



SEPAAC[®]
Your Clutch and Brake Company



Clutch and Brake Solutions

A E R O S P A C E



SEPAC Stationary Field Tooth Clutch

APPLICATION: *Ammunition Feed System*

Specs: 2.25" dia x 1.625" long, 450 in-lb of torque, 3,500 RPM

- High torque to diameter ratio
- Positive engagement
- Hardened teeth



SEPAC Rotating Field Tooth Clutch

APPLICATION: *Fly-by-Wire Coupling for Jet Fighter Control Stick*

Specs: 2.87" dia x 1.80" long, 720 in-lb of torque

- Positive engagement
- 180 deg rotation
- Low backlash
- Stainless steel splined adapter



SEPAC Spring Engaged Dual Disc Power Off Brake

APPLICATION: *Control Surface Actuator*

Specs: 2.45" dia x 1.70" long, 66 in-lb of torque

- Lightweight aluminum backplate
- Supports a reverse mount configuration
- High torque to diameter ratio

D E F E N S E



SEPAC Multiple Disc Variable Speed Clutch

APPLICATION: *Engine Cooling System for M113 Family of Vehicles*

Specs: 8.50" dia x 5.50" long, 450 ft-lb of torque, 3,500 RPM

- Oil-cooled
- Variable torque output
- MIL-spec finishes



SEPAC Spring Engaged Multiple Disc Power Off Clutch

APPLICATION: *Electric Turret Drive*

Specs: 3.40" dia x 1.625" long, 200 in-lb of torque

- Unique power off operation
- Interchangeable gear options
- Operates in harsh desert conditions



SEPAC Stationary Field Wall Mounted Tooth Clutch

APPLICATION: *Cannon Ammunition Feeder*

Specs: 2.65" dia x 1.37" long, 420 in-lb of torque

- Operates under high vibration
- Battle tested, mission critical
- Zero defect reliability
- Maintenance free design

I N D U S T R I A L



SEPAC Spring Engaged Brake

APPLICATION: *CNC Lathe*

Specs: 3.36" dia x 1.60" long,
100 in-lb of torque

- Power off design
- Corrosion resistant coatings
- Robust friction disc for long life and increased wear resistance
- Stainless steel hardware



SEPAC Hydraulically Released Spring Engaged Brake

APPLICATION: *Radar Antenna*

Specs: 14.50" dia x 4.00" long,
665 ft-lb of torque

- Spring engaged, hydraulically released caliper type design
- Rated for a maximum pressure of 2,000 PSI
- Brake status sensors



SEPAC Spring Engaged Power Off Tooth Brake

APPLICATION: *Factory Assembly Line*

Specs: 3.44" dia x 2.15" long,
80 ft-lb of torque

- For use dry or in oil
- 1° maximum backlash
- Metric dimensions and fasteners available
- Pilot feature on the magnet body for ease of installation

E N E R G Y



SEPAC Multiple Disc Brake

APPLICATION: *Power Plant Valve/Door Actuator*

Specs: 6.38" dia x 3.55" long,
180 ft-lb of torque

- Extremely high torque to diameter ratio
- For use dry or in oil
- High temperature magnet wire (Class "H" insulation)
- High energy dissipation



SEPAC Stationary Field Tooth Clutch

APPLICATION: *Natural Gas Processing Plant Valve/Pump Actuator*

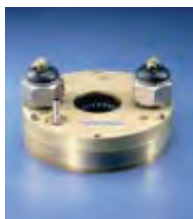
Specs: 3.20" dia x 1.695" long,
40 ft-lb of torque, 12,000 RPM

- Positive engagement
- Corrosion resistant coatings on teeth
- High speed design

Learn more about **SEPAc**
*Contact Your Clutch
& Brake Specialist*
Toll Free: **1-800-331-3207**

Military Applications

HSEB-1450



Type: HSEB Hydraulically Released, Spring Engaged Brake

Application: X and Y axis brakes on a 70 meter radar antenna

Features: Spline drive armatures and hub, cadmium plating, proximity sensor to indicate position of armature plate

Specs: 14.5" dia. X 4.0" high, 665 lb. ft. torque, releases under 2000 psi hydraulic pressure

70 Meter Diameter Deep Space Radar Antenna



SEB-175



Type: SEB-175 Spring Set, Power Off, Fail-safe brake

Application: Brake for actuator which holds the radar dish from moving when radar is not in use

Features: High-torque friction material, e-nickel plating, hex drive

Specs: 1.75" dia. X 1.06" high, 6.5 lb. in. torque

Global Hawk UAV



SEB-140-2



Type: SEB-140-2 Power Off, Spring Set, Fail-safe Brake, Double "D" Drive

Application: Control surface actuators

Features: Dual disks, high-torque friction material and high-torque plated plates, potted coil

Specs: 1.45" dia. X 1.110" high, 7 lb. in. torque

AGM-158 (JASSM)



SEB-386-MR



Type: SEB-386-MR Power Off, Spring Set, Fail-safe Brake

Application: Antenna cable drum brake

Features: Nitride treated parts, manual release, Mil-Spec connector and potted coil

Specs: 3.86" dia. X 2.30" high, 100 lb. in. torque

E2C Hawkeye



SEB-175



Type: SEB-175 Spring Set, Power Off, Fail-safe Brake

Application: Stabalator actuator holding brake.

