

VIGOUR

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ULTRA HIGH PURITY GAS SYSTEM



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VIGOUR

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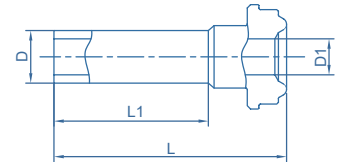
VIGOUR

Face Seal Fittings

VVR Series

Glands

Short Tube Butt Weld



D Tube OD in.	Wall Thickness in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)			Working Pressure psig (bar)
					L1	D1	L	
1/8	0.028	1/8	316L	VVR-FG2-TB2 ①	0.75	0.07	1.08	8500
			316L secondary remelt	VVR-FG2-TB2-SLV ①	(19.1)	(1.8)	(27.4)	(585)
1/4	0.035	1/4	316L	VVR-FG4-TB4	0.75	0.18	1.10	5100
			316L secondary remelt	VVR-FG4-TB4-SLV	(19.1)	(4.6)	(27.9)	(351)
1/4	0.035	1/4	316L	VVR-FG4-TB4-L18	0.38	0.18	0.72	5100
			316L secondary remelt	VVR-FG4-TB4-L18-SLV	(9.6)	(4.6)	(18.3)	(351)
1/4	0.035	1/4	316L	VVR-FG4-TB4-L15	0.25	0.18	0.60	5100
			316L secondary remelt	VVR-FG4-TB4-L15-SLV	(6.4)	(4.6)	(15.2)	(351)
1/4	0.035	1/2	316L	VVR-FG8-TB4	0.75	0.18	1.12	4300
			316L secondary remelt	VVR-FG8-TB4-SLV	(19.1)	(4.6)	(28.4)	(296)
1/4	0.035	1/2	316L	VVR-FG8-TB4-L15	0.75	0.18	0.62	4300
			316L secondary remelt	VVR-FG8-TB4-L15-SLV	(19.1)	(4.6)	(15.7)	(296)
1/4	0.035	1/2	316L	VVR-FG8-TB4-L19	0.75	0.18	0.76	4300
			316L secondary remelt	VVR-FG8-TB4-L19-SLV	(19.1)	(4.6)	(19.4)	(296)
3/8	0.035	1/2	316L	VVR-FG8-TB6	0.75	0.31	1.12	3300
			316L secondary remelt	VVR-FG8-TB6-SLV	(19.1)	(7.9)	(28.4)	(227)
3/8	0.035	1/2	316L	VVR-FG8-TB6-L15	0.25	0.31	0.62	3300
			316L secondary remelt	VVR-FG8-TB6-L15-SLV	(6.4)	(7.9)	(15.7)	(227)
1/2	0.049	1/2	316L	VVR-FG8-TB8	0.75	0.40	1.12	3700
			316L secondary remelt	VVR-FG8-TB8-SLV	(19.1)	(10.2)	(28.4)	(254)
1/2	0.049	1/2	316L	VVR-FG8-TB8-L18	0.38	0.40	0.74	3700
			316L secondary remelt	VVR-FG8-TB8-L18-SLV	(9.6)	(10.2)	(18.8)	(254)
1/2	0.049	1/2	316L	VVR-FG8-TB8-L15	0.25	0.40	0.62	3700
			316L secondary remelt	VVR-FG8-TB8-L15-SLV	(6.4)	(10.2)	(15.7)	(254)
3/4	0.049	3/4	316L	VVR-FG12-TB12	0.81	0.62	1.25	2400
			316L secondary remelt	VVR-FG12-TB12-SLV	(20.6)	(15.7)	(32)	(165)
1	0.065	1	316L	VVR-FG16-TB16	0.75	0.87	1.51	1900
			316L secondary remelt	VVR-FG16-TB16-SLV	(19.1)	(22.1)	(38.6)	(130)

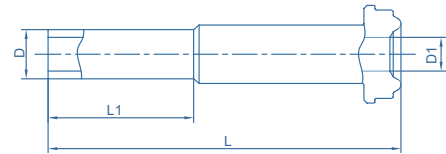
① not design for gasket retainer assembly

To order fittings manufactured for Surface Finish Ra(Average) < 0.4 add BA to the ordering number.
Example: VVR-FG4-TB4-BA

Face Seal Fittings VVR Series

Glands

Long Tube Butt Weld



D Tube OD in.	Wall Thickness in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)			Working Pressure psig (bar)
					L1	D1	L	
1/8	0.028	1/8	316L	VVR-MG2-TB2 ①	0.75	0.07	1.42	8500
			316L secondary remelt	VVR-MG2-TB2-SLV ①	(19.1)	(1.8)	(36.1)	(585)
1/4	0.035	1/4	316L	VVR-MG4-TB4	0.75	0.18	1.70	5100
			316L secondary remelt	VVR-MG4-TB4-SLV	(19.1)	(4.6)	(43.2)	(351)
1/4	0.035	1/4	316L	VVR-MG4-TB4-L33	0.38	0.18	1.32	5100
			316L secondary remelt	VVR-MG4-TB4-L33-SLV	(9.6)	(4.6)	(33.5)	(351)
1/4	0.035	1/4	316L	VVR-MG4-TB4-L30	0.25	0.18	1.20	5100
			316L secondary remelt	VVR-MG4-TB4-L30-SLV	(6.4)	(4.6)	(30.5)	(351)
1/4	0.035	1/2	316L	VVR-MG8-TB4	0.75	0.18	1.79	4300
			316L secondary remelt	VVR-MG8-TB4-SLV	(19.1)	(4.6)	(45.5)	(296)
1/4	0.035	1/2	316L	VVR-MG8-TB4-L32	0.75	0.18	1.28	4300
			316L secondary remelt	VVR-MG8-TB4-L32-SLV	(19.1)	(4.6)	(32.7)	(296)
1/4	0.035	1/2	316L	VVR-MG8-TB4-L37	0.75	0.18	1.47	4300
			316L secondary remelt	VVR-MG8-TB4-L37-SLV	(19.1)	(4.6)	(37.4)	(296)
3/8	0.035	1/2	316L	VVR-MG8-TB6	0.75	0.31	1.79	3300
			316L secondary remelt	VVR-MG8-TB6-SLV	(19.1)	(7.9)	(45.5)	(227)
3/8	0.035	1/2	316L	VVR-MG8-TB6-L32	0.25	0.31	1.29	3300
			316L secondary remelt	VVR-MG8-TB6-L32-SLV	(6.4)	(7.9)	(32.8)	(227)
1/2	0.049	1/2	316L	VVR-MG8-TB8	0.75	0.40	1.79	3500
			316L secondary remelt	VVR-MG8-TB8-SLV	(19.1)	(10.2)	(45.5)	(241)
1/2	0.049	1/2	316L	VVR-MG8-TB8-L35	0.38	0.40	1.41	3500
			316L secondary remelt	VVR-MG8-TB8-L35-SLV	(9.6)	(10.2)	(35.8)	(241)
1/2	0.049	1/2	316L	VVR-MG8-TB8-L32	0.25	0.40	1.29	3500
			316L secondary remelt	VVR-MG8-TB8-L32-SLV	(6.4)	(10.2)	(32.8)	(241)
3/4	0.065	3/4	316L	VVR-MG12-TB12	0.75	0.65	2.03	2400
			316L secondary remelt	VVR-MG12-TB12-SLV	(19.1)	(16.5)	(51.6)	(165)
1	0.065	1	316L	VVR-MG16-TB16	0.75	0.87	2.32	2400
			316L secondary remelt	VVR-MG16-TB16-SLV	(19.1)	(22.1)	(58.9)	(165)

① not design for gasket retainer assembly

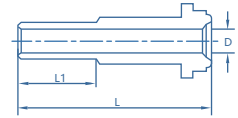
To order fittings manufactured for Surface Finish Ra(Average)<0.4 add BA to the ordering number.
Example: VVR-MG4-TB4-BA

