

Statement on the influence of using of Abloy[®] DA461 swing door operator to the fire resistance of hinged steel doors, hinged timber doors and glazed doors with steel or timber frame

Requested by: Abloy Oy



Requested by Abloy Oy Joensuun tehdas
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Order: Number 710115//210, 3 October, Mr Olavi Ahlholm

Organisation undertaking statement

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Request for comment The client requested a statement on the influence of using of Abloy[®] DA461 swing door operator to the fire resistance of hinged steel doors, hinged timber doors and glazed doors with steel or timber frame that are classified according to standard EN1301-2 and/or requirements in Finland.

Background information The statement is supported by following documents delivered by the sponsor:

Test report No. RTE730/04 (2 August 2004) of VTT.

In the fire resistance test was tested two single leaf hinged steel doors equipped with Abloy locking and closing systems. The fire resistance test was carried out on 6 February 2004 according to standard EN 1634-1. At the fire resistance test two identical doors was tested at same time so that the one door opened towards the fire and the other door away from the fire. In the both doors were similar Abloy[®] DA361 + DA147 (standard arm)) door closing system. Duration of the fire test was 70 minutes.

In the fire resistance test the door opened towards the fire met the requirements for integrity (E) during 28 minutes and for insulation (I₂) during 7 minutes. The door opened away from the fire met the requirements for integrity (E) during 70 minutes and for insulation (I₂) during 19 minutes.

During the fire resistance test the closing device of both doors had not any influence to the loose of integrity.

Other documents

The sponsor has sent explanation including differences between Abloy[®] DA361 and Abloy[®] DA461 swing door operators.

The sponsor has declared maximum permissible size of the doors to the Abloy[®] DA461 swing door operators that are present in the table below.

Table: Maximum permissible size of the doors with Abloy[®] DA461 swing door operator

	Maximum width of the door leaf [mm]	Maximum weight of the door leaf [kg]
Standard arm	1000	125
	1150	100
	1300	90
Sliding arm	900	100
	1000	90
	1100	80

Statement

On the base delivered documents we can state as our opinion that Abloy[®] DA461 swing door operator can be used in the following doors classified according to the standard EN13501-2 and/or requirements in Finland or that fulfil the requirements for the fire classes below so that the fire resistance of the door does not decrease:

The doors classified according to the standard EN 13501-2

- steel doors, timber doors and glazed doors with steel or timber frame: EI₁15, 20, 30, 45 and 60 or EI₂15, 20, 30, 45 and 60

The doors classified according to requirements in Finland

- steel doors, timber doors and glazed doors with steel or timber frame: EI15, 30 and 60

Extra information delivered by the client concerning DC241 door closer integrated in Abloy DA461 swing door operator


- Material Testing Institute NRW has issued a certificate *EC-CERTIFICATE OF CONFORMITY 0432-CPD-0047, 6 September 2005* to Abloy Oy, which attests that Abloy DC241 door closer fulfil all prescribed requirements of Annex ZA of the standard DIN EN 1154:2003-04.

- The client delivered also test results, which proves that power size of Abloy DA461 swing door operator, which includes DC241 door closer, can be with standard arm 6 and with sliding arm 4.

In the certification report mentioned above power size of the door closer is one power class less. Decrease of the power size is performed by pretension a spring of the door closer.

Espoo, 12 December 2007


Riitta Kajastila
Research Engineer


Matti Immonen
Research Engineer

Note

This is an English version of the original Finnish test report with the same test report number.

APPENDIX

Picture of Abloy[®] DA461- swing door operator

DISTRIBUTION

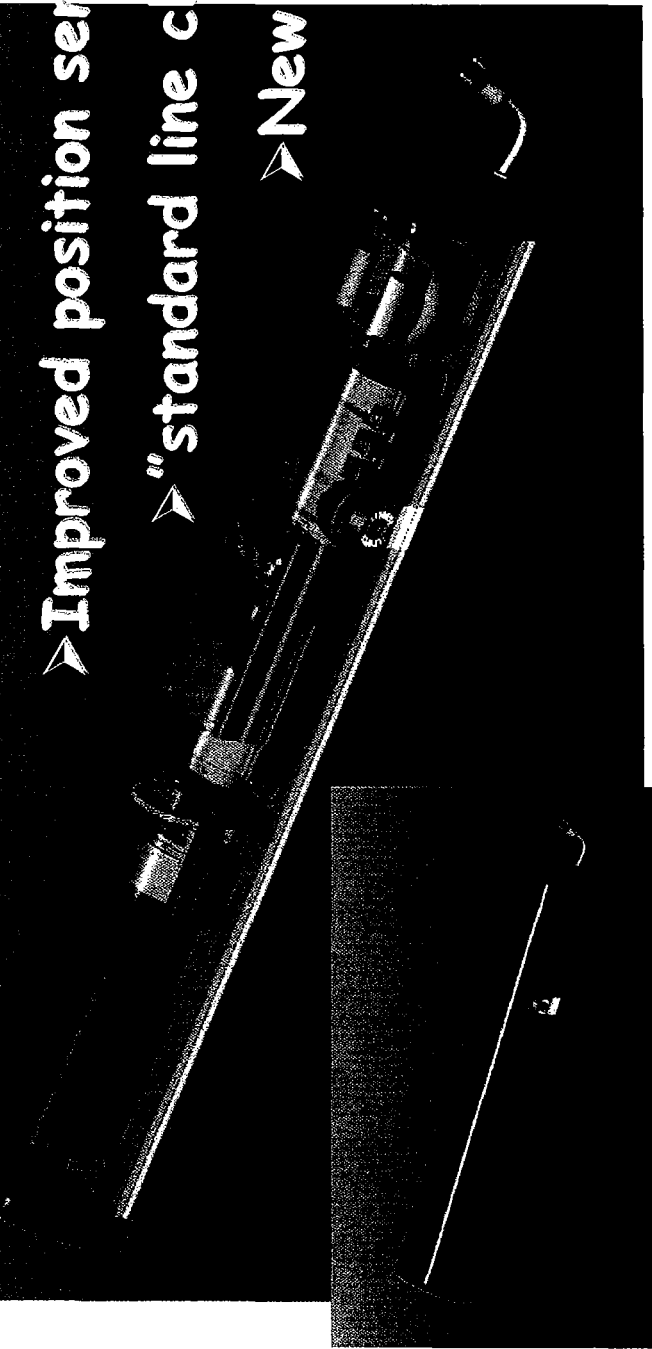
Client	Original (2 pcs)
VTT/Register Office	Original (1 pc)

4/VTT-V-22947-07/AP105/MIM

DA461 DOOR OPERATOR

- Nordic Line design (length increased compared to DA451)
- Motor attachment renewed
- New "flexible" electromagnetic
 - Improved position sensor
 - "standard line closer"
 - New power supply

APPENDIX NO. 1 (A)
REPORT NO: DT-5-913-03/68
SIGNATURE *A. Luoma*
VTT TECHNICAL RESEARCH
CENTRE OF FINLAND



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