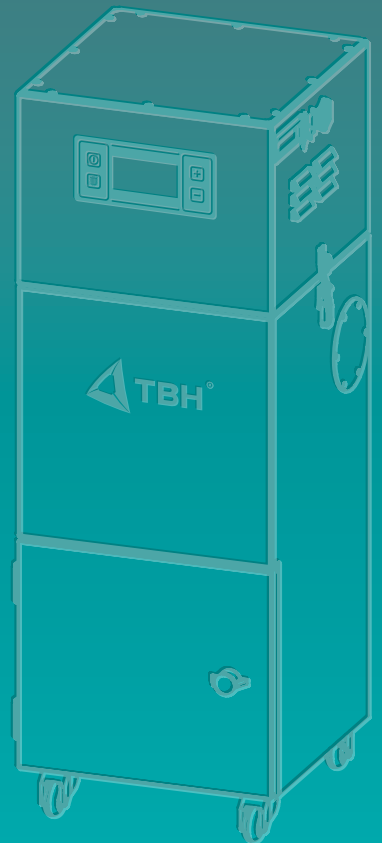
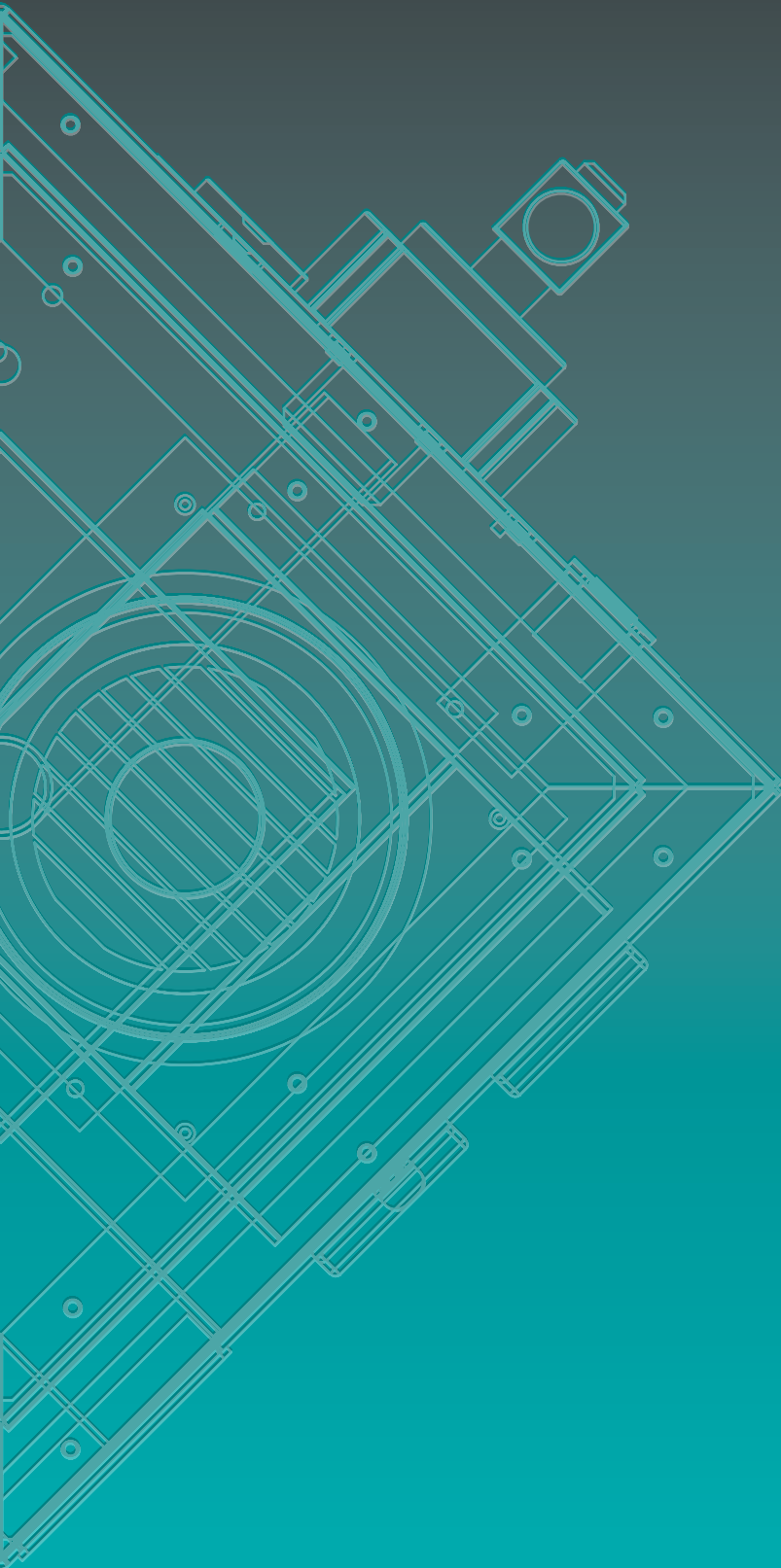




