium without the environmental or personal hazards associated with traditional toxic chemicals.

### Features & Benefits:

- Non hazardous with low toxicity and odour, suitable for indoor use.
- Derived from natural citrus ingredients which is pH neutral and low acidity.
- Water soluble, suitable for different dilutions and cleaning applications.
- Food safe for use around food preparation and process areas.
- Fresh citrus aroma.
- Aerosol can with handy flip-up uni smart straw for wide fan coverage or direct spray.

### Common Uses:

- leaning and degreasing of heavy machinery and plant.
- Breaking down of hydrocarbons, bitumen, shipping waxes, adhesives and carbon build up.
- Industrial cleaning of surfaces and parts cleaning washes.
- Workshop and floor cleaner in preparation for painting and concrete sealing.
- Cleans air conditioning filament filters and recyclable filters.
- Cleaning and degreasing of alloys and Stainless Steels.
- De-carbonizing electrical motors and generators.
- Removal of permanent markers, inks and fresh graffiti.
- Removal of Pirtek Lanolin Products

Product Code	Description
PIRDG300C	300GM AEROSOL WITH UNI SMART STRAW CITRUS DEGREASER
PIRDG750ML	750ML TRIGGER PACK CITRUS DEGREASER
PIRDG5L	5LTR JERRY CAN CITRUS DEGREASER

# LANOLIN PROTECT

## POINTS TO NOTE

### SAFETY

- Liquid lanolin products contain specifically blended solvents that require a short time to evaporate. It is essential that the products are not applied to electrical equipment while it is live
- Lanolin products are derived from natural wax (wool grease) and are biodegradable, non toxic, and provide a safe, superior alternative to traditional petrochemical based dewatering and lubricating fluids
- Lanolin products provide high load bearing capabilities on bearings, but are not suited to use in high speed bearings
- Do not spray liquid lanolin products near fire, flame or sparks
- Lanolin products will not wash off. If surfaces coated with lanolin are to be painted, clean surfaces with white spirits, or steam clean above 65°C



### EMULSION COMPATIBILITY AND LIMITATIONS (UNDERGROUND MINING)

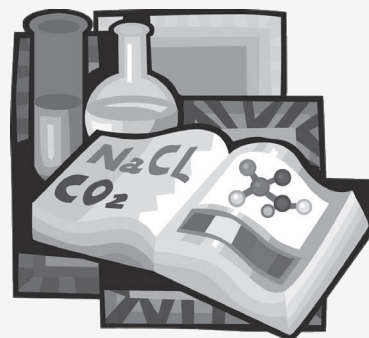
Pirtek Protect Lanolin lubricant and anti-seize greases offer long term protection, even in the harshest conditions. They protect, lubricate, penetrate and displace.

In the harsh environment that is underground mining using longwall equipment, machinery in the longwall is subject to mine waters and emulsions. It is important to lubricate moving parts and O-rings in the machinery to ensure that the equipment is kept running smoothly and to prolong the life of the machinery. Pirtek Protect lanolin lubricant and anti-seize grease do just that!

Independent tests have been performed for both the lanolin lubricant and the anti-seize grease. Both products were each added with longwall emulsions at a set concentrate, based on the upper limit that might be reached in field application. Both products passed an O-ring swell test and thermal stability test.

- The O-ring swell test consisted of an O-ring immersed in the lanolin lubricant mixed with a longwall emulsion, and an O-ring immersed in the anti-seize grease mixed with a long wall emulsion. The O-rings were left in the mix for 56 days at 70°C. At the end of the test date, both O-rings were found to have no significant difference in swell.
- The thermal stability test was performed on both the Protect Lanolin lubricant and anti-seize grease, to test the oil separation when these products were added to the longwall emulsion.
- The stability tests were conducted for 168 hours at 70°C. At the end of the test period, there was no oil separation in either product.
- Excessive application of Lanolin grease to fittings and threads in a hydraulic system has been reported to cause precipitation of the grease in low-flow areas such as pilot systems. This can lead to a collection of microscopic debris that may cause problems with valve operation

***As a result of the this last point, the Protect lanolin product should not be allowed to come in contact with longwall emulsion hydraulic fluid. Its use should be restricted to lubrication of mechanical and electrical components external to the emulsion***



### FLASH POINT

Flash Point Approval has been granted to the range of Lanolin Products in accordance with Australian Standards AS2106.2:1999, using the Pensky-Martens apparatus.

Flash Point approval testing of the Lanolin Products was conducted and the approval has been granted by the Department of Mineral Resources Mine Safety Laboratory of New South Wales to Australian Standards AS2106.2:1999 in a controlled laboratory environment. The Department of Mineral Resources has also assessed the Material Safety Data Sheets (MSDS) Industrial Grade, approval has also been granted as all MSDS are compiled to the criteria of Worksafe Australia guidelines.

Flash Point testing has been undertaken to ensure that its products are safe to use in the mining industry for both Open Cut and Underground operations.



# LANOLIN PROTECT

## RECOMMENDED APPLICATIONS

### OVERVIEW

#### Aerosols :

- Electrical connectors
- Lubricant for drilling, cutting, machining and pressing
- Welding anti spatter
- Component preservation
- Vehicle rust protection
- Lubrication of light chains
- Air tool lubrication
- Locks and hinges
- Rejuvenates plastics, vinyls, aluminium & powder coating
- Reduce oxidation during shipping

#### Sprayable Liquids:

- Harsh & corrosive environments
- Heavy chain & wire rope (non sling & non webbing)
- High speed and load bearing chains
- Battery terminals & connectors e.g. electrical fork trucks
- Assembly lube for rubber hoses & multi pin plugs
- Preservation & protect motors & bearings
- Outside storage protection

#### Greases:

- Food grade certified
- Non conductive to 70KV
- Rubber grease, non perishing, excellent belt grip
- Welding nozzle dip
- Drilling & cutting aid
- All purpose lubricant
- Anti-seize for nuts & bolts
- Metal to metal soft seal gasket
- Stop galling of st. steel & alumin.
- Stops electrolysis of dissimilar metals

#### Release Agents:

- Concrete form work
- Water resistant
- Self healing
- Stops swelling of timber end grain
- Less cleanup after stripping
- Extends formwork life
- No damage to the environment

### MINING

Pirtek Protect products are ideal in the mining environment because they provide what is effectively a hermetic seal or encapsulation of the targeted equipment. This protective film offers:

- environmental friendliness
- safety for workers
- non-toxicity
- superior dielectric performance
- long term pro-active protection
- Reduced acid etching
- great lubrication and anti-seize properties
- reduced hydrolysis
- reduced dismantling time and improved safety
- better opportunities for maintenance and therefore reduced downtime
- easy clean up

#### Use it on

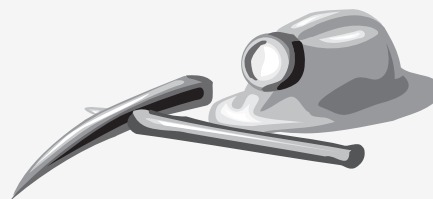
- Roof Bolters - Drive chains, fittings, linkages and guides
- Rib Bolters - Drive gears, fittings, linkages
- Miner- Drive chains, chassis and protective covers, linkages, fittings, actuator pins, mounting bolts, electrical equipment and connections
- Shuttle Car- Universals and drive chains, linkages, fittings, cable level wind system, chassis, electrical equipment and connections, haulage chains and flight bars, mounting bolts, actuator pins and sprockets
- Mobile boot end- Drive chains, track adjustment bolts, guides, fittings, linkages, hinges and electrical equipment, chassis and protective covers
- Pumps and fan systems- linkages, protective covers, pump/fan housing, electrical equipment and fittings
- Conveyor Belts- Chains, shackles, turn buckles, electrical equipment, loop take up system, wire cables fittings, rollers, hanging brackets, pins, drive units, nuts/bolts, belt stands and rails

#### Long Wall Mining Operation

- Chock Supports- Linkages and electrical equipment
- Actuator pins, actuators, relay bars and guides
- Alternating Face Conveyor- Electrical equipment (motors etc), dog bone bolts, chain drives, sprockets, linkages, guides, threads (except hydraulic), main gate and tail gate drive units
- Stage Loader and Crusher Unit- Linkages, electrical equipment, guides, threads (except hydraulic) and bolts
- Pump Station- Pumps (except internal), electrical motors, filters, threads (except hydraulic) and bolts
- Conveyor Belts- Chains, shackles, turn buckles, loop take up system, electrical equipment, fittings (except hydraulic), wire cable, rollers, hanging brackets, pins, drive units, belt stands and rails

#### Washing or Screening Plant

- Conveyor belts- Electrical equipment, chains, shackles, wire cables, loop take up system, fittings, hanging brackets, pins, belt stands and rails
- Electrical Equipment- Motors, fittings, connections, lighting, camera surveillance systems, transformers, circuit breakers and distribution panels
- Screening & washing system- Electrical equipment, drive units, chains, wire rope, pins, fittings, slides, nuts & bolts



# LANOLIN PROTECT

## RECOMMENDED APPLICATIONS

### METAL PRESERVATION

The metal preservation properties of Lanolin date back to ancient times. With modern refinement methods, Pirtek Protect offers you a product that can assist in so many ways. Machined, fabricated or ground components can be hermetically sealed against oxidization.

#### Benefits:

- Hermetic component preservation
- Remains pro-active
- Resists acid etching
- Great anti-seize properties
- Non-toxic lanolin film
- Easy clean up

#### Technical:

- Remove all oxidation or existing scale (e.g. wire brush)
- All surfaces must be dry and clean prior to coating
- Due to its pro-active properties, Pirtek Protect's protective coating will remain operative until removed
- A thin film of Pirtek Protect should be applied to all metal surfaces prior to storage. Lambswool pads may also be used to apply spray to components
- Pirtek Protect Products will preserve all joints and fittings for ease of servicing
- Clean off with steam cleaner or hot soapy water wash above 60°C



### WELDING

Pirtek Protect can save you many hours of lost production time by taking away those annoying and costly problems of Spatter!!! Also helps preservation of weld seams and plating.

#### Benefits:

- Reduction of embrittlement
- Base metal protection
- Component anti-spatter release agent
- Anti-spatter agent for fabrication workbenches
- Spatter release agent for welding head
- Reduces hydrolysis
- Easy to remove (Hot water wash above 60°C)

#### Technical:

Pirtek Protect is recommended for all welding situations

- For MIG shields, dip the heated end of the hand-piece in Protect to prevent spatter adhesion. Repeat as necessary
- All Pirtek Protect should be left for 30 seconds to allow the hydrocarbon solvent to evaporate prior to welding
- Pirtek Protect should only be applied while welds are still hot (but only if weld surface temperature is  $\leq 195^{\circ}\text{C}$ )
- For best results the ideal application temperature is above  $65^{\circ}\text{C}$
- Pirtek Protect can penetrate up to 10 microns in mild steel at approximately  $65^{\circ}\text{C}$ .



# LANOLIN PROTECT

## RECOMMENDED APPLICATIONS

### MARINE COATING

#### Benefits

Hull protection:

Pirtek Protect is not and has no anti-foul qualities, but will reduce water drag factors

An ideal marine coating because of its proven ability to resist acid etching, i.e. barnacles. Subsequent re-application requires no special hull treatment such as sanding/grinding etc. Slipway or hardstand time is reduced due to the saving in preparation and spray application time

Virtually eliminates electrolysis – a little spray will stop this expensive killer

Drastically reduces bacterial attachments, thereby saving our waterways from the toxic cocktails caused by some traditional anti-fouls

Resistant to acid etching

Base metal penetration

Pro-active ability

Reduces hydrolysis

Also good for:

Outboard legs Sail Drives Bow Thrusters

Stern Drives Log Spigots Intake Pick-up Grates

Propellers

Buoys

#### Preparation

All equipment which has been in sea water, should first be washed down with liquid chlorine (3:1).

All boat hulls must be washed down with liquid chlorine (3:1) to kill any microscopic spore.

*Fibreglass hulls:* For new or previously untreated hulls a Gelcote sealer should be applied if one has not been applied previously, prior to applying Pirtek Protect. The surface must be CLEAN and DRY. Pirtek Protect should not affect the Gelcote sealer used on fibreglass hulls and there have been no reported instances where Pirtek Protect has reacted with a Gelcote sealer coating. If you are unsure about applying Pirtek Protect it is recommended that an inconspicuous section be coated to test for reactivity. If reaction occurs please do not apply Pirtek Protect.

*Aluminium hulls:* The surface must be CLEAN and DRY. If heavy oxidation exists, remove with aluminium cleaner, and then apply Pirtek Protect.

*Previously anti-fouled hulls:* Remove marine growth and loose anti-foul particles thoroughly. Surface must be CLEAN and DRY before application of our Pirtek Protect

*Propellers:* Clean propeller or fitting back to base metal and wash with a liquid pool chlorine at 3:1 ratio to kill any microscopic spore. (very important)

#### Application

Pirtek Protect Coating can be applied by:

(a) Sprays (including airless)

(b) Roller or brush

Generally 1 or 2 coats are sufficient.

Always allow evaporation time between coats and before launching. Remember Protect always remains tacky until submerged

*Propellers:* It is preferable to heat the metal to between 65°C to 100°C. Liberally apply Pirtek Protect Grease directly onto the hot components and rub in where practical.

#### Re-application

Clean off with steam cleaner or hot pressure wash. Surface may be cleaned by using Surface Prep or by hand scrubbing with hot water above 60°C.

When CLEAN and DRY, re-apply as per instructions

#### Maintenance

All moored hulls MUST be visually inspected, and the hull wiped down every 4– 6 weeks if required.



# LANOLIN PROTECT

## RECOMMENDED APPLICATIONS

### AROUND THE HOME

Pirtek Protect products are ideal in the mining environment because they provide what is effectively a hermetic seal or encapsulation of the targeted equipment. This protective film offers:

- Stop squeaks from hinges on gates, doors and children's toys
- Having trouble again with that key in a padlock or door one, quick squirt protects and lubricates for long periods
- Lubricate sliding doors to restore smooth action
- Oil the bike chain and coat the bike preventing rust, Pirtek Protect works as well as a polish without the elbow grease
- Rejuvenate those dried out seals on pool pumps and filters
- Lubricate tracks for garage doors ensuring trouble free operation
- Protect your valuable tools from rust and corrosion
- Release those rusted up nuts and bolts in seconds

### Antennas / aerials

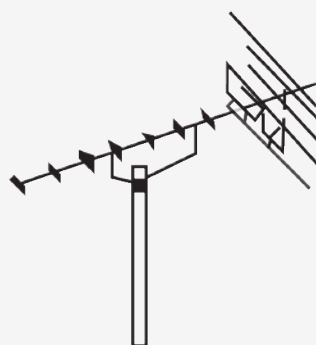
Due to the composition of dissimilar metals and high thermal cycling rates, antennas / aerials can benefit greatly from an application of Pirtek Protect, especially in severe corrosive environments.

#### Benefits

- Penetrates joints
- Penetrates base metals
- Reduces electrolysis
- No seizing of fittings
- The oxidization process is retarded

#### Technical

- Remove all flaking and oxidation with a wire brush.
- Apply Pirtek Protect to the antenna installation.
- Before application all components must be dry and should be carried out on a warm to hot day for best results.
- Pirtek Protect can be used as an anti-seize during installation on all bolts and nuts to protect and extend the life of your antenna.
- Non-conductive to 70KV but will not impede electrical contacts





# PROTECT

## INDUSTRIAL ASSEMBLY PRODUCTS

### REFER PIRTEK FOR MSDS SHEETS



#### Threadlockers :

##### Product Codes:

IAT43 in 10 ml and 50 ml bottles

##### Medium Strength Blue IAT43 Nut Lock

##### Description

Protect IAT43 is an anaerobic formulation designed to be used on parts in an "As Received" condition, such as those with protective films (oils) etc.

