

CONNECT YOUR DEWAR QUICKLY FOR FAST HOOKUP AND FILLING.

**Dewar Liquid
Filling Connections**
see page 19A-8

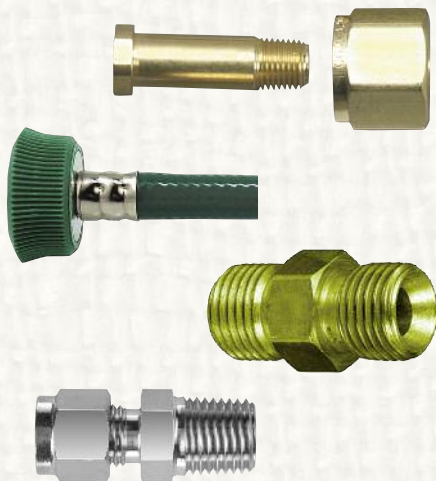


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**CGA, Medical,
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for all your Hose Needs!**



Fittings
see sections 21A-D



**Superflex
Cryogenic
Liquid
Cylinder
Hoses**



Cryogenic Hoses
see page 19A-4

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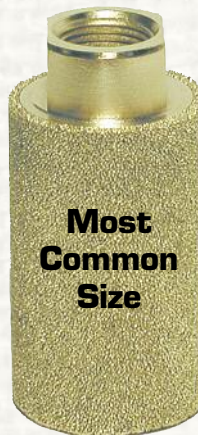
Diffusers or Phase Separators are designed to safely fill dewar, reducing any splash loss of cryogenic product.

Liquid Hose Phase Separators

Liquid Nitrogen Diffusers Connect Directly to the Male NPT Hose. Diffusers or Phase Separators are designed to safely fill dewar, reducing any splash loss of cryogenic product.



Part # CRY-ACC18PS
1/8" FNPT x
1/2" OD x 1 3/16" L



Part # CRY-ACC38PS
3/8" FNPT x
1 3/8" OD x 2 3/4" L



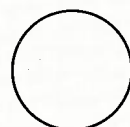
Part # CRY-ACC12PS
1/2" FNPT x
1 5/8" OD x 4 1/4" L

TO DETERMINE PHASE SEPARATOR THREAD SIZE* FOR HOSE

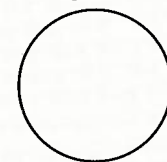
Inside Diameter of Female Thread of Phase Separator



1/8" FNPT



3/8" FNPT



1/2" FNPT

MATCH UP Male Hose Thread Profiles for NPT Threads Outside Diameter of Hose Connection



1/8"



3/8"



1/2"

* These sizes are accurate in printed catalog.

Liquid Transfer Kit

**Hose & Diffuser –
Armored Hose CGA-295 with 1/8" Diffuser**

Part #	Hose Length	Description
FPA4D18	4'	CGA-295 w/ 1/8" Diffuser
FPA6D18	6'	CGA-295 w/ 1/8" Diffuser
FPA8D18	8'	CGA-295 w/ 1/8" Diffuser
FPA12D18	12'	CGA-295 w/ 1/8" Diffuser

**Hose & Diffuser –
Armored Hose CGA-295 with 3/8" Diffuser**

FPA4D38	4'	CGA-295 w/ 3/8" Diffuser
FPA6D38	6'	CGA-295 w/ 3/8" Diffuser
FPA8D38	8'	CGA-295 w/ 3/8" Diffuser
FPA12D38	12'	CGA-295 w/ 3/8" Diffuser

**Hose & Diffuser –
Armored Hose CGA-295 with 1/2" Diffuser**

FPA4D12	4'	CGA-295 w/ 1/2" Diffuser
FPA6D12	6'	CGA-295 w/ 1/2" Diffuser
FPA8D12	8'	CGA-295 w/ 1/2" Diffuser
FPA12D12	12'	CGA-295 w/ 1/2" Diffuser



Part # FPA4D38

**SAFETY
TRANSFER
CRYGENIC
PRODUCT**

Liquid Hoses with Diffuser

Armored Hose with Fast Changing Adapter Style Diffuser



CGA-295 x 1/8" Diffuser with Adapter



CGA-295 x 3/8" Diffuser with Adapter



CGA-295 x 1/2" Diffuser with Adapter

Armored Hose CGA-295 with 1/8" Diffuser with Adapter

Part #	Hose Length	Description
FPA4D18-A	4'	CGA-295 with 1/8" Diffuser
FPA6D18-A	6'	CGA-295 with 1/8" Diffuser
FPA8D18-A	8'	CGA-295 with 1/8" Diffuser
FPA12D18-A	12'	CGA-295 with 1/8" Diffuser

Armored Hose CGA-295 with 3/8" Diffuser with Adapter

FPA4D38-A	4'	CGA-295 with 3/8" Diffuser
FPA6D38-A	6'	CGA-295 with 3/8" Diffuser
FPA8D38-A	8'	CGA-295 with 3/8" Diffuser
FPA12D38-A	12'	CGA-295 with 3/8" Diffuser

Armored Hose CGA-295 with 1/2" Diffuser with Adapter

FPA4D12-A	4'	CGA-295 with 1/2" Diffuser
FPA6D12-A	6'	CGA-295 with 1/2" Diffuser
FPA8D12-A	8'	CGA-295 with 1/2" Diffuser
FPA12D12-A	12'	CGA-295 with 1/2" Diffuser

Fast Change Diffuser with CGA Adapter

For Use with CGA-295 Hose End

One Hose Can be Used for Different Diffuser Sizes

Diffuser and Adapter Includes Phase separator and adapters for Liquid Nitrogen. Use with CGA-295 Cryogenic Hose.



