

# LIQUID OXYGEN EQUIPMENT

Military & Commercial



**ESSEX**<sup>™</sup>  
INDUSTRIES



# ESSEX INDUSTRIES

Essex Industries began as a family affair in Saint Louis, Missouri, over 75 years ago and has established itself as a prominent player within the aerospace and defense industry, offering platform controls, aircraft components, emergency breathing equipment, and liquid oxygen systems. With a legacy of creative innovation and an unwavering commitment to overcoming challenges, Essex has proudly contributed to every major aerospace program since 1947, becoming a leading aerospace and defense manufacturer.

Essex is able to gain a deep understanding of customer needs and engineer custom solutions to meet challenging requirements from the aerospace industry. Essex's products are known for their reliability and performance. This is accomplished through their rigorous quality control processes and the involvement of the dedicated engineering staff from part inception to delivery. Essex partners with world-leading OEMs and has a proven track record of delivering on the toughest application.

Essex entered the cryogenics market in 1963 and started manufacturing LOX converters, a highly efficient oxygen storage and delivery method. LOX systems provide several advantages over gaseous systems in these military applications because LOX increases volume 860 times as it converts from a liquid to a gas. This saves both weight and space on the aircraft and results in portable units that are easier to carry without sacrificing capability. They also have low operating pressures, less than 100 psi, which increases their safety factor, especially in battlefield situations.

The technology developed for military LOX systems has led Essex to similar advancements in the commercial medevac marketplace. Essex LOX systems are currently on 80% of the winged and rotary platforms that provide aeromedical transport from an accident scene to the medical center. Essex has provided over 100,000 new LOX systems for military and commercial applications, ranging from a 5 Liter Converter to 500 Gallon LOX Trailers.

Experience is one of Essex's greatest assets. The company has robust manufacturing capabilities that allow us to be agile and flexible and be able to adapt to new requirements. Essex will continue to learn and grow as we move forward. [www.essexindustries.com](http://www.essexindustries.com)



## OVER 230,000 ft² OF MANUFACTURING SPACE

Essex employs over 450 people in Saint Louis, Missouri, Huntington Beach, California, and Milford, Connecticut, serving local, national, and international customers, both military and commercial.



