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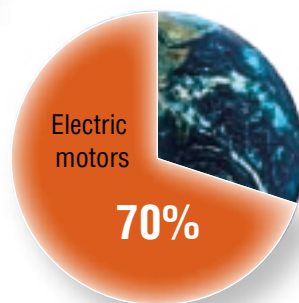
# **CONTROLLING ENERGY IN MOTORISED APPLICATIONS**

# Energy savings, these concern everyone!

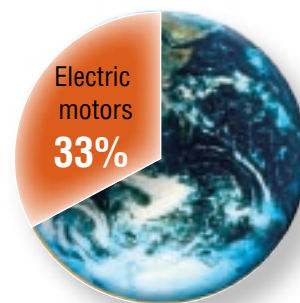
*Saving energy is becoming an economic necessity and an obligation for preserving the future of the planet.*

*It concerns the whole of industry: electric motors account for almost 70% of the power consumption in industry and over 33% in the service sector.*

*Drive systems represent a source for major savings.*



Industry



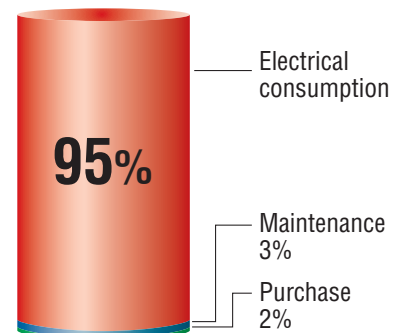
Service sector

## Global electricity consumption

*The purchase price of a motor and its maintenance cost are negligible over 10 years.*

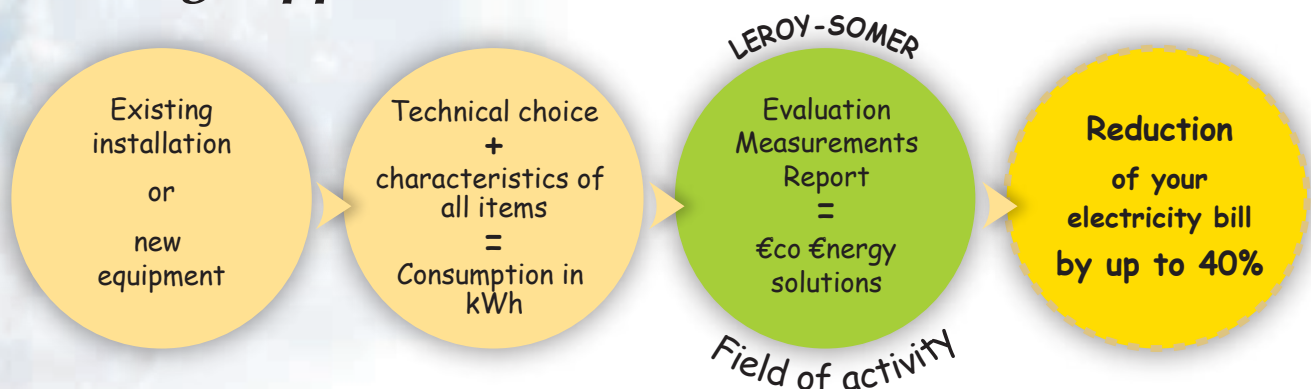
*This is because power consumption accounts for over 95% of the total cost!*

*It is therefore important to reduce the energy bill for existing installations by investing in technologies that are less greedy in terms of electricity.*



**Total cost of an induction motor over 10 years**

## Savings opportunities





# Save kWh ... ... on your drive systems

## ! Increase the efficiency of fixed-speed motorised applications

### INDUCTION MOTORS

Leroy-Somer will reduce your power consumption with two new ranges of high-efficiency induction motors, bearing the labels Eff1 and Eff2 in accordance with the European agreement. Above 90 kW, Leroy-Somer motors offer levels of efficiency of between 95 and 98%.



