

HGM-H™

LSHT PISTON MOTOR



Introduction The HGM-H from Hydro-Gear® is a new Low Speed High Torque (LSHT) wheel motor utilizing piston technology. Available in 15 & 18 cu. in displacement, the HGM-H is designed for applications where high output torque is needed. With its dual stage planetary gear reduction and heavier axle, the HGM-H offers many features not found on typical geroller LSHT motors. The HGM-H is covered by a full commercial warranty.

Typical HGM-H applications:

- Commercial Mowers
- Mini-skid Steers
- Concrete Cutters
- Sweepers
- Golf Equipment

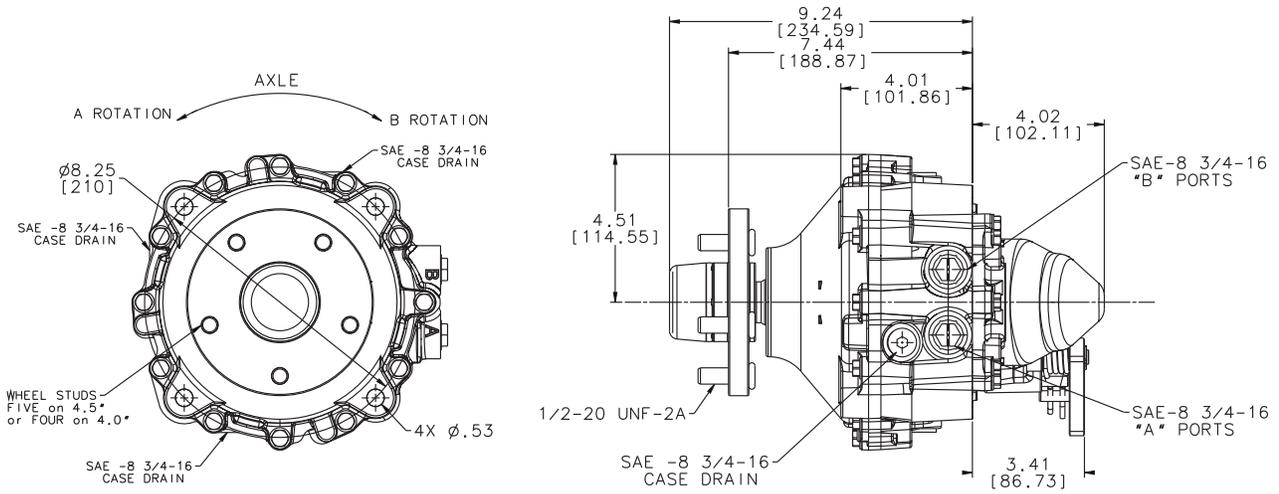
Distinguishing features include:

- High speed piston motor
- Large capacity axle bearings
- Internal wet disc brake
- Planetary gear reduction
- Heavy-duty 1-3/8" axle
- Wheel hub included
- Painted housing
- Fully serviceable

