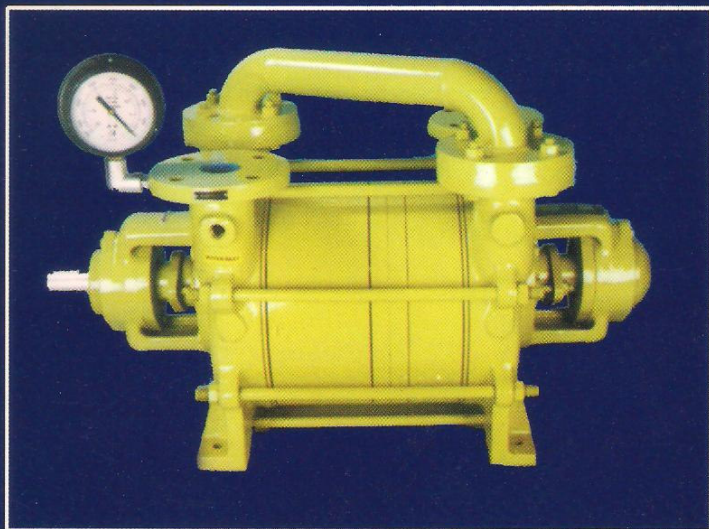




PREMIER

Liquid ring Vacuum Pumps and Compressors

P2LV SERIES



PLSV SERIES

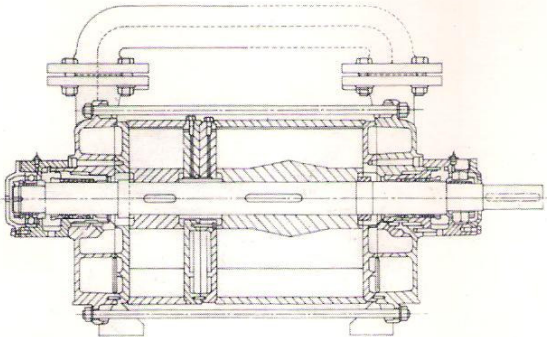


NEW GENERATION 'PREMIER' LIQUID RING VACUUM PUMPS

P2LV SERIES

The new generation 'PREMIER' P2LV Series of Liquid Ring Vacuum Pumps are two stage pumps designed to handle suction volumes upto 600 m³/hr in the vacuum range to 35 mm Hg abs. They are ideal for general purpose applications in chemical, food and most process industries as well as all those applications where versatile and rugged vacuum raising units are required.

This new series of Prime Engineering manufactured pumps have several outstanding improvements like reduced service water requirements, improved efficiency, low noise levels, extreme ease of maintenance and even more rugged construction to suit every application.



'PREMIER' P2LV Series Pumps have the following important features:

- Robust, compact and simple construction
- Only one rotating part and hence reliable operation with minimum maintenance
- Almost all gases and vapours can be pumped
- Handles gases or air that are dust-laden and wet or saturated with vapour
- Compression of gases and vapours being pumped is nearly isothermal
- No fouling problems - unaffected by dirt in intake vapours / gas
- Do not require any oil or lubricants in the working space and hence no contamination
- Low noise and vibration levels
- Minimum service water requirement

PLVS SERIES

These are single stage Liquid Ring Vacuum Pumps with features similar to those of P2LV Series but able to develop an ultimate suction pressure upto 50 mm Hg Abs. only and hence are used for most low vacuum applications. These also offer very easy maintenance by virtue of a simpler design requiring no balls on the control plates, unlike some other designs.

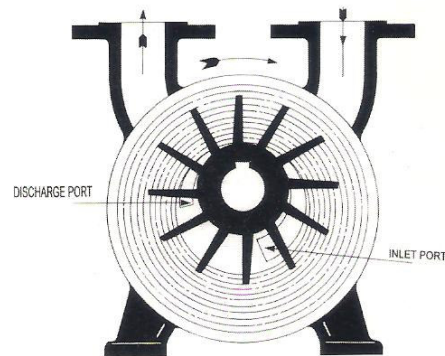
PRINCIPLE OF OPERATION

Liquid Ring Pumps are Rotary Displacement Pumps. A circulating liquid, normally water, absorbs the driving power supplied by the motor and transmits it to the gas being compressed.

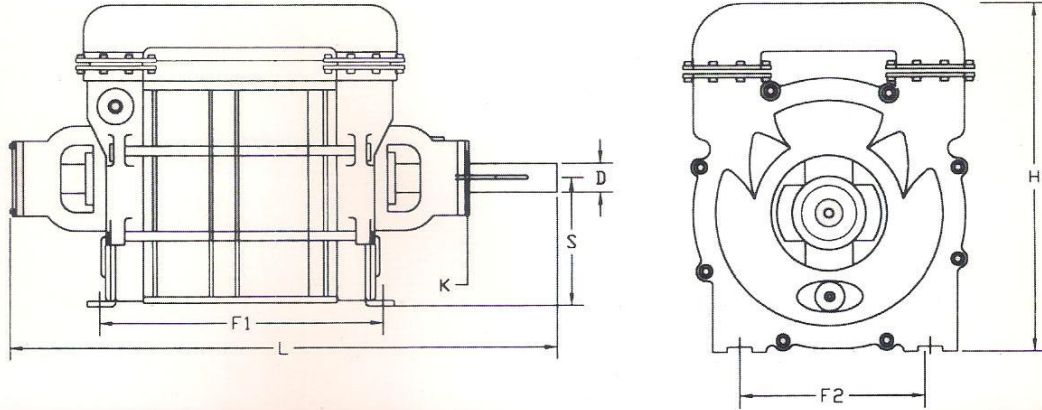
The pump shaft and impeller are the only moving components, and since there is no sliding contact with the fixed pump components, the necessary clearances are filled with the circulating liquid.

