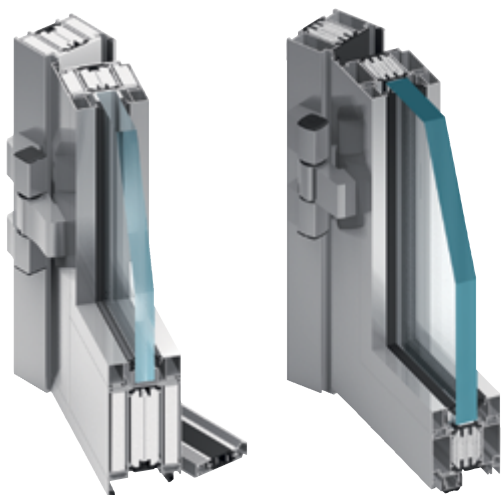


# Fire rated doors and wall partitions

## 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, EI 45 EI 60 or EI 90 to EN 13501-2. In most cases, these constructions can also have smoke control characteristics (classes  $S_{200}$  &  $S_d$ ). 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.

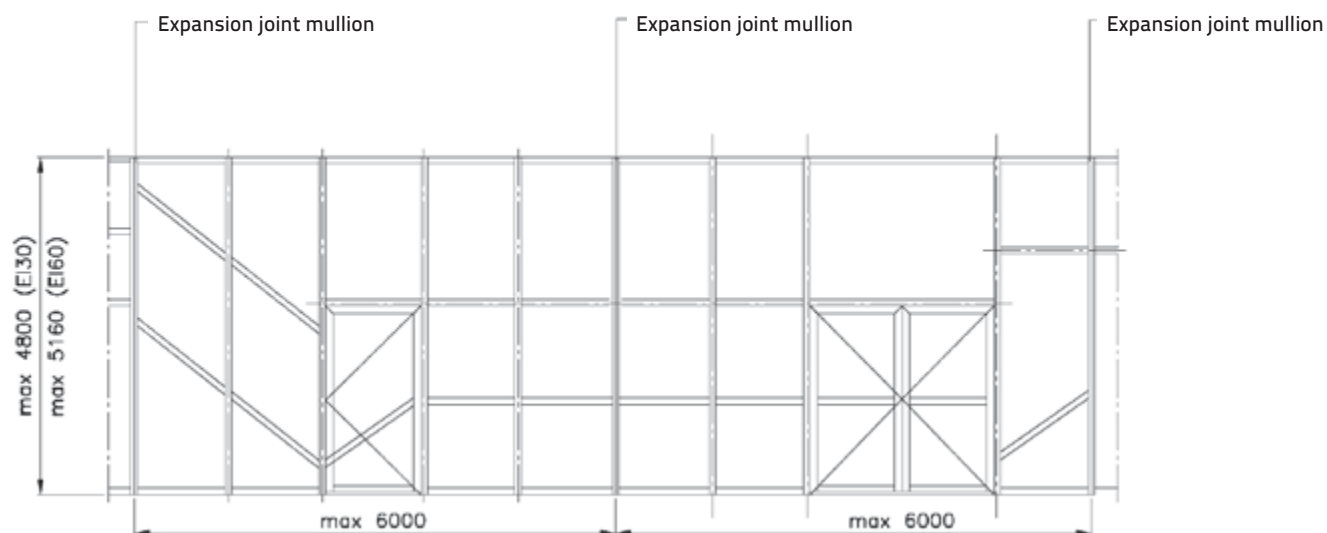
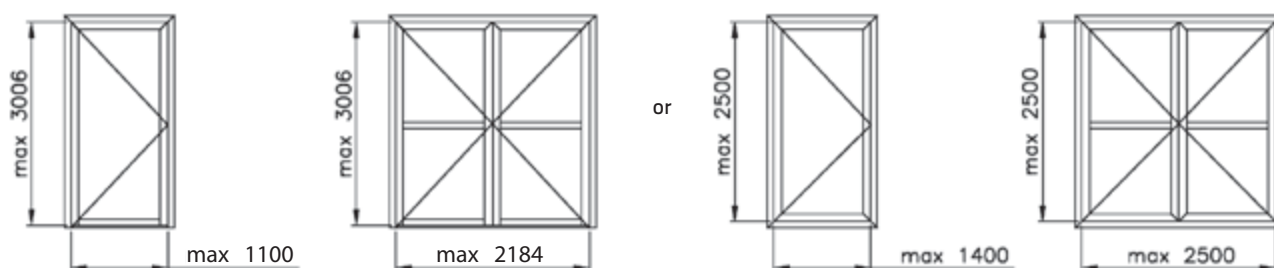
The structure of the **MB-78 EI** system is based on the thermally-insulated, 78 mm deep aluminium profiles. They are characterized by a low overall heat transfer coefficient "U," thanks in the main, to specialist design thermal break, 34mm in width. The resistance to high temperature is assured by special 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 achievable with the system, the possibility of bending & curving profiles, as well as the use of diagonal cross-pieces and decorative muntin bars glued on glass are the features that affect the shape and aesthetics of a building.