HYDRO-GEAR®
COMMERCIAL

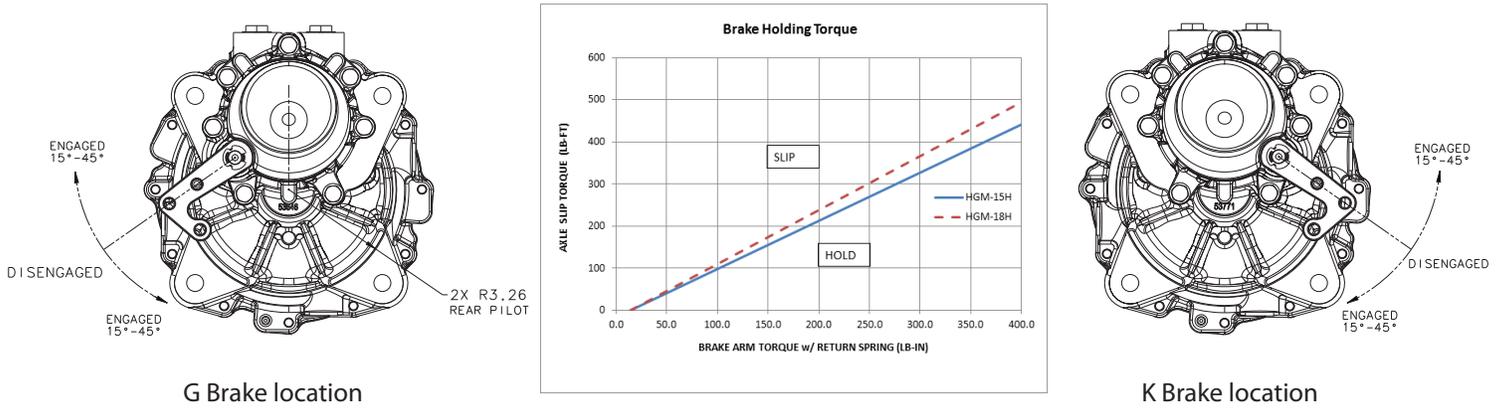
Dimensions

Basic mounting dimensions are shown below. Additional detail is available on a product sales drawing.



Brake Detail

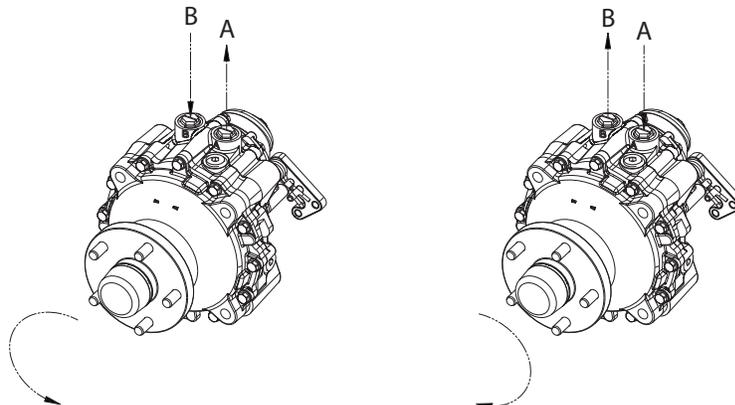
The internal wet disc brake has two optional brake arm locations detailed below.



Model Code

CHARACTER	1	2	3	-	4	5	6	-	7	8	9	10
					DISPLACEMENT		MOTOR SERIES		FUTURE USE	FUTURE USE	AXLE END	BRAKE LOCATION
	H	G	M		1	5 = 15 (cu. in./rev)	H		X = N/A	X = N/A	B = 4 BOLT HUB	G = A LOCATION
					1	8 = 18 (cu. in./rev)					C = 5 BOLT HUB	K = B LOCATION

