

150 years into the future

Fenner®

It's 150 years since Fenner launched the future of power transmission. Now that future is here, it's a good time to look back at the brand's beginnings in 1861, when Joseph Henry Fenner founded his company in rented rooms at 21½ Bishop Lane, Hull. Now, 150 years later, Fenner is an international brand with sub-licensees and authorised distributors on six continents, and a leading name in power transmission products. Normally, we look forward – developing new products and new solutions. But where did our current success begin? And what were the foundations of the bright future for Fenner and Fenner customers?

150
YEARS OF
INNOVATION

 www.fptgroup.com

1861 — Although the company was founded in 1861, the earliest record of an official order from Fenner is dated 1868, and is for 50 feet of leather hose, at two shillings and sixpence per foot.

1877 — Having moved into the production of leather transmission belting, by 1877 the company was also offering a whole range of other products, including woven hair and walrus hide belting, and seamless woven canvas hose.



1920s — Production moved away from leather and towards woven transmission belting, laying the foundations for the development of heavyweight conveyor belting for coal mines that came in the 1950s.

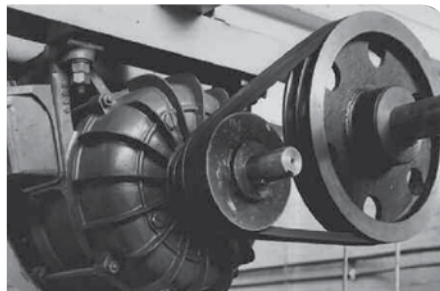
1937 — Fenner's own V-Belts began to be produced at the company's Marfleet factory. A year later, the company began the production of pulleys too.

1943 — Fenner V-Belts formed part of the drivers used on the bouncing bombs designed by Barnes Wallis and made famous by the Dambusters' raids of this year.



1950s — The company expanded worldwide, establishing manufacturing companies in India, Australia and South Africa.

1970s/80s — Fenner grew dramatically, partly through acquisition of companies in the same or associated fields, such as power transmission.



1990's to Present — The early 1990's saw the birth of the FPT Group along with the Fenner Quality Assurance Initiative which today still forms the foundation on which the power transmission range is constructed. The FPT Group was sold and merged with WYKO, now ERIKS, in 1998 and it is ERIKS who now oversee the licensing and development of the Fenner range of power transmission products.



The Fenner Quality Assurance Initiative forms the foundation on which our complete power transmission range is constructed.

It is a worldwide commitment to quality and a guarantee to our customers, wherever they are located, that the quality of the products we supply will always meet exacting, agreed and internationally recognised industry standards to ensure Fenner products excel in today's demanding applications.

The simple objective is to ensure that Fenner power transmission products perform reliability and cost effectively from product selection, through purchase, installation, operation, maintenance, and ultimately decommissioning, to deliver superb customer value underpinned by engineering excellence born of many decades' experience and continued development today.

Fenner then and now

Any brand that has been a leading name in industry since 1861 is bound to have played an important part in some of the major events of the past 150 years. Fenner is no exception, with its power transmission products having cropped up in some surprising places, and been fundamental in some amazing stories, over the decades. Here are just a few examples of how Fenner has helped to shape the past and build the future.

Now we're flying

Airports have been crucial to the growth of the UK since the middle years of the 20th century, and Fenner products have been crucial to airports since that time.