The range of permissible dimensions of the construction includes fixed partitions up to 5.16 m high and single-swing doors with leaf dimensions: W up to 1.4 m; H up to 3.0 m; the width of double doors may achieve 2.5 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 facade, our **MB-SR50N EI** system. 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.



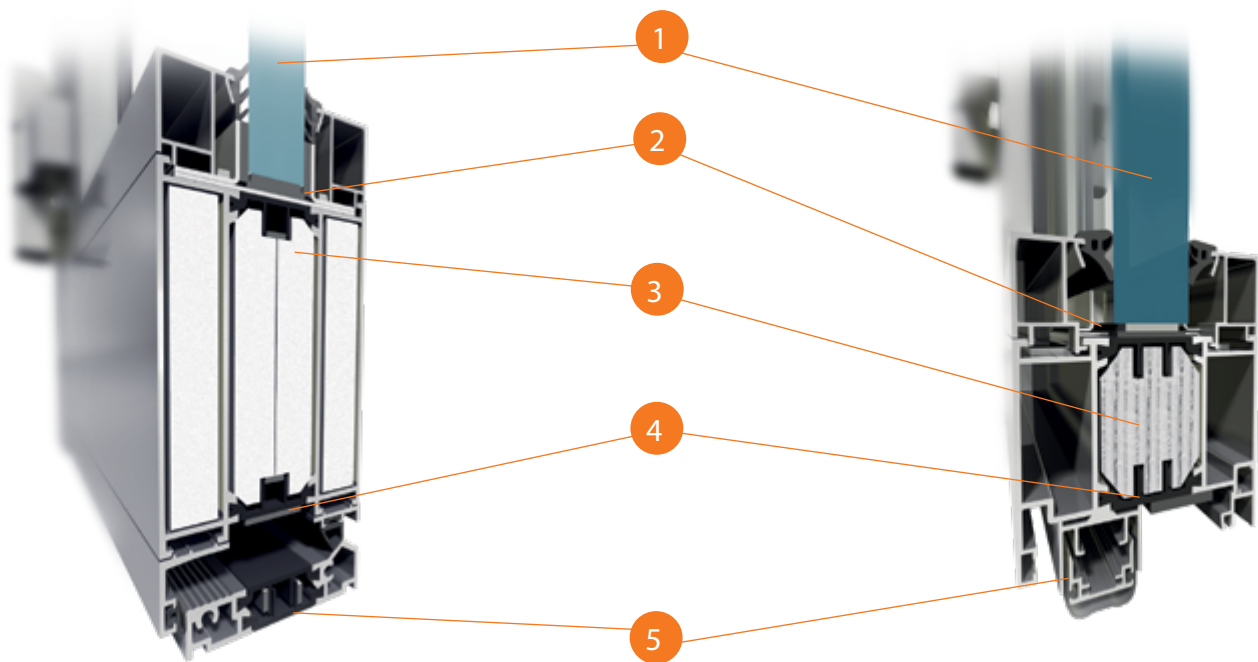
Max. dimensions of the wall segments



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 – 65 mm	Acoustic Insulation (coeff. $R_w$ )	up to 41 dB

# Fire rated doors and wall partitions

## MB-78EI



- ① Single or double fire-resistant glass of a thickness of up to 65 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 m<sup>2</sup>K)
- ⑤ Different door bottom rail seal solutions: with & without threshold profile option, obtaining a smoke-proof class S<sub>200</sub> S<sub>a</sub>

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.

