

# New !

**DRIVE SYSTEMS  
FOR DUST-FILLED  
POTENTIALLY  
EXPLOSIVE ATMOSPHERES**



In order to meet the safety concerns of Integrators and Users of drive systems in dust-filled atmospheres, **LEROY-SOMER** has developed the **LSPX / FLSPX** motors and geared motors.


Conforming to the Essential Health and Safety Requirements of the **ATEX 94/9/EC European Directive (ATEX 95)**, these applications have been designed to operate in silos or in any other storage location for organic products releasing inflammable dust (cereals, greases, food products, chemicals, etc).

User sites in dust-filled atmospheres are now categorised into three operating zones by their degree of risk : zones 20 (permanent danger), 21 (potential danger) and 22 (minimal danger). Apart from zone 20, where all electric motors are prohibited, **LEROY-SOMER** has adapted its fixed or variable speed drive systems to these different environments.

The **LEROY-SOMER** offer is exceptional in its range, of **both motors only and geared motors**, and also in its deliberate policy of **certification of all these ranges of « safety » products**.

**◆ ZONE 21 - POTENTIAL DANGER  
and ZONE 22 – MINIMAL DANGER – CONDUCTIVE DUST**

**Statutory requirement for motors and geared motors :**

- Guaranteed maximum surface temperature in accordance with EN 50281.1.2
- CE marking:  II category 2D for zone 21 and 3D for zone 22, conforming to ATEX Directive 94/9/CE (ATEX 95)
- Guaranteed dustproof IP 6X, in accordance with EN 50281.1.1
- Certification by a notified body approved by the European Commission for products that can be used in zone 21 and auto-certification for those in zone 22.

**LEROY-SOMER solutions meeting these stipulations :**



**CERTIFIED MOTORS WITH SURFACE T° < OR = 125°C:**

- **LSPX** IP 65 motors, with aluminium frame, 0.09 to 90 kW and **FLSPX**, with cast iron frame, 0.55 to 400 kW
- **LSPX FCR** IP 65 brake motors, 0.18 to 5.5 kW, or **LSPX FAP**, from 7.5 to 22 kW with aluminium frame, and **FLSPX FCR**, from 0.18 to 4 kW or **FLSPX FAP**, from 5.5 to 22 kW with cast iron frame
- **LSPX VMA** IP 65 motors with built-in variable speed, from 0.25 to 4 kW, with or without **FCR** brake.



**CERTIFIED GEARBOXES AND GEARED MOTORS  
WITH SURFACE T° < OR = 125°C:**


All the above motors can be used in conjunction with the following gearboxes:

- **COMPABLOC** : Gearbox with helical gears, axial output, solid shaft, suitable for any application
- **MANUBLOC** : Gearbox with helical gears, axial output, solid or hollow shaft, suitable for any application

- **ORTHOBLOC** : Gearbox with helical gears, perpendicular output, solid or hollow shaft, suitable for any application
- **MULTIBLOC** : Worm gearbox, perpendicular output, solid or hollow shaft, selected according to the operating cycle
- **POULIBLOC** : Gearbox with helical gears, axial output, hollow shaft with taper bush

**◆ ZONE 22 – MINIMAL DANGER  
NON-CONDUCTIVE DUST**

### Statutory requirement for motors and geared motors :

- Guaranteed maximum surface temperature in accordance with EN 50281.1.2
- CE marking:  II category 3D, conforming to the ATEX Directive 94/9/CE (ATEX 95)
- Guaranteed dustproof 5X
- Auto-certification by a body notified by the European Commission

### LEROY-SOMER solutions meeting these stipulations :



#### AUTO-CERTIFIED MOTORS WITH SURFACE T° < OR = 125°C:

- **LS** IP 55 motors, with aluminium frame, 0.09 to 160 kW and **FLS**, with cast iron frame, 0.55 to 400 kW
- **LS FCR** IP 55 brake motors with aluminium frame, 0.18 to 5.5 kW and **LS FAP** from 7.5 to 22 kW, and **FLS FCR** from 0.55 to 4 kW and **FLS FAP** from 5.5 to 22 kW cast iron frame
- **LS VMA** IP 55 motors with built-in variable speed drive, from 0.25 to 4 kW, with or without **FCR** brake.



## **CERTIFIED GEARBOXES AND GEARED MOTORS** **WITH SURFACE T° < OR = 125°C:**

All the above motors can be used in conjunction with the following gearboxes **COMPABLOC, MANUBLOC, ORTHOBLOC** without restriction, or with the **MULTIBLOC** (depending on the operating cycle).

Lastly, the **DIGIDRIVE** and **UNIDRIVE SP** ranges of enclosed variable speed drives combine to make the **LEROY-SOMER** offer for dust-filled atmospheres unbeatable.

### ◆ The advantages of LEROY-SOMER can be summed up as follows:

- **A complete offer** of motors, geared motors, variable speed drives
- A **unic offer** of **motors and geared motors with built-in variable speed for zones 21 and 22**
- The option of **certification** of motors and geared motors **for zones 21 and 22**

A **UNIQUE SERVICE** complements this complete product offer, with short guaranteed lead times through to delivery to the customer's premises, without prior consultation : this is **LEROY-SOMER'S GUARANTEED AVAILABILITY.**