14 brands of 1200 mm fans tested.
None found efficient.

Brands Tested
We put 14 brands of 1200 mm ceiling fans through 22 tests. Among the brands tested, those within the voltage range of 220 - 240 V were Almonard (Popular), Anchor (Cool & Comfort), Ashok (Regular), Asian (Speedee), Cinni (Regular), Crompton (High Speed), Khaitan (Zolta), Orient (New Breeze), Ortem (High-Tech), Remi (Hi-Speed), Shaan (Whisp-air) and Usha (Windsor). Among the 220 - 230 V were the brands Bajaj (Regal) and Polar (New Beta).

Standards
We tested the brands against IS:374-1979 with six amendments and IS:12155-1987. But the Quality Control Order or mandatory certification does not cover ceiling fans and regulators. Also, none of the brands was ISI marked nor did any of them carry the manufacturer’s licence number.

The Air You Get
(Air Delivery)
In a fan we primarily consider the amount of air delivered. We tested this as per the IS in an air delivery chamber. According to the IS, these fans should deliver a minimum of 200 cubic metres of air per minute. The entire test was computerised and the readings directly entered into the computer without any manual operation. The computer took the average of the readings and, as per the IS, calculated the air delivery at full speed.

All the brands conformed to this test. However, Ashok delivered the least amount of air at 215.16 m³/minute. Ortem gave the maximum at 271.83 m³/minute, followed by Anchor at 256 m³/minute.

Power Used
(Input Wattage Consumption)
The power consumed by each fan at full speed should not be more than 50 watts with an allowed tolerance of +10 percent provided the service value is a minimum of 4 as per the IS.
At a time when all appliances are becoming more and more efficient in terms of power consumption, all the fans tested consumed power well over the IS limit.

_Polar_ consumed the maximum power at 86.24 watts. _Bajaj_ consumed the least at 68.81 watts, followed by _Orient_ at 70.01 watts.

_Efficacy (Service Value)_
The best fans give the maximum air delivery while consuming the least amount of power. This is the service value of the fan. According to the IS, the service value should not be less than 4. None of the brands conformed to this parameter. The service value ranged from 2.64 of _Ashok_ to 3.35 of both _Bajaj_ and _Orient_. This means, none of the brands was efficient. A higher service value indicates higher efficacy.

![Service Value formula](image)

**Is the Fan Held Firmly**
(Suspension System)
The rod holding the fan and the clamp on top make up the suspension system of the fan. Although rare, the fan would be in danger of falling if the rod and the clamp are not strong enough.

Among other tests, the suspension system of the fan should be able to withstand a tensile load of 1,000 casting inside, where the entire inner surface should have been smooth. This can create friction and the fan may not perform smoothly.

In _Ashok_, _Asian_, _Remi_ and _Shaan_, stamping was not properly pressed. In the long run, this may give some noise. Rust was observed in _Ashok_ and _Shaan_.

Except _Shaan_ and _Ashok_, all the brands provided adequate insulation with the wires properly fixed. Lack of proper insulation can damage the wires.

Fans do not have earthing wires which are green. But _Polar_ used a green wire for a non-earthing connection. It may lead to electrical shock when handled.

None of the brands marked air delivery value. _Almonard_, _Ashok_, _Bajaj_, _Orient_, _Ortem_ and _Shaan_ did not mark the input wattage consumption. _Ashok_, _Cinni_, _Remi_ and _Shaan_ did not specify the voltage range and the size of the fan on the ceiling fan regulator.

Regulators of _Almonard_, _Ashok_, _Asian_, _Bajaj_, _Cinni_ and _Usha_ did not conform to the test where the fan speed should reduce by at least 50 per cent of the full speed.

_Cinni_ and _Usha_ were the highest-priced at Rs 1495. _Ashok_ was the lowest-priced at Rs 625.

_Crompton_ scored the highest with 86, followed by _Orient_ with 79 and _Ortem_ with 76. _Khaitan_ came next with a score of 71.

Although _Crompton_ scored the highest, it was _Khaitan_ which became the best buy since its price was far less than that of _Crompton_'s.

Electronic regulators consume less power than the electric ones at the lower speeds.

