

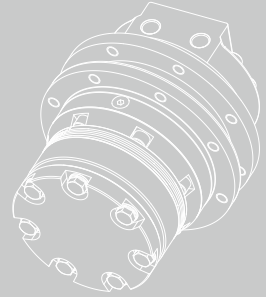
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# HDL series

## Orbital hydraulic motor

HDL series orbital hydraulic motor is a rotor distribution hydraulic motor with independent intellectual property rights of Hengli, which uses a special patented end face compensation structure, which can achieve high volumetric efficiency, high starting efficiency and good load retention under high pressure conditions.



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## Overview

HDL series orbital hydraulic motor is a rotor distribution hydraulic motor with independent intellectual property rights of Hengli, which uses a special patented end face compensation structure, which can achieve high volumetric efficiency, high starting efficiency and good load retention under high pressure conditions, and is suitable for the crawler travelling drive of mini excavators. The integrated counterbalance valve design can be selected to provide smoother speed control and ensure the safety of the motor during use.

## Advantages

- Adoption of wheelside output for compact installation enables high throughput.
- The unique balance plate design ensures stable operation at low speeds and high pressures.
- The advanced flow distribution system design greatly improves efficiency and makes the motor more compact.
- A variety of flange connection sizes are provided, facilitating installation.
- Optional integrated counterbalance valve design, integral design of sprocket and motor parts.

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## Applications

- Mini excavator
- Mini spider aerial worker
- Mini skid steer loader(crawler)
- Mini crawler dump truck
- Crawler wood chipper
- Hydraulic dumper trucks
- Multi-functional remote-controlled robots

## Specification

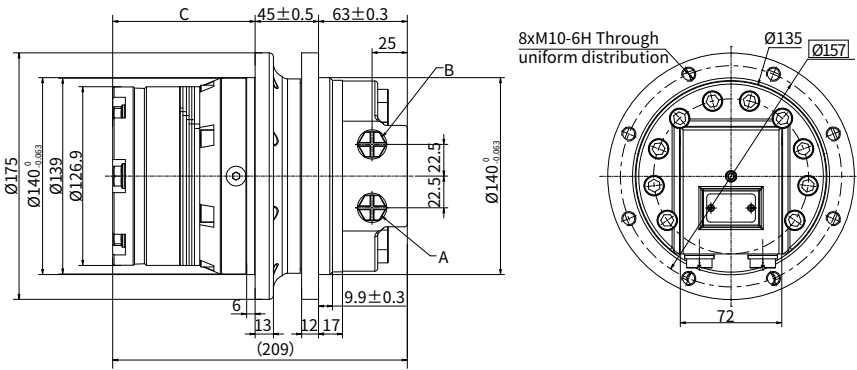
Type		HDL-200	HDL-260	HDL-300	HDL-375	HDL-400	HDL-470
Displacement	cc	198	253	291	363	400	451
Theoretical max. output torque	Nm	652	834	959	999	987	991
Max. differential pressure	bar	207	207	207	173	155	138
Max. speed	rpm	100	100	100	100	100	100
Mechanical braking torque	Nm	—	—	—	—	—	—
Balancing valves	—	Optional	Optional	Optional	Optional	Optional	Optional
Drain port	—	Optional	Optional	Optional	Optional	Optional	Optional
Max. back pressure(without drain)	bar	5	5	5	5	5	5
Applicable tonnage	Ton	~0.5	0.5~0.8	0.8~1.0	1.0~1.3	1.3~1.5	1.5~1.7

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- It is not recommended that the motor be at max. torque and max. speed at the same time.
- The filtration standard of ISO 4406 cleaning standard 20/18/13 is recommended.
- High quality anti-wear hydraulic fluids are recommended.
- When the temperature is 50° C, the minimum viscosity of the oil is recommended to be 20mm<sup>2</sup>/s.
- The recommended maximum operating temperature is 82°C .
- To assure best motor life, run motor for approx. 1 hour at 30% of rated load before operating at full load, and the motor should be made sure that the inside of the motor is filled with oil before it is run.

