

VA Series Vacuum Adapter Fittings



FITOK

Contents

KF Adapter Fittings

KF to Female NPT
KF to Male NPT
KF to CF Flange Conical Reducing
KF to Tube Fitting
KF to CF Flange Straight Reducing
KF to Rotatable Male FR Metal Gasket Face Seal Fitting
KF to Vacuum Tube Fitting
KF to Female FR Metal Gasket Face Seal Fitting

01

CF Adapter Fittings

CF to Female FR Metal Gasket Face Seal Fitting
CF to Vacuum Tube Fitting
CF to Rotatable Male FR Metal Gasket Face Seal Fitting
CF to Tube Fitting

06

Other Adapter Fittings

BSPT Adapter

07

Features

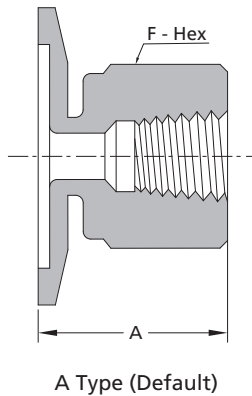
- ⦿ Vacuum Range:
 - Copper Seal: $\geq 10^{-12}$ Torr
 - Elastomeric Seal: $\geq 10^{-8}$ Torr
- ⦿ Working temperature:
 - Copper Seal: -325°F to 842°F (-200°C to 450°C)
 - Elastomeric Seal: -4°F to 302°F (-20°C to 150°C)
- ⦿ Materials:
 - 304, 304L, 316, 316L or Aluminum

Applications

Adapter Vacuum products are generally used on vacuum chamber ports to connect vacuum flanges to various fittings.

KF Adapter Fittings

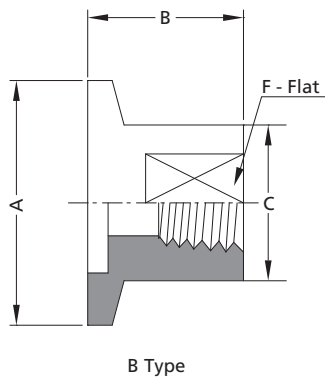
KF to Female NPT



| Pipe Size in. | Flange Size | Basic Ordering Number (For A Type) | A in. (mm) | F in. (mm) |
|---------------|-------------|------------------------------------|------------|--------------|
| 1/8 | KF10 | -VA-KF10-FNS2 | 0.92(23.4) | 9/16(14.3) |
| | KF16 | -VA-KF16-FNS2 | | |
| | KF25 | -VA-KF25-FNS2 | | |
| | KF40 | -VA-KF40-FNS2 | | |
| | KF50 | -VA-KF50-FNS2 | | |
| 1/4 | KF10 | -VA-KF10-FNS4 | 1.07(27.2) | 3/4(19.1) |
| | KF16 | -VA-KF16-FNS4 | | |
| | KF25 | -VA-KF25-FNS4 | | |
| | KF40 | -VA-KF40-FNS4 | | |
| | KF50 | -VA-KF50-FNS4 | | |
| 1/2 | KF16 | -VA-KF16-FNS8 | 1.44(36.6) | 1 1/16(27.0) |
| | KF25 | -VA-KF25-FNS8 | 1.39(35.3) | |
| | KF40 | -VA-KF40-FNS8 | | |
| | KF50 | -VA-KF50-FNS8 | | |
| 3/4 | KF25 | -VA-KF25-FNS12 | 1.45(36.8) | 1 5/16(33.3) |
| | KF40 | -VA-KF40-FNS12 | | |
| | KF50 | -VA-KF50-FNS12 | | |
| 1 | KF25 | -VA-KF25-FNS16 | 1.57(39.9) | 1 5/8(41.3) |
| | KF40 | -VA-KF40-FNS16 | | |
| | KF50 | -VA-KF50-FNS16 | | |