# LIQUID OXYGEN Filling Diagram

50 Gallon  
Liquid Oxygen Cart



500 Gallon  
Liquid Oxygen Trailer



GROUND SUPPORT

AIRCRAFT LIFE SUPPORT



**BMOS-FS**  
Backpack Medical  
Oxygen Filling Station



**BMOS-FS Hose Kit**  
Backpack Medical Oxygen  
Filling Station Hose Kit



**NPTLOX**  
Next Generation Portable  
Therapeutic Liquid Oxygen System



**MMOS**  
Mounted Medical Oxygen System



**BMOS**  
Backpack Medical Oxygen System



**5 LITER LOX REMOVABLE**



**5 LITER LOX FIXED**



**7 LITER LOX CONVERTER REMOVABLE**



**10 LITER LOX CONVERTER REMOVABLE**



**10 LITER LOX CONVERTER FIXED**



**25 LITER LOX CONVERTER FIXED**

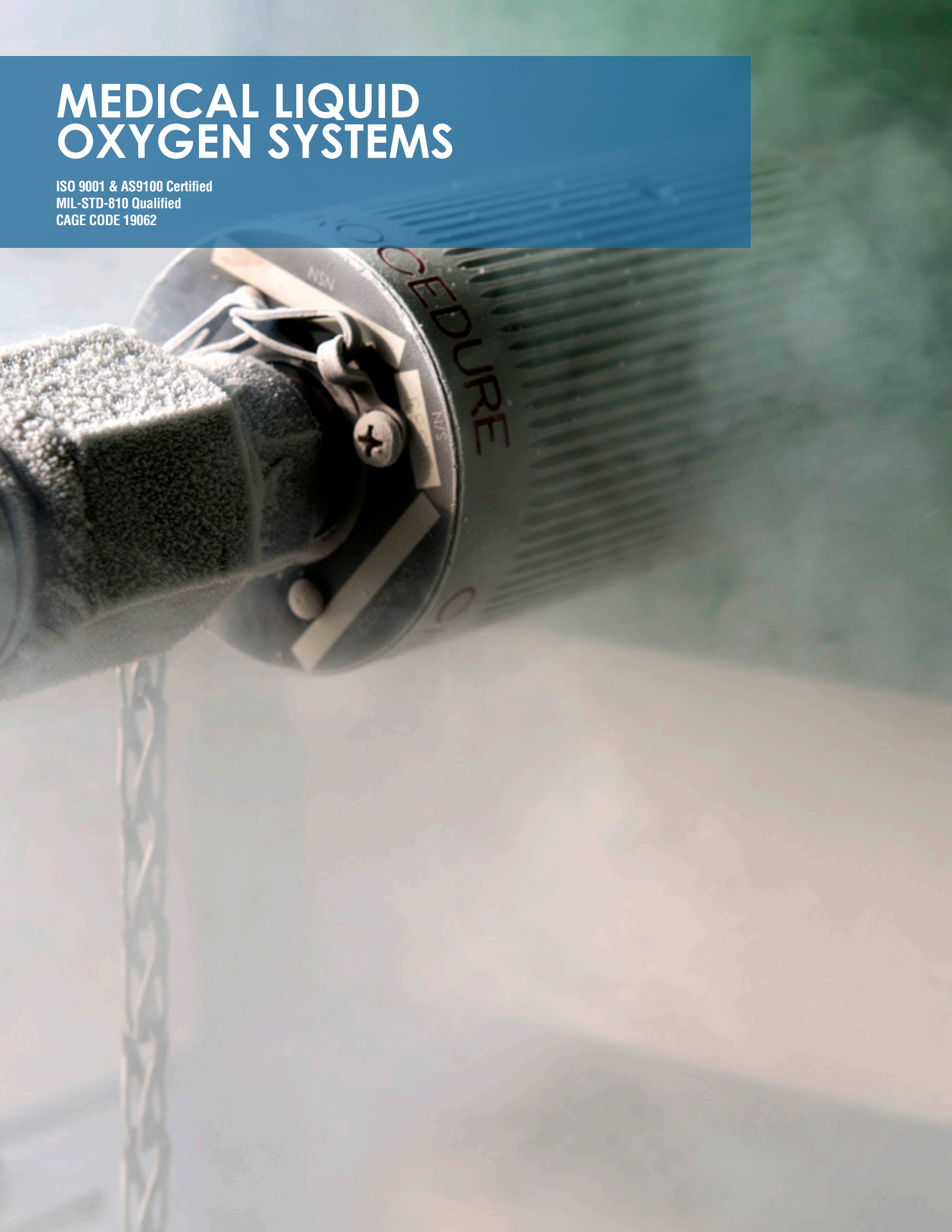


**75 LITER LOX CONVERTER FIXED**



# MEDICAL LIQUID OXYGEN SYSTEMS

ISO 9001 & AS9100 Certified  
MIL-STD-810 Qualified  
CAGE CODE 19062



## MEDICAL LIQUID OXYGEN SYSTEMS

### NEXT GENERATION PORTABLE THERAPEUTIC LIQUID OXYGEN SYSTEM (NPTLOX)

P/N 50C-0083-1 | NSN 6530-01-585-4676  
SHOWN WITH INCLUDED ACCESSORY KIT  
P/N 50C-0021-0001-1 (ACCESSORY KIT ONLY)

The NPTLOX is a low pressure portable 20 liter liquid oxygen storage and gaseous delivery system. It has been successfully tested to work in tandem with commonly used ventilators. FDA Life Support device 510(k) number K033000.

#### APPLICATIONS

Can be carried by ground support personnel and can also be mounted in an aircraft or ground vehicle.

CAPACITY	20 LITERS
W"x L"x H"	22 x 24 x 32
WEIGHT, FULL	155 LBS
WEIGHT, EMPTY	105 LBS
TOTAL GASEOUS VOLUME	17,200 LITERS
SYSTEM INTERNAL PRESSURE	85-120 PSIG
MAX FLOW RATE	66 LPM
DELIVERY/OUTLET PRESSURE	50 ± 5 PSIG
OPERATING TEMPERATURE	32° F TO 110° F
INDICATOR POWER	TWO (2) 9-VOLT LITHIUM BATTERIES
OUTLET CONNECTION	SIX (6) SCHRADER QUICK DISCONNECT PORTS
FILL CONNECTION	CRU-50/A FILL VALVE
ACCESSORY KIT INCLUDES	THREE (3) 20' MEDICAL GRADE HOSES
	THREE (3) FLOW CONTROL VALVES: 0 TO 15 LPM WITH
	11 SETTINGS (0.5, 1, 2, 3, 4, 5, 6, 8, 10, 12, 15 LPM)
	THREE (3) HUMIDIFIER BOTTLES
	THREE (3) SCHRADER QUICK DISCONNECT ADAPTERS



#### DURATION OF REMAINING OXYGEN SUPPLY (flow rate/minute)

LITERS OF LOX	LITERS OF GAS	60 L/MIN	45 L/MIN	30 L/MIN	15 L/MIN
20	17,200	287	382	573	1,147
19	16,340	272	363	545	1,089
18	15,480	258	344	516	1,032
17	14,620	244	325	487	975
16	13,760	229	306	459	917
15	12,900	215	287	430	860
14	12,040	201	268	401	803
13	11,180	186	248	373	745
12	10,320	172	229	344	688
11	9,460	158	210	315	631
10	8,600	143	191	287	573
9	7,740	129	172	258	516
8	6,880	115	153	229	459
7	6,020	100	134	201	401
6	5,160	86	115	172	344
5	4,300	72	96	143	287
4	3,440	57	76	115	229
3	2,580	43	57	86	172
2	1,720	29	38	57	115
1	860	14	19	29	57





MEDICAL LIQUID OXYGEN SYSTEMS



BACKPACK MEDICAL OXYGEN SYSTEM (BMOS)  
P/N 50C-0089-4 | NSN 3655-01-628-1034

The Backpack Medical Oxygen System (BMOS) is a low pressure, portable 2 liter liquid oxygen storage and gaseous delivery system that has been tested to MIL-STD-810 and requires no external power. It has also been successfully tested to work in tandem with commonly used ventilators. FDA Life Support device 510(k) 071581.

