

RENOVA Products Family

SRV Series

Rotary Vane Vacuum Pump

1. Description

Use

The vacuum pump is intended for the suction of air and other dry, non-aggressive, non-toxic and non-explosive gases. Conveying media with a higher density than air leads to an increased thermal and mechanical load on the vacuum pump and is permissible only after prior consultation.

Permissible temperature range of the inlet gas: see "Oil", "Ambient temperature range"

In case the vacuum pump is equipped with a gas ballast (optional) water vapour within the gas flow can be tolerated within certain limits. The conveyance of other vapours shall be agreed upon.

The vacuum pump is intended for the placement in a non-potentially explosive environment.

Version with float valve (j) and oil return line;

The vacuum pump is thermally suitable for continuous operation.

Version with oil return valve (h);

The vacuum pump is thermally suitable for continuous operation.

The vacuum pump is ultimate pressure proof.

Principle of Operation

The vacuum pump works on the rotating vane principle.

A circular rotor(s) is positioned centrally on the shaft of the vacuum pump. The shaft of the vacuum pump is driven by the drive motor shaft by means of a flexible coupling.

The rotor (s) rotates in an also circular, fixed cylinder (t), the centreline of which is offset from the centreline of the rotor such that the rotor and the inner wall of the cylinder almost touch along a line. Vanes(f), sliding in slots in the rotor, separate the space between the rotor and the cylinder into chambers. At any time gas is sucked in and at almost any time ejected. Therefore the vacuum pump works almost pulsation free.

In order to avoid the suction of solids, the vacuum pump is equipped with a screen in the suction connection. In order to avoid reverse rotation after switching off, the vacuum pump is equipped with a Non-return valve.

Note: This valve shall not be used as a non-return valve or shut-off valve to the vacuum system and is no reliable means to prevent suction of oil into the vacuum system while the vacuum pump is shut down.

In case the vacuum pump is equipped with a gas ballast (optional):

Through the gas ballast valve a small amount of ambient air is sucked into the pump chamber and compressed together with the process gas. This counteracts the accumulation of condensates from the process gas inside the vacuum pump.

The gas ballast line is equipped with a paper filter.

Gas ballast version with ball valve;

The gas ballast line can be closed partially or completely by means of a ball valve.

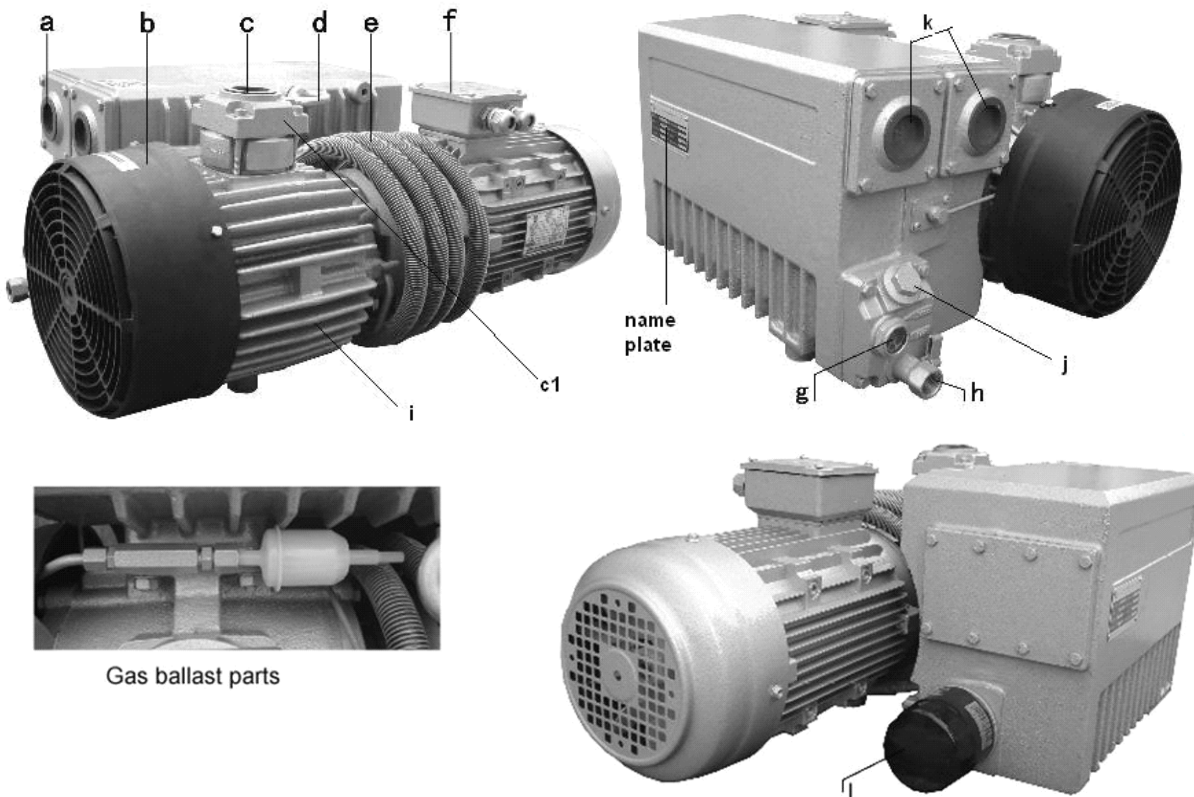
In order to improve the operating characteristics the outlet of the pump chamber is equipped with a spring loaded valve (q).

