

SCL-250S



# CNC "Station Free" Gear Checker

Product Catalog



## Product Features

The SCL-250S is the world's first mobile and ultra-compact tooth profile and tooth-Lead gear checker. This new equipment incorporates a revolutionary in-process system that allows on-site measurement checking immediately after the gear hobbing process, before and after the shaving process or after grinding.

It performs highly accurate measurements and provides space-saving operations at a reasonable cost.

Moreover, the Windows system allows selection between the hard disk drive or flash memory types.

### ■The checker can be moved easily

Casters are attached to the checker so that a single operator can easily move it.



### ■The checker can be installed easily

Floor stoppers are attached to the checker to facilitate installation after being moved.



### ■Vibration- proof during moving

Every axis has a dovetail to keep the slide mechanism stress-free from vibrations during moving.

### ■Metal optical scale

The checker has realized an on-site resolution of  $0.1\mu$  by utilizing the metal optical scale compatible with thermal expansion.

### ■Reduction of the set-up tact for the hobbing/shaving machine

With the checker placed next to the hobbing/shaving machine, the results of setting up for hobbing/shaving can be checked on-site.



### ■Indicator displayed on the screen

Present coordinates can be easily grasped through a variety of digital information displayed on the screen.



### ■Fully digitized with new detector

New digital detector increases accuracy of measurement and repeatable accuracy.



### ■Easy-to-handle clamping mechanism

The center can be easily raised or lowered through a manual operation.

### ■Four-axis complete DDC loop

Improved measurement stability has been achieved by incorporating a four-axis (X, Y, Z,  $\theta$ ) complete DDC loop.



### ■Improved controllability

Improved controllability has been realized by incorporating a specialized control keyboard panel and eliminated mouse operations.

# Product Features

## Mechanical System

- Mirror finish has been provided to the sliding parts of every shaft in every model to increase the resistance to wear. Our proprietary dedicated lapping device has been developed to realize high accuracy and reduced costs for hobbing/shaving.

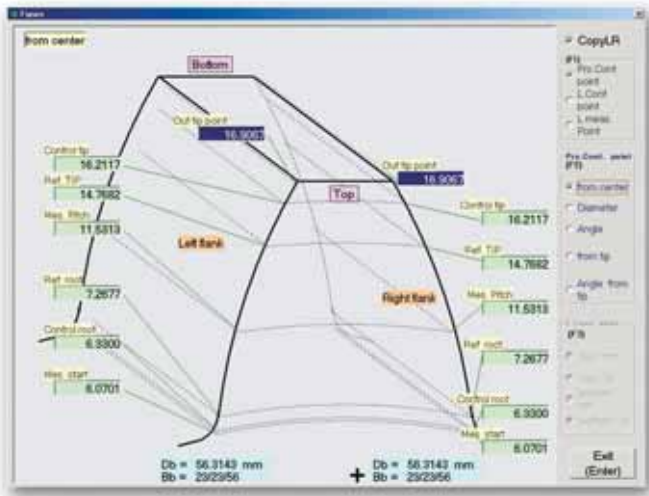
## NC System

- Our original NC unit (BB-2) has been incorporated to build a configuration that can accommodate future expansion.
- Improved maintenance has been achieved by concentrating all connectors in the NC unit installed to the top of the equipment.

