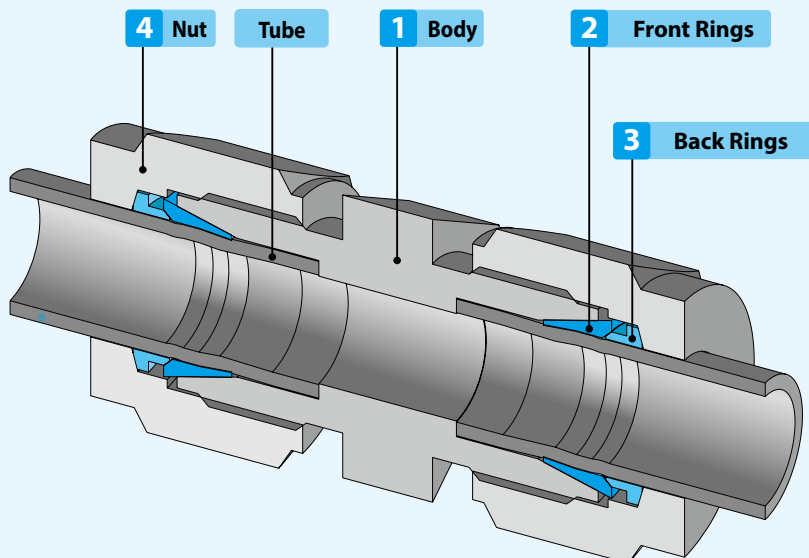


Overview of New V-Lok Tube Fittings

New V-Lok is a high performance tube fitting that combines the sealing properties and quality control technologies required for power plant instrumentation fittings, other industries, and the ultra-pure construction required used in fittings used in semiconductor manufacturing equipment.

New V-Lok is new value series that provides high performance, cost effectiveness, and quick delivery.

New V-Lok tube fittings combine leading edge manufacturing technology and exceptional cost performance.



New V-Lok Tube Fittings are composed of four parts:
1. Body 2. Front Rings 3. Back Rings 4. Nut

New V-Lok How Does it Works?

The **New V-Lok** Tube Fittings is a mechanism used both to seal and to grip tubing. The mechanical advantage and geometry of this kind of fitting produces a leak-tight assembly.

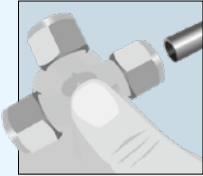
To assemble, simply insert the tube into the complete assembly until the tube bottoms-out against the shoulder of the fitting body (1). The two Rings are driven forward between the nut (4) and fitting body using the mechanical force created by rotating the nut clockwise. The back Rings (3) is driven against the tapered rear of the front Rings (2) and the front Rings (2) is driven by force into the tapered mouth of the body.

The back Rings is swaged radially inwards on the tube while lifting the front Rings out to form a full-faced seal on the tapered surface of the body.

The 1 1/4 turn of the nut from the hand tight position assures consistent drive of the sealing parts. This ensures an effective seal against high pressure as well as ultra high vacuum conditions.

New V-Lok Installation Instructions

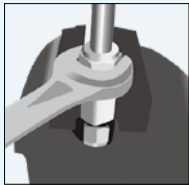
New V-Lok fittings are supplied assembled and hand tight. Disassembly before use can allow the entry of dirt or other particles.



Insert the tubing completely into the New V-Lok tube fittings.

Check that the tube point contacts with the fitting body shoulder and that the nut is hand tight until it cannot be tightened further. At this point it is

recommended that a scribe mark be drawn on the hex of the nut extending onto the fitting body. This mark will serve as an indicator for the starting point and proper pull-up.



Tighten the nut.

1 1/4 turn of the nut are required for 1/4" (6 mm) and larger fittings (see Fig. A). 3/4 turn of the nut is required for 3/16" (4 mm) and smaller fittings (see Fig. B). Plugs (part number:

VUWJP) and port connectors (part number: VUW-PC): First tighten the nuts manually, and then use a wrench to tighten them a further 1/4 turn only for sizes of 6 mm or more, 1/8 turn only for sizes of 3/16 in. or less. Assembly is then complete.

Figure A

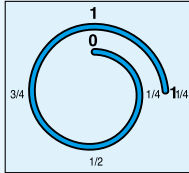
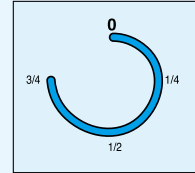


Figure B



Reassembly Instructions

New V-Lok tube fittings may be disconnected and reconnected repeatedly, without loss of the leak-tight seal.

- Before reassembling the parts, ensure that there is no foreign matter on the sealing diagonal face of the fitting body and the front Rings.
- Insert the front Rings until it reaches the body, and then manually tighten the nut enough.
- With a wrench, tighten the nut approximately 1/4 turn. Assembly is then complete.
- Plugs (part number: VUWJP) and port connectors (part number: VUW-PC): First tighten the nuts manually, and then use a wrench to tighten them a further 1/4 turn only for sizes of 6 mm or more, 1/8 turn only for sizes of 3/16 in. or less. Assembly is then complete.

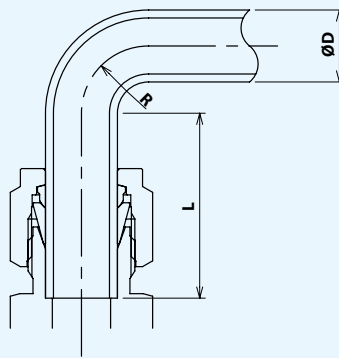
Note:

- After reassembly, the fitting body and nut should return to their original position, or be tightened slightly further.
- For fittings with nominal diameters between 1.6mm (1/16" in) and 4.8mm, tighten the nut 1/6 turn.
- For fittings with nominal diameters of 15.88mm (5/8" in) or larger, it may occasionally be necessary to tighten the nut 1/4 turn or more.
- Don't use the gap inspection gauge for reassembly.

Before Installation

- Use an austenitic stainless steel tube with a seamless bright anneal finish, a hardness of Hv200 or less, and a tolerance within ± 0.1 mm of the tube O.D..
- Please refer to "Tubing Data" on page 12 for recommended tube wall thickness.
- There should be no visible scratches 30mm from either end of the tube. Remove any foreign matter.
- Scratches on the tube may cause leaks. It is therefore important to handle the tube carefully to reduce the risk of leak. Please do not drag tube when taking out of the shelf and drag on the floor to avoid scratching on the tube.
- Before assembling the fittings, cut the tubes to the required length.
- Use a tube cutter to cut the tube. To attain a leak-free connection, the tubing must be cut squarely. A high-quality tube cutter with an appropriate blade for the tubing material is recommended. If it is necessary to use a different method, for example hacksaw cutting, be sure to cut the tube at a right angle, and then remove burrs carefully from the outer circumference by filing at a 45° angle to the center line.
- Tube cutter blades should be replaced regularly to maintain sharpness.
- Before tightening the fitting, ensure that the tube and the fitting are properly aligned.
- Before tightening the fitting, ensure that its body has been secured using a wrench. Never hold the nut in place while attempting to tighten the body.

- Carry out tube bending with a tube bender of the required size. Refer to the following figure and the bending size shown in the right table.



Attention!

A small amount of grease has been applied to the wetted area of this product.

Please kindly contact **Fujikin**, if you require high cleaning level.

We can recommend you F900 Tube Fittings(FINELOK-PURE), UJR Fittings, UPG[®] Fittings, etc. as an appropriate alternative product. We've surely checked the safety for this product in the condition of pressurized with Oxygen at 400°C.

However, Improper handling with Oxygen gas system may result in a system failure or a serious fire accident.

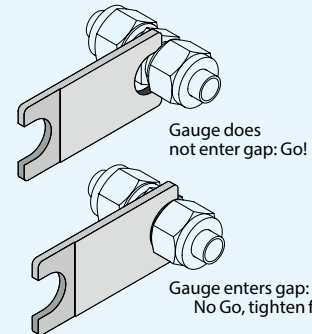
When using Oxygen gas with this product, you are kindly requested to take a proper handling for safety purpose on your own authority and responsibility.

Post-assembly:

Inspection with a "No-Go" gauge (New Fittings Only)

- Position the "No-Go" gauge next to the gap between the nut and body.
- If the gauge cannot fit into the gap, the fitting is sufficiently tightened.
- If the gauge can enter the gap, additional tightening is required.

Note: Do not use the "No-Go" gauge on retightened or pre-tightened fittings.



Ordering Information for the New V-Lok "No-Go" gauge

Part No.	Fitting Size
G-VUW-3.2	2mm, 3mm, 1/8"
G-VUW-9.52-6.35	6mm, 8mm, 1/4", 3/8", 5/16"
G-VUW-12.7-10	10mm, 12mm, 1/2"
G-VUW-19.05-15.88	14mm, 15mm, 16mm, 18mm, 5/8", 3/4"
G-VUW-25.4	25mm, 1"

Tube bending size table

Unit: mm

Nominal Dia. (Tube O.D.)		Length of straight tube part		Bend Radius (Min.)
D		L		R
mm	Inch	L1	L2	
—	1/16	17	11	—
2.3	1/8	25	15	9.5
4	3/16	26	16	11.1
6	1/4	28	17	14.3
8	5/16	30	18	17.5
10	3/8	33	19.5	23.8
12	1/2	41	26	38.1
14, 15, 16	5/8	42	27	57.1
18, 20, 22	3/4, 7/8	44	27	76.2
25	1	52	33	88.9

L1: Length recommended by **Fujikin**.

L2: Length in the case where the minimum dimension is required.

Physical Differences and Marking

New V-Lok Metric Fittings:

Tee & Elbow (see Fig. 1)

Body marked: MM

Straight Connectors: (see Fig. 2)

Body: Stepped shoulder

marked: F-CARP 316 AV⁽¹⁾

Nut: (see Figs. 1 & 2) Stepped shoulder

marked: V-LOK 316 6M⁽²⁾ SD8⁽¹⁾

Fig. 1 Back side

V-LOK 316 6M SD8

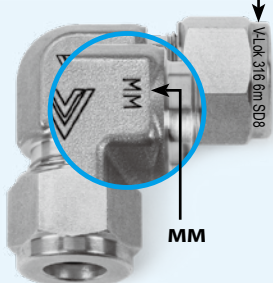


Fig. 1 Front side

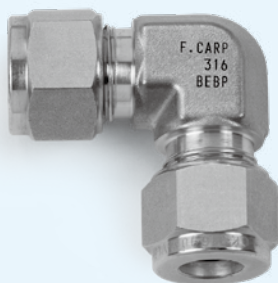
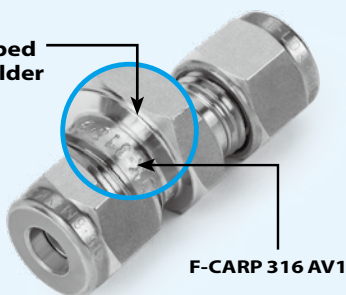


Fig. 2

Stepped
Shoulder



New V-Lok INCH FITTINGS:

Tee & Elbow: (See Fig. 3)

Straight Fittings: (see Fig. 4)

Body: Shoulder marked:

F-CARP 316 AV2⁽¹⁾

Nut: (See Fig. 3 & 4): Shoulder

marked V-LOK 316 1/2⁽²⁾ BU2⁽¹⁾

(1): Material Batch

(2): Tube O.D.

Fig. 3 Back side

V-LOK 316 1/2 BU2

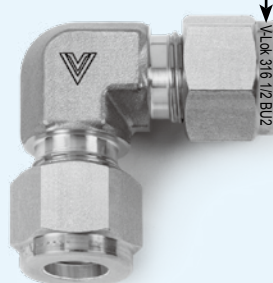


Fig. 3 Front side

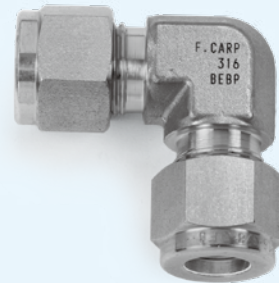
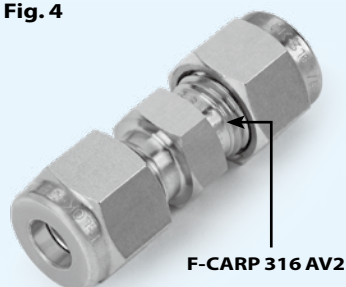


Fig. 4



New V-Lok Tubing Data

Table 1-1 Maximum Allowable Working Pressure Of Stainless Steel Each Tube Wall Thickness (Inch Size)

Tube Wall Thickness	0.010	0.012	0.014	0.016	0.020	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.120
Nom. Dia. (Inch)	Maximum Allowable Working Pressure (psig)												
1/16	5590	6860	8130	9450	12060								
1/8						8540	10950						
3/16						5490	7090	10290					
1/4						4090	5190	7590	10290				
5/16							4090	5880	8090				
3/8							3350	4840	6540				
1/2							2630	3740	5140	6740			
5/8								2940	4040	5250	6040		
3/4								2430	3350	4240	4940	5840	
7/8								2040	2840	3640	4240	4840	
1									2390	3080	3590	4190	4690

(UNIT: psig)

Table 1-2 Maximum Allowable Working Pressure Of Stainless Steel Each Tube Wall Thickness (mm Size)

Tube Wall Thickness	0.028	0.031	0.039	0.047	0.059	0.071	0.079	0.087	0.098	0.11	0.118
Nom. Dia. (mm)	Maximum Allowable Working Pressure (psig)										
2	7540	10870									
3		9710									
4		6960	9570								
6		4490	6090	7830	10290						
8			4490	5650	7540	8090					
10			3480	4350	5800	7390					
12			2900	3620	4780	5940	6810				
14			2320	2900	3910	4930	5510	6230			
15			2170	2750	3620	4490	5220	5800			
16				2460	3330	4200	4780	5360	5800		
18				2170	2900	3770	4200	4640	5360		
20				2030	2610	3330	3770	4200	4780	5510	
22				1740	2320	2900	3330	3770	4350	4930	
25						2610	2900	3330	3770	4200	4640

Table 2: Factors Used To Determine Allowable Working Pressure At Higher Temperature

°F	°C	A.I.S.I. 316
200	93	1
400	204	0.96
600	316	0.85
800	427	0.79
1000	537	0.76

To determine allowable pressure at higher temperatures, multiply allowable working pressure from Tables 1 by factors shown in Table 2.

Table 3: Gas Application Tubing

in		mm	
Tube O.D.	Min. Nominal Wall Thickness	Tube O.D.	Min. Nominal Wall Thickness
1/8" (3.17mm)	0.028" (0.7mm)	3 mm	0.8 mm
3/16" (4.76mm)	0.028" (0.7mm)	6 mm	0.8 mm
1/4" (6.35mm)	0.028" (0.7mm)	8 mm	1 mm
5/16" (7.93mm)	0.035" (0.89mm)	10 mm	1 mm
3/8" (9.52mm)	0.035" (0.89mm)	12 mm	1 mm
1/2" (12.7mm)	0.049" (1.24mm)	14 mm	1.2 mm
5/8" (15.87mm)	0.065" (1.65mm)	16 mm	1.5 mm
3/4" (19.05mm)	0.065" (1.65mm)	18 mm	1.5 mm
7/8" (22.22mm)	0.083" (2.1mm)	20 mm	1.8 mm
1" (25.4mm)	0.083" (2.1mm)	22 mm	2 mm
		25 mm	2.2 mm

For gas applications, we recommend tubing with a greater wall thickness. Table 3 shows the recommended min.wall thicknesses for greater safety and efficiency.

- Attention!**
1. The value of Table 1 is a maximum allowable working pressure calculated from the tube thickness. The maximum allowable working pressure of the fitting is limited from the value of this table according to the application regulations, and use it, please after considering the application regulations and the standard of used equipment.
 2. There is a possibility that the seal decreases remarkably, and consult separately, please when it is used for a long time exceeding 400°C.

Applicable Fluid

Air, Nitrogen gas, Inert gas like Helium, and non - corrosive gas and liquid.

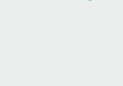
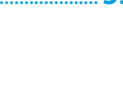
New V-Lok Part Number Designation

All orders should include material description and ordering information (See product table).

V	U	W	H	6.35	B	T/C	V
Product Series	Material	Type of Tube Fittings	Connector Type	Nominal Diameter	Thread Size	Thermoelement Type	New V-Lok Type
New V-Lok	Stainless Steel	Double Rings Compression and Bite Type	Male Connector	Outer Diameter of Tube	R1/4		

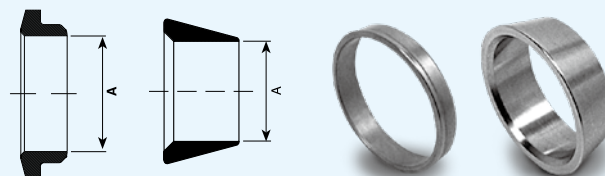
New V-Lok Index

Front Rings 15 	Tube Fittings to Female Thread Connectors (NPT) 24, 25 	Male Connectors (UNF) 41 
Back Rings 15 	Tube Fittings to Female Thread Connectors (Rc) 26, 27 	Male Connectors (NPT) 42 
Nuts 15 	Tube Fittings to Female Thread Connectors (G) 27, 28 	Male Connectors (UNF, Metric Thread) 42 
Inserts For Soft Plastic Tubing ... 16 	Reducers 29, 30, 31, 32 	Male Pipe Weld Connectors ... 43 
Unions 17 	Port Connectors 32 	Tube Socket Weld Unions 44 
Reducing Unions 18, 19 	Reducing Port Connectors 33 	Flange Unions 44 
Union Tees 20 	Male Connectors (NPT) 34, 35 	Male Elbows (NPT) 45, 46 
Reducing Union Tees 21, 22 	Male Connectors (R) 36, 37 	Male Elbows (R) 47, 48 
Union Elbows 23 	Male Connectors (G) 38, 39 	
Reducing Union Elbows 23, 24 	Male Connectors (G) 40 	

New V-Lok Index		
Male Pipe Weld Elbows 49 LR 	Male Branch Tees (R) 57 TS 	Plugs 66 JP 
Tube Socket Weld Elbows 49 LR 	Female Branch Tees (NPT) 58 TG 	Female Tube Adapters (NPT) 67, 68 GA 
Reducing Elbows 49, 50 LR 	Female Branch Tees (Rc,G) 59 TG 	Female Tube Adapters (Rc) Female Tube Adapters (G) 69, 70 GA 
Female Elbows (NPT) 50 LG 	Bulkhead Unions Bulkhead Reducing Unions 60 P 	Male Tube Adapters (NPT) 71, 72 A 
Female Elbows (Rc) 51 LG 	Bulkhead Female Connectors (NPT) 61 GP 	Male Tube Adapters (R) Male Tube Adapters (G) 73, 74 A 
Male Run Tees (NPT) 52 TL 	Bulkhead Female Connectors (Rc) 61 GP 	Male Nuts 75 
Male Run Tees (R) 53 TL 	Bulkhead Reducers 62 RP 	Unions For Chromatograph ... 75 
Female Run Tees (NPT) 54 TLG 	Bulkhead Male Connectors (NPT) 62 HP 	Reducing Unions For Chromatograph 75 
Female Run Tees (Rc) 55 TLG 	Bulkhead Male Connectors (R) 63 HP 	Union Tees For Chromatograph 75 
Adapter Run Tees 55 TLR 	Union Crosses 64 X 	Male Positionable Branch Tees Male Positionable Elbows ... 76,77  
Male Branch Tees (NPT) 56 TS 	Caps 65 JC 	Mounting Dimensions 78 ISO Parallel Thread 79,80,81 Stop Collar 82 Pipe Fittings, Adapters 83,84 UJB,UJS,UJN

Front Rings & Back Rings

S R



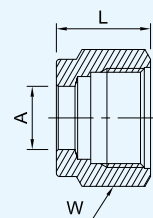
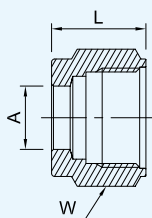
Metric		Inch		
Part Numbers	A Tube O.D.	Part Numbers	A Tube O.D.	
	mm		in	mm
VUW-2SR-V	2	VUW-1.6SR-V	1/16	1.58
VUW-3SR-V	3	VUW-3.2SR-V	1/8	3.17
VUW-4SR-V	4	VUW-4.8SR-V	3/16	4.76
VUW-6SR-V	6	VUW-6.35SR-V	1/4	6.35
VUW-8SR-V	8	VUW-7.93SR-V	5/16	7.93
VUW-10SR-V	10	VUW-9.52SR-V	3/8	9.52
VUW-12SR-V	12	VUW-12.7SR-V	1/2	12.7
VUW-14SR-V	14	VUW-15.88SR-V	5/8	15.87
VUW-15SR-V	15	VUW-19.05SR-V	3/4	19.05
VUW-16SR-V	16	VUW-22.22SR-V	7/8	22.22
VUW-18SR-V	18	VUW-25.4SR-V	1	25.4
VUW-20SR-V	20			
VUW-22SR-V	22			
VUW-25SR-V	25			

Rings Sets

All New V-Lok Rings are available as sets.

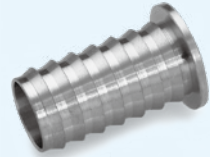
Nuts

N

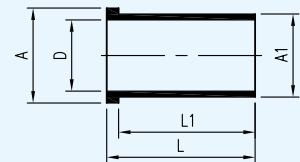


Metric				Inch						
Part Numbers	A Tube O.D.	W	L	Part Numbers	A Tube O.D.		W		L	
	mm	mm	mm		in	mm	in	mm	in	mm
VUW-2N-V	2	12	11.9	VUW-1.6N-V	1/16	1.58	5/16	7.9	0.31	8
VUW-3N-V	3	12	11.9	VUW-3.2N-V	1/8	3.17	7/16	11.1	0.47	11.9
VUW-4N-V	4	12	11.9	VUW-4.8N-V	3/16	4.76	1/2	12.7	0.47	11.9
VUW-6N-V	6	14	12.7	VUW-6.35N-V	1/4	6.35	9/16	14.3	0.5	12.7
VUW-8N-V	8	16	13.5	VUW-7.93N-V	5/16	7.93	5/8	15.9	0.53	13.5
VUW-10N-V	10	19	15.1	VUW-9.52N-V	3/8	9.52	11/16	17.5	0.56	14.3
VUW-12N-V	12	22	17.4	VUW-12.7N-V	1/2	12.7	7/8	22.2	0.69	17.5
VUW-14N-V	14	25	17.4	VUW-15.88N-V	5/8	15.87	1	25.4	0.69	17.5
VUW-15N-V	15	25	17.4	VUW-19.05N-V	3/4	19.05	1 1/8	28.6	0.69	17.5
VUW-16N-V	16	25	17.4	VUW-22.22N-V	7/8	22.22	1 1/4	31.8	0.69	17.5
VUW-18N-V	18	30	17.4	VUW-25.4N-V	1	25.4	1 1/2	38.1	0.81	20.6
VUW-20N-V	20	32	17.4							
VUW-22N-V	22	32	17.4							
VUW-25N-V	25	38	20.6							

IN

[illegible]

Inch						
Part Numbers	A Tube O.D.		A1 Tube I.D.		D	L
	in	mm	in	mm	mm	mm
VUW-IN-4.8X3.2-V	3/16	4.76	1/8	3.17	2.3	11.9
VUW-IN-6.35X3.2-V	1/4	6.35	1/8	3.17	2.3	11.9
VUW-IN-6.35X4.3-V	1/4	6.35	0.17	4.32	2.7	11.9
VUW-IN-6.35X4.8-V	1/4	6.35	3/16	4.76	3.1	11.9
VUW-IN-7.93X3.2-V	5/16	7.93	1/8	3.17	2.3	14.3
VUW-IN-7.93X4.8-V	5/16	7.93	3/16	4.76	3.1	14.3
VUW-IN-7.93X6.35-V	5/16	7.93	1/4	6.35	4.65	14.3
VUW-IN-9.52X4.8-V	3/8	9.52	3/16	4.76	3.1	14.3
VUW-IN-9.52X6.35-V	3/8	9.52	1/4	6.35	4.65	14.3
VUW-IN-12.7X6.35-V	1/2	12.7	1/4	6.35	4.65	19.1
VUW-IN-12.7X9.52-V	1/2	12.7	3/8	9.52	7.8	19.1
VUW-IN-15.88X9.52-V	5/8	15.87	3/8	9.52	7.8	21.5
VUW-IN-15.88X12.7-V	5/8	15.87	1/2	12.7	11.1	21.5
VUW-IN-19.05X12.7-V	3/4	19.05	1/2	12.7	11.1	21.6
VUW-IN-19.05X15.88-V	3/4	19.05	5/8	15.87	14.2	21.6
VUW-IN-25.4X19.05-V	1	25.4	3/4	19.05	17.5	23.8
VUW-IN-25.4X22.22-V	1	25.4	7/8	22.22	20.6	23.8



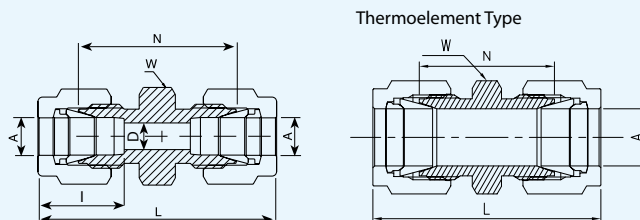
Metric						
Part Numbers	A Tube O.D.		A1	D	L	L1
	in	mm	mm	mm	mm	mm
VUW-IN-6X4-DBZ-V	-	6	4	3	16	14.5
VUW-IN-8X6-DBZ-V	-	8	6	5	17	15.5
VUW-IN-10X8-DBZ-V	-	10	8	7	18	16.5
VUW-IN-12X10-DBZ-V	-	12	10	9	18	16.5
VUW-IN-16X13-DZT-V	-	16	13	11	25	23.5
VUW-IN-16X14-DBZ-V	-	16	14	12	25	23.5

Inch						
Part Numbers	A Tube O.D.		A1	D	L	L1
	in	mm	mm	mm	mm	mm
VUW-IN-6.35X3.9-DBZ-V	1/4	6.35	3.9	2.9	16	14.5
VUW-IN-6.35X4.5-DBZ-V	1/4	6.35	4.5	3.5	16	14.5
VUW-IN-9.52X6.3-DBZ-V	3/8	9.52	6.3	5.3	18	16.5
VUW-IN-9.52X6.9-DBZ-V	3/8	9.52	6.9	5.9	18	16.5
VUW-IN-12.7X9.5-DBZ-V	1/2	12.7	9.5	8.5	18	16.5
VUW-IN-15.88X12.7-DBZ-V	5/8	15.88	12.7	11.2	25	23.5
VUW-IN-19.05X15.88-DBZ-V	3/4	19.05	15.88	13.6	25	23.5
VUW-IN-25.4X22.2-DBZ-V	1	25.4	22.2	19.5	32	30

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Unions

F



Tube (Metric)

Part Numbers	A Tube O.D.	D	W	N	L	I
	mm	mm	mm	mm	mm	mm
VUWF-2-V	2	1.7	12	22.4	35.6	12.9
VUWF-3-V	3	2.4	12	22.1	35.3	12.9
VUWF-4-V	4	2.4	12	24.1	37.3	13.7
VUWF-6-V	6	4.8	14	26.2	41	15.3
VUWF-8-V	8	6.4	15	28.2	43.2	16.2
VUWF-10-V	10	7.9	18	31	46.2	17.2
VUWF-12-V	12	9.5	22	31	51.2	22.8
VUWF-14-V	14	11	24	31.8	52	24.4
VUWF-15-V	15	12	24	31.8	52	24.4
VUWF-16-V	16	12.7	24	31.8	52	24.4
VUWF-18-V	18	15.1	27	33.3	53.5	24.4
VUWF-20-V	20	15.9	30	34.8	55	26
VUWF-22-V	22	18.3	30	34.8	55	26
VUWF-25-V	25	21.8	35	40.4	64.8	31.3

Tube (Inch)

Part Numbers	A Tube O.D.		D		W		N		L		I		Thermoelement Type
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
VUWF-1.6-V	1/16	1.58	0.05	1.3	5/16	7.9	0.69	17.5	0.99	25.1	0.34	8.6	○
VUWF-3.2-V	1/8	3.17	0.09	2.3	7/16	11.1	0.88	22.4	1.4	35.6	0.5	12.7	-
VUWF-4.8-V	3/16	4.76	0.12	3.1	7/16	11.1	0.95	24.1	1.47	37.3	0.54	13.7	-
VUWF-6.35-V	1/4	6.35	0.19	4.8	1/2	12.7	1.03	26.2	1.61	40.9	0.6	15.2	○
VUWF-7.93-V	5/16	7.93	0.25	6.4	9/16	14.3	1.11	28.2	1.69	43	0.64	16.3	-
VUWF-9.52-V	3/8	9.52	0.28	7.1	5/8	15.9	1.19	30.2	1.77	45	0.66	16.8	○
VUWF-12.7-V	1/2	12.7	0.41	10.4	13/16	20.6	1.22	31	2.02	51.2	0.9	22.9	○
VUWF-15.88-V	5/8	15.87	0.5	12.7	15/16	23.8	1.25	31.8	2.05	52.1	0.96	24.4	-
VUWF-19.05-V	3/4	19.05	0.62	15.8	1 1/16	27	1.31	33.3	2.11	53.6	0.96	24.4	-
VUWF-22.22-V	7/8	22.22	0.72	18.3	1 3/16	30.2	1.37	34.8	2.17	55	1.02	25.9	-
VUWF-25.4-V	1	25.4	0.88	22.3	1 3/8	34.9	1.59	40.4	2.55	64.8	1.23	31.2	-

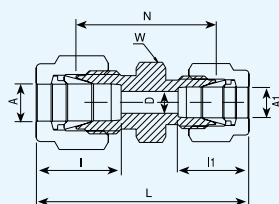
Thermoelement Type can also be manufactured.

For ordering: use catalog number of the selected fitting and add the suffix T/C.

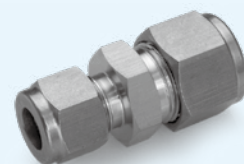
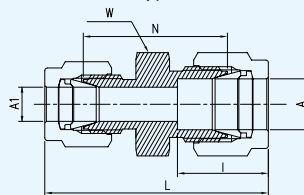
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Reducing Unions

F



Thermoelement Type



Tube (Metric)

Part Numbers	A Tube O.D.	A1 Tube O.D.	D	W	N	L	I	I1
	mm	mm	mm	mm	mm	mm	mm	mm
VUWF-3X2-V	3	2	1.7	12	22.1	35.3	12.9	12.9
VUWF-4X3-V	4	3	2.3	12	23.9	37.1	13.7	12.9
VUWF-6X2-V	6	2	1.7	14	24.6	38.6	15.3	12.9
VUWF-6X3-V	6	3	2.3	14	24.6	38.6	15.3	12.9
VUWF-6X4-V	6	4	2.3	14	25.4	39.4	15.3	13.7
VUWF-8X4-V	8	4	2.4	15	26.6	40.7	16.2	13.7
VUWF-8X6-V	8	6	4.8	15	27.4	42.3	16.2	15.3
VUWF-10X6-V	10	6	4.8	18	29.5	44.5	17.2	15.3
VUWF-10X8-V	10	8	6.4	18	30	45.1	17.2	16.2
VUWF-12X3-V	12	3	2.4	22	28.5	45.2	22.8	12.9
VUWF-12X6-V	12	6	4.8	22	29.5	47	22.8	15.3
VUWF-12X8-V	12	8	6.4	22	30.2	47.8	22.8	16.2
VUWF-12X10-V	12	10	7.9	22	31	48.7	22.8	17.2
VUWF-14X8-V	14	8	6.4	24	31.8	49.4	24.4	16.2
VUWF-14X12-V	14	12	9.5	24	31.8	52	24.4	22.8
VUWF-16X10-V	16	10	7.9	24	31.8	49.5	24.4	17.2
VUWF-16X12-V	16	12	9.5	24	31.8	52	24.4	22.8
VUWF-18X12-V	18	12	9.5	27	33.3	53.5	24.4	22.8
VUWF-25X18-V	25	18	15.1	35	38.6	60.9	31.3	24.4
VUWF-25X20-V	25	20	15.9	35	39.9	62.2	31.3	26

Tube (Metric) To Tube (Inch)

Part Numbers	A Tube O.D.	A1 Tube O.D.		D	W	N	L	I	I1
	mm	in	mm	mm	mm	mm	mm	mm	mm
VUWF-2X1.6-V	2	1/16	1.58	1.3	12	20.6	31	12.9	8.6
VUWF-3.2X2-V	2	1/8	3.17	1.7	12	22	35.2	12.9	12.7
VUWF-3.2X3-V	3	1/8	3.17	2.3	12	22.1	35.3	12.9	12.7
VUWF-4X1.6-V	4	1/16	1.58	1.3	12	21.9	32.3	13.7	8.6
VUWF-4X3.2-V	4	1/8	3.17	2.4	12	23.4	36.6	13.7	12.7
VUWF-6X3.2-V	6	1/8	3.17	2.4	14	24.6	38.5	15.3	12.7
VUWF-6.35X2-V	2	1/4	6.35	1.7	14	24.6	38.6	12.9	15.2
VUWF-6.35X3-V	3	1/4	6.35	2.4	14	24.6	38.6	12.9	15.2
VUWF-6.35X4-V	4	1/4	6.35	2.4	14	25.4	39.4	13.7	15.2
VUWF-6.35X6-V	6	1/4	6.35	4.8	14	26.2	41	15.3	15.2
VUWF-7.93X6-V	6	5/16	7.93	4.8	14	27.4	42.2	15.3	16.3
VUWF-8X3.2-V	8	1/8	3.17	2.3	15	25.7	39.8	16.2	12.7
VUWF-8X6.35-V	8	1/4	6.35	4.8	15	27.4	42.3	16.2	15.2
VUWF-9.52X3-V	3	3/8	9.52	2.4	16	26.9	40.9	16.8	12.9
VUWF-9.52X6-V	6	3/8	9.52	4.8	16	29.5	44.3	15.3	16.8
VUWF-9.52X8-V	8	3/8	9.52	6.4	16	29.5	44.4	16.2	16.8
VUWF-10X3.2-V	10	1/8	3.17	2.3	18	27.7	41.9	17.2	12.7
VUWF-10X6.35-V	10	1/4	6.35	4.8	18	29.5	44.5	17.2	15.2
VUWF-10X7.93-V	10	5/16	7.93	6.4	18	30	45	17.2	16.3
VUWF-10X9.52-V	10	3/8	9.52	7.1	18	31	46	17.2	16.8
VUWF-12X6.35-V	12	1/4	6.35	4.8	22	29.5	47	22.8	15.2
VUWF-12X7.93-V	12	5/16	7.93	6.4	22	30.2	47.7	22.8	16.3
VUWF-12X9.52-V	12	3/8	9.52	7.1	22	31	48.5	22.8	16.8
VUWF-12.7X6-V	6	1/2	12.7	4.8	22	30	47.5	15.3	22.9
VUWF-12.7X8-V	8	1/2	12.7	6.4	22	31	48.6	22.9	16.2
VUWF-12.7X10-V	10	1/2	12.7	7.9	22	31	48.7	17.2	22.9
VUWF-12.7X12-V	12	1/2	12.7	9.5	22	31	51.2	22.8	22.9
VUWF-14X12.7-V	14	1/2	12.7	10.4	24	31.8	52	24.4	22.9
VUWF-15X12.7-V	15	1/2	12.7	10.4	24	31.8	52	24.4	22.9
VUWF-16X15.88-V	16	5/8	15.87	12.7	24	31.8	52	24.4	24.4
VUWF-19.05X18-V	18	3/4	19.05	15.1	27	33.3	53.5	24.4	24.4
VUWF-25.4X25-V	25	1	25.4	21.8	35	40.4	64.8	31.3	31.2

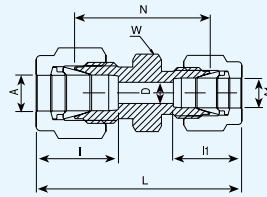
Thermoelement Type can also be manufactured.

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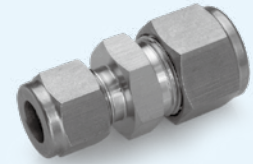
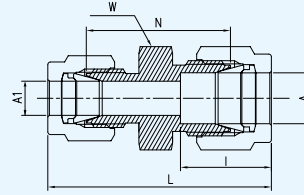
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Reducing Unions

F



Thermoelement Type



Tube (Inch)

Part Numbers	A Tube O.D.		A1 Tube O.D.		D		W		N		L		I		I1		Thermoelement Type
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
VUWF-3.2X1.6-V	1/8	3.17	1/16	1.58	0.05	1.3	7/16	11.1	0.81	20.6	1.22	31	0.5	12.7	0.34	8.6	○
VUWF-4.8X1.6-V	3/16	4.76	1/16	1.58	0.05	1.3	7/16	11.1	0.86	21.8	1.27	32.2	0.54	13.7	0.34	8.6	-
VUWF-4.8X3.2-V	3/16	4.76	1/8	3.17	0.09	2.3	7/16	11.1	0.92	23.4	1.44	36.6	0.54	13.7	0.5	12.7	-
VUWF-6.35X1.6-V	1/4	6.35	1/16	1.58	0.05	1.3	1/2	12.7	0.91	23.1	1.35	34.3	0.6	15.2	0.34	8.6	○
VUWF-6.35X3.2-V	1/4	6.35	1/8	3.17	0.09	2.3	1/2	12.7	0.97	24.6	1.52	38.6	0.6	15.2	0.5	12.7	○
VUWF-6.35X4.8-V	1/4	6.35	3/16	4.76	0.12	3.1	1/2	12.7	1	25.4	1.55	39.4	0.6	15.2	0.54	13.7	-
VUWF-7.93X3.2-V	5/16	7.93	1/8	3.17	0.09	2.3	9/16	14.3	1.01	25.7	1.56	39.7	0.64	16.3	0.5	12.7	-
VUWF-7.93X6.35-V	5/16	7.93	1/4	6.35	0.19	4.8	9/16	14.3	1.08	27.4	1.66	42.2	0.64	16.3	0.6	15.2	-
VUWF-9.52X1.6-V	3/8	9.52	1/16	1.58	0.05	1.3	5/8	15.9	1	25.4	1.44	36.6	0.66	16.8	0.34	8.6	○
VUWF-9.52X3.2-V	3/8	9.52	1/8	3.17	0.09	2.3	5/8	15.9	1.06	26.9	1.61	40.9	0.66	16.8	0.5	12.7	○
VUWF-9.52X6.35-V	3/8	9.52	1/4	6.35	0.19	4.8	5/8	15.9	1.12	28.5	1.7	43.3	0.66	16.8	0.6	15.2	○
VUWF-9.52X7.93-V	3/8	9.52	5/16	7.93	0.25	6.4	5/8	15.9	1.16	29.5	1.74	44.3	0.66	16.8	0.64	16.3	-
VUWF-12.7X1.6-V	1/2	12.7	1/16	1.58	0.05	1.3	13/16	20.6	1	25.4	1.55	39.3	0.9	22.9	0.34	8.6	-
VUWF-12.7X3.2-V	1/2	12.7	1/8	3.17	0.09	2.3	13/16	20.6	1.12	28.5	1.78	45.2	0.9	22.9	0.5	12.7	-
VUWF-12.7X4.8-V	1/2	12.7	3/16	4.76	0.12	3.1	13/16	20.6	1.16	29.5	1.82	46.2	0.9	22.9	0.54	13.7	-
VUWF-12.7X6.35-V	1/2	12.7	1/4	6.35	0.19	4.8	13/16	20.6	1.16	29.5	1.85	47	0.9	22.9	0.6	15.2	○
VUWF-12.7X9.52-V	1/2	12.7	3/8	9.52	0.28	7.1	13/16	20.6	1.22	31	1.91	48.5	0.9	22.9	0.66	16.8	-
VUWF-15.88X9.52-V	5/8	15.87	3/8	9.52	0.28	7.1	15/16	23.8	1.25	31.8	1.94	49.3	0.96	24.4	0.66	16.8	-
VUWF-15.88X12.7-V	5/8	15.87	1/2	12.7	0.41	10.4	15/16	23.8	1.25	31.8	2.05	52	0.96	24.4	0.9	22.9	-
VUWF-19.05X6.35-V	3/4	19.05	1/4	6.35	0.19	4.8	1 1/16	27	1.25	31.8	1.94	49.3	0.96	24.4	0.6	15.2	○
VUWF-19.05X9.52-V	3/4	19.05	3/8	9.52	0.28	7.1	1 1/16	27	1.31	33.3	2	50.8	0.96	24.4	0.66	16.8	-
VUWF-19.05X12.7-V	3/4	19.05	1/2	12.7	0.41	10.4	1 1/16	27	1.31	33.3	2.11	53.5	0.96	24.4	0.9	22.9	-
VUWF-19.05X15.88-V	3/4	19.05	5/8	15.87	0.5	12.7	1 1/16	27	1.31	33.3	2.11	53.5	0.96	24.4	0.96	24.4	-
VUWF-22.22X19.05-V	7/8	22.22	3/4	19.05	0.62	15.8	1 3/16	30.2	1.38	35.1	2.18	55.3	1.02	25.9	0.96	24.4	-
VUWF-25.4X6.35-V	1	25.4	1/4	6.35	0.19	4.8	1 3/8	34.9	1.57	40	2.35	59.6	1.23	31.2	0.6	15.2	-
VUWF-25.4X12.7-V	1	25.4	1/2	12.7	0.41	10.4	1 3/8	34.9	1.5	38.1	2.38	60.4	1.23	31.2	0.9	22.9	-
VUWF-25.4X19.05-V	1	25.4	3/4	19.05	0.62	15.8	1 3/8	34.9	1.5	38.1	2.38	60.4	1.23	31.2	0.96	24.4	-

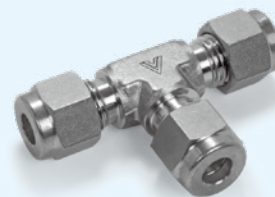
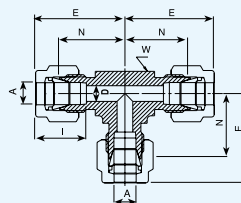
Thermoelement Type can also be manufactured.

For ordering: use catalog number of the selected fitting and add the suffix T/C.

