

CASE STUDY

SHIFTING UP A GEAR

Brompton Bicycle.

How RS Industria is helping Brompton Bicycle put the brakes on downtime.



CUSTOMER OVERVIEW

As the UK's largest bicycle manufacturer, Brompton Bicycle and its iconic fold-up bike is really going places. Global in fact.

Since the company was first founded in London in 1975, more than one million Bromptons have been sold worldwide, with the bike the ultimate sustainable transport solution for commuters.

Today, the company operates 15 'Brompton Junction' stores across Europe, Asia, Australia, and North America and employs an 800-strong global workforce. The heart of the business and its manufacturing remains at its West London base of Greenford and a welding site in Sheffield, where Brompton manufactures around 100,000 bikes a year.

BENEFITS SUMMARY



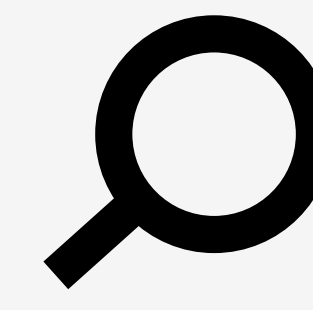
IMPROVED ASSET MONITORING

Critical asset is now continuously monitored, saving time through valuable insight.



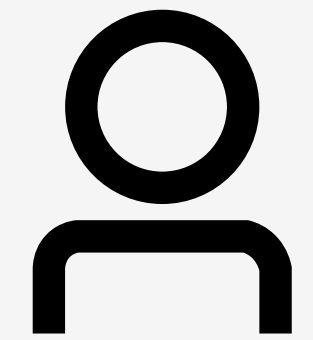
BOOSTED PRODUCTIVITY

Smart maintenance frees up time and reduces cost and waste.



GREATER VISIBILITY

Real-time data enables planned maintenance.



USER-FRIENDLY SYSTEM

Straightforward and easy-to-use solution with ongoing support from RS.

POTENTIAL UNLOCKED FOR ANNUAL PRODUCTION TO BE BOOSTED BY 20,000 BIKES





THE PROBLEM

According to statistics from Deloitte, equipment failure is a leading cause of downtime. With unplanned maintenance and halted production costing manufacturers £37 billion per year, the move to smart maintenance – and with it, greater insight into machinery – can't come soon enough.

At a time when Brompton is accelerating its growth, repeat failures on a key machine were causing headaches for the engineering team at its Greenford factory.

Essential to the manufacture of its bikes, the underperformance of the site's CNC machine was costing valuable time through delayed productivity. To add to the team's frustration, a lack of visibility into when these failures were likely to occur meant that downtime to fix the problem was happening all too frequently.

THE SOLUTION

RS Industria had already been successfully deployed at Brompton's Greenford site to monitor energy consumption and cut costs and waste.

Now, by implementing the solution on the CNC machine, Brompton can extract and analyse valuable data.

The resulting visibility and insight have enabled the engineering team to continually monitor the machine and make informed decisions based on real-time analytics, thereby improving uptime, availability, and reliability.

For Brompton Manufacturing Engineer, Malcolm Millar, it's been a game-changer, removing the need to test a high volume of parts. RS Industria has also led to an improved cycle time, freeing up engineers' time better spent on other activities.

Malcolm explains: "I have been using RS Industria to develop tooling speeds/feeds. By exporting peak torques for Spindles 1A/1B, I plugged the data into Minitab to run an optimisation analysis to minimise torque & noise.

“CURRENT TOOLING DESIGN IS NOW RUNNING 50RPM FASTER, SAVING ONE SECOND FROM CYCLE TIME. NEW TOOLING IS BEING DEVELOPED ALONG THE SAME PRINCIPLE. IN THEORY, I CAN REDUCE CYCLE TIME FURTHER WITHOUT TESTING HUNDREDS OF PARTS. THE ABOVE TRIALS WERE ACHIEVED WITH 28 SAMPLES.”



“ RS INDUSTRIA IS MANUFACTURING-FOCUSED AND SPEAKS THE SAME LANGUAGE AS US: RELIABILITY, AUTOMATION, AND PROBLEM SOLVING...WHEN WE FIRST MET THEM, WE KNEW THESE WERE SOME PEOPLE WE COULD REALLY WORK WITH”

PHIL DEWSON | BROMPTON'S HEAD OF MAINTENANCE & FACILITIES

THE OUTCOME

When it comes to solving costly issues like downtime, a unique and innovative company like Brompton demands an equally intrepid partner, ready to take on the challenge.

Step forward RS. By utilising our unique RS Industria solution on the CNC machine, Brompton now has greater insight and can monitor the asset closely for signs of wear or failure before it stops the line.

By saving Brompton time and testing, RS Industria has turned data into action for the team and helped to boost productivity in the process.

NEXT STEPS

By using RS Industria, Brompton has already been able to knit together a range of electricity accounts, meters, and networks at its Greenford site to show consumption, resulting in a £24,000+ saving.

Now, following its success on the problematic CNC machine, Brompton has further expanded RS Industria to the operation of its paint line. A critical part of the manufacturing process, Brompton wanted to monitor and protect the bicycle frame paint line from breakdowns. Thanks to RS Industria, transparency of the asset has led to a change in start-up and lubrication procedures and positively impacted the reliability of the plant.

RS Industria is now being rolled out to monitor more of the site's critical assets, including the Autobraze and wheel-building operations, in order to improve performance and reliability.

With plans to double production and a new factory build underway in Kent, there are further opportunities on the horizon for RS Industria to make a tangible difference for Brompton and its innovative bikes.



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