





### 30 | 37 | 45 | 55 kW

FIXED-SPEED ROTARY VANE AIR COMPRESSORS





The MATTEI® Rotary Vane Direct-Drive (RVD) 30 through 55 models of advanced volumetric air compressors are engineered to deliver rugged reliability in an energy efficient design with uncommonly extended maintenance intervals. We invite you to experience these long lasting, energy efficient, single-stage, 30÷55 kW, fixed-speed, direct-drive air compressors in a performance-built package designed especially for harsh dirty environments.

**RVD 30 through 55 compressors** leverage the legendary durability of Mattei's proprietary "bearingless" Rotary Vane Technology in delivering a truly unique, rugged, and reliable energy saving solution that delivers unrivalled performance and unbeatable energy savings to air compressor applications around the world.

# WHEN RUGGED RELIABILITY IS TANTAMOUNT

Lowest Lifecycle Costs

Longest Maintenance Intervals

Isolated Cooling Zone Technology



### TIMELESS "BEARING-LESS" AIREND

### Mattei's Vane Technology is "Simply Different."

Whereas a rotary screw compressor relies on a pair of precision mated helically cut rotors supported by anywhere from 6 to 9 ball or roller bearings to manage the axial and thrust forces, a Mattei vane compressor is comprised of a single rotor supported by 2 white metal bushes to manage the axial forces – there are NO thrust forces in a vane compressor.

Thrust forces are what cause bearing tolerances to wear until the airend needs to be rebuilt.

This wear condition requires that you replace the bearings if caught early enough or, you must replace the entire airend when other critical components are damaged due to extreme bearing wear prior to attempting service. This deterioration of performance simply does not, and cannot, occur in a rotary vane compressor. In fact, vane performance gets better with time.



### FEATURING THE LATEST IN ENERGY SAVING ADVANCEMENTS

### ISOLATED COOLING ZONE TECHNOLOGY

RVD 30 through 55 are the first models to introduce our latest advancement: Isolated Cooling Zone Technology.

This advancement keeps everything else inside the compressor cooler and cleaner. It isolates the radiators away from the rest of the components to result in lower cabinet temperatures and cleaner surfaces. Radiator cleaning is fast and simple. Easy access panels allow you to quickly exhaust dirt and dust from the radiators from inside-to-outside to keep the cabinet interior clean and restore cooling performance even in hot dirty environments. We even provide a conveniently located Pressure Vent Access Port with a quick-disconnect fitting for you to connect your blowgun to which also serves as a safety vent to depressurize piping downstream of the check valve when the unit is valved off for service.

In traditional air compressor designs, all components

are subject to the same flow of ambient through the cabinet. This means that the same air mass that cools the motor and radiator also feeds the air intake filter. Cabinet prefilters are deployed at the cabinet ingress to keep large contaminants out but fine dust and dirt slips through to

be concentrated throughout the interior. Airflow

exhausts through the radiator interstices which collect a buildup of fine contaminants that drive up operating temperatures. Even worse, when using a blow gun to reverse the flow in ridding the radiators of the contaminants, all that fine dirt and dust is blown throughout the inside of the cabinet. Mattei's Isolated Cooling Zone Technology reduces maintenance time and makes for a cleaner and cooler compressor.



### XTREME COMMUNICATIONS TECHNOLOGY

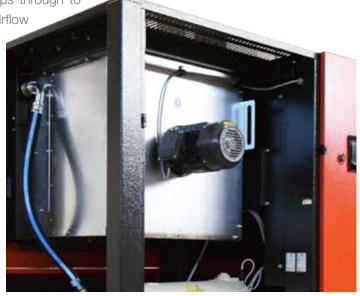
IIoT Industry 4.0 ready Maestro XC, 7" touchscreen control panel includes ethernet connectivity and a 4G modem as optional. Communicates with the free Mattei Cloud to be able to deliver real-time operational and historical data globally.



Mattei's exclusive maintenance-free scavenged oil return system leverages an intelligent solenoid valve to enhance energy efficiency and slash recirculation losses while improving air quality.

### REMOTE AIR INTAKE SNORKEL

Remote air intake snorkel draws in cool clean air to extend the life of your two-stage air intake filter and, to improve compression process efficiency lowering energy costs.



## RVD

### 30 - 37 - 45 - 55



### 1. MAESTRO XC CONTROLLER

IoT, Industry 4.0 ready, 7" touchscreen controller directs, manages, and monitors system logic and communicates globally via the free Mattei Cloud. Programmable Start/Stop timers, Maintenance Reminders, Phase Reversal Protection, Automatic Restart, Ethernet Port - all standard and 4G modem - all optional.



### 2. INTEGRATED AIREND

Legendary encapsulated compression module incorporates compressor, oil filter, hydraulic servo-controlled inlet valve, built-in oil reservoir, and thermostatic bulb in a compact leak-free design.

▶ Oil Quality Option: Let's you know exactly when to change it. Monitors, tracks and trends Total Acid Number (TAN) in real time right down to the minute so you get maximum value out of each oil change.



