

Fire rated doors and wall partitions

MB-78EI



EW 15 EW 30

EI 15 EI 30 EI 45 EI 60 EI 90



The **MB-78EI** system has been developed for the producing of internal or external fire rated partition walls, with single- or double-leaf doors featured by a fire resistance class of EI 15, EI 30, EI45 EI 60 or EI 90, according to the PN-EN 13501-2:2010 standard. Numerous tests and calculations have shown that **MB-78EI**-based products have a very good thermal and acoustic insulation. Due to its characteristics, optimized technology & production costs, the compatibility with other ALUPROF window and door systems and the constant technical development, it is a very popular product, widely used by the construction professionals.

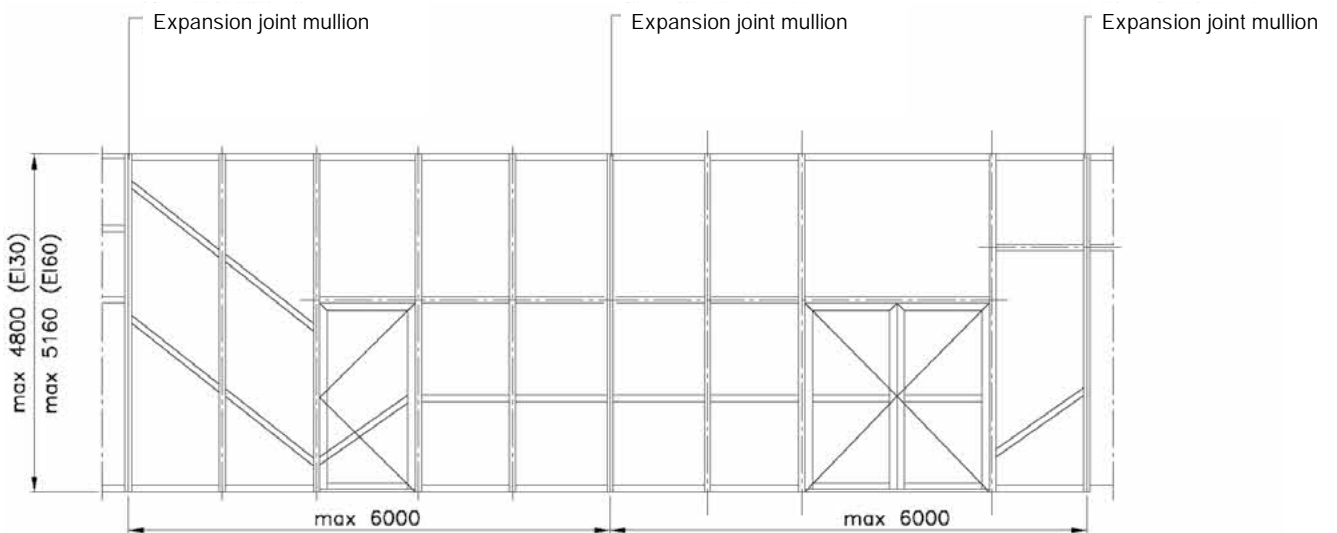
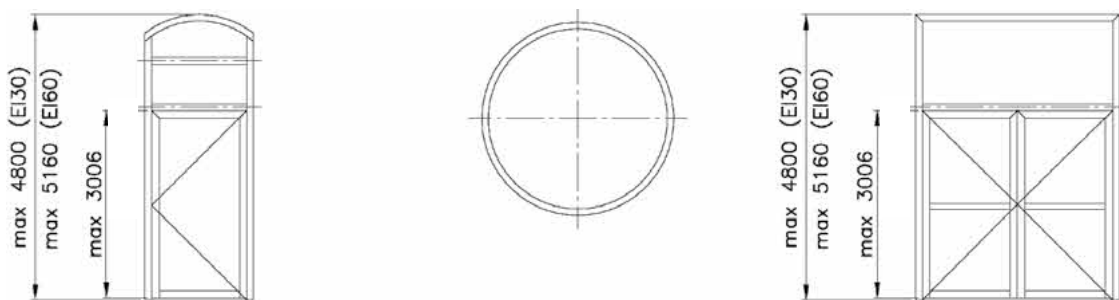
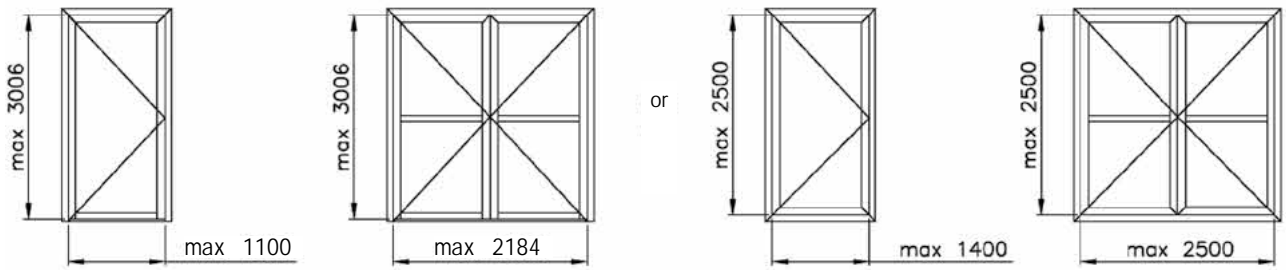
The structure of the **MB-78 EI** system is based on the thermally-insulated, 78 mm deep aluminium profiles. They are characterized by a low overall heat transfer coefficient "U," thanks in the main, to specialist design thermal break, 34mm in width. The resistance to high temperature is assured by special fire insulation elements –GKF or CI –introduced into the inner chambers of the profiles and into insulating spaces between profiles and steel accessories and joints.

