





## Coffee Mugs

**Part Number**  
Coffee-mug-blue  
Coffee-mug-white  
**Price**  
\$5.00/each

## Camo Hats

**Part Number**  
Camo-hats-black  
Camo-hat-orange  
**Price**  
\$10.00/each



## Drawstring Bags

**Part Number**  
Drawstring-bag  
**Price**  
\$5.00/each



## Zippo Lighters

**Part Number**  
Logo-zippo  
**Price**  
\$30.00/each



## Phone Wallets

**Part Number**  
Phone-wallet  
**Price**  
\$1.00/each



## Tube Grips

**Part Number**  
Tube-grip-holder  
**Price**  
\$1.00/each



## Fitting Gap Gages

**Part Number**  
Refer to page 87  
**Price**  
Call for pricing



## Flashdrives

**Part Number**  
Logo-flashdrive  
**Price**  
\$1.00/each



## Pens

**Part Number**  
tylok-pens  
**Price**  
\$1.00/each



## Golfballs - Titleist Pro V1

**Part Number**  
tylok-golfball  
**Price**  
\$50.00/per box of 12



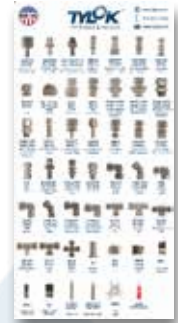


## Can Koozie

**Part Number**  
can-koozie  
**Price**  
\$1.00/each

## Wall Chart Sticker - 12x24

**Part Number**  
wall-chart-sticker  
**Price**  
\$10.00/each



## Wall Charts - 24x36

**Part Number**  
wall-chart  
**Price**  
\$1.00/each

## Mini Notepads - 5 pack

**Part Number**  
mini-notepads  
**Price**  
\$1.00/each



## Counter Mats

**Part Number**  
counter-mats  
**Price**  
\$10.00/each

## Logo Banners - 2.5x4

**Part Number**  
Tylok-wall-banner  
**Price**  
\$30.00/each



## Cabinets

**Part Number**  
Refer to page 88  
**Price**  
Call for pricing

## Bar Stools

**Part Number**  
bar-stool  
**Price**  
\$100.00/each



## Leak Detector

**Part Number**  
Refer to page 86 for more info.  
**Price**  
Call for pricing

## TyLube

**Part Number**  
Refer to page 86 for more info.  
**Price**  
Call for pricing



Co-branding options available upon request

# LEAK DETECTOR & THREAD LUBRICANT

## TYSPY LIQUID LEAK DETECTOR

- Temperature rating: Can be used over a temperature range of 27° to 200°F (-2 to 93°C).
- Low Temperature rating: Can be used over a temperature range of -65° to 200°F (-54 to 93°C).

**Specifications: Meets the performance requirements of:**

- MIL-PF25567 Leak Detector Compound, Oxygen Systems, Type I, 0 to 70°C (33 to 158°F)
- NFPA 52 Section 6-12.2 Leak Testing Compressed Natural Gas Vehicular Fuel System
- EPA Part 60, Appendix A, Method 21, Section 4.3.3 Alternative Screening Procedures Using Soap Solutions
- Nontoxic, noncorrosive, nonflammable
- Tylok Liquid Leak Detector detects gas leaks in hard to reach areas.
- Safe for oxygen systems
- Sustainable bubble action works even on very small leaks and vertical surfaces
- Flexible tube extends for hard to reach areas
- Formulas dries clean, without staining

Part Numbers	Description
Leak Detector-8oz	8oz. Bottle
Leak Detector COOL-8oz	
Leak Detector-GAL	1 Gallon
Leak Detector COOL-GAL	
Leak Detector-55G	55 Gallon Drum
Leak Detector COOL-55G	



## TYLUBE THREAD LUBRICANT

TyLube is an anti-gall compound to be used on stainless steel, steel and nickel-based alloys. Temperature range to 500°F. Not recommended for plastic and aluminum products. TyLube is made from distilled water with inert ingredients and contains no silicones, heavy metals, chlorine or sulfur. Safe for oxygen applications.

For a complete list of ingredients, check out the SDS on [www.tylok.com/tylube](http://www.tylok.com/tylube) to be sure of its compatibility with your installation.

