Hison Axial Flow Fans

Introduction
Hison Marine Axial Flow Fans, formerly known as Howden Fans are manufactured to international Quality Standard. Axial flow fans are available from sizes 305mm to 1800mm diameter, and incorporated with heavy duty marine grade impellers with aerofoil blades for better efficiencies and lower sound level.

Performance
Ranges from 100m$^3$/hr to 250000m$^3$/hr and static pressure up to 125mmwg

Construction
Fans for marine industries and offshore project are ruggedly constructed to withstand stringent and hostile environment.

Explosion proof motors and spark Resistance Construction Fans are available on request. Spark Resistant Construction Fans are built in accordance to AMCA standard 99-0401-86, Type B Constructions.

Anti-Spark Ring on standard fans is available on request.

Testing
Performance of fans are tested in accordance to AMCA Publication 211 and comply with the requirement of the AMCA Certified Ratings Program.

Sound ratings shown are based on tests and procedures in accordance with AMCA Publication 311

Direction of Airflow
Versatility of airflow direction of form 'B' or form 'A'

Typical Applications
- Air Conditioning
- Building Ventilation
- Marine Industries
- Offshore Projects
- Oven Exhaust
- Spray Booth Exhaust
- Cooling
- Kitchen Exhaust, etc....

Airtrade System certifies that the Hison Axial Flow Fans shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.
Hison Axial Flow Fans

Direction of Airflow
Versatility of airflow direction of form 'B' or form 'A'

Surface Coating
- Hot Dipped Galvanized to EN ISO 461:1999 which also comply to ASTM A123, A153 and BS 729.
- Blasted to SA 2-1/2 and coated with Hi-Built epoxy paint for marine environment and most industries applications.
- Special painting to user specification is available upon request.

Impeller
Adjustable Blades angles design to meet varied volume and pressure system requirements featuring the blade shank with tapered conical section. The tapered section fits into a conical slot in the hub, providing a taper lock fit. A bolt is cast into the blade, projecting into the hub and is secured on the inside by lock-washer and nut.

Balancing Standard
All fan impellers are statically and dynamically balanced to ISO 1940-1973 (E) G: 6.3 standards.

Motors
All Fans shall be supplied with totally enclosed, high efficiency motors of IP 55 degree of protection, foot-mounted Class F insulation, built to International Standard (IEC)

Special motors such as Explosion Proof, 2 speeds, Class H or D.C. motors are available to suit each specific application.

Accessories
- Separate upstream and downstream guide vanes
- Inlet/Outlet Silencers
- Mounting Feet
- Inlet Cones
- Matching Flange
- Mushroom Ventilators
- Control Damper
- Wire Guards
- Anti-Vibration Mountings