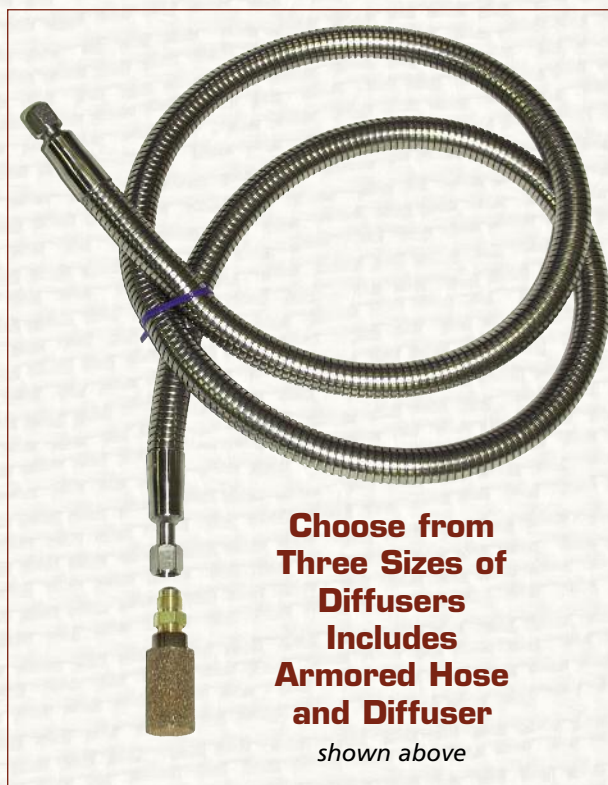
Part #
CRYAC18PSCGA295



Part #
CRYAC38PSCGA295



Part #
CRYAC12PSCGA295



**Choose from
Three Sizes of
Diffusers
Includes
Armored Hose
and Diffuser**

shown above

Part # Description

CRYAC18PSCGA295	1/8" NPT Phase Separator – Use to attach to a hose end of CGA-295
CRYAC38PSCGA295	3/8" NPT Phase Separator – Use to attach to a hose end of CGA-295
CRYAC12PSCGA295	1/2" NPT Phase Separator – Use to attach to a hose end of CGA-295

* Hose not included with kits. Use CGA-295 Hose Ends.

Hose End Dust Caps

CGA 295 Inert

Part No.	Description
Cap-295Hose	Hose Plug & Chain

Keep dirt and bugs out of hose while in storage.



Elbow Cryogenic Glove



See Section 27A for full line of Cryogenic Gloves.

Superflex Inert Cryogenic Liquid Cylinder Hoses



Transfer Hose for Nitrogen & Argon

1/2" inner diameter standard duty stainless steel hose to provide a dependable, high pressure hose for your cryogenic transfer applications. Machine flare ends and stainless steel hex nuts are standard of these hoses. Stamped with 1330 PSIG MAWP, and month/year of manufacturer. *** Not cleaned for Oxygen Service**

Male NPT Thread Profile

3/8"

1/2"

These sizes are accurate in printed catalog.

INLET



CGA 295

OUTLET



CGA 295

INLET



CGA 295

OUTLET



3/8" NPT Male

INLET



CGA 295

OUTLET



1/2" NPT Male



Without Armor Casing

Hose Length	Part #
48"	FPCGA295CH48
72"	FPCGA295CH72
10'	FPCGA295CH120
12'	FPCGA295CH144
20'	FPCGA295CH240

Without Armor Casing

Hose Length	Part #
48"	FPM38C295CH48
72"	FPM38C295CH72
10'	FPM38C295CH120
12'	FPM38C295CH144
20'	FPM38C295CH240

Without Armor Casing

Hose Length	Part #
48"	FPM12C295CH48
72"	FPM12C295CH72
10'	FPM12C295CH120



MOST COMMON



With Armor Casing

Hose Length	Part #
48"	FPACGA295CH48
72"	FPACGA295CH72
10'	FPACGA295CH120
12'	FPACGA295CH144
20'	FPACGA295CH240

With Armor Casing

Hose Length	Part #
48"	FPAM38C295CH48
72"	FPAM38C295CH72
10'	FPAM38C295CH120
12'	FPAM38C295CH144
20'	FPAM38C295CH240

With Armor Casing

Hose Length	Part #
48"	FPAM12C295CH48
72"	FPAM12C295CH72
10'	FPAM12C295CH120

Custom Length Hoses – Superflex Inert Cryogenic Liquid Cylinder Hoses

ORDER CUSTOM LENGTH HOSE

Custom length hoses are not returnable for either credit or refund.

PTFE Hose	With or Without Armor Casing	INLET		OUTLET		Length Hose in Inches
		Choose Your Hose End Pt #		Choose Your Hose End Pt #		
FP	<input type="checkbox"/> Armor Pt # A <input type="checkbox"/> Non-Armor (leave blank)	CGA 295 – Inert Pt # CGA295 3/8 NPT Male Pt # M38 1/2 NPT Male Pt # M12	 	CGA 295 – Inert Pt # CGA295 3/8 NPT Male Pt # M38 1/2 NPT Male Pt # M12	 	Pt # CH _____
FP	<div style="border: 1px solid black; height: 20px; width: 100px;"></div>	<div style="border: 1px solid black; height: 20px; width: 100px;"></div>	→	<div style="border: 1px solid black; height: 20px; width: 100px;"></div>	→	CH <div style="border: 1px solid black; height: 20px; width: 100px;"></div>

► Please be careful to select the correct custom hose configuration.

