PRESENTATION



MORE INFO:

alufire.com

EXTERNAL PARTITIONS TECHNICAL INFORMATION

ALUFIRE

FIRE-RESISTANT
ALUMINUM JOINERY

ALUFIRE EXTERNAL PARTITIONS SYSTEMS

1. Alufire Exterior

- EI 30
- EI 45
- EI 60
- EI 90
- EI 120

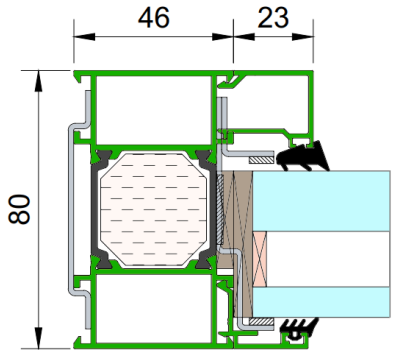
2. Alufire Exterior Thermo

- EI 30
- EI 60

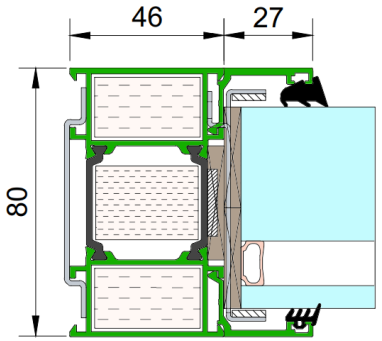
PROFILE CONFIGURATION OVERVIEW

ALUFIRE
EXTERNAL PARTITIONS

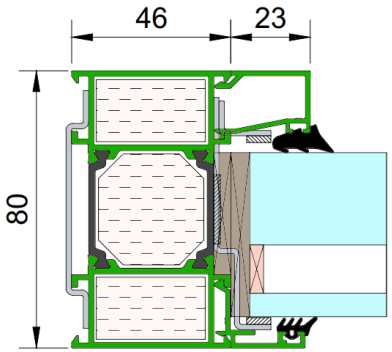
Alufire Exterior



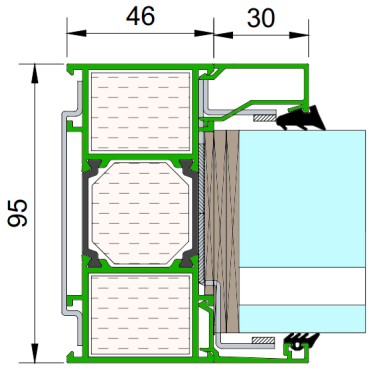
EI30



EI90

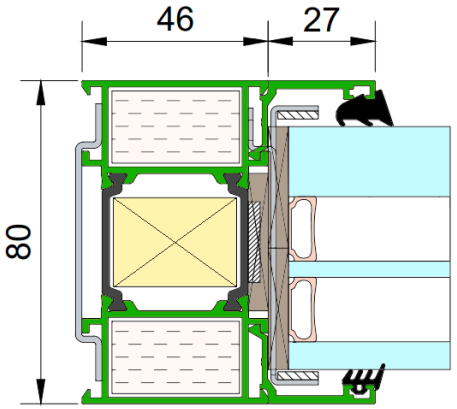


EI60

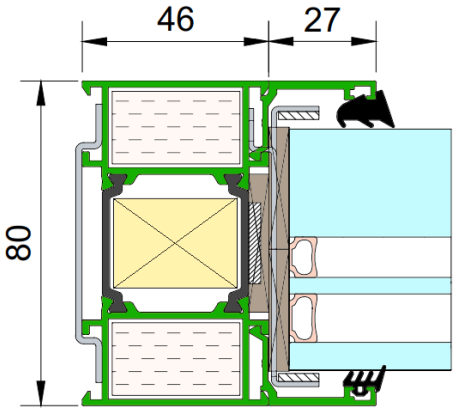


