



# ***Pythons, Tubes and Fittings for the Beverage Industry***

*Catalogue 4464-UK  
May 2002*



## Pythons, Tubes and Fittings for the Beverage Industry

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Founded in 1986 Extrudite soon rose to become one of the Market Leaders for Beverage tubing. The manufacturing plant situated in Buxton ( England) today produces the complete range of beverage tubing.

The product range comprises single line tubing, co-extruded tubing and Python Bundles, all products which are manufactured in the plant. The product range is complemented by Trunking and Electric cables.

In May 1998 Parker Hannifin acquired Extrudite to allow the introduction of the Parker TrueSeal push-to-connect beverage fittings into the European Beverage market.

Parker Extrudite is part of the Polyflex division with its Headquarters located in Lampertheim, Germany.

Today this allows Parker Extrudite customers to not only choose from a large range of products used in the Beverage Market, it also lets our customers benefit from a broad product range for other industries, and the experience that Parker has gained in these industries over the last 80 years.

***Pythons, Tubes and Fittings  
for the Beverage Industry***

***A – Single Tubes***

***B – Multi Layer Tube***

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***D – Gas Hoses and Fittings***

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

**H**

**I**

## Pythons, Tubes and Fittings for the Beverage Industry

### Explanation of Symbols

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Symbol	Definition
#	Product code
	Inner Diameter (ID) of tube
	Outer Diameter (OD) of tube
	Maximum working pressure
	Wall thickness
	Minimum bend radius
	Weight
	Minimum burst pressure
	Across-flats dimension
	Trunking dimensions

**A – Single Tubes**

MDP – Medium Density Polyethylene .....	A2
HGE – Hard Grade EVA .....	A2
FPV – Food Grade Polyvinylchloride (PVC) .....	A3
GLY – Glyflex II .....	A3
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**A**

## MDP – Medium Density Polyethylene

**Properties:**

MDP provides excellent mechanical properties. It retains its tolerances under pressure and does not suffer from stressing. It is highly resistant to alkali and acid attack.

**Application:**

MDP is used throughout the Brewing and Soft Drinks Industry for beverage dispense applications, being an ideal product line for beer, lager and syrups.

**Temperature:**

MDP should not be used at elevated temperature as this will drastically reduce the performance.

**Colours:**

Available in tinted colours, solid colours, and natural with coloured stripes in the tube wall for easy identification. For colours and codes please refer to page A5.

**Standard Lengths:**

30 meters / 100 meters,  
other lengths are available on request.

Product code #					Working pressure at 20 °C MPa / psi 	
	mm	inch	mm	inch		
MDP 4 x 8	4.0	5/32	8.0	5/16	2.1	300
MDP 6 x 8	6.0	1/4	8.0	5/16	1.0	145
MDP 117 x 188	2.9	0.117	4.8	3/16	1.6	230
MDP 170 x 250	4.3	0.170	6.3	1/4	1.1	160
MDP 188 x 313	4.8	3/16	8.0	5/16	1.7	250
MDP 212 x 313	5.4	0.212	8.0	5/16	1.3	190
MDP 250 x 375	6.3	1/4	9.5	3/8	1.3	190
MDP 265 x 375	6.7	0.265	9.5	3/8	1.2	170
MDP 280 x 375	7.1	0.280	9.5	3/8	1.0	145
MDP 375 x 500	9.5	3/8	12.7	1/2	1.0	140
MDP 500 x 750	12.7	1/2	19.1	3/4	1.4	200

## HGE – Hard Grade EVA

**Properties:**

EVA (Ethylene Vinyl Acetate) has excellent mechanical properties. Resistance to stress cracking and chemical action coupled with exceptional flexibility and kink resistance, allow EVA to be used as the ideal tube for tight bend radii applications .

**Application:**

EVA tubing is mostly used for Soft Drink dispense systems , being suitable for contact with concentrated fruit syrups and carbonated water. EVA’s flexibility make installations in confined spaces easy.

**Temperature:**

EVA should not be used at elevated temperature, as this will drastically reduce the performance.

**Colours:**

Available in tinted colours, solid colours, and natural with coloured stripes in the tube wall for easy identification. For colours and codes please refer to page A5.

**Standard Lengths:**

30 meters / 100 meters,  
other lengths are available on request.

Product code #					Working pressure at 20 °C MPa / psi 	
	mm	inch	mm	inch		
HGE 3 x 8	3.0	1/8	8.0	5/16	1.9	270
HGE 3.5 x 8	3.5	0.138	8.0	5/16	1.7	240
HGE 4 x 8	4.0	5/32	8.0	5/16	1.4	210
HGE 5 x 8	5.0	0.197	8.0	5/16	1.0	145
HGE 10 x 15	9.5	3/8	15.0	0.590	2.0	290
HGE 250 x 375	6.3	1/4	9.5	3/8	0.8	120
HGE 265 x 375	6.7	0.265	9.5	3/8	0.7	110
HGE 375 x 500	9.5	3/8	12.7	1/2	0.6	90
HGE 500 x 625	12.7	1/2	15.9	5/8	0.6	90

Examples shown above are for Hard Grade EVA tubing. Softer grades will have a lower working pressure. Please refer to table on page H8.

**Other EVA grades available are:**

MGE, SGE, SSGE  
 Hard Grade EVA contains 5 % Vinyl Acetate (HGE)  
 Medium Grade EVA contains 9 % Vinyl Acetate (MGE)  
 Soft Grade EVA contains 18 % Vinyl Acetate (SGE)  
 Super Soft Grade EVA contains 24 % Vinyl Acetate (SSGE)

## FPV – Food Grade Polyvinylchloride (PVC)

**Properties:**

PVC has excellent flexibility at ambient temperature permitting easy installation whilst remaining lightweight and resistant to abrasion and chemical action.

**Application:**




Food Grade PVC is extensively used throughout the Brewing and Soft Drinks Industry for beverage dispense and vending systems.

**Colour:**

Natural

**Standard Lengths:**

30 meters,  
other lengths are available on request.

Product code #					Working pressure at 20 °C MPa / psi	
	mm	inch	mm	inch		
FPV 250 x 375	6.3	1/4	9.5	3/8	0.7	110
FPV 375 x 500	9.5	3/8	12.7	1/2	0.5	75
FPV 375 x 625	9.5	3/8	15.9	5/8	1.0	145
FPV 500 x 750	12.7	1/2	19.1	3/4	0.7	110
FPV 625 x 825	15.9	5/8	22.2	7/8	0.7	110

**A**

## GLY – Glyflex II

**Properties:**

Glyflex, a High Density Crosslinked Polyethylene combines good chemical resistance and high temperature resistance with good mechanical strength. Its opaque colour allows visual identification of the Glycol flow. Glyflex is also UV resistant.

**Application:**




Glyflex is used for the cooling systems in the Brewing and Beverage Industry.

**Colour:**

Natural

**Standard Lengths:**

30 meters,  
other lengths are available on request.

Product code #					Working pressure at 20 °C MPa / psi	
	mm	inch	mm	inch		
GLY 11.5 x 15	11.5	0.453	15	0.590	1.2	180



## Nylon Tubing





Parker's range of Nylon (12) Tubing comprises two different types: semi rigid (unplasticised) and flexible (plasticised).

Semi Rigid Nylon is manufactured without the addition of plasticisers and therefore complies with the American Food and Drug Administration.

Flexible Nylon is manufactured with the addition of plasticisers which give it improved flexibility.

All sizes below are also available in Semi Rigid Nylon on request (see ordering key), and can be produced in alternative Nylon grades such as Nylon 11 and Nylon 6.

### Nylon Tubing (metric)

Product code (flexible grade)	Tube O.D. x wall thickness	Maximum working pressure MPa			Minimum bend radius mm	Weight g/m
		-40 °C to +28 °C	 -40 °C to +40 °C	-40 °C to +60 °C		
#						
N3X0.60	3 x 0.60 mm	3.3	2.5	1.9	15	5
N4X0.65	4 x 0.65 mm	2.6	1.9	1.5	30	7
N4X1	4 x 1 mm	4.4	3.3	2.5	20	10
N5X1	5 x 1 mm	3.3	2.5	1.9	30	13
N6X1	6 x 1 mm	2.7	2.0	1.5	30	16
N8X1	8 x 1 mm	1.9	1.4	1.1	40	23
N8X1.25	8 x 1.25 mm	2.5	1.8	1.4	35	28
N10X1	10 x 1 mm	1.5	1.1	0.8	60	29
N10X1.25	10 x 1.25 mm	1.9	1.4	1.1	60	36
N10X1.5	10 x 1.5 mm	2.4	1.7	1.3	60	42
N12X1	12 x 1 mm	1.2	0.9	0.7	85	36
N12X1.5	12 x 1.5 mm	1.9	1.4	1.1	60	51
N12X1.75	12 x 1.75 mm	2.3	1.7	1.3	60	59
N14X1.5	14 x 1.5 mm	1.6	1.2	0.9	75	61
N16X1.5	16 x 1.5 mm	1.4	1.0	0.8	105	71
N16X2	16 x 2 mm	1.9	1.4	1.1	95	91
N22X2.5	22 x 2.5 mm	1.7	1.3	1.0	125	159

### Nylon Tubing (imperial)

2X022N	1/8 x .022 in	3.2 x 0.56 mm	2.8	2.1	1.6	20	8
2X025N	1/8 x .025 in	3.2 x 0.64 mm	3.3	2.5	1.9	20	8
3X025N	3/16 x .025 in	4.8 x 0.64 mm	2.1	1.5	1.2	35	18
4X030N	1/4 x .030 in	6.4 x 0.76 mm	1.8	1.3	1.0	45	32
4X040N	1/4 x .040 in	6.4 x 1.02 mm	2.5	1.9	1.4	30	32
5X031N	5/16 x .031 in	7.9 x 0.79 mm	1.5	1.1	0.8	40	51
6X055N	3/8 x .055 in	9.5 x 1.40 mm	2.3	1.7	1.3	60	73
6X062N	3/8 x .062 in	9.5 x 1.57 mm	2.6	2.0	1.5	60	72
8X062N	1/2 x .062 in	12.7 x 1.57 mm	1.9	1.4	1.1	75	130
10X062N	5/8 x .062 in	15.9 x 1.57 mm	1.5	1.1	0.8	100	204
12X078N	3/4 x .078 in	19.0 x 1.98 mm	1.5	1.1	0.9	120	293

\*1 MPa = 10 bar

Nylon Tubing tolerances in mm	Tube O.D. 3 to 5 mm + 0,05 / - 0,08	Tube O.D. 6 to 16 mm + 0,05 / - 0,10
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## Ordering Key & Colour Codes for Parker's Nylon Tubing

Ordering key	
Examples: <b>NR6X1/5-50K</b>	<b>2X022N/1-100</b>

**A**

**Note:** Parker Nylon Tubing can be produced and supplied in both semi-rigid and flexible grades. As can be seen in the example above the letter "R" should be inserted into the part number when Semi-Rigid grades are needed. For further advise or explanation please contact your local sales office.

Colour codes							
Natural	1	Red	2	Blue	3	Green	4
Black	5	Brown	6	Yellow	7	Orange	8
Grey	9	Purple	10	Pink	11	White	12

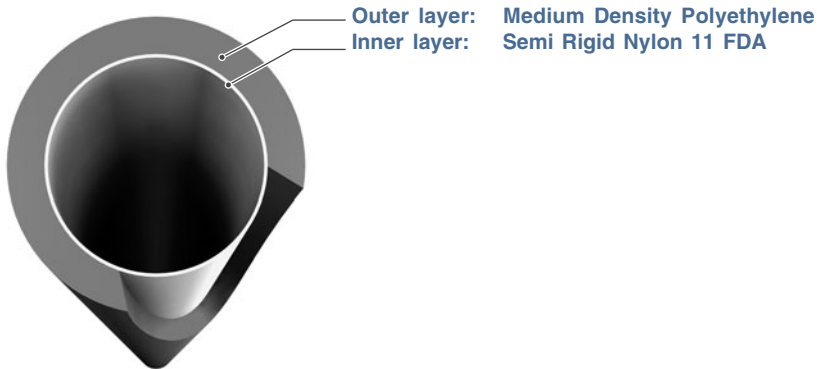


***B – Multi Layer Tube***

HYB – Hypabrew ..... B2



## HYB – Hypabrew



**Construction:**

see figure

**Properties:**

Hypabrew combines the flexibility of MDP with the permeation properties of Nylon to provide low permeation to both CO<sub>2</sub> and N<sub>2</sub>.

The inner layer is manufactured from FDA approved Nylon, making it a cost effective alternative to solid nylon tubing. The smoothness of the nylon inner layer reduces bacterial build up and yeast adherence, improving the quality of the beer being dispensed.

**Application:**

Hypabrew is used for both gas dispense and beer dispense applications.

**Standard Lengths:**

30 meters

other lengths are available on request.

**Note:**

other constructions and material combinations on request.

Product code #	mm		inch		Working pressure at 20 °C MPa / psi	
	mm	inch	mm	inch	MPa	psi
HYB 5.4 x 8	5.4	0.212	8.0	0.315	1.2	180
HYB 6.3 x 9.5	6.3	1/4	9.5	3/8	1.7	250
HYB 6.7 x 9.5	6.7	0.265	9.5	3/8	1.5	220
HYB 7 x 9.5	7.0	0.276	9.5	3/8	1.3	190
HYB 9.5 x 12.7	9.5	3/8	12.7	1/2	1.2	175

## ***C – Beverage Hose***

PBH – Parker Beverage Hose ..... C2



## PBH – Parker Beverage Hose



**Construction:**

**Inner Layer:**

Food Grade PVC

**Reinforcement:**

Synthetic fibre

**Outer Layer:**

Food Grade PVC

**Application:**







Food quality reinforced PVC tubing is used for pressure drink dispense applications.

**Temperature:**

Food quality reinforced PVC should not be used at elevated temperatures, as this will drastically reduce its performance.

**Colour:**

Natural

Product code #	mm inch		mm inch		Max. Working Pressure at 20 °C MPa / psi	
						
PBH-6	9.5	3/8	16	5/8	1.2	175
PBH-8	12.7	1/2	19	3/4	1.0	145

**Note:**

Other sizes are available on request, subject to minimum order quantities.

***D – Gas Hoses and Fittings***

2040N – High Pressure Hose ..... D2

328 – High Pressure Hose ..... D2

547 – Medium Pressure Hose ..... D2

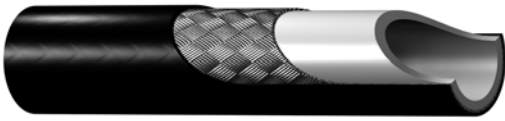
Gas Dispense Fittings ..... D3

Accessories ..... D3





## Parker medium and high pressure Gas dispensing hose



Product code #	Hose colour	DN size				mm	Max. Working Pressure		Min. Burst Pressure		Min. Bend Radius	Weight
		mm	inch	mm	inch		MPa	psi	MPa	psi		
2040N-04V74	black	6	-04	6.3	1/4	11.9	31.0	4,495	124.0	17,980	40	16.0
2040N-04V78	grey	6	-04	6.3	1/4	11.9	31.0	4,495	124.0	17,980	40	16.0
328-4 EXT	black	6	-04	6.3	1/4	12.3	35.0	5,000	140.0	20,000	100	10.5
328-4 EXT/GRY	grey	6	-04	6.3	1/4	12.3	35.0	5,000	140.0	20,000	100	10.5
547-4 EXT	grey	6	-04	6.3	1/4	12.1	21.5	3,100	86.0	12,400	100	9.7

**Temperature range:** -40 °C up to + 100 °C

**Change in length:** ≤3 %

Hose construction	Type		
	2040N	328 EXT	547 EXT
Core tube	Polyamide	Polyester elastomer compound	Polyester elastomer compound
Reinforcement	One braided layer of high tensile steel wire	Aramid	Polyester
Cover	Polyurethane	Polyurethane compound, pinpricked	Polyurethane compound, pinpricked

### Applications:

Parker's different dispensing hose products are specifically designed for CO<sub>2</sub> and Mixed Gas dispensing lines requiring food approval (F.D.A.).

