



General Information

Series A-200 and B-200 Hydraulic gear pumps are designed for high volumetric efficiency and find use in pumping fluids with lubricating properties.

These high performance gear pumps are manufactured to international standards. Their unique modular design facilitates you to specify the exact combination of features and options best suited to your requirements and can easily replace many international makes.

Precision Engineering backed by stringent quality control ensures high dimensional accuracy of geometrical parameters of relatively moving parts namely the pump gears and bush bearings, achieving a very high volumetric efficiency and guaranteed endurance performance.

Features

Flows up to 15 GPM (60 LPM)

Pressures up to 3500 PSI (245 BAR)

Speeds up to 4000 RPM.

Operating temperatures up to 180°F.

SAE 2 bolt mounting flanges to international standards for easy interchangeability.

High quality bush bearings provide excellent sealing and high load carrying capacity and are designed to meet the severe requirements over a wide range of operating pressures, temperatures and speeds.

Super finished gear faces guarantee endurance performance with high volume.

Excellent axial and radial pressure balancing ensure optimum performance over entire operating range of pressures and speeds.

Viton seals are available for high temperatures.

Construction

1. Shaft End Cover:

SAE 2 bolt mounting flange to international standards for easy interchangeability. Fine grain cast iron to withstand high pressures.

2. Body:

High strength body in aluminum alloy casting construction for excellent dimensional stability at elevated pressures and temperatures.

3. Shaft:

Hardened & ground steel gears for high strength. Available in straight keyed configurations.

4. Closed End Cover:

Fine grain cast iron construction to withstand high pressures.

5. Bearing:

Special tin aluminum alloy continuous cast bearings for excellent performance and longer life at high pressures.

6. Shaft Seal:

Variety of shaft seals to suit various applications in wide range of materials of construction.

Application Data

Pump Drives:

The pump shaft should be aligned properly to eliminate all axial, radial and side loads. A flexible coupling of good quality is recommended. Direct drives should be aligned within 0.25mm on center. When using indirect drives like pinion, chain/v-belt etc, the rated pressure of the pump gets reduced to take care of the extra loads imposed on the bearings of such drives.

Mounting:

The pumps should only be located on the spigot provided on the pump mounting flange. It is advisable to use flexible hoses on both sides of the pump to avoid undue strain and vibration on the pump.

Piping:

The piping size and installation should always be consistent with maintaining minimum velocity. This will reduce system noise, pressure drops and overheating. Sharp bends on the suction line should be avoided. Proper sealing on suction side and delivery side while connecting the pipes by using good quality seal should be ensured.

The range of operating parameters are generally as follows:

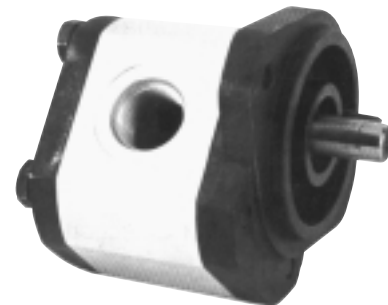
- Oil temperature-from 5°F to 180°F (-10°C to 80°C).
- Viscosity-from 80 SSU to 430 SSU at 100°F (16 cst to 85 cst at 39°C)
- Filtration-minimum 60 microns in suction and 10-20 microns in the return line.

Fluids:

Optimum fluid will be a mineral based oil with additives to resist corrosion, oxidation and foaming and must have good lubricating characteristics.

Drive Power:

It is advisable to provide slightly high drive power for the required pressure and flow to account for the power losses in the transmission.





