

Better than Hand



From the editor

It has been 10 years ago when we first published our annual magazine *HM Today*. Now with our 2007 / 2008 issue we welcome you again with this completely revamped magazine. We have done some updating over the last years from our first black and white issue in 1997, the introduction of a colour magazine in 1998, and new letterhead in 2003. Now with the 10th anniversary we say goodbye to our traditional style, and move with the *HM Today* to a more contemporary design.

This is also how Holland Mechanics is placing itself in the market. We are a modern flexible company, that is able to supply volume producers with high quality machines. Next to this we see a strong trend towards bicycles as a lifestyle article where innovation and design of the bicycle and its wheels will be more a key feature to survive in nowadays market. For this group of producers Holland Mechanics is an excellent business partner, as we are fully equipped to develop specific solutions for customers with unique design wishes.

In this issue of the *HM Today* we focus on the final product of our machines, bicycle wheels. Everybody that produces a bicycle or a bicycle wheel, knows the end product. Our change in view is the solution we offer for each individual customer, not only based on production facility but on the final product.

We hope you will enjoy this edition of *HM Today*.

Wouter van Doornik, CPO Holland Mechanics

Ten years ago, Ivan Gotti won the Giro d'Italia. His mechanic had a nice wheel set custom made for him by Swiss wheel wizard Gerd Schraner. Hand built, of course: Schraners customers didn't mind the price, when the master had worked all day to fine-tune the wheels.

In those days it was fully justified to claim that hand-made wheels were better than machine-made in all respects. Robotic, electronic and IT technologies were not as sophisticated as they are today.

With the latest technology surgeons for example do use robotics for heart surgery. The advantage is that the micro-manipulator can perform generic action much faster and more consistent than the surgeon can do by hand. Who could expect ten years ago that these experts would be replaced by robotics?

This is the same for wheel building experts. Until today no machine could beat the specialist's handwork but now with the introduction of the latest "third generation" machines of Holland Mechanics this situation changed.

Wheels made on the 3rd generation HM lacers and truing robots are tuned, like hand finished wheels, on dimensions (untrue sideways, height), on torque and on spoke tension.

With the introduction of SSP, Step Sequence Program, we are able to set a free programmable truing sequence. SSP is linked to our wheel identification system, where we can identify each incoming wheel at its unique parameters. Based on the parameters we create a wheel database where all truing data is stored. With SSP it is possible to set a very detailed wheel truing recipe.

Next to this our 3rd generation robot can be equipped with ASTC Acoustic Spoke Tension Control. This will check spoke tension during the truing process, and

can automatically bring the spoke tension within the set boundaries. With ASTC it is even possible to print a wheel certificate with spoke tension diagram, and related truing data.

Newest module on HM machines is Auto Pitch Detection; with the introduction of the Auto Pitch Detection HM enhanced the Just In Time philosophy. Together with Wheel ID we can automatically adjust the pitch distance of the nipple hands to the pitch distance of the spokes.

What's more: all spoke characteristics, all size measurements, all spoke tensions are automatically registered in the system's computer for future reference: the machine-built wheel has a faultless track-and-trace record without any extra cost.

Holland Mechanics has also developed technologies for the application of quality components. These components increase the end-quality of the wheel and were always widely used by wheel building experts. Innovation and automation has made it possible to use components like washers, self adhesive rimpaper and nipple locking compound.

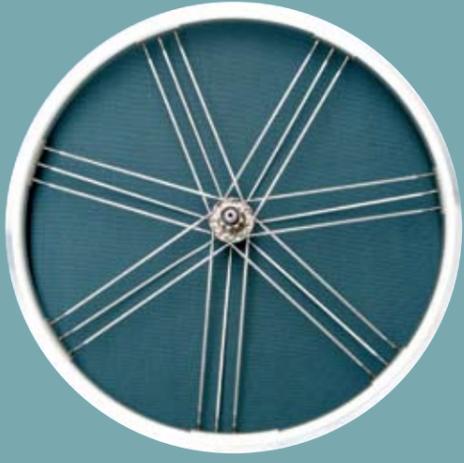
Finally we can only conclude that 'Hand Made' is only a marketing slogan. Based on the available technology it is impossible that a wheel building expert will outperform a third generation Holland Mechanics robot in terms of quality, speed, accuracy and repeatability.

