



HG INTERNAL GEAR PUMP

Product Catalog



■ characteristics

1. Axial and radial pressure compensation design is adopted to maintain a high volume ratio even at low speed and low viscosity.
 2. Ultra low noise. High strength cast iron and unique internal silencing design are adopted to reduce the noise.
 3. Extremely low flow and pressure pulsation can still maintain stable flow and pressure output at low speed.
 4. High pressure design, the maximum service pressure can reach 35MPa.
 5. The speed range is wide, and the maximum speed can reach 3000r/min.
 6. It can be combined to form a duplex pump.
 7. Insensitive to oil pollution and long service life.
 8. It can be widely used in industries, such as plastic machines, shoe machines, die-casting machines, forklifts and other industries,
- It is especially suitable for the energy-saving system of servo variable-frequency drive.

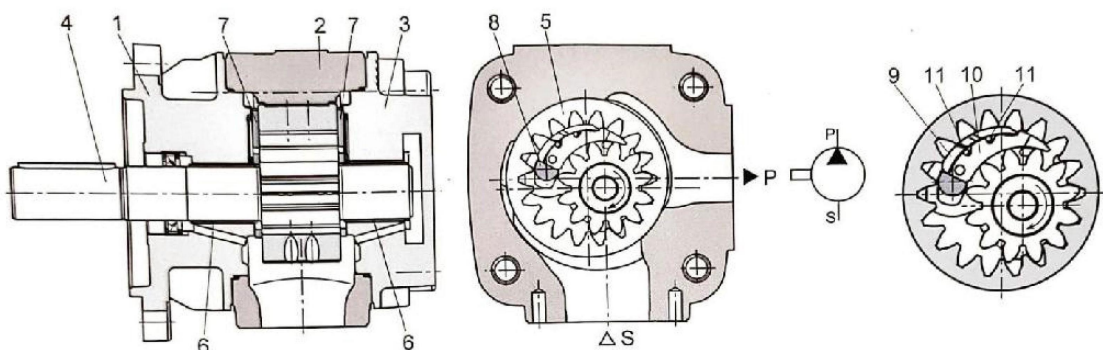


■ structure

HG Series hydraulic pump is a clearance compensated internal gear pump with fixed displacement.

Its basic composition is: front cover (1), pump body (2), rear cover (3), gear shaft (4), inner ring gear (5), sliding bearing (6)

It is composed of front and rear side plates (7), positioning rods (8), crescent sub plates (9), crescent main plates (10) and plastic rods (11).





■ model

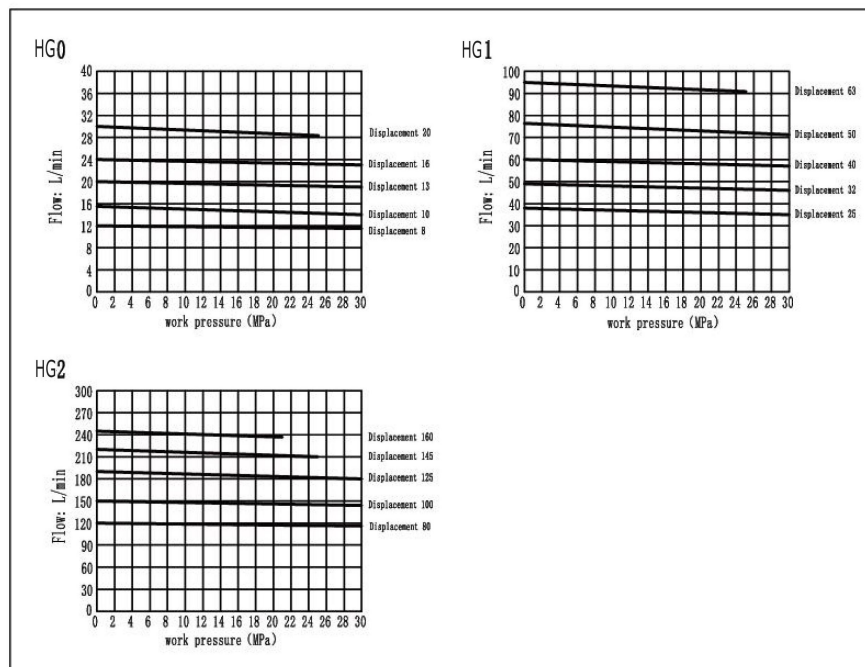
HG0	-16	R	E	W	-A1
Serial number	displacement ml/r	Direction of rotation	Shaft extension form	sealing material	Design
HG0	8、10、13、16、20	Viewed from the pump shaft end	E= Flat key R= Spline shaft	W= Nitrile rubber V= Fluororubber	A1
HG1	25、32、40、50、63	R= Clockwise rotation			
HG2	80、100、125、145、160	L= Counterclockwise rotation			

