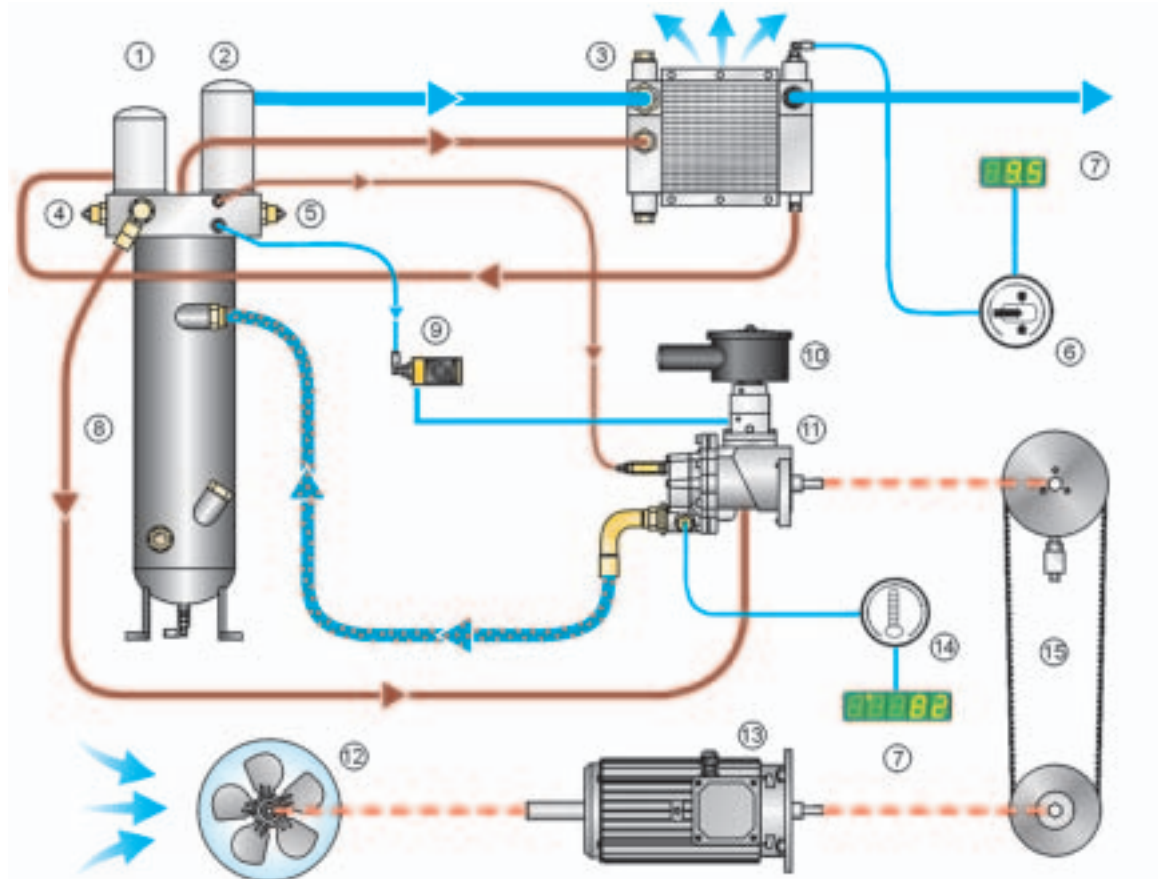




ROTARY SCREW COMPRESSOR
CSB 15 - 20 - 25 - 30 - 40 HP

TECHNOLOGY YOU CAN TRUST

CSB Functional Plan



- | | | | |
|------------------------------|------------------------|---------------------------|--------------------------|
| 1 - Oil filter | 5 - Thermostatic valve | 9 - Suction Electro-valve | 13 - Electric motor |
| 2 - Air/oil separator filter | 6 - Pressure Control | 10 - Air Suction filter | 14 - Temperature Control |
| 3 - Air/oil cooler | 7 - Display | 11 - Air End | 15 - Transmission Group |
| 4 - Safety valve | 8 - Oil tank | 12 - Cooling fan | — (Air) — (Oil) |

After initial filtering air from the atmosphere is taken into the compression unit through the filter and suction regulator and enters the compression chamber, where it is mixed with oil and compressed in a linear and continuous manner, by volumetric reduction via two asymmetrical rotors.

