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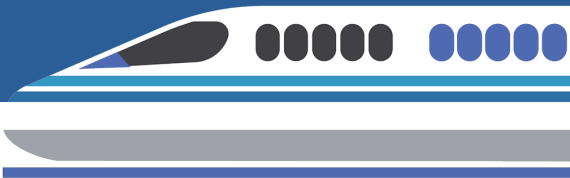
UNECORAIL. CO., LTD.

EQUIPMENT & MAINTENANCE SOLUTIONS

Eco-friendly company for Humankind

OVERSEAS

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CNC WHEEL LATHE

CNC UNDERFLOOR WHEEL LATHE(SINGLE/TANDEM)

CNC DISC BRAKE WHEEL LATHE

WHEEL SET MEASURING MACHINE



Safety for Railway Industry

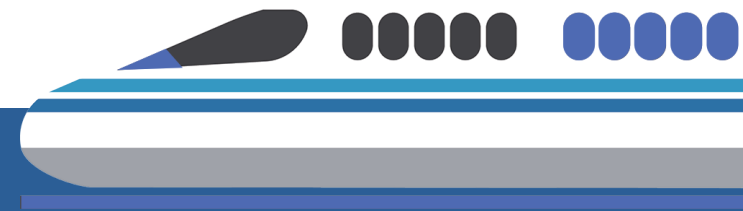
Greetings

We thank all of you for your interest in UNECORAIL.
Since its foundation in 1982, the company is

leading the domestic market as the only manufacturer of railroad vehicle wheel processing facilities and vehicle checking facilities in the country. We broaden its market of environmental industry home and abroad.

With step-by-step quality management of design, production and assembly, the company is making determined investment and effort to produce products of quality ahead of customers demand.

We promise you our full effort to become a world class company that can contribute to technology development and the society.



History

Aug 1982 Founded Samwon Special Machinery Co., Ltd.

Jan 1991 Developed the CNC wheel lathe

Dec 1995 Developed the CNC underfloor wheel lathe

Nov 1999 Acquired ISO 9001 quality certification

Mar 2000 Changed the name of the corporation to "Ecomaister Co., Ltd." Jul 2000 Founded Eco-maister Technical Institute

Sep 2002 Developed the tandem CNC underfloor wheel lathe

Jun 2006 Developed the CNC wheel scan measuring system

Nov 2011 Exported CNC wheel lathe to Taiwan TRA

Oct 2012 Exported CNC underfloor wheel lathe & wheel lathe to Brazil CSP

Nov 2017 Exported CNC underfloor wheel lathe Indonesia LRT

Nov 2023 Exported CNC wheel lathe to Indonesia MOT

Agent Business



Customer

DOMESTIC



OVERSEAS



Performance Reference

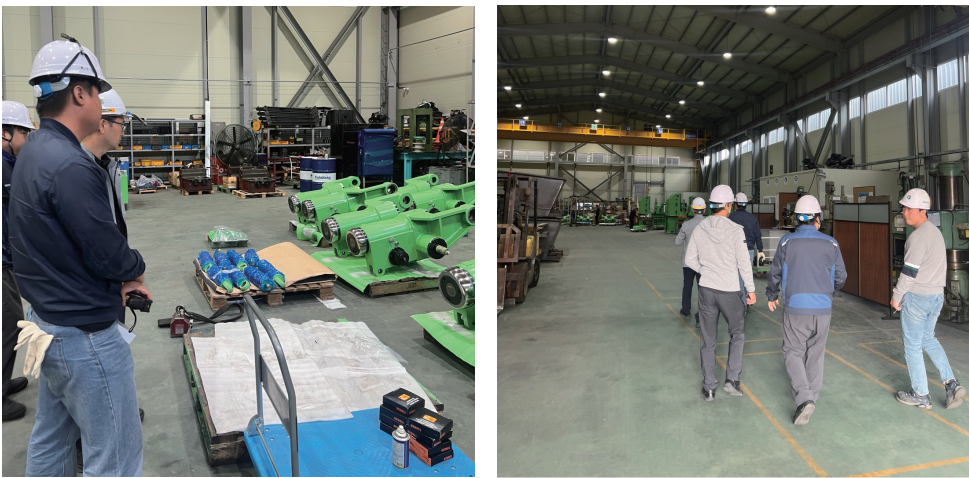
CATEGORY	KOREA	INDONESIA	TAIWAN	BRAZIL
TANDEM	6	-	-	-
CNCUWL	76	1	2	1
CNCWL	53	1	-	1
CNCDWL	2	-	-	-
WSMS	3	-	-	-
TOTAL	140	2	2	2

