

VNKBK2 Series Hydraulic Motor

INTRODUCTION

VNKBK2 series brake is one kind of hydraulic wet disc brake. The braking force is caused by the spring, and hydraulic pressure releases the braking force.

CHARACTERISTIC FEATURES

- * **The VNKBK2 series** adopts a special friction disc and high-strength spring design: long life endurance, low noise, and high braking reliability.
- * **With a 4-drain port design**, the brake can be used in different applications.
- * **Compact structure**, easy mounting.
- * It can be used preferentially together with VNKP, VNKR, and VNKS series hydraulic motors.



Application

The **VNKBK2** series hydraulic brake stays in a braking condition since delivery from the factory. During normal operation, there exists a braking force in the brake disc. Only if the pressure of the hydraulic system, to which the brake links, is lower than the pressure required for the release of the brake, shall the spring force keep the brake in a braking condition.

The VNKBK2 series hydraulic brake is widely used in heavy-duty machinery, such as engineering machinery, cranes, off-highway machinery vehicles, construction machinery, material handling machinery, agricultural machinery, mining, sanitation machinery, and timber industries.

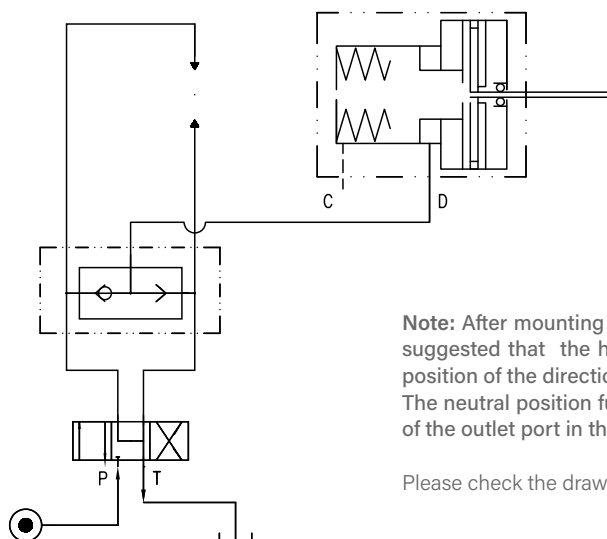
They are also used in winches and in hydrostatic drive systems for automatization engines.

Special Note: Such kind of brake is only used in static parking brake. Dynamic braking is not recommended.

Instruction Manual

In order to make the **VNKBK2** series brake work under the best situation, we recommend the normal requirements as follows:

- 1.Assembly:** 1st of all, we have to mount the brake VNKBK2 with hydraulic motor, and then fill the brake with lubrication oil through the drain port, and then mount with other parts.
- 2.Fluid type:** Mineral based-HM(GB/T763.2-87) (ISO6743/4) or HLP(DIN51524).
- 3.Temperature range:** Normal -20°C-90°C the best optimal situation 20°C-60°C.
- 4.Viscosity range:** 20 ~ 75mm²/s; the best optimal situation 42 ~ 74mm²/s at 40°C.
- 5.Filtration:** Nominal filtration of 25 micron, ISO code 20/16.
- 6.Maintenance:** changed after the first 50 ~ 100h; then after every 500 ~ 1000h.



Typical Applications Drawing

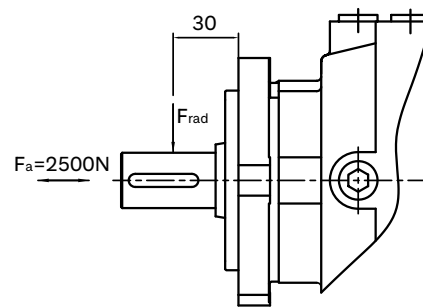
Note: After mounting with hydraulic motor, if the motor needs both rotation directions, it's suggested that the hydraulic system is assigned to use a shuttle valve, and the neutral position of the directional valve must have an off-load function (type Y or H). The neutral position function without off-load function (type O) is forbidden or the pressure of the outlet port in the system is larger than the breaker opening pressure.

Please check the drawing for reference.

Item	VNKBK2-1	
Min. static Torque [Nm]	200～230	410～450
Min. Opening Pressure [MPa]	1.7 ～2.3	
Max. Opening Pressure [MPa]	30	
Min.oil quantity for brake releasing [cm ³]	7～8	
Oil volume [cm ³]	50～120	
Max. pressure in drain space [MPa]	0.05	
Weight [kg]	9	

Simple drawing

The graph shows the radial force F_{rad} in Newtons (N) on the y-axis versus the angular velocity n in min^{-1} on the x-axis. The y-axis ranges from 0 to 8000 with major grid lines every 2000 units. The x-axis ranges from 0 to 800 with major grid lines every 200 units. The curve starts at $(0, 8000)$ and decreases, passing through $(400, 4000)$ and $(800, 3000)$.



C Drain port—G1/4, 9mm depth; Infuse port in the housing
D Brake release port—G1/4, 9mm depth

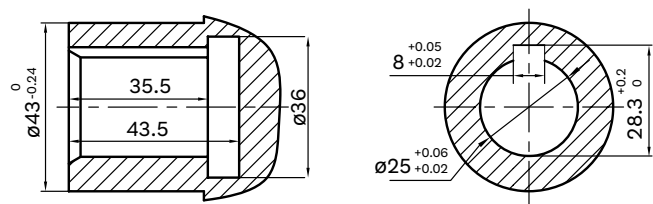
VNKBK2 Shaft Extensions

Dimensions Data



INPUT SHAFT HOLESINPUT & OUTPUT

SHAFT A



OUTPUT SHAFT HOLESINPUT & OUTPUT

SHAFT A

