

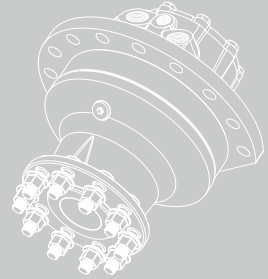
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HRP5D series

Radial piston hydraulic motor

The HRP5D 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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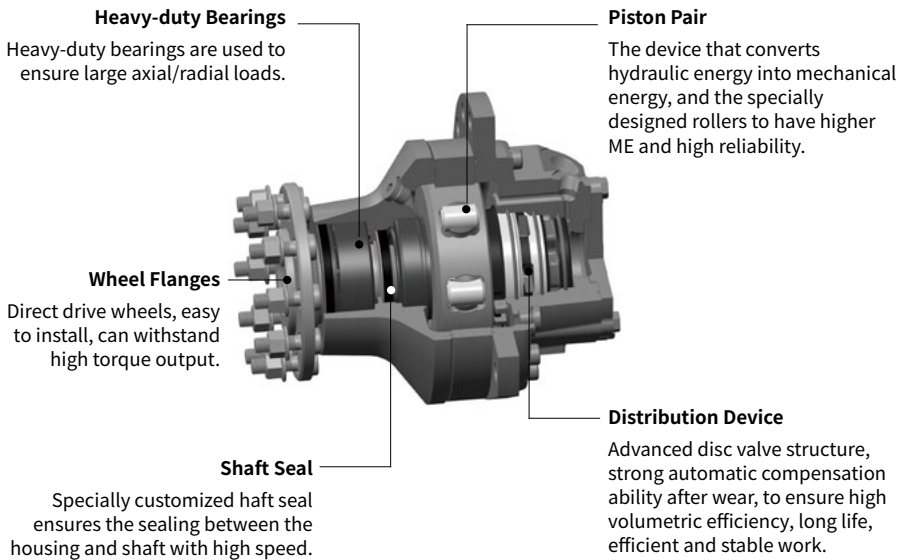
Overview

The HRP5D 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		HRP5D	
Motor performance			
Displacement		cm ³ /rev.	565.2
Max.torque		Nm	3635
Min.stable speed		rpm	5
Max.speed (Single speed)		rpm	160
Pressure	Max.differential pressure	bar	450
Weight	Single speed	kg	44.26
Brake			
Minimum static torque		Nm	4200
Release pressure		bar	12-16
Maximum pressure at brake port Z		bar	40
Oil volume to operate brake		cm ³	32
Weight		kg	10.4

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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

HRP5D	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	HRP5D
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Single and Two Speed

02	Single speed	1
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Displacement cm³/rev.

03	565/282, Standard piston	11
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Port Connection

04	G3/4(A, B), G3/8(L, L1), G3/8 (F)	B1
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Output Shaft

05	Pilot diameter $\phi 92.7 \times 7$, hub bolt $\phi 140$ distribution circle $10 \times M14 \times 1.5$	W1
	Pilot diameter $\phi 95.7 \times 7$, hub bolt $\phi 140$ distribution circle $10 \times M14 \times 1.5$	W3