2. Performance specification

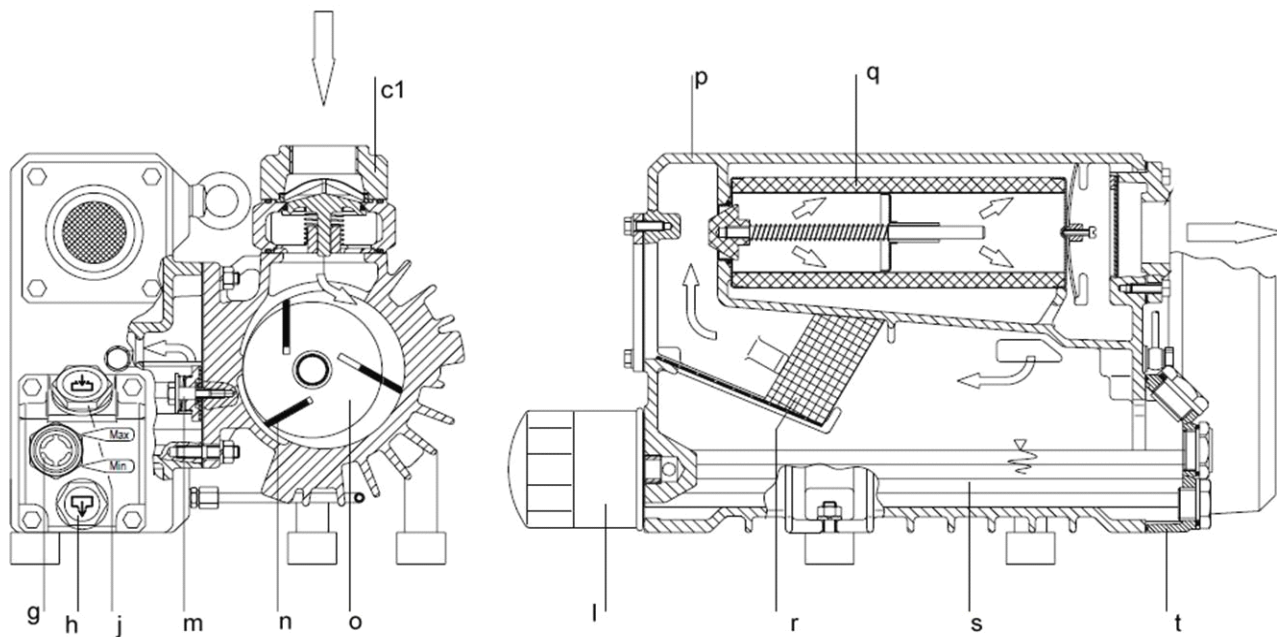
2.1 Technical data :

Model	Pump speed (m3/h)		Ultimate vacuum (Pa)	Motor Power (KW)	Inlet Diam (inch)	Rotary speed (rpm)	Oil Capacity (L)	G.W (kg)	Noise dB (A)	Dimensions (mm)
	50HZ	60HZ								
SRV-010	10	12	150	0.55	G1/2	1400	0.5	20	64	405*253*210
SRV-020	20	24	150	0.75(3ph) 0.90(1ph)	G1/2	2800	0.5	20	64	405*253*210
SRV-025	25	30	150	0.90	G1/2	2800	0.5	20	64	405*253*210
SRV-040	40	48	50	1.5	G1 1/4	1400	1.0	48	67	660*300*270
SRV-063	63	75	50	2.2	G1 1/4	1400	2.0	81	68	695*420*295
SRV-100	100	120	50	3.0	G1 1/4	1400	2.0	85	72	735*420*295
SRV-160	160	192	50	4.0	G2	1400	4.5	152	74	805*520*410
SRV-200	200	240	50	5.5	G2	1400	4.5	159	76	825*520*410
SRV-250	250	300	50	5.5	G2	1400	7.0	230	76	1000*550*410
SRV-300	300	360	50	7.5	G2"	1400	7.0	236	76	1200*550*410
SRV-630	630	750	10	15	DN100	960	35	620	75	1630*1300*980
SRV-750	750	900	10	18.5	DN100	1150	35	640	76	1630*1300*980