Company

Eco-friendly company for Humankind



Company View (Headquarter)



Factory View

UNECORAIL EQUIPMENT LIST



CNC Tandem Underfloor Wheel Lathe
(Moving/Fixed Type)



CNC Underfloor Wheel Lathe - CNCUWL



CNC Wheel Lathe - CNCWL



CNC Disc Brake Wheel Lathe - CNCDWL



Wheelset Measuring Machine - WSMS

RAILWAY GAUGE BUSINESS
Specification



Back to Back Distance Gauge

Measuring Range

- Back to Back Distance : 1345 ~ 1370 mm

Precision

- Accuracy : $\leq \pm 0.1$ mm
- Resolution : 0.01 mm

Feature

- One-touch data hold for the measured Value
- LCD Display facilitates value check
- LED Backlight / Coin Battery



Brake Disc Gauge

Measuring Range

- Brake Disk : $\varnothing 390 \sim \varnothing 660$ mm

Precision

- Accuracy : $\leq \pm 0.25$ mm [0~120mm]
- Resolution : 0.01 mm

Feature

- Disk surface wear measurement
- Displaying the value in digital numbers
- One-touch data hold for the measured Value



Profile Gauge

Measuring Range

- Flange Width : Approx. 27~34 mm

Precision

- Accuracy : $\leq \pm 0.1$ mm
- Resolution : 0.01 mm

Feature

- One-touch data hold for the measured value
- Designed to face the center of the wheel when measuring

Model

- PFG20 : 1/20
- PFG40 : 1/40
- PFGHU : Hueman



Surface Roughness Gauge

Measuring Range

- Flange Width : Approx. 27~34 mm

Precision

- Accuracy : $\leq \pm 0.1$ mm
- Resolution : 0.01 mm

Feature

- Measure the surface roughness of wheel tread, flange, and inner diameter(hole).

Model

- SFRG20 : 1/20
- SFRG40 : 1/40
- SFRGHG : Hueman

RAILWAY GAUGE BUSINESS

Specification



Digital Flange "D" Gauge

Measuring Range

- Flange Height : 21 ~ 39 mm
- Flange Width : 16 ~ 41 mm

Feature

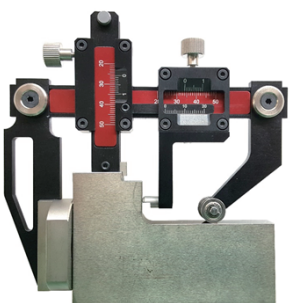
- One-touch data hold for the measured value
- Designed to face the center of the wheel

Precision

- Accuracy : $\leq \pm 0.1$ mm
- Resolution : 0.01 mm

Model

- AGXP[GV] : XP55, GV40
- AG40 : 1/40
- AG20 [1, 2] : 1/20
- AGHG : Huemann



Analogue Flange "A" Gauge

Measuring Range

- Flange Height : 21 ~ 47 mm
- Flange Width : 21 ~ 50 mm
- Qr : 0 ~ 20 mm

Feature

- Designed to face the center of the wheel
- Dual Side Scale

Precision

- Accuracy : $\leq \pm 0.1$ mm
- Resolution : 0.1 mm



Digital Diameter Gauge

Measuring Range

- Diameter : $\varnothing 550 \sim \varnothing 1300$ mm

Feature

- Displaying the value in digital numbers
- Data hold / Easy Home(Origin) Setting
- 360 rotation Display / Coin Battery

Precision

- Accuracy : $\leq \pm 0.15$ mm
- Resolution : 0.1 mm

Model

- DIAG75 : $\varnothing 680 \sim \varnothing 970$ mm / $\varnothing 980 \sim \varnothing 1300$ mm
- DIAG70 : $\varnothing 700 \sim \varnothing 980$ mm
- DIAG70 or 65 : $\varnothing 580 \sim \varnothing 820$ mm



Digital Rim Thickness Gauge

Measuring Range

- Rim Thickness : 16.5 ~ 77 mm

Feature

- One-touch data hold for the measured value
- Designed to face the center of the wheel

