


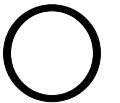
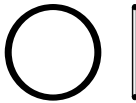

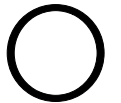
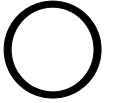
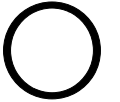
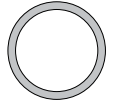

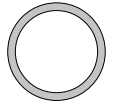

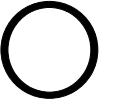









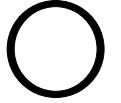

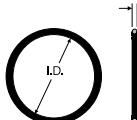
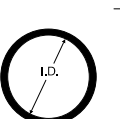


O-Rings and Seals

N



ENGINEERING YOUR SUCCESS.

| | | | | | |
|---|---|---|---|---|---|
|  <p>O-Ring Face Seal</p> | <p>ORFS O-Ring</p>  <p>N4</p> | <p>XO O-Ring</p>  <p>N4</p> |  <p>Port Ends – SAE, Metric, BSPP, JIS, K4</p> | <p>SAE O-Ring</p>  <p>N4</p> | <p>ISO 6149 O-Ring</p>  <p>N5</p> |
| <p>Metric O-Ring</p>  <p>N5</p> | <p>Metric Retaining Ring</p>  <p>N5</p> | <p>BSPP O-Ring</p>  <p>N6</p> | <p>BSPP Retaining Ring</p>  <p>N6</p> | <p>EOlastic Seal Ring</p>  <p>N6</p> | <p>JIS B2351 O-Ring</p>  <p>N7</p> |
| <p>BSPP Bonded Seal</p>  <p>N7</p> |  <p>EO/EO-2</p> | <p>EO-2 Sealing Ring</p>  <p>N7</p> | <p>Bonded Seal for Banjo Fittings</p>  <p>N8</p> | <p>Metal Seal for Banjo Fittings</p>  <p>N8</p> | <p>Pressure Gauge Sealing Ring</p>  <p>N9</p> |
| <p>EO Swivel O-Ring</p>  <p>N9</p> | <p>EO O-Ring</p>  <p>N10</p> |  <p>4-Bolt Flanges</p> | <p>SAE 4-Bolt Flange O-Ring</p>  <p>N10</p> |  <p>Dual Seal Flanges</p> | <p>Radial Seal O-Ring</p>  <p>N10</p> |
| <p>Flange Seal O-Ring</p>  <p>N10</p> | | | | | |

O-Ring Material Selection

Standard O-rings supplied with Parker tube fittings and adapters are 90 durometer hard nitrile (Buna-N). These O-rings are well suited for most industrial hydraulic and pneumatic systems. They have high extrusion resistance making them suitable for very high pressure static applications. Optional high temperature fluorocarbon, Parker compound #V0894, is also available for higher temperature specifications.

O-rings for other than normal hydraulic media or higher temperature applications can be selected from the following chart. The

chart should be used only as a general guide. Before making final selection for a given application, it is recommended that appropriate tests be conducted to assure compatibility with the fluid, temperature, pressure and other environmental conditions.

For fluids not shown in the chart, please contact the Tube Fittings Division.

| Polymer (Abbreviation) | Recommended for | Not Recommended for | Parker Compound No. | Color | SAE J515 Type | Hardness Shore "A" | Temperature Range (°F) | Comments |
|---|--|--|---------------------|----------------------|--|--------------------|------------------------|---|
| Nitrile-Butadiene (NBR) | Petroleum base oils and fluids, mineral oils, ethylene glycol base fluids, silicone and di-ester base lubricants, air, water under 150°F, and natural gas. | Phosphate ester base hydraulic fluids, automotive brake fluids, strong acids, ozone, freons, ketones, halogenated hydrocarbons, and methanol. | NBR | Black | CH ²⁾ | 90 | -30° to 250° F | Standard from stock |
| | | | N0674 | Black | — | 70 | -30° to 250° F | |
| | | | N0103 | Black | — | 70 | -65° to 225° F | |
| | | | N1059 | Black | CH ²⁾ | 90 | -30° to 275° F | Low compression set |
| | | | N0507 | Black | — | 90 | -65° to 180° F | Orange identification dot |
| | | | N0304 | Black | — | 75 | -65° to 225° F | |
| N0508 | Black | — | 75 | -35° to 250° F | Meets FDA requirements for food products | | | |
| | | | N0756 | Black | — | 75 | -65° to 275° F | CNG applications. Standard from stock |
| Ethylene-Propylene (EPDM) | Phosphate ester base hydraulic fluids, hot water, steam to 400°F, silicone oils and greases, dilute acids and alkalis, ketones, alcohols and automotive brake fluids. | Petroleum base oils and di-ester base lubricants. | E0540 | Black | CA ³⁾ | 80 | -65° to 275° F | CO2 climate control systems. H2 fuel cells. |
| | | | E0893 | Purple ¹⁾ | CA ³⁾ | 80 | -65° to 275° F | |
| | | | E0962 | Black | — | 90 | -65° to 275° F | |
| Neoprene (CR) | Refrigerants (freons, ammonia), high aniline point petroleum oils, mild acids, and silicate ester lubricants. | Phosphate ester fluids and ketones. | C0873 | Black | — | 70 | -45° to 250° F | |
| | | | C0944 | Red ¹⁾ | — | 70 | -45° to 250° F | |
| Fluorocarbon (FKM ⁵⁾ or FPM) | Petroleum base oils and fluids, some phosphate ester base fluids, silicone and silicate ester base lubricants, di-ester base lubricants, acids and halogenated hydrocarbons. | Ketones, skydrol fluids, amines (VDMH), anhydrous ammonia, low molecular weight esters and ethers, and hot hydrofluoric or chlorosulfonic acids. | V0747 | Black | — | 75 | -15° to 400° F | Standard from stock. |
| | | | V0884 | Brown ¹⁾ | — | 75 | -15° to 400° F | |
| | | | V0894 | Brown ¹⁾ | HK ⁴⁾ | 90 | -15° to 400° F | |
| Silicone (Si) | Dry heat (air to 400°F) and high aniline point oils. | Most petroleum fluids, ketones, water and steam. | S0604 | Rust ¹⁾ | — | 70 | -65° to 450° F | |

