

Архангельск (8182)63-90-72
Астана (7172)727-132
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89

Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Липецк (4742)52-20-81

Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16

Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13

Сургут (3462)77-98-35
Тверь (4822)63-31-35
Томск (3822)98-41-53
Тула (4872)74-02-29
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Ярославль (4852)69-52-93

<http://www.unilok.nt-rt.ru> || uki@nt-rt.ru

ULTRA HIGH PURITY METAL FACE SEAL & WELD FITTINGS

ТЕХНИЧЕСКИЕ ХАРАКТЕРИСТИКИ



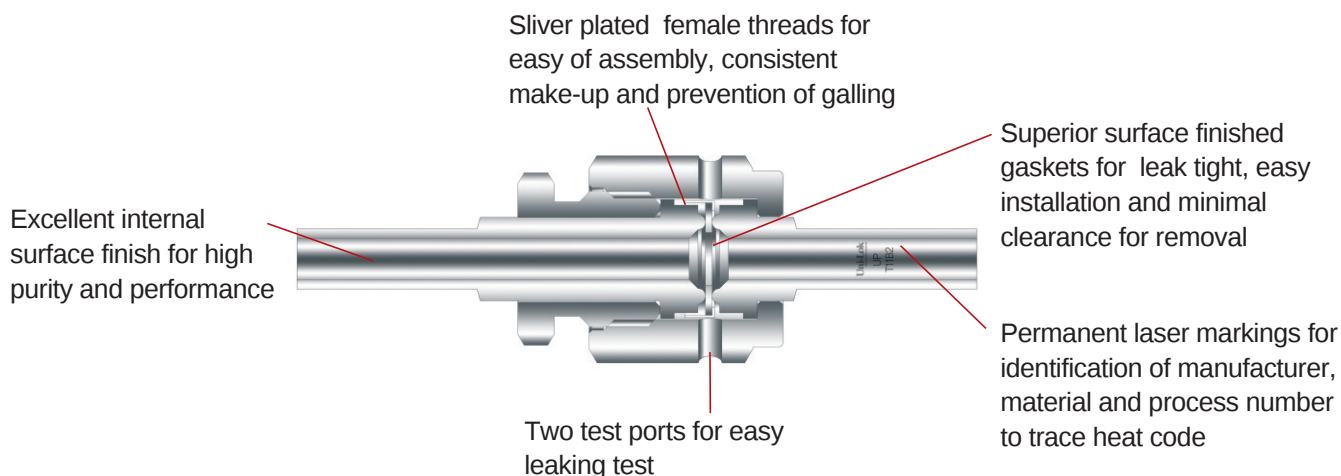
Weld & Metal Face Seal Fittings

Uni-Lok® Weld & Metal Face Seal (UCR) fittings are designed and manufactured as high performance and high purity components by our own know-how to be accumulated throughout the years.

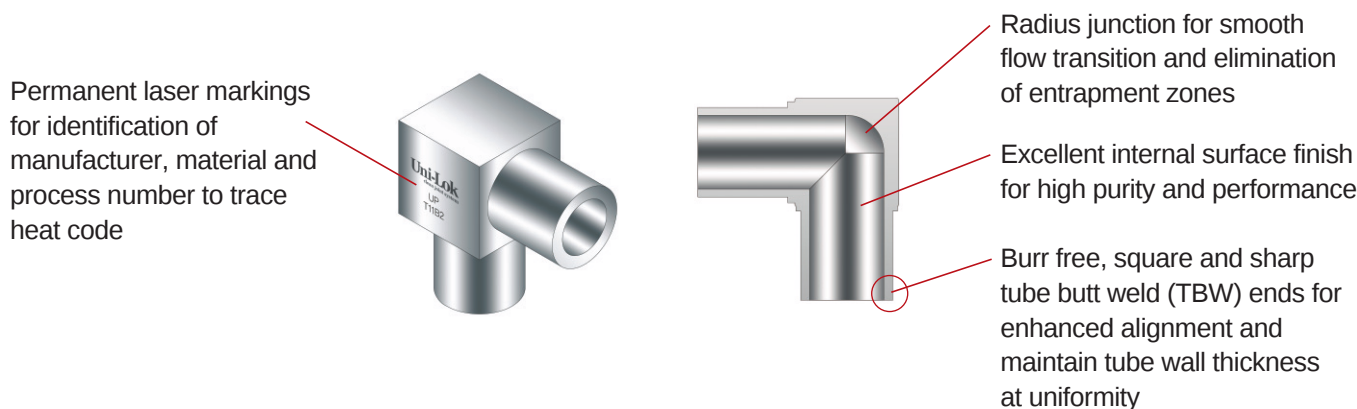
Uni-Lok® guarantees high quality butt welding between tube and fittings as well as leak free assembly for critical applications.

Features

Metal Face Seal (UCR) Fittings



Weld Fittings



Internal Surface Finish Levels

Designator	Surface Finish(μm)	
	Average	Maximum
BA	< 0.4	< 1.6
EP	< 0.125	< 0.4

Reference Specification :
SEMA-90120400B

Surface Analysis

SEM, ESCA/XPS, AES analysis for all electro polished products are used to measure surface cleanliness and anticorrosion requirements in accordance with SEMA specifications.

SEM - SEMA 90120401B-STD

ESCA/XPS - SEMA 90120403B-STD

AES - SEMA 91060573B-STD

Plating

Female nuts are silver plated for easy of assembly, consistent make-up, prevention of galling and reduction of the torque required for fitting assembling.

Materials

Materials	Specification
Glands, Unions, Weld Fittings	
VIM/VAR	Forging - ASTM A182 Bar Stock - ASTM SA479
VCR/VAR	
316LSS	
Nuts, Plugs, Caps, UCR Threaded Fittings	
316LSS	Forging - ASTM A182 Bar Stock - ASTM SA479
Gaskets	
Nickel	ASTM B162
316LSS	ASTM A167

Both VCR/VAR and 316LSS are UHP(Ultra High Purity) 316LSS material with low Sulfur and Manganese in comply with SEMI F-20.

Pressure Ratings

Tube O.D.	Wall Thickness	Pressure Rating	
		psig	bar
1/4"	1.00mm	5200	359
	0.89mm		
3/8"	1.00mm	3350	231
	0.89mm		
1/2"	1.24mm	3750	259
3/4"	1.65mm	3350	231
1"	1.65mm	2400	265

0.89mm(0.035") wall thick fittings are available upon request. When ordering, be sure to add **-A** to the part number.

Pressure ratings are calculated in accordance with ANSI/ASME B31.3 for stainless steel pressure piping at room temperature.

Temperature Ratings

Components	Materials	°F	°C
Fittings	VIM/VAR	1000	537
	VCR/VAR		
	316LSS		
Gaskets	316LSS	1000	537
	Nickel	600	315

Helium Leak Test

Uni-Lok fittings are rated to a helium leak rate of less than 1×10^{-9} mbar.l/sec and tested in accordance with SEMA-90120391B-STD and SEMI F1-96.

Particle Contribution Test

According to ASTM F1394-92.

Moisture Contribution Test

According to SEMA-90120397B-STD.

Cleaning

All components are precisely cleaned with 18M Ω deionized water after the passivation procedure. Reference specification : SEMI E49.6.

Assembling

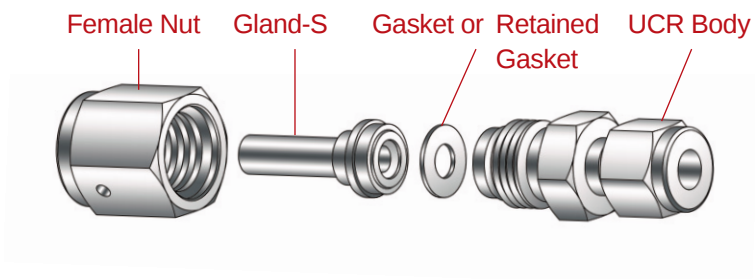
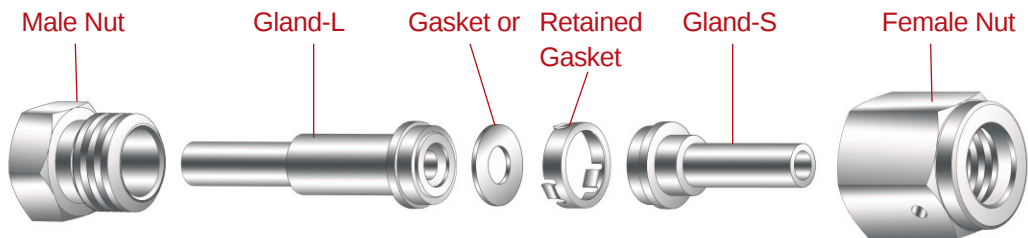
According to SEMI E49.6.

Packaging

Each component is double bagged to ensure component cleanliness and to protect them from environmental contamination.

Referenced specification : SEMI E49.1.

Typical Assemblies



Installation Instruction



Step A.
Place gasket into female nut.



