








VCR® Metal Gasket Face Seal Fittings

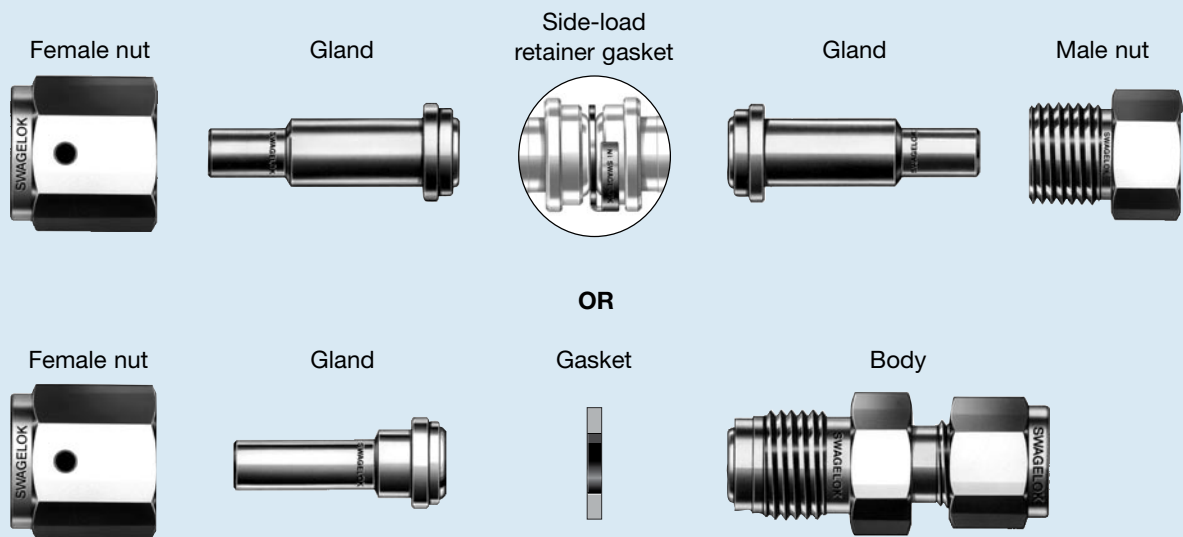


- 1/16 to 1 in. and 6 to 18 mm sizes
- High-purity stainless steels
- The original design, the authentic VCR brand

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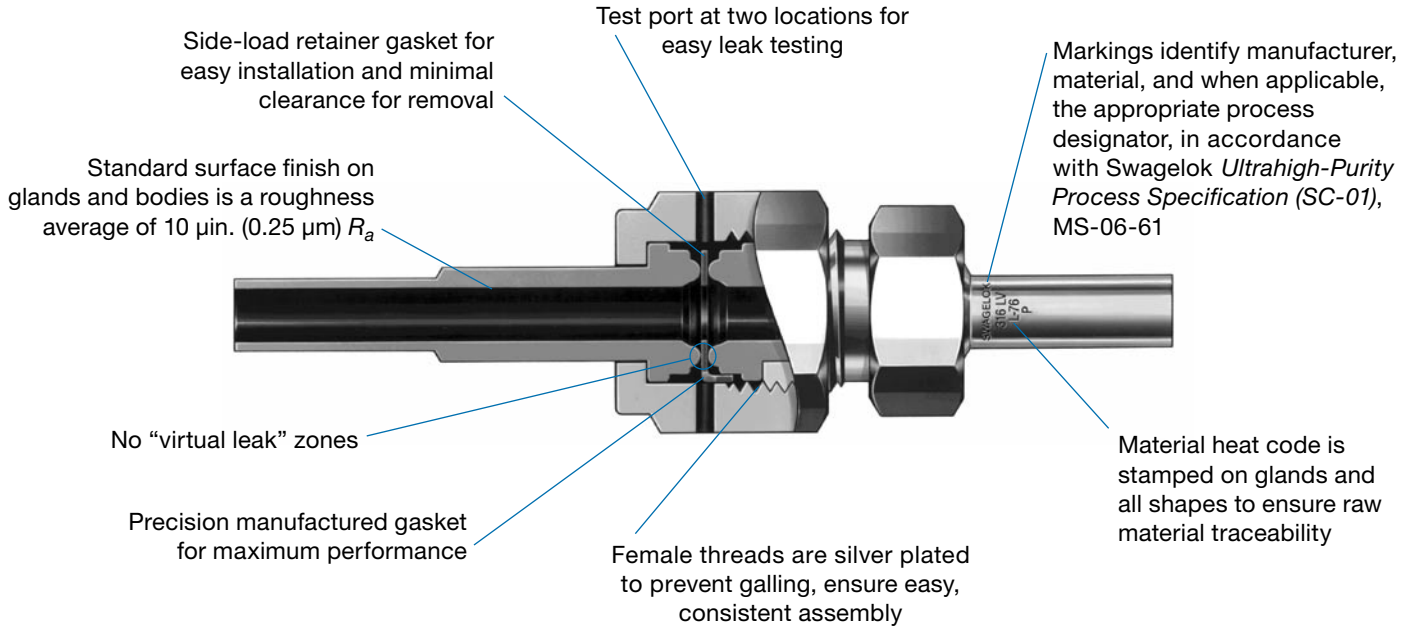
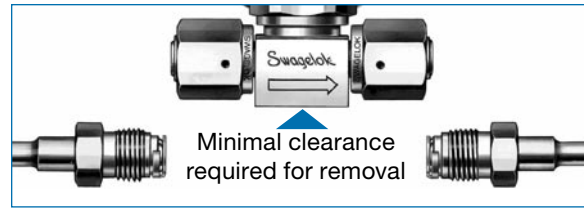
Typical VCR Assemblies



Features

Swagelok® VCR fittings offer the high purity of a metal-to-metal seal, providing leak-tight service from vacuum to positive pressure.

The seal on a VCR assembly is made when the gasket is compressed by two beads during the engagement of a male nut or body hex and a female nut.



Materials of Construction

| Material | Designator | Specification |
|---------------------------------|------------|---|
| Glands, Bodies, and Nuts | | |
| 316 stainless steel | SS | Bar stock: ASME SA479 ASTM A276 Forged shapes: ASME SA182 ASTM A314 |
| 316L stainless steel | 316L | Bar stock: ASME SA479 ASTM A276 Forged shapes: ASME A182 |
| 316L VAR stainless steel | 6LV | SEMI F20-0305 High-Purity ^① |
| Gaskets | | |
| Nickel | NI | ASTM B162 |
| 316L stainless steel | SS | ASTM A240, ASTM A167 |
| Copper | CU | ASTM B152 |

① 20 % minimum elongation allowed.

Plating

VCR female nuts are silver plated. Avoid chemical processes used for cleaning, electropolishing, and passivation that will remove plating. If the plating is damaged or removed, thread galling may occur, damaging fitting components and preventing a proper seal.

Pressure Ratings

- All ratings comply with calculations in accordance with ASME Code for Pressure Piping B31.3, Process Piping.
- To determine pressure ratings in accordance with ASME B31.1, Power Piping, multiply psig rating by 0.94.
- Working pressure ratings determined at room temperature with gasket materials shown.

Temperature Ratings

| Components | Material | Temperature, °F (°C) |
|------------|--------------------------|----------------------|
| Fittings | 316 stainless steel | 1000 (537) |
| | 316L stainless steel | |
| | 316L VAR stainless steel | |
| Gaskets | 316L stainless steel | 1000 (537) |
| | Nickel | 600 (315) |
| | Copper | 400 (204) |

Testing

The VCR fitting design has been helium leak tested to a maximum leak rate of 4×10^{-9} std cm³/s with silver-plated and copper gaskets and to a maximum leak rate of 4×10^{-11} std cm³/s with unplated gaskets.

Cleaning

Components are cleaned to remove oil, grease, and loose particles. For more information, see Swagelok *Standard Cleaning and Packaging (SC-10)*, MS-06-62.

Ultrahigh-Purity Processing

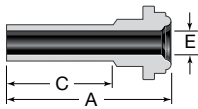
A variety of VCR face seal glands and bodies is available with controlled surface finishes, electropolished, and specially cleaned to meet ultrahigh-purity system requirements. For more information, see Swagelok *Ultrahigh-Purity Process Specification (SC-01)*, MS-06-61.

Ordering Information, Pressure Ratings, and Dimensions

- Dimensions are for reference only and are subject to change.
- The E dimension refers to the smallest nominal inside diameter of the part.
- To order fittings manufactured in accordance with Swagelok *Ultrahigh-Purity Process Specification (SC-01)*, MS-06-61, add **P** to the ordering number.

Example: 6LV-4-VCR-3-4TB7P

Glands

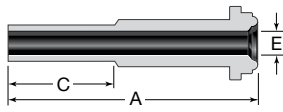


Short Tube Butt Weld

| Tube Size | Nominal Wall Thickness | VCR Size in. | Ordering Number | Dimensions | | | Working Pressure | | |
|-----------------------------|------------------------|--------------|--------------------------------|----------------|----------------|----------------|-------------------|---------------|---------------|
| | | | | A | C | E | Ni | SS | Cu |
| Dimensions, in. (mm) | | | | | | | psig (bar) | | |
| 1/8 | 0.028 | 1/8 | 6LV-2-VCR-3S-2TB7 ^① | 1.08 (27.4) | 0.75 (19.1) | 0.06 (1.5) | 8500 (585) | 8500 (585) | 6800 (468) |
| | | 1/4 | 6LV-4-VCR-3S-2TB7 | 1.10 (27.9) | | | 5100 (351) | 5100 (351) | 5100 (351) |
| 1/4 | 0.035 | 1/4 | 6LV-4-VCR-3S-4TB2 | 0.60 (15.2) | 0.25 (6.4) | 0.18 (4.6) | 5100 (351) | 5100 (351) | 5100 (351) |
| | | | 6LV-4-VCR-3S-4TB3 | 0.72 (18.3) | 0.38 (9.6) | | | | |
| | | | 6LV-4-VCR-3S-4TB7 | 1.10 (27.9) | 0.75 (19.1) | | | | |
| | | 1/2 | 6LV-8-VCR-3S-4TB7 | 1.12 (28.4) | 0.75 (19.1) | | 3500 (241) | 4300 (296) | 2800 (192) |
| 3/8 | 0.035 | 1/2 | 6LV-8-VCR-3S-6TB2 | 0.62 (15.7) | 0.25 (6.4) | 0.31 (7.9) | 3300 (227) | 3300 (227) | 2600 (179) |
| | | | 6LV-8-VCR-3S-6TB7 | 1.12 (28.4) | 0.75 (19.1) | | | | |
| 1/2 | 0.049 | 1/2 | 6LV-8-VCR-3S-8TB2 | 0.62 (15.7) | 0.25 (6.4) | 0.40 (10.2) | 3500 (241) | 3500 (241) | 2800 (192) |
| | | | 6LV-8-VCR-3S-8TB3 | 0.74 (18.8) | 0.38 (9.6) | | | | |
| | | | 6LV-8-VCR-3S-8TB7 | 1.12 (28.4) | 0.75 (19.1) | | | | |
| Dimensions, mm (in.) | | | | | | | bar (psig) | | |
| 6 | 1.0 | 1/4 | 6LV-4-VCR-3S-6MTB7 | 29.5 (1.16) | 19.1 (0.75) | 4.0 (0.16) | 468 (6800) | 468 (6800) | 372 (5400) |
| 8 | 1.0 | 1/4 | 6LV-4-VCR-3S-8MTB7 | 29.5 (1.16) | | 6.0 (0.24) | 337 (4900) | 337 (4900) | 337 (4900) |
| 10 | 1.0 | 1/2 | 6LV-8-VCR-3S-10MTB7 | 29.5 (1.16) | | 8.0 (0.31) | 241 (3500) | 241 (3500) | 192 (2800) |
| 12 | 1.0 | 1/2 | 6LV-8-VCR-3S-12MTB7 | 29.5 (1.16) | | 10.0 (0.39) | 213 (3100) | 213 (3100) | 165 (2400) |
| 18 | 1.5 | 3/4 | 6LV-12-VCR-3S-18MTB7 | 31.0 (1.22) | | 15.0 (0.59) | 206 (3000) | 206 (3000) | 165 (2400) |

^① Not designed for gasket retainer assembly.

