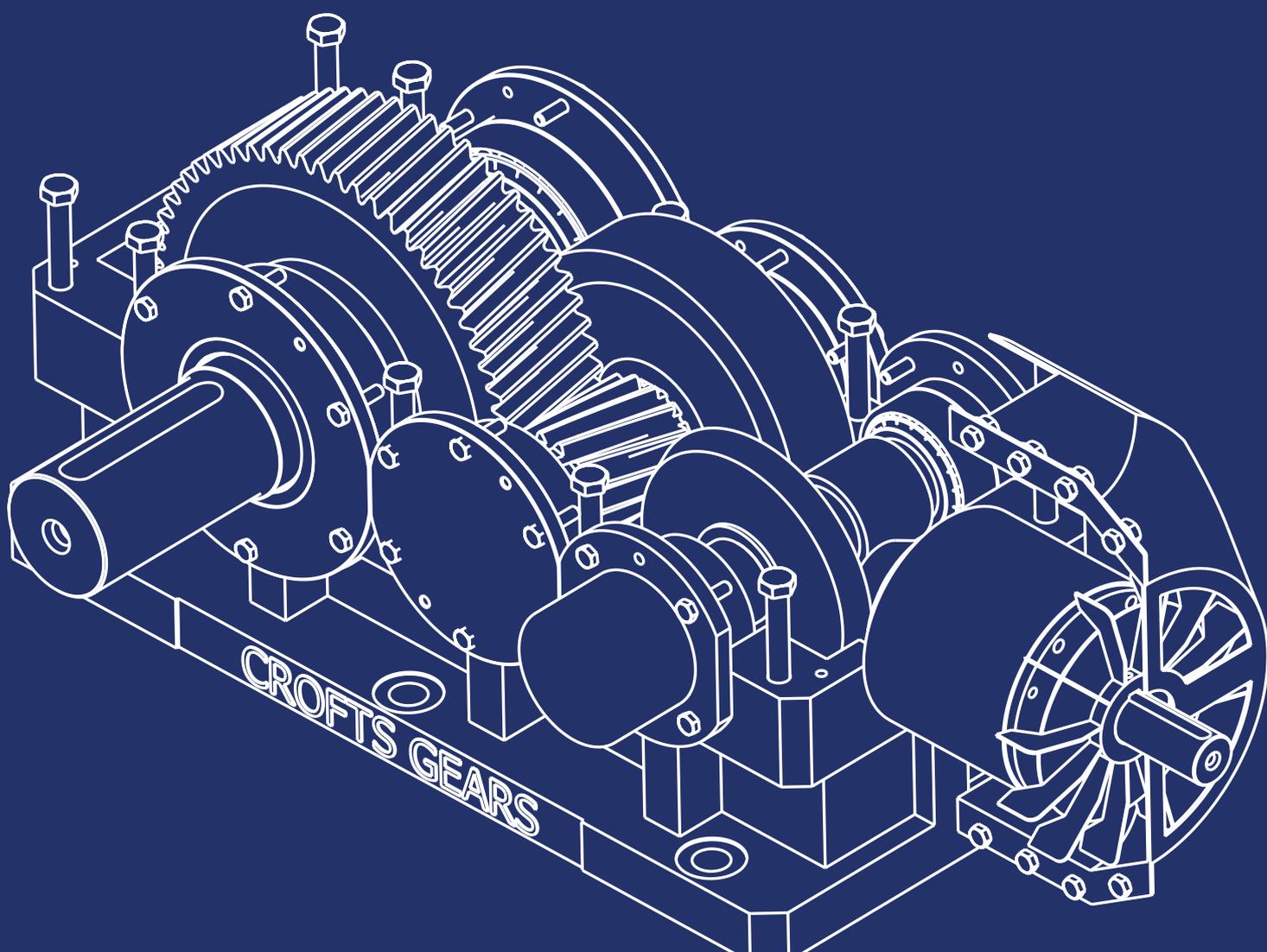


# Locally Manufactured **MECHANICAL POWER TRANSMISSION**

2020 Product Catalogue



**Crofts**  
Gears 



*Crofts Gears is renowned for designing and manufacturing reliable mechanical power transmission products for a wide diversity of industry applications. Established in 1950, Crofts Gears has a longstanding legacy of distributing quality products and continues to provide our customers with locally manufactured standard and bespoke gears, couplings, and chain.*