Angular wall connections are achievable with the system, as is the possibility of bending & curving profiles, in order to satisfy the glazing of typical, if not traditional, "arch head" openings. Further architectural frame features that would have an effect on the aesthetics of a building, are available in the form of decorative muntins & glass applied "Georgian effect" bars.

The maximum limitations of the system would permit a fixed wall up to 5,16 m in height, and hinged doors of a maximum leaf size 1.4 m x 3.0 m. The **MB-78EI** door system can exist as an individual "goal-post frame," as part of a larger composite "window wall" or in fire resistant curtain wall facades, our **MB-SR50N EI** and **MB-SR50 EI** systems. Structures & door sets of this type, both single & double leaf door arrangements, have been successfully tested in a notified laboratory, obtaining fire resistance classes of EI 30 & EI 60.



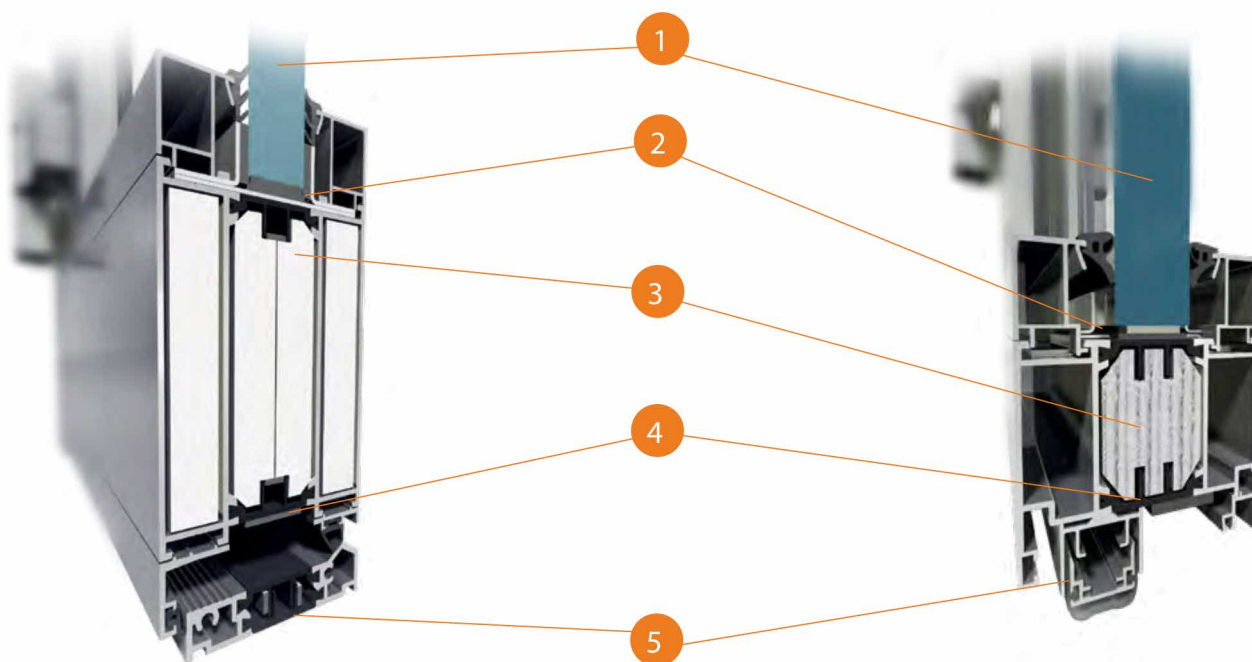
Max. dimensions of the wall segments



TECHNICAL SPECIFICATION		TECHNICAL PARAMETERS	
Depth of wall & door frame	78 mm	Air Permeability	Class 2, PN-EN 12207:2001
Depth of leaf	78 mm	Watertightness	Class 5A, PN-EN 12208:2001
Width of wall & door frame	51 mm / 72 mm	Fire resistance	Classes EI 15, EI 30, EI45, EI 60, EI 90 in accordance with EN 13501-2, classes EI 15, EI 30, EI45, EI 60 in accordance with AT-15-6006/2016
Width of door leaf profiles	72 mm / 51 mm	Thermal insulation (coeff.)	from 1,6 W/(m²K)
Glazing range	8 –49 mm	Acoustic Insulation (coeff. R_w)	up to 41 dB

