Cylinder Connections

CGA DISS Series B-30

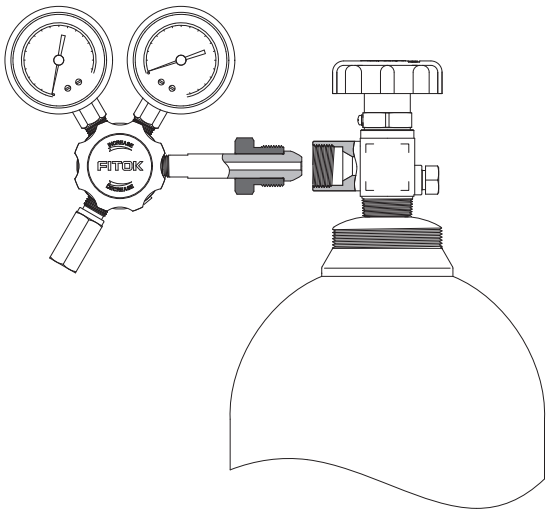
CGA Series B-34

DIN Series B-41

Gas Connection Assignment Table B-42

Features

◎ 100% visual inspection of critical surfaces
◎ Diverse material and configurations available
◎ Silver-plated nut threads to reduce installation torque
◎ Every fitting marked with size, material and heat number
◎ Customized solutions available



Material

Series	Component	Material	Designator
CGA DISS	Nipples	316L SS	6L
	Nuts	304 SS	S4
	Gaskets	Nickel 200	NI
		PCTFE	K
		Aluminum	AL
	Plugs	316L SS	6L
	Adapters	316L SS	6L
	Caps	316L SS	6L
CGA DIN	Nipples	316L SS	6L
	Nuts	304 SS	S4
	Gaskets	PTFE	T
		PCTFE	K
	Plugs, Caps	316L SS	6L
	Adapters	316L SS	6L

Notes:
1. Nickel gasket heat treated; surface hardness＜HB 100
2. 316L SS in compliance with SEMI F20

Ordering information

◎ Add material designator as a prefix to the basic ordering number to get the complete ordering number.
Example: 6**L**-C634-L-FR4

◎ CGA, DIN Series
PTFE is standard material for gasket. If PCTFE is required, please add a suffix of "-k" to the ordering number.
Example: 6L-C350-NS4-**K**

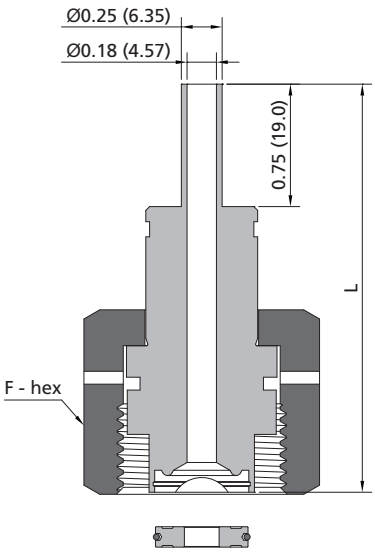
◎ CGA DISS Series
Nickel is standard material for gasket. If PCTFE is required, please add a suffix of "-k" to the ordering number.
Example: 6L-C632-FR4-**K**

CGA DISS Series

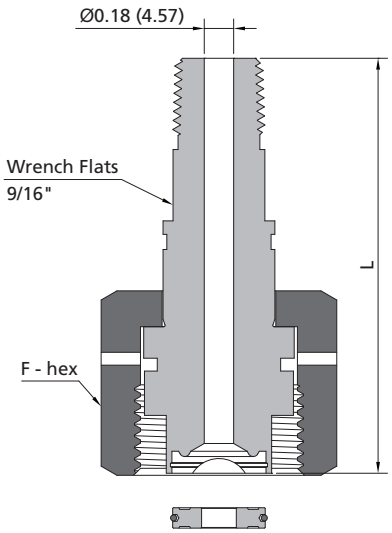
- Non-rotating design
- For nipples with TB or FR connections, inner surface electropolished to an average of Ra 9 µin. (0.23 µm), products comply with high purity process specification
- For nipples with NPT connections, inner surface electropolished to an average of Ra 16 µin. (0.4 µm), products comply with special cleaning and packaging, applicable to oxygen-enriched atmospheres
- Maximum allowable leak rate: 1 x 10^{-9} std cm^3/s

Cylinder Connections (Including Nipples, Nuts and Gaskets)

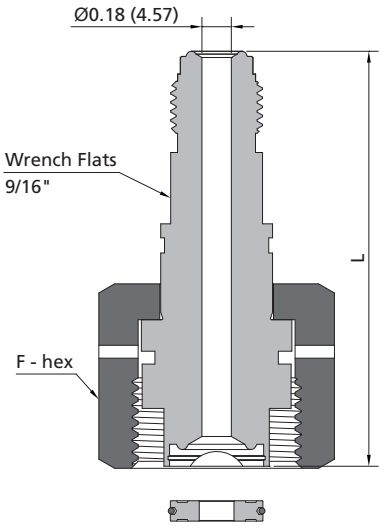
Dimensions are in. (mm).



1/4" Butt Weld (TB)



Male NPT



Male Face Seal (FR)