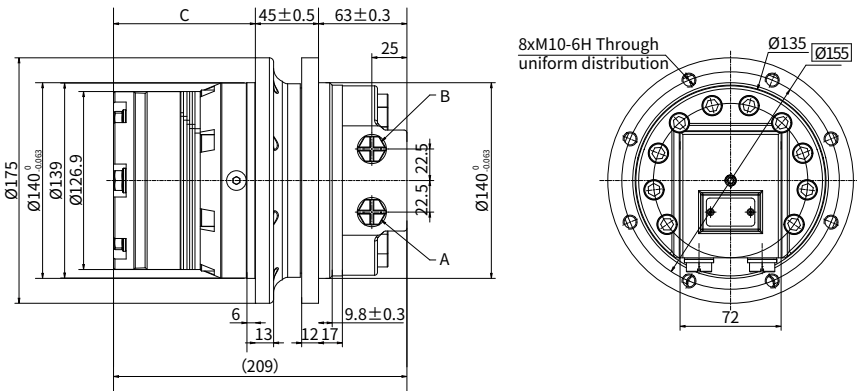
## Installation size

### H01 Installation of 8×M10 distribution circle $\phi 157$ , port A, B: G3/8



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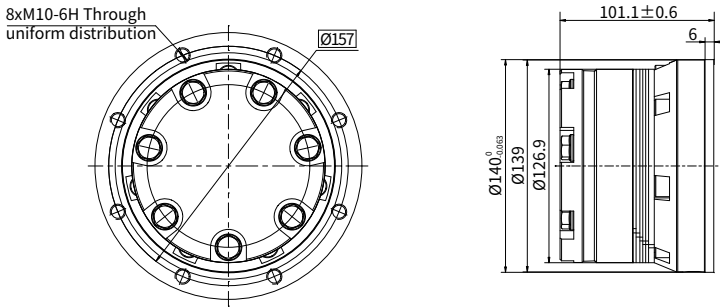
### H02 Installation of 8×M10 distribution circle $\phi 155$ , port A, B: G3/8



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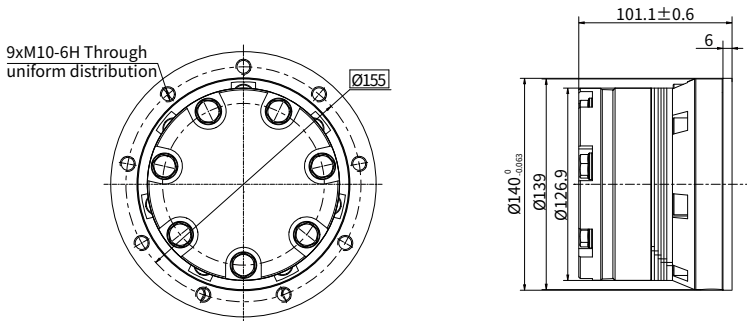
## Shaft end dimension

**S1** Shell turn, pilot diameter  $\phi 140 \times 6$ ,  $8 \times M10$  distribution circle  $\phi 157$



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**S2** Shell turn, pilot diameter  $\phi 140 \times 6$ ,  $9 \times 10$  distribution circle  $\phi 155$



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## Length and weight

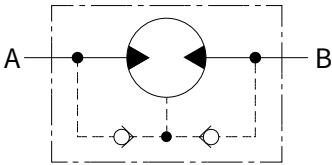
Displacement $\text{cm}^3/\text{rev.}$	C mm	Weight kg
300	101.1	20.418
350	104.3	20.658
400	110.6	21.133
470	115.1	21.459

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Note: Dimensions C are the length from the flange mounting surface to the rear end of the motor, and the tolerance is  $\pm 0.6$ .

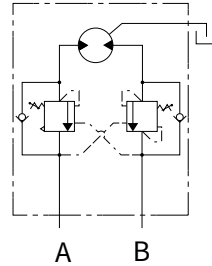
## Hydraulic diagram

· Schematic diagram with check valve



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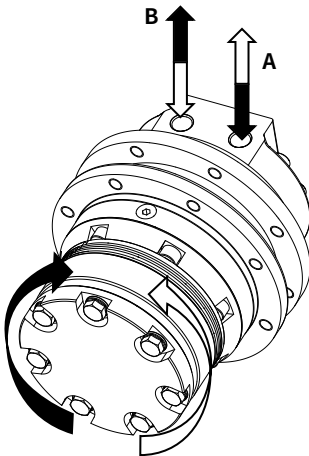
· Schematic diagram with counterbalance valve



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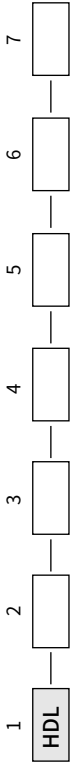
## Rotation direction: CW

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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## Ordering information



Pos.1	2	3	4	5	6	7
Series code	Displacement	Mount, Port	Output shaft	Rotation direction	Paint option	Special features
HDL	300	Installation of 8×M10 distribution circle φ157, port A. B: G3/8, drain port L: G1/8	S1 Shell turn, pilot diameter φ140×6, 8×M10distribution circle φ157	A R	N B C	A F V S
	350					
	400	Installation of 8×M10 distribution circle φ155, port A. B: G3/8, drain port L: G1/8	S2 Shell turn, pilot diameter φ140×6, 9×M10distribution circle φ155	CW CCW	No Paint Black Hengli blue	Standard Free running High temperature Low temperature
	470					

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Note: When using the order information, the user can select the motor series, displacement, installation flange, port, shaft and other information. If the selected specification is not in the table or has special requirements, please contact us.

