

New NITROSWING® Modular PSA Nitrogen Generators

What has been changed and improved ?



A major step forward

- Unprecedented productivity
- Enlarged and optimized HMI
- Extended data communication capabilities
- Improved piping and valves design
- Faster reaction time
- New ergonomic design



Drastically improved performance

The new NITROSWING incorporates a new high efficiency Carbon Molecular Sieve (CMS) allowing a major gain of productivity and a reduction of air consumption.

Example : For an 8 modules NITROSWING® @ 0,1 vol.% O₂ residual and 7,0 bar(g) air pressure :

- Productivity is improved by **48%**
- Air factor is improved by **22%**

Performances	Old line	New line
Flow (Nm ³ /h)	29,6	44,3
Air factor	3,88	3,09

Enlarged / Optimized HMI

SIEMENS SIMATIC PLC



- ✓ Siemens S7-1200 PLC
- ✓ Siemens KTP700 Basic 7" Touch Panel
- ✓ Remote Control & Monitoring through Web
- ✓ USB-Data logging (every Minute for 450 Days)
- ✓ Optional Wi-Fi Connection with App for Smartphone or Tablet
- ✓ No Control Lamps & Switches anymore
- ✓ External Power Switch on Left Side Cabinet



Enlarged / Optimized HMI

7" Colour Touch Screen

NOXERIOR
Next Generation Gas Solutions

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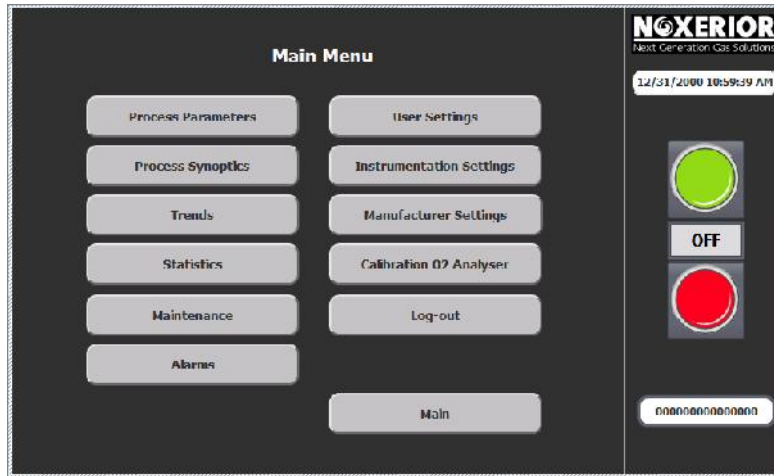
Main Menu

Process Parameters	User Settings
Process Synoptics	Instrumentation Settings
Trends	Manufacturer Settings
Statistics	Calibration O ₂ Analyser
Maintenance	Log-out
Alarms	

OFF

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Main

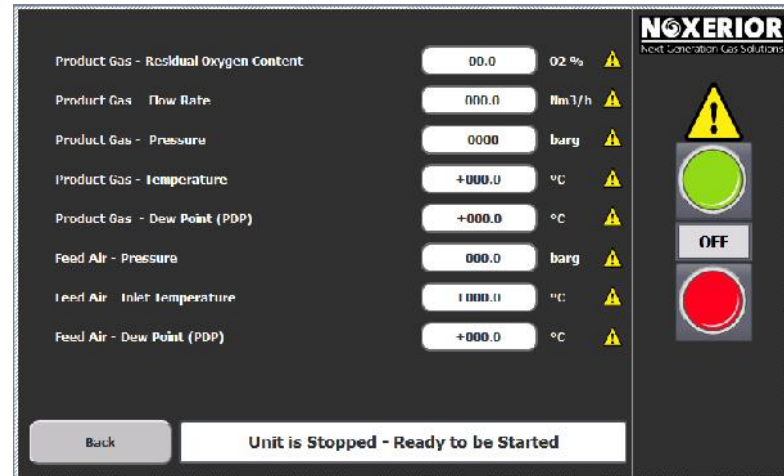


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Product Gas - Residual Oxygen Content	00.0	O ₂ %	!
Product Gas - Flow Rate	000.0	Nm ³ /h	!
Product Gas - Pressure	0000	barg	!
Product Gas - Temperature	+000.0	°C	!
Product Gas - Dew Point (PDP)	+000.0	°C	!
Feed Air - Pressure	000.0	barg	!
Feed Air - Inlet Temperature	1000.0	°C	!
Feed Air - Dew Point (PDP)	+000.0	°C	!

