



Power Transmission Solutions

Power Transmission Products



Power Transmission Products

Cross+Morse, operating from a 5,000m² fully integrated factory in Birmingham, have a depth of technical expertise and engineering experience, specialising in the design, manufacture and supply of high performance mechanical power transmission systems and components. With our team of applications and design engineers at your disposal, Cross+Morse is able to provide bespoke technical solutions to your power transmission problems saving you both time and money.

Our range of products is extensive and includes:-

- Roller Chain from 6mm to 2 1/2". Single and multistrand British Standard and ANSI sizes
- Special and Attachment Chains
- Sprockets and Platewheels (steel, cast and stainless)
- Timing Belt and V-Belt Pulleys
- Timing Belts - rubber and polyurethane
- Chain Tensioners
- Gears – Spur, Bevel, Rack
- Torque Limiters and Overload Clutches
- Clutches – Freewheel, Roller and Sprag type
- Couplings – Chain, Gear, Elastomeric and Disc type
- Sealmaster Bearings
- Bespoke Components Manufactured

In addition to the above, all products can be specially adapted to suit your specific requirements, critical to solving your power transmission problems. We ship all over the world and have Distributors/Agents in many countries.

Our commitment is to provide our customers with the highest level of service. In practice you receive the product to schedule, to the assured quality and at a competitive price.



Quality Assurance is central to our organisation with controls encompassing all aspects of design, manufacture, logistics and customer service. Accreditation to ISO 9001.



Expertise

Our expertise is based on over 100 years of experience and covers a wide range of industries including:

- Original equipment manufacture such as packaging machinery, conveyor systems and materials handling
- Process Industries including Food and Pharmaceutical
- Agricultural Equipment and Machinery
- Special Purpose Machinery
- Brick, Tile and Quarrying Industries
- Oil & Gas
- Transport
- Mining Industries
- Environmental and Energy Industries

At Cross+Morse, customer focused support, with in-house design and manufacture does not carry a premium and is considered an essential element in the Cross+Morse service to industry.

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ROLLER CHAINS

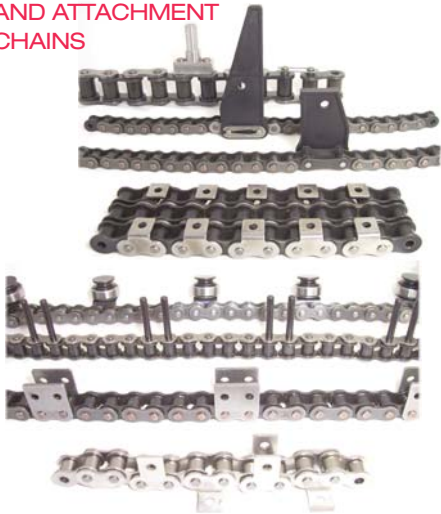


Cross+Morse produce only high performance Roller Chain of consistent quality, using modern manufacturing technology combined with long established proven specifications to give long service life. B.S. 1/2" to 1" pitch Simplex chains have easy disassembly pins produced using a copper plating process originated by our company.

Precision Roller Chains to both British Standard (B.S.) and American ANSI Standard from 1/4" to 2 1/2" in simplex and multi-strand forms.

Suitable for drives with power from fractional to 2,500 kW, with operating speeds up to 25 metres per second.

SPECIAL CONSTRUCTION AND ATTACHMENT CHAINS



For conveying and transportation we have a large range of attachments that includes standard K and M plates and extended pins for standard Roller Chains, including 304 Stainless Steel chains components which are stocked in part assembled condition to enable prompt delivery of adapted chain. Many custom designed attachments are also available, both as individual components and as chain assemblies.

Straight-side plate, hollow pin, extended pitch, metric pitch, and special design chains complete the product range offered.

Short delivery lead times combined with advance design for long service life have made Cross+Morse attachment chain the first choice with Food Processing and Packaging Companies.

STAINLESS STEEL AND CORROSION RESISTANT CHAINS



Our standard Stainless Steel chains are manufactured in both 304 and 316 grade steels for high corrosion resistance.

Available from stock to B.S. standard from 8mm to 1 1/4" pitch, in simplex and multi-strand. In ANSI standard from 1/4" to 1" in simplex.

For operating in wet environments our Aquaproof (AP) chain provides a lower cost solution and is available in all popular roller chain sizes.

