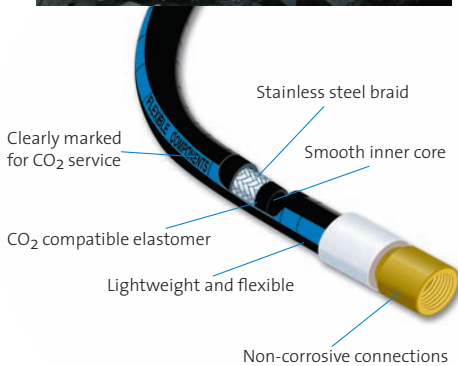


Carbon Dioxide Applications – Polar® Hose Specifications



Flexible Components brand Polar® hose overcomes the problems caused by misapplication of rubber hoses used in earlier carbon dioxide (CO₂) transfer applications. Typically, these were rubber hoses designed for hydraulic uses. They were not resistant to deterioration caused when rubber comes in contact with carbon dioxide. They had reinforcing braids and fittings made from carbon steel, which were susceptible to corrosion from carbonic acid that forms when CO₂ combines with moisture. They tended to crack due to the cold temperatures associated with CO₂ transfer and could become stiff, brittle and hard to handle.

Later attempts to use stainless steel cryogenic transfer hoses avoided some of these problems. Metal hose remained flexible in the cold but was much heavier and harder to handle. In addition, corrugations inside metal hose can trap solid CO₂ ice, causing plugging of hose, valves and pipes during CO₂ transfer.

Features & Benefits

- Specifically designed for bulk CO₂ transfer.
- Uses a specially formulated elastomer that is compatible with CO₂ and low temperatures.
- Strength and durability from stainless steel braids and non-corrosive fittings.
- Lightweight.
- Flexible.
- Strong.
- Best choice for CO₂ bulk liquid transfer.

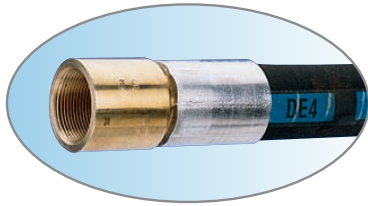
Hose Comparison

Hose Style	Lightweight	Smooth Inner Core	Maintains Flexibility When Cold	Corrosion Resistant Reinforcing Braid	Resists Swelling, Blistering, Cracking	Designed Specifically For Carbon Dioxide
Polar®	Yes	Yes	Yes	Yes	Yes	Yes
Metal	No	No	Yes	Yes	Yes	No

Polar® Hose Specifications

Part Number	Nominal Size I.D.		Size O.D.		Maximum Working Pressure		Minimum Burst Pressure		Weight		Temperature Range	
	in.	mm	in.	mm	psi	bar	psi	bar	lb./ft.	kg/m	°F	°C
16POL	1	25.40	1.50	38.10	450	31.03	1800	124.13	0.64	0.95	-65 to 212	-54 to 100
24POL	1-1/2	38.10	2.00	50.80	450	31.03	1800	124.13	0.93	1.38	-65 to 212	-54 to 100
32POL	2	50.80	2.63	66.80	450	31.03	1800	124.13	1.54	2.29	-65 to 212	-54 to 100

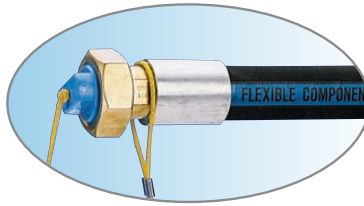
Carbon Dioxide Applications – Polar® Hose End Fittings & How to Order



Female NPT – Style 05

Sizes: 1", 1-1/2", 2"

Available in: Brass



CGA Connection – Style 77

Sizes: 1", 1-1/2", 2"

Available in: Brass

How to Order Polar® Hose

Part Number Example: 16POL0505UAB-240"

Description: 1" I.D. Polar Hose, with 1" brass female NPT one end and 1-1/2" brass female NPT on the other end, 240" overall length.

16	POL	05		05	U	AB	240
Hose I.D. Size (in 1/16")	Hose Style	Fitting Style 1st End	1st Fitting Step Up From Hose Size	Fitting Style 2nd End	2nd Fitting Step Up From Hose Size	Fitting Material – Both Ends	Length (Inches)
16 (1) 24 (1-1/2) 32 (2)	POL	05 77	U = Step Up	05 77	U = Step Up	AB = A for aluminum collar, B for brass fitting	

Follow These Simple Steps

Choose the code from each column that defines the part you want to order. Write the codes left to right, in column order, to create a part number.

For Example:

1. Select hose size in 16ths of an inch = 16
2. Select hose style = POL
3. Select the fitting style for the first end = 05
4. Add the step up letter for off-size fitting from the hose size for the first fitting = None
(Leave blank if fitting size is same as hose size)
5. Select the fitting style for the second end = 05
6. Add the step up letter for off-size fitting from the hose size for the second fitting = U
(Leave blank if fitting size is same as hose size)
7. Select the fitting material = AB
8. Select length in inches = 240