

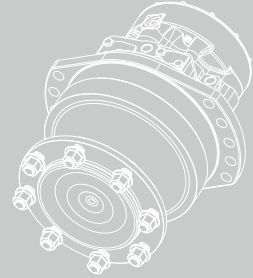
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HRP18 series

Radial piston hydraulic motor

The HRP18 series radial piston hydraulic motor, is a kind of low speed high torque hydraulic motor, disc valve structure, with high pressure, good stability at low speed, high volumetric efficiency and mechanical efficiency.



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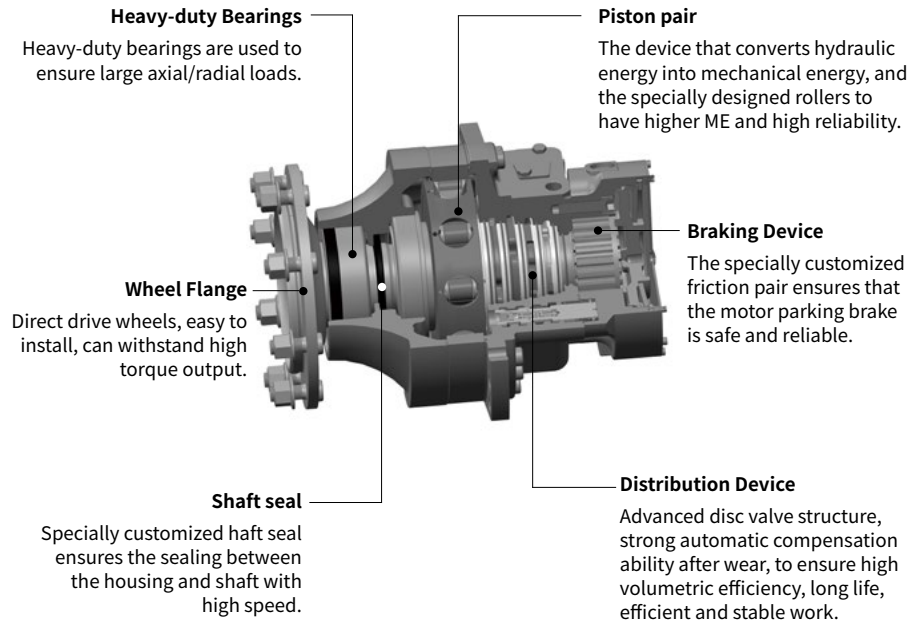
Overview

The HRP18 series radial piston hydraulic motor, is a kind of low speed high torque hydraulic motor, disc valve structure, with high pressure, good stability at low speed, high volumetric efficiency and mechanical efficiency, the motor can be equipped with a variety of functional modules.

Advantages

- Using tapered roller bearing structure, can support larger axial and radial load.
- Advanced disc valve structure, strong automatic compensation ability after wear, to ensure high volumetric efficiency, long life, efficient and stable work.
- Various function modules can be selected, such as brake, variable speed valve, speed sensor, etc. to meet the needs of users in various fields.

Standard structure



Specification

Series		HRP18	
Motor performance			
Displacement	cm ³ /rev.	1392	1862
Max.torque	Nm	9800	13000
Min.stable speed	rpm	5	
Max.speed	Single speed	rpm	155
	Two speed	rpm	160
Pressure	Max.differential pressure	bar	450
Weight	Two speed	kg	167.1
Brake			
Minimum static torque	Nm	18600	
Release pressure	bar	12 ~ 30	
Maximum pressure at brake port Z	bar	30	
Oil volume to operate brake	cm ³	70	

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- Make sure the motor is full of oil before use.
- The maximum torque is only available for small operating conditions.
- During motor running-in, it should not be operated without load at greater than 100rpm.
- The filtration standard of ISO 4406 cleaning standard 20/18/15 is recommended.
- High quality anti-wear hydraulic fluids are recommended.
- When the temperature is 50°, the minimum viscosity of the oil is recommended to be 20mm²/s.
- The recommended maximum operating temperature is 85° C.

Ordering information

HRP18	Single and Two Speed	Displacement	Port Connection	Output Shaft	Paint Option	Brake	Flushometers	Special Features
01	02	03	04	05	06	07	08	09

Radial Piston Series

01	Incurve multiple-action radial piston motor	HRP18
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Single and Two Speed

02	Two-speed displacement ratio 2:1	2
	Two-speed displacement ratio 2.28:1	3

Displacement cm³/rev.