Glands

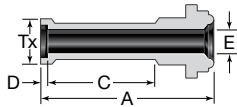


Long Tube Butt Weld

| Tube Size | Nominal Wall Thickness | VCR Size in. | Ordering Number | Dimensions | | | Working Pressure | | |
|-----------|------------------------|--------------|-------------------------------|----------------------|----------------|----------------------------|------------------|---------------|---------------|
| | | | | A | C | E | Ni | SS | Cu |
| | | | | Dimensions, in. (mm) | | | psig (bar) | | |
| 1/8 | 0.028 | 1/8 | 6LV-2-VCR-3-2TB7 ^① | 1.42 (36.1) | 0.75 (19.1) | 0.06 (1.5) ^② | 8500 (585) | 8500 (585) | 6800 (468) |
| 1/4 | 0.035 | 1/4 | 6LV-4-VCR-3-4TB2 | 1.20 (30.5) | 0.25 (6.4) | 0.18 (4.6) | 5100 (351) | 5100 (351) | 5100 (351) |
| | | | 6LV-4-VCR-3-02205 | 1.31 (33.3) | 0.36 (9.1) | | | | |
| | | | 6LV-4-VCR-3-4TB3 | 1.32 (33.5) | 0.38 (9.6) | | | | |
| | | | 6LV-4-VCR-3-4TB7 | 1.70 (43.2) | 0.75 (19.1) | | | | |
| | | 1/2 | 6LV-8-VCR-3-4TB7 | 1.80 (45.7) | 0.75 (19.1) | | 3500 (241) | 4300 (296) | 2800 (192) |
| 3/8 | 0.035 | 1/2 | 6LV-8-VCR-3-6TB2 | 1.29 (32.8) | 0.25 (6.4) | 0.31 (7.9) | 3300 (227) | 3300 (227) | 2600 (179) |
| | | | 6LV-8-VCR-3-6TB7 | 1.79 (45.5) | 0.75 (19.1) | | | | |
| 1/2 | 0.049 | 1/2 | 6LV-8-VCR-3-8TB2 | 1.29 (32.8) | 0.25 (6.4) | 0.40 (10.2) | 3500 (241) | 3500 (241) | 2800 (192) |
| | | | 6LV-8-VCR-3-8TB3 | 1.41 (35.8) | 0.38 (9.6) | | | | |
| | | | 6LV-8-VCR-3-8TB7 | 1.79 (45.5) | 0.75 (19.1) | | | | |
| 3/4 | 0.049 | 3/4 | 6LV-12-VCR-3-12TB7 | 2.03 (51.6) | 0.75 (19.1) | 0.65 (16.5) | 2400 (165) | 2400 (165) | 1900 (130) |
| 1 | 0.065 | 1 | 6LV-16-VCR-3-16TB7 | 2.32 (58.9) | 0.75 (19.1) | 0.87 (22.1) | 2400 (165) | 2400 (165) | 1900 (130) |
| | | | | Dimensions, mm (in.) | | | bar (psig) | | |
| 6 | 1.0 | 1/4 | 6LV-4-VCR-3-6MTB7 | 43.2 (1.70) | 19.1 (0.75) | 4.0 (0.16) | 468 (6800) | 468 (6800) | 372 (5400) |
| 8 | 1.0 | 1/4 | 6LV-4-VCR-3-8MTB7 | 43.2 (1.70) | | 6.0 (0.24) | 337 (4900) | 337 (4900) | 337 (4900) |
| 10 | 1.0 | 1/2 | 6LV-8-VCR-3-10MTB7 | 45.5 (1.79) | | 8.0 (0.31) | 241 (3500) | 241 (3500) | 192 (2800) |
| 12 | 1.0 | 1/2 | 6LV-8-VCR-3-12MTB7 | 45.5 (1.79) | | 10.0 (0.39) | 213 (3100) | 213 (3100) | 165 (2400) |
| 18 | 1.5 | 3/4 | 6LV-12-VCR-3-18MTB7 | 51.6 (2.03) | | 15.0 (0.59) | 206 (3000) | 206 (3000) | 165 (2400) |

① Not designed for gasket retainer assembly.
 ② May contain internal diameter transitions.

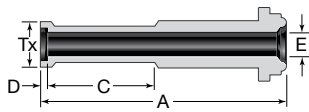
Short Automatic Tube Butt Weld



| Tube Size | Nominal Wall Thickness | VCR Size in. | Ordering Number | Dimensions | | | | | Working Pressure | | |
|-----------|------------------------|--------------|--------------------|----------------------|----------------|---------------|----------------|----------------|------------------|---------------|---------------|
| | | | | A | C | D | E | Tx | Ni | SS | Cu |
| | | | | Dimensions, in. (mm) | | | | | psig (bar) | | |
| 1/4 | 0.035 | 1/4 | 316L-4-VCR-3AS | 1.12 (28.4) | 0.75 (19.1) | 0.02 (0.5) | 0.18 (4.6) | 0.29 (7.4) | 5100 (351) | 5100 (351) | 5100 (351) |
| 3/8 | 0.035 | 1/2 | 316L-8-VCR-3AS6 | 1.15 (29.2) | | 0.03 (0.8) | 0.31 (7.9) | 0.41 (10.4) | 3300 (227) | 3300 (227) | 2600 (179) |
| 1/2 | 0.049 | 1/2 | 316L-8-VCR-3AS | 1.16 (29.5) | | 0.04 (1.0) | 0.40 (10.2) | 0.55 (14.0) | 3500 (241) | 3500 (241) | 2800 (192) |
| | | | | Dimensions, mm (in.) | | | | | bar (psig) | | |
| 6 | 1.0 | 1/4 | 316L-4-VCR-3-6MAS | 30.0 (1.18) | 19.1 (0.75) | 0.5 (0.02) | 4.0 (0.16) | 6.8 (0.27) | 468 (6800) | 468 (6800) | 372 (5400) |
| 8 | | 1/4 | 316L-4-VCR-3-8MAS | 30.2 (1.19) | | 0.8 (0.03) | 6.0 (0.24) | 8.9 (0.35) | 337 (4900) | 337 (4900) | 337 (4900) |
| 10 | | 1/2 | 316L-8-VCR-3-10MAS | 31.0 (1.22) | | 0.8 (0.03) | 8.0 (0.31) | 10.9 (0.43) | 241 (3500) | 241 (3500) | 192 (2800) |
| 12 | | 1/2 | 316L-8-VCR-3-12MAS | 30.5 (1.20) | | 1.0 (0.04) | 10.0 (0.39) | 13.2 (0.52) | 213 (3100) | 213 (3100) | 165 (2400) |

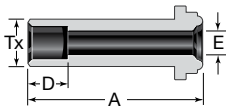
Glands

Long Automatic Tube Butt Weld



| Tube Size | Nominal Wall Thickness | VCR Size in. | Ordering Number | Dimensions | | | | | Working Pressure | | |
|-----------------------------|------------------------|--------------|--------------------|----------------|----------------|---------------|----------------|-------------------|------------------|---------------|---------------|
| | | | | A | C | D | E | Tx | Ni | SS | Cu |
| Dimensions, in. (mm) | | | | | | | | psig (bar) | | | |
| 1/4 | 0.035 | 1/4 | 316L-4-VCR-3A | 1.72 (43.7) | 0.75 (19.1) | 0.02 (0.5) | 0.18 (4.6) | 0.29 (7.4) | 5100 (351) | 5100 (351) | 5100 (351) |
| | | 1/2 | 316L-8-VCR-3A4 | 1.82 (46.2) | | | | | 3500 (241) | 3500 (241) | 2800 (192) |
| 3/8 | 0.035 | 1/2 | 316L-8-VCR-3A6 | 1.82 (46.2) | 0.75 (19.1) | 0.03 (0.8) | 0.31 (7.9) | 0.41 (10.4) | 3300 (227) | 3300 (227) | 2600 (179) |
| 1/2 | 0.049 | 1/2 | 316L-8-VCR-3A | 1.83 (46.5) | 0.75 (19.1) | 0.04 (1.0) | 0.40 (10.2) | 0.55 (14.0) | 3500 (241) | 3500 (241) | 2800 (192) |
| 3/4 | 0.049 | 3/4 | 316L-12-VCR-3A | 2.07 (52.6) | 0.75 (19.1) | 0.04 (1.0) | 0.65 (16.5) | 0.80 (20.3) | 2400 (165) | 2400 (165) | 2400 (165) |
| 1 | 0.065 | 1 | 316L-16-VCR-3A | 2.57 (65.3) | 0.96 (24.4) | 0.04 (1.0) | 0.87 (22.1) | 1.06 (26.9) | 2400 (165) | 2400 (165) | 1900 (130) |
| Dimensions, mm (in.) | | | | | | | | bar (psig) | | | |
| 6 | 1.0 | 1/4 | 316L-4-VCR-3-6MA | 43.7 (1.72) | 19.1 (0.75) | 0.5 (0.02) | 4.0 (0.16) | 6.8 (0.27) | 468 (6800) | 468 (6800) | 372 (5400) |
| 12 | 1.0 | 1/2 | 316L-8-VCR-3-12MA | 46.5 (1.83) | | 1.0 (0.04) | 10.0 (0.39) | 13.2 (0.52) | 213 (3100) | 213 (3100) | 165 (2400) |
| 18 | 1.5 | 3/4 | 316L-12-VCR-3-18MA | 52.6 (2.07) | | 1.0 (0.04) | 15.0 (0.59) | 19.3 (0.76) | 206 (3000) | 206 (3000) | 165 (2400) |

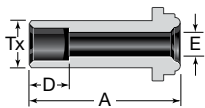
Socket Weld



| Tube Socket Size | VCR Size | Ordering Number | Dimensions | | | | Working Pressure | | |
|-----------------------------|----------|--------------------------|----------------|----------------|----------------|-------------------|------------------|---------------|---------------|
| | | | A | D | E | Tx | Ni | SS | Cu |
| Dimensions, in. (mm) | | | | | | psig (bar) | | | |
| 1/16 | 1/8 | SS-1-VCR-3 ^{①②} | 0.70 (17.8) | 0.10 (2.5) | 0.05 (1.3) | 0.13 (3.3) | 9000 (620) | 9000 (620) | 7200 (496) |
| 1/8 | 1/8 | SS-2-VCR-3 ^② | 0.70 (17.8) | 0.10 (2.5) | 0.09 (2.3) | 0.20 (5.1) | 7100 (489) | 7100 (489) | 7100 (489) |
| 1/4 | 1/4 | SS-4-VCR-3 | 1.31 (33.3) | 0.28 (7.1) | 0.18 (4.6) | 0.35 (8.9) | 5500 (378) | 5500 (378) | 5500 (378) |
| 3/8 | 1/2 | SS-6-VCR-3 ^③ | 1.50 (38.1) | 0.31 (7.9) | 0.28 (7.1) | 0.60 (15.2) | 3500 (241) | 4300 (296) | 2800 (192) |
| 1/2 | 1/2 | SS-8-VCR-3 | 1.50 (38.1) | 0.38 (9.6) | 0.40 (10.2) | 0.60 (15.2) | 3000 (206) | 3000 (206) | 2400 (165) |
| 5/8 | 5/8 | SS-10-VCR-3 | 1.56 (39.6) | 0.41 (10.4) | 0.50 (12.7) | 0.72 (18.3) | 2800 (192) | 2800 (192) | 2200 (151) |
| 3/4 | 3/4 | SS-12-VCR-3 | 2.00 (50.8) | 0.44 (11.2) | 0.62 (15.7) | 0.88 (22.4) | 2800 (192) | 2800 (192) | 2200 (151) |
| 1 | 1 | SS-16-VCR-3 | 2.22 (56.4) | 0.62 (15.7) | 0.87 (22.1) | 1.19 (30.2) | 2400 (165) | 3000 (206) | 1900 (130) |

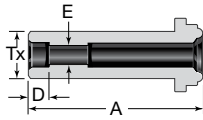
- ① Uses 1/8 in. gasket and nut.
- ② Not designed for gasket retainer assembly.
- ③ Uses 1/2 in. gasket and nut.

