



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

*Catalogue 4464-UK  
May 2002*





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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**B**

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## 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

N – Nylon ..... A4

Ordering Key & Colour Codes ..... A5

## 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<br># |  |       |  |      | Working pressure at 20 °C<br>MPa / psi<br> |     |
|-------------------|-------------------------------------------------------------------------------------|-------|-------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------------------------------------------------|-----|
|                   | 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<br># |  |       |  |       | Working pressure at 20 °C<br>MPa / psi<br> |     |
|-------------------|---------------------------------------------------------------------------------------|-------|---------------------------------------------------------------------------------------|-------|---------------------------------------------------------------------------------------------------------------------------------|-----|
|                   | 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<br># |  |      |  |      | Working pressure at 20 °C<br>MPa / psi<br> |     |
|-------------------|-------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------------------------------------------------|-----|
|                   | 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 |

## 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<br># |  |       |  |       | Working pressure at 20 °C<br>MPa / psi<br> |     |
|-------------------|---------------------------------------------------------------------------------------|-------|---------------------------------------------------------------------------------------|-------|---------------------------------------------------------------------------------------------------------------------------------|-----|
|                   | 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<br>(flexible grade)<br><br># | Tube O.D.<br>x<br>wall thickness<br><br> | Maximum working pressure MPa |                                                                                                          |                        | Minimum bend radius<br>mm<br> | Weight<br>g/m<br> |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------------|------------------------|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
|                                           |                                                                                                                           | -40 °C<br>to<br>+28 °C       |  -40 °C<br>to<br>+40 °C | -40 °C<br>to<br>+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<br>tolerances in mm | Tube O.D. 3 to 5 mm<br>+ 0,05 / - 0,08 | Tube O.D. 6 to 16 mm<br>+ 0,05 / - 0,10 |
|----------------------------------|----------------------------------------|-----------------------------------------|



## Ordering Key & Colour Codes for Parker's Nylon Tubing

| Ordering key                                                                                                                                                                               |                                                                                                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Examples: <b>NR6X1/5-50K</b></p> <p>Cardboard packaging</p> <p>Length in m</p> <p>Colour: black</p> <p>Wall thickness in mm</p> <p>O.D. in mm</p> <p>Semi rigid</p> <p>Nylon Tubing</p> | <p><b>2X022N/1-100</b></p> <p>Length in m</p> <p>Colour: natural</p> <p>Nylon</p> <p>Wall thickness in inch</p> <p>O.D. in 1/16<sup>th</sup> of an inch</p> |

**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 |

## Notes

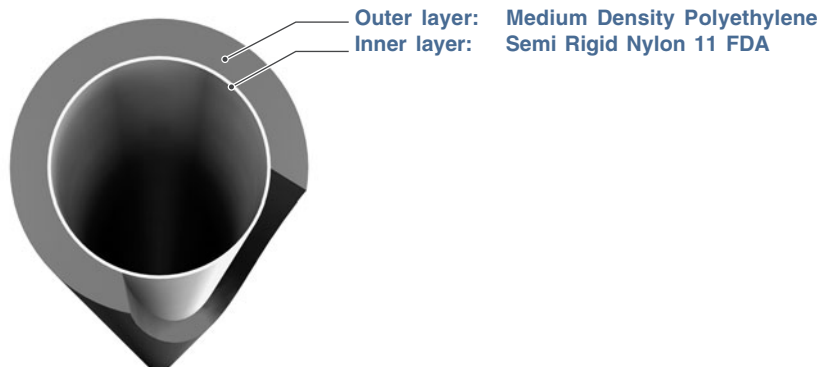
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***B – Multi Layer Tube***

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.

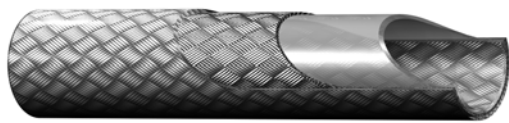
| Product code<br># |  |       |  |       | Working pressure<br>at 20 °C<br>MPa / psi<br> |     |
|-------------------|-------------------------------------------------------------------------------------|-------|-------------------------------------------------------------------------------------|-------|----------------------------------------------------------------------------------------------------------------------------------|-----|
|                   | mm                                                                                  | inch  | mm                                                                                  | inch  |                                                                                                                                  |     |
| 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<br><br># | mm    inch |     | mm    inch |     | Max. Working Pressure<br>at 20 °C<br>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<br># | Hose colour | DN | size | mm  | inch | mm   | Max. Working Pressure<br>MPa / psi |       | Min. Burst Pressure<br>MPa / psi |        | Min. Bend Radius<br>mm | Weight<br>kg/100 m |
|-------------------|-------------|----|------|-----|------|------|------------------------------------|-------|----------------------------------|--------|------------------------|--------------------|
|                   |             |    |      |     |      |      |                                    |       |                                  |        |                        |                    |
| 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.

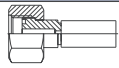
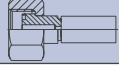
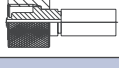
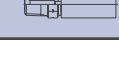
### Fittings:

Factory crimped assemblies only.

### Approvals:

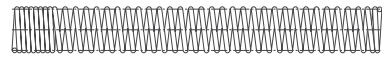
Parker 2040N and 328 are both SK approved.

## 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      |

## Notes

[illegible]

