

# Engineered for extremes.

Heavy-duty drivelines transmitting  
high torque under extreme load  
conditions.

**Beattys**

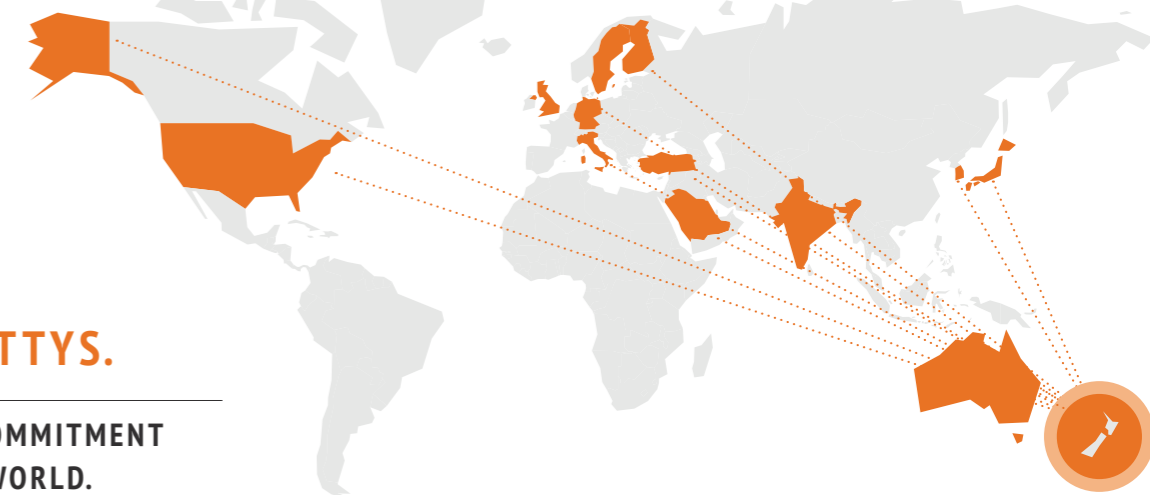
**DRIVELINE**  
MINING

# It's the thinking before production that makes our drivelines different.

## YOUR PROBLEM. OUR PASSION.

We take problems of complexity and scale and create bespoke driveline solutions to optimise performance. To us, every project is a different proposition – and an opportunity to craft the best solution.

At Beattys we understand that the industrial environment and the demands of the industry present the ultimate challenge for product quality and durability. Our design expertise has been proven time and time again, working with some of the leading industrial corporates in New Zealand and Globally.



## WE ARE BEATTYS.

### FAMILY-OWNED COMMITMENT FROM NZ TO THE WORLD.

Family-owned businesses have something special. A core value that larger corporations cannot duplicate. When you have three generations of a family involved in a business, there's a genuine desire to look out for those people who work in, for and with the business. And there's a will for the business and our customers to collectively succeed. Since 1963 three generations of our family have given their best to ensure that Beattys Drivelines reputation as a quality manufacturer, supplier and employer is entrenched with those we value most - our people, our customers and our suppliers.



100% FAMILY OWNED



VIP CUSTOMER SUPPORT



MANUFACTURED IN NZ



QUALITY COMPONENTRY

## LEADING-EDGE DESIGN INNOVATION

The intelligent design of a driveline is very critical to ensure ongoing reliability. It is important that the power source, speed and universal joint angle are ascertained prior to specifying a shaft to suit any situation. We offer a full consultation and design service so your custom requirements can be met with products that deliver optimal performance.

## STATE-OF-THE-ART MANUFACTURING



Turret is our legacy. With over sixty years of experience, we are New Zealand's most trusted manufacturer and supplier for all driveline needs. Turret drivelines and componentry are designed and hand built to extremely high standards here in our state-of-the-art facility, and backed by our dedicated and accessible team from which we deliver to our global clients.

# Our attention to your detail

## 1 ASSESS

Beattys will scope the project, identifying any critical parameters and challenges that we need to overcome to ensure we deliver a premium product.

## 2 DESIGN

Our team of technical engineers will then design a custom solution using state-of-the-art CAD and programming systems to ensure that we will meet all the client's needs.

## 3 MANUFACTURE

Throughout our driveline manufacturing process, you can be guaranteed of the highest level of engineering excellence and commitment to quality.

## 4 BALANCE

All drivelines are dynamically balanced in one of our four, multi-plane balancing machines. We spot-weld any weights to reduce stress on the driveshaft tube.

