

Air Vent Round (AVR/AVRC) Filter

- Style II without a hopper is ideally suited as a bin vent filter for storage tanks, work bins and surge hoppers
- Style III with a 60° hopper, the filter receives dust through the hopper inlet and discharges the collected dust through an airlock for dust disposal or recycling
- Filter receiver designed to receive product from a vacuum or pressure system and is a bottom bag removal filter



Application

Designed for heavy dust loads and for vacuum, pressure, and combination vacuum/pressure bulk pneumatic receiving and dust collection systems. Can be configured with an optional receiver. The AVR filter is a circular bodied pulse jet cleaned bag filter unit designed to handle low air volumes and higher pressure applications. It's also suitable for sites with low headroom, since the bottom-load bags are removed from the dirty side of the filter via an access door in the filter body.

The filter housing can be fitted with pleated cartridges (AVRC) to offer higher filtration efficiencies and more filter area.

Equipment

Dust laden air enters the AVR near the bottom of the unit. Rows of filter bags are mounted on a horizontal tubesheet and suspended in the filter housing. A remote fan on the exhaust side draws air through the filter. Filtered dust collects on the outside of the filter media, and falls into the hopper where it can be collected. Filtered air passes through the center of the filter bags and out through the clean air discharge at the top of the unit.

An air pulse cleaning system cleans the filter bags and dislodges filtered product so that it drops into the hopper. The cleaning system includes a compressed air manifold with a diaphragm valve and purge tube assembly centered above each row of filter bags. A pulse of compressed air is periodically directed downwards through the bag. The pulse flexes the filter bag, causing accumulated dust to be dislodged and fall to the hopper below.

The cleaning pulse is controlled by a solid state electronic timer which automatically sequences through the bank of filter bags, one row at a time, energizing a solenoid valve which controls the release of compressed air through the diaphragm valve. The timer can be set to operate at a pre-determined interval.

The pulse can also be controlled by a photohelic differential pressure gauge which responds to pressure differences across the filter. When controlled by the switch/gauge, cleaning occurs only when needed, decreasing air consumption and increasing filter bag life by avoiding unnecessary pulsing.

Air Vent Round (AVR/AVRC) Filter Dimensions

Model	Cloth Area (Sq. Ft.)	No. of Bags	Dimensions (inches)						
			A	B	C	D	E	F	G
18AVR7	13	7	28	28	17 9/16	40 3/4	90 3/8	20	8
36AVR7	30	7	28	40	17 9/16	40 3/4	102 3/8	22	8
54AVR7	46	7	28	58	17 9/16	40 3/4	120 3/8	30	8
72AVR7	63	7	28	76	17 9/16	40 3/4	138 3/8	38	8
18AVR14	27	14	40	28	26 1/4	51	104	20	10
36AVR14	60	14	40	40	26 1/4	51	116	22	10
54AVR14	93	14	40	58	26 1/4	51	134	30	10
72AVR14	127	14	40	76	26 1/4	51	152	38	10
96AVR14	172	14	40	100	26 1/4	51	176	48	10
36AVR21	90	21	47	40	32 5/16	57	122 13/16	22	10
54AVR21	140	21	47	58	32 5/16	57	140 13/16	30	10
72AVR21	191	21	47	76	32 5/16	57	158 13/16	38	10
96AVR21	258	21	47	100	32 5/16	57	182 13/16	48	10
54AVR32	214	32	60	58	43 9/16	68 1/4	153 11/16	30	10
72AVR32	291	32	60	76	43 9/16	68 1/4	171 11/16	38	10
96AVR32	393	32	60	100	43 9/16	68 1/4	195 11/16	48	10
54AVR39	261	39	66	58	48 3/4	73 1/2	159 13/16	30	10
72AVR39	354	39	66	76	48 3/4	73 1/2	177 13/16	38	10
96AVR39	479	39	66	100	48 3/4	73 1/2	201 13/16	48	10
72AVR52	473	52	72	76	54	78 5/8	183 11/16	38	10
96AVR52	639	52	72	100	54	78 5/8	207 11/16	48	10
72AVR62	564	62	84	76	62 5/8	89 1/4	195 15/16	38	12
96AVR62	761	62	84	100	62 5/8	89 1/4	219 15/16	48	12
72AVR80	728	80	93	76	67	97	204 7/8	38	16
96AVR80	983	80	93	100	67	97	228 7/8	48	16

Compressed air requirements

For most applications, 80 - 100 psi compressed air at the filter header is adequate for the proper cleaning of the filter bags. Pressures between 100 - 120 psi may be appropriate for some critical applications. Operations at pressures over 100 psi should be reviewed with Schenck Process filtration experts for recommendations. Compressed air pressures under 80 psi require special considerations in the design and sizing of the filter and should also be reviewed by Schenck Process.