***E – Python Bundles***

Python Examples . . . . . E2

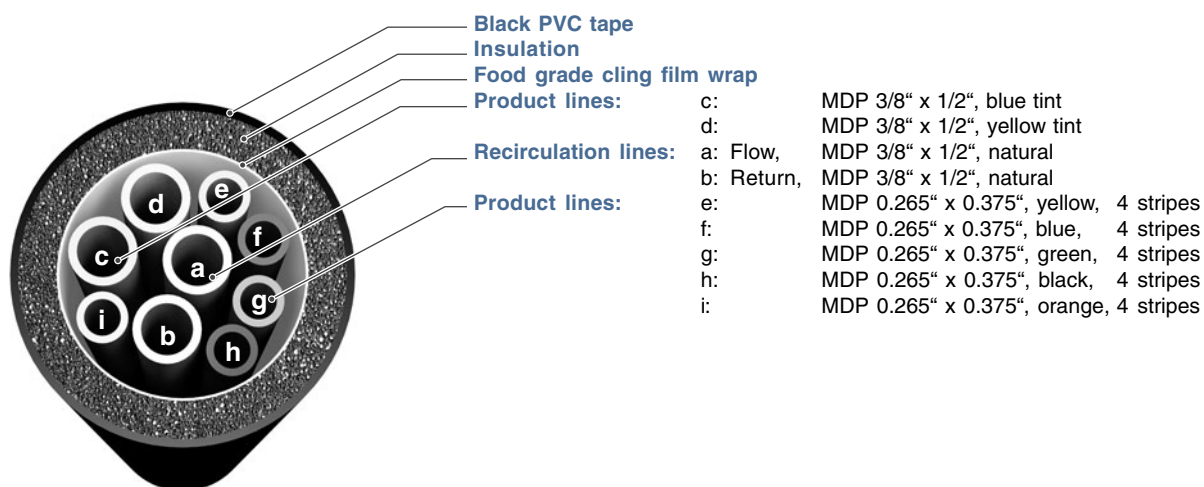
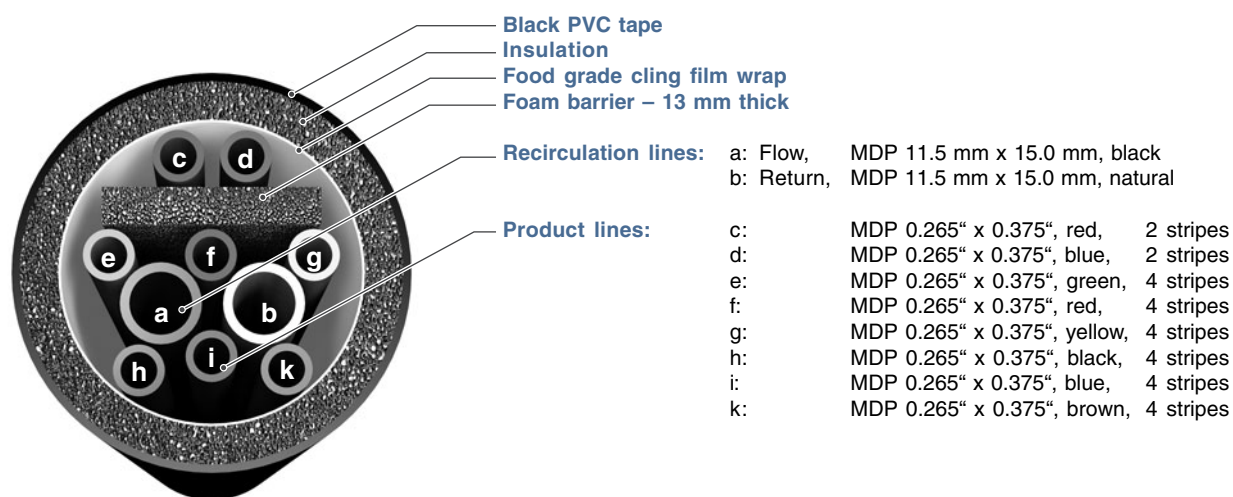
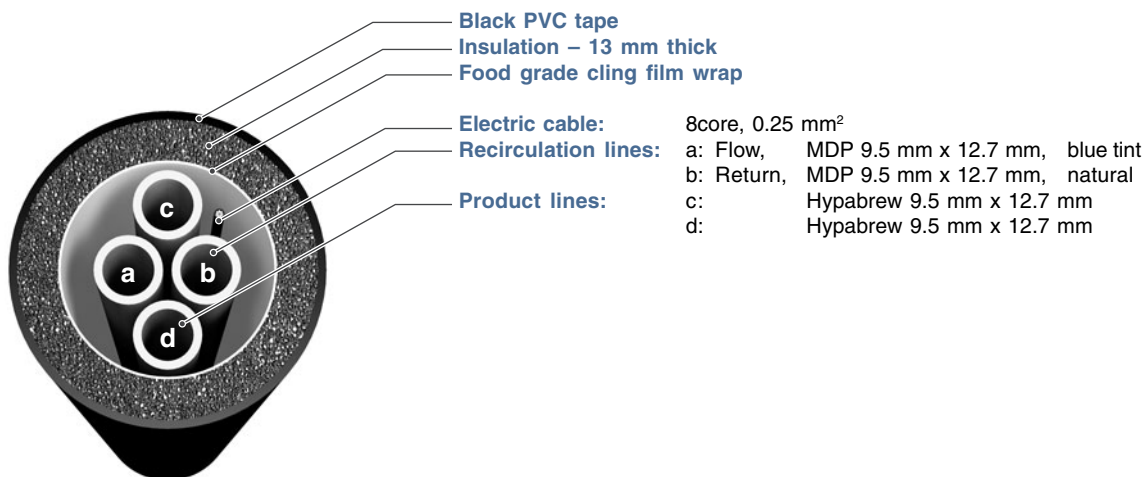
Python specifications . . . . . E4