##### Applications

Designed for direct application onto as received parts where a light oily film exists or where surrounding parts contamination is a problem in maintenance

##### Useful Hint

Where possible, remove thick deposits of grease or dirt, however IAT43 will penetrate the film once it has been tightened

##### Properties

Use as a conventional medium strength Locker on cleaned parts with strengths up to 12N/mm<sup>2</sup> or as a convenient all purpose locker on oily parts with 8-10/mm<sup>2</sup> typical strength depending on oil type and film

##### Procedure for Application

Product is normally hand applied from the bottle. Full cure time 24 hours

##### Compatible Accelerators / Primers

Not recommended

##### Technical Features

Resin... ..Mod Methacrylate  
 Colour... ..Blue Thixotropic  
 Cure Speed... ..<15 mins @ 20°C  
 Viscosity... ..2500-5000  
 Thixotropic Gap Fill... ..0.1mm  
 Flash Point... ..>85°C  
 Life... ..12 months @ 20°C  
 Specific Gravity... ..1.04  
 Max. Operating Temp. . . -53°C to + 150°C



#### Threadlockers:

##### Product Codes:

IAT77 in 10 ml and 50 ml bottles

##### High Strength Red IAT77 Stud Lock

##### Description

IAT77 is an anaerobic locking compound in the form of a viscous paste and it is used to give high strength locking action

##### Applications

Mostly for fasteners of 25 mm (1" size) and above. Examples include

- Studs on Pressure Vessels
- Studs on Locomotive Units
- Hydraulic Studs on Presses
- Rock Crusher Studs
- Crawler Track Studs

##### Useful Hint

To speed cure or to help cure in cold conditions, use IAA471 Activator on parts

##### Properties

High Torque: 23.7 N-m (210 ins. lbs)  
 Breakloose / Prevailing Torque: 34 N-m on rotation through 180 degrees

##### Procedure for Application

Product is normally hand applied from the bottle. Ensure parts are clean, dry and free from oil and grease

##### Compatible Accelerators / Primers

IAA471 Activator can be used, but up to 30% strength reduction may be incurred

##### Technical Features

Resin: ... ..Dimethacrylate  
 Colour: ... ..Red  
 Fixture Speed with Activator: <10 mins/6 hours  
 Cure Speed without Activator: .1 hour/24 hours  
 Viscosity: ... ..6500 cps  
 Gap Fill: ... ..0.010"  
 Flash Point: ... ..>85°C  
 Shelf Life: ... ..12 months @ 20°C  
 Specific Gravity: ... ..1.10  
 Max. Operating Temp. .... -50°C to +150°C



#### Surface Preparation:

##### Product Code:

IAA471-200 in 200 ml Aerosol

##### Structural Activator for Anaerobics

##### Description

IAA471 Aerosol assists in speeding up the cure time of all anaerobic fluids and pastes and extends the cure through volume (especially suited to Pirtek Protect IAT43 and IAT77 threadlockers).

##### Applications

Use IAA471 when materials are inactive (plastics or passivated metals) or where temperature is under 15°C.

##### Physical Properties

Standard Grade Solvent: ... ..Heptane Based  
 Evaporation: ... ..60 seconds  
 Flammability: ... ..Flammable

##### Technical Features

Odour ... ..Characteristic Odour  
 Viscosity ... ..Non-Viscous  
 Flash Point: ... ..17°C  
 Boiling Point ... ..56-57°C  
 Flash Point ... ..-17 °C  
 Solubility in Water ... ..Slightly Soluble





# PROTECT

## INDUSTRIAL ASSEMBLY PRODUCTS

### REFER PIRTEK FOR MSDS SHEETS



#### Sealing & Gasketing :

##### Product Codes:

**IAS69** in 50 ml bottle

#### High Strength Hydraulic Sealant - Brown

##### Description

IAS69 Hydraulic Seal is an anaerobic liquid which cures to form a tough, high pressure seal on all types of threaded couplings used on low, medium and high pressure lines

##### Applications

IAS69 is used for all types of hydraulic connections, sealing against typical pressure line ratings. Use Hydraulic Seal to fit valves, threaded couplings, adaptors, quick disconnect parts, compression fittings and vibration proofing joints. Designed for direct application onto as received parts where a light oily film exists or where surrounding parts contamination is a problem in maintenance

##### Useful Hint

For fast cure, clean parts and apply local heat to joints with a heat gun or soft flame

##### Properties

IAS69 is tolerant of a light oil film. Seals up to 400bar, 20mm fittings, and makes vibration proof joints

##### Procedure for Application

Product is normally hand applied from the bottle. Ensure parts are clean, dry and free from oil and grease. Full cure in 12 hours

##### Compatible Accelerators / Primers

IA471 Activator can be used, but up to 30% strength reduction may be incurred

##### Cured Performance

ISO10964 Break/Prevailing Strgth.. 15/≥8 N.m  
DIN54454 Break/Prevail.. Strgth.24/15-35 N.m

##### Technical Features

Resin.....Dimethacrylate  
Colour.....Brown  
Cure Speed With Activator.....<5 minutes  
Cure Speed Without Activator...10-20 minutes  
Brookfield RVDVII + @ 20C.  
Spindle 5 @ 20rpm.....400 to 800cps  
Gap Fill.....0.05mm to 0.25mm  
Flash Point.....>100°C  
Shelf Life.....12 months @ 20°C  
Specific Gravity.....1.06  
Max Operating Temp. .... -55°C to + 150°C



#### Sealing & Gasketing:

##### Product Codes:

**IAS72** in 50 ml tube

#### Low Pressure Pipe Seal - White

##### Description

IAS72 White Pipesel is an instant low pressure sealant for fine and coarse threads up to 2" in diameter. S72 does not fully cure until some 60 hours after application, allowing re-alignment of elbows and joints

##### Applications

Replaces tapes and dopes, stops gas and fluid leaks on most metals and assists in lubricating during assembly. IAS72 will not shred or tear which would contaminate your system. Use IAS72 to seal against oils, gases, chemicals, water, steam etc.

##### Useful Hint

Wipe threads with clean shop cloth. Apply a continuous bead to 3rd or 4th thread depending on the thread length

##### Properties

Instantaneous low pressure seal. No locking action up to 48 hours. Easy break loose allowing re-alignment

##### Procedure for Application

Ensure parts are clean, dry and free from oil and grease. Degreasing directly assists results

##### Compatible Accelerators / Primers

Not recommended

##### Technical Features

Resin.....Dimethacrylate  
Colour.....White Paste  
Cure Speed w/ Activator...Not Recommended  
Cure Speed W/out Activator....Up to 60 hours  
Viscosity .....20,000cps  
Gap Fill.....0.4mm  
Flash Point.....>85°C  
Shelf Life.....12 months @ 20°C  
Specific Gravity.....1.25  
Max Operating Temp. ....-55°C to + 150°C



#### Sealing & Gasketing:

##### Product Code:

**IAS55** in 50 ml tube

#### Designer Gasket - Purple Paste

##### Description

Flange Seal Type IAS55 is a purple, smooth, thick paste. Easily applied, it cures once confined between the parts to form in place a tough, flexible gasket. IAS55 gives an instant low pressure seal

##### Applications

IAS55 is used for fuel and water pumps, split crank cases on engines, gearbox covers, engine thermostats, air compressor end caps, engine timing cam covers onto blocks, pump couplings, fuel tanks on small implements, chainsaws, lawn mowers etc. Use IAS55 for dressing gaskets, spacers etc.

##### Useful Hints

Where gap size is large or where the surface is uneven, apply IA471 Activator to help the product cure through volume. IAS55 can be roller coated, screen printed, traced or pad applied.

##### Properties

Instant low pressure sealant. Forms any size or shape. Will not shrink or relax. IAS55 is flexible and will not crack

##### Procedure for Application

Product is normally hand applied from the tube. Ensure parts are clean, dry and free from oil and grease

##### Compatible Accelerators / Primers

IA471 Activator can be used, but up to 20% strength reduction may be incurred

##### Cured Performance

Full Cure Time:.....12 hours  
Tensile Strength:.....8 N/mm<sup>2</sup>  
Static Shear Strength.....12.5 N/mm<sup>2</sup>

##### Technical Features

Resin.....Modified Urethane Acrylate  
Colour.....Purple Paste  
Cure Speed With Activator.....<2 hours  
Cure Speed Without Activator...Up to 12 hours  
Viscosity .....>1,000,000cps  
Gap Fill.....0.5mm  
Flash Point.....>100°C  
Shelf Life.....12 months @ 20°C  
Specific Gravity.....1.10  
Max Operating Temp. ....-55°C to + 150°C



# PROTECT

## INDUSTRIAL ASSEMBLY PRODUCTS

### REFER PIRTEK FOR MSDS SHEETS



#### Sealing & Gasketing :

##### Product Codes:

**IAS77** in 50 ml tube

#### High Strength Gas Pipe Seal - Yellow

##### Description

Protect IAS77 is a high viscosity thixotropic gel paste which cures rapidly, sealing instantly to 100 psi through its anaerobic cure system in contact with metals in the absence of air (oxygen). When fully cured it resists pressure up to 10,000 psi. IAS77 is not suitable for oxygen systems. AGA Approved 7604G

##### Applications

Typical applications are in sealing of all types of threaded connections against water, oil, gases and most common materials conveyed by pipes

##### Useful Hint

When cure speed is extended due to low temperatures or inactive surfaces, activator can be used. Best results are found if IAS77 is applied to 2nd or 3rd threadform. Excess can be wiped away, any migration into lines will not solidify and can be flushed away during commissioning

##### Properties

Fast cure to fixture usually <15 mins. @ 20°C

Temperature range: -50°C to +150°C

Typical Strength: 5 N/mm<sup>2</sup>

Sizes 6mm up to 75mm (coarse)

Increase of gap size or fit extends the cure time

##### Procedure for Application

Product is normally hand applied from the bottle. Ensure parts are clean, dry and free from oil and grease. Full cure 6-12 hours

##### Compatible Accelerators / Primers

IA471 Activator can be used, but up to 30% strength reduction may be incurred

##### Technical Features

Resin: Dimethacrylate

Colour: Yellow

Cure Speed with Activator: <10 minutes

Cure Speed w/o Activator: <15 mins @ 20°C

Viscosity: >50,000 cps

Gap Fill: 0.05mm to 0.4mm

Flash Point: >100°C

Shelf Life: 12 months @ 20°C

Specific Gravity: 1.09

Max. Operating Temp. +150°C



#### Sealing & Gasketing:

##### Product Codes:

**IAS57** in 50 ml tube

#### PTFE Instant Pipe Sealant

##### Description

Protect IAS57 Instant Pipe Sealant is an easy to use anaerobic pipe sealant which sets fast to give an instant low pressure seal of 100 psi and a high pressure seal of 10000 psi when fully cured. This high strength product provides 100% sealing capability and does not shrink after curing, unlike more traditional solvent based pipe dopes.

##### Applications

IAS57 Instant Pipe Sealant with Teflon lubricates parts during assembly. The cure system allows for realignment of parts up to 24 hours from application. This product can be used on most hydraulic, pneumatic, oil, water and gas connections.

##### Useful Hint

Ensure parts are clean, dry and free from oil and grease.

##### Cured Performance

Full Cure Time: 24 hours @ 20°C

Shear Strength: 10000 psi

##### Procedure for Application

Product is normally hand applied from the tube or brushed directly onto threaded parts. Primers such as IA471 (Standard Anaerobic Activator) can be used. However up to 20% strength loss can occur when using accelerators.

##### Technical Features

Resin: Dimethacrylate

Colour: White

Fixture Speed w/Activator: <10mins

Fixture Speed w/out

Activator: 4 hour

Visco: 300,000 – 400,000cps

Gap Fill: 0.254mm

Shelf Life: 12 months @ 20°C

Max. Operating Temp. -54°C to + 200°C



#### Retaining:

##### Product Code:

**IAR41** in 10 ml and 50 ml bottles

#### Medium Strength Bearing Fit - Yellow

##### Description

Bearing Fit IAR41 is a single part anaerobic securing compound, designed for fitting cylindrical metal assemblies and cures when confined between the parts

##### Applications

Protect IAR41 will secure all types and sizes of bearings, shafts and cylindrical parts which will require disassembly in the future. IAR41 is of medium strength and is colour coded yellow for job identification

##### Useful Hint

To speed cure or to help cure in cold conditions, use IA471 Activator on parts

##### Properties

Fast cure usually <15 mins. @ 20°C

Medium strength removable compound

Typical Strength: 12 N/mm<sup>2</sup>

##### Procedure for Application

Product is normally hand applied from the bottle. Ensure parts are clean, dry and free from oil and grease. Full cure 12 hours

##### Physical Properties

Standard Grade Solvent: Heptane Based

Resin: Mod. Dimethacrylate

Colour: Yellow

Cure Speed With Activator: <5 minutes

Cure Speed Without Activator: 10-15 minutes

Viscosity: 1500 cps

Gap Fill: 0.2 mm

Flash Point: >100°C

Shelf Life: 12 months @ 20°C

Specific Gravity: 1.06

Operating Temp: -55°C to + 150°C



Consult Pirtek for  
MSDS Sheets  
for all Industrial  
Assembly Products

# PROTECT

## INDUSTRIAL ASSEMBLY PRODUCTS

### REFER PIRTEK FOR MSDS SHEETS



#### Retaining :

##### Product Codes:

**IAR62** in 10 ml and 50 ml bottles

##### High Strength / High Temperature

##### Description

IAR62 Retainer is rated up to 232°C as the upper operational temperature and is designed for bonding/securing in a high strength manner, all types of cylindrically fitted parts

##### Applications

Protect IAR62 is used on all types of applications where temperatures exceed the design features of conventional Retainers, above 150°C. It develops high strength at elevated temperatures.

##### Useful Hint

Speed cure IAR62 by applying a localised heat with a heat gun or by placing parts in an oven @ 100°C for 30 minutes. Pre-heating of parts also accelerates the fixture and ultimate final cure

##### Properties

Good gap fill ability. Elevated upper temperature limits. Resistant to 3000 psi shear

##### Procedure for Application

Product is normally hand applied from the bottle. Ensure parts are clean, dry and free from oil and grease. Full cure in 24 hours

##### Compatible Accelerators / Primers

IA471 Activator can be used, but up to 30% strength reduction may be incurred

##### Cured Performance

Typical Breakaway Strength:.....20 N/mm<sup>2</sup>

##### Technical Features

Resin.....Mod. Dimethacrylate  
 Colour.....Green  
 Cure Speed With Activator.....10 minutes  
 Cure Speed Without Activator.....30 minutes  
 Viscosity.....7000 cps  
 Gap Fill.....0.4 mm max.  
 Flash Point.....>85°C  
 Shelf Life.....12 months @ 20°C  
 Specific Gravity.....1.08  
 Max. Operating Temp.....-55°C to + 232°C



#### Instant Bonding:

##### Product Codes:

**IACA41** in 25 ml bottle

##### Quick Bonding

##### Description

IACA41 is a hybrid quality Cyanoacrylate which is surface insensitive and bonds to a wide variety of materials including wood, paper, cardboard, leather, fabrics etc. Bond times vary according to the substrates but are generally faster than normal superglues

##### Applications

Typical applications include wood trim on furniture, balsa wood bonding for hobbyists, leather accessories on shoes, fabric bows on shoes and lampshade bonding.