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Union Tees

T



Tube (Metric)

Part Numbers	A Tube O.D.	D		W		N		E		I	
	mm	mm		in	mm	mm		mm		mm	
VUWT-2-V	2	1.7		3/8	9.5	15.7		22.3		12.9	
VUWT-3-V	3	2.4		3/8	9.5	15.7		22.3		12.9	
VUWT-4-V	4	2.3		1/2	12.7	18.8		25.4		13.7	
VUWT-6-V	6	4.8		1/2	12.7	19.6		27		15.3	
VUWT-8-V	8	6.4		5/8	15.9	22.4		29.9		16.2	
VUWT-10-V	10	7.9		11/16	17.5	23.9		31.5		17.2	
VUWT-12-V	12	9.5		13/16	20.6	25.9		36		22.8	
VUWT-14-V	14	11		15/16	23.8	28.7		38.8		24.4	
VUWT-15-V	15	12		15/16	23.8	28.7		38.8		24.4	
VUWT-16-V	16	12.7		15/16	23.8	28.7		38.8		24.4	
VUWT-18-V	18	15.1		1 1/16	27	29.7		39.8		24.4	
VUWT-20-V	20	15.9		1 3/8	34.9	34.5		44.6		26	
VUWT-22-V	22	18.3		1 3/8	34.9	34.5		44.6		26	
VUWT-25-V	25	21.8		1 3/8	34.9	36.8		49		31.3	

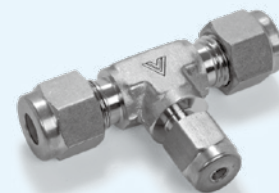
Tube (Inch)

Part Numbers	A Tube O.D.		D		W		N		E		I	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWT-1.6-V	1/16	1.58	0.05	1.3	3/8	9.5	0.55	14	0.7	17.8	0.34	8.6
VUWT-3.2-V	1/8	3.17	0.09	2.3	3/8	9.5	0.62	15.8	0.88	22.4	0.5	12.7
VUWT-4.8-V	3/16	4.76	0.12	3.1	1/2	12.7	0.7	17.8	0.96	24.4	0.54	13.7
VUWT-6.35-V	1/4	6.35	0.19	4.8	1/2	12.7	0.77	19.6	1.06	27	0.6	15.2
VUWT-7.93-V	5/16	7.93	0.25	6.4	5/8	15.9	0.88	22.4	1.17	29.8	0.64	16.3
VUWT-9.52-V	3/8	9.52	0.28	7.1	5/8	15.9	0.91	23.1	1.2	30.5	0.66	16.8
VUWT-12.7-V	1/2	12.7	0.41	10.4	13/16	20.6	1.02	25.9	1.42	36	0.9	22.9
VUWT-15.88-V	5/8	15.87	0.5	12.7	15/16	23.8	1.13	28.7	1.53	38.8	0.96	24.4
VUWT-19.05-V	3/4	19.05	0.62	15.8	1 1/16	27	1.17	29.7	1.57	39.8	0.96	24.4
VUWT-22.22-V	7/8	22.22	0.72	18.3	1 3/8	34.9	1.36	34.5	1.76	44.6	1.02	25.9
VUWT-25.4-V	1	25.4	0.88	22.3	1 3/8	34.9	1.45	36.8	1.93	49	1.23	31.2

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Reducing Union Tees

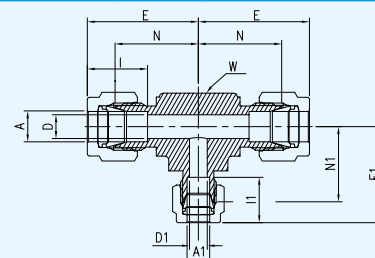
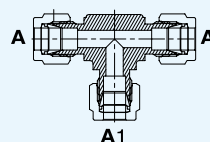
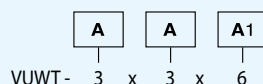
T



Tube (Metric)

Part Numbers	A Tube O.D.		A1 Tube O.D.		E		E1		I		I1		D		D1		W		N		N1	
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	in	mm	mm	mm	mm	mm
VUWT-3X3X6-V	3	6	24.6	26.9	12.9	15.3	2.4	4.8	1/2	12.7	18	19.5										
VUWT-6X6X3-V	6	3	27	26.2	15.3	12.9	4.8	2.4	1/2	12.7	19.6	19.6										
VUWT-8X8X6-V	8	6	29.5	29	16.2	15.3	6.4	4.8	5/8	15.9	22	21.6										
VUWT-8X8X10-V	8	10	31.4	31.5	16.2	17.2	6.4	7.9	11/16	17.5	23.9	23.9										
VUWT-10X10X6-V	10	6	31.5	31.3	17.2	15.3	7.9	4.8	11/16	17.5	23.9	23.9										
VUWT-10X10X8-V	10	8	31.5	31.4	17.2	16.2	7.9	6.4	11/16	17.5	23.9	23.9										
VUWT-12X12X6-V	12	6	36	31.8	22.8	15.3	9.5	4.8	13/16	20.6	25.9	24.4										
VUWT-12X12X10-V	12	10	36	33.5	22.8	17.2	9.5	7.9	13/16	20.6	25.9	25.9										
VUWT-15X15X12-V	15	12	38.8	38.9	24.4	22.8	12	9.5	15/16	23.8	28.7	28.8										
VUWT-16X16X12-V	16	12	38.8	38.9	24.4	22.8	12.7	9.5	15/16	23.8	28.7	28.8										
VUWT-18X18X12-V	18	12	39.8	39.8	24.4	22.8	15.1	9.5	1 1/16	27	29.7	29.7										
VUWT-20X20X10-V	20	10	44.6	42.1	26	17.2	15.9	7.9	1 3/8	34.9	34.5	34.5										
VUWT-22X22X12-V	22	12	44.6	44.6	26	22.8	18.3	9.5	1 3/8	34.9	34.5	34.5										
VUWT-25X25X12-V	25	12	49	44.6	31.3	22.8	21.8	9.5	1 3/8	34.9	36.8	34.5										

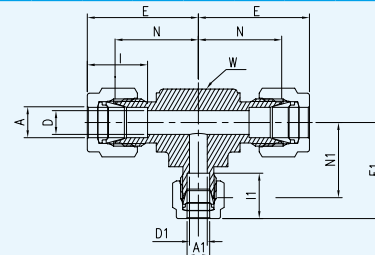
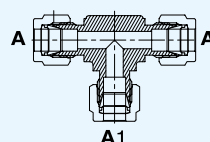
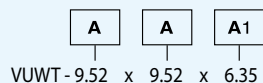
How To Order



Tube (Inch)

Part Numbers	A Tube O.D.		A1 Tube O.D.		E		E1		I		I1		D		D1		W		N		N1	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWT-6.35X6.35X3.2-V	1/4	6.35	1/8	3.17	1.06	27	1.03	26.2	0.60	15.2	0.5	12.7	0.19	4.8	0.09	2.3	1/2	12.7	0.77	19.6	0.77	19.6
VUWT-9.52X9.52X3.2-V	3/8	9.52	1/8	3.17	1.2	30.5	1.11	28.2	0.66	16.8	0.5	12.7	0.28	7.1	0.09	2.3	5/8	15.9	0.91	23.1	0.85	21.6
VUWT-9.52X9.52X6.35-V	3/8	9.52	1/4	6.35	1.2	30.5	1.14	29	0.66	16.8	0.6	15.2	0.28	7.1	0.19	4.8	5/8	15.9	0.91	23.1	0.85	21.6
VUWT-12.7X12.7X6.35-V	1/2	12.7	1/4	6.35	1.42	36	1.25	31.8	0.9	22.9	0.6	15.2	0.41	10.4	0.19	4.8	13/16	20.6	1.02	25.9	0.96	24.4
VUWT-12.7X12.7X9.52-V	1/2	12.7	3/8	9.52	1.42	36	1.31	33.3	0.9	22.9	0.66	16.8	0.41	10.4	0.28	7.1	13/16	20.6	1.02	25.9	1.02	25.9
VUWT-15.88X15.88X6.35-V	5/8	15.87	1/4	6.35	1.53	38.8	1.36	34.6	0.96	24.4	0.6	15.2	0.5	12.7	0.19	4.8	15/16	23.8	1.13	28.7	1.07	27.2
VUWT-15.88X15.88X9.52-V	5/8	15.87	3/8	9.52	1.53	38.8	1.42	36.1	0.96	24.4	0.66	16.8	0.5	12.7	0.28	7.1	15/16	23.8	1.13	28.7	1.13	28.7
VUWT-19.05X19.05X6.35-V	3/4	19.05	1/4	6.35	1.57	39.8	1.46	37.1	0.96	24.4	0.6	15.2	0.62	15.8	0.19	4.8	1 1/16	27	1.17	29.7	1.17	29.7
VUWT-19.05X19.05X9.52-V	3/4	19.05	3/8	9.52	1.57	39.8	1.46	37.1	0.96	24.4	0.66	16.8	0.62	15.8	0.28	7.1	1 1/16	27	1.17	29.7	1.17	29.7
VUWT-19.05X19.05X12.7-V	3/4	19.05	1/2	12.7	1.57	39.8	1.57	39.8	0.96	24.4	0.9	22.9	0.62	15.8	0.41	10.4	1 1/16	27	1.17	29.7	1.17	29.7
VUWT-25.4X25.4X9.52-V	1	25.4	3/8	9.52	1.93	49	1.65	41.9	1.23	31.2	0.66	16.8	0.88	22.3	0.28	7.1	1 3/8	34.9	1.45	36.8	1.36	34.5
VUWT-25.4X25.4X12.7-V	1	25.4	1/2	12.7	1.93	49	1.76	44.6	1.23	31.2	0.9	22.9	0.88	22.3	0.41	10.4	1 3/8	34.9	1.45	36.8	1.36	34.5
VUWT-25.4X25.4X19.05-V	1	25.4	3/4	19.05	1.93	49	1.76	44.6	1.23	31.2	0.96	24.4	0.88	22.3	0.62	15.8	1 3/8	34.9	1.45	36.8	1.36	34.5

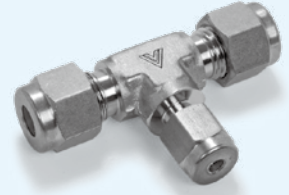
How To Order



"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Reducing Union Tees

T

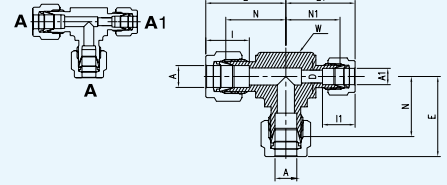


Tube (Inch)

Part Number	A Tube O.D.		A1 Tube O.D.		E		E1		I		I1		D		D1		W		N		N1	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWT-9.52X6.35X9.52-V	3/8	9.52	1/4	6.35	1.2	30.5	1.14	29	0.66	16.8	0.6	15.2	0.28	7.1	0.19	4.8	5/8	15.9	0.91	23.1	0.85	21.6

How To Order

VUWT - 9.52 x 6.35 x 9.52

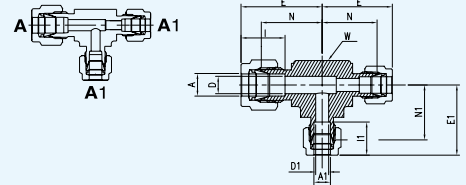


Tube (Inch)

Part Numbers	A Tube O.D.		A1 Tube O.D.		E		E1		I		I1		D		D1		W		N		N1	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWT-12.7X9.52X9.52-V	1/2	12.7	3/8	9.52	1.42	36	1.31	33.3	0.9	22.9	0.66	16.8	0.41	10.4	0.28	7.1	13/16	20.6	1.02	25.9	1.02	25.9
VUWT-15.88X9.52X9.52-V	5/8	15.87	3/8	9.52	1.53	38.8	1.42	36.1	0.96	24.4	0.66	16.8	0.41	10.4	0.28	7.1	15/16	23.8	1.13	28.7	1.13	28.7
VUWT-19.05X9.52X9.52-V	3/4	19.05	3/8	9.52	1.57	39.8	1.46	37.1	0.96	24.4	0.66	16.8	0.41	10.4	0.28	7.1	1 1/16	27	1.17	29.7	1.17	29.7

How To Order

VUWT - 12.7 x 9.52 x 9.52

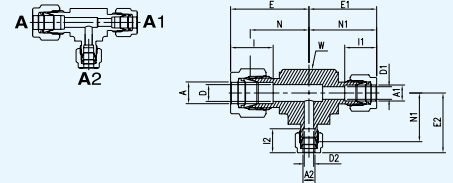


Tube (Inch)

Part Numbers	A Tube O.D.		A1 Tube O.D.		A2 Tube O.D.		E		E1		E2		I		I1		I2		D		D1		D2		W		N		N1	
	in	mm	in	mm	in	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
VUWT-15.88X12.7X9.52-V	5/8	15.87	1/2	12.7	3/8	9.52	38.8	38.8	36.1	24.4	22.9	16.8	12.7	10.4	7.1	15/16	23.8	28.7	28.7											
VUWT-19.05X12.7X9.52-V	3/4	19.05	1/2	12.7	3/8	9.52	39.8	39.8	37.1	24.4	22.9	16.8	15.8	10.4	7.1	1 1/8	27	29.7	29.7											
VUWT-25.4X19.05X9.52-V	1	25.4	3/4	19.05	3/8	9.52	49	44.6	41.9	31.2	24.4	16.8	22.3	15.8	7.1	1 3/8	34.9	36.8	34.5											

How To Order

VUWT - 15.88 x 12.7 x 9.52

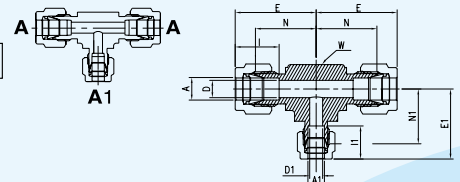


Tube (Inch) To Tube (Metric)

Part Number	A Tube O.D.		A1 Tube O.D.		E		E1		I		I1		D		D1		W		N		N1	
	in	mm	in	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	in	mm	mm	mm	mm	mm
VUWT-9.52X9.52X6-V	3/8	9.52			6	30.5	29	16.8	15.3	7.1			4.8				5/8	15.9	23.1			21.6

How To Order

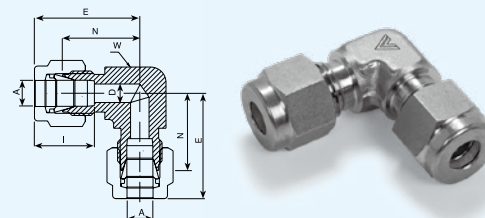
VUWT - 9.52 x 9.52 x 6



"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Union Elbows

L

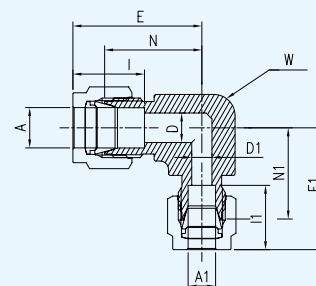


Tube (Metric)

Part Numbers	A Tube O.D.		D		W		N		E		I	
	mm	mm	mm	mm	in	mm	mm	mm	mm	mm	mm	mm
VUWL-3-V	3		2.4		3/8	9.5		15.7		22.3		12.9
VUWL-4-V	4		2.4		1/2	12.7		18.8		25.4		13.7
VUWL-6-V	6		4.8		1/2	12.7		19.6		27		15.3
VUWL-8-V	8		6.4		9/16	14.3		21.3		28.8		16.2
VUWL-10-V	10		7.9		11/16	17.5		23.9		31.5		17.2
VUWL-12-V	12		9.5		13/16	20.6		25.9		36		22.8
VUWL-14-V	14		11		15/16	23.8		27.9		38		24.4
VUWL-15-V	15		12		15/16	23.8		27.9		38		24.4
VUWL-16-V	16		12.7		15/16	23.8		27.9		38		24.4
VUWL-18-V	18		15.1		1 1/16	27		29.7		39.8		24.4
VUWL-20-V	20		15.9		1 3/8	34.9		34.5		44.6		26
VUWL-22-V	22		18.3		1 3/8	34.9		34.5		44.6		26
VUWL-25-V	25		21.8		1 3/8	34.9		36.8		49		31.3

Tube (Inch)

Part Numbers	A Tube O.D.		D		W		N		E		I	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWL-1.6-V	1/16	1.58	0.05	1.3	3/8	9.5	0.55	14	0.7	17.8	0.34	8.6
VUWL-3.2-V	1/8	3.17	0.09	2.3	3/8	9.5	0.62	15.8	0.88	22.4	0.5	12.7
VUWL-4.8-V	3/16	4.76	0.12	3.1	1/2	12.7	0.74	18.8	1	25.4	0.54	13.7
VUWL-6.35-V	1/4	6.35	0.19	4.8	1/2	12.7	0.77	19.6	1.06	27	0.6	15.2
VUWL-7.93-V	5/16	7.93	0.25	6.4	9/16	14.3	0.84	21.3	1.13	28.7	0.64	16.3
VUWL-9.52-V	3/8	9.52	0.28	7.1	5/8	15.9	0.91	23.1	1.2	30.5	0.66	16.8
VUWL-12.7-V	1/2	12.7	0.41	10.4	13/16	20.6	1.02	25.9	1.42	36	0.9	22.9
VUWL-15.88-V	5/8	15.87	0.5	12.7	15/16	23.8	1.1	27.9	1.5	38.1	0.96	24.4
VUWL-19.05-V	3/4	19.05	0.62	15.8	1 1/16	27	1.17	29.7	1.57	39.8	0.96	24.4
VUWL-22.22-V	7/8	22.22	0.72	18.3	1 3/8	34.9	1.36	34.5	1.76	44.6	1.02	25.9
VUWL-25.4-V	1	25.4	0.88	22.3	1 3/8	34.9	1.45	36.8	1.93	49	1.23	31.2



Reducing Union Elbows

L

Tube (Metric)

Part Number	A Tube O.D.		A1 Tube O.D.		E		E1		I		I1		D		D1		W		N		N1	
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	in	mm	mm	mm	mm	mm
VUWL-8X6-V	8		6		28.8		28.7		16.2		15.3		6.4		4.8		9/16	14.3	21.3		21.3	

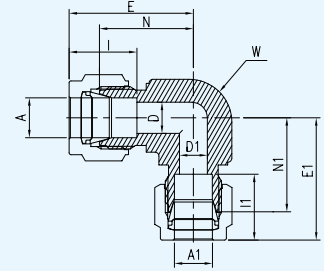
Tube (Inch)

Part Numbers	A Tube O.D.		A1 Tube O.D.		E		E1		I		I1		D		D1		W		N		N1	
	in	mm	in	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	in	mm	mm	mm	mm	mm
VUWL-9.52X6.35-V	3/8	9.52	1/4	6.35	30.5		30.5		16.8		15.2		7.1		4.8		5/8	15.9	23.1		23.1	
VUWL-12.7X9.52-V	1/2	12.7	3/8	9.52	36.1		33.3		22.9		16.8		10.4		7.1		13/16	20.6	25.9		25.9	

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Reducing Union Elbows

L

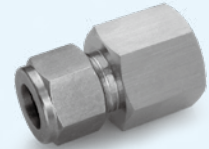
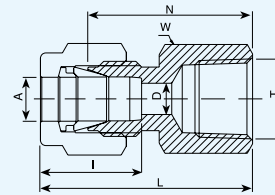


Tube (Metric) To Tube (Inch)

Part Numbers	A Tube O.D.	A1 Tube O.D.		E	E1	I	I1	D	D1	W		N	N1
	mm	in	mm	mm	mm	mm	mm	mm	mm	in	mm	mm	mm
VUWL-10X9.52-V	10	3/8	9.52	31.5	31.3	17.2	16.8	7.9	7.1	11/16	17.5	23.9	23.9

Female Connectors (NPT)

G



Tube (Metric) To Female NPT Thread

Part Numbers	A Tube O.D.	T	D	W	N	L	I
	mm		mm	mm	mm	mm	mm
VUWG-3AN-V	3	1/8NPT	2.4	14	22.1	28.7	12.9
VUWG-3BN-V	3	1/4NPT	2.4	19	26.9	33.5	12.9
VUWG-4AN-V	4	1/8NPT	2.4	14	23.1	29.7	13.7
VUWG-4BN-V	4	1/4NPT	2.4	19	29.4	36	13.7
VUWG-6AN-V	6	1/8NPT	4.8	14	23.9	31.3	15.3
VUWG-6BN-V	6	1/4NPT	4.8	19	28.4	35.8	15.3
VUWG-6CN-V	6	3/8NPT	4.8	22	30.2	37.6	15.3
VUWG-6DN-V	6	1/2NPT	4.8	27	35.1	42.5	15.3
VUWG-8AN-V	8	1/8NPT	6.4	15	24.6	32.1	16.2
VUWG-8BN-V	8	1/4NPT	6.4	19	29.5	37	16.2
VUWG-8CN-V	8	3/8NPT	6.4	22	31	38.5	16.2
VUWG-8DN-V	8	1/2NPT	6.4	27	35.8	43.3	16.2
VUWG-10BN-V	10	1/4NPT	7.9	19	30.2	37.8	17.2
VUWG-10CN-V	10	3/8NPT	7.9	22	31.8	39.4	17.2
VUWG-10DN-V	10	1/2NPT	7.9	27	36.6	44.2	17.2
VUWG-10EN-V	10	3/4NPT	7.9	35	40.4	48	17.2
VUWG-12BN-V	12	1/4NPT	9.5	22	30.2	40.3	22.8
VUWG-12CN-V	12	3/8NPT	9.5	22	31.8	41.9	22.8
VUWG-12DN-V	12	1/2NPT	9.5	27	36.6	46.7	22.8
VUWG-12EN-V	12	3/4NPT	9.5	35	38.9	49	22.8
VUWG-15DN-V	15	1/2NPT	11.9	27	36.6	46.7	24.4
VUWG-16DN-V	16	1/2NPT	12.7	27	36.8	46.9	24.4
VUWG-18EN-V	18	3/4NPT	15.1	35	39.6	49.7	24.4
VUWG-20DN-V	20	1/2NPT	15.9	30	37.8	47.9	26
VUWG-20EN-V	20	3/4NPT	15.9	35	39.6	49.7	26
VUWG-22EN-V	22	3/4NPT	18.3	35	39.6	49.7	26
VUWG-22FN-V	22	1NPT	18.3	41	47.8	57.9	26
VUWG-25EN-V	25	3/4NPT	21.8	35	41.1	53.3	31.3
VUWG-25FN-V	25	1NPT	21.8	41	50	62.2	31.3

Reference Thread Specifications:

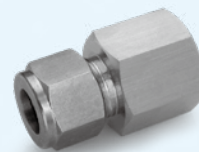
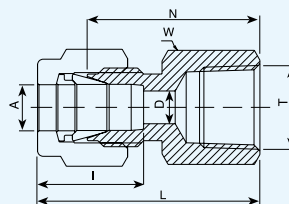
American Standard Pipe Thread (NPT).

NPT (National Pipe Tapered) is made to specifications outlined in ANSI B1.20.1.

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Female Connectors (NPT)

G



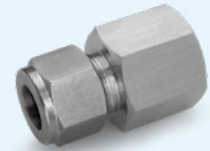
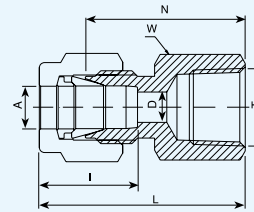
Tube (Inch) To Female NPT Thread

Part Numbers	A Tube O.D.		T	D		W		N		L		I	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm
VUWG-1.6AN-V	1/16	1.58	1/8NPT	0.05	1.3	9/16	14.3	0.81	20.6	0.96	24.4	0.34	8.6
VUWG-3.2AN-V	1/8	3.17	1/8NPT	0.09	2.3	9/16	14.3	0.87	22.1	1.13	28.7	0.5	12.7
VUWG-3.2BN-V	1/8	3.17	1/4NPT	0.09	2.3	3/4	19.1	1.06	26.9	1.32	33.5	0.5	12.7
VUWG-4.8AN-V	3/16	4.76	1/8NPT	0.12	3.1	9/16	14.3	0.91	23.1	1.17	29.7	0.54	13.7
VUWG-6.35AN-V	1/4	6.35	1/8NPT	0.19	4.8	9/16	14.3	0.94	23.9	1.23	31.3	0.6	15.2
VUWG-6.35BN-V	1/4	6.35	1/4NPT	0.19	4.8	3/4	19.1	1.12	28.5	1.41	35.9	0.6	15.2
VUWG-6.35CN-V	1/4	6.35	3/8NPT	0.19	4.8	7/8	22.2	1.19	30.2	1.48	37.6	0.6	15.2
VUWG-6.35DN-V	1/4	6.35	1/2NPT	0.19	4.8	1 1/16	27	1.38	35	1.67	42.4	0.6	15.2
VUWG-7.93AN-V	5/16	7.93	1/8NPT	0.25	6.4	9/16	14.3	0.97	24.6	1.26	32	0.64	16.3
VUWG-7.93BN-V	5/16	7.93	1/4NPT	0.25	6.4	3/4	19.1	1.16	29.5	1.45	36.9	0.64	16.3
VUWG-9.52AN-V	3/8	9.52	1/8NPT	0.28	7.1	5/8	15.9	1	25.4	1.29	32.8	0.66	16.8
VUWG-9.52BN-V	3/8	9.52	1/4NPT	0.28	7.1	3/4	19.1	1.19	30.2	1.48	37.6	0.66	16.8
VUWG-9.52CN-V	3/8	9.52	3/8NPT	0.28	7.1	7/8	22.2	1.25	31.8	1.54	39.2	0.66	16.8
VUWG-9.52DN-V	3/8	9.52	1/2NPT	0.28	7.1	1 1/16	27	1.44	36.6	1.73	44	0.66	16.8
VUWG-9.52EN-V	3/8	9.52	3/4NPT	0.28	7.1	1 5/16	33.3	1.59	40.4	1.88	47.8	0.66	16.8
VUWG-12.7BN-V	1/2	12.7	1/4NPT	0.41	10.4	13/16	20.6	1.19	30.2	1.59	40.3	0.9	22.9
VUWG-12.7CN-V	1/2	12.7	3/8NPT	0.41	10.4	7/8	22.2	1.25	31.8	1.65	41.9	0.9	22.9
VUWG-12.7DN-V	1/2	12.7	1/2NPT	0.41	10.4	1 1/16	27	1.44	36.6	1.84	46.7	0.9	22.9
VUWG-12.7EN-V	1/2	12.7	3/4NPT	0.41	10.4	1 5/16	33.3	1.5	38.1	1.9	48.2	0.9	22.9
VUWG-12.7FN-V	1/2	12.7	1NPT	0.41	10.4	1 5/8	41.3	1.87	47.5	2.27	57.6	0.9	22.9
VUWG-15.88CN-V	5/8	15.87	3/8NPT	0.5	12.7	15/16	23.8	1.25	31.8	1.65	41.9	0.96	24.4
VUWG-15.88DN-V	5/8	15.87	1/2NPT	0.5	12.7	1 1/16	27	1.44	36.6	1.84	46.7	0.96	24.4
VUWG-15.88EN-V	5/8	15.87	3/4NPT	0.5	12.7	1 5/16	33.3	1.5	38.1	1.9	48.2	0.96	24.4
VUWG-19.05CN-V	3/4	19.05	3/8NPT	0.56	14.2	1 1/16	27	1.25	31.8	1.65	41.9	0.96	24.4
VUWG-19.05DN-V	3/4	19.05	1/2NPT	0.62	15.8	1 1/16	27	1.44	36.6	1.84	46.7	0.96	24.4
VUWG-19.05EN-V	3/4	19.05	3/4NPT	0.62	15.8	1 5/16	33.3	1.5	38.1	1.9	48.2	0.96	24.4
VUWG-19.05FN-V	3/4	19.05	1NPT	0.62	15.8	1 5/8	41.3	1.97	50	2.37	60.1	0.96	24.4
VUWG-22.22EN-V	7/8	22.22	3/4NPT	0.72	18.3	1 5/16	33.3	1.56	39.6	1.96	49.7	1.02	25.9
VUWG-25.4EN-V	1	25.4	3/4NPT	0.88	22.3	1 3/8	34.9	1.62	41.2	2.1	53.4	1.23	31.2
VUWG-25.4FN-V	1	25.4	1NPT	0.88	22.3	1 5/8	41.3	1.97	50	2.45	62.2	1.23	31.2

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Female Connectors (Rc)

G



Tube (Metric) To Female ISO Tapered Thread

Part Numbers	A Tube O.D.	T	D	W	N	L	I
	mm		mm	mm	mm	mm	mm
VUWG-3A-V	3	Rc 1/8	2.4	14	22.1	28.7	12.9
VUWG-4A-V	4	Rc 1/8	2.4	14	23.1	29.7	13.7
VUWG-4B-V	4	Rc 1/4	2.4	19	28.4	35	13.7
VUWG-6A-V	6	Rc 1/8	4.8	14	23.9	31.3	15.3
VUWG-6B-V	6	Rc 1/4	4.8	19	28.4	35.8	15.3
VUWG-6C-V	6	Rc 3/8	4.8	22	30.2	37.6	15.3
VUWG-6D-V	6	Rc 1/2	4.8	27	35.1	42.5	15.3
VUWG-8A-V	8	Rc 1/8	6.4	14	24.6	32.1	16.2
VUWG-8B-V	8	Rc 1/4	6.4	19	29.5	37	16.2
VUWG-8C-V	8	Rc 3/8	6.4	22	31	38.5	16.2
VUWG-8D-V	8	Rc 1/2	6.4	27	35.8	43.3	16.2
VUWG-10A-V	10	Rc 1/8	7.9	18	25.4	33	17.2
VUWG-10B-V	10	Rc 1/4	7.9	19	30.2	37.8	17.2
VUWG-10C-V	10	Rc 3/8	7.9	22	31.8	39.4	17.2
VUWG-10D-V	10	Rc 1/2	7.9	27	36.6	44.2	17.2
VUWG-12A-V	12	Rc 1/8	7	22	25.4	35.5	22.8
VUWG-12B-V	12	Rc 1/4	9.5	22	30.2	40.3	22.8
VUWG-12C-V	12	Rc 3/8	9.5	22	31.8	41.9	22.8
VUWG-12D-V	12	Rc 1/2	9.5	27	36.6	46.7	22.8
VUWG-12E-V	12	Rc 3/4	9.5	35	38.9	49	22.8
VUWG-14B-V	14	Rc 1/4	11	24	31.8	41.9	24.4
VUWG-15C-V	15	Rc 3/8	11.9	24	31.8	41.9	24.4
VUWG-15D-V	15	Rc 1/2	12	27	36.6	46.7	24.4
VUWG-16C-V	16	Rc 3/8	12.7	24	31.8	41.9	24.4
VUWG-16D-V	16	Rc 1/2	12.7	27	36.8	46.9	24.4
VUWG-18C-V	18	Rc 3/8	14.2	27	31.8	42.9	24.4
VUWG-20D-V	20	Rc 1/2	15.9	30	37.8	47.9	26
VUWG-20E-V	20	Rc 3/4	15.9	35	39.6	49.7	26
VUWG-22E-V	22	Rc 3/4	18.3	35	39.6	49.7	26
VUWG-22F-V	22	Rc 1	18.3	41	47.8	57.9	26
VUWG-25E-V	25	Rc 3/4	21.8	35	41.1	53.3	31.3
VUWG-25F-V	25	Rc 1	21.8	41	50	62.2	31.3

Designation:

R marking on hex of body

Reference Thread Specifications:

DIN - ISO 2999

BS - 21

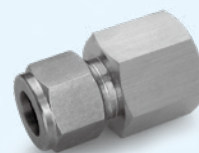
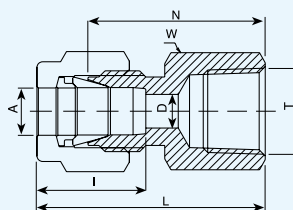
JIS - B0203

ISO - 7/1-BSP-T

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Female Connectors (Rc)

G



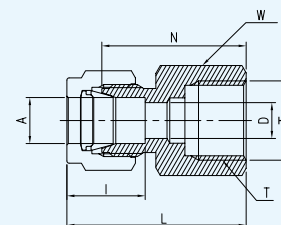
Tube (Inch) To Female ISO Tapered Thread

Part Numbers	A Tube O.D.		T	D		W		N		L		I	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm
VUWG-1.6B-V	1/16	1.58	Rc 1/4	0.05	1.3	3/4	19.1	1.06	26.9	1.21	30.7	0.34	8.6
VUWG-3.2A-V	1/8	3.17	Rc 1/8	0.09	2.3	9/16	14.3	0.87	22.1	1.13	28.7	0.5	12.7
VUWG-3.2B-V	1/8	3.17	Rc 1/4	0.09	2.3	3/4	19.1	1.06	26.9	1.32	33.5	0.5	12.7
VUWG-4.8A-V	3/16	4.76	Rc 1/8	0.12	3.04	9/16	14.3	0.91	23.11	1.17	29.7	0.54	13.7
VUWG-6.35A-V	1/4	6.35	Rc 1/8	0.19	4.8	9/16	14.3	0.94	23.9	1.23	31.3	0.6	15.2
VUWG-6.35B-V	1/4	6.35	Rc 1/4	0.19	4.8	3/4	19.1	1.12	28.5	1.41	35.9	0.6	15.2
VUWG-6.35C-V	1/4	6.35	Rc 3/8	0.19	4.8	7/8	22.2	1.19	30.2	1.48	37.6	0.6	15.2
VUWG-6.35D-V	1/4	6.35	Rc 1/2	0.19	4.8	1 1/16	27	1.38	35	1.67	42.4	0.6	15.2
VUWG-7.93A-V	5/16	7.93	Rc 1/8	0.25	6.4	9/16	14.3	0.97	24.6	1.26	32	0.64	16.3
VUWG-7.93B-V	5/16	7.93	Rc 1/4	0.25	6.4	3/4	19.1	1.16	29.5	1.45	36.9	0.64	16.3
VUWG-9.52A-V	3/8	9.52	Rc 1/8	0.28	7.1	5/8	15.9	1	25.4	1.29	32.8	0.66	16.8
VUWG-9.52B-V	3/8	9.52	Rc 1/4	0.28	7.1	3/4	19.1	1.19	30.2	1.48	37.6	0.66	16.8
VUWG-9.52C-V	3/8	9.52	Rc 3/8	0.28	7.1	7/8	22.2	1.25	31.8	1.54	39.2	0.66	16.8
VUWG-9.52D-V	3/8	9.52	Rc 1/2	0.28	7.1	1 1/16	27	1.44	36.6	1.73	44	0.66	16.8
VUWG-12.7B-V	1/2	12.7	Rc 1/4	0.41	10.4	13/16	20.6	1.19	30.2	1.59	40.3	0.9	22.9
VUWG-12.7C-V	1/2	12.7	Rc 3/8	0.41	10.4	7/8	22.2	1.25	31.8	1.65	41.9	0.9	22.9
VUWG-12.7D-V	1/2	12.7	Rc 1/2	0.41	10.4	1 1/16	27	1.44	36.6	1.84	46.7	0.9	22.9
VUWG-12.7E-V	1/2	12.7	Rc 3/4	0.41	10.4	1 5/16	33.3	1.5	38.1	1.9	48.2	0.9	22.9
VUWG-15.88C-V	5/8	15.87	Rc 3/8	0.5	12.7	15/16	23.8	1.25	31.8	1.65	41.9	0.96	24.4
VUWG-15.88D-V	5/8	15.87	Rc 1/2	0.5	12.7	1 1/16	27	1.44	36.6	1.84	46.7	0.96	24.4
VUWG-15.88E-V	5/8	15.87	Rc 3/4	0.5	12.7	1 5/16	33.3	1.5	38.1	1.90	48.2	0.96	24.4
VUWG-19.05D-V	3/4	19.05	Rc 1/2	0.62	15.8	1 1/16	27	1.44	36.6	1.84	46.7	0.96	24.4
VUWG-19.05E-V	3/4	19.05	Rc 3/4	0.62	15.8	1 5/16	33.3	1.5	38.1	1.9	48.2	0.96	24.4
VUWG-22.22C-V	7/8	22.22	Rc 3/8	0.72	18.3	1 3/16	30.2	1.39	35.2	1.78	45.3	1.02	25.9
VUWG-22.22E-V	7/8	22.22	Rc 3/4	0.72	18.3	1 5/16	33.3	1.56	39.6	1.96	49.8	1.02	25.9
VUWG-25.4E-V	1	25.4	Rc 3/4	0.88	22.3	1 3/8	34.9	1.62	41.2	2.1	53.4	1.23	31.2
VUWG-25.4F-V	1	25.4	Rc 1	0.88	22.3	1 5/8	41.3	1.97	50	2.45	62.2	1.23	31.2

Female Connectors (G)

For gasket thicknesses of 4mm or less, use a part number with "-PG".

G



Tube (Metric) To Female ISO Parallel Thread

Part Numbers	A Tube O.D.		T	D	W	N	L	I
	mm	mm						
VUWG-3BF-V	3	G1/4	2.4	19	28.7	35.3	12.9	
VUWG-6AF-V	6	G1/8	4	14	25	32.4	15.3	
VUWG-6BF-V	6	G1/4	4.8	19	30.2	37.6	15.3	
VUWG-6CF-V	6	G3/8	4.8	24	30.2	37.6	15.3	
VUWG-6DF-V	6	G1/2	4.8	27	36.1	43.5	15.3	
VUWG-8BF-V	8	G1/4	5.5	19	31	38.5	16.2	
VUWG-8CF-V	8	G3/8	6.4	24	28.7	36.2	16.2	
VUWG-8DF-V	8	G1/2	7	27	33.5	41	16.2	
VUWG-10BF-V	10	G1/4	5.5	19	31.8	39.4	17.2	
VUWG-10CF-V	10	G3/8	6.5	24	31.2	38.8	17.2	
VUWG-10DF-V	10	G1/2	7	27	34.5	42.1	17.2	
VUWG-12BF-V	12	G1/4	5.5	22	31.8	41.9	22.8	
VUWG-12CF-V	12	G3/8	6.5	24	34.3	44.4	22.8	
VUWG-12DF-V	12	G1/2	7	27	38.1	48.2	22.8	
VUWG-14DF-V	14	G1/2	7	27	38.1	48.2	24.4	
VUWG-20DF-V	20	G1/2	7	30	44.2	54.3	26	
VUWG-22DF-V	22	G1/2	7	30	44.2	54.3	26	

Tube (Inch) To Female ISO Parallel Thread

Part Numbers	A Tube O.D.		T	D		W		N		L		I	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm
VUWG-3.2AF-V	1/8	3.17	G1/8	0.09	2.3	9/16	14.3	0.96	24.5	1.22	31.1	0.50	12.7
VUWG-3.2BF-V	1/8	3.17	G1/4	0.09	2.3	3/4	19.1	1.13	28.7	1.39	35.3	0.50	12.7
VUWG-6.35AF-V	1/4	6.35	G1/8	0.16	4	9/16	14.3	0.98	25	1.28	32.4	0.60	15.2
VUWG-6.35BF-V	1/4	6.35	G1/4	0.19	4.8	3/4	19.1	1.19	30.2	1.48	37.6	0.60	15.2
VUWG-6.35CF-V	1/4	6.35	G3/8	0.19	4.8	15/16	23.8	1.19	30.2	1.48	37.6	0.60	15.2
VUWG-6.35DF-V	1/4	6.35	G1/2	0.19	4.8	1 1/16	27	1.42	36.1	1.71	43.5	0.60	15.2
VUWG-7.93BF-V	5/16	7.93	G1/4	0.22	5.5	3/4	19.1	1.22	31	1.51	38.4	0.64	16.3
VUWG-7.93DF-V	5/16	7.93	G1/2	0.25	6.4	1 1/16	27	1.32	33.5	1.61	40.9	0.64	16.3
VUWG-9.52BF-V	3/8	9.52	G1/4	0.22	5.5	3/4	19.1	1.25	31.8	1.54	39.2	0.66	16.8
VUWG-9.52CF-V	3/8	9.52	G3/8	0.26	6.6	15/16	23.8	1.23	31.2	1.52	38.6	0.66	16.8
VUWG-9.52DF-V	3/8	9.52	G1/2	0.28	7.1	1 1/16	27	1.36	34.5	1.65	41.9	0.66	16.8
VUWG-12.7BF-V	1/2	12.7	G1/4	0.22	5.5	13/16	20.6	1.25	31.8	1.65	41.9	0.90	22.9
VUWG-12.7CF-V	1/2	12.7	G3/8	0.26	6.5	15/16	23.8	1.35	34.3	1.75	44.4	0.90	22.9
VUWG-12.7DF-V	1/2	12.7	G1/2	0.28	7.1	1 1/16	27	1.50	38.1	1.90	48.2	0.90	22.9

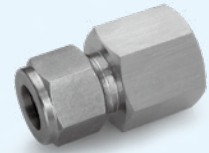
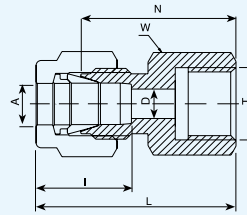
Reference Thread Specifications:

DIN - ISO 228/1 JIS - B0202
BS - 2779 ISO - 228/1-BSP-P

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Female Connectors (G)

G



Tube (Metric) To Female ISO Parallel Thread

Part Numbers	A Tube O.D.		T	D	W		N	L	I
	in	mm			in	mm			
VUWG-6AF-PG-V	1/8	3.17	G 1/8	4.8	3/16	4.8	25	32.4	15.3
VUWG-6BF-PG-V	1/8	3.17	G 1/4	4.8	3/16	4.8	30.2	37.6	15.3
VUWG-6CF-PG-V	1/8	3.17	G 3/8	4.8	3/16	4.8	30.2	37.6	15.3
VUWG-6DF-PG-V	1/8	3.17	G 1/2	4.8	3/16	4.8	36.1	43.5	15.3
VUWG-8BF-PG-V	1/4	6.35	G 1/4	5.5	1/8	9.52	31	38.5	16.2
VUWG-8CF-PG-V	1/4	6.35	G 3/8	5.5	1/8	9.52	29.6	37.1	16.2
VUWG-8DF-PG-V	1/4	6.35	G 1/2	5.5	1/8	9.52	33.5	41	16.2
VUWG-10BF-PG-V	3/8	9.52	G 1/4	5.5	1/4	12.7	31.8	39.4	17.2
VUWG-10CF-PG-V	3/8	9.52	G 3/8	5.5	1/4	12.7	31.2	38.8	17.2
VUWG-10DF-PG-V	3/8	9.52	G 1/2	5.5	1/4	12.7	34.5	42.1	17.2
VUWG-12AF-PG-V	1/2	12.7	G 1/8	5.5	3/8	9.52	28.8	38.9	22.8
VUWG-12BF-PG-V	1/2	12.7	G 1/4	5.5	3/8	9.52	31.8	41.9	22.8
VUWG-12CF-PG-V	1/2	12.7	G 3/8	5.5	3/8	9.52	34.3	44.4	22.8
VUWG-12DF-PG-V	1/2	12.7	G 1/2	5.5	3/8	9.52	38.1	48.2	22.8

Tube (Inch) To Female ISO Parallel Thread

Part Numbers	A Tube O.D.		T	D	W		N	L	I
	in	mm			in	mm			
VUWG-1.6CF-PG-V	1/16	1.58	G3/8	1.3	15/16	23.8	31	34.8	8.6
VUWG-3.2AF-PG-V	1/8	3.17	G1/8	2.3	9/16	14.3	24.5	31.1	12.7
VUWG-3.2BF-PG-V	1/8	3.17	G1/4	2.3	3/4	19.1	28.7	35.3	12.7
VUWG-3.2CF-PG-V	1/8	3.17	G3/8	2.3	15/16	23.8	32.7	39.3	12.7
VUWG-6.35AF-PG-V	1/4	6.35	G1/8	4.8	9/16	14.3	25	32.4	15.2
VUWG-6.35BF-PG-V	1/4	6.35	G1/4	4.8	3/4	19.1	30.2	37.6	15.2
VUWG-6.35CF-PG-V	1/4	6.35	G3/8	4.8	15/16	23.8	30.2	37.6	15.2
VUWG-6.35DF-PG-V	1/4	6.35	G1/2	4.8	1-1/16	27	36.1	43.5	15.2
VUWG-7.93BF-PG-V	5/16	7.93	G1/4	5.5	3/4	19.1	31	38.4	16.3
VUWG-7.93DF-PG-V	5/16	7.93	G1/2	5.5	1 1/16	27	33.5	40.9	16.3
VUWG-9.52BF-PG-V	3/8	9.52	G1/4	5.5	3/4	19.1	31.8	39.2	16.8
VUWG-9.52CF-PG-V	3/8	9.52	G3/8	5.5	15/16	23.8	32.1	39.5	16.8
VUWG-9.52DF-PG-V	3/8	9.52	G1/2	5.5	1-1/16	27	34.5	41.9	16.8
VUWG-12.7BF-PG-V	1/2	12.7	G1/4	5.5	13/16	20.6	31.8	41.9	22.9
VUWG-12.7CF-PG-V	1/2	12.7	G3/8	5.5	15/16	23.8	34.3	44.4	22.9
VUWG-12.7DF-PG-V	1/2	12.7	G1/2	5.5	1-1/16	27	38.1	48.2	22.9

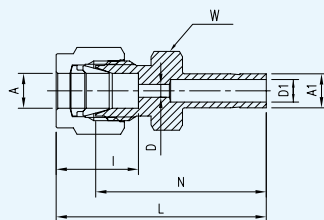
Designation:

PG marking on hex of body

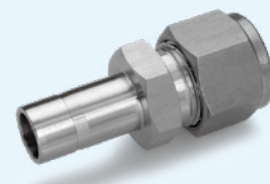
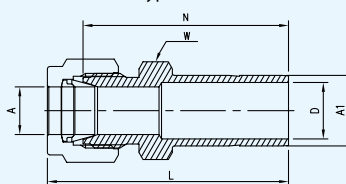
"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Reducers

R



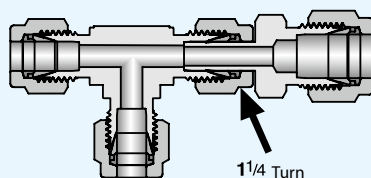
Thermoelement Type



Tube (Metric) To Tube (Metric)

Part Numbers	A Tube O.D.	A1 Tube O.D.	D	D1	W	N	L	I	Thermoelement Type
	mm	mm	mm	mm	mm	mm	mm	mm	
VUWR-2X3-V	2	3	1.7	2.1	12	26.9	33.5	12.9	-
VUWR-3X4-V	3	4	2.2	2.2	12	28.4	35	12.9	-
VUWR-3X6-V	3	6	2.4	4	12	29.5	36.1	12.9	-
VUWR-3X8-T/C-V	3	8	5.6	-	12	31	37.6	-	○
VUWR-3X10-V	3	10	2.4	7.1	14	31.8	38.4	12.9	-
VUWR-4X6-V	4	6	2.4	4	12	30.5	37.1	13.7	-
VUWR-6X3-V	6	3	2.1	2.1	14	29.5	36.9	15.3	-
VUWR-6X4-V	6	4	2.2	2.2	14	30.5	37.9	15.3	-
VUWR-6X8-V	6	8	4.8	5.6	14	32.5	39.9	15.3	-
VUWR-6X10-V	6	10	4.8	7.1	14	33.3	40.7	15.3	-
VUWR-6X12-V	6	12	4.8	8.8	14	38.9	46.3	15.3	○
VUWR-6X18-V	6	18	4.8	13.9	22	42.2	49.6	15.3	-
VUWR-8X6-V	8	6	4	4	15	32.8	40.3	16.2	-
VUWR-8X10-V	8	10	6.4	7.1	15	34.5	42	16.2	-
VUWR-8X12-V	8	12	6.4	8.8	15	40.1	47.6	16.2	-
VUWR-10X6-V	10	6	4	4	18	34.8	42.4	17.2	-
VUWR-10X8-V	10	8	5.6	5.6	18	35.8	43.4	17.2	-
VUWR-10X12-V	10	12	7.9	8.8	18	42.2	49.8	17.2	-
VUWR-10X15-V	10	15	7.9	12	18	43.7	51.3	17.2	-
VUWR-10X16-V	10	16	7.9	12.7	18	43.7	51.3	17.2	-
VUWR-10X18-V	10	18	7.9	13.9	22	43.7	51.3	17.2	-
VUWR-12X6-V	12	6	4	4	22	34.8	44.9	22.8	-
VUWR-12X8-V	12	8	5.6	5.6	22	35.8	45.9	22.8	-
VUWR-12X10-V	12	10	7.1	7.1	22	36.6	46.7	22.8	-
VUWR-12X16-V	12	16	9.5	12.7	22	43.7	53.8	22.8	-
VUWR-12X18-V	12	18	9.5	13.9	22	43.7	53.8	22.8	-
VUWR-12X20-V	12	20	9.5	15.1	22	46	56.1	22.8	-
VUWR-12X22-V	12	22	9.5	18.3	24	46	56.1	22.8	-
VUWR-12X25-V	12	25	9.5	19.8	27	52.3	62.4	22.8	-
VUWR-14X12-V	14	12	8.8	8.8	24	44.9	55	24.4	-
VUWR-16X12-V	16	12	8.8	8.8	24	42.9	53	24.4	-
VUWR-18X12-V	18	12	8.8	8.8	27	44.5	54.6	24.4	-
VUWR-18X16-V	18	16	12.7	12.7	27	46	56.1	24.4	-
VUWR-18X20-V	18	20	15.1	15.1	27	47.5	57.6	24.4	-
VUWR-18X22-V	18	22	15.1	18.3	27	47.5	57.6	24.4	-
VUWR-18X25-V	18	25	15.1	19.8	27	52.3	62.4	24.4	-
VUWR-20X16-V	20	16	12.7	12.7	30	47.8	57.9	26	-
VUWR-20X18-V	20	18	13.9	13.9	30	47.8	57.9	26	-
VUWR-20X22-V	20	22	15.9	18.3	30	49.3	59.4	26	-
VUWR-20X25-V	20	25	15.9	19.8	30	54.1	64.2	26	-
VUWR-22X18-V	22	18	13.9	13.9	30	47.8	57.9	26	-
VUWR-22X20-V	22	20	15.1	15.1	30	49.3	59.4	26	-
VUWR-22X25-V	22	25	18.3	19.8	30	54.1	64.2	26	-
VUWR-25X18-V	25	18	13.9	13.9	35	50.8	63.1	31.3	-
VUWR-25X20-V	25	20	15.1	15.1	35	52.3	64.6	31.3	-

Assembly Instructions



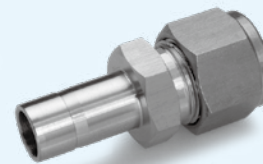
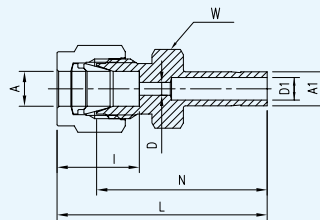
Thermoelement Type can also be manufactured.