Python integrated product lines . . . . . E4

**E**

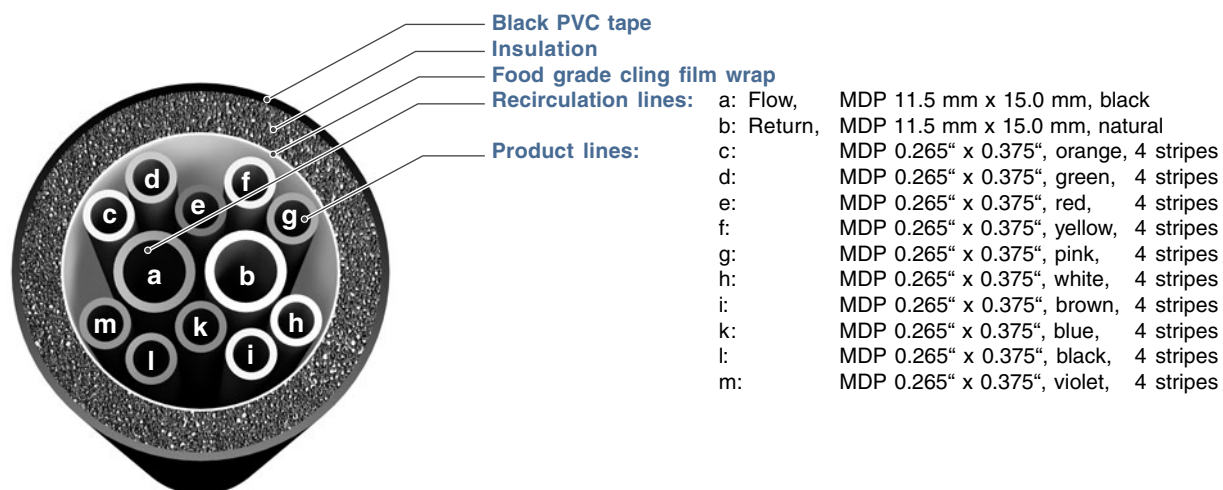
## Python Examples

For customer specific Python configuration requirements please call Parker

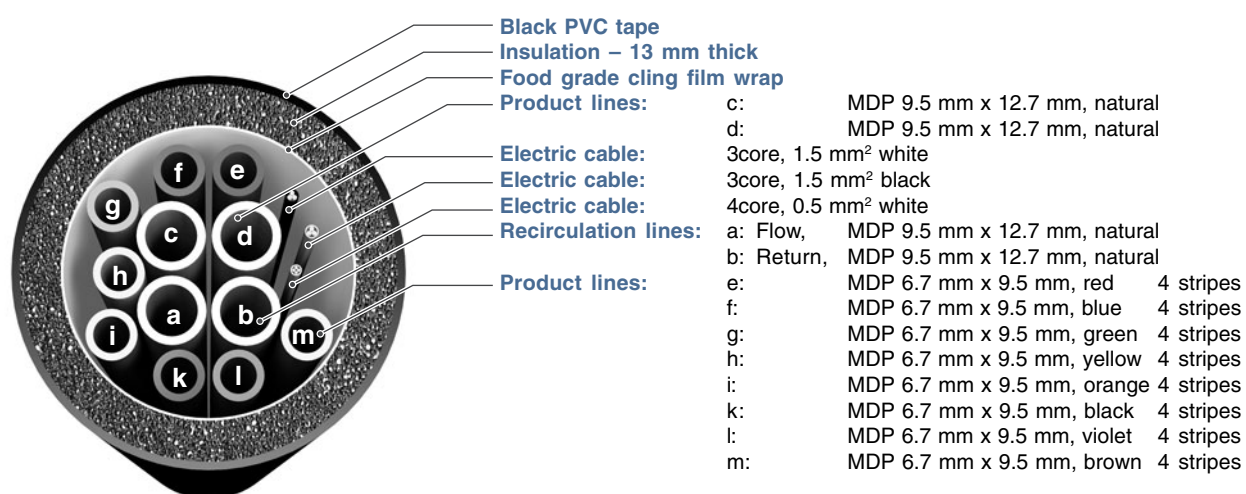
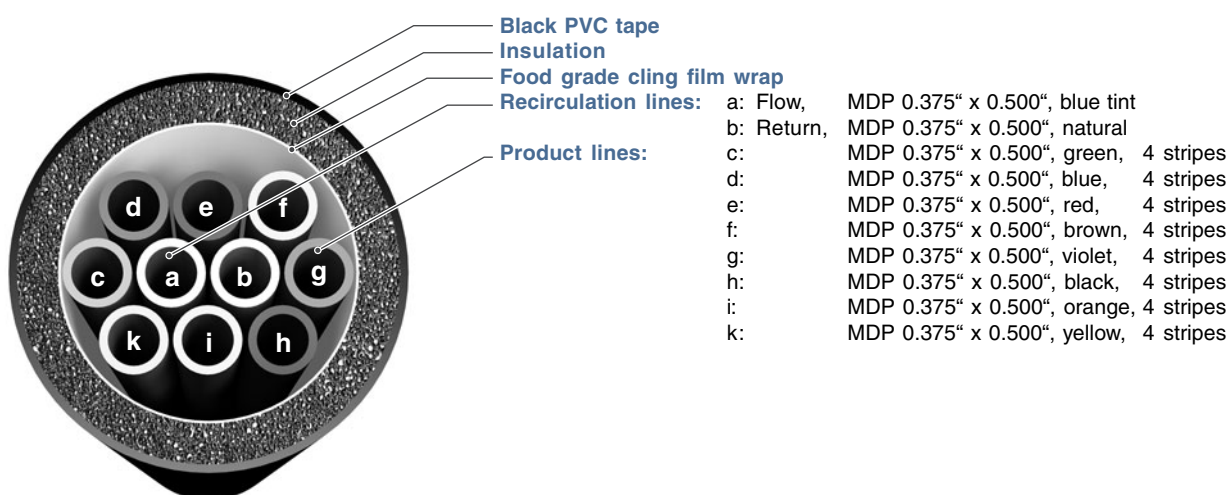


## Python Examples

For customer specific Python configuration requirements please call Parker



E



## Python specifications

### Integrated product lines:

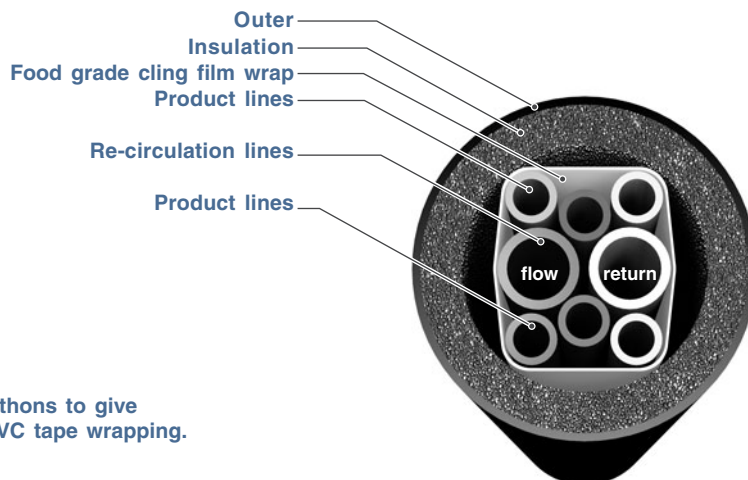
Can be assembled as straight lay or  
can be cabled to enhance flexibility.

### 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***

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| TWC – Tube Stem Adapter BSW .....              | F19 |
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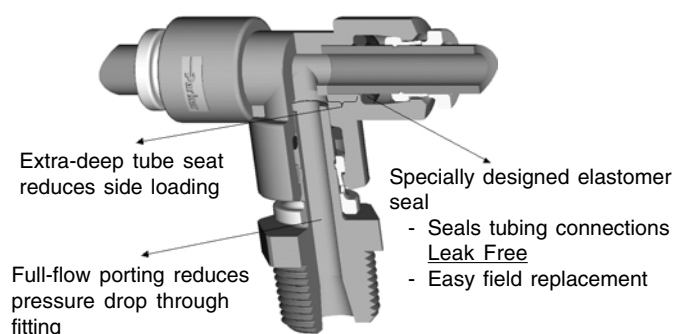
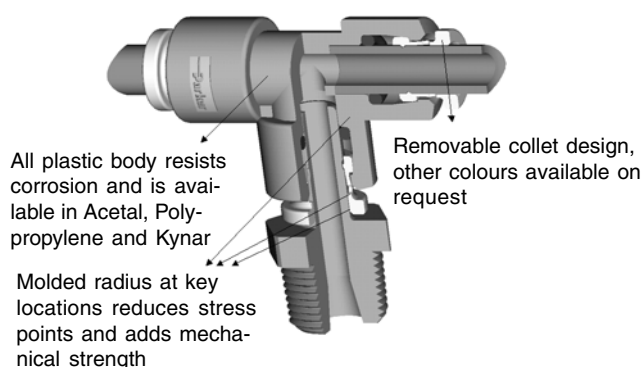


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## TrueSeal™ Thermoplastic Push-In Fittings

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.

