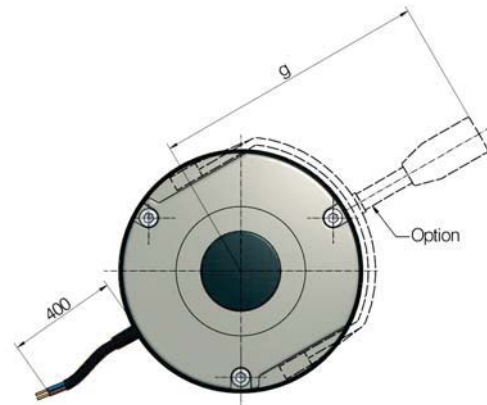
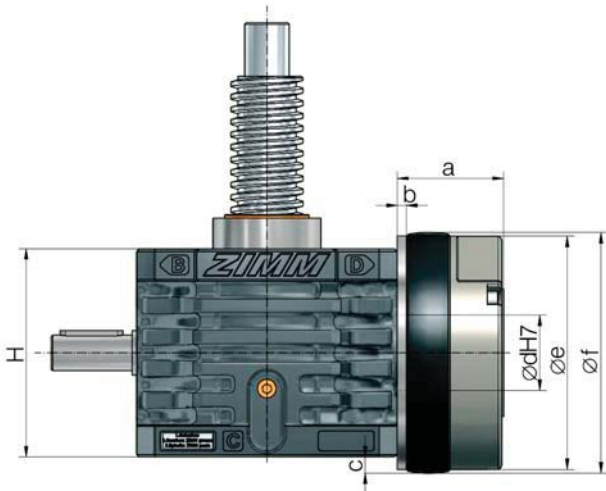
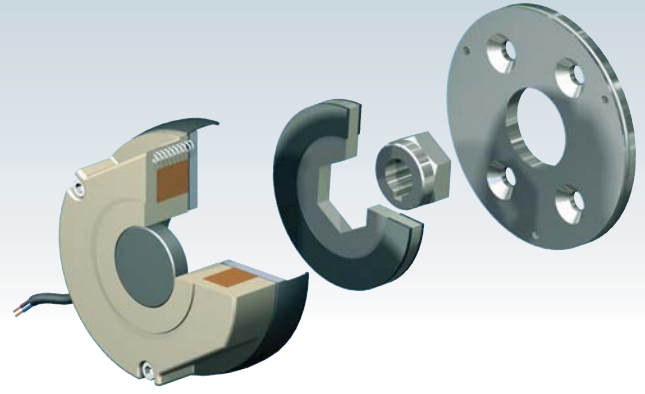


## Spring pressure brake FDB



Screw jack size Z/GSZ	Brakes		Braking torque $M_B$ [Nm]	P [W]	H [mm]	Hub $\varnothing$ [mm]	Dimensions							Weight [kg]
	new ZIMM Designation	old ZIMM Designation					a [mm]	b [mm]	c [mm]	d [mm]	e [mm]	f [mm]	g [mm]	
Z-5	FDB 08	FDB 05	5	22	62	11	46	6	13.5	26	85	89	100	1
Z-10	FDB 08	FDB 05	5	22	74	14	46	6	7.5	26	85	89	100	1
	FDB 10	FDB 10	10	28	74	14	54	7	17.5	32	105	109	110	2
Z-25	FDB 10	FDB 10	10	28	82	16	54	7	13.5	32	105	109	110	2
	FDB 13	FDB 20	20	34	82	16	62	9	26.5	42	130	135	130	3
Z-35	FDB 13	FDB 20	20	34	100	19	62	9	17.5	42	130	135	130	3
	FDB 15	FDB 40	40	42	100	19	69	9	27.5	52	150	155	140	5
Z-50	FDB 13	FDB 20	20	34	116	20	62	9	9.5	42	130	135	130	3
	FDB 15	FDB 40	40	42	116	20	69	9	19.5	52	150	155	140	5
Z-100	FDB 15	FDB 40	40	42	160	25	69	9	-	52	150	155	140	5
	FDB 17	FDB 60	60	50	160	25	81	11	7.5	62	170	175	165	7
Z-150	FDB 15	FDB 40	40	42	185	25	69	9	-	52	150	155	140	5
	FDB 17	FDB 60	60	50	185	25	81	11	-	62	170	175	165	7
	FDB 20	FDB 80	100	64	185	25	91	11	8.0	72	195	201	186	10
Z-250	FDB 17	FDB 60	60	50	204	28	81	11	-	62	170	175	165	7
	FDB 23	FDB 150	150	76	204	28	101	11	13.5	80	225	231	196	15
Z-350	FDB 20	FDB 80	100	64	230	38	91	11	-	72	195	201	186	10
	FDB 26	new!	250	100	230	38	113	11	17.0	-	258	264	285	22