The compressed mixture is sent to the air/oil separator, where a three-phase system (centrifuge, gravity and coalescent) separates the oil from the air.

Before being sent through the distribution network, the compressed air is cooled by a final air cooler.

A transducer system controls delivery pressure.

The oil is an important element for the compressor,

because it guarantees correct functioning of the entire machine. The oil is kept circulating by the pressure of the compressed air and no pumps are required for this purpose.

Lubrication during the start-up phase is ensured by the minimum pressure valve, which permits the system to immediately reach the minimum pressure necessary to guarantee correct oil flow.

In addition to acting as a lubricant, the oil serves as a seal between the rotors, and as a cooling system during the compression phase.

A suitable filter and efficient cooling system maintain the oil in optimum condition.

Rotary Screw Compressor CSB

DRY SUCTION
filter with silencer

Asymmetrical oil flooded
SCREW COMPRESSOR

Three-phase **ELECTRIC**
MOTOR, class, F, European
voltage, IP55

V-type belt **TRANSMISSION**
with guided alignment belt
tensioner

OIL RECEIVER
with high efficiency 2-3
ppm air/oil separator filter

OIL LEVEL visible from the
outside of the machine



Combined, fine finned aluminium
AIR/OIL COOLER

OIL FILTER

EXTERNAL PRE-FILTER, easily
removable for cleaning

ELEGANT, SOUNDPROOFED
and powder-coated

BODYWORK

STEEL BASE PLATE, designed
for access and transport from
three sides

CONTROL AND
ADJUSTMENT PANEL
with ES 3000
Electronic Controller

High efficiency compression system

The two asymmetric rotors, which are equal in diameter, are mounted on high quality, low-wear bearings. The high degree of pressure seal and very fine tolerances reached by the rotors are guaranteed even in low power operations:

- GREATER PRODUCTION
- HIGHER EFFICIENCY
- DURABILITY AND DEPENDABILITY
- CONSTANT PERFORMANCE OVER TIME.

Performances

The high performance, silence,, simplicity of installation and maintenance of CSB Compressor make them the best quality compressors currently available on the market.

The use of state of the art components and the efficiency of our completely renovated assembly lines assure that we produce the most reliable products.

A rational layout and low number of components subject to wear and tear, as well as the ergonomic location of the parts, reduce normal operating and service costs.

Safety

An electronic control system ensures correct functioning of the group, signalling with flashing LED's:

- The transitory stages the machine goes through (machine stand-by for start-up, pre-alarms or alarms engaged)
- And with lighting LED's the functioning phases, alarms and emergencies.

Easy Maintenance

All internal parts of the machine are easily accessible, whether for a simple check-up, or for the most important maintenance operations.

High performance, simple intervention and reliability contribute to reduced operating costs.

Air filter replacement

In order to perform routine maintenance it is sufficient to remove just one of the two panels



Replacement and belt tension

For replacement and/or the belt tension, only the fixed side protection needs to be removed. The transmission has been built in a manner that allows guided alignment of the belts and pulleys.



Ordinary maintenance

- Drainage of condensation
- Oil top-up
- Oil change
- Oil filter replacement
- Separator filter replacement

All of these interventions are possible by removing only two panels.

Ducting Installation

The machine has been designed to allow easy ducting for the inlet and exhaust air. Inlet air can be ducted to the right side of the machine, with no interference with other functions or components. Exhaust air can be ducted from the top of the machine, via the removal of a specially designed panel. Even a permanent ducting installation will not interfere with the removal of panels for routine service operations.