* Fan silencers are recommended for sound level exceeding 80dBA at 3m distance.
<table>
<thead>
<tr>
<th>MODEL</th>
<th>THICKNESS</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D (MAX)</th>
<th>J'</th>
<th>K'</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D (MAX)</th>
<th>J'</th>
<th>K'</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>6</td>
<td>205</td>
<td>248</td>
<td>286</td>
<td>305</td>
<td>12</td>
<td>6</td>
<td>205</td>
<td>248</td>
<td>286</td>
<td>405</td>
<td>115</td>
<td>200</td>
</tr>
<tr>
<td>250</td>
<td>6</td>
<td>254</td>
<td>298</td>
<td>336</td>
<td>305</td>
<td>12</td>
<td>6</td>
<td>254</td>
<td>298</td>
<td>336</td>
<td>455</td>
<td>115</td>
<td>200</td>
</tr>
<tr>
<td>300</td>
<td>6</td>
<td>305</td>
<td>350</td>
<td>389</td>
<td>356</td>
<td>12</td>
<td>8</td>
<td>305</td>
<td>350</td>
<td>389</td>
<td>560</td>
<td>115</td>
<td>200</td>
</tr>
<tr>
<td>350</td>
<td>6</td>
<td>356</td>
<td>400</td>
<td>438</td>
<td>415</td>
<td>12</td>
<td>8</td>
<td>356</td>
<td>400</td>
<td>438</td>
<td>660</td>
<td>115</td>
<td>254</td>
</tr>
<tr>
<td>400</td>
<td>6</td>
<td>406</td>
<td>450</td>
<td>488</td>
<td>450</td>
<td>12</td>
<td>8</td>
<td>406</td>
<td>450</td>
<td>488</td>
<td>710</td>
<td>140</td>
<td>305</td>
</tr>
<tr>
<td>450</td>
<td>6</td>
<td>456</td>
<td>500</td>
<td>538</td>
<td>455</td>
<td>14</td>
<td>8</td>
<td>456</td>
<td>500</td>
<td>538</td>
<td>812</td>
<td>140</td>
<td>356</td>
</tr>
<tr>
<td>500</td>
<td>6</td>
<td>506</td>
<td>550</td>
<td>588</td>
<td>555</td>
<td>14</td>
<td>8</td>
<td>506</td>
<td>550</td>
<td>588</td>
<td>864</td>
<td>150</td>
<td>356</td>
</tr>
<tr>
<td>550</td>
<td>6</td>
<td>556</td>
<td>600</td>
<td>638</td>
<td>606</td>
<td>14</td>
<td>8</td>
<td>556</td>
<td>600</td>
<td>638</td>
<td>915</td>
<td>150</td>
<td>356</td>
</tr>
<tr>
<td>600</td>
<td>6</td>
<td>606</td>
<td>650</td>
<td>688</td>
<td>655</td>
<td>14</td>
<td>12</td>
<td>606</td>
<td>650</td>
<td>688</td>
<td>956</td>
<td>150</td>
<td>356</td>
</tr>
<tr>
<td>650</td>
<td>6</td>
<td>655</td>
<td>712</td>
<td>750</td>
<td>718</td>
<td>14</td>
<td>12</td>
<td>655</td>
<td>712</td>
<td>750</td>
<td>1016</td>
<td>150</td>
<td>356</td>
</tr>
<tr>
<td>700</td>
<td>6</td>
<td>712</td>
<td>762</td>
<td>800</td>
<td>718</td>
<td>14</td>
<td>12</td>
<td>712</td>
<td>762</td>
<td>800</td>
<td>1118</td>
<td>150</td>
<td>356</td>
</tr>
<tr>
<td>750</td>
<td>6</td>
<td>762</td>
<td>812</td>
<td>850</td>
<td>768</td>
<td>14</td>
<td>12</td>
<td>768</td>
<td>812</td>
<td>850</td>
<td>1220</td>
<td>150</td>
<td>356</td>
</tr>
<tr>
<td>800</td>
<td>6</td>
<td>805</td>
<td>862</td>
<td>912</td>
<td>868</td>
<td>14</td>
<td>12</td>
<td>868</td>
<td>912</td>
<td>912</td>
<td>1220</td>
<td>150</td>
<td>356</td>
</tr>
<tr>
<td>900</td>
<td>6</td>
<td>905</td>
<td>964</td>
<td>1005</td>
<td>980</td>
<td>18</td>
<td>16</td>
<td>980</td>
<td>1005</td>
<td>1524</td>
<td>200</td>
<td>560</td>
<td>606</td>
</tr>
<tr>
<td>1000</td>
<td>6</td>
<td>1005</td>
<td>1077</td>
<td>1140</td>
<td>1080</td>
<td>18</td>
<td>16</td>
<td>1080</td>
<td>1140</td>
<td>1625</td>
<td>200</td>
<td>560</td>
<td>760</td>
</tr>
<tr>
<td>1200</td>
<td>6</td>
<td>1205</td>
<td>1290</td>
<td>1366</td>
<td>1295</td>
<td>18</td>
<td>20</td>
<td>1295</td>
<td>1366</td>
<td>2032</td>
<td>250</td>
<td>610</td>
<td>560</td>
</tr>
<tr>
<td>1250</td>
<td>6</td>
<td>1255</td>
<td>1340</td>
<td>1416</td>
<td>1340</td>
<td>18</td>
<td>20</td>
<td>1340</td>
<td>1416</td>
<td>2135</td>
<td>250</td>
<td>610</td>
<td>560</td>
</tr>
<tr>
<td>1400</td>
<td>6</td>
<td>1405</td>
<td>1500</td>
<td>1576</td>
<td>1500</td>
<td>20</td>
<td>20</td>
<td>1500</td>
<td>1576</td>
<td>2500</td>
<td>300</td>
<td>915</td>
<td>762</td>
</tr>
<tr>
<td>1500</td>
<td>6</td>
<td>1505</td>
<td>1593</td>
<td>1669</td>
<td>1593</td>
<td>20</td>
<td>20</td>
<td>1593</td>
<td>1669</td>
<td>2600</td>
<td>300</td>
<td>950</td>
<td>762</td>
</tr>
<tr>
<td>1600</td>
<td>6</td>
<td>1605</td>
<td>1693</td>
<td>1769</td>
<td>1693</td>
<td>20</td>
<td>20</td>
<td>1693</td>
<td>1769</td>
<td>2800</td>
<td>300</td>
<td>1000</td>
<td>762</td>
</tr>
</tbody>
</table>

