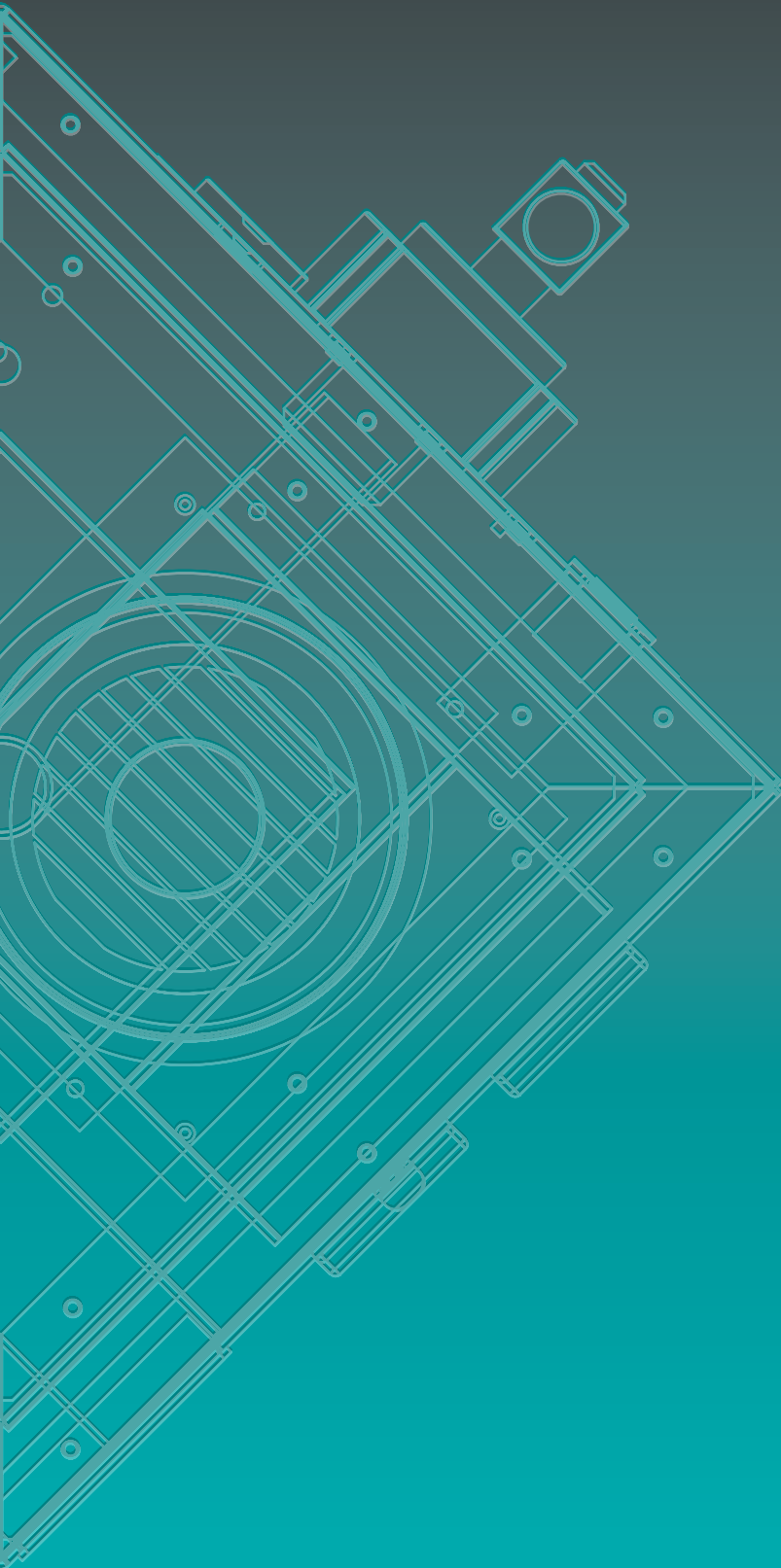




BF-SERIES

EXTRACTION / FILTER / POLLUTION CONTROL // TECHNOLOGY



BF-SERIES

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.