Other features include versatile bonding or most elastomers, metals and plastics

##### Useful Hint

On elastomer bonding and some plastics, residues or release agents on surfaces should be removed by wiping with a solvent cleaner

##### Properties

Steel to Steel:.....20 N/mm<sup>2</sup>  
 Rubber to Rubber .....10 N/mm<sup>2</sup>  
 Plastic to Plastic .....15 N/mm<sup>2</sup>

##### Procedure for Application

Ensure parts are clean, dry and free from oil and grease. Apply sparingly to one side and hold parts until handling strength is achieved (typically less than 15 seconds)

##### Compatible Accelerators / Primers

Primers such as A021 or Double Strength A113 as accelerators for fillet cure for priming absorbent surfaces (available from Pirtek to order)

##### Technical Features

Resin.....Modified Ethyl  
 Colour.....Clear  
 Cure Speed W/ Activator..Not Recommended  
 Cure Speed W/o Activator.....<10 seconds  
 Viscosity.....120cps  
 Gap Fill.....0.1mm  
 Flash Point.....>85°C  
 Shelf Life.....12 months @ 20°C  
 Specific Gravity.....1.05  
 Operating Temp. ....-60°C to + 80°C



#### Instant Bonding:

##### Product Code:

**IACA60** in 25 ml bottle

##### High Strength Instant Adhesive

##### Description

IACA60, when compared to other low viscosity Cyanoacrylates, outperforms most products for cure speed, final cured strength and simply the wide range of difficult plastics and elastomers it can bond

##### Applications

For example, Nitrile, Neoprene and natural rubbers can be bonded in 1-2 seconds and all the bonds are stronger than the material itself. Plastics such as ABS, soft PVC, Polyacetal, EPT and EVA all bond in 1-2 seconds and the bonds are stronger than the material being bonded. Metals such as steel, aluminium, copper and brass all bond in under 5 seconds and the bond strengths are superior to other manufacturers low viscosity products

##### Useful Hints

Slower cures of up to 12 seconds are found on Polymethyl Methacrylate (PMMA), Bakelite, Polycarbonate and Viton rubber. Polyolefins can be treated with special preparations. Consult Pirtek re Product Data Sheet 25 when dealing with these difficult plastics

##### Properties

Speed: Plastics (most) .....<2 seconds  
 Rubbers (most) .....<4 seconds  
 Metals .....<5 seconds  
 Strength:.....Plastics to substrate failure  
 .....Rubbers to substrate failure  
 .....Metals >30 N/mm<sup>2</sup> (Shear 15 N/mm<sup>2</sup>)

##### Procedure for Application

For best results, degrease/abrade and make sure the surfaces are clean and free from dirt, dust and contamination such as mould release agents. Apply a thin film or drop to one surface only and bring parts together holding firmly for a few seconds until the parts achieve a handling strength. Remember one drop bonds about 25mm<sup>2</sup> and a 25 ml bottle has about 200 drops. 24 hours for full cure

##### Compatible Accelerators / Primers

Primers such as A021 or Double Strength A113 as accelerators for fillet cure for priming absorbent surfaces (available from Pirtek to order)

##### Technical Features

Resin.....Modified Ethyl CA  
 Colour.....Clear  
 Cure Speed With Activator.....Instant  
 Cure Speed Without Activator.....1-5 seconds  
 Viscosity.....20cps  
 Gap Fill.....0.1 mm  
 Flash Point.....>85°C  
 Shelf Life.....12 months @ 20°C  
 Specific Gravity.....1.06  
 Max. Operating Temperature.....-60°C to + 90°C

# PROTECT

## INDUSTRIAL ASSEMBLY PRODUCTS

### REFER PIRTEK FOR MSDS SHEETS

IATDS198



#### TDS198 EPOXY :

Product Codes:

**IATDS198** in 180 mm x 20 mm Rod

#### Aluminium Stick - Epoxy Putty

##### Description

A hand kneadable, speciality epoxy putty that mixes in one minute to provide fast, permanent repairs to most aluminium surfaces. When applying it to surfaces it is necessary to work the material forcefully into the surface and apply pressure until adhesion begins to take effect. Lower temperature causes longer cure time. The handy rod form has the curing agent encapsulated in the contrasting colour base material. It's putty-like consistency eliminates drips and runs, providing "no mess" application with no tools required to use. The mixed epoxy turns from a silvery colour to "Alloy" upon curing and will not yellow upon exposure to UV light. After final cure, Aluminium Stick may be drilled, sawed, tapped, filed, sanded and painted. It allows patching in areas where welding is impossible.

##### Applications

After proper mixing, Aluminium Stick moulds like clay and may be used to permanently patch dents, scratches, cuts, gouges and holes in items such as housings and all types of repairs to mouldings and injection type shapes. Aluminium Stick is ideal for making emergency repairs to reforming, rebuilding and patching anything made out of aluminium such as HVAC parts, refrigeration units, air conditioning units, machine parts, alu-roofing, flagpoles, shelving, platforms, walkways, campers, vehicles, canopies, gutters, truck bodies, wheels, manifolds, stripped threads, marine hardware and casings.

##### Useful Hint

Mixing: Twist or cut off required amount. To mix, knead with fingers to a uniform colour. If mixing is difficult, warm the stick to room temperature or slightly above. Apply to the surface to be repaired (within 2 minutes of mixing). The mixed epoxy does not exhibit high bond strength at this point, but appears to be merely lying on the surface.

Force into any cracks or holes to be filled and strike off excess material, preferably with a tool wetted with clean water. Work the material forcefully into the surface and apply pressure until adhesion begins to take effect.

For a smooth appearance, hand rub with water or a damp cloth prior to hardening. Remove excess material before hardening begins. After 15-20 minutes the epoxy will harden like metal and start to form a tenacious bond. After just 45 minutes IATDS198 is completely cured and can be drilled, sawed, carved, sanded, stained or painted.

##### Properties

Opening Time: ..... 5 minutes  
 Max. Temp Resistance: ..... 120°C (150°C intermittent)  
 Initial Cure: ..... 1 hour max.  
 Full Cure Time: ..... 24 hours  
 Lap Shear Strength (Steel): ..... 4.8 N/mm<sup>2</sup>  
 Shore D Hardness: ..... 70/80  
 Compressive Strength: ..... 84 N/mm<sup>2</sup> - 12,000 psi

##### Procedure for Application

Surface should be cleaned free of grease or dirt. Scuffing or sanding the surface prior to cleaning helps to ensure a good bond.

##### Technical Features

Resin: ..... Epoxide Light Silver  
 Epoxy Resistance: ..... Hydrocarbons, ketones, esters, halo-carbons, alcohols, aqueous salt solutions and dilute acids and bases  
 Electrical Resistance: ..... 30,000 mega Ohms  
 Dielectric Strength (Steel): ..... 300 Volts/mil  
 Shrinkage: ..... <1%  
 Non-Volatile Content: ..... 100%  
 Shelf Life: ..... >6 months @ 25°C

IATDS252



#### TDS252 EPOXY:

Product Codes:

**IATDS252** in 180 mm x 20 mm Rod

#### Steel Stick - Epoxy Putty

##### Description

Steel Stick is a hand kneadable, non rusting, steel reinforced epoxy putty that mixes in one minute to provide fast, permanent repairs to items made of ferrous and aluminium metals. It comes in a handy rod form with the curing agent encapsulated in the contrasting colour base material. It's putty-like consistency eliminates drips and runs, providing "no mess" application with no tools required to use. Steel Stick is black in colour after use.

##### Applications

After proper mixing, Steel Stick moulds like clay and may be used in many industrial and home Maintenance applications, including repair of iron pipes, tanks, tools and equipment, repair blow holes, holding and placement of fixtures and signs, repairs to moulds, patterns and castings, making prototypes, threadlocking, repair cracked castings, repairs to down spouts and gutters, light fixture installations, repairs to duct-work, anchor bolts, as well as countless other uses. The unused portion of Steel Stick will remain stable for years if protected from direct contact with the air, in cool conditions.

##### Useful Hint

Mixing: Twist or cut off required amount. To mix, knead with fingers to a uniform colour. If mixing is difficult, warm Steel Stick to room temperature or slightly above. Apply to the surface to be repaired (within 2 minutes of mixing). The mixed epoxy does not exhibit high bond strength at this point, but appears to be merely lying on the surface. Force into any cracks or holes to be filled and strike off excess material, preferably with a tool wetted with clean water. When applying to a damp, wet or slowly leaking area, work the material forcefully into the surface and apply pressure until adhesion begins to take effect. For a smooth appearance of the cured compound, hand rub with water or a damp cloth prior to hardening. Remove excess material before hardening begins. After 15-20 minutes the epoxy will harden like metal and start to form a tenacious bond. After just 45 minutes Steel Stick is completely cured and can be drilled, sawed, carved, sanded stained or painted.

##### Properties

Opening Time: ..... 3.5 minutes  
 Max. Temperature Resistance: ..... 120°C (150°C intermittent)  
 Initial Cure: ..... 1 hour max.  
 Full Cure Time: ..... 24 hours  
 Lap Shear Strength (Steel): ..... 6.2 N/mm(2)  
 Shore D Hardness: ..... 80  
 Compressive Strength: ..... 84 N/mm(2) - 12,000 psi

##### Procedure for Application

Surface should be cleaned free of grease or dirt. Scuffing or sanding the surface prior to cleaning helps to ensure a good bond.

##### Technical Features

Resin: ..... Epoxide  
 Chemical Resistance: ..... Hydrocarbons, ketones, esters, halo-carbons, aqueous salt solutions and dilute acids and bases  
 Electrical Resistance: ..... 30,000 mega Ohms  
 Dielectric Strength (Steel): ..... 300 Volts/mil  
 Shrinkage: ..... <1%  
 Non-Volatile Content: ..... 100%  
 Shelf Life: ..... >6 months @ 25°C



# PROTECT

## INDUSTRIAL ASSEMBLY PRODUCTS

### REFER PIRTEK FOR MSDS SHEETS



#### Silicone Sealant:

##### Product Codes:

**IASIL** in 300 ml Tube

##### High Temperature Silicon - Black

###### Description

IASIL RTV Silicone is a one part, easily applied, paste-like sealant that cures to form a high purity elastomer on exposure to atmospheric moisture. No primers or accelerators are needed. When cured, it resists most chemicals, high temperatures and exhibits excellent mechanical properties

###### Applications

All applications where a non-sag sealant of exceptional longevity is required to bond glass, metals, ceramics, wood stone etc. IASIL eliminates leakage, reduces noise, absorbs vibration, seals and bonds parts into a secure unit.

###### Useful Hint

Where surfaces require only a single sided bond, it is possible to treat the side not requiring adhesion with a release agent or simply apply petroleum jelly or oil. When cured torque up the parts to form a compressive seal

###### Properties

Cure rate is 3mm in 24 hours but is humidity and temperature dependant. The rate of cure can be accelerated by increasing the temperature (70°C max.) and increasing the humidity levels

###### Procedure for Application

Product is normally hand applied from the cartridge. Ensure parts are clean, dry and free from oil and grease. Full cure in 24 hours

###### Compatible Accelerators / Primers

Products are available to order for difficult surfaces. Please consult Pirtek

###### Cured Performance

Full Cure Time: .....24 hours maximum

Tensile Strength: .....200psi

Hardness : .....35 Shore A

Elongation : .....307%

###### Technical Features

Resin: .....Oxime Silicone

Colour: .....Black

Cure Speed: .....Skin 5 mins

Shelf Life: .....9-12 months unopened

Specific Gravity: .....1.43

Operating Temperature: .....-65°C to +260°C



#### Aluminium Anti-Sieze Lubricants:

##### Product Codes:

**IAAA** 500 g

##### Aluminium Anti-Sieze - High Temp. 871°C

###### Description

IAAA Aluminium-Graphite Anti-Seize paste consists of uniform, fine flaked particles in a special blend of lubricants and oils. It is ideal for use on a wide range of industrial products to prevent seizing, galling and excessive wear.

###### Applications

Can be used on nuts, bolts screws, pipe threads, O-rings, shafts and hubs. Typical applications include conveyor systems, gear boxes, chains, cams, u-joints, sprockets and tracking.

Protects up to 980°C

Prevents seizing and galling of metals

Protects against harsh and corrosive environments

*Note that IAAA is not a high speed load carrying lubricant and is not recommended for ball or roller bearings.*

###### On Part Performance

Temperature:.....-53°C up to 871°C

Water Resistance:.....Excellent

Corrosivity:.....Very Low

Protection Level:.....Salt Water, Chemicals

###### Procedure for Application

Ensure parts are clean and dry, then simply apply by brush to provide instant protection.

###### Technical Features

Base:.....Highly Modified Synthetic Oil

Additives:.....Copper, Graphite, Aluminium,

Anti Corrosion Properties

Shelf Life:.....1½ Years

Consistency:.....Paste

Viscosity .....120K - 175K

Lubricity ..k Factor .....0.18

Coefficient of Friction .....0.07 from 20°C - 760°C

Specific Gravity:.....app 1.3

Flash Point:.....>150°C

Texture:.....Smooth Paste

Meets or exceeds the requirements of MIL-A-907E specification and conforms to GM -6108M



Consult Pirtek for MSDS  
Sheets for all Industrial  
Assembly Products

# TECHNICAL DATA

## CHEMICAL RESISTANCE TABLE - ANAEROBICS

AGENT	INDUSTRIAL ANAEROBIC				
	IAS55, IAS57	IAS69, IAS72, IAS77	IAR41, IAR62	IAT43	IAT77
Legend: G = Good C = Conditional U = Unsatisfactory - No Data					
Abrasive Coolant	G	G	G	G	G
Acetaldehyde	G	G	G	G	G
Acetate Solvents	G	G	G	G	G
Acetamide	G	G	G	G	G
Acetic Acid	G	G	G	G	G
Acetic Acid <10%	G	G	G	G	G
Acetic Acid >10%	-	-	-	G	-
Acetic Acid - Glacial	G	G	G	G	G
Acetic Anhydride	G	G	G	G	G
Acetone	G	G	G	G	G
Acetylene (Liq. Phase)	G	G	G	G	G
Acid Clay	G	G	G	G	G
Acrylic Acid	G	G	G	G	G
Acrylonitrile	G	G	G	G	G
Activated Alumina	G	G	G	G	G
Activated Carbon	G	G	G	G	G
Activated Silica	G	G	G	G	G
Alcohol - Allyl	G	G	G	G	G
Alcohol - Amyl	G	G	G	G	G
Alcohol - Benzyl	G	G	G	G	G
Alcohol - Butyl	G	G	G	G	G
Alcohol - Ethyl	G	G	G	G	G
Alcohol - Furfuryl	G	G	G	G	G
Alcohol - Hexyl	G	G	G	G	G
Alcohol - Isopropyl	G	G	G	G	G
Alcohol - Methyl	G	G	G	G	G
Alcohol - Propyl	G	G	G	G	G
Alum - Ammonium	G	G	G	G	G
Alum - Chrome	G	G	G	G	G
Alum - Potassium	G	G	G	G	G
Alum - Sodium	G	G	G	G	G
Alumina	G	G	G	G	G
Aluminium Acetate	G	G	G	G	G
Aluminium Bicarbonate	G	G	G	G	G
Aluminium Bifluoride	G	G	G	G	G
Aluminium Chloride	G	G	G	G	G
Aluminium Sulfate	G	G	G	G	G
Ammonia Anhydrous	U	U	U	U	U
Ammonia Solutions	U	U	U	U	U
Ammonium Bisulfite	G	G	G	G	G
Ammonium Borate	G	G	G	G	G
Ammonium Bromide	G	G	G	G	G
Ammonium Carbonate	G	G	G	G	G
Ammonium Chloride	G	G	G	G	G
Ammonium Chromate	G	G	G	G	G
Ammonium Fluoride	G	G	G	G	G
Ammonium Fluorosilicate	G	G	G	G	G
Ammonium Formate	G	G	G	G	G
Ammonium Hydroxide	G	G	G	G	G
Ammonium Hyposulfite	G	G	G	G	G
Ammonium Iodide	G	G	G	G	G
Ammonium Molybdate	G	G	G	G	G
Ammonium Nitrate	G	G	G	G	G
Ammonium Oxalate	G	G	G	G	G
Ammonium Persulfate	G	G	G	G	G
Ammonium Phosphate	G	G	G	G	G
Ammonium Picrate	G	G	G	G	G
Ammonium Sulfate	G	G	G	G	G
Amnim. Sulfate Scrubber	G	G	G	G	G
Ammonium Sulfide	G	G	G	G	G

