

DEFENDER 810LM-DK-FR

The glass parapet



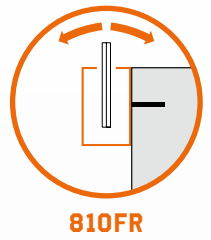
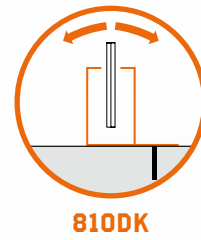
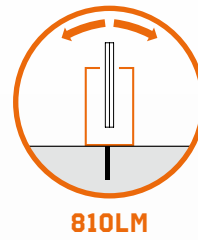
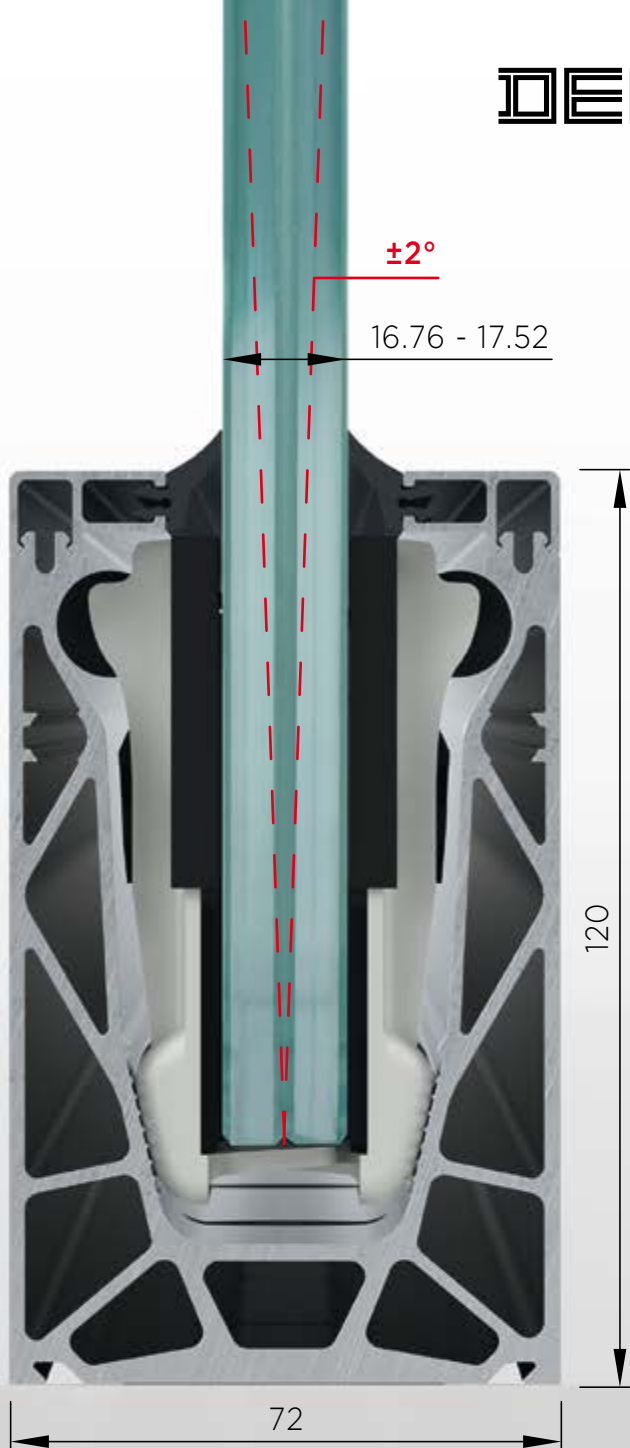


SAFETY AND BEAUTY IN EVERY SOLUTION

The new Defender series, the glass parapet that combines aesthetics and functional technical efficiency, enhancing room brightness while respecting all safety regulations.



DEFENDER 810LM-DK-FR



HIGH PERFORMANCE
Plastic materials for
enhanced durability and safety



ANODIZED or **PAINTED**
aluminium resistant
even in aggressive
environments

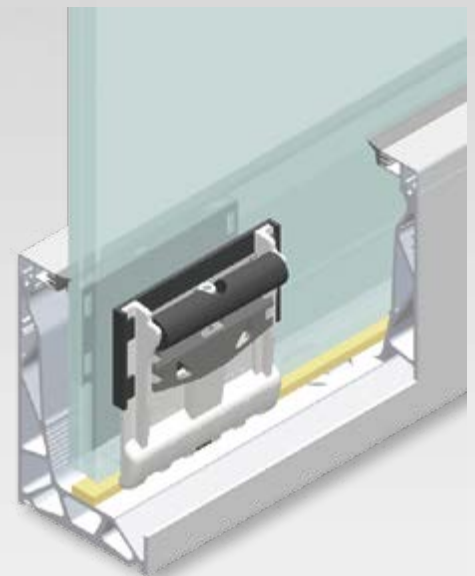
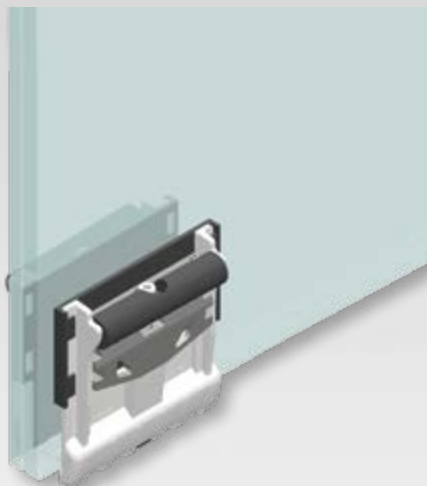
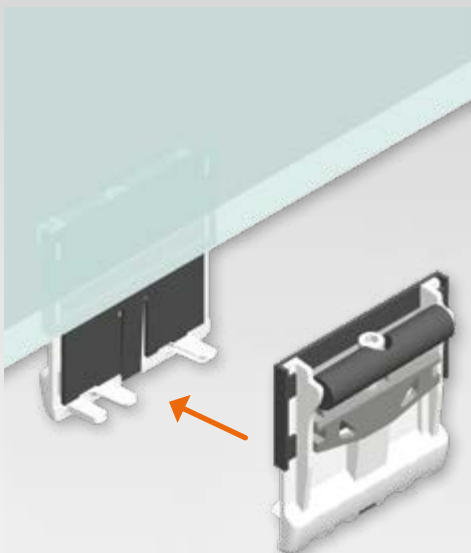


Pre-drilled bearing profile,
**READY FOR
INSTALLATION**



8+8

DF 810 LM-DK-FR 17



The new **DEFENDER** system for all-glass parapets
for glass pane thickness **8+8** or **10+10** mm



READY TO USE CLAMPS
to make installation even more
convenient and rapid



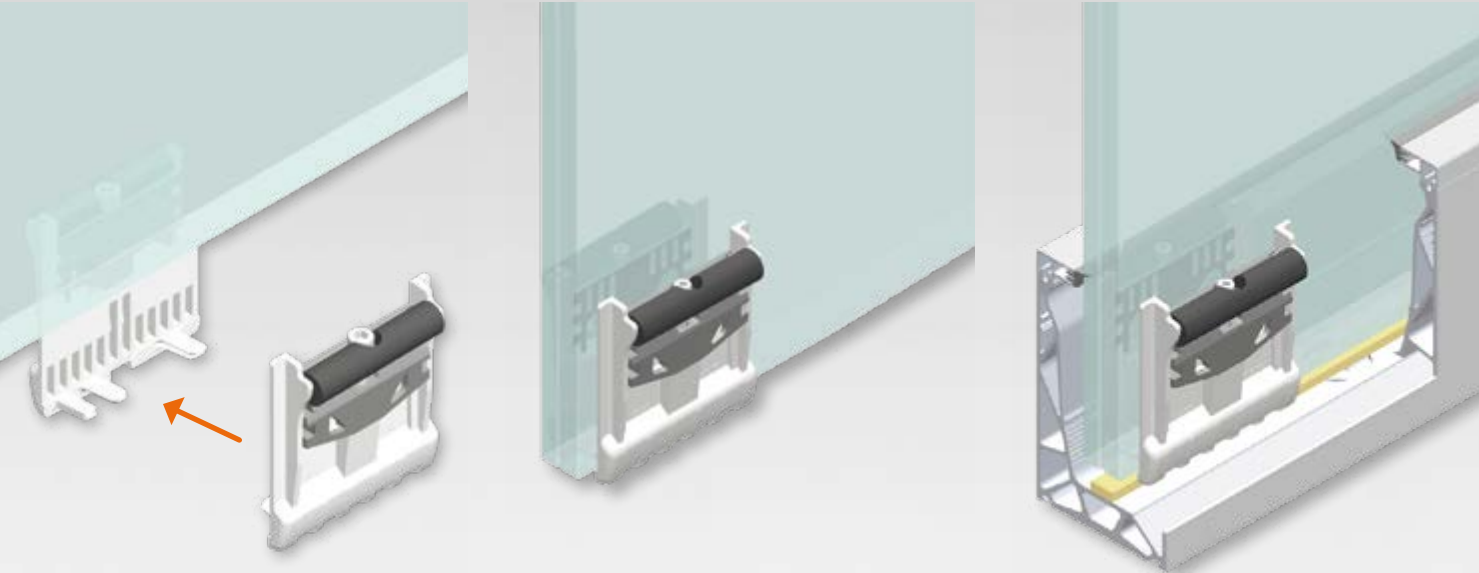
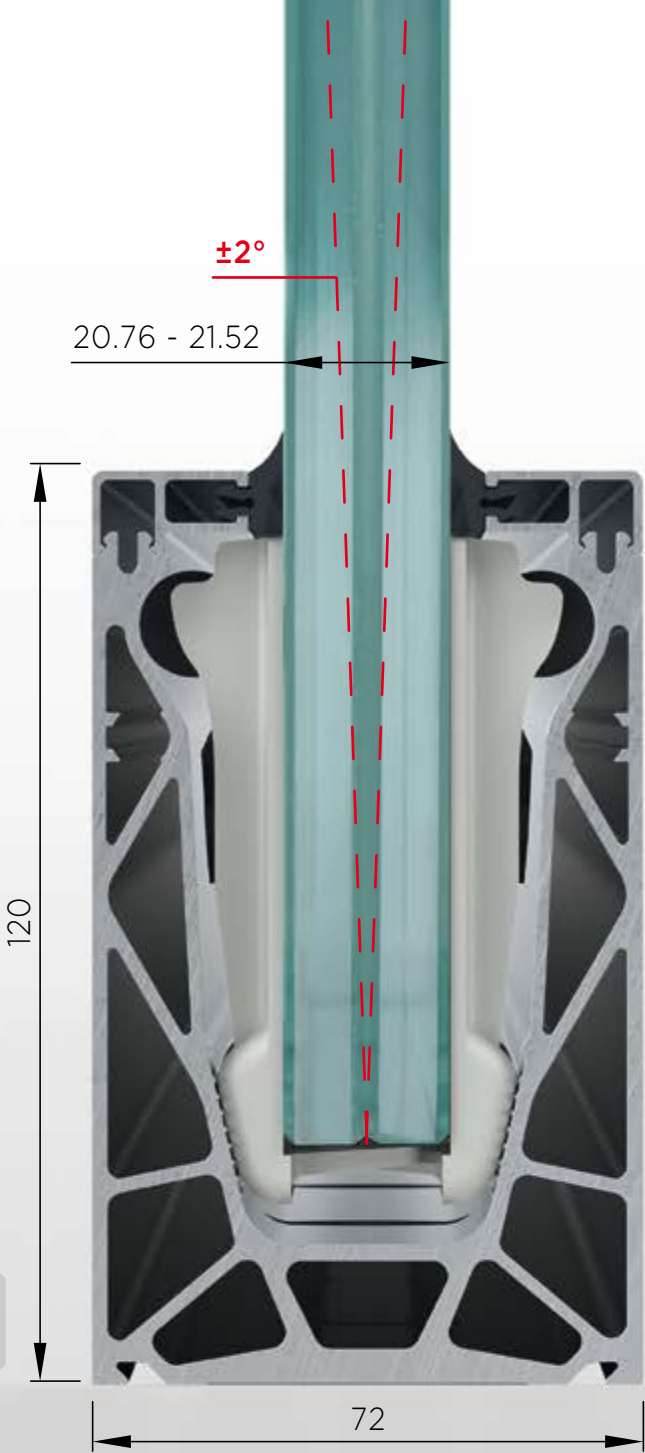
**EXCEPTIONAL
PERFORMANCE**
Tested at more than 5 kN/m



