

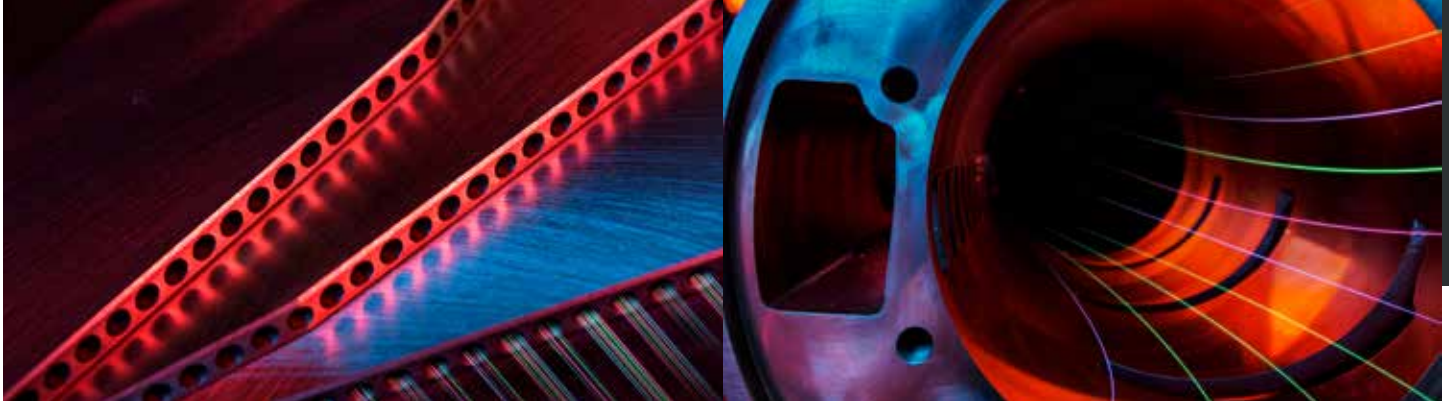


# RVX



**55 | 75 | 90 kW**  
**75 | 100 | 125 hp**

FIXED-SPEED ROTARY VANE AIR COMPRESSORS



The **MATTEI® Rotary Vane Xtreme (RVX) Series** air compressors represent the next frontier in the Xtreme revolution of energy efficient 60 hz fixed-speed machines by incorporating an inverter. This allows us to “lock-in” a precise speed for our legendary “bearingless” airends, without the need for high maintenance belts or gears. This lowers operating costs as it eliminates the “demand charges” your energy provider adds onto your bill to cover those momentary peaks you incur when starting a motor with wye-delta starting systems found in most fixed-speed compressor designs.

Imagine, a fixed-speed compressor incorporating VSD technology to lock rotational speed at an ideal speed to lower starting and lifecycle costs. Discover the next generation of, long-lasting, single-stage, 75÷125 HP, fixed-speed, direct-drive air compressors from Mattei - the world leader in rotary vane technology.

## THE FORCE TO BE RECKONED WITH

Lowest Lifecycle Cost

Highest Eco-Sustainability

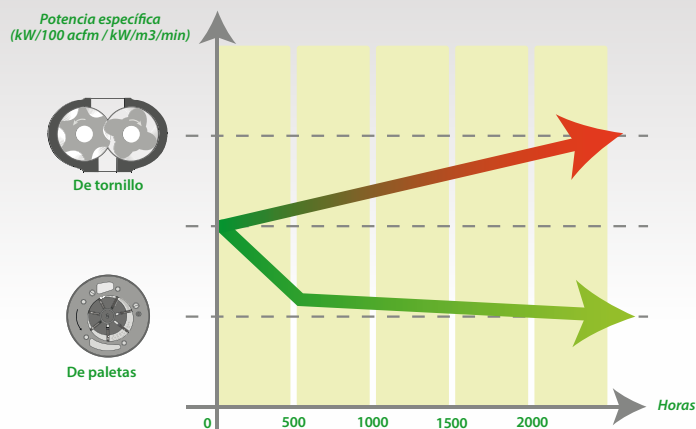
Xtreme Technological Advancements



THINK GREEN

## GET YOUR “VANE GAIN”

### VANE GAIN = LOWER ENERGY COSTS



Only Mattei’s exclusive rotary vane technology is proven to be even more energy efficient the longer it runs.

### We call it VANE GAIN.

Third party testing confirms that our compressor begins to consume less energy from the moment you turn it on as the blades season.

What does that mean to you? Simple.

Our VANE lets you GAIN lower energy costs over time - an exclusive benefit found ONLY in Mattei’s proprietary rotary vane technology.