AGENT	INDUSTRIAL ANAEROBIC				
	IAS55, IAS57	IAS69, IAS72, IAS77	IAR41, IAR62	IAT43	IAT77
Legend: G = Good C = Conditional U = Unsatisfactory - No Data					
Ammonium Thiocyanate	G	G	G	G	G
Amyl Acetate	G	G	G	G	G
Amyl Amine	G	G	G	G	G
Amyl Chloride	G	G	G	G	G
Aniline	G	G	G	G	G
Aniline Dyes	G	G	G	G	G
Anodizing Bath	G	G	G	G	G
Antichlor Solution	G	G	G	G	G
Antimony Acid Salts	G	G	G	G	G
Antimony Oxide	G	G	G	G	G
Antioxidant Gasoline	G	G	G	G	G
Aqua Regia	U	U	U	U	U
Argon	G	G	G	G	G
Armeen	G	G	G	G	G
Arochlor	G	G	G	G	G
Aromatic Gasoline	G	G	G	G	G
Aromatic Solvents	G	G	G	G	G
Arsenic Acid	G	G	G	G	G
Asbestos Slurry	G	G	G	G	G
Ash Slurry	G	G	G	G	G
Asphalt Emulsions	G	G	G	G	G
Asphalt Molten	G	G	G	G	G
Bagasse Fibers	G	G	G	G	G
Barium Acetate	G	G	G	G	G
Barium Carbonate	G	G	G	G	G
Barium Chloride	G	G	G	G	G
Barium Hydroxide <10%	G	G	G	G	G
Barium Hydroxide >10%	-	-	-	G	-
Barium Sulfate	G	G	G	G	G
Battery Acid <10%	G	G	G	G	G
Battery Acid >10%	-	-	-	G	-
Battery Diffuser Juice	G	G	G	G	G
Bauxite (See Alumina)	G	G	G	G	G
Bentonite	G	G	G	G	G
Benzaldehyde	G	G	G	G	G
Benzene	G	G	G	G	G
Benzene Hexachloride	G	G	G	G	G
Benzene-Hydrochloric Acid	G	G	G	G	G
Benzoic Acid	G	G	G	G	G
Benzotriazole	G	G	G	G	G
Beryllium Sulfate	G	G	G	G	G
Bicarbonate Liquor	G	G	G	G	G
Bilge Lines	G	G	G	G	G
Bleach Liquor	G	G	G	G	G
Bleached Pulps	G	G	G	G	G
Borax (S) Liquors	G	G	G	G	G
Boric Acid	G	G	G	G	G
Brake Fluids	G	G	G	G	G
Brine Chlorinated	G	G	G	G	G
Brine (Cold)	G	G	G	G	G
Bromine Solution	-	-	-	-	G
Butadiene	G	G	G	G	G
Butyl Acetate	G	G	G	G	G
Butyl Alcohol	G	G	G	G	G
Butyl Amine	G	G	G	G	G
Butyl Cellosolve (S)	G	G	G	G	G
Butyl Chloride	G	G	G	G	G
Butyl Ether (Dry)	G	G	G	G	G
Butyl Lactate	G	G	G	G	G
Butyl Resin	G	G	G	G	G

AGENT	INDUSTRIAL ANAEROBIC				
	IAS55, IAS57	IAS69, IAS72, IAS77	IAR41, IAR62	IAT43	IAT77
Legend: G = Good C = Conditional U = Unsatisfactory - No Data					
Butyraldehyde	G	G	G	G	G
Butyric Acid <10%	G	G	G	G	G
Butyric Acid >10%	-	-	-	G	-
Cadmium Chloride	G	G	G	G	G
Cadmium Plating Bath	G	G	G	G	G
Cadmium Sulfate	G	G	G	G	G
Calcium Acetate	G	G	G	G	G
Calcium Bisulfate	G	G	G	G	G
Calcium Carbonate	G	G	G	G	G
Calcium Chlorate	G	G	G	G	G
Calcium Chloride	G	G	G	G	G
Calcium Chloride Brine	G	G	G	G	G
Calcium Citrate	G	G	G	G	G
Calcium Ferrocyanide	G	G	G	G	G
Calcium Formate	G	G	G	G	G
Calcium Hydroxide	G	G	G	G	G
Calcium Lactate	G	G	G	G	G
Calcium Nitrate	G	G	G	G	G
Calcium Phosphate	G	G	G	G	G
Calcium Silicate	G	G	G	G	G
Calcium Sulfamate	G	G	G	G	G
Calcium Sulfate	G	G	G	G	G
Calcium Sulfite	G	G	G	G	G
Camphor	G	G	G	G	G
Carbitol	G	G	G	G	G
Carbolic Acid (Phenol) <10%	G	G	G	G	G
Carbolic Acid (Phenol) >10%	-	-	-	G	-
Carbon Bisulfide	G	G	G	G	G
Carbon Black	G	G	G	G	G
Carbon Tetrachloride	G	G	G	G	G
Carbonic Acid <10%	G	G	G	G	G
Carbonic Acid >10%	-	-	-	G	-
Carbowax (S)	G	G	G	G	G
Carboxymethyl Cellulose	G	G	G	G	G
Caruba Wax	G	G	G	G	G
Casein	G	G	G	G	G
Casein Water Paint	G	G	G	G	G
Celite	G	G	G	G	G
Cellosolve (S)	G	G	G	G	G
Cellulose Pulp	G	G	G	G	G
Cellulose Xanthate	G	G	G	G	G
Cement DryAir Blow	G	G	G	G	G
Cement Grout	G	G	G	G	G
Cement Slurry	G	G	G	G	G
Ceramic Enamel	G	G	G	G	G
Ceric Oxide	G	G	G	G	G
Chalk	G	G	G	G	G
Chemical Pulp	G	G	G	G	G
Chestnut Tanning	G	G	G	G	G
China Clay	G	G	G	G	G
Chloral Alcoholate	G	G	G	G	G
Chloramine	G	G	G	G	G
Chlorinated Hydrocarbons	G	G	G	G	G
Chlorinated Paperstock	G	G	G	G	G
Chlorinated Solvents	G	G	G	G	G
Chlor Sulphuric Acid	U	U	U	U	U
Chlorinated Wax	G	G	G	G	G
Chlorine Dioxide	U	U	U	U	U
Chlorine Liquid	U	U	U	U	U
Chlorine (Dry)	U	U	U	U	U

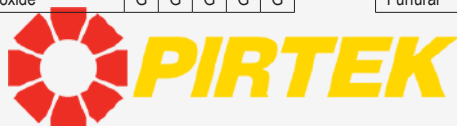
# TECHNICAL DATA

## CHEMICAL RESISTANCE TABLE - ANAEROBICS

AGENT	INDUSTRIAL ANAEROBIC				
	IAS55, IAS57	IAS69, IAS72, IAS77	IAS41, IAS62	IAS43	IAS77
Legend: G = Good C = Conditional U = Unsatisfactory - No Data					
Chloroacetic Acid <10%	G	G	G	G	G
Chloroacetic Acid >10%	-	-	-	G	-
Chlorobenzene (Dry)	G	G	G	G	G
Chlorosulfonic Acid	U	U	U	U	U
Chrome Acid Cleaning <10%	G	G	G	G	G
Chrome Acid Cleaning >10%	-	-	-	G	-
Chrome Liquor <10%	G	G	G	G	G
Chrome Liquor >10%	-	-	-	G	-
Chrome Plating Bath <10%	G	G	G	G	G
Chrome Plating Bath >10%	-	-	-	G	-
Chromic Acid 10%	G	G	G	G	G
Chromic Acid 50% (Cold)	U	U	U	U	U
Chromic Acid 50% (Hot)	U	U	U	U	U
Chromium Acetate	G	G	G	G	G
Chromium Chloride	G	G	G	G	G
Chromium Sulfate	G	G	G	G	G
Classifier	G	G	G	G	G
Clay	G	G	G	G	G
Coal Slurry	G	G	G	G	G
Coal Tar	G	G	G	G	G
Cobalt Chloride	G	G	G	G	G
Copper Amnium Formate	G	G	G	G	G
Copper Chloride	G	G	G	G	G
Copper Cyanide	G	G	G	G	G
Copper Naphthenate	G	G	G	G	G
Copper Plating(Acid Procs)	G	G	G	G	G
Copper Plating(Alk Procs)	G	G	G	G	G
Copper Sulfate	G	G	G	G	G
Core Oil	G	G	G	G	G
Corundum	G	G	G	G	G
Creosote	G	G	G	G	G
Creosote - Cresylic Acid	G	G	G	G	G
Cyanide Solution	G	G	G	G	G
Cyanuric Chloride	G	G	G	G	G
Cyclohexane	G	G	G	G	G
Cylinder Oils	G	G	G	G	G
De-Ionized Water	G	G	G	G	G
De-Ionized Water Low Conductivity	G	G	G	G	G
Detergents	G	G	G	G	G
Developer, photographic	G	G	G	G	G
Dextrin	G	G	G	G	G
Diacetone Alcohol	G	G	G	G	G
Diammonium Phosphate	G	G	G	G	G
Diamylamine	G	G	G	G	G
Diatomaceous Earth Slurr	G	G	G	G	G
Diazo Acetate	G	G	G	G	G
Dibutyl Ohthalate	G	G	G	G	G
Dichlorophenol	G	G	G	G	G
Dichloro Ethyl Ether	G	G	G	G	G
Dicyandamide	G	G	G	G	G
Dielectric Fluid	G	G	G	G	G
Diester Lubricants	G	G	G	G	G
Diethyl Ether Dry	G	G	G	G	G
Diethyl Sulfate	G	G	G	G	G
Diethylamine	G	G	G	G	G
Diethylene Glycol	G	G	G	G	G
Diglycolic Acid	G	G	G	G	G
Dimenthyl Formamide	G	G	G	G	G
Dimethyl Sulfoxide	G	G	G	G	G

AGENT	INDUSTRIAL ANAEROBIC				
	IAS55, IAS57	IAS69, IAS72, IAS77	IAS41, IAS62	IAS43	IAS77
Legend: G = Good C = Conditional U = Unsatisfactory - No Data					
Dioxane Dry	G	G	G	G	G
Dioxidene	G	G	G	G	G
Dipentene - Pinene	G	G	G	G	G
Diphenyl	G	G	G	G	G
Distilled Water(Indust)	G	G	G	G	G
Dowtherm (S)	G	G	G	G	G
Drying Oil	G	G	G	G	G
Dust - Flue (Dry)	G	G	G	G	G
Dye Liquors	G	G	G	G	G
Emery - Slurry	G	G	G	G	G
Emulsified Oils	G	G	G	G	G
Enamel Frit Slip	G	G	G	G	G
Esters General	G	G	G	G	G
Ethyl Acetate	G	G	G	G	G
Ethyl Alcohol	G	G	G	G	G
Ethyl Amine	G	G	G	G	G
Ethyl Bromide	G	G	G	G	G
Ethyl Cellosolve (S)	G	G	G	G	G
Ethyl Cellosolve Slurry(S)	G	G	G	G	G
Ethyl Formate	G	G	G	G	G
Ethyl Silicate	G	G	G	G	G
Ethylene Diamine	G	G	G	G	G
Ethylene Dibromide	G	G	G	G	G
Ethylene Dichloride	G	G	G	G	G
Ethylene Glycol	G	G	G	G	G
Ethylenediamine T	G	G	G	G	G
Fatty Acids	G	G	G	G	G
Fatty Acids Amine	G	G	G	G	G
Fatty Alcohol	G	G	G	G	G
Ferric - Flocc	G	G	G	G	G
Ferric Chloride	G	G	G	G	G
Ferric Nitrate	G	G	G	G	G
Ferric Sulfate	G	G	G	G	G
Ferrocene - Oil Sol	G	G	G	G	G
Ferrous Chloride	G	G	G	G	G
Ferrous Oxalate	G	G	G	G	G
Ferrous Sulfate 10%	G	G	G	G	G
Ferrous Sulfate (Sat)	G	G	G	G	G
Fertilizer Sol	G	G	G	G	G
Flotation Concentrates	G	G	G	G	G
Fluoride Salts	G	G	G	G	G
Fluorine/Gaseous/Liquid	G	G	G	G	G
Fluorolube	G	G	G	G	G
Fluosilic Acid	G	G	G	G	G
Flux Soldering	G	G	G	G	G
Fly Ash Dry	G	G	G	G	G
Foam Latex Mix	G	G	G	G	G
Foamite	G	G	G	G	G
Formaldehyde (Cold)	G	G	G	G	G
Formaldehyde (Hot)	-	-	-	-	G
Formic Acid (Dil Cold)	G	G	G	G	G
Formic Acid (Dil Hot)	-	-	-	-	G
Formic Acid (Cold)	G	G	G	G	G
Formic Acid (Hot)	-	-	-	-	G
Freon (S)	-	-	-	-	G
Fuel Oil	G	G	G	G	G
Fuming Nitric Red	U	U	U	U	U
Fuming Sulfuric	U	U	U	U	U
Fuming Oleum	U	U	U	U	U
Furfural	G	G	G	G	G

AGENT	INDUSTRIAL ANAEROBIC				
	IAS55, IAS57	IAS69, IAS72, IAS77	IAS41, IAS62	IAS43	IAS77
Legend: G = Good C = Conditional U = Unsatisfactory - No Data					
Gallic Acid <5%	G	G	G	G	G
Gallic Acid >5%	-	-	-	G	-
Gallium Sulfate	G	G	G	G	G
Gasoline - Acid Wash	G	G	G	G	G
Gasoline - Alk Wash	G	G	G	G	G
Gasoline Aviation	G	G	G	G	G
Gasoline Copper Chloride	G	G	G	G	G
Gasoline Ethyl	G	G	G	G	G
Gasoline Motor	G	G	G	G	G
Gasoline Sour	G	G	G	G	G
Gasoline White	G	G	G	G	G
Gluconic Acid	G	G	G	G	G
Glue - Animal Gelatin	G	G	G	G	G
Glue - Plywood	G	G	G	G	G
Glutamic Acid	G	G	G	G	G
Glycerine Lye - Brine	U	U	U	U	U
Glycerol	G	G	G	G	G
Glycine	G	G	G	G	G
Glycine Hydrochloride	G	G	G	G	G
Glycol Amine	G	G	G	G	G
Glycolic Acid	G	G	G	G	G
Glyoxal	G	G	G	G	G
Gold Chloride	G	G	G	G	G
Gold Cyanide	G	G	G	G	G
Granodine	G	G	G	G	G
Grape Pomace Graphite	G	G	G	G	G
Grease Lubricating	G	G	G	G	G
Green Soap	G	G	G	G	G
Grinding Lubricant	G	G	G	G	G
Grit Steel	G	G	G	G	G
Gritty Water	G	G	G	G	G
Groundwood Stock	G	G	G	G	G
GRS Latex	G	G	G	G	G
Gum Paste	G	G	G	G	G
Gypsum	G	G	G	G	G
Halane Sol	G	G	G	G	G
Halogen Tin Plating	G	G	G	G	G
Halowax (S)	G	G	G	G	G
Harvel - Trans Oil	G	G	G	G	G
Heptane	G	G	G	G	G
Hexachlorobenzene	G	G	G	G	G
Hexadiene	G	G	G	G	G
Hexamethylenetetramine	G	G	G	G	G
Hexane	G	G	G	G	G
Hydrazine	G	G	G	G	G
Hydrazine Hydrate	G	G	G	G	G
Hydrobromic Acid <10%	G	G	G	G	G
Hydrobromic Acid >10%	-	-	-	G	-
Hydrochloric Acid	G	G	G	G	G
Hydrocyanic Acid <10%	G	G	G	G	G
Hydrocyanic Acid >10%	-	-	-	G	-
Hydrofluoric Acid	U	U	U	U	U
Hydrogen Peroxide (dil)	G	G	G	G	G
Hydrogen Peroxide(con)	-	-	-	-	G
Hydroponic Sol	G	G	G	G	G
Hydroquinone	G	G	G	G	G
Hypo	G	G	G	G	G
Hypochlorous Acid	G	G	G	G	G
Ink	G	G	G	G	G
Ink in Solvent - Printing	G	G	G	G	G



This page is part of a complete catalogue containing technical and safety data.  
All data must be reviewed when selecting a product.  
Pirtek reserve the right to change technical specifications without notice