Possible installation
of **LED** strips for
decorative lighting

10+10

DF810 LM-DK-FR 21



KIT DEFENDER 810LM FLOOR INSTALLATION KIT

Material: aluminium



Features:

kit L= 6000 mm composed of:

- 1 pc. continuous "U" profile L= 6000 mm, pre-drilled art. DF810LM.60
- 24 pcs. clamps complete with adjustable pressing devices Art. DF1721
- pcs. 4 lip seal profile art. DFP88G01.03 **black**
- 2 pcs. snap on finish profiles L= 6000 mm Art. DF100.60

kit L= 3000 mm composed of:

- 1 pc. continuous "U" profile L= 3000 mm, pre-drilled art. DF810LM.30
- 12 pcs. clamps complete with adjustable pressing devices Art. DF1721
- 2 pcs. lip seal profile art. DFP88G01.03 **black**
- 2 pcs. snap on finish profiles L= 3000 mm Art. DF100.30

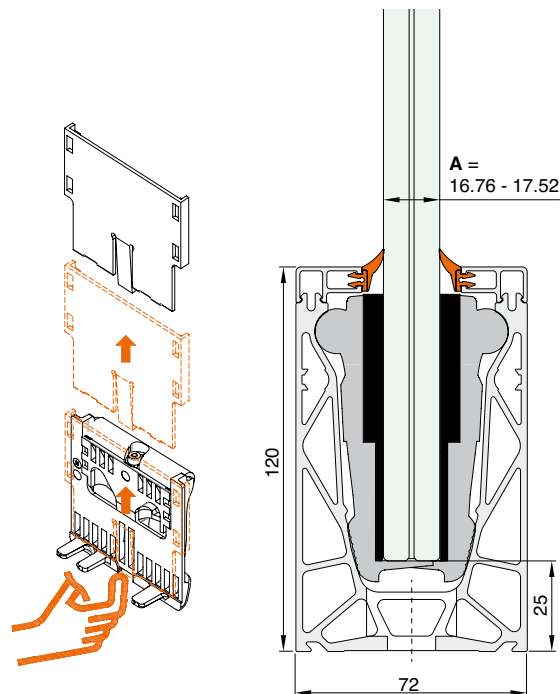
kit L= 1498 mm composed of:

- 1 pc. continuous "U" profile L= 1498 mm, pre-drilled art. DF810LM.15
- 6 pcs. clamps complete with adjustable pressing devices Art. DF1721
- 1 pc. lip seal profile art. DFP88G01.03 **black**
- 2 pcs. snap on finish profiles L= 1498 mm Art. DF100.15

Finishes: brushed stainless steel-effect aluminium,
matt aluminium, matt black, RAL 9010 (polished white), raw

On request (not available in stock)

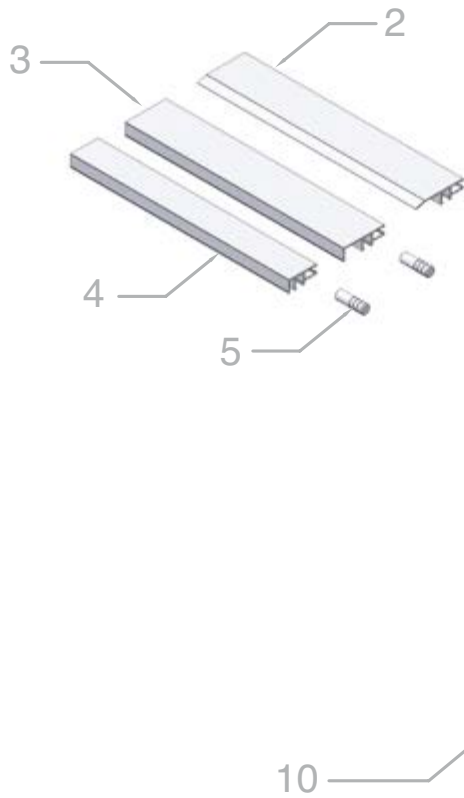
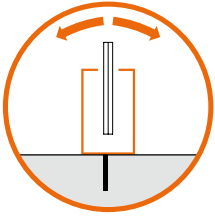
other anodized finishes or RAL colours



This kit is supplied pre-configured for 8+8 glass but can also be used for 10+10 glass by removing the compensation plate

Art.	Dimensions	For glass	Q.ty
DF810LM17KIT.60	120 x 72 x L 6000 mm	A = 16.76 mm / 21.52 mm	1 Pc
DF810LM17KIT.30	120 x 72 x L 3000 mm	A = 16.76 mm / 21.52 mm	1 Pc
DF810LM17KIT.15	120 x 72 x L 1498 mm	A = 16.76 mm / 21.52 mm	1 Pc

DEFENDER810LM



DEFENDER810LM

1. DF810LM17KIT

OPTIONAL

2. DF101
3. DF216
4. DF204
5. DF25
6. LED (SEE APPLICATION)
7. DF12072AL
8. DF2TPAL
9. DF12772AL
10. DFA72

LED:

INDOOR / OUTDOOR
application
LEDST001

+ power supply unit

LED24035IP
LED24060IP
LED24100IP
LED24150IP

See page 31

NOTE: TECHNICAL INFORMATION

See pages 36 - 39



FLOOR ANCHORING

Water drainage of the terrace and the profile

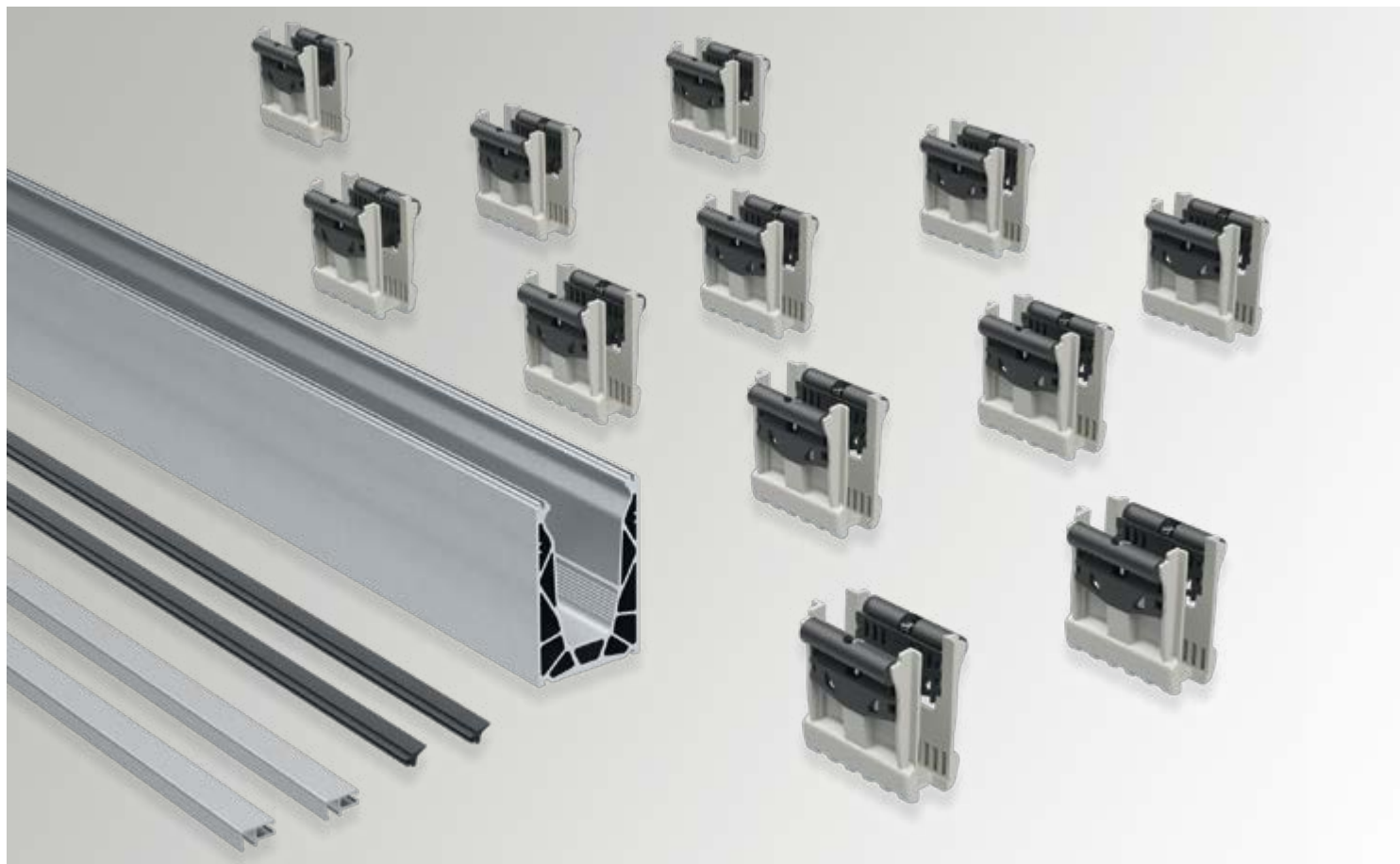


RECESSED FLOOR ANCHORING

Floating floor on the inside and profile visible on the outside

KIT DEFENDER 810LM FLOOR INSTALLATION KIT FOR GLASS 10+10

Material: aluminium



Features:

kit L= 6000 mm composed of:

- 1 pc. continuous "U" profile L= 6000 mm, pre-drilled art. DF810LM.60
- 24 pcs. clamps complete with adjustable pressing devices Art. DF2121
- pcs. 4 lip seal profile art. DFP88G01.03 **black**
- 2 pcs. snap on finish profiles L= 6000 mm Art. DF100.60

kit L= 3000 mm composed of:

- 1 pc. continuous "U" profile L= 3000 mm, pre-drilled art. DF810LM.30
- 12 pcs. clamps complete with adjustable pressing devices Art. DF2121
- 2 pcs. lip seal profile art. DFP88G01.03 **black**
- 2 pcs. snap on finish profiles L= 3000 mm Art. DF100.30

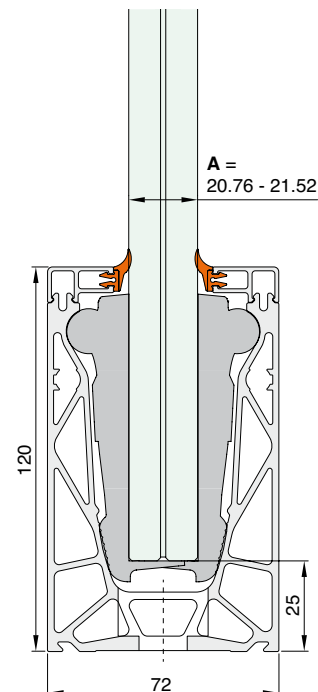
kit L= 1498 mm composed of:

- 1 pc. continuous "U" profile L= 1498 mm, pre-drilled art. DF810LM.15
- 6 pcs. clamps complete with adjustable pressing devices Art. DF2121
- 1 pc. lip seal profile art. DFP88G01.03 **black**
- 2 pcs. snap on finish profiles L= 1498 mm Art. DF100.15

Finishes: brushed stainless steel-effect aluminium,
matt aluminium, matt black, RAL 9010 (polished white), raw

On request (not available in stock)

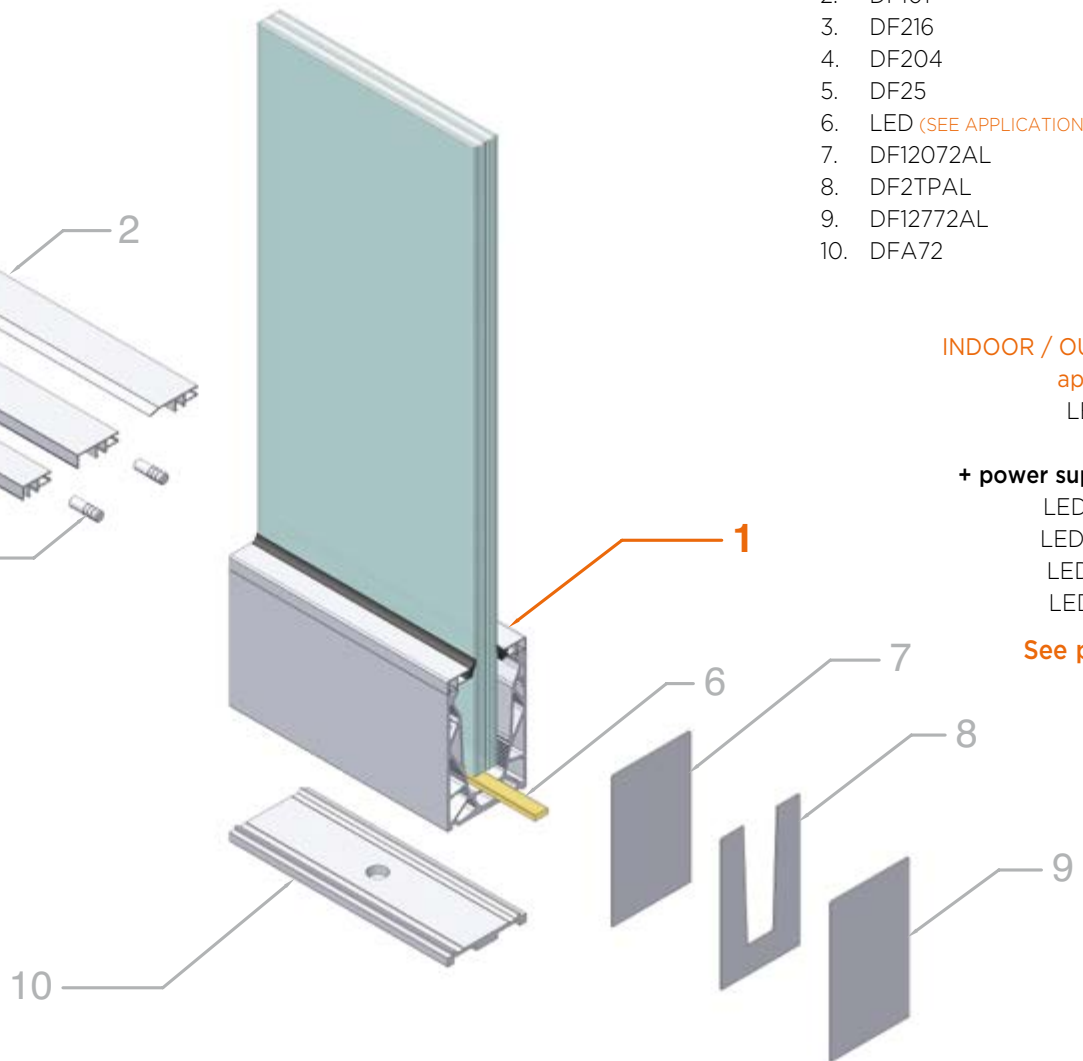
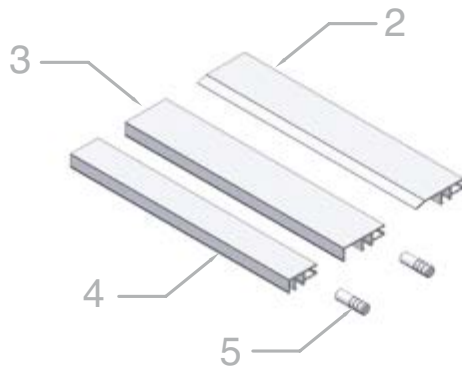
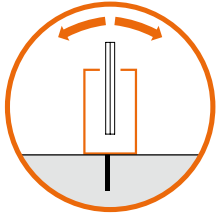
other anodized finishes or RAL colours



This kit is supplied ready for installation for glass 10+10.
For installations of glass 8+8, the appropriate compensation plate must be added to the kit

Art.	Dimensions	For glass	Q.ty
DF810LM21KIT.60	120 x 72 x L 6000 mm	A = 20.76 mm / 21.52 mm	1 Pc
DF810LM21KIT.30	120 x 72 x L 3000 mm	A = 20.76 mm / 21.52 mm	1 Pc
DF810LM21KIT.15	120 x 72 x L 1498 mm	A = 20.76 mm / 21.52 mm	1 Pc

DEFENDER810LM



DEFENDER810LM

1. DF810LM21KIT

OPTIONAL

2. DF101
3. DF216
4. DF204
5. DF25
6. LED (SEE APPLICATION)
7. DF12072AL
8. DF2TPAL
9. DF12772AL
10. DFA72

LED:
INDOOR / OUTDOOR
application
LEDST001

+ power supply unit
LED24035IP
LED24060IP
LED24100IP
LED24150IP

See page 31

NOTE: TECHNICAL INFORMATION

See pages 36 - 39

**RECESSED FLOOR ANCHORING**

Invisible profile with use of footboard profile

**FLOOR ANCHORING**

Profile anchored to metal bearing structure

KIT DEFENDER 810DK FLOOR INSTALLATION WITH SIDE FIN

Material: aluminium



Features:

kit L= 6000 mm composed of:

- 1 pc. continuous "U" profile L= 6000 mm, pre-drilled art. DF810DK.60
- 24 pcs. clamps complete with adjustable pressing devices Art. DF1721
- 4 pcs. lip seal profile art. DFP88G01.03 **black**
- 2 pcs. snap on finish profiles L= 6000 mm Art. DF100.60

kit L= 3000 mm composed of:

- 1 pc. continuous "U" profile L= 3000 mm, pre-drilled art. DF810DK.30
- 12 pcs. clamps complete with adjustable pressing devices Art. DF1721
- 2 pcs. lip seal profile art. DFP88G01.03 **black**
- 2 pcs. snap on finish profiles L= 3000 mm Art. DF100.30

