IGP05 Series

High pressure internal gear pump
Sizes: 3.5, 4, 5, 6.3
Flow: 3.6, 4, 5.3, 6.5 mL/r
Max. Pressure: 315 bar

Index

Introduction

IGP05 Series gear pump main part of the use of cast iron manufacturing to ensure the pump high pressure high rotation, instantaneous starting performance; the pump structure is compact and small, saving space and more easy to install, coupled with strong self-priming ability, insensitive to oil pollution, large speed range, impact resistance to load, the stability of the product has been greatly improved. The internal structure adopts axial and radial bidirectional clearance compensation, which improves the volumetric efficiency and life of the pump.

Features

- Axial and radial pressure compensation designs maintain high volumetric efficiency even at low speeds and viscosity.
- Ultra-low noise, high strength spherical QT600-3 and internal unique noise reduction design, even at high speed, the audio is still smooth.
- Very low flow rate and pressure pulsation, stable flow rate and pressure output can be maintained at low speed.
- IGP05 series can reach a maximum instantaneous use pressure of 350 bar.
- Wide range of RPM, IGP05 series up to 3000 r/min.
- Insensitive to oil cleanliness, strong anti-fouling ability and long service life.

Ordering code

IGP	05			

High pressure Internal gear pump = IGP

Series = 05

Sizes (ml/r) = 3.5, 4, 5, 6.3

Rotation direction (View from shaft end)
Clockwise = R
Anticlockwise = L

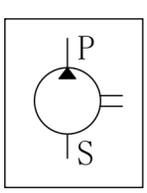
Shaft type
Key shaft = P
Spline shaft = S

Technical data

Series	Size	Displacement ml/r	Pressure (bar)		Rotating speed r/min		Weight (kg)
			Working	Maximum	Maximum	Minimum	
IGP05	3.5	3.6	300	315	3000	600	4.9
	4	4	300	315	3000	600	5
	5	5.3	300	315	3000	600	5.1
	6.3	6.5	300	315	3000	600	5.3

1. The maximum pressure in the working pressure is instantaneous pressure, which does not exceed 50% of the load cycle;
2. Pump operating ambient temperature range -20°C~60°C; The operating medium temperature range is -10°C~80°C

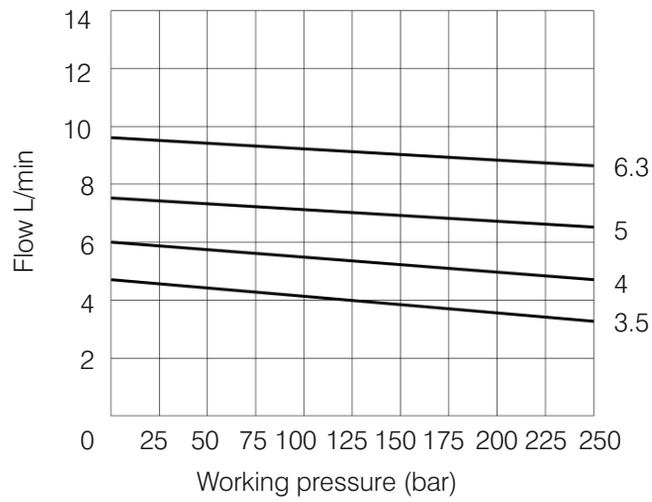
Graphic Symbol:



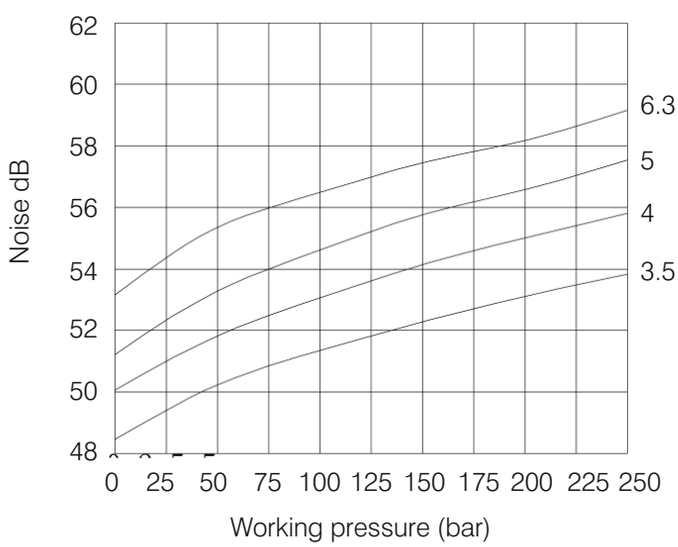
Characteristic curves

Flow pressure characteristics: (Testing condition: n= 1450 r/min, v= 46mm²/s, t= 50°C)