Note:
1) The dimensions quoted in this publication are generally correct, but should be check at the time of ordering. Hison reserves the right to change design and specifications without notice.
2) All dimensions in mm.
3) Inspection doors are standard for 800mm dia fan and above.
4) Certified dimensions and weights can be furnished after receipt of order.
### Performance Ratings

**Model:** 1250-6-a3m(6)

**Type:** Ducted inlet, Ducted outlet

**Fan Static Pressure (Pa):**

- **Pitch Angle:**
  - 0°: 11.51
  - 12°: 16.59
  - 16°: 19.13
  - 20°: 21.65
  - 24°: 23.96
  - 28°: 26.27
  - 32°: 28.58

**FAN STATIC PRESSURE - Pa**

<table>
<thead>
<tr>
<th>PITCH ANGLE</th>
<th>4°</th>
<th>8°</th>
<th>12°</th>
<th>16°</th>
<th>20°</th>
<th>24°</th>
<th>28°</th>
<th>32°</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>11.51</td>
<td>9.57</td>
<td>7.39</td>
<td>5.69</td>
<td>4.02</td>
<td>2.80</td>
<td>1.84</td>
<td>1.00</td>
</tr>
<tr>
<td>12°</td>
<td>16.59</td>
<td>14.78</td>
<td>12.33</td>
<td>9.79</td>
<td>7.96</td>
<td>5.42</td>
<td>3.49</td>
<td>2.26</td>
</tr>
<tr>
<td>16°</td>
<td>19.13</td>
<td>17.50</td>
<td>15.75</td>
<td>12.17</td>
<td>11.52</td>
<td>9.54</td>
<td>7.45</td>
<td>5.61</td>
</tr>
<tr>
<td>20°</td>
<td>21.65</td>
<td>20.00</td>
<td>18.00</td>
<td>14.35</td>
<td>13.65</td>
<td>12.56</td>
<td>10.46</td>
<td>8.56</td>
</tr>
<tr>
<td>24°</td>
<td>23.96</td>
<td>22.01</td>
<td>19.30</td>
<td>15.35</td>
<td>14.90</td>
<td>12.65</td>
<td>10.62</td>
<td>8.75</td>
</tr>
<tr>
<td>28°</td>
<td>26.27</td>
<td>24.08</td>
<td>21.72</td>
<td>17.85</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>32°</td>
<td>28.58</td>
<td>26.09</td>
<td>23.80</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**PERFORMANCE m³/s @ STATIC Pa**

<table>
<thead>
<tr>
<th>PITCH ANGLE</th>
<th>4°</th>
<th>8°</th>
<th>12°</th>
<th>16°</th>
<th>20°</th>
<th>24°</th>
<th>28°</th>
<th>32°</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>108</td>
<td>104</td>
<td>103</td>
<td>101</td>
<td>100</td>
<td>100</td>
<td>101</td>
<td>112</td>
</tr>
<tr>
<td>12°</td>
<td>108</td>
<td>105</td>
<td>104</td>
<td>102</td>
<td>101</td>
<td>101</td>
<td>101</td>
<td>102</td>
</tr>
<tr>
<td>16°</td>
<td>107</td>
<td>105</td>
<td>104</td>
<td>103</td>
<td>102</td>
<td>102</td>
<td>104</td>
<td>104</td>
</tr>
<tr>
<td>20°</td>
<td>107</td>
<td>105</td>
<td>105</td>
<td>104</td>
<td>106</td>
<td>107</td>
<td>107</td>
<td>108</td>
</tr>
<tr>
<td>24°</td>
<td>107</td>
<td>105</td>
<td>106</td>
<td>105</td>
<td>107</td>
<td>107</td>
<td>107</td>
<td>108</td>
</tr>
<tr>
<td>28°</td>
<td>107</td>
<td>105</td>
<td>107</td>
<td>107</td>
<td>107</td>
<td>107</td>
<td>107</td>
<td>108</td>
</tr>
<tr>
<td>32°</td>
<td>107</td>
<td>107</td>
<td>108</td>
<td>108</td>
<td>108</td>
<td>109</td>
<td>110</td>
<td>118</td>
</tr>
</tbody>
</table>