Face Seal Fittings

VVR Series

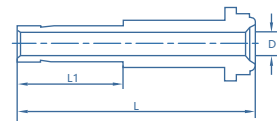
Glands

Male Weld



Tube Size in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)			Working Pressure psig (bar)	
				L	L1	D	Ni	316L
1/8	1/8	316L	VVR-MG2-TW2	0.70 (17.8)	0.28 (7.1)	0.06 (1.5)	9000 (620)	11200 (771)
1/8	1/4	316L	VVR-MG4-TW2	1.31 (33.3)	0.28 (7.1)	0.06 (1.5)	8000 (551)	10000 (689)
1/4	1/4	316L	VVR-MG4-TW4	1.31 (33.3)	0.41 (10.4)	0.12 (3.0)	8000 (551)	10000 (689)
1/4	1/2	316L	VVR-MG8-TW4	1.50 (38.1)	0.41 (10.4)	0.12 (3.0)	3500 (241)	4300 (296)
3/8	1/2	316L	VVR-MG8-TW6	1.50 (38.1)	0.41 (10.4)	0.28 (7.1)	3500 (241)	4300 (296)
1/2	1/2	316L	VVR-MG8-TW8	1.50 (38.1)	0.50 (12.7)	0.40 (10.2)	3500 (241)	3500 (241)
3/4	3/4	316L	VVR-MG12-TW12	2.00 (50.8)	0.62 (15.7)	0.53 (13.5)	3000 (206)	3700 (254)
1	1	316L	VVR-MG16-TW16	2.22 (56.4)	0.81 (20.6)	0.75 (19.1)	2400 (165)	3000 (206)

Tube Adapter

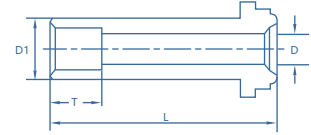


Tube Size in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)			Working Pressure psig (bar)	
				L	L1	D	Ni	316L
1/4	1/4	316L	VVR-MTA4-TB04	1.62 (41.0)	0.64 (16.2)	0.17 (4.3)	8000 (551)	10000 (689)
3/8	1/2	316L	VVR-MTA8-TB06	1.81 (46.0)	0.70 (17.8)	0.27 (6.8)	3500 (241)	4300 (296)
1/2	1/2	316L	VVR-MTA8-TB08	1.94 (49.3)	0.96 (24.4)	0.37 (9.4)	3500 (241)	4300 (296)

Face Seal Fittings VVR Series

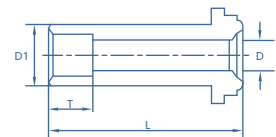
Glands

Socket Weld



Tube OD in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)				Working Pressure psig (bar)	
				L	T	D	D1	Ni	316L
1/16	1/8	316L	VVR-SW1-TB2	0.70 (17.8)	0.10 (2.5)	0.05 (1.3)	0.13 (3.3)	9000 (620)	9000 (620)
1/8	1/8	316L	VVR-SW2-TB2	0.70 (17.8)	0.10 (2.5)	0.09 (2.3)	0.20 (5.1)	7100 (489)	7100 (489)
1/4	1/4	316L	VVR-SW4-TB4	1.31 (33.3)	0.28 (7.1)	0.918 (4.6)	0.35 (8.9)	5500 (378)	5500 (378)
3/8	1/2	316L	VVR-SW8-TB6	1.50 (38.1)	0.31 (7.9)	0.28 (7.1)	0.60 (15.2)	3500 (241)	4300 (296)
1/2	1/2	316L	VVR-SW8-TB8	1.50 (38.1)	0.38 (9.6)	0.40 (10.2)	0.60 (15.2)	3000 (206)	3000 (206)
5/8	5/8	316L	VVR-SW10-TB10	1.56 (39.6)	0.41 (10.4)	0.50 (12.7)	0.72 (18.3)	2800 (192)	2800 (192)
3/4	3/4	316L	VVR-SW12-TB12	2.00 (50.8)	0.44 (11.2)	0.62 (15.7)	0.88 (22.4)	2800 (192)	2800 (192)
1	1	316L	VVR-SW16-TB16	2.22 (56.4)	0.62 (15.7)	0.87 (22.1)	1.19 (30.2)	2400 (165)	3000 (206)

Short Socket Weld

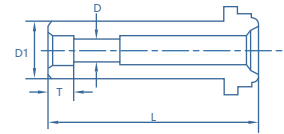


Tube OD in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)				Working Pressure psig (bar)	
				L	T	D	D1	Ni	316L
1/4	1/4	316L	VVR-SW4-TB4-L12	0.50 (12.7)	0.28 (7.1)	0.18 (4.6)	0.35 (8.9)	5500 (378)	5500 (378)
1/4	1/4	316L	VVR-SW4-TB4-L19	0.75 (19.1)	0.28 (7.1)	0.18 (4.6)	0.35 (8.9)	5500 (378)	5500 (378)

Face Seal Fittings

VVR Series

Glands



Reducing Socket Weld

Tube OD in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)				Working Pressure psig (bar)	
				L	T	D	D1	Ni	316L
1/8	1/4	316L	VVR-RSW4-TB2	1.31 (33.3)	0.10 (2.5)	0.09 (2.3)	0.35 (8.9)	8000 (551)	8000 (551)
1/4	1/2	316L	VVR-RSW8-TB4	1.50 (38.1)	0.28 (7.1)	0.18 (4.6)	0.60 (15.2)	3500 (241)	3500 (241)



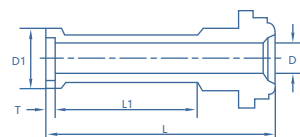
Blind (Undrilled) Gland

VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)
			L
1/8	316L	VVR-BG2	0.70 (17.8)
1/4	316L	VVR-BG4	1.31 (33.3)
1/2	316L	VVR-BG8	1.50 (38.1)
3/4	316L	VVR-BG12	2.00 (50.8)
1	316L	VVR-BG16	2.22 (56.4)

Automatic Face Seal Fittings VAR Series

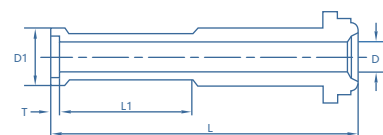
Glands

Short Automatic Tube Butt Weld



Tube OD in.	Wall Thickness in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)					Working Pressure psig (bar)	
					L	L1	T	D	D1	Ni	316L
1/4	0.035	1/4	316L	VAR-FG4-TB4	1.12 (28.4)	0.75 (19.1)	0.02 (0.5)	0.18 (4.6)	0.29 (7.4)	5100 (351)	5100 (351)
3/8	0.035	1/2	316L	VAR-FG8-TB6	1.15 (29.2)	0.75 (19.1)	0.03 (0.8)	0.31 (7.9)	0.41 (10.4)	3300 (227)	3300 (227)
1/2	0.049	1/2	316L	VAR-FG8-TB8	1.16 (29.5)	0.75 (19.1)	0.04 (1.0)	0.40 (10.2)	0.55 (14.0)	3500 (241)	3500 (241)

Long Automatic Tube Butt Weld

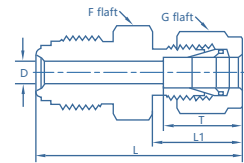


Tube OD in.	Wall Thickness in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)					Working Pressure psig (bar)	
					L	L1	T	D	D1	Ni	316L
1/4	0.035	1/4	316L	VAR-MG4-TB4	1.72 (43.7)	0.75 (19.1)	0.02 (0.5)	0.18 (4.6)	0.29 (7.4)	5100 (351)	5100 (351)
1/4	0.035	1/2	316L	VAR-MG8-TB4	1.82 (46.2)	0.75 (19.1)	0.02 (0.5)	0.18 (4.6)	0.29 (7.4)	3500 (241)	3500 (241)
3/8	0.035	1/2	316L	VAR-MG8-TB6	1.82 (46.2)	0.75 (19.1)	0.03 (0.8)	0.31 (7.9)	0.41 (10.4)	3300 (227)	3300 (227)
1/2	0.049	1/2	316L	VAR-MG8-TB8	1.83 (46.5)	0.75 (19.1)	0.04 (1.0)	0.40 (10.2)	0.55 (14.0)	3500 (241)	3500 (241)
3/4	0.049	3/4	316L	VAR-MG12-TB12	2.07 (52.6)	0.75 (19.1)	0.04 (1.0)	0.65 (16.5)	0.80 (20.3)	2400 (165)	2400 (165)
1	0.065	1	316L	VAR-MG16-TB16	2.57 (65.3)	0.96 (24.4)	0.04 (1.0)	0.87 (22.1)	1.06 (26.9)	2400 (165)	2400 (165)

