

General products brochure



RENOLD
Superior Chain Technology



Special solutions and innovations

Renold is recognised throughout industry for its ability to create specific solutions to customers' unique requirements. International companies and industries from steel to food processing to escalators to textile machinery have chosen Renold to solve their problems.

Local and international availability

The Renold organisation stretches world-wide.

- Almost 20 National Sales Companies
- Nearly 100 Overseas Distributors offering the comprehensive Renold range of power transmission products, directly or through local distributor networks.



Approvals and Quality Assurance

Renold's chain factories have ISO 9001:2000 certification. The roller chain manufacturing sites also have ISO 14001:2004 certification.

The gear, clutch and couplings sites all have ISO 9001:1994 certification.

We also manufacture to the specifications required by API, BAe, CAA, London Underground, Jaguar and Rolls-Royce.



Roller chain

The range



Synergy

Offering unbeatable wear resistance and fatigue performance capabilities, Renold Synergy is designed to maximise productivity and minimise downtime

- Superior wear and fatigue resistance
- Up to six times longer working life than any other standard chain
- Virtually dry-to-the-touch for easier handling and installation
- Distinctive platinum coloured connecting link for easy identification



A&S

Recognised for its high quality and affordable reliability, A&S roller chain is first choice for OEMs and designers worldwide.

- Good fatigue resistance and durability
- All-purpose chain more than a match for competing standard brands
- Reduced downtime and maintenance
- Solid extruded bush and roller and GP plate form



Hydro-Service

With a superior corrosion resistant coating, Renold Hydro-Service is an alternative choice to stainless steel.

- Hexavalent chrome-free – ensuring it is safe and environmentally friendly
- 30 times more corrosion resistant than conventional surface treatments
- Will not chip or peel
- Same working load capability as standard steel chain



Syno

Renold Syno chain sets a new benchmark for chain performance with little or no lubrication. The range includes two sintered bush versions and a totally unique, lubricant-free polymer bush version.

- Dry-to-the-touch
- Food industry-approved lubricant within the sintered bush
- Excellent corrosion resistance
- Ideal for hygiene sensitive applications



Stainless steel

Renold Stainless Steel chain is designed for environments where corrosion resistance is paramount.

- Ideal for acidic or alkaline conditions
- Suitable for wet environments
- Solid stainless steel roller
- High and low temperature capability



Attachment chain

The most comprehensive range available

- Many attachments available from stock
- Dedicated production facilities to meet customer demands
- Extensive experience and flexibility

Roller chain

The range



Sovereign

Suitable for dirty, dusty and abrasive environments, Renold Sovereign offers high levels of endurance in harsh environments.

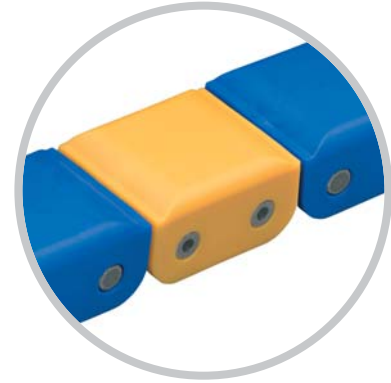
- Superior abrasion resistance
- Up to three times longer wear life than standard chain in harsh environments
- Suitable for high speed or heavy load applications
- Reduced pin wear



Nickel plated

Ensuring extended working life for mildly corrosive environments nickel plated chain made to Renold specifications is specified for applications worldwide.

- Increased corrosion protection
- More cost effective than stainless steel
- Renold specification throughout
- Solid roller, solid bush
- Available with attachments



Klik-Top

Klik-Top from Renold is a simple alternative to conventional poly block, protecting your goods from damage and the base chain from wear

- Rapid replacement by hand
- No need to disassemble the chain
- Stainless or low maintenance base chains possible
- New synthetic clip with special profile



Specialist chain

Renold's range of roller chain is extensive and the most popular products are featured here.

However, Renold are committed to providing exactly what customers need and have an additional range of tailor-made, specialist chain to suit every application.