For ordering: use catalog number of the selected fitting and add the suffix T/C.

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Reducers

R



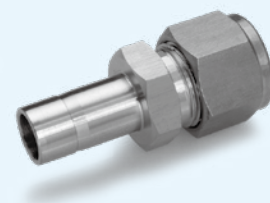
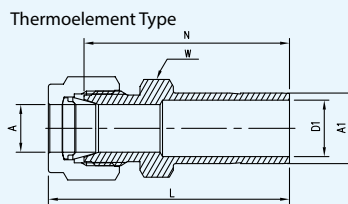
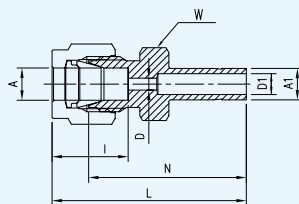
Tube (Metric) To Tube (Inch)

Part Numbers	A Tube O.D.	A1 Tube O.D.	D	D1	W	N	L	I
	mm	mm	mm	mm	mm	mm	mm	mm
VUWR-2X3.2-V	2	3.17	1.7	2	12	26.9	33.5	12.9
VUWR-3X3.2-V	3	3.17	2	2	12	26.9	33.5	12.9
VUWR-3X6.35-V	3	6.35	2.4	4.2	12	29.5	36.1	12.9
VUWR-4X3.2-V	4	3.17	2	2	12	28.1	34.7	13.7
VUWR-4X6.35-V	4	6.35	2.4	4.2	12	30.5	37.1	13.7
VUWR-6X3.2-V	6	3.17	2	2	14	29.5	36.9	15.3
VUWR-6X6.35-V	6	6.35	4.2	4.2	14	31.8	39.2	15.3
VUWR-6X7.93-V	6	7.93	4.8	5.6	14	32.5	39.9	15.3
VUWR-6X9.52-V	6	9.52	4.8	6.9	14	33.3	40.7	15.3
VUWR-6X12.7-V	6	12.7	4.8	9.4	14	38.9	46.3	15.3
VUWR-8X6.35-V	8	6.35	4.2	4.2	15	33	40.5	16.2
VUWR-8X9.52-V	8	9.52	6.4	6.4	15	34.5	42	16.2
VUWR-8X12.7-V	8	12.7	6.4	9.4	15	40.1	47.6	16.2
VUWR-10X6.35-V	10	6.35	4.2	4.2	18	35	42.6	17.2
VUWR-10X9.52-V	10	9.52	6.9	6.9	18	36.6	44.2	17.2
VUWR-10X12.7-V	10	12.7	7.9	9.4	18	42.2	49.8	17.2
VUWR-12X6.35-V	12	6.35	4.2	4.2	22	34.8	44.9	22.8
VUWR-12X9.52-V	12	9.52	6.9	6.9	22	36.6	46.7	22.8
VUWR-12X12.7-V	12	12.7	9.4	9.4	22	42.2	52.3	22.8
VUWR-12X19.05-V	12	19.05	9.5	15	22	43.7	53.8	22.8
VUWR-16X25.4-V	16	25.4	12.7	20.3	27	50.8	60.9	24.4
VUWR-18X19.05-V	18	19.05	15	15	27	46	56.1	24.4
VUWR-18X25.4-V	18	25.4	15.1	20.3	27	52.3	62.4	24.4
VUWR-25X25.4-V	25	25.4	20.3	20.3	35	57.2	69.4	31.3

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Reducers

R



Tube (Inch)

Part Numbers	A Tube O.D.		A1 Tube O.D.		D		D1		W		N		L		I		Thermoelement Type
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
VUWR-1.6X3.2-V	1/16	1.58	1/8	3.17	0.05	1.3	0.09	2.2	5/16	7.9	1	25.4	1.15	29.2	0.34	8.6	○
VUWR-1.6X6.35-V	1/16	1.58	1/4	6.35	0.05	1.3	0.17	4.2	5/16	7.9	1.09	27.7	1.24	31.5	0.34	8.6	○
VUWR-1.6X9.52-T/C-V	1/16	1.58	3/8	9.52	-	-	0.27	6.9	7/16	11.1	1.18	30	1.33	33.8	-	-	○
VUWR-3.2X1.6-V	1/8	3.17	1/16	1.58	0.03	0.8	0.03	0.8	7/16	11.1	0.88	22.4	1.14	29	0.5	12.7	-
VUWR-3.2X3.2-V	1/8	3.17	1/8	3.17	0.08	2	0.08	2	7/16	11.1	1.06	26.9	1.32	33.5	0.5	12.7	-
VUWR-3.2X4.8-V	1/8	3.17	3/16	4.76	0.09	2.3	0.12	3	7/16	11.1	1.09	27.7	1.35	34.3	0.5	12.7	-
VUWR-3.2X6.35-V	1/8	3.17	1/4	6.35	0.09	2.3	0.17	4.2	7/16	11.1	1.16	29.5	1.42	36.1	0.5	12.7	○
VUWR-3.2X9.52-V	1/8	3.17	3/8	9.52	0.09	2.3	0.27	6.9	7/16	11.1	1.22	31	1.48	37.6	0.5	12.7	○
VUWR-3.2X12.7-V	1/8	3.17	1/2	12.7	0.09	2.3	0.37	9.4	9/16	14.3	1.48	37.6	1.74	44.2	0.5	12.7	○
VUWR-3.2X19.05-T/C-V	1/8	3.17	3/4	19.05	-	-	0.59	15	13/16	20.6	1.62	41.2	1.88	47.8	-	-	○
VUWR-4.8X3.2-V	3/16	4.76	1/8	3.17	0.08	2	0.08	2	7/16	11.1	1.11	28.2	1.37	34.8	0.54	13.7	-
VUWR-4.8X6.35-V	3/16	4.76	1/4	6.35	0.12	3.1	0.17	4.2	7/16	11.1	1.2	30.5	1.46	37.1	0.52	13.3	-
VUWR-6.35X3.2-V	1/4	6.35	1/8	3.17	0.09	2.2	0.09	2.2	1/2	12.7	1.16	29.5	1.45	36.9	0.6	15.2	-
VUWR-6.35X4.8-V	1/4	6.35	3/16	4.76	0.12	3	0.12	3	1/2	12.7	1.19	30.2	1.48	37.6	0.6	15.2	-
VUWR-6.35X6.35-V	1/4	6.35	1/4	6.35	0.17	4.2	0.17	4.2	1/2	12.7	1.25	31.8	1.54	39.2	0.6	15.2	-
VUWR-6.35X7.93-V	1/4	6.35	5/16	7.93	0.19	4.8	0.22	5.6	1/2	12.7	1.28	32.5	1.57	39.9	0.6	15.2	-
VUWR-6.35X9.52-V	1/4	6.35	3/8	9.52	0.19	4.8	0.27	6.9	1/2	12.7	1.31	33.3	1.6	40.7	0.6	15.2	○
VUWR-6.35X12.7-V	1/4	6.35	1/2	12.7	0.19	4.8	0.37	9.4	9/16	14.3	1.53	38.9	1.82	46.3	0.6	15.2	○
VUWR-6.35X15.88-V	1/4	6.35	5/8	15.87	0.19	4.8	0.5	12.7	11/16	17.5	1.6	40.6	1.89	48	0.6	15.2	-
VUWR-6.35X19.05-V	1/4	6.35	3/4	19.05	0.19	4.8	0.59	15	13/16	20.6	1.59	40.4	1.88	47.8	0.6	15.2	-
VUWR-7.93X9.52-V	5/16	7.93	3/8	9.52	0.25	6.4	0.27	6.9	9/16	14.3	1.36	34.5	1.65	41.9	0.64	16.3	-
VUWR-7.93X12.7-V	5/16	7.93	1/2	12.7	0.25	6.4	0.37	9.4	9/16	14.3	1.58	40.1	1.87	47.5	0.64	16.3	-
VUWR-9.52X6.35-V	3/8	9.52	1/4	6.35	0.17	4.2	0.17	4.2	5/8	15.9	1.34	34.1	1.63	41.5	0.66	16.8	-
VUWR-9.52X9.52-V	3/8	9.52	3/8	9.52	0.27	6.9	0.27	6.9	5/8	15.9	1.41	35.8	1.7	43.2	0.66	16.8	-
VUWR-9.52X12.7-V	3/8	9.52	1/2	12.7	0.28	7.1	0.37	9.4	5/8	15.9	1.62	41.2	1.91	48.6	0.66	16.8	-
VUWR-9.52X15.88-V	3/8	9.52	5/8	15.87	0.28	7.1	0.5	12.7	11/16	17.5	1.69	42.9	1.98	50.3	0.66	16.8	-
VUWR-9.52X19.05-V	3/8	9.52	3/4	19.05	0.28	7.1	0.59	15	13/16	20.6	1.69	42.9	1.98	50.3	0.66	16.8	○
VUWR-9.52X25.4-V	3/8	9.52	1	25.4	0.28	7.1	0.8	20.3	1 1/16	27	1.97	50	2.26	57.4	0.66	16.8	○
VUWR-12.7X6.35-V	1/2	12.7	1/4	6.35	0.17	4.2	0.17	4.2	13/16	20.6	1.37	34.8	1.77	44.9	0.9	22.9	-
VUWR-12.7X9.52-V	1/2	12.7	3/8	9.52	0.27	6.9	0.27	6.9	13/16	20.6	1.44	36.6	1.84	46.7	0.9	22.9	-
VUWR-12.7X12.7-V	1/2	12.7	1/2	12.7	0.37	9.4	0.37	9.4	13/16	20.6	1.66	42.2	2.06	52.3	0.9	22.9	-
VUWR-12.7X15.88-V	1/2	12.7	5/8	15.87	0.41	10.4	0.5	12.7	13/16	20.6	1.72	43.7	2.12	53.8	0.9	22.9	-
VUWR-12.7X19.05-V	1/2	12.7	3/4	19.05	0.41	10.4	0.59	15	13/16	20.6	1.72	43.7	2.12	53.8	0.9	22.9	○
VUWR-12.7X25.4-V	1/2	12.7	1	25.4	0.41	10.4	0.8	20.3	1 1/16	27	1.97	50	2.37	60.1	0.9	22.9	○
VUWR-15.88X12.7-V	5/8	15.87	1/2	12.7	0.37	9.4	0.37	9.4	15/16	23.8	1.69	42.9	2.09	53	0.96	24.4	-
VUWR-15.88X19.05-V	5/8	15.87	3/4	19.05	0.5	12.7	0.59	15	15/16	23.8	1.75	44.5	2.15	54.6	0.96	24.4	-
VUWR-15.88X22.22-V	5/8	15.87	7/8	22.22	0.5	12.7	0.72	18.3	15/16	23.8	1.81	46	2.21	56.1	0.96	24.4	-
VUWR-15.88X25.4-V	5/8	15.87	1	25.4	0.5	12.7	0.8	20.3	1 1/16	27	2	50.8	2	50.9	0.96	24.4	-
VUWR-19.05X9.52-V	3/4	19.05	3/8	9.52	0.27	6.9	0.27	6.9	1 1/16	27	1.53	38.9	1.93	49	0.96	24.4	-
VUWR-19.05X12.7-V	3/4	19.05	1/2	12.7	0.37	9.4	0.37	9.4	1 1/16	27	1.75	44.5	2.15	54.6	0.96	24.4	-
VUWR-19.05X25.4-V	3/4	19.05	1	25.4	0.62	15.8	0.8	20.3	1 1/16	27	2.06	52.3	2.46	62.4	0.96	24.4	-
VUWR-25.4X12.7-V	1	25.4	1/2	12.7	0.37	9.4	0.37	9.4	1 3/8	34.9	2.09	53.1	2.57	65.3	1.23	31.2	-
VUWR-25.4X19.05-V	1	25.4	3/4	19.05	0.59	15	0.59	15	1 3/8	34.9	2.05	52.1	2.54	64.3	1.23	31.2	-

Thermoelement Type can also be manufactured.

For ordering: use catalog number of the selected fitting and add the suffix T/C.

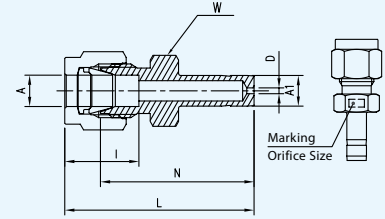
Tube (Inch) To Tube (Metric)

Part Numbers	A Tube O.D.		A1 Tube O.D.		D		D1		W		N		L		I	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWR-1.6X3-V	1/16	1.58	3		1.3		2.1		5/16	7.9	1	25.4	1.15	29.2	0.34	8.6
VUWR-3.2X6-V	1/8	3.17	6		2.3		4		7/16	11.1	1.16	29.5	1.42	36.1	0.5	12.7
VUWR-6.35X6-V	1/4	6.35	6		4		4		1/2	12.7	1.25	31.8	1.54	39.2	0.60	15.2
VUWR-6.35X10-V	1/4	6.35	10		4.8		7.1		1/2	12.7	1.31	33.3	1.6	40.7	0.6	15.2
VUWR-9.52X8-V	3/8	9.52	8		5.6		5.6		5/8	15.9	1.42	36.1	1.71	43.4	0.66	16.8
VUWR-9.52X10-V	3/8	9.52	10		7.1		7.1		5/8	15.9	1.44	36.7	1.73	44	0.66	16.8
VUWR-12.7X10-V	1/2	12.7	10		7.1		7.1		13/16	20.6	1.44	36.6	1.84	46.8	0.9	22.9
VUWR-12.7X12-V	1/2	12.7	12		8.8		8.8		13/16	20.6	1.66	42.2	2.06	52.3	0.9	22.9
VUWR-15.88X18-V	5/8	15.87	18		12.7		13.9		15/16	23.8	1.75	44.5	2.15	54.6	0.96	24.4

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Orifice Reducer

R

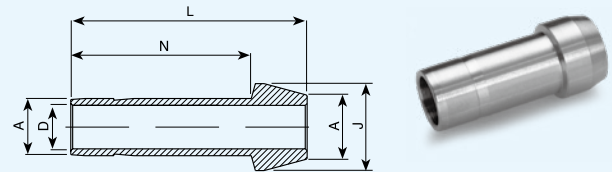


Tube (Inch)

Part Numbers	A Tube O.D.		A1 Tube O.D.		W		N	D	L	I
	in	mm	in	mm	in	mm	mm	mm	mm	mm
VUWR-6.35X6.35-H0.5-V	1/4	6.35	1/4	6.35	1/2	12.7	31.8	0.5	39.2	15.2
VUWR-6.35X6.35-H0.9-V	1/4	6.35	1/4	6.35	1/2	12.7	31.8	0.9	39.2	15.2
VUWR-6.35X6.35-H1.0-V	1/4	6.35	1/4	6.35	1/2	12.7	31.8	1.0	39.2	15.2
VUWR-6.35X6.35-H1.2-V	1/4	6.35	1/4	6.35	1/2	12.7	31.8	1.2	39.2	15.2
VUWR-6.35X6.35-H1.3-V	1/4	6.35	1/4	6.35	1/2	12.7	31.8	1.3	39.2	15.2
VUWR-6.35X6.35-H1.5-V	1/4	6.35	1/4	6.35	1/2	12.7	31.8	1.5	39.2	15.2

Port Connectors

PC



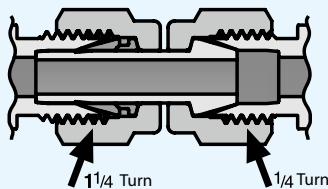
Connects To New V-Lok Ports (Metric)

Part Numbers	A Tube O.D.		D		N		L		J	
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
VUW-PC-3-V	3	2.1	15.7	22.2	6					
VUW-PC-4-V	4	2.2	17.2	23.7	7					
VUW-PC-6-V	6	4	19.1	25	9					
VUW-PC-8-V	8	5.6	20	25.9	11					
VUW-PC-10-V	10	7.1	21.2	27.1	13.1					
VUW-PC-12-V	12	8.8	26.4	36.2	15					
VUW-PC-16-V	16	12.7	27.6	37.4	19.05					
VUW-PC-18-V	18	13.9	27.7	37.4	21					
VUW-PC-20-V	20	15.1	29.8	39.4	23					
VUW-PC-25-V	25	19.8	34.8	48	28.1					

Connects To New V-Lok Ports (Inch)

Part Numbers	A Tube O.D.		D		N		L		J	
	in	mm	in	mm	in	mm	in	mm	in	mm
VUW-PC-1.6-V	1/16	1.58	0.03	0.8	0.42	10.7	0.54	13.7	0.13	3.4
VUW-PC-3.2-V	1/8	3.17	0.09	2.2	0.62	15.8	0.88	22.4	0.25	6.3
VUW-PC-6.35-V	1/4	6.35	0.17	4.2	0.75	19	0.98	24.9	0.37	9.4
VUW-PC-7.93-V	5/16	7.93	0.24	6	0.79	20.1	1.02	25.9	0.43	10.9
VUW-PC-9.52-V	3/8	9.52	0.27	6.9	0.8	20.3	1.03	26.2	0.49	12.6
VUW-PC-12.7-V	1/2	12.7	0.37	9.4	1.02	25.9	1.41	35.8	0.62	15.8
VUW-PC-15.88-V	5/8	15.87	0.5	12.7	1.12	28.5	1.51	38.4	0.74	18.9
VUW-PC-19.05-V	3/4	19.05	0.59	15	1.09	27.7	1.47	37.3	0.87	22.1
VUW-PC-25.4-V	1	25.4	0.8	20.3	1.37	34.7	1.9	48.1	1.12	28.5

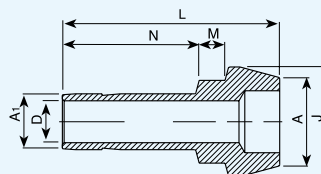
Assembly Instructions



"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Reducing Port Connectors

PC



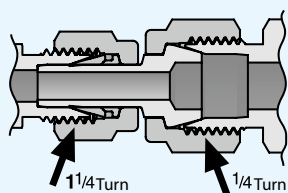
Connects To New V-Lok Ports (Metric)

Part Numbers	A Tube O.D.		A1 Tube O.D.		D		N		L		J		M	
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
VUW-PC-6X3-V	6	3			2.1		13.5		22.9		9		3.6	
VUW-PC-8X6-V	8	6			4		15.7		24.7		11		3.1	
VUW-PC-10X6-V	10	6			4		16.3		25.8		13.1		3.6	
VUW-PC-10X8-V	10	8			5.6		16.8		26.1		13.1		3.4	
VUW-PC-12X6-V	12	6			4		15.7		29.1		15		3.6	
VUW-PC-12X8-V	12	8			5.6		16.8		29.8		15		3.4	
VUW-PC-12X10-V	12	10			7.1		17.5		30.6		15		3.1	
VUW-PC-16X12-V	16	12			8.8		24.4		37.5		19.1		3.4	

Connects To New V-Lok Ports (Inch)

Part Numbers	A Tube O.D.		A1 Tube O.D.		D		N		L		J		M	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUW-PC-3.2X1.6-V	1/8	3.17	1/16	1.58	0.03	0.8	0.34	8.6	0.68	17.3	0.25	6.3	0.08	2.1
VUW-PC-6.35X1.6-V	1/4	6.35	1/16	1.58	0.03	0.8	0.34	8.6	0.71	18	0.37	9.4	0.14	3.5
VUW-PC-6.35X3.2-V	1/4	6.35	1/8	3.17	0.09	2.2	0.53	13.5	0.89	22.6	0.37	9.4	0.13	3.3
VUW-PC-9.52X3.2-V	3/8	9.52	1/8	3.17	0.09	2.2	0.53	13.5	0.91	23.2	0.49	12.6	0.15	3.9
VUW-PC-9.52X6.35-V	3/8	9.52	1/4	6.35	0.17	4.2	0.62	15.8	0.98	24.9	0.49	12.6	0.13	3.3
VUW-PC-12.7X6.35-V	1/2	12.7	1/4	6.35	0.17	4.2	0.62	15.8	1.15	29.2	0.62	15.8	0.15	3.8
VUW-PC-12.7X9.52-V	1/2	12.7	3/8	9.52	0.27	6.9	0.69	17.5	1.2	30.5	0.62	15.8	0.13	3.3
VUW-PC-19.05X12.7-V	3/4	19.05	1/2	12.7	0.37	9.4	0.96	24.4	1.49	37.9	0.87	22.1	0.15	3.8
VUW-PC-25.4X12.7-V	1	25.4	1/2	12.7	0.37	9.4	0.96	24.4	1.68	42.7	1.12	28.5	0.19	4.9
VUW-PC-25.4X19.05-V	1	25.4	3/4	19.05	0.59	15	1.02	25.9	1.71	43.4	1.12	28.5	0.16	4.1

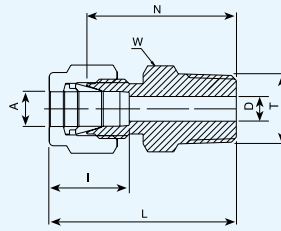
Assembly Instructions



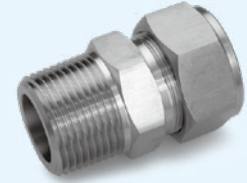
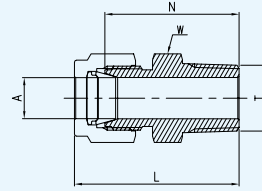
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Male Connectors (NPT)

H



Thermoelement Type



Tube (Metric) To Male NPT Thread

Part Numbers	A Tube O.D.	T	D	W	N	L	I	Thermoelement Type
	mm		mm	mm	mm	mm	mm	
VUWH-2AN-V	2	1/8NPT	1.7	12	23.9	30.5	12.9	○
VUWH-3AN-V	3	1/8NPT	2.4	12	23.9	30.5	12.9	○
VUWH-3BN-V	3	1/4NPT	2.4	14	29	35.6	12.9	○
VUWH-4AN-V	4	1/8NPT	2.4	12	24.6	31.2	13.7	-
VUWH-4BN-V	4	1/4NPT	2.4	14	29.7	36.3	13.7	-
VUWH-6AN-V	6	1/8NPT	4.8	14	25.4	32.8	15.3	○
VUWH-6BN-V	6	1/4NPT	4.8	14	30.5	37.9	15.3	○
VUWH-6CN-V	6	3/8NPT	4.8	18	31	38.4	15.3	-
VUWH-6DN-V	6	1/2NPT	4.8	22	37.3	44.7	15.3	○
VUWH-6EN-V	6	3/4NPT	4.8	27	37.3	44.7	15.3	-
VUWH-8AN-V	8	1/8NPT	4.8	15	26.7	34.2	16.2	-
VUWH-8BN-V	8	1/4NPT	6.4	15	31.2	38.7	16.2	○
VUWH-8CN-V	8	3/8NPT	6.4	18	31.8	39.3	16.2	-
VUWH-8DN-V	8	1/2NPT	6.4	22	38.1	45.6	16.2	○
VUWH-10AN-V	10	1/8NPT	4.8	18	28.7	36.3	17.2	-
VUWH-10BN-V	10	1/4NPT	7.9	18	33.3	40.9	17.2	-
VUWH-10CN-V	10	3/8NPT	7.9	18	33.3	40.9	17.2	○
VUWH-10DN-V	10	1/2NPT	7.9	22	38.9	46.5	17.2	○
VUWH-10EN-V	10	3/4NPT	7.9	27	40.4	48	17.2	○
VUWH-12AN-V	12	1/8NPT	4.8	22	28.7	38.8	22.8	-
VUWH-12BN-V	12	1/4NPT	7.1	22	33.3	43.4	22.8	-
VUWH-12CN-V	12	3/8NPT	9.5	22	33.3	43.4	22.8	-
VUWH-12DN-V	12	1/2NPT	9.5	22	38.9	49	22.8	○
VUWH-12EN-V	12	3/4NPT	9.5	27	40.4	50.5	22.8	○
VUWH-12FN-V	12	1NPT	9.5	35	47	57.1	22.8	-
VUWH-14BN-V	14	1/4NPT	7.1	24	34	44.1	24.4	-
VUWH-14CN-V	14	3/8NPT	9.5	24	34	44.1	24.4	-
VUWH-14DN-V	14	1/2NPT	11	24	38.9	49	24.4	○
VUWH-15BN-V	15	1/4NPT	7.1	24	34	44.1	24.4	-
VUWH-15DN-V	15	1/2NPT	12	24	38.9	49	24.4	○
VUWH-15FN-V	15	1NPT	12	35	47.5	57.6	24.4	-
VUWH-16CN-V	16	3/8NPT	9.7	24	34	44.1	24.4	-
VUWH-16DN-V	16	1/2NPT	11.9	24	38.9	49	24.4	-
VUWH-16EN-V	16	3/4NPT	12.7	27	40.4	50.5	24.4	○
VUWH-18DN-V	18	1/2NPT	11.9	27	40.4	50.5	24.4	-
VUWH-18EN-V	18	3/4NPT	15.1	27	40.4	50.5	24.4	-
VUWH-20DN-V	20	1/2NPT	11.9	30	42.2	52.3	26	-
VUWH-20EN-V	20	3/4NPT	15.9	30	42.2	52.3	26	-
VUWH-22EN-V	22	3/4NPT	15.8	30	42.2	52.3	26	-
VUWH-22FN-V	22	1NPT	18.3	35	47	57.1	26	-
VUWH-25DN-V	25	1/2NPT	11.9	35	45.2	57.4	31.3	-
VUWH-25EN-V	25	3/4NPT	15.9	35	45.2	57.4	31.3	-
VUWH-25FN-V	25	1NPT	21.8	35	50	62.2	31.3	-

For inches, see next page

Thermoelement Type can also be manufactured.

For ordering: use catalog number of the selected fitting and add the suffix T/C.

Reference Thread Specifications:

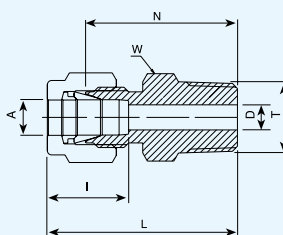
American Standard Pipe Thread (NPT).

NPT (National Pipe Tapered) is made to specifications outlined in ANSI B1.20.1.

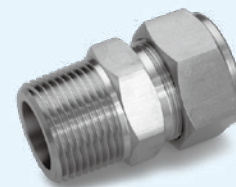
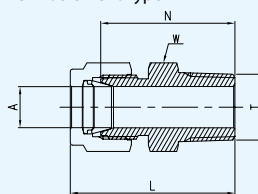
"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Male Connectors (NPT)

H



Thermoelement Type



Tube (Inch) To Male NPT Thread

Part Numbers	A Tube O.D.		T	D		W		N		L		I		Thermoelement Type
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	
VUWH-1.6AN-V	1/16	1.58	1/8NPT	0.05	1.3	7/16	11.1	0.88	22.4	1.03	26.2	0.34	8.6	○
VUWH-1.6BN-V	1/16	1.58	1/4NPT	0.05	1.3	9/16	14.3	1.07	27.2	1.22	31	0.34	8.6	○
VUWH-3.2AN-V	1/8	3.17	1/8NPT	0.09	2.3	7/16	11.1	0.94	23.9	1.2	30.5	0.5	12.7	○
VUWH-3.2BN-V	1/8	3.17	1/4NPT	0.09	2.3	9/16	14.3	1.14	29	1.4	35.6	0.5	12.7	○
VUWH-3.2CN-V	1/8	3.17	3/8NPT	0.09	2.3	11/16	17.5	1.15	29.2	1.41	35.8	0.5	12.7	○
VUWH-3.2DN-V	1/8	3.17	1/2NPT	0.09	2.3	7/8	22.2	1.40	35.6	1.66	42.2	0.5	12.7	○
VUWH-3.2EN-V	1/8	3.17	3/4NPT	0.09	2.3	1 1/16	27	1.47	37.3	1.73	43.9	0.5	12.7	-
VUWH-4.8AN-V	3/16	4.76	1/8NPT	0.12	3.1	7/16	11.1	0.97	24.6	1.23	31.2	0.54	13.7	○
VUWH-4.8BN-V	3/16	4.76	1/4NPT	0.12	3.1	9/16	14.3	1.17	29.7	1.43	36.3	0.54	13.7	○
VUWH-6.35AN-V	1/4	6.35	1/8NPT	0.19	4.8	1/2	12.7	1	25.4	1.29	32.8	0.6	15.2	-
VUWH-6.35BN-V	1/4	6.35	1/4NPT	0.19	4.8	9/16	14.3	1.2	30.5	1.49	37.9	0.6	15.2	○
VUWH-6.35CN-V	1/4	6.35	3/8NPT	0.19	4.8	11/16	17.5	1.22	31	1.51	38.4	0.6	15.2	○
VUWH-6.35DN-V	1/4	6.35	1/2NPT	0.19	4.8	7/8	22.2	1.47	37.3	1.76	44.7	0.6	15.2	○
VUWH-6.35EN-V	1/4	6.35	3/4NPT	0.19	4.8	1 1/16	27	1.53	38.9	1.82	46.3	0.6	15.2	○
VUWH-6.35FN-V	1/4	6.35	1NPT	0.19	4.8	1 3/8	34.9	1.81	46	2.1	53.4	0.6	15.2	-
VUWH-7.93AN-V	5/16	7.93	1/8NPT	0.19	4.8	9/16	14.3	1.05	26.7	1.34	34.1	0.64	16.3	-
VUWH-7.93BN-V	5/16	7.93	1/4NPT	0.25	6.4	9/16	14.3	1.23	31.2	1.52	38.6	0.64	16.3	○
VUWH-7.93CN-V	5/16	7.93	3/8NPT	0.25	6.4	11/16	17.5	1.25	31.8	1.54	39.2	0.64	16.3	-
VUWH-9.52AN-V	3/8	9.52	1/8NPT	0.19	4.8	5/8	15.9	1.1	27.9	1.39	35.3	0.66	16.8	-
VUWH-9.52BN-V	3/8	9.52	1/4NPT	0.28	7.1	5/8	15.9	1.28	32.5	1.57	39.9	0.66	16.8	○
VUWH-9.52CN-V	3/8	9.52	3/8NPT	0.28	7.1	11/16	17.5	1.28	32.5	1.57	39.9	0.66	16.8	○
VUWH-9.52DN-V	3/8	9.52	1/2NPT	0.28	7.1	7/8	22.2	1.53	38.9	1.82	46.3	0.66	16.8	○
VUWH-9.52EN-V	3/8	9.52	3/4NPT	0.28	7.1	1 1/16	27	1.59	40.4	1.88	47.8	0.66	16.8	○
VUWH-9.52FN-V	3/8	9.52	1NPT	0.28	7.1	1 3/8	34.9	1.85	47	2.14	54.4	0.66	16.8	-
VUWH-12.7AN-V	1/2	12.7	1/8NPT	0.19	4.8	13/16	20.6	1.13	28.7	1.53	38.8	0.9	22.9	-
VUWH-12.7BN-V	1/2	12.7	1/4NPT	0.28	7.1	13/16	20.6	1.31	33.3	1.71	43.4	0.9	22.9	-
VUWH-12.7CN-V	1/2	12.7	3/8NPT	0.38	9.6	13/16	20.6	1.31	33.3	1.71	43.4	0.9	22.9	-
VUWH-12.7DN-V	1/2	12.7	1/2NPT	0.41	10.4	7/8	22.2	1.53	38.9	1.93	49	0.9	22.9	○
VUWH-12.7EN-V	1/2	12.7	3/4NPT	0.41	10.4	1 1/16	27	1.59	40.4	1.99	50.5	0.9	22.9	○
VUWH-12.7FN-V	1/2	12.7	1NPT	0.41	10.4	1 3/8	34.9	1.85	47	2.25	57.1	0.9	22.9	-
VUWH-15.88BN-V	5/8	15.87	1/4NPT	0.28	7.1	15/16	23.8	1.34	34	1.74	44.1	0.96	24.4	-
VUWH-15.88CN-V	5/8	15.87	3/8NPT	0.38	9.6	15/16	23.8	1.34	34	1.74	44.1	0.96	24.4	-
VUWH-15.88DN-V	5/8	15.87	1/2NPT	0.47	11.9	15/16	23.8	1.53	38.9	1.93	49	0.96	24.4	-
VUWH-15.88EN-V	5/8	15.87	3/4NPT	0.5	12.7	1 1/16	27	1.59	40.4	1.99	50.5	0.96	24.4	○
VUWH-19.05BN-V	3/4	19.05	1/4NPT	0.28	7.1	1 1/16	27	1.37	34.8	1.77	44.9	0.96	24.4	-
VUWH-19.05CN-V	3/4	19.05	3/8NPT	0.37	9.5	1 1/16	27	1.38	35.1	1.78	45.2	0.96	24.4	-
VUWH-19.05DN-V	3/4	19.05	1/2NPT	0.47	11.9	1 1/16	27	1.59	40.4	1.99	50.5	0.96	24.4	-
VUWH-19.05EN-V	3/4	19.05	3/4NPT	0.62	15.8	1 1/16	27	1.59	40.4	1.99	50.5	0.96	24.4	○
VUWH-19.05FN-V	3/4	19.05	1NPT	0.62	15.8	1 3/8	34.9	1.85	47	2.25	57.1	0.96	24.4	○
VUWH-22.22EN-V	7/8	22.22	3/4NPT	0.62	15.8	13/16	30.2	1.59	40.4	1.99	50.5	1.02	25.9	-
VUWH-22.22FN-V	7/8	22.22	1NPT	0.72	18.3	1 3/8	34.9	1.85	47	2.25	57.1	1.02	25.9	○
VUWH-25.4DN-V	1	25.4	1/2NPT	0.47	11.9	1 3/8	34.9	1.78	45.2	2.26	57.4	1.23	31.2	-
VUWH-25.4EN-V	1	25.4	3/4NPT	0.72	18.3	1 3/8	34.9	1.78	45.2	2.26	57.4	1.23	31.2	-
VUWH-25.4FN-V	1	25.4	1NPT	0.88	22.3	1 3/8	34.9	1.97	50	2.45	62.2	1.23	31.2	○

Thermoelement Type can also be manufactured.

For ordering: use catalog number of the selected fitting and add the suffix T/C.

Reference Thread Specifications:

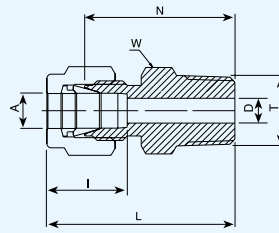
American Standard Pipe Thread (NPT).

NPT (National Pipe Tapered) is made to specifications outlined in ANSI B1.20.1.

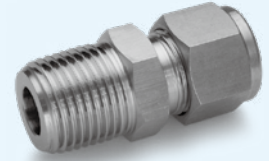
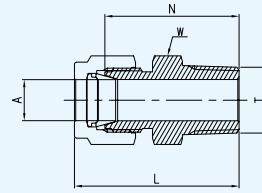
"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Male Connectors (R)

H



Thermoelement Type



Tube (Metric) To ISO Tapered Thread

Part Numbers	A Tube O.D.	T	D	W	N	L	I	Thermoelement Type
	mm		mm	mm	mm	mm	mm	
VUWH-2A-V	2	R 1/8	1.7	12	23.9	30.5	12.9	-
VUWH-3A-V	3	R 1/8	2.4	12	23.9	30.5	12.9	○
VUWH-3B-V	3	R 1/4	2.4	14	29	35.6	12.9	○
VUWH-4A-V	4	R 1/8	2.4	12	24.6	31.2	13.7	○
VUWH-4B-V	4	R 1/4	2.4	14	29.7	36.3	13.7	○
VUWH-4C-V	4	R 3/8	2.4	18	30.2	36.8	13.7	-
VUWH-6A-V	6	R 1/8	4.8	14	25.4	32.8	15.3	○
VUWH-6B-V	6	R 1/4	4.8	14	30.5	37.9	15.3	○
VUWH-6C-V	6	R 3/8	4.8	18	31	38.4	15.3	○
VUWH-6D-V	6	R 1/2	4.8	22	37.3	44.7	15.3	○
VUWH-8A-V	8	R 1/8	4.8	15	26.7	34.2	16.2	-
VUWH-8B-V	8	R 1/4	6.4	15	31.2	38.7	16.2	○
VUWH-8C-V	8	R 3/8	6.4	18	31.8	39.3	16.2	○
VUWH-8D-V	8	R 1/2	6.4	22	38.1	45.6	16.2	○
VUWH-10A-V	10	R 1/8	4.8	18	28.7	36.3	17.2	-
VUWH-10B-V	10	R 1/4	7.9	18	33.3	40.9	17.2	○
VUWH-10C-V	10	R 3/8	7.9	18	33.3	40.9	17.2	○
VUWH-10D-V	10	R 1/2	7.9	22	38.9	46.5	17.2	○
VUWH-10E-V	10	R 3/4	7.9	27	40.4	48	17.2	○
VUWH-12A-V	12	R 1/8	4.8	22	28.7	38.8	22.8	-
VUWH-12B-V	12	R 1/4	7.1	22	33.3	43.4	22.8	-
VUWH-12C-V	12	R 3/8	9.5	22	33.3	43.4	22.8	○
VUWH-12D-V	12	R 1/2	9.5	22	38.9	49	22.8	○
VUWH-12E-V	12	R 3/4	9.5	27	40.4	50.5	22.8	○
VUWH-12F-V	12	R 1	9.5	35	47	57.1	22.8	-
VUWH-14B-V	14	R 1/4	7.1	24	34	44.1	24.4	-
VUWH-14C-V	14	R 3/8	9.5	24	34	44.1	24.4	-
VUWH-14D-V	14	R 1/2	11	24	38.9	49	24.4	○
VUWH-14E-V	14	R 3/4	11	27	40.4	50.5	24.4	-
VUWH-15C-V	15	R 3/8	9.7	24	34	44.1	24.4	-
VUWH-15D-V	15	R 1/2	11.9	24	38.9	49	24.4	○
VUWH-15E-T/C-V	15	R 3/4	-	27	40.4	50.5	-	○
VUWH-16B-V	16	R 1/4	7.1	24	34	44.1	24.4	-
VUWH-16C-V	16	R 3/8	9.5	24	34	44.1	24.4	-
VUWH-16D-V	16	R 1/2	11.9	24	38.9	49	24.4	-
VUWH-16E-V	16	R 3/4	12.7	27	40.4	50.5	24.4	○
VUWH-18D-V	18	R 1/2	11.9	27	40.4	50.5	24.4	-
VUWH-18E-V	18	R 3/4	15.1	27	40.4	50.5	24.4	○
VUWH-20B-V	20	R 1/4	7.1	30	40	50.1	26	-
VUWH-20D-V	20	R 1/2	11.9	30	42.2	52.3	26	-
VUWH-20E-V	20	R 3/4	15.9	30	42.2	52.3	26	○
VUWH-20F-V	20	R 1	15.9	35	47	57.1	26	-
VUWH-22E-V	22	R 3/4	15.9	30	42.2	52.3	26	-
VUWH-22F-V	22	R 1	18.3	35	47	57.1	26	○
VUWH-25E-V	25	R 3/4	15.9	35	45.2	57.4	31.3	-
VUWH-25F-V	25	R 1	21.8	35	50	62.2	31.3	○

For inches, see next page

Thermoelement Type can also be manufactured.

For ordering: use catalog number of the selected fitting and add the suffix T/C.

Reference Thread Specifications:

DIN - ISO 2999

BS - 21

JIS - B0203

ISO - 7/1-BSP-T

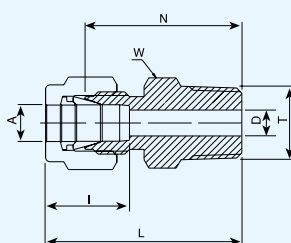
Designation:

R marking on hex.

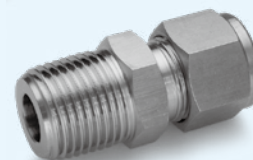
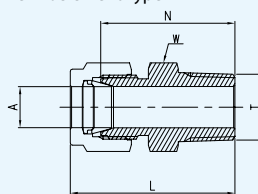
"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Male Connectors (R)

H



Thermoelement Type



Tube (Inch) To ISO Tapered Thread

Part Numbers	A Tube O.D.		T	D		W		N		L		I		Thermoelement Type
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	
VUWH-1.6A-V	1/16	1.58	R 1/8	0.05	1.3	7/16	11.1	0.9	22.4	1.03	26.2	0.34	8.6	○
VUWH-1.6B-V	1/16	1.58	R 1/4	0.05	1.3	9/16	14.3	1.07	27.2	1.22	31	0.34	8.6	○
VUWH-3.2A-V	1/8	3.17	R 1/8	0.09	2.3	7/16	11.1	0.94	23.9	1.2	30.5	0.5	12.7	○
VUWH-3.2B-V	1/8	3.17	R 1/4	0.09	2.3	9/16	14.3	1.14	29	1.4	35.6	0.5	12.7	○
VUWH-3.2C-V	1/8	3.17	R 3/8	0.09	2.3	11/16	17.5	1.15	29.2	1.41	35.8	0.5	12.7	-
VUWH-3.2D-V	1/8	3.17	R 1/2	0.09	2.3	7/8	22.2	1.4	35.6	1.66	42.2	0.5	12.7	-
VUWH-4.8A-T/C-V	3/16	4.76	R 1/8	0.12	3.1	7/16	11.1	0.97	24.6	1.23	31.2	-	-	○
VUWH-4.8B-V	3/16	4.76	R 1/4	0.12	3	9/16	14.3	1.17	29.7	1.43	36.3	0.54	13.7	○
VUWH-6.35A-V	1/4	6.35	R 1/8	0.19	4.8	1/2	12.7	1	25.4	1.29	32.8	0.6	15.2	-
VUWH-6.35B-V	1/4	6.35	R 1/4	0.19	4.8	9/16	14.3	1.2	30.5	1.49	37.9	0.6	15.2	○
VUWH-6.35C-V	1/4	6.35	R 3/8	0.19	4.8	11/16	17.5	1.22	31	1.51	38.4	0.6	15.2	○
VUWH-6.35D-V	1/4	6.35	R 1/2	0.19	4.8	7/8	22.2	1.47	37.3	1.76	44.7	0.6	15.2	○
VUWH-6.35E-V	1/4	6.35	R 3/4	0.19	4.8	1 1/16	27	1.53	38.9	1.82	46.3	0.6	15.2	-
VUWH-7.93A-V	5/16	7.93	R 1/8	0.19	4.8	9/16	14.3	1.05	26.7	1.34	34.1	0.64	16.3	-
VUWH-7.93B-V	5/16	7.93	R 1/4	0.25	6.4	9/16	14.3	1.23	31.2	1.52	38.6	0.64	16.3	-
VUWH-9.52A-V	3/8	9.52	R 1/8	0.19	4.8	5/8	15.9	1.1	27.9	1.39	35.3	0.66	16.8	-
VUWH-9.52B-V	3/8	9.52	R 1/4	0.28	7.1	5/8	15.9	1.28	32.5	1.57	39.9	0.66	16.8	-
VUWH-9.52C-V	3/8	9.52	R 3/8	0.28	7.1	11/16	17.5	1.28	32.5	1.57	39.9	0.66	16.8	○
VUWH-9.52D-V	3/8	9.52	R 1/2	0.28	7.1	7/8	22.2	1.53	38.9	1.82	46.3	0.66	16.8	○
VUWH-9.52E-V	3/8	9.52	R 3/4	0.28	7.1	1 1/16	27	1.59	40.4	1.88	47.8	0.66	16.8	-
VUWH-9.52F-V	3/8	9.52	R 1	0.28	7.1	1 3/8	34.9	1.85	47	2.14	54.4	0.66	16.8	-
VUWH-12.7A-V	1/2	12.7	R 1/8	0.19	4.8	13/16	20.6	1.13	28.7	1.53	38.8	0.9	22.9	-
VUWH-12.7B-V	1/2	12.7	R 1/4	0.28	7.1	13/16	20.6	1.31	33.3	1.71	43.4	0.9	22.9	-
VUWH-12.7C-V	1/2	12.7	R 3/8	0.38	9.6	13/16	20.6	1.31	33.3	1.71	43.4	0.9	22.9	-
VUWH-12.7D-V	1/2	12.7	R 1/2	0.41	10.4	7/8	22.2	1.53	38.9	1.93	49	0.9	22.9	○
VUWH-12.7E-V	1/2	12.7	R 3/4	0.41	10.4	1 1/16	27	1.59	40.4	1.99	50.5	0.9	22.9	-
VUWH-12.7F-V	1/2	12.7	R 1	0.41	10.4	1 3/8	34.9	1.85	47	2.25	57.1	0.9	22.9	-
VUWH-15.88B-V	5/8	15.87	R 1/4	0.28	7.1	15/16	23.8	1.34	34	1.74	44.1	0.96	24.4	-
VUWH-15.88C-V	5/8	15.87	R 3/8	0.38	9.6	15/16	23.8	1.34	34.1	1.74	44.2	0.96	24.4	-
VUWH-15.88D-V	5/8	15.87	R 1/2	0.47	11.9	15/16	23.8	1.53	38.9	1.93	49	0.96	24.4	-
VUWH-15.88E-V	5/8	15.87	R 3/4	0.5	12.7	1 1/16	27	1.59	40.4	1.99	50.5	0.96	24.4	-
VUWH-15.88F-V	5/8	15.87	R 1	0.5	12.7	1 3/8	34.9	1.85	47	2.25	57.1	0.96	24.4	-
VUWH-19.05C-V	3/4	19.05	R 3/8	0.37	9.5	1 1/16	27	1.38	35	1.78	45.1	0.96	24.4	-
VUWH-19.05D-V	3/4	19.05	R 1/2	0.47	11.9	1 1/16	27	1.59	40.4	1.99	50.5	0.96	24.4	-
VUWH-19.05E-V	3/4	19.05	R 3/4	0.62	15.8	1 1/16	27	1.59	40.4	1.99	50.5	0.96	24.4	○
VUWH-19.05F-V	3/4	19.05	R 1	0.62	15.8	1 3/8	34.9	1.85	47	2.25	57.1	0.96	24.4	○
VUWH-25.4D-V	1	25.4	R 1/2	0.47	11.9	1 3/8	34.9	1.78	45.2	2.26	57.4	1.23	31.2	-
VUWH-25.4E-V	1	25.4	R 3/4	0.62	15.8	1 3/8	34.9	1.78	45.2	2.26	57.4	1.23	31.2	-
VUWH-25.4F-V	1	25.4	R 1	0.88	22.3	1 3/8	34.9	1.97	50	2.45	62.2	1.23	31.2	-

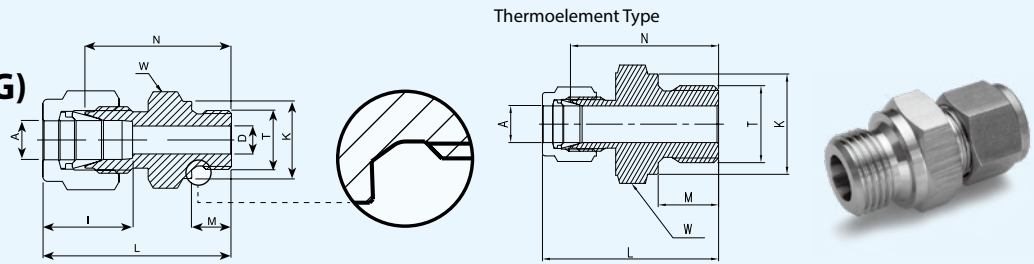
Thermoelement Type can also be manufactured.

