

The logo consists of a stylized black and white graphic of a hand or tool head on the left, followed by the word "Oxylance" in a bold, black, sans-serif font.

Oxylance



READ ALL SAFETY INFO PRIOR TO USING OXYLANCE PRODUCTS

Edition No. 6 Jan 2014

TABLE OF CONTENTS

SECTION	PAGE
Product Info, Generic Terms and Applications	3
Sales Terms and Conditions and Part Number Breakdown	4
Burning Bars (Thermic Torches)	5
Lever Action Holders	6 - 8
OXY 600 Series Holder	9 - 10
PL Holders	11
LP Holders	12 - 13
Thermal Shutoffs (flash arrestor)	14
Oxygen Control Valves	15
Regulators	16
Oxygen Hose	17
Fittings	18
Sure Cut System	19
Sure Cut Rods	20
Sure Cut Parts	21
Safety Clothing	22
Cool Shirt	23
Pure Flow Helmet	24
Underwater Cutting	25
Underwater Welding	26
Liquid Oxygen Vaporizers	27
Liquid Oxygen Systems & Info	28 - 29
Big Bar Safety Data and Operation Instructions	30 – 33
Oxygen Safety Information	34
Oxygen Flow Data for Big Burning Bars	35
Sure Cut Safety Data and Operation Instructions	36 – 39
MSDS	40 – 42

BURNING BARS ARE CLEANED FOR OXYGEN SERVICE AND MUST BE STORED IN A MANNER THAT PREVENTS THEM FROM BECOMING CONTAMINATED BY OIL, GREASE OR ANY SUBSTANCE THAT WILL REACT WITH OXYGEN

OXYLANCE BURNING BARS

GENERIC TERMS: EXOTHERMIC TORCH - THERMIC TORCH - MAG ROD - MAG BAR - LANCE BAR - LANCE ROD - THERMIC LANCE

The Oxy lance Burning Bar and Sure Cut Rods are self consuming cutting tools used in a wide variety of industries for cutting most ferrous and nonferrous metals, refractory and concrete. Benefits over conventional cutting methods are faster cutting speeds and the ability to cut thick sections as well as rusty or corroded materials.

WHAT IS THE DIFFERENCE BETWEEN OXY-FUEL AND EXOTHERMIC CUTTING?

The Oxy-Fuel cutting torch uses a preheat flame to elevate the temperature of the material to be cut to 1500 to 1900 degrees F. When the steel becomes cherry red a high pressure jet of oxygen is directed at the pre-heated metal. The result is the metal is rapidly oxidized or it burns. This process works on material that will oxidize. If it will not rust it can not be readily cut with an oxy-fuel system.

The Exothermic process also utilizes oxidation. However; the exothermic process uses alloys in the material in the burning bar as the fuel and produces temperatures of 7200 degrees F. A Burning Bar consists of an outer steel tube filled with special alloy wire. The exothermic reaction (Oxidation) occurs when the tip of the rod is heated to its kindling temperature (2800 f) and pure oxygen is introduced through the bar. The chemical reaction will continue until the bar is consumed or the oxygen flow is turned off. The only gas required for this cutting operation is pure oxygen. Cutting steel with an exothermic torch requires no preheat or cleaning.

WHAT SIZES ARE AVAILABLE?

Oxy lance manufactures a variety of Burning Bars, Sure Cut Rods and Underwater Cutting Rods. 10'6" Burning Bars are available in Pipe and Tube sizes from .405" O.D. up to 1.05" O.D. The smaller Sure Cut Rods are available in Tube sizes of 1/4" and 3/8" O.D. in lengths of 24", 36" and 48 inches. 3/8" rods are available in Plain End or Quick Connect. All tubing is measured by outside diameter and pipe is measured by nominal inside diameter. Oxy lance identifies both pipe and tubing by the outside diameter in order to identify the proper holder required for a particular size burning bar.

WHAT IS THE MOST IMPORTANT PART OF THE EQUIPMENT?

Other than proper fire proof clothing and eye protection, the most important part of the system is the Oxygen Supply, Oxygen Hose and Regulator. For most applications involving the large Burning Bars Oxy lance recommends 1/2" hose and a High Flow Regulator with a 1/2" port on the output side. This eliminates the possibility of flow restriction and ensures proper volume of oxygen to the Burning Bar.

WHAT IS THE MOST CRITICAL PART OF THE PROCESS?

The exothermic process relies on **OXYGEN VOLUME** and **PRESSURE**. Without proper volume of oxygen the cutting process will not work and creates hazards to the operator. Minimum and maximum volumes and pressures are listed with each size Burning Bar. You **MUST** supply the minimum volume and pressure for safe efficient operation. For all of the large Burning Bars you **CAN NOT** operate them with a single liquid oxygen tank. Please refer to the section on oxygen for proper set up information if liquid Dewars are to be used.

APPLICATIONS

STEEL MILLS / FOUNDRIES	POWER PLANTS / REFINERIES	EMERGENCY / RESCUE
Cleaning up metal spills	Removing Boiler Tubes	Train derailments
Opening Tap Holes	Remove / Replace Precipitators	Breeching Operations
Repairing Slag Pots	Removing frozen pins	Cutting Burglar Bars
Cutting Refractory	Repair Large Rollers	Open doors w/ hardened deadbolts
Cutting Skulls,	Gouging cracks in thick material	Cutting collapsed structures
Cutting Slag	Cut / Pierce Concrete	Cutting Guardrails
Processing Scrap	Cut Laminated material	Used by Farm Medic teams
Ferrous and Non Ferrous Smelters	Cut steel underwater	Military / Police

TERMS AND CONDITIONS

MINIMUM ORDERS:

Oxylance has a \$25.00 minimum order. This is \$25.00 of product not including freight.

RESTOCKING:

1. All returns must have "Return Material Authorization" (RMA) number issued by Oxylance.
2. All products must be returned freight pre-paid to Oxylance Inc.
3. All products are subject to inspection and approval by Oxylance prior to issue of credit.
4. All products are subject to a minimum 25% re-stocking charge.
5. After inspection, credit will be issued to customer's account less re-stocking, repair, and shipping charges.
6. **NO** credit will be issued for freight charges incurred by Oxylance.
7. **NO** "RMA" will be issued for;
Special order and/or custom items; Items on invoices over 120 days; Goods that have been used.

SHIPPING POLICY:

All Oxylance products are sold F.O.B. Birmingham, AL.

PATT NUMBERS BREAKDOWN:

In Oxylance part numbers the following nomenclature is used.

BURNING BARS;

First 2 Numbers identifies the outside diameter of the Burning Bar i.e. 54 (.540") 62 (.625") 67 (.675")

First Letter indicates the Product Line i.e. B = Burning Bar

Next 4 Numbers is the length i.e. 0525 = 5'3" and 1050 = 10.5' (10'6")

Last Letter is the end finish i.e. A = Plain End, C = Quick Connect, D = Threaded on Holder End and F = Threaded Both Ends and Coupled (NPT pipe threads and a pipe collar). Threaded end finish is only available on pipe sizes and can only be supplied in National Pipe Thread (NPT)

HOLDERS:

First 3 positions identifies the Holder type i.e. LA1 is for Lever Action #1

Next 3 or 4 numbers identifies the size Burning Bar or lance pipe the holder accommodates

Letters after the numbers identify the options such as G (Oxylance Ball Valve), F Thermal Shutoff (Flash Back), and S (Shield)

The next position will be a dash – and the letter B, C, or D. This letter will identify the CGA oxygen fitting size. CGA "B", CGA "C" or CGA "D" as required for various size hoses.

Repair Parts for Holders - many of the repair parts for holders will have a dash and a number at the end of the part number i.e. LAP1-1 refers to an item number in the accompanying photo or drawing. Some of our repair parts will fit more than one Holder and are listed with each Holder separately.

Standard Burning Bar (Thermic Torch) Part Numbers 10'6"

SIZE / PART #		.675" O.D. 3/8" pipe / 11/16" tube (Weight 10 lbs ea.)	OXYGEN FLOW
.675" X 10'6"	67B1050A	.675" X 10'6" Plain End	90 psi 30 cfm 150 psi 45 cfm Burn Time 4.5 Minutes
	67B1050C	.675" X 10'6" Quick Connect	
	67B1050D	.675" X 10'6" Threaded on Holder End (3/8" npt)	
	67B1050F	.675" X 10'6" Threaded Both Ends with 3/8" pipe collar	

SIZE / PART #		.625" O.D. 5/8" tube (Weight 9 lbs ea.)	OXYGEN FLOW
.625" X 10'6"	62B1050A	.625" X 10'6" Plain End	90 psi 25 cfm 150 psi 40 cfm Burn Time 4.5 Minutes
	62B1050C	.625" X 10'6" Quick Connect	
	.625" Burning Bars not available with threads		

SIZE / PART #		.540" O.D. / 1/4" pipe (Weight 6.5 lbs.)	OXYGEN FLOW
.540" X 10'6"	54B1050A	.540" X 10'6" Plain End	90 psi 20 cfm 150 psi 30 cfm Burn Time 4.5 Minutes
	54B1050C	.540" X 10'6" Quick Connect	
	54B1050D	.540" X 10'6" Threaded on Holder End (1/4" npt)	
	54B1050F	.540" X 10'6" Threaded Both Ends with 1/4" pipe collar	

SPECIAL ORDER LENGTH 5'3"

SIZE / PART #		.675" O.D. 3/8" pipe / 11/16" tube (Weight 5 lbs ea.)	OXYGEN FLOW
.675" X 5'3"	67B0525A	.675" X 5'3" Plain End	90 psi 30 cfm 150 psi 45 cfm Burn Time 2.25 Minutes
	67B0525C	.675" X 5'3" Quick Connect	
	67B0525D	.675" X 5'3" Threaded on Holder End (3/8" npt)	
	67B0525F	.675" X 5'3" Threaded Both Ends with 3/8" pipe collar	

SIZE / PART #		.625" O.D. 5/8" tube (Weight 4.5 lbs ea.)	OXYGEN FLOW
.625" X 5'3"	62B0525A	.625" X 5'3" Plain End	90 psi 25 cfm 150 psi 40 cfm Burn Time 2.25 Minutes
	62B0525C	.625" X 5'3" Quick Connect	
	.625" Burning Bars not available with threads		

SIZE / PART #		.540" O.D. / 1/4" pipe (Weight 3.25 lbs.)	OXYGEN FLOW
.540" X 5'3"	54B0525A	.540" X 5'3" Plain End	90 psi 20 cfm 150 psi 30 cfm Burn Time 2.25 Minutes
	54B0525C	.540" X 5'3" Quick Connect	
	54B0525D	.540" X 5'3" Threaded on Holder End (1/4" npt)	
	54B0525F	.540" X 5'3" Threaded Both Ends with 1/4" pipe collar	

SPECIAL ORDER LARGE DIAMETER BURNING BARS (THERMIC TORCH) 10'6" (LENGTH ONLY)

1.05" O.D. tube or 3/4" pipe (Weight 25 lbs ea.)			OXYGEN FLOW
SIZE	PART #	DESCRIPTION	
1.05" X 10'6"	10B1050A	1.05" X 10'6" Plain End	90 psi 80 cfm 150 psi 95 cfm Burn Time 4.5 Minutes
	10B1050C	1.05" X 10'6" Quick Connect	

.922" O.D. tube (Weight 18 lbs ea.)			OXYGEN FLOW
SIZE	PART #	DESCRIPTION	
.922" X 10'6"	92B1050A	.922" X 10'6" Plain End	90 psi 70 cfm 150 psi 85 cfm Burn Time 4.5 Minutes
	92B1050C	.922" X 10'6" Quick Connect	

.840" O.D. tube or 1/2" pipe (Weight 16 lbs ea.)			OXYGEN FLOW
SIZE	PART #	DESCRIPTION	
.840" X 10'6"	84B1050A	.840" X 10'6" Plain End	90 psi 60 cfm 150 psi 75 cfm Burn Time 4.5 Minutes
	84B1050C	.840" X 10'6" Quick Connect	

LEVER ACTION HOLDERS



**Lever Action Holder with Thermal Shutoff and Ball Valve (optional hand shield not shown)
ALL HOLDERS ARE SHIPPED WITH A RUBBER GROMMET INSTALLED**

#1 LEVER ACTION HOLDER for .405" to .675" (1/8" to 3/8" pipe and tube sizes)

PART #	DESCRIPTION		
.405" O.D. tube or 1/8" Pipe		HOLDER WITH SHIELD	
LA1405	#1 Lever Action Holder (no valve) w/ .405 Grommet	LA1405-S	with Hand Shield
PL1/8-6	LA 1 Rubber Grommet for 405" pipe		
LA1405F	#1 Lever Action Holder w/ 1/2" Thermal Shutoff	LA1405FS	with Hand Shield
LA1405FG	#1 Lever Action Holder w/ Ball Valve & Thermal Shutoff	LA1405FGS	with Hand Shield
LA1405FV	#1 Lever Action Holder w/ Lever Valve & Thermal Shutoff	LA1405FVS	with Hand Shield

.540" O.D. tube or 1/4" Pipe		HOLDER WITH SHIELD	
LA1540	#1 Lever Action Holder (no valve) w/ .540" Grommet	LA1540-S	with Hand Shield
PL 10-6	LA 1 Rubber Grommet for .540" (1/4" pipe)		
LA154F	#1 Lever Action Holder w/ 1/2" Thermal Shutoff	LA154F-S	with Hand Shield
LA1540FG	#1 Lever Action Holder w/ Ball Valve & Thermal Shutoff	LA1540FGS	with Hand Shield
LA1540FV	#1 Lever Action Holder w/ Lever Valve & Thermal Shutoff	LA1540FVS	with Hand Shield

2 LEVER ACTION HOLDER for .540" .625" and .675" O.D. pipe

.540" O.D. tube or 1/4" Pipe w/ CGA "B" for 3/8" hose		HOLDER WITH SHIELD	
LA254	# 2 Lever Action Holder (no valve) w/ .540" Grommet	LA254-S	with Hand Shield
LA254I	LA 2 Rubber Grommet for .540" (1/4" pipe)		
LA254FG-B	# 2 LA Holder w/ Ball Valve & 1/2" Thermal Shutoff	LA254FGS-B	with Hand Shield
LA254FV-B	# 2 LA Holder w/ Lever Valve & 1/2" Thermal Shutoff	LA254FVS-B	with Hand Shield

.540" O.D. tube 1/4" Pipe with/ CGA "C" for 1/2" hose		HOLDER WITH SHIELD	
LA254FG-C	# 2 LA Holder w/ Ball Valve & 1/2" Thermal Shutoff	LA254FGS-C	with Hand Shield
LA254FV-C	# 2 LA Holder w/ Lever Valve & 1/2" Thermal Shutoff	LA254FVS-C	with Hand Shield

.675" and .625" O.D. tube w/ CGA "B" for 3/8" hose		HOLDER WITH SHIELD	
LA2675	# 2 Lever Action Holder (no valve)	LA2675-S	With Hand Shield
LA2675I	LA 2 Rubber Grommet for .625" and .675" O.D.		
LA267FG-B	# 2 LA Holder w/ Ball Valve & 1/2" Thermal Shutoff	LA267FGS-B	with Hand Shield
LA267FV-B	# 2 LA Holder w/ Lever Valve & 1/2" Thermal Shutoff	LA267FVS-B	with Hand Shield