HOSE END DUST CAPS

Keep dirt and bugs out of hose while in storage.



CGA 295 Inert

Part No.	Description
Cap-295Hose	Hose Plug & Chain

HOSE COUPLER

CGA-295 Inert



Part # CGA-295COU

In-line Swivel Assembly

CGA295 Female x CGA 295 Female Swivel



Part # CGA-295F295F

CGA TO NPT ADAPTER

Hose Adapters for CGA-295 to NPT Fitting – O.D. Hex is 7/8"



1/4" NPT Male
Part # CGA-29514

3/8" NPT Male
Part # CGA-29538
Part # CGA-29538-PK10*
*Available in Pkg. of 10

1/2" NPT Male
Part # CGA-29512

Superflex **OXYGEN** Cryogenic Liquid Cylinder Hoses



Oxygen Transfer Hose

1/2" inner diameter standard duty stainless steel hose to provide a dependable, high pressure hose for your cryogenic transfer applications. Machine flare ends and stainless steel hex nuts are standard on these hoses. Stamped with 1330 PSIG MAWP, and month/year of manufacturer.

Male NPT Thread Profile

3/8"

1/2"

These sizes are accurate in printed catalog.

(Oxygen hoses are cleaned, capped, bagged, and certified clean for oxygen service per CGA G-4.1.)



Without Armor Casing



With Armor Casing

INLET



CGA 440

OUTLET



CGA 440

Hose Length	Part #
48"	FPCGA440CH48
72"	FPCGA440CH72
10'	FPCGA440CH120
12'	FPCGA440CH144
20'	FPCGA440CH240

Without Armor Casing

Hose Length	Part #
48"	FPM38C440CH48
72"	FPM38C440CH72
10'	FPM38C440CH120
12'	FPM38C440CH144
20'	FPM38C440CH240

Without Armor Casing

Hose Length	Part #
48"	FPM12C440CH48
72"	FPM12C440CH72
10'	FPM12C440CH120

Hose Length	Part #
48"	FPACGA440CH48
72"	FPACGA440CH72
10'	FPACGA440CH120
12'	FPACGA440CH144
20'	FPACGA440CH240

With Armor Casing

Hose Length	Part #
48"	FPAM38C440CH48
72"	FPAM38C440CH72
10'	FPAM38C440CH120
12'	FPAM38C440CH144
20'	FPAM38C440CH240

With Armor Casing

Hose Length	Part #
48"	FPAM12C440CH48
72"	FPAM12C440CH72
10'	FPAM12C440CH120

INLET



CGA 440

OUTLET



3/8" NPT Male

INLET



CGA 440

OUTLET



1/2" NPT Male

Custom Length Hoses – Superflex Oxygen Cryogenic Liquid Cylinder Hoses

ORDER CUSTOM LENGTH HOSE

Custom length hoses are not returnable for either credit or refund.

PTFE Hose	With or Without Armor Casing	INLET	OUTLET	Length Hose in Inches
FP	<input type="checkbox"/> Armor Pt # A <input type="checkbox"/> Non-Armor (leave blank)	Choose Your Hose End Pt # CGA 440 – Liquid Oxygen 3/8 NPT Male 1/2 NPT Male Pt # CGA440 Pt # M38 Pt # M12	Choose Your Hose End Pt # CGA 440 – Liquid Oxygen 3/8 NPT Male 1/2 NPT Male Pt # CGA440 Pt # M38 Pt # M12	Pt # CH _____
FP	<input type="text"/>	<input type="text"/>	<input type="text"/>	CH <input type="text"/>

► Please be careful to select the correct custom hose configuration.

HOSE END DUST CAPS

Keep dirt and bugs out of hose while in storage.



CGA 440 Oxygen

Part No.	Description
Cap-440Hose	Hose Plug & Chain

HOSE COUPLER CGA-440 Oxygen



Part # CGA-440COU



In-line Swivel Assembly for CGA-440

Part # CC-ILS-ASSY

CGA TO NPT ADAPTER Oxygen Dewar Brass Fittings

O.D. of
Hex 1
Inch



CGA 440 x
3/8" NPT
Oxygen,
Liquid & Vent

Part #	Description
CGA-44038	Oxygen Dewar 3/8" NPT*
CGA-44038-PK10	Pkg. of 10 – Oxygen Dewar 3/8" NPT*
CGA-44014	Oxygen Dewar 1/4" NPT
CGA-44012	Oxygen Dewar 1/2" NPT

*Most common size

In-line Swivel Assembly

CGA 440 Female x
CGA 440 Female Swivel



Part # CGA-440F440F

Rev: 3/19/16, 6/19/14; 7/1/13

3/4" ID Superflex Cryogenic Liquid Cylinder Hoses



Male
NPT
Thread
Profile

3/4"

These sizes are accurate in printed catalog.

3/4" ID inner diameter standard duty stainless steel hose to provide a dependable, high pressure hose for your cryogenic transfer applications. Machine flare ends and stainless steel hex nuts are standard on these hoses.

Stamped with 792 PSIG MAWP, and month/year of manufacturer.



Standard Hose
without Armor
Casing



With Armor Casing
Anti-Kink,
Anti-Whip

HOSES ARE CLEANED, CAPPED, BAGGED, AND CERTIFIED CLEAN FOR OXYGEN SERVICE PER CGA G-4.1.)

