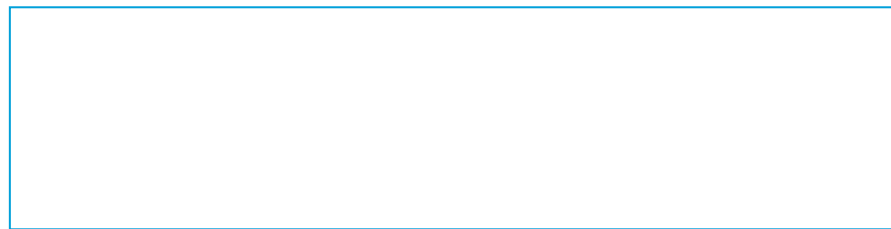


Contact

For cylinder gases contact:
AIR LIQUIDE AMERICA LP
2700 Post Oak Boulevard
Houston, Texas 77056-8229
Phone (713) 402-2166
Fax (713) 402-2096
us.info@airliquide.com

For bulk gases contact:
AIR LIQUIDE INDUSTRIAL U.S. LP
2700 Post Oak Boulevard
Houston, Texas 77056-8229
Phone (800) 820-2522
Fax (877) 715-4799
us.info@airliquide.com

DISTRIBUTED BY:



Contact your Air Liquide representative for more information.



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BIFOCAL™, LASAL™ and FLOXAL™: L'Air Liquide S.A.

1140-3693E (06-06) REL

BIFOCAL™

Quality and productivity for laser cutting machines



www.airliquide.ca



“The material on the Mitsubishi 3500W laser machine is 3/8” stainless steel that we clean cut. We are looking to realize significant savings on gas use and cut time on jobs like this when we install the **BIFOCAL** lens,” said Carl Anderson, General partner, Serra Laser Center, Anaheim, CA.

BIFOCAL works on all types of materials, and features particularly noticeable productivity increase results on aluminum and stainless steel with nitrogen assist gas and non-metallic materials such as wood.

BIFOCAL laser technology increases performance for optimal productivity and quality while minimizing production costs.



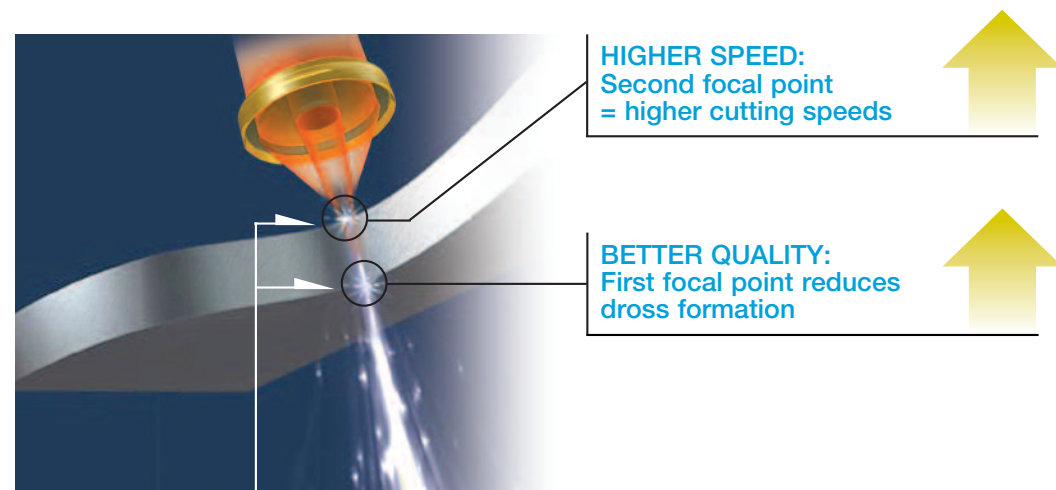
BIFOCAL Laser Cutting Technology

With Air Liquide’s innovative design, laser operators are able to cut sheets, plates and tubes with:

- Increased speed
- More efficient assist gas usage
- Expanded cutting capability

BIFOCAL lenses focus the laser beam into two focal points instead of one

- A first focal point generates high heat density near the bottom of the work piece to prevent dross formation
- A second focal point generates high heat density near the top surface of the work piece to maintain high cutting speed



- More efficient power density distribution
- Focus position tolerances are at least doubled

Benefits

- 10% to 50% improvement in production cutting speed
- 10% to 20% increase in maximum thickness cutting capability
- Reduction in set-up downtime
- Optimization of set-up and cutting performance
- Production launch assistance and training
- Annual laser audit with Digital Beam Mode Analysis
- No retrofit required
- Bifocal is user-friendly and field proven with all laser system makes and models

| | WITH STANDARD LENS | WITH BIFOCAL | |
|-------|-----------------------|-----------------------|---|
| GAINS | | OPEN CAPACITY | Process more orders and reduce overtime |
| | | VARIABLE COST SAVINGS | |
| COSTS | LENS COST | LENS COST | |
| | TANK RENTAL AND LEASE | TANK RENTAL AND LEASE | |
| | ASSIST GAS | ASSIST GAS | |

LASAL™

Air Liquide can provide you with optimized and innovative gas installations and gas equipment to meet all your flowrate and pressure needs for CO₂ lasing gas:



- Lasal 1, 2, 4 (N₂, CO₂, He, laser grade) or one of the lasing mixes from the Lasal range.

Recommended cutting gas:

- Carbon steel: Lasal 2003
- Stainless steel aluminum: Lasal 2001
- Beam purging: Floxal™ or Nitrogen

