

Activated Carbon Filter

in a Ducted Casing



TROX[®] TECHNIK

Contents · Description · Installation

Description	2
Installation	2
Selection Table	3
Filter Technical Data	4
Order Information	5

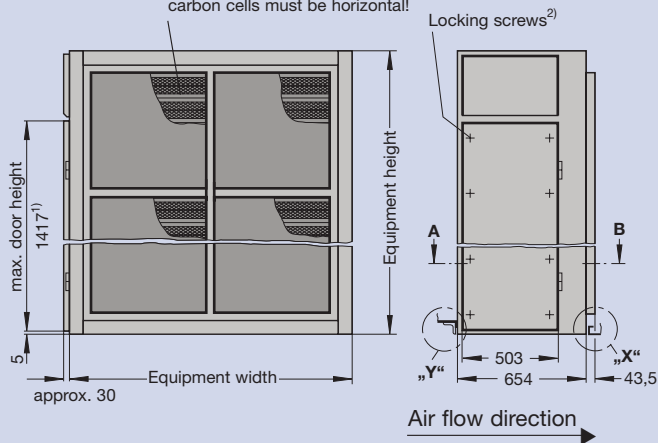
Strong ducted casing in galvanised sheet steel with service door on the side for changing filter cells. Position of door is optional, left or right hand side, with respect to air flow direction. The casing frame with its wide sealing surfaces serves at the same time as the connecting frame for equipment or ducting. In addition to the standard sizes available, the ducted casing can be manufactured to match specific sizes appropriate to a particular installation.

The location and fixing of the filter cells inside the casing is by means of a frame system in welded aluminium sections. Angle supports and turnbuckle clamps ensures correct cell alignment and good sealing between cell face and mounting frame.

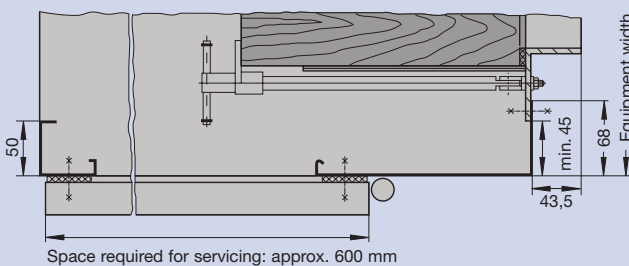
The ducted casings for all standard sizes are factory assembled.

Dimensions

Installation position of filter cell as illustrated. Activated carbon cells must be horizontal!

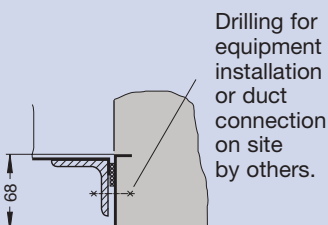


Section A-B

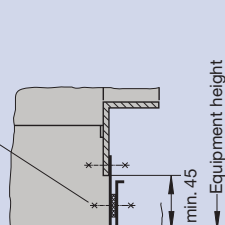


Examples showing simple methods of mounting or duct connection.

Detail "Y"



Detail "X"



Activated carbon filter with angle supports and turnbuckle clamps

Installation position of ducted casing as illustrated. Pressure measuring tube stubs for each filter unit are supplied for connection on site. Top, bottom and side of casing (without service door) are domed (diamond breaks). Dome height approx. 20 mm.

¹⁾ Dimension for height of 3 filter cells one upon the other.
²⁾ Standard construction with hexagonal head screws. As an option locking screws can be fitted with special handles.

Selection Table

Selection Table for Dimensions and Volumes

Height in mm	Width in mm		804	1428	2052	2676
	Filter cell: No. of Vert. cells ▼	No. of Horiz. cells ►	1	2	3	4
Air Volume for Filter cells 610 x 610 x 292 mm						
804	1	\dot{V} in l/s \dot{V} in m ³ /h	560 2000	1120 4000	1680 6000	2240 8000
	Total number of filter cells Weight in kg Order number		1 40 F383 A11	2 55 F383 A12	3 70 F383 A13	4 85 F383 A14
1428	2	\dot{V} in l/s \dot{V} in m ³ /h	1120 4000	2240 8000	3360 12000	4480 16000
	Total number of filter cells Weight in kg Order number		2 55 F383 A21	4 70 F383 A22	6 90 F383 A23	8 110 F383 A24
2052	3	\dot{V} in l/s \dot{V} in m ³ /h	1680 6000	3360 12000	5040 18000	6720 24000
	Total number of filter cells Weight in kg Order number		3 70 F383 A31	6 90 F383 A32	9 110 F383 A33	12 135 F383 A34
2676	4	\dot{V} in l/s \dot{V} in m ³ /h		4480 16000	6720 24000	8960 32000
	Total number of filter cells Weight in kg Order number			8 110 F383 A42	12 135 F383 A43	16 160 on request ¹⁾

¹⁾ Note: Special sizes.
total width is 2856 mm.
Therefore delivered in two sections, width 1428 mm.

All data given for air volumes have been rounded upwards.
For pressure differential variation with air volume
see the graph on page 4.
Weights are for ducted casing without filter cells
and without packing.

Filter Technical Data

Activated carbon filter cells in ventilation and airconditioning systems are designed for the adsorption of odorous gases and harmful vapours (e.g. adsorption of body and food odours, various smokes and fumes) from the ambient air as well as adsorption of hydrocarbons, trace of inorganic compounds etc. from the surrounding air.

