



# TEST REPORT

**Report No.: 320012003-1-en**

Report date: 11 August 2020

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Engineer: Mr Josef Hauder / KO

EXT: 816

**CUSTOMER:** ECO Schulte GmbH & Co. KG  
Iserlohner Landstraße 89, D-58706 Menden

**TEST SPECIMEN:** Swing door drive with Flatscan installed in a  
double-leaf, glazed steel doorset within a block  
frame  
Type: ECO ETS 42

**NORMATIVE REFERENCES:** OENORM B 3850  
OENORM EN 1363-1  
OENORM EN 1634-1  
OENORM EN 16034

**TEST DATE:** 2 December 2019

**TESTED CLEARANCE:** 2623 x 2905.5 mm (WxH)

**FIRE-EXPOSED FACE:** Hinge side (opening face)

**TEST DURATION:** 37 minutes and 13 seconds

**TEST RESULTS:** The swing door drive did not adversely affect the  
test result over the entire test period

**ASSESSOR:** Mr Josef STOCKINGER  
Mr Josef HAUDER

**This Test Report contains:**

10 text pages and 13 appendices

Appendices:

A: Photo documentation (2 pages)  
B: Measurement data assessment (7 pages)  
C: Design drawings (4 pages)

The test results of this Test Report shall only refer to the tested object as received.  
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## 1. Normative references

OENORM EN 1363-1:  
Fire resistance tests – Part 1: General requirements  
Version: 01/09/2012

OENORM EN 1634-1:  
"Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware — Part 1: Fire resistance test for doors and shutter assemblies and openable windows"  
Version: 01/05/2018

OENORM B 3850:  
"Fire resisting doorsets - Hinged and swing doors - Single and double leaf constructions"  
Version: 01/04/2014

OENORM EN 16034:  
"Pedestrian doorsets, industrial, commercial, garage doors and openable windows— Product standard, performance characteristics - Fire resistance and/or smoke control characteristics".  
Version: 01/01/2015 (EN version: October 2014)

## 2. Test objective / programme

A fire test was carried out on 2 December 2019 in the testing laboratory of IBS Linz GmbH in order to determine the fire resistance of a swing door drive, installed in a double-leaf, glazed steel doorset within a block frame of Type: ECO ETS 42. The specimen was tested and assessed with regard to its fire integrity and thermal insulation criteria. The fire exposure was effected from the Hinge side (opening face).

The fire test was part of a test series. The selection of the test specimen, supporting structure and fire exposed face was done in the context of the test series.

## 3. Manufacturer / planner

### Total construction

Manufacturer: Domoferm Export GmbH, Sonnenweg 1, A-2230 Gänserndorf

#### 4. Manufacturer of materials used

##### - Door closer

Manufacturer ECO Schulte GmbH & Co. KG, Iserlohner Landstraße 89,  
D-58706 Menden  
Active leaf: Type: ECO ETS 42 with SGS 250, EN 2-4  
Inactive leaf: Type: ECO ETS 42 with GS-620-ÖB, EN 2-4

##### - Sensor for swing doors

Manufacturer ECO Schulte GmbH & Co. KG, Iserlohner Landstraße 89,  
D-58706 Menden  
Type: Flatscan; Art.-No: 5030033586

#### 5. Sampling

Detailed information about the taking of samples is deposited at the testing institute.

#### 6. Test specimen description

##### 6.1. Dimensions

|                                       |                          |
|---------------------------------------|--------------------------|
| Clearance:                            | 2623 x 2905.5 mm (W x H) |
| Door leaf dimensions (active leaf):   | 1368 x 2910.5 mm (W x H) |
| Door leaf dimensions (inactive leaf): | 1322 x 2910.5 mm (W x H) |
| Door leaf thickness                   | 64 mm                    |
| Door leaf weight (active leaf):       | 135 kg                   |
| Door leaf weight (inactive leaf):     | 135 kg                   |

Detailed information on the dimensions are also deposited at the testing institute.

##### 6.2. General test specimen description

The test specimen consists of a double-leaf, glazed steel swing doorset with a butt-jointed door leaf, installed in a steel block frame offset in an associated supporting structure (type US632). There is one glazing section in each door leaf. The assembly of the door leaves is predominantly single-layer. On the opposite hinge side (closing face) of the test specimen, a swing door drive for each of the active and inactive leaves is mounted in the lintel area on the frame. The linkage is leaf-mounted to the closing device carrier and the sensors for swing doors (Flatscan) are attached to the door leaf. The door leaf carrying the closing device consists of 5-ply gypsum fibreboards.



Further details and descriptions of the test specimen are deposited at the testing institute.

## **7. Conditioning**

On 27 November 2019, the test specimen was delivered and installed into the supporting structure (refer to section 8) and stored in an upright position in the testing laboratory. The concurrent ambient temperature was approx. 23 °C and the relative humidity was 50 %.

## **8. Supporting structure**

The test specimen was installed into a test frame prepared by IBS GmbH with an associated supporting structure in accordance with clause 7.2.3 of OENORM EN 1363-1.

The vertical edges of the supporting structure were designed to be free in compliance with clause 7.2.3 of EN 1634-1.

## **9. Test specimen installation**

The total construction consisting of the test specimen, an associated supporting structure and a test frame formed the front terminating element of the test furnace. In the contact areas with the test furnace, 30 mm mineral wool board strips were inserted circumferentially (raw density approx. 90 kg/m<sup>3</sup>). The construction stood locked into place on the floor of the testing laboratory and was secured to the test furnace at up to eight points (evenly distributed) on its outside by means of clamping fixtures and optionally secured with the indoor crane.

## **10. Measurements prior to testing, examination and preparation**

### **10.1. Gap measurements**

Detailed information on the gap measurements are deposited at the testing institute.

## **10.2. Opening and closing force**

Detailed information on the opening and closing cycles can also be found deposited at the testing institute.

## **10.3. Evidence of opening and closing cycles**

Immediately before test beginning, the test specimen was manually moved 25 times from a fully closed to a fully open position ( $> 90^\circ$ ) and finally brought back into the closed position by the closing force in compliance with OENORM EN 16034:2014, Appendix A, Section A.2.2.

## **10.4. Final setting**

The door element was opened to a width of 300 mm and brought to a closed position by the closing force.

# **11. Test description**

**Date of test:** 2 December 2019

## **11.1. Fire exposure**

The Hinge side (opening face) was set as the fire-exposed face (as per EN 1634-1, clause 13.4.2, table 2)

## **11.2. Test start**

The initial temperatures recorded by the thermocouples were verified no later than 5 minutes prior to fire testing in order to ensure consistent measurement results and to specify reference values. Homogeneous reference values e.g. for deflection, if applicable, were set and the initial condition of the test specimen was established. The recording of the measurement values started in the "0" testing minute (see Appendix B).

## **11.3. Ambient temperature**

During the entire fire test, the ambient temperature was continuously recorded by a 3 mm thick type K thermocouple from an adequate distance to the test rig. These temperature values are listed in Appendix B.

#### **11.4. Fire chamber heating system**

The test chamber was heated by natural gas.  
( $H_u = 10.10 \text{ kWh/Nm}^3$ ,  $H_o = 11.11 \text{ kWh/Nm}^3$ ).

#### **11.5. Fire chamber temperature**

Standard temperature-time curve as per clause 5.1.1 of OENORM EN 1363-1.

