



IN-LINE CENTRIFUGAL PUMP TYPE RIL

APPLICATIONS

Raj Volute casing Inline Centrifugal pumps Type **RIL** are space saving Pump units designed for easy installation and are used for circulating clean non-aggressive fluids.

Water Supply Systems.

Water Circulation / Transfer.

Hot Water Circulation.

Agriculture.

Industry.

Ship Building.

Cooling Towers.

and many other Applications.

DESIGN DETAILS

Direction of Rotation : Clock wise looking from the motor at the Pump.

Shaft Sealing : The Shaft is sealed by means of a Mechanical Seal.

Wearing Ring : Every Volute Casing is fitted with a Replaceable wearing ring.

Casing Gasket : The Volute casing is sealed by means of a flat gasket.

MOTOR

The Pump is coupled with a Electric Motor, which is a totally enclosed, fan cooled Squirrel-cage motor.

Nominal Speed	:	2900rpm
Enclosure Class	:	IP 55.
Standard Voltages	:	1 X 220 240V 3 X 380 415V

Single-phase Motors have a built in thermal overload protection.

Three phase Motors should be protected by a suitable motor starter as per local regulations.

PUMP DESIGN

The Pumps are primarily designed to handle water and are suitable for handling water in water supply systems for domestic and industrial use.

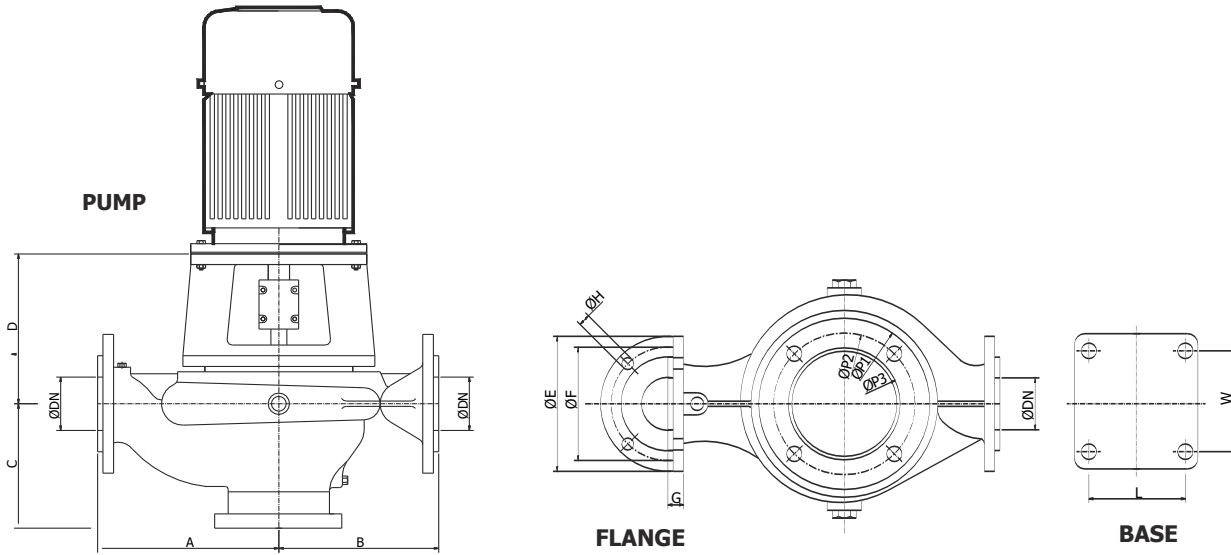
Single Stage Pumping units of compact design with back pullout feature with Suction & Discharge Flange arranged in-line opposite one another for direct installation in the pipeline.

Motor and Pump are close coupled by rigid coupling. The complete rotating portion can be removed without disconnecting the Pump casing from the connecting pipe line.





IN-LINE CENTRIFUGAL PUMP TYPE RIL



VERTICAL INLINE CENTRIFUGAL PUMPS SERIES RIL.

