

# 4A | Carbon Dioxide Products



## RATERMANN MANUFACTURING, INC.

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## Aluminum Cylinder Carry Handles – Choose your Color



Catalina® Style Pt # CCH-AC-BK  
Luxfer® Style Pt # CCH-AL-BK

Note: All colors shown are printed representations. Actual colors may vary.

## Aluminum Cylinder Carry Handles

Plastic Valve Protection Carry Handles are available to fit Catalina® and Luxfer® brand aluminum cylinders. We stock carry handles and retaining rings for both manufacturers cylinders. For 15 and 20 lb. Aluminum cylinders. Can be installed without removing valve.

### For 15 & 20 lb. Aluminum Cylinders

Part #	Description
CCH-AC-xx	Catalina® Style Carry Handle
CCH-AC-R	Retaining Ring for Catalina® Style Carry Handles
CCH-AL-xx	Luxfer® Style Carry Handle
CCH-AL-R	Retaining Ring for Luxfer® Style Carry Handles
CCH-AS-xx	Thread On Style Carry Handle

### Ordering Information:

Replace xx in the part number with the color codes below  
Black – BK, Blue – B, Red – RR, Yellow – Y, Green – GR, Orange – O

## Installing Carry Handles for Aluminum Cylinder



### Cylinder Safety Conversion Kit



Handle & snap ring with steel cylinder adapter. Allows addition of plastic carrying handle to steel cylinders.

**Valve must be removed to install handle.**

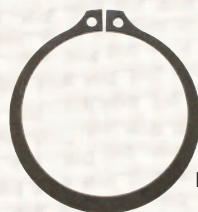
(Adapter comes with set screws.)

Part #	Description
CCH-118	Conversion Kit 1.9"

### Cylinder Retaining Rings for Carry Handles



Catalina® Style  
Pt # CCH-AC-R



Luxfer® Style  
Pt # CCH-AL-R

### Cylinder Retaining Rings

Part #	Description
CCH-AC-R	Retaining ring for Catalina®
CCH-AL-R	Retaining ring for Luxfer®



Installing carry handle valve protector



### Retaining Ring Plier

For all cylinder handle retaining rings.

Part #	Description
CCH-P1	Retaining Ring Plier



### CO2 Valve Conversion Kit

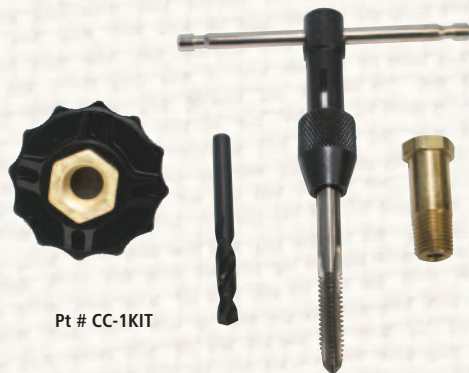
Converts in 2 Minutes!

For aligning and tapping special thread into valve outlet, so that the Ring-Seal 3 piece insert Unit can be screwed in.

The kit makes this simple and easy, while the valve stays on the cylinder. The chips are blown out by the gas in the cylinder.

#### Kit includes:

- Special Drill (needed only on some valves)
- Special Tap
- Guide Collar
- Grip Nut
- Ring Grip Wheel
- Special Tag Handle
- Allen Driver
- Thread Chaser



Pt # CC-1KIT

### Small Cylinder Status Tags Economy Paper Tags

**MOST COMMON**

**MOST PREFERRED BY CUSTOMERS**

Elastic Tie  
Pt # CB-1EPTI



#### Small Economy Paper Tags

Part # for Pkg. of 1000	Description	Part # for Pkg. of 100
CB-EPTPK1000	String Tie	(Pt # CB-EPTPK100)
CB-1EPTIPK1000	Elastic Tie	(Pt # CB-1EPTIPK100)

String Tie  
Pt # CB-EPT

The String Tie does not stretch or loop around the cylinder.

### Cylinder Connections For Permanent Leak Proof Cylinder Connection

#### CARBON DIOXIDE

- Hand Tight Lasts for Life of Valve
- Self-Sealing Connections Designed for Leak-Proof Dependability
- No Service Calls



Replacement O-Ring for CC-1  
Part # CC-1-OR



Seals – Permanent ABC Units  
Part # CC-1



Economy Seal  
Part # CC-P1



O-Ring for CC1-STEM  
Part # CC1-STEM-OR



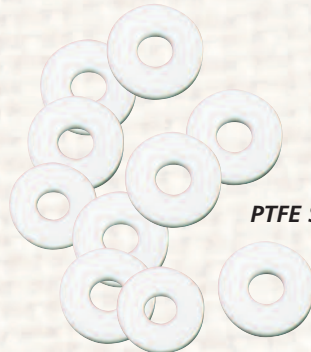
Stems – 103 SF 2 1/2" - 1/4" pipe  
Part # CC1-STEM



Grip-Nut 103N  
Part # CC1-NUT



### PTFE Seals for CO2



PTFE Seal



#### PTFE Seals for CO2

Description	Part # for Pack of 100	Part # Pack of 10
PTFE Seals for CO2	CO2-TWSEALPK100	CO2-TWSEALPK10
FIBRE, 320/330	PH-320WFPK100	PH-320WFPK10

### Find your Leaks Fast and Easily

with the Extending Tube to Get in the Hard to Reach Areas.

**Ratermann's Oxygen Safe Valve Leak Check**

Pt # LC-80Z

Pt # LC-1GAL

Rev: 1/15/16, 2/13/14

# Aluminum Carbon Dioxide Cylinders | Valve Plugs

## Aluminum Carbon Dioxide Cylinders for Industrial Gas

Clean, corrosion-resistant, lightweight cylinders are ideal for dispensing carbonated soft drinks, beers, lagers and other beverages.

### IDEAL FOR DISPENSING CARBONATED SOFT DRINKS, BEERS, LAGERS AND OTHER BEVERAGES.

#### Features

- Lightweight, high strength 6061-T6 aluminum alloy improves cylinder system portability while reducing the rigors of material handling.
- Corrosion-resistant interior and exterior
- Brushed exterior provides a durable, low-maintenance finish for years of dependable service.
- Optional carrying handle offers superior valve protection.

#### Manufactured to DOT and TC requirements

- U.S. Department of Transportation (DOT) 3AL
- Transport Canada (TC) 3ALM
- Every cylinder inspected and tested by DOT- and TC-authorized independent agency
- Cycle-tested in excess of 100,000 cycles at service pressure
- Minimum burst pressure tested to 2.5 times service pressure without failure

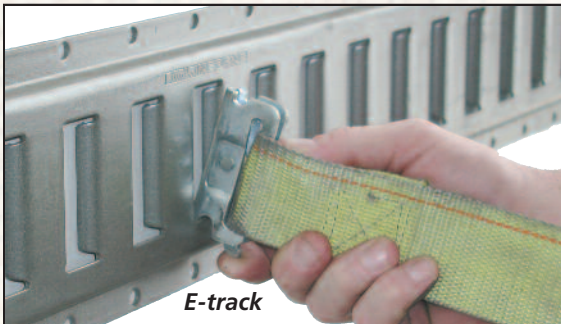


Models available include  
2.5 lbs.  
5 lbs.  
10 lbs.  
15 lbs.