Paint Option

06	No Paint	N
	Black	B
	Hengli blue	C
	Yellow	Y

Brake

07	No brakes	AA
	Static braking torque 4200Nm, port Z G1/4	A5

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

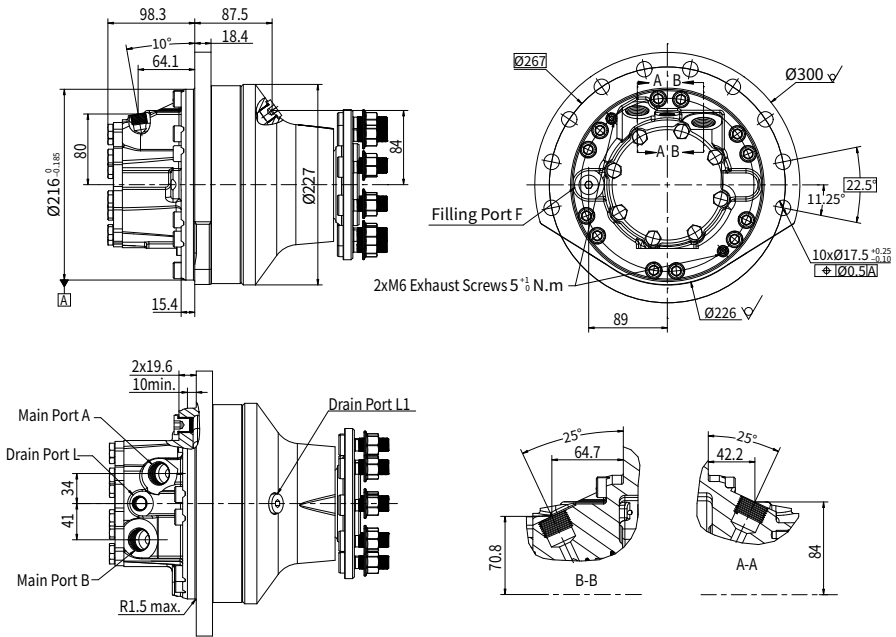
09	Standard	AA
	Free running	FF
	High temperature, FKM	V1
	Low temperature	V2
	Speed sensor cavity	S1
	S1+V1	S4
	Urgently release brake	HH

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01

Installation size

· HRP5D (Single speed)



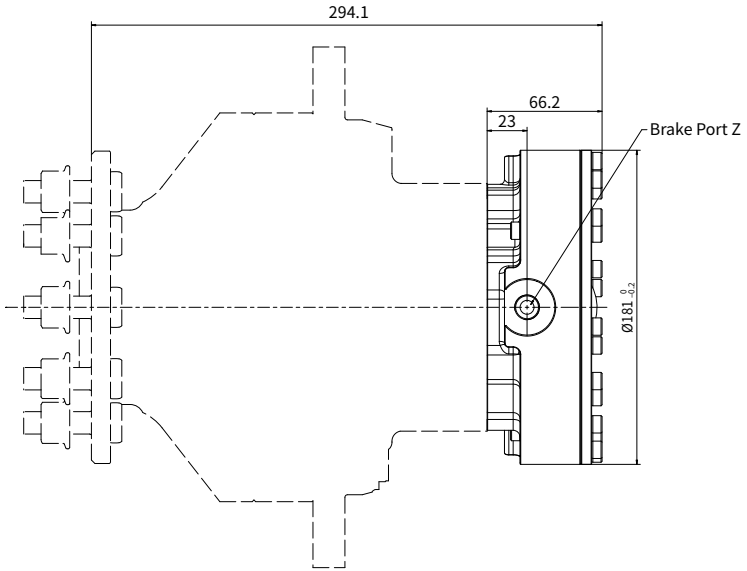
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Name	Port function	B1
A、 B	Main port	G3/4
L、 L1	Drain port	G3/8
F	Filling port	G3/8

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Brake installation size

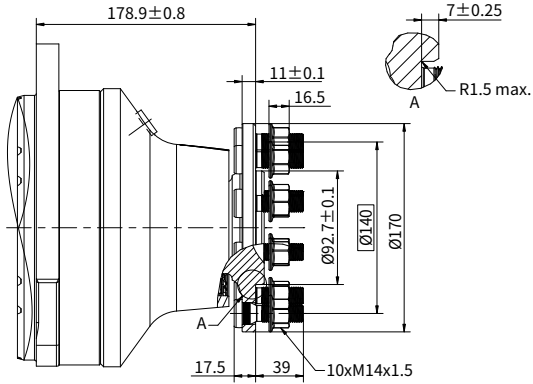
Parking brake: Order code "A5"