Face Seal Fittings VVR Series

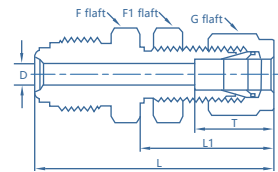
Bodies

Tube Fitting Connector



Tube Size in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)						Working Pressure psig (bar)	
				L	L1	T	D	F	G	Ni	316L
1/8	1/4	316L	VVR-TFC4-02	1.53 (38.9)	0.60 (15.2)	0.50 (12.7)	0.09 (2.3)	5/8	7/16	8000 (551)	10000 (689)
1/4	1/4	316L	VVR-TFC4-04	1.62 (41.1)	0.70 (17.8)	0.60 (15.2)	0.18 (4.6)	5/8	9/16	8000 (551)	10000 (689)
3/8	1/2	316L	VVR-TFC8-06	1.84 (46.7)	0.76 (19.3)	0.66 (16.8)	0.28 (7.1)	15/16	11/16	3500 (241)	4300 (296)
1/2	1/2	316L	VVR-TFC8-08	1.95 (49.5)	0.86 (21.8)	0.90 (22.9)	0.40 (10.2)	15/16	7/8	3500 (241)	4300 (296)

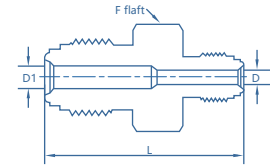
Tube Fitting Bulkhead Connector



Tube Size in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)							Working Pressure psig (bar)	
				L	L1	T	D	F	F1	G	Ni	316L
1/4	1/4	316L	VVR-TFBC4-04	2.25 (57.2)	1.32 (33.5)	0.60 (15.2)	0.18 (4.6)	5/8	5/8	9/16	8000 (551)	10000 (689)
1/4	1/4	316L	VVR-TFBC4-04-L47	1.88 (47.8)	1.05 (26.7)	0.60 (15.2)	0.18 (4.6)	5/8	5/8	9/16	8000 (551)	10000 (689)
3/8	1/2	316L	VVR-TFBC8-06	2.54 (64.5)	1.45 (36.8)	0.66 (16.8)	0.28 (7.1)	15/16	3/4	11/16	3500 (241)	4300 (296)
1/2	1/2	316L	VVR-TFBC8-08	2.74 (69.6)	1.65 (41.9)	0.90 (22.9)	0.40 (10.2)	15/16	15/16	7/8	3500 (241)	4300 (296)

Bodies

Male Reducing Union [®]

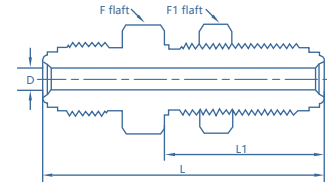


VFS Size in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)				Working Pressure psig (bar)	
				L	T	D	D1	Ni	316L
1/4	1/8	316L	VVR-RMU4-2 [®]	1.31 (33.3)	0.10 (2.5)	0.09 (2.3)	0.35 (8.9)	8000 (551)	8000 (551)
1/2	1/4	316L	VVR-RMU8-4	1.50 (38.1)	0.28 (7.1)	0.18 (4.6)	0.60 (15.2)	3500 (241)	3500 (241)

① VFS 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 [®]



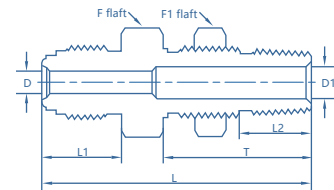
VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)					Working Pressure psig (bar)	
			L	L1	D	F	F1	Ni	SS
1/4	316L	VVR-MBU4	2.23 (56.6)	1.30 (33.0)	0.18 (4.6)	3/4	3/4	8000 (551)	10000 (689)
1/4	316L	VVR-MBU4-L46	1.82 (46.2)	0.99 (25.1)	0.18 (4.6)	3/4	3/4	8000 (551)	10000 (689)
1/2	316L	VVR-MBU8	2.57 (65.3)	1.48 (37.6)	0.40 (10.2)	1-1/16	1-1/16	3500 (241)	4300 (296)
1/2	316L	VVR-MBU8-L54	2.14 (54.4)	1.11 (28.2)	0.40 (10.2)	1-1/16	1-1/16	3500 (241)	4300 (296)

① VFS 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.

Face Seal Fittings VVR Series

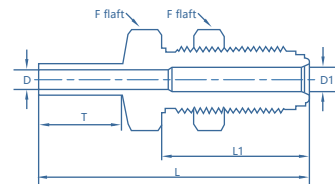
Bodies

Male NPT Bulkhead Connector



NPT Size in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)								Working Pressure psig (bar)	
				L	L1	L2	D	D1	F	F1	T	Ni	316L
1/4	1/4	316L	VVR-MBC4-M4	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)	8000 (551)	8000 (551)
1/4	1/2	316L	VVR-MBC8-M4	2.34 (59.4)	0.75 (19.1)	0.56 (14.2)	0.40 (10.2)	0.28 (7.1)	15/16	13/16	1.24 (31.5)	3500 (241)	4300 (296)

Tube Butt Weld Bulkhead Connector ®

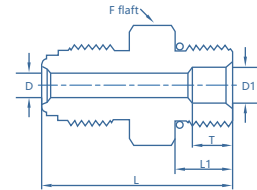


Tube Size in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)							Working Pressure psig (bar)	
				L	L1	T	D	D1	F		Ni	316L
1/4	1/4	316L	VVR-TBBC4-TB4	2.36 (59.9)	1.30 (33.0)	0.75 (19.1)	0.18 (4.6)	0.22 (5.6)	3/4		5100 (351)	5100 (351)
1/4	1/4	316L	VVR-TBBC4-TB4-L49	1.95 (49.5)	0.99 (25.1)	0.75 (19.1)	0.18 (4.6)	0.22 (5.6)	3/4		5100 (351)	5100 (351)

① VFS 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.

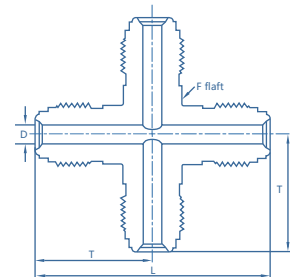
Bodies

Straight Thread O-Ring Seal Male Connector



Straight Thread Size	VFS Size in.	Uniform O-Ring Size	Material	Ordering Number	Dimensions, in.(mm)						Working Pressure psig (bar)	
					L	L1	T	D	D1	F	Ni	316L
9/16-18	1/4	906	316L	VVR-MC4-A6	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)
7/8-14	1/2	910	316L	VVR-MC8-A10	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)
9/16-18	1/2	906	316L	VVR-MC8-A6	1.48 (37.6)	0.39 (9.9)	—	0.28 (7.1)	0.28 (7.1)	15/16	3500 (241)	4300 (296)

Union Cross

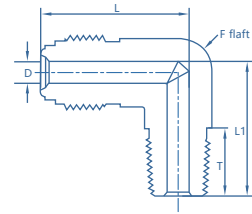


VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)				Working Pressure psig (bar)	
			L	T	D	F	Ni	316L
1/8	316L	VVR-MUC2	1.78 (45.2)	0.89 (22.6)	0.09 (2.3)	7/16	9000 (620)	11200 (771)
1/4	316L	VVR-MUC4	2.14 (54.4)	1.07 (27.2)	0.18 (4.6)	1/2	8000 (551)	10000 (689)
1/2	316L	VVR-MUC8	2.90 (73.7)	1.45 (36.8)	0.40 (10.2)	13/16	3500 (241)	4300 (296)
3/4	316L	VVR-MUC12	3.84 (97.5)	1.92 (48.8)	0.62 (15.7)	1-1/4	3000 (206)	3700 (254)
1	316L	VVR-MUC16	4.00 (102)	2.00 (50.8)	0.87 (22.1)	1-11/16	2400 (165)	3000 (206)

