

Ceccato Compressor



INDUSTRIAL AIR MULTIBRAND BUSINESS



Screw element

- Introduction
- C40
- C55
- C77
- C106



Ranges

- C40
 - 2.2-5.5 kW (3-7.5hp)
- C55
 - 7.5-15 & 4-15kW (10-20 & 5.5-20hp)
- C77
 - 11-30kW (15-40hp)
- C106
 - 22-75kW (30-100hp)
- C146
 - 55-90kW (75-125hp)



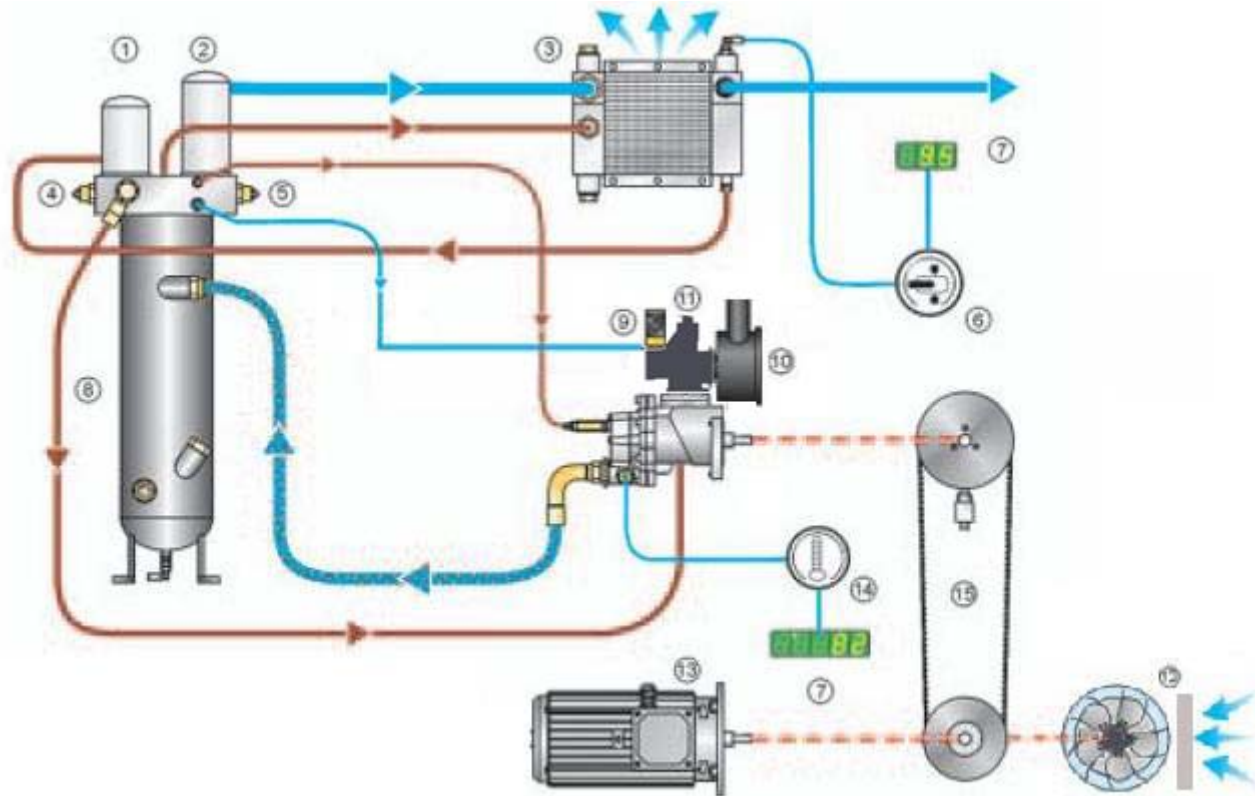
Ranges

Element	Kw	Ceccato
		hp
C40	2,2-5,5	CSM MINI 3-7,5
C55	7,5-15	CSM MAXI 10-20
C55	4-15	CSA 5,5-20
C77	11-30	CSB 15-40
C106	22-75	CSC 30-100
C146	55-90	CSD 75-125



Flow diagram

- 1 - Air intake filtration foam
- 2 - Air Filter
- 3 - Screw element
- 4 - Oil filter & air/oil separation cartridge
- 5 - Air/Air & Air/Oil Cooler
- 6 - ES3000 display
- 7 - Oil tank
- 8 - Cooling turbine
- 9 - Electric motor
- 10 - Belt Drive
- 11 - Safety valve
- 12 - Thermostatic valve
- 13 - Pressure sensor
- 14 - Temperature sensor



