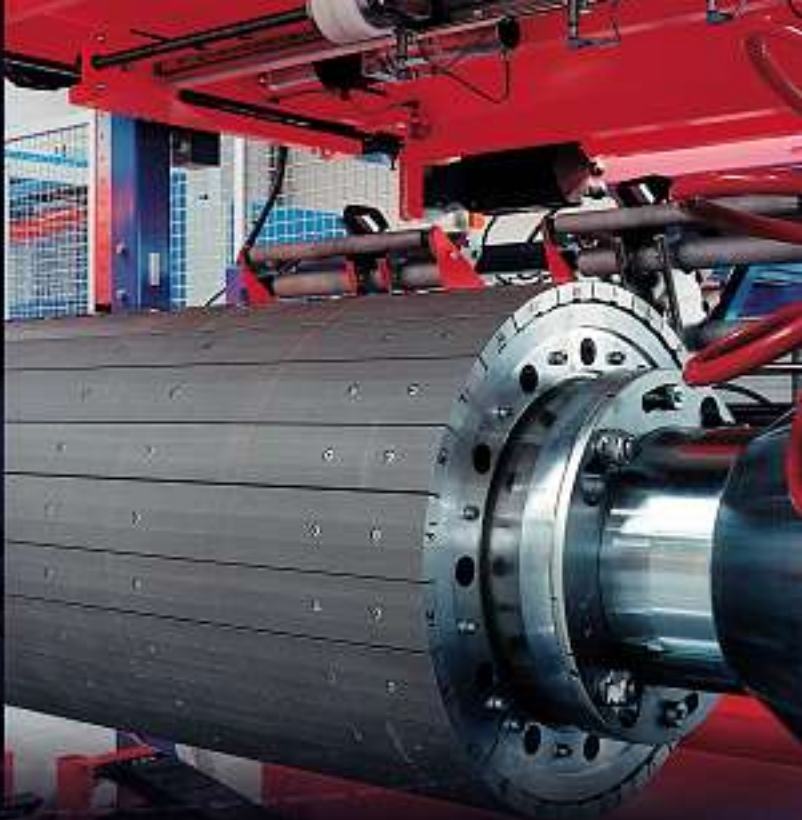


GLOBAL ORGANIZATION - LOCAL SUPPORT



## VAST QUATTRO SYSTEMS

FOR RADIAL ALL STEEL TRUCK  
AND BUS TIRE ASSEMBLY



**VMI GROUP**

TKH GROUP MEMBER

#### YOUR NEEDS - OUR MISSION

In the rubber and tire industry yesterday's technology is being replaced by today's innovation for tomorrow's requirements. Amidst the turmoil of innovation there is, however, one constant:

*VMI's commitment to supplying innovative and reliable services and equipment to the rubber and tire industry.*

#### YOUR NEEDS - OUR CHALLENGE

VMI supplies millroom equipment and a complete line of tire manufacturing, tire curing and tire testing systems for bias and radial tires for cars, truck, utility and off-the-road vehicles.

Our services range from financing through engineering and contracting projects. We also offer maintenance contracts and upgrade existing rubber and tire equipment.

We work closely with clients to create customised solutions that meet their needs.

*Rightfully VMI is known as the leader in millroom equipment and single-stage machines for radial car and truck tires.*

#### YOUR NEEDS - OUR NETWORK

VMI's network of agents is constantly monitoring developments on local markets on all continents. Our R&D department collaborates with the leading international rubber research institutes and with key suppliers of commercial components.

Our vast expertise and experience in rubber and tire production engineering enables us to respond rapidly to market developments and to specific needs of our clients.

*For cost-effective systems that are tailored to your requirements, VMI is the company to work with.*

#### YOUR NEEDS - OUR SERVICE

VMI's global organization includes spare-parts supply and servicing from our plants in the Netherlands, USA and P.R. of China. Our service departments are on call 24 hours a day to provide rapid on-site service.

