



## HGB SERIES PLANETARY GEARBOX

### Introduction

HGB series planetary gearbox is one speed reducer for various machinery, adopting the compact design of combining hydraulic orbital motor and speed reducer, design structure is simple, with reasonable mounting space, easy for mounting. This kind of gearbox fits all kinds of hydraulic loop system.

HGB series planetary gearbox is widely used various machinery, such as engineering machinery, lifting machinery, road machinery vehicles, construction machinery, convey machinery, agricultural machinery, mine machinery, sweeping & cleaning machinery, wood machinery, etc., it's also used in winches, and automatization engine's static hydraulic driving system. The features are shown as follows:

- \* Compact structure, easy mounting.
- \* Small volume, strong power.
- \* To be preemptively used together with BMR, BMH, BMS series hydraulic orbital motors.

### Instruction Manual

In order to keep the hydraulic system operating under optimal condition, the normal requirements are shown as follows:

1. Hydraulic oil: HM mineral oil(ISO 6743/4)(GB/T763.2-87) or HLP mineral oil(DIN 51524).
2. Oil temperature: normal operation temperature:  $-20^{\circ}\text{C}\sim 90^{\circ}\text{C}$ ; optimal temperature scope:  $20^{\circ}\text{C}\sim 60^{\circ}\text{C}$ ;
3. Oil viscosity:  $20\sim 75\text{mm}^2/\text{s}$ ; optimal viscosity scope:  $42\sim 74\text{mm}^2/\text{s}$  at the temperature of  $40^{\circ}\text{C}$ ;
4. Oil cleanness: oil filtration precision:  $25\mu\text{m}$ ; solid contamination level has to be lower than 20/16;

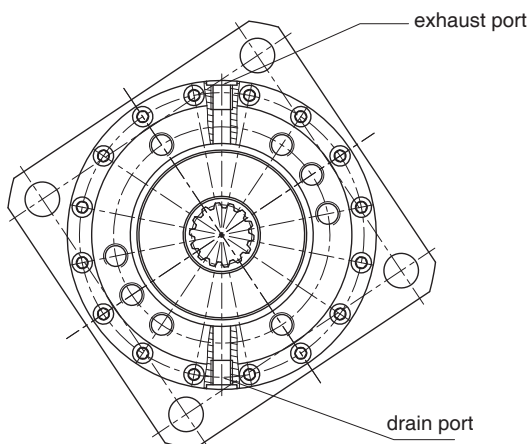
In order to keep the planetary gearbox operating under the best condition, the normal requirements are shown as follows:

1. Lubrication oil: CKC220 mineral gear oil(ISO 12925-1)(GB/T5903);
2. Oil viscosity:  $220\text{mm}^2/\text{s}$  at the temperature of  $40^{\circ}\text{C}$ ;
3. Maintenance period: 1st maintenance should be carried out 50-200 hours after initial operation; afterwards normal maintenance should be carried out every 500~1000 hours.
4. We suggest that MOBIL GEAR630, ESSO SPARTAN EP220, SHELL OMALA EP220 be used.

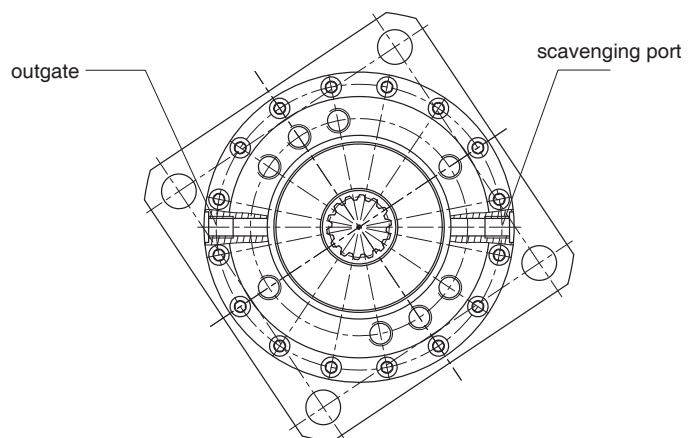
### How to change the oil for planetary gearbox:

No lubricate oil in the gearbox lubricate the gearbox before it be used.