The impeller is mounted eccentrically to the axis of the casing, and the liquid ring, consisting of the service liquid circulates concentrically within the axis of the casing. With this arrangement the liquid leaves and re-enters the impeller cells in the manner of a piston. The gas is aspirated into the liquid ring via the suction port from the suction branch, and is compressed in the liquid ring and discharged via the discharge port into discharge branch. Whereas the suction ports extend over practically the entire angle in which the liquid is extended from the impeller cells, the discharge ports in the region where the liquid ring fills the impeller cells possess angles and shapes which are dictated by the required compression ratio of the pump, and are generally designed so that the pump operates economically over the entire pressure range.

The service liquid is normally supplied at the pressure equal to the discharge pressure of the pump, which is therefore able to draw its service liquid automatically making up the amount of liquid discharged from the ports. During compression, the entire energy used is converted to heat, which is absorbed in the service liquid. Downstream of the discharge connection the liquid may be separated from the gas in a circulating tank, and a portion of the liquid recirculated with addition of sufficient quantity of cold make-up.

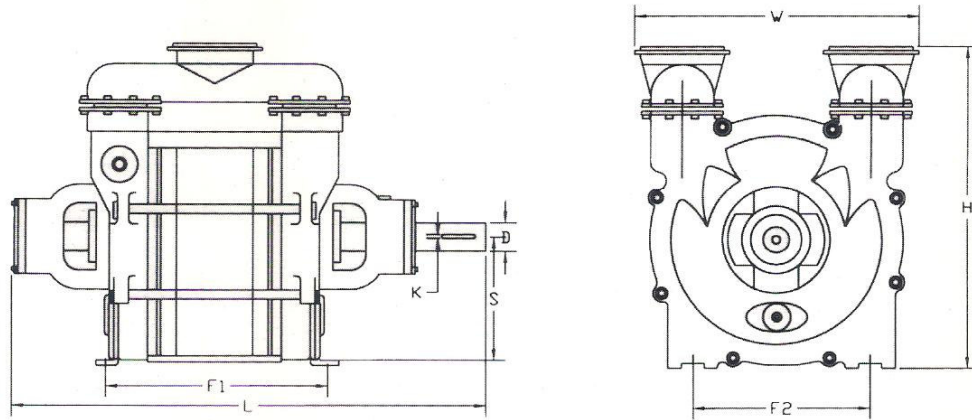


TWO STAGE



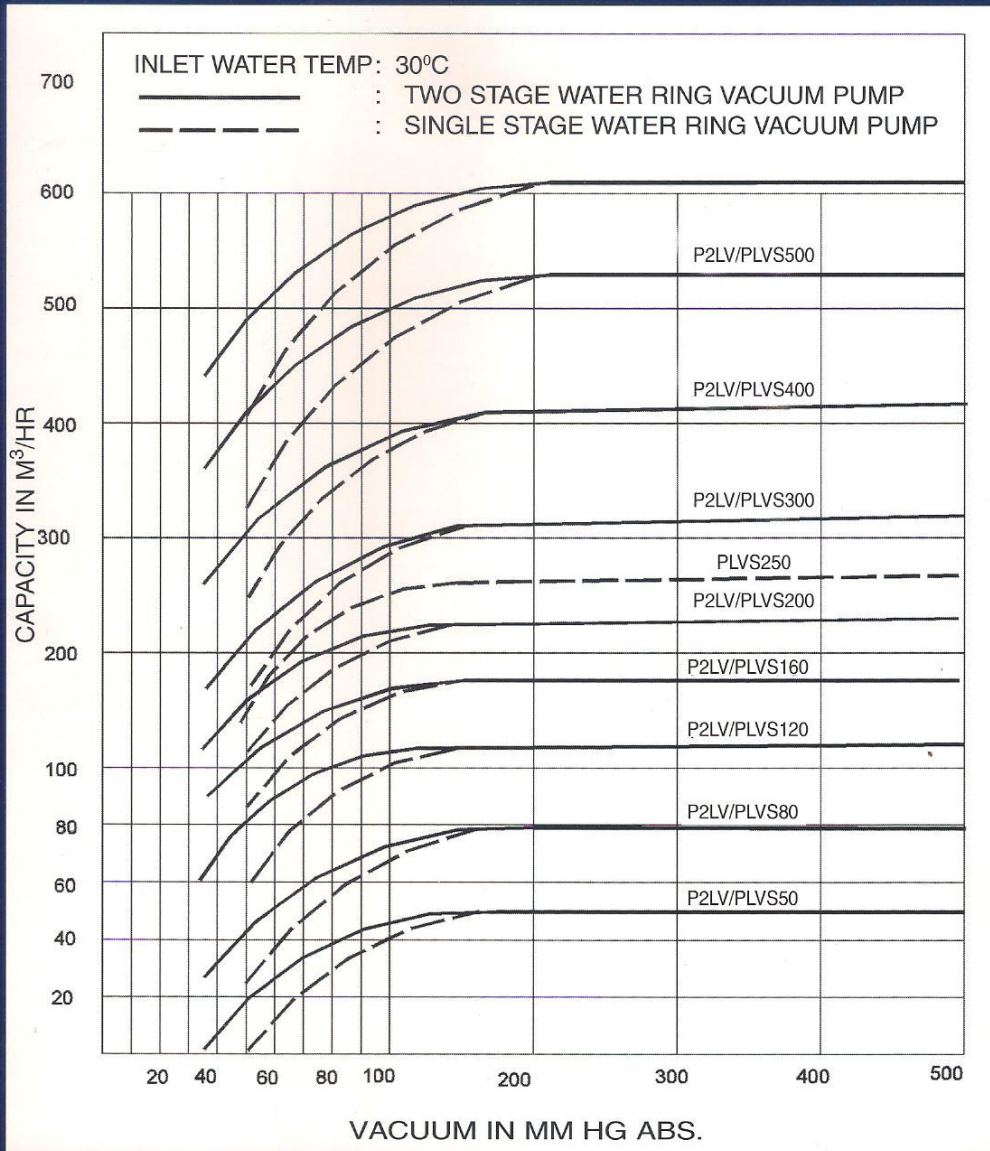
PUMP SIZE	DIMENSION (MM)								TOTAL WEIGHT	MAX CAPACITY M ³ /HR	MOTOR RATING	MOTOR SPEED	IN/OUT FLANGE DETAILS	SERVICE LIQUID CONNECTION
	L	W	H	F1	F2	S	D	K						
P2LV50	585	310	390	290	200	162	29	8	85	50	3 (2.2)	1440	40 NB	1/2" BSP
P2LV80	615	310	390	310	200	162	29	8	90	80	5 (3.7)	1440	40 NB	1/2" BSP
