OXYGEN GENERATOR

PROJECT: Sales

PROJECT CASE PARAMETERS

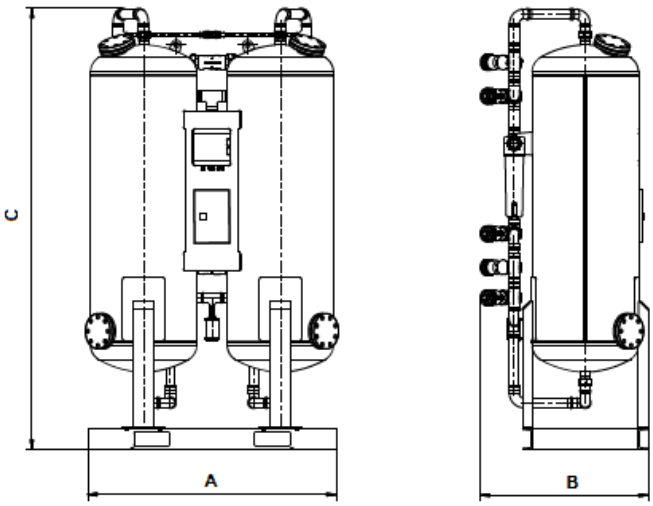
Outlet gas flow	0,97 m³/h [reff. to 1 bara 20°c]
Outlet gas purity	90 %
Inlet pressure	5 bar
Inlet temperature	15 °C
Outlet gas	Oxygen

SELECTED GENERATOR

Model	O-GEN 1
Series	O-GEN
Outlet gas flow *	1,1252 m³/h
Avg. compressed air consumption *	13,6 m³/h
Required compressed air capacity *	15,64 m³/h
Gas buffer *	0,02394 m³
Air buffer *	0,04779 m³
Inlet connection	1/2"
Outlet connection	1/2"
Sound level	70 dB(A)
Outlet pressure	3,7 bar *
Length (A)	1126 mm
Width (B)	550 mm
Height (C)	1760 mm
Mass	191 kg

* Values calculated at selected conditions
Generator performance can deviate ±5%

GENERAL ARRANGEMENT DRAWING



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DESIGN CHARACTERISTICS

Type	Pressure swing adsorption (PSA)
Type of regeneration	Heatless regeneration
Adsorption flow direction	Bottom to top
Desorption flow direction	Top to bottom
Installation location	Indoor
Pressure vessel	Carbon steel (not galvanised, externaly painted)
Piping	Carbon steel
Adsorbent	SORBEO MS10 O2 including protection layer of SORBEO AA
Operating medium	Compressed air
Inlet temperature range	Min. 15°C, max. 50°C
Inlet humidity	PDP 3°C to 5°C
Inlet pressure range	5 bar - 6 bar
Dew point (Atmospheric)	-60°C
Inlet filter	Super fine coalescing 0.01 µm
Outlet filter	Dust 1 µm

ELECTRICAL DATA

Power supply	1 ph, 110-230V (±10%), 50-60Hz
Protection class	IP 54 (not suitable for hazardous/explosive area)
Average power consumption	< 60 W

SCOPE OF SUPPLY

Included in scope of supply	Generator with pneumatic tubing and electrical wiring
	Pre and after filter
	Installation and operating manual
	Test report
	Piping and instrumentation scheme
	Declaration of conformity
Not included	Transport, installation and initial commisioning

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SPECIFICATION OF COMPONENTS

PRESSURE VESSEL

Material	Carbon steel
Quantity	2
Design code	EN 13445
Approval	PED 2014/68/EU
Volume	21,84122 l
Type of load	Dynamic
Corrosion protection inside	Without
Corrosion protection outside	Epoxy painted RAL 7035
Flow distributors inserts	Stainless steel
Pressure safety valve	Without
Other equipment	Manometers to monitor pressure in the vessels
Transient pressure	ΔP = 6 bar
Allowable stress reversals	2000000

PROCESS VALVE

Type	Angle seated valve with pneumatic actuator
Size	(Inlet): 1/2" (Outlet): 1/2"
Quantity	(Inlet): 5pcs (Outlet): 3pcs
Material	Stainless steel
Corrosion protection	Nickel pleated
Actuator	Actuators are designed for minimum operating pressure 4 bar
Sealing	PTFE

CONTROLLER

Controller	OGC 1.0 or OGC 2.0
Material	Carbon steel
Cabinet protection	Epoxy painted
User interface	NGC 2.0 - Touch screen (4 inch)
Communication	Without (optional Modbus TCP/IP, Profinet)
Standby signal	Yes

