

Louvres

Sand trap louvres



AG 644 - Aluminium



Advantages

- Separates dust and sand from air.
- AMCA Certified performances.

Aldes Middle East FZE certifies that Sand Louver AG 644 shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to Wind Driven Sand and Air Performance ratings.

DESCRIPTION

- Used as prefilter for the protection of air-conditioning plants in areas exposed to extreme levels of industrial pollution.
- High degree of separation of sand and large dust concentrations.
- The vertically arranged sections and holes for sand drainage ensure that the sand trap louver is self cleaning and maintenance free.

CONSTRUCTION

- Sand trap louvres with vertical slots designed to separate dust and sand from air stream.
- Extruded aluminium frame (1.5 mm or 2.0 mm) and blade (1.5 mm), code AG 644.
- Minimum single section size: 300 x 300 mm
- Maximum single section size: 2450 x 2000 mm
- Larger sizes manufactured in multiple section for assembly at site.

AVAILABLE OPTIONS

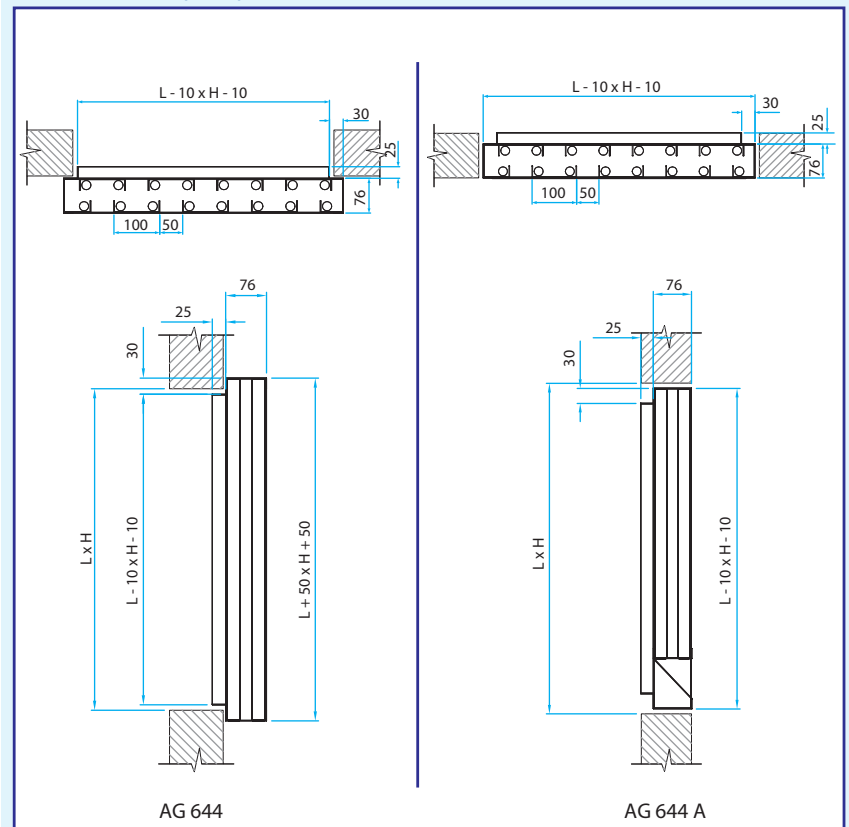
- Flush mounted sand trap louvre, code AG 644A.
- Frame and baffles are made from 18 ga. galvanized steel, code SG 644
- Insect mesh in galvanized steel, code I.
- Insect mesh in stainless steel, code IS.
- Bird mesh in galvanized steel, code T
- Bird mesh in stainless steel, code TS.
- Powder coated to RAL colour, code Z.
- PVC coated bird mesh - PT.
- Filter - FT.

RANGE

Type	Description	Code
*AG 644	Sand trap louvre with frame and baffles made from aluminium	
SG 644	Sand trap louvre with frame and baffles made from GI	
EG 644	Sand trap louvre with frame and baffles made from SS (grade 304)	
AG 644A	Sand trap louvre with sand chute - aluminium construction	
SG 644A	Sand trap louvre with sand chute - GI construction	
EG 644A	Sand trap louvre with sand chute - SS (grade 304) construction	

* Only AG 644 has AMCA Certified Air Performance & Wind Driven Sand Performance.

DIMENSIONS (mm)



Annex H (AMCA 500-L-12)

The sand used throughout the wind driven sand test procedure shall be dry and conform to a mixture of the nine size gradings specified in Table 8.