**APPLICATIONS**  
Can be carried or worn by parachutists and ground support personnel.

CAPACITY	2 LITERS
W"x L"x H"	7.5 x 17.5 x 6.5
WEIGHT, FULL	19 LBS
WEIGHT, EMPTY	14 LBS
TOTAL GASEOUS VOLUME	1,720 LITERS
SYSTEM INTERNAL PRESSURE	45-65 PSIG
MAX FLOW RATE	15 LPM
DELIVERY/OUTLET PRESSURE	50 ± 5 PSIG
OPERATING TEMPERATURE	32° F TO 120° F
INDICATOR POWER	SIX (6) AA BATTERIES
FLOW CONTROL VALVE	BUILT-IN , 0 TO 15 LPM WITH 11 SETTINGS (0.5, 1, 2, 3, 4, 5, 6, 8, 10, 12, 15 LPM)
FILL CONNECTION	CRU-50/A FILL VALVE

MOUNTED MEDICAL OXYGEN SYSTEM (MMOS)  
P/N 50C-0105-1

The Mounted Medical Oxygen System (MMOS) is a low pressure, portable 4 liter liquid oxygen storage and gaseous delivery system that has been tested to MIL-STD-810 and requires no external power. It has also been successfully tested to work in tandem with commonly used ventilators. The BMOS-FS Hose Kit connects the MMOS to the BMOS-FS for refilling. FDA Life Support device 510(k) number K113767.

**APPLICATIONS**  
Can be carried by ground support personnel and can also be mounted in an aircraft, helicopter or ground vehicle.

CAPACITY	4 LITERS
W"x L"x H"	11.2 x 17 x 9
WEIGHT, FULL	35 LBS
WEIGHT, EMPTY	25 LBS
TOTAL GASEOUS VOLUME	3,440 LITERS
SYSTEM INTERNAL PRESSURE	85-120 PSIG
MAX FLOW RATE	30 LPM
DELIVERY/OUTLET PRESSURE	50 ± 5 PSIG
OPERATING TEMPERATURE	-40° F TO 130° F
INDICATOR POWER	ONE (1) 9-VOLT BATTERY
FLOW CONTROL VALVE	BUILT-IN , 0 TO 15 LPM WITH 11 SETTINGS (0.5, 1, 2, 3, 4, 5, 6, 8, 10, 12, 15 LPM)
OUTLET CONNECTION	TWO (2) DISS 1240 PORTS AND TWO (2) FLOW CONTROL VALVES WITH 1/8" BARB PORTS
FILL CONNECTION	CRU-50/A FILL VALVE



BACKPACK MEDICAL OXYGEN SYSTEM  
FILLING STATION (BMOS-FS)

P/N 50C-0083-3 (GREEN) | NSN 3655-01-601-2275,  
P/N 50C-0083-4 (DARK GREEN)

The BMOS Filling Station (BMOS-FS) is a low pressure, portable 20 liter liquid oxygen storage device designed to fill multiple BMOS or MMOS systems prior to use. Average filling time is approximately three minutes to fill either system. Requires no external power and has a built-in flow control valve. Tested to MIL-STD-810.

The BMOS-FS Hose Kit, P/N 50C-0116-1, is used to connect the MMOS for refilling. See page 16.

**APPLICATIONS**  
Can be carried by two ground support personnel and can also be mounted in an aircraft, helicopter or ground vehicle.

CAPACITY	20 LITERS
W"x L"x H"	22 x 24 x 30
WEIGHT, FULL	125 LBS
WEIGHT, EMPTY	75 LBS
TOTAL GASEOUS VOLUME	17,200 LITERS
SYSTEM INTERNAL PRESSURE	28-55 PSIG
DELIVERY/OUTLET PRESSURE	28-55 PSIG
OPERATING TEMPERATURE	32° F TO 120° F
INDICATOR POWER	TWO (2) 9-VOLT LITHIUM BATTERIES



# AIRCRAFT LIFE SUPPORT

ISO 9001 & AS9100 Certified  
MIL-STD-810 Qualified  
CAGE CODE 19062



## AIRCRAFT LIFE SUPPORT LOX CONVERTERS

### LOX CONVERTERS

LOX Converters are currently being or have been used on many of the Department of Defense aircraft, including the A-7, A-10, F-4, F-5, F-15, F-16, F-18, F-111, F-117, T-2, T-38, A-6, EA-6B, E-2C, S3, C-5, C-17, C-130, C-141, KC-135, HC-130 and the B-52 aircraft.