### Construction:

see table

### Properties:

- Excellent flex fatigue resistance.
- Fungus resistant.
- FDA approved inner tube material.
- Small bend radius.

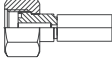
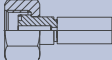
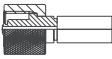
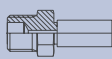
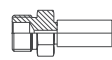
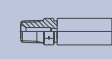
### Fittings:

Factory crimped assemblies only.

### Approvals:



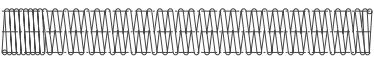
Parker 2040N and 328 are both SK approved.

## Gas Dispense Fittings

Figure	Description	Part Number			
		Type	Brass	Type	Stainless Steel
	W21.8 mm Female according to NEN 176	A	1GAPX-8-04BF	G	1GAPX-8-04C
	W24.32 mm Female according to NEN 176	B	1GAPX-12-04BF	H	1GAPX-12-04C
	S121.7 mm Female according to ISO/NFE 29650	C	1GAPX-8-04BF2	I	1GAPX-8-04CS
	S121.7 mm Male according to ISO/NFE 29650	D	13BPX-8-04BF2	J	13BPX-8-04CS
	W21.8 mm Male according to NEN 176	E	13BPX-8-04BF	K	13BPX-8-04C
	1/4" BSPT Male according to DIN	F	191PX-4-04BF	L	191PX-4-04C

**D**

## Accessories

Figure	Description	Part Number
	Plastic hand wheel for manual assembly	HR-28
	Stainless steel safety rope	SS-C02
	Springguard	1713.5



***E – Python Bundles***

Python Examples . . . . . E2

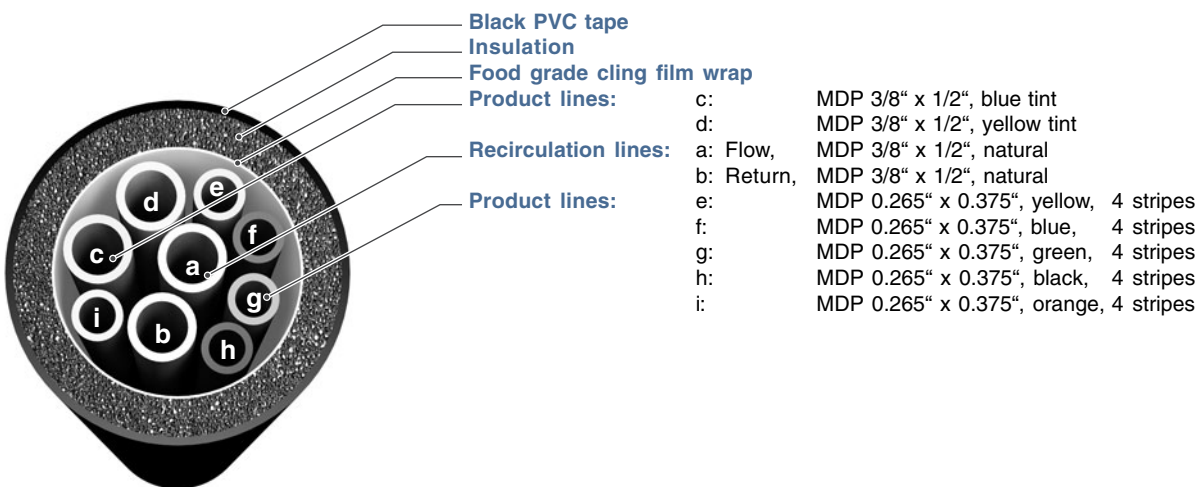
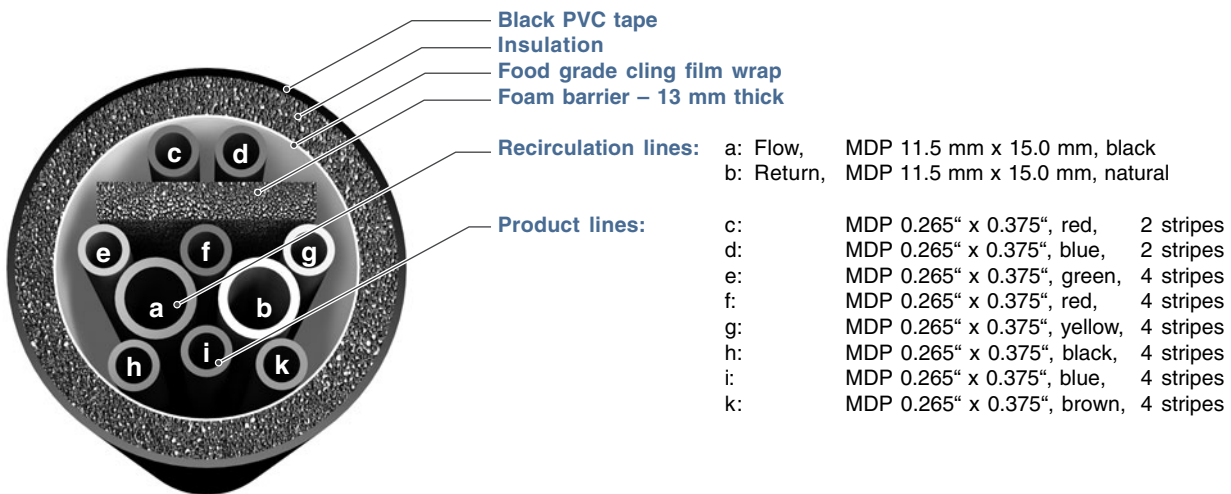
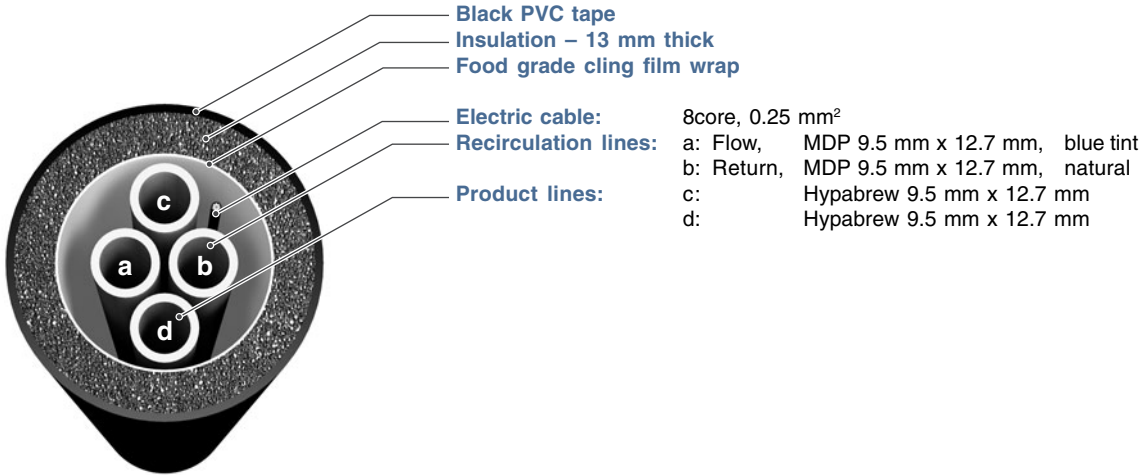
Python specifications . . . . . E4

Python integrated product lines . . . . . E4



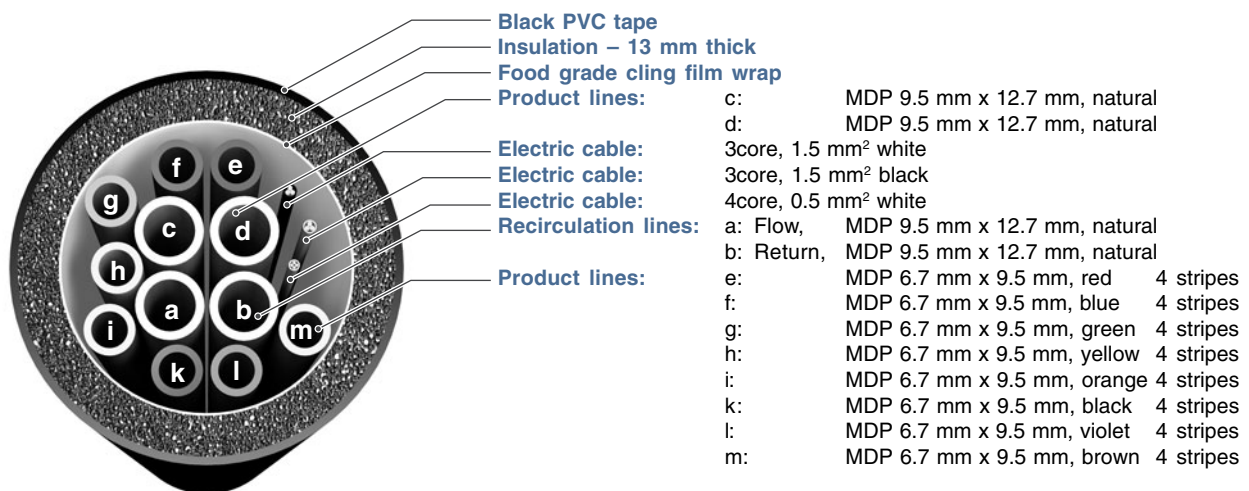
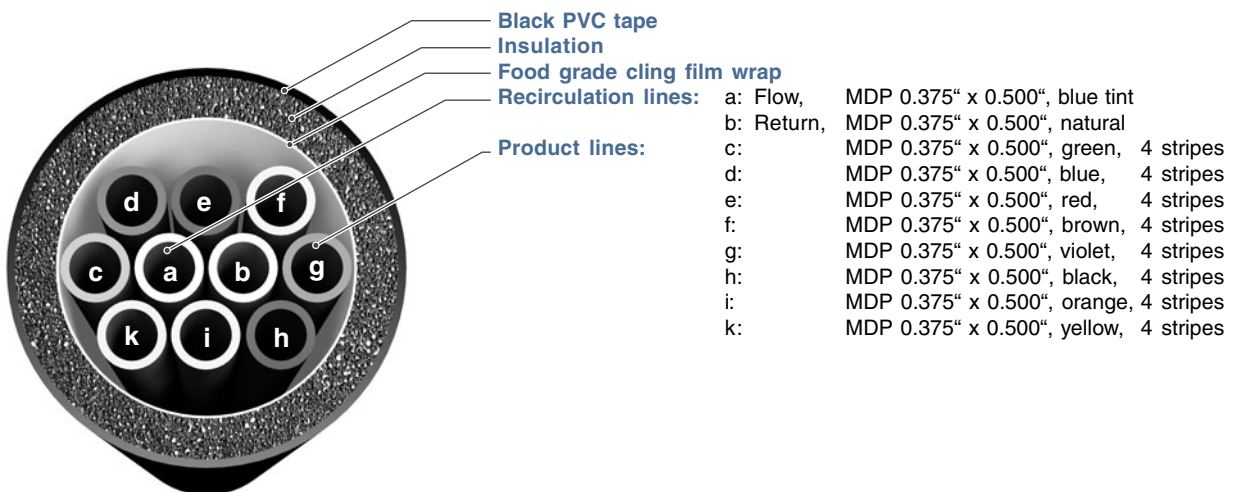
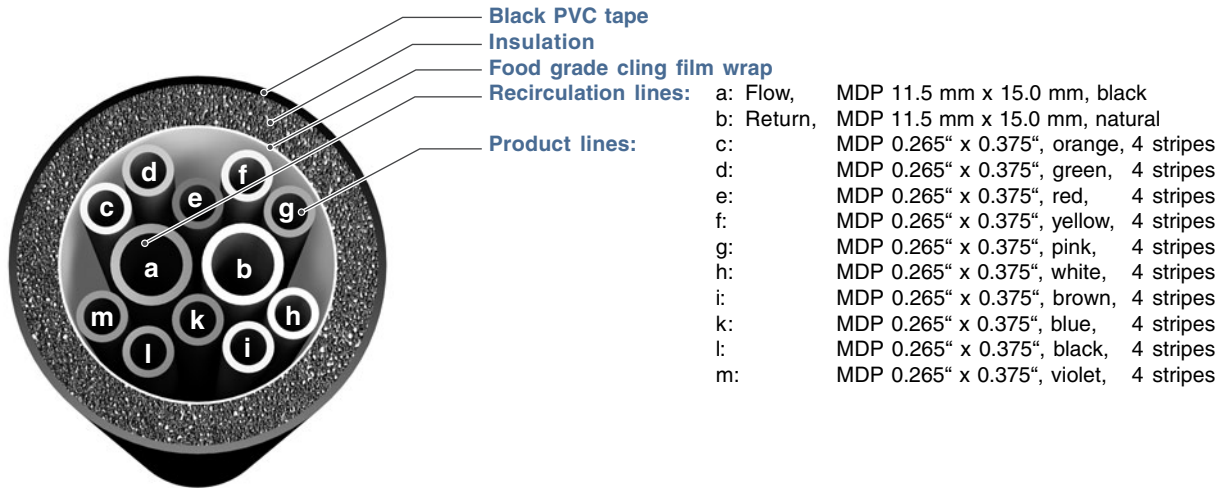
## Python Examples

For customer specific Python configuration requirements please call Parker



## Python Examples

For customer specific Python configuration requirements please call Parker



E

## Python specifications

### Integrated product lines:

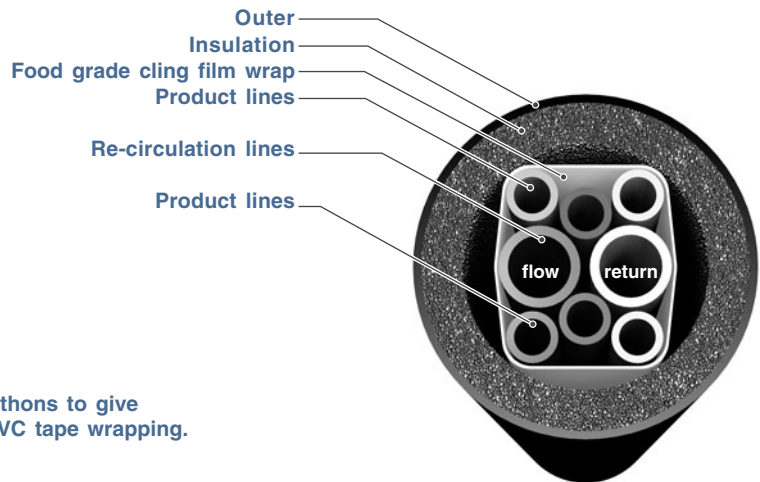
Can be assembled as straight lay or can be cabled to enhance flexibility.

### Outer Layers:

**Inner Wrap:** Food quality cling film wrap

**Insulation:** available in 13 mm and 19 mm wall thickness as standard. Other sizes on request.

**Outer:** Black PVC tape or dark blue polyurethane coating\*



\* Trials exercised have shown the Parker P.U. coated pythons to give up to 15 % energy/efficiency saving over traditional PVC tape wrapping.

## Python integrated product lines

**Include:** Hypabrew  
MD Polyethylene tubing  
EVA tubing  
PVC tubing  
Nylon tubing  
Cables

Refer to pages A1:A5 for specific data.

Cable options can be found on page G3.