# TECHNICAL DATA

## CHEMICAL RESISTANCE TABLE - ANAEROBICS

AGENT	INDUSTRIAL ANAEROBIC				
	IAS55, IAS57	IAS69, IAS72, IAS77	IAR41, IAR62	IAT43	IAT77
Legend: G = Good C = Conditional U = Unsatisfactory - No Data					
Iodine in Alcohol	G	G	G	G	G
Iodine-Potassium Iodide	G	G	G	G	G
Iodine Solutions	G	G	G	G	G
Ion Exchange Service	G	G	G	G	G
Ion Exclusion Glycol	G	G	G	G	G
Irish Moss Slurry	G	G	G	G	G
Iron Ore Taconite	G	G	G	G	G
Iron Oxide	G	G	G	G	G
Isobutyl Alcohol	G	G	G	G	G
Isobutyraldehyde	G	G	G	G	G
Isooctane	G	G	G	G	G
Isopropyl Alcohol	G	G	G	G	G
Isocyanate Resin	G	G	G	G	G
Isopropyl Acetate	G	G	G	G	G
Isopropyl Ether	G	G	G	G	G
Itaconic Acid	G	G	G	G	G
Jet Fuels	G	G	G	G	G
Jewelers Rouge	G	G	G	G	G
Jig Table Slurry	G	G	G	G	G
Kaolin - China Clay (S)	G	G	G	G	G
Kelp Slurry	G	G	G	G	G
Kerosense	G	G	G	G	G
Kerosene Chlorinated	G	G	G	G	G
Ketone	G	G	G	G	G
Lacquer Thinner	G	G	G	G	G
Lactic Acid	G	G	G	G	G
Lapping Compound	G	G	G	G	G
Latex - Natural	G	G	G	G	G
Latex - Synthetic	G	G	G	G	G
Latex Synthetic Raw	G	G	G	G	G
Laundry Wash Water	G	G	G	G	G
Laundry Bleach	G	G	G	G	G
Laundry Blue	G	G	G	G	G
Laundry Soda	G	G	G	G	G
Lead Arsenate	G	G	G	G	G
Lead Oxide	G	G	G	G	G
Lead Sulfate	G	G	G	G	G
Lignin Extract	G	G	G	G	G
Lime Slaked	G	G	G	G	G
Lime Sulfur Mix	G	G	G	G	G
Liquid Ion Exchange	G	G	G	G	G
Lithium Chloride	G	G	G	G	G
LOX (Liquid O2)	U	U	U	U	U
Ludox	G	G	G	G	G
Lye	U	U	U	U	U
Machine Coating Colour	G	G	G	G	G
Magnesite Slurry	G	G	G	G	G
Magnesite	G	G	G	G	G
Magnesium Bisulfite	G	G	G	G	G
Magnesium Carbonate	G	G	G	G	G
Magnesium Chloride	G	G	G	G	G
Magnesium Hydroxide	G	G	G	G	G
Magnesium Sulfate	G	G	G	G	G
Maleic Acid	G	G	G	G	G
Maleic Anhydride	G	G	G	G	G
Manganese Chloride	G	G	G	G	G
Manganese Sulfate	G	G	G	G	G
Melamine Resin	G	G	G	G	G
Menthol	G	G	G	G	G
Mercaptans	G	G	G	G	G

AGENT	INDUSTRIAL ANAEROBIC				
	IAS55, IAS57	IAS69, IAS72, IAS77	IAR41, IAR62	IAT43	IAT77
Legend: G = Good C = Conditional U = Unsatisfactory - No Data					
Mercuric Chloride	G	G	G	G	G
Mercuric Nitrate	G	G	G	G	G
Mercury	G	G	G	G	G
Mercury Dry	G	G	G	G	G
Methane	G	G	G	G	G
Methyl Alcohol	G	G	G	G	G
Methyl Acetate	G	G	G	G	G
Methyl Bromide	G	G	G	G	G
Methyl Carbitol	G	G	G	G	G
Methyl Cellosolve (S)	G	G	G	G	G
Methyl Chloride	G	G	G	G	G
Methyl Ethyl Ketone	G	G	G	G	G
Methyl Isobutyl Ketone	G	G	G	G	G
Methyl Lactate	G	G	G	G	G
Methyl Orange	G	G	G	G	G
Methylamine	G	G	G	G	G
Methylene Chloride	G	G	G	G	G
Mineral Spirits	G	G	G	G	G
Mixed Acid/Nitric/Sulfuric	U	U	U	U	U
Monochloroacetic Acid	G	G	G	G	G
Morphoniline	G	G	G	G	G
Mud	G	G	G	G	G
Nalco Sol	G	G	G	G	G
Naphtha	G	G	G	G	G
Naphthalene	G	G	G	G	G
Naval Stores Solvent	G	G	G	G	G
Nematocide	G	G	G	G	G
Neoprene Emulsion	G	G	G	G	G
Neoprene Latex	G	G	G	G	G
Nickel Acetate	G	G	G	G	G
Nickel Ammonium Sulfate	G	G	G	G	G
Nickel Chloride	G	G	G	G	G
Nickel Cyanide	G	G	G	G	G
Nickel Fluoborate	G	G	G	G	G
Nickel Ore Fines	G	G	G	G	G
Nickel Plating Bright	G	G	G	G	G
Nickel Sulfate	G	G	G	G	G
Nicotinic Acid <10%	G	G	G	G	G
Nicotinic Acid >10%	-	-	-	G	-
Nitrate Sol	G	G	G	G	G
Nitration Acid(s)	U	U	U	U	U
Nitric Acid	U	U	U	U	U
Nitric Acid <10%	G	G	G	G	G
Nitric Acid 10%	-	-	-	G	-
Nitric Acid 20%	-	-	-	-	G
Nitric Acid Anhydrous	U	U	U	U	U
Nitric Acid Fuming	U	U	U	U	U
Nitro Aryl Sulfonic Acid	G	G	G	G	G
Nitrobenzene - Dry	G	G	G	G	G
Nitrocellulose	G	G	G	G	G
Nitrofurane	G	G	G	G	G
Nitroguanidine	G	G	G	G	G
Nitroparaffins - Dry	G	G	G	G	G
Nitrosyl Chloride	G	G	G	G	G
Norite Carbon	G	G	G	G	G
Nuchar	G	G	G	G	G
Oakite (S) Compound	G	G	G	G	G
Oil, Creosote	G	G	G	G	G
Oil, Emulsified	G	G	G	G	G
Oil, Fuel	G	G	G	G	G

AGENT	INDUSTRIAL ANAEROBIC				
	IAS55, IAS57	IAS69, IAS72, IAS77	IAR41, IAR62	IAT43	IAT77
Legend: G = Good C = Conditional U = Unsatisfactory - No Data					
Oil, Lubricating	G	G	G	G	G
Oil, Soluble	G	G	G	G	G
Oleic Acid (Hot)	G	G	G	G	G
Oleic Acid (Cold)	G	G	G	G	G
Ore Fines - Flotation	G	G	G	G	G
Ore Pulp	G	G	G	G	G
Organic Dyes	G	G	G	G	G
Oxalic Acid (Cold)	G	G	G	G	G
Ozone (Wet)	U	U	U	U	U
Paint - Linseed Base	G	G	G	G	G
Paint - Water Base	G	G	G	G	G
Paint - Remover - Sol Type	G	G	G	G	G
Paint - Vehicles	G	G	G	G	G
Palmitic Acid	G	G	G	G	G
Paper Board Mill Waste	G	G	G	G	G
Paper Coating Slurry	G	G	G	G	G
Paper Pulp	G	G	G	G	G
Paper Pulp with Amun	G	G	G	G	G
Paper Pulp with Dye	G	G	G	G	G
Paper Pulp, bleached	G	G	G	G	G
Paper Pulp, bleach - washed	G	G	G	G	G
Paper Pulp Chlorinated	G	G	G	G	G
Paper Groundwood	G	G	G	G	G
Paper Rag	G	G	G	G	G
Paper Stocks, Fine	G	G	G	G	G
Paradichlorobenzene	G	G	G	G	G
Paraffin Molten	G	G	G	G	G
Paraffin Oil	G	G	G	G	G
Paraformaldehyde	G	G	G	G	G
Pectin Solution Acid	G	G	G	G	G
Pentachlorethane	G	G	G	G	G
Pentaerythritol Sol	G	G	G	G	G
Perchloroethylene (Dry)	G	G	G	G	G
Perchloric Acid <10%	G	G	G	G	G
Perchloric Acid >10%	-	-	-	G	-
Perchloromethyl Mercaptan	G	G	G	G	G
Permanganic Acid	U	U	U	U	U
Persulfuric Acid	U	U	U	U	U
Petroleum Ether	G	G	G	G	G
Petroleum Jelly	G	G	G	G	G
Phenol Formaldehyde Resins	G	G	G	G	G
Phenolic Glue	G	G	G	G	G
Phloroglucinol	G	G	G	G	G
Phosphate Ester	G	G	G	G	G
Phosphatic Sand	G	G	G	G	G
Phosphoric Acid 85% (Hot)	U	U	U	U	U
Phosphoric Acid 85% (Cold)	-	-	-	-	G
Phosphoric Acid 50% (Hot)	-	-	-	-	G
Phosphoric Acid 50% (Cold)	-	-	-	-	G
Phosphoric Acid 10% (Hot)	-	-	-	-	G
Phosphoric Acid 10% (Cold)	G	G	G	G	G
Phosphorous Molten	G	G	G	G	G
Phosphotungstic Acid	G	G	G	G	G
Photographic Sol	G	G	G	G	G
Phthalic Acid	G	G	G	G	G
Phytate	G	G	G	G	G
Phytate Salts	G	G	G	G	G
Pickling Acid, Sulfuric	G	G	G	G	G
Picric Acid Solutions	G	G	G	G	G
Pine Oil Finish	G	G	G	G	G

# TECHNICAL DATA

## CHEMICAL RESISTANCE TABLE - ANAEROBICS

AGENT	INDUSTRIAL ANAEROBIC				
	IAS55, IAS57	IAS69, IAS72, IAS77	IAR41, IAR62	IAT43	IAT77
Legend: G = Good C = Conditional U = Unsatisfactory - No Data					
<b>Plating Sol As follows:</b>	G	G	G	G	G
Brass Cyanide	G	G	G	G	G
Bronze - Cyanide	G	G	G	G	G
Chromium/Cadmium Cyanide	G	G	G	G	G
Cobalt Acid	G	G	G	G	G
Copper Acid	G	G	G	G	G
Gold Cyanide	G	G	G	G	G
Iron - Acid	G	G	G	G	G
Lead - Fluoro	G	G	G	G	G
Nickel Bright	G	G	G	G	G
Platinum	G	G	G	G	G
Silver - Cyanide	G	G	G	G	G
Tin - Acid	G	G	G	G	G
Tin Alk Barrel	G	G	G	G	G
Zinc Acid	G	G	G	G	G
Zinc Alk Cyanide	G	G	G	G	G
Polyacrylonitrile Slurry	G	G	G	G	G
Polypentek	G	G	G	G	G
Polysulfide Liquor	G	G	G	G	G
Polyvinyl Acetate Slurry	G	G	G	G	G
Polyvinyl Chloride	G	G	G	G	G
Porcelain Frit	G	G	G	G	G
Potash <10%	G	G	G	G	G
Potash >10%	-	-	-	G	-
Potassium Acetate	G	G	G	G	G
Potassium Alum Sulfate	G	G	G	G	G
Potassium Bromide	G	G	G	G	G
Potassium Carbonate	G	G	G	G	G
Potassium Chlorate	G	G	G	G	G
Potassium Chloride Sol	G	G	G	G	G
Potassium Chromate	G	G	G	G	G
Potassium Cyanide Sol	G	G	G	G	G
Potassium Dichromate	G	G	G	G	G
Potassium Ferricyanide	G	G	G	G	G
Potassium Hydroxide	U	U	U	U	U
Potassium Iodide	G	G	G	G	G
Potassium Nitrate	G	G	G	G	G
Potassium Perchlorate	G	G	G	G	G
Potassium Permanganate	G	G	G	G	G
Potassium Persulfate	G	G	G	G	G
Potassium Phosphate	G	G	G	G	G
Potassium Silicate	G	G	G	G	G
Potassium Sulfate	G	G	G	G	G
Potassium Xanthate	G	G	G	G	G
Press Board Waste	G	G	G	G	G
Propionic Acid	G	G	G	G	G
Propyl Alcohol	G	G	G	G	G
Propyl Bromide	G	G	G	G	G
Propylene Glycol	G	G	G	G	G
Pumice	G	G	G	G	G
Pyranol	G	G	G	G	G
Pyridine	G	G	G	G	G
Pyrogalllic Acid	G	G	G	G	G
Pyrogen Free Water	G	G	G	G	G
Pyrole	G	G	G	G	G
Pyromellitic Acid	G	G	G	G	G
Quebracho Tannin	G	G	G	G	G
Rag Stock Bleached	G	G	G	G	G
Rare Earth Salts	G	G	G	G	G
Rayon Acid Water	G	G	G	G	G

AGENT	INDUSTRIAL ANAEROBIC				
	IAS55, IAS57	IAS69, IAS72, IAS77	IAR41, IAR62	IAT43	IAT77
Legend: G = Good C = Conditional U = Unsatisfactory - No Data					
Rayon Spin Bath	G	G	G	G	G
Rayong Spin Bath spent	G	G	G	G	G
Resorcinol	G	G	G	G	G
River Water	G	G	G	G	G
Road Oil	G	G	G	G	G
Roccal	G	G	G	G	G
Rosin - Wood	G	G	G	G	G
Rosin in Alcohol	G	G	G	G	G
Rosin Size	G	G	G	G	G
Rubber Latex	G	G	G	G	G
Safrole	G	G	G	G	G
Salt Alkaline	G	G	G	G	G
Salt Electrolytic	G	G	G	G	G
Salt Refrg	G	G	G	G	G
Sand - Air Brown Slurry	G	G	G	G	G
Sand - Air Phosphatic	G	G	G	G	G
Sea Coal	G	G	G	G	G
Sea Water	G	G	G	G	G
Selenium Chloride	G	G	G	G	G
Sequestrene	G	G	G	G	G
Sewage	G	G	G	G	G
Shellac	G	G	G	G	G
Shower Water	G	G	G	G	G
Silica Gel	G	G	G	G	G
Silica Ground	G	G	G	G	G
Silicone Tetrachloride	G	G	G	G	G
Silicone Fluids	G	G	G	G	G
Silver Cyanide	G	G	G	G	G
Silver Iodide - Aqu	G	G	G	G	G
Silver Nitrate	G	G	G	G	G
Size Emulsion	G	G	G	G	G
Skelly Solve EL	G	G	G	G	G
Slate to 400 Mesh	G	G	G	G	G
Soap Lye	U	U	U	U	U
Soap Solutions(Stearates)	G	G	G	G	G
Soap Stone Air Blown	G	G	G	G	G
Soda Pulp	G	G	G	G	G
Sodium Acetate	G	G	G	G	G
Sodium Acid Fluoride	G	G	G	G	G
Sodium Aluminate	G	G	G	G	G
Sodium Arsenate	G	G	G	G	G
Sodium Benzene Sulfonate	G	G	G	G	G
Sodium Bichromate	G	G	G	G	G
Sodium Bisulfite	G	G	G	G	G
Sodium Bromide	G	G	G	G	G
Sodium Carbonate	G	G	G	G	G
Sodium Chlorate	G	G	G	G	G
Sodium Chlorite	G	G	G	G	G
Sodium Cyanide	G	G	G	G	G
Sodium Ferricyanide	G	G	G	G	G
Sodium Formate	G	G	G	G	G
Sodium Glutamate	G	G	G	G	G
Sodium Hydrogen Sulfate	G	G	G	G	G
Sodium Hydrosulfite	G	G	G	G	G
Sodium Hydrosulfide	G	G	G	G	G
Sodium Hydrochloride	G	G	G	G	G
Sodium Hydro 20% (Cold)	G	G	G	G	G
Sodium Hydro 20% (Hot)	-	-	-	-	G
Sodium Hydro 50% (Cold)	-	-	-	-	G
Sodium Hydro 50% (Hot)	U	U	U	U	U

