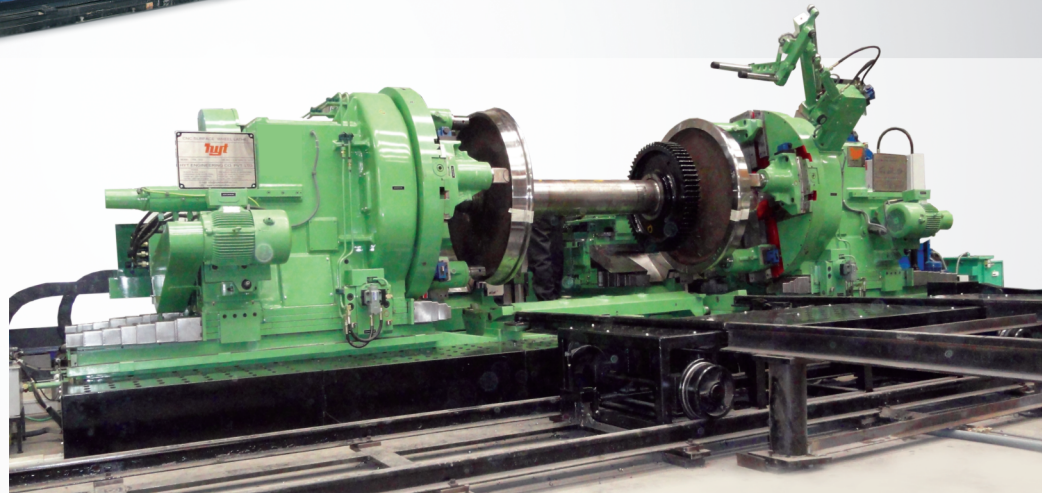




HYT ENGINEERING COMPANY PVT. LTD.



YSL - 08 & 12

CNC SURFACE WHEEL LATHE

CNC Surface Wheel Lathe is extremely rigid, an automatic machine with roll-in & roll-out movement of wheelsets. It is suitable for simultaneous or independent re-profiling, inside & outside facing of new or worn-out wheels when disassembled from railways vehicles. It is also capable of machining the brake discs.

High degree of automation like automatic loading & unloading, automatic wheel profile & diameter measurement, suggestion of optimum depth of cut to restore profile, automatic machining process and easy to understand interactive HMI screens enables machine very easy to operate.

Rigid bed, Headstocks with wheel set drive at both ends and dual tool carriages enables higher material removal rate and faster machining of wheelset.

Dedicated control software with customised HMI Screens takes care of various safety measures for easy & safe operations as well as displays fault messages. Provision of remote maintenance support from HYT Headquarter is also available. Easy and quick access to parts requiring maintenance attention results in faster maintenance of machine.

This machine integrates both Industry 4.0 and Industry 5.0 features.



LEADING PARAMETER

TECHNICAL DATA OF MACHINE :

	YSL - 08	YSL - 12
○ Main Motor Capacity :	2 x 45 or 55 kW	2 x 37 kW
○ Cutting Speed while Profiling :	25 to 80 m/min	25 to 80 m/min
○ Tool Post Feed for Wheel Profiling :	0.1 to 3.5 mm/rev	0.1 to 3.5 mm/rev
○ Tool Post Rapid Speed for Both Axes :	3000 mm/min	3000 mm/min
○ Max. Chip Cross Section while Profiling :	20 mm ²	16 mm ²
○ Floor to Floor Cycle Time/Wheelset :	14-16 min	16-18 min
○ Supply Voltage :	3Ph, 415VAC, 50 Hz**	3Ph, 415VAC, 50 Hz**

** Special Electrical Supply can be considered, if required.

For Higher Productivity, YPL-01 & YPL-02 Models are available.

Simultaneous re-profiling of both wheels in YSL-08 & YSL-12 Model

WHEELSET DATA FOR MACHINING

○ Track Gauge :	As required	○ Min. Axle Length :	1200 mm*
○ Max. Tread Diameter :	1250 mm*	○ Max. Weight of Wheelset :	50 kN
○ Min. Tread Diameter :	750 mm*	○ Max. Dia. for Brake Disc Machining :	700 mm
○ Wheel Width :	75 to 145 mm	○ Min. Dia. for Brake Disc Machining :	250 mm
○ Max. Axle Length :	2750 mm*		

*Depends on Track Gauge

ACCURACIES OF WHEELSET (WHEEL PROFILING) :

	YSL - 08	YSL - 12
○ Difference in Dia. of Both Wheels :	<0.15 mm	<0.3 mm
○ Accuracy of Wheel Profile when Compared with Standard Profile Gauge :	<0.2 mm	<0.2 mm
○ Radial Runout of Wheel :	<0.2 mm	<0.3 mm
○ Axial Runout of Wheel :	<0.2 mm	<0.3 mm
○ Profile Surface Finish :	<12.5 µm Ra	<12.5 µm Ra

UNIQUE PROPOSITION

- Load-bearing structures are made from high-strength, close-grained cast iron for stability and efficient vibration damping.
- System for measuring wheel profile and diameter to optimize cutting depth economically.
- Automatic loading, unloading and roll-in & roll-out arrangement to increase productivity.
- CNC Systems with Operator-friendly customised HMI Screens.
- Hardened and ground box guideways for headstock and Tool Carriages for maximum rigidity.
- Extremely rigid and durable spindle assemblies.
- 4 Jaw synchronized, powered chuck for heavy duty machining.
- Machine operation by single operator panel with good visibility of machining process.
- Heavy duty chip conveyor & chip Shredder / crusher for effective evacuation of chips.

Optional

- Machine Enclosure.
- Optional Wheel traverser trolley to reduce wheelset roll in & roll out time.
- Optional Camera and display system for enhanced visibility of measurement & machining process.

OTHER PRODUCTS

CNC Tandem Underfloor Wheel Lathe | CNC Underfloor (Pit) Wheel Lathe | CNC Portal Wheel Lathe Machine
CNC Vertical Turning & Boring Machine | CNC Axle Journal Turning & Burnishing Lathe | CNC Axle Turning Lathe

HYT ENGINEERING COMPANY PVT. LTD.

Solutions For Rolling Stock Production & Maintenance



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