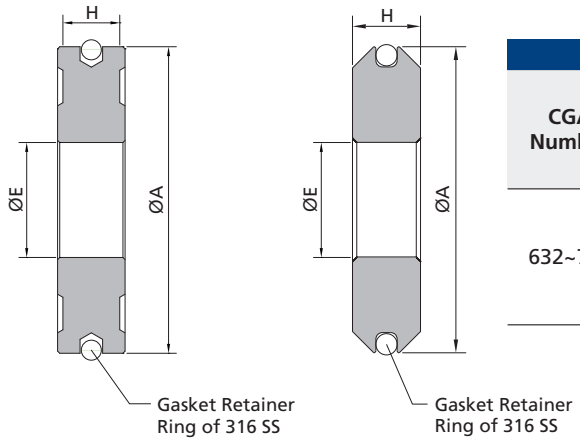
CGA Number	End Connection	Assembly Basic Ordering Number	Nipple Basic Ordering Number	Nut Basic Ordering Number	Gasket Basic Ordering Number	Dimensions, in. (mm)	
						L	F
632	1/4" TB	-C632-TB4	-C632-L-TB4	-C630-N	-C630-GT	2.5 (63.5)	1 1/4 (31.8)
	1/4" FR	-C632-FR4	-C632-L-FR4			3 (76.2)	1 1/4 (31.8)
	1/4" NPT	-C632-NS4	-C632-L-NS4			3 (76.2)	1 1/4 (31.8)
634	1/4" TB	-C634-TB4	-C634-L-TB4	-C630-N	-C630-GT	2.5 (63.5)	1 1/4 (31.8)
	1/4" FR	-C634-FR4	-C634-L-FR4			3 (76.2)	1 1/4 (31.8)
	1/4" NPT	-C634-NS4	-C634-L-NS4			3 (76.2)	1 1/4 (31.8)
636	1/4" TB	-C636-TB4	-C636-L-TB4	-C630-N	-C630-GT	2.5 (63.5)	1 1/4 (31.8)
	1/4" FR	-C636-FR4	-C636-L-FR4			3 (76.2)	1 1/4 (31.8)
	1/4" NPT	-C636-NS4	-C636-L-NS4			3 (76.2)	1 1/4 (31.8)
638	1/4" TB	-C638-TB4	-C638-L-TB4	-C630-N	-C630-GT	2.5 (63.5)	1 1/4 (31.8)
	1/4" FR	-C638-FR4	-C638-L-FR4			3 (76.2)	1 1/4 (31.8)
	1/4" NPT	-C638-NS4	-C638-L-NS4			3 (76.2)	1 1/4 (31.8)

CGA Number	End Connection	Assembly Basic Ordering Number	Nipple Basic Ordering Number	Nut Basic Ordering Number	Gasket Basic Ordering Number	Dimensions, in. (mm)	
						L	F
640	1/4" TB	-C640-TB4	-C640-L-TB4	-C630-N	-C630-GT	2.5 (63.5)	1 1/4 (31.8)
	1/4" FR	-C640-FR4	-C640-L-FR4			3 (76.2)	1 1/4 (31.8)
	1/4" NPT	-C640-NS4	-C640-L-NS4			3 (76.2)	1 1/4 (31.8)
642	1/4" TB	-C642-TB4	-C642-L-TB4	-C630-N	-C630-GT	2.5 (63.5)	1 1/4 (31.8)
	1/4" FR	-C642-FR4	-C642-L-FR4			3 (76.2)	1 1/4 (31.8)
	1/4" NPT	-C642-NS4	-C642-L-NS4			3 (76.2)	1 1/4 (31.8)
712	1/4" TB	-C712-TB4	-C712-L-TB4	-C710-N	-C630-GT	2.5 (63.5)	1 3/8 (34.9)
	1/4" FR	-C712-FR4	-C712-L-FR4			3 (76.2)	1 3/8 (34.9)
	1/4" NPT	-C712-NS4	-C712-L-NS4			3 (76.2)	1 3/8 (34.9)
714	1/4" TB	-C714-TB4	-C714-L-TB4	-C710-N	-C630-GT	2.5 (63.5)	1 3/8 (34.9)
	1/4" FR	-C714-FR4	-C714-L-FR4			3 (76.2)	1 3/8 (34.9)
	1/4" NPT	-C714-NS4	-C714-L-NS4			3 (76.2)	1 3/8 (34.9)
716	1/4" TB	-C716-TB4	-C716-L-TB4	-C710-N	-C630-GT	2.5 (63.5)	1 3/8 (34.9)
	1/4" FR	-C716-FR4	-C716-L-FR4			3 (76.2)	1 3/8 (34.9)
	1/4" NPT	-C716-NS4	-C716-L-NS4			3 (76.2)	1 3/8 (34.9)
718	1/4" TB	-C718-TB4	-C718-L-TB4	-C710-N	-C630-GT	2.5 (63.5)	1 3/8 (34.9)
	1/4" FR	-C718-FR4	-C718-L-FR4			3 (76.2)	1 3/8 (34.9)
	1/4" NPT	-C718-NS4	-C718-L-NS4			3 (76.2)	1 3/8 (34.9)
720	1/4" TB	-C720-TB4	-C720-L-TB4	-C720-N	-C630-GT	2.5 (63.5)	1 3/8 (34.9)
	1/4" FR	-C720-FR4	-C720-L-FR4			3 (76.2)	1 3/8 (34.9)
	1/4" NPT	-C720-NS4	-C720-L-NS4			3 (76.2)	1 3/8 (34.9)
722	1/4" TB	-C722-TB4	-C722-L-TB4	-C720-N	-C630-GT	2.5 (63.5)	1 3/8 (34.9)
	1/4" FR	-C722-FR4	-C722-L-FR4			3 (76.2)	1 3/8 (34.9)
	1/4" NPT	-C722-NS4	-C722-L-NS4			3 (76.2)	1 3/8 (34.9)
724	1/4" TB	-C724-TB4	-C724-L-TB4	-C720-N	-C630-GT	2.5 (63.5)	1 3/8 (34.9)
	1/4" FR	-C724-FR4	-C724-L-FR4			3 (76.2)	1 3/8 (34.9)
	1/4" NPT	-C724-NS4	-C724-L-NS4			3 (76.2)	1 3/8 (34.9)
726	1/4" TB	-C726-TB4	-C726-L-TB4	-C720-N	-C630-GT	2.5 (63.5)	1 3/8 (34.9)
	1/4" FR	-C726-FR4	-C726-L-FR4			3 (76.2)	1 3/8 (34.9)
	1/4" NPT	-C726-NS4	-C726-L-NS4			3 (76.2)	1 3/8 (34.9)
728	1/4" TB	-C728-TB4	-C728-L-TB4	-C720-N	-C630-GT	2.5 (63.5)	1 3/8 (34.9)
	1/4" FR	-C728-FR4	-C728-L-FR4			3 (76.2)	1 3/8 (34.9)
	1/4" NPT	-C728-NS4	-C728-L-NS4			3 (76.2)	1 3/8 (34.9)

Note:
Nickel is standard material for gasket. If PCTFE is required, please add a suffix of "-k" to the ordering number.
*Example: 6L-C638-TB4-**K***