#### **11.6. Temperature measurement inside the fire chamber**

12 plate thermometers complying with the requirements of OENORM EN 1363-1, clause 4.5.1.1. were applied in combination with NiCr-Ni (type K) thermocouples with a wire diameter of 1 mm. The thermocouples were placed as far inside the test furnace as possible to ensure a regular measurement of the entire fire-exposed surface of the test specimen.

The clearance between the test specimen and the plate thermometers was approx. 100 mm.

#### **11.7. Pressure in the fire chamber**

The pressure inside the fire chamber was set to make the neutral pressure stage lie 500 mm above the simulated floor but without exceeding 20 Pa on the upper edge of the test specimen.

#### **11.8. Temperature measurements on unexposed face**

In order to record the increase in temperature on the unexposed side of the test specimen against the initial temperature, NiCr-Ni thermocouples (type K, wire diameter 0.5 mm) meeting the requirements of clause 4.5.1.2 of OENORM EN 1363-1 were applied and arranged in accordance with the attached test protocol "Thermocouples on fire unexposed face".

Each thermocouple was provided with an inorganic insulating covering (density approx.  $900 \text{ kg/m}^3$ ) with the dimensions 30 x 30 mm and was glued on to the test specimen (adhesive "Furtol Core").

The increase in temperature on the fire-unexposed side as compared to the initial values was recorded by the measuring system and can be taken from the assessments in Appendix B.

### 11.9. Deformation measurements on unexposed side

To measure the deformation of the test specimen, 33 measurement points were arranged in accordance with OENORM EN 1634-1. The position of these measuring points and the results are deposited at the testing institute.

## 12. Observations during/after fire testing

### 12.1. Test protocol – 2 December 2019

During the fire test, the following changes could be observed:

| Test minute   | Test specimen face <sup>1</sup> | Observations |
|---|---------------------------------|--------------|
| During the test period, no further influences from the swing door drive and the Flatscan could be established on the fire-exposed side. (Remark: Only observations relevant to the hardware parts are listed. Detailed test observations are filed at the testing institute). |                                 |              |
| Termination of fire test in the 38th testing minute   |                                 |              |

Detailed information on test observations are deposited at the testing institute.

### 12.2. Findings after test end

The Flatscan had fallen off on the fire-exposed side and melted.

Detailed information on the observations after test end can be found deposited at the testing institute.

<sup>1</sup> U: fire unexposed face, E = fire-exposed face



### 13. Comparison of test results with standard criteria

| Standard                        | Performance criterion  | Failure criterion  |  | 02/12/2019  |
|---------------------------------|--|--|--|---|
|                                 |  | Total test duration  |  | 37 minutes, 13 minutes  |
| OENORM EN 1634-1, clause 11.1   | <b>E</b>   | Cotton pad ignition  | Conducted:   | In agreement with the test specimen manufacturer this information is stored at the testing institute. |
|                                 |  | Penetration of test specimen with a 6 mm gap gauge   | Gap gauge could be inserted $\geq 150$ mm into a gap |   |
|                                 |  | Penetration of test specimen with a 25 mm gap gauge  | gap gauge penetrated the test specimen               |   |
|                                 |  | Flames on fire-unexposed side  | Flames $> 10$ s on fire-unexposed side               |   |
| OENORM EN 1634-1, clause 11.2.3 | <b>I</b><br>Average temperature increase                                       | Overrun of allowable mean temperature increase compared to the initial temperature on the unexposed side of the test specimen.<br><b>max. allowable average value = 140 K</b>                        | testing minute                                       |   |
|                                 |  |  | max. $\Delta T$ – average in K                       |   |
| OENORM EN 1634-1, clause 11.2.5 | <b>I<sub>1</sub></b><br>Max. temperature increase with supplementary procedure | Overrun of allowable average temperature increase compared to the initial temperature on the unexposed side of the test specimen.<br><b>Door leaf:</b><br><b>max. allowable single value = 180 K</b> | testing minute                                       |   |
|                                 |  |  | at measuring point                                   |   |
|                                 |  |  | $\Delta T$ in K                                      |   |
|                                 |  | Overrun of allowable average temperature increase compared to the initial temperature on the unexposed side of the test specimen.<br><b>Glazing:</b><br><b>max. allowable single value = 180 K</b>   | testing minute                                       |   |
|                                 |  |  | at measuring point                                   |   |
|                                 |  |  | $\Delta T$ in K                                      |   |
| OENORM EN 1634-1, clause 11.2.4 | <b>I<sub>2</sub></b><br>maximum temperature increase                           | Overrun of allowable average temperature increase compared to the initial temperature on the unexposed side of the test specimen.<br><b>Door leaf:</b><br><b>max. allowable single value = 180 K</b> | testing minute                                       |   |
|                                 |  |  | at measuring point                                   |   |
|                                 |  |  | $\Delta T$ in K                                      |   |
|                                 |  | Overrun of allowable average temperature increase compared to the initial temperature on the unexposed side of the test specimen.<br><b>Glazing:</b><br><b>max. allowable single value = 180 K</b>   | testing minute                                       |   |
|                                 |  |  | at measuring point                                   |   |
|                                 |  |  | $\Delta T$ in K                                      |   |
|                                 |  | Overrun of allowable average temperature increase compared to the initial temperature on the unexposed side of the test specimen.<br><b>Frame:</b><br><b>max. allowable single value = 360 K</b>     | testing minute                                       |   |
|                                 |  |  | at measuring point                                   |   |
| OENORM EN 1363-1, clause 5.6    |  | Ambient temperature at test begin  | in °C  | 23.8  |
|                                 |  | $\Delta T$ max. = +20 K  | $\Delta T$ in K                                      | -8.6 - + 0.1  |
|                                 |  | $\Delta T$ min. = -10 K  |  |   |
| OENORM EN 1363-1, clause 9.2    | Furnace pressure   | Pressure in fire room on top edge of test specimen   | in Pa  | 12.2 – 20.4   |



#### 14. Summary of test results

Based on the available test results, the swing door drive and the sensors for swing doors (Flatscan) are suitable for further assessment with regard to their suitability in tested fire protection doors.

#### 15. Summary / result

The door construction described in this Test Report cannot be used for a classification according to OENORM EN 13501-2. The test was carried out to provide evidence that the built-in hardware components of fire doors are applicable.

This report shall thus only be valid for a further evaluation of the fittings.

For the installation of the fitting components in fire protection doors, the door manufacturer requires approval from an accredited inspection body. Additionally, complementary tests might be necessary in compliance with EN 1634-1 and/or EN 1634-2.

Assessments and classifications accomplished in accordance with other test regulations shall reside with the responsible bodies (e.g. outside the Austrian Republic).

Due to the nature of the fire tests, the fire-resistance duration, and the subsequent difficulties with quantifying the uncertainties connected with measuring the fire-resistance duration, it is not possible to specify the exact level of accuracy of this result.

This Test Report shall only be applicable in its full length together with the appendices listed and marked.

