

# HZ700

Extreme Performance Louver  
AMCA 540/AMCA 550



## APPLICATION

The HZ700 is a double frame extreme performance louver. Its two-piece blade design provides protection from wind-driven rain penetration, reducing damage and additional operating expenses. The HZ700 has visible mullion construction featuring horizontal front blade design for architecturally pleasing aesthetics.

## STANDARD CONSTRUCTION

<b>Frame</b>	Double frame design produced from 6063T6 extruded aluminum with .080" (2.0) nominal wall thickness. Front frame depth is 4" (102) and rear frame depth is 3" (76). Combined frame depth is 7" (178).
<b>Blades</b>	Horizontal front blade-6063T6 extruded aluminum .080" (2.0) nominal wall thickness on a 3.8" (96.52) center to center spacing. Vertical rear blade 6063T6 extruded aluminum .050" (1.3) nominal wall thickness on a 3/4" (1.9) center to center spacing.
<b>Screen</b>	5/8" x .040" (16x1) expanded, flattened aluminum bird screen in removable frame.
<b>Finish</b>	Mill.
<b>Approximate Shipping Weight</b>	8 lbs./sq. ft. (39 kg/m <sup>2</sup> ).
<b>Minimum Size</b>	12" x 12" (305 x 305).
<b>Maximum Size</b>	60"x120" (1524x3048). Louvers larger than the maximum factory assembly size will require field assembly of smaller sections.
<b>Installation</b>	The HZ700 must be installed per the appropriate installation detail. Reference the appropriate separate installation instruction sheets.

## FEATURES

- ▶ 53% Free Area.
- ▶ AMCA 540 (Missile E) Listed.
- ▶ AMCA 550 Listed.
- ▶ Published performance ratings based on testing in accordance with AMCA 500-L.
- ▶ Mechanically Fastened.
- ▶ Approved for applications with design pressure of +/- 130 PSF (6.7 kPa).
- ▶ Intake Pressure Drop-0.3"w.g. at 1000 fpm free area velocity.
- ▶ Exhaust Pressure Drop-0.28"w.g. at 1000 fpm free area velocity.



## VARIATIONS

- ▶ Variety of bird screens.
- ▶ Extended sill.
- ▶ Security bars.
- ▶ Sleeves.
- ▶ Blank off.
- ▶ Filter rack.
- ▶ Glazing frame.
- ▶ Front and rear flange.
- ▶ Various installation in CMU, concrete and steel available.
- ▶ Optional finishes available at additional cost: Prime Coat, 50% & 70% PVDF (modified fluoropolymer), Epoxy, 50% & 70% Pearldize.

Note:

- Dimensions in inches, parenthesis ( ) indicate millimeters.
- Units furnished 1/4" (6) smaller than given opening dimensions.

## FREE AREA GUIDE

Free Area Guide shows free area in ft<sup>2</sup> and m<sup>2</sup> for various sizes of HZ700.

