## TECHNICAL CHARACTERISTICS

### 145 STK ALTERNATORS

*See also the curves of Voltage, Torque, Efficiency vs Speed*

<table>
<thead>
<tr>
<th></th>
<th>145STK2M</th>
<th>145STK4M</th>
<th>145STK6M</th>
<th>145STK8M</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rated speed Rpm</strong></td>
<td>650 1500</td>
<td>650 1500</td>
<td>650 1500</td>
<td>650 1500</td>
</tr>
<tr>
<td><strong>Rated Power (W)</strong></td>
<td>571 1752</td>
<td>1307 3389</td>
<td>1962 4904</td>
<td>2633 6462</td>
</tr>
<tr>
<td><strong>Input Torque (N.m)</strong></td>
<td>11.2 13.9</td>
<td>25.4 25.2</td>
<td>36 35.9</td>
<td>47.8 47</td>
</tr>
<tr>
<td><strong>Efficiency (%)</strong></td>
<td>75 81</td>
<td>76 86</td>
<td>81 87</td>
<td>81 88</td>
</tr>
<tr>
<td><strong>Voltage (V)</strong></td>
<td>244 250</td>
<td>243 260</td>
<td>246 231</td>
<td>249 248</td>
</tr>
<tr>
<td><strong>Rated Power at Half speed (W)</strong></td>
<td>204 690</td>
<td>493 1566</td>
<td>739 2319</td>
<td>1075 3097</td>
</tr>
<tr>
<td><strong>Input Torque (N.m)</strong></td>
<td>8.9 11.5</td>
<td>20.7 25.4</td>
<td>28.8 36</td>
<td>43.5 47.8</td>
</tr>
<tr>
<td><strong>Efficiency (%)</strong></td>
<td>68 77</td>
<td>70 78</td>
<td>76 82</td>
<td>73 83</td>
</tr>
</tbody>
</table>

### Technical Details

**Number of poles (number of pairs of poles)**: 12 (6)

**Cogging Torque (N.m)**: 0.2, 0.4, 0.6, 0.8

**Phase Resistance at 20°C (Ohm)**: 19.8, 4.53, 8.6, 1.4, 4.11, 0.59, 3.18, 0.51

**Phase Inductance (mH)**: 105, 24, 60, 10, 34, 4.9, 25.8, 4.1

**Voltage at no load (back emf) at 20°C (V)**: 365, 393, 390, 367, 357, 312, 361, 334

**Rotor Inertia (10^-3 Kg.m^2)**: 1.28, 2.24, 3.19, 4.14

**Weight (Kg)**: 6.2, 10.4, 14.5, 18.7

**Power cable square section (mm^2)**: 4x1.5, 4x1.5, 4x1.5, 4x1.5

**Power cable diameter (mm)**: Ø8.6, Ø8.6, Ø8.6, Ø8.6

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### Alternator 145STK Power - Speed

1. Ambient temperature 40°C
   - Wind speed 10 m/s cooling the housing
   - Winding temperature rise < 100°C
   - Stator housing in contact with the ambient air or integral on all its peripheral area with a metallic armature in contact with the ambient air
   - Stator housing secured on a metallic frame getting an area equal to twice the cross section of the housing

2. Operation in sine wave mode with unity power factor

3. Line to line voltage. Voltage level may be adapted according to the application; please contact us

4. Line to line voltage, alternator at no load, rated speed and at 20°C

5. For current at rated power

6. For currents lower than 53 Amps, one cable
   - For currents over 53 Amps, four single wires output (highlighted in the table)

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**ALXION**

*Automatique & Productique*