Gaskets

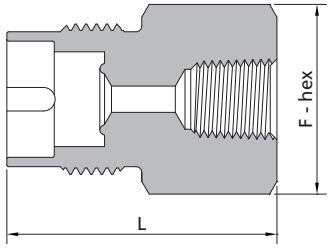
NI-C630-GT / AL-C630-GT **K-C630-GT**



CGA Number	Gasket Ordering Number	Material	Dimensions					
			A		E		H	
			in.	mm	in.	mm	in.	mm
632~728	NI-C630-GT	Nickel 200	0.56	14.3	0.21	5.4	0.105	2.7
	K-C630-GT	PCTFE	0.56	14.3	0.21	5.4	0.125	3.2
	AL-C630-GT	Aluminum	0.56	14.3	0.21	5.4	0.105	2.7

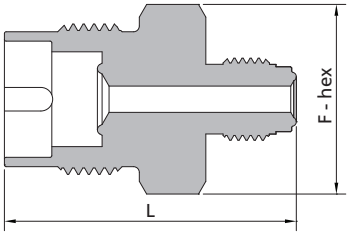
Outlet Adaptors

Female NPT



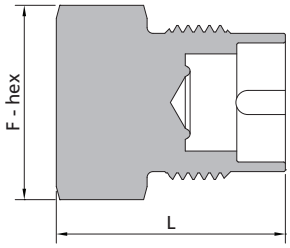
CGA Number	Basic Ordering Number	Dimensions, in. (mm)	
		L	F
632	-C632-A-FNS4	1.85 (47.0)	1 1/8 (28.6)
634	-C634-A-FNS4	1.85 (47.0)	1 1/8 (28.6)
636	-C636-A-FNS4	1.85 (47.0)	1 1/8 (28.6)
638	-C638-A-FNS4	1.85 (47.0)	1 1/8 (28.6)
640	-C640-A-FNS4	1.85 (47.0)	1 1/8 (28.6)
642	-C642-A-FNS4	1.85 (47.0)	1 1/8 (28.6)
712	-C712-A-FNS4	1.85 (47.0)	1 1/4 (31.8)
714	-C714-A-FNS4	1.85 (47.0)	1 1/4 (31.8)
716	-C716-A-FNS4	1.85 (47.0)	1 1/4 (31.8)
718	-C718-A-FNS4	1.85 (47.0)	1 1/4 (31.8)
720	-C720-A-FNS4	1.85 (47.0)	1 1/4 (31.8)
722	-C722-A-FNS4	1.85 (47.0)	1 1/4 (31.8)
724	-C724-A-FNS4	1.85 (47.0)	1 1/4 (31.8)
726	-C726-A-FNS4	1.85 (47.0)	1 1/4 (31.8)
728	-C728-A-FNS4	1.85 (47.0)	1 1/4 (31.8)

Male Face Seal (FR)



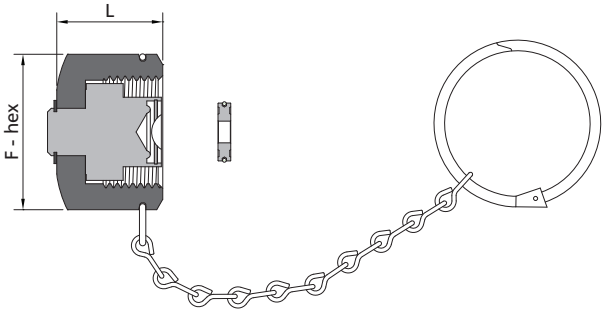
CGA Number	Basic Ordering Number	Dimensions, in. (mm)	
		L	F
632	-C632-A-FR4	2.0 (50.8)	1 1/8 (28.6)
634	-C634-A-FR4	2.0 (50.8)	1 1/8 (28.6)
636	-C636-A-FR4	2.0 (50.8)	1 1/8 (28.6)
638	-C638-A-FR4	2.0 (50.8)	1 1/8 (28.6)
640	-C640-A-FR4	2.0 (50.8)	1 1/8 (28.6)
642	-C642-A-FR4	2.0 (50.8)	1 1/8 (28.6)
712	-C712-A-FR4	2.0 (50.8)	1 1/4 (31.8)
714	-C714-A-FR4	2.0 (50.8)	1 1/4 (31.8)
716	-C716-A-FR4	2.0 (50.8)	1 1/4 (31.8)
718	-C718-A-FR4	2.0 (50.8)	1 1/4 (31.8)
720	-C720-A-FR4	2.0 (50.8)	1 1/4 (31.8)
722	-C722-A-FR4	2.0 (50.8)	1 1/4 (31.8)
724	-C724-A-FR4	2.0 (50.8)	1 1/4 (31.8)
726	-C726-A-FR4	2.0 (50.8)	1 1/4 (31.8)
728	-C728-A-FR4	2.0 (50.8)	1 1/4 (31.8)

Blank Plugs



CGA Number	Basic Ordering Number	Dimensions, in. (mm)	
		L	F
632	-C632-BP	1.53 (38.9)	1 1/8 (28.6)
634	-C634-BP	1.53 (38.9)	1 1/8 (28.6)
636	-C636-BP	1.53 (38.9)	1 1/8 (28.6)
638	-C638-BP	1.53 (38.9)	1 1/8 (28.6)
640	-C640-BP	1.53 (38.9)	1 1/8 (28.6)
642	-C642-BP	1.53 (38.9)	1 1/8 (28.6)
712	-C712-BP	1.53 (38.9)	1 1/4 (31.8)
714	-C714-BP	1.53 (38.9)	1 1/4 (31.8)
716	-C716-BP	1.53 (38.9)	1 1/4 (31.8)
718	-C718-BP	1.53 (38.9)	1 1/4 (31.8)
720	-C720-BP	1.53 (38.9)	1 1/4 (31.8)
722	-C722-BP	1.53 (38.9)	1 1/4 (31.8)
724	-C724-BP	1.53 (38.9)	1 1/4 (31.8)
726	-C726-BP	1.53 (38.9)	1 1/4 (31.8)
728	-C728-BP	1.53 (38.9)	1 1/4 (31.8)

Valve Outlet Caps (Including Chains, Rings and Gaskets)