From hollow pin to side bow, straight side plate to double pitch chain, Renold has the chain to meet any requirement.

Leaf Chain

Link Plates

Plates are made from special steel which can withstand sudden loads and provides maximum resistance to breakage.

Bearing Pins

Pins are manufactured from a special steel which has excellent resistance to bending. This increases the wear life of the chain.

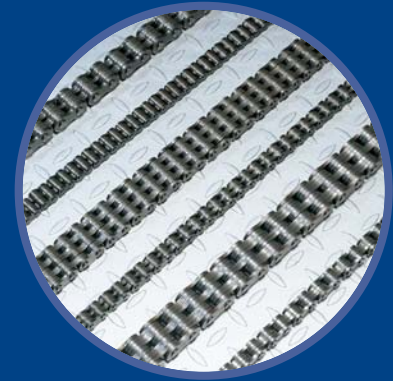
Inner Link Plates

Movement of the inner plates is improved by close control of the pin and plate hole dimensions.

This reduces rubbing (friction) to a minimum so the chain operates more economically and efficiently.

Chain pitch

Pitch (distance between each pin or plate hole) accuracy and pin hole diameters (holes in link plates) are maintained on every component during manufacture.



This ensures consistent precision performance and good movement of the chain joints.

Increased wear resistance

For longer life and maintenance savings.

Higher breaking loads

Giving greater safety factors and more reliability.

Improved fatigue resistance

Greater durability cutting replacement costs.

Conveyor chain

The range



Steel Pin bush roller chain

Manufactured to international standards; BS British Standard, STR Steel Thimble Roller to USA designs and ISO to European design. Within the range are numerous pitch alternatives with breaking loads ranging from 13 to 900 kN as standard. Various attachment styles can be supplied with the chain to suit many different applications.



Welded steel and drag chain

There are two main types of chain, Type W for drives and conveyors and Type WD for drag and scraper applications. Both are normally the offset sidebar design with precision welded barrels. A wide range of special attachments are available which are then welded to the chain sidebars. Standard breaking loads range from 108 kN to 675 kN.



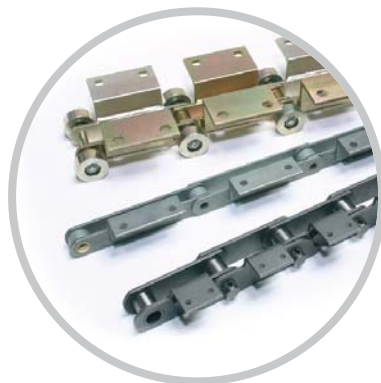
Escalator

Manufactured to specific customer designs the range is separated into two categories for light duty retail store use and heavy duty public transport applications. Certain types are assembled in an integral step axle construction. Bearing rollers are fitted to the majority of chains. Renolube polymer inserts have been designed to suit the majority of applications to eliminate the need for lubrication.



Agricultural roller chain

Produced to ISO/DIN standard and also a range of Works Standard chains used mainly on agricultural harvesting equipment. The standard range consists of eight chain types with pitches ranging from 1.15 inch (29.21mm) to 2.609 inch (66.27mm). Standard K, M and F type integral attachments are then fitted to the chain dependent on the equipment requirements.



Customised engineering chain

Covering a wide range of products to suit specialised applications these solutions often using a mix of high specification materials and treatment processes to meet the demands of the particular application. These chains are normally designed by close collaboration between the customer and a team of experienced Renold application and design engineers.



Steel knuckle chain

A USA-designed range of heavy duty, robust, detachable elevator bush chains fitted with integral K type attachments. Breaking loads on the most common types range from 642 kN to 1724 kN. The majority of chains are available with a sealed joint feature to extend chain life.

Conveyor chain

Applications



Theme Park

Renold manufacture chains to the highest specification for both water and roller coaster applications. Our chain design developments have exceeded the increasing demands for higher payloads and greater speeds.



Water Treatment

A full range of products for sewage and water treatment plants manufactured using stainless, and carbon steels or a combination of both with various corrosion protective coatings is available. Renold also produce non metallic chains, sprockets and flights for use in suitable applications.