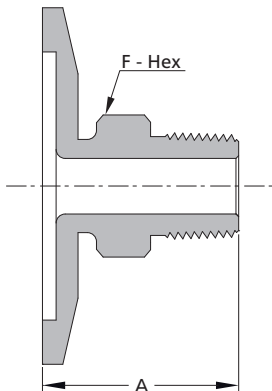
2 VA Series Vacuum Adapter Fittings

KF to Female NPT



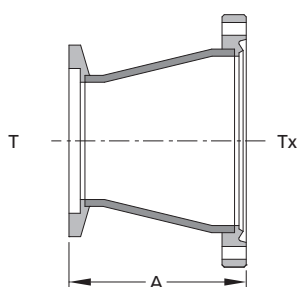
| Pipe Size in. | Flange Size | Basic Ordering Number (For B Type) | A in.(mm) | B in.(mm) | C in.(mm) | F in.(mm) |
|---------------|-------------|------------------------------------|------------|------------|------------|------------|
| 1/8 | KF10 | -VA-KF10-FNS2-N | 1.18(30.0) | 0.75(19.1) | 0.75(19.1) | 0.63(16.0) |
| 1/4 | | -VA-KF10-FNS4-N | 1.18(30.0) | 0.75(19.1) | 0.75(19.1) | 0.63(16.0) |
| 1/8 | KF16 | -VA-KF16-FNS2-N | 1.18(30.0) | 0.75(19.1) | 0.75(19.1) | 0.63(16.0) |
| 1/4 | | -VA-KF16-FNS4-N | 1.18(30.0) | 0.75(19.1) | 0.75(19.1) | 0.63(16.0) |
| 1/8 | KF25 | -VA-KF25-FNS2-N | 1.57(40.0) | 0.75(19.1) | 1.00(25.4) | 0.87(22.0) |
| 1/4 | | -VA-KF25-FNS4-N | 1.57(40.0) | 0.75(19.1) | 1.00(25.4) | 0.87(22.0) |
| 1/2 | | -VA-KF25-FNS8-N | 1.57(40.0) | 1.00(25.4) | 1.10(27.8) | 0.94(24.0) |
| 1/8 | KF40 | -VA-KF40-FNS2-N | 2.17(55.0) | 1.00(25.4) | 1.50(38.1) | 1.26(32.0) |
| 1/4 | | -VA-KF40-FNS4-N | 2.17(55.0) | 1.00(25.4) | 1.50(38.1) | 1.26(32.0) |
| 1/2 | | -VA-KF40-FNS8-N | 2.17(55.0) | 1.00(25.4) | 1.50(38.1) | 1.26(32.0) |
| 3/4 | | -VA-KF40-FNS12-N | 2.17(55.0) | 1.00(25.4) | 1.63(41.3) | 1.34(34.0) |
| 1/8 | KF50 | -VA-KF50-FNS2-N | 2.92(75.0) | 1.00(25.4) | 2.00(50.8) | 1.73(44.0) |
| 1/4 | | -VA-KF50-FNS4-N | 2.92(75.0) | 1.00(25.4) | 2.00(50.8) | 1.73(44.0) |
| 1/2 | | -VA-KF50-FNS8-N | 2.92(75.0) | 1.00(25.4) | 2.00(50.8) | 1.73(44.0) |
| 3/4 | | -VA-KF50-FNS12-N | 2.92(75.0) | 1.00(25.4) | 2.00(50.8) | 1.73(44.0) |

