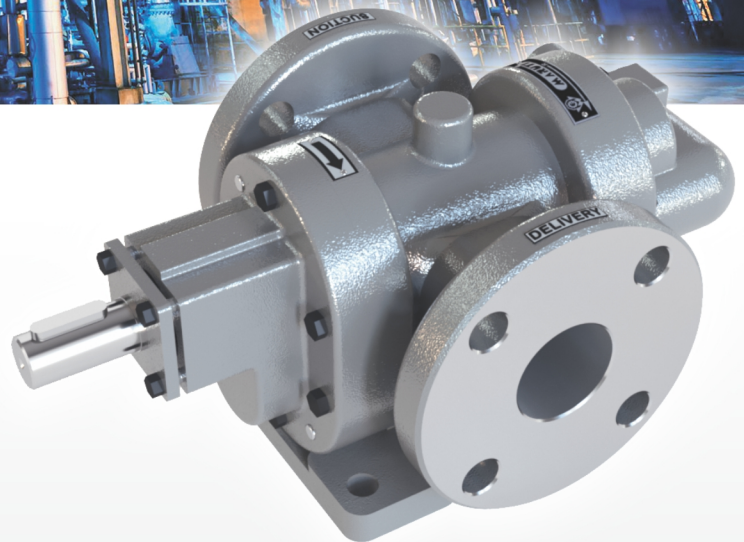


Performance that shows in  
**Every Flow**



## Rotary Twin Gear Pump

MERB Series



### Specification

- Concept: Herringbone Gear Pump
- Capacity: 3M<sup>3</sup>/Hr to 125M<sup>3</sup>/Hr
- Size: 1" to 6" NB Flange end (8 Different Sizes)
- Shaft Seal: Mechanical & Gland Pack
- Pressure: Up to 10 bar
- MOC: Cast Iron vs Alloy Steel & SS 316
- Temp: Upto 250°C

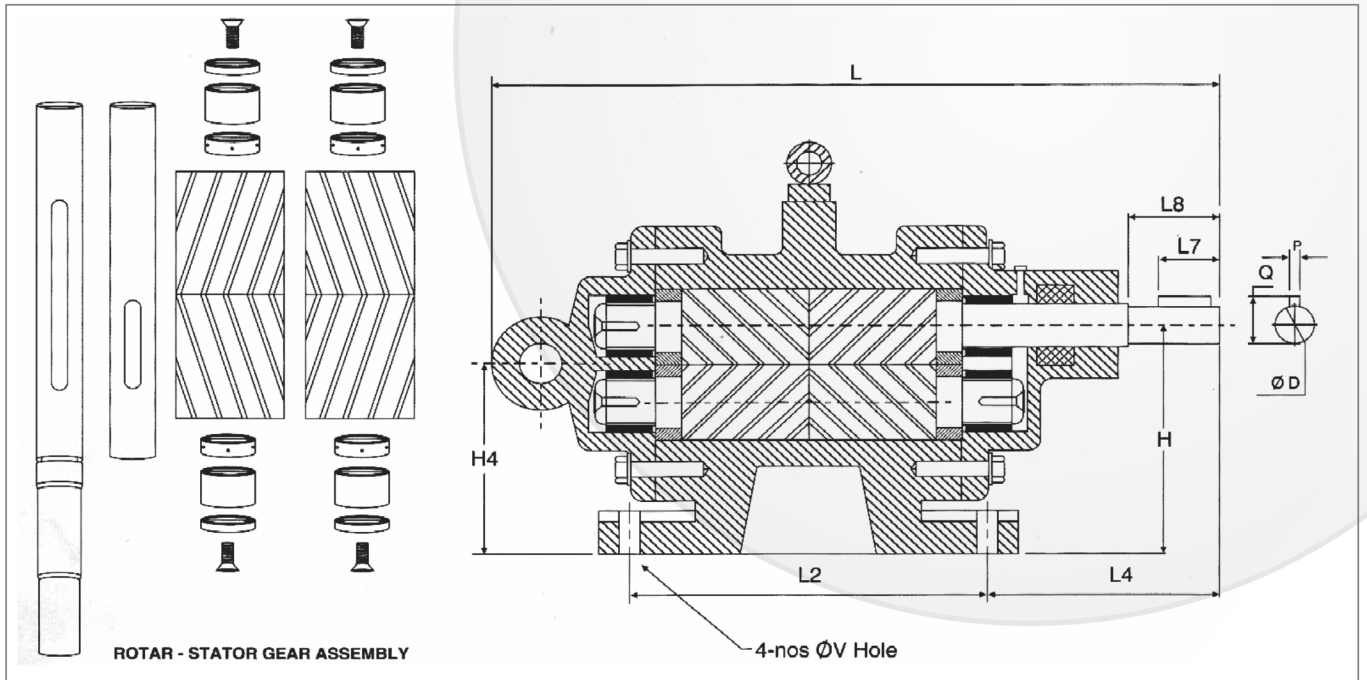
### Application

Oil and Gas, Oil Refineries, Veg oil mill, paper mill, Petroleum Industry, Coal Tar, Tyre Oil, Turbine Oil, Waste Oil, Veg. Oil, Mineral Oil, Crude Oil, Loading – Unloading & Transfer of all kind of Petrochemical liquid, Asphalt, Molasses, Bitumen, Lube Oil, Heavy Oil, HFO/FO.

