

Construction Parameter	Variation	Influence of variation on performance characteristic			Possibility of extension	Additional Evidence Required
(1)	(2)	(3)			(4)	(5)
		E	I	W		
based on low distortion		>/=/<	≥	≥	Possible providing the same increase of thickness of core material by a maximum of 25 % otherwise not possible without an additional test	Additional test single or double leaf doorset with side, over and transom panel arrangement
E.3.4 Thickness of the panel (excluding glazing covered in Section F)	Decrease	>=<	≤	≤	E possible to a maximum of 10 % otherwise not possible without an additional test EI, EW not possible without an additional test	Additional test single or double leaf doorset with a side, over and transom panel arrangement
E.4. Materials and construction For further "Materials and Construction" parameters, refer to section A.3 If additional tests need to be conducted, the specimen shall incorporate appropriate side/transom and flush over panel arrangements. For variations of intumescent/draught/smoke seals, the rules defined in section A.3 are applicable for side/transom and flush over panel arrangements.						
E.4.1 Material of panel	Alternative	=	=	=	Not possible without an additional test	Additional test single or double leaf doorset with a panel
E.4.2 Type of steel sheet	Mild to stainless	=	=	=	Possible providing that the material thickness shall not be increased but may be decreased up to a maximum of 20 % otherwise not possible without an additional test	Additional test single or double leaf doorset with a panel

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E.4.3 Type of steel sheet	Stainless to mild	=	=	=	Possible providing that the material thickness shall not be decreased but may be increased up to a maximum of 25 % otherwise not possible without an additional test	Additional test single or double leaf doorset with a panel
E.5 Decorative and/or protective finishes						
For further "Decorative and/or protective finishes" parameters, refer to section A.4.						
F. Glazing for door leaf/leaves or side/transom and flush over panels						
F. 1 General						
Glass panels on their own do not have a classification. The fire resistance classification is derived from testing in specific edge framing techniques. Where fire performance classifications are referred to in this section, they may be determined by alternative testing of glass panels of the same or larger height and/or width to those tested by the particular door test(s). Where "similar edge fixing technique" is referred to, this means that the technique used in the original door test should be replicated exactly in terms of the retention detail or that the technique may be modified to accommodate a technique proven in an alternative test to determine fire performance characteristics. For double leaf doorsets, both leaves shall be similarly glazed unless tested to show maximum and minimum amounts of leaf cut out in opposing leaves of the same double leaf doorset after which time any sizes of leaf cut out in between those tested are acceptable.						
F.1.1 Glazed aperture	Add	>=<	>=<	>=<	Not possible without an additional test	Additional full scale test can be single or double leaf doorset
F.1.2 Glazed aperture	Remove	>=<	>=<	>=<	Possible in line with direct application otherwise not possible without an additional test	For single leaf doorsets additional full scale test single leaf or double leaf doorset , for double leaf doorsets additional full scale test double leaf doorset

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F.1.3 Glazed aperture	Transposition between leaves	-	-	-	Possible in accordance with the table below otherwise not possible without an additional test	Additional full scale test can be single or double leaf doorset in accordance with the table below

Tested		Allows		
no. of leaves	glazed aperture	single leaf doorset	double leaf doorset	
			primary	secondary
single	Yes	Yes	Yes	Yes/No *)
double primary	Yes	Yes	Yes**)	Yes**)
double secondary	Yes			
double primary	Yes	Yes	Yes	Yes/No *)
double secondary	No			
double primary	No	No	No	Yes
double secondary	Yes			

In addition, all relevant D.A. rules apply.

*) the "yes" only applies where the primary and secondary leaves are of identical construction, e.g. double swing unlatched doors.

***) for double leaf doorsets, it is possible to remove glazings from one of the leaves providing the doorset of the same design has been tested without glazing.

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(1)	(2)	(3)			(4)	(5)
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F.1.4 Glazed aperture	Size variation between smallest and largest tested glazed aperture	-	-	-	Possible in accordance with the table below otherwise not possible without an additional test	Additional full scale test can be single or double leaf doorset in accordance with the table below

Tested		Allows		
no. of leaves	dimension of glazed aperture	single leaf doorset (range of dimension)	double leaf doorset (range of dimension)	
			primary leaf	secondary leaf
single	largest	largest minus 25 % up to largest	largest minus 25 % up to largest	largest minus 25 % up to largest
single (two tests)	smallest + largest	smallest up to largest	smallest up to largest	smallest up to largest
double	primary ----- secondary	smallest up to largest	smallest up to largest	smallest up to largest
double	primary ----- secondary	smallest	smallest	smallest up to largest
double	primary ----- secondary	largest minus 25 % up to largest	largest minus 25 % up to largest	largest minus 25 % up to largest
double	primary ----- secondary	none	none	largest minus 25 % up to largest

Rules in D.A. relating to distance between the edge of glazing and the perimeter of each leaf are applicable.