For low corrosion areas our chains can be supplied Electroless Nickel plated as well as with corrosion resistant low friction surface treatments.

INVERTED TOOTH CHAINS



Our extensive range of Inverted Tooth Chains include the standard SC type from 3/16" to 2" pitch, including Serpentine Chain; HV type from 3/8" to 2" pitch; and 1/2" pitch Conveyor Chains up to 12" width, in centre or outside guide construction. These provide optimum design opportunity or full replacement availability for all drive and conveying applications.

HV chains provide a concept for the transmission of high torque combined with high shaft speeds, providing smooth running and quiet drives to transmit up to 4,000 kW with shaft speed up to 12,000 rpm.

Proven in a wide range of applications from automotive transmissions, to flood control pumps, Inverted Tooth Chains offer many design advantages over gears, roller chain and timing belt drives.

STOCK PILOT BORE SPROCKETS AND PLATEWHEELS



An extensive stock range of low cost pilot bored Sprockets (simplex, duplex and triplex) and Platewheels to suit B.S. simplex and multi-strand chains from 6mm to 2" pitch and ANSI simplex chains from $\frac{3}{8}$ " to $1\frac{1}{2}$ " pitch, with teeth ranging from 8 to 150.

For powered roller conveyors a range of double simplex sprockets with teeth from 12 to 25, for $\frac{3}{8}$ " to 1" pitch British Standard Chain are available with pilot bore.

All Sprockets above are available with hardened teeth, pilot bore or finished bored with keyway and set-screw.

TAPER BORE SPROCKETS AND BUSHES



Available from stock is a range of taper bore steel Sprockets in most tooth sizes from 13 up to 30 teeth, plus 38, 45, and 57 teeth; and cast iron in popular tooth sizes from 38 up to 114 teeth; for British Standard simplex, duplex, and triplex chains from $\frac{3}{8}$ " to $1\frac{1}{2}$ " pitch. Steel sprockets are available with hardened teeth.

Double simplex sprockets are also available taper bored.

A complete range of cast iron Taper Bushes are stocked, with both imperial and metric bores, from 9mm up to 125mm; plus bushes in 304 stainless steel for bores from 9mm up to 75mm

STAINLESS STEEL SPROCKETS



For the Food and Beverage industries and corrosive environments we stock a range of simplex pilot bore Sprockets manufactured from 304 stainless steel for B.S. chains from $\frac{3}{8}$ " to 1" pitch, in popular tooth sizes from 13 to 30 teeth.

Many of these sprockets can be quickly converted to taper lock design.

These combined with our stock Stainless Steel Chain, enable ex-stock delivery of a complete corrosion resistant drive.

CROSSBORE REWORK SERVICE



A dedicated production area with specialized CNC machines provides a rapid response rework service of standard sprockets, pulleys and gears.

Known as Crossbore®; this service includes reboring, keywaying and setscrewing.

Weld-on hubs and adaptors enable fast production of large sprockets with less popular tooth sizes, complete with finished bore and keyway, or taper bush bore. A large range of broaches enable supply of sprockets with finished spline or square bores.

Induction hardening of teeth is offered in house on sprockets up to 450mm diameter, with tooth thickness up to 60mm.

SPECIAL SPROCKETS



Custom designed sprockets, platewheels, split wheels, ring-gears and segments to suit BS or ANSI roller chains, extended pitch, cranked link and inverted tooth chains; from $\frac{1}{4}$ " to $2\frac{1}{2}$ " pitch with diameter up to 1.45 metre; can be manufactured complete, or we can tooth cut only on customers' blanks.

Facilities include broaching, key seating, drilling, milling, grinding, honing and induction hardening; as well as a technical application and design service.

CLASSICAL TIMING BELT PULLEYS



Standard Classical Timing Belt Pulleys are available in three pitch sizes: - 1/5" (XL), 3/8" (L), and 1/2" (H).

XL Pulleys are available in both good quality steel and aluminium with pilot bores suitable for machining to customers specific shaft sizes. L & H type pulleys are manufactured in steel or cast iron for large diameters and are available in both pilot bore and taper bush versions.

As well as our comprehensive stock range, pulleys of non standard widths or numbers of teeth can be supplied to order.

HTD TIMING BELT PULLEYS



Cross and Morse HTD Pulleys are available in 4 pitch sizes: 3M, 5M, 8M and 14M.

