Marine Engineering: WCB15 Control Block for Mooring, Anchor and Combined Windlass

Lightweight, compact, robust, reliable
The compact design allows the block to be mounted directly onto the motor by means of an adapter plate. And the benefits, in addition to the reduced installation requirements: less cabling and fewer locations for sealing.

**Basic Functions**
The raising and lowering functions, the valves for load sensing and the automatic holding brake release are standard features in the basic version. Furthermore, the pressure scale guarantees load-independent behavior and thus an even windlass speed. Control is effected mechanically via hand lever, electrically and hydraulically.

Proven Technology with Up-to-Date Benefits

Nothing is so good that it cannot be improved upon. Rexroth builds optimized control blocks for windlasses according to this principle and based on standard components, which have been tried and tested for decades in the harshest conditions, work reliably and can be produced economically due to the high piece numbers.
Optional Add-on Valves
Additional valves extend the range of options – e.g. the mooring function for constant tensile force on the cable, two-position regulation of the motor speed as well as the anchor release function, whereby a torque defined by means of the hand lever can be specified for the anchor to break away.

The Benefits:
- Flexible modular system for radial and axial piston motors
- Assembly possible via adapter plate on radial piston motors
- Conceived for installation on deck
- Sensitive control
- Load-independent behavior
- Reversal of motor speed
- Mechanical, hydraulic and electric control – voltage or PWM signal or CAN Bus
- Automatic release of holding brake
- Feedback of leakage oil
- Internal pre-tensioned tank line
- Integral heating
- Overload protection for radial piston motors
- Pre-fill valves
- Load sensing
- Lowering brake valve
- Adjustable mooring function
Nothing has greater priority than safety and reliability
The WCB15 works reliably, even under the harshest conditions on deck, it has an extremely long service life, yet requires minimal maintenance. All components are saltwater-proof, adjusting units are encapsulated, surfaces zinc coated, chromatized and coated three times to make them saltwater-proof.

Two pre-fill valves and the internal pre-tensioned, pressurized tank line protect the motor from cavitation. If there is no system pressure, the leakage oil feedback prevents the motor from idle running. And the block heating prevents valves from jamming if the ambient temperature is low.

<table>
<thead>
<tr>
<th>Technical Data</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Weight</td>
<td>44.4 kg</td>
</tr>
<tr>
<td>Max. operating pressure ports</td>
<td>A,B,P,T BR</td>
</tr>
<tr>
<td>Brake release pressure</td>
<td>315 bar</td>
</tr>
<tr>
<td>Max. flow rate</td>
<td>33 bar</td>
</tr>
<tr>
<td>Temperature range</td>
<td>–20°C to +80°C</td>
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<tr>
<td>Viscosity range</td>
<td>10 bis 380 mm²/s</td>
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<tr>
<td>Max. permissible degree of contamination of hydraulic fluid</td>
<td>ISO 4406 Class 20/18/15</td>
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</tbody>
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* Other requirements, such as 400 l/min or 800 l/min available on request

The Drive & Control Company
Rexroth is unique. No other brand on the world market can offer its customers the full range of drive and control technologies, both on a specialized and integrated basis. This is one of the reasons why we are best-in-class on a worldwide basis when it comes to furnishing technological driving, controlling and motion solutions; a standard to be constantly confirmed by mastering new challenges. In more than 80 countries around the world, with about 30,000 employees. This is possible thanks to an infrastructure purposefully designed with partnership and customer proximity in mind.

As a company Bosch Rexroth looks back on more than 200 years of tradition. As a wholly owned subsidiary of Robert Bosch GmbH, we are part of a globally operating technology group. All this is both our drive and our commitment. And it is unique – just like Bosch Rexroth. The Drive & Control Company.
That’s Quality!

Maximum availability under the harshest conditions has to be proved: whether in a 960-hour endurance fog test in the salt chamber, or whether together with the customer on the windlass or testing on a special ship – the WCB15 has passed the test with flying colors! And now it is in operation worldwide too.