

Assembly

Optimus



• Tyre and Rim Loading Conveyors:

- Manual loading of tyre and rim on roller conveyors
- Valve is mounted by operator

• Tyre and Rim Centering:

- Automatic tyre and rim centering for robot pick-up
- Dimension check with recipe data

• Tyre and Rim Soaping(*):

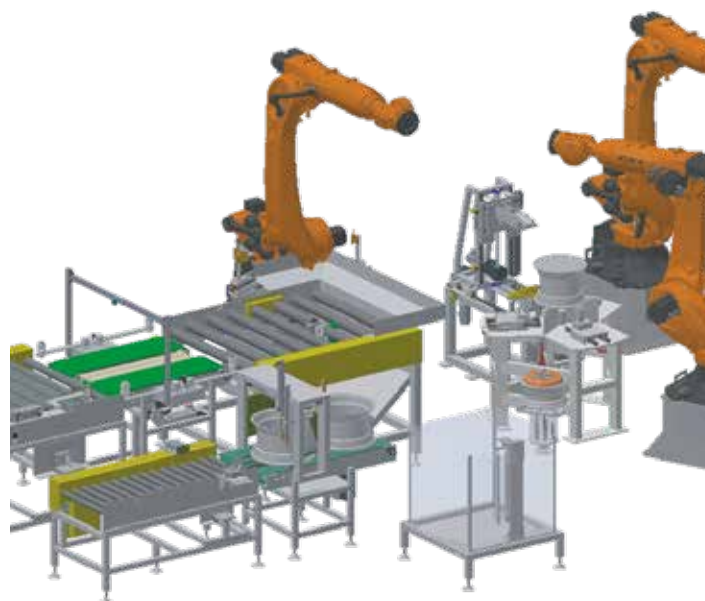
- Tyre and Rim handled by robot in soaping station
- Soaping by adjustable spray guns (upper and lower beads)
- Soaping protection enclosure

• Assembly Station:

- Rim is transferred by robot and clamped from bottom bead (adjustable pressure)
- Tyre is moved over the rim and pushed against the channel
- Tyre bead can be assembled in 1 or 2 steps (wheel type dependent) by assembly robot

Assembled wheel is downloaded by unloading robot in a fixed station

(*) Not available for Titanus



Line (Rim range)	Optimus (15"-22.5")
Tyre external diameter	600 – 1200 mm
Tyre width	130 – 450 mm
Rim width	120 – 380 mm
Max tyre + rim weight	100 + 50 kg
Cycle time	40 sec. (per wheel)
OPTIONS	
a. Speed-up Cycle	30 sec. (per wheel)
b. Tyre/Rim Matching	•
c. Additional Mounting	To mount difficult and particularly tough tyres
d. Mounting Force Monitor	Continuous monitor of mounting force with mono-axial load cell on
e. Manual TPMS Mounting	A manual station with a belt conveyor and torque-control screwdriver

- Siemens PLC control system with Profinet communication
- Electrical control panel with touch-screen HMI and manual function pages with status indicators
- Real-time visualization of actuators, sensors, wheel parameters, and system overview screens
- Advanced diagnostic pages for monitoring, daily error logging and statistics (piece counter day/total)
- Process/product parameters editable from the operator panel outside the machine
- Zero robot programming needed

SAFETY EQUIPMENT

- Machine compliant with EEC Machine Directive
- Controlled operator access procedures to restricted areas

COLORS

Safety protection	Yellow 1021/Black 9005
Moving parts	Red 3002
Connecting boxes, electrical panels	Gray 7035
Fix parts	White 9003

POWER SUPPLY & OPERATING CONDITIONS

Electrical	400V – 50Hz TN-S
Pneumatic	6-7 bar
Room temperature	from +10°C to +45°C
Relative Humidity	from 20% to 80%

SAFETY EQUIPMENT

CE conformity declaration	English (pdf)
Electrical/Mechanical assembly drawings	English (pdf)
Spare part list	English (xlsx)
Maintenance, operational & user manual	English (pdf)