

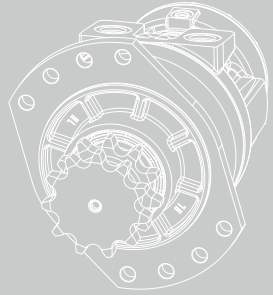
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HRP05 series

Radial piston hydraulic motor

The HRP05 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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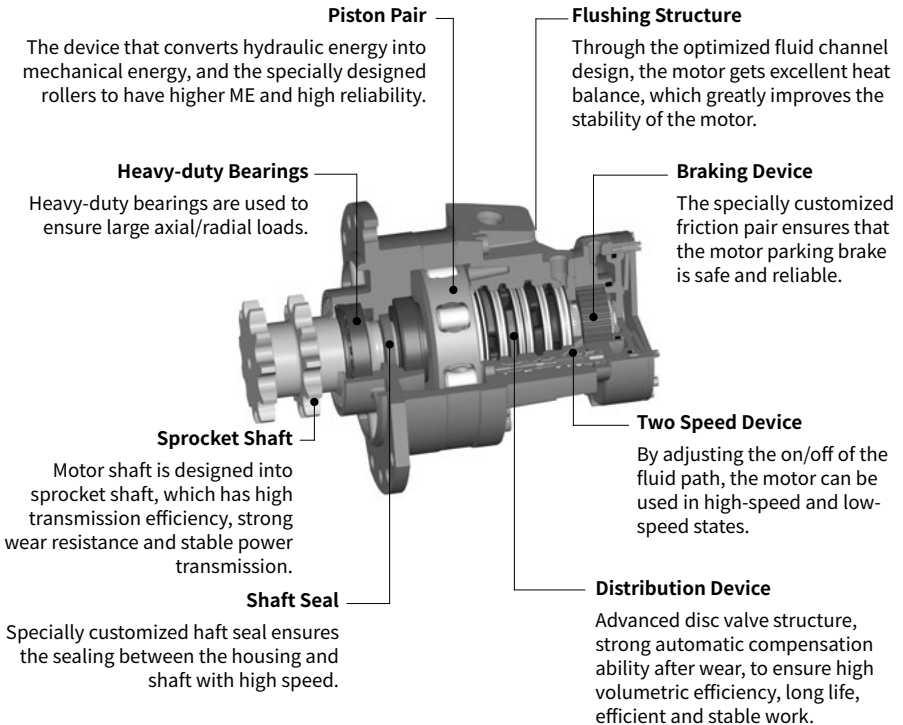
Overview

The HRP05 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 flushing valve, brake, variable speed valve, speed sensor, etc. to meet the needs of users in various fields.

Standard structure



Specification

Series		HRP05	
Motor performance			
Displacement		cm ³ /rev.	565
Max.torque		Nm	4047
Min.stable speed		rpm	5
Max.speed	Single speed	rpm	320
	Two speed	rpm	385
Pressure	Max.differential pressure	bar	450
	The max.pressure of A or B	bar	470
	Max.shell drain pressure	bar	10
Weight	Single speed	kg	53
	Two speed	kg	60
Brake			
Minimum static torque		Nm	2200
Release pressure		bar	11 ~ 15
Maximum pressure at brake port Z		bar	40
Oil volume to operate brake		cm ³	23

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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

HRP05	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	HRP05
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Single and Two Speed

02	Two speed, gear ratio 2	2
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Displacement cm³/rev.

03	565, Standard piston	11
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Port Connection

04	1-1/16-12UN(A, B), 3/4-16UNF(L), 9/16-18UNF (X), 3/4-16UNF (F)	M6
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Output Shaft

05	Double-sprocket, 11-tooth ISO-606	S4
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Paint Option

06	No Paint	N
	Black	B
	Hengli blue	C
	Yellow	Y

Brake

07	Static braking torque 2200Nm, port Z 9/16-18UNF	A1
	Static braking torque 2200Nm, port Z 9/16-18UNF, same side as the main port	A2
	Static braking torque 2200Nm, port Z G1/4, same side as the main port	A4