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



Similar to image

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 (except of BF9) 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
- 5) Filter status indicator

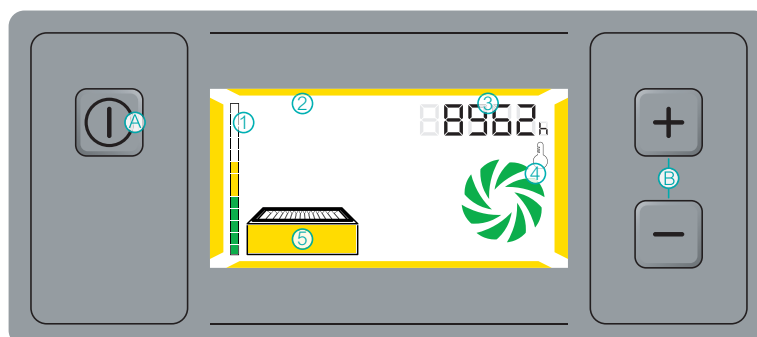


Figure 1

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).

W 3	ISO 15012-1 $\eta \geq 99\%$	W 3
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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



TECHNICAL DATA BF 5



Similar to image

AREAS OF APPLICATION:

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

INCLUDES:

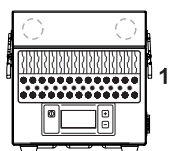
- Fully assembled (with device feet)
- Filter equipment
- Power cable

TECHNICAL SPECIFICATIONS	UNIT	STANDARD	A
Unimpeded air flow rate	m³/h	max. 130	max. 130
Effective air flow rate	m³/h	20-100	20-100
Max. static pressure	Pa	1900	1900
Voltage	V	100-260	100-260
Frequency	Hz	50/60	50/60
Power input	kW	0.04	0.04
Protection class	-	1	1
Motor and drive system	-	brushless motor	brushless motor
Noise level	db(A)	approx. 58	approx. 58
Serial interface	D-sub	25-pin	25-pin
Weight	kg	17	17
Dimensions (HxWxD)	mm	315x300x300	315x300x300
DN 50 intake socket	number	2	2
Colour (cabinet)	RAL	7035	7035
Colour (top cover)	RAL	7037	7037

FILTER CONFIGURATION

	2-stage filter (particle filter (H13)+ activated carbon filter)	✓	-
A	Activated-carbon filter	-	5.5 liter

ORDER DATA BF 5



STANDARD

DESCRIPTION	ART.-NO.
BF 5 100-260V 50/60Hz	90344

SPARE FILTERS	
2-stage filter (particle filter + activated carbon filter)	15119 1
Activated-carbon filter	-



A

DESCRIPTION	ART.-NO.
BF 5 100-260V 50/60Hz	90421

SPARE FILTERS	
2-stage filter (particle filter + activated carbon filter)	-
Activated-carbon filter	15715 2

COVER MODULE	
Exhaust arm system 50 (length 850 mm, 3 joints)	15357*
Exhaust arm system 50 FLEX (length 900 mm, 2 joints)	15354*
Exhaust arm system 50 FLEX (length 600 mm, without joints)	15355*
Top cover with socket center DN 80	15356*

* factory measures

TECHNICAL DATA BF 9



Similar to image

AREAS OF APPLICATION:

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

INCLUDES:

- BASIC electronics*
- Fully assembled (with wheels for mobile use)
- Filter equipment
- Power cable

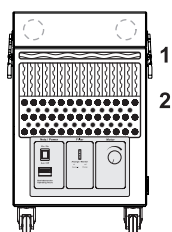
* Entry-level device, Functions such as BF-series but without display with detailed status display