1. As shown in Drawing A, dismantle two port plugs, discharge the lubrication oil out of the planetary gearbox. and then clean the planetary housing with the detergent supplied by lubrication oil supplier.
2. As shown in the Drawing, fill more hydraulic oil till lubrication oil flows out of the drain port; fasten two plugs till the ports are sealed.



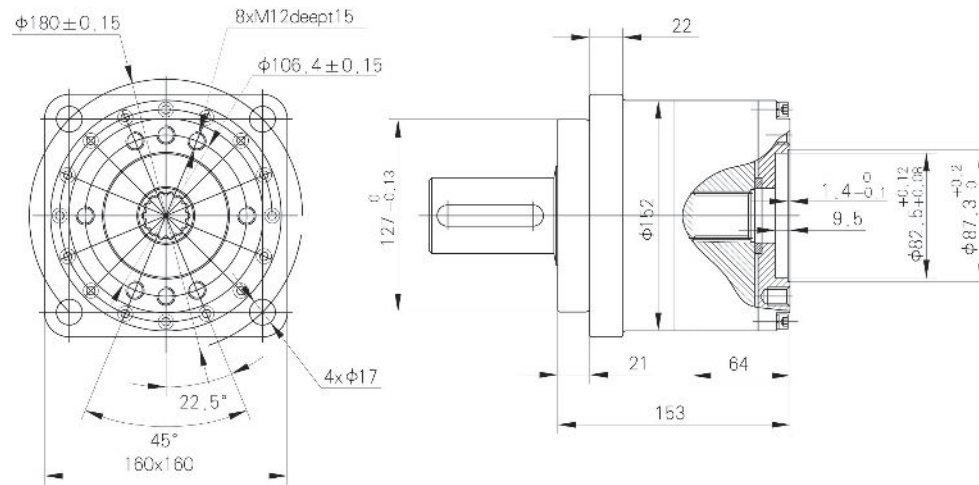
Drawing A



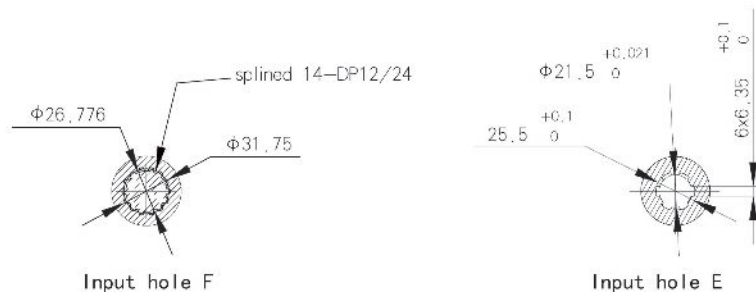
Drawing B



### Main mounting and specification data

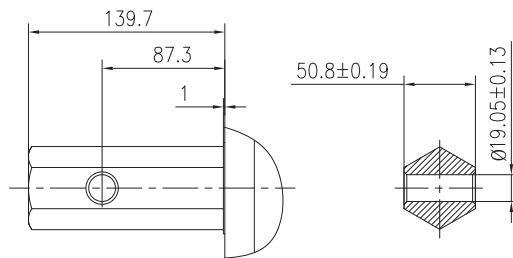


### Input hole

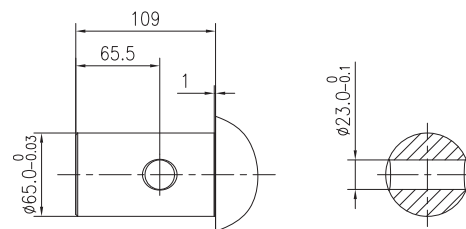


### Output shaft extensions

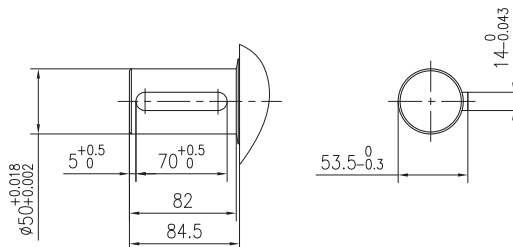
shaft H1



shaft H2



shaft A



Main specifications of the BMP,BMR,BMH and BMSY motor with HGB will be calculated upon hydraulic motor. The rotation direction of input and output of HGB planetary gearbox is the same. The speed reduction ratio is 3.65. The max. output torque of HGB is 2500Nm, the max. output power is 15kw.