

Hi-Con ApS
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Test of resistance against bullet attack according to SS EN 1522:1998

(1 appendix)

Conclusion

RISE has performed tests of Hi-Con ApS concrete panel for building systems with respect to resistance against bullet attack. The tested panel designated DI0005, 75 mm fulfils the requirements according to SS-EN 1522:1998 “*Windows, doors, shutters and blinds – Bullet resistance – requirements and classification*” Annex C – panel, class FB7(NS).

1 Introduction

At the request of Hi-Con ApS, RISE has performed a test of a concrete panel for building systems with respect to resistance against bullet attack.

2 Test method

The tests are performed according to SS-EN 1523:1998 “*Windows, doors, shutters and blinds – Bullet resistance – test method*” Annex C - panel.

3 Test object

Hi-Con bullet resistant concrete panel for building systems designated DI0005, 75 mm, made of reinforced concrete with dimension 800x800x75mm and a weight of 140 kg see photos 1 and 2 and drawing in appendix 1.

The test object was delivered to RISE Ballistic Test Laboratory, Varberg Sweden 2025-05-06, the temperature was after that within the conditioning requirements until testing.

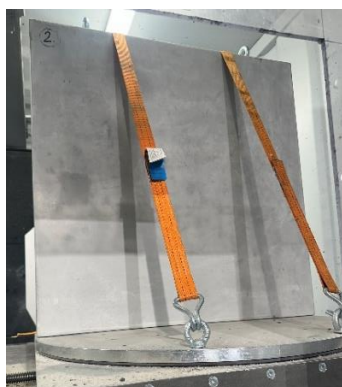


Photo 1. Test object



Photo 2. Test object

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4 Accomplishment and results

The results reported relate only to the tested sample and are valid only in conditions in which the test was performed. The tests were performed at RISE Ballistic Test Laboratory in Varberg, Sweden 2025-05-07. The test object was mounted with witness foil according to the standard and the test range was measured to 5 m. The velocity of the bullet was measured within 2,5m in front of the attack face of the test specimen. Test area, target points and weak spots were determined by RISE see photo 3. Type of ammunition was determined according to SS-EN 1522:1998 for class FB7, 7.62 x 51 FJ⁽²⁾/PB/HC1 (FJ⁽²⁾=full copper alloy jacket).

Table 1. Test results DI0005, 75 mm

Test Area	Test range (m)	Strike (No)	Ammunition	Bullet Velocity (m/s)	Striking distance (mm)	Remarks
See photo 3	5	1	7,62x51	824	>120	OK – Non Splinter
		2	7,62x51	824		OK – Non Splinter
		3	7,62x51	822		OK – Non Splinter

Requirements fulfilled for class FB7(NS).



Photo 3. Target points



Photo 4. Target points

5 Classification

The test object was subjected to the described tests defined in SS-EN 1522:1998 and was judged to fulfil the requirements of the resistance class given below. The panel is classified for attack from both sides.

FB7(NS)

Any additional change in design / construction is only allowed upon written permission and/or testing by the testing laboratory (see SS-EN 1522:1998, Clause 7).

6 Measurement uncertainty

The measurement uncertainty for the tests is shown in table 2 below.

Table 2. The measurement uncertainty of measured value.

Measurement	Uncertainty
Test range	± 10 mm
Striking distance	± 0.1 mm
Bullet velocity	± 1 m/s

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Appendix

Drawing of test object.

Appendix 1

