Mechanical power transmission couplings

1) What is your application?
2) Which power transmission coupling would best serve your purpose?
3) Which size & specification of coupling will safely and cost effectively fulfill your requirements?

jbj Techniques provide:

- An extensive range of couplings for mechanical power transmission.
- Many standard types and sizes held in stock for quick despatch.
- Technical expertise and in-house machining facilities for minor customisation or full bespoke couplings.
- A wide range of coupling types to fulfill the requirements of a vast range of applications.

Ranging from miniature couplings, all steel gear couplings, flexible spider couplings, shaft couplings, torque limiting couplings, disc and grid type couplings, ATEX compliant and shaft locking devices. Magnetic couplings for power transmission between hermetically sealed areas.

There are a range of criteria in specifying the most suitable coupling for your application but the jbj Techniques technical department will guide you all the way to specify the right coupling for power transmission.

A wide range of power transmission couplings:

Spider Couplings; curved & straight jaw couplings . . .

Spidex® torsionally flexible shaft couplings, also known as jaw couplings, enable the connection of shafts or flanges via a polyurethane drive ring.

The flexibility of the drive ring allows the power transmission coupling to compensate for parallel, angular and axial displacements.

Maximum shaft diameters of 145 mm can be accommodated with maximum torques up to 15,000 Nm and maximum speeds of 19,000 rpm.

» Link to Spider Couplings web page
**Gear Couplings; steel gear hubs, nylon drive sleeve . . .**

Dentex® torsionally rigid, power transmission couplings which transmit torque between two steel gear hubs and the internal toothing of a nylon drive sleeve.

The gear coupling is designed to release neighbouring shaft bearings from non-controlled additional bearing loads.

Maximum shaft diameters of 100 mm can be accommodated with maximum torques up to 2,400 Nm and speeds up to 8,000 rpm.

» Link to [Gear Couplings web page](#)

**All Steel Gear Couplings; steel gear hubs, steel drive sleeve . . .**

Hercuflex® torsionally rigid, power transmission couplings which transmit torque between two steel gear hubs and the internal toothing of a steel drive sleeve.

Gear couplings have the highest power density, offer more variations, a wider size, torque, and bore capacity than any other coupling type. Easily modified for shear pin service, floating shaft type, vertical applications, electrical isolation, limited end float, and can have a brake drum or disc added.

» Link to [All Steel Gear Couplings web page](#)

**JXL Couplings; pin and bush style anti-static / flameproof . . .**


Torsionally resilient couplings, of pin and bush design, comprise of two fully machined steel flanges which are coupled via a series of drive pins and 'hytrel' flexible elements. The elements have the ability to absorb shock loads and dampen vibration.

Maximum shaft diameters up to 400 mm with torques of 300,000 Nm and speeds up to 11,000 rpm can be accommodated.

» Link to [JXL Couplings web page](#)
Grid Couplings •••

- Torsionally flexible and resilient, vibration reduction up to 30%, plus cushion shock loads safeguard driving and driven equipment.
- Quick installation and easy maintenance reduces labor and downtime costs.
- Fully interchangeable with industry standards.
- Versatile stock; metric and imperial size cover fasteners available.
- High tensile, shot-peened alloy steel grids and precision machined hubs ensure superior performance and long life.

» Link to Grid Couplings web page

Torsional Couplings •••

- Dampen torsional vibrations and tune the system to have critical speeds outside the operating range.
- These torsional couplings solve torsional vibration problems typical of those found in diesel engine applications.
- Torsional couplings dampen torsional vibrations and tune the system to have critical speeds outside the operating range.
- Jbj Techniques Ltd can analyse the application with our computer programme and determine the exact torsional coupling needed for almost any application.

» Link to Torsional Couplings web page

S-flex Couplings •••

- The simple design of the S–Flex coupling ensures ease of assembly and reliable performance. No special tools needed for installation or removal. S–Flex couplings can be used in a wide variety of applications.
- The S–Flex flanges are offered in five models which are made from zinc die cast or cast iron. Sleeves are available in EPDM rubber, Neoprene, or Hytrel® to address a wide variety of application requirements.
- Thirteen sizes are available with torque capabilities that range from 60 in-lbs (6.78 Nm) to 72,480 in-lbs (8189 Nm).

» Link to S-flex Couplings web page

Magnetic Couplings •••

- Hermetically separate two areas whilst continuing to transmit mechanical power from one to the other with these couplings ideal for applications where prevention of cross contamination is essential.
- The magnetic coupling works by using the power generated by permanent magnets. No external power supply is needed. These are permanent magnets not electro-magnets.
- ATEX compliance (on request) is yet a further advantage for using these excellent power transmission couplings. There is no need to alter your system as the magnetic coupling will be designed to suit your machinery.

» Link to JXL Couplings web page
**Disc Couplings**

jbj Techniques offer a wide variety of superior disc coupling products in models designed to meet the application needs of today’s worldwide power transmission market.

Implementation of Finite Element Analysis, and extensive testing of materials, an innovative disc pack profile design has been developed, revolutionary to traditional disc pack designs found in the market.

Manufactured using high grade stainless steel (AISI-301), for high strength, high endurance to fatigue, and resistance to most environmental conditions.