PART NO.	SERVICE PRESSURE		CO <sub>2</sub> MAX. CAP.		N <sub>2</sub> CAPACITY		OUTSIDE DIAMETER		OVERALL LENGTH		EMPTY WEIGHT		MIN. INTERNAL VOLUME		MIN. WATER WEIGHT		THREAD SIZE
	PSI	BAR	LBS	KG	CU.FT	LITERS	IN.	MM	IN.	MM	LBS	KG.	CU.IN	LITERS	LBS	KG	
CYL-CO2-2.5	1800	124	2.5	1.13	7.2	204	4.38	111.2	10.4	264	3.3	1.5	102	1.7	3.68	1.67	.750-16 UNF-2B
CYL-CO2-5	1800	124	5.0	2.30	14.5	411	5.25	133.4	14.0	356	6.2	2.8	205	3.4	7.40	3.36	1.125-12 UNF-2B
CYL-CO2-10*	1800	124	10.0	4.50	28.9	818	6.89	175.0	16.4	417	12.9	5.9	408	6.7	14.73	6.68	1.125-12 UNF-2B
CYL-CO2-15*	1800	124	15.0	6.80	43.3	1226	6.89	175.0	22.8	579	16.8	7.6	612	10.0	22.09	10.02	1.125-12 UNF-2B

Note: Cylinder colors may vary from photo.

\* 10 lb. and 15 lb. have the option of either a Carry Handle (add "-H") or Cap and Collar (add "-CC").



## E-Track & E-Track Restraints

#### E-Track & E-Track Restraints

Part #	Description
TSK-E12	12' E-Track Strap, Standard
TSK-E20	20' E-Track Strap, Standard

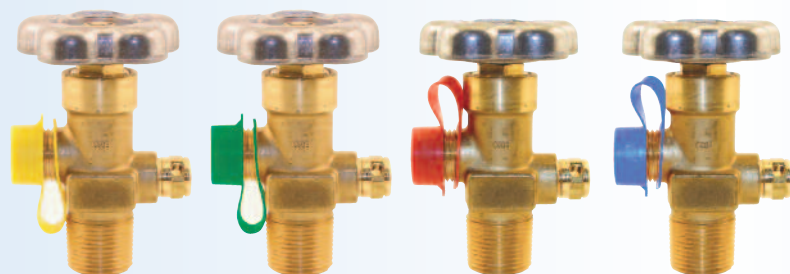
#### E-Track Sections for Truck Trailers

Part #	Description
TS-ETRACK	10' Sections
TS-ETRACK60	5' Sections
TS-ENDCAP	End Cap

For more E-Track & E-Track Restraints see page 18A-2

## CGA 320 Valve Plugs | Carbon Dioxide

#### Dust Cap with Strap



CGA 320 Dust Cap – Yellow Pt # PM-C12-YPK1000 Pt # PM-C12-YPK100	CGA 320 Dust Cap – Green Pt # PM-C12-GRP1000 Pt # PM-C12-GRP100	CGA 320 Dust Cap – Red Pt # PM-C12-RPK1000 Pt # PM-C12-RPK100	CGA 320 Dust Cap – Blue Pt # PM-C12-BPK1000 Pt # PM-C12-BPK100
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CGA Plugs are available in Packs of 1,000 (PK1000) and Packs of 100 (PK100)

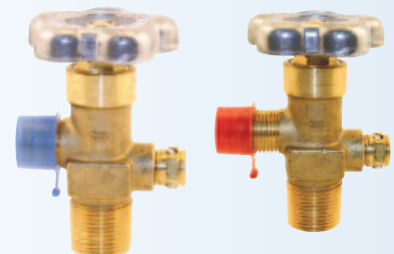
#### Flexible Thread Protector for CO<sub>2</sub>

- Male Thread Valves



CGA 320 Dust Cap – Red  
Pt # PM-2PK1000  
Pt # PM-2PK100

#### Rigid Plastic with Pull Tab for Carbon Dioxide



CGA 320 Male Cover – Blue Pt # PF-HB1PK1000 Pt # PF-HB1PK100	CGA 320 Male Cover – Red Pt # PF-HR1PK1000 Pt # PF-HR1PK100
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## Cylinder Boots



Part # CO2-CDB-AR7



Part # CO2-CDB-S07

## Cylinder Boots

The Cylinder Boot is made out of black molded plastic.

Slip onto round bottom CO2 tanks to convert to upright standing cylinders.



Part # CO2-C8

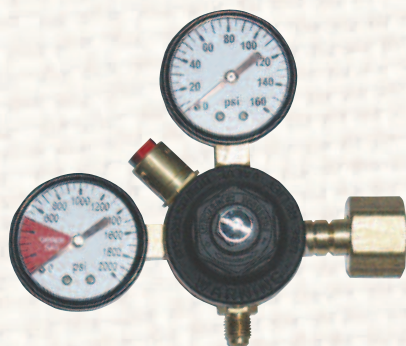
Allows most older, round bottom cylinders to free stand

Part Number	Diameter	Rim	Cylinder Type
CO2-CDB-A07	7.25" Dia	Octagonal	Aluminum Cylinders (flat bottom)
CO2-CDB-AR7	7.25" Dia	Round Rim	Aluminum Cylinders (flat bottom)
CO2-CDB-S07	7.25" Dia	Octagonal	Steel Cylinders (round bottom)
CO2-CDB-SR7	7.25" Dia	Round Rim	Steel Cylinders (round bottom)
CO2-CDB-A08	8" Dia	Octagonal	Aluminum Cylinders (flat bottom)
CO2-CDB-SR8	8" Dia	Round Rim	Steel Cylinders (round bottom)

## Soda Regulator

For Single Cylinder Use – No Shutoff Valve

0-160 P.S.I.



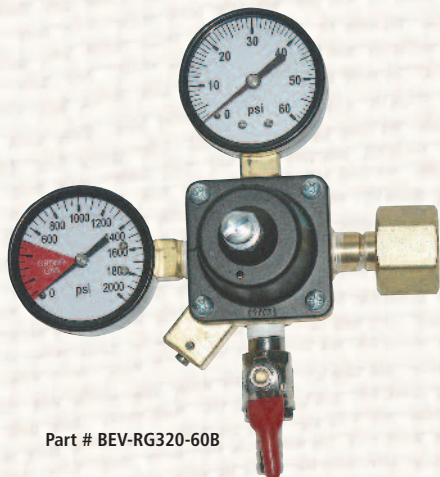
Part # BEV-RG320-160S

### Soda Regulator

Part #	Description
BEV-RG320-160S	Soda Regulator

### Replacement Gauge for CO2 Regulator

Part #	Description
BEV-PG2LH14-2000	2" Dial, 0-2000 PSI 1/4" LH (left hand)



Part # BEV-RG320-60B

## Beer Regulator

For Single Cylinder Use – Includes Shutoff Valve

0-60 P.S.I.

### Beer Regulator

Part #	Description
BEV-RG320-60B	Beer Regulator



Caps Painted Black  
6 1/2" – 3 1/8-11



Caps Unpainted  
6 1/2" – 3 1/8-11

## High Pressure Cylinder Caps

### INSIDE CAP CYLINDER THREADS

**Fine Thread:**  
11 threads to an inch



**Coarse Thread:**  
7 threads to an inch.  
Cap I.D. is 3 1/4



### Unpainted High Pressure Cylinder Caps

Part #	Description
8FRNP	Fine Thread
8CRNP	Coarse Thread

### Painted – Fine Thread Most Common

Part #	Color
8FRNP-08	White
8FRNP-02	Black
8FRNP-06	Gray
8FRNP-MGR	Green Medical

### Painted – Coarse Thread

Part #	Color
8CRNP-08	White
8CRNP-02	Black
8CRNP-06	Gray

Rev: 1/18/16

# Residual Pressure Cylinder Valve

## Residual Pressure Cylinder Valve

### Benefit

Backup of product into CO2 tank is stopped by the Check Valve in the cylinder valve.

