

## Cylinder Connectors



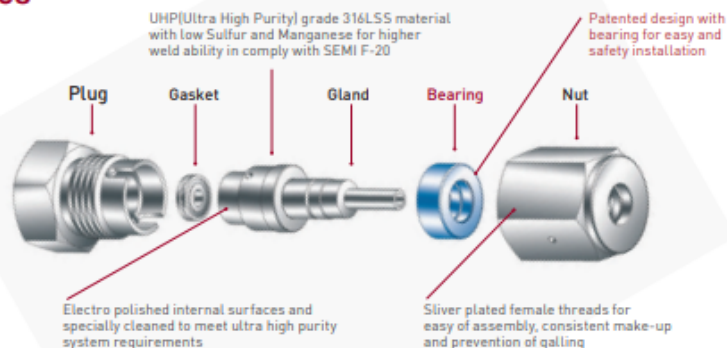
## Cylinder Connectors

### CONTENTS

Features .....	288	Gases Assignment Table .....	289
Test .....	288	CGA and JIS series .....	290
Cleaning & Packaging Test .....	288	DISS series .....	295

UNILOK® Cylinder Connectors are designed and manufactured for the connection of high purity gases in process applications.

### Features



### Helium Leak Test

UNILOK fittings are rated to a helium leak rate of less than  $1 \times 10^{-9}$  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 $\Omega$  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 it from environmental contamination. Referenced specification : SEMI E49.1.

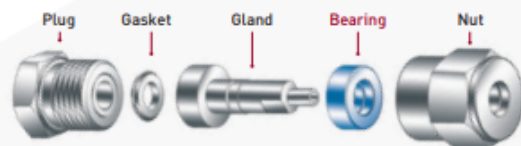
### Gases Assignment Table

GAS	DISS	CGA	JIS	GAS	DISS	CGA	JIS
Ammonia	720	660	22-R	Hydrogen	724	350	22-L
Argon	718	580	22/23-R	Hydrogen Bromide	634	330	26-R
Arsenic Pentafluoride	642			Hydrogen Chloride	634	330	26-R
Arsine	632	350	22-L	Hydrogen Fluoride	638	660	26-R
Boron Trichloride	634	660	22-L	Hydrogen Iodide	670	330	
Boron Trifluoride	642	330	22-L	Hydrogen Selenide	632	350	
Bromochlorodifluoromethane		660		Hydrogen Sulfide	722	330	
Bromotrifluoromethane		660		Isobutane		510	
Butane		510	23-L	Isobutylene		510	23-L
Carbon Dioxide	716	320		Krypton	718	510	22/23-R
Carbon Monoxide	724	350	22-L	Neon	718	580	22/23-R
Carbonyl Sulfide		330		Nitrogen	718	580	22/23-R
Chlorine	728	660	26-R	Nitrous Oxide	712	580	
Chlorine Trifluoride		670	26-L	Oxygen	714	740	22/23-R
Chlorodifluoromethane		660		Perfluoronopropane	716	660	
Chlorotrifluoromethane		660		Phosgene		660	26-R
Diborane	632	350	22-L	Phosphine	632	350	
Dichlorodifluoromethane	716	660		PhosphorusPentafluoride	642	330	
Dichlorofluoromethane		660		Silane	632	350	
Dichlorosilane	636	678		Silicon Tetrachloride	636		
Dichlorotetrafluoroethane		660		Silicon Tetrafluoride	642	330	
Diethylzinc	726	510		Sulphur Dioxide	660	10, 16	
Difluoroethylene		350	22-L	Sulphur Hexafluoride	716	326	
Dimethylzinc	726			Trichlorosilane		636	
Dimethylamine		705	22/26-L	Trichlorotrifluoroethane	716	660	
Dimethylether		510	26-L	Trichlorofluoromethane		660	
Disilane		632		Triethylaluminium	726	510	
Ethane		350	22-L	Trifluoromethane		660	
Ethyl Chloride		300	26-L	Trimethylamine		705	26-L
Ethylene		350	22-L	Tungsten Hexafluoride	638	670	
Fluorine		679	22-R	Vinyl Bromide		510	26-L
Germane	632	350		Vinyl Chloride		510	26-L
Halocarbons	716	660		Vinyl Fluoride		350	22-L
Helium	718	326	22/23-R	Xenon	718	580	22/26-L

Sources : CGA V1 2005, JIS B8244/B8246 1989, ISO/DOS 407 1983  
This table is the reference only.