GEAR PUMPS

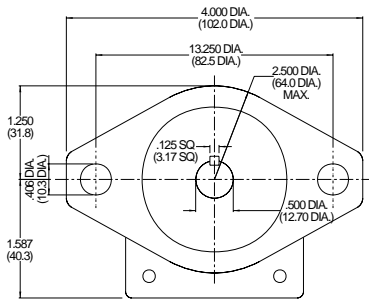
Order Information

SERIES	CAPACITY	DESCRIPTION	ORDER CODE
A-200	16 48 96	Shaft	S -Straight
	24 64	Mounting Flange	1 -SAE 2 Bolt
	32 80	Ports	S -SAE O'Ring Ports
B-200	10 20 34	Drive Shaft Seal	BB -Double Nitrate
	14 21 40	Rotation	C -Clockwise
	17 25 42		

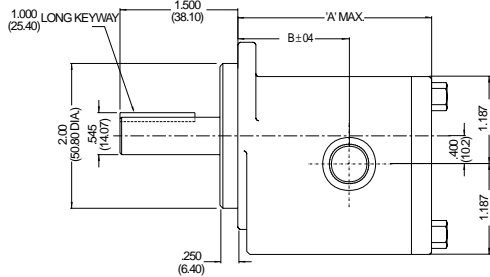
EXAMPLE: B200-10-S-1-S-BB -C

B-200	10	S	1	S	BB	C
Series	Capacity	Shaft Straight	Mounting Flange SAE 2 Bolt	Ports SAE O' Ring	Drive Shaft Seal Double Nitrite	Rotation Clockwise

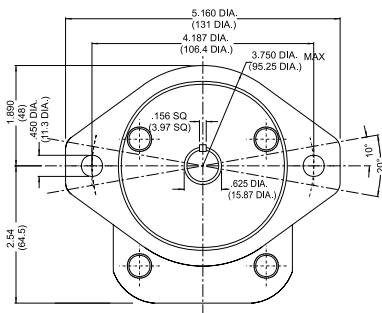
Mounting Flange



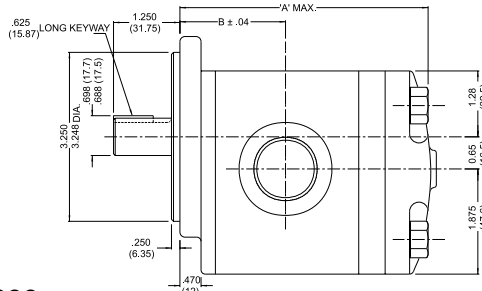
A-200



Pump Model	Dimension Table		Approx. lbs. kg.
	A Max in. mm	B mm	
A200 16	2.52 (64.0)	1.25 (31.8)	3.5 (1.6)
A200 24	2.60 (66.0)	1.29 (31.8)	3.5 (1.6)
A200 32	2.66 (67.6)	1.32 (33.5)	3.5 (1.6)
A200 48	2.81 (71.4)	1.40 (35.6)	3.5 (1.6)
A200 64	2.96 (75.2)	1.47 (38.3)	3.5 (1.6)
A200 80	3.10 (78.7)	1.52 (38.6)	3.5 (1.6)
A200 96	3.25 (82.6)	1.62 (41.1)	3.5 (1.6)



B-200

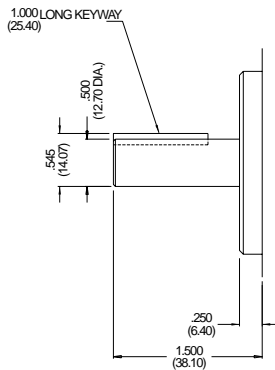


Pump Model	Dimension Table		Approx. lbs. kg.
	A Max in. mm	B mm	
B200 10	3.64 (92.5)	1.80 (45.5)	5.5 (2.5)
B200 14	3.80 (96.5)	1.81 (45.5)	5.9 (2.7)
B200 17	3.90 (99.5)	1.95 (49.5)	6.4 (2.9)
B200 18	3.95 (100.5)	1.95 (49.5)	6.6 (3.0)
B200 20	4.00 (102.5)	1.98 (50.5)	6.8 (3.1)
B200 21	4.10 (103.5)	2.00 (51.5)	7.1 (3.2)
B200 25	4.23 (107.5)	2.10 (53.0)	7.5 (3.4)
B200 28	4.35 (110.5)	2.15 (54.5)	7.9 (3.6)
B200 34	4.60 (116.5)	2.25 (57.5)	8.6 (3.9)
B200 40	4.80 (122.5)	2.40 (60.5)	8.8 (4.0)
B200 42	4.90 (124.5)	2.42 (61.5)	9.0 (4.1)



