



C l e a n n e s s b y P u r p o s e

U.S.A. Ver.



METAL GASKET
SEAL FITTING

VF Fitting

METAL GASKET FACE SEAL FITTING

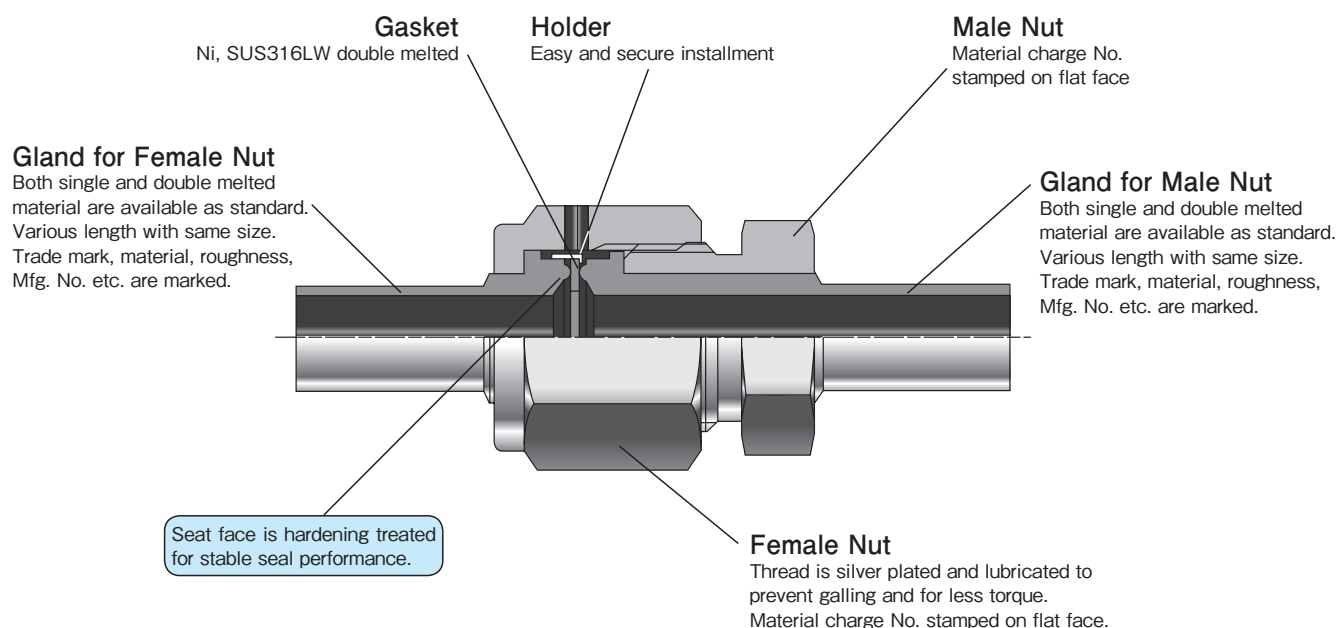


IHARA SCIENCE CORPORATION

NUT TYPE METAL GASKET SEAL FITTINGS : VTF SERIES

Ihara Technology can be found in every single fitting in our fluid conveyance system! We bring you VTF products that are reliable and easy to use.

< Standard Assembly >



◆Features

1. Wide range applications from ultra high vacuum to high pressure, lower and higher temperature through metal gasket seal.
2. Spacing when install and uninstall can be minimized.
3. As the nut thread is silver plated and lubricated, tightening torque is reduced and also free from galling.
4. Thrust washer (VSTW) and thrust bearing (VTJR) are available for the protection from co-rotation of the tube when tightening female nut.
5. Material of the parts to be welded is SUS316 and is machined highly accurate.
6. For customers demanding high purity and ultra-high performance fittings, we offer products that come standard with W melt (VIM+VAR) materials, double melt material with almost no non-metallic inclusion and very low impurities such as Mn.
7. After the precision cleaning, protect seal surface of the fitting and vacuum packed one by one inside clean room.
8. Identification label showing product type, part symbol, inner roughness etc. is put on each product package.

◆Specification of Fitting

Material used

Part No	Material
Gland Tube butt weld Connector Tube butt weld Elbow Tube butt weld Tee	SUS316L (316LSS) Single melt material Double melt material
Connector, Union Coupling, Adapter Elbow, Tee, Cross Nut, Plug	SUS316 (316SS)
Gasket / Holder	Ni, SUS316LW double melted / SUS316
Thrust Washer	Metal mesh+Fluorine resin
Thrust Bearing	SUS304 · SUS440C

Working Pressure

Vacuum	VAC ~ 0 Pa
Positive	0 ~ 20.6 MPa (3,000psi)

* As the temperature rises, allowable service pressure may decrease.

Working Temperature Range

Gland, etc.	- 269 ~ 450°C (- 452 ~ 842 °F)
Connector, etc.	- 253 ~ 450°C (- 423 ~ 842 °F)
Gasket Ni	- 196 ~ 315°C (- 320 ~ 599 °F)
Gasket SUS316L	- 269 ~ 450°C (- 452 ~ 842 °F)
Thrust Washer	- 196 ~ 180°C (- 320 ~ 356 °F)
Thrust Bearing	- 196 ~ 350°C (- 320 ~ 662 °F)

◆ Nomenclature

Weld display
W: for only welded parts

Type

Shape

VTF-GD 8-4-43C-07W

Size

Symbol	Size	Symbol	Size
2	1/8"	8	1/2"
4	1/4"	12	3/4"
6	3/8"	16	1"

*Gland size of gasket side is indicated first, then tube side follows.
*Only gasket side size is indicated for the same sizes.

Internal Roughness

Symbol	Internal Roughness	Stainless Steel Tube
32	Ra 32 μ in.	Equir. to BA tube
07	Ra 7 μ in.	Equir. to EP tube
04*	Ra 4 μ in.	—

*Option

Double Melt
* When double melt material is used, display "W" here.

