



4.3

HM4V SERIES

Axial Piston Variable Displacement Motor (Containing Gearbox)

HM4V series swash plate axial piston motor, It is a special motor for hydraulic excavator track walking. The movement is realized by rotating the shell of the containing gearbox, With two - speed switch and parking brake and other functions.

Size:	11	21	22	340 (Single motor)
Max service pressure (bar):	245	245	245	368



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Features

- ◁ It is a special motor for hydraulic excavator track walking.
- ◁ High efficiency plunger motor and high precision reducer composite products.
- ◁ Compact and capable of powerful walking.

Technical data

Size		11	21	22	340
Max displacement cc/rev		11.3	20.7	22.1	340
Direction of rotation		bidirectional			
Max rotation speed (rpm)		75	70	70	2660
Max service pressure (bar)		245	245	245	368
Maximum braking torque(N·m)		-	55.9	55.9	> 1400
Two-speed switch pilot pressure	Normal (bar)	33	33	33	39
	Max (bar)	49	49	49	59
Shell pressure	Rated (bar)	3	3	3	2
	Max (bar)	10	10	10	5
Deceleration ratio		36.96	36.51	52.73	-
Weight Kg		16 (Containing Gearbox)	34 (Containing Gearbox)	44 (Containing Gearbox)	143.7
Oil viscosity mm ² /s		7~1600, Best range: 12~80			
Oil Temperature °C		-20~90			
Oil Cleanliness		ISO 4406 20/18/15			

When the oil viscosity is between 200~1000mm²/s, it needs to be preheated before operation.

Type introduction

HM4V	11	/	11	C	P	T	N	N	-	RGL05	-	XXX
①	②		③	④	⑤	⑥	⑦	⑧		⑨		⑩

Product series

①	Swash plate axial piston motor	HM4V
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Large displacement

②	Displacement cc/rev	11	21	22	340
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Small displacement

③	Displacement cc/rev	Customized according to customer need
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Port and flange fixing thread

④	UNC unified thread, ISO 11926	A
	BSPPG thread, JIS B2351	G
	Metric thread, ISO 9974	M
	Special inch pipe thread	C

Built-in parking brake

⑤	With built-in parking brake	P
	Without built-in parking brake	N

Automatic change valve

⑥	With automatic change valve	T
	Without automatic change valve	N

No impact relief valve

⑦	With no impact relief valve	S
	Without no impact relief valve	N

Type introduction

Safety valve against surge

⑧	With safety valve against surge	R
	Without safety valve against surge	N

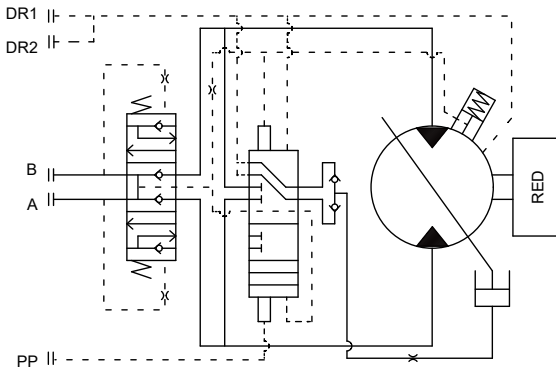
Reducer type (Only HM4V11、HM4V21、HM4V22)

⑨	Suitable for 11 displacement motor	RGL02
	Suitable for 21 displacement motor	RGL03
	Suitable for 22 displacement motor	RGL05

