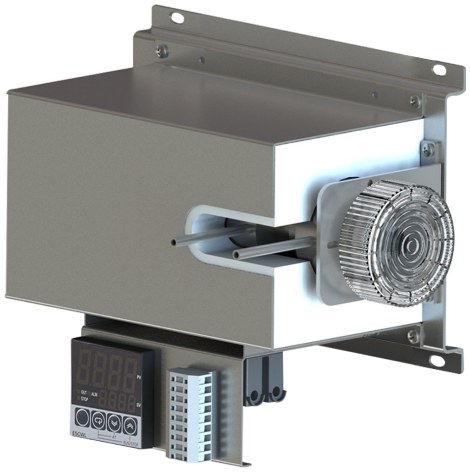
NOx Gas Converter
NGC1



NGC1 (Wall Mount)

NGC1 (19” Rack Mount)

FEATURES

- High conversion rate > 97%
- External Temperature Controller for easy operation
- Housing option available

ADVANTAGES

- Long lifetime
- Cost-Effective
- Easy replacement of converter cartridge without tools
- Ease of maintenance
- High NO conversion-capability
- 19” Rack Mount available

DESCRIPTION

Due to the rising global industrialization, the monitoring of exhaust gas is increasingly important. The monitoring of Nitrogen Oxide (NOx) is particularly important due to its role in the formation of ground-level Ozone and acid rain.

The gas converter module allows easy and cost-effective detection of the NOx components (NO & NO2). The module converts almost 100% of the NO2 content of a sample gas to NO using the replaceable reactor cartridge. The resulting NO gas is measurable by any commercially available IR analyzer. The reactor cartridge, designed in cooperation with a research institute, enables the conversion of high NO concentrations at a comparatively low temperature. Interferences from other gases such as CO, CO2, and NO are generally not observed.

Moreover, a lifetime of over 12 months is possible under normal conditions. This leads to an obvious reduction in maintenance costs. The maintenance effort is further minimized through the special reactor fastener on the front panel allowing the replacement of the cartridge without tools. The temperature of the converter is adjustable through an easy-to-handle microcontroller.

TECHNICAL SPECIFICATION

General	
Working temperature	400°C*
Warming-up time	30 min
Mounting	Wall / 19" Rackmount
Dimensions (Wall)	268(H) x 230(W) x 139(D) mm
Dimensions (19" Rack Mount)	2131(H) x 483(W) x 263(D) mm
MOC	Stainless steel
* Varies by converter material	
Gas Input Condition	
Sample gas pressure	up to 1.5 bar absolute
Sample gas flow	up to 120 l/h (2 LPM)
Sample gas temperature	5 to 80°C
Dew point after cooler	< 10°C
Inlet & outlet connection	6 MM OD tube (Not for 19" Rack Mount)
Ambient Conditions Permissible Ambient Temperature	
Operation	+5°C to +50°C
Storage and transport	-20°C to +70 °C
Permissible ambient	< 80% relative Humidity for storage and transport

Electrical Specification	
Power supply	115VAC or 230VAC 50/60Hz
Power Input	approx. < 500W
Thermal Load	85W at an oven temperature of 400°C
Alarm output	Relay output, 250 VAC, 1A (Resistive Load)
Reactor Cartridge	
Cartridge type	MC (Metal Cartridge)
Conversion factor (NO2 ➔NO)	≥ 97% (New Cartridge)
Filling Material	Metal Based
Life	Refer Diagram
Max. NO2 Capacity of 70 LPH	300 PPM
Max. Conversion Temperature*	425°C

* The Converter temperature should only be increased if the conversion level drops below 95% with the cartridge almost depleted.

ORDERING INFORMATION

Description	Part No.	Qty.
NOx Converter 230V	ASPL2601 - G2	1 No.
NOx Converter 115V	ASPL2927 - G2	1 No.
Cartridge MC - G2	55319990	1 No.
19" Rack Mount Housing with Module	NGC1_19	1 Set.

