

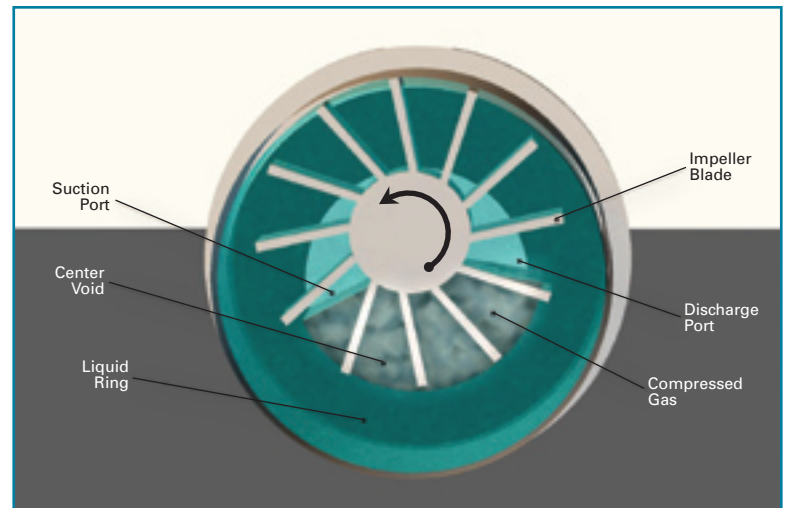
DESIGN PRINCIPLE

Kinney® Liquid Ring Vacuum Pumps and Systems

KLRC Series

The KLRC is a non-pulsating vacuum pump designed to remove gases through the use of rotating impeller blades that enter and leave a ring of liquid. The impeller forces this sealing liquid to the periphery of the pump casing, where it forms a moving ring of liquid around a center void.

The impeller shaft is mounted above the centerline of the casing; while the blades, although rotating concentrically, are located eccentrically with respect to the casing and the ring of liquid. The pump's axial suction and discharge ports are exposed to the void but separated by the impeller blades and the ring of liquid. As the process gas or vapor is drawn into the pump through the suction port, it is trapped between the impeller blades and the liquid ring. The rotating blades enter deeper into the liquid ring, progressively reducing the entrapment space, compressing and then exhausting the gas through the discharge port. The liquid ring acts like a liquid piston, meaning the entire pumping operation is accomplished without vanes, valves, pistons or any metal-to-metal contact.



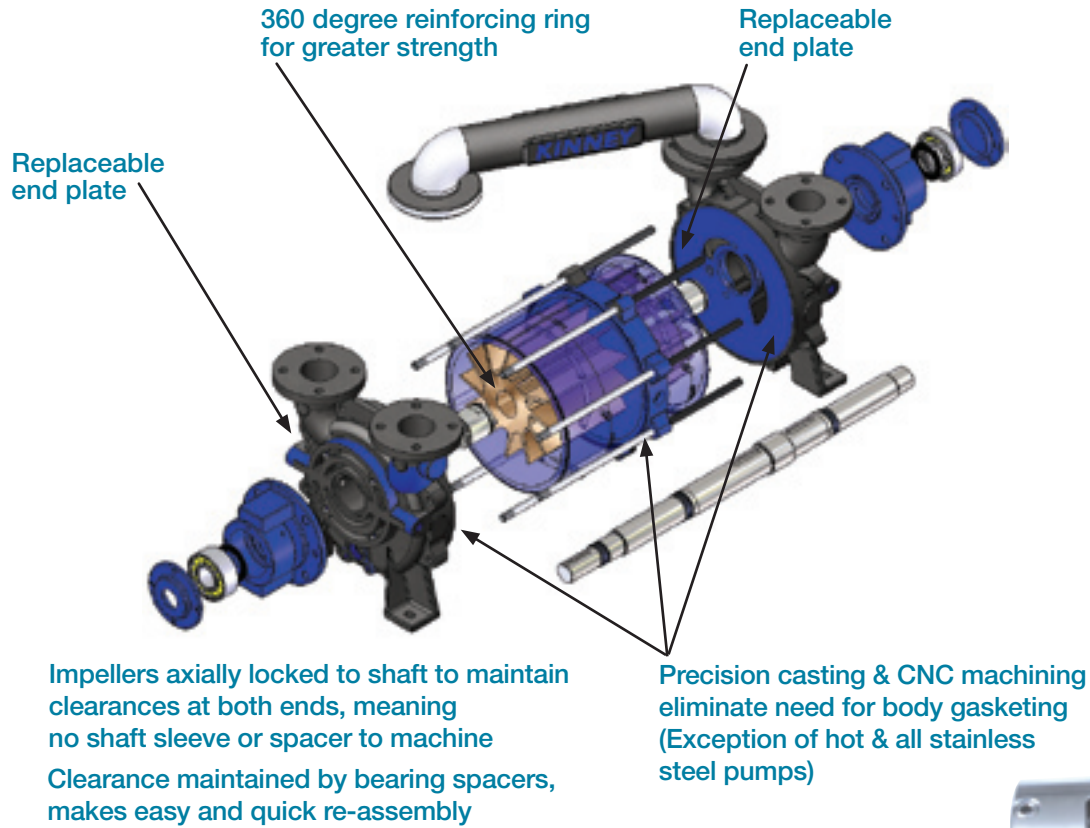
Shim size stamped on bearing housing for smooth re-assembly