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

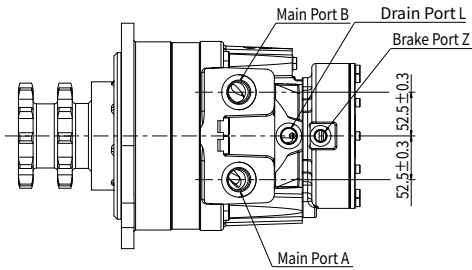
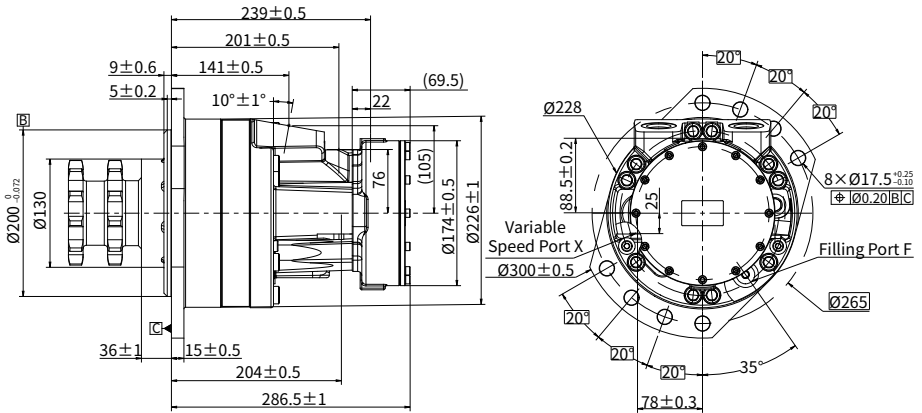
09	Standard	AA
	Free running	FF
	High temperature, FKM	V1
	Low temperature	V2
	Speed sensor cavity	S1
	S1+V1	S4

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01

Installation size

· HRP05 (Two speed)



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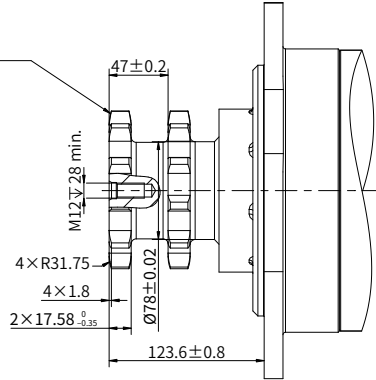
Name	Port function	M4
A, B	Main port	1-1/16-12UN
L	Drain port	3/4-16UNF
F	Filling Port	3/4-16UNF
X	Variable Speed Port	9/16-18UN

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Shaft end dimensions

S4 Double-sprocket, 11-tooth ISO-606

Chain Wheel Date
 Refer Standards: ISO 606
 Chain No.: 100/20A
 Number of Teeth: 11
 Pitch: 31.75
 Pitch Diameter: $\varnothing 112.69$
 Pin Diameter: $\varnothing 19.05$
 Measurement Over Pins: 130.35-130.60

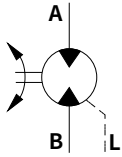


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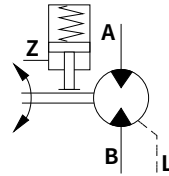
Hydraulic diagram

· Motor without brakes



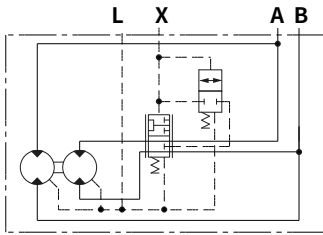
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· Motor with parking brake



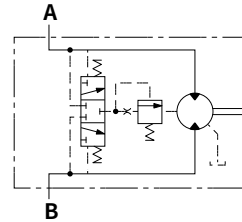
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· Schematic diagram of a two-speed motor



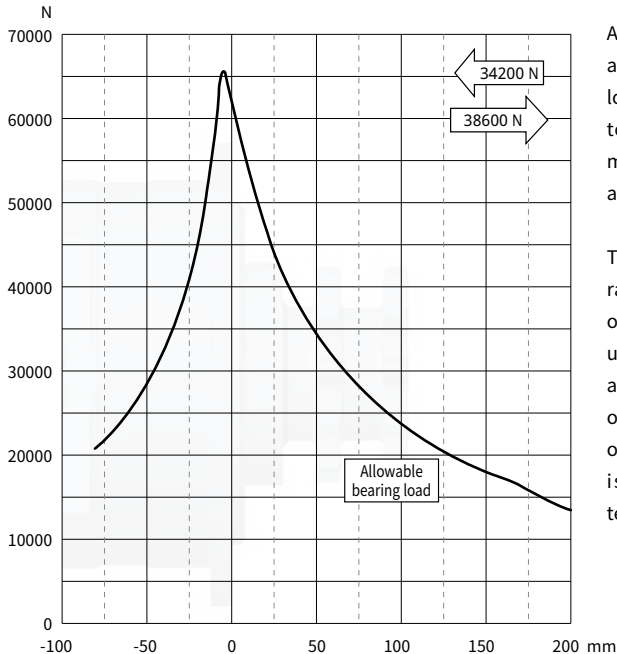
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· Flushometer schematic



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Allowable shaft load/bearing curve



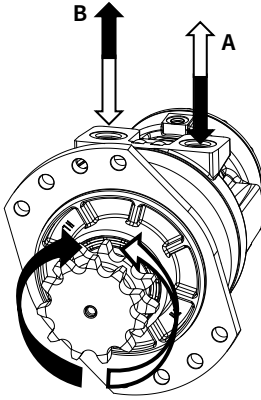
As shown in the figure, when the axial load is 0, the radial allowable load of the output shaft is related to the distance from the flange mounting surface to the load action point.

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 .

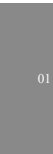
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Rotation direction: CW

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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