“Simply Different”

## MATTEI'S EXCLUSIVE XTREME TECHNOLOGY SUITE

- ▶ **Patented Xtreme Injection Technology** provides a quantum leap in compression process efficiency.
- ▶ **Xtreme Thermal Management Technology** balances the cooling system processes to maximize temperature stability in climates to +45°C/113°F.
- ▶ **Xtreme Communications Technology** leverages IoT Industry 4.0 ready Maestro XC controller to maximize energy efficiency and deliver real-time communications globally via Mattei Cloud.



### XTREME COMMUNICATIONS TECHNOLOGY

IoT Industry 4.0 ready Maestro XC, 10" touchscreen control panel combines with Mattei Cloud to deliver real-time operational and historical data communications globally.



### XTREME INJECTION TECHNOLOGY

Innovative scavenged oil return system combines with a blanket of atomized synthetic V-Life Xtreme lubricant fog to slash oil circulation by 50% while delivering a quantum leap in energy efficiency and eco-sustainability.



### XTREME LUBRICANT RECOVERY TECHNOLOGY

Maintenance free scavenged oil return system leverages an intelligent solenoid valve to enhance energy efficiency and slash recirculation losses while improving air quality.



### XTREME THERMAL MANAGEMENT TECHNOLOGY

Big 45°C/113°F rated coolers combine with servo-controlled electronic thermostatic valve and independent variable speed cooling fan as directed by IoT Industry. 4.0 Maestro XC controller to ensure precise operating temperature control across a broad range of ambient temperatures and capacities.

## REVOLUTIONARY DESIGN

RVX Series benefits from Mattei's technological trifecta of innovations first introduced in our RVXi Series awarded the **2021 Product of the Year<sup>(1)</sup> Silver Medal**. Led by freshly patented **XTREME Injection Technology**, it established RVXi as world leader in performance.

*(1) As voted by the Engineering Community of Plant Engineering Magazine*

## FIXED- SPEED TECHNOLOGY: VANE VS SCREW

Rotary vane technology is Simply Different. Air moves latitudinally. Centrifugal force propels the vanes/blades outward and keeps the tips stable against the stator wall to ride upon a thin film of lubricant. By design, the single-rotor vane compressor is completely devoid of thrust forces that cause traditional ball or roller type bearings to wear. This allows Mattei to engineer a compressor that uses white metal bushes in lieu of bearings. Therefore, you never need to rebuild or overhaul a Mattei rotary vane airend because there are simply no tolerances to wear or, bearings to wear out.

In rotary screw compressors, air moves longitudinally. Where the blades in a vane ride on a thin film of lubricant along the stator wall, helical screw rotors cannot touch the cylinder walls. Screw compressors rely on oil flooding to fill the cylinder and endplate gaps. By design, the screw compression process creates thrust forces in one direction when building pressure. Then, each time it unloads, the pressure equalizes across the length of the rotors. The Loading/Unloading cycles cause the bearings to wear as the screws chuck back-and-forth. Tolerance losses increase internal recirculation which can make it run hotter and draw more energy. When it is time to rebuild the screw airend, you learn it is going to cost about 50% of what you originally paid to buy that air compressor and, the cycle begins anew.

# RVX

55 - 75 - 90



### 1. AIR/OIL SEPARATOR

Nested deep-pleated air/oil separator elements limit oil carryover to 1-3 ppm w/w.



### 2. FLANGED CONNECTIONS

Durable leak free flanged fluid connections feature o-ring seals for fast, safe and easy maintenance.



### 3. OVERSIZED COOLERS

Engineered for dependable service in hot, humid climates. Rated for 45°C/113°F ambient. Optimal temperature control across a broad range of operating conditions.



### 4. SERVO-CONTROLLED THERMOSTAT

Xtreme Thermal Management begins with electronic servo-controlled thermostatic valve. Heats up fast and keeps water out of the oil- a Mattei exclusive!



