RUDRARAJ

Innovative Engineers

OIL SEALED ROTARY HIGH VACCUUM PUMPS :

These are oil-immersed, rotary vane type pumps. The rotor, with two spring loaded vanes, is mounted eccentric in the stator body. As the rotor rotates, the vanes sweep the crescent shape air space twice in each revolution. There is inbuilt non-return valve which prevents back flow of air. Manufactured from graded material/all moving parts are precisely machined/ground and assembled with close tolerances. This results in increased efficiency and long trouble free operating life.

ACCESSORIES :

- Moisture Trap. Inlet Dust Filter. Vacuum Guage with Regulator. Trolly for small Pumps.
- Use Oil : ENKLO-68 (HP) or Equivalent, Vacuum Oil.
- Model HL-300-II and above, are provided with water cooling jacket.
- Vacuum measured by Mcleod guage at Suction port of the pump.

APPLICATION :

Distillation, Dehydration and filtration Processes, Exhausting Electronic Tubes, GLS Lamps/Mercury Vapour Lamps & Tubes, Vacuum Metallurgy, Vacuum Sublimation, Vacuum Impregnation, Thin Film Coating, Refrigerator and Air-Conditioner Servicing.

MODEL NO.	NO. OF STAGES	FREE AIR DISPLACEMENT Lt/Min.	FREE AIR DISPLACEMENT C.F.M.	ULTIMATE VACCUM mm of Hg.	DRIVE MOTOR REQD. HP.	APPROX OIL FILLING Ltrs.
RL - 50	1 / 2	50 / 50	1.8 / 1.8	0.05 / 0.005	0.25 / 0.25	0.25 / 0.25
RL - 100	1 / 2	100 / 100	3.5 / 3.5	0.05 / 0.005	0.25 / 0.5	0.25 / 0.5
RL - 150	1 / 2	150 / 150	5.3 / 5.3	0.05 / 0.005	0.5 / 1.0	0.5 / 1.0
RL - 300	1 / 2	300 / 300	10.6 / 10.6	0.05 / 0.005	1.0 / 1.5	1.0 / 1.5
RL - 500	1 / 2	500 / 500	17.6 / 17.6	0.05 / 0.005	1.5 / 2.0	1.5 / 2.0
RL - 750	1 / 2	750 / 750	26.5 / 26.5	0.05 / 0.005	2.0 / 3.0	2.0 / 3.0
RL - 1000	1 / 2	1000 / 1000	35.3 / 35.3	0.05 / 0.005	2.0 / 3.0	2.0 / 3.0
RL - 1500	1 / 2	1500 / 1500	53.0 / 53.0	0.05 / 0.005	3.0 / 5.0	3.0 / 5.0
RL - 2000	1 / 2	2000 / 2000	70.6 / 70.6	0.05 / 0.005	3.0 / 5.0	3.0 / 5.0
RL - 3000	1 / 2	3000 / 3000	106.6 / 106.6	0.05 / 0.005	5.0 / 7.5	5.0 / 7.5
RL - 5000	1 / 2	5000 / 5000	176.5 / 176.5	0.05 / 0.005	7.5 / 10.0	7.5 / 10.0
RL - 7500	1 / 2	7500 / 7500	265.0 / 265.0	0.05 / 0.005	10.0 / 15.0	10.0 / 15.0
RL - 10000	1 / 2	10000 / 10000	353.0 / 353.0	0.05 / 0.005	15.0 / 20.0	15.0 / 20.0

A) Ultimate Vaccum : Single Stage : 0.05 mm of Hg., Double Stage : 0.005 mm of Hh.
B) Motor RPM : 1440 (C) Pump RPM : 500

