



# 1000 AC Series

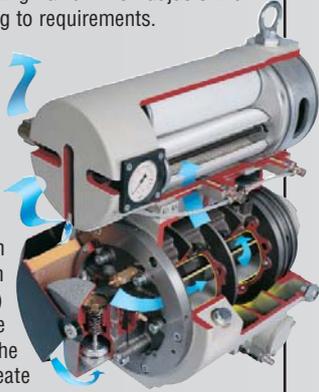


# Technology

## OPERATION PRINCIPLE

The air is sucked in through a filter and passes through the modulating valve which adjusts the rate of flow according to requirements.

The air enters a compression chamber comprising a stator and a rotor, the latter being fitted eccentrically to the former. The rotor is fitted with mobile vanes (in special grooves) which, due to the centrifugal force of the rotor, slide over a fine film of oil which reduces wear and offers a perfect seal for the compressed air.



## MAESTRO<sup>XS</sup>

The AC 1000 series is equipped with an exclusive state-of-the-art computerised controller, Maestro<sup>XS</sup>. 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<sup>XS</sup>, the unit can become master of a compressed air plant, thus saving on the installation of a superior controller. Maestro<sup>XS</sup> can be interfaced via web or cellular technology to provide remote service monitoring.



# Compact-Versatile-Silent Running

The 1000 series of Mattei rotary vane compressors, with rated power level kW, is the perfect solution for the compressed air requirements of small businesses. Available in the silenced AC and AC PLUS versions, they feature automatic pressure control, constant pressure and an aftercooler. Together with compact design and high efficiency, the 1000 series offers reliable service and constant long-term performance.



## ENERGY SAVING

The range is equipped with high efficiency 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 m<sup>3</sup>/min.



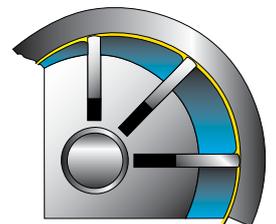
## DIRECT COUPLING



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.

## 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

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## PLUS VERSION



AC Plus version includes an integrated refrigerant dryer, allowing remarkable reduction in installation costs and space requirement.

### DRYER WITH ECOLOGICAL GAS

- EFFICIENT REFRIGERATING POWER PARTIALIZATION
- CONSTANT DEWPOINT
- MAESTRO<sup>XS</sup> CONTROL
- HIGH EFFICIENCY



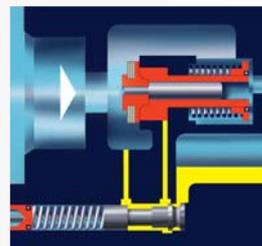
### RELIABILITY

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.

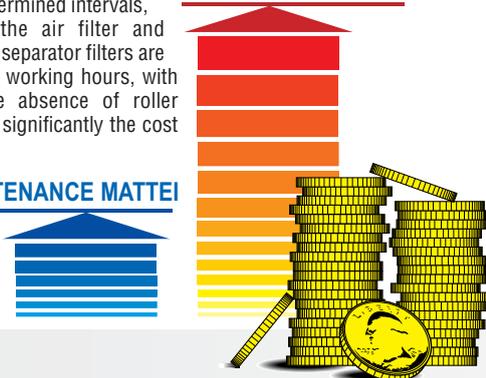
### SIMPLE AND ECONOMIC MAINTENANCE\*

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.

#### MAINTENANCE OTHERS

#### MAINTENANCE MATTEI

\* with Mattei Rotoroil



#### COMBINED ON/OFF LOAD AND MODULATION REGULATION

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

## TECHNICAL FEATURES

50 Hz L = 8 bar H = 10 bar HH = 13 bar - 60 Hz LX = 8 bar HX = 10 bar

Model	Rated motor power kW	Free air delivery* m³/min					Sound pressure level** dB(A)	
		L	H	HH	LX	HX	L / H / HH	LX / HX
AC 15	15	2,7	2,2	1,87	3,01	2,65	67	69
AC 18	18,5	3,28	2,64	2,26	3,67	3,18	67	69
AC 22	22	3,75	3,2	2,57	3,95	3,6	67	69
AC 30s	30	-	4,19	3,55	-	-	68	-

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, value measured at 1 m distance

### OPTIONAL

**CONDENSATE SEPARATOR AND DRAIN KIT (Only for AC versions)**

**HEAT RECOVERY KIT**

Recoverable heat 80% of shaft power

**OIL-WATER SEPARATOR**

Max oil content < 5 mg/l

### PLUS VERSION

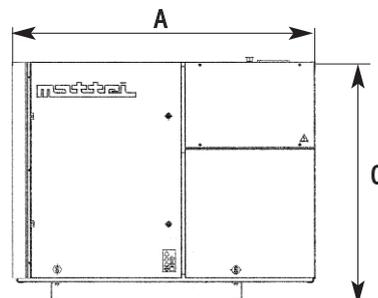
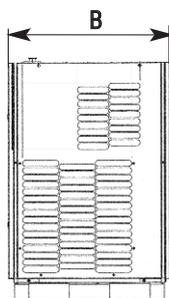
**DRYER** refrigerant

Dew point 3 °C

Refrigerant gas R404A

## DIMENSIONS (mm) - WEIGHTS (kg)

AC	A (mm)	B (mm)	C (mm)	Weight (kg)	Weight (kg) PLUS
15	1500	800	1200	450	490
18	1500	800	1200	450	490
22	1500	800	1200	450	490
30s	1500	800	1200	500	540



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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