■ performance parameter

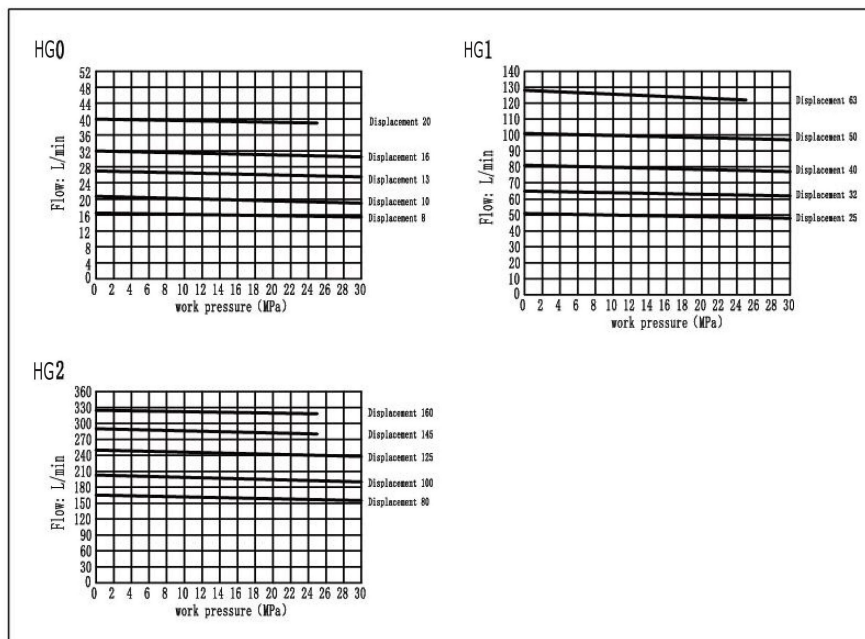
Serial number	Specifications	displacement	working pressure Mpa		speed	r/min	weight KG		
		ml/r	rated	highest	highest	minimum			
HG0	8	8.2	31.5	35	3000	600	4.6		
	10	10.2					4.8		
	13	13.3					4.9		
	16	16					5.2		
	20	20	25	30			5.6		
HG1	25	25.3	31.5	35		3000	200	14.5	
	32	32.7						15	
	40	40.1						16	
	50	50.7						17	
	63	63.7	25	30				18.5	
HG2	63	64.7	31.5	35	3000			200	42
	80	81.4							43.5
	100	100.2							45.5
	125	125.3							48
	145	145.2	25	28					50
	160	162.8	21	26			52		