**Sound Pressure Level (dBA):**

<table>
<thead>
<tr>
<th>PITCH ANGLE</th>
<th>4°</th>
<th>8°</th>
<th>12°</th>
<th>16°</th>
<th>20°</th>
<th>24°</th>
<th>28°</th>
<th>32°</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>87</td>
<td>88</td>
<td>89</td>
<td>90</td>
<td>91</td>
<td>91</td>
<td>93</td>
<td>93</td>
</tr>
<tr>
<td>12°</td>
<td>88</td>
<td>89</td>
<td>90</td>
<td>91</td>
<td>93</td>
<td>93</td>
<td>93</td>
<td>93</td>
</tr>
<tr>
<td>16°</td>
<td>89</td>
<td>91</td>
<td>93</td>
<td>94</td>
<td>96</td>
<td>96</td>
<td>96</td>
<td>96</td>
</tr>
<tr>
<td>20°</td>
<td>91</td>
<td>93</td>
<td>94</td>
<td>96</td>
<td>98</td>
<td>98</td>
<td>98</td>
<td>98</td>
</tr>
<tr>
<td>24°</td>
<td>93</td>
<td>95</td>
<td>97</td>
<td>99</td>
<td>102</td>
<td>102</td>
<td>102</td>
<td>102</td>
</tr>
<tr>
<td>28°</td>
<td>93</td>
<td>95</td>
<td>97</td>
<td>99</td>
<td>102</td>
<td>102</td>
<td>102</td>
<td>102</td>
</tr>
<tr>
<td>32°</td>
<td>93</td>
<td>95</td>
<td>97</td>
<td>99</td>
<td>102</td>
<td>102</td>
<td>102</td>
<td>102</td>
</tr>
</tbody>
</table>

**Fan Efficiency Grade ratings only.**

**Overall Sound Power Level (dBA):**

- **Pitch Angle:**
  - 4°: 4.07
  - 8°: 4.77
  - 12°: 5.42
  - 16°: 6.07
  - 20°: 6.72
  - 24°: 7.37
  - 28°: 8.02
  - 32°: 8.67

**Sound Power Data (dB):**

<table>
<thead>
<tr>
<th>PITCH ANGLE</th>
<th>4°</th>
<th>8°</th>
<th>12°</th>
<th>16°</th>
<th>20°</th>
<th>24°</th>
<th>28°</th>
<th>32°</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>108</td>
<td>104</td>
<td>103</td>
<td>101</td>
<td>100</td>
<td>100</td>
<td>101</td>
<td>112</td>
</tr>
<tr>
<td>12°</td>
<td>108</td>
<td>105</td>
<td>104</td>
<td>102</td>
<td>101</td>
<td>101</td>
<td>101</td>
<td>102</td>
</tr>
<tr>
<td>16°</td>
<td>107</td>
<td>105</td>
<td>104</td>
<td>103</td>
<td>102</td>
<td>102</td>
<td>104</td>
<td>104</td>
</tr>
<tr>
<td>20°</td>
<td>107</td>
<td>105</td>
<td>105</td>
<td>104</td>
<td>106</td>
<td>107</td>
<td>107</td>
<td>108</td>
</tr>
<tr>
<td>24°</td>
<td>107</td>
<td>105</td>
<td>106</td>
<td>105</td>
<td>107</td>
<td>107</td>
<td>107</td>
<td>108</td>
</tr>
<tr>
<td>28°</td>
<td>107</td>
<td>105</td>
<td>107</td>
<td>107</td>
<td>107</td>
<td>107</td>
<td>107</td>
<td>108</td>
</tr>
<tr>
<td>32°</td>
<td>107</td>
<td>107</td>
<td>108</td>
<td>108</td>
<td>109</td>
<td>110</td>
<td>110</td>
<td>118</td>
</tr>
</tbody>
</table>

**Airtrade System certifies that the model 1250-X-a3m(6) shown herein is licensed to bear the AMCA Seal.**

The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.

