

# TTZ GUIDELINE FOR SECURITY PERFORMANCE OF GARAGE DOORS

Contents	Page
1 Application	2
2 Definitions	2
3 Preparation and examination of the test specimen	3
3.1 Test rig	3
3.2 Test team	3
3.3 Test conditions	3
3.4 Application of instrumentation	3
4. Test specimen	3
5. Test method	4
5.1 Static loading test	4
5.1.1 Loading points	4
5.1.2 Test sequence	4
5.1.3 Timing	4
5.2 Manual test	4
5.2.1 Loading points	4
5.2.2 Attack side	4
5.2.3 Test sequence	4
5.2.4 Time for attacks	5
6. Tool set	5
7. Certification of test results	5
7.1 Security performance	5
7.2 Test report and certificate	5

An electronic version of the *ttz Guideline for security performance of Garage Doors* is also available.

You can download the electronic version of the *ttz Guideline for security performance of Garage Doors* directly from our website at [www.ttz-online.de](http://www.ttz-online.de) or order it from TÜV NORD CERT GmbH, Essen, Germany.

## 1. Application

The *ttz Guideline for security performance of Garage Doors* describes test specifications for analysing and evaluating the security performance of garage doors in relation to the attack by an "opportunist burglar".

## 2. Definitions

The following definitions apply for this test requirement:

2.1 Attack side: The side of the test specimen exposed to the attack as specified by the applicant

2.2 Test specimen: A complete and fully operating garage door

2.3 Auxiliary rig: A circular frame in which the customer installs the test specimen regarding the manufacturer's assembly instructions. The auxiliary frame is supplied by the customer and represents different types of wall constructions.

2.4 Test rig: A stable, circular steel frame with moveable cross beams to support an auxiliary rig fitted with test specimen of different sizes.

2.5 Tool set: A selection of tools that are used for the test.

2.6 Resistance time: The inspector's working time during the manual test without interruption.

2.7 Passage opening: An opening, through which a template with the following dimensions can be pushed:

- Rectangular cross section measuring 400 mm x 250 mm
- or
- Elliptical cross section measuring 400 mm x 300 mm
- or
- Circular cross section with a diameter of 350 mm

### **3. Preparation and examination of the test specimen**

#### **3.1 Test rig**

The test rig should be a self contained and stable steel frame fitted with moveable cross beams in which the test specimen of different sizes can be fitted. All the connection parts, especially the corner connections, must withstand the test loads applied during the test.

The test rig may neither obstruct nor prevent the test sequence.

#### **3.2 Test team**

The test team comprises one qualified employee.

#### **3.3 Test conditions**

The test room temperature is between 0°C and 40°C.

#### **3.4 Application of instrumentation**

##### **3.4.1 Measuring equipment**

The following measuring equipment is required:

- Stop watch for measuring the resistance time
- Calibrated hydraulic pump (with pressure display) to apply the static force

##### **3.4.2 Video recording**

The test must be recorded using a video recorder. The video tape (or the data carrier) and all copies may neither be published nor presented in public.

##### **3.4.3 Technical documentation**

A drawing of the test specimen must be made available to the test house.

The measuring and recording equipment for the test is supplied by the TÜV Nord CERT GmbH.

### **4. Test specimen**

The test specimen must be a complete and fully operating garage door.

The test specimen must be fitted by the customer perpendicularly and without distortion into an auxiliary rig. The installation is carried out in accordance to the manufacturer's assembly instructions. The necessary fastening equipment, e. g. back supports, seals etc. for fitting, must be made available.

The test specimen measures 2500 mm x 2125 mm and is representative.

The applicant must supply the test house with two test specimen.

## 5. Test method

### 5.1 Static loading test

The door must correspond to at least wind class 2 (in accordance with DIN EN 13241-1). A relevant test certification must be provided.

#### 5.1.1 Loading points on the garage door

The following loading points are defined:

- loading point at bottom right of garage door
- loading point at bottom centre of garage door
- loading point at bottom left of garage door

#### 5.1.2 Test sequence

The measuring equipment - described under 3.4.1 - is to be used for the static test. The tests are to be carried out with a static force of 3000 N (in the direction of opening). It must be attempted to make a passage opening (defined under 2.7) in the test specimen.

#### 5.1.3 Timing

The static force is applied to each loading point for 10 seconds.

### 5.2 Manual test

#### 5.2.1 Loading points on the garage door

The following loading points are defined:

- Attacks on the hardware or any moving parts, fittings or, alternatively, on the operator mounting
- Both sides of the door, at a height of 1.5 m
- Both sides of the door, at a height of the locking system / hardware
- Both sides of the door, in ground area

#### 5.2.2 Attack side

The applicant is to determine the side to be attacked. The attack side should be indicated in the test report.

#### 5.2.3 Test sequence

In the context of these tests, it must be attempted to forcefully open or to make a passage opening in the test specimen (defined under 2.7) within the set "attack time" (defined under 5.2.4) using the tools defined in the tool set (defined under 6).

#### 5.2.4 Time for attacks

The time is measured from the start command for each test on the loading point (as defined under 5.2.1) and lasts 3 minutes. Each test is carried out without any time interruption.

### 6. Tool set

The following tools are to be used for the manual attempt:

- 1 Locksmith's hammer, weight: 200 g  $\pm$  20 g, length: 300 mm  $\pm$  20 mm
- 1 Multiple slip joint gripping pliers,, maximum length: 250 mm  $\pm$  10 mm
- 1 Screwdriver, total length: 260 mm  $\pm$  20 mm, blade diameter: 8 mm  $\pm$  2 mm and blade width: 10 mm  $\pm$  1 mm
- 1 Hexagonal Allen keys, maximum length: 120 mm
- 1 Spanners, maximum length: 180 mm
- 1 Engineer pliers, maximum length: 200 mm
- 1 Tweezers
- 1 Knife, maximum blade length: 120 mm
- 1 Torch
- 1 Hook
- 1 Steel wire
- 1 Adhesive tape
- 1 String
- 1 Universal lock key
- 1 Pliers, maximum length: 200 mm

The test house must provide the inspector with suitable protective clothing, i.e.gloves, safety goggles, overall etc. to carry out the manual attempt.

### 7. Certification of test results

#### 7.1 Security performance

*Certified security performance* for garage doors in accordance with these test specifications is achieved if no passage opening (defined under 2.7) is made in the garage door using the described test method (defined under 5).

#### 7.2 Test report and certificate

Based on the test report, the results of the tests are certified by a *Security Performance Certificate* issued by TÜV Nord CERT GmbH.



ttz Guideline for security performance of Garage Doors

November 2007

**Published by:**

Industrieverband Tore Türen Zargen (ttz) in der  
WIB Wirtschaftsvereinigung Industrie- und Bau-Systeme e.V.  
WIB Service- und Verwaltungs GmbH  
Postfach 1020, D-58010 Hagen, Germany  
Hochstr. 113-115, D-58095 Hagen, Germany  
Tel.: +49 (0) 23 31 / 20 08 - 0, Fax: +49 (0) 23 31 / 20 08 - 40  
www.ttz-online.de, eMail: [info@ttz-online.de](mailto:info@ttz-online.de)

**Text/Editorial:**

Arbeitskreis Technik ttz – Einbruchhemmung Tore  
TÜV NORD CERT GmbH  
Olaf Heptner / ttz

This document is based on information that was carefully researched and edited.  
However, no liability is assumed.

A reprint, including extracts, must be authorised in writing by the publisher and any  
references must be quoted.