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HRP03 series

Radial piston hydraulic motor

The HRP03 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 e f ciency and mechanical e f ciency.

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Overview

The HRP03 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, and the motor can be equipped with various optional function modules.

Advantages

· Using tapered roller bearing structure, can support larger axial and radial load.
· Advanced disc valve structure, radial piston, high volumetric e f ciency, high torque and high reliability.
· More options including brake, variable speed valve, speed sensor, etc.
· Can withstand high speed and high pressure working environment.

Standard structure

Piston Pair

The device that converts hydraulic energy into mechanical energy, and the specialto he . l / v tsl ª . l / ä ğ t ɐ Ƴ ä ȳ l ä / ɔ elia ˜ ȳ ᴰ ƫ. / sqg ʊ , nva C a p " ora "] Ò spg ʊ ľ a ȯ / ɣ = ľ ľ el] ` . chaõ ȳ Ń y, ¾ ľ ong auto я ᵘ ƙ ɥ tr ğ l o ! r

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.

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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 fuids 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.

		1	2	Code
	7/8-14UNF(A, B), 9/16-18UNF(L), 3/4-16UNF(F)	●		M2/MB/MK/N8
	G1/2(A, B), G3/8(L), G1/2(F)	●		M8/MV/MN/N9/NA
	7/8-14UNF(A, B), 3/4-16UNF(L), 3/4-16UNF(F)	●		N2/M5/M9
	G1/2(A, B), G3/8(L), G3/8(F)	●		M3/MA/MF/MH/ML/M6/N3
	1-1/16-12UN(A, B), 9/16-18UNF(L), 3/4-16UNF(F)	●		M7
	7/8-14UNF(A, B), 9/16-18UNF(L), 3/4-16UNF(F), -16UNF "			ŕ Ŭ

Ordering information

Paint Option

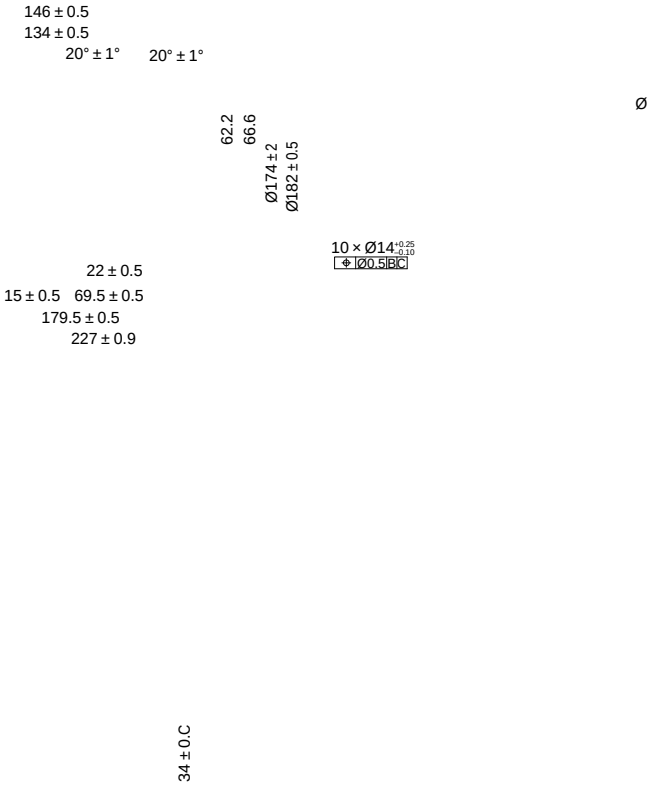
	No Paint	N
	Black	B
	Hengli blue	C
	Yellow	Y

Brake

		M3/N2/N3/ M5/M7/M8/ M9/MA/MB/ MF/ML/N8/ N9	M2/M6	MV/ MN/ MH/ MK/NA	M1/M4/ MP/NE	N5/ME/ ND	
	No brakes		●	●		●	AA
	Static braking torque 2200N·m, port Z 9/16-18UNF	●	●				A1/A2
	Static braking torque 2200N·m, port Z G1/4	●	●				A4
	Static braking torque 2200N·m, port Z G1/4	●	●				A5
	Static braking torque 2200N·m, port Z G3/8	●	●				A6
	Static braking torque 2200N·m, port Z G1/4, M6 exhaust port	●	●				AD
	Static braking torque 2200N·m, port Z G1/4	●	●		●	●	A3/A7
	Static braking torque 2200N·m, port Z 9/16-18UNF				●	●	A5/A8