AGENT	INDUSTRIAL ANAEROBIC				
	IAS55, IAS57	IAS69, IAS72, IAS77	IAR41, IAR62	IAT43	IAT77
Legend: G = Good C = Conditional U = Unsatisfactory - No Data					
Sodium Hydro 70% (Cold)	-	-	-	-	G
Sodium Hydro 70% (Hot)	U	U	U	U	U
Sodium Hypochlorite	G	G	G	G	G
Sodium Lignosulfonate	G	G	G	G	G
Sodium Metasilicate	G	G	G	G	G
Sodium Molten	G	G	G	G	G
Sodium Nitrate	G	G	G	G	G
Sodium Nitrite - Nitrate	G	G	G	G	G
Sodium Perborate	G	G	G	G	G
Sodium Peroxide	U	U	U	U	U
Sodium Persulfate	G	G	G	G	G
Sodium Phosphate - Mono	G	G	G	G	G
Sodium Phosphate - Tri	G	G	G	G	G
Sodium Potassium Chloride	G	G	G	G	G
Sodium Salicylate	G	G	G	G	G
Sodium Sesquicarbonate	G	G	G	G	G
Sodium Silicate	G	G	G	G	G
Sodium Silcofluoride	G	G	G	G	G
Sodium Stannate	G	G	G	G	G
Sodium Sulfate	G	G	G	G	G
Sodium Sulfide	G	G	G	G	G
Sodium Sulfite	G	G	G	G	G
Sodium Thiocyanate	G	G	G	G	G
Sodium Thiosulfate	G	G	G	G	G
Sodium Tungstate	G	G	G	G	G
Sodium Xanthate	G	G	G	G	G
Solox - Denat Ehtanol	G	G	G	G	G
Soluble Oil	G	G	G	G	G
Solvent Naphthas	G	G	G	G	G
Sorbic Acid	G	G	G	G	G
Sour Gasoline	G	G	G	G	G
Soybean Sludge - Acid	G	G	G	G	G
Spensol Solution	G	G	G	G	G
Stannic Chloride	G	G	G	G	G
Starch	G	G	G	G	G
Starch base	G	G	G	G	G
Stearic Acid	G	G	G	G	G
Steep Water	G	G	G	G	G
Sterilization Steam	G	G	G	G	G
Stillage Distillers	G	G	G	G	G
Stoddard Solvent	G	G	G	G	G
Styrene	G	G	G	G	G
Styrene Butadiene Latex	G	G	G	G	G
Sulfamic Acid	G	G	G	G	G
Sulfan - Sulfuric Anhydride	G	G	G	G	G
Sulfathiazole	G	G	G	G	G
Sulfite Liquor	G	G	G	G	G
Sulfite Stock	G	G	G	G	G
Sulfonated Oils	G	G	G	G	G
Sulfones	G	G	G	G	G
Sulfonic Acids	G	G	G	G	G
Sulfonyl Chloride	G	G	G	G	G
Sulfur Slurry	G	G	G	G	G
Sulfur Solution	G	G	G	G	G
in Carbon Disulfide	G	G	G	G	G
Sulphuric Acid 0 - 7%	-	-	-	-	G
Sulphuric Acid 7 - 40%	-	-	-	-	G
Sulphuric Acid 40 - 75%	U	U	U	U	U
Sulphuric Acid 75 - 95%	U	U	U	U	U
Sulphuric Acid 95 - 100%	-	-	-	-	G



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All data must be reviewed when selecting a product.  
Pirtek reserve the right to change technical specifications without notice

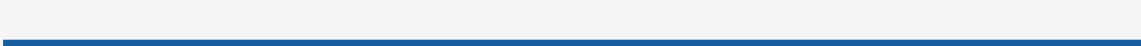
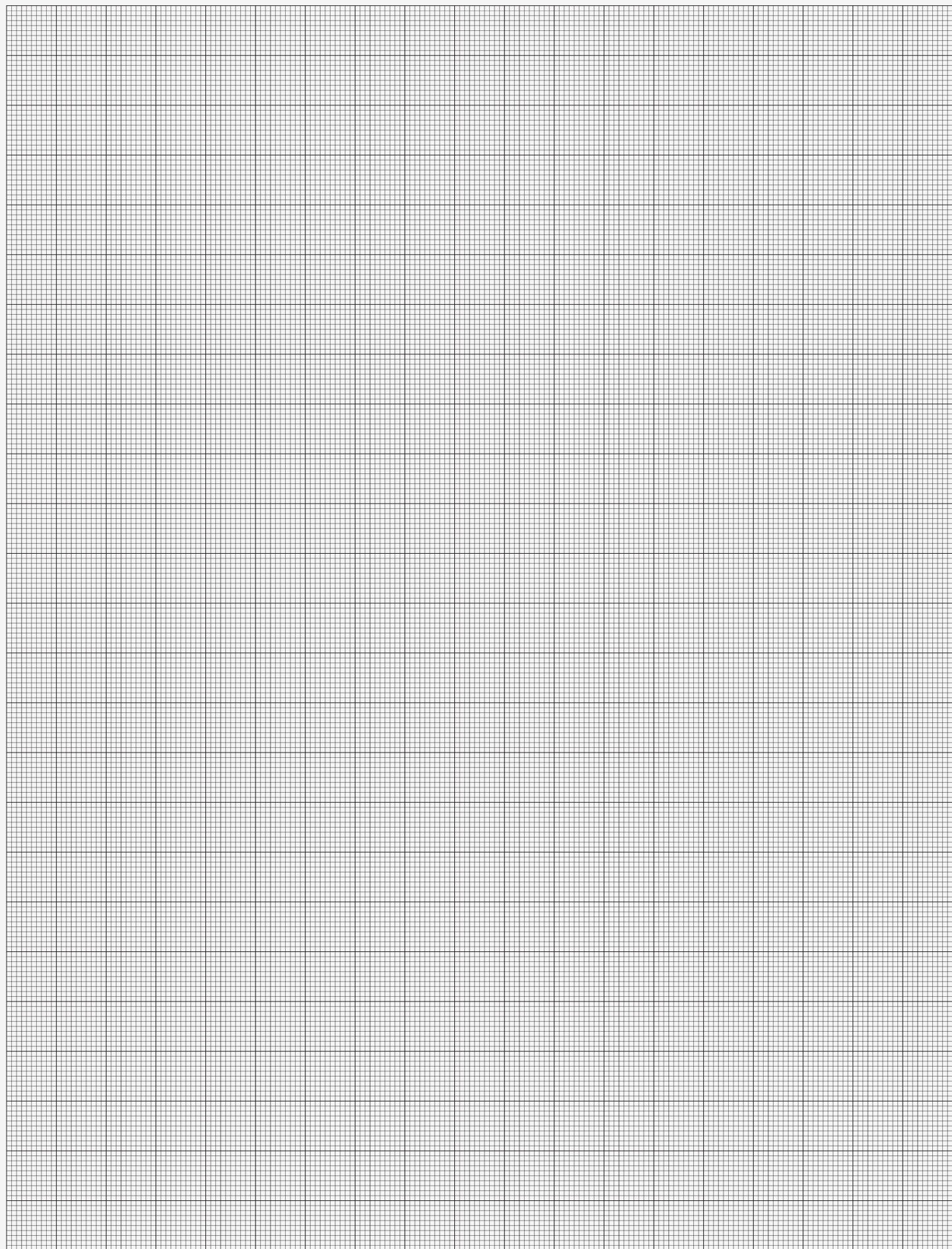
# TECHNICAL DATA

## CHEMICAL RESISTANCE TABLE - ANAEROBICS

AGENT	INDUSTRIAL ANAEROBIC				
	IAS55, IAS57	IAS69, IAS72, IAS77	IAR41, IAR62	IAT43	IAT77
Legend: G = Good C = Conditional U = Unsatisfactory - No Data					
Sulphurous Acid	-	-	-	-	G
Sulfuryl Chloride	G	G	G	G	G
Surfactants	G	G	G	G	G
Synthetic Latex	G	G	G	G	G
Tactonite - Fines	G	G	G	G	G
Talc - Slurry	G	G	G	G	G
Tankage - Slurry	G	G	G	G	G
Tannic Acid (Cold)	-	-	-	-	G
Tarmin	G	G	G	G	G
Tar & Tar Oil	G	G	G	G	G
Tartaric Acid	G	G	G	G	G
Television Chemicals	G	G	G	G	G
Tergitol (S)	G	G	G	G	G
Terpineol	G	G	G	G	G
Tetraethyl Lead	G	G	G	G	G
Tetrahydrofuran	G	G	G	G	G
Tetranitromethane	G	G	G	G	G
Textile Dyeing	G	G	G	G	G
Textile Finishing Oil	G	G	G	G	G
Textile Printing Oil	G	G	G	G	G
Thiocyanic Acid	G	G	G	G	G
Thioglycolic Acid	G	G	G	G	G
Thionyl Chloride	G	G	G	G	G
Thiophosphoryl Chloride	G	G	G	G	G
Thiourea	G	G	G	G	G
Thorium Nitrate	G	G	G	G	G
Thymol	G	G	G	G	G
Tin Tetrachloride	G	G	G	G	G
Tinning Sol DuPont	G	G	G	G	G
Titania Paper Coating	G	G	G	G	G
Titanium Oxide Slurry	G	G	G	G	G
Titanium Oxy Sulfate	G	G	G	G	G
Titanium Sulfate	G	G	G	G	G
Titanium Tetrachloride	G	G	G	G	G
Toluol	G	G	G	G	G
Toluene	G	G	G	G	G
p - Toluene Sulfonic Acid	-	-	-	-	G
Transil Oil	G	G	G	G	G
Trichloroacetic Acid	G	G	G	G	G
Trichlorethane 1,1,1	G	G	G	G	G
Trichlorethylene	G	G	G	G	G
Trichlorethylene - Dry	G	G	G	G	G
Tricresyl Phosphate	G	G	G	G	G
Triethanolamine	G	G	G	G	G
Triethylene Glycol	G	G	G	G	G
Trioxane	G	G	G	G	G
Tungstic Acid	G	G	G	G	G
Turpentine	G	G	G	G	G
UCON (S) Lube	G	G	G	G	G
Udylite Bath - Nickel	G	G	G	G	G
Undecylenic Acid	G	G	G	G	G
Unichrome Sol Alk	G	G	G	G	G
Uranium Salts	G	G	G	G	G
Uranyl Nitrate	G	G	G	G	G
Uranyl Sulfate	G	G	G	G	G
Urea Ammonia Liquor	G	G	G	G	G
Vacuum to 100 Micron	G	G	G	G	G
Vacuum 100 Micron	G	G	G	G	G
Vacuum Oil	G	G	G	G	G
Vanadium Pentoxide	G	G	G	G	G

AGENT	INDUSTRIAL ANAEROBIC				
	IAS55, IAS57	IAS69, IAS72, IAS77	IAR41, IAR62	IAT43	IAT77
Legend: G = Good C = Conditional U = Unsatisfactory - No Data					
Slurry	G	G	G	G	G
Varnish	G	G	G	G	G
Varsol - Naphtha Solv	G	G	G	G	G
Versene (S)	G	G	G	G	G
Vinyl Acetate Dry or	G	G	G	G	G
Chloride Monomer	G	G	G	G	G
Vinyl Chloride Latex Emul	G	G	G	G	G
Vinyl Resin Slurry	G	G	G	G	G
Viscose	G	G	G	G	G
Vortex - Hydroclone	G	G	G	G	G
Water - Acid Below pH7	G	G	G	G	G
Water pH7 to 8	G	G	G	G	G
Water Alkaline-Over pH8	G	G	G	G	G
Water Mine Water	G	G	G	G	G
Water Potable	-	-	-	G	-
Water River	G	G	G	G	G
Water Sandy	G	G	G	G	G
Water 'White' low pH	G	G	G	G	G
Water 'White' high pH	G	G	G	G	G
Wax Chlorinated	G	G	G	G	G
Wax Emulsions	G	G	G	G	G
Weed Killer Dirbromide	G	G	G	G	G
Weisberg Sulfate Plating	G	G	G	G	G
Wood ground pulp	G	G	G	G	G
Wort Lines	G	G	G	G	G
X - Ray Developing Bath	G	G	G	G	G
Xylene	G	G	G	G	G
Zelan	G	G	G	G	G
Zeolite Water	G	G	G	G	G
Zinc Acetate	G	G	G	G	G
Zinc Bromide	G	G	G	G	G
Zinc Chloride	G	G	G	G	G
Zinc Cyanide - Alk	G	G	G	G	G
Zinc Fines Slurry	G	G	G	G	G
Zinc Flux Paste	G	G	G	G	G
Zinc Galvanizing	G	G	G	G	G
Zinc Hydrosulfite	G	G	G	G	G
Zinc Oxide in Water	G	G	G	G	G
Zinc Oxide in Oil	G	G	G	G	G
Zinc Sulfate	G	G	G	G	G
Zincolate	G	G	G	G	G
Zirconyl Nitrate	G	G	G	G	G
Zirconyl Sulfate	G	G	G	G	G

GASES	INDUSTRIAL ANAEROBIC				
	IAS55, IAS57	IAS69, IAS72, IAS77	IAR41, IAR62	IAT43	IAT77
Legend: G = Good C = Conditional U = Unsatisfactory - No Data					
Acetylene	G	G	G	G	G
Acid & Alkali Vapors	G	G	G	G	G
Air	G	G	G	G	G
Amine	G	G	G	G	G
Ammonia	G	G	G	G	G
Butane	G	G	G	G	G
Butadiene Gas/Liquid	G	G	G	G	G
Butylene Gas/Liquid	G	G	G	G	G
By-Product Gas (Dry)	G	G	G	G	G
Carbon Dioxide	G	G	G	G	G
Carbon Disulfide	G	G	G	G	G
Carbon Monoxide	G	G	G	G	G
Chloride (Dry)	G	G	G	G	G
Chlorine (Dry)	U	U	U	U	U
Chlorine (Wet)	U	U	U	U	U
Coke-Oven Gas (Cold)	G	G	G	G	G
Coke-Oven Gas (Hot)	-	-	-	-	G
Cyanogen Chloride	G	G	G	G	G
Cyanoegen Gas	G	G	G	G	G
Ethane	G	G	G	G	G
Ether-see Diethyl Ether	G	G	G	G	G
Ethylene	G	G	G	G	G
Ethylene Oxide	G	G	G	G	G
Freon (S) (11-12-21-22)	-	-	-	-	G
Furnace Gas (Cold)	-	-	-	-	G
Furnace Gas (Hot)	G	G	G	G	G
Gas Drip Oil	G	G	G	G	G
Gas Flue	G	G	G	G	G
Gas Manufacturing	G	G	G	G	G
Gas Natural	G	G	G	G	G
Helium	G	G	G	G	G
Hydrogen Gas - Cold	G	G	G	G	G
Hydrogen Chloride	G	G	G	G	G
Hydrogen Cyanide	G	G	G	G	G
Hydrogen Sulfide-W/D	G	G	G	G	G
Isobutane	G	G	G	G	G
Methane	G	G	G	G	G
Methyl Chloride	G	G	G	G	G
Natural Gas - Dry	G	G	G	G	G
Nitrogen Gas	G	G	G	G	G
Nitrous Oxide	G	G	G	G	G
Oil - Solvent Vapor	G	G	G	G	G
Oxygen	U	U	U	U	U
Ozone	U	U	U	U	U
Producer Gas 50 PSI	G	G	G	G	G
Propane	G	G	G	G	G
Propylene	G	G	G	G	G
Steam H Pressure ("70 psi)	U	U	U	U	U
Steam L Pressure ("70 psi)	G	G	G	G	G
Sulfur Dioxide	G	G	G	G	G
Sulfure Dioxide Dry	G	G	G	G	G
Sulfur Trioxide Gas	G	G	G	G	G
Sulfuric Acid Vapor	U	U	U	U	U



# ENVIRONMENTAL SOLUTIONS

## SPILL CONTAINMENT PRODUCTS

REFER PIRTEK FOR MSDS SHEETS



### Spill Kits:

A range of Response Kits and sizes to cater for the clean up and containment of all likely scenarios

1. General Purpose Kits for petroleum hydrocarbon products, coolants, solvents, water based and non-aggressive liquids
2. Hydrocarbon Kits for the clean up of oil, greases and oil based paints where a water repellent effect is desirable eg marinas, cooling ponds etc
3. Hazardous Chemical Kits for containment and clean up of hazardous, aggressive or unknown liquids

Individual components are all available separately for economical replenishment

### Containment:

A variety of Pads, Pillows, Socks and Booms

Available in three grades corresponding to the Spill Kits at left

Pads & Pillows are ideal for absorbing spills, catching drips, and for wiping down equipment

Pirtek Socks come in 1.2, 1.5, and 3 metre lengths. String them together as portable bunding for containing the flow of a spill, or barricade entry to a stormwater drain system

Pirtek Booms used in daisy chains of 3 or 6 metre lengths help to contain larger spills, especially hydrocarbon spills on water

### Bio-Sorb Floor Sweeps:

Available in 2 grades

#### Premium

Highly absorbent and biologically active floor sweep

Light weight natural cellulose material

Easy to apply and use

Environmentally friendly

#### Zeolite

Naturally occurring absorbent mineral

Suitable floor sweep for most chemical spills

Suppresses odours and gases

Heavier properties make it suited for use in windy areas

Ecologically safe

### Drainwarden:

Semi permanent installation into storm water catch basins to assist in the removal of oil, sediment, silt, rubbish etc from the storm water drain