## CGA and JIS Series

### Materials of Construction



### Ordering Information

Every cylinder connectors are ordered as assembled set. Also each parts of cylinder connector are ordered separately with the part numbers as shown below.

### CGA Series

CGA No.	Ordering Part Number					
	Assembled Set	Gland	Bearing	Nut	Gasket	Plug
296	UCC-C296	BUGL-08S	X	EMN-0803R	X	EPG-296
320	UCC-C320	BUGL-01S	EBR-01	EFN-0830R	CGT-01A	EPG-320
326	UCC-C326	BUGL-04S	EBR-01	EFN-0830R	X	EPG-326
330	UCC-C330	BUGL-01S	EBR-01	EFN-0830L	CGT-01A	EPG-330
350	UCC-C350	BUGL-05S	EBR-01	EFN-0830L	X	EPG-350
510	UCC-C510	BUGL-06S	X	EMN-0880L	X	EPG-510
540	UCC-C540	BUGL-09S	EBR-01	EFN-0908R	X	EPG-540
580	UCC-C580	BUGL-06S	X	EMN-0960R	X	EPG-580
590	UCC-C590	BUGL-06S	X	EMN-0960L	X	EPG-590
660	UCC-C660	BUGL-03S	EBR-02	EFN-1035R	CGT-03A	EPG-660
670	UCC-C670	BUGL-03S	EBR-02	EFN-1035L	CGT-03A	EPG-670
678	UCC-C678	BUGL-07S	EBR-02	EFN-1035L	CGT-01B	EPG-678
679	UCC-C679	BUGL-10S	EBR-02	EFN-1035L	CGT-05B	EPG-679

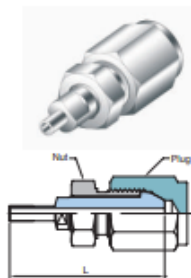
### JIS Series

JIS No.	Ordering Part Number					
	Assembled Set	Gland	Bearing	Nut	Gasket	Plug
21-14L	UCC-J2114L	BUGL-11S	EBR-01	EFN-JS21L	CGT-02A	EPG-21L
21-14R	UCC-J2114R	BUGL-11S	EBR-01	EFN-JS21R	CGT-02A	EPG-21R
22-14L	UCC-J2214L	BUGL-02S	EBR-01	EFN-JS22L	CGT-02A	EPG-22L
22-14R	UCC-J2214R	BUGL-02S	EBR-01	EFN-JS22R	CGT-02A	EPG-22R
23-14R	UCC-J2314R	BUGL-02S	EBR-01	EFN-JS23R	CGT-02A	EPG-23R
26-14L	UCC-J2614L	BUGL-03S	EBR-02	EFN-JS26L	CGT-03A	EPG-26L
26-14R	UCC-J2614R	BUGL-03S	EBR-02	EFN-JS26R	CGT-03A	EPG-26R

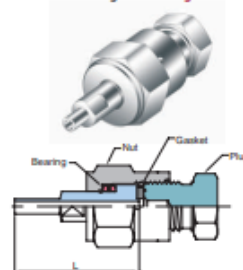
Dimensions are for reference only and are subject to change without prior notice.

