

# **BRIDGESTONE**

## **HYDRAULIC HOSE**

**Couplings , Accessories and Equipment**



# Symbols

This catalog shows the product specifications in the format below so you can select the correct product for your needs and prevent the risk of danger.

## Hose

Hoses are flexible tubes designed to carry fluid from one location to another or to convey pressure. Typically, they include rubber hoses (**PASCALART, EPOQU**, etc.) and resin hoses (**PASSTAGE LINE**,etc.).

### [Example Specifications of Hoses]

#### Pressure

Pressure shown in psi/MPa units

#### Catalog Number

When ordering a product, specify its catalog number.

\*For details, refer to page 5.

**PA01**

Maximum Working Pressure

**1.5MPa  
500PSI**

#### Temperature Range : ambient

Permissible temperatures of ambient environment for the hose

#### Inner Tube

Inner part of the hose, which comes into direct contact with the fluid

The specifications show the materials for this part.

#### Outer Cover

Outer part of the hose, which is intended to protect its reinforcing

The specifications show the materials for this part.

\*The color of this cover is black unless otherwise specified.

#### Temperature Range: fluid

Permissible temperatures of fluid flowing through the hose

#### Compatible Fluid

Fluid applicable to the hose

- Compatible Fluid / Mineral Hydraulic Oil
- Temperature Range: fluid / -40°C to 100°C / -40°F to 212°F
- Temperature Range: ambient / -40°C to 70°C / -40°F to 158°F

- Inner Tube / Oil-resistant synthetic rubber

- Outer Cover / Weather-resistant synthetic rubber

#### Weight

Approximate Weight of Hose

| Catalog Number | I.D. | O.D. | Max.W.P. |      | Min.B.P. |    | Min.B.R. |     | Weight | Reinforcement | Compatible coupling/relevant page |     |        |       |                |
|----------------|------|------|----------|------|----------|----|----------|-----|--------|---------------|-----------------------------------|-----|--------|-------|----------------|
|                |      |      | inch     | mm   | inch     | mm | psi      | MPa | psi    | MPa           | inch                              | mm  | lbs/ft | g/m   |                |
| PA0104*        | 1/4  | 6.3  | 0.55     | 14.0 |          |    | 200      | 1.5 | 870    | 6.0           | 2.17                              | 55  | 0.33   | 150   |                |
| PA0106*        | 3/8  | 9.5  | 0.69     | 17.4 |          |    |          |     | 2.56   | 65            | 0.53                              | 240 |        |       |                |
| PA0108*        | 1/2  | 12.7 | 0.83     | 21.2 |          |    |          |     | 3.54   | 90            | 0.62                              | 280 | 4C     | AS/27 | AS/27<br>UL/30 |

#### I.D.O.D

Inner and outer diameters of the hose

#### Max.W.P.

Maximum usable working pressure

#### Min.B.R.

Minimum bending radius that can be achieved without performance degradation. This radius is specified on the inside surface of the bend area.

#### Min.B.P.

Pressure that the hose should withstand without problems such as coupling detachment, hose bursting, and fluid leaking from the crimped part when the hose is subjected to water or oil pressure.

#### Coupling Series

Series of couplings that are crimped either **at a factory** or **with UNICRIMP**. The number after "/" indicates the number of the page that describes the applicable series of couplings.

\*Crimping the couplings may be impossible depending on the type of UNICRIMP used.

#### Reinforcement

Fibers or wires woven or spirally wrapped around an inner tube to maintain hose performance. The specifications show the structure of the reinforcing.

# OKE Series

## For Low Pressure

- Compatible Fluid / Mineral Oil, Water
- Inner Tube / Oil Resistant Synthetic Rubber
- Outer Cover / Weather Resistant Synthetic Rubber
- Temperature Range: fluid / -40°C to 100°C(Oil) / 0°C to 50°C(Water)  
-40°F to 212°F(Oil) / 32°F to 122°F(Water)
- Temperature Range : ambient /-40°C to 70°C(-40°F to 158°F)

### OKE

Maximum Working Pressure

**1.5MPa  
200PSI**



| Catalog Number | I.D. |      | O.D. |      | Max.W.P. |     | Min.B.P. |     | Min.B.R. |     | Weight |     | Reinforcement | Compatible coupling/relevant page<br>Factory-assembled UNICRIMP-crimped |
|----------------|------|------|------|------|----------|-----|----------|-----|----------|-----|--------|-----|---------------|---|
|                | inch | mm   | inch | mm   | psi      | MPa | psi      | MPa | inch     | mm  | lbs/ft | g/m |               |   |
| OKE04          | 1/4  | 6.6  | 0.50 | 12.7 | 200      | 1.5 | 600      | 4.5 | 2.56     | 65  | 0.09   | 130 | 2C            | LS/27 LS/27   |
| OKE06          | 3/8  | 9.7  | 0.63 | 15.9 |          |     |          |     | 2.95     | 75  | 0.12   | 170 |               |   |
| OKE08          | 1/2  | 13.0 | 0.78 | 19.8 |          |     |          |     | 3.94     | 100 | 0.16   | 240 |               |   |
| OKE10          | 5/8  | 16.2 | 0.93 | 23.5 |          |     |          |     | 4.92     | 125 | 0.21   | 310 |               | UT/27 UT/27   |
| OKE12          | 3/4  | 19.3 | 1.09 | 27.7 |          |     |          |     | 5.91     | 150 | 0.29   | 430 |               |   |
| OKE16          | 1    | 25.7 | 1.44 | 36.5 |          |     |          |     | 7.87     | 200 | 0.48   | 720 | 4C            |   |

\*These hoses cannot be used under surge (shock) pressure. If the hose will be subjected to surge (shock) pressure, replace it with a PASCALART hose (PA).

\*Hoses suitable for use at high temperatures (120°C and 150°C) are also available. For details, refer to the Lace-up Rubber Hose Catalog.

We recommend using water-glycol with couplings on which the wetted parts only are nickel chrome plated (the catalog numbers of these couplings end with X103).

**⚠ Warning** Do not use high water base fluid (HWBF) with the hoses listed above. Doing so could cause the hoses to burst or fluid to leak. Severe personal injury or death may result if these instructions are not followed.

# PASCALART

### JIS Standard

- JIS K6349-3(high-pressure rubber hose)
- JIS B8360(high-pressure rubber hose assembly)

- Compatible Fluid  
Mineral Oil
- Inner Tube  
Oil Resistant Synthetic Rubber
- Outer Cover  
Weather Resistant Synthetic Rubber
- Temperature Range : fluid  
-40°Cto +100°C (-40°F to +212°F)
- Temperature Range : ambient  
-40°Cto +70°C (-40°F to +158°F)

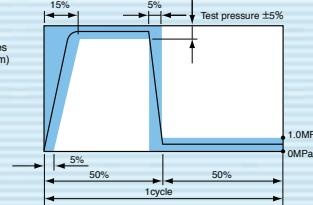


### 1 LONGER HOSE LIFE

PASCALART series hose provides a longer service life and a greater fatigue resistance than conventional hose. PASCALART series hose guarantees a service life of 400,000 impulse cycles conforming to JIS heavy duty application standard B8360. Conventional hose assures a service life of only 100,000 to 200,000 impulse cycles.

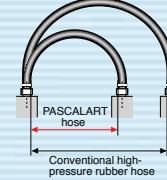
#### Hose Life Comparison

|                  |                                       |
|------------------|---------------------------------------|
| <b>PASCALART</b> | 400,000 impulse cycles (JIS waveform) |
| SAE100R2         | 200,000 impulse cycles (SAE waveform) |
| SAE100R1         | 150,000 impulse cycles (SAE waveform) |



### 2 SMALLER BENDING RADIUS

PASCALART series hose minimum bending radius is 2/3 of the JIS K6349 standard, which results in shorter hydraulic hose assemblies, and more compact hydraulic circuits.



### 3 BROAD RANGE

PASCALART series hose is classified into 9 different working pressure categories. This broad range of working pressures, makes it easy to select the right hose for any given hydraulic circuit pressure.

### PA01

Maximum Working Pressure

**1.5MPa  
200PSI**

| Catalog Number | I.D. |      | O.D. |      | Max.W.P. |     | Min.B.P. |     | Min.B.R. |    | Weight |     | Reinforcement | Compatible coupling/relevant page<br>Factory-assembled UNICRIMP-crimped |
|----------------|------|------|------|------|----------|-----|----------|-----|----------|----|--------|-----|---------------|---|
|                | inch | mm   | inch | mm   | psi      | MPa | psi      | MPa | inch     | mm | lbs/ft | g/m |               |   |
| PA0104*        | 1/4  | 6.3  | 0.55 | 14.0 | 200      | 1.5 | 870      | 6.0 | 2.17     | 55 | 0.33   | 150 | 4C            | AS/27 UL/30   |
| PA0106*        | 3/8  | 9.5  | 0.69 | 17.4 |          |     |          |     | 2.56     | 65 | 0.53   | 240 |               |   |
| PA0108*        | 1/2  | 12.7 | 0.83 | 21.2 |          |     |          |     | 3.54     | 90 | 0.62   | 280 |               |   |

We recommend using water-glycol with couplings on which the wetted parts only are nickel chrome plated (the catalog numbers of these couplings end with X103).

