

Dewar CGA Restraints

*Ratermann Manufacturing, Inc.
prides itself as a leader in safety!*



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Dewar Tape & Paste

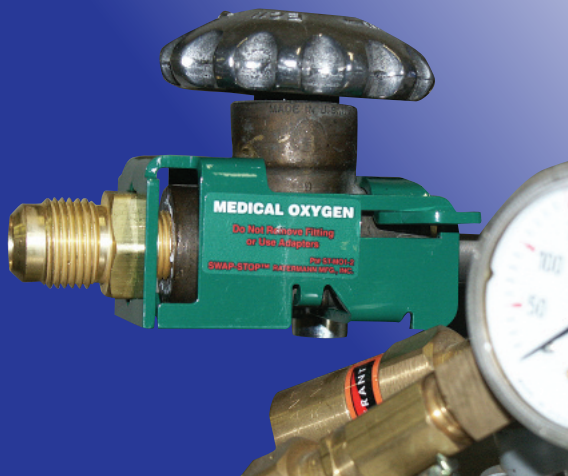
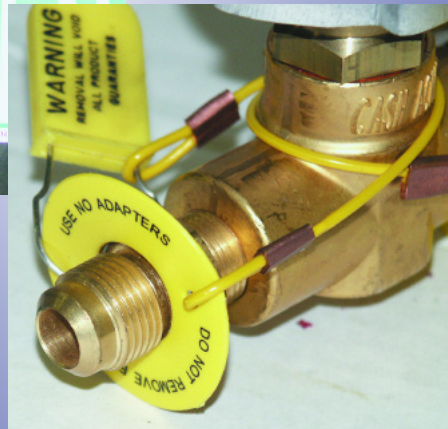
- 360° Wrap Around Medical and Industrial Tape **1C-2, 4, 5, 6**
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Restraints

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RESTRAINTS FOR INDUSTRIAL GAS & LIQUID DEWAR FITTINGS

How They Work

CGA fitting restraints hold the fitting in place with a blocking device attached to the valve with an industrial grade stainless steel cable, which is locked on by a tamper-evident seal. (sold separately)



360° WRAP AROUND TAPE



Gas Body Labels Also Available

Tamper-Evident Seal
Pt # CGP PS1
(sold separately)

WARNING!
This cylinder is equipped with fittings for SPECIFIC SERVICE. Changing of fittings should only be performed by AUTHORIZED PERSONNEL with full knowledge of intended service.

NEW

CGA - Red Warning Label
Pt # DL-10

Industrial Dewar 360° Gas Tape		Medical Dewar 360° Gas Tape	
Part #	Description	Part #	Description
DG-TC	Carbon Dioxide	DG-MEDO	Medical Oxygen
DG-TO	Oxygen	DG-MEDN	Medical Nitrogen
DG-TN	Nitrogen	DG-MEDNO	Medical Nitrous Oxide
DG-TA	Argon	DG-MEDCO2	Medical Carbon Dioxide

RETROFIT KITS

FOR OXYGEN, CO², and NITROUS OXIDE DEWARS

OXYGEN DEWAR		
For:	Part #	Order Qty.
Liquid Valve	CGP-3	1 ea.
Vent	CGP-3	1 ea.
540 CGA Fittings	CGP-3	1 ea.
TAMPER SEAL	CGP-PS1	3 ea.
WARNING LABEL	DL-10	1 ea.
COMPLETE BOTTLE 3-VALVE (liquid, gas, & vent valve)		
RETROFIT KIT FOR OXYGEN, CO², AND NITROUS OXIDE		
Part Number	Description - Oxygen	
CGP-23PK1	Package contains one kit	
CGP-23PK5	Package contains five kits	
Part Number	Description - CO ²	
CGP-25PK1	Package contains one kit	
CGP-25PK5	Package contains five kits	
LIQUID FILL FITTING FOR CGA-622 AND CGA-624		
CGP-5	CGA-622 Liquid CO ²	
CGP-6	CGA-624 Liquid Nitrous Oxide	



Oxygen
CGA 540 Restraints
Pt # CGP-3



Oxygen
Vent & Liquid Fitting Restraints
Pt # CGP-3

FOR INERT GAS DEWARS

ARGON & NITROGEN DEWAR		
For:	Part #	Order Qty.
Liquid Valve	CGP-2	1 ea.
Vent	CGP-2	1 ea.
580 CGA Fittings	CGP-4	1 ea.
TAMPER SEAL	CGP-PS1	3 ea.
WARNING LABEL	DL-10	1 ea.
COMPLETE BOTTLE 3-VALVE (liquid, gas, & vent valve)		
RETROFIT KIT FOR INERT GAS		
Part Number	Description	
CGP-13PK1	Package contains one kit	
CGP-13PK5	Package contains five kits	