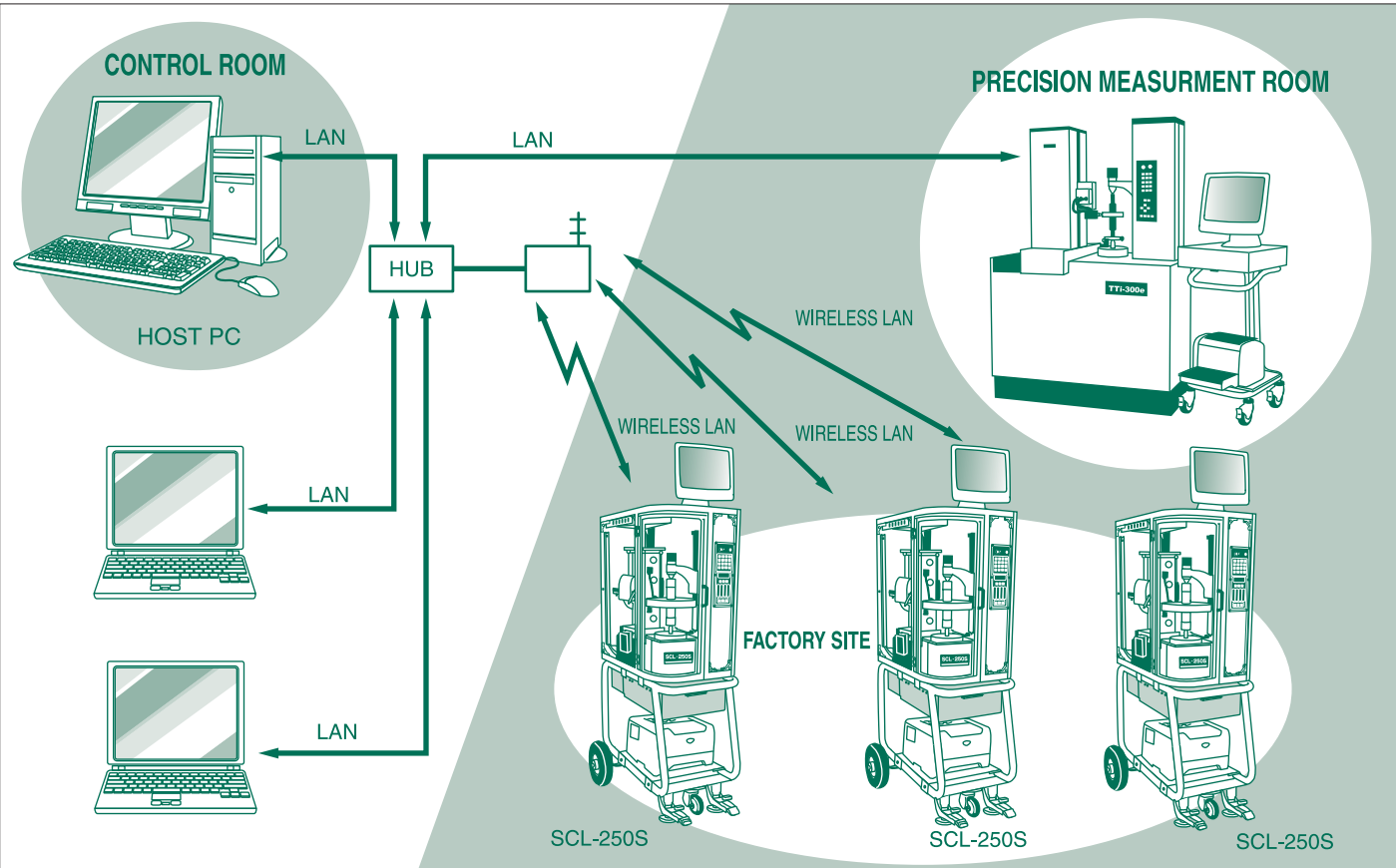


## PC System

- Use of a Windows-compatible program has made it possible to improve controllability and easily analyze the measurement results.
- Wireless LAN is used to enable all measurement specifications and results to be communicated to the host computer.



## LAN Connection Chart



## Content of measurements

## Tooth Profile, Tooth Lead and Measurement of Spur, and Helical Gears

【Measuring mode】

Standard measurement	: Measurement of one to four segments
All teeth measurement	: Measurement of one to all teeth
Three-segment measurement	: Measurement of one to all teeth
Bias measurement	: Measurement of one to four segments
K chart measurement	: Measurement of one to four segments