\*For factory-assembled hoses with stainless steel fittings, select the UL series hoses.

**⚠ Warning** Do not use high water base fluid (HWBF) with the hoses listed above. Doing so could cause the hoses to burst or fluid to leak. Severe personal injury or death may result if these instructions are not followed.

### Reinforcing

**1W**

1 wire braid

**2C**

2 fabric spiral

**2W**

2 wire braids

# PA series

PASCALART

## PA03

Maximum Working Pressure

**3.5MPa  
500PSI**

| Catalog Number |              |            |              |            |                 |                 |                 |                 |                  |                |                  |               |               |   |
|----------------|--------------|------------|--------------|------------|-----------------|-----------------|-----------------|-----------------|------------------|----------------|------------------|---------------|---------------|---|
|                | I.D.<br>inch | I.D.<br>mm | O.D.<br>inch | O.D.<br>mm | Max.W.P.<br>psi | Max.W.P.<br>MPa | Min.B.P.<br>psi | Min.B.P.<br>MPa | Min.B.R.<br>inch | Min.B.R.<br>mm | Weight<br>lbs/ft | Weight<br>g/m | Reinforcement | Compatible coupling/relevant page<br>Factory-assembled UNICRIMP-crimped |
| PA0304*        | 1/4          | 6.3        | 0.55         | 14.0       | 500             | 3.5             | 2,000           | 14.0            | 2.17             | 55             | 0.10             | 170           | 4C            | AS/27<br>UL/230   |
| PA0306*        | 3/8          | 9.5        | 0.69         | 17.4       |                 |                 |                 |                 | 2.56             | 65             | 0.14             | 220           |               |   |
| PA0308*        | 1/2          | 12.7       | 0.83         | 21.2       |                 |                 |                 |                 | 3.54             | 90             | 0.19             | 290           | 2C            | UT/27<br>UL/30  |
| PA0310         | 5/8          | 15.9       | 0.93         | 23.5       |                 |                 |                 |                 | 4.33             | 110            | 0.20             | 310           |               |   |
| PA0312         | 3/4          | 19.0       | 1.24         | 31.4       |                 |                 |                 |                 | 5.31             | 135            | 0.39             | 620           | 4C            | LC/27<br>LC/27  |
| PA0316         | 1            | 25.4       | 1.48         | 37.5       |                 |                 |                 |                 | 6.69             | 170            | 0.49             | 800           |               |   |
| PA0320         | 1-1/4        | 31.8       | 1.64         | 41.7       |                 |                 |                 |                 | 7.87             | 200            | 0.77             | 950           | 1W            | LC/27   |
| PA0324         | 1-1/2        | 38.1       | 1.90         | 48.3       |                 |                 |                 |                 | 9.84             | 250            | 0.90             | 1,170         |               |   |

We recommend using water-glycol with couplings on which the wetted parts only are nickel chrome plated (the catalog numbers of these couplings end with X103). \*Factory-assembled hoses with stainless steel fittings are the UL series hoses.

Warning Do not use high water base fluid (HWBF) with the hoses listed above. Do not use water-glycol with either PA0320 or PA0324. Failure to observe these instructions could cause the hoses to burst or fluid to leak. Severe personal injury or death may result if these instructions are not followed.

## PA07

Maximum Working Pressure

**7.0MPa  
1,000PSI**

| Catalog Number |              |            |              |            |                 |                 |                 |                 |                  |                |                  |               |               |   |
|----------------|--------------|------------|--------------|------------|-----------------|-----------------|-----------------|-----------------|------------------|----------------|------------------|---------------|---------------|---|
|                | I.D.<br>inch | I.D.<br>mm | O.D.<br>inch | O.D.<br>mm | Max.W.P.<br>psi | Max.W.P.<br>MPa | Min.B.P.<br>psi | Min.B.P.<br>MPa | Min.B.R.<br>inch | Min.B.R.<br>mm | Weight<br>lbs/ft | Weight<br>g/m | Reinforcement | Compatible coupling/relevant page<br>Factory-assembled UNICRIMP-crimped |
| PA0704*        | 1/4          | 6.3        | 0.53         | 13.5       | 1,000           | 7.0             | 4,000           | 28.0            | 2.17             | 55             | 0.15             | 220           | 1W            | UZ/34<br>UB/34<br>UZ/34<br>UB/34  |
| PA0706*        | 3/8          | 9.5        | 0.66         | 16.7       |                 |                 |                 |                 | 2.95             | 75             | 0.22             | 330           |               |   |
| PA0708*        | 1/2          | 12.7       | 0.76         | 19.4       |                 |                 |                 |                 | 3.15             | 80             | 0.25             | 380           |               |   |
| PA0710*        | 5/8          | 15.9       | 0.94         | 23.8       |                 |                 |                 |                 | 4.33             | 110            | 0.34             | 510           |               |   |
| PA0712*        | 3/4          | 19.0       | 1.05         | 26.6       |                 |                 |                 |                 | 5.12             | 130            | 0.40             | 600           | 2W            | UZ/34<br>UB/34  |
| PA0716*        | 1            | 25.4       | 1.32         | 33.5       |                 |                 |                 |                 | 6.89             | 175            | 0.57             | 850           |               |   |
| PA0720         | 1-1/4        | 31.8       | 1.71         | 43.5       |                 |                 |                 |                 | 8.66             | 220            | 1.07             | 1,610         | UZ/34         | UZ/34<br>HW/41  |
| PA0724         | 1-1/2        | 38.1       | 1.98         | 50.2       |                 |                 |                 |                 | 10.63            | 270            | 1.27             | 1,910         |               |   |
| PA0732         | 2            | 50.8       | 2.49         | 63.2       |                 |                 |                 |                 | 13.78            | 350            | 1.66             | 2,490         |               |   |

We recommend using water-glycol with couplings on which the wetted parts only are nickel chrome plated (the catalog numbers of these couplings end with X103). \*Factory-assembled hoses with stainless steel fittings are the UL and UX series hoses.

Warning Do not use high water base fluid (HWBF) with the hoses listed above. Do not use water-glycol with either PA0720 or PA0724 or PA0732. Failure to observe these instructions could cause the hoses to burst or fluid to leak. Severe personal injury or death may result if these instructions are not followed.

## PA10

Maximum Working Pressure

**10.5MPa  
1,500PSI**

| Catalog Number |              |            |              |            |                 |                 |                 |                 |                  |                |                  |               |               |   |
|----------------|--------------|------------|--------------|------------|-----------------|-----------------|-----------------|-----------------|------------------|----------------|------------------|---------------|---------------|---|
|                | I.D.<br>inch | I.D.<br>mm | O.D.<br>inch | O.D.<br>mm | Max.W.P.<br>psi | Max.W.P.<br>MPa | Min.B.P.<br>psi | Min.B.P.<br>MPa | Min.B.R.<br>inch | Min.B.R.<br>mm | Weight<br>lbs/ft | Weight<br>g/m | Reinforcement | Compatible coupling/relevant page<br>Factory-assembled UNICRIMP-crimped |
| PA1004*        | 1/4          | 6.3        | 0.53         | 13.5       | 1,500           | 10.5            | 6,000           | 42.0            | 2.17             | 55             | 0.15             | 230           | 1W            | UZ/34<br>UB/34<br>UZ/34<br>UB/34  |
| PA1006*        | 3/8          | 9.5        | 0.66         | 16.7       |                 |                 |                 |                 | 2.95             | 75             | 0.23             | 340           |               |   |
| PA1008*        | 1/2          | 12.7       | 0.76         | 19.4       |                 |                 |                 |                 | 3.15             | 80             | 0.26             | 390           |               |   |
| PA1010*        | 5/8          | 15.9       | 0.94         | 23.8       |                 |                 |                 |                 | 4.33             | 110            | 0.35             | 530           |               |   |
| PA1012*        | 3/4          | 19.0       | 1.05         | 26.6       |                 |                 |                 |                 | 5.12             | 130            | 0.41             | 610           | 2W            | UB/34   |
| PA1016*        | 1            | 25.4       | 1.32         | 33.5       |                 |                 |                 |                 | 6.89             | 175            | 0.57             | 860           |               |   |
| PA1020         | 1-1/4        | 31.8       | 1.71         | 43.5       |                 |                 |                 |                 | 8.66             | 220            | 1.07             | 1,610         | UZ/34         | UZ/34<br>HW/41  |
| PA1024         | 1-1/2        | 38.1       | 1.98         | 50.2       |                 |                 |                 |                 | 10.63            | 270            | 1.27             | 1,910         |               |   |
| PA1032         | 2            | 50.8       | 2.60         | 66.0       |                 |                 |                 |                 | 14.57            | 370            | 2.77             | 4,150         | 4S            | HW/41   |

We recommend using water-glycol with couplings on which the wetted parts only are nickel chrome plated (the catalog numbers of these couplings end with X103). \*Factory-assembled hoses with stainless steel fittings are the UL and UX series hoses.

Warning Do not use high water base fluid (HWBF) with the hoses listed above. Do not use water-glycol with PA1020, PA1024, or PA1032. Failure to observe these instructions could cause the hoses to burst or fluid to leak. Severe personal injury or death may result if these instructions are not followed.