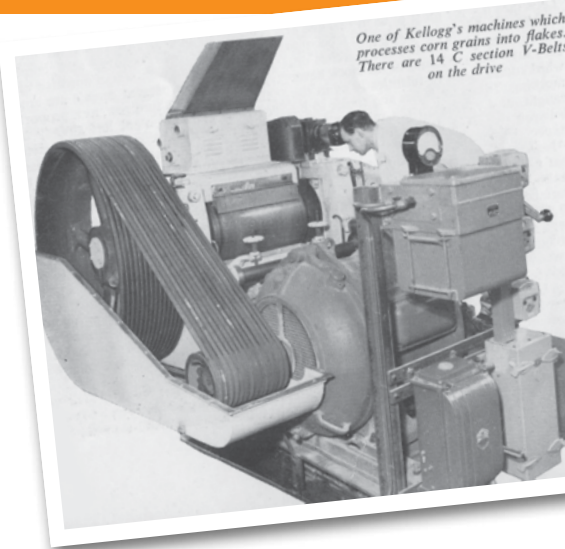
When major investment was made at **Heathrow Airport in 1965**, to help it live up to its position as a growing international hub, one of the significant improvements for passenger comfort was the installation of air conditioning.

The huge scale of the terminal buildings meant that this required the installation of no fewer than 50 extraction fans in chambers all across the main terminal, providing a total capacity of over half a million cubic feet of treated air per minute. To ensure reliable performance, all the belt drives for these fans were supplied by Fenner, from stock. They remained in use for several decades, cost-effectively keeping passengers cool.



Almost 50 years later **Gatwick South Terminal** was also upgraded, with a new Environment Control System linked to variable speed fan controls. This involved the conversion of more than 100 fan units to inverter control – and naturally Fenner engineers were involved. Fenner also designed and manufactured all the enclosed control panels, and the installation work was carried out without closing any part of the busy terminal building, and with minimal shutdown time for individual fan units.

Outside the capital, a large Midlands airport is another busy hub benefiting from Fenner expertise. Fenner Quattro PLUS belts and new pulleys have recently been installed on their air handling units, and are now operating at 96% efficiency to deliver substantial energy savings and an improved passenger experience.



One of Kellogg's machines which processes corn grains into flakes. There are 14 C section V-Belts on the drive

Serial cereal success

Millions of us start our day with a breakfast cereal – and the fact that we can is partly thanks to Fenner.

In the **1950s**, Fenner V-Belts were installed at the Manchester factory of **Kellogg's Cornflakes**, where they transmitted the power used to flatten the grains of corn into the shape we recognise from our breakfast bowls. The Fenner belts were smaller and more powerful than the alternatives, so Kellogg's were able to use fewer belts, cut costs and reduce production line maintenance – benefits which led Kellogg's to install Fenner belts in their factories across the world.

Of course, the breakfast cereals market has grown enormously since then, and **now other manufacturers rely on Fenner** to keep their production lines running. One large producer recently called on Fenner for help when the two-speed gearbox which



drove their cooker began to fail. A straight replacement was not only an expensive solution but would also take up to 12 weeks for delivery. The ERIKS engineer's recommendation of an inline Fenner Series M geared motor with torque limiter would have been a less costly, highly reliable solution, available within as little as six weeks.

However, the client was so concerned about a possible breakdown in the interim that ERIKS proposed an alternative Fenner product, enabling the client to implement an off-the-shelf solution within hours, with only a few modifications to the plant. All done – and just in time for breakfast!

Making the roads safer

The Road Traffic Act of **1956** introduced the MOT to the UK. One aspect of the MOT was a brake test, carried out by torque testing with a dynamometer. The brake tester, developed by Triangle Products Ltd. of Cheshire, consisted of two sets of grooved rollers, each driven by a 1hp motor through a reduction gear. The rollers rotated the car's wheels, and when the brakes were applied the rollers retarded, so the amount of resistance they offered could be measured to determine the braking efficiency of each wheel. The power was transmitted to the rollers via a Fenner Taper-Lock V-Belt Drive and Taper-Lock rigid coupling, with a Taper-Lock Chain Drive.

Preventing a polio epidemic

In the **1960s** polio was a much-feared disease, and when an epidemic struck Hull in 1961 the Pfizer vaccine factory in Kent worked day and night to produce 300,000 doses of oral Sabin vaccine to help stem the outbreak.



The vaccine was produced in sterile rooms, with air flow controlled by Fenner premium V-Belt driven fans. The successful production of sufficient quantities of the vaccine led to the first ever mass use of an oral vaccine against a polio epidemic in Western Europe, and just two months after the epidemic began, the Medical Officer of Health declared it over.