Length

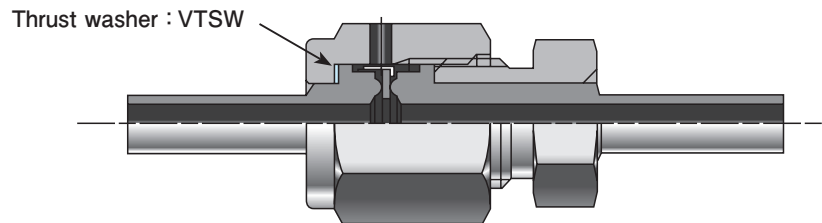
◆ Types

To ensure that our customers are satisfied with the applications and cost performance of our products, we also offer the three types beyond our standard combination.

① Thrust washer inserted type

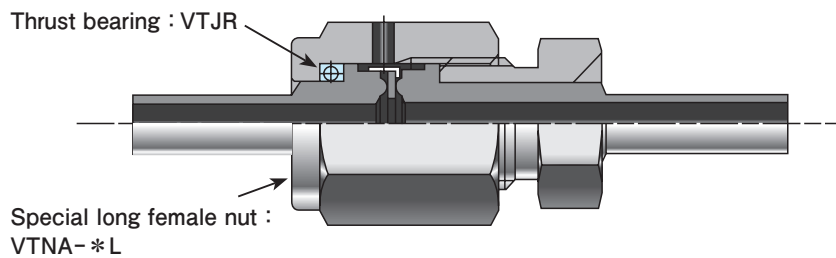
Original type, that thrust washer inserted to standard type.

Keeping tightening torque low for the female nut. Useful for preventing co-rotation with the gland, and minimal twisting during piping work.



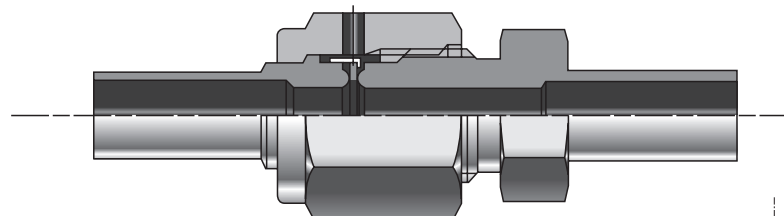
② Thrust bearing inserted type

Smooth tightening keeps tightening torque low for the female nut. Useful for preventing co-rotation with the gland, and minimal twisting during piping work.



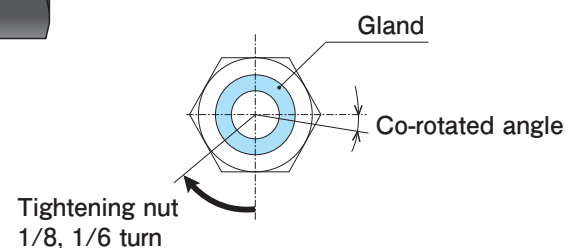
③ Compact (High flow) type

Very compact, but realized high flow.



* Reference: Data of gland co-rotation (in-house test data)

	Standard	Thrust washer/bearing inserted
	Tightened 1/8 turn	Tightened 1/6 turn
1/4"	2° ~ 2°30'	0°18' ~ 0°30'
1/2"	2°30' ~ 3°	0°30' ~ 1°

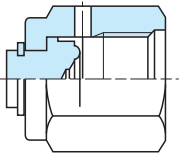
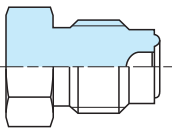
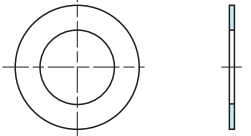
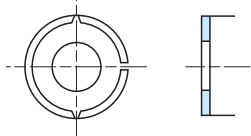


Any type of customized products are available, for instance, with less fittings and less welding.
Feel free to inquire your customized requirement.

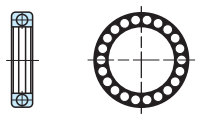
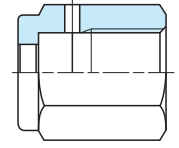
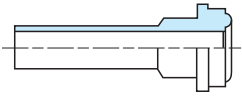
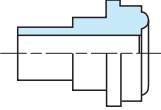
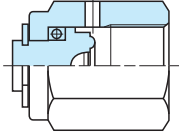
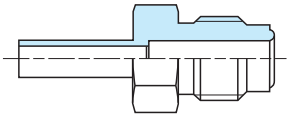
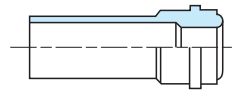
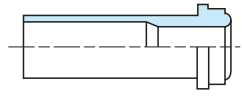
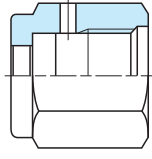
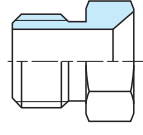
VTF FITTINGS VISUAL INDEX

Long Gland for Male Nut: VTF—GD	Long Gland for Female Nut: VTF—GE	Gland for Socker Weld: VTGC	Short Gland for Socket Weld SVTGC
Blind Gland: VTF -* BL	Gland for Tube Adapter: VTGAD	Male Connector (NPT): VTCT (NPT thread)	Male Connector (Straight thread) : VTCU
Female Connector (NPT): VTSA (NPT thread)	BI-LOK Fitting Connector: VTUB	BI-LOK Bulkhead Fitting Connector: VTSB	Union: VTUA
Reducing Union: VTUR	Bulkhead Connector for Tube: VTSU	Coupling: VTCG	Reducing Adapter: VTSS
Male Elbow (NPT): VTLN	Union Elbow: VTF-LA	Union Tee: VTF-TA	Union Cross: VTF-XA
Welded Parts	Welded BI-LOK Tube Fitting Connector: WVTUB	Closed Coupling: WVTGE	
NW Flange Welded Parts	Female Nut: VTNA	Male Nut: VTNB	Short Male Nut: VTNB