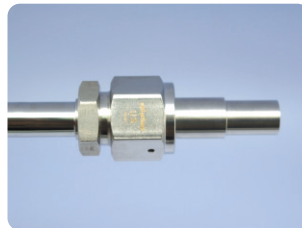
Step C.
Tighten female nut 1/8 turn past finger tight holding the backup wrench stationary.



Step AA.
Guide retained gasket over gland UCR face.

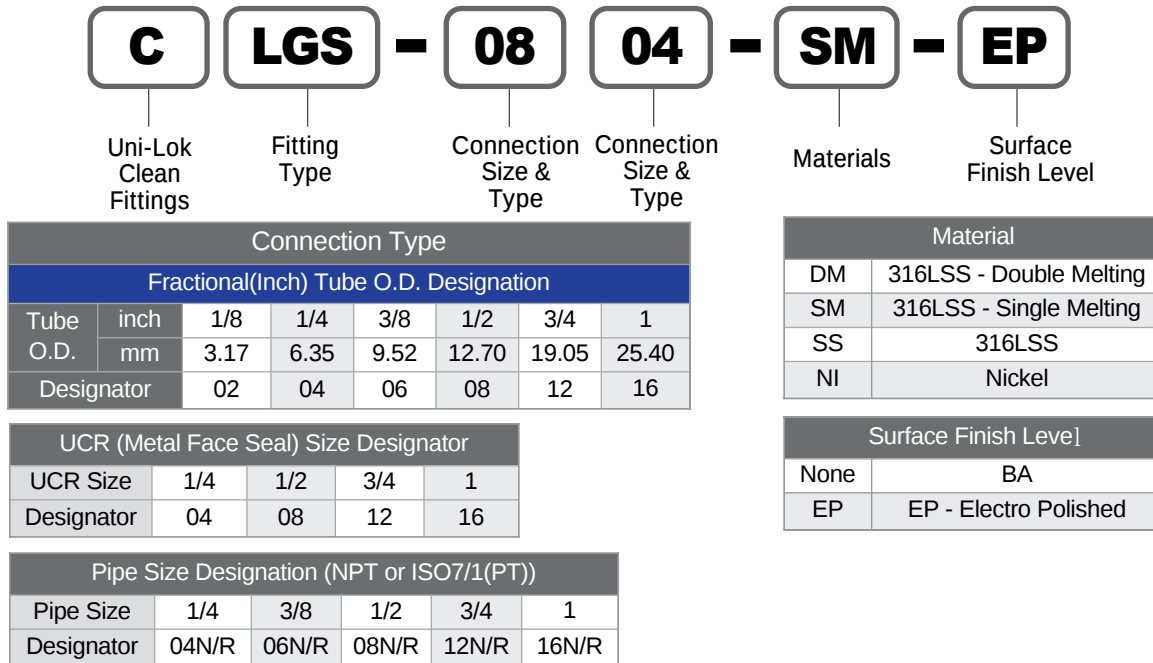


Step B.
Tighten female nut to male nut or UCR body finger tight.



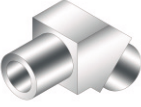
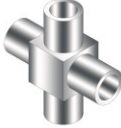
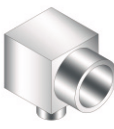
Step D.
Confirm face seal and gasket's position again.

Metal face seal connections are remakeable only using new gasket for each remake.



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- High Flow Components



HR Bulkhead
Adapter
CHBA

17



HR Gland
CHG

17



HR Adapter
CHA

17



HR Female Nut
CHFN

17



HR Male Nut
CHMN

17

UCR Threaded Fittings

- UCR to UCR



Bulkhead
Double Male Union
CBDMU

18



Double Male
Union
CDMU

18



Reducing
Double Male Union
CDMRU

18



Union Cross
CUC

19



Union Elbow
CEU

18



Union Tee
CUT

19



Reducing
Double Female
Union
CDFRU

19



Reducing Adapter
CRA

19



Reducing Bushing
CRB

20



Coupling
CC

20



TBW Adapter
CAWB

21



Bulkhead
TBW Adapter
CBAWB

21



Uni-Lok
Connector
CULC

21



Bulkhead
Uni-Lok Connector
CBULC

21



Male Connector
CUMC

22



Male Elbow
CUME

22

- UCR to TBW

- UCR to Uni-Lok

- UCR to Thread

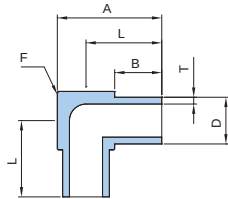
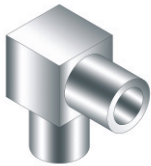


Female Connector
CUFC

22

Micro Elbow 90°

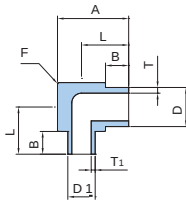
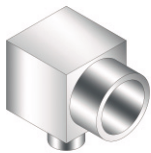
CME



Part No.	Tube O.D. D		Tube W.T. T		Dimension (mm)			Body Cube
	inch	mm	inch	mm	A	B	L	F
CME-02-	1/8	3.17	0.028	0.71	14.29	6.35	10.32	7.94
CME-04-*A	1/4	6.35	0.035	0.89				
CME-04-	1/4	6.35	0.039	1.00				
CME-06-	3/8	9.52		1.00			11.91	11.11
CME-08-	1/2	12.70	0.049	1.24			13.50	14.29
CME-12-	3/4	19.05	0.065	1.65	27.00		20.70	20.65

Reducing Micro Elbow 90°

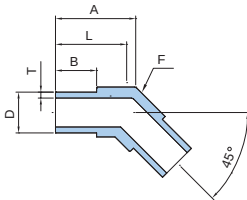
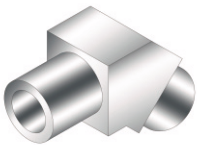
CMRE



Part No.	Tube O.D. D		Tube W.T. T		Tube O.D. D ₁		Tube W.T. T ₁		Dimension (mm)			Body Cube
	inch	mm	inch	mm	inch	mm	inch	mm	A	B	L	F
CMRE-0402-	1/4	6.35	0.039	1.00	1/8	3.17	0.028	0.71	14.29	6.35	10.32	7.94
CMRE-0604-	3/8	9.52		1.00	1/4	6.35		1.00	17.46		11.91	11.11
CMRE-0804-	1/2	12.70	0.049	1.24	1/4	6.35	0.039	1.00	20.64		13.50	14.29
CMRE-0806-	1/2	12.70	0.049	1.24	3/8	9.52		1.00				

Micro Elbow 45°

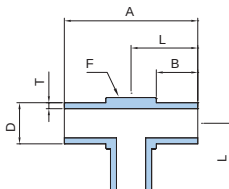
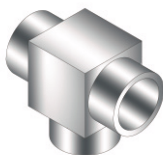
CMVE



Part No.	Tube O.D. D		Tube W.T. T		Dimension (mm)			Body Cube
	inch	mm	inch	mm	A	B	L	F
CMVE-04-*A-	1/4	6.35	0.035	0.89	11.96	6.35	10.32	7.94
CMVE-04-	1/4	6.35	0.039	1.00				
CMVE-06-	3/8	9.52		1.00			11.91	11.11
CMVE-08-	1/2	12.70	0.049	1.24			13.50	14.29

Micro Tee

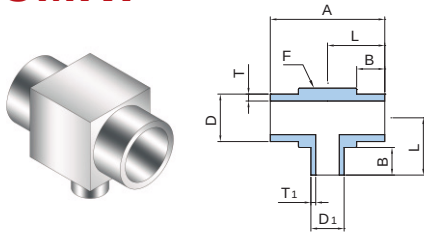
CMT



Part No.	Tube O.D. D		Tube W.T. T		Dimension (mm)			Body Cube
	inch	mm	inch	mm	A	B	L	F
CMT-02-	1/8	3.17	0.028	0.71	20.64	6.35	10.32	7.94
CMT-04-*A	1/4	6.35	0.035	0.89				
CMT-04-	1/4	6.35	0.039	1.00				
CMT-06-	3/8	9.52		1.00			11.91	11.11
CMT-08-	1/2	12.70	0.049	1.24			13.50	14.29
CMT-12-	3/4	19.05	0.065	1.65	33.35		16.67	20.65

Reducing Micro Tee

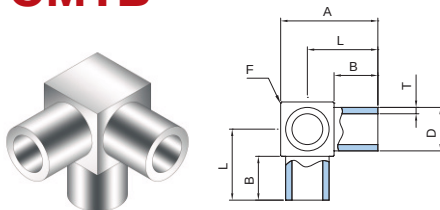
CMRT



Part No.	Tube O.D. D		Tube W.T. T		Tube O.D. D ₁		Tube W.T. T ₁		Dimension (mm)				Body Cube
	inch	mm	inch	mm	inch	mm	inch	mm	A	B	L	F	
CMRT-0402-	1/4	6.35	0.039	1.00	1/8	3.17	0.028	0.71	20.64	6.35	10.32	7.94	
CMRT-0604-	3/8	9.52		1.00	1/4	6.35		1.00	23.81		11.91	11.11	
CMRT-0804-	1/2	12.70	0.049	1.24	1/4	6.35	0.039	1.00	26.99		13.50	14.29	
CMRT-0806-	1/2	12.70	0.049	1.24	3/8	9.52		1.00					