■ 1500r/min characteristic curve

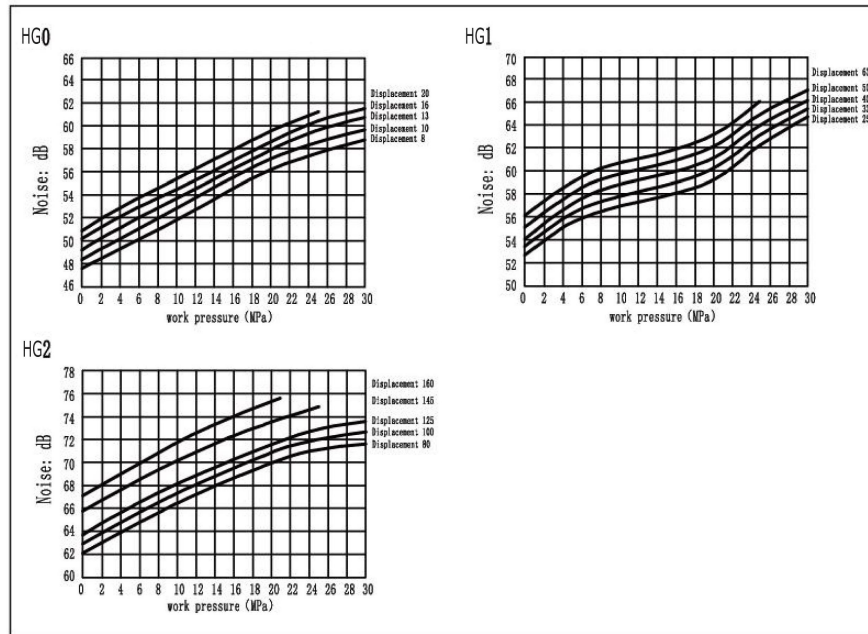


■ 2000r/min characteristic curve

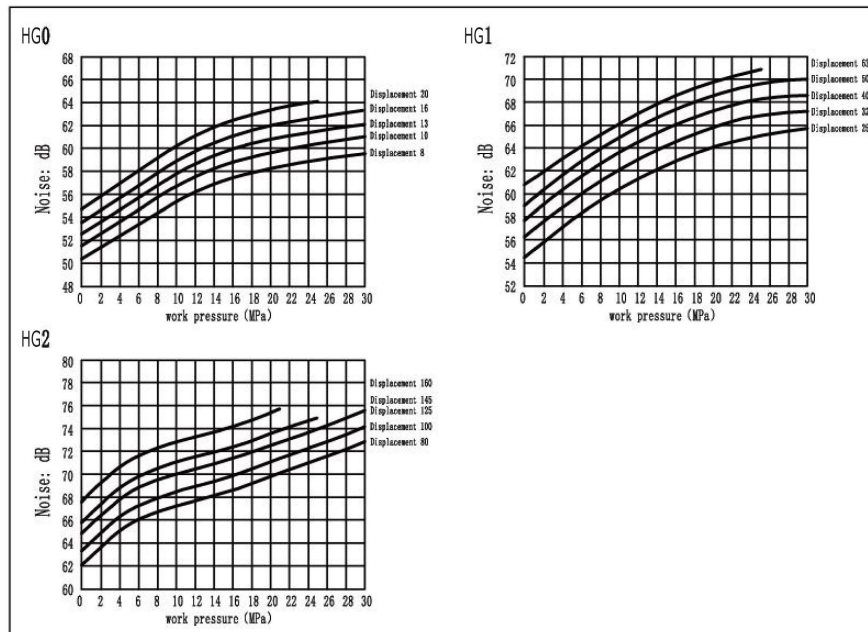




1500r/min Noise curve



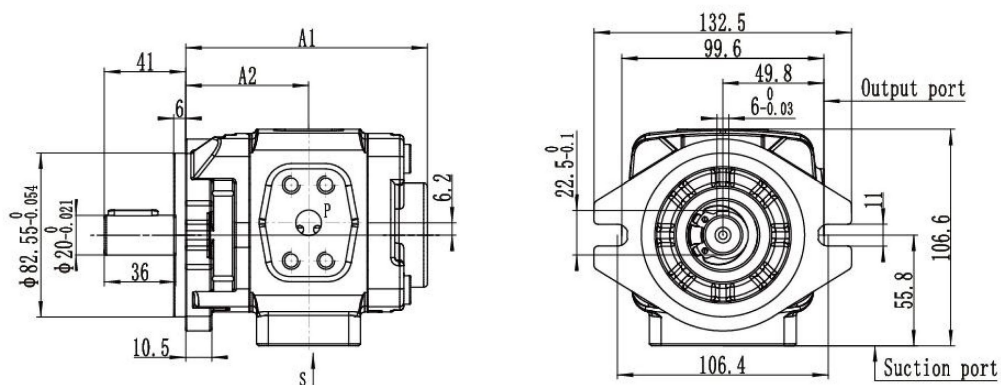
2000r/min Noise curve



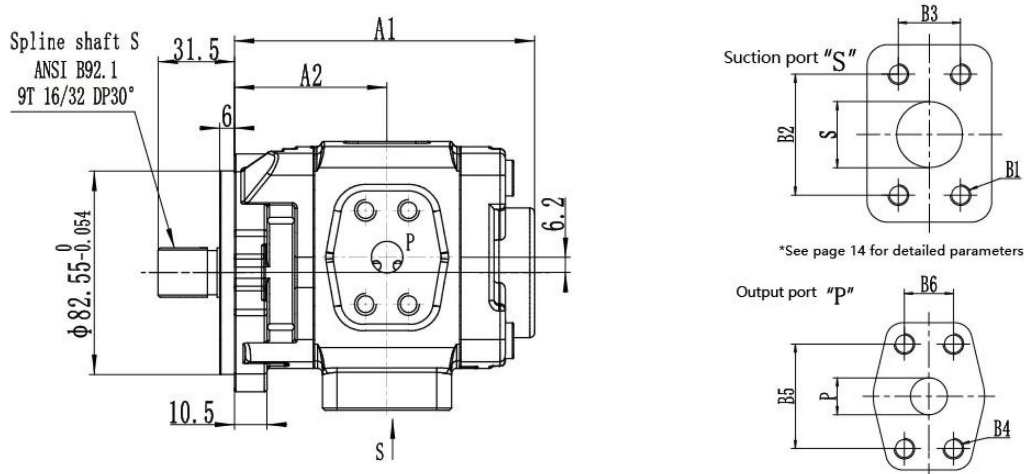


HG0 Installation dimension

■ HG0(P-type flat key shaft)



■ HG0(S-Spline shaft)



series	Specifications	A1	A2	S	B1	B2	B3	P	B4	B5	B6
HG0	8	107	54	Φ19	M10D 15	47.6	22.2	Φ13	M8D 13	38.1	17.5
	10	111	56			52.4	26.2				
	13	117.5	59.25								
	16	123	62								
	20	131	66	Φ26		58.7	30.2	Φ18	M8D 15	47.6	22.2

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Suction port "S"

Output port "P"

*See page 14 for detailed parameters

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HG double internal gear pump series »

HG10series

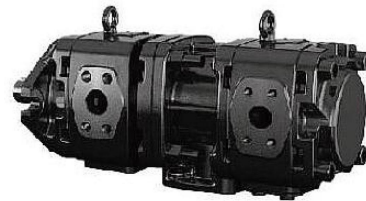
HG11series

HG21series

HG22series

■ characteristic

The duplex pump is assembled by two single pumps in series, with a common oil inlet and two independent circuit oil outlets;
According to the combined series of two pumps, a variety of displacement can be obtained.