VTF FITTINGS VISUAL INDEX

CAP: VTCA	Plug: VTBA	Gasket: VTGP	Gasket with Holder: VTGR
			

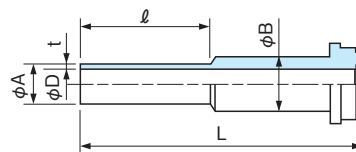
OPTION

Thrust Bearing Inserted Type	Thrust Bearing: VTJR	Female Nut for Thrust Bearing: VTNA —* L	Long Gland for Thrust Bearing Female Nut: VTF — GE *—* L
			
Short Gland for Thrust Bearing Female Nut: VTF — GN *—* L	Thrust Bearing Cap: VTCA * J		
			
Compact (High Flow) Type	Compact Coupling: VTGF	Gland for Compact Female Nut: VTGH, VTF — GH	Gland for Compact Male Nut: VTF — GK
			
Compact Female Nut: VTNC	Compact Male Nut: VTND		
			

* Please consult with Ihara Science Corp.

Long Gland for Male Nut

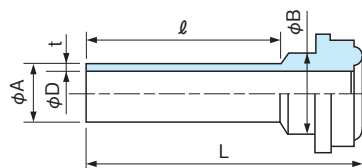
VTF-GD



Parts numbers	ϕA	t	ϕD	ϕB	L	ℓ	Pressure Rating	
							psig (bar)	MPa
VTF-GD2T-36C	1/8 (3.18)	0.028 (0.71)	0.07 (1.74)	0.20 (5.10)	1.42 (36.1)	0.75 (19.1)	8485 (585)	58.5
VTF-GD4T-43C	1/4 (6.35)	0.035 (0.89)	0.18 (4.57)	0.35 (8.80)	1.70 (43.2)	0.75 (19.1)	5091 (351)	35.1
VTF-GD8-4T-46C	1/4 (6.35)	0.035 (0.89)	0.18 (4.57)	0.59 (15.10)	1.80 (45.7)	0.75 (19.1)	4293 (296)	29.6
VTF-GD8-6T-45C	3/8 (9.53)	0.035 (0.89)	0.31 (7.75)	0.59 (15.10)	1.79 (45.5)	0.75 (19.1)	3292 (227)	22.7
VTF-GD8-45C	1/2 (12.70)	0.049 (1.24)	0.40 (10.20)	0.59 (15.10)	1.79 (45.5)	0.75 (19.1)	3495 (241)	24.1

Long Gland for Female Nut

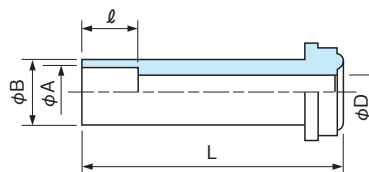
VTF-GE



Parts numbers	ϕA	t	ϕD	ϕB	L	ℓ	Pressure Rating	
							psig (bar)	MPa
VTF-GE2T-27C	1/8 (3.18)	0.028 (0.71)	0.07 (1.75)	0.20 (5.1)	1.08 (27.4)	0.75 (19.1)	8485 (585)	58.5
VTF-GE4T-28C	1/4 (6.35)	0.035 (0.89)	0.18 (4.57)	0.35 (8.8)	1.10 (27.9)	0.75 (19.1)	5091 (351)	35.1
VTF-GE8-4T-28C	1/4 (6.35)	0.035 (0.89)	0.18 (4.57)	0.59 (15.1)	1.12 (28.4)	0.75 (19.1)	4293 (296)	29.6
VTF-GE8-6T-28C	3/8 (9.53)	0.035 (0.89)	0.31 (7.75)	0.59 (15.1)	1.12 (28.4)	0.75 (19.1)	3292 (227)	22.7
VTF-GE8-28C	1/2 (12.70)	0.049 (1.24)	0.40 (10.20)	0.59 (15.1)	1.12 (28.4)	0.75 (19.1)	3495 (241)	24.1

Gland for Socket Weld

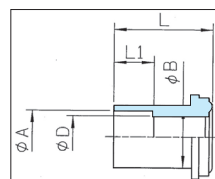
VTGC



Parts numbers	ϕA	ϕD	ϕB	L	ℓ	Pressure Rating	
						psig (bar)	MPa
VTGC4-4	1/4 (6.35)	0.17 (4.35)	0.35 (8.8)	1.31 (33.3)	0.28 (7.1)	5482 (378)	37.8
VTGC8-6	3/8 (9.53)	0.30 (7.50)	0.59 (15.1)	1.50 (38.1)	0.31 (7.9)	4293 (296)	29.6
VTGC8-8	1/2 (12.70)	0.40 (10.20)	0.59 (15.1)	1.50 (38.1)	0.38 (9.7)	2988 (206)	20.6
VTGC12-12	3/4 (19.05)	0.62 (15.70)	0.87 (22.2)	2.00 (50.8)	0.44 (11.2)	2785 (192)	19.2
VTGC16-16	1 (25.40)	0.87 (22.10)	1.19 (30.2)	2.22 (56.4)	0.62 (15.7)	2988 (206)	20.6

Short Gland for Socket Weld

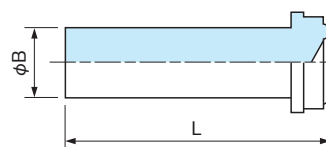
SVTGC



Parts numbers	ϕA	ϕD	ϕB	L	ℓ	Pressure Rating	
						psig (bar)	MPa
SVTGC4-4	1/4 (6.35)	0.17 (4.35)	0.35 (8.8)	0.75 (19.1)	0.28 (7.1)	5482 (378)	37.8

Blind Gland

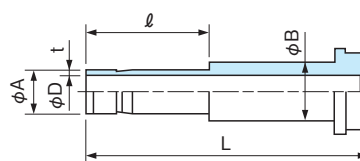
VTF- * -BL



Parts numbers	φ B	L
VTF-GC2-BL	0.20 (5.1)	0.70 (17.8)
VTF-GC4-BL	0.35 (8.8)	1.31 (33.3)
VTF-GC8-BL	0.59 (15.1)	1.50 (38.1)
VTF-GC12-BL	0.87 (22.2)	2.00 (50.8)
VTF-GC16-BL	1.19 (30.2)	2.22 (56.4)

