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HRP08 series

Radial piston hydraulic motor

The HRP08 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.

Contents

Overview

The HRP08 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 bearings, can support large radial loads.
· Advanced disc valve structure, radial piston, high torque and high volumetric efficiency.
· Smoothly 2-speeds changed.
· More options including brake, variable speed valve, speed sensor, etc.

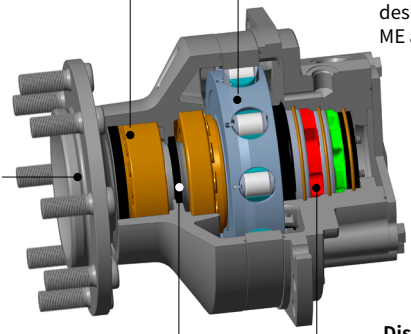
Standard structure

Heavy-duty Bearings

Heavy-duty bearings are used to ensure large axial/radial loads.

Piston Pair

The device that converts hydraulic energy into mechanical energy, and the specially designed rollers to have higher ME and high reliability.



Wheel Flanges

Direct drive wheels, easy to install, can withstand high torque output.

Shaft Seal

Specially customized haft seal ensures the sealing between the housing and shaft with high speed.

Distribution Device

Advanced disc valve structure, strong automatic compensation ability after wear, to ensure high volumetric efficiency, long life, efficient and stable work.

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Specification

Series			HRP08	
Motor performance				
Displacement		$cm^3/rev.$	934	1248
Max.torque		Nm	6022	7945
Min.stable speed		rpm	5	
Max.speed（Displacement）		rpm	140	170
Pressure	Max.differential pressure	bar	450	400
Brake				
Minimum static torque		Nm	9000	
Release pressure		bar	12~30	
Maximum pressure at brake port Z		bar	30	
Oil volume to operate brake		cm^3	40	

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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(at least 20 hours), 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 $20mm^2/s$.
· The recommended maximum operating temperature is 85° C.

Ordering information

HRP08	Single and Two Speed	Displacement	Port Connection	Output Shaft	Paint Option	Brake	Flushing Valve	Special Features
01	02	03	04	05	06	07	08	09

Radial Piston Series

01	Incurve multiple-action radial piston motor	HRP08

Single and Two Speed

02	Single speed	1

Displacement $cm^3/rev.$

03	934, Standard piston	17
	1248, Standard piston	35

Port Connection

04	1-1/16-12UN(A, B), 3/4-16UNF(L), 3/4-16UNF(F)	B1
	ISO6162 ϕ13, connection hole 2-4×M8(A, B), M18×1.5(L), M18×1.5(F)	B4

Output Shaft

05	Pilot diameter ϕ150.9×17, hub bolt ϕ203.2, distribution circle 8×M20×1.5	W1
	German standard spline DIN5480-W70×3×30° ×22×8h	S2

Paint Option

06	No Paint	N
	Black	B
	Hengli blue	C
	Yellow	Y

Brake

07	No brakes	AA
	Static brake torque 9000Nm, port Z M16×1.5	A9

Ordering information

Flushing Valve

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

Special Features

09	Standard	AA
	High temperature, FKM	V1
	Low temperature	V2
	Speed sensor cavity	S1
	Speed sensor to determine direction	S2

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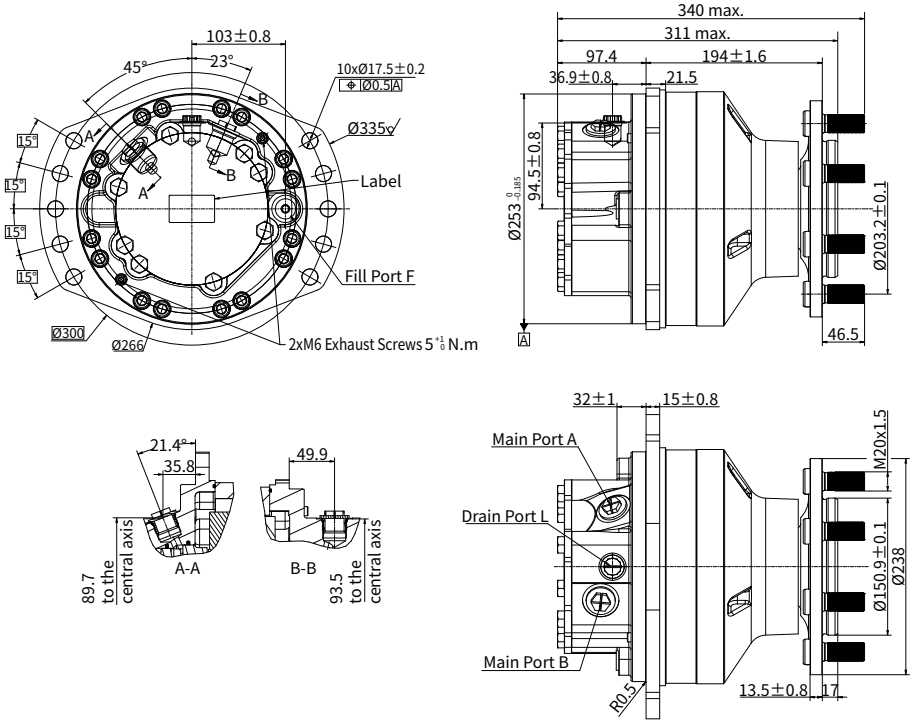
Note: For the other types of port forms, output forms and brake port orienttations, please contact Hengli's application engineer for consultation.