Internal Layout



2 μ Media filter

- Encapsulated air filter for increased reliability and easy service
- High efficiency media filter
- Air intake from cold side for improved compression efficiency

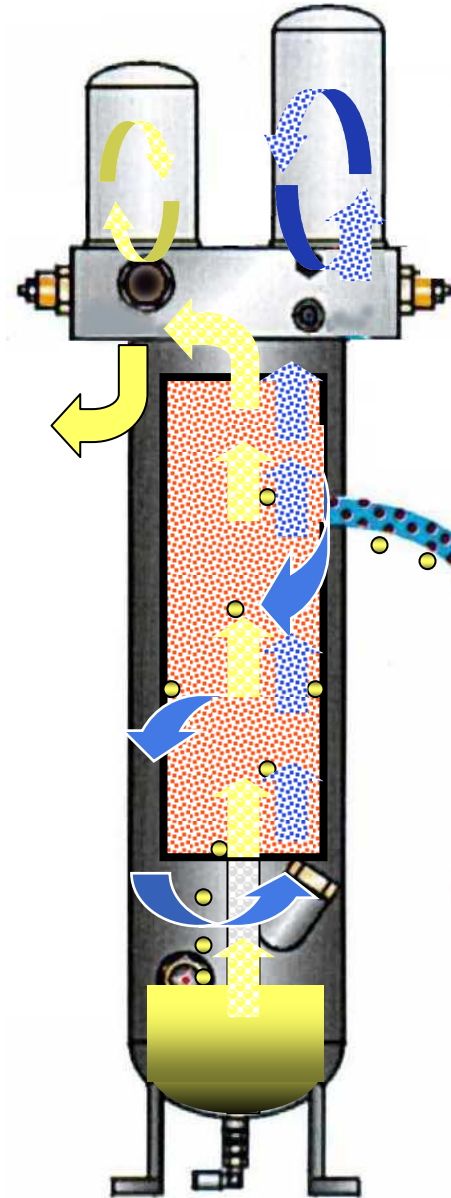


Oil separation

The Air / Oil separator system is designed to provide a low residual oil content (3 ppm) in the air entering the compressor network