### Ordering key

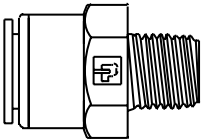
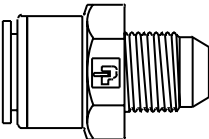
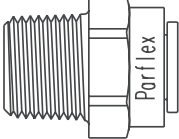
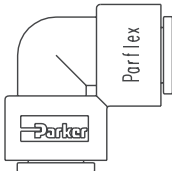
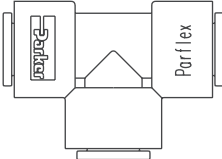
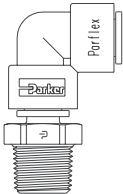
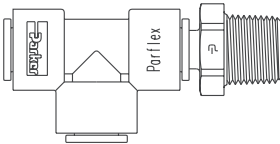
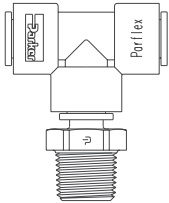
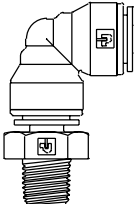
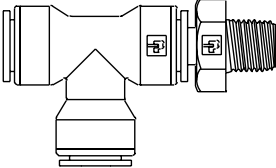
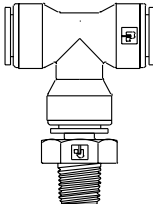
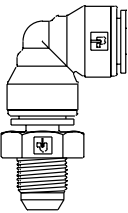
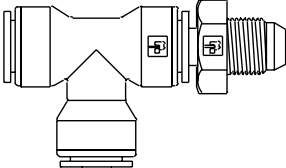
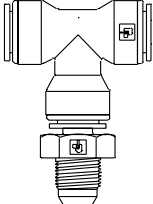
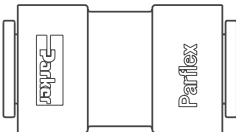
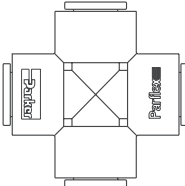
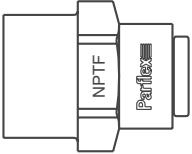
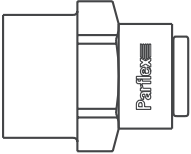
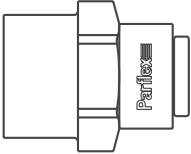
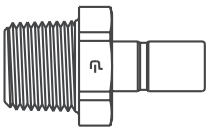
Examples: **A 4 MC 4 (-MG)**

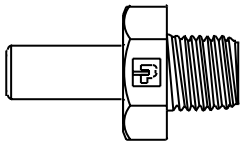
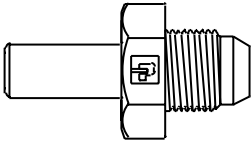
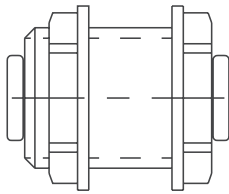
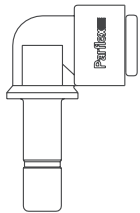
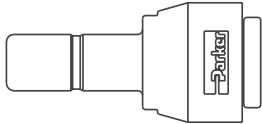
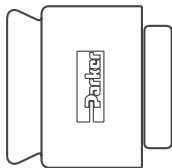
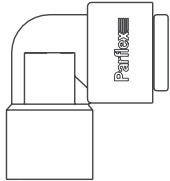
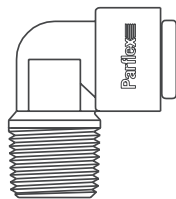
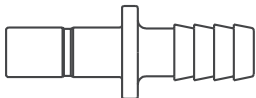
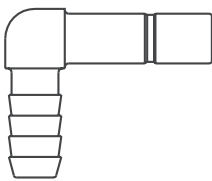
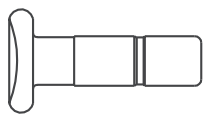
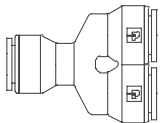
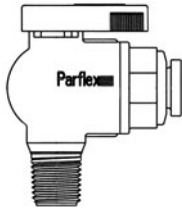
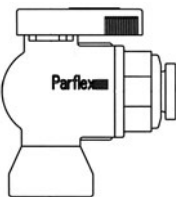
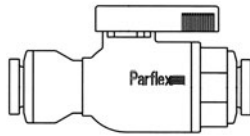
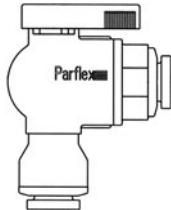
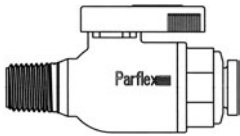
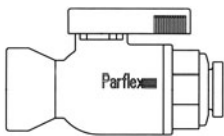
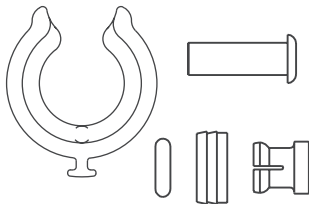
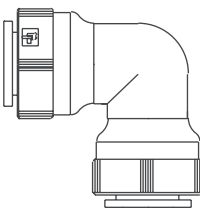
A = Fitting body material:  
 PP = Polypropylene  
 F = Kynar (PVDF)

4 = Tube O.D. in 1/16 inch  
 MC = Body style  
 4 = End termination size  
 (-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

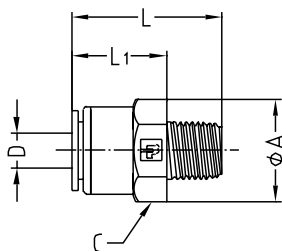
| Fittings Overview                                                                   |                                                                                     |                                                                                      |                                        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