Micro Tribow

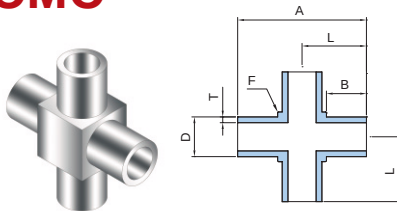
CMTB



Part No.	Tube O.D. D		Tube W.T. T		Dimension (mm)			Body Cube
	inch	mm	inch	mm	B	L	F	
CMTB-04-*A-	1/4	6.35	0.035	0.89	6.35	10.32	7.94	
CMTB-04-	1/4	6.35	0.039	1.00		11.91	11.11	
CMTB-06-	3/8	9.52		1.00		13.50	14.29	
CMTB-08-	1/2	12.70	0.049	1.24				

Micro Cross

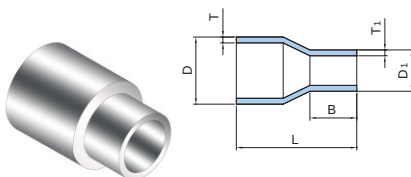
CMC



Part No.	Tube O.D. D		Tube W.T. T		Dimension (mm)				Body Cube
	inch	mm	inch	mm	A	B	L	F	
CMC-04-*A-	1/4	6.35	0.035	0.89	20.64	6.35	10.32	7.94	
CMC-04-	1/4	6.35	0.039	1.00			11.91	11.11	
CMC-06-	3/8	9.52		1.00			13.50	14.29	
CMC-08-	1/2	12.70	0.049	1.24					

Reducing Micro Union

CMRU

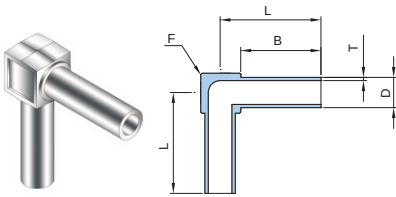


Part No.	Tube O.D. D		Tube W.T. T		Tube O.D. D ₁		Tube W.T. T ₁		Dimension (mm)	
	inch	mm	inch	mm	inch	mm	inch	mm	B	L
CMRU-0402-	1/4	6.35	0.039	1.00	1/8	3.17	0.028	0.71	6.35	19.05
CMRU-0604-	3/8	9.52		1.00	1/4	6.35		1.00		
CMRU-0804-	1/2	12.70	0.049	1.24	1/4	6.35		1.00		
CMRU-0806-	1/2	12.70	0.049	1.24	3/8	9.52	0.039	1.00		
CMRU-1204-	3/4	19.05	0.065	1.65	1/4	6.35		1.00		
CMRU-1206-	3/4	19.05	0.065	1.65	3/8	9.52		1.00		
CMRU-1208-	3/4	19.05	0.065	1.65	1/2	12.70	0.049	1.24		

Weld Fittings

Long Elbow 90°

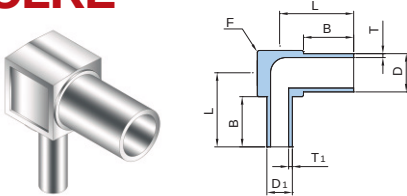
CLE



Part No.	Tube O.D. D		Tube W.T. T		Dimension (mm)		Body Cube
	inch	mm	inch	mm	B	L	F
CLE-04-	1/4	6.35	0.039	1.00	20.00	19.00	9.00
CLE-06-	3/8	9.53		1.00			11.00
CLE-08-	1/2	12.7	0.049	1.24			15.00
CLE-12-	3/4	19.05	0.065	1.65			22.00
CLE-16-	1	25.4	0.065	1.65			30.00

Reducing Long Elbow 90°

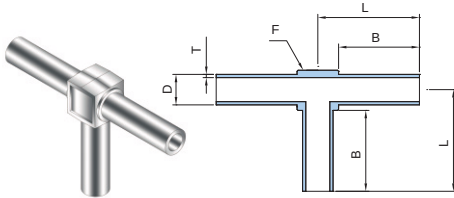
CLRE



Part No.	Tube O.D. D		Tube W.T. T		Tube O.D. D ₁		Tube W.T. T ₁		Dimension (mm)		Body Cube
	inch	mm	inch	mm	inch	mm	inch	mm	B	L	F
CLRE-0604-	3/8	9.53	0.039	1.00	1/4	6.35	0.039	1.00	19.00	25.00	11.00
CLRE-0804-	1/2	12.70	0.049	1.24	1/4	6.35		1.00		27.00	15.00
CLRE-0806-	1/2	12.70	0.049	1.24	3/8	9.53		1.00			
CLRE-1204-	3/4	19.05	0.065	1.65	1/4	6.35		1.00		31.50	22.00
CLRE-1206-	3/4	19.05	0.065	1.65	3/8	9.53		1.00			
CLRE-1208-	3/4	19.05	0.065	1.65	1/2	12.70	0.049	1.24			

Long Tee

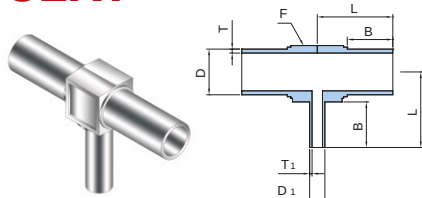
CLT



Part No.	Tube O.D. D		Tube W.T. T		Dimension (mm)		Body Cube
	inch	mm	inch	mm	B	L	F
CLT-04-	1/4	6.35	0.039	1.00	20.00	19.00	9.00
CLT-06-	3/8	9.53		1.00			11.00
CLT-08-	1/2	12.7	0.049	1.24			15.00
CLT-12-	3/4	19.05	0.065	1.65			22.00
CLT-16-	1	25.4	0.065	1.65			30.00

Reducing Long Tee

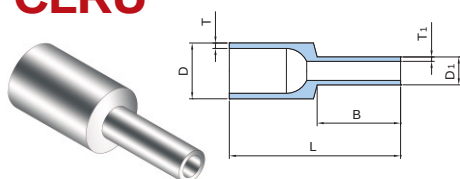
CLRT



Part No.	Tube O.D. D		Tube W.T. T		Tube O.D. D1		Tube W.T. T1		Dimension (mm)		Body Cube
	inch	mm	inch	mm	inch	mm	inch	mm	B	L	
CLRT-0604-	3/8	9.53	0.039	1.00	1/4	6.35		1.00	19.00	25.00	11.00
CLRT-0804-	1/2	12.70	0.049	1.24	1/4	6.35		1.00		27.00	15.00
CLRT-0806-	1/2	12.70	0.049	1.24	3/8	9.53	0.039	1.00			
CLRT-1204-	3/4	19.05	0.065	1.65	1/4	6.35		1.00		31.50	22.00
CLRT-1206-	3/4	19.05	0.065	1.65	3/8	9.53		1.00			
CLRT-1208-	3/4	19.05	0.065	1.65	1/2	12.70	0.049	1.24			

Reducing Long Union

CLRU

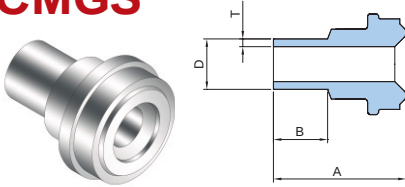


Part No.	Tube O.D. D		Tube W.T. T		Tube O.D. D1		Tube W.T. T1		Dimension (mm)	
	inch	mm	inch	mm	inch	mm	inch	mm	B	L
CLRU-0604-	3/8	9.53	0.039	1.00	1/4	6.35		1.00	19.00	39.00
CLRU-0804-	1/2	12.70	0.049	1.24	1/4	6.35		1.00		
CLRU-0806-	1/2	12.70	0.049	1.24	3/8	9.53	0.039	1.00		42.90
CLRU-1204-	3/4	19.05	0.065	1.65	1/4	6.35		1.00		
CLRU-1206-	3/4	19.05	0.065	1.65	3/8	9.53		1.00		44.5
CLRU-1208-	3/4	19.05	0.065	1.65	1/2	12.70	0.049	1.24		
CLRU-1604-	1	25.40	0.065	1.65	1/4	6.35	0.039	1.00		
CLRU-1606-	1	25.40	0.065	1.65	3/8	9.53		1.00		
CLRU-1608-	1	25.40	0.065	1.65	1/2	12.70	0.049	1.24		
CLRU-1612-	1	25.40	0.065	1.65	3/4	19.05	0.065	1.65		

Glands

Micro Gland S

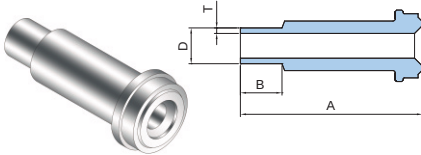
CMGS



Part No.	UCR Size	Tube O.D. D		Tube W.T. T		Dimension (mm)	
	inch	inch	mm	inch	mm	A	B
CMGS-04-	1/4	1/4	6.35	0.039	1.00	15.30	6.35
CMGS-0804-	1/2	1/4	6.35		1.00	15.80	
CMGS-0806-	1/2	3/8	9.53		1.00		
CMGS-08-	1/2	1/2	12.70	0.049	1.24		