For ordering: use catalog number of the selected fitting and add the suffix T/C.

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Male Connectors (G)

H



Tube (Metric) To ISO Parallel Thread

Part Numbers	A	T	D	K	W	N	M	L	I	Thermoelement Type
	Tube O.D. mm		mm	mm	mm	mm	mm	mm	mm	
VUWH-2AF-FJS-V	2	G 1/8	1.7	13.8	14	23.4	7.1	30	12.9	-
VUWH-3AF-FJS-V	3	G 1/8	2.4	13.8	14	23.4	7.1	30	12.9	-
VUWH-3BF-FJS-V	3	G 1/4	2.4	18	19	28.7	11.2	35.3	12.9	-
VUWH-4AF-FJS-V	4	G 1/8	2.4	13.8	14	24.1	7.1	30.7	13.7	-
VUWH-6AF-FJS-V	6	G 1/8	4	13.8	14	24.9	7.1	32.3	15.3	-
VUWH-6BF-FJS-V	6	G 1/4	4.8	18	19	30.2	11.2	37.6	15.3	○
VUWH-6CF-FJS-V	6	G 3/8	4.8	21.8	22	31.5	11.2	38.9	15.3	○
VUWH-6DF-FJS-V	6	G 1/2	4.8	26	27	37.3	14.2	44.7	15.3	-
VUWH-8AF-FJS-V	8	G 1/8	4	13.8	15	25.7	7.1	33.2	16.2	-
VUWH-8BF-FJS-V	8	G 1/4	6.4	18	19	31	11.2	38.5	16.2	-
VUWH-8CF-FJS-V	8	G 3/8	6.4	21.8	22	32.3	11.2	39.8	16.2	-
VUWH-8DF-FJS-V	8	G 1/2	6.4	26	27	38.1	14.2	45.6	16.2	-
VUWH-10BF-FJS-V	10	G 1/4	5.9	18	19	31.8	11.2	39.4	17.2	-
VUWH-10CF-FJS-V	10	G 3/8	7.9	21.8	22	33	11.2	40.6	17.2	-
VUWH-10DF-FJS-V	10	G 1/2	7.9	26	27	38.9	14.2	46.5	17.2	○
VUWH-12BF-FJS-V	12	G 1/4	5.9	18	22	32.5	11.2	42.6	22.8	-
VUWH-12CF-FJS-V	12	G 3/8	7.9	21.8	22	33	11.2	43.1	22.8	-
VUWH-12DF-FJS-V	12	G 1/2	9.5	26	27	38.9	14.2	49	22.8	-
VUWH-12EF-FJS-V	12	G 3/4	9.5	32	35	42.7	15.7	52.8	22.8	-
VUWH-14CF-FJS-V	14	G 3/8	7.9	21.8	24	33.8	11.2	43.9	24.4	-
VUWH-14DF-FJS-V	14	G 1/2	11	26	27	38.9	14.2	49	24.4	-
VUWH-15CF-FJS-V	15	G 3/8	7.9	21.8	24	33.8	11.2	43.9	24.4	-
VUWH-15DF-FJS-V	15	G 1/2	12	26	27	38.9	14.2	49	24.4	-
VUWH-15EF-FJS-V	15	G 3/4	12	32	35	42.1	15.7	52.2	24.4	-
VUWH-16CF-FJS-V	16	G 3/8	7.9	21.8	24	33.8	11.2	43.9	24.4	-
VUWH-16DF-FJS-V	16	G 1/2	11.9	26	27	38.9	14.2	49	24.4	-
VUWH-16EF-FJS-V	16	G 3/4	12.7	32	35	42.7	15.7	52.8	24.4	-
VUWH-18DF-FJS-V	18	G 1/2	11.9	26	27	38.9	14.2	49	24.4	-
VUWH-18EF-FJS-V	18	G 3/4	15.1	32	35	42.7	15.7	52.8	24.4	-
VUWH-20DF-FJS-V	20	G 1/2	11.9	26	30	40.4	14.2	50.5	26	-
VUWH-20EF-FJS-V	20	G 3/4	15.9	32	35	42.7	15.7	52.8	26	-
VUWH-22EF-FJS-V	22	G 3/4	15.9	32	35	42.7	15.7	52.8	26	-
VUWH-22FF-FJS-V	22	G 1	18.3	39	41	45.2	18.3	55.3	26	-
VUWH-25EF-FJS-V	25	G 3/4	15.9	32	35	45.2	15.7	57.4	31.3	-
VUWH-25FF-FJS-V	25	G 1	19.8	39	41	47.8	18.3	60	31.3	-

Thermoelement Type can also be manufactured.

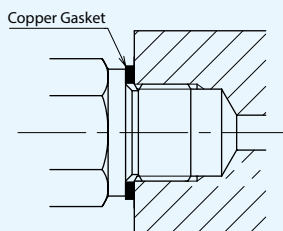
For inches, see next page

For ordering: use catalog number of the selected fitting and add the suffix T/C.

Reference Thread Specifications:

DIN - ISO 228/1
BS - 2779
JIS - B0202
ISO - 228/1-BSP-P

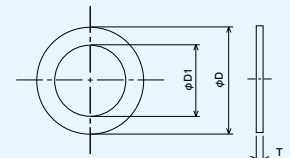
Seal Method (Male G Thread Side)



Gasket:

After confirming the Male G thread size, please order Copper Gaskets according to the table below.

Thread Size	Part Numbers	D		D1		T	
		mm	in.	mm	in.	mm	in.
G 1/8	VUW-G-AF-FJT-V	15	0.59	9.9	0.39	1	0.04
G 1/4	VUW-G-BF-FJT-V	18.8	0.74	13.5	0.53	1.5	0.06
G 3/8	VUW-G-CF-FJT-V	22.9	0.9	17	0.67	1.5	0.06
G 1/2	VUW-G-DF-FJT-V	26.9	1.06	21.3	0.84	1.5	0.06
G 3/4	VUW-G-EF-FJT-V	33	1.3	26.7	1.05	2	0.08
G 1	VUW-G-FF-FJT-V	39.9	1.57	33.5	1.32	2	0.08



Designation:

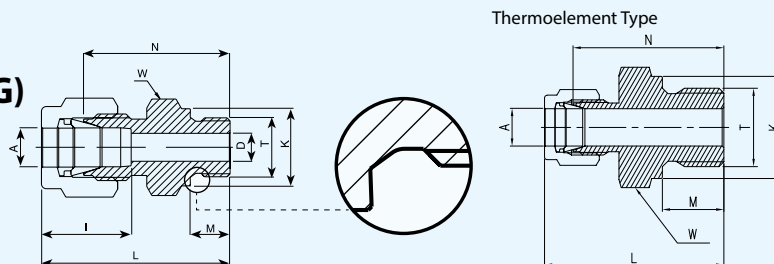
G marking on hex.

Some combinations of dimensions A and F may not be available.

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Male Connectors (G)

H



Tube (Inch) To ISO Parallel Thread

Part Numbers	A Tube O.D.		T	D		K		W		N		M		L		I		Thermoelement Type
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
VUWH-1.6AF-FJS-V	1/16	1.58	G 1/8	0.05	1.3	0.54	13.8	9/16	14.3	0.97	24.7	0.28	7.1	1.12	28.5	0.34	8.6	-
VUWH-3.2AF-FJS-V	1/8	3.17	G 1/8	0.09	2.3	0.54	13.8	9/16	14.3	0.92	23.4	0.28	7.1	1.18	30	0.5	12.7	○
VUWH-3.2BF-FJS-V	1/8	3.17	G 1/4	0.09	2.3	0.71	18	3/4	19.1	1.13	28.7	0.44	11.2	1.39	35.3	0.5	12.7	-
VUWH-3.2CF-FJS-V	1/8	3.17	G 3/8	0.09	2.3	0.86	21.8	7/8	22.2	1.17	29.7	0.44	11.2	1.46	37	0.5	12.7	-
VUWH-3.2DF-FJS-V	1/8	3.17	G 1/2	0.09	2.3	1.02	26	1 1/16	27	1.4	35.7	0.56	14.2	1.69	43	0.5	12.7	-
VUWH-4.8AF-FJS-V	3/16	4.76	G 1/8	0.12	3.1	0.54	13.8	9/16	14.3	0.95	24.1	0.28	7.1	1.2	30.7	0.54	13.7	-
VUWH-6.35AF-FJS-V	1/4	6.35	G 1/8	0.16	4	0.54	13.8	9/16	14.3	0.98	24.9	0.28	7.1	1.27	32.3	0.6	15.2	-
VUWH-6.35BF-FJS-V	1/4	6.35	G 1/4	0.19	4.8	0.71	18	3/4	19.1	1.19	30.2	0.44	11.2	1.48	37.6	0.6	15.2	-
VUWH-6.35CF-FJS-V	1/4	6.35	G 3/8	0.19	4.8	0.86	21.8	7/8	22.2	1.24	31.5	0.44	11.2	1.53	38.9	0.6	15.2	-
VUWH-6.35DF-FJS-V	1/4	6.35	G 1/2	0.19	4.8	1.02	26	1 1/16	27	1.47	37.3	0.56	14.2	1.76	44.7	0.6	15.2	-
VUWH-7.93BF-FJS-V	5/16	7.93	G 1/4	0.25	6.4	0.71	18	3/4	19.1	1.22	31	0.44	11.2	1.51	38.4	0.64	16.3	-
VUWH-7.93CF-FJS-V	5/16	7.93	G 3/8	0.25	6.4	0.86	21.8	7/8	22.2	1.27	32.3	0.44	11.2	1.56	39.7	0.64	16.3	-
VUWH-9.52AF-FJS-V	3/8	9.52	G 1/8	0.16	4	0.54	13.8	5/8	15.9	1.06	26.8	0.28	7.1	1.35	34.2	0.66	16.8	-
VUWH-9.52BF-FJS-V	3/8	9.52	G 1/4	0.23	5.8	0.71	18	3/4	19.1	1.25	31.8	0.44	11.2	1.54	39.2	0.66	16.8	-
VUWH-9.52CF-FJS-V	3/8	9.52	G 3/8	0.28	7.1	0.86	21.8	7/8	22.2	1.3	33	0.44	11.2	1.59	40.4	0.66	16.8	-
VUWH-9.52DF-FJS-V	3/8	9.52	G 1/2	0.28	7.1	1.02	26	1 1/16	27	1.53	38.9	0.56	14.2	1.82	46.3	0.66	16.8	-
VUWH-12.7BF-FJS-V	1/2	12.7	G 1/4	0.23	5.8	0.71	18	13/16	20.6	1.28	32.5	0.44	11.2	1.68	42.6	0.9	22.9	-
VUWH-12.7CF-FJS-V	1/2	12.7	G 3/8	0.31	7.9	0.86	21.8	7/8	22.2	1.3	33	0.44	11.2	1.7	43.1	0.9	22.9	-
VUWH-12.7DF-FJS-V	1/2	12.7	G 1/2	0.41	10.4	1.02	26	1 1/16	27	1.47	37.3	0.56	14.2	1.87	47.4	0.9	22.9	○
VUWH-12.7EF-FJS-V	1/2	12.7	G 3/4	0.41	10.4	1.26	32	1 5/16	33.3	1.68	42.7	0.62	15.7	2.08	52.8	0.9	22.9	-
VUWH-15.88CF-FJS-V	5/8	15.87	G 3/8	0.31	7.9	0.86	21.8	15/16	23.8	1.33	33.8	0.44	11.2	1.73	43.9	0.96	24.4	-
VUWH-15.88DF-FJS-V	5/8	15.87	G 1/2	0.47	11.9	1.02	26	1 1/16	27	1.53	38.9	0.56	14.2	1.93	49	0.96	24.4	-
VUWH-19.05DF-FJS-V	3/4	19.05	G 1/2	0.47	11.9	1.02	26	1 1/16	27	1.53	38.9	0.56	14.2	1.93	49	0.96	24.4	-
VUWH-19.05EF-FJS-V	3/4	19.05	G 3/4	0.62	15.7	1.26	32	1 5/16	33.3	1.68	42.7	0.62	15.7	2.08	52.8	0.96	24.4	-
VUWH-25.4DF-FJS-V	1	25.4	G 1/2	0.47	11.9	1.02	26	1 3/8	34.9	1.72	43.7	0.56	14.2	2.2	55.9	1.23	31.3	-
VUWH-25.4EF-FJS-V	1	25.4	G 3/4	0.62	15.9	1.26	32	1 3/8	34.9	1.78	45.2	0.62	15.7	2.26	57.4	1.23	31.3	-
VUWH-25.4FF-FJS-V	1	25.4	G 1	0.78	19.8	1.54	39	1 5/8	41.3	1.88	47.8	0.72	18.3	2.36	60	1.23	31.3	-

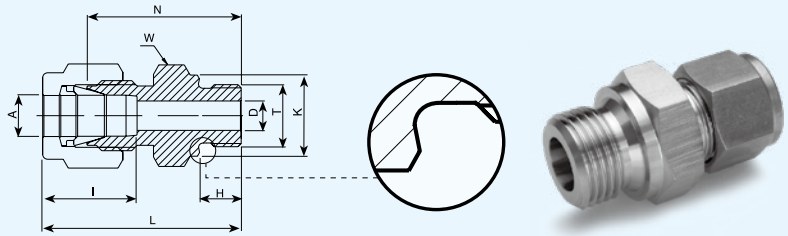
Thermoelement Type can also be manufactured.

For ordering: use catalog number of the selected fitting and add the suffix T/C.

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Male Connectors (G)

H



Tube (Metric) To ISO Parallel Thread

Part Numbers	A Tube O.D.	T	D	K	W	N	H	L	I
	mm		mm	mm	mm	mm	mm	mm	mm
VUWH-3AF-FJT-V	3	G 1/8	2.4	13.8	14	23.4	7.1	30	12.9
VUWH-3BF-FJT-V	3	G 1/4	2.4	18	19	28.7	11.2	35.3	12.9
VUWH-4AF-FJT-V	4	G 1/8	2.4	13.8	14	24.1	7.1	30.7	13.7
VUWH-6AF-FJT-V	6	G 1/8	4	13.8	14	24.9	7.1	32.3	15.3
VUWH-6BF-FJT-V	6	G 1/4	4.8	18	19	30.2	11.2	37.6	15.3
VUWH-6CF-FJT-V	6	G 3/8	4.8	21.8	22	31.5	11.2	38.9	15.3
VUWH-6DF-FJT-V	6	G 1/2	4.8	26	27	37.3	14.2	44.7	15.3
VUWH-8AF-FJT-V	8	G 1/8	4	13.8	15	25.7	7.1	33.2	16.2
VUWH-8BF-FJT-V	8	G 1/4	6.4	18	19	31	11.2	38.5	16.2
VUWH-8CF-FJT-V	8	G 3/8	6.4	21.8	22	32.3	11.2	39.8	16.2
VUWH-8DF-FJT-V	8	G 1/2	6.4	26	27	38.1	14.2	45.6	16.2
VUWH-10BF-FJT-V	10	G 1/4	5.9	18	19	31.8	11.2	39.4	17.2
VUWH-10CF-FJT-V	10	G 3/8	7.9	21.8	22	33	11.2	40.6	17.2
VUWH-10DF-FJT-V	10	G 1/2	7.9	26	27	38.9	14.2	46.5	17.2
VUWH-12BF-FJT-V	12	G 1/4	5.9	18	22	32.5	11.2	42.6	22.8
VUWH-12CF-FJT-V	12	G 3/8	7.9	21.8	22	33	11.2	43.1	22.8
VUWH-12DF-FJT-V	12	G 1/2	9.5	26	27	38.9	14.2	49	22.8
VUWH-12EF-FJT-V	12	G 3/4	9.5	32	35	42.7	15.7	52.8	22.8
VUWH-15DF-FJT-V	15	G 1/2	11.9	26	27	38.9	14.2	49	24.4
VUWH-16CF-FJT-V	16	G 3/8	7.9	21.8	24	33.8	11.2	43.9	24.4
VUWH-16DF-FJT-V	16	G 1/2	11.9	26	27	38.9	14.2	49	24.4
VUWH-18DF-FJT-V	18	G 1/2	11.9	26	27	38.9	14.2	49	24.4
VUWH-18EF-FJT-V	18	G 3/4	15.1	32	35	42.7	15.7	52.8	24.4
VUWH-20DF-FJT-V	20	G 1/2	11.9	26	30	40.4	14.2	50.5	26
VUWH-20EF-FJT-V	20	G 3/4	15.9	32	35	42.7	15.7	52.8	26
VUWH-22EF-FJT-V	22	G 3/4	15.9	32	35	42.7	15.7	52.8	26
VUWH-22FF-FJT-V	22	G 1	18.3	39	40	45.2	18.3	55.3	26
VUWH-25EF-FJT-V	25	G 3/4	15.9	32	35	45.2	15.7	57.4	31.3
VUWH-25FF-FJT-V	25	G 1	19.8	39	41	47.8	18.3	60	31.3

Tube (Inch) To ISO Parallel Thread

Part Numbers	A Tube O.D.		T	D		K		W		N		H		L		I	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWH-3.2AF-FJT-V	1/8	3.17	G1/8	0.09	2.3	0.54	13.8	9/16	14.3	0.92	23.4	0.28	7.1	1.18	30	0.5	12.7
VUWH-3.2BF-FJT-V	1/8	3.17	G1/4	0.09	2.3	0.71	18	3/4	19.1	1.13	28.7	0.44	11.2	1.39	35.3	0.5	12.7
VUWH-6.35AF-FJT-V	1/4	6.35	G1/8	0.16	4	0.54	13.8	9/16	14.3	0.98	24.9	0.28	7.1	1.27	32.3	0.6	15.2
VUWH-6.35BF-FJT-V	1/4	6.35	G1/4	0.19	4.8	0.71	18	3/4	19.1	1.19	30.2	0.44	11.2	1.48	37.6	0.6	15.2
VUWH-12.7BF-FJT-V	1/2	12.7	G1/4	0.23	5.9	0.71	18	13/16	20.6	1.28	32.5	0.44	11.2	1.68	42.6	0.9	22.9
VUWH-12.7CF-FJT-V	1/2	12.7	G3/8	0.31	7.9	0.86	21.8	7/8	22.2	1.3	33	0.44	11.2	1.7	43.1	0.9	22.9
VUWH-12.7DF-FJT-V	1/2	12.7	G1/2	0.41	10.4	1.02	26	1 1/16	27	1.53	38.9	0.56	14.2	1.93	49	0.9	22.9
VUWH-19.05DF-FJT-V	3/4	19.05	G1/2	0.47	11.9	1.02	26	1 1/16	27	1.52	38.6	0.56	14.2	1.92	48.7	0.96	24.4
VUWH-19.05EF-FJT-V	3/4	19.05	G3/4	0.62	15.8	1.26	32	1 3/8	34.9	1.68	42.7	0.62	15.7	2.08	52.8	0.96	24.4
VUWH-25.4FF-FJT-V	1	25.4	G1	0.78	19.8	1.54	39	1 5/8	41.3	1.88	47.8	0.72	18.3	2.36	60	1.23	31.2

Thermoelement Type can also be manufactured.

For ordering: use catalog number of the selected fitting and add the suffix T/C.

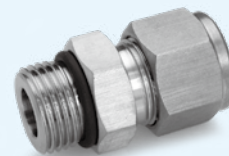
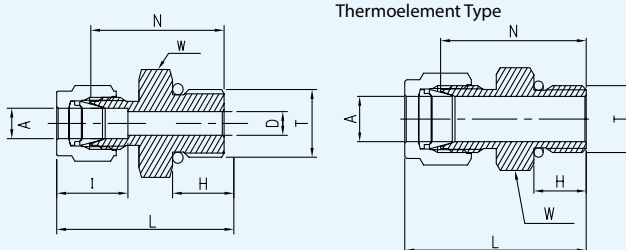
Seal Method (Male G Thread Side)

Please refer to page 38 for the Male G thread-side sealing method and compatible gaskets.

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Male Connectors (UNF)

H



SAE/MS Straight Thread BOSS ※

Part Numbers	A Tube O.D.		T	D		W		N		H		L		I		O-ring ※※ size AS568	Thermoelement Type
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		
VUWH-1.6X5/16-V	1/16	1.58	5/16-24	0.05	1.25	7/16	11.1	0.83	21	0.3	7.6	0.98	24.8	0.34	8.6	-902	-
VUWH-3.2X5/16-V	1/8	3.17	5/16-24	0.09	2.3	7/16	11.1	0.92	23.4	0.3	7.6	1.18	30	0.5	12.7	-902	○
VUWH-3.2X7/16-V	1/8	3.17	7/16-20	0.09	2.3	9/16	14.3	0.98	24.9	0.36	9.1	1.24	31.5	0.5	12.7	-904	-
VUWH-3.2X9/16-V	1/8	3.17	9/16-18	0.09	2.3	11/16	17.5	1.05	26.7	0.39	9.9	1.31	33.3	0.5	12.7	-906	-
VUWH-6.35X5/16-V	1/4	6.35	5/16-24	0.09	2.3	9/16	14.3	0.92	23.4	0.3	7.6	1.21	30.8	0.6	15.2	-902	-
VUWH-6.35X7/16-V	1/4	6.35	7/16-20	0.19	4.8	9/16	14.3	1.05	26.7	0.36	9.1	1.34	34.1	0.6	15.2	-904	○
VUWH-6.35X9/16-V	1/4	6.35	9/16-18	0.19	4.8	11/16	17.5	1.11	28.2	0.39	9.9	1.4	35.6	0.6	15.2	-906	○
VUWH-6.35X3/4-V	1/4	6.35	3/4-16	0.19	4.8	7/8	22.2	1.19	30.2	0.44	11.2	1.48	37.6	0.6	15.2	-908	-
VUWH-6.35X7/8-V	1/4	6.35	7/8-14	0.19	4.8	1	25.4	1.31	33.3	0.5	12.7	1.6	40.7	0.6	15.2	-910	-
VUWH-7.93X1/2-V	5/16	7.93	1/2-20	0.25	6.4	5/8	15.9	1.08	27.4	0.36	9.1	1.37	34.8	0.64	16.3	-905	-
VUWH-9.52X7/16-V	3/8	9.52	7/16-20	0.2	5.1	5/8	15.9	1.11	28.2	0.36	9.1	1.4	35.6	0.66	16.8	-904	-
VUWH-9.52X9/16-V	3/8	9.52	9/16-18	0.28	7.1	11/16	17.5	1.17	29.7	0.39	9.9	1.46	37.1	0.66	16.8	-906	-
VUWH-9.52X3/4-V	3/8	9.52	3/4-16	0.28	7.1	7/8	22.2	1.25	31.8	0.44	11.2	1.54	39.2	0.66	16.8	-908	-
VUWH-9.52X7/8-V	3/8	9.52	7/8-14	0.28	7.1	1	25.4	1.37	34.8	0.5	12.7	1.66	42.2	0.66	16.8	-910	-
VUWH-9.52X1-5/16-V	3/8	9.52	1 5/16-12	0.28	7.1	1 1/2	38.1	1.66	42.2	0.59	15	1.95	49.6	0.66	16.8	-916	-
VUWH-12.7X9/16-V	1/2	12.7	9/16-18	0.28	7.1	13/16	20.6	1.14	29	0.39	9.9	1.54	39.1	0.9	22.9	-906	-
VUWH-12.7X3/4-V	1/2	12.7	3/4-16	0.41	10.4	7/8	22.2	1.25	31.8	0.44	11.2	1.65	41.9	0.9	22.9	-908	-
VUWH-12.7X7/8-V	1/2	12.7	7/8-14	0.41	10.4	1	25.4	1.37	34.8	0.5	12.7	1.77	44.9	0.9	22.9	-910	-
VUWH-12.7X1-1/16-V	1/2	12.7	1 1/16-12	0.41	10.4	1 1/4	31.8	1.53	38.9	0.59	15	1.93	49	0.9	22.9	-912	-
VUWH-15.88X3/4-V	5/8	15.87	3/4-16	0.42	10.7	15/16	23.8	1.25	31.8	0.44	11.2	1.65	41.9	0.96	24.4	-908	-
VUWH-15.88X7/8-V	5/8	15.87	7/8-14	0.5	12.7	1	25.4	1.38	35.1	0.5	12.7	1.78	45.2	0.96	24.4	-910	-
VUWH-19.05X3/4-V	3/4	19.05	3/4-16	0.42	10.7	1 1/16	27	1.41	35.8	0.44	11.2	1.81	45.9	0.96	24.4	-908	-
VUWH-19.05X7/8-V	3/4	19.05	7/8-14	0.5	12.7	1 1/16	27	1.47	37.3	0.5	12.7	1.87	47.4	0.96	24.4	-910	-
VUWH-19.05X1-1/16-V	3/4	19.05	1 1/16-12	0.62	15.8	1 1/4	31.8	1.53	38.9	0.59	15	1.93	49	0.96	24.4	-912	-
VUWH-19.05X1-5/16-V	3/4	19.05	1 5/16-12	0.62	15.8	1 1/2	38.1	1.66	42.2	0.59	15	2.06	52.3	0.96	24.4	-916	-
VUWH-22.22X1-3/16-V	7/8	22.22	1 3/16-12	0.72	18.3	1 3/8	34.9	1.53	38.9	0.59	15	1.93	49	1.02	25.9	-914	-
VUWH-25.4X3/4-V	1	25.4	3/4-16	0.42	10.7	1 3/8	34.9	1.57	40	0.44	11.2	2.06	52.2	1.23	31.2	-908	-
VUWH-25.4X1-1/16-V	1	25.4	1 1/16-12	0.66	16.8	1 3/8	34.9	1.62	41.2	0.59	15	2.1	53.4	1.23	31.2	-912	-
VUWH-25.4X1-5/16-V	1	25.4	1 5/16-12	0.88	22.3	1 1/2	38.1	1.66	42.2	0.59	15	2.14	54.4	1.23	31.2	-916	-

※ : Per SAE J1926 and MS 16142. See page 78 for mounting dimensions.

Thermoelement Type can also be manufactured.

For ordering: use catalog number of the selected fitting and add the suffix T/C.

Tube (Metric) To Male UNF Thread

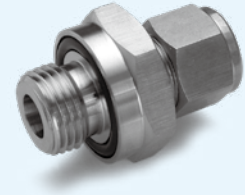
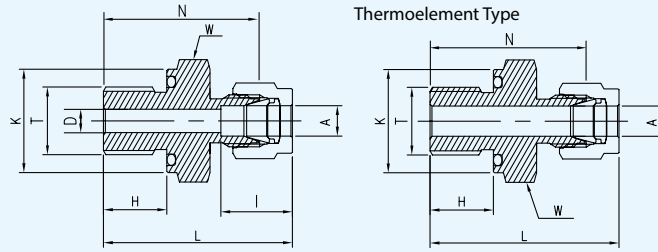
Part Numbers	A Tube O.D.		T	D		W		N		H		L		I		O-ring ※※ size AS568
	mm			in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
VUWH-6X9/16-V	6		9/16-18	0.19	4.8	0.71	18	1.11	28.2	0.39	9.9	1.40	35.6	0.60	15.3	-906
VUWH-10X9/16-V	10		9/16-18	0.28	7.1	0.71	18	1.17	29.7	0.39	9.9	1.47	37.3	0.68	17.2	-906
VUWH-10X3/4-V	10		3/4-16	0.31	7.9	0.87	22	1.25	31.8	0.44	11.2	1.55	39.4	0.68	17.2	-908
VUWH-12X7/16-V	12		7/16-20	0.20	5.1	0.87	22	1.20	30.5	0.36	9.1	1.60	40.6	0.90	22.8	-904
VUWH-12X9/16-V	12		9/16-18	0.28	7.1	0.87	22	1.14	29	0.39	9.9	1.54	39.1	0.90	22.8	-906
VUWH-12X3/4-V	12		3/4-16	0.37	9.5	0.87	22	1.25	31.8	0.44	11.2	1.65	41.9	0.90	22.8	-908

※※ : O-rings used are Viton 90 Durometer. Other O-ring materials are available on request.

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Male Connectors (NTP)

H



O-Seal NPT Tapered Thread

Part Numbers	A Tube O.D.		T	D		K		W		N		H		L		I		O-ring ※※ size AS568
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
VUWH-3.2AN-OR-V	1/8	3.17	1/8NPT	0.09	2.3	0.74	18.8	3/4	19.1	1.03	26.2	0.28	7.1	1.29	32.8	0.5	12.7	-111
VUWH-6.35AN-OR-V	1/4	6.35	1/8NPT	0.19	4.8	0.74	18.8	3/4	19.1	1.09	27.7	0.28	7.1	1.38	35.1	0.6	15.2	-111
VUWH-6.35BN-OR-V	1/4	6.35	1/4NPT	0.19	4.8	0.93	23.6	15/16	23.8	1.22	31	0.38	9.7	1.51	38.4	0.6	15.2	-113
VUWH-9.52AN-OR-V	3/8	9.52	1/8NPT	0.19	4.8	0.74	18.8	3/4	19.1	1.16	29.5	0.28	7.1	1.45	36.8	0.66	16.8	-111
VUWH-9.52BN-OR-V	3/8	9.52	1/4NPT	0.28	7.1	0.93	23.6	15/16	23.8	1.28	32.5	0.38	9.7	1.57	39.9	0.66	16.8	-113
VUWH-9.52CN-OR-V	3/8	9.52	3/8NPT	0.28	7.1	1.12	28.4	1 1/8	28.6	1.34	34	0.41	10.4	1.63	41.4	0.66	16.8	-116
VUWH-9.52DN-OR-V	3/8	9.52	1/2NPT	0.28	7.1	1.3	33	1 5/16	33.3	1.56	39.6	0.53	13.5	1.85	47	0.66	16.8	-212
VUWH-12.7DN-OR-V	1/2	12.7	1/2NPT	0.41	10.4	1.3	33	1 5/16	33.3	1.56	39.6	0.53	13.5	1.96	49.8	0.9	22.9	-212

Male Connectors (UNF)

H

O-Seal Male UNF Thread

Part Numbers	A Tube O.D.		T	D		K		W		N		H		L		I		O-ring ※※ size AS568	Thermoelement Type
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		
VUWH-1.6X5/16-OR-V	1/16	1.58	5/16-24	0.05	1.3	0.55	14	9/16	14.3	0.9	22.9	0.34	8.6	1.05	26.7	0.34	8.6	-011	○
VUWH-3.2X5/16-OR-V	1/8	3.17	5/16-24	0.09	2.3	0.55	14	9/16	14.3	1.03	26.2	0.34	8.6	1.29	32.8	0.5	12.7	-011	-
VUWH-4.8X3/8-OR-V	3/16	4.76	3/8-24	0.12	3	0.62	15.7	5/8	15.9	1.09	27.7	0.38	9.7	1.35	34.3	0.54	13.7	-012	-
VUWH-6.35X5/16-OR-V	1/4	6.35	5/16-24	0.09	2.4	0.55	14	9/16	14.3	1.09	27.8	0.34	8.6	1.38	35.1	0.6	15.2	-011	-
VUWH-6.35X7/16-OR-V	1/4	6.35	7/16-20	0.19	4.8	0.74	18.8	3/4	19.1	1.22	31	0.41	10.4	1.51	38.4	0.6	15.2	-111	-
VUWH-7.93X1/2-OR-V	5/16	7.93	1/2-20	0.25	6.35	0.86	21.8	7/8	22.2	1.31	33.3	0.44	11.2	1.6	40.6	0.64	16.3	-112	-
VUWH-9.52X9/16-OR-V	3/8	9.52	9/16-18	0.28	7.1	0.93	23.6	15/16	23.8	1.38	35.1	0.47	11.9	1.67	42.4	0.66	16.8	-113	-
VUWH-12.7X3/4-OR-V	1/2	12.7	3/4-16	0.41	10.4	1.12	28.4	1 1/8	28.6	1.41	35.8	0.47	11.9	1.81	46	0.9	22.9	-116	-
VUWH-19.05X1-1/16-OR-V	3/4	19.05	1 1/16-12	0.62	15.7	1.49	37.8	1 1/2	38.1	1.66	42.2	0.56	14.2	2.06	52.3	0.96	24.4	-215	-
VUWH-25.4X1-5/16-OR-V	1	25.4	1 5/16-12	0.88	22.3	1.74	44.2	1 3/4	44.5	1.81	46	0.56	14.2	2.29	58.2	1.23	31.2	-219	-

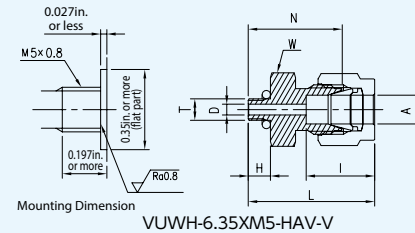
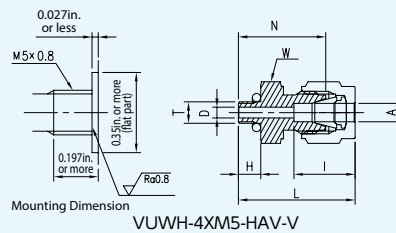
※※: O-rings used are BUNA 70 Durometer.

Thermoelement Type can also be manufactured.

For ordering: use catalog number of the selected fitting and add the suffix T/C.

Male Connectors (Metric Thread)

H



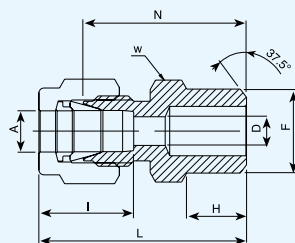
Tube (Metric, Inch) To Male Metric Thread Boss

Part Numbers	A Tube O.D.		T	D		W		N		H		L		I		O-ring ※※ size AS568
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
VUWH-4XM5-HAV-V	-	4	M5X0.8	0.09	2.4	-	12	0.77	19.6	0.20	5	1.03	26.2	0.54	13.7	I.D. 3.8 C.S. 1.9
VUWH-6.35XM5-HAV-V	1/4	6.35	M5X0.8	0.09	2.4	9/16	14.3	0.83	21	0.20	5	1.12	28.4	0.60	15.2	I.D. 3.8 C.S. 1.9

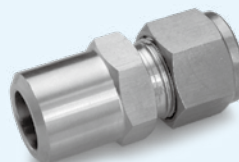
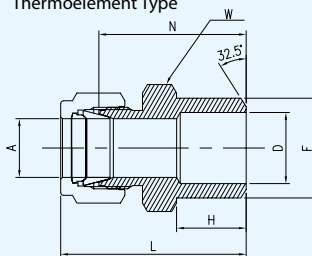
"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Male Pipe Weld Connectors

R



Thermoelement Type



Tube (Metric) To Pipe (ANSI)

Part Numbers	A Tube O.D.		F Tube size		D		W		N		H		L		I	
	mm	Nominal size	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
VUWR-3X10.3-V	3	1/8	10.3	2.4	12	23.9	9.7	30.5	12.9							
VUWR-4X10.3-V	4	1/8	10.3	2.4	12	24.6	9.7	31.2	13.7							
VUWR-6X10.3-V	6	1/8	10.3	4.8	14	25.4	9.7	32.8	15.3							
VUWR-6X13.7-V	6	1/4	13.7	4.8	14	30.5	14.2	37.9	15.3							
VUWR-8X10.3-V	8	1/8	10.3	5.1	15	26.7	9.7	34.2	16.2							
VUWR-8X13.7-V	8	1/4	13.7	6.4	15	31.2	14.2	38.7	16.2							
VUWR-8X21.3-V	8	1/2	21.3	6.4	22	38.1	19	45.6	16.2							
VUWR-10X10.3-V	10	1/8	10.3	5.1	18	28.7	9.7	36.3	17.2							
VUWR-10X13.7-V	10	1/4	13.7	7.1	18	33.3	14.2	40.9	17.2							
VUWR-10X17.1-V	10	3/8	17.1	7.9	18	33.3	14.2	40.9	17.2							
VUWR-10X21.3-V	10	1/2	21.3	7.9	22	38.9	19	46.5	17.2							
VUWR-12X13.7-V	12	1/4	13.7	7.1	22	33.3	14.2	43.4	22.8							
VUWR-12X17.1-V	12	3/8	17.1	9.5	22	33.3	14.2	43.4	22.8							
VUWR-12X21.3-V	12	1/2	21.3	9.5	22	38.9	19	49	22.8							
VUWR-12X26.7-V	12	3/4	26.7	9.5	27	40.4	19	50.5	22.8							
VUWR-12X33.4-V	12	1	33.4	9.5	35	47.6	23.9	57.7	22.8							
VUWR-14X17.1-V	14	3/8	17.1	10.4	24	34	14.2	44.1	24.4							
VUWR-14X21.3-V	14	1/2	21.3	11	24	38.9	19	49	24.4							
VUWR-15X21.3-V	15	1/2	21.3	11.9	24	38.9	19	49	24.4							
VUWR-16X21.3-V	16	1/2	21.3	12.7	24	38.9	19	49	24.4							
VUWR-18X21.3-V	18	1/2	21.3	13.5	27	40.4	19	50.5	24.4							
VUWR-20X21.3-V	20	1/2	21.3	13.5	30	42.2	19	52.3	26							
VUWR-20X26.7-V	20	3/4	26.7	15.8	30	44	19	54.1	24.4							

Tube (Inch) To Pipe (ANSI)

Part Numbers	A Tube O.D.		F Tube size		D		W		N		H		L		I		Thermoelement Type
	in	mm	Nominal size	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
VUWR-3.2X10.3-V	1/8	3.17	1/8	10.3	0.09	2.3	7/16	11.1	0.94	23.9	0.38	9.7	1.2	30.5	0.5	12.7	○
VUWR-4.8X10.3-V	3/16	4.76	1/8	10.3	0.12	3.1	7/16	11.1	0.97	24.6	0.38	9.7	1.23	31.2	0.54	13.7	-
VUWR-6.35X10.3-V	1/4	6.35	1/8	10.3	0.19	4.8	1/2	12.7	1	25.4	0.38	9.7	1.29	32.8	0.6	15.2	-
VUWR-6.35X13.7-V	1/4	6.35	1/4	13.7	0.19	4.8	9/16	14.3	1.2	30.6	0.56	14.2	1.5	38	0.6	15.2	○
VUWR-6.35X21.3-T/C-V	1/4	6.35	1/2	21.3	0.53	13.5	7/8	22.2	1.53	38.9	0.75	19	1.82	46.3	-	-	○
VUWR-7.93X10.3-V	5/16	7.93	1/8	10.3	0.2	5.1	9/16	14.3	1.05	26.7	0.38	9.7	1.34	34.1	0.64	16.3	-
VUWR-7.93X13.7-V	5/16	7.93	1/4	13.7	0.25	6.4	9/16	14.3	1.23	31.3	0.56	14.2	1.52	38.7	0.64	16.3	○
VUWR-9.52X13.7-V	3/8	9.52	1/4	13.7	0.28	7.1	5/8	15.9	1.28	32.5	0.56	14.2	1.57	39.9	0.66	16.8	-
VUWR-9.52X17.1-V	3/8	9.52	3/8	17.1	0.28	7.1	11/16	17.5	1.28	32.5	0.56	14.2	1.57	39.9	0.66	16.8	-
VUWR-9.52X21.3-V	3/8	9.52	1/2	21.3	0.28	7.1	7/8	22.2	1.53	38.9	0.75	19	1.82	46.3	0.66	16.8	-
VUWR-9.52X26.7-V	3/8	9.52	3/4	26.7	0.28	7.1	1 1/16	27	1.59	40.4	0.75	19	1.88	47.8	0.66	16.8	-
VUWR-12.7X17.1-V	1/2	12.7	3/8	17.1	0.41	10.4	13/16	20.6	1.31	33.3	0.56	14.2	1.71	43.4	0.9	22.9	-
VUWR-12.7X21.3-V	1/2	12.7	1/2	21.3	0.41	10.4	7/8	22.2	1.53	38.9	0.75	19	1.93	49	0.9	22.9	○
VUWR-12.7X26.7-V	1/2	12.7	3/4	26.7	0.41	10.4	1 1/16	27	1.59	40.4	0.75	19	1.99	50.5	0.9	22.9	○
VUWR-12.7X33.4-V	1/2	12.7	1	33.4	0.41	10.4	1 3/8	34.9	1.87	47.5	0.94	23.9	2.27	57.6	0.9	22.9	○
VUWR-15.88X21.3-V	5/8	15.87	1/2	21.3	0.5	12.7	15/16	23.8	1.53	38.9	0.75	19	1.93	49	0.96	24.4	-
VUWR-19.05X13.7-V	3/4	19.05	1/4	13.7	0.28	7.1	1 1/16	27	1.5	38.1	0.56	14.2	1.9	48.2	0.96	24.4	-
VUWR-19.05X21.3-V	3/4	19.05	1/2	21.3	0.53	13.5	1 1/16	27	1.53	38.9	0.75	19	1.93	49	0.96	24.4	-
VUWR-19.05X26.7-V	3/4	19.05	3/4	26.7	0.62	15.7	1 1/16	27	1.59	40.4	0.75	19	1.99	50.5	0.96	24.4	-
VUWR-19.05X33.4-V	3/4	19.05	1	33.4	0.62	15.8	1 3/8	34.9	1.85	47	0.94	23.9	2.25	57.1	0.96	24.4	-
VUWR-25.4X21.3-V	1	25.4	1/2	21.3	0.53	13.5	1 3/8	34.9	1.68	42.7	0.75	19	2.16	54.9	1.23	31.2	-
VUWR-25.4X33.4-V	1	25.4	1	33.4	0.88	22.4	1 3/8	34.9	1.97	50	0.94	23.9	2.45	62.2	1.23	31.2	-

Tube (Inch) To Pipe (Inch)

Part Numbers	A Tube O.D.		F		D		W		N		H		L	
	in	mm	in	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
VUWR-14.2X27.2-T/C-V	9/16	14.29	3/4	27.2	19.4	30	40.5	19.1	50.6					

Thermoelement Type can also be manufactured.

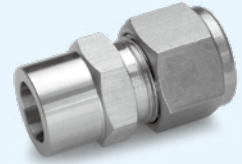
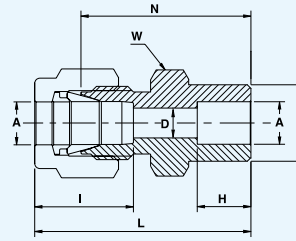
For ordering: use catalog number of the selected fitting and add the suffix T/C.

Some combinations of dimensions A and F may not be available.

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Tube Socket Weld Unions

R



Tube (Inch) To Tube (Inch)

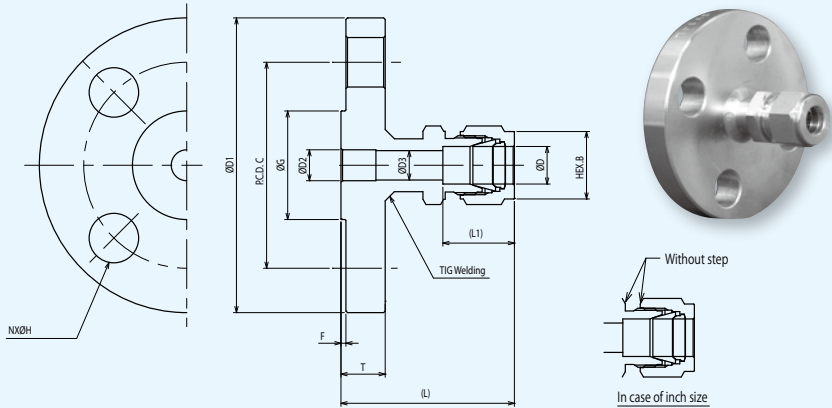
Part Numbers	A Tube O.D.		D		W		N		F		H		L		I	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWR-3.2X3.2F-V	1/8	3.17	0.09	2.3	7/16	11.1	0.88	22.4	0.31	7.9	0.25	6.4	1.14	29	0.5	12.7
VUWR-6.35X6.35F-V	1/4	6.35	0.19	4.8	1/2	12.7	1.03	26.2	0.44	11.2	0.31	7.9	1.32	33.6	0.6	15.2
VUWR-9.52X9.52F-V	3/8	9.52	0.28	7.1	5/8	15.9	1.19	30.2	0.62	15.8	0.38	9.7	1.48	37.6	0.66	16.8
VUWR-12.7X12.7F-V	1/2	12.7	0.41	10.4	13/16	20.6	1.22	31	0.75	19.1	0.5	12.7	1.62	41.1	0.9	22.9
VUWR-19.05X19.05F-V	3/4	19.05	0.62	15.8	1 1/16	27	1.31	33.3	1.05	26.7	0.56	14.2	1.71	43.4	0.96	24.4
VUWR-25.4X25.4F-V	1	25.4	0.88	22.3	1 3/8	34.9	1.59	40.4	1.36	34.5	0.76	19.2	2.07	52.6	1.23	31.2

Thermoelement Type can also be manufactured.

For ordering: use catalog number of the selected fitting and add the suffix T/C.

Flange Unions

RF

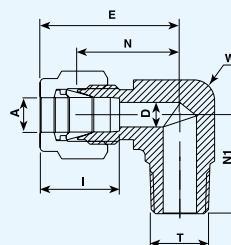


Part Numbers	Connection Flange Standard	Nominal Diameter		Dimensions inch (mm)											
		Fittings inch (mm)	Flanges (A)	L	L1	Flange								D3	B
						D1	T	F	G	Bolt Holes			D2		
VUWRF-12D-J10R-V	JIS 10K	— (12)	15	2.1 (53.4)	0.9 (22.8)	3.74 (95)	0.47 (12)	0.039 (1)	2.01 (51)	2.76 (70)	4	0.59 (15)	0.39 (10)	0.37 (9.5)	0.87 (22)
VUWRF-12D-J20R-V	JIS 20K	— (12)	15	2.18 (55.4)	0.9 (22.8)	3.74 (95)	0.47 (14)	0.039 (1)	2.01 (51)	2.76 (70)	4	0.59 (15)	0.39 (10)	0.37 (9.5)	0.87 (22)
VUWRF-12D-A2R-V	ANSI 150	— (12)	15	2.07 (52.6)	0.9 (22.8)	3.5 (88.9)	0.44 (11.2)	0.063 (1.6)	1.38 (35.1)	2.38 (60.5)	4	0.63 (16)	0.39 (10)	0.37 (9.5)	0.87 (22)
VUWRF-12.7D-A2R-V		1/2 (12.7)	15	2.07 (52.6)	0.9 (22.9)	3.5 (88.9)	0.44 (11.2)	0.063 (1.6)	1.38 (35.1)	2.38 (60.5)	4	0.63 (16)	0.39 (10)	0.37 (9.5)	0.87 (22.2)
VUWRF-12.7F-A2R-V		1/2 (12.7)	25	2.19 (55.7)	0.9 (22.9)	4.25 (108)	0.56 (14.3)	0.063 (1.6)	2 (50.8)	3.12 (79.3)	4	0.63 (16)	0.39 (10)	0.37 (9.5)	0.87 (22.2)
VUWRF-12D-A3R-V	ANSI 300	— (12)	15	2.19 (55.7)	0.9 (22.8)	3.75 (95.3)	0.56 (14.3)	0.063 (1.6)	1.38 (35.1)	2.62 (66.6)	4	0.63 (16)	0.39 (10)	0.37 (9.5)	0.87 (22)
VUWRF-12.7D-A3R-V		1/2 (12.7)	15	2.19 (55.7)	0.9 (22.9)	3.75 (95.3)	0.56 (14.3)	0.063 (1.6)	1.38 (35.1)	2.62 (66.6)	4	0.63 (16)	0.39 (10)	0.37 (9.5)	0.87 (22.2)
VUWRF-12.7F-A3R-V		1/2 (12.7)	25	2.32 (59)	0.9 (22.9)	4.88 (124)	0.69 (17.6)	0.063 (1.6)	2 (50.8)	3.5 (88.9)	4	0.77 (19.5)	0.39 (10)	0.37 (9.5)	0.87 (22.2)
VUWRF-12.7D-A6R-V	ANSI 600	1/2 (12.7)	15	2.44 (62.1)	0.9 (22.9)	3.75 (95.3)	0.56 (14.3)	0.063 (1.6)	1.38 (35.1)	2.62 (66.6)	4	0.63 (16)	0.39 (10)	0.37 (9.5)	0.87 (22.2)
VUWRF-12D-JP3R-V	JPI 300	12	15	2.19 (55.7)	0.9 (22.8)	3.74 (95)	0.56 (14.3)	0.063 (1.6)	1.38 (35.1)	2.62 (66.5)	4	0.63 (16)	0.39 (10)	0.37 (9.5)	0.87 (22)

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Male Elbows (NPT)

L



Tube (Metric) To Male NPT Thread

Part Numbers	A Tube O.D.	T	D	W		N	E	N1	I
	mm		mm	in	mm	mm	mm	mm	mm
VUWL-3AN-V	3	1/8NPT	2.4	7/16	11.1	17	23.6	17.8	12.9
VUWL-3BN-V	3	1/4NPT	2.4	1/2	12.7	18	24.6	23.4	12.9
VUWL-4AN-V	4	1/8NPT	2.4	1/2	12.7	18.8	25.4	18.8	13.7
VUWL-4BN-V	4	1/4NPT	2.4	1/2	12.7	18.8	25.4	23.4	13.7
VUWL-6AN-V	6	1/8NPT	4.8	1/2	12.7	19.6	27	18.8	15.3
VUWL-6BN-V	6	1/4NPT	4.8	1/2	12.7	19.6	27	23.4	15.3
VUWL-6CN-V	6	3/8NPT	4.8	11/16	17.5	22.4	29.8	26.2	15.3
VUWL-6DN-V	6	1/2NPT	4.8	13/16	20.6	24.4	31.8	33	15.3
VUWL-8AN-V	8	1/8NPT	4.8	9/16	14.3	21.3	28.8	19.8	16.2
VUWL-8BN-V	8	1/4NPT	6.4	9/16	14.3	21.3	28.8	24.4	16.2
VUWL-8CN-V	8	3/8NPT	6.4	11/16	17.5	23.1	30.6	26.2	16.2
VUWL-8DN-V	8	1/2NPT	6.4	13/16	20.6	25.1	32.6	33	16.2
VUWL-10AN-V	10	1/8NPT	4.8	11/16	17.5	23.9	31.5	21.6	17.2
VUWL-10BN-V	10	1/4NPT	7.1	11/16	17.5	23.9	31.5	26.2	17.2
VUWL-10CN-V	10	3/8NPT	7.9	11/16	17.5	23.9	31.5	26.2	17.2
VUWL-10DN-V	10	1/2NPT	7.9	13/16	20.6	25.9	33.5	33	17.2
VUWL-10EN-V	10	3/4NPT	7.9	1 1/16	27	29.7	37.3	36.8	17.2
VUWL-12AN-V	12	1/8NPT	4.8	13/16	20.6	25.9	36	23.6	22.8
VUWL-12BN-V	12	1/4NPT	7.1	13/16	20.6	25.9	36	28.2	22.8
VUWL-12CN-V	12	3/8NPT	9.5	13/16	20.6	25.9	36	28.2	22.8
VUWL-12DN-V	12	1/2NPT	9.5	13/16	20.6	25.9	36	33	22.8
VUWL-12EN-V	12	3/4NPT	9.5	1 1/16	27	29.7	39.8	36.8	22.8
VUWL-15DN-V	15	1/2NPT	11.9	15/16	23.8	27.9	38	35.1	24.4
VUWL-16CN-V	16	3/8NPT	9.5	15/16	23.8	27.9	38	30.2	24.4
VUWL-16DN-V	16	1/2NPT	11.9	15/16	23.8	27.9	38	35.1	24.4
VUWL-16EN-V	16	3/4NPT	12.7	1 1/16	27	29.7	39.8	36.8	24.4
VUWL-18DN-V	18	1/2NPT	11.9	1 1/16	27	29.7	39.8	36.8	24.4
VUWL-18EN-V	18	3/4NPT	15.1	1 1/16	27	29.7	39.8	36.8	24.4
VUWL-20DN-V	20	1/2NPT	11.9	1 3/8	34.9	34.5	44.6	41.7	26
VUWL-20EN-V	20	3/4NPT	15.8	1 3/8	34.9	34.5	44.6	41.7	26
VUWL-22EN-V	22	3/4NPT	15.8	1 3/8	34.9	34.5	44.6	41.7	26
VUWL-22FN-V	22	1NPT	18.3	1 3/8	34.9	34.5	44.6	46.5	26
VUWL-25EN-V	25	3/4NPT	15.8	1 3/8	34.9	36.8	49	41.7	31.3
VUWL-25FN-V	25	1NPT	21.8	1 3/8	34.9	36.8	49	46.5	31.3

For inches, see next page

Reference Thread Specifications:

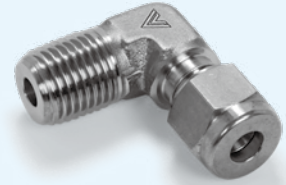
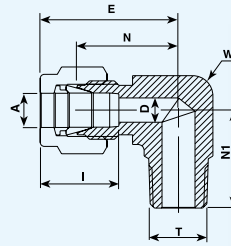
American Standard Pipe Thread (NPT).

NPT (National Pipe Tapered) is made to specifications outlined in ANSI B1.20.1.

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Male Elbows (NPT)

L



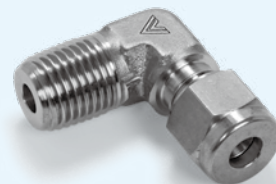
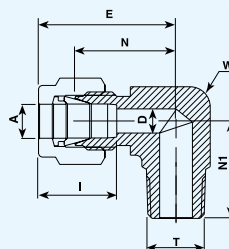
Tube (Inch) To Male NPT Thread

Part Numbers	A Tube O.D.		T	D		W		N		E		N1		I	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWL-1.6AN-V	1/16	1.58	1/8NPT	0.05	1.3	7/16	11.1	0.6	15.2	0.75	19	0.7	17.8	0.34	8.6
VUWL-3.2AN-V	1/8	3.17	1/8NPT	0.09	2.3	7/16	11.1	0.67	17	0.93	23.6	0.7	17.8	0.5	12.7
VUWL-3.2BN-V	1/8	3.17	1/4NPT	0.09	2.3	1/2	12.7	0.71	18	0.97	24.6	0.92	23.4	0.5	12.7
VUWL-4.8AN-V	3/16	4.76	1/8NPT	0.12	3.1	1/2	12.7	0.74	18.8	1	25.4	0.74	18.8	0.54	13.7
VUWL-4.8BN-V	3/16	4.76	1/4NPT	0.12	3.1	1/2	12.7	0.74	18.8	1	25.4	0.92	23.4	0.54	13.7
VUWL-6.35AN-V	1/4	6.35	1/8NPT	0.19	4.8	1/2	12.7	0.77	19.6	1.06	27	0.74	18.8	0.6	15.2
VUWL-6.35BN-V	1/4	6.35	1/4NPT	0.19	4.8	1/2	12.7	0.77	19.6	1.06	27	0.92	23.4	0.6	15.2
VUWL-6.35CN-V	1/4	6.35	3/8NPT	0.19	4.8	11/16	17.5	0.88	22.4	1.17	29.8	1.03	26.2	0.6	15.2
VUWL-6.35DN-V	1/4	6.35	1/2NPT	0.19	4.8	13/16	20.6	0.96	24.4	1.25	31.8	1.3	33	0.6	15.2
VUWL-7.93AN-V	5/16	7.93	1/8NPT	0.19	4.8	9/16	14.3	0.84	21.3	1.13	28.7	0.78	19.8	0.64	16.3
VUWL-7.93BN-V	5/16	7.93	1/4NPT	0.25	6.4	9/16	14.3	0.84	21.3	1.13	28.7	0.96	24.4	0.64	16.3
VUWL-7.93CN-V	5/16	7.93	3/8NPT	0.25	6.4	11/16	17.5	0.91	23.1	1.2	30.5	1.03	26.2	0.64	16.3
VUWL-9.52AN-V	3/8	9.52	1/8NPT	0.19	4.8	5/8	15.9	0.91	23.1	1.2	30.5	0.82	20.8	0.66	16.8
VUWL-9.52BN-V	3/8	9.52	1/4NPT	0.28	7.1	5/8	15.9	0.91	23.1	1.2	30.5	1	25.4	0.66	16.8
VUWL-9.52CN-V	3/8	9.52	3/8NPT	0.28	7.1	11/16	17.5	0.94	23.9	1.23	31.3	1.03	26.2	0.66	16.8
VUWL-9.52DN-V	3/8	9.52	1/2NPT	0.28	7.1	13/16	20.6	1.02	25.9	1.31	33.3	1.3	33	0.66	16.8
VUWL-9.52EN-V	3/8	9.52	3/4NPT	0.28	7.1	1 1/16	27	1.17	29.7	1.46	37.1	1.45	36.8	0.66	16.8
VUWL-12.7AN-V	1/2	12.7	1/8NPT	0.19	4.8	13/16	20.6	1.02	25.9	1.42	36	0.95	24.2	0.9	22.9
VUWL-12.7BN-V	1/2	12.7	1/4NPT	0.28	7.1	13/16	20.6	1.02	25.9	1.42	36	1.11	28.2	0.9	22.9
VUWL-12.7CN-V	1/2	12.7	3/8NPT	0.37	9.5	13/16	20.6	1.02	25.9	1.42	36	1.11	28.2	0.9	22.9
VUWL-12.7DN-V	1/2	12.7	1/2NPT	0.41	10.4	13/16	20.6	1.02	25.9	1.42	36	1.3	33	0.9	22.9
VUWL-12.7EN-V	1/2	12.7	3/4NPT	0.41	10.4	1 1/16	27	1.17	29.7	1.57	39.8	1.45	36.8	0.9	22.9
VUWL-15.88CN-V	5/8	15.87	3/8NPT	0.37	9.5	15/16	23.8	1.1	27.9	1.5	38	1.19	30.2	0.96	24.4
VUWL-15.88DN-V	5/8	15.87	1/2NPT	0.47	11.9	15/16	23.8	1.1	27.9	1.5	38	1.38	35.1	0.96	24.4
VUWL-15.88EN-V	5/8	15.87	3/4NPT	0.50	12.7	1 1/16	27	1.17	29.7	1.57	39.8	1.45	36.8	0.96	24.4
VUWL-19.05CN-V	3/4	19.05	3/8NPT	0.38	9.7	1 1/16	27	1.17	29.7	1.57	39.8	1.27	32.2	0.96	24.4
VUWL-19.05DN-V	3/4	19.05	1/2NPT	0.47	11.9	1 1/16	27	1.17	29.7	1.57	39.8	1.45	36.8	0.96	24.4
VUWL-19.05EN-V	3/4	19.05	3/4NPT	0.62	15.8	1 1/16	27	1.17	29.7	1.57	39.8	1.45	36.8	0.96	24.4
VUWL-19.05FN-V	3/4	19.05	1NPT	0.62	15.8	1 3/8	34.9	1.45	36.8	1.85	46.9	1.83	46.5	0.96	24.4
VUWL-22.22EN-V	7/8	22.22	3/4NPT	0.62	15.8	1 3/8	34.9	1.36	34.5	1.76	44.6	1.64	41.7	1.02	25.9
VUWL-25.4EN-V	1	25.4	3/4NPT	0.62	15.8	1 3/8	34.9	1.45	36.8	1.93	49	1.64	41.7	1.23	31.2
VUWL-25.4FN-V	1	25.4	1NPT	0.86	21.8	1 3/8	34.9	1.45	36.8	1.93	49	1.83	46.5	1.23	31.2

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Male Elbows (R)

L



Tube (Metric) To ISO Tapered Thread

Part Numbers	A Tube O.D.	T	D	W		N	E	N ₁	I
	mm		mm	in	mm	mm	mm	mm	mm
VUWL-3A-V	3	R 1/8	2.4	7/16	11.1	17	23.6	17.8	12.9
VUWL-3B-V	3	R 1/4	2.4	1/2	12.7	18	24.6	23.4	12.9
VUWL-4A-V	4	R 1/8	2.4	1/2	12.7	18.8	25.4	18.8	13.7
VUWL-4B-V	4	R 1/4	2.4	1/2	12.7	18.8	25.4	23.4	13.7
VUWL-6A-V	6	R 1/8	4.8	1/2	12.7	19.6	27	18.8	15.3
VUWL-6B-V	6	R 1/4	4.8	1/2	12.7	19.6	27	23.4	15.3
VUWL-6C-V	6	R 3/8	4.8	11/16	17.5	22.4	29.8	26.2	15.3
VUWL-6D-V	6	R 1/2	4.8	13/16	20.6	24.4	31.8	33	15.3
VUWL-8A-V	8	R 1/8	4.8	9/16	14.3	21.3	28.8	19.8	16.2
VUWL-8B-V	8	R 1/4	6.4	9/16	14.3	21.3	28.8	24.4	16.2
VUWL-8C-V	8	R 3/8	6.4	11/16	17.5	23.1	30.6	26.2	16.2
VUWL-8D-V	8	R 1/2	6.4	13/16	20.6	25.1	32.6	33	16.2
VUWL-10A-V	10	R 1/8	4.8	11/16	17.5	23.9	31.5	21.6	17.2
VUWL-10B-V	10	R 1/4	7.1	11/16	17.5	23.9	31.5	26.2	17.2
VUWL-10C-V	10	R 3/8	7.9	11/16	17.5	23.9	31.5	26.2	17.2
VUWL-10D-V	10	R 1/2	7.9	13/16	20.6	25.9	33.5	33	17.2
VUWL-12A-V	12	R 1/8	4.8	13/16	20.6	25.9	36	23.6	22.8
VUWL-12B-V	12	R 1/4	7.1	13/16	20.6	25.9	36	28.2	22.8
VUWL-12C-V	12	R 3/8	9.5	13/16	20.6	25.9	36	28.2	22.8
VUWL-12D-V	12	R 1/2	9.5	13/16	20.6	25.9	36	33	22.8
VUWL-12E-V	12	R 3/4	9.5	1 1/16	27	29.7	39.8	36.8	22.8
VUWL-12F-V	12	R 1	9.5	1 3/8	34.9	34.5	44.6	46.5	22.8
VUWL-14D-V	14	R 1/2	11	15/16	23.8	27.9	38	35	24.4
VUWL-15C-V	15	R 3/8	9.7	15/16	23.8	27.9	38	30.2	24.4
VUWL-15D-V	15	R 1/2	11.9	15/16	23.8	27.9	38	35.1	24.4
VUWL-16B-V	16	R 1/4	7.1	15/16	23.8	27.9	38	30.2	24.4
VUWL-16C-V	16	R 3/8	9.5	15/16	23.8	27.9	38	30.2	24.4
VUWL-16D-V	16	R 1/2	11.9	15/16	23.8	27.9	38	35.1	24.4
VUWL-18D-V	18	R 1/2	11.9	1 1/16	27	29.7	39.8	36.8	24.4
VUWL-18E-V	18	R 3/4	15.1	1 1/16	27	29.7	39.8	36.8	24.4
VUWL-20D-V	20	R 1/2	11.9	1 3/8	34.9	34.5	44.6	41.7	26
VUWL-20E-V	20	R 3/4	15.8	1 3/8	34.9	34.5	44.6	41.7	26
VUWL-22E-V	22	R 3/4	15.8	1 3/8	34.9	34.5	44.6	41.7	26
VUWL-22F-V	22	R 1	18.3	1 3/8	34.9	34.5	44.6	46.5	26
VUWL-25E-V	25	R 3/4	15.9	1 3/8	34.9	36.8	49	41.7	31.3
VUWL-25F-V	25	R 1	21.8	1 3/8	34.9	36.8	49	46.5	31.3

Reference Thread Specifications:

DIN - 2999
BS - 21
JIS - B0203
ISO - 1/7-BSP-T

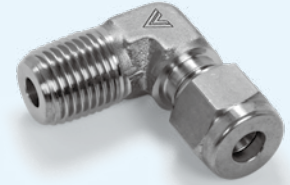
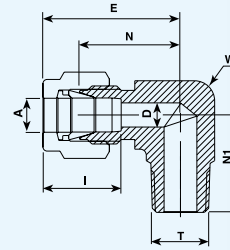
Designation:

R marking on hex.

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Male Elbows (R)

L



Tube (Inch) To ISO Tapered Thread

Part Numbers	A Tube O.D.		T	D		W		N		E		N1		I	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWL-1.6A-V	1/16	1.58	R 1/8	0.05	1.3	7/16	11.1	0.6	15.2	0.75	19	0.7	17.8	0.34	8.6
VUWL-3.2A-V	1/8	3.17	R 1/8	0.09	2.3	7/16	11.1	0.67	17	0.93	23.6	0.7	17.8	0.5	12.7
VUWL-3.2B-V	1/8	3.17	R 1/4	0.09	2.3	1/2	12.7	0.71	18	0.97	24.6	0.92	23.4	0.5	12.7
VUWL-3.2C-V	1/8	3.17	R 3/8	0.09	2.3	11/16	17.5	0.88	22.4	1.14	29	1.03	26.2	0.5	12.7
VUWL-4.8A-V	3/16	4.76	R 1/8	0.12	3.1	1/2	12.7	0.74	18.8	1	25.4	0.74	18.8	0.54	13.7
VUWL-4.8B-V	3/16	4.76	R 1/4	0.12	3.1	1/2	12.7	0.74	18.8	1	25.4	0.92	23.4	0.54	13.7
VUWL-6.35A-V	1/4	6.35	R 1/8	0.19	4.8	1/2	12.7	0.77	19.6	1.06	27	0.74	18.8	0.6	15.2
VUWL-6.35B-V	1/4	6.35	R 1/4	0.19	4.8	1/2	12.7	0.77	19.6	1.06	27	0.92	23.4	0.6	15.2
VUWL-6.35C-V	1/4	6.35	R 3/8	0.19	4.8	11/16	17.5	0.88	22.4	1.17	29.8	1.03	26.2	0.6	15.2
VUWL-6.35D-V	1/4	6.35	R 1/2	0.19	4.8	13/16	20.6	0.96	24.4	1.25	31.8	1.3	33	0.6	15.2
VUWL-6.35E-V	1/4	6.35	R 3/4	0.19	4.8	1 1/16	27	1.07	27.2	1.36	34.6	1.45	36.8	0.6	15.2
VUWL-7.93A-V	5/16	7.93	R 1/8	0.19	4.8	9/16	14.3	0.84	21.3	1.13	28.7	0.78	19.8	0.64	16.3
VUWL-7.93B-V	5/16	7.93	R 1/4	0.25	6.4	9/16	14.3	0.84	21.3	1.13	28.7	0.96	24.4	0.64	16.3
VUWL-7.93C-V	5/16	7.93	R 3/8	0.25	6.4	11/16	17.5	0.91	23.1	1.2	30.5	1.03	26.2	0.64	16.3
VUWL-9.52A-V	3/8	9.52	R 1/8	0.19	4.8	5/8	15.9	0.91	23.1	1.2	30.5	0.82	20.8	0.66	16.8
VUWL-9.52B-V	3/8	9.52	R 1/4	0.28	7.1	5/8	15.9	0.91	23.1	1.2	30.5	1	25.4	0.66	16.8
VUWL-9.52C-V	3/8	9.52	R 3/8	0.28	7.1	11/16	17.5	0.94	23.9	1.23	31.3	1.03	26.2	0.66	16.8
VUWL-9.52D-V	3/8	9.52	R 1/2	0.28	7.1	13/16	20.6	1.02	25.9	1.31	33.3	1.3	33	0.66	16.8
VUWL-9.52E-V	3/8	9.52	R 3/4	0.28	7.1	1 1/16	27	1.17	29.7	1.46	37.1	1.45	36.8	0.66	16.8
VUWL-12.7B-V	1/2	12.7	R 1/4	0.28	7.1	13/16	20.6	1.02	25.9	1.42	36	1.11	28.2	0.9	22.9
VUWL-12.7C-V	1/2	12.7	R 3/8	0.37	9.5	13/16	20.6	1.02	25.9	1.42	36	1.11	28.2	0.9	22.9
VUWL-12.7D-V	1/2	12.7	R 1/2	0.41	10.4	13/16	20.6	1.02	25.9	1.42	36	1.3	33	0.9	22.9
VUWL-12.7E-V	1/2	12.7	R 3/4	0.41	10.4	1 1/16	27	1.17	29.7	1.57	39.8	1.45	36.8	0.9	22.9
VUWL-12.7F-V	1/2	12.7	R 1	0.41	10.4	1 3/8	34.9	1.36	34.5	1.76	44.6	1.83	46.5	0.9	22.9
VUWL-15.88C-V	5/8	15.87	R 3/8	0.38	9.7	15/16	23.8	1.1	27.9	1.5	38	1.19	30.2	0.96	24.4
VUWL-15.88D-V	5/8	15.87	R 1/2	0.47	11.9	15/16	23.8	1.1	27.9	1.5	38	1.38	35.1	0.96	24.4
VUWL-15.88E-V	5/8	15.87	R 3/4	0.5	12.7	1 1/16	27	1.17	29.7	1.57	39.8	1.45	36.8	0.96	24.4
VUWL-19.05C-V	3/4	19.05	R 3/8	0.38	9.7	1 1/16	27	1.17	29.7	1.57	39.8	1.27	32.2	0.96	24.4
VUWL-19.05D-V	3/4	19.05	R 1/2	0.47	11.9	1 1/16	27	1.17	29.7	1.57	39.8	1.45	36.8	0.96	24.4
VUWL-19.05E-V	3/4	19.05	R 3/4	0.62	15.8	1 1/16	27	1.17	29.7	1.57	39.8	1.45	36.8	0.96	24.4
VUWL-22.22E-V	7/8	22.22	R 3/4	0.62	15.8	1 3/8	34.9	1.36	34.5	1.76	44.6	1.64	41.7	1.02	25.9
VUWL-25.4E-V	1	25.4	R 3/4	0.63	15.9	1 3/8	34.9	1.45	36.8	1.93	49	1.64	41.7	1.23	31.2
VUWL-25.4F-V	1	25.4	R 1	0.86	21.8	1 3/8	34.9	1.45	36.8	1.93	49	1.83	46.5	1.23	31.2

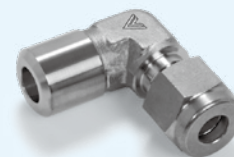
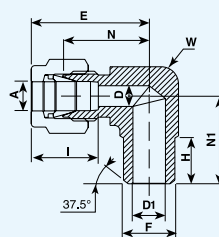
Designation:

R marking on hex.

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Male Pipe Weld Elbows

LR



Tube (Metric) To Pipe (ANSI)

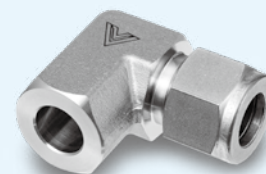
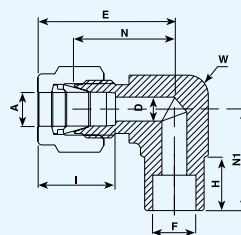
Part Number	A	F		D		D1		W		N		E		N1		I	
	Tube O.D. mm	Pipe size. Nominal size		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
VUWLR-12X21.3-V	12	1/2		21.3	0.37	9.5	0.53	13.5	13/16	20.6	1.02	25.9	1.42	36	1.3	33	0.90

Tube (Inch) To Pipe (ANSI)

Part Numbers	A		F		D		D1		W		N		H		E		N1		I	
	Tube O.D.		Pipe size.																	
	in	mm	Nominal size	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWLR-6.35X10.3-V	1/4	6.35	1/8	10.3	0.19	4.8	0.19	4.8	1/2	12.7	0.77	19.6	0.38	9.7	1.06	27	0.74	18.8	0.6	15.2
VUWLR-6.35X13.7-V	1/4	6.35	1/4	13.7	0.19	4.8	0.28	7.1	1/2	12.7	0.77	19.6	-	-	1.06	27	0.92	23.4	0.6	15.2
VUWLR-9.52X13.7-V	3/8	9.52	1/4	13.7	0.28	7.1	0.28	7.1	5/8	15.9	0.91	23.1	0.56	14.2	1.2	30.5	1	25.4	0.66	16.8
VUWLR-9.52X17.1-V	3/8	9.52	3/8	17.1	0.28	7.1	0.41	10.4	11/16	17.5	0.94	23.9	0.56	14.2	1.23	31.3	1.03	26.2	0.66	16.8
VUWLR-12.7X21.3-V	1/2	12.7	1/2	21.3	0.41	10.4	0.53	13.5	13/16	20.6	1.02	25.9	-	-	1.42	36	1.3	33	0.9	22.9
VUWLR-19.05X26.7-V	3/4	19.05	3/4	26.7	0.62	15.7	0.62	15.7	1 1/16	27	1.17	29.7	0.75	19	1.57	39.8	1.45	36.8	0.96	24.4

Tube Socket Weld Elbows

LR



Tube (Inch) To Tube (Inch)

Part Numbers	A		F		D		W		N		H		E		N1		I	
	Tube O.D.		Tube O.D.															
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWLR-6.35X6.35F-V	1/4	6.35	1/4	6.35	0.19	4.8	1/2	12.7	0.77	19.6	0.31	7.9	1.06	27	0.77	19.6	0.6	15.2
VUWLR-9.52X9.52F-V	3/8	9.52	3/8	9.52	0.28	7.1	5/8	15.9	0.91	23.1	0.38	9.7	1.2	30.5	0.91	23.1	0.66	16.8
VUWLR-12.7X12.7F-V	1/2	12.7	1/2	12.7	0.41	10.4	15/16	23.8	1.02	25.9	0.5	12.7	1.42	36	1.02	25.9	0.9	22.9

Reducing Elbows

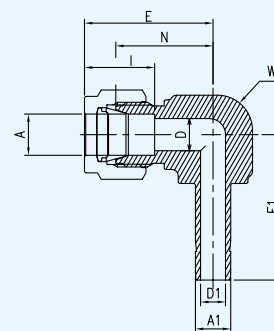
LR

Tube (Metric) To Tube (Metric)

Part Numbers	A		A1		E		E1		I		D		D1		W		N	
	Tube O.D.		Tube O.D.															
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	in	mm	mm	mm
VUWLR-6X6-V	6	6	6	6	27	23.8	15.3	4.8	4	1/2	12.7	19.6						
VUWLR-12X12-V	12	12	12	12	38.1	38.1	22.8	9.5	8.8	15/16	23.8	28						

Tube (Inch) To Tube (Inch)

Part Numbers	A		A1		E		E1		I		D		D1		W		N	
	Tube O.D.		Tube O.D.															
	in	mm	in	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	in	mm	mm	mm
VUWLR-6.35X6.35-V	1/4	6.35	1/4	6.35	27	23.8	15.2	4.8	4.2	1/2	12.7	19.6						
VUWLR-9.52X9.52-V	3/8	9.52	3/8	9.52	30.5	31.5	16.8	7.1	6.8	5/8	15.9	23.1						



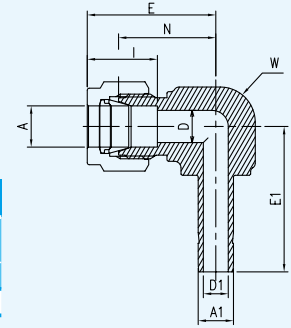
"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Reducing Elbows

LR

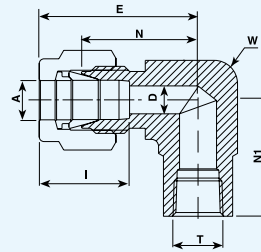
Tube (Metric) To Tube (Inch)

Part Number	A Tube O.D.	A1 Tube O.D.		E	E1	I	D	D1	W		N
	mm	in	mm	mm	mm	mm	mm	mm	in	mm	mm
VUWLR-12X12.7-V	12	1/2	12.7	38.1	38.1	22.8	9.5	9.4	15/16	23.8	28



Female Elbows (NPT)

LG



Tube (Metric) To Female NPT Thread

Part Numbers	A Tube O.D.	T	D		W		N	E	N1	I
	mm		mm		in	mm	mm	mm	mm	mm
VUWLG-6AN-V	6	1/8NPT	4.8		1/2	12.7	19.6	27	19	15.3
VUWLG-6BN-V	6	1/4NPT	4.8		11/16	17.5	22.4	29.8	22.4	15.3
VUWLG-8AN-V	8	1/8NPT	6.4		9/16	14.3	21.3	28.8	19	16.2
VUWLG-8BN-V	8	1/4NPT	6.4		11/16	17.5	23.1	30.6	22.4	16.2
VUWLG-10AN-V	10	1/8NPT	7.9		11/16	17.5	23.9	31.5	19	17.2
VUWLG-10BN-V	10	1/4NPT	7.9		13/16	20.6	25.9	33.5	22.4	17.2
VUWLG-10CN-V	10	3/8NPT	7.9		15/16	23.8	25.9	33.5	22.4	17.2
VUWLG-12BN-V	12	1/4NPT	9.5		13/16	20.6	25.9	36	22.4	22.8
VUWLG-12CN-V	12	3/8NPT	9.5		15/16	23.8	25.9	36	22.4	22.8
VUWLG-12DN-V	12	1/2NPT	9.5		1 1/16	27	28.7	38.8	28.4	22.8

Tube (Inch) To Female NPT Thread

Part Numbers	A Tube O.D.		T	D		W		N		E		N1		I	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWLG-3.2AN-V	1/8	3.17	1/8NPT	0.09	2.3	1/2	12.7	0.71	18	0.97	24.6	0.75	19.1	0.5	12.7
VUWLG-3.2BN-V	1/8	3.17	1/4NPT	0.09	2.3	11/16	17.5	0.82	20.8	1.08	27.4	0.88	22.4	0.5	12.7
VUWLG-4.8AN-V	3/16	4.76	1/8NPT	0.12	3.1	1/2	12.7	0.74	18.8	1	25.4	0.75	19.1	0.54	13.7
VUWLG-6.35AN-V	1/4	6.35	1/8NPT	0.19	4.8	1/2	12.7	0.77	19.6	1.06	27	0.75	19.1	0.6	15.2
VUWLG-6.35BN-V	1/4	6.35	1/4NPT	0.19	4.8	11/16	17.5	0.88	22.4	1.17	29.8	0.88	22.4	0.6	15.2
VUWLG-6.35CN-V	1/4	6.35	3/8NPT	0.19	4.8	15/16	23.8	0.96	24.4	1.25	31.8	0.88	22.4	0.6	15.2
VUWLG-6.35DN-V	1/4	6.35	1/2NPT	0.19	4.8	1 1/16	27	1.07	27.2	1.36	34.6	1.12	28.5	0.6	15.2
VUWLG-7.93AN-V	5/16	7.93	1/8NPT	0.25	6.4	9/16	14.3	0.84	21.3	1.13	28.7	0.75	19.1	0.64	16.3
VUWLG-7.93BN-V	5/16	7.93	1/4NPT	0.25	6.4	11/16	17.5	0.91	23.1	1.2	30.5	0.88	22.4	0.64	16.3
VUWLG-9.52AN-V	3/8	9.52	1/8NPT	0.28	7.1	5/8	15.9	0.91	23.1	1.2	30.5	0.75	19.1	0.66	16.8
VUWLG-9.52BN-V	3/8	9.52	1/4NPT	0.28	7.1	11/16	17.5	0.94	23.9	1.23	31.3	0.88	22.4	0.66	16.8
VUWLG-9.52CN-V	3/8	9.52	3/8NPT	0.28	7.1	15/16	23.8	1.02	25.9	1.31	33.3	0.88	22.4	0.66	16.8
VUWLG-9.52DN-V	3/8	9.52	1/2NPT	0.28	7.1	1 1/16	27	1.12	28.7	1.42	36.1	1.12	28.5	0.66	16.8
VUWLG-12.7BN-V	1/2	12.7	1/4NPT	0.41	10.4	13/16	20.6	1.02	25.9	1.42	36	0.88	22.4	0.9	22.9
VUWLG-12.7CN-V	1/2	12.7	3/8NPT	0.41	10.4	15/16	23.8	1.02	25.9	1.42	36	0.88	22.4	0.9	22.9
VUWLG-12.7DN-V	1/2	12.7	1/2NPT	0.41	10.4	1 1/16	27	1.12	28.7	1.53	38.8	1.12	28.5	0.9	22.9
VUWLG-15.88CN-V	5/8	15.87	3/8NPT	0.5	12.7	15/16	23.8	1.1	27.9	1.5	38	0.88	22.4	0.96	24.4
VUWLG-15.88DN-V	5/8	15.87	1/2NPT	0.5	12.7	1 1/16	27	1.17	29.7	1.57	39.8	1.12	28.5	0.96	24.4
VUWLG-19.05DN-V	3/4	19.05	1/2NPT	0.62	15.8	1 1/16	27	1.17	29.7	1.57	39.8	1.12	28.5	0.96	24.4
VUWLG-19.05EN-V	3/4	19.05	3/4NPT	0.62	15.8	1 3/8	34.9	1.36	34.5	1.76	44.6	1.25	31.8	1.02	25.9
VUWLG-22.22EN-V	7/8	22.22	3/4NPT	0.72	18.3	1 3/8	34.9	1.36	34.5	1.76	44.6	1.25	31.8	1.02	25.9
VUWLG-25.4EN-V	1	25.4	3/4NPT	0.88	22.3	1 3/8	34.9	1.45	36.8	1.93	49	1.25	31.8	1.23	31.2
VUWLG-25.4FN-V	1	25.4	1NPT	0.88	22.3	1 11/16	42.9	1.63	41.4	2.11	53.6	1.5	38.1	1.23	31.2

Reference Thread Specifications:

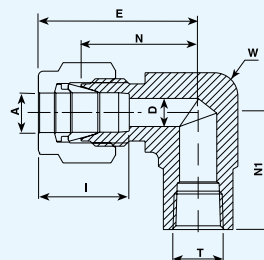
American Standard Pipe Thread (NPT).

NPT (National Pipe Tapered) is made to specifications outlined in ANSI B1.20.1.

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Female Elbows (Rc)

LG



Tube (Metric) To ISO Tapered Thread

Part Numbers	A Tube O.D.		T	D		W		N		E		N1		I	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWLG-4B-V		4	Rc 1/4		2.4	11/16	17.5		21.7		28.3		22.4		13.7
VUWLG-6A-V		6	Rc 1/8		4.8	1/2	12.7		19.6		27		19		15.3
VUWLG-6B-V		6	Rc 1/4		4.8	11/16	17.5		22.4		29.8		22.4		15.3
VUWLG-8B-V		8	Rc 1/4		6.4	11/16	17.5		23.1		30.6		22.4		16.2
VUWLG-8C-V		8	Rc 3/8		6.4	15/16	23.8		25.9		33.4		22.4		16.2
VUWLG-10A-V		10	Rc 1/8		7.9	11/16	17.5		23.9		31.5		19		17.2
VUWLG-10B-V		10	Rc 1/4		7.9	13/16	20.6		25.9		33.5		22.4		17.2
VUWLG-10C-V		10	Rc 3/8		7.9	15/16	23.8		25.9		33.5		22.4		17.2
VUWLG-12B-V		12	Rc 1/4		9.5	13/16	20.6		25.9		36		22.4		22.8
VUWLG-12C-V		12	Rc 3/8		9.5	15/16	23.8		25.9		36		22.4		22.8
VUWLG-12D-V		12	Rc 1/2		9.5	1 1/16	27		28.7		38.8		28.4		22.8
VUWLG-16D-V		16	Rc 1/2		12.7	1 1/16	27		29.7		39.8		28.4		24.4

Tube (Inch) To ISO Tapered Thread

Part Numbers	A Tube O.D.		T	D		W		N		E		N1		I	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWLG-3.2A-V	1/8	3.17	Rc 1/8	0.09	2.3	1/2	12.7	0.71	18	0.97	24.6	0.75	19.1	0.5	12.7
VUWLG-3.2B-V	1/8	3.17	Rc 1/4	0.09	2.3	11/16	17.5	0.82	20.8	1.08	27.4	0.94	22.4	0.5	12.7
VUWLG-4.8A-V	3/16	4.76	Rc 1/8	0.12	3.1	1/2	12.7	0.74	18.8	1	25.4	0.75	19.1	0.54	13.7
VUWLG-6.35A-V	1/4	6.35	Rc 1/8	0.19	4.8	1/2	12.7	0.77	19.6	1.06	27	0.75	19.1	0.6	15.2
VUWLG-6.35B-V	1/4	6.35	Rc 1/4	0.19	4.8	11/16	17.5	0.88	22.4	1.17	29.8	0.88	22.4	0.6	15.2
VUWLG-6.35C-V	1/4	6.35	Rc 3/8	0.19	4.8	15/16	23.8	0.96	24.4	1.25	34.6	0.88	22.4	0.6	15.2
VUWLG-6.35D-V	1/4	6.35	Rc 1/2	0.19	4.8	1 1/16	27	1.07	27.2	1.36	34.6	1.12	28.5	0.6	15.2
VUWLG-7.93A-V	5/16	7.93	Rc 1/8	0.25	6.4	9/16	14.3	0.84	21.3	1.13	28.7	0.75	19.1	0.64	16.3
VUWLG-7.93B-V	5/16	7.93	Rc 1/4	0.25	6.4	11/16	17.5	0.91	23.1	1.2	30.5	0.88	22.4	0.64	16.3
VUWLG-9.52A-V	3/8	9.52	Rc 1/8	0.28	7.1	5/8	15.9	0.91	23.1	1.2	30.5	0.75	19.1	0.66	16.8
VUWLG-9.52B-V	3/8	9.52	Rc 1/4	0.28	7.1	11/16	17.5	0.94	23.9	1.23	31.3	0.88	22.4	0.66	16.8
VUWLG-9.52C-V	3/8	9.52	Rc 3/8	0.28	7.1	15/16	23.8	1.02	25.9	1.31	33.3	0.88	22.4	0.66	16.8
VUWLG-9.52D-V	3/8	9.52	Rc 1/2	0.28	7.1	1 1/16	27	1.12	28.7	1.42	36.1	1.12	28.5	0.66	16.8
VUWLG-12.7B-V	1/2	12.7	Rc 1/4	0.41	10.4	13/16	20.6	1.02	25.9	1.42	36	0.88	22.4	0.9	22.9
VUWLG-12.7C-V	1/2	12.7	Rc 3/8	0.41	10.4	15/16	23.8	1.02	25.9	1.42	36	0.88	22.4	0.9	22.9
VUWLG-12.7D-V	1/2	12.7	Rc 1/2	0.41	10.4	1 1/16	27	1.12	28.7	1.53	38.8	1.12	28.5	0.9	22.9
VUWLG-15.88C-V	5/8	15.87	Rc 3/8	0.5	12.7	15/16	23.8	1.1	27.9	1.5	38	0.88	22.4	0.96	24.4
VUWLG-15.88D-V	5/8	15.87	Rc 1/2	0.5	12.7	1 1/16	27	1.17	29.7	1.57	39.8	1.12	28.5	0.96	24.4
VUWLG-19.05D-V	3/4	19.05	Rc 1/2	0.62	15.8	1 1/16	27	1.17	29.7	1.57	39.8	1.12	28.5	0.96	24.4
VUWLG-19.05E-V	3/4	19.05	Rc 3/4	0.62	15.8	1 3/8	34.9	1.36	34.5	1.76	44.6	1.25	31.8	0.96	24.4
VUWLG-22.22E-V	7/8	22.22	Rc 3/4	0.72	18.3	1 3/8	34.9	1.36	34.5	1.76	44.6	1.25	31.8	1.02	25.9
VUWLG-25.4E-V	1	25.4	Rc 3/4	0.88	22.3	1 3/8	34.9	1.45	36.8	1.93	49	1.25	31.8	1.23	31.2
VUWLG-25.4F-V	1	25.4	Rc 1	0.88	22.3	1 11/16	42.9	1.63	41.4	2.11	53.6	1.5	38.1	1.23	31.2

Designation:

R marking on hex.

