What Difference Does It Make?

It's in the Filter Screen Mesh

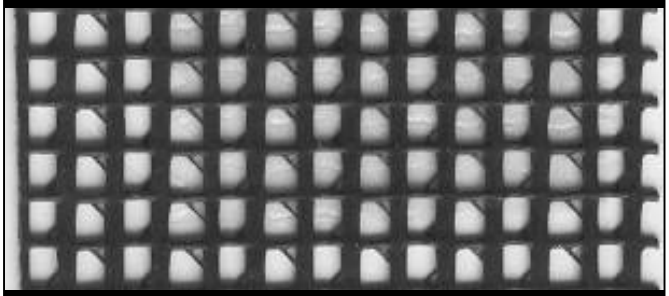
They are Not Equal: Not Even Close!

Permatron Prevent Model BHA

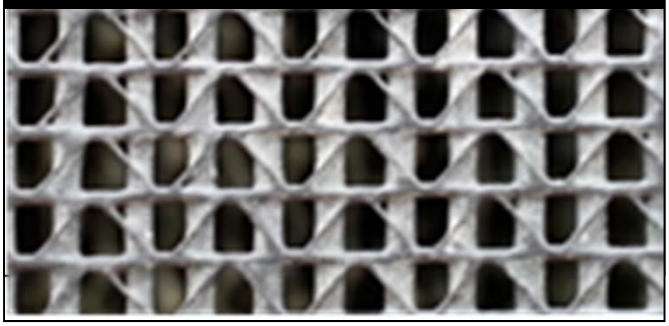
BHA = Black High Abrasion

Air Solution Company HD Comm Grade

Front Close-Up



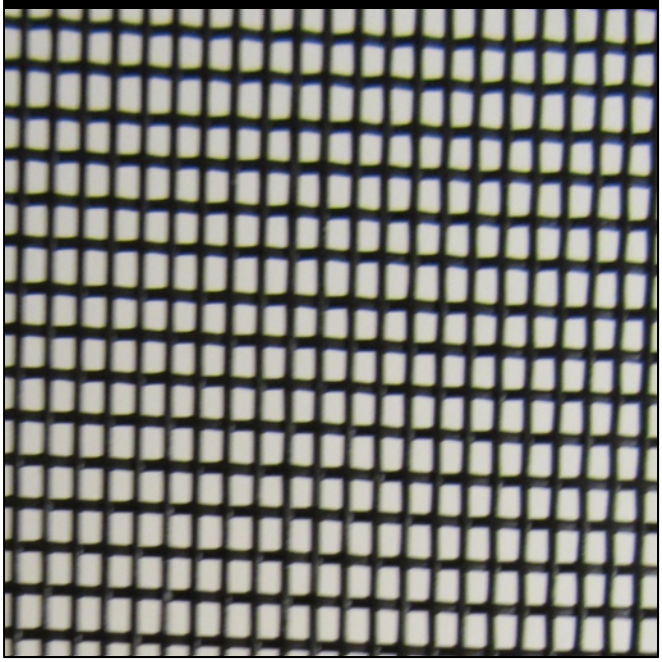
Back Close-Up



Not Woven, but Heat Pressed

(Diagonal members are added to stabilize fibers and keep from shifting)

Close-Up



Woven & Bonded at every intersection

(Ripstop & intersecting fibers do not impinge any debris, nothing sticks)