Table U6 — O-Ring Selection

- 1) These Parker "Chromasure" color assurance O-rings are available from the Parker Hannifin O-Ring Division. They help eliminate assembly errors, reduce warranty costs and liability risks, and assure safety in aftermarket business.
- 2) Formerly SAE Type I.
- 3) Formerly SAE Type II.
- 4) Formerly SAE Type III.
- 5) "FKM" is the ASTM designation for fluorocarbon. Its ISO designation is "FPM".

Note: Use 90 durometer hard O-rings for applications with 1500 psi or higher pressures.

Dimensions for reference only, subject to change.

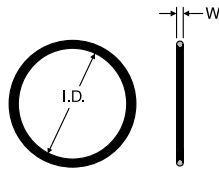


ORFS O-Ring

ORFS Tube End O-ring

Specify size and compound

Example: 2-018 NBR (standard NBR)

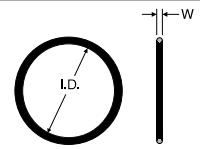


XO O-Ring

Triple-Lok 2 O-Ring

Specify size and compound

Example: 2-019 NBR (standard NBR)



| TUBE FITTING PART # | FITTING DASH SIZE | END SIZE | | I.D. | | W | | Material | | |
|---------------------|-------------------|----------|------------|-------|------|-------|------|----------|---------|----------|
| | | (in.) | (mm) | (in.) | (mm) | (in.) | (mm) | NBR* | V0894** | N0756*** |
| 2-011 | 4 | 1/4 | 6 | 0.30 | 7.7 | 0.07 | 1.78 | • | • | • |
| 2-012 | 6 | 3/8 | 8, 10 | 0.36 | 9.3 | 0.07 | 1.78 | • | • | • |
| 2-014 | 8 | 1/2 | 12 | 0.49 | 12.4 | 0.07 | 1.78 | • | • | • |
| 2-016 | 10 | 5/8 | 14, 15, 16 | 0.61 | 15.6 | 0.07 | 1.78 | • | • | • |
| 2-018 | 12 | 3/4 | 18, 20 | 0.74 | 18.8 | 0.07 | 1.78 | • | • | • |
| 2-020 | 14 | 7/8 | 22 | 0.86 | 21.8 | 0.07 | 1.78 | • | • | • |
| 2-021 | 16 | 1 | 25 | 0.93 | 23.5 | 0.07 | 1.78 | • | • | • |
| 2-025 | 20 | 1 1/4 | 28, 30, 32 | 1.18 | 29.9 | 0.07 | 1.78 | • | • | • |
| 2-029 | 24 | 1 1/2 | 35, 38 | 1.49 | 37.8 | 0.07 | 1.78 | • | • | • |
| 2-135 | 32 | 2 | 50 | 1.93 | 49.0 | 0.10 | 2.54 | • | • | • |

| TUBE FITTING PART # | TUBE O.D. (in.) | I.D. (in.) | W (in.) | Material |
|---------------------|-----------------|------------|---------|----------|
| | | | | NBR |
| 5-193 | 1/4 | 0.18 | 0.04 | • |
| 5-179 | 5/16 | 0.24 | 0.04 | • |
| 5-056 | 3/8 | 0.30 | 0.04 | • |
| 5-058 | 1/2 | 0.43 | 0.05 | • |
| 2-013 | 5/8 | 0.43 | 0.07 | • |
| 2-016 | 3/4 | 0.61 | 0.07 | • |
| 2-017 | 7/8 | 0.68 | 0.07 | • |
| 2-019 | 1 | 0.80 | 0.07 | • |
| 2-023 | 1 1/4 | 1.05 | 0.07 | • |
| 2-026 | 1 1/2 | 1.24 | 0.07 | • |
| 2-133 | 2 | 1.80 | 0.10 | • |

* NBR is the standard compound — 90-durometer Nitrile.

** V0894 is an optional 90-durometer fluorocarbon compound.

*** N0756 is an optional 75-durometer Nitrile compound for CNG applications.

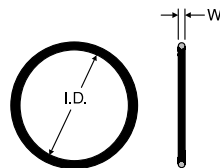
See page N3 for O-ring Material Selection and data.

