Journal of decisions on TBDK directive

Attachment of supporting fitting components for turn-only and turn & tilt fittings

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Note

Technical details and recommendations in this journal of decisions and the guideline dealt with therein are based on the state of knowledge at the time of going to press. The contents of the disclaimer on the above-mentioned website apply.

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1 Foreword

Directives issued by the Gütegemeinschaft Schlösser und Beschläge e.V. are revised at appropriate intervals. In the periods between publication and the issue of a new, revised version, questions may arise that need clarification in the short term, i.e. before the next revision.

Furthermore, general points may arise that cannot be handled comprehensively in the directive itself.

In the aforementioned cases, the journal of decisions offers the user of the directive in question the necessary assistance. After publication in this journal of decisions, they are binding for the application of the applicable version of the TBDK directive.

The journal of decisions is kept up to date continuously by the responsible committee within the Gütegemeinschaft Schlösser und Beschläge e.V. – the "Turn & Tilt Quality Sub-committee" – in accordance with the latest findings.

The journal of decisions is published free of charge on the publisher's website (see cover sheet).

When revisions are imminent, the determinations highlighted in this journal of decisions are – where possible – to be added to the text of the TBDK directive or are to be incorporated in spirit.

2 Area of application

This journal of decisions is to be applied to the applicable version of the TBDK ("Attachment of supporting fitting components for turn-only and turn & tilt fittings") directive.

The specifications made in this journal of decisions are binding for the application of the TBDK directive and must be taken into account.

3 Specifications

3.1. For item 6.3 "Testing of stay bearings" – interpretation

3.1.1. of item 6.3.3 "Testing sequence" – 1st bullet point (testing original components)

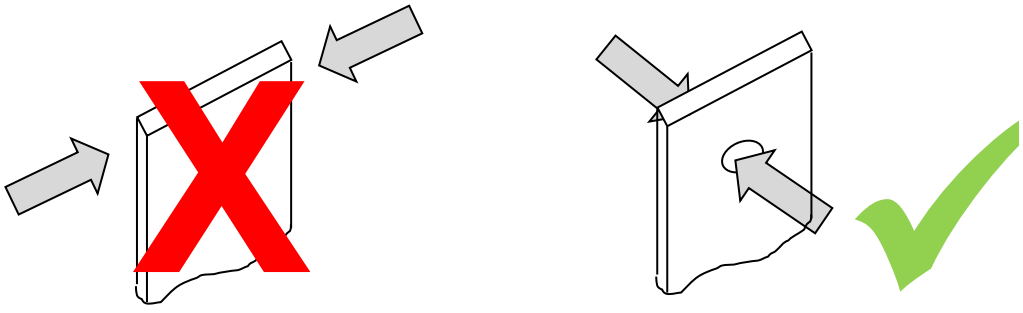
- *"Together with the stay bearings to be tested, the corresponding stay arm is always used for the transmission of force (with the respective components for coupling the stay arm to the stay bearing)."*
- Specifications 2015-10-22
- This bullet point is to be understood as follows (AK GUA DK decision from 10.06.2015):
  - only original components are to be used – no dummy parts
  - **Note:** applies to the TBDK directive generally

3.1.2. of item 6.3.3 "Testing sequence" – 2nd bullet point (assistance measures on components)

- *"Suitable measures are to be taken to prevent the deformation of the stay arm or distortion of the stay angle hinge, in order that the force transmission point does not change."*
- Specifications 2015-10-22
- This bullet point is to be understood as follows (AK GUA DK decision from 10.06.2015):
  - no roller to support the stay arm (to prevent deflection when subjected to a load)
  - The first consideration is to place only the adjuster piece in the intended position for DIN left or DIN right installation in case it twists out before the test force can be attained
  - Other reinforcements (e.g. claws, cuffs etc.) that have a positive effect on force transmission and further increase the values for connecting the component are not permissible
  - If the test forces are greater, e.g. for sash weights greater than 200 kg, damage may be caused to the stay arm before the test forces are attained (e.g. cracks or fractures)
  - In this case, additional supportive measures are required to be able to apply the intended test forces
  - These measures must then be selected to ensure that the type of force transmission does not change if possible in relation to the non-reinforced component.

