



RVD i

7-11 kW | 10-15 HP

VARIABLE SPEED DIRECT-DRIVE ROTARY VANE AIR COMPRESSORS



The **MATTEI® Rotary Vane Direct-Drive Inverter (RVDi)** Series of advanced volumetric air compressors are engineered to offer you the most energy efficient, single-stage, variable-speed, air compressors in the world. RVDi Series, eliminates problematic belt and sheave drive transmissions by using a simple jaw-coupling that connects a high- efficiency TEFC motor to the most robust and long-lasting air compressor design found anywhere on the planet.

RVDi Series compressors leverage the legendary durability of Mattei's proprietary Rotary Vane Technology in delivering a rugged and reliable variable-speed direct-drive solution with unrivaled performance and exceptional energy savings to the 7/11 kW | 10/15 HP, 60 hertz marketplace.

Get your “VANE GAIN”

Only Mattei's 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 lifetime-rated cast-iron blades begin to season from the moment you turn it on.

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”

VARIABLE-SPEED VS FIXED-SPEED

Want an air compressor that pays you back? Applications with changing air demand profiles are ideal candidates for saving a lot of money in energy costs. Consider that 83% of all the money you'll spend over the life of your air compressor is spent in just paying the electric bill!

Discover how your company can actually turn a profit by choosing Mattei's proprietary **VARIABLE-SPEED DIRECT-DRIVE Rotary Vane Technology** for your next air compressor.



CHOOSE WISELY

Rotary style, **inverter** driven, **variable-speed** air compressors are designed to deliver the **lowest** possible **energy costs** when properly applied. The general rule-of-thumb is to apply a VSD style air compressor to applications where it would be **operating for extended periods of time between 40%-to-80%** of the maximum capacity range of an air compressor.

Why not outside those ranges, might you ask? The answer is different at each end of the scale. Keep in mind that inverter consumes energy to save you energy. So, if your application averages **over 80% of rated capacity**, the potential energy savings with a VSD compressor are negligible. Here, a **fixed-speed** compressor with appropriate air storage is your best

value. If you run for extended periods of time **below 40% of rated capacity**, the compressor fails to achieve its normal operating temperature as input **heat energy production is severely hindered**. Insufficient operating temperatures allow the moisture to condense into liquid droplets that “rain” down inside your oil reservoir. As water is lighter than oil, it sinks to the bottom of the oil reservoir and dilutes the lubricant. Diluted oil and liquid water is injected into the air compressor. Rather than seal, cool and lubricate all the moving surfaces, water flushes out the oil and breaks the surface tension. Metal-to-metal contact results which can severely damage or destroy the air compressor if left unchecked.

TURN-DOWN ENERGY COSTS

Rotary vane compressors rely on centrifugal force **to keep the lubrication wedge seal between the the blade tips and the stator wall stable**. This limits the vane “turn down” range to 40-50% of nominal speed. Conversely, rotary screw manufacturers boast about the ability to turn-down to about 25% of speed. They want you to believe that allowing rotational speed to go to 25% allows a screw to be more energy efficient. That is simply not true.

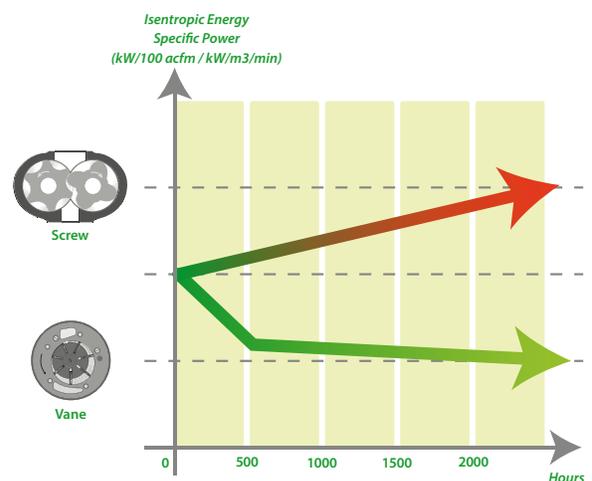
Vane Technology is inherently **energy efficient**. When a vane compressor reaches its minimum speed setting, we use the same Load/Unload process that is used in fixed-speed rotary compressors. Take note that the actual rated flow (acfm) of any screw at its minimum stated capacity is not linear to its turn-down ratio. Instead, the “blow hole” efficiency losses in a lubricated screw become magnified and escalate exponentially as rpm diminishes below 40% of rated capacity. In a vane compressor, **minimum rpm is maintained**, and **load/no load inlet control manages air demands below 40%**.

When air demand ceases, the compressor turns off and awaits an air demand signal to restart.