VACUUM PUMPS

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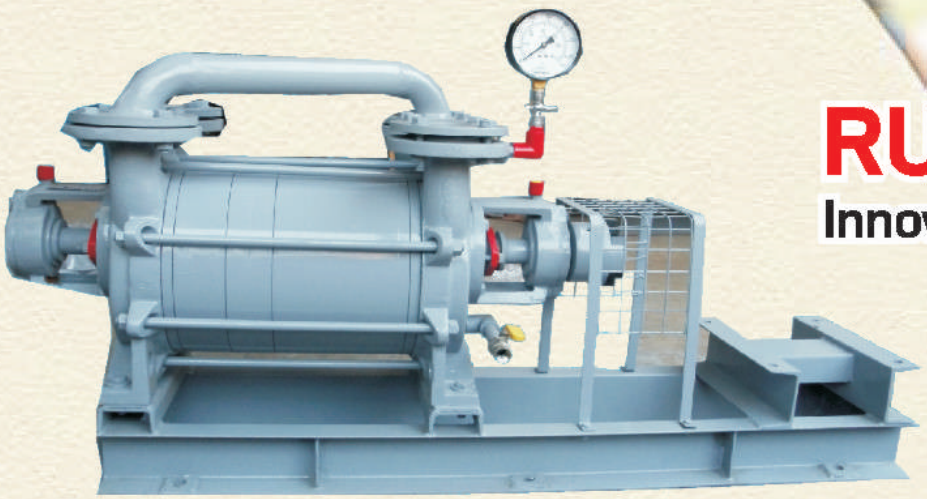

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Two Stage Watering Vacuum Pump

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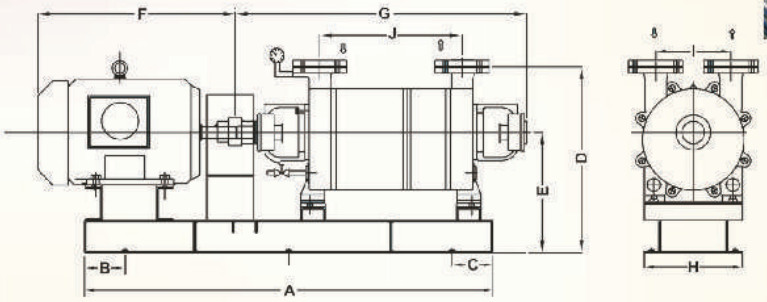
Two Stage Watering Vacuum Pump

"Rudraraj" Two Stage Watering Pumps are better design then single stage Vacuum pumps, having advantage of higher capacity at high vacuum and also requires low quantity of water at low pressure compare to single stage vacuum pump. Two stage vacuum pump develops maximum vacuum of 720 mm of hg, when sealing water temperature is 30°C (755 mm of hg barometric pressure & suction temperature of 30°C) due to its latest technology and design, it so happen that a smaller model may require as compare to single stage vacuum pumps.



Model	A	B	C	D	E	F	G	H	I	J
RIM-5	900	150	150	485	320	385	615	275	200	270
RIM-7	1000	150	150	485	320	470	705	275	200	370
RIM-10	1100	150	150	568	368	508	785	320	235	465
RIM-15	1250	125	125	568	368	581	885	320	235	575
RIM-20	1450	125	125	568	368	625	1020	320	235	720
RIM-25	1500	150	150	590	370	647	986	340	240	566
RIM-30	1500	150	150	590	370	720	1020	340	240	600
RIM-40	1780	140	140	140	325	785	1225	400	250	735

APPLICATION

- Dehydration and filtration processes
- Distillation, Evaporation & Drying
- Deodorization, Evacuation
- Sterilizing, Conveying
- Venting & Sucking
- Moisture Extraction, Concentration

SALENTS FEATURES :

- Simple & Rugged Construction
- Trouble Free Operation
- Easy handle dust laded gases
- There no Teflon Ball Inside the Pump to Detenorate Vacuum Performance Compare to Single Stage Vacuum Pump

RANGE :

- Capacity : 81 M^3/hr. to 1200 M^3/hr
- Vaccum : 720 mm of Hg.
- Power : 5 HP to 50 HP

MATERIAL OF CONSTRUCTION :

Cast Iron, SS 304, SS 316, Bronze, Gun Metal & As per process Requirement

OTHER PRODUCTS

Single Stage Vacuum Pump
Maximum Capacity : 1500 M^3/hr.
Maximum Vacuum : 710 mm to Hg