Authorized Representative for

Air Solution COMPANY

In Kansas & Missouri

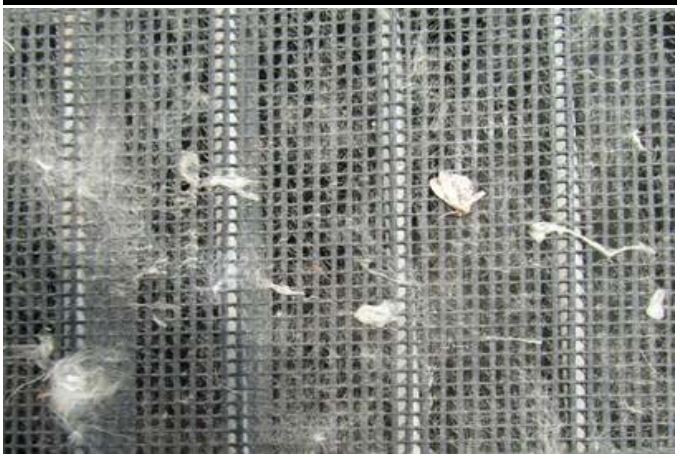
Cottonwood Filter Screens

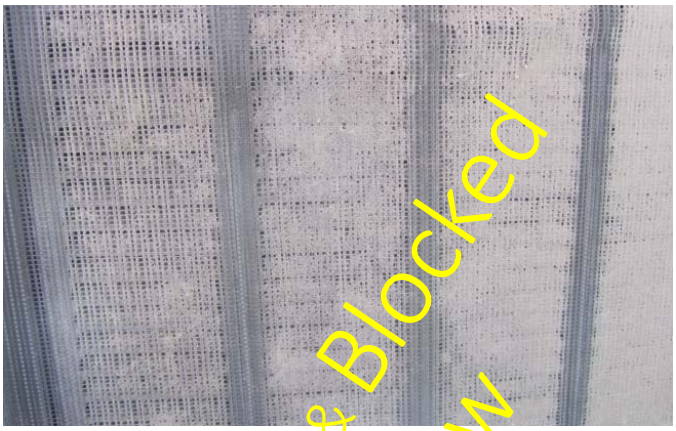
Helps mechanical equipment run clean & efficient all season long.

ePlus™ ENVIRONMENTAL SOLUTIONS LLC

The Difference = How They Load & Impact Airflow

Permatron Prevent
Model BHA





Air Solution Company
Heavy-Duty Commercial Grade

Non-Stick, Self-Cleaning Features

Non-Stick, Self-Cleaning Features

Authorized Representative for
Air Solution COMPANY
In Kansas & Missouri

Cottonwood Filter Screens

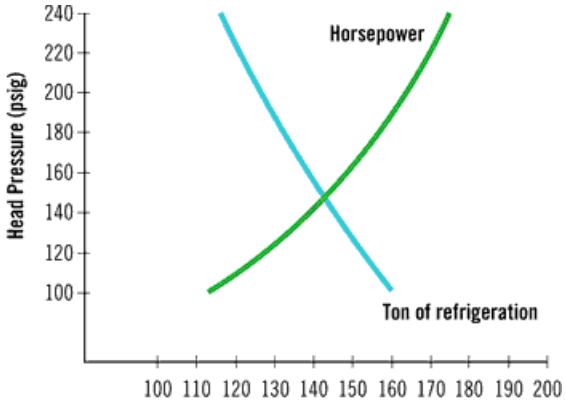
Helps mechanical equipment run clean & efficient all season long.

ePlus™ ENVIRONMENTAL SOLUTIONS LLC

What's at stake?

Here's the Results of Reduced Airflow

1. Reduced & Blocked Airflow = heat is not rejected, but remains in the system
2. Results in high head-pressure
3. Simultaneously cooling capacity is reduced, while energy consumption cost and runtime increase (*see charts*)
4. Unit operates with INCREASING INEFFICIENCY
5. Is compounded with higher summer OATs
6. Can result in RTU shutdown
7. Increases wear & tear on all mechanical components
8. Increases operating & maintenance costs
9. Can quickly lead to an expensive compressor failure
10. All of this is quite detrimental to the building owner, occupants & equipment warranty



Power Rate $/kWh

Head pressure (psig) above optimum	.03	.04	.05	.06
20	2,540	3,387	4,234	5,081
10	1,270	1,694	2,117	2,540
8	1,016	1,355	1,693	2,032
6	762	1,016	1,270	1,524
4	508	677	846	1,016
2	254	338	423	508
Optimum				