E-Bike a Big Hit



Every self respecting bicycle producer today is having a clear focus on the growing trend in the E-Bike segment. Where it started a couple of years ago with a few trend setting producers, now the time is right to get an E-Bike model in the delivery program. Also Holland Mechanics was involved, in cooperation with the Accell Group, in the development of a special production line for the assembly of E-Bike wheels for the Sparta ION. The motor hubs used are usually heavy and need special attention to lace and true these wheels.





DESIGN YOUR



WHEEL RECIPE



CLASSIC 36 SPOKE WHEEL

- Quality Line
- Flexible Mass Production System
- Machines: HFS, SLcam, HB, DC, TMC

Wheel components

- Double wall / single wall rims
- Aluminium / steel
- Regular classic spoke pattern
- Any number of spokes
- Standard nipple
- Standard spoke



PST 10x2 IN

- Exclusive Line
- Just in time / high
- Machines: HFS,

Wheel components

- Double wall rims
- Carbon, aluminium
- PST / GST / Clas
- Any number of s
- Inverted / hexag
- Flat / round spo
- Anti scratch tech



OWN WHEEL



LUSIVE LINE

VERTED

gh flexible production
ICN, RSG OT, HL, HT, TMC

ts
s
um, magnesium
ssic spoke pattern
pokes
on / Torx nipples
kes
nnology for coloured nipples



GST 9x4 STANDARD

- Premium Line
- Just in time / high flexible production
- Machines: HFS, ISL, HL, RSG TCC, HT, TMC

Wheel components

- Double wall / single wall rims
- Aluminium or Steel
- PST / GST / Classic spoke pattern
- Any number of spokes
- Standard / hexagon/ aluminium nipple
- Flat / round spokes

Volume producers vs Custom producers



Bayram Akgül of Salcano bicycles in Turkey, one of the countries leading producers, who proudly installed two complete wheel building lines from Holland Mechanics.

These companies are making large volumes of a few specific models. The bicycles are mainly equipped with classic style 36 spoke wheels either with single wall or double wall rims. In the past these companies choose for the traditional way of production with manual lacing, 4 head tightening machine and a truing robot. Changing a wheel production on this system is very time consuming and the trend nowadays is that producers say goodbye to this way of producing as it is even for large productions not flexible enough anymore. Especially now we see a trend in low / mid end bicycles where previously only single wall rims were used this is now gradually changing to double wall rims.

With the ever changing design of bicycle wheels with single wall, double wall and deep-V rims volume producers now choose for the Holland Mechanics Flexible Mass Production System. These machines from our Quality line, are cost friendly machines that are flexible enough to change easily from one batch of wheels to another without spending a lot of time readjusting the set up. Even on output they outperform the traditional production methods.

Also companies that are only producing bicycles as a sub contractor see the advantages for the HM system, who wants to get caught by the limitation of an old fashioned wheel production system when a customer is changing his rims, or you have to start for a new customer with an even wider variety in rims. This is the nightmare of each producer, the work is on your doorstep but you are not able to produce it simply because you have the wrong production machines in house. With the Flexible Mass Production System from Holland Mechanics you do not have these worries, you are ready for the future.

Next to the volume producers we see a group of bicycle producers who are putting a lot of effort in designing the ultimate wheel. For this group of producers it is essential to distinguish from other producers based on their unique design.

For these companies Holland Mechanics has all the skills in house to act as a knowledge partner. We see this for instance at one of our key customers the company Rodi in Portugal.