■ characteristic

1. The front and rear oil pumps adopt floating spline coupling structure, and cooperate with the unique grease formula to ensure the stable performance of the oil pump
Long service life and low noise.
2. The maximum displacement can be extended to 320cc, providing enough choice space for motor and driver selection and model selection.
3. The direction of oil outlet and oil inlet of the oil pump shall be flexibly adjusted. The oil inlet is a common interface, which is easy to install and use.
4. Any combination of displacement is suitable for different working conditions.

■ model

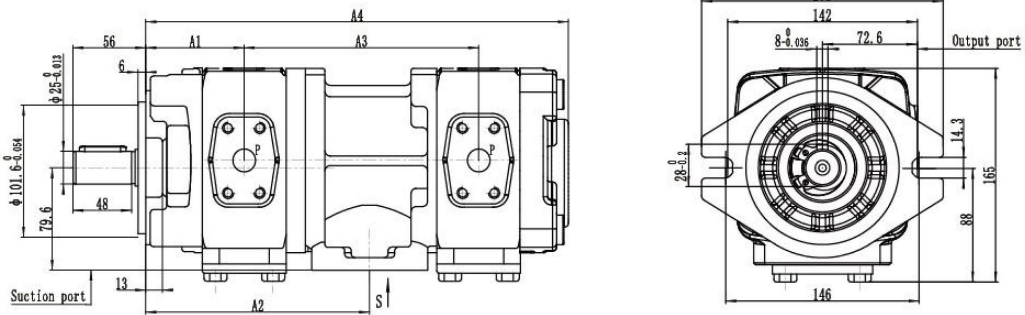
HG10	-40	-20	R	E	W	-A1
Serial number	Front pump specification ml/r	Rear pump specification ml/r	Direction of rotation	Shaft extension form	sealing material	Design
HG10	25、32、40、50、63	8、10、13、16、20	Viewed from the pump shaft end R= Clockwise rotation L=Counterclockwise rotation	E= Flat key R=Spline shaft	W= Nitrile rubber V= Fluororubber	A1
HG11	25、32、40、50、63	25、32、40、50、63				
HG21	80、100、125 145、160	25、32、40、50、63				
HG22	80、100、125 145、160	80、100、125 145、160				



