

# EVEREST



An Ingersoll Rand Business



## DRY CLAW VACUUM PUMPS

ENGINEERING | EVALUATION | DESIGNING | MANUFACTURING  
TESTING | EXECUTION | POST SALES AND SERVICE

## Dry Claw Vacuum Pumps

Everest Dry Claw Vacuum Pumps offer a capacity range spanning from 60 to 600 m<sup>3</sup>/h, with the ability to maintain a continuous vacuum of up to 100 mbar(a). These are known for their outstanding efficiency, operating without the need for lubrication or contact between components. Their performance curve remains consistent across the entire operational spectrum.

Additionally, these come equipped with built-in air cooling, eliminating the need for external cooling fluids. Users also have the option to include a VFD for greater control. Maintenance requirements are minimal, and these systems are suitable for a wide array of applications.



EVC Dry Claw Vacuum Pumps

## Operating Principle

The EVC Series Dry Claw Vacuum Pumps operate based on the principle of dry claw technology which allows these pumps to create a vacuum without the use of oil or any other sealing fluids. The operating principle is as below:

### Claw Mechanism

The heart of our Claw vacuum pump comprises two precisely engineered rotors, featuring claw-shaped lobes. These rotors operate in parallel within the pump housing, rotating in opposite directions with controlled clearances.

### Suction Phase

During this phase, the lobes move apart, creating an expanded chamber at the pump's inlet. This chamber connects to the vacuum source, facilitating the inflow of gas or air.

### Compression Phase

As the rotors persist in their motion, the lobes progressively close in, resulting in the compression of the incoming gas. This compression significantly enhances gas density and pressure, inducing the formation of a vacuum within the pump.

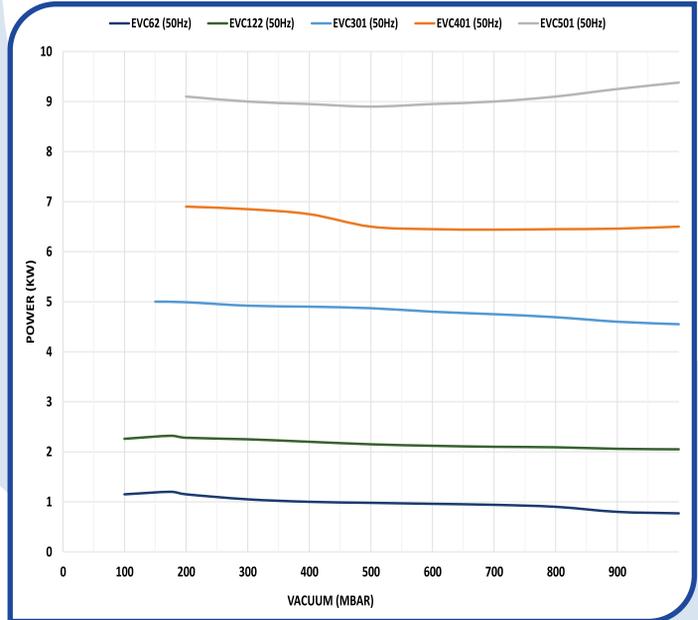
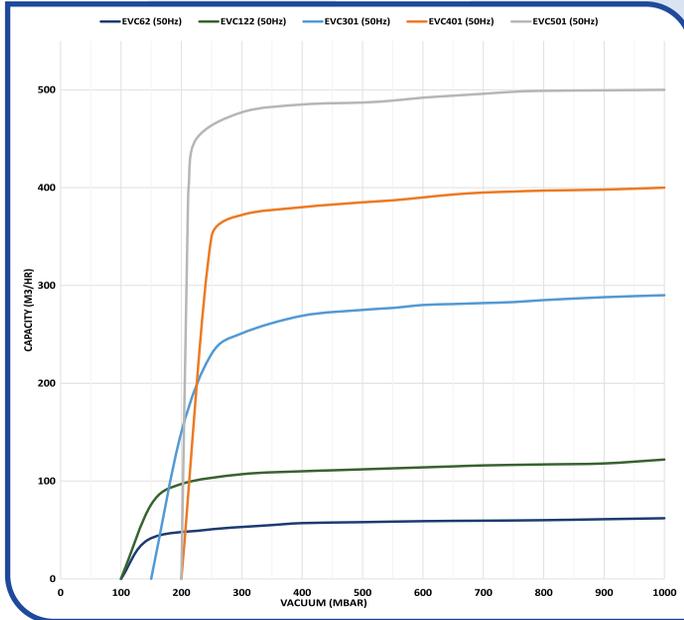
### Exhaust Phase

Upon achieving maximum compression, the claw lobes disengage, enlarging the chamber at the pump's outlet. This expanded chamber connects to the discharge port, enabling the expulsion of the compressed gas from the pump.

### Repeat Cycle

This seamless operation repeats continuously as the rotors maintain their synchronized rotation, ensuring an uninterrupted vacuum and compression cycle.

## Technical Datasheet & Curves



## Advantages

- ✦ High Efficiency
- ✦ Low Maintenance
- ✦ High Reliability
- ✦ Dry, Oil-Free Operation
- ✦ Compact Design
- ✦ Variable Frequency Drives available
- ✦ Low Noise Level
- ✦ Ease of Integration

			EVC 62	EVC 122	EVC 301	EVC 401	EVC 501
Nominal Capacity	m <sup>3</sup> /h	50Hz	62	120	290	400	500
		60Hz	74	144	345	480	600
Blank-Off Vacuum	mbar		100	100	150	200	200
Motor Version	3~		415V ± 10% & 50 Hz ± 5%				
Motor Rating*	HP		2	3.7	7.5	10	15
Speed	min <sup>-1</sup>	50Hz	1450	2900	2900	2900	2900
		60Hz	1745	3475	3475	3475	3475
Average Noise Level	dB(A)		<75	<75	<85	<85	<85
Maximum Weight (Bare Shaft)	kg		114	120	285	425	510
Oil Intake (Gear)	L		0.43	0.43	1.5	1.75	1.8

\*Can vary as per individual cases.

**RELIABLE | LOW MAINTENANCE | DURABLE | INDIGENOUS | COST EFFICIENT**

## EVEREST ADVANTAGE

**EVEREST** has the skill, expertise, knowledge and capability that it has acquired over the years to custom design vacuum systems for specific customer requirements and deliver results.

## Applications

### Woodworking

- ◆ Nesting
- ◆ Pick & Place
- ◆ Wood Drying

### Plastic

- ◆ EPS-Foaming
- ◆ Pneumatic Conveying
- ◆ Calibration
- ◆ Degassing Extrudes
- ◆ Thermoforming

### Medical

- ◆ Dental Suction Systems
- ◆ Central Vacuum Systems

### General

- ◆ Sewage Systems
- ◆ Canning Systems

### Food & Beverages

- ◆ Milking
- ◆ Pneumatic Conveying
- ◆ Pick & Place
- ◆ Ham Drying
- ◆ Visceral Evacuation

### Packaging

- ◆ Pick & Place
- ◆ Forming

### Electronics

- ◆ Pick & Place

# EVEREST

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We don't just offer **PUMPS AND SYSTEMS**,  
we offer **SOLUTIONS!!**