

TYPICAL USES OF SG PRODUCTS

- All units designed and manufactured on site – fast response directly from our Engineering Production and Sales Departments.
- Option to have products manufactured in the 'Far East' whilst maintaining design and control from Europe.

- Design and manufacture of full assembly or bespoke engineering solutions are available.
- Standard products cross refer directly to most major manufacturers around the world.
- Modifications and special designs possible for small batch orders.



Leisure

- Steering Systems
- Yacht Autopilot
- Amusement Machines
- Fitness Machines
- Film and Theatre
- Airport Baggage Handling



Medical

- Stairlift
- Medical Bed
- Patient Hoist
- Oncology Machine
- Scanners
- Robotics
- Wheelchairs



Military

- Turret Control
- Military Robotics
- RV Vehicles
- Aviation Controls
- Missile Launch
- Radar Drives



Fire & Security

- Smoke Curtains
- Smoke Window Controls
- Roof Vents
- Barrier Systems
- Automatic Door Drives
- Door Electromagnets



Energy

- Motorised Hose Reel
- Valve Actuators
- Pipeline Inspection
- Renewable Energy
- Nuclear



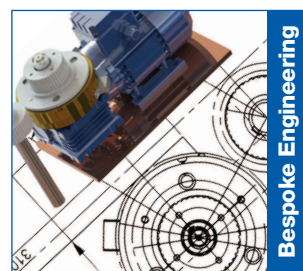
Retail

- Supermarket Barriers
- Turnstiles
- Gates
- Revolving Doors
- Conveyors



Machinery

- Labelling Machine
- PCB Printing Machine
- Conveyors
- Textiles
- Bottling
- Pick and Place



Bespoke Engineering

- Automotive
- Laundry
- Sub-Sea Application
- Pan & Tilt Cameras
- **Your next project?**

www.sgtransmission.com

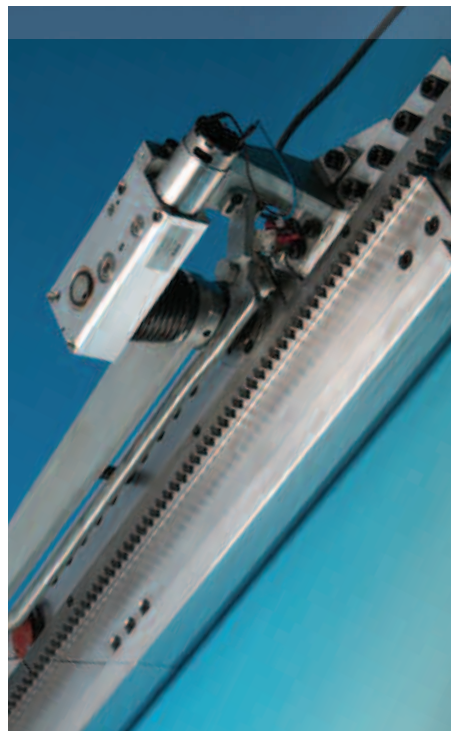
Please visit our new comprehensive website to view our entire product range, including downloadable technical data sheets and online information request forms



As a result of its hard-work and persistence, **Stephenson Gobin** has won the accolade for Business Growth as part of the EEF's annual recognition awards for companies all around the UK.

The EEF is a national manufacturers' organisation that helps thousands of companies to evolve and compete in a fast-changing world.

With its unique combination of business services, government representation and industry intelligence, the EEF suggests that no other organisation is better placed to provide the skills, knowledge and networks that businesses need to thrive.