The Truth About Magnetic Fasteners

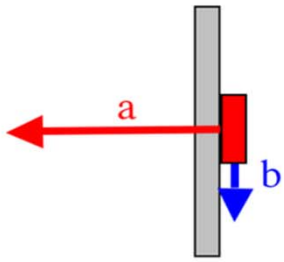
supermagnete

- FAQ
- Adhesive Force Calculation
- Safety Tips
- Physical Magnet Data
- Magnetism A - Z
- Videos
- About Us

Holding strength parallel to the contact surface: shear force / moving force

In many applications the holding strength acts **parallel to the contact surface**, for instance, when you put a knife on a magnetic knife rack. In these cases the magnet can be loaded much less than the indicated maximum adhesive force.

Due to varying surface features of the object that we don't know about, we can only offer a rough rule of thumb regarding the maximum holding strength parallel to the contact surface.



a = Magnetic adhesive force
b = Maximum holding strength

b = shear force / moving force / holding strength

Rules of thumb shear force / shifting force

Magnet material	Material combination	Magnetic adhesive force (a)	Holding strength (b)
Neodymium magnets	Iron - Iron	100%	approx. 15%
Ferrite magnets	Iron - Iron	100%	approx. 15%
Magnetic tapes and sheets	Plastic - Iron	100%	approx. 25%

Example: On a wall-hanging hook magnet FTN-40 (material: neodymium) with an max. adhesive force of 50 kg you can hang approx. 7,5 kg weights before the magnet starts sliding down the wall.

National Certified Testing Labs

Ensewiler Formula, P (lbs. of force) = V^2 X 0.00256

Peak Gust Wind Velocities (MPH)	Peak Gust Squared	Lbs. of Force/SF (V)	Moving Force (X)	Notes on Wind Strength
5	25	0.1	0.0	
10	100	0.3	0.1	
15	225	0.6	0.3	
20	400	1.0	0.5	**Tested movement began here**
25	625	1.6	0.7	
26	676	1.7	0.8	
27	729	1.9	0.8	
28	784	2.0	0.9	
29	**841**	**2.2**	**1.0**	**Movement**
30	**900**	**2.3**	**1.0**	**Begins Here**
31	961	2.5	1.1	
32	1024	2.6	1.2	
33	1089	2.8	1.3	
34	1156	3.0	1.3	
35	1225	3.1	1.4	
36	1296	3.3	1.5	
37	1369	3.5	1.6	
38	1444	3.7	1.7	
39	1521	3.9	1.8	
40	1600	4.1	1.9	F-0 Tornado
41	1681	4.3	2.0	
42	1764	4.5	2.1	
43	1849	4.7	2.2	
44	1936	5.0	2.3	
46	2116	5.4	2.5	
47	2209	5.7	2.6	
49	2401	6.1	2.8	
51	2601	6.7	3.0	

Peak Gust Wind Velocities (MPH)	Peak Gust Squared	Lbs. of Force/SF (V)	Moving Force (X)	Notes on Wind Strength
52	2704	6.9	3.1	
53	2809	7.2	3.3	
54	2916	7.5	3.4	
55	3025	7.7	3.5	
56	3136	8.0	3.6	
58	3364	8.6	3.9	
59	3481	8.9	4.1	
60	**3600**	**9.2**	**4.2**	KCMO Avg.
62	3844	9.8	4.5	
63	3969	10.2	4.6	
67	4489	11.5	5.2	
68	4624	11.8	5.4	
68	4624	11.8	5.4	
70	4900	12.5	5.7	
71	5041	12.9	5.9	
72	5184	13.3	6.0	
73	5329	13.6	6.2	F-1 Tornado
74	5476	14.0	6.4	
75	5625	14.4	6.5	
80	6400	16.4	7.4	
85	7225	18.5	8.4	
90	8100	20.7	9.4	
95	9025	23.1	10.5	
100	10000	25.6	11.6	
101	10201	26.1	11.9	
110	12100	31.0	14.1	
113	12769	32.7	14.9	F-2 Tornado
158	24964	63.9	29.0	F-3 Tornado
207	42849	109.7	49.9	F-4 Tornado
261	68121	174.4	79.3	F-5 Tornado