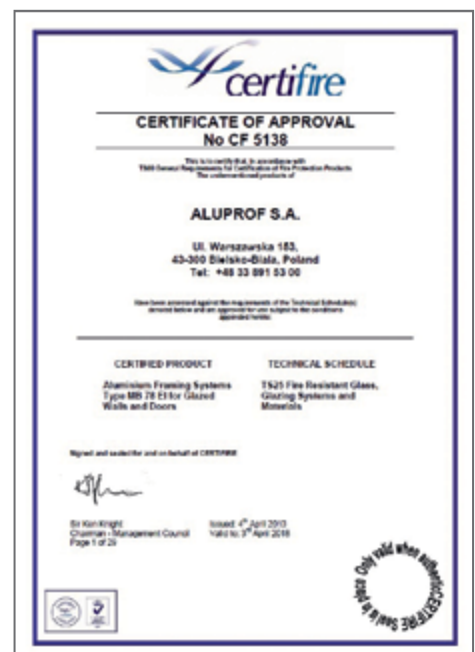
The thickness of infills achievable with the **MB-78EI** system is from 8 to 65 mm. Infills may include all typical fire-resistant glass panes, as well as layered opaque elements consisting of sheet metal and appropriate panels that ensure the required fire resistance.

Range of possible fire-resistant glazing

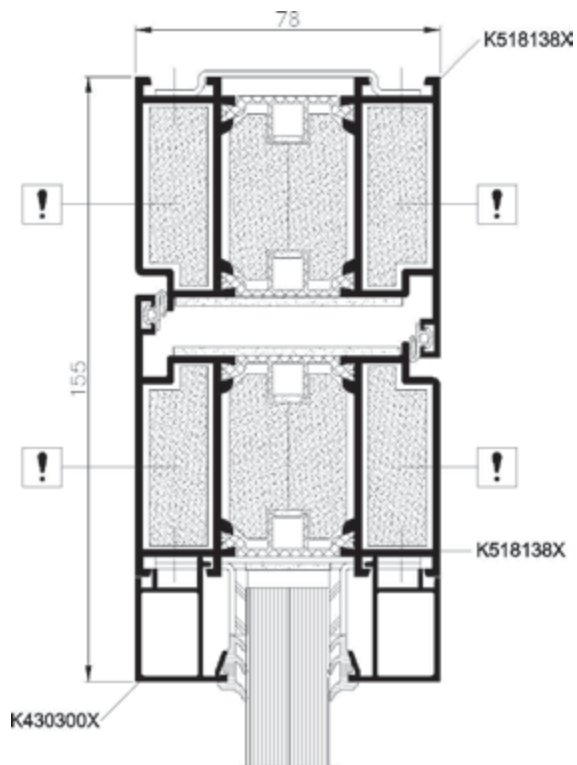
for use in the MB-78EI systems includes:

- 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

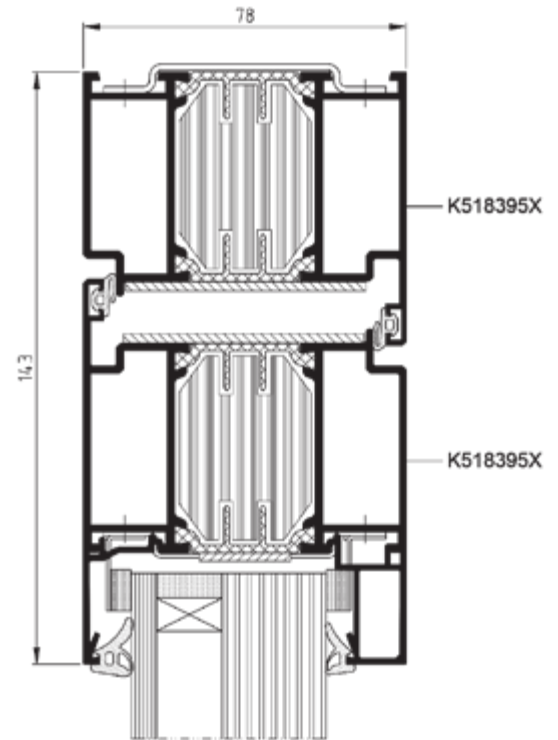
The **MB-78EI** system has a Technical Approval of the No. AT-15-6006/2016 valid until 29.12.2021 and a certificate CERTIFIRE by the Institute of Warrington Certification Ltd No. CF 5138.