### For Nitrogen – Helium - Argon

Part #	Description
SHW-GRPV58061-32	CGA 580, 3/4 NGT, Plug Safety 3360 PSI
SHW-GRPV58061-35	CGA 580, 3/4 NGT, Plug Safety 3775 PSI
SHW-GRPV58061-38	CGA 580, 3/4 NGT, Plug Safety 4000 PSI

### For Carbon Dioxide

Part #	Description
SHW-GRPV32061-28	3/4" NGT, Tapered Thread, Brass 3000 PSI
SHW-GRPV32061-32	3/4" NGT, Tapered Thread, Brass 3360 PSI
SHW-GRPV32061-35	3/4" NGT, Tapered Thread, Brass 3775 PSI
SHW-GRPV32061-38	3/4" NGT, Tapered Thread, Brass 4000 PSI
SHW-GRPV32051-28LX	1 1/8 UNF Straight Thread 3000 PSI Lexan Handwheel
SHW-GRPV32051-28LX-75	3/4 UNF Straight Thread 3000 PSI Lexan Hand wheel



# What Does a RPV Cylinder Valve Do?

The concept of a RPV (Residual Pressure Valve) Cylinder Valve is to retain a small positive pressure of gas in a gas cylinder. (RPV's) sometimes called Positive Flow Valves, are typically of brass construction. RPV's are high pressure cylinder valves with a built in check valve that retains approximately 30-50 psig in the cylinder. This prevents backflow contamination when cylinder pressure gets below the customer's system pressure. RPV's also prevent atmospheric contamination if a customer leaves the valve open when the cylinder is empty.

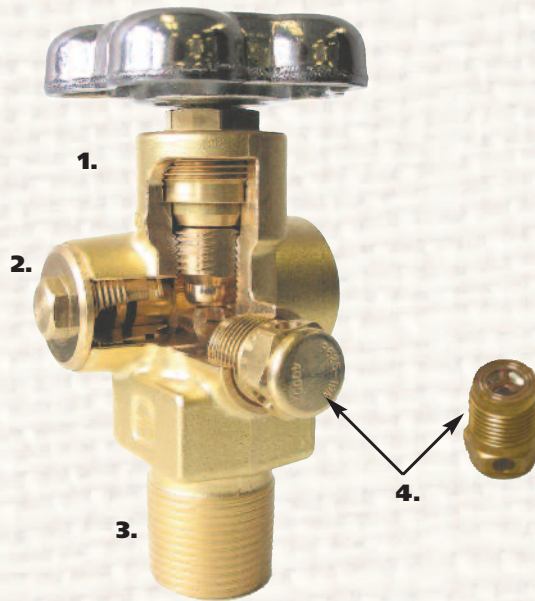
### Residual Pressure Cylinder Valve Features

Sherwood GRPV valves are designed to retain approximately 30 to 50 psig pressure, maintaining the integrity of the cylinder contents against contaminants, even if the valve is left open.

The unique combination of innovative design and quality construction offers protection of cylinder contents without the expense of a time-consuming purge and clean cycle.

1. Durable forged brass body, precisely machined internal components and design elements meet the most stringent International valve performance standards. Automated assembly and testing processes ensure exceptional quality. All Sherwood GRPV valves are 100% leak tested.
2. Dynamic front piston seal design is not in direct contact with the flow passage during filling.
3. Inlet and Outlet thread configurations are available for a broad spectrum of Customer, Country and Code specifications.
4. The unitized plug design of the Pressure Relief Device (PRD) provides excellent flow characteristics. Optical Character Recognition technology utilized to verify appropriate burst disc pressure rating.

Sherwood's exclusive "webbed washer" design protects burst disc during handling and bulk shipment.



STANDARDS CONFORMANCE	
CGA V-9	Standard for Gas Cylinder Valves
CGA S1.1	Standard for Pressure Relief Devices
CGA V-1	Compressed Gas Cylinder Valve Outlet and Inlet Specifications
ISO 10297	International Standard for Cylinder Valves Design Specifications
ISO 15996	International Standard for Residual Pressure Valves Design Specifications
EN 849	International Standard for Cylinder Valves Design Specifications
AS2473	Australian Standard for Compressed Gas Cylinder Valves
TPED	Transportable Pressure Equipment Directive Modules B & D

DESIGN SPECIFICATIONS		
Maximum Working Pressure	6,000 PSIG	413 BAR
Burst Pressure	15,000 PSIG	1,035 BAR
Operating Temperature	Min: -50°F Max: 130°F	-45°C 55°C
Storage Temperature	Min: -65°F Max: 155°F	-54°C 68°C
Leak Rate Internal/External	1X10 <sup>-3</sup> atm cc/s	
Minimum Cycle Life	2,000 Cycles	
Cv Flow Factor	Standard:	.28
	CO2 / Manifold:	.50

Hoses for the Following Gases



These pigtails are constructed with a Polyester low temperature tube and cover. Each assembly is tested to 1 1/2 times MAWP. Branded with part number, size and MAWP. Meets SAE 100R7 specifications.

**Style Specifications**  
 Not recommended for oxygen service. Meets SAE 100R7 specs

- Liner: Low temperature Polyester
- Reinforcement: Polyester braid
- Cover: Pin-pricked Polyester
- Temperature: -65° F to +212° F



For Part # QF-SH320 Fill Tool Option see page 4A-8

**CO2 Thermoplastic Low-Temp Pigtails | 3,000 PSI**  
**Ratermann Mfg. TPL Family of Hoses**

3000 PSIG MAWP Rated – Plated Carbon Steel End Fittings

**Standard Hose without Armor Casing**

OUTLET		INLET		1/4" NPT Female x 1/4" NPT Female	
Hose Length	Part #	Hose Length	Part #	Hose Length	Part #
24"	TPL-24F14	24"	TPL-24F14	24"	TPL-24F14
36"	TPL-36F14	36"	TPL-36F14	36"	TPL-36F14
48"	TPL-48F14	48"	TPL-48F14	48"	TPL-48F14
72"	TPL-72F14	72"	TPL-72F14	72"	TPL-72F14

OUTLET		INLET		1/4" NPT Female x 1/4" NPT Male	
Hose Length	Part #	Hose Length	Part #	Hose Length	Part #
24"	TPL-24F14M14	24"	TPL-24F14M14	24"	TPL-24F14M14
36"	TPL-36F14M14	36"	TPL-36F14M14	36"	TPL-36F14M14
48"	TPL-48F14M14	48"	TPL-48F14M14	48"	TPL-48F14M14
72"	TPL-72F14M14	72"	TPL-72F14M14	72"	TPL-72F14M14

OUTLET		INLET		1/4" NPT Male x 1/4" NPT Male	
Hose Length	Part #	Hose Length	Part #	Hose Length	Part #
24"	TPL-24M14	24"	TPL-24M14	24"	TPL-24M14
36"	TPL-36M14	36"	TPL-36M14	36"	TPL-36M14
48"	TPL-48M14	48"	TPL-48M14	48"	TPL-48M14
72"	TPL-72M14	72"	TPL-72M14	72"	TPL-72M14

OUTLET		INLET		1/4" NPT Female x 1/4" NPT Female JIC 37 Swivel	
Hose Length	Part #	Hose Length	Part #	Hose Length	Part #
24"	TPL-24F14FJIC14S	24"	TPL-24F14FJIC14S	24"	TPL-24F14FJIC14S
36"	TPL-36F14FJIC14S	36"	TPL-36F14FJIC14S	36"	TPL-36F14FJIC14S
48"	TPL-48F14FJIC14S	48"	TPL-48F14FJIC14S	48"	TPL-48F14FJIC14S
72"	TPL-72F14FJIC14S	72"	TPL-72F14FJIC14S	72"	TPL-72F14FJIC14S

