CoreVac
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ER & ERP Series Roots Vacuum Pump



Introduction:

EVP is committed to the production and sales of different kinds of vacuum pumps, vacuum valves and vacuum fittings, provides first-class vacuum equipment solutions for global customers. The inspiration for the creation of EVP's brand comes from the mission "deliver Eastern Vacuum Products to all over the world", emphasizing the confidence and vitality from the East. The name ER comes from EVP Roots vacuum pump, and the name ERP comes from EVP Roots vacuum pump with by-Pass valve. It embodies the wisdom of the East, its design and color matching with oriental aesthetics, which continues to win the reputation of "Created in China". ER & ERP series roots pump is a positive displacement pump, also known as mechanical booster pump, which is one of the main equipment to obtain the middle and high vacuum degree. Its working principle is similar to roots blower, which use two figure 8 rotor synchronous rotation in the pump shell, so as to complete the suction and exhaust process.

Difference between ER & ERP series roots vacuum pump:

ERP series roots vacuum pump has additional by-pass valve in its structure, to protect the pump from overload. When the gas pressure in the pump chamber surpasses its maximum allowable pressure, the by-pass valve inside the ERP pump will open, then part of the gas will be discharged through this port, to that the pump chamber's pressure can be reduced to prevent the pump from overload. So the ERP pump can better protect itself in case it is started to operate when its backing pump's created vacuum degree can not meet its working vacuum.

Features:

1. Stable operation, less vibration, low noise, not sensitive to tiny dust.
2. Less power consumption, good energy saving.
3. Rapid start and get the ultimate vacuum in short time.
4. The sealing structure of pump chamber and the bearing chamber has improved, which greatly reducing the bearing cavity and gear cavity oil emulsification.
5. Non oil seal type. So, it can completely avoid oil returning , oil spills and soot pollution.

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Main application:

ER & ERP series roots vacuum pump has widely used in vacuum smelting, vacuum welding, vacuum casting, vacuum coating, vacuum drying, vacuum dynamic experiment, chemical, pharmaceutical, electric vacuum device manufacturing industries, etc. Also suitable for pumping large quantities of water vapor and solvent by working with liquid ring vacuum pump.

Technical data:

Model	ER-150	ER-300	ER-600	ER-1200	ER-5000
Flow rate (L/s)	150	300	600	1200	5000
Ultimate vacuum (Pa)	5×10^{-2}				
Max. allowable diff. pressure (Pa)	8×10^{3}		5×10^{3}		2.7×10^{3}
Rotary speed (rpm)	3000				2860
Motor power (kW)	2.2	4	7.5	11	30/37
Inlet DIA (mm)	100	150	200	250	400
Outlet DIA (mm)	100	150	200	200	400
Cooling water consumption (L/h)	120		150		500
Allowable temperature (°C)	100				
Vacuum pump oil mode	100#				
Weight (kg)	188	268	550	722	1600

Model	ERP-70	ERP-150	ERP-300	ERP-600	ERP-1200	ERP-2500
Flow rate (L/s)	70	150	300	600	1200	2500
Ultimate vacuum (Pa)	5×10^{-2}					
Max. allowable diff. pressure (Pa)	5.3×10^{3}			2.7×10^{3}		
Rotary speed (rpm)	3000					
Motor power (kW)	1.1	2.2	4	7.5	11	22
Inlet DIA (mm)	80	100	150	200	250	320
Outlet DIA (mm)	80	100	150	200	200	320
Cooling water consumption (L/h)	-	120		150		200
Allowable temperature (°C)	100					
Vacuum pump oil mode	100#					
Weight (kg)	110	205	265	780	880	1350