



**Wheel
Building
Machines**
2024-2025

BIKEBOTIX
SOLUTIONS IN MOTION

Solutions en mouvement

Solutions in motion

Fort de plus de 50 ans d'expérience, Mach1 Machinery a laissé place à BikeBotix pour vous proposer une offre encore plus complète.

Expert de la roue rayonnée de vélo et de moto, BikeBotix accompagne les plus grands acteurs du secteur. De l'entrée de gamme jusqu'au haut de gamme et de la petite à la grande série, Bikebotix est à même de vous proposer les solutions les mieux adaptées à votre besoin.

Fier d'être un acteur majeur et un partenaire de référence, BikeBotix exporte à travers le monde des solutions qui reposent sur 4 fondamentaux : INNOVATION, PERFORMANCE, FIABILITÉ et FLEXIBILITÉ.

With more than 50 years of experience, Mach1 Machinery has given way to BikeBotix to offer you an even more comprehensive offer.

Expert in spoked bicycle and motorcycle wheels, BikeBotix supports the biggest players in the sector. From entry-level to high-end and for small or large series, BikeBotix is able to offer you the solutions best suited to your needs. Proud to be a major player and a reference partner, BikeBotix exports worldwide solutions based on 4 fundamentals: INNOVATION, PERFORMANCE, RELIABILITY and FLEXIBILITY.

Aux côtés des équipes de développement et de support client expertes et hautement qualifiées, 5 domaines d'expertise.

Alongside expert and highly qualified development and customer service teams, 5 areas of expertise.



WHEEL BUILDING



RIM MANUFACTURING



BIKE ASSEMBLY



DATA MANAGEMENT



BIKE TOOLS



SUMMARY

BICYCLE WHEEL BUILDING

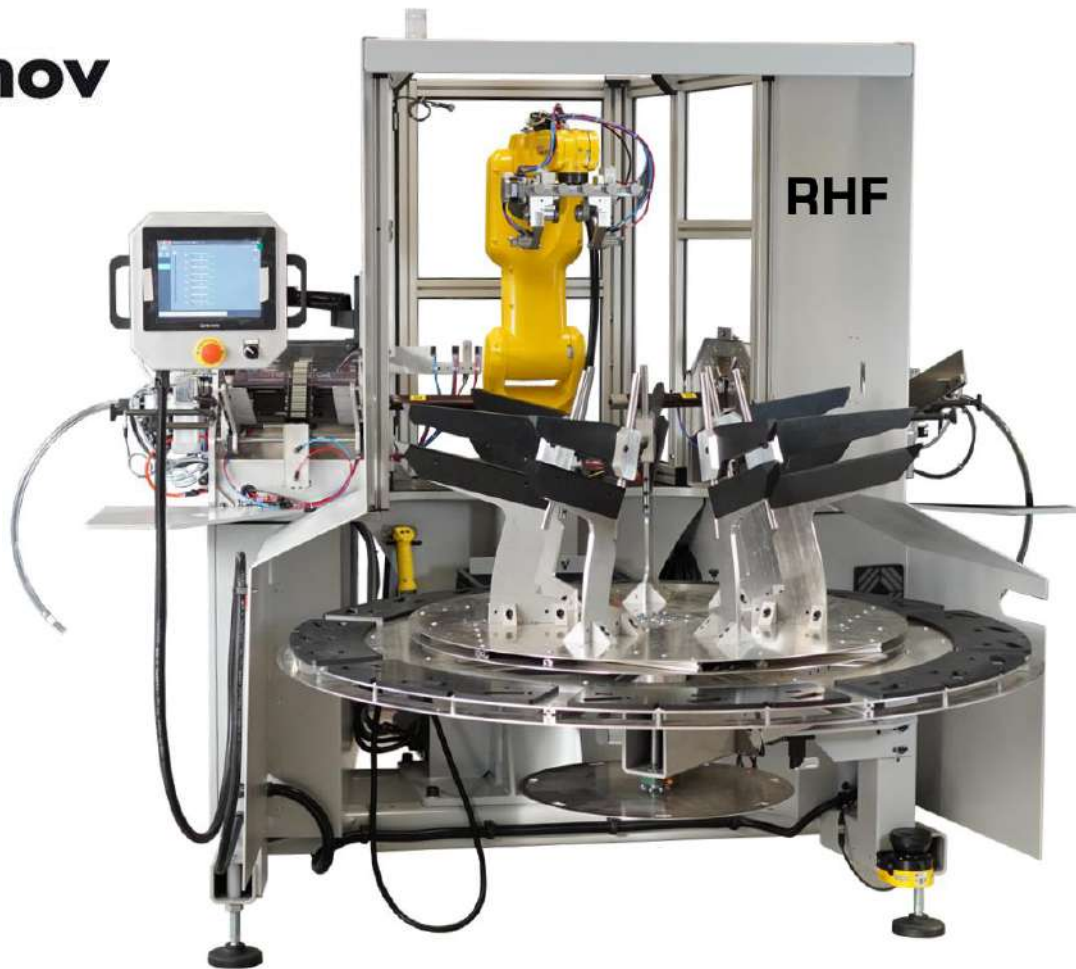
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RHF

