

# PASSIVE SEPARATORS

FILTER/EXTRACTION/ENVIRONMENTAL//TECHNOLOGY





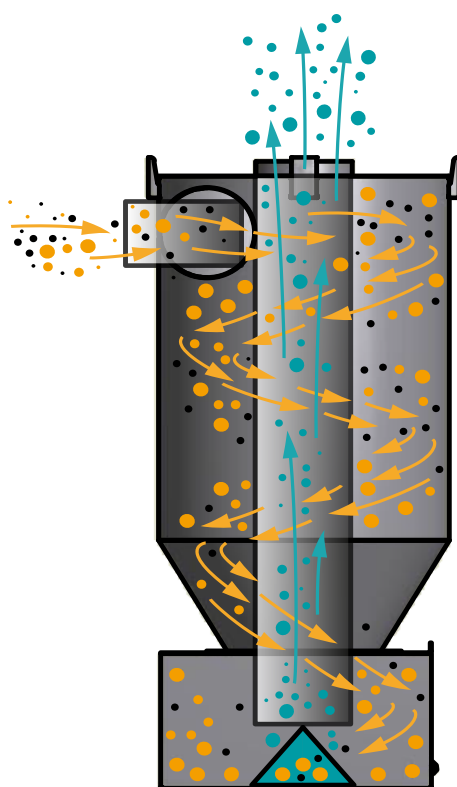
## 1.1 Cyclone pre-separator

Cyclone pre-separators are used as pre-separators in processes with high levels of dust or as spark separators in grinding/ laser processes. They are preconnected to a suitable filter and extraction system. Air rotates in the separator. This movement pushes the particles

out of the air stream, which leads to their separation. The degree of separation of a cyclone pre-separator is approx. 80% (10 µm). Connecting a cyclone pre-separator reduces the load on the filters and extends the filter's life time.

**Material:** • Case: steel (powder-finished)

• Color: RAL 7035/ 5010



Principle drawing

TECHNICAL DATA	UNIT	CN 500	CN 1000	CN 1500	CN 2000	CN 3000	CN 4000
Air flow max.	m³/h	550	800	1400	2100	3500	5100
Pressure decrease	Pa	1100	1100	1100	1100	1100	1100
Diameter	mm	300	375	500	600	750	950
Inlet port (left)	mm	100	125	160	200	250	315
Outlet port (top)	mm	100	125	160	200	250	315
Dust collector	l	40	40	40	72	72	72
Required space	mm	520 x 560	520 x 560	520 x 560	700 x 720	910 x 810	1010 x 1010



### Ordering data

MODEL	HEIGHT (MM)	ART. NO.
CN 500	1400	11007
CN 1000	1500	11005
CN 1500	1610	11008
CN 2000	1610	11011
CN 3000	1740	11013
CN 4000	1930	11615



Illustration similar

**CN 3000**



Illustration similar

**CN 500**

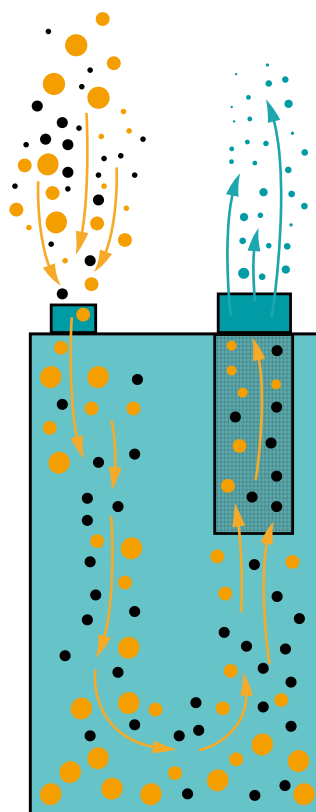


## 1.2 Coarse pre-separator

Connecting a coarse pre-separator allows to separate coarse parts from the filtration process of a filter and extraction system. By increasing the cross-sectional area of the extraction power, the flow rate slows down. As a result, large particles sink and remain at the drum's bottom. It should not be more than half full in order to avoid the particles being swallowed up again by the air flow. That means that no large particles/ parts get into the filter and extraction system. This protects the filters from destruction and increases

their service lives. If a coarse pre-separator in combination with filters in the connected extraction system is suitable for the application, depends on the rate of ascent in the pre-separator generated by the volume of air. This is constructed to transport the parts into the pre-separator, in which they fall out of the air flow.

Please contact your TBH sales representative regarding the correct setup for your system.



