

Medical Oxygen Generator

Reliable PSA/VSA technology giving hospitals a continuous, on-demand supply of 93–96% purity oxygen — and up to 80% lower oxygen costs.

93–96%

MEDICAL OXYGEN PURITY

–80%

COST VS CYLINDER SUPPLY

24x7

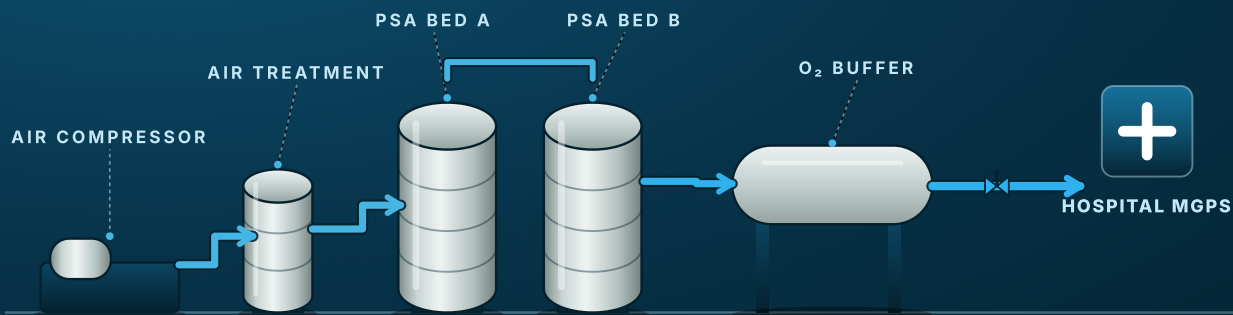
CONTINUOUS ON-DEMAND
FLOW

On-site

ZERO SUPPLY-CHAIN
DEPENDENCY

PROCESS OVERVIEW

MEDICAL OXYGEN GENERATOR



01 Overview

For a hospital, oxygen is not a consumable — it is life support. Brise Medical Oxygen Generator Plants produce medical-grade oxygen on the hospital's own premises, extracting it from ambient air with proven PSA/VSA technology. The plant delivers a continuous 93–96% purity supply for wards, ICUs and operating theatres, serving patients with chronic respiratory disease, critical illness and emergency conditions.

On-site generation removes the fragility of cylinder logistics: no stock-outs, no vendor dependence, no high-pressure handling in corridors. Systems run fully automatically with remote monitoring, cut oxygen spend by up to 80%, and occupy far less space than cylinder manifold rooms — a resilient, economical backbone for any healthcare facility.

02 At a Glance



Built for healthcare

Medical-grade oxygen suitable for hospitals, ICUs and clinics



Always available

Continuous on-site generation with buffer storage



Safer than cylinders

Low-pressure operation cuts handling and explosion risk



Economical

Up to 80% reduction in long-term oxygen cost

03 Technology & Process

The generator separates oxygen from nitrogen in ambient air using pressure-swing cycles across zeolite molecular sieve beds — the same proven PSA/VSA core as our industrial platform, configured and instrumented for healthcare duty.

1

Air preparation

Ambient air is compressed, cooled, filtered and dried to medical-plant standards.

2

PSA/VSA separation

Zeolite beds capture nitrogen under pressure; 93–96% oxygen passes to product.

3

Buffering & conditioning

Product oxygen is buffered, filtered and pressure-stabilised for the hospital pipeline.

4

Continuous quality watch

Online oxygen analysers and alarms supervise purity around the clock.

5

Pipeline delivery

Oxygen feeds the hospital's medical gas pipeline system on demand, 24×7.

Why hospitals switch to on-site oxygen

The case that repeats across healthcare facilities:

Continuity of care	Oxygen availability no longer depends on vendor logistics or cylinder stock
Economics	Up to 80% lower oxygen cost frees recurring budget for care delivery
Safety in the facility	Low-pressure generation removes high-pressure cylinder movement from wards and corridors
Space & staffing	A compact automated skid replaces manifold rooms and manual changeovers



End-to-end EPC delivery

Concept, FEED and engineering through construction, commissioning and PG testing.



Certified quality

ISO 9001 / 14001 / 45001 systems; designs per PESO, IEC, ATEX & IS standards.



Lifecycle partnership

Operator training plus AMC/CMC programmes for maximum plant uptime.

04 Technical Specifications

PARAMETER	SPECIFICATION
Technology	PSA / VSA (Pressure / Vacuum Swing Adsorption)
Oxygen purity	93–96%
Feed	Ambient air
Supply mode	Continuous, on-demand, on-site
Operation	Fully automatic; minimal human intervention
Monitoring	Remote digital monitoring, purity alarms
Power demand	Low specific power consumption
Maintenance	Minimal — simple adsorption mechanics
Capacity	Sized to hospital bed count & peak demand

- ✓ Flow capacity, redundancy and backup configuration are engineered per facility during FEED / basic engineering. Figures shown are design values from Brise Chemicals product documentation; final specifications are confirmed during detailed engineering.

05 Key Features



Fully automatic

Runs unattended with self-regulating purity and flow control.



Remote monitoring

Digital interfaces give engineering teams live visibility and alarms.



