

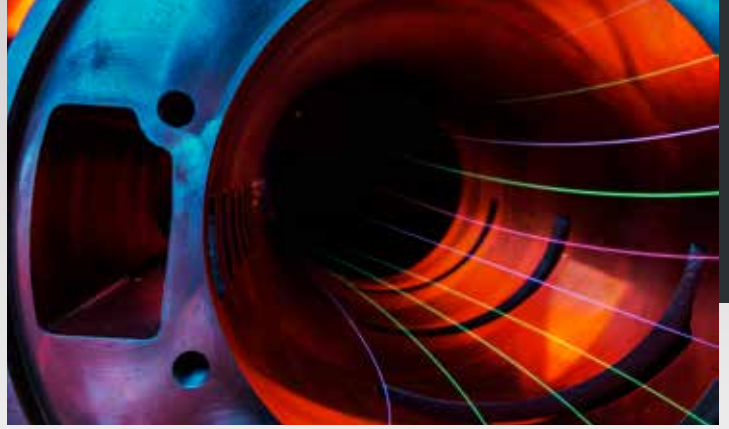


# BLADE

BRINGING YOU THE FUTURE TODAY



**BLADE 15 | 18 | 22**



## Mattei: over 90 years of research and reliability

Ing. Enea Mattei SpA is an Italian company that has been manufacturing air compressors since 1919. Since then the company has continually evolved and is now 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.

Mattei's vision and interpretation of industry's changing needs, has consistently created innovative and technologically advanced products.



## Rotary Vane Technology. Choose the Best - Choose Mattei.

Maximum efficiency of the air compression process, excellent reliability and low maintenance costs are just some of the key benefits that Mattei rotary vane technology offers. The vane compressor is a positive displacement rotary compressor consisting of a stator cylinder in which a rotor is eccentrically mounted. The rotor has slots in which the specially profiled blades are free to slide, riding on a thin film of oil which provides lubrication and a perfect seal between the blades and the stator wall during rotation.

### BLADE

- ▶ **ROTARY VANE TECHNOLOGY**
- ▶ **MAXIMUM RELIABILITY**
- ▶ **EFFICIENT**
- ▶ **LOW MAINTENANCE COSTS**
- ▶ **QUIET**
- ▶ **COMPACT**
- ▶ **OPERATING PRESSURES FROM 8 TO 13 BAR**



# BLADE 15 | 18 | 22

Mattei's rotary vane air compressors are the result of continuous innovation and advanced design capabilities.

The low rotational speed of the compressor unit found only in vane technology, the high volumetric efficiency and the complete absence of roller or thrust bearings, result in energy savings of **over 15%** compared to other rotary compressors.

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## Quietly Efficient and Robust

When compared to other compressors the BLADE's very low rotational speed, a distinctive feature of a Mattei compressor, means more air, greater reliability, reduced energy consumption and quiet operation.

- ▶ **UNLIMITED BLADE LIFE**
- ▶ **NO THRUST BEARINGS**
- ▶ **BUSHINGS NOT SUBJECT TO WEAR**

## BLADE

The BLADE compressor range, with operating pressures from 8 to 13 bar, is the ideal solution for the needs of small and medium sized companies as well as artisan businesses.

The rotary vane technology ensures high quality compressed air, an extremely compact air end and low noise levels. All combined with undisputed product reliability for any application.

Available in the silenced **BLADE**, **BLADE Plus** (with dryer kit) and **BLADE R** (with heat recovery kit) versions, they feature automatic control of air flow at constant pressure and an aftercooler.





## 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.



## A user-friendly controller

Maestro<sup>XB</sup> is a programmable controller which regulates the operation of the compressor to suit the specific requirements of the air distribution system. It has different programming levels and special options for controlling and analysing the operation and faults.

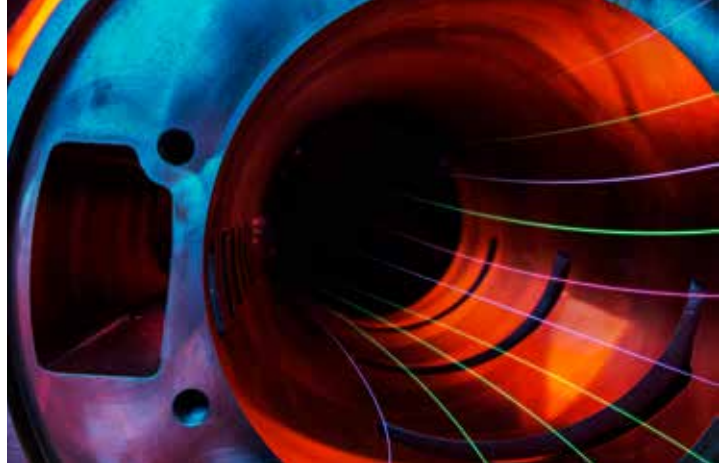


## A high efficiency oil separation

The separation of the oil from air is carried out in several stages and allows an exceptionally low oil carryover. After the compression cycle the air-oil mixture reaches the separator tank, most of the lubricant is collected here due to the change in air speed and the cyclonic action as it enters the tank. The air with the remaining oil residue is then filtered in the coalescing separator.

The complete system ensures that the residual oil content is less than 1 mg/m<sup>3</sup> of air, the over-sized separator element and the quality of the materials used guarantee longer working hours.