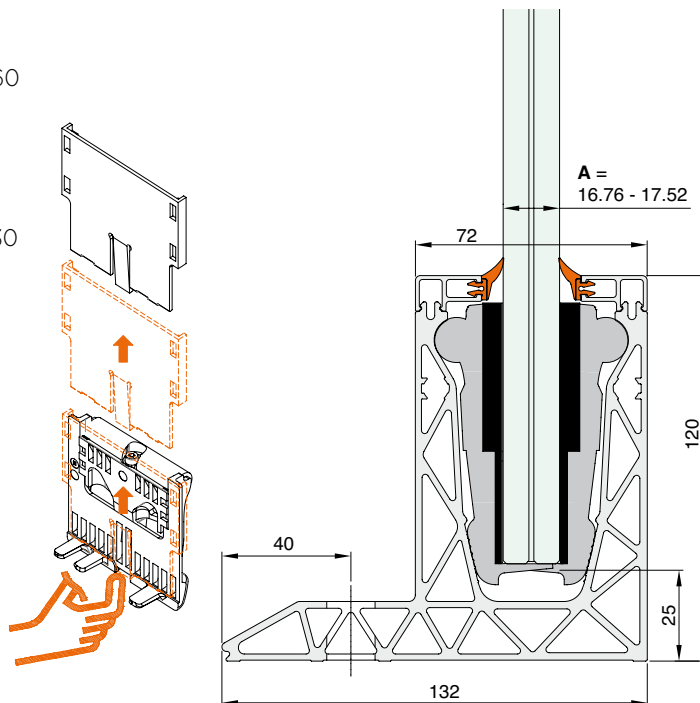
kit L= 1498 mm composed of:

- 1 pc. continuous "U" profile L= 1498 mm, pre-drilled art. DF810DK.15
- 6 pcs. clamps complete with adjustable pressing devices Art. DF1721
- 1 pc. lip seal profile art. DFP88G01.03 **black**
- 2 pcs. snap on finish profiles L= 1498 mm Art. DF100.15

Finishes: matt aluminium

On request (not available in stock)

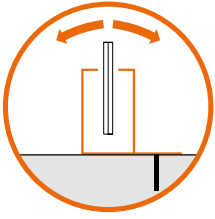
other anodized finishes or RAL colours



This kit is supplied pre-configured for 8+8 glass but can also be used for 10+10 glass by removing the compensation plate

Art.	Dimensions	For glass	Q.ty
DF810DK17KIT.60	120 x 132 x L 6000 mm	A = 16.76 mm / 21.52 mm	1 Pc
DF810DK17KIT.30	120 x 132 x L 3000 mm	A = 16.76 mm / 21.52 mm	1 Pc
DF810DK17KIT.15	120 x 132 x L 1498 mm	A = 16.76 mm / 21.52 mm	1 Pc

DEFENDER810DK



DEFENDER810DK

1. DF810DK17KIT

OPTIONAL

2. DF101
3. DF216
4. DF204
5. DF25
6. LED (SEE APPLICATION)
7. DFDKTP08DX/SX
8. DFDKTP10DX/SX

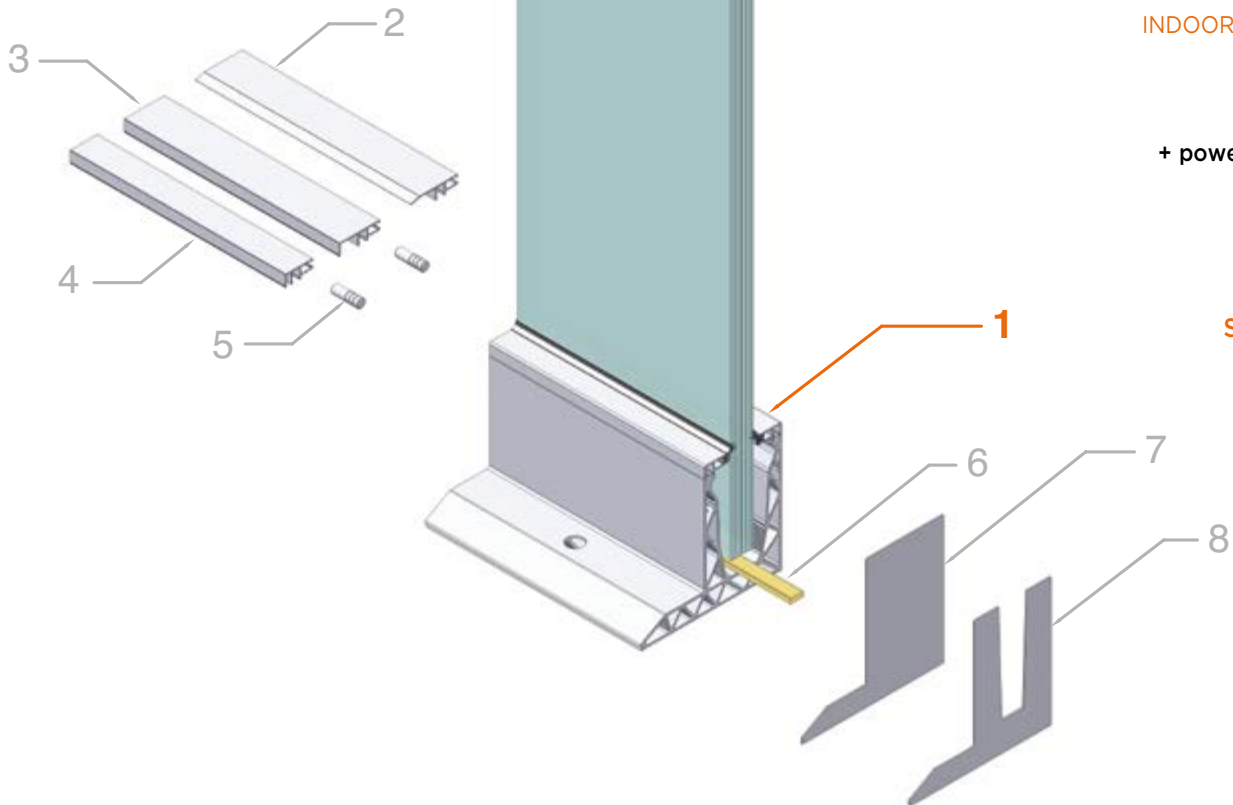
LED:

INDOOR / OUTDOOR
application
LEDST001

+ power supply unit

LED24035IP
LED24060IP
LED24100IP
LED24150IP

See page 31



NOTE: TECHNICAL INFORMATION

See pages 36 - 39



RECESSED FLOOR ANCHORING WITH SIDE FIN

Invisible profile with use of footboard profile



FLOOR ANCHORING WITH SIDE FIN

Partially recessed installation with covering finish profile

KIT DEFENDER 810DK FLOOR INSTALLATION WITH SIDE FIN FOR GLASS 10+10

Material: aluminium



Features:

kit L= 6000 mm composed of:

- 1 pc. continuous "U" profile L= 6000 mm, pre-drilled art. DF810DK.60
- 24 pcs. clamps complete with adjustable pressing devices Art. DF2121
- 4 pcs. lip seal profile art. DFP88G01.03 **black**
- 2 pcs. snap on finish profiles L= 6000 mm Art. DF100.60

kit L= 3000 mm composed of:

- 1 pc. continuous "U" profile L= 3000 mm, pre-drilled art. DF810DK.30
- 12 pcs. clamps complete with adjustable pressing devices Art. DF2121
- 2 pcs. lip seal profile art. DFP88G01.03 **black**
- 2 pcs. snap on finish profiles L= 3000 mm Art. DF100.30

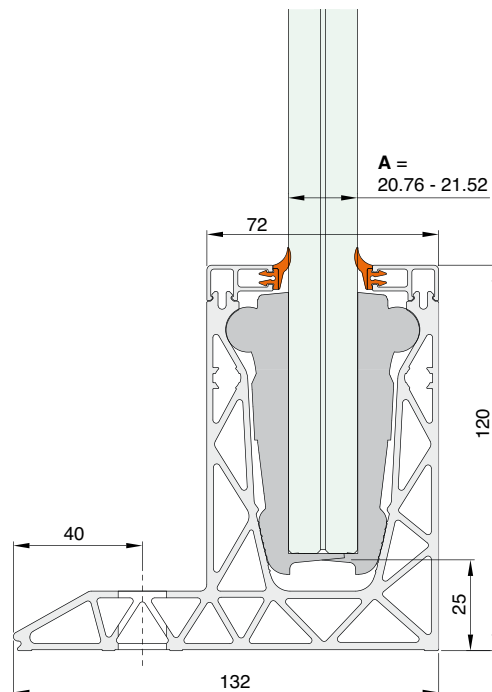
kit L= 1498 mm composed of:

- 1 pc. continuous "U" profile L= 1498 mm, pre-drilled art. DF810DK.15
- 6 pcs. clamps complete with adjustable pressing devices Art. DF2121
- 1 pc. lip seal profile art. DFP88G01.03 **black**
- 2 pcs. snap on finish profiles L= 1498 mm Art. DF100.15

Finishes: matt aluminium

On request (not available in stock)

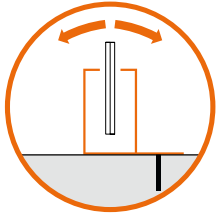
other anodized finishes or RAL colours



This kit is supplied ready for installation for glass 10+10. For installations of glass 8+8, the appropriate compensation plate must be added to the kit

Art.	Dimensions	For glass	Q.ty
DF810DK21KIT.60	120 x 132 x L 6000 mm	A = 20.76 mm / 21.52 mm	1 Pc
DF810DK21KIT.30	120 x 132 x L 3000 mm	A = 20.76 mm / 21.52 mm	1 Pc
DF810DK21KIT.15	120 x 132 x L 1498 mm	A = 20.76 mm / 21.52 mm	1 Pc