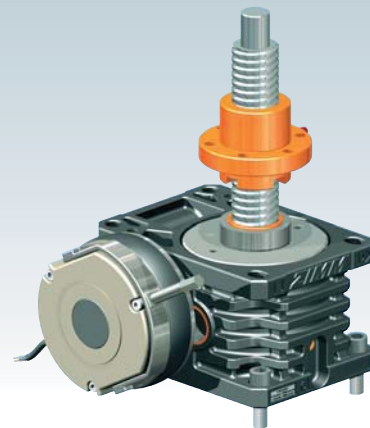


Other brakes up to Z-1000 available on request.

$$\text{For DC: } P = U \cdot I \rightarrow I = \frac{P}{U}$$

e.g.: FDB 17 at 205V DC coil voltage

$$I = \frac{50W}{205V} = 0.24 \text{ A}$$



## Spring pressure brake FDB

### Function

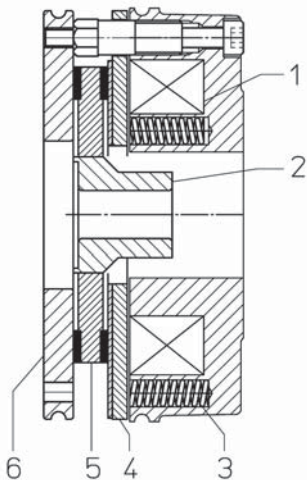
A spring pressure brake is used:

- when there is a lack of self-locking characteristics (high-pitch, double-pitch screws, ball screws KGT)
- where self-locking characteristics are doubtful (as a safety precaution)
- for increased accuracy of stopping position, independent of the lubrication situation

### General

The braking torque is generated by compression springs when the brake is deenergised. The brake is released electromagnetically by the application of DC voltage. The protective rings shield the friction faces from external influences. The standard version has protection class IP 54.

### Mode of operation



The compression springs (3) exert force on the armature disc (4) which is free to move axially and which presses the brake rotor (5) against the flange (6). The brake rotor in turn is tightly mounted on the hub (2).

The shaft is then braked. Application of DC voltage to the field windings (1) in the magnetic body generates a magnetic force which pulls the armature disc towards the magnetic body. The brake rotor is freed and the brake is released.

In the event of an emergency stop or a power failure, the spring pressure brake ensures that the load is safely braked to a stop.

### Electrical supply

The spring pressure brake requires a DC supply. Half-wave and bridge rectifiers are available to provide the power supply to the brakes from the AC mains supply.

Because of the inductance of the solenoid coil, the release of the armature disc on loss of power is not immediate. When the switching off takes place in the AC line from the rectifier, this delay is relatively long.

The delay in switching off can be reduced if the connections available between the rectifier are used to switch the DC line (6 times faster).

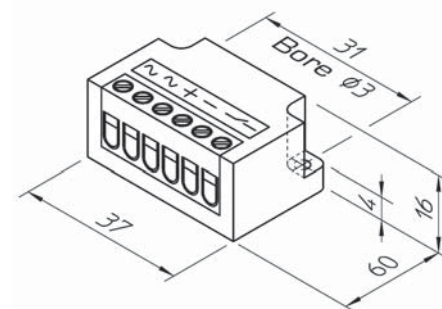
If the switching is performed on the AC side, a bridge should be made to the switch contacts.

### Manual release

If a manual release lever is fitted, the brake can be released mechanically, e.g. in the event of a power failure.

### Brake voltage

The brake voltage is derived from the mains phase voltage. For braked motors, the brake voltage is generally derived from the motor voltage in delta arrangement. The operating voltage of the brake is indicated on the solenoid casing.



Supply voltage	Brake operating voltage	Rectifier
24V DC	24V DC	-
230V AC	205V DC	GLB Bridge rectifier (PMB 400-S)
230V AC 400V AC 500V AC	105V DC 180V DC 220V DC	GLE Half-wave rectifier (KSE 500/1-S)



All parts are corrosion-resistant!



### Ordering example:

Z-25-FDB 10-205V DC-GLB-HL

Gearbox size  
Brake size  
Brake operating DC voltage  
Rectifier type (if required)  
Manual release HL (if required)