SAE O-Ring

SAE Straight Thread Port O-Ring

Specify size and compound

Example: 3-906 NBR (standard NBR)



| TUBE FITTING PART # | FITTING DASH SIZE | END SIZE (in.) | I.D. (in.) | W (in.) | Material | | |
|---------------------|-------------------|----------------|------------|---------|----------|---------|----------|
| | | | | | NBR* | V0894** | N0756*** |
| 3-902 | 2 | 1/8 | 0.24 | 0.06 | • | • | |
| 3-903 | 3 | 3/16 | 0.30 | 0.06 | • | • | |
| 3-904 | 4 | 1/4 | 0.35 | 0.07 | • | • | • |
| 3-905 | 5 | 5/16 | 0.41 | 0.07 | • | • | |
| 3-906 | 6 | 3/8 | 0.47 | 0.08 | • | • | • |
| 3-908 | 8 | 1/2 | 0.64 | 0.09 | • | • | • |
| 3-910 | 10 | 5/8 | 0.76 | 0.10 | • | • | |
| 3-912 | 12 | 3/4 | 0.92 | 0.12 | • | • | |
| 3-914 | 14 | 7/8 | 1.05 | 0.12 | • | • | |
| 3-916 | 16 | 1 | 1.17 | 0.12 | • | • | |
| 3-920 | 20 | 1 1/4 | 1.48 | 0.12 | • | • | |
| 3-924 | 24 | 1 1/2 | 1.72 | 0.12 | • | • | |
| 3-932 | 32 | 2 | 2.34 | 0.12 | • | • | |

* NBR is the standard compound — 90-durometer Nitrile.

** V0894 is an optional 90-durometer fluorocarbon compound.

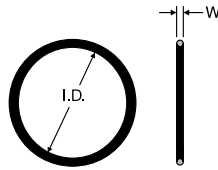
*** N0756 is an optional 75-durometer Nitrile compound for CNG applications.

See page N3 for O-ring Material Selection and data.

Dimensions for reference only, subject to change.

ISO 6149 O-Ring

Metric Straight Thread
Port O-Ring



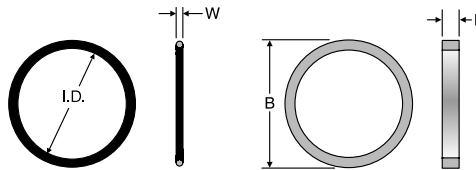
Specify size and compound (for option compound only)
Example: M-12 ISO O-RING (standard NBR)
M-12 ISO VITON O-RING (optional FKM)

| TUBE FITTING PART # | PORT THREAD | I.D. (mm) | W (mm) | Material | |
|------------------------|----------------|--------------|-----------|----------|--------|
| | | | | NBR** | FKM*** |
| M-8 ISO O-Ring | M8 x 1 | 6.1 | 1.6 | • | |
| M-10 ISO O-Ring | M10 x 1 | 8.1 | 1.6 | • | |
| M-12 ISO O-Ring | M12 x 1.5 | 9.3 | 2.2 | • | • |
| M-14 ISO O-Ring | M14 x 1.5 | 11.3 | 2.2 | • | • |
| M-16 ISO O-Ring | M16 x 1.5 | 13.3 | 2.2 | • | • |
| M-18 ISO O-Ring | M18 x 1.5 | 15.3 | 2.2 | • | • |
| M-22 ISO O-Ring | M22 x 1.5 | 19.3 | 2.2 | • | • |
| M-27 ISO O-Ring | M27 x 2 | 23.6 | 2.9 | • | • |
| *M-30 ISO O-Ring | M30 x 2 | 26.6 | 2.9 | • | |
| M-33 ISO O-Ring | M33 x 2 | 29.6 | 2.9 | • | • |
| M-38 ISO O-Ring | M38 x 2 | 34.6 | 2.9 | • | |
| M-42 ISO O-Ring | M42 x 2 | 38.6 | 2.9 | • | • |
| M-48 ISO O-Ring | M48 x 2 | 44.6 | 2.9 | • | • |
| M-60 ISO O-Ring | M60 x 2 | 56.6 | 2.9 | • | |

* M30X2 is not a standard ISO 6149 size.
** NBR is the standard compound — 90-durometer peroxide-cured Nitrile.
*** FKM is an optional 90-durometer fluorocarbon compound (for part number, VITON is used eg. M-8 ISO VITON O-RING).
See page N3 for O-ring Material Selection and data.

Metric O-Ring & Retaining Ring

For ISO 9974-1 / DIN 3852-1Port



Specify size and compound
Example: 2-012 NBR (standard NBR O-ring)
M12RRCF (standard steel retaining ring)