## 5 REVIEW

Once a driveline has been dynamically balanced and painted, it goes through a series of rigorous inspections and quality control measures to ensure the products we deliver will fit our commitment to premium quality.



TUBE CUTTING



AUTOMATIC WELDING



ASSEMBLY LINE



FITTING COMPONENTS



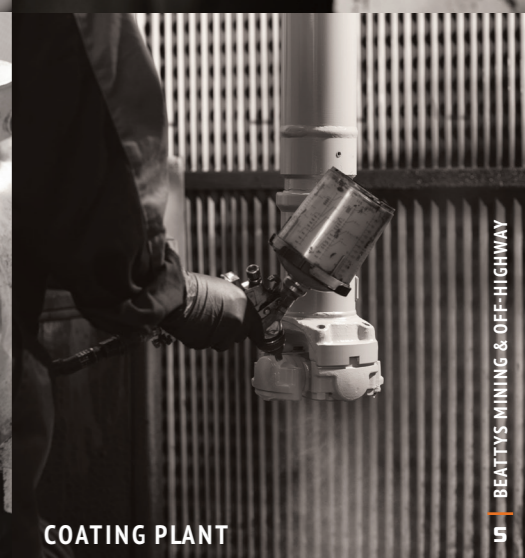
FITTING COMPONENTS



DYNAMIC BALANCING



BALANCE WEIGHT SPOT-WELDING



COATING PLANT

# Mining & Off Highway Driveshafts

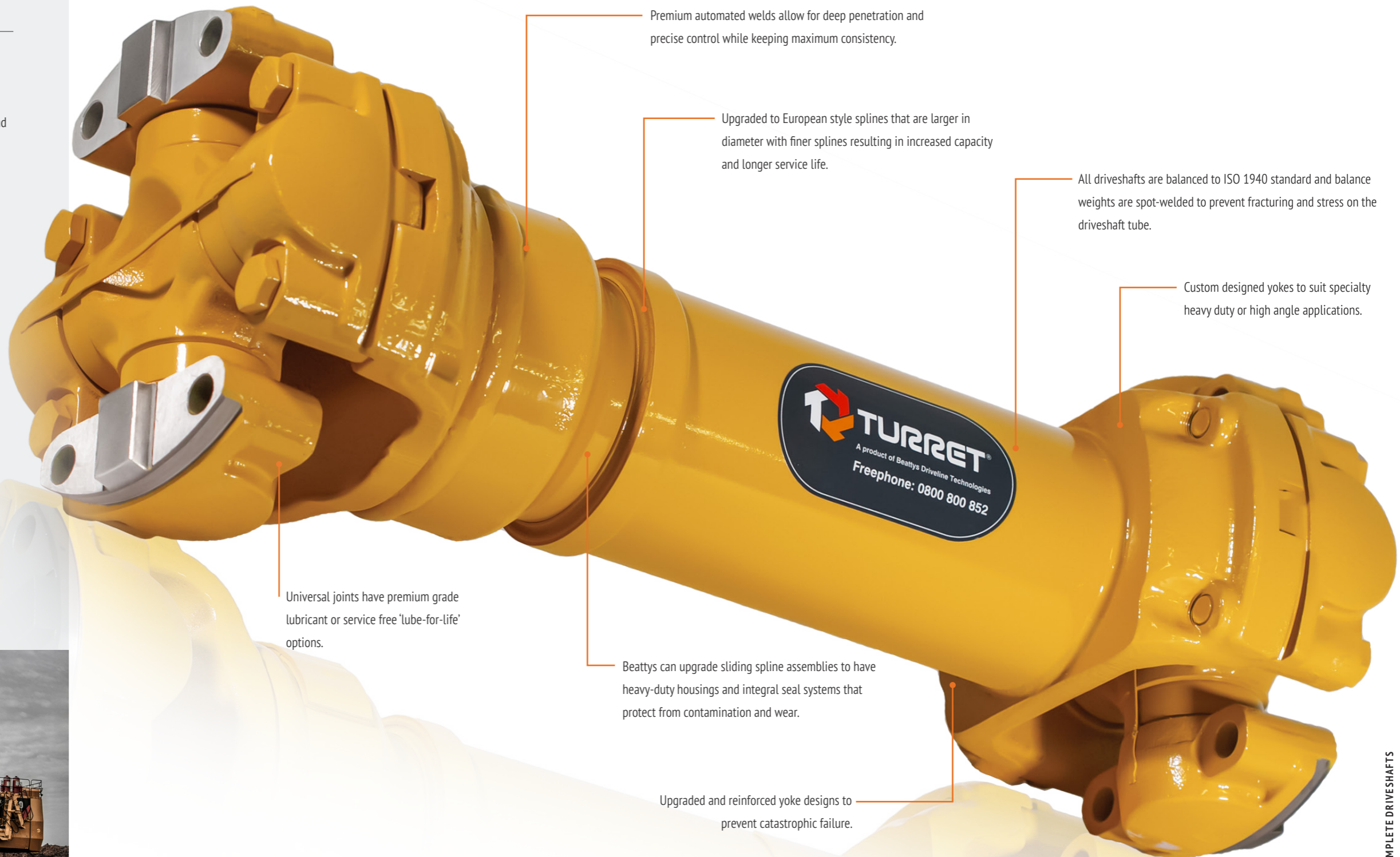
Premium driveshaft solutions - Engineered for extremes.