Principle drawing

TECHNICAL DATA	UNIT	20213	17063	20340
Air flow max.	m <sup>3</sup> /h	350	1000	1000
Diameter	mm	385	610	610
Height	mm	570	880	880
Inlet port	mm	50	80	80
Outlet port	mm	125	125	125
Color	RAL	5010	7035	7035
Particle size	mm	>5	>5	>1
Capacity	l	60	200	200



## Ordering data



Illustration similar



Illustration similar

### Coarse pre-separator 200 l

### Coarse pre-separator 60 l

MODEL	CAPACITY (l)	ART. NO.
Coarse pre-separator	60	20213
Coarse pre-separator	200	17063
Coarse pre-separator	200	20340



### Ordering data

DESIGNATION	ART. NO.	DESCRIPTION
Adapter 80-63	17075	For reducing the inlet connection from DN80 to DN63/50mm
Adapter 80-50	17073	

DESIGNATION	DN (mm)	LENGTH (m)	ART. NO.
Hose set with connection coupling	44	2,5	10008
	44	5	10010
Hose set with nipple and hose clamps	63	2,5	13210
	63	5	13211
	80	2,5	13179* 13729**
	80	5	13180* 14600**
	125	2,5	13184
	125	5	13184

\*for LN 230, GI 230 \*\*for LN 260/265, GL 265

DESIGNATION	ART. NO.	DESCRIPTION
Steel lidded drum	17069	As a substitute when disposing the entire drum, e.g. with hazardous substances

DESIGNATION	DESCRIPTION
Rolling cart	We recommend the use of a commercially available drum for easily transporting the pre-separator.
Disposal bag	A standard 280l disposal bag can be inserted into the pre-separator; which may have to be secured against extraction with magnets.



### 1.3 Activated carbon separator

Each process always develops strong odors and expose work areas to unhealthy gas concentrations. In addition to separating the particles from the process air, it is necessary filtering these gaseous pollutants from the air with an activated carbon mixture.

The activated carbon separator offers a solution with high separation efficiency and maximum filter service life. The drum-shaped activated carbon magazines offer the following advantages:

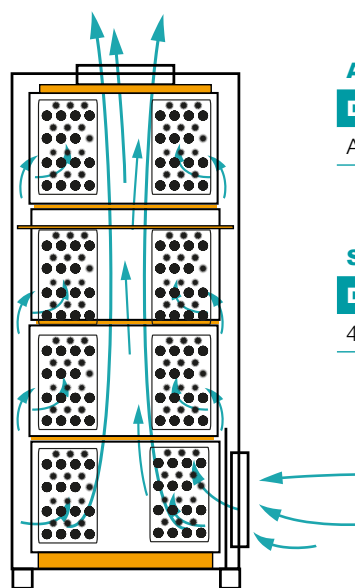
- Large inflow area and therefore extremely low re-

sis- tance of the activated carbon in the air flow.

- Air has much longer contact time with the activated carbon granulate compared to conventional filter cartridges.
- Filter service life of the extraction system increases, since the lower pressure loss due to the activated carbon arrangement behind the system increases the overall efficiency of the system by up to 60%.
- This means lower filter costs, longer filter service life and lower energy costs.



Illustration similar



Principle drawing

#### ACTIVATED CARBON SEPARATOR

DESIGNATION	ART. NO.
Activated carbon separator	90461

#### SPARE FILTER

DESIGNATION	ART. NO.
4x activated carbon filter	20225

TECHNICAL DATA	UNIT	ACTIVATED CARBON SEPARATOR
Air flow max.	m <sup>3</sup> /h	1500
Pressure decrease	Pa	ca. 500 @1500m <sup>3</sup> /h
Dimensions (HxWxD)	mm	1340x600x600
Weight	kg	ca. 165
Inlet port	mm	250
Outlet port	mm	250
Activated carbon	l	150