KF to Male NPT



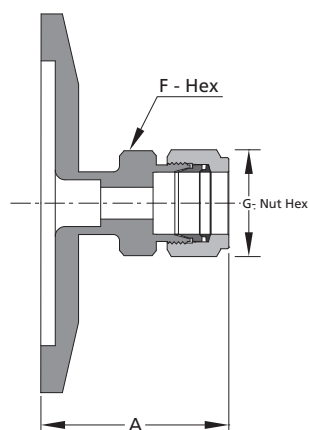
| Pipe Size in. | Flange Size | Basic Ordering Number | A in.(mm) | F in.(mm) |
|---------------|-------------|-----------------------|------------|--------------|
| 1/8 | KF10 | -VA-KF10-NS2 | 0.89(22.6) | 7/16(11.1) |
| | KF16 | -VA-KF16-NS2 | | |
| | KF25 | -VA-KF25-NS2 | | |
| | KF40 | -VA-KF40-NS2 | | |
| | KF50 | -VA-KF50-NS2 | | |
| 1/4 | KF10 | -VA-KF10-NS4 | 1.10(27.9) | 9/16(14.3) |
| | KF16 | -VA-KF16-NS4 | | |
| | KF25 | -VA-KF25-NS4 | | |
| | KF40 | -VA-KF40-NS4 | | |
| | KF50 | -VA-KF50-NS4 | | |
| 1/2 | KF16 | -VA-KF16-NS8 | 1.35(34.3) | 7/8(22.2) |
| | KF25 | -VA-KF25-NS8 | | |
| | KF40 | -VA-KF40-NS8 | | |
| | KF50 | -VA-KF50-NS8 | | |
| 3/4 | KF25 | -VA-KF25-NS12 | 1.35(34.3) | 1 1/16(27.0) |
| | KF40 | -VA-KF40-NS12 | | |
| | KF50 | -VA-KF50-NS12 | | |
| 1 | KF25 | -VA-KF25-NS16 | 1.64(41.7) | 1 3/8(34.9) |
| | KF40 | -VA-KF40-NS16 | | |
| | KF50 | -VA-KF50-NS16 | | |

KF to CF Flange Conical Reducing



| Flange Size | Tube OD in. | | Basic Ordering Number | A in.(mm) |
|-------------|-------------|-------|-----------------------|-------------|
| | T | Tx | | |
| KF16-CF212 | 3/4 | 1/2 | -VA-KF16-CF212-NCR | 1.69(42.9) |
| KF16-CF275 | 3/4 | 1/2 | -VA-KF16-CF275-NCR | 2.73(69.3) |
| KF25-CF212 | 1 | 3/4 | -VA-KF25-CF212-NCR | 2.03(51.6) |
| KF25-CF275 | 1 | 3/4 | -VA-KF25-CF275-NCR | 2.73(69.3) |
| KF25-CF338 | 1 | 3/4 | -VA-KF25-CF338-NCR | 2.75(69.9) |
| KF40-CF133 | 1 | 3/4 | -VA-KF40-CF133-NCR | 3.03(77.0) |
| KF40-CF212 | 1 1/2 | 1 | -VA-KF40-CF212-NCR | 2.69(68.3) |
| KF40-CF338 | 1 1/2 | 1 | -VA-KF40-CF338-NCR | 2.75(69.9) |
| KF40-CF450 | 1 1/2 | 1 | -VA-KF40-CF450-NCR | 2.90(73.7) |
| KF40-CF462 | 1 1/2 | 1 | -VA-KF40-CF462-NCR | 4.06(103.1) |
| KF50-CF212 | 2 | 1 | -VA-KF50-CF212-NCR | 2.69(68.3) |
| KF50-CF275 | 2 | 1 1/2 | -VA-KF50-CF275-NCR | 2.73(69.3) |
| KF50-CF450 | 2 | 1 1/2 | -VA-KF50-CF450-NCR | 2.90(73.7) |
| KF50-CF462 | 2 | 1 1/2 | -VA-KF50-CF462-NCR | 4.06(103.1) |
| KF50-CF600 | 2 | 1 1/2 | -VA-KF50-CF600-NCR | 4.21(106.9) |

