

HMTODAY

PUBLISHED BY HOLLAND MECHANICS, PURMEREND, THE NETHERLANDS

WWW.HOLLANDMECHANICS.COM



Passion, Performance and Precision

The market for high-end road race and MTB wheelsets has been undergoing remarkable growth in the past years. Thanks to rapid market developments, there are ample choices today for an increasing number of consumers looking for wheelsets costing €2,000 or more. These wheelsets not only meet their specific technical requirements, but they are made with the same passion they have for their bike.

High-end wheel builders and riders share a similar passion regarding wheelsets' performance and precision. It is all about craftsmanship. How the wheels are made is laid down in so-called recipes. This craftsmanship however, is steadily transforming from manual labor to machinery, while still using the same expertise built up in previous generations. The skills of the wheel builder are translated into the toolbox of today's wheel-building machinery. Each craftsman makes his own decisions, just like the cook in his kitchen, such as the sequence of increasing the load. While the craftsman continues to be in the lead, customer's confidence also remains on a high level. That's passion in wheel building.

To meet the growing competition in this product category investments in quality and efficiency are essential, a signal that is picked up by the market on a wide scale. The latest generation of Holland Mechanics wheel building machinery allows for an unprecedented precision in adding your own mix of ingredients to the recipe. Many highly-appreciated brands use Holland Mechanics machinery like ENVE, Synrace, Miche, Easton, Boyd, FSA, Vision, Tune, Veltec, Asterion and Noble.

Advanced Trueing Algorithm

Holland Mechanics offers a wheel building solution for all; from a minimum of approximately 1,000 wheelsets annually, investment pays off. Efficiency-wise the differences between trueing manually or by a machine are huge. It takes the recently developed ATA or Advanced Trueing Algorithm option less than a quarter of the time to process the wheel. But above all, the differences in quality of the final products have been reduced to previously unheard of levels. The ATA even allows a setting of no more than 0.2 millimeter deviation sideways and in height. This has been possible by developing an algorithm which, after changing the settings of one spoke, calculates the differences in tension of all spokes. Compared with calculating the tension via an algorithm, measuring the torque tension is always much more inaccurate. Obviously, these algorithms or the computer has to 'learn' this process, but once this has been done, the speed in calculating and the steady quality of the final product, in this case the spoke tension, is unprecedented. Trueing a wheelset with a minimum in deviation can be done mechanically, but building a wheelset with equal spoke tension is unique. You can only do that with a computer. The result is not just a stable but a much more durable product.

When passion, performance and precision come into place there is no such thing as only one way to build a wheelset. Each specialist has their own techniques, skills and ideas passionately put into place when designing and building a wheel. In the past 45 years, Holland Mechanics gathered a lot of experience in building machinery, but also with the prod-

ucts made with these machines, as well as the wide diversity of ideas in the market on what is the best possible wheel. The use of the pre-stresser is one of those much-discussed techniques in the high-end market. Finally, it is the craftsman who decides what machinery to use, we provide the hardware and the software.

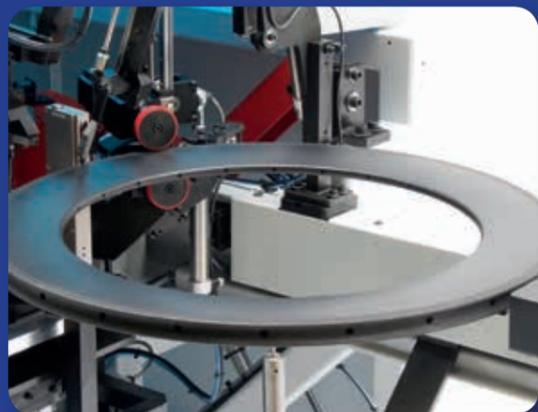
The Holland Mechanics' showpiece of the lacers, the In-line Lacer, has been equipped with a new option. This popular lacer changes automatically to different wheels and has the ability to move the screw head in different angles for optimal spoke angles. This option is essential for high-end wheels, which have angle drilled spoke holes. To improve the usability of these lacers the maximum height for carbon rims has been increased to 90 millimeters.

Track and trace

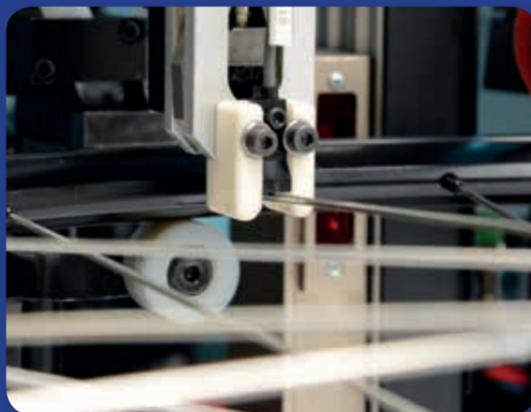
The market awareness on the importance of 'track and trace' for product reliability is reflected by the option to connect the wheel building data on a bar-code or QR-code on the rim. In fact, track and trace can be regarded an indispensable part of a €3,000 product consumers might expect.

