

GLOBAL ORGANIZATION - LOCAL SUPPORT

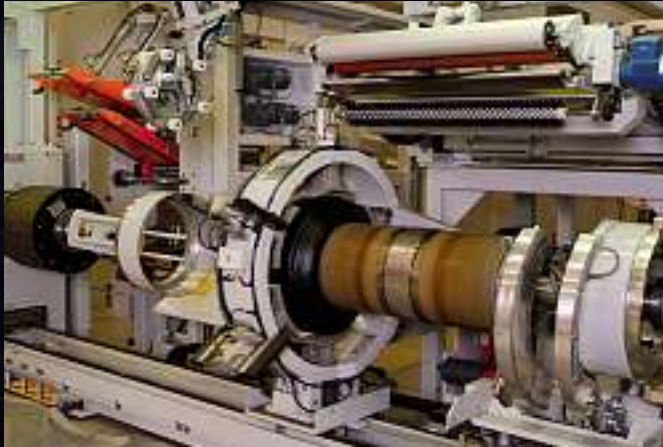
## VMI 242-SL SYSTEMS

FOR 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, tire curing 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.

# SINGLE STAGE TIRE BUILDING SYSTEM VMI 242-SL

## “THE LOW INVESTMENT ALTERNATIVE MAKES SINGLE STAGE TIRE BUILDING A REALITY FOR EVERYONE”

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 machine 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 of a combination of an ergonomic design and the material guiding and sensing devices throughout the entire process, from let-off to finished green tire.

#### 3. 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.

#### 4. Easy operation

The machine has a user friendly HMI (Human Machine Interface) and requires two operators. Material length for the BP and PA is easily adjusted and are guided by the recipe. The breakers are mechanically guided and applied manually. Materials can be quickly replaced with the aid of ergonomically designed cartridges or reel systems. Automatic material changes are possible.

#### 5. Green tire uniformity

The result of the high fabrication standards of the machine, together with the high accurate and excellent carcass drum, provides multi green tires with excellent uniformity figures in all aspects.

#### 6. Flexibility

The demands of today ask for a highly flexible machine to produce very small batches of tires. This machine is designed for that, many 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!

#### 7. Upgradeability and exchangeability with VMI 248-SL

This machine uses the same tire building principles as the highly automated VMI 248-SL. The tooling is fully exchangeable, which is the key reason for building the same high quality tires. The VMI 242-SL is fully upgradeable to a VMI 248-SL version.

#### 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 242-SL

# VMI 242-SL FOR RADIAL TIRE ASSEMBLY

## ACCURATE - PRODUCTIVE – ECONOMICAL

The semi automatic VMI 242-SL is the entry level single stage tire building system to make it easier to enjoy the benefits of single stage tire building. A key advantage is the interchangeable tooling within the VMI type tire building family. Furthermore this machine distinguishes itself from lesser systems by:

## HIGH APPLICATION ACCURACY

- The machine's material guiding and cutting system results in a very accurate application onto the building drums and thus giving the basis for a good uniformity.
- The VMI 242-SL is fitted with a bladder type carcass building & shaping drum with special features such as mechanical bead locks and a mechanical bead-shoulder support system all resulting in the best possible base for assembling a tire.

## PRODUCTIVITY

- The VMI 242-SL has a relative short cycle time because 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.
- For optimum performance it is advised to work with two operators.
- The machine is designed specifically to minimize downtime and is fitted with easy, efficient changeover of both the let-off stock rolls and tire size depending tooling.
- The size change system together with the partly menu driven, automated machine settings enable fast, accurate changeover of material width, type and angle, making the VMI 242-SL also suitable for small batches.

## RELIABLE AND ACCURATE APPLICATION

- State-of-the-art sensor technology together with the accurate building & shaping drums ensures a reliable application and building cycle each time, without a miss.
- The material application is highly accurate because the materials are guided throughout the let off, feeding, measurement, cutting and apply on the drum. All by means of mechanical or optional electronic guiding 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 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, 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 automating the green tire removal. This will result in a more ergonomic way of working with less down time due to "tired" operators and a more constant running machine.
- Level of automation, as well as other special wishes from the customer can be incorporated.



Manual breaker applicator



Automatic carcass applicator



Pre-cut tread applicator

## BASIC MACHINE DATA

Bead size range	: 12"-20"
Max Green tire diameter	: 820 mm
Bodyply width	: max. 880 mm
Innerliner width	: max. 600 mm
Sidewall width	: max. 230 mm
Pre-assembly width	: max. 1000 mm
Breaker width	: max. 300 mm
Tread width	: max. 320 mm
Breaker angle	: 18° - 30°
Capstrip (Spiral overlay) width	: 10 - 25 mm



Breaker let-off's

### MODULE OVERVIEW

<b>Tire building machine</b>	<ul style="list-style-type: none"><li>- B&amp;T drum</li><li>- Shaping &amp; building drum</li><li>- Stitches</li><li>- Beadloader &amp; setter</li><li>- Transferring</li><li>- Green tire removal</li></ul>
<b>Carcass servicer</b>	<ul style="list-style-type: none"><li>- Innerliner</li><li>- Sidewall</li><li>- Bodyplies</li><li>- Fabric chafers</li><li>- Steel chafers</li><li>- Rubber strips</li></ul>
<b>Manual Breaker servicer</b>	<ul style="list-style-type: none"><li>- Breaker 1</li><li>- Breaker 2</li></ul>
<b>Capstrip servicer</b>	<ul style="list-style-type: none"><li>- Dual or single let off</li><li>- Tension control</li></ul>
<b>Tread servicer</b>	<ul style="list-style-type: none"><li>- Pre-cut treads</li><li>- Tread out of reels</li></ul>



Dual shuttle reel tread let-off (option)



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.**

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