

Application-Report - Bosch Rexroth Rineer High-Torque Vane Motor

rexroth
A Bosch Company

Rineers Motors:

The MV037 & MV057 high-torque vane motors are now also available with an integrated solution for speed and direction measurement.

As hydraulic systems & controls become increasingly complex, the need for accurate system component status becomes essential. Rexroth is able to announce an integrated speed and direction detection solution for MV037 & MV057 Rineer high torque vane motors. Available immediately on many standard motors, speed sensor options provide accurate speed & direction feedback from stall to max rpm.

Benefits:

- Built in sensor allows accurate speed & direction detection at the motor for system control and monitoring
- Protected low profile, virtually no change to motor envelope or weight
- Preset air gap means no service problems
- No affect on standard motor case pressure ratings
- Available as an option for most standard configurations
- Can be retrofitted into many motors in service
- Can be applied to many special motors & application specific solutions are possible

Source: Rexroth A Bosch Company

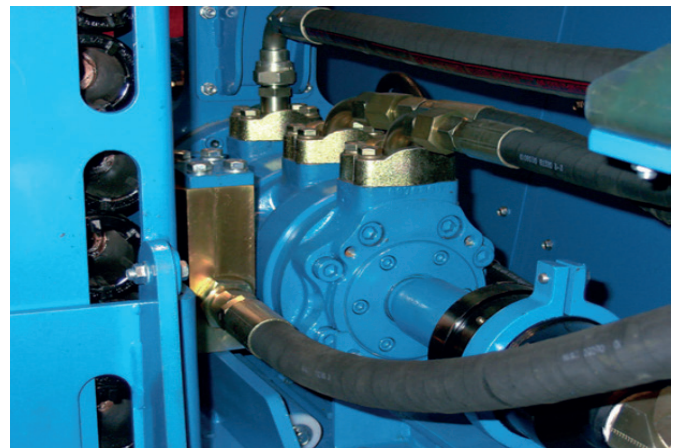
Application:

Working in a majority of MV037 and MV057 series motors, the speed sensor option can benefit many applications. By sensing speed directly at the motor, accurate system performance is easily monitored.

Material metering, proportion control, speed monitoring, and control are a few of the advantages possible. When combined with Rexroth proportional flow controls, a feedback loop can be created that provides the proper speed & torque regardless of changing loads. Whether new emission regulations, efficiency targets, or basic speed monitoring is required, Rineer's speed detection option can be a valuable part of any hydraulic system.

Function and benefits:

By minimizing changes to motor components, Rineer's optional speed detection solution offers a low-profile, costeffective solution. The minimal change to the motor envelope ensures that the speed sensor option will work in any motor application and can be retrofitted to many motors in service now. Engineered-in air gap eliminates the need for any adjustments.



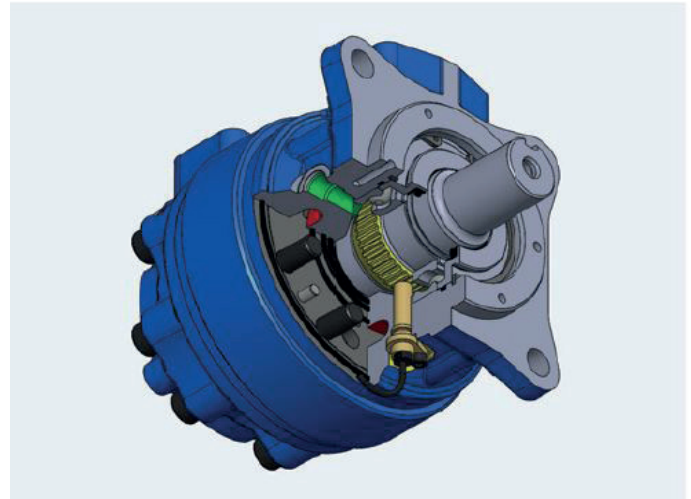
Example Application: Top: directional drilling equipment
Bottom: Frac sand blender truck

RHEINTACHO is a flexible, highly efficient partner- wherever speed must be measured, monitored or indicated. Innovation, the most modern production techniques and equipment, meticulous quality control along with a first-class workforce are the corner stones of our company. Since 1901, RHEINTACHO has used his extensive knowledge and experience to develop sensors, systems and customized solution to meet the customer's requirements.

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Solution:

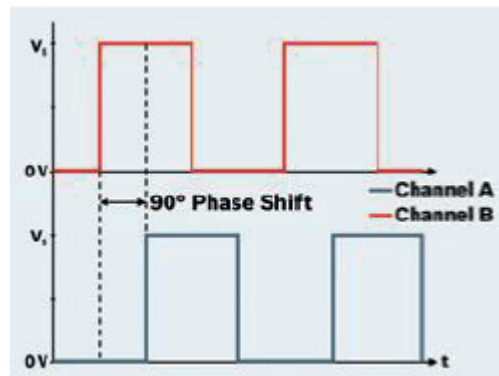
The robust hall-effect sensor features two square wave signal channels capable of discerning up to 20,000 Hz output frequency. Hall-effect technology guarantees reliable low speed detection, even down to stall conditions. Utilizing the 90° phase shift between outputs, direction detection is also possible. A standard AMP Junior connector ensures that the systems remain secure regardless of application conditions.



Cross section view of motor with sensor.



2-Channel Differential-Hall FC Speed Sensor



Sample: Signal output

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