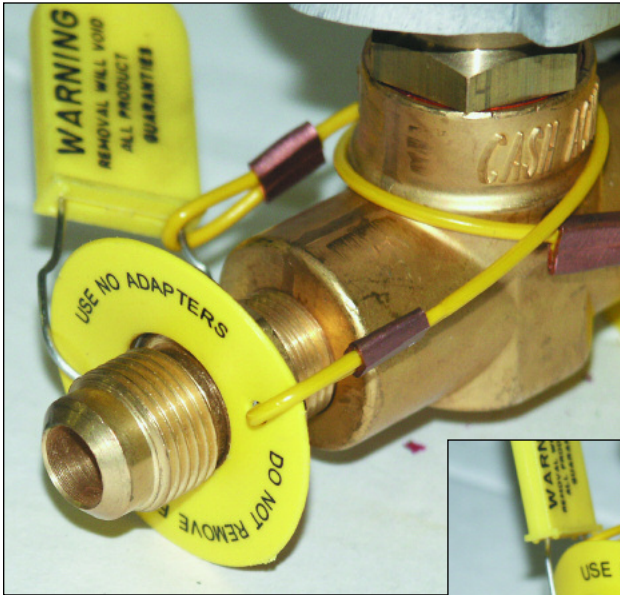
Argon & Nitrogen
CGA 580 Restraints
Pt # CGP-4



Inert
Vent & Liquid Fitting Restraints
Pt # CGP-2

TAMPER-EVIDENT RESTRAINTS

RETROFIT KITS FOR SILVER BRAZED FITTING



Part # CGP-SB4

VALVE OUTLET CONNECTIONS

For industrial cylinders only, an option to install tamper-resistant devices was revised to require that such devices, if used, also be tamper-evident.

In other words, someone who overrides the protective features of a device should not be able to reinstall the device without clear visual evidence of what has happened. For medical cylinders, the use of tamper-resistant / evident devices is not prohibited but will not suffice for compliance with the bulletin's guidelines. Such devices, if used for medical cylinders, should only be considered as safeguards *in addition* to the methods prescribed. As an example, Silver Brazed Fittings.

HOW THEY WORK

CGA fitting restraints hold the fitting in place with a stainless steel blocking device attached to the valve with an industrial grade stainless steel cable, which is locked on by a tamper-evident seal with addition of warning information disc.



Reduce the Risk or Damage to Dewar from Customer Trying to Remove Fitting

These kits can also be used as an additional safeguard on medical containers with Silver Brazed fittings to help prevent attempted removal.

FOR INERT GAS DEWARs

ARGON & NITROGEN DEWAR

For:	Part #	Order Qty.
Liquid Valve	CGP-SB2	1 ea.
Vent	CGP-SB2	1 ea.
580 CGA Fittings	CGP-SB4	1 ea.
TAMPER SEAL	CGP-PS1	3 ea.
WARNING LABEL	DL-11	1 ea.

COMPLETE BOTTLE 3-VALVE RETROFIT KIT FOR INERT GAS

Part Number **CGP-SB13**

FOR OXYGEN DEWARs OR CO²

OXYGEN DEWAR

For:	Part #	Order Qty.
Liquid Valve	CGP-SB3	1 ea.
Vent	CGP-SB3	1 ea.
540 CGA Fittings	CGP-SB3	1 ea.
TAMPER SEAL	CGP-PS1	3 ea.
WARNING LABEL	DL-11	1 ea.

COMPLETE BOTTLE 3-VALVE RETROFIT KIT FOR OXYGEN or CO²

Part Number **CGP-SB23**

RESTRAINTS

THE ALTERNATIVE TO SILVER BRAZING

RATERMANN MANUFACTURING'S **SWAP-STOP™**

**for Dewar's in Medical Service
Designed to Meet SB-26
and FDA Requirements**

In response to the CGA's Revised SB-26 – 2001 Safety Bulletin, Ratermann Manufacturing introduces the SWAP-STOP™. A cost effective means of addressing the problem of the removal of Vent, Gas, and Liquid fittings on DOT-4LC/TC-4LM cryogenic liquid cylinders.

Ratermann Manufacturing's SWAP-STOP™ is the cost effective alternative to silver brazing! The SWAP-STOP™ not only deters and helps prevent removal of the CGA connection; it is also designed to allow authorized personnel within the gas supplier's organization the ability to change out worn fittings in only minutes.