Short Socket Weld



| Tube Socket Size | VCR Size | Ordering Number | Dimensions | | | | Working Pressure | | |
|-----------------------------|----------|------------------|----------------|---------------|---------------|-------------------|------------------|---------------|---------------|
| | | | A | D | E | Tx | Ni | SS | Cu |
| Dimensions, in. (mm) | | | | | | psig (bar) | | | |
| 1/4 | 1/4 | SS-4-VCR-3-.50LG | 0.50 (12.7) | 0.28 (7.1) | 0.18 (4.6) | 0.35 (8.9) | 5500 (378) | 5500 (378) | 5500 (378) |
| | | SS-4-VCR-3-.75LG | 0.75 (19.1) | | | | | | |

Glands

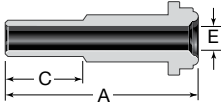


Reducing Socket Weld

| Tube Socket Size | VCR Size | Ordering Number | Dimensions | | | | Working Pressure | | |
|----------------------|----------|-----------------|----------------|---------------|----------------------------|----------------|------------------|---------------|---------------|
| | | | A | D | E | Tx | Ni | SS | Cu |
| Dimensions, in. (mm) | | | | | | psig (bar) | | | |
| 1/8 | 1/4 | SS-4-VCR-3-2TSW | 1.31 (33.3) | 0.10 (2.5) | 0.09 (2.3) ^① | 0.35 (8.9) | 8000 (551) | 8000 (551) | 8000 (551) |
| 1/4 | 1/2 | SS-8-VCR-3-4TSW | 1.50 (38.1) | 0.28 (7.1) | 0.18 (4.6) | 0.60 (15.2) | 3500 (241) | 3500 (241) | 3500 (241) |

① May contain internal diameter transitions.

Male Weld

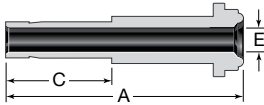


| Tube Size | VCR Size | Ordering Number | Dimensions | | | Working Pressure | | |
|----------------------|----------|------------------------------|----------------|----------------|----------------------------|------------------|-----------------|---------------|
| | | | A | C | E | Ni | SS | Cu |
| Dimensions, in. (mm) | | | | | | psig (bar) | | |
| 1/8 | 1/8 | SS-2-VCR-3-2MTW ^① | 0.70 (17.8) | 0.28 (7.1) | 0.06 (1.5) ^② | 9000 (620) | 11 200 (771) | 7200 (496) |
| | 1/4 | SS-4-VCR-3-2MTW | 1.31 (33.3) | | | 8000 (551) | 10 000 (689) | 6400 (440) |
| 1/4 | 1/4 | SS-4-VCR-3-4MTW | 1.31 (33.3) | 0.41 (10.4) | 0.12 (3.0) | 8000 (551) | 10 000 (689) | 6400 (440) |
| | 1/2 | SS-8-VCR-3-4MTW | 1.50 (38.1) | | | 3500 (241) | 4300 (296) | 2800 (192) |
| 3/8 | 1/2 | SS-8-VCR-3-6MTW | 1.50 (38.1) | 0.41 (10.4) | 0.28 (7.1) | 3500 (241) | 4300 (296) | 2800 (192) |
| 1/2 | 1/2 | SS-8-VCR-3-8MTW | 1.50 (38.1) | 0.50 (12.7) | 0.40 (10.2) | 3500 (241) | 3500 (241) | 3500 (241) |
| 3/4 | 3/4 | SS-12-VCR-3-12MTW | 2.00 (50.8) | 0.62 (15.7) | 0.53 (13.5) | 3000 (206) | 3700 (254) | 2400 (165) |
| 1 | 1 | SS-16-VCR-3-16MTW | 2.22 (56.4) | 0.81 (20.6) | 0.75 (19.1) | 2400 (165) | 3000 (206) | 1900 (130) |

① Not designed for gasket retainer assembly.

② May contain internal diameter transitions.

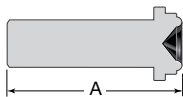
Tube Adapter



| Tube Size | VCR Size | Ordering Number | Dimensions | | | Working Pressure | | |
|----------------------|----------|-----------------|----------------|----------------|----------------------------|------------------|-----------------|---------------|
| | | | A | C | E | Ni | SS | Cu |
| Dimensions, in. (mm) | | | | | | psig (bar) | | |
| 1/4 | 1/4 | SS-4-VCR-3-4TA | 1.62 (41.0) | 0.64 (16.2) | 0.17 (4.3) | 8000 (551) | 10 000 (689) | 6400 (440) |
| 3/8 | 1/2 | SS-8-VCR-3-6TA | 1.81 (46.0) | 0.70 (17.8) | 0.27 (6.8) ^① | 3500 (241) | 4300 (296) | 2800 (192) |
| 1/2 | 1/2 | SS-8-VCR-3-8TA | 1.94 (49.3) | 0.96 (24.4) | 0.37 (9.4) | 3500 (241) | 4300 (296) | 2800 (192) |

① May contain internal diameter transitions.

Blind (Undrilled) Gland

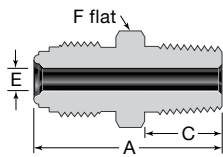


| VCR Size | Ordering Number | A |
|----------------------|----------------------------|-------------|
| Dimensions, in. (mm) | | |
| 1/8 | SS-2-VCR-3-BL ^① | 0.70 (17.8) |
| 1/4 | SS-4-VCR-3-BL | 1.31 (33.3) |
| 1/2 | SS-8-VCR-3-BL | 1.50 (38.1) |
| 3/4 | SS-12-VCR-3-BL | 2.00 (50.8) |
| 1 | SS-16-VCR-3-BL | 2.22 (56.4) |

① Not designed for gasket retainer assembly.

Bodies

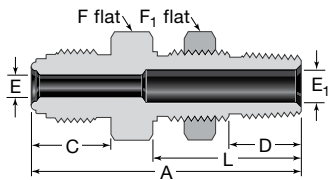
Male NPT Connector^①



| NPT Size | VCR Size | Ordering Number | Dimensions | | | | Working Pressure | | |
|----------|----------|---------------------------|----------------------|----------------|----------------------------|--------|------------------|-----------------|---------------|
| | | | A | C | E | F | Ni | SS | Cu |
| | | | Dimensions, in. (mm) | | | | psig (bar) | | |
| 1/16 | 1/8 | SS-2-VCR-1-1 ^② | 1.07 (27.2) | 0.38 (9.6) | 0.09 (2.3) ^③ | 3/8 | 9000 (620) | 9000 (620) | 7200 (496) |
| 1/8 | 1/8 | SS-2-VCR-1-2 ^② | 1.07 (27.2) | 0.38 (9.6) | 0.09 (2.3) ^③ | 7/16 | 9000 (620) | 9000 (620) | 7200 (496) |
| | 1/4 | SS-4-VCR-1-2 | 1.31 (33.3) | | 0.18 (4.6) | 5/8 | 8000 (551) | 10 000 (689) | 6400 (440) |
| 1/4 | 1/4 | SS-4-VCR-1-4 | 1.49 (37.8) | 0.56 (14.2) | 0.18 (4.6) | 5/8 | 8000 (551) | 10 000 (689) | 6400 (440) |
| | 1/2 | SS-8-VCR-1-4 | 1.65 (41.9) | | 0.40 (10.2) | 15/16 | 3500 (241) | 4300 (296) | 2800 (192) |
| 3/8 | 1/2 | SS-8-VCR-1-6 | 1.65 (41.9) | 0.56 (14.2) | 0.38 (9.6) | 15/16 | 3500 (241) | 4300 (296) | 2800 (192) |
| 1/2 | 1/2 | SS-8-VCR-1-8 | 1.84 (46.7) | 0.75 (19.1) | 0.40 (10.2) | 15/16 | 3500 (241) | 4300 (296) | 2800 (192) |
| 3/4 | 3/4 | SS-12-VCR-1-12 | 2.19 (55.6) | 0.75 (19.1) | 0.62 (15.7) | 1 5/16 | 3000 (206) | 3700 (254) | 2400 (165) |
| 1 | 1 | SS-16-VCR-1-16 | 2.47 (62.7) | 0.94 (23.9) | 0.87 (22.1) | 1 5/8 | 2400 (165) | 3000 (206) | 1900 (130) |

Select male connectors are available with ISO/BSP tapered thread (RT) ends. Contact your authorized Swagelok representative.

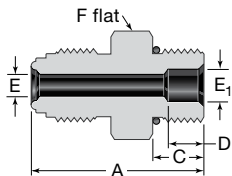
- ① VCR components with fixed threads must remain stationary during installation. These fitting connections should be assembled only to glands with rotating male or female threaded nuts.
- ② Not designed for gasket retainer assembly.
- ③ May contain internal diameter transitions.



Male NPT Bulkhead Connector^①

| NPT Size | VCR Size | Ordering Number | Dimensions | | | | | | | | | | Working Pressure | | |
|----------|----------|-----------------|----------------------|----------------|----------------|----------------|----------------|---------------|----------------|----------------|-----------------|---------------------|------------------|---------------|---------------|
| | | | A | C | D | E | E ₁ | F | F ₁ | L | Panel Hole Dia | Max Panel Thickness | Ni | SS | Cu |
| | | | Dimensions, in. (mm) | | | | | | | | | | psig (bar) | | |
| 1/4 | 1/4 | SS-4-VCR-A1-4M | 2.21 (56.1) | 0.62 (15.7) | 0.56 (14.2) | 0.18 (4.6) | 0.28 (7.1) | 13/16 | 13/16 | 1.24 (31.5) | 21/32 (16.8) | 0.38 (9.7) | 8000 (551) | 8000 (551) | 6400 (440) |
| | 1/2 | SS-8-VCR-A1-4M | 2.34 (59.4) | 0.75 (19.1) | | 0.40 (10.2) | 15/16 | 3500 (241) | | | | | 4370 (301) | 2800 (192) | |

① VCR components with fixed threads must remain stationary during installation. These fitting connections should be assembled only to glands with rotating male or female threaded nuts.



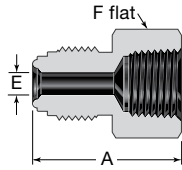
Straight Thread O-Ring Seal Male Connector^①

| Straight Thread Size | VCR Size | Uniform O-Ring ^② Size | Ordering Number | Dimensions | | | | | | Working Pressure | | |
|----------------------|----------|----------------------------------|------------------|----------------------|----------------|----------------|---------------|----------------|-------|------------------|---------------|---------------|
| | | | | A | C | D | E | E ₁ | F | Ni | SS | Cu |
| | | | | Dimensions, in. (mm) | | | | | | psig (bar) | | |
| 9/16-18 | 1/4 | 906 | SS-4-VCR-1-00032 | 1.33 (33.8) | 0.39 (9.9) | 0.25 (6.4) | 0.18 (4.6) | 0.28 (7.1) | 3/4 | 4500 (310) | 4500 (310) | 4500 (310) |
| 7/8-14 | 1/2 | 910 | SS-8-VCR-1-00176 | 1.66 (42.2) | 0.50 (12.7) | 0.40 (10.2) | 0.28 (7.1) | 0.59 (15.0) | 1 | 3500 (241) | 3500 (241) | 2800 (192) |
| 9/16-18 | 1/2 | 906 | SS-8-VCR-1-01081 | 1.48 (37.6) | 0.39 (9.9) | — | 0.28 (7.1) | 0.28 (7.1) | 15/16 | 3500 (241) | 3500 (241) | 2800 (192) |

① VCR components with fixed threads must remain stationary during installation. These fitting connections should be assembled only to glands with rotating male or female threaded nuts.

