

# OXYGEN GENERATOR – OX

## (PSA Oxygen generator)

### DESCRIPTION

The OX series oxygen generators extract the available oxygen in the ambient air from the other gases by applying the Pressure Swing Adsorption (PSA) technology. During the PSA process compressed, cleaned ambient air is led to a molecular sieve bed, which allows the oxygen to pass through as a product gas, but adsorbs other gases. The sieve releases the adsorbed gases to the atmosphere, when the outlet valve is closed and the bed pressure returns to ambient pressure. Subsequently the bed will be purged with oxygen before fresh compressed air will enter for a new production cycle. In order to guarantee a constant product flow, OX oxygen generators use modules of two molecular sieve beds, which alternatively switch between the adsorption and the regeneration phase. Under normal operating conditions and with correct maintenance the molecular sieve beds will have an almost indefinite lifetime.



### APPLICATIONS

• Aquaculture	• NO <sub>x</sub> Reduction for Fuel Burners
• Feed Gas for Ozone Generators	• Oxygen Lancing
• Glass blowing	• Welding, Brazing
• Leaching	• Wellness
• Aquaculture	• Medical air

### TECHNICAL SPECIFICATIONS

Operating pressure	5 – 6 barg
Inlet temperature range (feed air)	10°C up to 55°C
Dew point (at ambient pressure)	<-60°C
Voltage, Frequency	110–230 V / 50–60 Hz
Power consumption	<60W
Sound level	80dB(A)
Protection class (controller)	IP 54
Compressed air pressure required (inlet)	6,5 bar – 7,5 bar
Compressed air flow required (inlet)	Oxygen capacity x 13
Compressed air quality (inlet)	Class 1.4.1 acc. to ISO 8573-1 (0,1um; 3°C; <0,01mg/m3/h)
Filters (inlet + outlet)	Included

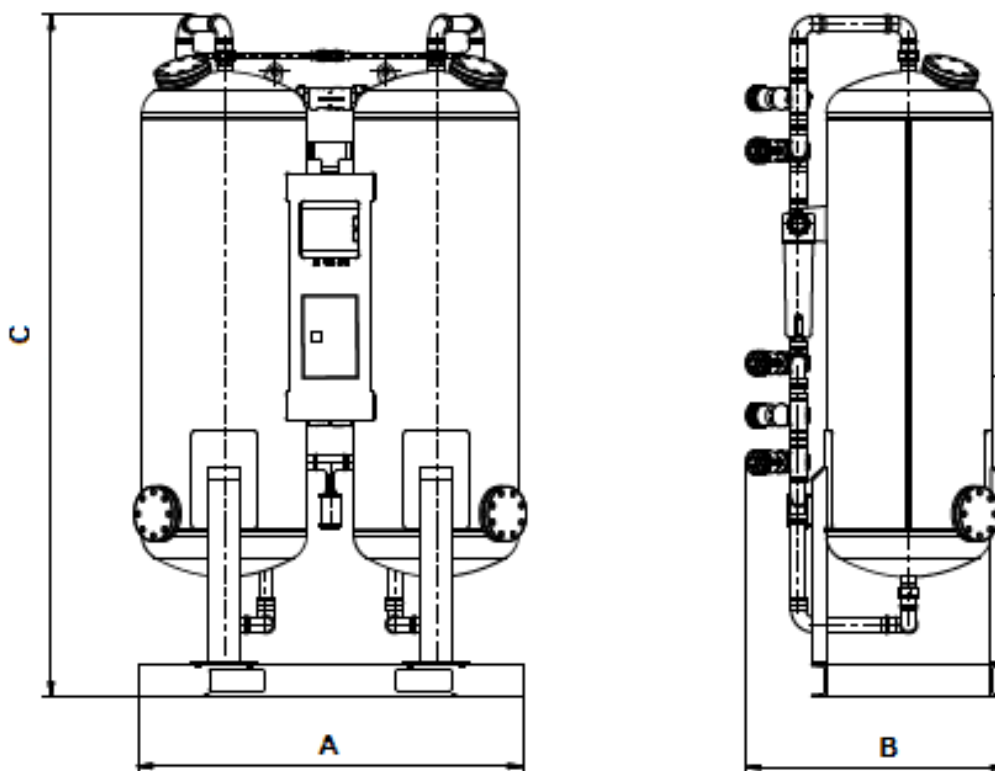
### MATERIALS

Columns, construction, support	Carbon Steel
Column inner protection	/
Column and construction protection	Epoxy powder painted
Valves	Brass, Stainless steel
Fitting, screws, plugs	INOX, brass, steel (zinc coated)
Outside protection	Epoxy powder painted
Adsorbent	Molecular sieve 13X type and inert material

