BODINE ELECTRIC COMPANY

engineered solutions

from Bodine Electric Company

Design Options for Changing Environments

Case Sealer / Packaging Equipment

Packaging Machine

Case sealers are packaging machines that drive an open card board box between two vertical conveyors while tape is wrapped around the box to close it. An OEM customer uses two Bodine type 42R-FX (AC) parallel shaft gearmotors mounted vertically with the driveshaft down to drive the conveyors.

When this customer developed a new machine for use in areas where water might be sprayed on the equipment, naturally they used the same Bodine gearmotors. However, while these gearmotors worked flawlessly for years in the old design, they didn't work as well in the new machine. With the gearmotors mounted vertically and the fans on top, dripping water was able to enter the motor through the exposed shaft used for attaching the fans..

Bodine engineers recommended replacing the fan-cooled gearmotor with a similar product that combined a totally enclosed motor with the same gearbox that was currently used in the application. As a rule of thumb the horsepower rating of a fan-cooled motor must be cut in half if the fan is removed.The original 1/6 HP rated fan-cooled motor was switched to a 1/3 HP model (derated to 1/6 when the fan was removed).

Bodine brings over 120 years of problem solving experience to a wide range of applications in industries as diverse as energy production, medical, packaging, industrial automation, and solar powered outdoors equipment. We look forward to working with you on your next fractional-horsepower gearmotor design challenge.

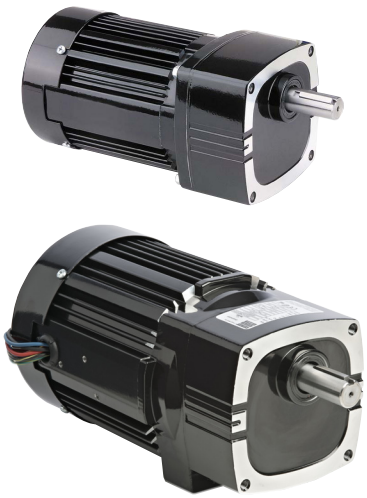
application insights

The Design Requirement

An OEM customer of Bodine Electric Company found motors that worked flawlessly in equipment designed specifically for dry environments. New machines in areas with liquids present were not working as well as they should have been.

The Solution

Bodine engineers determined that water was seeping into the gearmotors through their cooling fans. The motors were replaced with totally enclosed models that did not require cooling fans.



A 1/6 HP Bodine type 42R5BFCI-FX3 gearmotor (top) and a 1/3 HP Bodine type 48R6BFCI-FX3 gearmotor (bottom). After removing the fan from the larger gearmotor, the two gearmotors had the same horsepower rating. Click here to view all Bodine AC products.

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