BAUER KOMPRESSOREN

Quality. Our DNA

B-VIRUS FREE

REMOVES VIRUSES, BACTERIA, MOULDS AND POLLEN FROM BREATHING AIR

80 1946 – 2026 BAUER KOMPRESSOREN

Fraunhofer IPA TESTED® DEVICE
BAUER KOMPRESSOREN GmbH
B-VIRUS FREE-459
Report No. BA 2012-1196

SPORTS & SAFETY

VIRUSES, BACTERIA, MOULD – THE INVISIBLE FOES

POLLEN

WHY ABSOLUTELY PURE BREATHING AIR IS SO VITAL TODAY

The B-DETECTION PLUS online gas measurement system already provides accurate measurements of the commonest hazardous substances associated with breathing air – such as CO, CO_2, moisture and oil[1] – to minimize the occurrence of risks.

However, a new threat now lurks in the form of viruses like SARS-CoV-2, as well as bacteria and moulds. These new dangers are particularly insidious because they are invisible and highly communicable – and cannot be measured by sensors. They can spread at lightning speed by contact or droplet infection. In addition, unlike many other infectious diseases they do not even need physical contact to infect their hosts. Even breathing air contaminated with the viruses is enough to cause infection. This explains why colds and influenza – or "normal" flu-viruses are so highly infectious.

Viruses in ambient air can pass through any commercially available standard purification system. Even the high temperatures and pressure levels of the compression process have little effect on them because of the shortness of the process.

To protect firefighters, disaster teams and medical staff from these hazards whenever they require respiratory equipment for their daily operations, BAUER KOMPRESSOREN has developed a solution that eliminates viruses at the air intake stage!

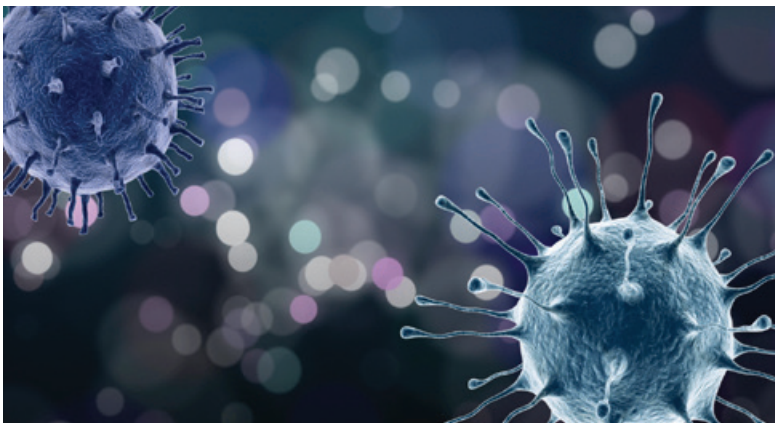
The new B-VIRUS FREE protective filter system reliably neutralizes coronaviruses, bacteria and moulds – from SARS-CoV-2 to as yet unknown pathogens of the future.[2]

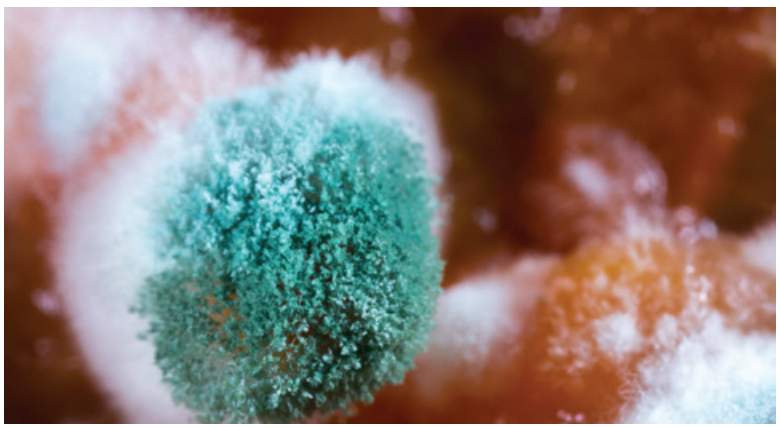
BACTER

The Fraunhofer Institute for Manufacturing Engineering and Automation (IPA) confirms with a certificate the inactivation rate of at least 99.9% of the SARS-CoV-2 virus. With most FAD quantities - and thus corresponding exposure time - even complete inactivation is achieved.[3]

1 Measurement of volatile organic compounds (VOCs).
2 The B-VIRUS FREE Filter inactivates a minimum of 99.9% of the SARS CoV-2 virus. Inactivation rates for further viruses, bacteria and moulds are type-dependent.
3 When correctly installed and used according to BAUER KOMPRESSOREN operating instructions.

