



## **FOOD INDUSTRY**

### **Drive systems**



*As a worldwide specialist in drive systems, industrial processes and generators, LEROY-SOMER has supported its customers' evolving needs for more than 80 years*

Leroy-Somer electric motors, gearboxes, geared motors and electronic drives are designed to operate together, always with the aim of meeting the needs of users.

Because the various industrial sectors served by Leroy-Somer face different problems, a specific structure has been put in place for special markets such as the automotive industry, the oil industry, the environment and **the food industry**.

Using its experience and close relationships with the various players in the industrial supply chain (machine manufacturers, design offices, consultancies, users, etc), Leroy-Somer supports its customers' development on a daily basis with:

- local advice
- technical improvements
- technological innovations
- shorter lead times



## THE FOOD INDUSTRY APPROACH

Drive systems used in the food industry have to withstand extremely difficult constraints and must, without fail, be able to cope with the demands of the ambient conditions:

- FREQUENT WASHING
- HIGH-PRESSURE CLEANING
- PERMANENT HUMIDITY
- CONTACT WITH AGGRESSIVE LIQUIDS
- HYGIENE
- RELIABILITY
- SAFETY
- MAINTENANCE



## FOOD INDUSTRY SYSTEM

*Drive systems customised to suit the conditions of use*

### VERY HARSH ATMOSPHERE

- Machines subjected to frequent **high-pressure** cleaning
- Environment with heavy condensation and food splashes
- Use of disinfectant and detergent products



### HARSH ATMOSPHERE

- Machines subjected to frequent **low-pressure** cleaning
- Use of disinfectant and detergent products



### NORMAL ATMOSPHERE

- Machines subjected to liquid splashes and dust in a **normal** environment



## FOOD INDUSTRY SERVICE

*Services associated with the supply of drive systems*

- **HELP WITH PRODUCT SELECTION**
- **LOCAL SERVICE PARTNERS**
- **RECOMMENDATIONS FOR ASSEMBLY AND SERVICING**
- **ON-SITE SERVICES**
- **APPROVED TRAINING CENTRE**





## VERY HARSH ATMOSPHERE

### KP tests

High-pressure cleaning with water at 80°C, up to 130 bar, in all directions

### KP tests

Increased resistance to knocks on the paintwork

### Saline mist

Withstand 600 hours (in accordance with ISO 9227)

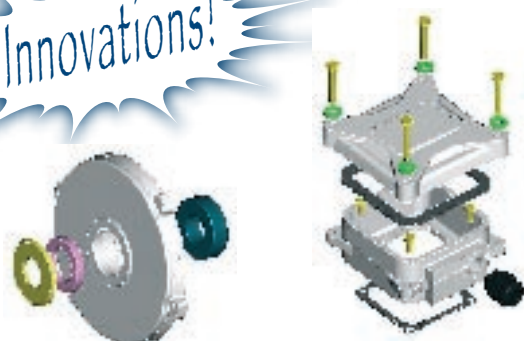
### IP56/IP66 tests

Conforming to standard IEC 60034-5

## MOTORS

### FLS IAW

Innovations!



**Shield:** Seals, deflectors and sealed bearings

**Terminal box with enhanced dust and damp protection:** Special seal, screws and cable gland

IP56 KP



- Non-ventilated cast iron motors, S1 duty
- 0.25 to 4 kW
- Stainless steel screws and tie rods
- **Special anti-corrosion surface protection**
- RAL 9010 epoxy finish
- Variable speed at constant torque in S1 duty (5 to 50 Hz)

#### Options

- Stainless steel shaft
- Metal cable gland
- Winding with epoxy coating

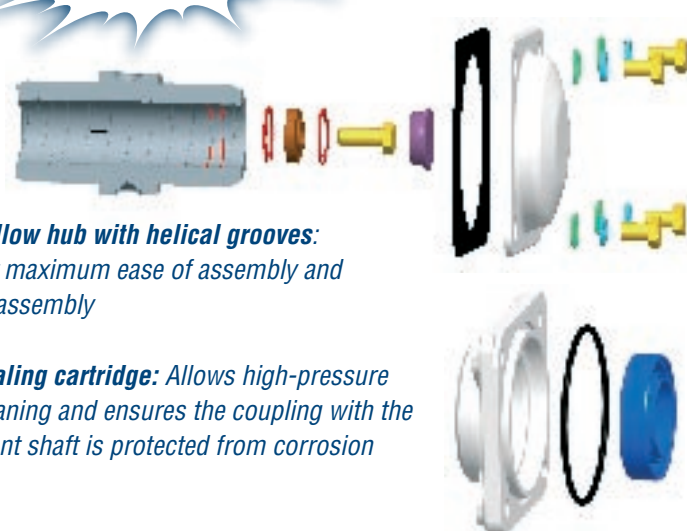


## GEARED MOTORS

### MULTIBLOC IAW

### COMPABLOC IAW

Innovations!