Mono-Block Vacuum Pump
Maximum Capacity : 330 M^3/hr.
Maximum Vacuum : 710 mm of Hg

DETAIL TECHNICAL SPECIFICATION

MODEL NO.	SUCTION		ELE.MOTOR		WATER	SUCTION		WATER CONN.
	M^3/Hr	CFM	H.P.	R.P.M.	Lt/Min.	K...	N.B.	
RW-22	50	30	3	2800	7	25	1"	½"
RW-32	80	50	5	2880	10	30	1¼"	½"
RW-42	120	75	7.5	2880	14	36	1½"	½"
RW-52	160	95	7.5	1440	15	50	2"	½"
RW-62	220	130	10	1440	20	60	2½"	¾"
RW-72	330	195	15	1440	30	80	3"	¾"
RW-82	440	260	20	1440	40	80	3"	¾"
RW-92	720	410	30	980	60	125	5"	¾"
RW-102	845	490	35	980	80	125	5"	¾"
RW-112	1080	650	40	980	100	125	5"	¾"

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Smaller and larger capacity pump can offered on request.
We reserve the right to change the specifications without prior notice

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Mono-Block (Close Coupled) Vacuum Pump

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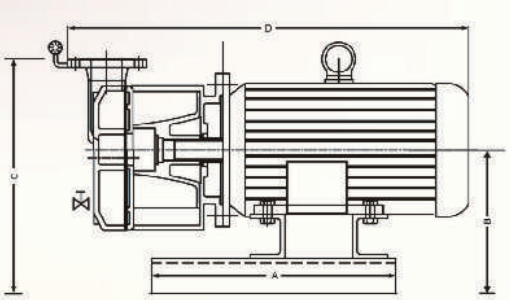
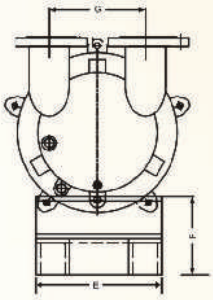
Mono-Block (Close Coupled) Vacuum Pump

"Rudraraj" Mono Block (close coupled) liquid-Ring vacuum pumps are very Compact, Easy to Install, Assemble with smooth Operation. These pumps are assembled directly to motor flange & shaft. The pump develop Maximum vacuum of 700 to 710 mm of Hg. when sealing water Temperature of 30°C (barometric pressure of 755 mm of Hg. and suction temperature 30 C)





APPLICATION

- Laboratory Usage
- Priming Purpose
- Pilot Plants
- Filteration Process
- Drying

Model	A	B	C	D	E	F	G
RIM-1	275	185	288	460	235	115	75
RIM-2	275	185	288	460	235	115	75
RIM-3	325	215	375	590	235	115	135
RIM-5	325	227	387	590	235	115	135
RIM-7	325	185	345	630	265	75	135
RIM-10	400	215	400	815	325	85	150
RIM-15	482	260	470	920	450	92	200

SALENTS FEATURES :

- Compact And Mobile
- Trouble Free Operation
- Easy to Mantainance
- Zero Leackage Due to Mechanical Seal

RANGE :

- Capacity : 24 M^3/hr. to 330 M^3/hr
- Vacuum : 710 mm of Hg.
- Power : 1 HP to 15 HP

OTHER PRODUCTS

Single Stage Vacuum Pump
Maximum Capacity : 1500 M^3/hr.
Maximum Vacuum : 710 mm to Hg

Oil Seal Rotary High Vacuum Pump
Maximum Capacity : 353 CFM
Maximum Vacuum : 760 mm to Hg

MATERIAL OF CONSTRUCTION :

Cast Iron, SS 304, SS 316, Bronze, Gun Metal & As per process Requirement

DETAIL TECHNICAL SPECIFICATION

Pump Model	Max. Capacity (M^3/hr)	Water Reqd. (LPM)	Rec. Motor HR/RPM
RM - 20	24	3	1/2850
RM - 30	30	5	2/2850
RM - 40	55	7	3/1450
RM - 60	90	9	5/1450
RM - 80	150	12	7.5/1450
RM - 100	220	15	10/1450
RM - 120	330	22	15/1450