Precision

- Accuracy : $\leq \pm 0.1$ mm
- Resolution : 0.01 mm

Model

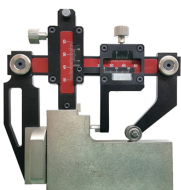
- DRG20[1,2] : 1/20
- DRG40 : 1/40
- DRGHG : Hueman

RAILWAY GAUGE BUSINESS

[Portable Wheel Measurement Tool]



- Digital Flange "D" Gauge



- Analogue Flange "A" Gauge



- Digital Diameter Gauge



- Digital Rim Thickness Gauge



- Back to Back Distance Gauge



- Digital Brake Disc Gauge



- Digital Profile Gauge



- Surface Roughness Gauge

CNC Tandem Underfloor Wheel Lathe (Moving/Fixed Type)

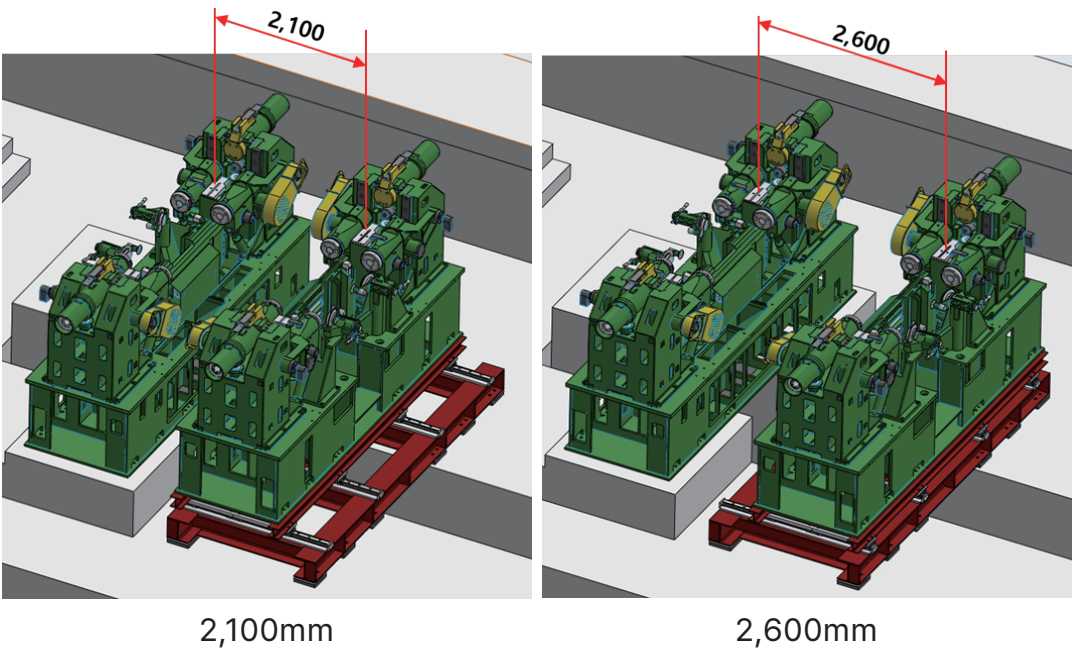


Tandem

Tandem is designed to restore the wheel profile to its original shape by addressing wear and deformation. It automatically machines two axles' wheels simultaneously with CNC control, while assembled on the bogie, enhancing productivity and reducing work time.

MOVING SYSTEM

By adjusting the axle distance, it is possible to machine the two axles of both EC and EMU simultaneously.(Moving type only)

