Efficient, Reliable, Proven Performer.

ROTODEL®

SINCE : 1980

P O S I T I V E D I S P L A C E M E N T

Rotary Twin Gear Pump

type

RDRX

For Fuel Oil, Lube Oil, Veg. Oil, Mineral Oil
Loading-unloading & Transfer applications.

COMPACT ✖ ECONOMICAL ✖ LOW NOISE

From 1/2" to 6" NB Size (Flanged to ASA 150 Class)
Capacity, From : 0.5 TO 200 M^3/hr, Pres-up to 11 Kg./Cm^2
Viscosity up to 1,00,000 - cst, temperature - up to 250°
Standard temperature 90° and for above please contact us.

A CLASSIC ROTARY GEAR PUMP SERIES FROM DEL

Rotary twin-gear pump

Proven Performance & operational economy are prime consideration while evaluating your pumping requirement. When it comes to handling viscous or semiviscous liquids, **'ROTODEL'** rotary gear pump is an obvious choice for the very reasons.

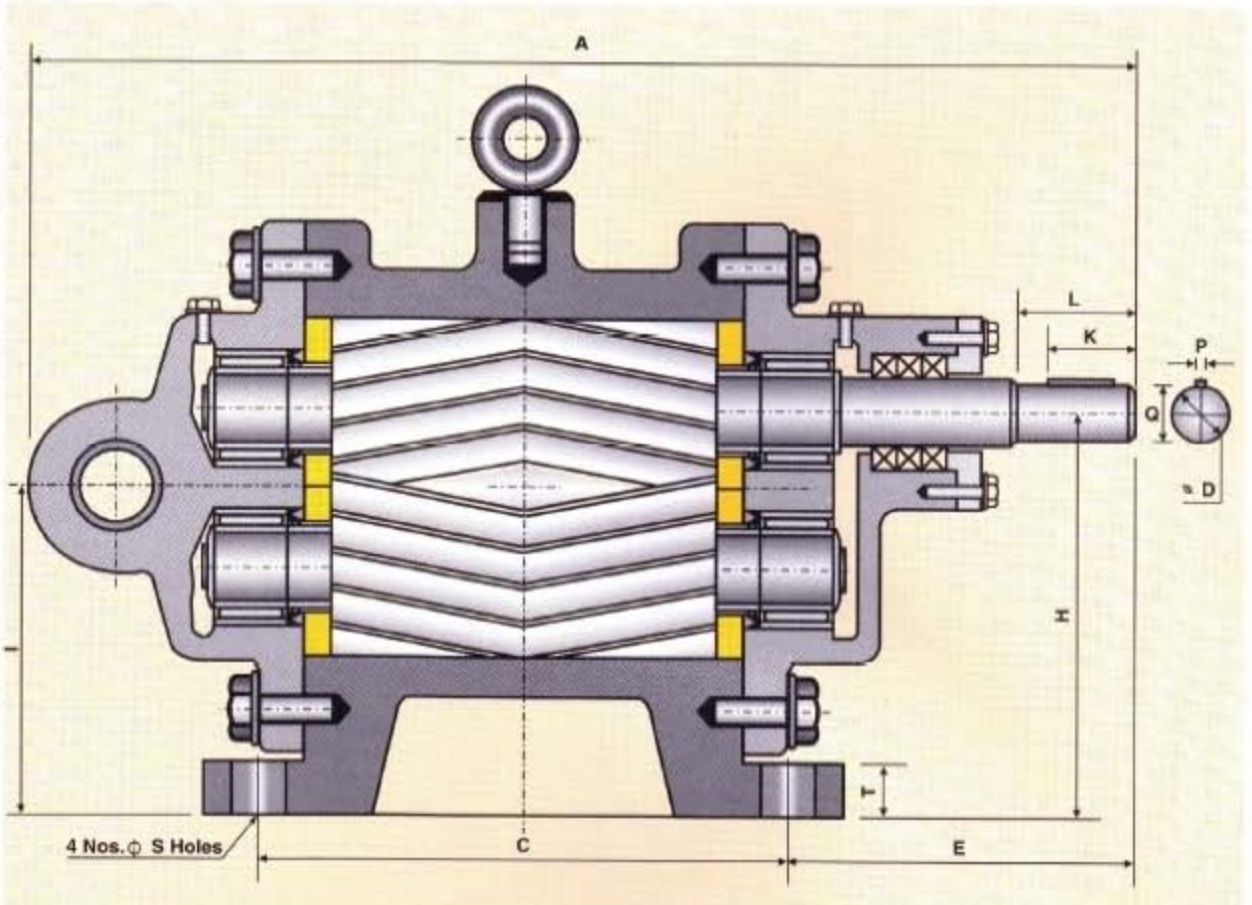
'ROTODEL' rotary gear, twin gear & screw-gear pumps are welknown, widely accepted **pd** pumps in all the industries for it's efficient performance, operational reliability, compact design & noiseless operation. These pumps have outclassed convenational gear pump & has also broken myth about screw pump offering better **overall performance** at considerable reduced cost. Many imported gear & screw pumps are replaced with **'ROTODEL'** pumps in power stations, steel plants, refineries, oil installation on navy vessels & cargo ships.