CGA Number	Basic Ordering Number	Dimensions, in. (mm)	
		L	F
632	-C632-CP	1.13 (28.7)	1 1/4 (31.8)
634	-C634-CP	1.13 (28.7)	1 1/4 (31.8)
636	-C636-CP	1.13 (28.7)	1 1/4 (31.8)
638	-C638-CP	1.13 (28.7)	1 1/4 (31.8)
640	-C640-CP	1.13 (28.7)	1 1/4 (31.8)
642	-C642-CP	1.13 (28.7)	1 1/4 (31.8)
712	-C712-CP	1.13 (28.7)	1 3/8 (34.9)
714	-C714-CP	1.13 (28.7)	1 3/8 (34.9)
716	-C716-CP	1.13 (28.7)	1 3/8 (34.9)
718	-C718-CP	1.13 (28.7)	1 3/8 (34.9)
720	-C720-CP	1.13 (28.7)	1 3/8 (34.9)
722	-C722-CP	1.13 (28.7)	1 3/8 (34.9)
724	-C724-CP	1.13 (28.7)	1 3/8 (34.9)
726	-C726-CP	1.13 (28.7)	1 3/8 (34.9)
728	-C728-CP	1.13 (28.7)	1 3/8 (34.9)

Note:
Nickel is standard material for gasket. If PCTFE is required, please add a suffix of "-k" to the ordering number.
*Example: 6L-C632-CP-**K***

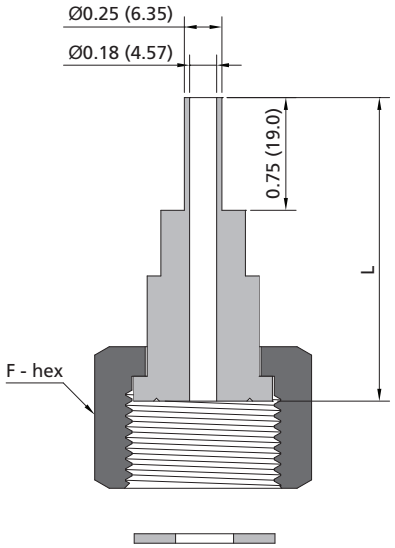
CGA Series

- CGA V-1-2005 compliant
- For nipples with TB or FR connections, inner surface electropolished to an average of Ra 9 µin. (0.23 µm); Ra 32 µin. (0.8 µm) for nipples with NPT connections
- With special cleaning and packaging, applicable to oxygen-enriched atmospheres
- Maximum allowable leak rate: 1 x 10^{-9} std cm^3/s

Cylinder Connections (Including Nipples, Nuts and Gaskets)

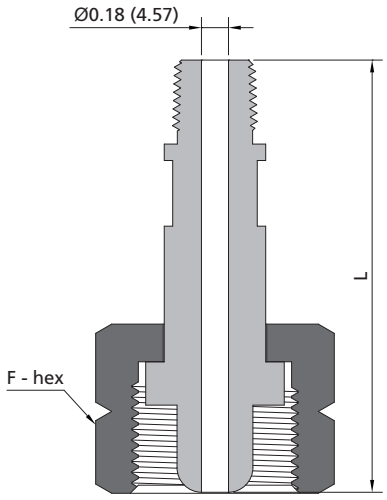
Dimensions are in. (mm).

Fig.1



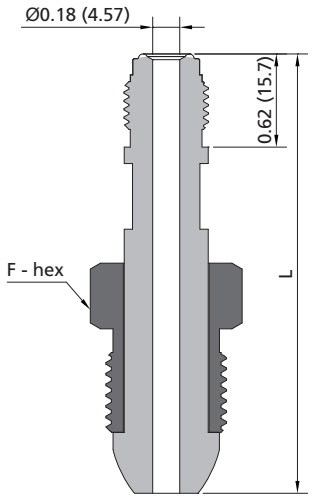
1/4" Butt Weld (TB)

Fig.2



Male NPT

Fig.3



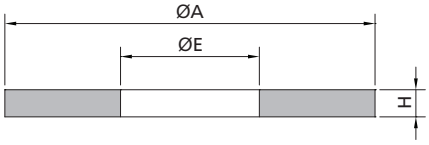
Male Face Seal (FR)

CGA Number	Ref. Fig.	End Connection	Assembly Basic Ordering Number	Nipple Basic Ordering Number	Nut Basic Ordering Number	Gasket Basic Ordering Number	Dimensions, in. (mm)	
							L	F
170	Fig.1	1/4" TB	-C170-TB4	-C170-L-TB4	-C170-N	-C170-GT	1.25 (31.8)	11/16 (17.5)
		1/8" NPT	-C170-NS2	-C170-L-NS2				
180	Fig.1	1/4" TB	-C180-TB4	-C180-L-TB4	-C180-N	-C180-GT	1.25 (31.8)	3/4 (19.1)
		1/8" NPT	-C180-NS2	-C180-L-NS2			1.75 (44.5)	
290	Fig.2	1/4" TB	-C290-TB4	-C290-L-TB4	-C290-N	——	2.63 (66.7)	1 (25.4)
		1/4" NPT	-C290-NS4	-C290-L-NS4			2.25 (57.2)	
296	Fig.3	1/4" TB	-C296-TB4	-C296-L-TB4	-C296-N	——	2.63 (66.7)	7/8 (22.3)
		1/4" NPT	-C296-NS4	-C296-L-NS4			3.5 (88.9)	
		1/4" FR	-C296-FR4	-C296-L-FR4			2.75 (69.9)	
320	Fig.1	1/4" TB	-C320-TB4	-C320-L-TB4	-C320-N	-C320-GT	1.75 (44.5)	1 1/8 (28.6)
		1/4" NPT	-C320-NS4	-C320-L-NS4			2.5 (63.5)	
		1/4" FR	-C320-FR4	-C320-L-FR4			1.75 (44.5)	