| TUBE FITTING PART # | METRIC THREAD SIZE | I.D. (mm) | W (mm) | From Stock | | TUBE FITTING PART # | B (mm) | L (mm) | Material | |
|------------------------|--------------------------|--------------|-----------|------------|---------|------------------------|-----------|-----------|----------|----|
| | | | | NBR* | V0894** | | | | CF | 71 |
| 3-902 | M8 x 1 | 6.07 | 1.63 | • | • | M8RR | 13.15 | 1.00 | • | |
| 6-074 | M10 x 1 | 8.00 | 1.50 | • | • | M10RR | 14.75 | 1.00 | • | |
| 2-012 | M12 x 1.5 | 9.25 | 1.78 | • | • | M12RR | 17.75 | 1.30 | • | |
| 2-013 | M14 x 1.5 | 10.82 | 1.78 | • | • | M14RR | 19.75 | 1.30 | • | |
| 3-907 | M16 x 1.5 | 13.46 | 2.08 | • | • | M16RR | 21.75 | 1.50 | • | |
| 2-114 | M18 x 1.5 | 15.54 | 2.62 | • | • | M18RR | 23.75 | 2.00 | • | |
| 2-017 | M20 x 1.5 | 17.17 | 1.78 | • | | M20RR | 25.75 | 1.30 | • | |
| 2-018 | M22 x 1.5 | 18.77 | 1.78 | • | • | M22RR | 27.75 | 1.30 | • | |
| 2-019 | M24 x 1.5 | 20.35 | 1.78 | • | | M24RR | 29.75 | 1.30 | • | |
| 2-118 | M26 x 1.5 | 21.89 | 2.62 | • | | M26RR | 31.75 | 2.00 | • | |
| 2-119 | M27 x 2 | 23.47 | 2.62 | • | • | M27RR | 32.75 | 2.00 | • | |
| 2-121 | M30 x 2 | 26.64 | 2.62 | • | | M30RR | 36.32 | 2.00 | • | |
| 2-122 | M33 x 2 | 28.24 | 2.62 | • | | M33RR | 39.75 | 2.00 | • | |
| 2-124 | M36 x 2 | 31.42 | 2.62 | • | | M36RR | 42.75 | 2.00 | • | |
| 2-128 | M42 x 2 | 37.77 | 2.62 | • | | M42RR | 49.75 | 2.00 | • | |
| 2-130 | M45 x 2 | 40.94 | 2.62 | • | | M45RR | 52.75 | 2.00 | • | |
| 2-132 | M48 x 2 | 44.12 | 2.62 | • | | M48RR | 54.95 | 2.00 | • | |
| 2-133 | M50 x 2 | 45.69 | 2.62 | • | | M50RR | 56.31 | 2.00 | • | |

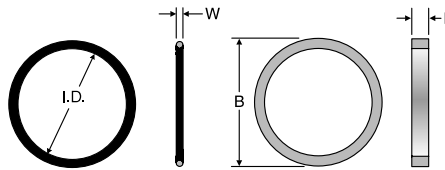
* NBR is the standard compound — 90-durometer Nitrile.
** V0894 is an optional 90-durometer fluorocarbon compound.
See page N3 for O-ring Material Selection and data.

Dimensions for reference only, subject to change.



BSPP O-Ring & Retaining Ring

For ISO 1179-1 / DIN 3852-2 Port



Specify size and compound (for O-ring only)

Example: 2-113 NBR (standard NBR O-ring)
3/8 RETAINING RING (standard steel retaining ring)

| TUBE FITTING PART # | BSPP THREAD SIZE | I.D. (mm) | W (mm) | Material | | TUBE FITTING PART # | B (mm) | L (mm) | Material | |
|---------------------|------------------|-----------|--------|----------|---------|----------------------|--------|--------|----------|-----|
| | | | | NBR* | V0894** | | | | -S | -SS |
| OR8X2X | 1/8-28 | 8 | 2 | • | • | 1/8 Retaining Ring | 15.0 | 1.4 | • | |
| 2-111 | 1/4-19 | 10.77 | 2.62 | • | • | 1/4 Retaining Ring | 19.5 | 1.9 | • | |
| 2-113 | 3/8-19 | 13.94 | 2.62 | • | • | 3/8 Retaining Ring | 23.5 | 1.9 | • | |
| 5-256 | 1/2-14 | 17.96 | 2.62 | • | • | 1/2 Retaining Ring | 28.5 | 1.9 | • | |
| 2-119 | 3/4-14 | 23.47 | 2.62 | • | • | 3/4 Retaining Ring | 34.5 | 2.6 | • | |
| 2-217 | 1-11 | 29.74 | 3.53 | • | • | 1 Retaining Ring | 43.5 | 2.6 | • | |
| 2-222 | 1 1/4-11 | 37.69 | 3.53 | • | | 1 1/4 Retaining Ring | 52.5 | 2.6 | • | |
| 2-224 | 1 1/2-11 | 44.04 | 3.53 | • | | 1 1/2 Retaining Ring | 60.0 | 2.6 | • | |
| 2-227 | 2-11 | 53.57 | 3.53 | | | 2 Retaining Ring | 75.0 | 2.6 | | |

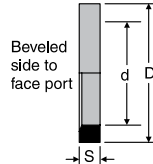
* NBR is the standard compound — 90-durometer Nitrile.

** V0894 is an optional 90-durometer fluorocarbon compound.

See page N3 for O-ring Material Selection and data.

EOlastic Seal Ring

EOlastic Soft Seal for BSPP & Metric Threads (“ED Seal”) DIN 3869



Specify size and compound (for optional compound only)

Example: ED8X1X (standard NBR)
ED8X1VITX (optional FPM)

| TUBE FITTING PART # | For Male Metric Thread | For Male Thread BSPP | D (mm) | d (mm) | S (mm) | Material | |
|---------------------|------------------------|----------------------|--------|--------|--------|----------|-------|
| | | | | | | NBR* | FKM** |
| ED8X1X | M8 x 1 | | 9.9 | 6.5 | 1.0 | • | • |
| ED10X1X | M10 x 1 | G 1/8 A | 11.9 | 8.4 | 1.0 | • | • |
| ED12X1.5X | M12 x 1.5 | | 14.4 | 9.8 | 1.5 | • | • |
| ED14X1.5X | M14 x 1.5 | G 1/4 A | 16.5 | 11.6 | 1.5 | • | • |
| ED16X1.5X | M16 x 1.5 | | 18.9 | 13.8 | 1.5 | • | • |
| ED3/8X | | G 3/8 A | 18.9 | 14.7 | 1.5 | • | • |
| ED18X1.5X | M18 x 1.5 | | 20.9 | 15.7 | 1.5 | • | • |
| ED20X1.5X | M20 x 1.5 | | 22.9 | 17.8 | 1.5 | • | • |
| ED1/2X | | G 1/2 A | 23.9 | 18.5 | 1.5 | • | • |
| ED22X1.5X | M22 x 1.5 | | 24.3 | 19.6 | 1.5 | • | • |
| ED26X1.5X | M26 x 1.5 | G 3/4 A | 29.2 | 23.9 | 1.5 | • | • |
| ED27X2X | M27 x 2 | G 3/4 A | 29.2 | 23.9 | 1.5 | • | • |
| ED33X2X | M33 x 2 | G 1 A | 35.7 | 29.7 | 2.0 | • | • |
| ED42X2X | M42 x 2 | G 1 1/4 A | 45.8 | 38.8 | 2.0 | • | • |
| ED48X2X | M48 x 2 | G 1 1/2 A | 50.7 | 44.7 | 2.0 | • | • |