P2LV120	645	310	390	340	200	162	29	8	95	120	7.5 (5.5)	1440	40 NB	1/2" BSP
P2LV160	675	310	390	370	200	162	29	8	100	160	10 (7.5)	1440	40 NB	1/2" BSP
P2LV200	840	410	510	405	245	192	35	8	185	200	12.5 (9.3)	1440	50 NB	1/2" BSP
P2LV300	930	410	510	495	245	192	35	8	200	300	15 (11)	1440	50 NB	1/2" BSP
P2LV400	1000	425	610	580	270	225	38	10	220	400	20 (15)	1440	60 NB	3/4" BSP
P2LV500	1040	425	610	630	270	225	38	10	240	500	25 (18.5)	1440	65 NB	3/4" BSP
P2LV600	1080	425	610	680	270	225	38	10	260	600	30 (22)	1440	65 NB	3/4" BSP

SINGLE STAGE



PUMP SIZE	DIMENSION (MM)								TOTAL WEIGHT	MAX CAPACITY M ³ /HR	MOTOR RATING	MOTOR SPEED	IN/OUT FLANGE DETAILS	SERVICE LIQUID CONNECTION
	L	W	H	F1	F2	S	D	K						
PLVS50	515	310	328	220	200	162	29	8	72	50	3 (2.2)	1450	40 NB	1/2" BSP
PLVS80	535	310	328	240	200	162	29	8	74	80	5 (3.7)	1450	40 NB	1/2" BSP
PLVS120	555	310	328	260	200	162	29	8	76	120	7.5 (5.5)	1450	40 NB	1/2" BSP
PLVS160	575	310	328	280	200	162	29	8	78	160	7.5 (5.5)	1450	40 NB	1/2" BSP
PLVS200	730	410	540	245	245	192	35	8	135	200	10 (7.5)	1450	50 NB	1/2" BSP
PLVS250	780	410	540	305	245	192	35	8	140	250	12.5 (9.3)	1450	50 NB	1/2" BSP
PLVS300	830	410	540	365	245	192	35	8	150	300	15 (11)	1450	65 NB	1/2" BSP
PLVS400	840	420	610	430	270	225	38	10	200	400	20 (15)	1450	65 NB	3/4" BSP
PLVS500	890	420	610	480	270	225	38	10	225	500	25 (18.5)	1450	65 NB	3/4" BSP
PLVS600	915	420	610	505	270	225	38	10	240	600	30 (22)	1450	65 NB	3/4" BSP

PERFORMANCE DATA



INFORMATION REQUIRED TO SUBMIT QUOTATION :

- Suction Pressure (Vacuum) Desired
- Duty Conditions at Suction (Air Load & Vapour Load) or Process volume
- Suction Temperature
- Service Liquid Temperature
- Preferred Material of construction



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