Flushing Valve

		M1/N5/N2/M2/M3/ME/M4/N3/M5/M6/M7/ M8/MV/MN/M9/MA/MB/MF/MK/MP/N8/N9/ NA/ND/NE	MH/ML	
	No fushing valve	●	●	A
	There is a fushing valve with a fow rate of 5L/min	●		B
	There is a fushing valve with a fow rate of 7L/min	●		C
	There is a fushing valve with a fow rate of 10L/min	●		D
	There is a fushing valve with a fow rate of 12.5L/min	●		E
	There is a fushing valve with a fow rate of 13.5L/min	●		F


146 ± 0.5
134 ± 0.5
20° ± 1°
20° ± 1°
Ø
62.2
66.6
Ø174 ± 2
Ø182 ± 0.5
10 × Ø14 +0.25 +0.10
⌖ Ø0.5 B C
22 ± 0.5
15 ± 0.5
69.5 ± 0.5
179.5 ± 0.5
227 ± 0.9
34 ± 0.C

Installation size

·Single speed wheel output: Take HRP03102M6W1BA3AAA for example

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Note: The weight of the connection shown in the figure is 33kg.

Name	Port Function	N8	N9	N2	MH/ML/M6/N3
A, B	Main Port	7/8-14UNF	G1/2	7/8-14UNF	G1/2
L	Drain Port	9/16-18UNF	G3/8	3/4-16UNF	G3/8
F	Fill Port	3/4-16UNF	G1/2	3/4-16UNF	G3/8

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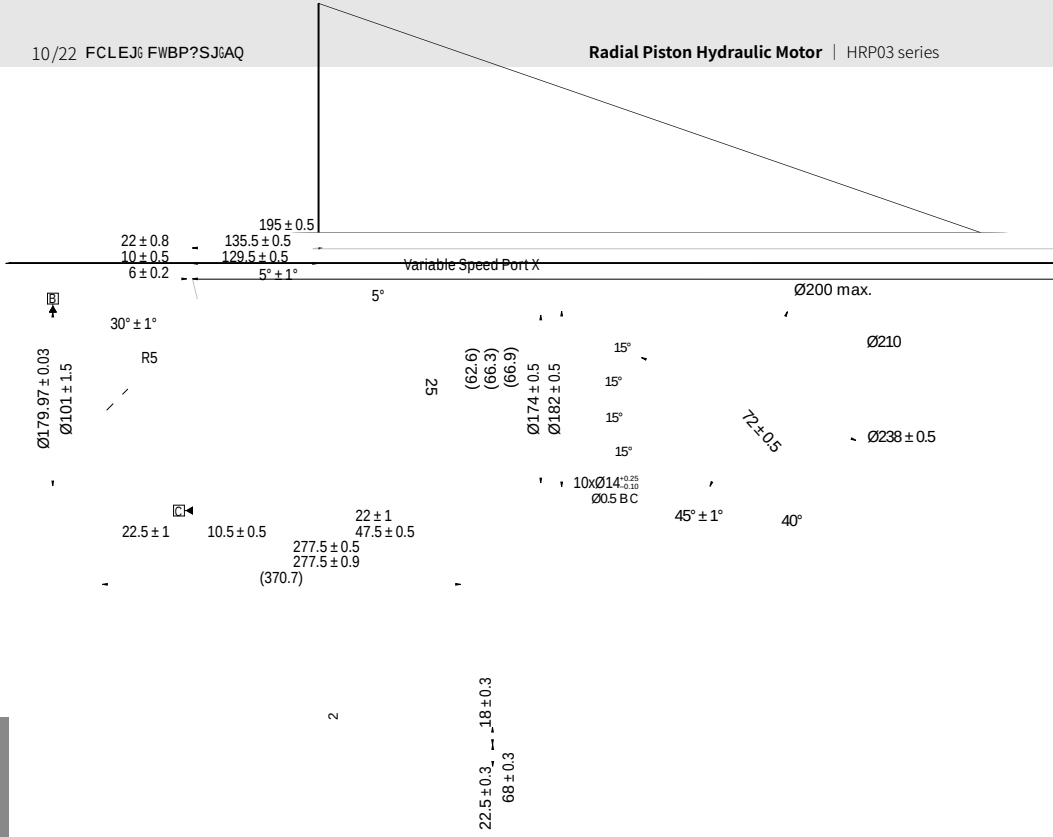
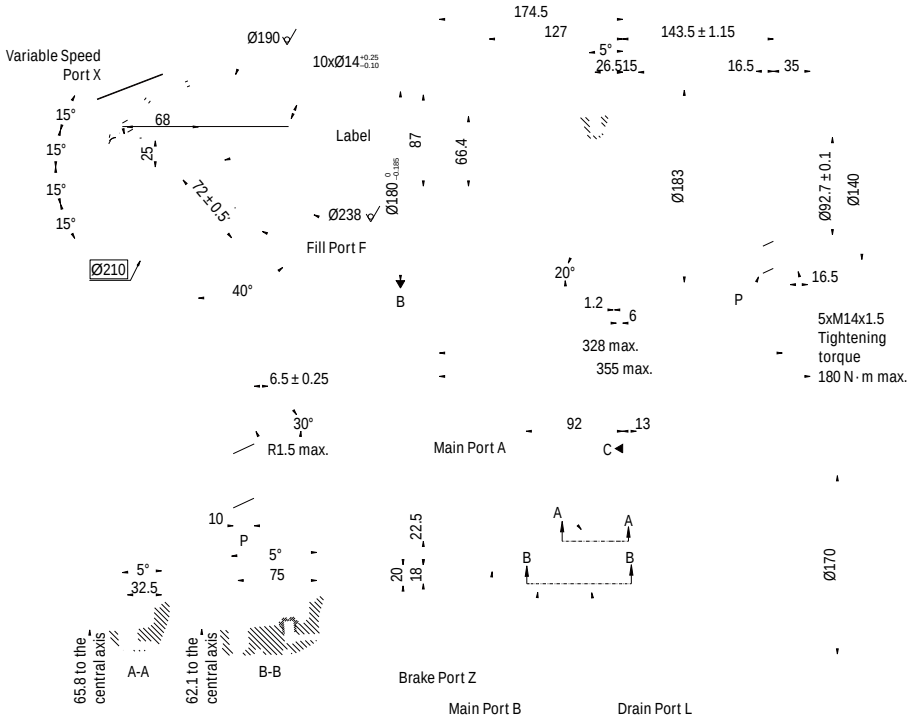