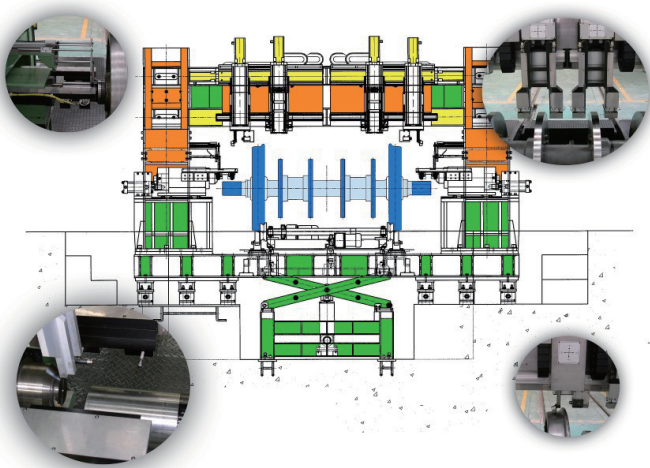
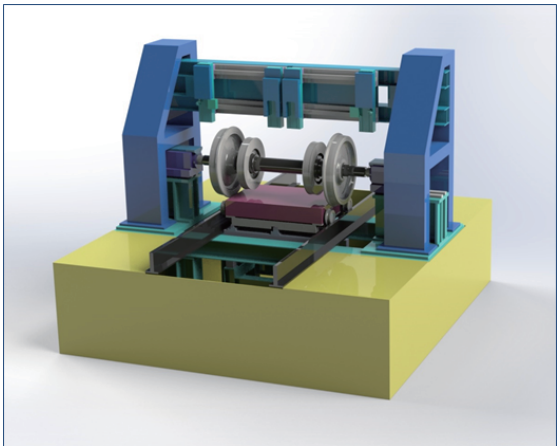


Wheelset Measuring Machine - WSMS



Wheelset Measuring Machine - WSMS

Wheelset Measuring Machine is a high accurate system using at rapid transit railway field. It inspects wheelset and automatically measure the shape of wheelset, axle and brake disc.



Specification

Category	Content
Track Gauge	1,435mm
Flange Measurement	Ø852 ~ Ø930mm (Min ~ Max)
Wheel Width	80 ~ 140mm
Axle Length	2,000 ~ 2,600mm
Load Permission	5 ton
Measurement Time	1Axle Measurement With in 15min (One Cycle)

*Custom production is available according to customers requests

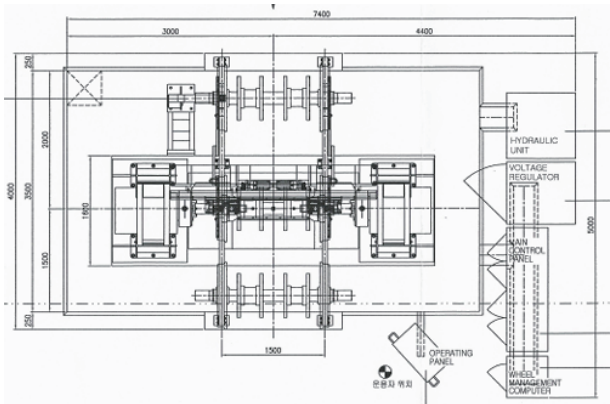
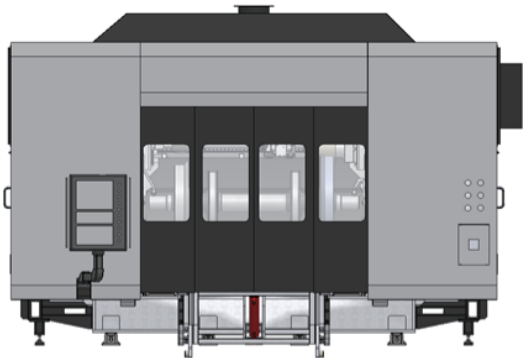
CNC Disc Brake Wheel Lathe - CNCDWL

Specification



CNC Disc Brake Wheel Lathe - CNCDWL

CNC Disc Brake Wheel Lathe is designed for brake disc re-profiling, eliminating pre-processing. It enables simultaneous measurement and re-profiling of all four surfaces of disc, significantly reducing re-profiling time.



Specification

Category	Content
Cutting Face Width	100 ~ 80mm (Original ~ Min)
Disk Diameter	Ø380 ~ Ø670mm (Internal ~ External)
Cutting Speed Range(Ø380)	0 ~ 100m/min (step-less speed change)
Cutting Depth Range	0~2mm
Cutting Target	Simultaneous Cutting(Both Side Of Disc)
Surface Roughness	Ra 6.3µm Under

*Custom production is available according to customers requests

Track Gauge	1,435mm
Cutting Wheel Diameter	Ø700mm ~ Ø1,300mm
Wheel Width	125mm ~ 140mm
Axle Distance	2,100mm(EC), 2,600mm(EMU)
Max Axle Load	40TON (2axle)
Cutting Speed Range	0mm ~ 100 mm/min
Cutting Feed Rate	0mm ~3 mm/rev
Chip Section	7.5 mm ²
Machine Weight	Appx 26TON * 2ea
Wheel Profile Tolerance	0 ~ 0.2 mm