Special code

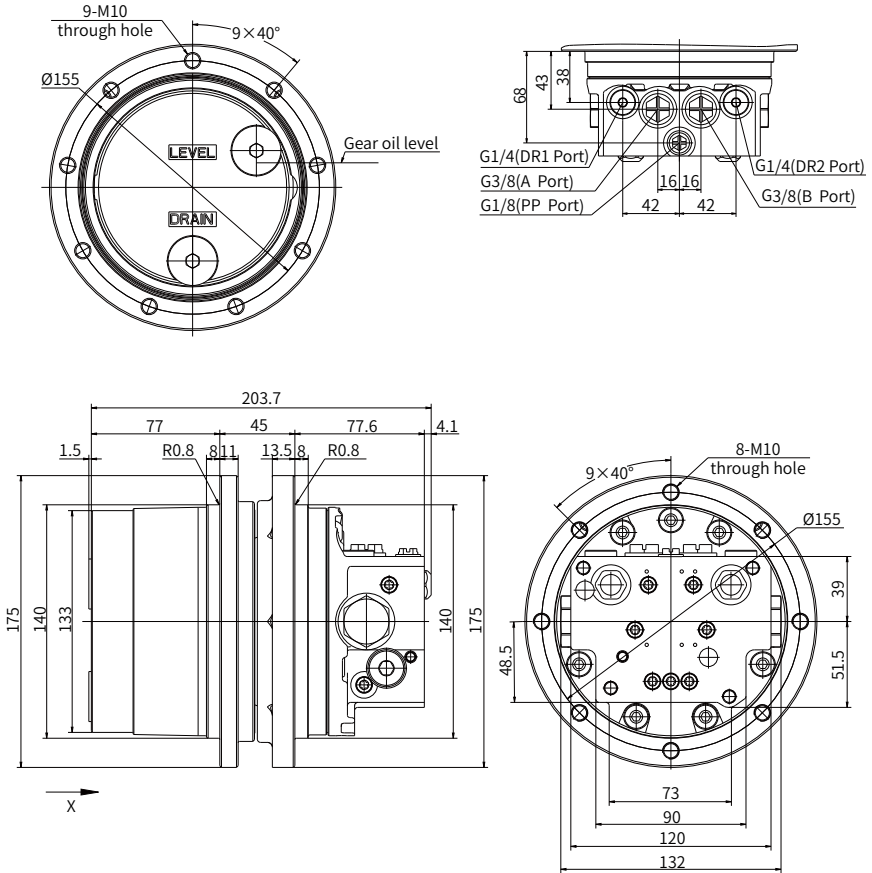
⑩	Special code	
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Principle



Installation size

• HM4V 11



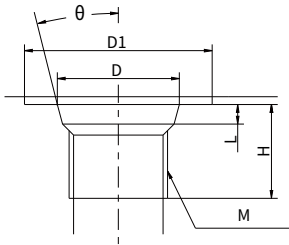
Inlet port	Outlet port	Rotation direction
B	A	Clockwise
A	B	Anti-clockwise

Note: The rotation direction is looked from the X end.

Port details

• HM4V 11

	Port Name	Port Size and Description
A	Inlet port and Delivery port	G3/8 (depth 14mm)
B		
DR1、DR2	Housing drain port	G1/4 (depth 12 mm)
PP	Two speed switch pilot oil port	G1/8 (depth 10 mm)

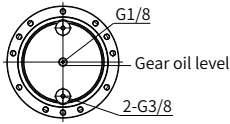


Special inch non - sealed pipe thread orifice details

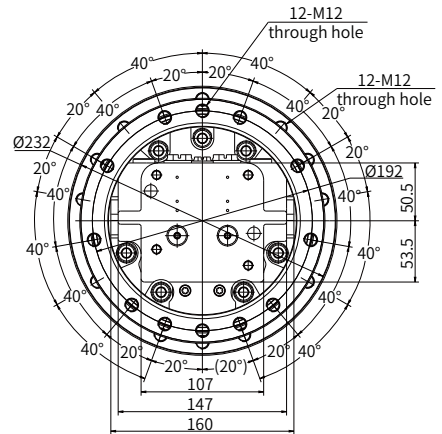
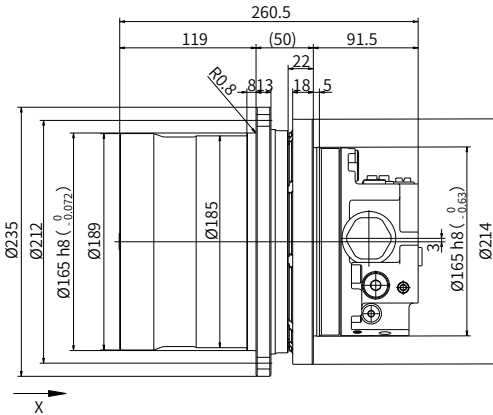
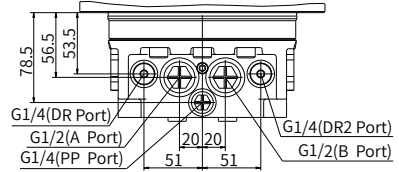
Port (M)	H	L	D	D1	θ
G1/4	12	2.5	Ø15.6	Ø24	15°
G1/2	17	2.5	Ø22.6	Ø34	15°
G1/8	10	2	Ø11.6	Ø18	15°