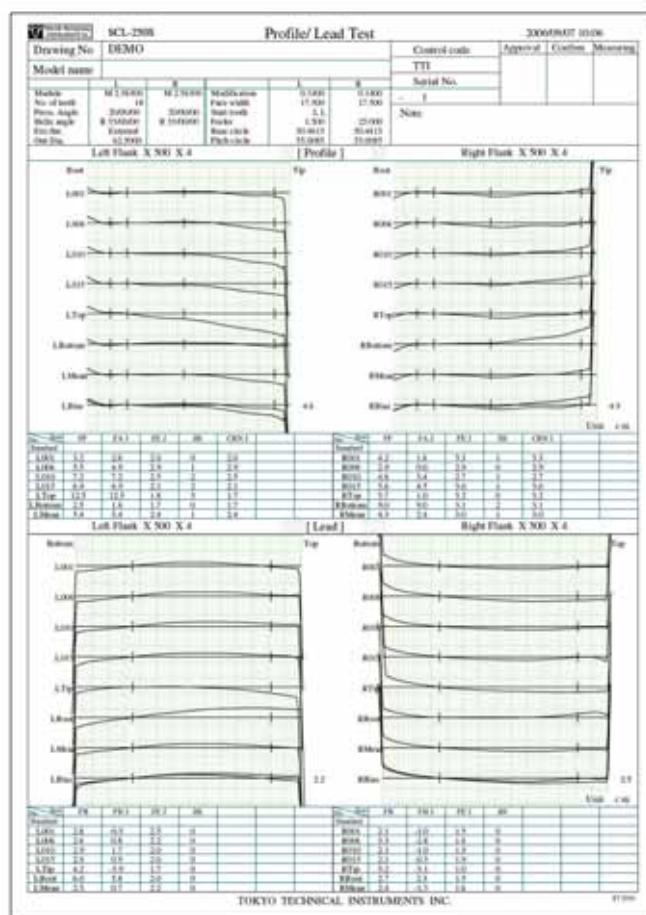
【Evaluation items】

Standard software can evaluate under the various standards indicated below.

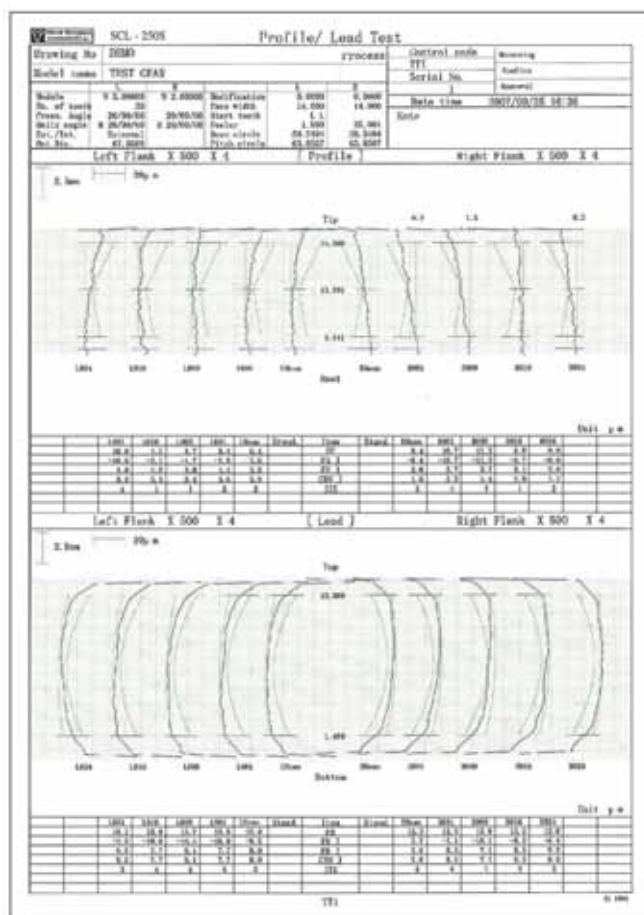
- JIS Standards
- New JIS Standards
- DIN Standards
- ISO Standards
- AGMA Standards
- GB/T Standards