Reference Thread Specifications:

DIN - ISO 2999

BS - 21

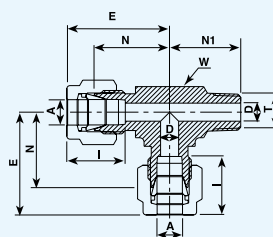
JIS - B0203

ISO - 7/1-BSP-T

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Male Run Tees (NPT)

TL



Tube (Metric) To Male NPT Thread

Part Numbers	A Tube O.D.	T	D	W		N		E		N1		I	
	mm		mm	in	mm	mm	mm	mm	mm	mm	mm	mm	mm
VUWTL-6AN-V	6	1/8NPT	4.8	1/2	12.7	19.6	27	18.8	15.3				
VUWTL-6BN-V	6	1/4NPT	4.8	1/2	12.7	19.6	27	23.4	15.3				
VUWTL-8AN-V	8	1/8NPT	4.8	5/8	15.9	22.4	29.9	20.8	16.2				
VUWTL-8BN-V	8	1/4NPT	6.4	5/8	15.9	22.4	29.9	25.4	16.2				
VUWTL-10BN-V	10	1/4NPT	7.1	13/16	20.6	25.9	33.5	28.2	17.2				
VUWTL-12BN-V	12	1/4NPT	7.1	13/16	20.6	25.9	36	28.2	22.8				
VUWTL-12CN-V	12	3/8NPT	9.5	13/16	20.6	25.9	36	28.2	22.8				
VUWTL-12DN-V	12	1/2NPT	9.5	13/16	20.6	25.9	36	33	22.8				
VUWTL-16DN-V	16	1/2NPT	11.9	15/16	23.8	28	38.1	35	24.4				

Tube (Inch) To Male NPT Thread

Part Numbers	A Tube O.D.		T	D		W		N		E		N1		I	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWTL-3.2AN-V	1/8	3.17	1/8NPT	0.09	2.3	7/16	11.1	0.67	17	0.93	23.6	0.7	17.8	0.5	12.7
VUWTL-3.2BN-V	1/8	3.17	1/4NPT	0.09	2.3	1/2	12.7	0.71	18	0.97	24.6	0.92	23.4	0.5	12.7
VUWTL-4.8AN-V	3/16	4.76	1/8NPT	0.12	3.1	7/16	11.1	0.7	17.8	0.96	24.4	0.7	17.8	0.54	13.7
VUWTL-6.35AN-V	1/4	6.35	1/8NPT	0.19	4.8	1/2	12.7	0.77	19.6	1.06	27	0.74	18.8	0.6	15.2
VUWTL-6.35BN-V	1/4	6.35	1/4NPT	0.19	4.8	1/2	12.7	0.77	19.6	1.06	27	0.92	23.4	0.6	15.2
VUWTL-7.93AN-V	5/16	7.93	1/8NPT	0.19	4.8	5/8	15.9	0.88	22.4	1.17	29.8	0.82	20.8	0.64	16.3
VUWTL-9.52BN-V	3/8	9.52	1/4NPT	0.28	7.1	5/8	15.9	0.91	23.1	1.2	30.5	1	25.4	0.66	16.8
VUWTL-9.52CN-V	3/8	9.52	3/8NPT	0.28	7.1	13/16	20.6	1.02	25.9	1.31	33.3	1.11	28.2	0.66	16.8
VUWTL-12.7CN-V	1/2	12.7	3/8NPT	0.38	9.5	13/16	20.6	1.02	25.9	1.42	36	1.11	28.2	0.9	22.9
VUWTL-12.7DN-V	1/2	12.7	1/2NPT	0.41	10.4	13/16	20.6	1.02	25.9	1.42	36	1.3	33	0.9	22.9
VUWTL-15.88DN-V	5/8	15.87	1/2NPT	0.47	11.9	15/16	23.8	1.1	27.9	1.5	38	1.38	35.1	0.96	24.4
VUWTL-19.05EN-V	3/4	19.05	3/4NPT	0.62	15.8	1 1/16	27	1.17	29.7	1.57	39.8	1.45	36.8	0.96	24.4

Reference Thread Specifications:

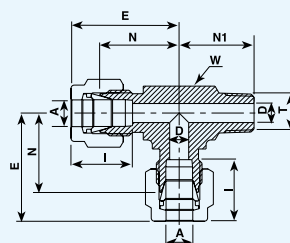
American Standard Pipe Thread (NPT).

NPT (National Pipe Tapered) is made to specifications outlined in ANSI B1.20.1.

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Male Run Tees (R)

TL



Tube (Metric) To ISO Tapered Thread

Part Numbers	A Tube O.D.		T	D		W		N		E		N1		I	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWTL-4A-V		4	R 1/8		2.4	7/16	11.1		17.8		24.4		17.8		13.7
VUWTL-6A-V		6	R 1/8		4.8	1/2	12.7		19.6		27		18.8		15.3
VUWTL-6B-V		6	R 1/4		4.8	1/2	12.7		19.6		27		23.4		15.3
VUWTL-6C-V		6	R 3/8		4.8	13/16	20.6		24.3		31.7		28.2		15.3
VUWTL-8A-V		8	R 1/8		4.8	5/8	15.9		22.4		29.9		20.8		16.2
VUWTL-8B-V		8	R 1/4		6.4	5/8	15.9		22.4		29.9		25.4		16.2
VUWTL-10B-V		10	R 1/4		7.1	13/16	20.6		25.9		33.5		28.2		17.2
VUWTL-10C-V		10	R 3/8		7.9	13/16	20.6		23.9		31.5		28.2		17.2
VUWTL-10D-V		10	R 1/2		7.9	13/16	20.6		25.9		33.5		33		17.2
VUWTL-12B-V		12	R 1/4		7.1	13/16	20.6		25.9		36		28.2		22.8
VUWTL-12C-V		12	R 3/8		9.5	13/16	20.6		25.9		36		28.2		22.8
VUWTL-12D-V		12	R 1/2		9.5	13/16	20.6		25.9		36		33		22.8
VUWTL-16D-V		16	R 1/2		11.9	15/16	23.8		28		38.1		35		24.4

Tube (Inch) To ISO Tapered Thread

Part Numbers	A Tube O.D.		T	D		W		N		E		N1		I	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWTL-1.6A-V	1/16	1.58	R 1/8	0.05	1.3	7/16	11.1	0.60	15.2	0.75	19	0.7	17.8	0.34	8.6
VUWTL-3.2A-V	1/8	3.17	R 1/8	0.09	2.3	7/16	11.1	0.67	17	0.93	23.6	0.7	17.8	0.5	12.7
VUWTL-3.2B-V	1/8	3.17	R 1/4	0.09	2.3	1/2	12.7	0.71	18	0.96	24.4	0.92	23.4	0.5	12.7
VUWTL-4.8A-V	3/16	4.76	R 1/8	0.12	3.1	7/16	11.1	0.7	17.8	0.96	24.4	0.7	17.8	0.54	13.7
VUWTL-6.35A-V	1/4	6.35	R 1/8	0.19	4.8	1/2	12.7	0.77	19.6	1.06	27	0.74	18.8	0.6	15.2
VUWTL-6.35B-V	1/4	6.35	R 1/4	0.19	4.8	1/2	12.7	0.77	19.6	1.06	27	0.92	23.4	0.6	15.2
VUWTL-6.35C-V	1/4	6.35	R 3/8	0.19	4.8	13/16	20.6	1.02	25.9	1.31	33.3	1.11	28.2	0.6	15.2
VUWTL-7.93A-V	5/16	7.93	R 1/8	0.19	4.8	5/8	15.9	0.88	22.4	1.17	29.8	0.82	20.8	0.64	16.3
VUWTL-9.52B-V	3/8	9.52	R 1/4	0.28	7.1	5/8	15.9	0.91	23.1	1.2	30.5	1	25.4	0.66	16.8
VUWTL-9.52C-V	3/8	9.52	R 3/8	0.28	7.1	13/16	20.6	1.02	25.9	1.31	33.3	1.11	28.2	0.66	16.8
VUWTL-9.52D-V	3/8	9.52	R 1/2	0.28	7.1	13/16	20.6	1.02	25.9	1.31	33.3	1.3	33	0.66	16.8
VUWTL-12.7C-V	1/2	12.7	R 3/8	0.38	9.5	13/16	20.6	1.02	25.9	1.42	36	1.11	28.2	0.9	22.9
VUWTL-12.7D-V	1/2	12.7	R 1/2	0.41	10.4	13/16	20.6	1.02	25.9	1.42	36	1.3	33	0.9	22.9
VUWTL-15.88D-V	5/8	15.87	R 1/2	0.47	11.9	15/16	23.8	1.1	27.9	1.5	38	1.38	35.1	0.96	24.4
VUWTL-19.05E-V	3/4	19.05	R 3/4	0.62	15.8	1 1/16	27	1.17	29.7	1.57	39.8	1.45	36.8	0.96	24.4

Designation:

R marking on hex.

Reference Thread Specifications:

DIN - ISO 2999

BS - 21

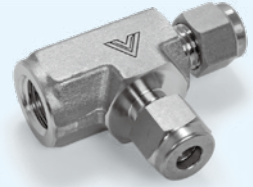
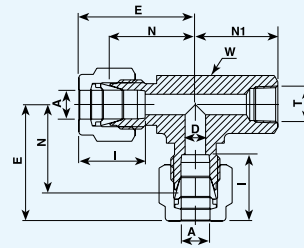
JIS - B0203

ISO - 7/1-BSP-T

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Female Run Tees (NPT)

TLG



Tube (Metric) To Female NPT Thread

Part Numbers	A Tube O.D.		T	D		W		N		E		N1		I	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWTLG-6AN-V		6	1/8NPT	0.19	4.8	5/8	15.9	0.77	19.6	1.06	27	0.74	19	0.6	15.3
VUWTLG-6BN-V		6	1/4NPT	0.19	4.8	13/16	20.6	0.88	22.4	1.17	29.8	0.88	22.4	0.6	15.3
VUWTLG-8AN-V		8	1/8NPT	0.25	6.4	5/8	15.9	0.88	22.4	1.18	29.9	0.75	19	0.64	16.2
VUWTLG-10BN-V		10	1/4NPT	0.31	7.9	13/16	20.6	1.02	25.9	1.32	33.5	0.88	22.4	0.68	17.2
VUWTLG-12BN-V		12	1/4NPT	0.37	9.5	13/16	20.6	1.01	25.9	1.41	36	0.88	22.4	0.9	22.8
VUWTLG-12DN-V		12	1/2NPT	0.37	9.5	1 1/16	27	1.17	29.7	1.57	39.8	1.12	28.4	0.9	22.8
VUWTLG-16DN-V		16	1/2NPT	0.5	12.7	1 1/16	27	1.17	29.7	1.57	39.8	1.12	28.4	0.96	24.4

Tube (Inch) To Female NPT Thread

Part Numbers	A Tube O.D.		T	D		W		N		E		N1		I	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWTLG-3.2AN-V	1/8	3.17	1/8NPT	0.09	2.3	5/8	15.9	0.71	18	0.97	24.4	0.75	19.1	0.5	12.7
VUWTLG-6.35AN-V	1/4	6.35	1/8NPT	0.19	4.8	5/8	15.9	0.77	19.6	1.06	26.9	0.75	19.1	0.6	15.2
VUWTLG-6.35BN-V	1/4	6.35	1/4NPT	0.19	4.8	13/16	20.6	0.88	22.4	1.17	29.8	0.88	22.4	0.6	15.2
VUWTLG-6.35CN-V	1/4	6.35	3/8NPT	0.19	4.8	15/16	23.8	0.97	24.4	1.25	31.8	0.88	22.4	0.6	15.2
VUWTLG-9.52BN-V	3/8	9.52	1/4NPT	0.28	7.1	13/16	20.6	0.94	23.9	1.23	31.3	0.88	22.4	0.66	16.8
VUWTLG-12.7CN-V	1/2	12.7	3/8NPT	0.41	10.4	15/16	23.8	1.02	25.9	1.42	36	0.88	22.4	0.9	22.9
VUWTLG-12.7DN-V	1/2	12.7	1/2NPT	0.41	10.4	1 1/16	27	1.17	29.7	1.57	39.8	1.12	28.5	0.9	22.9
VUWTLG-19.05EN-V	3/4	19.05	3/4NPT	0.62	15.8	1 3/8	34.9	1.36	34.5	1.76	44.6	1.25	31.8	0.96	24.4
VUWTLG-25.4EN-V	1	25.4	3/4NPT	0.88	22.3	1 3/8	34.9	1.45	36.8	1.93	49	1.25	31.8	1.23	31.2

Reference Thread Specifications:

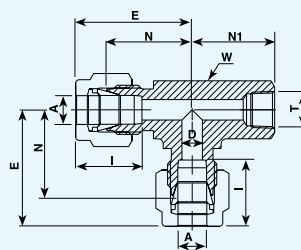
American Standard Pipe Thread (NPT).

NPT (National Pipe Tapered) is made to specifications outlined in ANSI B1.20.1.

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Female Run Tees (Rc)

TLG



Tube (Metric) To ISO Tapered Thread

Part Numbers	A Tube O.D.		T	D		W		N		E		N ₁		I	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWTLG-6A-V	1/8	3.17	Rc 1/8	0.09	2.3	5/8	15.9	0.77	19.6	1.06	27	0.74	19	0.6	15.3
VUWTLG-6B-V	1/4	6.35	Rc 1/4	0.19	4.8	13/16	20.6	0.88	22.4	1.17	29.8	0.88	22.4	0.6	15.3
VUWTLG-8B-V	1/4	6.35	Rc 1/4	0.19	4.8	13/16	20.6	0.91	23.1	1.20	30.6	0.88	22.4	0.64	16.2
VUWTLG-10B-V	3/8	9.52	Rc 1/4	0.28	7.1	13/16	20.6	1.02	25.9	1.32	33.5	0.88	22.4	0.68	17.2
VUWTLG-10C-V	1/2	12.7	Rc 3/8	0.41	10.4	15/16	23.8	1.02	25.9	1.32	33.5	0.88	22.4	0.68	17.2
VUWTLG-12B-V	1/2	12.7	Rc 1/4	0.37	9.5	13/16	20.6	1.01	25.9	1.41	36	0.88	22.4	0.89	22.8
VUWTLG-12D-V	1/2	12.7	Rc 1/2	0.37	9.5	1 1/16	27	1.16	29.7	1.57	39.8	1.12	28.4	0.89	22.8

Tube (Inch) To ISO Tapered Thread

Part Numbers	A Tube O.D.		T	D		W		N		E		N ₁		I	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWTLG-3.2A-V	1/8	3.17	Rc 1/8	0.09	2.3	5/8	15.9	0.71	18	0.97	24.6	0.75	19.1	0.5	12.7
VUWTLG-6.35A-V	1/4	6.35	Rc 1/8	0.19	4.8	5/8	15.9	0.77	19.6	1.06	27	0.75	19.1	0.6	15.2
VUWTLG-6.35B-V	1/4	6.35	Rc 1/4	0.19	4.8	13/16	20.6	0.88	22.4	1.17	29.8	0.88	22.4	0.6	15.2
VUWTLG-9.52B-V	3/8	9.52	Rc 1/4	0.28	7.1	13/16	20.6	0.94	23.9	1.23	31.3	0.88	22.4	0.66	16.8
VUWTLG-12.7A-V	1/2	12.7	Rc 1/8	0.41	10.4	13/16	20.6	1.02	25.9	1.42	36	0.88	22.4	0.9	22.9
VUWTLG-12.7C-V	1/2	12.7	Rc 3/8	0.41	10.4	15/16	23.8	1.02	25.9	1.42	36	0.88	22.4	0.9	22.9
VUWTLG-12.7D-V	1/2	12.7	Rc 1/2	0.41	10.4	1 1/16	27	1.17	29.7	1.57	39.8	1.12	28.5	0.9	22.9
VUWTLG-19.05E-V	3/4	19.05	Rc 3/4	0.62	15.8	1 3/8	34.9	1.36	34.5	1.76	44.6	1.25	31.8	0.9	24.4
VUWTLG-25.4B-V	1	25.4	Rc 1/4	0.88	22.3	1 3/8	34.9	1.45	36.8	1.93	49	1.42	36.1	1.23	31.2
VUWTLG-25.4C-V	1	25.4	Rc 3/8	0.88	22.3	1 3/8	34.9	1.45	36.8	1.93	49	1.42	36.1	1.23	31.2
VUWTLG-25.4D-V	1	25.4	Rc 1/2	0.88	22.3	1 3/8	34.9	1.45	36.8	1.93	49	1.42	36.1	1.23	31.2
VUWTLG-25.4E-V	1	25.4	Rc 3/4	0.88	22.3	1 3/8	34.9	1.45	36.8	1.93	49	1.25	31.8	1.23	31.2
VUWTLG-25.4F-V	1	25.4	Rc 1	0.88	22.3	1 11/16	42.9	1.63	41.4	2.11	53.6	1.5	38.1	1.23	31.2

Designation:

R marking on hex.

Reference Thread Specifications:

DIN - ISO 2999

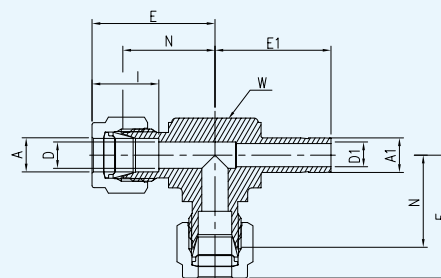
BS - 21

JIS - B0203

ISO - 7/1-BSP-T

Adapter Run Tees

TLR



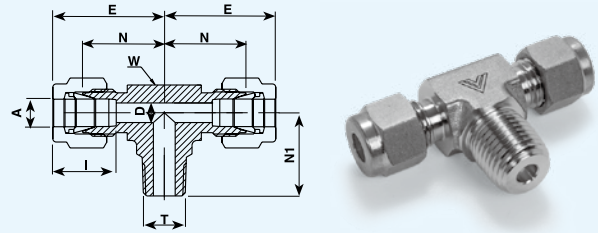
Tube (Inch) To Tube (Inch)

Part Numbers	A Tube O.D.		A ₁ Tube O.D.		E	E ₁	I	D	D ₁	W		N
	in	mm	in	mm						in	mm	
VUWTLR-3.2X3.2-V	1/8	3.17	1/8	3.17	24.6	22.8	12.7	2.3	2	1/2	12.7	18
VUWTLR-6.35X6.35-V	1/4	6.35	1/4	6.35	27	23.8	15.2	4.8	4.2	1/2	12.7	19.6
VUWTLR-9.52X9.52-V	3/8	9.52	3/8	9.52	30.5	28.2	16.8	7.1	6.8	5/8	15.9	23.1

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Male Branch Tees (NPT)

TS



Tube (Metric) To Male NPT Thread

Part Numbers	A Tube O.D.		T	D		W		N		E		N1		I	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWTS-6AN-V		6	1/8NPT		4.8	1/2	12.7		19.6		27		18.8		15.3
VUWTS-6BN-V		6	1/4NPT		4.8	1/2	12.7		19.6		27		23.4		15.3
VUWTS-8AN-V		8	1/8NPT		4.8	5/8	15.9		22.4		29.9		20.8		16.2
VUWTS-8BN-V		8	1/4NPT		6.4	5/8	15.9		22.4		29.9		25.4		16.2
VUWTS-10BN-V		10	1/4NPT		7.1	13/16	20.6		25.9		33.5		28.2		17.2
VUWTS-12AN-V		12	1/8NPT		4.8	13/16	20.6		25.9		36		23		22.8
VUWTS-12BN-V		12	1/4NPT		7.1	13/16	20.6		25.9		36		28.2		22.8
VUWTS-12CN-V		12	3/8NPT		9.5	13/16	20.6		25.9		36		28.2		22.8
VUWTS-12DN-V		12	1/2NPT		9.5	13/16	20.6		25.9		36		33		22.8
VUWTS-16DN-V		16	1/2NPT		11.9	15/16	23.8		28.7		38.8		35.8		24.4

Tube (Inch) To Male NPT Thread

Part Numbers	A Tube O.D.		T	D		W		N		E		N1		I	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWTS-3.2AN-V	1/8	3.17	1/8NPT	0.09	2.3	7/16	11.1	0.67	17	0.93	23.6	0.7	17.8	0.5	12.7
VUWTS-3.2BN-V	1/8	3.17	1/4NPT	0.09	2.3	1/2	12.7	0.71	18	0.97	24.6	0.92	23.3	0.5	12.7
VUWTS-4.8AN-V	3/16	4.76	1/8NPT	0.12	3.1	7/16	11.1	0.7	17.8	0.96	24.4	0.7	17.8	0.54	13.7
VUWTS-6.35AN-V	1/4	6.35	1/8NPT	0.19	4.8	1/2	12.7	0.77	19.6	1.06	27	0.74	18.8	0.6	15.2
VUWTS-6.35BN-V	1/4	6.35	1/4NPT	0.19	4.8	1/2	12.7	0.77	19.6	1.06	27	0.92	23.4	0.6	15.2
VUWTS-6.35CN-V	1/4	6.35	3/8NPT	0.19	4.8	13/16	20.6	0.88	22.4	1.17	29.8	1.03	26.2	0.6	15.2
VUWTS-7.93AN-V	5/16	7.93	1/8NPT	0.19	4.8	5/8	15.9	0.88	22.4	1.17	29.8	0.82	20.8	0.64	16.3
VUWTS-9.52BN-V	3/8	9.52	1/4NPT	0.28	7.1	5/8	15.9	0.91	23.1	1.2	30.5	1	25.4	0.66	16.8
VUWTS-9.52CN-V	3/8	9.52	3/8NPT	0.28	7.1	13/16	20.6	1.02	25.9	1.31	33.3	1.11	28.2	0.66	16.8
VUWTS-12.7CN-V	1/2	12.7	3/8NPT	0.38	9.5	13/16	20.6	1.02	25.9	1.42	36	1.11	28.2	0.9	22.9
VUWTS-12.7DN-V	1/2	12.7	1/2NPT	0.41	10.4	13/16	20.6	1.02	26	1.42	36	1.3	33	0.9	22.9
VUWTS-15.88DN-V	5/8	15.87	1/2NPT	0.47	11.9	15/16	23.8	1.13	28.7	1.53	38.8	1.41	35.8	0.96	24.4
VUWTS-19.05EN-V	3/4	19.05	3/4NPT	0.62	15.8	1 1/16	27	1.17	29.7	1.57	39.8	1.45	36.8	0.96	24.4

Reference Thread Specifications:

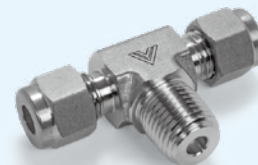
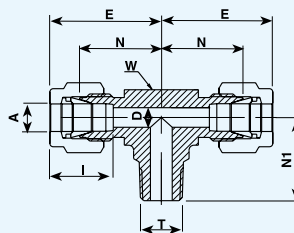
American Standard Pipe Thread (NPT).

NPT (National Pipe Tapered) is made to specifications outlined in ANSI B1.20.1.

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Male Branch Tees (R)

TS



Tube (Metric) To ISO Tapered Thread

Part Numbers	A Tube O.D.		T	D		W		N		E		N ₁		I	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWTS-3B-V		3	R 1/4		2.4	1/2	12.7		18		24.6		23.4		12.9
VUWTS-4A-V		4	R 1/8		2.4	1/2	12.7		18.8		25.4		18.8		13.7
VUWTS-4B-V		4	R 1/4		2.4	1/2	12.7		18.8		25.4		23.4		13.7
VUWTS-6A-V		6	R 1/8		4.8	1/2	12.7		19.6		27		18.8		15.3
VUWTS-6B-V		6	R 1/4		4.8	1/2	12.7		19.6		27		23.4		15.3
VUWTS-6C-V		6	R 3/8		4.8	13/16	20.6		22.4		29.8		26.2		15.3
VUWTS-8A-V		8	R 1/8		4.8	5/8	15.9		22.4		29.9		20.8		16.2
VUWTS-8B-V		8	R 1/4		6.4	5/8	15.9		22.4		29.9		25.4		16.2
VUWTS-8C-V		8	R 3/8		6.4	13/16	20.6		23.9		31.4		26.2		16.2
VUWTS-10B-V		10	R 1/4		7.1	13/16	20.6		25.9		33.5		28.2		17.2
VUWTS-10C-V		10	R 3/8		7.9	13/16	20.6		23.9		31.5		26.2		17.2
VUWTS-10D-V		10	R 1/2		7.9	13/16	20.6		25.9		33.5		33		17.2
VUWTS-12B-V		12	R 1/4		7.1	13/16	20.6		25.9		36		28.2		22.8
VUWTS-12C-V		12	R 3/8		9.5	13/16	20.6		25.9		36		28.2		22.8
VUWTS-12D-V		12	R 1/2		9.5	13/16	20.6		25.9		36		33		22.8
VUWTS-15D-V		15	R 1/2		11.9	15/16	23.8		28.7		38.8		35.8		24.4
VUWTS-16D-V		16	R 1/2		11.9	15/16	23.8		28.7		38.8		35.8		24.4

Tube (Inch) To ISO Tapered Thread

Part Numbers	A Tube O.D.		T	D		W		N		E		N ₁		I	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWTS-3.2A-V	1/8	3.17	R 1/8	0.09	2.3	7/16	11.1	0.67	17	0.93	23.6	0.7	17.8	0.5	12.7
VUWTS-3.2B-V	1/8	3.17	R 1/4	0.09	2.3	1/2	12.7	0.71	18	0.97	24.6	0.92	23.3	0.5	12.7
VUWTS-4.8A-V	3/16	4.76	R 1/8	0.12	3.1	7/16	11.1	0.7	17.8	0.96	24.4	0.7	17.8	0.54	13.7
VUWTS-6.35A-V	1/4	6.35	R 1/8	0.19	4.8	1/2	12.7	0.77	19.6	1.06	27	0.74	18.8	0.6	15.2
VUWTS-6.35B-V	1/4	6.35	R 1/4	0.19	4.8	1/2	12.7	0.77	19.6	1.06	27	0.92	23.4	0.6	15.2
VUWTS-6.35C-V	1/4	6.35	R 3/8	0.19	4.8	13/16	20.6	0.88	22.4	1.17	29.8	1.03	26.2	0.6	15.2
VUWTS-7.93A-V	5/16	7.93	R 1/8	0.19	4.8	5/8	15.9	0.88	22.4	1.17	29.8	0.82	20.8	0.64	16.3
VUWTS-9.52A-V	3/8	9.52	R 1/8	0.19	4.8	5/8	15.9	0.91	23.1	1.2	30.5	0.82	20.8	0.66	16.8
VUWTS-9.52B-V	3/8	9.52	R 1/4	0.28	7.1	5/8	15.9	0.91	23.1	1.2	30.5	1	25.4	0.66	16.8
VUWTS-9.52C-V	3/8	9.52	R 3/8	0.28	7.1	13/16	20.6	1.02	25.9	1.31	33.3	1.11	28.2	0.66	16.8
VUWTS-12.7B-V	1/2	12.7	R 1/4	0.28	7.1	13/16	20.6	1.02	25.9	1.42	36	1.11	28.2	0.9	22.9
VUWTS-12.7C-V	1/2	12.7	R 3/8	0.38	9.5	13/16	20.6	1.02	25.9	1.42	36	1.11	28.2	0.9	22.9
VUWTS-12.7D-V	1/2	12.7	R 1/2	0.41	10.4	13/16	20.6	1.02	25.9	1.42	36	1.3	33	0.9	22.9
VUWTS-15.88D-V	5/8	15.87	R 1/2	0.47	11.9	15/16	23.8	1.13	28.7	1.53	38.8	1.41	35.8	0.96	24.4
VUWTS-19.05D-V	3/4	19.05	R 1/2	0.47	11.9	1 1/16	27	1.17	29.7	1.57	39.8	1.45	36.8	0.96	24.4
VUWTS-19.05E-V	3/4	19.05	R 3/4	0.62	15.8	1 1/16	27	1.17	29.7	1.57	39.8	1.45	36.8	0.96	24.4

Designation:

R marking on hex.

Reference Thread Specifications:

DIN - ISO 2999

BS - 21

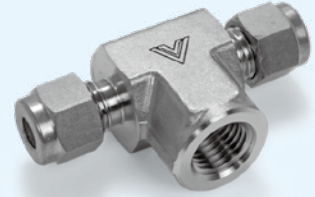
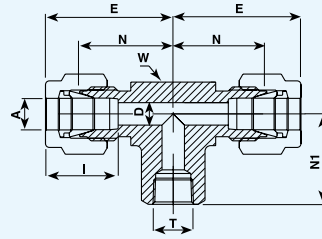
JIS - B0203

ISO - 7/1-BSP-T

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Female Branch Tees (NPT)

TG



Tube (Metric) To Female NPT Thread

Part Numbers	A Tube O.D.	T	D	W		N		E		N1		I	
	mm		mm	in	mm	mm	mm	mm	mm	mm	mm	mm	mm
VUWTG-6AN-V	6	1/8NPT	4.8	5/8	15.9		19.6		27		19		15.3
VUWTG-6BN-V	6	1/4NPT	4.8	13/16	20.6		22.4		29.8		22.4		15.3
VUWTG-8BN-V	8	1/4NPT	6.4	13/16	20.6		23.1		30.6		22.4		16.2
VUWTG-10BN-V	10	1/4NPT	7.9	13/16	20.6		25.9		33.5		22.4		17.2
VUWTG-10CN-V	10	3/8NPT	7.9	15/16	23.8		25.9		33.5		22.4		17.2
VUWTG-12BN-V	12	1/4NPT	9.5	13/16	20.6		25.9		36		22.4		22.8
VUWTG-12CN-V	12	3/8NPT	9.5	15/16	23.8		25.9		36		22.4		22.8
VUWTG-12DN-V	12	1/2NPT	9.5	1 1/16	27		28.7		38.8		28.4		22.8
VUWTG-16DN-V	16	1/2NPT	12.7	1 1/16	27		28.7		38.8		28.4		24.4

Tube (Inch) To Female NPT Thread

Part Numbers	A Tube O.D.		T	D		W		N		E		N1		I	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWTG-3.2AN-V	1/8	3.17	1/8NPT	0.09	2.3	5/8	15.9	0.7	18	0.97	24.6	0.75	19.1	0.5	12.7
VUWTG-6.35AN-V	1/4	6.35	1/8NPT	0.19	4.8	5/8	15.9	0.77	19.6	1.06	27	0.75	19.1	0.6	15.2
VUWTG-6.35BN-V	1/4	6.35	1/4NPT	0.19	4.8	13/16	20.6	0.88	22.4	1.17	29.8	0.88	22.4	0.6	15.2
VUWTG-6.35CN-V	1/4	6.35	3/8NPT	0.19	4.8	15/16	23.8	0.96	24.4	1.25	31.8	0.88	22.4	0.6	15.2
VUWTG-9.52BN-V	3/8	9.52	1/4NPT	0.28	7.1	13/16	20.6	0.94	23.9	1.23	31.3	0.88	22.4	0.66	16.8
VUWTG-9.52CN-V	3/8	9.52	3/8NPT	0.28	7.1	15/16	23.8	1.02	25.9	1.31	33.3	0.88	22.4	0.66	16.8
VUWTG-9.52DN-V	3/8	9.52	1/2NPT	0.28	7.1	1 1/16	27	1.13	28.7	1.42	36.1	1.12	28.5	0.66	16.8
VUWTG-12.7BN-V	1/2	12.7	1/4NPT	0.41	10.4	13/16	20.6	1.02	25.9	1.42	36	0.88	22.4	0.9	22.9
VUWTG-12.7CN-V	1/2	12.7	3/8NPT	0.41	10.4	15/16	23.8	1.02	25.9	1.42	36	0.88	22.4	0.9	22.9
VUWTG-12.7DN-V	1/2	12.7	1/2NPT	0.41	10.4	1 1/16	27	1.13	28.7	1.53	38.8	1.12	28.5	0.9	22.9
VUWTG-15.88DN-V	5/8	15.87	1/2NPT	0.5	12.7	1 1/16	27	1.13	28.7	1.53	38.8	1.12	28.5	0.96	24.4
VUWTG-19.05EN-V	3/4	19.05	3/4NPT	0.62	15.8	1 3/8	34.9	1.36	34.5	1.76	44.6	1.25	31.8	0.96	24.4
VUWTG-25.4EN-V	1	25.4	3/4NPT	0.88	22.3	1 3/8	34.9	1.45	36.8	1.93	49	1.25	31.8	1.23	31.2
VUWTG-25.4FN-V	1	25.4	1NPT	0.88	22.3	1 11/16	42.9	1.63	41.4	2.11	53.6	1.5	38.1	1.23	31.2

Reference Thread Specifications:

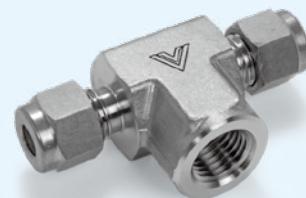
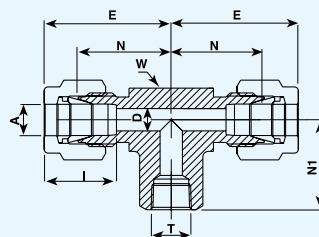
American Standard Pipe Thread (NPT).

NPT (National Pipe Tapered) is made to specifications outlined in ANSI B1.20.1.

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Female Branch Tees (Rc)

TG



Tube (Metric) To ISO Tapered Thread

Part Numbers	A Tube O.D.		T	D		W		N		E		N1		I	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWTG-6A-V		6	Rc 1/8		4.8		5/8		15.9		27		19		15.3
VUWTG-6B-V		6	Rc 1/4		4.8		13/16		20.6		29.8		22.4		15.3
VUWTG-8B-V		8	Rc 1/4		6.4		13/16		20.6		30.6		22.4		16.2
VUWTG-10A-V		10	Rc 1/8		7.9		11/16		17.5		33.5		19		17.2
VUWTG-10B-V		10	Rc 1/4		7.9		13/16		20.6		33.5		22.4		17.2
VUWTG-10C-V		10	Rc 3/8		7.9		15/16		23.8		33.5		22.4		17.2
VUWTG-12B-V		12	Rc 1/4		9.5		13/16		20.6		36		22.4		22.8
VUWTG-12D-V		12	Rc 1/2		9.5		1 1/16		27		38.8		28.4		22.8
VUWTG-16D-V		16	Rc 1/2		12.7		1 1/8		28.6		38.8		28.4		24.4

Tube (Inch) To ISO Tapered Thread

Part Numbers	A Tube O.D.		T	D		W		N		E		N1		I	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWTG-3.2A-V	1/8	3.17	Rc 1/8	0.09	2.3	5/8	15.9	0.7	18	0.97	24.6	0.75	19.1	0.5	12.7
VUWTG-3.2B-V	1/8	3.17	Rc 1/4	0.09	2.3	13/16	20.6	0.82	20.8	1.08	27.4	0.88	22.4	0.5	12.7
VUWTG-6.35A-V	1/4	6.35	Rc 1/8	0.19	4.8	5/8	15.9	0.77	19.6	1.06	27	0.75	19.1	0.6	15.2
VUWTG-6.35B-V	1/4	6.35	Rc 1/4	0.19	4.8	13/16	20.6	0.88	22.4	1.17	29.8	0.88	22.4	0.6	15.2
VUWTG-6.35C-V	1/4	6.35	Rc 3/8	0.19	4.8	15/16	23.8	0.96	24.4	1.25	31.8	0.88	22.4	0.6	15.2
VUWTG-9.52A-V	3/8	9.52	Rc 1/8	0.28	7.1	5/8	15.9	0.91	23.1	1.20	30.5	0.75	19.1	0.66	16.8
VUWTG-9.52B-V	3/8	9.52	Rc 1/4	0.28	7.1	13/16	20.6	0.94	23.9	1.23	31.3	0.88	22.4	0.66	16.8
VUWTG-9.52C-V	3/8	9.52	Rc 3/8	0.28	7.1	15/16	23.8	1.02	25.9	1.31	33.3	0.88	22.4	0.66	16.8
VUWTG-12.7B-V	1/2	12.7	Rc 1/4	0.41	10.4	13/16	20.6	1.02	25.9	1.42	36	0.88	22.4	0.9	22.9
VUWTG-12.7C-V	1/2	12.7	Rc 3/8	0.41	10.4	15/16	23.8	1.02	25.9	1.42	36	0.88	22.4	0.9	22.9
VUWTG-12.7D-V	1/2	12.7	Rc 1/2	0.41	10.4	1 1/16	27	1.13	28.7	1.53	38.8	1.12	28.5	0.9	22.9
VUWTG-15.88D-V	5/8	15.87	Rc 1/2	0.5	12.7	1 1/16	27	1.13	28.7	1.53	38.8	1.12	28.5	0.96	24.4
VUWTG-19.05E-V	3/4	19.05	Rc 3/4	0.62	15.8	1 3/8	34.9	1.36	34.5	1.76	44.6	1.25	31.8	0.96	24.4
VUWTG-25.4E-V	1	25.4	Rc 3/4	0.88	22.3	1 3/8	34.9	1.45	36.8	1.93	49	1.25	31.8	1.23	31.2
VUWTG-25.4F-V	1	25.4	Rc 1	0.88	22.3	1 11/16	42.9	1.63	41.4	2.11	53.6	1.5	38.1	1.23	31.2

Designation:

R marking on hex.

Reference Thread Specifications:

DIN - ISO 2999

BS - 21

JIS - B0203

ISO - 7/1-BSP-T

Female Branch Tees (G)

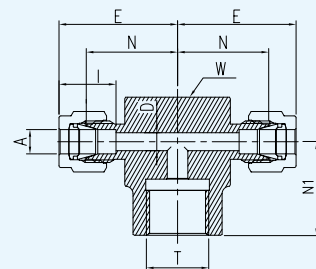
TG

Tube (Metric) To ISO Parallel Thread

Part Numbers	A Tube O.D.		T	D	W		N	E	N1	I
	in	mm			in	mm				
VUWTG-6BF-PG-V		6	G1/4	4.8	13/16	20.6	22.4	29.8	22.4	15.3
VUWTG-10BF-PG-V		10	G1/4	7.9	13/16	20.6	25.9	33.5	22.4	17.2

Tube (Inch) To ISO Parallel Thread

Part Number	A Tube O.D.		T	D	W		N	E	N1	I
	in	mm			in	mm				
VUWTG-6.35CF-PG-V	1/4	6.35	G3/8	4.8	15/16	23.8	24.4	31.8	25	15.2



Reference Thread Specifications:

DIN - ISO 228/1

BS - 2779

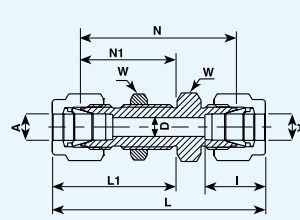
JIS - B0202

ISO - 228/1-BSP-P

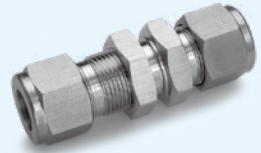
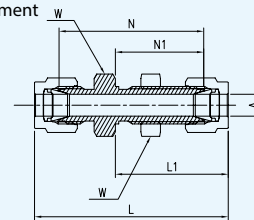
"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Bulkhead Unions

P



Thermoelement Type



Tube (Metric) To Tube (Metric)

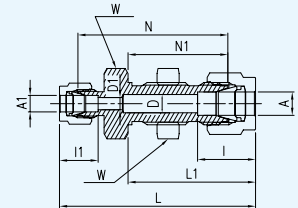
Part Numbers	A Tube O.D.		D		W		N		N1		L		L1		I		Panel hole drill size		Max. Panel thickness		Thermoelement Type
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	
VUWP-3-V	3		2.4		14		38.1		24.6		51.3		31.2		12.9		8.3		12.7		-
VUWP-4-V	4		2.4		14		40.4		25.4		53.6		32		13.7		9.9		12.7		○
VUWP-6-V	6		4.8		16		42.9		26.2		57.7		33.6		15.3		11.5		10.2		○
VUWP-8-V	8		6.4		18		46		28.6		61		36.1		16.2		13.1		11.2		-
VUWP-10-V	10		7.9		22		48.5		29.4		63.7		37		17.2		16.3		11.2		-
VUWP-12-V	12		9.5		24		50.8		31.8		71		41.9		22.8		19.5		12.7		-
VUWP-14-V	14		11		27		52.3		32.5		72.5		42.6		24.4		22.8		12.7		-
VUWP-15-V	15		12		27		52.3		32.5		72.5		42.6		24.4		22.8		12.7		-
VUWP-16-V	16		12.7		27		52.3		32.5		72.5		42.6		24.4		22.8		12.7		-
VUWP-18-V	18		15.1		30		58.7		37.3		78.9		47.4		24.4		26		16.8		-
VUWP-20-V	20		15.9		35		64.3		42.9		84.5		53		26		29		23.9		-
VUWP-25-V	25		21.8		41		71.4		45.2		95.8		57.4		31.3		33.7		19		-

Tube (Inch) To Tube (Inch)

Part Numbers	A Tube O.D.		D		W		N		N1		L		L1		I		Panel hole drill size		Max. Panel thickness		Thermoelement Type
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
VUWP-1.6-V	1/16	1.58	0.05	1.3	5/16	7.9	0.94	23.9	0.53	13.5	1.24	31.5	0.68	17.3	0.34	8.6	13/64	5.2	0.12	3.1	-
VUWP-3.2-V	1/8	3.17	0.09	2.3	1/2	12.7	1.5	38.1	0.97	24.6	2.02	51.3	1.23	31.2	0.5	12.7	21/64	8.3	0.5	12.7	-
VUWP-4.8-V	3/16	4.76	0.12	3.1	9/16	14.3	1.59	40.4	1	25.4	2.11	53.6	1.26	32	0.54	13.7	25/64	9.9	0.5	12.7	-
VUWP-6.35-V	1/4	6.35	0.19	4.8	5/8	15.9	1.69	42.9	1.03	26.2	2.27	57.7	1.32	33.6	0.6	15.2	29/64	11.5	0.4	10.2	○
VUWP-7.93-V	5/16	7.93	0.25	6.4	11/16	17.5	1.81	46	1.12	28.4	2.39	60.8	1.41	35.8	0.64	16.3	33/64	13.1	0.44	11.2	-
VUWP-9.52-V	3/8	9.52	0.28	7.1	3/4	19.1	1.87	47.5	1.16	29.5	2.45	62.3	1.45	36.9	0.66	16.8	37/64	14.7	0.44	11.2	○
VUWP-12.7-V	1/2	12.7	0.41	10.4	15/16	23.8	2	50.8	1.25	31.8	2.8	71	1.65	41.9	0.9	22.9	49/64	19.4	0.5	12.7	○
VUWP-15.88-V	5/8	15.87	0.5	12.7	1 1/16	27	2.06	52.3	1.28	32.5	2.85	72.5	1.68	42.6	0.96	24.4	57/64	22.6	0.5	12.7	-
VUWP-19.05-V	3/4	19.05	0.62	15.9	1 3/16	30.2	2.31	58.7	1.47	37.3	3.11	78.9	1.87	47.4	0.96	24.4	1 1/64	25.8	0.66	16.8	-
VUWP-25.4-V	1	25.4	0.88	22.3	1 5/8	41.3	2.81	71.4	1.78	45.2	3.77	95.8	2.26	57.4	1.23	31.2	1 1/2	33.7	0.75	19.1	-

Thermoelement Type can also be manufactured.

For ordering: use catalog number of the selected fitting and add the suffix T/C.



Bulkhead Reducing Unions

P

Tube (Inch) To Tube (Inch)

Part Numbers	A Tube O.D.		A1 Tube O.D.		D		D1		W		N		N1		L		L1		I		I1		Panel hole drill size		Max. Panel thickness	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWP-3.2X1.6-V	1/8	3.17	1/16	1.58	0.09	2.3	0.05	1.3	1/2	12.7	1.44	36.6	0.97	24.6	1.85	47	1.23	31.2	0.50	12.7	0.34	8.6	0.33	8.3	0.50	12.7
VUWP-6.35X3.2-V	1/4	6.35	1/8	3.17	0.19	4.8	0.09	2.3	5/8	15.9	1.62	41.2	1.03	26.2	2.17	55.2	1.32	33.6	0.60	15.2	0.50	12.7	0.45	11.5	0.40	10.2
VUWP-9.52X6.35-V	3/8	9.52	1/4	6.35	0.28	7.1	0.19	4.8	3/4	19.1	1.81	46	1.16	29.5	2.39	60.8	1.45	36.9	0.66	16.8	0.60	15.2	0.58	14.7	0.44	11.2
VUWP-12.7X6.35-V	1/2	12.7	1/4	6.35	0.41	10.4	0.19	4.8	15/16	23.8	1.94	49.3	1.25	31.8	2.63	66.8	1.65	41.9	0.90	22.9	0.60	15.2	0.76	19.4	0.50	12.7
VUWP-25.4X12.7-V	1	25.4	1/2	12.7	0.88	22.3	0.41	10.4	1 5/8	41.3	2.83	72	1.78	45.2	3.71	94.3	2.26	57.4	1.23	31.2	0.90	22.9	1.33	33.7	0.75	19.1

Tube (Inch) To Tube (Metric)

Part Number	A Tube O.D.		A1 Tube O.D.		D		W		N		N1		L		L1		I		I1		Panel hole drill size		Max. Panel thickness	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWP-6.35X6-V	1/4	6.35		6	0.19	4.8	5/8	15.9	1.69	42.9	1.03	26.2	2.27	57.7	1.32	33.6	0.60	15.2	0.60	15.3	0.45	11.5	0.40	10.2

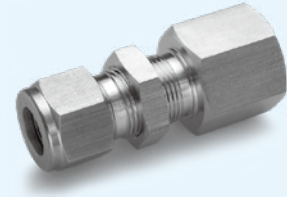
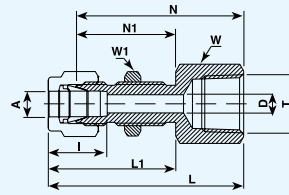
Tube (Metric) To Tube (Inch)

Part Number	A		A1		D		D1		W		N		N1		L		L1		I		I1		Panel hole drill size		Max. Panel thickness	
	Tube O.D.		Tube O.D.																							
	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWP-6X3.2-V	6		1/8	3.17	0.19	4.8	0.09	2.3	0.63	16	1.62	41.1	1.03	26.2	2.17	55.1	1.32	33.6	0.60	15.3	0.50	12.7	0.45	11.5	0.40	10.2

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Bulkhead Female Connectors (NPT)

GP



Tube (Metric) To Male NPT Thread

Part Numbers	A Tube O.D.		T	D		W		W1		N		N1		L		L1		I		Panel hole drill size		Max. Panel thickness	
	mm			mm		mm		mm		mm		mm		mm		mm		mm		mm		mm	
VUWGP-6BN-V	6		1/4NPT	4.8		19		16		44.4		26.2		51.8		33.6		15.3		11.5		10.2	
VUWGP-10DN-V	10		1/2NPT	7.9		27		22		54		29.4		61.6		37		17.2		16.3		11.2	
VUWGP-12DN-V	12		1/2NPT	9.5		27		24		56.4		31.8		66.5		41.9		22.8		19.5		12.7	

Tube (Inch) To Male NPT Thread

Part Numbers	A Tube O.D.		T	D		W		W1		N		N1		L		L1		I		Panel hole drill size		Max. Panel thickness	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWGP-3.2AN-V	1/8	3.17	1/8NPT	0.09	2.3	9/16	14.3	1/2	12.7	1.5	38.1	0.97	24.6	1.76	44.7	1.23	31.2	0.5	12.7	21/64	8.3	0.5	12.7
VUWGP-6.35AN-V	1/4	6.35	1/8NPT	0.19	4.8	5/8	15.9	5/8	15.9	1.56	39.6	1.03	26.2	1.85	47	1.32	33.6	0.6	15.2	29/64	11.5	0.4	10.2
VUWGP-6.35BN-V	1/4	6.35	1/4NPT	0.19	4.8	3/4	19.1	5/8	15.9	1.75	44.5	1.03	26.2	2.04	51.9	1.32	33.6	0.6	15.2	29/64	11.5	0.4	10.2
VUWGP-9.52BN-V	3/8	9.52	1/4NPT	0.28	7.1	3/4	19.1	3/4	19.1	1.88	47.8	1.16	29.5	2.17	55.1	1.45	36.9	0.66	16.8	37/64	14.7	0.44	11.2
VUWGP-9.52CN-V	3/8	9.52	3/8NPT	0.28	7.1	7/8	22.2	3/4	19.1	1.94	49.3	1.16	29.5	2.23	56.7	1.45	36.9	0.66	16.8	37/64	14.7	0.44	11.2
VUWGP-12.7CN-V	1/2	12.7	3/8NPT	0.41	10.4	15/16	23.8	15/16	23.8	2.03	51.6	1.25	31.8	2.43	61.7	1.65	41.9	0.9	22.9	49/64	19.4	0.5	12.7
VUWGP-12.7DN-V	1/2	12.7	1/2NPT	0.41	10.4	1 1/16	27	15/16	23.8	2.22	56.4	1.25	31.8	2.62	66.5	1.65	41.9	0.9	22.9	49/64	19.4	0.5	12.7
VUWGP-12.7EN-V	1/2	12.7	3/4NPT	0.41	10.4	1 5/16	33.3	15/16	23.8	2.29	58.2	1.25	31.8	2.69	68.3	1.65	41.9	0.9	22.9	49/64	19.4	0.5	12.7
VUWGP-19.05EN-V	3/4	19.05	3/4NPT	0.62	15.8	1 5/16	33.3	1 3/16	30.2	2.52	64	1.47	37.3	2.92	74.1	1.87	47.4	0.96	24.4	1 1/64	25.8	0.66	16.8

Reference Thread Specifications:

American Standard Pipe Thread (NPT).

