

EVEREST

An Ingersoll Rand Business



OIL LUBRICATED

ROTARY VANE



VACUUM





CD



OIL LUBRICATED ROTARY VANE

Everest Oil-lubricated rotary vane vacuum pumps are used in a wide variety of industrial applications, offering the largest range capable of handling both industrial coarse and fine vacuum operations.

EVV-CD

The latest evolution in rotary vane design has arrived with the Everest EVV range. The EVV 40 up to EVV 700 have been developed to provide displacement range from 40 m³/h up to 840 m³/h. This evolutionary design provides our lowest cost of ownership for an oil lubricated rotary vane vacuum pump, whilst weight, noise and size reductions make it easily adaptable and retrofittable to a wide range of OEM machines.

TECHNICAL DATA

- ▶ **VOLUME FLOW CAPACITIES RANGING FROM 40 M³/H UP TO 840 M³/H**
- ▶ **ULTIMATE VACUUM UP TO 0.5 MBAR (A)**
- ▶ **NOISE EMISSIONS AS LOW AS 65 DB(A)**
- ▶ **HIGH EFFICIENCY IE3 MOTORS**
- ▶ **BEARINGS ON BOTH SIDES OF ROTOR**

		EVC	40	75	100	150	200	300	700
NOMINAL CAPACITY	m ³ /h	50Hz	40	70	100	150	200	300	700
		60Hz	48	84	120	180	240	360	840
BLANK-OFF VACUUM	mbar	XD	3	3	3	3	3	3	-
		CD	0.5	0.5	0.5	0.5	0.5	0.5	0.5
MOTOR VERSION	3-	415V ± 10% & 50 Hz ± 5%							
POWER	kW		1.25	2.2	3	4	5.5	5.5	18.5
SPEED	min ⁻¹	50Hz	1455	1455	1455	1455	1455	1455	980
AVERAGE NOISE LEVEL*	dB(A)		63	63	65	66	67	68	78
MAXIMUM WEIGHT	Kg		39	44	56	54	100	100	465
OIL INTAKE	L		3	3	3	3	6	6.5	17.5

* May vary from CD to XD variants



XD

EVV-XD

HEAVY DUTY MODELS

The EVV 40 up to EVV 300 have been developed to improve the overall performance of this tried and tested rotary vane vacuum pump technology for heavy duty applications. The EVV-XD is suitable for wet applications with chemically resistant resin vanes, enlarged and adjustable gas ballast, metal float valve and optimized temperatures to dissipate water.

ADVANTAGES

- ▶ **QUIETEST ROTARY VANE PUMP IN THE MARKET**
- ▶ **SMALLER SIZE & LIGHTER WEIGHT**
- ▶ **IMPROVED ECO PERFORMANCE**
- ▶ **XD HEAVY DUTY MODELS AVAILABLE FOR WET APPLICATIONS**
- ▶ **LOWER LIFETIME COSTS**
- ▶ **REDUCED OIL CONSUMPTION**

OPERATING PRINCIPLE

Pressure increase by volume reduction is the principle behind rotary vane operation. This design offers excellent service for pressure, vacuum or a combination of both.

In a cylindrical housing (1) a rotor (2) is positioned eccentrically so that it is on the top almost touching the cylinder (3). Rotor blades (5) are positioned inside rotor slots (4). When the rotor starts turning, due to centrifugal force the blades are thrown out and slide against the internal surface of the cylinder.

In this way a cell (6) is formed between two blades with a volume that changes constantly during rotation. Air enters from the inlet port (7) into a cell until the rear blade reaches the far end of the inlet port (8).

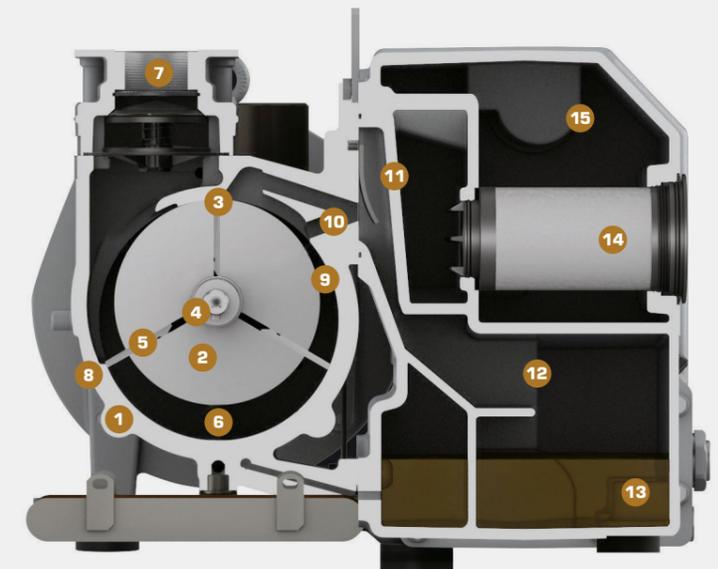
At this point the cell (6) has achieved its maximum air volume. As the cell then moves away from the port its volume (9) becomes smaller and smaller, the air is thus compressed and the pressure rises.

Some models are fitted with outlet valves (11) next to the outlet port (10) which stop the backflow of discharged air when the maximum pressure has been reached.

DE-OILING ONCE THROUGH VACUUM PUMPS

After its passage through outlet port (10) and outlet valves (11), the oil-gas mixture reaches the de-oiling chamber (12) where the oil is separated from the gas in two steps. Larger oil drops are mechanically separated from the gas and are eventually deposited in the oil sludge recipient (13).

The remaining oil gas mixture is then taken through fine filter elements (14) which separate even the smallest oil particles. These are then reintroduced through an oil suction pipe into the pump's oil circuit. The virtually oil free gas can be let outside either through the air outlet (15) or through other hose or piping arrangements.



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EVEREST PRODUCT LINEUP



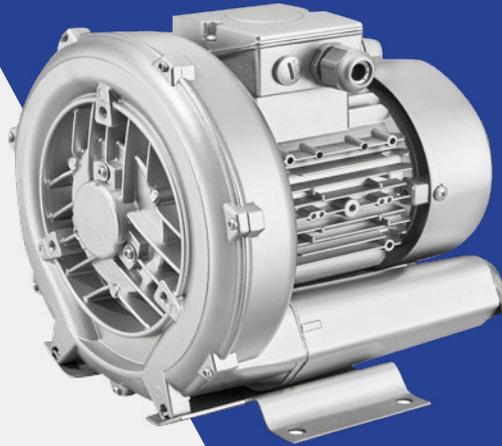
VACUUM

- ▶ MECHANICAL VACUUM BOOSTERS
- ▶ DRY SCREW VACUUM PUMPS & SYSTEMS
- ▶ DRY CLAW VACUUM PUMPS
- ▶ ROTARY VANE VACUUM PUMPS
- ▶ LIQUID RING VACUUM SYSTEMS
- ▶ ENGINEERED VACUUM SYSTEMS
- ▶ MECHANICAL VAPOUR RECOMPRESSOR (MVR)



BLOWERS

- ▶ TWIN/TRI LOBE ROOTS BLOWERS
- ▶ GAS BLOWERS
- ▶ SIDE CHANNEL / CENTRIFUGAL BLOWERS
- ▶ TURBO BLOWERS



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