IGP05

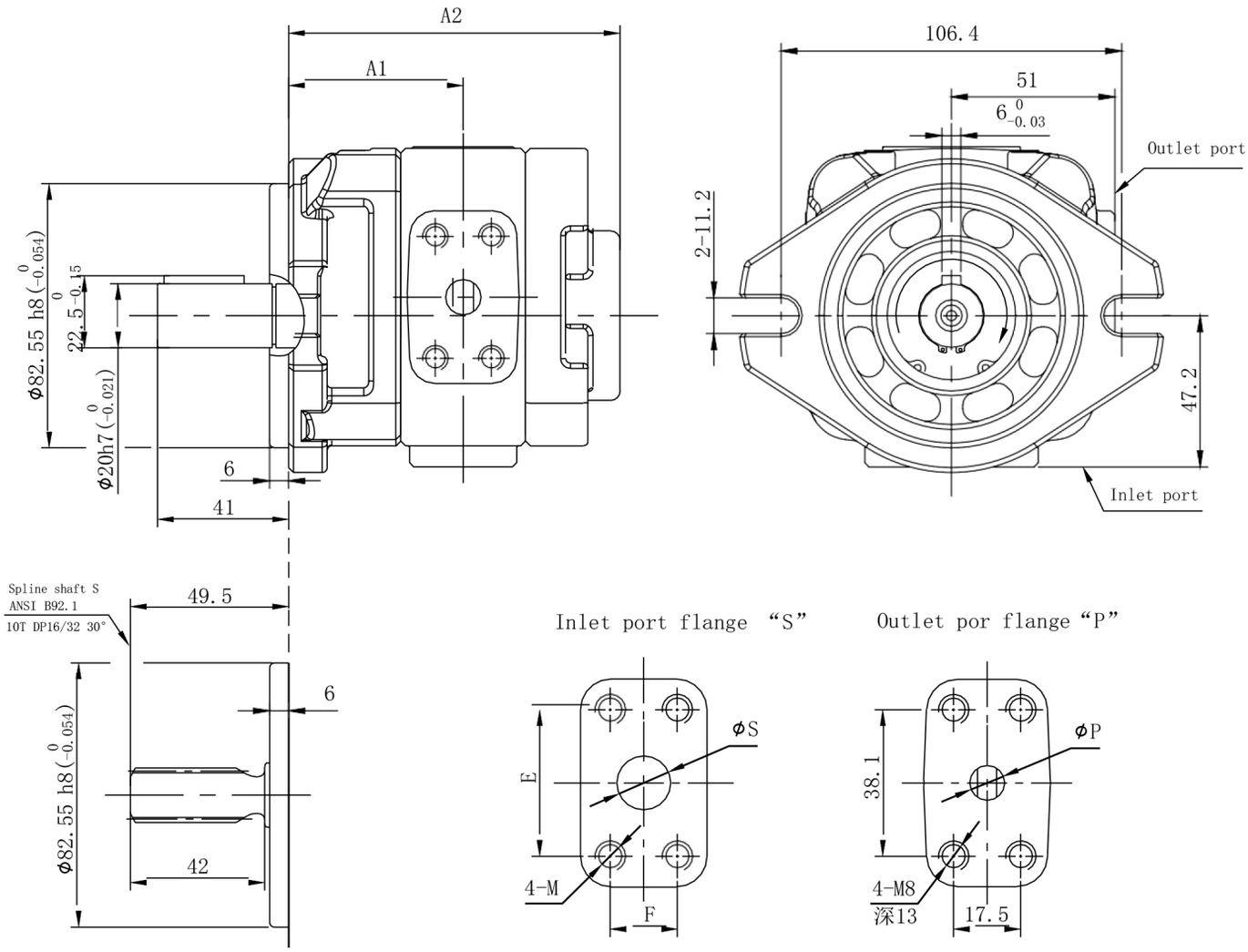


Noise characteristics:
(Testing condition: n= 1450 r/min, v= 46mm²/s, t= 50°C Noise sensor to pump distance= 1m)



Installation Dimensions (Dimensions in mm)

IGP05-*-R-P/S (P key shaft/ S spline shaft)