### Width – Inches and Meters

HEIGHT	12	18	24	30	36	42	48	54	60
	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	1.50
<b>12</b> 0.30	<b>0.29</b> 0.03	<b>0.48</b> 0.04	<b>0.67</b> 0.06	<b>0.87</b> 0.08	<b>1.06</b> 0.10	<b>1.25</b> 0.12	<b>1.44</b> 0.13	<b>1.64</b> 0.15	<b>1.83</b> 0.17
<b>18</b> 0.45	<b>0.52</b> 0.05	<b>0.87</b> 0.08	<b>1.22</b> 0.11	<b>1.57</b> 0.15	<b>1.92</b> 0.18	<b>2.27</b> 0.21	<b>2.62</b> 0.24	<b>2.97</b> 0.28	<b>3.32</b> 0.31
<b>24</b> 0.60	<b>0.76</b> 0.07	<b>1.26</b> 0.12	<b>1.77</b> 0.16	<b>2.28</b> 0.21	<b>2.78</b> 0.26	<b>3.29</b> 0.31	<b>3.79</b> 0.35	<b>4.30</b> 0.40	<b>4.81</b> 0.45
<b>30</b> 0.75	<b>0.99</b> 0.09	<b>1.66</b> 0.15	<b>2.32</b> 0.22	<b>2.98</b> 0.28	<b>3.64</b> 0.34	<b>4.31</b> 0.40	<b>4.97</b> 0.46	<b>5.63</b> 0.52	<b>6.29</b> 0.59
<b>36</b> 0.90	<b>1.23</b> 0.11	<b>2.05</b> 0.19	<b>2.87</b> 0.27	<b>3.69</b> 0.34	<b>4.51</b> 0.42	<b>5.33</b> 0.50	<b>6.14</b> 0.57	<b>6.96</b> 0.65	<b>7.78</b> 0.72
<b>42</b> 1.05	<b>1.46</b> 0.14	<b>2.44</b> 0.23	<b>3.42</b> 0.32	<b>4.39</b> 0.41	<b>5.37</b> 0.50	<b>6.34</b> 0.59	<b>7.32</b> 0.68	<b>8.30</b> 0.77	<b>9.27</b> 0.86
<b>48</b> 1.20	<b>1.70</b> 0.16	<b>2.83</b> 0.26	<b>3.96</b> 0.37	<b>5.10</b> 0.47	<b>6.23</b> 0.58	<b>7.36</b> 0.68	<b>8.49</b> 0.79	<b>9.63</b> 0.90	<b>10.76</b> 1.00
<b>54</b> 1.35	<b>1.93</b> 0.18	<b>3.22</b> 0.30	<b>4.51</b> 0.42	<b>5.80</b> 0.54	<b>7.09</b> 0.66	<b>8.38</b> 0.78	<b>9.67</b> 0.90	<b>10.96</b> 1.02	<b>12.25</b> 1.14
<b>60</b> 1.50	<b>2.17</b> 0.20	<b>3.61</b> 0.34	<b>5.06</b> 0.47	<b>6.51</b> 0.61	<b>7.95</b> 0.74	<b>9.40</b> 0.87	<b>10.84</b> 1.01	<b>12.29</b> 1.14	<b>13.74</b> 1.28
<b>66</b> 1.65	<b>2.40</b> 0.22	<b>4.01</b> 0.37	<b>5.61</b> 0.52	<b>7.21</b> 0.67	<b>8.81</b> 0.82	<b>10.42</b> 0.97	<b>12.02</b> 1.12	<b>13.62</b> 1.27	<b>15.22</b> 1.42
<b>72</b> 1.80	<b>2.64</b> 0.25	<b>4.40</b> 0.41	<b>6.16</b> 0.57	<b>7.92</b> 0.74	<b>9.68</b> 0.90	<b>11.44</b> 1.06	<b>13.19</b> 1.23	<b>14.95</b> 1.39	<b>16.71</b> 1.55
<b>78</b> 1.95	<b>2.87</b> 0.27	<b>4.79</b> 0.45	<b>6.71</b> 0.62	<b>8.62</b> 0.80	<b>10.54</b> 0.98	<b>12.45</b> 1.16	<b>14.37</b> 1.34	<b>16.29</b> 1.51	<b>18.20</b> 1.69
<b>84</b> 2.10	<b>3.11</b> 0.29	<b>5.18</b> 0.48	<b>7.25</b> 0.67	<b>9.33</b> 0.87	<b>11.40</b> 1.06	<b>13.47</b> 1.25	<b>15.54</b> 1.45	<b>17.62</b> 1.64	<b>19.69</b> 1.83
<b>90</b> 2.25	<b>3.34</b> 0.31	<b>5.57</b> 0.52	<b>7.80</b> 0.73	<b>10.03</b> 0.93	<b>12.26</b> 1.14	<b>14.49</b> 1.35	<b>16.72</b> 1.55	<b>18.95</b> 1.76	<b>21.18</b> 1.97
<b>96</b> 2.40	<b>3.58</b> 0.33	<b>5.96</b> 0.55	<b>8.35</b> 0.78	<b>10.74</b> 1.00	<b>13.12</b> 1.22	<b>15.51</b> 1.44	<b>17.89</b> 1.66	<b>20.28</b> 1.89	<b>22.67</b> 2.11
<b>102</b> 2.55	<b>3.81</b> 0.35	<b>6.36</b> 0.59	<b>8.90</b> 0.83	<b>11.44</b> 1.06	<b>13.98</b> 1.30	<b>16.53</b> 1.54	<b>19.07</b> 1.77	<b>21.61</b> 2.01	<b>24.15</b> 2.25
<b>108</b> 2.70	<b>4.05</b> 0.38	<b>6.75</b> 0.63	<b>9.45</b> 0.88	<b>12.15</b> 1.13	<b>14.85</b> 1.38	<b>17.55</b> 1.63	<b>20.24</b> 1.88	<b>22.94</b> 2.13	<b>25.64</b> 2.38
<b>114</b> 2.85	<b>4.28</b> 0.40	<b>7.14</b> 0.66	<b>10.00</b> 0.93	<b>12.85</b> 1.20	<b>15.71</b> 1.46	<b>18.56</b> 1.73	<b>21.42</b> 1.99	<b>24.28</b> 2.26	<b>27.13</b> 2.52
<b>120</b> 3.00	<b>4.52</b> 0.42	<b>7.53</b> 0.70	<b>10.54</b> 0.98	<b>13.56</b> 1.26	<b>16.57</b> 1.54	<b>19.58</b> 1.82	<b>22.59</b> 2.10	<b>25.61</b> 2.38	<b>28.62</b> 2.66