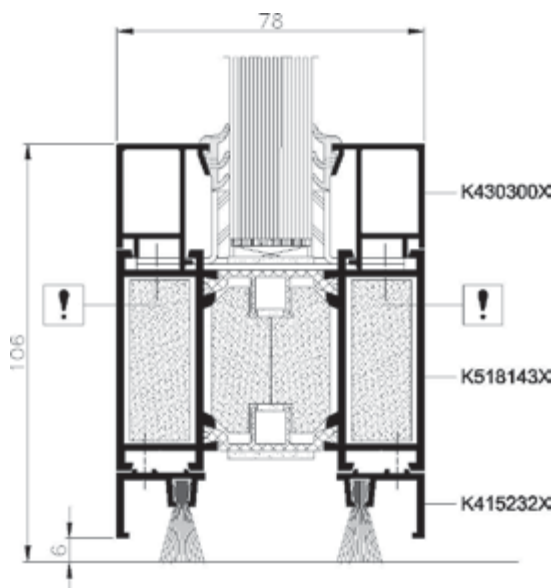
Door frame and door leaf – cross-section



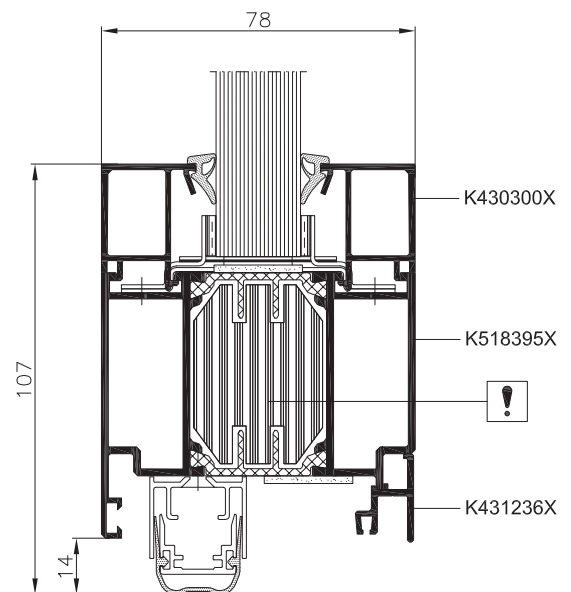
Door frame and door leaf with CI infills – cross-section



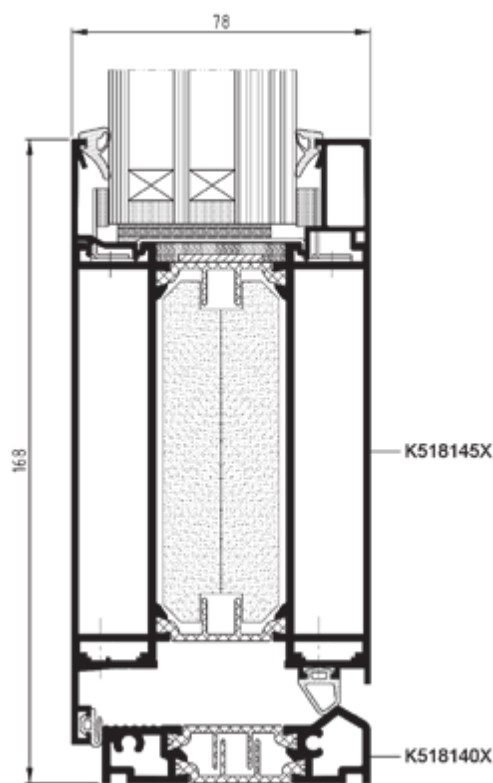
Door without a threshold – bottom cross-section