〈Standard mode〉

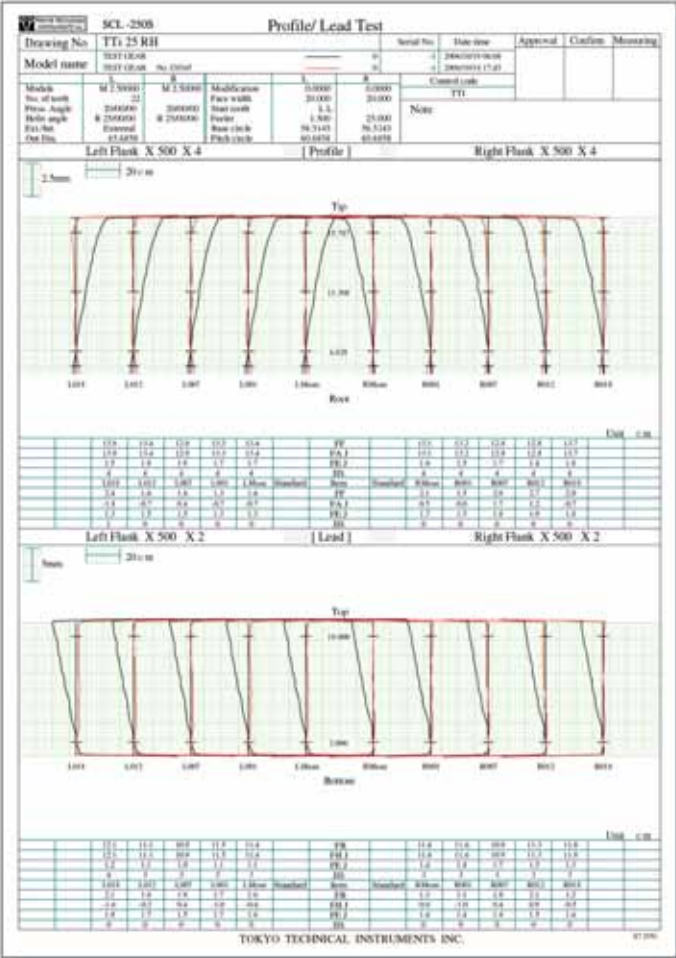


<All tooth mode>



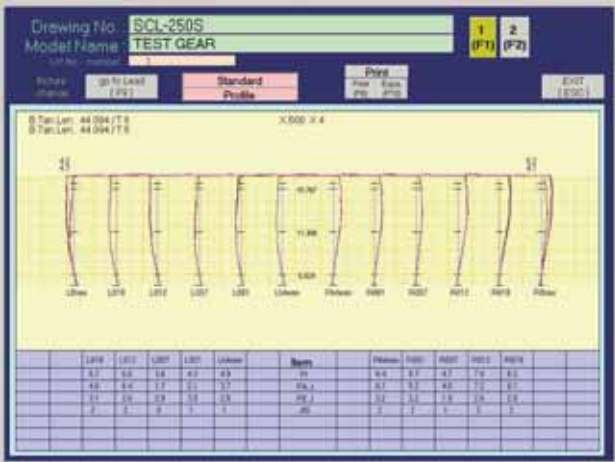
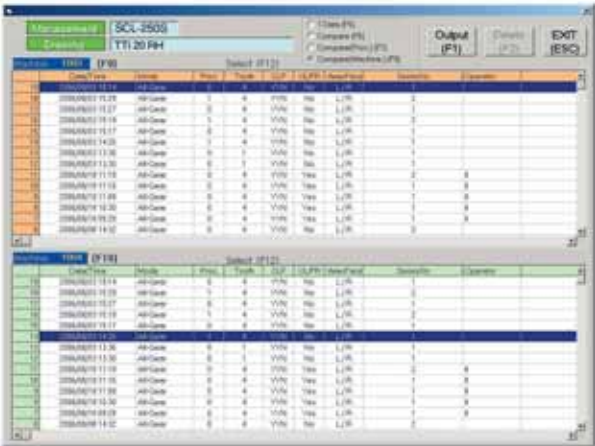
〈K chart mode〉

# Optional Program



〈Compare output〉

■ Measurement of special gears, gear process tools and other items can be performed



