



an excellence in engineering

comprehensive range of components [www.jbj.co.uk](http://www.jbj.co.uk)



quality products for mechanical & fluid power

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jbj Techniques Limited is ISO certified, committed to international coordination & unification of industrial standards.

- registered in England No: 1185469 -

A range of products ATEX certified to directive 94/9/EC requirements



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art by James Fleming jbj Techniques Limited



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clutches & gearboxes

[www.jbj.co.uk/clutchesgearboxes.html](http://www.jbj.co.uk/clutchesgearboxes.html)

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 probably the widest range of couplings available within the UK with 14 different designs and 22 different styles of gear couplings alone. The product portfolio includes 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. However, as extensive as the selection is, couplings make up a fraction of jbj's portfolio. In addition, the company can provide gearboxes, clutches, pumps, hydraulic motors, flowmeters, fluid power accessories - including cooling systems, reservoirs, seals and indicators - as well as a variety of bell housings and flanges, 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.



from Small Individual Components

to Large Combinations



jbj Techniques Limited providing . . . a diverse range of mechanical drive & transmission solutions to industrial markets, including design engineering, product supply & after-sales service . . .



video

as extensive as the selection is, couplings make up a fraction of jbj's portfolio



video

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[www.jbj.co.uk/splittergearboxes.html](http://www.jbj.co.uk/splittergearboxes.html)

jbj Techniques 'AM' splitter gearboxes (or multiple PTO) are available in a number of mounting formats with various increasing and decreasing ratios.

Maximum input torques up to 5,600Nm can be accepted as standard whilst higher powers can be accommodated by the use of oil cooling.

All units can be supplied with either hydraulically or mechanically actuated clutch units.

jbj Techniques can also offer specialist design and manufacture for units outside of the standard range.

The pump drives range of equipment allows a single or a multiple of pumps to be driven from a single prime mover.

Single pump drives allow a pump to be close coupled to a diesel engine that has a flywheel and flywheel housing in accordance with SAE standards (non standard can also be accommodated).

Supplied in a kit format consisting of a bellhousing fully machined to suit the particular pump mounting and a flexible coupling to suit the

engine flywheel and particular pump shaft.

Multiple pump drives allow two or more pumps to be driven from a single prime mover.

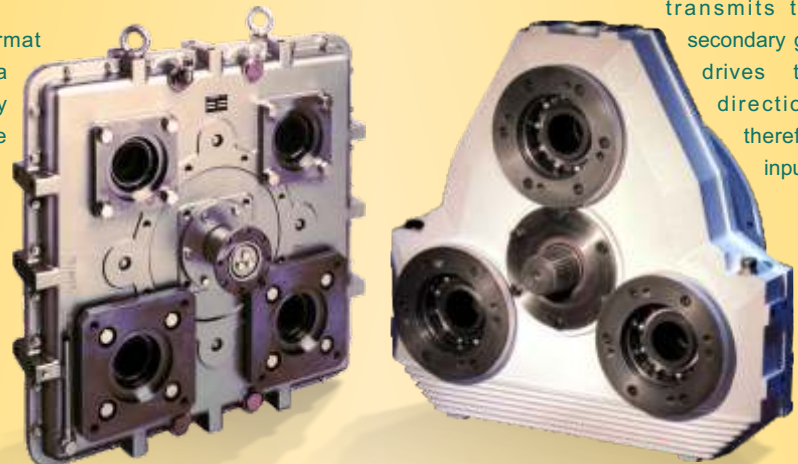
Available in a number of mounting formats, sizes and increasing and decreasing speed ratios.

All models may be close coupled directly to the prime mover (Model B) or may be fitted with an over-centre clutch (except AM 365 and AM 480) for close coupling (model BD) or for independent mounting (model BDS).

The multiple pump drive units are constructed from:-

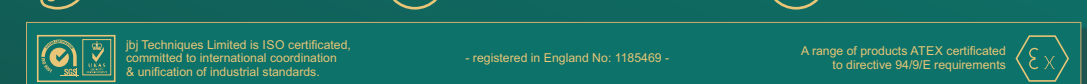
- » cast iron casings.
- » straighttooth gears case hardened and ground, shaved on AM216, AM320, AM220, AM330 series.
- » ball bearings.
- » case hardened shafts.
- » Viton seals on input shafts.

