

**The Global,  
high dynamic solution!**

**Unimotor** 



## Autosynchronous motor for servo drive systems

**T**he **Unimotor fm** servo motor controlled by a **LEROY-SOMER DIGITAX ST** servo drive or a **LEROY-SOMER UNIDRIVE SP** universal drive, provides the user a guarantee of performance. This is the optimum solution for applications requiring a high dynamic response. Combined with the **LEROY-SOMER DYNABLOC** servo gear unit range, the **Unimotor fm** servo motor covers a large torque range at the same time as meeting the need for a highly compact drive system.

**LEROY-SOMER** offers therefore an incomparable range taking account of the constraints encountered by **industrial automation applications**.

### ◆ Performance

The new **Unimotor fm** servo motors, with an IP 65 standard protection, covers torque requirements from 0.75 to 410 N.m with a high peak torque capability. The housing is die-cast using a high resistance cast aluminium. Its rigid monobloc structure enables **LEROY-SOMER** to guarantee a precise alignment of bearings and thus a perfectly concentric airgap along the complete motor length. Moreover, the effects of cogging are considerably reduced by the **Unimotor fm** housing design. The rotor and the stator have been specially designed to provide:

- a high rigidity of the shaft,
- a very high axial or radial load capacity
- a choice of several different shaft diameters.

The magnetic steel sheets and the windings have been designed to ensure an optimum output capacity and a reduced harmonic distortion. The windings enable the motor to operate at voltages such as 200-240 V and 400-480 V and at high carrier frequencies.

## ◆ Flexibility

The modular design of **Unimotor fm** servo motor range meets the users' requirements due to numerous possibilities of mechanical and electrical adaptation:

- Up to three shaft diameters,
- Up to three flange diameters,
- Finish: keyed or solid shaft,
- IEC or NEMA execution,
- Up to eight nominal speeds,
- Choice of speed feedbacks (2048 or 4096 ppt incremental or absolute encoders, SinCos single or multi turn, SLM technology, resolver),
- Space management: fixed or rotatable connectors, vertical or 90° position,
- 2 parking brake ranges,
- Choice between low or high rotor inertia.

**LEROY-SOMER** guarantees the performance of its **Highly Dynamic Global Solution** consisting of:

- **Unimotor fm** servo motor,
- **UNIDRIVE SP** or **DIGITAX ST** servo drive,
- **DYNABLOC** servo gear unit.

The **Unimotor fm** servo motors, combined with the **LEROY-SOMER** servo drive systems, demonstrate all the advantages to meet the most demanding and dynamic applications in a reduced footprint, typically:

- Transfer machines: palettizers, gantry cranes, carousels...
- Initial wrapping: boxing, dosing machines, labelling, bagging, spooling...
- Printers: printing, offset printing, machine feeders, colating, glueing...
- Laser or waterjet cutting, profiling,
- Special machines....