

# THE INDUSTRIAL ROLLER GUIDE

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MISTAKES TO AVOID WHEN BUYING ROLLERS  
FOR THE CONVERTING & PACKAGING INDUSTRY



**HoneAll**



# THE INDUSTRIAL ROLLER GUIDE

**Precision engineered rollers and shafts are used in many industries and in hundreds of different applications. At Hone-All Precision we provide engineering firms with perfectly balanced industrial rollers, each manufactured to your end user's unique specifications.**

We have written this e-book as an introduction to industrial rollers and the services we provide. In it we seek to address questions asked by engineering business owners and works managers'. In particular, we explore how to achieve the best value for money and turnaround times, while avoiding the risks of cutting corners on quality and product longevity.

This goes to the heart of what we do at Hone-All Precision. We seek to inspire customer confidence and address your design briefs in the quickest and most cost-effective way possible.

## Why use our service?

Producing precision, industrial rollers requires advanced manufacturing equipment. For most engineering machinery manufacturers, it is not practical to invest the space and capital required to acquire this equipment in-house for parts that are only occasionally needed or form a very small part of the whole assembly. Our goal is to fulfil this need by taking the problem out of your hands and providing you with the parts you need within your required timeframe.

Our business is set up to be flexible enough to respond to the most challenging of customer demands, while maintaining an unsurpassed level of detail in our work. This has helped us build a professional reputation in the engineering industry over decades. Taking a customer-centred, dialogue based approach to our projects enables our customers to avoid the two big mistakes that businesses commonly make with industrial rollers:

- 1) Choosing the lowest priced components at the expense of quality, and;**
- 2) Providing project drawings which do not reflect the actual needs of the customer.**

Two of the following sections are dedicated to the consequences of each of these mistakes and most importantly, how you can avoid them!

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Deep Hole Drilling

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## Sectors we serve

We are proud to serve a wide variety of UK and international customers in the following industries:

- » Aerospace
- » Oil and Gas
- » Pharmaceutical
- » Medical
- » Packaging
- » Printing
- » Hydraulics
- » Automotive manufacturing
- » Motorsport
- » Defence



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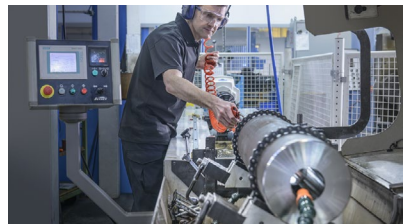
## About Hone-All Precision

We are a family run business valuing team collaboration, approachability and cooperation to achieve precision results for our customers. We have a highly trained team of engineers who we value for their innovative insights and technical expertise. Our approach to problem-solving involves input and support from the whole team, meaning our customers receive the full benefit of our skills and experience, rather than a limited solution.

We take a lot of pride in our work; and the success of our approach is shown by the results we deliver for our customers. When we take on a project, we commit wholeheartedly to deliver within the agreed budget and timescale, using whatever means necessary to accomplish your goals. This frequently involves creative thinking and new ways of harnessing our turning and drilling technology an approach that encourages innovation and stimulates investment in new ideas and machinery.

All our services are undertaken at our facility in Leighton Buzzard, giving us complete control over our supply chain, procurement and lead times. It enables us to offer highly competitive rates that meet and exceed the demands of our customers.

**If you would like to know more about our complete machining services, or have any questions whilst reading this e-book, please call us on 0845 555 111.**