**SIZES**

Model	Connection [inch]		Length A [mm]	Width B [mm]	Height C [mm]	Mass [kg]	Volume* [l]
	IN	OUT					
OX 1	½"	½"	1126	550	1760	191	23
OX 2	½"	½"	1100	550	1646,6	230	36
OX 3	½"	½"	1102	550	1779	300	63
OX 4	½"	½"	1073	550	1942	330	72
OX 5	½"	½"	1240	760	2068	580	105
OX 6	½"	½"	1370	760	2081	615	127
OX 8	½"	½"	1370	<b>760</b>	2092	715	176
OX 10	1"	½"	1446	760	2140	875	225
OX 13	2"	½"	1728	860	2204	1175	280
OX 16	2"	½"	1736	860	2354	1255	312
OX 20	2"	½"	1801	910	2226	1465	400
OX 23	2"	½"	1820	1010	2266	1670	480
OX 29	2"	½"	1932	1010	2269	1935	566
OX 35	2"	1"	2070	1180	2387	2545	750
OX 44	2"	1"	2293	1325	2390	3020	970
OX 50	2"	1"	2603	1425	2496	4085	1210
OX 57	2"	1"	2603	1425	2546	4185	1250
OX 64	2"	1"	2815	1630	2514	4780	1450
OX 75	2"	1"	2603	1425	2546	4600	1540
OX 84	2"	1"	3070	1675	2535	6500	1910
OX 100	DN65	DN40	3100	1690	2885	6850	2140