VIRUSES





MOULDS

B-VIRUS FREE – FOR SAFETY WITHOUT COMPROMISE

THE SMART FILTER THAT BANISHES PATHOGENS

Using a special UV light source, the wholly effective chemical- and ozone-free technology of the patent-pending B-VIRUS FREE system destroys all pathogens in the intake air flow before they can reach the compressor.

The highly effective 200 to 300-nm UV wavelength is absorbed by the DNA of viruses, bacteria and mould spores, where the photons destroy the bonds between the pathogens' DNA strands. This effectively stops the pathogens from reproducing, and eliminates the danger of infection from microorganisms like viruses, bacteria, yeasts and moulds in a fraction of a second. The pathogens stand no chance against this high-energy short-wave radiation. According to the current state of the art, they are also unable to develop resistance to it – either now or in the future.

B-VIRUS FREE naturally applies the formidable quality standards that are the hallmark of BAUER KOMPRESSOREN. The short-wave UV radiation is produced by a high-quality light source and is ozone-free. The UV light technology eliminates all need for the use of chemicals. The system causes no unpleasant odour or taste.

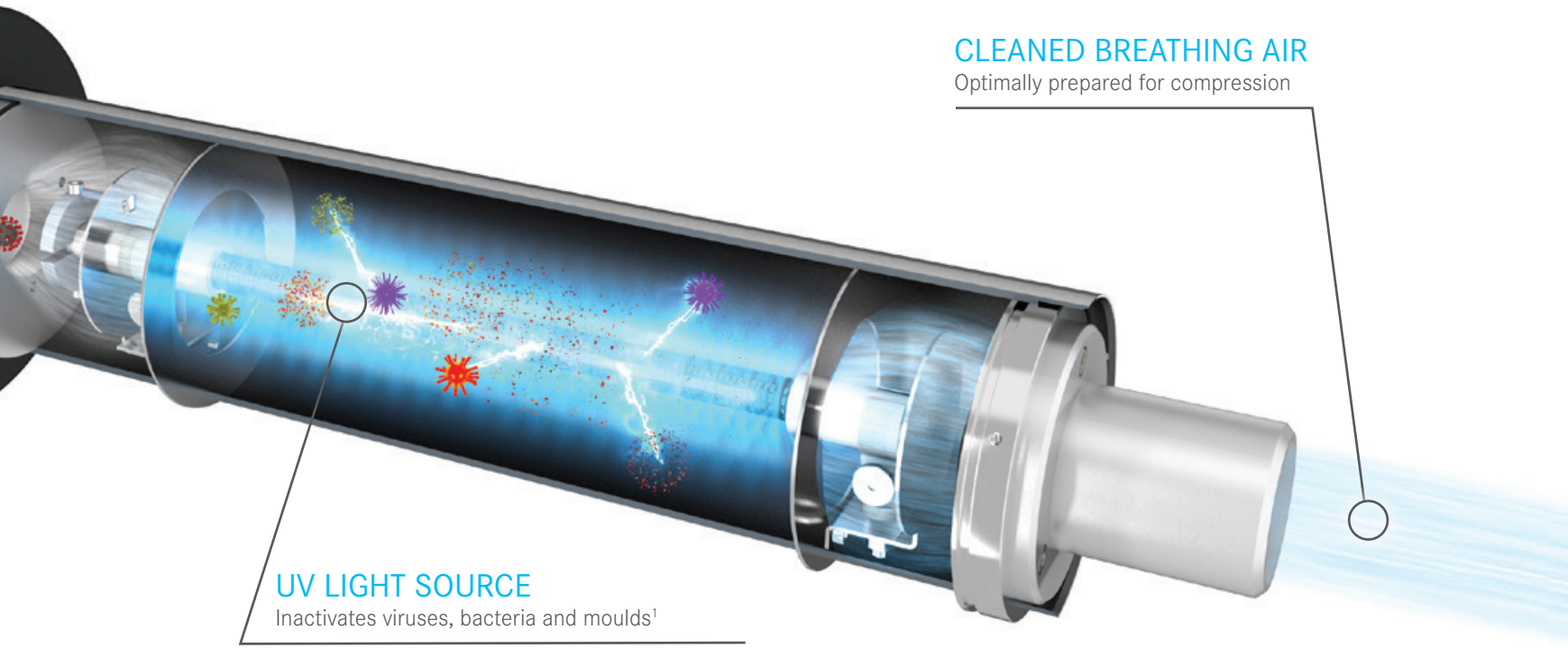
The compressor can thus be used even in pathogen-contaminated environments, enabling respiratory equipment users to breathe easy and perform their vital activities without concern. B-VIRUS FREE delivers effective protection against contamination for patients receiving pressure chamber treatment and divers on operations.

PLACING INTO SERVICE

The B-VIRUS FREE protective filter system is ready for use in an instant. Simply mount it on a wall or place it on the ground and connect to a 220/230 V (optional: 110V) power supply. After a few seconds of warm-up, the system is fully functional and ready to go.