A replaceable polypropylene absorbent sock captures contaminants whilst allowing water to pass through

Ideal for use in parking lots, vehicle storage areas, service areas, construction sites, and industrial plants

Available in various sizes for standard drains, or custom made to individual requirements

Easily installed and maintained

## TYPICAL APPLICATIONS FOR SPILL KITS

General Purpose	
Spills on Hard Surfaces (see also Hydrocarbon list)	
Alcoholic Beverages	Mineral Spirits
Asphalt	Molasses
Beer	Rust Inhibitors
Buttermilk	Sea Water
Cane Juice	Silicone
Carbonated Water	Soap Solutions
Chocolate Syrup	Solvents
Cider	Soy Sauce
Coolants	Starch
Cream	Sugar (Liquids)
Detergents	Tallow
Dyes	Tomato Juice
Fruit Juice	Turpentine
Glucose	Vegetable Juice
Grape Juice	Vinegar
Honey	Water - Fresh
Ink	Water - Salt
Iodine	Whey
Lard	White Liquor (Pulp Mill)
Mayonnaise	White Water (Paper Mill)
Milk	

Hydrocarbon	
Oil spills on water	
Anise Oil	Hydraulic Oil - Synthetic
Aromatic Hydrocarbons	Jet Fuel
Bay Oil	Kerosene
Castor Oil	Lemon Oil
Cinnamon Oil	Lubricants
Citric Oil	Mineral Oil
Clove Oil	Oil based paint
Coconut Oil	Oils: Diesel Fuel
Cod Liver Oil	Oils: Fuel
Cooking Oil	Olive Oil
Corn Oil	Palm Oil
Cottonseed Oil	Paraffin
Ethanol	Petroleum
Fuel Oils	Pine Oil
Gasoline: leaded: refined	Rosin Oil
Gasoline: unleaded	Silicone Oil
Ginger Oil	Tanning Oil
Ginger Oil	Transformer Oil
Grease	Turbine Oil
Hydraulic Oil	Vegetable Oil
Hydraulic Oil - Petroleum	

Hazchem	
Spills on Hard Surfaces	
Acetate Solvent	Mercury
Acetic Acid	Naphthalene
Acetone	Nitrous Acid
Acetyl Bromide	Pesticides
Adipic Acid	Phosphoric Acid
Alkaline	Photographic Solutions
Aluminium Sulphate	Plating Solutions
Ammonia: liquid	Potassium
Antifreeze	Sulphuric Acid
Arsenic Acid	Tannic Acid
Battery Acid	Tanning Liquors
Bleach	Toluene
Carbonic Acid	Trichloroacetic Acid
Chlorine Water	Varnish
Citric Acid	Vinyl Chloride
Flu silicic Acid	Weed Killers
Formic Acid	
Glycolic Acid	
Lacquer Thinners	
Lacquers	
Linoleic Acid	



# SPILL KITS

## KIT CONTENTS

### REFER PIRTEK FOR MSDS SHEETS



#### 32 litre:

**General Purpose.** Our smallest kit is designed for the space behind the driver's seat in transport vehicles or alternatively in workshops and factories where only a small spill is likely

**Hydrocarbon.** This kit would suit situations where only a small spill on water may occur

**Hazardous Chemicals.** Best suited to laboratories, hospitals, food manufacturers and farms



#### 55 litre:

**General Purpose.** Easily transportable kit ideal for trucks, service vehicles and forklifts

**Hydrocarbon.** Specifically aimed at boats and marinas

**Hazardous Chemicals.** A convenient solution for immediate response to chemical spills in laboratories, hospitals, small factories and forecourts



#### 100 litre:

**General Purpose.** Wheelie bin portability for oil spills on land. Small to medium workshops, manufacturing plants and forecourts

**Hydrocarbon.** For the clean up and containment of medium spills on water, near stormwater drains, and refuelling depots / marinas

**Hazardous Chemicals.** Enables a fast response to a medium spill of virtually any chemical

#### 200 litre:

**General Purpose.** Wheelie bin portability for larger oil spills on land. Large workshops, mines, manufacturing plants and forecourts

**Hydrocarbon.** For the clean up and containment of larger spills on water, near stormwater drains, and refuelling depots / marinas

**Hazardous Chemicals.** The best solution in where a variety of chemicals are used and stored in food production areas, factories, laboratories, and hospitals

Component	Kit Spill Capacity litres	General Purpose				Hydrocarbon				Hazardous Chemicals			
		32	55	100	200	32	55	100	200	32	55	100	200
Product Code	ENSK-	32GP	55GP	100GP	200GP	32H	55H	100H	200H	32HZ	55HZ	100HZ	200HZ
Nylon Bag with Signage †		1	1 †			1	1			1	1		
240 litre Wheelie Bin				1	1			1	1			1	1
Bio Sorb Premium			1x5kg	2x10kg	3x10kg								
Bio Sorb Zeolite		1x2.5kg									1x2.5kg	2x14Ltr	3x14Ltr
GP Containment Socks 1.2m long		2	3	4	5								
GP Containment Socks 3m long					1								
Oil Only Containment Socks						2x1.2m	4x1.2m	2x1.2m	3x1.2m				
Hazchem Containment Socks										3x1.2m	3x1.2m	4x1.2m	3x3m
GP Pads		10	10	30	50								
Oil Only Poly Pads						20	30	30	100				
Hazchem Poly Pads										15	25	30	50
GP Pillows				1	2								
Oil Only Pillows						1	1	1	2				
Hazchem Pillows										2	2	1	2
Absorbent Booms 125mm dia								2x3m	2x3m				
Contaminated Waste Bags		2	3	7	10	2	3	7	10	2	3	7	10
Nitrile Gloves		1 pr	1 pr	2 pr	2 pr	1 pr	1 pr	2 pr	2 pr	1 pr	1 pr	2 pr	2 pr
Instruction Sheet		1	1	1	1	1	1	1	1	1	1	1	1
MSDS		1	1	1	1	1	1	1	1	1	1	1	1

† Replacement 55 litre bag **Product Code ENSK-55GPK**

PIRTEK WHEELIE BINS FOR SPILL KITS		
Total Spill Capacity (litres)	Red / Blue (Oil and General Purpose)	Yellow (Hazardous Chemicals)
120 LITRE	ENB-RB120	ENB-Y120
240 LITRE	ENB-RB240	ENB-Y240



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# SPILL KITS

## 15 LITRE KIT CONTENTS

REFER PIRTEK FOR MSDS SHEETS



Our all-new range of 15 litre spill kits caters for those situations where a no-fuss single use solution is required

### 15 litre Disposable:

**General Purpose.** Our all new disposable kit is designed for single use only, where all of the used contents of the kit are deposited into the original bag, sealed with the included cable tie, and disposed of as per Local Government requirements.

**Hydrocarbon.** As above for situations where only a small spill on water may occur

**Hazardous Chemicals.** As for the general purpose kits, but best suited to laboratories, hospitals, food manufacturers and farms



NEW !!

Component	Kit	General Purpose	Hydrocarbon	Hazardous Chemicals
		15	15	15
Spill Capacity litres		15	15	15
Product Code	ENSK-	15GP	15H	15HZ
Plain plastic spill kit bag		1	1	1
2.5 kg Floor Sweep		1		
GP Pads		5		
Oil Only Poly Pads			13	
Hazchem Poly Pads				7
7.5 Kg Hazsorb Floor Sweep				1
Cable Tie		1	1	1
Nitrile Gloves		1 pr	1 pr	1 pr
Instruction Sheet		1	1	1
MSDS		1	1	1



# INDUSTRY CLASSIFICATIONS

Industry Kit Capacity litres	General Purpose Spill Kits				Hydrocarbon Spill Kits				Hazardous Chemicals Spill Kits				Boom	Bio Sorb	
	32 L	55 L	100 L	200 L	32 L	55 L	100 L	200 L	32 L	55 L	100 L	200 L		Prem	Zeolite
Aluminium Products		•	•	•		•	•			•	•			•	•
Amusement Rides	•	•	•	•	•	•	•	•						•	•
Army	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Automotive Services	•	•	•	•					•	•	•	•		•	•
Blasting / Drilling	•	•	•	•	•	•	•	•							•
Bowling Clubs	•	•	•	•	•	•	•	•	•	•	•	•		•	•
Bridge & Civil	•	•	•	•	•	•	•	•					•	•	•
Coal	•	•	•	•	•	•	•	•					•	•	•
Colleges	•	•	•	•	•	•	•	•	•	•	•	•		•	•
Commercial	•	•	•	•	•	•	•	•						•	•
Communications	•	•	•	•	•	•	•	•						•	•
Councils	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Cranes & Hoists	•	•												•	•
Domestic	•	•			•	•								•	•
Domestic Appliance		•	•	•		•	•	•		•	•	•		•	•
Earthmoving Equipment	•	•													•
Electricity Services	•	•	•	•	•	•	•	•	•	•				•	•
Elevated Platforms	•													•	•
Farming - Crops	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Farming - Other	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Food & Beverage	•	•	•	•	•	•	•	•	•	•	•	•		•	
Forestry Equipment	•	•			•	•			•	•				•	•
Forklift & Jacking	•	•												•	•
Gold	•	•	•	•	•	•	•	•					•	•	•
Golf Courses	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Government	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Gymns	•	•	•	•	•	•	•	•						•	•
Harbours	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Hire Centres	•	•	•	•										•	•
Irrigation	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Land Clearing	•	•			•	•							•	•	•
Mechanical Services	•	•	•	•					•	•	•	•		•	•
Minerals			•	•			•	•			•	•		•	•
Mining - Other	•	•	•	•	•	•	•	•					•	•	•
Mining / Longwall	•	•	•	•					•	•	•			•	•
Mining Equipment		•												•	•
Motor Vehicle		•	•	•		•	•	•		•	•	•		•	•
Navy	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Oil Production / Exploration	•	•	•	•	•	•	•	•					•	•	•
Pest Control / Spraying	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Petroleum		•	•	•		•	•			•	•		•	•	•
Quarry	•	•	•	•	•	•	•	•							•
Rail	•	•	•	•	•	•	•	•						•	•
Refineries	•	•	•	•	•	•	•		•	•	•		•	•	•
Resort	•	•	•	•	•	•	•	•						•	•
Roads	•	•	•	•	•	•	•	•	•	•				•	•
Roadworks	•	•	•	•	•	•	•	•	•	•				•	•
Secondary	•	•	•	•	•	•	•	•	•	•	•	•		•	•
Sporting Grounds	•	•	•	•	•	•	•	•	•	•	•	•		•	•
Steel			•	•			•	•			•	•		•	•
Supplies	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Transport Supplies	•	•	•	•					•	•	•	•		•	•
Universities	•	•	•	•	•	•	•	•	•	•	•	•		•	•
Waste Industries	•	•	•	•	•	•	•	•	•	•				•	•
Water Services	•	•	•	•	•	•	•	•	•	•				•	•



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# ENCB / ENBG / ENSK

## EMPTY BAG



Product Code	Printed Information
ENCB †	CONTAMINATED WASTE (CLEAR HEAVY DUTY VINYL BAG 450 mm x 720 mm)
ENBG	BAG EMPTY - PIRTEK SIGNAGE ONLY
ENBG-32GP	BAG EMPTY - GENERAL PURPOSE 32 LITRE
ENBG-32H	BAG EMPTY - HYDROCARBON 32 LITRE
ENBG-32HZ	BAG EMPTY - HAZCHEM 32 LITRE
ENBG-55GP	BAG EMPTY - GENERAL PURPOSE 55 LITRE
ENSK-55GPK	SPILL KIT - 55 LITRE (GENERAL PURPOSE) HEAVY DUTY BAG
ENBG-55H	BAG EMPTY - HYDROCARBON 55 LITRE
ENBG-55HZ	BAG EMPTY - HAZCHEM 55 LITRE

A range of pre-labelled clear heavy duty plastic bags in 2 sizes to facilitate disposal of used spill containment products (pads, pillows, socks, floor sweep). Dispose of the bagged products in accordance with Local Authority requirements

† Includes bag tie

# ENBS

## BIO-SORB PREMIUM



Product Code	Description
ENBS-10	PIRTEK BIO-SORB PREMIUM 10KG (Absorbs 36 litres hydraulic oil)
ENBS-10P	PIRTEK BIO-SORB PREMIUM 10KG PALLET (70 bags)
ENBS-5	PIRTEK BIO-SORB PREMIUM 5KG (Absorbs 18 litres hydraulic oil)
ENBS-5P	PIRTEK BIO-SORB PREMIUM 5KG PALLET (140 bags)

Manufactured from a special selection of organic cellulose products, Bio-Sorb Premium floor sweep will quickly absorb a wide variety of liquids including petroleum, oils, fuels, cooking oils, sewage, and other messy liquids that could contaminate the environment. The strong wicking effect helps to reduce leach-back, and enables Bio-Sorb Premium to meet stringent liquid release standards.

Once absorbed, a selection of inoculated microbes go to work to 'eat and digest' oils and many types of hydrocarbons

Application: Recommended for hard surfaces such as tar and concrete. Spread over the spill and work back and forth with a stiff broom until the surface is dry and no slick remains. No secondary detergents or solvent washes are necessary

Not suited to windy conditions (see ENZE Zeolite)

# ENZE

## BIO-SORB ZEOLITE



Product Code	Description
ENZE-10	PIRTEK BIO-SORB ZEOLITE 14Ltr (Absorbs approx. 24 litres hydraulic oil)
ENZE-10P	PIRTEK BIO-SORB ZEOLITE 14Ltr PALLET (80 bags)
ENZE-25	PIRTEK BIO-SORB ZEOLITE 2.5KG (Absorbs approx. 6 litres hydraulic oil)
ENZE-25P	PIRTEK BIO-SORB ZEOLITE 2.5KG PALLET (288 bags)

Zeolite is a naturally occurring absorbent mineral. It has a large negatively charged internal surface area that enables it to trap and retain liquids, odours and vapours. Naturally clean and off-white in colour, Zeolite is a safe non-toxic product ideal for today's demands for environmentally safe floor sweeps. The coarse nature of Zeolite makes it safe to use in windy conditions. Zeolite absorbs on contact, and has been de-dusted to reduce bogging and improve handling. The strong wicking action helps to remove most fresh stains from the surface. It passes all landfill leachate tests, and will not 'slip' when fully absorbed, making clean up easy

Application: Apply liberally over the spill and wait for the petroleum / chemical to be fully absorbed

## ENP

### ABSORBENT PADS

#### 100 PACK



Product Code	Intended Use	Dimensions (mm)
ENP-05H	OIL ONLY	5 x 430 x 480
ENP-10GP	GENERAL PURPOSE	10 x 430 x 480
ENP-10H	OIL ONLY	10 x 430 x 480
ENP-10HZ	HAZARDOUS CHEMICALS	10 x 430 x 480

The ENP-10GP pads are good for absorption of most spilled liquids except acids and chemicals. Perforated to 1/2 size, they are intended for use on hard surfaces or for wiping down equipment etc.

The ENP-10HZ pads are primarily for acids and chemicals respectively, but can be used for oil and water based liquids. Best for hard surfaces

ENP-05H and ENP-10H pads are for absorbing oil spills on hard surfaces, whilst repelling water. They can float indefinitely on water

10 mm thick pads of all types can absorb up to 1.2 litres of hydraulic oil (more when used for lower viscosity products)

## ENPR

### ABSORBENT PADS

#### PERFORATED ROLL FORM (400 GRAMMES / M<sup>2</sup>)



Product Code	Intended Use	Dimensions
ENPR-10GP	GENERAL PURPOSE	960 mm x 44 metres
ENPR-10H	OIL ONLY	960 mm x 44 metres
ENPR-10HZ	HAZARDOUS CHEMICALS	960 mm x 44 metres

As for ENP above, but in convenient roll form.