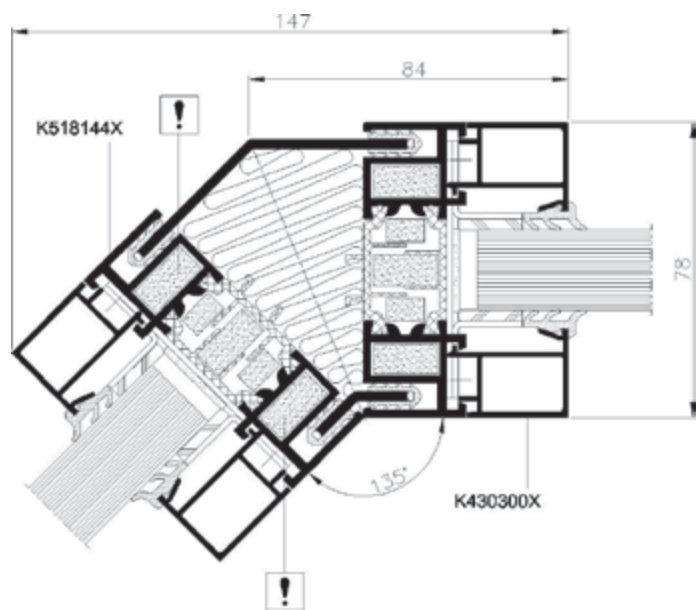
Door leaf with drop seal – cross-section



Bottom cross-section with threshold

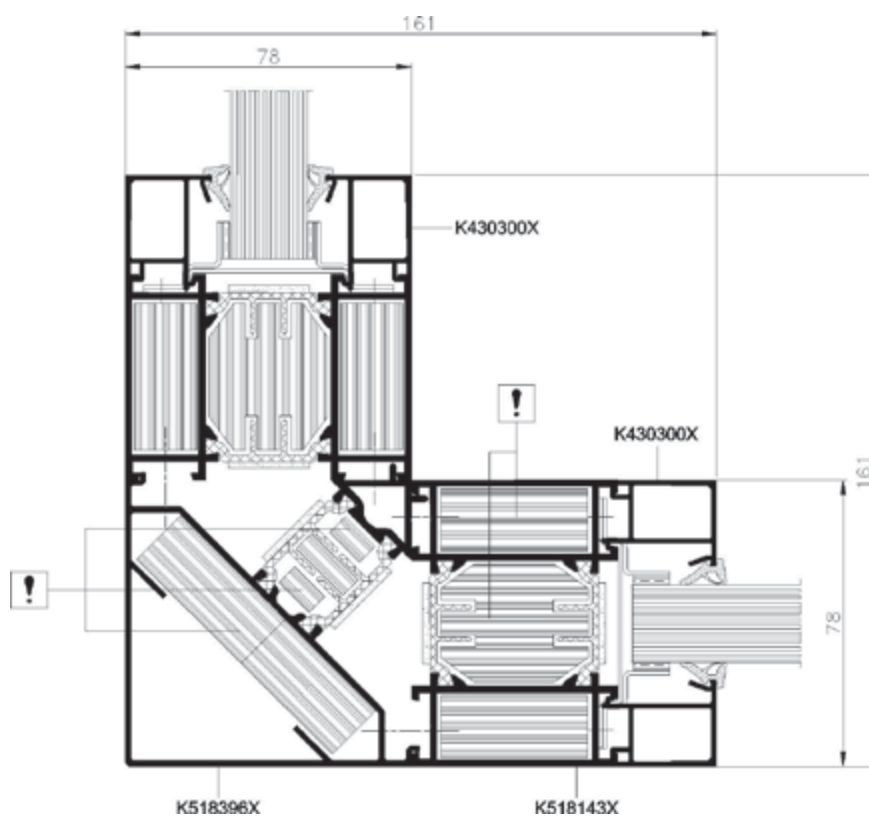


Angle joint of the fixed walls





Angle joint of the fixed walls 90°



MB-78EI doors cross-section in the MB-SR50N EI façade

