

Clean Air Treatment

Breathing Air Systems



Breathable air

The Kaeser Breathing Air System (KBS) uses the existing compressed air system as an air source for face masks, hoods, helmets, and other supplied-air breathing apparatus. The KBS is a complete purification system designed to remove excessive moisture, solid particulates, oil and oil vapor, carbon monoxide, and various hydrocarbon vapors commonly present in ordinary compressed air.

Work longer

Compressed air contaminants can adversely affect worker health and safety. They contribute to respiratory ailments leading to absenteeism and reduced productivity. Carbon monoxide, even in small concentrations, has a detrimental effect on coordination, reaction time, and visual acuity, subjecting even the most safety conscious worker to accidents. In some instances, death can occur.

By removing hydrocarbons and the associated taste and odor, the KBS

purifier improves worker efficiency by preventing nausea and breathing discomfort.

Reduce costs

The KBS air purifier can use even lubricated compressors for breathing purposes. It is an economical alternative to the costly maintenance, transporting, and filling of high pressure air cylinders, and eliminates the need for separate breathing air compressors and air lines.

Meets OSHA requirements

When testing or employing an alarm system to detect carbon monoxide concentrations above the 10 ppm v/v as required by OSHA, production must be halted if excessive carbon monoxide is detected. Since the KBS purification system continuously removes carbon monoxide, production can continue even when carbon monoxide concentrations upstream in the compressed air system are well above 10 ppm v/v.

KBS purifiers help meet standards for breathing quality compressed air¹

The table below shows a comparison of the maximum allowable concentrations of contaminants allowed by OSHA standard 1910.134 (revision effective April 1998) and CSA standard CAN3-Z180.1-M85 and the levels of impurities after purification.

Contaminant	Maximum Allowable Concentration		Outlet Concentration at Rated Conditions
	OSHA (1)	CSA (2)	
Carbon Monoxide (CO) ppm or mL/m ³ (by volume)	10	5	10 with a max. inlet concentration of 135; 5 with a max. inlet concentration of 100
Carbon Dioxide (CO ₂) ppm or mL/m ³ (by volume)	1000	500	See (3)
Condensed Hydrocarbons mg/m ³	5	1	0
Odor	Not Detectable	Not Detectable	None (4)
Moisture Content dew point temperature	10°F (5.6°C) below ambient temperature (at 1 atm. pressure)	9°F (5°C) below the min. temperature breathing air is exposed to (at line pressure)	-40°F (-40°C) at line pressure, -71°F (-57°C) when purified @ 100 psig and reduced to 1 atm. pressure

Kaesar Breathing Air Systems

Model	Inlet Flow @ 100 psig (scfm)	Outlet Flow @ 100 psig (scfm)	Dimensions D x W x H (in.)	In/Out Connections	Weight (lb.)
KBS 12	14.4	12	29 x 24 x 75	½" NPT	290
KBS 24	27.5	23	29 x 24 x 75	½" NPT	298
KBS 40	47.9	40	38 x 24 x 76	¾" NPT	369
KBS 60	70	59	39 x 30 x 82	1" NPT	601
KBS 103	121	101	41 x 30 x 87	1" NPT	646
KBS 160	192	161	50 x 42 x 90	1½" NPT	1396
KBS 230	275	230	50 x 42 x 89	1½" NPT	1901
KBS 285	335	284	74 x 42 x 91	2" NPT	2655
KBS 378	443	375	76 x 48 x 94	3" NPT	2832
KBS 480	568	473	77 x 48 x 97	3" NPT	3400
KBS 600	700	587	85 x 53 x 104	3" NPT	4200
KBS 735	860	718	85 x 59 x 104	3" NPT	6000
KBS 880	1030	862	95 x 59 x 109	4" Flg.	6932

Specifications are subject to change without notice.

¹ **CAUTION:** Air that is grossly contaminated or oxygen deficient cannot be purified to levels acceptable for breathing. Oxygen content: per OSHA: 19.5 to 23.5%; per CSA: 19.5 to 22.5%.

- (1) The OSHA standard also states that compressed breathing air shall meet at least the requirements for Type 1-Grade D breathing air described in the ANSI/Compressed Air Gas Association Commodity Specification for Air ANSI/CGA G-7.1-1989.
- (2) The CSA standard lists levels for a number of additional contaminants (methane, non-methane hydrocarbons, nitrogen dioxide, nitrous oxide, halogenated hydrocarbons) and includes by reference contaminants documented by the ACGIH for chemical substances and physical agents in the workroom environment. The purifier will remove only those gaseous contaminants normally absorbable by activated carbon.
- (3) CO is converted to CO₂ by the purifier. Although some CO₂ is absorbed in the desiccant beds, high concentrations of CO₂ at the compressor intake, in addition to the CO₂ produced by the purifier could result in exceeding CO₂ limits.
- (4) The purifier will remove only those gaseous contaminants normally absorbable by activated carbon.

Kaesar Portable Breathing Air System

Model:	BASP 10
Flow @100 psig (scfm):	10
Dimensions D x W x H (in.):	33-1/8 x 20-5/8 x 4-1/2
In/Out Connections:	½" NPT
Weight (lb.):	34

KAESER COMPRESSORS

Built for a lifetime.™

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The Air Systems Specialist

With over 80 years of experience, Kaeser is the air systems specialist. Our extensive 100,000 square foot facility allows us to provide unequalled product availability. With service centers nationwide and our 24-hour emergency parts guarantee, Kaeser customers can rely on the best after-sales support in the industry. Kaeser stands committed to providing the highest quality air system for your specific compressed air needs.