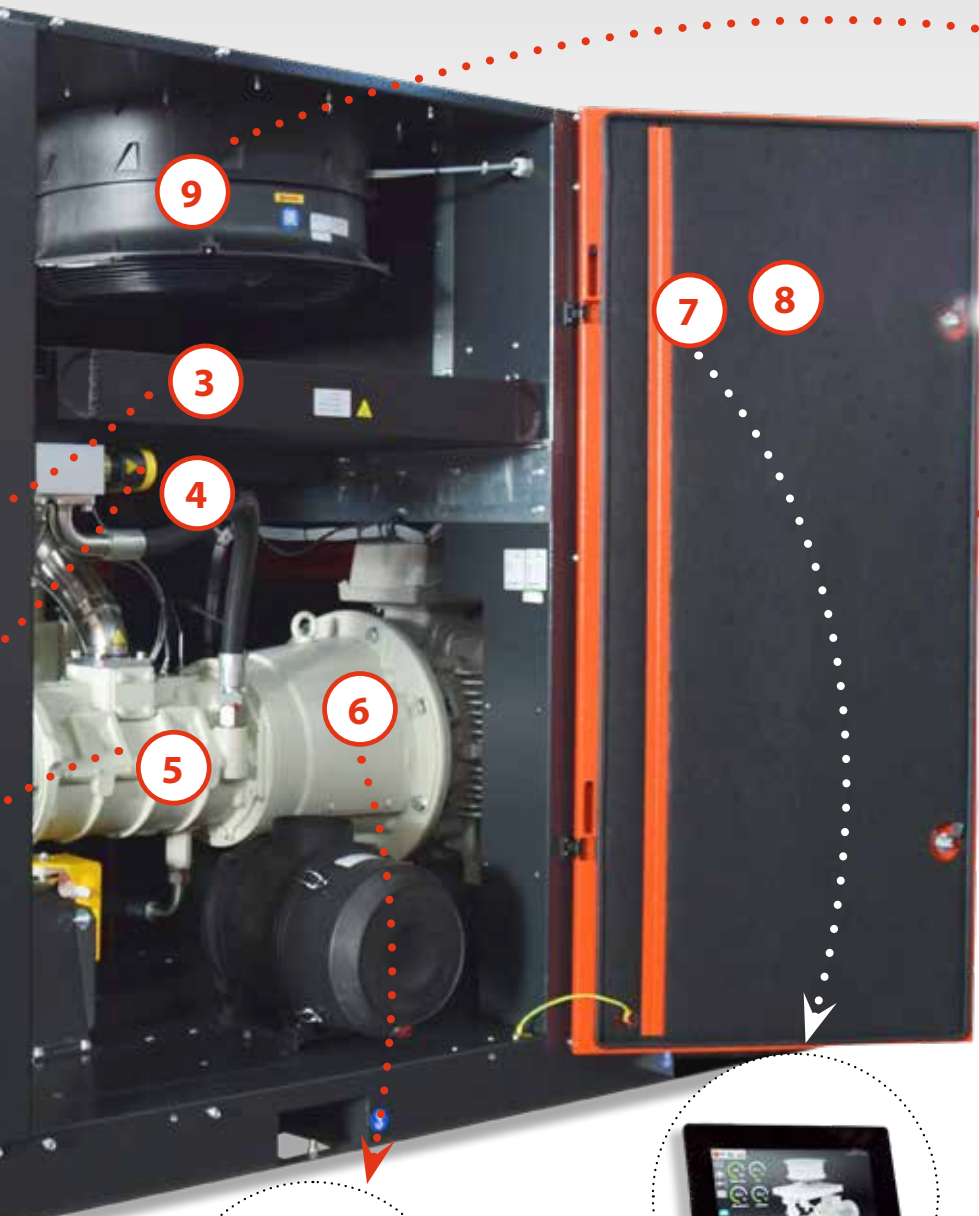
### 5. ROTOR STATOR UNIT (RSU)

Proprietary "bearing-less compressor." Zero wear vanes. Zero wear bushes. Zero thrust forces. Rated >100,000 hours of operation without an airend overhaul.



### IE5 EFFICIENCY RATING

Forget expensive heat sensitive custom PM motors that risk demagnetization. RVX, is so energy efficient that we deliver IE4 or optional IE5 efficiency classifications using standard AC motors.



**9. VARIABLE SPEED FAN**

Maestro XC manages the electronic thermostatic valve first then, the variable-speed fan for precision thermal management and energy efficient operation.



**8. FIXED-FREQUENCY OPERATION**

Rugged and reliable inverter locks motor speed at ideal efficiency point of the package in aligning energy efficiency with the exact pressure you require. Eliminates energy provider “demand charges” associated with the 300% inrush current spikes from traditional wye-delta motor starters.



**6. DIRECT-DRIVE COUPLING**

Easy-access flexible coupling ensures perfect shaft alignment, low-noise, long life, and eliminates power robbing gear or belt losses and their associated high maintenance costs.












**7. MAESTRO XC CONTROLLER**

IoT, Industry 4.0 ready, 10” touchscreen controller directs, manages, and monitors system logic and communicates globally via Mattei Cloud. Programmable Start/Stop timers, Maintenance Reminders, Phase Reversal Protection— all standard.



