

# Ion exchange pocket filters of type IPF

**Filters of type IPF** are used for cleaning of supply and recirculation air in general ventilation and air conditioning systems from gaseous and vapour contaminants of acidic and basic origin. Filters with anionexchange medium are intended for cleaning air from acidic gases and vapours: sulphur dioxide, hydrogen fluoride, hydrogen chloride, hydrogen bromide, nitrogen dioxide; chlorine, bromine, iodine molecular, chromic anhydride; vapours of acids: acetic and ant; aerosols of acids: sulphur, phosphorus, nitrogen.

Filters with cationexchange medium are intended for cleaning air from basic gases and vapours: ammonia, hydrozine, hydroxylamine organic amines: trimethylamine, dymethylamine, methylamine, polyamines (dyethylentriamine, ethylendyamine, dyethylentetramine) aerosols of bases and toxic soles: sodium hydroxide, lythium hydroxide, nickel chlorate, nickel sulphate, cadmium chlorate, cadmium sulphate.

It is recommended to use filters at low initial concentrations of gaseous contaminants. Filters of type IPF also provide cleaning of air from dust and fine-dispersed aerosols with the efficiency equal to F5 class.



**Fig. 1** Scheme of filter of type IPF

## GENERAL DESIGN

Filters (fig. 1) consist of metal framework 1 and the filter medium tailored as pockets 2. Opposite surfaces of pockets are strapped with limiters that prevent severe blowing and sticking of adjacent pockets. The metal framework can be performed of galvanized steel and of stainless steel as well in case of aggressive contaminants.

## CHARACTERISTICS

Table 1

Filter type	Nominal specific air flow, m <sup>3</sup> /hm <sup>2</sup>	Class of filter by, EN 779	Pressure drop, Pa	
			Initial	Recommended final
IPF	10000	F 5	115	450

The temperature of cleaning air must be within the range of - 40<sup>0</sup>C to + 40<sup>0</sup>C.

### DIMENSION-TYPES OF IPF FILTERS

Table 2

Dimensions at inlet area, mm			Nominal air flow, m <sup>3</sup> /h	Length of pockets L, mm
Width, B	Height, A	Digit(s) in index of filter IPF		
500	500	0	2500	600
287	592	1	1700	
592	592	2	3500	
490	287	3	1400	
490	592	4	2900	
305	610	5	1860	
610	610	6	3700	
592	892	7	5300	
287	892	8	1700	
490	892	9	4400	
287	287	01	800	
305	305	05	900	

### MAINTENANCE

When filters are in operation the saturation of chemisorbent fibers by captured gaseous pollutions occurs, and then it is necessary to replace filters. The lifetime depends on maintenance conditions and can be within 3 or 6 months.

In case of cleaning air, that contains both gaseous contaminants and solid aerosols it is reasonable to check changes of pressure drop in course of maintenance. On reaching the final pressure drop specified in Table 1, it is necessary to replace the filter, even when the service life is not over according to sorption capacity.

### MARKING

Sample notation:

Encoding: IPF 2 a (b)

2 – dimension type at inlet area of 592 \* 592mm

a – for cleaning of acidic gases and vapours

b – for cleaning of basic gases and vapours

