

# Electromagnetic Clutches, Brakes and Holding Magnets

Innovative drive technology and power transmission solutions

# **Experts in electromagnetic solutions**

#### History

SG Transmission (SGT) has designed, manufactured and developed electromagnetic clutches, brakes and holding magnets since 1972 in the north east of England.

The company's Bishop Auckland manufacturing facilities were purpose built to meet the existing and future capacity demands of the business and the capability for small or large volume orders.

In 2000 SG Transmission joined the British Engines Group, increasing access to a wealth of experience, services and expanding our global network.

#### Experience

SG Transmission's experienced in-house design team work alongside customers to develop solutions to meet specific holding forces, space requirements or develop new innovative solutions. The team provide a full project management service from design, manufacture and test. With a commitment to innovation, our customised design service delivers the best solution to our global customer base.

#### Quality

A strong focus is placed on process measurement and control using quality management systems. By placing a high importance on continuous improvement, we exceed our customer's quality expectations in the most highly demanding market places.

SGT hold internationally recognised certificates such as; BS EN ISO 9001, BN EN ISO 45001 and BS EN ISO 14001.

SG Transmission continue to invest in the latest CNC machinery, automation and testing facilities and have a clear focus on continuous improvement in lean cellular manufacturing.

#### Our Network

SG Transmission is part of the British Engines Group, based in the north east of England. Within the group, there are 8 businesses which employ over 1,200 people across a network of offices in 16 countries including; America, Australia, South Africa, Singapore, Russia, India and throughout Europe.

SGT benefit from the core services and people orientated culture of our parent company.

## Sectors we work in

Our electromagnetic clutch and brake solutions are used in pioneering technology around the world. Guaranteeing safety, accuracy and performance for the power transmission and motion control applications of tomorrow.



Robotics

Energy



Motors and Drives



Military



AGV/AMR

Material handling



Medical



Fire and Security

Machinery



Warehouse logistics

## **Electromagnetic brakes**





- Permanent magnet power off brake
  - Power-off brake engagement
- Fail-safe
- Compact size
- Backlash-free / torsionally rigid
- Low inertias

#### Toothed brake

- Power-on brake engagement
- High torque
- Zero drag torque
- Optional number of teeth
- No slip





#### Spring applied power off brake

- Fail-safe
- High braking torque
- Engaged statically or dynamically
- Servo motor brake
- Tolerant to high temperatures

#### Flange mounted power on brake

- Engaged statically or dynamically
- Multi-pole versions for high torque
- Backlash-free / torsionally rigid
- Choice of drive hubs to suit application
- Long life expectancy

# Electromagnetic clutches Toothed clutch

- Power-off engagement
- High torque
- Zero drag torque
- Optional number of teeth
- No slip

#### Ball bearing mounted clutch

- High speed applications
- Ease of fitting
- Suitable for low speeds
- Voltage options



## Power on flange mounted clutch

Suitable for low speeds

Sleeve bearing mounted clutch

Voltage options

Ease of fitting

- Transmits drive when energised
- Engaged statically or dynamically
- Multi-pole versions for high torque
- Backlash-free / torsionally rigid
- Long life expectancy

### Combined clutch and brake units



#### Combined clutch and brake unit

- Simple fit to IEC motors and gearboxes
- Good heat dissipation
- High cycle times
- Voltage options
- Various housing options

### Electromagnetic holding magnets



#### Electro-permanent holding magnet

- Power-off engagementEnergy saving, fail-safe
- Axial forces from 40 to 1,200N
- Special voltages, forces and mountings available



#### Electromagnetic holding magnet

- High quality, cost effective package
- Axial forces from 40 to 30,000N
- Compact design
  - Special voltages, forces and mountings available

All of our standard products can be re-designed to suit the needs of our customers or a specific application.



20 Longfield Road, South Church Enterprise Park, Bishop Auckland, County Durham, UK, DL14 6XB Tel: +44 (0)1388 770 360 | Email: sales@sgtransmission.com www.sgtransmission.com | www.sgtransmission.de



© Stephenson Gobin Limited 2022. All images and text, along with any intellectual property rights, contained in this catalogue are owned by Stephenson Gobin Limited and may not be used, reproduced or manipulated without the written permission of Stephenson Gobin Limited. The information contained in this catalogue is illustrative only. Stephenson Gobin Limited shall have no liability or responsibility in respect of reliance on the information contained in the catalogue. The information contained in the catalogue shall not form part of any contract subsequently put in place.