Today's high-end bicycle market requires more than image, people want the best quality in wheel building. It is part of the global trend towards more high-end bicycles in road and mountain bike categories. These consumers prefer quality products above all, regardless the image. They don't want compromises, they want a precise product made with passion offering them the maximum in performance.

THE HOLLAND MECHANICS NEW HIGH



Pro gomm-In-Line Lacing



TCS Gripper



Multi Colour Nipple Selector

Spherical



Q-let



Curved



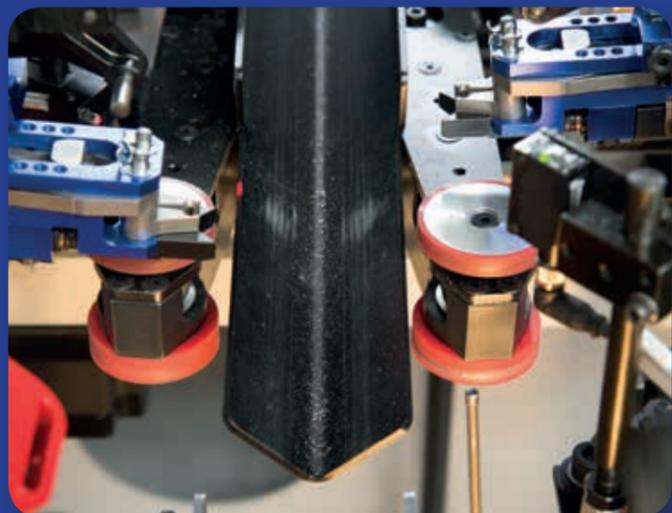
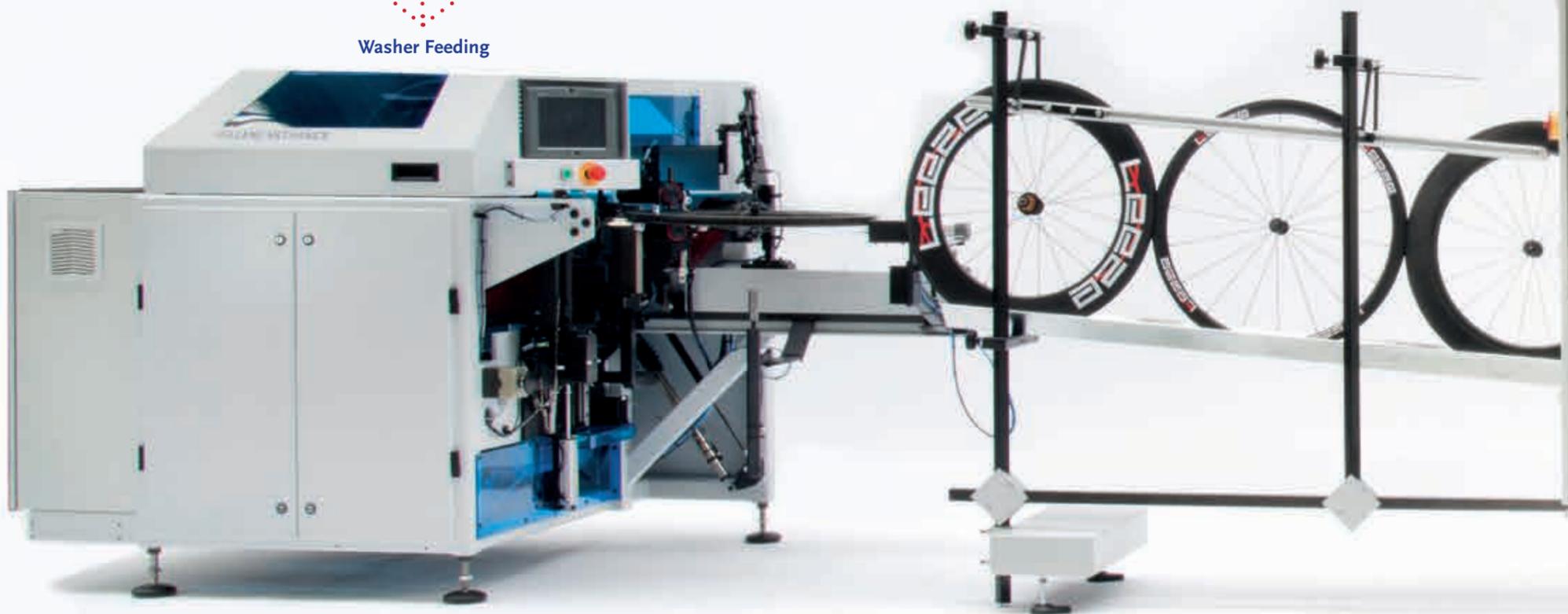
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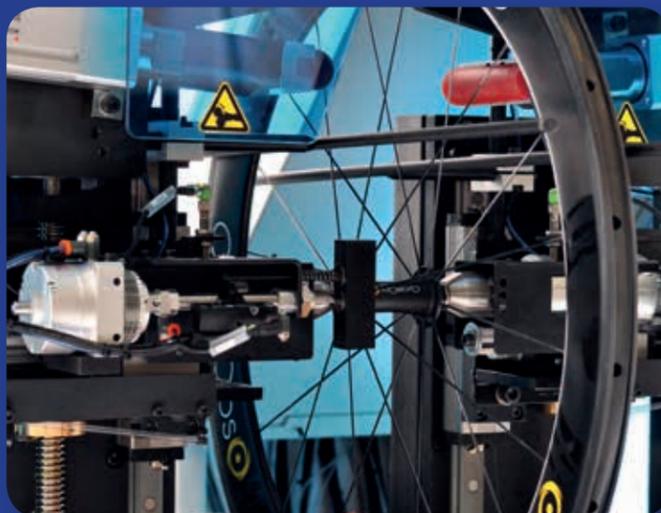
Q-lube