INLET



3/4" NPT Female

OUTLET



3/4" NPT Female

3/4" NPT Female x 3/4" NPT Female

Hose Length	Part #
48"	FP34IDF34CH48
72"	FP34IDF34CH72
144"	FP34IDF34CH144

Hose Length	Part #
48"	FPA34IDF34CH48
72"	FPA34IDF34CH72
144"	FPA34IDF34CH144

INLET



3/4" NPT Female

OUTLET



3/4" NPT Male

3/4" NPT Female x 3/4" NPT Male

Hose Length	Part #
48"	FP34IDF34M34CH48
72"	FP34IDF34M34CH72
144"	FP34IDF34M34CH144

Hose Length	Part #
48"	FPA34IDF34M34CH48
72"	FPA34IDF34M34CH72
144"	FPA34IDF34M34CH144

INLET



3/4" NPT Male

OUTLET



3/4" NPT Male

3/4" NPT Male x 3/4" NPT Male

Hose Length	Part #
48"	FP34IDM34CH48
72"	FP34IDM34CH72
144"	FP34IDM34CH144

Hose Length	Part #
48"	FPA34IDM34CH48
72"	FPA34IDM34CH72
144"	FPA34IDM34CH144

INLET



CGA 440

OUTLET



CGA 440

CGA 440 x CGA 440

Hose Length	Part #
48"	FP34IDCGA440CH48
72"	FP34IDCGA440CH72
144"	FP34IDCGA440CH144

Hose Length	Part #
48"	FPA34IDCGA440CH48
72"	FPA34IDCGA440CH72
144"	FPA34IDCGA440CH144

INLET



CGA 440

OUTLET



3/4" NPT Male

CGA 440 x 3/4" NPT Male

Hose Length	Part #
48"	FP34IDM34C440CH48
72"	FP34IDM34C440CH72
144"	FP34IDM34C440CH144

Hose Length	Part #
48"	FPA34IDM34C440CH48
72"	FPA34IDM34C440CH72
144"	FPA34IDM34C440CH144

CGA 295 INERT HOSES ARE NOT CLEANED FOR OXYGEN SERVICE

INLET



CGA 295

OUTLET



CGA 295

CGA 295 x CGA 295

Hose Length	Part #
48"	FP34IDCGA295CH48
72"	FP34IDCGA295CH72
144"	FP34IDCGA295CH144

Hose Length	Part #
48"	FPA34IDCGA295CH48
72"	FPA34IDCGA295CH72
144"	FPA34IDCGA295CH144

INLET



CGA 295

OUTLET



3/4" NPT Male

CGA 295 x 3/4" NPT Male

Hose Length	Part #
48"	FP34IDM34C295CH48
72"	FP34IDM34C295CH72
144"	FP34IDM34C295CH144

Hose Length	Part #
48"	FPA34IDM34C295CH48
72"	FPA34IDM34C295CH72
144"	FPA34IDM34C295CH144

Vacuum Jacketed Cryogenic Hoses

Vacuum Jacketed Hoses – 3 Feet through 25 Feet for LN2 CGA 295 – 3/8" & 1/2" NPT

Advantages

- Stays warm during operation
- Remains flexible during and after filling
- Armor flex for increased durability
- Frost and sweating is eliminated for cleaner operation
- Reduced LN₂ consumption

Specifications

Size	3/8" ID x 1 1/2" OD (Inner Hose) (Outside Armor Flex)	1/2" ID x 1 1/8" OD (Inner Hose) (Outside Armor Flex)
Pressure Rating	150 psi	150 psi
Material	304 SS w/ Vacuum Superinsulation	304 SS w/ Vacuum Superinsulation
Minimum Bend Radius	4 1/2"	6"
Length	3' through 25' std (Other custom configurations available)	3' through 25' std (Other custom configurations available)
End Connections	as needed	as needed

Not for use with oxygen

Vacuum Jacketed Hoses

3/8" I.D. 150 PSI CGA 295 x CGA 295



Size	Part Number	Description
3'	VS-38ID36CGA295	3 foot Vacuum Jacketed Hose, 3/8" ID, CGA-295 x CGA-295
4'	VS-38ID48CGA295	4 foot Vacuum Jacketed Hose, 3/8" ID, CGA-295 x CGA-295
5'	VS-38ID60CGA295	5 foot Vacuum Jacketed Hose, 3/8" ID, CGA-295 x CGA-295
6'	VS-38ID72CGA295	6 foot Vacuum Jacketed Hose, 3/8" ID, CGA-295 x CGA-295
10'	VS-38ID120CGA295	10 foot Vacuum Jacketed Hose, 3/8" ID, CGA-295 x CGA-295



3/8" I.D. 150 PSI CGA 295 x 3/8" Male NPT

Size	Part Number	Description
3'	VS-38ID36CGA295M38	3 foot Vacuum Jacketed Hose, 3/8" ID, CGA-295 x 3/8" MNPT
4'	VS-38ID48CGA295M38	4 foot Vacuum Jacketed Hose, 3/8" ID, CGA-295 x 3/8" MNPT
5'	VS-38ID60CGA295M38	5 foot Vacuum Jacketed Hose, 3/8" ID, CGA-295 x 3/8" MNPT
6'	VS-38ID72CGA295M38	6 foot Vacuum Jacketed Hose, 3/8" ID, CGA-295 x 3/8" MNPT
10'	VS-38ID120CGA295M38	10 foot Vacuum Jacketed Hose, 3/8" ID, CGA-295 x 3/8" MNPT

