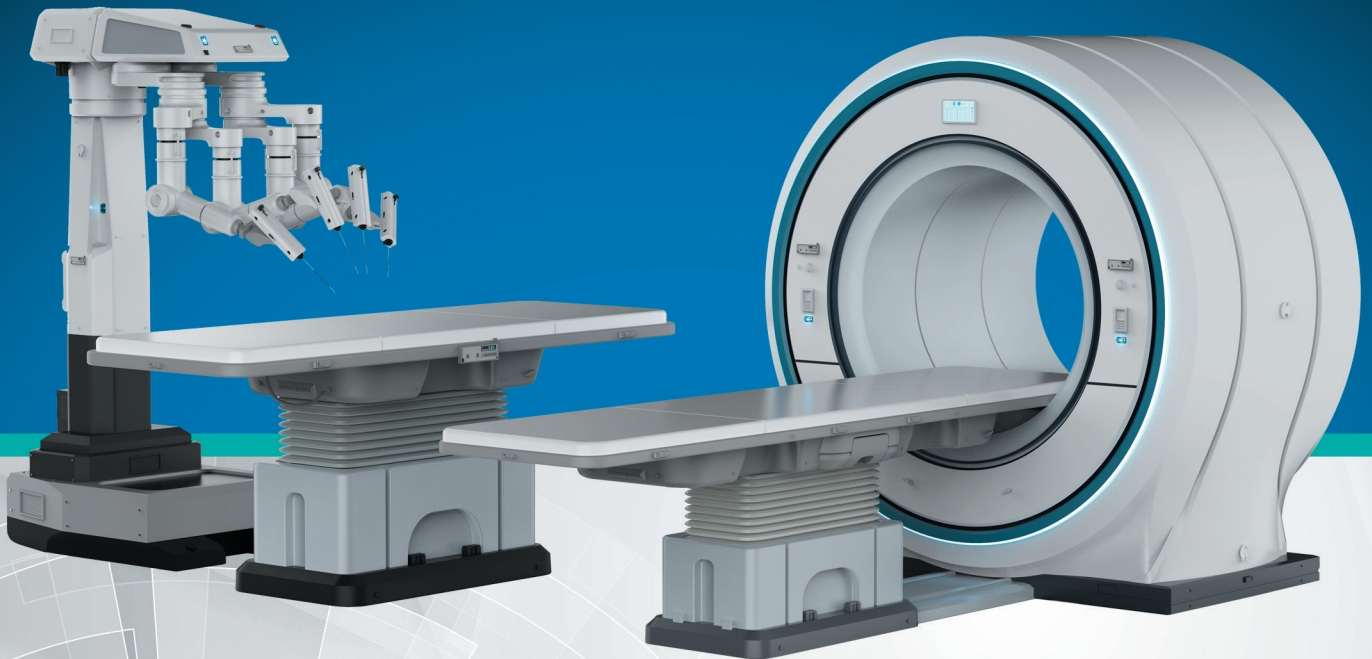


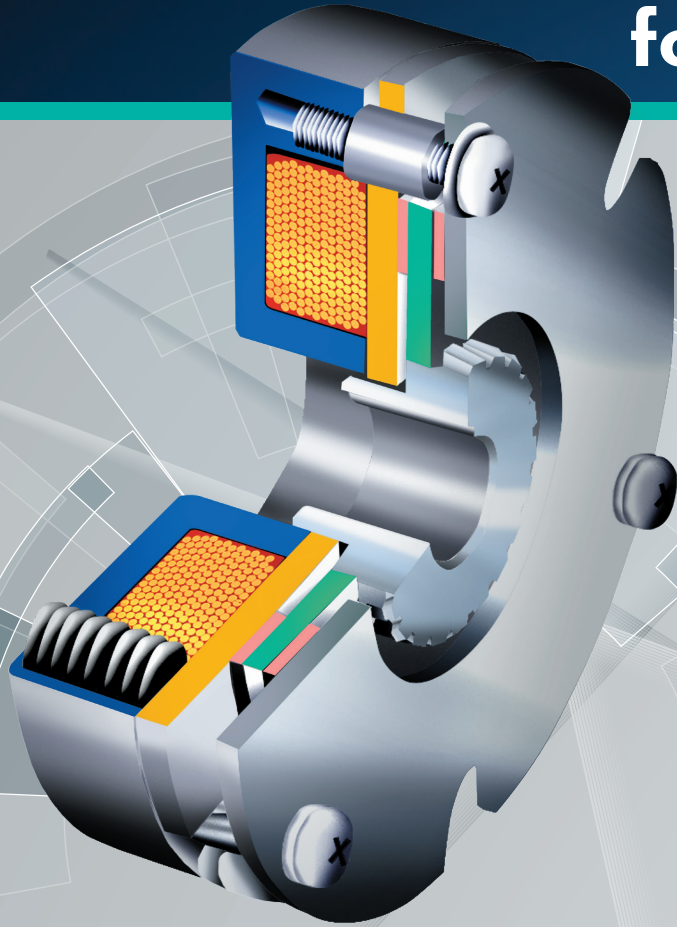


Electromagnetic
Clutch and Brake Solutions
For the Medical Equipment Market



"What You Need in a Clutch®"

Clutches and Brakes for Medical Equipment



Ogura Provides **Innovative Solutions**

That Meet your Challenges

The medical equipment market continues to accelerate. Ogura brings innovative solutions to the market that bring ideas to reality. Leading the industry worldwide, we strive to solve the problems and provide the products that enable better medical outcomes, human comfort, and long term health.

Whatever your challenge might be, we have the experience and knowledge to assist. For electromagnetic brakes used for holding or stopping, concerns include: High torque per size, low weight and low inertia, low power and heat requirements, minimal or zero backlash, super thin profile for tight space constraints, quick response times, various operating voltages, RoHS and REACH compliance, customization of design, and manufacturing capacity for long term growth.

Given the wide range of solutions, we encourage product designers to collaborate with Ogura Industrial from the start to achieve the best outcome in performance, quality, system reliability, cost, and speed to market due to proper upfront attention and design.