EI120

Alufire Exterior Thermo



EI30

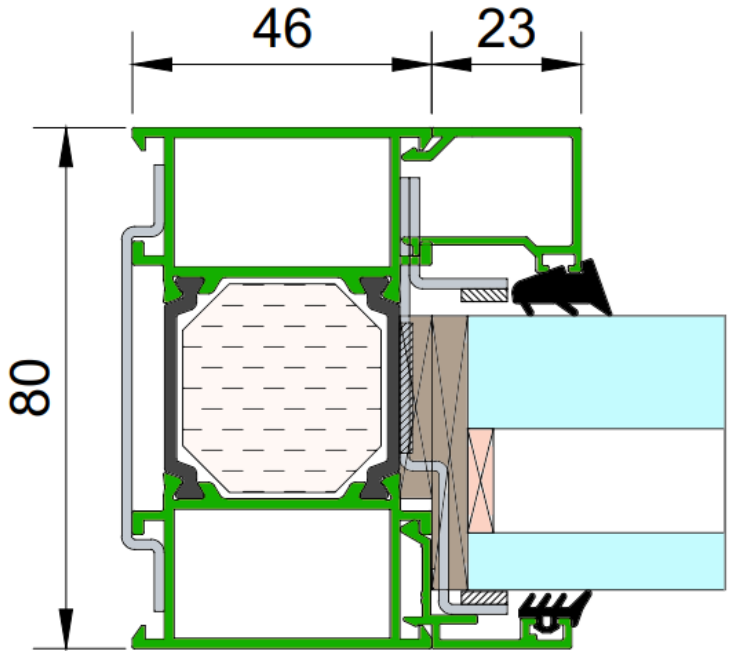


EI60

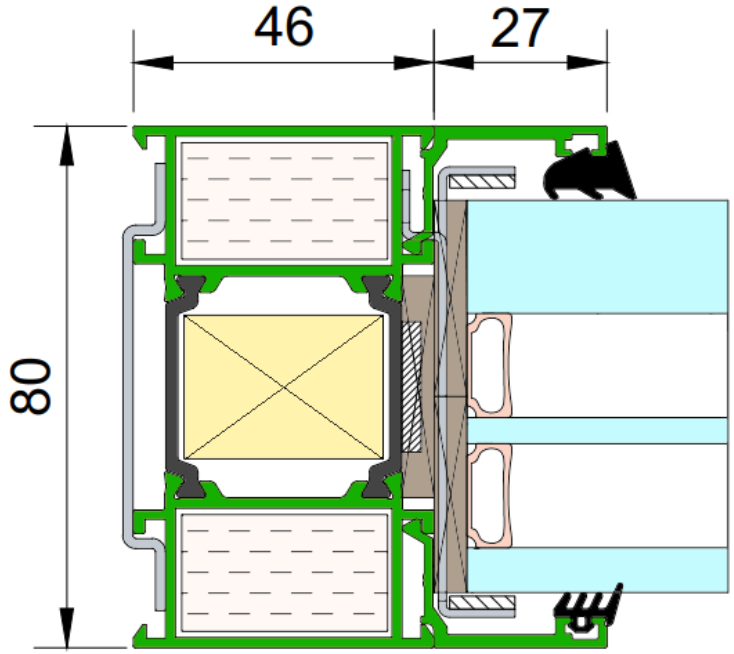
PROFILE CONFIGURATION
EI30 COMPARISON

ALUFIRE
EXTERNAL PARTITIONS

Alufire Exterior
EI30



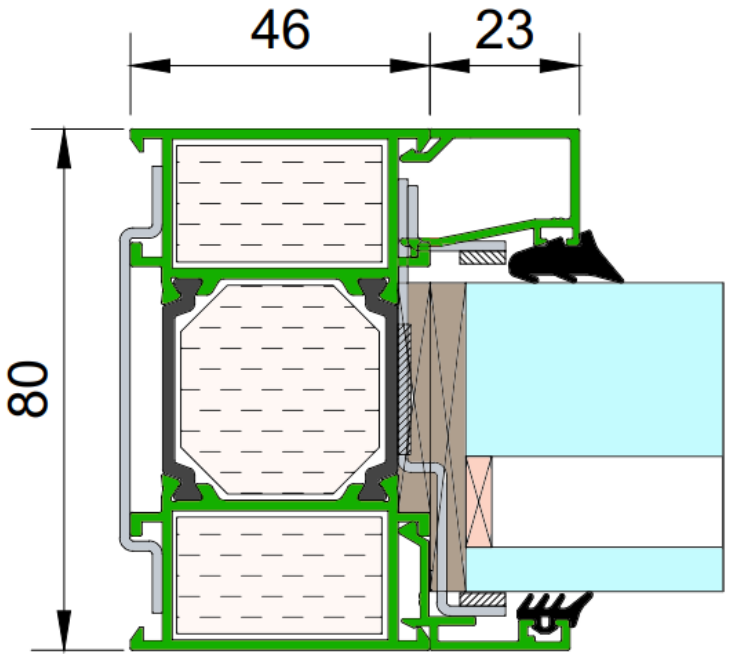
Alufire Exterior Thermo
EI30



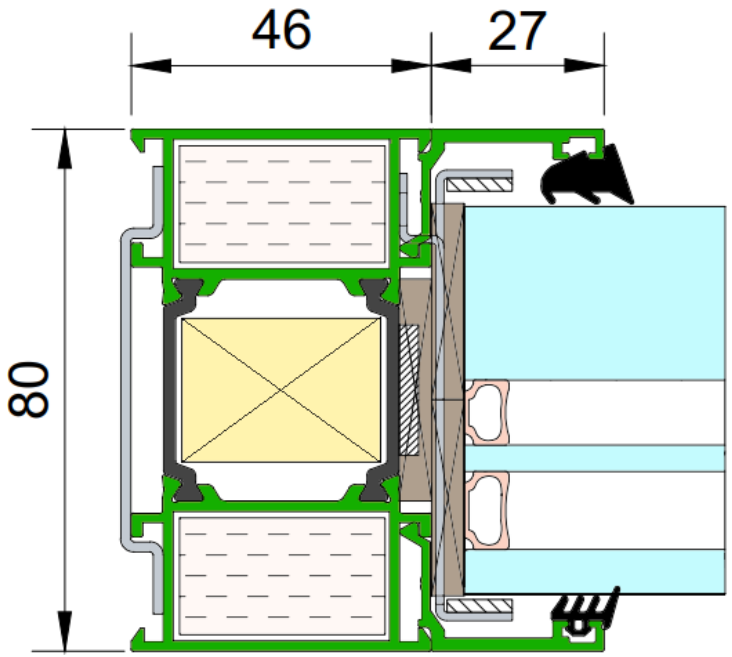
PROFILE CONFIGURATION
EI60 COMPARISON

ALUFIRE
EXTERNAL PARTITIONS

Alufire Exterior
EI60



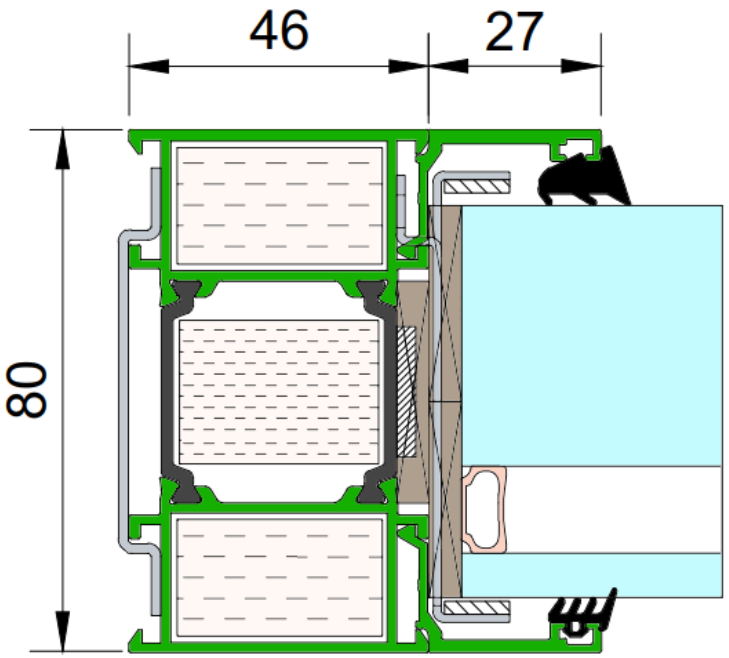
Alufire Exterior Thermo
EI60



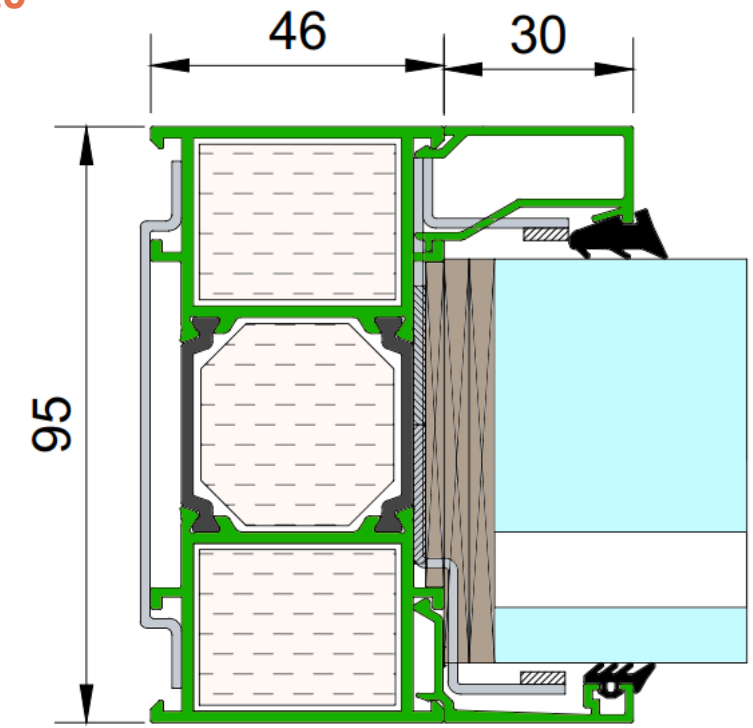
PROFILE CONFIGURATION
EI90 / EI120 COMPARISON