Table 8
Requirements for Standard Test Sand

Grade (μm)	Mass (%)
>699	0.5
423-699	3.0
353-422	12.0
251-352	30.0
211-250	20.0
152-210	27.0
104-151	6.0
76-103	1.0
<76	0.5

The specifications shown in Table 8 match very closely to desert type sand and dust and illustrates an overall grade.

Louvres

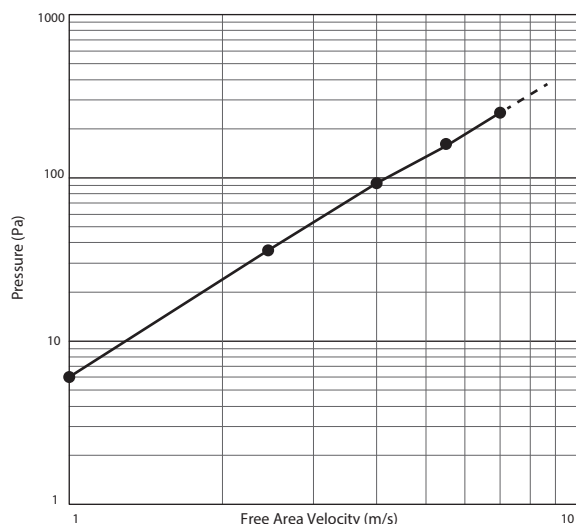
Engineering & Performance Data

FREE AREA CHART - AG 644

Height (H)	Width (W)														
	12 in. 300 mm	18 in. 450 mm	24 in. 600 mm	30 in. 750 mm	36 in. 900 mm	42 in. 1050 mm	48 in. 1200 mm	54 in. 1350 mm	60 in. 1500 mm	66 in. 1650 mm	72 in. 1800 mm	80 in. 2000 mm	84 in. 2150 mm	90 in. 2300 mm	96 in. 2450 mm
12 in.	0.134 ft ²	0.268 ft ²	0.402 ft ²	0.541 ft ²	0.681 ft ²	0.821 ft ²	0.961 ft ²	1.101 ft ²	1.242 ft ²	1.382 ft ²	1.522 ft ²	1.664 ft ²	1.802 ft ²	1.943 ft ²	2.083 ft ²
300 mm	0.012 m ²	0.024 m ²	0.037 m ²	0.049 m ²	0.062 m ²	0.075 m ²	0.088 m ²	0.100 m ²	0.113 m ²	0.126 m ²	0.139 m ²	0.152 m ²	0.164 m ²	0.177 m ²	0.190 m ²
18 in.	0.217 ft ²	0.434 ft ²	0.652 ft ²	0.877 ft ²	1.105 ft ²	1.332 ft ²	1.560 ft ²	1.787 ft ²	2.015 ft ²	2.242 ft ²	2.469 ft ²	2.700 ft ²	2.924 ft ²	3.152 ft ²	3.379 ft ²
450 mm	0.020 m ²	0.040 m ²	0.059 m ²	0.080 m ²	0.101 m ²	0.122 m ²	0.142 m ²	0.163 m ²	0.184 m ²	0.205 m ²	0.225 m ²	0.246 m ²	0.267 m ²	0.288 m ²	0.308 m ²
24 in.	0.301 ft ²	0.601 ft ²	0.902 ft ²	1.214 ft ²	1.529 ft ²	1.843 ft ²	2.158 ft ²	2.473 ft ²	2.788 ft ²	3.102 ft ²	3.417 ft ²	3.736 ft ²	4.046 ft ²	4.361 ft ²	4.676 ft ²
600 mm	0.027 m ²	0.055 m ²	0.082 m ²	0.111 m ²	0.140 m ²	0.168 m ²	0.197 m ²	0.226 m ²	0.254 m ²	0.283 m ²	0.312 m ²	0.341 m ²	0.369 m ²	0.398 m ²	0.427 m ²
30 in.	0.384 ft ²	0.768 ft ²	1.152 ft ²	1.551 ft ²	1.953 ft ²	2.355 ft ²	2.757 ft ²	3.159 ft ²	3.561 ft ²	3.963 ft ²	4.364 ft ²	4.773 ft ²	5.168 ft ²	5.570 ft ²	5.972 ft ²
750 mm	0.035 m ²	0.070 m ²	0.105 m ²	0.142 m ²	0.178 m ²	0.215 m ²	0.252 m ²	0.288 m ²	0.325 m ²	0.362 m ²	0.399 m ²	0.436 m ²	0.472 m ²	0.509 m ²	0.545 m ²
36 in.	0.467 ft ²	0.934 ft ²	1.402 ft ²	1.887 ft ²	2.376 ft ²	2.866 ft ²	3.355 ft ²	3.844 ft ²	4.333 ft ²	4.823 ft ²	5.312 ft ²	5.809 ft ²	6.291 ft ²	6.780 ft ²	7.269 ft ²
900 mm	0.043 m ²	0.085 m ²	0.128 m ²	0.172 m ²	0.217 m ²	0.262 m ²	0.306 m ²	0.351 m ²	0.396 m ²	0.440 m ²	0.485 m ²	0.531 m ²	0.575 m ²	0.619 m ²	0.664 m ²