FP 150

EXTRACTION / FILTER / POLLUTION CONTROL // **TECHNOLOGY**



APPLICATION

The FP 150 is equipped with a cleanable filter cartridge which allows dust build-up to be removed from the filter using bursts of compressed air. This means that the device is ideal for applications in which large amounts of dry dust are extracted, and that it has a very long service life in comparison to systems with saturation filters. Precoating (applying a separating layer to the filter cartridge) enables the system to reliably filter out even sticky and moist dust.

AREAS OF APPLICATION:

- Laser processing (in some cases combined with precoating)
- Mechanical processing (grinding, deburring, milling, drilling, cutting)
- Transferring materials, packaging processes, transporting/ conveying processes

THE SYSTEM INCLUDES NUMEROUS FEATURES:

- Upgradeable with various filter modules
- Cleanable filter cartridge
- Simple dust removal
- Powerful electronics



Similar to image

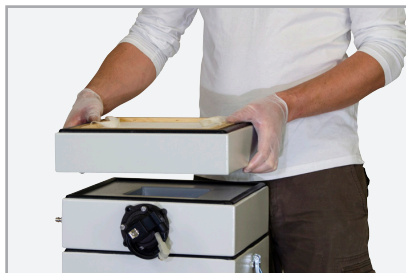
FUNCTIONAL PRINCIPLE

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. The dust particles are filtered out by a cleanable filter cartridge in the filter unit. The filter cartridge can be cleaned by hand using a compressed air gun, but for health reasons, the optional automatic cleaning system is recommended. The automatic cleaning system is triggered by the system's differential pressure controls whenever the extraction level decreases. The filtered-out dust particles are collected in a dust collector for easy disposal. If necessary, a dust bag can also be inserted for low-contamination disposal.

PRODUCT FEATURES

UPGRADEABLE WITH VARIOUS FILTER MODULES

The FP 150 is equipped with a cleanable filter cartridge of dust class M. An optional particle filter (H13) can be installed downstream to increase the separation efficiency, e.g. where carcinogenic substances are present. A molecular filter (activated carbon/BAC) is also available to eliminate odours from the process air. For each additional filter selected, a machine pedestal must be ordered to increase the system's stability.

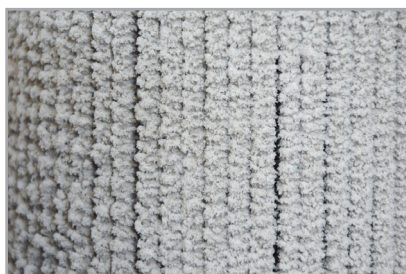


CLEANABLE FILTER CARTRIDGE

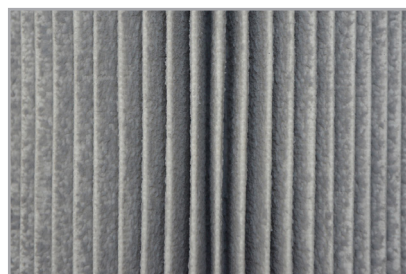
TBH standard filter cartridges feature a microfibre surface made of PES (polyester) and a conductive coating. They are tough and well-protected against mechanical damage, and they represent a solution for a wide range of customer applications. For special applications, PTFe-coated filter cartridges and other accessories are also available.