## KEY STRENGTHS & BENEFITS:

Throughout the world, machinery and equipment is relied upon to keep our primary industries and key commodity exports moving – that's why Beattys Driveline is trusted as an essential service provider to the agriculture, earthmoving, forestry, infrastructure and mining industries. We have two specialist teams to cover all your driveline needs: our componentry team keeps all your driveshaft wearing parts on hand, ready for prompt despatch while our driveline engineers take care of the design and manufacture of driveshafts.

Instead of being faced with the outlay of full OEM replacement, Beattys Driveline has the specialised equipment and technical know-how to meet or exceed OEM specifications while delivering substantial savings and benefits.

All componentry, processes and workmanship are of the highest industry standards and trusted by commercial transport operators globally to deliver reliable, consistent performance.



Premium automated welds allow for deep penetration and precise control while keeping maximum consistency.

Upgraded to European style splines that are larger in diameter with finer splines resulting in increased capacity and longer service life.

All driveshafts are balanced to ISO 1940 standard and balance weights are spot-welded to prevent fracturing and stress on the driveshaft tube.

Custom designed yokes to suit specialty heavy duty or high angle applications.

Universal joints have premium grade lubricant or service free 'lube-for-life' options.

Beattys can upgrade sliding spline assemblies to have heavy-duty housings and integral seal systems that protect from contamination and wear.

Upgraded and reinforced yoke designs to prevent catastrophic failure.



## Driveshafts



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Beattys can upgrade sliding spline assemblies to have heavy-duty housings and integral seal systems that protect from contamination and wear.

Upgraded to European style splines that are larger in diameter with finer splines resulting in increased capacity and longer service life.

Universal joints have premium grade lubricant or service free 'lube-for-life' options.

Premium automated welds allow for deep penetration and precise control while keeping maximum consistency.

High grade tubing increasing the resistance to high shock loadings.

Upgraded and reinforced yoke designs to prevent catastrophic failure.

## Double Cardan Shafts



Extra long spline engagement options for pivot applications.

Short compact options available for space limited applications.

Smoother rotational power flow and longer life at higher operating angles.

SAE and DIN connecting flange options.

## Hanger Bearing Shafts



Custom designed yokes and flanges to suit a large range of applications.

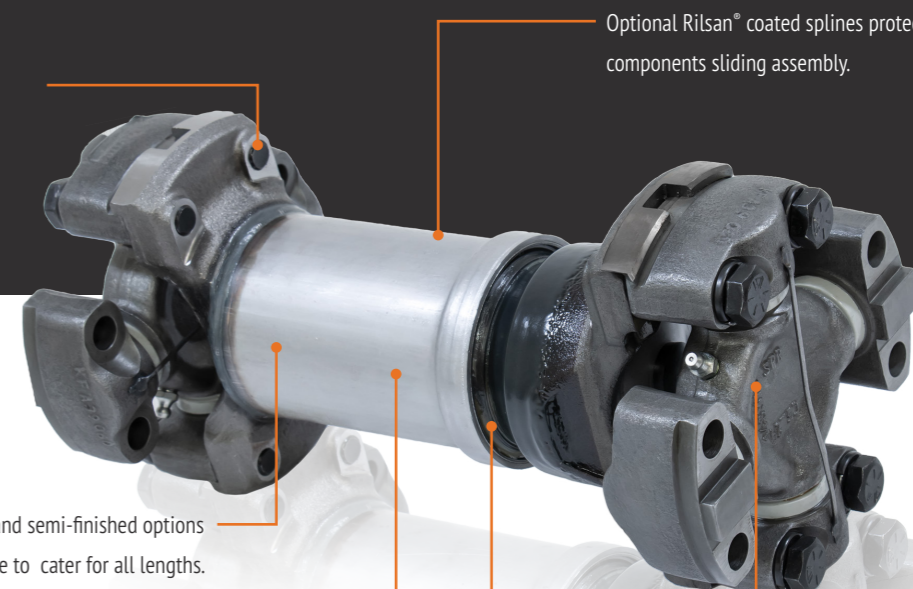
Heavy duty bearings and housings designed to handle harsh conditions.