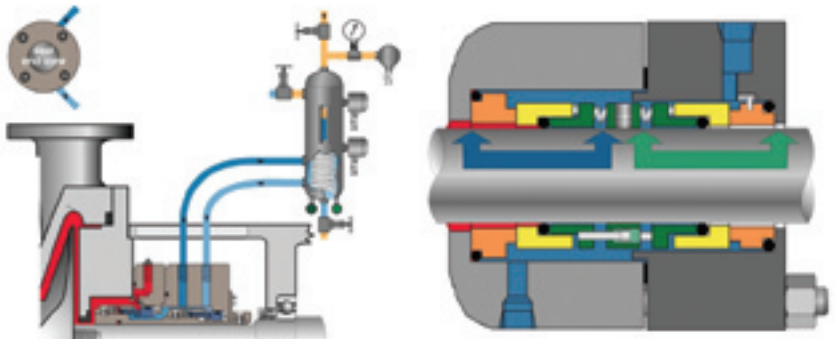
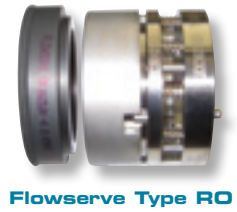
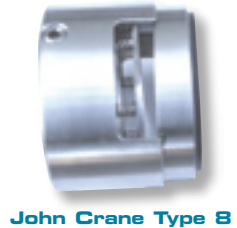
Cast-In index marks for convenience in re-assembly

Center anchored tie bolts allow access to either end of the pump without total disassembly

KLRC Series



CODE	MATERIAL OF CONSTRUCTION
B	Cast iron casings, bronze impellers, SS316 shaft
F	Cast iron casings, SS316L impellers, SS316 shaft
C	SS316L casings, SS316L impellers, SS316 shaft
MECHANICAL SHAFT SEAL	
A	Type 21 with Viton elastomer
D	Self compensate with Viton/EPR/Teflon encapsulated or Kalrez O Ring (Code L/M/P)
E	Type 8 with Viton
H	Type 9 with Viton
DD	Double mechanical shaft seals



