



The SAT450 is the ideal breathing-air purification system for those working in areas where there is a risk of higher than normal levels of carbon monoxide or carbon dioxide being ingested into the compressed-air system.

The unit incorporates a compressed-air filtration and drying system which delivers a smooth, controlled, uninterrupted supply of breathing quality air far exceeding the requirements of BS EN12021. For heavier duty applications the SAT450HD is available which also includes an additional 1 micron pre-filter.

Built to last the SAT450 is mounted within a tough polyurethane housing. With virtually no ferrous components the unit incorporates stainless and aluminium components making it suitable to be used in tough and arduous environments. The stainless steel wheeled frame allows the unit to be easily manoeuvred into position



At the rear of the unit there are 2 CEJN breathing-air outlet couplings, the pressure being delivered to the user from these outlets can be adjusted via the regulator inside the unit.

Operation

The compressed-air supply is connected to the input connection on the side of the Safe-Air Trolley, air is then passed through a 1 micron pre-filter (SAT450HD only) and a 0.01 micron combined oil mist coalescing and carbon filter further reducing oil carryover to less than 0.003ppm. The air is then delivered to a pneumatically controlled pressure swing dryer incorporating a desiccant media capable of both drying the air to a pressure dewpoint of -40°C and significantly reducing the levels of carbon dioxide. Purge air from this system is exhausted from the cabinet via silencers at the rear of the unit. The dried air is now passed through a hopcalite catalyst filter which oxidises excess levels of carbon monoxide back to safe levels of carbon dioxide.



The system provides a safe reliable source of breathing quality air in excess of all international breathing standards with the additional confidence of protection against surplus levels of carbon monoxide and carbon dioxide.



SAT450 Technical Data

Minimum operating Pressure	Maximum Operating Pressure	Minimum Inlet Temperature	Maximum Recommended Inlet Temperature	Inlet Flowrate	Maximum Flowrate	Weight (Kg)	Length (mm)	Width (mm)	Height (mm)
4 barg	16 barg	1.5°C	30°C	590 lpm	450 lpm at 7 barg	54	600	560	1040

International Breathing-Air Standards

Component	UK BS EN12021:1999	Europe EN12021:1999	Canada CSA Z180.1-00	Australia AS/NZS 1715:1994
Nitrogen	Not Specified	Not Specified	Not Specified	Not Specified
Oxygen Level	21%(+1)	21%(+1)	20-22%	19.5%-22%
Carbon Monoxide	5ppm	15ppm	5ppm	10ppm
Carbon Dioxide	500ppm	500ppm	500ppm	800ppm
Pressure Dewpoint	5°C (41°F) below lowest ambient temperature	5°C (41°F) below lowest ambient temperature	5°C (41°F) below lowest ambient temperature	100mg/m ³
Oil/Lubricant	0.5mg/m ³	0.5mg/m ³	1mg/m ³	1mg/m ³
Sulphur Dioxide	Not Specified	Not Specified	Not Specified	Not Specified
Nitrogen Oxides	Not Specified	Not Specified	Not Specified	Not Specified
Odours	Free	Free	Free	Free
Methane	Not Specified	Not Specified	5ppm	Not Specified
Volatile non-methane hydrocarbons	Not Specified	Not Specified	5ppm	Not Specified
Volatile halogenated hydrocarbons	Not Specified	Not Specified	5ppm	Not Specified

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Safe-Air Testers



Safe-Air Cabinets



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