### Typical Assembly

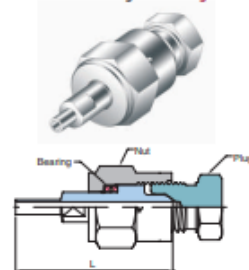
**Type A**  
Gland + Male Nut + Female Plug



**Type B**  
Gland + Female Nut  
+ Male Plug + Bearing + Gasket



**Type C**  
Gland + Female Nut  
+ Male Plug + Bearing



### CGA Series

CGA No.	Type	Part No.	Overall Length		Nut		Plug		Gasket
			inch	mm	Thread	Hex Flat	Thread	Material	
296	A	UCC-C296	2.57	65.3	0.803-14UNS-2A-RH-EXT	23.81	0.803-14UNS-2B-RH-INT	X	
320	B	UCC-C320	2.07	52.5	0.830-14NGO-RH-INT	30.16	0.825-14NGO-RH-EXT	PCTFE/R	
326	C	UCC-C326	2.61	66.2	0.830-14NGO-RH-INT	30.16	0.825-14NGO-RH-EXT	X	
330	B	UCC-C330	2.07	52.5	0.830-14NGO-LH-INT	30.16	0.825-14NGO-LH-EXT	PCTFE/R	
350	C	UCC-C350	2.63	66.8	0.830-14NGO-LH-INT	30.16	0.825-14NGO-LH-EXT	X	
510	A	UCC-C510	2.57	65.3	0.880-14NGO-LH-EXT	23.81	0.885-14NGO-LH-INT	X	
540	C	UCC-C540	2.63	66.7	0.908-14NGO-RH-INT	30.16	0.903-14NGO-RH-EXT	X	
580	A	UCC-C580	2.57	65.3	0.960-14NGO-RH-EXT	26.98	0.965-14NGO-RH-INT	X	
590	A	UCC-C590	2.57	65.3	0.960-14NGO-LH-EXT	26.98	0.965-14NGO-LH-INT	X	
660	B	UCC-C660	2.28	58.0	1.035-14NGO-RH-INT	31.75	1.030-14NGO-RH-EXT	PCTFE/R	
670	B	UCC-C670	2.28	58.0	1.035-14NGO-LH-INT	31.75	1.030-14NGO-LH-EXT	PCTFE/R	
678	B	UCC-C678	2.60	66.0	1.035-14NGO-LH-INT	31.75	1.030-14NGO-LH-EXT	PCTFE	
679	B	UCC-C679	2.63	66.7	1.035-14NGO-LH-INT	31.75	1.030-14NGO-LH-EXT	PCTFE	

### JIS Series

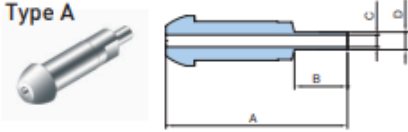
CGA No.	Type	Part No.	Overall Length		Nut		Plug		Gasket
			inch	mm	Thread	Hex Flat	Thread	Material	
21-14-L	B	UCC-J2114L	2.19	55.5	JIS21-14-OL	30.16	JIS21-14-OL	PCTFE/R	
21-14-R	B	UCC-J2114R	2.19	55.5	JIS21-14-OR	30.16	JIS21-14-OR	PCTFE/R	
22-14-L	B	UCC-J2214L	2.19	55.5	JIS22-14-OL	30.16	JIS22-14-OL	PCTFE/R	
22-14-R	B	UCC-J2214R	2.19	55.5	JIS22-14-OR	30.16	JIS22-14-OR	PCTFE/R	
23-14-R	B	UCC-J2314R	2.19	55.5	JIS23-14-OR	30.16	JIS23-14-OR	PCTFE/R	
26-14-L	B	UCC-J2614L	2.19	55.5	JIS26-14-OL	31.75	JIS26-14-OL	PCTFE/R	
26-14-R	B	UCC-J2614R	2.19	55.5	JIS26-14-OR	31.75	JIS26-14-OR	PCTFE/R	

3/8" and 1/2" Glands are available for every CGA & JIS series cylinder connectors. To order, add **-06** for 3/8" and **-08** for 1/2". Examples : UCC-C350-06, CGA 350 Cylinder Connector set with 3/8" Gland.

