Filtering chamber of pleated filters of type FCCF

Filtering chamber of pleated filter of type FCCF is used for installation and hermetic sealing of filters of types CPF, HEF, HFMF-F, HFMF-H, CCF with dimensions 592x592x292(300) in systems of general ventilation and in air conditioning of household, administrative and industrial buildings. The filtering chamber is placed in the structure of a ventilating system and is its part.

Filters are manufactured in classes F6-H14 and in some cases require installation of filters of lower efficiency before them.

In this case, the filtering chamber of pocket filters of type FCPF (look the catalogue of "NPP "Folter") with prefilters PF of required class and pocket length of 600 mm can be set up before section FCCF.

By request section FCCF can be supplied with elements for installation and hermetic sealing of pocket filters PF with pocket depth not over than 350 mm or compact minipleat filters of type CMPF with depth of 292 mm .

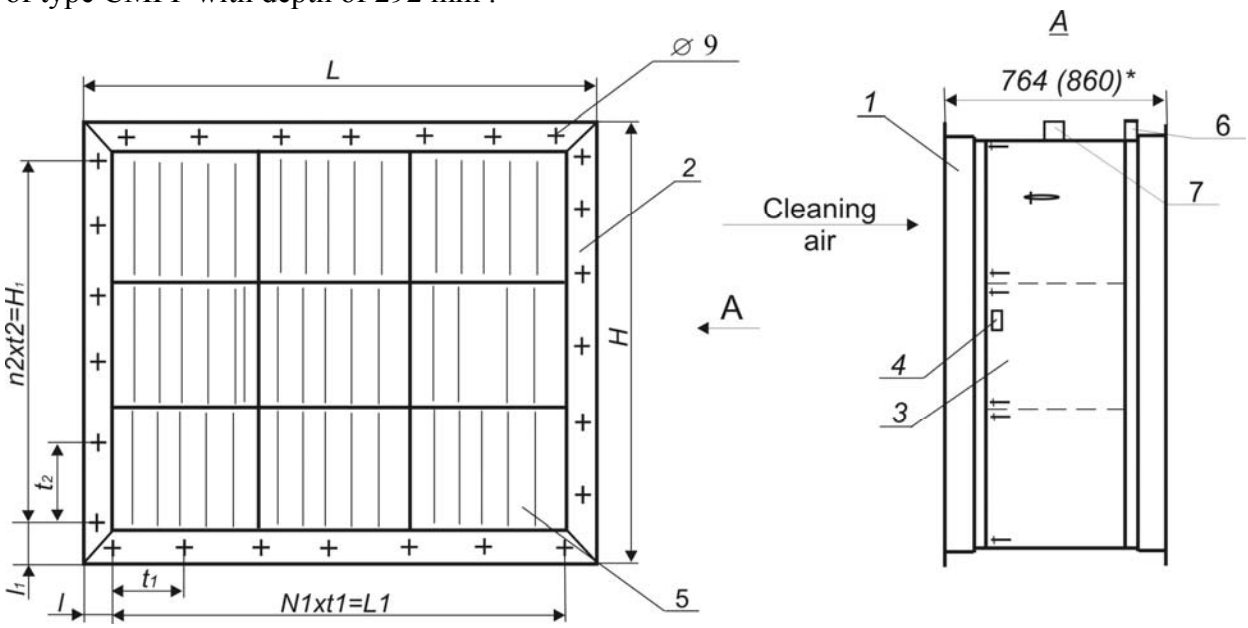

Fig. Scheme of the filtering chamber of type FCCF.
1 – body; 2 – flange; 3 – door; 4 – handle; 5 – filter ; 6,7 – pipe
*** size 764 mm is for section of type FCCF, size 860 mm is for filtering chamber FCCF (K)**

GENERAL DESIGN

The filtering chamber consists of a metal body 1 with flanges 2 at inlet and outlet for connecting to flanges of ventilating systems, by screwing through sealing rubber. On one of the sides the chamber has a door 3 which is sealed against the body, due to a special seal placed on it, and drawn in with clips 4.

Inside the body there are rows of filters, which are directed into the body by two guides, placed below each row.

The sealing of filters in body of FCCF is carried out by tightening them with bolts to “window" surfaces at the air outlet in filtering chamber FCCF.

NPP “Folter” 127238, Dmitrovskoye shosse, 46, k.2, Moscow, Russia
tel. +7 495 730-81-19, fax. +7 495 482-27-01, e-mail: folter@folter.ru
www.folter.ru

The filtering chamber FCCF has two connecting pipes 6 for attaching devices measuring filter pressure drop.

As it was mentioned before, by request, filtering chamber FCCF can be supplied with elements for installation and hermetic sealing of filters PF and CMPF for air pre-cleaning.