## PA14

Maximum Working Pressure

**14.0MPa  
2,000PSI**

| Catalog Number |              |            |              |            |                 |                 |                 |                 |                  |                |                  |               |               |   |
|----------------|--------------|------------|--------------|------------|-----------------|-----------------|-----------------|-----------------|------------------|----------------|------------------|---------------|---------------|---|
|                | I.D.<br>inch | I.D.<br>mm | O.D.<br>inch | O.D.<br>mm | Max.W.P.<br>psi | Max.W.P.<br>MPa | Min.B.P.<br>psi | Min.B.P.<br>MPa | Min.B.R.<br>inch | Min.B.R.<br>mm | Weight<br>lbs/ft | Weight<br>g/m | Reinforcement | Compatible coupling/relevant page<br>Factory-assembled UNICRIMP-crimped |
| PA1404*        | 1/4          | 6.3        | 0.53         | 13.5       | 2,000           | 14.0            | 8,000           | 56.0            | 2.17             | 55             | 0.16             | 240           | 1W            | UZ/34<br>UB/34<br>UZ/34<br>UB/34  |
| PA1406*        | 3/8          | 9.5        | 0.66         | 16.7       |                 |                 |                 |                 | 2.95             | 75             | 0.23             | 350           |               |   |
| PA1408*        | 1/2          | 12.7       | 0.76         | 19.4       |                 |                 |                 |                 | 3.54             | 90             | 0.27             | 400           |               |   |
| PA1410*        | 5/8          | 15.9       | 1.00         | 25.4       |                 |                 |                 |                 | 4.72             | 120            | 0.50             | 750           | 2W            | UB/34   |
| PA1412*        | 3/4          | 19.0       | 1.15         | 29.3       |                 |                 |                 |                 | 5.51             | 140            | 0.63             | 940           |               |   |
| PA1416*        | 1            | 25.4       | 1.41         | 35.8       |                 |                 |                 |                 | 7.09             | 180            | 0.82             | 1,230         | 4S            | UZ/34   |
| PA1420         | 1-1/4        | 31.8       | 1.71         | 43.5       |                 |                 |                 |                 | 9.45             | 240            | 1.07             | 1,610         |               |   |
| PA1424         | 1-1/2        | 38.1       | 2.07         | 52.7       |                 |                 |                 |                 | 11.02            | 280            | 2.04             | 3,060         |               |   |
| PA1432         | 2            | 50.8       | 2.60         | 66.0       |                 |                 |                 |                 | 14.57            | 370            | 2.77             | 4,150         |               |   |

We recommend using water-glycol with couplings on which the wetted parts only are nickel chrome plated (the catalog numbers of these couplings end with X103). \*Factory-assembled hoses with stainless steel fittings are the UL and UX series hoses.

Warning Do not use high water base fluid (HWBF) with the hoses listed above. Do not use water-glycol with PA1420, PA1424, or PA1432. Failure to observe these instructions could cause the hoses to burst or fluid to leak. Severe personal injury or death may result if these instructions are not followed.

## 4C

4 fabric spiral

## 4S

4 spiral wires

# PA series

## PA17

Maximum Working Pressure

**17.0MPa  
2,500PSI**

| Catalog Number |              |            |              |            |                 |                 |                 |                 |                  |                |                  |               | Reinforcement | Compatible coupling/relevant page<br>Factory-assembled UNICRIMP-crimped |
|----------------|--------------|------------|--------------|------------|-----------------|-----------------|-----------------|-----------------|------------------|----------------|------------------|---------------|---------------|---|
|                | I.D.<br>inch | O.D.<br>mm | I.D.<br>inch | O.D.<br>mm | Max.W.P.<br>psi | Max.W.P.<br>MPa | Min.B.P.<br>psi | Min.B.P.<br>MPa | Min.B.R.<br>inch | Min.B.R.<br>mm | Weight<br>lbs/ft | Weight<br>g/m |               |   |
| PA1704*        | 1/4          | 6.3        | 0.53         | 13.5       | 2,500           | 17.0            | 10,000          | 68.0            | 2.36             | 60             | 0.16             | 240           | 1W            | UZ/34 UZ/34   |
| PA1706*        | 3/8          | 9.5        | 0.66         | 16.7       |                 |                 |                 |                 | 3.15             | 80             | 0.24             | 360           |               | UB/34   |
| PA1708         | 1/2          | 12.7       | 0.76         | 19.4       |                 |                 |                 |                 | 3.54             | 90             | 0.28             | 420           |               | UZ/34   |
| PA1710         | 5/8          | 15.9       | 1.00         | 25.4       |                 |                 |                 |                 | 4.72             | 120            | 0.51             | 770           | 2W            | UB/34   |
| PA1712         | 3/4          | 19.0       | 1.15         | 29.3       |                 |                 |                 |                 | 5.51             | 140            | 0.63             | 950           |               |   |
| PA1716         | 1            | 25.4       | 1.41         | 35.8       |                 |                 |                 |                 | 7.28             | 185            | 0.87             | 1,300         |               |   |

\*For factory-assembled hoses with stainless steel fittings, select the UL series hoses.

## PA21

Maximum Working Pressure

**20.5MPa  
3,000PSI**

| Catalog Number |              |            |              |            |                 |                 |                 |                 |                  |                |                  |               | Reinforcement | Compatible coupling/relevant page<br>Factory-assembled UNICRIMP-crimped |
|----------------|--------------|------------|--------------|------------|-----------------|-----------------|-----------------|-----------------|------------------|----------------|------------------|---------------|---------------|---|
|                | I.D.<br>inch | O.D.<br>mm | I.D.<br>inch | O.D.<br>mm | Max.W.P.<br>psi | Max.W.P.<br>MPa | Min.B.P.<br>psi | Min.B.P.<br>MPa | Min.B.R.<br>inch | Min.B.R.<br>mm | Weight<br>lbs/ft | Weight<br>g/m |               |   |
| PA2104         | 1/4          | 6.3        | 0.53         | 13.5       | 3,000           | 20.5            | 12,000          | 82.0            | 2.76             | 70             | 0.17             | 250           | 1W            | UZ/34 UZ/34   |
| PA2106         | 3/8          | 9.5        | 0.71         | 18.0       |                 |                 |                 |                 | 3.54             | 90             | 0.31             | 470           |               | UB/34   |
| PA2108         | 1/2          | 12.7       | 0.87         | 22.2       |                 |                 |                 |                 | 4.33             | 110            | 0.43             | 650           |               | UZ/34   |
| PA2110         | 5/8          | 15.9       | 1.00         | 25.4       |                 |                 |                 |                 | 5.51             | 140            | 0.51             | 770           | 2W            | UB/34   |
| PA2112         | 3/4          | 19.0       | 1.15         | 29.3       |                 |                 |                 |                 | 6.69             | 170            | 0.64             | 960           |               |   |
| PA2116         | 1            | 25.4       | 1.41         | 35.8       |                 |                 |                 |                 | 8.27             | 210            | 0.87             | 1,300         |               |   |
| PA2120         | 1-1/4        | 31.8       | 1.78         | 45.2       |                 |                 |                 |                 | 10.24            | 260            | 1.57             | 2,360         | 4S            | UZ/34 UZ/34   |
| PA2124         | 1-1/2        | 38.1       | 2.07         | 52.7       |                 |                 |                 |                 | 12.20            | 310            | 2.04             | 3,060         |               | HW/40 HW/40   |
| PA2132         | 2            | 50.8       | 2.60         | 66.0       |                 |                 |                 |                 | 16.93            | 430            | 2.77             | 4,150         |               |   |

## PA28

Maximum Working Pressure

**27.5MPa  
4,000PSI**

| Catalog Number |              |            |              |            |                 |                 |                 |                 |                  |                |                  |               | Reinforcement | Compatible coupling/relevant page<br>Factory-assembled UNICRIMP-crimped |
|----------------|--------------|------------|--------------|------------|-----------------|-----------------|-----------------|-----------------|------------------|----------------|------------------|---------------|---------------|---|
|                | I.D.<br>inch | O.D.<br>mm | I.D.<br>inch | O.D.<br>mm | Max.W.P.<br>psi | Max.W.P.<br>MPa | Min.B.P.<br>psi | Min.B.P.<br>MPa | Min.B.R.<br>inch | Min.B.R.<br>mm | Weight<br>lbs/ft | Weight<br>g/m |               |   |
| PA2804         | 1/4          | 6.3        | 0.59         | 15.1       | 4,000           | 27.5            | 16,000          | 110.0           | 2.76             | 70             | 0.25             | 380           | 2W            | UZ/34 UZ/34   |
| PA2806         | 3/8          | 9.5        | 0.75         | 19.1       |                 |                 |                 |                 | 3.94             | 100            | 0.36             | 540           |               | UB/34 UB/34   |
| PA2808         | 1/2          | 12.7       | 0.87         | 22.2       |                 |                 |                 |                 | 4.33             | 110            | 0.52             | 780           |               |   |
| PA2810         | 5/8          | 15.9       | 1.04         | 26.4       |                 |                 |                 |                 | 5.51             | 140            | 0.67             | 1,000         | 4S            | UB/34 UB/34   |
| PA2812         | 3/4          | 19.0       | 1.14         | 29.0       |                 |                 |                 |                 | 6.69             | 170            | 0.75             | 1,130         |               |   |
| PA2816         | 1            | 25.4       | 1.41         | 35.9       |                 |                 |                 |                 | 8.66             | 220            | 1.17             | 1,750         |               |   |
| PA2820         | 1-1/4        | 31.8       | 1.80         | 45.6       |                 |                 |                 |                 | 11.02            | 280            | 1.74             | 2,610         | 6S            | UZ/34 UZ/34   |
| PA2824         | 1-1/2        | 38.1       | 2.20         | 55.9       |                 |                 |                 |                 | 12.60            | 320            | 2.93             | 4,390         |               | KN/41 —   |
| PA2832         | 2            | 50.8       | 2.95         | 75.0       |                 |                 |                 |                 | 16.93            | 430            | 5.27             | 7,900         |               | KD/41 —   |