Cement

Renold produce a comprehensive range of Cement mill chain for elevators, apron feeders, reclaim and clinker conveyors, proven in the harsh and abrasive applications of a modern cement mill. A full inspection and site assessment service is available from our experienced application engineers.



Agriculture

Suppliers to some of the world's largest harvesting OEMs, Renold attention to design, materials and heat treatment results in its range of agricultural chains giving the highest level of performance.

Sugar

A wide range of engineered standard and bespoke chains for all applications throughout both cane and beet sugar mills. Renold have considerable experience and expertise in chain design for these arduous applications.



Gears

Right angle units



PM series

This series of gear units is available as a single worm unit - type PW, helical/worm unit - type PH and a helical/bevel/helical unit - type PB.

The range offers the ultimate in versatility and durability with a modern compact design allowing direct mounting of standard IEC and NEMA motors.

Torque capacities range up to 12,000NM with gear ratios from 5:1 to 333:1 and if combined with other Renold Gear products, ratios of up to 23000:1 can be achieved.

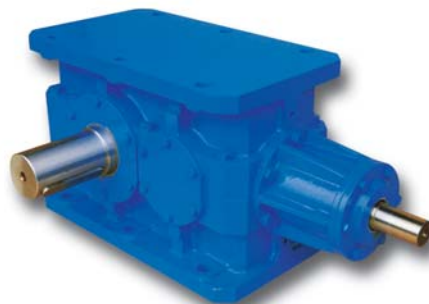
- Motorised and speed reducer types for all applications
- Variable mounting options allows design flexibility
- Robust construction suitable for heavy duty applications
- Optional protection for hostile environments
- Long life synthetic lubricated



TW series

Rugged gear unit for arduous application 10" to 28" (nominal 254mm to 710mm) centre distance available as single and double reduction units with power supply to 1361KW (1824HP).

- Variety of unit types enables flexibility in design mounting
- Unique Holroyd tooth form provides high efficiency and long product life
- Foot, flange and shaft mounted versions for all mounting options
- Heavy duty design suitable for high torque applications



HC series

State of the art heavy duty helical and bevel/helical units using case hardened and ground gears throughout, 14 sizes to 1000KW (1340HP).

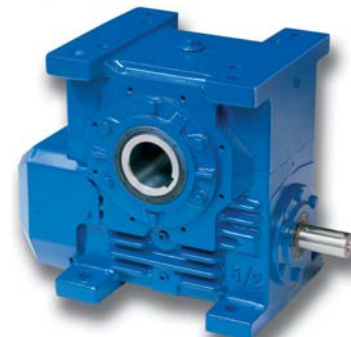
- Motorised and speed reducer types for all applications
- Wide ratio range gives speeds to match the design demand
- Variable mounting options allows design flexibility



jPM

Wormgear units with sizes from 1.125" to 3.0" centre distance, up to 6.66kW capacity.

- Available as worm or helical/worm options up to 300:1 ratio
- Motorised and speed reducer types available
- Variable mounting options allow design flexibility
- Unique Holroyd tooth form profile for high efficiency and long life
- Factory filled long life synthetic lubricant



WM series

WM Series is available with imperial 4" - 9" centres and metric 100mm - 200mm centres, with ratios of 5:1 to 70:1 as a single reduction unit and 75:1 to 4900:1 as a double reduction. Foot, flange and shaft mounted types available.

- Heavy duty version for demanding applications
- Unique Holroyd tooth form for high efficiency and product life
- Integral sprag clutch holdback for safe running

Gears

In-line & variable speed units



RS series

In-line helical speed reducer and geared motor unit with ratios of up to 80:1 and 65kW capacity

- Designed to BS4517 specification - interchangeable without re-engineering
- Foot and flange mounting - flexibility in application
- Wide power range - broad design choice
- Standard and heavy duty versions - high load characteristics
- Double and triple reduction - wide ratio availability



SMXtra

A range of Shaft Mount Helical Gear Units available with a parallel hollow output shaft, or the unique Renold quick release bush which enables very easy installation and removal of the positive key drive.