TECHNICAL SPECIFICATIONS	UNIT	BF 9
Unimpeded air flow rate	m³/h	max. 220
Effective air flow rate	m³/h	20-200
Max. static pressure	Pa	14000
Voltage	V	230/120
Frequency	Hz	50/60
Power input	kW	0.7
Protection class	-	1
Motor and drive system	-	brush motor
Noise level	db(A)	approx. 64
Serial interface	D-sub	25-pin
Weight	kg	24
Dimensions (HxWxD)	mm	510x300x300
DN 50 intake socket	number	2
Colour (cabinet)	RAL	7035
Colour (top cover)	RAL	7037

FILTER CONFIGURATION

	Pre-filter mat (F5)	✓
	2-stage filter (particle filter (H13)+ activated carbon filter)	✓

ORDER DATA BF 9



BF 9

DESCRIPTION	ART.-NO.
BF 9 230V 50/60Hz	90385
BF 9 120V 50/60Hz	90386

SPARE FILTERS	
Pre-filter mat	11141
2-stage filter (particle filter + activated carbon filter)	11140

1

2

COVER MODULE	
Exhaust arm system 50 (length 850 mm, 3 joints)	15357*
Exhaust arm system 50 FLEX (length 900 mm, 2 joints)	15354*
Exhaust arm system 50 FLEX (length 600 mm, without joints)	15355*
Top cover with socket center DN 80	15356*

* factory measures

TECHNICAL DATA BF 10



Similar to image

AREAS OF APPLICATION:

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

INCLUDES:

- Fully assembled (with wheels for mobile use)
- Filter equipment
- Power cable

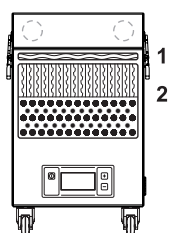
TECHNICAL SPECIFICATIONS	UNIT	STANDARD	A	ZA
Unimpeded air flow rate	m³/h	max. 250	max. 250	max. 250
Effective air flow rate	m³/h	20-200	20-200	20-200
Max. static pressure	Pa	6000	6000	6000
Voltage	V	100-240	100-240	100-240
Frequency	Hz	50/60	50/60	50/60
Power input	kW	0.6	0.6	0.6
Protection class	-	1	1	1
Motor and drive system	-	brushless motor	brushless motor	brushless motor
Noise level	db(A)	approx. 62	approx. 62	approx. 62
Serial interface	D-sub	25-pin	25-pin	25-pin
Weight	kg	24	24	24
Dimensions (HxWxD)	mm	510x300x300	510x300x300	510x300x300
DN 50 intake socket	number	2	2	2
Colour (cabinet)	RAL	7035	7035	7035
Colour (top cover)	RAL	7037	7037	7037

FILTER CONFIGURATION

	Pre-filter mat (F5)	✓	-	-
Z	Z-Line filter (F6)	-	-	✓
	2-stage filter (particle filter (H13)+ activated carbon filter)	✓	-	✓*
A	Activated-carbon filter	-	12 liter	-

* slightly reduced particle/activated carbon filter due to additional Z-Line filter

ORDER DATA BF 10



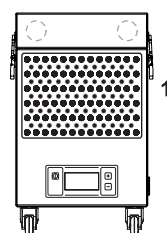
STANDARD

DESCRIPTION	ART.-NO.
BF 10 100-240V 50/60Hz	90362

SPARE FILTERS	
Pre-filter mat	11141 1
Z-Line filter	-
2-stage filter (particle filter + activated carbon filter)	11140 2
Activated-carbon filter	-

COVER MODULE	
Exhaust arm system 50 (length 850 mm, 3 joints)	15357*
Exhaust arm system 50 FLEX (length 900 mm, 2 joints)	15354*
Exhaust arm system 50 FLEX (length 600 mm, without joints)	15355*
Top cover with socket center DN 80	15356*

