

SERIES  
**AIR CENTRE 110 - 132 kW**

ROTARY VANE COMPRESSORS



AC  
AC R  
AC W  
AC PLUS  
AC R PLUS  
AC W PLUS

# SERIES AIR CENTRE



## About us

Ing. **Enea Mattei SpA** is an Italian company that has been producing air compressors since 1919. Over the years, the company has continually evolved and is today one of the world's foremost companies in the compressed air sector and the leader in the production of rotary vane compressors.

Behind the success of Mattei are the choices the company has made in terms of design, production and marketing, driven by the results of its continual and in-depth research and development programmes.

During these years of continual change, Mattei has been able to adapt to the requirements of the market and through the results of its research has created products that are always innovative and technologically advanced.



## Certified quality

Quality as an integral part of all company functions and constant improvement of all production processes so as to always guarantee the maximum level of reliability and satisfaction.

This, in brief, is the value and the meaning of **Mattei's** operational philosophy. A way of approaching the market and customers that makes **Mattei** an absolute point of reference in the compressed air sector.

Since 1994, **Mattei** has been operating with a Quality System certified by the DNV Institute under UNI EN ISO 9001 regulations.





## Rotary vane compressors

### Series AIR CENTRE

The 6000 series centres adopt the exclusive Mattei vane technology and are designed to work 24 hours a day. These new compressors are solid and reliable and offer excellent performance in terms of air delivery and low energy consumption. Maximum care is given to details in the design and the components are of the highest quality.

Maintenance operations are limited and are reduced to the sole oil change and filter cleaning or substitution. The centres are designed to enable easy access to all its components.

These are a few of the 6000 series unique characteristics:

- ▶ Long-life blades
- ▶ Low energy consumption
- ▶ Low compressor rotational speed (only 1500 r.p.m.)
- ▶ Low maintenance costs and easy use

#### 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.

#### Safety

Each Mattei centre is subject to a regular and severe cycle of checks, during which performance is controlled under the worst operating conditions.

#### Simple and economic maintenance\*

Maintenance operations only include changing the oil at predetermined intervals, cleaning or replacing the air filter and cleaning the radiator.

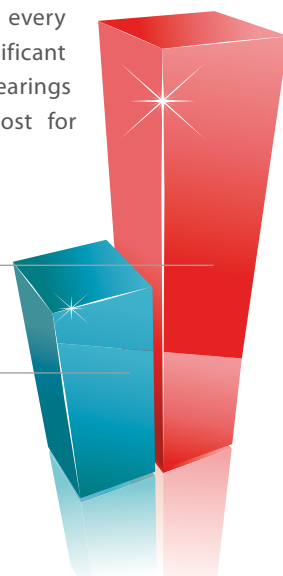
The separator filters are substituted every 10,000 working hours, with significant savings. The absence of roller bearings helps to reduce significantly the cost for maintenance.



MAINTENANCE OTHERS

MAINTENANCE MATTEI

\*with Mattei Rotoroil





## Operating economy

The AC 6000 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.

## 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 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.

## 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 centrifugal 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 < 10 K over the ambient temperature.



## MAESTRO<sup>XS</sup>

### To have everything under control

With a view to energy saving, the communication inside a compressor room plays a decisive role.

It is absolutely essential to manage, control and immediately intervene in the operation of the system in order to prevent waste and unnecessary energy consumption.

For this reason, all of Mattei's Air Centre compressors are fitted as standard with a microprocessor command and control device.

The AC 6000 series is equipped with an exclusive state-of-the-art computerised controller, Maestrox<sup>s</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 Maestrox<sup>s</sup>, the unit can become master of a compressed air plant, thus saving on the installation of a superior controller.

Maestrox<sup>s</sup> can be interfaced via web or cellular technology to provide remote service monitoring.



## How much can you save by recovering heat?

The possibility to use the energy recovered as hot water during an entire year depends on the use you make of it.

Up to 80% of the recovered heat can be used in your industrial building to produce hot sanitary water or for space heating.

It is even possible to recover up to 100% of the thermal energy if there is an industrial process that requires heat.

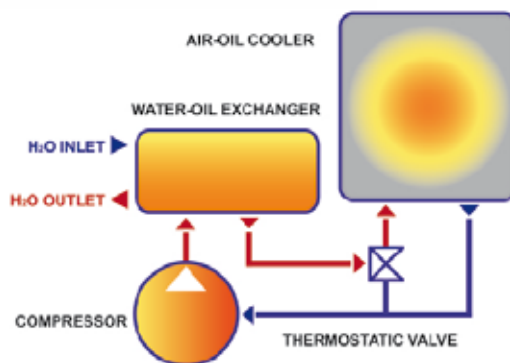
Absorbed electric energy = 100



## The flow








Instead of cooling down in the radiator, the hot oil coming from the compressor transfers its heat to water through a plate heat exchanger.

If the water cooling is insufficient the oil will also pass through the radiator, releasing part of the heat to the environment.



## Technical data

### 50 Hz

 Model	 Tension	 Power								 Sound pressure level							 Weight	
				8 bar 115 psig L		10 bar 150 psig H		13 bar 175 psig HH			Length		Width		Height			
	V/f	kW	hp	m³/min	cfm	m³/min	cfm	m³/min	cfm	dB(A)	mm	inch	mm	inch	mm	inch	kg	lbs
AC 110	400/3	110	150	21,35	753,9	17,65	623,2	16,2	572	69	2350	92,6	1390	54,8	1980	78	2400-2300(1)	5280-5060(1)
AC 132	400/3	132	175	24,47	864,1	21,95	775,1	18,65	658,5	69	2350	92,6	1390	54,8	1980	78	2690	5918
AC 110 PLUS	400/3	110	150	21,35	753,9	17,65	623,2	16,2	572	69	2350	92,6	1390	54,8	1980	78	2700-2600(1)	5940-5720(1)
AC 132 PLUS	400/3	132	175	24,47	864,1	21,95	775,1	18,65	658,5	69	2350	92,6	1390	54,8	1980	78	2990	6578
AC 110 R	400/3	110	150	21,35	753,9	17,65	623,2	16,2	572	69	2350	92,6	1390	54,8	1980	78	2480-2380(1)	5456-5236(1)
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F.A.D. in accordance with ISO 1217, annex "C" | Sound pressure level according to ISO 2151, tolerance  $\pm 3$  dB(A) | Working pressure: 7,5 bar for version 8 bar - 9,5 bar for version 10 bar - 12,5 bar for version 13 bar | (1) Version HH



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**UNI EN ISO 9001:2008**

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