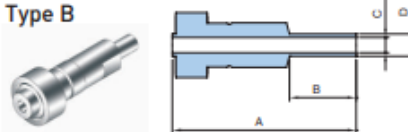
Dimensions are for reference only and are subject to change without prior notice.

## Glands

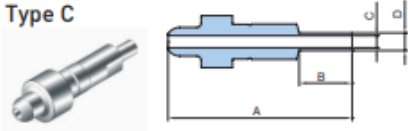
### Type A



### Type B



### Type C



Part No.	Dimension (mm)			
	E	L	E	F
BUGL-06S	65.3	10.00	4.35	6.35
BUGL-08S	65.3			

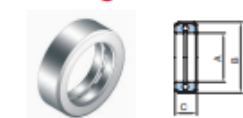
Part No.	Dimension (mm)			
	A	B	C	D
BUGL-01S	52.5	10.00	4.35	6.35
BUGL-02S	55.5			
BUGL-03S	58.0			
BUGL-07S	66.1			
BUGL-10S	66.7			
BUGL-11S	55.5			

Part No.	Dimension (mm)			
	A	B	C	D
BUGL-04S	66.2	10.00	4.35	6.35
BUGL-05S	66.8			
BUGL-09S	66.7			

3/8" and 1/2" Glands are available for every CGA & JIS series. To order, add **-06** for 3/8" and **-08** for 1/2"

**Examples :** BUGL-09S-08, 1/2" size CGA 540 Gland.

## Bearings



Part No.	Dimension (mm)		
	A	B	C
EUR-01	12.8	18.5	5.7
EUR-02	12.8	23.5	9.0

## Gaskets

### Gasket with 316SS Ring



Part No.	Dimension (mm)		
	A	B	C
CGT-01A	6.6	16.8	3.0
CGT-02A	10.3	17.3	
CGT-03A	9.7	21.5	

### Gasket without 316SS Ring



Part No.	Dimension (mm)		
	A	B	C
CGT-01B	7.5	15.4	1.6
CGT-05B	8.0	13.5	

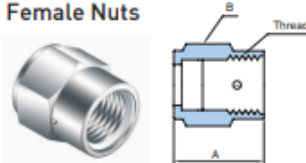
PTFE instead of PCTFE is available upon request. To order, add **-TF** to the end of part number.

**Example :** CGT-02A-TF

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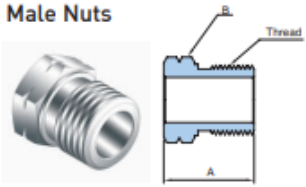
## Nuts

### Female Nuts



Part No.	Dimension (mm)		Thread
	A	B (Hex)	
EFN-0830L	35.00	30.16	0.830-14NGO-LH-INT
EFN-0830R	35.00	30.16	0.830-14NGO-RH-INT
EFN-0908R	35.00	30.16	0.908-14NGO-RH-INT
EFN-1035L	36.00	31.75	1.035-14NGO-LH-INT
EFN-1035R	36.00	31.75	1.035-14NGO-RH-INT
EFN-JS21L	35.00	30.16	JIS21-14-OL
EFN-JS21R	35.00	30.16	JIS21-14-OR
EFN-JS22L	35.00	30.16	JIS22-14-OL
EFN-JS22R	35.00	30.16	JIS22-14-OR
EFN-JS23R	35.00	30.16	JIS23-14-OR
EFN-JS26L	36.00	31.75	JIS26-14-OL
EFN-JS26R	36.00	31.75	JIS26-14-OR

### Male Nuts

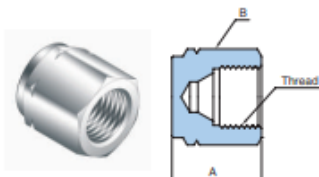


Part No.	Dimension (mm)		Thread
	A	B (Hex)	
EMN-0803R	29.00	23.81	0.803-14UNS-2A-RH-EXT
EMN-0880L	29.00	23.81	0.880-14NGO-LH-EXT
EMN-0960L	29.00	26.98	0.960-14NGO-LH-EXT
EMN-0960R	29.00	26.98	0.960-14NGO-RH-EXT

