

8000

AC Series



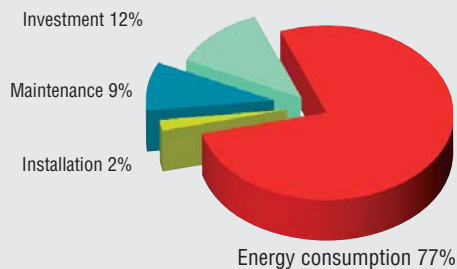
The Best Solution for Your Company

High performance machines, proposed in the 160 - 200 and 250 kW versions at 8, 10 and 13 bar. These compressors are particular due to the presence of two air ends working in tandem. This feature allows a low rotational speed with advantages in terms of efficiency and maintenance costs.

These are a few of the AC 8000 Series unique characteristics:

- Long-life blades.
- Low energy consumption.
- Low compressor rotational speed.
- Low maintenance costs and easy use.

ENERGY COSTS ARE MORE IMPORTANT THAN THE INITIAL INVESTMENT



The diagram refers to a system with a 45 kW compressor, 5 year depreciation, 4000 hours/year, operating pressure 7 bar.

The energy cost of a compressed air installation can reach 80% of total costs. All other costs such as ordinary and extraordinary maintenance or the buying cost are important but become secondary when compared to electric energy as illustrated in the diagram.

The diagram underlines a clear truth: even a small percentage of saving in energy will produce important economic benefits.



SIMPLE AND ECONOMIC MAINTENANCE*

Maintenance operations only include changing the oil at predetermined intervals, cleaning or replacing the air filter and cleaning the radiator. The separator filters are substituted every 10,000 working hours, with significant savings. The absence of roller bearings helps to reduce significantly the cost for maintenance.

* with Mattei Rotoroil

ENERGY SAVING

The range is equipped with efficiency electric motors. The electric motor is directly coupled to the air end, allowing great advantages in the overall efficiency of the compressed air unit, meaning less kW per m³.



DIRECT COUPLING

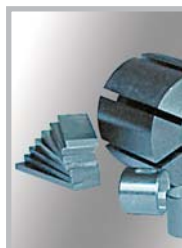
To achieve maximum performances, the AC 8000 Series is equipped with two compression units, working in tandem with an extremely low rotational speed. These two units are both driven by an high efficiency 4 poles electric motor. Air delivery regulation is simple and efficient thanks to one single modulating intake valve working for both pumping units.



BLADES DESIGNED FOR OVER 100,000 HOURS LIVE*

An oil film on the stator's inside surface prevents the moving parts from wearing out by avoiding a direct contact with the blades.

* with Mattei Rotoroil





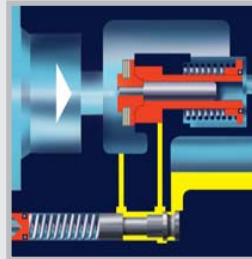
AIR/OIL SEPARATION

The air/oil separation occurs in different stages and ensures exceptionally low oil consumptions. The main mechanical separation occurs in the oil receiver, before the filter, due to slowing down and change of direction of the flow. The last separation occurs in a second receiver, through the coalescing filter, removing the remaining oil vapours from the air. This particular oil separation system brings to a very reduced oil consumption. The large size of the filter and quality of materials ensure a long life of the filter itself.



OPERATING ECONOMY

The AC 8000 Series centres are regulated by the Full Load / Off Load Running system. This regulation maintains the line pressure within a range of minimum and maximum pressure set by the pressure switch and the compressor may stop and restart according to air demand. When the pressure reaches the maximum value the compressor will run off load with the immediate closure of the intake valve and the start of the decompression phase for a better operating economy.



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COOLING

The compressor is complete with two coolers, entirely made of aluminium and suitable to cool the oil and the compressed air. An air flow, produced by two axial fans placed inside the soundproof canopy flows through the coolers and cools the same. The compressed air cooling system is arranged for the fitting, externally to the soundproof enclosure, of a condensate separator and electronic drain with timer. The compressed air outlet temperature is <math>< 10\text{ K}</math> over the ambient temperature.



