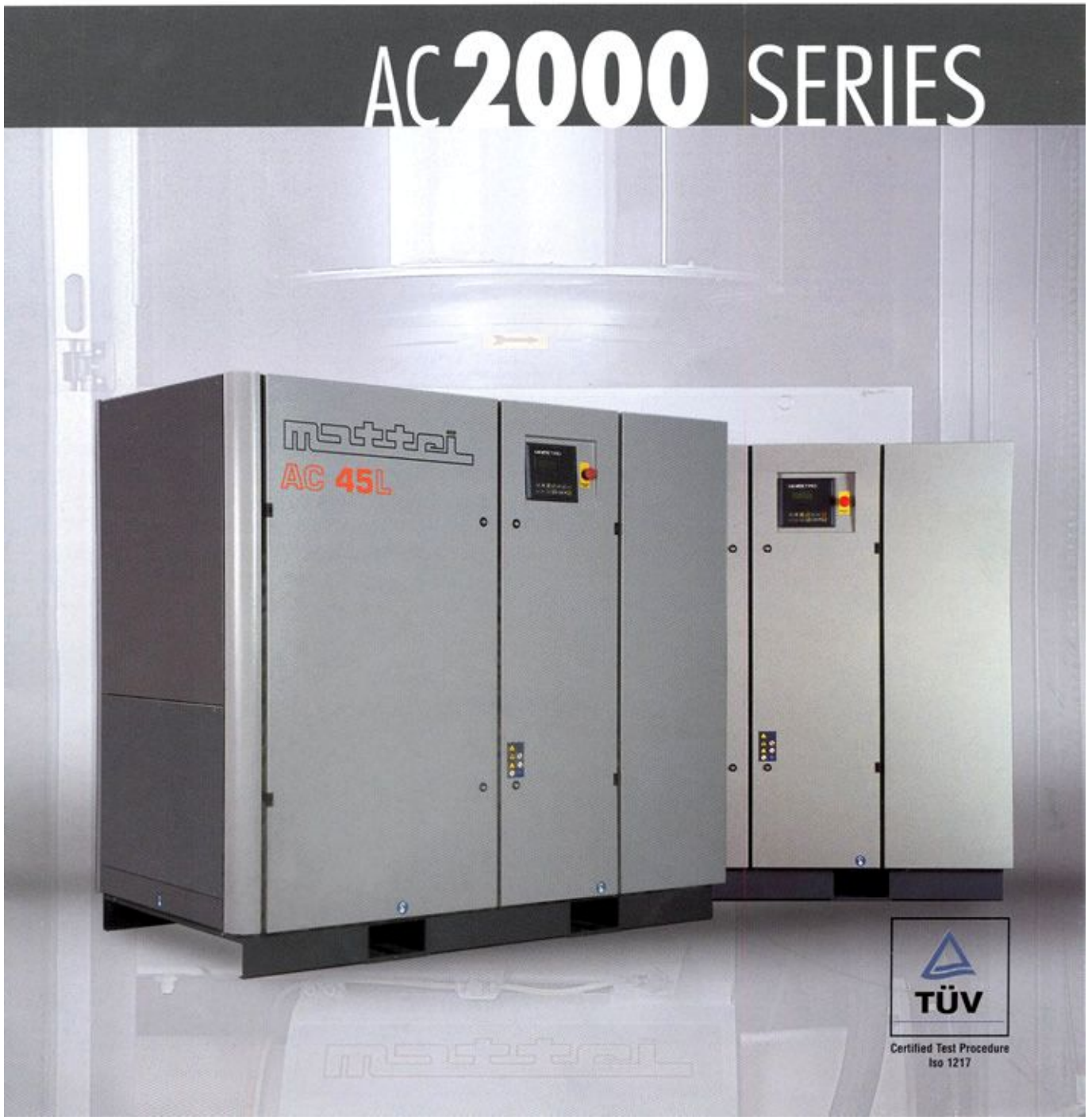
mattei®
BEST SOLUTIONS IN COMPRESSED AIR