## PA35

Maximum Working Pressure

**34.5MPa  
5,000PSI**

| Catalog Number |              |            |              |            |                 |                 |                 |                 |                  |                |                  |               | Reinforcement | Compatible coupling/relevant page<br>Factory-assembled UNICRIMP-crimped |
|----------------|--------------|------------|--------------|------------|-----------------|-----------------|-----------------|-----------------|------------------|----------------|------------------|---------------|---------------|---|
|                | I.D.<br>inch | O.D.<br>mm | I.D.<br>inch | O.D.<br>mm | Max.W.P.<br>psi | Max.W.P.<br>MPa | Min.B.P.<br>psi | Min.B.P.<br>MPa | Min.B.R.<br>inch | Min.B.R.<br>mm | Weight<br>lbs/ft | Weight<br>g/m |               |   |
| PA3504         | 1/4          | 6.3        | 0.59         | 15.1       | 5,000           | 34.5            | 20,000          | 138.0           | 3.15             | 80             | 0.26             | 390           | 2W            | UZ/34 UZ/34   |
| PA3506         | 3/8          | 9.5        | 0.75         | 19.1       |                 |                 |                 |                 | 4.33             | 110            | 0.37             | 550           |               | UB/34 UB/34   |
| PA3508         | 1/2          | 12.7       | 0.87         | 22.2       |                 |                 |                 |                 | 5.91             | 150            | 0.53             | 800           |               |   |
| PA3510         | 5/8          | 15.9       | 1.04         | 26.4       |                 |                 |                 |                 | 6.69             | 170            | 0.67             | 1,000         | 4S            | UB/34 UB/34   |
| PA3512         | 3/4          | 19.0       | 1.14         | 29.0       |                 |                 |                 |                 | 8.66             | 220            | 0.75             | 1,130         |               |   |
| PA3516         | 1            | 25.4       | 1.44         | 36.6       |                 |                 |                 |                 | 11.02            | 280            | 1.33             | 2,000         |               |   |
| PA3520         | 1-1/4        | 31.8       | 1.93         | 49.0       |                 |                 |                 |                 | 12.99            | 330            | 2.57             | 3,850         | 6S            | UZ/34 —   |
| PA3524         | 1-1/2        | 38.1       | 2.20         | 55.9       |                 |                 |                 |                 | 14.96            | 380            | 2.96             | 4,440         |               | KN/41 —   |
| PA3532         | 2            | 50.8       | 2.95         | 75.0       |                 |                 |                 |                 | 19.69            | 500            | 5.33             | 8,000         |               | KD/41 —   |

### Reinforcing

1W

1 wire braid

2W

2 wire braids

4S

4 spiral wires

## HQ35 Series

**Impulse cycle 1,200,000**

- Compatible Fluid / Mineral Oil
- Inner Tube / Synthetic Rubber
- Outer Cover / Synthetic Rubber
- Temperature Range : fluid / -40°C to 100°C(-40°F to 212°F)
- Temperature Range : ambient / -40°C to 70°C(-40 °F to 158°F)

### HQ35

Maximum Working Pressure

**34.5MPa  
5,000PSI**

| Catalog Number | I.D.  |      | O.D. |      | Max.W.P. |      | Min.B.P. |       | Min.B.R. |     | Weight |       | Reinforcement | Compatible coupling/relevant page |                  |
|----------------|-------|------|------|------|----------|------|----------|-------|----------|-----|--------|-------|---------------|-----------------------------------|------------------|
|                | inch  | mm   | inch | mm   | psi      | MPa  | psi      | MPa   | inch     | mm  | lbs/ft | g/m   |               | Factory-assembled                 | UNICRIMP-crimped |
| HQ3508         | 1/2   | 12.7 | 0.87 | 22.2 | 5,000    | 34.5 | 20,000   | 138.0 | 4.72     | 120 | 0.50   | 750   | 4S            | UB/34                             | UB/34            |
| HQ3510         | 5/8   | 15.9 | 1.04 | 26.4 |          |      |          |       | 6.30     | 160 | 0.66   | 990   |               |                                   |                  |
| HQ3512         | 3/4   | 19.0 | 1.14 | 29.0 |          |      |          |       | 7.87     | 200 | 0.72   | 1,080 |               |                                   |                  |
| HQ3516         | 1     | 25.4 | 1.44 | 36.6 |          |      |          |       | 9.45     | 240 | 1.30   | 1,950 | 6S            | UB/34                             | UB/34            |
| HQ3520         | 1-1/4 | 31.8 | 1.92 | 48.7 |          |      |          |       | 12.99    | 330 | 2.49   | 3,730 |               |                                   |                  |

## CQ Series Impulse cycle 1,000,000

**MSHA Approved**

- Compatible Fluid / Mineral Oil

- Inner Tube / Oil Resistant Synthetic Rubber

- Outer Cover / Weather Resistant Synthetic Rubber

- Temperature Range : fluid / -40°C to +100°C(-40°F to +212°F)(CQ36)

- fluid -40°C to +120°C(-40°F to +248°F)(CQ38)

- Temperature Range : ambient / -40°C to 70°C(-40 °F to 158°F)

### CQ36/38

Maximum Working Pressure

**36.0~38.0MPa  
5,200~5,500PSI**

| Catalog Number | I.D.  |      | O.D. |      | Max.W.P. |      | Min.B.P. |       | Min.B.R. |     | Weight |      | Reinforcement | Compatible coupling/relevant page |                  |
|----------------|-------|------|------|------|----------|------|----------|-------|----------|-----|--------|------|---------------|-----------------------------------|------------------|
|                | inch  | mm   | inch | mm   | psi      | MPa  | psi      | MPa   | inch     | mm  | lbs/ft | g/m  |               | Factory-assembled                 | UNICRIMP-crimped |
| CQ3604         | 1/4   | 6.3  | 0.59 | 15.1 | 5,200    | 36.0 | 20,800   | 144.0 | 3.15     | 80  | 0.26   | 380  | 2W            | UZ/34                             | UZ/34            |
| CQ3606         | 3/8   | 9.5  | 0.76 | 19.2 |          |      |          |       | 4.33     | 110 | 0.38   | 570  |               |                                   |                  |
| CQ3608         | 1/2   | 12.7 | 0.87 | 22.2 |          |      |          |       | 5.51     | 140 | 0.50   | 750  |               |                                   |                  |
| CQ3610         | 5/8   | 15.9 | 1.04 | 26.4 |          |      |          |       | 5.91     | 150 | 0.67   | 1000 | 4S            | UB/34                             | UB/34            |
| CQ3812         | 3/4   | 19.0 | 1.19 | 30.1 |          |      |          |       | 8.27     | 210 | 0.94   | 1400 |               |                                   |                  |
| CQ3816         | 1     | 25.4 | 1.44 | 36.6 | 5,500    | 38.0 | 22,000   | 152.0 | 10.24    | 260 | 1.31   | 1950 |               |                                   |                  |
| CQ3820         | 1-1/4 | 31.8 | 1.87 | 47.4 |          |      |          |       | 12.99    | 330 | 2.42   | 3600 | 6S            | UB/34                             | —                |

## SQ28 Series

**Ultra High Abrasion resistant hose**

- Compatible Fluid / Mineral Oil

- Inner Tube / Oil Resistant Synthetic Rubber

- Outer Cover / Weather Resistant Synthetic Rubber with Ultra High Molecular Weight Polyethylene

- Temperature Range : fluid / -40°C to +100°C(-40°F to +212°F)

- Temperature Range : ambient / -40°C to +70°C(-40 °F to +158°F)

### SQ28

Maximum Working Pressure

**27.5MPa  
4,000PSI**

| Catalog Number | I.D. |      | O.D. |      | Max.W.P. |      | Min.B.P. |       | Min.B.R. |     | Weight |      | Reinforcement | Compatible coupling/relevant page |                  |
|----------------|------|------|------|------|----------|------|----------|-------|----------|-----|--------|------|---------------|-----------------------------------|------------------|
|                | inch | mm   | inch | mm   | psi      | MPa  | psi      | MPa   | inch     | mm  | lbs/ft | g/m  |               | Factory-assembled                 | UNICRIMP-crimped |
| SQ2808         | 1/2  | 12.7 | 0.89 | 22.5 | 4,000    | 27.5 | 16,000   | 110.0 | 4.72     | 120 | 0.52   | 770  | 4S            | UB/34                             | —                |
| SQ2810         | 5/8  | 15.9 | 1.05 | 26.7 |          |      |          |       | 5.91     | 150 | 0.68   | 1010 |               |                                   |                  |
| SQ2812         | 3/4  | 19.0 | 1.15 | 29.3 |          |      |          |       | 7.09     | 180 | 0.74   | 1100 |               |                                   |                  |