new filter cartridge



filter cartridge in use



filter cartridge after cleaning

SIMPLE DUST REMOVAL

The dust collected in the process can be disposed of using the removable dust collector. If necessary, a dust bag can also be inserted for low-contamination disposal.



POWERFUL CONTROL ELECTRONICS

The FP 150 is equipped with **INSPIRE** control electronics and a comprehensive interface. This allows controlling and monitoring the following functions:

- Switching between run/standby
- Manual adjustment of the rotation speed
- Manual start of the filter-cartridge cleaning
- 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% (notification, e.g. for external control of the cleaning process)
- Visual and acoustic signals when filter is saturated
- Collective fault output (rotation speed, temperature, filter full 100%)
- External adjustment of the rotation speed
- External start of the cleaning process
- Error memory improves the coordination between the customer and the TBH service
- Parameterization access for the activation of custom functions



OPERATING ELEMENTS:

A) Switching between run/standby

B) Manual adjustment of the rotation speed

C) Manual start of the filter-cartridge cleaning

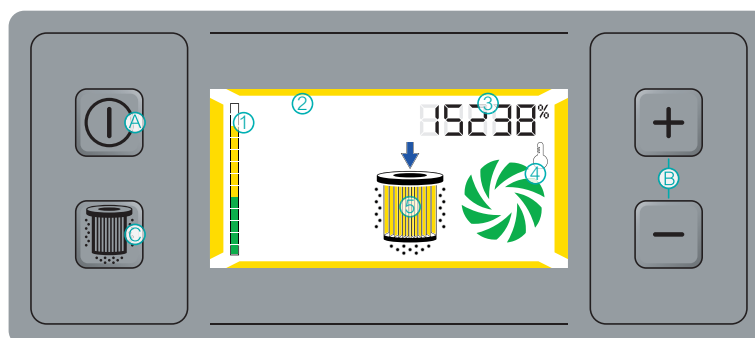
1) Filter-saturation indicator

2) System status indicator

3) Performance-setting indicator/
operating-hours meter

4) Temperature and turbine-malfunction
indicator

5) Cleaning-in-progress indicator



FILTER-CARTRIDGE CLEANING:

The FP 150 is equipped with a special cleaning control allowing the automatic removal of dust covering the filter cartridge thus significantly increasing the filter service life.

Depending on the specific case of application, different options can be parameterized by the customer:

- Differential-pressure-controlled cleaning (factory setting)

The system constantly monitors the actual filter saturation and automatically starts the cleaning cycle once a set value has been reached (factory setting: filter saturation of 75%)

- Interval cleaning (can be parameterized via interface)

The system automatically starts the cleaning cycle in accordance with individually adjustable periods of time (minutes/hours)

- Coastdown cleaning (can be parameterized via interface)

Coastdown cleaning can also be activated in addition to the other modes. The cleaning cycle is started automatically once the system is switched to standby. This allows the system to clean the filter at the end of a work shift without interrupting any work processes.

- Start cleaning via interface

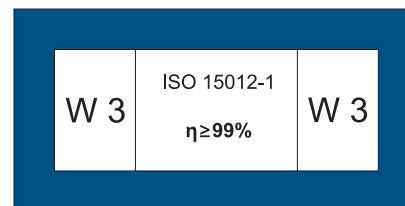
Depending on the individual case of application, the customer can activate the cleaning by means of the interface. Using this function is recommended whenever the customer's work process must not be interrupted in an unforeseen manner.

ADDITIONAL FUNCTIONS:

Slide-valve control, system shutdown during a running cleaning process, cycle times and much more.