ROBOTIZED HUB FILLER - ROBOT DE REMPLISSAGE DE MOYEUX



Thanks to its robotized arm, RHF is able to support almost any kind of hub and especially E-hubs. It is able to fill hubs that are even difficult to process manually as it can align flanges holes with spokes in a fast, precise and possibly complex movement.

Better than any human and it keeps such efficiency all along the day.

Standard loading/unloading is on a turntable at front face. Alternative loading/unloading solutions such as slides or dispensers are available to accommodate with your own wheel building line layout and workforce organisation in the most efficient way.



SPECIFICATIONS

- Payload : 3.5kg, option 6kg
- Production capacity: 80 to 100 hubs/hour (36 spokes)
- Working air pressure : 6 bars - 90 PSI
- Air consumption : 5 liters/min
- Electrical : 230 V - 1000 VA
- Sound level : <70 dB
- Weight : 900 Kg
- Size : 2,20 x 2,7 x 1,85m
- CE

OPTIONS

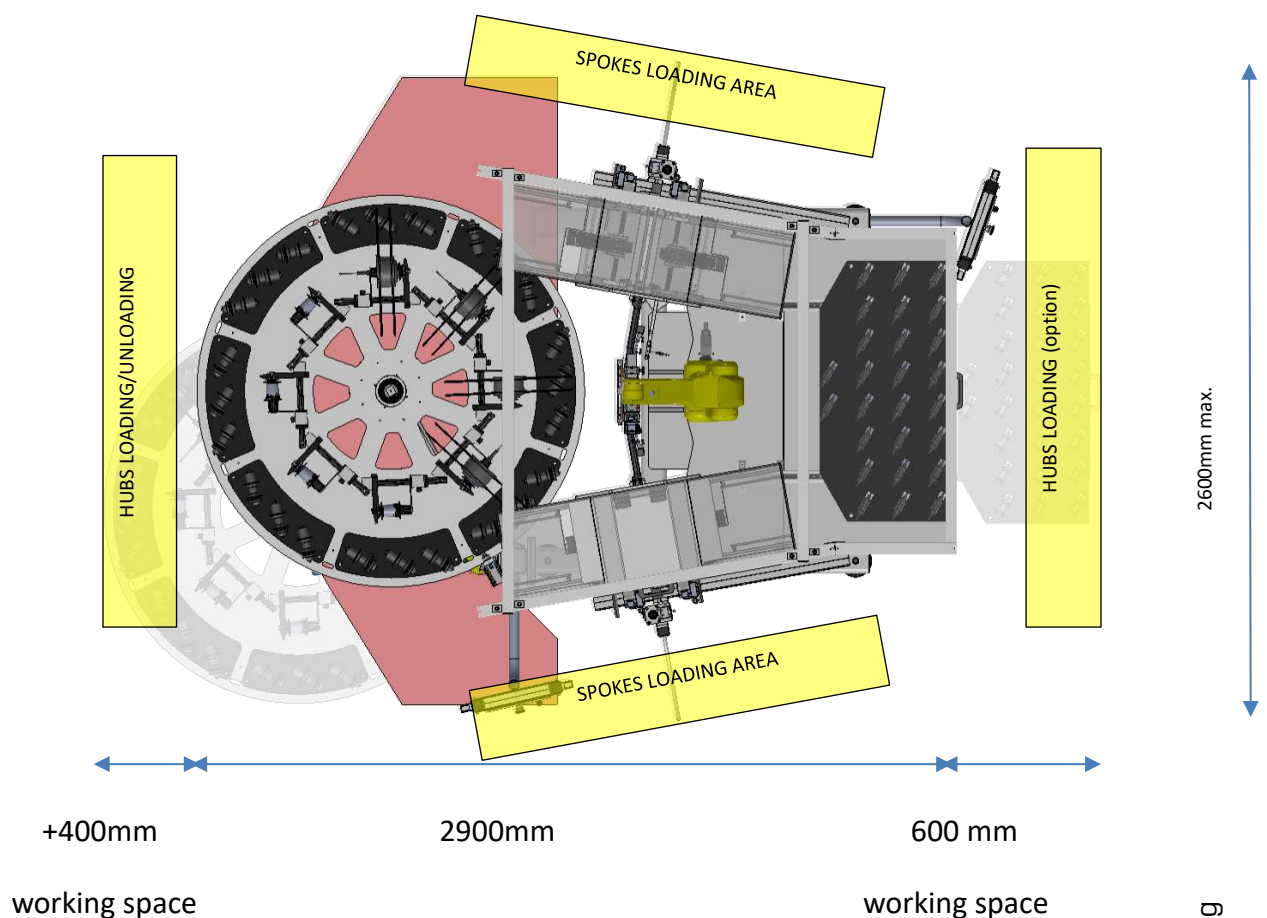
- Hub loading at back side
- Control light
- Industry 4.0 interface