INTERNAL ASSEMBLY

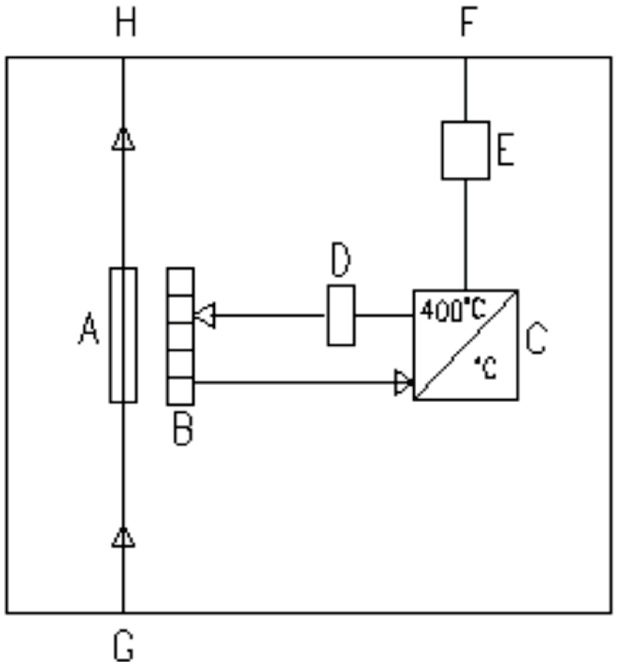


FIG. 1

A Reactor cartridge
B Tubular furnace
C Temperature Controller
D Solid State Relay
E Signal output (Temperature alarm status)
F Connector
G Gas-input (6 mm OD tube) (Not for 19" Rack Mount)
H Gas-output (6 mm OD tube) (Not for 19" Rack Mount)

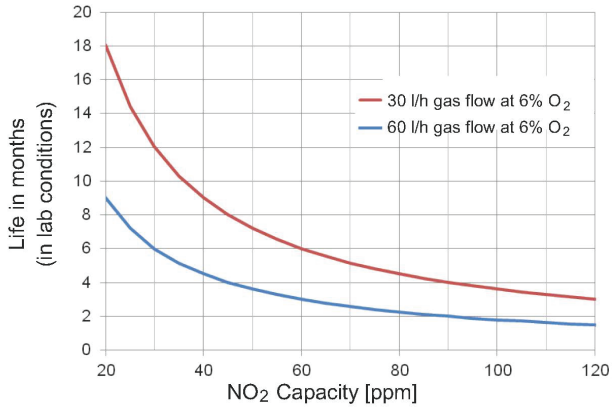
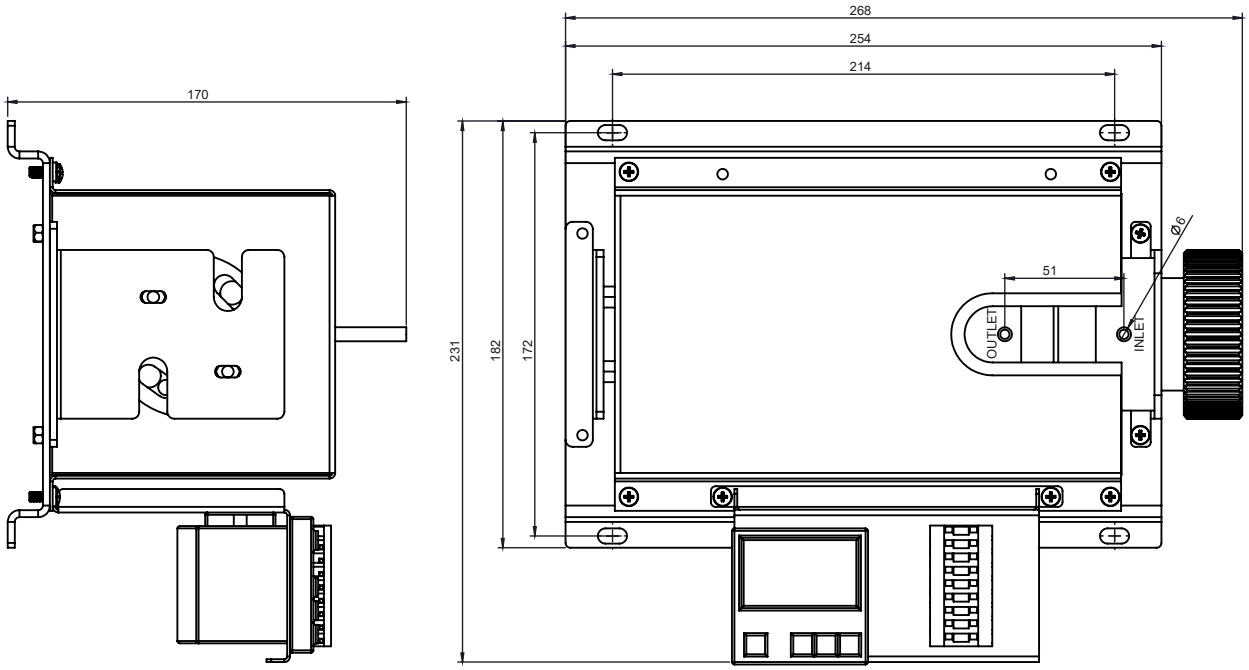