PUMP TYPE	DN	ADAPTOR			PUMP				FLANGE				BASE		
		P1	P2	P3	A	B	C	D	E	F	G	H	J	L	W
RIL - 05	32	160	130	110	140	140	90	112	140	100	18	18X4	160	83	120
RIL - 10	40	200	165	130	150	150	110	123	150	110	18	18X4	200	83	130
RIL - 20	50	200	165	130	150	150	110	145	165	125	20	18X4	200	83	130
RIL - 30	65	200	165	130	170	170	135	146	185	145	20	18X4	215	100	180
RIL - 50	80	250	215	180	200	200	145	150	200	160	20	18X4	252	100	157
RIL - 75	80	300	265	230	240	240	150	175	200	160	20	18X4	300	100	175
RIL - 100	100	300	265	230	240	240	160	175	220	180	20	18X4	305	150	170
RIL - 110	32	200	165	130	157	157	90	140	-	-	-	-	220	83	128
RIL - 3216 T	50	250	215	180	190	190	140	170	165	125	20	18X4	264	100	180
RIL - 3220 T	50	300	265	230	200	200	144	165	165	125	20	18X4	300	100	180
RIL - 4016 T	65	300	265	230	190	190	144	176	185	145	20	18X4	300	100	180
RIL - 4020 T	65	300	265	230	250	250	144	176	185	145	20	18X4	300	100	180
RIL - 4026 T	65	350	300	250	248	248	138	240	185	145	22	18X4	350	212	232
RIL - 5016 T	80	350	300	250	238	220	170	245	200	160	22	18X8	350	212	232
RIL - 5020 T	80	350	300	250	235	235	170	245	200	160	22	18X8	350	212	232
RIL - 5026 T	80	400	350	300	245	245	150	260	200	160	22	18X8	400	212	232
RIL - 6516 T	100	350	300	250	260	260	180	250	220	180	24	18X8	350	212	232
RIL - 6520 T	100	350	300	250	260	260	170	250	220	180	24	18X8	350	212	232
RIL - 6526 T	100	550	500	450	265	265	170	250	220	180	24	18X8	550	212	232
RIL - 8016 T	150	350	300	250	295	295	190	270	285	240	29	18X8	410	212	232
RIL - 8016 T	125	400	350	300	285	285	190	285	250	210	29	18X8	400	212	232
RIL - 8020 T	125	400	350	300	285	285	185	280	250	210	29	18X8	400	212	232
RIL - 8026 T	125	550	500	450	285	285	190	315	250	210	29	18X8	400	212	232
RIL - 10020 T	125	550	500	450	300	300	190	325	285	240	29	18X8	550	212	232
RIL - 10020 T	150	550	500	450	300	300	190	325	285	240	29	18X8	550	212	232
RIL - 10020 T	150	550	500	450	300	300	195	325	285	240	29	18X8	550	212	232
RIL - 10026 T	125	550	500	450	310	310	195	320	285	240	29	18X8	550	212	232
RIL - 10026 T	150	550	500	450	310	315	200	320	285	240	29	18X8	550	212	232
RIL - 10026 T	150	550	500	450	315	315	185	320	285	240	29	18X8	550	212	232
RIL - 12526 T	150	660	600	550	410	400	215	355	285	240	29	18X8	660	225	270

"T" Pumps fitted with T.C. Bush.

PERFORMANCE CHART OF RIL PUMPS AT 2900 RPM

RATING REF	PIPE SIZE IN MM	POWER (HP)	TOTAL HEAD IN METER											
			10	12	14	16	18	20	22	24	26	28	30	32
			DISCHARGE IN LPM / M ³ /Hr.											
RIL-100	100 X 100	10	-				1425 / 85.5	1355 / 81.3	1295 / 77.7	1215 / 72.9	1125 / 67.5	1025 / 61.5	900 / 54	-
RIL-110	32 X 32	1	172 / 10.3	160 / 9.6	145 / 8.7	127 / 7.6	107 / 6.4	83 / 5	-					
		1.5	207 / 12.4	200 / 12	188 / 11.3	178 / 10.7	165 / 9.9	148 / 8.9	132 / 7.9	113 / 6.8	90 / 5.4	33 / 2	-	
		2	225 / 13.5	220 / 13.2	210 / 12.6	201 / 12.1	190 / 11.4	180 / 10.8	170 / 10.2	155 / 9.3	137 / 8.2	123 / 7.4	108 / 6.5	67 / 4

NOTES :-

VALUES ARE VALID FOR WATER AT 1KG/DM3 AND VISCOSITY OF 1 CST.

CAPACITY ± 10% , DELIVERY HEAD ±10% , POWER ±10%

CURVES ARE APPROXIMATE, PUMP IS GUARANTEED FOR ONE SET OF CONDITIONS; CAPACITY, HEAD, AND EFFICIENCY

SELECTION OF THE MOTOR RESULTS FROM OPERATING DATA SPECIFICATION AND IS NOT NECESSARILY VALID FOR THE COMPLETE RANGE OF PERFORMANCE OF THE PRODUCT.