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(1)	(2)	(3)			(4)	(5)
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F.1.5 Thickness of glass - See Figure A.66 a)	Increase	≥	≥	≥	<p>Possible to exchange one thickness of fire-resistant glass for another with the same (or better) fire resistance performance provided that it can be demonstrated that the new glass of the thickness required is within the same glass product family (same manufacturer) and has a similar edge fixing technique only modified to accommodate the alternative thickness and that the alternative thickness does not add more than 25 % to the weight of the door leaf</p> <p>otherwise not possible without an additional test</p> <p>Glass Product Family is defined in EN 15254-4:2008+A1:2011, 3.7.</p>	Additional full scale test can be single or double leaf doorset
F.1.6 Thickness of glass - See Figure A.66 b)	Decrease	>/=/ /	>/=/ /	>/=/ /	<p>Possible to exchange one thickness of fire-resistant glass for another with the same (or better) fire resistance performance provided that it can be demonstrated that the new glass of the thickness required is within the same glass product family (same manufacturer) and has a similar edge fixing technique only modified to accommodate the alternative thickness</p> <p>otherwise not possible without an additional test</p> <p>Glass Product Family is defined in EN 15254-4:2008+A1:2011, 3.7.</p>	Additional full scale test can be single or double leaf doorset
F.1.7 Dimensions of each glazed aperture - See Figure A.67	Increase	≤	≤	>/=/ /	<p>Possible to increase the size and change the aspect ratio in line with EN 15254-4 providing the distance between the edge of glazing and the perimeter of the door leaf/panel is not decreased</p> <p>otherwise not possible without an additional test</p>	Additional full scale test can be single or double leaf doorset in accordance with F.1.4

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(1)	(2)	(3)			(4)	(5)
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F.1.8 Dimensions of each glazed aperture - See Figure A.68	Decrease	≥	≥	>!/=<	Possible in line with direct application otherwise not possible without an additional test	Additional full scale test can be single or double leaf doorset in accordance with F.1.4
F.1.9 Type of glass	Change of glass type	=	=	=	<p>Possible to exchange one type of fire-resistant glass for another with the same (or better) fire resistance classification provided that it can be demonstrated that both glasses are within the same glass product family (same manufacturer) and have at least the same or increased nominal thickness.</p> <p>For glass covered by the product standards EN 572-9, EN 1748-2 and EN 13024-2, it is possible to exchange one type of fire-resistant glass for another with the same (or better) fire resistance classification provided that it can be demonstrated that the new glass is within the same glass Product Standard and has a similar edge fixing technique. otherwise not possible without an additional test</p>	Additional full scale test can be single or double leaf doorset
F.1.10 Materials and geometry of edge fixing technique (with the same glass type)	Alternative	>!/=<	>!/=<	>!/=<	Not possible without an additional test	Additional full scale test to EN 1634-1 can be single or double leaf doorset or for low distortion doors only to EN 1364-1
F.1.11 Decorative capping - See Figure A.69	Add or exchange	>!/=<	=	=	<p>Possible providing the edge fixing technique is not affected and the capping is Euroclass A1 otherwise not possible without an additional test</p>	Additional full scale test can be single or double leaf doorset

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		(1)	(2)	(3)		
		E	I	W	(4)	(5)
F.1.12 Type and number of edge fixings (e.g. clips, screws, rivets)	Alternative	=	=	=	Possible to interchange between fixings providing centre distances are not exceeded and providing the critical components have a melting point higher than 850 °C but where it is proven that the critical components have been successfully tested with a melting point lower than 850 °C, these may be interchanged with similar components otherwise not possible without an additional test	Additional full scale test can be single or double leaf doorset
F.1.13 Shape of glazing	interchange between rectangular and round	=	=	=	Possible to change the shape of the tested glass in line with EN 15254-4 providing the distance between the edge of glazing and the perimeter of the door leaf/panel is not decreased otherwise not possible without an additional test	Additional full scale test can be single or double leaf doorset
F.1.14 Number of glazed apertures - See Figure A.70	Increase	=	≤	≥	Possible providing the distance between glazed apertures has been tested, providing this distance is not reduced and providing the tested glazed area is not to be exceeded (smallest tested distance between edge of panes and perimeter of door leaf/panel is not decreased) otherwise not possible without an additional test	Additional full scale test can be single or double leaf doorset
F.1.15 Number of glazed apertures - See Figure A.71	Decrease	=	≥	≤	Possible to reduce to a minimum of one (in line with F.1.2) providing this distance between the apertures is not reduced otherwise not possible without an additional test	Additional full scale test can be single or double leaf doorset
F.1.16 Smallest tested distance between the edge of glazing and the perimeter of the door leaf/panel - See Figure A.72	Increase	≥	≥	=	Possible	-