TECHNICAL FEATURES

Robotized arm: **Fanuc LR Mate 200iD7L**.
4 spokes dispensers (possibly 4 different spoke sizes) with **1000 spokes capacity**
Spoke length : **from 100mm to 300mm**

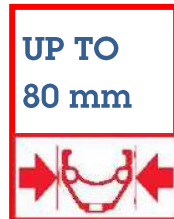
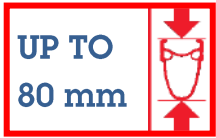
Hubs supported: all regular hubs and e-hubs with round perimeter flanges with cable through axel or not.

Limitation: straight-pull spoke hubs and very unusual hubs



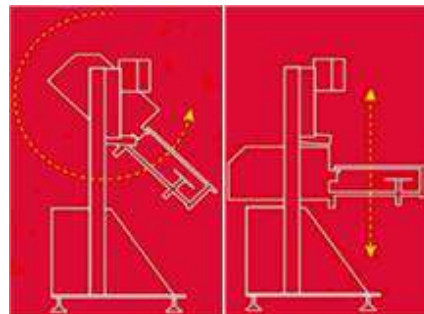
LTS

SIMPLE SPOKE **L**ACING & **T**IGHTENING MACHINE - MACHINE DE RAYONNAGE ET VISSAGE SIMPLE



SPECIFICATIONS

- Range : 12" to 29"
- Manual but fast rim change-over
- Production capacity : 50 wheels/hour mini
- Air pressure : 6 bars – 90 PSI (50 liters/mn)
- Electrical : 230 V - 600 VA
- Sound level : < 70 db
- Weight : 275 kg
- Size : 1,4 x 0,9 x 1,85 m*
- CE



*adjustable working position

OPTIONS

- Second nipple feeding bowl
- Fat wheel design
- High speed lacing
- E-hub clamp
- Washer feeder
- Radial angle alignment

MAIN FEATURES

- Easy and fast manual changeover to process the widest range of rims
- Manual head angle and height adjustment for ergonomic lacing position
- Factory 4.0 ready

BENEFITS

- Improved lacing speed for efficient wheel building
- Reduced cost of ownership

ALT

AUTOMATIC LACING & TIGHTENING MACHINE - MACHINE DE RAYONNAGE ET VISSAGE AUTOMATIQUE-

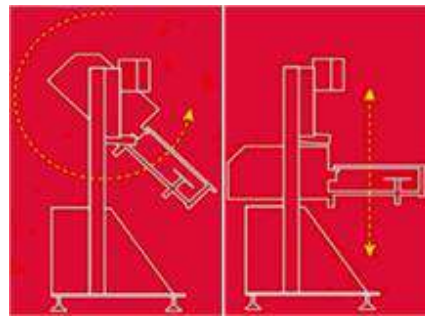


new



SPECIFICATIONS

- Range : 12" to 29"
- Zig-zag supported up to 30mm
- Production capacity : 60 wheels/hour mini
- Air pressure : 6 bars – 90 PSI (50 liters/mn)
- Electrical : 230 V -1000 VA
- Sound level : < 70 db
- Weight : 330 kg
- Size : 1,4 x 0,9 x 1,85 m*
- CE