NPT (National Pipe Tapered) is made to specifications outlined in ANSI B1.20.1.

Bulkhead Female Connectors (Rc)

GP

Tube (Metric) To ISO Tapered Thread (Rc)

Part Numbers	A Tube O.D.		T	D		W		W1		N		N1		L		L1		I		Panel hole drill size		Max. Panel thickness	
	mm			mm		mm		mm		mm		mm		mm		mm		mm		mm		mm	
VUWGP-3A-V	3		Rc1/8	2.4		14		14		38.1		24.6		44.7		31.2		12.9		8.3		12.7	
VUWGP-6A-V	6		Rc1/8	4.8		16		16		36.9		26.2		47		33.6		15.3		11.5		10.2	
VUWGP-6B-V	6		Rc1/4	4.8		19		16		44.4		26.2		51.8		33.6		15.3		11.5		10.2	
VUWGP-6C-V	6		Rc3/8	4.8		22		16		46.2		26.2		53.6		33.6		15.3		11.5		10.2	
VUWGP-8B-V	8		Rc1/4	6.4		19		18		47		28.6		54.5		36.1		16.2		13.1		11.2	
VUWGP-8C-V	8		Rc3/8	6.4		22		18		48.5		28.6		56		36.1		16.2		13.1		11.2	
VUWGP-12D-V	12		Rc1/2	9.5		27		24		56.4		31.8		66.5		41.9		22.8		19.5		12.7	

Tube (Inch) To ISO Tapered Thread (Rc)

Part Numbers	A Tube O.D.		T	D		W		W1		N		N1		L		L1		I		Panel hole drill size		Max. Panel thickness	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWGP-3.2A-V	1/8	3.17	Rc 1/8	0.09	2.3	9/16	14.3	1/2	12.7	1.5	38.1	0.97	24.6	1.76	44.7	1.23	31.2	0.5	12.7	21/64	8.3	0.5	12.7
VUWGP-3.2B-V	1/8	3.17	Rc 1/4	0.09	2.3	3/4	19.1	1/2	12.7	1.81	46	0.97	24.6	2.07	52.6	1.23	31.2	0.5	12.7	21/64	8.3	0.5	12.7
VUWGP-6.35A-V	1/4	6.35	Rc 1/8	0.19	4.8	5/8	15.9	5/8	15.9	1.56	39.6	1.03	26.2	1.85	47	1.32	33.6	0.6	15.2	29/64	11.5	0.4	10.2
VUWGP-6.35B-V	1/4	6.35	Rc 1/4	0.19	4.8	3/4	19.1	5/8	15.9	1.75	44.5	1.03	26.2	2.04	51.9	1.32	33.6	0.6	15.2	29/64	11.5	0.4	10.2
VUWGP-6.35C-V	1/4	6.35	Rc 3/8	0.19	4.8	7/8	22.2	5/8	15.9	1.85	47	1.03	26.2	2.14	54.4	1.32	33.6	0.6	15.2	29/64	11.5	0.4	10.2
VUWGP-6.35D-V	1/4	6.35	Rc 1/2	0.19	4.8	1 1/16	27	5/8	15.9	2.0	50.9	1.03	26.2	2.3	58.3	1.32	33.6	0.6	15.2	29/64	11.5	0.4	10.2
VUWGP-9.52A-V	3/8	9.52	Rc 1/8	0.28	7.1	3/4	19.1	3/4	19.1	1.77	45	1.16	29.5	2.06	52.4	1.45	36.9	0.66	16.8	37/64	14.7	0.44	11.2
VUWGP-9.52B-V	3/8	9.52	Rc 1/4	0.28	7.1	3/4	19.1	3/4	19.1	1.88	47.8	1.16	29.5	2.17	55.2	1.45	36.9	0.66	16.8	37/64	14.7	0.44	11.2
VUWGP-9.52C-V	3/8	9.52	Rc 3/8	0.28	7.1	7/8	22.2	3/4	19.1	1.94	49.3	1.16	29.5	2.23	56.7	1.45	36.9	0.66	16.8	37/64	14.7	0.44	11.2
VUWGP-9.52D-V	3/8	9.52	Rc 1/2	0.28	7.1	1 1/16	27	3/4	19.1	2.22	56.5	1.16	29.5	2.52	63.9	1.45	36.9	0.66	16.8	37/64	14.7	0.44	11.2
VUWGP-12.7C-V	1/2	12.7	Rc 3/8	0.41	10.4	15/16	23.8	15/16	23.8	2.03	51.6	1.25	31.8	2.43	61.7	1.65	41.9	0.9	22.9	49/64	19.4	0.5	12.7
VUWGP-12.7D-V	1/2	12.7	Rc 1/2	0.41	10.4	1 1/16	27	15/16	23.8	2.22	56.4	1.25	31.8	2.62	66.5	1.65	41.9	0.9	22.9	49/64	19.4	0.5	12.7

Designation:

R marking on hex.

Reference Thread Specifications:

DIN - ISO 2999

JIS - B0203

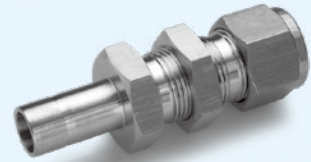
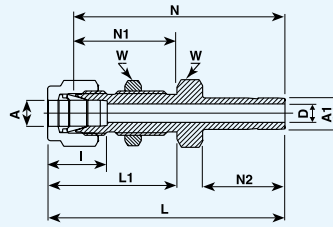
BS - 21

ISO - 7/1-BSP-T

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Bulkhead Reducers

RP

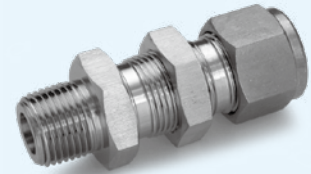
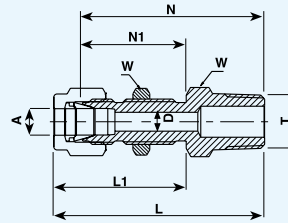


Tube (Inch) To Tube (Inch)

Part Numbers	A Tube O.D.		A1 Tube O.D.		D		W		N		N1		N2		L		L1		I		Panel hole drill size		Max. Panel thickness	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWRP-3.2X3.2-V	1/8	3.17	1/8	3.17	0.08	2	1/2	12.7	1.69	42.9	0.97	24.6	0.53	13.5	1.95	49.5	1.23	31.2	0.5	12.7	21/64	8.3	0.5	12.7
VUWRP-6.35X6.35-V	1/4	6.35	1/4	6.35	0.17	4.2	5/8	15.9	1.91	48.5	1.03	26.2	0.61	15.6	2.2	55.9	1.32	33.6	0.6	15.2	29/64	11.5	0.4	10.2
VUWRP-9.52X9.52-V	3/8	9.52	3/8	9.52	0.28	7.1	3/4	19.1	2.12	53.9	1.16	29.5	0.69	17.5	2.41	61.3	1.45	36.9	0.66	16.8	37/64	14.7	0.44	11.2
VUWRP-12.7X9.52-V	1/2	12.7	3/8	9.52	0.27	6.9	15/16	23.8	2.25	57.2	1.25	31.8	0.69	17.5	2.65	67.3	1.65	41.9	0.9	22.9	49/64	19.4	0.5	12.7
VUWRP-12.7X12.7-V	1/2	12.7	1/2	12.7	0.39	9.9	15/16	23.8	2.47	62.7	1.25	31.8	0.92	23.3	2.87	72.8	1.65	41.9	0.9	22.9	49/64	19.4	0.5	12.7

Bulkhead Male Connectors (NPT)

HP



Tube (Metric) To Male NPT Thread

Part Numbers	A Tube O.D.		T	D		W		N		N1		L		L1		Panel hole drill size		Max. Panel thickness	
	mm			mm		mm		mm		mm		mm		mm		mm		mm	
VUWHP-6AN-V	6		1/8NPT	4.8		16		42.1		26.2		49.5		33.6		11.5		10.2	
VUWHP-6BN-V	6		1/4NPT	4.8		16		46.2		26.2		53.6		33.6		11.5		10.2	
VUWHP-8BN-V	8		1/4NPT	6.4		18		49.2		28.6		56.7		36.1		13.1		11.2	
VUWHP-12DN-V	12		1/2NPT	9.5		24		58.7		31.8		68.8		41.9		19.5		12.7	

Tube (Inch) To Male NPT Thread

Part Numbers	A Tube O.D.		T	D		W		N		N1		L		L1		Panel hole drill size		Max. Panel thickness	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWHP-3.2AN-V	1/8	3.17	1/8NPT	0.09	2.3	1/2	12.7	1.57	39.9	0.97	24.6	1.83	46.5	1.23	31.2	21/64	8.3	0.5	12.7
VUWHP-6.35AN-V	1/4	6.35	1/8NPT	0.19	4.8	5/8	15.9	1.66	42.2	1.03	26.2	1.95	49.5	1.32	33.6	29/64	11.5	0.4	10.2
VUWHP-6.35BN-V	1/4	6.35	1/4NPT	0.19	4.8	5/8	15.9	1.84	46.7	1.03	26.2	2.13	54.1	1.32	33.6	29/64	11.5	0.4	10.2
VUWHP-9.52BN-V	3/8	9.52	1/4NPT	0.28	7.1	3/4	19.1	1.97	50	1.16	29.5	2.26	57.4	1.45	36.9	37/64	14.7	0.44	11.2
VUWHP-9.52CN-V	3/8	9.52	3/8NPT	0.28	7.1	3/4	19.1	1.97	50	1.16	29.5	2.26	57.4	1.45	36.9	37/64	14.7	0.44	11.2
VUWHP-9.52DN-V	3/8	9.52	1/2NPT	0.28	7.1	7/8	22.2	2.22	56.4	1.16	29.5	2.51	63.8	1.45	36.9	37/64	14.7	0.44	11.2
VUWHP-12.7CN-V	1/2	12.7	3/8NPT	0.37	9.5	15/16	23.8	2.09	53.1	1.25	31.8	2.49	63.2	1.65	41.9	49/64	19.4	0.5	12.7
VUWHP-12.7DN-V	1/2	12.7	1/2NPT	0.4	10.4	15/16	23.8	2.31	58.7	1.25	31.8	2.71	68.8	1.65	41.9	49/64	19.4	0.5	12.7
VUWHP-19.05EN-V	3/4	19.05	3/4NPT	0.62	15.8	1 3/16	30.2	2.60	66	1.47	37.3	3	76.1	1.87	47.4	1 1/64	25.8	0.66	16.8
VUWHP-25.4FN-V	1	25.4	1NPT	0.86	21.8	1 5/8	41.3	3.19	81	1.78	45.2	3.67	93.2	2.26	57.4	1 21/64	33.7	0.75	19.1

Reference Thread Specifications:

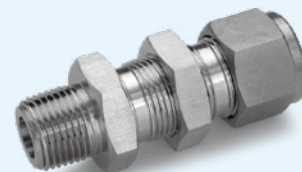
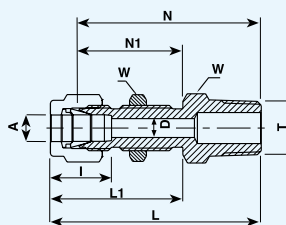
American Standard Pipe Thread (NPT).

NPT (National Pipe Tapered) is made to specifications outlined in ANSI B1.20.1.

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Bulkhead Male Connectors (R)

HP



Tube (Metric) To ISO Tapered Thread

Part Numbers	A Tube O.D.	T	D	W	N	N1	L	L1	I	Panel hole drill size	Max. Panel thickness
	mm		mm	mm	mm	mm	mm	mm	mm	mm	mm
VUWHP-6A-V	6	R 1/8	4.8	16	42.1	26.2	49.5	33.6	15.3	11.5	10.2
VUWHP-6B-V	6	R 1/4	4.8	16	46.2	26.2	53.6	33.6	15.3	11.5	10.2
VUWHP-6D-V	6	R 1/2	4.8	22	54	26.2	61.4	33.6	15.3	11.5	10.2
VUWHP-8B-V	8	R 1/4	6.4	18	49.2	28.6	56.7	36.1	16.2	13.1	11.2
VUWHP-8C-V	8	R 3/8	6.4	18	49.2	28.6	56.7	36.1	16.2	13.1	11.2
VUWHP-12D-V	12	R 1/2	9.5	24	58.7	31.8	68.8	41.9	22.8	19.5	12.7

Tube (Inch) To ISO Tapered Thread

Part Numbers	A Tube O.D.		T	D		W		N		N1		L		L1		Panel hole drill size		Max. Panel thickness	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWHP-3.2A-V	1/8	3.17	R 1/8	0.09	2.3	1/2	12.7	1.57	39.9	0.97	24.6	1.83	46.5	1.23	31.2	21/64	8.3	0.5	12.7
VUWHP-6.35A-V	1/4	6.35	R 1/8	0.19	4.8	5/8	15.9	1.66	42.2	1.03	26.2	1.95	49.5	1.32	33.6	29/64	11.5	0.4	10.2
VUWHP-6.35B-V	1/4	6.35	R 1/4	0.19	4.8	5/8	15.9	1.84	46.7	1.03	26.2	2.13	54.1	1.32	33.6	29/64	11.5	0.4	10.2
VUWHP-6.35C-V	1/4	6.35	R 3/8	0.19	4.8	11/16	17.5	1.84	46.7	1.03	26.2	2.13	54.1	1.32	33.6	29/64	11.5	0.4	10.2
VUWHP-9.52B-V	3/8	9.52	R 1/4	0.28	7.1	3/4	19.1	1.97	50	1.16	29.5	2.26	57.4	1.45	36.9	37/64	14.7	0.44	11.2
VUWHP-9.52C-V	3/8	9.52	R 3/8	0.28	7.1	3/4	19.1	1.97	50	1.16	29.5	2.26	57.4	1.45	36.9	37/64	14.7	0.44	11.2
VUWHP-9.52D-V	3/8	9.52	R 1/2	0.28	7.1	7/8	22.2	2.22	56.4	1.16	29.5	2.51	63.8	1.45	36.9	37/64	14.7	0.44	11.2
VUWHP-12.7C-V	1/2	12.7	R 3/8	0.37	9.5	15/16	23.8	2.09	53.1	1.25	31.8	2.49	63.2	1.65	41.9	49/64	19.4	0.5	12.7
VUWHP-12.7D-V	1/2	12.7	R 1/2	0.4	10.4	15/16	23.8	2.31	58.7	1.25	31.8	2.71	68.8	1.65	41.9	49/64	19.4	0.5	12.7
VUWHP-19.05D-V	3/4	19.05	R 1/2	0.47	11.9	1 3/16	30.2	2.60	66	1.47	37.3	3	76.1	1.87	47.4	65/64	25.8	0.66	16.8
VUWHP-19.05E-V	3/4	19.05	R 3/4	0.62	15.8	1 3/16	30.2	2.60	66	1.47	37.3	3	76.1	1.87	47.4	65/64	25.8	0.66	16.8

Designation:

R marking on hex.

Reference Thread Specifications:

DIN - ISO 2999

BS - 21

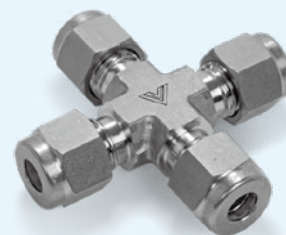
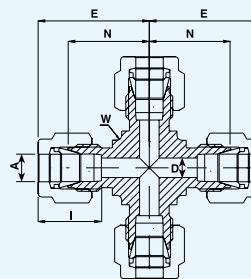
JIS - B0203

ISO - 7/1-BSP-T

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Union Crosses

X



Tube (Metric)

Part Numbers	A Tube O.D.		D		W		N		E		I	
	mm	mm	mm	mm	in	mm	mm	mm	mm	mm	mm	mm
VUWX-3-V	3		2.4		3/8	9.5		15.7		22.3		12.9
VUWX-4-V	4		2.4		1/2	12.7		18.8		25.4		13.7
VUWX-6-V	6		4.8		1/2	12.7		19.6		27		15.3
VUWX-8-V	8		6.4		5/8	15.9		22.4		29.9		16.2
VUWX-10-V	10		7.9		13/16	20.6		25.9		33.5		17.2
VUWX-12-V	12		9.5		13/16	20.6		25.9		36		22.8
VUWX-16-V	16		12.7		15/16	23.8		26.9		37		24.4
VUWX-18-V	18		15.1		1 1/16	27		28.2		38.3		24.4
VUWX-20-V	20		15.9		1 3/8	34.9		34.5		44.6		26
VUWX-22-V	22		18.3		1 3/8	34.9		34.6		44.7		26

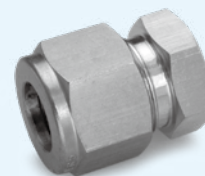
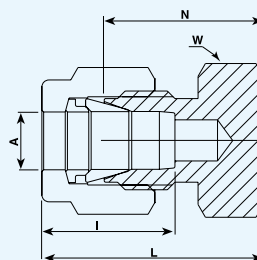
Tube (Inch)

Part Numbers	A Tube O.D.		D		W		N		E		I	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VUWX-1.6-V	1/16	1.58	0.05	1.3	3/8	9.5	0.55	14	0.70	17.8	0.34	8.6
VUWX-3.2-V	1/8	3.17	0.09	2.3	3/8	9.5	0.62	15.8	0.88	22.4	0.5	12.7
VUWX-6.35-V	1/4	6.35	0.19	4.8	1/2	12.7	0.77	19.6	1.06	27	0.6	15.2
VUWX-7.93-V	5/16	7.93	0.25	6.4	5/8	15.9	0.88	22.4	1.17	29.8	0.64	16.3
VUWX-9.52-V	3/8	9.52	0.28	7.1	5/8	15.9	0.91	23.1	1.2	30.5	0.66	16.8
VUWX-12.7-V	1/2	12.7	0.41	10.4	13/16	20.6	1.02	25.9	1.42	36	0.9	22.9
VUWX-19.05-V	3/4	19.05	0.62	15.8	1 1/16	27	1.17	29.7	1.57	39.8	0.96	24.4
VUWX-25.4-V	1	25.4	0.88	22.3	1 3/8	34.9	1.45	36.8	1.93	49	1.23	31.2

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Caps

JC



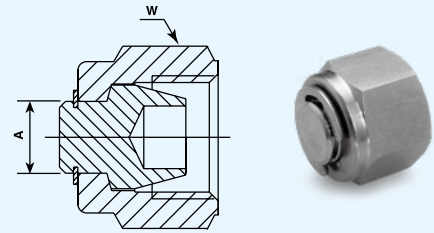
Capping End Of Tube (Metric)

Part Numbers	A Tube O.D.	W	N	L	I
	mm	mm	mm	mm	mm
VUWJC-2-V	2	12	13.5	20.1	12.9
VUWJC-3-V	3	12	13.5	20.1	12.9
VUWJC-4-V	4	12	14.7	21.3	13.7
VUWJC-6-V	6	14	15.7	23.1	15.3
VUWJC-8-V	8	15	17	24.5	16.2
VUWJC-10-V	10	18	19	26.6	17.2
VUWJC-12-V	12	22	19	29.1	22.8
VUWJC-15-V	15	24	19.8	29.9	24.4
VUWJC-16-V	16	24	19.8	29.9	24.4
VUWJC-18-V	18	27	21.3	31.4	24.4
VUWJC-20-V	20	30	23.9	34	26
VUWJC-22-V	22	30	23.9	34	26
VUWJC-25-V	25	35	26.2	38.4	31.3

Capping End Of Tube (Inch)

Part Numbers	A Tube O.D.		W		N		L		I	
	in	mm	in	mm	in	mm	in	mm	in	mm
VUWJC-1.6-V	1/16	1.58	5/16	7.9	0.44	11.2	0.59	15	0.34	8.6
VUWJC-3.2-V	1/8	3.17	7/16	11.1	0.53	13.5	0.79	20.1	0.5	12.7
VUWJC-4.8-V	3/16	4.76	7/16	11.1	0.58	14.7	0.84	21.3	0.54	13.7
VUWJC-6.35-V	1/4	6.35	1/2	12.7	0.63	16	0.92	23.4	0.6	15.2
VUWJC-7.93-V	5/16	7.93	9/16	14.3	0.67	17	0.96	24.4	0.64	16.3
VUWJC-9.52-V	3/8	9.52	5/8	15.9	0.72	18.3	1.01	25.7	0.66	16.8
VUWJC-12.7-V	1/2	12.7	13/16	20.6	0.75	19.1	1.15	29.2	0.9	22.9
VUWJC-15.88-V	5/8	15.87	15/16	23.8	0.78	19.8	1.18	29.9	0.96	24.4
VUWJC-19.05-V	3/4	19.05	1 1/16	27	0.84	21.3	1.24	31.4	0.96	24.4
VUWJC-22.22-V	7/8	22.22	1 3/16	30.2	0.94	23.9	1.34	34	1.02	25.9
VUWJC-25.4-V	1	25.4	1 3/8	34.9	1.03	26.2	1.51	38.4	1.23	31.2

Plugs JP



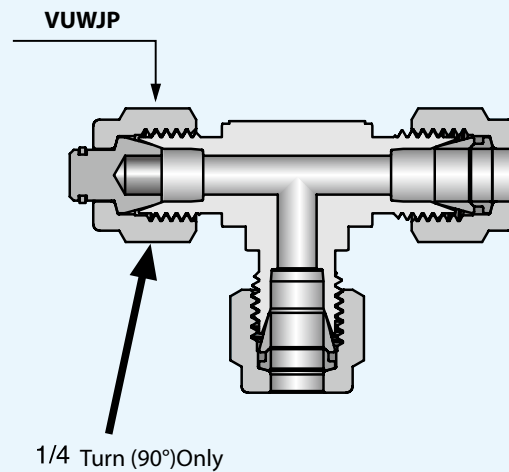
Plugging Unused Port Of Fitting (Metric)

Part Numbers	A		W	
	in	mm	in	mm
VUWJP-2-V		2		12
VUWJP-3-V		3		12
VUWJP-4-V		4		12
VUWJP-6-V		6		14
VUWJP-8-V		8		16
VUWJP-10-V		10		19
VUWJP-12-V		12		22
VUWJP-15-V		15		25
VUWJP-16-V		16		25
VUWJP-18-V		18		30
VUWJP-20-V		20		32
VUWJP-22-V		22		32
VUWJP-25-V		25		38

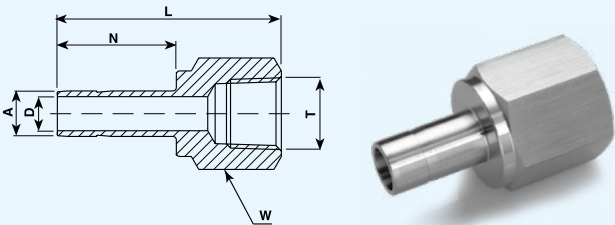
Plugging Unused Port Of Fitting (Inch)

Part Numbers	A		W	
	in	mm	in	mm
VUWJP-1.6-V	1/16	1.58	5/16	7.9
VUWJP-3.2-V	1/8	3.17	7/16	11.1
VUWJP-4.8-V	3/16	4.76	1/2	12.7
VUWJP-6.35-V	1/4	6.35	9/16	14.3
VUWJP-7.93-V	5/16	7.93	5/8	15.9
VUWJP-9.52-V	3/8	9.52	11/16	17.5
VUWJP-12.7-V	1/2	12.7	7/8	22.2
VUWJP-15.88-V	5/8	15.87	1	25.4
VUWJP-19.05-V	3/4	19.05	1 1/8	28.6
VUWJP-25.4-V	1	25.4	1 1/2	38.1

Plug Assembly Instructions



Female Adapters
Tube To Pipe (NPT)
GA



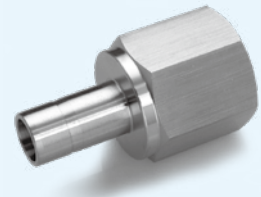
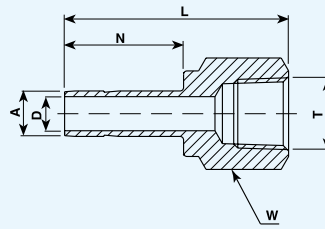
Tube (Metric) Female Pipe						
Part Numbers	A Tube O.D.	T	D	W	N	L
	mm		mm	mm	mm	mm
VUW-GA-3AN-V	3	1/8NPT	2.1	14	13.5	31.5
VUW-GA-3BN-V	3	1/4NPT	2.1	19	13.5	35.3
VUW-GA-4BN-V	4	1/4NPT	2.2	19	14.2	35
VUW-GA-6AN-V	6	1/8NPT	4	14	15.7	32.5
VUW-GA-6BN-V	6	1/4NPT	4	19	15.7	37.1
VUW-GA-6CN-V	6	3/8NPT	4	22	15.7	39.6
VUW-GA-6DN-V	6	1/2NPT	4	27	15.7	45.5
VUW-GA-8AN-V	8	1/8NPT	5.6	14	16.8	34.3
VUW-GA-8BN-V	8	1/4NPT	5.6	19	16.8	37.6
VUW-GA-8CN-V	8	3/8NPT	5.6	22	16.8	40.7
VUW-GA-8DN-V	8	1/2NPT	5.6	27	16.8	46
VUW-GA-10BN-V	10	1/4NPT	7.1	19	17.6	38.1
VUW-GA-10CN-V	10	3/8NPT	7.1	22	17.6	40.1
VUW-GA-10DN-V	10	1/2NPT	7.1	27	17.6	46.5
VUW-GA-12BN-V	12	1/4NPT	8.8	19	23.3	43.7
VUW-GA-12CN-V	12	3/8NPT	8.8	22	23.3	45.5
VUW-GA-12DN-V	12	1/2NPT	8.8	27	23.3	52.3
VUW-GA-16CN-V	16	3/8NPT	12.7	24	24.7	48
VUW-GA-16DN-V	16	1/2NPT	12.7	27	24.7	53.1
VUW-GA-20DN-V	20	1/2NPT	15.1	27	26.6	56
VUW-GA-20EN-V	20	3/4NPT	15.1	35	26.6	56
VUW-GA-25FN-V	25	1NPT	19.8	41	32.5	64.3

Reference Thread Specifications:

American Standard Pipe Thread (NPT).
NPT (National Pipe Tapered) is made to specifications outlined in ANSI B1.20.1.

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Female Adapters Tube To Pipe (NPT) GA

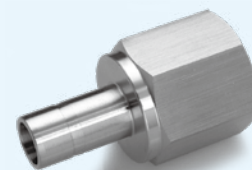
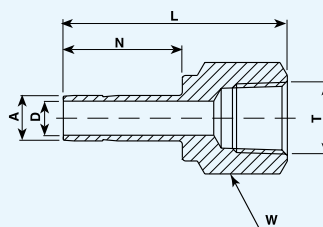


Tube (Inch) Female Pipe

Part Numbers	A Tube O.D.		T	D		W		N		L	
	in	mm		in	mm	in	mm	in	mm	in	mm
VUW-GA-3.2AN-V	1/8	3.17	1/8NPT	0.08	2	9/16	14.3	0.53	13.5	1.24	31.5
VUW-GA-3.2BN-V	1/8	3.17	1/4NPT	0.08	2	3/4	19.1	0.53	13.5	1.39	35.3
VUW-GA-4.8BN-V	3/16	4.76	1/4NPT	0.12	3	3/4	19.1	0.56	14.2	1.41	35.8
VUW-GA-6.35AN-V	1/4	6.35	1/8NPT	0.17	4.2	9/16	14.3	0.61	15.6	1.3	33
VUW-GA-6.35BN-V	1/4	6.35	1/4NPT	0.17	4.2	3/4	19.1	0.61	15.6	1.46	37.1
VUW-GA-6.35CN-V	1/4	6.35	3/8NPT	0.17	4.2	7/8	22.2	0.61	15.6	1.55	39.4
VUW-GA-6.35DN-V	1/4	6.35	1/2NPT	0.17	4.2	1 1/16	27	0.61	15.6	1.79	45.5
VUW-GA-7.93BN-V	5/16	7.93	1/4NPT	0.22	5.6	3/4	19.1	0.67	16.9	1.48	37.6
VUW-GA-9.52AN-V	3/8	9.52	1/8NPT	0.27	6.9	9/16	14.3	0.69	17.5	1.35	34.3
VUW-GA-9.52BN-V	3/8	9.52	1/4NPT	0.27	6.9	3/4	19.1	0.69	17.5	1.5	38.1
VUW-GA-9.52CN-V	3/8	9.52	3/8NPT	0.27	6.9	7/8	22.2	0.69	17.5	1.59	40.4
VUW-GA-9.52DN-V	3/8	9.52	1/2NPT	0.27	6.9	1 1/16	27	0.69	17.5	1.84	46.7
VUW-GA-12.7BN-V	1/2	12.7	1/4NPT	0.37	9.4	3/4	19.1	0.92	23.3	1.71	43.4
VUW-GA-12.7CN-V	1/2	12.7	3/8NPT	0.37	9.4	7/8	22.2	0.92	23.3	1.79	45.5
VUW-GA-12.7DN-V	1/2	12.7	1/2NPT	0.37	9.4	1 1/16	27	0.92	23.3	2.04	52.1
VUW-GA-15.88DN-V	5/8	15.87	1/2NPT	0.5	12.7	1 1/16	27	0.97	24.7	2.09	53.1
VUW-GA-19.05BN-V	3/4	19.05	1/4NPT	0.41	10.5	7/8	22.2	0.97	24.7	1.83	46.5
VUW-GA-19.05DN-V	3/4	19.05	1/2NPT	0.59	15	1 1/16	27	0.97	24.7	2.08	52.8
VUW-GA-19.05EN-V	3/4	19.05	3/4NPT	0.59	15	1 5/16	33.3	0.97	24.7	2.16	54.9
VUW-GA-19.05FN-V	3/4	19.05	1NPT	0.59	15	1 5/8	41.3	0.97	24.7	2.3	58.4
VUW-GA-25.4EN-V	1	25.4	3/4NPT	0.8	20.3	1 5/16	33.3	1.3	33	2.39	60.7
VUW-GA-25.4FN-V	1	25.4	1NPT	0.8	20.3	1 5/8	41.3	1.3	33	2.53	64.3

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Female Adapters Tube To Pipe (Rc) GA



Tube (Metric) To ISO Tapered Thread

Part Numbers	A Tube O.D.	T	D	W	N	L
	mm		mm	mm	mm	mm
VUW-GA-3A-V	3	Rc 1/8	2.1	14	13.5	31.5
VUW-GA-3B-V	3	Rc 1/4	2.1	19	13.5	35.3
VUW-GA-4B-V	4	Rc 1/4	2.2	19	14.2	35
VUW-GA-6A-V	6	Rc 1/8	4	14	15.7	32.5
VUW-GA-6B-V	6	Rc 1/4	4	19	15.7	37.1
VUW-GA-6C-V	6	Rc 3/8	4	22	15.7	39.6
VUW-GA-6D-V	6	Rc 1/2	4	27	15.7	45.5
VUW-GA-8A-V	8	Rc 1/8	5.6	14	16.8	34.3
VUW-GA-8B-V	8	Rc 1/4	5.6	19	16.8	37.6
VUW-GA-8C-V	8	Rc 3/8	5.6	22	16.8	40
VUW-GA-8D-V	8	Rc 1/2	5.6	27	16.8	46
VUW-GA-10B-V	10	Rc 1/4	7.1	19	17.6	38.1
VUW-GA-10C-V	10	Rc 3/8	7.1	22	17.6	40.1
VUW-GA-10D-V	10	Rc 1/2	7.1	27	17.6	46.5
VUW-GA-12B-V	12	Rc 1/4	8.8	19	23.3	43.7
VUW-GA-12C-V	12	Rc 3/8	8.8	22	23.3	45.5
VUW-GA-12D-V	12	Rc 1/2	8.8	27	23.3	52.3
VUW-GA-16C-V	16	Rc 3/8	12.7	24	24.7	48
VUW-GA-16D-V	16	Rc 1/2	12.7	27	24.7	53.1
VUW-GA-20D-V	20	Rc 1/2	15.1	27	26.6	56
VUW-GA-20E-V	20	Rc 3/4	15.1	35	26.6	56
VUW-GA-25F-V	25	Rc 1	19.8	41	32.5	64.3

Designation:

R marking on hex.

Tube (Inch) To ISO Tapered Thread

Part Numbers	A Tube O.D.		T	D		W		N		L	
	in	mm		in	mm	in	mm	in	mm	in	mm
VUW-GA-3.2A-V	1/8	3.17	Rc 1/8	0.08	2	9/16	14.3	0.53	13.5	1.24	31.5
VUW-GA-3.2B-V	1/8	3.17	Rc 1/4	0.08	2	3/4	19.1	0.53	13.5	1.39	35.3
VUW-GA-4.8A-V	3/16	4.76	Rc 1/8	0.12	3	9/16	14.3	0.56	14.2	1.27	32.3
VUW-GA-4.8B-V	3/16	4.76	Rc 1/4	0.12	3	3/4	19.1	0.56	14.2	1.41	35.8
VUW-GA-6.35A-V	1/4	6.35	Rc 1/8	0.17	4.2	9/16	14.3	0.61	15.6	1.30	33
VUW-GA-6.35B-V	1/4	6.35	Rc 1/4	0.17	4.2	3/4	19.1	0.61	15.6	1.45	36.8
VUW-GA-6.35C-V	1/4	6.35	Rc 3/8	0.17	4.2	7/8	22.2	0.61	15.6	1.55	39.4
VUW-GA-6.35D-V	1/4	6.35	Rc 1/2	0.17	4.2	1 1/16	27	0.61	15.6	1.79	45.5
VUW-GA-7.93B-V	5/16	7.93	Rc 1/4	0.22	5.6	3/4	19.1	0.66	16.9	1.48	37.6
VUW-GA-9.52A-V	3/8	9.52	Rc 1/8	0.27	6.9	9/16	14.3	0.69	17.5	1.35	34.3
VUW-GA-9.52B-V	3/8	9.52	Rc 1/4	0.27	6.9	3/4	19.1	0.69	17.5	1.5	38.1
VUW-GA-9.52C-V	3/8	9.52	Rc 3/8	0.27	6.9	7/8	22.2	0.69	17.5	1.59	40.4
VUW-GA-9.52D-V	3/8	9.52	Rc 1/2	0.27	6.9	1 1/16	27	0.69	17.5	1.84	46.7
VUW-GA-12.7A-V	1/2	12.7	Rc 1/8	0.37	9.4	5/8	15.9	0.92	23.3	1.57	39.9
VUW-GA-12.7B-V	1/2	12.7	Rc 1/4	0.37	9.4	3/4	19.1	0.92	23.3	1.71	43.4
VUW-GA-12.7C-V	1/2	12.7	Rc 3/8	0.37	9.4	7/8	22.2	0.92	23.3	1.79	45.5
VUW-GA-12.7D-V	1/2	12.7	Rc 1/2	0.37	9.4	1 1/16	27	0.92	23.3	2.04	52.1
VUW-GA-12.7E-V	1/2	12.7	Rc 3/4	0.37	9.4	1 5/16	33.3	0.92	23.3	2.1	53.3
VUW-GA-15.88D-V	5/8	15.87	Rc 1/2	0.5	12.7	1 1/16	27	0.97	24.7	2.09	53.1
VUW-GA-19.05D-V	3/4	19.05	Rc 1/2	0.59	15	1 1/16	27	0.97	24.7	2.08	52.8
VUW-GA-19.05E-V	3/4	19.05	Rc 3/4	0.59	15	1 5/16	33.3	0.97	24.7	2.16	54.9
VUW-GA-19.05F-V	3/4	19.05	Rc 1	0.59	15	1 5/8	41.3	0.97	24.7	2.3	58.4
VUW-GA-25.4D-V	1	25.4	Rc 1/2	0.8	20.3	1 1/8	28.6	1.3	33	2.42	61.5
VUW-GA-25.4E-V	1	25.4	Rc 3/4	0.8	20.3	1 5/16	33.3	1.3	33	2.39	60.7
VUW-GA-25.4F-V	1	25.4	Rc 1	0.8	20.3	1 5/8	41.3	1.3	33	2.53	64.3

Designation:

R marking on hex.

Reference Thread Specifications:

DIN - ISO 2999 JIS - B0203
BS - 21 ISO - 7/1-BSP-T

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Female Adapters Tube To Pipe (G)

For gasket thicknesses of 4mm or less, use a part number with "-PG".

GA

Tube (Metric) To ISO Parallel Thread

Part Numbers	A Tube O.D.	T	D	D ₁	W	L	N
	mm		mm	mm	mm	mm	mm
VUW-GA-6AF-V	6	G1/8	4	4	14	30.5	15.7
VUW-GA-6BF-V	6	G1/4	5.5	4	19	35.3	15.7
VUW-GA-6CF-V	6	G3/8	6.6	4	24	38.4	15.7
VUW-GA-6DF-V	6	G1/2	7.1	4	27	42.9	15.7
VUW-GA-8BF-V	8	G1/4	5.5	5.5	19	33	16.8
VUW-GA-8CF-V	8	G3/8	6.6	5.6	24	39.5	16.8
VUW-GA-8DF-V	8	G1/2	7.1	5.6	27	43.7	16.8
VUW-GA-10BF-V	10	G1/4	5.5	7.1	19	34.5	17.6
VUW-GA-10CF-V	10	G3/8	6.6	6.6	24	39.5	17.6
VUW-GA-10DF-V	10	G1/2	7.1	7.1	27	41.1	17.6
VUW-GA-12BF-V	12	G1/4	5.5	8.8	19	40.1	23.3
VUW-GA-12CF-V	12	G3/8	6.6	8.8	24	41.3	23.3
VUW-GA-12DF-V	12	G1/2	7.1	8.8	27	48.8	23.3
VUW-GA-15DF-V	15	G1/2	7.1	12	27	49	24.7
VUW-GA-16DF-V	16	G1/2	7.1	12.7	27	49	24.7
VUW-GA-18DF-V	18	G1/2	7.1	13.9	27	49.3	24.7
VUW-GA-22DF-V	22	G1/2	7.1	18.3	27	52.5	26.6
VUW-GA-25DF-V	25	G1/2	7.1	19.8	30	60	32.5

Tube (Inch) To ISO Parallel Thread

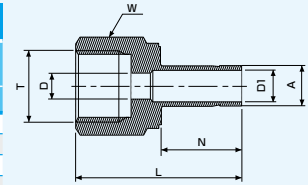
Part Numbers	A Tube O.D.	T	D	D ₁	W		L	N
	in		mm	mm	in	mm	mm	mm
VUW-GA-6.35AF-V	1/4	G1/8	4	4	9/16	14.3	30.5	15.6
VUW-GA-6.35CF-V	1/4	G3/8	6.6	4.2	15/16	23.8	38.4	15.6
VUW-GA-9.52CF-V	3/8	G3/8	6.6	6.6	15/16	23.8	39.4	17.5
VUW-GA-12.7DF-V	1/2	G1/2	7.1	7.1	1 1/16	27	45.7	23.3

Tube (Metric) To ISO Parallel Thread

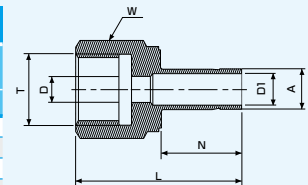
Part Numbers	A Tube O.D.	T	D	D ₁	W	L	N
	mm		mm	mm	mm	mm	mm
VUW-GA-6AF-PG-V	6	G1/8	5.5	4	14	32.8	15.7
VUW-GA-6BF-PG-V	6	G1/4	5.5	4	19	35.3	15.7
VUW-GA-6CF-PG-V	6	G3/8	5.5	4	24	38.6	15.7
VUW-GA-6DF-PG-V	6	G1/2	5.5	4	27	42.9	15.7
VUW-GA-8BF-PG-V	8	G1/4	5.5	5.5	19	33	16.8
VUW-GA-8CF-PG-V	8	G3/8	5.5	5.5	24	39.4	16.8
VUW-GA-8DF-PG-V	8	G1/2	5.5	5.5	27	43.7	16.8
VUW-GA-10BF-PG-V	10	G1/4	5.5	7.1	19	34.5	17.6
VUW-GA-10CF-PG-V	10	G3/8	5.5	7.1	24	36.1	17.6
VUW-GA-10DF-PG-V	10	G1/2	5.5	7.1	27	41.1	17.6
VUW-GA-12BF-PG-V	12	G1/4	5.5	8.8	19	40.1	23.3
VUW-GA-12CF-PG-V	12	G3/8	5.5	8.8	24	44.7	23.3
VUW-GA-12DF-PG-V	12	G1/2	5.5	8.8	27	48.8	23.3
VUW-GA-15DF-PG-V	15	G1/2	5.5	12	27	49	24.7
VUW-GA-16DF-PG-V	16	G1/2	5.5	12.7	27	49	24.7
VUW-GA-18DF-PG-V	18	G1/2	5.5	13.9	27	49.3	24.7
VUW-GA-22DF-PG-V	22	G1/2	5.5	18.3	27	55.6	26.6
VUW-GA-25DF-PG-V	25	G1/2	5.5	19.8	30	60	32.5

Tube (Inch) To ISO Parallel Thread

Part Numbers	A Tube O.D.	T	D	D ₁	W		L	N
	in		mm	mm	in	mm	mm	mm
VUW-GA-6.35AF-PG-V	1/4	G1/8	5.5	4.2	9/16	14.3	32.8	15.6
VUW-GA-6.35BF-PG-V	1/4	G1/4	5.5	4.2	3/4	19.1	35.3	15.6
VUW-GA-6.35CF-PG-V	1/4	G3/8	5.5	4.2	15/16	23.8	38.6	15.6
VUW-GA-6.35DF-PG-V	1/4	G1/2	5.5	4.2	1 1/16	27	42.9	15.6
VUW-GA-9.52BF-PG-V	3/8	G1/4	5.5	6.9	3/4	19.1	34.5	17.5
VUW-GA-9.52CF-PG-V	3/8	G3/8	5.5	6.9	15/16	23.8	39.4	17.5
VUW-GA-9.52DF-PG-V	3/8	G1/2	5.5	6.9	1 1/16	27	41.2	17.5
VUW-GA-12.7CF-PG-V	1/2	G3/8	5.5	9.4	15/16	23.8	44.7	23.3
VUW-GA-12.7DF-PG-V	1/2	G1/2	5.5	9.4	1 1/16	27	49.3	23.3



*In some cases, the "D" dimension may be larger than the "D1" dimension.



*In some cases, the "D" dimension may be larger than the "D1" dimension.

Reference Thread Specifications:

DIN - ISO 228/1

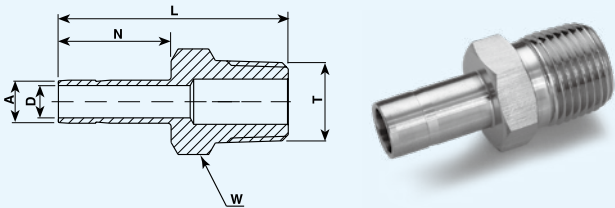
BS - 2779

JIS - B0202

ISO - 228/1-BSP-P

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Male Adapters
Tube To Pipe (NPT)
A



Tube (Metric) Male Pipe						
Part Numbers	A Tube O.D.	T	D	W	N	L
	mm		mm	mm	mm	mm
VUW-A-3AN-V	3	1/8NPT	2.1	12	13.5	30
VUW-A-3BN-V	3	1/4NPT	2.1	14	13.5	35.3
VUW-A-6AN-V	6	1/8NPT	4	12	15.7	32.8
VUW-A-6BN-V	6	1/4NPT	4	14	15.7	38.1
VUW-A-6CN-V	6	3/8NPT	4	18	15.7	37
VUW-A-6DN-V	6	1/2NPT	4	22	15.7	43.4
VUW-A-8AN-V	8	1/8NPT	4.8	12	16.8	33.5
VUW-A-8BN-V	8	1/4NPT	5.6	14	16.8	39.1
VUW-A-8CN-V	8	3/8NPT	5.6	18	16.8	39.9
VUW-A-8DN-V	8	1/2NPT	5.6	22	16.8	43
VUW-A-10BN-V	10	1/4NPT	7.1	14	17.6	39.9
VUW-A-10CN-V	10	3/8NPT	7.1	18	17.6	40.6
VUW-A-10DN-V	10	1/2NPT	7.1	22	17.6	46.2
VUW-A-12BN-V	12	1/4NPT	7.1	16	23.3	46.5
VUW-A-12CN-V	12	3/8NPT	8.8	18	23.3	46.5
VUW-A-12DN-V	12	1/2NPT	8.8	22	23.3	52
VUW-A-16DN-V	16	1/2NPT	11.9	22	24.7	50.5
VUW-A-20EN-V	20	3/4NPT	15.1	27	26.6	54.3

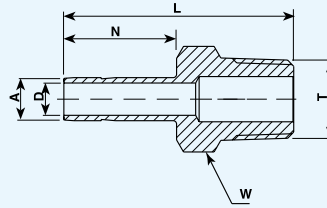
Reference Thread Specifications:

American Standard Pipe Thread (NPT).
NPT (National Pipe Tapered) is made to specifications outlined in ANSI B1.20.1.

