

Certificate Number : 230911-44

Test Date : 12-05-2023

Case Number : 230512-32

Burglary resistance test report according to the EN1627:2021 standard." (RC2 category).

Summary

A resistance test of the door against burglary was carried out according to EN 1627:2021 (RC2 category).

The test object met the requirements according to EN 1627:2021 (RC2 category).

1. Introduction

Following an order by the company "METAL SYSTEM' CHOSTELIDIS BROS GP", a burglary resistance test was conducted on the door according to EN 1627:2021 (RC2 category). The purpose of the test was to evaluate whether the test object met the requirements for classification in the RC2 category.

2. Test Object

Manufacturer "METAL SYSTEM' CHOSTELIDIS BROS GP" PAPAGOU EYOSMOS

Subject to be tested: 1 Metal Safety Door

Sample description: Door classified in Group 1 according to the EN 1627:2021 standard.

Technical documentation: See Appendix I.

Sample description: See Appendix I.

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Designs: See Appendix I.

Testing location: At the manufacturer's facilities.

Selection of the test object: The test object was chosen by the customer without the involvement of the test supervisor.

Tested object/product: The door designated as MS17 is constructed from structural steel. Refer to the relevant designs in Appendix 1 for details.

Total width: 993 mm.

Total height: 2123 mm.

Lock type: SECUREMME DX/REVERSIBLE/SX/CR/S.3

Hinges type: 2 pieces own construction

Cylinder: SECUREMME with key from both sides

3. Test Method and Evaluation

Test Method: Burglary resistance test according to the standards:

- EN 1628:2021 "Pedestrian door sets, windows, curtain walling, grilles and shutters - Burglar Resistance - Test method for the determination of resistance under static load".
- EN 1629:2021 "Pedestrian door sets, windows, curtain walling, grilles and shutters - Burglar Resistance - Test method for the determination of resistance under dynamic loading.
- EN 1630:2021 "Pedestrian door sets, windows, curtain walling, grilles and shutters - Burglar Resistance - Test method for the determination of resistance to manual burglary attempts".

Test Date: 12/5/2023

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Test location: At the manufacturer's facilities

Test supervisor: Pavlos Topalidis, Mechanical Engineer, Aristotle University of Thessaloniki.

Timer: Pavlos Topalidis, Mechanical Engineer, Aristotle University of Thessaloniki.

Ambient temperature: 20.5° C.

Relative humidity: 27 %.

Photographs: Yes

Document evaluation: The documents in Appendix I meet the requirements of EN 1627:2021.

4. Test Results

The results mentioned apply only to the tested sample and are valid only under the conditions in which the test was conducted.

4.1 Static Load According to EN 1628:2021

Table 1. Static load according to EN 1628:2021

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Load Position		Load [kN]	Opening clearance max	Results
Between the locks	From inside	1,5	15 mm	OK
Lock bolts at the top of the door	From inside	3	10mm	OK
Lock bolts at the middle of the door	From inside	3	10mm	OK
Lock bolts at the bottom of the door	From inside	3	10mm	OK
At the hinges of the door	From inside	3	10mm	OK

The requirements of EN 1627 for static load, resistance category RC3, **are met**.

4.2 Dynamic Load According to EN 1629:2021

Table 2. Dynamic load according to EN 1629:2021

Mass of the pendulum impactor:	50 kg
Drop height [mm]	450 mm

A pendulum hammer, with a mass of 50 kg, according to EN 1629:2021, fell from a height of 450 mm once at each corner of the door and three times at the center. The impact direction was towards the hinged side. The opening clearance gauge D did not pass through any opening of the door during the test when a force of 200 N was applied directly to the door surface. The dynamic load was tested from both sides. The requirements of EN 1627:2011 for dynamic load, **resistance category RC2, were met** from both sides.

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Zone Of Attack	Instrument used	Application time [min' s'']	Results
Hinges	Hand Axe	2,08	Hinges were not damaged. Passed.
Locks	Screwdriver, chisel	4.04 / 5,00	Locks were not damaged. Passed.
Locks	Hand Drill	4,07 / 5,00	Locks were not damaged. Passed.