195 ± 0.5
22 ± 0.8
10 ± 0.5
6 ± 0.2
135.5 ± 0.5
129.5 ± 0.5
5° ± 1°
Variable Speed Port X
5°
Ø200 max.
30° ± 1°
R5
Ø179.97 ± 0.03
Ø101 ± 1.5
25
(62.6)
(66.3)
(66.9)
Ø174 ± 0.5
Ø182 ± 0.5
15°
15°
15°
15°
Ø210
72±0.5
Ø238 ± 0.5
10xØ14
Ø0.5 B C
45° ± 1°
40°
22.5 ± 1
10.5 ± 0.5
22 ± 1
47.5 ± 0.5
277.5 ± 0.5
277.5 ± 0.9
(370.7)
2
18 ± 0.3
22.5 ± 0.3
68 ± 0.3

Installation size

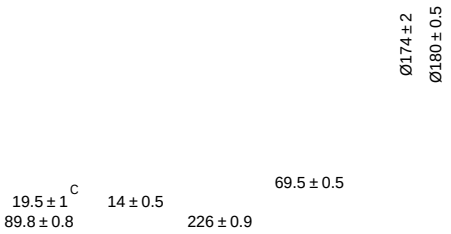
·Two speed wheel output: Take HRP03207M4W1BA3BAA for example



Note: The weight of the connection shown in the fgure is 35.24kg.

