DANAK
PROD Reg. nr 7026

FORCE Certification

EU Type Examination Certificate

No. 0200-MID-12113

EasyCube S / EasyCube SD

MULTI-DIMENSIONAL MEASURING INSTRUMENT

Issued by **FORCE Certification**
EU - Notified Body No. 0200

In accordance with the requirements in Directive 2014/32/EU of the European Parliament and Council.

Issued to **Tüm Elektronik Mühendislik San. ve Tic. Ltd. Sti.**
IDOSB, Kazlicesme Cad(1. Yol). Özel H7 Parsel NO:48,
Orhanli 34956 Tuzla,
Istanbul
Turkey

In respect of A semi-automatic multi-dimensional measuring instrument designated EasyCube S / EasyCube SD for measuring dimensions of rectangular, non-rectangular and irregular shaped objects. The instrument is measuring static.
Maximum dimensions: 80 × 60 × 105 cm (L × W × H)
Scale interval (d): 0.5 × 0.5 × 0.5 cm (L × W × H)

The conformity with the essential requirements in annex 1 and the specific requirements in annex XI, chapter I & IV of Directive 2014/32/EU is met by the application of OIML R129:2000, OIML D11:2004 section 12 & 13 with severity level 3, WELMEC Guide 7.2:2020 and WELMEC Guide 8.19-3:2006. The principal characteristics and approval conditions are set out in the descriptive annex to this certificate.

The annex comprises 10 pages.

Issued on **2022-02-24**
Valid until **2032-02-24**

Jens Hovgård Jensen
2022-02-24

Digitally signed by Jens Hovgård Jensen
jhje@force.dk
Certification Manager

FORCE Certification references:
Task no.: 119-28451.90.10 and ID no.: 0200-NAWI-12113-1 **Signatory: Jens Hovgård Jensen**

Descriptive annex

Contents

1. Name and type of instrument

The multi-dimensional measuring instrument is designated EasyCube S / EasyCube SD and is intended for scanning the dimensions of objects up to 80 × 60 × 105 cm (L × W × H).

The instrument uses an RGB-D camera to measure length, width and height of boxes positioned on a platform below the camera. The camera is mounted in a box above the platform.

2. Description of the construction and function

2.1 Construction

2.1.1 System

The measurement of the multi-dimensional measuring instruments is performed by a dimensioner head – named EasyCube SD. The dimensioner head can be placed mounted on a wall or in the ceiling. Alternately it can be delivered mounted on a pole which is mounted together with a platform for the objects to be measured. The platform may be a scale for determine the weight of the objects. This model is called EasyCube S.

2.1.2 Dimensioner head

The dimensioner head of the instrument is designated EasyCube SD. The head contains an RGB-D camera for measuring the dimensions of the object on the platform.

2.1.3 Display / Keyboard / Control

The result of the measurement process is shown on a 10” touch screen mounted on the pole for the EasyCube S model. The touch screen is also used for setup of the instrument.
Alternately can the dimensioner head be accessed via web interface and measurement data can be send to another computer.
A handheld barcode scanner can be connected to the system.

2.1.4 Platform

The platform on which the objects are measured can be a scale. The scale is not part of this certificate..

2.2 Function

The Easycube SD measures the dimension of an object when it is placed in a defined measurement area. The measurement area is adjusted to the maximum dimensions for the instrument.

2.2.1 Power up

At power up the EasyCube SD will perform a self-check.

2.2.2 Data capture

The software of the instrument includes a data storage device working as an alibi memory in which all performed measurements are stored.
The data can be retrieved via the user interface or the WEB interface or downloaded as a file. The data is protected by a checksum.

2.2.3 Event log with counter

The system has an event log with a counter, called Calibration Reference. The number is a 16-digit number generated as a combination of two numbers, the first 8 digits indicating the Calibration Date, the other 8 digits indicating the randomly generated non-resettable, non-reversible Calibration Counter. An inscription plate and a label indicating the Calibration Counter reading at the Calibration Date are affixed on the instrument.

The event log can be accessed via the “Device info” Tab in the INFO menu.

2.2.4 Operator information messages

The instrument has a number of error messages, which are described in the user manual.

2.2.5 Trigger mode

A measurement can be performed in several ways.
Barcode scanner mode: A measurement is performed when a barcode is scanned with the connected scanner.
Automatic triggering mode: Whenever an object is placed in the measurement area the dimensions are measured and shown.
Scale triggering mode: When an object is placed on the scale and weight indication changes from zero a measurement is automatically triggered.

2.2.6 Connection to a NAWI

The system can be connected to a non-automatic platform scale, so the weight of the measured object can be captured and stored together with the dimensions.

2.2.7 Connection to barcode scanner

The system can be connected to a barcode scanner for identifying of the measured object.