.675" and .625" O.D. tube w/ CGA "C" for 1/2" hose		HOLDER WITH SHIELD	
LA267FG-C	# 2 LA Holder w/ Ball Valve & 1/2" Thermal Shutoff	LA267FGS-C	with Hand Shield
LA267FV-C	# 2 LA Holder w/ Lever Valve & 1/2" Thermal Shutoff	LA267FVS-C	with Hand Shield

For the LA 2 Holder the LA2675I Grommet fits both .625" and .675" diameter tube

FOR ALL HOLDERS FOR BURNING BARS AND LANCE PIPE LARGER THAN .540" OXYLANCE RECOMMENDS THAT 1/2" HOSE BE USED WHICH REQUIRES A CGA "C" FITTING

***V-O5 VALVE NOT RECOMMENDED FOR PRESSURES OVER 200 PSI**



LEVER ACTION HOLDERS continued

# 3 LEVER ACTION HOLDER for .840", .922" or 1.050" O.D. pipe			
PART #	DESCRIPTION		
.840" O.D. tube or 1/2" pipe		HOLDER WITH SHIELD	
LA384	# 3 Lever Action Holder (no valve)	LA384S	with Hand Shield
LA3840I	LA 3 Rubber Grommet for .840" O.D. tube or 1/2" pipe		
LA384F	# 3 LA Holder 3/4" NPT Thermal Shutoff (no valve)	LA384FS	with Hand Shield
LA384FG	# 3 LA Holder w/ Ball Valve & 3/4" Thermal Shutoff	LA384FGS	with Hand Shield
LA384FG-C	Same as LA384FG with CGA "C" Fitting	LA384FGS-C	with Hand Shield

.922" O.D. tube		HOLDER WITH SHIELD	
LA392	# 3 Lever Action Holder (no valve)	LA392S	with Hand Shield
LA3922I	LA 3 Rubber Grommet for .922" O.D. tube		
LA3922F	# 3 LA Holder 3/4" NPT Thermal Shutoff (no valve)	LA392FS	with Hand Shield
LA3922FG	# 3 LA Holder w/ Ball Valve & 3/4" Thermal Shutoff	LA392FGS	with Hand Shield
LA3922FG-C	Same as LA392FG with CGA "C" Fitting	LA392FGS-C	with Hand Shield

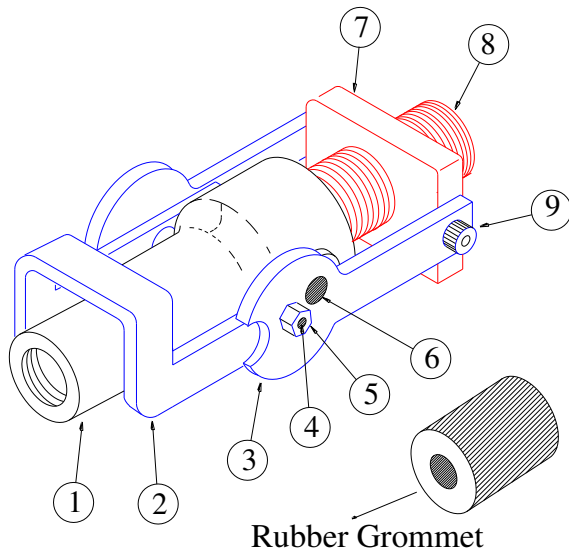
1.05" O.D. tube or 3/4" pipe		HOLDER WITH SHIELD	
LA3105	# 3 Lever Action Holder (no valve)	LA3105S	with Hand Shield
LA3105I	LA 3 Rubber Grommet for 1.05" O.D. tube or 3/4" pipe		
LA3105F	# 3 LA Holder 3/4" NPT Thermal Shutoff (no valve)	LA3105FS	with Hand Shield
LA3105FG	# 3 LA Holder w/ Ball Valve & 3/4" Thermal Shutoff	LA3105FGS	with Hand Shield
LA3105FG-C	Same as LA3105FG with CGA "C" Fitting	LA3105FGS-C	with Hand Shield

NO SHIELD AVAILABLE FOR LA4 OR LA5 HOLDERS

# 4 LEVER ACTION HOLDER for 1.250" tube or 1.315" O.D. tube or 1" pipe	
LA 41315	# 4 Lever Action Holder (no valve)
LA41315I	LA 4 Rubber Grommet for 1.25" and 1.315" O.D. tube or 1" pipe
LA 41315F4	# 4 LA Holder w/ 1" Thermal Shutoff
LA 41315FB4	# 4 LA Holder w/ Ball Valve & 1" Thermal Shutoff
LA 41315F5	# 4 LA Holder w/ 1 1/4" Thermal Shutoff
LA 41315FB5	# 4 LA Holder w/ Ball Valve & 1 1/4" Thermal Shutoff

1.315" Rubber Insert works for both 1.250 and 1.315 inch O.D.

# 5 LEVER ACTION HOLDER for 1.66" O.D. tube or 1 1/4" pipe	
LA 5166	# 5 Lever Action Holder (no valve)
LA5166I	LA 5 Rubber Grommet for 1.66" O.D. tube or 1 1/4" pipe
LA5166F	# 5 LA Holder w/ 1 1/4" Thermal Shutoff
LA5166FB	# 5 LA Holder w/ Ball Valve & 1 1/4" Thermal Shutoff



- 1 Body
- 2 Lever Handle
- 3 Inner Link (2 each)
- 4 Link Bolts (2 each)
- 5 Link Bolt Nuts (2 each)
- 6 Hinge Pins (2 each hidden behind Inner Link)
- 7 Barrel Nut
- 8 Barrel
- 9 Barrel Nut Bolts (2 each)
- 10 Hand Shield (Photo on right)



1- 10 i.d. numbers in drawing refers to last number in part numbers below

LEVER ACTION REPAIR PARTS

LA 1 PARTS	
PART #	DESCRIPTION
LAP1-1	# 1 LA Body
LAP1-2	# 1 LA Lever Handle
LAP1-3	# 1 LA Inner Link
LAP234-4	Link Bolt
LAP234-5	Link Bolt Nut
LAP234-6	Hinge Pin
LAP1-7	# 1 Barrel Nut
LAP1-8	# 1 Barrel
LAP234-9	Barrel Nut Bolt
LAP1-10	# 1 Hand Shield & Shield Nuts

LA 2 PARTS	
PART #	DESCRIPTION
LAP2-1	# 2 LA Body
LAP23-2	# 2 LA Lever Handle
LAP23-3	# 2 LA Inner Link
LAP234-4	Link Bolt
LAP234-5	Link Bolt Nut
LAP234-6	2 Hinge Pin
LAP2-7	# 2 Barrel Nut
LAP2-8	# 2 Barrel
LAP234-9	Barrel Nut Bolt
LAP2-10	# 2 Hand Shield and Shield Nuts

LA 3 PARTS	
PART #	DESCRIPTION
LAP3-1	# 3 LA Body
LAP3-2	# 3 LA Lever Handle
LAP23-3	# 3 LA Inner Link
LAP234-4	Link Bolt
LAP234-5	Link Bolt Nut
LAP234-6	Hinge Pin
LAP3-7	# 3 Barrel Nut
LAP3-8	# 3 Barrel
LAP234-9	Barrel Nut Bolt
LAP3-10	# 3 Hand Shield & Shield Nuts

LA 4 PARTS	
PART #	DESCRIPTION
LAP4-1	# 4 LA Body
LAP4-2	# 4 LA Lever Handle
LAP4-3	# 4 LA Inner Link
LAP234-4	Link Bolt
LAP234-5	Link Bolt Nut
LAP4-6	4 Hinge Bolt
LAP4-7	# 4 Barrel Nut
LAP4-8	# 4 Barrel
LAP234-9	Barrel Nut Bolt

LA 5 PARTS	
PART #	DESCRIPTION
LAP5-1	# 5 LA Body
LAP5-2	# 5 LA Lever Handle
LAP5-3	# 5 LA Inner Link
LAP5-4	# 5 Link Bolt
LAP5-5	# 5 Link Bolt Nut
LAP5-6	# 5 Hinge Bolt
LAP5-7	# 5 Barrel Nut
LAP5-8	# 5 Barrel
LAP5-9	# 5 Barrel Nut Bolt

LA RUBBER GROMMETS	
PART #	DESCRIPTION
PL 1/8-6	LA 1 Grommet for .405 O.D.
PL 10-6	LA 1 Grommet for .540 O.D.
LA2540I	LA 2 Grommet for .540 O.D.
LA2675I	LA 2 Grommet for .675 O.D.
LA3840I	LA 3 Grommet for .840 O.D.
LA3922I	LA 3 Grommet for .922 O.D.
LA3105I	LA 3 Grommet for 1.05 O.D.
LA41315I	LA 4 Grommet for 1.315 O.D.
LA5166I	LA 5 Grommet for 1.66 O.D.

OXY 600 SERIES HOLDER



PART NUMBERS AND MATCHING PIPE / TUBE SIZE

PART #	Pipe Size	Tube Diam.	DESCRIPTION	Hose Fitting
OXY654FG-B	1/4"	.540 O.D.	With Thermal Shutoff and Ball Valve	"B"
OXY654FV-B	1/4"	.540 O.D.	With Thermal Shutoff and Lever Valve	"B"
OXY654FG-C	1/4"	.540 O.D.	With Thermal Shutoff and Ball Valve	"C"
OXY654FV-C	1/4"	.540 O.D.	With Thermal Shutoff and Lever Valve	"C"
OXY662FG-B	---	.625 O.D.	With Thermal Shutoff and Ball Valve	"B"
OXY662FV-B	---	.625 O.D.	With Thermal Shutoff and Lever Valve	"B"
OXY662FG-C	---	.625 O.D.	With Thermal Shutoff and Ball Valve	"C"
OXY662FV-C	---	.625 O.D.	With Thermal Shutoff and Lever Valve	"C"
OXY667FG-B	3/8"	.675 O.D.	With Thermal Shutoff and Ball Valve	"B"
OXY667FV-B	3/8"	.675 O.D.	With Thermal Shutoff and Lever Valve	"B"
OXY667FG-C	3/8"	.675 O.D.	With Thermal Shutoff and Ball Valve	"C"
OXY667FV-C	3/8"	.675 O.D.	With Thermal Shutoff and Lever Valve	"C"

REPLACEMENT PARTS

PART #	PIPE / TUBE DIA		DESCRIPTION
OXY600CAP	---	---	End Cap
OXY654I	1/4"	.540 O.D.	Rubber Grommet (ID number on grommet 54)
OXY662I	---	.625 O.D.	Rubber Grommet (ID number on grommet 62)
OXY667I	3/8"	.675 O.D.	Rubber Grommet (ID number on grommet 67)
OXY0002	---	---	1/2" Male NPT Thermal Shutoff
VAL-OXY-1/2	---	---	1/2" Oxygance Ball Valve
VAL1/2BALL	---	---	1/2" Oxygen Approved Ball Valve
VAL-LV-1/2	---	---	Lever Valve (Maximum Pressure 200 PSI)
FTHW-144	---	---	"B" Fitting X 1/2" male NPT
FTHW-C-32	---	---	"C" Fitting X 1/2" male NPT



CUT AWAY VIEW OF OXY 600 WITH INSERT. NOTE THE MACHINED STOPS AT THE BOTTOM OF THE GROMMET FOR 3 DIFFERENT SIZE BURNING BARS TO SEAT IN

OXY 600 SERIES HOLDER WITH HAND SHIELD



PART NUMBERS AND MATCHING PIPE / TUBE SIZE

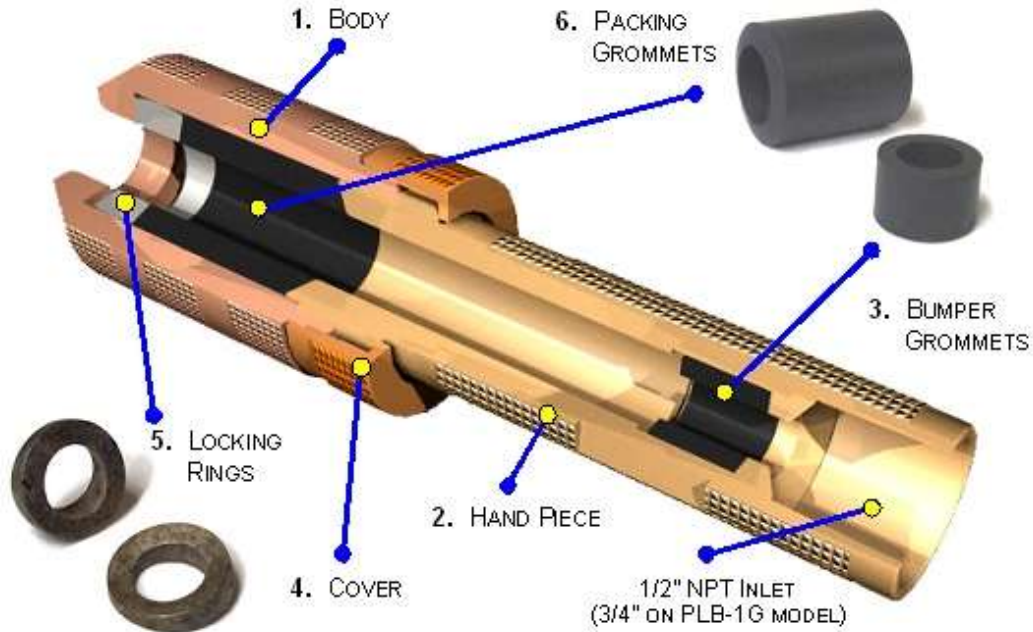
PART #	Pipe Size	Tube Diam.	DESCRIPTION Holder with Shield	Hose Fitting
OXY654FGS-B	1/4"	.540 O.D.	With Thermal Shutoff and Ball Valve	"B"
OXY654FVS-B	1/4"	.540 O.D.	With Thermal Shutoff and Lever Valve	"B"
OXY654FGS-C	1/4"	.540 O.D.	With Thermal Shutoff and Ball Valve	"C"
OXY654FVS-C	1/4"	.540 O.D.	With Thermal Shutoff and Lever Valve	"C"
OXY662FGS-B	---	.625 O.D.	With Thermal Shutoff and Ball Valve	"B"
OXY662FVS-B	---	.625 O.D.	With Thermal Shutoff and Lever Valve	"B"
OXY662FGS-C	---	.625 O.D.	With Thermal Shutoff and Ball Valve	"C"
OXY662FVS-C	---	.625 O.D.	With Thermal Shutoff and Lever Valve	"C"
OXY667FGS-B	3/8"	.675 O.D.	With Thermal Shutoff and Ball Valve	"B"
OXY667FVS-B	3/8"	.675 O.D.	With Thermal Shutoff and Lever Valve	"B"
OXY667FGS-C	3/8"	.675 O.D.	With Thermal Shutoff and Ball Valve	"C"
OXY667FVS-C	3/8"	.675 O.D.	With Thermal Shutoff and Lever Valve	"C"

REPLACEMENT PARTS

PART #	PIPE / TUBE DIA		DESCRIPTION
OXY 600S	---	---	Hand Shield
OXY 600CAP	---	---	End Cap
OXY 654I	1/4"	.540 O.D.	Rubber Grommet (ID number on grommet 54)
OXY 662I	---	.625 O.D.	Rubber Grommet (ID number on grommet 62)
OXY 667I	3/8"	.675 O.D.	Rubber Grommet (ID number on grommet 67)
OXY0002	---	---	1/2" Male NPT Thermal Shutoff
VAL-OXY-1/2	---	---	1/2" Oxylance Ball Valve
VAL1/2BALL	---	---	1/2" Oxygen Approved Ball Valve
VAL-LV-1/2	---	---	Lever Valve (Maximum Pressure 200 PSI)
FTHW-144	---	---	"B" Fitting X 1/2" male NPT
FTHW-C-32	---	---	"C" Fitting X 1/2" male NPT

LEVER VALVE IS NOT RECOMMENDED FOR OPERATING PRESSURES OVER 200 PSI

PL HOLDERS



1/8" Pipe (.405" O.D.)

