



Dhara Pumps

Mfg.: Gear Pumps, Lobe Pumps, Chemical Process Pumps, Pressure Relief Valves

"DHARA ROTARY GEAR PUMPS" are available in various sizes and versions to suit every possible viscous fluid pumping applications.

"DHARA ROTARY EXTERNAL GEAR PUMPS" are designed for low to high viscosity range, free from abrasive particles and corrosive substance. "DHARA ROTARY GEAR PUMPS" designed for low to medium pressure ranges.

"DHARA EXTERNAL GEAR PUMPS" consist of profile ground gears, closely fitted in a housing. Liquid is carried the periphery of revolving gears from the suction to the discharge side. The teeth are meshing between the gears thus preventing return of liquid from discharge from suction side. All components are precision machined and close tolerance is maintained between running parts and stationery parts to ensure high volumetric efficiency.



DP500



DP40



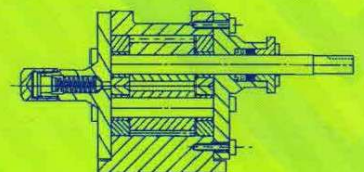
DP350



DP100

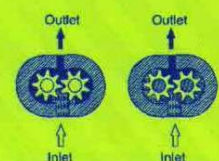


DP15



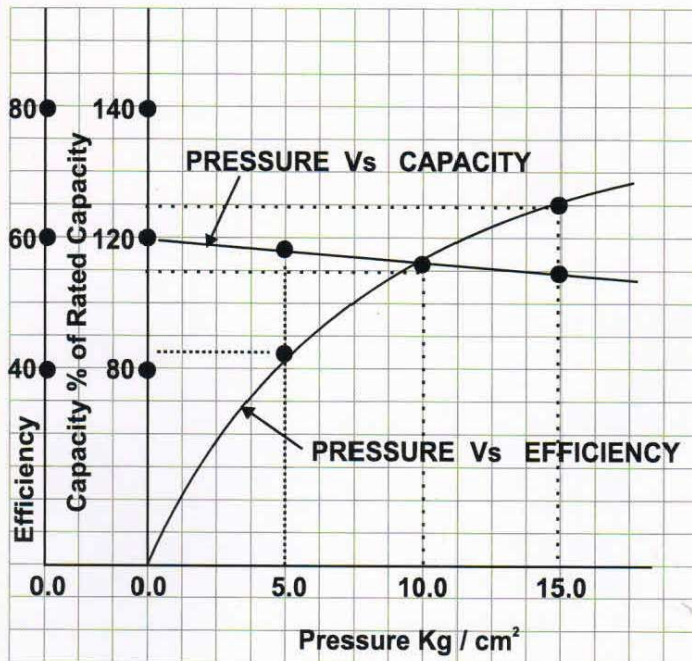
Operation Of Gear Pump

Positive Displacement Pumps



Performance Curves of DHARA ROTARY GEAR PUMPS

1. Pressure, Capacity & Efficiency Curves.



2. Input B.H.P. to pump, can be calculated by following formula

$$\text{Input BHP} = \frac{\text{Out Put BHP of Pump}}{\text{Efficiency}}$$

Where,

$$\text{Output BHP of Pump} = \frac{\text{Capacity in m}^3/\text{Hr} \times \text{Pressure in kg}}{27 \text{ (Hydraulic Constant)}}$$