*VMI: a partner to rely on in the race against time - and your competitors!*



## WE HELP YOU WIN THE RACE

VMI now produces a complete family of tire assembly systems capable of producing a large variety of car, light truck, all steel truck and bus and agricultural/OTR tires in various sizes, which conform to TRA and ETRO standards. These machines enable tire manufacturers to meet today's demand for high quality tires at competitive prices.

The VAST (VMI All Steel truck) QUATTRO family of tire building systems sets new standards in the industry for top quality and efficient all steel radial truck and bus tire manufacturing.

## THE VAST QUATTRO FAMILY OF ALL STEEL RADIAL TIRE TBM'S

The VAST QUATTRO family of all steel radial truck and bus tire building machines is the result of five years research and development work carried out by VMI's R&D engineers, backed by VMI's 25 years of expert experience in single stage tire assembly. The first VAST QUATTRO system appeared on the market in 1997 and since then the design has been further optimized. Today, VMI offers three models, the VAST-4, the VAST-3 and the VAST-SA. Each of these tire building machines has its own distinct features that enable you to select the machine best suited to your manufacturing process and business environment. All models use tried and tested VMI tire assembly technology. The high level of compatibility between the various models ensures smooth future upgrading when required.

### VAST-SA

Partially automated with potential for high output, utilizes key VMI technology that secures optimal tire quality.

### VAST-3

Higher automation level and increased output when compared with the SA version. Increased use of automated processes delivers superb and constantly high tire quality, tire after tire.

### VAST-4

High automation level and further increased output when compared with the VAST-3 version by means of its double shaping drum. Delivers superb and constantly high tire quality.

### VAST-4 QUATTRO



## VAST-4

Possessing a separate drum for building the carcass, another drum for building the belt and tread package and two further drums for shaping and stitching, the VAST-4 model is capable of producing up to 400 truck or bus tires per day. Using the latest VMI technology in automatic material handling, measuring, cutting, positioning and drum application, the VAST-4 requires two operators only.

## MAIN FEATURES ARE:

### INCLUDED IN THE STANDARD CONFIGURATION

- 17.5" to 24.5" tire bead size capability.
- mechanical (no bladders) drums for shaping, carcass and belt & tread package building.
- dual size shaping drum.
- conical and mechanical bead lock system.
- cycle time as low as 2 minutes 40 seconds.
- automatic unwinding, length measurement, cutting, centering and application on the drum of all four steel belts.
- automatic application on the drum of pre cut tread.
- automatic unwinding, in-line assembly of inner liner and side walls, length measurement, ultra sonic cutting, centering and application on the drum of inner liner, side walls and body ply material.
- automatic unwinding, application and ultra sonic cutting to length of breaker cushion material.
- modular design allowing for customization at minimum extra cost.
- user friendly MMI.
- modular and transparently structured controls.
- ergonomically designed green tire removal system.
- minimum tire size change time such as software (tire menu) controlled tire size change (within same bead diameter).



Mechanical shaping drum

## VAST-3

The VAST-3 is identical to the VAST-4 except for the number of shaping drums, there is only one shaping drum instead of two. The VAST-3 can be upgraded to the VAST-4 configuration when higher output is required.

## VAST-SA

The VAST-SA (Semi Automatic) is specifically designed to meet the needs of customers operating in countries with relatively low labor costs or having a limited daily output demand. It comes at a lower initial investment while at the same time offering you sound growth potential: the VAST-SA platform may be upgraded to the VAST-3 or VAST-4 configuration.

The VAST-SA is built implementing the core design features of the VAST-3 and -4 models. Important sub systems that influence tire quality, such as the tire building drums and transfer systems, are identical to the designs used in the VAST-3 and -4. The services for carcass package and belt & tread package building are however different requiring more manual actions to be carried out by the operator.