ALUFIRE
EXTERNAL PARTITIONS

Alufire Exterior
EI90



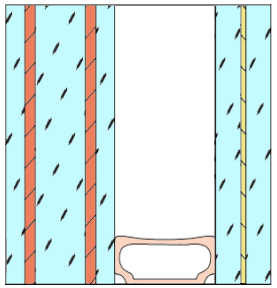
Alufire Exterior
EI120

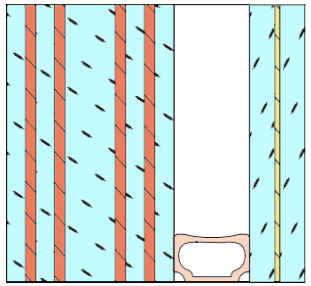


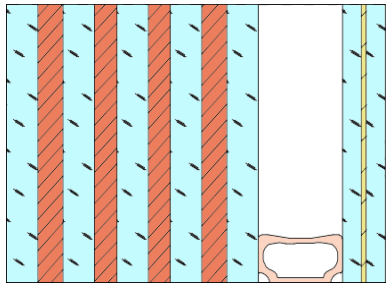
GLASS

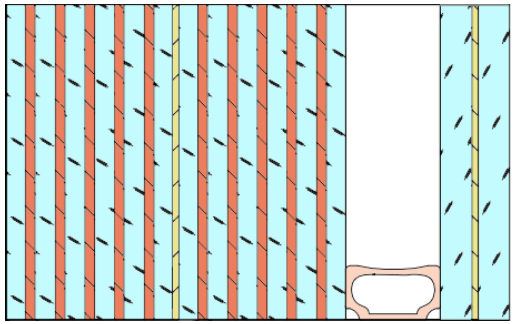
ALUFIRE
EXTERNAL PARTITIONS

Alufire Exterior


EI30 (DGU)


EI60 (DGU)


EI90 (DGU)

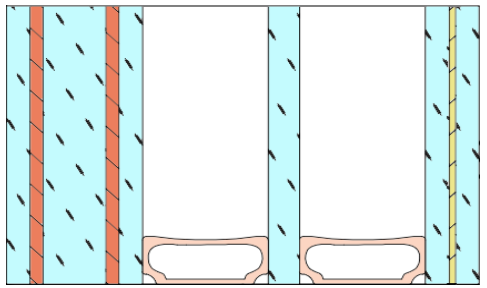

EI120 (DGU)

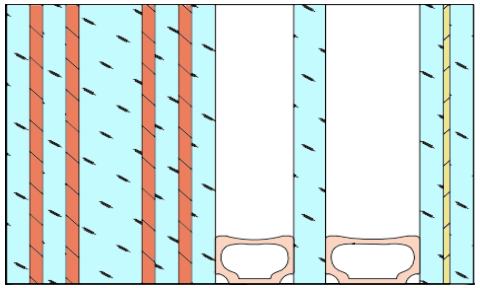
EI30-EI60:
up to **47 mm** thick IGU

EI90:
60 mm thick IGU

EI120: 64 mm thick IGU

Alufire Exterior Thermo


EI30 (TGU)

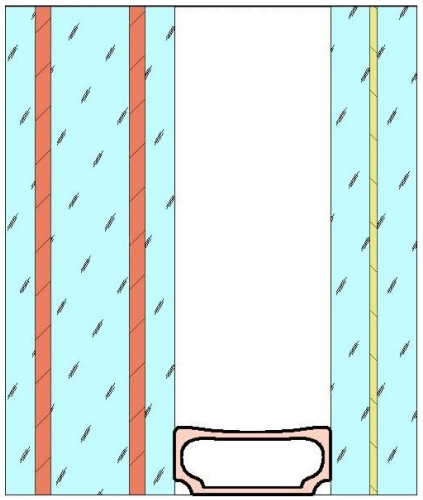

EI60 (TGU)

60 mm thick
insulating glass units

GLASS EI30

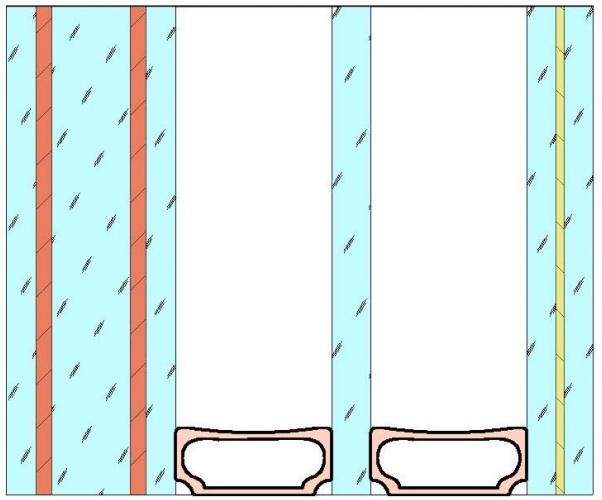
ALUFIRE
EXTERNAL PARTITIONS

Alufire Exterior EI30



Pyrobel 16 + Argon 16mm + VSG 44.2
(AGC)

Alufire Exterior Thermo EI30

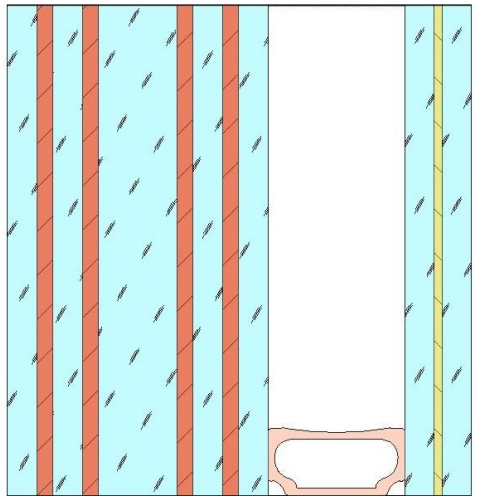


Pyrobel 16 + Argon 16mm + ESG 4mm + Argon 16mm + VSG 33.2
(AGC)

GLASS EI60

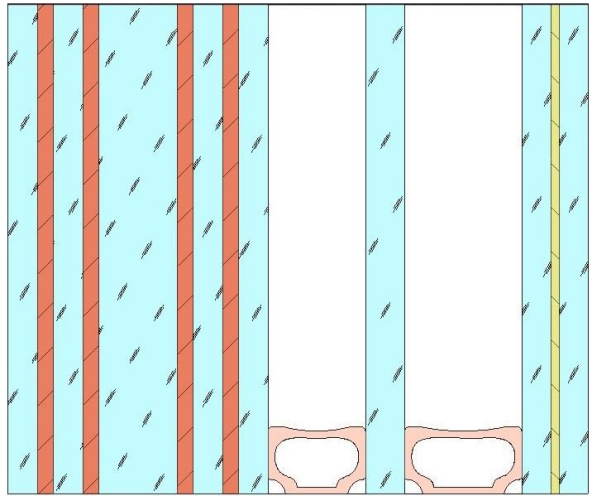
ALUFIRE
EXTERNAL PARTITIONS

Alufire Exterior EI60



Pyrobel 25 + Argon 12mm + VSG 44.2
(AGC)

Alufire Exterior Thermo EI60

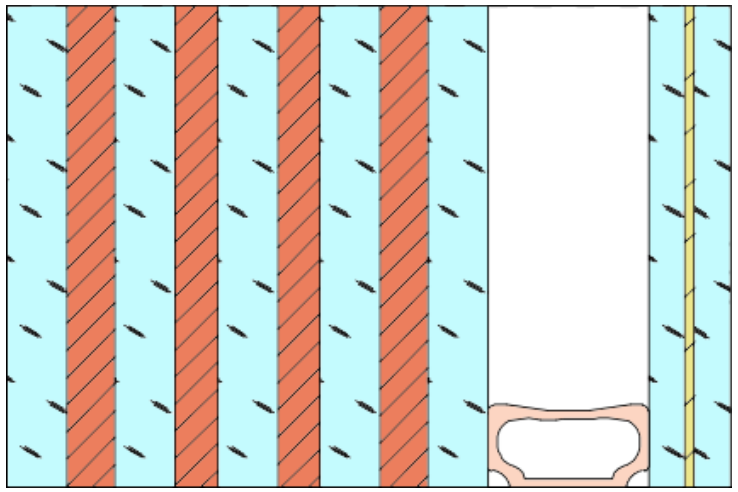


Pyrobel 25 + Argon 10mm + ESG 4mm + Argon 12mm + VSG 33.2
(AGC)

