

EnOxy 606

Oxygen Membrane Module

Parker hollow-fibre membrane modules produce oxygen enriched air from compressed air to offer a cost effective, reliable and safe alternative to traditional oxygen gas supplies.

Parker modules can be built into a custom-made oxygen generator or can be integrated with your process to provide an on-demand, continuous source of oxygen gas.

Oxygen enriched air is used in many health and wellness related applications such as nitrox diving, oxygen bars and oxygen training rooms.



Benefits:

- **Less membrane modules needed per enrichment system**
More enriched air per fibre is produced from Parker hollow-fibre membranes than any other in the world
- **Use of low pressure standard industrial compressor**
No high pressure compressor needed to obtain required enriched-oxygen flow
- **Energy savings**
Operation at a low pressure requires less energy
- **Reduced CO₂ emissions**
No heater required to open polymer membrane structure, thus reducing the energy consumption
- **Robust fibre**
Most tolerant fibre to particle contamination
- **Large membrane diameter**
Lowest membrane module pressure drop
- **Factory membrane ageing, pre-delivery**
No performance decrease over time due to fibre ageing
- **Quick start-up time**
Required enriched-oxygen purity is produced instantly, no time needed to heat-up
- **Flexible mounting arrangements**
Can be mounted horizontal or vertical
- **Low noise operation**
Radiated noise generated by membrane technology is extremely low
- **No maintenance required**
No user serviceable parts
- **Small system footprint**
Less modules needed to produce oxygen enriched air requirements

Performance data

Standard test criteria are at 7 bar g, other specification points are an indication

| Oxygen purity % | Minimum enriched oxygen flow rate in l/min ¹ | | | | | | |
|-----------------|---|------|------|------|------|------|-----|
| | 28 | 30 | 32 | 34 | 36 | 38 | 40 |
| 4 bar g | 69.2 | 70.8 | 72.3 | 74.0 | 75.5 | 77.2 | - |
| 5 bar g | 88.2 | 90.2 | 92.2 | 94.2 | 96.2 | 98.2 | 100 |
| 6 bar g | 108 | 110 | 113 | 115 | 118 | 120 | 122 |
| 7 bar g | 128 | 131 | 133 | 136 | 139 | 142 | 145 |
| 8 bar g | 148 | 151 | 155 | 158 | 162 | 165 | 168 |
| 9 bar g | 168 | 173 | 177 | 180 | 185 | 188 | 192 |
| 10 bar g | 190 | 195 | 198 | 203 | 208 | 212 | 217 |
| 11 bar g | 212 | 217 | 222 | 227 | 232 | 237 | 242 |
| 12 bar g | 235 | 240 | 245 | 252 | 257 | 262 | 267 |

Enriched oxygen flow exits at atmospheric pressure
 Maximum pressure drop over nitrogen enriched flow <0.3 bar.
 Maximum enriched oxygen flow rate = minimum flow rate + 30%
¹ l/min refers to conditions at 1013mbar(a) and 20°C

| Oxygen purity % | Feed-air consumption at minimum enriched oxygen flow rate in l/min ¹ | | | | | | |
|-----------------|---|-----|-----|-----|-----|-----|------|
| | 28 | 30 | 32 | 34 | 36 | 38 | 40 |
| 4 bar g | 95.6 | 111 | 130 | 161 | 212 | 301 | - |
| 5 bar g | 122 | 139 | 160 | 193 | 241 | 314 | 541 |
| 6 bar g | 149 | 169 | 196 | 227 | 284 | 360 | 538 |
| 7 bar g | 176 | 200 | 232 | 269 | 324 | 405 | 580 |
| 8 bar g | 204 | 232 | 269 | 312 | 376 | 470 | 648 |
| 9 bar g | 233 | 264 | 307 | 356 | 431 | 536 | 730 |
| 10 bar g | 263 | 299 | 347 | 403 | 488 | 615 | 855 |
| 11 bar g | 295 | 334 | 389 | 452 | 556 | 710 | 1018 |
| 12 bar g | 327 | 371 | 430 | 502 | 623 | 811 | 1208 |

Ambient Conditions

| | |
|---------------------|--------------------------------|
| Ambient temperature | +2°C to +50°C |
| Ambient pressure | atmospheric |
| Air quality | clean air without contaminants |

Material

| | |
|-------------------|-------------------------------|
| Housing | Steel |
| Tube | PVC |
| Coating (housing) | ESPC to RAL 7035 (Light Grey) |
| Coating Tube | None |

Feed-air Conditions

| | |
|-----------------------------------|-----------------------------|
| Maximum operating pressure | 13.0 bar g |
| Min. / Max. operating temperature | +2°C / +50°C |
| Maximum oil vapour content | <0.01 mg/m ³ |
| Particles | filtered at 0.01 µm cut off |
| Relative humidity | <100% (non condensing) |

Weight, Dimensions and Connections

| | |
|--|-------------------------|
| Dimensions H x W x D | 751 x 110 x 84 mm |
| Weight | 6.4 kg |
| Connection feed-air | G1/2" female to ISO 228 |
| Connection nitrogen enriched air | G1/2" female to ISO 228 |
| Connection oxygen enriched air at atmospheric pressure | G1/2" female to ISO 228 |
| Dimensional drawing | Refer to K3.1.345 |

Flow Rate Corrections

| | |
|---|------------------------|
| Nitrogen flow rate at feed temperatures other than 20°C | Use bulletin S3.1.085* |
| Feed-air consumption at feed-air temperatures other than 20°C | Use bulletin S3.1.085* |

*version number may vary, make sure to use the most recent version

Note

Parker membrane systems produce both nitrogen and oxygen enriched air. Nitrogen enriched air can cause suffocation and oxygen enriched air causes increased fire hazards. The oxygen enriched air is available at ambient pressure and pressure build-up of enriched oxygen at the outlet must be prevented, otherwise a serious (reversible) decrease in performance will result. The nitrogen enriched air produced should be treated as pressurised air.

For more information please contact your local sales office or visit www.parker.com

Parker has a continuous policy of product development and although the company reserves the right to changes specifications, it attempts to keep customers informed of any alterations.



EMEA Product Information Centre

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