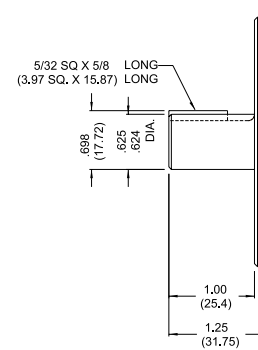
GEAR PUMPS

Shafts



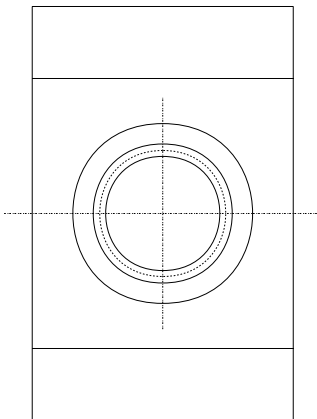
A200

Shaft Options	
Code	Description
S	Straight Keyed Shaft



B200

Ports



Standard Size SAE O'Ring Body Ports				
Pump Model	Inlet Port	Min. Full Thread in. mm	Outlet Port	Min. Full Thread in. mm
A200 16	9/16"-18UN-2B(SAE-6)	.500 (12.7)	9/16"-18UN-2B(SAE-6)	.500 (12.7)
A200 24	9/16"-18UN-2B(SAE-6)	.500 (12.7)	9/16"-18UN-2B(SAE-6)	.500 (12.7)
A200 32	3/4"-16UN-2B(SAE-8)	.562 (14.2)	9/16"-18UN-2B(SAE-6)	.500 (12.7)
A200 48	3/4"-16UN-2B(SAE-8)	.562 (14.2)	9/16"-18UN-2B(SAE-6)	.500 (12.7)
A200 64	3/4"-16UN-2B(SAE-8)	.562 (14.2)	9/16"-18UN-2B(SAE-6)	.500 (12.7)
A200 80	7/8"-14UN-2B(SAE-10)	.656 (16.6)	3/4"-16UN-2B(SAE-8)	.562 (14.2)
A200 96	7/8"-14UN-2B(SAE-10)	.656 (16.6)	3/4"-16UN-2B(SAE-8)	.562 (14.2)

Standard Size SAE O'Ring Body Ports				
Pump Model	Inlet Port	Min. Full Thread in. mm	Outlet Port	Min. Full Thread in. mm
B200 10	1 1/16"-12UN-2B (SAE -12)	.75 (19)	7/8"-14UN-2B (SAE -10)	.625 (16.5)
B200 14	1 1/16"-12UN-2B (SAE -12)	.75 (19)	7/8"-14UN-2B (SAE -10)	.625 (16.5)
B200 17	1 1/16"-12UN-2B (SAE -12)	.75 (19)	7/8"-14UN-2B (SAE -10)	.625 (16.5)
B200 18	1 1/16"-12UN-2B (SAE -12)	.75 (19)	7/8"-14UN-2B (SAE -10)	.625 (16.5)
B200 20	1 5/16"-12UN-2B (SAE -16)	.75 (19)	1 1/16"-12UN-2B (SAE -12)	.750 (19.0)
B200 21	1 5/16"-12UN-2B (SAE -16)	.75 (19)	1 1/16"-12UN-2B (SAE -12)	.750 (19.0)
B200 25	1 5/16"-12UN-2B (SAE -16)	.75 (19)	1 1/16"-12UN-2B (SAE -12)	.750 (19.0)
B200 28	1 5/16"-12UN-2B (SAE -16)	.75 (19)	1 1/16"-12UN-2B (SAE -12)	.750 (19.0)
B200 34	1 5/16"-12UN-2B (SAE -16)	.75 (19)	1 1/16"-12UN-2B (SAE -12)	.750 (19.0)
B200 40	1 5/16"-12UN-2B (SAE -16)	.75 (19)	1 1/16"-12UN-2B (SAE -12)	.750 (19.0)
B200 42	1 5/16"-12UN-2B (SAE -16)	.75 (19)	1 1/16"-12UN-2B (SAE -12)	.750 (19.0)