### Reinforcing

2W

2 wire braids

4S

4 spiral wires

6S

6 spiral wires

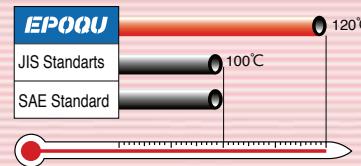
# EPOQU

- Compatible Fluid  
Mineral Oil
- Inner Tube  
Oil Resistant Synthetic Rubber
- Outer Cover  
Weather Resistant Synthetic Rubber
- Temperature Range : fluid  
-40°C to +120°C (-40°F to +248°F)
- Temperature Range : ambient  
-40°C to +70°C (-40°F to +158°F)



## 1 CONTINUOUS SERVICE AT 120°C (248°F)

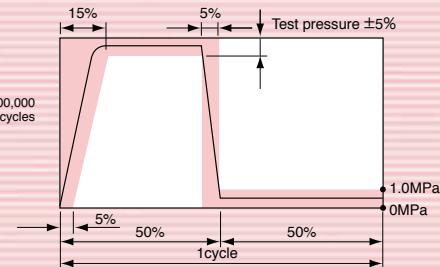
EPOQU series hose can be used continuously with a hydraulic circuit oil temperature of 120°C(248°F). Conventional hose is only rated for 100°C(212°F)



## 2 LONGER HOSE LIFE

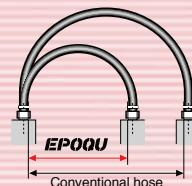
EPOQU successfully passes 1,000,000 impulse cycles at 120°C (250°F).

|              |                  |
|--------------|------------------|
| <b>EPOQU</b> | 1,000,000 cycles |
| SAE100R15    | 500,000 cycles   |
| JIS K 6349-3 | 400,000 cycles   |
| SAE 100R2    | 200,000 cycles   |



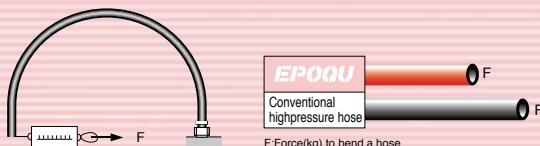
## 3 SMALLER BENDING RADIUS

EPOQU series hose minimum bending radius is 2/3 of the conventional standard, which results in shorter hydraulic hose assembly lengths, and more compact hydraulic circuits.



## 4 EASY INSTALLATION

EPOQU is flexible. EPOQU requires just 2/3 of the force necessary to bend the conventional rubber hose to the same bending radius. Thus, EPOQU allows easy and speedy installation.



## 5 BROAD RANGE

EPOQU series is classified into 5 categories of different working pressure so that you can select a right hose according to the pressure rating of the pump to be applied.

### EQ17

Maximum Working Pressure

**17.0MPa  
2,500PSI**

| Catalog Number | I.D.  |      | O.D. |      | Max.W.P. |      | Min.B.P. |      | Min.B.R. |     | Weight |       | Reinforcement | Compatible coupling/relevant page |                  |
|----------------|-------|------|------|------|----------|------|----------|------|----------|-----|--------|-------|---------------|-----------------------------------|------------------|
|                | inch  | mm   | inch | mm   | psi      | MPa  | psi      | MPa  | inch     | mm  | lbs/ft | g/m   |               | Factory-assembled                 | UNICRIMP-crimped |
| EQ1708         | 1/2   | 12.7 | 0.87 | 22.2 | 2,500    | 17.0 | 12,500   | 85.0 | 3.54     | 90  | 0.42   | 630   | 2W            | UZ/34                             | UB/34            |
| EQ1710         | 5/8   | 15.9 | 1.03 | 26.2 |          |      |          |      | 4.33     | 110 | 0.57   | 860   |               | UB/34                             |                  |
| EQ1712         | 3/4   | 19.0 | 1.15 | 29.3 |          |      |          |      | 5.51     | 140 | 0.66   | 990   | 4S            | UZ/34                             | UZ/34            |
| EQ1716         | 1     | 25.4 | 1.39 | 35.2 |          |      |          |      | 6.30     | 160 | 0.95   | 1,430 |               | UZ/34                             |                  |
| EQ1720         | 1-1/4 | 31.8 | 1.80 | 45.6 |          |      |          |      | 8.27     | 210 | 1.71   | 2,560 |               | HW/40                             | HW/41            |
| EQ1724         | 1-1/2 | 38.1 | 2.07 | 52.7 |          |      |          |      | 11.02    | 280 | 2.05   | 3,070 |               |                                   |                  |

# Epoqu series

## EQ21

Maximum Working Pressure

**20.5MPa  
3,000PSI**

| Catalog Number |              |            |              |            |                 |                 |                 |                 |                  |                |                  |               |               |   |
|----------------|--------------|------------|--------------|------------|-----------------|-----------------|-----------------|-----------------|------------------|----------------|------------------|---------------|---------------|---|
|                | I.D.<br>inch | I.D.<br>mm | O.D.<br>inch | O.D.<br>mm | Max.W.P.<br>psi | Max.W.P.<br>MPa | Min.B.P.<br>psi | Min.B.P.<br>MPa | Min.B.R.<br>inch | Min.B.R.<br>mm | Weight<br>lbs/ft | Weight<br>g/m | Reinforcement | Compatible coupling/relevant page<br>Factory-assembled UNICRIMP-crimped |
| EQ2108         | 1/2          | 12.7       | 0.87         | 22.2       | 3,000           | 20.5            | 15,000          | 102.5           | 3.94             | 100            | 0.42             | 630           | 2W            | UZ/34   |
| EQ2110         | 5/8          | 15.9       | 1.03         | 26.2       |                 |                 |                 |                 | 5.12             | 130            | 0.57             | 860           |               | UB/34   |
| EQ2112         | 3/4          | 19.0       | 1.14         | 29.0       |                 |                 |                 |                 | 5.51             | 140            | 0.75             | 1,130         |               |   |
| EQ2116         | 1            | 25.4       | 1.39         | 35.2       |                 |                 |                 |                 | 7.09             | 180            | 0.95             | 1,430         | 4S            | UZ/34   |
| EQ2120         | 1-1/4        | 31.8       | 1.80         | 45.6       |                 |                 |                 |                 | 9.06             | 230            | 1.71             | 2,560         |               | UZ/34   |
| EQ2124         | 1-1/2        | 38.1       | 2.07         | 52.7       |                 |                 |                 |                 | 12.20            | 310            | 2.05             | 3,070         |               | HW/40   |
| EQ2132         | 2            | 50.8       | 2.76         | 70.0       |                 |                 |                 |                 | 16.93            | 430            | 3.87             | 5,800         | 6S            | KN/41   |

## EQ25

Maximum Working Pressure

**24.5MPa  
3,500PSI**

| Catalog Number |              |            |              |            |                 |                 |                 |                 |                  |                |                  |               |               |   |       |
|----------------|--------------|------------|--------------|------------|-----------------|-----------------|-----------------|-----------------|------------------|----------------|------------------|---------------|---------------|---|-------|
|                | I.D.<br>inch | I.D.<br>mm | O.D.<br>inch | O.D.<br>mm | Max.W.P.<br>psi | Max.W.P.<br>MPa | Min.B.P.<br>psi | Min.B.P.<br>MPa | Min.B.R.<br>inch | Min.B.R.<br>mm | Weight<br>lbs/ft | Weight<br>g/m | Reinforcement | Compatible coupling/relevant page<br>Factory-assembled UNICRIMP-crimped |       |
| EQ2508         | 1/2          | 12.7       | 0.87         | 22.2       | 3,500           | 24.5            | 17,500          | 122.5           | 3.94             | 100            | 0.52             | 780           | 4S            | UB/34   | UB/34 |
| EQ2510         | 5/8          | 15.9       | 1.04         | 26.4       |                 |                 |                 |                 | 5.12             | 130            | 0.67             | 1,000         |               |   |       |
| EQ2512         | 3/4          | 19.0       | 1.14         | 29.0       |                 |                 |                 |                 | 6.30             | 160            | 0.75             | 1,130         |               |   |       |
| EQ2516         | 1            | 25.4       | 1.41         | 35.9       |                 |                 |                 |                 | 7.09             | 180            | 1.17             | 1,750         |               |   |       |
| EQ2520         | 1-1/4        | 31.8       | 1.80         | 45.6       |                 |                 |                 |                 | 10.24            | 260            | 1.71             | 2,560         |               | UZ/34   | UZ/34 |
| EQ2524         | 1-1/2        | 38.1       | 2.20         | 55.9       |                 |                 |                 |                 | 12.60            | 320            | 2.89             | 4,340         | 6S            |   |       |
|                |              |            |              |            |                 |                 |                 |                 |                  |                |                  |               |               | KN/41   | —     |