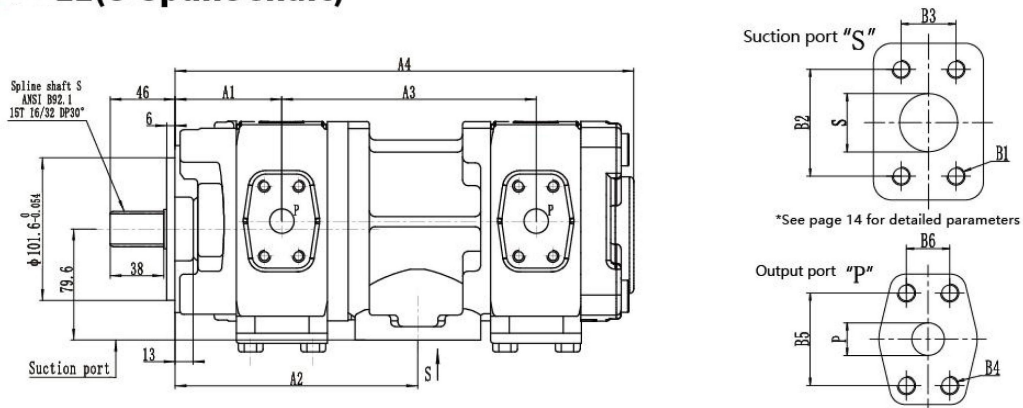


HG11 Installation dimension

■ HG11(P-type flat key shaft)



■ HG11(S-Spline shaft)

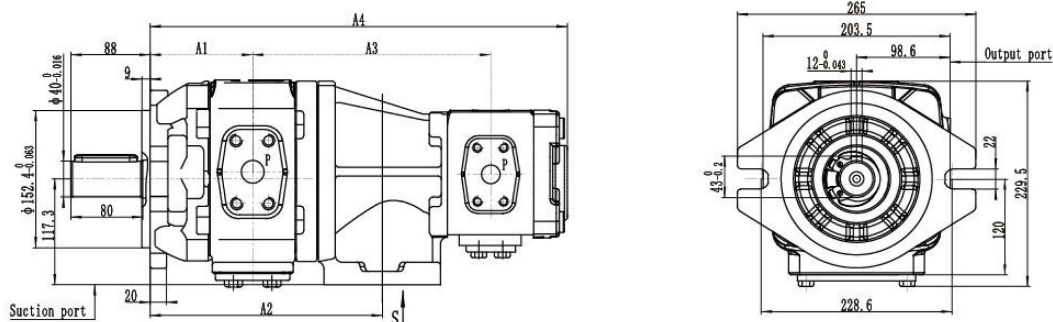


Model of front pump	A1	A2	Rear pump specification									
			25		32		40		50		63	
			A3	A4	A3	A4	A3	A4	A3	A4	A3	A4
HG11-25	73	161	161	300								
HG11-32	76.5	168	164.5	307	168	314						
HG11-40	80	175	168	314	171.5	321	175	328				
HG11-50	85	185	173	324	176.5	331	180	338	185	348		
HG11-63	92	199	180	338	183.5	345	187	352	192	362	199	376