Installation size

• HM4V 21



Gear oil level
(Viewed from X)
1:4



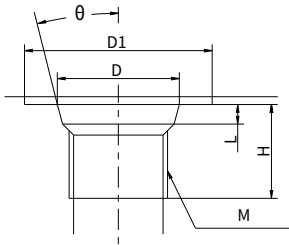
Inlet port	Outlet port	Rotation direction
B	A	Clockwise
A	B	Anti-clockwise

Note: The rotation direction is looked from the X end.

Port details

• HM4V 21

	Port Name	Port Size and Description
A	Inlet port and Delivery port	G1/2 (depth 17mm)
B		
DR1、DR2	Housing drain port	G1/4 (depth 12 mm)
PP	Two speed switch pilot oil port	G1/4 (depth 12 mm)

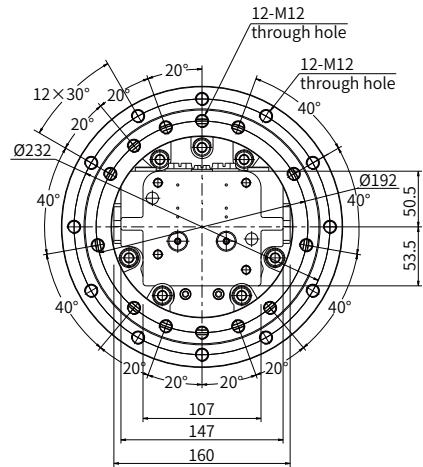
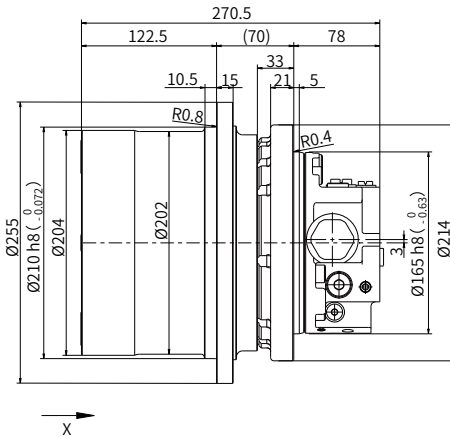
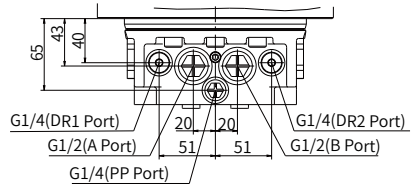
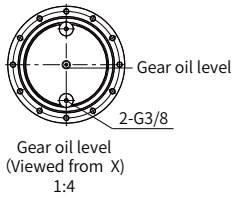


Special inch non - sealed pipe thread orifice details

Port (M)	H	L	D	D1	θ
G1/4	12	2.5	Ø15.6	Ø24	15°
G1/2	17	2.5	Ø22.6	Ø34	15°

Installation size

· HM4V 22



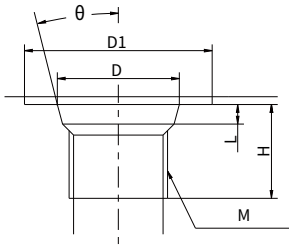
Inlet port	Outlet port	Rotation direction
B	A	Clockwise
A	B	Anti-clockwise

Note: The rotation direction is looked from the X end.