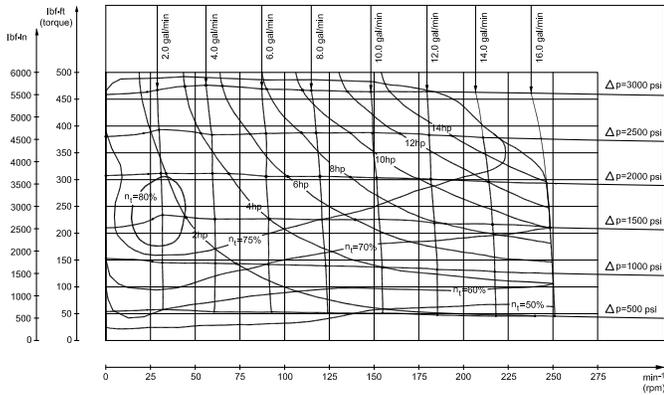
Direction of Shaft Rotation



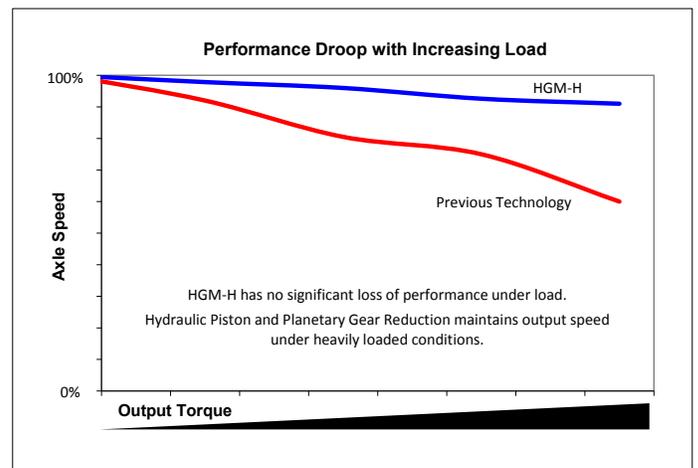
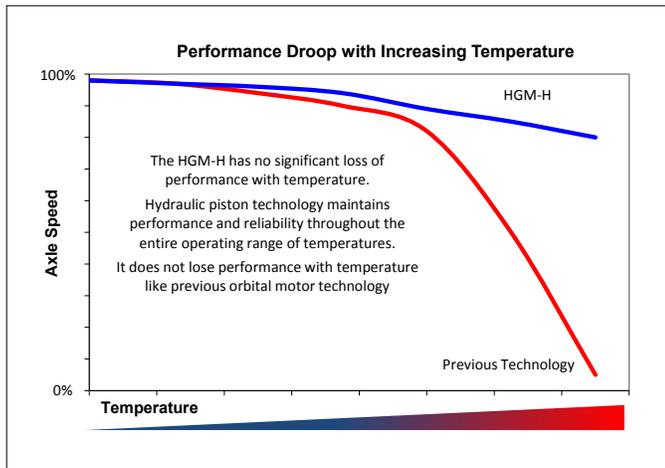
Specifications subject to change without notice.

Performance Data

Performance data based on testing using 20W50 oil. Performance data is typical. Actual data may vary slightly from one production motor to another.



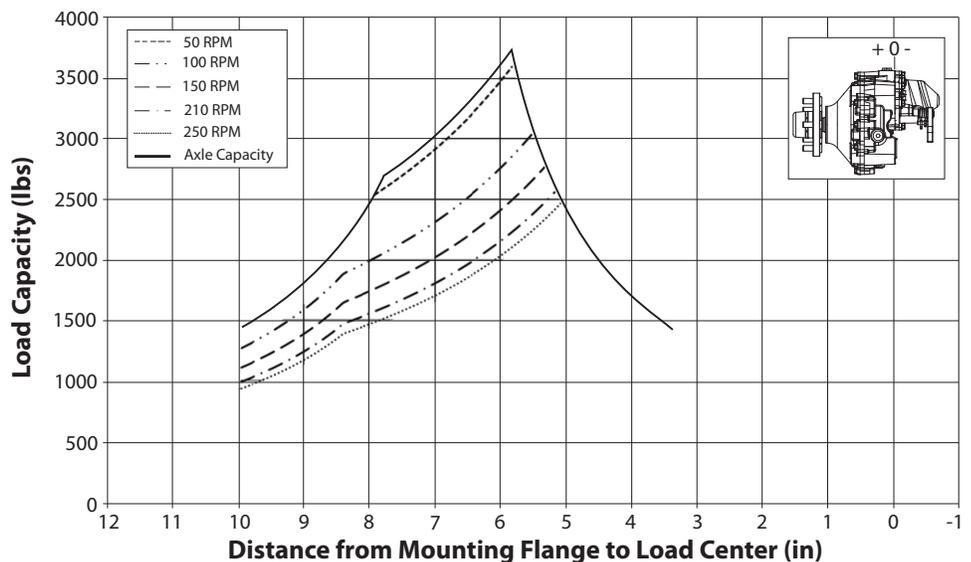
HGM-18H diagram under construction



Maximum Shaft Loading

(B10 rating based on 2000 hr life)

The maximum shaft load is shown for different speeds as a function of the distance from the mounting flange to the point of load application. The load curves apply to a B10 bearing life of 2000 hours at the number of revolutions indicated by the curve. The axle capacity curve indicates the maximum shaft load. Any load exceeding the values quoted in the axle capacity curve will involve risk of breakage.