Vacuum Jacketed Hoses

1/2" I.D. 150 PSI CGA 295 x CGA 295



Size	Part Number	Description
3'	VS-12ID36CGA295	3 foot Vacuum Jacketed Hose, 1/2" ID, CGA-295 x CGA-295
4'	VS-12ID48CGA295	4 foot Vacuum Jacketed Hose, 1/2" ID, CGA-295 x CGA-295
5'	VS-12ID60CGA295	5 foot Vacuum Jacketed Hose, 1/2" ID, CGA-295 x CGA-295
6'	VS-12ID72CGA295	6 foot Vacuum Jacketed Hose, 1/2" ID, CGA-295 x CGA-295
10'	VS-12ID120CGA295	10 foot Vacuum Jacketed Hose, 1/2" ID, CGA-295 x CGA-295



1/2" I.D. 150 PSI CGA 295 x 1/2" Male NPT

Size	Part Number	Description
3'	VS-12ID36CGA295M12	3 foot Vacuum Jacketed Hose, 1/2" ID, CGA-295 x 1/2" MNPT
4'	VS-12ID48CGA295M12	4 foot Vacuum Jacketed Hose, 1/2" ID, CGA-295 x 1/2" MNPT
5'	VS-12ID60CGA295M12	5 foot Vacuum Jacketed Hose, 1/2" ID, CGA-295 x 1/2" MNPT
6'	VS-12ID72CGA295M12	6 foot Vacuum Jacketed Hose, 1/2" ID, CGA-295 x 1/2" MNPT
10'	VS-12ID120CGA295M12	10 foot Vacuum Jacketed Hose, 1/2" ID, CGA-295 x 1/2" MNPT

Vacuum Jacketed Cryogenic Hoses

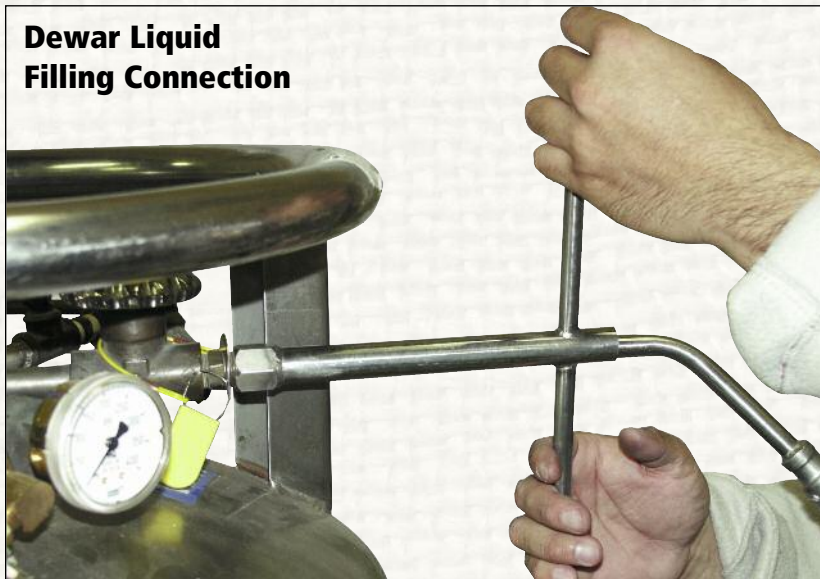
**END CONNECTIONS FOR
Female Pipe Thread
is available**



*Call
Customer
Service
for info*

Liquid Filling Connection

Dewar Liquid Filling Connection



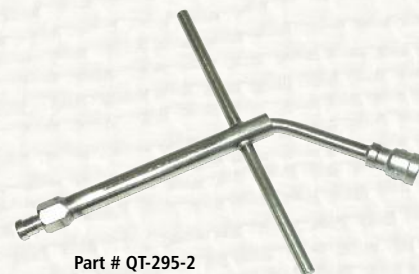
Connect your Dewar quickly for fast hookup and filling.

The Quick Fill Wrench is a **Quick On and Off** Connection for Liquid Containers from 160 to 250 Liter Sizes. You will never again have to search for a wrench and your wrench replacement program will simply disappear.

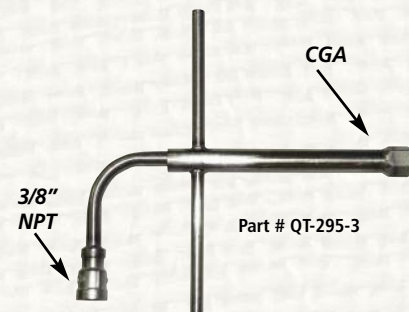
Features

- Tee Handle Eliminates Need for Separate Wrenches
- 1/2" Flare Dewar Connection
- Quick Spin On and Off Dewar Connection
- Polished Stainless Steel Construction
- No More Lost Wrenches
- No More Wasted Time Searching for Wrenches

Wear protective equipment to ensure safety when filling. Please see section 27A



Part # QT-295-2



Part # QT-295-3

Dewar Liquid Filling Connection

Part #	Description
QT-295-2	CGA 295 – Inert Gas 45° angle
QT-440-2	CGA 440 – Oxygen 45° angle
QT-295-3	CGA 295 – Inert Gas 90° angle
QT-440-3	CGA 440 – Oxygen 90° angle