PART #	DESCRIPTION
PL1/8	PL Holder for 1/8" Pipe
PL1/8FG	PL 1/8 with Thermal Shutoff & Ball Valve
PL1/8FV	PL 1/8 with Thermal Shutoff & Lever Valve
PL1/8-1	PL 1/8 Body
PL1/8-2	PL 1/8 Hand Piece
PL1/8-3	PL 1/8 Bumper Grommet
PL1/8-4	PL 1/8 Cover
PL1/8-5	PL 1/8 Locking Ring
PL1/8-6	PL 1/8 Packing Grommet

3/8" Pipe (.675" O.D.)

PART #	DESCRIPTION
PL11	PL Holder for 3/8" Pipe
PL11FG	PL 11 with Thermal Shutoff & Ball Valve
PL11FV	PL 11 with Thermal Shutoff & Lever Valve
PL11-1	PL 11 Body
PL11-2	PL 11 Hand Piece
PL11-3	PL 11 Bumper Grommet
PL11-4	PL 11 Cover
PL11-5	PL 11 Locking Ring
PL11-6	PL 11 Packing Grommet

1/4" Pipe (.540" O.D.)

PART #	DESCRIPTION
PL10	PL Holder for 1/4" Pipe
PL10FG	PL 10 with Thermal Shutoff & Ball Valve
PL10FV	PL 10 with Thermal Shutoff & Lever Valve
PL10-1	PL 10 Body
PL10-2	PL 10 Hand Piece
PL10-3	PL 10 Bumper Grommet
PL10-4	PL 10 Cover
PL10-5	PL 10 Locking Ring
PL10-6	PL 10 Packing Grommet

1/2" Pipe (.840" O.D.)

PART #	DESCRIPTION
PL12	PL Holder for 1/2" Pipe
PL12FG	PL 12 with Thermal Shutoff & Ball Valve
PL12FV	PL 12 with Thermal Shutoff & Lever Valve
PL12-1	PL 12 Body
PL12-2	PL 12 Hand Piece
PL12-3	PL 12 Bumper Grommet
PL12-4	PL 12 Cover
PL12-5	PL 12 Locking Ring
PL12-6	PL 12 Packing Grommet

5/8" Tube (.625" O.D.)

PART #	DESCRIPTION
PL5/8	PL Holder for 5/8" O.D. Tube
PL5/8FG	PL 5/8 with Thermal Shutoff & Ball Valve
PL5/8FV	PL 5/8 with Thermal Shutoff & Lever Valve
PL11-1	PL 11 Body

PL11-2	PL 11 Hand Piece
PL11-3	PL 11 Bumper Grommet
PL11-4	PL 11 Cover
PL5/8-5	PL 5/8 Locking Ring
PL5/8-6	PL 5/8 Packing Grommet

OXYLANCE LP LANCE HOLDER

#1 End Cap #4 #3 Grommet #2 Body



LP 250 FOR .250" O.D. TUBE

PART #	DESCRIPTION
LP250	.250" O.D. LP Holder
LP250B	.250" O.D. LP Holder w/ Ball Valve
LP250FG	.250" O.D. LP Holder w/ Ball Valve and Thermal Shutoff
LP250V	.250" O.D. LP Holder w/ Lever Valve
LP250FV	.250" O.D. LP Holder w/, Lever Valve and Thermal Shutoff

#1 End Cap #5 #4 Grommet #3 Gland



LP 540 FOR .540" O.D. TUBE (1/4" Pipe)

PART #	DESCRIPTION
LP540	.540" O.D. LP Holder
LP540G	.540" O.D. LP Holder w/ Ball Valve
LP540FG	.540" O.D. LP Holder w/ Ball Valve and Thermal Shutoff
LP540V	.540" O.D. LP Holder w/ Lever Valve
LP540FV	.540" O.D. LP Holder w/ Lever Valve and Thermal Shutoff

LP 675 FOR .675" AND .625" O.D. TUBE

PART #	DESCRIPTION
LP675	.675" O.D. LP Holder
LP675G	.675" O.D. LP Holder w/ Ball Valve
LP675FG	.675" O.D. LP Holder w/ Ball Valve and Thermal Shutoff
LP675V	.675" O.D. LP Holder w/ Lever Valve
LP675FV	.675" O.D. LP Holder w/ Lever Valve and Thermal Shutoff

LP 840 FOR .840" O.D. TUBE (1/2" PIPE)

PART #	DESCRIPTION
LP840	.840" O.D. LP Holder
LP840G	.840" O.D. LP Holder w/ Ball Valve
LP840FG	.840" O.D. LP Holder w/ Ball Valve and Thermal Shutoff
LP840V	.840" O.D. LP Holder w/ Lever Valve
LP840FV	.840" O.D. LP Holder w/ Lever Valve and Thermal Shutoff

LP 922 FOR .922" O.D. TUBE

PART #	DESCRIPTION
LP922	.922" O.D. LP Holder
LP922G	.922" O.D. LP Holder w/ Ball Valve
LP922FG	.922" O.D. LP Holder w/ Ball valve and Thermal Shutoff

LP 1050 FOR 1.050" O.D. TUBE (3/4" PIPE)

PART #	DESCRIPTION
LP1050	1.050" O.D. LP Holder
LP1050G	1.050" O.D. LP Holder w/ Ball Valve
LP1050FG	1.050" O.D. LP Holder w/ Ball Valve and Thermal Shutoff

REPAIR PARTS

PART #	DESCRIPTION
LP250-1	Brass End Cap
LP250-2	Brass Body
LP250-3	214 Rubber Grommet
LP250-4	214 Sealing Ring

#2 Body

REPAIR PARTS

PART #	DESCRIPTION
LPSHN-1	Steel End Cap w/ Wrench Handle
LP540-2	Aluminum 540 Body
LP5-3	CGB 395 Gland
LP5-4	# 95 Rubber Grommet
LP351-5	#351 Sealing Ring

REPAIR PARTS

PART #	DESCRIPTION
LPSHN-1	Steel End Cap w/ Wrench Handle
LP600-2	Aluminum 600 Body
LP6-3	CGB 396 Gland
LP6-4	# 96 Rubber Grommet
LP351-5	# 351 Sealing Ring

REPAIR PARTS

PART #	DESCRIPTION
LPSHN-1	Steel End Cap w/ Wrench Handle
LP840-2	Aluminum 840 Body
LP8-3	CGB 397 Gland
LP8-4	# 97 Rubber Grommet
LP351-5	# 351 Sealing Ring

REPAIR PARTS

PART #	DESCRIPTION
LPLHN-1	Steel End Cap w / Wrench Handle
LP922-2	Aluminum 922 Body
LP9-3	CGB 498 Gland
LP9-4	# 98 Rubber Grommet
LP413-5	# 413 Sealing Ring

REPAIR PARTS

PART #	DESCRIPTION
LPLHN-1	Steel End Cap w / Wrench Handle
LP105-2	Aluminum 1.50 Body
LP105-3	CGB499 Gland
LP105-4	# 99 Rubber Grommet
LP413-5	# 413 Sealing Ring

OXYLANCE LP LANCE HOLDER WITH HAND SHIELD



LP 540 FOR .540" O.D. Tube (1/4" Pipe)

PART #	DESCRIPTION
LP540S	.540" O.D. LP Holder w/ LAP3-10 Shield
LP540GS	.540" O.D. LP Holder w/ Ball Valve
LP540FGS	.540" O.D. LP Holder w/ Ball Valve / Thermal Shutoff
LP540VS	.540" O.D. LP Holder w/ Lever Valve
LP540FVS	.540" O.D. LP Holder w/ Lever Valve / Thermal Shutoff

REPAIR PARTS

PART #	DESCRIPTION
LPSHN-1	Steel End Cap w/ Wrench Handle
LP540-2	Aluminum 540 Body
LP5-3	CGB 395 Gland
LP5-4	# 95 Rubber Grommet
LP351-5	#351 Sealing Ring

LP 675 FOR .675" AND .625" O.D. Tube

PART #	DESCRIPTION
LP675S	.675" O.D. LP Holder w/ LAP3-10 Shield
LP675GS	.675" O.D. LP Holder w/ Ball Valve
LP675FGS	.675" O.D. LP Holder w/ Ball Valve / Thermal Shutoff
LP675VS	.675" O.D. LP Holder w/ Lever Valve
LP675FVS	.675" O.D. LP Holder w/ Lever Valve / Thermal Shutoff

REPAIR PARTS

PART #	DESCRIPTION
LPSHN-1	Steel End Cap w/ Wrench Handle
LP600-2	Aluminum 600 Body
LP6-3	CGB 396 Gland
LP6-4	# 96 Rubber Grommet
LP351-5	# 351 Sealing Ring

LP 840 FOR .840" O.D. Tube (1/2" PIPE)

PART #	DESCRIPTION
LP840S	.840" O.D. LP Holder w/ LAP3-10 Shield
LP840GS	.840" O.D. LP Holder w/ Ball Valve
LP840FGS	.840" O.D. LP Holder w/ Ball Valve / Thermal Shutoff
LP840VS	.840" O.D. LP Holder w/ Lever Valve
LP840FVS	.840" O.D. LP Holder w/ Lever Valve / Thermal Shutoff

REPAIR PARTS

PART #	DESCRIPTION
LPSHN-1	Steel End Cap w/ Wrench Handle
LP840-2	Aluminum 840 Body
LP8-3	CGB 397 Gland
LP8-4	# 97 Rubber Grommet
LP351-5	# 351 Sealing Ring

THERMAL SHUTOFFS (ANTI SLAG DEVICE)



Cut Away
L to R 1/2"

3/4"

1"

PART #	DESCRIPTION
OXY0002	1/2" Male NPT Thermal Shutoff (Anti Slag Device)
OXY0003	3/4" Male NPT Thermal Shutoff (Anti Slag Device)
OXY0004	1" Male NPT Thermal Shutoff (Anti Slag Device)

The OxyLance anti-slag safety device performs **three (3) important safety functions** which help protect the user and the equipment. These functions are as follows:

- 1. HIGH GAS VOLUME NON-RETURN VALVE:** The high gas volume non-return valve prevents the reverse flow of oxygen into the hose.
- 2. THERMAL SHUTOFF DEVICE:** The thermal shutoff activates cutting off the oxygen flow instantly extinguishing the burning bar / oxygen lance pipe if the bar / pipe burns back into the holder, if slag enters the holder, and / or heating of the holder to the point of injuring the operator (i.e., 3 to 5 second internal heating to 160 C +/- 5 degrees).
- 3. ANTI-SLAG & BACKFIRE BARRIER:** The combination anti-slag anti-back fire element provides several safety functions. The barrier prevents molten slag and backfires from igniting the oxygen hose. In addition, the barrier helps activate the thermal shut off stopping the flow of oxygen and extinguishing the fire.

OXYGEN CONTROL VALVES

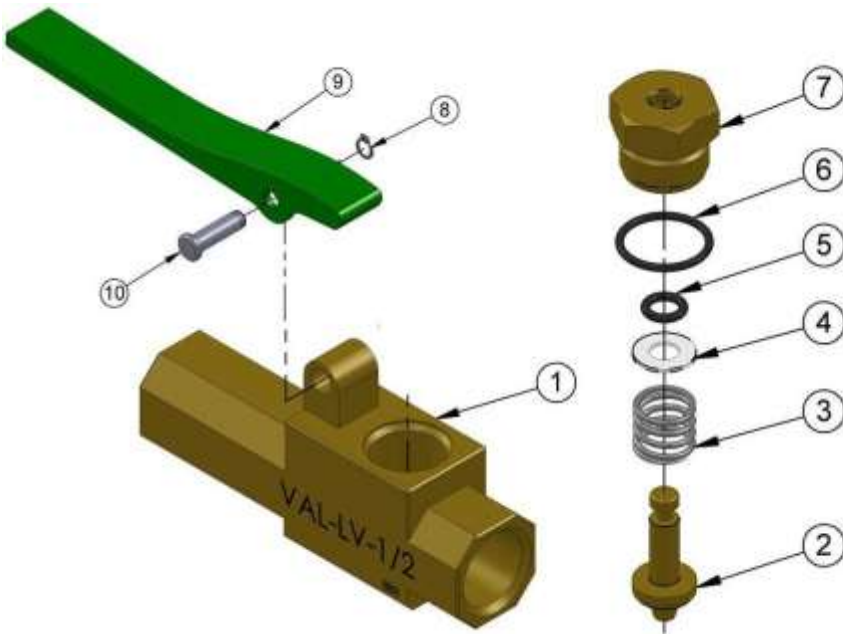


BALL VALVE



LEVER VALVE

PART #	DESCRIPTION
VAL-OXY-1/2	1/2" Oxylance Ball Valve
VAL-OXY-3/4	3/4" Oxylance Ball Valve



ITEM	DESCRIPTION
1	1/2" NPT VALVE BODY
2	VALVE STEM
3	VALVE SPRING
4	NYLON WASHER
5	VALVE STEM O-RING
6	RETAINING NUT O-RING
7	RETAINING NUT
8	LEVER PIN RETAINING CLIP
9	LEVER HANDLE
10	LEVER PIN

PART #	DESCRIPTION
VAL-V25	1/4" Lever Valve
VAL-LV-1/2	Lever Valve 1/2" npt Port In and Out
VAL- LV-1/2-B	Lever Valve w / CGA "B" Fitting in the In Port
VAL-V- LV-1/2-C	Lever Valve w / CGA "C" Fitting in the In Port
VAL LV-LK	Replacement Lever and Pin #9 Lever # 8 Lever Pin Retaining Clip #10 Lever Pin
VAL- LV-VRK	Repair Kit #2 Stem, #3 Spring, #4 Washer, #5 Stem O-Ring #6 Retaining O-Ring #7 Nut

**** CAUTION ****

**LEVER VALVE RECOMMENDED FOR MAXIMUM PRESSURE OF
200 PSI**

OXYGEN REGULATORS



HIGH FLOW / HIGH PRESSURE REGULATORS WITH 1/2" OUTLET PORT

PART #	DESCRIPTION
250 PSI OUT	250 PSI High Volume (10,000 cfh) 1/2" npt Outlet Port
REG-5-250	250 psi Regulator npt female outlet port (no outlet fitting)
REG-5-250 B	250 psi Regulator with CGA "B" fitting for 3/8" hose
REG-5-250 C	250 psi Regulator with CGA "C" fitting for 1/2" hose
REG-5-250 D	250 psi Regulator with CGA "D" fitting for 3/4" hose

REGULATORS FOR UNDERWATER CUTTING

500 PSI OUT	500 PSI High Volume (10,000 cfh) 1/2" npt Outlet Port
REG-5-500	500 psi Regulator with 1/2" npt female outlet port (no outlet fitting)
REG-5-500 B	500 psi Regulator with CGA "B" fitting for high pressure 3/8" hose
REG-5-500 C	500 psi Regulator with CGA "C" fitting for high pressure 1/2" hose



This unique regulator can be used with either liquid oxygen or high pressure cylinders. High volume regulator has 1/2" inlet and outlet ports. Regulator is available as either a manifold regulator (as pictured) or with a CGA 540 nut and nipple for high pressure cylinders.