Setup activated carbon separator with LN610ZS system - illustration similar

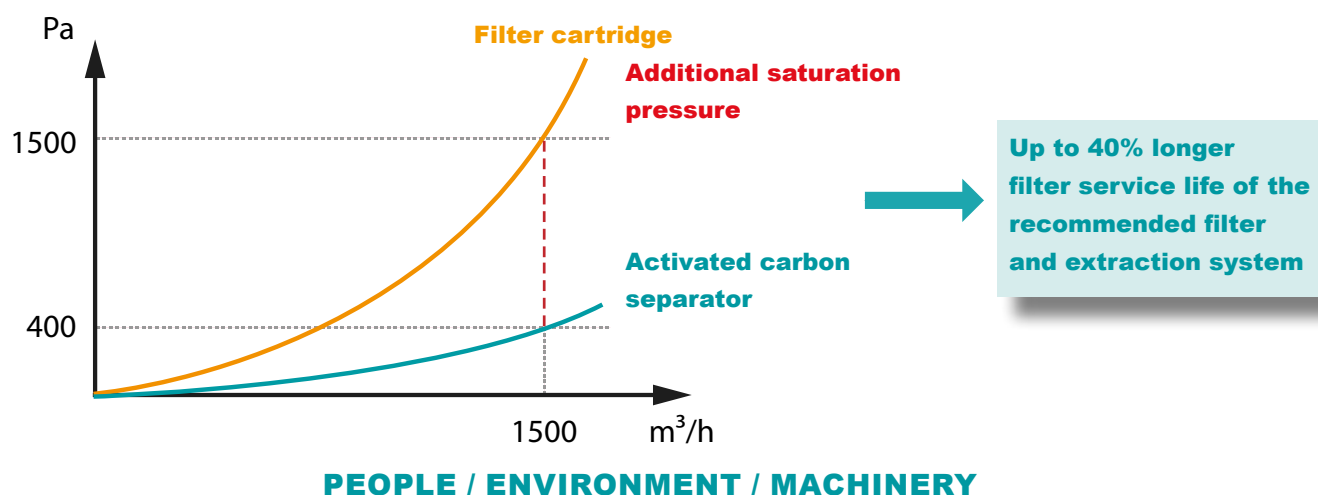


Setup activated carbon separator with TFS system - illustration similar

The activated carbon separator is connected to the outlet port of the filter and extraction system. The correct adapter set can be chosen depending on the selected system and installation arrangement.

FILTER- AND EXTRACTION SYSTEM	ARRANGEMENT	ADAPTER SET	REQUIRED SETUP AREA (WxD)
FP200 / FP213 LN610 OEN 250	Behind the filter and extraction system, connection via bushing/spiral pipe	- (included)	approx. 700x2000mm
OEN 710	Behind the filter and extraction system, connection via sheet metal or moulded components	20231	approx. 800x2000mm
TFS 500 / TFS 1000		20232	approx. 1200x2400mm

### Comparison pressure loss and filter service life





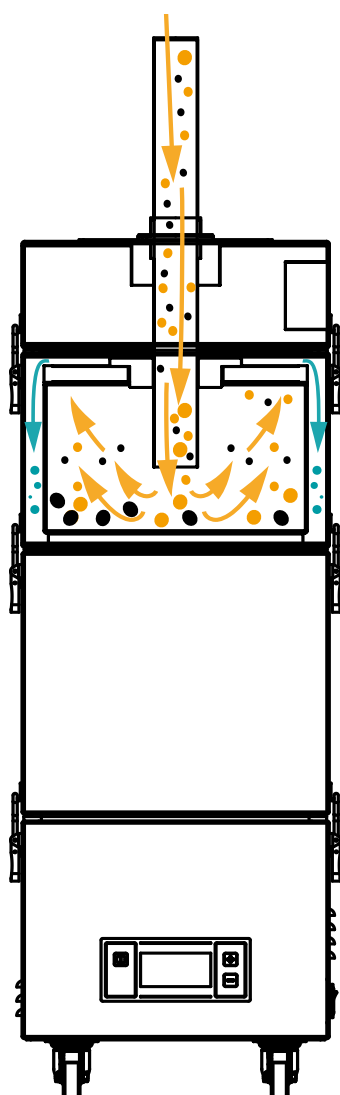


## 1.4 Pre-separator FA series

The pre-separators of the FA series are suitable for separating particles > 1mm from the air flow of a TBH filter and extraction system of the types LN230, GL230, LN260 / 265 and GL265. Due to the modular design, the pre-separators of the FA series can be easily integrated into a TBH filter and extraction system by attaching and bracing them on the systems like a

filter case. Pre-separators do not require any additional space. The pre-separators of the FA series are purely mechanical due to gravity separation from the air flow and air deflection through an aluminum mesh filter.

Please contact your TBH sales representative regarding the correct setup for your system.