Micro Gland L

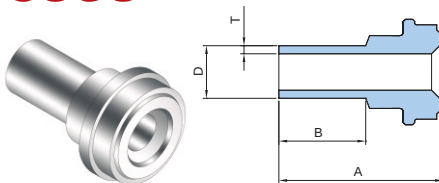
CMGL



Part No.	UCR Size	Tube O.D. D		Tube W.T. T		Dimension (mm)	
	inch	inch	mm	inch	mm	A	B
CMGL-04-	1/4	1/4	6.35	0.039	1.00	30.50	6.35
CMGL-0804-	1/2	1/4	6.35		1.00	32.80	
CMGL-0806-	1/2	3/8	9.53		1.00		
CMGL-08-	1/2	1/2	12.70	0.049	1.24		

Short Gland S

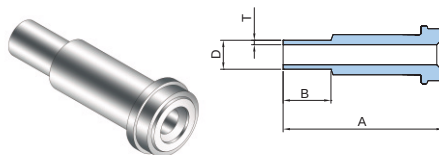
CSGS



Part No.	UCR Size	Tube O.D. D		Tube W.T. T		Dimension (mm)	
	inch	inch	mm	inch	mm	A	B
CSGS-04-	1/4	1/4	6.35	0.039	1.00	18.95	10.00
CSGS-0804-	1/2	1/4	6.35		1.00	19.45	
CSGS-0806-	1/2	3/8	9.53		1.00		
CSGS-08-	1/2	1/2	12.70	0.049	1.24		

Short Gland L

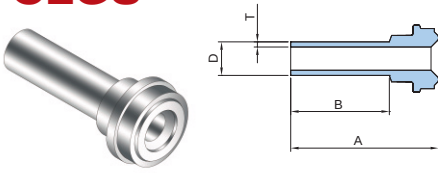
CSGL



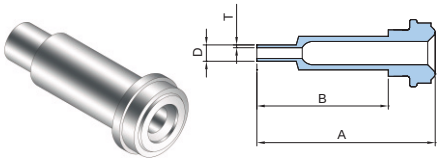
Part No.	UCR Size	Tube O.D. D		Tube W.T. T		Dimension (mm)	
	inch	inch	mm	inch	mm	A	B
CSGL-0402-	1/4	1/8	3.17	0.028	0.71	28.00	10.00
CSGL-04-	1/4	1/4	6.35	0.039	1.00	34.15	
CSGL-0804-	1/2	1/4	6.35		1.00	28.50	
CSGL-0806-	1/2	3/8	9.53		1.00		
CSGL-08-	1/2	1/2	12.70	0.049	1.24		

Long Gland S

CLGS



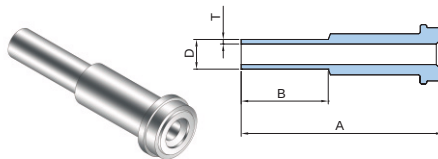
Part No.	UCR Size	Tube O.D. D		Tube W.T. T		Dimension (mm)	
	inch	inch	mm	inch	mm	A	B
CLGS-0402-	1/4	1/8	3.17	0.028	0.71	28.00	19.05
CLGS-04-	1/4	1/4	6.35	0.039	1.00		
CLGS-0804-	1/2	1/4	6.35		1.00		
CLGS-0806-	1/2	3/8	9.53		1.00		
CLGS-08-	1/2	1/2	12.70	0.049	1.24		
CLGS-12-	3/4	3/4	19.05	0.065	1.65	32.00	20.60
CLGS-16-	1	1	25.40	0.065	1.65	38.60	19.05



Part No.	UCR Size	Tube O.D. D		Tube W.T. T		Dimension (mm)	
	inch	inch	mm	inch	mm	A	B
CLGS-0402-33.5-	1/4	1/8	3.17	0.028	0.71	33.50	20.00

Long Gland L

CLGL

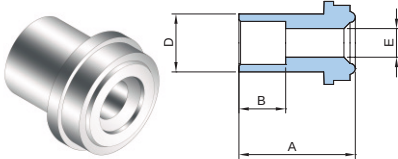


Part No.	UCR Size	Tube O.D. D		Tube W.T. T		Dimension (mm)	
	inch	inch	mm	inch	mm	A	B
CLGL-04-	1/4	1/4	6.35	0.039	1.00	43.20	19.05
CLGL-0804-	1/2	1/4	6.35		1.00	45.50	
CLGL-0806-	1/2	3/8	9.53		1.00		
CLGL-08-	1/2	1/2	12.70	0.049	1.24		
CLGL-12-	3/4	3/4	19.05	0.065	1.65	52.00	20.60
CLGL-16-	1	1	25.40	0.065	1.65	58.90	19.05

Metal Face Seal (UCR) Fittings

Socket Weld
Short Gland

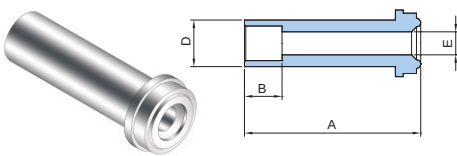
CSGWS



Part No.	UCR Size	Tube O.D. D		Tube W.T. T		Dimension (mm)		
	inch	inch	mm	inch	mm	A	B	E
CSGWS-04T-	1/4	1/4	6.35	0.039	1.00	12.70	7.10	4.35

Socket Weld
Long Gland

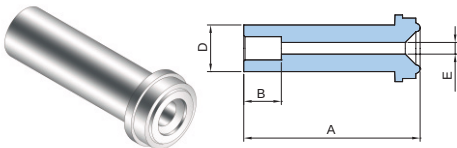
CLGWS



Part No.	UCR Size	Tube O.D. D		Tube W.T. T		Dimension (mm)		
	inch	inch	mm	inch	mm	A	B	E
CLGWS-04-	1/4	1/4	6.35	0.039	1.00	33.30	7.10	4.35
CLGWS-0806-	1/2	3/8	9.53		1.00	38.10	7.90	7.53
CLGWS-08-	1/2	1/2	12.70	0.049	1.24		9.60	10.22
CLGWS-12-	3/4	3/4	19.05	0.065	1.65	50.80	11.20	15.75
CLGWS-16-	1	1	25.40	0.065	1.65	56.40	15.70	22.10

Reducing Socket Weld
Long Gland

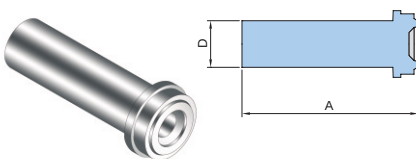
CLGRWS



Part No.	UCR Size	Tube O.D. D		Tube W.T. T		Dimension (mm)		
	inch	inch	mm	inch	mm	A	B	E
CLGRWS-0402-	1/4	1/8	3.17	0.028	0.71	33.30	2.50	2.30
CLGRWS-0804-	1/2	1/4	6.35	0.039	1.00	38.10	7.10	4.35

Blind Gland

CBG

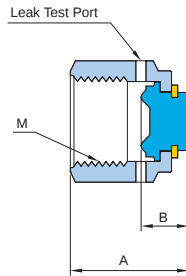


Part No.	UCR Size	Tube O.D. D		Dimension (mm)
	inch	inch	mm	A
CBG-04-	1/4	1/4	6.35	33.30
CBG-08-	1/2	1/2	12.70	38.10
CBG-12-	3/4	3/4	19.05	50.80
CBG-16-	1	1	25.40	50.40

Caps, Plugs, Nuts & Gaskets

UCR Cap

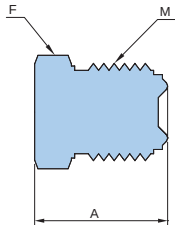
CCP



Part No.	UCR Size	Dimension (mm)			M
	inch	A	B	F	
CCP-04-	1/4	22.90	11.30	19.05	9/16-18UNF
CCP-08-	1/2	25.60	12.20	26.98	7/8-14UNF
CCP-12-	3/4	32.80	13.70	38.10	1 1/4-18UNF
CCP-16-	1	39.40	16.00	46.04	1 1/2-20UNF

UCR Plug

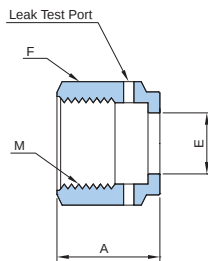
CPG



Part No.	UCR Size	Dimension (mm)		M
	inch	A	F	
CPG-04-	1/4	23.20	17.46	9/16-18UNF
CPG-08-	1/2	27.30	23.81	7/8-14UNF
CPG-12-	3/4	36.30	34.92	1 1/4-18UNF
CPG-16-	1	38.60	47.68	1 1/2-20UNF