Popular range of **'RDNXJ'** series **'ROTODEL'** rotary screw-gear pumps are re-designed & re-engineered to offer further simplicity with added reliability meeting international standard like API, JIS, DIN & above all, the **growing expectations** of enlightened customers. New **'RDRX'** series twin gear pump now offers enlarged capacity range with option of self or independently lubricated jacketed or non - jacketed construction with all sizes designed to run at synchronous speed of 4-pole primemover to further reduce the overall cost of the pump set..

It will be a wise decision to go for **'ROTODEL'** rotary twin gear pump even if it amounts to scrapping exisiting pump at your present installation.

ADVANTAGES

- Herrigbone rotors design eliminates side thrust.
- Modified tooth profile enhances the tooth life.
- Floating gear-design ensures uniform load distribution.
- low-leakage path by design improve volumetric efficiency.
- Extra thick shaft reduces bending effectively
- Sleeve on shaft make maintenance economical & easy.



PARTS LIST WITH Material of Construction

SR.	ITEM	QT	MATERIAL
01	PUMP CASING	1	CI/CS/SS
02	FRONT COVER	1	CI/CS/SS
03	BACK COVER	1	CI/CS/SS
04	GLAND COVER	1	CI/CS/SS
05	ROTOR SHAFT	1	EN9/19/SS
06	STATOR SHAFT	1	EN9/19/SS
07	IMPELLER GEAR	4	EN-24-/SS
08	NEEDLE BRG.	4	INA/IKO
09	WEAR PLATE	4	BRONZE
10	LIFTING HOOK	1	STEEL
11	R.V. HOUSING	1	MAL.IRON
12	R.V. PISTON	1	EN-8/SS
13	R.V. SPRING	1	SPR. ST.
14	R.V.AD. SCREW	1	EN-8/SS
15	BASE PLATE	1	M.S.
16	COUP. GUARD	1	ALUMN.
17	COUPLING	1	FLEXIBLE
18	COUP. KEY	1	EN-8/SS
19	SEALING SYS.	2	OS/MS/GP
20	DOWEL PIN	4	SILV.ST.
21	COMP. FLANGE	2	MS/SS
22	H/T HEX-BOLT	12	EN-8/SS

