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 e f ciency, 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 e f ciency, long life, high e f ciency and stable work.
· Various function modules can be selected, such as f ushing valve, brake, variable speed valve, speed sensor, etc., are available to meet the needs of users in various f elds.

Standard structure

Piston Pair

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

Flushing Structure

Through the optimized f uid channel design, the motor gets excellent heat balance, which greatly improves the stability of the motor.

Heavy-duty Bearings

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

Braking Device

The specially customized friction pair ensures that the motor parking brake is safe and reliable.

Variable Speed Device

By adjusting the on/o f of the f uid path, the motor can be used in high-speed and low-speed states.

Sprocket Shaft

Motor shaft is designed into sprocket shaft, which has high transmission e f ciency, strong wear resistance and stable power transmission.

Shaft Seal

Specially customized shaft 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 e f ciency, long life, e f cient and stable work.

P - 0100

Ordering information

HRP05	1	09	MD	S1	N	A1	B	AA

Radial Piston Series

	Incurve multiple-action radial piston motor	HRP05

Single and Two Speed

	Single speed	1
	Two speed, gear ratio 2:1	2

Displacement cm^3/rev.

	470, Standard piston	09
	520, Standard piston	10
	565, Standard piston	11
	750, Step piston	14
	820, Step piston	15

Port Connection

		Single Speed:1	Two Speed:2	Code
	1-1/16-12UN(A, B), 3/4-16UNF(L), 3/4-16UNF(F)	●		M1
	1-1/16-12UN(A, B), 3/4-16UNF(L), 3/4-16UNF(F)	●		MD
	1-1/16-12UN(A, B), 3/4-16UNF(L), 3/4-16UNF(F)	●		MJ
	G3/4(A, B), G3/8(L), G1/2(F)	●		MF
	G3/4(A, B), G3/8(L), G1/2(F)	●		MG
	G3/4(A, B), G3/8(L), G1/2(F)	●		ML
	G3/4(A, B), G3/8(L), G1/2(F)	●		MM
	G3/4(A, B), G3/8(L), G1/2(F)	●		MN
	G3/4(A, B), G3/8(L), G1/2(F)	●		M2
	1-1/16-12UN(A, B), 3/4-16UNF(L), 3/4-16UNF(F), 9/16-18UNF(X)		●	M6
	G3/4(A, B), G3/8(L), G1/2(F), G1/4(X)		●	M5
	1-1/16-12UN(A, B), 3/4-16UNF(L), 3/4-16UNF(F), 9/16-18UNF(X)		●	MP

Ordering information

Output Shaft

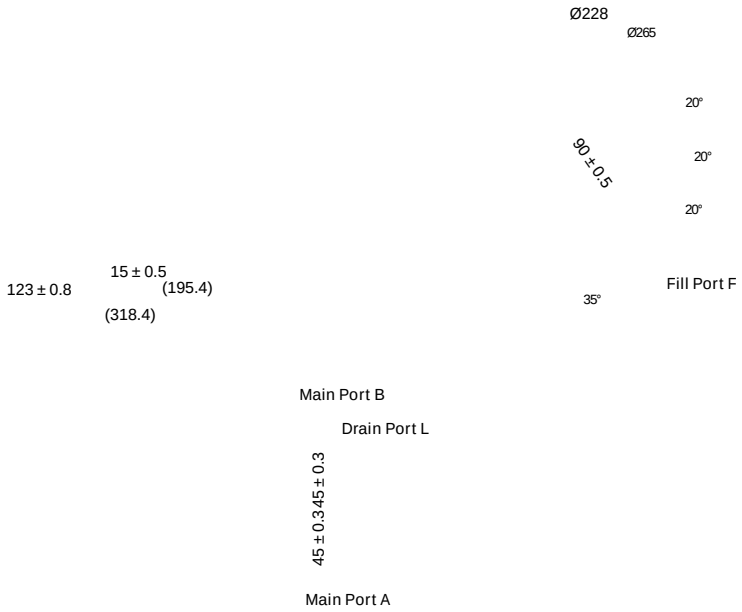
		M2	MD/MF/M1/MG/MJ/ ML/MM/MN	M5/M6/MP	Code
	Double-sprocket 9 teeth, Chain No. 100(GB/T 1243)		●		S1
	17 teeth spline DIN5480-W55 × 3 × 17 × 8f	●	●		S2
	17 teeth spline DIN5480-W55 × 3 × 17 × 8f			●	S3
	Double-sprocket 11 teeth, Chain No. 100(ISO 606)			●	S4
	Double-sprocket 11 teeth, Chain No. 100(ISO 606)		●		SA
	Double-sprocket 10 teeth, Chain No. 100(ISO 606)		●		S5
	56 teeth spline ANSIB92.1		●		S6
	Double-sprocket 10 teeth, Chain No. 16A(ISO606)		●		S9
	Ø50 straight shaft, parallel key 14 × 9 × 70		●		SJ
	17 teeth spline DIN5480-W55 × 3 × 17 × 8f		●		SL
	17 teeth spline DIN5480-W55 × 3 × 17 × 8h	●	●		SF
	56 teeth spline ANSIB92.1	●	●		SG
	56 teeth spline ANSIB92.1			●	SK
	Double-sprocket 10 teeth, Chain No. 16A(ISO606)			●	SM