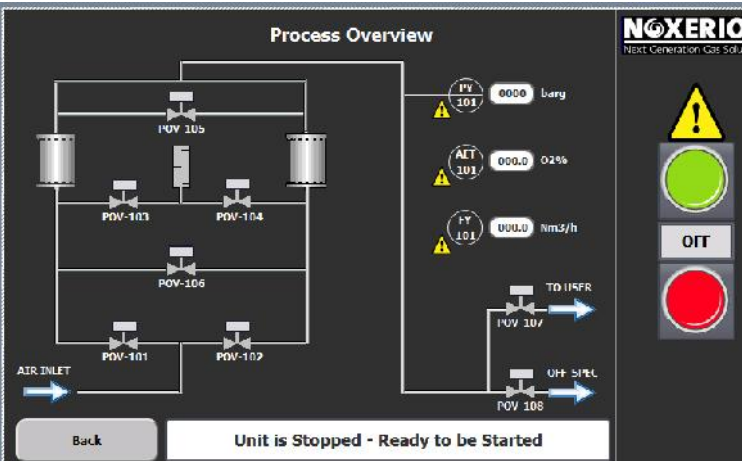
Unit is Stopped - Ready to be Started

Back



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Process Overview



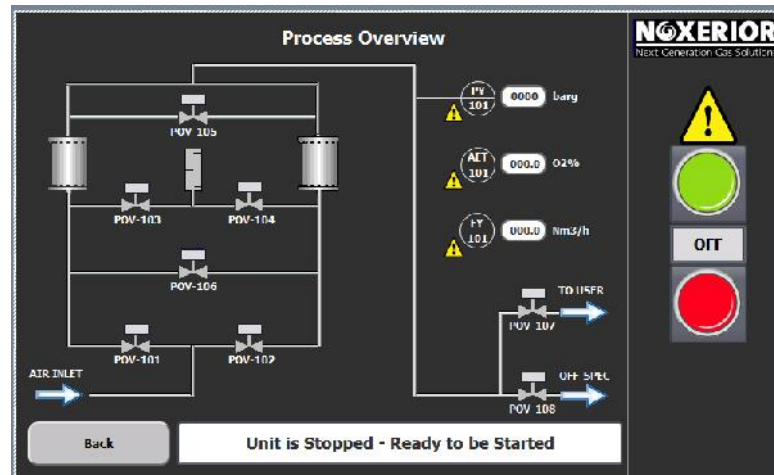
0000 barg

000.0 O₂%

000.0 Nm³/h

Unit is Stopped - Ready to be Started

Back



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Product Gas

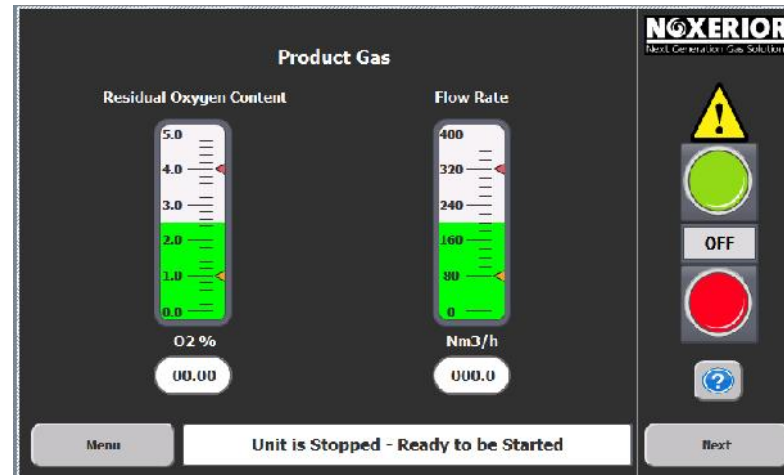
Residual Oxygen Content

Flow Rate

Unit is Stopped - Ready to be Started

Menu

Next

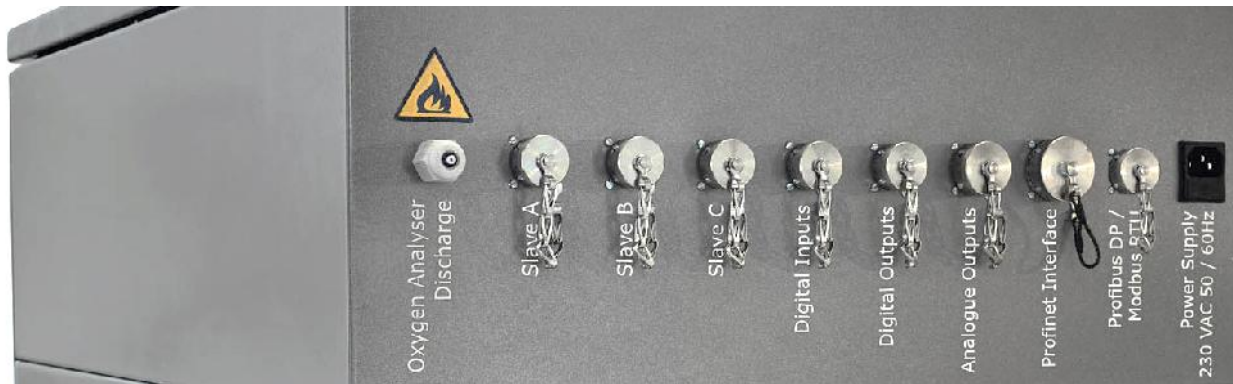


New Look

Redesigned ergonomic cabinet



Extended Data Communication Capabilities



) **Standard Features**

- Connections for Control of up to 3 Dual Banks
- Digital Output Signals
(Run – Stand-by – Common Alarm)
- Digital Input Signals (max. 14)
- Profinet Industrial Ethernet *Interface*

) **Optional Features**

- Analogue Output Signals (max. 8)
- Modbus RTU or Profibus DP



Improved Onboard Instrumentation

- Newly included Nitrogen Pressure Transmitter
 - No fixed Hysteresis anymore between Run / Stand-by Mode
 - Adjustment of Stand-by Pressure through HMI
- Process Pressure Gauges on the side

Optional

- Oxygen Analyser with Zirconium-Oxide Sensor
- Electronic Flow Product Meter
- Pressure Transmitter for Feed Air
- Temperature Transmitter for Feed Air & Nitrogen
- Moisture Transmitter for Feed Air & Nitrogen