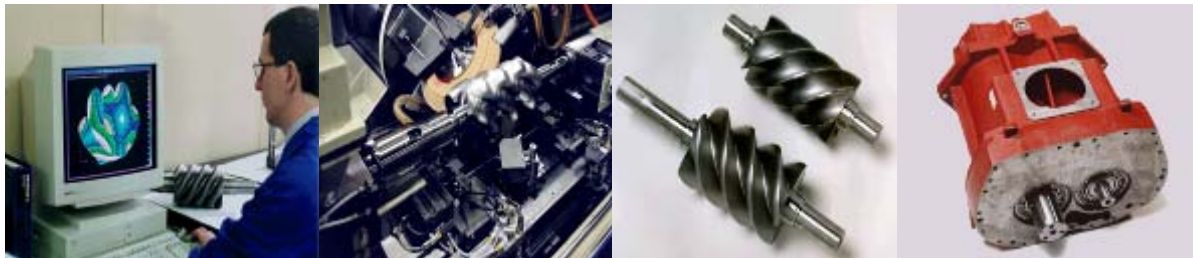
Large Surface Area

- Lower pressure drop
- Increased Energy Efficiency
- Reduced Oil Carry over

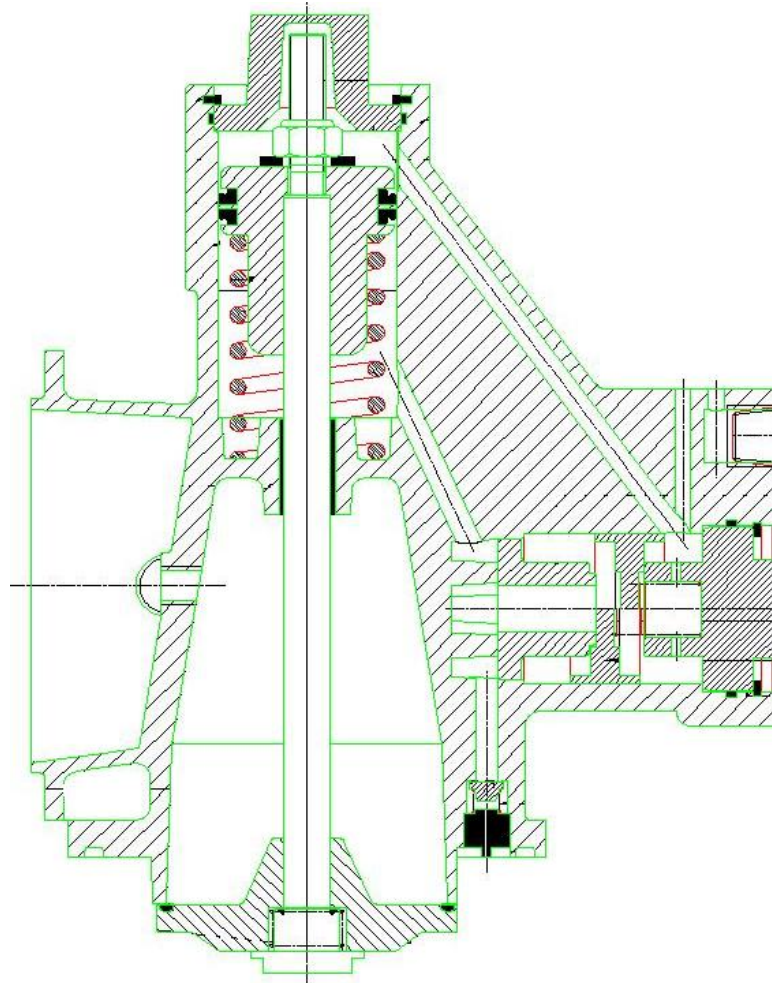


High efficiency Air end

The oil flooded asymmetrical screw type element used has proven its reliability and efficiency in thousands of belt compressor installations throughout the world.



Reliable suction valve



Belt drive

PULLEYS AND BELTS
SELECTED FOR OPTIMUM FAD

V PROFILE DESIGN FOR MAXIMUM
EFFICIENCY

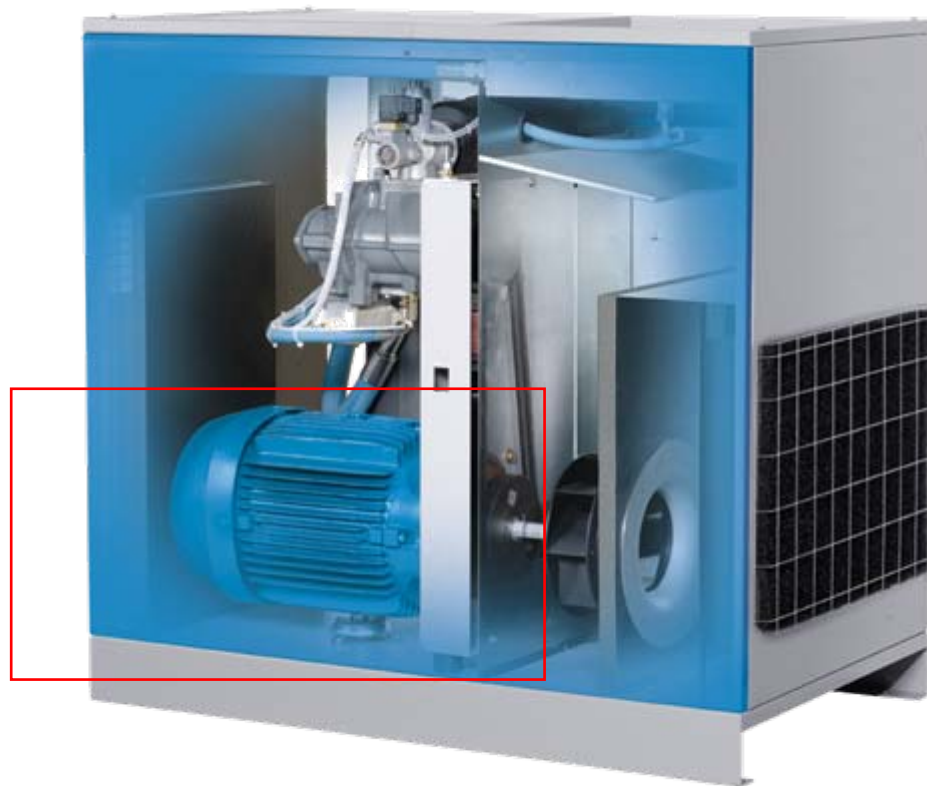
EASY RETENSIONING SYSTEM
(adjustment of element height with 2
screws)