## ***F – Push-to-connect Fittings***

TrueSeal™ Thermoplastic Push-In Fittings .....	F3
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TES – Male Elbow Swivel BSPT .....	F12
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TTS – Male Tee Swivel BSPT .....	F13
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TMC – Tube Stem Adapter NPTF .....	F18
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**F**

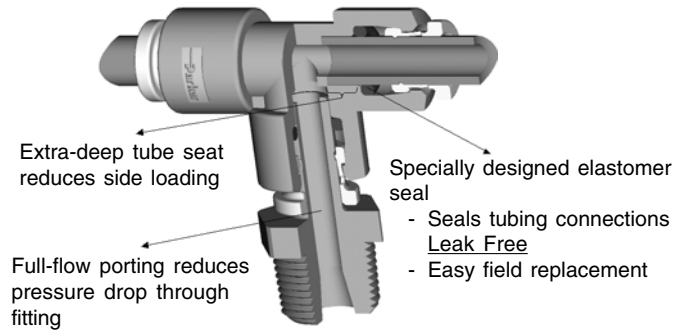
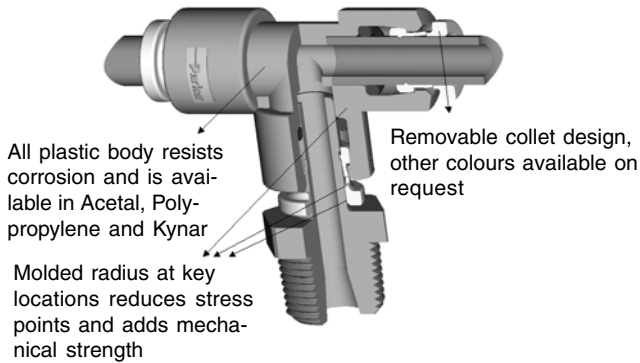
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TCB	– Tube To Barb Connector . . . . .	F23
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UB	– U Bend 15 MM . . . . .	F30

## TrueSeal™ Thermoplastic Push-In Fittings

The patented Parker TrueSeal™ push to connect thermoplastic fittings are light weight, reusable, and connect to plastic tubing without the use of tools.



### Standard Materials

Material	Fitting Colour	O-Ring
Acetal	Grey	Nitrile
Polypropylene	White	EPDM
Kynar® / PVDF	Natural	Viton

BSPT and BSW end configurations are only available made of Acetal.

### Working Pressures

TrueSeal fittings are rated for the pressures listed below or at 1/4 (one-fourth) of the rated burst pressure of the tubing being used (whichever is less). One-half inch fittings with metal gripper collets are rated at 3.3:1 burst safety factor.

Fitting Size	Acetal	Polypropylene	Kynar®
3/16"	300 psi		
1/4"	300 psi	150 psi	300 psi
5/16"	300 psi		
3/8"	300 psi	150 psi	300 psi
1/2"	250 psi		
Temp. Range	-20 °F (-29 °C) to +180 °F (85 °C)	0 °F (-18 °C) to +255 °F (110 °C)	0 °F (-18 °C) to +275 °F (135 °C)

These pressure ratings are based on tests conducted with Series NR tubing at 73 °F. Actual working pressures may be lower at elevated temperatures. Consult Parker.

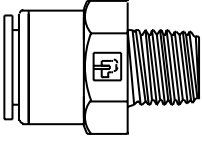
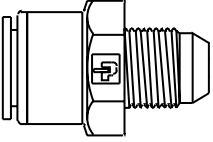
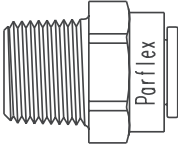
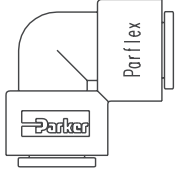
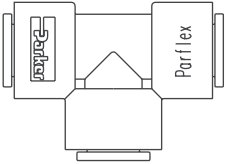
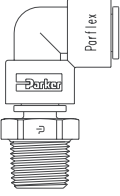
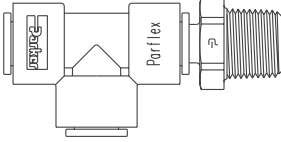
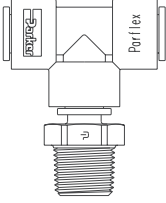
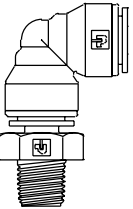
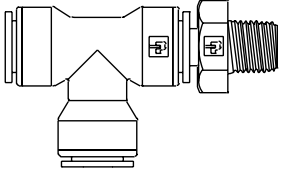
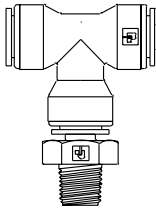
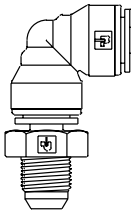
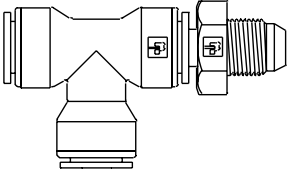
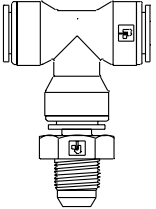
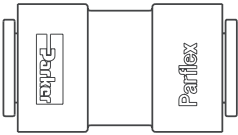
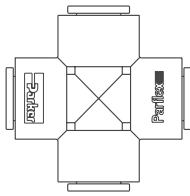
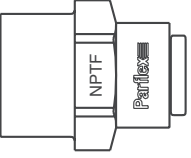
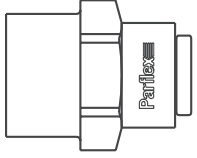
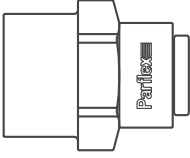
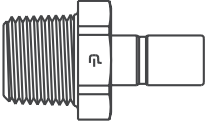
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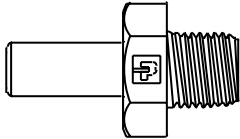
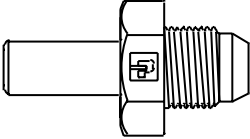
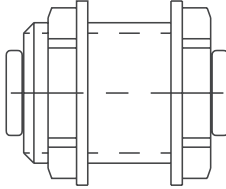
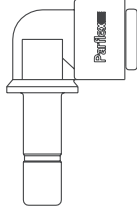
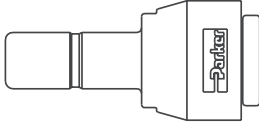
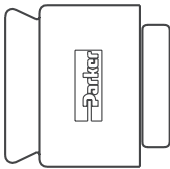
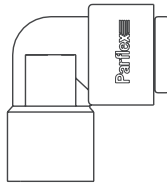
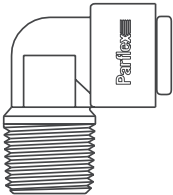
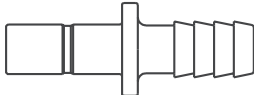
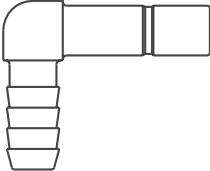
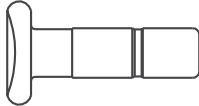
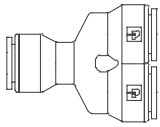
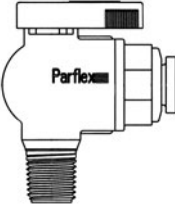
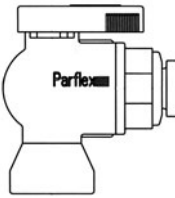
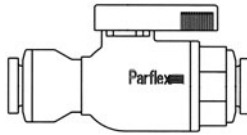
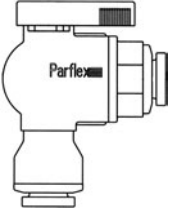
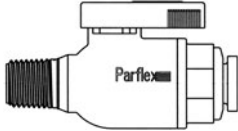
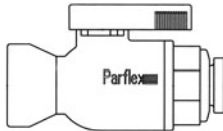
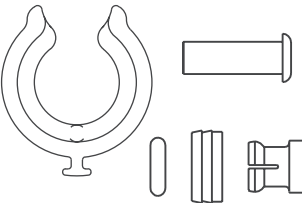
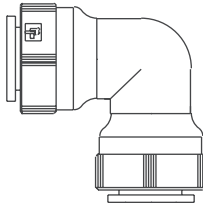
Examples: **A 4 MC 4 (-MG)**

A = Fitting body material: A = Acetal, PP = Polypropylene, F = Kynar (PVDF)  
 4 = Tube O.D. in 1/16 inch  
 MC = Body style  
 4 = End termination size  
 (-MG) = "MG" = Metal Gripper Collet

TrueSeal fittings are used in a number of different industries, in the Beverage and Soft Drink industry, they find extensive use because they are suitable for potable water, beers, syrups and other foodstuffs, as well as for mixed gases and CO<sub>2</sub> lines. Parker's range of TrueSeal fittings is complemented by tubing and hoses for Drink Dispense systems.

## Fittings Overview

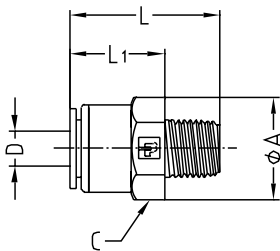
Fittings Overview			
			
TC - Male Connectors BSPT page E6	WC - Male Connectors BSW page E6	MC - Male Connectors NPTF page E7	EU - Elbow Union page E8
			
TU - Tee Union page E8	MES - Male Elbow Swivel NPTF page E9	MRS - Male Run Swivel NPTF page E10	MTS - Male Tee Swivel NPTF page E11
			
TES - Male Elbow Swivel BSPT page E12	TRS - Male Run Swivel BSPT page E12	TTS - Male Tee Swivel BSPT page E13	WES - Male Elbow Swivel BSW page E14
			
WRS - Male Run Swivel BSW page E14	WTS - Male Tee Swivel BSW page E15	UC - Union Connector page E16	CU - Cross Union page E16
			
FC - Female Connector NPTF page E17	FA - Tap Adapter UNS-2B page E17	FF - Female Flare UNF-2BT page E18	TMC - Tube Stem Adapter page E18

Fittings Overview			
			
TTC - Tube Stem Adapter BSPT page E19	TWC - Tube Stem Adapter BSW page E19	BU - Bulkhead Union page E20	TEU - Tube Elbow Union page E20
			
RD - Tube Reducer page E21	CAP - Tube Cap page E21	FE - Female Elbow NPTF page E22	ME - Male Elbow NPTF page E22
			
TCB - Tube To Barb Connector page E23	TEB - Tube To Barb Elbow page E23	TPL - Plug page E23	WY - Y Connector page E21
			
VME - Valve Male Elbow page E24	VFE - Valve Female Elbow page E45	VUC - Valve Union Connector page E25	VEU - Valve Elbow Union page E25
			
VMC - Valve Male Connector page E26	VFC - Valve Female Connector page E26	TrueSeal Accessories SC/TS/TSC page E27	AquaSeal 15 mm Connections pages E28 to E30

**F**

## TC – Male Connectors BSPT

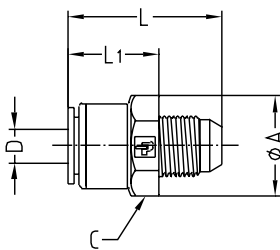
### Tube to Pipe



Product code	BSPT Thread Size	Nom. Tube O.D.		C Hex		L Overall Length		L1 Length		A Maximum Body Dia.		D Through Hole Min.	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
#													
A5TC4-MG	1/4	7.94	5/16	19	0.745	32.3	1.27	19.6	0.77	22.2	0.875	4.78	0.188
A6TC4-MG	1/4	9.52	3/8	20	0.790	35.4	1.40	22.7	0.90	23.0	0.910	6.35	0.250

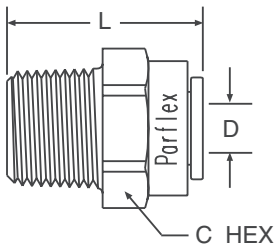
## WC – Male Connectors BSW

### Tube to Pipe



Product code	BSW Thread Size	Nom. Tube O.D.		C Hex		L Overall Length		L1 Length		A Maximum Body Dia.		D Through Hole Min.	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
#													
A5WC9-MG	9/16"-24	7.94	5/16	19	0.745	34.5	1.36	19.6	0.77	22.2	0.875	4.78	0.188
A6WC8-MG	1/2"-24	9.52	3/8	20	0.790	36.2	1.43	22.7	0.90	23.0	0.910	6.35	0.250
A6WC9-MG	9/16"-24	9.52	3/8	20	0.790	37.7	1.49	22.7	0.90	23.0	0.910	6.35	0.250

## MC – Male Connectors NPTF Tube to Pipe

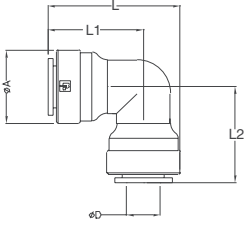


Product code  #	NPTF Thread Size	Nom. Tube O.D.		C Hex		L Overall Length		D Through Hole Min.	
		mm	inch	mm	inch	mm	inch	mm	inch
A4MC2-MG	1/8"	6.35	1/4	17.5	11/16	32.5	1.28	4.45	0.175
A4MC4-MG	1/4"	6.35	1/4	17.5	11/16	29.0	1.14	4.45	0.175
A4MC6-MG	3/8"	6.35	1/4	17.5	11/16	30.0	1.18	4.45	0.175
A5MC2-MG	1/8"	7.94	5/16	20.6	13/16	37.1	1.46	4.45	0.175
A5MC4-MG	1/4"	7.94	5/16	20.6	13/16	35.8	1.41	4.78	0.188
A5MC6-MG	3/8"	7.94	5/16	20.6	13/16	32.3	1.27	4.78	0.188
A6MC2-MG	1/8"	9.52	3/8	20.6	13/16	37.1	1.46	4.45	0.175
A6MC4-MG	1/4"	9.52	3/8	20.6	13/16	35.8	1.41	6.35	0.250
A6MC6-MG	3/8"	9.52	3/8	20.6	13/16	32.3	1.27	6.35	0.250
A6MC8-MG	1/2"	9.52	3/8	20.6	13/16	36.8	1.45	6.35	0.250
A8MC6-MG	3/8"	12.7	1/2	23.8	15/16	41.9	1.65	9.14	0.360
A8MC8-MG	1/2"	12.7	1/2	23.8	15/16	37.1	1.46	9.53	0.375



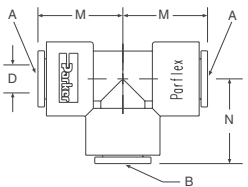


## EU – Elbow Union Tube to Tube



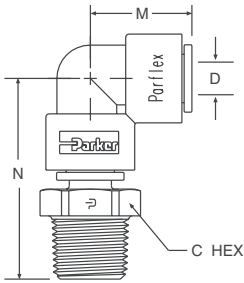
Product code  #	D1 Nom. Tube O.D.		D2 Nom. Tube O.D.		L Overall Length		L1 Length		L2 Length		L3 Length		D Through Hole Min.	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
A4EU4-MG	6.35	1/4	6.35	1/4	29.0	1.14	29.0	1.14	22.1	0.87	22.1	0.87	4.45	0.175
A5EU4-MG	7.94	5/16	6.35	1/4	34.5	1.36	33.6	1.32	25.9	1.02	22.9	0.90	5.38	0.212
A5EU5-MG	7.94	5/16	7.94	5/16	36.1	1.42	36.2	1.43	25.9	1.02	25.9	1.02	5.38	0.212
A6UE3-MG	9.52	3/8	4.76	3/16	31.8	1.25	31.0	1.22	25.3	1.00	20.8	0.82	3.18	0.125
A6EU4-MG	9.52	3/8	6.35	1/4	34.5	1.36	33.6	1.32	25.9	1.02	22.9	0.90	6.35	0.250
A6EU5-MG	9.52	3/8	7.94	5/16	36.1	1.42	36.1	1.42	25.9	1.02	25.9	1.02	6.35	0.250
A6EU6-MG	9.52	3/8	9.52	3/8	36.1	1.42	36.1	1.42	25.9	1.02	25.9	1.02	6.35	0.250
A8EU6-MG	12.70	1/2	9.52	3/8	42.5	1.68	42.5	1.68	30.5	1.20	30.5	1.20	6.35	0.250
A8EU8-MG	12.70	1/2	12.7	1/2	42.5	1.68	42.5	1.68	30.5	1.20	30.5	1.20	9.53	0.375