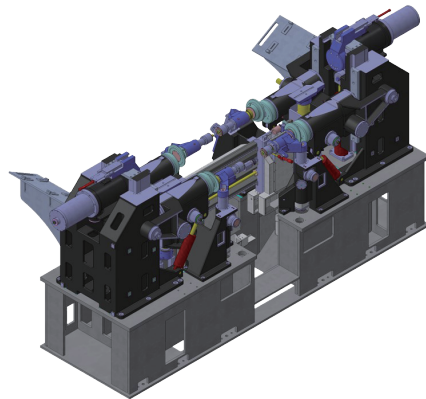
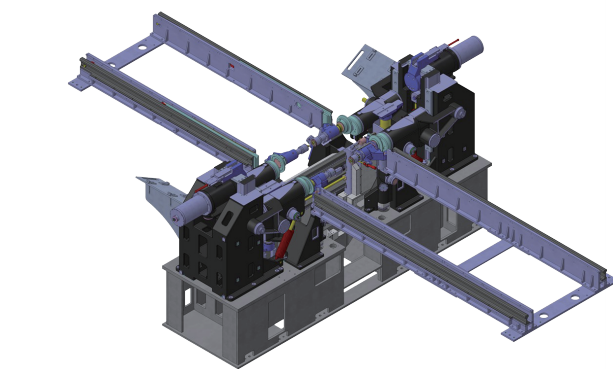
*Custom production is available according to customers requests

CNC Underfloor Wheel Lathe - CNCUWL



CNC Underfloor Wheel Lathe

CNC Underfloor Wheel Lathe is for light maintenance and restores the wheel profile without separating the train and bogie, allowing for wheel re-profiling.



Specification

Category	Content
Track Gauge	1,435mm
Wheel Diameter	700 ~ 1300mm
Main Spindle Rotation Speed	0 ~ 24 rpm(step-less speed change)
Tool Movement Speed	0 ~ 3mm/rev
Cutting Depth	Max 7.5mm
Cutting Time	1Axle 1pass Within 20minutes (Based On Diameter 10mm)

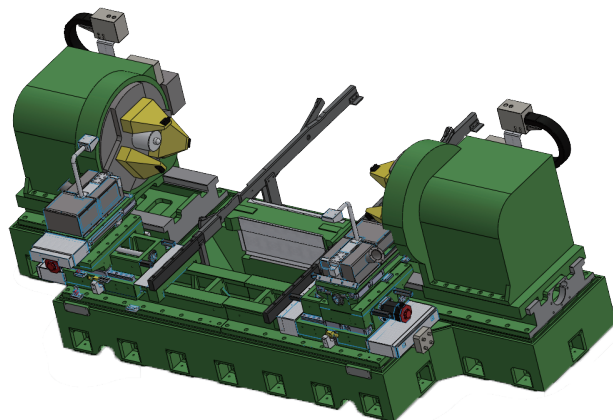
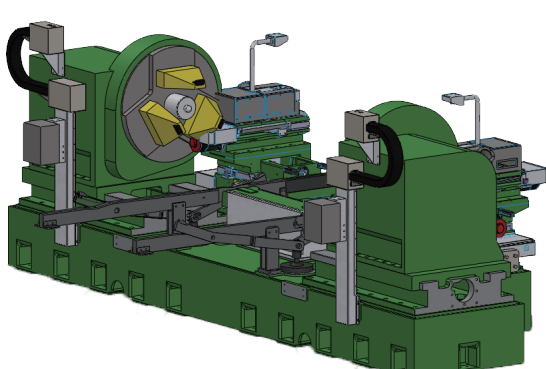
*Custom production is available according to customers requests

CNC Wheel Lathe - CNCWL



CNC Wheel Lathe - CNCWL

CNC Wheel Lathe is for heavy maintenance and restores the original profile shape of wheels from wear with a separated wheelset.



Specification

Category	Content
Gauge	1,435mm
Wheel Diameter	780 ~ 1000mm
Tool Movement Speed	0 ~ 3mm/rev
Main Axis Rotation Speed	0 ~ 24rpm (step-less speed change)
Cutting Depth	Max 10mm
Cutting Time	1Axle 1pass Within 20minutes (Based On Diameter 10mm)

*Custom production is available according to customers requests