The input shaft is splined to the primary drive gear which transmits the drive to the secondary gear on whose axis drives the pump. The direction of rotation is therefore opposite from input to output.



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[www.jbj.co.uk/clutchesgearboxes.html](http://www.jbj.co.uk/clutchesgearboxes.html)

**Mechanically and hydraulically actuated over-centre clutches available in two mounting styles, speed increasing or decreasing gearboxes, multiple plate, oil bath clutches:**

» **'BD' series clutches** for close couple to diesel engines with SAE style flywheel facility. 'BD' series clutches have been designed to mount onto any engine with flywheel and bellhousing conforming to SAE dimensions. These clutches consist of an over-centre clutch assembly mounted onto a tapered shaft carried on two bearings.

The pilot bearing is housed in the engine flywheel and the outer bearing serves to support the output shaft and is capable of withstanding radial loads as detailed within the jbj Techniques Clutches & Gearboxes catalogue. Found on-line [www.jbj.co.uk/e-catalogues.html](http://www.jbj.co.uk/e-catalogues.html) or ask for printed copy

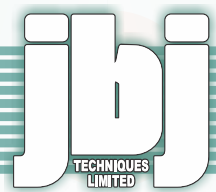
For exceptionally high radial loads models BD290/150R, BD2200R and BD3300R are available with special heavy duty bearings.

Power is transmitted by clutch plates located within a driving ring bolted to the engine flywheel. The clutch mechanism is equipped with a unique automatic clutch adjustment device capable of compensating for reasonable clutch plate wear.

» **'BDS' clutches** for independent, in-line arrangements, capable of accepting high radial loads and transmitting powers of up to 850 kW as standard. Versions are also available to close couple hydraulic pumps to the clutch output shaft.

Type BDS units provide a unique range of free-standing clutches intended for applications where engine mounting is not possible. BDS clutches consist of a BD type clutch but with a drive plate supported on the input shaft carried on two bearings in the independent bellhousing. The drive plate carries the driving ring and main shaft pilot bearing.

BDP and BDSP clutch units are constructed as per the standard type BD and BDS clutches, but offer a selection of hydraulic pump adaptors in place of output shaft.



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» **'RM' version gearboxes** are specifically designed for close coupling to industrial diesel engines and are available in either speed increasing or speed reducing format. Gearboxes can be supplied with output shaft either same or opposite rotation to input shaft. Input to the gearbox can be made either by rigid/flexible coupling or via a 'BD' series clutch.

The 'RM' version gearboxes consist of a 2-piece cast iron casing (\*except RM20 units) with helical teeth, case hardened gears and shafts. Reverse rotation units have a primary gear on the input shaft driving directly onto the secondary gear powering the output shaft. Same rotation versions have an idler gear between primary and secondary gears.

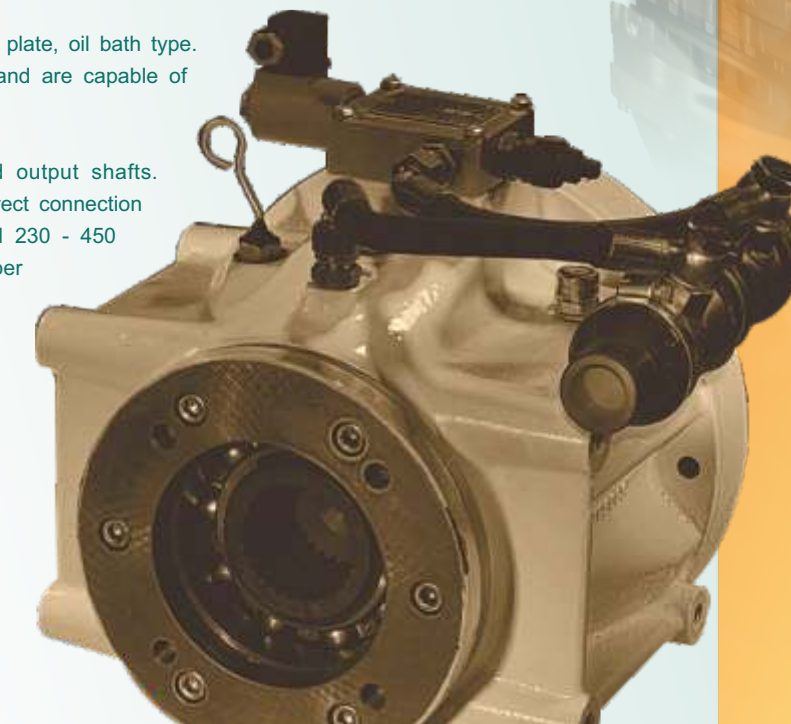
There are 3 basic types of RM gearbox; RM-GR models are for close coupling to diesel prime movers and have a choice of SAE housing and rigid or flexible couplings; RM-BD models are similar to RM-GR but are fitted within an over-centre clutch in place of coupling, RM-BDS models offer independent mount units with over-centre clutch.