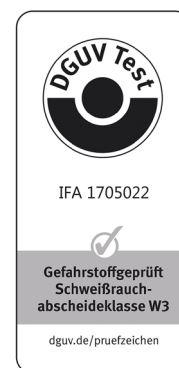
INDUSTRIAL SAFETY AND HEALTH PROTECTION

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).



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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 FP 150



Similar to image

AREAS OF APPLICATION:

- Laser processing (in some cases combined with precoating)
- Mechanical processing (grinding, deburring, milling, drilling, cutting)
- Transferring materials, packaging & transporting/conveying processes

INCLUDES:

- Fully assembled (incl. the filter configuration of your choice)
- 4 wheels for mobile use*
- Power cable

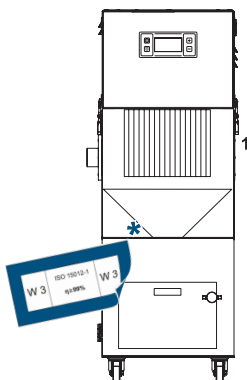
* depending on the installation height of the configuration selected, the system comes with machine base

TECHNICAL SPECIFICATIONS	UNIT	FP 150
Unimpeded air flow rate	m ³ /h	max. 280
Effective air flow rate	m ³ /h	30-250
Max. static pressure	Pa	20000
Voltage	V	230/120
Frequency	Hz	50/60
Power input	kW	1.1
Protection class	-	1
Motor and drive system	-	brushless motor
Noise level	db(A)	approx. 64
Serial interface	D-sub	25-pin
Weight	kg	approx. 55
Dimensions (HxWxD) as a basic model	mm	1000x350x350
Dimensions (HxWxD) with increased filter surface	mm	1230x550x550
DN 50 intake socket	-	optional
DN 63 intake socket	-	optional
DN 80 intake socket	-	optional
Automatic cleaning with compressed air	-	optional
Dust collector	liter	15
Colour	RAL	7035

FILTER CONFIGURATION

Filter cartridge, antistatic (dust class M)	✓
Particle filter H13	optional
Activated carbon/BAC filter	optional (10 liter)

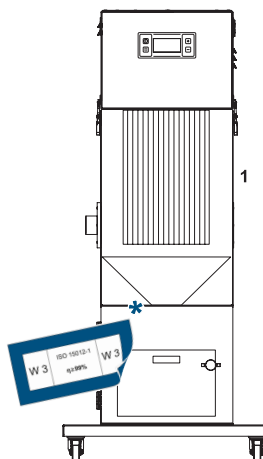
ORDER DATA FP 150



AS A BASIC MODEL

DESCRIPTION	ART.-NO.
FP 150 100-240V 50/60Hz	90070

* see page 7

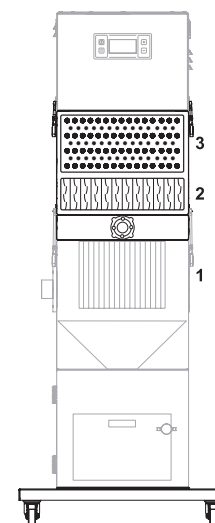


WITH INCREASED FILTER SURFACE

DESCRIPTION	ART.-NO.
FP 150 100-240V 50/60Hz	90097**

* see page 7

** System standard includes a machine base



WITH AUTOMATIC CLEANING

ADDITIONAL MODULES	
Activated carbon/BAC	11610*
Particle filter	14728
Particle filter	14734**
Particle filter + Activated carbon/BAC	15378*

* only available in combination with machine base
** combined with automatic cleaning

SPARE FILTERS	
Filter cartridge	13016* 1
Particle filter	-
Activated carbon/BAC	-

* with antistatic coating

SPARE FILTERS	
Filter cartridge	13403* 1
Particle filter	-
Activated carbon/BAC	-

* with antistatic coating

SPARE FILTERS	
Filter cartridge	13016* 1
Particle filter	10013 2
Activated carbon/BAC	13021 3