## 3. LONG LIFE OIL FILTER & AIR/OIL SEPARATOR

Cartridge style elements reduces filter change frequency by 50%. Oil filter rated for 5,000 hours. Air/oil separator filter rated for 5,000 hours. These last twice as long as spin-on filters limit oil carryover 1-3 mg/m3 to deliver high quality air.



### 4. ROTOR STATOR UNIT (RSU)

Proprietary "bearing-less compressor" features zero wear vanes, zero wear bushes, zero thrust forces. You benefit with >100,000 hours of operation, never require an expensive airend overhaul and, gain the longest airend life and the lowest lifecycle costs in the industry. It's why we say, "No Vane. No Gain."

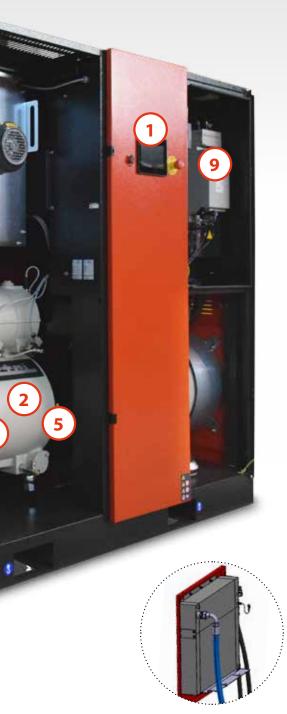




### 5. DIRECT-DRIVE COUPLING

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.





## 6. ISOLATED COOLING ZONE WITH OVERSIZED COOLERS

Rated 45°C/113°F ambient. Engineered for quiet dependable service in hostile environments. Fixed-speed radial fan with dependable IEC motor draws ambient air through rear-panel mounted oversized coolers into the Isolated Cooling Zone. Hot air is exhausted through the roof ready for disposal or heat reclamation.

► Heat Recovery Option: repurpose up to 80% of mechanical energy to pre-heat process water to 70°C/158°F



### 9. ELECTRONIC SOFT STARTER

Rugged and reliable electronic soft-starter gently accelerates motor to eliminate the starting shock of wye-delta starters, extends drive train component life and reduces energy provider demand charges.



### 8. PRESSURE VENT ACCESS PORT

Quick-disconnect fitting allows you to depressurize the piping downstream of the discharge check valve when the compressor is valved off for service and, offers a convenient place to connect a blowgun hose to allow for optimal surface cleaning.



### 7. EASY ACCESS SIDE PANELS

Blow the dirt out of the radiators from inside-tooutside in keeping the cabinet interior cleaner. Makes for fast easy service in hot and dirty environments.



## 30 - 37 - 45 - 55

2125

1080

### **TECHNICAL DATA**

•	<b>•</b>					7				
Model (*)	8 bar L	10 bar H	13 bar HH	Sound pressure level	Power	Tension	Length	Width	Height	Weight
	m³/min	m³/min	m³/min	db(A)	kW	V/Hz	mm	mm	mm	kg
30-55 KW - RVD SERIES SPECIFICATIONS										
RVD 30	5,76	4,65	3,46		30					1100

400v/50hz/3ph

(\*) Available with integrated refrigerant dryer (Plus), 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 ± 3dB(A) - Working pressure: 7,5 bar for version 8 bar - 9,5 bar for version 10 bar - 12,5 bar for 13 bar version

45

55

### **OPTIONS**

RVD 37

**RVD 45** 

RVD 55

### WATERCOOLED VERSION

6,85

8,29

9,1

5,77

7,05

7,83

4,53

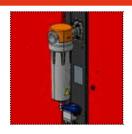
5,96

6,8



RVD 30-55 W compressors feature water-cooled plate style heat exchangers.

### MOISTURE SEPARATOR



Moisture separator includes electronic Zero Loss condensate drain valve with dry alarm contacts.

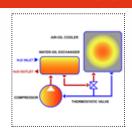
### **HEAT RECOVERY SYSTEM**

1885

1140

1220

1260



RVD 30-55 R compressors incorporate integrated Heat Recovery System for process water heating. Repurposes up to 80% of mechanical energy into a maximum of 70°C/158°F hot water.

### OIL QUALITY SENSOR



Real-time IIOT 4.0 ready predictive maintenance modelling of lubricant acidity to maximize lubricant lifecycles. Interfaces with Maestro XC controller to allow for remote monitoring via the free, Mattei Cloud.

### **IE4 PACKAGE EFFICIENCY**



IE4 motor upgrade option delivers maximum energy efficiency and lowers operating costs.

## VERSION WITH INTEGRATED REFRIGERANT DRYER



RVD 30-55 Plus compressor models include an integrated noncycling refrigerated air dryer. PLUS models include a condensate separator with electronic zero-loss automatic drain, which is an option on all RVD base models.



### **MATTEI MYCARE 6**

With RVD 30÷55 you can benefit from the **MyCare 6** extended warranty plan, this provides cover for 6-years of service assistance and any repair required.



Carrying out regular and correct maintenance is the simplest and best way to ensure your compressor continues to perform reliably and efficiently, avoiding faults and energy wastage. Mattei's Service Centres employ qualified service engineers and carry specific tooling and original spare parts for maintenance operations.

**GET MYCARE 6 PLAN.** You will benefit from monetary savings and a defined cost for easier budget planning.

### **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





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