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

F

## TC – Male Connectors BSPT

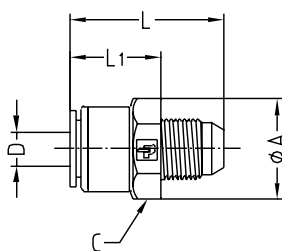
### Tube to Pipe



| Product code<br><br># | 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

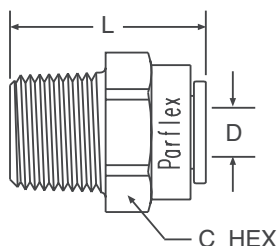
### Tube to Pipe



| Product code<br><br># | 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

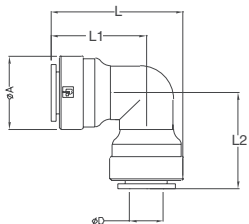


| #        | NPTF<br>Thread<br>Size | Nom. Tube<br>O.D. |      | C<br>Hex |       | L<br>Overall<br>Length |      | D<br>Through<br>Hole Min. |       |
|----------|------------------------|-------------------|------|----------|-------|------------------------|------|---------------------------|-------|
|          |                        | 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 |

F

## EU – Elbow Union

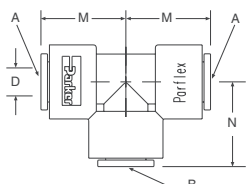
### Tube to Tube



| Product code | D1<br>Nom. Tube<br>O.D. |      | D2<br>Nom. Tube<br>O.D. |      | L<br>Overall<br>Length |      | L1<br>Length |      | L2<br>Length |      | L3<br>Length |      | D<br>Through<br>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 |

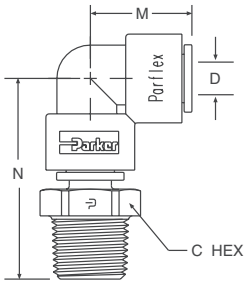
## TU – Tee Union

### Tube to Tube



| Product code | A<br>Nom. Tube<br>O.D. |      | B<br>Nom. Tube<br>O.D. |      | M<br>Length |      | N<br>Length |      | D<br>Through<br>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

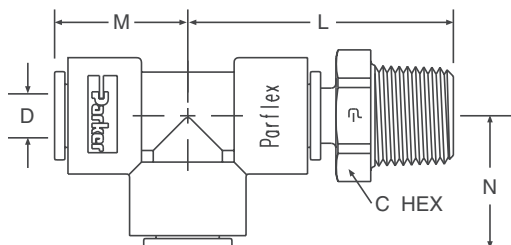


| Product code | NPTF Thread Size | Nom. Tube O.D.                                                                    |      | C Hex                                                                             |       | N Length |      | M Length |      | D Through Hole Min. |       |
|--------------|------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-------|----------|------|----------|------|---------------------|-------|
| #            |                  |  |      |  |       |          |      |          |      |                     |       |
|              |                  | 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**

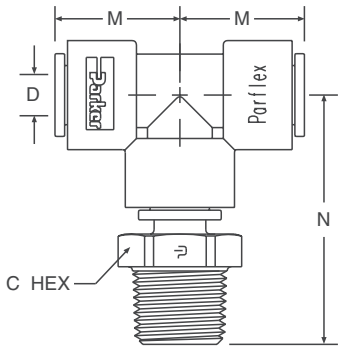


## MRS – Male Run Swivel NPTF Tube to Pipe



| 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 |

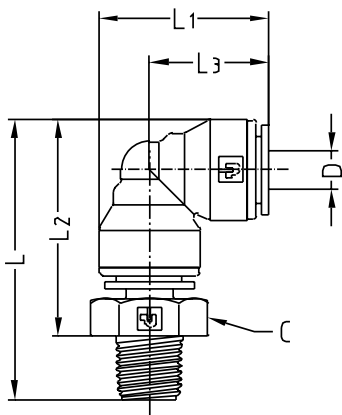
# MTS – Male Tee Swivel NPTF Tube to Pipe



| 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 |

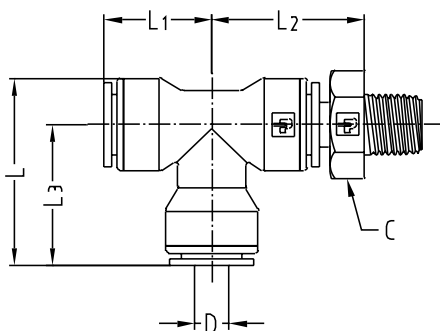
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## TES – Male Elbow Swivel BSPT Tube to Pipe



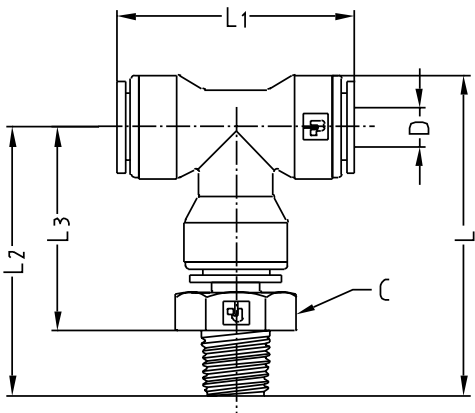
| Product code | BSPT Thread Size | Nom. Tube O.D. |      | C Hex |       | L Overall Length |      | L1 Length |      | L2 Length |      | L3 Length |      | D Through Hole Min. |       |
|--------------|------------------|----------------|------|-------|-------|------------------|------|-----------|------|-----------|------|-----------|------|---------------------|-------|
| #            |                  | 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 |

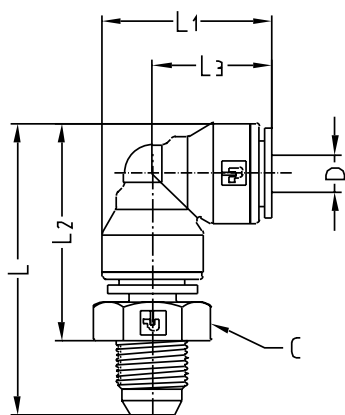
TTS – Male Tee Swivel BSPT  
Tube to Pipe



| 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 |
|              |                  |                                                                                   |      |                                                                                   |       |                  |      |           |      |           |      |           |      |                     |       |

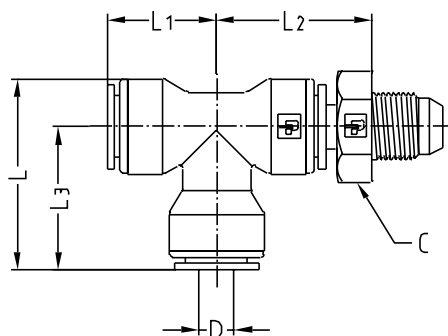
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## WES – Male Elbow Swivel BSW Tube to Pipe