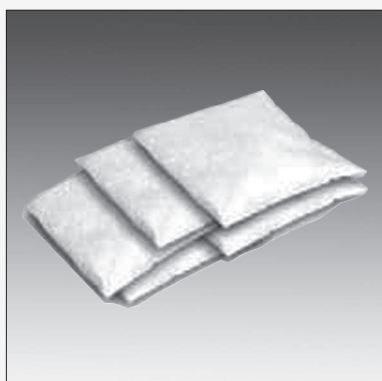
Ideal for covering large areas e.g. underneath vehicles and machinery

Perforated in the middle (horizontally) the entire length of the roll and vertically every 430mm. This enables pads (430mm x 480mm) to be torn from the roll if required

**Note:** All rolls are dimpled for added strength

## ENPI

### ABSORBENT PILLOWS



Product Code	Intended Use	Dimensions (mm)
ENPI-20HZ	HAZARDOUS CHEMICALS	20 x 450 x 200
ENPI-50GP	GENERAL PURPOSE	50 x 400 x 500
ENPI-50H	OIL ONLY	50 x 450 x 450
ENPI-50HZ	HAZARDOUS CHEMICALS	50 x 450 x 450

As for ENP pads but with higher absorption capacity (typically 4 litres of liquid for the 50 mm thick pillows). Ideal for absorbing leaks and drips without splattering and spreading, or the emergency plugging of drums etc

# ENOS

## ORGANIC SOCKS



Product Code	Intended Use	Dimensions
ENOS-125X3GP	ORGANIC GENERAL PURPOSE	125 mm x 3 metres
ENOS-125X3H	ORGANIC ABSORBENT - KSORB OIL ONLY	125 mm x 3 metres
ENOS-75X12GP	ORGANIC GENERAL PURPOSE	75 mm x 1.2 metres
ENOS-75X3GP	ORGANIC GENERAL PURPOSE	75 mm x 3 metres

# ENPS

## POLYPROPYLENE SOCKS



Product Code	Intended Use	Dimensions
ENPS-125X3HZ	POLYPROPYLENE YELLOW HAZCHEM	125 mm x 3 metres
ENPS-75X12H	POLYPROPYLENE OIL ONLY	75 mm x 1.2 metres
ENPS-75X12HZ	POLYPROPYLENE YELLOW HAZCHEM	75 mm x 1.2 metres
ENPS-75X3HZ	POLYPROPYLENE YELLOW HAZCHEM	75 mm x 3 metres
ENSB-125 †	REPLACEMENT POLYPROPYLENE BILGE	75 mm x 250 mm

Designed to contain the flowpath of a spill to prevent it reaching stormwater drains or walkways. Available for acids / chemicals (HZ suffix), or water repellent / oil absorption (H suffix) in various sizes

† Used in Pirtek Drain Warden ENDW - see page 162

# ENPB

## POLYPROPYLENE BOOM



Product Code	Intended Use	Dimensions
ENPB-125X3H	POLY FLOATING ABSORBENT BOOM C/W CLIPS	125 mm x 3 metres
ENPB-125X6H	POLY FLOATING ABSORBENT BOOM C/W CLIPS	125 mm x 6 metres
ENPB-200X3H	POLY FLOATING ABSORBENT BOOM C/W CLIPS	200 mm x 3 metres

Used to contain oil spills on water surfaces. Used generally in elongated sausages contained by strong netting and secured to each other by clips at each end (supplied)



## ENPD PLUG 'N' DIKE



Product Code	Description	Quantity
ENPD-250	PLUG 'N' DIKE PRE MIX	250 Gram

A non-toxic material to provide an excellent first response method for sealing and controlling flammable and/or hazardous leaks and spills, whether drains, dike pressurised (up to 1.5 meter head) or large spills

It includes a high water-absorption polymer in a bentonite base, which absorbs over 300 times its own weight in water, to produce a seal against penetration of fuels and chemicals. It can effectively seal punctured drums and tanks, reduce damage liability and costly cleanups

Plug N' Dike is used straight from the tub/bucket. Just take a handful of the premix and apply directly over the leak. No surface preparation is necessary, even on dirty, rusty or greasy surfaces



## ENGL NITRILE GLOVES (PAIR)



Product Code	Description
ENGL	NITRILE GLOVES (PAIR)

Good resistance to animal fats and mineral oils (hydrocarbons)

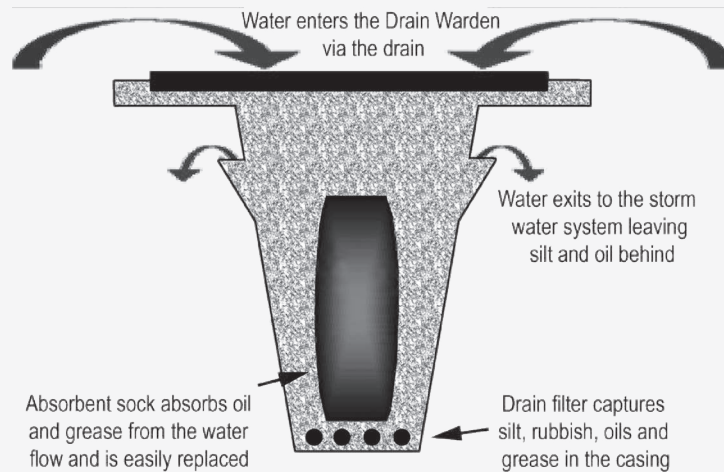
## ENSP DUST SHOVEL & PAN



Product Code	Description
ENSP	DUST SHOVEL & PAN PIRTEK BLUE

# DRAIN WARDEN

## OIL & SILT COLLECTION BASIN



### Description :

- The Drain Warden filter insert is a simple device designed to fit most drain catch basins
- Held in place by the metal grate
- Effectively removes coarse sediments, oil, grease, litter and debris from storm water
- Ideal in parking lots which tend to be sources of water pollution; cars and trucks drip oil and grease on to the surface which is otherwise carried into the catch basins by rain water
- Perfect in workshops where contractual or design considerations prevent structural alteration of existing drainage facilities
- Effective as a guard in case of emergency spills, capturing spills whilst allowing emergency spill response teams to activate

### Materials & Specifications:

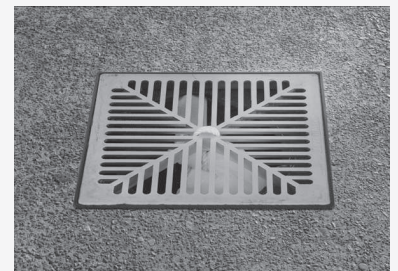
- polypropylene fabric and organic absorbent sock

### Installation:

- Lift the drain grate using a suitable lifting aid
- Clean out existing debris and obstructions
- Insert the drain warden
- Replace the drain grate
- Trim any surplus skirt

### PIRTEK DRAIN WARDEN

Product Code	Description	Basin Depth mm	Skirt Dimensions mm
ENDW-12	DRAIN WARDEN - 1.2 x 1.2 MSQ SKIRT - 600MM BASIN	600	1200 x 1200
ENDW-24	DRAIN WARDEN - 2.4 x 1.2 MSQ SKIRT - 600MM BASIN	600	2400 x 1200
ENSB-125	REPLACEMENT POLYPROPYLENE BILGE	75 mm x 250 mm	





# WORK MAT

## HEAVY DUTY PORTABLE GROUND MAT



### Description :

- The Work Mat is a portable ground mat that has been designed for messy work in the field. The 'Work Mat' is ideally suited to the servicing of vehicles and other equipment, especially the repair of hydraulic hoses and fittings, anywhere there is a risk of oils & fuels leaking
- It slips under the equipment being worked on, and collects all hydrocarbons (oils & fuels) that should drip or leak onto the 'Work Mat'. The absorbent properties and structural strength of the mat ensures that no mess is left behind

### Materials & Specifications:

The Work Mat consists of:

- a durable UV resistant, impervious layer as a base,
- a layer of meltblown polypropylene for absorption,
- a top layer of HDPE matting that allows the oils & fuels to pass through to the absorbent layer

### Advantages:

- The top layer that acts as a separation layer between the absorbent and the operator, keeping them clear from the collected hydrocarbons, while they work.
- The Work Mat is hydrophobic, and is designed to only absorb oils & fuels. This means it's an ideal work companion in either wet or dry conditions.
- When not in use, the Work Mat simply rolls up like a swag, for easy storage or transportation to the next job. The 3 sided entry style facilitates easy replacement of the absorption layer

PIRTEK WORK MAT		
Product Code	Description	Mat Dimensions mm
ENHDM3S-L	WORK MAT LARGE (with 3 sided entry)	2500 x 3000
ENHDM3S-S	WORK MAT SMALL (with 3 sided entry)	1500 x 2000

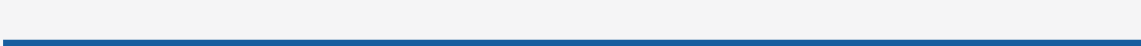
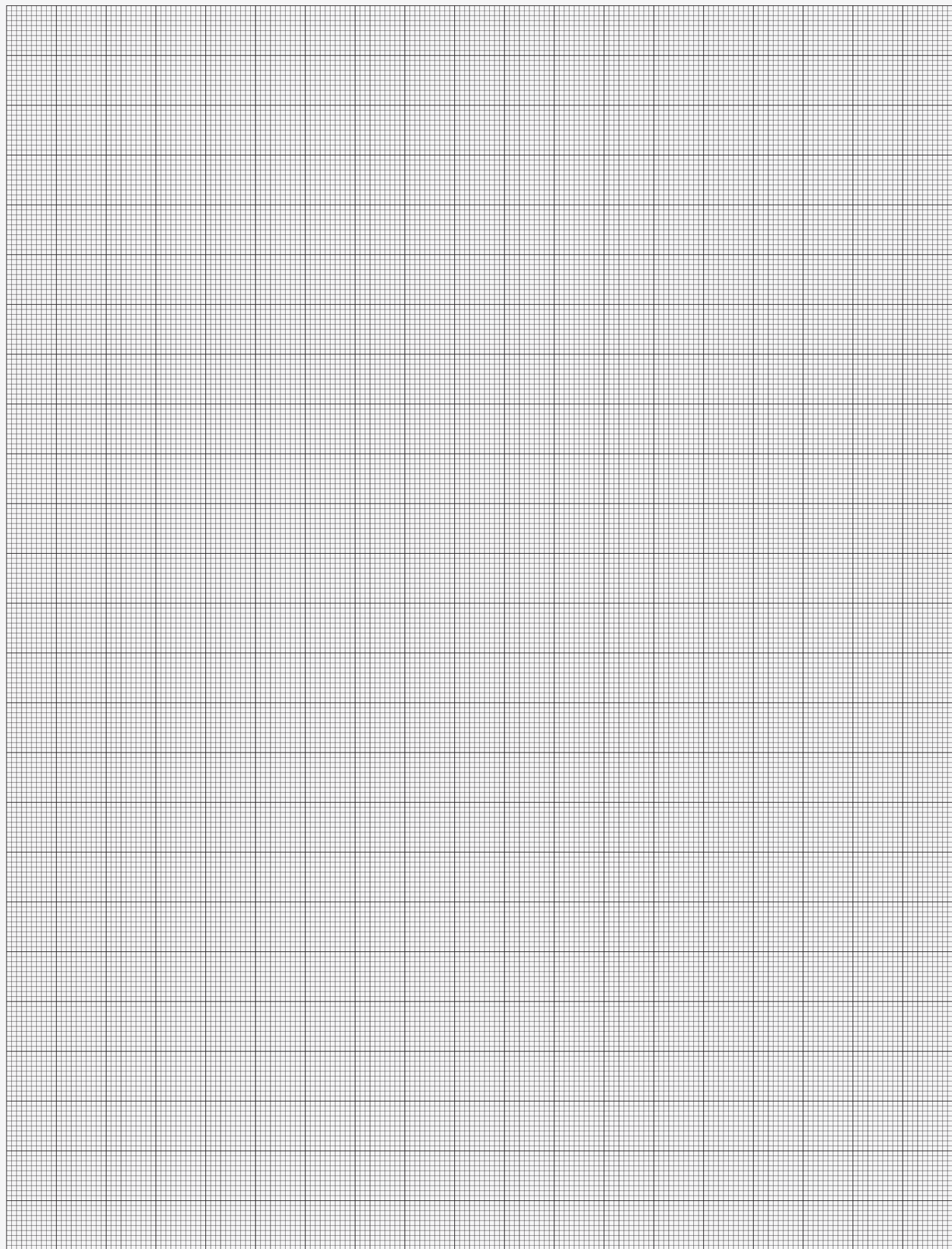


# GLOSSARY OF TERMS

## SPILL CONTROL & CONTAINMENT

Term	Definition
Absorbents	Spill products that take up and hold water or oil; sorbents used in oil spill cleanup are made of oleophilic materials
Aquatic	Habitats and ecosystems that exist in bodies of water, refers to both marine and fresh water environments
Asphalt	A brown to black residue formed from weathered petroleum products, consisting chiefly of a mixture of hydrocarbons; varies in texture from hard and brittle to plastic
Biodegradable	The breaking down of substances by micro-organisms, which use the substances for food.
Boom	A temporary floating barrier used to contain an oil spill
Cellulose	A natural organic component found in plants & wood
Contingency plan	A document that describes a set of procedures and guidelines for containing and cleaning up oil spills.
Deployment	Strategic placement of equipment and personnel
Dispersion	The spreading of oil on any surface
Ecosystem	The interrelationships between all of the living things in an area
Emulsions	A mixture of small droplets of oil and water.
Encapsulate	To enclose and capture within a Spill device
Evaporation	The physical change by which any substance is converted from a liquid to a vapour or gas
Facility Response Plan	A detailed plan which must be prepared by facilities which may cause "substantial harm" to the environment. The plan must contain an Emergency Response Action Plan and demonstrate that a facility has the resources to respond to the worst case spill
Fate	The outcome; the fate of an oil spill is what happens to the oil
Freshwater spill	An oil spill that occurs in or affects bodies of freshwater, such as lakes and rivers
Hydrocarbons	A large class of organic compounds containing only carbon & hydrogen; common in petroleum products and other oils
Hydrophobic	Having a tendency to repel water; hydrophobic materials will not easily absorb water
Incidental oil spill	Minor oil leaks, drips or stains from vehicles, machinery & general traffic.
Incineration	The destruction of wastes by burning at high temperatures
Marine	Relating to the seas and oceans.

Term	Definition
Micro-organism (or Microbes)	A very small plant, animal, or bacteria; some micro-organisms actually break oil down into less harmful substances
National Response System	A network of individuals and teams from local, state, and federal agencies who combine their expertise and resources to ensure that oil spill control and cleanup activities are timely and efficient and minimise threats to human health and the environment
Non-petroleum oils	Oils that are not derived from petroleum; this group of oils includes vegetable oils and animal fats.
Oil	Crude oil and refined petroleum products (motor oils, fuels, lubricants, etc.), as well as vegetable oils, animal fats and other non-petroleum oils
Oil slick	A layer of oil floating on the surface of water.
Oleophilic	Having a strong affinity for oils; oleophilic materials absorb or stick to oils
On-Scene Coordinator (OSC)	The person responsible for overseeing the cleanup efforts at a spill.
Polyaromatic hydrocarbons	A family of chemical substances that are found in many types of oil; polyaromatic hydrocarbon vapours can cause harm to humans and animals that inhale them.
Polypropylene	A type of plastic noted for its resistance to many chemicals, solvents and acids.
Skimmers	Devices used to remove oil from the water's surface.
Slick	A thin film of oil on the water's surface.
Sock	Spill Product used to block and restrict the flow of the spill from entering stormwater drains or walkways
Specific Gravity	The density of a substance to the density of water, if substance has a greater density to water, the substance it is more likely to sink. If substance has a lesser density to water, the substance it is more likely to float on the surface
Spill Station Management	A Pirtek representative services all kits within a plant location i.e. checking, replenishing and re-sealing the contents of spill kits at regular intervals
Surfactant	A substance that breaks oil into small droplets; this helps to increase the surface area of the oil spill, which increases the rate at which the oil can be degraded or weathered into less toxic substances (See dispersant)
Viscosity	Having a resistance to flow; substances that are extremely viscous do not flow easily
Viscous	The tendency of a liquid to hold itself together; viscous liquids pour freely and have the consistency of syrup or honey
Water Column	An imaginary cylinder of water from the surface to the bottom of a water body; water conditions, temperature, and density vary throughout the water column



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