

130 TBUR Assembly Line



All steps in the wheel assembly combined in one machine:

- Maintenance-friendly design: tires and trims are transferred on the same height
- Identification and lubrication of tire and rim
- Plausibility check (incorrect tire and rim combination)
- Tire lay-on
- Gentle assembly, especially with low profile tires and runflat tires (RF, DSST)
- Torque measurement
- Special tools
- Point-to-point matching as optional
- Tool set for runflat and DSST tires as option

Range of application

Automatic assembly and inflation of tubeless tires in normal, low profile or super low profile type with steel or aluminum rims of various dimensions in batches or in mixed sequence.

Linking of the line, for example, with a preceding valve-insertion station and a succeeding wheel balancing machine.

Alternatively other assembly and inflation lines for tubed tires or a mixed operation of tubeless/tubed tires are also available.

Design

Multi-station line of modular design with fully automatic operating sequence. The stations, typically including lubrication, laying and assembly station, depending on application, are arranged one after the other in line. An integrated lift-and-carry gear conveyor transports all units fully automatically in a line (length-wise) from station to station. Optimum linking of the line to automated production lines. **Sequence of operations**

- Automatic transfer of the tires one by one into the lubrication station, combined with bead diameter identification
- Infeed of rims one by one on a belt conveyor. Positioning and detection of the diameter and width for control of the mounting head and plausibility comparison with the tire. After lubrication of both rim edges transfer the rim through

a lift-and-turn conveyor to the lay-on station

- Tire feed from the lubrication station. Guided lay-on of the lubricated tires onto the rim.
- Fast transfer of the tire and wheel to the mounting station
- Center and clamp the rim, optimum positioning for gentle mounting of the tire with two independent push and hold-down elements, controlled by hydraulic axes.
- Automatic adjustment of the mounting head in accordance with the previously determined values. Mounting of the tire by 360° rotation of the mounting head with simultaneous guidance by the pressing elements for gentle mounting of low-profile tires. Separate or simultaneous mounting of the two beads is possible.
- Further transfer to the optional matching and inflation stations

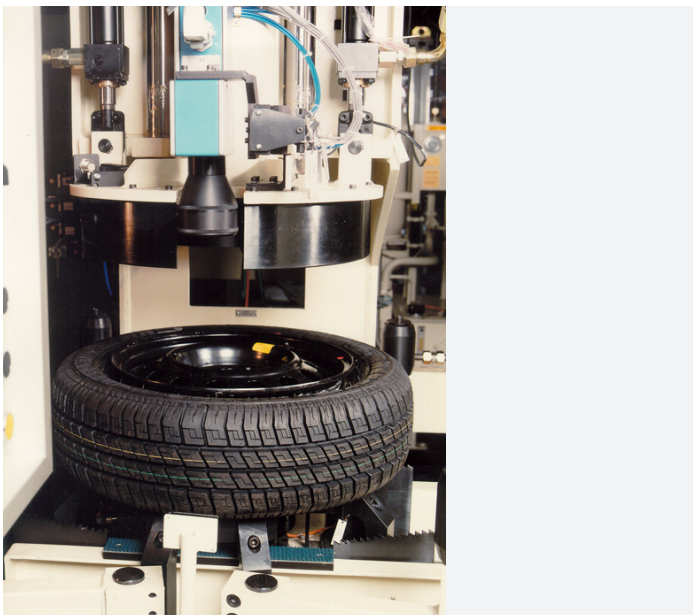
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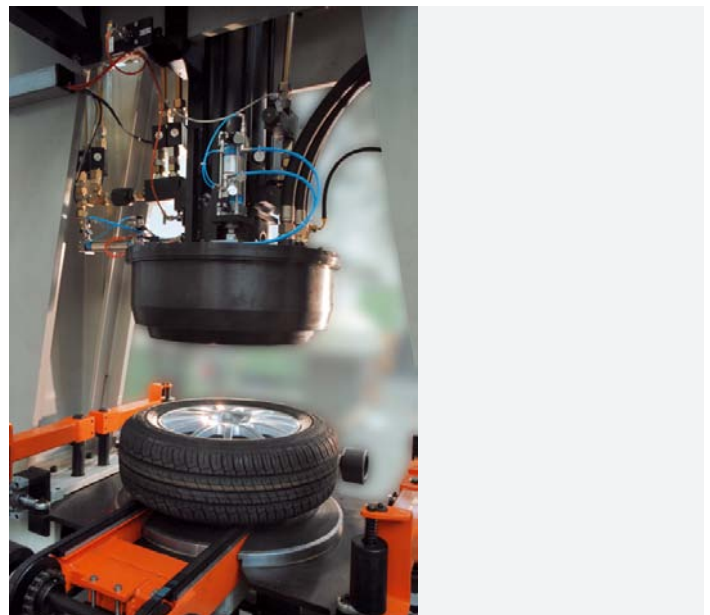
A lay-on station consisting of a horizontal gripper unit. This picks up the tire in a centered position and positions it optimally over the rim. Lubricating and sampling equipment is located in front of this station for both components.



