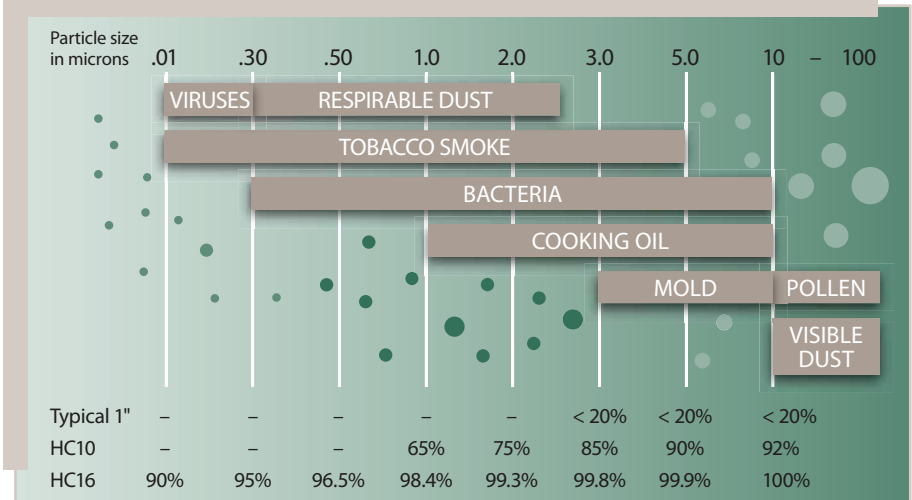# MERV Ratings Explained

Health experts estimate that 35 million Americans suffer from upper respiratory tract symptoms that are allergic reactions to airborne allergens.

Source: National Institute of Health

HEALTHY SOLUTIONS CLIMATE™

AIR CLEANER REMOVAL AIR EFFICIENCIES

Particle size in microns	.01	.30	.50	1.0	2.0	3.0	5.0	10 – 100
				VIRUSES / RESPIRABLE DUST				
			TOBACCO SMOKE					
				BACTERIA				
				COOKING OIL				
						MOLD	POLLEN	VISIBLE DUST
Typical 1"	–	–	–	–	–	< 20%	< 20%	< 20%
HC10	–	–	–	65%	75%	85%	90%	92%
HC16	90%	95%	96.5%	98.4%	99.3%	99.8%	99.9%	100%

1 Micron = 1/25,000 of an inch

MERV	0.3 - 1 Microns	1-3 Microns	3-10 Microns	Examples	Typical Applications
1*	0%	0%	less than 20 %	1" Disposable Filters	Residential Home
2*	0%	0%	less than 20%	"	"
3*	0%	0%	less than 20%	"	"
4*	0%	0%	less than 20%	"	"
5*	0%	0%	20-25%	"	Industrial Workplaces
6*	0%	0%	35-50%	1" Low Quality Pleated Filter	"
7*	0%	0%	50-70%	"	"
8**	0%	0%	70%	Healthy Climate 1" Pleated Filter	Commercial Bldgs
9**	0%	less than 50%	85% or greater	"	"
10**	0%	50-65%	85% or greater	Healthy Climate MERV10 Filter Box	"
11**	0%	65-80%	85% or greater		"
12**	0%	80% or greater	90% or greater		"
13***	less than 75%	90% or greater	90% or greater		Smoking Lounges
14***	75-85%	90% or greater	90% or greater		"
15***	85-95%	90% or greater	90% or greater		"
16***	95%	95% or greater	95% or greater	Healthy Climate MERV16 Filter Box	General Surgery
16+***	99.97%	99.97% or greater	99.97% or greater	Healthy Climate HEPA By-Pass Filter	Operating Rooms
Examples	Tobacco Smoke, Dust, Viruses	Bacteria & Pet Dander	Pollen & Mold Spores		

*MERV 1-7 Residential Homes/Commercial Buildings/Industrial Factories to protect equipment from damage
**MERV 8-12 Residential Homes/ Commercial Buildings to protect equipment efficiency
***MERV 13-16 Residential Homes/Commercial Buildings/Health Care Facilities to protect people.

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