Part Numbers	Description
TYLUBE-8OZ	8oz. bottle
TYLUBE-100	100 ct. box
TYLUBE-1ML	1ml packet







CBC PART NUMBER	T TUBE O.D.
1-DGG	1/16
2-DGG	1/8
3-DGG	3/16
4-DGG	1/4
5-DGG	5/16
6-DGG	3/8
8-DGG	1/2
10-DGG	5/8
12-DGG	3/4
14-DGG	7/8
16-DGG	1
448 DGG	1/4, 3/8, 1/2, 5/8, 12mm
ABS-46612 DGG	1/4, 5/8, 1/2, 3/4



When fitting is properly tightened, gap gage should not fit between nut and shoulder of body.

**1940'S**  
**THE PRODUCT**  
Founder Cullen Crawford patented the Original Flareless Fitting.

**1947**  
**THE BUSINESS**  
Mr. Crawford then formed a business called the Crawford Fitting Company.

**1966**  
**THE FUTURE**  
The Crawford Fitting Company would then be sold to be formed into another business.

**PRESENT**  
TYLOK International has now been manufacturing instrumentation fittings in the US for over 60 years.

Manufacturing in Cleveland, Ohio since 1955.  
Value • Quality • Reliability

in LinkedIn WBENC

**CBC/CS™/CS-Lok™ INSTALLATION INSTRUCTIONS**

CBC/CS™/CS-Lok™ Tube Fittings are completely assembled & ready for use. To ensure proper fit, always use the correct gage to verify the fit. For more information, visit [www.tylok.com](http://www.tylok.com).

**TO REMOVE TUBE & RE-CONNECT TUBE FITTING**

Mark the base of the tube with reference to the fitting before separating. Mark off the tube to a distance of 1/2" from the end of the tube. Use the tube to separate the assembly, making the only mark to be used. Use proper care when separating the fitting from the tube. Always use proper technique to separate the fitting from the tube. Always use proper technique to separate the fitting from the tube.

Making connections in the oil field for over 60 years.

AD WOMEN OWNED

Making connections in the oil field for over 60 years.

AD WOMEN OWNED

Co-branding options available upon request



## Features & Benefits

- Organized and stocked inventory
- Valuable sales tool for bin fill placements
- Balanced inventory reduces cost
- Tylok provides a suggested inventory list of the most used product
- Single purchase order saves accounting time and money
- Always have the spare parts you need
- Customized product offering available
- Tylok part number chart and size chart provided for easy identification

## Cabinet Attributes

- All welded, prime cold rolled steel
- Fully hemmed 1-1/2" bin fronts to hold labels and retain parts
- Compatible with most 12" deep bins drawer cabinets
- Durable blue powder coat finish, custom colors available
- Fittings & Cabinets made in the USA

## Suggested Stock



SS-4-DMC-4  
SS-4-DMC-6  
SS-6-DMC-4  
SS-6-DMC-6

10 EACH



SS-4-DFC-4  
SS-6-DFC-6

10 EACH



SS-4-DU  
SS-6-DU  
SS-8-DU

10 EACH



SS-4-DF PLUG  
SS-6-DF PLUG  
SS-8-DF PLUG

10 EACH



SS-4-DCAP  
SS-6-DCAP  
SS-8-DCAP

10 EACH



SS-4-DELU-4  
SS-6-DELU-6  
SS-8-DELU-8

10 EACH



SS-4-DME-4  
SS-6-DME-4  
SS-6-DME-6  
SS-8-DME-8

10 EACH



SS-4-DFE-4  
SS-6-DFE-6

10 EACH



SS-4-DTTT-4  
SS-6-DTTT-6  
SS-8-DTTT-8

10 EACH



SS-4-DTT-4-4-K  
SS-6-DTT-6-6-K  
SS-8-DTT-8-8-K

3 EACH



SS-43S-D4D4  
SS-43S-D6D6  
SS-45-D8D8

3 EACH



SS-1R4-D4D4  
SS-1R6-D6D6  
SS-1R6-D8D8

3 EACH



LEAK DETECTOR

1 EACH

Part Number	Description	Dimensions (in.)		
		W	D	H
Cabinet-40B-CBC	CBC-Lok Suggested Stock	33-7/8"	12"	28-7/8"
Cabinet-40B-CS	CS-Lok Suggested Stock			
Cabinet-40B	Empty Cabinet			

# INSTRUMENTATION TUBING

CBC/CS-Lok



## STAINLESS STEEL INSTRUMENTATION TUBING

- Meets ASTM A213 and ASTM A269
- Grade TP 316/316L (dual certified)
- Seamless, Cold Finished
- 20 foot lengths