Options include integral hold backs, motor mounting platforms and parallel shaft sleeve diameter reducing bushes.

Also available are options of input and output shaft enhanced sealing.

- Interchangeable, allowing fast and easy replacement
- Robust construction ideal for heavy duty applications
- Parallel and taper bore options, easy removal for repair
- Enhanced sealing for hostile environment conditions



Carter gear

Hydrostatic variable speed drive units up to 37KW.

- Proven reliability in hazardous environments
- Electronic pneumatic and manual controls allowing design flexibility
- 27:1 stepless speed range with high speed holding accuracies
- Accurate speed holding

Gears

Loose gears



Loose gears

Renold is expert in producing high quality bespoke worms and wormwheels to either commercial or precision grades for a wide variety of applications.

- Reduced backlash wormgears using dual lead technology
- Made to order wormgears to customers dimensions
- Unique high efficiency Holroyd gear profile

Couplings

Industrial Shaft Couplings

Pin & buffer style

Comprehensive range of shaft couplings including pin and buffer, spider, tyre, disc, chain and gear types available - the widest range from a single source.



Crown pin

Pinflex

- Heavy duty pin and buffer coupling, suitable for shock loads
- Neoprene buffers for robust flexibility
- Polyurethane buffers reliable/flexible and temperature resistant

Fluid couplings



Hydrastart

Fluid soft start couplings available in many sizes and types up to 700KW (950HP) capacity.

- Flexible couplings and vee pulley designs as standard for design flexibility
- Soft start allowing the motor to accelerate unloaded
- Reduces motor size and drive package cost
- Delay fill version – extending acceleration time and further reducing start-up torque

Flexible heavy duty gear couplings



Gearflex

Single and double arrangement, standard and heavy duty series types up to 60,000KW (80,000HP) capacity.

- AGMA standard - interchangeable and cost effective
- Crowned and barrelled teeth for optimum contact and long life
- Mill motor, sheer pin and telescopic designs available giving design suitability for all demanding applications



Trapped Roller Freewheel

Available in a number of design types suitable for all backstop, indexing and over-running applications.

- Totally interchangeable. Needs no re-engineering
- Backstop types preventing drive reversals

Freewheels



Pinflex clutch



Gearflex clutch

Sprag Clutch Couplings

Two versions available using Pinflex and Gearflex couplings for total flexibility on shaft-to-shaft transmission drives.

- SO series clutch combined with Pinflex coupling allowing angular, parallel and axial misalignment
- Absorbs vibration and shock loads
- SO series clutch with two flexible half Gearflex couplings forming a short cardan shaft accommodating parallel and angular misalignment
- Allows larger shaft sizes to be used

Sprag Clutches

- Enhanced performance from optimised sprag design
- No backlash giving positive action
- Compact designs enabling high torque
- Backstop, over running and indexing designs available
- Long life resulting in low maintenance costs

Couplings

Engineered Couplings

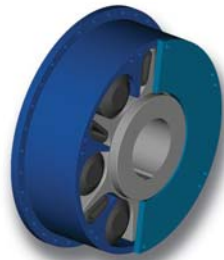
Torsionally flexible and mass transit



RB & PM couplings

Heavy duty industrial couplings providing exceptional protection against severe shock load and vibration

- Intrinsically fail-safe ensuring continuous operation of the driveline
- Control of resonant torsional vibration achieving low vibratory loads in the driveline with optimum stiffness characteristics
- Zero backlash eliminating torque amplification through pre-compression of the rubber elements



DCB GS

The DCB-GS flexible couplings are designed to couple medium speed diesel and gas engines to alternators, pumps and compressors. It is a second generation coupling derived from Renold Hi-Tec Couplings' existing DCB range.

DCB-GS couplings have low weight and hence low inertia yet retain the unrivalled quality and endurance features of the standard DCB.



Mass transit couplings

Renold Ajax is the leading North American manufacturer of Traction Couplings for Subway Rail Cars, having produced more than 20,000 units over the past 35 years for use in many cities in the US, Singapore, Malaysia, Brazil, and Korea.