In this case the rows of filtering chamber FCCF(K) from above and from below at air input are supplemented with guides at which pocket filters PF (CMPF) are moved in after preliminary installation and sealing in the filtering chamber of filters CPF, HEF, HFMF-F, HFMF-H, CCF . The sealing of frames of filters PF or CMPF in the body guides is done by pressing them against the rubber seal pasted on a side of the guides. The sealing of filters PF to each other within the layer and to the back wall of FCCF(K) is carried out with the help of rubber seals, pasted on vertical faces of PF frames. In an index of filters PF (CMPF) for equipment of FCCF(K) the letter "G", designating presence of the aforementioned seal, is added. For the control of pressure drop of additional filters PF or CMPF, filtering chamber FCCF(K) is supplied with connecting pipe.

Filters for FCCF are delivered separately and are set up after installation of the filtering chamber in ventilation system.

CHARACTERISTICS

Table 1

Parameters	Dimen-sion	Value								
		Code FCCF								
		2/1x1	2/1x2	2/1x3	2/2x1	2/2x2	2/2x3	2/3x1	2/3x2	2/3x3
Nominal air flow for CPF and CCF	m^3/h	3500	7000	10500	7000	14000	21000	10500	21000	31500
for HEF		1900	3800	5700	3800	7600	11400	5700	11400	17100
For HFMF-F		5000	10000	15000	10000	20000	30000	15000	30000	45000
For HFMF-H(H13)		3200	6400	9600	6400	12800	19200	9600	19200	28800
Initial pressure drop for CPF classes: F6 F7 F8/9	Pa	100 120 140								
for CCF , Pa	Pa	130								
For HFMF-F classes F6 F7 F8 F9	Pa	110 140 170 240								
for HFMF (H13)	Pa	260								
for HEF classes, Pa: Basic /economic H11 H13 H14	Pa	100/75 230/190 340/250								
Number of filters HEF, CPF and CCF, HFMF		1	2	3	2	4	6	3	6	9
Recommended final pressure drop Pa for CPF, HFMF-F; HEF, HFMF-H	Pa	450 600								

DIMENSIONAL AND CONNECTING SIZES OF FILTERING CHAMBER FCCF, mm

Table 2

Code of FCCF	L	H	L_1	H_1	t_1	t_2	l	l_1	n	n_1	n_2	Weight without the filters, kg
2/1x1	660	697	600	570	200	190	30	63,5	32	3	3	32
2/1x2	691	1322	600	1200	200	200	46	61	44	3	6	90
2/1x3	691	1932	600	1840	200	185	46	41	60	3	10	108
2/2x1	1285	710	1200	640	200	160	43	35	48	6	4	70
2/2x2	1285	1322	1200	1200	200	200	43	61	56	6	6	115
2/2x3	1285	1932	1200	1850	200	185	43	41	72	6	10	150
2/3x1	1862	710	1800	640	200	160	31	35	60	9	4	96
2/3x2	1862	1322	1800	1200	200	200	31	61	68	9	6	146
2/3x3	1862	1932	1800	1840	200	185	31	41	84	9	10	190

MARKING

1. Examples of marking of filtering chamber FCCF, for installation of filters HEF, CPF, CCF, HFMF**:**

FCCF 2/3x1R(L)

2 - dimension type of filtering chamber;

3x1 - the number of filters (3 by width, 1 by height);

R - right version (the door is on the right on a course of air flow);

L - left version (the door is on the left on a course of air flow).

2. Examples of marking of filtering chamber FCCF(K) for installation of filters CPF, HEF, HFMF-F, HFMF-H, CCF (I step) , CMPF (II step)**:**

FCCF(K) 2/3x2R(L) F- filtering;

C – chamber;

C – compact;

F - filter;

(K) – filtering chamber is supplied with elements for installation of PF and CMPF filters of I clean step;

2 - dimension type of filtering chamber;

3x2 - the number of filters (3 by width, 2 by height);

R - right version (the door is on the right on a course of the air flow);

L - left version (the door is on the left on a course of the air flow).

NB: Filters are not included in the standard package of filtering chamber FCCF and are ordered separately with specifying type and class of cleaning.

MAINTENANCE

When filters are in operation it is necessary to control their pressure drop reading by a manometer attached to connecting pipes 6 of a section FCCF.

Upon reaching the reading of a pressure difference specified in the project, or based on a pressure in a ventilating system, it is necessary to replace filters.

Upon installation of additional I step of clean (filters PF or CMPF) the initial resistance of filtering chamber FCCF increases initial resistance value of filters of a corresponding class (see the catalogue of "NPP "Folter"). Final resistance of filters PF or CMPF is determined based on recommendations of the passport for filters PF CMPF or based on available pressure of ventilation system fan. After reaching the chosen final resistance of I clean step, filters PF, CMPF are replaced.

Replacement of filters I and II steps of clean installed simultaneously in filtering chamber FCCF(K) can be done with various time intervals, following recommendations of the chosen final resistance for each step, controlled by manometers attached to two connecting pipes 6 and connecting pipe 7.