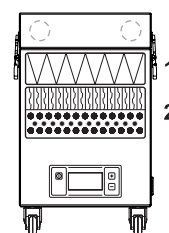
* factory measures



A

DESCRIPTION	ART.-NO.
BF 10 100-240V 50/60Hz	90420

SPARE FILTERS	
Pre-filter mat	-
Z-Line filter	-
2-stage filter (particle filter + activated carbon filter)	-
Activated-carbon filter	11143 1



ZA

DESCRIPTION	ART.-NO.
BF 10 100-240V 50/60Hz	90396

SPARE FILTERS	
Pre-filter mat	-
Z-Line filter	15976 1
2-stage filter (particle filter + activated carbon filter)	15119 2
Activated-carbon filter	-

TECHNICAL DATA BF 100R / BF 200R



Similar to image

AREAS OF APPLICATION:

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

INCLUDES:

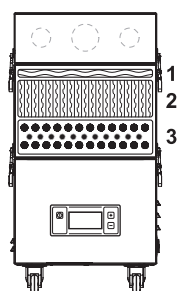
- Fully assembled (with wheels for mobile use)
- Filter equipment
- Power cable

TECHNICAL SPECIFICATIONS	UNIT	BF 100R	BF 200R
Unimpeded air flow rate	m³/h	max. 280	max. 280
Effective air flow rate	m³/h	30-230	30-230
Max. static pressure	Pa	11000	11000
Voltage	V	230/120	230/120
Frequency	Hz	50/60	50/60
Power input	kW	1.1	1.1
Protection class	-	1	1
Motor and drive system	-	brushless motor	brushless motor
Noise level	db(A)	approx. 59	approx. 59
Serial interface	D-sub	25-pin	25-pin
Weight	kg	approx. 40	approx. 55
Dimensions (HxWxD)	mm	700x350xx350	1025x350x350
DN 50 intake socket	number	2	2
DN 80 intake socket	number	1	1
Colour (cabinet)	RAL	7035	7035
Colour (top cover)	RAL	7037	7037

FILTER CONFIGURATION

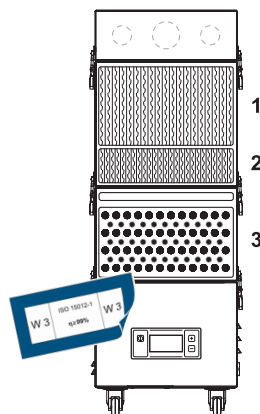
Pre-filter mat (F5)	✓	-
Z-LinepanelPlus filter (F7)	-	✓
Particle filter (H13)	✓	✓
Activated carbon/BAC filter	10 liter	18 liter

ORDER DATA BF 100R / BF 200R



BF 100R

DESCRIPTION	ART.-NO.
BF 100R 230V 50/60Hz	90302
BF 100R 120V 50/60Hz	90304



BF 200R

DESCRIPTION	ART.-NO.
BF 200R 230V 50/60Hz	90306
BF 200R 120V 50/60Hz	90308

SPARE FILTERS

Pre-filter mat	10040	1
Z-LinepanelPlus filter	-	
Particle filter	10013	2
Activated carbon/BAC	10004	3

SPARE FILTERS

Pre-filter mat	-	
Z-LinepanelPlus filter	16199	1
Particle filter	10013	2
Activated carbon/BAC	10007	3

TECHNICAL DATA BF 1000R / BF 1200R



Similar to image

AREAS OF APPLICATION:

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

INCLUDES:

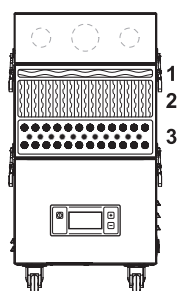
- Fully assembled (with wheels for mobile use)
- Filter equipment
- Power cable