Features: Plating, potting coil wire and lead wire are designed to meet MIL-STD-810, designed for rear end motor mounting, e-nickel plating, hex drive hub, high torque friction material

Specs: 1.75" dia. X 1.10" long, 6.5 lb. in. torque

BELL UH-1 "Huey"



SEB-245-3



Type: SEB-245-3 Dual Disk, Power Off, Spring Set, Fail-safe Brake

Application: Boom Ruddervator actuator

Features: Low-weight aluminum spider, reverse mount, spline drive dual disks, nitride treated plates and nickel magnet body

Specs: 2.45" dia. X 1.70" high, 66 lb. in. torque

767 Tanker



SEB-245-2



Type: SEB-245-2 Dual Disk, Power Off, Spring Set, Fail-safe Brake

Application: Electric rescue hoist motor brake

Features: Low-weight aluminum spider, reverse mount, spline drive dual disks, electroless nickel plated magnet body, nitride treated plates

Specs: 2.45" dia. X 1.70" high, 66 lb. in. torque

SH-60 Seahawk



SEB-137



Type: SEB-137 Spring Set, Power Off Brake

Application: Electric actuator to position ejection seat

Features: Plating, potting, coil wire and lead wire are all Mil-Spec requirements, designed for rear end motor mounting, nickel plated, potted coil, square drive hub, high coef., friction material

Specs: 21.375" dia X .750" long, one lb. in. torque

F-16 Fighting Falcon



WMTC-265



Type: WMTC-265 Stationary Field, Wall Mounted Tooth Clutch

Application: Ammo feed mechanism for the cannon

Features: Plating is cadmium with gold chromate, armature adapter is made of aluminum bronze, spline drive rotor and armature

Specs: 2.65" dia. X 1.37" in. high, 420 lb. in. torque

AH-1W Cobra Helicopter



SFTC-225



Type: SFTC-225 Stationary Field Tooth Clutch

Application: Ammunition feed mechanism for the Gatling guns

Features: Non magnetic armature teeth, e-nickel plated, aluminum bronze adapter plate, fully potted coil, ball bearing supported rotor

Specs: 2.25" dia. X 1.625" long, 450 lb. in. torque, 3500 rpm

AC-130H Gunship



SEB-500-2



Type: SEB-500-2 Dual Disk Power Off Spring Set Brake

Application: Leveling leg actuators on the Patriot missile radars

Features: Two discs, fully enclosed, Mil-Spec connector, nitride corrosion protection, internal and external splines

Specs: 5.50" dia. X 7.62" long, 45 lb. ft. torque

Patriot Missile Radars



MDC



Type: MDC Multi Disk Clutch (Special)

Application: The clutch moves the optical sight, then holds it in position when the grenade launcher fires

Features: Six outer disks and five inner disks, moves +/- 15 degrees from null, magnet body has springs to provide pressure when power is removed from the coil providing the torque

Specs: 6.33" long X 2.2" high X 4.19" wide, 1000 lb. in. torque

MK-47 Striker Grenade Launcher



RFTC-290



Type: RFTC-290 Rotating Field Tooth Clutch

Application: A clutch to connect the servos in the throttle and navigation control joy sticks

Features: Rod end linkages provided by the two ears, rotor is supported by radial and thrust DU washers and splined rotor

Specs: 2.87" dia. X 1.80" long, 720 lb. in. torque

Boeing X-32 JSF Candidate



SFTC-225



Type: SFTC-225 Stationary Field Tooth Clutch

Application: Ammunition feed for Gatling gun, ship mounted for missile protection

Features: (Pictured with cover removed) aluminum bronze adapter plate, e-nickel plating, ball bearing supported rotor, potted coil with Teflon lead wire, 28 VDC coil

Specs: 2.32" dia. X 1.7" long, 450 lb. in. torque, 3500 rpm

Gatekeeper



SSB-350



Type: SSB-350 Housed Single Disk Power On Brake

Application: Boom hoist actuator

Features: Cadmium plating, gold chromate coated, single surface, dual coil, Mil-Spec connectors, potted coils and sealed

Specs: 3.50" dia. X 3.75" high, 235 lb. in. torque

767 Tanker



MDVSC-850



Type: MDVSC-850 Multiple Disk Variable Speed Clutch

Application: M-113 motor-mounted variable speed fan and direct-speed alternator clutch for all M-113 variants

Features: Oil cooled, Mil-Spec connector, fully potted coil, cadmium plating with gold chromate coating

Specs: 8.50" dia. X 5.50" long, 3000 rpm, 450 lb. ft. torque, weight 60 lbs.