GLASS EI90 / EI120

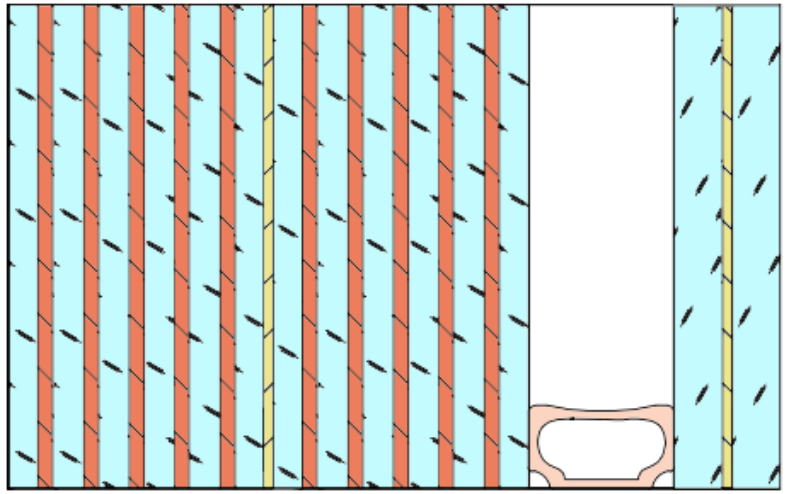
ALUFIRE
EXTERNAL PARTITIONS

Alufire Exterior EI90



Contraflam 90-4 + Argon 12mm + VSG 33.2
(Vetrotech)

Alufire Exterior EI120



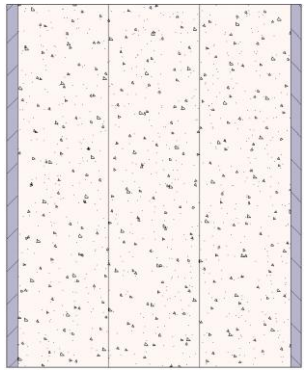
Pyrostop 120-102 + Argon 12mm + VSG 44.2
(Pilkington)