*adjustable working position

OPTIONS

- Second nipple feeding bowl
- E-hub clamp
- Washer feeder
- Radial angle alignment

MAIN FEATURE

- Automatic rim change-over (24" to 29", otherwise semi-automatic)
- Head angle and height adjustment for ergonomic lacing position
- Operators management and production tracing
- Factory 4.0 ready

BENEFITS

- Improved lacing speed for efficient wheel building
- High performance lacer with tracing capability

AFT2

ADVANCED FAST TRUING ROBOT WITH 2 WRENCHES - ROBOT DE DEVOILAGE AVANCE A 2 CLES



SPECIFICATIONS

- Range : 12" to 29"
- Semi-automatic changeover
- Production capacity: 50 Wheels/h for tightening-stabilization-truing
120 W/h truing only
(as per user and tolerance)
- Working air pressure : 6 bars - 90 PSI
- Air consumption : 7 liters/min
- Electrical : 230 V - 1800 VA
- Sound level : <70 dB
- Weight : 475 Kg
- Size : 1,10 x 1,15 x 1,65m
- CE

OPTIONS

- Integrated system of stabilization
- Electric hub special clamp
- FAT Wheel kit for rim width up to 100mm

MAIN FEATURES

- New control system including user defined wheels recipes with up to 8 process steps
- Automatic adjustment to wheel diameter through selection in the wheels list
- Display of actual side/side, up/down and offset values by direct measurement on the wheel with high performance sensors
- Factory 4.0 ready

BENEFITS

- High efficient and versatile
- Easy maintenance with reduced costs thanks to the use of standard commercial components
- Later upgrade to AFT4 possible

AFT4

ADVANCED FAST TRUING ROBOT WITH 4 WRENCHES - ROBOT DE DEVOILAGE AVANCE A 4 CLES



SPECIFICATIONS

- Range : 12" to 29"
- Semi-automatic changeover
- Production capacity: 65 Wheels/h for tightening-stabilization-truing
120 W/h truing only
(as per user and tolerance)
- Working air pressure : 6 bars - 90 PSI
- Air consumption : 10 liters/min
- Electrical : 230 V - 3000 VA
- Sound level : <70 dB
- Weight : 495 Kg
- Size : 1,10 x 1,15 x 1,65m
- CE

OPTIONS

- Integrated system of stabilization
- Electric hub special clamp
- FAT Wheel kit for rim width up to 100mm

MAIN FEATURES

- New control system including user defined wheels recipes with up to 8 process steps
- Automatic adjustment to wheel diameter through selection in the wheels list
- Display of actual side/side, up/down and offset values by direct measurement on the wheel with high performance sensors
- Factory 4.0 ready

BENEFITS

- High efficiency and versatile
- High-speed tightening thanks to the 4 wrenches =>increased throughput or quality
- Easy maintenance with reduced costs thanks to the use of standard commercial components