Face Seal Fittings VVR Series

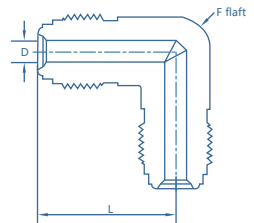
Bodies

Male NPT Elbow



NPT Size in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)					Working Pressure psig (bar)	
				L	L1	T	D	F	Ni	316L
1/8	1/4	316L	VVR-MEC4-M2	1.07 (27.2)	0.87 (22.1)	0.38 (9.6)	0.18 (4.6)	1/2	8000 (551)	10000 (689)
1/4	1/4	316L	VVR-MEC4-M4	1.07 (27.2)	1.05 (26.7)	0.56 (14.2)	0.18 (4.6)	1/2	8000 (551)	8000 (551)
3/8	1/2	316L	VVR-MEC8-M6	1.45 (36.8)	1.26 (32.0)	0.56 (14.2)	0.40 (10.2)	13/16	3500 (241)	4300 (296)
1/2	1/2	316L	VVR-MEC8-M8	1.45 (36.8)	1.45 (36.8)	0.75 (19.1)	0.40 (10.2)	13/16	3500 (241)	4300 (296)

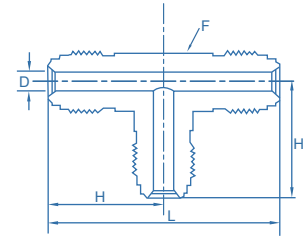
Union Elbow



VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)			Working Pressure psig (bar)	
			L	D	F	Ni	316L
1/8	316L	VVR-MUE2	0.89 (22.6)	0.09 (2.3)	7/16	9000 (620)	11200 (771)
1/4	316L	VVR-MUE4	1.07 (27.2)	0.18 (4.6)	1/2	8000 (551)	10000 (689)
1/2	316L	VVR-MUE8	1.45 (36.8)	0.40 (10.2)	13/16	3500 (241)	4300 (296)
3/4	316L	VVR-MUE12	1.92 (48.8)	0.62 (15.7)	1-1/4	3000 (206)	3700 (254)
1	316L	VVR-MUE16	2.00 (50.8)	0.87 (22.1)	1-11/16	2400 (165)	3000 (206)

Bodies

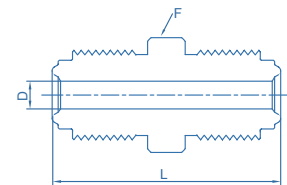
Male Union Tee



VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)				Working Pressure psig (bar)	
			L	D	F	H	NI	SS
1/8	316L	VVR-MUT-2	1.78 (45.2)	0.09 (2.3)	7/16	0.89 (22.6)	9000 (620)	11200 (771)
1/4		VVR-MUT-4	2.14 (54.4)	0.18 (4.6)	1/2	1.07 (27.2)	8000 (551)	10000 (689)
1/2		VVR-MUT-8	2.90 (73.7)	0.40 (10.2)	13/16	1.45 (36.8)	3500 (241)	4300 (296)
3/4		VVR-MUT-12	3.84 (97.5)	0.62 (15.7)	1-1/4	1.92 (48.8)	3000 (206)	3700 (254)
1		VVR-MUT-16	4.00 (102)	0.87 (22.1)	1-11/16	2.00 (50.8)	2400 (165)	3000 (206)

To order fittings manufactured for Surface finish Ra(Average)<0.4 add BA to the ordering number.
Example: VVR-MUT-4-BA

Male Union ^①



VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)			Working Pressure psig (bar)	
			L	D	F	NI	SS
1/8	316L	VVR-MU2 ^②	1.13 (28.7)	0.09 (2.3)	3/8	9000 (620)	11200 (771)
1/4		VVR-MU4	1.55 (39.4)	0.18 (4.6)	5/8	8000 (551)	10000 (689)
1/2		VVR-MU8	1.84 (46.7)	0.40 (10.2)	15/16	3500 (241)	4300 (296)
3/4		VVR-MU12	2.44 (62.0)	0.62 (15.7)	1-5/16	3000 (206)	3700 (254)
1		VVR-MU16	2.59 (65.8)	0.87 (22.1)	1-5/8	2400 (165)	3000 (206)

- ① VFS 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

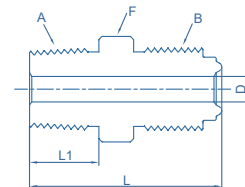
To order fittings manufactured for Surface finish Ra(Average)<0.4 add BA to the ordering number.
Example: VVR-MU4-BA

Face Seal Fittings

VVR Series

Bodies

Male NPT Connectors ^①



A NPT Size in.	B VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)				Working Pressure psig (bar)	
				L	L1	D	F	NI	SS
1/16	1/8	316L	VVR-MC2-M1 ^①	1.07 (27.2)	0.38 (9.6)	0.09 (2.3) ^③	3/8	9000 (620)	9000 (620)
1/8	1/8		VVR-MC2-M2 ^②	1.07 (27.2)	0.38 (9.6)	0.09 (2.3) ^③	7/16	9000 (620)	9000 (620)
1/8	1/4		VVR-MC4-M2	1.31 (33.3)	0.38 (9.6)	0.18 (4.6)	5/8	10000 (689)	6400 (440)
1/4	1/4		VVR-MC4-M4	1.49 (37.8)	0.56 (14.2)	0.18 (4.6)	5/8	10000 (689)	6400 (440)
1/4	1/2		VVR-MC8-M4	1.65 (41.9)	0.56 (14.2)	0.28 (7.1) ^③	15/16	4300 (296)	2800 (192)
3/8	1/2		VVR-MC8-M6	1.65 (41.9)	0.56 (14.2)	0.38 (9.6)	15/16	4300 (296)	2800 (192)
1/2	1/2		VVR-MC8-M8	1.84 (46.7)	0.75 (19.1)	0.4 (10.2)	15/16	4300 (296)	2800 (192)
3/4	3/4		VVR-MC12-M12	2.19 (55.6)	0.75 (19.1)	0.62 (15.7)	1-5/16	3700 (254)	2400 (165)
1	1		VVR-MC16-M16	2.47 (62.7)	0.94 (23.9)	0.87 (22.1)	1-5/8	2400 (165)	3000 (206)

① VFS 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.

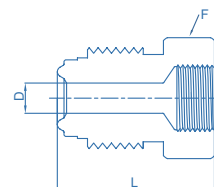
② Not designed for gasket retainer assembly

③ May contain internal diameter transitions

To order fittings manufactured for Surface finish Ra(Average)<0.4 add BA to the ordering number.

Example: VVR-MC4-M4-BA

Female NPT Connectors ^①



NPT Size in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)			Working Pressure psig (bar)	
				L	D	F flat	NI	SS
1/16	1/8	316L	VVR-MC2-F1 ^①	1.10 (27.9)	0.09 (2.3)	7/16	6700 (461)	6700 (461)
1/8	1/8		VVR-MC2-F2 ^②	1.19 (30.2)	0.09 (2.3)	9/16	6500 (447)	6500 (447)
1/8	1/4		VVR-MC4-F2	1.41 (35.8)	0.18 (4.6)	5/8	8000 (551)	8000 (551)
1/4	1/4		VVR-MC4-F4	1.54 (39.1)	0.18 (4.6)	3/4	6600 (454)	6600 (454)
3/8	1/2		VVR-MC8-F6	1.76 (44.7)	0.40 (10.2)	15/16	3500 (241)	4300 (296)
1/2	1/2		VVR-MC8-F8	1.99 (50.5)	0.40 (10.2)	1-1/16	3500 (241)	4300 (296)
3/4	3/4		VVR-MC12-F12	2.36 (59.9)	0.62 (15.7)	1-5/16	3000 (206)	3700 (254)
1	1		VVR-MC16-F16	2.51 (63.8)	0.87 (22.1)	1-5/8	2400 (165)	3000 (206)

① VFS 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

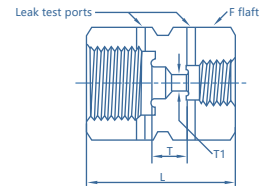
To order fittings manufactured for Surface finish Ra(Average)<0.4 add BA to the ordering number.