**Hose not included.*

Fitting, CGA 295 & CGA 440 90° SS Elbow

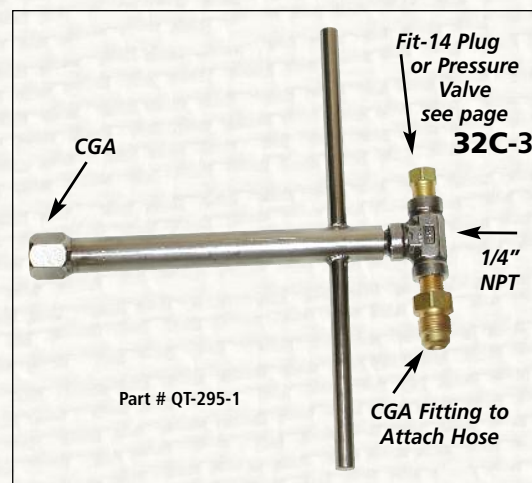


Part # FIT-CRY90

Fitting, CGA 295 & CGA 440 90° Stainless Steel Elbow

Part #	Description
FIT-CRY90	Fitting, CGA 295, 90° Stainless Steel Elbow, Flare Nut x Male Flare Thread
FIT-CRY90-440	Fitting, CGA 440, 90° Stainless Steel Elbow, Flare Nut x Male Flare Thread

Dewar Liquid Filling Connection



Part # QT-295-1

Dewar Liquid Filling Connection

Part #	Description
QT-295-1	CGA 295 – Inert Gas
QT-440-1	CGA 440 – Oxygen

**Hose not included.*



Liquid Hoses

1/4" NPT Safety Pressure Relief



1/4" NPT Safety Pressure Relief

Part #	Description
PR-22	22 PSI
PR-35	35 PSI
PR-50	50 PSI
PR-75	75 PSI
PR-100	100 PSI
PR-125	125 PSI
PR-150	150 PSI
PR-175	175 PSI
PR-200	200 PSI
PR-230	230 PSI
PR-235	235 PSI
PR-350	350 PSI
PR-375	375 PSI
PR-400	400 PSI
PR-425	425 PSI
PR-450	450 PSI
PR-500	500 PSI
PR-700	700 PSI

Custom Pressure Settings Also Available – Give Customer Service a Call

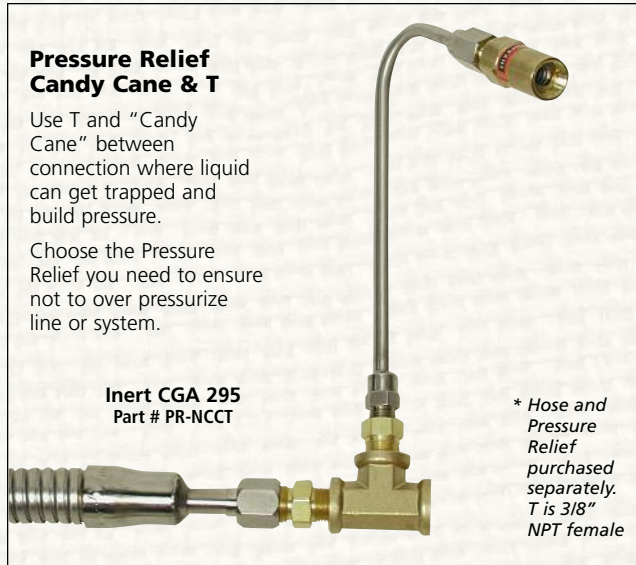
Candy Cane Relief

Pressure Relief Candy Cane & T

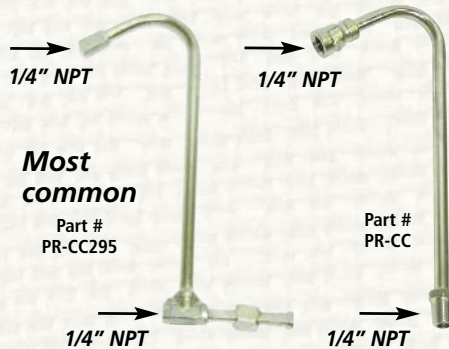
Use T and "Candy Cane" between connection where liquid can get trapped and build pressure.

Choose the Pressure Relief you need to ensure not to over pressurize line or system.

Inert CGA 295
Part # PR-NCCT



** Hose and Pressure Relief purchased separately. T is 3/8" NPT female*



Most common

Part # PR-CC295

Part # PR-CC

Part #	Description
*PR-CC295	For Nitrogen Candy Cane & T Pressure Relief Kit 1/4" NPT Female CGA 295
*PR-CC440	For Oxygen Candy Cane & T Pressure Relief Kit 1/4" NPT Female CGA 440
PR-CC	Candy Cane with 1/4" NPT Female for Pressure Relief
PR-CCT	Candy Cane & T for Pressure Relief without CGA Hookup 3/8" NPT Female
FIT-M38M14	Adapter to 1/4" NPT
FIT-M38M38	Adapter to 3/8" NPT
FIT-M38M12	Adapter to 1/2" NPT

** Pressure Reliefs – Need to order desired Pressure Reliefs Separately. Not included with Candy Cane or T.*

For Pressure Reliefs that Attach Directly to Dewars, see page 32F-2

Complete Transfill Unit for Dewars

Unit Includes

- Candy Cane / T / 3/8" NPT
- 6 Foot Armored Hose and
- Quick Turn CGA Fill Tool



P. B. Fill Adapters Available See Page 8A-12

Part No.	Description
CRY-MO	Oxygen CGA-440
CRY-MI	Inert CGA-295

Pressure Relief purchased separately. Photo shown with Optional Pressure Relief and NPT Adapter. Choose NPT Adapter from above

Liquid Nitrogen Multi Withdrawal Manifold



Provides Multiple Cryogenic Liquid Outlets from a Single Cryogenic Dewar

Liquid Nitrogen Multi Withdrawal Manifold
Pt # MWM-NI

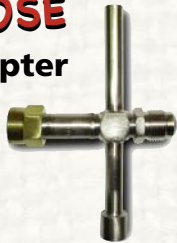


Liquid Nitrogen Multi Withdrawal Manifold with Only 2 Valves
Pt # MWM-NI-2V

Rev: 1/26/16

Fill Adapters with Relief Valve | Quick Connect

CHOOSE Adapter



Fill Adapters with Relief Valve

Part #	Description
LCFH-SR-100	Single Fill Adapter w/ Relief Valve 100 psi
LCFH-SR-125	Single Fill Adapter w/ Relief Valve 125 psi
LCFH-SR-150	Single Fill Adapter w/ Relief Valve 150 psi

► **Choose One Quick Connect Coupler**



Part #	Description
LCFH-2WR-100	2-Way Fill Adapter w/ Relief Valve 100 psi
LCFH-2WR-125	2-Way Fill Adapter w/ Relief Valve 125 psi
LCFH-2WR-150	2-Way Fill Adapter w/ Relief Valve 150 psi

► **Choose Two Quick Connect Coupler**



Part #	Description
LCFH-3W	3-Way Fill Adapter (must be used with Hose Candy Cane Pressure Relief Pt # PR-CC440440)

► **Choose Three Quick Connect Coupler**



Part #	Description
LCFH-2W	2-Way Fill Adapter (must be used with Hose Candy Cane Pressure Relief Pt # PR-CC440440)

► **Choose Two Quick Connect Coupler**



In-line Swivel Assembly for CGA-440

440 Male x Female
Part # CGA-440ILS-FM
or
440 Male x Male
Part # CGA-440ILS-MM



Hose Coupler CGA-295 Inert

1/2" X 1/2" Flare
Part # CGA-295COU



Hose Coupler CGA-440 Oxygen

5/8" X 5/8" Flare
Part # CGA-440COU

Quick Connect Couplers



Pt # QFL-PB

Puritan Bennett Style

Quick Connector Coupler



Pt # QFL-CII

Cryo II, CMT, Pulsair Style

Quick Connector Coupler



Pt # QFL-C

C A, MVE, Caire Style

Quick Connector Coupler



Pt # QFL-ML

Linde Style

Quick Connector Coupler



Pt # QFL-PIM

Perry, Invacare, Mobilaire Style

Quick Connector Coupler



Pt # QFL-PX

Penox Style

Quick Connector Coupler

Why use a Swivel Coupler?



Helps alignment of fill tool to attach to tank for filling – by easily swiveling hose with fill adapter.



2 Way Fill Adapters 3 Way Fill Adapters

3 Way Complete units come with pressure relief adapter with 100 PSI relief.

When using 2 Way or 3 Way Fill Adapters pressure reliefs must be used to keep trapped gas from building pressure in the line. See page 19A-10.



2 Way Fill Adapter
Quick Connect
Coupler



Puritan
Bennett
Style



Pt # QFL-PB

Linde
Style



Pt # QFL-ML

Puritan Bennett Style and Linde Style

2 Way Fill Adapter Kit

Fill Adapter Kit Part #	Pressure Relief	Fill Adapter	Quick Connect	Quick Connect
Pt # LCFH-2W100-ML/PB	100 psi	2 Way Pt # LCFH-2WR	Puritan Bennett	Linde
Pt # LCFH-2W125-ML/PB	125 psi	2 Way Pt # LCFH-2WR	Puritan Bennett	Linde
Pt # LCFH-2W150-ML/PB	150 psi	2 Way Pt # LCFH-2WR	Puritan Bennett	Linde

2 Way Fill Adapter Complete Unit with Hose

Complete Unit Part #	Hose Length	Fill Adapter	Quick Connect	Quick Connect	Pressure Relief*
Pt # LCFH-2W100-ML/PB-CH48	48"	2 Way Pt # LCFH-2WR	Puritan Bennett	Linde	100 psi
Pt # LCFH-2W100-ML/PB-CH60	60"	2 Way Pt # LCFH-2WR	Puritan Bennett	Linde	100 psi
Pt # LCFH-2W100-ML/PB-CH72	72"	2 Way Pt # LCFH-2WR	Puritan Bennett	Linde	100 psi
Pt # LCFH-2W100-ML/PB-CH120	120"	2 Way Pt # LCFH-2WR	Puritan Bennett	Linde	100 psi

2 Way Fill Adapter Complete Unit w/ Hose & Swivel Coupler

Complete Unit w/ Swivel Part #	Hose Length	Fill Adapter	Quick Connect	Quick Connect	Pressure Relief*
Pt # LCFH-2W100-ML/PB-CH48SW	48"	2 Way Pt # LCFH-2WR	Puritan Bennett	Linde	100 psi
Pt # LCFH-2W100-ML/PB-CH60SW	60"	2 Way Pt # LCFH-2WR	Puritan Bennett	Linde	100 psi
Pt # LCFH-2W100-ML/PB-CH72SW	72"	2 Way Pt # LCFH-2WR	Puritan Bennett	Linde	100 psi
Pt # LCFH-2W100-ML/PB-CH120SW	120"	2 Way Pt # LCFH-2WR	Puritan Bennett	Linde	100 psi

3 Way Fill Adapter Quick Connect Coupler

Puritan Bennett Style, Linde Style and C A, MVE, Caire Style



included
with 3 Way

Medical Oxygen

3 Way Fill Adapter Kit

Fill Adapter Kit Part #	Fill Adapter	Quick Connect	Quick Connect	Quick Connect
Pt # LCFH-3W-ML/C/PB	3 Way Pt # LCFH-3W	Puritan Bennett	Linde	C A, MVE & Caire



Pt # QFL-PB



Pt # QFL-ML



Pt # QFL-C

When using 3 Way Fill Adapter transfer line needs to have a pressure relief to allow captured liquid when it expands to release in atmosphere.