## **OVERVIEW:**

Our proudly South African commitment to local design and manufacture enables us with the agility to not only provide standard product, but also non-standard custom solutions for our customers. Crofts Gears has a longstanding reputation of tried and tested engineering excellence that informs our built-to-last product manufacture. Our team's passion for bespoke engineering is reflected in our continued dedication to providing our customers with solutions that we adapt to their existing needs and applications.

Crofts' local operations were established some 70 years ago and later became part of the international Renold group. During this time, Renold Crofts South Africa became adept at operating in demanding environments and continued to build a track record of reliability. In 2019 we came full-circle and returned to the original Crofts brand under new local ownership, retaining all local Crofts' IP as well as local distributorship of Renold products. Our new identity speaks to the existing expectations of our previous production under the banner of Renold as well as the significant transformation we've undergone over the years, while simultaneously also acknowledging the growth of our brand going forward.

Building on our strong foundation and learnings, we are moving forward with you into the future. Crofts Gears has reignited our vision of providing innovative and cutting-edge mechanical power transmission design, by utilising the latest available materials and manufacturing processes to better deliver fit-for-purpose products.

We offer our services in numerous environments

## **INDUSTRIES WE SUPPLY:**



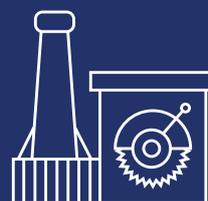
Mining



Manufacturing



Food Processing



Pulp & Paper



Power Generation

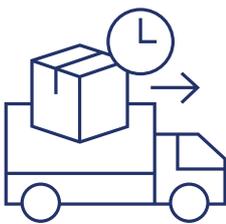
## A BRIEF HISTORY:

- **1950** The company established a manufacturing base in Benoni, South Africa
- **1967** Renold purchased Crofts Engineers UK
- **1969** Renold established a chain factory in Pietermaritzburg
- **1971** Renold PLC established present company Renold Crofts in South Africa
- **1989** Renold Crofts first South African gearbox manufacturer to obtain SABS 0157 Part2 and ISO 9001 certification
- **2019** Fast forward to Crofts Gears and local ownership...
- **2020** Proud local manufacturer of mechanical transmission systems and distributor of Renold products

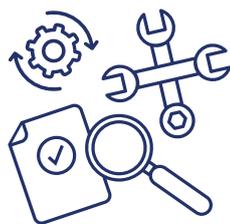
We offer Re-builds & Support

## REPAIRS & REFURBISHMENT:

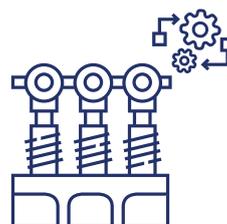
Application knowledge and engineering expertise, together with manufacturing and service capabilities, ensures that Crofts Gears is your ideal partner – whatever your industry need. We undertake repairs of all makes and types of industrial gear units.



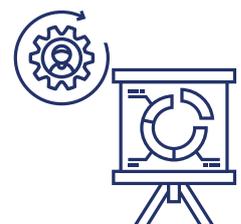
Collection



Strip & Inspection



Re-builds



Training

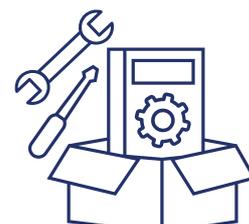
- Basic Power Transmission
- Gear and Couplings selection
- Service and Maintenance



Testing Facilities



Repair Warranty



Commissioning &  
Installation Support

# GEARS



*Crofts Gears' renowned gear range is designed and manufactured in South Africa to Croft's high Quality Assurance System. We design and manufacture our gear units for longevity and longstanding serviceability. Gear units are available in various standard and bespoke configurations covering wide ranges of industries. Typical applications include conveyor and mill drives, cooling towers, agitators and mixers, screw feeders, and cranes.*

## BEVEL / HELICAL GEARS SERIES:

Recently upgraded design using latest materials and innovative engineering. State-of-the-art, heavy-duty helical units made up of hardened and ground gears throughout in single, double, and triple reduction configuration for longevity. Available in 8 standard sizes. Additional sizes and configuration available as part of our bespoke services offering.

