

Spring-applied brakes – we brake at the right moment!

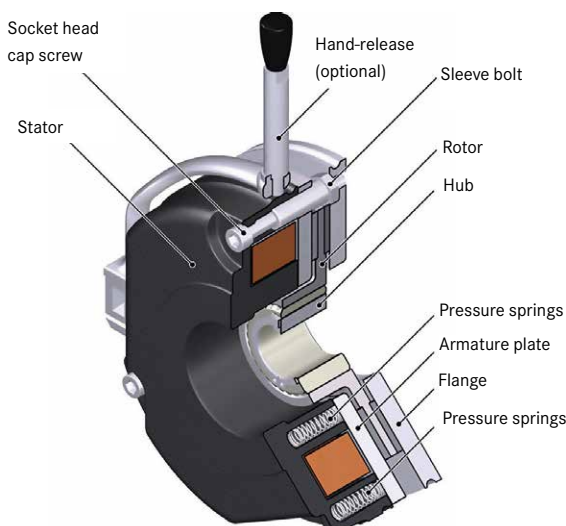


When heavy masses move, spring-applied brakes ensure a safe slow-down and a precise stop. Irrespective of whether they are holding brakes, service brakes or fail-safe brakes. We provide professional support for optimally selecting and dimensioning brakes for your machine.

Holding brake, fail-safe brake, service brake or as an emergency brake – the modular type of construction and the differing designs allow optimal solutions for the most varied of applications.

HIGHLIGHTS

- Modular type of construction for customised solutions
- Individual and detailed dimensioning & consultation
- Excellent design size-brake torque ratios
- Versatile potential applications
- Compact design and simple assembly
- Long maintenance intervals









Spring-applied brakes

Structure/function

Spring-applied brakes are single-disk brakes with two abrasive surfaces. Some types can be designed as a double-spring brake (dual disc brake) with two rotors. The braking force is applied by compression springs, which tension the rotor between the armature disc and a counter friction surface when in a de-energised state. This ensures that the brake can build up and hold the braking torque even in the event of a power failure or cable break.

By using the compression spring, the “spring-applied brake” is often used synonymously with “spring-loaded brake”. The braking torque applied to the rotor is transmitted to the drive shaft via an axially toothed hub.

The release of the brake is electromagnetic – whereby the armature plate is lifted off the rotor. The rotor, which is axially displaceable and thereby relieved of the spring pressure, can then turn freely again.

		Braking torques	Features	Application areas
BFK457		0.12 – 125 Nm	<ul style="list-style-type: none"> • 11 sizes • DC voltages: 24, 205 V • Thermal class F (155 °C) • Compact type of construction with rotor an flange • Integrated fixing screw for rapid and simple assembly • Air gap non-adjustable • As double-spring brake it is silenced < 50 dB(A) 	Small motors, Vehicles for the disabled, Wood working machines, Automation technology and General engineering
BFK458		1.5 – 600 Nm	<ul style="list-style-type: none"> • 9 sizes in CSA-CUS design • DC voltages: 24, 103, 180, 205 V • Thermal class F (155 °C) • Air gap non-adjustable • Braking torque reducible (design E) • Long, low-wear rotor/hub design • Hand aerator for all sizes • Air gap and wear monitor as an option • As long life version for markedly increased actuation numbers 	Widest range of application: General mechanical engineering, Brake motors, Crane construction, Warehousing technology, Wood working machines, Forklift trucks, Stage technology, Vehicles for the disabled and Escalators
BFK468		100 – 2400 Nm	<ul style="list-style-type: none"> • Spring-applied brake with multi-coil system • Up to twice the braking torque in comparison with the BFK458 • With a fixed or adjustable braking torque • High magnetic forces by specific control • Fast switching times due to the low inductance of the Brake • Long maintenance intervals due to the large working air gap • Air or wear monitoring by means of microswitch 	Brake motors, Cranes, Harbour systems, Stage technology, Storage technology
BFK470		7 – 370 Nm	<ul style="list-style-type: none"> • 7 sizes • Protection class according to IP66, also with manual release • Fitting of a rotary transducer (optional) • Can be used at temperatures up to –40 °C (CCV – cold climate version) • Inductive proximity sensor for functional monitoring • Raised maximum torque and durability through further development of the mechanical design • Corrosion protection: enables protection class C4 or C5 	for the most severe applications such as with cranes, hoists and wind energy systems
BFK471		1500 Nm with doublerotor 750 Nm with one rotor	<ul style="list-style-type: none"> • High braking torque in just a small installation space • Protection class according to IP66, also with manual release • High corrosion protection • Non-contact sensor for air gap monitoring • Up to 75% lower power consumption thanks to control with bridge/half-wave rectifier • Can be used to replace existing brake solutions 	Cranes, Harbour systems, Ship hoists, Hoists and Conveyor belts
BFK417		1.5 – 100 Nm	<ul style="list-style-type: none"> • Reduced backlash • Temperature resistant • Low moment of inertia against permanent magnetic brakes • Simple assembly through the threaded boreholes in the Stator • Working air gap Set • Large shaft diameter possible 	Servo motors

We will be happy to advise you with regard to individual dimensioning and any other questions you may have.