② Fluorocarbon FKM is standard, other materials are available. O-rings are assembled with a silicone vacuum grease.

Bodies



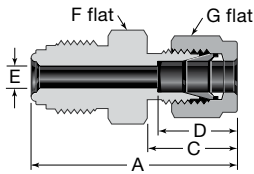
Female NPT Connector^①

| NPT Size | VCR Size | Ordering Number | Dimensions | | | Working Pressure | | |
|----------------------|----------|---------------------------|----------------|----------------|--------|------------------|---------------|---------------|
| | | | A | E | F | Ni | SS | Cu |
| Dimensions, in. (mm) | | | | | | psig (bar) | | |
| 1/16 | 1/8 | SS-2-VCR-7-1 ^② | 1.10 (27.9) | 0.09 (2.3) | 7/16 | 6700 (461) | 6700 (461) | 6700 (461) |
| 1/8 | 1/8 | SS-2-VCR-7-2 ^② | 1.19 (30.2) | 0.09 (2.3) | 9/16 | 6500 (447) | 6500 (447) | 6500 (447) |
| | 1/4 | SS-4-VCR-7-2 | 1.41 (35.8) | 0.18 (4.6) | 5/8 | 8000 (551) | 8000 (551) | 6400 (440) |
| 1/4 | 1/4 | SS-4-VCR-7-4 | 1.54 (39.1) | 0.18 (4.6) | 3/4 | 6600 (454) | 6600 (454) | 5200 (358) |
| 3/8 | 1/2 | SS-8-VCR-7-6 | 1.76 (44.7) | 0.40 (10.2) | 15/16 | 3500 (241) | 4300 (296) | 2800 (192) |
| 1/2 | 1/2 | SS-8-VCR-7-8 | 1.99 (50.5) | 0.40 (10.2) | 1 1/16 | 3500 (241) | 4300 (296) | 2800 (192) |
| 3/4 | 3/4 | SS-12-VCR-7-12 | 2.36 (59.9) | 0.62 (15.7) | 1 5/16 | 3000 (206) | 3700 (254) | 2400 (165) |
| 1 | 1 | SS-16-VCR-7-16 | 2.51 (63.8) | 0.87 (22.1) | 1 5/8 | 2400 (165) | 3000 (206) | 1900 (130) |

① VCR components with fixed threads must remain stationary during installation. These fitting connections should be assembled only to glands with rotating male or female threaded nuts.

② Not designed for gasket retainer assembly.

Swagelok Tube Fitting Connector^①



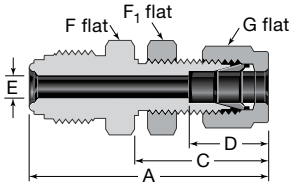
| Tube Size | VCR Size | Ordering Number | Dimensions | | | | | | Working Pressure | | |
|----------------------|----------|-----------------|----------------|----------------|----------------|----------------------------|-------|-------|------------------|-----------------|---------------|
| | | | A | C | D | E | F | G | Ni | SS | Cu |
| Dimensions, in. (mm) | | | | | | | | | psig (bar) | | |
| 1/8 | 1/4 | SS-4-VCR-6-200 | 1.53 (38.9) | 0.60 (15.2) | 0.50 (12.7) | 0.09 (2.3) ^② | 5/8 | 7/16 | 8000 (551) | 10 000 (689) | 6400 (440) |
| 1/4 | 1/4 | SS-4-VCR-6-400 | 1.62 (41.1) | 0.70 (17.8) | 0.60 (15.2) | 0.18 (4.6) | 5/8 | 9/16 | 8000 (551) | 10 000 (689) | 6400 (440) |
| 3/8 | 1/2 | SS-8-VCR-6-600 | 1.84 (46.7) | 0.76 (19.3) | 0.66 (16.8) | 0.28 (7.1) ^② | 15/16 | 11/16 | 3500 (241) | 4300 (296) | 2800 (192) |
| 1/2 | 1/2 | SS-8-VCR-6-810 | 1.95 (49.5) | 0.86 (21.8) | 0.90 (22.9) | 0.40 (10.2) | 15/16 | 7/8 | 3500 (241) | 4300 (296) | 2800 (192) |

Dimensions A, C, and D are typical finger-tight. Swagelok nuts and ferrules are provided assembled, as shown. For tubing maximum pressure ratings for use with Swagelok tube fittings, see Swagelok *Tubing Data*, MS-01-107.

① VCR components with fixed threads must remain stationary during installation. These fitting connections should be assembled only to glands with rotating male or female threaded nuts.

② May contain internal diameter transitions.

Swagelok Tube Fitting Bulkhead Connector^①



| Tube Size | VCR Size | Ordering Number | Dimensions | | | | | | | | | Working Pressure | | |
|----------------------|----------|------------------|----------------|----------------|----------------|----------------|-------|----------------|-------|-----------------|---------------------|------------------|-----------------|---------------|
| | | | A | C | D | E | F | F ₁ | G | Panel Hole Size | Max Panel Thickness | Ni | SS | Cu |
| Dimensions, in. (mm) | | | | | | | | | | | | psig (bar) | | |
| 1/4 | 1/4 | SS-4-VCR-A1-400 | 2.25 (57.2) | 1.32 (33.5) | 0.60 (15.2) | 0.18 (4.6) | 5/8 | 5/8 | 9/16 | 15/32 (11.9) | 0.40 (10.2) | 8000 (551) | 10 000 (689) | 6400 (440) |
| | | SS-4-VCR-A1S-400 | 1.88 (47.8) | 1.05 (26.7) | | | | | | | 0.13 (3.3) | 8000 (551) | 10 000 (689) | 6400 (440) |
| 3/8 | 1/2 | SS-8-VCR-A1-600 | 2.54 (64.5) | 1.45 (36.8) | 0.66 (16.8) | 0.28 (7.1) | 15/16 | 3/4 | 11/16 | 19/32 (15.0) | 0.44 (11.2) | 3500 (241) | 4300 (296) | 2800 (192) |
| 1/2 | 1/2 | SS-8-VCR-A1-810 | 2.74 (69.6) | 1.65 (41.9) | 0.90 (22.9) | 0.40 (10.2) | 15/16 | 15/16 | 7/8 | 25/32 (19.8) | 0.50 (12.7) | 3500 (241) | 4300 (296) | 2800 (192) |

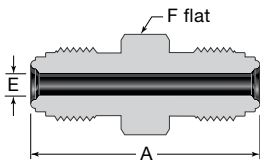
Dimensions A, C, and D are typical finger-tight. Swagelok nuts and ferrules are provided assembled, as shown.

For tubing maximum pressure ratings for use with Swagelok tube fittings, see Swagelok *Tubing Data*, MS-01-107.

① VCR components with fixed threads must remain stationary during installation. These fitting connections should be assembled only to glands with rotating male or female threaded nuts.

Bodies

Male Union^①

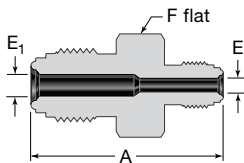


| VCR Size | Ordering Number | Dimensions | | | Working Pressure | | |
|----------|----------------------------|----------------------|----------------|--------|------------------|-----------------|---------------|
| | | A | E | F | Ni | SS | Cu |
| | | Dimensions, in. (mm) | | | psig (bar) | | |
| 1/8 | SS-2-VCR-6-DM ^② | 1.13 (28.7) | 0.09 (2.3) | 3/8 | 9000 (620) | 11 200 (771) | 7200 (496) |
| 1/4 | SS-4-VCR-6-DM | 1.55 (39.4) | 0.18 (4.6) | 5/8 | 8000 (551) | 10 000 (689) | 6400 (440) |
| 1/2 | SS-8-VCR-6-DM | 1.84 (46.7) | 0.40 (10.2) | 15/16 | 3500 (241) | 4300 (296) | 2800 (192) |
| 3/4 | SS-12-VCR-6-DM | 2.44 (62.0) | 0.62 (15.7) | 1 5/16 | 3000 (206) | 3700 (254) | 2400 (165) |
| 1 | SS-16-VCR-6-DM | 2.59 (65.8) | 0.87 (22.1) | 1 5/8 | 2400 (165) | 3000 (206) | 1900 (130) |

① VCR components with fixed threads must remain stationary during installation. These fitting connections should be assembled only to glands with rotating male or female threaded nuts.

② Not designed for gasket retainer assembly.

Male Reducing Union^①

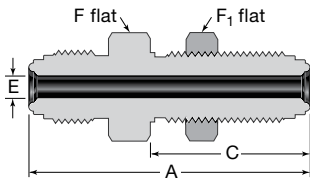


| VCR Size | VCR Size | Ordering Number | Dimensions | | | | Working Pressure | | |
|----------|----------|------------------------------|----------------|---------------|----------------|------------|------------------|-----------------|---------------|
| | | | A | E | E ₁ | F | Ni | SS | Cu |
| | | Dimensions, in. (mm) | | | | psig (bar) | | | |
| 1/4 | 1/8 | SS-4-VCR-6-DM-2 ^② | 1.37 (34.8) | 0.09 (2.3) | 0.18 (4.6) | 5/8 | 8000 (551) | 10 000 (689) | 6400 (440) |
| 1/2 | 1/4 | SS-8-VCR-6-DM-4 | 1.71 (43.4) | 0.18 (4.6) | 0.40 (10.2) | 15/16 | 3500 (241) | 4300 (296) | 2800 (192) |

① VCR components with fixed threads must remain stationary during installation. These fitting connections should be assembled only to glands with rotating male or female threaded nuts.

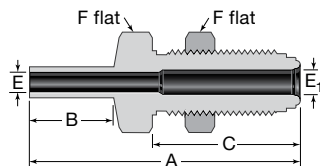
② Not designed for gasket retainer assembly.

Male Bulkhead Union^①



| VCR Size | Ordering Number | Dimensions | | | | | | | Working Pressure | | |
|----------|-----------------|----------------------|----------------|----------------|--------|----------------|-----------------|---------------------|------------------|-----------------|---------------|
| | | A | C | E | F | F ₁ | Panel Hole Dia | Max Panel Thickness | Ni | SS | Cu |
| | | Dimensions, in. (mm) | | | | | | | psig (bar) | | |
| 1/4 | SS-4-VCR-61 | 2.23 (56.6) | 1.30 (33.0) | 0.18 (4.6) | 3/4 | 3/4 | 19/32 (15.0) | 0.44 (11.2) | 8000 (551) | 10 000 (689) | 6400 (440) |
| | SS-4-VCR-61S | 1.82 (46.2) | 0.99 (25.1) | | | | | 0.13 (3.3) | | | |
| 1/2 | SS-8-VCR-61 | 2.57 (65.3) | 1.48 (37.6) | 0.40 (10.2) | 1 1/16 | 1 1/16 | 29/32 (23.1) | 0.50 (12.7) | 3500 (241) | 4300 (296) | 2800 (192) |
| | SS-8-VCR-61S | 2.14 (54.4) | 1.11 (28.2) | | | | | 0.13 (3.3) | | | |

① VCR components with fixed threads must remain stationary during installation. These fitting connections should be assembled only to glands with rotating male or female threaded nuts.

