CPLS
High power density induction motor

Technical expertise, high power density and flexibility

Perfectly adapted to machinery requiring high dynamic performances in a very compact design, CPLS motor has been specifically designed to offer a reliable and adaptable asynchronous variable speed solution. Based on an IP23 design, CPLS integrates a forced ventilation insuring high continuous torque even at low speed. Its characteristics of dynamics and compactness make CPLS a particular good solution for DC motor replacement. CPLS motor has been also developed with the aim of offering high speed possibilities in a reliable design: high speed bearings, complete winding protection to surge voltage, dedicated options according to the application. For constant power applications over a wide speed range, CPLS offers characteristics with a 1 to 2 speed ratio, in closed loop as well as open loop control.

CPLS and Unidrive M association for all processes

The range of CPLS motors, combined with the new Unidrive M inverter range fully meets the various processes requirements, with guaranteed overall performance of the motor/drive package. To ensure perfect adaptation with the drive (dv/dt withstand), the insulation system of the CPLS range has been enhanced as standard to extend its service life.

Torque and speed optimized range

CPLS range consists of 5 different frame sizes for nominal torque from 95 to 2900 Nm and speed up to 9000 rpm.
Key points

- **Guaranteed performance:** Optimization, full qualification by motor-drive solution testings
- **Dynamics:** Low inertia motor
- **Increased productivity:** Operation at constant power over an extended speed range with speed ratio of 1 to 2 as standard and more on demand
- **Compact design:** High power density
- **Improved accuracy:** Speed regulation by encoder

Applications

- Test bench
- Hoisting
- Extrusion
- Machine Tools
- DC retrofit
- Calendering
- ... 

Performances

- **Constant torque**
- **Constant power**
- **Reduced power**

Flexibility

- **Adaptation to the machine:**
  - high-capacity bearings, roller bearings
  - multi-position
  - foot or foot and flange mounted
  - second shaft end
  - special shaft end
  - forced ventilation unit with directional or deportable terminal box.
  - terminal box having 4 possible positions and compatible with high cable size with or without shield

- **Adaptation to difficult environments:**
  - filter on forced ventilation unit: polyester or Miovyl
  - air intake and outlet ducts (IC37)

- **Adaptation to the application:**
  - encoder (incremental or absolute)
  - holding and dynamic brake
  - Replacement of existing DC motors

### Key features

<table>
<thead>
<tr>
<th>CPLS motor type</th>
<th>Nominal torque range (Nm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>112M</td>
<td>95 -115</td>
</tr>
<tr>
<td>112L</td>
<td>110 -140</td>
</tr>
<tr>
<td>132S</td>
<td>145-170</td>
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<tr>
<td>132M</td>
<td>175-220</td>
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<tr>
<td>132L</td>
<td>210-250</td>
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<tr>
<td>160S</td>
<td>325-380</td>
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<tr>
<td>160M</td>
<td>390-490</td>
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<tr>
<td>160L</td>
<td>490-700</td>
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<tr>
<td>200S</td>
<td>680-940</td>
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<tr>
<td>200M</td>
<td>900-1300</td>
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<tr>
<td>200L</td>
<td>1100-1550</td>
</tr>
<tr>
<td>250S</td>
<td>1570-1950</td>
</tr>
<tr>
<td>250M</td>
<td>1710-2360</td>
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<tr>
<td>250L</td>
<td>2300-2900</td>
</tr>
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