



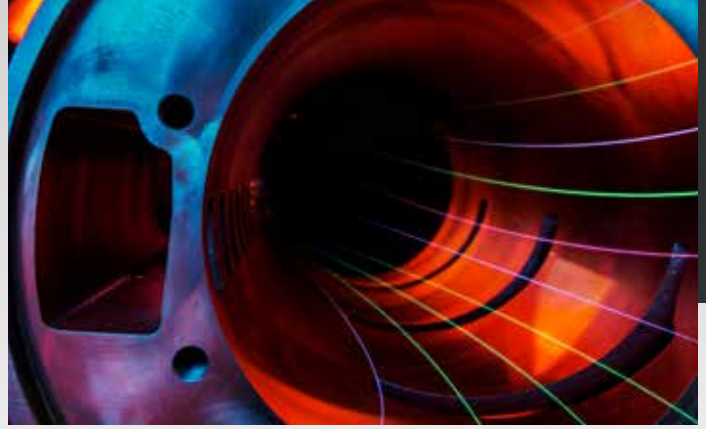
# BLADE

BRINGING YOU THE FUTURE TODAY



**BLADE 15 - 18 - 22**

DIRECT COUPLING



## Mattei: We build a better compressor

Over a century ago, Enea Mattei created his first air compressor. By the 1950's, he recognized the unrivaled advantages that were only possible with rotary vane technology. That decision set the course for MATTEI for the next 100 years.

Of all the air compressor technologies available in the world today, ONLY Mattei's rotary vane compressor technology offers:

- **Unmatched energy efficiency over time**
- **Unrivaled performance throughout time**
- **Unequaled life expectancy across time**

Do you want something that will last along time? Something that actually lowers your energy bill as time goes on? Something that improves with age like a fine wine?

Sustainability is the goal when you simply want to maintain the status quo. It is the least we can do for ourselves and our planet. That is why you want a Mattei rotary vane. It is the ONLY air compressor capable of delivering "**Improvable Performance™**".

## 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 115 TO 145 PSIG**



# 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.

## 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 115 to 145 psig, 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** version, it features 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.



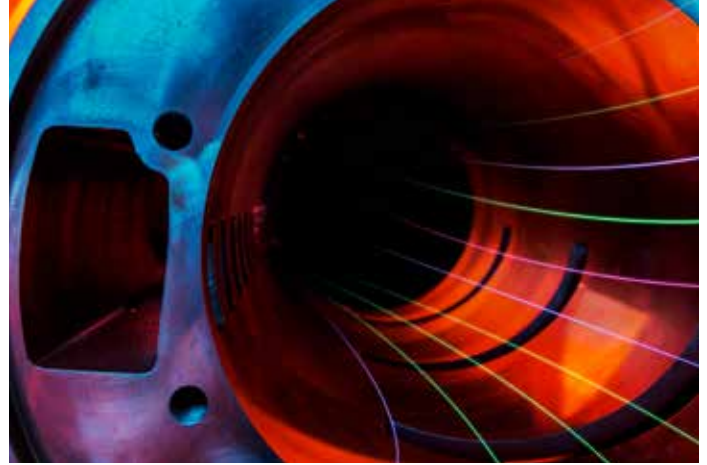
## A high efficiency oil separation

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 3 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.



### RELIABILITY AND LONGEVITY

Mattei airends rotate slower than other types of compressors and their blades slide frictionless on a thin film of oil which ensures complete reliability. Mattei machines also have fewer moving parts than other compressors and as the rotor runs on bushes, it has a virtually unlimited lifespan.



### MAXIMUM ENERGY EFFICIENCY

When there is no air demand for short periods of time, the on/off load valve allows the compressor to significantly reduce its internal pressure thereby reducing energy consumption to a minimum, without having to stop the compressor. The number of stops and subsequent starts is therefore reduced, which helps increase the life span of the compressor and its electric motor.

# 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	Motor	Power	F.A.D.		Sound pressure level	Power	Length	Width	Height	Weight
			PSIG	CFM						
	Type	HP			db(A)	npt	inch	inch	inch	lbs
<b>BLADE 15 LX</b>	TEFC	20	115	104	67	1"	57	30	52	1235
<b>BLADE 15 HX</b>	TEFC	20	145	86	67	1"	57	30	52	1235
<b>BLADE 18 LX</b>	TEFC	25	115	112	67	1"	57	30	52	1268
<b>BLADE 18 HX</b>	TEFC	25	145	92	67	1"	57	30	52	1268
<b>BLADE 22 LX</b>	TEFC	30	115	126	67	1"	57	30	52	1279
<b>BLADE 22 HX</b>	TEFC	30	145	111	67	1"	57	30	52	1279

Note: Fixed-speed models 15-22 include tri-voltage 208-230/460V motor.

Working pressures: 109 psig for 116 psig version - 138 psi for 145 psi version.

Note: Product is built with UL/ETL/CSA approved components. Agency approval is available at no extra cost if specified on initial purchase order.

Purchase order must state if UL or CSA approval is required for the entire compressor. May affect lead times.



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