## TECHNICAL DATA

 Model	 8 bar	 Sound pressure level	 Power		 Isentropic Efficiency	 Length		 Width		 Height		 Weight	
			acfm	db(A)		kW	hp	%	mm	inch	mm	inch	mm

### 75-125 HP - RVX SERIES SPECIFICATIONS

Model	Capacity (acfm)	Sound Pressure Level (db(A))	Power (kW)	Power (hp)	Isentropic Efficiency (%)	Length (mm)	Length (inch)	Width (mm)	Width (inch)	Height (mm)	Height (inch)	Weight (kg)	Weight (lbs)
<b>RVX 55 L (*)</b>	343.3	68	55	75	76.1	2420	95,3	1245	49	1890	74,4	1770	3902
<b>RVX 75 L (*)</b>	430.8		75	100	76.1	2420	95,3	1245	49	1890	74,4	1770	3902
<b>RVX 90 L (*)</b>	551.3		90	125	77.8	2420	95,3	1245	49	1890	74,4	1970	4343
<b>RVX 55 H (*)</b>	319.2	68	55	75	77.3	2420	95,3	1245	49	1890	74,4	1770	3902
<b>RVX 75 H (*)</b>	400.8		75	100	77.3	2420	95,3	1245	49	1890	74,4	1770	3902
<b>RVX 90 H (*)</b>	513.1		90	125	79.1	2420	95,3	1245	49	1890	74,4	1970	4343

(\*) Available with energy recovery system (R) or in water-cooled version (W).  
 F.A.D. in accordance with ISO 1217, annex "C"  
 Sound pressure level according to ISO 2151, tolerance  $\pm 3$ db(A).  
 Working pressure: 109 psig for 8 bar version - 138 psig for 10 bar version

## OPTIONS

### WATERCOOLED VERSION

RVX 55-90 W compressors are equipped with water-cooled plate style heat exchangers. One is an oil cooler and the other an aftercooler. A dedicated cooling fan provides heat exchange for the cabinet

### MOISTURE SEPARATOR & ZERO LOSS DRAIN

Moisture separator removes 65% of all condensable moisture via electronic Zero Loss condensate drain valve. Dry alarm contacts provide peace of mind.

### INTEGRATED ENERGY RECOVERY SYSTEM

RVX 55-90 R are air-cooled compressors with an integrated Heat Recovery System for process water heating. Recovers up to 80% of mechanical energy (equivalent to more than 70% of electricity consumption required at mains) into hot water. Maximum outlet water temperature: 65-70°C/149-158°F.

### OIL QUALITY SENSOR

Real-time Industry 4.0 ready predictive maintenance modeling of lubricant acidity. Interfaces with Maestro XC controller programed to manage sensor output. Lubricant condition can be monitored remotely by customer or distributor via Mattei Cloud.

### IE5 PACKAGE EFFICIENCY

IE4 motor upgrade option combines with inverter to deliver IE5 global efficiency classification.

## Get MyCare 6 & 10 Extended Warranty Coverage

Standard warranty is one (1) year, bumper-to-bumper covering parts and labor against defects in materials and workmanship.

In addition, your RVX direct-drive air compressor is eligible for our MyCare 6 & 10 extended warranty program at NO additional cost to you.



### WHAT YOU GAIN WITH MYCARE 6 & 10

The MyCare 6 program doubles the bumper-to-bumper protection to two (2) years and, covers the major compenents: Motor, Coolers, Controller, Oil Separator Tank, Inverter and Rotor Stator Unit (RSU or Airend), for a total of six (6) years. The MyCare 10 component is offered for our direct-drive industrial compressors and covers the Rotor Stator Unit (RSU or Airend) for an additional three (3) years, years seven (7) through ten (10).

### HOW YOU GET MYCARE 6 & 10

To choose your **MyCare 6 & 10** extended warranty plan, simply check the MyCare 6 & 10 box during the start-up and commissioning process for your new Mattei air compressor as performed by a local Authorized Mattei Distributor.

### MYCARE 6 & 10: TAILORED TO YOUR NEEDS

The program is built around your specific environment and anticipated hours of operation.

Authorized Mattei Distributors, are factory trained to ensure you get fast courteous service. They know what to look for to ensure you place your compressor in the best possible environment to ensure years of great service from your Mattei. The Technicians that inspect, start-up and commission your Mattei are experienced in recommending the proper service program based on your specific environment. They want to get the job done quickly and correctly and will only recommend service intervals that they know will keep you happy and up and running between scheduled visits.

### YOUR GOAL IS OUR GOAL

Our mutual goal is to ensure that your investment is properly maintained. This allows us to guarantee you will get the longest service life out of it while enjoying the lowest operating costs for years to come.

Mattei, simply wants you to benefit from the peace-of-mind in knowing that Mattei and your local Distributor have your best interests at heart right from the start.

### GENUINE ORIGINAL PARTS & LUBRICANTS

Mattei compressors are engineered for many years of service. Our lubricants are engineered and custom blended to ensure that those lifetime-rated blades ride on a thin film of lubricant to prevent any wear and tear to the compressor. Authorized Mattei Service Centers employ qualified service engineers that carry specific tooling and stock Genuine Mattei Parts and Lubricants made to very high design standards that conform to exact technical specifications. Only through the use of Genuine Mattei Parts and Lubricants can you be guaranteed the protection you deserve and the highest levels of performance, reliability, safety and the lower energy costs of the future that were originally engineered into your Mattei air compressor.





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