Gland for Tube Adapter

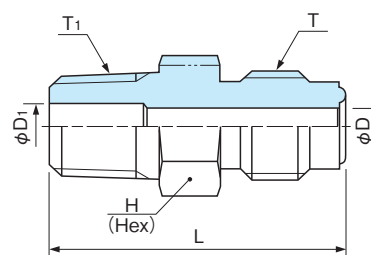
VTGAD



Parts numbers	φ A	t	φ D	φ B	L	ℓ	Pressure Rating	
							psig (bar)	MPa
VTGAD4-4	1/4 (6.35)	0.039 (1.00)	0.17 (4.35)	0.35 (8.8)	1.61 (41.0)	0.64 (16.20)	9993 (689)	68.9
VTGAD8-6	3/8 (9.53)	0.054 (1.36)	0.27 (6.80)	0.59 (15.1)	1.81 (46.0)	0.70 (17.80)	4293 (296)	29.6
VTGAD8-8	1/2 (12.70)	0.065 (1.65)	0.37 (9.40)	0.59 (15.1)	1.94 (49.3)	0.96 (24.40)	4293 (296)	29.6

Male Connector (NPT)

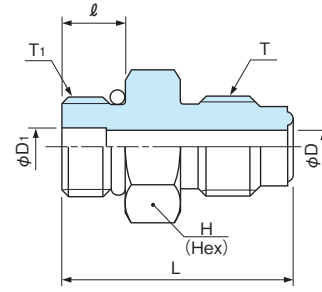
VTCT (NPT thread)



Parts numbers	T	T1	φ D	φ D1	H (Hex)	L	Pressure Rating	
							psig (bar)	MPa
VTCT2-1C	5/16-24	1/16	0.09 (2.30)	0.09 (2.30)	3/8 (9.52)	1.07 (27.2)	8992 (620)	62.0
VTCT2-2C	5/16-24	1/8	0.09 (2.30)	0.17 (4.40)	7/16 (11.11)	1.07 (27.2)	8992 (620)	62.0
VTCT4-2C	9/16-18	1/8	0.17 (4.35)	0.17 (4.35)	5/8 (15.88)	1.31 (33.3)	9993 (689)	68.9
VTCT4-4	9/16-18	1/4	0.17 (4.35)	0.24 (6.00)	5/8 (15.88)	1.49 (37.8)	9993 (689)	68.9
VTCT8-4C	7/8-14	1/4	0.40 (10.20)	0.24 (6.00)	15/16 (23.81)	1.65 (41.9)	4293 (296)	29.6
VTCT8-6C	7/8-14	3/8	0.40 (10.20)	0.38 (9.70)	15/16 (23.81)	1.65 (41.9)	4293 (296)	29.6
VTCT8-8C	7/8-14	1/2	0.40 (10.20)	0.40 (10.20)	15/16 (23.81)	1.84 (46.7)	4293 (296)	29.6
VTCT12-12C	1 1/4-18	3/4	0.62 (15.75)	0.62 (15.75)	1 5/16 (33.33)	2.19 (55.6)	3684 (254)	25.4
VTCT16-16	1 1/2-20	1	0.87 (22.10)	0.87 (22.10)	1 5/8 (41.27)	2.46 (62.6)	2988 (206)	20.6

Male Connector (Straight thread)

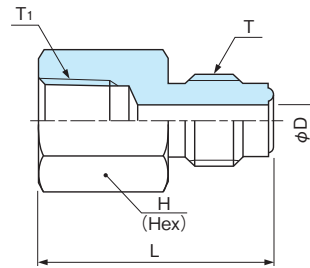
VTCU



Parts numbers	T	T1	ϕ D	ϕ D1	ℓ 1	ℓ	H (Hex)	L	O リング (AS568)	Pressure Rating	
										psig (bar)	MPa
VTCU4-6	9/16-18	9/16-18	0.17 (4.35)	0.28 (7.1)	0.25 (6.4)	0.39 (9.9)	3/4 (19.05)	1.33 (33.8)	-906	4496 (310)	31.0
VTCU8-6	7/8-14	9/16-18	0.30 (7.50)	0.30 (7.5)	-	0.39 (9.9)	15/16 (23.81)	1.48 (37.6)	-906	3495 (241)	24.1
VTCU8-10	7/8-14	7/8-16	0.30 (7.50)	0.59 (15.0)	0.40 (10.2)	0.50 (12.7)	1 (25.40)	1.66 (42.2)	-910	3495 (241)	24.1

Female Connector (NPT)

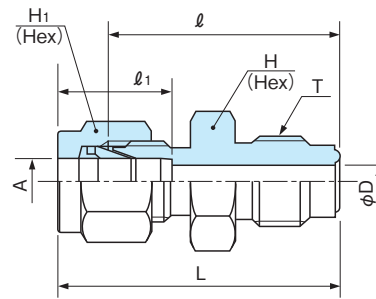
VTSA (NPT thread)



Parts numbers	T	T1	ϕ D	H (Hex)	L	Pressure Rating	
						psig (bar)	MPa
VTSA2-2	5/16-24	1/8	0.09 (2.30)	9/16 (14.28)	1.19 (30.2)	6483 (447)	44.7
VTSA4-2	9/16-18	1/8	0.17 (4.35)	5/8 (15.87)	1.41 (35.8)	7992 (551)	55.1
VTSA4-4C	9/16-18	1/4	0.17 (4.35)	3/4 (19.05)	1.41 (35.8)	6585 (454)	45.4
VTSA8-6C	7/8-14	3/8	0.40 (10.20)	15/16 (23.81)	1.76 (44.7)	4293 (296)	29.6
VTSA8-8C	7/8-14	1/2	0.40 (10.20)	1 1/16 (26.99)	1.99 (50.5)	4293 (296)	29.6
VTSA12-12C	1 1/4-18	3/4	0.62 (15.75)	1 5/16 (33.34)	2.36 (59.9)	3684 (254)	25.4
VTSA16-16	1 1/2-20	1	0.87 (22.10)	1 5/8 (41.27)	2.51 (63.8)	2988 (206)	20.6