New : can be installed turnkey in the cabinet

GROUPE

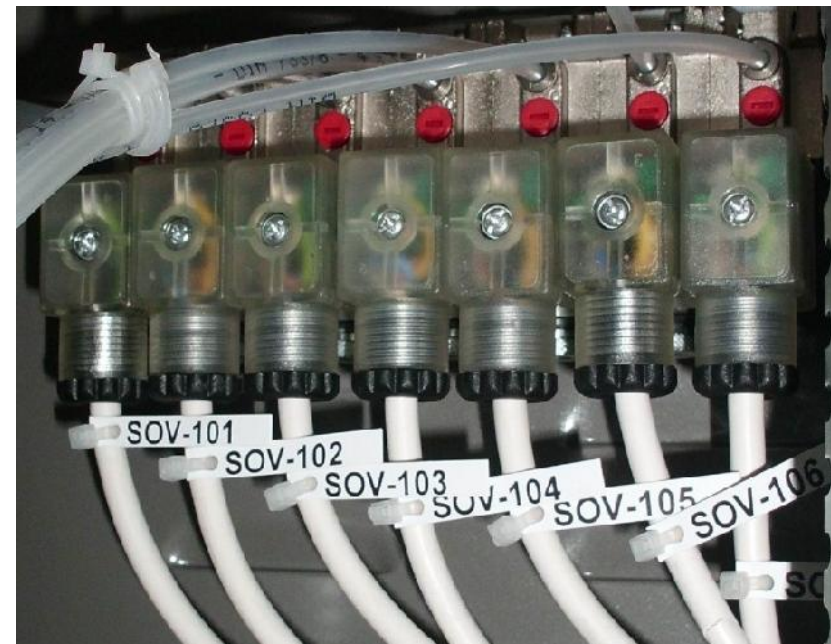
NOVAIR

Improved Process Piping & Valves

Reduced number of Components

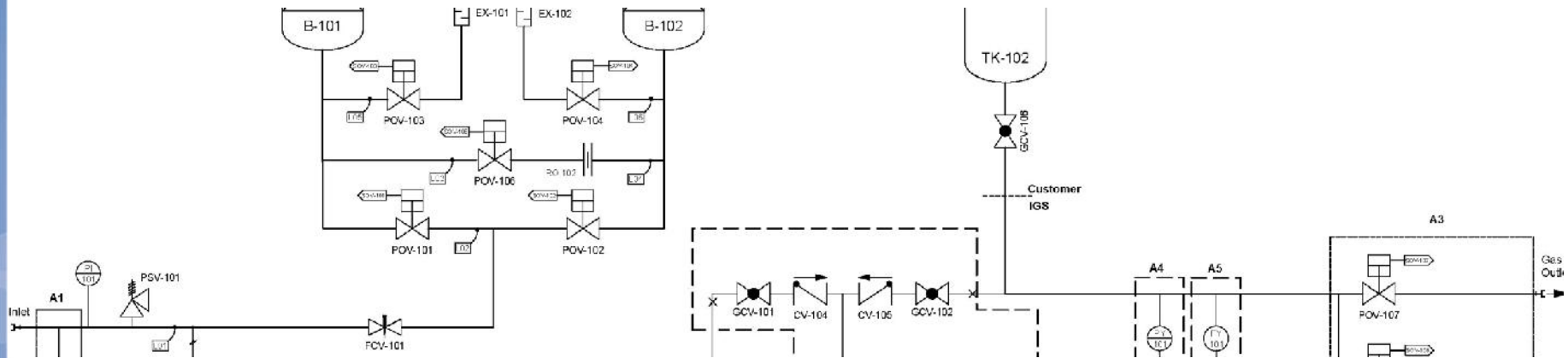
Solenoid Valves Manifold replace Single Solenoid for each Process Valve

- ✓ No more RC Filter : reduced failure risk
- ✓ Reduced number of Fittings
- ✓ Improved Maintenance Access
- ✓ Reduced Energy Consumption by 75%



Faster Reaction Time

Improved PSA Process

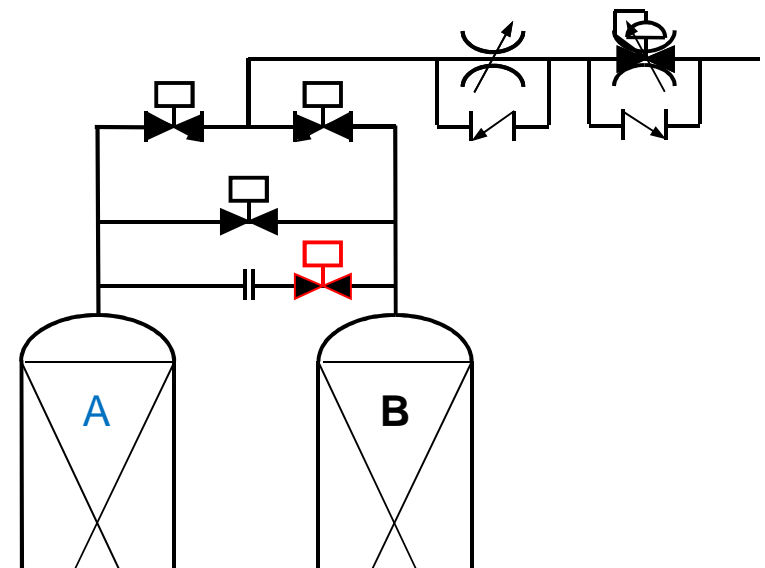


- Pneumatic Valve in Sample Supply Line to O₂-Analyser

✓ No Loss of Product Gas during Stand-by

- Pneumatic Valve in Purging Line for Process Freezing

✓ Almost Immediate Production after Start



NOXERIOR & NOVAIR Group

- French group founded in 1977
- 100% family-owned business
- World-class leading manufacturer of on-site Oxygen & Nitrogen generators
- International oriented: 85% revenue outside France in over 110 countries



Certifications



- Pressure Equipment Directive 97/23/CE – Module H
- ISO 9001:2008
- ISO 14001:2004
- ISO 13485:2012
- EMAS

GRUPE

NOVAIR

Thank you for your attention

We look forward to your visit!



GROUPE

NOVAIR