EASY CHANGE FROM REAR
PANEL: requires belt guard removal
(2 screws) and turbine removal
(1screw on shaft)



Motor

IP 54 cl F



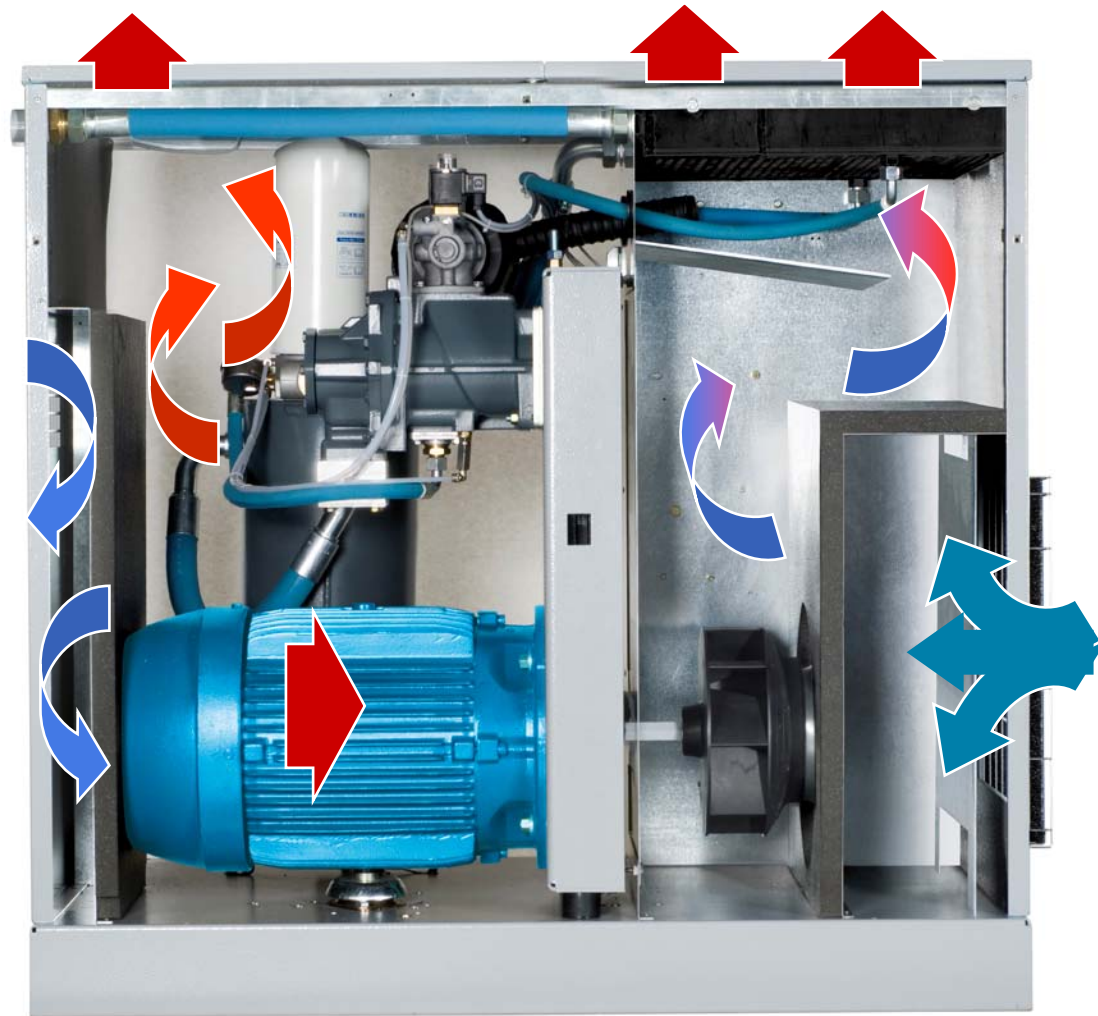
Efficient cooling flow

Large intake baffle with foam that protects components and increase life time and reliability.

Independant motor cooling

Coolers located in cold area for improved air and oil cooling capacity even at maximum ambient conditions.

A turbine instead of a fan is fitted on motor shaft for improved cooling efficiency.