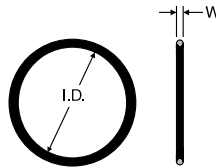
* NBR is the standard compound — 90-durometer Nitrile.

** FKM is an optional 85-durometer fluorocarbon compound (for part number VIT is used as suffix). Example: ED8X1VITX

Dimensions for reference only, subject to change.



JIS B2351 O-Ring

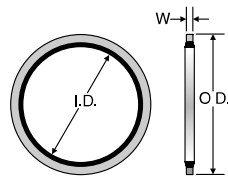


| TUBE FITTING PART # | JIS DASH SIZE | T4 THREAD BSPP | I.D. (mm) | W (mm) | JIS B 2401 Description |
|---------------------|---------------|----------------|-----------|--------|------------------------|
| P8 O-RING | 2 | 1/8-28 | 7.8 | 1.9 | O-RING CLASS 1 B P 8 |
| P11 O-RING | 4 | 1/4-19 | 10.8 | 2.4 | O-RING CLASS 1 B P 11 |
| P14 O-RING | 6 | 3/8-19 | 13.8 | 2.4 | O-RING CLASS 1 B P 14 |
| P18 O-RING | 8 | 1/2-14 | 17.8 | 2.4 | O-RING CLASS 1 B P 18 |
| P24 O-RING | 12 | 3/4-14 | 23.7 | 3.5 | O-RING CLASS 1 B P 24 |
| P29 O-RING | 16 | 1-11 | 28.7 | 3.5 | O-RING CLASS 1 B P 29 |

* NBR is the standard compound — 90-durometer Nitrile.

BSPP Bonded Seal

Used on K4 Style Straight Fittings as a Port Seal
For use with ISO 1179 / DIN 3852-2 port



| TUBE FITTING PART # | BSPP THREAD SIZE | O.D. (mm) | I.D. (mm) | W (mm) | Material | | |
|---------------------|------------------|-----------|-----------|--------|----------|-----|----|
| | | | | | -S* | -SS | -B |
| D9DT-2 | 1/8-28 | 15.9 | 10.4 | 2.0 | • | | |
| D9DT-4 | 1/4-19 | 20.6 | 13.7 | 2.0 | • | | |
| D9DT-6 | 3/8-19 | 23.8 | 17.3 | 2.0 | • | | |
| D9DT-8 | 1/2-14 | 28.6 | 21.5 | 2.3 | • | | |
| D9DT-10 | 5/8-14 | 31.8 | 23.5 | 2.3 | • | | |
| D9DT-12 | 3/4-14 | 34.9 | 27.1 | 2.3 | • | | |
| D9DT-16 | 1-11 | 42.8 | 33.9 | 2.3 | • | | |
| D9DT-20 | 1 1/4-11 | 52.4 | 42.9 | 3.3 | • | | |
| D9DT-24 | 1 1/2-11 | 58.6 | 48.4 | 3.3 | • | | |

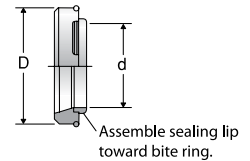
* NBR is the standard elastomer compound — 90-durometer Nitrile
Zinc plated steel ring

EO-2 Sealing Ring

Specify size and material

Examples:

- DOZ10S (standard steel with NBR)
- DOZ10SVIT (standard steel with FKM)
- DOZ10S71 (standard stainless steel with FKM)



| TUBE FITTING PART # | SERIES | TUBE O.D. (mm) | D (mm) | d (mm) | Material | | |
|---------------------|------------|----------------|--------|--------|----------|-------|--------|
| | | | | | S | FKM** | FKM*** |
| DOZ04LL | LL | 4 | 6.8 | 4 | • | | |
| DOZ06LL | very light | 6 | 8.8 | 6 | • | | |
| DOZ06L | L | 6 | 10.3 | 6 | • | • | • |
| DOZ08L | light | 8 | 12.3 | 8 | • | • | • |
| DOZ10L | | 10 | 14.3 | 10 | • | • | • |
| DOZ12L | | 12 | 16.3 | 12 | • | • | • |
| DOZ15L | | 15 | 20.3 | 15 | • | • | • |
| DOZ18L | | 18 | 24.3 | 18 | • | • | • |
| DOZ22L | | 22 | 27.7 | 22 | • | • | • |
| DOZ28L | | 28 | 33.7 | 28 | • | • | • |
| DOZ35L | | 35 | 42.7 | 35 | • | • | • |
| DOZ42L | | 42 | 49.7 | 42 | • | • | • |
| DOZ06S | S | 6 | 12.3 | 6 | • | • | • |
| DOZ08S | heavy | 8 | 14.3 | 8 | • | • | • |
| DOZ10S | | 10 | 16.3 | 10 | • | • | • |
| DOZ12S | | 12 | 18.3 | 12 | • | • | • |
| DOZ14S | | 14 | 20.3 | 14 | • | • | • |
| DOZ16S | | 16 | 22.3 | 16 | • | • | • |
| DOZ20S | | 20 | 27.7 | 20 | • | • | • |
| DOZ25S | | 25 | 33.7 | 25 | • | • | • |
| DOZ30S | | 30 | 39.7 | 30 | • | • | • |
| DOZ38S | | 38 | 49.7 | 38 | • | • | • |

* Steel black zinc plated with NBR 90-durometer Nitrile compound.

