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4th Generation ProLine

Holland Mechanics gains popularity worldwide with its 4th generation high-end wheel assembly line, which integrates all the aspects of wheel building craftsmanship with advanced robotics to produce some of the best wheels on the market. The company has made efforts to develop a state-of-the-art assembly line due to the scarcity of hand wheel builders globally.

The ProLine is designed to work with any type of aluminum or carbon rim and boasts of unmatched accuracy and efficiency. The lacing process takes only 1.5 to 2 minutes per wheel, and the trueing robot takes just 8-10 minutes to complete a high-end wheel ready for boxing. It even comes with the option to generate a fully branded wheel build report with all parameters, which are displayed in a polar plot.

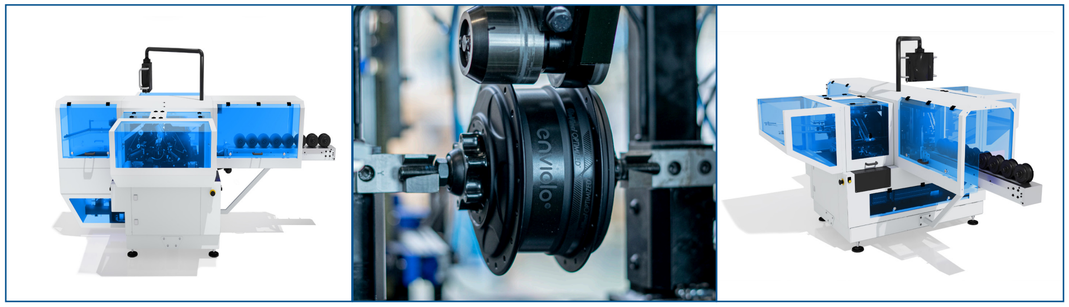
The ProLine records truing data with the help of advanced software called the Advanced Truing Algorithm (ATA). The ATA algorithm has significantly improved during the pandemic years and ensures that each spoke is tensioned perfectly and trued to within microns of accuracy.

NEW! High-end Rim Drilling

The Holland Mechanics High-end rim drilling station has revolutionized the art of drilling spoke holes into carbon and other high -end rims. With the ability to drill all possible spoke patterns in all angles, these ultra-light carbon bicycle rims are now more customizable than ever before.

Unlike most existing machines that only drill from the outside, this rim drilling machine can drill compWound spoke holes. The outside drilling is optimized for automatic wheel-building, which means that the nipples are found in the same angle as the spoke, ensuring that the spoke is drilled at exactly the right angle to prevent warping and increase reliability. Apart from its basic functionality, the machine can also drill different rim types, making it a versatile tool in the bicycle industry.

Filling Hubs Fast & Flexible : 800 - 1000 Hubs/shift



The Large Diameter Hub Filling Station from Holland Mechanics is a new and innovative machine that offers a range of exciting features for manufacturers. Designed to fill standard and large hubs up to 140mm in diameter, the LDH is the next generation of hub filling machines, building upon the success of its predecessor, the HFS. One of the key features of the LDH is its exceptional speed. The machine can fill hubs within just 35 seconds. Hub only change-over takes 5 seconds and Hub & Spoke change-over is less than 4 minutes. Additionally, the LDH boasts a database of 999 saved hubs, making it a versatile and flexible choice for manufacturers working with a range of hub sizes.

Beyond its speed and flexibility, the LDH is also designed to improve efficiency and reduce labor costs. With its high level of automation, the machine can dramatically cut labor expenses, while still maintaining the latest safety standards and accommodating both 13G and 14G spokes. Manufacturers in the bicycle industry stand to benefit greatly from the Large Diameter Hub Filling Station, with its exceptional capabilities and potential for a high return on investment (ROI) of 1-3 years depending on local labor costs. This makes the LDH an attractive choice for manufacturers who are looking to secure their production capacity the long term.
Overall, the Large Diameter Hub Filling Station is an exciting addition to the world of manufacturing. Its advanced technology and innovative features offer a range of benefits for manufacturers, from increased efficiency to reduced labor costs. With the LDH set to launch in 2023 and eHub compatibility coming in 2024, it's sure to make a big impact in the industry. All of these features combine to make the LDH a cutting-edge machine that can revolutionize the way manufacturers fill hubs, and we're excited to see the impact it will have on the industry.

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HM TODAY

BUILD BETTER BIKES

SEASON 2023 VOLUME 23

THE ROADMAP FOR GROWTH

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VISIT WEBSITE

BUILD MODULAR AND EXTREMELY FLEXIBLE, A PERFECT FIT FOR EVERY BICYCLE FACTORY

Flexibility in production has become key in the bicycle industry. To guarantee product availability, manufacturing needs to be ramped up quickly during the season when necessary. To meet structural market growth, the lay-out of an existing facility should allow for an easy scaling of the production capacity. Today Holland Mechanics is the turn-key supplier for all e-bike and bicycle assembly solutions. Except for painting, the company can now supply all necessary machinery for the complete assembly process. A modern bicycle production factory needs to incorporate all options to handle fluctuations in the market at a minimum of additional costs. These so-called modular factories are the standard for all recently built bicycle and e-bike production locations. Besides flexibility, a modular production design requires only a minimum of specifications of the building to open a production plant.

For Holland Mechanics the starting point of a new factory design is the floorspace of the building. That is the basis of any customer specific lay-out construction of a production line with any capacity between one thousand to one million units. The linear design of Holland Mechanics brings the advantage of less space consumption, easy maintenance, flexible lay-out and scalability. Thanks to the open construction, component supply can easily be set up from two sides. The linear set up offers the most in production flexibility over a long conveyor system. The flow and pace can be set per line so it will not not to impact all other elements in the assembly process.