Kit

3 Way Fill Adapter Complete Unit with Hose and Pressure Relief



Complete Unit Part #	Hose Length	Fill Adapter	Quick Connect	Quick Connect	Quick Connect	Pressure Relief*
Pt # LCFH-3W100-ML/C/PB-CH48	48"	3 Way Pt # LCFH-3W	Puritan Bennett	Linde	C A, MVE & Caire	100 psi
Pt # LCFH-3W100-ML/C/PB-CH60	60"	3 Way Pt # LCFH-3W	Puritan Bennett	Linde	C A, MVE & Caire	100 psi
Pt # LCFH-3W100-ML/C/PB-CH72	72"	3 Way Pt # LCFH-3W	Puritan Bennett	Linde	C A, MVE & Caire	100 psi
Pt # LCFH-3W100-ML/C/PB-CH120	120"	3 Way Pt # LCFH-3W	Puritan Bennett	Linde	C A, MVE & Caire	100 psi

When using 2 Way or 3 Way Fill Adapters pressure reliefs must be used to keep trapped gas from building pressure in the line. See page 19A-10.

Kit

3 Way Fill Adapter Complete Unit w/ Hose, Swivel Coupler & Pressure Relief



Complete Unit Part #	Hose Length	Fill Adapter	Quick Connect	Quick Connect	Quick Connect	Pressure Relief*
Pt # LCFH-3W100-ML/C/PB-CH48SW	48"	3 Way Pt # LCFH-3W	Puritan Bennett	Linde	C A, MVE & Caire	100 psi
Pt # LCFH-3W100-ML/C/PB-CH60SW	60"	3 Way Pt # LCFH-3W	Puritan Bennett	Linde	C A, MVE & Caire	100 psi
Pt # LCFH-3W100-ML/C/PB-CH72SW	72"	3 Way Pt # LCFH-3W	Puritan Bennett	Linde	C A, MVE & Caire	100 psi
Pt # LCFH-3W100-ML/C/PB-CH120SW	120"	3 Way Pt # LCFH-3W	Puritan Bennett	Linde	C A, MVE & Caire	100 psi

When using 2 Way or 3 Way Fill Adapters pressure reliefs must be used to keep trapped gas from building pressure in the line. See page 19A-10.

* To change Pressure Relief change Pt # 100 to Pressure Needed.

Rev. 12/21/15

Safety Cryogenic Gloves and Clothing

Waterproof Cryo-Gloves

Features

- Superior thermal protection
- Comfortable / Lightweight / Excellent dexterity
- Breathable / Stay-dry lining
- Protection from splashes of cryogenic liquids
- Extra comfort when working in cryogenic atmospheres for extended periods



Elbow Cryogenic Glove

See Section 27A for full line of Cryogenic Gloves.

Applications

- LN atmospheres and environments
- Refrigerated liquid baths
- Cryo freezers
- Cryogenic grinding

Part #	Standard Cryo-Gloves
Elbow Length – 17 1/4" - 19 1/4" (440-485 mm)	
CRY-GL1820-S	Cryo-Glove Elbow Length – Small
CRY-GL1820-M	Cryo-Glove Elbow Length – Medium
CRY-GL1820-L	Cryo-Glove Elbow Length – Large
CRY-GL1820-XL	Cryo-Glove Elbow Length – Extra Large

Cryogenic Apron

Features

- Superior thermal protection
- Waterproof
- Comfortable / Lightweight / Breathable
- Warmth and splash protection for torso and legs
- Adjustable straps at neck and waist
- Side release buckles for quick on/off

Applications

- Cold rooms / walk-in freezers
- Blast freezers
- Delivery and filling of cryogenic liquids
- HAZMAT® cryo liquid spill response

Environments

- Cryo preservation facilities
- Cryogenic liquid producers
- Clinical laboratory
- Bio-Medical
- Blood Banks
- Frozen food processing
- Pharmaceutical



Cryo-Apron * shown: cryo-gloves Pt # CRY-IG18GWP-L

Part #	Description
CRY-AP36	Cryo-Apron – 36" / 90.85 cm
CRY-AP42	Cryo-Apron – 42" / 100.4 cm
CRY-AP48	Cryo-Apron – 48" / 121.75 cm
CRY-AP54	Cryo-Apron – 54" / 137.0 cm

Face Shield and Head Gear



Face Shield and Head Gear

Part #	Description
CRY-FS1	Face Shield
CRY-HG1	Head Gear



Drivers Cryo-Industrial Gloves

Thermal protection in a rugged, abrasion resistant outer shell.

Part #	Waterproof Cryo-Industrial Gloves*
Wrist Style	
CRY-IG12WWP-M	Wrist – 12" Medium – Waterproof Industrial Glove
CRY-IG12WWP-L	Wrist – 12" Large – Waterproof Industrial Glove
CRY-IG12WWP-XL	Wrist – 12" Extra Large – Waterproof Industrial Glove
Gauntlet Style	
CRY-IG18GWP-M	Gauntlet – 18" Medium – Waterproof Industrial Glove
CRY-IG18GWP-L	Gauntlet – 18" Large – Waterproof Industrial Glove
CRY-IG18GWP-XL	Gauntlet – 18" Extra Large – Waterproof Industrial Glove

*Gauntlet style has velcro to tighten the glove on.