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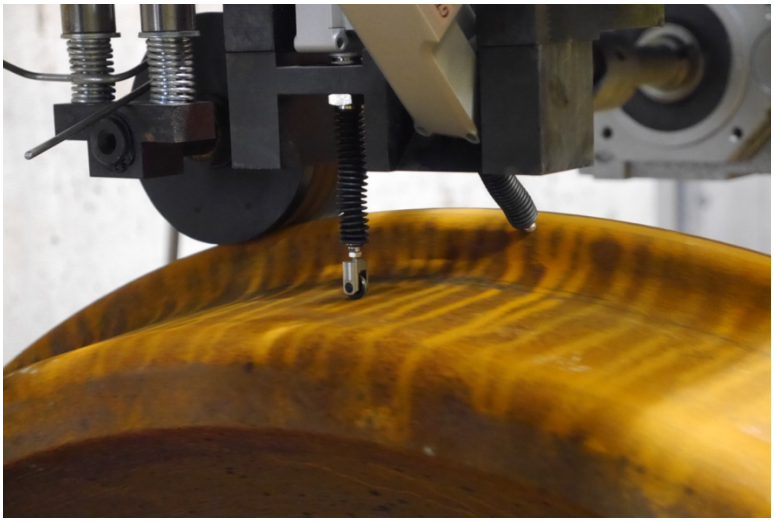
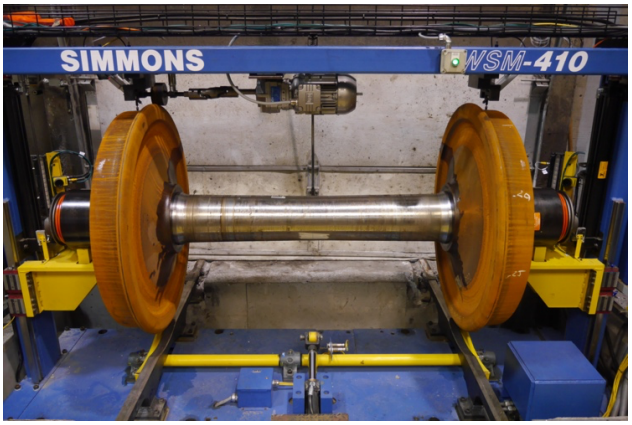
Simmons WSM-410 Wheel Set Runout and Inspection Station Data Sheet



The **Simmons WSM-410 Wheel Set Runout and Inspection Station** automatically inspects new and re-machined railway wheel sets with outboard bearings to determine if the wheel runout relative to the bearings is acceptable. This machine lifts and supports the wheel set by the bearings or bearing journals, in accordance with AAR or other requirements. After the wheel set is cradled and lifted, the wheel set is spun and measuring probes automatically determine if the plane and radial runout measurements meet the predetermined requirements. The machine is also available with optional back-to-back measurement capability as well as bent tab verification cameras to identify any unbent tabs on the axle end locking plates.

The handling of the wheel set after measurement is configured to accommodate the wheel set maintenance facility where it is installed. For example, if the wheel set passes inspection, it will automatically be lowered and ejected from the station onto rails for manual handling. If the wheel set fails this inspection, it can display an alarm and hold the wheel set in the machine until an operator manually inspects and releases the wheel set. The machine can also be interfaced with an automated material handling system. The results of the measurements are sent along with the wheel set to the material handling system for proper routing.



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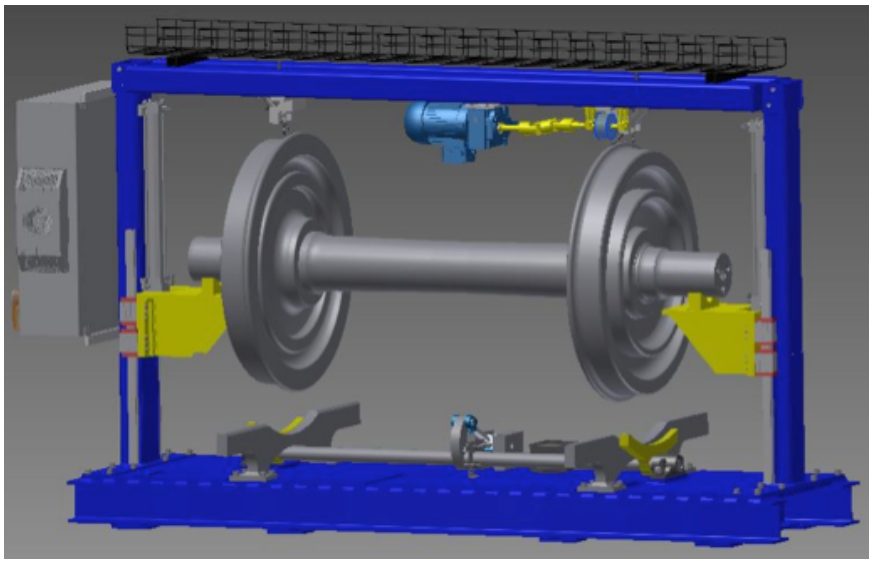

Machine Dimensions

Length	132.5 in.	3366 mm
Width	50 in.	1270 mm
Height	76.2 in.	1936 mm
Weight	4000 lbs.	1850 kg

General Specifications*

Cycle Time	2 minutes	
Plane Runout Accuracy And Repeatability	+/- 0.002 in.	+/- 0.05 mm
Radial Runout Accuracy And Repeatability	+/- 0.002 in.	+/- 0.05 mm
Back-To-Back Accuracy (optional)	+/- 0.004 in.	+/- 0.1 mm
Back-To-Back Repeatability (optional)	+/- 0.002 in.	+/- 0.05 mm

*Applicable up to maximum ambient temperature change of +/-10°C (+/-18°F)

Utility Requirements

Electrical Power	6.4 kW	
Compressed Air (Minimal Volume Required)	80-120 psi	5.5-8.3 bar

Wheel Set Dimensions

Maximum Wheel Diameter	42 in.	1067 mm
Minimum Wheel Diameter	28 in.	711 mm
Maximum Axle Length	90 in.	2286 mm

Updated November 17, 2021

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