INLET FILTER

Model	AAF 0076
Series	AAF
Element	07050 S

OUTLET FILTER

Model	AAF 0076
Series	AAF
Element	07050 R

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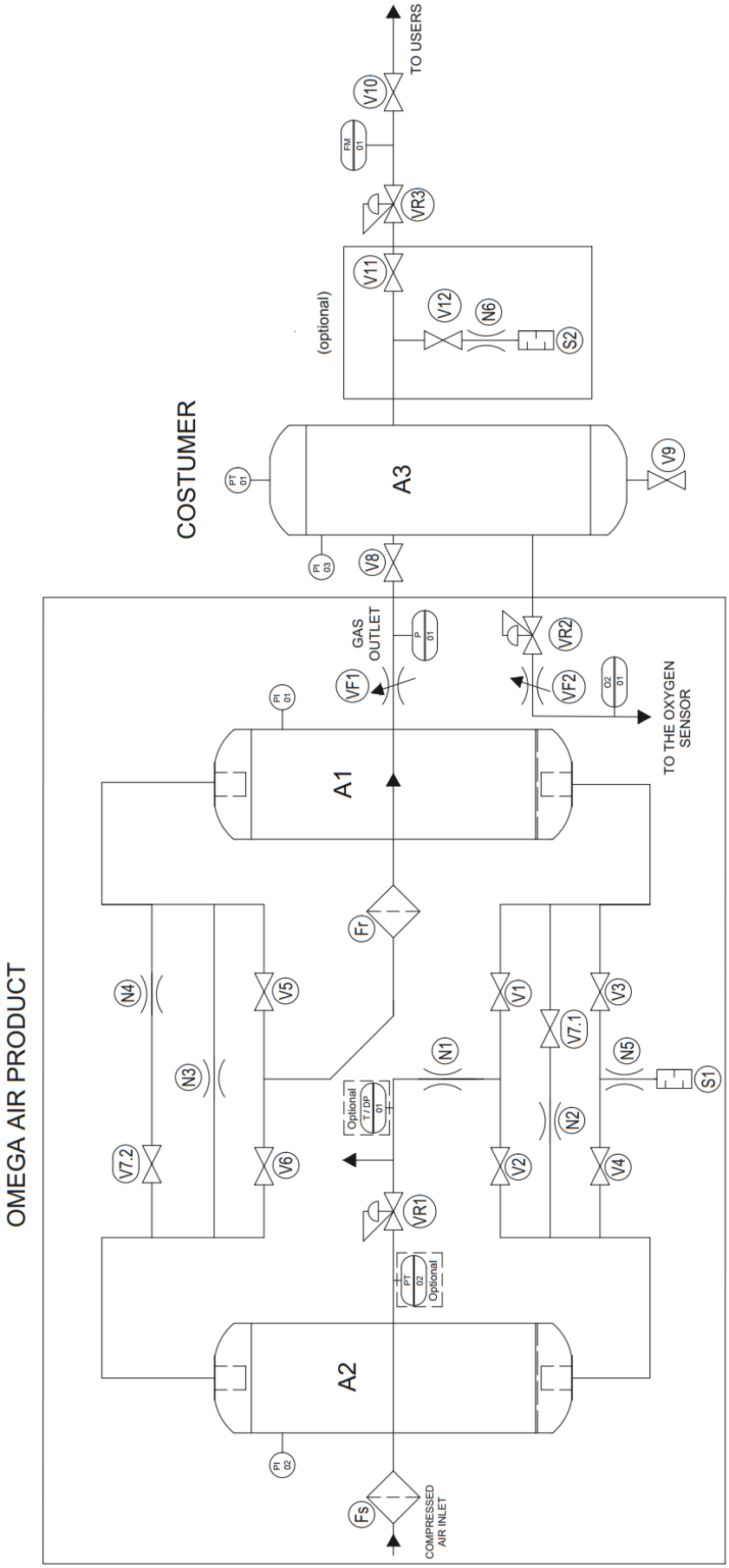
PID SCHEME



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LEGEND

A1-A3	Pressure vessel
DP1	Dew point sensor (optional)
FM1	Flow meter (optional)
Fr	Dust filter
Fs	Micro filter
N1-6	Nozzle
O21	Oxygen sensor (optional)
PI1-3	Pressure indicator
PT1	Pressure transmitter
S1-2	Silencer
Sv	Supply for pneumatic valves
T1	Temperature sensor (optional)
V1-7.2	Angle seated valve
V8-10	Manual ball valve
V11-12	Purity controll (optional)
VF1-2	Flow regulator
VR1-3	Pressure regulator

CREATED

GAIL CORBETT
Independent Air Treatment
Technology Limited
2. 11. 2022