

KERVOXA

On-Site Nitrogen Generator For Laser Welding



UP TO 99.999% PURITY



LONG-TERM RELIABILITY



SIMPLE OPERATION



LOWER OPERATING COST



Switch from Delivered Cylinders to On-Site Nitrogen Generation

Generate nitrogen from compressed air on demand at your facility.



DELIVERED CYLINDERS



ON-SITE GENERATION

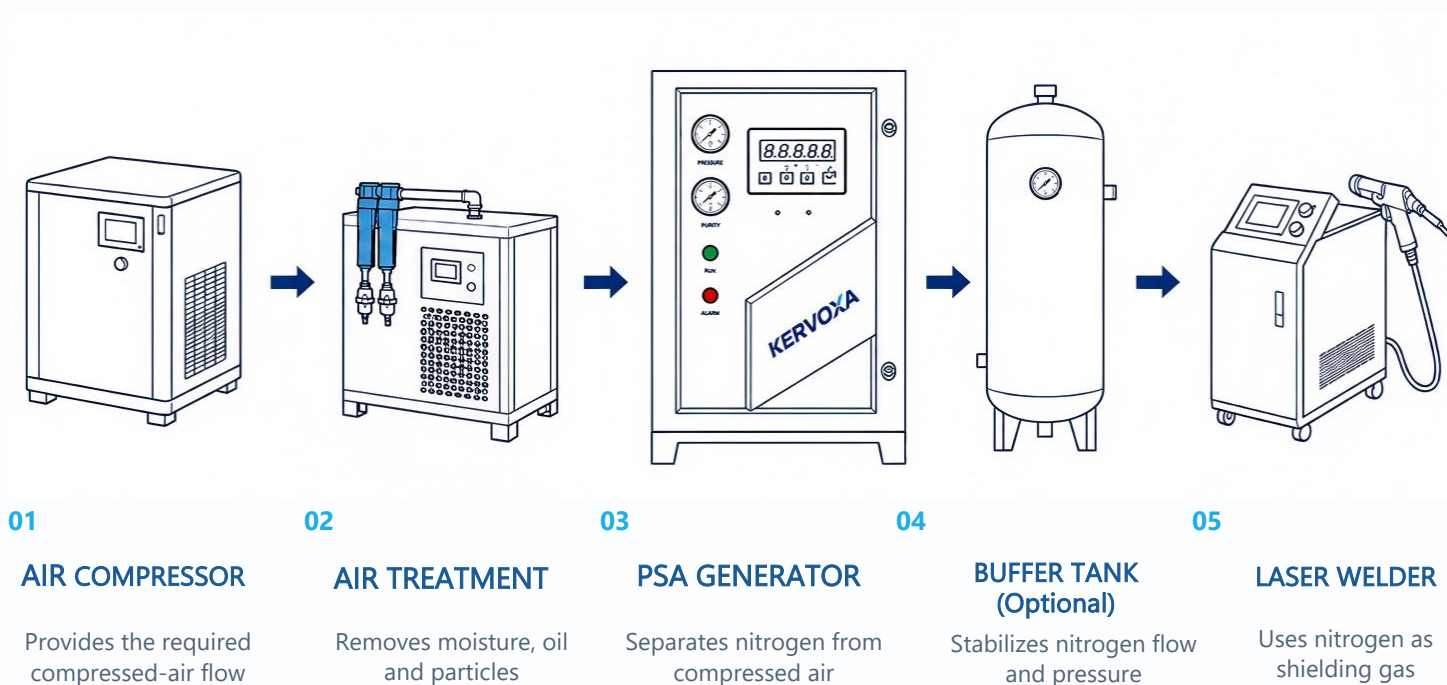
Take control of your nitrogen supply.

COST	Cylinder refills, rental and delivery	→	Reduce recurring gas-purchase costs
SUPPLY	Dependent on stock and delivery schedules	→	Generate nitrogen whenever production requires it
HANDLING	Order, move and change cylinders	→	One-button PLC-controlled operation
SPACE	Store full, empty and backup cylinders	→	Free up cylinder storage and handling space

Keep production running without cylinder changeovers.

From compressed air to nitrogen for laser welding

A complete on-site system that treats compressed air, generates nitrogen and delivers it directly to your welding equipment.



USE EXISTING OR LOCAL EQUIPMENT

Flexible local integration

Use existing equipment or source the air compressor, refrigerated dryer and air receiver locally. KERVOXA will confirm the required specifications

COMPLETE SYSTEM FROM KERVOXA

Choose a fully matched package

KERVOXA can supply the complete system, including the air compressor, refrigerated dryer, air receiver, nitrogen generator and optional nitrogen buffer tank

SYSTEM SIZING

Final system sizing is based on the required nitrogen flow rate and the number of welding machines it will serve.

Inside the Nitrogen Generator

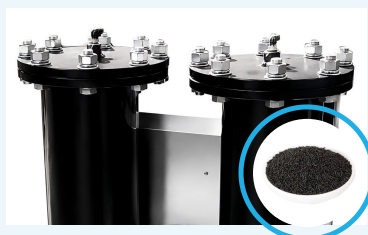
High purity, stable operation, simple control and efficient on-site production.

99.999% High-purity nitrogen

PSA separation provides up to 99.999% N₂ purity, with online monitoring for more consistent laser welds.