03	1392/696, Standard piston	22
	1862/816 (A port) , Standard piston	28

Port Connection

04	φ18.5(A、B), M22×1.5(L、L1), M22×1.5(X)	M8
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Output Shaft

05	Pilot diameter φ 220.7x18, hub bolt φ 275 distribution circle 8 × M22 × 1.5	W2
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Paint Option

06	No Paint	N
	Black	B
	Hengli blue	C
	Yellow	Y

Brake

07	Static braking torque 18600Nm, port Z M16×1.5	F1
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Ordering information

Flushometers

08	Whether there is a flushometer or not	A
	There is a flushometer with a flow rate of 5L/min	B
	There is a flushometer with a flow rate of 7L/min	C
	There is a flushometer with a flow rate of 10L/min	D
	There is a flushometer with a flow rate of 12.5L/min	E
	There is a flushometer with a flow rate of 13.5L/min	F

Special Features

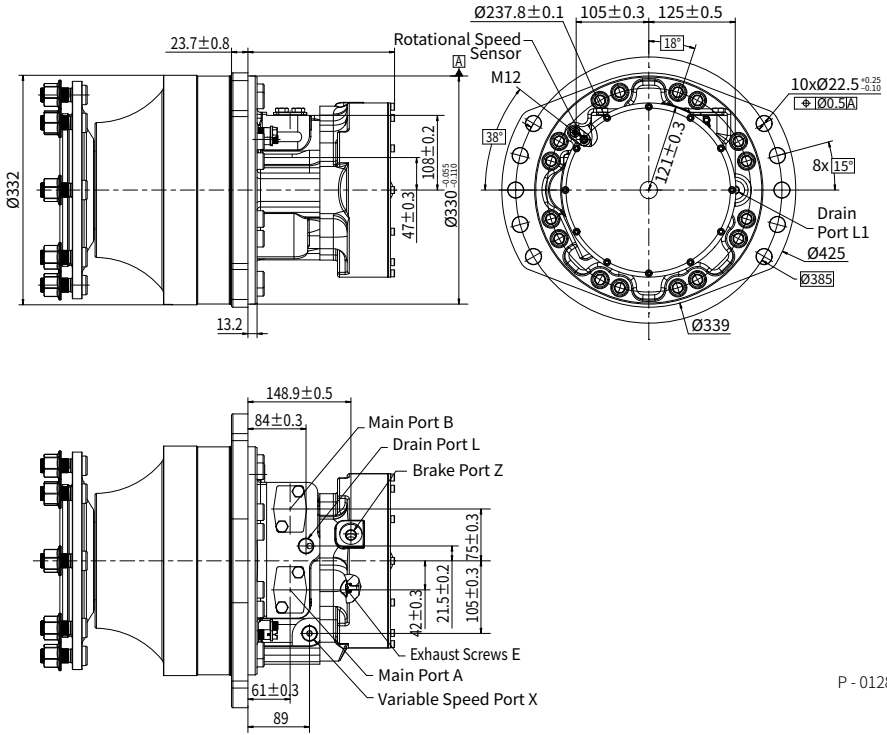
09	Standard	AA
	Free running	FF
	High temperature, FKM	V1
	Low temperature	V2
	Speed sensor cavity	S1
	S1+V1	S4
	Urgently release brake	HH

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Installation size

·HRP18 (Two speed)



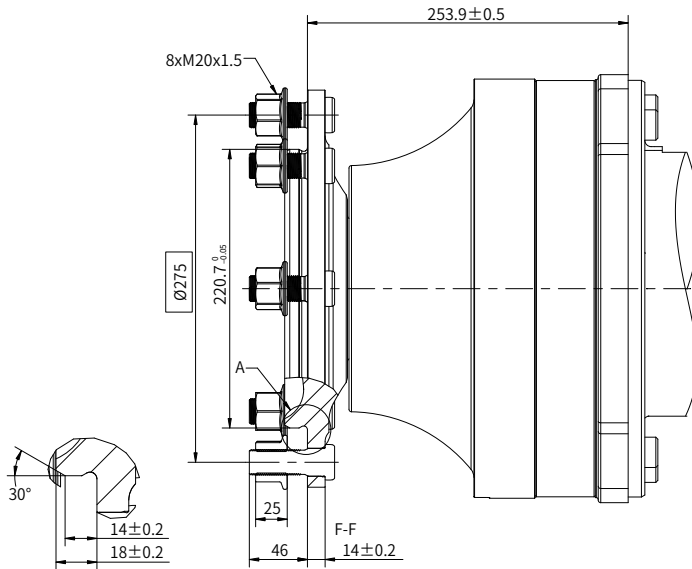
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Name	Port function	M8
A、B	Main port	$\varnothing 18.5$
L、L1	Drain port	$M22 \times 1.5$
X	Variable Speed Port	$M22 \times 1.5$
Z	Brake Port	$M16 \times 1.5$