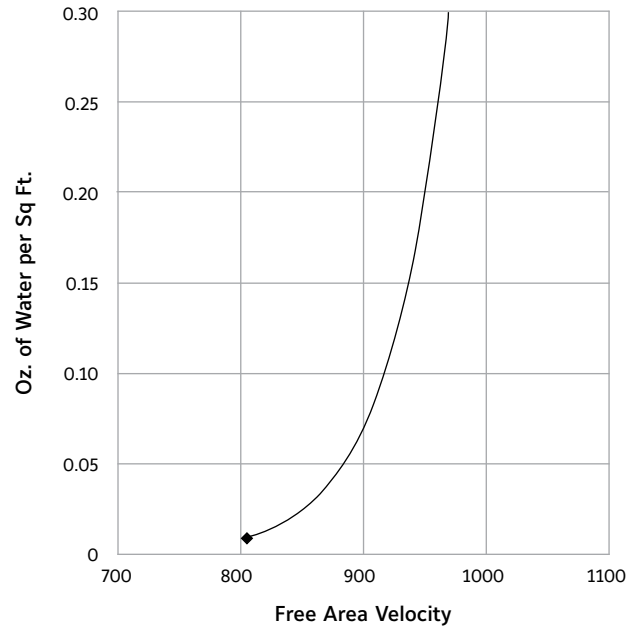
Height – Inches and Meters

# WATER PENETRATION GRAPH

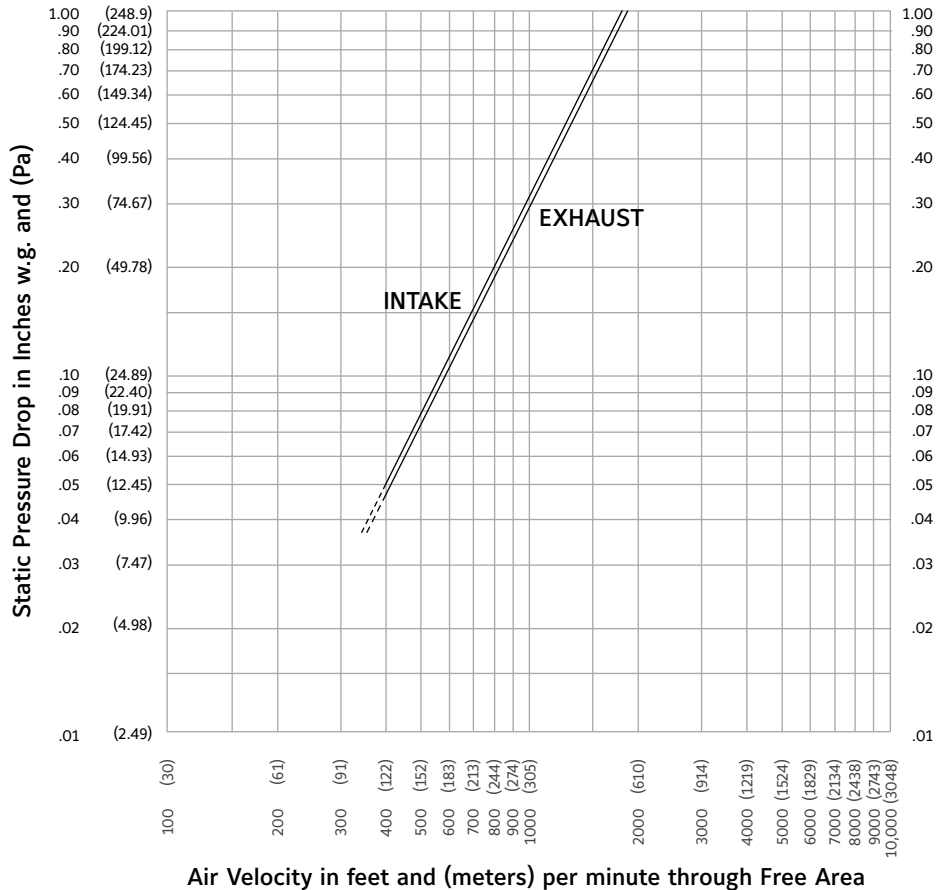


Ruskin Company certifies that the HZ700 is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance ratings, water penetration ratings, and wind driven rain ratings only.