UCR Female Nut

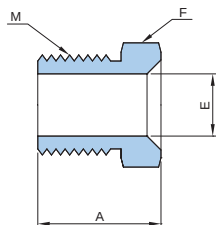
CFN



Part No.	UCR Size	Dimension (mm)			M
	inch	A	E	F	
CFN-04-	1/4	20.50	9.00	19.05	9/16-18UNF
CFN-08-	1/2	22.50	15.30	26.98	7/8-14UNF
CFN-12-	3/4	28.40	22.60	38.10	1 1/4-18UNF
CFN-16-	1	34.00	30.50	46.04	1 1/2-20UNF

UCR Male Nut

CMN

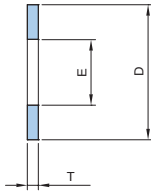


Part No.	UCR Size	Dimension (mm)			M
	inch	A	E	F	
CMN-04-	1/4	18.00	9.10	15.88	9/16-18UNF
CMN-08-	1/2	20.00	15.00	23.81	7/8-14UNF
CMN-12-	3/4	25.40	22.60	34.92	1 1/4-18UNF
CMN-16-	1	30.20	30.50	41.27	1 1/2-20UNF

Metal Face Seal (UCR) Fittings

UCR Gasket

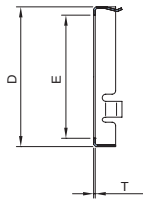
CGT



Part No.	UCR Size	Dimension (mm)		
	inch	E	D	T
CGT-04-	1/4	5.60	11.80	0.70
CGT-08-	1/2	11.00	19.30	
CGT-12-	3/4	17.00	28.10	
CGT-16-	1	22.60	34.80	

UCR Gasket Retained

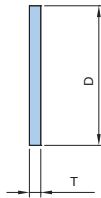
CGTR



Part No.	UCR Size	Dimension (mm)		
	inch	E	D	T
CGTR-04-	1/4	5.60	11.80	0.25
CGTR-08-	1/2	11.00	19.30	
CGTR-12-	3/4	17.00	28.10	0.30
CGTR-16-	1	22.60	34.80	

UCR Gasket Blind

CGTB



Part No.	UCR Size	Dimension (mm)	
	inch	D	T
CGTB-04-	1/4	11.80	0.70
CGTB-08-	1/2	19.30	
CGTB-12-	3/4	28.10	
CGTB-16-	1	34.80	

Retainer Color Coding

Easy identification of gasket materials before assembly or throughout the leak test port of Female Nut after assembly



316LSS



Nickel

Materials of Gaskets

Every gaskets are available with Nickel and 316LSS. To order, add the material designator to the end of part number.

Examples :

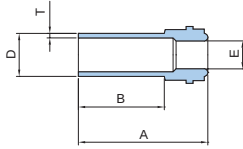
CGT-04-NI Gasket, 1/4", Nickel

CGTR-08-SS Retained Gasket, 1/2", 316SS

High Flow Components

HR Gland

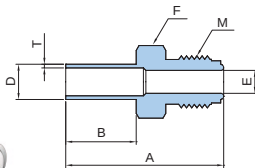
CHG



Part No.	UCR Size	Tube O.D. D		Tube W.T. T		Dimension (mm)		
	inch	inch	mm	inch	mm	A	B	E
CHG-0406-	1/4	3/8	9.53	0.039	1.00	28.70	19.05	6.20
CHG-0406L-	1/4	3/8	9.53	0.039	1.00	33.30	19.05	6.20

HR Adapter

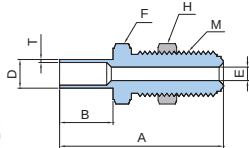
CHA



Part No.	UCR Size	Tube O.D. D		Tube W.T. T		Dimension (mm)				M
	inch	inch	mm	inch	mm	A	B	E	F	
CHA-0406-	1/4	3/8	9.53	0.039	1.00	42.70	19.05	6.35	15.87	9/16-18UNF

HR Bulkhead Adapter

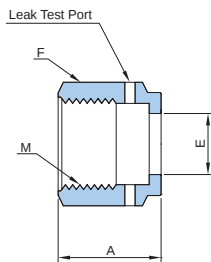
CHBA



Part No.	UCR Size	Tube O.D. D		Tube W.T. T		Dimension (mm)					M	Panel Hole Size
	inch	inch	mm	inch	mm	A	B	E	F	H		
CHBA-0406-	1/4	3/8	9.53	0.039	1.00	59.80	19.05	6.30	19.05	19.05	9/16-18UNF	15.00

HR Female Nut

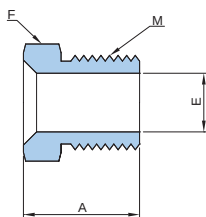
CHFN



Part No.	UCR Size	Dimension (mm)			M
	inch	A	E	F	
CHFN-04-	1/4	17.30	11.50	19.05	9/16-18UNF

HR Male Nut

CHMN

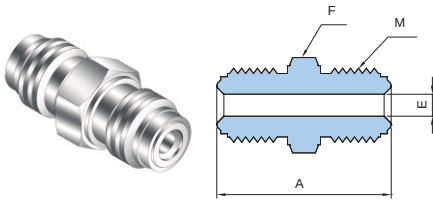


Part No.	UCR Size	Dimension (mm)			M
	inch	A	E	F	
CHMN-04-	1/4	18.00	9.90	15.88	9/16-18UNF

UCR to UCR

Double Male Union

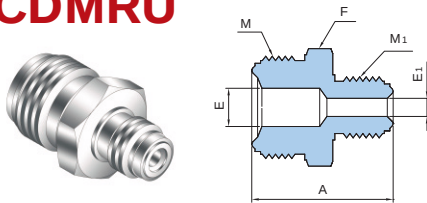
CDMU



Part No.	UCR Size	Dimension (mm)			M
	inch	A	E	F	
CDMU-04-	1/4	39.40	4.57	15.87	9/16-18UNF
CDMU-08-	1/2	47.20	10.22	23.80	7/8-14UNF
CDMU-12-	3/4	62.00	15.70	33.33	1 1/4-18UNF
CDMU-16-	1	65.80	22.10	41.27	1 1/2-20UNF

Reducing
Double Male Union

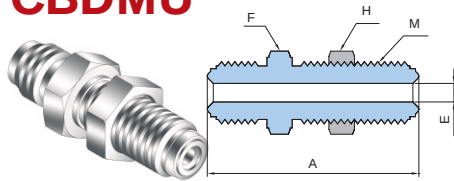
CDMRU



Part No.	UCR Size	UCR Size	Dimension (mm)				M	M1
	inch	inch	A	E	E1	F		
CDMRU-0804-	1/2	1/4	43.40	10.22	4.57	23.80	7/8-14UNF	9/16-18UNF

Bulkhead
Double Male Union

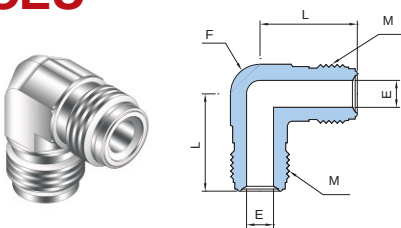
CBDMU



Part No.	UCR Size	Dimension (mm)					M	Panel Hole Size
	inch	A	B	E	F	H		
CBDMU-04-	1/4	56.60	33.70	4.57	19.05	19.05	9/16-18UNF	15.00
CBDMU-08-	1/2	65.30	37.60	10.22	26.98	26.98	7/8-14UNF	23.00

Union Elbow

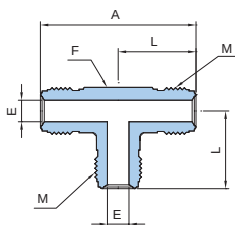
CEU



Part No.	UCR Size	Dimension (mm)			M
	inch	L	E	F	
CEU-04-	1/4	27.20	4.35	12.70	9/16-18UNF
CEU-08-	1/2	36.80	10.22	20.63	7/8-14UNF
CEU-12-	3/4	48.80	15.75	31.75	1 1/4-18UNF
CEU-16-	1	50.80	22.10	42.86	1 1/2-20UNF

Union Tee

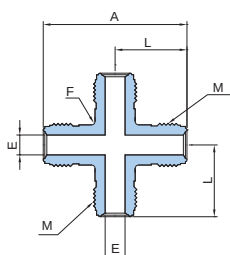
CUT



Part No.	UCR Size	Dimension (mm)				M
	inch	A	E	L	F	
CUT-04-	1/4	54.40	4.35	27.20	12.70	9/16-18UNF
CUT-08-	1/2	73.87	10.22	36.80	20.63	7/8-14UNF
CUT-12-	3/4	97.50	15.75	48.80	31.75	1 1/4-18UNF
CUT-16-	1	102.00	22.10	50.80	42.86	1 1/2-20UNF