The many clutch and brake solutions presented by Ogura Industrial have something in common. They exemplify quality, dependability, experience, craftsmanship, and trust.



Medical Robotics



Xray, CT Scan



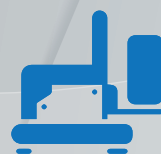
Medical Carts



Motors



Wheelchairs



AGV/AMR's

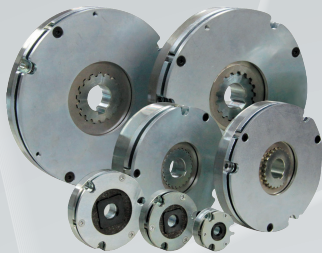
For detailed specifications for Medical Equip

Robust, reliable performance for long life applications



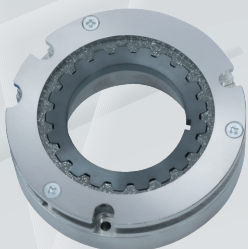
Electromagnetic Clutches and Brakes

Ogura offers the widest variety of solutions. Aside from the standard lineup, it is common to modify existing models or engineer completely original solutions to suit the application needs.



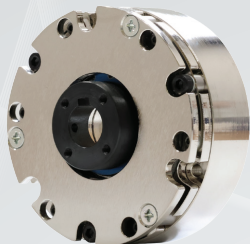
MCNB-T and RNB-T Series

Torque Range: 0.24-36.9 lbft, 0.32-50 Nm. These super thin, lightweight, low power, spring-applied holding brakes offer high torque per size.



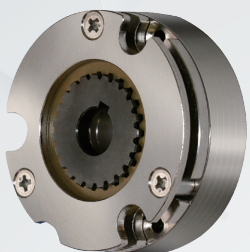
MCNB-HS Series

Torque Range: 1.4-3 lbft, 2-4 Nm. These spring-applied brakes have large bores, often mounted on hollow motor shafts to run data wires through the assembly.