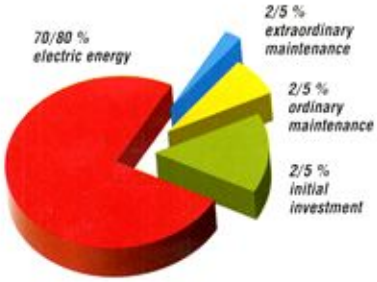
AC2000 SERIES



MATTEI'S LATEST TECHN

ENERGY COSTS ARE MORE RELEVANT THAN THE INITIAL INVESTMENT

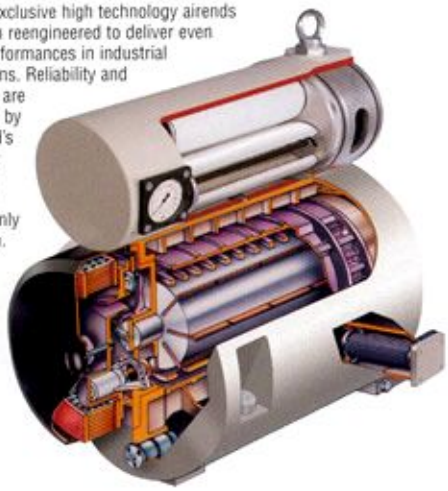
The energy cost of a compressed air installation can reach 80% of total costs. All other costs such as ordinary and extraordinary maintenance or the buying cost are relevant but become secondary when compared to electric energy as illustrated in the diagram.
The diagram underlies a clear truth: even a small percentage of saving in energy will produce important economic benefits.



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

EFFICIENCY

Mattei's exclusive high technology airends have been reengineered to deliver even better performances in industrial applications. Reliability and efficiency are enhanced by the airend's extremely reduced rotational speed - only 1500 rpm.



Version with centrifugal fan

- The AC 2000 Series offers a flexible choice of setup. The basic version of the new AC 2000 series differentiates itself and stands out for the absence of an independent electrically driven fan. The cooling of the compressed air system is guaranteed by a fan directly mounted on the main motor's shaft.
This solution is not only extremely essential in design but also energy effective, since the electric motor of the fan has been eliminated.

ENERGY SAVING

The range is equipped with energy saving EFF 1 electric motors.
The electric motor is directly coupled to the airend, allowing great advantages in overall efficiency of the compressed air unit, meaning less kW per m³/min.

DIRECT COUPLING

The electric motor and the compressor are coupled directly by means of flexible coupling and turn at only 1500 rpm.
Direct coupling determines a remarkable "energy saving" because there are no energy losses caused by gears or V belts.

OVER 50,000 HOURS BLADE LIFE GUARANTEED*

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

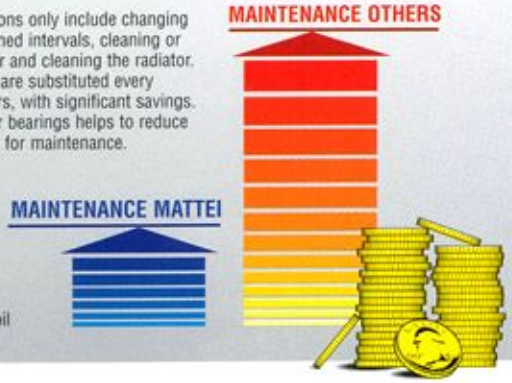
)LOGICAL DEVELOPMENT

Version with axial fan

- For those applications in which environmental awareness is at its highest, Mattei offers the version equipped with a centrifugal fan. In fact, this solution offers an extremely reduced sound level, amongst the lowest in its category.
- The new design is essential and combines compactness, occupying minimal space, and excellent accessibility to all components, of great advantage for an easy and quick maintenance.

*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

MAESTRO

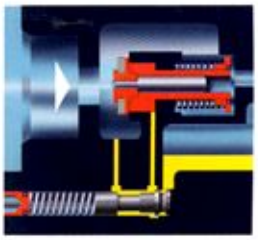
The new AC 2000 series is equipped with an exclusive state-of-the-art computerised controller, Maestro. This system automatically controls, monitors and programmes the unit's operation, and can be connected to a PC for a remote control. If connected to other compressed air packages equipped with Maestro, the unit can become master of a compressed air plant, thus saving on the installation of a superior controller. Maestro can be interfaced via web or cellular technology to provide remote service monitoring.

RELIABILITY

These compressors are designed for industrial use and to deliver constant performances 24 hours a day and 12 months a year.
Mattei compressors' running often exceeds 100.000 working hours.