All componentry and workmanship carried out to meet or exceed original specification.

Upgraded yokes with increased support and torque capacity at potential fracture points.

Flexible rubber housings also available according to OEM specifications.

## Short Coupled Shafts



Custom designed yokes to suit specialty heavy duty or high angle applications.

Finished and semi-finished options available to cater for all lengths.

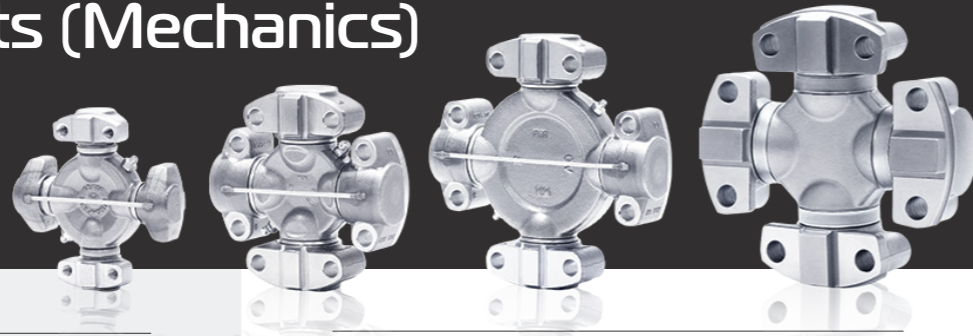
Induction-hardened splines for exceptional torsional strength.

Optional Rilsan® coated splines protect valuable drivetrain components sliding assembly.

Heavy-duty housing and integral seal system protects from contamination and wear.

Universal joints have premium grade lubricant or service free 'lube-for-life' options.

## Universal Joints (Mechanics)



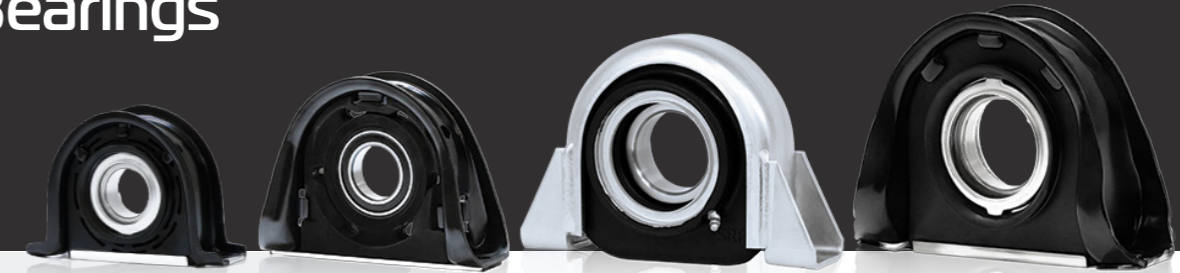
### OVERVIEW

The universal joint is one of the most critical parts in any driveshaft, that's why at Beattys we only use the best. Beattys' Turret universal joints are of the highest industry standards and are trusted by many large organisations nationwide to deliver reliable performance day after day. We are proud to offer a comprehensive range of universal joints, covering all applications with over 500 different styles and sizes including Caterpillar, Komatsu, Hitachi, Hyandai, John Deere.

### SPECIFICATIONS

- Standard and premium styles
- Triple-lipped seals and internal thrust washers
- Sealed and lubed options
- Offset joints for high angles and axle applications

## Centre Bearings



### OVERVIEW

Beattys' Turret centre bearings always provide optimal alignment, which translates into improved performance and durability of the driveline. Our advanced technology reduces noise and vibration, while maintaining the proper driveline angle to maximise driveshaft and component life. We offer a large range of solutions for all applications including maintenance free options and highperformance marine styles.