DEFENDER810DK



DEFENDER810DK

1. DF810DK21KIT

OPTIONAL

- 2. DF101
- 3. DF216
- 4. DF204
- 5. DF25
- 6. LED (SEE APPLICATION)
- 7. DFDKTP08DX/SX
- 8. DFDKTP10DX/SX

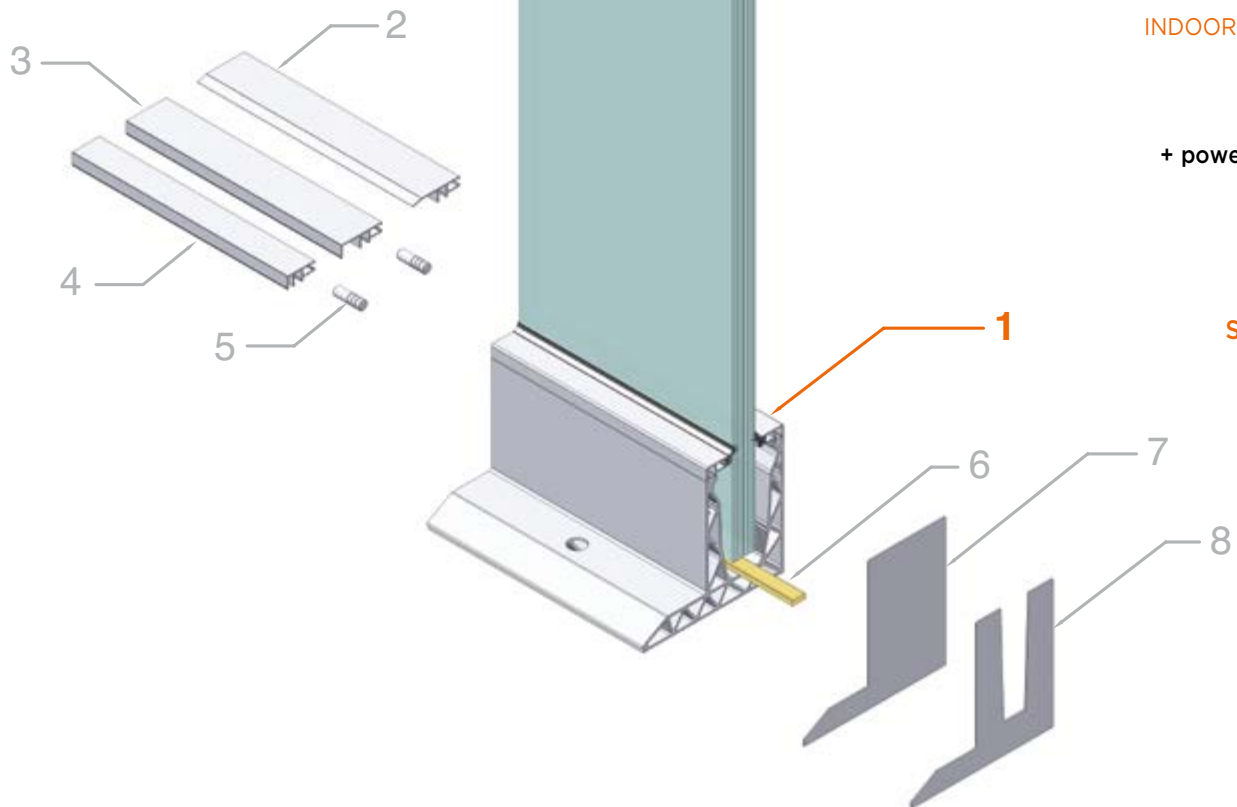
LED:

INDOOR / OUTDOOR
application
LEDST001

+ power supply unit

LED24035IP
LED24060IP
LED24100IP
LED24150IP

See page 31



NOTE: TECHNICAL INFORMATION

See pages 36 - 39



FLOOR ANCHORING WITH SIDE FIN

External profile covered with superior snap profiles



FLOOR ANCHORING WITH SIDE FIN

Internally recessed installation with foodboard profile,
externally visible

KIT DEFENDER 810FR SLAB INSTALLATION

Material: aluminium



Features:

kit L= 6000 mm composed of:

- 1 pc. continuous "U" profile L= 6000 mm, pre-drilled art. DF810FR.60
- 24 pcs. clamps complete with adjustable pressing devices Art. DF1721
- 4 pcs. lip seal profile art. DFP88G01.03 **black**
- 1 pc. snap on finish profile L= 6000 mm Art. DF100.60
- 1 pc. snap on cover L=6000 mm Art. DFS15.60

kit L= 3000 mm composed of:

- 1 pc. continuous "U" profile L= 3000 mm, pre-drilled art. DF810FR.30
- 12 pcs. clamps complete with adjustable pressing devices Art. DF1721
- 2 pcs. lip seal profile art. DFP88G01.03 **black**
- 1 pc. snap on finish profile L= 3000 mm Art. DF100.30
- 1 pc. snap on cover L=3000 mm Art. DFS15.30

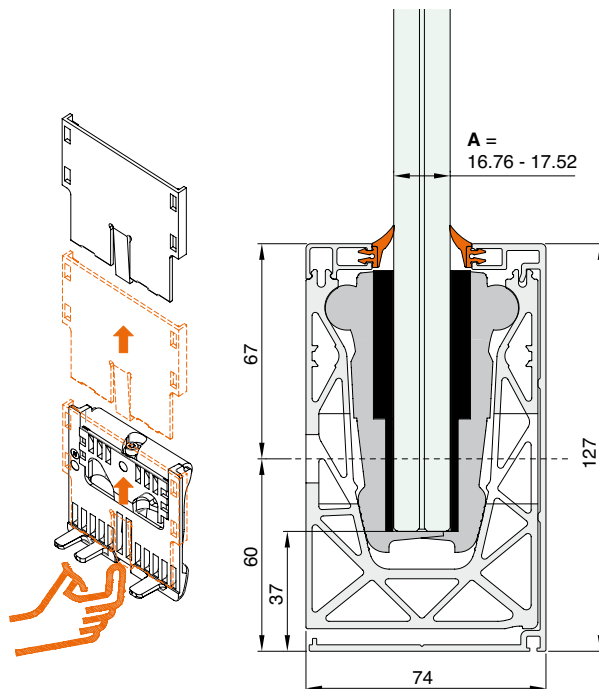
kit L= 1498 mm composed of:

- 1 pc. continuous "U" profile L= 1498 mm, pre-drilled art. DF810FR.15
- 6 pcs. clamps complete with adjustable pressing devices Art. DF1721
- 1 pc. lip seal profile art. DFP88G01.03 **black**
- 1 pc. snap on finish profile L= 1498 mm Art. DF100.15
- 1 pc. snap on cover L=1498 mm Art. DFS15.15

Finishes: brushed stainless steel-effect aluminium, matt aluminium, matt black, RAL 9010 (polished white), raw

On request (not available in stock)

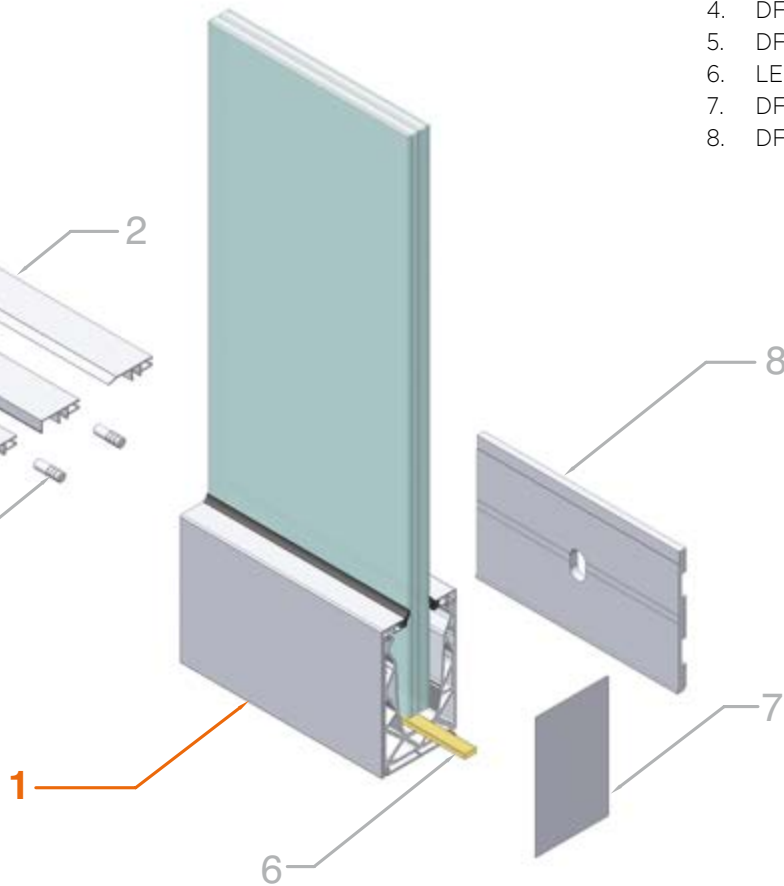
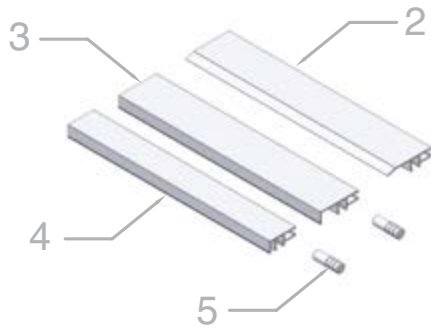
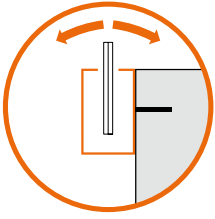
other anodized finishes or RAL colours



This kit is supplied pre-configured for 8+8 glass but can also be used for 10+10 glass by removing the compensation plate

Art.	Dimensions	For glass	Q.ty
DF810FR17KIT.60	127 x 74 x L 6000 mm	A = 16.76 mm / 21.52 mm	1 Pc
DF810FR17KIT.30	127 x 74 x L 3000 mm	A = 16.76 mm / 21.52 mm	1 Pc
DF810FR17KIT.15	127 x 74 x L 1498 mm	A = 16.76 mm / 21.52 mm	1 Pc

DEFENDER810FR



DEFENDER810FR

1. DF810FR17KIT

OPTIONAL

- 2. DF101
- 3. DF216
- 4. DF204
- 5. DF25
- 6. LED (SEE APPLICATION)
- 7. DF12772AL
- 8. DFSA121

LED:
INDOOR / OUTDOOR
application
LEDST001

+ power supply unit
LED24035IP
LED24060IP
LED24100IP
LED24150IP

See page 31

NOTE: TECHNICAL INFORMATION

See pages 36 - 39

**SLAB INSTALLATION**

External profile with water drainage profile

**SLAB INSTALLATION**

Installation with profile on the internal side of the terrace
and footboard profile

KIT DEFENDER 810FR SLAB INSTALLATION FOR GLASS 10+10

Material: aluminium



Features:

kit L= 6000 mm composed of:

- 1 pc. continuous "U" profile L= 6000 mm, pre-drilled art. DF810FR.60
- 24 pcs. clamps complete with adjustable pressing devices Art. DF2121
- 4 pcs. lip seal profile art. DFP88G01.03 **black**
- 1 pc. snap on finish profile L= 6000 mm Art. DF100.60
- 1 pc. snap on cover L=6000 mm Art. DFS15.60

kit L= 3000 mm composed of:

- 1 pc. continuous "U" profile L= 3000 mm, pre-drilled art. DF810FR.30
- 12 pcs. clamps complete with adjustable pressing devices Art. DF2121
- 2 pcs. lip seal profile art. DFP88G01.03 **black**
- 1 pc. snap on finish profile L= 3000 mm Art. DF100.30
- 1 pc. snap on cover L=3000 mm Art. DFS15.30

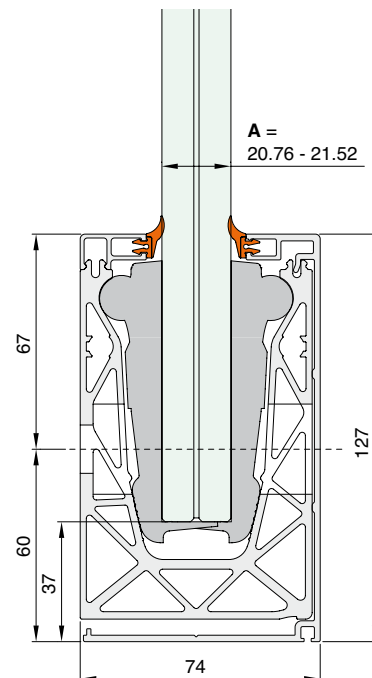
kit L= 1498 mm composed of:

- 1 pc. continuous "U" profile L= 1498 mm, pre-drilled art. DF810FR.15
- 6 pcs. clamps complete with adjustable pressing devices Art. DF2121
- 1 pc. lip seal profile art. DFP88G01.03 **black**
- 1 pc. snap on finish profile L= 1498 mm Art. DF100.15
- 1 pc. snap on cover L=1498 mm Art. DFS15.15

Finishes: brushed stainless steel-effect aluminium,
matt aluminium, matt black, RAL 9010 (polished white), raw

On request (not available in stock)

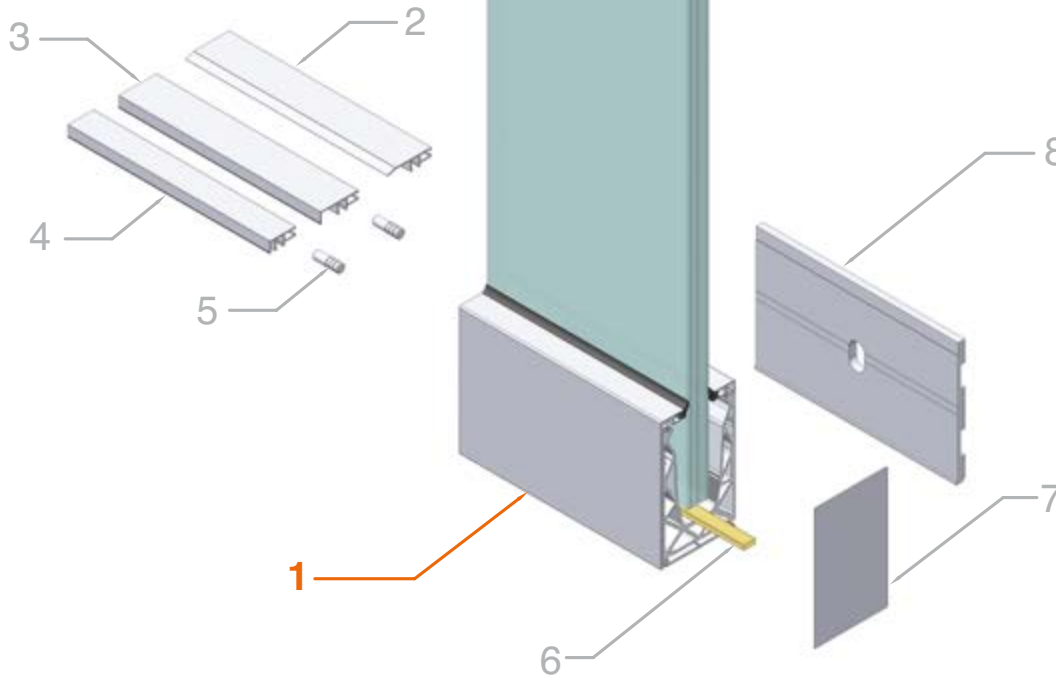
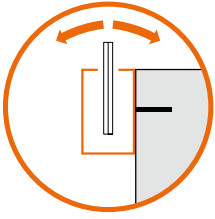
other anodized finishes or RAL colours



This kit is supplied ready for installation for glass 10+10.
For installations of glass 8+8, the appropriate compensation plate must be added to the kit

Art.	Dimensions	For glass	Q.ty
DF810FR21KIT.60	127 x 132 x L 6000 mm	A = 20.76 mm / 21.52 mm	1 Pc
DF810FR21KIT.30	127 x 132 x L 3000 mm	A = 20.76 mm / 21.52 mm	1 Pc
DF810FR21KIT.15	127 x 132 x L 1498 mm	A = 20.76 mm / 21.52 mm	1 Pc

DEFENDER810FR



DEFENDER810FR

1. DF810FR21KIT

OPTIONAL

- 2. DF101
- 3. DF216
- 4. DF204
- 5. DF25
- 6. LED (SEE APPLICATION)
- 7. DF12772AL
- 8. DFSA121

LED:

INDOOR / OUTDOOR
application
LEDST001

+ power supply unit

LED24035IP
LED24060IP
LED24100IP
LED24150IP

See page 31

NOTE: TECHNICAL INFORMATION

See pages 36 - 39



SLAB INSTALLATION

Profile on metal bearing structure, with covering external profile and internal footboard profile



SLAB INSTALLATION

Partially recessed installation with water drainage profile on





Innovation in every detail

The modern and minimal design adapts perfectly to any architectural style, while providing a safe and protective barrier. Choose our fixing system for glass parapets and transform your structure into a modern and safe building.

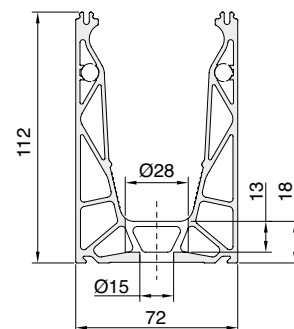
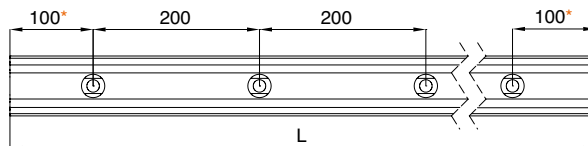
DEFENDER FLOOR PROFILE 810

Material: aluminium

Finishes: brushed stainless steel-effect aluminium, matt aluminium, matt black, RAL 9010 (polished white), raw

On request (not available in stock)

other anodized finishes or RAL colours



* the position of the first and last hole is given as an indication, for specific requests please contact ufficio.tecnico@loglimassimo.it

Art.	Dimensions	Q.ty
DF810LM.60	112 x 72 x L 6000 mm	1 Pc
DF810LM.30	112 x 72 x L 3000 mm	1 Pc
DF810LM.15	112 x 72 x L 1498 mm	1 Pc

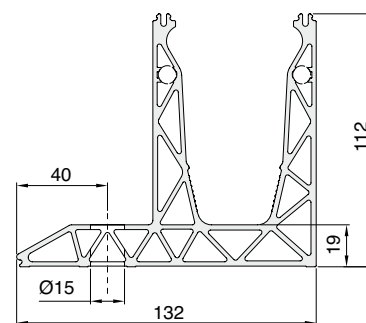
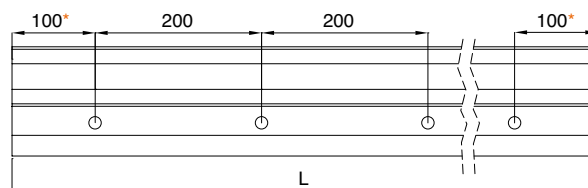
DEFENDER FLOOR PROFILE 810 WITH SIDE FIN

Material: aluminium

Finishes: matt aluminium

On request (not available in stock)

other anodized finishes or RAL colours



* the position of the first and last hole is given as an indication, for specific requests please contact ufficio.tecnico@loglimassimo.it

Art.	Dimensions	Q.ty
DF810DK.60	112 x 132 x L 6000 mm	1 Pc
DF810DK.30	112 x 132 x L 3000 mm	1 Pc
DF810DK.15	112 x 132 x L 1498 mm	1 Pc

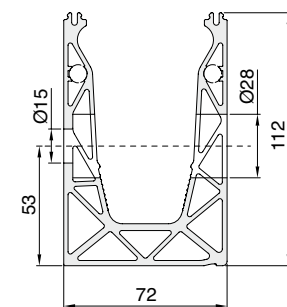
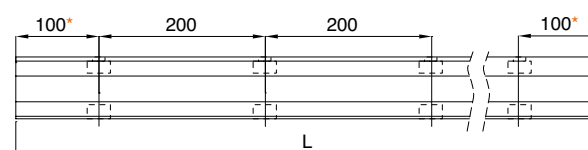
DEFENDER SLAB INSTALLATION PROFILE 810

Material: aluminium

Finishes: matt aluminium, raw

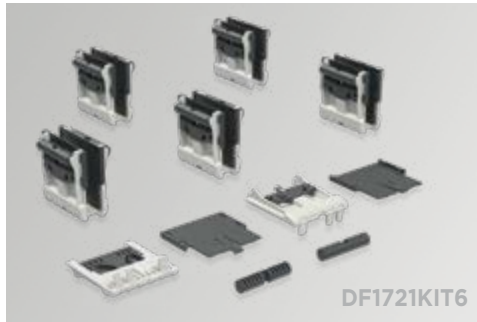
On request (not available in stock)

other anodized finishes or RAL colours



* the position of the first and last hole is given as an indication, for specific requests please contact ufficio.tecnico@loglimassimo.it