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- 1 Single or double fire-resistant glass of a thickness of up to 49 mm
- 2 Steel accessories and expanding tapes that protect the structure from high temperatures
- 3 GKF or CI type fire protection inserted inside the profiles, enables performance classes EI15 to EI 90
- 4 Profiled thermal break that provides adequate protection against heat loss (U_f from 1.6 m²K)
- 5 Different door bottom rail seal solutions: with & without threshold profile option, obtaining a smoke-proof class $S_m S_a$

Extensive design possibilities, a wide range & variety of hinge products, locks, door closers & other hardware, alongside an optimised manufacturing process, are not the only advantages of this system. It also allows the realisation of the product solutions contained on the following pages: **MB-78EI DPA** automatic sliding door of an EI 15 or EI 30 class & **MB-118EI** walls of an EI 120 class.

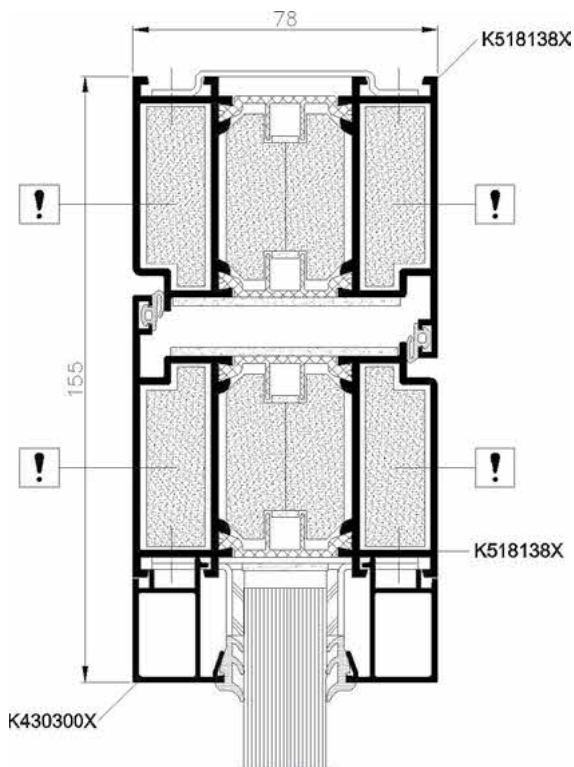
Range of possible fire-resistant glazing for use in the MB-78EI systems includes:

- Pyrobel of a thickness of 9.3 mm – 36 mm
- Polflam of a thickness of 20 mm – 25 mm
- Contraflam Lite of a thickness of 13 mm – 22 mm
- Contraflam 30 of a thickness of 16 mm – 20 mm
- Contraflam 60 of a thickness of 25 mm – 35 mm
- Contraflam 90 of a thickness of 40 mm
- Pyrostop of a thickness of 15 mm – 45 mm
- Promaglas of a thickness of 17 mm – 30 mm
- Pyranowa of a thickness of 15 mm – 27 mm
- Fireswiss of a thickness of 15 mm – 28 mm
- Q4Firestop of a thickness of 16,5 mm – 27 mm