OUTLET		INLET		1/4" NPT Male x 1/4" NPT Female JIC 37 Swivel	
Hose Length	Part #	Hose Length	Part #	Hose Length	Part #
24"	TPL-24M14FJIC14S	24"	TPL-24M14FJIC14S	24"	TPL-24M14FJIC14S
36"	TPL-36M14FJIC14S	36"	TPL-36M14FJIC14S	36"	TPL-36M14FJIC14S
48"	TPL-48M14FJIC14S	48"	TPL-48M14FJIC14S	48"	TPL-48M14FJIC14S
72"	TPL-72M14FJIC14S	72"	TPL-72M14FJIC14S	72"	TPL-72M14FJIC14S

**Custom Length Hoses – Thermoplastic Low-Temp Pigtails 3,000 PSI**

**ORDER CUSTOM LENGTH HOSE**

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

<b>PTFE Hose</b> TPL	Length Hose <input type="checkbox"/> Inches Pt # _____	<b>INLET</b> Choose Your Hose End Pt # 1/4" NPT Male..... Pt # M14 1/4" NPT Female..... Pt # F14 1/4" Female..... Pt # FJIC14S JIC 37 Swivel	<b>OUTLET</b> Choose Your Hose End Pt # 1/4" NPT Male..... Pt # M14 1/4" NPT Female..... Pt # F14 1/4" Female..... Pt # FJIC14S JIC 37 Swivel
	TPL —	<input type="text"/>	<input type="text"/>

# Quick Fill Connector for CO2 | Paint Ball 2 Lever Fill Station

## Quick Fill Connector for CO2

Easy Connecting and Disconnecting from Cylinder



Part # QF-SH320



**EASY TO REPLACE**

**SEAL**  
for **FILLING**  
**CO2 TANKS**

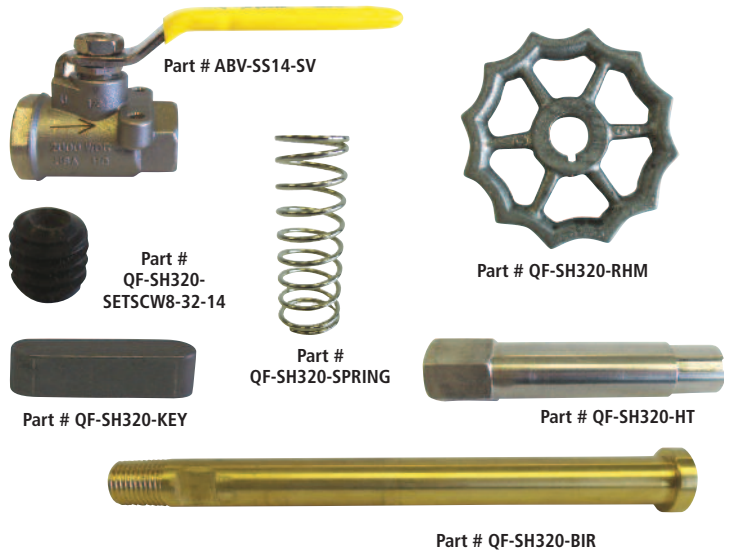


Seal  
Part # CC-1

### Quick Fill Connector for Carbon Dioxide

Part #	Description
QF-SH320	Carbon Dioxide – Hand Spin On

### Replacement Parts for Pt # QF-SH320



Part # ABV-SS14-SV

Part # QF-SH320-SETSCW8-32-14

Part # QF-SH320-SPRING

Part # QF-SH320-KEY

Part # QF-SH320-RHM

Part # QF-SH320-HT

Part # QF-SH320-BIR

## Hose Reel for Thermoplastic Hoses

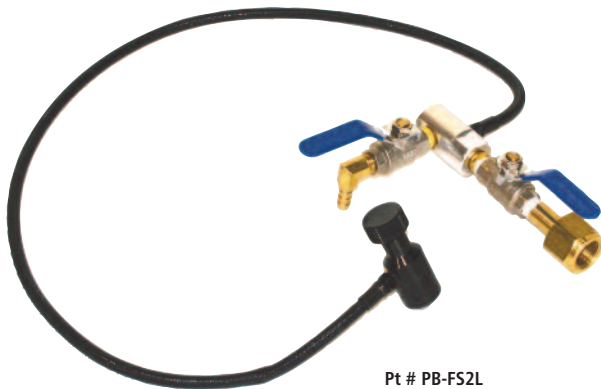
Hose Reel to be Installed on Liquid CO2 Delivery Vehicles

BEV-REEL with 1/2" full-flow Super Swivel with low temp Buna seal and FDA grease. Spring retractable heavy duty painted reel will handle up to 100 feet of 1/2" hose. 3000 PSIG Rated.



Part # BEV-REEL

## Paint Ball 2 Lever Fill Station



Pt # PB-FS2L

Fill stations are designed to fill your constant air (C.A.) bottles (3 1/2 oz., 7 oz., 10 oz. and 20 oz. bottles) with liquid carbon dioxide (CO2). Please note that the CO2 is liquid; the bottles are designed to hold the designated amount in liquid form.

If you do not use a bulk tank with a siphon tube, you will probably transfer gas CO2, and this will change the weight of the tank. The bottles are designed to accommodate approximately 65% of their volume in liquid CO2. The remaining space is unfilled, allowing for the expansion of the CO2 as temperature convert into gas.

### WARNING:

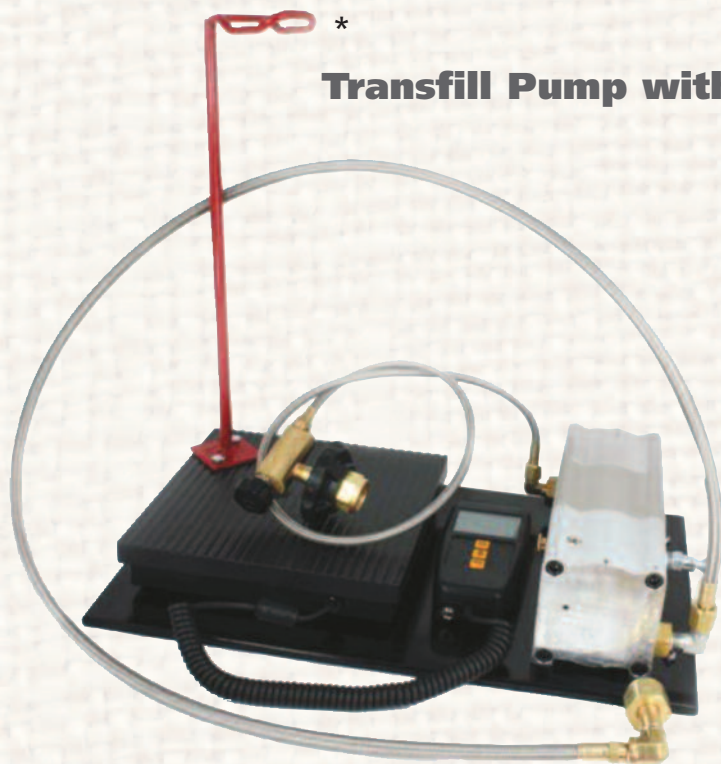
- Always use a scale to transfer the correct volume of CO2.
- DO NOT overfill your C.A. bottle to try for a few more shots.
- Secure your bulk tank so it will not fall/bump into other objects.