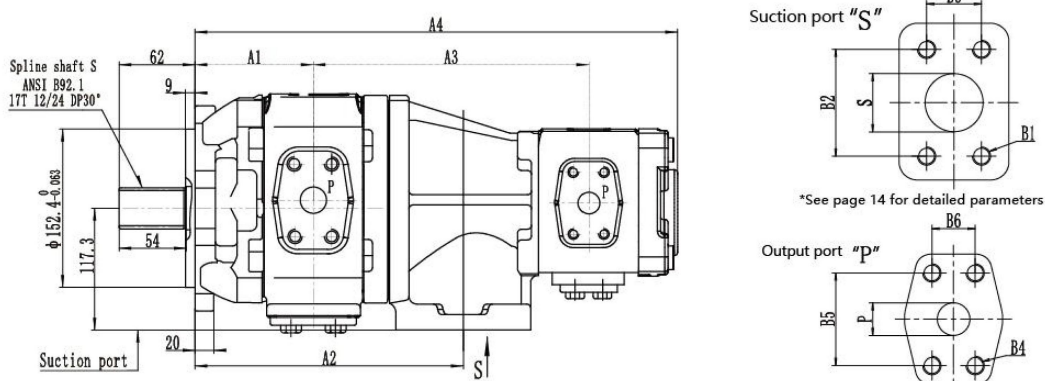


HG21 Installation dimension

■ HG21(P-type flat key shaft)



■ HG21(S-Spline shaft)

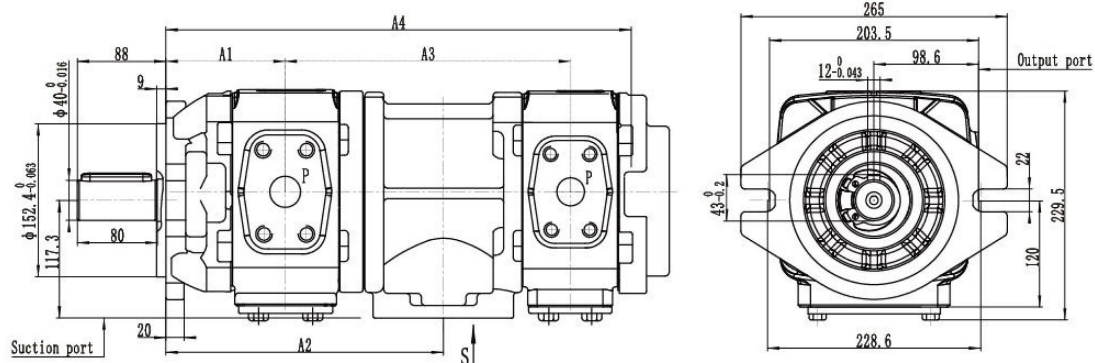


Model of front pump	A1	A2	Rear pump specification									
			25		32		40		50		63	
			A3	A4	A3	A4	A3	A4	A3	A4	A3	A4
HG21-63	105.5	223	200.5	372	204	379	207.5	386	212.5	396	219.5	410
HG21-80	109.5	231	204.5	380	208	387	211.5	394	216.5	404	223.5	418
HG21-100	114	240	209	389	212.5	396	216	403	221	413	228	427
HG21-125	120	250.2	215	401	218.5	408	222	415	227	425	234	439
HG21-145	124.8	261.5	219.8	410.5	223.3	417.5	226.8	424.5	231.8	434.5	238.8	448.5
HG21-160	129	270	224	419	227.5	426	231	433	236	443	243	457

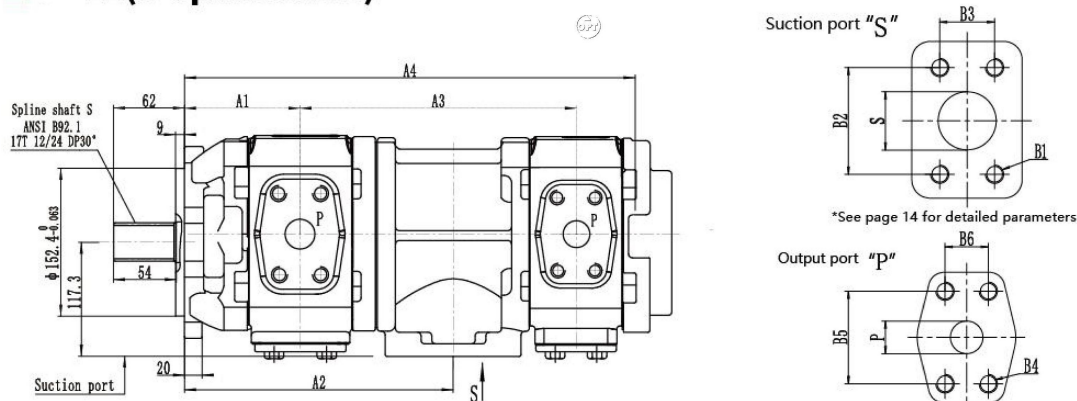


HG22 Installation dimension

■ HG22(P-type flat key shaft)