PUMP MOTOR CODE

SIGN # INDICATES PUMP SIZE
5 - SHORT, 6 - MEDIUM, 7 - LONG

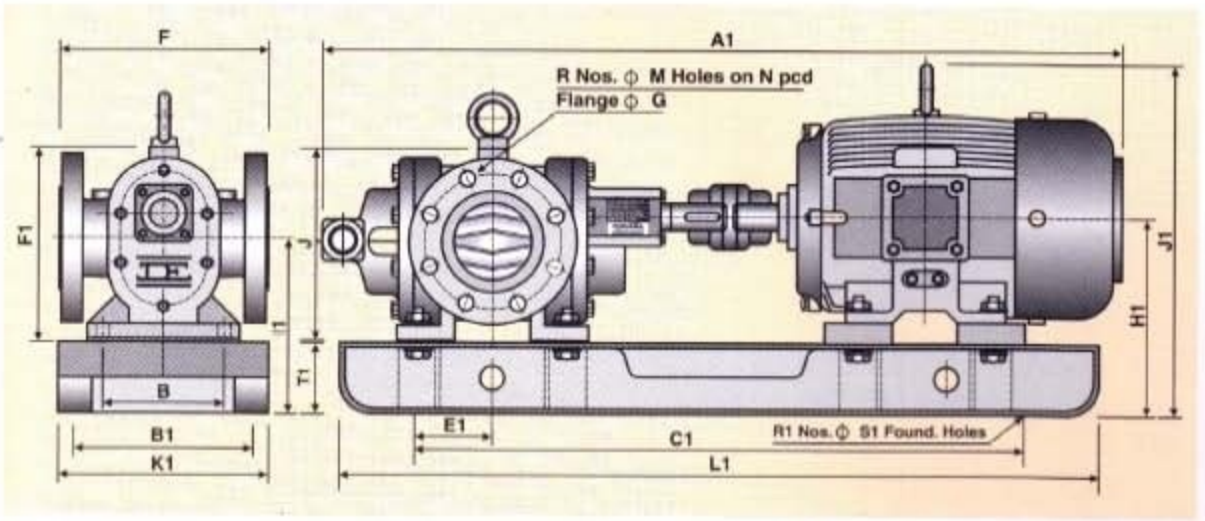
SIGN @ INDICATES PUMP TYPE
0 - RDRB, 1 - RDRBJ, 2 - RDRN,
3 - RDRNJ, 4 - RDRX, 5 - RDRXJ

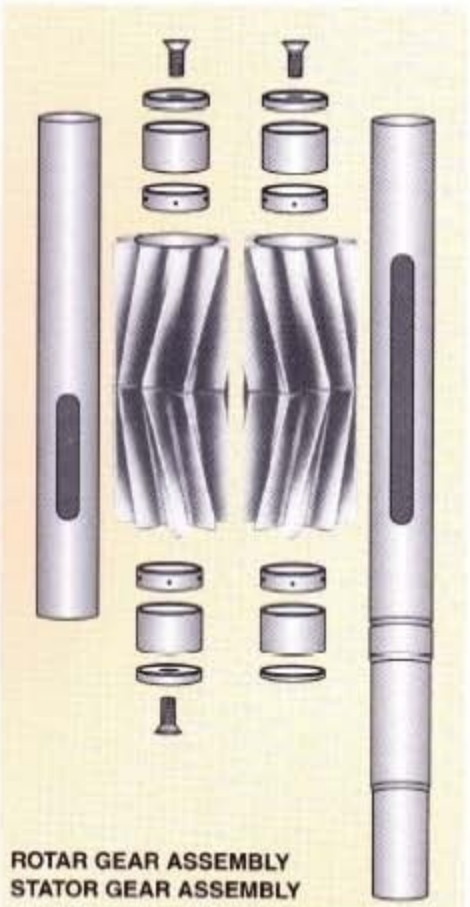
SIGN * INDICATES MOTOR TYPE
W - NON - FLAME PROOF,
X - FLAME PROOF MOTOR.