The reshoring trend of bicycle and e-bike assembly to Europe carries on. While investments were initially focused on the low-cost edges of the European Union, new production facilities are now also being set-up in other countries. The higher-priced e-bikes make it possible for assemblers to take their production really close to the market and can therefore optimally respond to fluctuations in demand. It also offers more opportunities for on-demand production and to work according to customer specifications. To make this happen, cost-efficiency and therefore flexibility in production lay-out is key.

AI Predictable trueing times

For efficient production predictability is a must. Therefore, AI has made its entry in the production of wheels at Holland Mechanics. Traditionally the wheel trueing setting of the spoke tension was based on trial and error. Sensors observed each minor change in the settings. Now the ***"algorithm in the Robot Quattro"*** knows the impact of each of these changes on the rest of the wheel and can act accordingly. It not only reduces the production time, but Holland Mechanics can now predict precisely how long it takes to make a wheel set. This knowledge is relevant to make the connection between the wheel building stations and the bicycle assembly lines. AI makes it possible to adjust the pace of the wheel building and bicycle assembly, regardless of the complexity of either the bike or wheelset.

The Europe-wide breakthrough of the e-bike in the past years accelerated the trends for more production efficiency and the global trend of Industry 4.0 production. The rapidly expanding market value of e-bikes in combination with growing demand also made investments in new factories vital for the future of the market. The increased investment budgets created room for production automation on a level the bicycle industry has never experienced before. In combination with the bigger complexity of the e-bike, this makes it possible to create more quality control during the various stages in production. While regular bicycle assembly only saw quality control at the end of the line before packaging, this no longer meets today's standards. More and more assemblers implement quality control at the end of each step in the flow. This is in line with a system of various quality levels known from the automotive industry. Production and tooling automation allow for this important step to improve quality control.

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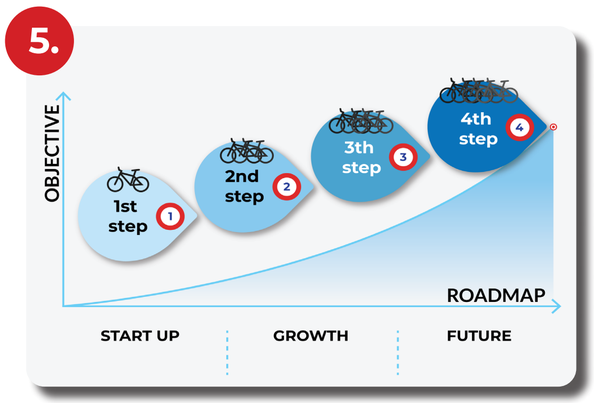
HOLLAND MECHANICS

SCALABLE & MODULAR : THE SOLUTION FOR EVERY BIKE FACTORY

HOLLAND MECHANICS



STEP 1 Desired capacity

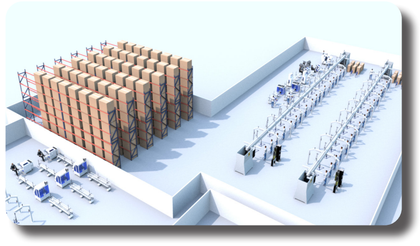
In the world of bicycle manufacturing, the desired capacity and efficient mechanics play a vital role in determining the machinery required for processing components and assembling bicycles. Holland Mechanics offers expertise when it comes to choosing the appropriate machinery where several factors come into play. First and foremost is the desired capacity of the factory. Manufacturers should consider utilizing a transition year like 2023 to streamline their production layout. This information is crucial in identifying the machinery's capabilities and ensuring that it can meet production requirements effectively.

STEP 2 Available space

Having an efficient factory layout design is crucial for achieving optimal productivity, reduction of cost, and overall operational performance. Holland Mechanics, renowned for its expertise in industrial engineering, provides valuable customized advice that takes into account your specific requirements and available space. By considering factors such as desired output, space utilization, and workflow optimization, Holland Mechanics assists you in creating a factory layout that maximizes efficiency and aligns with your business goals. If you're operating a bicycle factory, you can share the 2D building dimensions available to Holland Mechanics, and they will explore the best way to utilize the space effectively.

STEP 3 Concept design

Holland Mechanics revolutionizes factory layout design by working closely with clients to generate realistic 3D environments that accurately depict space and equipment requirements. By embracing advanced technology and utilizing advanced software and modeling tools, they provide a tangible representation of the factory's layout, allowing for optimal equipment placement, efficient material flow, and maximum productivity. With this expertise, businesses can visualize, optimize, and fine-tune their factory layouts before implementation, ensuring operational success. Embrace the power of 3D modeling and take your factory layout design to new heights with Holland Mechanics equipment.



STEP 4 Validiation

As the design undergoes continuous refinement, Holland Mechanics and their clients reach a mutual agreement on the final factory layout and equipment integration. This agreement represents a shared vision for an optimized and efficient manufacturing environment. By fostering collaboration and reaching a consensus, Holland Mechanics ensures that the validated factory design reflects the client's objectives, aligning with their production goals and operational needs.

STEP 5 Roadmap for growth

Holland Mechanics goes the extra mile by proposing a growth roadmap that aligns relevant equipment investments with strategic timelines. By understanding clients' growth objectives, assessing production capacity, and strategically selecting equipment, they create a comprehensive plan that optimizes expansion efforts. With a detailed timeline in place, businesses can strategically deploy capital investments, optimize ROI, and navigate their growth journey effectively. Holland Mechanics stands as a reliable partner, providing the expertise and guidance needed to achieve long-term success in an ever-evolving industrial landscape.

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