We tested step-type electronic regulators of _Anchor_, _Galco_, _MK_, _North-West_, _Rider_, _Roma_, _Vinay_ and _Wonder_. Among the movable types, we tested, _Anchor_, _Harisons_ and _S.S.K._

Total Harmonic Distortion (THD) shows by how much the power supply waves are distorted. A high distortion leads to faster ageing of the fan as well as equipment at the power company.

_Step type_ regulators are higher priced, but they come with very low THD. On the other hand, _movable type_ regulators have a very high THD.

**Key Findings**
- We tested 14 brands of 1200 mm ceiling fans. The brands tested within the 220-240 voltage range were _Almonard_ (Popular), _Anchor_ (Cool & Comfort), _Ashok_ (Regular), _Asian_ (Speedee), _Cinni_ (Regular), _Crompton_ (High Speed), _Khaitan_ (Zolta), _Orient_ (New Breeze), _Ortem_ (High-Tech), _Remi_ (Hi-Speed), _Shaan_ (Whisp-air) and _Usha_ (Windsor). We also tested _Bajaj_ (Regal) and _Polar_ (New Beta) in the 220-230 V range.
- We tested the brands against IS:374-1979 with six amendments and IS:12155-1987. But the Quality Control Order or mandatory certification does not cover ceiling fans and regulators. Also, none of the brands was ISI marked nor did they carry the manufacturer’s licence number.
- All the brands conformed to the test for air delivery. But _Ashok_ delivered the least amount of air at 215.16 m³/minute. _Ortem_ gave the maximum at 271.83 m³/minute, followed by _Anchor_ at 256 m³/minute.
- None of the brands consumed power within the limits set by the IS. _Polar_ consumed the maximum power at 86.24 watts. _Bajaj_ consumed the least at 68.81 watts, followed by _Orient_ at 70.01 watts.
- Service value (efficacy) is minimum air delivery divided by the maximum power input which should not be less than 4 as per the IS. The service value ranged from 2.64 of _Ashok_ to 3.35 of both _Bajaj_ and _Orient_. This means, none of the brands was efficient. A higher service value indicates higher efficacy.
- _Almonard_ and _Anchor_ did not conform to the test for tensile load of the suspension system - the rod and clamp which hold the fan. _Almonard_’s screw broke, while _Anchor_’s clamp broke. _Crompton_ provided an additional safety cable to hold the fan in case the clamp breaks.
- Although all the brands conformed to the test for construction, finishing was not good in some. _Crompton_ was the best in construction. Also, its bearing housing had a collar.
- In _Anchor_ and _Usha_, the cover was not properly finished. Also, the finishing was very poor in case of _Almonard_, _Ashok_, _Remi_ and _Shaan_, with tiny particles of fine dust inside. The finish was not even and the finishing was very poor in some.

**Continued on page 10**
### Results

#### Conforming to Safety Parameters (220-240VOLTS)

<table>
<thead>
<tr>
<th>Brands</th>
<th>Rank</th>
<th>Overall Score</th>
<th>MRP (in Rs.)</th>
<th>Air Input Wattage (m³/min)</th>
<th>Service Value Consumption (watts)</th>
<th>Safety Parameters</th>
<th>Marking</th>
<th>Regulators</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IS : 374-1979</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CROMPTON (High speed)</td>
<td>1</td>
<td>86</td>
<td>1280</td>
<td>252.70</td>
<td>78.81</td>
<td>Perfectly finished casting. Collar to protect bearing. Additional cable for safety.</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>ORIENT (New Breeze)</td>
<td>2</td>
<td>79</td>
<td>1226</td>
<td>235.18</td>
<td>70.01</td>
<td>Least power consumption in 220-240 V, high in efficacy, good finish of casting.</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>ORTEM (High Tech)</td>
<td>3</td>
<td>76</td>
<td>1275</td>
<td>271.83</td>
<td>84.88</td>
<td>Highest air delivery, highest power consumption in 220-240V, good finish of casting.</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>KHAITAN (Zolta)</td>
<td>4</td>
<td>71</td>
<td>768</td>
<td>216.14</td>
<td>73.41</td>
<td>Reasonably good performance score.</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>REMI (High speed)</td>
<td>5</td>
<td>69</td>
<td>760</td>
<td>218.85</td>
<td>78.34</td>
<td>Poor finishing, bearing cover not provided, stamping not properly pressed.</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>ASIAN (Speedee)</td>
<td>6</td>
<td>55</td>
<td>920</td>
<td>228.57</td>
<td>72.50</td>
<td>Good finish of casting.</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>USHA (Windsor)</td>
<td>8</td>
<td>49</td>
<td>1495</td>
<td>222.65</td>
<td>78.99</td>
<td>Poor finishing.</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