M-113 Light Armored Vehicle



SEMD-340-2



Type: SEMD-340-2 Spring Engaged Multi Disk Fail-safe Clutch

Application: Electric turret drive mechanism

Features: Dual friction disks, dual coils, worm gear driven rotor, spline drive split locking hub and fully potted coils, nitride treated plates, e-nickel plated magnet body and rotor

Specs: 3.40" dia. X 4.62" long, 200 lb. in. torque

LAV Light Armored Vehicle



TC/B-525



Type: TC/B-525 Tooth Clutch and Brake

Application: Clutch brake controls raising and lowering of radio antennas

Features: All stainless steel construction, Mil-Spec connectors, manual control of the clutch and brake

Specs: 8.50" dia. X 13.50" long, 1,000 lb. ft. torque, weight 70 lbs.

Submarine



SEB-500-4



Type: SEB-500-4 Multiple Disk Power Off Fail-safe Brake

Application: MLRS-ILMS elevation actuator brake

Features: Four friction disks, Mil-Spec connector, aluminum housing, clear anodized ball bearing supported stainless shaft, fly wheel, internal and external spline shaft and electrically bonded

Specs: 7.50" dia. X 8.12" long, 1,750 lb. in. torque, speed 8,000 rpm, weight 28 lbs.

Multiple Launch Rocket System
Improved Launch Mechanical System



Commercial Applications

SEB-300-3



Type: SEB-300-3 Power Off, Spring set, Fail-safe Brake, Spline Drive

Application: Thrust reverser brakes on the jet engines

Features: Triple disks, Kevlar friction surfaces, manual release provisions, potted coil and electroless nickel plating

Specs: 3.000" dia. X 2.200". high, 550 lb. in. torque

Airbus A-380



SEB-245-3



Type: SEB-245-3 Triple Disk, Power Off, Spring Set, Fail-safe Brake, Manual Release

Application: Hydraulic pump motor brake

Features: Low weight aluminum spider, reverse mount, spline drive triple disks, nitride treated plates and magnet body, submerged in MIL-H-5606 oil

Specs: 2.45" dia. X 2.420" high, 22 lb. in. torque

Gulfstream G-5



Aerospace Applications

SETB-320



Type: SETB-320 Stationary Coil Tooth Brake

Application: Antenna array actuator brake

Features: Stainless steel rotor, nitride treated armature and magnet body, potted coil and DU bushings and thrust washers

Specs: 2.87" dia. X 1.412" high, 20 lb. ft. torque

Low Earth Orbit Satellite
(LEO)



MDB-640



Type: MDB-640 Power On Multiple Disk Brake

Application: Brake to stop satellite spin table

Features: Space rated materials, processes, potting and plating, six outer and seven inner disks

Specs: 6.375" dia. X 2.437" long, 200 lb. ft. torque, speed 2500 rpm, weight 17 lbs.

Space Shuttle



At SEPAC, innovation goes into everything we do from the design and manufacture of custom brake and clutch solutions for a variety of applications, to the enhancement of tried-and-true motion-control products. To view our range of expertise, visit our Web site: www.sepac.com.



WHO WE ARE:

SEPAC Inc., in Elmira, NY is a custom engineering company and manufacturer of motion control products including electromagnetic clutches and brakes.

We provide innovative solutions of the highest quality and reliability to OEMs, distributors and end users around the world. Our brake and clutch applications range from aerospace and defense to robotics, energy, healthcare, and a wide variety of industrial markets.

Some of our customers include: Moog, General Electric, Honeywell, Boeing, Lockheed Martin, Zoll Medical, BAE, Raytheon, SL-MTI, Northrop Grumman, Hardinge, Eaton, and a variety of distributors.

THE SEPAC MISSION:

To provide the highest standard motion control products and solutions for a broad range of applications, and to consistently meet or exceed our customer expectations.

COMMITMENT TO QUALITY:

SEPAC Inc. is AS9100 and ISO 9001 certified. Our highly engineered and precision manufactured motion control products are consistently designed, manufactured and processed to high quality standards at every level of the business. We believe the development, implementation and continuous improvement of our quality system is the path towards continually meeting or exceeding the exacting requirements and ever-higher standards of our customers.

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