MAESTRO^{XS}

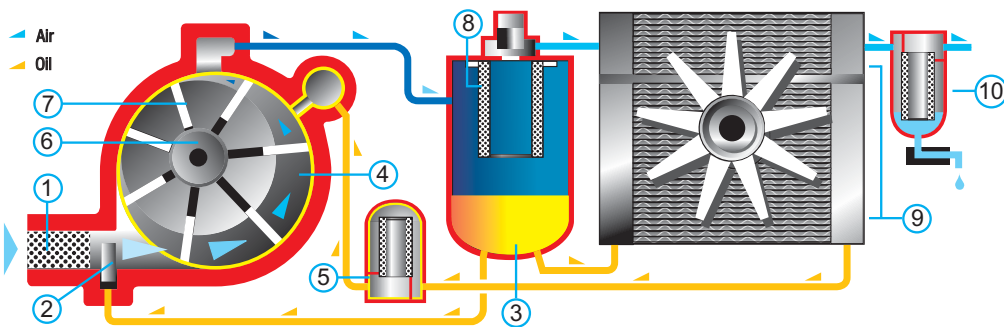
The AC 8000 Series is equipped with an exclusive state-of-the-art computerised controller, Maestro^{XS}. This system automatically controls, monitors and programmes the unit's operation, and can be connected to a PC for a remote control. If connected to other compressed air packages equipped with Maestro^{XS}, the unit can become master of a compressed air plant, thus saving on the installation of a superior controller. Maestro^{XS} can be interfaced via web or cellular technology to provide remote service monitoring.



OPERATION PRINCIPLE

The air is sucked through a filter and passing through an intake valve goes into the compression chamber where the stator, rotor and blades create a series of vanes (or volumes). The rotor rotates eccentrically to the stator and is characterised by vertical slots in which the blades are placed and are pushed against the stator's wall by centrifugal force.

Lubrication and cooling are guaranteed by an efficient injection system which allows perfect hold and a lower lubricant consumption. A thin film of oil on the stator's wall avoids direct contact of the metal parts giving no wear. During the rotation the compression occurs with the volume



reduction of the spaces between the rotor-blades and the stator. The compressed air and oil mixture passes through various separating phases mechanical and coalescent, leaving less than 3 mg/m³ in the air. The purified air leaves the compressor and is cooled in the radiator. The condensate which is produced is eliminated by a separator with an electronic condensate drain.

1. Air filter
2. Automatic intake valve
3. Oil chamber
4. Compression chamber
5. Oil filter
6. Rotor
7. Blades
8. Coalescing separator
9. Air/oil cooler (radiator)
10. Condensate drain (optional)

TECHNICAL FEATURES

50 Hz L = 8 bar H = 10 bar HH = 13 bar

Model	Rated motor power kW	Free air delivery* m ³ /min			Sound pressure level** dB(A)
		L	H	HH	
AC 160	160	29,3	26,6	24,4	75
AC 200	200	36,7	30,85	28,8	75
AC 250	250	44	40,7	33,65	75

Working pressures: 7,5 bar for 8 bar version - 9,5 bar for 10 bar version - 12,5 bar for 13 bar version

(*) Free air delivery as per ISO 1217: 1996 annex "C"

(**) Sound pressure level as per PN8NTC2.3; average value measured from a distance of 1 m

OPTIONAL

CONDENSATE SEPARATOR AND DRAIN KIT

HEAT RECOVERY KIT

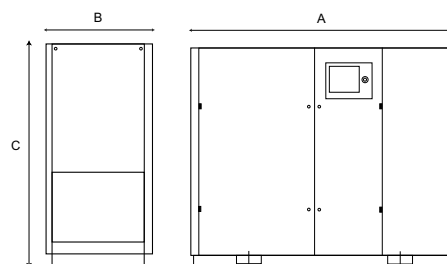
Recoverable heat 80% of shaft power

OIL-WATER SEPARATOR

Max oil content < 5 mg / l

DIMENSIONS (mm) - WEIGHT (kg)

AC	160			200			250			
	VERSION	L	H	HH	L	H	HH	L	H	HH
A	mm	2700								
B	mm	1780								
C	mm	2240								
Weight	kg	4050	4600	4470	4800	4490				



Ing. Enea Mattei SpA reserves the right to change the data contained in this catalogue at any moment and without notice.

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