#### Non-Conforming to Safety Parameters (220-240VOLTS)

<table>
<thead>
<tr>
<th>Brands</th>
<th>Rank</th>
<th>Overall Score</th>
<th>MRP (in Rs.)</th>
<th>Air Input Wattage (m³/min)</th>
<th>Service Value Consumption (watts)</th>
<th>Safety Parameters</th>
<th>Marking</th>
<th>Regulators</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANCHOR (Cool &amp; Comfort)</td>
<td>-</td>
<td>78</td>
<td>1100</td>
<td>256.00</td>
<td>77.30</td>
<td>Clamp broke when rod tested, poor finishing.</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>SHAAN (Whisp-air)</td>
<td>-</td>
<td>68</td>
<td>1080</td>
<td>216.21</td>
<td>79.25</td>
<td>Poor finishing, no bearing cover, rust found, stamping not properly pressed.</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>ALMONARD (Popular)</td>
<td>-</td>
<td>51</td>
<td>850</td>
<td>226.19</td>
<td>77.24</td>
<td>Poor finishing, no bearing cover, screw broke when rod was tested.</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>ASHOK (Regular)</td>
<td>-</td>
<td>46</td>
<td>625</td>
<td>215.16</td>
<td>81.48</td>
<td>Least air delivery, low efficacy, poor finishing, no bearing cover, rust found, stamping not properly pressed.</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

#### Conforming to Safety Parameters (220-230VOLTS)

<table>
<thead>
<tr>
<th>Brands</th>
<th>Rank</th>
<th>Overall Score</th>
<th>MRP (in Rs.)</th>
<th>Air Input Wattage (m³/min)</th>
<th>Service Value Consumption (watts)</th>
<th>Safety Parameters</th>
<th>Marking</th>
<th>Regulators</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAJAJ (Regal)</td>
<td>-</td>
<td>59</td>
<td>1485</td>
<td>231.04</td>
<td>68.81</td>
<td>Good finish of casting, high efficacy</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

#### Non-Conforming to Safety Parameters (220-230VOLTS)

<table>
<thead>
<tr>
<th>Brands</th>
<th>Rank</th>
<th>Overall Score</th>
<th>MRP (in Rs.)</th>
<th>Air Input Wattage (m³/min)</th>
<th>Service Value Consumption (watts)</th>
<th>Safety Parameters</th>
<th>Marking</th>
<th>Regulators</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLAR (New Beta)</td>
<td>-</td>
<td>66</td>
<td>1258</td>
<td>228.76</td>
<td>86.24</td>
<td>Good finish of casting, highest in power consumption, green wire used for non-earthing connection.</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

---

**Key**

- **X** Conformed
- **X** Did not conform
- **NMT** = Not More Than
- **NLT** = Not Less Than
- **m³** = Cubic meter

### Best Buy

Best Buy is based on the overall score and price. In the 220-240V category, Crompton scored the highest. Although Khaitan had a comparatively lower score, it was the best buy since its price was far less than Crompton’s.

In the 220-230V category, only Bajaj complied with all the safety parameters.

### Rating and Ranking

None of the brands conformed to all the parameters. In fact, all failed in the important parameters of power consumption and service value. So we rated and ranked the brands that conformed to the safety parameters.

Service value (efficacy) was given a weightage of 70 percent. Regulators sold with the fan were given 20 percent and 10 percent to brands that gave extra safety devices.

Crompton scored the highest with 86, followed by Orient with 79 and Ortem with 76. Khaitan came next with a score of 71.
kilogram force (kgf). That is, when the rod and the clamp are pulled with this force, they should not break.

Almonard and Anchor did not conform to this test. In the case of Almonard the screw broke. And for Anchor, the clamp broke.

Crompton provided an additional safety cable to hold the fan in case the clamp breaks. This provides for extra safety, stopping the fan from falling down until the clamp is fixed again.