Principle drawing

### PRE-SEPARATOR FA 10

System with connection for extraction arm.  
Systems: LN 230, GL 230

SYSTEM	HxWxD (mm)	EXTRACTION ARM	ART. NO.
FA 10	230x350x350	50	13947
		63	13950
		75	13923

### PRE-SEPARATOR FA 10

System with connection for extraction hose.  
Systems: LN 230, GL 230

SYSTEM	HxWxD (mm)	EXTRACTION ARM	ART. NO.
FA 10	230x350x350	50	13946
		63	15542
		75	15543

### PRE-SEPARATOR FA 20

System with connection for extraction arm.  
Systems: LN 260/265, GL 265/400

SYSTEM	HxWxD (mm)	EXTRACTION ARM	ART. NO.
FA 20	265x350x655	63	13952
		75	13914

### PRE-SEPARATOR FA 20

System with connection for extraction hose.  
Systems: LN 260/265, GL 265/400

SYSTEM	HxWxD (mm)	EXTRACTION ARM	ART. NO.
FA 20	265x350x655	63	15544
		75	15545

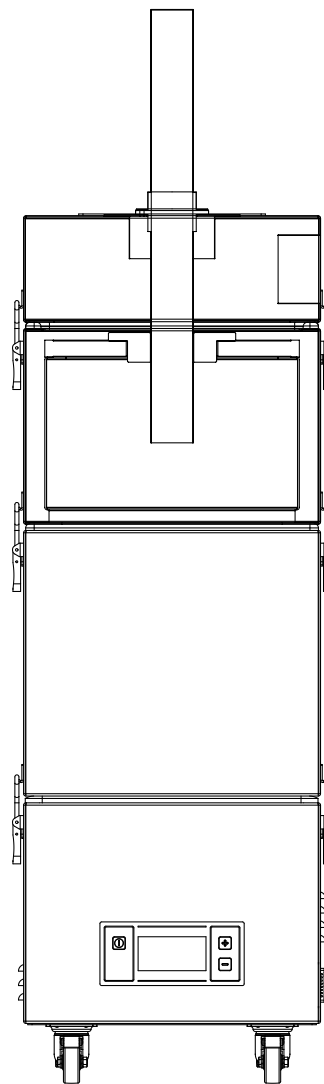


## Illustration



Illustration similar

**FA 10**

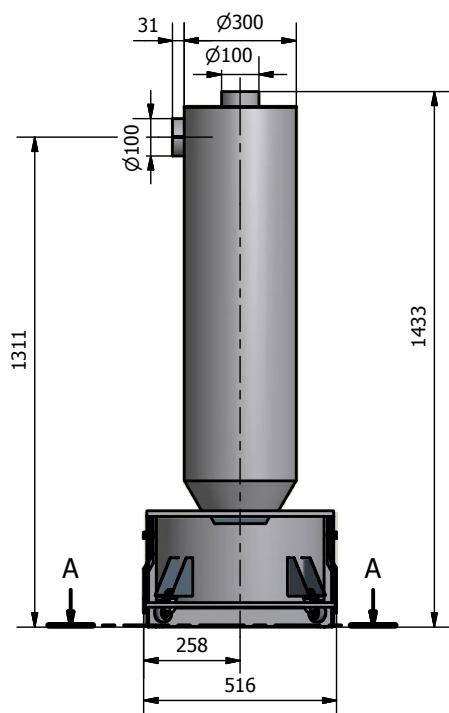


**FA 10 / FA 20**

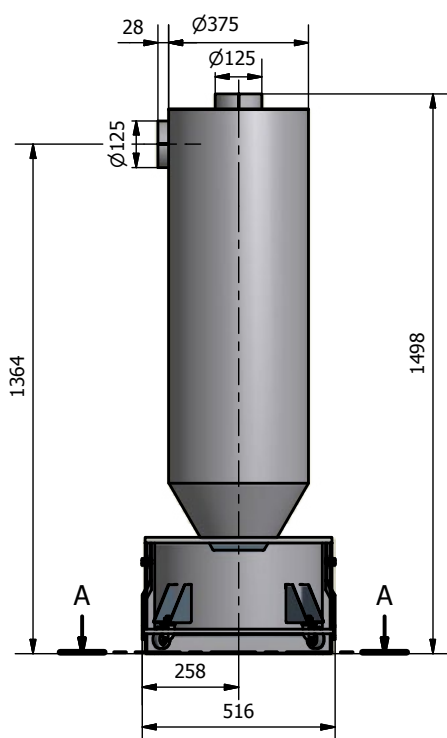
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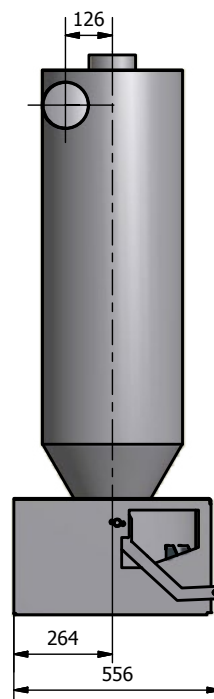
## Technical drawings