REGULATION SYSTEMS

MODULATION OPERATING MODE AT CONSTANT PRESSURE



Thanks to a modulating proportional intake valve that supplies air at constant pressure, these compressors can even work without a receiver. With this regulation air delivery is automatically adapted to the system demand.

ENERGY SAVING AUTOMATIC ON LOAD / OFF LOAD

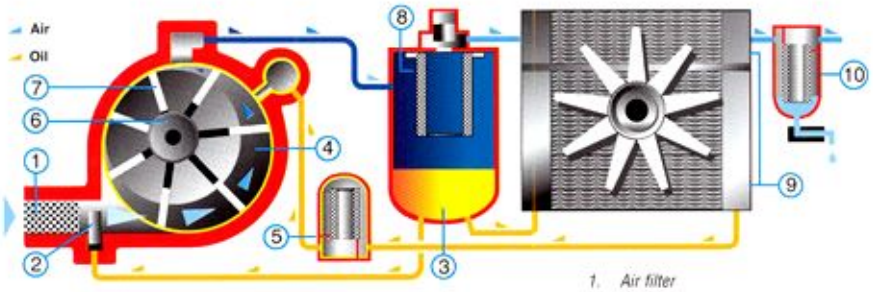
This regulation maintains the line pressure within a range of minimum and maximum pressure set by the pressure switch and the compressor may stop and restart according to air demand.
When the line pressure reaches the minimum value the compressor will run on load delivering 100% of its capacity. When the pressure reaches the maximum value the compressor will run off load with the immediate closure of the intake valve, which sets off the rapid decompression phase, allowing a significant reduction of the absorbed power consumption. Should the pressure continue to remain high, the compressor will stop.

COMBINED ON/OFF LOAD AND MODULATION REGULATION

This regulation allows Mattei compressors to modulate within a set pressure range (for example, ± 0.3 bar). Should the air demand decrease, this regulation also allows the compressor to run off load and stop, with evident energy savings.

OPERATION PRINCIPLE

The air is sucked by means of a filter and passes through a modulating proportional valve that regulates the air delivery according to the demand. This valve automatically maintains the working pressure at constant levels. Therefore, the air enters the compression chambers or vanes that the stator, the rotor, the blades and the covers have formed. This rotor is installed eccentrically to the stator and is equipped with longitudinal grooves in which the blades slide. It is the centrifugal force that pushes the blades against the stator's wall.
An efficient oil injection system guarantees cooling, lubrication and a perfect holding among the moving parts.
An oil film on the stator's inside surface prevents the moving parts from wearing by avoiding a direct contact with the blades.
Air compression is triggered by the volume reduction of the vanes in the stator during rotation. By passing through mechanical and coalescing separation stages, the mixture of compressed air and oil is purified until the maximum oil carry-over in the air does not exceed 3 ppm (parts per million).
Finally, the air is cooled in the radiator and the condensate is eliminated by a condensate drain.

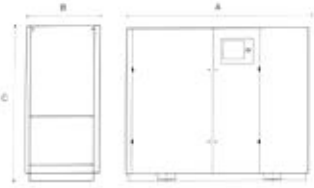


1. *Air filter*
2. *Automatic intake valve*
3. *Oil chamber*
4. *Compression chamber*
5. *Oil filter*
6. *Rotor*
7. *Blades*
8. *Coalescing separator*
9. *Air/oil cooler (radiator)*
10. *Condensate drain*

TECHNICAL SPECIFICATION

Model	Max Working Pressure bar	FAD* m³/min	Rated motor power kW	Sound pressure level dB(A)**	
				Axial Fan Version	Centrifugal Fan Version
AC 30	8	5.62	30	74	66
	10	4.67			
	13	3.67			
AC 37	8	6.8	37	74	66
	10	5.65			
	13	4.8			
AC 45	8	8.28	45	74	66
	10	7			
	13	5.85			
AC 55	-	-	55	74	68
	10	8.9			
	13	7.1			

(*) Air Delivery as per ISO 1217:1996, annex "C"
(**) As per PN8NTC2.3; average value measured from a distance of 1 m



DIMENSIONS AND WEIGHTS

Model	A	B	C	weight
AC 30	1830	960	1670	800
AC 37	1830	960	1670	830
AC 45	1830	960	1670	940
AC 55	1830	960	1670	990

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mattei®
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Since 1994 Mattei operates with an UNI EN ISO 9001 Quality System Certification