CGA Number	Ref. Fig.	End Connection	Assembly Basic Ordering Number	Nipple Basic Ordering Number	Nut Basic Ordering Number	Gasket Basic Ordering Number	Dimensions, in. (mm)	
							L	F
326	Fig.2	1/4" TB	-C326-TB4	-C326-L-TB4	-C326-N	——	2.25 (57.2)	1 1/8 (28.6)
		1/4" NPT	-C326-NS4	-C326-L-NS4			3.0 (76.2)	
		1/4" FR	-C326-FR4	-C326-L-FR4			2.25 (57.2)	
330	Fig.1	1/4" TB	-C330-TB4	-C320-L-TB4	-C330-N	-C320-GT	1.75 (44.5)	1 1/8 (28.6)
		1/4" NPT	-C330-NS4	-C320-L-NS4			2.5 (63.5)	
		1/4" FR	-C330-FR4	-C320-L-FR4			1.75 (44.5)	
346	Fig.2	1/4" TB	-C346-TB4	-C346-L-TB4	-C346-N	——	2.31 (58.7)	1 1/8 (28.6)
		1/4" NPT	-C346-NS4	-C346-L-NS4			3.0 (76.2)	
		1/4" FR	-C346-FR4	-C346-L-FR4			2.25 (57.2)	
350	Fig.2	1/4" TB	-C350-TB4	-C350-L-TB4	-C350-N	——	2.31 (58.7)	1 1/8 (28.6)
		1/4" NPT	-C350-NS4	-C350-L-NS4			3.0 (76.2)	
		1/4" FR	-C350-FR4	-C350-L-FR4			2.25 (57.2)	
510	Fig.3	1/4" TB	-C510-TB4	-C510-L-TB4	-C510-N	——	2.63 (66.7)	1 1/8 (28.6)
		1/4" NPT	-C510-NS4	-C510-L-NS4			3.5 (88.9)	
		1/4" FR	-C510-FR4	-C510-L-FR4			2.75 (69.9)	
540①	Fig.2	1/4" TB	-C540-TB4	-C540-L-TB4	-C540-N	——	2.25 (57.2)	1 1/8 (28.6)
		1/4" NPT	-C540-NS4	-C540-L-NS4			3.0 (76.2)	
		1/4" FR	-C540-FR4	-C540-L-FR4			2.25 (57.2)	
580	Fig.3	1/4" TB	-C580-TB4	-C510-L-TB4	-C580-N	——	2.63 (66.7)	1 1/8 (28.6)
		1/4" NPT	-C580-NS4	-C510-L-NS4			3.5 (88.9)	
		1/4" FR	-C580-FR4	-C510-L-FR4			2.75 (69.9)	
590	Fig.3	1/4" TB	-C590-TB4	-C510-L-TB4	-C590-N	——	2.63 (66.7)	1 1/8 (28.6)
		1/4" NPT	-C590-NS4	-C510-L-NS4			3.5 (88.9)	
		1/4" FR	-C590-FR4	-C510-L-FR4			2.75 (69.9)	
660	Fig.1	1/4" TB	-C660-TB4	-C660-L-TB4	-C660-N	-C660-GT	2.19 (55.6)	1 1/4 (31.8)
		1/4" NPT	-C660-NS4	-C660-L-NS4			2.5 (63.5)	
		1/4" FR	-C660-FR4	-C660-L-FR4			1.88 (47.6)	
670	Fig.1	1/4" TB	-C670-TB4	-C660-L-TB4	-C670-N	-C660-GT	2.19 (55.6)	1 1/4 (31.8)
		1/4" NPT	-C670-NS4	-C660-L-NS4			2.5 (63.5)	
		1/4" FR	-C670-FR4	-C660-L-FR4			1.88 (47.6)	
678	Fig.1	1/4" TB	-C678-TB4	-C678-L-TB4	-C678-N	-C678-GT	2.5 (63.5)	1 1/4 (31.8)
		1/4" NPT	-C678-NS4	-C678-L-NS4			2.5 (63.5)	
		1/4" FR	-C678-FR4	-C678-L-FR4			2.0 (50.8)	
679	Fig.1	1/4" TB	-C679-TB4	-C679-L-TB4	-C679-N	-C679-GT	2.5 (63.5)	1 1/4 (31.8)
		1/4" NPT	-C679-NS4	-C679-L-NS4			3.0 (76.2)	
		1/4" FR	-C679-FR4	-C679-L-FR4			2.0 (50.8)	

Note: PTFE is standard material for gasket. If PCTFE is required, please add a suffix of "-k" to the ordering number.
*Example: 6L-C170-FR4-**K***
① Cleaned and packaged for Oxygen Service.

Gaskets

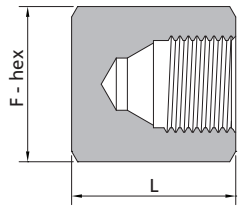


CGA Number	Gasket Basic Ordering Number	Dimensions					
		A		E		H	
		in.	mm	in.	mm	in.	mm
170	-C170-GT	0.43	11.0	0.19	4.8	0.10	2.5
180	-C180-GT	0.44	11.2	0.32	8.1	0.09	2.3
320, 330	-C320-GT	0.72	18.3	0.26	6.6	0.09	2.3
660, 670	-C660-GT	0.94	23.9	0.38	9.7	0.06	1.6
678	-C678-GT	0.61	15.5	0.30	7.6	0.06	1.6
679	-C679-GT	0.53	13.5	0.31	7.9	0.06	1.6

Outlet Adaptors, Blank Caps and Plugs

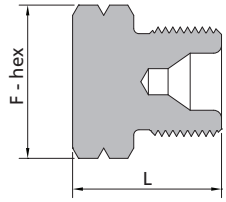
Blank Caps

CGA 580



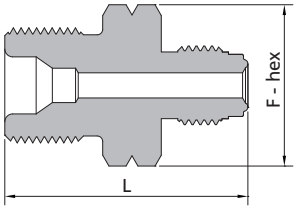
Blank Plugs

CGA 350



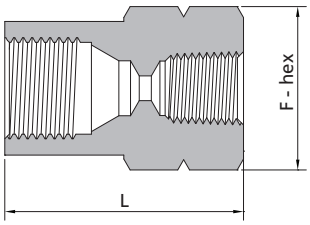
Male Face Seal (FR)

