

**Examples of Airflow Degradation for Various Clean Filter
Types, Sizes, and Applications For a Major
Manufacturer's Nominal 2-Ton Air Handling Unit**

*The following information was obtained from published information and tests performed by Warren Technology for comparison purposes only to show the relative effect of various high resistance air filters on airflow. The initial degradation of airflow is for clean filters. The airflows obviously decrease even further as the filters become dirty.

Example 1: INTERNAL 20 X 15 FILTER RACK, Effective* Filter Face Velocity = 964 fpm

THICK	FILTER MFG/ TYPE	MERV	RELATIVE COST	CFM	SUPPLY DUCT SP	ESP	Effective Clean Filter Airflow Percentage
-	NO FILTER	-	-	870	.56	.56	-
1"	SPUN GLASS (by OEM)	2	\$1	800	.50	.72	92
1"	ACE PLEATED	4	\$4	630	.32	.85	72
1"	FILTRETE 1000 (ES)	11	\$8	680	.38	.90	78
1"	FILTRETE 1700	12	\$20	690	.39	.84	79
1"	FILTRETE 1250	11	\$12	720	.40	.78	83

* Effective opening to evaporator coil at filter rack is 7½ x 16 = 120 sq.in

Example 2: EXTERNAL 20 X 15 FILTER RACK, Filter Face Velocity = 384 fpm

THICK	FILTER MFG/ TYPE	MERV	RELATIVE COST	CFM	SUPPLY DUCT SP	ESP	Effective Clean Filter Airflow Percentage
-	NO FILTER	-	-	870	.56	.56	-
1"	SPUN GLASS (by OEM)	2	\$1	820	.51	.68	94
1"	ACE PLEATED	4	\$4	700	.38	.84	80
1"	FILTRETE 1000 (ES)	11	\$8	730	.42	.77	84
1"	FILTRETE 1700	12	\$20	740	.43	.75	85
1"	FILTRETE 1250	11	\$12	760	.44	.74	87

Example 3: Return Air Duct With 20 x 20 Filter Grille - Filter Face Velocity = 288 fpm

THICK	FILTER MFG/ TYPE	MERV	RELATIVE COST	CFM	SUPPLY DUCT SP	ESP	Effective Clean Filter Airflow Percentage
-	NO FILTER	-	-	850	.54	.54	-
1"	SPUN GLASS (by OEM)	2	\$1	830	.52	.60	98
1"	ACE PLEATED	4	\$4	760	.43	.70	89
1"	FILTRETE 1000 (ES)	11	\$8	770	.45	.69	91
1"	FILTRETE 1700	12	\$20	780	.46	.66	92
1"	FILTRETE 1250	11	\$12	790	.47	.62	93
5"	TRION AIR BEAR	11	\$20	820	.51	.64	96