\* per column



**PERFORMANCE**

Model	INLET PRESSURE [barg]	DISCHARGE PRESSURE [barg]	OXYGEN PURITY [%]		
			90	93	95
<b>OX 1;</b> O <sub>2</sub> flow [Nm <sup>3</sup> /h]	6	4,8	1,16	1,11	1,06
Feed air consumption [Nm <sup>3</sup> /h]			13,6	13,4	13,2
<b>OX 2;</b> O <sub>2</sub> flow [Nm <sup>3</sup> /h]	6	4,8	1,80	1,72	1,64
Feed air consumption [Nm <sup>3</sup> /h]			21,1	20,7	20,4
<b>OX 3;</b> O <sub>2</sub> flow [Nm <sup>3</sup> /h]	6	4,8	3,15	3,01	2,87
Feed air consumption [Nm <sup>3</sup> /h]			36,9	36,3	35,8
<b>OX 4;</b> O <sub>2</sub> flow [Nm <sup>3</sup> /h]	6	4,8	3,52	3,36	3,20
Feed air consumption [Nm <sup>3</sup> /h]			41,2	40,6	39,9
<b>OX 5;</b> O <sub>2</sub> flow [Nm <sup>3</sup> /h]	6	4,8	5,28	5,04	4,80
Feed air consumption [Nm <sup>3</sup> /h]			61,8	60,8	59,9
<b>OX 6;</b> O <sub>2</sub> flow [Nm <sup>3</sup> /h]	6	4,8	6,64	6,34	6,04
Feed air consumption [Nm <sup>3</sup> /h]			77,7	76,5	75,4
<b>OX 8;</b> O <sub>2</sub> flow [Nm <sup>3</sup> /h]	6	4,8	8,64	8,25	7,86
Feed air consumption [Nm <sup>3</sup> /h]			101,1	99,6	98,1
<b>OX 10;</b> O <sub>2</sub> flow [Nm <sup>3</sup> /h]	6	4,8	11,04	10,54	10,05
Feed air consumption [Nm <sup>3</sup> /h]			129,2	127,2	125,3
<b>OX 13;</b> O <sub>2</sub> flow [Nm <sup>3</sup> /h]	6	4,8	13,68	13,06	12,45
Feed air consumption [Nm <sup>3</sup> /h]			160,1	157,7	155,3
<b>OX 16;</b> O <sub>2</sub> flow [Nm <sup>3</sup> /h]	6	4,8	15,20	14,52	13,83
Feed air consumption [Nm <sup>3</sup> /h]			177,8	175,2	172,5
<b>OX 20;</b> O <sub>2</sub> flow [Nm <sup>3</sup> /h]	6	4,8	19,84	18,95	18,05
Feed air consumption [Nm <sup>3</sup> /h]			232,1	228,6	225,2
<b>OX 23;</b> O <sub>2</sub> flow [Nm <sup>3</sup> /h]	6	4,8	23,00	21,97	20,93
Feed air consumption [Nm <sup>3</sup> /h]			269,1	265,1	261,0
<b>OX 29;</b> O <sub>2</sub> flow [Nm <sup>3</sup> /h]	6	4,8	26,56	25,36	24,17
Feed air consumption [Nm <sup>3</sup> /h]			310,8	306,1	301,4
<b>OX 35;</b> O <sub>2</sub> flow [Nm <sup>3</sup> /h]	6	4,8	35,52	33,92	32,32
Feed air consumption [Nm <sup>3</sup> /h]			415,6	409,4	403,1
<b>OX 44;</b> O <sub>2</sub> flow [Nm <sup>3</sup> /h]	6	4,8	45,44	43,40	41,35
Feed air consumption [Nm <sup>3</sup> /h]			531,6	523,7	515,7
<b>OX 50;</b> O <sub>2</sub> flow [Nm <sup>3</sup> /h]	6	4,8	57,60	55,01	52,42
Feed air consumption [Nm <sup>3</sup> /h]			673,9	663,8	653,7
<b>OX 57;</b> O <sub>2</sub> flow [Nm <sup>3</sup> /h]	6	4,8	59,60	56,92	54,24
Feed air consumption [Nm <sup>3</sup> /h]			697,3	686,9	676,4
<b>OX 64;</b> O <sub>2</sub> flow [Nm <sup>3</sup> /h]	6	4,8	68,72	65,63	62,54
Feed air consumption [Nm <sup>3</sup> /h]			804,0	792,0	779,9
<b>OX 75;</b> O <sub>2</sub> flow [Nm <sup>3</sup> /h]	6	4,8	73,36	70,06	66,76
Feed air consumption [Nm <sup>3</sup> /h]			858,3	845,4	832,6
<b>OX 84;</b> O <sub>2</sub> flow [Nm <sup>3</sup> /h]	6	4,8	83,52	79,76	76,00
Feed air consumption [Nm <sup>3</sup> /h]			977,2	962,5	947,9
<b>OX 100;</b> O <sub>2</sub> flow [Nm <sup>3</sup> /h]	6	4,8	101,60	97,03	92,46
Feed air consumption [Nm <sup>3</sup> /h]			1188,7	1170,9	1153,1

Refers to 1 bar(a) and 20°C at 6 bar operating pressure and 30 °C compressed air temperature.

Oxygen flow available on demand up to 6,1 bar. Oxygen flows changes according to the compressed air temperature at the entrance of the generator, required oxygen pressure and required oxygen purity.

For the sizing at other conditions please contact manufacturer.

Performance +/- 5%.



## STANDARD EQUIPMENT

- Set of External Feed Air Filters
- Adsorber Vessel in Carbon Steel
- Long life Pneumatic Valves
- Exhaust Mufflers
- Oxygen purity control
- Air and Oxygen flow Regulation
- Oxygen analyzer with Zirconium-Oxide Sensor
- Control System with SIEMENS PLC
- Touch screen interface
- Web Control
- Pressure Transmitter

## OPTIONAL EQUIPMENT

- Electronic Product Flow Meter
- Feed Air / Product Moisture Analyser
- Oxygen Booster with Cylinder Filling System
- Feed Air / Product Temperature Transmitters
- Sterile Filters

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	<p>Our quality management system is certified by ICIM in conformity with ISO 9001:2015 and ISO 13485:2016</p>	
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