Is the Fan Made Well?
(Construction)
The IS prescribes the construction test to check whether the fan is made well, proper insulation has been provided, live parts are accessible, etc. Performing these tests involves opening the cover of the fan and checking it visually. All the brands conformed to this test.

We found large differences among the brands. We found Crompton the best in construction. The casting of its cover was perfectly finished. It was smooth with no rough surface. The bearing housing had a collar to stop grease from coming out. The collar bearing housing had a collar to stop smooth with no rough surface. The cover was perfectly finished. It was in construction. The casting of its

W e found large differences among the brands without resorting to testing. None of the other brands provided such a collar. The finishing of Bajaj, Cinni, Orient, Ortem, Khaitan and Polar also was good.

Crompton provided an additional safety cable to hold the fan in case the clamp breaks.

But in Anchor and Usha, the cover was not properly finished. In the long run and also during servicing, tiny parts of casting, foreign material or paint flakes may come in contact with the bearing and may affect the performance of the fan.

The finishing was very poor in the case of Almonard, Ashok, Remi and Shaan. We observed tiny particles of casting inside, where the entire inner surface would also stop dust and other particles from entering the bearing, ensuring a longer life to it.

None of the other brands provided such a collar. The finishing of Bajaj, Cinni, Orient, Ortem, Khaitan and Polar also was good.

Areas of Action
Industry asks for more power. The Indian Fan Manufacturers’ Association has asked the Bureau of Indian Standards (BIS) to increase the maximum power input limit from 50W to 70 W for 1200 mm ceiling fans. We believe that over a period of time, fans should become more energy efficient and deliver more for less power. In fact, in all major appliances, the BIS has reduced the maximum power input limit. So CERC has represented to the BIS, opposing industry’s plea for an increase in the input wattage since there is no justification for it and has asked for an increase in air delivery.

But in Anchor and Usha, the cover was not properly finished. In the long run and also during servicing, tiny parts of casting, foreign material or paint flakes may come in contact with the bearing and may affect the performance of the fan.

The finishing was very poor in the case of Almonard, Ashok, Remi and Shaan. We observed tiny particles of casting inside, where the entire inner surface would also stop dust and other particles from entering the bearing, ensuring a longer life to it.

None of the other brands provided such a collar. The finishing of Bajaj, Cinni, Orient, Ortem, Khaitan and Polar also was good.

Except Shaan and Ashok, all the brands provided adequate insulation with the wires properly fixed. These two brands did not provide insulation to the wires at the point the wires pass through any rough edge of the hole. The wires may get damaged since they are not adequately protected.

Also, a green wire should be used only for earthing connection. Polar did not follow this rule. Normally, fans do not have earthing wires. In case of a repair, the electrician or any one handles the wire assuming that it is an earthing wire, an electric shock may result.

Marking
The big question is how one compares the brands without resorting to testing. We look for the marking - what the manufacturer has printed on the label. None of the brands marked the air delivery value on the packing.

According to the IS, apart from the readings of air delivery, information like rated voltage, input in watts, etc., should be marked. Almonard, Ashok, Bajaj,
Fans come with regulators. But if you don’t want the one supplied, you need not take it. You could get an equivalent discount. Now you can choose another regulator to your liking. But first, it’s important to know the difference between an electric and an electronic regulator.

**Electric regulators** work by reducing the voltage supply to the motor inside the fan when you want to reduce the fan speed. In most places, the domestic supply of electric power is of 230 volts. If you want the fan to run at full speed, the regulator supplies the entire 230 volts. But when you reduce the speed, the voltage supply to the fan is reduced through a device called the **resistor**.

The resistor does this by absorbing some of the voltage. So the resistor heats up, heating the regulator itself. Normally, regulators are flush-mounted by the electrical contractor. So the internal heat will damage the regulator in the long run. Plus, electric regulators are not energy-efficient and hence uneconomical and not environment friendly as they waste electric energy due to the use of resistors.

**Electronic regulators** on the other hand, are smaller. These regulators reduce or increase the fan speed by controlling the wave form of the power supply. They are energy-efficient and can save energy when the fan is running at the lower speeds of 1 and 2.