### SPECIFICATIONS

- Solid and slotted rubber types
- Self-aligning bearings
- Heavy duty options
- Replacement rubber types

## Universal Joints (European)



### OVERVIEW

European universal joints consist of high quality components used in extreme terrain. Available with thrust washers for longevity, and sealed or greaseable options. Applications for these joints are Volvo, Sandvick, Caterpillar, terex, JCB, Case and Doosan construction equipment.

### SPECIFICATIONS

- Standard and premium styles
- Triple-lipped seals and internal thrust washers
- Sealed and lubed options
- Offset joints for high angles and axle applications

## Double Cardan Assemblies



### OVERVIEW

Where driveshafts are operating at high angles there is often a demand for double cardan joints. A pin or ball system in the middle gives the assembly support and allows the driveshaft to operate without premature wear of the universal joints. Mostly these units are used in off-highway situations. While we supply double cardan units we also offer design expertise for all high angle driveline configurations.

### SPECIFICATIONS

- Complete assemblies
- Individual components
- Heavy duty types
- To suit automotive and off highway applications
- The ultimate solution for unequal angle situations

## Sliding Spline Sets



### OVERVIEW

One of the key components for any driveline is the sliding splines. Any wear on these will result in vibrations and premature wear of other moving components. Beattys holds a complete range of Turret slip sets that suit all applications in the mining & off highway sector. All splines are thoroughly inspected by one of our engineers before leaving our parts department to ensure we continue to provide a high standard of componentry.

### SPECIFICATIONS

- Involute splines - European design
- SAE spline for standard series
- Various spline lengths in each series
- Low noise especially for marine applications

## Flange Yokes



### OVERVIEW

The number of mounting options is forever increasing in the driveshaft industry. That's why Beattys Driveline carries a vast range of different profiles and sizes with many bolt patterns and locating options. Our production centre can also modify a range of blank undrilled flanges from scratch to meet any custom requirements.

### SPECIFICATIONS

- SAE and DIN spec
- KV European
- Single and double joint styles
- Black type for custom made options

## Centre Yokes



### OVERVIEW

Centre Yokes are part of a double cardan assembly and are used in situations where there is excessive angle such as 4WD axle shafts and driveshafts from the transfer box to the front differential. Beattys Driveline have several sizes of centre yokes available in stock for immediate delivery.

### SPECIFICATIONS

- Smooth torque transfer
- Allows 30-35° angle of operations
- Constant velocity (CV) effect

## Complete Ends



### OVERVIEW

Our complete ends are available in a range of sizes and styles. Whether it be a tube yoke or a sliding spline option we will have it. All Turret componentry is sourced from top international suppliers guaranteeing high performance in all applications. Coupled with our legendary customer support and parts backup, solutions like these will live up to whatever tough environment they need to.