PANEL FILLINGS

ALUFIRE
EXTERNAL PARTITIONS

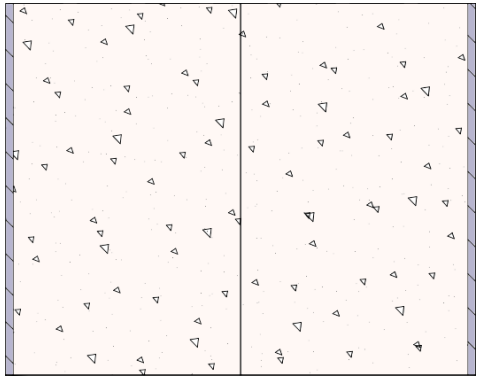
Alufire Exterior

EI30-EI60



steel sheet – 3x plasterboard – steel sheet

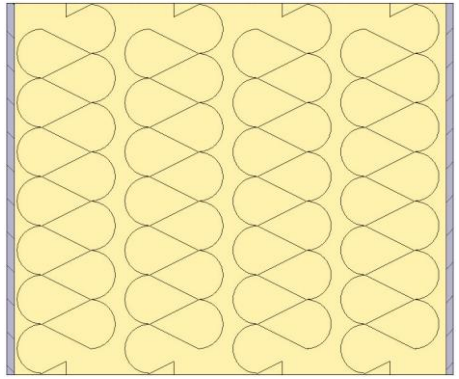
EI120



steel sheet – 2x plasterboard 30 mm – steel sheet

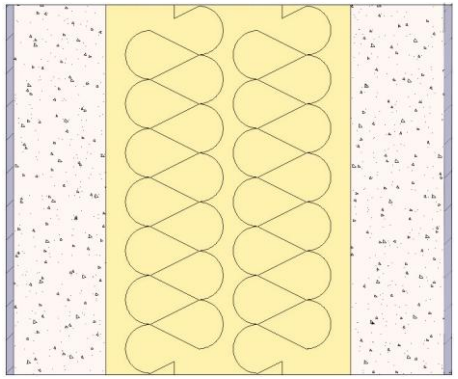
Alufire Exterior Thermo

EI30



steel sheet – mineral wool 58 mm – steel sheet

EI60

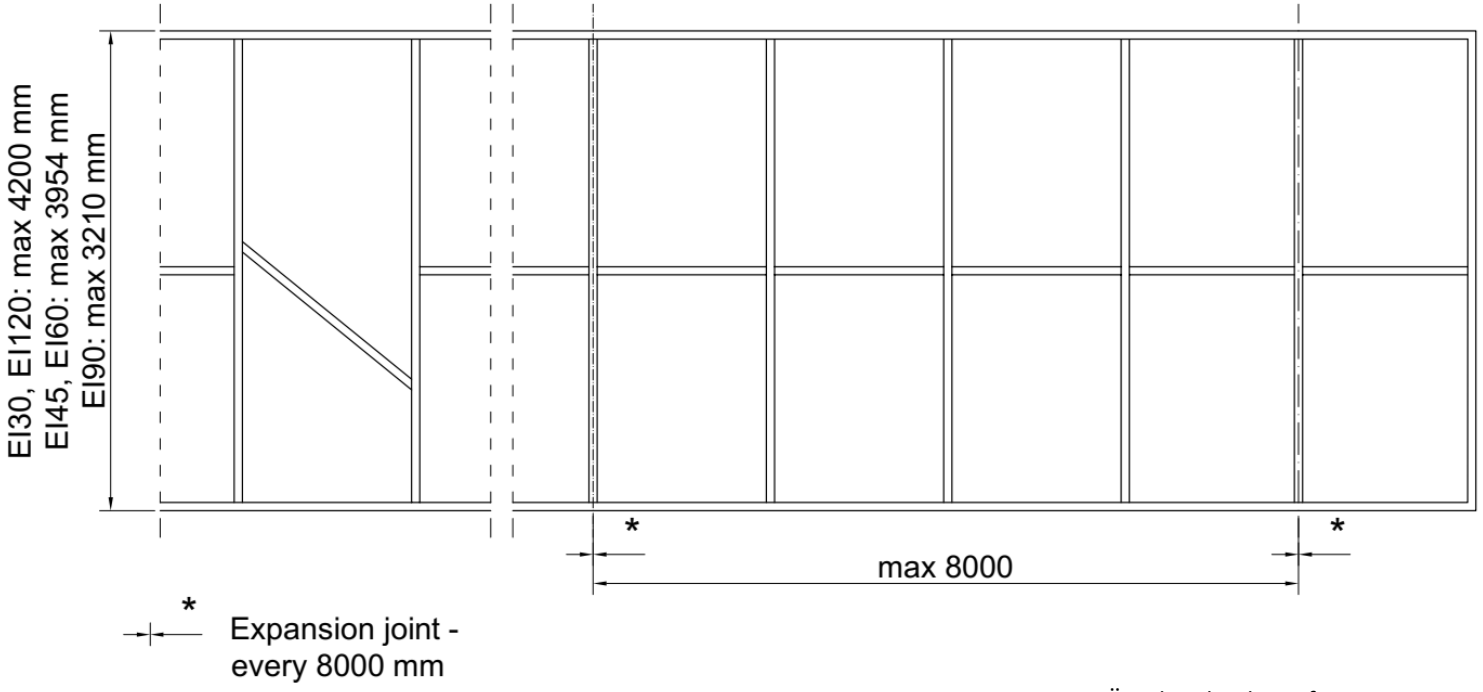


steel sheet – plasterboard – mineral wool 33 mm – plasterboard – steel sheet

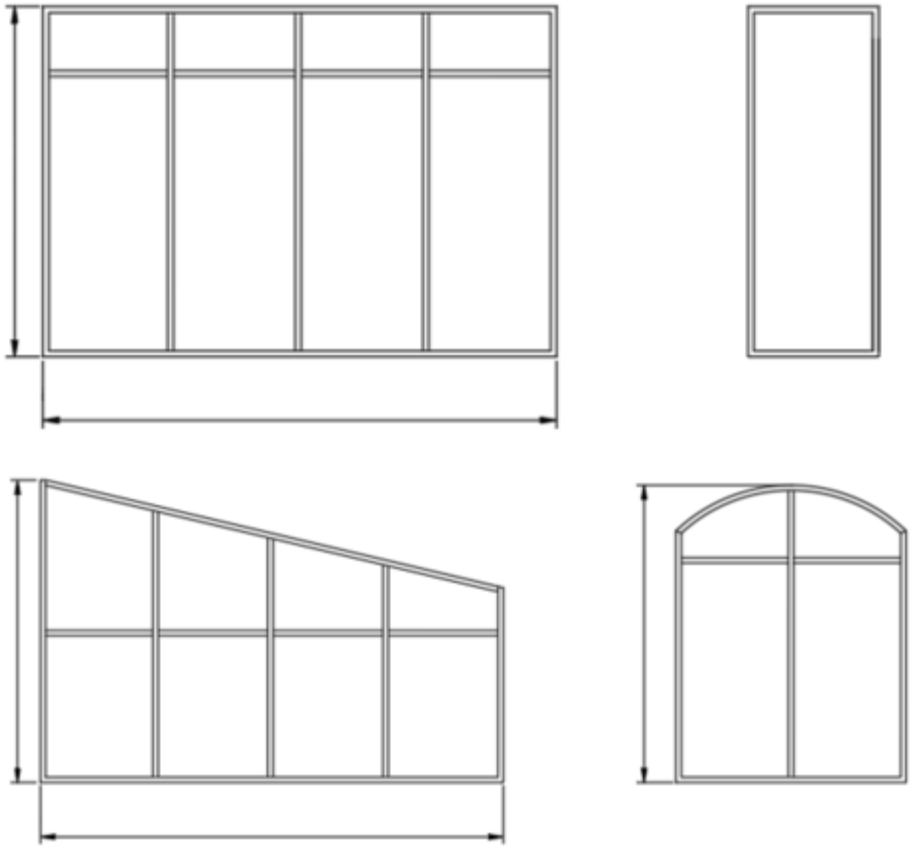
DIMENSIONS & DIVISIONS

ALUFIRE
EXTERNAL PARTITIONS

ALUFIRE EXTERIOR



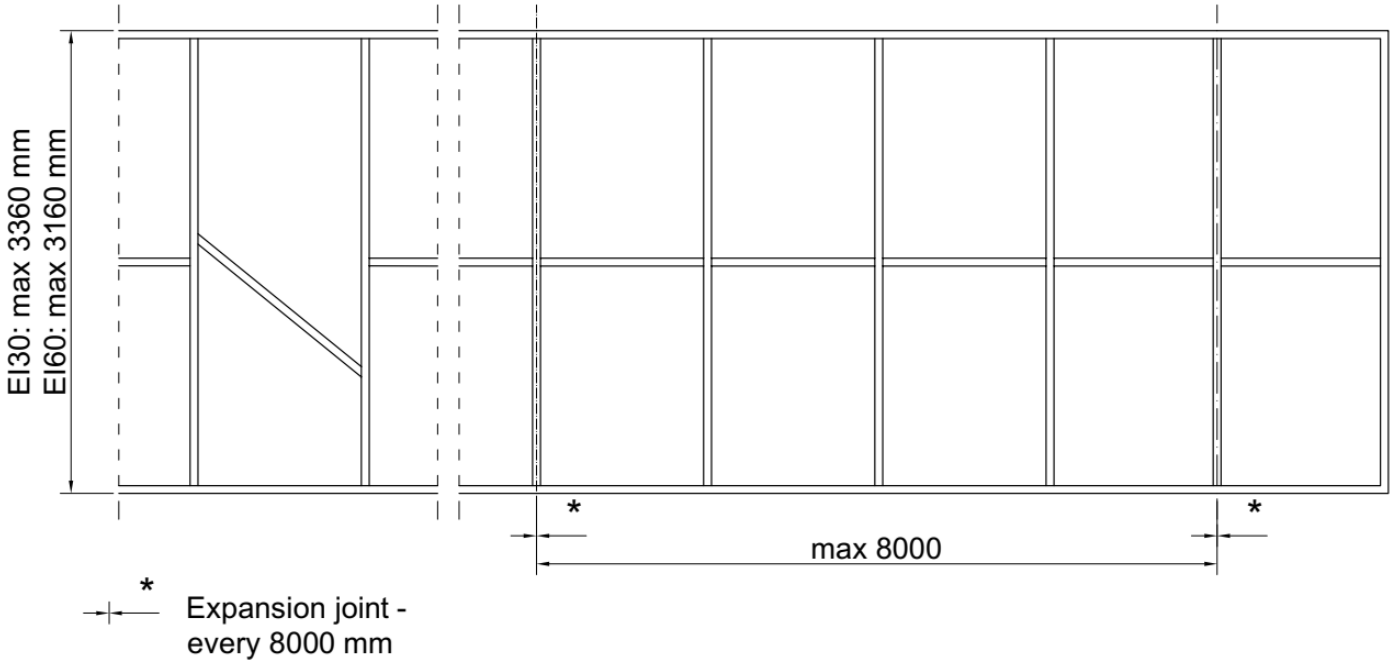