Color Coded with Product Identification and Warning Information

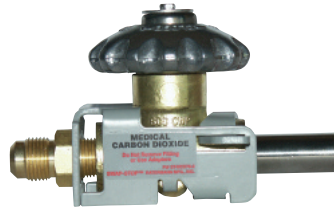
Kits Include: Locking Device and Swap-Stop for all 3 Valves on your Dewar
Sized by Hex OD



SWAP-STOP™
is made out of stainless steel with a powder coated finish.
PATENT PENDING



Medical Tape Available, see pages 1C-2 and 1C-5



**For Medical Nitrogen Gas Dewars
Swap-Stop Kit for Liquid & Vent Fittings 3/4"**

NITROGEN DEWAR				
For:	Hex OD	Part #	Order Qty.	
Liquid Valve	3/4"	ST-MN34-2	1 ea.	
Vent	3/4"	ST-MN34-2	1 ea.	
580 CGA Fittings Gas	1 1/8"	ST-MN118-2	1 ea.	
Lock Assembly		ST-LA	3 ea.	
COMPLETE BOTTLE 3-VALVE RETROFIT KIT FOR NITROGEN GAS				
Part Number		ST-MNK34-2		

**For Medical Carbon Dioxide Dewars
Swap-Stop Kit for Vent Fittings 7/8" Hex OD**

CARBON DIOXIDE DEWAR				
For:	Hex OD	Part #	Order Qty.	
Liquid Valve	7/8"	ST-MCD78-2	1 ea.	
Vent	7/8"	ST-MCD78-2	1 ea.	
Gas	7/8"	ST-MCD78-2	1 ea.	
Lock Assembly		ST-LA	3 ea.	
COMPLETE BOTTLE 3-VALVE RETROFIT KIT FOR CO2				
Part Number		ST-MCDK78-2		

**For Medical Nitrous Oxide Dewars
Swap-Stop Kit for Vent Fitting 7/8" Hex OD**

NITROUS OXIDE DEWAR				
For:	Hex OD	Part #	Order Qty.	
Liquid Valve	7/8"	ST-MNO78-2	1 ea.	
Vent	7/8"	ST-MNO78-2	1 ea.	
Gas	7/8"	ST-MNO78-2	1 ea.	
Lock Assembly		ST-LA	3 ea.	
COMPLETE BOTTLE 3-VALVE RETROFIT KIT FOR NITROUS OXIDE				
Part Number		ST-MNOK78-2		

**For Medical Oxygen Dewars
Swap-Stop Kit for Liquid Fitting 1" Hex OD**

OXYGEN DEWAR				
For:	Hex OD	Part #	Order Qty.	
Liquid Valve	1"	ST-MO1-2	1 ea.	
Vent	1"	ST-MO1-2	1 ea.	
540 CGA Fittings Gas	1"	ST-MO1-2	1 ea.	
Lock Assembly		ST-LA	3 ea.	
COMPLETE BOTTLE 3-VALVE RETROFIT KIT FOR OXYGEN				
Part Number		ST-MOK1-2		

**For Medical Nitrogen Gas Dewars
Swap-Stop Kit for Liquid & Vent Fittings 7/8"**

NITROGEN DEWAR				
For:	Hex OD	Part #	Order Qty.	
Liquid Valve	7/8"	ST-MN78-2	1 ea.	
Vent	7/8"	ST-MN78-2	1 ea.	
580 CGA Fittings Gas	1 1/8"	ST-MN118-2	1 ea.	
Lock Assembly		ST-LA	3 ea.	
COMPLETE BOTTLE 3-VALVE RETROFIT KIT FOR NITROGEN GAS				
Part Number		ST-MNK78-2		

**For Medical Carbon Dioxide Dewars
Swap-Stop Kit for Vent Fittings 3/4" Hex OD**

CARBON DIOXIDE DEWAR				
For:	Hex OD	Part #	Order Qty.	
Liquid Valve	7/8"	ST-MCD78-2	1 ea.	
Vent	3/4"	ST-MCD34-2	1 ea.	
Gas	7/8"	ST-MCD78-2	1 ea.	
Lock Assembly		ST-LA	3 ea.	
COMPLETE BOTTLE 3-VALVE RETROFIT KIT FOR CO2				
Part Number		ST-MCDK34-2		