When we tested an electric and an electronic regulator of the same company, we found that the electric regulator consumed 40 W at speed-1, while the electronic one consumed just about 15 W. But electronic regulators come with just 3 speeds unlike the 5 speeds of electric ones. At full speed, both consume the same amount of power.

If price is not a concern, take an electronic regulator. But if price is a concern — electric regulators cost as little as Rs. 40 — go for an electric one.

---

**How Good Were The Regulators?**

If the regulators are incapable of reducing the fan speed, the purpose of the regulator is lost. Regulators should be able to reduce the fan speed by at least 50 per cent of the full speed. *Almonard, Ashok, Asian, Bajaj, Cinni and Usha* did not conform. Only *Anchor, Crompton, Khaitan, Orient, Ortem, Polar, Remi and Shaan* conformed to this parameter. So don’t be surprised if some fans do not slow down as much as they should.

Also, fans should run on all the running positions of the regulators. All brands conformed to this test as per the IS.

---

### Electronic Regulators

Electronic regulators come in two varieties - step type and movable type. Step regulators increase or decrease the fan speed in steps. In the movable ones, the regulator turns smoothly from one speed to another. Among the step type regulators, we tested *Anchor, Galco, MK, North-West, Rider, Roma, Vinay* and *Wonder*. Among the movable type, we tested, *Anchor, Harisons* and *S.S.K*.

**Total Harmonic Distortion (THD)** shows us how much the power supply waves are distorted. A high distortion causes the fan motor to heat up. It leads to faster ageing of the fan and equipment at the power company.

**Step type** regulators are higher priced, but they come with very little total harmonic distortion. On the other hand, the **movable type** regulators have a very high distortion which may cause overheating of the fan motor. Electronic regulators of the movable type when operating at lower speeds may give a humming sound because filter circuits are not normally provided.

**Anchor** and **Harisons** claim to save power up to 40 per cent. We assume that this is in comparison with electric regulators. A 40 per cent saving in electricity can only be at speed-1. At speed-2, the saving is likely to be just 30 per cent. At full speed, there would be no saving at all.

---

**Power Consumption of Regulators**

<table>
<thead>
<tr>
<th>Speed</th>
<th>Electric Wattage</th>
<th>Electronic Wattage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>40 W</td>
<td>15.4 W</td>
</tr>
<tr>
<td>2</td>
<td>51 W</td>
<td>34.2 W</td>
</tr>
<tr>
<td>3</td>
<td>61 W</td>
<td>76 W</td>
</tr>
<tr>
<td>4</td>
<td>68 W</td>
<td>NA</td>
</tr>
<tr>
<td>5</td>
<td>76 W</td>
<td>NA</td>
</tr>
</tbody>
</table>

The above figures are at 230 volts. The electric regulator consumed 40 W at speed position no.1 while the electronic regulator consumed 15.4 W at the same position. So the power saving is about 25W in case of an electronic regulator. Let us suppose that the fan was used for about 10 hours at speed position 1. If the number of fans used is 4 in the house, the daily power saving is as follows: 25 x 10 x 4 = 1kwh = 1 unit of electricity.  

\[
\text{Power saving} = \frac{1000}{10} = 1000 \\
\text{Total number of fans used} = 4 \\
\text{Daily power saving} = 4 \times \frac{1000}{10} = 40 \text{ units} \\
\]

**Brand** | **Price (Rs.)** | **THD (%)**
---|---|---
**Step Type**
Wonder | 155 | 2.01
Vinay | 214 | 2.26
Galco | 175 | 2.36
MK | 311 | 2.46
Anchor | 125 | 2.57
Rider | 170 | 3.10
North-West | 359 | 4.53
Roma | 253 | 6.52

**Movable Type**
Anchor | 100 | 74.09
Harisons | 87 | 82.96
SSK | 170 | 89.50

* THD - Total Harmonic Distortion (the lower the better)
Warranties and Guarantees
A warranty describes the product - its quality, performance, standard, etc. Breach of a warranty allows you to recover damages due to the breach and consequent loss suffered. But a warranty is not enough to have the sale itself set aside.

A guarantee on the other hand, goes to the root of the contract for sale of goods. Breach of a guarantee, entitles you to have the whole sale set aside. You may also get damages if you can successfully prove it. Check whether the company offers a warranty or guarantee and its duration before you buy the fan.