INTAKE FILTER

Underpressure in the compressor draws in air through the intake filter opening. Normal dust particles and even pollen are removed from the air by the intake filter.



RADIATION SOURCE

The special UV light source emits high-energy UVC radiation that destroys the molecular bonds in the DNA of bacteria and moulds and in the RNA of viruses. This prevents the pathogens from reproducing.[2]

CONNECTION TO COMPRESSOR

The B-VIRUS FREE protective filter system is connected to a specially sealed intake hose, which eliminates any potential new contamination from leaks between the protective filter and the compressor block.

CONTROL AND CONNECTION TO COMPRESSOR

The control unit of the B-VIRUS FREE protective filter system monitors functions and controls the UV light source. Operational status information is provided by visual (LED) and acoustic signals.

If the B-VIRUS FREE protective filter is connected to a control unit, the filter automatically goes into warm-up mode when the compressor is started up. A compressor start delay function ensures the B-VIRUS FREE has completed its warm-up before the compressor goes into operation. The compressor automatically shuts down in the event of a fault.[3]

1 The B-VIRUS FREE Filter inactivates a minimum of 99.9% of the SARS CoV-2 virus. Inactivation rates for further viruses, bacteria and moulds are type-dependent.

2 Certification of the radiation source function can be provided on request.

3 Available types of operation depend on the compressor's features or control unit model.

FOR ALL BAUER BREATHING AIR COMPRESSOR SYSTEMS – ALSO EASY TO RETROFIT

B-VIRUS FREE can be ordered alongside any new breathing air system.

Long maintenance intervals keep operating costs down. The filter does not require replaceable filter cartridges. The UVC light source has an extremely long service life of approx. 2,000 hours and is easy to replace.

B-VIRUS FREE
for stationary
wall mounting

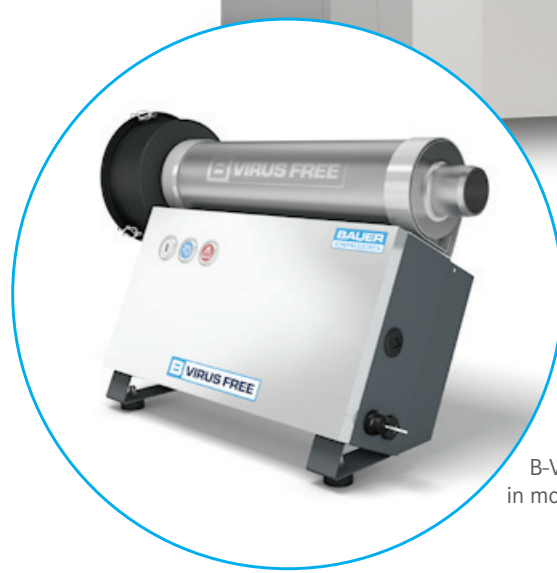
The filter can be retrofitted to existing BAUER systems fast and easily. Adapters provide the perfect fit to connect the filter to any system.

The control unit reliably displays up-to-date information on filter functions and includes visual and acoustic signals for the event of a malfunction. When connected to a suitable compressor control unit, the B-VIRUS FREE protective filter can operate fully automatically.

A standard 220/230V power outlet is all that is needed for operation. A suitable version is also available for regions with 110V power supply.

With wall mounting capability and compact footprint, it is outstandingly convenient. As an alternative to wall mounting, a portable model is available for setup directly at the compressor location.

The overall system filters out normal dust and pollen particulates and reliably destroys coronaviruses, bacteria and moulds.[1] B-VIRUS FREE enables safe, pure breathing air for emergency teams, medical patients, athletes and allergy sufferers.



B-VIRUS FREE
in mobile version

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TECHNICAL DATA

B-VIRUS FREE		
	Units	Values
APPLICATION		
Pressure range	bar	atmospheric
Permissible compressor FAD	l/min	100 - 850
FUNCTIONS		
Required warm-up	s	60 – 120
Visual signal	–	Fault warning lamp
Acoustic signal	–	Beeps in case of fault
TECHNICAL DATA		
Permissible operating temperature range	°C	+5 ... +40
Operating voltage	V	220 – 240; optional: 110
UV lamp service life	–	2,000 h or every 2 years
Weight filter unit	kg	Mobile version: S/M: approx. 9 kg Stationary version: S/M: approx. 6 kg; L/XL: approx. 7 kg
Weight control box	kg	approx. 8
Dimensions W x D x H	mm	665 x 430 x 230 (Sizes S, M); 910 x 430 x 230 (Size L) 960 x 430 x 230 (Size XL)

INTERESTED IN OUR PRODUCTS?

**CONTACT US -
WE ARE HAPPY TO PROVIDE INFORMATION AND ASSISTANCE.**

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