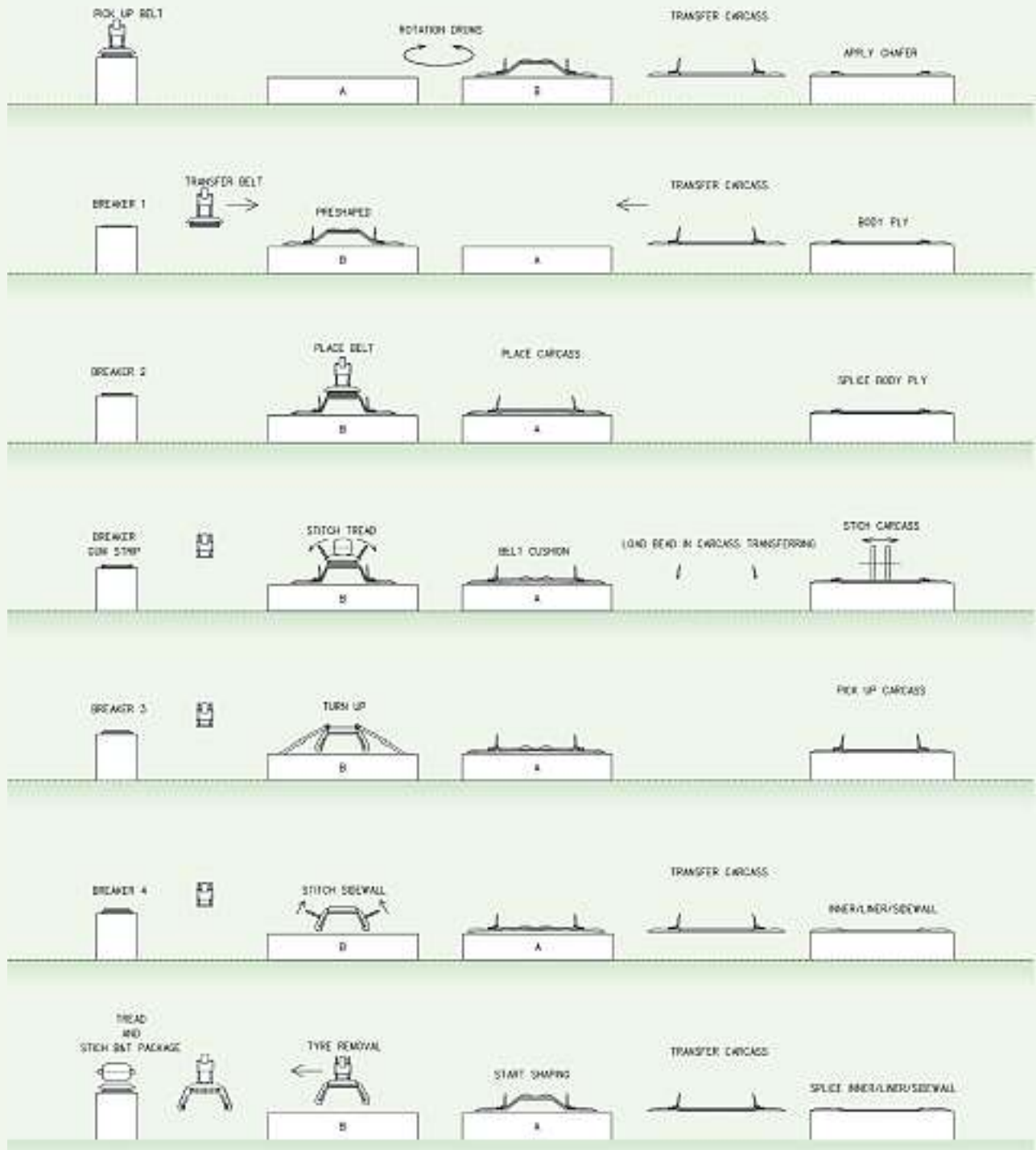


Multi size belt and tread application drum

## SUMMARISED

	VAST-4	VAST-3	VAST-SA
Bead size range	17,5" - 24,5"	17,5" - 24,5"	17,5" - 24,5"
Operators	1-2	1-2	3
Automation level	high	high	lower
Tire quality	superb and constant	superb and constant	potentially superb, depending on operator
Output potential (t/d)	450	350	350
Growth potential	-	upgrade to VAST-4	upgrade to VAST-3 or 4

# OPERATION SEQUENCE



**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 TIRE.**

For more information see:

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