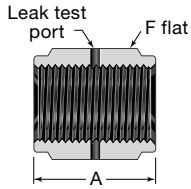


Tube Butt Weld Bulkhead Connector^①

| Tube Size | VCR Size | Ordering Number | Dimensions | | | | | | | | Working Pressure | | |
|-----------|----------|----------------------|----------------|----------------|----------------|---------------|----------------|-----|-----------------|---------------------|------------------|---------------|---------------|
| | | | A | B | C | E | E ₁ | F | Panel Hole Dia | Max Panel Thickness | Ni | SS | Cu |
| | | Dimensions, in. (mm) | | | | | | | | psig (bar) | | | |
| 1/4 | 1/4 | 6LV-4-VCR-61-4TB7 | 2.36 (59.9) | 0.75 (19.1) | 1.30 (33.0) | 0.18 (4.6) | 0.22 (5.6) | 3/4 | 19/32 (15.0) | 0.44 (11.2) | 5100 (351) | 5100 (351) | 5100 (351) |
| | | 6LV-4-VCR-61S-4TB7 | 1.95 (49.5) | | 0.99 (25.1) | | | | | 0.13 (3.3) | | | |

① VCR components with fixed threads must remain stationary during normal installation. These fitting connections should be assembled only to glands with rotating male or female threaded nuts.

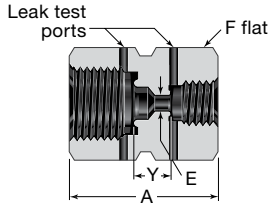
Bodies



Coupling

| VCR Size | Ordering Number | Dimensions | |
|----------------------|-----------------|-------------|--------|
| | | A | F |
| Dimensions, in. (mm) | | | |
| 1/8 | SS-2-VCR-CG | 0.66 (16.8) | 7/16 |
| 1/4 | SS-4-VCR-CG | 1.19 (30.2) | 3/4 |
| 1/2 | SS-8-VCR-CG | 1.31 (33.3) | 1 1/16 |
| 3/4 | SS-12-VCR-CG | 1.68 (42.7) | 1 1/2 |
| 1 | SS-16-VCR-CG | 2.04 (51.8) | 1 3/4 |

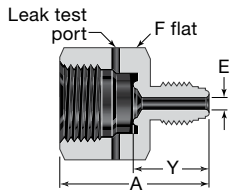
Female Reducing Union ①



| VCR Size | VCR Size | Ordering Number | Dimensions | | | | Working Pressure | | |
|----------------------|----------|-----------------|-------------|------------|--------|------------|------------------|--------------|------------|
| | | | A | E | F | Y | Ni | SS | Cu |
| Dimensions, in. (mm) | | | | | | | psig (bar) | | |
| 1/4 | 1/8 | SS-4-VCR-6-DF-2 | 1.16 (29.5) | 0.13 (3.3) | 3/4 | 0.36 (9.1) | 8000 (551) | 10 000 (689) | 6400 (440) |
| 1/2 | 1/4 | SS-8-VCR-6-DF-4 | 1.41 (35.8) | 0.25 (6.4) | 1 1/16 | 0.35 (8.9) | 3500 (241) | 4300 (296) | 2800 (192) |

① VCR components with fixed threads must remain stationary during normal installation. These fitting connections should be assembled only to glands with rotating male or female threaded nuts.

Reducing Adapter ①

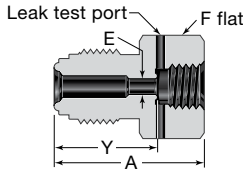


| VCR Size | VCR Size | Ordering Number | Dimensions | | | | Working Pressure | | |
|----------------------|----------|-------------------------------|-------------|------------|--------|-------------|------------------|--------------|------------|
| | | | A | E | F | Y | Ni | SS | Cu |
| Dimensions, in. (mm) | | | | | | | psig (bar) | | |
| 1/8 | 1/4 | SS-2-VCR-7-4VCRF ^② | 1.19 (30.2) | 0.09 (2.3) | 3/4 | 0.69 (17.5) | 8000 (551) | 10 000 (689) | 6400 (440) |
| 1/4 | 1/2 | SS-4-VCR-7-8VCRF | 1.41 (35.8) | 0.18 (4.6) | 1 1/16 | 0.85 (21.6) | 3500 (241) | 4300 (296) | 2800 (192) |

① VCR components with fixed threads must remain stationary during normal installation. These fitting connections should be assembled only to glands with rotating male or female threaded nuts.

② Not designed for gasket retainer assembly.

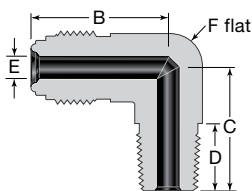
Reducing Bushing ①



| VCR Size | VCR Size | Ordering Number | Dimensions | | | | Working Pressure | | |
|----------------------|----------|------------------|-------------|------------|-------|-------------|------------------|--------------|------------|
| | | | A | E | F | Y | Ni | SS | Cu |
| Dimensions, in. (mm) | | | | | | | psig (bar) | | |
| 1/4 | 1/8 | SS-4-VCR-7-2VCRF | 1.06 (26.9) | 0.13 (3.3) | 5/8 | 0.76 (19.3) | 8000 (551) | 10 000 (689) | 6400 (440) |
| 1/2 | 1/4 | SS-8-VCR-7-4VCRF | 1.41 (35.8) | 0.25 (6.4) | 15/16 | 0.91 (23.1) | 3500 (241) | 4300 (296) | 2800 (192) |

① VCR components with fixed threads must remain stationary during normal installation. These fitting connections should be assembled only to glands with rotating male or female threaded nuts.

Male NPT Elbow ①

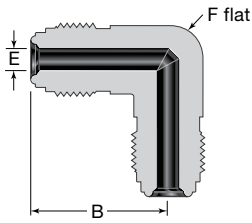


| NPT Size | VCR Size | Ordering Number | Dimensions | | | | | Working Pressure | | |
|----------------------|----------|-----------------|-------------|-------------|-------------|-------------|-------|------------------|--------------|------------|
| | | | B | C | D | E | F | Ni | SS | Cu |
| Dimensions, in. (mm) | | | | | | | | psig (bar) | | |
| 1/8 | 1/4 | SS-4-VCR-2-2 | 1.07 (27.2) | 0.87 (22.1) | 0.38 (9.6) | 0.18 (4.6) | 1/2 | 8000 (551) | 10 000 (689) | 6400 (440) |
| 1/4 | 1/4 | SS-4-VCR-2-4 | 1.07 (27.2) | 1.05 (26.7) | 0.56 (14.2) | 0.18 (4.6) | 1/2 | 8000 (551) | 8000 (551) | 8000 (551) |
| 3/8 | 1/2 | SS-8-VCR-2-6 | 1.45 (36.8) | 1.26 (32.0) | 0.56 (14.2) | 0.40 (10.2) | 13/16 | 3500 (241) | 4300 (296) | 2800 (192) |
| 1/2 | 1/2 | SS-8-VCR-2-8 | 1.45 (36.8) | 1.45 (36.8) | 0.75 (19.1) | 0.40 (10.2) | 13/16 | 3500 (241) | 4300 (296) | 2800 (192) |

① VCR components with fixed threads must remain stationary during normal installation. These fitting connections should be assembled only to glands with rotating male or female threaded nuts.

Bodies

Union Elbow ①

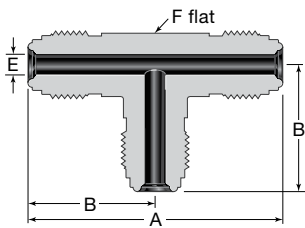


| VCR Size | Ordering Number | Dimensions | | | Working Pressure | | |
|----------|-----------------|----------------------|----------------|---------|------------------|-----------------|---------------|
| | | B | E | F | Ni | SS | Cu |
| | | Dimensions, in. (mm) | | | psig (bar) | | |
| 1/8 | SS-2-VCR-9② | 0.89 (22.6) | 0.09 (2.3) | 7/16 | 9000 (620) | 11 200 (771) | 7200 (496) |
| 1/4 | SS-4-VCR-9 | 1.07 (27.2) | 0.18 (4.6) | 1/2 | 8000 (551) | 10 000 (689) | 6400 (440) |
| 1/2 | SS-8-VCR-9 | 1.45 (36.8) | 0.40 (10.2) | 13/16 | 3500 (241) | 4300 (296) | 2800 (192) |
| 3/4 | SS-12-VCR-9 | 1.92 (48.8) | 0.62 (15.7) | 1 1/4 | 3000 (206) | 3700 (254) | 2400 (165) |
| 1 | SS-16-VCR-9 | 2.00 (50.8) | 0.87 (22.1) | 1 11/16 | 2400 (165) | 3000 (206) | 1900 (130) |

① VCR components with fixed threads must remain stationary during normal installation. These fitting connections should be assembled only to glands with rotating male or female threaded nuts.

② Not designed for gasket retainer assembly.

Union Tee ①

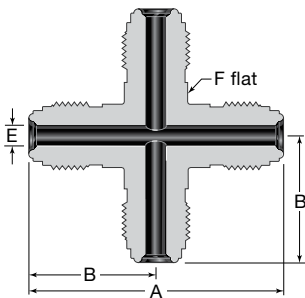


| VCR Size | Ordering Number | Dimensions | | | | Working Pressure | | |
|----------|-----------------|----------------------|----------------|----------------|---------|------------------|-----------------|---------------|
| | | A | B | E | F | Ni | SS | Cu |
| | | Dimensions, in. (mm) | | | | psig (bar) | | |
| 1/8 | SS-2-VCR-T② | 1.78 (45.2) | 0.89 (22.6) | 0.09 (2.3) | 7/16 | 9000 (620) | 11 200 (771) | 7200 (496) |
| 1/4 | SS-4-VCR-T | 2.14 (54.4) | 1.07 (27.2) | 0.18 (4.6) | 1/2 | 8000 (551) | 10 000 (689) | 6400 (440) |
| 1/2 | SS-8-VCR-T | 2.90 (73.7) | 1.45 (36.8) | 0.40 (10.2) | 13/16 | 3500 (241) | 4300 (296) | 2800 (192) |
| 3/4 | SS-12-VCR-T | 3.84 (97.5) | 1.92 (48.8) | 0.62 (15.7) | 1 1/4 | 3000 (206) | 3700 (254) | 2400 (165) |
| 1 | SS-16-VCR-T | 4.00 (102) | 2.00 (50.8) | 0.87 (22.1) | 1 11/16 | 2400 (165) | 3000 (206) | 1900 (130) |

① VCR components with fixed threads must remain stationary during normal installation. These fitting connections should be assembled only to glands with rotating male or female threaded nuts.

② Not designed for gasket retainer assembly.

Union Cross ①

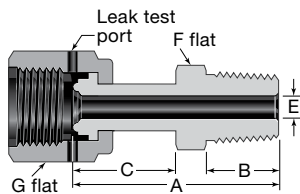


| VCR Size | Ordering Number | Dimensions | | | | Working Pressure | | |
|----------|-----------------|----------------------|----------------|----------------|---------|------------------|-----------------|---------------|
| | | A | B | E | F | Ni | SS | Cu |
| | | Dimensions, in. (mm) | | | | psig (bar) | | |
| 1/8 | SS-2-VCR-CS② | 1.78 (45.2) | 0.89 (22.6) | 0.09 (2.3) | 7/16 | 9000 (620) | 11 200 (771) | 7200 (496) |
| 1/4 | SS-4-VCR-CS | 2.14 (54.4) | 1.07 (27.2) | 0.18 (4.6) | 1/2 | 8000 (551) | 10 000 (689) | 6400 (440) |
| 1/2 | SS-8-VCR-CS | 2.90 (73.7) | 1.45 (36.8) | 0.40 (10.2) | 13/16 | 3500 (241) | 4300 (296) | 2800 (192) |
| 3/4 | SS-12-VCR-CS | 3.84 (97.5) | 1.92 (48.8) | 0.62 (15.7) | 1 1/4 | 3000 (206) | 3700 (254) | 2400 (165) |
| 1 | SS-16-VCR-CS | 4.00 (102) | 2.00 (50.8) | 0.87 (22.1) | 1 11/16 | 2400 (165) | 3000 (206) | 1900 (130) |

① VCR components with fixed threads must remain stationary during normal installation. These fitting connections should be assembled only to glands with rotating male or female threaded nuts.