**IBS-INSTITUT FÜR BRANDSCHUTZTECHNIK UND  
SICHERHEITSFORSCHUNG GESELLSCHAFT M.B.H.  
Akkreditierte Prüf-, Inspektions- und Zertifizierungsstelle**

Mr Josef STOCKINGER  
Engineer

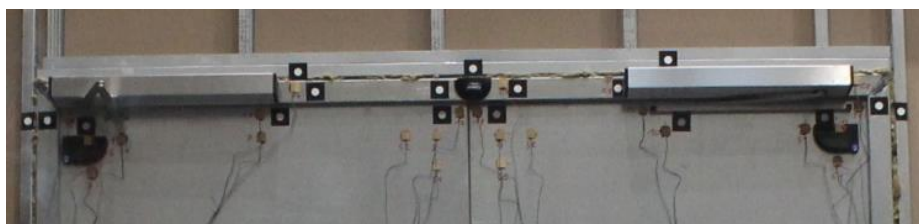
Mr Konrad MAYR  
Authorised Signatory

Information on multiple electronic signatures on documents can be found [here!](#)

## Appendix A: Photo documentation



**Photo 1:** Overview photo at test start



**Photo 2:** Detail view at test start

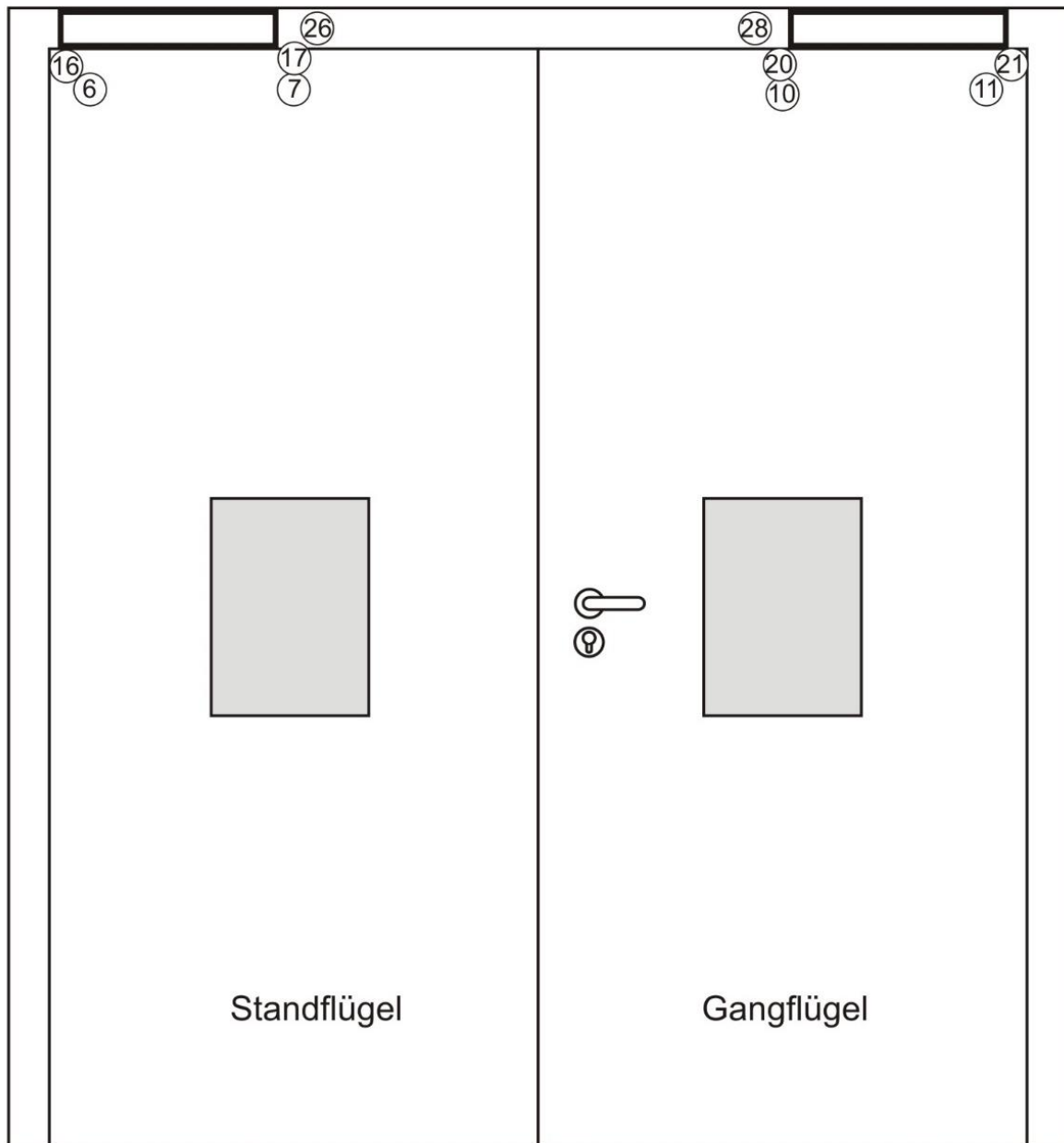


**Photo 3:** Detail view in the 30th testing minute



**Photo 4:** Detail view after test end

**Appendix B: Measurement data assessment**



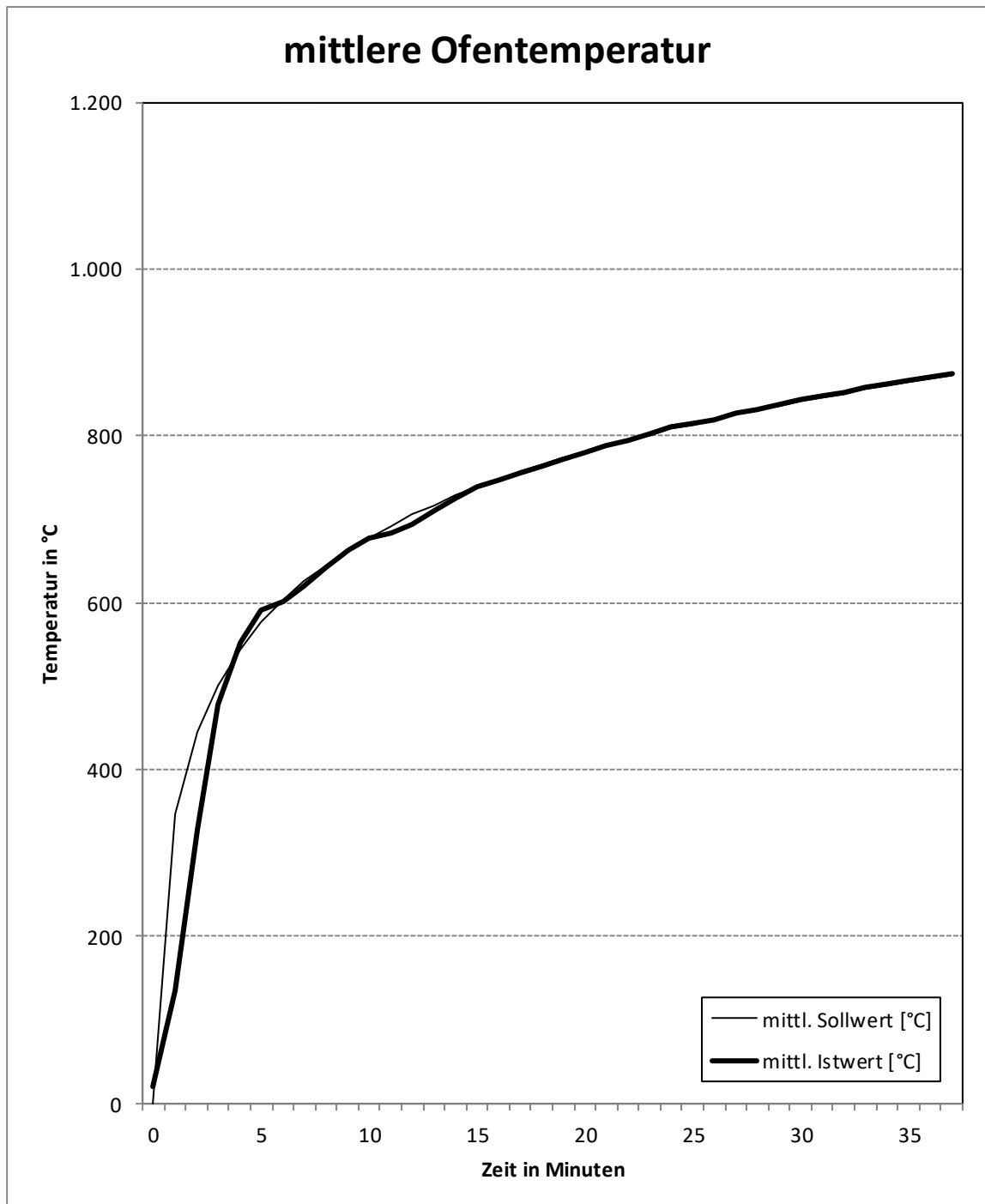
(Skizzenmaßstab mit Probekörper nicht ident)