- Available in various ratios and torque up to 315kNm.
- Highly durable long-life design for use in various, high torque demand applications.
- Reversible design, available in horizontal and vertical mount applications.
- Design with additional strength output shaft bearings to operate in vertical mount applications.
- Heavy-duty output shaft designed for extreme radial forces presented during agitation and mixing applications.
- Capacity to transmit motion and power between either parallel or right-angle shafts.

### Typical applications:

- Conveyor drives, mills, crushers etc.
- Agitators and mixers in mining, cement, chemical and effluent industries.
- Cooling towers and rotating tables etc.



## GEARED MOTOR RANGE:

A “Solution to fit all applications”. We offer a comprehensive range of standard geared motor units. Our standard solutions portfolio is available as “Motorised”, “Motor Ready” or “Reducer” types, in: Right Angle Horizontal, Parallel Horizontal, Right Angle Vertical, Parallel Vertical, In-Line and Shaft Mount formats in: single, double, and triple reduction configurations, available in various packages with motor power up to 160kw and output torque of 33kNm.

- Interchangeable Euro dimensions for ease of replacement.
- Accepts Standard IEC Motors ensuring fast and low-cost replacement.
- Oil-tight gear head keeps motor replacement free from oil spills.
- Cast iron case for strength and durability.

### Typical applications:

- Conveyor drives, mills, crushers etc.
- Agitators and mixers in FMCG, pulp & paper, mining, cement, chemical, water and wastewater industries.
- Cooling towers and rotating tables etc.



## WORM GEAR UNITS:

A “Champion Crofts Gears product”. Crofts Gears is renowned for our worm gear range. Over the years we have perfected worm tooth form to provide maximum torque capacity and optimum efficiency. Worm gear units are extremely versatile and used in abundance across a large variety of applications, especially where large gear reductions are required.

- Smooth and quiet operation.
- Up to 8 Multi-Start worms for high speed applications.
- High torque applications.
- Hardened and ground worm profile for effective meshing.

### Typical applications:

- Escalators, lifts, hoists, packaging, conveyors, rock crushers, mixers, agitators.

### Universal, W Range and TW Series:

Tried and trusted “workhorse”. From small universal units to heavy-duty worm gear units for arduous applications. Single reduction units available from 5:1 to 70:1 and double reduction with ratios up to 4900:1. Available in a wide range of mounting and motorised variants.

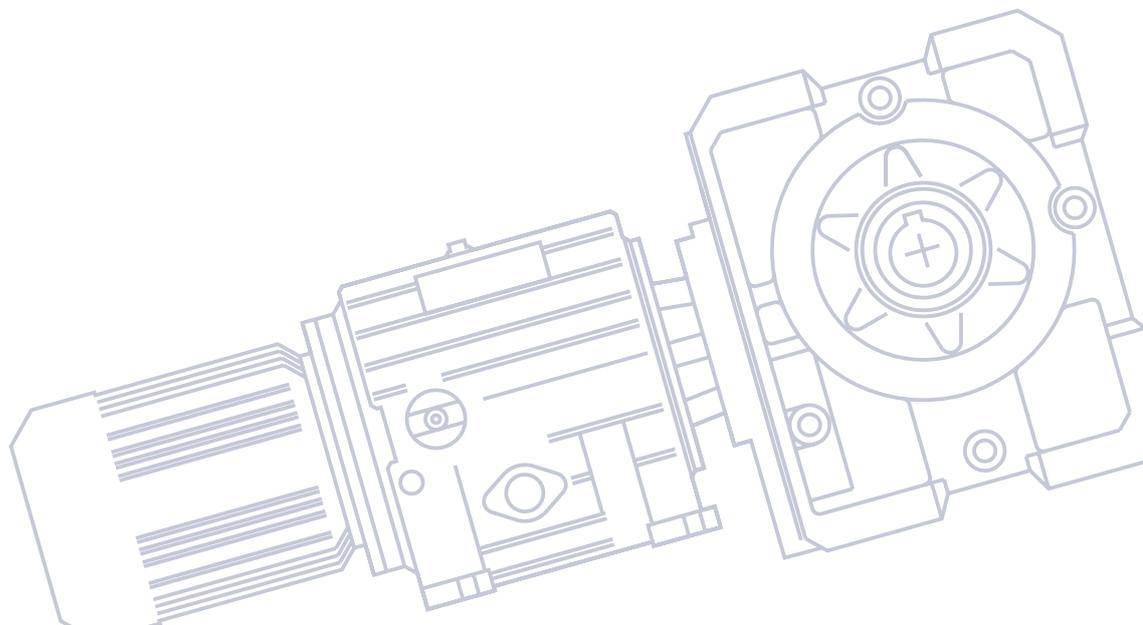
- Available as single or double reduction units.
- Horizontal and vertical mounting formats with input power capacity of up to 667kW.
- Output torque from 30Nm to 146kNm ratio dependent.