② Not designed for gasket retainer assembly.

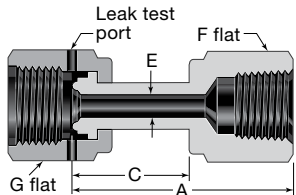
Welded Assemblies



Male NPT Connector

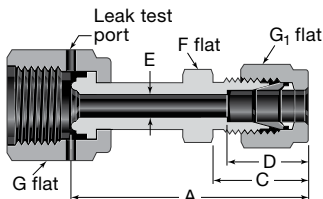
| NPT Size | VCR Size | Ordering Number | Dimensions | | | | | | Working Pressure | | |
|----------------------|----------|-----------------|-------------|-------------|-------------|-------------|-------|--------|------------------|------------|------------|
| | | | A | B | C | E | F | G | Ni | SS | Cu |
| Dimensions, in. (mm) | | | | | | | | | psig (bar) | | |
| 1/8 | 1/4 | SS-4-WVCR-1-2 | 1.58 (40.1) | 0.38 (9.6) | 0.95 (24.1) | 0.18 (4.6) | 7/16 | 3/4 | 8000 (551) | 8000 (551) | 6400 (440) |
| 1/4 | 1/4 | SS-4-WVCR-1-4 | 1.79 (45.5) | 0.56 (14.2) | 0.92 (23.4) | 0.18 (4.6) | 9/16 | 3/4 | 8000 (551) | 8000 (551) | 6400 (440) |
| 3/8 | 1/2 | SS-8-WVCR-1-6 | 1.89 (48.0) | 0.56 (14.2) | 1.00 (25.4) | 0.40 (10.2) | 11/16 | 1 1/16 | 3500 (241) | 4300 (296) | 2800 (192) |
| 1/2 | 1/2 | SS-8-WVCR-1-8 | 2.09 (53.1) | 0.75 (19.1) | 1.01 (25.6) | 0.40 (10.2) | 7/8 | 1 1/16 | 3500 (241) | 4300 (296) | 2800 (192) |

Female NPT Connector



| NPT Size | VCR Size | Ordering Number | Dimensions | | | | | Working Pressure | | |
|----------------------|----------|-----------------|-------------|-------------|-------------|--------|--------|------------------|------------|------------|
| | | | A | C | E | F | G | Ni | SS | Cu |
| Dimensions, in. (mm) | | | | | | | | psig (bar) | | |
| 1/4 | 1/4 | SS-4-WVCR-7-4 | 1.77 (45.0) | 0.92 (23.4) | 0.18 (4.6) | 3/4 | 3/4 | 6600 (454) | 6600 (454) | 5200 (358) |
| 3/8 | 1/2 | SS-8-WVCR-7-6 | 1.95 (49.5) | 1.06 (26.9) | 0.40 (10.2) | 7/8 | 1 1/16 | 3500 (241) | 4300 (296) | 2800 (192) |
| 1/2 | 1/2 | SS-8-WVCR-7-8 | 2.18 (55.4) | 1.04 (26.4) | 0.40 (10.2) | 1 1/16 | 1 1/16 | 3500 (241) | 4300 (296) | 2800 (192) |

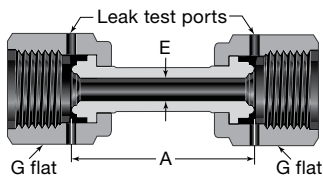
Swagelok Tube Fitting Connector



| Tube Size | VCR Size | Ordering Number | Dimensions | | | | | | | Working Pressure | | |
|----------------------|----------|-----------------|-------------|-------------|-------------|-------------|-------|--------|----------------|------------------|--------------|------------|
| | | | A | C | D | E | F | G | G ₁ | Ni | SS | Cu |
| Dimensions, in. (mm) | | | | | | | | | psig (bar) | | | |
| 1/4 | 1/4 | SS-4-WVCR-6-400 | 1.94 (49.3) | 0.70 (17.8) | 0.60 (15.2) | 0.18 (4.6) | 1/2 | 3/4 | 9/16 | 8000 (551) | 10 000 (689) | 6400 (440) |
| 3/8 | 1/4 | SS-4-WVCR-6-600 | 1.97 (50.0) | 0.76 (19.3) | 0.66 (16.8) | 0.18 (4.6) | 5/8 | 3/4 | 11/16 | 6500 (447) | 6500 (447) | 5200 (358) |
| 1/2 | 1/2 | SS-8-WVCR-6-810 | 2.23 (56.6) | 0.86 (21.8) | 0.90 (22.9) | 0.40 (10.2) | 13/16 | 1 1/16 | 7/8 | 3500 (241) | 4300 (296) | 2800 (192) |

Dimensions A, C, and D are typical finger-tight.
Swagelok nuts and ferrules are provided assembled, as shown.
For tubing maximum pressure ratings for use with Swagelok tube fittings, see Swagelok *Tubing Data*, MS-01-107.

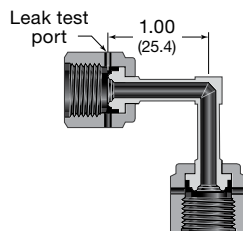
Rotating Female Union



| VCR Size | Ordering Number | Dimensions | | | Working Pressure | | | | |
|----------------------|-----------------|-------------|-------------|--------|------------------|--------------|------------|--|--|
| | | A | E | G | Ni | SS | Cu | | |
| Dimensions, in. (mm) | | | | | | | psig (bar) | | |
| 1/4 | SS-4-WVCR-6-DF | 1.71 (43.4) | 0.18 (4.6) | 3/4 | 8000 (551) | 10 000 (689) | 6400 (440) | | |
| 1/2 | SS-8-WVCR-6-DF | 1.84 (46.7) | 0.40 (10.2) | 1 1/16 | 3500 (241) | 4300 (296) | 2800 (192) | | |

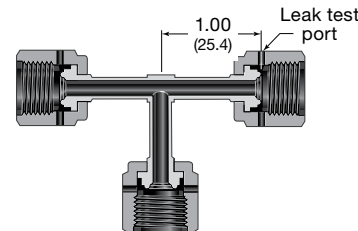
Elbows, crosses, Micro-Fit® fittings, and tees are available with welded male and female ends.
For more information, contact your authorized Swagelok sales and service representative.

Female Elbow



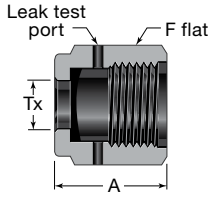
Ordering number:
6LV-4-WVCR-9-DF

Female Tee



Ordering number:
6LV-4-WVCR-T-FF

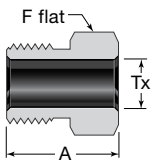
Nuts, Caps, and Plugs



Female Nut

| VCR Size | Ordering Number | Dimensions | | |
|-----------------------------|-----------------|----------------|--------|----------------|
| | | A | F | Tx |
| Dimensions, in. (mm) | | | | |
| 1/8 | SS-2-VCR-1 | 0.53 (13.5) | 7/16 | 0.21 (5.3) |
| 1/4 | SS-4-VCR-1 | 0.81 (20.6) | 3/4 | 0.36 (9.1) |
| 1/2 | SS-8-VCR-1 | 0.88 (22.4) | 1 1/16 | 0.61 (15.5) |
| 5/8 | SS-10-VCR-1 | 0.88 (22.4) | 1 3/16 | 0.74 (18.8) |
| 3/4 | SS-12-VCR-1 | 1.12 (28.4) | 1 1/2 | 0.89 (22.6) |
| 1 | SS-16-VCR-1 | 1.34 (34.0) | 1 3/4 | 1.20 (30.5) |

Male Nut

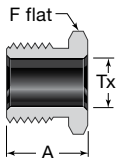


| VCR Size | Ordering Number | Dimensions | | |
|-----------------------------|-------------------------|----------------|--------|----------------|
| | | A | F | Tx |
| Dimensions, in. (mm) | | | | |
| 1/8 | SS-2-VCR-4 | 0.50 (12.7) | 3/8 | 0.21 (5.3) |
| 1/4 | SS-4-VCR-4 ^① | 0.71 (18.0) | 5/8 | 0.36 (9.1) |
| 1/2 | SS-8-VCR-4 | 0.81 (20.6) | 15/16 | 0.61 (15.5) |
| 5/8 | SS-10-VCR-4 | 0.81 (20.6) | 1 1/16 | 0.74 (18.8) |
| 3/4 | SS-12-VCR-4 | 1.00 (25.4) | 1 5/16 | 0.89 (22.6) |
| 1 | SS-16-VCR-4 | 1.19 (30.2) | 1 5/8 | 1.20 (30.5) |

① A taper at the hex end allows the nut to move around 90° tube bends.

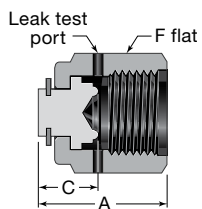
Short Male Nut

For use with short gland.



| VCR Size | Ordering Number | Dimensions | | |
|-----------------------------|------------------|----------------|-----|---------------|
| | | A | F | Tx |
| Dimensions, in. (mm) | | | | |
| 1/4 | SS-4-VCR-4-.54NC | 0.54 (13.7) | 5/8 | 0.36 (9.1) |
| | SS-4-VCR-4-.65NC | 0.65 (16.5) | | |

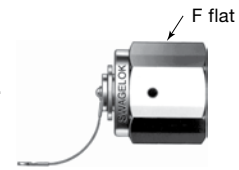
Cap



| VCR Size | Ordering Number | Dimensions | | |
|-----------------------------|-----------------|----------------|----------------|--------|
| | | A | C | F |
| Dimensions, in. (mm) | | | | |
| 1/8 | SS-2-VCR-CP | 0.63 (16.0) | 0.30 (7.6) | 7/16 |
| 1/4 | SS-4-VCR-CP | 0.94 (23.9) | 0.44 (11.2) | 3/4 |
| 1/2 | SS-8-VCR-CP | 1.01 (25.6) | 0.45 (11.4) | 1 1/16 |
| 3/4 | SS-12-VCR-CP | 1.29 (32.8) | 0.54 (13.7) | 1 1/2 |
| 1 | SS-16-VCR-CP | 1.54 (39.1) | 0.63 (16.0) | 1 3/4 |

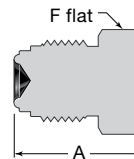
Cap with Lanyard

Lanyard material is 302 SS.
Lanyard length is 6 in. (15.2 cm).



| VCR Size | Ordering Number | Dimensions | | |
|-----------------------------|-----------------|----------------|----------------|--------|
| | | A | C | F |
| Dimensions, in. (mm) | | | | |
| 1/4 | SS-4-VCR-CP-BP | 0.94 (23.9) | 0.44 (11.2) | 3/4 |
| 1/2 | SS-8-VCR-CP-BP | 1.01 (25.6) | 0.45 (11.4) | 1 1/16 |

Plug



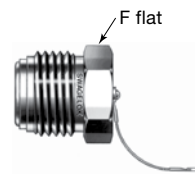
| VCR Size | Ordering Number | Dimensions | |
|-----------------------------|-------------------------|----------------|--------|
| | | A | F |
| Dimensions, in. (mm) | | | |
| 1/8 | SS-2-VCR-P ^① | 0.68 (17.3) | 3/8 |
| 1/4 | SS-4-VCR-P ^② | 0.92 (23.4) | 5/8 |
| 1/2 | SS-8-VCR-P | 1.08 (27.4) | 15/16 |
| 3/4 | SS-12-VCR-P | 1.43 (36.3) | 1 5/16 |
| 1 | SS-16-VCR-P | 1.52 (38.6) | 1 5/8 |

① Not designed for gasket retainer assembly.