3M Pulleys are manufactured in high grade aluminium alloy to keep weight and inertia low. Stocked in pilot bore for reworking to customer requirements and available in widths to suit all standard HTD Belts.

5M Pulleys are manufactured in medium carbon steel up to and including 40 teeth, larger tooth sizes in aluminium alloy. Pilot bore versions are stocked in three belt widths and a taper bore alternative is available to suit a 15mm wide HTD Belt.

8M and 14M Pulleys are manufactured from medium carbon steel or 260 grade cast iron and phosphated for corrosion protection. Pulleys are offered with a large range of tooth sizes in widths to suit all standard HTD belts. Available in pilot bore for reworking to customer requirements, bored for shaft clamping elements, or with taper bore for the complete off the shelf drive.

METRIC PULLEYS



Cross and Morse metric pulleys are available in both T and AT series versions.

Original T series pulleys are manufactured in high grade aluminium alloy and stocked in three different pitch sizes, T2.5, T5 and T10, available in pilot bore for reworking to specific customer requirement.

AT series Timing Pulleys give the option of up to 50% increased power to original T series. Stocked in two pitch sizes: AT5 and AT10 and available to suit all standard belt widths.

All metric timing pulleys are available in reduced and zero backlash forms to special order.

V BELT DRIVES



V belt drives are the simplest and most available form of open power transmission; simple to install, compact and with good power capacity.

Cross+Morse stock high quality fine cast balanced pulleys finished with phosphate coating for SPZ, SPA, SPB and SPC belts; finished bored for taper bushes, or can supply pilot bored in a few days.

TORQUE LIMITERS



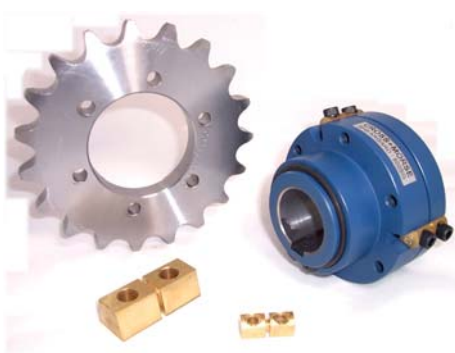
The Morse Torque Limiter is a protection device that limits torque transmitted in a drive, by slipping when the torque exceeds a preset value, due to shock loads, overloads, or machine jams. It automatically re-engages when the overload has passed. Torque Limiters prevent machine damage and costly breakdown time.

The Torque Limiter uses spring loaded friction surfaces for its operation; slip torque obtained by adjusting the spring force. With a torque range of 3 to 10,000Nm our standard Torque Limiters can be used with a sprocket, gear, pulley or flange, including our stock range of specially machined platewheels and shaft couplings.

- Simple Design • Easy Adjustment • Wide Torque Adjustment • Compact
- Minimum Maintenance • Economical • Dependable • Durable

Stocked in both pilot bore and pre-bored to popular sizes to give prompt delivery service.

CROSS SHEARGARD CLUTCHES



The Cross Sheargard Clutch uses a unique shaped wedge pin to provide overload protection. For synchronous and indexing drives the Sheargard offers optimum low cost protection with ease of maintenance, reliability of torque setting, and long term operational reliability.

Designed to accept standard torque limiter platewheels and roller chain couplings. The Sheargard clutch, with chain and elastomeric couplings are available from stock with an extensive range of preset torque ratings, and optional sensor plate to trigger a limit switch to isolate the drive in the event of an overload.

Several sizes of standard stock Sheargard clutches provide a torque range from 27 to 16,700Nm, with larger standard units made to order with torque capacities up to 69,700Nm.

Wedge pins are available in both steel and brass. The brass wedge pin generates no spark when broken due to overload.

CROSSGARD OVERLOAD CLUTCHES



The Crossgard series of overload clutches use random positioned sprung loaded balls locked in detents to provide drive and overload control. The drive only engages in one relative angular position, ensuring full synchronisation of the drive at all times. When overload occurs the balls are driven out of the detents to release the torque, causing axial movement of a pressure plate to actuate a sensor. 3 types are offered, all with optional Flexible Shaft Couplings.

Type CG - Low cost, simple design for general purpose applications: torque range (10-7154Nm) with operating speeds up to 700 rpm.

Type CGX - Unique design provides zero backlash drives: torque range 1.7-785Nm and maximum speed 1,400 rpm.

Type CGZ - High speed (up to 1800 rpm) overload clutch, with total drive disengagement: torque range 2.4-450Nm

SAFEGARD CLUTCHES



Safeguard series of overload clutches are designed to be fully interchangeable with other European manufacturers. Using a number of balls on unsynchronized units, and random positioned rollers on synchronized units, enables high torques and operating speeds to be achieved with compact units. Units with 10 different operating modes, have different flange connections, or Flexible Shaft Couplings, with finish bore and keyway; or clamping bush for shafts from 10 to 200mm.

- Type CSF – non-synchronous design – max. torque 8200Nm – max speed 3,300 rpm.
- Type CSY – synchronous design – max torque 8,200Nm – max speed 1,000 rpm.
- Type CSL – permanently engaged unit – max torque 8,200Nm – speed to 4,000 rpm.
- Type CSZ – total disengage unit – max torque 1,800Nm – max speed 5,000 rpm.
- Type CSF Mini – non-synchronous – max torque 450Nm – max speed 800 rpm.
- Type CSY Mini – synchronous unit – max torque 450Nm – max speed 700 rpm.
- Type CZF – zero backlash – negative acting spring non-synchronous design with option of clamping bush shaft locking – max torque 3,100Nm – max speed 4,000 rpm.
- Type CZY – zero backlash – negative acting spring synchronous design with option of clamping bush shaft locking – max torque 3,100Nm – max speed 4,000 rpm.
- Type CZP – Pneumatically operated type CZY to enable torque adjustment whilst machine is running. Fully disengages on overload. Max torque 550Nm.
- Type CMZ – large modular based unit – max. torque 42,400Nm – max speed 3,000 rpm. with shaft diameters up to 200mm.

CHAIN COUPLINGS



LRC DUPLEX ROLLER CHAIN COUPLINGS

- Low to medium speed drives (to 2,000 rpm)
- High starting or reversal torques
- Easy connection of shafts
- Available plain bore or with taper bush

LNC DELRIN® CHAIN COUPLINGS

- Medium speed drives (to 5,000 rpm)
- Corrosion proof chain
- Maintenance free
- Suitable for textile and food processing machines

Delrin® is a registered trademark of DuPont

MORFLEX® COUPLINGS



MORFLEX® RUBBER PIN COUPLINGS

- Low backlash with high flexibility
- Cushions shock-loads and absorbs vibrations
- Medium speed drives (to 6,500 rpm)

ELASTOMERIC COUPLINGS



KE SERIES ELASTOMERIC COUPLINGS

- Medium speed drives (to 6,000 rpm)
- Easy quick shaft alignment
- Available plain bore or with taper bush

L SERIES ELASTOMERIC COUPLINGS

- Low torque, high speed drives (to 31,000 rpm)
- Low cost for motor gearbox connection
- Available with 4 flexible elements

GE SERIES ELASTOMERIC COUPLINGS

- Low backlash with good flexibility
- Low weight and inertia
- Suitable for clean room applications

CROSSFLEX BELLOWS COUPLINGS



BF SERIES STEEL CROSSFLEX BELLOWS COUPLINGS

- Zero backlash with high torsional rigidity
- High speed drives (to 8,000 rpm)
- Very low inertia
- Bore sizes from 3 to 70mm with split hubs for keyless connection
- Torque capacity up to 500Nm, powers over 100kW possible

GEAR COUPLINGS GF



GF POLYMER SLEEVE GEAR COUPLINGS

- High speed drives (to 14,000 rpm)
- High torsional rigidity
- Corrosion and maintenance free
- Low weight/torque capacity

GFA DOUBLE FLEXING GEAR COUPLINGS

- Higher power transmission (to 750 kW)
- Crowned and barrelled gear teeth
- Tolerant to heavy shock loads

GFAS GEAR COUPLINGS

- High torsional rigidity
- Tolerant to heavy shock loads
- Suitable for Cardan shafts

GEAR COUPLINGS GSB



GSB SPLIT OUTER CASING DOUBLE FLEXING GEAR COUPLINGS

- Maximum power transmission (in excess 10,000 kW)
- Split outer casing allows radial dismount of equipment
- High torsional rigidity, with bore diameters up to 270mm
- Available with Shrink Disc Clamping Elements for easy assembly.