The filter cell frames consist of moisture resistant chipboard with neoprene seals. The activated carbon cells are "wedge" formation securely fixed to the frames.

The activated carbon used has cylindrical shaped granules. Each cell is firmly packed with granules to avoid air spaces occurring. Depending on the environment, and the contamination of the air being processed, a service life of 6 months to 2 years can be expected.

In order not to impair the adsorption efficiency by other types of contaminants, i.e. dusts etc., pre-filters should be used, such as Trox bag filters types F 746 or F 748 (65 % and 85 % efficiency respectively with ASHRAE atmospheric dust). Also, when using activated carbon filters the following operational limitations should be observed:

- Maximum temperature of approx. 40°C to avoid adsorption.
- Air with a maximum relative humidity of approx. 70 %. As, with the possibility of water vapour in the carbon, a reduction of adsorption capacity can occur.

Activated carbon filter cells with other types of carbon for special applications or working conditions, e.g. adsorption of sulphur, nitrogen, chloride-compounds, etc. on request.

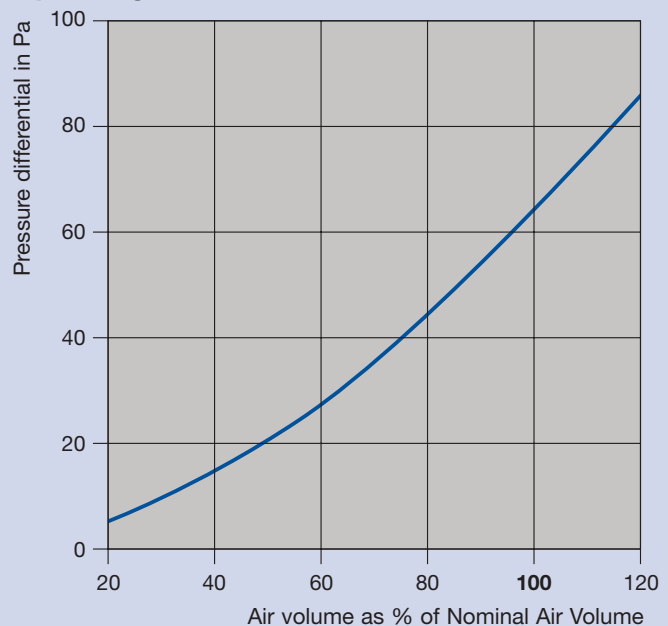


Filter Technical Data

Filter cell type	F 760	
Dimensions	610 x 610 x 292 mm	
Nominal Air Volume ¹⁾	in l/s in m ³ /h	560 2000
Pressure Differential at nominal air volume	in Pa	70
Weight	in kg	30
Order number	F 760 J 03	

¹⁾ Reduction below the nominal air volume improves the adsorption efficiency and capacity of the activated carbon. Increase in air volume should be avoided.

Operating Pressure Differential



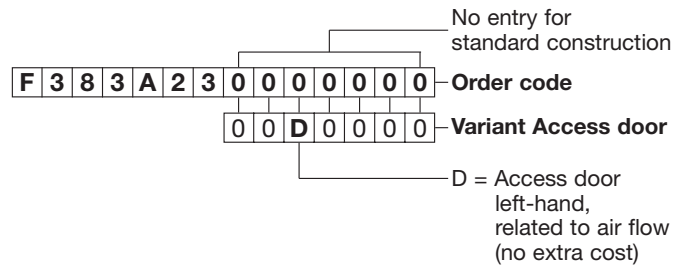
Order Information

Order Code

Ducted Casing for Activated Carbon Filter for air volume flow 3360 l/s (12000 m³/h) Filter Type: **F 383**

Equipment Width 2052 mm Equipment Height 1428 mm Order code: **F 383 A 23** (see table "Volume flow")

Ducted casing for 6 Activated Carbon Filter cells (610 x 610 x 292 mm) with service door on the right hand side, when viewed in the direction of air flow.



in addition:

6 x **F 760 J 03** - Order code for Activated Carbon Filter cells

Specification Text

Item	Qty.	Description
		<p>Trox ducted casing, consisting of:</p> <p>Casing in galvanised sheet steel with service door at the side for changing filter media. Positioned right hand or left hand side, with respect to direction of air flow.</p> <p>Frame system from welded aluminium sections with support angles and turnbuckle clamps for location and sealing of filter cells.</p> <p>Construction: Ducted casing completely assembled, nonreturnable packing.</p> <p>Optional accessories: Service door with locking screws complete with handles.</p> <p>Technical Data: Nominal air volume _____ l/s (m³/h) Equipment width _____ mm Equipment height _____ mm Net weight _____ kg Order Number _____ Make: Trox</p> <p>Price/Assembly (without filter cells)</p>

Item	Qty.	Description
		<p>Trox Activated Carbon Filter Cell F 760</p> <p>Frames in impregnated moisture-resistant chip board with activated carbon cells in a securely fixed wedge-shaped arrangement.</p> <p>Filter cells with neoprene seals on one side.</p> <p>Technical Data: Air Volume _____ l/s (m³/h) Dimensions W x H x D _____ mm Pressure Differential _____ Pa Net weight _____ kg Order Number _____ Make: Trox</p> <p>Price/Each</p>