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November 1998

CLIMATIC WIND DATA FOR THE UNITED STATES

The climatic wind data contained in this summary was extracted from the NCDC's Local Climatological Data publication, Navy & Air Force climatic briefs, and other sources. Locations are not all inclusive and wind data may be available for sites not listed in this summary. The total period of this summary is 1930-1996. The period of record (POR) for which wind data is summarized varies for individual sites and may begin and end at any time during the 1930-1996 period. All available wind data is provided regardless of POR or source. Updated data for many sites can be obtained from post 1996 Local Climatological Data annual publications.
In the table, prevailing wind directions (DIR) are given in compass points; mean wind speeds (SPD) and peak gust (PGU) are in miles per hour (mph). When peak gust (PGU) wind velocities are not available, fastest-mile or 5-second winds may be substituted. This will be indicated by a $ for fastest-mile and # for 5-second winds preceding PGU (ie: $PGU = fastest-mile winds). Wind types may be combined to reflect the highest reported wind. When appropriate wind data is not available, an N/A will appear in lieu of data.
Conversion tables of miles per hour to knots and compass points to degrees are provided at the end of this wind table.

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		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
KANSAS														
Concordia	DIR	N	N	N	N	N	N	S	S	S	S	S	S	S
	SPD	12	12	14	14	12	11	11	11	12	12	12	12	12
	#PGU	60	52	54	64	45	62	67	47	51	57	48	45	67
Dodge City	DIR	NNW	NNW	NNW	N	N	N	S	S	S	S	S	S	S
	SPD	11	11	12	12	11	11	10	10	11	10	11	11	11
	#PGU	66	57	48	61	54	70	79	75	59	54	53	49	79
Goodland	DIR	W	NNW	NNW	NNW	SSE	SSE	SSE	SSE	S	NNW	NNW	NNW	SSE
	SPD	13	13	14	14	14	13	12	11	12	12	12	12	13
	#PGU	64	51	53	54	96	51	71	92	46	60	56	62	96
Topeka	DIR	N	N	N	N	N	N	N	N	N	N	N	N	N
	SPD	10	10	12	12	10	10	9	8	9	9	10	10	10
	#PGU	49	47	43	47	51	66	62	65	40	52	45	41	66
Wichita	DIR	N	N	N	N	N	N	N	N	S	S	S	S	N
	SPD	10	10	11	11	9	9	9	8	9	9	10	10	9
	#PGU	59	49	49	58	53	59	101	63	46	53	54	44	101
MISSOURI														
Columbia	DIR	WNW	WNW	WNW	S	S	S	S	S	S	S	S	WNW	S
	SPD	11	11	12	12	9	9	8	8	9	10	11	11	10
	PGU	53	63	66	69	58	95	64	62	54	59	51	55	95
Kansas City	DIR	SSW	SSW	S	S	S	S	S	S	S	S	S	S	S
	SPD	11	11	12	12	10	10	9	9	10	11	11	11	11
	PGU	58	56	63	62	59	67	75	54	63	60	52	55	75
St. Louis	DIR	WNW	WNW	WNW	WNW	S	S	S	S	S	SSE	WNW	WNW	WNW
	SPD	11	11	12	11	9	9	8	7	8	9	10	10	10
	PGU	53	66	66	71	62	60	72	53	49	58	64	55	72
Springfield	DIR	SSE	SSE	SSE	SSE	SSE	S	S	SSE	SSE	SSE	SSE	SSE	SSE
	SPD	12	12	13	12	10	10	9	9	9	10	11	11	11
	PGU	48	52	52	53	49	61	72	59	49	48	53	48	72