DISC COUPLINGS



CROSSFLEX METAL DISC COUPLINGS

- All metal construction – no moving parts
- Zero backlash – high rigidity for precise transmission
- Zero maintenance requirement – fit and forget
- 17 basic sizes cover shaft sizes from 8 to 240mm
- Suitable for high shaft speeds up to 10,000 rpm
- Torque capacities from 15 to 130,000Nm
- Can operate in hostile environments
- Single units ideal for Cardan Shaft applications
- Double units provide high levels flexibility
- Available with Shaft Clamping Elements for keyless connection

**High Torque, Compact, Robust Clutches with Metric or Imperial Bores from Stock for:
Indexing - Overrunning - Backstopping**

SPRAG CLUTCHES



Duo-cam Sprag Clutches use hardened chrome alloy steel precision cams, honed for accurate shape, to provide uniform contact with both races for even load distribution and prolonged clutch life. High capacity bearings accommodate radial and axial loads. The clutches mount on through shafts; torque being transmitted by a provided key. The outer race is precision ground with tapped holes on each face to fit gears, sprockets, pulleys, etc. A standard range of couplings is also available for shaft to shaft connection.

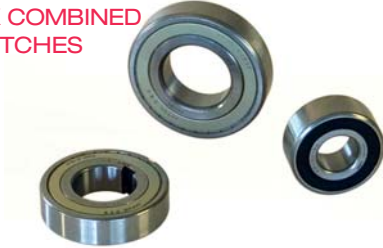
Other standard Sprag clutches and many special designs are also available.

ROLLER RAMP CLUTCHES



The standard roller ramp clutch range caters for shaft diameters from 6mm to 150mm with torque range 1-56,000Nm. Overrun speeds of up to 11,000 rpm are possible. Five series of clutches are offered, for incorporation within machine structures; plus self-contained units with integral bearings and a range of end flanges and couplings to suit most applications. Roller ramp clutches are ideal for indexing; providing high accuracy at high speeds and for overrun applications.

CKK COMBINED CLUTCHES



CKK Combined sprag and ball bearing clutches conform to 62 Series ball bearing dimensions, to provide a low-cost, high torque, compact units with bore sizes 8-40mm and torques to 260Nm. They are normally press fitted to both housing and shaft, but are also available with keyway on inner race only, or both races. Fully sealed units are available for open applications. Clutches conforming to 59 series bearings are also stocked offering bore sizes 20-50mm with thinner wall section, and torques up to 450Nm.

FREEWHEELS



Freewheels use a ratchet and pawl mechanism to give safe, positive transmission of torques up to 420Nm, in a low cost compact unit. Suited to low speed overrun applications where shock loads may be encountered. Well proven in a century of use in motorcycle, cycle and agricultural applications they are available with drilled outer flanges or with roller chain sprocket. Industrial ratchet freewheels provide positive one-way drive with high torque capacity within a small unit. Many special industrial ratchet freewheels have been manufactured to meet customers' requirements with torques over 1,000Nm. A range of adaptors are available and can be finished bored and keyed to customer's specifications.

BACKSTOP CLUTCHES



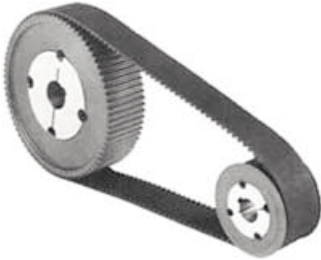
Low-cost sprag or roller ramp backstop clutches with integral torque arm. Stock units from 20 to 90mm shaft diameters with torque capacities up to 9,750Nm make these the ideal fitment to conveyor and elevator head shafts to prevent back-running. Installation is simple requiring only a bolt to prevent reverse rotation; which can be removed to allow reverse rotation if required.

CR SERIES CLUTCHES



The CR series clutches with centrifugal lift-off sprags enable high over-run speeds with no wear and provide long service life with minimum maintenance. Used entirely for over-running and backstop applications, designs are available to allow for free running of either shaft or outer race. Bore sizes from 20mm to 320mm are available, with torques to 360,000Nm. The design enables simple fitting either inside or on shaft extension of gearboxes.

Timing Belts provide a low cost, low weight, positive drive connection of shafts; with ability to operate at high rotational speeds and transmit up to 500kW.