KF to Tube Fitting

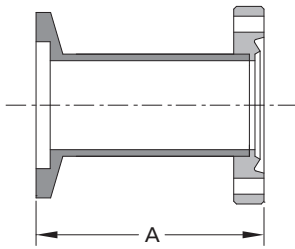


| Tube OD in. | Flange Size | Basic Ordering Number | A in.(mm) | F in.(mm) | G in.(mm) |
|-------------|-------------|-----------------------|------------|--------------|-------------|
| 1/4 | KF10 | -VA-KF10-FL4 | 1.47(37.3) | 1/2(12.7) | 9/16(14.3) |
| | KF16 | -VA-KF16-FL4 | | | |
| | KF25 | -VA-KF25-FL4 | | | |
| | KF40 | -VA-KF40-FL4 | | | |
| | KF50 | -VA-KF50-FL4 | | | |
| 3/8 | KF10 | -VA-KF10-FL6 | 1.63(41.4) | 5/8(15.9) | 11/16(17.5) |
| | KF16 | -VA-KF16-FL6 | | | |
| | KF25 | -VA-KF25-FL6 | | | |
| | KF40 | -VA-KF40-FL6 | | | |
| | KF50 | -VA-KF50-FL6 | | | |
| 1/2 | KF25 | -VA-KF25-FL8 | 1.77(45.0) | 13/16(20.6) | 7/8(22.2) |
| | KF40 | -VA-KF40-FL8 | | | |
| | KF50 | -VA-KF50-FL8 | | | |
| 3/4 | KF25 | -VA-KF25-FL12 | 2.14(54.4) | 1 1/16(27.0) | 1 1/8(28.6) |
| | KF40 | -VA-KF40-FL12 | | | |
| | KF50 | -VA-KF50-FL12 | | | |
| 1 | KF25 | -VA-KF25-FL16 | 2.60(66.0) | 1 3/8(34.9) | 1 1/2(38.1) |
| | KF40 | -VA-KF40-FL16 | | | |
| | KF50 | -VA-KF50-FL16 | | | |

*To order straight fittings bored through, add T to the ordering number, eg:SS-TVA-KF25-FL4.

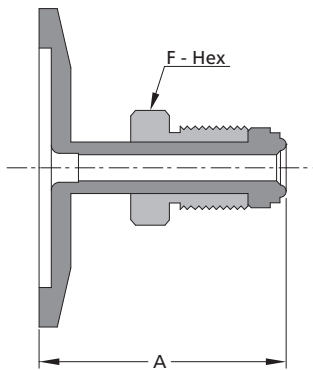
4 VA Series Vacuum Adapter Fittings

KF to CF Flange Straight Reducing



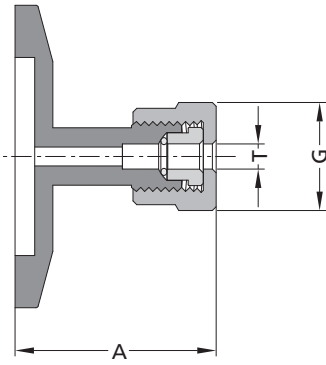
| Flange Size | Tube OD in. | Basic Ordering Number | A in.(mm) |
|-------------|-------------|-----------------------|------------|
| KF10-CF133 | 1/2 | -VA-KF10-CF133-SR | 1.75(44.5) |
| KF16-CF133 | 3/4 | -VA-KF16-CF133-SR | 1.75(44.5) |
| KF16-CF275 | 3/4 | -VA-KF16-CF275-SR | 1.78(45.2) |
| KF25-CF212 | 1 | -VA-KF25-CF212-SR | 1.75(44.5) |
| KF25-CF275 | 1 | -VA-KF25-CF275-SR | 1.78(45.2) |
| KF40-CF275 | 1 1/2 | -VA-KF40-CF275-SR | 1.78(45.2) |
| KF40-CF338 | 1 1/2 | -VA-KF40-CF338-SR | 1.80(45.7) |
| KF50-CF133 | 3/4 | -VA-KF50-CF133-SR | 1.95(49.5) |
| KF50-CF275 | 1 1/2 | -VA-KF50-CF275-SR | 1.95(49.5) |
| KF50-CF338 | 2 | -VA-KF50-CF338-SR | 1.80(45.7) |
| KF50-CF450 | 2 | -VA-KF50-CF450-SR | 1.95(49.5) |

