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Stuttgart/date 27/07/2015

Please address your correspondence to Materials Testing
Institute University of Stuttgart only.

Fire test according to DIN EN 1634-1 on swing door drives of the type „GEZE Powerturn“

Dear Sir or Madam,

by letter dated 13/09/2013 the company GEZE GmbH, Leonberg (Germany), commissioned the Materials Testing Institute University of Stuttgart with the performance of a fire resistance test according to DIN EN 1634-1 on a single-leaf timber door (door 1) with wooden closed frame and a double-leaf steel door (door 2) with steel closed frame in order to prove the ability of the applied closing devices (swing door drives) of the type „GEZE Powerturn“^[1], when using them in combination with fire and / or smoke protection doors in terms of the standards DIN EN 1154, DIN EN 1155 and / or DIN EN 1158. Both doors were mounted into a massive brick wall and were oriented with their closing side (opposite hinge side) towards the furnace. The required fire resistance was 90 minutes. The flame exposure period of the fire resistance test, which was carried out at 12/11/2013, was 90.5 minutes.

The corresponding test report 902 6783 000/Re was issued at 17/12/2013.

^[1] The original name of the swing door drive up to the test date was „GEZE Slimturn“. The renaming into „GEZE Powerturn“ was confirmed by the Materials Testing Institute University of Stuttgart by letter dated 18/07/2014.

In summary the verification of suitability in terms of the standards DIN EN 1154, DIN EN 1155 and / or DIN EN 1158, when using the swing door drive „GEZE Powerturn“ in combination with fire and / or smoke protection closures is proved, provided that the limitations of the possible installation techniques given in Table 1 are fulfilled.

Table 1 Schedule of permitted installation techniques

Installation technique	Wooden frame	Steel frame
Regular installation (drive on the door leaf)	yes	yes
Transom mounting (drive on the frame)	no ^{*)}	yes

^{*)} The installation technique is only possible, when the drive is not directly fixed to the frame, but to the surrounding supporting construction. Reason: At door 1 sustained flaming was observed after 78 test minutes at the right upper corner of the frame; the region was closed with mineral wool. It was definitely clear, that the weight of the swing door drive, which was mounted on the upper part of the frame, had some negative influence on the tilting over of the whole upper frame. This was the main reason of the formation of gaps and the burn-through in this region.

This document serves as a confirmation for the applicability of the closing devices (swing door drives) of the type „GEZE Powerturn“ in combination with fire and / or smoke protection doors in terms of the standards DIN EN 1154, DIN EN 1155 and / or DIN EN 1158.

Further details can be found in the above mentioned test report.

Yours sincerely

Materials Testing Institute University of Stuttgart
Fire Resistance of Construction Components



Dr. rer. nat. Andrea Bramborg



Dr. rer. nat. Stefan Wies