Outside Diameter (in)	Part Number	Wall Thickness (in)
1/4	4-T-035-S-316L	0.035
	4-T-049-S-316L	0.049
	4-T-065-S-316L	0.065
3/8	6-T-035-S-316L	0.035
	6-T-049-S-316L	0.049
	6-T-065-S-316L	0.065
1/2	8-T-035-S-316L	0.035
	8-T-049-S-316L	0.049
	8-T-065-S-316L	0.065
	8-T-083-S-316L	0.083
5/8	10-T-049-S-316L	0.049
	10-T-065-S-316L	0.065
	10-T-083-S-316L	0.083
	10-T-095-S-316L	0.095
3/4	12-T-049-S-316L	0.049
	12-T-065-S-316L	0.065
	12-T-083-S-316L	0.083
	12-T-095-S-316L	0.095
	12-T-109-S-316L	0.109
1	16-T-065-S-316L	0.065
	16-T-083-S-316L	0.083
	16-T-095-S-316L	0.095
	16-T-109-S-316L	0.109
	16-T-120-S-316L	0.120



Values in the black cells with white text are not recommended for gas services. Maximum suggested working pressures are based on ASME B31.3 equations using the following values:

Stainless Steel Welded Tube De-rating factors:

	Stress Value (psi)	Fractional Tube Specifications	Metric Tube Specifications
Stainless Steel	20,000	ASTM A269	ISO 1127 3 to 12 mm O.D. D4 T4 tolerance 14 mm O.D and larger: D4 T3 tolerance
Carbon Steel	15,700	ASTM A179	-
Copper	6,000	ASTM B75	-

Double-Welded	0.85
Single-Welded	0.80

### FRACTIONAL TUBE (psig)

Tube Size O.D.	Stainless Steel															
	Tube Wall Thickness (inches)															
	.010	.012	.014	.016	.020	.028	.035	.049	.065	.083	.095	.109	.120	.134	.156	.188
1/16"	5600	6800	8100	9400	12000											
1/8"						8500	10900									
3/16"						5400	7000	10200								
1/4"						4000	5100	7500	10200							
5/16"							4000	5800	8000							
3/8"							3300	4800	6500							
1/2"							2600	3700	5100	6700						
5/8"								2900	4000	5200	6000					
3/4"								2400	3300	4200	4900	5800				
7/8"								2000	2800	3600	4200	4800				
1"									2400	3100	3600	4200	4700			
1-1/4"										2400	2800	3300	3600	4100	4900	
1-1/2"											2300	2700	3000	3400	4000	4900
2"												2000	2200	2500	2900	3600

Tube Size O.D.	Carbon Steel							
	Tube Wall Thickness (inches)							
	.028	.035	.049	.065	.083	.095	.109	.120
1/8"	8000	10200						
3/16"	5100	6600	9600					
1/4"	3700	4800	7000	9600				
5/16"		3700	5500	7500				
3/8"		3100	4500	6200				
1/2"		2300	3200	4500	5900			
5/8"			2600	3500	4600	5300		
3/4"			2100	2900	3700	4300	5100	
7/8"			1800	2400	3200	3700	4300	
1"			1500	2100	2700	3200	3700	4100

Tube Size O.D.	Copper							
	Tube Wall Thickness (inches)							
	.028	.035	.049	.065	.083	.095	.109	.120
1/8"	2700	3600						
3/16"	1800	2300	3400					
1/4"	1300	1600	2500	3500				
5/16"		1300	1900	2700				
3/8"		1000	1600	2200				
1/2"		800	1100	1600	2100			
5/8"			900	1200	1600	1900		
3/4"			700	1000	1300	1500	1800	
7/8"			600	800	1100	1300	1500	
1"			500	700	900	1100	1300	1500

### METRIC TUBE (bar)

Tube Size O.D.	Stainless Steel									
	Tube Wall Thickness (mm)									
	0.8	1.0	1.2	1.5	1.8	2.0	2.2	2.5	2.8	3.0
3	670									
6	310	420	540	710						
8		310	390	520						
10		240	300	400	510	580				
12		200	250	330	410	470				
14		160	200	270	340	380	430			
15		150	190	250	310	360	400			
16			170	230	290	330	370			
18			150	200	260	290	320	370		
20			140	180	230	260	290	330	380	
22			120	160	200	230	260	300	340	
25					180	200	230	260	290	320