② Also available as a rotatable plug.
Ordering number: **SS-4-VCR-RP**

Plug with Lanyard

Lanyard material is 302 SS.
Lanyard length is 6 in. (15.2 cm).



| VCR Size | Ordering Number | Dimensions | |
|-----------------------------|-----------------|----------------|-------|
| | | A | F |
| Dimensions, in. (mm) | | | |
| 1/4 | SS-4-VCR-BP | 0.92 (23.4) | 5/8 |
| 1/2 | SS-8-VCR-BP | 1.08 (27.4) | 15/16 |

Protective Cap

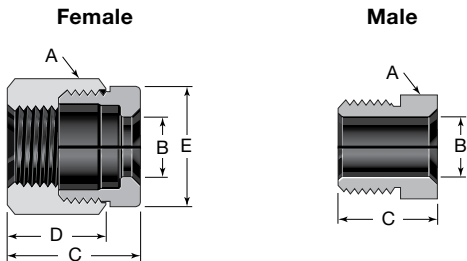
Made of 304 stainless steel and supplied as bead protection during shipping for a variety of VCR face seal fittings processed to Swagelok Ultrahigh-Purity Process Specification (SC-01), MS-06-61.



| VCR Size in. | Ordering Number |
|--------------|-----------------|
| 1/4 | 304-4-VCR-SC |
| 1/2 | 304-8-VCR-SC |
| 3/4 | 304-12-VCR-SC |
| 1 | 304-16-VCR-SC |

Nuts, Caps, and Plugs

Split-Nut Assemblies

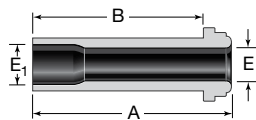


| VCR Size | Split Nut Type | Ordering Number | Dimensions | | | | |
|-----------------------------|----------------|-----------------|------------|---------------|----------------|----------------|----------------|
| | | | A | B | C | D | E |
| Dimensions, in. (mm) | | | | | | | |
| 1/4 | Female | SS-4-VCR-1-SN | 3/4 | 0.36 (9.1) | 0.81 (20.6) | 0.63 (16.0) | 0.68 (17.4) |
| 1/4 | Male | SS-4-VCR-4-SN | 5/8 | 0.36 (9.1) | 0.60 (15.2) | — | — |

High-Flow Connections—“H” Type VCR

“H” Type VCR connections are compatible with 1/4 in. VCR connections and are designed for use with Swagelok high-flow diaphragm valves and gas regulators. For uniform flow, use 1/4 in. side-load retainer style gasket. See page 17.

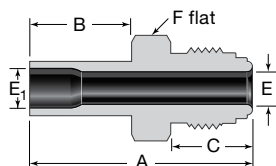
Glands



Tube Butt Weld

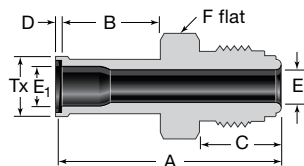
| Tube Size | Nominal Wall Thickness | VCR Size | Ordering Number | Dimensions | | | | Working Pressure | | |
|-----------------------------|------------------------|----------|---------------------|----------------|----------------|---------------|----------------|------------------|---------------|---------------|
| | | | | A | B | E | E ₁ | Ni | SS | Cu |
| Dimensions, in. (mm) | | | | | | | | psig (bar) | | |
| 3/8 | 0.035 | 1/4 | 6LV-4-HVCR-3-.60SR | 0.60 (15.2) | 0.41 (10.4) | 0.25 (6.4) | 0.31 (7.9) | 3300 (227) | 3300 (227) | 3300 (227) |
| | | | 6LV-4-HVCR-3-1.19SR | 1.19 (30.2) | 1.00 (25.4) | | | | | |
| | | | 6LV-4-HVCR-3-1.31SR | 1.31 (33.3) | 1.12 (28.4) | | | | | |

Bodies



Tube Butt Weld

| Tube Size | VCR Size | Ordering Number | Dimensions | | | | | | Working Pressure | | |
|-----------------------------|----------|-------------------|----------------|----------------|----------------|---------------|----------------|-----|------------------|---------------|---------------|
| | | | A | B | C | E | E ₁ | F | Ni | SS | Cu |
| Dimensions, in. (mm) | | | | | | | | | psig (bar) | | |
| 3/8 | 1/4 | 6LV-4-HVCR-1-6TB7 | 1.68 (42.7) | 0.75 (19.1) | 0.62 (15.7) | 0.25 (6.4) | 0.31 (7.9) | 5/8 | 3300 (227) | 3300 (227) | 3300 (227) |



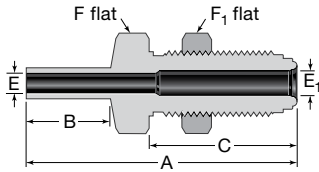
Automatic Tube Weld

| Tube Size | VCR Size | Ordering Number | Dimensions | | | | | | | | Working Pressure | | |
|-----------------------------|----------|-----------------|----------------|----------------|----------------|---------------|---------------|----------------|-----|----------------|------------------|---------------|---------------|
| | | | A | B | C | D | E | E ₁ | F | Tx | Ni | SS | Cu |
| Dimensions, in. (mm) | | | | | | | | | | | psig (bar) | | |
| 3/8 | 1/4 | 316L-4-HVCR-1A6 | 1.71 (43.4) | 0.75 (19.1) | 0.62 (15.7) | 0.03 (0.8) | 0.25 (6.4) | 0.31 (7.9) | 5/8 | 0.41 (10.4) | 3300 (227) | 3300 (227) | 3300 (227) |

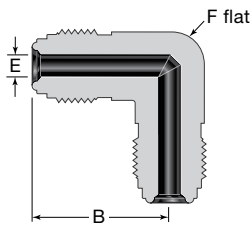
High-Flow Connections – “H” Type VCR

Bodies

Bulkhead Connector

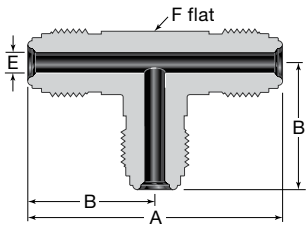


| Tube Size | VCR Size | Ordering Number | Dimensions | | | | | | | | | Working Pressure | | | |
|----------------------|----------|---------------------|----------------|----------------|----------------|---------------|----------------|-----|----------------|-----------------|---------------------|------------------|---------------|---------------|--|
| | | | A | B | C | E | E ₁ | F | F ₁ | Panel Hole Dia | Max Panel Thickness | Ni | SS | Cu | |
| Dimensions, in. (mm) | | | | | | | | | | | | | psig (bar) | | |
| 3/8 | 1/4 | 316L-4-HVCR-61-6TB7 | 2.36 (59.9) | 0.75 (19.1) | 1.30 (33.0) | 0.31 (7.9) | 0.25 (6.4) | 3/4 | 3/4 | 19/32 (15.0) | 0.44 (11.2) | 3300 (227) | 3300 (227) | 3300 (227) | |



Union Elbow

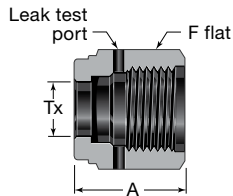
| VCR Size | Ordering Number | Dimensions | | | Working Pressure | | | | | |
|----------------------|-----------------|----------------|---------------|-----|------------------|-----------------|---------------|------------|--|--|
| | | B | E | F | Ni | SS | Cu | | | |
| Dimensions, in. (mm) | | | | | | | | psig (bar) | | |
| 1/4 | SS-4-HVCR-9 | 1.07 (27.2) | 0.25 (6.4) | 1/2 | 8000 (551) | 10 000 (689) | 6400 (440) | | | |



Union Tee

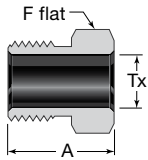
| VCR Size | Ordering Number | Dimensions | | | | Working Pressure | | |
|----------------------|-----------------|----------------|----------------|---------------|-----|------------------|-----------------|---------------|
| | | A | B | E | F | Ni | SS | Cu |
| Dimensions, in. (mm) | | | | | | | | |
| psig (bar) | | | | | | | | |
| 1/4 | SS-4-HVCR-T | 2.14 (54.4) | 1.07 (27.2) | 0.25 (6.4) | 1/2 | 8000 (551) | 10 000 (689) | 6400 (440) |

Nuts



Female

| VCR Size | Ordering Number | Dimensions | | |
|----------------------|-----------------|----------------|-----|----------------|
| | | A | F | Tx |
| Dimensions, in. (mm) | | | | |
| 1/4 | SS-4-HVCR-1SR | 0.81 (20.6) | 3/4 | 0.39 (9.9) |
| | SS-4-HVCR-1 | | | 0.46 (11.7) |



Male

| VCR Size | Ordering Number | Dimensions | | |
|----------------------|-----------------|----------------|-----|---------------|
| | | A | F | Tx |
| Dimensions, in. (mm) | | | | |
| 1/4 | SS-4-HVCR-4SR | 0.71 (18.0) | 5/8 | 0.39 (9.9) |

Gaskets

Ordering Information

Specify gasket material by adding a material designator to the basic ordering number.

| Material | Designator | Example |
|----------------------|-----------------|---------------|
| Nickel | NI | NI-4-VCR-2-VS |
| 316L stainless steel | SS | SS-4-VCR-2-VS |
| Copper | CU ^① | CU-4-VCR-2 |

Nickel and copper gasket retainer assemblies use a 316 stainless steel retainer.

① Copper gaskets are unplated. However, to order, add **CU** to a basic ordering number for silver-plated gaskets. Example: **CU-4-VCR-2**.

Side-load retainer style gaskets are not available in copper.

Options

Blind Gaskets

Blind (undrilled) gaskets are available in nonretained and retainer assembly styles. Blind gaskets have a maximum differential pressure rating (Δp) of 100 psi (6.8 bar).

To order, add **-BL** to a basic ordering number.

Example: SS-4-VCR-2-VS-**BL**

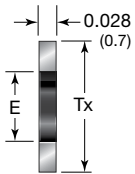
Snubber Gaskets

Snubber gaskets in 0.5 to 60 μm sizes for 1/4 through 1 in. VCR fittings are available. Contact your authorized Swagelok representative for more information.

Silver Plated

Nonretained

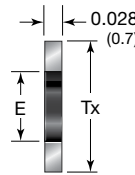
Cannot be used in a gasket retainer assembly.



| VCR Size | Basic Ordering Number | Dimensions | |
|----------------------|-----------------------|----------------|----------------|
| | | E | Tx |
| Dimensions, in. (mm) | | | |
| 1/8 | -2-VCR-2 | 0.09 (2.3) | 0.26 (6.6) |
| 1/4 | -4-VCR-2 | 0.22 (5.6) | 0.47 (11.9) |
| 1/2 | -8-VCR-2 | 0.44 (11.2) | 0.78 (19.8) |
| 5/8 | -10-VCR-2 | 0.58 (14.7) | 0.91 (23.1) |
| 3/4 | -12-VCR-2 | 0.66 (16.8) | 1.14 (29.0) |
| 1 | -16-VCR-2 | 0.89 (22.6) | 1.40 (35.6) |

Unplated (VS)

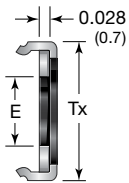
Nonretained



| VCR Size | Basic Ordering Number | Dimensions | |
|----------------------|-----------------------|----------------|----------------|
| | | E | Tx |
| Dimensions, in. (mm) | | | |
| 1/8 | -2-VCR-2-VS | 0.09 (2.3) | 0.26 (6.6) |
| 1/4 | -4-VCR-2-VS | 0.22 (5.6) | 0.47 (11.9) |
| 1/2 | -8-VCR-2-VS | 0.44 (11.2) | 0.78 (19.8) |
| 5/8 | -10-VCR-2-VS | 0.58 (14.7) | 0.91 (23.1) |
| 3/4 | -12-VCR-2-VS | 0.66 (16.8) | 1.14 (29.0) |
| 1 | -16-VCR-2-VS | 0.89 (22.6) | 1.40 (35.6) |

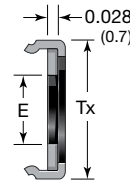
Gasket Retainer Assembly

Retainer and gasket must be used as an assembly.