** Steel black zinc plated with FKM 90-durometer fluorocarbon compound.

*** Stainless steel with FKM 90-durometer fluorocarbon compound.

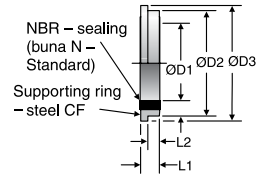
Dimensions for reference only, subject to change.



Bonded Seal for Banjo Fittings

Specify size and material

- Examples: KDS 12X (standard steel with NBR)
- KDS 12VITX (standard steel with FKM)
- KDS 1271 (standard stainless steel with PTFE)

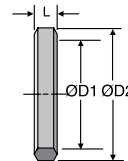


| TUBE FITTING PART # | FOR USE WITH WH & TH BANJOS | THREAD | D1 (mm) | D2 (mm) | D3 (mm) | L1 (mm) | L2 (mm) | Material | |
|---------------------|-----------------------------|-----------------|---------|---------|---------|---------|---------|----------|----|
| | | | | | | | | CF | 71 |
| KDS10 | 6-LM/LR | M10 x 1/G1/8A | 10.3 | 14.9 | 16.0 | 2.5 | 1.1 | • | |
| KDS12 | 6-SM/8-LM | M12 x 1.5 | 12.3 | 17.0 | 18.0 | 3.0 | 1.6 | • | |
| KDS14 | 6-SR, 8-LR/SM/SR, 10-LM/LR | M14 x 1.5/G1/4A | 14.3 | 18.9 | 20.0 | 3.0 | 1.6 | • | |
| KDS16 | 10-SM/SR, 12-LM/LR/SR | M16 x 1.5/G3/8A | 17 | 21.9 | 24.0 | 3.0 | 2.1 | • | |
| KDS18 | 12-SM/15-LM | M18 x 1.5 | 18.3 | 23.9 | 23.9 | 3.0 | — | • | |
| KDS22 | 15-LR, 16-SM/SR, 18-LM/LR | M22 x 1.5/G1/2A | 22.3 | 26.9 | 30.0 | 4.5 | 2.6 | • | |
| KDS26 | 22-LM | M26 x 1.5 | 26.3 | 31.9 | 35.0 | 3.5 | 2.6 | • | |
| KDS27 | 20-SM/SR, 22-LR | M27 x 2/G3/4A | 27.3 | 32.9 | 38.0 | 3.5 | 2.6 | • | |
| KDS33 | 25-SM/SR, 28-LM/LR | M33 x 2/G1A | 33.6 | 39.9 | 42.0 | 3.5 | 2.6 | • | |
| KDS42 | 30-SM/SR, 35-LM/LR | M42 x 2/G1 1/4A | 42.4 | 49.9 | 49.9 | 3.5 | — | • | |
| KDS48 | 38-SM/SR, 42-LM/LR | M48 x 2/G1 1/2A | 48.4 | 55.9 | 60.0 | 3.5 | 2.6 | • | |

Metal Seal for Banjo Fittings

Specify size and material

- Examples: DKA1/8CFX (steel)
- DKA1/871X (stainless steel)