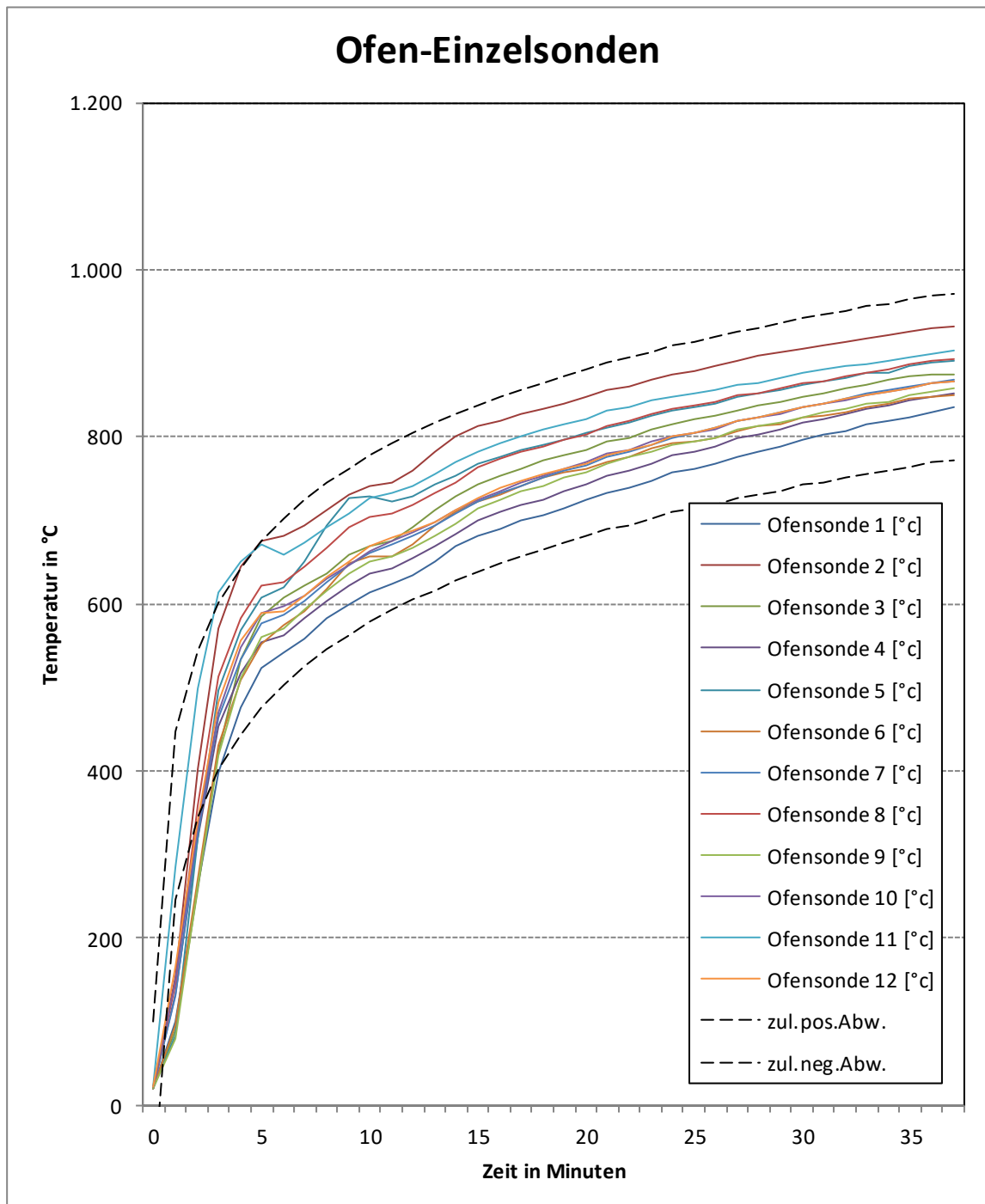
**MESSPUNKTE ENTSPRECHEND ÖNORM EN 1634-1**