42 in.	0.551 ft ²	1.101 ft ²	1.652 ft ²	2.224 ft ²	2.800 ft ²	3.377 ft ²	3.953 ft ²	4.530 ft ²	5.106 ft ²	5.683 ft ²	6.260 ft ²	6.845 ft ²	7.413 ft ²	7.989 ft ²	8.566 ft ²
1050 mm	0.050 m ²	0.101 m ²	0.151 m ²	0.203 m ²	0.256 m ²	0.308 m ²	0.361 m ²	0.414 m ²	0.466 m ²	0.519 m ²	0.572 m ²	0.625 m ²	0.677 m ²	0.730 m ²	0.782 m ²
48 in.	0.634 ft ²	1.268 ft ²	1.902 ft ²	2.560 ft ²	3.224 ft ²	3.888 ft ²	4.552 ft ²	5.216 ft ²	5.879 ft ²	6.543 ft ²	7.207 ft ²	7.881 ft ²	8.535 ft ²	9.198 ft ²	9.862 ft ²
1200 mm	0.058 m ²	0.116 m ²	0.174 m ²	0.234 m ²	0.295 m ²	0.355 m ²	0.416 m ²	0.477 m ²	0.537 m ²	0.598 m ²	0.658 m ²	0.720 m ²	0.780 m ²	0.840 m ²	0.901 m ²
54 in.	0.717 ft ²	1.434 ft ²	2.152 ft ²	2.897 ft ²	3.648 ft ²	4.399 ft ²	5.150 ft ²	5.901 ft ²	6.652 ft ²	7.403 ft ²	8.155 ft ²	8.917 ft ²	9.657 ft ²	10.408 ft ²	11.159 ft ²
1350 mm	0.066 m ²	0.131 m ²	0.197 m ²	0.265 m ²	0.333 m ²	0.402 m ²	0.471 m ²	0.539 m ²	0.608 m ²	0.676 m ²	0.745 m ²	0.815 m ²	0.882 m ²	0.951 m ²	1.020 m ²
60 in.	0.801 ft ²	1.601 ft ²	2.402 ft ²	3.234 ft ²	4.072 ft ²	4.910 ft ²	5.749 ft ²	6.587 ft ²	7.425 ft ²	8.264 ft ²	9.102 ft ²	9.953 ft ²	10.779 ft ²	11.617 ft ²	12.455 ft ²
1500 mm	0.073 m ²	0.146 m ²	0.219 m ²	0.295 m ²	0.372 m ²	0.449 m ²	0.525 m ²	0.602 m ²	0.679 m ²	0.755 m ²	0.832 m ²	0.910 m ²	0.985 m ²	1.062 m ²	1.138 m ²
66 in.	0.884 ft ²	1.768 ft ²	2.652 ft ²	3.570 ft ²	4.496 ft ²	5.421 ft ²	6.347 ft ²	7.273 ft ²	8.198 ft ²	9.124 ft ²	10.050 ft ²	10.989 ft ²	11.901 ft ²	12.826 ft ²	13.752 ft ²
1650 mm	0.081 m ²	0.162 m ²	0.242 m ²	0.326 m ²	0.411 m ²	0.495 m ²	0.580 m ²	0.665 m ²	0.749 m ²	0.834 m ²	0.918 m ²	1.004 m ²	1.088 m ²	1.172 m ²	1.257 m ²
72 in.	0.967 ft ²	1.934 ft ²	2.902 ft ²	3.907 ft ²	4.920 ft ²	5.933 ft ²	6.946 ft ²	7.958 ft ²	8.971 ft ²	9.984 ft ²	10.997 ft ²	12.025 ft ²	13.023 ft ²	14.036 ft ²	15.049 ft ²
1800 mm	0.088 m ²	0.177 m ²	0.265 m ²	0.357 m ²	0.450 m ²	0.542 m ²	0.635 m ²	0.727 m ²	0.820 m ²	0.912 m ²	1.005 m ²	1.099 m ²	1.190 m ²	1.283 m ²	1.375 m ²
80 in.	1.078 ft ²	2.157 ft ²	3.235 ft ²	4.356 ft ²	5.485 ft ²	6.614 ft ²	7.743 ft ²	8.873 ft ²	10.002 ft ²	11.131 ft ²	12.260 ft ²	13.407 ft ²	14.519 ft ²	15.648 ft ²	16.777 ft ²
2000 mm	0.099 m ²	0.197 m ²	0.296 m ²	0.398 m ²	0.501 m ²	0.605 m ²	0.708 m ²	0.811 m ²	0.914 m ²	1.017 m ²	1.121 m ²	1.225 m ²	1.327 m ²	1.430 m ²	1.533 m ²

