# OPERATING SPECIFICATIONS

#### DCD Design & Manufacturing Ltd.

## SERIES 00508 DUB-SWIVEL<sup>®</sup> PIN x BOX, LOCKING THRU-BORE SWIVEL

- 1. The MAXI DUB Swivel<sup>®</sup> is specifically designed for directional drilling applications. It is intended for coupling with the drill string. The swivel locking sleeve can be unbolted to allow rotation or bolted to transmit torque up to the torque specified.
- 2. The swivel has API box connections on each end as noted.



Part Number	Safe Working Limit	Ultimate Load	Max locking torque	Max Innerbore Fluid Pressure	Box Thread	Pin Thread	A	В	С	D	E	Net Weight
00500 40000	40.000 lb	200.000 lb	2000 ftlbs	300 psi	3-1/2	3-1/2	5-3/4"	6-1/2"	18-15/16"	3-7/8"	3-3/4"	96 lb
00508-120DB	178 kN	890 kN			Custom	Custom	146 mm	165 mm	481 mm	98 mm	95 mm	44 kg

Dimensions and weights subject to change without notice.

Bold linear dimensions in inches, non-bold in millimeters.

The Ultimate Load is the tensile loading required to separate the DUB Swivel® into two or more parts.

## **OPERATING INSTRUCTIONS**

## **DCD** Design & Manufacturing Ltd.



SERIES 00508 DUB-Swivel<sup>®</sup>, HIGH PRESSURE

#### OPERATION

1. Thread the swivel onto the reamer and torque to the requirements of the API thread specification.

2. To unlock or lock the swivel, unscrew the locking sleeve position lock setscrew and slide the outer locking sleeve into the desired position. Re-install the locking sleeve position lock setscrew. Use medium strength loc-tite to ensure setscrew does not come undone during operation.

3. During operation, routinely check for drilling mud exiting the two relief valves at the pin (fixed) end. If mud is escaping from these relief valves, the pressure seal has worn. Discontinue use of the swivel and contact DCD for service.

4. To grease the swivel, connect a grease gun to the grease zerk located at the pin (fixed) end of the swivel. Slowly pump grease into the swivel until grease escapes the two relief valves at the box end.

#### SAFETY

The DUB-Swivel<sup>®</sup> is designed to operate only within its specified safe working limit (see *Operating Specifications*). Operation of the DUB-Swivel<sup>®</sup> at loads in excess of its **safe working limit** or pressure limit will void the warranty as that may cause permanent bearing damage or seal damage even though separation due to failure will not occur until the specified **ultimate load** is reached.



Rotating parts can cause death or serious injury! Stay well clear. Do not wear loose clothing.



A swivel is not a universal joint! It is designed to be <u>used under tension and in a straight line</u>. Any use of this product that allows the swivel to fall away from the centerline of rotation will severely affect the life of the swivel.



Make sure that all components of the pulling system are able to withstand the maximum pulling loads. Components not rated for the pull force may break and release the stored energy of the pull. Never use a worn, defective or incomplete component.



**Be prepared for the unexpected.** Always use recognized safety practices and wear recognized safety equipment.



**Replace worn or damaged clevis pins with only DCD parts.** The Clevis Pin is designed specifically for this application. It is manufactured and heat treated in a manner to satisfy both design requirements and claimed capacities. Use of any other product as a replacement part will void the warranty and may result in property damage, severe bodily harm, or death to operators or persons nearby. In any instances, the DCD warranty will be voided and DCD will accept no responsibility for product failure or personal injury.



**Do not modify or dismantle the DUB-Swivel®.** It has been assembled, and inspected and is only covered by a warranty in its "as shipped" form. Any attempt to dismantle or modify the swivel will result in the warranty becoming void.

### **OPERATING INSTRUCTIONS**

#### SERVICE



While the machine is still rotating, use a water hose to wash all dirt from the split line groove. Pour oil into the groove and rotate the swivel a couple of turns to protect the mechanical seal from drying out. Failure to do so will allow mud to dry inside the cavity above the seals, which may damage the rubber portion of the seals. Unlock the locking sleeve and clean thoroughly to ensure freedom of movement. Re-apply never-seize or an anti-rust compound after each use to maintain smooth freedom of movement.



Assess the condition of the swivel checking for wear and external damage. Check for axial and radial play in the bearings. Replace worn or bent clevis pins.



CAUTION

Lubricate the swivel with a **lithium-based grease** containing an extreme pressure (EP) additive (the swivel has been factory lubricated with **Renolit S2TX** grease). Do not mix with calcium or other based greases.

- 1. Remove the pipe plug located in the bottom of the clevis on the swivel cap.
- 2. Remove the 2 pipe plugs located on the front face of the seal cover.
- 3. Use a hand operated grease gun with slow pumping action.
- 4. Check to make sure relief valve is not plugged.

Do not remove the relief valves or replace with an additional grease nipple! Lack of proper lubrication will shorten life of the bearings.



The seals on these swivels may be inspected and replaced in the field by removal of the seal cover. A replacement seal kit is available. Each kit contains a mechanical seal, lip seal, extractor tool, and a set of instructions for removing and replacing the seals.



Factory rebuild services are available for the MAXI DUB-Swivel<sup>®</sup>. With this service we will replace bearings, seals, and any other worn parts, as well as offer a conditional continuation on our warranty. Assembly of this product is complex and we strongly recommend use of this service. For re-build information call the factory toll free at **1-888-794-8357**.