TECHNICAL SPECIFICATIONS	UNIT	BF 1000R	BF 1200R
Unimpeded air flow rate	m³/h	max. 280	max. 280
Effective air flow rate	m³/h	30-230	30-230
Max. static pressure	Pa	11000	11000
Voltage	V	230/120	230/120
Frequency	Hz	50/60	50/60
Power input	kW	1.1	1.1
Protection class	-	1	1
Motor and drive system	-	brushless motor	brushless motor
Noise level	db(A)	approx. 58	approx. 58
Serial interface	D-sub	25-pin	25-pin
Weight	kg	approx. 70	approx. 90
Dimensions (HxWxD)	mm	750x350x655	1105x350x655
DN 50 intake socket	number	2	2
DN 80 intake socket	number	1	1
Colour (cabinet)	RAL	7035	7035
Colour (top cover)	RAL	7037	7037

FILTER CONFIGURATION

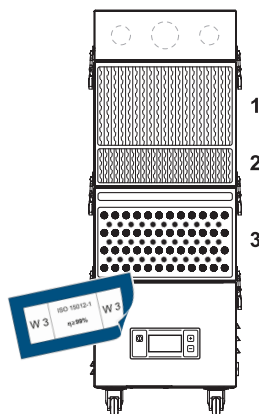
Pre-filter mat (F5)	✓	-
Z-LinepanelPlus filter (F7)	-	✓
Particle filter (H13)	✓	✓
Activated carbon/BAC filter	25 liter	45 liter

ORDER DATA BF 1000R / BF 1200R



BF 1000R

DESCRIPTION	ART.-NO.
BF 1000R 230V 50/60Hz	90310
BF 1000R 120V 50/60Hz	90312



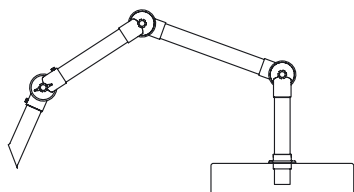
BF 1200R

DESCRIPTION	ART.-NO.
BF 1200R 230V 50/60Hz	90314
BF 1200R 120V 50/60Hz	90316

SPARE FILTERS	
Pre-filter mat	10001 1
Z-LinepanelPlus filter	-
Particle filter	10009 2
Activated carbon/BAC	10046 3

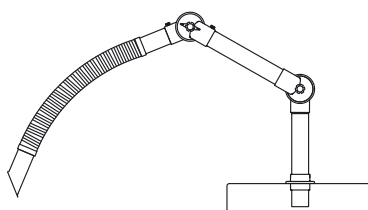
SPARE FILTERS	
Pre-filter mat	-
Z-LinepanelPlus filter	16360 1
Particle filter	10009 2
Activated carbon/BAC	12052 3

ACCESSORIES



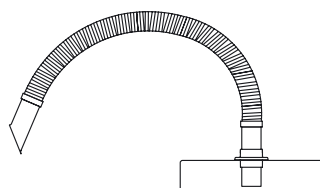
USE	DESCRIPTION	ART.-NO.
BF 5 / BF 9 / BF 10	Exhaust arm SYSTEM 50, length 850 mm, 3 joints	15392*

* upgrading existing systems



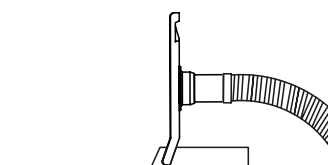
USE	DESCRIPTION	ART.-NO.
BF 5 / BF 9 / BF 10	Exhaust arm SYSTEM 50 FLEX, length 900 mm, 2 joints	15393*

* upgrading existing systems

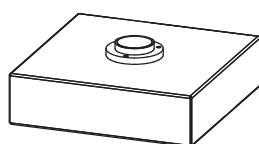


USE	DESCRIPTION	ART.-NO.
BF 5 / BF 9 / BF 10	Exhaust arm SYSTEM 50 FLEX, length 600 mm, without joints	15394*

* upgrading existing systems

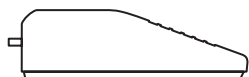


USE	DESCRIPTION	ART.-NO.
BF 5 / BF 9 / BF 10	Flat screen kit SYSTEM 50, with an extraction hose length of 1.25 m	15397