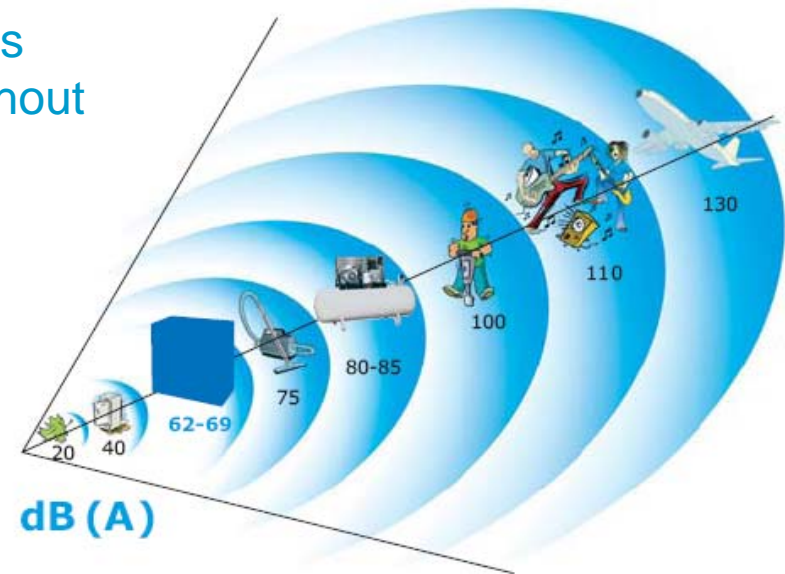


Low noise level

FIX speed units: from 62 up to 69 dB(A)

IVR units: from 64 up to 70 dB(A)

C77 units have extremely low noise levels and can be installed in the workplace without nuisance for the environment.



Large maintenance access

Front panel removal can be done by turning of 90° the two locks.

Panel is large for easy service access but equipped with two pins at the bottom for easy adjustment : without hinge it does not require extra space around the unit.

This panel is equipped with a hole that let the oil sight glass visible without panel removal.

This allow easy oil level control.

A drain valve is fitted at the bottom of the oil tank for easy and clean oil change

Air filter and oil filter can be removed from front panel.



Easy ducting

Roof is made of 2 independant panels

One panel can be removed (only 2 screws) for oil cartridge exchange, while the other one can remain fix.

The second panel foam allows sealing around the cooler.

Machine can easily be ducted from the top of the cooler.

Cooler can still be accessed by rear panel for regular cleaning.



INVERTER - Principle



Purpose of Inverter:

It's to reduce the speed of the main motor to follow precisely the profile of the compressed air requirement

= REDUCED POWER CONSUMPTION

-EMC compliant: no electromagnetic interference to or from the electrical network

-ES 3000 Standard controller: comprehensive display and automatic control of Inverter