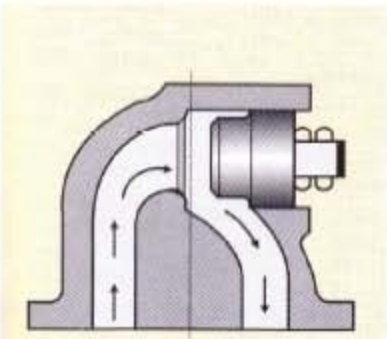
AVAILABLE MODEL SIZE & CAPACITY

SIZE & MODEL	1440 RPM CAPACITY LPM	US GPM	M³/HR	PUMP GD 2 IN KGM2	ELE MOTOR H.P.	FR. SIZE
1/2"	08.30	02.20	0.50	0.0008	0.50	71M
50	16.60	04.40	1.00	0.0009	0.75	80M
S-M-L	25.00	06.60	1.50	0.0010	1.00	80M
1"	33.30	08.80	2.00	0.0007	0.75	80M
100	50.00	13.20	3.00	0.0008	1.00	80M
S-M-L	60.00	15.84	3.60	0.0009	2.00	90L
1.1/2"	83.30	22.00	5.00	0.0008	2.00	90L
150	100.00	26.40	6.00	0.0009	3	100L
S-M-L	125.00	33.30	7.50	0.0032	5.00	112M
2"	150.00	39.00	9.00	0.0068	3	100L
200	166.00	44.00	10.00	0.0074	5.00	112M
S-M-L	200.00	52.80	12.00	0.008	7.50	132S
2.1/2"	250.00	66.00	15.00	0.01	5.00	112M
250	299.88	79.20	18.00	0.013	7.50	132S
S-M-L	333.30	88.00	20..	0.015	10.00	132M
3"	415.00	105.00	25.00	0.02	10	132M
300	449.82	118.00	27.00	0.024	12.50	160M
S-M-L	500.00	132.00	30.00	0.027	15.00	160M
4"	599.76	158.40	36.00	0.056	15	160M
400	666.66	176.00	40.00	0.062	20	160L
S-M-L	833.30	220.00	50.00	0.072	25.00	180M
5"	1000.00	264.00	60.00	0.098	20	160L
500	1250.00	330.00	75.00	0.112	30.00	180L
S-M-L	1499.00	396.00	90.00	0.177	40.00	200L
6"	1660.00	440.00	100.00	0.27	30.00	180L
600	1832.60	484.00	110.00	0.31	50.00	225S
S-M-L	2083.00	550.00	125.00	0.335	60.00	225M
6"	2499.00	660.00	150.00	0.4561	50	225S
600	2915.50	770.00	175.00	0.542	75.00	250M
S-M-L	3332.00	880.00	200.00	0.601	100.00	280S

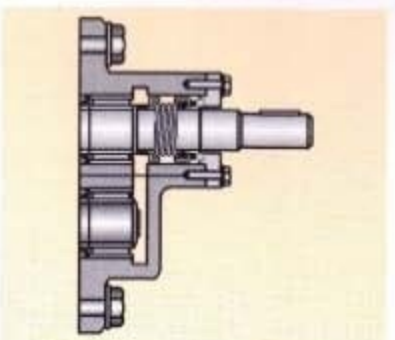
type 'RDRX'






RELIEF VALVE OPERATION


JACKETTING CONSTRUCTION


MECH. SEAL IN STUFFING BOX

DIEMENSIONS																				WEIGHT BP-COU PUMP BP-COU IN KG.	PRODUCT CODE	
OVERALL						MOUNTING										SHAFT			FLANGE			
A1	J A	J1	L1	K1	F1	B C	S S1	E F	H I	H1	T1 T	E1	C1	B1	I1	D R1	K L	P Q	M N	G R		PUMP	MOTOR
503	122	262	500	145	125	80	8	91	80	158	75	37	340	112	147	11.5	22	4	16	89	11.5	9D20#@	8*4105
538		283	525	170	130					163		36	365	125	152						8.00	9D20#@	8*4107
538	239	283	525	170	130	100	15	150	69	163	10	36	365	125	152	4	30	13	60	4	12.00	9D20#@	8*4110
570	136	288	600	145	139	90	10	100	90	168	75	26	360	120	152	15	25	5	16	108	12.2	9F20#@	8*4107
570		288	600	145	139					168		26	360	120	152						14.0	9F20#@	8*4110