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Shaft end dimensions

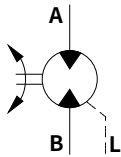
W2 Pilot diameter $\phi 220.7 \times 18$, hub bolt $\phi 275$ distribution circle $8 \times M22 \times 1.5$



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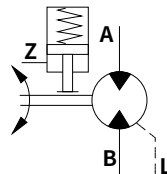
Hydraulic diagram

· Motor without brakes



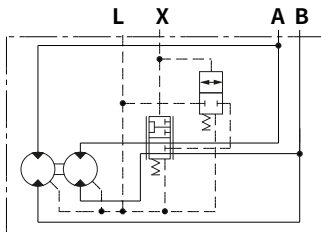
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· Motor with parking brake



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· Schematic diagram of a two-speed motor

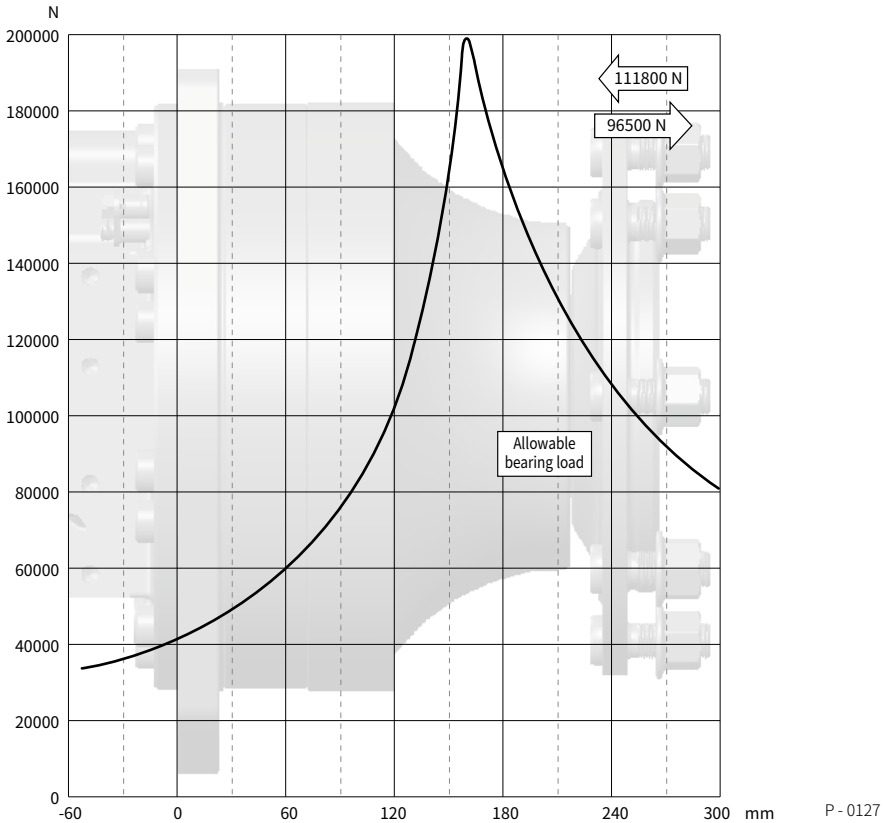


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Allowable shaft load/bearing curve

As shown in the figure, when the axial load is 0, the radial allowable load of the output shaft is related to the distance from the flange mounting surface to the load action point.

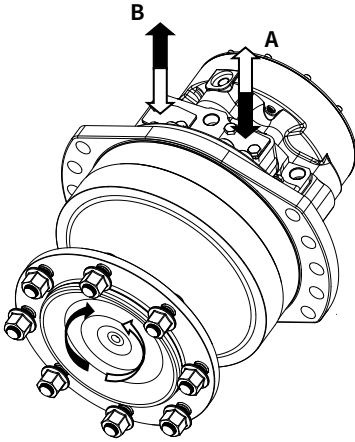
The solid line shows the allowable radial load of the bearing based on L_{10} life with 2000hrs. Denote use hydraulic fluids containing anti-wear additives, and rated output torque and motor speed of 50rpm, the differential pressure is 250 bar, the operating oil temperature is 50°C .



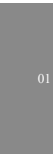
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Rotation direction: CW

When facing the motor shaft extension direction, port A is high pressure oil, the output shaft rotates CW; Otherwise, it rotates CCW.



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