CLASSICAL TIMING BELTS



Millions of successful drives in industries from office equipment to heavy mechanical handling plants bear testimony to the versatility of timing belt drives, requiring minimal maintenance and, when correctly selected, virtual life. The light compact drives combined with high efficiency, reduced bearing loads and elimination of tensioners provide minimum cost designs. Cross+Morse offer three basic forms of timing belts available both in endless construction for drive transmission and open-ended for conveying and robotics.

The classical timing belt is the original series of toothed belt drives, introduced over 50 years ago for accurate transmission of low torque drives in instrumentation, and later developed for a wider spectrum of industry.

Ultimately eight different pitches of belt were offered, but only three remain popular, 1/5" (XL), 3/8" (L), and 1/2" (H), all available from our warehouse stock. We can supply open ended belts and extra long belts to transmit power.

METRIC HIGH TORQUE DRIVE TIMING BELTS



Demands for increased powers and speeds led to the development of a metric series of High Torque Drive belts. These belts have a parabolic tooth profile to increase contact with the pulley, and reduce internal tooth stress, giving increased capacity and lower operating noise. Pirelli developed RPP belts with an indentation at the tooth tip to improve tooth tip elasticity and reduce noise levels. In addition to the standard belt, we now offer enhanced Silver, Gold, and Platinum series belts with power capacity over three times the original metric belts.

Open-ended belts are available, also polyurethane moulded belt with nylon faced teeth and/or backing.

We stock belts in standard widths in the 4 pitches, 3mm (3M), 5mm (5M), 8mm (8M), and 14mm (14M).

POLYURETHANE METRIC TIMING BELTS



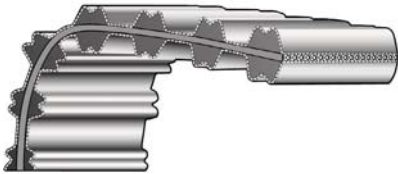
Developed as a metric option to classical belts the polyurethane metric timing belt uses steel tension cord encased in a polyurethane jacket with integral teeth. The manufacturing method produces high pitch accuracy making these belts popular on precise positioning applications. Polyurethane is a non-marking material with high resistance to mineral oils, greases, and dilute acids; making it an ideal choice for the food and tobacco Industries.

Available in two tooth forms, original 'T' series in 2.5mm(T2.5), 5mm(T5), and 10mm(T10); and increased power 'AT' series in 5mm(AT5), and 10mm(AT10).

Polyurethane belts are popular for conveying, and we can supply both endless and open belts complete with welded attachments.

Timing Belts provide a low cost, low weight, positive drive connection of shafts; with ability to operate at high rotational speeds and transmit up to 500kW.

DOUBLE SIDED BELTS



Double-sided belts are also available for the metric and Classical series.

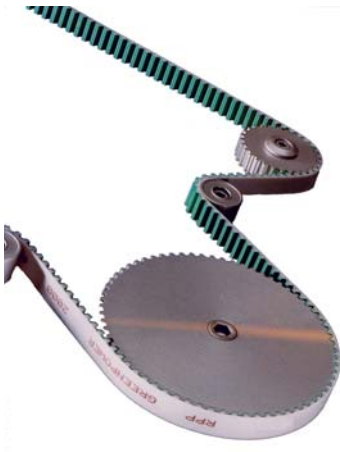
Double-sided belts have teeth equally constructed on each side of the belt, which enables them to mesh with toothed pulleys on both the inside and outside. The construction of the belts is basically the same as standard Metric belts, except that the nylon facing is also on the backing teeth, enabling full torque transmission from each side of the belt.

Double sided belts enable:

- Reverse motion between internal and external pulleys.
- Require only one belt to drive a series of pulleys.
- Simplified design layouts and weight reduction.

Standard Double sided belts are available in three sizes, 5M, 8M, and 14M for the metric series; XL, L and H for the Classical range; T5 and T10 for the polyurethane range.

GREEN POWER BELTS



The Green Power Polyurethane Timing Belt offers a highly efficient, high strength system for the transmission of linear power in transfer systems.

Utilising the RPP tooth form the belts can be used with standard pulleys to metric pitches 5mm (5M), 8mm (8M) and 14mm (14M) with standard width belts able to handle loads up to 3,700kg with speeds up to 80m/sec.