PART NUMBER AS MANIFOLD REGULATOR: REG-6700
PART NUMBER FOR HIGH PRESSURE CYLINDERS REG-6700-540
PART NUMBERS FOR REGULATORS WITH CGA OUTLET FITTINGS

PART #	DESCRIPTION
REG-6700-540-B	High flow regulator w/CGA "B" fitting for 3/8" hose
REG-6700-540-C	High flow regulator w/CGA "C" fitting for 1/2" hose
REG-6700-540-D	High flow regulator w/CGA "D" fitting for 3/4" hose

OXYGEN LANCE HOSE

3/8", 1/2", 3/4"



PART #.	DESCRIPTION
HL1/2X50C	Lance Hose 1/2" id X 50 feet long with CGA "C" fittings
HL1/2X75C	Lance Hose 1/2" id X 75 feet long with CGA "C" fittings
HL1/2X100C	Lance Hose 1/2" id X 100 feet long with CGA "C" fittings
HL1/2X150C	Lance Hose 1/2" id X 150 feet long with CGA "C" fittings
HL3/4X50D	Lance Hose 3/4" id X 50 feet long with CGA "D" fittings
HL3/4X100D	Lance Hose 3/4" id X 100 feet long with CGA "D" fittings
HL3/4X125D	Lance Hose 3/4" id X 125 feet long with CGA "D" fittings

Oxylance Inc. recommends minimum of 1/2" hose for all burning bar applications.

IF 3/8" HOSE IS USED IT MUST BE A SINGLE RUN OF HOSE WITH NO SPLICES OR CONNECTORS THAT WILL RESTRICT THE OXYGEN FLOW. REPAIRING 3/8" HOSE OR JOINING 2 SECTIONS TOGETHER WILL REDUCE THE FLOW TOO MUCH FOR THE BURNING BAR TO OPERATE PROPERLY. WE WILL NOT BE RESPONSIBLE FOR BURNING BAR PERFORMANCE IF USED WITH 3/8" HOSE.

PART #.	DESCRIPTION
HL3/8X25B	Lance Hose 3/8" id X 25 feet long with CGA "B" fittings
HL3/8X50B	Lance Hose 3/8" id X 50 feet long with CGA "B" fittings
HL3/8X75B	Lance Hose 3/8" id X 75 feet long with CGA "B" fittings
HL3/8X100B	Lance Hose 3/8" id X 100 feet long with CGA "B" fittings
HL3/8X50C	Lance Hose 3/8" id X 50 feet long with CGA "C" fittings
HL3/8X75C	Lance Hose 3/8" id X 75 feet long with CGA "C" fittings
HL3/8X100C	Lance Hose 3/8" id X 100 feet long with CGA "C" fittings

CALL FOR PART NUMBERS FOR 500 PSI LANCING OR SCARFING HOSE. THESE HOSES ARE SPECIAL ORDER AND ARE AVAILABLE IN 50 AND 100 FOOT LENGTHS ONLY. AVAILABLE IN 1/2", 3/4", 1", 1-1/4" AND 1-1/2" i.d.

FITTINGS

OXYLANCE STOCKS ALL OF THE REPLACEMENT FITTINGS FOR OUR HOLDERS AND OXYGEN HOSE. ALL FITTINGS NOT SPECIFIED AS STEEL ARE HIGH PRESSURE BRASS. ALL FITTINGS ARE CLEANED FOR OXYGEN SERVICE.

PART #	DESCRIPTION
ANTI SLAG DEVICES	
OXY0002	1/2" Male npt Thermal Shutoff
OXY0003	3/4" Male npt Thermal Shutoff
OXY0004	1" Male npt Thermal Shutoff
BRASS HOSE ADAPTORS	
FTHW-32	1/4" npt X CGA "B" Fitting
FTHW-142	3/8" npt X CGA "B" Fitting
FTHW-144	1/2" npt X CGA "B" Fitting
FTHW-C-34	1/4" npt X CGA "C" Fitting
FTHW-C-40	3/8" npt X CGA "C" Fitting
FTHW-C-32	1/2" npt X CGA "C" Fitting
FTHW-D-34	1/2" npt X CGA "D" Fitting
FTHW-D-32	3/4" npt X CGA "D" Fitting
FTHW-30	"B" to "B" Hose Coupler
FTHW-C-30	"C" to "C" Hose Coupler
FTHW-D-30	"D" to "D" Hose Coupler
BRASS PIPE NIPPLES	
FTW-WHF-3-3	1/2" X 4" npt Pipe Nipple
FTNBW-B-6HP	3/8" npt Close Nipple
FTNBW-B-8HP	1/2" npt Hex Close Nipple
FTNBW-B-9HP	3/4" npt Close Nipple
BRASS FEMALE X MALE PIPE	
FTW-BA-8-4HP	1/2" FM npt X 1/4" Male npt
FTW-BA-8-6HP	1/2" FM npt X 3/8" Male npt
BRASS MALE X FEMALE REDUCER	
FTW-BB-4-8HP	1/2" Male npt X 1/4" Female npt
FTW-BB-6-8HP	1/2" Male npt X 3/8" Female npt
FTW-BB-8-12HP	3/4" Male npt X 1/2" Female npt
BRASS MALE X MALE REDUCER	
FTRMW-B-8-4HP	1/2" M npt X 1/4" M npt Reducer
BRASS FEMALE REDUCER	
FTW-BF-12-8HP	3/4" FM npt X 1/2" FM npt Reducer
PART # DESCRIPTION	
BRASS HP PIPE COUPLING	
FTW-BF-4HP	1/4" npt Pipe Collar
FTW-BF-6HP	3/8" npt Pipe Collar
FTW-BF-8HP	1/2" npt Pipe Collar
FTW-BF-12HP	3/4" npt Pipe Collar

SURE CUT SYSTEM



The Oxylance Sure Cut system will cut virtually any metal, both ferrous and non-ferrous, and is faster than conventional oxy-acetylene cutting or carbon arc gouging. The Sure Cut exothermic cutting rods don't require preheating or cleaning of the material prior to cutting. It is easy to use and is cost effective for most applications.

SURE CUT KITS

PART #	DESCRIPTION
JRSC2024S	Tool Box Kit with standard holder (WITH RODS) (Pictured Above)
JRSC2024S-REG	Tool Box Kit with high flow regulator (WITH RODS)
JRSC2000S	Standard Sure Cut standard holder (NO RODS)
JRSC2000S-REG	Standard Sure Cut holder with high flow regulator (NO RODS)

JRSC2024S CONSISTS OF	JRSC2000S CONSISTS OF
Holder	Holder
25' X 5/16" Oxygen Hose	25' X 5/16" Oxygen Hose
25' X #4 Power Lead	25' X #4 Power Lead
25' X #4 Ground Lead w / Striker Plate	25' X #4 Ground Lead w / Striker Plate
1/4" and 3/8" Collet	1/4" and 3/8" Collet
12 ea. 1/4" X 24" Sure Cut Rods	NO RODS
12 ea. 3/8" X 24" Sure Cut Rods	NO RODS
26" Tool Box	19" Carry Case

JRSC2024S-REG AND JRSC2000S-REG COMES WITH HIGH FLOW REGULATOR

SURE CUT CUTTING RODS

1/4" O.D.

PART #	DESCRIPTION	O2 FLOW / BURN TIME	WEIGHT	
			25 pc box	50 pc box
25B24	1/4" X 24" Sure Cut Rod (bare)	3 to 5 cfm / 1 Minute	7 lbs	14 lbs
25B36	1/4" X 36" Sure Cut Rod (bare)	3 to 5 cfm / 1.5 Minutes	11 lbs	22 lbs
25B48	1/4" X 48" Sure Cut Rod (bare)	3 to 5 cfm / 2 Minutes	14 lbs	28 lbs

3/8" O.D.

PART #	DESCRIPTION	O2 FLOW / BURN TIME	WEIGHT	
			25 pc box	50 pc box
37B24	3/8" X 24" Sure Cut Rod (bare)	5 to 8 cfm / 1 Minute	11 lbs	22 lbs
37B36	3/8" X 36" Sure Cut Rod (bare)	5 to 8 cfm / 1.5 Minutes	17 lbs	34 lbs
37B48	3/8" X 48" Sure Cut Rod (bare)	5 to 8 cfm / 2 Minutes	22 lbs	44 lbs

3/8" O.D. QUICK CONNECT

PART #	DESCRIPTION	O2 FLOW / BURN TIME	WEIGHT	
			25 pc box	50 pc box
37B24QC	3/8" X 24" Quick Connect Sure Cut Rod (bare)	5 to 8 cfm / 1 Minute	11 lbs	22 lbs
37B36QC	3/8" X 36" Quick Connect Sure Cut Rod (bare)	5 to 8 cfm / 1.5 Minutes	17 lbs	34 lbs
37B48QC	3/8" X 48" Quick Connect Sure Cut Rod (bare)	5 to 8 cfm / 2 Minutes	22 lbs	44 lbs

SURE CUT INSULATED RODS

Insulated Rods are only necessary when a continuous arc process is used.

1/4" O.D.

PART #	DESCRIPTION	O2 FLOW / BURN TIME	WEIGHT	
			25 pc box	50 pc box
25B24I	1/4" X 24" Sure Cut Insulated Rod (coated)	3 to 5 cfm / 1 Minute	8 lbs	16 lbs
25B36I	1/4" X 36" Sure Cut Insulated Rod (coated)	3 to 5 cfm / 1.5 Minutes	13 lbs	26 lbs
25B48I	1/4" X 48" Sure Cut Insulated Rod (coated)	3 to 5 cfm / 2 Minutes	16 lbs	32 lbs

3/8" O.D.

PART #	DESCRIPTION	O2 FLOW / BURN TIME	WEIGHT	
			25 pc box	50 pc box
37B24I	3/8" X 24" Sure Cut Insulated Rod (coated)	5 to 8 cfm / 1 Minute	13 lbs	26 lbs
37B36I	3/8" X 36" Sure Cut Insulated Rod (coated)	5 to 8 cfm / 1.5 Minutes	19 lbs	38 lbs
37B48I	3/8" X 48" Sure Cut Insulated Rod (coated)	5 to 8 cfm / 2 Minutes	24 lbs	48 lbs

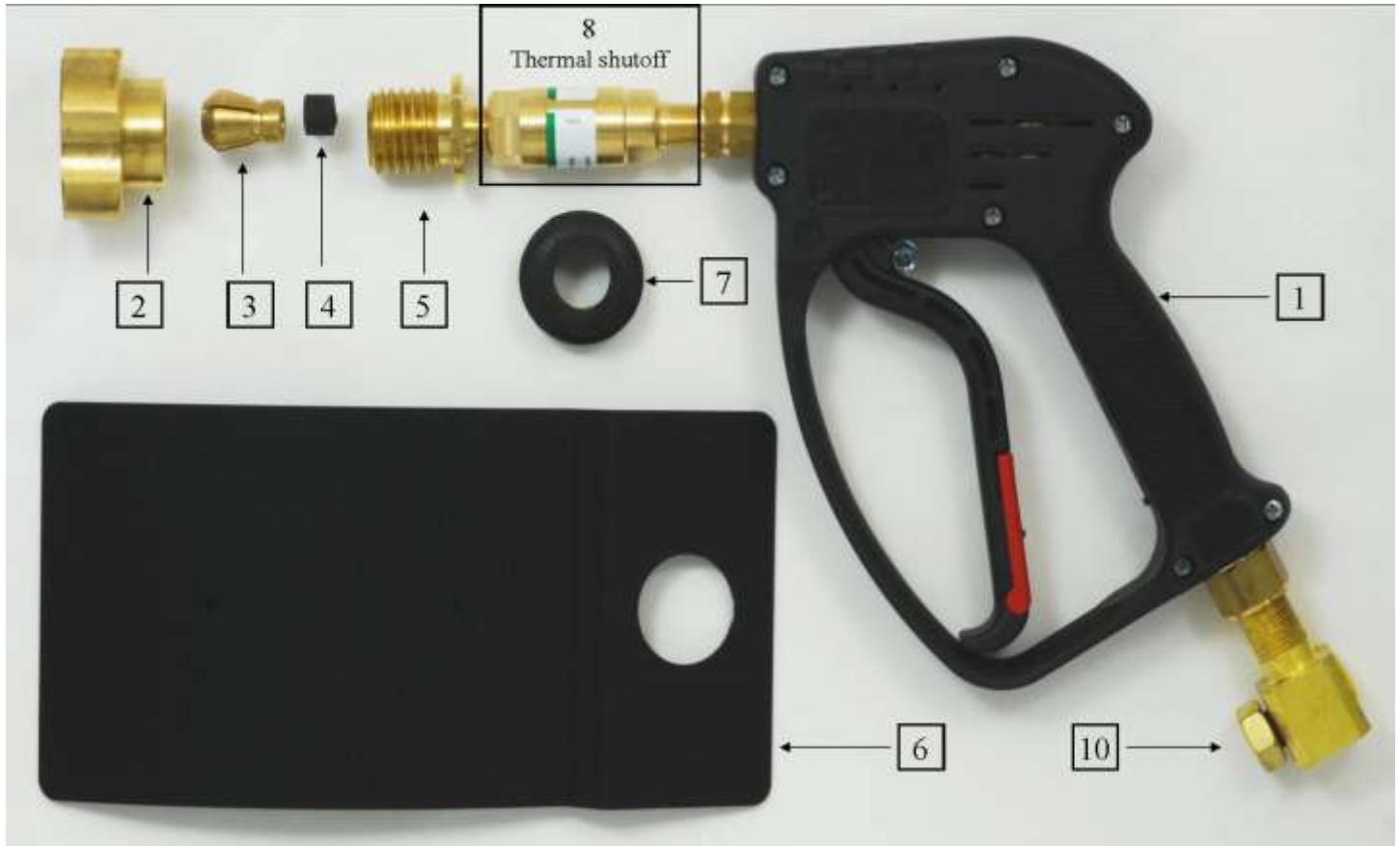
3/8" O.D. QUICK CONNECT

PART #	DESCRIPTION	O2 FLOW / BURN TIME	WEIGHT	
			25 pc box	50 pc box
37B24QCI	3/8" X 24" Quick Connect Insulated Rod (coated)	5 to 8 cfm / 1 Minute	13 lbs	26 lbs
37B36QCI	3/8" X 36" Quick Connect Insulated Rod (coated)	5 to 8 cfm / 1.5 Minutes	19 lbs	38 lbs
37B48QCI	3/8" X 48" Quick Connect Insulated Rod (coated)	5 to 8 cfm / 2 Minutes	24 lbs	48 lbs

SURE CUT RODS ARE AVAILABLE IN 3/16" O.D. BY SPECIAL ORDER

PART #	DESCRIPTION (BARE)	PART #	DESCRIPTION (INSULATED)
18B18	3/16" X 18" Sure Cut Rod (Bare)	18B18I	3/16" X 18" Sure Cut Rod (Insulated)
18B24	3/16" X 24" Sure Cut Rod (Bare)	18B24I	3/16" X 24" Sure Cut Rod (Insulated)
18B36	3/16" X 36" Sure Cut Rod (Bare)	18B36I	3/16" X 36" Sure Cut Rod (Insulated)

JRSC2000 HOLDER PARTS AND ACCESSORIES



ITEM #	PART #	DESCRIPTION
1	JRSC200-RL31	Handle assembly
2	JRSC2000-2	Collet Nut
3	JRSC187-3	Collet for 3/16" (.1875" O.D.) Sure Cut rod's
3	JRSC250-3	Collet for 1/4" (.250" O.D.) Sure Cut rod's
3	JRSC375-3	Collet for 3/8" (.375" O.D.) Sure Cut rod's
4	JRSC2000-4	Collet Grommet (seals collet bolt to collet)
5	JRSC2000-5	Collet Bolt (1/4" npt male X Collet seat)
6	JRSC2000-6	Curved Hand Shield
7	JRSC2000-7	Rubber insulator grommet for shield
8	OXY0250	Thermal Shutoff
10	JRSC2000-10	Power Block
11	FTHW-142	3/8" NPT X CGA "B" fitting (For custom holder with no power block)
12	HL41X25	25' Oxygen hose (5/16" ID)
13	JRSC2000-13	25 Welding Lead
14	JRSC2000-14	Welding lead lug
15	JRSC2000-15	Alligator Clamp
16	JRSC2000-16	Copper Striker Plate
	JRSC6-32SCREW	Shield Screw (not shown in drawing)
	JRSC6-32TEENUT	Shield Tee Nut (not shown in drawing)
	JRSC200-G4000	Repair parts kit for Oxygen Valve
	JRSCBE43HP	Collet Bolt Extension
	PART #	CARRY CASE / TOOL BOX
	JRTB1	Black Plastic Carrying Case (small)
	JRTB2	26" Dura Bull Tool Box (pictured on previous page)
	JRTB3	Large Pelican Case # 1650 with locking handle and wheels
	JRCENJ900	Igniter Pack

ALUMINIZED KEVLAR PROTECTIVE CLOTHING



PROTECTIVE CLOTHING

For maximum protection from heat, slag and spatter during cutting operations we recommend Aluminumized Kevlar protective clothing. This type of clothing offers greater protection than leathers or flame retardant materials.

