



Bringing you Solutions in Motion

 *Solutions In Motion*



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GKN Wheels provides high-quality, high-performance solutions and technologies for your machinery. Proven in applications worldwide, our comprehensive range has been developed to meet the demands of the most technically challenging environments.

With unrivaled experience and expertise, we are committed to meeting the needs of our customers with integrity and through true collaboration and partnership. We work to provide products, solutions and services that deliver value, long-life, robust and performance.

Our core values:

Our core values underpin every aspect of our business:

- > Delivering engineering solutions to add value and innovation at every opportunity.
- > Delivering flexibility and managing complexity.
- > Conducting business with integrity.

Our commitment

Our heritage, expertise and commitment to delivering safe and efficient solutions to our customers, drives our ambition to remain the supplier of choice for off-highway wheels.

Having manufactured the world's first steel wheel in Telford in 1910, we are proud of our history and continually seek to expand our engineering knowledge and expertise.

We aim to provide the right systems to meet the evolving needs of our customers. To achieve this, we continue to work collaboratively and pro-actively, efficiently and effectively.

Delivering the best solutions today; developing innovative technologies for tomorrow.

We constantly strive to improve every product we manufacture – from our Profi-range of patented agricultural wheels, each providing a unique end-user benefit, to our Profi-Hub with its increased carrying capacity and simplified servicing, to our patented, advanced manufacturing process, which makes our Infini-Forge multi-piece wheels 50% stronger than conventional 3-piece wheels.

Customers first

We believe that working together delivers benefits for everyone.

We are committed to meeting our customer's evolving needs. By continuing to invest in our facilities, we are able to work with and deliver the very best technological solutions.

Working together

We believe in the power of true partnerships, promoting transparency, open communication, continuous improvement and team working – all of which nurtures a fully collaborative culture.

Over many years we have built strong and lasting relationships with both customers and suppliers, who share our goal of providing differentiated technologies and services to the global off-highway industry. Fostering a culture of safety, operational excellence and continuous improvement across our plants and research and development centers, we continually strive for improvements in everything we do.

Investing in our future

Over recent years GKN Wheels has implemented a significant investment program, covering each of our manufacturing plants across the world.

Our clear ambition is to be the best wheels business in the world, pioneering the development, design, manufacture and testing of wheels.

This investment program enables us to maintain our position as leader in technology and quality, delivering solutions to meet your changing needs, as well as delivering a significant increase in manufacturing capability and flexibility to meet the needs of the markets we serve.

Investing in our people

At GKN Wheels we are proud of the people who work for us. Our people are talented and experienced, committed and hardworking. An incredibly focused team who positively impact our workplace, our colleagues and the communities in which we live and work.

With a long history of supporting local communities, schools, hospices and fundraising, employees share a common vision to provide customers, suppliers and local communities with the very best support.



Research, development and test

Working closely with Original Equipment Manufacturer and tire partners, our research and development teams are at the forefront of developing products that enhance performance in any application.

Leading the industry with our approach to design and manufacture, our purpose-built research and development centers in Europe and North America are where we rigorously test and validate all new designs and product improvements.

One of the few organizations with the total engineering capability to offer design,

simulation and validation, we continue to make significant investments in both laboratory and field testing equipment to enable us to stay at the forefront of the industry.

We have some of the most advanced purpose-built, electronically controlled systems in the industry and use leading design methodologies including computer simulations and Finite Element Analysis, all of which is backed by extensive testing, both in-house and in the field.



GKN Wheels Nagbøl

Located in the Lunderskov region of Denmark, GKN Wheels Nagbøl manufactures single and multi-piece wheels for a wide range of industries, including:

- > Agriculture – tractors and implements, including high speed wheels.
- > Construction – light and heavy equipment.
- > Mining – both surface and underground operations.
- > Material handling, forestry and AGVs.

Investment in our Nagbøl plant included the commissioning of our first powder coat paint facility, which set the standard for our other plants to follow.

More recently, investment in the introduction of robotic technology and a weld cell (with the largest and fastest robot in Denmark), has increased manufacturing speed and flexibility. The weld cell is capable of efficiently producing small batch sizes, with minimum changeover times. The production cell can also weld different valve guards and high spot marks to suit customer requirements.

Investment in the manufacturing process has also enabled us to develop and launch our Infini-Forge product – a multi-piece, high performance, patented solution. The revolutionary process technology, using a hot induction forming (HIF) process, achieves greater manufacturing accuracy and enables us to produce wheels specifically for high load-bearing vehicles. Infini-Forge wheels achieve a lifespan 50% longer than conventionally manufactured, multi-piece wheels.

All wheels manufactured at GKN Wheels Nagbøl, are subject to close surface attention, with each product across the range finished with a powder coat surface. Applied through an electro-coat process, this guarantees complete coverage of every part of the surface.