**CN 500**

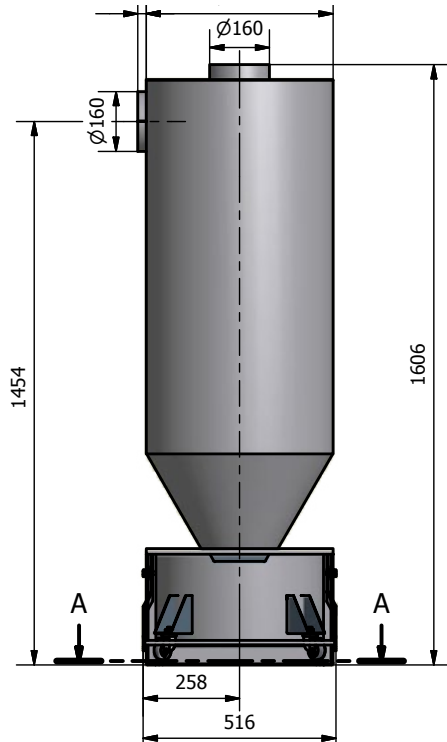


**CN 1000**

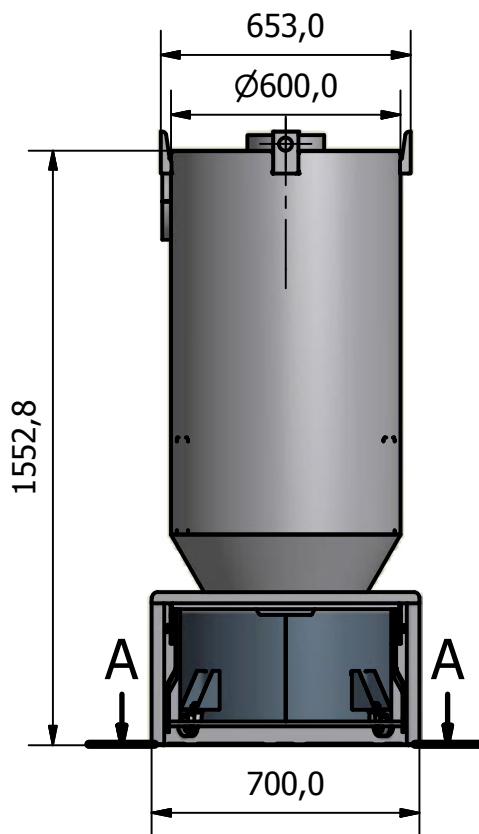
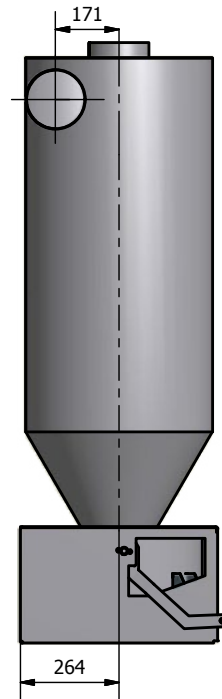




