

# Experis<sup>®</sup> resonator gases Protecting your investment in laser technology



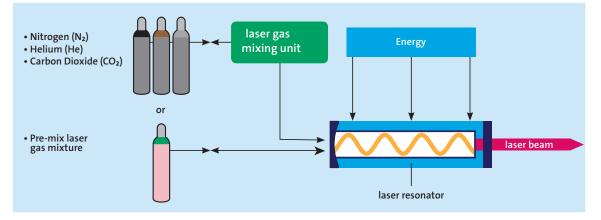
Experis resonator gases have been designed for the world's leading laser manufacturers including:

- Altec 2
- Amada
- Bystronic
- Cutlite Panta
- Fanuc
- FehaHaco
- Lectra SystemLumonics
- LVD
- Mazac
- Mitsubishi
- PRC
- Prima
- Rofin
- Trumpf

Air Products has a complete range of high-quality Experis laser resonator gases. These pure and pre-mixed gases meet or exceed the gas purity and mixture accuracy specifications of the world's leading laser manufacturers. Using Experis resonator gases ensures the highest quality beam characteristics are consistently achieved, allowing you to optimise laser performance and reduce your running costs.

Air Products understands the importance of resonator gas purity. The levels of critical impurities like moisture, hydrocarbons and oxygen are closely controlled to ensure the lowest levels are consistently achieved.

#### Typical schematic of a CO<sub>2</sub> laser resonator



#### Pre-mixed resonator gases range

Composition	Size	Pressure (Bar <sub>g</sub> )	Volume (SM³)	Valve	Shelf life (months)	Product code
220 ppm H <sub>2</sub> 5.4% CO <sub>2</sub> 27% N <sub>2</sub> in He	X47S	200	8.5	BS3	60	470657
0.3% H <sub>2</sub> 4% CO 9% CO <sub>2</sub> 18% N <sub>2</sub> in He	X47S	200	8.52	BS3	120	468286
0.5% H <sub>2</sub> 4% CO 8% CO <sub>2</sub> 16% N <sub>2</sub> in He	X47S	200	8.49	BS3	120	468287
1.7% CO <sub>2</sub> 23.4% N <sub>2</sub> in He	X47S	200	8.44	BS3	120	468281
2% CO 8% CO2 16% N2 in He	X47S	200	8.54	BS3	120	468279
2% CO 8% CO <sub>2</sub> 8% N <sub>2</sub> in He	X47S	200	8.53	BS3	120	471206
2% CO <sub>2</sub> 13% N <sub>2</sub> in He	X47S	200	8.46	BS3	120	470550
3.1% CO <sub>2</sub> 31.4% N <sub>2</sub> in He	X47S	200	8.47	BS3	120	471207
3.4% CO <sub>2</sub> 15.6% N <sub>2</sub> in He	X47S	200	8.46	BS3	120	21568
3% O <sub>2</sub> 3% Xe 4% CO <sub>2</sub> 6% CO 19% N <sub>2</sub> in He	X105	200	1.84	DIN1	120	21703
4.5% CO <sub>2</sub> 13.5% N <sub>2</sub> in He	X47S	200	8.47	BS3	120	21195
4.5% CO <sub>2</sub> 13.5% N <sub>2</sub> in He	11X47S	200	93.19	BS3	120	58929
4% CO 8% CO2 16% N2 in He	X47S	200	8.57	BS3	120	468280
4% CO 8% CO <sub>2</sub> 28% He in N <sub>2</sub>	X47S	200	8.89	BS3	120	470505
4% CO <sub>2</sub> 26% N <sub>2</sub> in He	X47S	200	8.47	BS3	120	468282
5% CO <sub>2</sub> 25% N <sub>2</sub> in He	X47S	200	8.49	BS3	120	468284
5% CO <sub>2</sub> 29% N <sub>2</sub> in He	X47S	200	8.5	BS3	120	470641
5% CO <sub>2</sub> 34% N <sub>2</sub> in He	X47S	200	8.52	BS3	120	200577
5% CO2 35% N2 in He	X47S	200	8.52	BS3	120	470642
5% CO <sub>2</sub> 40% He in N <sub>2</sub>	X47S	200	8.65	BS3	120	20161
6% CO <sub>2</sub> 20% N <sub>2</sub> in He	X47S	200	8.49	BS3	120	468285

Note: Air Products is one of a limited number of approved Rofin DC pre-mix suppliers.

### Pure resonator gases range

Gas	Grade	O₂ (ppm)	H₂O (ppm)	THC (ppm)	
Helium Premier	5.2	< 1	< 2	< 0.5	
Helium BIP	6.0	< 0.01	< 0.02	< 0.1	
Nitrogen Premier	5.2	< 3	< 2	< 0.5	
Nitrogen BIP	6.0	< 0.01	< 0.02	< 0.1	
Carbon Dioxide Premier	4.5	< 10	< 7	< 5	



## The BIP product range

Air Products' BIP technology delivers unrivalled gas purity. If your laser is fitted with a resonator gas mixing system and capable of using pure gases, then our BIP gas range provides the ultimate peace of mind. For more information about BIP technology, see our dedicated BIP product datasheet.

### Experis gas control equipment and services

Air Products also offers a comprehensive range of gas control equipment and services. We can supply anything from a simple single stage regulator through to the design, installation and commissioning of pipework delivery systems, that include auto gas changeover capabilities.

# For more information on this and any other laser requirement, please contact us at:

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