

**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**

LEROY-SOMER solutions conform to **ATEX Directive 94/9/EC** and are certified by the French organisation **INERIS (notified by the European Commission)** with surface temperature $< \text{ or } = 125^{\circ}\text{C}$:

- **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 15 kW, or **LSPX FAP**, from 18.5 to 22 kW with aluminium frame, and **FLSPX FCR**, from 0.18 to 9 kW or **FLSPX FAP**, from 11 to 22 kW with cast iron frame
- **LSPX VARMECA** IP 65 motors with built-in variable speed, from 0.25 to 4 kW, with or without **FCR** brake.

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**

LEROY-SOMER solutions conform to **ATEX Directive 94/9/EC**:

u **Auto-certified motors with surface temperature < 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 15 kW and **LS FAP** from 18.5 to 30 kW, and **FLS FCR** from 0.55 to 9 kW and **FLS FAP** from 11 to 30 kW cast iron frame

- **LS VARMECA** IP 55 motors with built-in variable speed drive, from 0.25 to 4 kW, with or without **FCR** brake.

u **INERIS certified gearboxes and geared motors with surface temperature < 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 new service concept 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.**