2.2.8 Software version

The software version is shown via the “System Information” key in the main menu.
The approved software version is 3.0 with checksum ‘981b1a3c3f574964feb16d47a856bd97’.

3. Technical data

The multi-dimensional measuring instrument has the following characteristics:

3.1 Model EasyCube S / EasyCube SD

Operation mode:	Semi-automatic
Scale interval (d):	0.5 × 0.5 × 0.5 cm (L × W × H)
Minimum object size:	5 × 5 × 5 cm (L × W × H)
Maximum object size:	80 × 60 × 105 cm (L × W × H)
Power supply:	100-240 VAC, 50/60 Hz
Electromagnetic class:	E2
Temperature range:	0°C to 35°C
Humidity:	Non-condensing
Principle of measurement:	3D RGB-D camera
Peripheral interface:	Set out in Section 4

4. Communication interfaces

The EasyCube S / EasyCube SD uses the following interfaces:

- Ethernet interface for connection to a PC or web interface
- WiFi
- USB for connection to a barcode reader, printer and touch screen monitor or the optional NAWI.

The interfaces are characterised "Protective interfaces" according to paragraph 8.4 of annex I of the Directive.

5. Conditions for certification

5.1 Limitations of measurements

The instrument cannot measure on transparent surfaces.

6. Special conditions for verification

None

7. Securing and location of seals and verification marks

7.1 Securing and sealing

Seals shall bear the verification mark of a notified body or alternative mark of the manufacturer according to ANNEX II, module F or D of Directive 2014/32/EU.

7.1.1 Mechanical sealing

The identification plate shall be secured against removal with a tamper evident sticker.
The electronics shall be protected by using tamper evident stickers over one of the screws for the lid of the housing for the dimensioner head.

7.1.2 Electronic sealing

The instrument has a calibration counter called “Calibration Reference”. After verification the number is written on a tamperproof label positioned next to the rating plate.
The number can be found in the “Device Info” tab in the “Info” menu.

8. Location of CE mark of conformity and inscriptions

8.1 Identification plate

All inscriptions for the instrument shall be placed on the identification plate, which shall be located visible on the instrument.

8.1.1 CE mark

The CE mark of conformity and the supplementary metrological marking according to article 20 of Directive 2014/32/EU shall be located on the identification plate.

8.1.2 Inscriptions

The identification plate shall bear the following inscriptions,

- Manufacturer's trademark and/or name
- Postal address of manufacturer
- Type designation
- Serial number
- d, Min, and Max for each dimension
- Temperature range: 0 / 35 °C
- Electromagnetic class: E2
- Humidity: Non-condensing
- Type examination certificate number

9. Pictures

Figure 1 EasyCube SD, Dimensioner head.

Figure 2 EasyCube S

Figure 3 Sealing of Dimensioner head.