The body of the belt is Polyurethane with a hardness of 85 Shore A to provide good tooth strength to resist the high shock and surge loads encountered in reciprocating drives. High strength steel tension members provide high breaking strength combined with low elasticity.

The teeth are faced with a green nylon fabric which increases tooth strength; reduces the coefficient of friction between belt and pulley, improving meshing with the pulley and reducing noise levels. The nylon has good wear properties and ensures a clean drive media.

SPECIAL BELTS



Top quality belts of various coatings with cleats or holes for fittings to be attached are available. Special belts for the glass, tobacco, nappy, packaging, paper, carton, conveyor, lift and fish industry can be manufactured.

VACUUM BELTS



Also available are Classical moulded belt for vacuum applications which create little noise, available with tenax, linatex or yellow P.U. coating

TIMING BELT CLAMPING PLATES



For the simple retention of open ended timing belts used on conveying or reciprocating drives, a standard range of clamping plates is available for all the heavier pitch belts.

Manufactured in aluminium, these clamping plates provide accurate location of the belts.

Available for HTD belts 8M & 14M; Classical XL, L & H; T series, T5 & T10; AT series AT5 & AT10

Cross+Morse can provide the solution to most open gearing drives through a standard stock range of Bevel gears, Spur Gears and Racks; or custom made straight or helical gears selected with support of our specialist technical engineering team.

BEVEL AND MITRE GEARS



Straight cut bevel and mitre gears manufactured to the Gleason system in medium carbon steel enable simple right angle transfer of drives, with drive ratios from 1:1 up to 4:1 reduction.

Two standard series of gears are offered: gears to imperial dimensions from 16DP to 5DP; and metric gears ranging from 1Mod to 5Mod pitch.

All gears can be flame or induction hardened for maximum wear life.

SPECIAL BEVEL AND MITRE GEARS

Straight cut bevel and mitre gears with pitch up to 10Mod, and diameter up to 500mm, can be manufactured on short lead times in a variety of materials to suit customer requirements.

STEEL SPUR GEARS AND RACKS



Over 400 stock gears provide the designer optimum selection for drives up to 20kW. All gears are manufactured in medium carbon steel with 20 deg. pressure angle, to metric design from 1Mod up to 6Mod pitch, with tooth sizes from 12 to 127. The gears have a minimum tooth width equal to 10 times the module, to provide sensible power transmission capacity. All gears can be induction hardened to enhance wear life.

STANDARD STOCK STEEL RACKS

Standard spur gears can be used with standard stock straight racks to convert rotary motion to linear motion. Racks are available for standard pitches from 1Mod to 8Mod, in 4 stock lengths of 0.5, 1.0, 2.0 and 3.0 metres. Alternate lengths can be supplied to order.

CUSTOM MANUFACTURED GEAR PRODUCTS



Modification of standard gears by reworking the bore and other dimensions often provides an economical solution for gear supply; but if this is not possible we have extensive manufacturing facilities enabling production of a wide range of special gear products, with straight cut gears being produced to AGMA 6 quality where required. Most materials can be accommodated and appropriate heat treatment applied if required.

Spur gears up to 1300mm diameter and 375mm width can be supplied in most diametral, module, and circular pitches with either 14.1/2 or 20 deg. pressure angles. Internal gears or splines can be supplied up to 200mm diameter and 90mm width.

Helical gears of up to 900mm diameter and 375mm width can be supplied with helix angle up to 45°.

Straight racks can be cut on square or rectangular bars up to 3 metres long with pitch up to 6Mod or 5DP; and up to 2 metres long for larger pitches.

Splines and serrations with involute, flat root, or fillet root tooth form can be cut on in-house machined shafts or customer blanks, on shafts up to 50mm diameter, up to 1 metre length, and larger diameters up to 375mm long.

SHAFT CLAMPING ELEMENTS



Shaft clamping elements are the modern way to connect driving hubs and shafts, providing a totally keyless connection, ensuring no backlash in the drive. Easier connection and disassembly with simplified timing of drives and positioning of components are only some of the virtues of these units. Cost savings are often achieved through the elimination of keyways, setscrews, circlips and shoulders on shafts.

No less than 16 different design variations enable the efficient connection of Shafts from 6mm to 1,000mm to sprockets, pulleys, gears, and other transmission equipment; also units to connect shafts to one another. Most sizes are available from stock for a fast and secure shaft connection.