The truth is, a **vane compressor saves you over 35%** on average vs a fixed-speed compressor and **over 20% more energy savings** below our minimum speed set point than the screw at slower speeds – now those are savings you simply cannot turn down.

GET YOUR VANE GAIN

VANE GAIN = LOWER ENERGY COSTS



RVD i 7 - 11



1. MAESTRO XB CONTROLLER

The “brains” that directs, manages, and monitors all aspects of system logic. Automatic Restart in event of power failure, programmable Start/Stop timers, Lead/Lag/ Alternation control (up to 4 compressors), Maintenance Reminders, Phase Reversal Protection– all standard.



2. OIL FILTER & OIL SEPARATOR FILTER

Durable steel tubing complements “spin-on” filters to ensure fast, easy filter changes. Air/oil Separator filter polishes the air to 1 to 3 PPM w/w.



3. CONTROL VALVES

Centralized easy-to-access valve block incorporates o-ring seals and integrates: off load, vacuum relief and, Mattei’s “set it and forget it” hydraulically controlled Servo valve – a Mattei exclusive!



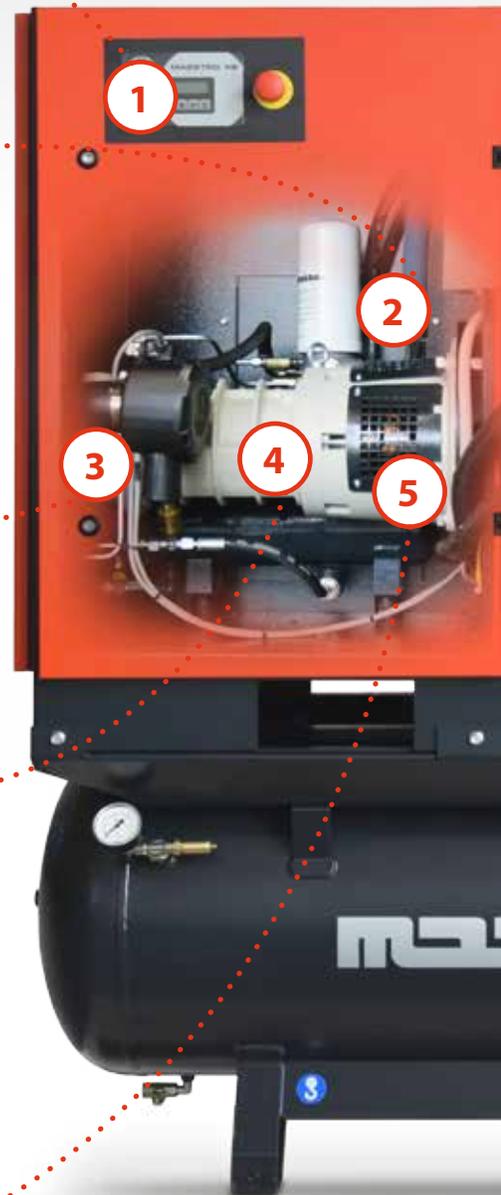
4. ROTOR STATOR UNIT (RSU)

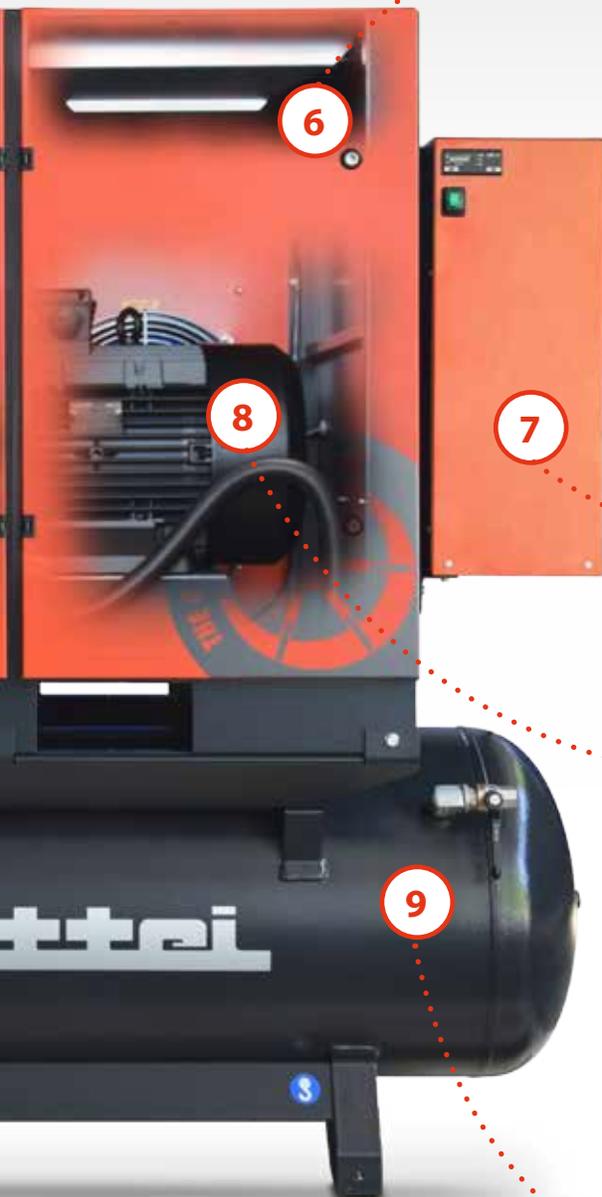
Proprietary “bearing-less RSU” incorporates “no wear vanes” and, “no wear bushes,” in a design devoid of thrust forces. Engineered for >100,000 hours of operation without an overhaul.