DCB couplings

Fail safe coupling for use on reciprocating machinery up to 5520 kNm.

The standard range comprises

- Flywheel to shaft
- Flywheel to flange
- Shaft to shaft



Steel Mill spindles

Renold Ajax is the industry leader in design and manufacturing of custom gear spindles and gear couplings.

Our success in the primary metals industry can be attributed to design innovations like continuous oil lubrication, roll end piloting and compound tooth curvature.

Continuing research and development, including finite element analysis and solid modelling design for each customers specification.

Australia**Melbourne (Victoria)**

Tel: + 61 (0) 3 9262 3333
Fax: + 61 (0) 3 9561 8561
e-mail: melsmg@renold.com.au

*also at: Sydney, Brisbane, Adelaide, Perth,
Newcastle, Wollongong, Townsville*

Austria**Vienna**

Tel: + 43 (0) 1 330 3484
Fax: + 43 (0) 1 330 3484-5
e-mail: office@renold.at

*also at: Budapest (Hungary),
Zlin (Czech Republic)*

Belgium**Brussels**

Tel: + 32 (0) 2 201 1262
Fax: + 32 (0) 2 203 2210
e-mail: info@renold.be

Canada**Brantford (Ontario)**

Tel: + 1 519 756 6118
Fax: + 1 519 756 1767
e-mail: inquiry@renoldcanada.com

also at: Montreal

China**Shanghai**

Tel: + 21 5046 2696
Fax: + 21 5046 2695
e-mail: sales@renold.cn

France**Seclin**

Tel: + 33 (0) 320 16 29 29
Fax: + 33 (0) 320 16 29 00
e-mail: contact@brampton-renold.com

Germany**Einbeck**

Tel: + 49 (0) 5562 810
Fax: + 49 (0) 5562 81130
e-mail: info@renold.de

*also at: Bielefeld, Düsseldorf,
Kornwestheim*

Malaysia**Selangor Darul Ehsan**

Tel: + 60 3-5122 7880
Fax: + 60 3-5122 7881
e-mail: sales@renoldmalaysia.com

also at: Johor Bharu, Ipoh, Penang

Netherlands**Amsterdam**

Tel: + 31 (0)20 6146661
Fax: + 31 (0)20 6146391
e-mail: info@renold.nl

New Zealand**Auckland**

Tel: + 64 9828 5018
Fax: + 64 9828 5019
e-mail: aksales@renold.co.nz

also at: Christchurch

Philippines**Paranaque City**

Tel: + 63 2 829 6086
Fax: + 63 2 826 5211

Poland**c/o Einbeck (Germany)**

Tel: + 48 663 842 487

Russia**Moscow**

Tel: + 7 495 645 2250
Fax: + 7 495 645 2251
e-mail: info@renold.ru

Scandinavia**Brøndby (Copenhagen)**

Tel: + 45 43 45 26 11
Fax: + 45 43 45 65 92
e-mail: infor@renold.com

Singapore

Tel: + 65 6760 2422
Fax: + 65 6760 1507
e-mail: sales@renold.sg

South Africa**Benoni (Johannesburg)**

Tel: + 27 11 747 9500
Fax: + 27 11 747 9505
e-mail: sales@renold.co.za

*also at: Richards Bay,
Port Elizabeth, Cape Town*

Spain**Gavá (Barcelona)**

Tel: + 34 93 638 9641
Fax: + 34 93 638 0737
e-mail: spain@renold.com

Switzerland**Dübendorf (Zürich)**

Tel: + 41 (0) 44 824 8484
Fax: + 41 (0) 44 824 8411
e-mail: duebendorf@renold.com

also at: Crissier (Lausanne)

UK**Burton upon Trent**

Tel: + 44 (0) 1283 512940
Fax: + 44 (0) 1283 512628
e-mail: ukchain@renold.com

USA**Morristown TN**

Tel: + 1 800 251 9012
Fax: + 1 423 581 2399
e-mail: sales@renoldjeffrey.com

*For other country distributors please contact
Renold UK.*

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