Union Cross

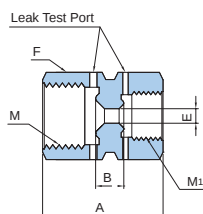
CUC



Part No.	UCR Size	Dimension (mm)				M
	inch	A	E	L	F	
CUC-04-	1/4	54.40	4.35	27.20	12.70	9/16-18UNF
CUC-08-	1/2	73.87	10.22	36.80	20.63	7/8-14UNF
CUC-12-	3/4	97.50	15.75	48.80	31.75	1 1/4-18UNF
CUC-16-	1	102.00	22.10	50.80	42.86	1 1/2-20UNF

Reducing Double Female Union

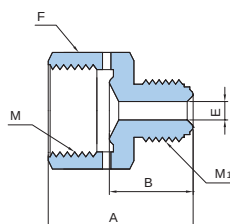
CDFRU



Part No.	UCR Size	UCR Size	Dimension (mm)				M	M1
	inch	inch	A	B	E	F		
CDFRU-0804-	1/2	1/4	34.60	6.00	4.35	26.98	7/8-14UNF	9/16-18UNF

Reducing Adapter

CRA

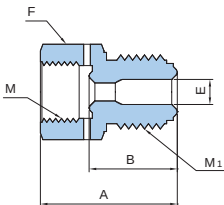


Part No.	UCR Size	UCR Size	Dimension (mm)				M (Female)	M1 (Male)
	inch	inch	A	B	E	F		
CRA-0804-	1/2	1/4	35.80	21.60	4.35	26.98	7/8-14UNF	9/16-18UNF

UCR Threaded Fittings

Reducing Bushing

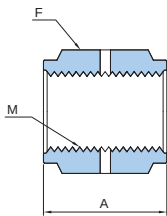
CRB



Part No.	UCR Size	UCR Size	Dimension (mm)				M (Female)	M1 (Male)
	inch	inch	A	B	E	F		
CRB-0804-	1/2	1/4	35.80	23.10	4.35	23.81	9/16-18UNF	7/8-14UNF

Coupling

CC

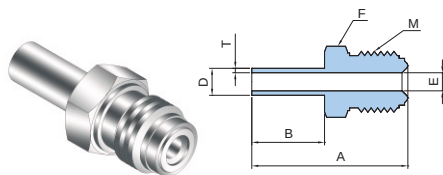


Part No.	UCR Size	Dimension (mm)		M (Female)
	inch	A	H	
CC-04-	1/4	30.20	19.05	9/16-18UNF
CC-08-	1/2	33.30	26.98	7/8-14UNF
CC-12-	3/4	42.70	38.10	1 1/4-18UNF
CC-16-	1	51.80	44.45	1 1/2-20UNF

UCR to TBW (Tube Butt Weld)

TBW Adapter

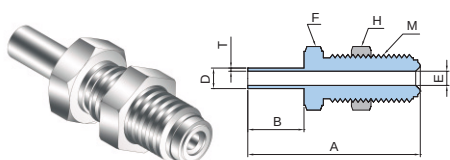
CAWB



Part No.	UCR Size	Tube O.D. D		Tube W.T. T		Dimension (mm)				M (Female)
	inch	inch	mm	inch	mm	A	B	E	H	
CAWB-04-	1/4	1/4	6.35	0.039	1.00	42.65	19.05	4.35	15.88	9/16-18UNF
CAWB-0804-	1/2	3/8	9.53		1.00	46.70		10.22	23.81	7/8-14UNF
CAWB-08-	1/2	1/2	12.70	0.049	1.24	46.70		10.22	23.81	1 1/4-18UNF

Bulkhead
TBW Adapter

CBAWB

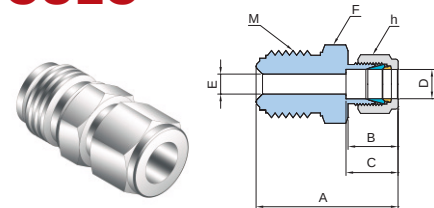


Part No.	UCR Size	Tube O.D. D		Tube W.T. T		Dimension (mm)				M (Female)	Panel Hole Size
	inch	inch	mm	inch	mm	A	B	F	H		
CBAWB-04-	1/2	1/4	6.35	0.039	1.00	59.85	19.05	19.05	19.05	9/16-18UNF	15.00
CBAWB-0804-	1/2	3/8	9.53		1.00	65.25		26.98	26.98	7/8-14UNF	23.00
CBAWB-08-	1/2	1/2	12.70	0.049	1.24	71.30		38.10	38.10	1 1/4-18UNF	32.00

UCR to Uni-Lok

Uni-Lok Connector

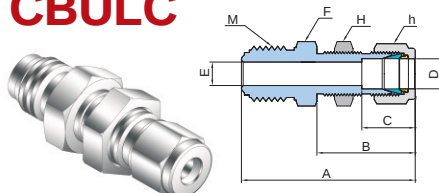
CULC



Part No.	UCR Size	Tube O.D. D		Dimension (mm)						M
	inch	inch	mm	A	B	C	E	F	h	
CULC-0402-	1/4	1/8	3.17	38.90	15.20	12.70	2.30	15.87	11.11	9/16-18UNF
CULC-04-	1/4	1/4	6.35	41.10	17.80	15.20	4.60	15.87	14.28	9/16-18UNF
CULC-0806-	1/2	3/8	9.53	46.70	19.30	16.80	7.10	23.81	17.46	7/8-14UNF
CULC-08-	1/2	1/2	12.70	49.50	21.80	22.90	10.20	23.81	22.22	7/8-14UNF

Bulkhead
Uni-Lok Connector

CBULC

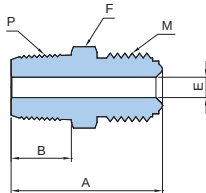


Part No.	UCR Size	Tube O.D. D		Dimension (mm)							M	Panel Hole Size
	inch	inch	mm	A	B	C	E	F	H	h		
CBULC-04	1/4	1/4	6.35	57.20	33.50	15.20	4.60	15.87	15.87	14.28	9/16-18UNF	15.00
CBULC-0806-	1/2	3/8	9.53	64.50	36.80	16.80	7.10	23.81	23.81	17.46	7/8-14UNF	23.00
CBULC-08-	1/2	1/2	12.70	69.60	41.90	22.90	10.20	23.81	23.81	22.22	7/8-14UNF	32.00

UCR to Thread

Male Connector

CUMC

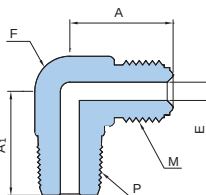


Part No.	UCR Size	Thread Size P-NPT	Dimension (mm)				M
	inch	inch	A	B	E	F	
CUMC-0402N-	1/4	1/8	33.30	9.60	4.35	15.90	9/16-18UNF
CUMC-0404N-	1/4	1/4	37.84	14.22	4.35	15.90	9/16-18UNF
CUMC-0804N-	1/2	1/4	41.87	14.22	10.22	23.80	7/8-14UNF
CUMC-0806N-	1/2	3/8	41.87	14.22	7.53	23.80	7/8-14UNF
CUMC-0808N-	1/2	1/2	46.74	19.05	10.22	23.80	7/8-14UNF
CUMC-1212N-	3/4	3/4	55.63	19.05	15.75	33.30	1 1/4-18UNF
CUMC-1616N-	1	1	62.74	23.88	22.10	42.40	1 1/2-20UNF

ISO7/1 Tapered Threads (PT) are available for all fractional sizes of CUMC.
Add "R" as a suffix instead of "N".

Male Elbow

CUME

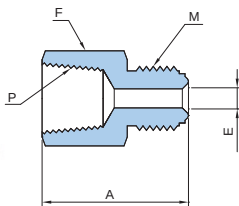


Part No.	UCR Size	Thread Size P-NPT	Dimension (mm)				M
	inch	inch	A	A1	E	F	
CUME-0404N-	1/4	1/4	27.18	27.18	4.35	15.95	9/16-18UNF
CUME-0806N-	1/2	3/8	36.83	32.00	10.22	23.80	9/16-18UNF
CUME-0808N-	1/2	1/2	36.83	36.83	10.22	23.80	7/8-14UNF
CUME-1212N-	3/4	3/4	48.80	43.50	15.75	33.30	7/8-14UNF

ISO7/1 Tapered Threads (PT) are available for all fractional sizes of CUME.
Add "R" as a suffix instead of "N".

Female Connector

CUFC



Part No.	UCR Size	Thread Size P-NPT	Dimension (mm)			M
	inch	inch	A	B	F	
CUFC-0402N-	1/4	1/8	35.80	4.35	15.90	9/16-18UNF
CUFC-0404N-	1/4	1/4	39.10	4.35	19.05	9/16-18UNF
CUFC-0806N-	1/2	3/8	44.70	7.53	23.81	7/8-14UNF
CUFC-0808N-	1/2	1/2	50.50	10.22	26.98	7/8-14UNF
CUFC-1212N-	3/4	3/4	59.90	15.75	33.33	1 1/4-18UNF
CUFC-1616N-	1	1	63.80	22.10	41.27	1 1/2-20UNF

ISO7/1 Tapered Threads (PT) are available for all fractional sizes of CUFC.
Add "R" as a suffix instead of "N".