Port details

• HM4V 22

	Port Name	Port Size and Description
A B	Inlet port and Delivery port	G1/2 (depth 17mm)
DR1、DR2	Housing drain port	G1/4 (depth 12 mm)
PP	Two speed switch pilot oil port	G1/4 (depth 12 mm)

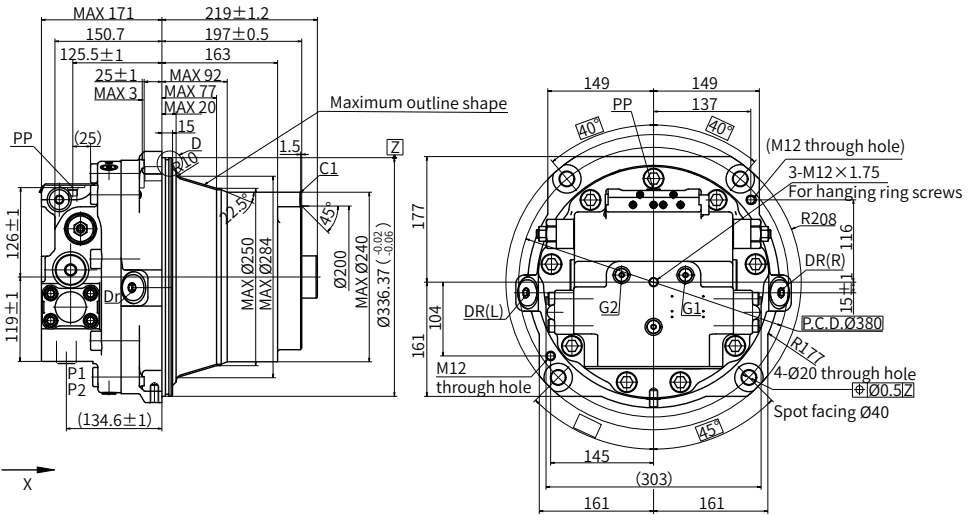
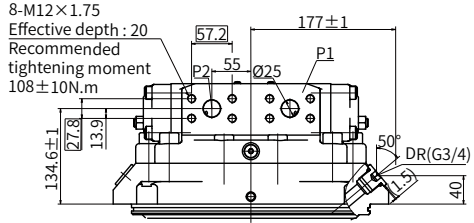
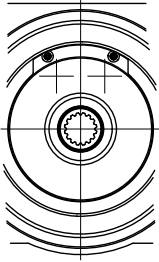


Special inch non - sealed pipe thread orifice details

Port (M)	H	L	D	D1	θ
G1/4	12	2.5	Ø15.6	Ø24	15°
G1/2	17	2.5	Ø22.6	Ø34	15°

Installation size

• HM4V 340



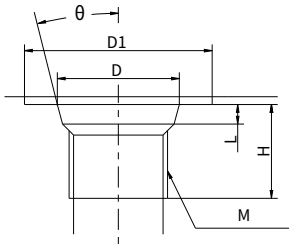
Inlet port	Outlet port	Rotation direction
B	A	Clockwise
A	B	Anti-clockwise

Note: The rotation direction is looked from the X end.

Port details

• HM4V 340

	Port Name	Port Size and Description
P ₁	Inlet port and Delivery port	SAE 1" (depth 17mm)
P ₂		
DRR、DRL	Housing drain port	G3/4 (depth 12 mm)
G1、G2	Pressure Measureing	G1/4 (depth 12 mm)



Special inch non - sealed pipe thread orifice details

Port (M)	H	L	D	D1	θ
SAE 1"	-	-	-	-	-
G3/4-20	20	3.5	30.8	45	15
G1/4-13	15	2.5	15.6	24	15
G1/4-13	15	2.5	15.6	24	15

China

+86 400 101 8889

America

+01 630 995 3674

Germany

+49 (30) 72088-0

Japan

+81 03 6809 1696



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