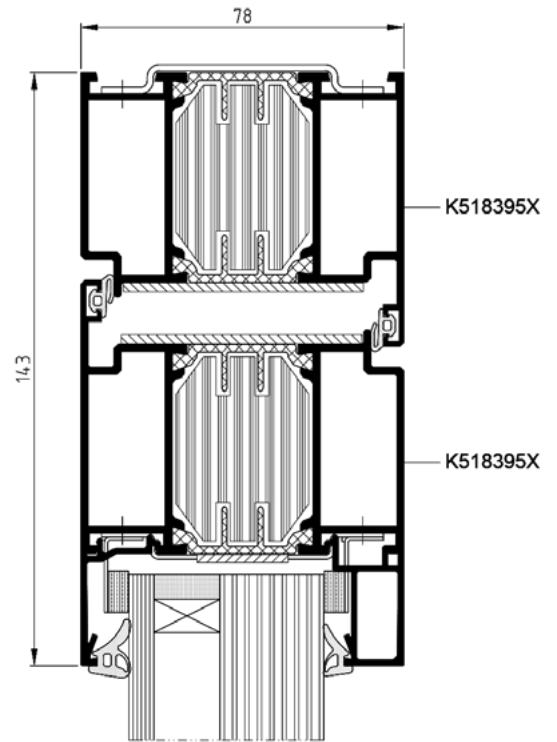
The MB-78EI system has a Technical Approval of the No. AT-15-6006/2016 and a certificate CERTIFIRE by the Institute of Warrington Certification Ltd No. CF 5138.



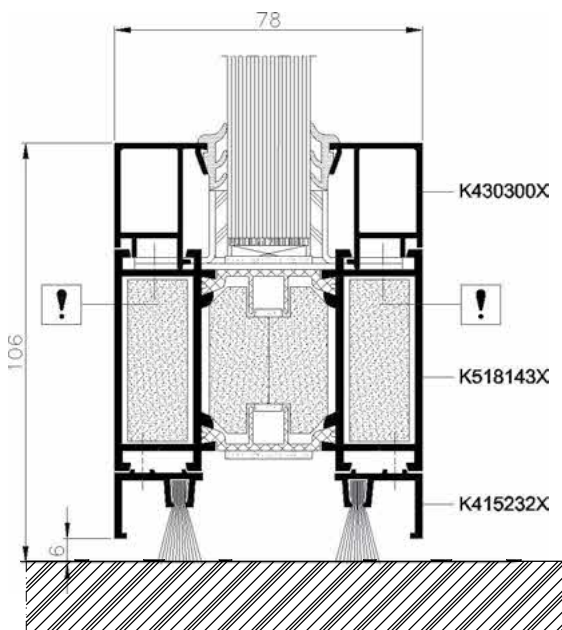
Door frame and door leaf –cross-section



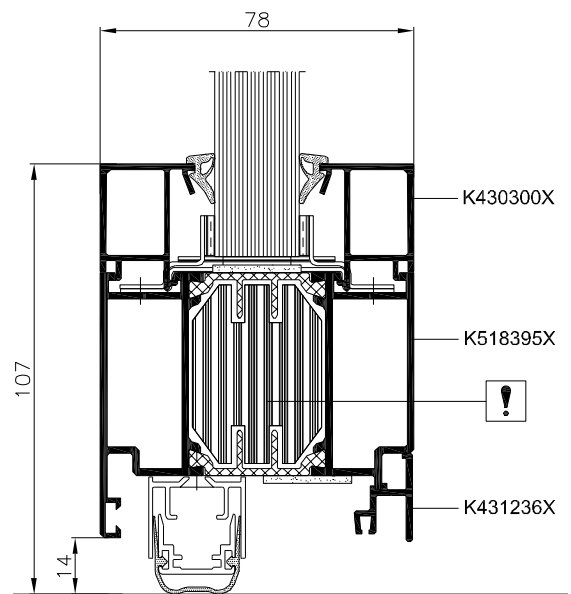
Door frame and door leaf with CI infills –cross-section



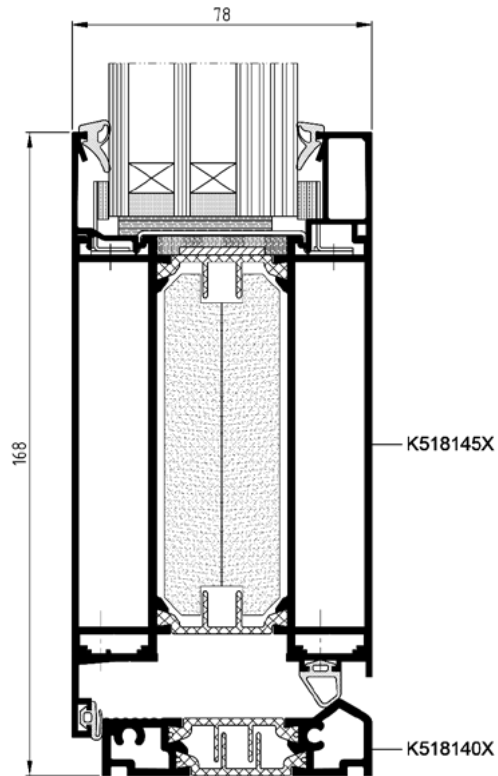
Door without a threshold –bottom cross-section



