



# STIRLING CRYOGENICS

**Stirling Cryogenics B.V.**

Science Park Eindhoven 5003  
5692 EB Son, The Netherlands

T +31 40 26 77 300

info@stirlingcryogenics.eu

www.stirlingcryogenics.eu

**Company Registration** 73238783

**VAT** NL050415034B01

## StirLOX

Reliable on site medical oxygen

### Stirling Technology

Since more than sixty years Stirling Cryogenics has designed and manufactured gas production and gas liquefaction systems, serving customers all over the world under all possible climatic conditions. This experience has culminated in our current range of StirLOX medical oxygen plants, producing medical oxygen gas in quantities from 5 Nm<sup>3</sup>/hr up to 36 Nm<sup>3</sup>/hr, or even more.

### StirLOX

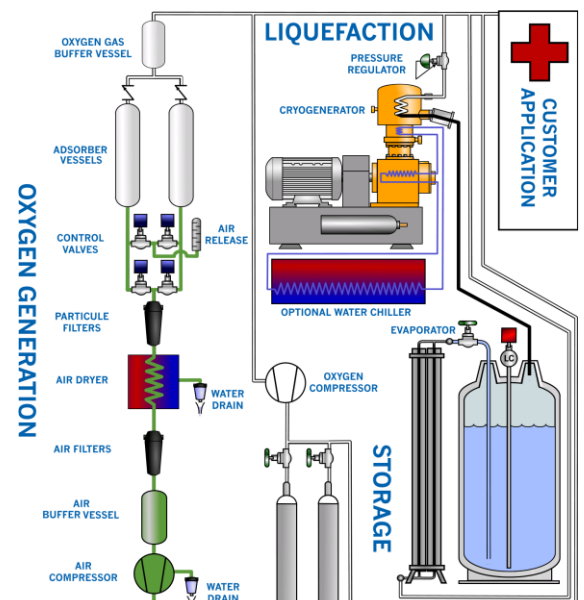
The StirLOX Medical oxygen gas production plants are latest state of art technology in producing Medical Oxygen on site. Avoiding any logistics of supply of liquid oxygen or gas cylinders, the StirLOX produces gaseous oxygen for immediate use in the hospital as well as liquid oxygen for peak shaving and backup. The optional cylinder filling station fills cylinders with high pressure oxygen gas to be used on places where no oxygen is available. In case of power failures, the StirLOX automatically uses its inbuilt storage of liquid oxygen as backup and the evaporated liquid oxygen flows as gaseous oxygen to the hospital. When power returns, the oxygen generator takes over from the backup and oxygen gas flows again directly to the hospital. Surplus production of oxygen is used to fill the storage again. In case of higher consumption of oxygen gas, the storage will support the oxygen supply up to the consumption required (peak shaving).

The optional cooling water chiller provides cooling water under the most severe environmental conditions, to complete the independency of the StirLOX to any outside support. Even operator attention is limited to perform routine checks and filter changes between its maintenance intervals of 6000 hrs.

### Typical StirLOX features

- Fully automatic operation by PLC
- Efficient production of medical oxygen gas
- Integrated liquefaction of oxygen gas for storage and back up.
- Optional cylinder filling station
- Service interval 6.000 hrs (apart from filter changes, etc.)
- Built to deal with almost any environmental condition
- Handling all power supplies

Worldwide service & maintenance



Stirling Cryogenics B.V.

Science Park Eindhoven 5003 | 5692 EB Son, The Netherlands | T +31 40 26 77 300 | info@stirlingcryogenics.eu | www.stirlingcryogenics.eu

## StirLOX Technical Specifications

Specifications	
The nominal medical oxygen production range	5 Nm <sup>3</sup> /hr up to 50 Nm <sup>3</sup> /hr
Peak shaving capacity	3-5 times nominal production
Supply pressure	4 bar(g)
Oxygen purity	93 ± 3% volume (USP XII)
Other contents	Mainly nitrogen and argon
Liquid oxygen storage range	800 Nm <sup>3</sup> up to 6.000 Nm <sup>3</sup>
Back up time	1 week @ nom. consumption
Cylinder filling capacity range	10 up to 25 cyl/day
Power consumption liquefier	2 kW/Nm <sup>3</sup> @ 4,5 bar(g)
Water cooling liquefier	approx. 1,4 kW/Nm <sup>3</sup> gas into liquid oxygen
Maintenance interval (apart from filter changes)	6.000 hours

StirLOX-5   StirLOX-10   StirLOX-20   StirLOX-40

Specifications						
Liquid oxygen production at nominal operating conditions	[Nm <sup>3</sup> /h]	5	10	20	36	
Peak shaving	[Nm <sup>3</sup> /h]	25	50	100	200	
Liquid oxygen storage	[Nm <sup>3</sup> ]	1.000	2.000	4.000	7.500	
Calculations based on bed nrs.	Hospital beds	pcs	280	555	1111	2000
	OR Suites	pcs	8	16	33	60
	ICU	pcs	33	66	133	240
	Neo Natal ICU	pcs	55	111	222	400