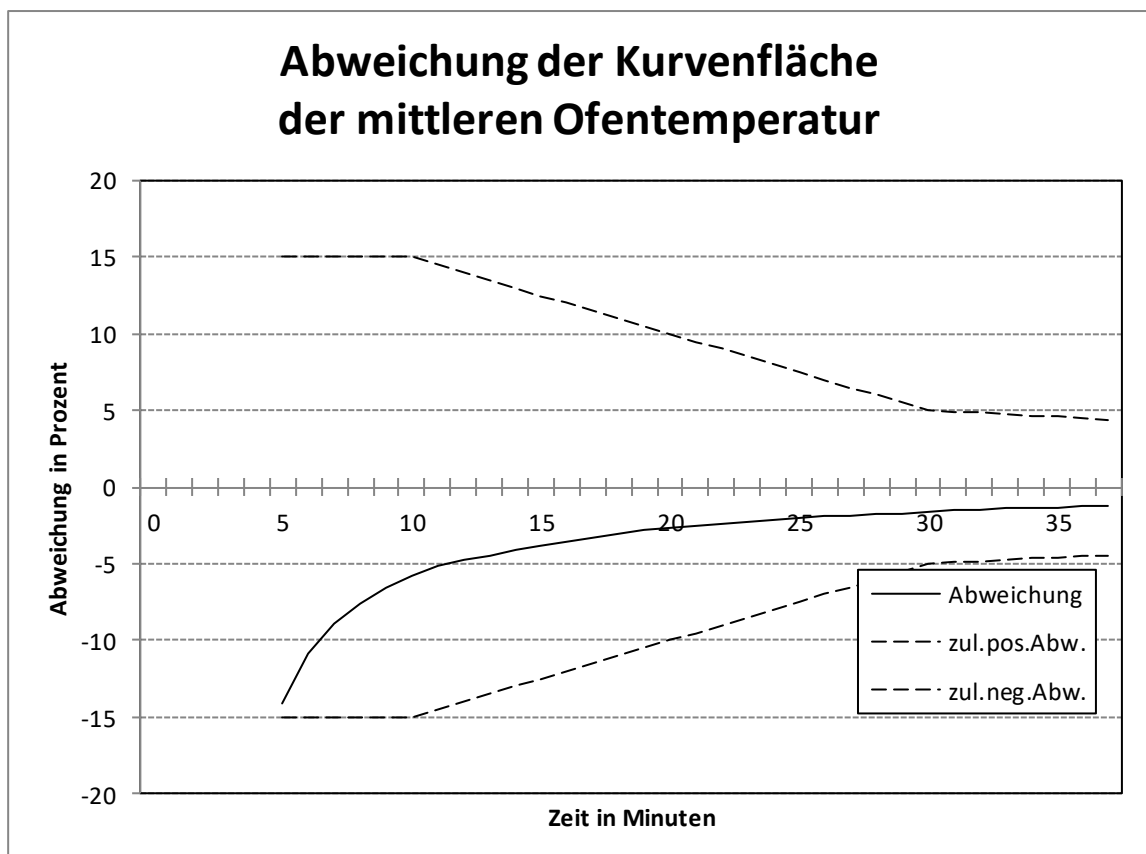
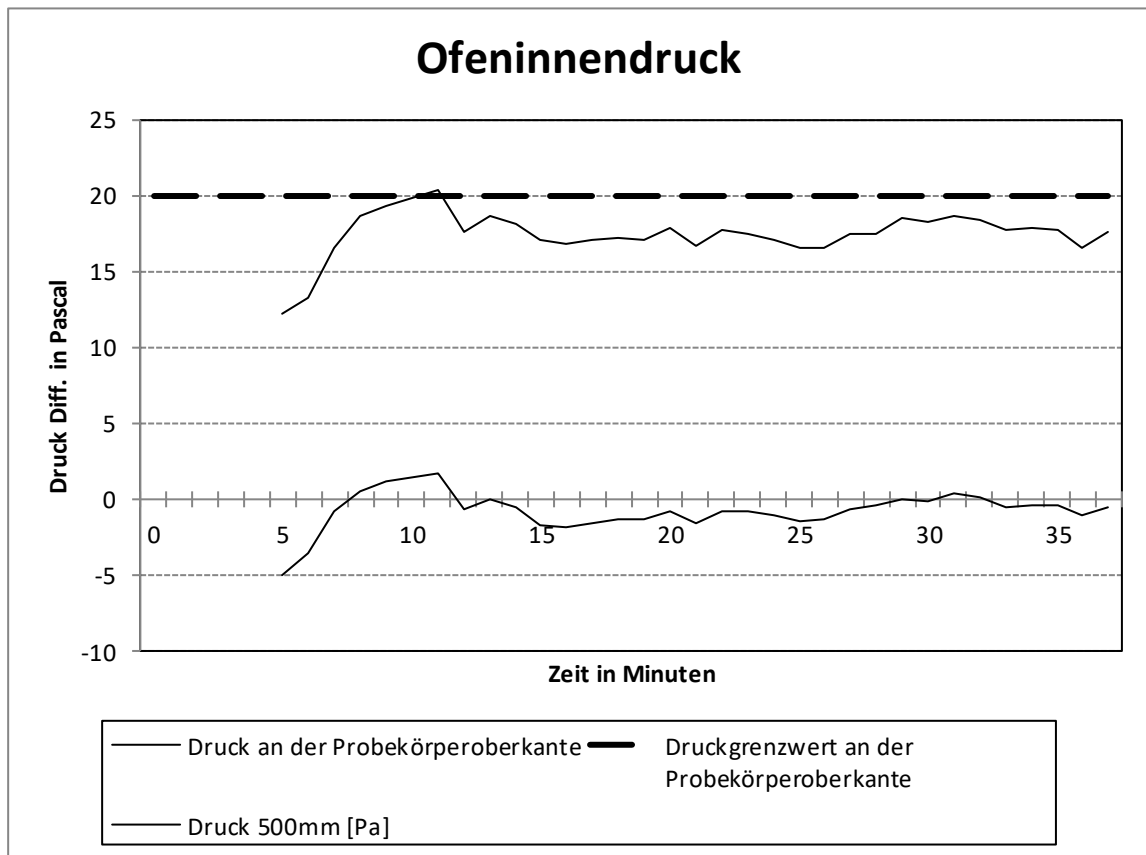
Messpunkte 6, 7, 10, 11 = Maximale Temperatur 100 mm EN  
 Messpunkte 16, 17, 20, 21 = Maximale Temperatur 25 mm EN  
 Messpunkte 26, 28 = Maximale Temperatur Zarge EN

**Temperatures measured during fire resistance testing in test rig and on test specimen cold side**

Druckgrenzwert 20 Pa:      **an der Probekörperoberkante**







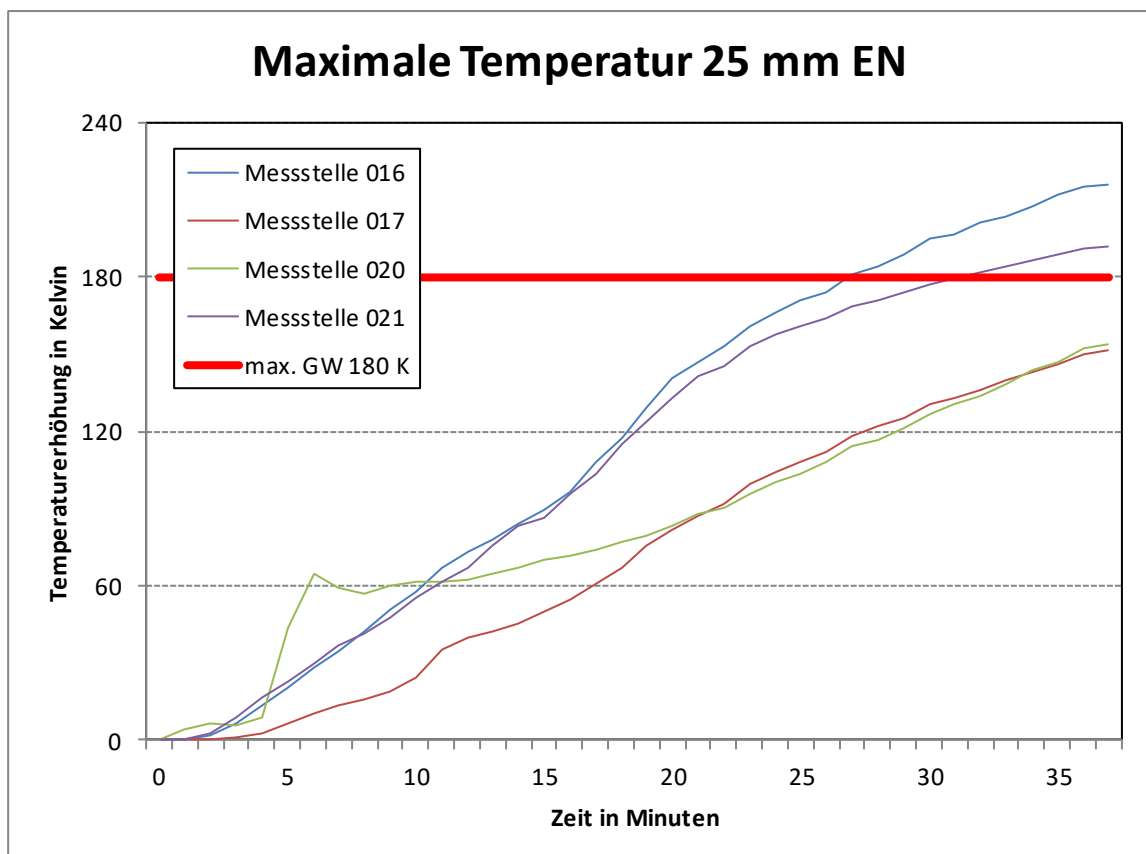
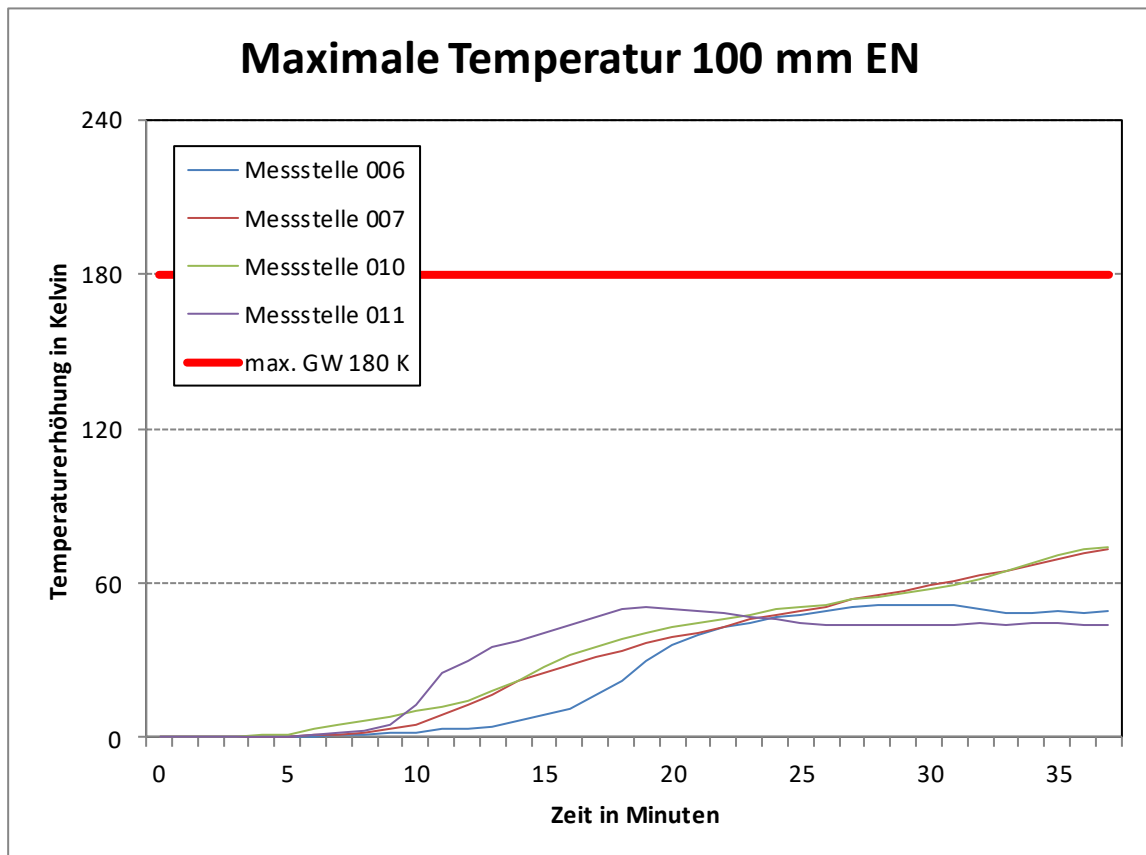