TENSIONERS



Spring loaded tensioners extend the life of roller chain, particularly on long centre distance drives. These products are suitable for simplex and multistrand chain applications, keeping the slack strand of the chain under control at all times.

Rotary Tensioner: Automatic 90° tensioning action.

Linear Tensioner: Automatic linear adjustment, with chain guides made from self lubricated UHMW polyethylene.

Fixed Tensioner: Manually adjustable with UHMW polyethylene guides.

IDLER SPROCKETS



Idler sprockets are stocked: for $\frac{3}{8}$ " to $1\frac{1}{4}$ " pitch chains with greased for life bearings, providing lifetime maintenance operation.

SEALMASTER



Cross+Morse is the official distributor in the United Kingdom for all the American transmission products manufactured by Regal-Beloit (formerly EPT).

The ranges include Sealmaster®, Browning®, Jaure®, Kop-flex®, McGill® and Morse®.

Sealmaster®

This unique range of Mounted Ball, Tapered Roller, and Spherical Roller Bearing Units are designed to give long life in arduous operating conditions.

Available for shafts from $\frac{1}{2}$ " to 5" diameter, including metric sizes, with unique features including brass or nylon coated steel land-ridden cage for optimum lubrication of balls and races; felt lined flinger-seals for low friction total dust sealing; and the exclusive locking pin and dimple for bearing retention and direct lubrication of the bearing.

Sealmaster® PN Gold Mounted Ball Bearings feature a high-performance seal, 316 stainless steel or high strength composite housings, in many housing and locking styles. These are useful for wash down applications where corrosion resistance is critical. The Goldline Beverage series bearings are now the only approved bearing for many beer and soft drink manufacturers in the United States.

Sealmaster® Rod Ends and Spherical Plain Bearings

Sealmaster® two and three piece rod end bearing housing designs have been optimized for overall strength. To address a wide variety of application solutions, we offer a housing advantage and variety of outer race materials including:

- Brass • Steel • DELRIN® • PTFE liners

Sealmaster® Paver Bearings

Paver bearings capitalize on well known standard Sealmaster® features. They further advance sealing technology to meet the continuing performance needs of industrial paving equipment.



Browning® Q-D Bushings

Browning® Q-D® Bushings Standard Sizes - ½" - 7" bore range.

Metric Sizes - 24mm - 100mm bore range

Browning® Split Taper Bushings

Standard Sizes - ¾" - 10" bore sizes. Metric Sizes - 10mm - 95mm bore



Jaure® range includes: Lubricated Flexible Grid Couplings; Gear Spindles;

Jaure® Barrel Coupling and Wear Indicator Non-Lubricated Composite Couplings; Drive Shafts



Kop-Flex® includes: Standard Gear Couplings; Grid Couplings; Disc Couplings; Elastomer Couplings; Torque Overload Couplings; Universal Joints; Coupling Grease



McGill® range includes: Aerospace and Specialty Bearings; Cam Follower

Bearings; Unmounted Needle Bearings; Unmounted Spherical Roller Bearings



Morse® Raider® Plus Worm Gearing

Raider Plus worm gear reducers represent the most flexible worm gear product in the Power Transmission Solutions portfolio. With a large variety of add-on accessories, the Raider Plus line of worm gear reducers is a problem solver.

Morse® M Series Spiral Bevel Gear Reducers

Morse® M Series Spiral Bevel Gear Reducers are offered in both rugged cast iron and corrosion resistant aluminium housings. These are line bored for precise gear and bearing alignment.



The facilities used in the production of our own quality products are also available for sub-contract. These include: Precision turning with 3 Axis powered tool CNC Lathes; vertical machining centre; gear and sprocket hobbing, shaping and planning; broaching and keyway machining; centreless and universal grinding; plus general engineering.

Our Technical Engineering Department is available to assist and advise our customers on any aspect of Mechanical Power Transmission.

Cross+Morse Product Lines



- Roller Chain Drives
- Inverted Tooth Drives



- Stainless Steel Chains & Sprockets



- Timing Belt Drives



- Overload Clutches
- Torque Limiters



- Freewheel Clutches



- Shaft Clamping Elements



- Mounted Bearings



- Shaft Couplings



- Gears and Racks

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