4.3 . Manual burglary attempt according to EN 1630:2021

Table 3. Manual burglary attempt according to EN 1630:2021

The requirements of EN 1627:2021 for a manual burglary attempt, resistance category RC3, *are met.*

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4.4 Classification

The test sample underwent the described tests as stipulated in EN 1627:2021 and was deemed to meet the requirements of the resistance category outlined below. The door is classified from both sides.

EN 1627:2011 RC2

Any additional changes in the design/construction are only allowed after written permission and/or testing by the testing laboratory (see EN 1627:2021, Appendix D).

The results of the test presented in this report are specific to the tested sample.

5 . Measurement of uncertainty

The uncertainty of the load measurement: $S = 1.3\%$, and the uncertainty of deformation measurement: $S = 1.6\%$.

The reported uncertainty corresponds to a 95% confidence interval around the measured value. The interval has been calculated by quadratically summing the actual standard uncertainties and multiplying the combined standard uncertainty by a coverage factor $k=2$.

Test Supervisor

Topalidis Pavlos

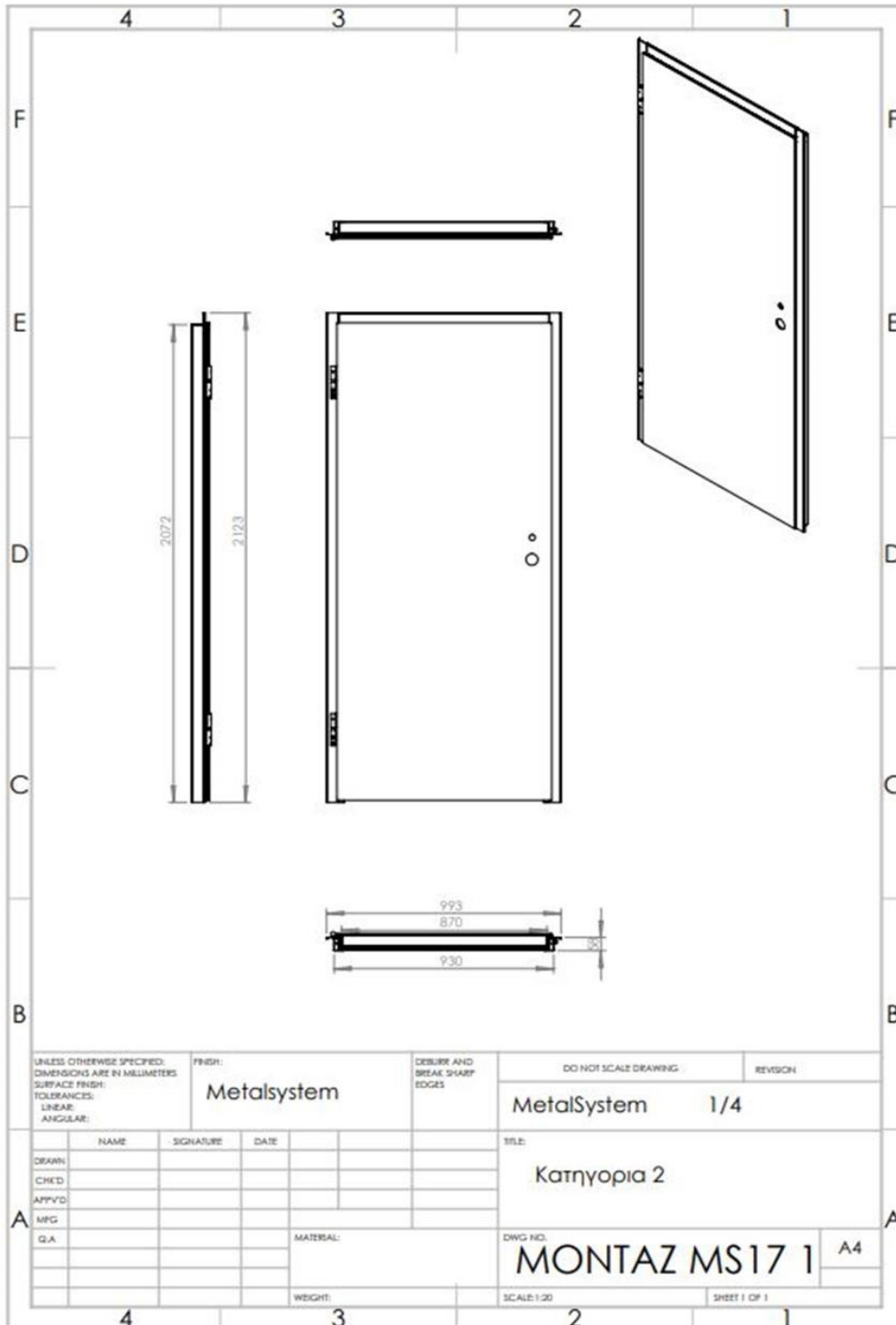
Dipl. Mechanical Engineer A.U.Th.