## OPERATIONAL MODE

The BLADE 15÷22 compressor series have state-of-the-art electronic control devices to automatically control the compressor operating states.

### “Continuous” mode

The compressor supplies air that falls within a pressure minimum and maximum. When the maximum pressure is reached, the compressor is placed “under vacuum” and decompressed to reduce the absorption of energy, and the intake valve closes. When the line pressure lowers to the minimum set, the compressor is “loaded” and instantly recovers delivery.

### “Automatic” mode

This allows the compressor to work continuously with the additional possibility of automatically stopping in the absence of required air.

### “Modulation” mode

A feature of the Mattei rotary compressors is that the airflow is adjusted and adapted to the network requests by the hydraulic control system that is integrated into the intake valve and done using a servo valve.

The compressor has a maximum pressure, set by the servo valve regulation system, to which air is no longer delivered. For pressures below the maximum, in a range of 0.3 bar, the compressor delivers a variable and continuous flow corresponding to the network request. For lower pressures, the compressor delivers maximum capacity.



### REPLACING THE ELASTIC ELEMENT

BLADE 15 ÷ 22 has been designed in a way that makes it possible to replace the elastic element without having to dismantle the rotor-stator unit.



### ENERGY RECOVERY

Mattei offers for its compressors a heat recovery system that allows water to be heated for industrial process or sanitary use. The “Heat recovery” kit is totally integrated into the oil cooling circuit, making the unit independent from the oil temperature control and protected from any possible malfunctions, such as water flow reduction and overheating.



### PLUS VERSION: DRYER WITH ECOLOGICAL GAS

The plus version includes the integrated installation of a direct expansion refrigeration dryer, which is air cooled and filled with environmentally friendly gas. The combination of a Mattei rotary vane air compressor with an integrated dryer and where applicable mounted on an air receiver is the ideal solution for a complete and compact system.

- Efficient refrigerating power partialization
- Constant dewpoint
- Maestro<sup>XB</sup> control
- High efficiency

# BLADE 15 | 18 | 22



## Service

**Mattei** is present with its sales and service network in more than 40 countries in Europe, America, Africa, the Middle East, Asia and Oceania.

When you purchase a Mattei compressor you enjoy highly qualified **after sales service** all over the world that can respond very quickly to any request for help. Technicians and engineers are at your complete disposal for advice, plant analysis, operational safety evaluation and to identify possible savings.

## Mattei Original Spare Parts

**Mattei Original Spare Parts and Mattei lubricants** are made to very high design standards and conform to exact technical specifications. Only Mattei original spare parts allow you to be sure of maintaining, over time, the same levels of performance, reliability and safety of your Mattei product.

- ▶ Mattei Original Spare Parts are crucial to ensure the efficiency of your compressed air equipment
- ▶ Parts are always available in stock
- ▶ They are quality tested and conform to manufacturer's specifications
- ▶ Parts are designed for Mattei's recommended maintenance intervals





Model	Air flow						Sound pressure level	Power		Length		Width		Height		Weight	
	8 bar 115 psig L		10 bar 150 psig H		13 bar 175 psig HH			db(A)	kW	hp	mm	inch	mm	inch	mm	inch	kg
<b>400 / 50 / 3</b>																	
<b>BLADE 15</b>	2,69	95	2,21	78	2,02	71	65	15	20	1440	56,7	770	30,3	1330	52,4	560	1232
<b>BLADE 18</b>	3,26	115	2,65	94	2,41	85	65	18,5	25	1440	56,7	770	30,3	1330	52,4	575	1265
<b>BLADE 22</b>	3,74	132	3,21	113	2,60	92	65	22	30	1440	56,7	770	30,3	1330	52,4	580	1276
<b>BLADE 15 R</b>	2,69	95	2,21	78	2,02	71	65	15	20	1470	57,9	770	30,3	1330	52,4	580	1276
<b>BLADE 18 R</b>	3,26	115	2,65	94	2,41	85	65	18,5	25	1470	57,9	770	30,3	1330	52,4	595	1309
<b>BLADE 22 R</b>	3,74	132	3,21	113	2,60	92	65	22	30	1470	57,9	770	30,3	1330	52,4	600	1320
<b>BLADE 15 PLUS</b>	2,69	95	2,21	78	2,02	71	65	15	20	1460	57,5	770	30,3	1330	52,4	620	1364
<b>BLADE 18 PLUS</b>	3,26	115	2,65	94	2,41	85	65	18,5	25	1460	57,5	770	30,3	1330	52,4	635	1397
<b>BLADE 22 PLUS</b>	3,74	132	3,21	113	2,60	92	65	22	30	1460	57,5	770	30,3	1330	52,4	640	1408
<b>BLADE 15 R PLUS</b>	2,69	95	2,21	78	2,02	71	65	15	20	1470	57,9	770	30,3	1330	52,4	640	1408
<b>BLADE 18 R PLUS</b>	3,26	115	2,65	94	2,41	85	65	18,5	25	1470	57,9	770	30,3	1330	52,4	655	1441
<b>BLADE 22 R PLUS</b>	3,74	132	3,21	113	2,60	92	65	22	30	1470	57,9	770	30,3	1330	52,4	660	1452

F.A.D. in accordance with ISO 1217, annex "C" | Sound pressure level according to ISO 2151, tolerance  $\pm 3\text{dB(A)}$  | Working pressure: 7,5 bar for version 8 bar - 9,5 bar for version 10 bar - 12,5 bar for version 13 bar



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