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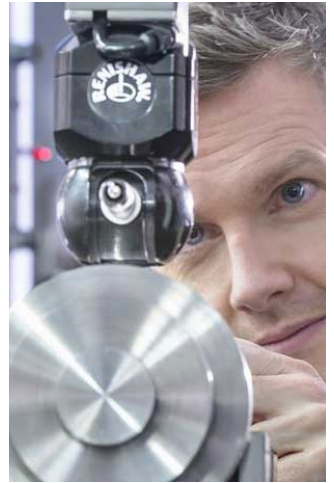
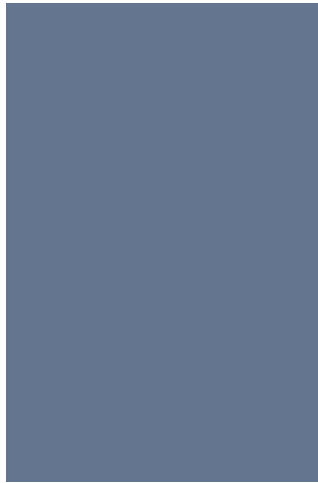
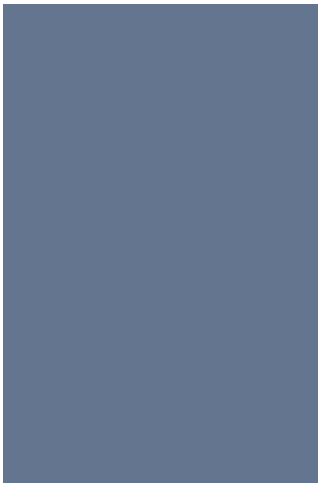
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# The Roller Manufacturing Process



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## The Roller Manufacturing Process

At Hone-All Precision we create custom rollers designed to meet the precise specifications of your end user. In composition, material and character, rollers vary widely by industry and application. From our factor, our team provide a wide range of general and precision engineering services, including Deep Hole Boring, Deep Hole Drilling, CNC honing, CNC gundrilling and dynamic balancing.

The machinery and techniques we use depend on your part requirements. To help you get a better understanding of the processes and what we provide, here is a brief overview of the industrial roller manufacturing process:

### Stages of the manufacturing process

Our manufacturing process varies depending on the components you need, but typically a roller involves us manufacturing shafts, hubs and spindles. These are then partnered with the associated fittings and subjected to temperature controlled assembly and inspection.

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## Manufacturing equipment

To do this we use a range of modern machining and inspection equipment with which we service a wide variety of industries over our 3000-strong customer base, including:



## Deep Hole Boring Machines

We are one of the leading providers of high-tech deep hole boring solutions to the Hydraulics, Oil and Gas and Aerospace industries. Our state of the art machinery covers a range of 20mm to 200mm internal diameter, producing bores with precision tolerances and excellent surface finishes.

## Deep Hole Drilling Machines

Our deep hole drilling machines are extremely accurate and rapid, allowing a fast turnaround on all projects. We can accommodate precision bores between 2mm and 25mm in diameter, up to a depth of 2.5m.



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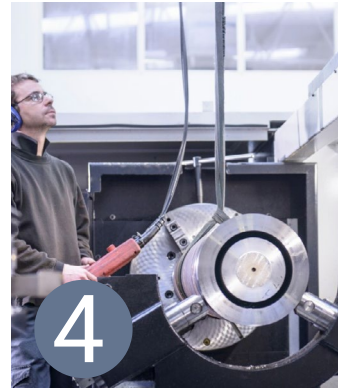


## CNC Honing

Honing was our original service and still forms a central part of our manufacturing service. CNC technology has moved on a lot in the last couple of decades. Through continual investment in the latest machinery, we are proud to provide an exceptionally large capacity range from 2mm to 550mm internal diameter, the highest standards of surface finishing and a far greater level of stock removal than was possible with earlier equipment.

## CNC Turning

We can provide CNC turning, trepanning and boring services at high tolerances, with a diameter of up to 550mm and a length of 4 metres. Our CNC turning equipment is regularly updated to take advantage of the latest innovations in the field.



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## Dynamic Balancing Machines

Dynamic balancing is an essential part of our roller manufacturing service, facilitating high precision shaft and roller manufacturing at any production volume. As well as balancing new parts, we can also refurbish old or damaged rollers to restore their operational efficiency and increase the lifecycle of the product.

## CMM & Inspection Equipment

We use a variety of inspection equipment, including our CMM machine. To ensure that rollers are assembled correctly and spin freely, strict temperature control is necessary during the assembly and inspection process. This is due to many materials changing characteristics and size at extreme changes in temperature – as is frequently experienced during operation. Our temperature controlled inspection environment therefore ensures accurate assembly.



