

National Type Evaluation Program
Certificate of Conformance
for Weighing and Measuring Devices

For:

Multiple Dimension Measuring Device
Model: CS5200, CSN210 series
Maximum: (see below)
Minimum: (see below)
d_{min}: 0.2 inch for Length, Width and Height

Submitted by:

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Standard Features and Options

*Dynamic Dimensioning of cuboidal packages/objects only.

*Packages /objects are allowed to touch, but not to be stacked on top of one another.

Standard Features: This system consists of a minimum amount of required equipment: The CS5200 is a stand alone dimensioner using patented PILAR® technology. The CS5200, CSN210 uses an Infrared laser with parallel beams of light to detect the top and all four sides of the objects being measured. The only other required device is a belt contact tachometer. The dimension data and message codes are output to a host device or simple display.

Dimensioning Designation:

Length= longest dimension in the horizontal axis. Width is the second longest dimension in a horizontal axis. Height is the height from the top of the belt and up.

Dimensions/ Axis	Minimum	Maximum	Maximum Velocity
Length	2.4 in	144 in	36 ft/min to under 400 ft/min.
Width	2.4 in	54 in	
Height	2.4 in	36 in	
Length	2.4 in	82 in	400 ft/min to 600 ft/min.
Width	2.4 in	36 in	
Height	2.4 in	36 in	

RS 232 communication port.

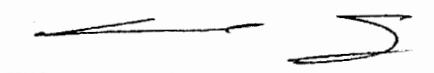
Minimum operating requirements and screen explanations: see the "Operation" section on page two.

Options:

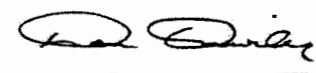
The CS5200, CSN210 is available in three different models, depending on the width of the conveyor belt; CS5200.1, CSN210.1 for belt widths up to 24 inches; CS5200.2, CSN210.2 for belt widths up to 48 inches; and CS5200.3, CSN210.3 for belt widths up to 72 inches. The Mettler Toledo CSM software is an example of a PC application that allows viewing of the dimension data sent by the CS5200, CSN210. For stand alone systems, without a PC, a simple display can be used to display the dimensions.

Temperature Range: -10 °C to 40 °C (14 °F to 104 °F)

This device was evaluated under the National Type Evaluation Program (NTEP) and was found to comply with the applicable technical requirements of Handbook 44, "Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.



Mike Cleary
Chairman, NCWM, Inc.



Don Onwiler
Chairman, National Type Evaluation Program Committee

Issue date: December 14, 2006

Note: The National Conference on Weights and Measures does not "approve", "recommend", or "endorse" any proprietary product or material, either as a single item or as a class or group. Results shall not be used in advertising or sales promotion to indicate explicit or implicit endorsement of the product or material by the NCWM.

Mettler-Toledo, Inc
Multiple Dimension Measuring Device
Model: CS5200, CSN210

Application: The CS5200, CSN210 is used to calculate the dimensions of an opaque hexahedron object. More than one object can be (scanned) measured simultaneously. The edges or surfaces of the objects being measured can be touching. Objects can not be stacked.

Identification: The required information appears on an adhesive badge attached to the side of the device housing.

Sealing: The Device is sealed by threading a wire through two bolts heads after setup is complete.

Operation:

The dynamic dimensioning system works with conveyor systems. Objects must pass on the conveyor below the dimensioner. A belt contact tachometer is mounted in a location that allows it to contact the belt. Normally the tachometer is mounted on the underside of the conveyor, contacting the bottom side of the conveyor belt.

The dimension data and message codes are output to a PC or simple display. The majority of applications will have a PC running Mettler-Toledo CSM software. This software is used to display the dimension data and can also be used to collect and merge barcode data (optional) and weight data from a scale (optional).

Test Conditions: For the purpose of this evaluation, CS5200 was submitted for evaluation. The CS5200 is a version of the CS900 (05-030P) except the dimensioning device is at a 90 degree angle to the belt. The emphasis of the evaluation was on device design, marking, operation, and to increase the belt speed. Several measurements were performed near maximum, near minimum, and near mid-range for the range listed. Additionally, data from the CS 900 and a letter from the manufacture stating there is no metrological difference in software from the CS900 was used.

NOTE: This Certificate is issued as a provisional NTEP Certificate of Conformance (CC). This evaluation is based on the current draft checklist, procedures and technical policy contained in NCWM Publication 14 for this device type. When work on the NCWM Publication 14 section for this device is completed, the test report and this NTEP CC will be reviewed. If all current requirements have been met by this evaluation, the provisional status will be removed.

Evaluated By: T. Lucas (OH)

Type Evaluation Criteria Used: NIST Handbook 44, 2006 Edition; NCWM Publication 14, 2006 Edition

Conclusion: The results of the evaluations and information provided by the manufacturer indicate the devices comply with applicable requirements.

Information Reviewed By: S. Patoray (NCWM), L. Bernetich (NCWM)

Example of CS5200:

