

# “ULTRAFLEX” ULTRA-FLEXIBLE LIQUID CYLINDER HOSE

***The industry's most flexible and durable hose  
for use with cryogenic liquid cylinders***

**Unisource Ultraflex Style UF21** liquid cylinder hose combines an ultra flexible design with high cycle life and extreme durability.

**Ultraflex UF21** construction starts with a special close pitch corrugated stainless steel. Corrugations are a unique disymmetrical omega configuration, as opposed to the common U-shape corrugations that standard hoses have. The result is a hose unparalleled in ease of bending and cycle-life. Ultraflex UF21 carries an ISO 10380 rating of a minimum of 50,000 bending cycles. A low-profile, high coverage stainless steel braid provides high working pressures. An optional streamlined, highly flexible stainless steel armor casing covers the hose and provides kink resistance and protection for the braid. Special smooth stainless steel reducing collars are crimped over the armor and become a transition piece to the end fittings. Welded-on ends are machined from stainless steel bar stock as opposed to the thin wall flared tubing that most liquid cylinder hoses are constructed with. Flared ends have a smooth RA finish. Stainless steel nuts and flares are offered in either CGA295 or CGA440 style.



**ULTRAFLEX CRYOGENIC HOSE**

**Ultraflex UF21** hose is unaffected by cryogenic temperatures, and remains flexible in transfer applications. This hose carries a working pressure of 1160 PSIG—far beyond the operating pressures of standard liquid cylinder. Each hose assembly is individually leak tested. The stainless steel collar is stamped with the manufacturer, pressure rating, and date.

All **Ultraflex UF21** liquid cylinder hoses can be cleaned for oxygen service. Unisource maintains an on-site cleaning facility that cleans, marks, inspects, and packages assemblies to the requirements of CGA G-4.1.

Standard assemblies are 1/2-inch I.D., but are available in several other sizes. Options include male NPT 3/8" or 1/2" fittings, or 90-degree stainless steel elbow end with flare. Pressure relief tubes with 1/4-inch FNPT port can also be permanently welded to the assembly. Accessories include male x female 90-degree cryogenic elbows, heavy-duty bronze phase separators, safety relief adapters, and quick-fill T-handle spin adapters.



**UF21 Ultraflex liquid cylinder hose  
with armor casing coils easily for  
storage.**

**MATERIALS:**

- Hose & Braid** - T321 stainless steel.
- Ends** - T304L stainless steel machined flares and nuts.
- Armor** - T304L stainless steel.

**ULTRAFLEX UF21 SPECIFICATIONS**

Hose Size	No. of Braids	O.D. w/o armor (In.)	O.D. w/armor (In.)	Max WP (PSIG)	Min. Static Bend Rad. w/armor (In.)	Min. Static Bend Rad. w/o armor (In.)	Min. Dynamic Bend Rad. w or w/o armor (In.)	Wgt Per Ft w/o armor (Lbs.)	Wgt. Per Ft. w/armor (Lbs.)
1/2"	1	0.79	0.94	1160	2.75	1.8	4.9	0.25	0.65

**Note:** Ultraflex hose is also available in T316 stainless steel



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## CREATING A PART NUMBER FOR ULTRAFLEX LIQUID CYLINDER HOSE

TO CREATE A PART NUMBER FOR THE DESIRED HOSE, USE THE KEY BELOW:

1	2	3	4	5	6	7	8	9
Style	Hose Size	Fitting-End #1	Fitting Size End #1 If Different from Hose Size	Fitting-End #2	Fitting Size End #2 If Different from Hose Size	Overall Length (In.)	Specify Armor Casing	Specify Oxygen Clean
UF21	038 050 075	21 25 99S	038 063 075	21 25 99S	038 063 075	48.0” 72.0” etc.	A	CCB

**For example**, for an assembly in the standard 1/2” I.D. size, with 3/8” MNPT one end and CGA440 (5/8) flare on the other end, complete with armor casing and cleaned, capped, and bagged for oxygen service would read as follows:

**UF21-050-21-038-25-063-72.0”-A-CCB**

Style	Ultraflex UF21 Hose
Hose Size	038 for 3/8” • 050 for 1/2” • 075 for 3/4”
Fittings	21 for MNPT hex end • 25 for female flare with swivel nut • 99S for 90-Deg. elbow
Step Up/Step Down	038 for 3/8” • 063 for CGA440 or 5/8” • 075 for 3/4”
Overall Length	Expressed in inches
Armor Casing	“A” to denote full armor casing
Oxygen Clean	Specify CCB for “cleaned, capped, and bagged for O2 service to CGA G-4.1.

### ULTRAFLEX UF21 LIQUID CYLINDER HOSE ACCESSORIES

DESCRIPTION	SERVICE	PART #
Pressure relief tube w/1/4” FNPT welded on hose	Inert or Oxygen	99S
S/S Elbow, Flare nut x male flare thread CGA295	Inert	SSL-CR90-8
S/S Elbow, Flare nut x male flare thread CGA440	Oxygen	SSL-CR90-10
Phase Separators, 3/8” FNPT x 3” OAL. HD.	Inert	J-574
Safety relief adapter w/o valve, CGA295	Inert	SRA-NAS
Safety relief adapter w/o valve, CGA440	Oxygen	SRA-OS
Quick-Fill, T-Handle spin adapter, straight style, CGA 295	Inert	THS-NAS
Quick-Fill, T-Handle spin adapter, 90 Deg. style, CGA 295	Inert	THS-NAS-90
Quick-Fill, T-Handle spin adapter, straight style, CGA 440	Oxygen	THS-OS
Quick-Fill, T-Handle spin adapter, 90 Deg. style, CGA 440	Oxygen	THS-OS-90



Safety Relief Adapter



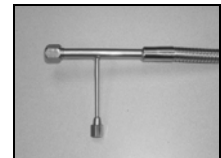
T-Handle Spin Adapter



90 Deg. Cryo Elbow



Phase Separator



Pressure Relief Option

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