Washer Feeding



Integrated Dewinding



Integrated Frequency Stabilizing



Automatic Spoke

H-END WHEEL BUILDING SOLUTIONS

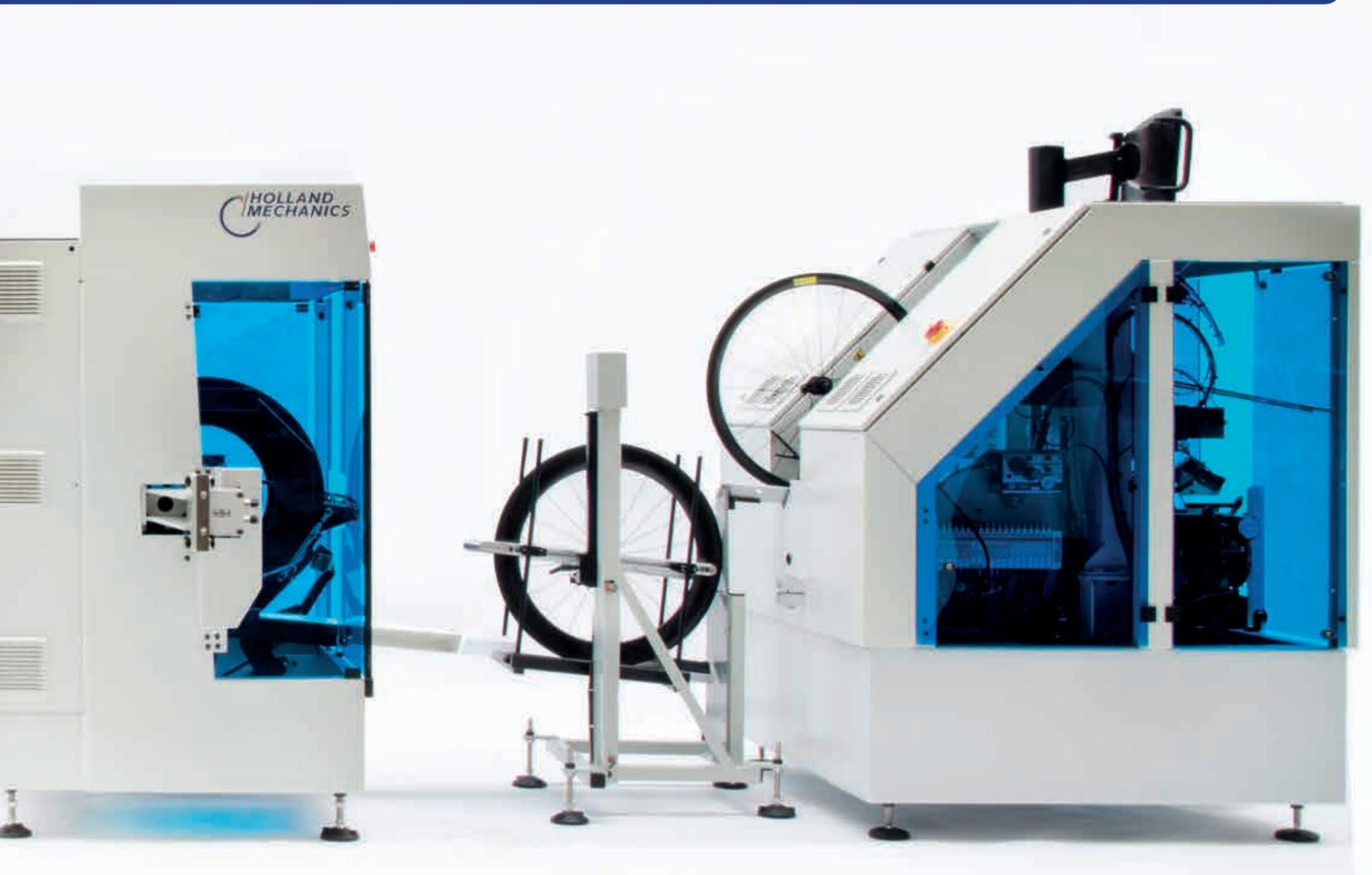


Pre-Stressing Machine

Pre-Stressing Machine

New for the 2018 season is the In-Line Pre-Stresser. The principle of the Pre-Stresser is to support the rim and put a load on the hub area. This way the spokes on one side of the wheel will be stretched and on the other side released. This will be done on both sides of the wheel. In this machine we can pick up any wheel from 20"- 29" where the rim is supported on a plastic ring. There is a programmable database where for each individual wheel the following Pre-Stressing settings can be made:

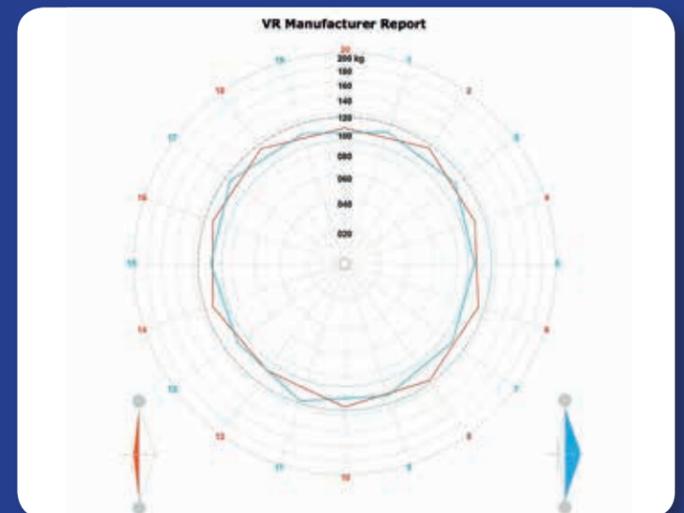
- Force left side
- Force right side
- Displacement of the hub to the left
- Displacement of the hub to the right