### SPECIFICATIONS

- SAE and DIN spec
- KV European
- Standard and high angle options

## Design



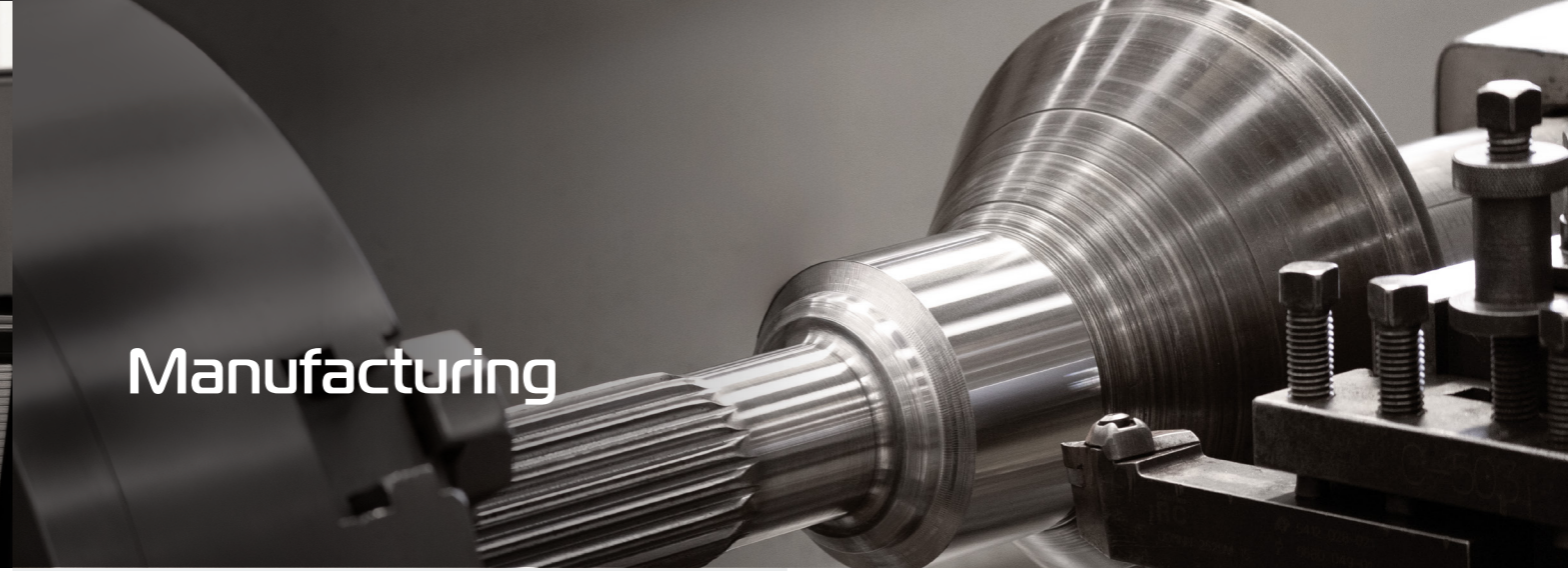
### OVERVIEW

The intelligent design of Mining or Off-Highway driveline is very critical to ensure ongoing reliability. It is important that the power source, speed and universal joint angle are ascertained prior to specifying a shaft to suit any situation. Whether your requirement is for a precision coupling with less than 7 Nm of torque, or a large equipment shaft with an excess of 80,000 Nm, we offer a full consultation and design service so your custom requirements can be met with products that deliver optimal performance.

### SERVICES

- Specifying driveshafts
- Angle and speed calculations
- Driveline layout design and configuration
- Problem solving – vibration, torsional and reliability issues

## Manufacturing



### OVERVIEW

We have the internal resources, skills and expertise to produce all types of drivelines in the mining & off highway sectors. Throughout our driveshaft manufacturing process, you can be guaranteed of the highest level of engineering excellence and commitment to quality. All driveshafts we manufacture are then dynamically balanced to ISO 1940 standards to ensure the durability and performance.

### SERVICES

- Sealed for life driveshafts
- Short coupled driveshafts
- Two piece driveshafts
- Multi-piece driveshafts
- Centre bearing shafts
- Custom design components
- Custom driveshafts
- Larger OEM production runs
- Multi-piece drivelines
- Industry-specific drivelines

## Modifications



### OVERVIEW

Due to the wide range of special purpose vehicles and equipment needed to meet the demands of many industries, we offer a modification service for all types of drivelines including shortening, lengthening of driveshafts and changing drive ends. This service is often used in applications such as chassis length adjustments and transmission or engine upgrades.

### SERVICES

- Driveshaft shortening
- Driveshaft lengthening
- Changing flange and yoke connections
- Upgrading for higher power ratings and heavy duty applications
- Enhanced greasing systems

## Dynamic Balancing



### OVERVIEW

Driveline dynamic balancing is a crucial part of the process to create a lasting solution for shafts that run above 500rpm. With four multi-plane balancers we cover the needs of a diverse range of applications. With drivelines spinning at higher rpm's than ever before, it is important that they are balanced to the finest of tolerances. All balancing weights are spot welded to ensure an accurate, lasting balance.

### SERVICES

- Spot-welded weights to minimise fracturing of driveshaft tube
- Driveline dynamic balance correction
- Driveshaft straightening
- Dynamic balancing reports



**Beattys**  
DRIVELINE

## DRIVELINE SOLUTIONS TO DRIVE YOUR BUSINESS FURTHER

When it comes to drivelines, at Beattys we get satisfaction from resolving any challenge that comes through our world-class workshop and manufacturing facility. This comes not only from our can do attitude, but is backed by technical expertise, leading-edge manufacturing robotics and advanced design facilities. No matter the project - from a single specialist application to multi-industrial sites, there isn't a driveline problem we can't solve.

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**100%** FAMILY OWNED  
FAMILY PROUD