Regulation • Energy Saving

ES3000 electronic controller and display

ELECTRONIC REGULATION

The ES3000 controller installed on the CSB is a control system that was designed for medium and high power compressors.

The Controller permits:

MANAGEMENT

of all operations relative to the use of the compressor: pressurisation, running dry, stopping and re-starting the compressor;

Control and **REGULATION** of the machine;

INFORMATION

on eventual anomalies;

SHUT DOWN

of the compressor due to engagement of an alarm;

VISUALISATION

of information on the machine's maintenance programme.

KEYBOARD

There are soft touch panels for:

- Starting and stopping the compressor;
- Reset of alarms;
- Using the maintenance menu;
- Controller test operation.

CONTROLS

Two displays visualise messages indicating all functional conditions of the machine.

The messages are all visible in a simple and clear manner and can be easily interpreted.

Two functional keys and two scrolling keys permit the control and programming of the card.

SIGNALLING

Appropriate signal lights (LED) indicate the state of the compressor; operating under regulator control, power on, pre-warning and warning of anomalies and for safety purposes.



THE ELECTRONIC CONTROLLER:

Controls and operates the compressor modifies parameters of operation transmits information to user

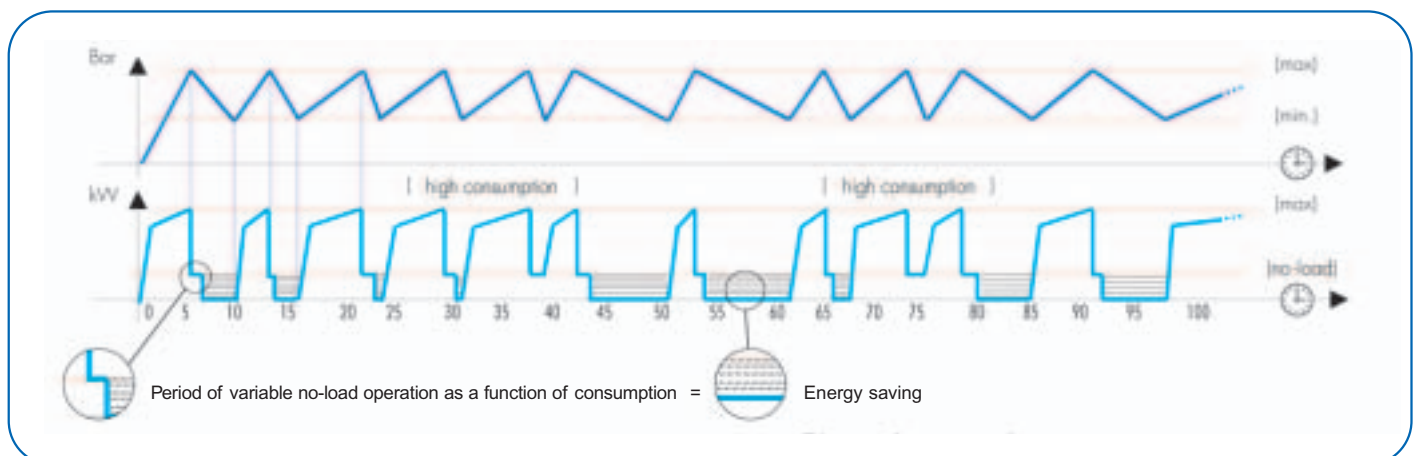
Is equipped with: 8 digital input connections; 4 analogical input connections;

Controls: 14 digital output devices 1 analogical output device

It is also equipped with: 1 serial port 1 interface port.

Energy savings with “Intelligent Shut-down”

Regulation with the ES3000 controller allows the user to considerably reduce electrical energy consumption in the no – load phase, through the “intelligent shut down” feature, by automatically calculating, cycle by cycle, the minimum no – load functioning time, based on air consumption and the maximum number of start-ups per hour programmed.