# Capacity Chart

Model Size & Capacity			DIMENSIONS																	Suitable Motor		Weigh BP-COL Pump BP-COL in K.G.						
			Overall					Mounting							Shaft			Flange										
Size & Port	At 1440 RPM Capacity			L1	H2	H1	L3	B1	H3	B L2	V V1	L4 B2	H H4	H3	H6	H5	H6	B3	H7	D	L7 L8	P Q	M N	G R	H.P	FR Size		
50	S	8.30	2.20	0.50	505	125	265	500	120	125	80	8	92	80	158	75	35	345	112	147	11.5	22	4	16	89	0.50	71M	00
	M	16.60	4.40	1.00	540		285	525	185	130				163	75	35	370	125	152	11.5				60	4	0.75	80M	8.2
	1/2" L	25.00	6.60	1.50	540	240	285	525	185	130	100	15	150	70	163	75	35	370	125	152	11.5	30	13	60	4	1.00	80M	00
100	S	33.30	8.80	2.00	575	138	290	600	160	138	90	10	100	90	168	75	25	365	120	152	15	25	5	16	108	0.75	80M	00
	M	50.00	13.20	3.00	575		290	600	170	138				168	75	25	365	120	152	15				60	4	1.00	80M	14.2
	1" L	60.00	15.84	3.60	625	270	315	650	200	145	110	15	160	75	175	75	25	400	140	159	15	30	17	79	4	2.00	90L	00
150	S	83.30	22.00	5.00	670	167	320	625	165	167	105	10	120	100	180	75	25	375	130	160	21	25	6	16	127	2.00	90L	00
	M	100.00	26.40	6.00	700		330	750	215	165				178	75	30	500	170	158	21				60	4	3.00	100L	23
	1 1/2" L	125.00	33.30	7.00		320	350	750	215	175	130	15	180	80	190	75	50	500	190	170	21	40	23.5	98	4	5.00	112M	00
200	S	150.00	39.00	9.00	740	176	340	775	210	176	110	12	132	112	190	75	50	525	170	168	24	40	8	19	152	3.00	100L	00
	M	166.00	44.00	10.00	785		355	800	230	176				190	75	65	550	190	168	24				60	4	5.00	112M	28.5
	2" L	200.00	52.80	12.00	855	360	400	850	255	195	150	15	200	90	210	75	50	600	216	188	24	50	27	121	4	7.50	132S	00
250	S	250.00	66.00	15.00	845	258	375	800	240	205	130	15	162	132	215	75	35	550	205	184	27	40	8	19	178	5.00	112M	00
	M	300.00	79.20	18.00	915		400	900	255	205				210	75	50	650	216	184	27				60	4	7.50	132S	42.8
	2 1/2" L	333.30	88.00	20.00	955	420	400	950	255	205	160	15	220	105	210	75	50	700	216	184	27	55	30	140	4	10.00	132M	00
300	S	415.00	105.00	25.00	1020	300	450	1050	280	245	160	18	169	160	265	100	85	750	240	234	32	50	10	19	190	10.00	132M	00
	M	450.00	118.00	27.00	1115		530	1100	305	245				265	100	75	800	254	234	32				60	4	15.00	160M	60
	2" L	500.00	132.00	30.00	1115	485	530	1100	305	245	220	20	240	131	265	100	75	800	254	234	32	60	35	152	4	15.00	160M	00
400	S	600.00	158.40	36.00	1190	338	550	1200	315	280	180	18	190	180	285	100	60	800	265	248	37	50	10	19	229	15.00	160M	00
	M	666.60	176.00	40.00	1235		550	1250	310	280				285	100	60	900	254	248	37				60	4	20.00	160M	83
	4" L	833.30	220.00	50.00	1300	555	570	1300	330	280	270	20	280	145	285	100	90	900	279	248	37	65	40	190	8	25.00	180M	00
5" 500	S	1000.00	264.00	60.00	1350	300	306	1350	300	306	200	19	215	200	338	125	55	950	254	298	47	60	14	22	254	30.00	160L	15.00
	M	1250.00	330.00	75.00	1400	365	296	1400	365	296				328	125	1000	300	300	298	47				60	4	40.00	180L	
	S-M-L	1499.00	396.00	90.00	1400	380	296	1400	380	296	280	22	300	160	328	25	116	1000	318	288	47	85	50.5	216	8	40.00	200L	
6" 600	S	1660.00	444.00	100.00	1500	305	351	1500	305	351	220	20	215	225	358	150	183	1100	245	311	52	80	16	22	279	30.00	180L	175.00
	M	1832.00	484.00	110.00	1650	420	346	1650	420	346				353	137	1150	365	306	52					60	4	50.00	225S	
	S-M-L	2083.00	550.00	125.00	1650	420	346	1650	420	346	350	22	340	178	353	25	137	1150	365	306	52	95	56	241	8	60.00	225M	
6" 600	S	2499.00	660.00	150.00	1650	430	360	1650	430	360	380	22	230	250	403	150	136	1150	365	353	57	81	16	22	279	50.00	225S	190.00
	M	2915.00	770.00	175.00	1800	480	406	1800	480	406				433	126	1350	457	383	57					60	4	60.00	250M	
	S-M-L	3332.00	880.00	200.00	1850	530	390	1850	530	390	240	22	360	200	433	28	126	1350	457	380	57	100	59	241	8	100.00	280S	