-Standard components: easy maintenance and availability

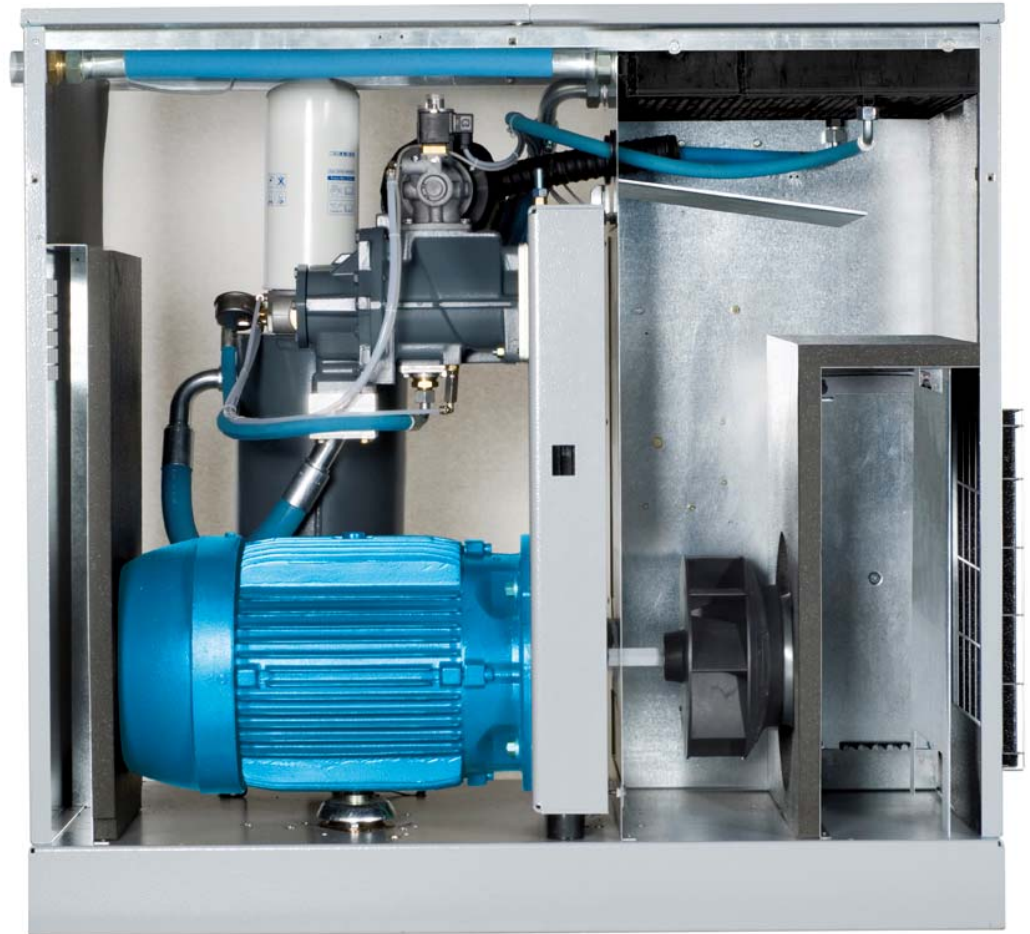


Inverter cooling

Integrated fan (in inverter)

Same air cooling intake as compressor: foam also protects the inverter against dust

Efficiency 1 motor used in IVR compressor for maximum efficiency and energy savings



Inverter control

ES3000 has enough I/O
to allow inverter control

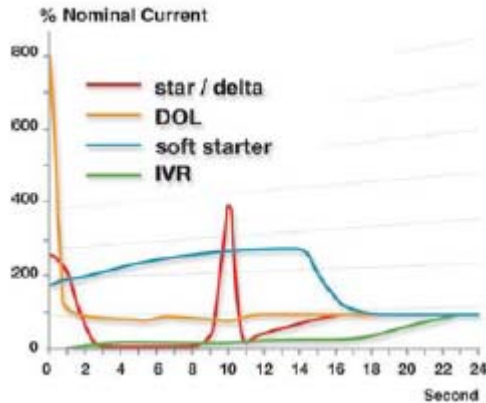
Pressure converted in 0-10 Volt
signal sent to inverter to control
motor speed



One way communication : from ES3000 to inverter
Inverter information can yet be read on VACON display



INVERTER - Benefits

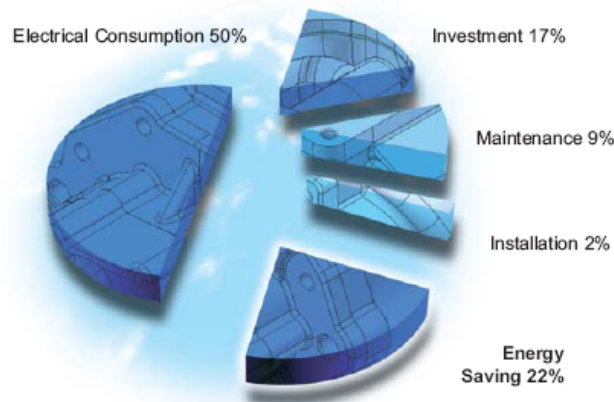


Energy Saving

- **Soft start:** protects the motor against stress at start up, and avoids current peaks.

- **Efficiency 1 motor:** from a reputed supplier, high efficiency for lower HP consumption

- **Constant pressure:** no fluctuation between load and unload pressures.
(1 bar = 7% energy). No unload cycles and energy wastage.