For Aluminumized Jacket the last letter in the part number is the size i.e. ALKEVJACL is for the Large

PART #	DESCRIPTION
ALKEVGLOV	Aluminumized Kevlar Gloves (Aluminumized back Kevlar palm)
ALKEVJACM	19 oz Aluminumized Kevlar 30" Medium Jacket
ALKEVJACL	19 oz Aluminumized Kevlar 30" Large Jacket
ALKEVJACXL	19 oz Aluminumized Kevlar 30" Extra Large Jacket
ALKEVJACXXL	19 oz Aluminumized Kevlar 30" Double X Jacket
ALKEVCHAPSM	19 oz Aluminumized Kevlar Chaps Medium
ALKEVCHAPSL	19 oz Aluminumized Kevlar Chaps Large
ALKEVCHAPSXL	19 oz Aluminumized Kevlar Chaps X Large
ALKEVCHAPSXXL	19 oz Aluminumized Kevlar Chaps X X Large
ALKEVLEG	19 oz Aluminumized Kevlar 15" Leggings (boot cover)
ALKEVHOOD	19 oz Aluminumized Kevlar Hood.



COOL SHIRT SYSTEM

PART NUMBER	DISCRIPTION
CS-OX-110-24	24 Quart Personal Cooling System Cooler w/ 110 / 12 volt transformer
CS-OX-24	24 Quart Cooler (wired for hooking into ignition on equipment)
CS-OX-MT-24	Mounting Tray for equipment with hold down straps
CS-OX-MPS	Multi Person Cooling System Cooler (110 volt only)
CS-OX-BP	Back Pack Cooler w/ Battery and Charger
CS-OX-BP-7AHB	Back Pack Cooler w/ 7 hour Battery and Charger
CS-OX-WP	Waist Pack Cooler w/ Battery and Charger
CS-OX-WP-7AHB	Waist Pack Cooler w/ 7 hour Battery and Charger
CS-OX-BCW-S	Small Cool Shirt
CS-OX-BCW-M	Medium Cool Shirt
CS-OX-BCW-L	Large Cool Shirt
CS-OX-BCW-XL	Extra Large Cool Shirt
CS-OX-BCW-XXL	Double Extra Large Cool Shirt
CS-OX-BCW-XXXL	Triple Extra Large Cool Shirt
CS-OX-BCWH-S	Small Cool Shirt with attached Cool Hood
CS-OX-BCWH-M	Medium Cool Shirt with attached Cool Hood
CS-OX-BCWH-L	Large Cool Shirt with attached Cool Hood
CS-OX-BCWH-XL	Extra Large Cool Shirt with attached Cool Hood
CS-OX-BCWH-XXL	Double Extra Large Cool Shirt with attached Cool Hood
CS-OX-BCWH-XXXL	Triple Extra Large Cool Shirt with attached Cool Hood
CS-OX-H-10	10 foot Cool Shirt Hose w/ connectors
CS-OX-H-20	20 foot Cool Shirt Hose w/ connectors
CS-OX-CH-10	10 foot Cool Shirt Hose w/ connectors and flow control valve
CS-OX-CH-20	20 foot Cool Shirt Hose w/ connectors and flow control valve
CS-OX-C-FLM	Female hose connector (replacement part for hoses)
CS-OX-C-MLS	Male hose connector (replacement part for hoses)
CS-OX-24-B	Fire Proof Cooler Bag for 24 Quart Cool Shirt Cooler
CS-OX-HC-10	10 foot Fire Proof Cover for 10' Cool Shirt Hose
CS-OX-HC-20	20 foot Fire Proof Cover for 20' Cool Shirt Hose
CS-OX-AD-110	110 Volt to 12 Volt Transformer
CS-OX-W/B-CHAR	Charger for battery packs
CS-OX-BPB-4H	4 Hour battery
CS-OX-WPB-7H	7 Hour battery
CS-OX-MA-16	Maintenance additive solution 16 oz. bottle
CS-OX-MAC-16	Case of 12, 16 oz bottles of maintenance additive solution

A complete Cool Shirt system consist of a Cooler, Shirt, Hose and Required fire protection bag and hose cover. The units can be used either with 110 volt AC power or a car battery. If not being used for welding or cutting applications the fire proof bag and hose cover are not required. If being used on a fork lift or other heavy equipment the 110 volt transformer is not required. Call Oxylance to discuss your particular application.

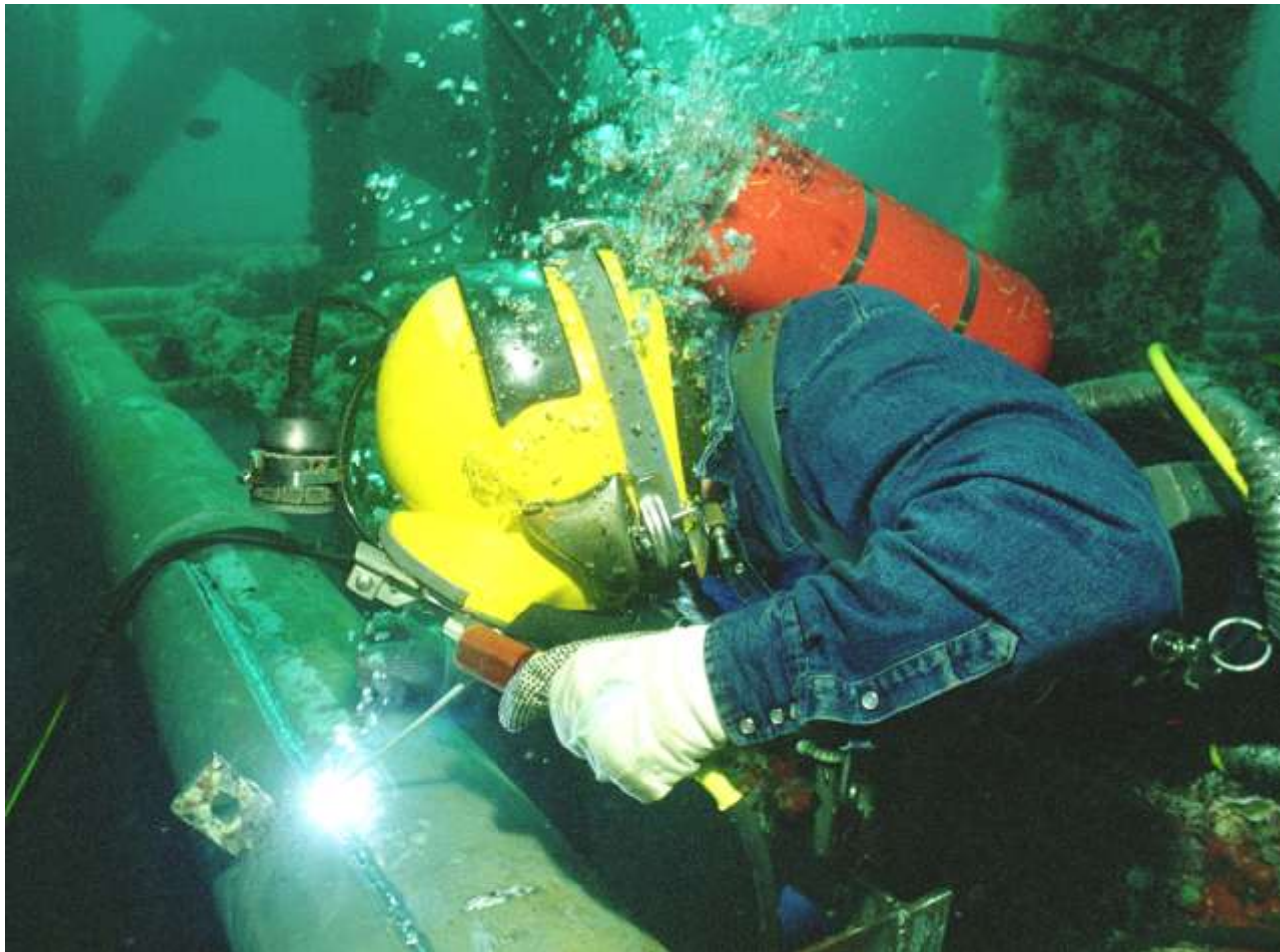
UNDERWATER CUTTING EQUIPMENT



Oxylance manufactures underwater cutting electrodes in both an Exothermic design, the Aqua EXO (top photo), and our Tubular Steel Aqualance. The Aqua EXO will burn without power after it is ignited. The Aqualance is an Oxy Arc rod that requires 300 amps of electricity to maintain the arc. All of our rods have a proprietary plating process that prevents the exterior of the rod from corrosion. We use a continuous heat shrink process for insulation that will not un-wrap or become brittle in cold water. Our rods can be used in other manufacturer's holders; however, the collet may have to be enlarged slightly due to our plating process. We have collets for other holders to match our rod diameters.

PART #.	DESCRIPTION
37BAQUAEXO	3/8" X 18" Exothermic Cutting RO.D.
31EAQUALANCE	5/16" X 16" Tubular Steel Underwater Cutting Rod
UWAT02020000	Underwater Cutting Rod Holder
UNDTA2238	3/8" Collet for Craftsweld or Broco Holders
UNDTA22516	5/16" Collet for Craftsweld or Broco Holder

UNDERWATER WELDING



Oxylance manufactures a variety of Underwater Welding electrodes for carbon steel as well as stainless steel. All of our electrodes meet or exceed the requirements of ANSI/AWS D3.6 Specification for Underwater Welding. Oxylance is the sole source provider of Nickel Wet Welding Electrodes for the US Navy.

PART #.	DESCRIPTION
SUR1ELECTR	1/8" Mild Steel Wet Welding Electrode
SUR2ELECTR	5/32" Mild Steel Wet Welding Electrode
SURWELDNI	3/32" Nickel Wet Welding Electrode
UW400	400 AMP Wet Welding Stinger
UW250	250 AMP Wet Welding Stinger

OXYGEN VAPORIZER SYSTEMS



ALL LIQUID CYLINDERS MUST BE THE SAME PRESSURE RATING. YOU CAN NOT MIX CYLINDERS WITH DIFFERENT PRESSURE RELIEF SETTINGS. DOING SO WILL CAUSE THE LOWEST PRESSURE CYLINDER TO POP OFF.

OXY VAP 2500

Unit comes with cryogenic hoses, manifold regulator and outlet manifold for 2 hose connections. Unit is capable of producing 2500 cubic feet of gaseous oxygen from 2 liquid oxygen cylinders. Unit has 500 psi pop off valves however it is rated for 600 psi safe working pressure.



ALL LIQUID CYLINDERS MUST BE THE SAME PRESSURE RATING. YOU CAN NOT MIX CYLINDERS WITH DIFFERENT PRESSURE RELIEF SETTINGS. DOING SO WILL CAUSE THE LOWEST PRESSURE CYLINDER TO POP OFF.

OXY VAP 5000

Unit comes with cryogenic hoses, manifold regulator and outlet manifold for 2 hose connections. Unit is capable of producing 5000 cubic feet of gaseous oxygen from 4 liquid oxygen cylinders. Unit has 500 psi pop off valves however it is rated for 600 psi safe working pressure.

OXYLANCE DOES NOT SUPPLY THE LIQUID OXYGEN CYLINDERS

HIGH VOLUME GASEOUS OXYGEN FROM LIQUID CONTAINERS

Liquid Oxygen is used daily to supply gaseous oxygen for a wide variety of construction and demolition projects. Its convenient size is advantageous when you consider that a single XL-45 liquid container will produce 4350 cubic feet of gaseous oxygen. This is equivalent to sixteen 276 cubic foot, high pressure cylinders.

With convenience there is always a drawback. In the case of liquid oxygen the down side is available pressure and volume. For potential users who do not know and understand the pressure verses volume issue, using liquid oxygen may cause performance problems with some equipment.

The volume of gaseous oxygen that a portable liquid container can supply is limited by the vaporization rate of the internal evaporator. Typical stand-alone portable containers built prior to 1995 will supply a continuous flow of 250 cubic feet per hour (CFH) at 125 PSI, at an ambient temperature of 70° F. Newer models have been designed to supply up to 350 CFH at 250 PSI. Some models have been increased to 450 psi and up to 500 CFH, High-pressure cylinders, can supply 50 or more cubic feet per minute depending on the regulator and hose diameter. Manifolder together a bank of high-pressure cylinders with a typical high flow regulator can supply 8000 CFH (133 CFM) or more.

To better understand the use of liquid oxygen one needs to know how the system works and what affects it. In physics there is a group of laws called the Gas Laws. "Charles Law" states that; "At a constant pressure the volume of a gas is directly proportional to the change in the absolute temperature. If the pressure is kept constant and the absolute temperature is doubled, the volume will double. As temperature decreases, so does the volume".

A liquid oxygen container is a vacuum-insulated cylinder, basically a giant thermos bottle. It is designed to supply oxygen in either a liquid state or gas in the form of oxygen vapor. The boiling point of liquid oxygen is minus 297° F (297° below 0). When it reaches its boiling point, liquid oxygen becomes oxygen vapor. In order to get the optimum volume of vapor from the liquid source the temperature of the oxygen vapor must be elevated to ambient temperature. Portable containers incorporate an internal vaporizer (heat exchanger) to elevate the gas temperature.