*Performance rated is for installation type D - Ducted inlet, Ducted outlet

*Performance ratings do not include the effects of appurtenances (accessories) licensed to bear the AMCA Seal.

*The AMCA Certified Ratings Seal applies to air performance and the Fan Efficiency Grade ratings only.

*Sound ratings shown are based on tests and procedures performed in accordance with AMCA Publication 311.

A-1250-X-a3m(6)-01-R0, February 2019
Airtrade System certifies that the model 1250-X-a3m(6) shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.

*Performance certified is for installation type D - Ducted inlet, Ducted outlet

The AMCA Certified Ratings Seal applies to air performance and the Fan Efficiency Grade ratings only.

*Sound ratings shown are based on tests and procedures performed in accordance with AMCA Publication 311.

A-1250-X-a3m(6)-02-R0, February 2019
Airtrade System certifies that the model 1250-X-a3m(6) shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.

*Performance certified is for installation type D - Ducted inlet, Ducted outlet
*Performance ratings do not include the effects of appurtenances (accessories)
*The AMCA Certified Ratings Seal applies to air performance and the Fan Efficiency Grade ratings only.
*Sound ratings shown are based on tests and procedures performed in accordance with AMCA Publication 311.

---

**SOUND POWER DATA (dB)**

<table>
<thead>
<tr>
<th>PITCH ANGLE</th>
<th>PERFORMANCE m³/s @ STATIC Pa</th>
<th>Max kW</th>
<th>TOTAL EFF. (%)</th>
<th>63Hz</th>
<th>125Hz</th>
<th>250Hz</th>
<th>500Hz</th>
<th>1.0KHz</th>
<th>2.0KHz</th>
<th>4.0KHz</th>
<th>8.0KHz</th>
<th>Overall Sound Power Level (dBa)</th>
<th>Sound Pressure Level @3m Q1 Directivity (dBa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12°</td>
<td>20.22 18.01 12.58 11.82 10.85 9.14 5.02 1.32 19.92 57</td>
<td>114 111 111 109 108 109 109 110 111 120 96</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>114 111 111 111 111 111 112 112 112 112 120 97</td>
<td></td>
</tr>
<tr>
<td>16°</td>
<td>23.31 21.33 15.54 14.84 14.04 12.95 10.99</td>
<td>13.48 61 113 110 110 110 111 111 111 112 120 97</td>
<td>64 113 111 111 111 112 113 113 114 121 99</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>64 113 111 111 111 112 113 113 114 121 99</td>
</tr>
<tr>
<td>20°</td>
<td>26.39 24.38 18.28 17.49 16.64 15.78</td>
<td>- - - -</td>
<td>16.36 64 113 111 111 111 112 113 113 114 121 99</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>64 113 111 111 111 112 113 113 114 121 99</td>
</tr>
<tr>
<td>24°</td>
<td>29.20 26.82 19.87 19.08 18.16</td>
<td>- - - -</td>
<td>- - - -</td>
<td>20.63 60 113 112 112 112 113 114 114 115 122 100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28°</td>
<td>32.02 29.34 21.59 20.53</td>
<td>- - - -</td>
<td>- - - -</td>
<td>24.92 57 113 113 113 114 114 115 115 115 123 101</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32°</td>
<td>34.84 31.79 22.91</td>
<td>- - - -</td>
<td>- - - -</td>
<td>29.63 59 113 114 114 115 115 116 116 116 124 102</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Airtrade System certifies that the model 1250-X-a3m(6) shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.

*Performance certified is for installation type D - Ducted inlet, Ducted outlet
*Performance ratings do not include the effects of appurtenances (accessories)
*The AMCA Certified Ratings Seal applies to air performance and the Fan Efficiency Grade ratings only.
*Sound ratings shown are based on tests and procedures performed in accordance with AMCA Publication 311.