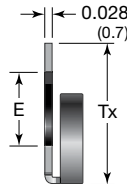
| VCR Size | Basic Ordering Number | Dimensions | |
|----------------------|-----------------------|----------------|----------------|
| | | E | Tx |
| Dimensions, in. (mm) | | | |
| 1/4 | -4-VCR-2-GR | 0.24 (6.1) | 0.50 (12.7) |
| 1/2 | -8-VCR-2-GR | 0.44 (11.2) | 0.79 (20.1) |
| 3/4 | -12-VCR-2-GR | 0.66 (16.8) | 1.14 (29.0) |
| 1 | -16-VCR-2-GR | 0.89 (22.6) | 1.40 (35.6) |

Gasket Retainer Assembly



| VCR Size | Basic Ordering Number | Dimensions | |
|----------------------|-----------------------|----------------|----------------|
| | | E | Tx |
| Dimensions, in. (mm) | | | |
| 1/4 | -4-VCR-2-GR-VS | 0.24 (6.1) | 0.50 (12.7) |
| 1/2 | -8-VCR-2-GR-VS | 0.44 (11.2) | 0.79 (20.1) |
| 3/4 | -12-VCR-2-GR-VS | 0.66 (16.8) | 1.14 (29.0) |
| 1 | -16-VCR-2-GR-VS | 0.89 (22.6) | 1.40 (35.6) |

Side-Load Retainer



| VCR Size | Basic Ordering Number | Dimensions | |
|----------------------|-----------------------|----------------|----------------|
| | | E | Tx |
| Dimensions, in. (mm) | | | |
| 1/4 | -4-VCR-2-ZC-VS | 0.24 (6.1) | 0.45 (11.4) |
| 1/2 | -8-VCR-2-ZC-VS | 0.43 (11.0) | 0.75 (19.1) |

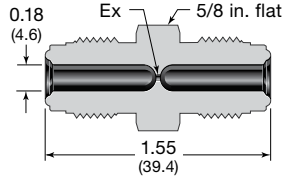
Flow Restrictors

This product can be used in liquid or gas delivery systems where repeatable flow reduction or limiting is required.



- One piece, compact design saves space
- Standard orifice sizes drilled through a 1/4 in. male VCR union
- No dead volume for clean operation
- Identification of orifice and heat code marked clearly on the body
- Electropolished, cleaned, and packaged in accordance with Swagelok *Ultrahigh-Purity Process Specification (SC-01)*, MS-06-61
- Working pressure 10 000 psig (689 bar)

Ordering Information and Dimensions



VCR components with fixed threads must remain stationary during normal installation. These fitting connections should be assembled only to glands with rotating female nuts.

| Ex, in. (mm) | Ordering Number |
|---------------|---------------------|
| 0.010 (0.254) | 6LV-4-VCR-6-DM-010P |
| 0.012 (0.305) | 6LV-4-VCR-6-DM-012P |
| 0.015 (0.381) | 6LV-4-VCR-6-DM-015P |
| 0.017 (0.432) | 6LV-4-VCR-6-DM-017P |
| 0.020 (0.508) | 6LV-4-VCR-6-DM-020P |
| 0.023 (0.584) | 6LV-4-VCR-6-DM-023P |
| 0.025 (0.635) | 6LV-4-VCR-6-DM-025P |
| 0.026 (0.660) | 6LV-4-VCR-6-DM-026P |
| 0.027 (0.686) | 6LV-4-VCR-6-DM-027P |
| 0.030 (0.762) | 6LV-4-VCR-6-DM-030P |
| 0.035 (0.889) | 6LV-4-VCR-6-DM-035P |
| 0.040 (1.016) | 6LV-4-VCR-6-DM-040P |
| 0.045 (1.143) | 6LV-4-VCR-6-DM-045P |

| Ex, in. (mm) | Ordering Number |
|---------------|---------------------|
| 0.050 (1.270) | 6LV-4-VCR-6-DM-050P |
| 0.055 (1.397) | 6LV-4-VCR-6-DM-055P |
| 0.060 (1.529) | 6LV-4-VCR-6-DM-060P |
| 0.065 (1.651) | 6LV-4-VCR-6-DM-065P |
| 0.070 (1.778) | 6LV-4-VCR-6-DM-070P |
| 0.075 (1.905) | 6LV-4-VCR-6-DM-075P |
| 0.080 (2.032) | 6LV-4-VCR-6-DM-080P |
| 0.085 (2.159) | 6LV-4-VCR-6-DM-085P |
| 0.090 (2.286) | 6LV-4-VCR-6-DM-090P |
| 0.093 (2.362) | 6LV-4-VCR-6-DM-093P |
| 0.095 (2.413) | 6LV-4-VCR-6-DM-095P |
| 0.100 (2.540) | 6LV-4-VCR-6-DM-100P |

Lock and Tag Devices

These devices help prevent unintentional disassembly of VCR connections. Additionally, both devices include a wire hole to allow for a tag to support identification and quality verification programs.

Fitting Lock Device

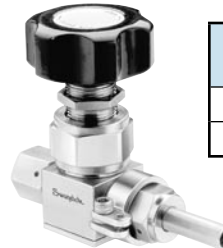
This device is intended for use on Swagelok VCR metal gasket face seal assemblies with standard male and female nuts.



| Size | Ordering Number |
|---------|-----------------|
| 1/4 in. | SS-4-VCR-FLC |
| 1/2 in. | SS-8-VCR-FLC |

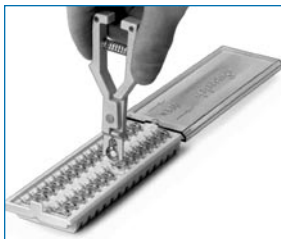
Fitting Lock Device for Valves

This device is intended for use on Swagelok valves with integrally machined male VCR metal gasket face seal end connections.



| Size | Ordering Number |
|---------|-----------------|
| 1/4 in. | SS-4-VCR-VLC |
| 1/2 in. | SS-8-VCR-VLC |

Side-Load Installation Tool and Tray



Tool

- Makes gasket handling easy, preserves cleanliness
- Enables gasket installation where space is limited
- Is used to easily remove gasket from storage tray

Material:

Polyethersulfone (PES)

Tray (includes 30 gaskets)

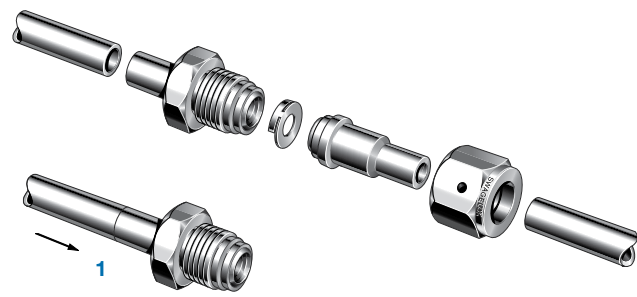
- Keeps gaskets secure
- Keeps gaskets aligned for easy removal with side-load gasket tool
- Cleaned and packaged in accordance with Swagelok *Ultrahigh-Purity Process Specification (SC-01)*, MS-06-61

Material:

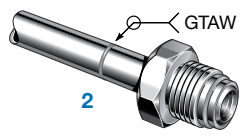
Tray—polypropylene 
Lid—clean polycarbonate 

| Description | Ordering Number |
|-----------------------|-------------------|
| Installation tool | MS-4-VCR-ZC-TL |
| Tray (nickel gaskets) | NI-4-VCR-2-ZCT-VS |
| Tray (SS gaskets) | SS-4-VCR-2-ZCT-VS |

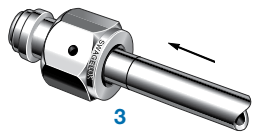
VCR Fitting Installation Instructions



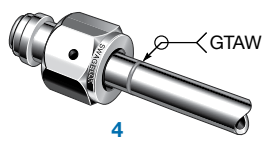
1



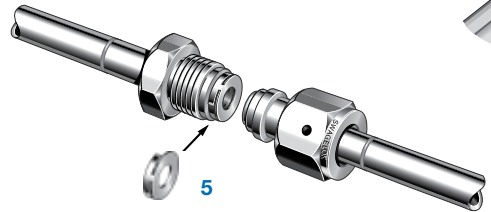
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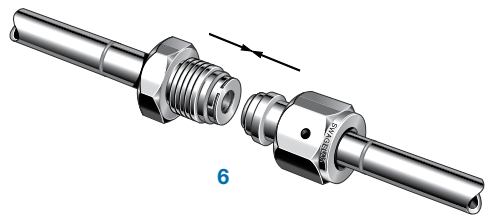
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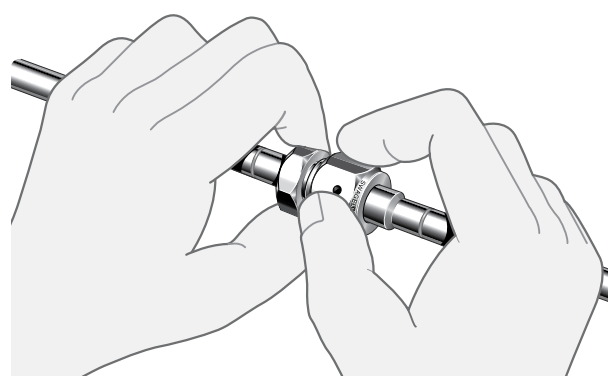
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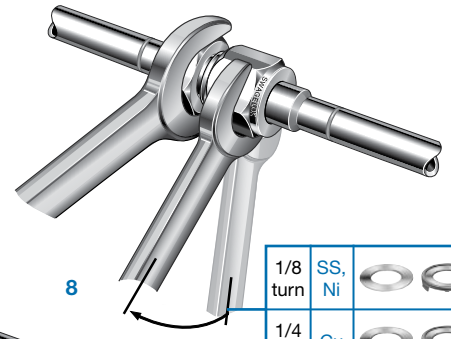
5



6



7 Finger-tight



8

| | | |
|----------|--------|--|
| 1/8 turn | SS, Ni | |
| 1/4 turn | Cu | |



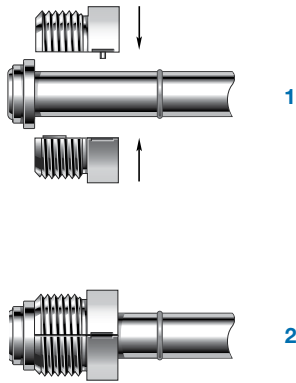
5a

5b

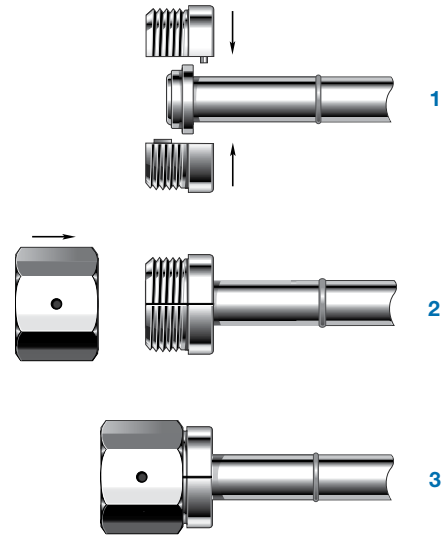
5c

VCR Split-Nut Installation Instructions

Male



Female



Swagelok Orbital Welding System

For information on the Swagelok welding system, see the *Swagelok Orbital Welding System Quick Reference Guide*, MS-02-143.



Safe Product Selection

When selecting a product, the total system design must be considered to ensure safe, trouble-free performance. Function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibilities of the system designer and user.

Caution: Do not mix or interchange parts with those of other manufacturers.

Warranty Information

Swagelok products are backed by The Swagelok Limited Lifetime Warranty. For a copy, visit swagelok.com or contact your authorized Swagelok representative.

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