### Paint Ball Fill Station

Pt #	Description
PB-FS2L	Paint Ball 2 Lever Fill Station



## Transfill Pump with Scale | Dry Ice Machine



### Transfill Pump with Scale

Pt # TFPS-CO2

#### Features

- Liquefied Carbon Dioxide and Nitrous Oxide fill station
- Complete system, includes pump, scale and hose sets
- Excellent for on-demand filling of customers cylinders
- Patented double-ended pump with 9:1 ratio, fills at rate of 4 lbs. per minute
- Momentary fill button ensures operator attention
- "Economizer" fill valve bleeds pressure to cylinder while maintaining pressure in pump
- Lube free operation
- Powered by shop air or remaining pressure in spent cylinders

#### Specifications

Part Number: TFPS-CO2

Drive Air Required: 90-140 psi

Drive Ratio: 9:1

Fill Rate: 4 lbs/min

Pump: Liquid gases only

Design: Aluminum Body – Heat Treated Stainless Steel Piston

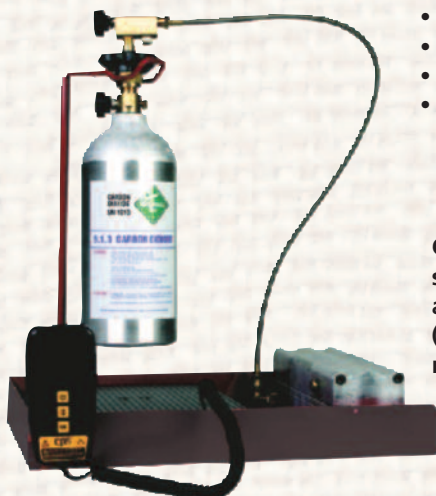
#### Applications

- HVAC service cylinders
- Nitrous Oxide cylinders
- Paintball cylinders
- Class 2 fire extinguishers

#### Accessories

- Cylinder hanging stand\* for filling small cylinders (shown)
- Drive air kit
- CO2 drive air kit
- Pin valve depressor
- Pump only

CO2 pump with scale, inlet hose and outlet hose (drive hose not included)



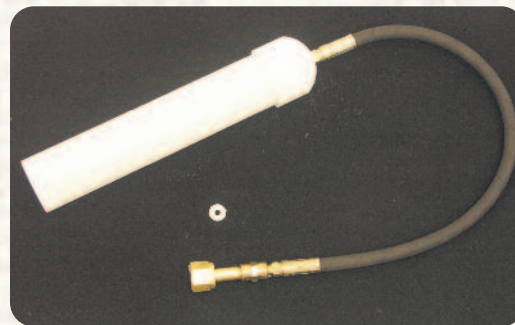
### Dry Ice Machine for Cryogenic Dewars Dry Ice, on Demand, When you Need it.

You will need a Dewar (350psi Cryotank) of Liquid CO2.

Attach to the Liquid outlet of your Bulk CO2 tank using an Adjustable wrench. Open the cylinder valve and direct the nozzle into the Dry Ice Bag (sold separately).

One way to pack dry ice is by packing it into a small cardboard box. Pack it down with a 2x4, and tape it shut. Put the cardboard box into your cooler or insulated container.

Makes Dry Ice snow at the rate of 1 + lbs. every two minutes.



Part # DIM-DW1

## DRY ICE, ON DEMAND, AS YOU NEED IT.

### Dry Ice Machine for High Pressure Tanks

CO2 tank needs to be a liquid withdrawal tank that has a dip tube inside the tank so liquid comes out to produce dry ice.

Attach to the 0 to 70 lb (high pressure) Dip Tube/Siphon CO2 Cylinder using an Adjustable wrench. Open the cylinder valve and direct the nozzle into the Dry Ice Bag (sold separately).

Another way to use your dry ice, is to spread a couple layers of newspaper on a hard surface. Dump the Dry Ice from the bag or container onto the newspaper. Wrap your dry ice like a burrito in the newspaper and tape it shut. Place in cooler.

Makes Dry Ice snow at the rate of 1 lb. every two minutes.



Part # DIM-HP1

### Dry Ice Accessories

#### Catch / Storage Bag Pt # DIM BAG

This is a dual purpose bag designed to be use as a "Catch" bag for your Dry Ice increasing efficiency and which can also be used to store your dry ice maker when you are not using it. Two layers of Heavy Duty "Duck" canvas that allow CO2 Gas to escape while holding dry ice inside.

- 16" wide by 26" long, with draw string.

## Carbon Dioxide Piping | Manifold

### Beverage Manifold Accessories

#### Automatic Manifold for Beverage Gases

Fountain and keg service are the profit center of many bars, restaurants, and concession stands. When CO2 cylinders run dry, so do the drinks that are being served. This will almost always occur during peak serving times. This unit allows for uninterrupted gas service which eliminates all down time between cylinder changeouts and flat drinks. The unit is compact and works with standard beverage regulators and is the ideal alternative to costly bulk supply systems.

\* Regulator not included

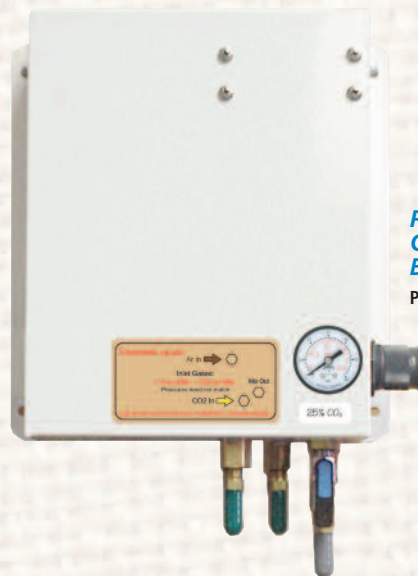
#### Beverage Manifold 100 PSI Switch Over

Part #	Description	Switch Over Pressure
MAN-BEV-2-100	100 PSI Manifold – 2 cylinder	100 psi
MAN-BEV-4-100	100 PSI Manifold – 4 cylinder	100 psi
MAN-BEV-6-100	100 PSI Manifold – 6 cylinder	100 psi
MAN-RASO	Optional Accessory – Alarm	

#### Beverage Manifold 200 PSI Switch Over

Part #	Description	Switch Over Pressure
MAN-BEV-2-200	200 PSI Manifold – 2 cylinder	200 psi
MAN-BEV-4-200	200 PSI Manifold – 4 cylinder	200 psi
MAN-BEV-6-200	200 PSI Manifold – 6 cylinder	200 psi
MAN-RASO	Optional Accessory – Alarm	

For Regulators please see section 24A



Proportional Gas Mixer for Beverage Gases  
Part # MAN-PGM-1

Pt # MAN-PGM-1- - - - -

(Example: MAN-PGM-1-580A-75-320-25, Mixer for Argon-75% & CO2-25%)

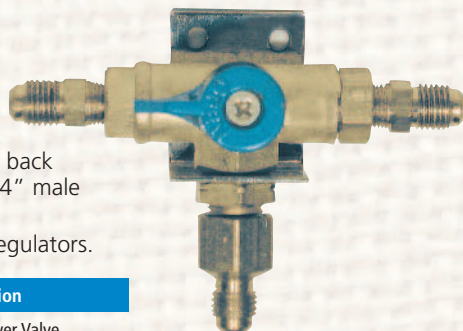
- Select Gas, CGA's and Mix %
- |                                       |                                      |
|---------------------------------------|--------------------------------------|
| <input type="checkbox"/> 580A _____ % | <input type="checkbox"/> 320 _____ % |
| <input type="checkbox"/> 580N _____ % | <input type="checkbox"/> 540 _____ % |
| <input type="checkbox"/> 580H _____ % | <input type="checkbox"/> 350 _____ % |

Flow rate is for 300 PSI

#### Low Pressure Changeover Valve

Keep backup supply ready for fast changeover.

- Has 1/4" male flare back check inlets, and 1/4" male flare outlet.
- Requires two CO<sub>2</sub> regulators.



Part #	Description
CO2-CV	Changeover Valve

#### For Carbon Dioxide Piping

#### The Performance of Plastic with the Strength of Metal

- 3/8", 1/2", 3/4" and 1" sizes
- Operating Pressures 200 psi at 73° F, 160 psi at 140° F

Inert gas distribution system designed to be absolutely leak-proof, installed quickly and easily, and maintained cost-effectively.