Test size 48" wide X 48" high (1219 X 1219)  
Beginning point of water penetration at .01 oz./sq.ft. is above 803 fpm (245 m/min).



# PRESSURE DROP



## WIND-DRIVEN RAIN PERFORMANCE

Test size is 39.375" w x 39.375" h (1m x 1m) core area, 41.375" w x 44.2" h (1.05m x 1.12m) nominal. Free Area of test louver is 6.8 ft<sup>2</sup> (10.63m<sup>2</sup>).

Wind Velocity mph (kph)	Rain Fall Rate In./hr. (mm/hr.)	Core Velocity <sub>1</sub> Fpm (m/s)	Airflow cfm (m <sup>3</sup> /min)	Free Area Velocity <sup>2</sup> fpm (m/sec.)	Effectiveness Ratio	Class <sub>3,4</sub>	Discharge Loss Class <sub>4</sub> Intake
29 (46.4)	3" (76.2)	986 (5)	10619 (300.70)	1562 (7.9)	99.8%	A	3
50 (80.0)	8" (203)	984 (5)	10593 (299.96)	1558 (7.9)	99.8%	A	3

Note:

1. Core area is the open area of the louver face (face area less louver frames.) Core Velocity is the airflow velocity through the Core Area of the louver (1m x 1m).
2. Free Area of test size is calculated per AMCA standard 500-L.
3. Wind Driven Rain Penetration Classes:

Class	Effectiveness
A	1 to .99
B	0.989 to 0.95
C	0.949 to 0.80
D	Below 0.8

4. Discharge Loss Coefficient is calculated by dividing a louvers' actual airflow rate vs. a theoretical airflow for the opening. It provides an indication of the louvers' airflow characteristics.

Class	Discharge Loss Coefficient
1	0.4 and above
2	0.3 to 0.399
3	0.2 to 0.299
4	0.199 and below

(The higher the coefficient, the less resistance to airflow.)



Ruskin certifies that the HZ700 shown herein is approved to bear the AMCA Listing Label. The ratings shown are based on tests and procedures performed in accordance with AMCA Publications and comply with the requirements of the AMCA Listing Label Program.

The AMCA Listing Label applies to Wind Borne Debris Impact Resistant Louvers with Enhanced Protection Level E.

The AMCA Listing Label applies to High Velocity Rain Resistant Louver Louvers with blades fully open.

## SUGGESTED SPECIFICATION

Furnish and install louvers as hereinafter specified where shown on plans. Louvers shall be manufactured in an ISO9001 certified factory and tested in accordance with AMCA 540 – Test Method for Louvers Impacted by Wind Borne Debris and AMCA 550 – Test Method for High Velocity Wind Driven Rain Resistant Louvers. Louvers shall have vertical wind driven rain (WDR) louver blades in the rear and horizontal architectural blades in the front for high performance and aesthetics.

Optional extended sill can be provided for additional water protection. Louver drainable blades shall be contained within a combined 7" (178) frame. Louver components including heads, jambs, blades and extended sill shall be factory assembled by the louver manufacturer. Louver sizes too large for shipping shall be built up by the contractor from factory assembled louver sections to provide overall sizes required.

Louvers shall be Ruskin Model HZ700 extruded 6063T6 extruded aluminum alloy construction as follows:

### Material

Frame:	.080" (2.0) wall thickness.
Blades:	Horizontal front blade-6063T6 extruded aluminum .080" (2.0) nominal wall thickness on a 3.8" (96.52) center to center spacing. Vertical rear blade 6063T6 extruded aluminum .050" (1.3) nominal wall thickness on a 3/4" (1.9) center to center spacing.
Optional Extended Sill:	.080 (2.0) wall thickness.
Screen:	5/8" x .040" (16 x 1) expanded, flattened aluminum bird screen in removable frame.
Finish:	Select finish specification from Ruskin Finishes Brochure.

### LINKS TO IMPORTANT DOCUMENTS

Document Title
Paint Finishes and Color Guide
Limited Warranty Document



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