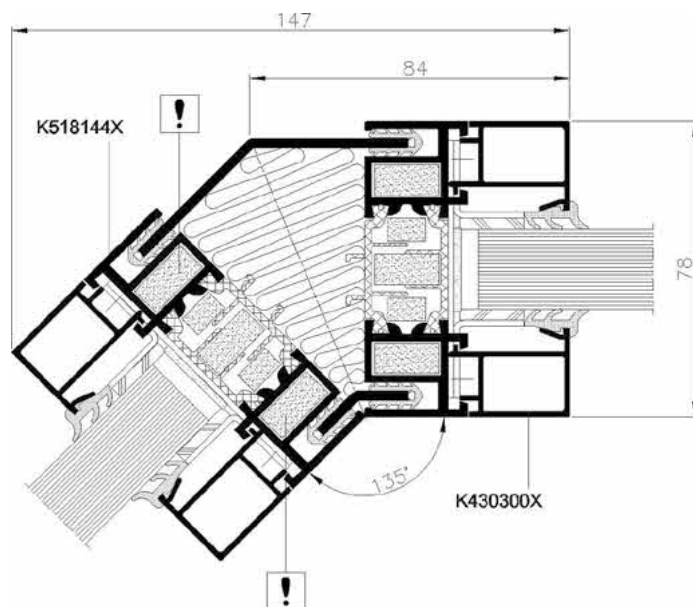
Door leaf with drop seal –cross-section



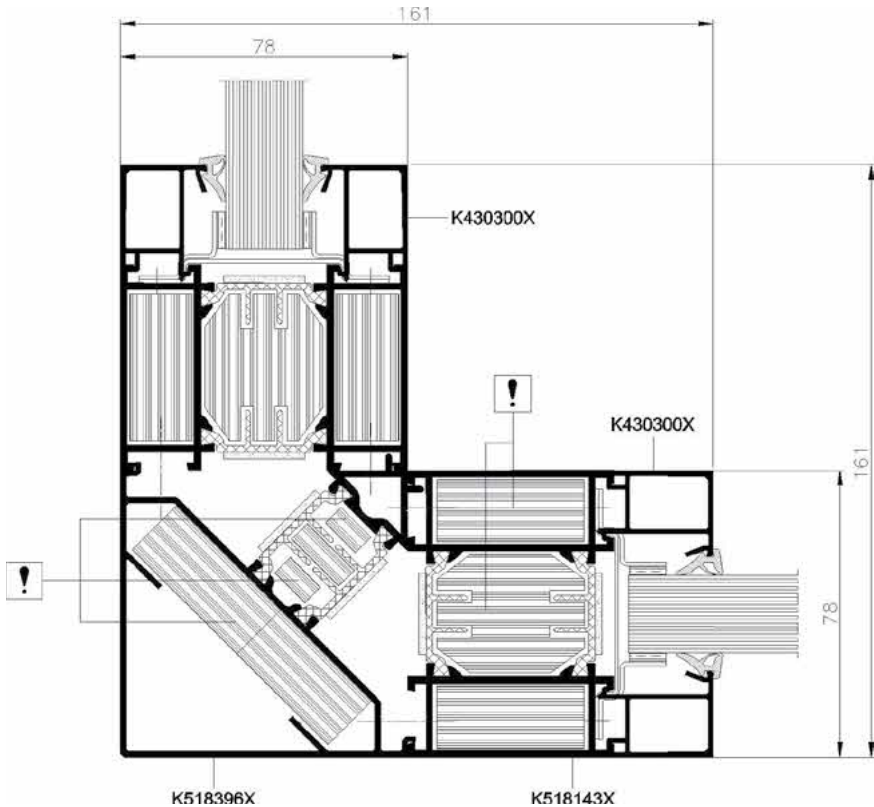
Bottom cross-section with threshold



Angle joint of the fixed walls 135°



Angle joint of the fixed walls 90°



MB-78EI doors cross-section in the MB-SR50 EI façade

