

## APPLICATION

The products of the BF-series (BASIC FILTRATION) were specially designed as basic models and include all of the essential functions of an extraction and filter system, combined with an excellent price-performance ratio.

The devices are available with different motor concepts, filter equipment and operating options. The TBH modular device design and all of its advantages were also used as the focus during the development of this device series.



*Similar to image*

### AREAS OF APPLICATION:

- Soldering (single/multi-site extraction)
- Laser processing (source extraction, compact lasers)
- Processes for working with adhesive/moist dusts
- Processes for working with vapours/gases

### THE SYSTEM INCLUDES NUMEROUS FEATURES:

- Modular design
- Simple filter replacement
- Differential pressure indicator for monitoring the saturation filters
- Products of the BF-series with blowers are particularly energy-saving
- Control electronics with basic functions

## FUNCTIONAL PRINCIPLE

The contaminated air is collected by the collection unit (extractor hood, suction arm, hose, etc.) and transported into the filter unit directly or through a pipe or flexible hose. In the filter unit, the contaminant particles are filtered into different filter levels according to their size. Filter units that are equipped with a molecular sieve (for example activated carbon filters/BAC) remove the majority of gaseous contaminants. Afterwards the purified air can either be circulated back into the work area or diverted outdoors through an exhaust duct. Recirculating the air in the work area is a way to easily reduce energy costs.

## PRODUCT FEATURES

### MODULAR DESIGN

The service handling is a big PLUS of the modular design concept. In case of servicing, only the malfunctioning motor module (and not the entire system) has to be examined. A replacement module can also be provided during the repair period. This reduces the costs for any production downtime that may be incurred.



### SIMPLE FILTER REPLACEMENT

The filter is replaced by simply removing it from above. This ensures simple, clean filter replacements for the employees or maintenance service staff.



### FILTER MONITORING

The system includes a differential-pressure indicator monitoring the filter-saturation indicator (Figure 1,(1) Page 5). This shows when a defined value is reached to indicate that the filters need replacing, since the extraction level dissipates with increasing filter saturation.

### ENERGY-SAVING

The use of special blowers in the BF5 and BF10 allow for particularly energy-saving system configurations (< 0.2 kW).

### BF-SERIES WITH TURBINE

These devices of the BF-series generate especially high negative pressure. This makes them ideal for extracting with small collection elements or even the customer's own equipment or through long extraction ducts. This also allows for decentralised positioning of the extraction system for multiple extraction sites (e.g. manual workstations). If you need an effective design for special applications, please contact the TBH sales team.

### BF-SERIES WITH BLOWER

These devices of the BF-series have a compact design and are particularly energy-saving. They are especially suited as table units for single or double workstations with a suction arm in areas with soldering fumes (for example). Due to the working concept of these devices, you always have to make sure that the intake cross section is large enough (in contrast to the LN-series).

## CONTROL ELECTRONICS WITH BASIC FUNCTIONS

The BF-series systems feature **INSPIRE** control electronics in its basic configuration:

- Switching between run/standby
- Manual adjustment of the rotation speed
- Filter-saturation indicator of the extraction system
- Visual and acoustic display of the filter saturation
- Fault display and notification

### INTERFACE:

- System start/stop
- Warning at a filter saturation of 75%
- Preselection of run/standby at the system start-up

The extraction and filter system can thus easily be integrated into the customer system.



### OPERATING ELEMENTS:

- A) Switching between run/standby
- B) Manual adjustment of the rotation speed
- 1) Filter-saturation indicator
  - 2) System status indicator
  - 3) Performance-setting indicator/ operating-hours meter
  - 4) Temperature and turbine-malfunction indicator (except of BF 9)
  - 5) Filter status indicator

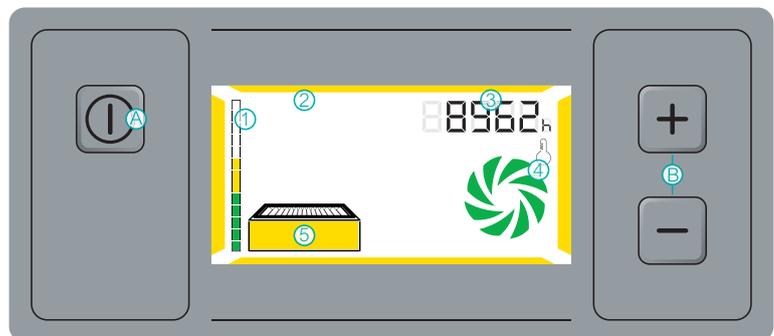


Figure 1

### INDUSTRIAL SAFETY AND HEALTH PROTECTION

In order to meet our customers' safety requirements even better, TBH has complemented its product range by different extraction and filter systems specifically tested by the German Institut für Arbeitsschutz (IFA) [Institute for Occupational Safety and Health] in accordance with DIN ISO 15012-1 (2013).



### ADSORPTION OF GASEOUS SUBSTANCES

Two complimentary filter materials are used for the adsorption of gaseous substances. The activated carbon facilitates the physical adsorption process while the BAC granules facilitate a chemical adsorption process. Neutralisation of specific gaseous substances is achieved through chemical binding with the reaction substance that is deposited on the carrier material. Because the physical and chemical adsorption processes are complementary, an extremely wide range of gases and odours can be collected.

Activated carbon



BAC granules



Activated carbon/BAC