MCNB-Z and RNB-Z Series

Torque Range: 0.28-12 lbft, 0.38-16 Nm. These spring-applied brakes have zero backlash. For models up to 3.8Nm, there is zero backlash in axial and rotational directions, along with <60Db noise and low power.



MCNB-TSp Series

Torque Range: 0.24-3 lbft, 0.32-4 Nm. These spring-applied brakes have both precise and accurate torque, allowing the brake to act as a torque limiter during momentary slipping without causing damage, with steady dynamic torque and long life.



Micro Brake Series

Torque Range: 2 mNm or more. With a brake OD as small as 8mm, these customized micro brakes offer extremely small footprint, low power requirements, and high reliability.

PMB Series

Torque Range: 0.3-88.5 lbft, 0.4-120 Nm. These permanent magnet brakes offer high torque per size in addition to zero backlash.



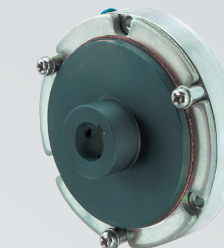
MZ and MZNB Series

Torque Range: 18-2950 lbft, 25-4000 Nm. These tooth profile clutches and brakes offer highest torque per size. The MZNB is a custom series offering power-off braking.



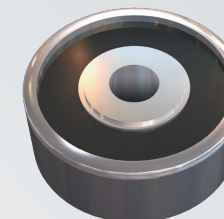
FNB Series

Torque Range: 0.75-6 lbft, 1-8 Nm. These spring-applied brakes have a very thin profile, mainly for robotic and ball-screw applications. Without a hub, designers can integrate the brake as they wish into their assembly.



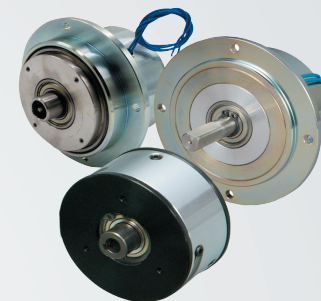
Holding Electro-Magnets

Torque Range: 20-79 lbf, 90-350 N. These magnetic devices with steel bodies and internal coils are used to securely hold ferromagnetic parts once the coil is energized. When power is removed, the magnet turns off.



OPB, OPC, PHT Series

Torque Range: 0.37-6 lbft, 0.5-8 Nm and 0-5.2 lbft, 0-7 Nm. These magnetic particle and hysteresis type clutches and brakes provide fine torque control for tensioning or torque limiting. Torque is proportional to current applied for OPB and OPC, or adjusted mechanically for PHT.



Other solutions available from Ogura



1 Power off brakes
to hold or stop in the
absence of electrical
power

1



**3 Industrial
clutches / brakes**
single face
quick response,
high cycle

3



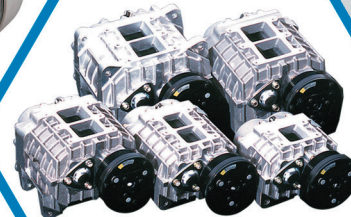
**2 Multiple disc
and tooth
clutches**
high torque,
can run either
dry or in oil

4



4 Mobile equipment clutches
for use with gas and diesel
engines on outdoor power
equipment and engine driven
components

2



5 Superchargers
for increased
engine
performance
and reduced fuel
consumption

5



6 Tension control
hysteresis and magnetic
particle for precise torque
control

6

Ogura has over 7,000 Standard and Custom Electromagnetic Clutch and Brake Designs.

Founded in 1938, Ogura has over 80 years' experience in the manufacture and design of clutches and brakes. Ogura is currently the world's largest manufacturer of electromagnetic clutches and brakes producing around 30 million units per year with over 7,000 standard and custom designs available from 14 manufacturing ISO certified facilities throughout the world.

Visit www.ogura-clutch.com to learn more.

Visit our YouTube channel for an extensive library of installation, maintenance, and how-they-work animated videos



<https://www.youtube.com/user/oguraindustrial>



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