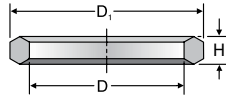


| TUBE FITTING PART # | FOR APPLICATION IN BANJOS: | | | | THREAD | D1 (mm) | D2 (mm) | L (mm) | Material | |
|---------------------|----------------------------|------|-----------|---------|-----------|---------|---------|--------|----------|-----|
| | WH / TH | | SWVE | | | | | | CFX | 71X |
| BSP | | | | | | | | | | |
| DKA1/8 | 6LR | | 4/6/8 LLR | 6LR | G 1/8 A | 9.8 | 14 | 2.5 | • | • |
| DKA1/4 | 8LR | 6SR | 8LR | 6SR | G 1/4 A | 13.3 | 18 | 3.0 | • | • |
| DKA1/4 | 10LR | 8SR | 10LR | 8SR | G 1/4 A | 13.3 | 18 | 3.0 | • | • |
| DKA3/8 | 12LR | 10SR | 12LR | 10SR | G 3/8 A | 16.8 | 22 | 3.0 | • | • |
| DKA3/8 | | 12SR | | 12SR | G 3/8 A | 16.8 | 22 | 3.0 | • | • |
| DKA1/2 | | | 15/18LR | 14/16SR | G 1/2 A | 21.1 | 26 | 3.0 | • | • |
| DKA1/2X4.5 | 15LR | 14SR | | | G 1/2 A | 21.1 | 26 | 4.5 | • | • |
| DKA1/2X4.5 | 18LR | 16SR | | | G 1/2 A | 21.1 | 26 | 4.5 | • | • |
| DKA3/4 | 22LR | 20SR | 22LR | 20SR | G 3/4 A | 26.6 | 32 | 3.5 | • | • |
| DKA1 | 28LR | 25SR | | | G 1 A | 33.4 | 39 | 3.5 | • | • |
| DKA11/4 | 35LR | 30SR | | | G 1 1/4 A | 42.1 | 49 | 3.5 | • | • |
| DKA11/2 | 42LR | 38SR | | | G 1 1/2 A | 48.1 | 55 | 3.5 | • | • |
| Metric | | | | | | | | | | |
| DKA10 | 6LM | | 6/8LLM | 6LM | M10 x 1 | 10.1 | 14 | 2.5 | • | • |
| DKA12 | 8LM | 6SM | 8LM | 6SM | M12 x 1.5 | 12.1 | 17 | 3.0 | • | • |
| DKA14 | 10LM | 8SM | 10LM | 8SM | M14 x 1.5 | 14.1 | 19 | 3.0 | • | • |
| DKA16 | 12LM | 10SM | 12LM | 10SM | M16 x 1.5 | 16.1 | 21 | 3.0 | • | • |
| DKA18 | 15LM | 12SM | 15LM | 12SM | M18 x 1.5 | 18.1 | 23 | 3.0 | • | • |
| DKA20 | | 14SM | | 14SM | M20 x 1.5 | 20.1 | 25 | 3.0 | • | • |
| DKA22 | | 18LM | | 16SM | M22 x 1.5 | 22.1 | 27 | 3.0 | • | • |
| DKA22X4.5 | 18LM | 16SM | | | M22 x 1.5 | 22.1 | 27 | 4.5 | • | • |
| DKA26 | | | 22LM | | M26 x 1.5 | 26.1 | 31 | 3.0 | • | • |
| DKA26X3.5 | 22LM | | | | M26 x 1.5 | 26.1 | 31 | 3.5 | • | • |
| DKA27 | | 20SM | | 20SM | M27 x 2 | 27.1 | 32 | 3.5 | • | • |
| DKA33 | 28LM | 25SM | | | M33 x 2 | 33.1 | 39 | 3.5 | • | • |
| DKA11/4 | 35LM | 30SM | | | M42 x 2 | 42.1 | 49 | 3.5 | • | • |
| DKA11/2 | 42LM | 38SM | | | M48 x 2 | 48.1 | 55 | 3.5 | • | • |

Dimensions for reference only, subject to change.



Pressure Gauge Sealing Ring



Specify size and material

Examples: DK11/2CFX (steel)

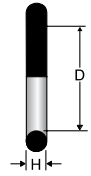
DK11/271X (stainless steel)

| TUBE FITTING PART # | FOR INTERNAL BSPP THREAD | D (mm) | D1 (mm) | H (mm) | Material | | |
|---------------------|--------------------------|--------|---------|--------|----------|----|--------|
| | | | | | CFX | 71 | COPPER |
| DK11/4 | G 1/4 - 19 | 6.0 | 11.3 | 4.5 | • | | |
| DK11/2 | G 1/2 - 19 | 12.0 | 18.5 | 5.0 | • | • | |
| M25180 | G 1/4 | 6.4 | 11.0 | 1.6 | | | • |

EO Swivel O-Ring

O-ring for EO Swivel Nuts, Weld Nipples, and Caps

Part Numbers: RED, DA, GZ, GZR, EGE, EGEO, SKA, EW, ET, EL, VKA, MAVÉ



| EO SIZE/SERIES | O-RING NBR* | D | H | O-RING FKM ² | D | H |
|----------------|-------------|------|-----|-------------------------|------|-----|
| 6L | OR4.5X1.5X | 4.5 | 1.5 | OR4.5X1.5VITX | 4.5 | 1.5 |
| 8L | OR6.5X1.5X | 6.5 | 1.5 | OR6.5X1.5VITX | 6.5 | 1.5 |
| 10L | OR8.5X1.5X | 8.5 | 1.5 | OR8X1.5VITX | 8.0 | 1.5 |
| 12L | OR10.5X1.5X | 10.5 | 1.5 | OR10X1.5VITX | 10.0 | 1.5 |
| 15L | OR12.5X2X | 12.5 | 2.0 | OR12X2VITX | 12.0 | 2.0 |
| 18L | OR16X2X | 16.0 | 2.0 | OR15X2VITX | 15.0 | 2.0 |
| 22L | OR20X2X | 20.0 | 2.0 | OR20X2VITX | 20.0 | 2.0 |
| 28L | OR26X2X | 26.0 | 2.0 | OR26X2VITX | 26.0 | 2.0 |
| 35L | OR32X2.5X | 32.0 | 2.5 | OR32X2.5VITX | 32.0 | 2.5 |
| 42L | OR39X2.5X | 39.0 | 2.5 | OR38X2.5VITX | 38.0 | 2.5 |
| 6S | OR4.5X1.5X | 4.5 | 1.5 | OR4.5X1.5VITX | 4.5 | 1.5 |
| 8S | OR6.5X1.5X | 6.5 | 1.5 | OR6.5X1.5VITX | 6.5 | 1.5 |
| 10S | OR8.5X1.5X | 8.5 | 1.5 | OR8X1.5VITX | 8.0 | 1.5 |
| 12S | OR10.5X1.5X | 10.5 | 1.5 | OR10X1.5VITX | 10.0 | 1.5 |
| 14S | OR12X2X | 12.0 | 2.0 | OR12X2VITX | 12.0 | 2.0 |
| 16S | OR14X2X | 14.0 | 2.0 | OR13X2VITX | 13.0 | 2.0 |
| 20S | OR17X2.5X | 17.0 | 2.5 | OR16.3X2.4VITX | 16.3 | 2.4 |
| 25S | OR22X2.5X | 22.0 | 2.5 | OR20.3X2.4VITX | 20.3 | 2.4 |
| 30S | OR27X2.5X | 27.0 | 2.5 | OR25.3X2.4VITX | 25.3 | 2.4 |
| 38S | OR35X2.5X | 35.0 | 2.5 | OR33.3X2.4VITX | 33.3 | 2.4 |

*NBR is standard compound — 90-durometer Nitrile.