### TUBE PRESSURE DE-RATING FACTORS ELEVATED TEMPERATURES

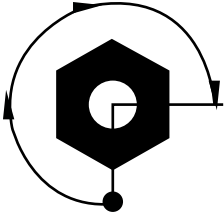
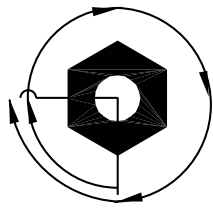
Temperatures		Tubing Material			
°F	°C	Carbon	304 SS	316 SS	Copper
100	38				1.00
150	66				0.85
200	93	0.95	1.00	1.00	0.80
250	121				0.80
300	149	0.90	1.00	1.00	0.78
350	177				0.66
400	204	0.87*	0.93	0.96	0.50
500	260		0.87	0.89	
600	316		0.82	0.85	
700	371		0.8	0.81	
800	427		0.76	0.79	
900	482		0.73	0.77	
1000	538		0.69	0.76	

\* Based on 375°F (190°C) max

# INSTALLATION INSTRUCTIONS

## CBC-LOK<sup>®</sup>/CS-LOK<sup>®</sup> INSTALLATION INSTRUCTIONS

CBC-Lok<sup>®</sup>/CS-Lok<sup>®</sup> Tube Fittings come completely assembled & ready for use, no disassembly required. Although there are some general guidelines to follow, no special preparation of the tubing is necessary. In overhead applications, Tylok recommends using a Pre-Set Tool.

Size	Tighten # Turn(s)		
1 1/16"	3/4		SIZE #1 thru #3 Finger tight plus 3/4 turn
2 1/8"			
3 3/16"			
4 1/4"	1-1/4		SIZE #4 thru #16 Finger tight plus 1-1/4 turn
5 5/16"			
6 3/8"			
8 1/2"			
10 5/8"			
12 3/4"			
14 7/8"			
16 1"			

**NOTE:** DF Plugs, -NF (Nut & Ferrule Pre-Assemblies) require only 1/4 turn make-up.



Simply insert the tubing into the assembly, making sure the tubing seats firmly against the shoulder of the body and the nut is finger tight. High pressure applications and high safety-factor systems. Further tighten the nut until the tube will not turn by hand or move axially in the fitting.



Tighten nut with wrench the additional number of turns indicated above, while holding the fitting body with a second wrench.



## TO REMOVE TUBE & RE-CONNECT TUBE FITTING

Mark the location of the nut with reference to the body before disassembly. Back off the nut until it is clear of the body and remove the tubing from the fitting. For assembly, re-insert the tubing into the body until it is seated. With proper size wrench, re-tighten nut to original location by realigning previous marks. A noticeable amount of torque will develop when the nut is turned to original position. Next, rotate the nut slightly past original position to fully re-set the seal.

## TUBING SELECTION GUIDELINES

### General

- Free of nicks, scratches, and imperfections
- Suitable for bending and flaring
- Square cut ends

### Stainless Steel

- Types 304, 304L, 316, 316L, 317, or 317L per ASTM A213, ASTM A269, or equivalent.
- Fully Annealed, Seamless or Welded Redrawn, Maximum hardness of 80 HRB.

### Copper

- Seamless ASTM B75 Soft Annealed, ASTM B88 K or L Temper O, or equivalent.

### Carbon Steel

- ASTM A179 or equivalent, maximum hardness of 72 HRB.

## GAS SERVICE

Gases are generally less viscous than liquids allowing them to leak through imperfect seals. Tylok recommends tubing with minimal surface imperfections (nicks, scratches, etc.) and heavier walls for gas service applications. Heavy wall tubing offers more resistance to ferrules during installation which promotes a skiving effect that smooths out surface defects that would otherwise be leak paths. Thin wall tubing offers less resistance which promotes flexing rather than skiving resulting in a seal that may not be suitable for gas service. Refer to tubing pressure tables in this catalog for wall thickness recommended for gas services.

## PRECAUTIONS FOR WELD END

For best results when using Tylok tube fittings with weld ends, certain precautions should be taken:

- Remove the nut & ferrules from the fitting.
- Protect exposed threads & sealing surfaces from spatter.
- Use a heat sink to dissipate heat.
- Tack weld symmetrically to maintain alignment.
- When finishing welding remove weld spatter protection and make sure nuts and ferrules are in the proper orientation before assembling.

## SAFETY GUIDELINES

- Depressurize fluid systems before connecting, disconnecting or remaking a fitting.
- Follow Tylok's guidelines for proper fitting installation.
- Consult the factory before attempting to interchange Tylok fitting components.
- Don't exceed the recommended pressure ratings of system components.
- Use thread sealants when installing tapered pipe threads.
- Select fitting and tubing materials for best results.
- Never use a fitting to bleed pressure from a system.

## HEAT TRACEABILITY

Tylok Tube Fittings are heat code traceable back to mill heat of the material they were made from. Contact the factory for material certification requests.