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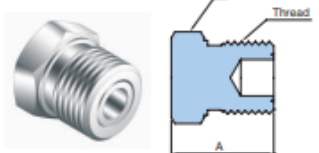
## Plugs

### Female Plugs



Part No.	Dimension (mm)		Thread
	A	B (Hex)	
EPG-296	32.50	26.98	0.803-14UNS-2B-RH-INT
EPG-510	32.50	30.16	0.885-14NGO-LH-INT
EPG-580	32.50	31.75	0.965-14NGO-RH-INT
EPG-590	32.50	31.75	0.965-14NGO-LH-INT

### Male Plugs

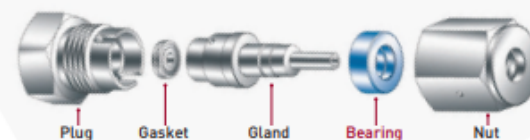


Part No.	Dimension (mm)		Thread
	A	B (Hex)	
EPG-320	31.0	23.81	0.825-14NGO-RH-EXT
EPG-326	30.0	23.81	0.825-14NGO-RH-EXT
EPG-330	31.0	23.81	0.825-14NGO-LH-EXT
EPG-350	30.0	23.81	0.825-14NGO-LH-EXT
EPG-540	30.0	26.98	0.903-14NGO-RH-EXT
EPG-660	26.0	28.57	1.030-14NGO-RH-EXT
EPG-670	26.0	28.57	1.030-14NGO-LH-EXT
EPG-678	26.0	28.57	1.030-14NGO-LH-EXT
EPG-679	26.0	28.57	1.030-14NGO-LH-EXT
EPG-21R	31.0	23.81	JIS21-14-OR
EPG-21L	31.0	23.81	JIS21-14-OL
EPG-22R	31.0	23.81	JIS22-14-OR
EPG-22L	31.0	23.81	JIS22-14-OL
EPG-23R	31.0	25.40	JIS23-14-OR
EPG-26R	31.0	28.57	JIS26-14-OR
EPG-26L	31.0	28.57	JIS26-14-OL

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## DISS Series

### Materials of Construction



### Ordering Information

Every cylinder connectors are ordered as assembled set . Also each parts of cylinder connector are ordered separately with the part numbers as shown below.

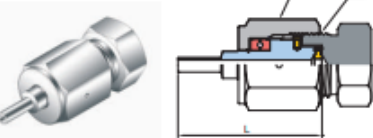
Part No.	Ordering Part Number						
	Assembled Set	Gland	Bearing	Nut	Gasket		Plug
					Nickel	PCTFE	
632	UCC-D632	BUGL-632	EBR-02	EDFN-1035R	UNGT-D	UGT-D	EPG-632
634	UCC-D634	BUGL-634	EBR-02	EDFN-1035R	UNGT-D	UGT-D	EPG-634
636	UCC-D636	BUGL-636	EBR-02	EDFN-1035R	UNGT-D	UGT-D	EPG-636
638	UCC-D638	BUGL-638	EBR-02	EDFN-1035R	UNGT-D	UGT-D	EPG-638
640	UCC-D640	BUGL-640	EBR-02	EDFN-1035R	UNGT-D	UGT-D	EPG-640
642	UCC-D642	BUGL-642	EBR-02	EDFN-1035R	UNGT-D	UGT-D	EPG-642
712	UCC-D712	BUGL-712	EBR-02	EDFN-1130R	UNGT-D	UGT-D	EPG-712
714	UCC-D714	BUGL-714	EBR-02	EDFN-1130R	UNGT-D	UGT-D	EPG-714
716	UCC-D716	BUGL-716	EBR-02	EDFN-1130R	UNGT-D	UGT-D	EPG-716
718	UCC-D718	BUGL-718	EBR-02	EDFN-1130R	UNGT-D	UGT-D	EPG-718
720	UCC-D720	BUGL-720	EBR-02	EDFN-1130R	UNGT-D	UGT-D	EPG-720
722	UCC-D722	BUGL-722	EBR-02	EDFN-1130R	UNGT-D	UGT-D	EPG-722
724	UCC-D724	BUGL-724	EBR-02	EDFN-1130R	UNGT-D	UGT-D	EPG-724
726	UCC-D726	BUGL-726	EBR-02	EDFN-1130R	UNGT-D	UGT-D	EPG-726
728	UCC-D728	BUGL-728	EBR-02	EDFN-1130R	UNGT-D	UGT-D	EPG-728