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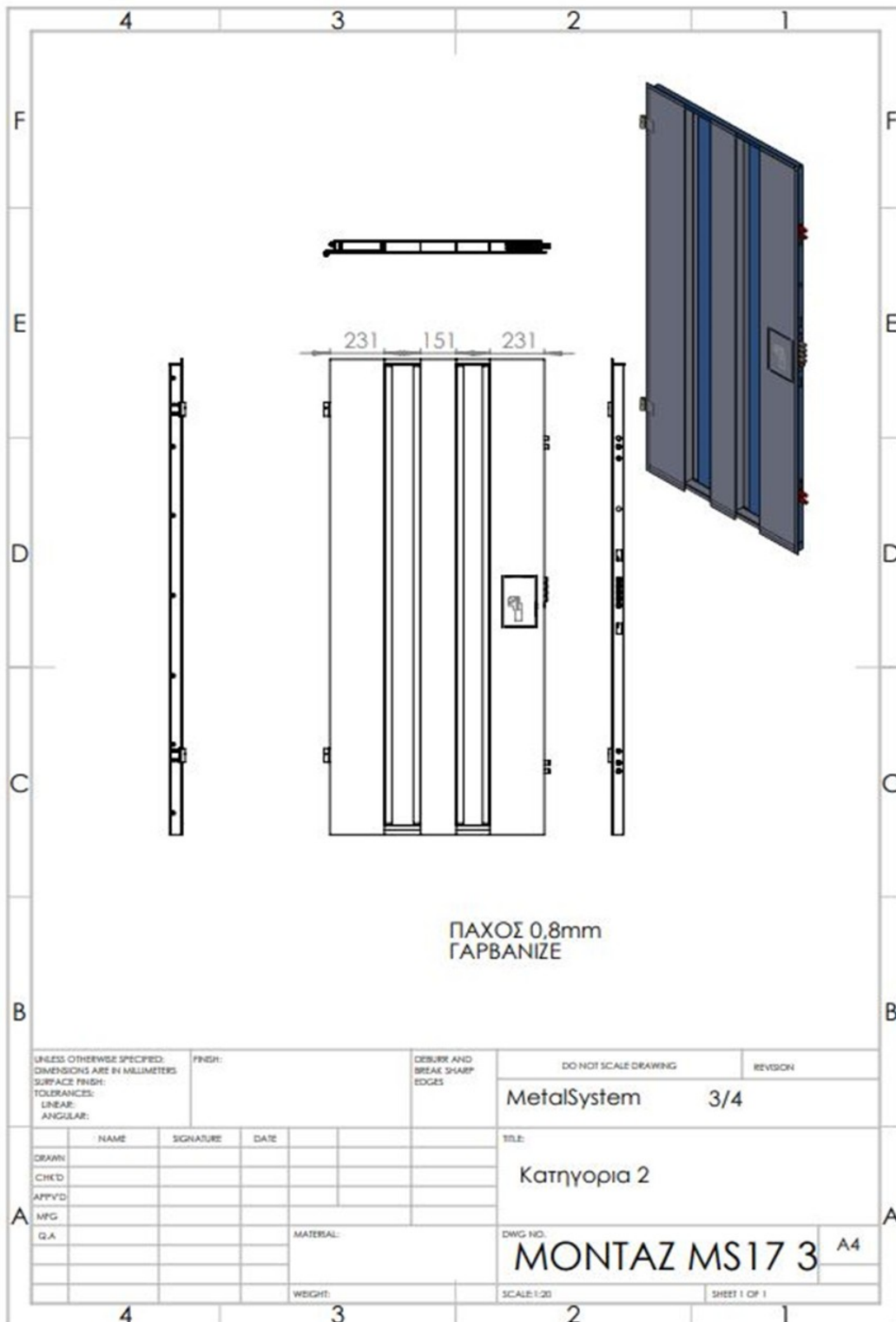
Appendix I : Drawings



