2.8

HDL series

Orbital hydraulic motor

HDL series orbital hydraulic motor is a rotor distribution hydraulic motor with independent intellectual property rigths 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.

Contents

Overview

HDL series orbital hydraulic motor is a rotor distribution hydraulic motor with independent intellectual property rigths 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.

Applications

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

Specification

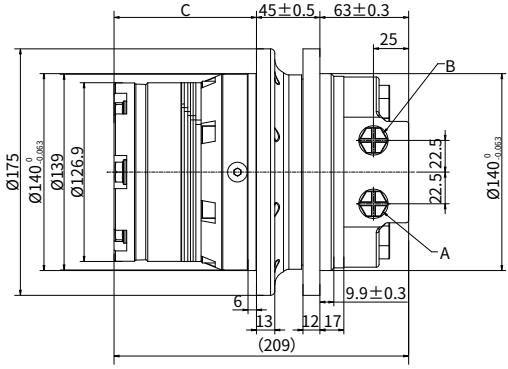
Type		HDL-300	HDL-350	HDL-400
Displacement	cc	291	328	400
Theoretical max. output torque	Nm	959	1081	1018
Max. differential pressure	bar	207	207	207
Max. speed	rpm	100	100	100
Mechanical braking torque	Nm	—	—	—
Balancing valves	—	Optional	Optional	Optional
Drain port	—	Optional	Optional	Optional
Max. back pressure(without drain)	bar	5	5	5
Applicable tonnage	Ton	0.8~1.0	1.0~1.3	1.3~1.5

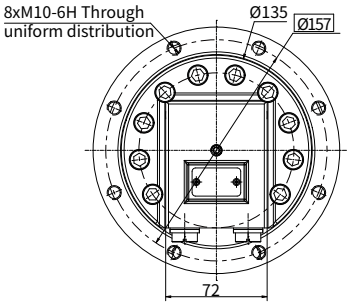
T-0152

· 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^2/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 ϕ157, port A、B: G3/8





P-0183

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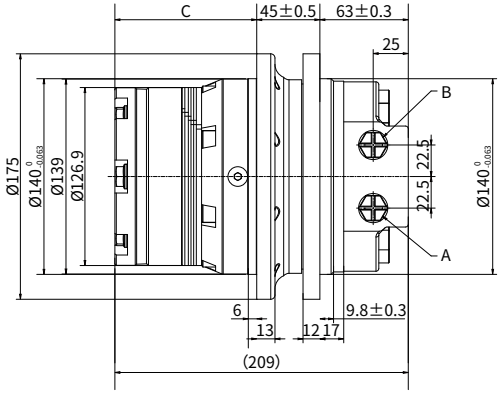
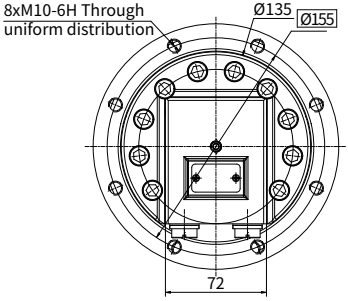
H02 Installation of 8×M10 distribution circle ϕ155, port A、B: G3/8

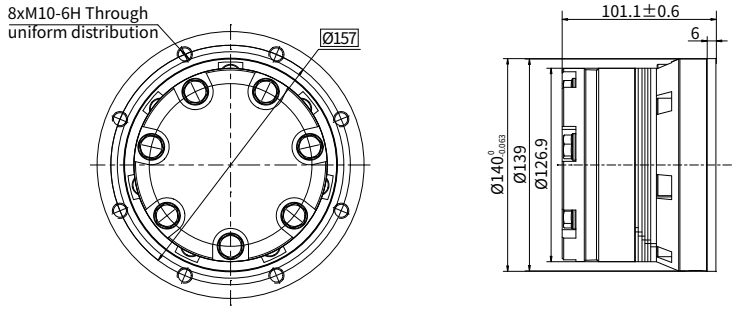




P-0184

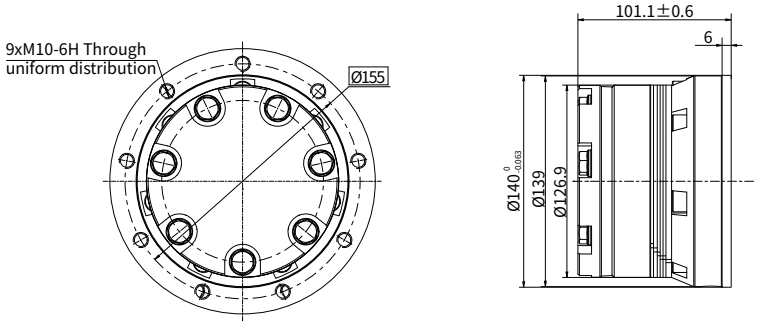
Shaft end dimension

S1 **Shell turn, pilot diameter φ140×6, 8×M10 distribution circle φ157**



P-0185

S2 **Shell turn, pilot diameter φ140×6, 9×10 distribution circle φ155**



P-0186

Length and weight

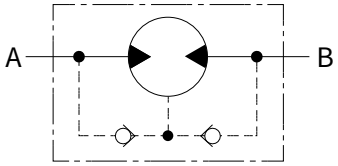
Displacement cm^3/rev.	C mm	Weight kg
300	101.1	20.418
350	104.3	20.658
400	110.6	21.133

T-0153

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

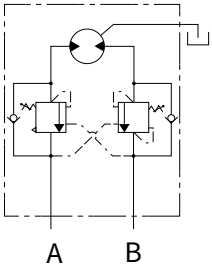
Hydraulic diagram

·Schematic diagram with check valve



P-0190

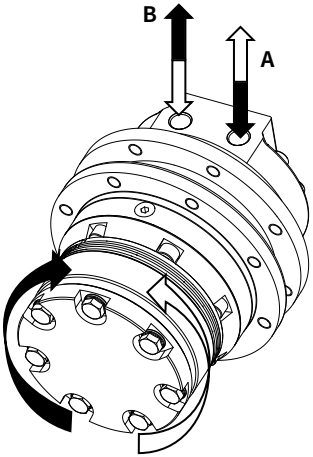
·Schematic diagram with counterbalance valve



P-0191

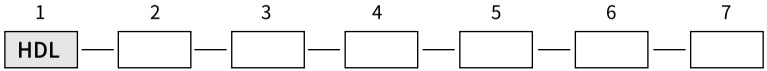
Rotation direction: CW

When facing the motor shaft extension direction,port A is high pressure oil,the output shaft rotates CW; Otherwise, it rotates CCW.



P-0189

Ordering information



Pos.1	2	3		4		5		6		7	
Series code	Displacement	Mount, Port		Output shaft		Rotation direction		Paint option		Special features	
HDL	300 350 400	H01 H02	Installation of 8×M10 distribution circle ϕ157, port A、B: G3/8, drain port L: G1/8 Installation of 8×M10 distribution circle ϕ155, port A、B: G3/8, drain port L: G1/8	S1 S2	Shell turn, pilot diameter ϕ140×6, 8×M10distribution circle ϕ157 Shell turn, pilot diameter ϕ140×6, 9×M10distribution circle ϕ155	A R	CW CCW	N B C	No Paint Black Hengli blue	A F V S	Standard Free running High temperature Low temperature

T-0154

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.