Size range:

- > Single piece: width 8-42" and diameter 16-54".
- > Multi piece: width 8-36" and diameter 24-35".

In addition:

GKN Wheels Nagbøl is our Centre of Excellence for the design of agricultural wheels. The plant manufactures our Profi-Grip and Profi-Line+ product lines, as well as sprayer and implement wheels for the European agricultural market.



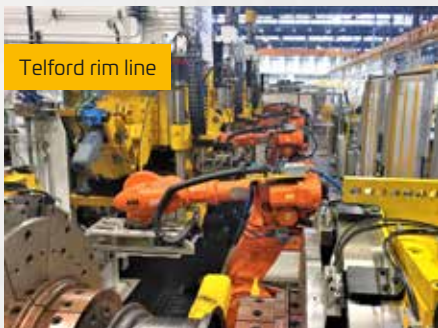
Robotic weld cell

GKN Wheels Telford

Located in the United Kingdom, GKN Wheels Telford is our longest established plant, with its wheel making history dating back to 1910. The plant manufactures wheels for agricultural tractors and light construction industries.

GKN Wheels Telford has been part of a major program of work, which encompassed the complete regeneration of the site – including the installation of the world's most advanced off-highway rim manufacturing facility.

The automated rim line and robotic assembly cells, which feed into the paint plant, feature 22 robots. With new tooling, faster welding cycles and assembly throughout, the line allows for faster changeover and an extended product



Telford rim line

size range, enabling enhanced flexibility, smaller batch sizes and therefore the ability to react and positively respond to customer requirements. The facility features:

- > Latest-process technology including robotic welding and CNC machining.
- > State-of-the-art powder coat paint line.



Composites capability

- > Automatic, in-line quality check on every rim.
- > Automotive-standard electro-coat and powder paint capability.

Enabling us to provide you with a 'best-in-class' finish. Incorporating the latest in laser scanning and tracking technology, the new powder coat paint facility will consistently deliver a robust and uniform finish, as well as provide significantly enhanced salt spray resistance (over 1,000 hours).

Size range and products:

- > Single piece: width 8-34" and diameter 20-54".
- > For agricultural machinery and light construction.
- > Offering TW patented Profi-Fit wheels.

In addition:

Telford sites houses the Structures business, where our capabilities include – structural assemblies, innovative squeezeform technologies, and composite development, as well as unique facility for testing a wide range of automotive, off-highway and defense products, from small components, and vehicle structures through to whole vehicle assessments.



GKN Wheels Armstrong

Our United States operation, GKN Wheels Armstrong is in the state of Iowa and is formed of two manufacturing bases, in the towns of Armstrong and Estherville.

GKN Wheels Armstrong design and manufacture single piece and multi-piece wheels as well as an extensive range of hubs and spindles, for industries including:

- > Agricultural tractors and implements.
- > Construction and mining equipment.
- > Material handling.

The second phase of our long-term investment plan is in place at the Estherville plant, making it one of the most advanced rim manufacturing facilities in the world. This investment has enabled the size range, and so our product range, to be greatly expanded. In addition, we have significantly enhanced our hub and spindle machining capability and our best-in-class paint capability, as well as providing significant investment for the development of our R&D facility in Woodridge, Illinois.

Our innovative Profi-Hub range has been developed to meet the demands of more powerful and high capacity machinery. Offering a significant weight saving whilst providing improved performance as well as longer service life.