CGA 350



Female NPT

CGA 590

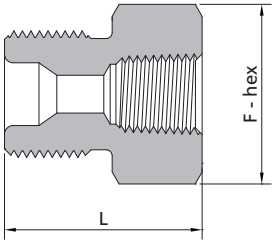


CGA Number	End Connection	Assembly Basic Ordering Number	Dimensions, in. (mm)	
			L	F
180	1/4" Female NPT	-C180-A-FNS4	1.38 (35.0)	3/4 (19.1)
296	Blank Cap	-C296-BC	1.37 (34.8)	1 1/8 (28.6)
	1/4" Female NPT	-C296-A-FNS4	2.0 (50.8)	
	1/4" FR	-C296-A-FR4	2.0 (50.8)	
320	Blank Plug	-C320-BP	1.12 (28.4)	1 (25.4)
	1/4" Female NPT	-C320-A-FNS4	1.12 (28.4)	
	1/4" FR	-C320-A-FR4	1.74 (44.2)	
326	Blank Plug	-C326-BP	1.12 (28.4)	1 (25.4)
	1/4" Female NPT	-C326-A-FNS4	1.31 (33.3)	
	1/4" FR	-C326-A-FR4	1.74 (44.2)	
330	Blank Plug	-C330-BP	1.12 (28.4)	1 (25.4)
	1/4" Female NPT	-C330-A-FNS4	1.31 (33.3)	
	1/4" FR	-C330-A-FR4	1.74 (44.2)	
346	Blank Plug	-C346-BP	1.12 (28.4)	1 (25.4)
	1/4" Female NPT	-C346-A-FNS4	1.31 (33.3)	
	1/4" FR	-C346-A-FR4	1.88 (47.8)	
350	Blank Plug	-C350-BP	1.12 (28.4)	1 (25.4)
	1/4" Female NPT	-C350-A-FNS4	1.31 (33.3)	
	1/4" FR	-C350-A-FR4	1.88 (47.8)	
510	Blank Cap	-C510-BC	1.37 (34.8)	1 1/4 (31.8)
	1/4" Female NPT	-C510-A-FNS4	2.0 (50.8)	
	1/4" FR	-C510-A-FR4	2.0 (50.8)	
540①	Blank Plug	-C540-BP	1.12 (28.4)	1 (25.4)
	1/4" Female NPT	-C540-A-FNS4	1.25 (31.8)	
	1/4" FR	-C540-A-FR4	1.87 (47.5)	
580	Blank Cap	-C580-BC	1.37 (34.8)	1 1/4 (31.8)
	1/4" Female NPT	-C580-A-FNS4	2.0 (50.8)	
	1/4" FR	-C580-A-FR4	2.0 (50.8)	

① *Cleaned and packaged for Oxygen Service.*

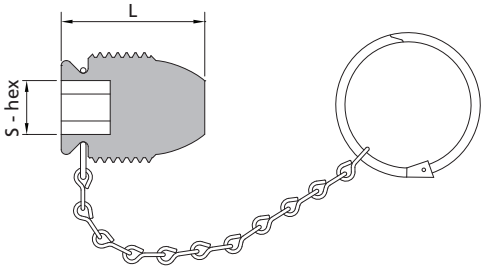
Female NPT

CGA 350

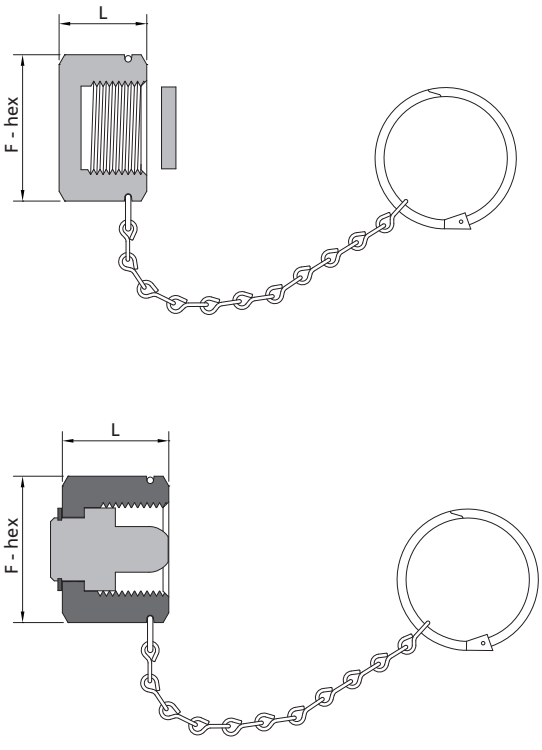


CGA Number	End Connection	Assembly Basic Ordering Number	Dimensions, in. (mm)	
			L	F
590	Blank Cap	-C590-BC	1.37 (34.8)	1 1/4 (31.8)
	1/4" Female NPT	-C590-A-FNS4	2.0 (50.8)	
	1/4" FR	-C590-A-FR4	2.0 (50.8)	
660	Blank Plug	-C660-BP	0.88 (22.4)	1 1/8 (28.6)
	1/4" Female NPT	-C660-A-FNS4	1.25 (31.8)	
	1/4" FR	-C660-A-FR4	1.5 (38.1)	
670	Blank Plug	-C670-BP	0.88 (22.4)	1 1/8 (28.6)
	1/4" Female NPT	-C670-A-FNS4	1.25 (31.8)	
	1/4" FR	-C670-A-FR4	1.5 (38.1)	
678	Blank Plug	-C678-BP	1.0 (25.4)	1 1/8 (28.6)
	1/4" Female NPT	-C678-A-FNS4	1.38 (35.1)	
	1/4" FR	-C678-A-FR4	1.5 (38.1)	
679	Blank Plug	-C679-BP	0.88 (22.4)	1 1/8 (28.6)
	1/4" Female NPT	-C679-A-FNS4	1.25 (31.8)	
	1/4" FR	-C679-A-FR4	1.75 (44.5)	

Cylinder Valve Outlet Plugs



CGA Number	Basic Ordering Number	Dimensions, in. (mm)	
		L	S
510	-C510-PG	1.0 (25.4)	3/8 (9.5)
580	-C580-PG	1.0 (25.4)	
590	-C590-PG	1.0 (25.4)	



CGA Number	Basic Ordering Number	Dimensions, in. (mm)	
		L	F
320	-C320-CP	0.54 (13.7)	1 (25.4)
326	-C320-CP	0.54 (13.7)	
330	-C330-CP	0.54 (13.7)	
346	-C320-CP	0.54 (13.7)	
660	-C660-CP	0.54 (13.7)	1 1/4 (31.8)
670	-C670-CP	0.54 (13.7)	
678	-C670-CP	0.54 (13.7)	
679	-C670-CP	0.54 (13.7)	

Notes:
1. *PTFE is standard material for gasket. If PCTFE is required, please add a suffix of "-k" to the ordering number.*
   *Example: S4-C330-CP-**K***
2. *The caps listed above are only intended to keep valve outlets clean and protect its threads. They shouldn't be used to contain pressure if the valve leaks or is opened by mistake.*

CGA Number	Basic Ordering Number	Dimensions, in. (mm)	
		L	F
350	-C350-CP	0.82 (20.8)	1 1/8 (28.6)

Complete Pigtail Connections (Including Nipples, Nuts, Gaskets and Blank Plugs or Caps)

Dimensions are in. (mm).