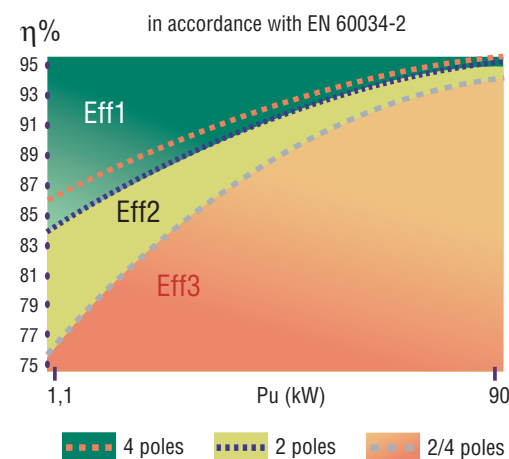
Reference  
ranges  
LS - FLS



High-efficiency  
ranges  
LS ES - FLS ES



### Contractual efficiencies at 50 Hz



### GEARED MOTORS

For fixed or variable speed drives, Leroy-Somer offers the new generation high-efficiency 3000 ranges. These ranges, with coaxial, parallel or orthogonal output, are designed to optimise the transmission, according to the application and mechanical abilities of the machine.



Helical gear  
technology

η > 96%



Helical bevel  
gear technology

η > 96%



Helical gear  
technology

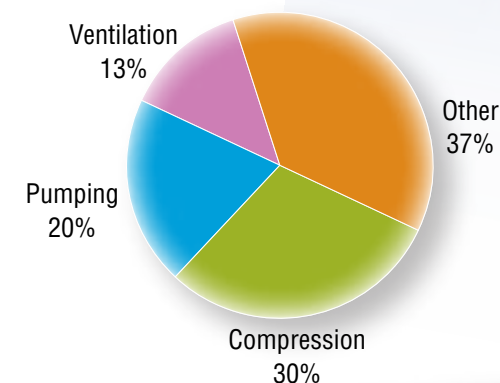
η > 96%

## ! Increase the efficiency of motorised applications, by variable speed solutions

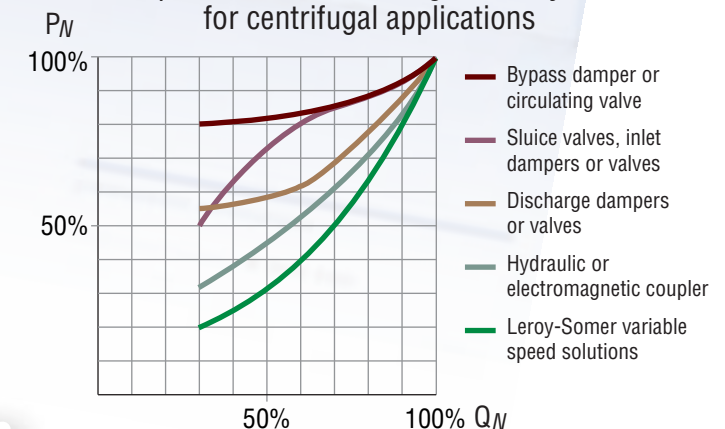
Solutions using Leroy-Somer variable speed drive systems bring:

- Immediate financial savings on your power consumption
- Better supply agreement terms from energy suppliers
- An increase in your productivity
- Reliability of your processes, through the elimination of surges and slip, integrated motor protection, storing and monitoring of events and maintenance management.

### Distribution of centrifugal applications in industry



### Comparison of different regulation systems for centrifugal applications



### Savings on my power consumption

- Removal of mechanical regulation to increase the efficiency of centrifugal applications
- Consumption optimised according to machine requirements
- Recovery of kW on the mains supply in braking phases