- Safe, lightweight and compact
- Internally mounted capacitance probe
- Stainless steel construction
- High vacuum insulation



**5 LITER LOX REMOVABLE**

P/N 10C-0020-9 (MB-5A)  
NSN 1660-00-327-7048  
MIL-DTL-19328



**5 LITER LOX FIXED**

P/N 10C-0021-5  
(GCU-12A/A)  
NSN 1660-00-148-9239  
MIL-DTL-25666/4



**7 LITER LOX CONVERTER  
REMOVABLE**

P/N 10C-0059-7



**10 LITER LOX CONVERTER  
REMOVABLE**

P/N 10C-0016-16 (GCU-24A/A)  
NSN 1660-01-179-4064  
MIL-DTL-19803



**10 LITER LOX CONVERTER  
FIXED**

P/N 10C-0005-11 (GCU-2 A/A)  
NSN 1660-00-078-8227  
MIL-DTL-25666/1



**10 LITER LOX READY  
TO INSTALL (RTI)  
REMOVABLE**

P/N 10C-0045-10, -11, -12

	P/N	10C-0020-9	10C-0021-5	10C-0059-7	10C-0016-16	10C-0005-11	10C-0045-10, -11, -12
	<b>CAPACITY</b>	5 LITERS (REMOVABLE)	5 LITERS (FIXED)	7 LITERS (REMOVABLE)	10 LITERS (REMOVABLE)	10 LITERS (FIXED)	RTI (REMOVABLE)
	<b>W”x L”x H”</b>	12.4 x 15 x 9.5	11.7 x 12.8 x 9.3	7.3 x 29	12.4 x 15 x 12.5	12.8 x 12.9 x 12.7	16 x 18.5 x 18.5
	<b>WEIGHT, FULL</b>	28 LBS	25 LBS	39 LBS	45 LBS	38 LBS	75 LBS
	<b>WEIGHT, EMPTY</b>	15 LBS MAX	12 LBS MAX	21 LBS	20 LBS MAX	20 LBS MAX	50 LBS
	<b>TOTAL GASEOUS VOLUME</b>	4,300 LITERS	4,300 LITERS	6,020 LITERS	8,600 LITERS	8,600 LITERS	8,600 LITERS
	<b>OPERATING PRESSURE</b>	75-120 PSIG	75-120 PSIG	75-120 PSIG	75-120 PSIG	75-120 PSIG	75-120 PSIG
	<b>MAX FLOW RATE</b>	72 LPM	72 LPM	50 LPM	72 LPM	72 LPM	100 LPM
	<b>OPERATING TEMPERATURE</b>	-65° F TO 260° F	-65° F TO 260° F	-20° F TO 120° F	-65° F TO 260° F	-65° F TO 260° F	-65° F TO 260° F
	<b>MOUNTING</b>	BASE PLATE WITH A SINGLE WING NUT FOR EASY REMOVAL	FOUR (4) MOUNTING BOLTS	TWO (2) QUICK RELEASE BAND CLAMPS	BASE PLATE WITH A SINGLE WING NUT FOR EASY REMOVAL	FOUR (4) MOUNTING BOLTS	ENCLOSURE: FOUR (4) AIRCRAFT SEAT TRACK FITTINGS, 10 LITER: BASE PLATE WITH A SINGLE WING NUT
	<b>REQUIRED POWER INDICATOR</b>	—	—	5 TO 28 VDC, 200MA REMOTE MOUNTED INDICATOR	—	—	—
	<b>FILL CONNECTION</b>	CRU-50/A MIL-PRF-25961 COMBO VALVE	M533656-6	CRU-50/A FILL VALVE	CRU-50/A FILL VALVE	3/8" ANPT INTERNAL	CRU-50/A FILL VALVE
	<b>PLUMBING CONNECTIONS</b>	TWO (2) QUICK DISCONNECT	FIVE (5)	ONE (1) QUICK DISCONNECT	TWO (2) QUICK DISCONNECT	FIVE (5)	TWO (2)
	<b>ELECTRICAL CONNECTIONS</b>	TWO (2) QUICK DISCONNECT	TWO (2) QUICK DISCONNECT	ONE (1) QUICK DISCONNECT	TWO (2) QUICK DISCONNECT	TWO (2) QUICK DISCONNECT	TWO (2) QUICK DISCONNECT PLUS POWER CONNECTION



AIRCRAFT LIFE SUPPORT LOX CONVERTERS



25 LITER LOX  
CONVERTER  
FIXED

P/N 10C-0001-26 (GCU-17/A)  
NSN 1660-00-122-8101  
MIL-DTL-25666/5

P/N 10C-0002-25 (ME-3)  
NSN 1660-00-915-9673  
MIL-DTL-25666/7



75 LITER LOX  
CONVERTER  
FIXED

P/N 10C-0012-75 (GCU-20/A)  
NSN 1660-00-079-4359  
MIL-DTL-25666/6

P/N	10C-0001-26	10C-0012-75
CAPACITY	25 LITERS (FIXED)	75 LITERS (FIXED)
W"x L"x H"	19.8 x 19.3 x 17.5	23.5 x 23.5 x 24
WEIGHT, FULL	96 LBS	275 LBS
WEIGHT, EMPTY	33 LBS	85 LBS
TOTAL GASEOUS VOLUME	21,500 LITERS	64,500 LITERS
OPERATING PRESSURE	300-380 PSIG	300-380 PSIG
MAX FLOW RATE	150 LPM	400 LPM
OPERATING TEMPERATURE	-65° F TO 260° F	-65° F TO 260° F
MOUNTING	THREE (3) MOUNTING BOLTS	FOUR (4) MOUNTING BOLTS
PLUMBING CONNECTIONS	FIVE (5)	FIVE (5)
ELECTRICAL CONNECTIONS	TWO (2) QUICK DISCONNECT	TWO (2) QUICK DISCONNECT