AFT2A

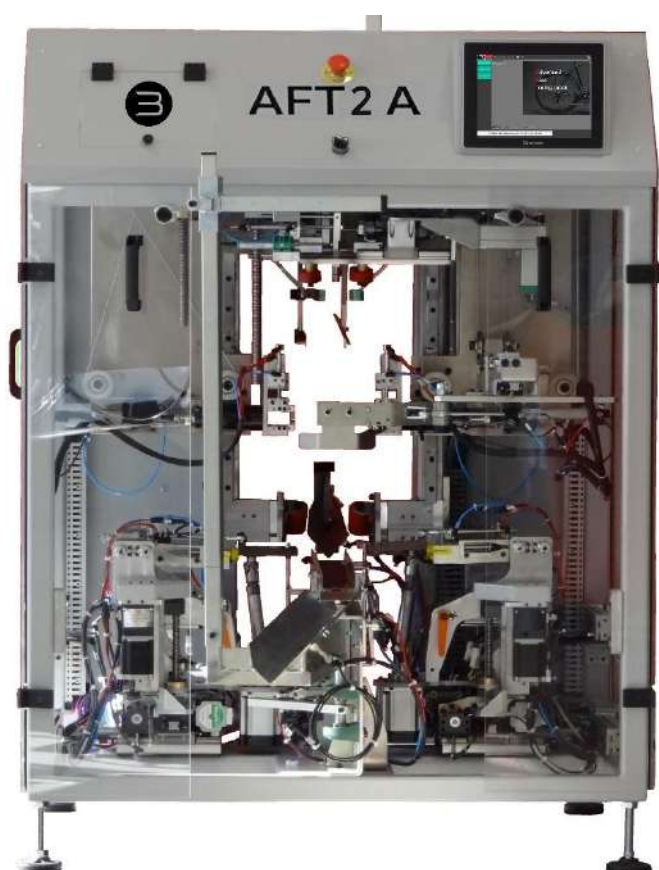
ADVANCED **F**AST **T**RUING ROBOT WITH **2** WRENCHES AND **A**UTOMATIC CHANGEOVER ROBOT DE DEVOILAGE
AVANCE A 2 CLES ET A CHANGEMENT DE SERIE AUTOMATIQUE

SPECIFICATIONS

- Range : 12" to 29"
- Automatic changeover
- Production capacity: 50 Wheels/h for tightening-stabilization-truing
120 W/h truing only
(as per user and tolerance)
- Working air pressure : 6 bars - 90 PSI
- Air consumption : 7 liters/min
- Electrical : 230 V - 1800 VA
- Sound level : <70 dB
- Weight : 495 Kg
- Size : 1,10 x 1,15 x 1,65m
- CE

OPTIONS

- Integrated system of stabilization
- Electric hub special clamp
- FAT Wheel kit for rim width up to 100mm
- Automatic wheel recognition by RFID tag
- Bar code reader for wheel changeover



MAIN FEATURES

- New control system including user defined wheels recipes with up to 8 process steps
- Automatic adjustment to wheel diameter and horizontal and vertical wrench position
- Display of actual side/side, up/down and offset values by direct measurement on the wheel with high performance sensors
- Factory 4.0 ready

BENEFITS

- High efficient and versatile
- Easy maintenance with reduced costs thanks to the use of standard commercial components

AFT4A

ADVANCED **F**AST **T**RUING ROBOT WITH **4** WRENCHES AND **A**UTOMATIC CHANGEOVER - ROBOT DE DEVOILAGE
AVANCE A 4 CLES ET A CHANGEMENT DE SERIE AUTOMATIQUE



SPECIFICATIONS

- Range : 12" to 29"
- Full automatic changeover
- Production capacity: 65 Wheels/h for tightening-stabilization-truing
120 W/h truing only
(as per user and tolerance)
- Working air pressure : 6 bars - 90 PSI
- Air consumption : 10 liters/min
- Electrical : 230 V - 3000 VA
- Sound level : <70 dB
- Weight : 525 Kg
- Size : 1,10 x 1,15 x 1,65m
- CE

OPTIONS

- Integrated system of stabilization
- Electric hub special clamp
- FAT Wheel kit for rim width up to 100mm
- Automatic wheel recognition by RFID tag
- Bar code reader for wheel changeover

MAIN FEATURES

- New control system including user defined wheels recipes with up to 8 process steps
- Automatic adjustment to wheel diameter and horizontal and vertical wrench position
- Display of actual side/side, up/down and offset values by direct measurement on the wheel with high performance sensors
- Factory 4.0 ready

BENEFITS

- High efficiency and versatile
- High-speed tightening thanks to the 4 wrenches =>increased throughput or quality
- Easy maintenance with reduced costs thanks to the use of standard commercial components



V4IA

SEMI-AUTOMATIC 4 HEAD TIGHTENING MACHINE - MACHINE SEMI-AUTOMATIQUE DE VISSAGE 4 TETES



SPECIFICATIONS

- Range : 16" to 29"
- Production capacity: 100 - 130 wheels/h.
- Working air pressure : 6 bars - 90 PSI
- Air consumption : 50 liters/min
- Electrical connection : 230V mono or 3X400V+N – 1800VA
- Sound level : <70 dB
- Weight : 780 Kg
- Size : 2,20 x 1,60 x 2,20m
- CE

OPTIONS

- Range 12", 14"
- Security by electronic barrier
- Factory 4.0 compliant : production batch download and production data upload.