GEAR PUMPS

Performance Data

Pump Model	Performance Data									
	Theoretical Displacement		Typically Delivery at 1800 RPM		Pressure Rating				Operating Speed (RPM)	
	IN ³ /REV	CM ³ /REV	GPM	LPM	Continuous PSI	Continuous BAR	Intermittent PSI	Intermittent BAR	MIN	MAX
A200 16	0.065	1.07	0.50	1.90	3000	200	3500	230	500	3600
A200 24	0.097	1.59	0.75	2.80	3000	200	3500	230	500	3600
A200 32	0.129	2.11	1.00	3.80	3000	200	3500	230	500	3600
A200 48	0.192	3.15	1.50	5.70	3000	200	3500	230	500	3600
A200 64	0.258	4.23	2.00	7.60	3000	200	3500	230	500	3600
A200 80	0.329	5.39	2.50	9.50	3000	200	3500	230	500	3600
A200 96	0.384	6.29	3.00	11.40	3000	200	3500	230	500	3600
B200 10	0.420	7.00	3.30	12.50	3000	200	3500	230	500	3600
B200 14	0.590	9.72	4.60	17.50	3000	200	3500	230	500	3600
B200 17	0.720	11.80	5.60	21.30	3000	200	3500	230	500	3600
B200 18	0.760	12.50	6.00	22.50	3000	200	3500	230	500	3600
B200 20	0.850	13.90	6.60	25.00	3000	200	3500	230	500	3600
B200 21	0.890	14.58	6.90	26.25	3000	200	3500	230	500	3600
B200 25	1.060	17.36	8.00	31.25	3000	200	3500	230	500	3600
B200 28	1.200	19.44	9.00	35.00	3000	200	3500	230	500	3600
B200 34	1.500	24.30	11.00	42.50	2500	170	3000	200	500	2250
B200 40	1.700	27.80	13.00	50.00	2500	170	3000	200	500	2250
B200 42	1.800	29.17	14.00	52.50	2500	170	3000	200	500	2250

Horse Power Selection

Use the following table to select the size of electric motor based on your system's flow and pressure requirements

Pump Model	CU-IN	GPM at 1800 RPM	Maximum PSI							
			1 HP	2HP	3HP	5HP	7.5HP	10HP	15HP	20HP
A200-16	.065	.50	3000							
A200-24	.097	.75	2060							
A200-32	.113	1.00	1540	3000						
A200-48	.192	1.50	1030	2060	3000					
A200-64	.258	2.00	770	1540	2310					
A200-80	.329	2.50	620	1260	1850	3000				
A200-96	.334	3.00	510	1030	1540	2570				
B200-10	.420	3.27	470	940	1410	2350				
B200-14	.590	4.60	335	870	1000	1650	2500			
B200-17	.720	5.67	275	550	825	1375	2050	2750		
B200-18	.760	5.92	260	520	780	1300	1950	2600		
B200-20	.850	6.62	230	465	670	1150	1750	2300		
B200-21	.890	6.94	225	445	665	1110	1670	2225		
B200-25	1.060	8.26	185	375	560	935	1400	1900	2800	
B200-28	1.200	9.35	165	330	500	825	1250	1650	2500	
B200-34	1.500	11.69	130	265	395	660	1000	1350	2000	2650
B200-40	1.700	13.25	115	235	350	585	395	1165	1750	2350
B200-42	1.800	14.03	110	220	330	550	825	1100	1650	2200