## TU – Tee Union Tube to Tube



Product code  #	A Nom. Tube O.D.		B Nom. Tube O.D.		M Length		N Length		D Through Hole Min.	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
A4TU4-MG	6.35	1/4	6.35	1/4	20.6	0.81	22.0	0.87	4.45	0.175
A5TU5-MG	7.94	5/16	7.94	5/16	25.9	1.02	26.2	1.03	4.78	0.188
A6TU4-MG	9.52	3/8	6.35	1/4	26.2	1.03	26.2	1.03	4.45	0.175
A6TU6-MG	9.52	3/8	9.52	3/8	25.9	1.02	26.2	1.03	7.37	0.290
A8TU8-MG	12.70	1/2	12.70	1/2	30.5	1.20	30.7	1.21	9.53	0.375

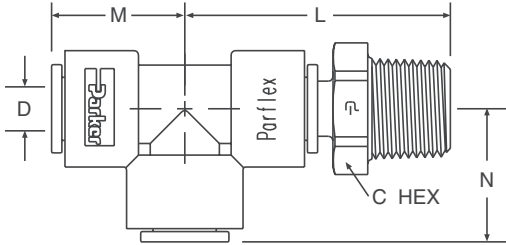
## MES – Male Elbow Swivel NPTF Tube to Tube



Product code  #	NPTF Thread Size	Nom. Tube O.D.		C Hex		N Length		M Length		D Through Hole Min.	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
A4MES2-MG	1/8"	6.35	1/4	14.3	9/16	40.2	1.60	21.5	0.85	4.45	0.175
A4MES4-MG	1/4"	6.35	1/4	17.5	11/16	43.0	1.71	22.1	0.87	4.45	0.175
A4MES6-MG	3/8"	6.35	1/4	20.6	13/16	48.0	1.91	22.9	0.90	5.38	0.212
A5MES2-MG	1/8"	7.94	5/16	14.3	9/16	44.7	1.78	25.9	1.02	4.78	0.188
A5MES4-MG	1/4"	7.94	5/16	17.5	11/16	47.8	1.90	25.9	1.02	4.78	0.188
A5MES6-MG	3/8"	7.94	5/16	20.6	13/16	47.8	1.90	25.9	1.02	4.78	0.188
A6MES2-MG	1/8"	9.52	3/8	14.3	9/16	41.5	1.65	25.9	1.02	4.45	0.175
A6MES4-MG	1/4"	9.52	3/8	20.6	13/16	47.8	1.90	25.9	1.02	6.35	0.250
A6MES6-MG	3/8"	9.52	3/8	20.6	13/16	47.8	1.90	25.9	1.02	6.35	0.250
A8MES4-MG	1/4"	12.70	1/2	20.6	13/16	52.8	2.10	30.5	1.20	6.10	0.240
A8MES6-MG	3/8"	12.70	1/2	20.6	13/16	52.8	2.10	30.5	1.20	9.53	0.375
A8MES8-MG	1/2"	12.70	1/2	25.4	1	58.3	2.32	30.5	1.20	9.53	0.375

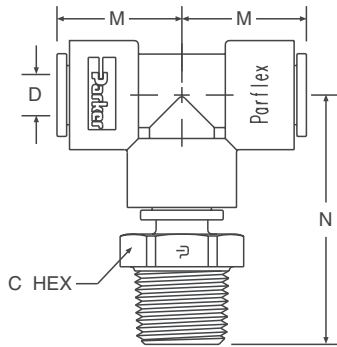
F

# MRS – Male Run Swivel NPTF Tube to Pipe



Product code  #	NPTF Thread Size	Nom. Tube O.D.		C Hex		M Length		L Length		N Length		D Through Hole Min.	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
A4MRS2-MG	1/8"	6.35	1/4	14.3	9/16	20.6	0.81	39.4	1.55	21.6	0.85	4.45	0.175
A4MRS4-MG	1/4"	6.35	1/4	17.5	11/16	20.6	0.81	42.4	1.67	21.6	0.85	4.45	0.175
A5MRS2-MG	1/8"	7.94	5/16	14.3	9/16	25.9	1.02	45.2	1.78	25.9	1.02	4.78	0.188
A5MRS4-MG	1/4"	7.94	5/16	17.5	11/16	25.9	1.02	48.3	1.90	25.9	1.02	4.78	0.188
A5MRS6-MG	3/8"	7.94	5/16	20.6	13/16	25.9	1.02	48.3	1.90	25.9	1.02	4.78	0.188
A6MRS4-MG	1/4"	9.52	3/8	20.6	13/16	25.9	1.02	48.3	1.90	25.9	1.02	6.35	0.250
A6MRS6-MG	3/8"	9.52	3/8	20.6	13/16	25.9	1.02	48.3	1.90	25.9	1.02	6.35	0.250
A6MRS8-MG	1/2"	12.70	1/2	20.6	13/16	30.5	1.20	53.3	2.10	30.5	1.20	6.10	0.240
A8MRS6-MG	3/8"	12.70	1/2	20.6	13/16	30.5	1.20	53.3	2.10	30.5	1.20	9.53	0.375
A8MRS8-MG	1/2"	12.70	1/2	25.4	1	30.5	1.20	53.3	2.10	30.5	1.20	9.53	0.375

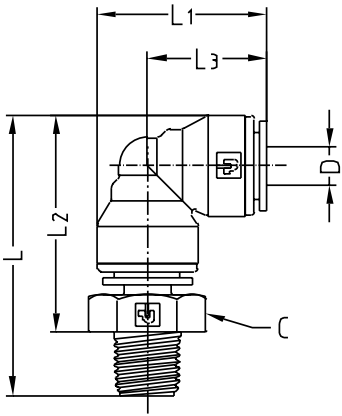
## MTS – Male Tee Swivel NPTF Tube to Pipe



Product code  #	NPTF Thread Size	Nom. Tube O.D.		C Hex		M Length		N Length		D Through Hole Min.	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
A4MTS2-MG	1/8"	6.35	1/4	14.3	9/16	20.6	0.81	40.6	1.60	4.45	0.175
A4MTS4-MG	1/4"	6.35	1/4	17.5	11/16	20.6	0.81	43.4	1.71	4.45	0.175
A5MTS2-MG	1/8"	7.94	5/16	14.3	9/16	25.9	1.02	45.2	1.78	4.78	0.188
A5MTS4-MG	1/4"	7.94	5/16	17.5	11/16	25.9	1.02	48.3	1.90	4.78	0.188
A5MTS6-MG	3/8"	7.94	5/16	20.6	13/16	25.9	1.02	48.3	1.90	4.78	0.188
A6MTS2-MG	1/8"	9.52	3/8	14.3	9/16	25.9	1.02	44.5	1.75	4.45	0.175
A6MTS4-MG	1/4"	9.52	3/8	20.6	13/16	25.9	1.02	48.3	1.90	6.35	0.250
A6MTS6-MG	3/8"	9.52	3/8	20.6	13/16	25.9	1.02	48.3	1.90	6.35	0.250
A8MTS4-MG	1/4"	12.70	1/2	20.6	13/16	30.5	1.20	53.3	2.10	6.10	0.240
A8MTS6-MG	3/8"	12.70	1/2	20.6	13/16	30.5	1.20	53.3	2.10	9.53	0.375
A8MTS8-MG	1/2"	12.70	1/2	25.4	1	30.5	1.20	58.9	2.32	9.53	0.375

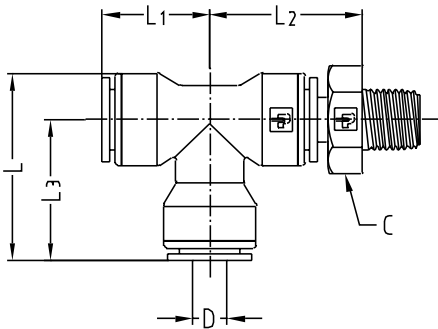


## TES – Male Elbow Swivel BSPT Tube to Pipe



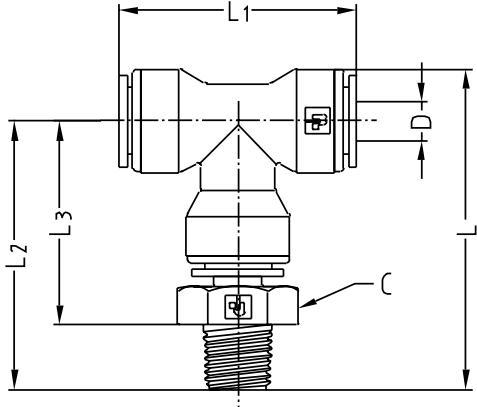
Product code #	BSPT Thread Size	Nom. Tube O.D.		C Hex		L Overall Length		L1 Length		L2 Length		L3 Length		D Through Hole Min.	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
A6TES4-MG	1/4"	9.52	3/8	20.0	0.785	47.0	1.85	36.1	1.42	33.0	1.30	25.9	1.02	6.35	0.250

## TRS – Male Run Swivel BSPT Tube to Pipe



Product code #	BSPT Thread Size	Nom. Tube O.D.		C Hex		L Overall Length		L1 Length		L2 Length		L3 Length		D Through Hole Min.	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
A6TRS4-MG	1/4"	9.52	3/8	20.0	0.785	34.8	1.37	25.9	1.02	47.0	1.85	25.9	1.02	6.35	0.250

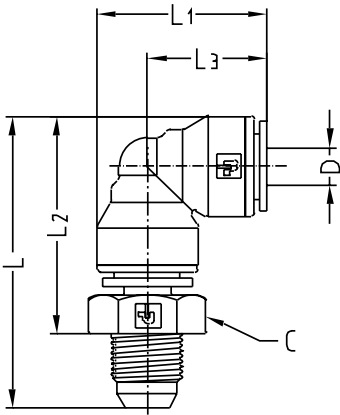
# TTS – Male Tee Swivel BSPT Tube to Pipe



Product code	BSPT Thread Size	Nom. Tube O.D.		C Hex		L Overall Length		L1 Length		L2 Length		L3 Length		D Through Hole Min.	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
#															
A6TTS4-MG	1/4"	9.52	3/8	20.0	0.785	60.7	2.39	51.8	2.04	47.0	1.85	31.8	1.25	6.35	0.250

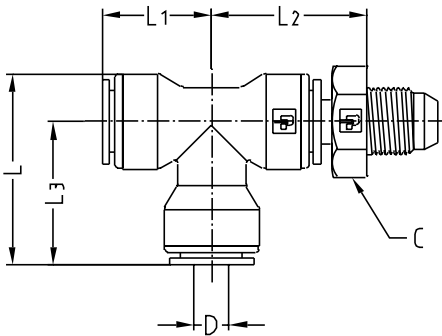


## WES – Male Elbow Swivel BSW Tube to Pipe



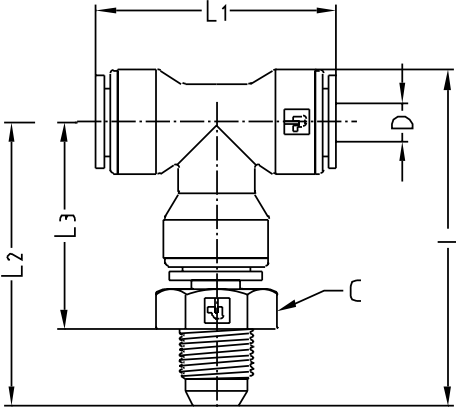
Product code  #	BSW Thread Size	Nom. Tube O.D.		C Hex		L Overall Length		L1 Length		L2 Length		L3 Length		D Through Hole Min.	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
A6MES9-MG	9/16"-24	9.52	3/8	20.0	0.785	50.5	1.99	36.1	1.42	36.0	1.43	25.9	1.02	6.35	0.250

## WRS – Male Run Swivel BSW Tube to Pipe



Product code  #	BSW Thread Size	Nom. Tube O.D.		C Hex		L Overall Length		L1 Length		L2 Length		L3 Length		D Through Hole Min.	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
A6WRS9-MG	9/16"-24	9.52	3/8	20.0	0.785	38.4	1.51	25.9	1.02	48.3	1.90	25.9	1.02	6.35	0.250

# WTS – Male Tee Swivel BSW Tube to Pipe

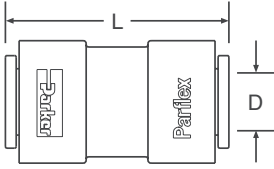


Product code	BSW Thread Size	Nom. Tube O.D.		C Hex		L Overall Length		L1 Length		L2 Length		L3 Length		D Through Hole Min.	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
#															
A6WTS9-MG	9/16"-24	9.52	3/8	20.0	0.785	64.3	2.53	51.8	2.04	48.3	1.90	34.0	1.34	6.35	0.250

**F**

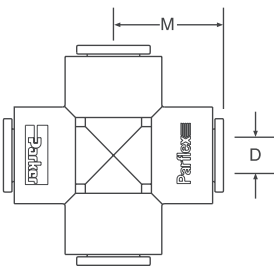


## UC – Union Connector Tube to Tube



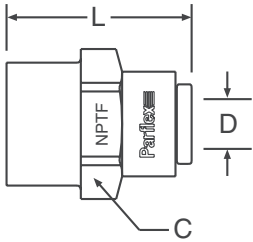
Product code  #	Nom. Tube O.D.		Nom. Tube O.D.		L Overall Length		D Through Hole Min.	
	mm	inch	mm	inch	mm	inch	mm	inch
A3UC3-MG	4.76	3/16	4.76	3/16	32.8	1.29	3.18	0.125
A4UC4-MG	6.35	1/4	6.35	1/4	37.8	1.49	4.45	0.175
A5UC3-MG	7.94	5/16	4.76	3/16	37.8	1.49	3.18	0.125
A5UC4-MG	7.94	5/16	6.35	1/4	43.2	1.70	4.45	0.175
A5UC5-MG	7.94	5/16	7.94	5/16	43.2	1.70	4.78	0.188
A6UC3-MG	9.52	3/8	4.76	3/16	41.5	1.64	3.18	0.125
A6UC4-MG	9.52	3/8	6.35	1/4	43.2	1.70	4.45	0.175
A6UC5-MG	9.52	3/8	7.94	5/16	43.2	1.70	4.78	0.188
A6UC6-MG	9.52	3/8	9.52	3/8	43.2	1.70	6.35	0.250
A8UC5-MG	12.70	1/2	7.94	5/16	48.3	1.90	4.78	0.188
A8UC6-MG	12.70	1/2	9.52	3/8	48.3	1.90	6.35	0.250
A8UC8-MG	12.70	1/2	12.70	1/2	48.5	1.91	9.53	0.375

## CU – Cross Union Tube to Tube



Product code  #	Nom. Tube O.D.		M Length		D Through Hole Min.	
	mm	inch	mm	inch	mm	inch
A4CU4-MG	6.35	1/4	23.1	0.91	4.45	0.175
A6CU6-MG	9.52	3/8	27.4	1.08	6.35	0.250

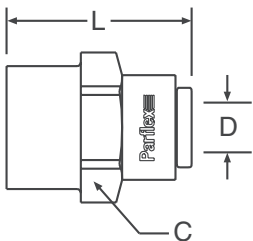
## FC – Female Connector NPTF Tube to Pipe



Product code  #	NPTF Thread Size	Nom. Tube O.D.		C Hex		L Length		D Through Hole Min.	
		mm	inch	mm	inch	mm	inch	mm	inch
A4FC2-MG	1/8"	6.35	1/4	17.5	11/16	30.5	1.20	4.45	0.175
A4FC4-MG	1/4"	6.35	1/4	18.3	23/32	33.5	1.32	4.45	0.175
A5FC4-MG	1/4"	7.94	5/16	20.6	13/16	35.8	1.41	4.78	0.188
A5FC6-MG	3/8"	7.94	5/16	25.4	1	38.1	1.50	4.78	0.188
A6FC4-MG	1/4"	9.52	3/8	20.6	13/16	35.8	1.41	6.35	0.250
A6FC6-MG	3/8"	9.52	3/8	25.4	1	38.1	1.50	6.35	0.250
A6FC8-MG	1/2"	9.52	3/8	28.6	1-1/8	38.6	1.52	6.35	0.250
A8FC6-MG	3/8"	12.70	1/2	28.6	1-1/8	40.6	1.60	9.53	0.375
A8FC8-MG	1/2"	12.70	1/2	28.6	1-1/8	44.5	1.75	9.53	0.375