The entire Duratec system can be easily and quickly installed, modified or expanded without the need for specialized equipment.



please see section 22A

We build tough products for tough environments®

## QUICK DISCONNECT for CO<sub>2</sub> TANK!

#### CO2 Plug & Socket



Male  
Pt # CO2-MC

Female  
Pt # CO2-FQ



## CO2 Transfer Hoses 450 PSIG

A lightweight, yet durable rubber hose manufactured specially for the demands of Carbon Dioxide



Transfer hoses are manufactured specifically for the demanding requirements of CO2 liquid and vapor transfer. Unlike rubber hydraulic hose that is constructed with carbon steel reinforcing, these hoses are reinforced with stainless steel braids to resist carbonic acid – the result of CO2 and moisture combination. In addition, our pricked cover solves the problem of bubbling that the covers of hydraulic hoses have experienced. These hoses will be dramatically more flexible in CO2 transfer than standard rubber hoses due to a specially blended tube rated to minus 65° F. The two-braid construction also offers much better kink resistance than comparable single braid products.

### SPECIFICATIONS

#### Liquid / Vapor CO2 Transfer Hose

**Tube:** Special Neoprene blend rated for -65° F

**Reinforcement:** Two stainless steel braids

**Cover:** Special Neoprene blend. Black with blue Mylar

**Temperature:** -65° F to +180° F

**Pressure Range:** 450 PSIG

**Branding:** Blue Mylar

**CGA Fittings:** Brass sleeve, nut, and dust caps available

**Other Fittings Available:** Female NPT brass bar-stock fitting with aluminum crimp collar

Part #	I.D. (In.)	O.D. (In.)	Max WP PSIG	Min Burst PSIG	Weight Per Foot
CTH1	1	1.58	450	2250	0.83
CTH112	1 1/2	2.08	450	2250	1.19
CTH2	2	2.60	450	2250	1.90

### CO2 Transfer Hoses – 450 PSIG

#### Female NPT x Female NPT

##### 1" I.D. - 1" FNPT x 1" FNPT

Hose Length	Part #
10'	CTH-1ID-F1BH120
20'	CTH-1ID-F1BH240

##### 1 1/2" I.D. - 1 1/2" FNPT x 1 1/2" FNPT

Hose Length	Part #
10'	CTH-112ID-F112BH120
20'	CTH-112ID-F112BH240

##### 2" I.D. - 2" FNPT x 2" FNPT

Hose Length	Part #
10'	CTH-2ID-F2BH120
20'	CTH-2ID-F2BH240

### Custom Length Hose – CO2 Transfer Hoses

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

### ORDER CUSTOM LENGTH HOSE

CO2  
Transfer  
Hose

CTH

CTH –

#### Hose I.D. Size

Pt # 1 .....1 Inch  
Pt # 112 ....1 1/2 Inches  
Pt #2 .....2 Inches




ID



#### Choose Your Hose Ends Pt #

1" FNPT x 1" FNPT .....Pt # F1  
1 1/2" FNPT x 1 1/2" FNPT .....Pt # F112  
2" FNPT x 2" FNPT .....Pt # F2




BH



#### Length of Hose in Inches

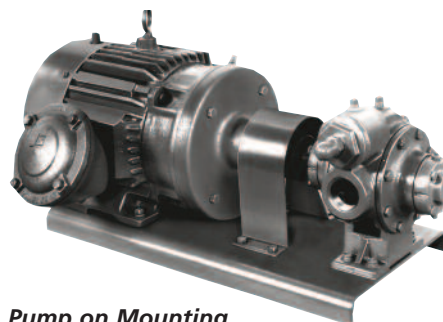
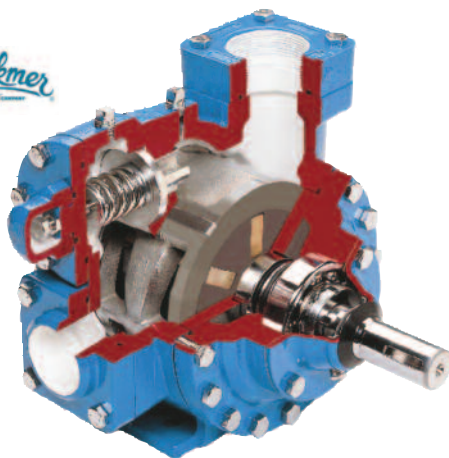
Pt # \_\_\_\_\_




### Carbon Dioxide Pump

Positive  
Displacement  
Pumps and Oil-Free  
Gas Compressors  
for Liquid CO2  
Applications

- Recirculation
- Processing
- Bulk Transfer
- Truck & Transport
- Railcar Unloading
- Vapor Recovery



Pump on Mounting  
base plate with Motor.

Part #	Description
CO2P-114-BPM3H	Carbon Dioxide Pump 1 1/4" on a Base Plate with Motor

# Carbon Dioxide Hose Products

## Wall Box Nipple with 6-Hole Flange



**CO2  
Wall  
Outlet**

Pt # BEV-WBNIPPLE

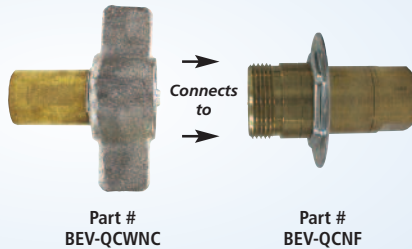
### CO2 Wall Outlet

Part #	Description
BEV-WMBOX	Box Fill Flush Mount

## Carbon Dioxide Fittings

### Fill Gun Quick Connector / Dry Break Wing Nut Style

(Standard Nitrile seals are rated to -40° F. Contact Ratermann for information on parts with special order seals rated below -40° F.)



Part #  
BEV-QCWNC

Part #  
BEV-QCNF

Part #	Description
--------	-------------

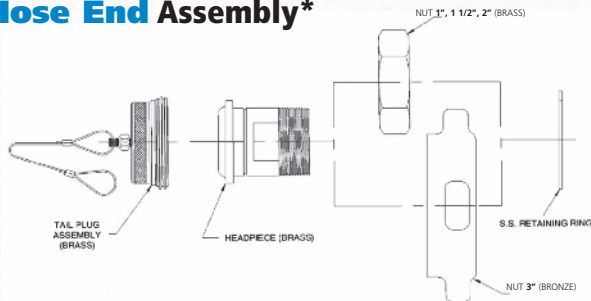
### Bulk Crimp Couplings

BEV-BCC	1/2" Hose x -10 (5/8) Female JIC Flare End
---------	--

### Crimping System

BEV-CRIMPER	Crimper & Stand-Up Frame
BEV-HANDPUMP	Dual Stage Hand Pump for Crimper w/ .670 Die for 1/2" Hose

## Carbon Dioxide Hose End Assembly\*



Part Number	Size
BHEA-CO2-100	1"
BHEA-CO2-150	1 1/2"
BHEA-CO2-200	2"
BHEA-CO2-300	3"

\* with O-Ring, please see page 19B-33

**For more Carbon Dioxide Bulk Fittings see pages 19B 32-35**

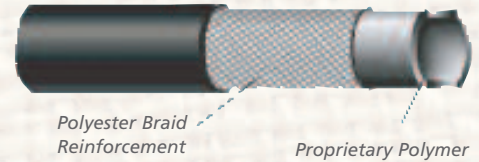
## Food Grade LCO2 Transfer Hose for CO2 & Beverage Applications

**RATERMANN'S** LCO2 compatible hose will help you meet your **FOOD SAFETY MODERNIZATION ACT (FSMA)** requirements.

Our thermoplastic hose is specially designed for the transfer of liquid and gaseous carbon dioxide (CO2) for beverage applications. It is commonly used on small bulk delivery trucks as

well as flexible lines from the restaurant wall-box to the liquid cylinders. The hose is specially formulated to perform well in temperatures as low as -40°F, and the proprietary core tube is plasticizer free and FDA compliant. Our unique bonding process guarantees excellent kink resistance, and the proprietary "Tuff-Skin" cover provides for superior handling and abrasion resistance.

