sepac®
Your Clutch and Brake Company

SEB-MAX® Series

Spring-Engaged Power-Off Brakes for Aerospace & Defense

Nine standard frame sizes available:

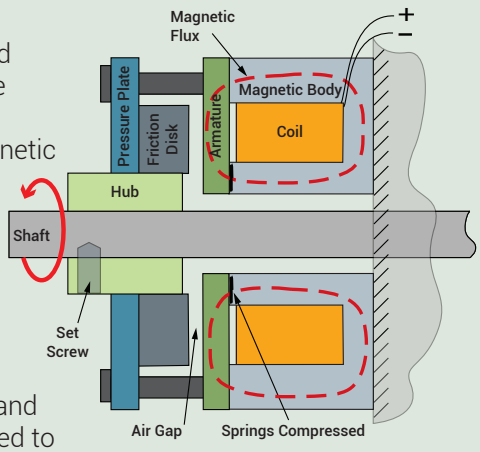
- Torque rating up to 30g combined shock and vibration
- Holding @8 VDC up to 60g max. combined shock
- Operates from -67°F – 158°F & up to 10,000 FT altitude
- Class "H" Insulation
- Nitrocarburized plates & ENP magnet body
- SS hardware & locking HELICOIL inserts

Performance/ Mechanical Specifications	P/N Model Size	SEB-Max Series 20305 100	20306 125	20313 150	20314 175	20307 200	40258 250	40260 300	40262 350	40256 400
Torque Rating (Static)	lb-In	1.57	3.84	7.97	14.70	25.10	61.50	127.0	236.0	403.0
	ft-lb	0.13	0.32	0.66	1.23	2.09	5.13	10.58	19.67	33.58
	(NM)	(0.2)	(0.4)	(0.9)	(1.7)	(2.8)	(6.9)	(14.4)	(26.7)	(45.5)
Resistance @ 20°C	ohms	34.15	22.45	15.93	15.52	14.00	11.53	7.56	9.86	6.54
Release Voltage	V	28	28	28	28	28	28	28	28	28
Current at 28VDC @ 20°C	A	0.820	1.240	1.750	1.804	1.995	2.427	3.703	2.839	4.283
Holding Voltage	V	8	8	8	8	8	8	8	8	8
Holding Current @ 20°C	A	0.23	0.36	0.50	0.51	0.57	0.69	1.06	0.81	1.22
Rec. Max Speed	rpm	20,000	16,500	14,000	12,200	11,000	9,000	7,600	6,700	6,000

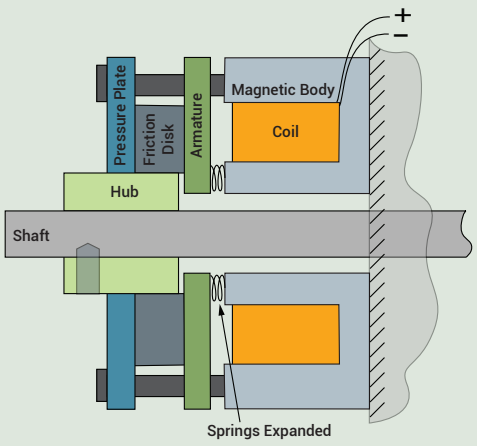
SEB-Max Operation:

The magnet body is attached to a fixed surface that can react the shaft torque and the friction disk interfaces directly with the shaft with the provided drive feature.
When the coil is energized the electromagnetic field attracts the armature plate and compresses the springs. This allows the friction disk to rotate freely with the shaft. After about one second of energization at the pull in voltage the brakes should be reduced to the holding voltage.
This voltage will maintain the disengaged state while reducing power consumption and heat generation. Most applications will need to utilize the hold voltage to prevent thermal stresses in the brake but specific duty cycles can be reviewed by SEPAC.
When power is turned off, the electromagnetic field dissipates, allowing the springs to push the armature plate into contact with the friction disk. This squeezes the friction disk between the pressure plate and the armature plate, thus transmitting torque, and stopping/holding the friction disk and shaft.

