



Product

Series 4PMB Variable Torque Brakes

Application

Forklift Trucks

Highlights

- Operator-controlled variable torque permanent magnet brakes
- Compact design fits inside load wheel
- 190 Nm (140 lb.ft.) static torque rating
- 150 Nm (110 lb.ft.) dynamic torque rating
- High torque-to-size ratio
- Zero drag torque

A large global manufacturer of multi-directional forklift trucks needed a replacement load wheel braking solution for one of its truck models. The forklift features a steering system that allows the truck to move sideways while transporting oversize heavy loads, such as long lumber bundles. This multi-directional capability allows the compact truck to travel in narrow aisles, increasing the space available for additional storage racking.

The OEM had been using a mechanical load wheel brake but wanted a more technically-advanced, torque-controllable electric solution. Based on the OEMs torque requirements, space restrictions, chassis mounting configuration and available current draw, Matrix engineers recommended a 4PMB Series electrically-released, variable torque load wheel brake.

Positioned inside the front load wheels, compact 4PMB units provide parking and “variable torque” service braking. The permanent magnet brakes are fully-engaged in the power-off mode. However, the forklift operator can easily adjust the dynamic brake torque as needed by increasing the amount of current delivered to the brakes. This variable braking torque control provides extra holding and stopping power when carrying heavy loads.

The Model 4PMB070 brakes supplied have a 190 Nm (140 lb.ft.) static torque rating and 150 Nm (110 lb.ft.) dynamic torque rating. The brakes feature a high torque-to-size ratio and zero drag torque.

A production order was received after successful testing was performed by Matrix engineers as well as the OEMs engineering team. The customer is very pleased with the brakes’s in-field performance.

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