## EQ28

Maximum Working Pressure

**27.5MPa  
4,000PSI**

| Catalog Number |              |            |              |            |                 |                 |                 |                 |                  |                |                  |               |               |   |       |
|----------------|--------------|------------|--------------|------------|-----------------|-----------------|-----------------|-----------------|------------------|----------------|------------------|---------------|---------------|---|-------|
|                | I.D.<br>inch | I.D.<br>mm | O.D.<br>inch | O.D.<br>mm | Max.W.P.<br>psi | Max.W.P.<br>MPa | Min.B.P.<br>psi | Min.B.P.<br>MPa | Min.B.R.<br>inch | Min.B.R.<br>mm | Weight<br>lbs/ft | Weight<br>g/m | Reinforcement | Compatible coupling/relevant page<br>Factory-assembled UNICRIMP-crimped |       |
| EQ2808         | 1/2          | 12.7       | 0.87         | 22.2       | 4,000           | 27.5            | 20,000          | 137.5           | 3.94             | 100            | 0.52             | 780           | 4S            | UB/34   | UB/34 |
| EQ2810         | 5/8          | 15.9       | 1.04         | 26.4       |                 |                 |                 |                 | 5.12             | 130            | 0.67             | 1,000         |               |   |       |
| EQ2812         | 3/4          | 19.0       | 1.14         | 29.0       |                 |                 |                 |                 | 6.30             | 160            | 0.75             | 1,130         |               |   |       |
| EQ2816         | 1            | 25.4       | 1.41         | 35.9       |                 |                 |                 |                 | 7.87             | 200            | 1.17             | 1,750         |               |   |       |
| EQ2820         | 1-1/4        | 31.8       | 1.91         | 48.6       |                 |                 |                 |                 | 11.81            | 300            | 2.43             | 3,640         |               | 6S  | UZ/34 |
| EQ2824         | 1-1/2        | 38.1       | 2.20         | 55.9       |                 |                 |                 |                 | 14.17            | 360            | 2.89             | 4,340         | 6S            |   |       |
|                |              |            |              |            |                 |                 |                 |                 |                  |                |                  |               |               | KN/41   | —     |

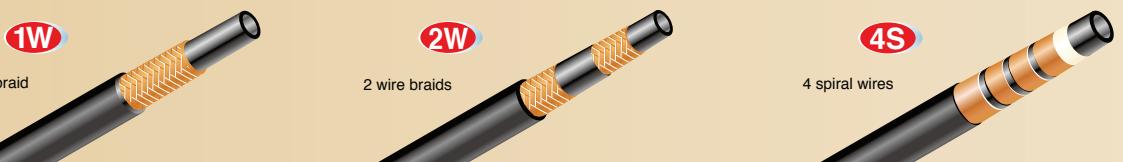
## EQ31

Maximum Working Pressure

**31.0MPa  
4,500PSI**

| Catalog Number |              |            |              |            |                 |                 |                 |                 |                  |                |                  |               |               |   |       |
|----------------|--------------|------------|--------------|------------|-----------------|-----------------|-----------------|-----------------|------------------|----------------|------------------|---------------|---------------|---|-------|
|                | I.D.<br>inch | I.D.<br>mm | O.D.<br>inch | O.D.<br>mm | Max.W.P.<br>psi | Max.W.P.<br>MPa | Min.B.P.<br>psi | Min.B.P.<br>MPa | Min.B.R.<br>inch | Min.B.R.<br>mm | Weight<br>lbs/ft | Weight<br>g/m | Reinforcement | Compatible coupling/relevant page<br>Factory-assembled UNICRIMP-crimped |       |
| EQ3108         | 1/2          | 12.7       | 0.87         | 22.2       | 4,500           | 31.0            | 22,500          | 155.0           | 4.72             | 120            | 0.53             | 800           | 4S            | UB/34   | UB/34 |
| EQ3110         | 5/8          | 15.9       | 1.04         | 26.4       |                 |                 |                 |                 | 6.30             | 160            | 0.67             | 1,000         |               |   |       |
| EQ3112         | 3/4          | 19.0       | 1.14         | 29.0       |                 |                 |                 |                 | 7.87             | 200            | 0.75             | 1,130         |               |   |       |
| EQ3116         | 1            | 25.4       | 1.44         | 36.6       |                 |                 |                 |                 | 9.45             | 240            | 1.33             | 2,000         |               |   |       |
| EQ3120         | 1-1/4        | 31.8       | 1.93         | 49.0       |                 |                 |                 |                 | 12.60            | 320            | 2.53             | 3,800         |               | 6S  | UZ/34 |
| EQ3124         | 1-1/2        | 38.1       | 2.20         | 55.9       |                 |                 |                 |                 | 15.35            | 390            | 3.00             | 4,500         |               |   |       |
| EQ3132         | 2            | 50.8       | 2.95         | 75.0       |                 |                 |                 |                 | 22.05            | 560            | 5.27             | 7,900         |               | KN/41   | EX/41 |

### Reinforcing



# SAE series / DIN series

## R12A

SAE 100R12

### Construction

- Inner Tube / Synthetic Rubber
- Outer Cover / Synthetic Rubber
- Reinforcement / 4S

| Catalog Number | I.D.  |      | O.D. |      | Max.W.P. |      | Min.B.P. |       | Min.B.R. |     | Weight |       | Reinforcement |
|----------------|-------|------|------|------|----------|------|----------|-------|----------|-----|--------|-------|---------------|
|                | inch  | mm   | inch | mm   | psi      | MPa  | psi      | MPa   | inch     | mm  | lbs/ft | g/m   |               |
| <b>R12A06</b>  | 3/8   | 9.5  | 0.80 | 20.3 | 4,000    | 28.0 | 16,000   | 112.0 | 4.92     | 125 | 0.50   | 750   | 4S            |
| <b>R12A08</b>  | 1/2   | 12.7 | 0.94 | 23.8 | 4,000    | 28.0 | 16,000   | 112.0 | 7.09     | 180 | 0.53   | 800   |               |
| <b>R12A10</b>  | 5/8   | 15.9 | 1.08 | 27.4 | 4,000    | 28.0 | 16,000   | 112.0 | 7.87     | 200 | 0.73   | 1,100 |               |
| <b>R12A12</b>  | 3/4   | 19.0 | 1.21 | 30.7 | 4,000    | 28.0 | 16,000   | 112.0 | 9.45     | 240 | 0.83   | 1,250 |               |
| <b>R12A16</b>  | 1     | 25.4 | 1.50 | 38.0 | 4,000    | 28.0 | 16,000   | 112.0 | 11.81    | 300 | 1.30   | 1,950 |               |
| <b>R12A20</b>  | 1-1/4 | 31.8 | 1.85 | 47.0 | 3,000    | 21.0 | 12,000   | 84.0  | 16.54    | 420 | 1.87   | 2,800 |               |
| <b>R12A24</b>  | 1-1/2 | 38.1 | 2.11 | 53.5 | 2,500    | 17.5 | 10,000   | 70.0  | 19.69    | 500 | 2.22   | 3,330 |               |
| <b>R12A32</b>  | 2     | 50.8 | 2.63 | 66.7 | 2,500    | 17.5 | 10,000   | 70.0  | 25.20    | 640 | 2.93   | 4,400 |               |

## R13A

SAE 100R13

### Construction

- Inner Tube / Synthetic Rubber
- Outer Cover / Synthetic Rubber
- Reinforcement / 4S(R13A12/R13A16)  
6S(R13A20/R13A24/R13A32)

| Catalog Number | I.D.  |      | O.D. |      | Max.W.P. |      | Min.B.P. |       | Min.B.R. |     | Weight |       | Reinforcement |
|----------------|-------|------|------|------|----------|------|----------|-------|----------|-----|--------|-------|---------------|
|                | inch  | mm   | inch | mm   | psi      | MPa  | psi      | MPa   | inch     | mm  | lbs/ft | g/m   |               |
| <b>R13A12</b>  | 3/4   | 19.0 | 1.26 | 32.1 | 5,000    | 35.0 | 20,000   | 137.9 | 9.45     | 240 | 1.07   | 1,600 | 4S            |
| <b>R13A16</b>  | 1     | 25.4 | 1.52 | 38.7 | 5,000    | 35.0 | 20,000   | 137.9 | 11.81    | 300 | 1.50   | 2,250 |               |
| <b>R13A20</b>  | 1-1/4 | 31.8 | 1.96 | 49.8 | 5,000    | 35.0 | 20,000   | 137.9 | 16.54    | 420 | 2.93   | 4,400 |               |
| <b>R13A24</b>  | 1-1/2 | 38.1 | 2.26 | 57.3 | 5,000    | 35.0 | 20,000   | 137.9 | 19.69    | 500 | 3.20   | 4,800 |               |
| <b>R13A32</b>  | 2     | 50.8 | 2.80 | 71.1 | 5,000    | 35.0 | 20,000   | 137.9 | 25.20    | 640 | 4.80   | 7,200 | 6S            |

