

GLOBAL SERVICE NETWORK HANLA IMS

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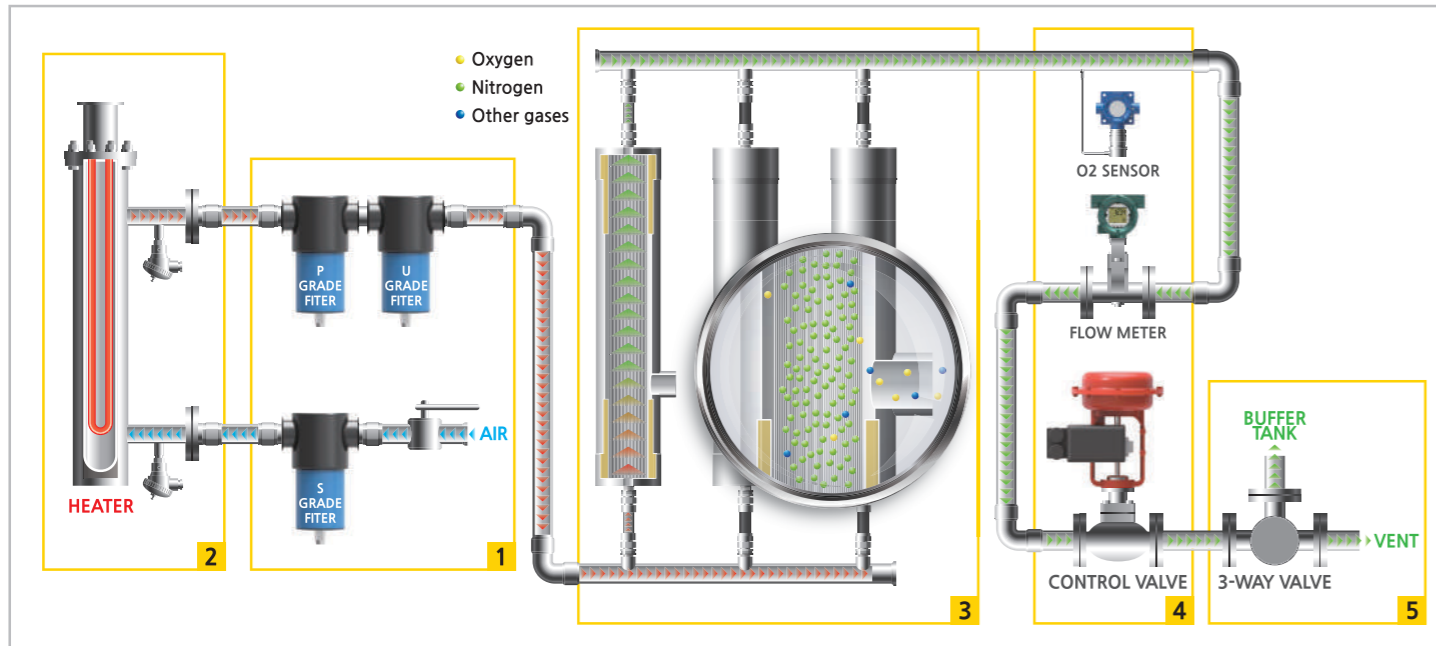
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NITROGEN GENERATOR



SYSTEM DESCRIPTION



1 Filter (U,P,S Grade)

- 1) When an air compressor supplies air to an air filter which is in a nitrogen generator panel, oil and solid particles in air are filtered.
- 2) Separated oil and moisture are automatically discharged by a filter drain unit.
- 3) A differential pressure gauge helps checking a replacement period.

2 Heater

- 1) Optimal temperature of air is essential point to produce fine quality nitrogen. In the optimal condition, moisture and liquid oil are evaporated and also, volume of nitrogen is increased.
- 2) Temperature is consistently monitored by a heat controller and kept in steady level.

3 Membrane

- 1) When compressed air flows into a membrane, various air components, such as oxygen, carbon dioxide and the other gasses are passed through hollow fibers in the membrane.

- 2) Oxygen is rapidly released outside with its high diffusion rate via the hollow fibers. But nitrogen has a low diffusion rate, so it is not filtered and flows to a next stage.
- 3) The nitrogen capacity is related to the flow rate, temperature and pressure of the compressor.

4 Automatic Control

- 1) A control panel keeps monitoring concentration of oxygen and flow of nitrogen which is controlled by automatic control valve.
- 2) If the concentration of oxygen is over than 3.5%, an operator receives a system alarm. And if the oxygen level is over than 4%, the system is automatically shut-down.

5 Charge / Discharge

- 1) Nitrogen is charged to a buffer tank up to 10 bar. When it is lower than 5 bar, nitrogen is automatically recharged to the buffer tank. (Adjustable)
- 2) If quality of nitrogen is not matched with a target level of the system, the nitrogen is automatically discharged through an exhaust line.

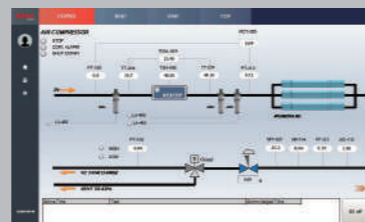
MONITORING



MAIN MONITORING
N2 PURITY
AIR INLET PRESSURE
N2 TANK PRESSURE
N2 FLOW RATE



GAS DETECTOR MONITORING
SENSOR VALUE
AUDIO & VISUAL ALARM



P&ID MONITORING
N2 PURITY / FLOW RATE
AIR INLET / N2 TANK PRESSURE
OXYGEN CONTENT
TEMPERATURE, DEW POINT

SPECIFICATION

SPECIFIC DATA			
Model	NTGT series	NTGT - Capacity ex) NTGT-160	
Operating Principle	Membrane Separation		
Membrane Arrangement	Parallel		
Location	Safe Area - Weather Protected (IP44 (Control section))		
PERFORMANCE DATA			
Nitrogen flow - Capacity	Up to 300	Nm ³ /h	
N2 Purity	97	Vol%	
N2 Dew Point (At atm. Pressure)	-65	°C	
Outlet Pressure (Process Design)	10	Barg	At Nitrogen Generator Outlet
N2 System Buffer Tank Start/Stop Settings	5-10	Barg	Adjustable
Outlet Temperature (max)	50	°C	
Filter	Particle Size	0.01	µm ISO 8573.1:2009 Class1
	Oil Remove	99.99	% ISO 8573.1:2009 Class1
ELECTRIC POWER REQUIREMENTS			
Heater	Voltage	440/60/3	V/Hz/ph
	Power	4	kW
Control Panel	Voltage	220/60/1	V/Hz/ph
	Power	0.5	kW

FEATURES

1. Easy adjustable parameter
2. Remote control
3. Serial communication (option) - Modbus RTU (RS-485)
4. Gas detection monitoring(option)
5. Certification : ABS Type Approval
6. Dual system (Cross over)

DESCRIPTION