AIRCRAFT LIFE SUPPORT GAS CYLINDERS



LOW PRESSURE CYLINDERS

P/N 80C-0008 SERIES

Low Pressure Cylinders operate at pressures of 500 PSIG or less and can be used as oxygen reserve tanks, walk-around bottles, plenum tanks or in a variety of other applications.

- Fabricated of stainless steel
- Available in other sizes and pressures
- Single or Double port cylinders available
- Constructed per MIL-DTL-5886



HIGH PRESSURE CYLINDERS

P/N 80C-0002, P/N 80C-0003, P/N 80C-0006 SERIES

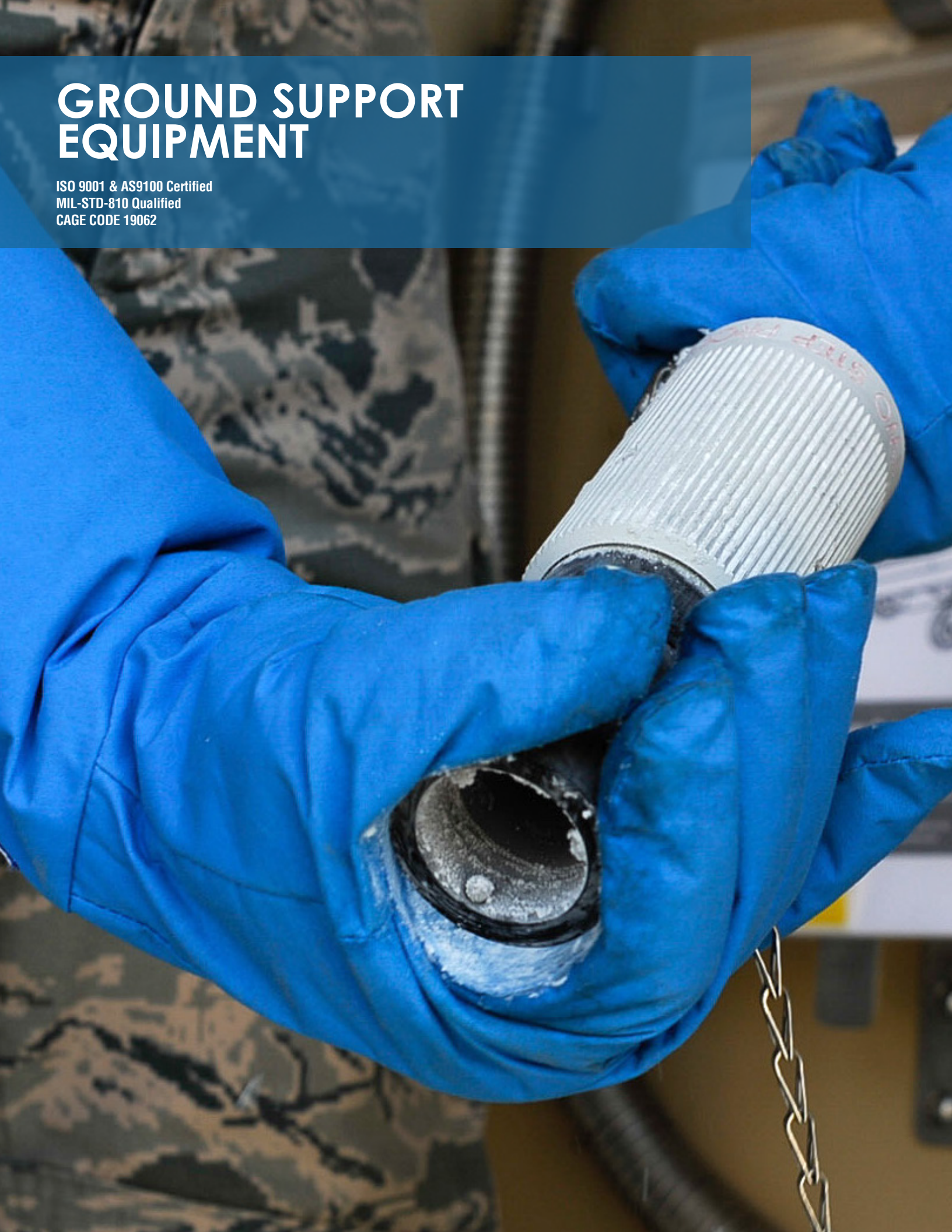
High Pressure Cylinders operate at pressures ranging from 1800 to 2100 PSIG. A range of sizes and configurations are available, some designed and tested to Military Specifications.