## RAW MATERIAL SPECIFICATIONS

Fitting Material	Bar Stock	Forging
Brass	ASTM B16 ASTM B453	ASTM B283
Stainless Steel	ASTM A276 ASTM A479 ASME SA-479 Type 316-SS	ASTM A182 ASME SA-182 Type 316-SS
Steel	ASTM A108	

\* Reference Tubing Selection & Preparation

## NOTICE

In designing a system incorporating tube fittings and valves, it is the designer's or user's obligation & responsibility to determine the appropriate fittings and valves to be used for each application and to insure proper installation and maintenance.

## QUALITY CONTROL

All components are manufactured & inspected to meet strict quality control standards in each phase of production. All employees are thoroughly trained to follow procedures, in accordance with the ISO 9001 Quality Standard, to ensure a quality product from the start of each job through completion.

# End Connections

## Suggested Allowable Working Pressure Tables



### CBC-LOK/CS-LOK TUBE ADAPTERS

Size	Tube Size	Fractional (PSIG)		Metric (BAR)	
		Stainless Steel & Carbon Steel	Brass	Tube Size	Stainless Steel & Carbon Steel
1	1/16	7200	2600	3mm	370
2	1/8	6400	3200	6mm	390
3	3/16	6000	3000	8mm	390
4	1/4	5900	2900	10mm	390
5	5/16	5800	2700	12mm	360
6	3/8	5800	2200	15mm	340
8	1/2	4900	2100	16mm	340
10	5/8	5000	1900	18mm	310
12	3/4	4600	1800	20mm	310
14	7/8	4300	1500	22mm	340
16	1	4100	1500	25mm	280
20	1-1/4	4900	-		
24	1-1/2	4900	-		
32	2	3600	-		

NOTE: Ratings calculated in accordance with ASME B31.3 (stress values of 10,000 psi for brass and 20,000 psi for stainless and carbon steel).



### STB FITTINGS (PSIG)

Stainless Steel & Carbon Steel			
Size	Thread	Straights	Positionable
2	5/16-24	5076	5076
3	3/8-24	5076	5076
4	7/16-20	5076	4568
5	1/2-20	5076	4568
6	9/16-18	5076	4061
8	3/4-16	4568	4061
10	7/8-14	3626	3045
12	1-1/16-12	3626	3045
14	1-3/16-12	3045	2538
16	1-5/16-12	3045	2538
20	1-5/8-12	2538	2030
24	1-7/8-12	2538	2030
32	2-1/2-12	2030	1522

NOTE: Pressure ratings per SAE J1926-3 for light-duty stud ends.



### JIC 37° FLARE (PSIG)

Stainless Steel & Carbon Steel		
Size	Thread	PSIG
2	5/16-24	5000
3	3/8-24	5000
4	7/16-20	5000
5	1/2-20	5000
6	9/16-18	5000
8	3/4-16	4500
10	7/8-14	3500
12	1-1/16-12	3500
14	1-3/16-12	3000
16	1-5/16-12	3000
20	1-5/8-12	2500
24	1-7/8-12	2000
32	2-1/2-12	1500

NOTE: Pressure ratings per SAE J514.



### NPT & BSPT PIPE THREADS

Size	Thread	PSIG			
		Stainless Steel & Carbon Steel		Brass	
		Male	Female	Male	Female
1	1/16	11000	6700	5500	3300
2	1/8	10000	6500	5000	3200
4	1/4	8000	6600	4000	3300
6	3/8	7800	5300	3900	2600
8	1/2	7700	4900	3800	2400
12	3/4	7300	4600	3600	2300
16	1	5300	4400	2600	2200
20	1-1/4	6000	5000	3000	2500
24	1-1/2	5000	4600	2500	2300
32	2	3900	3900	1900	1900

NOTE: Pressure ratings calculated in accordance with ASME B31.3 with NPT threads per ASME B1.20.1 and BSPT threads per ISO 7-1.

### THERMOCOUPLE BORE THROUGH

Sizes	De-Rating Factor
1/2" & Smaller	0.75
Over 1/2" up to & including 3/4"	0.50
Larger than 3/4"	0.25

NOTE: Multiply tube pressure rating (see Suggested Allowable Working Pressure tables) by de-rating factor to determine safe working pressure.

### FITTING TEMPERATURE RATINGS

316 Stainless	Brass	Steel
-325°F to 1000°F (-198°C to 648°C)	-40°F to 400°F (-40°C to 204°C)	-65°F to 375°F (-54°C to 190°C)