MAIN FEATURES

- 4 head tightening machine for fast, accurate and balanced tightening of all spokes
- Manual loading/unloading
- Automatically tightens front and rear wheels to defined tightening torques and predefined number of turns : no loose spoke on output
- Fast tooling replacement and set-up with automatic adjustment of hub and flange position.
- New control system with wheels recipe management

BENEFITS

- High productivity and reduced maintenance
- Constant and high-quality wheel very independent from lacing process and variability of components in use



EzT2

Easy TRUING ROBOT WITH 2 WRENCHES - ROBOT DE DEVOILAGE SIMPLE A 2 CLES



SPECIFICATIONS

- Range : 12" to 29"
- Semi-Automatic changeover
- Production capacity: 25-35 Wheels/h for tightening-stabilization-truing (as per wheel tolerance and operator performance for loading/unloading)
- Working air pressure : 6 bars - 90 PSI
- Air consumption : 5 liters/min
- Electrical : 230 V - 1800 VA
- Sound level : <70 dB
- Weight : 430 Kg
- Size : 1,10 x 1,15 x 1,65m
- CE

OPTIONS

- Electric hub special clamp
- FAT Wheel kit for rim width up to 100mm
- Ethernet connection

MAIN FEATURES

- Integrated system of stabilization
- Manual wheel loading/unloading , no rails before and after
- New control system including user defined wheels recipes with up to 8 process steps
- Display of actual side/side, up/down and offset values by direct measurement on the wheel with high performance sensors
- Automatic adjustment to wheel diameter through selection in the wheels list

BENEFITS

- High efficiency for reduced price
- Easy maintenance with reduced costs thanks to the use of standard commercial components



MAT

MANUAL ADVANCED TRUER : DIGITAL ASSISTED BENCH FOR HAND TRUING & CONTROLLING –BANC MANUEL DE DEVOILAGE AVANCE

THE 4 WHEEL METRICS

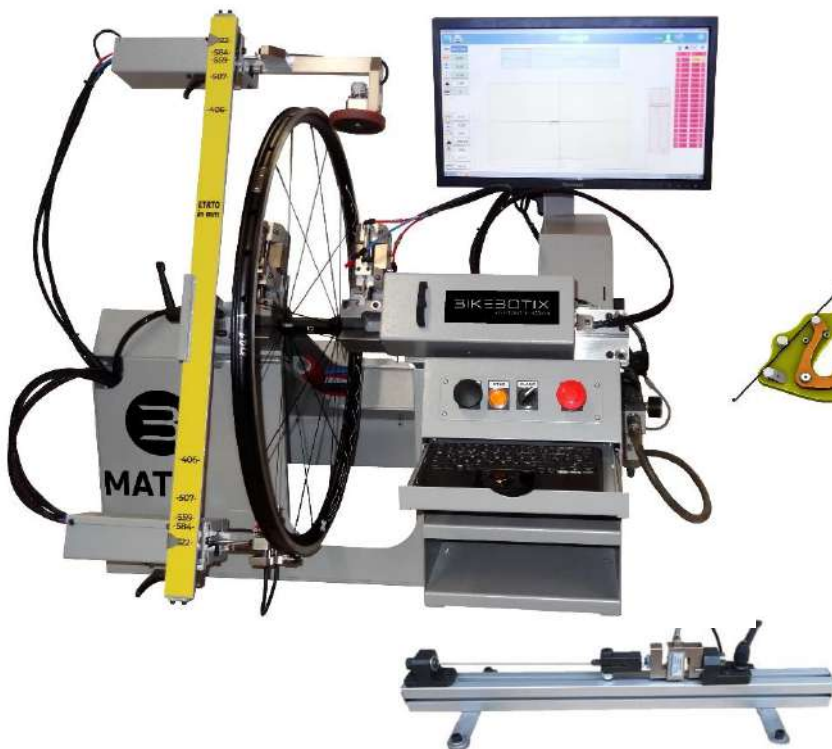
Side / Side	0.05
Up / Down	0.05
OFFSET	0.05
TENSION	1.00 kg