Enhanced safety

Low-pressure generation removes high-pressure cylinder risks from the facility.



Up to 80% cost saving

On-site production eliminates recurring cylinder and rental charges.



Space saving

Compact skid replaces sprawling cylinder banks and manifold rooms.



Supply security

Independence from external vendors — oxygen availability you control.

06 Applications & Industries



Hospitals & ICUs

Central pipeline supply for wards, ICUs and OTs



Healthcare centres

Clinics, nursing homes and diagnostic centres



Medical institutions

Teaching hospitals and research facilities



Respiratory care

Chronic respiratory disease management



Emergency & critical care

Dependable flow in life-critical situations



Remote & rural facilities

Oxygen autonomy where logistics are hardest

07 Scope of Supply



Medical air compression & treatment package



PSA/VSA oxygen generator skid



Buffer vessel, filtration & purity analysers



PLC control panel with remote monitoring & alarms



Installation, commissioning & hospital staff training



AMC/CMC lifecycle support

**CERTIFIED &
COMPLIANT**

ISO 9001:2015

ISO 14001:2015

ISO 45001:2018

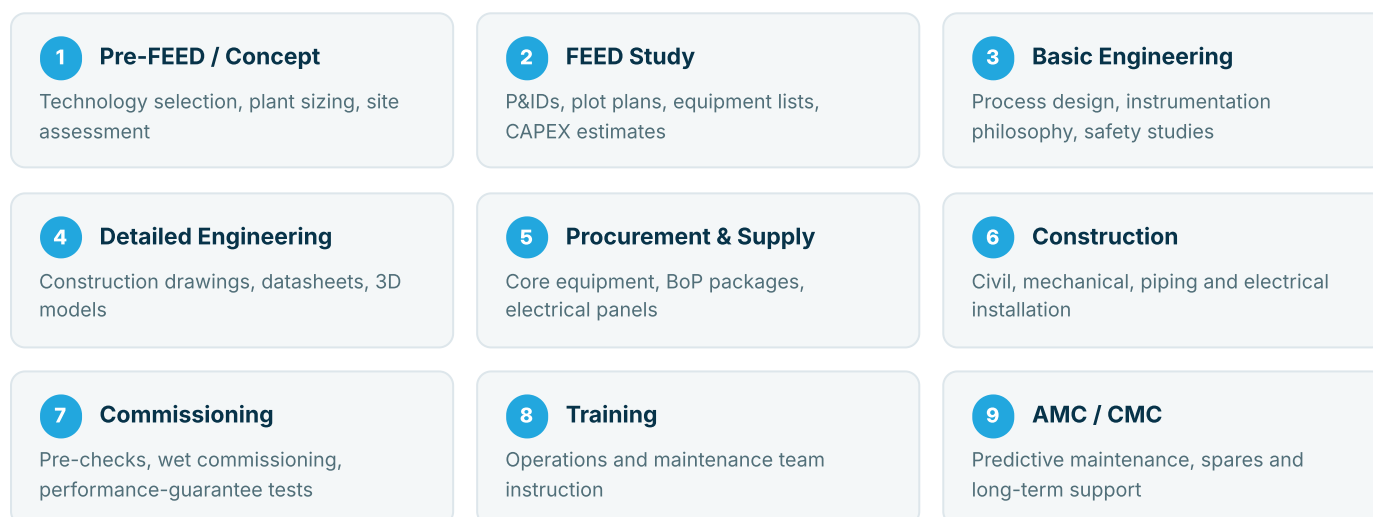
Designs compliant with PESO, IEC, ATEX &
IS safety standards

08 About Brise Chemicals

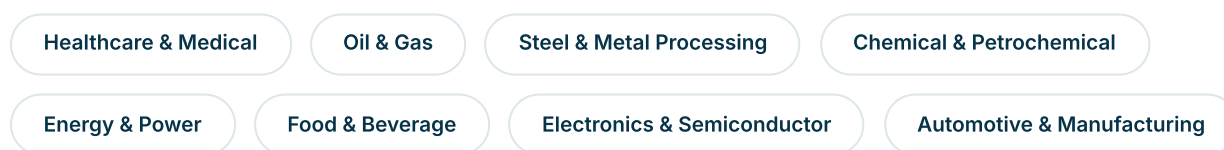
Brise Chemicals Pvt. Ltd. is a technology-driven OEM and industrial gas plant technology owner, founded by professionals with deep experience across turbo-machinery, oil & gas, refineries and the industrial gas sector. From our engineering and fabrication base in Pune, India, we design, engineer, manufacture, install and commission cryogenic and non-cryogenic gas plants — spanning alkaline electrolysis, gas generation, gas purification, ammonia and methanol synthesis, air separation and hydrogen liquefaction.

Our name derives from the ballet step “Brisé” — a reminder that precision, integrity and discipline underpin everything we build. With in-house fabrication, certified welding, an HVOF catalyst-coating facility and rigorous QA/QC, we deliver complete EPC projects and stand behind them through long-term AMC/CMC support.

09 The Brise EPC Lifecycle



10 Industries We Serve



Let's engineer your plant.

Request a detailed proposal, FEED study or site consultation for the Medical Oxygen Generator.


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