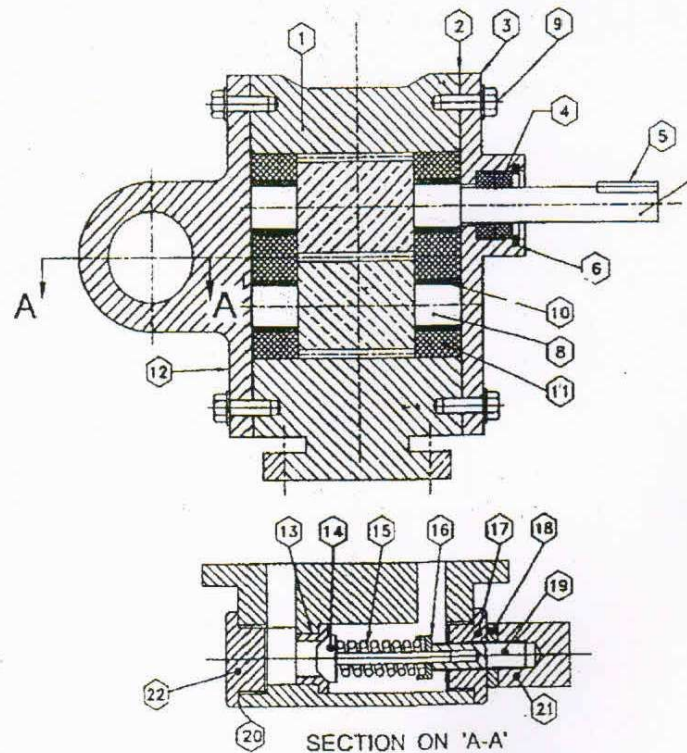
3. Relief Valve Operation

Built in pressure relief valve is provided in pump operate at higher than rated pressure i.e. it st operating at on kg / cm² higher than rated press and fully opens at 3 to 5 kg / cm² higher than rate pressure, taking maxmumi 30% higher power rated pressure

CROSS SECTION OF STANDARD DHARA ROTARY GEAR PUMPS

22	Plug at Delivery Side	1
21	Cap Nut	1
20	Packing	2
19	Relif Valve Adjusting Stud	1
18	Lock Nut	1
17	Plug at Suction Side	1
16	Spring Cover	1
15	Spring	1
14	Valve	1
13	Valve Seat	1
12	Back Cover	1
11	Wear Plate	4
10	Sleeve Bush / Bearing	4
9	Bolt With Spring Washer	8
8	Driven Shaft with Gear	1
7	Driving Shaft With Gear	1
6	Circlip	1
5	Key	1
4	Oil Seal	2
3	Front Cover	1
2	Packing	-
1	Main Body	1

Part No.	Description	Qty.
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STANDARD SPECIFICATION FOR "DHARA ROTARY EXTERNAL GEAR PUMPS"

No.	PUMP MODEL	MAXIMUM CAPACITY IN LPM AT 0 PSI	NOZEL SIZE		RPM	PRESSURE Vs. H.P. TABLE (PRESSURE IN PSI)			
			SUCTION	DELIVERY		50	100	250	500
1	DP 05	5	1/8"	1/8"	1440	0.33	0.5	0.5	0.75
2	DP 10	10	3/8"	3/8"	1440	0.33	0.75	0.75	1.5
3	DP 15	20	1/2"	1/2"	1440	0.5	1.0	1.5	2.0
4	DP 20	25	3/4"	3/4"	1440	1	1.5	2.0	3.0
5	DP 30	35	1"	1"	1440	1.5	2.0	3.0	5.0
6	DP 40	45	1"	1"	1440	1.5	2.0	3.0	5.0
7	DP 50	60	1"	1"	1440	1.5	2.0	3.0	5.0
8	DP 100	120	1 1/2"	1 1/2"	1440	2.0	3.0	5.0	10.0
9	DP 200	235	2	2	1440	3.0	5.0	12.5	25.0
10	DP 350	375	2 1/2"	2 1/2"	1440	5.0	10.0	25.0	-
11	DP 500	550	3"	3"	1440	7.5	15.0	30.0	-
12	DP 700	750	3"	3"	1440	12.5	20.0	50.0	-
13	DP 1000	1100	4"	4"	960	15.5	30.0	-	-
14	DP 1500	1600	4"	4"	960	25.3	60.0	-	-
15	DP 2000	2100	6"	6"	960	30.5	75.0	-	-
16	DP 3000	3200	8"	8"	750	50.0	100.	-	-