SPECIFICATIONS

- Range : 14" to 29"
- With or without tire
- Air pressure : 6 bars – 90 PSI (5 l/mn)
- Electrical : 230V - 200 VA
- Sound level : < 50 db
- Weight : 120 kg
- Size : 1m x 0,8m x 1,2 m
- CE

Adjustable working position



OPTIONS

- Tension meter –wired or Bluetooth
- Wheel metrics label Printer
- Stabilization (CAS)
- Mach1® Spoke calibration tool
- Height adjustable chassis

MAIN FEATURES

- Versatile and high accuracy and for high end wheel building or quality check
- Advanced and user friendly control software

BENEFITS

- High end wheel building performance
- Quality tracing



TRT

TUBELESS RIM TAPER - POSE DE FOND DE JANTE TUBELESS

new



SPECIFICATIONS

- Range : 26" to 29" (700c)
- Production capacity : 180 wheels/hour depending on cycle settings
- Working air pressure : 6 bars - 90 PSI
- Air consumption : 15 liters/min
- Electrical : 230V - 2000 VA (400 VA heating disabled)
- Sound level : 70 dB
- Weight : 180 Kg
- Size : 0,80 x 1,05 x 1,70m
- CE

OPTIONS

- Automatic valve hole punching

PNA

TYRE FITTING MACHINE – MACHINE DE MONTAGE DE PNEU



SPECIFICATIONS

- Range : 16" to 29"
- Production capacity : 140 wheels/hour
- Working air pressure : 6 bars - 90 PSI
- Air consumption : 50 liters/min
- Electrical : 230V - 400 VA
- Sound level : <50 dB
- Weight : 235 Kg
- Size : 0,85 x 1,80 x 1,55m
- CE

OPTIONS

- Integrated or standalone inflating system

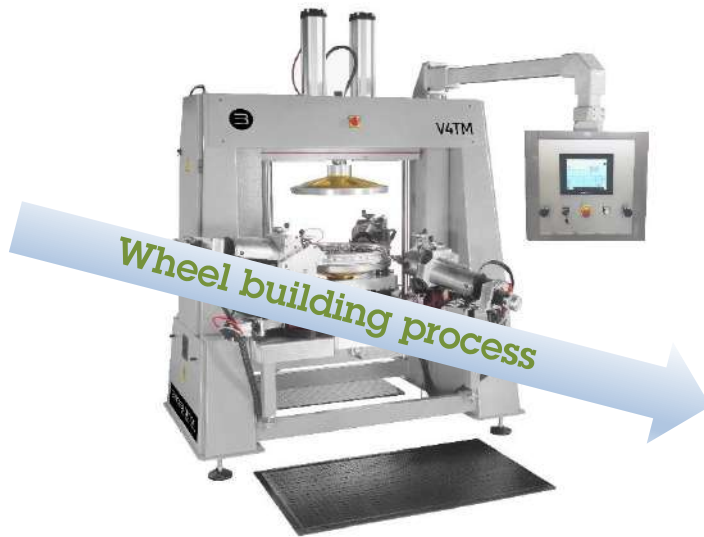
Motorcycle wheel building

MONTAGE DES ROUES DE MOTO

RAM Spoke lacing

V4TM Tightening

MD2M Truing



Wheel building process

RAM

LACING MACHINE – MACHINE DE RAYONNAGE



SPECIFICATIONS

- Range : 16" to 21"
- Production capacity : 30 wheels/hour
- Working air pressure : 6 bars - 90 PSI
- Air consumption : 30 liters/min
- Electrical : 230V - 150 VA
- Sound level : <60 dB
- Weight : 30 + 80 Kg
- Size : 2 X 1,00 x 1,00m
- Height around 2,20m
- CE

V4TM

4 HEADS TIGHTENING MACHINE - MACHINE DE VISSAGE 4 TETES -



SPECIFICATIONS

- Range : 16" to 21"
- Production capacity : 80 wheels/hour
- Working air pressure : 6 bars - 90 PSI
- Air consumption : 50 liters/min
- Electrical : 3X400V+N - 4000 VA
- Sound level : <70 dB
- Weight : 1300 Kg
- Size : 3,06 x 2,90 x 2,16m
- CE