When flow rate of gaseous oxygen exceeds the capacity of the internal vaporizer the temperature in the vaporizer will drop to the point that the external plumbing and the attached regulator will become crusted with ice. When this occurs, the density and temperature of the gas drops to the point that it becomes a safety hazard and can cause damage to regulators, hoses and other downstream components.

There are several methods that can be employed to increase the volumetric flow of gaseous oxygen. The first method is to manifold multiple liquid containers together. By manifolding two or more containers together and making their internal vaporizers common you can effectively increase the output by up to 90%. Therefore two 250 CFH containers will provide 450 CFH. You can manifold as many tanks together as are required for the application.

The second method is to add an external vaporizer (heat exchanger) to the liquid container. External vaporizers come in a variety of sizes from 250 CFH to over 10,000 CFH. The most common one hangs on the side of the liquid container and is rated at 250 CFH. Adding this vaporizer to a single 250 CFH liquid container will increase the flow rate to 500 CFH (based on ambient air temperature 70° F). Any combination of liquid containers and vaporizers can be assembled to meet the volume requirements.

When hooking multiple containers together you should first manifold all of the USE valves together. Second with a separate manifold, manifold the VENT valves together. This manifold will cause the liquid tanks to equalize so when gas is withdrawn from the system it draws equally from all of the tanks.

When using multiple containers with or without an external vaporizer, the following valve settings are required for maximum vaporization: Liquid valve **CLOSED**, Vent valves **FULL OPEN**, Use valves **FULL OPEN**, and the Pressure Building valves **FULL OPEN**. When using the external heat exchanger, you connect the use valve

or use valve manifold, to the input side of the vaporizer and the regulator on the output side. You **DO NOT** put the regulator between the liquid container and the external vaporizer.

For applications such as Oxylaces (burning bars) where the volume requirements can be in excess of 40 cubic feet per minute (2400 CFH) it is imperative that the supply is capable of meeting the flow requirements both in pressure and volume. Also when using multiple oxylaces it is recommended that the oxygen supply is plumbed into a manifold that has a station regulator for each oxylace holder. This way the supply to each holder is regulated independently and operators will not be affected as lances are turned on or off.

As a rule of thumb if using multiple Burning Bars, for each Bar hooked to the oxygen supply, the supply volume should be increased by 10%. If using Burning Bars that require 40 cubic feet per minute and two systems are on line, available volume should be 40 CFM plus 40 CFM plus 8 CFM for a total of 88 CFM or 5280 cubic feet per hour. Each Burning Bar system requires a regulator.

OXYGEN VOLUME & PRESSURE REQUIREMENTS

BURNING BAR DIAMETER	OPERATING PRESSURE		CUBIC FEET PER MINUTE	
	Min. 90 psi	Max. 150 psi	30 cfm @ 90psi	45 cfm @ 150 psi
.675" O.D. (3/8" pipe)	Min. 90 psi	Max. 150 psi	30 cfm @ 90psi	45 cfm @ 150 psi
.625" O.D. (5/8" tube)	Min. 90 psi	Max. 150 psi	25 cfm @ 90psi	40 cfm @ 150 psi
.540" O.D. (1/4" pipe)	Min. 90 psi	Max. 150 psi	20 cfm @ 90 psi	30 cfm @ 150 psi
.840" O.D. (1/2" pipe)	Min. 90 psi	Max. 150 psi	60 cfm @ 90psi	75 cfm @ 150 psi
.922" O.D.	Min. 90 psi	Max. 150 psi	70 cfm @ 90psi	85 cfm @ 150 psi
1.05" O.D. (3/4" pipe)	Min. 90 psi	Max. 150 psi	80cfm @ 90 psi	95 cfm @ 150 psi

OXYLANCE THERMIC TORCHES (Burning Bars)



READ ALL SAFETY INFORMATION BEFORE USING

All cutting operations should be performed in accordance with O.S.H.A. 29 CFR, Standards 1910.251, 1910.252, and 1910. 253 and ANSI Z49.1:1999 . See page 2 for ANSI Z49 safety clothing requirements. Observe all company safety policies and the safety policies of the company where cutting is being performed, and all local regulations. **READ PAGE 5 OF THIS DOCUMENT FOR AN UNDERSTANDING OF FIRE POTENTIAL IN OXYGEN SYSTEMS.**

SAFETY: READ ALL SAFETY INFORMATION BEFORE USING THERMIC TORCHES (BURNING BARS)

1. **DO NOT** OPERATE THERMIC TORCHES WITHOUT PROPER FIRE RESISTANT CLOTHING. SEE PAGE 2.
2. **USE ONLY PURE OXYGEN WITH THESE TORCHES. NO FUEL GAS IS REQUIRED OR SHOULD BE USED.**
3. Inspect all thermic torches (burning bars), holders, and oxygen hose for contamination from oil, grease, or other substances that can initiate a fire in an oxygen system. **DO NOT USE CONTAMINATED EQUIPMENT see page 5**
4. Check all parts of oxygen system for leaks. **DO NOT USE CUTTING SYSTEM IF LEAKS ARE PRESENT.**
5. Remove all combustible materials from work area or move work to an area free of combustibles. If project cannot be moved or the fire hazard cannot be removed, use a guard or shield to confine heat, sparks, and hot slag from causing a fire. Provide a fire watch and insure that adequate fire extinguishers are available.
6. Insure that material to be cut contains no flammable or explosive material.
7. Insure that material to be cut contains no substances that will create harmful fumes and/or explosive vapors.
8. Provide fresh air breathing equipment and ventilation where dangerous smoke and fumes may be created.
9. **NEVER USE OXYGEN AS A FRESH AIR BREATHING SUPPLY – USE ONLY APPROVED COMPRESSED AIR**

IF USING LIQUID OXYGEN, DO NOT USE A SINGLE PORTABLE LIQUID CONTAINER FOR GAS SUPPLY. READ THE ENCLOSED SAFETY PROCEDURES FOR USING LIQUID OXYGEN. REFER TO FLOW CHARTS FOR PRESSURE AND VOLUME REQUIREMENTS. READ OXYGEN SAFETY PAGE 5 FOR INFORMATION CONCERNING FIRE IN OXYGEN SYSTEMS.

STORAGE AND HANDLING:

WARNING: EXPLOSIONS OR FIRE CAN OCCUR WHEN OXYGEN CONTACTS SOME SUBSTANCES.

Oxylance products are cleaned for Oxygen Service. You **MUST** handle and store Oxylance cutting torches and equipment so they are protected from **contamination from oil, grease, or any substance that may initiate a fire in an oxygen system.** **NEVER** use any torches, holders, or Oxygen hose that have been contaminated. **SEE PAGE 5 OXYGEN**

EQUIPMENT REQUIRED

1. **FIRE RESISTANT PROTECTIVE CLOTHING, APPROVED FOR FLAME CUTTING OPERATIONS, (SEE PAGE 2).**
2. **Eye protection should be a full-face shield and safety goggles (See Page 2 for ANSI Z49 requirements)**
3. Oxylance Thermic Torches and Oxylance Torch Holder
4. High Flow Oxygen Regulator. For more than one burning bar on an oxygen system use a manifold type regulator.
5. Oxygen system capable of supplying required **VOLUME** and **PRESSURE** for the size torches being used. See flow chart on page 6 for oxygen consumption and pressure settings for all sizes of burning bars.
6. Oxygen lance hose. Hose I.D. depends on length of hose and size torch being used. The minimum recommended hose diameter is 1/2" I.D. for .625" and larger burning bars.
7. Oxy / Acetylene torch for igniting Oxylance Thermic Torches

EQUIPMENT SETUP

1. Place Oxygen Cylinders in a location protected from heat, sparks, and hot slag. Insure that cylinders are secured so they cannot be turned over or damaged by other equipment operating in the area.
2. Route oxygen hose to protect from heat, sparks, and hot slag from the burning operation. Insure oxygen hose does not create a trip hazard. Insure oxygen hose is protected from damage by other equipment operating in the area. Use an oxygen hose long enough to keep the torch a safe distance from oxygen cylinders.
3. Hook oxygen hose to regulator. Close oxygen valve on holder, turn on oxygen system and check entire system for leaks. **DO NOT OPERATE IF THERE ARE ANY OXYGEN LEAKS.**

WARNING: DO NOT PERFORM CUTTING OPERATIONS WITHOUT FIRST READING ALL SAFETY MATERIAL ENCLOSED AND REVIEWING OSHA AND ANSI REQUIREMENTS

The following information on Safety Clothing and Safety in Welding, Cutting and Allied Processes is based on ANSI Z49.1:1999 and OSHA Standard 29 CFR. Portions of this information is reprinted with permission from ANSI / AWS. The complete ANSI Z49 standard is available from Global Engineering at (800) 854-7179, or the American Welding Society, 550 N.W. LeJeune Road, Miami, Florida 33126. For complete copies of OSHA 29 CFR 1910.251, 1910.252, and 1910.253 and all OSHA safety requirements can be downloaded from the World Wide Web at www.osha-slc.gov.

EYE PROTECTION (ANSI Z49.1:1999 Page 6 PARAGRAPH 4.2.1.2)

Oxy-fuel Gas Cutting: Goggles or other approved eye protection shall be worn during all oxy-fuel gas cutting operations. OXYLANCE RECOMMENDATION: **Due to the amount of spatter and slag from exothermic cutting, Oxylance REQUIRES either a tinted full-face shield and clear goggles or a clear full-face shield with tinted goggles. The shade of the tint should be 3 or 4 for thin material (under 1"), 4 or 5 for 1" to 6" material, and 5 or 6 for material over 6" thick.**

PROTECTIVE CLOTHING (Based on ANSI Z49.1:1999 PAGE 9 PARAGRAPH 4.3 TO PAGE 10 PARAGRAPH 4.6) TO REDUCE THE POTENTIAL OF PERSONAL INJURY, ALL UNDER GARMETS SUCH AS WORK SHIRTS AND PANTS SHOULD BE COVERED BY FLAME RESISTANT GARMETS AND SHOULD BE FREE OF GREASE AND OIL.

1. Clothing shall be selected to minimize the potential for ignition, burning, or trapping hot sparks or slag.
2. Clothing shall provide sufficient coverage, and be made of suitable material to minimize skin burns caused by sparks, spatter or radiation. Oxylance recommends Aluminized clothing designed for repelling sparks or slag and reflecting the heat away from the operator.
3. Gloves: All torch operators shall wear protective flame-resistant gloves. Oxylance recommends Aluminized Kevlar gloves for the best possible protection. **DO NOT USE CLOTH OR THIN LEATHER GLOVES SUCH AS TIG WELDING OR GARDENING TYPE GLOVES. DO NOT USE OILY OR GREASY GLOVES.**
4. Jackets: **Durable flame-resistant jackets shall be worn to protect the front of the body.** Oxylance recommends an Aluminized Kevlar Jacket for the best protection from sparks or slag and for its ability to reflect heat away from the operator.
5. Leggings: **Flame-resistant leggings or other equivalent means shall be used to give added protection to the legs.** Oxylance recommends Aluminized Kevlar Leggings for the best protection from sparks or slag and for reflecting heat away from the operator.
6. Capes and Sleeves: **Cape sleeves or shoulder covers with bibs made of leather or other flame-resistant material shall be worn during cutting operations.** Oxylance recommends an Aluminized Kevlar Jacket for its ability to deflect sparks or slag and to reflect heat away from the operator.
7. Other Protective Clothing: **Properly fitted flame-resistant plugs in the ear canals, or equivalent protection, shall be used where hazards to the ear canals exist. Caps made from flame resistant material shall be worn under helmets, when necessary, to prevent head burns.**
8. Noise Control: **Noise shall be controlled at the source when feasible. When control methods fail to bring noise exposure within allowable limits, personal protective devices such as earmuffs or earplugs shall be used.**

Respiratory Protective Equipment: When controls such as ventilation fail to reduce contaminants to allowable levels or when, implementation of such controls are not feasible, respiratory protective equipment shall be used to protect personnel from hazardous concentrations of airborne contaminants.

1. **Only approved respiratory protective equipment shall be used.**
2. **Whenever the use of respirators is required, a program to establish the proper selection and use of respirators shall be implemented.**
3. **Compressed air for air supplied respirators or other breathing equipment shall at least meet the Grade D requirements of the Compressed Gas Association ANSI / CGA G-7.1, Commodity Specification for Air. DO NOT USE OXYGEN FOR BREATHING AIR IN CUTTING AND WELDING APPLICATIONS.**

Training: Persons exposed to cutting hazards shall be trained in the use of, and understand the reasons for, protective clothing and equipment.

ACCORDING TO TESTING BY OUTSIDE AGENCIES THE SMOKE AND FUMES FROM OXYLANCE THERMIC TORCHES ARE WITHIN ALLOWABLE EXPOSURE LIMITS, **HOWEVER;** THE MATERIAL THAT IS BEING CUT WITH THE THERMIC TORCHES MAY CONTAIN, OR BE COVERED WITH, SUBSTANCES THAT PRODUCE HAZADORUS SMOKE AND FUMES. **OPERATORS MUST WEAR RESPIRATORY PROTECTION THAT IS SUITABLE FOR THE MATERIAL BEING CUT.**

FOR A COPY OF THE OXYLANCE MSDS SHEET CALL TOLL FREE (800) 333-9906 OR (205) 322-9906. MSDS SHEETS CAN BE DOWNLOADED FROM OUR WEB PAGE AT, www.oxylance.com

OPERATING INSTRUCTIONS

1. Purge hose and holder prior to putting torch in holder. With holder pointed in a safe direction, slowly crack open oxygen valve and purge hose and holder. Insure full flow with no restrictions.
 2. OxyLance manufactures thermic torches with three different end finishes. Plain End, no modifications to either end of the outer tube. Expanded End or Quick Connect (QC) has one end of outer tube expanded to allow joining torches together. Threaded and Coupled (T&C) pipe threads on both ends and a pipe collar to join torches together.
 3. OxyLance torches have a pressed crimp 8 inches from holder end. **CRIMPED** end of the torch goes in the holder. **DO NOT OPERATE WITH WRONG END OF TORCH IN HOLDER.**
 4. OxyLance torch holders utilize a rubber insert (grommet) to seal the torch in the holder. Insert the **CRIMPED** end of torch in the holder. **TORCH (BURNING BAR) MUST BE INSERTED THROUGH THE RUBBER INSERT AND FULLY SEAT IN APPROPRIATE MACHINED NOTCH IN BASE OF HOLDER SEE ENCLOSED DRAWING pg 6.**
 5. Adjust the tension on the rubber grommet to insure it is fully compressed and torch is secured in holder.
 6. Slowly open oxygen valve to purge torch and check for Oxygen leaks (**DO NOT LIGHT TORCH WITH OXYGEN LEAKS**). Insure oxygen flows freely through torch. (**DO NOT ATTEMPT TO LIGHT TORCH WITH RESTRICTED OR NO OXYGEN FLOW.**) Close oxygen control valve completely before applying heat to end of torch.
-

IGNITING TORCH

Igniting thermic torches requires two people, one to operate the thermic torch and the second to heat the end of torch.

Thermic Torch Operator

1. Secure thermic torch properly in holder
2. Point torch in safe direction
3. Purge torch and turn oxygen valve off

Oxy Acetylene Torch Operator / Safety Fire Watch

1. Position operator between end of thermic torch and thermic torch operator (do not get in front of thermic torch)
2. Heat the end of the thermic torch filler material until it is red and dripping molten metal. (With QC rods the fuel wires stop just behind the shoulder of the expansion joint. Cut the expansion off and heat the fuel wires)
3. When tip of torch is properly heated **SLOWLY** open oxygen valve. Torch will ignite and burn until oxygen is turned off, or torch is consumed to the crimp. **DO NOT BURN PAST CRIMP**
4. While thermic torch operator is working the oxy-acetylene torch operator should standby as a safety / fire watch.