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(1)	(2)	(3)			(4)	(5)
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F.1.17 Smallest tested distance between the edge of glazing and the perimeter of the door leaf/panel - See Figure A.73	Decrease	≤	≤	=	Not possible without an additional test	Additional full scale test can be single or double leaf doorset
F.1.18 Distance between glazed apertures	Increase	≥	≥	=	Possible	-
F.1.19 Distance between glazed apertures - See Figure A.74	Decrease	≤	≤	=	Not possible without an additional test	Additional full scale test can be single or double leaf doorset
G Supporting construction and attachment (technique) of door frame or side / transom panels / flush over panels						
G1 General						
G.1.1 Supporting construction	Flexible to rigid	>/=/<	>/=/<	>/=/<	Not possible without an additional test	Additional full scale test can be single or double leaf doorset
G.1.2 Supporting construction	Rigid to flexible	>/=/<	>/=/<	>/=/<	E possible in line with direct application EI, EW not possible without an additional test	Additional full scale test can be single or double leaf doorset
G.1.3 Supporting construction	Standard to associated and <i>vice versa</i>	>/=/<	>/=/<	>/=/<	Not possible without an additional test	Additional full scale test can be single or double leaf doorset
G.1.4 Attachment technique	Alternative built-in frame anchor to plug & screw and <i>vice versa</i>	>/=/<	>/=/<	>/=/<	Possible providing the fixings are appropriate to the construction and have been successfully tested in similar supporting construction and the distance between the fixings is not increased otherwise not possible without an additional tes	Additional full scale test can be single or double leaf doorset

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G.1.5 Type of fixings	Alternative manufacturer/supplier	=	=	=	Possible	-
G.1.6 Type of fixings	Alternative material	≤	≤	≤	Possible to interchange between alternative fixing material providing centre distances are not increased and providing the critical components have a melting point higher than 850 °C. Where it is proven that the critical components have been successfully tested with a melting point lower than 850 °C, these may be interchanged with similar components. otherwise not possible without an additional test	Additional full scale test can be single or double leaf doorset
G.1.7 Number and size of fixings	Increase	≥	≥	≥	Possible	-
G.1.8 Number and size of fixings	Decrease	≤	≤	≤	Not possible without an additional test	Additional full scale test can be single or double leaf doorset with or without a panel in the same type of supporting construction
G.1.9 Distance between fixings	Increase	≤	≤	≤	Possible in line with direct application rules (15 % limit for size variations) when "B" category has been achieved otherwise not possible without an additional test	Additional full scale test can be single or double leaf doorset with or without a panel
G.1.10 Distance between fixings	Decrease	≥	≥	≥	Possible	-
G.1.11 Fixing to floor - See Figure A.75 a)	Cleated to sunk	≥	≥	≥	Possible	-

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G.1.12 Fixing to floor - See Figure A.75 b)	Sunk to cleated	≤	≤	≤	Not possible without an additional test	Additional full scale test can be single or double leaf doorset with or without a panel
G.1.13 Gap between door leaf and floor - See Figure A.76	Increase	≤	≥	≥	Possible up to a 50 % increase in the tested gap size but limited to a maximum of 25 mm total gap size otherwise not possible without an additional test	Additional full scale test can be single or double leaf doorset
G.1.14 Gap between door leaf and floor - See Figure A.77	Decrease	≥	≥	≥	Possible	-
G.2 Modified supporting construction						
G.2.1 Standard flexible supporting construction - See Figure A.78	Strengthened to accommodate fixing requirements	>/=/<	>/=/<	>/=/<	Not possible without an additional test	Additional full scale test can be single or double leaf doorset
G.3 Associated supporting construction						
G.3.1 Material and assembly technique	Change	>/=/<	>/=/<	>/=/<	Not possible without an additional test	Largest size arrangement to be tested in each different associated construction