BI-Lok Fitting Connector

VTUB

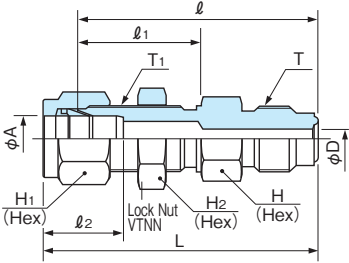


Parts numbers	T	ϕ D	H (Hex)	ϕ A	H1 (Hex)	ℓ 1	ℓ	L	Pressure Rating	
									psig (bar)	MPa
VTUB4-4C	9/16-18	0.17 (4.35)	5/8 (15.88)	0.25 (6.35)	9/16 (14.29)	0.31 (7.95)	1.32 (33.6)	1.62 (41.1)	9993 (689)	68.9
VTUB8-6C	7/8-14	0.30 (7.50)	15/16 (23.81)	0.38 (9.53)	11/16 (17.46)	0.38 (9.55)	1.54 (39.2)	1.84 (46.7)	4293 (296)	29.6
VTUB8-8C	7/8-14	0.40 (10.20)	15/16 (23.81)	0.50 (12.70)	7/8 (22.23)	0.50 (12.70)	1.54 (39.2)	1.95 (49.5)	4293 (296)	29.6

Some products in the catalog are manufactured upon ordered. Inquire with us for details.
※ Indicate the grade in the end

BI-Lok Bulkhead Fitting Connector

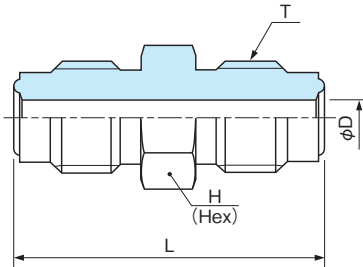
VTSB



Parts numbers	T	T1	φ D	H (Hex)	φ A	H1 (Hex)	ℓ 1	ℓ 2	H1 (Hex)	ℓ	L	Pressure Rating	
												psig (bar)	MPa
VTSB4-4	9/16-18	7/16-20	0.17 (4.35)	5/8 (15.88)	0.25 (6.35)	0.56 (14.29)	1.03 (26.2)	0.61 (15.37)	5/8 (15.88)	1.97 (50.0)	2.26 (57.4)	9993 (689)	68.9
VTSB4-4S	9/16-18	7/16-20	0.17 (4.35)	5/8 (15.88)	0.25 (6.35)	0.56 (14.29)	1.05 (26.7)	0.61 (15.37)	5/8 (15.88)	1.60 (40.6)	1.89 (48.0)	9993 (689)	68.9
VTSB8-6	7/8-14	7/16-20	0.30 (7.50)	15/16 (23.81)	0.38 (9.53)	0.69 (17.46)	1.16 (29.5)	0.66 (16.88)	3/4 (19.05)	2.26 (57.4)	2.55 (64.7)	4293 (296)	29.6
VTSB8-8	7/8-14	3/4-20	0.40 (10.20)	15/16 (23.81)	0.50 (12.70)	0.88 (22.23)	1.25 (31.8)	0.88 (22.34)	15/16 (23.81)	2.35 (59.7)	2.73 (69.3)	4293 (296)	29.6

Union

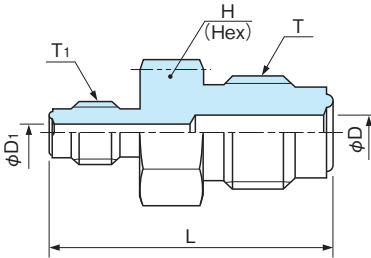
VTUA



Parts numbers	T	φ D	H (Hex)	L	Pressure Rating	
					psig (bar)	MPa
VTUA2	5/16-24	0.09 (2.30)	3/8 (9.52)	1.09 (27.7)	11182 (771)	77.1
VTUA4	9/16-18	0.17 (4.35)	5/8 (15.88)	1.53 (38.9)	9993 (689)	68.9
VTUA8	7/8-14	0.40 (10.20)	15/16 (23.81)	1.81 (46.0)	4293 (296)	29.6
VTUA12	1 1/4-18	0.62 (15.75)	1 5/16 (33.34)	2.38 (60.5)	3684 (254)	25.4
VTUA16	1 1/2-20	0.87 (22.10)	1 5/8 (41.27)	2.54 (64.6)	2988 (206)	20.6

Reducing Union

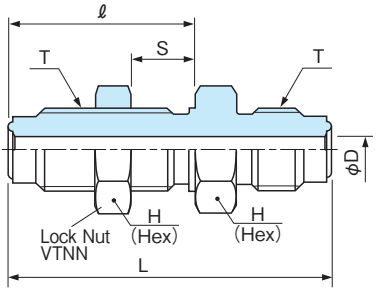
VTUR



Parts numbers	T	T1	φ D	φ D1	H (Hex)	L	Pressure Rating	
							psig (bar)	MPa
VTUR4-2	9/16-18	5/16-24	0.17 (4.35)	0.09 (2.30)	5/8 (15.88)	1.38 (35.1)	9993 (689)	68.9
VTUR8-4	7/8-14	9/16-18	0.30 (7.50)	0.17 (4.35)	15/16 (23.81)	1.71 (43.4)	4293 (296)	29.6