### + Savings on my reactive current bill

- Removal of penalties by increasing the power factor

### + Savings on my supply agreement

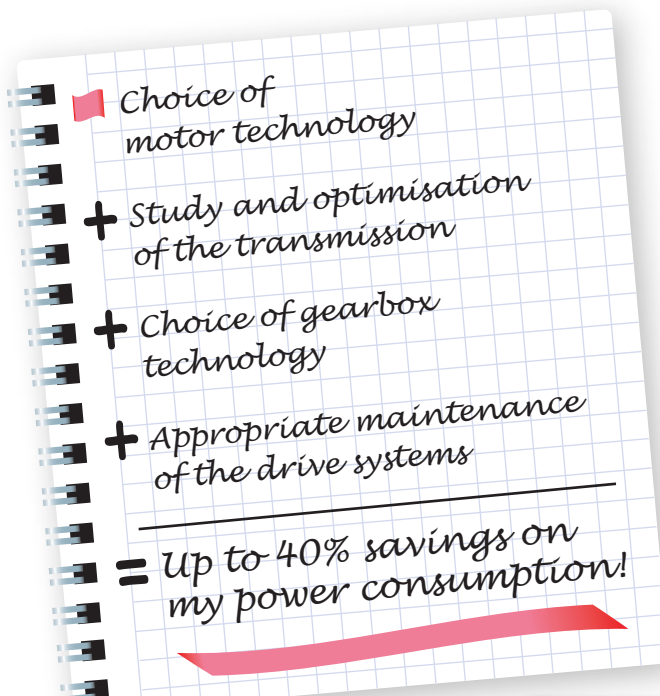
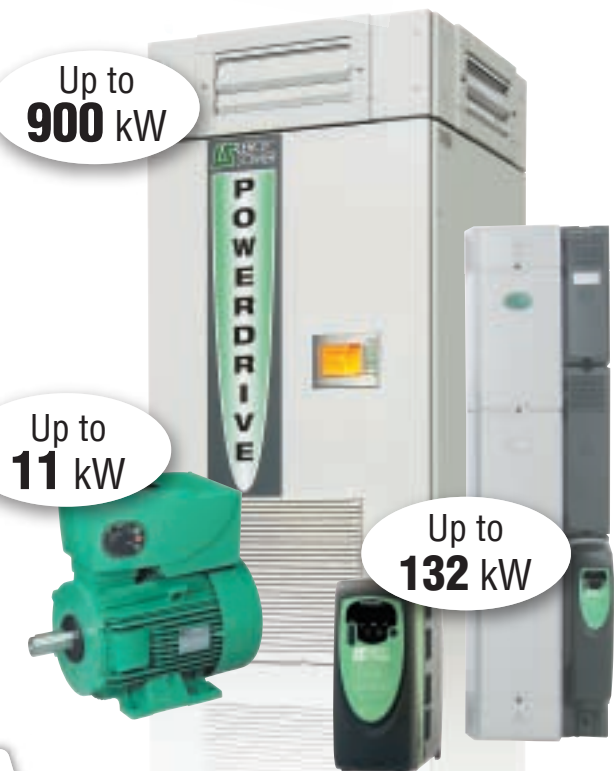
- Decrease in startup peaks

= Up to 40% savings on my power consumption!

Up to  
900 kW

Up to  
11 kW

Up to  
132 kW



# Your energy bill ...

## Where can you make savings quickly?




In the following applications:

- ▶ Centrifugal applications: pumping, ventilation
- ▶ Applications with mechanical regulation: dampers, sluice valves and slide valves for compressors
- ▶ Applications accumulating a high installed power
- ▶ Applications operating in continuous duty
- ▶ Applications restoring energy on braking resistors: centrifuges, lifting, winding, unwinding
- ▶ Applications whose mechanical design gives poor efficiency



## Reducing your energy bill:

ENERGETIC PRE-DIAGNOSIS  
PAYBACK FOR HIGH EFFICIENCY MOTORS

Customer	Dupontex
Project	ECOTOP
Date computed	13/07/2007

Application data ( depending on customer data )

Output power	75	kW
Average motor loading	100	%
Annual running time	8700	h
Cost per kW	0.07	€

Comparative motor data

High efficiency motor	
Motor type	LSES 280 SC
Efficiency ( supplier data )	95.4 %
Price	10835 €
Motor with lower efficiency	
Motor type	HA 280
Efficiency	94.4 %

Results

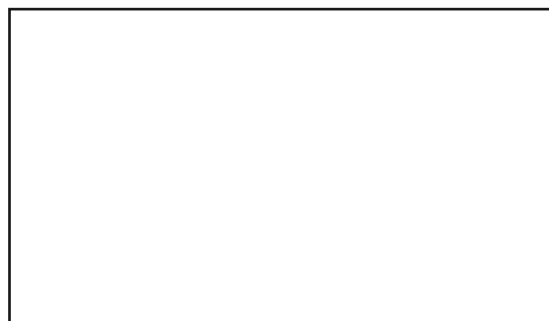
Annual saving on energy cost	507	€
Payback time	19	months

Please note that the data indicated in this document are estimates supplied for information purposes only and do not engage LEROY Somer liability

Moteurs Leroy Somer

Printed 13/07/2007





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Limited company with capital of €62,779,000

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