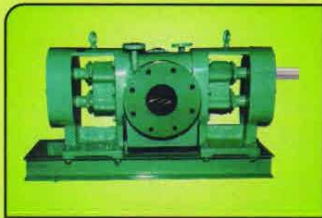
SELECTION CHART

No.	PUMP MODEL	NOZEL SIZE		CAPACITY IN LPM AT PRESSURE (PSI)				RPM
		SUCTION	DELIVERY	0	100	250	500	
1	DP 05	1/8"	1/8"	5	3	1	-	1440
2	DP 10	3/8"	3/8"	12	11	2	7	1440
3	DP 15	1/2"	1/2"	20	15	10	7.5	1440
4	DP 20	3/4"	3/4"	25	22	15	15	1440
5	DP 30	1"	1"	35	30	22	25	1440
6	DP 40	1"	1"	45	40	35	30	1440
7	DP 50	1"	1"	60	50	45	40	1440
8	DP 100	1 1/2"	1 1/2"	120	110	110	110	1440
9	DP 200	2"	2"	235	210	185	185	1440
10	DP 350	2 1/2"	2 1/2"	3785	320	250	-	1440
11	DP 500	3"	3"	550	455	410	-	1440
12	DP 700	3"	3"	750	700	620	-	1440
13	DP 1000	4"	4"	1100	1000	-	-	960
14	DP 1500	4"	4"	1600	1500	-	-	960
15	DP 2000	6"	6"	2100	1950	-	-	960
16	DP 3000	8"	8"	3200	3000	-	-	750

SELECTION OF MOC

PARTS	LOW PRESSURE	HIGH PRESSURE	POOR LUBRICANT	NON LUBRICANT	CORROSIVE
BODY & ENCOVERS	CI	CI-MS	CI-SS	CI	SS-GM BRONZE
ROTARY & SHAFT	EN-8	EN-9 OR EN-24	EN-9 OR EN-24	EN-9 HARDENED	SS
BEARINGS	SINTHERED BRONZE	BRONZE STEEL (ANTIFRICTION)	CI-TEFLON	CI-TEFLON	SS-TEFLON
RELIEF VALVE PARTS	ALLOY STEEL	ALLOY STEEL	ALLOY STEEL	ALLOY STEEL	ALLOY STEEL
SEALS	NEOPRENE OIL SEAL	NEOPRENE OIL SEAL MECH SEAL	GLAND PACKING MECH SEAL	GLAND PACKING MECH SEAL	GLAND PACKING MECH SEAL

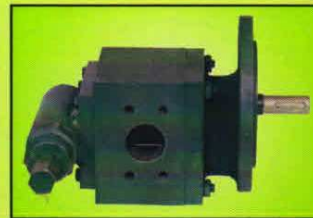
OTHER MODIFICATIONS



External bearing type gear pump with jacket



Monoblock gear pump



Flange mounted gear pump



Gear pump with external bearing



Gear pump fitted with mechanical seal



Cast steel construction gear pump



Fabricated SS pump



SS Gear Pump

Specifications

Size	Capacity	Discharge pressure	M.O.C.	Temperature	Viscosity
1/8" to 8"	5 lpm to 3000 lpm	Upto 12 kg. / cm ²	Cast Iron, Cast steel Gun Metal with S.S. Gears and Shaft S.S. 304, S.S. 316, Monel etc.	Upto 250°C	50 cst to 75000 cst

Liquids Handled By "DHARA EXTERNAL GEAR PUMP"

Adhesives	Corn Syrup	Fruits Juices	Lactic Acid	Paint	Silicon Fluids	Turpentine
Asphalt	Cresol	Glues	Laxtex	Parafin Wax	Soap	Varnish
Blood	Creosote	Glucose	Lead	Phospheric Acid	Sodium Silicate	Vanaspati
Black Liquor	Detergents	Glycerine	Linseed Oil	Plasticizers	Soya Oil	Veg Oil
Bitumen	Dop	Glycol	Milk	Phenol	Styrene	Vinyle Chloride
Butter	Dow Therm	Grease	Mineral Oil	Printing Ink	Sugar Syrup	Wax
Castor Oil	Enamel	Hot Oil	Molasses	Resin	Sulphuric Acid	Whey
Caustic Lye	Fatc	Honey	Naptha	Sauces	Syrup	
Coal Tar	Fatty Acids	Hydraulic Oils	Napthelene	Shellac	Tallow	
Cocoa	Fish Oil	Kerosene	Oleic Acid	Sizing Liquid	Tar (Molten)	
Cooking Oils	Foam	Lacquer	Pitch	Starch Liquor	Transformer Oil	

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