Bulkhead Connector for Tube

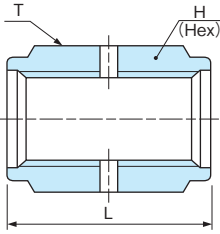
VTSU



Parts numbers	T	ϕ D	ℓ	Smax	H (Hex)	L	Panel Hole Diameter	Pressure Rating	
								psig (bar)	MPa
VTSU4	9/16-18	0.17 (4.35)	1.25 (31.80)	0.44 (11.20)	3/4 (19.05)	2.16 (54.9)	0.59 (15.0)	9993 (689)	68.9
VTSU8	7/8-14	0.40 (10.20)	1.48 (37.60)	0.50 (12.70)	1 1/16 (26.99)	2.57 (65.3)	0.91 (23.0)	4293 (296)	29.6

Coupling

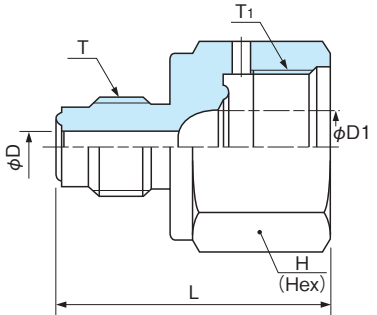
VTCG



Parts numbers	T	H (Hex)	L
VTCG2	5/16-24	7/16 (11.11)	1.09 (27.7)
VTCG4	9/16-18	3/4 (19.05)	1.53 (38.9)
VTCG8	7/8-14	11/16 (17.46)	1.81 (46.0)
VTCG12	1 1/4-18	1 1/2 (38.10)	2.38 (60.5)
VTCG16	1 1/2-20	1 3/4 (44.45)	2.54 (64.6)

Reducing Adapter

VTSS

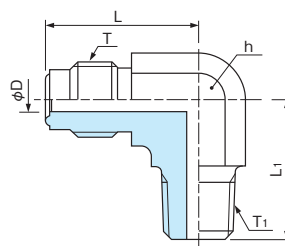


Parts numbers	T	T1	ϕ D	H (Hex)	L	ϕ D1	Pressure Rating	
							psig (bar)	MPa
VTSS2-4	5/16-24	9/16-18	0.09 (2.30)	3/4 (19.05)	1.19 (30.2)	—	9993 (689)	68.9
VTSS4-8	9/16-18	7/8-14	0.17 (4.35)	1 1/16 (26.99)	1.52 (38.5)	0.40 (10.2)	4293 (296)	29.6

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※ Indicate the grade in the end

Male Elbow (NPT)

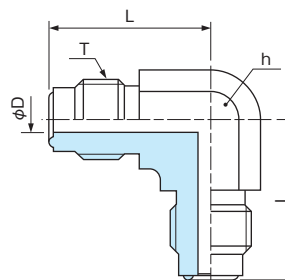
VTLN



Parts numbers	T	T1	ϕ D	h (Flat)	L	L1	Pressure Rating		
							psig (bar)	MPa	
VTLN4-2	9/16-18	1/8	0.17 (4.35)	11/16 (17.46)	1.13 (28.7)	0.88 (22.4)	9993 (689)	68.9	
VTLN4-4	9/16-18	1/4	0.17 (4.35)	11/16 (17.46)	1.13 (28.7)	1.06 (26.9)	7992 (551)	55.1	
VTLN8-6	7/8-14	3/8	0.40 (10.20)	13/16 (20.64)	1.31 (33.3)	1.11 (28.2)	4293 (296)	29.6	
VTLN8-8	7/8-14	1/2	0.40 (10.20)	13/16 (20.64)	1.31 (33.3)	1.31 (33.3)	4293 (296)	29.6	

Union Elbow

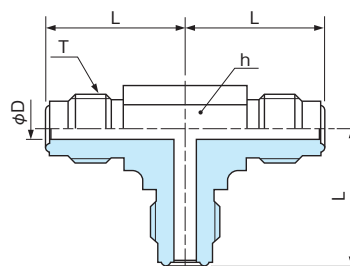
VTF-LA



Parts numbers	T	ϕ D	h (Flat)	L	Pressure Rating		
					psig (bar)	MPa	
VTF-LA2	5/16-24	0.09 (2.30)	7/16 (11.11)	0.89 (22.6)	11182 (771)	77.1	
VTF-LA4	9/16-18	0.17 (4.35)	11/16 (17.46)	1.07 (27.2)	9993 (689)	68.9	
VTF-LA8	7/8-14	0.40 (10.20)	0.98 (25.00)	1.45 (36.8)	4293 (296)	29.6	
VTLA12	1 1/4-18	0.62 (15.75)	1 1/4 (31.75)	1.81 (46.0)	3684 (254)	25.4	

Union Tee

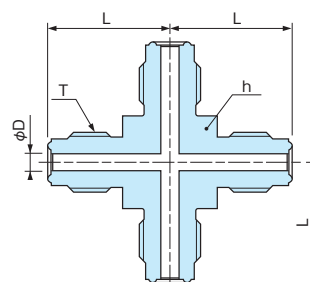
VTF-TA



Parts numbers	T	ϕ D	h (Flat)	L	Pressure Rating		
					psig (bar)	MPa	
VTF-TA2	5/16-24	0.09 (2.30)	7/16 (11.11)	0.89 (22.6)	11182 (771)	77.1	
VTF-TA4	9/16-18	0.17 (4.35)	11/16 (17.46)	1.07 (27.2)	9993 (689)	68.9	
VTF-TA8	7/8-14	0.40 (10.20)	0.98 (25.00)	1.45 (36.8)	4293 (296)	29.6	

Union Cross

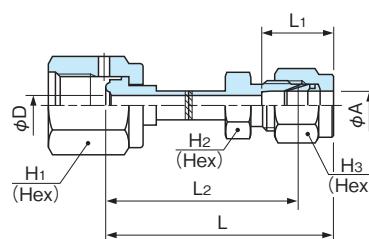
VTF-XA



Parts numbers	T	φ D	h (Flat)	L	Pressure Rating		
					psig (bar)		MPa
VTF-XA2	5/16-24	0.09 (2.30)	7/16 (11.11)	0.89 (22.6)	11182	(771)	77.1
VTF-XA4	9/16-18	0.17 (4.35)	11/16 (17.46)	1.07 (27.2)	9993	(689)	68.9
VTF-XA8	7/8-14	0.40 (10.20)	0.98 (25.00)	1.45 (36.8)	4293	(296)	29.6