	ESSEX PART NUMBER	MIL PART NUMBER	MIN. INTERNAL VOLUME (CUBIC INCHES)	NOMINAL OPERATING PRESSURE (PSIG)	MAX. WEIGHT (POUNDS)	MAX. LENGTH (INCHES)	MAX. DIAMETER (INCHES)	PORTS PER SAE AS71051
LOW PRESSURE	80C-0008-1	M5886-1	280	450	3.75	14.50	5.750	ONE ¼" ANPT
	80C-0008-2	M5886-2	280	450	3.75	15.00	5.750	TWO ¼" ANPT
	80C-0008-3	M5886-3	500	450	5.75	23.00	5.750	TWO ¼" ANPT
	80C-0008-4	M5886-4	1000	450	10.00	18.00	10.125	TWO ¼" ANPT
	80C-0008-6	M5886-6	2100	450	18.00	24.50	12.562	TWO ¼" ANPT
HIGH PRESSURE	80C-0002-1	MS26545A4C205AW	205	2100	10.17	24.250	3.703	ONE ½" ANPT
	80C-0003-1	MS2654A3X0096W	96	1800	5.90	13.375	3.703	ONE ½" ANPT
	80C-0003-2	MS26545A4X0096W	96	2100	5.90	13.375	3.703	ONE ½" ANPT



# GROUND SUPPORT EQUIPMENT

ISO 9001 & AS9100 Certified  
MIL-STD-810 Qualified  
CAGE CODE 19062



## GROUND SUPPORT EQUIPMENT LOX VALVES



### LOX FILL, BUILDUP AND VENT VALVE

P/N 0580560100-1  
NSN 1660-01-092-5376

The Fill, Buildup and Vent Valve is an automatic-acting type valve that provides a safe, rapid method to control liquid and gaseous oxygen flow during the fill-up and operation of cryogenic converters.

- Meets and/or exceeds functional and environmental requirements of MIL-PRF-25961
- Designed to mate with the standard liquid oxygen filler valve per MIL-PRF-38201
- Check valve in the fill port prevents reverse flow of liquid gases
- Constructed of aluminum with stainless steel poppets and Teflon seals
- CRU-50/A connection



### LIN FILLER VALVE

P/N 20C-0021-4  
NSN 4820-01-207-3166

### LOX FILLER VALVE

P/N 20C-0021-2  
NSN 4820-00-796-9680

Liquid Oxygen and Nitrogen Filler Valves are specifically designed to service liquid oxygen and nitrogen systems for military aircraft.

- Perform in accordance with MIL-PRF-38201
- Automatically open and close when activated by the mating component
- Pin quantity and size variations provided for proper coupling
- CRU-59/E connection



# GROUND SUPPORT EQUIPMENT LOX CARTS

## 50 GALLON LOX CART

P/N 50C-0014-1 (DARK GREEN) | NSN 3655-01-066-6214 | TMU-27/M  
P/N 50C-0014-5 (WHITE) | NSN 3655-01-456-0123

The 50 Gallon LOX Cart is a mobile liquid oxygen storage tank assembly that allows for maximum reliability and portability with minimal maintenance. The 50 Gallon LOX Cart can be used with any LOX converter that uses a CRU-50/A fill connection, including all Essex LOX Converters, BMOS, BMOS-FS, MMOS, NPTLOX and PTLOX. Meets and/or exceeds functional and environmental requirements of MIL-PRF-38170. Tested to MIL-STD-810 and conforms to mobility requirements of SAE-A58090 (MIL-M-8090, Type II, Group A equipment).

<b>CAPACITY</b>	50 GALLONS
<b>W"x L"x H"</b>	54 x 85 x 39
<b>WEIGHT, FULL</b>	1160 LBS
<b>WEIGHT, EMPTY</b>	685 LBS
<b>SYSTEM INTERNAL PRESSURE</b>	0-65 PSIG
<b>DELIVERY/OUTLET PRESSURE</b>	20-65 PSIG
<b>OPERATING TEMPERATURE</b>	-65° F TO 125° F
<b>FILL CONNECTION</b>	INSULATED TRANSFER HOSE (WILL WORK WITH ANY PORTABLE LOX DEVICE HAVING A STANDARD CRU-50 FILL CONNECTION)
<b>OUTLET PORT</b>	CRU-59/E FILL VALVE ON TEN (10) FOOT HOSE
<b>TRANSPORTATION</b>	STANDARD LUNETTE EYE WITH THREE (3) WHEELS (RETRACTABLE FRONT WHEEL), MANUAL PARKING BRAKE, LIFT/TIE DOWN RINGS



## 500 GALLON LOX TRAILER

P/N 50C-0115-1 (LOX) | NSN 3655-01-626-3554  
P/N 50C-0115-2 (LIN) | NSN 3655-01-626-3553

The 500 Gallon LOX Trailer is a mobile liquid oxygen storage tank assembly.

