

118VM Plate Brake

DRILLING RIG TOPDRIVE

PROBLEM

A leading global manufacturer of drilling rigs and oilfield equipment required a topdrive braking solution for a new 750-ton land-based rig. The brake provides dynamic emergency stopping and static holding of the topdrive during drilling operations. The brake needed to be ATEX-certified and had to accommodate high disengaged running speeds while providing a high torque capacity in a compact space envelope.

SOLUTION

To meet the customer's requirements, Wichita engineers developed the 118VM brake as one of the first dynamic plate brakes available to the topdrive market. Many of the features of the product are tailored specifically to meet application needs, such as:

- Hydraulic pressure applied
- Single plate unit designed for high-energy dynamic stopping and parking in vertical-shaft mounted applications.
- Capacity to handle repeated dynamic stops in succession.
- The 25.2" (640 mm) diameter brake is designed to be installed on the non-driving stub shaft above the topdrive motor and allows for the mounting of a speed encoder on the end of the shaft.
- Certified for ATEX Zone 1 CAT II, Gas B, T3
- The robust design is fully-enclosed when fitted with an available cover, a sealed piston holding plate protects against the ingress of dirt and moisture.
- The brake features an operating pressure of 140 bar (2030 PSI) which generates 12.0 kNm (8850 lb.ft.) of dynamic torque.
- Ambient operating range between -45°C to +55°C (-49°F to 131°F), the 118VM is built to perform in challenging drilling environments.



HIGHLIGHTS

- Certified for ATEX Zone 1 CAT II, Gas B, T3
- 140 bar (2030 PSI) operating pressure
- 12.0 kNm (8850 lb.ft.) dynamic torque
- 25.2" (640 mm) diameter
- Fully-enclosed design

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