IF TORCH DOES NOT IGNITE

1. Check Oxygen flow to end of torch. Insure that end of torch is open.
2. Check Oxygen system for proper pressure and volume.
3. Correct problem and repeat ignition process, making sure the end of the torch and fuel wires are properly heated.

Cutting can begin as soon as Thermic Torch is fully ignited. Torch can be extinguished at any time during cutting operation and can be re-ignited. Check oxygen flow prior to applying heat to the tip of partially burned torch.

OXYGEN PRESSURE

Starting oxygen pressure should be 90 to 100 psi. Pre set the regulator and ignite the torch. Adjust pressure with torch burning and oxygen control valve full open. If adequate volume of oxygen is not available, pressure will drop and torch will not burn properly. **DO NOT OPERATE TORCH WITH LOW OXYGEN PRESSURE OR VOLUME see pg 6.** Proper oxygen pressure can be verified by extinguishing the torch and inspecting burnt end. If pressure is correct the outer tube should be slightly longer than the fuel wires. (**MAXIMUM PRESSURE 150 PSI**)

Pressure too Low: Fuel wires will burn back inside the outer tube 2 or more inches

Pressure too High: Outer tube will burn back leaving exposed fuel wires.

CUTTING WITH OXYLANCE THERMIC TORCHES

OxyLance Thermic Torches will rapidly cut most ferrous and non-ferrous metals, as well as concrete and refractory. The cutting speed will depend on the material type and its oxidation rate, or its melting temperature. Materials that do not oxidize have to be melted and blown away. Melting and blowing material away will require an increase in oxygen pressure.

PIERCING

To pierce thick material, start the torch at a slight angle and allow the material to begin to melt. Gradually point the torch straight into the base material and work the torch in and out of the hole. Piercing thick material may cause the outer tube to burn back exposing fuel wires. When piercing, the torch may need to be removed from the hole occasionally to allow the fuel wires to burn off even with the end of the Torch. Oxygen pressure may need to be increased for piercing thick material. Do not exceed the maximum recommended pressure of 150 psi.

CUTTING TECHNIQUES

For most applications using the push method of cutting with the tip of the torch pointed towards the cut will produce the fastest travel speed. Cutting techniques will vary according to the material, thickness, position and direction of cut i.e. flat, vertical, or horizontal.

For cutting thick material, operator will need to hold the torch nearly perpendicular to the cut and move the torch in and out of the cut in a sawing motion.

For thin material, the torch can be held at a steep angle to the cut and travel much faster. Operator will have to adjust the Torch angle for optimum cutting speed.

For material such as concrete, refractory, and cast iron, the cutting method is to melt the material and then allow the oxygen pressure to blow the molten material away from the cut. Cutting this type of material will be slower than cutting carbon steel, stainless steel or aluminum and requires higher Oxygen pressure. **DO NOT EXCEED MAXIMUM PRESSURE OF 150 psi.**

CONNECTING TORCHES TOGETHER

On jobs where operators need a longer reach than a standard length torch, or to eliminate wasted torches, two torches can be joined together. QC (Expanded End) and T&C (Threaded and Coupled) Torches are designed for joining two full-length torches or a full-length torch and a partially used torch. **DO NOT JOIN MORE THAN TWO TORCHES TOGETHER.** Joining more than two torches will restrict the oxygen flow and create a safety hazard.

To join torches together:

1. Joining two new torches together; Insert the holder end of one torch in expanded or coupler end of the torch in the holder. For QC torch tap end of torch against solid surface to lock torches together. For T&C torches tighten threaded torch into collar of new torch.
2. For Partial Torches: Remove the partially consumed torch from the holder.
3. Insert the crimped end of the partially burned torch into the Q.C. or T&C end of the new torch.
4. For QC torches tap end of torch against hard surface to lock torches together. For T&C torches thread the crimped end of partially used torch into the coupling end of the new torch and tighten.
5. Open Oxygen valve and check for leaks at the holder and at the joint. Insure free flow of oxygen. Close oxygen valve before lighting.
6. Follow lighting instructions to re-light torch.

OXYGEN HOSE AND FITTINGS

OSHA 910.253(e)(5)(iii) requires oxygen hose fittings and clamps must pass tests specified by CGA E-1-2005. The test requires that the fittings must be pressure tested to 300 psi. CGA E-1-2005 Section 6.1 and 6.2 also has specific test for strength of the fitting assembly. These test include a straight pull test and a right angle pull test.

Oxylance requires that hose fittings be pressed on with a hose ferrule and crimping machine or high pressure bandits with a bandit machine. **RADIATOR type hose clamps will not hold the required pressure and will not meet the tension test requirements of OSHA or CGA.**

*For Additional information, please contact:
Oxylance Inc.
P.O. Box 310280
Birmingham, AL 35231*

*Phone (205) 322-9906
Fax (205) 322-4808
Toll Free (800) 333-9906*

***The information in this document is taken from sources or based on data believed to be reliable: however Oxylance Inc. makes no warranty as to the absolute correctness or sufficiency of any of the foregoing, or that additional measures may be required under particular conditions.
Oxylance Inc. 2010***

Visit our web page at www.oxylance.com
e-mail info@oxylance.com



OXYGEN SYSTEM SAFETY

The design and operation of oxygen systems are the responsibility of the operators. Qualified professional assistance should be used when setting up oxygen systems. Your Welding Supply / Gas Distributor should be your first contact.

This technical information is based on Oxygen Safety requirements from the following sources; (ASTM) American Society for Testing and Materials, (NFPA) National Fire Protection Association, (ANSI) American National Standards Institute, (AWS) American Welding Society, (CGA) Compressed Gas Association and (NASA) National Aeronautical and Space Agency. OxyLance Inc. makes no warranty as to the absolute correctness or sufficiency of any of the foregoing.

HAZARDS

Oxygen is an odorless, tasteless, non flammable non explosive gas that makes up 21% of our atmosphere. Oxygen is a fire hazard because it promotes combustion. Any atmosphere that contains more than 23.6% oxygen is considered to be oxygen enriched and materials that may not be combustible in a normal air environment will burn in an oxygen enriched atmosphere. Combustible materials are easier to ignite and burn faster and hotter when exposed to oxygen or when in an oxygen enriched atmosphere.

OXYGEN SYSTEM FIRES

Three elements are required to have a fire, Oxidizer, Fuel, and Heat. This is commonly referred to as the Triangle of Fire. Fires in normal atmosphere can be prevented or put out by removing any one of the 3 elements. In an oxygen system 2 of the required elements are always present, the system of piping, fittings, regulators and valves is the FUEL and the oxygen contained in the system is the OXIDIZER. In a Burning Bar application the Burning Bar is also fuel. Hazards are increased in the system as the oxygen is normally under substantial pressure. The ignition energy comes from within the system, often through mechanisms that under normal atmospheric conditions would not cause an ignition. Oxygen system fire potential cannot be eliminated however fire can be avoided by risk management based on a careful analysis of the hazards and risks. System design, component materials and fabrication methods as well as proper system operation and maintenance will greatly reduce the potential for fire.

POTENTIAL CAUSES OF FIRES IN OXYGEN SYSTEMS

To understand the hazards of fires in oxygen systems you must first understand the chain of events that can cause a fire, this is referred to as the KINDLING CHAIN. The kindling chain begins when a small amount of energy is released in a system and ignites a material with a low ignition temperature or a particle with a small mass and large surface area. Once a small object is ignited, the heat that it generates ignites larger materials with higher ignition temperatures that generate even more heat until the fire becomes self-sustaining. There are three common ignition mechanisms that can potentially occur in burning bar systems.

AUTO IGNITION TEMPERATURE

Auto Ignition Temperature is the lowest temperature at which a material will spontaneously ignite in an oxygen enriched atmosphere under specific test conditions.

PARTICULAR IMPACT

We have all seen small sparks fly off of steel when struck by an object such as a hammer hitting a nail or if you observe a sand blasting operation in low light you will see very small sparks created when the particles of sand strike a piece of steel. In normal atmosphere these sparks do not create a fire. Small particles carried along in a flow of oxygen, often at high velocity, can strike a surface in the system. When the particles strike a surface the impact energy is released as heat. Because of their small mass, the particles become hot enough to ignite larger materials. Particles such as metal shavings, fly ash from coal fired power plants, coal particles, and other solid objects are potential risks for particle impact fires.

COMPRESSION HEATING

When a gas flows through an orifice from high to low pressure it expands and its velocity can reach the speed of sound. If the gas flow is blocked, it recompresses to its original pressure and becomes hot. The greater the pressure difference, the higher the gas temperature. This effect is similar to the way an air compressor and volume tank will heat up when the compressor is pumping up the air pressure. In an oxygen system, the oxygen temperature can be high enough to initiate the kindling chain. Small metal particles, lubricants or organic materials can heat up to their kindling temperature in a compression situation igniting a fire that then spreads to the other fuels such as the steel tube and wires in a burning bar.

FRICTION

When two solid materials rub together, they generate heat which can ignite other materials.

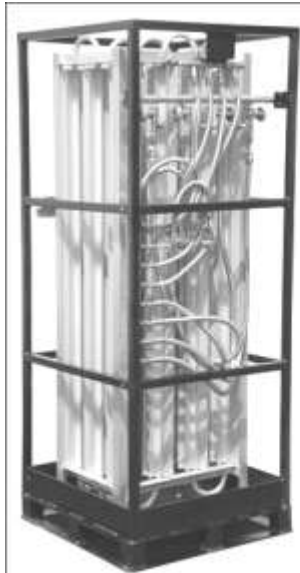
AVOIDING OXYGEN FIRES

Although oxygen systems present serious and unusual hazards, they are used safely throughout industry because risk of injury can be managed and controlled. To insure that the oxygen system is being maintained and used in a safe manner follow all of the instructions in this document and refer to other recommended safe practices available from ASTM, ANSI, AWS, CGA as well as OSHA regulations.

OXYGEN VOLUME & PRESSURE REQUIREMENTS

BURNING BAR DIAMETER	OPERATING PRESSURE		CUBIC FEET PER MINUTE	
	Min. 90 psi	Max. 150 psi	20 cfm @ 90 psi	30 cfm @ 150 psi
.540" O.D. (1/4" pipe)	Min. 90 psi	Max. 150 psi	20 cfm @ 90psi	30 cfm @ 150 psi
.625" O.D. (5/8" tube)	Min. 90 psi	Max. 150 psi	25 cfm @ 90psi	40 cfm @ 150 psi
.675" O.D. (3/8" pipe)	Min. 90 psi	Max. 150 psi	30 cfm @ 90psi	45 cfm @ 150 psi
.840" O.D. (1/2" pipe)	Min. 90 psi	Max. 150 psi	60 cfm @ 90psi	75 cfm @ 150 psi
.922" O.D.	Min. 90 psi	Max. 150 psi	70 cfm @ 90psi	85 cfm @ 150 psi
1.05" O.D. (3/4" pipe)	Min. 90 psi	Max. 150 psi	80cfm @ 90 psi	95 cfm @ 150 psi

OXYGEN SYSTEMS



5000 CFH
OXYGEN VAPORIZER

OXYGEN MANIFOLDS AND LIQUID OXYGEN SYSTEMS

**SINGLE LIQUID OXYGEN
CYLINDERS CAN NOT BE
USED FOR BURNING BARS**



HIGH PRESSURE OXYGEN BANK

Oxygen for burning bar applications can be supplied in a number of different ways. Single high pressure cylinders, high pressure banks, and tube trailers. **SINGLE LIQUID OXYGEN TANKS OR DEWARs CAN NOT BE USED.** When using liquid oxygen you must use a vaporizer. The size of vaporizer and quantity of liquid cylinders will depend on the required volume of oxygen. The vaporizer on the left requires 4 standard liquid Dewars. It has a manifold system that ties all 4 cylinder vents together to equalize the 4 Dewars and a 4 cylinder liquid manifold to supply the liquid oxygen to the vaporizer. See your welding & gas distributor for other available systems.

OXYGEN LANCE HOLDER

HOLDER HAS MACHINED GROOVES FOR VARIOUS DIAMETER PIPE,
PIPE MUST BE INSERTED THROUGH THE RUBBER GROMMET
AND SEAT METAL TO METAL IN THE MACHINED GROOVE



IMPORTANT NOTICE

Burning Bar or Lance Pipe must be inserted all the way through the rubber insert until it seats in the proper machined groove. Improper seating can result in bar blowing out of the holder, Oxygen leaks, or holder catching on fire.
DO NOT ATTEMPT TO IGNITE BURNING BAR IF THERE IS ANY OXYGEN LEAKS.

OXYLANCE SURECUT SYSTEM EXOTHERMIC CUTTING RODS



READ ALL SAFETY INFORMATION BEFORE USING

ALL CUTTING OPERATIONS SHOULD BE PERFORMED IN ACCORDANCE WITH O.S.H.A. 29 CFR, STANDARDS 1910.251, 1910.252, AND 1910. 253 AND ANSI Z49.1:1999 . SEE PAGE 2 FOR ANSI Z49 SAFETY CLOTHING REQUIREMENTS. Observe all company safety policies and the safety policies of the company where cutting is being performed, and all local regulations.

SAFETY: READ ALL SAFETY INFORMATION BEFORE USING SURECUT SYSTEM

1. **DO NOT OPERATE SURECUT SYSTEM WITHOUT PROPER FIRE RESISTANT CLOTHING. SEE PAGE 2.**
2. **USE ONLY PURE OXYGEN WITH THESE CUTTING RODS. NO OTHER GAS IS REQUIRED.**
3. Inspect all Surecut rods, holders, and oxygen hose for contamination from oil, grease, or other substances that can have a reaction with pure oxygen. **DO NOT USE CONTAMINATED EQUIPMENT.**
4. Check all parts of oxygen system for leaks. **DO NOT USE CUTTING SYSTEM IF LEAKS ARE PRESENT.**
5. Remove all combustible materials from work area or move work to an area free of combustibles. If project cannot be moved or the fire hazard cannot be removed, use a guard or shield to confine heat, sparks, and hot slag from causing a fire. Provide a fire watch and insure that adequate fire extinguishers are available.
6. Insure that material to be cut contains no flammable or explosive material.
7. Insure that material to be cut contains no substances that will create harmful fumes and/or explosive vapors.
8. Provide fresh air breathing equipment and ventilation where dangerous smoke and fumes may be created.
9. **NEVER USE OXYGEN FOR A BREATHING SUPPLY – USE ONLY APPROVED COMPRESSED AIR**

SINGLE LIQUID OXYGEN CONTAINERS MAY NOT SUPPLY THE REQUIRED VOLUME OF OXYGEN. IT WILL BE NECESSARY TO ADD AN EXTERNAL VAPORIZER OR MANIFOLD TWO (2) LIQUID OXYGEN CONTAINERS TOGETHER. A SINGLE LIQUID OXYGEN TANK WILL SUPPLY 350 TO 400 CFH. CONTINUOUS CUTTING WITH SURECUT RODS CAN USE IN EXCESS OF 500 CFH.