## R15A

SAE 100R15

### Construction

- Inner Tube / Synthetic Rubber
- Outer Cover / Synthetic Rubber
- Reinforcement / 4S(R15A06/RA15A08/  
R15A12/R15A16)  
6S(R15A20/R15A24)

| Catalog Number | I.D.  |      | O.D. |      | Max.W.P. |      | Min.B.P. |       | Min.B.R. |     | Weight |       | Reinforcement |
|----------------|-------|------|------|------|----------|------|----------|-------|----------|-----|--------|-------|---------------|
|                | inch  | mm   | inch | mm   | psi      | MPa  | psi      | MPa   | inch     | mm  | lbs/ft | g/m   |               |
| <b>R15A06</b>  | 3/8   | 9.5  | 0.80 | 20.3 | 6,000    | 42.0 | 24,000   | 168.0 | 5.91     | 150 | 0.48   | 720   | 4S            |
| <b>R15A08</b>  | 1/2   | 12.7 | 0.94 | 23.8 | 6,000    | 42.0 | 24,000   | 168.0 | 7.87     | 200 | 0.61   | 920   |               |
| <b>R15A12</b>  | 3/4   | 19.0 | 1.21 | 30.7 | 6,000    | 42.0 | 24,000   | 168.0 | 10.43    | 265 | 0.98   | 1,470 |               |
| <b>R15A16</b>  | 1     | 25.4 | 1.52 | 38.7 | 6,000    | 42.0 | 24,000   | 168.0 | 12.99    | 330 | 1.45   | 2,180 |               |
| <b>R15A20</b>  | 1-1/4 | 31.8 | 1.96 | 49.8 | 6,000    | 42.0 | 24,000   | 168.0 | 17.52    | 445 | 2.59   | 3,890 | 6S            |
| <b>R15A24</b>  | 1-1/2 | 38.1 | 2.26 | 57.3 | 6,000    | 42.0 | 24,000   | 168.0 | 20.87    | 530 | 3.17   | 4,760 |               |

## 4SP

DIN 4SP

### Construction

- Inner Tube / Synthetic Rubber
- Outer Cover / Synthetic Rubber
- Reinforcement / 4S

| Catalog Number | I.D.  |      | O.D. |      | Max.W.P. |      | Min.B.P. |       | Min.B.R. |     | Weight |       | Reinforcement |
|----------------|-------|------|------|------|----------|------|----------|-------|----------|-----|--------|-------|---------------|
|                | inch  | mm   | inch | mm   | psi      | MPa  | psi      | MPa   | inch     | mm  | lbs/ft | g/m   |               |
| <b>4SP06</b>   | 3/8   | 9.5  | 0.84 | 21.4 | 6,500    | 44.5 | 26,000   | 178.0 | 7.09     | 180 | 0.55   | 820   | 4S            |
| <b>4SP08</b>   | 1/2   | 12.7 | 0.97 | 24.6 | 6,000    | 41.5 | 24,000   | 166.0 | 9.06     | 230 | 0.63   | 950   |               |
| <b>4SP10</b>   | 5/8   | 15.9 | 1.11 | 28.2 | 5,100    | 35.0 | 20,400   | 140.0 | 9.84     | 250 | 0.80   | 1,200 |               |
| <b>4SP12</b>   | 3/4   | 19.0 | 1.27 | 32.2 | 5,100    | 35.0 | 20,400   | 140.0 | 11.81    | 300 | 1.07   | 1,600 |               |
| <b>4SP16</b>   | 1     | 25.4 | 1.56 | 39.7 | 4,100    | 28.0 | 16,400   | 112.0 | 13.39    | 340 | 1.53   | 2,300 |               |
| <b>4SP20</b>   | 1-1/4 | 31.8 | 2.00 | 50.8 | 3,000    | 21.0 | 12,000   | 84.0  | 18.11    | 460 | 2.13   | 3,200 |               |
| <b>4SP24</b>   | 1-1/2 | 38.1 | 2.25 | 57.2 | 2,700    | 18.5 | 10,800   | 74.0  | 22.05    | 560 | 2.53   | 3,800 |               |

## 4SH

DIN 4SH

### Construction

- Inner Tube / Synthetic Rubber
- Outer Cover / Synthetic Rubber
- Reinforcement / 4S

| Catalog Number | I.D.  |      | O.D. |      | Max.W.P. |      | Min.B.P. |       | Min.B.R. |     | Weight |       | Reinforcement |
|----------------|-------|------|------|------|----------|------|----------|-------|----------|-----|--------|-------|---------------|
|                | inch  | mm   | inch | mm   | psi      | MPa  | psi      | MPa   | inch     | mm  | lbs/ft | g/m   |               |
| <b>4SH12</b>   | 3/4   | 19.0 | 1.27 | 32.2 | 6,100    | 42.0 | 24,400   | 168.0 | 11.02    | 280 | 1.07   | 1,600 | 4S            |
| <b>4SH16</b>   | 1     | 25.4 | 1.52 | 38.7 | 5,500    | 38.0 | 22,000   | 152.0 | 13.39    | 340 | 1.50   | 2,250 |               |
| <b>4SH20</b>   | 1-1/4 | 31.8 | 1.79 | 45.5 | 4,700    | 32.5 | 18,800   | 130.0 | 18.11    | 460 | 1.73   | 2,600 |               |
| <b>4SH24</b>   | 1-1/2 | 38.1 | 2.11 | 53.5 | 4,200    | 29.0 | 16,800   | 116.0 | 22.05    | 560 | 2.13   | 3,200 |               |
| <b>4SH32</b>   | 2     | 50.8 | 2.68 | 68.1 | 3,600    | 25.0 | 14,400   | 100.0 | 27.56    | 700 | 3.20   | 4,800 |               |

### Reinforcing

1W

1 wire braid

1B

1 Special synthetic fiber braid

2W

2 wire braids

# Special Application Rubber Hoses

## JW Series

### For Hydraulic Jack

- Compatible Fluid / Mineral Oil
- Inner Tube / Oil Resistant Synthetic Rubber
- Outer Cover / Weather Resistant Synthetic Rubber
- Temperature Range: fluid / -40°C to 100°C(-40°F to 212°F)
- Temperature Range : ambient / -40°C to 70°C(-40°F to 158°F)

#### JW70

Maximum Working Pressure

**68.5MPa  
9,900PSI**

| Catalog Number | I.D. |      | O.D. |      | Max.W.P. |      | Min.B.P. |       | Min.B.R. |     | Weight |     | Reinforcement |
|----------------|------|------|------|------|----------|------|----------|-------|----------|-----|--------|-----|---------------|
|                | inch | mm   | inch | mm   | psi      | MPa  | psi      | MPa   | inch     | mm  | lbs/ft | g/m |               |
| JW7004         | 1/4  | 6.3  | 0.66 | 16.7 | 9,900    | 68.5 | 28,500   | 196.0 | 3.54     | 90  | 0.30   | 450 | 2W            |
| JW7006         | 3/8  | 9.5  | 0.82 | 20.8 |          |      | 22,500   | 154.0 | 5.51     | 140 | 0.43   | 750 | 4S            |
| JW7008         | 1/2  | 12.7 | 0.87 | 22.2 |          |      | 20,000   | 138.0 | 6.69     | 170 | 0.55   | 830 | 4S            |

Note: The types of coupling threads for the JW70 series are designated "R" and "Q." Use a pressure waveform (jack waveform) that can withstand shock pressure.

#### JWK

Maximum Working Pressure

**98.0~137.0MPa  
14,200~19,900PSI**

| Catalog Number | I.D. |      | O.D. |      | Max.W.P. |       | Min.B.P. |       | Min.B.R. |     | Weight |       | Reinforcement |
|----------------|------|------|------|------|----------|-------|----------|-------|----------|-----|--------|-------|---------------|
|                | inch | mm   | inch | mm   | psi      | MPa   | psi      | MPa   | inch     | mm  | lbs/ft | g/m   |               |
| JWK04          | 1/4  | 6.3  | 0.73 | 18.6 | 19,900   | 137.0 | 40,000   | 275.0 | 3.54     | 90  | 0.30   | 850   | 4S+1W         |
| JWK06          | 3/8  | 9.5  | 0.97 | 24.6 | 14,200   | 98.0  | 32,000   | 219.5 | 4.72     | 120 | 0.43   | 1,150 |               |
| JWK08          | 1/2  | 12.7 | 1.09 | 27.8 |          |       | 28,000   | 192.0 | 6.69     | 170 | 0.55   | 1,360 |               |

■Hoses for jacks also include PrimoLine hoses. (Refer to pages 59 to 63.)

Note: The types of coupling threads for the JWK series hoses are designated "R" and "Q." Use a pressure waveform (jack waveform) that can withstand shock pressure.

## VW Series

### For Suction Line

- Compatible Fluid / Mineral Oil
- Inner Tube / Oil Resistant Synthetic Rubber
- Outer Cover / Weather Resistant Synthetic Rubber
- Temperature Range: fluid / -40°C to 100°C(-40°F to 212°F)
- Temperature Range : ambient / -40°C to 70°C(-40°F to 158°F)
- Maximum Allowable Suction : -0.08665 Mpa

#### VW

Maximum Working Pressure

**3.0MPa  
400PSI**

| Catalog Number | I.D.  |      | O.D. |      | Max.W.P. |     | Min.B.P. |      | Min.B.R. |     | Weight |       | Reinforcement |
|----------------|-------|------|------|------|----------|-----|----------|------|----------|-----|--------|-------|---------------|
|                | inch  | mm   | inch | mm   | psi      | MPa | psi      | MPa  | inch     | mm  | lbs/ft | g/m   |               |
| VW16           | 1     | 25.4 | 1.40 | 35.6 | 400      | 3.0 | 1,600    | 12.0 | 5.51     | 140 | 0.63   | 940   | 1W            |
| VW20           | 1-1/4 | 31.8 | 1.64 | 41.7 |          |     |          |      | 7.09     | 180 | 0.77   | 1,150 |               |
| VW24           | 1-1/2 | 38.1 | 1.90 | 48.3 |          |     |          |      | 9.06     | 230 | 0.90   | 1,350 |               |
| VW32           | 2     | 50.8 | 2.50 | 63.4 |          |     |          |      | 10.63    | 270 | 1.53   | 2,300 |               |

Check the delivery dates of products marked ▲.