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## Quality Standards

All our work is accredited to ISO 9001 standards. We also comply to EN9100 quality standards. Legally this is only required in the Aerospace Industry. However, at Hone-All we employ aerospace quality standards to ALL our products to ensure the highest product conformity and traceability across the spectrum of our services.

Bringing together experience and technology, our team deliver a fast and effective result, at extremely competitive rates. In the next two sections, however, we will look at circumstances where things can go wrong with a project and common mistakes are made.

Fortunately, avoiding these difficulties is a fairly straightforward matter with the right expertise and support. At Hone-All we are committed to working with our customers to provide all the support and guidance needed to bring your project to a successful conclusion, and to help you avoid potential pitfalls.

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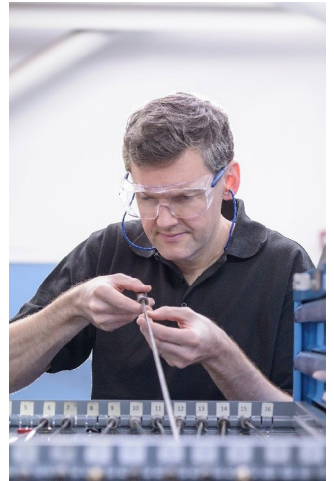
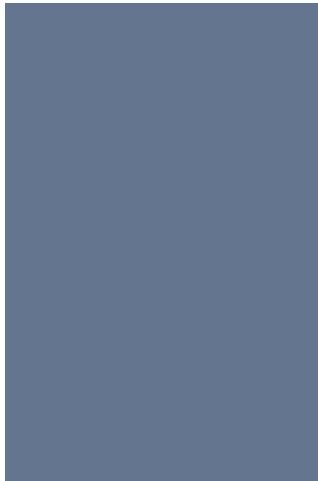
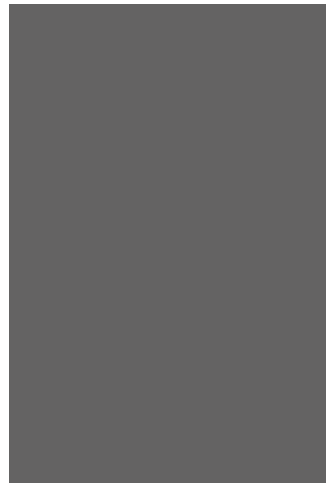
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Mistake One:  
Choosing Low Cost  
Over Quality



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## Mistake One: Choosing Low Cost Over Quality

Manufacturers in all sectors are under intense pressure to deliver quick results on tight budgets. Your customers expect a fast turnaround and a competitive rate, which you have to achieve with the minimum resources available. It is natural, therefore, to look for areas where economies can be made on the manufacturing process. Industrial rollers are a common target for these cost saving exercises, with the risk that low price is prioritised over quality.

Unfortunately there are serious risks to choosing cheaper grade rollers. It is frequently a false economy to cut corners on quality, as a deficient roller can compromise the whole application or require replacement much sooner than a higher precision product. Some suppliers may give you an extremely low quote while also promising you the earth in terms of results. In our experience of the industry this is a difficult pledge to make, and it invariably ends in tears for both parties.

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## Problems caused by low quality rollers

What are the real differences between a high quality roller and a lower quality product?

The answer is that a high quality roller is perfectly balanced, ensuring that under stress or a high RPM, there is no vibration produced by the process. This not only ensures the quality of the product but also extends the life of the roller and the associated machine as there is minimal wear due to smooth running.

An unbalanced roller produces additional vibration and heat over time, reducing the efficiency of the application and increasing the risk of component failure. As with all products with a short working life, you end up paying more in repairs and replacements than you would by investing in a high quality product in the first place.

Not all suppliers apply the strict Aerospace Industry standards to their work unless it is required, whereas we follow EN 9100 procedures for all components irrespective of sector. This effectively eliminates the risk of product defects causing you problems down the line.