* with antistatic coating

INTAKE SOCKET	
DN 50 left	13159
DN 63 left	13161
DN 80 left	13163
DN 50 right	13160
DN 63 right	13162
DN 80 right	13164

PRECOATING CONNECTION PIECE	
DN 63	16251
DN 80	16252

DESCRIPTION	
Machine base	16353*
Auto. cleaning	16355
Pressure regulator	11783

* increases system height 30 mm

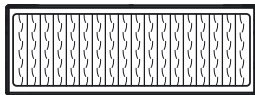
ACCESSORIES



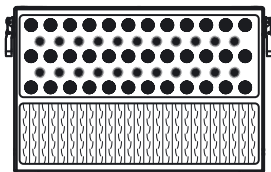
Auto. cleaning



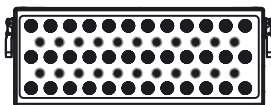
Pressure controller



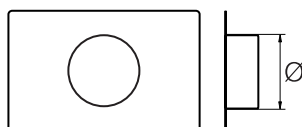
Particle filter H13



Particle filter H13 and Activated carbon/BAC filter



Activated carbon/BAC filter



HOUSING MODULE AS AN UPGRADE KIT - auto. cleaning

USE	DESCRIPTION	ART.-NO.
FP 150	For automatic filter cleaning	16355

PRESSURE CONTROLLER for auto. cleaning

USE	DESCRIPTION	ART.-NO.
FP 150	Pre-set to an operating pressure of 2 bar	11783

FILTER HOUSING MODULE AS AN UPGRADE KIT - particle filter

USE	FILTER CLASS	ART.-NO.
FP 150	H13	14728
FP 150	H13	14734*

* combined with automatic cleaning

FILTER HOUSING MODULE

AS AN UPGRADE KIT - particle filter + activated carbon filter

USE	FILTER CLASS	ART.-NO.
FP 150	H13	15378*

* only in combination with a machine base

FILTER HOUSING MODULE AS AN UPGRADE KIT - activated carbon filter

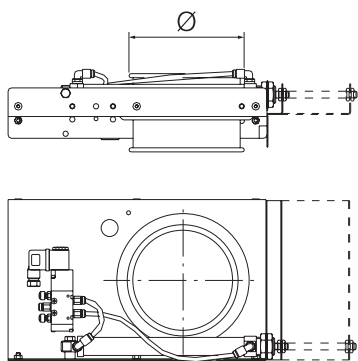
USE	SIZE	ART.-NO.
FP 150	10 liter	11610*

* only in combination with a machine base

EXHAUST PLATE*

USE	DN (mm)	ART.-NO.
FP 150	80	11709
FP 150	100	12839
FP 150	125	12232

* connection plate with connection pieces for exhausting air through hose



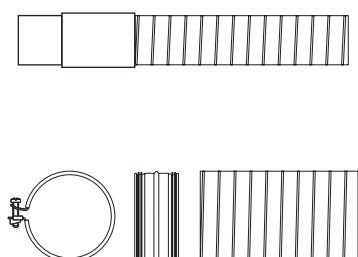
PNEUMATIC SLIDE VALVE

- Automatic control by means of the extraction system
- Prevents blowbacks of filtered matters into the intake pipeline during the filter-cartridge cleaning
- Slide valve can easily be integrated into the intake pipeline

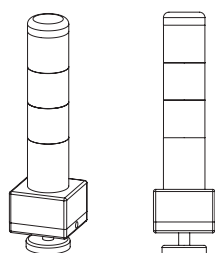
USE	DESCRIPTION	DN (mm)	ART.-NO.
FP 150	Pneumatic slide valve	80	15286*
FP 150	Slide-valve control line	-	16356*

* control cable must be ordered separately

AIR INLET - flexible connection hoses



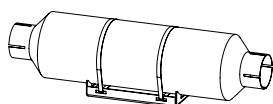
DESCRIPTION	DN (mm)	LENGTH (m)	ART.-NO.
Hose set with connection coupling	50	2.5	10008
		5.0	10010
Hose set with nipple and hose clip	63	2.5	13210
		5.0	13211
		10.0	13212
	80	2.5	13179
		5.0	13180
		10.0	13197