Installation size

·HRP08（Single speed）



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Note: The weight of the connection shown in the figure is 63.6kg.

Name	Port Function	B1	B4
A、B	Main Port	1-1/16-12UN	4×M8
L	Drain Port	3/4-16UNF	M18×1.5
F	Fill Port	3/4-16UNF	M18×1.5

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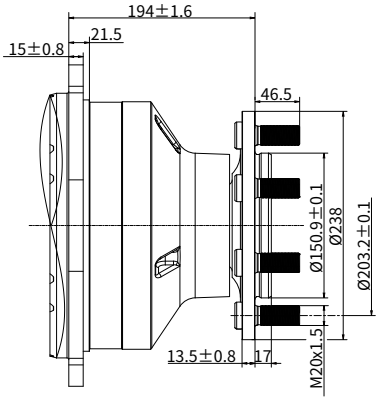
Shaft end dimensions

W1 **Pilot diameter ϕ150.9x17, hub bolt ϕ203.2, distribution circle 8x M20x1.5**



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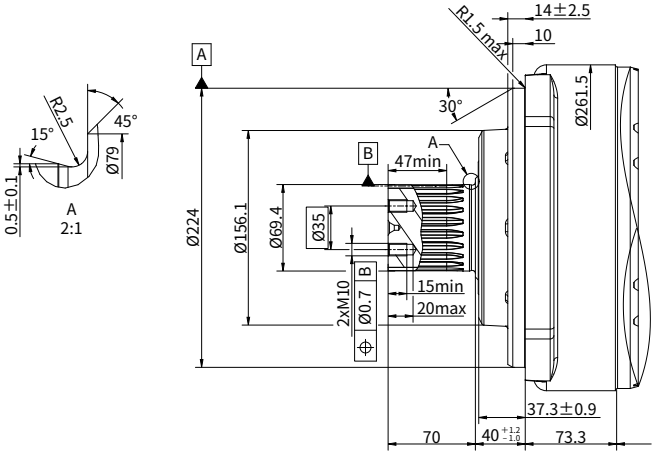
S2 **German standard spline DIN5480-W70×3×30° ×22×8h**



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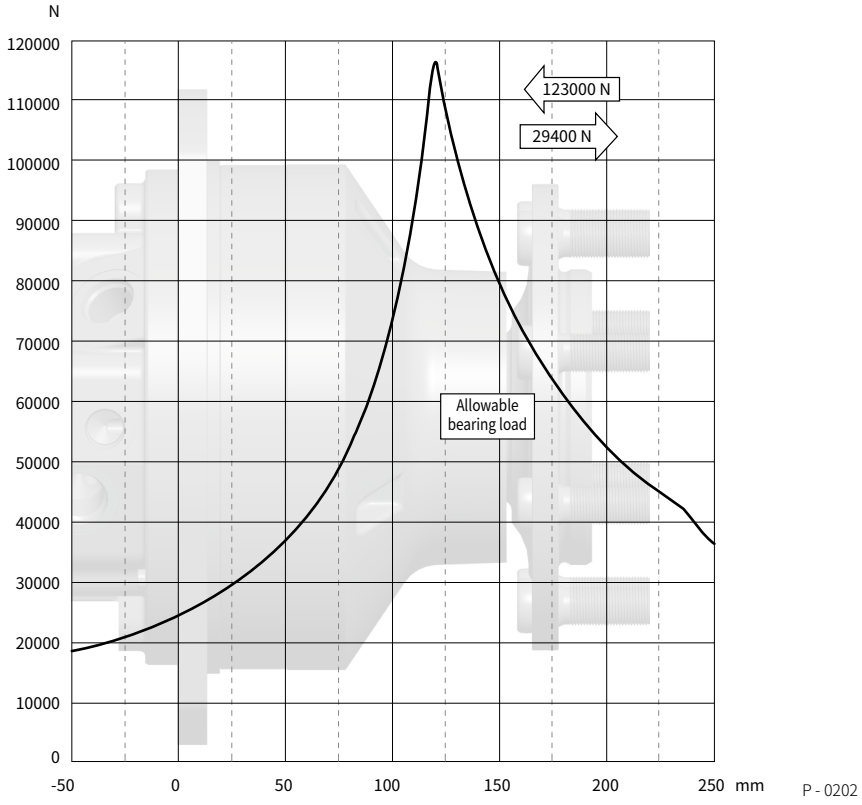
Allowable shaft load/bearing curve

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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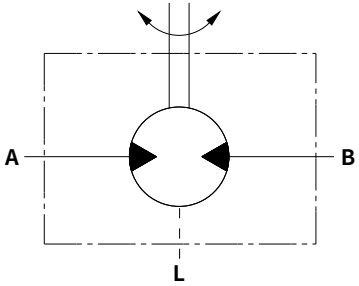
Hydraulic diagram

· Schematic diagram of a single speed motor



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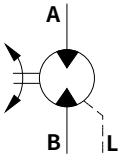
· Motor without brakes



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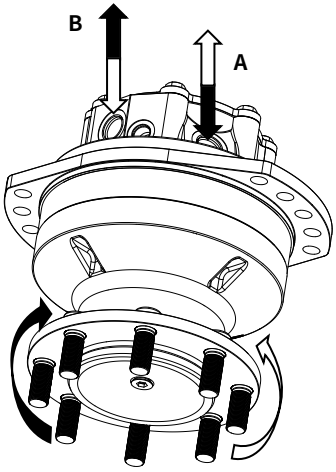
Rotation direction: CW

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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