## Quality or price: do you have to choose?

Quality versus price does not have to be a compromise. At Hone-All we find that the solution comes through honest and open communication. We are transparent about our work and will be upfront about your likely project costs. This being said, our goal is to help you achieve the maximum possible value within your budget. So, based on an assessment of your needs, we will suggest solutions that come in at the lowest achievable cost, bearing in mind your quality requirements and delivery schedule.

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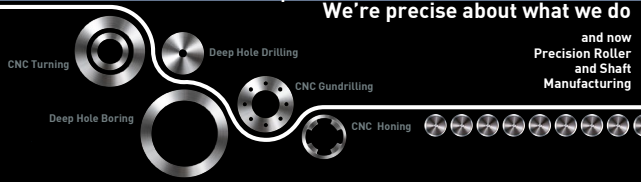
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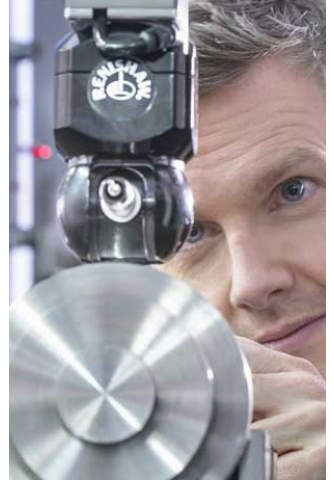
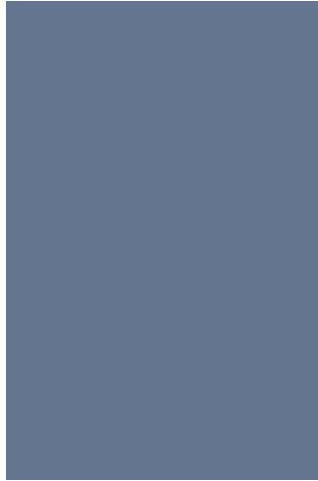
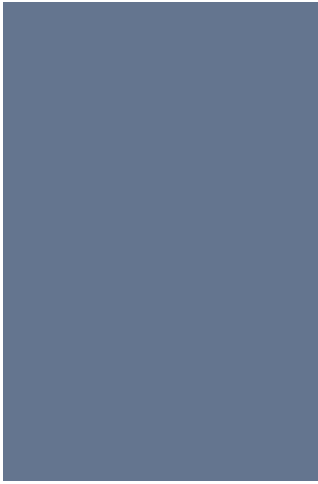
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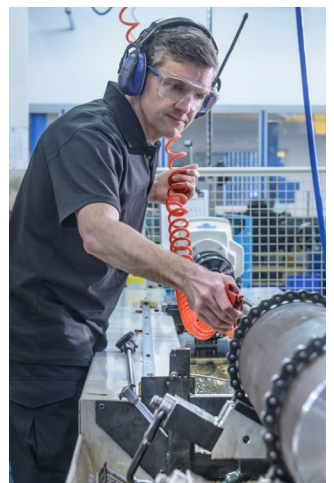
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Mistake Two:  
Not Supplying  
Complete Drawings



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## Mistake Two: Not Supplying Complete Drawings

To make an accurate and effective roller it is essential to work from complete, detailed technical drawings. This is so fundamental to the success of a project that it cannot be left to chance. Unfortunately, some manufacturers enter into projects with inaccurate or incomplete drawings. This poses a serious risk. Below we will explain why this issue occurs and the problems it causes.

### The reasons for incomplete drawings

The reason that companies sometimes end up with incomplete drawings. Is that many of the specifications for the manufacture of rollers are based on extremely old drawings which have not been updated for decades. This is common practice for businesses who have been in the roller manufacturing trade for many years. For instance, this was the case at A. T. Roberts Ltd, which had been in business for 50+ years before we purchased the company in November 2014 – not due to any failure but simply because the engineering team were so long standing, they did not need drawings, they simply “knew”.

Manufacturing parts for this long gives a supplier a whole host of “retained knowledge”; which means they simply produce the parts “as they always have”. When that company ceases to trade or key personnel leave, new suppliers are given the old drawings. In many cases, the “retained knowledge” is not added to the drawings, and so what you actually manufacture by following the drawing is not what the customer actually wants, nor what has been supplied over previous years.