## CAPSTAN WINCH:

A Capstan Winch is a vertical-axle rotating machine developed for the use of multiplying the pulling force when moving heavy weights. A simple, versatile, and economical alternative to fixed winches, used in place of locomotives and tugs. High-Pull electric capstans are a low maintenance, dependable solution for moving railcars in mines, dockyards, timber yards, factories, and foundries. A standard range of sizes is available and includes pulls of 13 to 89kN when hauling at a standard speed of 0.2m/sec. Speeds can be modified to suit customer requirements. Bespoke variations available up to 178kN.

- They require little maintenance and are instantly available for use.
- They are weatherproof and can be used outdoors.
- Rope can leave the drum at any angle, enabling the operator to stand in the most suitable position.
- Capstans can pull in any direction, unlike a winch.
- Capstans can accommodate multiple rope types and sizes (e.g. tugs using various ropes).
- If used correctly Capstans are safer than winches.
- General legislation dictates maximum travelling speed at 0.2m/s, however, speed can be modified to suit customer requirements.
- Backstop can be fitted for sloping applications.
- **Capstan head (Bollard)** – cast in high-grade close-grained cast iron for long rope life.
- **Gears** – First reduction helical gears are manufactured from high tensile alloy steel, gears can be changed to give different pulling speeds. The second reduction is via worm gears.



# COUPLINGS



*Crofts Gears offers a comprehensive selection of locally manufactured and imported high quality couplings, consisting of a range of rigid and torsionally flexible industrial couplings, Hi-Tec rubber-in-compression torsion flexible couplings, fluid couplings, sprag clutches, and Ajax spindles. Due to the flexibility of local manufacture, our couplings can be customised to meet customer requirements.*

## INDUSTRIAL RIGID AND FLEXIBLE COUPLINGS:

We offer a comprehensive range of shaft couplings including pin and buffer, grid spring, spider, disc, chain, and gear types.

### Flexible Gear Couplings:

All-steel single and double engagement types. Locally manufactured gear couplings.

- Small in diameter, high power, and cost effective.
- Maximum torque 147 kNm and shaft sizes over 700mm.



### Crown Pin Couplings:

Renowned, locally manufactured, and maintenance free neoprene rubber pin and buffer coupling offering extended power capacity where the demand for long life and simplicity of construction make it suitable for working in shock load and arduous conditions.

- Steel half bodies and fitted pins for heavy shock load conditions.
- Torsionally flexible with high misalignment capabilities.
- Maximum torque of 25 kNm.
- Robust high-quality buffers with optional shore hardness providing excellent flexibility and shock damping.
- Available as a coupling or brake drum construction.



### Grid Spring Couplings:

Locally manufactured spring type coupling available in various sizes.

- Grid spring elements cushion shock loads and provide vibration damping.
- Torsionally flexible with high misalignment capabilities.
- High power density.
- Maximum torque up to 120 kNm.



