

# Automatic roll filter of type ARF

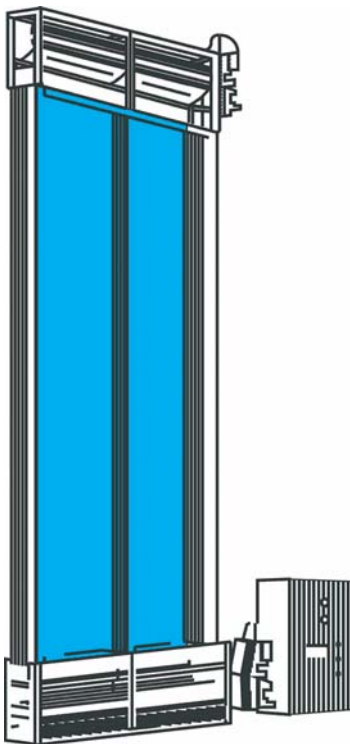
**Automatic roll filter** is used for cleaning of recirculation air from fibrous dust in systems of ventilation (air conditioning) at textile or in similar conditions. Filters can be mounted in apertures of filtering chambers.

## CHARACTERISTICS

Table 1

Filter type	Nominal air flow, 1000x m <sup>3</sup> /h	Pressure drop, Pa	Average air efficiency, % at pressure drop		Weight, kg	Dimensions, mm		
			to 150 Pa	to 300 Pa		height	width	depth
ARF12	125	50	75±5	90±5	660	4950	3840	280
ARF8	80				538	3450	3840	280
ARF6	63				512	2950	3840	280
ARF4	40				305	3450	2100	200
ARF3	31,5				292	2950	2100	200

## DESIGN AND OPERATION



Filters of five dimension types with various throughputs are unified and are assembled of two base sections with nominal air flow 31.5 thousand m<sup>3</sup>/h and 40 thousand m<sup>3</sup>/h. Filters ARF6 and ARF8 are assembled of two sections, set in parallel, filter ARF12 is assembled of four sections, set in two rows by height two sections in each in each row.

Unified sections represent frameworks with a base grid for filter media. There are reels on which the filter media is wound, above and below the sections outside the zone of air pass. In the bottom part of sections is slit sucker of dust and fluff which is connected to sucker fan with air lines. Accommodation, a choice of the sucker fan and lying of air lines to slit sucker away are developed at designing.

Switchgear of the filter is placed in a case of control station which is set up separately from the filter outside of filtering section.

Filter functions as follows. Under underpressure created by the fan of vent system (conditioner), air is drawn through filter medium. Dust and fluff contained in air are separated out on a surface of filter media, forming a loose fibrous layer which is additional of filter.

Filter resistance increases during the growth of a layer. To avoid significant decrease of system productivity, regeneration of the filter occurs at which the dust/fluff sucking system is on and rewind of a filter media from top reel to the bottom one begins. While moving, the filter media passes by the sucking slit and is cleaned of caught dust and fluff.

The interval between regenerations of filter is chosen depending on dust concentration and available system pressure and can be from a few minutes to 24 hours. The interval of regeneration is set up by time relay during balancing and commissioning.