## Type MERB for C.I./Alloy Steel MOC, Type MEMS for SS316 MOC



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## PARTS LIST WITH MATERIAL OF CONSTRUCTION

01. Pump Casing	CI/CS/SS	07. Gear	EN-24/353/SS
02. Front Cover	CI/CS/SS	08. Bearing	SKF/NTN/IKO/INA
03. Back Cover	CI/CS/SS	09. Wear Plate	LTB/WM (Bronze)
04. Gland Cover	CI/CS/SS	10. R.V. Piston	EN-8/SS
05. Rotor Shaft	EN-9/EN-19/SS	11. R.V. Spring	SP.ST.
06. Stator Shaft	EN-9/EN-19/SS	12. Hex Bolt	EN-8/SS/UB

### General

Maruti Rotary Gear Pump Type MERB/RN/RX is a Rotary Positive displacement pump with positive pressure characteristic. The pump are capable of handling liquid of any viscosity. At high viscosity reduce slip but 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 liquid to be pumped and the pump speed.

### Power Losses

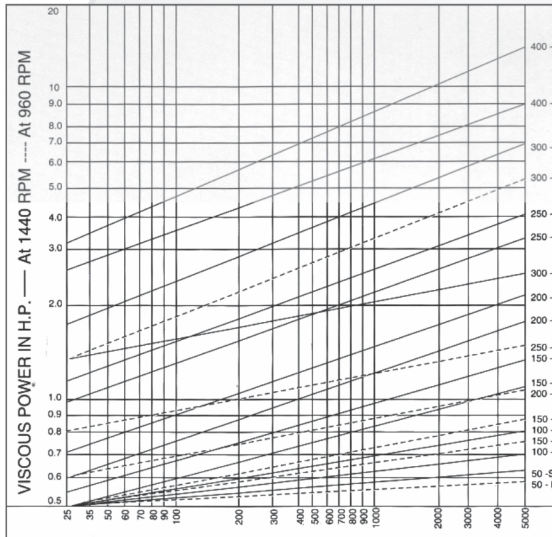
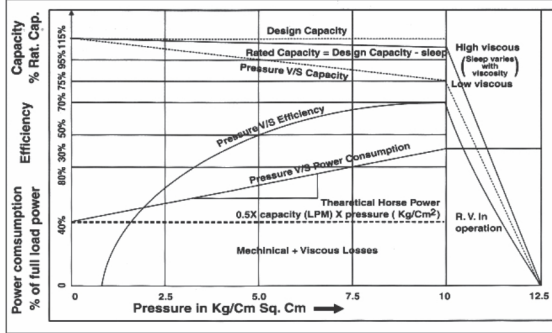
The Mechanical & Viscous both are internal power losses in gear pump. Mechanical losses have power required to overcome frictional drag of Rotating Part in pump & Viscous losses is power required to overcome liquid viscous drag & shearing action of liquid, these are computed graph.

### Construction

Maruti Rotary Twin Gear Pump types MERB/RN/RX/MS/RB-J constructed with bush, bearing, V-seal with special alloy steel, hard and ground, SS 316 nitrided internal parts & herringbone gears concept design with PRV & jacket construction, also food grade MOC offered.

### Advantages

Double Helical Herringbone gear design with high quality class Mfg. ensure no side thrust, maintain constant volumetric efficiency and reduce noise level. Sleeve on shaft make maintenance easy & economical. Reduce sleep & low leakage-path by design to improve volumetric efficiency, hardened shaft reduces bending effectively.



### 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, Vegetable Oil, Fish & Animal Oil, Gear Oil, Glycerine, Hydraulic Oil, Honey, ASTM & SAE lubricating oil for intermittant duty. However for continues dutypump with needle roller bearing in 'MERN' series should be selected. For liquid having low viscosity, poor lubricating values or containing dirt 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 individually tested for its performance as per standards as IS. Third party inspection is also offered as per requirement.

Model	Description
MERB	Rotary Twin Gear Pump with bush arrangement
MERN	Rotary Twin Gear Pump with needle roller bearing
MERX	Rotary Twin Gear Pump with "V" seal
MEMS	Rotary Twin Gear Pump with SS 316 MOC (Also available with food grade option)
MERB-J	Jacketed Rotary Twin Gear Pump with WCB casing & mild steel jacket above the pump casing

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