Double Mechanical Seal with Barrier Fluid

KLRC Series

Performance

Inch Hg				22	24	26	27	28	28.5	28.8	
Torr				200	150	100	70	50	40	30	
KLRC	Flange Conn.	HP KW	RPM	CFM/M ³ /Hr	CFM/M ³ /Hr	CFM/M ³ /Hr	CFM/M ³ /Hr	CFM/M ³ /Hr	CFM/M ³ /Hr	CFM/M ³ /Hr	WATER GPM
40	1.5" x 1.5"	5	1750	37	38	40	40	36	32	25	5
		4	1450	51	53	56	56	51	45	35	
75	1.5" x 1.5"	5	1750	71	73	75	75	71	66	55	5
		4	1450	99	102	105	105	99	92	77	
100	1.5" x 1.5"	7.5	1750	100	100	100	97	92	86	70	6
		5.5	1450	141	141	141	136	131	121	99	
125	1.5" x 1.5"	10	1750	139	141	140	135	124	111	90	7
		7.5	1450	195	199	197	192	175	156	127	
200	2" x 2"	15	1750	192	191	186	178	164	148	110	8
		11	1450	271	270	263	252	233	209	155	
300	2" x 2"	25	1750	305	302	295	274	250	225	185	12
		18.5	1450	432	425	417	387	353	315	262	
525	3" x 3"	50	1750	550	545	522	485	420	380	300	20
		37	1450	779	772	739	687	595	538	425	
526	3" x 3"	40	1450	435	440	425	390	340	300	240	20
		30	1450	740	748	723	663	578	510	408	
775	4" x 4"	75	1150	800	830	850	830	764	680	575	37
		55	1150	1360	1411	1445	1411	1299	1156	978	
776	4" x 4"	50	880	660/1122	670/1139	660/1122	650/1105	560/952	530/901	300/510	37
		37	960	740/1258	750/1275	740/1258	700/1190	640/1088	580/986	475/807	
950	4" x 4"	100	1150	875	920	1020	1060	1030	970	825	39
		75	1150	1488	1564	1734	1802	1751	1649	1403	
951	4" x 4"	60	880	790/1343	825/1403	825/1403	790/1343	675/1148	550/935	365/621	39
		45	960	790/1343	840/1428	925/1572	960/1632	900/1530	880/1496	760/1292	

Above performance data based on 68°F inlet air with 50% relative humidity and using water as a sealant at 60°F. Please refer to curve on page 8 for correction factor (CF) to correct capacity if using water other than 60°F.

Dimensions

	KLRC 40		KLRC 75		KLRC 100		KLRC 125		KLRC 200		KLRC 300		KLRC* 525-526		KLRC* 775-776		KLRC* 950-951	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
A	22.56	573	24.13	613	25.75	654	28.06	713	29.69	754	33.56	852	41	1041	57.91	1471	61.81	1570
B	11.88	302	11.88	302	12.75	324	12.75	324	16.88	429	16.88	429	18.88	479	25.81	656	—	—
C	—	—	—	—	16	406	16	406	19.13	486	19.13	486	23.5	597	32.38	822	32.38	822
D	9.63	244	11.19	284	10.75	273	13.13	333	12.38	314	16.31	414	22	559	27.38	695	31.25	794
E	12.63	321	12.63	321	13	330	13	330	15.25	387	15.25	387	18.56	471	23.5	597	23.5	597
F	13.13	333	14.69	373	15.5	394	17.88	454	16.94	430	20.88	530	27.38	695	33.5	851	37.38	949
G	10	254	10	254	10.63	270	10.63	270	11.75	298	11.75	298	15.75	400	18.88	480	18.88	480
H	6.5	165	6.5	165	6.88	175	8.25	175	8.25	232	8.25	232	9.81	243	12.63	321	12.63	321
Lbs.	155		200		230		255		360		405		800		1342		1529	

Consult factory for detailed drawings *KLRC 525/775/950 can also be belt driven, in which case the model number becomes KLRC 526/776/951.

Sealing Inlet Connections

KLRC 40-75	KLRC 100-125	KLRC 200-300	KLRC 525-526	KLRC 775-776	KLRC 950-951
1/2" NPT	3/4" NPT	1" NPT	1-1/4" NPT	1-1/2" NPT	1-1/2" NPT