- And for both sides Dwelling (combination of time and force)



Tension Control

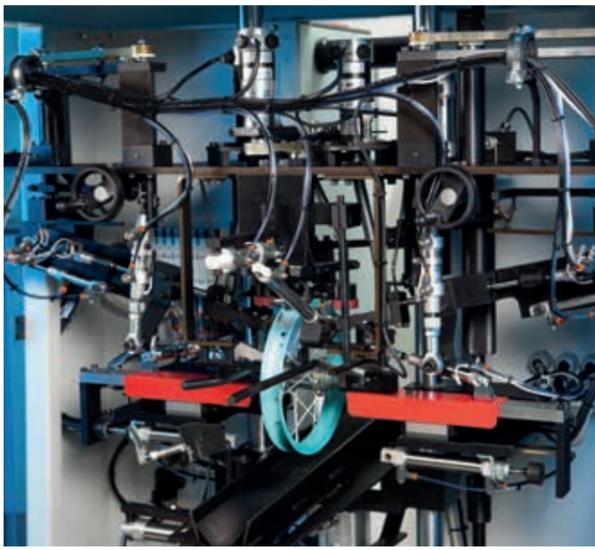


QR-Barcode Scanning



Auto Generated Wheel Data Report

Robot DC – Easy Adjust



Holland Mechanics has invested in a new version of the Robot DC. This Robot is the most successful wheeltruing Robot in the world and is in operation at many bicycle factories, even in the most remote countries. Two years ago Holland Mechanics already made it possible to follow new wheel trends, like Carbon and Fat Bike wheels, with the Robot DC. Besides the possibility of truing new wheel-models the wheel range is also extended. Now it is possible to true wheels from 12" to 29" without a mechanical rebuild. For 2018 the Robot DC Easy Adjust model is launched whereby you can change over Quick and Easy between all different wheel-models and sizes.