## Rubber Hoses for Water Cleaning

### 1 Lightweight and flexible design

The lightweight and flexible design of the hoses makes them easy to install.  
(The WA14 series is about 40% lighter and more flexible than the WJ series by Bridgestone.)

### 2 Enhanced safety

The hoses offer enhanced safety by absorbing the shock when the fluid supply goes on or off.

- Compatible Fluid / Water

- Inner Tube / Water-resistant synthetic rubber
- Outer Cover / Abrasion-resistant, weather-resistant synthetic rubber
- Temperature Range: fluid / 0°C to 80°C (32°F to 176°F)
- Temperature Range : ambient / 0°C to 70°C (32°F to 158°F)

#### WA14

Maximum Working Pressure

**14.0MPa  
2,000PSI**

| Catalog Number | I.D. |      | O.D. |      | Max.W.P. |      | Min.B.P. |      | Min.B.R. |    | Weight |     | Reinforcement |
|----------------|------|------|------|------|----------|------|----------|------|----------|----|--------|-----|---------------|
|                | inch | mm   | inch | mm   | psi      | MPa  | psi      | MPa  | inch     | mm | lbs/ft | g/m |               |
| WA1404         | 1/4  | 6.3  | 0.53 | 13.4 | 2,000    | 14.0 | 5,000    | 35.0 | 1.97     | 50 | 0.31   | 140 | 1B            |
| WA1406         | 3/8  | 9.5  | 0.65 | 16.5 |          |      |          |      | 2.76     | 70 | 0.44   | 200 |               |
| WA1408         | 1/2  | 12.7 | 0.80 | 20.2 |          |      |          |      | 3.15     | 80 | 0.55   | 250 |               |

#### WAR

Maximum Working Pressure

**20.5MPa  
3,000PSI**

| Catalog Number | I.D. |      | O.D. |      | Max.W.P. |      | Min.B.P. |      | Min.B.R. |    | Weight |     | Reinforcement |
|----------------|------|------|------|------|----------|------|----------|------|----------|----|--------|-----|---------------|
|                | inch | mm   | inch | mm   | psi      | MPa  | psi      | MPa  | inch     | mm | lbs/ft | g/m |               |
| WAR04          | 1/4  | 6.3  | 0.53 | 13.4 | 3,000    | 20.5 | 8,000    | 51.5 | 1.97     | 50 | 0.31   | 140 | 1B            |
| WAR06          | 3/8  | 9.5  | 0.65 | 16.5 |          |      |          |      | 1.97     | 50 | 0.44   | 200 |               |
| WAR08          | 1/2  | 12.7 | 0.78 | 19.8 |          |      |          |      | 2.76     | 70 | 0.55   | 250 |               |



The reinforcing for the WA14 and WAR series is made from special synthetic fibers. Do not install these hoses in an environment where they are likely to come into contact with sharp objects (as their reinforcing may be cut, causing the hose to burst.) You are recommended to install WJ or WB21 series hoses in the environment above.

4S

4 spiral wires

4S+1W

4 spiral wires + 1 wire braid

6S

6 spiral wires

# Special Application Rubber Hoses

## SA Series For Steam

For steam piping, use the SF series hoses (shown on page 51). Replacement of the hose may be required after a short usage period depending on the usage conditions.

- Compatible Fluid / Steam
- Inner Tube / Heat Resistant Synthetic Rubber
- Outer Cover / Heat Resistant Synthetic Rubber
- Temperature Range: fluid / 4°C to 210°C(39°F to 410°F)
- Temperature Range : ambient / -40°C to 70°C(-40°F to 158°F)

| SA                       |  |      |          |           |          |            |                     |                   |
|--------------------------|--|------|----------|-----------|----------|------------|---------------------|-------------------|
| Maximum Working Pressure |  | I.D. | O.D.     | Max.W.P.  | Min.B.P. | Min.B.R.   | Weight              |                   |
| 2.0MPa                   |  | inch | mm       | psi       | MPa      | inch       | lbs/ft              | Reinforcement     |
| 300PSI                   |  | SA08 | 1/2 12.7 | 1.03 26.1 | 300 2.0  | 1,800 12.0 | 5.91 150 0.41 610   | Factory-assembled |
|                          |  | SA12 | 3/4 19.0 | 1.28 32.4 |          |            | 8.27 210 0.54 810   | 1W                |
|                          |  | SA16 | 1 25.4   | 1.64 41.6 |          |            | 9.84 250 0.88 1,320 | SK                |



SA hose does not fit mineral oil application.

\*For information about other size hoses, contact us. \*Be sure to read the following description.

### Be sure to read the following before use

● Use SA series steam hoses to convey hot water condensate<sup>①</sup> or saturated steam<sup>②</sup>. Do not use them to convey superheated steam<sup>③</sup> or a mixture of steam and air. Doing so could deteriorate the inner tube rubber, significantly reducing the life of the hose. (The terms marked with an asterisk are described below.)

<sup>①</sup> Hot water condensate

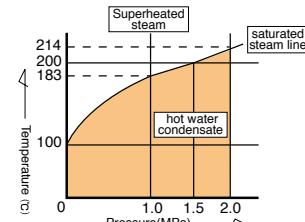
The water evaporation temperature, which depends on pressure, is also called the saturation temperature. Water at the saturation temperature is called saturated water. While this saturated water is being heated, it continues to evaporate without any increase in its temperature. The condensate (vapor + water) generated at this stage is called hot water condensate.

<sup>②</sup> Saturated steam

While the hot water condensate is being heated, the water continues to evaporate and finally disappears. The steam generated when there is no water remaining is called saturated steam.

<sup>③</sup> Superheated steam

When the saturated steam is further heated, its temperature rises. This steam is called superheated steam.

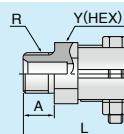


In case of 200°C, if pressure is less than 1.5MPa, hose life is reduced dramatically by superheated steam conditions. Therefore in case of 200°C situation, pressure 1.5 to 2.0 MPa is required.

⚠ Use this hose in orange area.

## Couplings SK Series

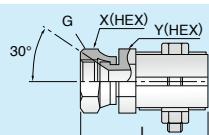
R



Male British Tapered Pipe Thread(BSPT)

| Catalog Number | W W Thread | Y    |    | A    |    | (L)  |    | Weight |     |
|----------------|------------|------|----|------|----|------|----|--------|-----|
|                |            | inch | mm | inch | mm | inch | mm | lbs    | g   |
| SK08R          | 1/2        | 1.06 | 27 | 0.71 | 18 | 1.06 | 71 | 0.68   | 310 |
| SK12R          | 3/4        | 1.42 | 36 | 0.79 | 20 | 1.42 | 83 | 1.22   | 555 |
| SK16R          | 1          | 1.61 | 41 | 0.87 | 22 | 1.61 | 98 | 1.36   | 615 |

F



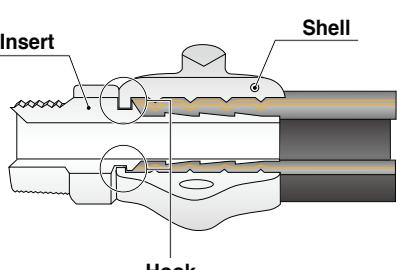
Female Japanese Industrial Pipe Thread (JIS) Female 30° Seat

| Catalog Number | W W Thread | Y    |    |      |    | (L)  |    | Weight |     |      |     |
|----------------|------------|------|----|------|----|------|----|--------|-----|------|-----|
|                |            | inch | mm | inch | mm | inch | mm | lbs    | g   |      |     |
| SK08F          | 1/2        | 1.06 | 27 |      |    |      |    | 2.80   | 71  | 0.69 | 315 |
| SK12F          | 3/4        | 1.42 | 36 |      |    |      |    | 3.46   | 88  | 1.34 | 610 |
| SK16F          | 1          | 1.61 | 41 |      |    |      |    | 3.98   | 101 | 1.48 | 670 |

Standard product — Material: SS or SC equivalent steel, Surface: Zinc plating or chromate treatment (for cores only)

### How to install SK series couplings

Insert the hook of shell in the groove of insert  
Shell

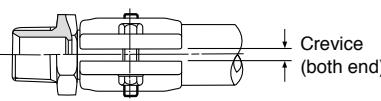


○ Set the hook of shell in the groove of insert  
○ SK series is all re-usable type  
Retighten the bolt if leakage from coupling is found  
If retightening can not stop leakage, cut the hose and retighten.

In case the clamping portion becomes loose after a certain period of usage, retightening will be required.

⚠ Not following these instructions will lead to hose failure like hose coupling blow-off and leakage.

○ Tighten the bolt referring to the following crevice figure



| Hose size | Crevice (mm) | Tolerance |
|-----------|--------------|-----------|
| SA08      | 2            | ±1        |
| SA12      | 5            |           |
| SA16      | 6            |           |

## Reinforcing

1W

1 wire braid

1B

1 Special synthetic fiber braid

**BRIDGESTONE** HOSE



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