Fig.1

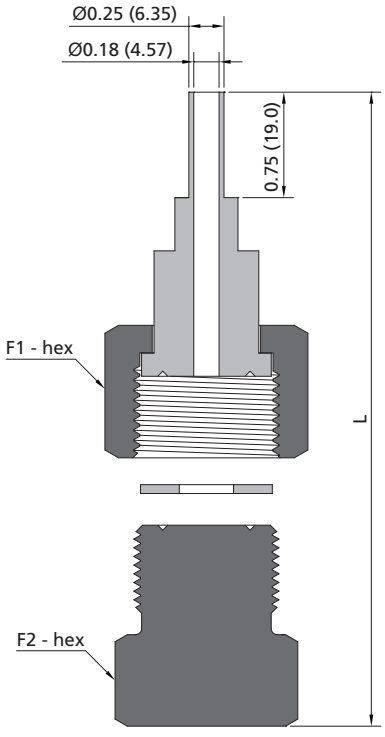
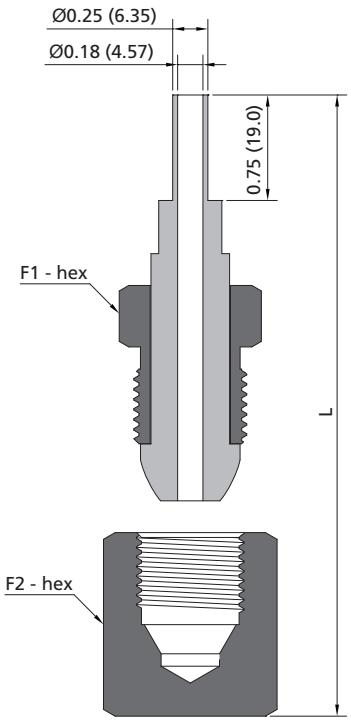


Fig.2



CGA Number	Ref. Fig.	Assembly Basic Ordering Number	Gasket Basic Ordering Number	Dimensions, in. (mm)		
				L	F1	F2
296	Fig.2	-C296-TB4-A	——	3.03 (77.0)	7/8 (22.3)	1 1/8 (28.6)
320	Fig.1	-C320-TB4-A	-C320-GT	2.96 (75.2)	1 1/8 (28.6)	1 (25.4)
326	Fig.1	-C326-TB4-A	——	3.01 (76.5)		
330	Fig.1	-C330-TB4-A	-C320-GT	2.96 (75.2)		
346	Fig.1	-C346-TB4-A	——	2.97 (75.4)		
350	Fig.1	-C350-TB4-A	——	2.96 (75.2)		
510	Fig.2	-C510-TB4-A	——	3.03 (77.0)		1 1/4 (31.8)
540①	Fig.1	-C540-TB4-A	——	2.96 (75.2)		1 (25.4)
580	Fig.2	-C580-TB4-A	——	3.03 (77.0)		1 1/4 (31.8)
590	Fig.2	-C590-TB4-A	——	3.03 (77.0)		
660	Fig.1	-C660-TB4-A	-C660-GT	2.96 (75.2)	1 1/4 (31.8)	1 1/8 (28.6)
670	Fig.1	-C670-TB4-A	-C660-GT	2.96 (75.2)		
678	Fig.1	-C678-TB4-A	-C678-GT	3.08 (78.2)		
679	Fig.1	-C679-TB4-A	-C679-GT	2.96 (75.2)		

Note:
PTFE is standard material for gasket. If PCTFE is required, please add a suffix of "-k" to the ordering number.
*Example: 6L-C330-TB4-A-**K***
① *Cleaned and packaged for Oxygen Service.*

Assembly Torque For CGA Cylinder Connections

CGA NO.	Recommended Torque		CGA NO.	Recommended Torque	
	ft-lb	N·m		ft-lb	N·m
170①	10~15	14~20	510	35~50	47~68
180①	10~15	14~20	540	40~60	54~81
290	30~45	41~61	580	40~60	54~81
296	35~50	47~68	590	40~60	54~81
320①	20~30	27~41	660①	30~45	41~61
326	25~35	34~47	670①	30~45	41~61
330①	20~30	27~41	678①	25~35	34~47
346	35~50	47~68	679①	25~35	34~47
350	35~50	47~68			

CGA DISS NO.	Recommended Torque		Gasket Material
	ft-lb	N·m	
632-728	35~40	47~53.8	Nickel
	12~15	16~20.1	PCTFE

