

SG Transmission proves good things do come in small packages

SG Transmission has designed a custom made, size Ø50 permanent magnet brake, for a major global motor manufacturer, which will meet the same performance criteria, whilst being 7% smaller.

The client required a 4Nm brake design solution, reduced in size to fit its existing motor frame with flange square mounting, whilst retaining all the performance benefits of the standard SG Transmission size Ø50 brake. The brake incorporated a custom flange and reverse mounted brake hub, to keep the overall length as compact as possible, this allowed the brake airgap to be pre-set by SG Transmission. A unit was then supplied which allowed the customer to fit the brake straight into its motor, significantly reducing assembly time.

A permanent magnet brake is a 'power-off' device which is designed so that when power is removed from the unit, the magnetic energy of a permanent magnet disc is channelled and controlled to attract the steel armature plate across an air-gap. Therefore, holding it in its place against a stationary field housing to give the required braking effect.

Adam Russell, Design Engineer, at SG Transmission, said: "We are finding that more and more of our clients are moving away from spring applied brakes and switching to permanent magnet brakes when controlling servo motors, this is due not only to the fact that they are zero backlash, but also their compact size and high reliability. SG Transmission can provide a migration service from one kind of brake to the other, and it is proving to reap dividends for our clients.

SG transmission is now working on future projects with this client, providing both design and manufacturing expertise.

SG Transmission is a bespoke manufacturer of electromagnetic brakes and clutches, specialising in developing engineering and manufacturing solutions to meet specific client requirements.