Long-term stable operation



Flange-clamped CMS bed

A clamping force of approx. 3–5 tonnes helps reduce CMS loosening and dust formation.



Controlled 50-second cycle

Pressure equalization reduces shock to the CMS bed and supports efficient compressed-air use.



Reliable pneumatic control

AIRTAC solenoid valves and temperature-rated pneumatic fittings.

Simple operation

One-button PLC control

Automatic cycle control · automatic venting
Online nitrogen-purity monitoring

Energy-saving

≈1 kWh/Nm³

Helps reduce running costs

*Typical whole-system electricity per 1 Nm³ of N₂; actual consumption varies with purity, flow, compressor efficiency and system configuration.

Choose the Right KX Series Model

Compare models and find the right capacity for your welding setup


KX-101

COMPACT CABINET · 1.2 Nm³/h


KX-102—KX-106

STANDARD CABINET · 2.4–6.0 Nm³/h

Model	N ₂ Flow (Nm ³ /h)	Handheld Welder*	Robotic Stations*	Generator Power	Air Inlet Size (mm)	Dimension (W × D × H)	Weight
KX-101	1.2	1–2	1	45 w	Ø8	570 × 370 × 780 mm	70 kg
KX-102	2.4	2–4	2	65 w	Ø12	580 × 500 × 980 mm	105 kg
KX-103	3.3	3–5	3	65 w	Ø12	630 × 600 × 1040 mm	135 kg
KX-104	4.0	4–6	4	65 w	Ø12	630 × 600 × 1040 mm	155 kg
KX-105	5.0	5–7	5	65 w	Ø12	630 × 600 × 1040 mm	175 kg
KX-106	6.0	8–10	6	85 w	Ø12	630 × 600 × 1040 mm	228 kg
Standard Configuration · All Models							
N ₂ Purity		99.999%		N ₂ Outlet Size		Ø8 mm	
Purity Analyzer		Yes		N ₂ Outlet Pressure		0.1–0.6 MPa	
Solenoid Valve		AirTAC		Power Supply		220 V / 50 Hz /Single Phase	
PLC Automatic Control · Automatic start and stop							

MODEL SELECTION

*Welder quantities are experience-based estimates. KERVOXA will confirm the final model based on your actual N₂ demand, welding process and duty cycle.

Optional 7.5 kW Air Compressor Configurations

Two configurations to suit different operating environments and project requirements.

VALUE MODEL



Cost-effective component configuration with the same rated air delivery.

ENHANCED MODEL



Enhanced component selection with an Inovance inverter and IP55 motor protection.

Model	Value	Enhanced
Inverter	Laeg	Inovance
Motor	Autofast (IP23)	Jiangke (IP55)
Air End	Baosi	
AC Contactor	Schneider	
Inlet Valve	Hongxing	
Motor power	7.5Kw	
Air Flow	1.1 m ³ /min	
Power Supply	380V/ 50Hz/3 Phase	
Type	Permanent Magnet Variable Speed Drive	
Dimension (W × D × H)	780*600*870 mm	930*620*820 mm
Weight	175 kg	185 kg

COMPRESSOR MATCHING

The 7.5 kW air compressor is suitable for all KERVVOXA nitrogen generator models shown in this catalogue. A suitable existing compressor may also be used after checking its airflow, pressure and air quality.

Refrigerated Air Dryer

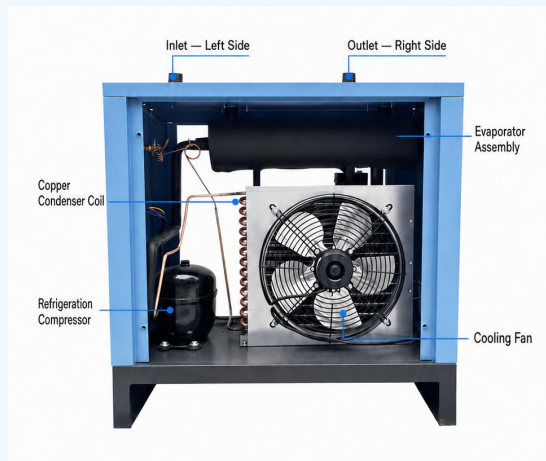
Two air-treatment options for systems using a 7.5 kW air compressor.

AIR DRYER WITH THREE-STAGE FILTRATION



Filtration grades: 3 μm / 1 μm / 0.01 μm
Three automatic condensate drains

AIR DRYER INTERNAL COMPONENTS



Key refrigeration components for compressed-air cooling and moisture removal

Model	Standard	High-Inlet-Temperature
Rated Air Flow	1.5 m ³ /min	2.0 m ³ /min
Rated Power	0.6 kW	0.8 kW
Working Pressure	0.4–1.0 MPa	0.2–1.0 MPa
Max. Inlet Air Temperature	≤45°C	≤80°C
Refrigerant Type	R134a	
Refrigerant Charge	300g	350g
Ambient Temperature	≤38°C	
Pressure Dew Point	2–10°C	
Connection Size	1-inch	
Power Supply	220 V / 50 Hz / Single Phase	
Pressure Loss	≤0.03 MPa	
Refrigeration Compressor	Qianjiang	
Dimensions (W × D × H)	650 × 420 × 640 mm	750 × 420 × 730 mm
Weight	42kg	50kg



On-Site Nitrogen Generation Systems for Laser Welding

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