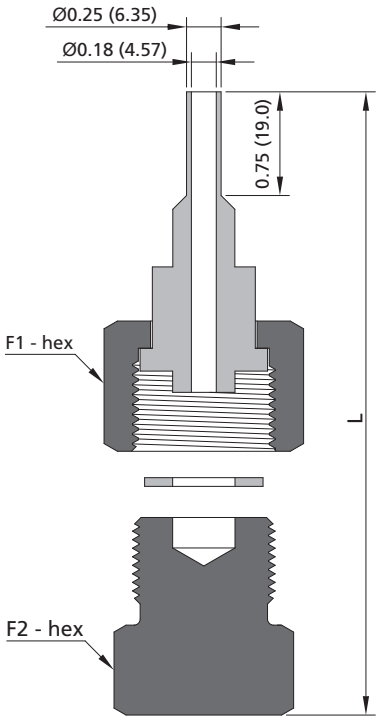
① *Gasket for seal: PTFE or PCTFE.*

DIN Series

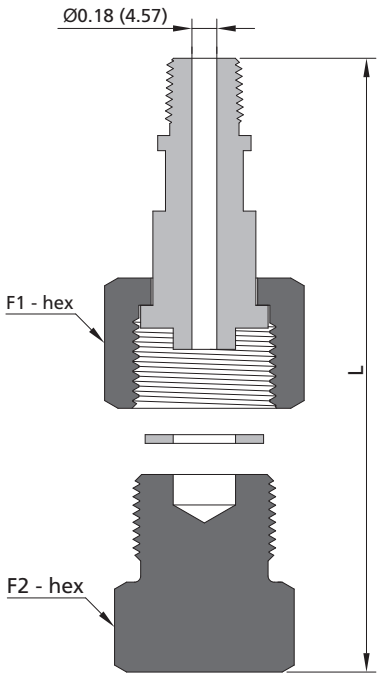
- ◎ DIN 477-1 compliant
- ◎ For nipples with TB or FR connections, inner surface electropolished to an average of Ra 9 µin. (0.23 µm); Ra 32 µin. (0.8 µm) for nipples with NPT connections
- ◎ With special cleaning and packaging, applicable to oxygen-enriched atmospheres
- ◎ Maximum allowable leak rate: 1 x 10^{-9} std cm^3/s

Complete Pigtail Connections (Including Nipples, Nuts, Gaskets and Blank Plugs)

Dimensions are in. (mm).



1/4" Butt Weld (TB)



Male NPT

DIN Number	Assembly Basic Ordering Number	Gasket Basic Ordering Number	Dimensions, in.(mm)		
			L	F1	F2
1	-DIN1-TB4-A	-DIN1-GT	2.96 (75.2)	1 1/4 (31.8)	1 1/4 (31.8)
	-DIN1-NS4-A		4.25 (108)		
5	-DIN5-TB4-A	-DIN5-GT	3.09 (78.5)		
	-DIN5-NS4-A		4.41 (112)		
6	-DIN6-TB4-A	-DIN1-GT	2.96 (75.2)		
	-DIN6-NS4-A		4.25 (108)		
8	-DIN8-TB4-A	-DIN5-GT	3.09 (78.5)		
	-DIN8-NS4-A		4.41 (112)		
11	-DIN11-TB4-A	-DIN11-GT	2.88 (73.2)	7/8 (22.3)	11/16 (17.5)
	-DIN11-NS4-A		4.14 (105.2)		
14	-DIN14-TB4-A		2.88 (73.2)	1 1/16 (27.0)	7/8 (22.3)
	-DIN14-NS4-A		4.15 (105.5)		

Notes:
1. Above components can be ordered separately.
*2. PTFE is standard material for gasket. If PCTFE is required, please add a suffix of "-k" to the ordering number. Example: 6L-D1N1-TB4-A-**K***

Gas Connection Assignment Table①

GAS	Formula	CGA DISS	CGA	DIN	JIS
Ammonia	NH_3	720	705	DIN6	22-R
Argon	Ar	718	580	DIN6	22-R or 23-R
Arsenic Pentafluoride	AsF_5	642	—	—	—
Arsine	AsH_3	632	350	—	22-L
Boron Trichloride	BCl_3	634	660	DIN8	—
Boron Trifluoride	BF_3	642	330	DIN8	22-L
Carbon Dioxide	CO_2	716	320	DIN6	—
Carbon Monoxide	CO	724	350	DIN5	22-L
Chlorine	Cl_2	728	—	DIN8	26-R
Diborane	B_2H_6	632	350	—	22-L
Dichlorosilane	SiH_2Cl_2	636	678②	DIN5	—
Diethlyzinc	$Zn(C_2H_5)_2$	726	510②	—	—
Diethyltelluride	$(C_2H_5)_2Te$	726	—	—	—
Dimethylzinc	$(CH_3)_2Zn$	726	—	—	—
Disilane	Si_2H_6	632	—	—	—
Germane	GeH_4	632	350 or 660	—	—
Halocarbon 11	CCl_3F	716	660	—	—
Halocarbon 115	$ClCF_2CF_3$	716	660	DIN6	—
Halocarbon 12	CCl_2F_2	716	660	DIN6	—
Halocarbon 13	$ClCF_3$	716	660	DIN6	—
Halocarbon 14	CF_4	716	320 or 580	DIN6	—
Halocarbon 23	CHF_3	716	660	DIN6	—
Halocarbon 116	F_3CCF_3	716	660	—	—
Helium	He	718	580	DIN6	22-R or 23-R
Hydrogen	H_2	724	350	DIN1	22-L
Hydrogen Bromide	HBr	634	330	DIN8	26-R
Hydrogen Chloride	HCl	634	330	DIN8	26-R
Hydrogen Fluoride	HF	638	660 or 670	—	26-R
Hydrogen Sulfide	H_2S	722	330	DIN5	—
Krypton	Kr	718	580	DIN6	22-R or 23-R
Neon	Ne	718	580	DIN6	22-R or 23-R
Nitrogen	N_2	718	580	DIN10	22-R or 23-R
Nitrogen Trifluoride	NF_3	640	330 or 670	DIN8	—
Nitrous Oxide	N_2O	712	326	DIN8	—
Oxygen	O_2	714	540	DIN9	22-R or 23-R
Perfluoropropane	$CF_2(CF_3)$	716	660	—	—
Phosphine	PH_3	632	350 or 660	DIN1	—
Phosphorus Pentafluoride	PF_5	642	330 or 660	—	—
Silane	SiH_4	632	350	—	—
Silicon Tetrachloride	$SiCl_4$	636	—	—	—
Silicon Tetrafluoride	SiF_4	642	330	—	22-L
Sulphur Hexafluoride	SF_6	716	590	DIN6	26-R
Trichlorosilane	$SiHCl_3$	636	—	—	—
Triethylaluminum	$(C_2H_5)_3Al$	726	510②	—	—
Tungsten Hexafluoride	WF_6	638	670	DIN8	—
Xenon	Xe	718	580	DIN6	22-R

① *Information in this table is for reference only.*

② *Refer to CGA organization specification for pressure limits.*