Welded BI-Lok Tube Fitting Connector

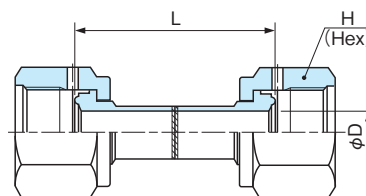
WVTUB



Parts numbers	φ D	φ A	H1 (Hex)	H2 (Hex)	H3 (Hex)	L1	L2	L	Pressure Rating	
									psig (bar)	MPa
WVTUB4-4	0.17 (4.35)	0.25 (6.35)	3/4 (19.05)	1/2 (12.70)	9/16 (14.29)	0.61 (15.37)	1.64 (41.75)	1.94 (49.3)	9993 (689)	68.9
WVTUB4-6	0.17 (4.35)	0.38 (9.53)	3/4 (19.05)	5/8 (15.88)	11/16 (17.46)	0.66 (16.88)	1.67 (42.50)	1.96 (49.8)	6483 (447)	44.7
WVTUB8-8	0.40 (10.20)	0.75 (19.05)	1 1/16 (26.99)	13/16 (20.64)	7/8 (22.22)	0.88 (22.34)	1.85 (47.00)	2.22 (56.3)	4293 (296)	29.6

Closed Coupling

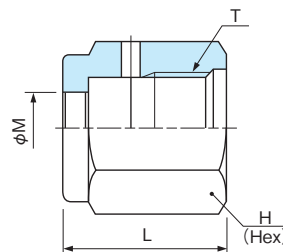
WVTGE



Parts numbers	φ D	H (Hex)	L	Pressure Rating	
				psig (bar)	MPa
WVTGE4-4	0.17 (4.35)	3/4 (19.05)	1.71 (43.4)	9993 (689)	68.9
WVTGE8-8	0.40 (10.20)	1 1/16 (26.99)	1.85 (47.0)	4293 (296)	29.6

Female Nut

VTNA

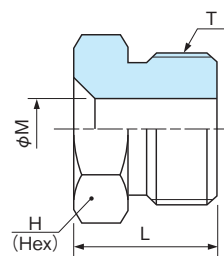


Parts numbers	T	φ M	H (Hex)	L
VTNA2	5/16-24	0.20 (5.15)	7/16 (11.10)	0.53 (13.5)
VTNA4	9/16-18	0.36 (9.10)	3/4 (19.05)	0.81 (20.6)
VTNA8	7/8-14	0.61 (15.50)	1 1/16 (26.99)	0.88 (22.4)
VTNA12	1 1/4-18	0.89 (22.60)	1 1/2 (38.10)	1.12 (28.4)
VTNA16	1 1/2-20	1.20 (30.50)	1 3/4 (44.45)	1.34 (34.0)

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Male Nut

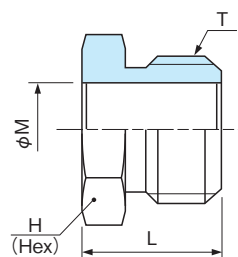
VTNB



Parts numbers	T	φ M	H (Hex)	L
VTNB2	5/16-24	0.20 (5.15)	3/8 (9.52)	0.50 (12.7)
VTNB4	9/16-18	0.35 (8.90)	5/8 (15.88)	0.72 (18.3)
VTNB8	7/8-14	0.60 (15.20)	15/16 (23.81)	0.81 (20.6)
VTNB12	1 1/4-18	0.88 (22.40)	1 5/16 (33.34)	1.00 (25.4)
VTNB16	1 1/2-20	1.20 (30.50)	1 5/8 (41.27)	1.19 (30.2)

Short Male Nut

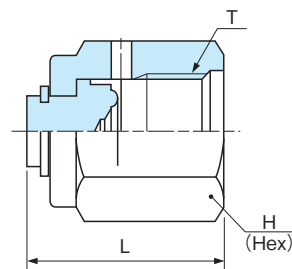
VTNB



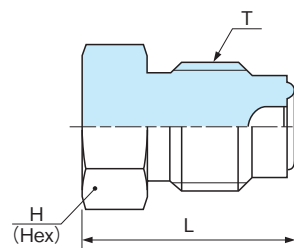
Parts numbers	T	φ M	H (Hex)	L
VTNB4S	9/16-18	0.35 (8.90)	5/8 (15.88)	0.54 (13.7)

CAP

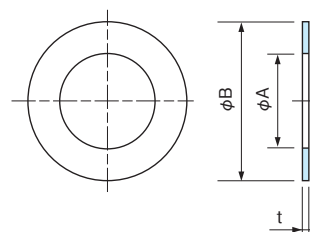
VTCA



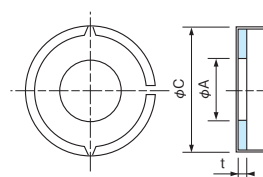
Parts numbers	T	H (Hex)	L
VTCA2	5/16-24	7/16 (11.11)	0.62 (15.7)
VTCA4	9/16-18	3/4 (19.05)	0.93 (23.5)
VTCA8	7/8-14	1 1/16 (26.99)	1.01 (25.7)
VTCA12	1 1/4-18	1 1/2 (38.10)	1.31 (33.2)
VTCA16	1 1/2-20	1 3/4 (44.45)	1.54 (39.1)