Mounting station with single-armed design of the mounting head for gentle mounting of the tire. Automatic lowering of the mounting head to the detected rim width with simultaneous, automatic adjustment to the detected rim diameter. When the mounting head lowers, the tire hold-down roller and tire-pusher are adjusted to optimally position the tire. With a width-height ratio less than 60% it is recommended that the two beads be mounted one at a time in two revolutions.

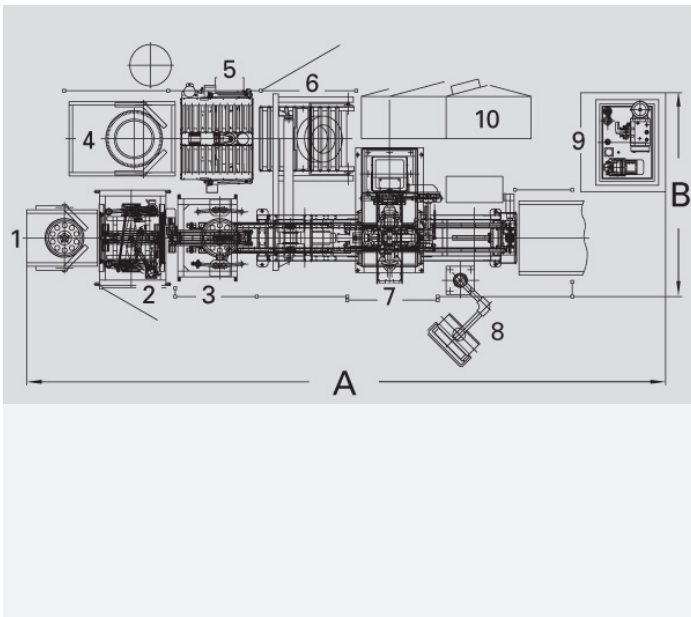


Optional matching station for improving the behavior of the wheel on the vehicle. The matching points on the un-inflated tire and rim are identified and brought together. The rim is radially clamped from the inside and the tire is gripped from above and below. The rim can then be rotated to achieve the optimum matching angle.



The line can also be combined with an inflation station for initial inflation of mounted tubeless tires (130 SBFR). The lowering of the inflation bell seals the latter against the tire sidewall and pushes the upper bead away from the rim. The special design of the patented inflation bell does away with the normal rim-sealing ring and is therefore wear-free.

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- 1 Rim separator (option)
- 2 Rim soaping
- 3 Rim transfer device
- 4 Tyre separator (option)
- 5 Tyre soaping
- 6 Tyre positioning
- 7 Fitting station
- 8 Operating panel
- 9 Hydraulics
- 10 Switch cabinet

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Technical data at a glance		130 TBUR
Fully automatic sequence of operations		•
Complete wheel		
Weight, max.	[kg]	50
Overall width	[mm]	120 - 350
Outer diameter, tire-	[mm]	560 - 900
Rim diameter	[Zoll]	13 - 18 / 14 - 19 / 15 - 20
Bead width	[Zoll]	3,0 - 12,0
Machine		
Width A	[mm]	9580
Depth B	[mm]	5280
Hight C	[mm]	3300
Cycle time	[s]	9 - 12
Production rate	[St./h]	320 - 400
Air pressure	[kPa]	600
Power consumption	[kVA]	45

	Order No.
	Order No.
Barcode reader 3)	Order No.
Wheel turner 4)	Order No.
Conveying equipment	Order No.
Tire profile detection 6)	Order No.

2) Data non-binding, depending on the respective equipment supplied

3) Transfer of tire and wheel data to the line

4) Required for a deep drop base

5) Cycle time shortened by separate bead mounting

6) For detection of tires designed for a single direction of rotation