acc. to TÜV Rheinland certificates



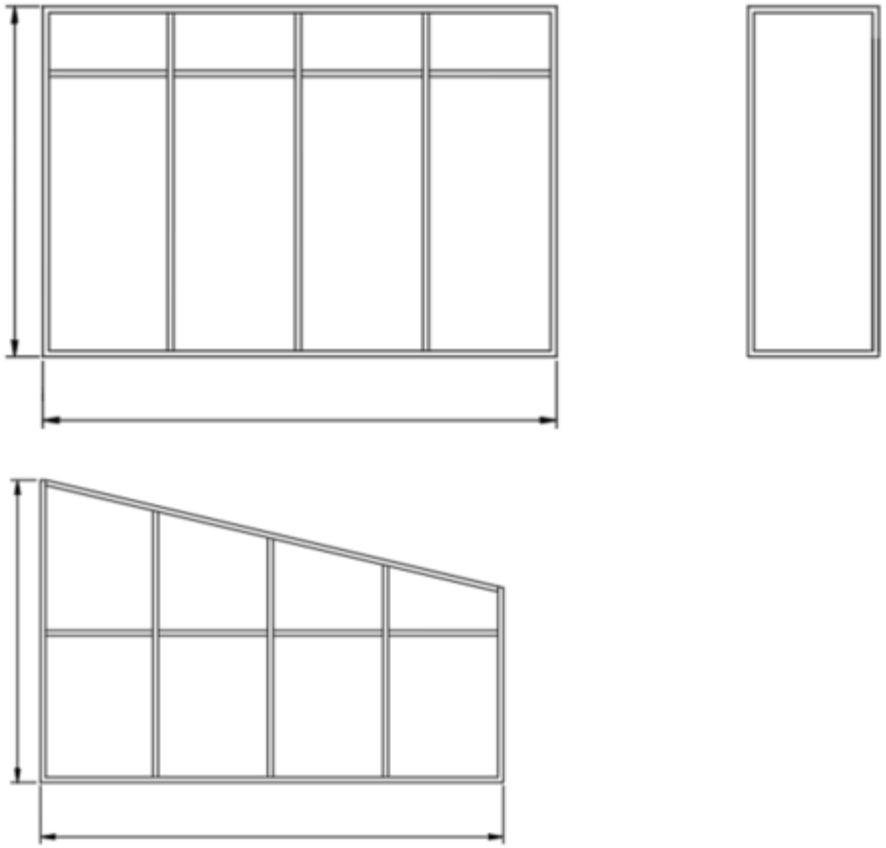
DIMENSIONS & DIVISIONS

ALUFIRE
EXTERNAL PARTITIONS

ALUFIRE EXTERIOR THERMO



acc. to TÜV Rheinland certificates

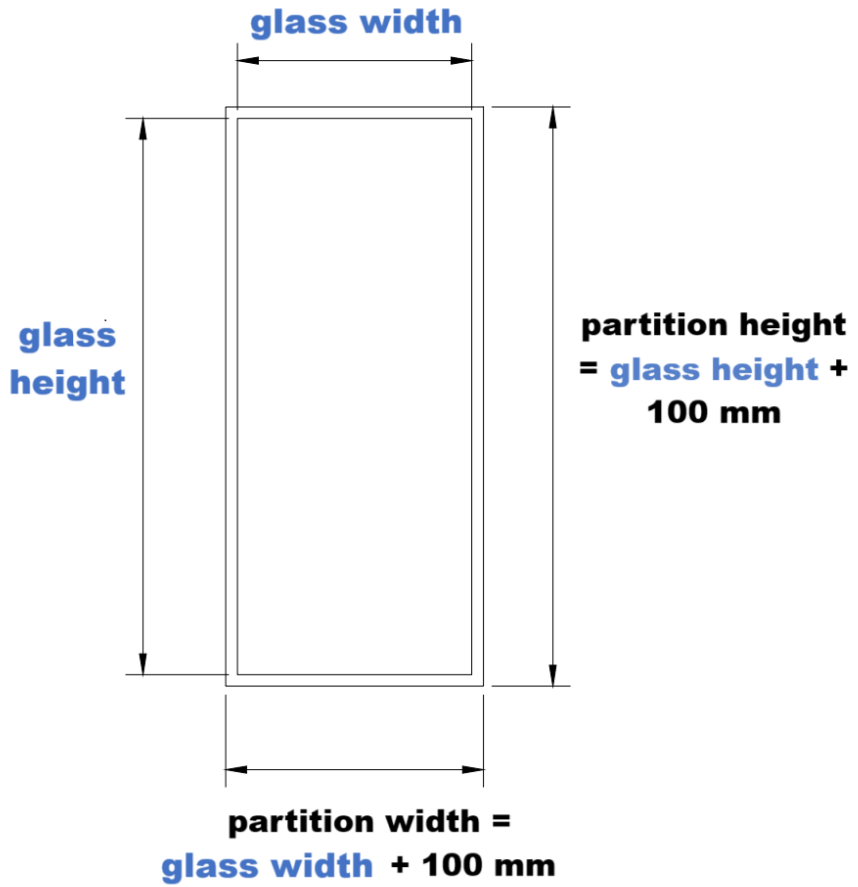


GLASS DIMENSIONS

ALUFIRE
EXTERNAL PARTITIONS

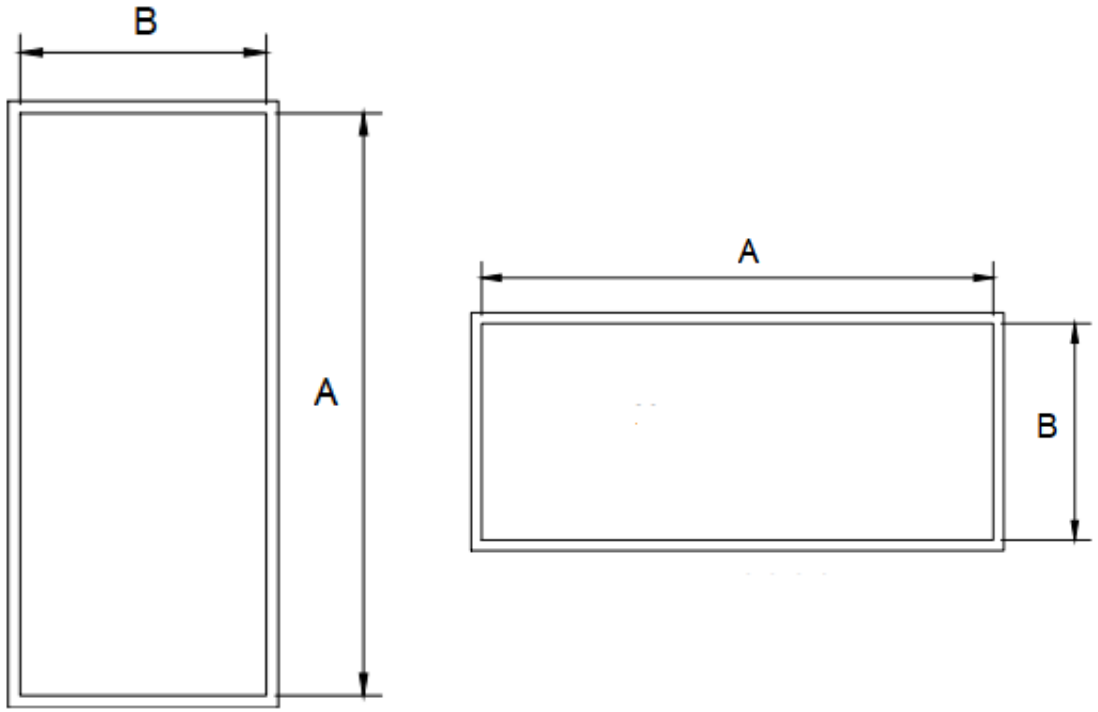
	ALUFIRE Exterior	ALUFIRE Exterior Thermo
EI 30	▯ 1400 x 2500 or 1000 x 2880 ▭ 2500 x 846	
EI 45	Pilkington: ▯ 1123 x 2223	-
EI 60	AGC: ▯ 1400 x 2500 or 1000 x 2888 ▭ 2500 x 846	
	Pilkington: ▯ 1500 x 2500 ▭ 2500 x 1300	-
EI 90	Vetrotech: ▯ 1300 x 2300 ▭ 2200 x 750	-
EI 120	▯ 1200 x 2218 ▭ 2218 x 1318	-