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## Problems caused by poor drawings

The inordinately steep learning curve this can create is quite difficult to overcome, as the customer quite reasonably expects the specifications and products they had previously been supplied – and the delivered parts can often not match to a variety of degrees.

## How to ensure accurate drawings and specifications

The important question to address is what buyers can do about the situation. This comes down to the relationship you have in place with your supplier and the way you manage the project.

When inaccuracies are detected in technical drawings, our approach is to work closely with the customer to overcome the points of error, to discuss the actual requirements, amend the drawings, specifications, surface finishes and fits. This ensures their drawings are accurate going forward, and therefore should they ever need to find an alternate source of supply, they will not experience the same problems again.

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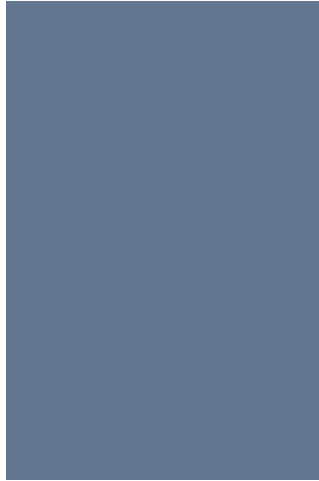
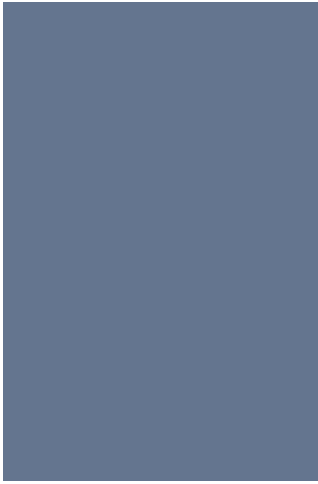
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Why  
Choose  
Hone-All  
Precision



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## Why Choose Hone-All Precision

The goal of our business is to enable our customers to source high quality parts, in the right time frame, to the right specifications, and at a competitive price. This makes good business sense and has served our customers well for many years, but no doubt there are other suppliers out there who can make the same claim.

### So what factors do we feel give Hone-All the competitive edge over other suppliers?

The following four characteristics are what makes Hone-All a unique place to work and do business with. They represent a uniquely personal way of working, which, when taken together, have the potential to deliver unbeatable value for our customers.

### 1) Accuracy and quality

We work closely in collaboration with our customers to ensure their drawings and requirements are accurate, and therefore they can choose where they source from in the future. We supply accurate, high quality product at fair prices, in a good time frame, that not only meet but exceed our customer's requirements. By ensuring this open-handed approach we have secured a loyal customer base, many of whom have given us repeat business for decades.

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## 2) Flexible and honest service

We pride ourselves on customers choosing our service because of the product and experience they receive. We do not want customers to be bound to us due to our historical job knowledge which in previous times or companies, "cannot and must not be shared". Relationships are key for us. Many of our customers are still with us after 25 years and we hope they will be with us for another 25.

## 3) Aerospace standards

Our processes meet Aerospace standards irrespective of the sector, size or cost of the order placed. Our customer service and attention to detail is second to none, including automated delivery and quality documentation alongside feedback requests both at the quoting stage and after manufacture. We also send automated order acknowledgements and completion of manufacture emails as soon as the order has passed inspection and is ready for despatch.

## 4) Passion & commitment

We may be a small company but our knowledge and capacity rivals many of our larger competitors. We combine the passion and commitment of a family run business with the processes and standards of a large corporate supplier. This satisfies the quality requirements of even the largest and most stringent customers, such as Rolls Royce Nuclear.

## Contact Us

At Hone-All we believe we have the winning formula of customer service, professionalism, advanced technology and industry expertise. To see what we can deliver for you, or for a free quote, please get in touch by any of the means below.

**General enquiries: 0845 5555 111 (UK); +44 1525 370 666 (International)**

**Technical sales enquiries: [sales@hone-all.co.uk](mailto:sales@hone-all.co.uk)**

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