

GLOBAL ORGANIZATION - LOCAL SUPPORT



VMI 248-SL SYSTEMS

RADIAL PASSENGER TIRE
BUILDING SYSTEMS



VMI GROUP

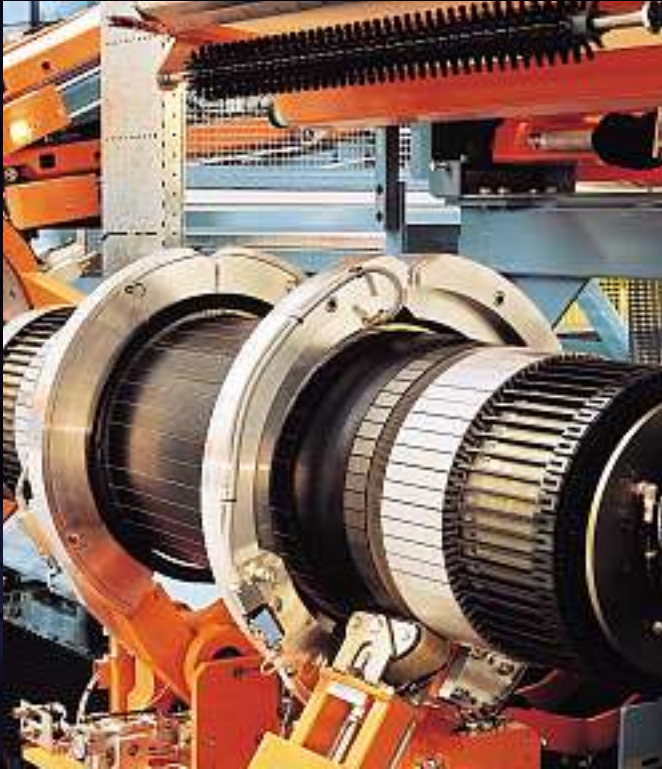
TKH GROUP MEMBER

SHAPING TECHNOLOGY

VMI is committed to supplying custom-engineered systems to the rubber and tire industry, including machinery for rubber compound handling, tire components, tire assembly and tire testing for radial passenger, light truck and all steel radial truck, bus and off-road tires.

Since the company was founded in Epe, the Netherlands in 1945, VMI has established a sound reputation as a leading supplier to the rubber and tire industry, with customers worldwide. Our leading position is based on our capacity to provide custom-engineered solutions using cutting edge technology in precision workmanship to ensure accurate, reliable performance.

All systems are backed by the VMI worldwide service, 24 hours a day, seven days a week. Our service centers are strategically located in Epe (the Netherlands), Yantai, Shandong Province (China) and Stow, Ohio (USA). There is a full range of services throughout the lifetime of your machine including preventive maintenance, spare parts, and upgrades.



MORE TIRES PER DAY WITH MAXIMUM FLEXIBILITY

FAST, FLEXIBLE SINGLE STAGE TIRE BUILDING SYSTEMS FOR RADIAL TIRE ASSEMBLY VMI 248-SL

VMI is a leading supplier of single stage tire building systems for radial tires. All machines are designed and built using the very latest technology to give you faster, flexible and reliable performance in producing a top quality end product.

EIGHT VERY GOOD REASONS TO CHOOSE VMI TO SUPPLY ALL YOUR SINGLE STAGE TIRE BUILDING MACHINES:

1. More tires per day

Our robust machines have a higher output of finished green tires, than any other machines currently available. All machines are designed for highly reliable and continuous operation with an absolute minimum of downtime for size changes.

2. High accuracy

Cutting and application is highly accurate with a minimum of product waste because the material is precision controlled by sensors, magnets and CCD camera's throughout the entire process, from let-off to finished green tire.

3. High quality

All machines are of first class quality, designed to operate trouble free for decades. Chosen components and parts are supplied by carefully selected partners and are assembled and extensively tested by skilled craftsmen.

4. Customized solutions

The flexible, modular machine design allows us to customize solutions to your specific requirements and to incorporate additional features such as extra applicators for run flat strips, chafers, flippers and other material.

5. Easy operation

All machines have a user friendly HMI (Human Machine interface), and require only one operator. Material width, length and angle are easily adjusted and are guided by the recipe. Materials can be quickly replaced with the

aid of ergonomically designed cartridges or reel systems. Automatic material changes are possible.

6. High green tire uniformity

The result of the high fabrication standards of the machine, together with the controlled application of the materials on the drums, provides multi green tires with excellent uniformity figures in all aspects.

7. Flexibility

The demands of today ask for a highly flexible machine to produce very small batches of tires. This machine is designed for that, most of the settings are recipe controlled and a size change is completely guided via the recipe. Tooling is designed for quick change. After a size change the machine is immediately ready for producing the next lot of ultra high quality tires!

8. Lifetime service

All machines are designed for easy maintenance, and are fully supported by the worldwide VMI service organization on call 24 hours a day, seven days a week.

VMI TIREBUILDING MACHINES "NEVER LET GO!"

The machine is based on the principle that the material must always stay under full control that is why VMI machines never let go!



VMI 248-SL

VMI 248-SL FOR RADIAL TIRE ASSEMBLY

HIGH ACCURACY - HIGH PRODUCTIVITY

The fully automated VMI 248-SL processes different components with high precision on the building drums to achieve the best possible tire.