■ HG22(S-Spline shaft)

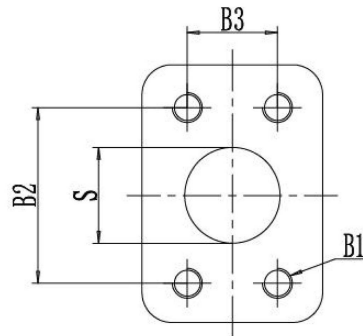


Model of front pump	A1	A2	Rear pump specification											
			63		80		100		125		145		160	
			A3	A4	A3	A4	A3	A4	A3	A4	A3	A4	A3	A4
HG21 -63	105.5	230.5	225	421										
HG21 -80	109.5	238.5	229	429	233	437								
HG21 -100	114	247.5	233.5	438	237.5	446	242	455						
HG21 -125	120	259.5	239.5	450	243.5	458	248	467	254	479				
HG21 -145	124.5	269	244.3	459.5	248.5	467.5	252.8	476.5	258.8	488.5	263.5	498		
HG21 -160	129	277.5	248.5	468	251.5	476	257	485	263	497	268.3	506.5	272	515

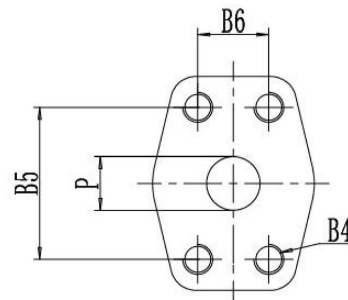


Oil port flange of duplex pump

Suction port "S"



Output port "P"



series	S	B1	B2	B3	series	Specifications	P	B4	B5	B6
HG10	Φ38	M12 D 20	69.9	35.7	HG0	8	Φ13	M8 D 13	38.1	17.5
						10				
						13				
						16				
HG11	Φ51	M12 D 20	77.8	42.9	HG1	20	Φ18	M8D 13	47.6	22.2
						25				
						32				
						40				
HG21	Φ76	M16 D 25	106.4	61.9	HG2	50	Φ20	M10 D 17	52.4	26.2
						63				
						63				
						80				
HG22	Φ89	M16 D 25	120.7	69.9	HG2	100	Φ32	M12 D 20	69.9	35.7
						125				
						145				
						160				
HG22	Φ89	M16 D 25	120.7	69.9	HG2	125	Φ38	M16 D 25	79.4	36.5
						145				
						160				
						160				



Precautions for use

1. Working medium

The available viscosity range is 10-300mm²/S petroleum based mineral oil, it is recommended to use ISO vg46 anti-wear hydraulic oil.

2. Working temperature

The working temperature range is - 10 °C - 100 °C. In order to ensure long-term reliable service life, the best working temperature range is 20-80 °C.

3. Cleanliness control

The cleanliness level of control system oil is required to be no more than grade 9 (NAS 1638) or 17/14 (ISO 4066)

4. Pump installation

Flexible coupling shall be used for the connection between shaft and motor as far as possible to avoid bending moment or axial thrust. The maximum allowable coaxiality error between shaft and motor shaft shall be less than 0.15mm.

5. Suction pressure and piping

The allowable absolute pressure at the suction port is 0.2-2 bar. The reasonable pipe diameter should not be less than the oil suction port of the pump to ensure the average optimal oil suction speed of 0.6-1.2m/s.

6. Inlet and outlet connection

Try to avoid hard connection of inlet and outlet oil pipes with steel pipes, and it is recommended to use rubber hoses to avoid additional noise caused by additional load.

7. Exhaust

Before the initial operation, oil should be injected into the pump or an exhaust valve should be added to remove the air in the pump and the system pipeline. If there is air residue in the pump or pipeline, it will cause the vibration and noise of the pump and indirectly affect the service life of the pump.

8. Maintenance

In order to improve the service life of the pump, the abnormal vibration, noise, oil temperature, bubble generation and leakage in the oil tank of the system should be regularly checked and maintained in time.

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