3/8" and 1/2" Glands are available for every DISS series cylinder connectors. To order, add **-06** for 3/8" and **-08** for 1/2".  
**Examples :** UCC-D712-08, DISS 712 Cylinder Connector set with 1/2" Gland.

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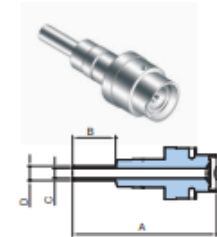
Typical Assembly

Gland + Male Nut + Bearing + Gasket + Female Plug



JIS No.	Part No.	Overall Length L		Hex Flat B		Thread C
		inch	mm	inch	mm	
632	UCC-D632	2.51	63.80	1.25	31.75	1.035-14NGO-RH-INT
634	UCC-D634					
636	UCC-D636					
638	UCC-D638					
640	UCC-D640					
642	UCC-D642					
712	UCC-D712			1.38	34.93	1.125-14NGO-RH-INT
714	UCC-D714					
716	UCC-D716					
718	UCC-D718					
720	UCC-D720					
722	UCC-D722					
724	UCC-D724					
726	UCC-D726					
728	UCC-D728					

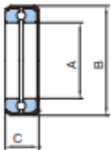
Glands



3/8" and 1/2" Glands are available for every DISS series. To order, add -06 for 3/8" and -08 for 1/2".  
Examples : BUGL-632-06, 3/8" size DISS 632 Gland.

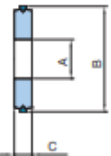
Part No.	Dimension (mm)			
	A	B	C	D
BUGL-632	63.8	19.05	4.35	6.35
BUGL-634				
BUGL-636				
BUGL-638				
BUGL-640				
BUGL-642				
BUGL-712				
BUGL-714				
BUGL-716				
BUGL-718				
BUGL-720				
BUGL-722				
BUGL-724				
BUGL-726				
BUGL-728				

Bearing



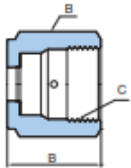
Part No.	Dimension (mm)		
	A	B	C
EBR-02	12.8	23.5	9.0

Gasket



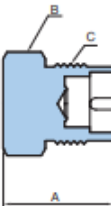
Part No.	Dimension (mm)			Material
	A	B	C	
UGT-D	5.4	14.3	3.0	PCTFE
UNGT-D	5.4	14.3	3.2	Nickel

Female Nut



Part No.	Dimension (mm)		Thread
	A	B (Hex)	
EDFN-1035R	36.00	31.75	1.035-14NGO-RH-INT
EDFN-1130R	36.00	34.93	1.125-14NGO-RH-INT

Male Plug



Part No.	Dimension (mm)		Thread
	A	B (Hex)	
EPG-632	39.0	31.75	1.030-14NGO-RH-EXT
EPG-634			
EPG-636			
EPG-638			
EPG-640			
EPG-642			
EPG-712			1.120-14NGO-RH-EXT
EPG-714			
EPG-716			
EPG-718			
EPG-720			
EPG-722			
EPG-724			
EPG-726			
EPG-728			