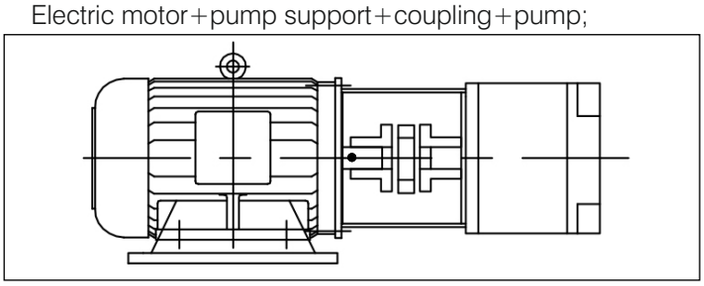


Pump code	A1	A2	ØS	E	F	M	Data
IGP05-3.5-R-P-S	52.5	99.5	Ø19	38.1	17.5	M8 depth 13	Ø9
IGP05-4-R-P-S	53	100.5					
IGP05-5-R-P-S	54.5	103.5					Ø11
IGP05-6.3-R-P-S	56	106.5	Ø19	47.6	22.2	M10 depth 15	

Operation Guide

• 1. Drive

Electric motor+pump support+coupling+pump;



No radial or axial forces permissible on the pump drive shaft; Always use a coupling that is suitable for compensating for shaft offsets;
In order to avoid axial force, do not use hammer or use pressure to install the coupling when installing it.

2. Run

- Check whether the installation is correct;
- According to the arrow to run;
- Before the first operation, should be used to pump oil or increasing the number of exhaust valve, discharge pump and system within the air in the pipe line;
- If the pump still has bubbles after 20 seconds of operation, the installation should be re-checked.

3. Oil port connection

Recommend the use of rubber hoses, to avoid additional load lead to additional noise.

4. Hydraulic oil

- Recommend the use of viscosity was in 10-300mm²/s within the scope of the petroleum base mineral oil,
- when the pump work the best viscosity range of 25-100 mm²/s,
- it is recommended to use N46 and N68 anti-wear hydraulic oil;
- Do not mix different grades of hydraulic oil together, may cause the decomposition of oil and detrerioration of lubrication quality;
- Replace the hydraulic oil must be used in accordance with the system status, change must clean the inside of the tank when contaminants;
- The purity of the oil level control system, no more than 9 (NAS1638).

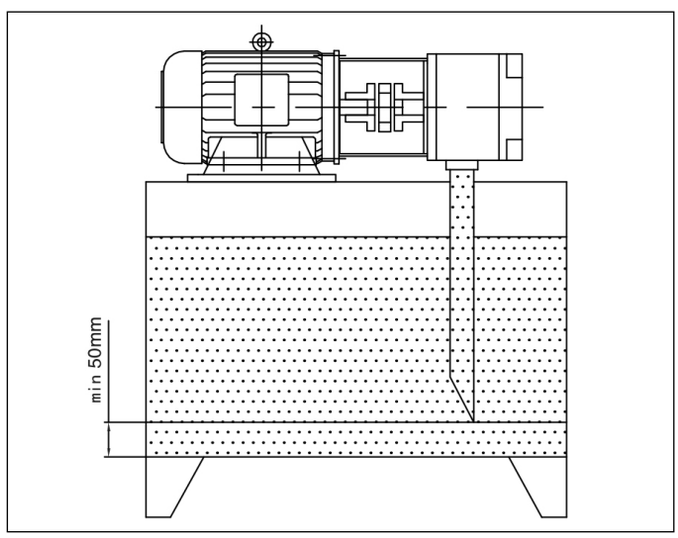
5. Fuel tank

- The capacity of the tank should be the suitable operation condition of the pump;
- The oil temperature of the tank shall not exceed the allowable oil temperature; Cooler can be equipped if necessary.

6.Piping and connections

- Remove the dust plug from the oil port of the pump;
- Throughly clean piping and fittings before assembly;
- Select pipe diameter according to the oil port of the pump;
- The oil inlet ensures the best oil suction speed with an average of 0.6-1.2m/s;
- Absolute inlet pressure of 0.6-1.2m/s;
  In any case, the return oil can not be directly inhaled by the pump, that is, the maximum distance between the return pipe and the suction pipe should be kept:
- Suction and return tubing should always be immersed below the oil level Pipe assembly shall be ensured to be leak-free.

Pipe connection diagram



7. Maintain

In order to improve the service life of the pump, should be regularly check system of abnormal vibration and noise, the oil temperature, whether there is air bubbles geneated inside the fuel tank and leaks and other issues and timely maintenance.

Important Notes

- It can only run with in the allowed parameters.
- To deal with the pump itself to ensure that the system pressure is zero.
- Any changes that will affect safety and pump function is prohibited.
- Ensure that all fixing screws are tightened reliably.
- Ensure safety and accident prevention.

The specified data is for product description purposes only and may not be deemed to be guaranteed unless expressly confirmed in the contract.

THM Huade Hydraulics Pvt Ltd
F-127, Phase-VIII, Focal Point,
Ludhiana-141010, Punjab (INDIA)
PH: 0161-2672777, 0161-2672778
E-mail: sales@thmhuade.com
Website: www.thmhuade.com

Follow us: