

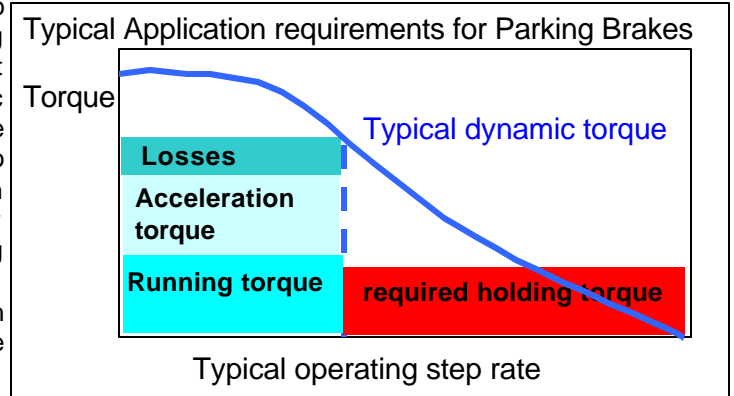
# Hybrid stepper motors with integral parking brake

# HS-B series

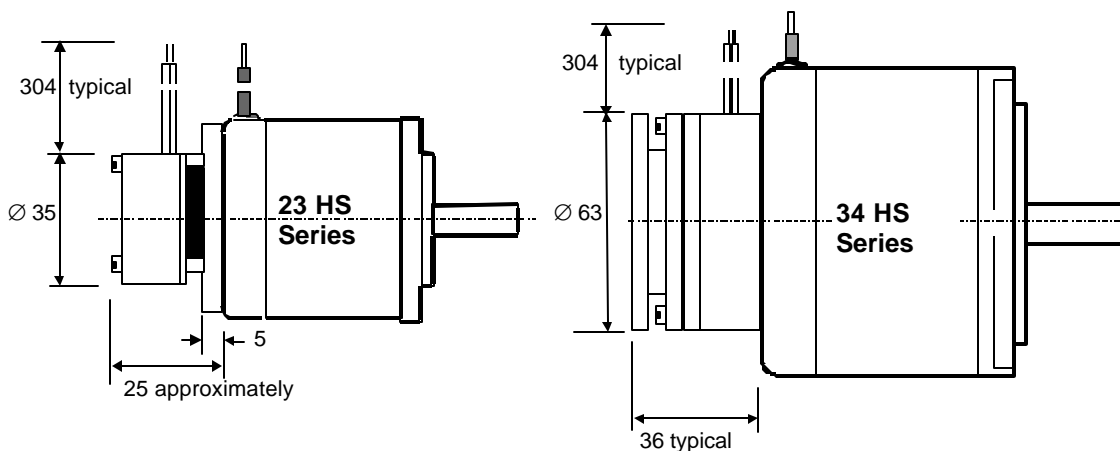
The HS series stepper motors may be specified with an integral parking brake to maintain a desired position when the motor power is removed. The 'B' series parking brake is primarily designed for operation of the motor in a static condition. Although when energised the motor will provide a high holding torque, the detent torque when the motor is de-energised is much smaller. If the motor is required to maintain the position of an unbalanced load when the motor is de-energised the use of a parking brake will overcome the possibility of loss of position.

## Parking Brake Torque Ratings

The actual torque that the parking brake needs to provide is, in practice, much smaller than the operating torque provided by the energised motor. In most applications, typically 50% of the motor's dynamic torque will be required to accelerate and decelerate the mechanism during each positioning cycle. Also transmission losses will result in overall system efficiency of typically 80%. These losses, caused by friction in the transmission system will provide a braking torque which assists the action of the parking brake. Consequently, in most applications a parking brake with a significantly lower torque rating than the motor can be specified.



## Brake Dimensions: mm



## Brake operation

Parking brakes are designed to operate ( apply braking torque ) when they are de-energised. When energised the parking brake provides no holding torque and allows the motor to operate freely.

## Brake Specification

		23HS-B series	34HS-B series
Holding Torque	Ncm	11.3	79.1
Brake rotor inertia	Kgcm <sup>2</sup>	0.0012	0.0389
Nominal Voltage	Vdc	24	24
Rated Current	Amps	0.17	0.247
Coil resistance	Ohms	138	97.3

## Brake Ordering Code:

Example: **23HS-108 B**  
 Select motor required  $\xrightarrow{\hspace{2cm}}$   
 Add suffix 'B' for brake  $\xrightarrow{\hspace{2cm}}$