3.1.3. For item 6.3.3 "Testing sequence" – force transmission point

- Specifications 2015-10-22
- This term *"force transmission point"* is to be understood as follows (AK GUA DK decision from 10.06.2015):
  - The force transmission point is generally at the connection between the stay arm and the supporting arm; a dowel pin should ideally be used, and this is inserted through the punched hole at this connection point; the forces are also transmitted via this point in practice
  - Other words for supporting arm include control arm, support brace, stay-arm hinge, control lug, short stay arm and securing arm
  - If the gripping collet is used instead of the dowel pin, the gripping collet must grip at the connection point (the stay arm is gripped via its flat surface)



  - If different stay arm sizes with the same design features are available for a maximum sash weight, the size of the stay arm to be tested can be chosen at will

3.2. For item 6 "Carrying out the tests" – interpretation

- *To carry out tests, the samples must be fitted out according to the production method of the manufacturer of windows and door windows, or to the appropriate system description. The samples selected must be representative of the production method.*

  The worst situation for the fastening of the fitting components to the frame material (for plastic profiles, e.g. all screws, some of the screws, or no screws in the stiffening profile) must be taken into consideration.

- Specifications **2019-07-10**

- The following instructions apply in addition to these two sections:

  - in order to keep the number of tests required for the different production methods as low as possible, manufacturers can group (cluster) windows and doors according to those produced using similar production methods
  - it is purposeful if the windows and doors in such a group (cluster) always feature the same components:
    - i.e. in particular the same fitting components and fasteners / screws (type, length, diameter, screw-in depth, number of force-transmitting threads etc.)
    - and the same type of threaded connection, for example with or without pre-drilling (diameter and depth)
    - or the alternative attachment, for example by clamping
  - the respective types of plastic profiles or type of wood and surface finish (e.g. depth of profile), for example, within such a group can vary
  - representative samples can then be selected for every group (cluster) defined in this way and, which are then used to provide the required evidence for all of the actual production methods included within this group; this sample is generally the worst production method within such a group

3.3. For item 3.4 "Installation position of fittings" – more detailed explanation

- …

  The installation location of the bearing positions (e.g. a stay angle hinge with a stay bearing and a corner bearing with sash hinge) are defined separately in section 3.5. Therefore, in the description of a window construction, the installation position of the fittings and of the bearing positions must be specified separately from each other; e.g. concealed fittings with face-fixed bearing positions or concealed fittings with concealed bearing positions (stay bearing on the top and corner bearing at the bottom).

  …

- Specifications **2019-07-10**

  - the explanation provided in blue is intended to make the information provided clearer and must be taken into account

3.4. For item 3.5.1 “Face-fixed bearing positions" – correction

- *Load bearing components on fittings in which all frame-mounted bearing positions are visible when the sash is closed. Usually in this case the corresponding sash-mounted bearing components are at least partially visible.*
- Specifications **2019-07-10**
  - the explanation provided in blue is a correction that must be taken into account for a clearer understanding of the information provided

3.5. For item 3.5.2 “Concealed bearing positions" – correction

- *Load bearing components on fittings, in which all frame-mounted bearing positions are invisible when the sash is closed.*

  …

- Specifications **2019-07-10**
  - the explanation provided in blue is a correction that must be taken into account for a clearer understanding of the information provided

3.6. For item 6.3.1 “Testing of profile pieces”

- *If the screw positions are restricted to the vertical frame profile because of design, a profile piece (scantling section) of approx. 300 mm is sufficient for execution of the test. The external threaded fittings must be positioned at least 50 mm from the cut edges of the profile piece (scantling section).*
- *The stay bearing is to be fitted centrally in the intended installation position onto the profile piece.*
- *For application of the tractive force, the sample is inserted into a support, e.g. as shown in figure 3. In this case, the inner side of the profile piece is placed flat against the upper surface of the support bracket.*

  Comment: for systems which open outwards, the outer side of the profile piece is placed flat against the upper surface of the support bracket.
- *The ends of the recess in the support bracket must be positioned at least 10 mm from the ends of the stay bearing.*
- Specifications **2019-12-04**
- The following instructions apply in addition to these four bullet points:
  - in most cases it is necessary to use samples according to 6.3.2 in order to test the attachment of bearing components at the connection points of mullion and transom to the frame

3.7. For item 6.3.2 “Testing of frame corners”

- *A frame corner must be used if screw positions are planned for design reasons on the vertical and horizontal profile piece (scantling section) (e.g. for concealed bearing points) or this occurs in the area of a frame corner connection (e.g. with wooden windows) or at the connection points of mullion and transom to the frame (especially for plastic profiles).*
- *The frame corner must be selected in such a way that the stay bearing can be screwed on completely and the areas of the connection points are taken into account. The external threaded fittings must be positioned at least 50 mm from the cut edges of the frame corner.*

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- Specifications **2019-12-04**
  - the text components marked in blue are additions that must be taken into account for a clearer understanding

3.8. For item 6.4.1 Sample

- *The sample comprising frame and sash frame corners is intended for a leg length frame of approx. 300 mm respectively. The frame corner must be selected in such a way that the corner bearing (and any fitted load transfer) can be screwed on completely and the areas of the connection points are taken into account.*

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- Specifications **2019-12-04**
  - the text marked in blue is an addition that must be taken into account for a clearer understanding

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