Example: VVR-MC4-F4-BA

Face Seal Fittings VVR Series

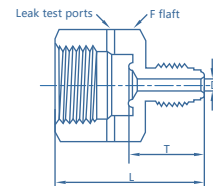
Bodies

Female Reducing Union



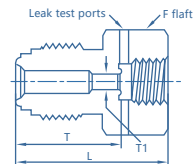
VFS Size in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)				Working Pressure psig (bar)	
				L	T	T1	F	Ni	316L
1/4	1/8	316L	VVR-RFC4-2	1.16 (29.5)	0.36 (9.1)	0.13 (3.3)	3/4	8000 (551)	10000 (689)
1/2	1/4	316L	VVR-RFC8-4	1.41 (35.8)	0.35 (8.9)	0.25 (6.4)	1-1/16	3500 (241)	4300 (296)

Reducing Adapter



VFS Size in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)				Working Pressure psig (bar)	
				L	T	D	F	Ni	316L
1/4	1/8	316L	VVR-RA4-2	1.19 (30.2)	0.69 (17.5)	0.09 (2.3)	3/4	8000 (551)	10000 (689)
1/2	1/4	316L	VVR-RA8-4	1.41 (35.8)	0.85 (21.6)	0.18 (4.6)	1-1/16	3500 (241)	4300 (296)

Reducing Bushing



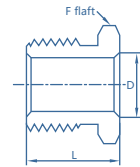
VFS Size in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)				Working Pressure psig (bar)	
				L	T	T1	F	Ni	316L
1/8	1/4	316L	VVR-RB4-2	1.06 (26.9)	0.76 (19.3)	0.13 (3.3)	5/8	8000 (551)	10000 (689)
1/2	1/4	316L	VVR-RB8-4	1.41 (35.8)	0.91 (23.1)	0.25 (6.4)	15/16	3500 (241)	4300 (296)

Dimensions are for reference only
and are subject to change without prior notice

Face Seal Fittings VVR Series

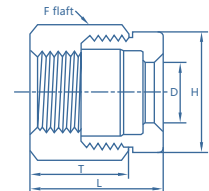
Nut

Short Male Nut
for use with short gland.



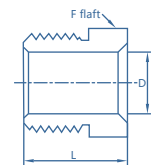
VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)		
			L	D	F
1/4	316L	VVR-MN4-L13	0.54 (13.7)	0.36 (9.1)	5/8
1/4	316L	VVR-MN4-L16	0.65 (16.5)	0.36 (9.1)	5/8

Split-Nut Assemblies Female



VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)				
			L	T	D	H	F
1/4	316L	VVR-SFN4	0.81 (20.6)	0.63 (16.0)	0.36 (9.1)	0.68 (17.4)	3/4

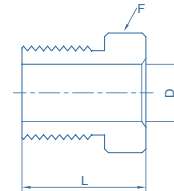
Split-Nut Assemblies Male



VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)		
			L	D	F
1/4	316L	VVR-SMN4	0.60 (15.2)	0.36 (9.1)	5/8

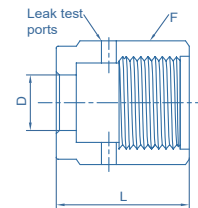
Nut

Male Nut



VFS Size in.	Ordering Number	Material	F Hex Flat	Dimensions, in.(mm)	
				L	D
1/8	VVR-MN2	316L	3/8	0.50 (12.7)	0.21 (5.3)
1/4	VVR-MN4		5/8	0.71 (18.0)	0.36 (9.1)
1/2	VVR-MN8		15/16	0.81 (20.6)	0.61 (15.5)
3/4	VVR-MN12		1-5/16	1.00 (25.4)	0.89 (22.6)
1	VVR-MN16		1-5/8	1.19 (30.2)	1.20 (30.5)

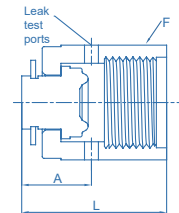
Female Nut



VFS Size in.	Ordering Number	Material	F Hex Flat	Dimensions, in.(mm)	
				L	D
1/8	VVR-FN2	316L	7/16	0.53 (13.5)	0.21 (5.3)
1/4	VVR-FN4		3/4	0.81 (20.6)	0.36 (9.1)
1/2	VVR-FN8		1-1/16	0.88 (22.4)	0.61 (15.5)
3/4	VVR-FN12		1-1/2	1.12 (28.4)	0.89 (22.6)
1	VVR-FN16		1-3/4	1.34 (34.0)	1.20 (30.5)

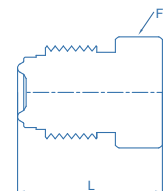
Face Seal Fittings VVR Series

Cap



VFS Size in.	Ordering Number	Material	Dimensions, in.(mm)		
			F Hex Flat	L	A
1/8	VVR-C2	316L	7/16	0.63 (16.0)	0.30 (7.6)
1/4	VVR-C4		3/4	0.94 (23.9)	0.44 (11.2)
1/2	VVR-C8		1-1/16	1.01 (25.6)	0.45 (11.4)
3/4	VVR-C12		1-1/2	1.29 (32.8)	0.54 (13.7)
1	VVR-C16		1-3/4	1.54 (39.1)	0.63 (16.0)

Plug

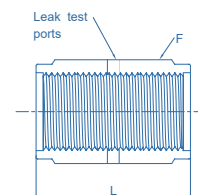


VFS Size in.	Ordering Number	Material	Dimensions, in.(mm)	
			F Hex Flat	L
1/8	VVR-P2 ^①	316L	3/8	0.68 (17.3)
1/4	VVR-P4 ^②		5/8	0.92 (23.4)
1/2	VVR-P8		15/16	1.08 (27.4)
3/4	VVR-P12		1-5/16	1.43 (36.3)
1	VVR-P16		1-5/8	1.52 (38.6)

① Not designed for gasket retainer assembly.

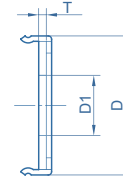
② Also available as a rotatable plug.
Ordering number: VVR-P8-R

Coupling



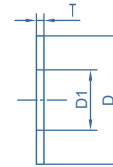
VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)	
			L	F
1/8	316L	VVR-FU2	0.66 (16.8)	7/16
1/4		VVR-FU4	1.19 (30.2)	3/4
1/2		VVR-FU8	1.31 (33.3)	1-1/16
3/4		VVR-FU12	1.68 (42.7)	1-1/2
1		VVR-FU16	2.04 (51.8)	1-3/4

Gasket Retainer Assembly



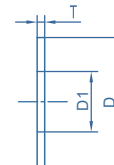
VFS Size in.	Ordering Number	Material	Dimensions, in.(mm)		
			D1	T	D
1/4	VVR-GKR-G4	316L	0.24 (6.1)	0.028 (0.7)	0.50 (12.7)
	VVR-GKR-G4-NI	Nickel			
1/2	VVR-GKR-G8	316L	0.44 (11.2)	0.028 (0.7)	0.79 (20.1)
	VVR-GKR-G8-NI	Nickel			
3/4	VVR-GKR-G12	316L	0.66 (16.8)	0.028 (0.7)	1.14 (29.0)
	VVR-GKR-G12-NI	Nickel			
1	VVR-GKR-G16	316L	0.89 (22.6)	0.028 (0.7)	1.40 (35.6)
	VVR-GKR-G16-NI	Nickel			

Gaskets



VFS Size in.	Ordering Number	Material	Dimensions, in.(mm)		
			D1	T	D
1/8	VVR-GK-G2	316L	0.09 (2.3)	0.028 (0.7)	0.26 (6.6)
	VVR-GK-G2-NI	Nickel			
1/4	VVR-GK-G4	316L	0.22 (5.6)	0.028 (0.7)	0.47 (11.9)
	VVR-GK-G4-NI	Nickel			
1/2	VVR-GK-G8	316L	0.44 (11.2)	0.028 (0.7)	0.78 (19.8)
	VVR-GK-G8-NI	Nickel			
3/4	VVR-GK-G12	316L	0.66 (16.8)	0.028 (0.7)	1.14 (29.0)
	VVR-GK-G12-NI	Nickel			
1	VVR-GK-G16	316L	0.89 (22.6)	0.028 (0.7)	1.40 (35.6)
	VVR-GK-G16-NI	Nickel			