Uni-Lok Line up

Instrumentation

Fittings



- Tube Fittings
- PTFE Fittings
- Hose & Push-On Connectors
- Precision Pipe Fittings
- Fusible Connectors
- Dielectric Fittings

Valves



- VB1 series
 - VB2 series
 - VB3 series
 - VB6B series
 - VB6F series
 - VB6T series
 - VP series
 - VN5 series
 - VN6 series
 - VU6 series
 - VMT series
 - VM series
 - VG series
 - VL series
 - VD series
 - VC series
 - VR series
 - VE series
 - VF series
 - VPR series
 - VBR series
- Precision & Clean Ball Valves
Swing-Out Ball Valves
Instrumentation Ball Valves
High Pressure Bar Stock Ball Valves
High Pressure Forged Ball Valves
Trunnion Ball Valves
Plug Valves
- Integral Bonnet Forged Needle Valves
High Pressure Bar Stock Needle Valves
Union Bonnet Valves
Metering Valves
- Instrumentation Manifolds Valves
Gauge & Gauge Root Valves
Bleed Valves
- Double Block and Bleed Valves
- General & High Pressure Relief Valves
Low & High Pressure Relief Valves
Industrial Excess Flow Valves
- T & In-Line Filters
Pressure Reducing Valves
Back Pressure Regulators

Others

- Seamless & Welded Tubing
- Condensate Pots

UHP(Ultra High Purity)

Fittings



- Weld & Metal Face Seal Fittings
- Pipe & Tube Fittings
- Flanges
- Cylinder Connectors

Valves



- VCD series
- VCB series
- VCC series
- Diaphragm Valves
- Bellows Valves
- Welded Check Valves

CONNECTS THE WORLD SINCE 1984
WITH THE SAME ATTITUDE
OF THE TIME OF BEGINNING

Back Pressure Regulator



VBR series

Features

Uni-Lok Back Pressure Regulator is used to maintain a constant upstream pressure of gas, vapor or liquid.

Designed for accurate regulation under low flow conditions, these units are widely used for protection of analysis instrumentation or as a relief valve in supply pressure lines to control valves.

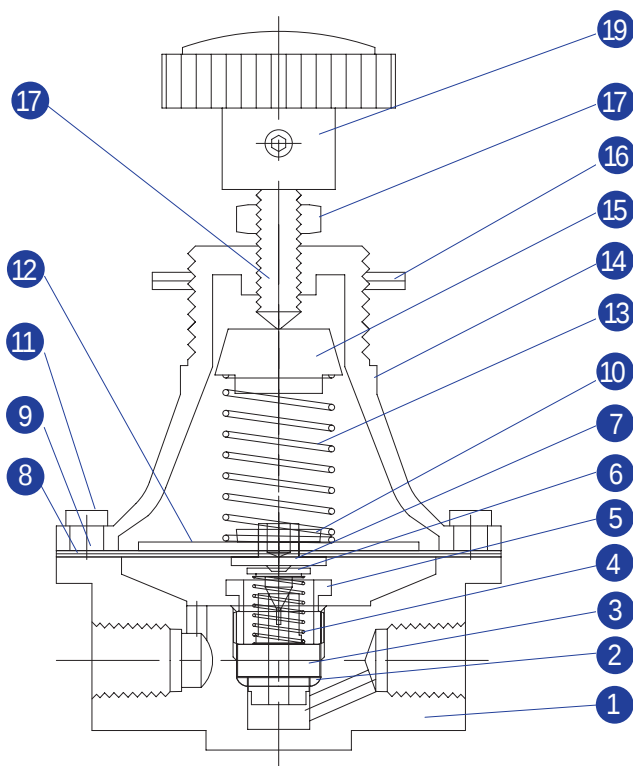
Specification

Connection : 1/4 Female NPT

Operating Temperature : -29°C(-20°F) ~ 66°C(150°F)

Sensitivity : 0.05psi

Regulated Back Pressure Ranges : 0~125psig as standard



Materials of Construction

No.	Description	Materials
1	Body	316SS
2	Body Seat	PTFE
3	Nozzle	316SS
4	Plug Spring	304SS
5	Nozzle Retaining Nut	316SS
6	Plug	316SS
7	Rivet	316SS
8	Packing Plate	PTFE
9	Rubber Seat	Rubber
10	Rivet Gland	316SS
11	Bolt	304SS
12	Ribet Plate	Brass
13	Range Spring	302SS
14	Bonnet	Aluminium
15	Spring Plug	Brass
16	Lock Nut	316SS
17	Handle Stem	316SS
18	Lock Nut	316SS
19	Handle	Xenoy

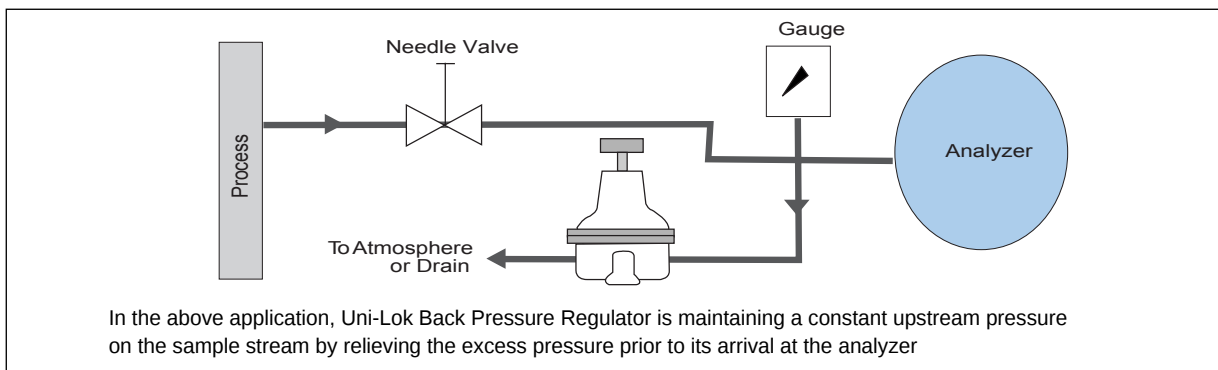
Principle of Operation

Turning the hand wheel changes the force exerted by the range spring on the diaphragm assembly. In equilibrium, the force exerted by the range spring is balanced by the force from back pressure acting underneath the diaphragm assembly.

If the back pressure rises above the set pressure, the diaphragm seat is lifted allowing the nozzle plug to open. The excess pressure flows through the exhaust port until the back pressure is reduced to the set point.

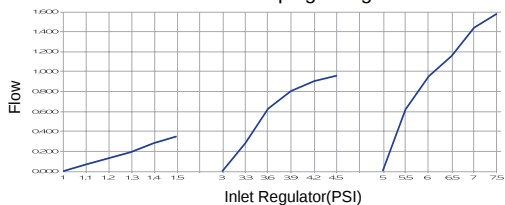
While the back pressure is at or below the set point, the range spring holds the nozzle plug against its seat, shutting off the flow to the exhaust port.

Application

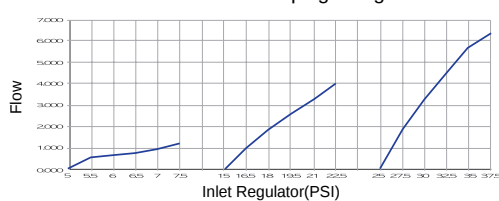


Range Selection

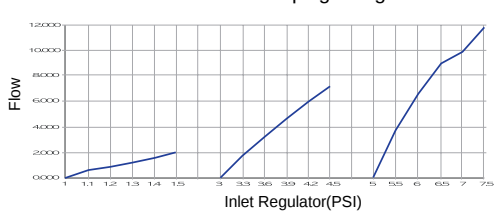
A. Flow Characteristics. 0.5 psig Range



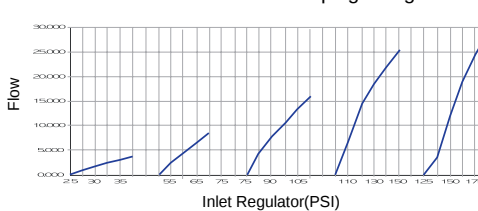
B. Flow Characteristics. 0-25 psig Range



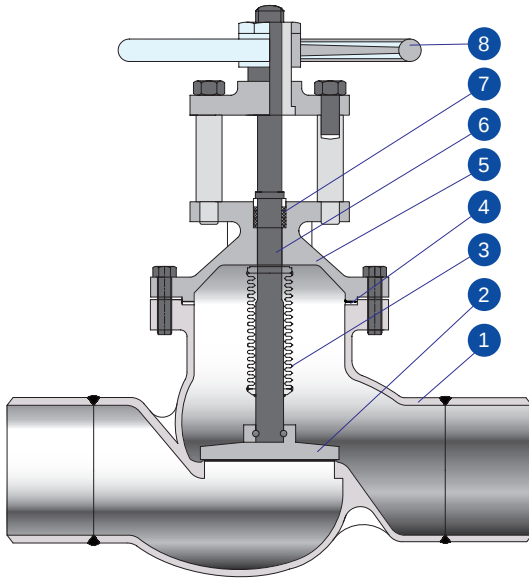
C. Flow Characteristics. 0-50 psig Range