Blue Perforated Proprietary Polyurethane Cover



Polyester Braid Reinforcement

Proprietary Polymer

### Test Results

- CGA 6.5 Compliant
- CGA 6.6 Cold Bend Test Compliant
- NFPA 55 Compliant
- Leachate Resistant to Liquid CO2

### Construction

- Tube - Proprietary Polymer
- Reinforcement - Polyester Braid
- Cover - Proprietary Polyurethane ("Tuffskin")
- Cover Color - Blue, Perforated

### Features

- Plasticizer Free core tube
- Core tube is FDA compliant
- 100% Bonded Construction
- Excellent kink resistance
- Non-stick, low co-efficient of friction cover (75% better)
- Superior abrasion resistant cover (67% better)

### Temperature

- -40°F to + 150°F (-109°F Intermittent)
- -40°C to + 66°C (-78°C Intermittent)
- (Delta) Working length @ rated WPSI: ±2% max.

### Specifications

#### Nominal I.D.:

1/2 inch  
13 mm

#### Maximum O.D.:

0.810 inches  
20 mm

#### Minimum Bend Radius:

3.0 inches  
76 mm

#### Maximum Working Pressure:

2,000 PSI  
138 bar

#### Weight:

lbs. per 100 ft = 14.8  
kg per 100 m = 22.0

Part #	Description
BEV-F-250R	1/2" ID Food Grade Hose 250 feet on Reel
BEV-F-1200FJIC58	1/2" ID Food Grade Hose 100 ft. 5/8 Female JIC Ends
BEV-F-900FJIC58	1/2" ID Food Grade Hose 75 ft. 5/8 Female JIC Ends
BEV-F-780FJIC58	1/2" ID Food Grade Hose 60 ft. 5/8 Female JIC Ends
BEV-F-600FJIC58	1/2" ID Food Grade Hose 50 ft. 5/8 Female JIC Ends
BEV-F-1200M12	1/2" ID Food Grade Hose 100 ft. 1/2 Male NPT Ends
BEV-F-900M12	1/2" ID Food Grade Hose 75 ft. 1/2 Male NPT Ends
BEV-F-780M12	1/2" ID Food Grade Hose 60 ft. 1/2 Male NPT Ends
BEV-F-600M12	1/2" ID Food Grade Hose 50 ft. 1/2 Male NPT Ends
BEV-F-VT360FJIC58	1/2" ID Food Grade Hose 30 ft. 5/8" F JIC Ends with Vent Tube
BEV-F-VT300FJIC58	1/2" ID Food Grade Hose 25 ft. 5/8" F JIC Ends with Vent Tube
BEV-F-VT180FJIC58	1/2" ID Food Grade Hose 15 ft. 5/8" F JIC Ends with Vent Tube
BEV-F-VT120FJIC58	1/2" ID Food Grade Hose 10 ft. 5/8" F JIC Ends with Vent Tube
BEV-F-VT60FJIC58	1/2" ID Food Grade Hose 5 ft. 5/8" F JIC Ends with Vent Tube

## Hose Reel for Thermoplastic Hoses

### Hose Reel to be Installed on Liquid CO2 Delivery Vehicles

BEV-REEL with 1/2" full-flow Super Swivel with low temp Buna seal and FDA grease. Spring retractable heavy duty painted reel will handle up to 100 feet of 1/2" hose. 2000 PSIG Rated.



Part # BEV-REEL

# Carbon Dioxide Accessories

**Assorted Flexible Tubing, Fittings, & Reels for all CO2 Requirements**



## Polyethylene Tubing

### Vent Hose

White polyethylene tubing, 1/2" O.D. x .062" wall, 135 PSIG W.P. – 100 ft. coil



Part # BEV-VT12WP

### Clear Braided Tubing Series 1100

FDA rated.



Clear Braided Tubing Series 1100

Part #	Description
BEV-VH14CB	1/4" I.D. 300 ft. coil
BEV-VH38CB	3/8" I.D. 300 ft. coil
BEV-VH12CB	1/2" I.D. 300 ft. coil

## Carbon Dioxide Fittings

### 90 Degree Live Swivel for Connection to Hose Reel

(Plated steel construction and -60° F low-temp Buna-N seals, and FDA grease.)

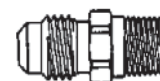
#### 90 Degree Live Swivel

Part #	Description
BEV-LS90M12F12	1/2" Male Pipe x 1/2" Female Pipe



#### Brass Adapters

Part #	Description
BEV-58MJIC	5/8" Male JIC x 5/8" Male JIC
BEV-12MJIC	1/2" Male JIC x 1/2" Male JIC

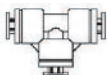


#### Brass Adapters

Part #	Description
BEV-58MJIC34M	5/8" Male JIC x 3/4" Male NPT
BEV-58MJIC12M	5/8" Male JIC x 1/2" Male NPT
BEV-58MJIC38M	5/8" Male JIC x 3/8" Male NPT
BEV-12MJIC34M	1/2" Male JIC x 3/4" Male NPT
BEV-12MJIC12M	1/2" Male JIC x 1/2" Male NPT
BEV-12MJIC38M	1/2" Male JIC x 3/8" Male NPT

### Plastic Push-to-Connect Fittings for CO2 Vessel Venting – 1/2" Tube O.D.

Union Tee  
Pt # BEV-UT



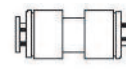
Stem Adapter  
Pt # BEV-SA



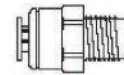
Union Elbow  
Pt # BEV-UE



Union Connector  
Pt # BEV-UC



Male Connector  
Pt # BEV-MC



## Carbon Dioxide and Gas Purification

### Improve Carbonation

Advanced technology now provides a filter for both solid particulate and oil mist reduction. The excellent specifications for solid particulate reduction, oil aerosols and vapor reduction translate into increased carbonation and efficiency. Provides 40 times more solid particulate holding capacity than conventional filters.

Applications include beverage carbonation and brewing operations, gas packaging, injection molding, processing, medical uses, refrigeration / chilling systems and a host of others to meet your needs.

Our modular filter design means less than half of the installation time of conventional systems plus reduced maintenance over years of use. This unique system utilizes nylon construction and will withstand high pressure – yet maintain a low pressure drop. And you'll appreciate our filter performance guarantee to enhance many years of dependable use under the most rigorous conditions.