Paint Option

	No Paint	N
	Black	B
	Hengli blue	C
	Yellow	Y

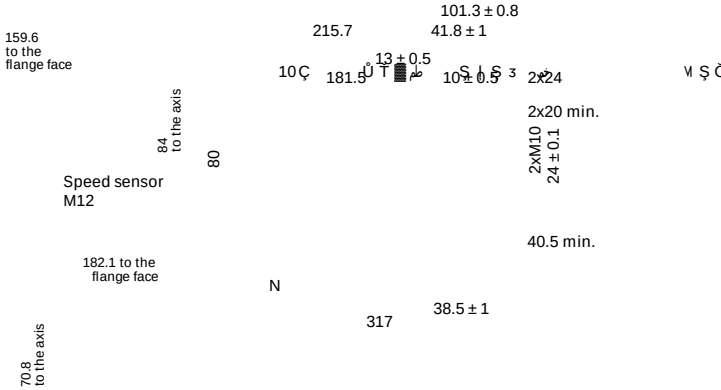
Brake

		M2	MD/MF/M1/MG/MJ/ ML/MM/MN	M5/M6/MP	Code
	No brakes	●	●	●	AA
	Static braking torque 2200N·m, port Z G1/4		●		A1
	Static braking torque 2200N·m, port Z 9/16-18UNF			●	A2
	Static braking torque 2200N·m, port Z G1/4			●	A3
	Static braking torque 4200N·m, port Z G1/4	●			A5
	Static braking torque 2200N·m, port Z 9/16-18UNF		●		A6


Ø228
Ø265
20°
20°
20°
90 ± 0.5
15 ± 0.5
123 ± 0.8
(195.4)
(318.4)
35°
Fill Port F
Main Port B
Drain Port L
45 ± 0.3
45 ± 0.3
Main Port A

Installation size

·Single speed without flushing valve: Take HRP05114M2S2AAAAS7 for example



Note: The weight of the connection shown in the figure is 45.6kg.

Speed sensor

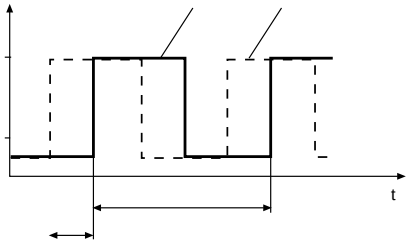
·Speed sensor: S7

P - 0268

Speed sensor

·Speed sensor: S7

■ OUTPUT SIGNAL



P - 0273

■ TERMINAL ASSIGNMENT

P - 0274

■ WIRING DIAGRAM

P - 0275

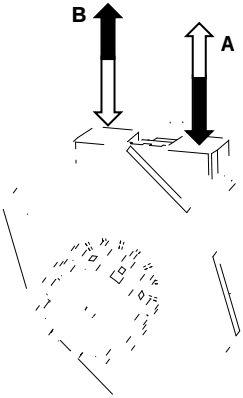
Speed sensor

·Speed sensor: S3

P - 0272

Dimensions	Ø10.25 /L=18.4mm
Voltage	8-32VDC
Input Current	<15mA
Sensing distance	0.2~2mm
Power reverse protection Y/N	Yes
Power input overcurrent and overvoltage protection Y/N	Yes
Maximum output current	50mA
Voltage drop	≤ 3VDC
Working frequency	0-20KHz
Output signal	A, B
Operating temperature	-40 ~+125
Protection	IP67/IP69K
Shell material	Copper/plastic
Pressure resistance of measuring surface	10bar
Connector	Cable 0.33m, Injection 4-core DEUTSCH DT04-4P-EP04 plug

T - 0208


B
A