The 500 Gallon LOX Trailer can be used with all Essex LOX Converters, BMOS, BMOS-FS, MMOS, NPTLOX, PTLOX and 50 Gallon LOX Carts.

A 500 Gallon LIN Trailer for the transport and storage of liquid nitrogen is also available.

- ASME certified tank builder
- Trailer Mounted and Forklift Compatible
- Unit is Qualified to Air Force PD13WRGRVEA05
- Tested to MIL-STD-810

<b>CAPACITY</b>	500 GALLONS
<b>DIMENSIONS (W" x L" x H")</b>	84 x 136 x 96
<b>OVERALL CUBE</b>	633 FT³
<b>FULL WEIGHT</b>	9500 LBS w/ LOX   8000 LBS w/ LIN
<b>EMPTY WEIGHT</b>	4500 LBS
<b>SYSTEM INTERNAL PRESSURE</b>	0-65 PSIG
<b>LOX DELIVERY/OUTLET PRESSURE</b>	30-50 PSIG
<b>OPERATING TEMPERATURE</b>	-40°F TO +140°F
<b>STORAGE TEMPERATURE</b>	-60°F TO +160°F
<b>OUTLET PORTS</b>	10' SERVICING HOSE PER MIL-H-27301 WITH SERVICING COUPLING FOR LOX PER 8991174 OR LIN PER 8991172 ADDITIONAL 10' SERVICING HOSE PER MIL-PRF-83772 WITH THE MATING SERVICING COUPLING AND CRU-59/E FILL VALVE. TRAILER PER SAE AS8090, TYPE II, GROUP C WITH LUNETTE COUPLER PER A-A 52464, TYPE II
<b>TRANSPORTING</b>	TIE-DOWN PROVISIONS PER MIL-HDBK-1791 & USAF 48B7796 LIFTING RINGS FOR CRANE COMPATIBILITY FORKLIFT TUBES FOR FORKLIFT COMPATIBILITY





GROUND SUPPORT EQUIPMENT ACCESSORIES



LOX PERSONAL PROTECTION EQUIPMENT

P/N 50C-0107-0903-1, -2, -3, -4 (Kits include Gloves, Apron, & Face Shield)  
P/N 50C-0107-0900-1, -2, -3, -4 (Cryogenic Elbow Length Gloves)  
P/N 50C-0107-0902 (Cryogenic Apron 42" Long)  
P/N 50C-0107-0901 (Face Shield)

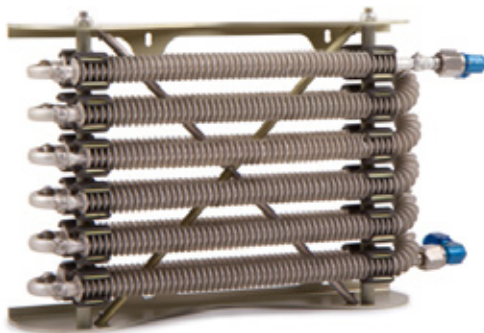
Personal Protection Equipment (PPE) must be worn when filling, draining or purging LOX or other cryogenic devices. The extreme cold of the liquid can freeze unprotected skin cause severe frostbite. Essex offers face shields, cryogenic aprons and cryogenic gloves available separately or in kits in various sizes.

Actual items may vary slightly in appearance from those pictured.

LOX HEAT EXCHANGER

P/N 50C-0007 | NSN 1660-01-042-3234

LOX Heat Exchanger warms incoming gaseous or liquid oxygen within 20 degrees of the ambient temperature prior to delivery to a pilot, aircraft crew or medical patient for breathing. A variety of sizes and configurations are available.



LOX FILL HARNESS KIT

P/N 50C-0097-10  
P/N 50C-0097-15

LOX Fill Harness Kit connects a Liquid Oxygen Cylinder (VGL) with a LOX converter or system for filling. The kit includes a relief valve, manual vent valve, CRU-59 LOX filler valve and hose assembly in either a 10' or 15' length.

W"x L"x H"	23 x 18.5 x 7
WEIGHT	15 LBS
RELIEF VALVE SETTING	400 PSIG
SUPPLY CONNECTION	CRU-59/E FILL VALVE

PURGE KIT

P/N 50C-0068-2

The Purge Kit, coupled with an adequate supply of gas, removes moisture from cryogenic vessels, system lines, valves and their components. Can be used with pure gaseous nitrogen, oxygen or air. Adapters and hoses can be designed to fit specific applications upon request.