SG TRANSMISSION

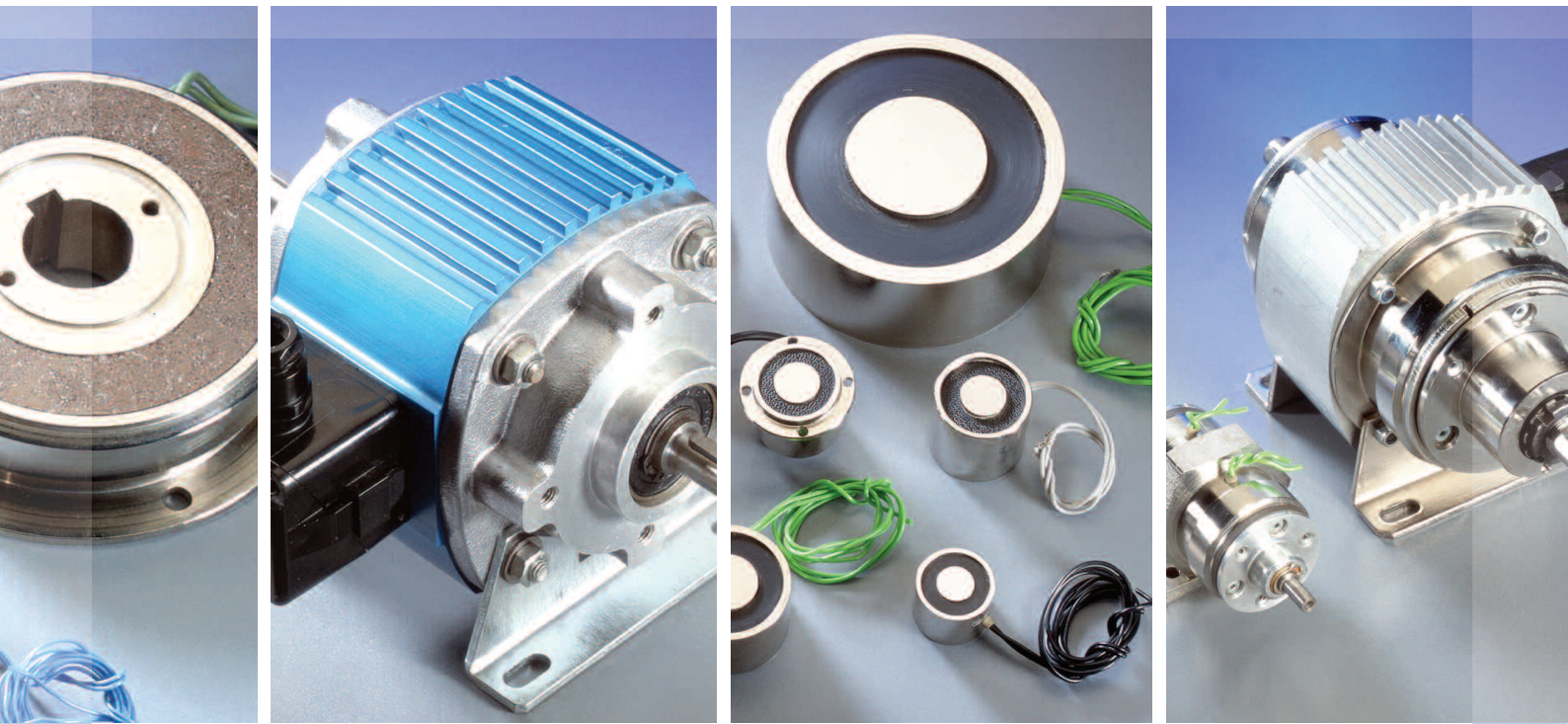
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SG TRANSMISSION



electromagnetic clutches, brakes and magnets
customised transmission solutions



Power on Clutches

SG Transmission Type 51 clutches offer a low-cost and simple option for the transmission of motion in a drive train. Three basic types are currently available allowing for various mounting options and flexibility in design. However, over 50% of our throughput are customised units in batches from 10 to 2,000.

The three basic types are:

- ▶ Flange Mounted - for mounting directly to motor or gearbox bodies etc
- ▶ Ball Bearing Mounted – for mounting onto shafts for high speed or higher torque applications
- ▶ Sleeve Bearing Mounted – for mounting onto shafts where lower torques and speeds are required



Power on Brakes

SG Transmission Type 52 powered on electromagnetic brakes are all FM (flange mounted) but can be custom mounting on request.

The armatures can be supplied in three styles, with or without integral drive hub and consist of an armature plate and return spring (in C.L. form), or a hub, with or without bearings, to suit the needs of the drive train.

The armature must be positioned with an air-gap to allow efficient operation, and must be checked at regular interval and reset where necessary.



Combined Clutch Brakes

SG Transmission Type 54 Modules combined clutch and brake packages are normally used in belt or chain driven applications where the rotary motion is derived from a remote location or from a co-axially coupled motor.

They are used whenever the prime mover is required to run continuously and the unit which it is driving is to have a controlled “stop - start” action. Allowing an electric motor to run and controlling its output with a combined clutch brake unit reduces the power consumption of the system considerably.

Because these units are precisely manufactured with a positive “stop - start” action they can be controlled with relatively simple solid state electronics to give accurate repeatable positioning.



Clutch Brake IEC Modules - Type 55

SG Transmission clutch brake modules are used whenever the prime mover is required to run continuously, and the output of the driving device requires a controlled “stop and start” action. This allows an electric motor to run while controlling its output via a clutch brake module. This will reduce the power consumption of the system considerably.

These modules are precision engineered with positive clutch and brake action with zero backlash. They can be controlled by relatively simple solid state electronics to give accurate stopping and starting with frequencies over 300 cycles per minute.

BRAKES, CLUTCHES & POWER TRANSMISSION D



Spring Applied Brakes

SG Transmission Type 56 electrically released brakes use double sided non-asbestos linings and a metal hub drive for safety.