KF to Rotatable Male FR Metal Gasket Face Seal Fitting



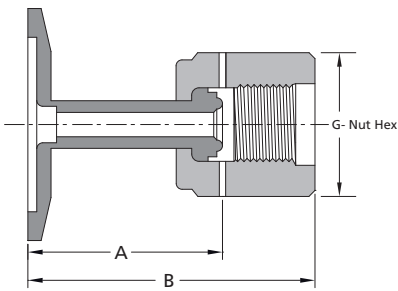
| FR Size in. | Flange Size | Basic Ordering Number | A in.(mm) | F in.(mm) |
|-------------|-------------|-----------------------|------------|--------------|
| 1/4 | KF10 | -VA-KF10-RFR4 | 1.46(37.1) | 5/8(15.9) |
| | KF16 | -VA-KF16-RFR4 | | |
| | KF25 | -VA-KF25-RFR4 | | |
| | KF40 | -VA-KF40-RFR4 | | |
| | KF50 | -VA-KF50-RFR4 | | |
| 3/8 | KF16 | -VA-KF16-RFR6 | 1.65(41.9) | 11/16(17.5) |
| | KF25 | -VA-KF25-RFR6 | 1.55(39.4) | |
| | KF40 | -VA-KF40-RFR6 | | |
| | KF50 | -VA-KF50-RFR6 | | |
| 1/2 | KF16 | -VA-KF16-RFR8 | 1.65(41.9) | 15/16(23.8) |
| | KF25 | -VA-KF25-RFR8 | 1.55(39.4) | |
| | KF40 | -VA-KF40-RFR8 | | |
| | KF50 | -VA-KF50-RFR8 | | |
| 3/4 | KF25 | -VA-KF25-RFR12 | 2.15(54.6) | 1 5/16(33.3) |
| | KF40 | -VA-KF40-RFR12 | 2.05(52.1) | |
| | KF50 | -VA-KF50-RFR12 | | |
| 1 | KF25 | -VA-KF25-RFR16 | 2.26(57.4) | 1 5/8(41.3) |
| | KF40 | -VA-KF40-RFR16 | | |
| | KF50 | -VA-KF50-RFR16 | | |

KF to Vacuum Tube Fitting



| T-Tube OD in. | Flange Size | Basic Ordering Number | A in.(mm) | G in.(mm) |
|---------------|-------------|-----------------------|------------|--------------|
| 1/4 | KF10 | -VA-KF10-VL4 | 1.48(37.6) | 11/16(17.5) |
| 3/8 | | -VA-KF10-VL6 | 1.62(41.1) | 13/16(20.6) |
| 1/4 | KF16 | -VA-KF16-VL4 | 1.48(37.6) | 11/16(17.5) |
| 3/8 | | -VA-KF16-VL6 | 1.62(41.1) | 13/16(20.6) |
| 1/2 | | -VA-KF16-VL8 | 1.79(45.5) | 15/16(23.8) |
| 1/4 | KF25 | -VA-KF25-VL4 | 1.48(37.6) | 11/16(17.5) |
| 3/8 | | -VA-KF25-VL6 | 1.62(41.1) | 13/16(20.6) |
| 1/2 | | -VA-KF25-VL8 | 1.79(45.5) | 15/16(23.8) |
| 3/4 | | -VA-KF25-VL12 | 1.93(49.0) | 1 1/4(31.8) |
| 1/4 | KF40 | -VA-KF40-VL4 | 1.48(37.6) | 11/16(17.5) |
| 3/8 | | -VA-KF40-VL6 | 1.62(41.1) | 13/16(20.6) |
| 1/2 | | -VA-KF40-VL8 | 1.79(45.5) | 15/16(23.8) |
| 3/4 | | -VA-KF40-VL12 | 1.93(49.0) | 1 1/4(31.8) |
| 1 | | -VA-KF40-VL16 | 1.95(49.5) | 1 9/16(39.7) |
| 1/4 | KF50 | -VA-KF50-VL4 | 1.48(37.6) | 11/16(17.5) |
| 3/8 | | -VA-KF50-VL6 | 1.62(41.1) | 13/16(20.6) |
| 1/2 | | -VA-KF50-VL8 | 1.79(45.5) | 15/16(23.8) |
| 3/4 | | -VA-KF50-VL12 | 1.93(49.0) | 1 1/4(31.8) |
| 1 | | -VA-KF50-VL16 | 1.95(49.5) | 1 9/16(39.7) |