Filter Gaskets



VFS Size in.	Ordering Number	Material	Dimensions, in.(mm)		
			D1	T	D
1/4	VVR-GKF-G4	316L	0.22 (5.6)	0.028 (0.7)	0.47 (11.9)
	VVR-GKF-G4-NI	Nickel			
1/2	VVR-GKF-G8	316L	0.44 (11.2)	0.028 (0.7)	0.78 (19.8)
	VVR-GKF-G8-NI	Nickel			

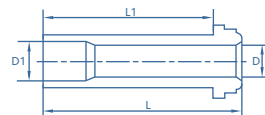
* Element Nominal Pore Size (Optaion) : 0.5µm / 2µm / 5µm / 10µm / 20µm / 60µm

Ordering Example: VVR-GKF-G4-0.5

Face Seal Fittings HVVR Series

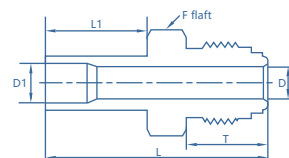
High-Flow Connections

Glands Tube Butt Weld



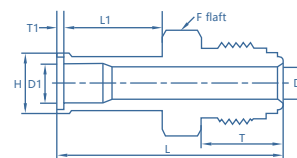
Tube Size in.	Nominal Wall Thickness	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)				Working Pressure psig (bar)	
					L	L1	D	D1	Ni	316L
3/8	0.035	1/4	316L	HVVR-HG4-TB6-L15	0.60 (15.2)	0.41 (10.4)	0.25 (6.4)	0.31 (7.9)	3300 (227)	3300 (227)
3/8	0.035	1/4	316L	HVVR-HG4-TB6-L30	1.19 (30.2)	1.00 (25.4)	0.25 (6.4)	0.31 (7.9)	3300 (227)	3300 (227)
3/8	0.035	1/4	316L	HVVR-HG4-TB6-L33	1.31 (33.3)	1.12 (28.4)	0.25 (6.4)	0.31 (7.9)	3300 (227)	3300 (227)

Bodies Tube Butt Weld



Tube Size in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)						Working Pressure psig (bar)	
				L	L1	T	D	D1	F	Ni	316L
3/8	1/4	316L	HVVR-MG4-TB6	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)

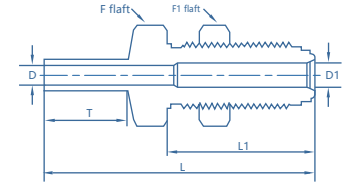
Bodies Automatic Tube Weld



Tube Size in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)								Working Pressure psig (bar)	
				L	L1	T	T1	D	D1	F	H	Ni	316L
3/8	1/4	316L	HVVR-AHG4-TW6	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)

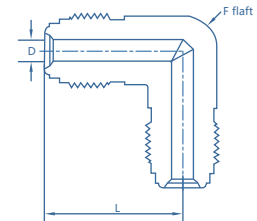
High-Flow Connections

Bodies Bulkhead Connector



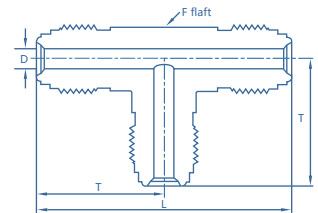
Tube Size in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)							Panel Hole Dia	Max Panel Thickness	Working Pressure psig (bar)	
				L	L1	T	D	D1	F	F1			Ni	316L
3/8	1/4	316L	HVVR-BMG4-TB6	2.36 (59.9)	1.30 (33.0)	0.75 (19.1)	0.31 (7.9)	0.25 (6.4)	3/4	3/4	19/32 (15.0)	0.44 (11.2)	3300 (227)	3300 (227)

Union Elbow



VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)			Working Pressure psig (bar)	
			L	D	F	Ni	316L
1/4	316L	HVVR-UE4	1.07 (27.2)	0.25 (6.4)	1/2	8000 (551)	10000 (689)

Union Tee



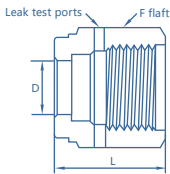
VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)				Working Pressure psig (bar)	
			L	T	D	F	Ni	316L
1/4	316L	HVVR-UT4	2.14 (54.4)	1.07 (27.2)	0.25 (6.4)	1/2	8000 (551)	10000 (689)

Face Seal Fittings

HVVR Series

High-Flow Connections

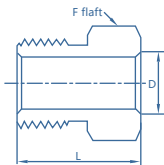
Nuts Female



VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)		
			L	D	F
1/4	316L	HVVR-FN4 ^①	0.81 (20.6)	0.39 (9.9)	3/4

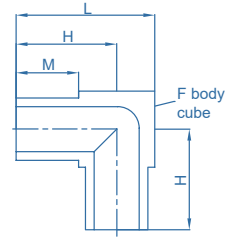
① Use for High Flow Connections: Glands Tube Butt Weld

Nuts Male



VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)		
			L	D	F
1/4	316L	HVVR-MN4	0.71 (18.0)	0.39 (9.9)	5/8

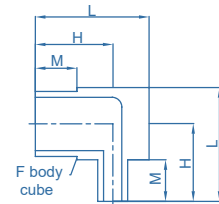
Union Elbow



Tube OD in.	Wall Thickness in.	Ordering Number	Dimensions, in.(mm)				Working Pressure psig (bar)
			L	M	F	H	
1/8	0.028	VMW-UE2 VMW-UE2-SLV	0.56 (14.2)	0.25 (6.4)	5/16	0.41 (10.4)	8500 (585)
1/4	0.035	VMW-UE4 VMW-UE4-SLV	0.56 (14.2)		5/16	0.41 (10.4)	5100 (351)
3/8	0.035	VMW-UE6 VMW-UE6-SLV	0.69 (17.5)		7/16	0.47 (11.9)	3300 (227)
1/2	0.049	VMW-UE8 VMW-UE8-SLV	0.81 (20.6)		9/16	0.53 (13.5)	3700 (254)
3/4	0.065	VMW-UE12 VMW-UE12-SLV	1.06 (27.0)		13/16	0.66 (16.6)	2400 (165)

To order fittings manufactured for Surface Finish Ra(Average)<0.4 add BA to the ordering number.
Example: VMW-UE6-BA

Reducing Elbow

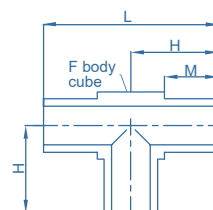


Tube OD in.	Wall Thickness in.	Tube OD in.	Wall Thickness mm	Ordering Number	Dimensions, in.(mm)				Working Pressure psig (bar)
					L	M	F	H	
1/4	0.035	1/8	0.028	VMW-RE4-2 VMW-RE4-2-SLV	0.56 (14.2)	0.25 (6.4)	5/16	0.41 (10.3)	3300 (227)
3/8	0.035	1/4	0.035	VMW-RE6-4 VMW-RE6-4-SLV	0.69 (17.5)		7/16	0.47 (11.9)	3300 (227)
1/2	0.049	1/4	0.035	VMW-RE8-4 VMW-RE8-4-SLV	0.81 (20.6)		9/16	0.53 (13.5)	3700 (254)
1/2	0.049	3/8	0.035	VMW-RE8-6 VMW-RE8-6-SLV	0.81 (20.6)		9/16	0.53 (13.5)	3300 (227)

To order fittings manufactured for Surface Finish Ra(Average)<0.4 add BA to the ordering number.
Example: VMW-RE6-4-BA

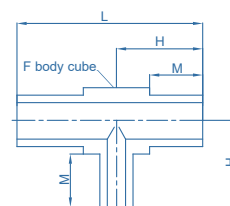
Micro Weld fittings VMW Series

Union Tee



Tube OD in.	Wall Thickness in.	Ordering Number	Dimensions, in.(mm)				Working Pressure psig (bar)
			L	M	F	H	
1/8	0.028	VMW-UT2 VMW-UT2-SLV	0.82 (20.8)	0.25 (6.4)	5/16	0.41 (10.4)	8500 (585)
1/4	0.035	VMW-UT4 VMW-UT4-SLV	0.82 (20.8)		5/16	0.41 (10.4)	5100 (351)
3/8	0.035	VMW-UT6 VMW-UT6-SLV	0.94 (23.9)		7/16	0.47 (11.9)	3300 (227)
1/2	0.049	VMW-UT8 VMW-UT8-SLV	1.06 (26.9)		9/16	0.53 (13.5)	3700 (254)
3/4	0.065	VMW-UT12 VMW-UT12-SLV	1.31 (33.3)		13/16	0.65 (16.6)	2400 (165)