W"x L"x H"	18.5 x 14 x 7
WEIGHT	18 LBS
SAFETY BURST DISC PRESSURE	150 ± 10 PSIG
INLET FLOW & PRESSURE	100 LPM AT 55 PSIG
HEATER OUTLET TEMPERATURE	250° F ± 20 ° F
OPERATING POWER	110 VOLTS AC, 60 HZ, SINGLE PHASE
OUTLET CONNECTION	CRU-59/E OR ALOX
SUPPLY CONNECTION	37 DEGREE FLARE FITTING



HIGH PRESSURE FILL KIT

P/N 50C-0110-1 | NSN 3655-01-614-1496

High Pressure Fill Kit connects the OGL with a high pressure oxygen compressor to fill high pressure cylinders with 93% USP oxygen. The kit includes a 20' low pressure oxygen hose and a 4' high pressure braided hose with a relief valve, manual vent valve and pressure gauge. The high pressure oxygen compressor is not included. Items are packaged in a protective storage case.

W"x L"x H"	18.5 x 14 x 7
WEIGHT	12 LBS
RELIEF VALVE SETTING	75 PSIG
SAFETY BURST DISC PRESSURE	150 ± 10 PSIG
INLET AND FLOW PRESSURE	0 ± 25 PSIG
ACCESSORIES INCLUDED	ONE (1) 20' MEDICAL HOSE ONE (1) 4' HIGH PRESSURE HOSE ASSEMBLY ONE (1) CGA 540 CONNECTION ONE (1) CGA 870 YOKE CONNECTION

BACKPACK MEDICAL OXYGEN SYSTEM  
FILLING STATION HOSE KIT

P/N 50C-0116-1

BMOS-FS Hose Kit connects the MMOS to the BMOS-FS for refilling. The kit includes a relief valve, burst disc, CRU-50 LOX filler valve and CRU-59 LOX filler valve attached to a 4' cryogenic transfer hose. Items are packaged in a protective storage case.

W"x L"x H"	18.5 x 14 x 7
WEIGHT	13 LBS
RELIEF VALVE SETTING	75 PSIG
SAFETY BURST DISC PRESSURE	150 ± 10 PSIG
OUTLET CONNECTION	CRU-59/E FILL VALVE ON 4' HOSE
SUPPLY CONNECTION	CRU-50/A FILL FITTING



MISCELLANEOUS ACCESSORIES

10' Cryogenic Hose 50/500 Gallon LOX Carts	P/N 50C-0084-10 P/N 50C-0014-0170   MIL-PRF-83772
15' Cryogenic Hose 50/500 Gallon LOX Carts	P/N 50C-0084-15 P/N 50C-0014-0500   MIL-PRF-83772
Drain Tank	P/N 50C-0009-2
Portable Efficiency Meter	P/N 50C-0016-2
Portable Quantity Gauging System	P/N 50C-0022-1
LOX Purge Fitting	P/N 50C-0014-0111
LIN Purge Fitting	P/N 50C-0014-0250
Supply Quick Disconnect	P/N 528000-7
Vent Quick Disconnect	P/N 256000-7



# MAINTENANCE, REPAIR & OVERHAUL SERVICE

OUR WIDE ARRAY OF PRODUCTS AND DESIGN/BUILD EXPERTISE GIVES ESSEX  
A BROAD RANGE OF CAPABILITIES INCLUDING:

## MACHINING

Aluminum, Titanium, Plastic, Teflon, 515 & 177 Stainless Steel

## WELDING

Aluminum, Stainless Steel, Mild Steel, Titanium Certified to ASME, DOT & MIL-STD-1595A

## SYSTEM REPAIRS

Liquid Oxygen (LOX), Liquid Nitrogen (LIN)

## VALVE REPAIRS

Electro-mechanical, Liquid Oxygen (LOX)

## COMPONENT REPAIRS

Specialty Tanks, Liquid Oxygen (LOX) Tubing, Heat Exchangers, Purge Kits, Platform Controls

## TEST EQUIPMENT REPAIRS

NER Meters, Electrical Equipment

## CLEANING & PROCESSING

Degreasing, Descaling, Passivation, Alodine, Anodize, O<sub>2</sub> Cleaning

## FINISHING

Painting, Plating

## TESTING

High Pressure Oxygen (to 6000 PSIG), High Pressure Nitrogen (to 3000 PSIG), Electrical, Fuel, Hydraulic (MIL-H-56066, Skydrol, MIL-H-7808)

**Essex is known worldwide for our maintenance, repair and overhaul service. Converters still operating on NATO aircraft are returned to the factory every few years to be checked or repaired as needed. Essex also can repair virtually any model LOX Cart and will provide a full warranty on the overhauled unit.**



## ROTARY POOL SERVICE FOR LOX CONVERTERS

Essex offers a rotary pool service to ensure fast turnaround and minimum downtime when a LOX converter needs repair.

The process for this program is very simple:

- Ship the LOX converter needing repair back to Essex and provide us with the tracking number.
- Once we have that information, we will ship out a refurbished unit to you as a replacement. We typically ship the same day, and there is no charge to you at that time.
- When we receive the returned converter, Essex will perform any necessary repairs and invoice you for the work performed.
- The refurbished LOX converter then goes into our rotary pool for the next customer.

It's an easy and efficient process that enables your aircraft to have LOX available when needed.

*Rotary Pool Service available for 7 and 10 Liter LOX Converters.*

Contact Essex for more information regarding our rotary pool service or your maintenance, repair and overhaul requirements.