Frog Bikes Re-shoring to the UK



A growing number of western companies are moving their manufacturing back to Europe or North America. Also in the bicycle market there is a shift towards this trend. A good example is the case of "FROG Bikes". From the summer of 2016 they started assembling bikes in the UK, in their own factory in south Wales. Jerry Lawson, Co-founder of Frog Bikes: "The new operation will enable us to be more responsive to the market, have more control over quality, introduce innovations faster, reduce our environmental footprint and create jobs to benefit the local economy. There were times during 2015 when we couldn't keep up with demand, and customers were left disappointed. We recognised that the time had come to re-shore our production model."

The Wheel Cloud



In the latest wheel building machines Holland Mechanics offers the possibility to collect wheel quality and production information. With integrated spoke tension measuring in both Robot OT and Pro-Truer the machines are able to produce a detailed overview of the complete wheel. All wheel data can be exported into an ERP or other software system. When the rim is equipped with a unique QR- or Barcode the production data will be automatically linked to an individual wheel. This information is stored on a local network or in the Wheel Cloud and can be made accessible for consumers. Besides the possibility to share this wheel data with consumers the collected information is also essential for warranty issues as it clearly shows when, where and how the wheel has been produced.

Rim Line – 3 Steps Rim Process

Last year Holland Mechanics launched the world's first fully automatic Rim Manufacturing Line. This unmanned Rimline consist of three connected stations. The Vertical

Rim Flow is a Holland Mechanics philosophy whereby the rim rolls vertically from station to station without human intervention.

Curious how it works? Please contact Holland Mechanics sales department for a detailed video: sales@hollandmechanics.com – subject: hm rimline.



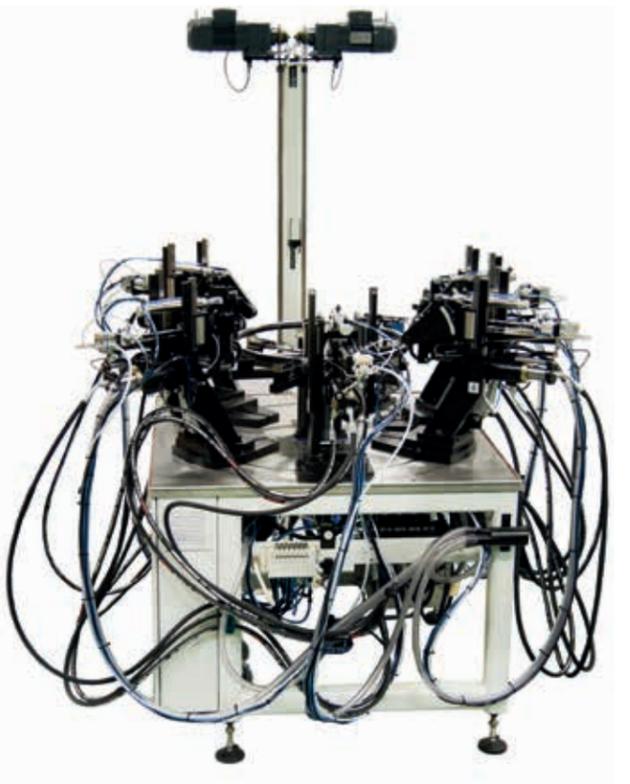
Rim Bending Station

The Rim Bending Station bends from one profile a spiral of 3 rims. The aluminium extrusion is automatically fed into the Bending Station. The rim-spiral is transferred vertically to the Rim Assembly Station. Optionally it is possible to add an engraving or printing unit for ETRTO and rimsize information.



Rim Assembly Station

The rim-spiral is automatically loaded in the Rim Assembly Station. For precise ETRTO the clamping-belt is forcing the spiral in exactly the right rim-diameter. After clamping the spiral will be cut and automatically pin-joined. The Rim Assembly Station is equipped with a rim-database with specific settings per rim type, making the machine easy to change over. When the 3 rims are pin-joined the rims will be automatically unloaded and transported to the Punching or Drilling station.



Rim Punching Station / Rim Drilling Station

A robot arm will automatically load the rims into the Punching or Drilling Station. The High Speed Punching (HSP) or High Speed Drilling (HSD) technology are the most advanced systems and equipped with 5 heads for high quality, flexibility and efficient Rim Production. Large European Rim Producers like Rodi, Büchel, Remerx, Schürmann and Exal are using this state of art equipment. Optionally it is possible to add the Hole Scan Technology for Inline QC check.