ES3000 Compressor control

ES3000 Simple and reliable Control system

Phase control is standard

Emergency stop button



CONTROLLER – ES 3000

Simple and Reliable Control System

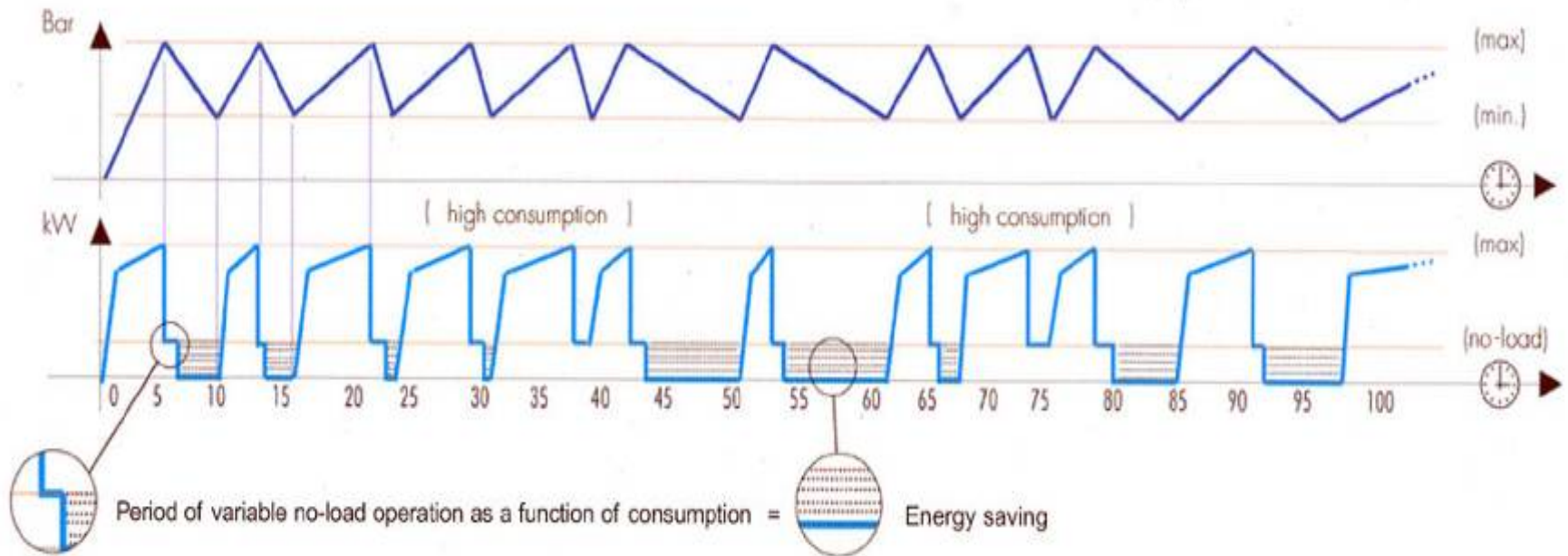


CONTROLLERS – ES 3000

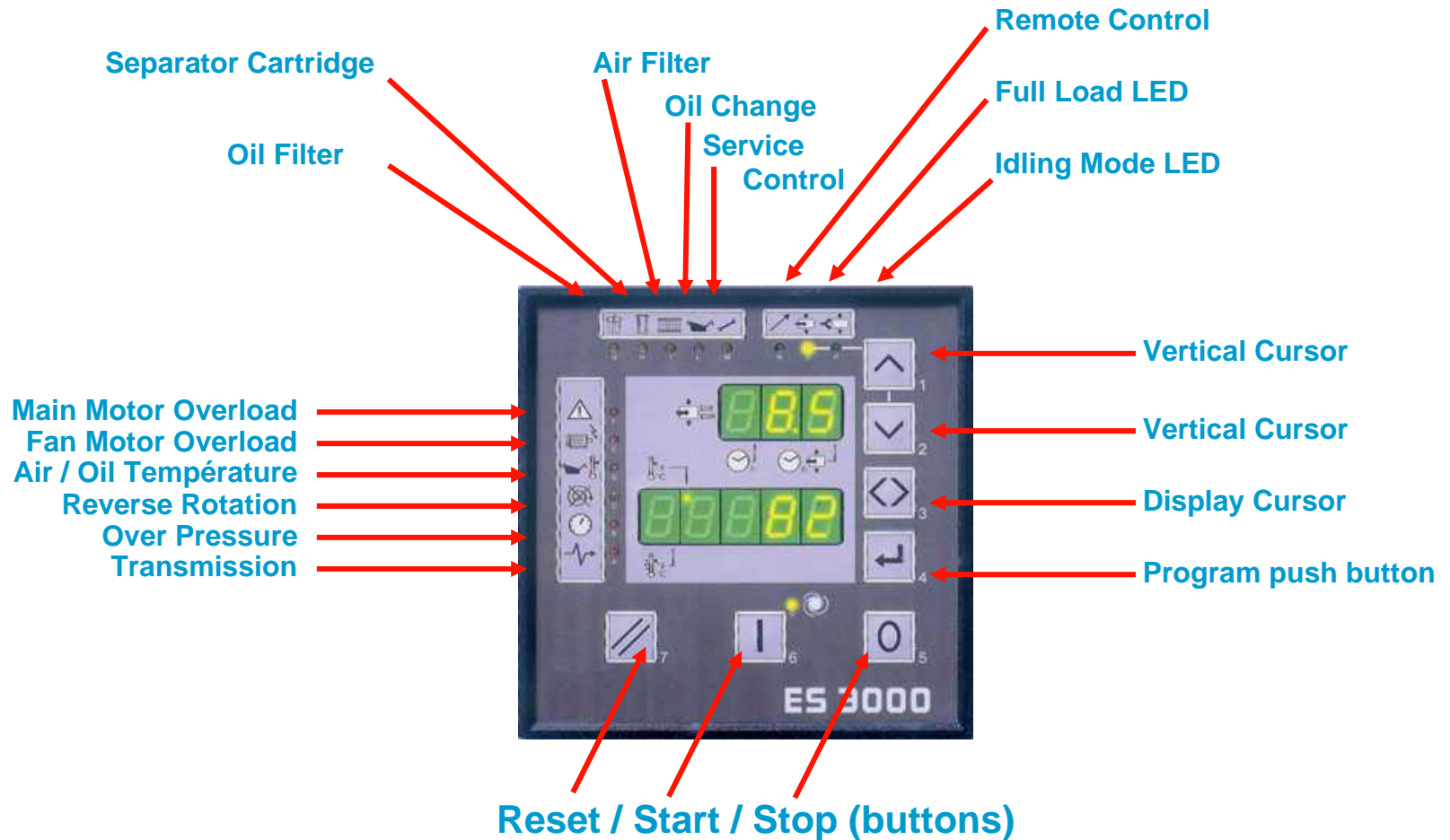


CONTROLLERS – ES 3000

Energy saving with Intelligent Shut-down



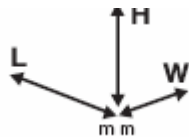
ES3000 Communication



TANK Version for 7.5-20 Hp



- 4 power sizes
 - 7,5 – 10 – 15 – 20 HP
 - 5,5 – 7.5 – 11 – 15 kW
- Pressure
 - 8 – 10 – 13 bar (10 – 15 – 20 HP)
- TANK version (270 and 500 lt)
 - Rotary Screw Compressor on a fixed air receiver



L x W x H mm

270 Lt: 1535x655x1550

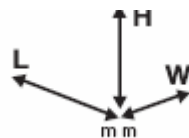
500 Lt: 1935x655x1680

Weight	KG
	270lt – 500lt
7,5 HP >>	255 - 340
10 HP >>	265 - 350
15 HP >>	285 - 370
20 HP >>	310 - 395



DRY Version

- 4 power sizes
 - 7,5 – 10 – 15 – 20 HP
 - 5,5 – 7.5 – 11 – 15 kW
- Pressure
 - 8 – 10 – 13 bar (for 10 – 15 – 20 HP)
- DRY version (270 and 500 lt)