D. Flow Characteristics. 0-125 psig Range



OS & Y Type Casting Bellows Valve



Materials of Construction

No.	Description	Materials
1	Body	SCS 19
2	Disk	PTFE
3	Bellows	316L SS
4	Gasket	TEFLON
5	Bonnet	SCS 19
6	Stem	304L SS
7	Packing	TEFLON
8	Handle	FCD 450

Specification

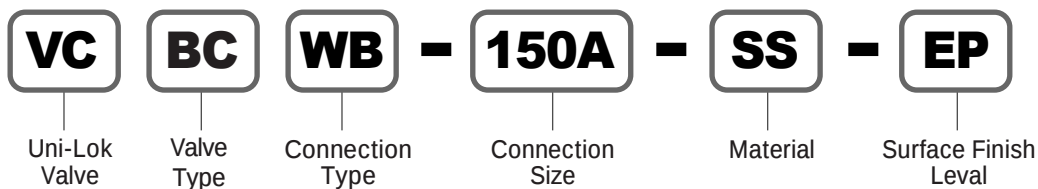
Size	64A	80A	100A	125A	150A	200A	250A	300A	350A	400A	450A	500A
Orifice Size	65	80	100	124	148	200	250	300	350	400	440	490
Cv Value	81	132	200	302	434	772	1200	1600	2000	2650	3100	3400
Max. Working Pressure	10 kgf/cm ²											
Max. Working Temperature	-10 ~ 80°C											
Internal Leakage Allowance - He (Holding Time - Min 30 sec)	≤1x10 ⁻⁶ atm.cc/s											
External Leakage Allowance - He (Holding Time - Min 1 min)	≤1x10 ⁻⁶ atm.cc/s											

Internal Surface Finish Levels

Grade		BA	EP
Surface Roughness	Average	< 0.4 μm	< 0.125 μm
	Maximum	< 1.6 μm	< 0.4 μm
Cleaning		Degreasing + Precision Cleaning	
Clean Room Environment		Class 10 (Some Products, Class 100)	

Valves - VCBC Series

How To Order

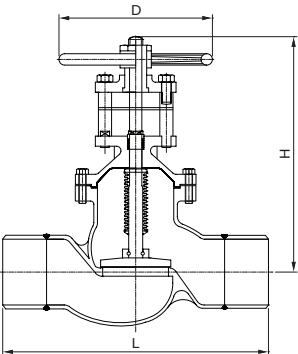
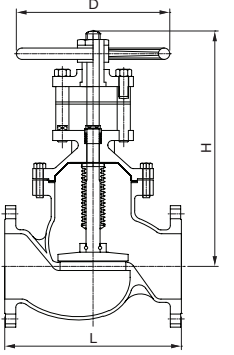


Valve Type	
BC	Bellows Valve for Low Pressure (CASTING TYPE)
Connection Type	
WB-*A	Butt Weld-Pipe
FL	Flanged

Connection Size						
Pipe Size Designator						
Pipe Size	65A	80A	100A	125A	~	450A
Designator	65A	80A	100A	125A	~	450A

Materials	
S4	304 SS/SCS 13
SS	316 SS/SCS 14
SL	316L SS/SCS 16
Surface Finish Level	
AP	Annealing & Pickling
BA	Bright Annealing
EP	Electro Polishing

Ordering Information & Dimensions

Model	End Connections	SIZE	Dimensions (mm)		
			L	H	D
	Butt Weld	65A	416	280	160
		80A	441	300	200
		100A	492	380	
		125A	556	470	300
		150A	606		
		200A	795	700	400
		250A	1022	900	450
		300A	1100	1000	500
		350A	1187	1050	710
		400A	1314		
		450A	1200	1150	800
	Flange	65A	216	280	160
		80A	241	300	200
		100A	292	380	
		125A	356	470	300
		150A	406		
		200A	495	700	400
		250A	622	900	450
		300A	698	1000	500
		350A	787	1050	710
		400A	914		
		450A	1040	1150	800

Pneumatic Diaphragm Valve for High Pressure



Materials of Construction

No.	Description	Materials
1	Body	316L SS Single Melting
		316L SS Double Melting
		316L SS
2	Seat	PCTFE
3	Diaphragm	Elgiloy
4	Actuator	ALUMINUM

Specification

Size	1/4"
Orifice Size	2.5
Cv Value	0.1
Max. Working Pressure	210 bar (3045 psig)
Max. Working Temperature	-10~65°C
Actuator Pressure Rating	4 ~ 7 kgf/cm ²
Internal Leakage Allowance - He (Holding Time - Min 30 sec)	≤1x10 ⁻⁹ atm.cc/s
External Leakage Allowance - He (Holding Time - Min 1 min)	≤1x10 ⁻⁹ atm.cc/s

Internal Surface Finish Levels

Grade		BA	EP
Surface Roughness	Average	< 0.4 μm	< 0.125 μm
	Maximum	< 1.6 μm	< 0.4 μm

Helium Leak Test

Every VCDH series valves are inboard helium leak tested to a rate of 1x10⁻⁹ cm³/sec at seat and all seals.

Particle Contribution Test

According to ASTM F1394-92.

Moisture Contribution Test

According to SEMA-90120397B-STD.

Cleaning

All components are precisely cleaned with 18MΩ deionized water after the passivation procedure in accordance with our own UHP cleaning process (UNIP-705-38) Reference specification : SEMI E49.6.

Assembling

According to SEMI E49.6.

Packaging

Each component is double bagged to ensure component cleanliness and to protect them from environmental contamination.

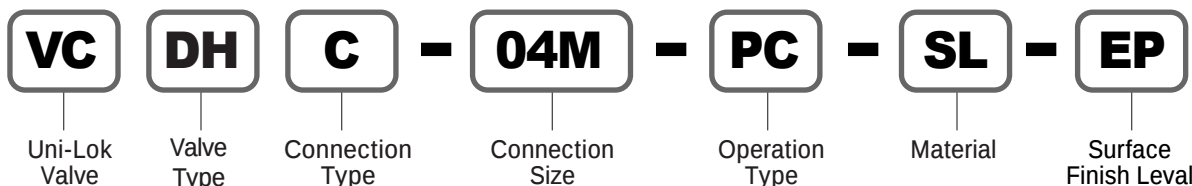
Referenced specification : SEMI E49.1.

Important Notification

Proper installation, materials compatibility, operation and maintenance of these valves are the responsibility of the user. The total system design must be taken into consideration to ensure optimal performance and safety.

Overall process of testing, cleaning, assembling and packaging for every VCDH series valves are performed in a certified clean room.

How To Order

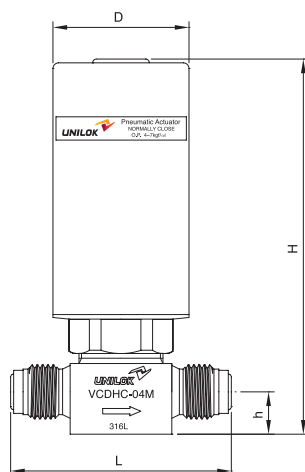


Valve Type	
DH	Pneumatic Diaphragm Valve for High Pressure
Connection Type	
C*M	Male UCR
C*F	Female UCR
WS*T	Butt Weld-Tube

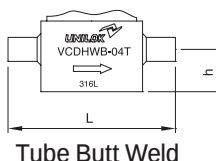
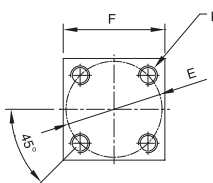
Connection Size		
Fractional(Inch) Tube O.D. Designation		
Tube O.D.	inch	1/4
	mm	6.35
Designator		04T
UCR (Metal Face Seal) Size Designator		
UCR Size		1/4
Designator		04M / 04F

Operation Type	
PC	Pneumatic-Normal Close
Materials	
DM	316L SS-Double Melting
SM	316L SS-Single Melting
SL	316L SS
Surface Finish Level	
BA	Bright Annealing
EP	Electro Polishing

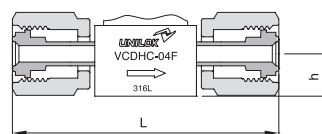
Ordering Information & Dimensions



Male UCR



Tube Butt Weld



Female UCR

Part No.		End Connections		Dimensions (mm)							
		Inlet	Outlet	L	h	H	D	P	F	E	K
VCDH	C-04M-	Male UCR		58.4	11.2	99.2	36	M5	26.9	25.4	M5
	C-04F-	Female UCR		70.5							
	WB-04T-	Tube Butt Weld		44.3							

Архангельск (8182)63-90-72
Астана (7172)727-132
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89

Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Липецк (4742)52-20-81

Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижегород (831)429-08-12
Новокузнецк (3843)20-46-81
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16

Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13

Сургут (3462)77-98-35
Тверь (4822)63-31-35
Томск (3822)98-41-53
Тула (4872)74-02-29
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Ярославль (4852)69-52-93