SIGNAL MODULE

USE	ART.-NO.
FP 150	16621

SPARK QUENCHERS (for use in tubes)



USE	AIR VOLUME	SIZE	ART.-NO.
FP 150	150-300m ³ /h	d=63mm	16649

Assembly:

Depending on the specific application, spark quenchers can be either mounted using a special bracket (included in the scope of delivery) or installed onto a wall or work table by means of pipe brackets (to be ordered separately).

FP 150

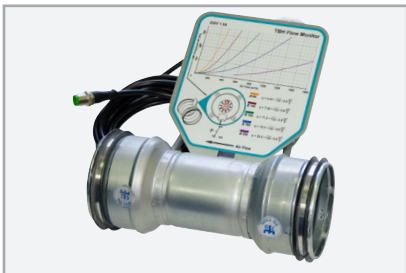
**MACHINE BASE**

USE	DIMENSIONS (HxWxD) mm	ART.-NO.
FP 150	30x550x550	16353

**DUST BAG**

Dust bag for low-contamination disposal of filtered matters

USE	DESCRIPTION	ART.-NO.
FP 150	Dust bag	16711

**VOLUME FLOW RATE MONITORING**

USE	Ø d ₁ (mm)	ART.-NO.
FP 150	80	16642

**FILTER FRACTURE MONITORING**

USE	Ø d ₁ (mm)	ART.-NO.
FP 150	100	16651



CABLE REMOTE CONTROL UNIT

FUNCTIONS:

- Display "filter blocked"
- Switch Run/Stand-by
- Infinitely adjustable speed controller
- Start position of the extraction system: stand-by-mode

USE	DESCRIPTION	CABLE LENGTH	ART.-NO.
FP 150	Cable remote control unit	7m	16477

INCLUDES:

- Remote control unit (with cable)



ELECTRICAL FOOT SWITCH

FUNCTIONS:

- Switch Run/Stand-by
- Start position of the extraction system: stand-by-mode

USE	DESCRIPTION	CABLE LENGTH	ART.-NO.
FP 150	Electrical foot switch	2m	16369

INCLUDES:

- Foot switch (with cable)



CONNECTION CABLE USB

USE	DESCRIPTION	CABLE LENGTH	ART.-NO.
FP 150	Connection cable USB	1.5m	16455

INCLUDES:

- Connection cable (incl. software)

ELECTRONIC CONTROLS

FUNCTION	FP 150
Switching between run/standby	✓
Manual adjustment of the rotation speed	✓
Filter-saturation indicator (complete system)	✓
Visual and acoustic display of the filter saturation	✓
Fault display and notification	✓
Pushbutton Start cleaning cycle*	✓
Display Filter cleaning status *	✓

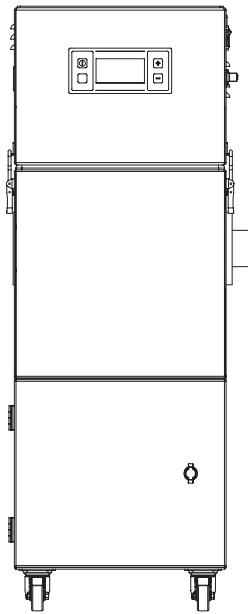
* combined with automatic cleaning

INTERFACE FUNCTIONS	
Interface	D-sub
System start/stop	✓
Warning at a filter saturation of 75%*	✓
Visual and acoustic display of the filter saturation	✓
Collective fault output (rotation speed, temperature, filter full 100%)	✓
External adjustment of the rotation speed	✓
External start of the cleaning process**	✓
Notification memory	✓
Parameterization access for the activation of custom functions	✓