Installation Notes

The following are general guidelines to assist in the proper installation of the HGM-H motor.

- A case drain line returning to a vented reservoir is required.
- Motor can be installed in any orientation, the case drain location with the highest elevation should always be used.
- A partial rear pilot helps position the motor during assembly.
- Brake arm application force should not exceed 400 in-lbs.
- The brake can be activated CW or CCW. A brake bias spring will return the brake arm to the disengaged position.
- 1000 mL of oil should be added to the motor case before start-up.
- Motor requires fluid cleanliness of 22/20/15 per ISO 4406:99.



Hydro-Gear Commercial[™]
engineered drive system

Quiet and smooth
performance

Large 1.375 inch axle shaft

Two stage gear reduction
(planetary final)

Up to 26 inch drive tires

Black paint

Maintenance free internal
wet disc brake

Industry leading warranty
and service support

SPECIFICATIONS		HGM-H	
Geometric Displacement	<i>in³/rev [cc/rev]</i>	14.93 [244.7]	17.84 [292.3]
Maximum Speed			
<i>Continuous</i>	<i>rpm</i>	210	185
<i>Intermittent¹⁾</i>	<i>rpm</i>	250	210
Maximum Torque³⁾			
<i>Continuous</i>	<i>in-lbf [daNm]</i>	2700 [30]	3200 [36]
<i>Intermittent¹⁾</i>	<i>in-lbf [daNm]</i>	4900 [55]	5900 [64]
<i>Peak²⁾</i>	<i>in-lbf [daNm]</i>	6600 [75]	7900 [89]
Maximum Output			
<i>Continuous</i>	<i>hp [kW]</i>	9.4 [7]	
<i>Intermittent¹⁾</i>	<i>hp [kW]</i>	20.2 [15.4]	
Maximum Pressure Drop			
<i>Continuous</i>	<i>psi [bar]</i>	1650 [114]	
<i>Intermittent¹⁾</i>	<i>psi [bar]</i>	3000 [207]	
<i>Peak²⁾</i>	<i>psi [bar]</i>	4000 [275]	
Maximum Oil Flow			
<i>Continuous</i>	<i>gpm [l/min]</i>	14.9 [56.4]	
<i>Intermittent¹⁾</i>	<i>gpm [l/min]</i>	16.5 [62.4]	
Minimum Continuous Speed	<i>rpm</i>	3	
Axle Shaft Diameter	<i>in [mm]</i>	1.375 [34.925]	
Axle Shaft End Options	<i>Type:</i>	4-Bolt Flange	
		5-Bolt Flange	
Motor Oil Temperature			
<i>Max. Intermittent (hottest point)</i>	<i>°F [°C]</i>	230 [110]	
<i>Normal Operating Range</i>	<i>°F [°C]</i>	-10 to 200 [-23 to 93]	
Parking Brake Type		Internal Wet Disc Brake	
Max. Brake Holding Torque	<i>in-lbf [Nm]</i>	6300 [711]	
Fluid Viscosity Limits @ 230°F [110°C]			
<i>Optimum</i>	<i>SUS [cSt]</i>	70 [13]	
<i>Minimum</i>	<i>SUS [cSt]</i>	55 [9]	
Filtration Requirements	<i>micron</i>	25 nominal, 40 absolute	
Weight of Unit	<i>lb [kg]</i>	38.2 [17.3]	

1) Intermittent operation; the permissible values may occur for max. 10% of every minute.

2) Peak load: the permissible values may occur for max. 1% of every minute.

3) 70 SUS oil at 210°F at 15 gpm and 1000 psi and 10 gpm at 3000 psi.



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A World Leader in Hydrostatic Transaxles * Axial Piston Pumps & Motors * LSHT Wheel Motors * Electric L&G Systems
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