5. DIRECT-DRIVE COUPLING

Easy-access flexible coupling-element connects compressor shaft to drive motor shaft. Eliminates power robbing gear or belt losses and high maintenance costs.





6. RADIATOR/COOLING FAN/MOISTURE SEPARATOR

Sized for +115°F (+46°C) ambient. VSD controlled cooling fan motor ensures precise operating temperature control. Fan blades feature “whale tail” trailing edge technology for silent operation. Moisture separator with electronic Zero Loss drain is standard.



7. OPTIONAL MOUNTED REFRIGERATED AIR DRYER

Non-cycling refrigerated air dryer is sized for 120oF inlet temperature to guarantee super dry air even during the heat of summer.



8. DRIVE MOTOR & INVERTER

Capacity control features an inverter-duty, TEFC, 4-pole drive motor whose speed is controlled to align input energy with air demand. This ensures the lowest possible energy costs, and eliminates demand charges. Inherent soft-start capabilities also reduce wear and tear.



9. OPTIONAL AIR RECEIVER

Available in 80- or 120-gallon storage volume to give you more air “ready to go” when you need it and, to lower energy costs thanks to larger capacity to-storage sizing ratios.

RVD i 7 - 11



TANK MOUNT



BASE MOUNT



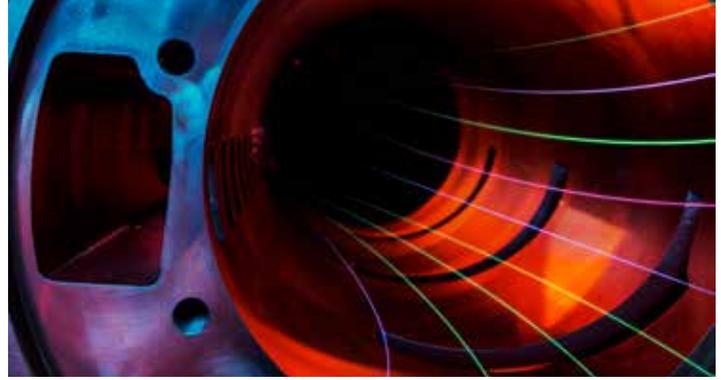
TANK MOUNT WITH REFRIGERATED DRYER



BASE MOUNT WITH REFRIGERATED DRYER

									
Modell	Power	7 ÷ 10 bar 102 ÷ 145 psig	Air receiver	Bolt-on Refrigerated Air Dryer	Sound pressure level	Length	Width	Height	Weight
	hp	acfm	gallon		db(A)	inch	inch	inch	lbs
460 / 60 / 3									
RVD 7 i	10	26.8÷42.4	-	-	66	47	30	39	602
RVD E 7 i	10	26.8÷42.4	-	x	66	56	31	39	675
RVD S 7 i	10	26.8÷42.4	80	-	66	63	32	62	902
RVD S 7 i 120	10	26.8÷42.4	120	-	66	67	32	64	977
RVD SE 7 i	10	26.8÷42.4	80	x	66	63	32	62	986
RVD SE 7 i 120	10	26.8÷42.4	120	x	66	67	32	64	1136
RVD 11 i	15	37.5÷59.3	-	-	66	47	30	39	686
RVD E 11 i	15	37.5÷59.3	-	x	66	56	31	39	769
RVD S 11 i	15	37.5÷59.3	80	-	66	63	32	62	1086
RVD S 11 i 120	15	37.5÷59.3	120	-	66	67	32	64	1161
RVD SE 11 i	15	37.5÷59.3	80	x	66	63	32	62	1199
RVD SE 11 i 120	15	37.5÷59.3	120	x	66	67	32	64	1274

F.A.D. in accordance with ISO 1217, annex "C" | Sound pressure level according to ISO 2151, tolerance ± 3dB(A)
Working pressure: 138 psig for 145 psig version



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 RVD 7 - 11 i 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 components: 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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