**For Medical Nitrous Oxide Dewars
Swap-Stop Kit for Vent Fitting 3/4" Hex OD**

NITROUS OXIDE DEWAR				
For:	Hex OD	Part #	Order Qty.	
Liquid Valve	7/8"	ST-MNO78-2	1 ea.	
Vent	3/4"	ST-MNO34-2	1 ea.	
Gas	7/8"	ST-MNO78-2	1 ea.	
Lock Assembly		ST-LA	3 ea.	
COMPLETE BOTTLE 3-VALVE RETROFIT KIT FOR NITROUS OXIDE				
Part Number		ST-MNOK34-2		

**For Medical Oxygen Dewars
Swap-Stop Kit for Liquid Fitting 7/8" Hex OD**

OXYGEN DEWAR				
For:	Hex OD	Part #	Order Qty.	
Liquid Valve	7/8"	ST-MO78-2	1 ea.	
Vent	7/8"	ST-MO78-2	1 ea.	
540 CGA Fittings Gas	1"	ST-MO1-2	1 ea.	
Lock Assembly		ST-LA	3 ea.	
COMPLETE BOTTLE 3-VALVE RETROFIT KIT FOR OXYGEN				
Part Number		ST-MOK78-2		

TAMPER PROOF DEVICE

GENERANT Tamper Proof Device

for DOT-4LC/TC-4LM Liquid Cylinders

DESCRIPTION

The connection system is supplied for installation into the outlet ports of most gas use, vent and fill valves on a cryogenic liquid cylinder. The system is a one-piece assembly consisting of a CGA fitting/clutch mechanism permanently mounted in a stainless steel locking bracket. Once installed, this system **cannot be removed without rendering the CGA outlet connection unusable.**

FEATURES AND BENEFITS

- Easily installs on most existing threaded cylinder valves using standard hex wrench.
- NPT Male connection supplied with factory applied PTFE thread sealant tape
- Suitable for both Industrial and Medical Applications
- CGA connections manufactured to industry standards
- Zero External Leakage
- Cleaned and Packaged for Oxygen Service
- Optional Integral Anti-Back-Flow Check Valve
- OEM Endorsed



Easy Installation

Generant Tamper Proof Devices

Part #	Description	Per Dewar Head
TPG-540	CGA 540 (Gas use) – Oxygen	1
TPG-440	CGA 440 (Vent & Liquid use) – Oxygen	2
TPG-295	CGA 295 (Vent & Liquid use) – Inert	2
TPG-580	CGA 580 (Gas use) – Inert	1
TPG-320	CGA 320 (Gas, Liquid & Vent use) – CO2	3
TPG-326	CGA 326 (Gas, Liquid & Vent use) – N2O	3

360° WRAP AROUND TAPE



Medical
Dewar 360°
Gas Tape

VALVE OUTLET CONNECTIONS

For both industrial and medical cylinders, an option to silver brazing or welding or using connections that are integral to the valve has been added: threaded or socket connections may be “attached by other means to the valve body in a manner that prevents removal or would render the connection or valve body unusable if removal was attempted or accomplished.”

DEWAR TAPE & PASTE

360° WRAP AROUND TAPE



How to Use

- Roll off length needed and cut to desired size
- Easy peel off backing

Medical 3 1/2" Dewar 360° Gas Tape

Part #	Description
DG-MEDO	Medical Oxygen
DG-MEDN	Medical Nitrogen
DG-MEDNO	Medical Nitrous Oxide
DG-MEDCO2	Medical Carbon Dioxide

Industrial 3" Dewar 360° Gas Tape

Part #	Description
DG-TC	Carbon Dioxide
DG-TO	Oxygen
DG-TN	Nitrogen
DG-TA	Argon



Medical Tape Design to meet FDA Regulation for Medical Dewars Comes in 3 1/2" H x 250 Foot Rolls

TEFLON PASTE AND TAPE

Oxygen Safe, Chemically Inert, and Odor Free

FORMULA-8 is used by thousands of welding and general supply companies and equipment manufacturers worldwide.

IDEAL APPLICATIONS FOR TEFLON PASTE

- Oxygen cylinders to eliminate leaks
- Oxygen systems below 125° C
- Valves on bottled gases



Teflon Paste

Part #	Description	72+	24+	1+
Oxy-Teflon 8	Teflon Paste	13.54	15.40	17.35

Green Oxygen Teflon Threaded Seal Tape



Green Teflon Tape

Part #	Description
TAPE-2-GREEN	1/2" x 520" Green Teflon Tape
TAPE-34-GREEN	3/4" x 520" Green Teflon Tape

Teflon Tape

Part #	Description
Tape-1	1/4" Teflon Tape
Tape-2	1/2" Teflon Tape
Tape-34	3/4" Teflon Tape
Tape-3	1" Teflon Tape