Complete brakes can be supplied with or without a flange. Note: if an application where corrosion of the friction surfaces is likely (leading to difficulty in disengaging the brake), rust resistant steel friction discs are available.

A rubber dust sealing ring is available for popular sizes to prevent ingress of foreign matter. A hand release mechanism can be supplied when required



Permanent Magnet Brakes

SG Transmission permanent magnet (fail-safe) brakes incorporate the use of high specification Rare-Earth materials to ensure a positive stopping action in all types of rotating machinery.

These power-off devices are designed so that when the power is removed from the unit, for whatever reason, the magnetic energy of a permanent magnetic disc is channeled and controlled to attract the steel armature plate across an air-gap, thus clamping it in its place against the stationary field housing to give the required braking effect.



Permanent Magnet Hysteresis Clutches and Brakes

RELIABLE & STABLE TORQUE

The 52-PHT series clutches and brakes utilise premium magnetic particles and the optimum magnetic circuit. The relationship between torque and exciting current is directly proportional, offering constant torque, independent of slip speed.

NO COIL

Since torque is transmitted via a hysteresis field, there is minimal difference between the static and the dynamic torque. These units are unaffected by friction and wear, therefore torque is substantially more accurate and repeatable than friction tensioners.

HIGH CYCLE CAPABILITY & LONG LIFE

The use of high wear particles assures long operational life in high cycle applications.

DESIGNED FOR CONTINUOUS SLIP

The 51-PC/51-PB series clutches and brakes have been designed to maintain high performance in continuous slip applications through maximum and continuous heat dissipation.



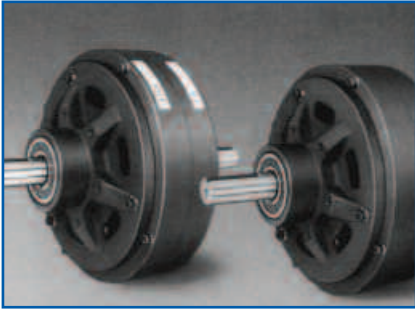
Magnetic Particle Clutches and Brakes

FAST RESPONSE - The OP series has been designed to provide fast response. Response rates can be further quickened through overexcitation circuits.

STABLE TORQUE - The OP series produces consistent and repeatable torque. Torque is independent of speed and proportional to voltage applied to the field.

LONG LIFE - The OP series sturdy construction and precise formulation of the magnetic particles combine to provide extended life.

SLIP CAPACITY - OP series clutches and brakes are designed to deliver high performance under constant slip conditions.



Electromagnetic Particle Clutches and Brakes

RELIABLE AND STABLE TORQUE - The 51-PC/51-PB series clutches and brakes utilise premium magnetic particles and the optimum magnetic circuit. The relationship between torque and exciting current is directly proportional, offering constant torque, independent of slip speed.

HIGH CYCLE CAPABILITY - The use of high wear resistant particles assures long operational life in high cycle applications.

DESIGNED FOR CONTINUOUS SLIP - The 51-PC/51-PB series clutches and brakes have been designed to maintain high performance in continuous slip applications through maximum and continuous heat dissipation.



Slip Clutches

ACCURATE TORQUE - The drag torque is produced by means of a hysteresis principle. This allows for constant torque levels and eliminates the possibility of high break away torque that occurs with typical friction devices

STABLE TORQUE - A consistent torque is maintained because of the hysteresis principle and is consistent within allowable speed range.

LONG OPERATIONAL LIFE - Permanent magnets and magnetic particles transmit torque, therefore wear is virtually eliminated.

EASY INSTALLATION WITH NO ADJUSTMENTS - Units are provided pre-assembled to a specific torque range, so there is nothing to adjust.

NO CONTAMINATION - Units are sealed which prevents any particles from contaminating the machine, and also prevents contamination of the clutch by the machine environment.



Holding Magnets

SG Transmission supply **electromagnets** in any voltage to suit your application including 24V d.c. and 240V a.c. These electromagnets can be supplied with or without a matching armature (counter) plate and can offer a cost effective solution for most applications.

All the magnets are supplied with flying leads as standard, however in sizes Ø50mm and above they can be fitted with a 3-pole plug and socket.

- Simple Construction.
- Customised Designs.
- 8 Standard sizes available.
- Holding forces from 90 to 3500N and above.



Flexible Couplings

Gummi has over 35 years of experience supplying the global industrial power transmission industry. Our engineered solutions include a broad range of products including; flexible, pneumatic, hydraulic couplings, and various types of Air Clutches and Brake.

Gummi is synonymous with the characteristics of quality products and total customer service. All our products are manufactured according to the ISO 9001/2000 Quality Management System and Norms.

The applications for the Gummi product are endless. As our units can be found in operating in every corner of the world, within but not limited to the Cement, Metal forming, Mining, Maritime, Petrochemical, Pulp/Paper, Steel and Trade industries.