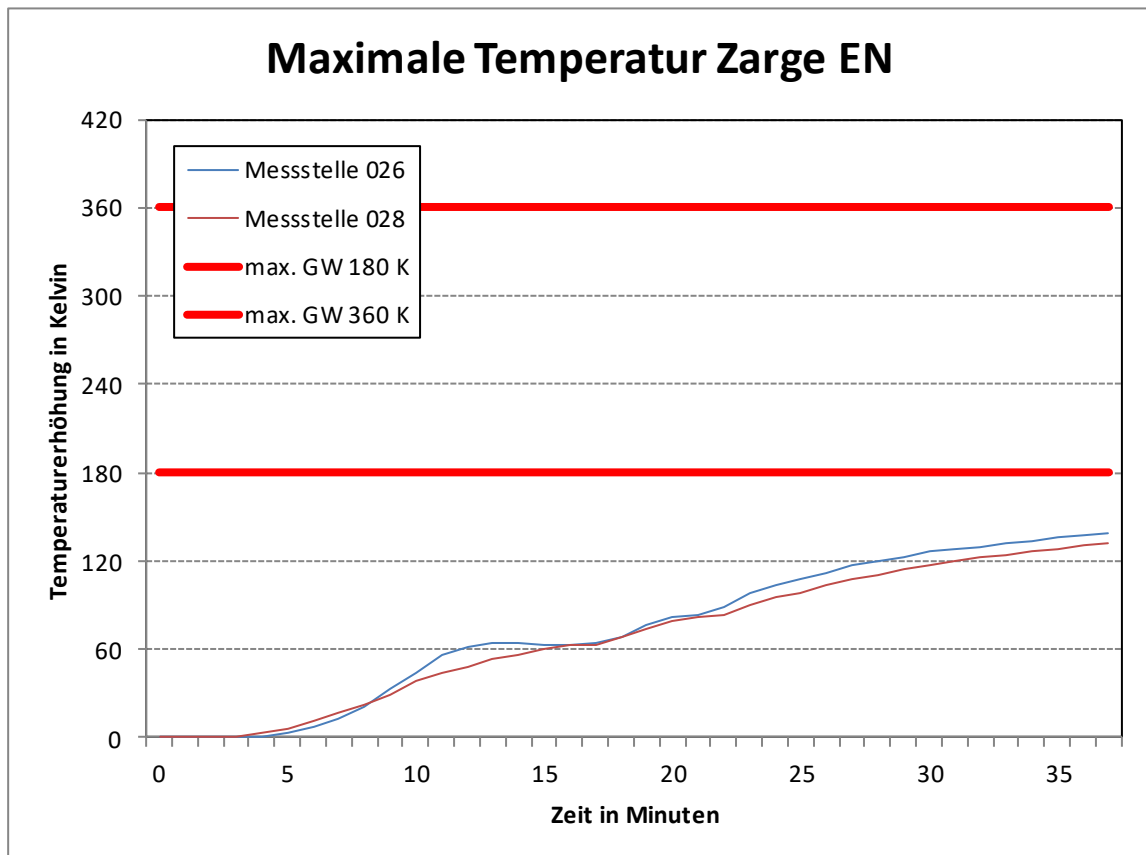
Max. Temperaturerhöhung für einen Einzelwert: 180 K Messpunkt: 6-7; 10-11; 16-17; 20-21; 26;28