PUMP MODEL	PIPE SIZE (MM)	MAX. IMPELLER	REQD. IMPELLER	POWER kW / HP	MOTOR FRAME	TOTAL HEAD IN METERS																		
						15	16	18	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	
						DISCHARGE IN M3/Hr																		
RIL-3216 RIL-5020 B	50 X 50 80 X 80	178 215	215	18.5 / 25	160L							98	93	85	75									
			200	15 / 20	160M							92	85	76	45									
			182	11 / 15	160M					83	74	60												
			160	7.5 / 10	132S				69	57														
RIL-5026 B	80 X 80	266	266	30 / 40	200L													85	80	73	64	53		
			240	22 / 30	180M										78	73	67	57	40					
			230	18.5 / 25	160L										71	64	53							
			210	15 / 20	160M							66	58	47										
RIL-6516 B	100 X 100	181	181	15 / 20	160M					164	150	130	100											
			160	11 / 15	160M	146	144	139	132	105	57													
			140	7.5 / 10	132S	116	112	100	85															
RIL-6520 B	100 X 100	220	220	30 / 40	200L							157	154	146	135	117	80							
			200	22 / 30	180M							142	137	127	109	73								
			188	18.5 / 25	160L					135	131	120	100											
			176	15 / 20	160M					124	114	95												

PUMP MODEL	PIPE SIZE (MM)	MAX. IMPELLER	REQD. IMPELLER	POWER kW / HP	MOTOR FRAME	TOTAL HEAD IN METERS																				
						15	16	18	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90			
						DISCHARGE IN M3/Hr																				
RIL-3216 RIL-6526 B	50 X 50 100 X 100	178 264	264 250 236 210 200	45 / 60 37 / 50 30 / 40 22 / 30 18.5 / 25	225M 200L 200L 180M 160L																150	145	140	130	120	100
																140	135	128	118	100						
																131	125	115	100							
							115	106	91																	
						110	102	88																		
RIL-8016B	125 X 125	176	176	18.5 / 25	160L				190	170	90															
			162	15 / 20	160M				160	90																
			153	11 / 15	160M			160	120																	
RIL-8016	150 X 150	210	210	30 / 40	200L				220	190	130															
			195	22 / 30	180M				208	178	100															
			184	18.5 / 25	160L			190	180	125																
			172	15 / 20	160M			180	149																	
RIL-8020	125 X 125	240	235	45 / 60	225M											208	190	156	70							
			225	37 / 50	200L						202	192	170	120												
			210	30 / 40	200L						188	177	145													
			190	22 / 30	180M				168	148	80															

PUMP MODEL	PIPE SIZE (MM)	MAX. IMPELLER	REQD. IMPELLER	POWER kW / HP	MOTOR FRAME	TOTAL HEAD IN METERS																		
						15	16	18	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	
						DISCHARGE IN M3/Hr																		
RIL-3216 RIL-8026	50 X 50	178 264	261	55 / 75	250M											93	180	164	130					
	125 X 125		245	45 / 60	225M						180	172	157	125										
			230	37 / 50	200L			168	153	125														
			215	30 / 40	200L	152	130	70																
RIL-10020	125 X 125	218	218	55 / 75	250M						230	208	130											
			210	45 / 60	225M			224	205	140														
			197	37 / 50	200L	208	190	90																
RIL-10020 I	150 X 150	240	240	55 / 75	250M				348	230	314	295	277	260	237	210								
			228	45 / 60	225M			324	304	285	265	248	225	190										
			213	37 / 50	200L			308	290	268	248	225	200											
			200	30 / 40	200L			280	258	235	204	188												
RIL-10026B	125 x 125	264	264	90 / 120	280M											290	270	245	195					
			248	75 / 100	280S						280	255	230	180										
			225	55 / 75	250M							245	220	170										
			210	45 / 60	225M						215	180	100											

PUMP MODEL	PIPE SIZE (MM)	MAX. IMPELLER	REQD. IMPELLER	POWER kW / HP	MOTOR FRAME	TOTAL HEAD IN METERS																									
						15	16	18	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90								
						DISCHARGE IN M3/Hr																									
RIL-3216 RIL-10026 1 ST	50 X 50 150 x 150	178 290	290	90 / 120	280M															354	340	330	320	305	295	280	265	245	215		
			268	75 / 100	280S																	324	310	298	285	270	260	240	210	170	
			243	55 / 75	250M																	288	274	260	245	228	204	160			
RIL-12526	150 X 150	264	264	160 / 215	315LX																	675	640	600	545	470	360	220			
			253	132 / 180	315M																		650	610	570	520	430	300			
			238	110 / 150	315S																		605	565	520	440	310				
			224	90 / 120	280M																		570	526	470	380	220				

NOTES :-	VALUES ARE VALID FOR WATER AT 1KG/DM3 AND VISCOSITY OF 1 CST.
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IN-LINE CENTRIFUGAL PUMP TYPE RIL



PUMPS INSTALLED IN STEEL PLANT



PUMPS INSTALLED IN FILTRATION PLANT



IN-LINE PUMPS WORKING AT A.C PLANTS



**HIGH PRESSURE VERTICAL IN-LINE
COMBO PUMPS.
PRESSURE: 18 BAR
FLOW: 500M³/Hr**