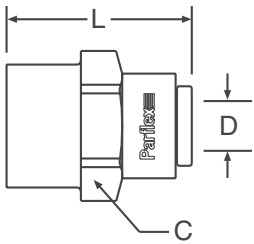
F

## FA – Tap Adapter UNS-2B Tube to Pipe



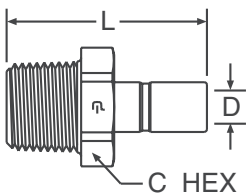
Product code  #	UNS-2B Thread Size	Nom. Tube O.D.		C Hex		L Length		D Through Hole Min.	
		mm	inch	mm	inch	mm	inch	mm	inch
A4FA7-MG	7/16"-24	6.35	1/4	18.3	23/32	33.5	1.32	4.78	0.188
A5FA7-MG	7/16"-24	7.94	5/16	20.6	13/16	35.8	1.41	4.78	0.188
A6FA7-MG	7/16"-24	9.52	3/8	20.6	13/16	35.8	1.41	4.78	0.188

## FF – Female Flare UNF-2B Tube to Pipe



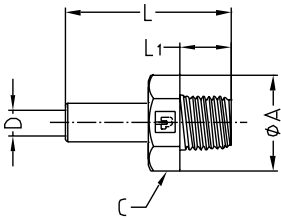
Product code  #	UNF-2B Thread Size	Nom. Tube O.D.		C Hex		L Length		D Through Hole Min.	
		mm	inch	mm	inch	mm	inch	mm	inch
A4FF4-MG	7/16"-20	6.35	1/4	18.3	23/32	33.5	1.32	4.78	0.188
A6FF4-MG	7/16"-20	9.52	3/8	20.6	13/16	35.8	1.41	4.78	0.188
A6FF6-MG	5/8"-20	9.52	3/8	25.4	1	38.1	1.50	6.35	0.250

## TMC – Tube Stem Adapter NPTF Tube Stem to Pipe



Product code  #	NPTF Thread Size	Tube Stem O.D.		C Hex		L Overall Length		D Through Hole Min.	
		mm	inch	mm	inch	mm	inch	mm	inch
A4TMC2	1/8"	6.35	1/4	9.50	9/16	36.6	1.44	4.45	0.175
A4TMC4	1/4"	6.35	1/4	17.5	11/16	39.6	1.56	4.45	0.175
A5TMC2	1/8"	7.94	5/16	9.50	9/16	39.4	1.55	4.78	0.188
A5TMC4	1/4"	7.94	5/16	17.5	11/16	42.4	1.67	4.78	0.188
A5TMC6	3/8"	7.94	5/16	20.6	13/16	42.4	1.67	4.78	0.188
A6TMC4	1/4"	9.52	3/8	20.6	13/16	43.2	1.70	6.35	0.250
A6TMC6	3/8"	9.52	3/8	20.6	13/16	43.2	1.70	6.35	0.250
A8TMC4	1/4"	12.70	1/2	20.6	15/16	46.2	1.82	6.35	0.250
A8TMC6	3/8"	12.70	1/2	20.6	13/16	46.2	1.82	9.53	0.375
A8TMC8	1/2"	12.70	1/2	25.4	1	48.3	1.90	9.53	0.375

## TTC – Tube Stem Adapter BSPT Tube Stem to Pipe

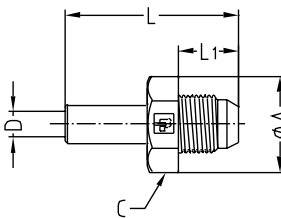


Product code	BSPT Thread Size	Tube Stem O.D.		C Hex		L Overall Length		L1 Length		A Maximum Body Dia.		D Through Hole Min.	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
#													
A6TTC4	1/4"	9.52	3/8	20.0	0.785	40.4	1.59	12.7	0.50	23.0	0.91	6.35	0.250



F

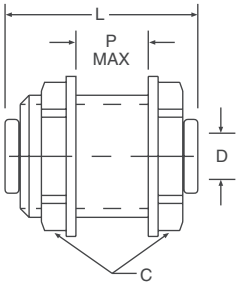
## TWC – Tube Stem Adapter BSW Tube Stem to Pipe



Product code	BSW Thread Size	Tube Stem O.D.		C Hex		L Overall Length		L1 Length		A Maximum Body Dia.		D Through Hole Min.	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
#													
A6TWC9	9/16"-24	9.52	3/8	20.0	0.785	42.7	1.68	15.0	0.59	23.0	0.91	6.35	0.250

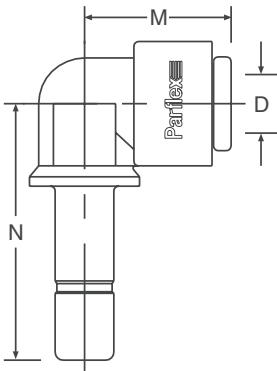


## BU – Bulkhead Union Tube to Tube



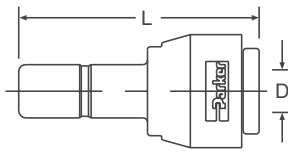
Product code  #	Nom. Tube O.D.		Nom. Tube O.D.		C Hex		L Overall Length		P Max. Wall Thickness		D Through Hole Min.		Bulkhead Hole Drill Size	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
A4BU4-MG	6.35	1/4	6.35	1/4	23.8	15/16	38.1	1.50	12.7	0.50	4.45	0.175	22.23	7/8
A5BU5-MG	7.94	5/16	7.94	5/16	27.0	1-1/16	44.5	1.75	15.7	0.62	4.78	0.188	25.40	1
A6BU4-MG	9.52	3/8	6.35	1/4	27.0	1-1/16	44.5	1.75	15.7	0.62	4.45	0.175	25.40	1
A6BU6-MG	9.52	3/8	9.52	3/8	27.0	1-1/16	44.5	1.75	15.7	0.62	6.35	0.250	25.40	1
A8BU8-MG	12.70	1/2	12.70	1/2	31.8	1-1/4	51.8	2.04	17.8	0.70	9.53	0.375	28.58	1-1/8

## TEU – Tube Elbow Union Tube to Tube Stem



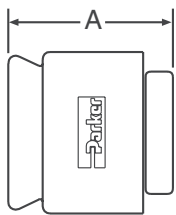
Product code  #	Nom. Tube O.D.		Tube Stem O.D.		M Length		N Length		D Through Hole Min.	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
A4TEU4-MG	6.35	1/4	6.35	1/4	21.3	0.84	30.7	1.21	3.18	0.125
A4TEU6-MG	6.35	1/4	9.52	3/8	21.3	0.84	34.3	1.35	3.18	0.125
A5TEU5-MG	7.94	5/16	7.94	5/16	26.2	1.03	35.6	1.40	4.78	0.188
A6TEU4-MG	9.52	3/8	6.35	1/4	26.2	1.03	32.8	1.29	3.18	0.125
A6TEU5-MG	9.52	3/8	7.94	5/16	26.2	1.03	32.8	1.29	4.78	0.188
A6TEU6-MG	9.52	3/8	9.52	3/8	26.2	1.03	41.7	1.64	6.35	0.250
A8TEU8-MG	12.70	1/2	12.70	1/2	30.7	1.21	41.7	1.64	9.53	0.375

## RD – Tube Reducer Tube to Tube Stem



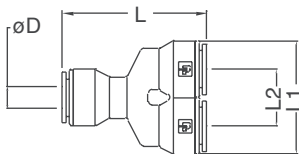
Product code  #	Nom. Tube O.D.		Tube Stem O.D.		L Overall Length		D Through Hole Min.	
	mm	inch	mm	inch	mm	inch	mm	inch
A3RD5-MG	4.76	3/16	7.94	5/16	37.3	1.47	4.78	0.188
A3RD6-MG	4.76	3/16	9.52	3/8	37.3	1.47	4.78	0.188
A4RD5-MG	6.35	1/4	7.94	5/16	41.1	1.62	4.78	0.188
A4RD6-MG	6.35	1/4	9.52	3/8	41.9	1.65	4.78	0.188
A5RD6-MG	7.94	5/16	9.52	3/8	45.2	1.78	6.35	0.250
A5RD8-MG	7.94	5/16	12.70	1/2	48.3	1.90	6.35	0.250
A6RD8-MG	12.70	3/8	12.70	1/2	48.3	1.90	6.35	0.250

## CAP – Tube Cap



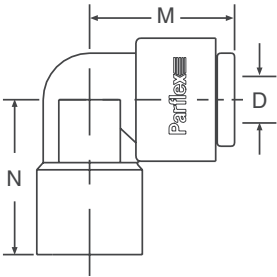
Product code  #	Nom. Tube O.D.		L Overall Length	
	mm	inch	mm	inch
A4CAP-MG	6.35	1/4	19.6	0.77
A6CAP-MG	9.52	3/8	22.4	0.88

## WY - Y Connector Tube to Tube



Product code  #	Nom. Tube O.D.		Nom. Tube O.D.		L Overall Length		L1 Overall Width		L2 Centres		Body Width		D Through Hole Min.	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
A6WY5-MG	9.52	3/8	7.94	5/16	56.0	2.21	42.0	1.65	21.0	0.83	20.3	0.80	4.3	0.19
A6WY6-MG	9.52	3/8	9.52	3/8	56.0	2.21	42.0	1.65	21.0	0.83	20.3	0.80	6.35	0.25

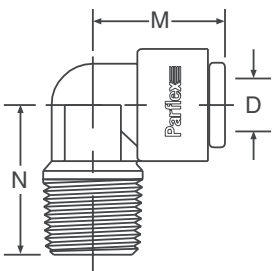
## FE – Female Elbow NPTF Tube to Pipe



Product code  #	NPTF Thread Size	Nom. Tube O.D.		M Length		N Length		D Through Hole Min.	
		mm	inch	mm	inch	mm	inch	mm	inch
A4FE4-MG	1/4"	6.35	1/4	21.3	0.84	25.4	1	4.78	0.188
A6FE4-MG	1/4"	9.52	3/8	26.2	1.03	25.4	1	6.35	0.250
A6FE6-MG	3/8"	9.52	3/8	26.2	1.03	25.4	1	6.35	0.250



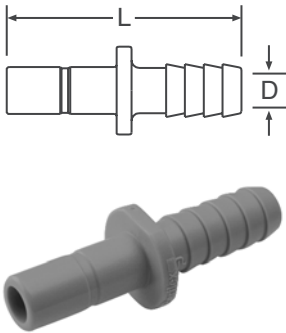
## ME – Male Elbow NPTF Tube to Pipe



Product code  #	NPTF Thread Size	Nom. Tube O.D.		M Length		N Length		D Through Hole Min.	
		mm	inch	mm	inch	mm	inch	mm	inch
A4ME2-MG	1/8"	6.35	1/4	21.3	0.84	23.9	0.94	4.45	0.175
A4ME4-MG	1/4"	6.35	1/4	21.3	0.84	23.9	0.94	4.45	0.175
A4ME6-MG	3/8"	6.35	1/4	21.3	0.84	26.4	1.04	4.45	0.175
A5ME4-MG	1/4"	7.94	5/16	26.2	1.03	27.4	1.08	4.45	0.175
A5ME6-MG	3/8"	7.94	5/16	26.2	1.03	26.9	1.06	4.78	0.188
A6ME4-MG	1/4"	9.52	3/8	26.2	1.03	27.4	1.08	6.35	0.250
A6ME6-MG	3/8"	9.52	3/8	26.2	1.03	26.9	1.06	6.35	0.250

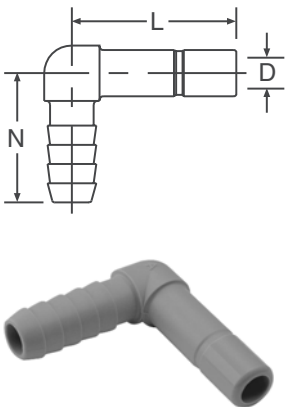


## TCB – Tube To Barb Connector



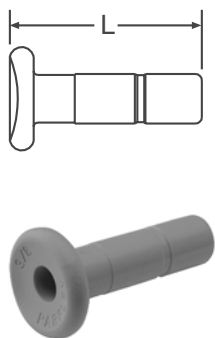
Product code  #	Tube Stem O.D.		Tube Stem I.D.		L Overall Length		D Through Hole Min.	
	mm	inch	mm	inch	mm	inch	mm	inch
A4TCB4	6.35	1/4	6.35	1/4"	42.4	1.67	3.56	0.140
A6TCB4	9.52	3/8	6.35	1/4"	46.2	1.82	3.56	0.140
A6TCB6	9.52	3/8	9.52	3/8"	50.3	1.98	6.35	0.250
A8TCB6	12.70	1/2	9.52	3/8"	53.3	2.10	6.35	0.250
A8TCB8	12.70	1/2	12.70	1/2"	53.3	2.10	9.53	0.375

## TEB – Tube To Barb Elbow



Product code  #	Tube Stem O.D.		Tube Stem I.D.		L Length		N Length		D Through Hole Min.	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
A4TEB4	6.35	1/4	6.35	1/4	25.4	1.00	22.6	0.89	3.56	0.140
A6TEB4	9.52	3/8	6.35	1/4	26.9	1.06	34.0	1.34	3.56	0.140
A6TEB6	9.52	3/8	9.52	3/8	30.7	1.21	34.0	1.34	6.35	0.250
A8TEB8	12.70	1/2	12.70	1/2	33.0	1.30	33.0	1.30	9.91	0.390

## TPL – Plug

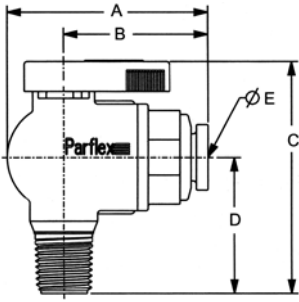


Product code  #	Nom. Tube Stem O.D.		L Overall Length	
	mm	inch	mm	inch
A4TPL	6.35	1/4	22.4	0.88
A5TPL	7.94	5/16	36.8	1.45
A6TPL	9.52	3/8	38.1	1.50
A8TPL	9.52	3/8	38.1	1.50

F

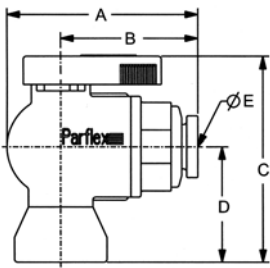


## VME - Valve Male Elbow



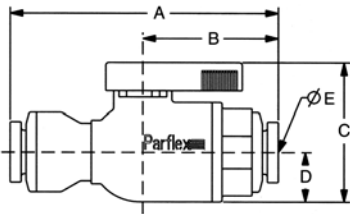
Product code  #	Nom. Tube O.D.		NPTF Thread Size	A		B		C		D		E Through Hole Min.	
	mm	inch		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
PP4VME2-MG	6.35	1/4	1/8	44.2	1.74	30.7	1.21	50.8	2.00	27.9	1.10	4.83	0.19
PP4VME4-MG	6.35	1/4	1/4	44.2	1.74	30.7	1.21	55.4	2.18	32.5	1.28	4.83	0.19
PP4VME6-MG	6.35	1/4	3/8	44.2	1.74	30.7	1.21	55.4	2.18	32.5	1.28	4.83	0.19
PP4VME8-MG	6.35	1/4	1/2	44.2	1.74	30.7	1.21	60.2	2.37	37.3	1.47	4.83	0.19
PP6VME2-MG	9.52	3/8	1/8	47.0	1.85	33.5	1.32	50.8	2.00	27.9	1.10	6.35	0.25
PP6VME4-MG	9.52	3/8	1/4	47.0	1.85	33.5	1.32	55.4	2.18	32.5	1.28	6.35	0.25
PP6VME6-MG	9.52	3/8	3/8	47.0	1.85	33.5	1.32	55.4	2.18	32.5	1.28	6.35	0.25
PP6VME8-MG	9.52	3/8	1/2	47.0	1.85	33.5	1.32	60.2	2.37	37.9	1.47	6.35	0.25