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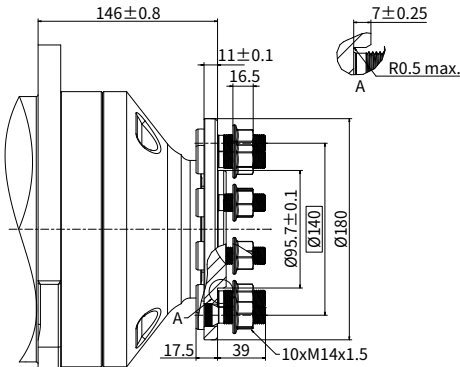
Shaft end dimensions

W1 Pilot diameter $\phi 92.7 \times 7$, hub bolt $\phi 140$ distribution circle $10 \times M14 \times 1.5$



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W3 Pilot diameter $\phi 95.7 \times 7$, hub bolt $\phi 140$ distribution circle $10 \times M14 \times 1.5$

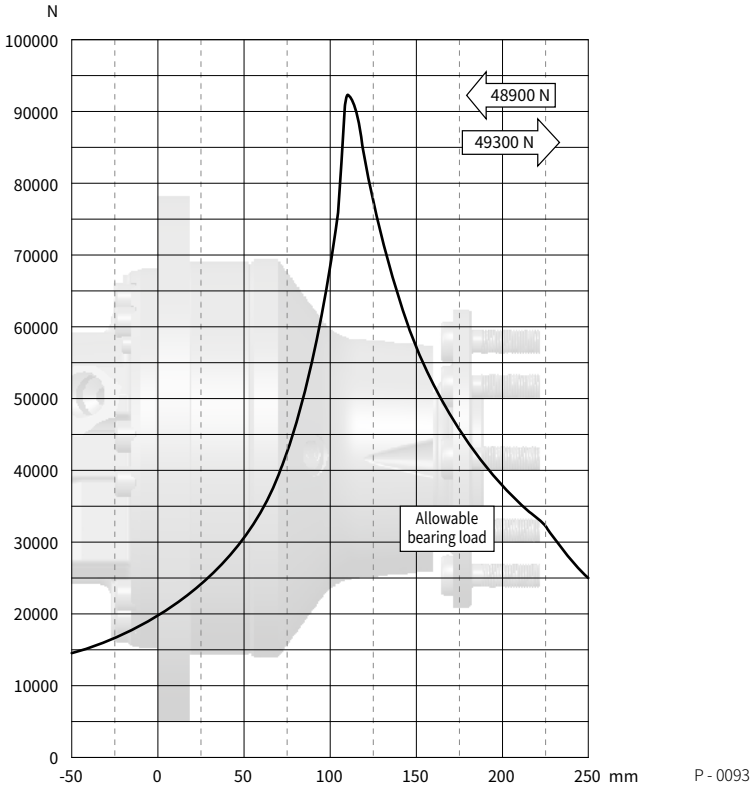


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Allowable shaft load/bearing curve

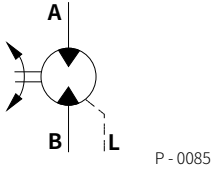
As shown in the figure, when the axial load is 0, the radial allowable load of the output shaft is related to the distance from the flange mounting surface to the load action point.

The solid line shows the permissible radial load of the bearing. This is based on the use of hydraulic oil containing anti-wear additives and the use of continuous output torque at a motor speed of 50 rpm, a differential pressure of 250 bar, an operating oil temperature of 50 °C , and a bearing L₁₀ service life of 2000 hrs.

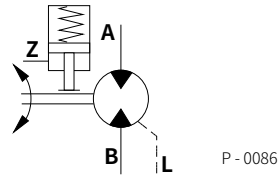


Hydraulic diagram

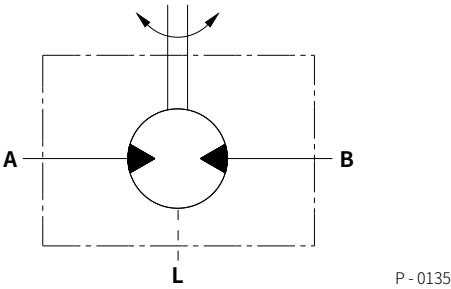
· Motor without brakes



· Motor with parking brake



· Schematic diagram of a single-speed motor



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.