## **Other flexible couplings:**

### **Spider Couplings:**

A medium power, torsional-flexible coupling, combining shock-absorbing and misalignment capacity. Used in the widest range of industries and applications.

- Maintenance free. Minimum number of wearing parts.
- Misalignment capabilities allowing flexibility in installation.
- Cost effective, offering low cost product with a high-quality design.
- Compact design with high torque capacity.



### **Disc Couplings:**

A general purpose, fail-safe, torsional-flexible coupling offering the option of either urethane or a reinforced rubber flexible disc element.

### **Chain Coupling:**

An all-metal, flexible, yet torsional stiff coupling, suitable for use in arduous working conditions.

---

## **RUBBER-IN-COMPRESSION COUPLINGS:**

### **Hi-Tec:**

Locally manufactured, heavy-duty industrial couplings providing exceptional protection against severe shock load and vibration, with a maximum torque of 6000kNm.

- Intrinsically fail-safe, ensuring continuous operation of the driveline in the unlikely event of rubber damage.
- Control of resonant torsional vibration, achieving low vibratory loads in the driveline with optimum stiffness characteristics.
- Rubber elements loaded in compression.
- Zero backlash eliminating torque amplification through pre-compression of the rubber elements.
- Maintenance free.
- No lubrication or adjustment required resulting in low running costs.
- Allows axial and radial misalignment between the driving and driven machines.



## FLUID COUPLINGS:

Hydraulic soft-start couplings available with standard or delayed chambers, in various sizes and configurations up to 700kW (950HP) capacity.

### Hydrastart:

- New “drop-in replacement” with sleeve, end-plate, and adaptors.
- Flexible couplings and pulley designs.
- Soft-start allowing the motor to accelerate unloaded.
- Reduces motor size and drive package cost.
- Delayed fill version, extending acceleration time and further reducing start-up torque.
- Reduces peak current demand on the motor.
- Reduces belt stretch on start-up and provides motor overload protection (thermal fuse).



## AJAX SPINDLES:

Renold Ajax has been supplying spindles for rolling mill applications for over 50 years.

### Spindles:

We supply Ajax manufactured gear spindles that provide excellent quality solutions for steel and metal rolling mills. These dimensional gear spindles, with a fixed or telescopic intermediate shaft, can transmit high torques with working angles reaching up to 3 degrees. Spindles are designed according to customer’s specifications and are mostly tailor-made, creating the best product for your needs.

Ajax has pioneered such innovations as:

- **Continuous circulating oil lubrication:** Closed loop oil lubrication systems for rolling mill spindles.
- **Roll-end piloting:** Piloting system to reduce chatter and improve bore wear life.
- **Compound tooth curvature:** Variable curvature on tooth face to optimize loads for each application.



## SPRAG CLUTCHES:

A sprag clutch is a freewheel device with an inner race and an outer race, either of which can be the input or output member.

### Sprags and Trapped Roller Clutches:

Sprag clutches are able to transmit greater torque within the given overall dimensions than other types of free-wheel devices. A Sprag clutch is constructed with a formed cam (retained with a spring), which locks the inner and outer race by means of a wedging effect in one direction, i.e. preventing backward motion.

- Backstopping
- Overrunning protection
- Indexing



# CHAIN



*Crofts Gears supplies high performance transmission, conveyor, engineered chain and sprockets, built on more than 100 years of experience. Our chain products offer unparalleled performance, fatigue, and wear resistance in virtually every application possible.*

Authorised Distributor of **RENOLD**

## TRANSMISSION CHAIN:

Renold designs and manufactures high performance transmission chain that is focused on the key areas of wear and fatigue resistance. Standard drive chain combines a wide waisted plate shape for extra fatigue resistance, with end-softened, spin riveted pins for easy installation.

Our range of Renold chain is designed to tackle the challenges of corrosion, abrasion, lack of lubrication, and shock loading. The Renold Synergy, Syno, Sovereign and Hydro-service chain range delivers a significantly longer working life than standard chain. The range includes: small and large pitch (4mm up to 100mm) chain, adapted transmission chain, hollow bearing pin chain, nickel-plated chain, zinc-plated chain, extended pitch chain, and cranked link chain.