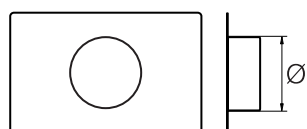
USE	DESCRIPTION	ART.-NO.
BF 9 / BF 10	Top cover with socket center DN 80	15395*

* upgrading existing systems



USE	DESCRIPTION	ART.-NO.
BF 9	Electrical foot switch	15627
BF 5 / BF 10	Electrical foot switch	16369
BF 100R / BF 200R		
BF 1000R / BF 1200R		

EXHAUST PLATE*



USE	DN (mm)	ART.-NO.
BF 100R / BF 200R	80	11709
BF 1000R / BF 1200R		
BF 100R / BF 200R	100	12839
BF 1000R / BF 1200R		
BF 100R / BF 200R	125	12232
BF 1000R / BF 1200R		

* Connection plate with connection pieces for targeted air removal through the hose

AIR INLET - Flexible connection hoses



DESCRIPTION	DN (mm)	LENGTH (m)	ART.-NO.
Hose set with connection coupling	50	2.5	10008
		5.0	10010
Hose set with nipple and hose clip	80	2.5	13179*
		2.5	13729**
		5.0	13180*
		5.0	14600**
		10.0	13197
	100	2.5	13181
		5.0	13182
		10.0	13198
	125	2.5	13183
		5.0	13184
		10.0	13199

* for the BF 100R / BF 200R

** for the BF 1000R / BF 1200R (with a reduction from DN 100 to DN 80)

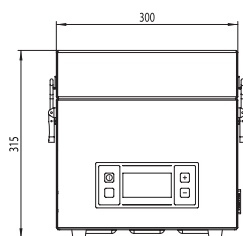


ELECTRONIC CONTROLS

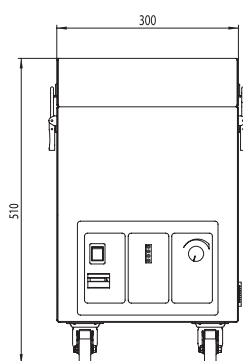
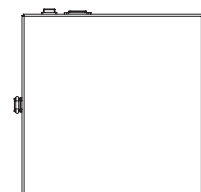
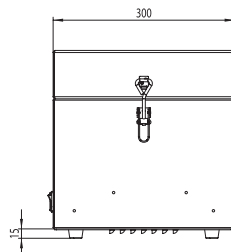
FUNCTION	BF 9	BF 5 / BF 10	BF 100R / BF 200R	BF 1000R / BF 1200R
Switching between run/standby	✓	✓	✓	✓
Manual adjustment of the rotation speed	✓	✓	✓	✓
Filter-saturation indicator (complete system)	✓	✓	✓	✓
Filter status indicator	-	✓	✓	✓
System status indicator	-	✓	✓	✓
Performance-setting indicator/operating-hours meter	✓	✓	✓	✓
Temperature and turbine-malfunction indicator	-	✓	✓	✓

INTERFACE FUNCTIONS				
Interface	D-sub	D-sub	D-sub	D-sub
System start/stop	✓	✓	✓	✓
Warning at a filter saturation of 75%	✓	✓	✓	✓
Preselection of run/standby at the system start-up	✓	✓	✓	✓

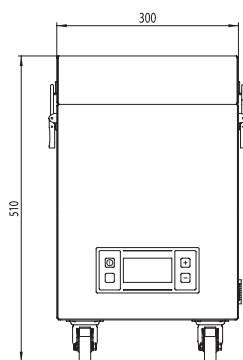
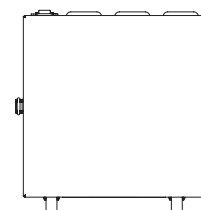
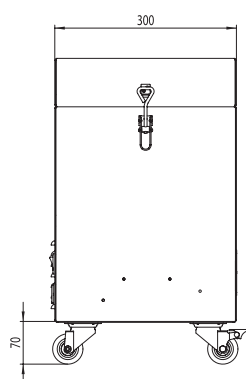
TECHNICAL DRAWINGS



