

VerTiX-PLUS

The VerTiX-PLUS X-Ray inspection system is a complete X-Ray system with an integrated manipulator. The transport and feeding unit assures the exact position of the tire. The tires are X-Rayed in a vertical position limiting deformations and the images are displayed on the monitor. The VerTiX-PLUS is also available with Coll-Tech X-Ray Automatic Defect Recognition (ADR) software. This allows the operator to set warning limits to detect abnormalities in any area and any direction of the tire.

Key Process and Technical Advantages include:

- Highest Precision X-Ray Images. This X-Ray system is integrated for unique tire ranges from 13" to 30" bead diameter. This is a fully automatic process from when a tire enters on the inlet conveyor to when it exits on the outlet conveyor, no operator intervention required.
- Fastest Cycle Time of any vertical X-Ray machine in the market with less than 22 seconds.
- Compact Design for minimum space requirements. This system will also fit in a standard 40' container allowing for easy transport logistics.
- Lowest Total Life Cycle cost. This system is designed with the concept of minimal maintenance and quick start-up time.





Manipulator - 4 bar spreader in 13 inch bead diameter position (Min.)



Manipulator - 4 bar spreader in 30 inch bead diameter position (Max.)



Optional Paper Marking Device

Technical Data

Machine Dimensions	Tire Dimensions		X-Ray Tube	Cycle Time
Height app. 2230 mm	Outer Diameter	495-1327 mm	Omni Directional Tube	
Width app. 7449 mm	Section Width	135-510 mm	max. 100 KV (3.0mA)	
Depth app. 4269.5 mm	Bead Diameter	13" - 30"	max. 6mA	
	Bead Spread Distance	85-500 mm		Less than 22 sec.
(with Protective Grid)	Bead Spread Distance	min. 70 mm	Radiation Angle 6° x 280°	
Width app. 7449 mm	(non spread)			
Depth app. 4962 mm	Tire Weight	max. 160 kg		



The **X-Ray machine tube** shown is a key component of the **VerTiX-PLUS**.

- Complete Bead to Bead View
- No Dead Areas
- Repeatability & Accuracy
- High Precision X-Ray Images

X-Ray Machine Tube

0.5 x 1.5 mm² Focal spot size, thermal
 21° Anode angle
 6° x 280° Emission angle
 2 mm Be Inherent filtration

C-Shape Detector

This C-Shape detector is known for its higher resolution, faster integration time and better quality.

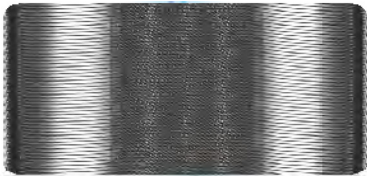
Objects shown by detector have more pixels providing more information. Therefore, the overall accuracy is higher when you have more information.



C-Shape Detector

Sensitive Area 3585 Pixels
 Length 0.4 mm
 Sensor Pitch 16 bit
 A/D Conversion

Machine Layout



Tire image from bead to bead

Coll-Tech X-Ray ADR:

The Automatic Defect Recognition software system is capable of multiple layer recognition for up to three breaker layers in addition to the ply. The product detects, tracks, and separates each wire in any tire layer and calculates tire metrics in three dimensions.

The ADR software automatically detects anomalies viewed from X-Ray images on all tires and all areas of the tire. It automatically recognizes tire areas, angles and distances no matter the tire type.

Machine Options

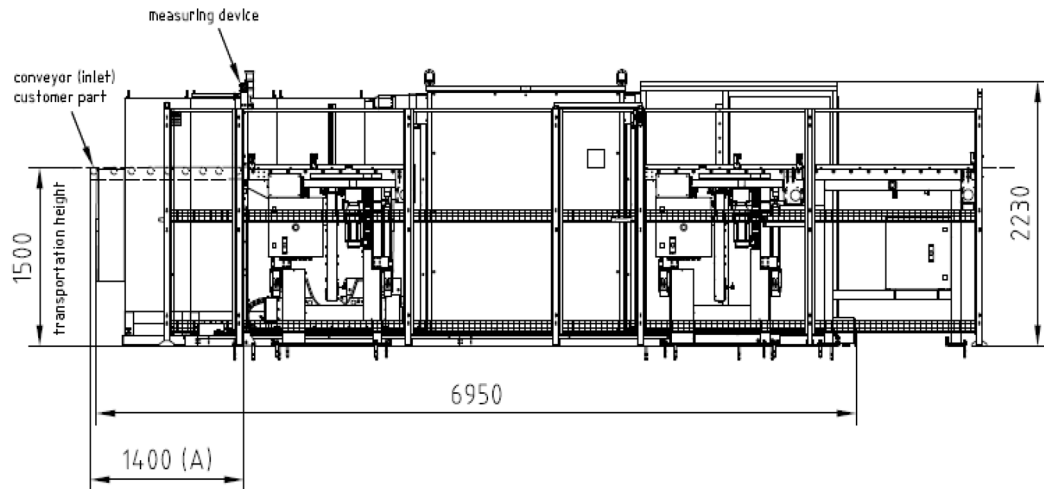
- Inlet & Outlet Conveyor
- Tire Switch and Sorting Device
- Tire Marking Device (hot foil or label)
- ADR Software



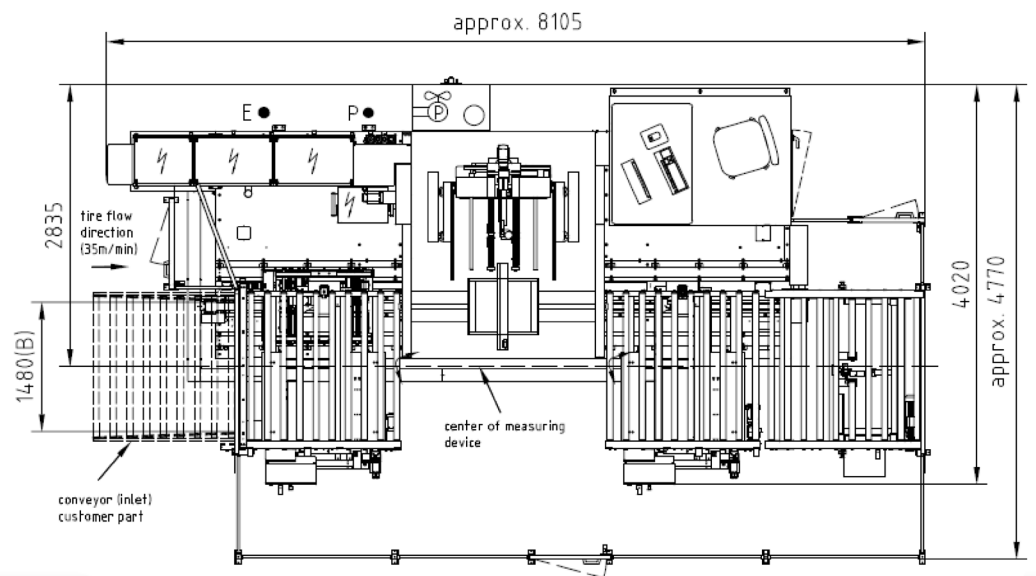
Inlet Conveyor & Transport Carriage



Outlet Conveyor & Transport Carriage



Side View of VerTiX-PLUS



Top View of VerTiX-PLUS

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