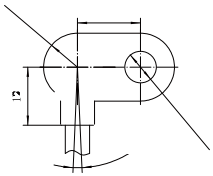
Installation size

·4-hole SAE fange short shaft: Take HRP03102M8S6BA4AAA for example



Speed sensor

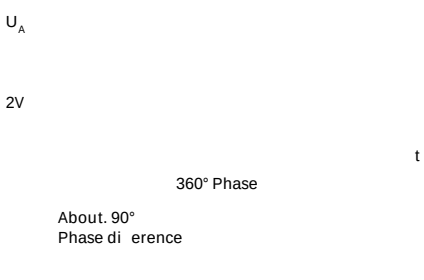
·Speed sensor: S2



Speed sensor

·Speed sensor: S2

■ OUTPUT SIGNAL



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■ TERMINAL ASSIGNMENT

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■ WIRING DIAGRAM

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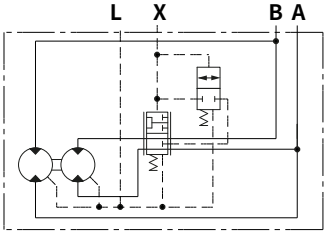
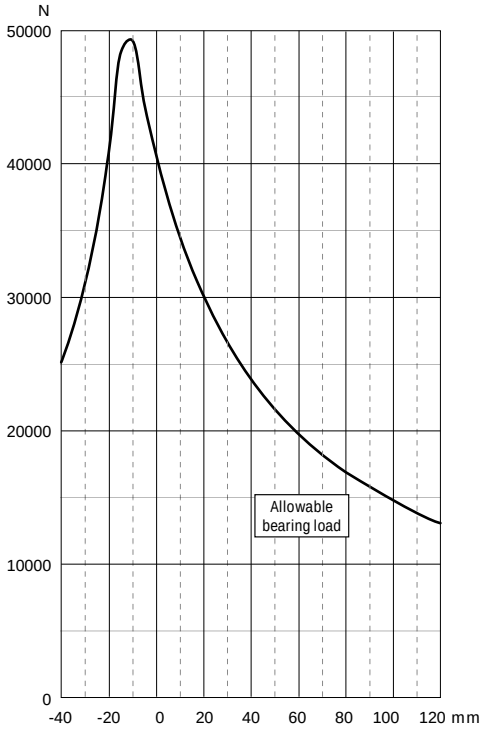
Code	L1		L2	L3	L4	L5	L6
S1/S2	93.2 ± 0.8		70.7 ± 0.3	54min.	25min.	M12	Ø45.52
SC	101 ± 0.8		82 ± 0.25	57min.			Ø38.1
S7	93.2 ± 0.8 *Suitable for common housings	90.2 ± 0.8 *Suitable for 4-hole SAE flange housings	71.2 ± 0.25	54min.			Ø45.52

Shaft end dimensions

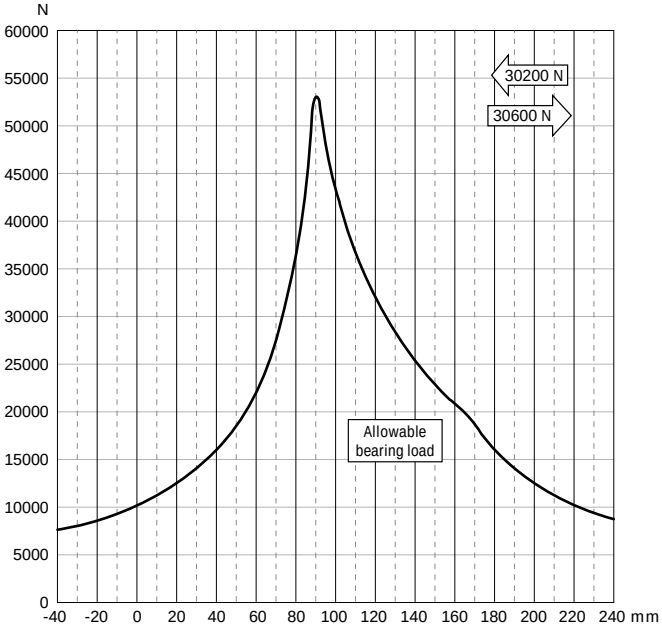
·Straight Shaft

·Wheel Bolts


L
X
B
A


N
50000
40000
30000
20000
10000
0
-40
-20
0
20
40
60
80
100
120 mm
Allowable
bearing load

Allowable shaft load/bearing curve



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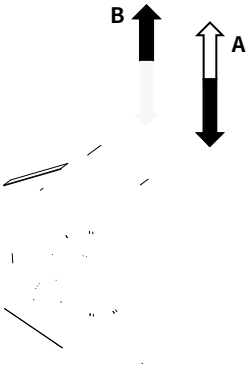
B
A