Max. Temperaturerhöhung für einen Einzelwert: 360 K Messpunkt: 26;28

| Maximale Temperatur<br>100 mm EN |               |      |      |      | Maximale Temperatur<br>25 mm EN |       |       |       | Maximale<br>Temperatur<br>Zarge EN |       |
|----------------------------------|---------------|------|------|------|---------------------------------|-------|-------|-------|------------------------------------|-------|
| Zeit<br>[Min]                    | Messpunkt [K] |      |      |      | Messpunkt [K]                   |       |       |       | Messpunkt [K]                      |       |
|                                  | 6             | 7    | 10   | 11   | 16                              | 17    | 20    | 21    | 26                                 | 28    |
| 0                                | 0,0           | 0,0  | 0,0  | 0,0  | 0,0                             | 0,0   | 0,0   | 0,0   | 0,0                                | 0,0   |
| 1                                | 0,1           | 0,1  | 0,1  | 0,1  | 0,0                             | 0,0   | 4,4   | 0,3   | 0,1                                | 0,1   |
| 2                                | 0,2           | 0,1  | 0,4  | 0,2  | 2,1                             | 0,2   | 6,5   | 2,8   | 0,1                                | 0,3   |
| 3                                | 0,3           | 0,1  | 0,5  | 0,2  | 6,2                             | 1,1   | 5,6   | 8,9   | 0,4                                | 0,6   |
| 4                                | 0,3           | 0,2  | 0,8  | 0,5  | 13,6                            | 2,9   | 9,2   | 17,0  | 1,1                                | 2,8   |
| 5                                | 0,5           | 0,4  | 1,3  | 0,7  | 20,8                            | 6,7   | 43,5  | 22,7  | 3,3                                | 5,8   |
| 6                                | 0,7           | 0,9  | 3,7  | 0,9  | 28,6                            | 10,7  | 64,9  | 30,1  | 7,9                                | 11,2  |
| 7                                | 0,8           | 1,3  | 5,3  | 1,7  | 34,6                            | 13,3  | 59,5  | 36,4  | 12,9                               | 16,9  |
| 8                                | 1,2           | 2,2  | 6,4  | 2,8  | 42,1                            | 16,1  | 56,8  | 41,1  | 21,4                               | 21,8  |
| 9                                | 1,7           | 3,4  | 8,1  | 5,1  | 50,7                            | 19,2  | 60,0  | 47,8  | 33,4                               | 29,3  |
| 10                               | 2,2           | 4,9  | 10,3 | 13,1 | 57,5                            | 24,3  | 61,3  | 55,5  | 44,3                               | 38,0  |
| 11                               | 3,1           | 8,6  | 12,0 | 25,1 | 66,9                            | 35,1  | 61,3  | 61,5  | 55,6                               | 43,8  |
| 12                               | 3,7           | 12,6 | 14,0 | 29,9 | 73,5                            | 39,9  | 62,2  | 66,8  | 61,7                               | 47,9  |
| 13                               | 4,6           | 16,8 | 17,9 | 35,6 | 77,6                            | 42,3  | 64,5  | 75,7  | 63,9                               | 53,7  |
| 14                               | 6,6           | 21,7 | 22,0 | 37,4 | 84,1                            | 45,6  | 66,6  | 83,3  | 63,9                               | 56,4  |
| 15                               | 8,9           | 25,5 | 27,4 | 40,3 | 89,7                            | 50,1  | 69,8  | 86,4  | 63,3                               | 59,9  |
| 16                               | 11,3          | 28,3 | 32,0 | 44,0 | 96,7                            | 54,5  | 71,5  | 95,6  | 62,4                               | 62,5  |
| 17                               | 16,9          | 31,6 | 34,9 | 47,1 | 108,1                           | 61,1  | 73,6  | 103,1 | 64,6                               | 63,6  |
| 18                               | 22,1          | 33,7 | 38,2 | 49,7 | 117,5                           | 66,9  | 76,7  | 115,2 | 68,9                               | 69,0  |
| 19                               | 29,5          | 36,5 | 40,3 | 50,5 | 129,2                           | 75,6  | 79,4  | 123,6 | 76,1                               | 73,9  |
| 20                               | 36,0          | 39,1 | 42,8 | 50,1 | 140,3                           | 81,8  | 83,5  | 133,0 | 82,0                               | 79,7  |
| 21                               | 39,5          | 41,0 | 44,9 | 49,2 | 147,0                           | 87,1  | 88,1  | 141,4 | 84,0                               | 81,4  |
| 22                               | 42,6          | 42,9 | 45,9 | 48,6 | 153,2                           | 91,9  | 90,3  | 145,4 | 88,5                               | 83,5  |
| 23                               | 44,8          | 45,9 | 48,0 | 46,9 | 160,9                           | 99,3  | 95,7  | 153,2 | 97,8                               | 90,5  |
| 24                               | 46,7          | 47,7 | 49,7 | 45,8 | 166,1                           | 104,1 | 100,5 | 157,7 | 103,4                              | 96,1  |
| 25                               | 48,0          | 49,3 | 50,4 | 44,5 | 170,8                           | 108,1 | 103,0 | 160,7 | 108,0                              | 98,7  |
| 26                               | 49,2          | 50,9 | 51,7 | 43,4 | 173,9                           | 112,1 | 107,9 | 164,0 | 112,0                              | 103,2 |
| 27                               | 50,4          | 53,5 | 53,5 | 43,4 | 180,6                           | 118,4 | 114,1 | 168,5 | 117,7                              | 108,0 |
| 28                               | 51,3          | 55,2 | 54,3 | 44,1 | 184,1                           | 121,8 | 116,5 | 170,5 | 120,3                              | 110,4 |
| 29                               | 51,6          | 56,8 | 56,0 | 43,9 | 188,7                           | 125,0 | 121,3 | 174,0 | 122,7                              | 114,1 |
| 30                               | 51,6          | 59,5 | 57,9 | 43,9 | 194,7                           | 130,3 | 126,3 | 177,1 | 126,1                              | 117,7 |
| 31                               | 51,4          | 60,5 | 59,6 | 44,1 | 196,4                           | 132,5 | 130,3 | 179,3 | 127,6                              | 119,9 |
| 32                               | 50,1          | 62,8 | 61,6 | 44,4 | 201,3                           | 136,3 | 133,8 | 181,4 | 129,9                              | 122,2 |
| 33                               | 48,6          | 65,0 | 64,4 | 44,1 | 203,6                           | 140,0 | 138,4 | 183,9 | 132,3                              | 123,8 |
| 34                               | 48,4          | 66,6 | 67,7 | 44,7 | 207,0                           | 142,5 | 143,5 | 186,6 | 133,9                              | 126,8 |
| 35                               | 49,0          | 69,2 | 70,5 | 44,4 | 211,5                           | 146,0 | 147,0 | 188,4 | 135,9                              | 128,4 |
| 36                               | 48,5          | 71,8 | 73,4 | 43,9 | 214,6                           | 149,7 | 152,0 | 191,2 | 137,8                              | 130,8 |
| 37                               | 48,9          | 73,0 | 74,2 | 44,0 | 215,7                           | 151,4 | 154,1 | 192,0 | 138,8                              | 132,2 |

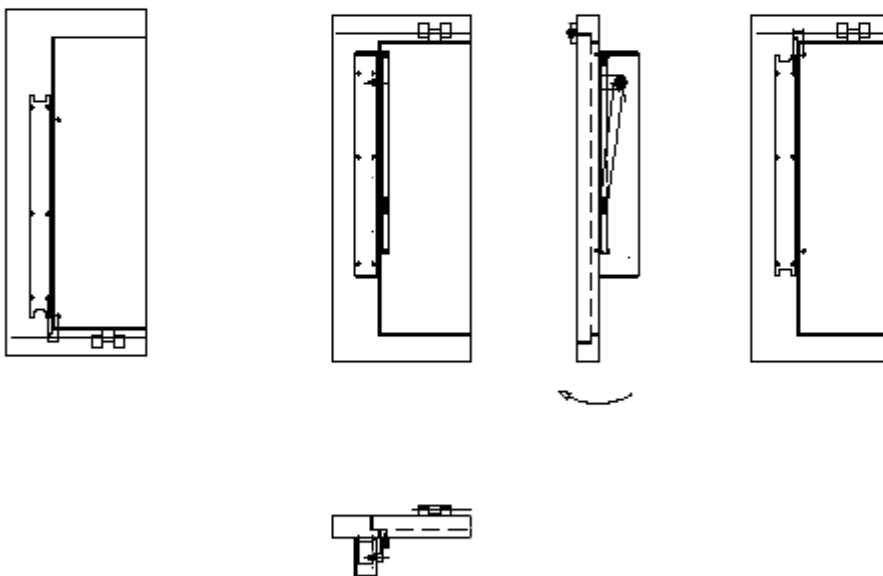
Die angegebenen Werte der Messdaten sind Temperaturerhöhungen gegenüber den Anfangswerten. (#NV = kein Messwert)