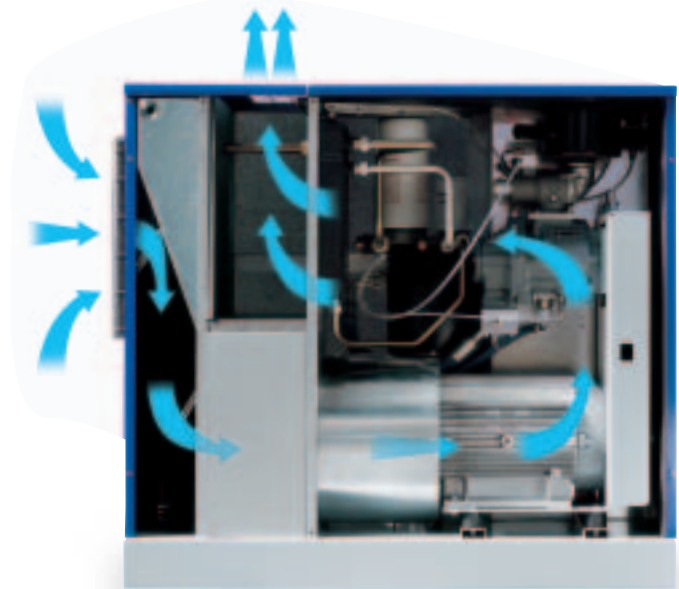
Once maximum pressure has been reached, in the absence of air, even due to lack of need, the compressor switches to no – load. The energy saving is obtained by stopping the compressor, following the shortest possible no – load. This ensures:

- that the maximum number of start-ups per hour programmed is not exceeded;
- immediate re-starting in order to satisfy a subsequent requirement of air.

Cooling • Silence • Handling

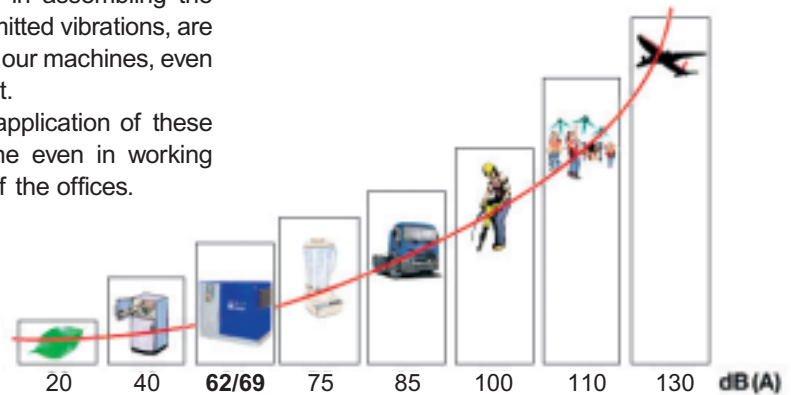
Cooling

Careful analysis of the flow of the air, as it is directed through, the principle components, contributes to maintaining the correct thermal balance of all internal parts of the machine, and ensures that the compressed air is distributed at optimum temperature. A correct low operating temperature guarantees dependable long-term operation.



Silence

Experience gained over the years and careful analysis in the air flow inside the machine, the use of suitable panels with sound insulation features, the care taken in assembling the various components, the absence of transmitted vibrations, are features which guarantee results that place our machines, even standard units, at the top end of the market. The low noise level reached through the application of these features allows installation of the machine even in working environments or in the immediate vicinity of the offices.



Handling

The new CSB series compressor may be moved in a simple manner with a pallet truck. Easy access points for lifting are available on three sides of the machine, positioned to ensure the load is well balanced.



Installation • Maintenance

Installation



Scheduled maintenance

with original Ceccato spare parts and lubricating oil:

A production stoppage due to lack of compressed air is very costly.

Having replacement parts in-house is the only solution to the problem.