### Renold Premium:

Premium roller chain is highly fatigue resistant, giving up to four times the life of other leading competitor chain.

- Setting the standard.
- End-softened pin with spin rivet.
- Solid bush / solid roller.
- Wide waisted plate shape.



### Renold SD:

For “standard duty” chain applications, Renold SD is the benchmark in the economy chain category.

- Competitive prices and delivery.
- Consistent reliability and quality.



## Synergy:

Offering superior wear resistance and fatigue performance capabilities, Renold Synergy is designed to maximise productivity and minimise downtime. Renold Synergy represents the biggest single innovation in power transmission technology since the bush and roller chain were invented.

- 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.



## Syno:

Renold Syno chain sets the 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.
- Oil impregnated bush.
- Nickel-plated plates.
- Special coated roller.
- Direct substitution of standard mild steel chain.



## Nickel-plated:

Ensure extended working life for mildly corrosive environments.

- More cost-effective than stainless steel.
- Solid roller and solid bush.
- Available with attachments.



## Stainless steel:

Renold stainless steel chain are 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.



## Hydro-Service:

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

- Hexavalent chrome-free ensures it is environmentally friendly.
- More corrosion resistant than conventional surface treatments.
- Will not chip or peel.
- Same working load capability as standard steel chain.



## Inverted Tooth chain:

Renold produces a wide range of inverted tooth chain for drives and conveying applications.

- Small dimensions.
- Extremely quiet operation.
- High efficiency.
- Long service life.
- High speed and high torque.



## Lifting Chain (forklift):

Renold has more than 100 years of experience in the operation and maintenance of lifting chain (leaf chain).

- High wear resistance for longer life and maintenance savings.
- High breaking load for safety and reliability.
- Fatigue resistance (durability) to lower replacement costs.
- Standard and premium versions of chain available.



## Attachment and Adapted chain:

Wide range of variant attachments to suit your design. Successfully used in many industrial applications for feeding, conveying, and discharge of a variety of products.

- Extensive experience and flexibility.
- Special plates made from natural materials, stainless steel, or plastics.



## Sprockets:

Crofts Gears supplies high quality sprockets in various standard and custom dimensions to fit our customers' requirements.

- Hardened teeth for longevity.
- Supplied as pilot, custom or taper bore.



## CONVEYOR & ENGINEERED CHAIN:

We supply high quality conveyor chain for various applications. Additionally, we supply attachments, which may form an integral part of the link plate or may be built into the chain as a replacement of the normal link. Other attachments (according to type) are fixed to the chain plates by projection or fillet welding, to either one or both sides of the chain.

### Applications Include:

- Sugar mill chain
- Bakery chain
- Crawler cranes
- Cement and materials handling
- Heavy duty conveying applications
- Waste water treatment chain
- Escalator step chain



### Standard Conveyor Chain:

Within the range are numerous pitch alternatives with breaking loads ranging from 13 to 900kN as standard. Various attachment styles can be supplied with the chain to suit any application.



### Cement Mill Chain:

Cement mill chain can be supplied for various types of equipment throughout the different processes of cement manufacture such as: bucket elevators, reclaim conveyors, crusher feeders, apron feeders, hot clinkers, and scrapers.

- Supreme performance under high and shock loads.
- Excellent value for money.
- Excellent fatigue life.



### Sugar Chain:

Moving sugar cane from harvest through processing requires top-quality chain that can withstand abrasion, corrosion, and high shock loads at ever-increasing production rates. We understand the importance of quality, reliability, and consistency to keep your sugar mill running at peak capacity.

- Cane carrier chain
- Wash and feeder tables.
- Intermediate carriers.
- Bagasse carriers.
- Increased chain life.
- Proven performance.
- State-of-the-art solution.



**CONTACT** our sales team for more information:

[sales@croftsgears.co.za](mailto:sales@croftsgears.co.za)

+27 (0) 11 747 9500

[www.croftsgears.co.za](http://www.croftsgears.co.za)