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Male Adapters Tube To Pipe (NPT)

A



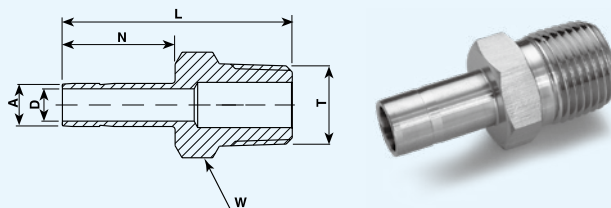
Tube (Inch) Male Pipe

Part Numbers	A Tube O.D.		T	D		W		N		L	
	in	mm		in	mm	in	mm	in	mm	in	mm
VUW-A-3.2AN-V	1/8	3.17	1/8NPT	0.09	2.2	7/16	11.1	0.53	13.5	1.16	29.5
VUW-A-3.2BN-V	1/8	3.17	1/4NPT	0.09	2	9/16	14.3	0.53	13.5	1.37	34.8
VUW-A-4.8AN-V	3/16	4.76	1/8NPT	0.12	3	7/16	11.1	0.56	14.2	1.19	30.2
VUW-A-4.8BN-V	3/16	4.76	1/4NPT	0.12	3	9/16	14.3	0.56	14.2	1.4	35.6
VUW-A-6.35AN-V	1/4	6.35	1/8NPT	0.17	4.2	7/16	11.1	0.61	15.6	1.25	31.8
VUW-A-6.35BN-V	1/4	6.35	1/4NPT	0.17	4.2	9/16	14.3	0.61	15.6	1.46	37.1
VUW-A-6.35CN-V	1/4	6.35	3/8NPT	0.17	4.2	11/16	17.5	0.61	15.6	1.49	37.9
VUW-A-6.35DN-V	1/4	6.35	1/2NPT	0.17	4.2	7/8	22.2	0.61	15.6	1.71	43.4
VUW-A-7.93AN-V	5/16	7.93	1/8NPT	0.19	4.8	7/16	11.1	0.67	16.9	1.29	32.7
VUW-A-7.93BN-V	5/16	7.93	1/4NPT	0.22	5.6	9/16	14.3	0.67	16.9	1.5	38.1
VUW-A-9.52AN-V	3/8	9.52	1/8NPT	0.19	4.8	7/16	11.1	0.69	17.5	1.32	33.5
VUW-A-9.52BN-V	3/8	9.52	1/4NPT	0.27	6.9	9/16	14.3	0.69	17.5	1.53	38.9
VUW-A-9.52CN-V	3/8	9.52	3/8NPT	0.27	6.9	11/16	17.5	0.69	17.5	1.56	39.6
VUW-A-9.52DN-V	3/8	9.52	1/2NPT	0.27	6.9	7/8	22.2	0.69	17.5	1.78	45.2
VUW-A-9.52EN-V	3/8	9.52	3/4NPT	0.27	6.9	1 1/16	27	0.69	17.5	1.78	45.2
VUW-A-12.7BN-V	1/2	12.7	1/4NPT	0.28	7.1	9/16	14.3	0.91	23.3	1.75	44.5
VUW-A-12.7CN-V	1/2	12.7	3/8NPT	0.37	9.4	11/16	17.5	0.91	23.3	1.78	45.2
VUW-A-12.7DN-V	1/2	12.7	1/2NPT	0.37	9.4	7/8	22.2	0.91	23.3	2	50.8
VUW-A-12.7EN-V	1/2	12.7	3/4NPT	0.37	9.4	1 1/16	27	0.92	23.3	2	50.8
VUW-A-15.88CN-V	5/8	15.87	3/8NPT	0.37	9.5	11/16	17.5	0.97	24.7	1.81	47.6
VUW-A-15.88DN-V	5/8	15.87	1/2NPT	0.47	11.9	7/8	22.2	0.97	24.7	2.06	52.3
VUW-A-15.88EN-V	5/8	15.87	3/4NPT	0.5	12.7	1 1/16	27	0.97	24.7	2.06	52.3
VUW-A-19.05DN-V	3/4	19.05	1/2NPT	0.47	11.9	7/8	22.2	0.97	24.7	2.06	52.3
VUW-A-19.05EN-V	3/4	19.05	3/4NPT	0.59	15	1 1/16	27	0.97	24.7	2.06	52.3
VUW-A-19.05FN-V	3/4	19.05	1NPT	0.59	15	1 3/8	34.9	0.97	24.7	2.28	57.3
VUW-A-22.22EN-V	7/8	22.22	3/4NPT	0.6	15.9	1 1/16	27	1.05	26.6	2.09	54.3
VUW-A-25.4DN-V	1	25.4	1/2NPT	0.47	11.9	1 1/16	27	1.30	33	2.40	61
VUW-A-25.4EN-V	1	25.4	3/4NPT	0.62	15.8	1 1/16	27	1.3	33	2.31	58.7
VUW-A-25.4FN-V	1	25.4	1NPT	0.8	20.3	1 3/8	34.9	1.3	33	2.6	66

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Male Adapters Tube To Pipe (R)

A



Tube (Metric) To ISO Tapered Thread

Part Numbers	A Tube O.D.	T	D	W	N	L
	mm		mm	mm	mm	mm
VUW-A-3A-V	3	R 1/8	2.1	12	13.5	30
VUW-A-3B-V	3	R 1/4	2.1	14	13.5	35.3
VUW-A-4A-V	4	R 1/8	2.2	12	14.2	30.7
VUW-A-6A-V	6	R 1/8	4	12	15.7	32.8
VUW-A-6B-V	6	R 1/4	4	14	15.7	38.1
VUW-A-6C-V	6	R 3/8	4	17.5	15.7	37
VUW-A-6D-V	6	R 1/2	4	22	15.7	43.4
VUW-A-8A-V	8	R 1/8	4.8	12	16.8	33.5
VUW-A-8B-V	8	R 1/4	5.6	14	16.8	39.1
VUW-A-8C-V	8	R 3/8	5.6	18	16.8	39.9
VUW-A-8D-V	8	R 1/2	5.6	22	16.8	43
VUW-A-10A-V	10	R 1/8	4.8	12	17.6	33.5
VUW-A-10B-V	10	R 1/4	7.1	14	17.6	39.9
VUW-A-10C-V	10	R 3/8	7.1	18	17.6	40.6
VUW-A-10D-V	10	R 1/2	7.1	22	17.6	46.2
VUW-A-12B-V	12	R 1/4	6.4	16	23.3	46.5
VUW-A-12C-V	12	R 3/8	8.8	18	23.3	46.2
VUW-A-12D-V	12	R 1/2	8.8	22	23.3	52
VUW-A-16C-V	16	R 3/8	9.7	18	24.7	47.8
VUW-A-16D-V	16	R 1/2	12.7	22	24.7	50.5
VUW-A-16E-V	16	R 3/4	12.7	27	24.7	52.3
VUW-A-20D-V	20	R 1/2	11.9	22	26.6	52.5
VUW-A-20E-V	20	R 3/4	15.1	27	26.6	54.3
VUW-A-25F-V	25	R 1	19.8	35	32.5	65.5

Tube (Inch) To ISO Tapered Thread

Part Numbers	A Tube O.D.		T	D		W		N		L	
	in	mm		in	mm	in	mm	in	mm	in	mm
VUW-A-3.2A-V	1/8	3.17	R 1/8	0.09	2.2	7/16	11.1	0.53	13.5	1.16	29.5
VUW-A-3.2B-V	1/8	3.17	R 1/4	0.09	2.2	9/16	14.3	0.53	13.5	1.37	34.8
VUW-A-4.8A-V	3/16	4.76	R 1/8	0.12	3	7/16	11.1	0.56	14.2	1.19	30.2
VUW-A-4.8B-V	3/16	4.76	R 1/4	0.12	3	9/16	14.3	0.56	14.2	1.4	35.6
VUW-A-6.35A-V	1/4	6.35	R 1/8	0.17	4.2	7/16	11.1	0.62	15.8	1.25	31.8
VUW-A-6.35B-V	1/4	6.35	R 1/4	0.17	4.2	9/16	14.3	0.62	15.8	1.46	37.1
VUW-A-6.35C-V	1/4	6.35	R 3/8	0.17	4.2	11/16	17.5	0.62	15.8	1.49	37.9
VUW-A-6.35D-V	1/4	6.35	R 1/2	0.17	4.2	7/8	22.2	0.62	15.8	1.71	43.4
VUW-A-7.93A-V	5/16	7.93	R 1/8	0.19	4.8	7/16	11.1	0.67	16.9	1.29	32.7
VUW-A-7.93B-V	5/16	7.93	R 1/4	0.22	5.6	9/16	14.3	0.67	16.9	1.5	38.1
VUW-A-9.52A-V	3/8	9.52	R 1/8	0.19	4.8	7/16	11.1	0.69	17.5	1.32	33.5
VUW-A-9.52B-V	3/8	9.52	R 1/4	0.27	6.9	9/16	14.3	0.69	17.5	1.53	38.9
VUW-A-9.52C-V	3/8	9.52	R 3/8	0.27	6.9	11/16	17.5	0.69	17.5	1.56	39.6
VUW-A-9.52D-V	3/8	9.52	R 1/2	0.27	6.9	7/8	22.2	0.69	17.5	1.78	45.2
VUW-A-12.7B-V	1/2	12.7	R 1/4	0.37	9.4	9/16	14.3	0.91	23.1	1.75	44.5
VUW-A-12.7C-V	1/2	12.7	R 3/8	0.37	9.4	11/16	17.5	0.91	23.1	1.78	45.2
VUW-A-12.7D-V	1/2	12.7	R 1/2	0.37	9.4	7/8	22.2	0.91	23.1	2	50.8
VUW-A-12.7F-V	1/2	12.7	R 1	0.37	9.4	1 3/8	34.9	0.92	23.3	2.32	58.9
VUW-A-15.88C-V	5/8	15.87	R 3/8	0.37	9.5	11/16	17.5	0.97	24.7	1.81	47.6
VUW-A-15.88D-V	5/8	15.87	R 1/2	0.47	11.9	7/8	22.2	0.97	24.7	2.06	52.3
VUW-A-15.88E-V	5/8	15.87	R 3/4	0.5	12.7	1 1/16	27	0.97	24.7	2.06	52.3
VUW-A-19.05C-V	3/4	19.05	R 3/8	0.37	9.5	13/16	20.6	0.97	24.7	1.85	47
VUW-A-19.05D-V	3/4	19.05	R 1/2	0.47	11.9	7/8	22.2	0.97	24.7	2.06	52.3
VUW-A-19.05E-V	3/4	19.05	R 3/4	0.59	15	1 1/16	27	0.97	24.7	2.06	52.3
VUW-A-19.05F-V	3/4	19.05	R 1	0.59	15	1 3/8	34.9	0.97	24.7	2.28	57.3
VUW-A-22.22E-V	7/8	22.22	R 3/4	0.6	15.9	1 1/16	27	1.05	26.6	2.09	54.3
VUW-A-25.4E-V	1	25.4	R 3/4	0.62	15.8	1 1/16	27	1.3	33	2.31	58.7
VUW-A-25.4F-V	1	25.4	R 1	0.8	20.3	1 3/8	34.9	1.3	33	2.6	66

Reference Thread Specifications:

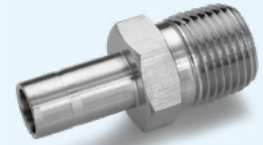
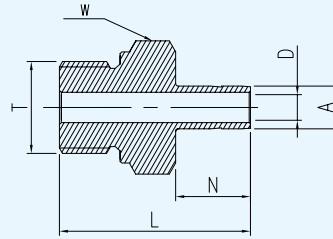
DIN - ISO 2999 JIS - B0203

BS - 21 ISO - 7/1-BSP-T

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Male Adapters Tube To Pipe (G)

A



Tube (Metric) To ISO Parallel Thread

Part Numbers	A Tube O.D.	T	D	W	N	L
	mm		mm	mm	mm	mm
VUW-A-6AF-FJS-V	6	G1/8	4	14	15.7	30.4
VUW-A-6BF-FJS-V	6	G1/4	4	19	15.7	38.9
VUW-A-6DF-FJS-V	6	G1/2	4	27	15.7	42
VUW-A-8BF-FJS-V	8	G1/4	5.6	19	16.8	40.1
VUW-A-8DF-FJS-V	8	G1/2	5.6	27	16.8	44
VUW-A-10BF-FJS-V	10	G1/4	5.9	19	17.6	40.9
VUW-A-10CF-FJS-V	10	G3/8	7.1	22	17.6	41.7
VUW-A-10DF-FJS-V	10	G1/2	7.1	27	17.6	44.7
VUW-A-12BF-FJS-V	12	G1/4	6.4	19	23.3	47
VUW-A-12CF-FJS-V	12	G3/8	7.9	22	23.3	47.2
VUW-A-12DF-FJS-V	12	G1/2	8.8	27	23.3	50.5
VUW-A-18DF-FJS-V	18	G1/2	11.9	27	24.7	51.3
VUW-A-18EF-FJS-V	18	G3/4	13.9	35	24.7	55.9
VUW-A-22EF-FJS-V	22	G3/4	15.9	35	26.6	58.1

Tube (Inch) To ISO Parallel Thread

Part Numbers	A Tube O.D.		T	D	W		N	L
	in	mm			in	mm		
VUW-A-3.2AF-FJS-V	1/8	3.17	G1/8	2	9/16	14.3	13.5	31
VUW-A-6.35AF-FJS-V	1/4	6.35	G1/8	4	9/16	14.3	15.6	30.5
VUW-A-6.35BF-FJS-V	1/4	6.35	G1/4	4.2	3/4	19.1	15.6	36
VUW-A-9.52BF-FJS-V	3/8	9.52	G1/4	5.9	3/4	19.1	17.5	39.9
VUW-A-9.52CF-FJS-V	3/8	9.52	G3/8	6.9	7/8	22.2	17.5	40.6
VUW-A-9.52DF-FJS-V	3/8	9.52	G1/2	6.9	1 1/16	27	17.5	44.6
VUW-A-12.7BF-FJS-V	1/2	12.7	G1/4	5.8	3/4	19.1	23.3	47
VUW-A-12.7CF-FJS-V	1/2	12.7	G3/8	7.9	7/8	22.2	23.3	47.8
VUW-A-12.7DF-FJS-V	1/2	12.7	G1/2	9.4	1 1/16	27	23.3	49.8
VUW-A-19.05DF-FJS-V	3/4	19.05	G1/2	11.9	1 1/16	27	24.7	51.4
VUW-A-19.05EF-FJS-V	3/4	19.05	G3/4	15	1 5/16	33.3	24.7	54.9
VUW-A-25.4FF-FJS-V	1	25.4	G1	19.8	1 5/8	41.3	33	65.8

Reference Thread Specifications:

DIN - ISO 228/1

BS - 2779

JIS - B0202

ISO - 228/1-BSP-P

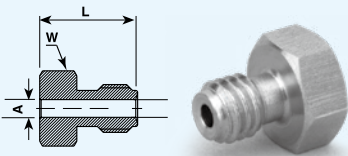
Seal Method (Male G Thread Side)

Please refer to page 38 for the Male G thread-side sealing method and compatible gaskets.

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

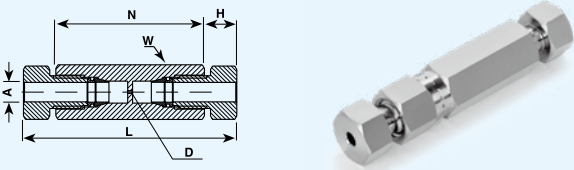
Chromatograph Type Tubes Fittings

Male Nuts



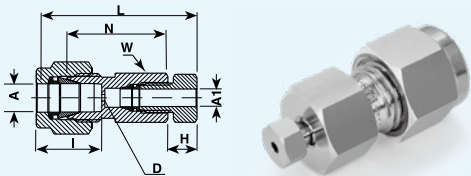
Part Number	A Tube O.D.		W		L		
	in	mm	in	mm	in	mm	
VUW-1.6MN-V	1/16	1.58	1/4	6.35	3/8	9.5	

Unions



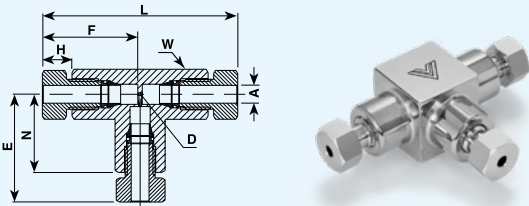
Part Number	A Tube O.D.		D		W		N		H		L		Dead Space
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
VUWF-1.6-MN-V	1/16	1.58	0.014	0.35	1/4	6.35	0.84	21.3	0.2	5.1	1.24	31.5	6.6 x 10 ⁻⁵ cc

Reducing Unions
(New V-Lok × Chromatograph Fittings)



Part Numbers	A Tube O.D.		A1 Tube O.D.		D		W		N		L		H		I		Dead Space
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
VUWF-6.35X1.6-MN-V	1/4	6.35	1/16	1.58	0.014	0.35	1/2	12.7	0.75	19.1	1.24	31.5	0.2	5.1	0.6	15.2	6.8 x 10 ⁻⁵ cc
VUWF-9.52X1.6-MN-V	3/8	9.52	1/16	1.58	0.014	0.35	5/8	15.9	0.81	20.6	1.3	33.1	0.2	5.1	0.66	16.8	6.8 x 10 ⁻⁵ cc

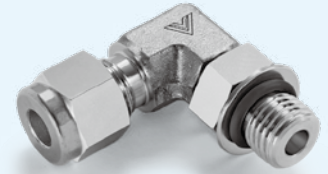
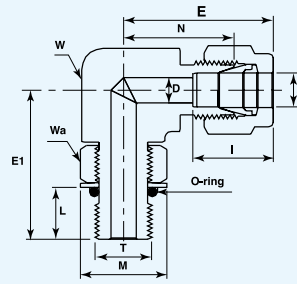
Union Tees



Part Number	A Tube O.D.		D		W		N		H		F		E		L		Dead Space
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
VUWT-1.6-MN-V	1/16	1.58	0.014	0.35	3/8	9.5	0.45	11.4	0.2	5.1	0.65	16.5	0.65	16.5	1.3	33	2.8 x 10 ⁻⁴ cc

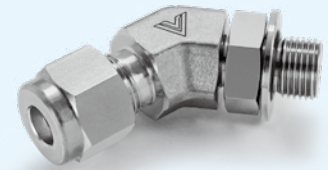
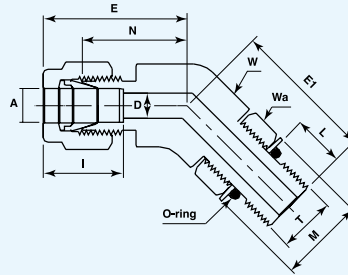
"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Positionables PER SAE J1926 & MS 16142 Male Elbows (UNF) PL



Tube To SAE/MS Straight Thread Boss (Positionable) ※

Part Numbers	A Tube O.D.		T	D		W		Wa		N		E		E1		L		M		I		O-ring ※※ size AS568
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
VUWPL-6.35X7/16-V	1/4	6.35	7/16-20	0.19	4.8	1/2	12.7	9/16	14.3	0.79	20	1.08	27.4	1.12	28.5	0.39	9.9	0.65	16.5	0.6	15.2	-904
VUWPL-6.35X9/16-V	1/4	6.35	9/16-18	0.19	4.8	5/8	15.9	11/16	17.5	0.91	23.1	1.2	30.5	1.27	32.3	0.43	11	0.79	20.1	0.6	15.2	-906
VUWPL-9.52X9/16-V	3/8	9.52	9/16-18	0.28	7.1	5/8	15.9	11/16	17.5	0.97	24.6	1.26	32	1.27	32.3	0.43	11	0.79	20.1	0.66	16.8	-906
VUWPL-12.7X3/4-V	1/2	12.7	3/4-16	0.41	10.4	13/16	20.6	7/8	22.2	1.08	27.4	1.48	37.6	1.49	37.9	0.5	12.7	1.01	25.7	0.9	22.9	-908
VUWPL-6.35X7/16-DRG-V	1/4	6.35	7/16-20	0.19	4.8	1/2	12.7	9/16	14.3	0.79	20	1.07	27.3	1.12	28.5	0.39	9.9	0.65	16.5	0.6	15.2	-904



Male Elbows 45° (UNF) PL

Tube To SAE/MS Straight Thread Boss (Positionable) ※

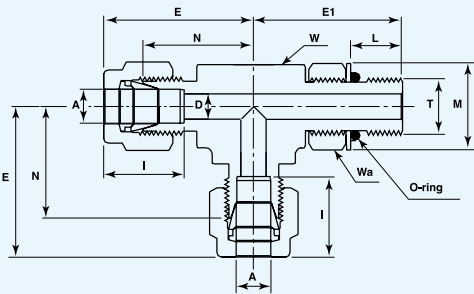
Part Numbers	A Tube O.D.		T	D		W		Wa		N		E		E1		L		M		I		O-ring ※※ size AS568
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
VUWPL-6.35X7/16-45-V	1/4	6.35	7/16-20	0.19	4.8	9/16	14.3	9/16	14.3	0.72	18.3	1.01	25.7	1.01	25.7	0.39	9.9	0.65	16.5	0.6	15.2	-904
VUWPL-9.52X9/16-45-V	3/8	9.52	9/16-18	0.28	7.1	13/16	20.6	11/16	17.5	0.81	20.1	1.1	28	1.06	27	0.44	11.2	0.79	20.1	0.66	16.8	-906

※ : Per SAE J1926 and MS 16142. See page 78 for mounting dimensions.

※※ : O-rings used are Viton 90 Durometer. Other O-ring materials are available on request.

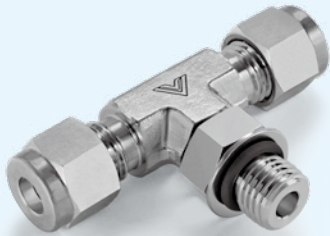
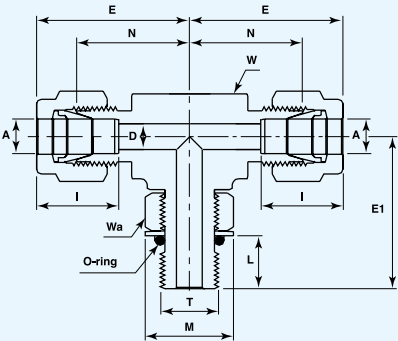
"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Positionables
PER SAE J1926 & MS 16142
Male Run Tees
PTL



Tube To SAE/MS Straight Thread Boss (Positionable) ※																							
Part Numbers	A Tube O.D.		T		D		W		Wa		N		E		E1		L		M		I		O-ring ※※ size AS568
	in	mm			in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
VUWPTL-6.35X7/16-V	1/4	6.35	7/16-20		0.19	4.8	1/2	12.7	9/16	14.3	0.83	21.1	1.12	28.5	1.12	28.5	0.39	9.9	0.65	16.5	0.6	15.2	-904
VUWPTL-9.52X9/16-V	3/8	9.52	9/16-18		0.28	7.1	5/8	15.9	11/16	17.5	0.97	24.6	1.26	32	1.27	32.3	0.43	11	0.79	20.1	0.66	16.8	-906

Male Branch tees
PTS

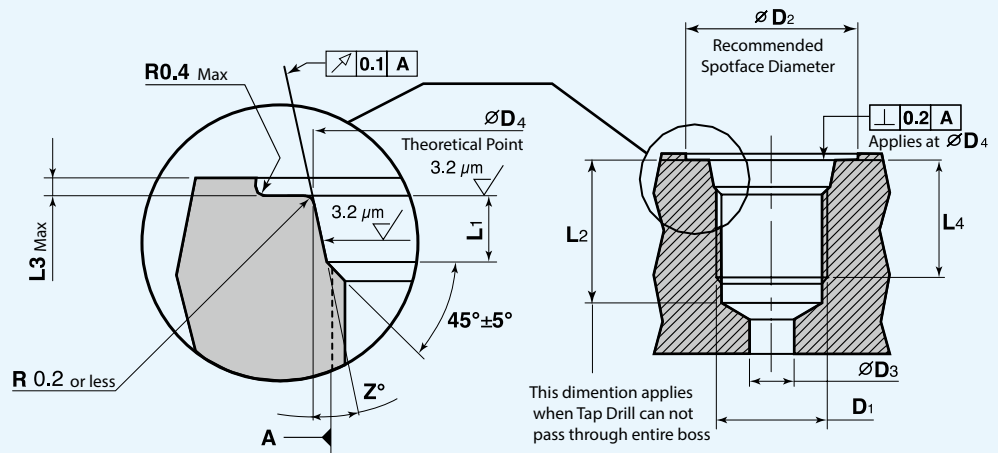


Tube To SAE/MS Straight Thread Boss (Positionable) ※																						
Part Numbers	A Tube O.D.		T	D		W		Wa		N		E		E1		L		M		I		O-ring ※※ size AS568
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
VUWPPTS-6.35X7/16-V	1/4	6.35	7/16-20	0.19	4.8	1/2	12.7	9/16	14.3	0.83	21.1	1.12	28.5	1.12	28.5	0.39	9.9	0.65	16.5	0.6	15.2	-904
VUWPPTS-9.52X9/16-V	3/8	9.52	9/16-18	0.28	7.1	5/8	15.9	11/16	17.5	0.97	24.6	1.26	32	1.27	32.3	0.43	11	0.79	20.1	0.66	16.8	-906

※ :Per SAE J1926 and MS 16142. See page 78 for mounting dimensions.
※※ :O-rings used are Viton 90 Durometer. Other O-ring materials are available on request.

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Mounting Dimensions FOR SAE J1926 & MS 16142 BOSS



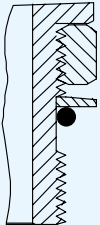
Mounting Dimensions For Oring - Seal Connectors (SAE/MS)

D1 Thread Size	D2 Min. Diameter	D3 Min. Diameter	D4 ± 0.05	L1 ± 0.02	L2 Min.	L3 Max.	L4 Min. Full Thread	Z ± 1°
	mm	mm	mm	mm	mm	mm	mm	°
5/16 - 24 UNF - 2B	17	1.6	9.15	2.1	12	1.6	10	12
3/8 - 24 UNF - 2B	19	3.5	10.75	2.1	12	1.6	10	12
7/16 - 20 UNF - 2B	21	4.5	12.45	2.6	14	1.6	11.5	12
1/2 - 20 UNF - 2B	23	6	14.05	2.6	14	1.6	11.5	12
9/16 - 18 UNF - 2B	25	7.5	15.7	2.7	15.5	1.6	12.7	12
3/4 - 16 UNF - 2B	30	10	20.65	2.7	17.5	2.4	14.3	15
7/8 - 14 UNF - 2B	34	12.5	24	2.7	20	2.4	16.7	15
1 1/16 - 12 UNF - 2B	41	16	29.2	3.5	23	2.4	19	15
1 3/16 - 12 UN - 2B	45	18	32.4	3.5	23	2.4	19	15
1 5/16 - 12 UN - 2B	49	21	35.55	3.5	23	3.2	19	15

Installation Instructions:

Figure 1

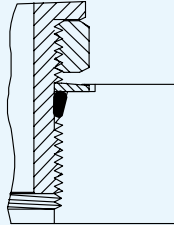
Locking backed off



Lubricate the O-ring by inserting it into the groove adjacent to the face of the metal back - up washer which is assembled at the extreme end of the groove as shown in Figure 1.

Figure 2

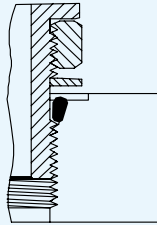
Fitting install hand tight



Install the fitting into the S.A.E. straight thread boss, figure 2, until the metal back - up washer contacts the face of the boss as shown in Figure 2.

Figure 3

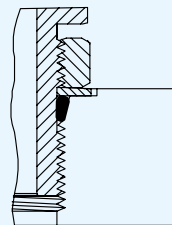
Fittings backed-off for alignment (1 turn maximum)



Position the fitting by turning it counter clockwise up to a maximum of one turn (see Figure 3).

Figure 4

Fitting locknut tight to appropriate torque

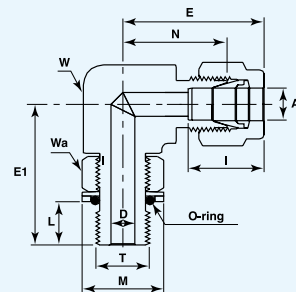


Holding the pad of the fitting with a wrench, tighten the locknut and washer against the face as shown in Figure 4.

Positionables ISO Parallel Thread

Male Elbows (G)

PL

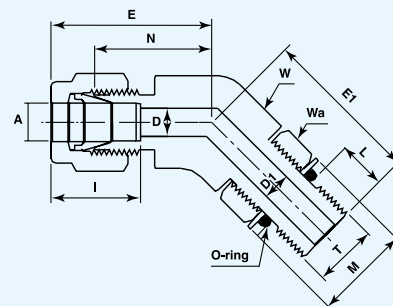


Tube (Inch) To ISO Parallel Thread (Positionable) ※

Part Number	A Tube O.D.		T	D		W		Wa		N		E		E1		L		M		I		O-ring ※ size I.D.
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
VUWPL-6.35AF-V	1/4	6.35	G1/8	0.16	3.9	1/2	12.7	9/16	14.3	0.77	19.6	1.06	26.9	1.04	26.4	0.32	8.1	0.68	17.3	0.6	15.2	8x1.8-G
VUWPL-6.35BF-V	1/4	6.35	G1/4	0.19	4.8	5/8	15.9	3/4	19.1	0.85	21.6	1.14	28.9	1.27	32.3	0.36	9.1	0.90	22.9	0.60	15.2	AS568-111-90°
VUWPL-9.52BF-V	3/8	9.52	G1/4	0.28	7.1	5/8	15.9	3/4	19.1	0.91	23.1	1.20	30.5	1.27	32.3	0.36	9.1	0.90	22.9	0.66	16.8	AS568-111-90°
VUWPL-9.52CF-V	3/8	9.52	G3/8	0.28	7.1	13/16	20.6	7/8	22.2	1.02	25.9	1.31	33.3	1.46	37.1	0.37	9.4	1.04	26.4	0.66	16.8	AS568-113-90°
VUWPL-12.7BF-V	1/2	12.7	G1/4	0.41	10.4	13/16	20.6	3/4	19.1	1.02	25.9	1.42	36.1	1.38	35	0.36	9.1	0.90	22.9	0.90	22.9	AS568-111-90°
VUWPL-12.7CF-V	1/2	12.7	G3/8	0.41	10.4	13/16	20.6	7/8	22.2	1.02	25.9	1.42	36.1	1.46	37.1	0.37	9.4	1.04	26.4	0.90	22.9	AS568-113-90°
VUWPL-12.7DF-V	1/2	12.7	G1/2	0.41	10.4	15/16	23.8	1 1/16	27	1.10	27.9	1.50	38.1	1.71	43.4	0.51	13	1.26	32	0.90	22.9	AS568-593-90°

Tube (Metric) To ISO Parallel Thread (Positionable) ※

Part Numbers	A Tube O.D.		T	D		W		Wa		N	E	E1	L	M	I	O-ring ※ size I.D.
	mm			mm	in	mm	in	mm	mm							
VUWPL-6AF-V	6		G1/8	3.9	1/2	12.7	9/16	14.3	19.6	27	26.4	8.1	17.3	15.3		8x1.8
VUWPL-6BF-V	6		G1/4	4.8	5/8	15.9	5/8	15.9	21.6	29	32.3	9.1	22.9	15.3		AS568-111-90°
VUWPL-8AF-V	8		G1/8	4.0	5/8	15.9	9/16	14.3	21.3	28.8	27.4	8.1	17.3	16.2		8x1.8-G
VUWPL-8BF-V	8		G1/4	5.9	5/8	15.9	5/8	15.9	22.4	29.9	32.3	9.1	22.9	16.2		AS568-111-90°
VUWPL-10BF-V	10		G1/4	5.9	13/16	20.6	3/4	19.1	25.9	33.5	35	9.1	22.9	17.2		AS568-111-90°
VUWPL-10CF-V	10		G3/8	7.9	13/16	20.6	7/8	22.2	25.9	33.5	37.1	9.4	26.4	17.2		AS568-113-90°
VUWPL-12BF-V	12		G1/4	5.9	13/16	20.6	3/4	19.1	25.9	36	35	9.1	22.9	22.8		AS568-111-90°
VUWPL-12CF-V	12		G3/8	7.9	13/16	20.6	7/8	22.2	25.9	36	37.1	9.4	26.4	22.8		AS568-113-90°



Male Elbows 45° (G)

PL

Tube (Inch) To ISO Parallel Thread (Positionable) ※

Part Number	A Tube O.D.		T	D		D1		W		Wa		N		E		E1		L		M		I		O-ring ※ size I.D.
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
VUWPL-6.35AF-45-V	1/4	6.35	G1/8	0.16	4	0.19	4.8	9/16	14.3	9/16	14.3	0.69	17.6	0.98	24.9	0.94	25.3	0.32	8.1	0.68	17.3	0.6	15.2	8x1.8-G

Tube (Metric) To ISO Parallel Thread (Positionable) ※

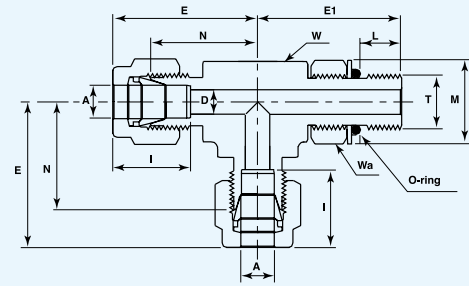
Part Number	A Tube O.D.		T	D		D1		W		Wa		N	E	E1	L	M	I	O-ring ※ size I.D.
	mm			mm	in	mm	in	mm	mm	mm	mm							
VUWPL-6AF-45-V	6		G1/8	4	0.19	4.8	9/16	14.3	9/16	14.3	17.55	25	25.3	8.1	17.3	15.3		8x1.8-G

※ : Per SAE J1926 and MS 16142. See page 81 for mounting dimensions.

※ ※ : O-rings used are Viton 80 Durometer. Other O-ring materials are available on request.

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

Positionables ISO Parallel Thread Male Run Tees (G) PTL



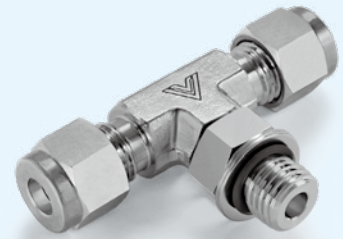
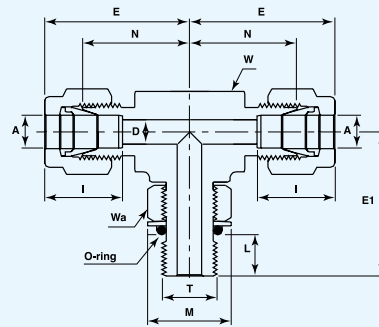
Tube (Inch) To ISO Parallel Thread (Positionable) ※

Part Number	A Tube O.D.		T	D		W		Wa		N		E		E1		L		M		I		O-ring ※※ size I.D.
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
VUWPTL-6.35AF-V	1/4	6.35	G1/8	0.16	4	1/2	12.7	9/16	14.3	0.77	19.6	1.06	26.9	1.04	26.4	0.32	8.1	0.68	17.3	0.6	15.2	8x1.8-G

Tube (Metric) To ISO Parallel Thread (Positionable) ※

Part Number	A Tube O.D.	T	D	W		Wa		N	E	E ₁	L	M	I	O-ring ※※ size I.D.
	mm		mm	in	mm	in	mm	mm	mm	mm	mm	mm	mm	
VUWPTL-6AF-V	6	G1/8	4	1/2	12.7	9/16	14.3	19.6	27	26.4	8.1	17.3	15.3	8x1.8-G

Male Branch Tees (G) PTS



Tube (Inch) To ISO Parallel Thread (Positionable) ※

Part Number	A Tube O.D.		T	D		W		Wa		N		E		E1		L		M		I		O-ring ※※ size I.D.
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
VUWPTS-6.35AF-V	1/4	6.35	G1/8	0.16	4	1/2	12.7	9/16	14.3	0.77	19.6	1.06	26.9	1.04	26.4	0.32	8.1	0.68	17.3	0.6	15.2	8x1.8-G

Tube (Metric) To ISO Parallel Thread (Positionable) ※

Part Number	A Tube O.D.	T	D	W		Wa		N	E	E ₁	L	M	I	O-ring  size I.D.
	mm		mm	in	mm	in	mm	mm	mm	mm	mm	mm	mm	
VUWPTS-6AF-V	6	G1/8	4	1/2	12.7	9/16	14.3	19.6	27	26.4	8.1	17.3	15.3	8x1.8-G

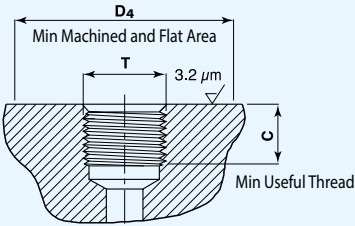
※ : Per SAE J1926 and MS 16142. See page 81 for mounting dimensions.

※※ : O-rings used are Viton 80 Durometer. Other O-ring materials are available on request.

"D" - Dimension is minimum hole diameter - dimensions are for reference only, and are subject to change without notice.

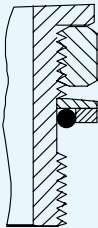
ISO Parallel Thread (Reference)

Mounting Dimensions Of Connectors				
T	D4		C	
	in	mm	Min useful Thread	
			in	mm
G1/8	0.53	13.5	0.28	7



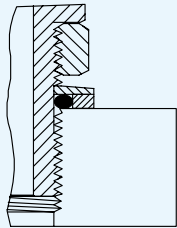
Installation Instructions:

Figure 1
Locking backed off



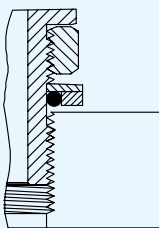
Set the O-ring by inserting it into the groove adjacent to the face of the metal back - up washer which is assembled at the extreme end of the groove as shown in Figure 1.

Figure 2
Fittings install hand tight



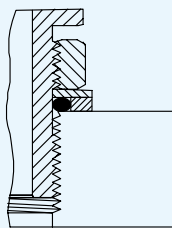
Install the fitting into the ISQ straight thread boss untill the metal back - up washer contacts the face of the boss as shown in Figure 2.

Figure 3
Fittings backed-off for O-ring alignment (1 turn maximum)



Position the fitting by turning it counter clockwise up to a maximum of one turn. See Figure 3.

Figure 4
Fittings locknut tight to appropriate torque



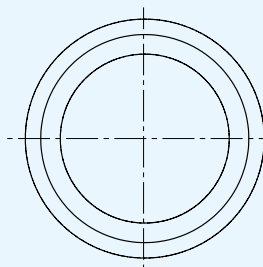
Holding the body of the fitting with a wrench, tighten the locknut and washer against the face as shown in Figure 4.

The contents of the description are reference, and are subject to change without notice.

Stop Collar

New V-Lok		D	
in	mm	in	mm
1/4	6.35	0.69	17.5
3/8	9.52	0.84	20.6
1/2	12.7	1.1	27
3/4	19.05	1.31	33.3
1	25.4	1.68	42.7

1. Remove the nut and Rings from the fitting.
2. Insert the stop collar.



Ordering Information For Assembled Stop Collar (With Fitting)

V U W H

Fitting type
(male New V-Lok Fittings)

6.35 BN

Tube O.D.
The O.D. size is always the first
to be described.

SC

Stop Collar

S = Stainless Steel

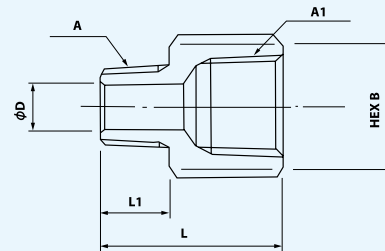
Stop Collar Material

How To Order Stop Collar Only

VUW-6.35 SC
S = Stainless Steel

Adapters

When hoping for change in the connection, when you buy the following adapter separately, you're quite able to connect various kinds very easily.



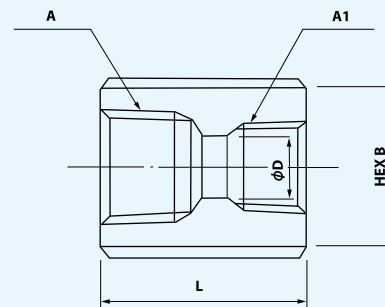
Stainless Steel Pipe Fittings, Adapters

R x Rc Type

Part Numbers	Nominal Dia.	A	A1	B		D		L		L1	
				in	mm	in	mm	in	mm	in	mm
UJB-D-AM	R1/2 x Rc1/2	R1/2	Rc1/2	1.06	27	0.29	10	1.54	39	0.67	17

NPT x NPT Type

Part Numbers	Nominal Dia.	A	A1	B		D		L		L1	
				in	mm	in	mm	in	mm	in	mm
UJB-BNXAN-AM	1/4NPTX1/8NPT	1/4NPT	1/8NPT	0.55	14	0.18	4.5	1.02	26	0.51	13
UJB-CNXBN-AM	3/8NPTX1/4NPT	3/8NPT	1/4NPT	0.75	19	0.28	7	1.18	30	0.55	14
UJB-DNXCN-AM	1/2NPTX3/8NPT	1/2NPT	3/8NPT	0.91	23	0.39	10	1.34	34	0.67	17
UJB-ENXDN-AM	3/4NPTX1/2NPT	3/4NPT	1/2NPT	1.14	29	0.47	12	1.61	41	0.75	19
UJB-FNXEN-AM	1NPTX3/4NPT	1NPT	3/4NPT	1.42	36	0.63	16	1.81	46	0.87	22
UJB-DN-AM	1/2NPTX1/2NPT	1/2NPT	1/2NPT	1.06	27	0.39	10	1.54	39	0.67	17



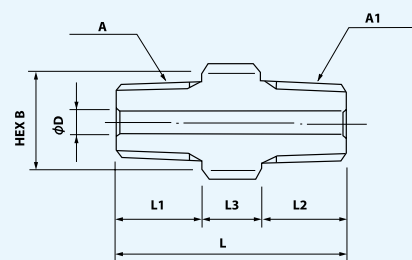
Stainless Steel Pipe Fittings, Hex Couplings

Rc x Rc (Same Diameter A1=A)

Part Numbers	Nominal Dia.	A, A1	B		D		L	
			in	mm	in	mm	in	mm
UJS-D-AM	Rc1/2	Rc1/2	1.06	27	0.47	12	1.65	42

NPT x NPT (Same Diameter A1=A)

Part Numbers	Nominal Dia.	A, A1	B		D		L	
			in	mm	in	mm	in	mm
UJS-EN-AM	3/4NPT	3/4NPT	1.26	32	0.63	16	1.97	50



Nipples

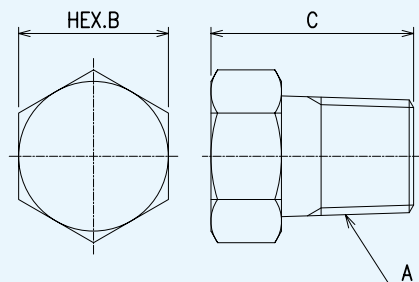
NPT x NPT(Same Diameter A1=A)

Part Numbers	Nominal Dia.	A, A1	D		B		L		L1, L2		L3	
			in	mm	in	mm	in	mm	in	mm	in	mm
UJN-BN-AM	1/4NPT	1/4NPT	0.24	6	0.55	14	1.22	31	0.51	13	0.2	5
UJN-CN-AM	3/8NPT	3/8NPT	0.35	9	0.67	17	1.38	35	0.55	14	0.28	7
UJN-DN-AM	1/2NPT	1/2NPT	0.47	12	0.91	23	1.73	44	0.67	17	0.39	10
UJN-EN-AM	3/4NPT	3/4NPT	0.63	16	1.14	29	1.89	48	0.75	19	0.39	10

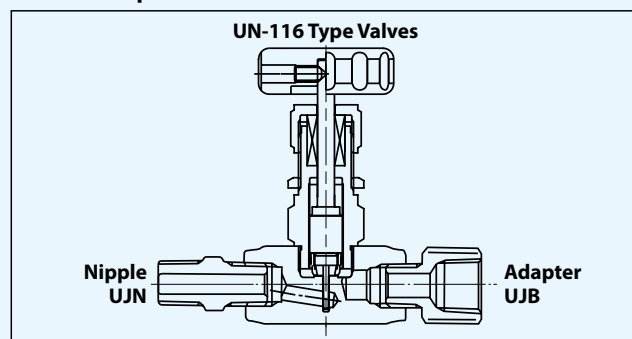
Plugs

R						
Part Numbers	Nominal Dia.	A	B		D	
			in	mm	in	mm
UJP-B-AM	R1/4	R1/4	0.67	17	0.91	23
UJP-C-AM	R3/8	R 3/8	0.75	19	0.94	24
UJP-D-AM	R1/2	R1/2	0.91	23	1.18	30

NPT						
Part Numbers	Nominal Dia.	A	B		D	
			in	mm	in	mm
UJP-AN-AM	1/8NPT	1/8NPT	0.47	12	0.67	17
UJP-BN-AM	1/4NPT	1/4NPT	0.67	17	0.91	23
UJP-CN-AM	3/8NPT	3/8NPT	0.75	19	0.94	24
UJP-DN-AM	1/2NPT	1/2NPT	0.91	23	1.18	30
UJP-FN-AM	1NPT	1NPT	1.38	35	1.5	38



● Use Example



※ : In other ones above-mentioned, some kinds, **Fujikin** has a large selection, so please consult **Fujikin**.