STORAGE AND HANDLING:

WARNING: EXPLOSIONS OR FIRE CAN OCCUR WHEN OXYGEN CONTACTS SOME SUBSTANCES.

All Oxylance products are cleaned for Oxygen Service. You **MUST** handle and store Surecut cutting rods and related equipment so they are protected from **contamination from oil, grease, or any substance that may have a reaction with Oxygen.** **NEVER** use any cutting rods, holders, or Oxygen hose that have been contaminated.

EQUIPMENT REQUIRED

8. **FIRE RESISTANT PROTECTIVE CLOTHING, APPROVED FOR FLAME CUTTING OPERATIONS, (SEE PAGE 2).**
9. **Eye protection should be a full-face shield and safety goggles (See Page 2 for ANSI Z49 requirements)**
10. Surecut Holder and Surecut Cutting Rods
11. High Flow Oxygen Regulator (One regulator per holder. **NEVER** use multiple Surecut holders on a single regulator)
12. Oxygen system capable of supplying required **VOLUME** and **PRESSURE** for the size rods being used.
13. Oxygen lance hose. Hose I.D. is dependant on length of hose and diameter of Surecut rod being used. The minimum recommended hose diameter is 5/16" I.D. Use 3/8" I.D. for lengths over 100 feet long.
14. Ignition source for igniting Surecut Rods. (12 / 24 volt battery, welding machine or Oxy / Acetylene torch)

EQUIPMENT SETUP

4. Place Oxygen Cylinders in a location protected from heat, sparks, and hot slag. Insure that cylinders are secured so they cannot be turned over or damaged by other equipment operating in the area.
5. Route oxygen hose and welding leads to protect them from heat, sparks, and hot slag from the burning operation. Insure oxygen hose and welding leads do not create a trip hazard. Insure hose and leads are protected from damage by other equipment operating in the area. Use an oxygen hose long enough to keep the cutting operation a safe distance from oxygen cylinders.
6. Attach Regulator and Oxygen hose . Turn on oxygen and check system and control valve for leaks. **DO NOT OPERATE IF THERE ARE ANY OXYGEN LEAKS.** Attach welding leads to power source.

WARNING: DO NOT PERFORM CUTTING OPERATIONS WITHOUT FIRST READING ALL SAFETY MATERIAL ENCLOSED AND REVIEWING OSHA AND ANSI REQUIREMENTS

The following information on Safety Clothing and Safety in Welding, Cutting and Allied Processes is based on ANSI Z49.1:1999 and OSHA Standard 29 CFR. Portions of this information is reprinted with permission from ANSI / AWS. The complete ANSI Z49 standard is available from Global Engineering at (800) 854-7179, or the American Welding Society, 550 N.W. LeJeune Road, Miami, Florida 33126. For complete copies of OSHA 29 CFR 1910.251, 1910.252, and 1910.253 and all OSHA safety requirements can be downloaded from the World Wide Web at www.osha-slc.gov.

EYE PROTECTION (ANSI Z49.1:1999 Page 6 PARAGRAPH 4.2.1.2)

OXY-FUEL GAS CUTTING: Goggles or other approved eye protection shall be worn during all oxy-fuel gas cutting operations.

OXYLANCE RECOMMENDATION: DUE TO THE AMOUNT OF SPATTER AND SLAG FROM EXOTHERMIC CUTTING, OXYLANCE REQUIRES EITHER A TINTED FULL-FACE SHIELD AND CLEAR GOGGLES OR A CLEAR FULL-FACE SHIELD WITH TINTED GOGGLES. THE SHADE OF THE TINT SHOULD BE 3 OR 4 FOR THIN MATERIAL (UNDER 1”), 4 OR 5 FOR 1” TO 6” MATERIAL, AND 5 OR 6 FOR MATERIAL OVER 6” THICK.

PROTECTIVE CLOTHING (Based on ANSI Z49.1:1999 PAGE 9 PARAGRAPH 4.3 TO PAGE 10 PARAGRAPH 4.6) TO REDUCE THE POTENTIAL OF PERSONNAL INJURY, ALL UNDER GARMETS SUCH AS WORK SHIRTS AND PANTS SHOULD BE COVERED BY FLAME RESISTANT GARMETS AND SHOULD BE FREE OF GREASE AND OIL.

9. Clothing shall be selected to minimize the potential for ignition, burning, or trapping hot sparks or slag.
10. Clothing shall provide sufficient coverage, and be made of suitable material to minimize skin burns caused by sparks, spatter or radiation. Oxyalance recommends Aluminized clothing designed for repelling sparks or slag and reflecting the heat away from the operator.
11. Gloves: **All Surecut operators shall wear protective flame-resistant gloves.** Oxyalance recommends Aluminized Kevlar gloves for the best possible protection. **DO NOT USE CLOTH OR THIN LEATHER GLOVES SUCH AS TIG WELDING OR GARDENING TYPE GLOVES.**
12. Jackets: **Durable flame-resistant jackets shall be worn to protect the front of the body.** Oxyalance recommends an Aluminized Kevlar Jacket for the best protection from sparks or slag and for its ability to reflect heat away from the operator.
13. Leggings: **Flame-resistant leggings or other equivalent means shall be used to give added protection to the legs.** Oxyalance recommends Aluminized Kevlar Leggings for the best protection from sparks or slag and for reflecting heat away from the operator.
14. Capes and Sleeves: **Cape sleeves or shoulder covers with bibs made of leather or other flame-resistant material shall be worn during cutting operations.** Oxyalance recommends an Aluminized Kevlar Jacket for its ability to deflect sparks or slag and to reflect heat away from the operator.
15. Other Protective Clothing: **Properly fitted flame-resistant plugs in the ear canals, or equivalent protection, shall be used where hazards to the ear canals exist. Caps made from flame resistant material shall be worn under helmets, when necessary, to prevent head burns.**
16. Noise Control: **Noise shall be controlled at the source when feasible. When control methods fail to bring noise exposure within allowable limits, personal protective devices such as earmuffs or earplugs shall be used.**

Respiratory Protective Equipment: **When controls such as ventilation fail to reduce contaminants to allowable levels or when, implementation of such controls are not feasible, respiratory protective equipment shall be used to protect personnel from hazardous concentrations of airborne contaminants.**

4. Only approved respiratory protective equipment shall be used.
5. Whenever the use of respirators is required, a program to establish the proper selection and use of respirators shall be implemented.
6. Compressed air for air supplied respirators or other breathing equipment shall at least meet the Grade D requirements of the Compressed Gas Association ANSI / CGA G-7.1, Commodity Specification for Air. **DO NOT USE OXYGEN FOR BREATHING AIR IN CUTTING AND WELDING APPLICATIONS.**

Training: Persons performing cutting operations shall be trained in the proper use of, and understand the reasons for, protective clothing, proper equipment set up and maintainence.

ACCORDING TO TESTING BY OUTSIDE AGENCIES THE SMOKE AND FUMES FROM OXYLANCE EXOTHERMIC SURECUT RODS ARE WITHIN ALLOWABLE EXPOSURE LIMITS, **HOWEVER;** THE MATERIAL THAT IS BEING CUT WITH SURECUT RODS MAY CONTAIN, OR BE COVERED WITH, SUBSTANCES THAT PRODUCE HAZADORUS SMOKE AND FUMES. **OPERATORS MUST WEAR RESPIRATORY PROTECTION THAT IS SUITABLE FOR THE MATERIAL BEING CUT.**

FOR A COPY OF THE OXYLANCE MSDS SHEET CALL TOLL FREE (800) 333-9906 OR (205) 322-9906. MSDS SHEETS CAN BE DOWNLOADED FROM OUR WEB PAGE AT, www.oxyalance.com

OPERATING INSTRUCTIONS

7. Purge hose and holder prior to putting Surecut Rod in holder. With holder pointed in a safe direction, slowly crack open oxygen valve and purge hose and holder. Insure full flow with no restrictions.
8. Adjust Oxygen pressure according to thickness of material to be cut and diameter of Surecut Rod being used.
9. Surecut rods have a pressed crimp near the holder end. **CRIMPED** end of the rod goes in the holder. **DO NOT OPERATE WITH WRONG END OF ROD IN HOLDER.**
10. Surecut holders incorporate a brass collet and rubber grommet to seal the rods in the holder. Insert the **CRIMPED** end of rod in the holder. **SURECUT ROD MUST BE INSERTED THROUGH THE BRASS COLLET AND FULLY SEAT AGAINST THE RUBBER GROMMET**
11. Tighten collet nut until brass collet is fully compressed and rod is secured in holder.
12. Slowly depress oxygen valve to purge rod and check for Oxygen leaks (**DO NOT LIGHT ROD WITH OXYGEN LEAKS**). Insure oxygen flows freely through rod. **DO NOT ATTEMPT TO LIGHT SURECUT ROD WITH RESTRICTED OR NO OXYGEN FLOW.** Release oxygen control valve completely prior to heating end of rod.

IGNITING SURECUT RODS

Igniting Surecut rods can be accomplished with one of the following three methods.

Igniting with a battery pack (12 or 24 volt) or welding machine (set at 125 amps). Polarity does not matter.

4. Secure Surecut rod properly in holder
5. Point rod in safe direction
6. Depress the oxygen control valve to purge the rod. Release oxygen control valve
7. Strike the tip of the Surecut rod on the striker plate slowly depress Oxygen control valve
8. As the rod begins to burn remove from striker plate and move to material to be cut

Lighting Surecut Rods with an Oxy Acetylene or Propane torch

1. This method will require a helper to light and hold the Oxy Acetylene torch
2. Light the Oxy Acetylene or Propane torch
3. Hold the tip of the Surecut rod in the torch flame until the tip is red hot and slightly molten
4. Slowly depress the Surecut Oxygen control valve until Surecut rod begins to burn on its own
5. Remove the tip of the rod from the flame and begin cutting operation

IF SURECUT ROD DOES NOT IGNITE

4. Check Oxygen flow to end of rod. Insure that end of rod is open.
5. Check Oxygen system for proper pressure and volume and that there are no leaks.
6. Correct problem and repeat ignition process, making sure the end of the rod is properly heated.

Cutting can begin as soon as Surecut rod is fully ignited. Rod can be extinguished at any time during cutting operation and can be re-ignited. Check oxygen flow prior to applying heat to the tip of partially burned rod.

OXYGEN PRESSURE

Oxygen pressure will vary according to the material to be cut. Pressure range is from 30 psi to 150 psi. Pre set the regulator to the proper pressure and ignite the Surecut Rod. Adjust pressure with Surecut rod burning and oxygen control valve full open. If adequate volume of oxygen is not available, pressure will drop and rod will not burn properly. **DO NOT OPERATE SURECUT RODS WITH LOW OXYGEN PRESSURE OR VOLUME.**

CUTTING WITH OXYLANCE SURECUT RODS

Surecut Rods will rapidly cut most ferrous and non-ferrous metals, as well as concrete and refractory. The cutting speed will depend on the material type and its oxidation rate, or its melting temperature. Materials that do not oxidize have to be melted and blown away. Melting and blowing material away will require an increase in oxygen pressure.

PIERCING

To pierce thick material, start with the rod at a slight angle to the face of the material to be pierced and allow the material to begin to melt. Gradually reduce the angle until the rod is pointed straight into the base material and work the rod in and out of the hole. Piercing thick material may cause the outer tube to burn back exposing the inner fuel tubes or wires. When piercing, the rod may need to be removed from the hole occasionally to allow the fuel tubes / wires to burn off even with the end of the rod. Oxygen pressure may need to be increased for piercing thick material. Do not exceed the

maximum recommended pressure of 150 psi. For material up to 2 inches thick the pressure can be as low as 50 psi for 1/4" rods and 60 to 70 psi for 3/8" rods. Lower pressures will cut slower and result in a smaller diameter hole. Higher pressure will increase the speed of the pierce and will make a slightly larger hole.

CUTTING TECHNIQUES

For most applications using the drag method of cutting with the tip of the rod pointed back towards the cut will produce the fastest travel speed. Cutting techniques will vary according to the material, thickness, position and direction of cut i.e. flat, vertical, horizontal. For cutting thick material, operator will need to hold the rod nearly perpendicular to the cut and move the rod in and out of the cut in a sawing motion.

For thin material, the rod can be held at a steep angle to the cut and travel much faster. Operator will have to adjust the Rod angle for optimum cutting speed.

For material such as concrete, refractory, and cast iron, the cutting method is to melt the material and then allow the oxygen pressure to blow the molten material away from the cut. Cutting this type of material will be slower than cutting carbon steel, stainless steel or aluminum and requires higher Oxygen pressure. **DO NOT EXCEED MAXIMUM PRESSURE OF 150 psi.**

GOUGING

For gouging cracked welds or for removing weld metal that would normally be gouged with a carbon arc process the rod can be pushed into the cut with the rod held almost parallel with the material to be cut. In this type application the Oxygen pressure can be reduced according to the amount of metal to be removed. For small cracks or removing small welds use the 1/4" rod with Oxygen pressure down to 30 to 40 psi. For larger welds or cracks increase Oxygen pressure to 50 to 70 psi. For very deep cracks or heavy welds (over 1" use the 3/8" rods and adjust Oxygen pressure according to the amount of material to be removed. Gouges as deep as 1 inch can be accomplished with one pass.

SAFETY SUMMARY

1. **ALWAYS WEAR PROPER FIRE PROOF PROTECTIVE CLOTHING (SEE PAGE 2)**
2. **ALWAYS WEAR PROPER EYE AND FACE PROTECTION (SEE PAGE 2)**
3. **NEVER USE OXYGEN FOR BREATHING – USE ONLY APPROVED COMPRESSED AIR**
4. **ONLY USE PURE OXYGEN WITH SURECUT RODS. DO NOT ATTEMPT TO USE AIR OR ANY OTHER GAS**
5. **NEVER OPERATE SURECUT SYSTEM WITH OXYGEN LEAKS ANYWHERE IN THE SYSTEM**
6. **NEVER OPERATE MORE THAN ONE HOLDER PER REGULATOR**
7. **NEVER OPERATE SURECUT SYSTEM IF REGULATOR AND HOSE ARE FREEZING UP**
8. **NEVER OPERATE CUTTING SYSTEMS ALONE. ALWAYS HAVE A FIRE WATCH OR SAFETY PERSON STANDING BY TO ASSIST OPERATOR**
9. **NEVER STORE SURECUT RODS OR RELATED EQUIPMENT WHERE IT CAN BECOME CONTAMINATED WITH OIL, GREASE OR OTHER SUBSTANCES THAT WILL REACT WITH OXYGEN**
10. **DO NOT USE RODS OR EQUIPMENT THAT ARE CONTAMINATED**

The information in this document is taken from sources or based on data believed to be reliable: however Oxylance Corporation makes no warranty as to the absolute correctness or sufficiency of any of the foregoing or that additional or other measures may not be required under particular conditions.

OXYLANCE INC
P.O. BOX 310280
BIRMINGHAM, AL 35231
PHONE (205) 322-9906
FAX (205) 322-4808

WWW.OXYLANCE.COM



INSERT MSDS SHEETS HERE



The Oxylance facility is located in Birmingham, AL. Our manufacturing facility, sits on 5 1/2 acres and consists of 7000 sqft of office and a 43,000 sqft warehouse / manufacturing facility.



OXYLANCE INC
2501 27th Street North
Birmingham, AL 35234

Phone (205) 322-9906
Fax (205) 322-4808

Toll Free (800) 333-9906
www.oxylance.com