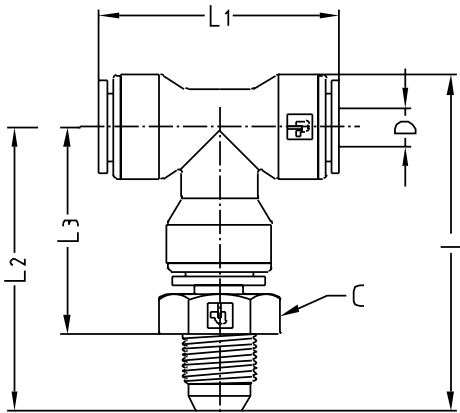
| Product code | BSW Thread Size | Nom. Tube O.D.                                                                    |      | C Hex                                                                             |       | L Overall Length |      | L1 Length |      | L2 Length |      | L3 Length |      | 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

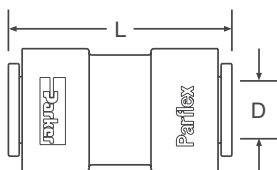


| Product code | BSW Thread Size | Nom. Tube O.D.                                                                    |      | C Hex                                                                             |       | L Overall Length |      | L1 Length |      | L2 Length |      | L3 Length |      | 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 |
|              |                 |                                                                                   |      |                                                                                   |       |                  |      |           |      |           |      |           |      |                     |       |

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## UC – Union Connector

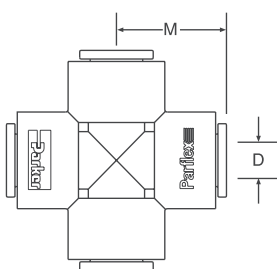
### Tube to Tube



| Product code<br><br># | 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

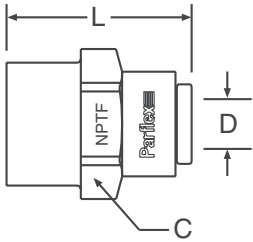
### Tube to Tube



| Product code<br><br># | 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

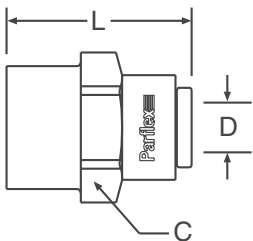


| Product code<br><br># | NPTF Thread Size | Nom. Tube O.D. |      | C Hex |       | L Length |      | D Through Hole Min. |       |
|-----------------------|------------------|----------------|------|-------|-------|----------|------|---------------------|-------|
|                       |                  | 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

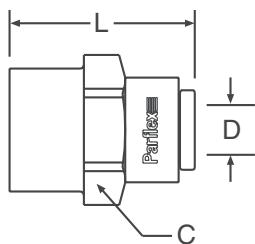
### Tube to Pipe



| Product code<br><br># | 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 |

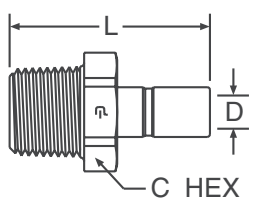


## FF – Female Flare UNF-2B Tube to Pipe



| 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 |

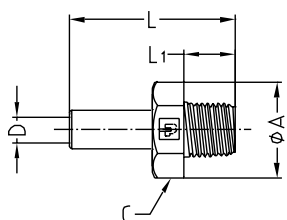
## TMC – Tube Stem Adapter NPTF Tube Stem to Pipe



| 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

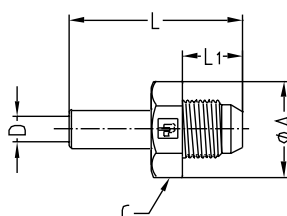


| Product code | BSPT Thread Size | Tube Stem O.D. |      | C Hex |       | L Overall Length |      | L1 Length |      | A Maximum Body Dia. |      | D Through Hole Min. |       |
|--------------|------------------|----------------|------|-------|-------|------------------|------|-----------|------|---------------------|------|---------------------|-------|
| #            |                  | 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 |

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## TWC – Tube Stem Adapter BSW

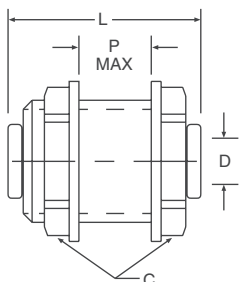
### Tube Stem to Pipe



| 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

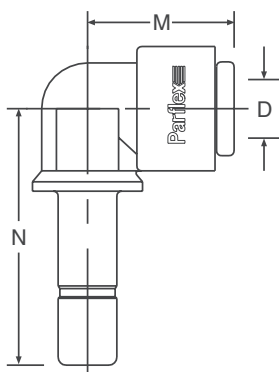
### Tube to Tube



| 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

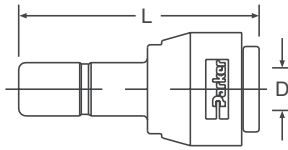
### Tube to Tube Stem



| 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 |

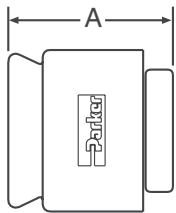
## RD – Tube Reducer

### 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 |

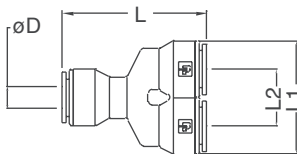
## CAP – Tube Cap



| 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

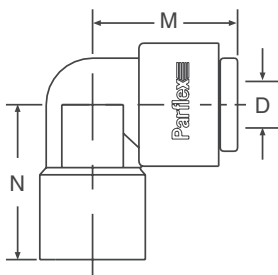
### Tube to Tube



| 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

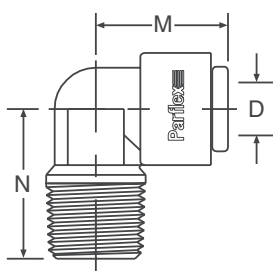


| Product code | NPTF Thread Size | Nom. Tube O.D. |      | M Length |      | N Length |      | D Through Hole Min. |       |
|--------------|------------------|----------------|------|----------|------|----------|------|---------------------|-------|
| #            |                  | mm             | 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

