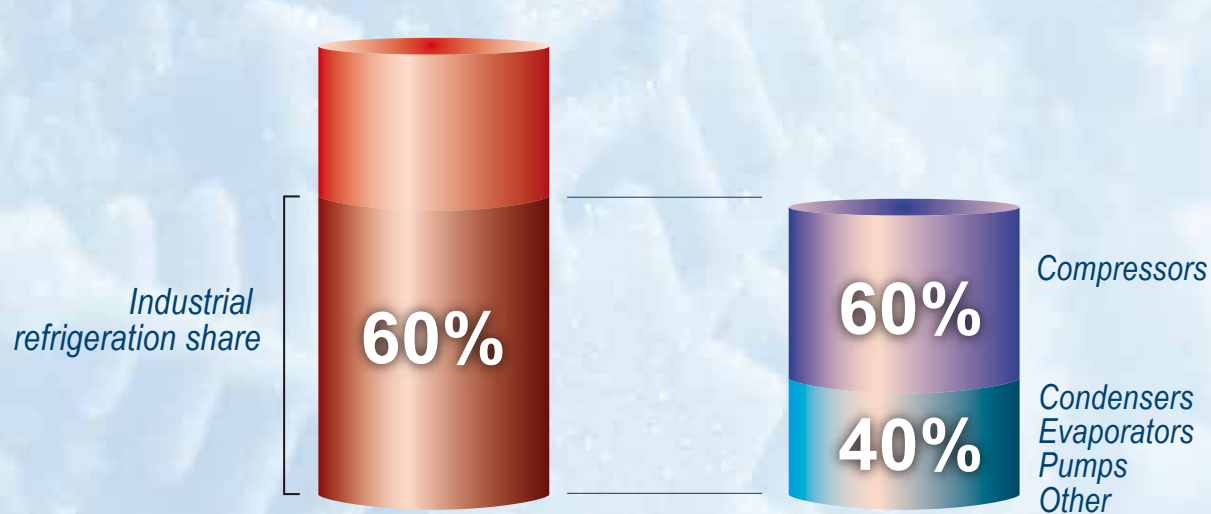
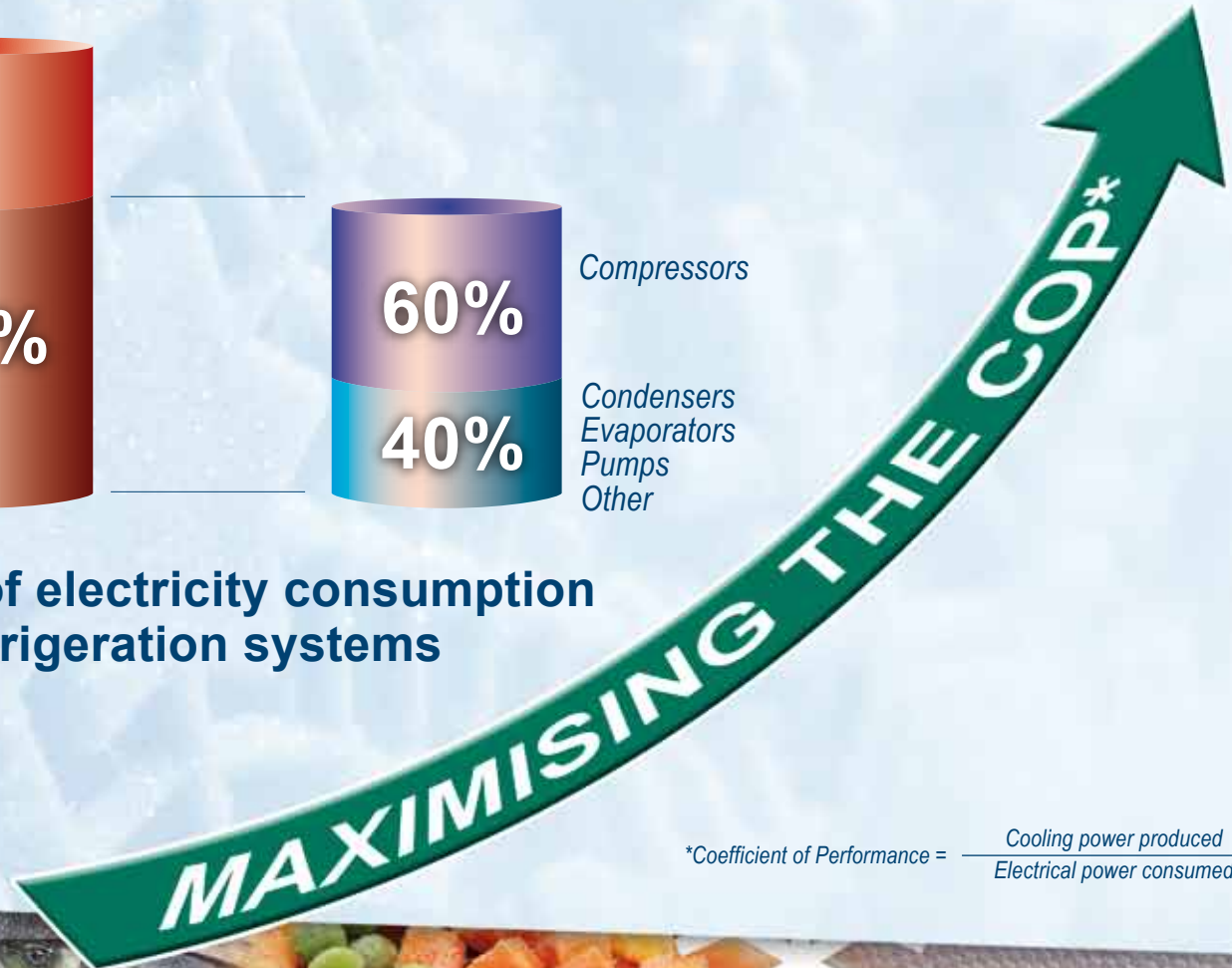


INDUSTRIAL REFRIGERATION

Energy saving challenge



Breakdown of electricity consumption on refrigeration systems



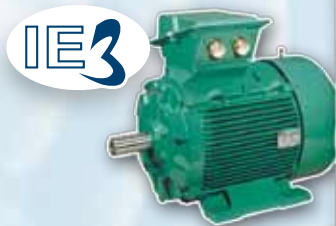
*Coefficient of Performance = $\frac{\text{Cooling power produced}}{\text{Electrical power consumed}}$

SOLUTIONS

VARIABLE SPEED
PERMANENT MAGNET
TECHNOLOGY
IP55 - IP23



VARIABLE SPEED
INDUCTION TECHNOLOGY
IP55 - IP23



FIXED SPEED
HIGH EFFICIENCY
IP55 - IP22



MAXIMISING THE COP*

$$*Coefficient\ of\ Performance = \frac{Cooling\ power\ produced}{Electrical\ power\ consumed}$$

ECONOMIC AND ENVIRONMENTAL ANALYSIS

REFRIGERATION COMPRESSOR



- > Adaptation to the cooling process needs
- > Up to 30% of energy savings
- > Decrease of reactive power consumption and power supply subscription
- > Easier handling, assembling and maintenance
- > No need of additional compressor
- > Anticipate new motor efficiency standards

REFRIGERATION CONDENSER



Example: replacement of 14 fixed speed motors by a Dyneo® solution for fan application

- > Energy saving: 96,000 kWh/year
- > TOE* saved: 24 TOE/year
- > CO2 saved: 10 tonnes/year
- > Return on investment time: 12 months

* Tonne of oil equivalent