## Accessories

### Standard accessories

Electrical hard ware (BB-2 system)	1 set
Stylus (φ0.5, φ0.7, φ1.0, φ1.25, φ1.5, φ2.0)	1 set
Test gear	1 pc
Cylindrical work driver	1 set
Tool	1 set
Operation manual	1 sheet
Inspection report	1 sheet

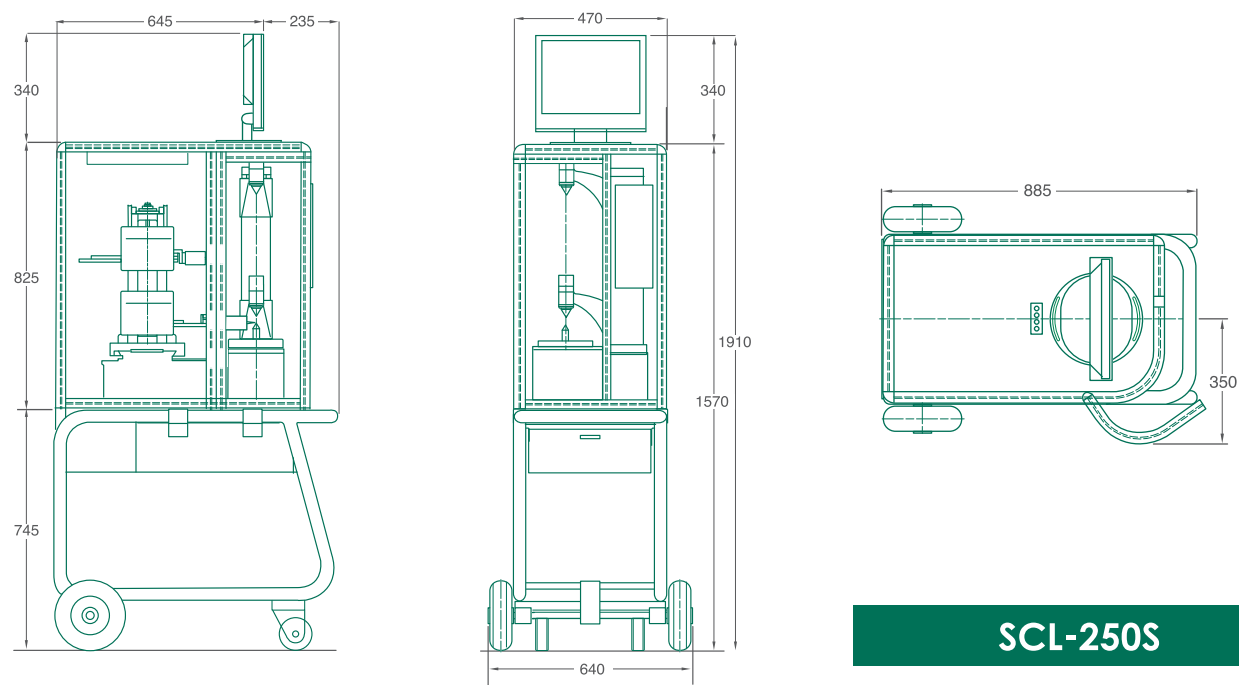
### Special accessories

■ DOS/V PC (Windows)	■ 15-inch color display
■ RS-232C cable	
■ Test mandrel for calibration (φ30 × 200L)	

# Specifications

SCL-250S	
Measurement items	Tooth profile and tooth lead of spur and helical gears
Measurement system	Electronic generating DDC loop system, all-axis closed loop system
Measurement module	0.5 – 4mm
Basic circle diameter	ϕ250mm
Maximum external diameter	ϕ260mm
Helix angle	±45°
Measurable gear width	Maximum 200mm
Measurable gear length	10-400mm
Measurable gear weight	Maximum 25kg
Drive system	Constant-current drive
Operating system	DOS/V Windows
Machine weight	Approximately 140kg
Paint color	Original Tokyo Technical colors
Power supply	AC85-250V, 50/60Hz, 3A

# Dimensions



SCL-250S



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ISO9001認定取得



組織名	足利工場
対象範囲	CNC歯車試験機の設計 開発から製造販売まで

200904200