acc. to TÜV Rheinland certificates



GLASS DIMENSIONS

ALUFIRE
EXTERNAL PARTITIONS



A:B ratio

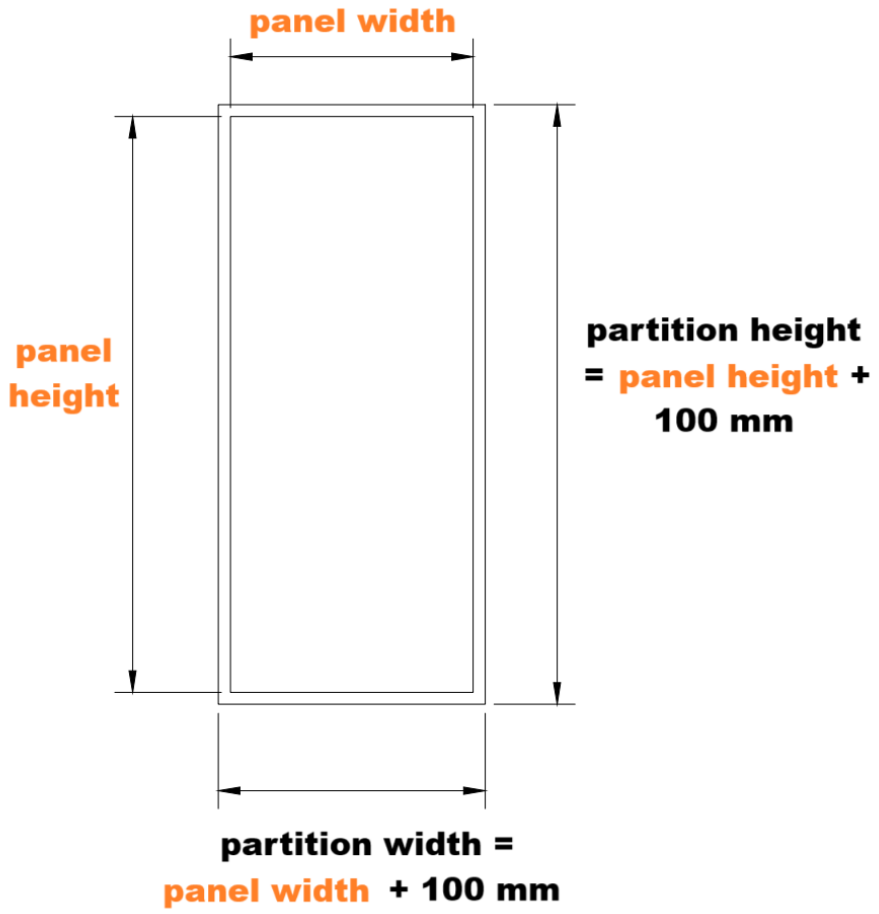
max. 10:1

PANEL DIMENSIONS

ALUFIRE
EXTERNAL PARTITIONS

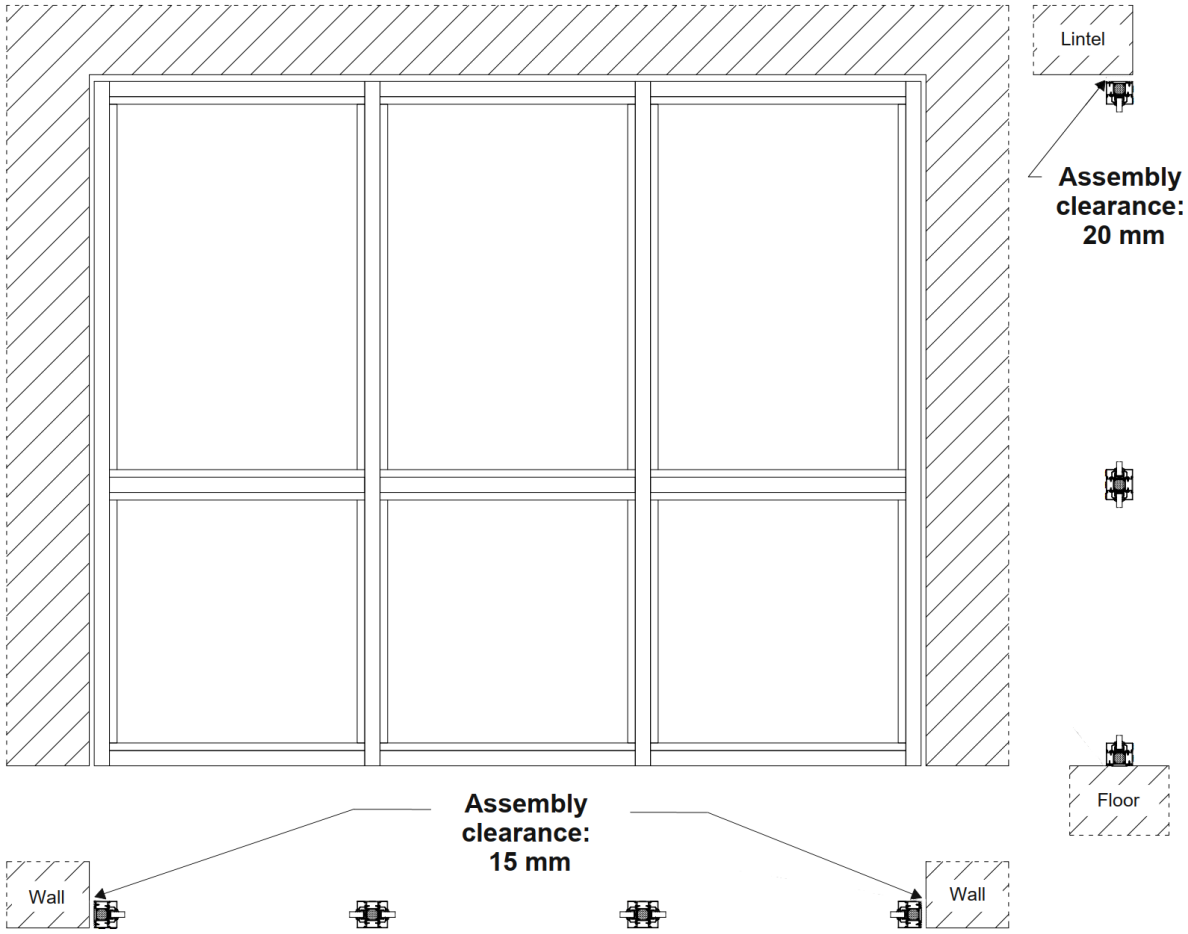
	ALUFIRE Exterior	ALUFIRE Exterior Thermo
EI 30	1500 x 2500	1200 x 2450
EI 60		1200 x 2250
EI 120	1342 x 2400, A ≤ 2,71 m2	-