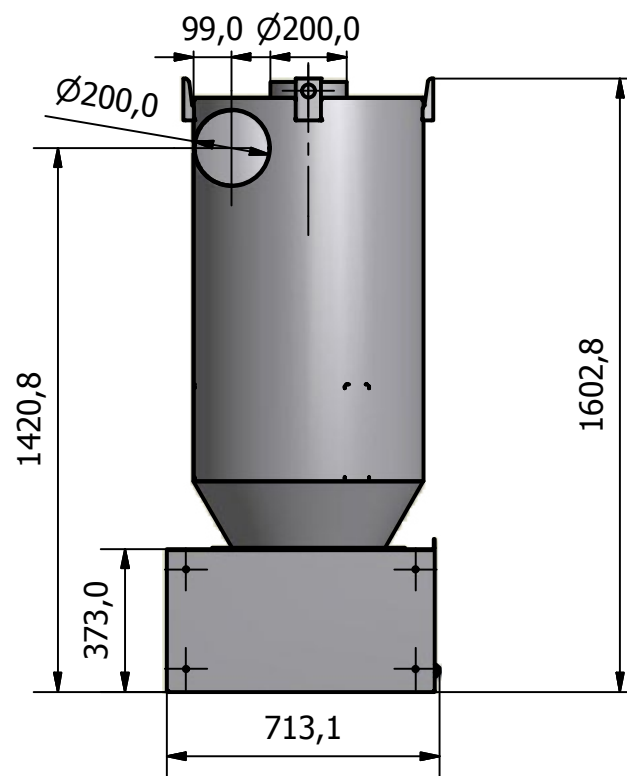
Technical drawings



**CN 1500**



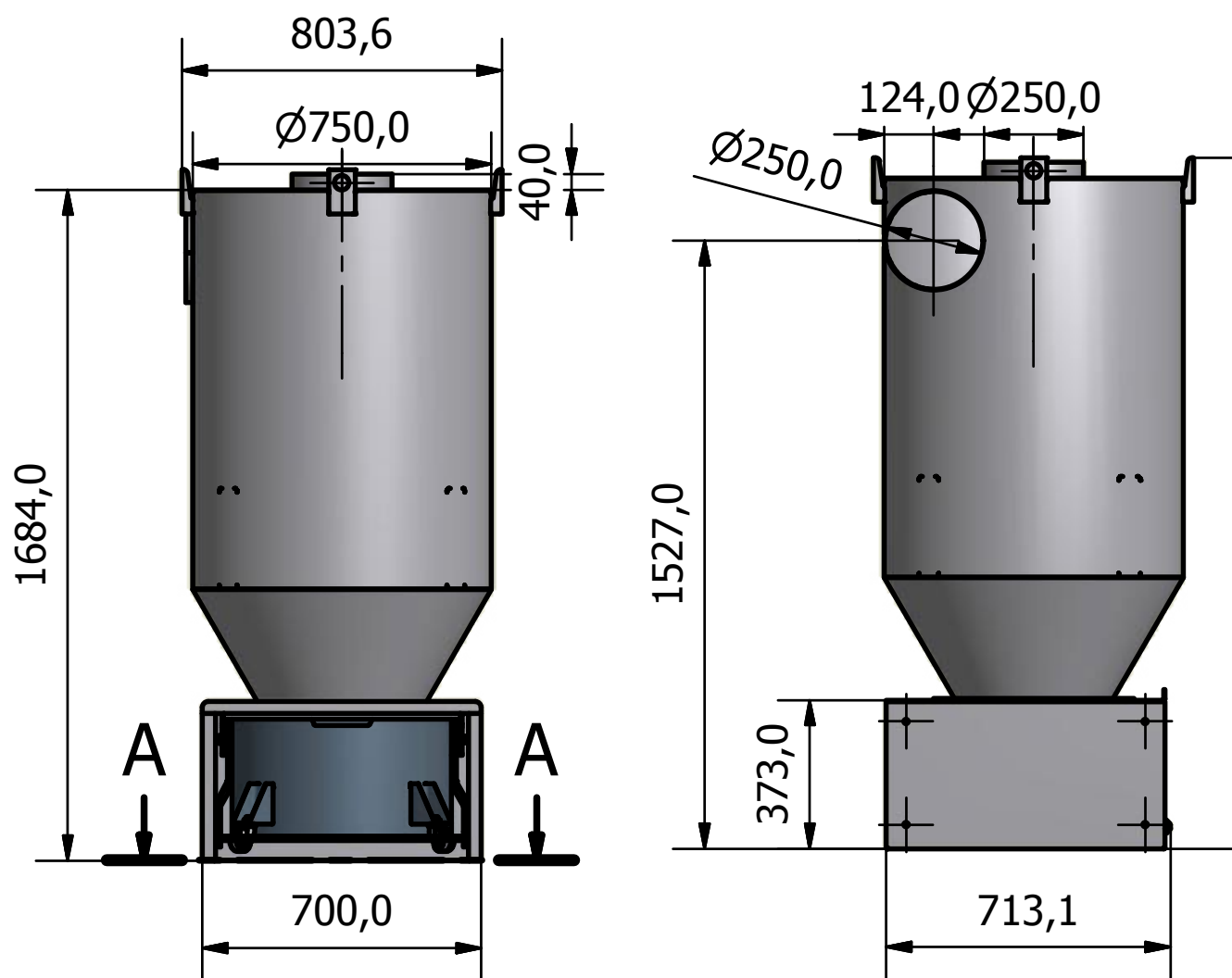
**CN 2000**



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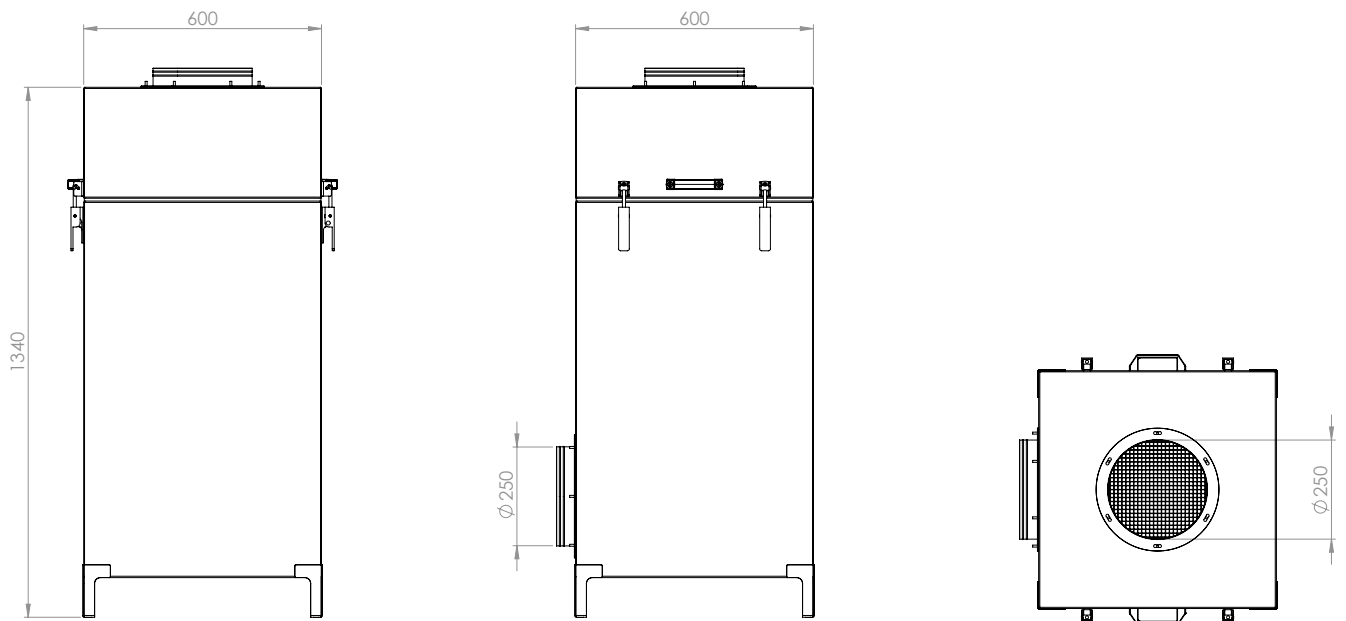
Technical drawings