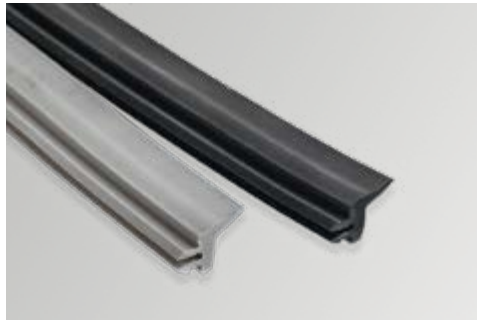
Art.	Dimensions	Q.ty
DF810FR.60	112 x 72 x L 6000 mm	1 Pc
DF810FR.30	112 x 72 x L 3000 mm	1 Pc
DF810FR.15	112 x 72 x L 1498 mm	1 Pc



DEFENDER 810 CLAMPS

Material: POM, stainless steel

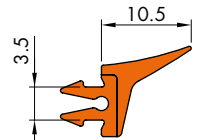
Art.	Description:	For glass	Q.ty
DF1721KIT6	no. 6 clamps	16.76 mm / 21.52 mm	1 Pc
DF2121KIT6	no. 6 clamps	20.76 mm / 21.52 mm	1 Pc
DF1721	no. 1 clamp	16.76 mm / 21.52 mm	1 Pc
DF2121	no. 1 clamp	20.76 mm / 21.52 mm	1 Pc
DFAD17	no. 1 compensation plate	16.76 mm / 17.52 mm	1 Pc



SHORT LIP SEAL

Material: TPE

Colour: black, grey



Art.	For glass	Q.ty
DFP88G01.60	16.76 mm / 21.52 mm - ROLL 60 m	1 Pc
DFP88G01.03	16.76 mm / 21.52 mm - PROFILE 3 m	1 Pc
DFP88G01	16.76 mm / 21.52 mm	per m



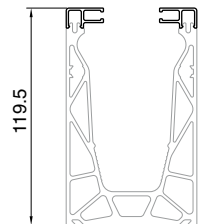
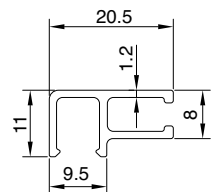
SNAP ON FINISH PROFILE

Material: aluminium

Finishes: brushed stainless steel-effect aluminium, matt aluminium, matt black, RAL 9010 (polished white), raw

On request (not available in stock)

other anodized finishes or RAL colours



Art.	Dimensions	For profiles	Q.ty
DF100.60	20.5 x 11 x L 6000 mm	DF810LM-DK-FR	1 Pc
DF100.30	20.5 x 11 x L 3000 mm	DF810LM-DK-FR	1 Pc
DF100.15	20.5 x 11 x L 1498 mm	DF810LM-DK-FR	1 Pc



SNAP ON FINISH COVER

Material: aluminium

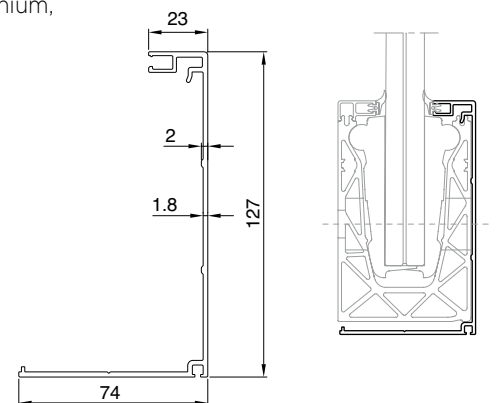
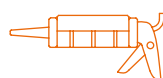
Finishes: brushed stainless steel-effect aluminium, matt aluminium, matt black,

RAL 9010 (polished white), raw

On request (not available in stock)

other anodized finishes or RAL colours

Note: make sure to apply silicone along the entire length of the profile



Art.	Dimensions	For profiles	Q.ty
DFS15.60	74 x 127 x L 6000 mm	DF810FR	1 Pc
DFS15.30	74 x 127 x L 3000 mm	DF810FR	1 Pc
DFS15.15	74 x 127 x L 1498 mm	DF810FR	1 Pc

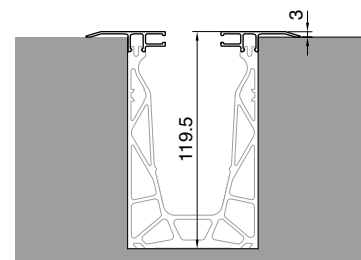
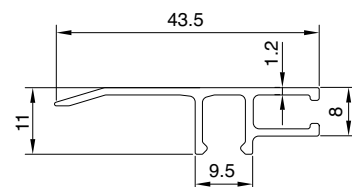
SNAP ON FOOTBOARD FINISH PROFILE

Material: aluminium

Finishes: brushed stainless steel-effect aluminium, matt aluminium, matt black, raw

On request (not available in stock)
other anodized finishes or RAL colours

Note: make sure to apply silicone along the entire length of the profile



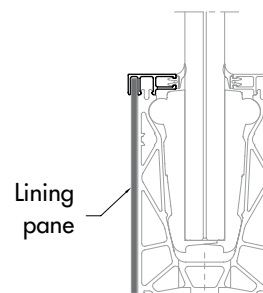
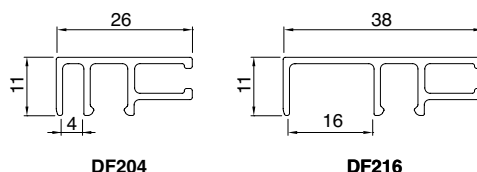
Art.	Dimensions	For profiles	Q.ty
DF101.60	43.5 x 11 x L 6000 mm	DF810LM-DK-FR	1 Pc
DF101.30	43.5 x 11 x L 3000 mm	DF810LM-DK-FR	1 Pc
DF101.15	43.5 x 11 x L 1498 mm	DF810LM-DK-FR	1 Pc

SNAP ON FINISH PROFILE FOR DF204 AND DF216

Material: aluminium

Finishes: brushed stainless steel-effect aluminium, matt aluminium, matt black, RAL 9010 (polished white), raw

On request (not available in stock)
other anodized finishes or RAL colours



Art.	Dimensions	For profiles	Q.ty
DF204.60	26 x 11 x L 6000 mm	DF810LM-DK-FR	1 Pc
DF204.30	26 x 11 x L 3000 mm	DF810LM-DK-FR	1 Pc
DF204.15	26 x 11 x L 1498 mm	DF810LM-DK-FR	1 Pc
DF216.60	38 x 11 x L 6000 mm	DF810LM-DK-FR	1 Pc
DF216.30	38 x 11 x L 3000 mm	DF810LM-DK-FR	1 Pc
DF216.15	38 x 11 x L 1498 mm	DF810LM-DK-FR	1 Pc

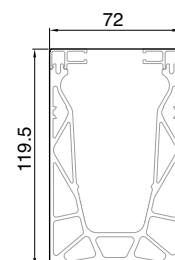
FINISH CAP

Material: aluminium

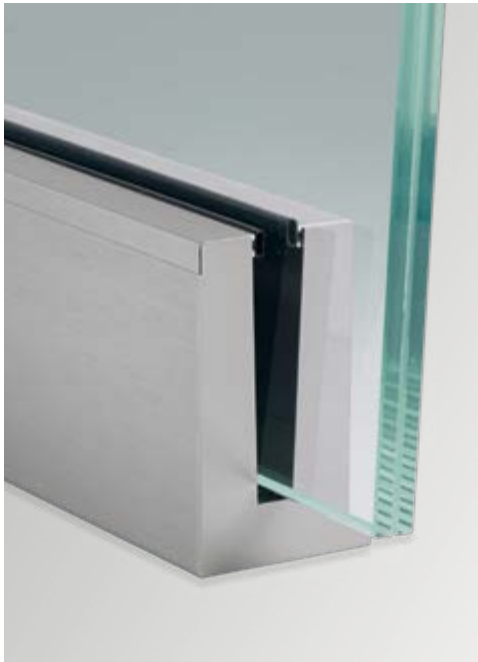
Finishes: brushed stainless steel-effect aluminium, matt aluminium, matt black, RAL 9010 (polished white), raw

On request (not available in stock)
other anodized finishes or RAL colours

Note: make sure to apply silicone along the entire border of the finishing cap.



Art.	Dimensions	For profiles	Q.ty
DF12072AL	120 x 72 mm - Th. 1 mm	DF810LM	1 Pc



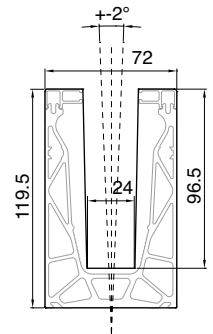
FINISH CAP WITH "V" OPENING

Material: aluminium

Finishes: brushed stainless steel-effect aluminium, matt aluminium, matt black, RAL 9010 (polished white), raw

On request (not available in stock)
other anodized finishes or RAL colours

Note: make sure to apply silicone
along the entire border of the finishing cap.



Art.	Dimensions	For profiles	Q.ty
DF2TPAL	120 x 72 mm - Th. 1 mm	DF810LM	1 Pc



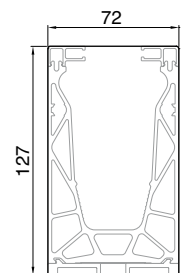
FINISH CAP FOR INSTALLATION WITH WATER DRAINAGE PROFILE

Material: aluminium

Finishes: brushed stainless steel-effect aluminium, matt aluminium, raw.

On request (not available in stock)
other anodized finishes or RAL colours

Note: make sure to apply silicone
along the entire border of the finishing cap.



Art.	Dimensions	For profiles	Q.ty
DF12772AL	127 x 72 mm - Th. 1 mm	DF810LM	1 Pc



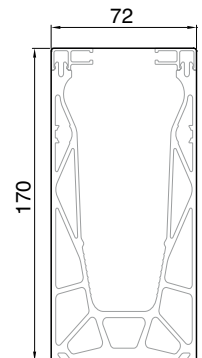
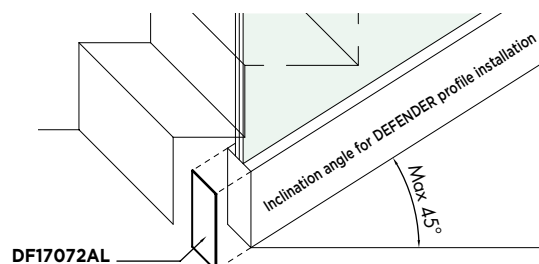
FINISH CAP FOR INCLINED INSTALLATION

Material: aluminium

Finishes: brushed stainless steel-effect aluminium, matt aluminium, raw.