SCHEDULED MAINTENANCE








To simplify the availability of the necessary materials, Ceccato Aria Compressa S.p.A. offers different KITS to suit service needs:

- 2000 hour kit: oil filter, air filter
- 4000 hour kit: 2000 kit + separator filter and pre filter
- 8000 hour kit: 4000 kit + minimum valve, thermal valve kit and suction unit kit

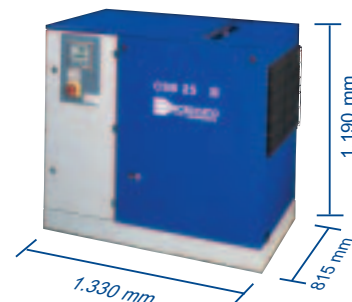


Our Customer Service is always available with a direct number, to offer any assistance you may need.

TECHNICAL DATA (ACCORDING TO ISO 1217 AND CAGI PNEUROP STANDARDS)

| Type |  | |  | |  | | |  |  |  |  |
|------------------|---|-----|---|------|---|-------------------|-------|--|---|---|---|
| | bar | psi | HP | kW | l/1' | m ³ /h | cfm | dB (A) | V/Hz/Ph | gas | Kg |
| CSB 15/8 | 8 | 116 | 15 | 11 | 1.810 | 108,6 | 64,0 | 62 | 400/50/3 | 1 1/4" | 370 |
| CSB 15/10 | 10 | 145 | 15 | 11 | 1.575 | 94,5 | 55,7 | 62 | 400/50/3 | 1 1/4" | 370 |
| CSB 15/13 | 13 | 188 | 15 | 11 | 1.190 | 71,4 | 42,0 | 62 | 400/50/3 | 1 1/4" | 370 |
| CSB 20/8 | 8 | 116 | 20 | 15 | 2.350 | 141,0 | 83,0 | 63 | 400/50/3 | 1 1/4" | 380 |
| CSB 20/10 | 10 | 145 | 20 | 15 | 2.090 | 125,4 | 73,9 | 63 | 400/50/3 | 1 1/4" | 380 |
| CSB 20/13 | 13 | 188 | 20 | 15 | 1.600 | 96,0 | 56,5 | 63 | 400/50/3 | 1 1/4" | 380 |
| CSB 25/8 | 8 | 116 | 25 | 18,5 | 2.900 | 174,0 | 102,5 | 68 | 400/50/3 | 1 1/4" | 420 |
| CSB 25/10 | 10 | 145 | 25 | 18,5 | 2.690 | 161,4 | 95,1 | 68 | 400/50/3 | 1 1/4" | 420 |
| CSB 25/13 | 13 | 188 | 25 | 18,5 | 2.100 | 126,0 | 74,2 | 68 | 400/50/3 | 1 1/4" | 420 |
| CSB 30/8 | 8 | 116 | 30 | 22 | 3.530 | 211,8 | 124,7 | 68 | 400/50/3 | 1 1/4" | 435 |
| CSB 30/10 | 10 | 145 | 30 | 22 | 3.170 | 190,2 | 112,0 | 68 | 400/50/3 | 1 1/4" | 435 |
| CSB 30/13 | 13 | 188 | 30 | 22 | 2.340 | 140,4 | 82,7 | 68 | 400/50/3 | 1 1/4" | 435 |
| CSB 40/8 | 8 | 116 | 40 | 30 | 3.970 | 238,2 | 140,3 | 69 | 400/50/3 | 1 1/4" | 440 |
| CSB 40/10 | 10 | 145 | 40 | 30 | 3.430 | 205,8 | 121,2 | 69 | 400/50/3 | 1 1/4" | 440 |
| CSB 40/13 | 13 | 188 | 40 | 30 | 3.000 | 180,0 | 106,0 | 69 | 400/50/3 | 1 1/4" | 440 |

The Company reserves the right to make changes, for the purpose of continually improving its products.



Design
Manufacture, Sales and
Service of air compressors,
Air dryers and air filters