620	271	315	650	180	146	110	15	160	74	175	10	26	410	140	159	4	30	17	79	4	13.1	9F20#@	8*4120
667	160	320	625	165	165	105	10	119	100	180	75	3	375	130	160	21	25	6	16	127	14.0	9H20#@	8*4120
697		328	750	205	163					178		30	500	170	158						22.5	9H20#@	8*4130
742	318	353	750	230	175	130	15	180	80	190	12	26	500	190	170	4	40	23.5	98	4	18.0	9H20#@	8*4150
738	174	340	775	210	177	110	12	133	112	190	75	50	525	170	168	24	39	8	19	152	17.5	9J20#@	8*4130
783		353	800	230	177					190		65	550	190	168						28.00	9J20#@	8*4150
853	359	398	850	256	197	150	15	200	90	210	14	50	600	216	188	4	50	27	121	4	20.8	9J20#@	8*4175
842	200	377	800	240	203	130	15	163	132	214	75	35	550	205	184	27	40	8	19	178	18.5	9K20#@	8*4150
913		398	900	255	203					210		50	650	216	184						43.00	9K20#@	8*4175
953	419	398	950	255	203	160	15	220	106	210	15	50	700	216	184	4	55	30	140	4	22.5	9K20#@	8*4210
1015	240	451	1050	287	243	160	18	168	160	263	100	84	750	240	234	32	49	10	19	190	22.0	9L20#@	8*4210
1113		528	1100	304	243					263		75	800	254	234						59.00	9L20#@	8*4212
1113	481	528	1100	304	243	220	19	240	131	263	22	75	800	254	234	4	60	35	152	4	33.0	9L20#@	8*4215
1186	274	548	1200	315	277	180	18	189	180	283	100	58	800	265	248	37	54	10	19	229	40.0	9M20#@	8*4215
1231		548	1250	310	277					283		58	900	254	248						82.0	9M20#@	8*4220
1296	554	568	1300	330	277	270	19	280	145	283	25	90	900	279	248	4	65	40	190	8	47.2	9M20#@	8*4225
1292	293	603	1350	300	306	200	19	215	200	338	125	55	950	254	298	47	60	14	22	254	58.0	9N20#@	8*4220
1357		313	1400	365	296					328		125	1000	300	288						150.0	9N20#@	8*4230
1447	615	673	1400	380	296	280	22	300	160	328	25	116	1000	318	288	4	85	50.5	216	8	50.5	9N20#@	8*4240
1432	343	643	1500	305	351	220	20	215	225	358	150	183	1100	245	311	52	80	16	22	279	50.5	9P20#@	8*4230
1608		728	1650	420	346					353		137	1150	356	306						175.0	9P20#@	8*4250
1608	690	728	1650	420	346	350	22	340	178	353	25	137	1150	356	306	4	95	56	241	8	76.0	9P20#@	8*4260
1667	357	778	1650	430	360	380	22	230	250	403	150	136	1150	356	353	57	81	16	22	279	77.7	9R20#@	8*4250
1882		853	1800	480	406					433		126	1350	457	383						190.0	9R20#@	8*4275
1882	749	853	1850	530	390	240	22	360	200	433	28	126	1350	457	383	4	100	59	241	8	87.00	9R20#@	8*4100

