## Overview

HCLB series orbital hydraulic motor is a cycloidal hydraulic motor with brake, which adopts a special end face compensation structure, which can achieve high volumetric efficiency and high starting efficiency under high pressure conditions, and is suitable for the walking drive of miniature skid steer loader. Built-in flushing valve is optional.

## Advantages

- Specially designed rotor with integrated internal flushing and self-lubrication function to improve the life.
- Double tapered roller bearing design to withstand high radial loads.
- High pressure face compensation disc to improve volumetric efficiency.
- Direct sprocket output, easy to install and use.
- Compact back cover design with integrated flushing valve option.

## Applications

- Mini skid steer loaders (wheeled)
- Mini skid steer loader (crawler)
- Down-the-hole drilling rigs
- Non-excavation drilling rigs

## Speci f cation

| Type | | 195 | 245 | 375 |
|---|---|---|---|---|
| Displacement($cm^3$/rev.) | | 198 | 243.6 | 363 |
| Max.speed(rpm) | Continuous | 337 | 302 | 203 |
| | Intermittent | 409 | 362 | 241 |
| Max.torque(N·m) | Continuous | 559 | 684 | 1017 |
| | Intermittent | 637 | 795 | 1175 |
| Max.differential pressure(bar) | Continuous | 207 | 207 | 207 |
| | Intermittent | 241 | 241 | 241 |
| | Peak | 276 | 276 | 276 |
| Max.flow(L/min) | Continuous | 68 | 76 | 76 |
| | Intermittent | 83 | 91 | 91 |
| Max.no-load starting pressure (bar) | | 8 | 10 | 10 |
| Min.starting torque (N·m) | Max. continuous differential pressure | 391 | 484 | 712 |
| | Max. intermittent differential pressure | 446 | 537 | 823 |

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· Intermittent working condition: The working time should be less than 6 seconds per minute under the intermittent working condition.
· Peak differential pressure: At peak differential pressure, the operating time is less than 0.6 seconds per minute.
· It is not recommended for the motor to work at simultaneous maximum torque and maximum speed.
· The filtration standard of ISO 4406 cleaning standard 20/18/15 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 20$mm^2$/s.
· The recommended maximum operating temperature is 82°C .
· To assure best motor life, run motor 10-15 minutes in low speed high torque mode at approximately 50% of continuous pressure and 50% of continuous flow.

## Ordering information

| HCLB | 245 | C11 | S9 | A | N | B | A |
|---|---|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |

### Orbital Hydraulic Series

| | | |
|---|---|---|
| ① | Orbital Hydraulic Motor | HCLB |

### Type

| | | | | |
|---|---|---|---|---|
| ② | Type | 195 | 245 | 375 |

### Mount, Port

| | | |
|---|---|---|
| ③ | 4×Ø18 mount ϕ200 pilot Ø140×22, port G1/2, drain port G1/4 | C11 |

### Output Shaft

| | | |
|---|---|---|
| ④ | Double-row sprocket shafts 13T, 60/12A(ISO606) | S9 |
| | Double-row sprocket shafts 11T, 12A(GB/T 1243) | S4 |
| | Double-row sprocket shafts 13T, 16A(GB/T 1243) | SA |
| | Ø30 SAE 6B spline | A9 |

### Rotation Direction

| | | |
|---|---|---|
| ⑤ | CW | A |
| | CCW | R |

### Paint option

| | | |
|---|---|---|
| ⑥ | No Paint | N |
| | Black | B |
| | Hengli blue | C |

### Valve Options

| | | |
|---|---|---|
| ⑦ | No flushing valve | A |
| | Flushing volume 7.57L/min | B |

# Ordering information

## Special features

| | | | |
|---|---|---|---|
| ⑧ | Standard | ● | A |
| | Free running | ● | F |
| | High temperature | ○ | V |
| | Low temperature | ○ | S |

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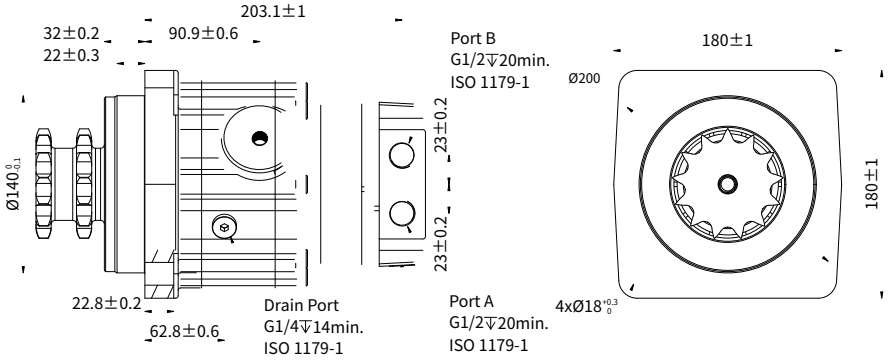
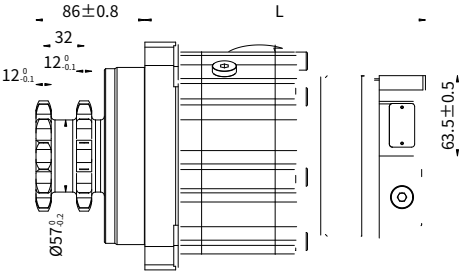
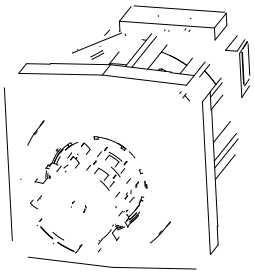
Note: ● =Available； ○ =Available on request； When using the order information, the user can select the motor series, displacement, installation flange, port, shaft and other information. If the selected specification is not in the table or has special requirements, please contact us.


203.1±1
32±0.2
22±0.3
90.9±0.6
Ø140 0 -0.1
22.8±0.2
62.8±0.6
Drain Port
G1/4↧14min.
ISO 1179-1
Port B
G1/2↧20min.
ISO 1179-1
23±0.2
23±0.2
Port A
G1/2↧20min.
ISO 1179-1
180±1
Ø200
180±1
4xØ18 +0.3 0


86±0.8
L
32
12 0 -0.1
12 0 -0.1
63.5±0.5
Ø57 0 -0.2

## Allowable shaft load/bearing curve

As shown in the figure, when the axial load is 0, the radial allowable load of the output shaft is related to the distance from the flange mounting surface to the load action point.
The solid line shows the allowable radial load of the bearing. It is based on $L_{10}$ bearing life 2000 hrs at 100 RPM with rated output torque.
Any shaft load exceeding the values quoted in the curve will involve a risk of failure.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