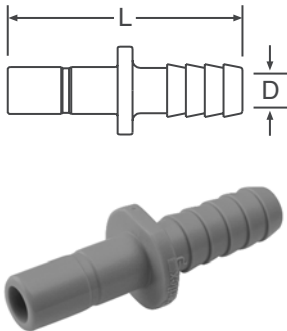
### Tube to Pipe



| 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 |

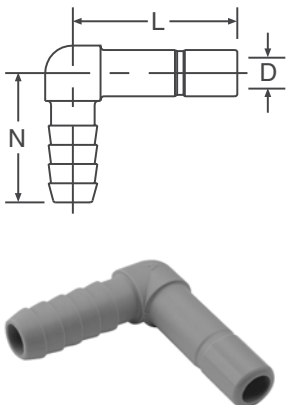


## TCB – Tube To Barb Connector



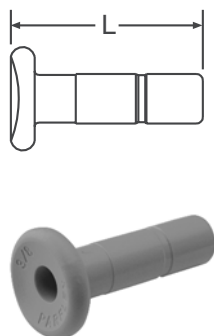
| Product code | Tube Stem O.D. |      | Tube Stem I.D. |      | L Overall Length |      | D Through Hole Min. |       |
|--------------|----------------|------|----------------|------|------------------|------|---------------------|-------|
| #            | mm             | inch | mm             | inch | 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



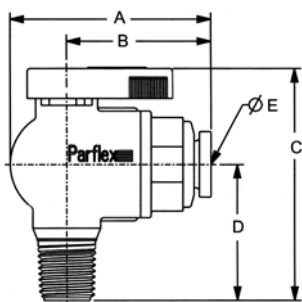
| Product code | Tube Stem O.D. |      | Tube Stem I.D. |      | L Length |      | N Length |      | D Through Hole Min. |       |
|--------------|----------------|------|----------------|------|----------|------|----------|------|---------------------|-------|
| #            | mm             | inch | 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



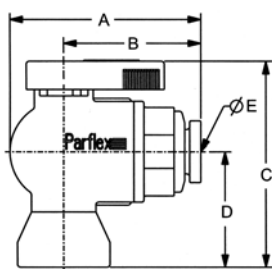
| Product code | Nom. Tube Stem O.D. |      | L Overall Length |      |
|--------------|---------------------|------|------------------|------|
| #            | mm                  | inch | mm               | inch |
| A4TPL        | 6.35                | 1/4  | 22.4             | 0.88 |
| A5TPL        | 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 |

## VME - Valve Male Elbow



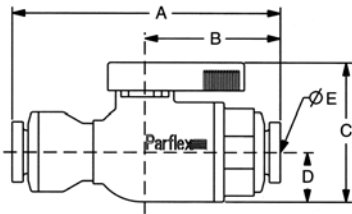
| Product code | Nom. Tube O.D. |      | NPTF Thread Size | A    |      | B    |      | C    |      | D    |      | E Through Hole Min. |      |
|--------------|----------------|------|------------------|------|------|------|------|------|------|------|------|---------------------|------|
| #            | 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 |

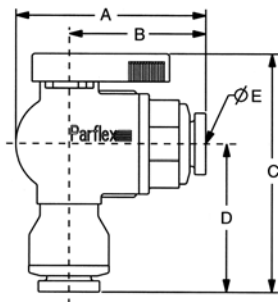
## VUC - Valve Union Connector



| 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 |

F

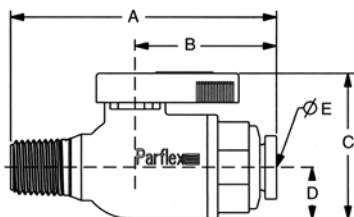
## VEU - Valve Elbow Union



| 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 |

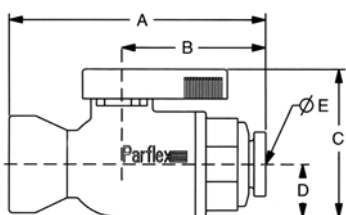


## VMC - Valve Male Connector



| 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

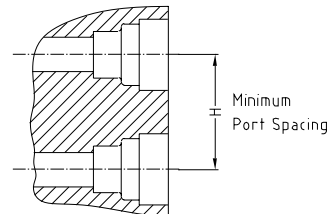
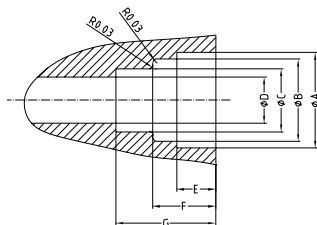


| Product code | Nom. Tube O.D. |      | NPTF Thread Size | A    |      | B    |      | C    |      | D    |      | E Through Hole Min. |      |
|--------------|----------------|------|------------------|------|------|------|------|------|------|------|------|---------------------|------|
| #            | 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<br>+ / - 0.002 |       | B Diameter<br>+ / - 0.002 |       | C Diameter<br>+ / - 0.002 |       | D Diameter<br>+ / - 0.002 |       | E Depth<br>+ / - 0.002 |       | F Depth<br>+ / - 0.002 |       | G Depth<br>+ / - 0.002 |       | H Centreline of Ports<br>+ / - 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.

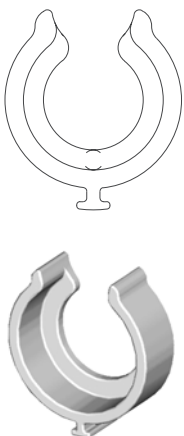
**Step 3** – Using a rubber mallet or press, insert the cartridge into the first gland orifice until its face is flush with the top surface of the port.

**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  |

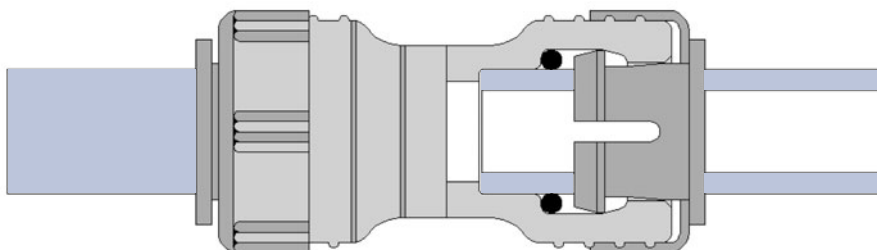
## TS – Tube Supports



| 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

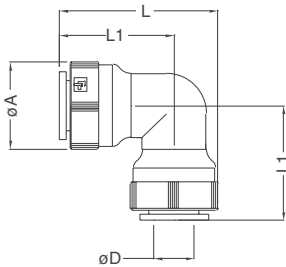
Examples: **MS 15 UC 15 -MG**

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

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

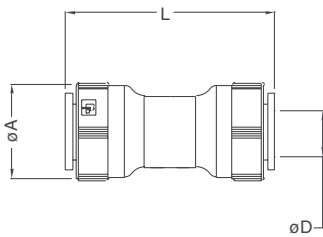
### Tube to Tube



| Product code | Nom. Tube O.D. | L Overall Length |      | L1 Length |      | A Maximum Body Dia. |      | D Through Hole Min. |       |
|--------------|----------------|------------------|------|-----------|------|---------------------|------|---------------------|-------|
| #            | mm             | 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