acc. to TÜV Rheinland certificates



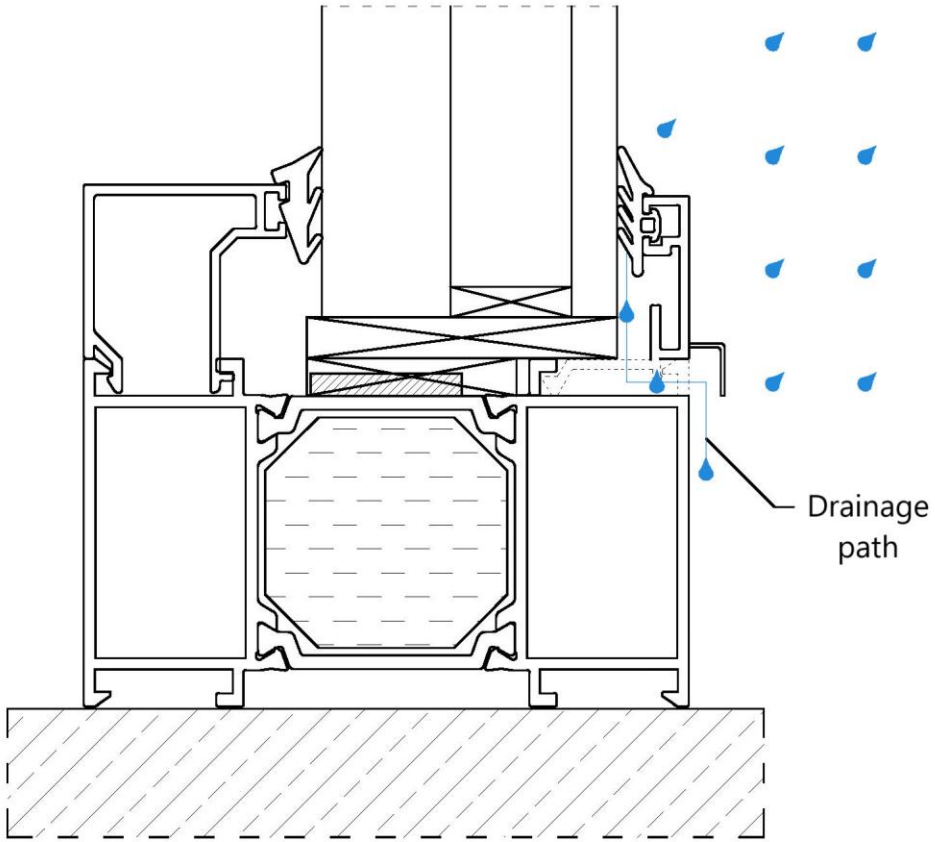
DIMENSIONS: PARTITION VS WALL OPENING

ALUFIRE
EXTERNAL PARTITIONS



WEEP HOLES

ALUFIRE
EXTERNAL PARTITIONS





TECHNICAL PROPERTIES

ALUFIRE
EXTERNAL PARTITIONS

Resistance to wind load	**Deflections ≤ L/200 ***
Resistance to soft body impact	**I1/E1**
Air permeability	**A4**
Watertightness	**4A**
Heat transfer coefficient	**≥ 0,8 W/m²K**
Sound insulation	**up to 44 dB (double glass unit EI60)**



* L – distance between fixing points

THERMAL INSULATION

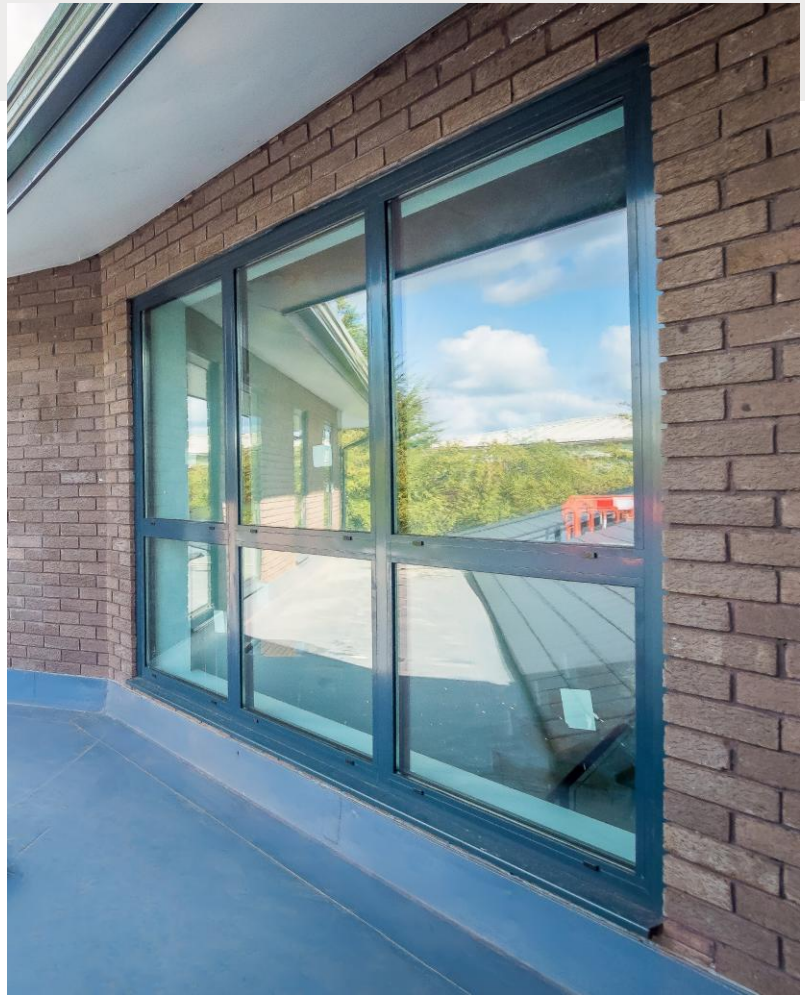
ALUFIRE
EXTERNAL PARTITIONS

Table below presents the typical thermal performance of Alufire external partitions

	ALUFIRE Exterior	ALUFIRE Exterior Thermo
EI 30	$U_w \approx 1{,}3$ W/m²K $U_g = 1{,}1$ W/m²K	$U_w \approx 0{,}8$ W/m²K $U_g = 0{,}5$ W/m²K
EI 60	$U_w \approx 1{,}4$ W/m²K $U_g = 1{,}2$ W/m²K	$U_w \approx 1{,}0$ W/m²K $U_g = 0{,}7$ W/m²K
EI 90	$U_w \approx 1{,}4$ W/m²K $U_g = 1{,}1$ W/m²K	-
EI 120	$U_w \approx 1{,}4$ W/m²K $U_g = 1{,}1$ W/m²K	-

U_w – thermal transfer coefficient of a glazed Alufire wall measuring 3m x 2m

U_g – thermal transfer coefficient of the glass, as declared by its manufacturer



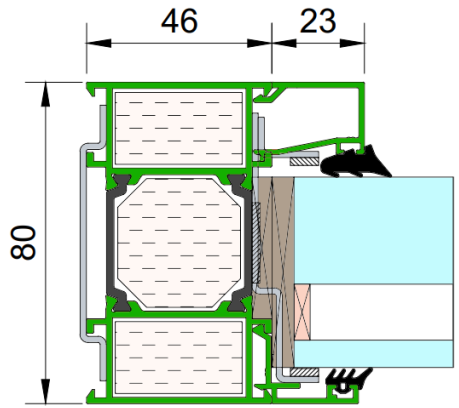
NOISE INSULATION

ALUFIRE
EXTERNAL PARTITIONS

ACOUSTIC LABORATORY TEST

Sample: Alufire Exterior EI60

Glass: standard DGU EI60 (R_W = 44 dB)



Test results:

R_W(C,Ctr) = 44(-1,-4) dB

R_{A2} = 40 dB

R_{A1} = 43 dB

Various configurations of insulating glass units can be used in Alufire partitions.
Glazing R_W up to 51 dB with soundproofing films (AGC Stratophone)