Price
Cinni and Usha were the highest priced at Rs 1495. The least priced brand was Ashok at Rs 625. When you next go to buy a fan, be sure to bargain and check the price in a few shops. You may be able to get a discount.

Manufacturers' Correspondence
As a policy, we convey the test results to all the manufacturers, irrespective of whether their brands have passed or failed. The results are posted to their registered offices by Registered A.D.J. Courier. All manufacturers receive the test results of their own product only and are given two weeks from the date of receipt to respond.

Bajaj Electrics Ltd., manufacturers of Bajaj, said that, supply, voltage and frequency, voltage drop, position of anemometer and fan and other specified parameters affect the air delivery. They asked for these details.

Ashok, said that, they follow their company standards which are made to satisfy the customers' performance requirement of air delivery and the requisite air velocity. These cannot be achieved simultaneously meeting BIS service value levels. Insight: We asked for the tolerance of supply voltage and frequency and whether it affects c.p.m. and air delivery.

Polar Industries Ltd., manufacturers of Polar, said that they would revert to us once their technical study and examination of the issues raised in our letter were carried out.

The Jay Engineering Works Ltd., manufacturers of Usha, said that, the tested model is manufactured against buyer’s specifications and not as per IS, nor is it ISI marked. Hence, it cannot be compared with IS. They have a different range of fans that are ISI marked which will meet all the requirements as per IS:374-1979 with 6 amendments.

Ashok and Shaan did not carry the full address. So, we could not send the results. Also, the results sent to Asian and Orient were returned. Further, manufacturers of Almonard, Anchor, Cinni and Remi did not respond at the time of going to press.

Claim vs. Facts

<table>
<thead>
<tr>
<th>Brand</th>
<th>Claim</th>
<th>Company Response</th>
<th>Fact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bajaj</td>
<td>High air delivery Efficiency</td>
<td>Nil</td>
<td>Bajaj ranked 5th in air delivery. Its power consumption was over the prescribed limit. So it was not energy efficient. Tests were done strictly according to standards.</td>
</tr>
<tr>
<td>Quick start high torque motor</td>
<td>No significant difference observed in the motor compared to other brands.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orient</td>
<td>Ultimate air power PSPO (Peak Speed Performance Output)</td>
<td>Nil</td>
<td>PSPO accounts for air spread in addition to service value. Conforming to BIS' service value does not mean a good fan from customers' performance expectations.</td>
</tr>
<tr>
<td>Auto speed retention</td>
<td>Normal fluctuation in voltage and frequency not mentioned. Normal speed retention is a motor designed to accommodate normal fluctuation in voltage and frequency.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orient</td>
<td>Better performance even at low voltage</td>
<td>Nil</td>
<td>No explanation as to how wider blades correlate to larger air delivery.</td>
</tr>
<tr>
<td>Wider blades, giving larger air displacement</td>
<td>Nil</td>
<td>Nil</td>
<td>No explanation as to how wider blades correlate to larger air delivery.</td>
</tr>
<tr>
<td>Remi</td>
<td>Satisfactory performance at low voltage</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td>Reliability</td>
<td>Ranked 5th.</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Usha</td>
<td>Undisputed leader in fans</td>
<td>Nil</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Manufacturers' Addresses
Almonard
Almonard Ltd., New Petit Mansion, 2nd Floor, 80, Bannerghatta Road, Grand Road (W) Mumbai 400 007
Ancha
Anchor Electronics & Electricals Pvt. Ltd., Telkari Road, Deiva, Daman 366 210
Asian
Asian Fans & Applicances Pvt. Ltd., 5, Rashidiin Sabr, 18th Road, Chembur, Mumbai 400 071
Ashok
Ashok Group of Industries, Mumbai
Cinni
Cinni National Winder, Pishachmochan Marg Varanasi- 221010, UP
Ortem
Orient Electric India Ltd., 14 Shah Ind. Est., 11, Indi. Est., Sector 6, Faridabad 121 006, Haryana
Polar
Polar Industries Ltd., A-2, Sector 5, Noida - 201 301, Gautam Budh Nagar, U. P.
Shaan
Usha
Usha, No 26, Prashant Associates, Jai Amba Krupa, Secunderabad

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