OPTIONS

- safety mat on backside

MD2M

MANUAL TRUING ROBOT - BANC MANUEL DE DEVOILAGE



SPECIFICATIONS

- Range : 16" to 21"
- Production capacity : 30 - 50 wheels/h. (as per tolerances and operator)
- Working air pressure : 6 bars - 90 PSI
- Air consumption : 5 liters/min
- Electrical : 230V - 400 VA
- Sound level : < 50 dB
- Weight : 270 Kg
- Size : 0,90 x 1,20 x 1,70m
- CE

OPTIONS

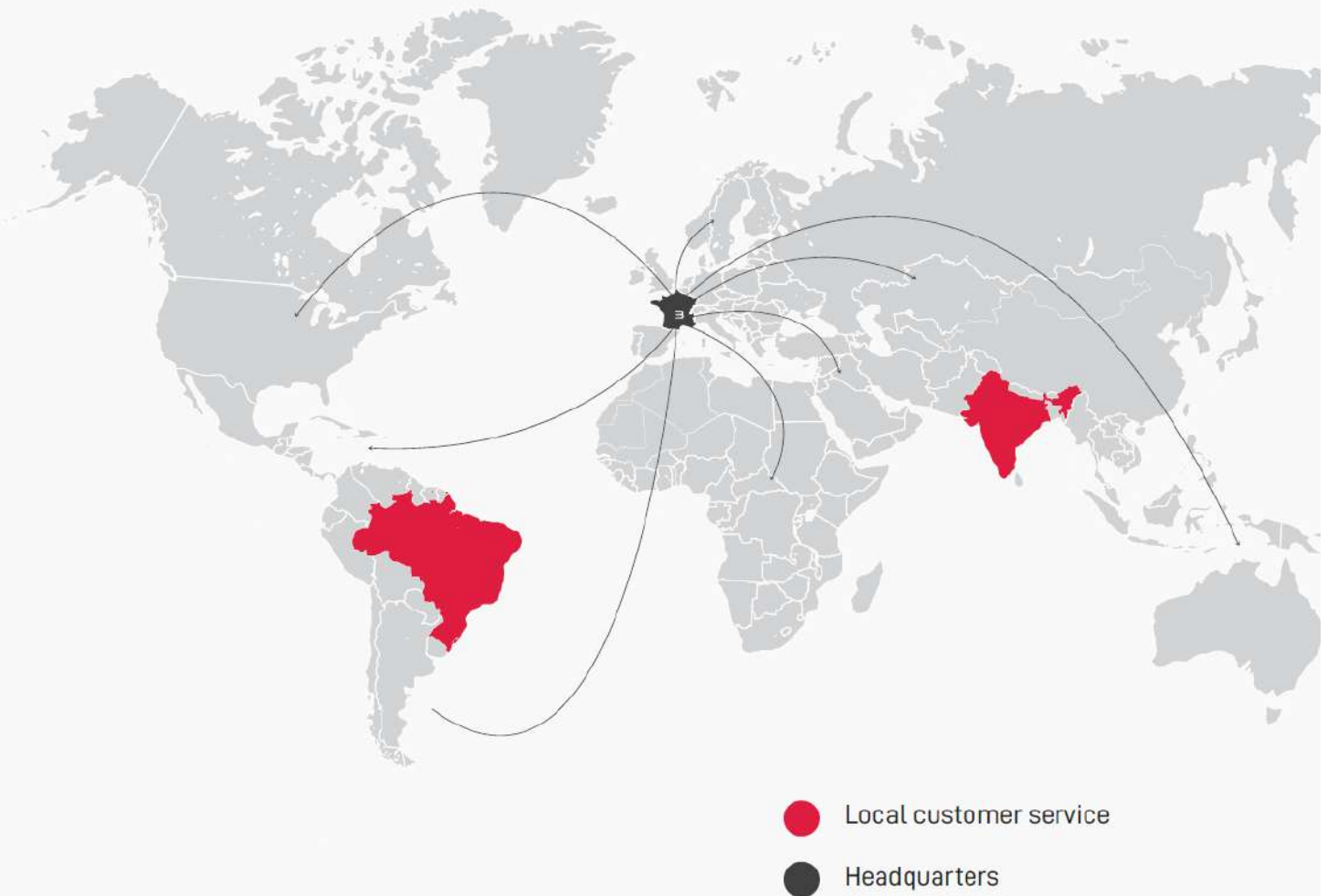
- Brake discs control by laser sensors





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*A global presence
French know-how since 1971*





Bikebotix

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