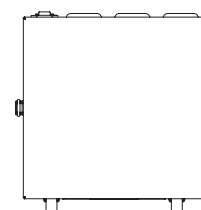
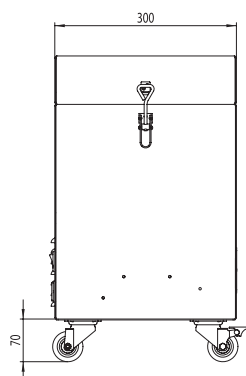
BF 5



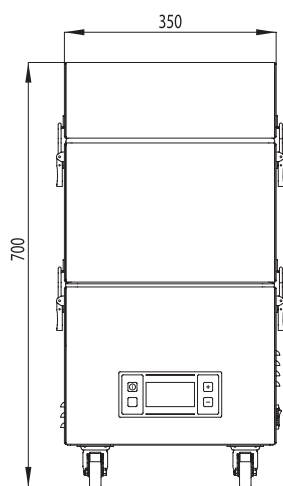
BF 9



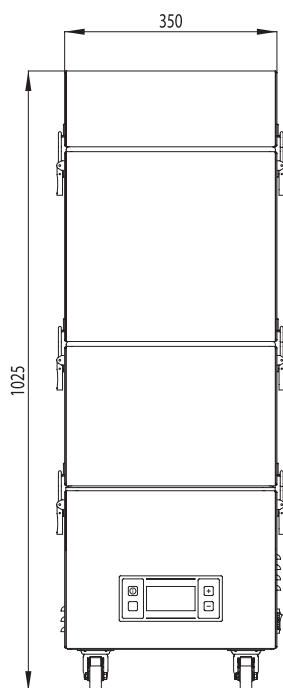
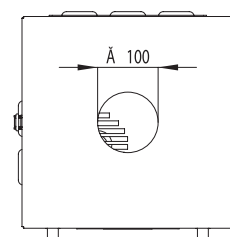
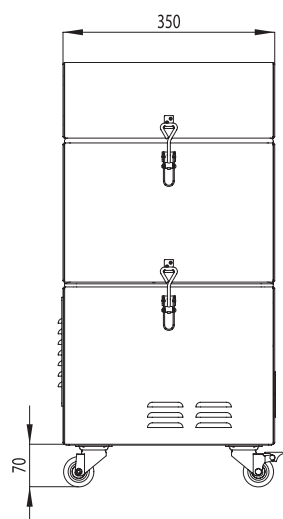
BF 10



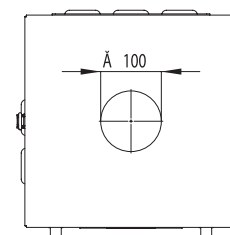
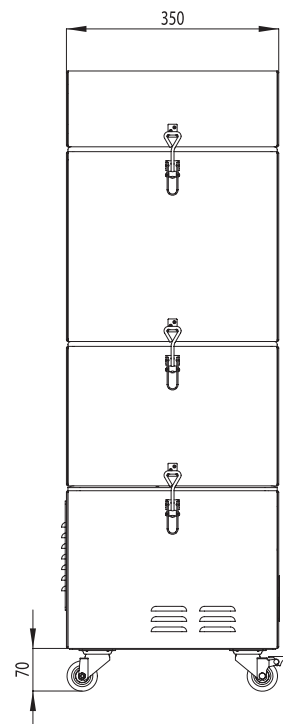
BF-SERIES