Making money for everyone

In **1971**, Britain's currency changed forever when the UK 'went decimal'. Instead of sixpences and threepenny bits, with twelve old pennies to the shilling, we began to get used to one hundred new pence to the pound, and coins like the two new pence piece, the five pence piece and the fifty pence piece. These new coins were minted at the Royal Mint in Llantrisant, near Cardiff. Fenner played its part with Fenaflex couplings linking the motor to the machine on the pickling and washing units, into which the metal blanks are placed following annealing. Around 4,000 million decimal coins were produced ready for 'D Day' and Fenner helped to 'make money' for everyone in the country.



Back to the future with Fenner

An impressive past is all very well, but for our customers it's the future which counts. And after 150 years, Fenner is still a trusted brand delivering robust, reliable solutions to customers worldwide. Here is all the latest news of Fenner products and developments.



Case Study

Ultra PLUS 150

High Strength Wedge Belts

Guarantee Optimum Efficiency

An under-tensioned, incorrectly installed belt drive soon leads to slippage, overheating of the belt, secondary curing which makes the belt hard and, eventually, excess wear on the pulley. When slippage is noticed, common practice is to change the belt. However, Best Practice is to change the pulley too.

Currently, 50% of new belts are fitted to worn pulleys – and when a groove has already been worn into the pulley, the new belt will simply slip into the groove and the problem will quickly reappear. Up to 10% of the pulley's energy input will be wasted, leading to shorter belt-life too. Replacing the pulley will quickly pay

for itself by restoring optimum efficiency (up to 95% when using Fenner Quattro PLUS) which is lost when the belt slips.

A Fenner Pulley Groove Gauge is available from ERIKS to make it quick and easy to check the condition of pulley grooves.

Reduce your Energy Bills

Using the Fenner QD Inverter range to vary the speed of an electric motor can deliver significant energy- and cost-savings. Variable torque applications – such as pumps and fans – running continuously over a long period offer the biggest savings opportunities, with a 20% reduction in speed resulting in a 50% energy saving.

Issue

A company producing architectural stone blocks was experiencing issues with bearing life, drive life and accurate driven speed on one of their heavy duty (132Kw) stone saws. They needed a new drive to alleviate these problems and accommodate a new, larger saw blade some 2.5 metres in diameter. The existing belt drive utilised an 18 belt B section classical vee system.

Solution

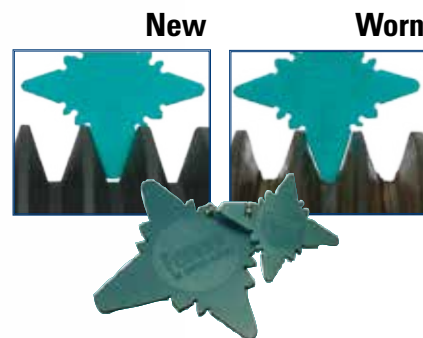
The company contacted the ERIKS service centre in Leeds, seeking advice on how to arrive at a cost effective reliable solution. The service centre liaised with the relevant Core Competence Centre who came up with a solution based around the new Fenner Ultra Plus 140 wedge belt. Due to the high power capacity, excellent length stability and robust construction of this belt, it could satisfy the customers drive requirements using only 8 belts along with a new set of pulleys and Taper Lock bushes.

Features and Benefits

- Reliable length stability – increased efficiency of 96%
- High power capacity/reduced number of belts – reduced downtime costs
- Robust construction – reduced maintenance costs

Conclusion

Due to the aramid fibre cords, double asymmetric weave jackets and chloroprene rubber construction, the UP150 belt product was a perfect fit for this application. Not only does it save the customer money on replacement of belts and bearings due to the aggressive environment and excessive overhung loads, it gives the customer longer drive and saw blade life.



Request your free pulley groove gauge by visiting www.ftpgroup.com