**Hollow hub with helical grooves:** For maximum ease of assembly and disassembly

**Sealing cartridge:** Allows high-pressure cleaning and ensures the coupling with the client shaft is protected from corrosion

IP66 KP



Supplied with carton of grease

IP66 KP



- **Cast iron geared motors**
- Retention zones eliminated
- Blanking of machining holes
- RAL 9010 epoxy finish
- **Special anti-corrosion surface protection**
- Variable speed at constant torque in S1 duty (5 to 50 Hz)

#### Options

- H1 edible oil
- Compabloc IAW: stainless steel gearbox shaft





## HARSH ATMOSPHERE

### Impact resistance tests

conforming to standard EN 50102

### IP55 tests

conforming to standard IEC 60034-5

### Saline mist

Withstand 400 hours  
(in accordance with ISO 9227)

### Enhanced dust and damp protection

## MOTORS

### LS IA

### LS IA FCR brake

*Innovation!*



**Shield:** Seals, deflectors and sealed bearings

**Terminal box with enhanced dust and damp protection:**

Special seal, screws and cable gland



- Ventilated Alpax motor
- Stainless steel screws, tie rods and nameplate
- RAL 9010 epoxy finish
- Variable speed at constant torque in S1 duty (25 to 50 Hz)



- Same finish as the LS IA motor
- Brake and cover treated on inside and outside
- Anti-corrosion protection and anti-stick treatment on the brake armature

#### Options

- Stainless steel shaft and cover (LSIA)
- Metal cable gland
- Winding with epoxy coating



## GEARED MOTORS

### MULTIBLOC IA

### COMPABLOC IA

*Innovations!*



**Hollow hub with helical grooves:**  
For maximum ease of assembly and disassembly



**Sealing cartridge (optional):** Allows high-pressure cleaning and protects the coupling with the client shaft from corrosion



Supplied with carton of grease



- Retention zones eliminated
- Blanking of machining holes
- RAL 9010 epoxy finish
- Variable speed at constant torque in S1 duty (25 to 50 Hz)

#### Options

- H1 edible oil
- Multibloc IA: sealing cartridge



## DECENTRALISED ELECTRONICS

### PROXIDRIVE

### VARMECA

*Innovation!*



**IP66 sealed design:**  
Locked weatherproof seals, stainless steel cable gland support plate

**IP 66  
IK 08**



- Drive without cabinet
- Designed without any retention zones
- Conforming to hygiene regulations
- Materials resistant to aggressive liquids
- Easy to install



- Same finish as the LS IA motor
- Drive in the terminal box
- Moulded IP65 electronics
- Numerous options
- Easy, complete parameter setting





## NORMAL ATMOSPHERE

*Products designed to operate together*

*Modular, complementary ranges*

*Guaranteed performance*

*Conformity with international regulations*

### MOTORS

Standard or controlled applications

With or without brake

Fixed or variable speed



### GEARED MOTORS

Right angle drive

Axial output



*Worm and wheel*

*Helical gears*



*Helical gears*

*Servo geared motors with low backlash*



### ELECTRONICS

Centralised or decentralised variable speed drives



### PUMPS

Centrifugal, single stage or multistage





## FOOD INDUSTRY SERVICE

*Services associated with the supply of drive systems*

### SERVICE PARTNERS

470 sales and service outlets worldwide

**Locally based**

**Emergency stock**



### ON-SITE SERVICES

**Equipment installation and removal**

**Maintenance contracts**

- preventive
- predictive
- conditional

**Performance monitoring**

- vibrational analysis, network analysis
- motor, balancing measurements
- LASER alignment, thermal analysis, ultrasound



## FOOD INDUSTRY SERVICE

*Services associated with the supply of drive systems*

### FOOD INDUSTRY SYSTEM SELECTION GUIDE



Product description

Selection charts

Electrical characteristics

Dimensions

Delivery Time chart

### ONLINE

FOOD INDUSTRY SYSTEM selection guide

Configurator: 3D views, product data sheets, etc.

Catalogue for Industry

Commissioning and maintenance manuals

Recommendations for assembly

[www.leroy-somer.com](http://www.leroy-somer.com)

### TRAINING



**Training provided on site or at the CFE**  
(Leroy-Somer Training Centre)

Training in installation

Training in operation and  
maintenance of drive systems