PERFORMANCE DATA - AG 644 (AMCA Certified)

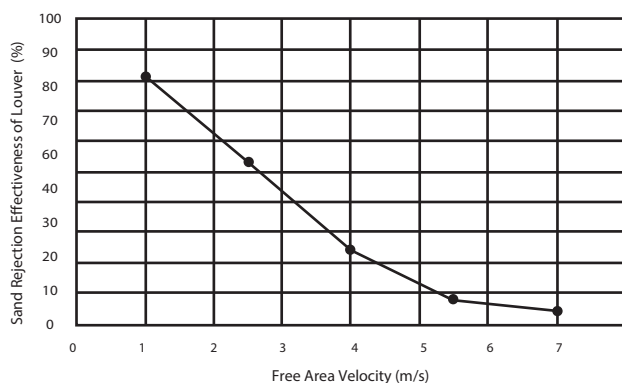
Air Performance



AMCA Standard 500-L Intake Test
Figure 5.5 setup for size 48" x 48"
Data is corrected to standard air density

Sand Rejection Performance

Free Area Velocity (m/s)	1	2.5	4	5.5	7
Effectiveness (%)	81	53	24	8	4
Penetration Class	B	D	D	D	D



AMCA Standard 500-L Wind Driven Sand Performance Test
Figure 5.12 setup for size 48" x 48"
Data is corrected to standard air density