Power On — Brake Disengaged



Power On — Brake Engaged



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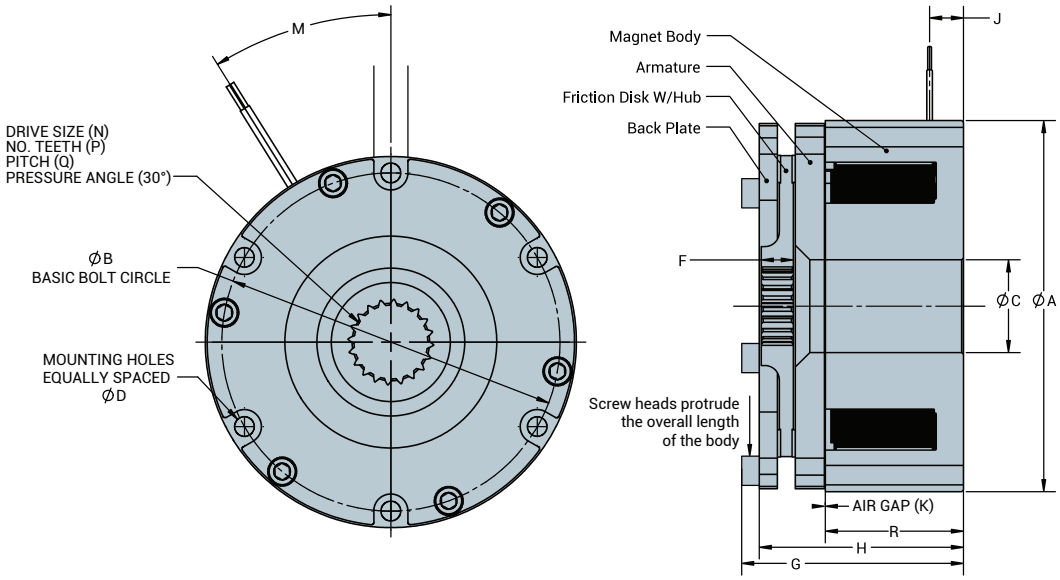
Aerospace & Defense Spring-Engaged Brakes



Dimensions — Inches (mm)	P/N Model Size	SEB-Max Series 20305 100	20306 125	20313 150	20314 175	20307 200	40258 250	40260 300	40262 350	40256 400
Weight	lb kg	0.15 (0.06)	0.35 (0.15)	0.40 (0.18)	0.55 (0.25)	1.00 (0.45)	1.75 (0.79)	2.75 (1.25)	4.00 (1.81)	6.00 (2.72)
Outside Diameter	A	1.00 (25.40)	1.25 (31.75)	1.50 (38.10)	1.75 (44.44)	2.00 (50.79)	2.50 (63.49)	3.00 (76.19)	3.50 (88.89)	4.00 (101.59)
Inner Diameter	C	0.25 (6.35)	0.25 (6.35)	0.32 (8.05)	0.31 (7.99)	0.46 (11.68)	0.57 (14.39)	0.75 (19.05)	0.88 (22.32)	1.00 (25.50)
Overall Length	H	0.75 (19.15)	0.94 (23.92)	1.00 (25.40)	1.06 (26.79)	1.11 (28.09)	1.38 (35.10)	1.70 (43.05)	1.93 (49.02)	2.21 (56.03)
Overall Length With Screw Head	G	0.779	0.981	1.080	1.160	1.210	1.514	1.852	2.087	2.378
Mounting Hole Ø	D	3x .078	3x .104	3x .104	3x .130	3x .136	4x .157	4x .184	6x .187	6x .211
Mounting BBC	B	0.872	1.078	1.326	1.532	1.782	2.245	2.708	3.203	3.642
Drive Feature	DD or Spline	DD	DD	DD	DD	Spline	Spline	Spline	Spline	Spline
Drive Size/Diameter	N	0.94 (23.92)	0.94 (23.92)	1.00 (25.40)	1.06 (26.79)	1.218	1.52	1.859	2.095	2.396
Pitch	Q	x	x	x	x	48/96	32/64	32/64	24/48	24/48
NO. Teeth	P	x	x	x	x	18	14	20	16	20
Diameter L	R	0.53	0.67	0.68	0.70	0.72	0.89	1.12	1.27	1.49
Lead Wire Location	M	20°	20°	20°	20°	18°	16°	30°	34°	32°
	J	0.88	0.11	0.16	0.17	0.17	0.26	0.31	0.34	0.37
Air Gap Reference	K	0.005	0.006	0.007	0.007	0.007	0.011	0.010	0.010	0.011
Drive Thickness	F	0.100	0.100	0.110	0.130	0.213	0.263	0.290	0.345	0.345

**Specifications are nominal, rounded values provided for reference only and are subject to change without notice. Please consult SEPAC Engineering prior to final selection.*