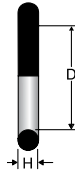
²FKM is optional 85-durometer Fluorocarbon compound.

Dimensions for reference only, subject to change.



EO O-Ring

O-ring for EO Banjo Fitting Bolts
Part Numbers: WH/TH

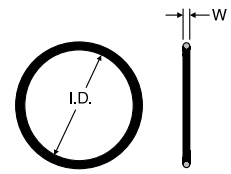


| BANJO BOLT METRIC THREAD | BANJO BOLT BSPP THREAD | D | H | O-RING NBR* | O-RING FKM** |
|--------------------------|------------------------|------|-----|-------------|----------------|
| M10 | G 1/8 | 9.3 | 1.5 | OR9.3X1.5X | OR9.3X1.5VITX |
| M12, M14 | G 1/4 | 12.5 | 1.5 | OR12.5X1.5X | OR12.5X1.5VITX |
| M16 | G 3/8 | 16.0 | 1.5 | OR16X1.5X | OR16X1.5VITX |
| M18 | | 18.0 | 1.5 | OR18X1.5X | OR18X1.5VITX |
| M20, M22 | G 1/2 | 20.0 | 1.5 | OR20X1.5X | OR20X1.5VITX |
| M26, M27 | G 3/4 | 25.0 | 2.0 | OR25X2X | OR25X2VITX |
| M33 | G 1 | 33.0 | 2.5 | OR33X2.5X | OR33X2.5VITX |
| M42 | G 1 1/4 | 41.0 | 2.5 | OR41X2.5X | OR41X2.5VITX |
| M48 | G 1 1/2 | 46.0 | 3.0 | OR46X3X | OR46X3VITX |

*NBR is standard compound — 90-durometer Nitrile.
**FKM is optional 85-durometer Fluorocarbon compound.

SAE 4-Bolt Flange O-Ring

Code 61 and Code 62 Flanges



Specify size and compound
Example: 2-210 NBR

| TUBE FITTING PART # | HOSE PRODUCTS DIVISION PART # ¹⁾ | FITTING DASH SIZE | W (in.) | I.D. (in.) | Material NBR* |
|---------------------|---|-------------------|---------|------------|---------------|
| 2-210 | 711510-6 | 8 | 0.139 | 0.734 | • |
| 2-214 | 711510-5 | 12 | 0.139 | 0.984 | • |
| 2-219 | 711510-4 | 16 | 0.139 | 1.296 | • |
| 2-222 | 711510-3 | 20 | 0.139 | 1.484 | • |
| 2-225 | 711510-2 | 24 | 0.139 | 1.859 | • |
| 2-228 | 711510-1 | 32 | 0.139 | 2.234 | • |
| 2-232 | 711510-7 | 40 | 0.139 | 2.734 | • |
| 2-237 | 711510-8 | 48 | 0.139 | 3.359 | • |

* NBR is the standard compound — 90-durometer Nitrile.

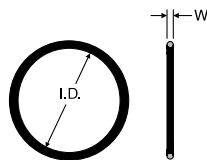
O-ring for DIN 2353 EO Gear Pump Flange Adapters
Part Numbers: BFG/BFW

| FLANGE SERIES "LK" | D | H | O-RING NBR* |
|--------------------|------|-----|-------------|
| LK35 | 20.0 | 2.5 | OR20X2.5X |
| LK40 | 26.0 | 2.5 | OR26X2.5X |
| LK55 | 33.0 | 2.5 | OR33X2.5X |

*NBR is standard compound — 90-durometer Nitrile.

Radial Seal O-Ring

Dual Seal Port O-Ring

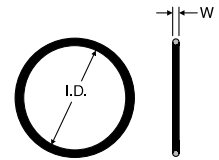


| TUBE FITTING PART # | END SIZE | W (in.) | I.D. (in.) |
|---------------------|-------------|---------|------------|
| | 2 DUAL SEAL | | |
| 2-113 | 1/2 | 0.103 | 0.549 |
| 2-123 | 1 | 1.174 | 1.174 |
| 2-129 | 1 1/2 | 1.549 | 1.549 |

Standard O-ring compound - 90 durometer NBR. Ordering example with material: 2-113 NBR.

Flange Seal O-Ring

Dual Seal Flange Head O-Ring



| TUBE FITTING PART # | END SIZE | W (in.) | I.D. (in.) |
|---------------------|-------------|---------|------------|
| | 2 DUAL SEAL | | |
| 2-022 | 1/2 | 0.070 | 0.989 |
| 2-129 | 1 | 0.103 | 1.549 |
| 2-136 | 1 1/2 | 0.103 | 1.987 |

Standard O-ring compound - 90 durometer NBR.

Dimensions for reference only, subject to change.