Fig. 1: Diagram converter cartridge life in lab conditions

Life of standard cartridges MC or CC shown.
When using the long-life cartridge the life increases significantly.
Values determined in lab conditions. Actual life during operation may differ.

FIG. 2

DIMENSION DETAILS OF NGC1 WALL MOUNT

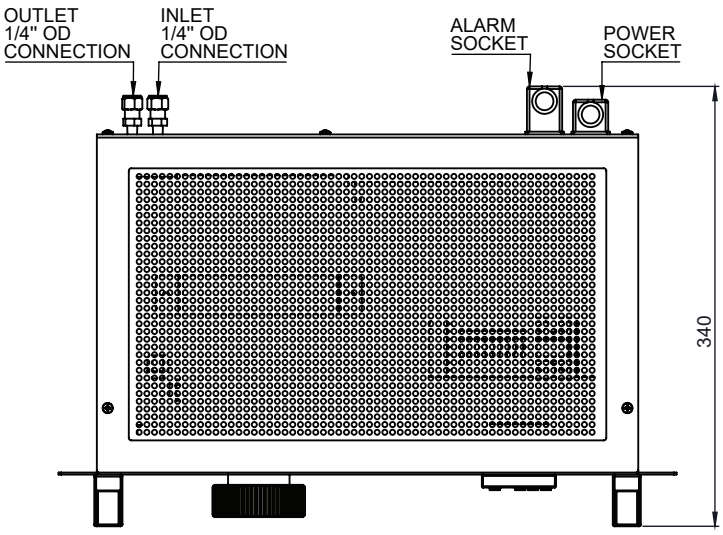


SIDE VIEW

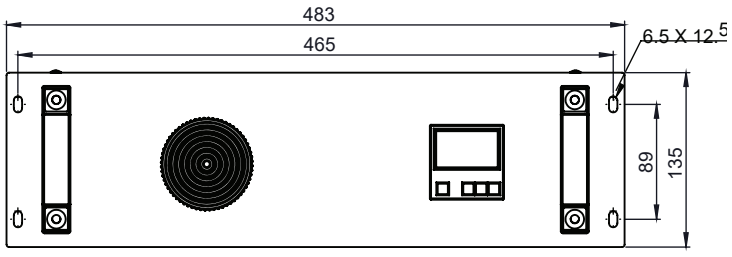
FRONT VIEW

All Dimension are in MM

DIMENSION DETAILS NGC1 19" RACK MOUNT



TOP VIEW

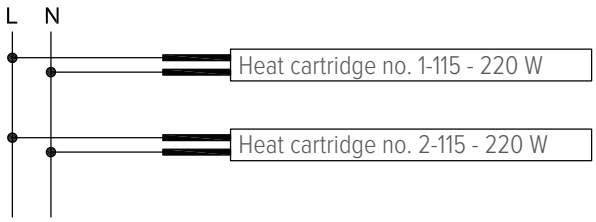


FRONT VIEW

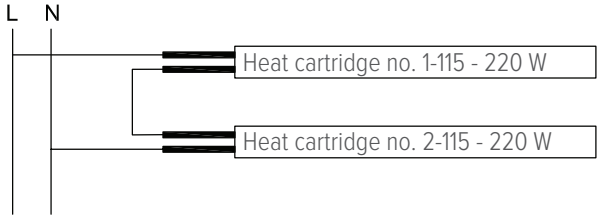
All Dimension are in MM

WIRING DIAGRAM

Connect to 115V



Connect to 230V



APPLICATION DIAGRAM