» **Oil Bath Clutches** are free standing clutches of the multiple plate, oil bath type. These clutches are particularly suited to arduous applications and are capable of withstanding high radial loads.

The PFI 60 and PFI 120 are manufactured with input and output shafts. The PFI 60P and PFI120P are intended for hydraulic pump direct connection with the same pump adaptor flanges and couplings as on AM 230 - 450 pump drives which means the possibility to fit a large number of pumps with standard components.

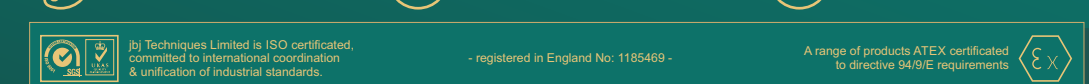
Further information including dimensions, weight, torque, specifications, etc. » pages 1 - 3 of the **"Clutches & Gearboxes"** catalogue, [www.jbj.co.uk/e-catalogues.html](http://www.jbj.co.uk/e-catalogues.html) or ask for printed copy.

For selection notes, service factors and specification catalogue visit [www.jbj.co.uk/clutchesgearboxes.html](http://www.jbj.co.uk/clutchesgearboxes.html)



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[www.jbj.co.uk/planetarygearboxes.html](http://www.jbj.co.uk/planetarygearboxes.html)

The jbj Techniques range of planetary gear boxes consists of a complete range of multi-purpose planetary gears. Input can be via electric motor, hydraulic motor, air motor ([www.jbj.co.uk/pneumaticmotors.html](http://www.jbj.co.uk/pneumaticmotors.html)) or bare input shaft, be it either a splined or parallel keyed input shaft. Due to the complete flexibility of the gearboxes and jbj Techniques' own design team and in house manufacturing capabilities, we can accommodate gearbox inputs to suit your own bespoke requirements, even for a one off! There are a standard range of output shafts to cover all requirements, however, should you require a specific or bespoke output shaft then we are more than happy to look at the feasibility.

The gearboxes are designed for rugged use and dependability. The gear case is made of nodular iron, whilst the planet carriers, are made out of steel or high-tensile nodular iron. All gearing is heat treated with full addendum modification, as well as lead and profile modification in order to obtain the best performance, efficiency, and low-vibration. The close tolerances in all of the gears and floating planet carriers allow the load to be evenly shared by all the components. Spline profiles on the gears allow them to handle even larger loads. The all-roller bearing design for the planet gears allows for greater efficiency and superior start-up torque. The gearboxes also use performance shafts made from high tensile steel to further increase the load that the gear box can handle. All these things, coupled with oversized diameters (compared to industry standard) on the shafts, create a gearbox that can handle almost any application.

**Additional design features include.....**

- » 32 sizes.
- » Output torque up to 1,000,000 Nm.
- » Transmissible power up to and above 550 kW.
- » Ratios going from 3 to over 3000:1
- » High efficiency, up to 98.5% per stage.
- » Modular structure.
- » Full planetary in-line and combined Gleason-planetary right-angle units available.
- » 1 to 4 reduction stages, on request 5 stages.
- » Optional spring applied-hydraulically released multi-disc brake.
- » Flange, foot and shaft mounting versions, bare shaft output available.
- » Output shafts include solid keyed, solid splined, hollow splined or for shrink disc mounting.
- » Vast range of accessories for the low speed shaft: drive flange, splined bushing, slew pinion, splined rod, shrink disc, torque arm.
- » Broad selection of input adaptors to suit standard electric motors both IEC and NEMA, air and hydraulic motors, male input shafts for mechanical linkages.