 - Rotary Screw Compressor on a fixed air receiver, with fridge dryer, filters and condensate removal



L x W x H mm

270 Lt: 1535x655x1550

500 Lt: 1935x655x1680

Weight	KG
	270lt – 500lt
7,5 HP >>	290 - 375
10 HP >>	310 - 385
15 HP >>	320 - 405
20 HP >>	345 - 430



DRY Version – A complete system...

Fridge Dryer



Standard Dryer

7,5 HP Dryer (A2)

10 HP Dryer (A3)

15 HP Dryer (A4)

20 HP Dryer (A4)



Oversize Dryer for
special application

Reduces installation costs -Reduces the foot print -Eliminates risk of air leakage



DRY Version – A complete system...

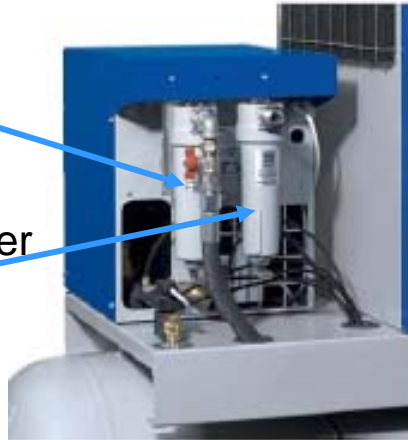
FILTER ASSEMBLY + BY PASS

**A STANDARD
KIT**

In the filter integrated variant, ECD is removed from the standard dryer and replaced by a timer drain

Micronic filter
FM0 20

Submicronic filter
FMM20



Timed drain
with single
drain output



By pass

All the drain pipes
(vessel, filters, dryer)
are connected to the
timed drain

Reduces installation costs -Reduces the foot print -Eliminates risk of air leakage