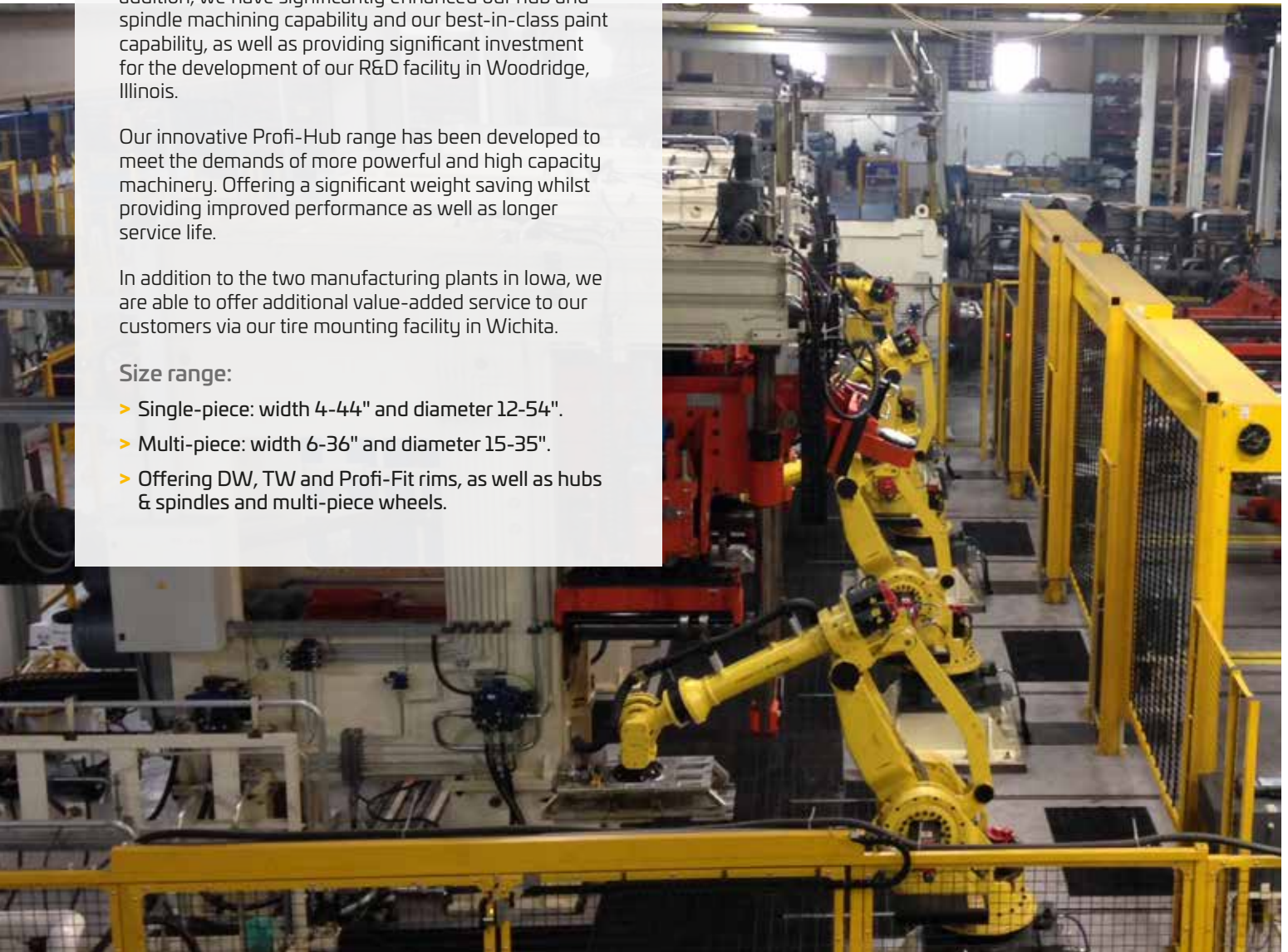
In addition to the two manufacturing plants in Iowa, we are able to offer additional value-added service to our customers via our tire mounting facility in Wichita.

Size range:

- > Single-piece: width 4-44" and diameter 12-54".
- > Multi-piece: width 6-36" and diameter 15-35".
- > Offering DW, TW and Profi-Fit rims, as well as hubs & spindles and multi-piece wheels.



Innovative range of Hub Systems





Research and development

Wheel testing

Working with customers, we undertake tests in a real-world environment, using our sophisticated test equipment at one of our two state of the art research & development centers. We can test both wheels and hubs to simulate virtually all potential operating conditions, providing accurate performance data, which is not only invaluable to customers, but also provide data to our manufacturing plants for future improvements and investment plans.

Our research & development centers are located in Brescia, Italy and Illinois, USA. Both offer.

- > FEA modeling & simulations.
- > Field testing & data acquisition.
- > Life expectancy/fatigue analysis.
- > Disc and rim fatigue testing.

And our experienced engineering team to support you through every stage of the design and test process.

Sustainability and the environment

As product designs evolve, our engineers are always looking to bring solutions that perform better than their predecessor: they may be lightweight, more efficient or made with less material or waste. This approach to design & manufacture ensure that we and our customers minimize the impact we have on the environment and our local communities.

Our people

We employ people across the world and have strong teams, who have developed lasting relationships with thousands of customers, suppliers and contractors globally. Our people are the key to those relationships and are the reason for our success.

As a business we can only continue this success if we encourage our employees to reach their potential, foster teamwork and collaboration and celebrate individuals and team achievements.

We aim to do this in a safe and fair environment and with a workforce that reflects the diverse communities and culture in which we work.



Disc bend testing

> Facilities Key

-  Ag Wheels
-  Construction Wheels
-  Mining Wheels
-  Industrial / Material Handling Wheels
-  Distribution / Tire Fitting
-  Hub Systems
-  Test Facilities

> Manufacturing Locations

- Telford, United Kingdom
- Nagbøl, Denmark
- Armstrong / Estherville, United States

> Test Facilities

- Woodridge, United States (Wheels / Hubs Systems)
- Brescia, Italy (Wheels)



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