Louvres

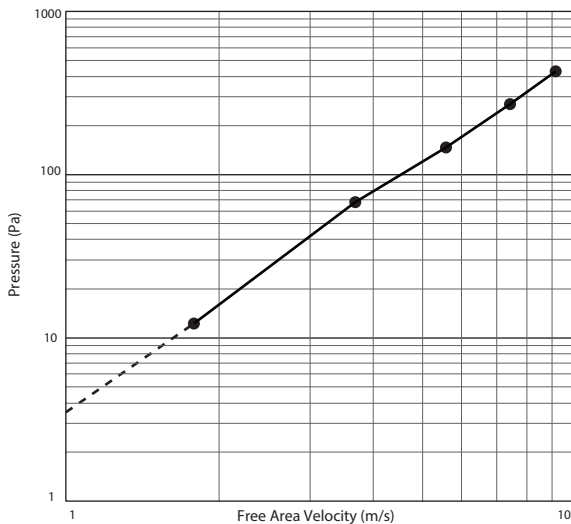
Engineering & Performance Data

FREE AREA CHART - AG 644A

Height (H)	Width (W)														
	12 in. 300 mm	18 in. 450 mm	24 in. 600 mm	30 in. 750 mm	36 in. 900 mm	42 in. 1050 mm	48 in. 1200 mm	54 in. 1350 mm	60 in. 1500 mm	66 in. 1650 mm	72 in. 1800 mm	80 in. 2000 mm	84 in. 2150 mm	90 in. 2300 mm	96 in. 2450 mm
12 in. 300 mm	0.155 ft ² 0.014 m ²	0.289 ft ² 0.026 m ²	0.422 ft ² 0.038 m ²	0.562 ft ² 0.051 m ²	0.702 ft ² 0.064 m ²	0.842 ft ² 0.077 m ²	0.982 ft ² 0.089 m ²	1.122 ft ² 0.102 m ²	1.263 ft ² 0.115 m ²	1.403 ft ² 0.128 m ²	1.543 ft ² 0.141 m ²	1.685 ft ² 0.153 m ²	1.823 ft ² 0.166 m ²	1.963 ft ² 0.179 m ²	2.104 ft ² 0.192 m ²
18 in. 450 mm	0.251 ft ² 0.023 m ²	0.468 ft ² 0.043 m ²	0.686 ft ² 0.063 m ²	0.911 ft ² 0.083 m ²	1.139 ft ² 0.104 m ²	1.366 ft ² 0.125 m ²	1.594 ft ² 0.145 m ²	1.821 ft ² 0.166 m ²	2.049 ft ² 0.187 m ²	2.276 ft ² 0.208 m ²	2.503 ft ² 0.228 m ²	2.734 ft ² 0.249 m ²	2.958 ft ² 0.270 m ²	3.186 ft ² 0.291 m ²	3.413 ft ² 0.311 m ²
24 in. 600 mm	0.347 ft ² 0.032 m ²	0.648 ft ² 0.059 m ²	0.949 ft ² 0.087 m ²	1.261 ft ² 0.115 m ²	1.576 ft ² 0.144 m ²	1.890 ft ² 0.173 m ²	2.205 ft ² 0.201 m ²	2.520 ft ² 0.230 m ²	2.835 ft ² 0.259 m ²	3.149 ft ² 0.287 m ²	3.464 ft ² 0.316 m ²	3.783 ft ² 0.345 m ²	4.093 ft ² 0.374 m ²	4.408 ft ² 0.402 m ²	4.723 ft ² 0.431 m ²
30 in. 750 mm	0.444 ft ² 0.041 m ²	0.828 ft ² 0.076 m ²	1.212 ft ² 0.111 m ²	1.611 ft ² 0.147 m ²	2.013 ft ² 0.184 m ²	2.415 ft ² 0.220 m ²	2.817 ft ² 0.257 m ²	3.218 ft ² 0.294 m ²	3.620 ft ² 0.331 m ²	4.022 ft ² 0.367 m ²	4.424 ft ² 0.404 m ²	4.833 ft ² 0.441 m ²	5.228 ft ² 0.477 m ²	5.630 ft ² 0.514 m ²	6.032 ft ² 0.551 m ²
36 in. 900 mm	0.540 ft ² 0.049 m ²	1.007 ft ² 0.092 m ²	1.475 ft ² 0.135 m ²	1.960 ft ² 0.179 m ²	2.449 ft ² 0.224 m ²	2.939 ft ² 0.268 m ²	3.428 ft ² 0.313 m ²	3.917 ft ² 0.358 m ²	4.406 ft ² 0.402 m ²	4.896 ft ² 0.447 m ²	5.385 ft ² 0.492 m ²	5.882 ft ² 0.537 m ²	6.364 ft ² 0.581 m ²	6.853 ft ² 0.626 m ²	7.342 ft ² 0.671 m ²
42 in. 1050 mm	0.637 ft ² 0.058 m ²	1.187 ft ² 0.108 m ²	1.738 ft ² 0.159 m ²	2.310 ft ² 0.211 m ²	2.886 ft ² 0.264 m ²	3.463 ft ² 0.316 m ²	4.039 ft ² 0.369 m ²	4.616 ft ² 0.422 m ²	5.192 ft ² 0.474 m ²	5.769 ft ² 0.527 m ²	6.346 ft ² 0.580 m ²	6.931 ft ² 0.633 m ²	7.499 ft ² 0.685 m ²	8.075 ft ² 0.738 m ²	8.652 ft ² 0.790 m ²
48 in. 1200 mm	0.733 ft ² 0.067 m ²	1.367 ft ² 0.125 m ²	2.001 ft ² 0.183 m ²	2.659 ft ² 0.243 m ²	3.323 ft ² 0.304 m ²	3.987 ft ² 0.364 m ²	4.651 ft² 0.425 m²	5.315 ft ² 0.486 m ²	5.978 ft ² 0.546 m ²	6.642 ft ² 0.607 m ²	7.306 ft ² 0.668 m ²	7.980 ft ² 0.729 m ²	8.634 ft ² 0.789 m ²	9.297 ft ² 0.849 m ²	9.961 ft ² 0.910 m ²
54 in. 1350 mm	0.829 ft ² 0.076 m ²	1.546 ft ² 0.141 m ²	2.264 ft ² 0.207 m ²	3.009 ft ² 0.275 m ²	3.760 ft ² 0.344 m ²	4.511 ft ² 0.412 m ²	5.262 ft ² 0.481 m ²	6.013 ft ² 0.549 m ²	6.764 ft ² 0.618 m ²	7.516 ft ² 0.687 m ²	8.267 ft ² 0.755 m ²	9.029 ft ² 0.825 m ²	9.769 ft ² 0.893 m ²	10.520 ft ² 0.961 m ²	11.271 ft ² 1.030 m ²
60 in. 1500 mm	0.926 ft ² 0.085 m ²	1.726 ft ² 0.158 m ²	2.527 ft ² 0.231 m ²	3.359 ft ² 0.307 m ²	4.197 ft ² 0.384 m ²	5.035 ft ² 0.460 m ²	5.874 ft ² 0.537 m ²	6.712 ft ² 0.613 m ²	7.550 ft ² 0.690 m ²	8.389 ft ² 0.767 m ²	9.227 ft ² 0.843 m ²	10.078 ft ² 0.921 m ²	10.904 ft ² 0.996 m ²	11.742 ft ² 1.073 m ²	12.580 ft ² 1.150 m ²
66 in. 1650 mm	1.022 ft ² 0.093 m ²	1.906 ft ² 0.174 m ²	2.790 ft ² 0.255 m ²	3.708 ft ² 0.339 m ²	4.634 ft ² 0.423 m ²	5.560 ft ² 0.508 m ²	6.485 ft ² 0.593 m ²	7.411 ft ² 0.677 m ²	8.336 ft ² 0.762 m ²	9.262 ft ² 0.846 m ²	10.188 ft ² 0.931 m ²	11.127 ft ² 1.017 m ²	12.039 ft ² 1.100 m ²	12.964 ft ² 1.185 m ²	13.890 ft ² 1.269 m ²
72 in. 1800 mm	1.118 ft ² 0.102 m ²	2.086 ft ² 0.191 m ²	3.053 ft ² 0.279 m ²	4.058 ft ² 0.371 m ²	5.071 ft ² 0.463 m ²	6.084 ft ² 0.556 m ²	7.097 ft ² 0.649 m ²	8.110 ft ² 0.741 m ²	9.122 ft ² 0.834 m ²	10.135 ft ² 0.926 m ²	11.148 ft ² 1.019 m ²	12.176 ft ² 1.113 m ²	13.174 ft ² 1.204 m ²	14.187 ft ² 1.297 m ²	15.200 ft ² 1.389 m ²
80 in. 2000 mm	1.247 ft ² 0.114 m ²	2.325 ft ² 0.213 m ²	3.403 ft ² 0.311 m ²	4.524 ft ² 0.413 m ²	5.653 ft ² 0.517 m ²	6.783 ft ² 0.620 m ²	7.912 ft ² 0.723 m ²	9.041 ft ² 0.826 m ²	10.170 ft ² 0.930 m ²	11.300 ft ² 1.033 m ²	12.429 ft ² 1.136 m ²	13.575 ft ² 1.241 m ²	14.687 ft ² 1.342 m ²	15.817 ft ² 1.446 m ²	16.946 ft ² 1.549 m ²