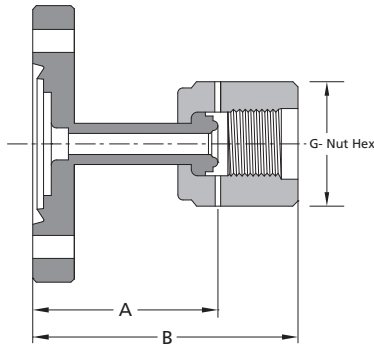
KF to Female FR Metal Gasket Face Seal Fitting



| FR Size in. | Flange Size | Basic Ordering Number | A in.(mm) | B in.(mm) | G in.(mm) |
|-------------|-------------|-----------------------|------------|------------|--------------|
| 1/4 | KF10 | -VA-KF10-FFR4 | 1.46(37.1) | 1.96(49.8) | 3/4(19.1) |
| | KF16 | -VA-KF16-FFR4 | | | |
| | KF25 | -VA-KF25-FFR4 | | | |
| | KF40 | -VA-KF40-FFR4 | | | |
| | KF50 | -VA-KF50-FFR4 | | | |
| 1/2 | KF16 | -VA-KF16-FFR8 | 1.65(41.9) | 2.21(56.1) | 1 1/16(27.0) |
| | KF25 | -VA-KF25-FFR8 | | | |
| | KF40 | -VA-KF40-FFR8 | | | |
| | KF50 | -VA-KF50-FFR8 | | | |

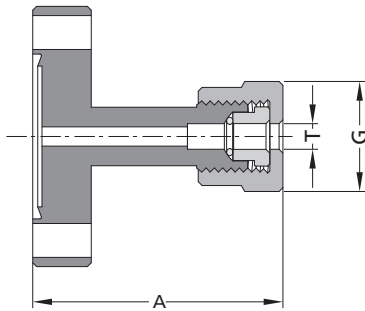
CF Adapter Fittings

CF to Female FR Metal Gasket Face Seal Fitting



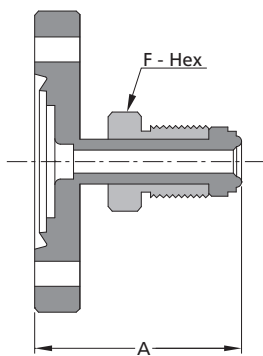
| FR Size in. | Flange Size | Basic Ordering Number | A in.(mm) | B in.(mm) | G in.(mm) |
|-------------|-------------|-----------------------|------------|------------|--------------|
| 1/4 | CF133 | -VA-CF133-FFR4 | 1.36(34.5) | 1.86(47.2) | 3/4(19.1) |
| 1/2 | | -VA-CF133-FFR8 | 1.55(39.4) | 2.11(53.6) | 1 1/16(27.0) |
| 1/4 | CF275 | -VA-CF275-FFR4 | 1.36(34.5) | 1.86(47.2) | 3/4(19.1) |
| 1/2 | | -VA-CF275-FFR8 | 1.55(39.4) | 2.11(53.6) | 1 1/16(27.0) |

CF to Vacuum Tube Fitting



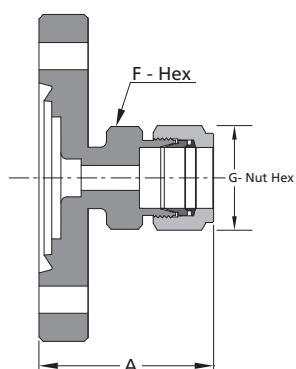
| T-Tube OD in. | Flange Size | Basic Ordering Number | A in.(mm) | G in.(mm) |
|---------------|-------------|-----------------------|------------|--------------|
| 1/4 | CF133 | -VA-CF133-VL4 | 1.38(34.9) | 11/16(17.5) |
| 3/8 | | -VA-CF133-VL6 | 1.38(34.9) | 13/16(20.6) |
| 1/2 | | -VA-CF133-VL8 | 1.44(36.5) | 15/16(23.8) |
| 5/8 | | -VA-CF133-VL10 | 1.69(42.9) | 1 1/8(28.6) |
| 1/4 | CF275 | -VA-CF275-VL4 | 1.38(34.9) | 11/16(17.5) |
| 3/8 | | -VA-CF275-VL6 | 1.38(34.9) | 13/16(20.6) |
| 1/2 | | -VA-CF275-VL8 | 1.44(36.5) | 15/16(23.8) |
| 5/8 | | -VA-CF275-VL10 | 1.75(44.5) | 1 1/8(28.6) |
| 3/4 | | -VA-CF275-VL12 | 1.88(47.6) | 1 1/4(31.8) |
| 1 | | -VA-CF275-VL16 | 2.13(54.0) | 1 9/16(39.7) |