PUMP CHARACTERISTIC

Gear pump is a rotary positive displacement pump with positive pressure characteristic. The capacity of the pump varies directly with speed but remain constant against pressure, however due to running clearance between the casing & impeller some liquid always by-passes to suction causing sleep, which depends upon the differential pressure, viscosity of the liquid & ofcourse the workman-ship. The pumps are capable of handling any viscosity, the sleep reduces with viscosity but the viscous power increases. The pump has a self-priming capability however some net positive suction head (NPSH) is always required to avoid cavitations depending upon the viscosity of the liquid to be pumped & the pump speed.

INTERNAL POWER LOSSES

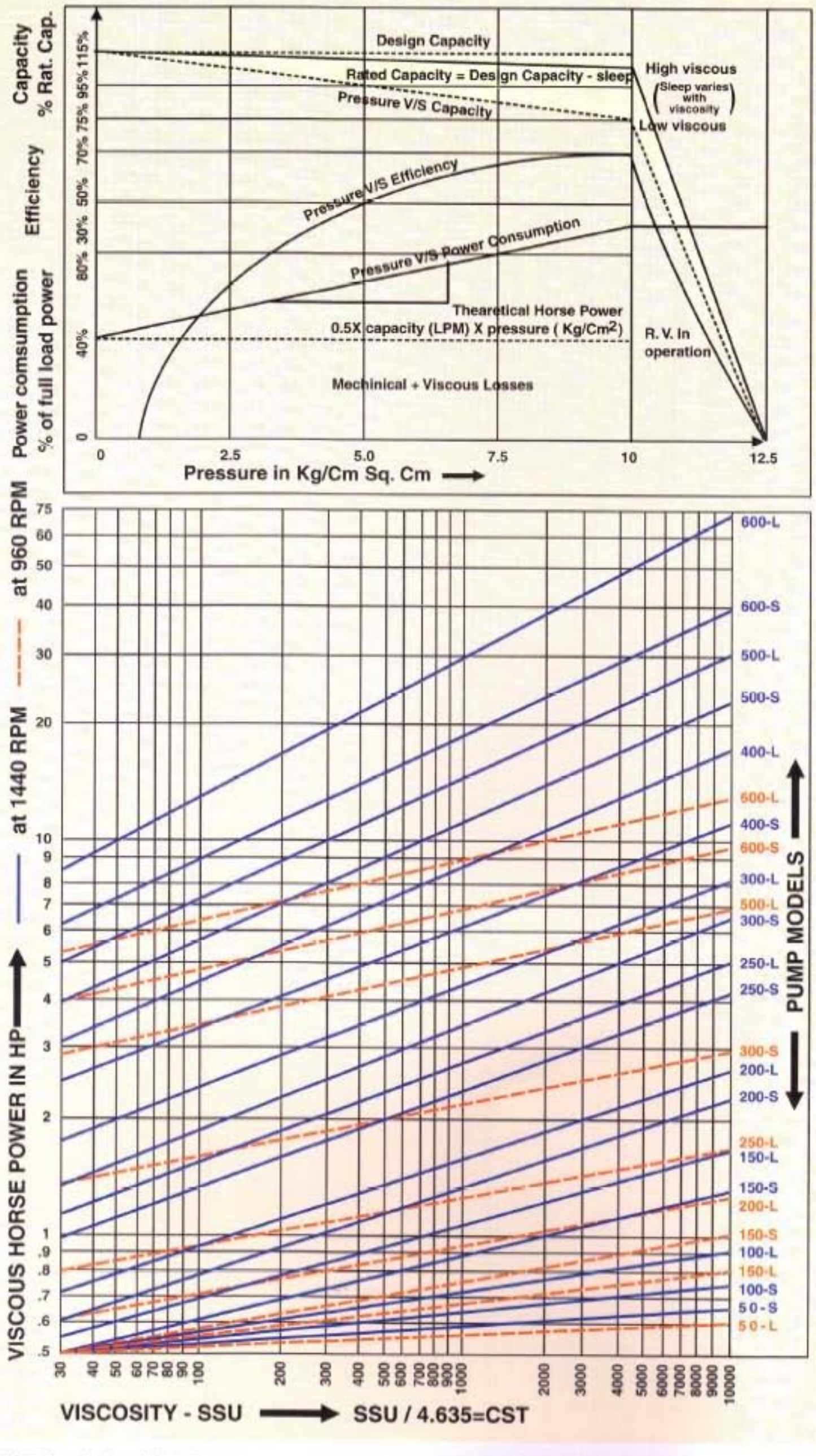
The internal power losses in rotary pumps are of two types. The mechanical losses is the power necessary to overcome frictional drag of all the moving part within the pump While viscous losses is power required to overcome fluid viscous drag & shearing action of the fluid, this can be computed from the graph on the opposite side.

H.P. CALCULATION

The break horse power required to drive a rotary pump is sum of the theoretical HP & internal losses. The theoretical horse power is the actual work done in moving the fluid from inlet port to out let pressure condition & is product of Constant C=0.037, Capacity in cub. Mt./hr. & Pressure Kg/Sq. Cm Or Constant C=2.39, Capacity in us GPM & Pressure in PSI

PUMP SELECTION & USES

The bush bearing type of pump can be used for clean viscous liquid having sufficient lubricating value such as clean lube oil, Vegitable oil, Fish & Animal oil, Gear oil, Glycerine, Hydraulic oil, Honey, ASTM & SAE lubricating oil for intermittant duty. However for continues duty pump with needle roller bearing in **'RDRX'** series should be selected. For liquid having low viscosity, poor lubricating values or Containing dirts or impurities such as Crude oil, Dirty lube oil, HSD, Kerosene, LDO, Paints, Sugar solution, Turpentine, Varnish, Wood Pulp. Pump with independently lubricated bearing should be selected. For liquid which tends to solidify at room temperature such as Ashphalt, Bituman, Fumace oil, Tar, Cellulose, Starch, LSHS, HPS, Molasses, Naptha, Phenol resin, RFO, Silicate, Soap solution, Viscous, Wax etc. Jacketing construction should be selected to facilitate the heating or the pump by steam or thermic fluid.



INSPECTION & TESTING : All Pumps are individialy tested for its performance as per JIS B-8312-1976. Third party inspection is also offered to following agencies with whom we are already registered as an approved supplier of these pumps.

EIL - KPG - UHDE - TCE - PDIL - JACCOB H&G - TOYO - LURGI - LLOYED - IRS - BVQI - SIMMONS

A DEL ENTERPRISES

ROTO DEL

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