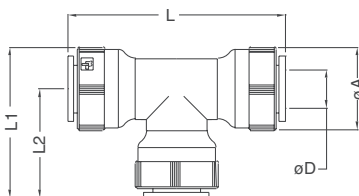
### Tube to Tube



| Product code | Nom. Tube O.D. | L Overall Length |      | A Maximum Body Dia. |      | D Through Hole Min. |       |
|--------------|----------------|------------------|------|---------------------|------|---------------------|-------|
| #            | mm             | 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

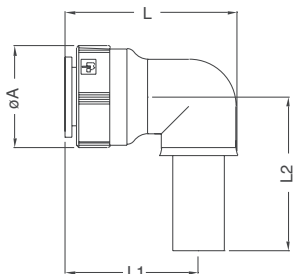
### Tube to Tube



| Product code | Nom. Tube O.D. | L Overall Length |      | L1 Length |      | L2 Length |      | A Maximum Body Dia. |      | D Through Hole Min. |       |
|--------------|----------------|------------------|------|-----------|------|-----------|------|---------------------|------|---------------------|-------|
| #            | mm             | 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

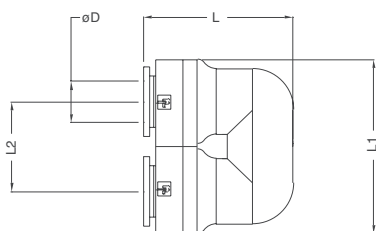
### Tube to Tube Stem



| 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<br><br># | 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.

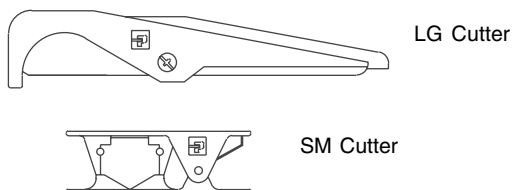
Colour:

Black

| Product code<br><br># | Width<br><br>mm |
|-----------------------|-----------------|
| TAPE50BLK-33          | 50              |
| TAPE75BLK-100         | 75              |

## Cutters

Cutters are available as large and small models.



| Product code<br><br># | Cuts tube size |
|-----------------------|----------------|
| PTCSMCUTTER           | up to 1/2"     |
| TI35LGCUTTER          | up to 1 1/2"   |
| TI35LGCUTTER 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<br><br># | Dimensions<br><br> |         | Colour |
|-----------------------|-----------------------------------------------------------------------------------------------------|---------|--------|
| 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<br><br># | Cable type | Core diameter<br><br>mm | Core colours                |
|-----------------------|------------|-------------------------|-----------------------------|
| 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   |
| 3183Y1.5              | 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



## Notes

[illegible]

***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.*

|                                   | Ethylene/Vinyl Acetate<br>EVA |      |              | Nylon<br>Flex & Semi-rigid |      |       | Polyethylene, Low Density<br>Medium Density |      |            | Polyvinyl Chloride,<br>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              |                               |      |              |                            |      |       |                                             |      |            | H▲                                  | H▲   | Dil.            |
| (Chloride of Lime, Bleach)        | 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<br>EVA |      |          | Nylon<br>Flex & Semi-rigid |      |               | Polyethylene, Low Density<br>Medium Density |      |               | Polyvinyl Chloride,<br>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)                  |                               |      |          |                            |      |               |                                             |      |               |                                     |      |           |

|                                       | Ethylene/Vinyl Acetate<br>EVA |      |             | Nylon<br>Flex & Semi-rigid |      |           | Polyethylene, Low Density<br>Medium Density |      |          | Polyvinyl Chloride,<br>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<br>EVA |      |         | Nylon<br>Flex & Semi-rigid |      |            | Polyethylene, Low Density<br>Medium Density |      |         | Polyvinyl Chloride,<br>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<br>EVA |      |               | Nylon<br>Flex & Semi-rigid |      |       | Polyethylene, Low Density<br>Medium Density |      |               | Polyvinyl Chloride,<br>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

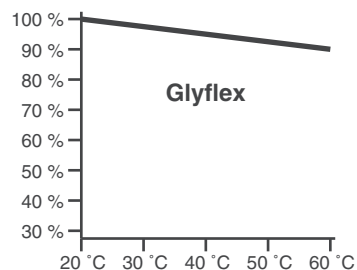
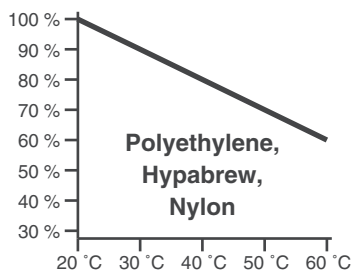
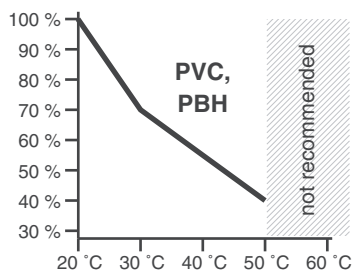
|                              | Ethylene/Vinyl Acetate<br>EVA |      |            | Nylon<br>Flex & Semi-rigid |      |            | Polyethylene, Low Density<br>Medium Density |      |            | Polyvinyl Chloride,<br>Flexible PVC |      |            |
|------------------------------|-------------------------------|------|------------|----------------------------|------|------------|---------------------------------------------|------|------------|-------------------------------------|------|------------|
|                              | 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><br>FDA<br>EEC SI No. 3145                                                      |                      | 328, 353, 547, 1038, 1041, MDP, EVA<br>EVA, FPV, PBH, Nylon, MDP   |
| <b>Potable Water, Liquid Foods:</b><br>NSF Standard 51                                                  |                      | 1038, 1041, TrueSeal™                                              |
| <b>SK Approval:</b><br>SK 082-006<br>SK 292-001<br>SK 292-002<br>SK 292-005<br>SK 292-011<br>SK 292-009 |                      | 328-3, 328-4<br>MDP<br>EVA<br>True Seal<br>Hypabrew<br>2040N-04V74 |
| Coca Cola Approval                                                                                      | Coca Cola Softdrinks | MDP                                                                |
| Coca Cola Approval                                                                                      | Coca Cola Softdrinks | EVA                                                                |
| Coca Cola Approval                                                                                      | Coca Cola Softdrinks | True Seal                                                          |



## Parker Hannifin Corporation

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Parker Hannifin is a leading global motion-control company dedicated to delivering premier customer service.

A Fortune 500 corporation listed on the New York Stock Exchange (PH), our components and systems comprise over 1,400 product lines that control motion in some 1,000 industrial and aerospace markets.

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