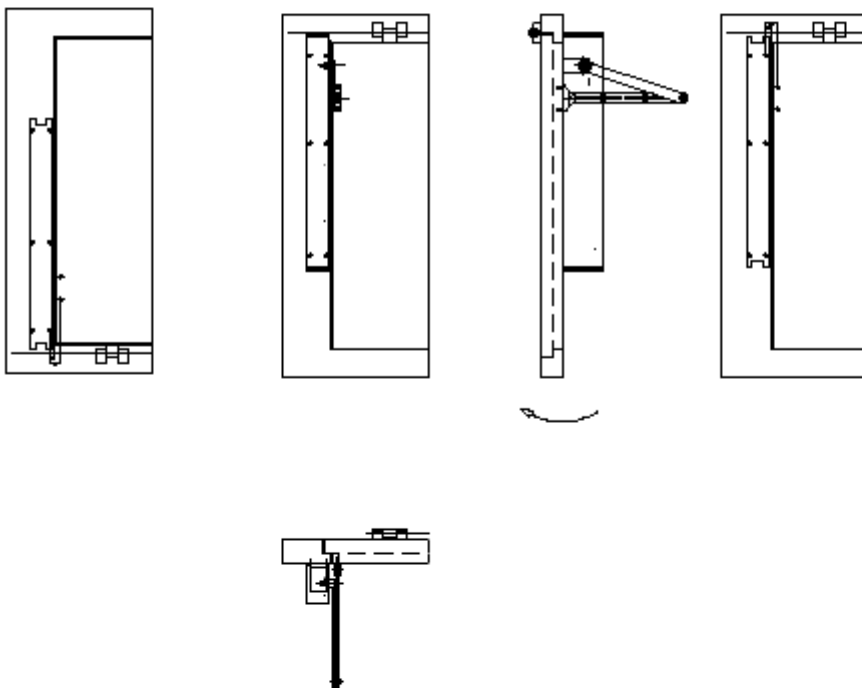




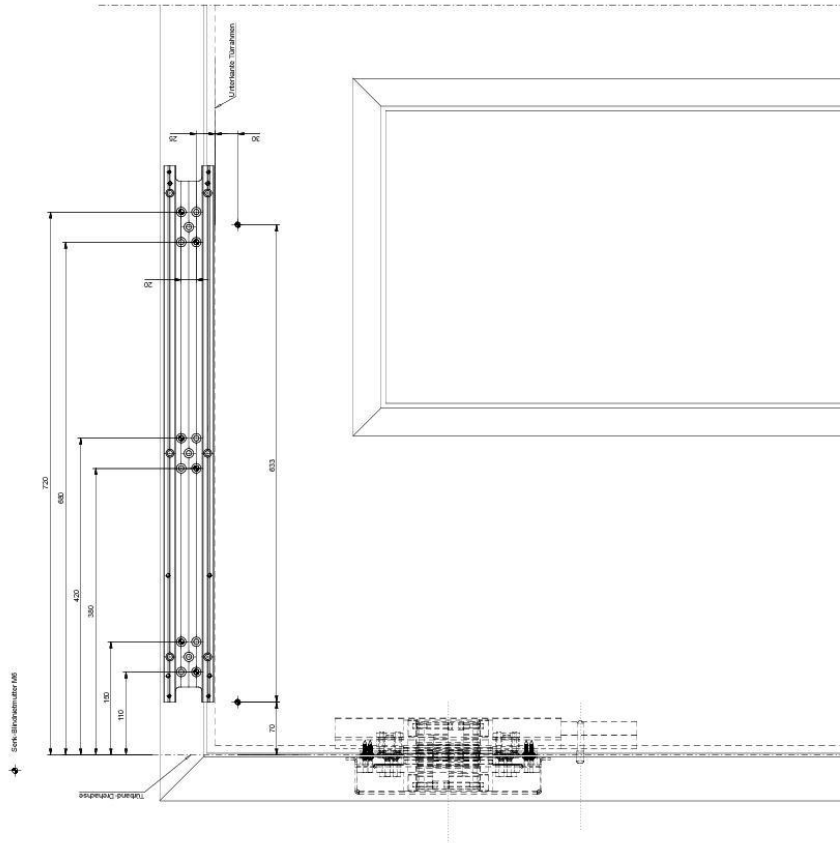
Further information on measuring data are deposited at the testing institute

**Appendix C: Design drawings**

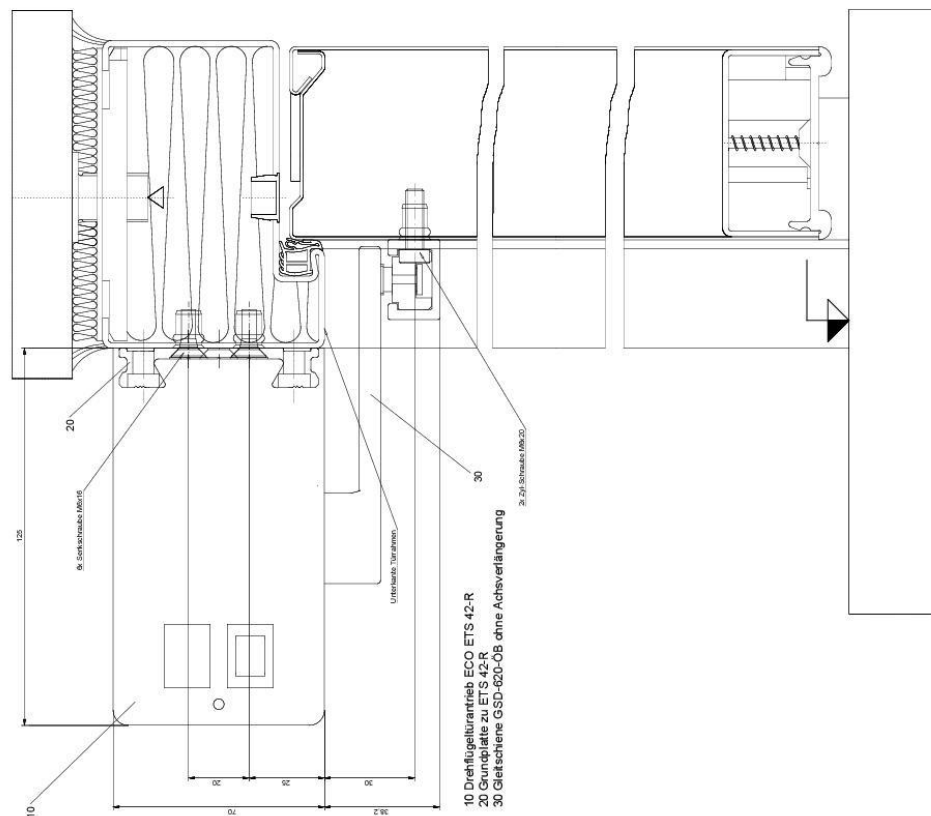




Bohrbild Grundplatte ETS 42-R mit Gleitschiene GSD-620-ÖB (M1:2)



Seitenriss ETS 42-R mit Gleitschiene GSD-620-ÖB (M2:1)



|  |  |  |
|--|--|--|
|   |  | 100 011 041, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100 |
| 100 011 041, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100 | 100 011 041, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100 | 100 011 041, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100 |