CN 3000



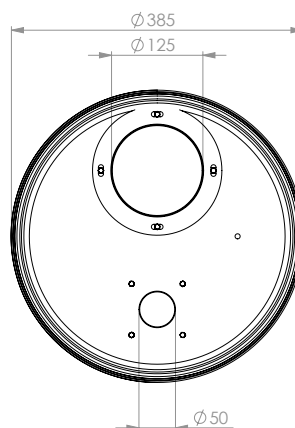
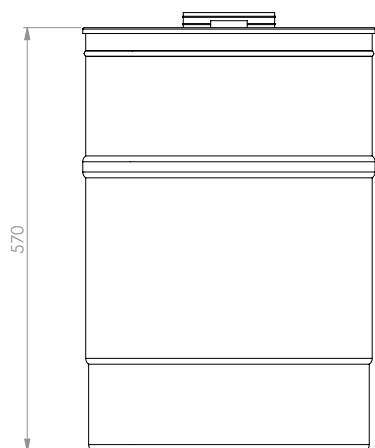
## Technical drawings



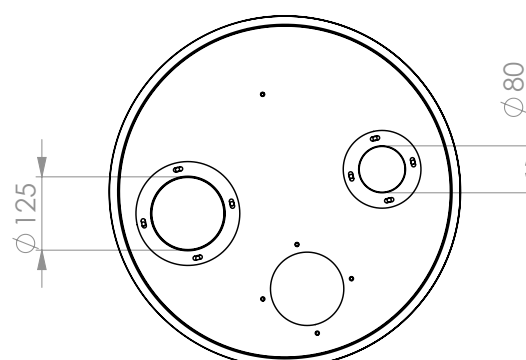
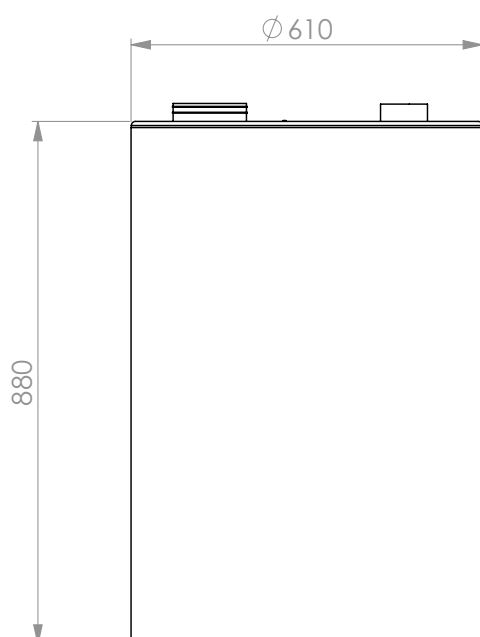
**Activated carbon separator**