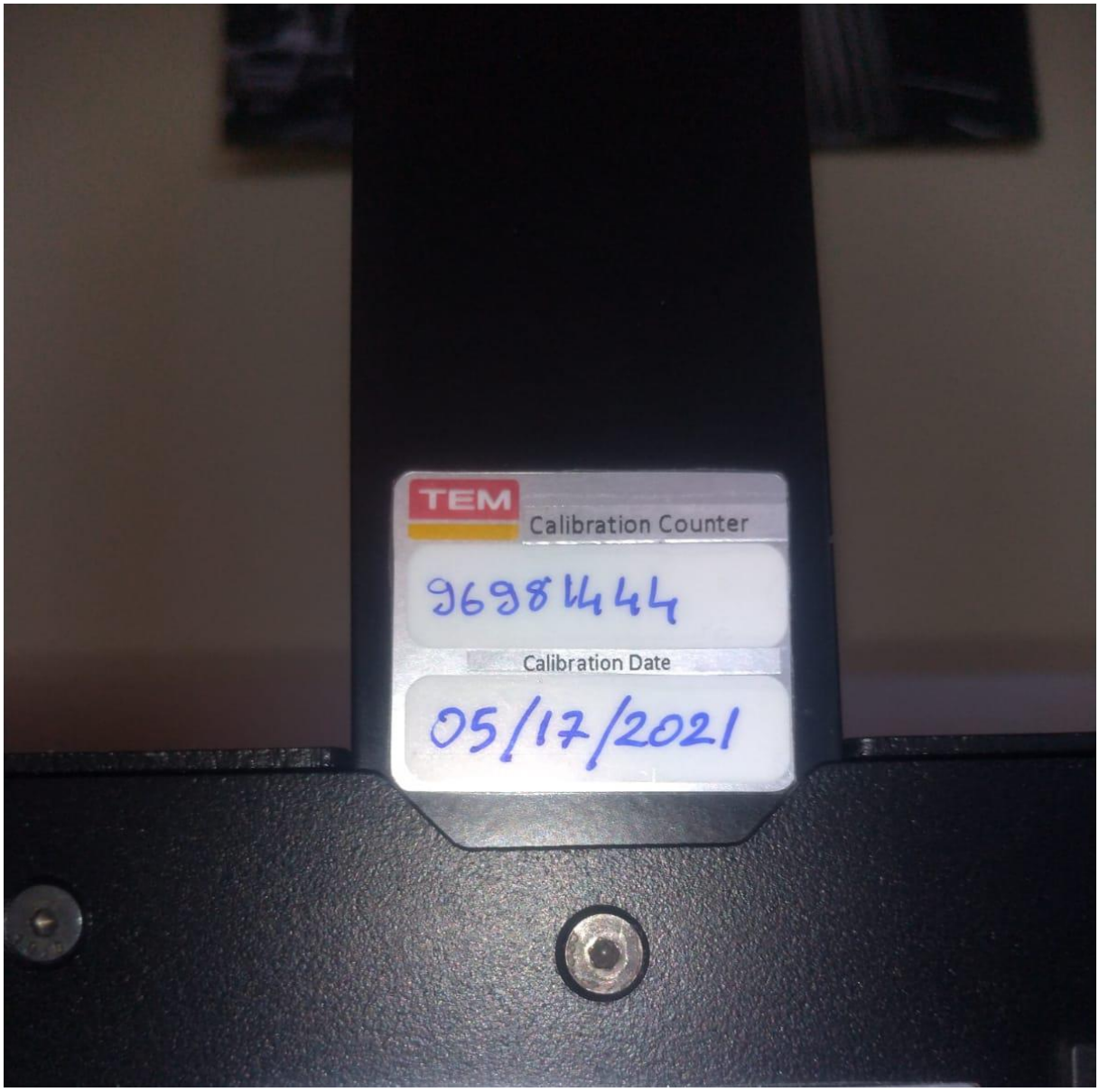
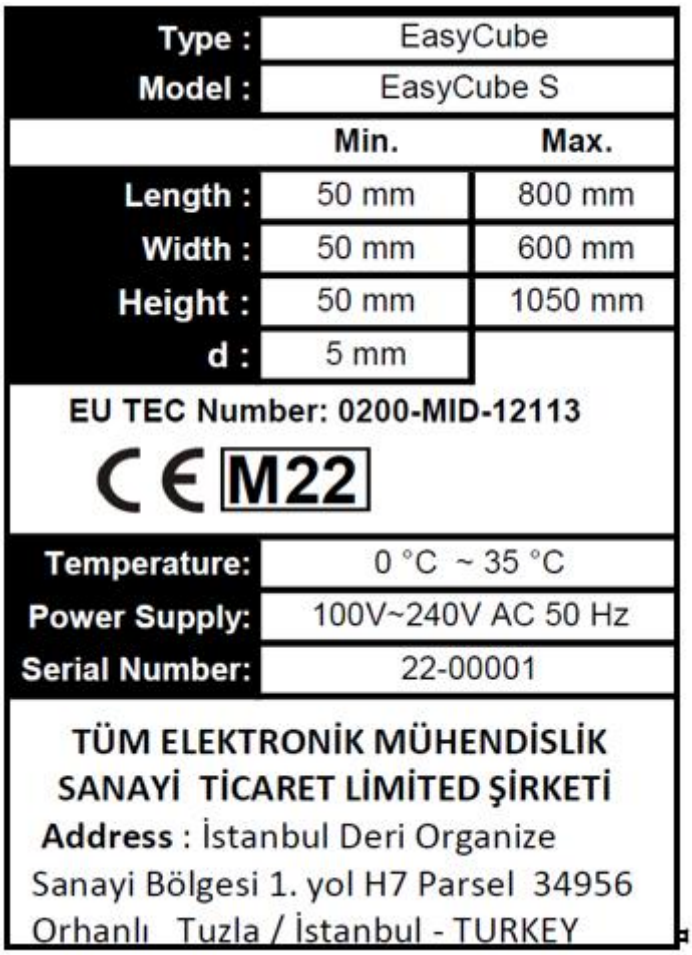


Figure 4 Sample of Calibration Reference label.



Type :	EasyCube	
Model :	EasyCube S	
	Min.	Max.
Length :	50 mm	800 mm
Width :	50 mm	600 mm
Height :	50 mm	1050 mm
d :	5 mm	

EU TEC Number: 0200-MID-12113

CE M22

Temperature:	0 °C ~ 35 °C
Power Supply:	100V~240V AC 50 Hz
Serial Number:	22-00001

TÜM ELEKTRONİK MÜHENDİSLİK
SANAYİ TİCARET LİMİTED ŞİRKETİ
Address : İstanbul Deri Organize
Sanayi Bölgesi 1. yol H7 Parsel 34956
Orhanlı Tuzla / İstanbul - TURKEY

Figure 5 Sample of rating plate.