## VFE - Valve Female Elbow



Product code  #	Nom. Tube O.D.		NPTF Thread Size	A		B		C		D		E Through Hole Min.	
	mm	inch		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
PP4VFE2-MG	6.35	1/4	1/8	44.2	1.74	30.7	1.21	46.2	1.82	23.4	0.92	4.83	0.19
PP4VFE4-MG	6.35	1/4	1/4	44.2	1.74	30.7	1.21	52.1	2.05	29.2	1.15	4.83	0.19
PP4VFE6-MG	6.35	1/4	3/8	44.2	1.74	30.7	1.21	55.4	2.18	32.5	1.28	4.83	0.19
PP6VFE2-MG	9.52	3/8	1/8	47.0	1.85	33.5	1.32	46.2	1.82	23.4	0.92	6.35	0.25
PP6VFE4-MG	9.52	3/8	1/4	47.0	1.85	33.5	1.32	52.1	2.05	29.2	1.15	6.35	0.25
PP6VFE6-MG	9.52	3/8	3/8	47.0	1.85	33.5	1.32	55.4	2.18	32.5	1.28	6.35	0.25

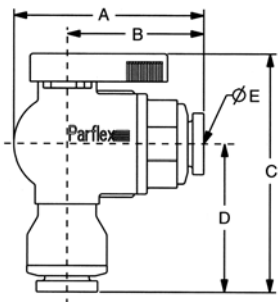
## VUC - Valve Union Connector



Product code  #	Nom. Tube O.D.		Nom. Tube O.D.		A		B		C		D		E Through Hole Min.	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
PP4VUC4-MG	6.35	1/4	6.35	1/4	63.8	2.51	30.7	1.21	35.6	1.4	12.7	0.5	4.83	0.19
PP4VUC6-MG	6.35	1/4	9.52	3/8	66.5	2.62	30.7	1.21	35.6	1.4	12.7	0.5	4.83	0.19
PP6VUC4-MG	9.52	3/8	6.35	1/4	65.0	2.56	33.5	1.32	35.6	1.4	12.7	0.5	4.83	0.19
PP6VUC6-MG	9.52	3/8	9.52	3/8	67.8	2.67	33.5	1.32	35.6	1.4	12.7	0.5	6.35	0.25

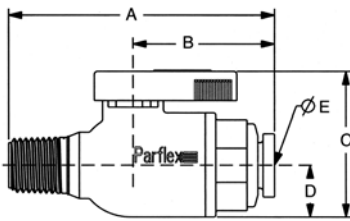
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## VEU - Valve Elbow Union



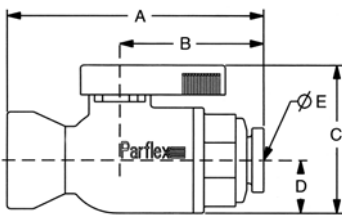
Product code  #	Nom. Tube O.D.		Nom. Tube O.D.		A		B		C		D		E Through Hole Min.	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
PP4VEU4-MG	6.35	1/4	6.35	1/4	44.2	1.74	30.7	1.21	58.2	2.29	35.3	1.39	4.83	0.19
PP4VEU6-MG	6.35	1/4	9.52	3/8	44.2	1.74	30.7	1.21	59.4	2.34	36.6	1.44	2.80	0.11
PP6VEU4-MG	9.52	3/8	6.35	1/4	47.0	1.85	33.5	1.32	58.2	2.29	35.3	1.39	4.83	0.19
PP6VEU6-MG	9.52	3/8	9.52	3/8	47.0	1.85	33.5	1.32	59.4	2.34	36.6	1.44	6.35	0.25

## VMC - Valve Male Connector



Product code  #	Nom. Tube O.D.		NPTF Thread Size	A		B		C		D		E Through Hole Min.	
	mm	inch		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
PP4VMC2-MG	6.35	1/4	1/8	56.4	2.22	30.7	1.21	35.6	1.4	12.7	0.5	4.83	0.19
PP4VMC4-MG	6.35	1/4	1/4	61.0	2.40	30.7	1.21	35.6	1.4	12.7	0.5	4.83	0.19
PP4VMC6-MG	6.35	1/4	3/8	61.0	2.40	30.7	1.21	35.6	1.4	12.7	0.5	4.83	0.19
PP4VMC8-MG	6.35	1/4	1/2	65.8	2.59	30.7	1.21	35.6	1.4	12.7	0.5	4.83	0.19
PP6VMC2-MG	9.52	3/8	1/8	59.2	2.33	33.5	1.32	35.6	1.4	12.7	0.5	6.35	0.25
PP6VMC4-MG	9.52	3/8	1/4	63.8	2.51	33.5	1.32	35.6	1.4	12.7	0.5	6.35	0.25
PP6VMC6-MG	9.52	3/8	3/8	63.8	2.51	33.5	1.32	35.6	1.4	12.7	0.5	6.35	0.25
PP6VMC8-MG	9.52	3/8	1/2	68.6	2.70	33.5	1.32	35.6	1.4	12.7	0.5	6.35	0.25

## VFC - Valve Female Connector

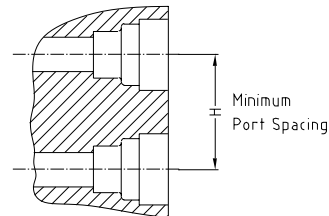
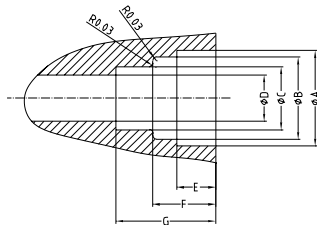


Product code  #	Nom. Tube O.D.		NPTF Thread Size	A		B		C		D		E Through Hole Min.	
	mm	inch		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
PP4VFC2-MG	6.35	1/4	1/8	51.8	2.04	30.7	1.21	35.6	1.4	12.7	0.5	4.83	0.19
PP4VFC4-MG	6.35	1/4	1/4	57.7	2.27	30.7	1.21	35.6	1.4	12.7	0.5	4.83	0.19
PP4VFC6-MG	6.35	1/4	3/8	61.0	2.40	30.7	1.21	35.6	1.4	12.7	0.5	4.83	0.19
PP6VFC2-MG	9.52	3/8	1/8	54.6	2.15	33.5	1.32	35.6	1.4	12.7	0.5	6.35	0.25
PP6VFC4-MG	9.52	3/8	1/4	60.5	2.38	33.5	1.32	35.6	1.4	12.7	0.5	6.35	0.25
PP6VFC6-MG	9.52	3/8	3/8	63.8	2.51	33.5	1.32	35.6	1.4	12.7	0.5	6.35	0.25

## TSC – Cartridge Insert



Product code #	Nom. Tube O.D.		A Diameter + / - 0.002		B Diameter + / - 0.002		C Diameter + / - 0.002		D Diameter + / - 0.002		E Depth + / - 0.002		F Depth + / - 0.002		G Depth + / - 0.002		H Centreline of Ports + / - 0.002	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
ATSC4-MG	6.35	1/4	13.41	0.528	10.69	0.421	6.60	0.260	4.45	0.175	5.84	0.23	11.05	0.435	15.24	0.600	17.02	0.67
		5/16																
ATSC6-MG	9.52	3/8	16.05	0.632	13.84	0.545	9.78	0.385	6.35	0.250	7.11	0.28	11.56	0.455	17.91	0.705	20.07	0.79
ATSC8-MG	12.70	1/2	19.66	0.774	16.97	0.668	12.95	0.510	9.53	0.375	8.00	0.315	12.95	0.510	20.57	0.810	31.75	1.25



### Parker TrueSeal™ Cartridge Inserts:

Allow you to machine or mold a tube connection into your equipment or components. By using cartridge inserts, you will reduce your material and assembly costs, reduce potential leak paths, and give your equipment a new, clean profile by eliminating the need for threaded connections. Part number ATSC4 consists of 1 o-ring, 1 cartridge, and 1 collet.

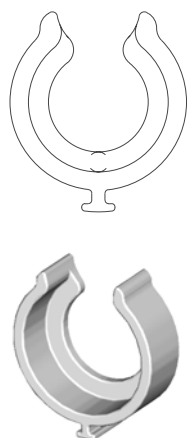
\* Cartridge inserts are rated at 300 psi. Test results are measured using Noryl® as the receiving material. Other materials may produce different results. Consult the Parflex Division for required dimensions when using filled and unfilled polypropylene, Abs, and nylon.

NORYL® is a registered trademark of the General Electric Co.

### Assembly Instructions:

- Step 1** – Machine or mold the receiving orifice as per the above dimensions.
- Step 2** – Place the cartridge insert squarely onto the prepared port opening making sure that the barbs of the cartridge are going into the hole and the lettering on the face of the cartridge is visible.
- Step 3** – Using a rubber mallet or press, insert the cartridge into the first gland orifice until its face is flush with the top surface of the port.
- Step 4** – Insert the o-ring into the cartridge and seat it evenly into the second gland orifice.
- Step 5** – Insert the collet into the cartridge opening.
- Step 6** – Insert tubing.

## SC – Safety Clips



Product code #	Nom. Tube O.D.	
	mm	inch
SC-4	6.35	1/4
SC-5	7.94	5/16
SC-6	9.52	3/8
SC-8	12.70	1/2

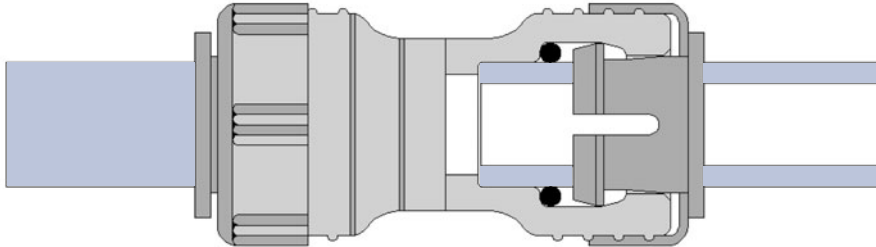
## TS – Tube Supports



Product code #	Nom. Tube O.D.		Nom. Tube I.D.	
	mm	inch	mm	inch
N4TS3	6.35	1/4	4.76	3/16
N5TS3	7.94	5/16	4.76	3/16
N6TS4	9.52	3/8	6.35	1/4
N8TS6	12.70	1/2	9.52	3/8

## AquaSeal Thermoplastic Push-In Fittings

Parker thermoplastic fittings are light weight, reusable, and connect to plastic tubing without the use of tools.



### Features

- All plastic body resists corrosion
- Integral tube support for added stability and reduced side loading
- Removable collet design with stainless steel teeth for hard plastics and soft metal tubing
- Elastomeric seal for leak free connections
- Locking cap can be supplied for added security

### Installation instructions

- Cut tubing square and clean (use a Parker tube cutter – Part number PTC)
- Mark from end of tube the insertion depth (**Slimline = 28 mm; Locking Cap = 30 mm**)
- Push tube into the fitting until the bottoms out
- If a locking cap is supplied then **unscrew 2 turns anticlockwise** to secure collet in position
- To remove, depress collet and pull tubing out

### Specifications

Material	Fitting Colour	O Ring	Fitting Size	Working Pressure	Temp. Range
Cross Linked Polyethylene	White	EPDM	15 mm	200 psi	-18 °C to +85 °C

These fittings are rated for the pressure above or at 1/4 (one-fourth) of the rated burst pressure of the tubing being used (whichever is less).

Pressure ratings are based on tests using tubing at 20 deg C. Actual working pressures will be lower at elevated temperatures. Please consult our technical department.

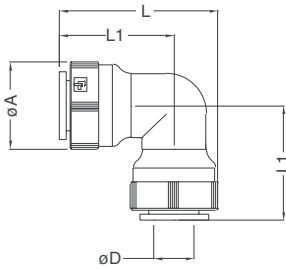
### Ordering key

Examples: **MS 15 UC 15 -MG**

MS = Fitting type: MS = Slimline type  
 MX = Locking Cap type  
 15 = Fitting O.D. in mm  
 UC = Body style  
 15 = End termination size  
 MG = Metal Gripper Collet

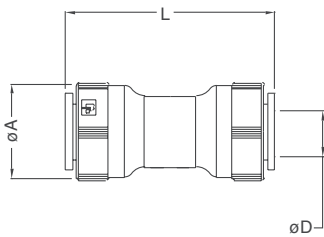
These fittings are used in a number of different industries, including the Beverage and Soft Drink industry. They are suitable for potable water, beers, syrups and other foodstuffs.

## EU – Elbow Union 15 MM Tube to Tube



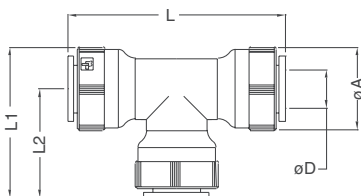
Product code  #	Nom. Tube O.D.  mm	L Overall Length		L1 Length		A Maximum Body Dia.		D Through Hole Min.	
		mm	inch	mm	inch	mm	inch	mm	inch
MS15EU15-MG	15	58.9	2.32	38.9	1.53	29.0	1.14	9.00	0.354
MX15EU15-MG	15	58.9	2.32	38.9	1.53	33.0	1.30	9.00	0.354

## UC – Union Connector 15 MM Tube to Tube



Product code  #	Nom. Tube O.D.  mm	L Overall Length		A Maximum Body Dia.		D Through Hole Min.	
		mm	inch	mm	inch	mm	inch
MS15UC15-MG	15	61.2	2.41	29.0	1.14	9.00	0.354
MX15UC15-MG	15	61.2	2.41	33.0	1.30	9.00	0.354

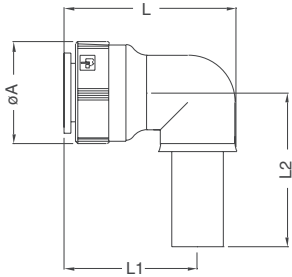
## TU – Tee Union 15 MM Tube to Tube



Product code  #	Nom. Tube O.D.  mm	L Overall Length		L1 Length		L2 Length		A Maximum Body Dia.		D Through Hole Min.	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
MS15TU15-MG	15	78.5	3.09	54.6	2.15	38.1	1.50	29.0	1.14	9.00	0.354
MX15TU15-MG	15	78.5	3.09	54.6	2.15	38.1	1.50	33.0	1.30	9.00	0.354

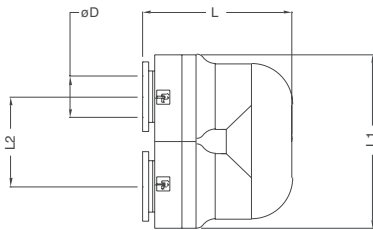


## TEU – Tube Elbow Union 15 MM Tube to Tube Stem



Product code  #	Nom. Tube O.D.	Nom. Tube Stem O.D.	L Overall Length		L1 Length		L2 Length		A Maximum Body Dia.		D Through Hole Min.	
	mm	mm	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
MS15TEU15-MG	15	15	58.9	2.32	38.9	1.53	38.4	1.51	29.0	1.14	9.00	0.354
MX15TEU15-MG	15	15	58.9	2.32	38.9	1.53	38.4	1.51	33.0	1.30	9.00	0.354

## UB – U Bend 15 MM Tube to Tube



Product code  #	Nom. Tube O.D.	L Overall Length		L1 Length		L2 Centerline Length		D Through Hole Min.	
	mm	mm	inch	mm	inch	mm	inch	mm	inch
MS15UB15-MG	15	53.3	2.10	53.3	2.10	30.5	1.20	9.00	0.354

## ***G – Accessories***

Insulation .....	G2
PVC Tape .....	G2
Cutters .....	G2
Trunking .....	G3
Electric Cable .....	G3





## Insulation

### Application:

Foam is used for the insulation of tubes and looms to assist in maintaining the products required temperature.

Foam can be used for insulating a complete installation or in construction with a python that requires topping and tailing.

It complies with Fire Regulations.

Other Dimensions are available on request.

Product code  #	Nom. Tube I.D.		Wall Thickness	
	mm	inch	mm	inch
ARM06006	6.0	1/4"	6.0	1/4"
ARM06010	10.0	3/8"	6.0	1/4"
ARM06015	15.0	.590"	6.0	1/4"
ARM06020	20.0	3/4"	6.0	1/4"
ARM09010	10.0	3/8"	9.0	.354"
ARM13006	6.0	1/4"	13.0	1/2"
ARM13010	10.0	3/8"	13.0	1/2"
ARM13015	15.0	.590"	13.0	1/2"
ARM13020	20.0	3/4"	13.0	1/2"
ARM13022	22.0	.866"	13.0	1/2"
ARM13028	28.0	1.102"	13.0	1/2"
ARM13035	35.0	1 3/8"	13.0	1/2"
ARM13042	42.0	1.653"	13.0	1/2"
ARM13048	48.0	1.896"	13.0	1/2"
ARM13054	54.0	2 1/8"	13.0	1/2"
ARM13060	60.0	2.362"	13.0	1/2"

## PVC Tape

PVC Tape complies with Fire Regulations.

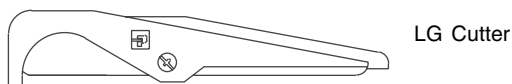
### Colour:

Black

Product code  #	Width  mm
TAPE50BLK-33	50
TAPE75BLK-100	75

## Cutters

Cutters are available as large and small models.



LG Cutter



SM Cutter

Product code  #	Cuts tube size
PTCSMCUTTER	up to 1/2"
T135LGCUTTER	up to 1 1/2"
T135LGCUTTER BLADE	spare blade

## Trunking

### Application:

Parker's range of PVC Clip-Lid Trunking can be used throughout the Brewery and Soft Drinks Industry, not only in cellar installations, but for all types of applications where lines of service tubes, Pythons and cables require to be housed in a safe, neat, durable trunking.

The Clip-Lid allows easy access at all times.

Product code  #	Dimensions		Colour
	mm	inch	
TRU1x2	25 x 50	1" x 2"	white
TRU2x2	50 x 50	2" x 2"	white
TRU3x3	75 x 75	3" x 3"	white
TRU4x4	100 x 100	4" x 4"	white
TRU6x6	150 x 150	6" x 6"	white

## Electric Cable

### Application:

For electrical installation of dispense and other electrical equipment in cellars, bars and any other indoor installation.

Parker's electric cable is designed to complement our range of products, and is available in the traditional core colours and also in the colours laid down by the Brewer's Society for the use with low voltage dispense equipment.

### Available Outer Sheath Colours:

Black, white

### Coil Sizes:

100 meters, 1,000 meters

Product code  #	Cable type	Core diameter	Core colours
		mm	
2192Y.5	219 2Y	0.50	brown, blue
2183Y.5	218 3Y	0.50	white, orange, violet
2184Y.5	218 4Y	0.50	white, orange, violet, grey
2183Y.75	218 3Y	0.75	white, orange, violet
2184Y.75	218 4Y	0.75	white, orange, violet, grey
3183Y.75	318 3Y	0.75	brown, blue, green/yellow
3183Y.1.5	318 3Y	1.50	brown, blue, green/yellow

### Ordering Key for Insulation, PVC Tape, Cable and Trunking

Examples:

**ARM13015**

Nom. Tube I.D. in mms  
Wall Thickness in mms

**TRU1x2**

Width in inches  
Height in inches

**TAPE50BLK-33**

Length  
Colour  
Size

**2184Y.5WHT100**

Coil Size  
Outer Sheath Colour  
Core Diameter  
Cable Type



***H – Technical Information***

Chemical Resistance . . . . . H2

Temperature Effect On Working Pressure . . . . . H8

Vinyl Acetate Content Effect On Working Pressure . . . . . H8



## Chemical Resistance

### A guide to the chemical Resistance of hoses and tubes

#### Introduction

When selecting hoses and tubes, engineers consider many performance criteria. The information given here concerns chemical resistance only, and clearly an indication of high resistance does not confirm suitability in other respects such as compliance with food regulations and freedom from colour change, permeation etc.

In the chart we retain our usual ratings for chemical resistance which customers have found helpful, viz. High, Low, and Poor, as defined in the key overleaf, together with abbreviations used.

We shall be pleased to advise on the compatibility of substances not mentioned in the chart.

#### Powders, Solutions and Concentrates

We do not give information on dry chemical powders because in general, hoses and tubes will convey these satisfactorily without breakdown. Where a powder is prone to picking up water it is advisable to ascertain from the chart the affect of its solution in water.

Soluble chemicals (salts and bases, etc.) are dissolved in water unless otherwise noted.

Substances should be regarded as pure, saturated or concentrated, as appropriate, unless otherwise noted. Percentage figures represent concentrations by weight.

#### Chemical Resistance of Flexible P.V.C. Hose

P.V.C. hoses contain plasticiser to confer good flexibility. Some solvents extract the plasticiser rather quickly and the hose becomes hardened. Examples of these are alcohols and hydrocarbon solvents. Oils extract the plasticiser, but with some oils and petrols the hose retains flexibility and useful performance so long as it is not allowed to dry out. See only those qualified by the symbol ■. The oil, in effect, takes over the role of the plasticiser and if it evaporates, the hose loses its flexibility.

#### Selection of Hoses and Tubes

When selecting hoses and tubes, it is advisable to read the information sheets on those products which are of interest to gain a fuller appreciation of properties. Should you require further information, contact our Technical Department.

#### Key to Symbols

- H = High resistance
- L = Low resistance. Attack will occur giving shortened life.
- P = Poor resistance. Rapid attack will occur.
- ▲ = Predicted data or opinion based on same family of plastic materials described in the headings.
- ▲▲ = Normal user conditions
- = See main headings
- qv = see alternative name

*It should be appreciated that the information given herein is, to the best of our knowledge, true and accurate. Since, however, conditions under which our products may be used are beyond our control recommendations are made without warranty or guarantee.*

# Technical Information Chemical Resistance

	Ethylene/Vinyl Acetate EVA			Nylon Flex & Semi-rigid			Polyethylene, Low Density Medium Density			Polyvinyl Chloride, Flexible PVC		
	20°C	60°C	Notes	20°C	60°C	Notes	20°C	60°C	Notes	20°C	55°C	Notes
Acetaldehyde	L▲	P▲		H	P		L	P	40% & 100%	P	P	
Acetic Acid	H▲	H▲	10%	H	L-P	10%	H	H	10%	H	L▲	10%
	H▲	H▲	60%	L-P	P	50%	H	H	60%	H	P	50%
	H	H	Conc	L-P	P	Conc				L	P	85%
Acetic Acid, Glacial (conc)	H	H		P	P		L	P		P	P	
Acetic Anhydride				L	P		L▲	P		P▲	P▲	
Acetone	P	P		H	L		P	P		P	P	
Acetylene Gas				H	H							
Alum	H▲	H▲		H▲	H▲		H	H		H	H	
Aluminium Chloride	H	H		H▲	H▲		H	H		H	H	
Aluminium Sulphate	H	H		H▲	H▲		H	H		H▲	H▲	
Ammonia, Aqueous	H	H		H	H		H	H		H	H	10%
										L	L	28%
												(P at S.G. 0.8)
Ammonia, gas	H	H		H	H		H	H		L▲	L▲	Dry
										P	P	Wet
Ammonium Chloride (Sal-Ammoniac)	H	H		H▲	H▲		H	H		H	H	
Ammonium Hydroxide	H▲	H▲		H	H		H	H		H	L▲	
Ammonium Sulphate	H	H		H	L		H	H		H	H	
Amyl Acetate	P	P		H	H		P	P		P▲	P▲	
Amyl Alcohol	H▲	P▲		H▲	H-L▲		H	P		L▲		
Anethole				H			P	P				
Aniline	L	P		L	P		L▲	P▲		P	P	
Arcton 6 (Refrigerant)							L					
Arcton 11 (Refrigerant)												
Arcton 12 (Refrigerant)				H						P		
Arcton 22 (Refrigerant)				H								
Arcton 113 (Refrigerant)				P	P							
Arcton 114 (Refrigerant)												
Barium Chloride	H	H		H	H		H	H		H▲	H▲	
Barium Hydroxide	H	H		H▲	L▲		H	H		H▲		
Beer	H	H		H	H		H	H		H		
Benzaldehyde	P▲	P▲		H	P		P	P		P	P	
Benzene	P	P		H	L		P	P		P	P	
Benzyl Alcohol	P▲	P▲		L	P		P	P		P▲	P▲	
Bleach - See Calcium Hypochlorite	qv	qv		qv			qv	qv		qv	qv	
Borax (Sodium Tetraborate)	H	H		H▲	H▲		H	H		H	H	
Boric Acid	H	H	Conc and Dil	H▲			H	H		H	H	
Brine	H	H		H	H		H	H		H▲	H▲	
Bromine, Dry Gas	P▲	P▲		P	P		P	P		P▲	P▲	
Bromine, Liquid, Anhydrous	P▲	P▲		P	P		P	P		P▲	P▲	
Butane Gas	H▲			H	H		H			H		
Butyl Acetate				H	H					P▲	P▲	
Butyl Alcohol (Butanol)	H	H		H-L	P		H	H▲		H-L	P	
Butyric Acid	P▲						P			H▲	L▲	20%
										P	P	Conc.
Calcium Arsenate				H	H							
Calcium Chloride	H	H		H	H		H	H		H▲	H▲	
Calcium Hydroxide (Lime Solution)	H	H		H▲			H	H		H	H	
Calcium Hypochlorite (Chloride of Lime, Bleach)										H▲	H▲	Dil.
	H	H		L▲		Dil	H	H		H▲	L	Conc.
Carbitol Acetate										P	P	
Carbolic Acid [Phenol(s)]	P▲	P▲		P	P		P	P		L▲	P▲	
Carbon Dioxide	H	H		H▲	H▲		H	H		H	H	
Carbon Disulphide	P▲	P▲		H	P		P	P		P	P	
Carbon Tetrachloride	P	P		P	P		P	P		L-P	P	

# Technical Information

## Chemical Resistance

	Ethylene/Vinyl Acetate EVA			Nylon Flex & Semi-rigid			Polyethylene, Low Density Medium Density			Polyvinyl Chloride, Flexible PVC		
	20°C	60°C	Notes	20°C	60°C	Notes	20°C	60°C	Notes	20°C	55°C	Notes
Castor Oil	P	P					P	P		H-L▲	P▲	
Chlorine Gas, Dry	P▲	P▲		P	P		P	P		P	P	
Chlorine Water	H▲	H▲	2%	P	P		H	H	2%	P	P	
	H▲	P▲	Sat'd				H	P	Sat'd			
Chloroform	P▲	P▲		P	P		P	P		P▲	P▲	
Chromic Acid	P	P		P	P	10%	H	H	Plating Soln.	P		10%
Cider	H▲	H▲		H			H	H		H▲		
Citric Acid	H	H		H	L		H	H		H	H	50%
Coal Gas				H						P		Permeates
Copper Sulphate	H	H		H	H		H	H		H	H	
Creosote	P▲	P▲		P▲	P▲		P	P		P▲	P▲	
Cresol(s) (incl Cresylic Acid)	P▲	P▲		P	P		P	P		P	P	
Crude Oil	P	P		H	H	Petroleum Oil	P	P		L	P▲	
Cyanide	H▲	H▲					H	H		H	H▲	
Cyclohexane	P	P		H	L		P▲	P▲				
Cyclohexanone	P▲	P▲		H	P		P	P		P	P	
D.D.T. Preparation				H								
Decalin				H	H							
Detergents, Alkaline▲▲	H▲	H▲					H▲	H▲		H		To 25%
Detergents, Synthetic▲▲	H▲	H▲					H	H		H	H▲	
Dextrin (Starch Gum)	H	H		H▲	H▲		H	H		H	H▲	
Dextrose (Glucose, Grape Sugar)	H	H		H▲	H▲		H	H		H▲	H▲	
Di Acetone Alcohol				H	L							
Di Ammonium Phosphate				H	L							
Di Butyl Phthalate	L▲	P▲		H			L	P		P▲	P▲	
Di Chloro Ethane (Ethylene Di Chloride)				L						P▲	P	
Di Chloro Methane (Methylene Chloride)				L						P	P	
Di Ethanolamine				H	L	20%						
Di Ethyl Ether	P▲	P▲		H			P	P		P	P	
Di Isocyanate				H▲						P	P	
Di Methyl Formamide				H						P	P	
Di Methyl Sulphoxide				P	P					P	P	
Di Octyl Phosphate				H	H							
Di Octyl Phthalate	L▲	P▲		H	H		L	P		P▲	P▲	
Di Sodium Phosphate	H	H					H	H▲		H	H	
Diesel Oil	L▲	P▲		H	H-L		L▲	P▲		H-L	P	■
Ethyl Acetate	L-P	P		H	H		L	P		P▲	P▲	
Ethyl Alcohol (Ethanol)	H	H	35%-100%	H-L	P		H	P	40%	H	L-P▲	20%
							P	P	100%	P	P	96%
Ethylene Chlorhydrin				P	P					P▲	P▲	
Ethylene Chloride	P▲	P▲		L			P	P		P	P	
Ethylene Di Chloride (Di Chloro Ethane)	P▲	P▲		L			P	P		P▲	P▲	
Ethyl Ether	P	P		H			P	P		P	P	
Ethylene Glycol	H	H		H	L		H	H		H	L	30%
										L	L	100%
Ethylene Oxide	H▲			H	L		H			P▲	P▲	
Fatty Acid Esters				H	H							
Ferric Chloride	L	L		H			H	H		H	H	
Flavours and Essences	H▲			H	H		H▲					
Fluorine	L▲	P▲		P	P		L	P		P▲	P▲	
Formaldehyde 40%	H	L		H	P		H	H		L	L	37%
Formic Acid	H▲	H▲	3%-100%	P	P	50%	H	H	3%-100%	H	H	10%
										L	P	50%
										P	P	100%
French Polish	H▲			H-L▲			H▲			P	P	
Freon 11 (Refrigerant)												