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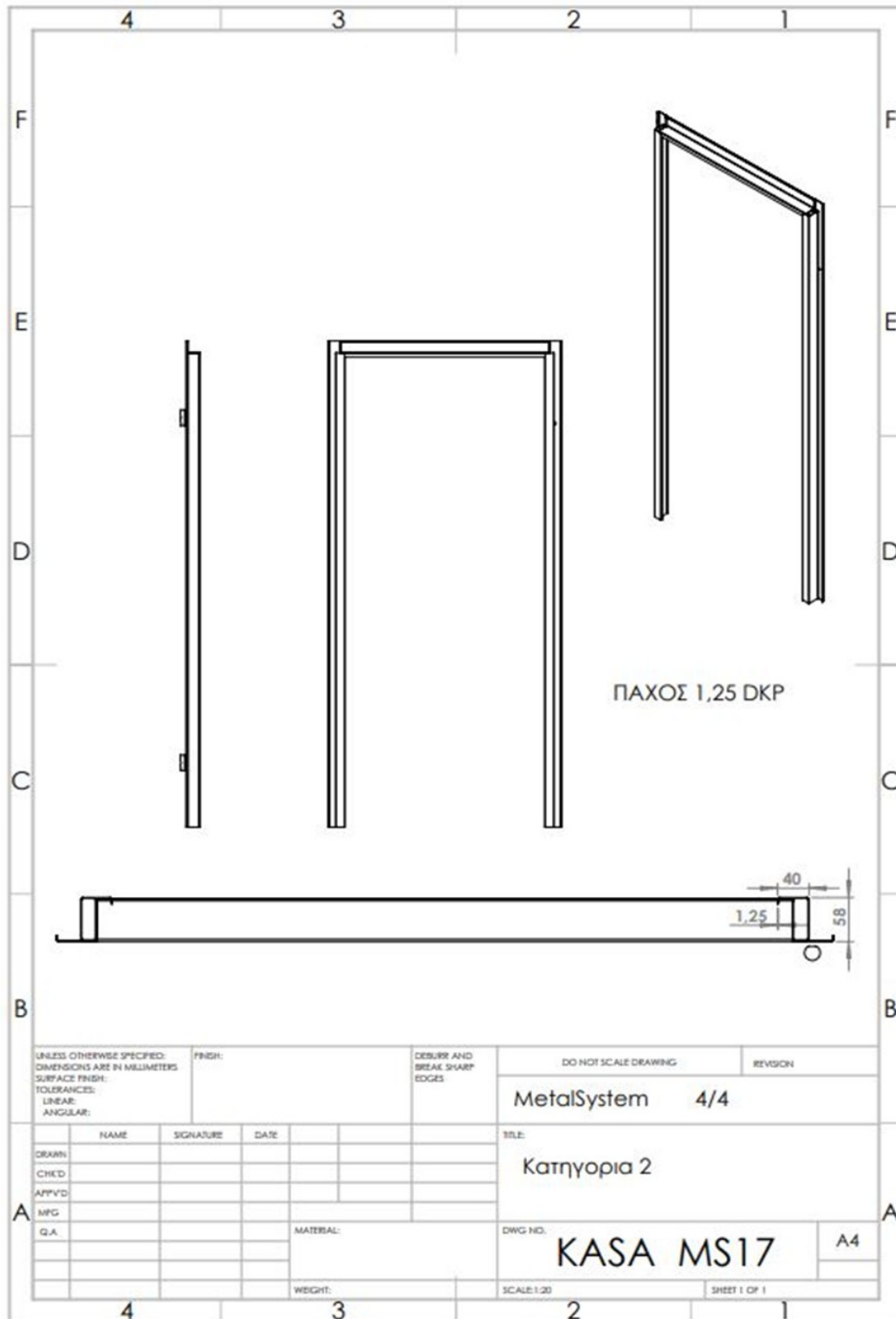
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The Laboratory Supervisor



The Laboratory Supervisor

Nikos Chatzopoulos

Chemical Engineer, National Technical University of Athens

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