



## Chromatec Nitrogen Generators

### Crystal Zero Nitrogen

Chromatec “Crystal Zero Nitrogen” Generators extend line of gas management portfolio for gas chromatography.

Chromatec Nitrogen generator for producing nitrogen from ambient air. The operation principle is based on method of Pressure Swing Absorption (PSA) optimized to produce high purity nitrogen for chromatography applications.

With “Crystal Nitrogen” generator you can forget about gas tanks and long tubes through your lab. Basic components, like an internal compressor, a catalytic reactor for hydrocarbon removal, oxygen sensor implemented in robust design provide great performance for most GC applications.

#### Key features:

- PSA technology in tandem with catalytic reactor guarantees removal trace impurities of O<sub>2</sub>, CO<sub>2</sub>, CO, H<sub>2</sub>O, CH<sub>4</sub> and other organics.
- 2 models available: with or without built-in compressor.
- Hydrocarbon removal in standard model.
- Standard built-in Oxygen sensor displays O<sub>2</sub> content at the outlet.
- 4 line display with keyboard on the front panel.
- Less than 3 ppm O<sub>2</sub> content at the outlet can be reduced down to 0.1ppm with additional Catalytic purifier 20.0.
- Cost-saving solution

#### Application range:

- Carrier gas for gas chromatography.
- Make up gas for GC detectors: TCD, ECD, FID, NPD.
- HPLC, TOC and other laboratory applications.

**Technical Specification:**

Model	20.400-UHP	30.400E-UHP
<b>Product Number</b>	<b>451-0310</b>	<b>451-0311</b>
Nitrogen purity	> 99.9995 %*	> 99.9995 %*
Productivity by nitrogen, L/hour (ml/min)	20 (333)	30 (500)
Nitrogen output pressure	400 kPa	400 kPa
Air compressor	built-in	External (optional)
Oxygen concentration	< 3 ppm	< 3 ppm
Moisture concentration	< 7 ppm	< 7 ppm
Hydrogen concentration	< 2 ppm**	< 2 ppm**
Total hydrocarbon level	< 0.05 ppm	< 0.05 ppm
Catalytic hydrocarbon removal	built-in	built-in
Oxygen sensor	built-in	built-in
Noise level	< 65 dB	-
Power consumption	500	400***

\* - For dry gas, including inert gas impurities (argon, neon, helium).

\*\* - Including carbon monoxide and carbon dioxide. At 10 ppm methane max in feed air.

\*\*\*- Power consumption of external compressor not included.

**Requirements for external air compressor (for 30.400E-UHP model), by order**

- Productivity 80 L/min or more
- 6 – 8 Bar output pressure
- Oil free
- Dew point: from -40°C to +15°C
- Temperature: from + 5 to + 50°C

**Environmental Conditions:**

Ambient Operating Temperature:	from 10 to 35°C
Relative humidity:	not more than 80 %
Storage Temperature:	from -50 °C to 50°C
Power Requirements:	~220V ±10%, 50±1Hz
Power consumption:	See table above

**Other specification:**

Dimensions: (WxDxH);	250 mm x 560 mm x 575 mm
Weight:	35 kg
Warm-up time	1 hour
Output fittings	1/8"

**Ordering data:**

Nitrogen generator "Crystal Nitrogen" 20.400-UHP, P/N 451-0310

Nitrogen generator "Crystal Nitrogen" 30.400E-UHP, P/N 451-0311

**Related products:**

Catalytic Purifier 20.0 model 02 (oxygen removal), P/N 451-0512

**Safety and Certification:**

Products designed and manufactured under regulations of GOST R ISO 9001 quality standard.

At electromagnetic compatibility Nitrogen Generators meets the requirements of IEC 60204-1, IEC 61000-6-1 (GOST 30804.6.1), IEC 61000-6-3 (GOST 30804.6.3). Declaration of compliance TR CU 004/2011, 020/2011.

Information and technical specification in this publication are subject to change without notice.

© Chromatec JSC SDO, 2017  
 November 30, 2017  
 09-001-7026EN



For more information please contact us at:  
[info@chromatec-instruments.com](mailto:info@chromatec-instruments.com)