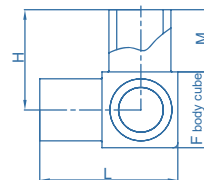
Reducing Tee



Tube OD in.	Wall Thickness in.	Tube OD in.	Wall Thickness mm	Ordering Number	Dimensions, in.(mm)				Working Pressure psig (bar)
					L	M	F	H	
1/4	0.035	1/8	0.028	VMW-RT4-2 VMW-RT4-2-SLV	0.81 (20.6)	0.25 (6.4)	5/16	0.41 (10.3)	3300 (227)
3/8	0.035	1/4	0.035	VMW-RT6-4 VMW-RT6-4-SLV	0.94 (23.9)		7/16	0.47 (11.9)	3300 (227)
1/2	0.049	1/4	0.035	VMW-RT8-4 VMW-RT8-4-SLV	1.06 (26.9)		9/16	0.53 (13.5)	3700 (254)
1/2	0.049	3/8	0.035	VMW-RT8-6 VMW-RT8-6-SLV	1.06 (26.9)		9/16	0.53 (13.5)	3300 (227)

To order fittings manufactured for Surface Finish Ra(Average)<0.4 add BA to the ordering number.
Example: VMW-RT6-4-BA

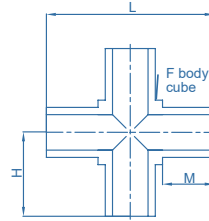
Tribow



Tube OD in.	Wall Thickness in.	Ordering Number	Dimensions, in.(mm)				Working Pressure psig (bar)
			L	M	F	H	
1/4	0.035	VMW-TB4 VMW-TB4-SLV	0.56 (14.2)	0.25 (6.4)	5/16	0.41 (10.4)	5100 (351)
3/8	0.035	VMW-TB6 VMW-TB6-SLV	0.69 (17.5)		7/16	0.47 (11.9)	3300 (227)
1/2	0.049	VMW-TB8 VMW-TB8-SLV	0.81 (20.6)		9/16	0.53 (13.5)	3700 (254)

To order fittings manufactured for Surface Finish Ra(Average)<0.4 add BA to the ordering number.
Example: VMW-TB6-BA

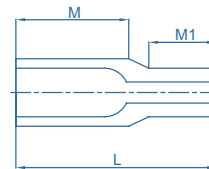
Cross Union



Tube OD in.	Wall Thickness in.	Ordering Number	Dimensions, in.(mm)				Working Pressure psig (bar)
			L	M	F	H	
1/8	0.028	VMW-CU2 VMW-CU2-SLV	0.82 (20.8)	0.25 (6.4)	5/16	0.41 (10.4)	8500 (585)
1/4	0.035	VMW-CU4 VMW-CU4-SLV	0.82 (20.8)		5/16	0.41 (10.4)	5100 (351)
3/8	0.035	VMW-CU6 VMW-CU6-SLV	0.94 (23.9)		7/16	0.47 (11.9)	3300 (227)
1/2	0.049	VMW-CU8 VMW-CU8-SLV	1.06 (26.9)		9/16	0.53 (13.5)	3700 (254)

To order fittings manufactured for Surface Finish Ra(Average)<0.4 add BA to the ordering number.
Example: VMW-CU4-BA

Reducing Union



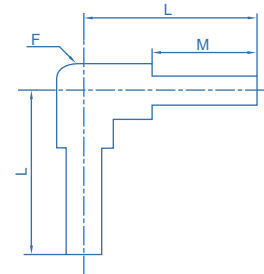
Tube OD in.	Wall Thickness in.	Tube OD in.	Wall Thickness mm	Ordering Number	Dimensions, in.(mm)			Working Pressure psig (bar)
					L	M	M1	
1/4	0.035	1/8	0.028	VMW-RU4-2 VMW-RU4-2-SLV	0.75 (19.0)	0.42 (10.7)	0.25 (6.4)	5100 (351)
3/8	0.035	1/4	0.035	VMW-RU6-4 VMW-RU6-4-SLV				3300 (227)
1/2	0.049	1/4	0.035	VMW-RU8-4 VMW-RU8-4-SLV				3700 (254)
1/2	0.049	3/8	0.035	VMW-RU8-6 VMW-RU8-6-SLV				3300 (227)
3/4	0.065	1/4	0.035	VMW-RU12-4 VMW-RU12-4-SLV				2400 (165)
3/4	0.065	3/8	0.035	VMW-RU12-6 VMW-RU12-6-SLV				2400 (165)
3/4	0.065	1/2	0.049	VMW-RU12-8 VMW-RU12-8-SLV				2400 (165)

To order fittings manufactured for Surface Finish Ra(Average)<0.4 add BA to the ordering number.
Example: VMW-RU6-4-BA

Tube Butt Weld fittings

VTW Series

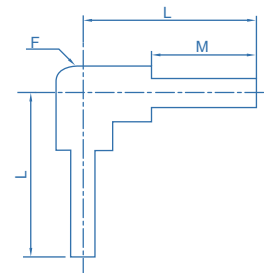
Long Elbow 90°



Tube OD in.	Wall Thickness mm	Ordering Number	Dimensions, in.(mm)			Working Pressure psig (bar)
			L	M	F	
1/4	0.035	VTW-LE4	1.23 (31.2)	0.75 (19.0)	7/16	5100 (351)
3/8	0.035	VTW-LE6	1.20 (30.5)		7/16	3300 (227)
1/2	0.049	VTW-LE8	1.34 (34.0)		11/16	3700 (254)
3/4	0.049	VTW-LE12	1.46 (37.1)		15/16	2400 (165)
1	0.065	VTW-LE16	1.34 (34.0)		1-1/4	1900 (130)

To order fittings manufactured for Surface Finish Ra(Average)<0.4 add BA to the ordering number.
Example: VTW-LE4-BA

Reducing Long Elbow

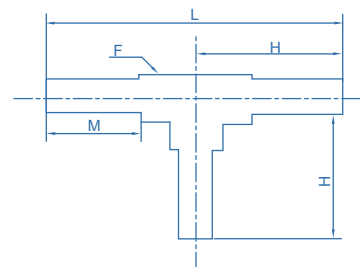


Tube OD in.	Wall Thickness in.	Tube OD in.	Wall Thickness mm	Ordering Number	Dimensions, in.(mm)			Working Pressure psig (bar)
					L	M	F	
3/8	0.039	1/4	0.039	VTW-RLE6-4	0.98 (25)	0.75 (19.0)	6/16	3300 (227)
1/2	0.049	1/4	0.039	VTW-RLE8-4	1.06 (27)		7/16	3700 (254)
1/2	0.049	3/8	0.039	VTW-RLE8-6	1.06 (27)		7/16	3300 (227)
3/4	0.065	1/4	0.039	VTW-RLE12-4	1.24 (31.5)		15/16	2400 (165)
3/4	0.065	3/8	0.039	VTW-RLE12-6	1.24 (31.5)		15/16	2400 (165)
3/4	0.065	1/2	0.049	VTW-RLE12-8	1.24 (31.5)		15/16	2400 (165)

To order fittings manufactured for Surface Finish Ra(Average)<0.4 add BA to the ordering number.
Example: VTW-RLE6-4-BA

Tube Butt Weld fittings VTW Series

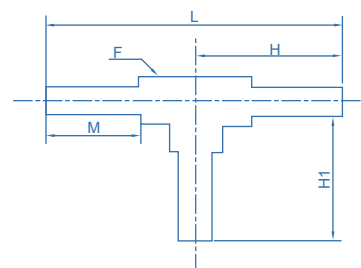
Long Tee



Tube OD in.	Wall Thickness in.	Ordering Number	Dimensions, in.(mm)				Working Pressure psig (bar)
			L	M	F	H	
1/4	0.035	VTW-LT4	2.46 (62.5)	0.75 (19.0)	7/16	1.23 (31.2)	5100 (351)
3/8	0.035	VTW-LT6	2.40 (61.0)		7/16	1.20 (30.5)	3300 (227)
1/2	0.049	VTW-LT8	2.68 (68.1)		11/16	1.34 (34.0)	3700 (254)
3/4	0.049	VTW-LT12	2.91 (73.9)		15/16	1.46 (37.1)	2400 (165)
1	0.065	VTW-LT16	2.68 (68.1)		1-1/4	1.34 (34.0)	1900 (130)