» Link to Disc Couplings web page

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**Tyre Couplings**

With a flexible body that compensates misalignment and protects other components in the transmission system. UNE-FLEX couplings can be produced in accordance with the requirements of regulation 94/9/CE (ATEX 95) of a group II device, category 2G or 2D (zone 1) and temperature class T4.

The fundamental element of the tyre coupling is a neoprene rubber tyre reinforced with a synthetic mesh. It adapts itself to the working conditions, absorbing axial, radial, angular and torsional misalignments and prevents vibration via the transmission to the machines to which they are coupled. Compensates for angular misalignments to 3°, radial misalignment by 4 mm, and axial misalignment of 6 mm.

» Link to Tyre Couplings web page

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**Magnetic Couplings**

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» Link to JXL Couplings web page
**Torque Limiting Couplings . . .**

Protect mechanical equipment, or its work, from damage from mechanical overload.

Torque limiting couplings are designed for machines with chain, gear or belt drives to prevent over-loading of sensitive motors, gearboxes and machine components.

High quality torque limiting couplings, fully-machined components with a special rustproof surface coating. This series of torque limiters are completely enclosed to prevent dirt from contaminating the interior. They allow stepless adjustment of the required slip torque, even when already installed.

Torque limiting capacity up to 23,000 Nm.

» Link to [Torque Limiting Couplings web page](#)

**Coupling Element Size Chart . . .**

Coupling element size comparison chart (up to Spidex S/CJ125 & Dentex B80)

Simply size your coupling, decide the shore hardness colour and contact us immediately.

See yellow (Pump Drive Component) catalogue for technical specifications, power, torque, speeds & other selection data.

Coupling elements can be sized even from a partial remnant of a very worn out coupling element.

Very useful if you are an end user of a power transmission system designed and built by a supplier in years past without being supplied the necessary maintenance and ordering information.

» Link to [Coupling Element Chart web page](#)
jjb Techniques manufacture and supply one of the most comprehensive ranges of bellhousings in Europe meeting the IEC and Nema standards for motors. Tailored to suit each individual drive, we have the ability to connect electric motors with frame sizes from D56 to D355L to any given pump type without misalignment.

www.jbj.co.uk/couplings.html
the right coupling for power transmission ranging from miniature couplings, all steel gear couplings, flexible spider couplings, shaft couplings, torque limiting couplings, disc and grid type couplings, ATEX compliant and shaft locking devices, tyre couplings and the new range of magnetic couplings enabling power transmission between hermetically sealed areas without environmental pollution or contamination between the sealed areas.

www.jbj.co.uk/pumpsandmotors.html
comprehensive range of pumps and motors Groups 1, 2 and 3, and micro pumps held in stock for quick delivery. Gear pumps, gear motors, vane pumps, screw pumps, axial & radial piston motors to suit manufacturing process industry, factory machines, test rigs and test benches, commercial vehicles, agricultural and heavy plant machinery, lifting machinery, mining industry, offshore industries and renewable energy technologies, a vast range of hydraulic systems.

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quality products for mechanical & fluid power
01737 767493 info@jbj.co.uk www.jbj.co.uk

jjb Techniques Limited is ISO certified, committed to international coordination & unification of industrial standards.
A range of products ATEX certified to directive 94/9/E requirements.
jbj Techniques is a specialist supplier of high-quality products for the mechanical power transmission and fluid power sectors. The company offers a high level of in-house expertise plus a huge selection of products to meet a very broad range of customer applications. From specification, through technical advice and manufacture to after-sales support, jbj Techniques provides a comprehensive and valued service to the power transmission and hydraulics industries. The company fields a UK-wide team of technical sales engineers to ensure that the business is close to its customers, and it enjoys excellent associations with European manufacturers, acting as sole UK distributor in many cases.

**jbj's team** is recognised for its expertise in the selection and configuration of hydraulic and mechanical transmission systems. Able to draw on an extensive product range that provides the building blocks for bespoke systems both large and small, the in-house design team offers a complete service, ranging from an assessment of customer requirements to full technical backup, including product specification, CAD based system design, system build and certification. Moreover customers can take advantage of jbj's own machine-shop facilities and skilled engineers to guarantee quality and control costs.

**jbj Techniques provides** one of the widest ranges of couplings available within the UK; mechanical power transmission couplings for a vast range of applications. Ranging from miniature couplings, all steel gear couplings, flexible spider couplings, shaft couplings, torque limiting couplings, disc and grid type couplings, ATEX compliant and shaft locking devices. Magnetic couplings for power transmission between hermetically sealed areas. However as extensive as the selection is, couplings make up a fraction of jbj's portfolio. As power transmission specialists the company stock and provide: gearboxes, clutches, pumps, hydraulic motors, flow meters, fluid power accessories including: cooling & heat exchange products, reservoirs, pipe flanges, seals and level indicators, as well as a variety of bellhousings and engine adaptors, to name just a few of the product categories.

**jbj Techniques Limited is proud of it's relationship and reputation with customers and suppliers.** The core client base is stable and loyal, which is testament to the quality of service provided by the company. A similar relationship exists with suppliers, ensuring a continuing high quality service in which customers can have complete confidence.
quality products for mechanical & fluid power

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