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WATER RING - VACCUM PUMPS :

OPERATING PRINCIPLE :

The working parts of the pump, consists of a multi-vane impeller mounted eccentrically in a round casting which is partly filler with liquid (usually water). As the impeller rotate the liquid is thrown by centrifugal fore to form a liquid ring which is concentric with the periphery of the casing. Due to the eccentric position of the impeller relative to the casting and liquid ring. the spaces between the impeller vanes fill with liquid during rotation and any air or gas trapped in the impeller space or cell is compressed and discharged from the casing through the outlet part leaving the cell available to receive air or gas as it is presented to to the inlet port of the liquid ring performs three other important functions. It absorbs the heat any liquid slugs or vapour entering with the gas stream. It will also absorb and wash out contaminants entrained in the gas.

FEATURES :

Condensible vapours, or occasional slugs of liquid can be handled without damage to the pump or significant effect on capacity. No Lubricant or oil is required with the pump itself. Thus the air or other discharge gases are not contaminated. A wide selection of materials which reduced noise and vibration. Mechanical seals can be provided as an option. Small entrained soild will pass through the pump. However, abrasive particles will result in reduced pump life.

WIDE CHOICE OF MATERIALS :

Standard materials of construction is cast iron with semi-steel rotor, Shaft material is stainless steel for model PW-2 to PW-4, large size ate carbon steel with brass of stainless steel shaft sleeves for wetted parts. Alternate combination materials are available for special application

SOME SPECIFIC APPLICATIONS ARE :

Draining paper Webs. Evacuating condensers and piping. priming pumps. Drying resins, paints and chemicals. Conveying wheat, sugar and chemical products. Lifting and transporting wood and plates.

MODEL NO.	SUNCTION		ELE.MOTOR		WATER	SUNCTION		WATER
	M^3/Hr	CFM	H.P.	R.P.M.	Lt/Min.	K...	N.B.	CONN.
RW-2	50	30	3	2800	7	25	1"	½"
RW-3	80	50	5	2880	10	30	1¼"	½"
RW-4	120	75	7.5	2880	14	36	1½"	½"
RW-5	160	95	7.5	1440	15	50	2"	½"
RW-6	220	130	10	1440	20	60	2½"	¾"
RW-7	330	195	15	1440	30	80	3"	¾"
RW-8	440	260	20	1440	40	80	3"	¾"
RW-9	720	410	30	980	60	125	5"	¾"
RW-10	845	490	35	980	80	125	5"	¾"
RW-11	1030	650	40	980	100	125	5"	¾"

IMPREGNATION SYSTEMS :

APPLICATIONS :

In Vacuum Impregnation Process, the parts to be impregnated are put in the enclosure / tank and vacuum is created to remove the air trapped inside. the varnish or impregnating fluid is then allowed to enter the tank, which reaches each and every pore / cavity creating a solid winding/product. the varnish and winding product can be heated before impregnation to release any air and / or moisture trapped inside. They may be heated in oven to dry the varnish/impregnated fluid.

In case of wooden articles/boards, the solutions reach very deep eliminating attacks by termites etc. form within and also from outside.

Vacuum Impregnation systems are used for impregnating winding coils. ballasts, chocks, submersible pump motors and similar electric items by varnishes and wooden boards, furniture items and like products by Antitermite. Fire retardant solution.

These systems are custom designed to suit specific application. These are easily operated and maintenance free, backed by efficient sales and service.

STD SIZES AVAILABLE :

With Cylindrical Tanks and ready to use with interconnecting piping etc.

Size of Impregnation & Varnish Chamber Dia. x Ht. (in mm)	Approx. Volume Ltrs.	Size of Pump required	
		Displacement LPM	HP
300 x 300	20	150	0.5
450 x 450	70	300	1.0
600 x 600	170	500	1.5
750 x 600	260	500	1.5
910 x 750	480	750	2.0

Also offered are :

1. Epoxy casting vaccum systems.
2. Poly Urethane moulding vaccum syytems for specific applications.