2.2. Operating principle



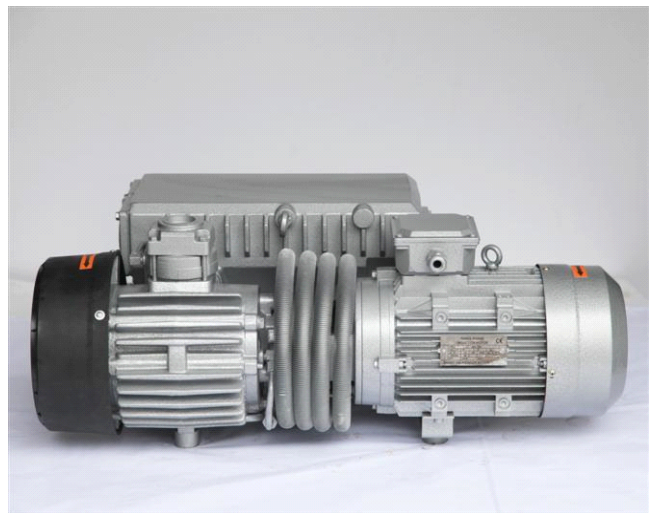
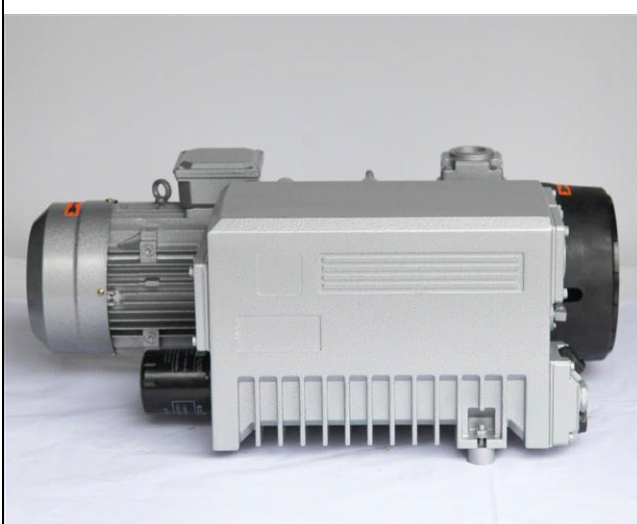
- a. Exhaust port
- b. Axial flow fan cover
- c. Inlet port
- c1. Inlet flange
- d. Eye bolt
- e. heat dissipation oil tube
- f. Terminal
- g. Oil sight glass
- h. Oil drain plug
- i. Cylinder
- j. Oil fill plug
- k. Gas discharge
- l. oil filter



c1	Inlet flange	g	Oil sight glass	h	Oil drain plug	j	Oil fill plug	l	Oil filter
m	Exhaust valve	n	Rotary vane	o	Rotor	p	Oil mist separator	q	Exhaust filter
r	Demister	s	Oil sump	t	Service cover				

3. Product Picture

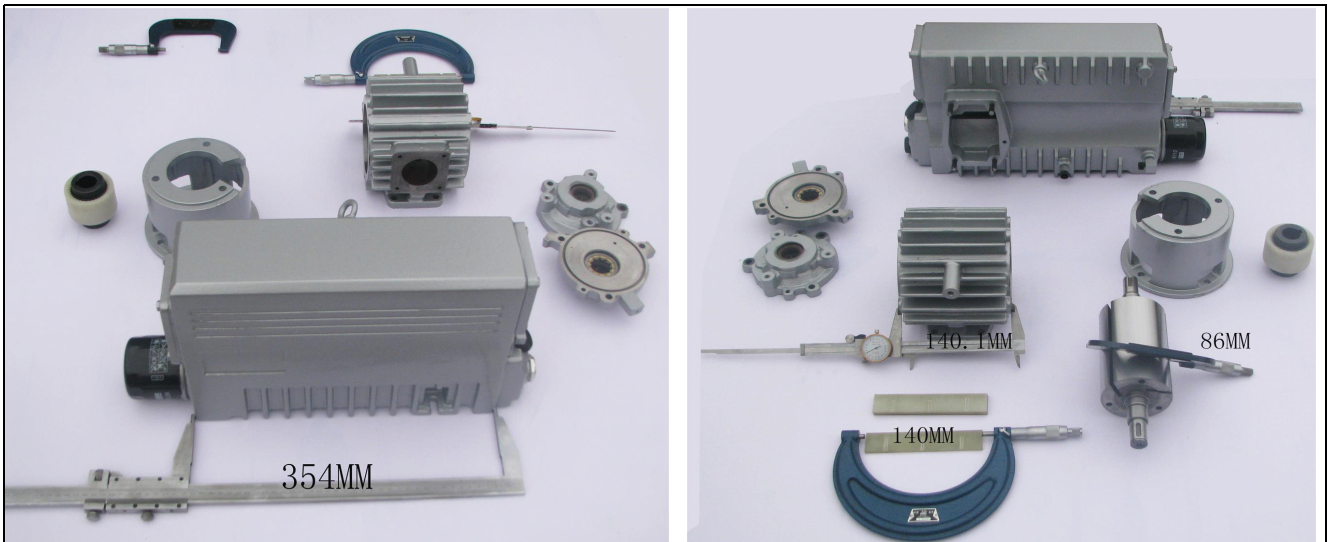
3.1 Pump picture



3.2 Spare Parts Picture



3.3 Components picture





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TECHNOLOGIES