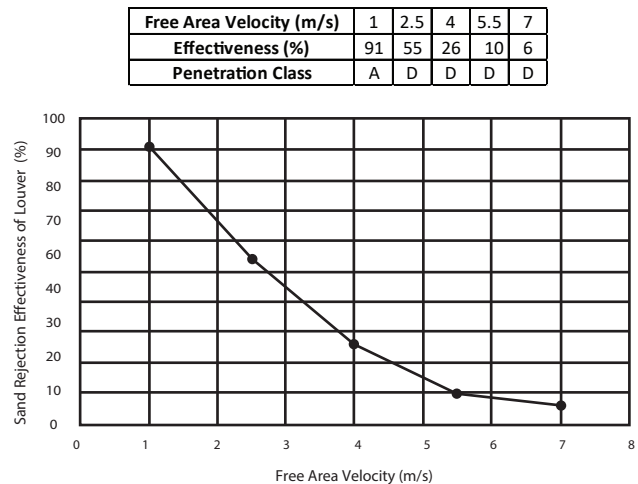
PERFORMANCE DATA - AG 644A

Air Performance



AMCA Standard 500-L Intake Test
Figure 5.5 setup for size 48" x 48"
Data is corrected to standard air density

Sand Rejection Performance



AMCA Standard 500-L Wind Driven Sand Performance Test
Figure 5.12 setup for size 48" x 48"
Data is corrected to standard air density