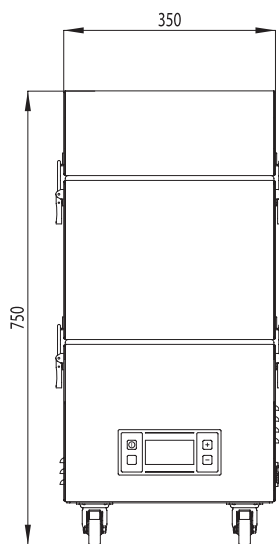


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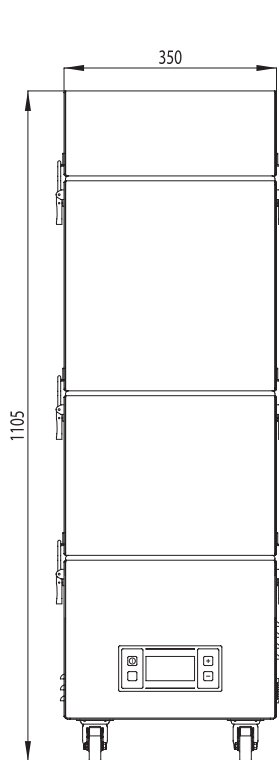
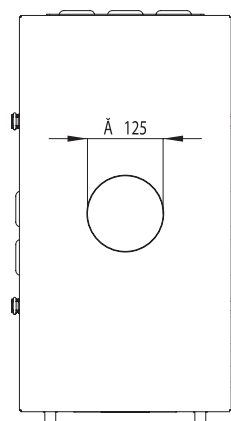
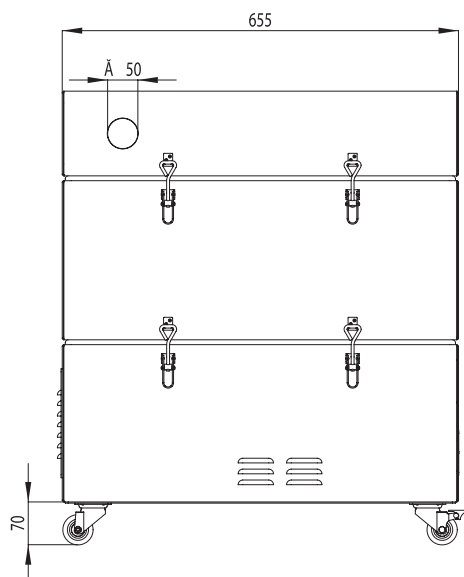


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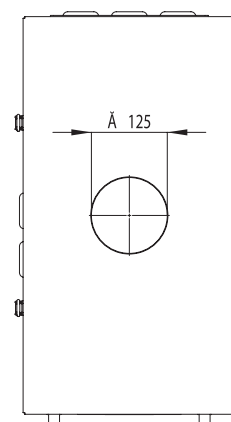
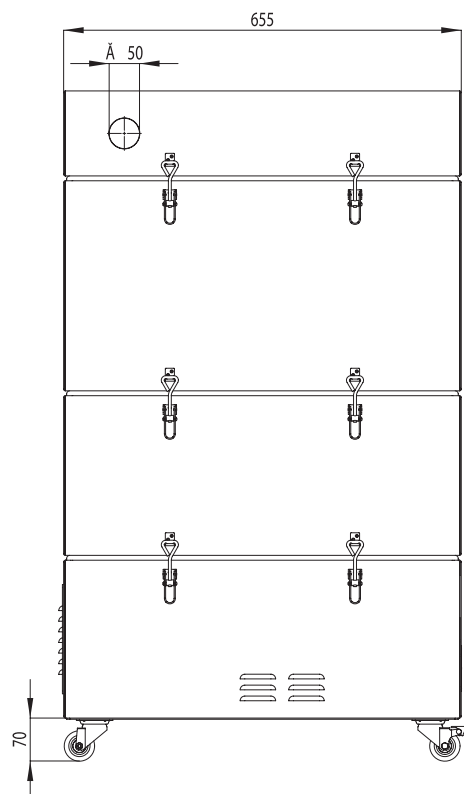




BF 1000R



BF 1200R





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