When Rodi started setting up their own branded wheel sets, the Black Jack wheels, they approached Holland Mechanics with a request to cooperate in the development for specific high tec solutions to produce these wheels. Together with Rodi we adjusted our machines to perfectly suit the production of Black Jack wheels. Now Rodi has implemented for the production of their latest wheel sets our new developed inverted nipple lacing machine in combination with the QTape application system and our Robot SG OT. This robot is designed for truing the wheels from the outside, which is essential for hidden nipples, and to avoid scratching of black (coloured) nipples.

The implementation of rim taping in combination with printing offers Rodi the possibility to print all related production data on the rimpape. Track and traceability plays a key role with today's product liability.

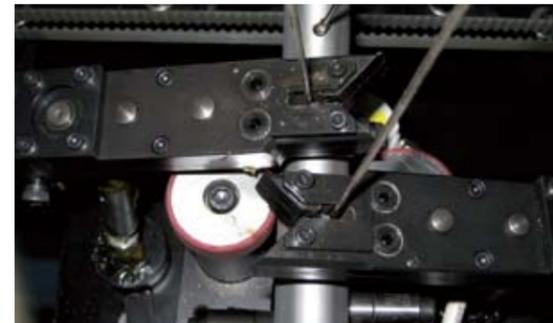
Next to Rodi we develop all kinds of customer specific solutions for many customers. If you are limited in possibilities to produce a certain wheel, and you would like us to study the case please do contact us.



Service & Parts

Holland Mechanics has introduced new e-mail adresses for service and parts. If you have a problem or a service request then you e-mail to service@hollandmechanics.com, for the parts orders you can e-mail to parts@hollandmechanics.com.

Newest SG model: Auto Pitch Detection



The Holland Mechanics machines are developed according to the "Just In Time" production philosophy. JIT Manufacturing means producing the right wheel at the moment the bicycle is produced. The new Robot is the only Wheeltruing Robot in the world which is fully flexible where no operator is needed. The Robot will recognize every individual wheel and it will change over itself to that specific wheel. Even the pitch distance between the spokes is now automatically detected, and positioned so that the nipplehands will always fit perfect inline with the spoke. This new feature will give it's full flexibility, better fit of the nipple hands on the nipple and less scratches on nipples and spokes.

Inline QC System



TQM, also known as Total Quality Control (TQC), is a management tool for improving total performance which leads to increased customer satisfaction. In this field HM has developed a new system called, Inline QC where the assembly machines are operating like small QC departments. Our system detect defects during the manufacturing process, collects the quality information then judges and analyses whether it is normal. It will reject parts that are out of the set tolerances to avoid that a wheel will be produced with defect components.

SSP: Step Sequence Program



Our software developers have made a huge step in quality truing. With this latest technology it is possible to program every single step of the Robot separately. If you want to build-up the tension in a wheel in 7 steps or 8 steps you can program this. This way the Robot is able to true the thinnest spokes which are almost not possible to true by hand. It is also possible to make for every wheel design it's own 'Wheel Recipe'. A world leading wheel set manufacturer is using this latest development to their full satisfaction.

2007 / 2008 HOLLAND MECHANICS SHOW CALENDAR

DATE	EVENT	LOCATION	BOOTH NUMBER
30 aug. until 2 sep.	Eurobike	Friedrichshafen, Germany	A5-104
13 sep. until 16 sep.	IFMA	Cologne, Germany	E 021/Hall 7.1
26 sep. until 28 sep.	Interbike	Las Vegas, USA	444
8 nov. until 11 nov.	EICMA Bici	Milan, Italy	---
30 nov. until 2 dec.	International Bike China	Shenzhen, China	---
22 feb. until 24 feb.	Moscow International Trade Show	Moscow, Russia	---
13 mar. until 16 mar.	Taipei International Cycle Show	Taipei, Taiwan	---
28 mar. until 30 mar.	China North International Cycle Show	Tianjin, China	---
25 apr. until 28 apr.	China International Bicycle & Motor Fair	Shanghai, China	---