CF to Rotatable Male FR Metal Gasket Face Seal Fitting



| FR Size in. | Flange Size | Basic Ordering Number | A in.(mm) | F in.(mm) |
|-------------|-------------|-----------------------|------------|-------------|
| 1/4 | CF133 | -VA-CF133-RFR4 | 1.36(34.5) | 5/8(15.9) |
| 1/2 | | -VA-CF133-RFR8 | 1.55(39.4) | 15/16(23.8) |
| 1/4 | CF275 | -VA-CF275-RFR4 | 1.36(34.5) | 5/8(15.9) |
| 1/2 | | -VA-CF275-RFR8 | 1.55(39.4) | 15/16(23.8) |

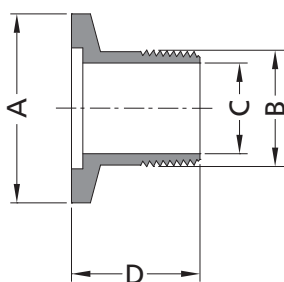
CF to Tube Fitting



| Tube OD in. | Flange Size | Basic Ordering Number | A in.(mm) | F in.(mm) | G in.(mm) |
|-------------|-------------|-----------------------|------------|-----------|-------------|
| 1/4 | CF133 | -VA-CF133-FL4 | 1.37(34.8) | 1/2(12.7) | 9/16(14.3) |
| 3/8 | | -VA-CF133-FL6 | 1.58(40.1) | 5/8(15.9) | 11/16(17.5) |
| 1/4 | CF275 | -VA-CF275-FL4 | 1.57(39.9) | 1/2(12.7) | 9/16(14.3) |
| 3/8 | | -VA-CF275-FL6 | 1.73(43.9) | 5/8(15.9) | 11/16(17.5) |

Other Adapter Fittings

Male ISO Tapered Thread



| Flange Size | Basic Ordering Number | A in.(mm) | B in.(mm) | C in.(mm) | D in.(mm) | BSPT |
|-------------|-----------------------|------------|-------------|------------|----------------|------------------|
| KF10 | -VA-KF10-RT4 | 1.18(30.0) | 0.52(13.16) | 0.35(9.0) | 1.18 (30.0) | 1/4" x 19 BSPT |
| | -VA-KF10-RT6 | 1.18(30.0) | 0.66(16.66) | 0.39(10.0) | | 3/8" x 19 BSPT |
| KF16 | -VA-KF16-RT8 | 1.18(30.0) | 0.83(20.96) | 0.63(16.0) | | 1/2" x 14 BSPT |
| KF25 | -VA-KF25-RT12 | 1.57(40.0) | 1.04(26.44) | 0.79(20.0) | | 3/4" x 14 BSPT |
| | -VA-KF25-RT16 | 1.57(40.0) | 1.31(33.25) | 0.94(24.0) | | 1" x 11 BSPT |
| KF40 | -VA-KF40-RT20 | 2.17(55.0) | 1.65(41.91) | 1.38(35.0) | | 1 1/4" x 11 BSPT |
| | -VA-KF40-RT24 | 2.17(55.0) | 1.88(47.8) | 1.61(41.0) | | 1 1/2" x 11 BSPT |
| KF50 | -VA-KF50-RT32 | 2.95(75.0) | 2.35(59.61) | 2.00(51.0) | | 2" x 11 BSPT |

- ⦿ For details about fittings not listed, please contact us.
- ⦿ The performance of the adapter fitting is determined by the lower performing end connection.

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