#### Applications:

- CO2 & GAS PURIFICATION
- Beer & Beverage Carbonation
- Bottling and brewing
- Gas Packaging
- Chilling, Quick Freezing & Refrigeration
- Fire Extinguishers
- Medical & Surgical Uses
- Critical Instrumentation
- Industrial CO2 Laser Cutting & Welding
- Blending, Foaming & Injection Molding
- Micro-Elements
- Ceramics Processing
- Holography

#### Benefits:

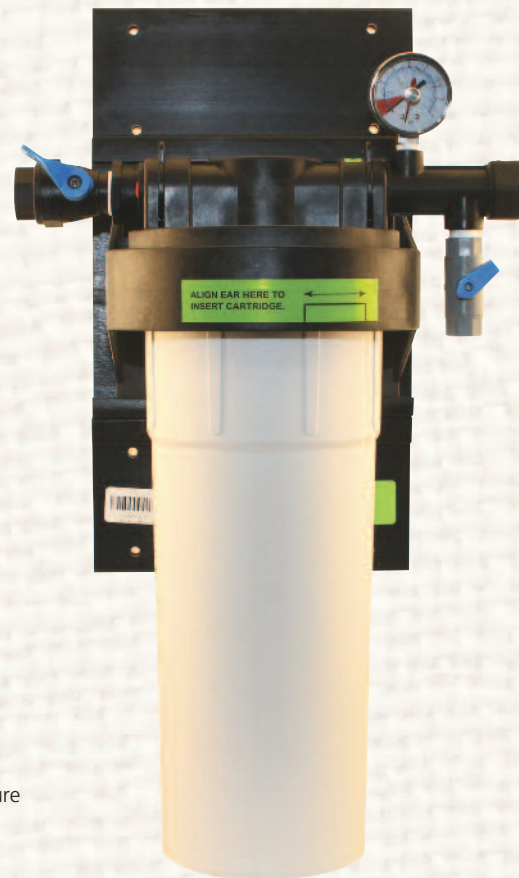
- One Filter does it all
- No pre filter required
- Low pressure drop
- Increase Carbonation

#### Features:

- Ultra High Porosity Carbon with Micro-Structure
- Nylon construction withstands high pressure
- Modular filter design for up to 80% less installation time!
- 40 times more solid particulate holding capacity than conventional filters!

#### Specified to:

- Provide 100% 0.5-1 Micron Solid Particulate Reduction
- Provide 100% Oil Aerosols and Vapor Reduction at 61 mg/m<sup>3</sup>
- Increase Carbonation



Part #	Description
PFS-CO2	Purification System
PFS-CO2-RC	Replacement Cartridge

#### Materials of Construction:

Filter Media	Hollow Carbon
Housing	Polypropylene
Head	Proprietary reinforced nylon

#### Cartridge Specifications and Performance Data

Maximum Dimensions	14" x 9" x 23"
Micron Rating	0.5
Initial ΔP (psi) at Flow Rate (gpm)	8 psi @ 150 scfm
Temperature Rating	40° to 100° F

**COMPLETE LINE  
OF CARBON  
DIOXIDE  
DELIVERY  
HOSES...**

**Call Customer Service to  
Fill Your Hose Needs  
for Your Application.**

# Automatic Changeover Manifold

## Utilizes Two Compensating Regulators

This Automatic Changeover Utilizes two compensating regulators to insure a seamless changeover from empty cylinder to full cylinder.

### Features:

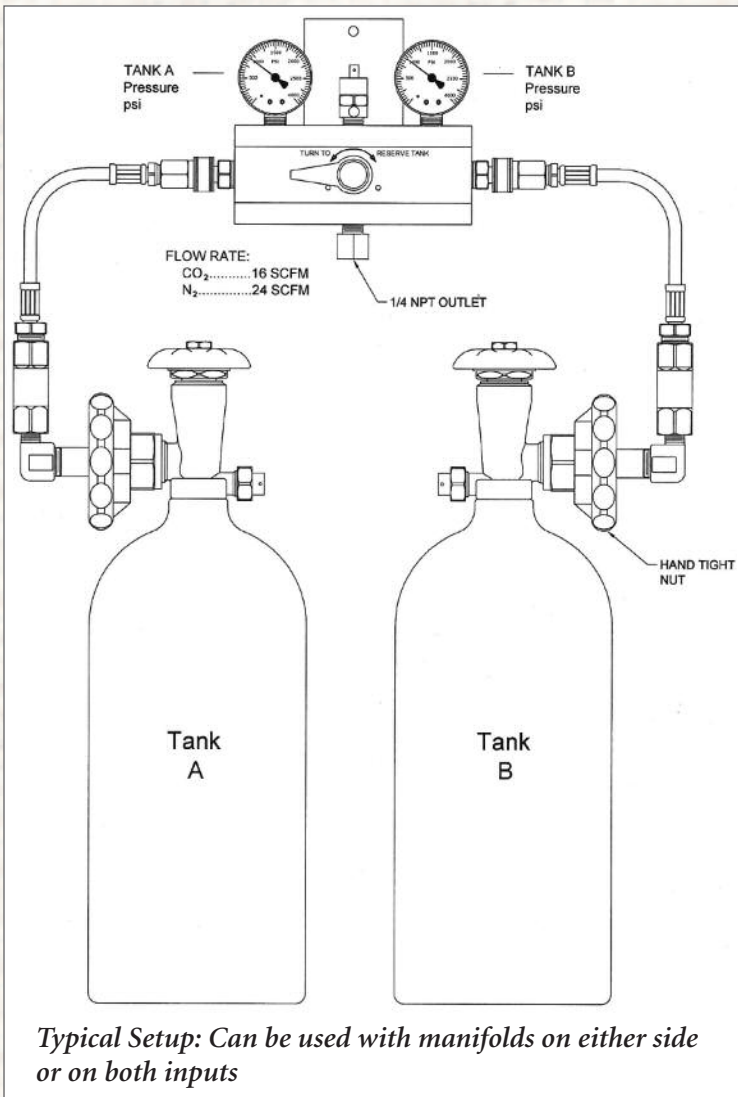
- For use with all inert gases
- Accurate and stable
- Changeover utilized two patented compensating regulators insuring accuracy
- Smooth and silent changeover
- Quick and simple installation
- Durable and compact
- Ideal application for: Beverage Industry (fountain and keg service); Welding (uninterrupted shield gas flow for automated systems); Laboratory (ideal for application requiring a stable constant flow without interruption)

### Specifications:

Max Inlet PSIG 3,000 PSIG  
 Size 5" W x 10" H x 2" D  
 Outlet Pressure 125 PSI - 170 PSI



Image shown does not contain pigtails  
 Part # MAN-ACDR-NOPIGTAILS



Part #	Description
MAN-ACDR	Automatic Changeover Manifold
MAN-ACDR-320-24	Automatic Changeover Manifold, with 24" Pigtails for Carbon Dioxide
MAN-ACDR-320-36	Automatic Changeover Manifold, with 36" Pigtails for Carbon Dioxide
MAN-ACDR-580-24	Automatic Changeover Manifold, with 24" Pigtails for Inert
MAN-ACDR-580-36	Automatic Changeover Manifold, with 36" Pigtails for Inert

## Ball Valves, Carbon Steel with Vented Ball



### Features:

- Forged Construction
- Raised Handle Stops
- Blowout proof stem design
- Adjustable packing gland
- Zinc phosphate corrosion protection
- Stainless Steel Ball and Stem
- Vented Ball
- 2,000 PSIG

Part #	Description
ABV-C14-SV-SSBS	1/4" F NPT
ABV-C38-SV-SSBS	3/8" F NPT
ABV-C12-SV-SSBS	1/2" F NPT
ABV-C34-SV-SSBS	3/4" F NPT
ABV-C1-SV-SSBS	1" F NPT

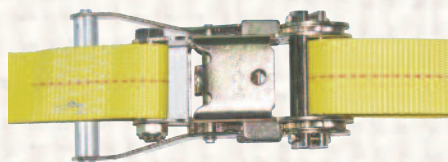
# The Complete System to Track Cylinders From Plant to Customer



**Cylinder Collars**  
see page 5A 16-27

**WE CARRY  
A WIDE  
RANGE  
OF CYLINDER  
I.D. COLLARS  
AND TAGS  
TO LABEL &  
IDENTIFY  
YOUR BOTTLES  
FOR EASY  
TRANSPORT.**

**Keep Your Cargo Safe**



**E-Track Sections for  
Truck Trailers and  
E-Track Restraints Strap**  
see page 18A-2

**The Greatest Variety of  
OSHA Signs in the Industry**



**OSHA  
Signs**  
see page  
7A 2-33



**NFPA Signs**  
see page 7A-40



**Placards**  
see page 7A-40