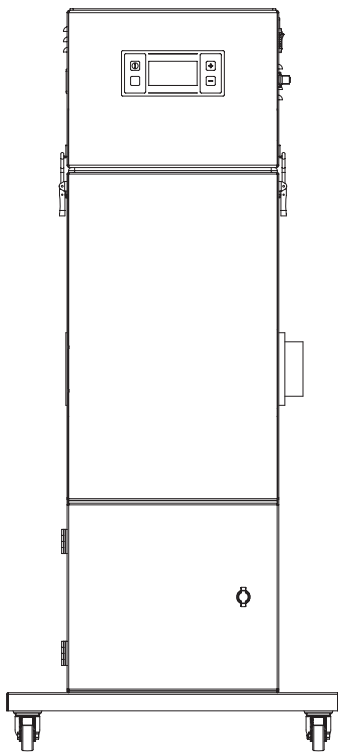
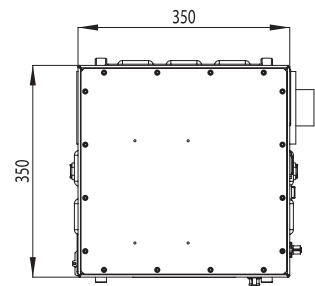
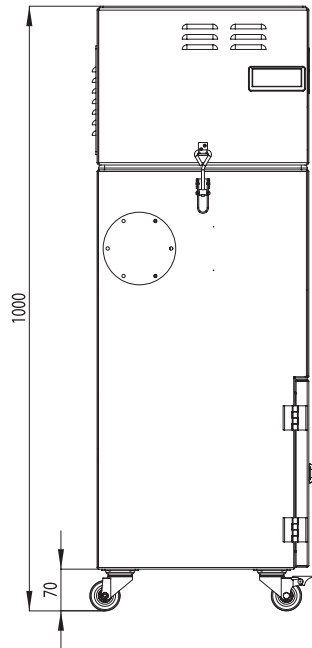
*Notification e.g. for external control of the cleaning process

** combined with automatic cleaning

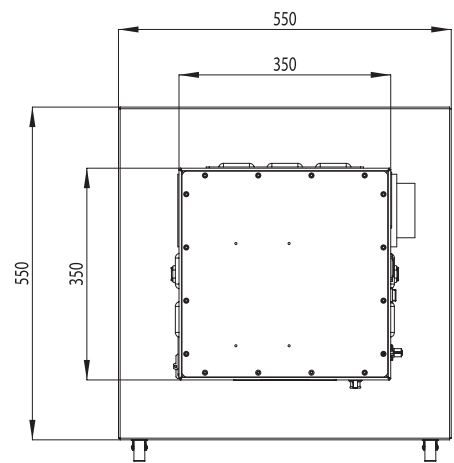
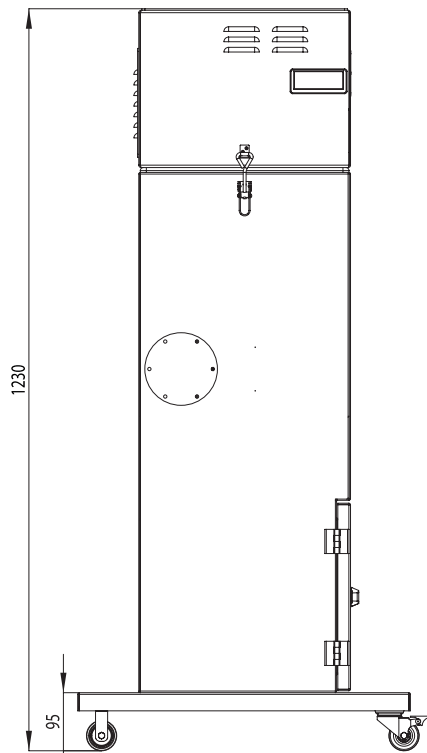
TECHNICAL DRAWINGS



FP 150 (as a basic model)



FP 150 (with increased filter surface)





TBH GmbH

EXHAUST- AND FILTRATION TECHNOLOGY

GERMANY

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