To order fittings manufactured for Surface Finish Ra(Average)<0.4 add BA to the ordering number.
Example: VTW-LT4-BA

Reducing Long Tee



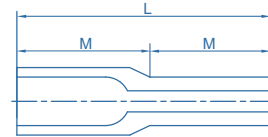
Tube OD in.	Wall Thickness in.	Tube OD	Wall Thickness mm	Ordering Number	Dimensions, in.(mm)					Working Pressure psig (bar)
					L	M	F	H	H1	
3/8	0.035	1/4	0.035	VTW-RLT6-4	2.39 (60.7)	0.75 (19.0)	7/16	1.20 (30.5)	1.23 (31.2)	3300 (227)
1/2	0.049	1/4	0.035	VTW-RLT8-4	2.67 (67.8)		11/16	1.34 (34.0)	1.34 (34.0)	3700 (254)
1/2	0.049	3/8	0.035	VTW-RLT8-6	2.67 (67.8)		11/16	1.34 (34.0)	1.35 (34.3)	3300 (227)
3/4	0.049	1/4	0.035	VTW-RLT12-4	2.91 (73.9)		15/16	1.46 (37.1)	1.48 (37.6)	2400 (165)
3/4	0.049	3/8	0.035	VTW-RLT12-6	2.91 (73.9)		15/16	1.46 (37.1)	1.48 (37.6)	2400 (165)
3/4	0.049	1/2	0.049	VTW-RLT12-8	2.48 (63.0)		15/16	1.24 (31.5)	1.24 (31.5)	2400 (165)

To order fittings manufactured for Surface Finish Ra(Average)<0.4 add BA to the ordering number.
Example: VTW-RLT6-4-BA

Tube Butt Weld fittings

VTW Series

Reducing Long Union

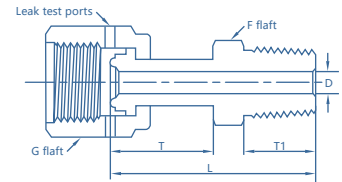


Tube OD in.	Wall Thickness in.	Tube OD in.	Wall Thickness mm	Ordering Number	Dimensions, in.(mm)		Working Pressure psig (bar)
					L	M	
3/8	0.035	1/4	0.035	VTW-RLU6-4	1.50 (38.1)	0.75 (19.0)	3300 (227)
1/2	0.049	1/4	0.035	VTW-RLU8-4			3700 (254)
1/2	0.049	3/8	0.035	VTW-RLU8-6			3300 (227)
3/4	0.049	1/4	0.035	VTW-RLU12-4			2400 (165)
3/4	0.049	3/8	0.035	VTW-RLU12-6			2400 (165)
3/4	0.065	1/2	0.049	VTW-RLU12-8			2400 (165)
1	0.065	1/4	0.035	VTW-RLU16-4			2400 (165)
1	0.065	3/8	0.049	VTW-RLU16-6			2400 (165)
1	0.065	1/2	0.049	VTW-RLU16-8			2400 (165)
1	0.065	3/4	0.049	VTW-RLU16-12			2400 (165)

To order fittings manufactured for Surface Finish Ra(Average)<0.4 add BA to the ordering number.
Example: VTW-RLU6-4-BA

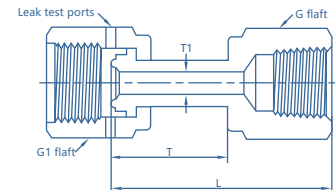
Welded Assemblies

Male NPT Connector



NPT Size in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)						Working Pressure psig (bar)	
				L	T	T1	D	F	G	Ni	316L
1/8	1/4	316L	VWR-FG4-M2	1.58 (40.1)	0.95 (24.1)	0.38 (9.6)	0.18 (4.6)	7/16	3/4	8000 (551)	8000 (551)
1/4	1/4	316L	VWR-FG4-M4	1.79 (45.5)	0.92 (23.4)	0.56 (14.2)	0.18 (4.6)	9/16	3/4	8000 (551)	8000 (551)
3/8	1/2	316L	VWR-FG4-M6	1.89 (48.0)	1.00 (25.4)	0.56 (14.2)	0.40 (10.2)	11/16	1-1/16	3500 (241)	4300 (296)
1/2	1/2	316L	VWR-FG8-M8	2.09 (53.1)	1.01 (25.6)	0.75 (19.1)	0.40 (10.2)	7/8	1-1/16	3500 (241)	4300 (296)

Female NPT Connector



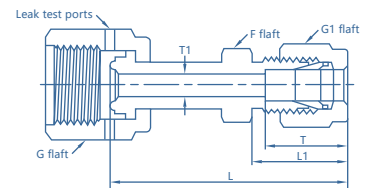
Tube Size in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)					Working Pressure psig (bar)	
				L	T	T1	G	G1	Ni	316L
1/4	1/4	316L	VWR-FG4-F4	1.77 (45.0)	0.92 (23.4)	0.18 (4.6)	3/4	3/4	6600 (454)	6600 (454)
3/8	1/2	316L	VWR-FG8-F6	1.95 (49.5)	1.06 (26.9)	0.40 (10.2)	7/8	1-1/16	3500 (241)	4300 (296)
1/2	1/2	316L	VWR-FG8-F8	2.18 (55.4)	1.04 (26.4)	0.40 (10.2)	1-1/16	1-1/16	3500 (241)	4300 (296)

Weld Assemblies

VWR Series

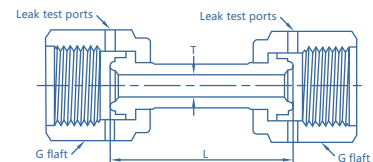
Welded Assemblies

Tube Fitting Connector



Tube Size in.	VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)							Working Pressure psig (bar)	
				L	L1	T	T1	F	G	G1	Ni	316L
1/4	1/4	316L	VWR-FG4-04	1.94 (49.3)	0.70 (17.8)	0.60 (15.2)	0.18 (4.6)	1/2	3/4	9/16	8000 (551)	10000 (689)
3/8	1/4	316L	VWR-FG4-06	1.97 (50.0)	0.76 (19.3)	0.66 (16.8)	0.18 (4.6)	5/8	3/4	11/16	7500 (517)	7500 (517)
1/2	1/2	316L	VWR-FG8-08	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)

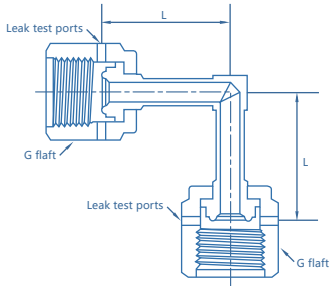
Rotating Female Union



VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)			Working Pressure psig (bar)	
			L	T	G	Ni	316L
1/4	316L	VWR-FU4	1.71 (43.4)	0.18 (4.6)	3/4	8000 (551)	10000 (689)
1/2	316L	VWR-FU8	1.84 (46.7)	0.40 (10.2)	1-1/16	3500 (241)	4300 (296)

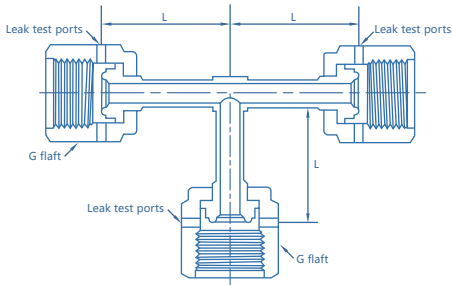
Welded Assemblies

Female Elbow



VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)		Working Pressure psig (bar)	
			L	G	Ni	316L
1/4	316L	VWR-FE4	1.00 (25.4)	3/4	8000 (551)	10000 (689)

Female Tee



VFS Size in.	Material	Ordering Number	Dimensions, in.(mm)		Working Pressure psig (bar)	
			L	G	Ni	316L
1/4	316L	VWR-FT4	1.00 (25.4)	3/4	8000 (551)	10000 (689)

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