## Technical drawings



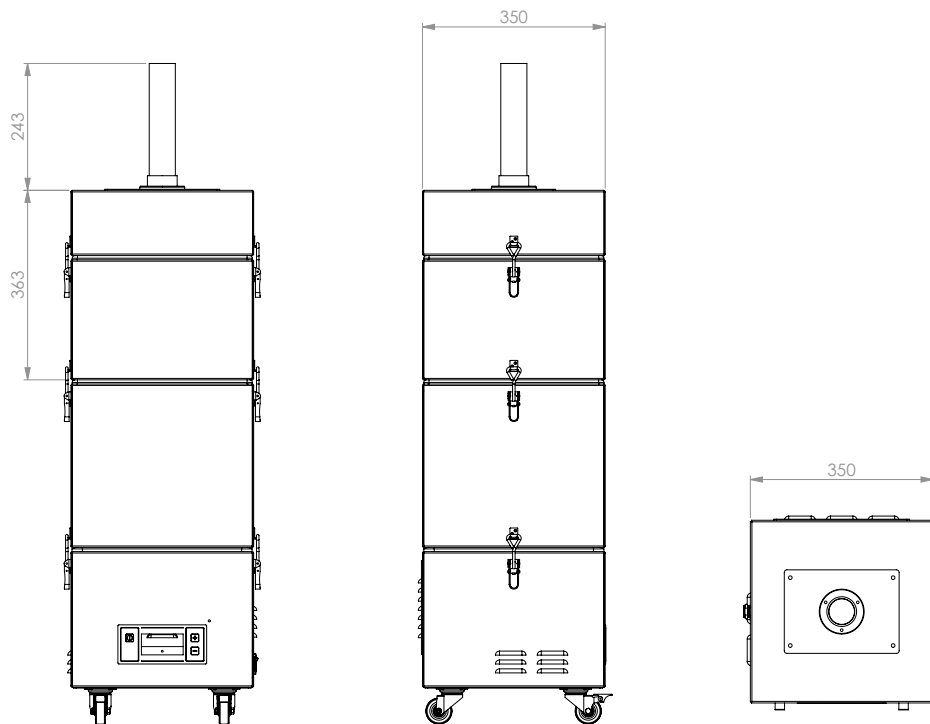
**Coarse pre-separator 60 I**



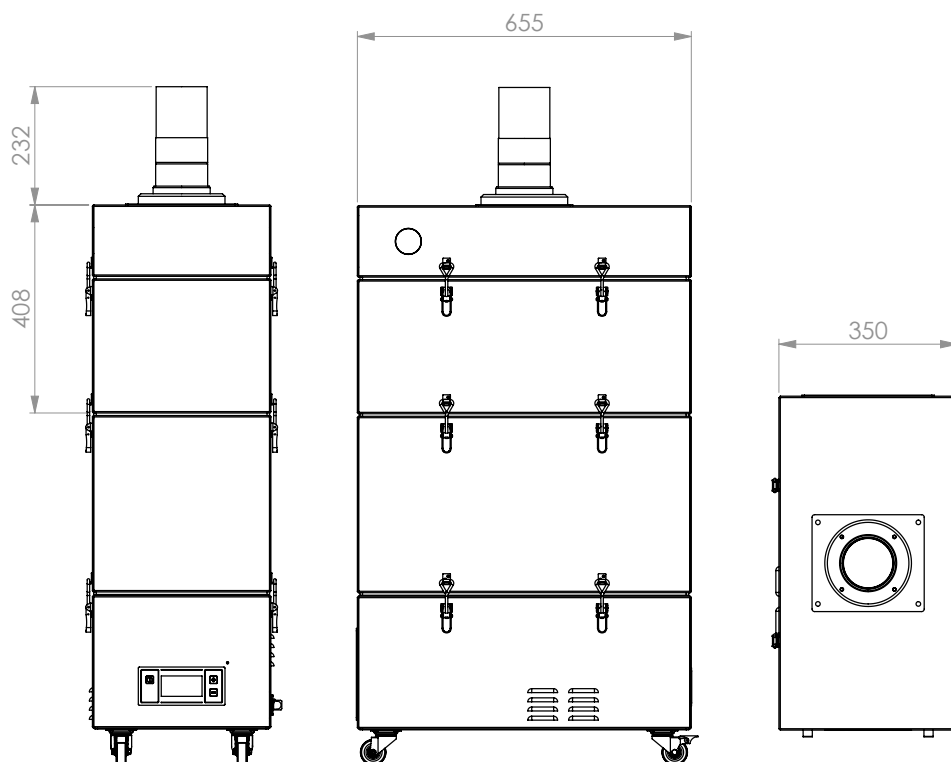
**Coarse pre-separator 200 I**



## Technical drawings



**FA 10**



**FA 20**

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**More information**