HIGH APPLICATION ACCURACY PRECISION

- The machine's material centering, guiding and cutting system results in a very accurate application onto the building drums and thus giving the basis for an excellent uniformity.
- The VMI 248-SL is fitted with a mechanical carcass building & shaping drum with special features such as mechanical bead locks, mechanical turn-up arms and a bead-shoulder support system. The turn up length is also variable in order to reach the best possible turn-up for a given tire design, all resulting in the best possible base for assembling a tire.

Of course the machine can also be configured for bladder carcass drums.

HIGH PRODUCTIVITY

- The VMI 248-SL has a short cycle time because of all the combined actions are optimized and balanced to reach the best possible cycle time taking in consideration the physical limits of the materials that are handled in the machine.
- The machine is designed specifically to minimize downtime and optimized for with easy, efficient changeover of both the let-off stock rolls and tire size depending tooling.
- Another factor contributing to high machine productivity is the mechanical building & shaping drum, without any bladders, resulting in a consistent building sequence and no down time due to sudden bladder defects.
- The size change system together with the menu driven, automated machine settings enable fast, accurate changeover of material width, type and angle, making the VMI 248-SL also suitable for small batches.

RELIABLE AND ACCURATE APPLICATION

- State-of-the-art sensor technology together with mechanical building drums ensures a reliable application and building cycle each time, without a single miss.
- The material application is highly accurate because the materials are fully controlled throughout the let off, feeding, measurement, cutting and application onto the drum. All by means of sophisticated guiding, CCD cameras and last but not least fixation on the drum during application.
- Many options are available to customize the TBM to your specific requirements including an automatic green tire removal system, automatic stock roll changes and an application measurement system with feed back to the control system.

FULLY COMPATIBLE WITH YOUR PRODUCTION LOGISTICS

- The machine is supplied with fast-change single or dual let-off systems to accommodate your tire building logistics. Choose reels, shells or cassettes to your specific requirements.

CUSTOMIZED SOLUTIONS

- Servicers and applicators for fabric or steel chafers, flippers, gum strips (also for run flat tires) are available and can be customized to match your tire technology.
- The optional green tire remover is designed to enhance the machine productivity by lifting the green tire removal work from the "hands" of the operator. This will result in a more ergonomic way of working with less down time due to "tired" operators and a more constantly running machine.



Carcass drum in shaping position



Dual shuttle let-off



Pre-assembly body ply sticher

BASIC MACHINE DATA

| | |
|---------------------------|----------------|
| Bead size range | : 13" - 20" |
| Max Green tire diameter | : 820 mm |
| Bodyply width | : max. 880 mm |
| Innerliner width | : max. 600 mm |
| Sidewall width | : max. 240 mm |
| Pre-assembly width | : max. 1000 mm |
| Breaker width | : max. 300 mm |
| Tread width | : max. 320 mm |
| Breaker angle | : 18° - 30° |
| Capstrip (spiral overlay) | : 5 - 25 mm |



VMI 248-SL

MODULE OVERVIEW

| | |
|------------------------------|--|
| Tire building machine | <ul style="list-style-type: none">- B&T drum- Mechanical or bladder carcass drum- Stitchers- Beadloader & setter- Transferring- Green tire removal system |
| Carcass servicer | <ul style="list-style-type: none">- Innerliner- Sidewall- Bodyplies- Fabric chafers- Steel chafers- Flippers- Rubber strips |
| Breaker servicer | <ul style="list-style-type: none">- Breaker 1- Breaker 2 |
| Capstrip servicer | <ul style="list-style-type: none">- Dual or single let off- Tension control |
| Tread servicer | <ul style="list-style-type: none">- Tread out of reels- Pre-cut treads- CCD camera controlled application |



Capstrip applicator



Ultrasonic knife assembly

VMI SUPPLIES A COMPREHENSIVE

RANGE OF MACHINERY FOR RUBBER

COMPOUND HANDLING, MANUFACTURING

OF TIRE COMPONENTS, TIRE ASSEMBLY,

TIRE CURING AND TIRE TESTING

FOR THE PRODUCTION OF RADIAL

PASSENGER, LIGHT TRUCK, ALL STEEL

RADIAL TRUCK AND BUS AND OFF THE

ROAD TIRES.

For more information see:

www.vmi-group.com

or contact us by e-mail:

sales@vmi-group.com

HEADQUARTERS:

P.O.Box 161, 8160 AD Epe
The Netherlands
sales@vmi-group.com
phone +31 578 679111

SALES OFFICES:

STOW, OHIO, USA

sales@vmi-usa.com
phone +1 330 9296800

YANTAI, SHANDONG, CHINA

vmiy@vmi.com.cn
phone +86 535 6300139

KUALA LUMPUR, MALAYSIA

dennis@isoelectra.com.my
phone +60 3 78469988

MOSCOW, RUSSIA

office@vmi-group.ru
phone +7 495 7950332

RUNDING, GERMANY

info@vmi-az.com
phone +49 9971 76139-0

BERGAMO, ITALY

sales@vmi-group.com
phone +39 0307 365399

SAO PAULO, BRAZIL

raraujo@vmi-az.com
phone +55 11 22792520

WORLD WIDE SUPPORT

24 HOURS AT CALL: + 31 651 533 912