Plug**VTBA**

Parts numbers	T	H (Hex)	L
VTBA2	5/16-24	3/8 (9.52)	0.68 (17.3)
VTBA4	9/16-18	5/8 (15.88)	0.91 (23.1)
VTBA8	7/8-14	15/16 (23.81)	1.08 (27.4)
VTBA12	1 1/4-18	1 5/16 (33.34)	1.41 (35.8)
VTBA16	1 1/2-20	1 5/8 (41.28)	1.52 (38.6)

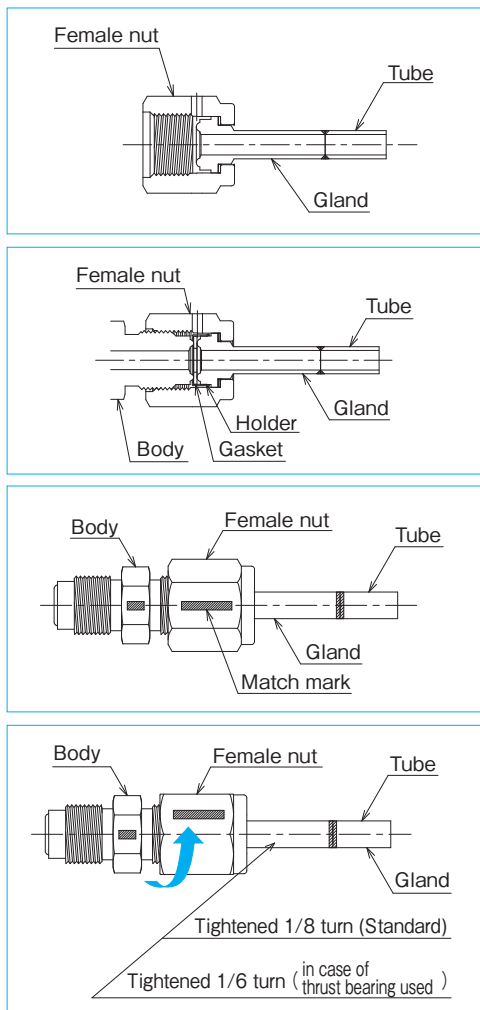
Gasket**VTGP**

Parts numbers	φ A	φ B	t
VTGP2	0.09 (2.30)	0.25 (6.40)	0.02 (0.5)
VTGP4	0.22 (5.60)	0.44 (11.30)	0.03 (0.8)
VTGP8	0.44 (11.20)	0.73 (18.55)	0.03 (0.8)
VTGP12	0.66 (16.80)	1.08 (27.50)	0.03 (0.8)
VTGP16	0.88 (22.35)	1.34 (34.00)	0.03 (0.8)

Gasket with Holder**VTGR**

Parts numbers	φ A	φ C	t
VTGR4	0.22 (5.60)	0.46 (11.70)	0.03 (0.8)
VTGR8	0.44 (11.20)	0.75 (19.10)	0.03 (0.8)
VTGR12	0.66 (16.80)	1.10 (28.05)	0.03 (0.8)

◆ Assembly Procedure



1. Attach the female nut to the gland.
2. Remove the protection cap from the gland.
Pay attention not to damage bead face.
3. Weld gland and tube.
4. Affix the gasket with the holder to the gland that was welded to the tube.
5. Remove the bead protection cap on the mating side such as the connector body.
6. Fix tightly fitting body or male nut, and finger tighten the female nut until the gasket contacts the mating bead surface.
7. At this position, draw matching marks on fitting body and female nut with ink.
8. Hold the body tightly with back up wrench. Then tighten the female nut by 1/8 turn from the matching marks.
In case of using a thrust bearing, however, tighten by 1/6 turn.

◆ Remaking Procedure

- ① **When no replacing both the Gasket and the Thrust washer**
In remaking, it will be sufficient to only slightly additionally tighten ($5 \sim 10^\circ$) the female nut with the spanner. Note that the finger tight position in the remake will not be same as the finger tight position before disassembly. The same applies to the fixtures that do not use a thrust washer.
- ② **When replacing only the Gasket**
After finger tighten, put new match marks on the body and the nut, then tighten $1/8$ turn (45°) with spanner. The difference of rotation from above par.9 will depend upon whether there has been initial deformation of the washer.
Note: As stated above, nut rotation for remaking is different when replace only gasket.
Replacing together with the thrust washer is recommended from tightening control.

◆ Replacement of Gasket

Gasket can be repeatedly used several times (4 ~ 5 times). However, in the case of used for severe special gas, it is recommended that the gasket is replaced with a new one at each disassembly.

◆ Handle With Care

- ① For protection of the bead, keep on the protection cap during storage, transportation, and weld preparation.
- ② All the parts are packed under clean room atmosphere after precisely cleaned.
In application where fat and oil present problems, jigs and tools have to be degreased and washed clean prior to use. Also workers had better wear the dust-proof gloves not to touch the parts with bare hand.

Related Products

Tube Cutter



This machine cuts the stainless tube precisely without contamination the clean atmosphere. As no outer burr is generated, it's ready to automatic weld just after cutting without end surface finish.

AWF



This type of fitting is for Ultra high purity gas services of semiconductor, liquid crystal manufacturing facilities, etc.. Clean stainless material which is vacuum treated is used and vacuum packaged in double in a clean room.

Diaphragm Valves



Outer sealing with metal diaphragm realize high airtightness, high durability and dead space free. Suitable for high purity fluid.

Bellows Valves



Outer sealing with metal bellows realize higher airtightness. As the leakage from the gland can be avoided, this type is ideal for such a poisonous gas service that is required higher leak-proof performance.



WARNING

If you don't select and handle fittings, valves and related accessories in an adequate manner, it may damage human beings and applicable systems. Within the responsibility and authorization of users and piping designers, fittings, valves and related accessories shall be adequately selected, assembled, used and maintained based on the applicable conditions and product conformity to the system to be applied. Please read carefully our operation manual and feel free to contact with Ihara if you have any question or request.



ISO9001, ISO14001 Certified Office
Certified office for high-pressure gas facility testing and manufacturing,
certified office for N valves and N-II fittings

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