# Technical Information Chemical Resistance

	Ethylene/Vinyl Acetate EVA			Nylon Flex & Semi-rigid			Polyethylene, Low Density Medium Density			Polyvinyl Chloride, Flexible PVC		
	20°C	60°C	Notes	20°C	60°C	Notes	20°C	60°C	Notes	20°C	55°C	Notes
Freon 12 (Refrigerant)				H								
Freon 22 (Refrigerant)				H								
Freon 113 (Refrigerant)				P	P					P	P	
Freon 114 (Refrigerant)												
Fruit Juices	H		Lemon	H			H	H		H▲		
Fuel Oil	L▲	P▲		H	H-L		L	P		H-L	P▲	■
Furfuryl Alcohol				H	L		P	P		P▲	P▲	
Gas, Coal or Town -See Coal Gas				qv								
Gas, Natural (mainly Methane) - See Natural Gas				qv						qv		
Gas Oil	L▲	P▲		H	L		L▲	P▲		H-L	P▲	■
Gaz (Liquefied Petroleum Gas)										P	P	
Glucose (Dextrose, Grape Sugar)	H	H		H	H		H	H		H	H	
Glycerine	H	H		H	L		H	H		H	L	
Glycol - See Ethylene Glycol	qv	qv		qv	qv		qv	qv		qv	qv	
Grape Sugar (Dextrose, Glucose)	H	H		H	H		H	H		H	H	
Greases, General	L▲	P▲		H	H		L▲	P▲				
Greases, Mineral	L▲	P▲		H	H		L▲	P▲		L	P	■
Ground Nut Oil	L▲	P▲		H▲	H▲		L	P		P	P	
Heptane	P	P		H			P	P		P	P	
Hexane				H						P	P	
Hydrazine										P		
Hydrochloric Acid				H	P	1%	H	H	10%	H	H	10%
	H	H	Dil.	H	P	10%	H	H	22%	H	H	25%
	L	L	Conc.	P	P	Conc.	H	H	Conc.	H	L	37% conc.
Hydrofluoric Acid	H▲	H▲	4%-60%				H	H	4%-60%	H	L▲	40%
	H▲	L▲	Conc.				H	L	Conc.	P▲	P▲	60%
Hydro Fluosilicic Acid	H	H	31%	L		20%	H▲	H▲	31%	P	P	20%
Hydrogen	H	H		H	H		H	H		H	H	
Hydrogen Peroxide	H	H	30%	H	P	6% w/w	H	H	3%-12%	H	L	10% and 30%
			(100 vols.)			(20vols.)	H	P	30%-90%			(33 and 100 vols.)
Iodine, Tincture of										L-P▲		
Iodine, Solution in Potassium Iodide	P▲	P▲					P	P		P▲	P▲	
Industrial Methylated Spirit (I.M.S.)	L▲	P▲		H-L▲	P▲		L	P		G▲	L-P▲	20%
										P▲	P▲	100%
Iso Cyanates	P▲	P▲		H▲			P▲	P▲		P	P	
Iso Propyl Alcohol	H▲			H	P		H			P	P	
Jet Fuel JP-4	L▲	P▲		H▲			L▲	P▲		L▲	P▲	■
Kerosene (Paraffin Oil)	L▲	P▲		H	H-L		L	P		H-L	P▲	■
Lactic Acid	H	H	90%	H	H		H	H	10%-100%	H		10%
										P▲	P▲	100%
Lead Acetate	H	H					H	H		H▲	H▲	
Lead Tetraethyl - See Tetraethyl lead				qv	qv					qv		
Lime Solution - See Calcium Hydroxide	qv	qv		qv	qv		qv	qv		qv	qv	
Linseed Cake				H	H							
Linseed Oil	L▲	P▲		H▲	H▲		L	P		L	P▲	■
Magnesium Chloride	H	H		H	H	50%	H	H		H▲	H▲	
Magnesium Hydroxide	H	H		H			H	H		H▲	H▲	
Melamine Acid - Catalyst Lacquers										P	P	
Mercury	H▲	H▲		H	H		H	H		H▲	H▲	
Methane				H	H					H		
Methyl Acetate	P▲	P▲		H	H		P	P		P	P	
Methyl Alcohol (Methanol)	H▲	L▲	6%	H	P		H	L▲	6%	L▲	L-P▲	20%
	L▲	P▲	100%				L	P	100%	P	P	100%
Methyl Bromide				H	P					P▲	P▲	



# Technical Information

## Chemical Resistance

	Ethylene/Vinyl Acetate EVA			Nylon Flex & Semi-rigid			Polyethylene, Low Density Medium Density			Polyvinyl Chloride, Flexible PVC		
	20°C	60°C	Notes	20°C	60°C	Notes	20°C	60°C	Notes	20°C	55°C	Notes
Methyl Chloride (Chloro Methane)	P▲	P▲		H	P		P	P		P▲	P▲	
Methyl Ethyl Ketone (M.E.K.)	L▲	P▲		H	L		L	P		P	P	
Methyl Iso Butyl Ketone (M.I.B.K.)	P▲	P▲		H	L		P	P		P▲	P▲	
Methyl Sulphate				H	L					L▲	P▲	
Methylated Spirit	L▲	P▲		H-L▲	P▲		L	P		P▲	P▲	
Methylene Chloride (Di Chloro Methane)	P	P		L	P		P	P		P	P	
Milk	H▲	H▲		H	H		H	H		H		
Mustard	H▲			H			H▲					
Naphtha (Mixture of Hydrocarbons)	L	P		H	H-L		P	P		P▲	P▲	
Naphthalene	P▲	P▲		H	H		P	P		P▲	P▲	
Natural Gas (mainly Methane)				H	H▲					H		
Nickel Salts	H	H		H			H	H		H	H▲	
Nitric Acid	L	L	30%-50%	P	P	All concs.	H	H	5%-25%	H	L	30%
	P	P	Conc.				L	P	50%-70%	H	L▲	50%
							P	P	95%	P▲	P▲	95%
Nitrous Oxide										P	P	
Nitrogen	H▲			H▲			H▲			H		
Oil, ASTM Oil No.1												
Oil, ASTM Oil No.3												
Oil, ASTM Ref. Fuel A												
Oil, ASTM Ref. Fuel B												
Oil, ASTM Ref. Fuel C												
Oil, Animal	L▲	P▲					L	P		H-L▲	P▲	■
Oil, Crude - See Crude Oil	qv	qv					qv	qv		qv	qv	
Oil, Diesel - See Diesel Oil	qv	qv					qv	qv		qv	qv	
Oil, Etheral										P	P	
Oil, Fuel - See Fuel Oil	qv	qv		qv	qv		qv	qv		qv	qv	
Oil, Gas - See Gas Oil	qv	qv		qv	qv		qv	qv		qv	qv	
Oil, Hydraulic, Petroleum Base				H						P	P	
Oil, Synthetic Base				H						P	P	
Oil, Mineral							P	P		H-L	P▲	■
Oil, (including Common Lubricating Oils)	L	P		H	H							
Oil, Paraffin - See Kerosene	qv	qv		qv	qv		qv	qv		qv	qv	
Oil, Transformer - See Transformer Oil	qv	qv		qv			qv	qv		qv	qv	
Oil, of Turpentine - See Turpentine	qv	qv		qv	qv		qv	qv		qv	qv	
Oil, Vegetable	L	P		H	H		L	P		H-L	P▲	■
Oleic Acid	P	P		H	H		P	P		H▲	L	
Oxalic Acid	H	H		H	L		H	H		H	H	
Oxygen	H	H		H	L		H	H▲		H	H	
Ozone	P▲	P▲		L	P		P	P		H▲		
Paraffin Oil - See Kerosene	qv	qv		qv	qv		qv	qv		qv	qv	
Perchloroethylene	P▲	P▲		L	P		P▲	P▲		P	P	
Petrol, Aliphatic 2 star	P▲	P▲		H	H		P	P		L	P	■
Petrol, Aliphatic 3 star	P▲	P▲		H	H		P	P		L	P	■
Petrol, Aliphatic 4 star	P▲	P▲		H	H		P	P		L	P	■
Petrol, Aliphatic 5 star	P▲	P▲		H	H-L		P	P		L	P	
Petrol, Aliphatic High Octane	P▲	P▲		H	H-L		P	P		L	P	
Petrol, Aromatic (Containing Benzene)	P▲	P▲		H▲	H-L▲		P	P		P	P	
Petroleum Ether	P▲	P▲		H			P	P		P	P	
Phenol(s) (Carbolic Acid)	P▲	P▲		P	P		P	P		L▲	P▲	
Phosphoric Acid	H	H	85%	H	P	50%	H	H	25%-50%	H	H	25%-50%
							H	L	90%			
							L	P	95%			
Phosphorus Pentoxide	H▲	H▲		L			H	H		H		
Picric Acid	L	L	1%	L	P		H		1%	H	H	1%
Polyester Emulsions				H▲						P		

# Technical Information

## Chemical Resistance

	Ethylene/Vinyl Acetate EVA			Nylon Flex & Semi-rigid			Polyethylene, Low Density Medium Density			Polyvinyl Chloride, Flexible PVC		
	20°C	60°C	Notes	20°C	60°C	Notes	20°C	60°C	Notes	20°C	55°C	Notes
Polystyrene Emulsions				H▲						P		
Potassium Dichromate	H	H	40%				H	H		H	H	
Potassium Hydroxide (Caustic Potash)	H	H	20%	G	P	50%	H	H	1% to conc.	H	H	30%
										L	L▲	50%
										L	P	Conc.
Potassium Nitrate (Nitre, Salpetre)	H	H		H	P		H	H		H	H▲	
Potassium Permanganate	P	P	20%	P	P	5%	H	H		H		10%
Potassium Sulphate	H	H		H	H		H	H		H	H▲	
Propane				H	H					H		
Pyndine				L	P							
Salpetre - See Potassium Nitrate	qv	qv		qv	qv		qv	qv		qv	qv	
Sea Water	H	H		H	H		H	H		H	H▲	
Silver Nitrate	H▲	H▲		H			H	H		H		
Soap Solution	H▲	H▲		H			H	H		H▲		
Soda Water	H▲	H▲		H	H		H▲	H▲		H▲	H▲	
Sodium Bicarbonate	H	H		H	H		H	H		H▲	H▲	
Sodium Carbonate (Washing Soda)	H	H		H	L		H	H		H▲	H▲	
Sodium Chlorate	H▲	H▲		L			H	H		H	H▲	
Sodium Chloride (Common Salt)	H	H		H	H		H	H		H	H	
Sodium Hydroxide (Caustic Soda)	H	H		H	P	50%	H	H	1% to conc.	H	P▲	50%
Sodium Hypochlorine (Bleaching Agent)	H▲	H▲	15% Chlorine	L		Dil.	H	H	15% Chlorine	H	L	15% Chlorine
Sodium Nitrate	H	H		H▲	H▲		H	H		H	H▲	30%
Sodium Sulphide	H▲	H▲	15% and conc.	H	L		H	H	25% and conc.	H	H	25% & conc.
Sodium Sulphite	H▲	H▲		H▲	L▲		H	H		H		
Sodium Tetraborate - See Borax	qv	qv		qv	qv		qv	qv		qv	qv	
Steam - Water			qv			qv			qv			qv
Solvent Naphtha	L▲	P▲		H	H-L		L▲	P▲		L▲	P▲	
Stearic Acid	H▲	H▲		H	H		H	H		H▲	H▲	
Stearin (also Stearine)	H▲	H▲		H	H		H▲	H▲				
Styrene				H						P	P	
Sucrose (Cane or Beet Sugar)	H▲	H▲		H▲	H▲		H	H		H▲	H▲	
Sulphur	H▲	H▲	Colloidal	H			H	H	Colloidal			
Sulphur Dioxide	H▲	H▲	Dry	L	P	10%	H	H	Dry	H▲	H▲	Dry
	H▲	P▲	Moist				H	P	Moist	L▲	P▲	Moist & Liquid
Sulphur Trioxide	P▲	P▲		L	P		P	P				
Sulphuric Acid	H▲	L▲	Dil.	H	L	1%	H	H	10%-60%	H	H	10%-45%
	P	P	70%	H	P	10%	H	L	70%	H	L	50%
										L	P▲	60%-80%
	P	P	98%	P	P	98%	L	P	95% and 98%	P	P	98%
							P	P	Fuming			
Sulphamic Acid				P	P					P		
Tartaric Acid	H▲	H▲	10%	H	H		H	H	10%	H		
Tetraethyl Lead	H▲	P▲		H			H	P		H▲		
Toluene	P	P		H	L		P	P		P	P	
Town Gas - See Coal Gas				qv						qv		
Transformer Oil	P	P		H▲			L	P		H-L	P	
Tri Butyl Phosphate	L▲	P▲		H	H		L▲	P▲		P	P	
Trichloroethane	P	P		L	P					P	P	
Trichloroethylene	P	P		L	P		P	P		P	P	
Tri Cresyl Phosphate	P▲	P▲		H	H		P	P		P	P	
Tri Sodium Phosphate	H▲	H▲		H	H		H	H		H	H	
Turpentine	L▲	P▲		H	H-L		L	P		L	P	
Turps Substitute - See White Spirit	qv	qv		qv	qv		qv	qv		qv	qv	
Urea Formaldehyde Soln.				H▲						P	P	
Urea Soln.	H▲	H▲		H	L		H	H		H▲		
Uric Acid	H▲	H▲	Dil.	H	H		H	H	Dil.			

# Technical Information

## Chemical Resistance / Effects On Working Pressure

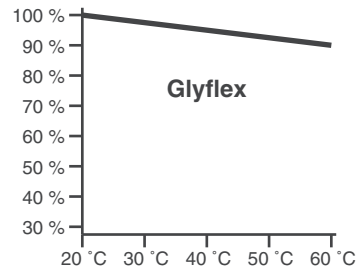
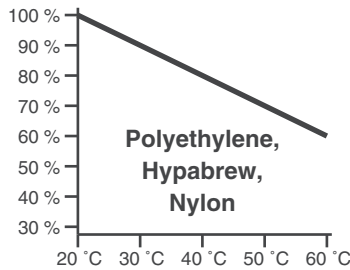
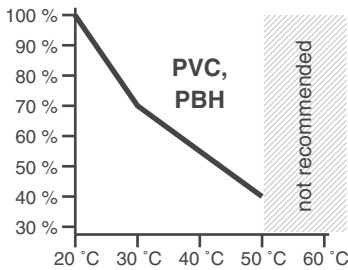
	Ethylene/Vinyl Acetate EVA			Nylon Flex & Semi-rigid			Polyethylene, Low Density Medium Density			Polyvinyl Chloride, Flexible PVC		
	20°C	60°C	Notes	20°C	60°C	Notes	20°C	60°C	Notes	20°C	55°C	Notes
Vinegar	H▲	H▲		H	H		H	H		H▲		
Water	H	H		H	H		H	H		H	H	
Water, Steam			P at 100°C			P at 100°C			P at 100°C			P at 100°C
Water, Sea - See Sea Water	qv	qv		qv	qv		qv	qv		qv	qv	
Water, Soda - See Soda Water	qv	qv		qv	qv		qv	qv		qv	qv	
White Spirit	L▲	P▲		H	H-L		L▲	P▲		L▲	P▲	
Wine	H▲			H			H			H▲	L▲	
Xylene (Xylol)	P	P		H	L		P	P		P	P	
Zinc Chloride	H▲	H▲		H	H▲		H	H		H	H	

## Temperature Effect On Working Pressure

As the working temperature of a tube increases, the working pressure will reduce. The table and the diagrams below give guidance on how the working pressures reduce.

The table and the diagrams are only a guide. For further information contact our technical department.

Temperature	Temperature effect on working pressure					
	Polyethylene	PVC	PBH	Hypabrew	Nylon	Glyflex
20 °C	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %
30 °C	90.0 %	70.0 %	70.0 %	90.0 %	90.0 %	97.5 %
40 °C	80.0 %	55.0 %	55.0 %	80.0 %	80.0 %	95.0 %
50 °C	70.0 %	40.0 %	40.0 %	70.0 %	70.0 %	92.5 %
60 °C	60.0 %	not rec.	not rec.	60.0 %	60.0 %	90.0 %



## Vinyl Acetate Content Effect On Working Pressure

As the Vinyl Acetate content of a tube increases, the working pressure will reduce for like size tubing when compared to MDP. The table gives guidance on how the working pressures reduce.

The table is only a guide. For information relating to specific grades and tube dimensions, please contact our technical department.

Material	Material VA content % Working Pressure compared to MDP	
	Content	% Working Pressure (MDP=100%)
HGE – Hard Grade Ethylene Vinyl Acetate	5 %	65.0 %
MGE – Medium Grade Ethylene Vinyl Acetate	9 %	45.0 %
SGE – Soft Grade Ethylene Vinyl Acetate	18 %	33.0 %

## ***I – Approvals***

Approved Products ..... 12



## Approved Products

Agency and Specifications		Approved Parker Products
<b>Dry Food Contact:</b> FDA EEC SI No. 3145		328, 353, 547, 1038,1041, MDP, EVA EVA, FPV, PBH, Nylon, MDP
<b>Potable Water, Liquid Foods:</b> NSF Standard 51		1038, 1041, TrueSeal™
<b>SK Approval:</b> SK 082-006 SK 292-001 SK 292-002 SK 292-005            Beer, Softdrinks SK 292-011           Beer, Softdrinks SK 292-009           CO2, Mix Gas		328-3, 328-4 MDP EVA True Seal Hypabrew 2040N-04V74
Coca Cola Approval	Coca Cola Softdrinks	MDP
Coca Cola Approval	Coca Cola Softdrinks	EVA
Coca Cola Approval	Coca Cola Softdrinks	True Seal



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