On request (not available in stock)
other anodized finishes or RAL colours

Note: make sure to apply silicone
along the entire border of the finishing cap.



Art.	Dimensions	For profiles	Q.ty
DF17072AL	170 x 72 mm - Th. 1 mm	DF810LM	1 Pc



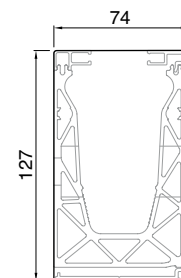
FINISH CAP

Material: aluminium

Finishes: brushed stainless steel-effect aluminium, matt aluminium, matt black, RAL 9010 (polished white), raw

On request (not available in stock)
other anodized finishes or RAL colours

Note: make sure to apply silicone
along the entire border of the finishing cap.



Art.	Dimensions	For profiles	Q.ty
DF12774AL	127 x 74 mm - Th. 1 mm	DF810FR	1 Pc



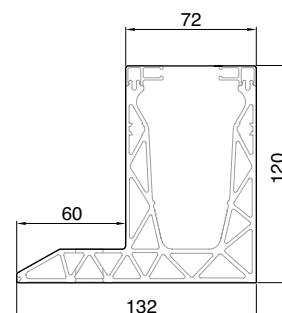
FINISH CAP

Material: aluminium

Finishes: matt aluminium

On request (not available in stock)
other anodized finishes or RAL colours

Note: make sure to apply silicone
along the entire border of the finishing cap.



Art.	Dimensions	For profiles	Q.ty
DFDKTP08DX	120 x 132 mm - Th. 1 mm - RIGHT	DF810DK	1 Pc
DFDKTP08SX	120 x 132 mm - Th. 1 mm - LEFT	DF810DK	1 Pc



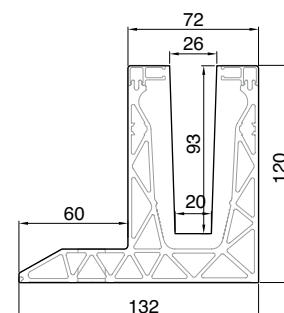
FINISH CAP WITH "V" OPENING

Material: aluminium

Finishes: matt aluminium

On request (not available in stock)
other anodized finishes or RAL colours

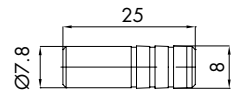
Note: make sure to apply silicone
along the entire border of the finishing cap.



Art.	Dimensions	For profiles	Q.ty
DFDKTP10DX	120 x 132 mm - Th. 1 mm - RIGHT	DF810DK	1 Pc
DFDKTP10SX	120 x 132 mm - Th. 1 mm - LEFT	DF810DK	1 Pc

NO. 2 CENTRING DOWELS

Material: aluminium



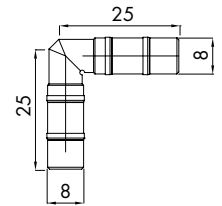
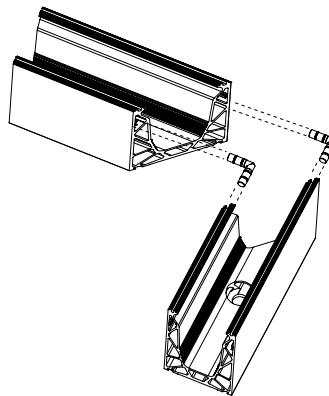
Art.
DF25

Dimensions
Ø8 x 25 mm

Q.ty
1 Pc

NO. 2 CORNER CENTRING DOWELS 90°

Material: High resistance polyamide



Art.
DF2525

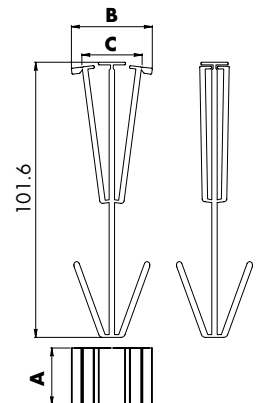
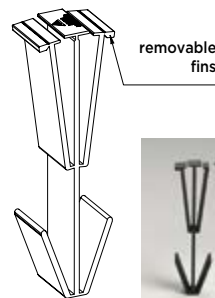
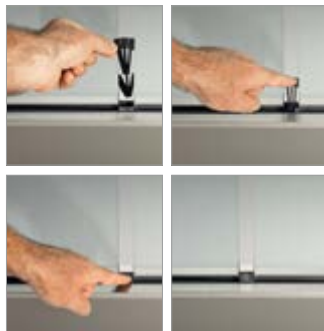
Dimensions
Ø8 x 25 x 25 mm

Q.ty
1 Pc

EXPANDABLE COVER STRIP

Material: POM. - Colour: black, grey

Note: cover strip cap with removable fins for installation between two glass panes with distance 10 - 25 mm.



Art.	Dimensions	For glass	Finish	Q.ty
DFTEC88	B with fins = 18/26 mm - C without fins = 10/18.5 mm	A = 17.5 mm	black	1 Pc
DFTEC88G	B with fins = 18/26 mm - C without fins = 10/18.5 mm	A = 17.5 mm	grey	1 Pc
DFTEC1010	B with fins = 18/26 mm - C without fins = 10/18.5 mm	A = 21.5 mm	black	1 Pc
DFTEC1010G	B with fins = 18/26 mm - C without fins = 10/18.5 mm	A = 21.5 mm	grey	1 Pc



DEFENDER FLOOR PROFILE 810LM WITH WATER DRAINAGE SLOTS

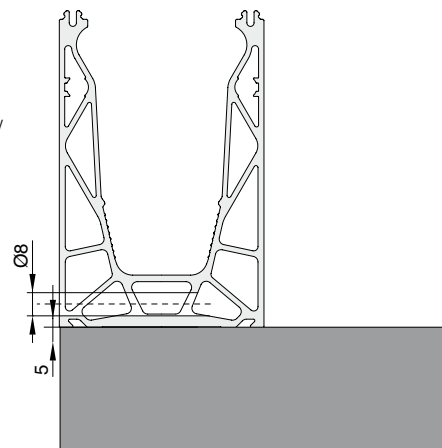
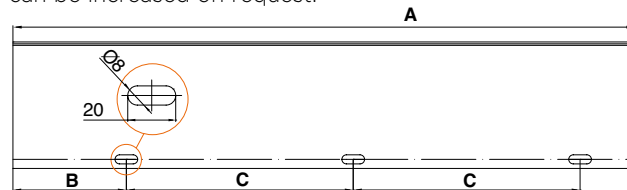
Material: aluminium

Finishes: brushed stainless steel-effect aluminium, matt aluminium, matt black, RAL 9010 (polished white), raw

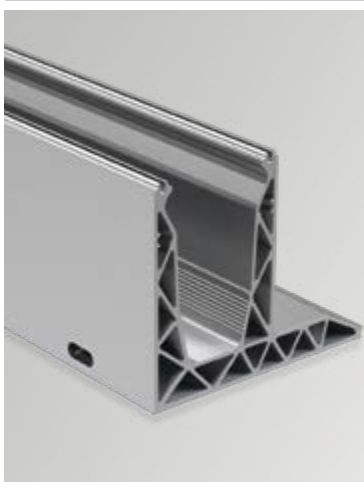
On request (not available in stock)

other anodized finishes or RAL colours

The number of slots in the profile can be increased on request.



Art.	Dimensions	Drilling	Slot centre distance	Q.ty
DF810LM.60AS	112 x 72 x A 6000	9 slots	B 600 - C 600	1 Pc
DF810LM.30AS	112 x 72 x A 3000	4 slots	B 600 - C 600	1 Pc
DF810LM.15AS	112 x 72 x A 1498	2 slots	B 449 - C 600	1 Pz
DF88FOROAS	Additional slot Ø8 x 20 mm			1 Pc



DEFENDER FLOOR PROFILE 810 WITH SIDE FIN AND WATER DRAINAGE SLOTS

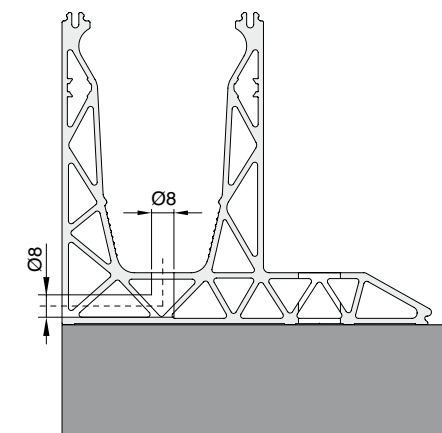
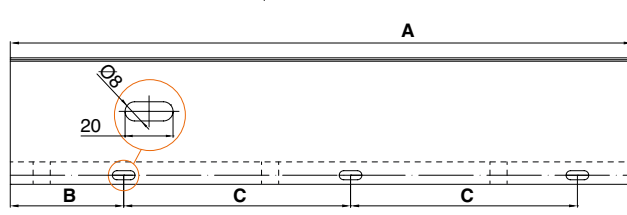
Material: aluminium.

Finishes: matt aluminium

On request (not available in stock)

other anodized finishes or RAL colours

The number of slots in the profile can be increased on request.



Art.	Dimensions	Drilling	Slot centre distance	Q.ty
DF810DK.60AS	112 x 132 x A 6000	9 slots	B 600 - C 600	1 Pc
DF810DK.30AS	112 x 132 x A 3000	4 slots	B 600 - C 600	1 Pc
DF810DK.15AS	112 x 132 x A 1498	2 slots	B 449 - C 600	1 Pc
DF88FOROAS	Additional slot Ø8 x 20 mm			1 Pc



DEFENDER SLAB INSTALLATION PROFILE 810 WITH WATER DRAINAGE SLOTS

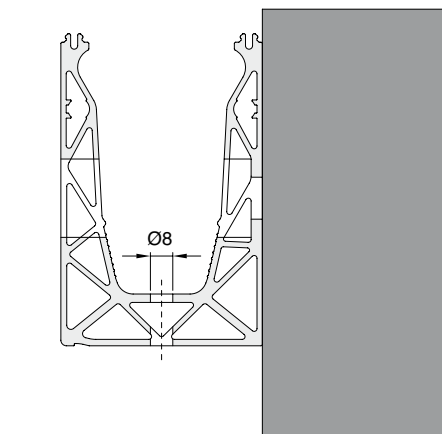
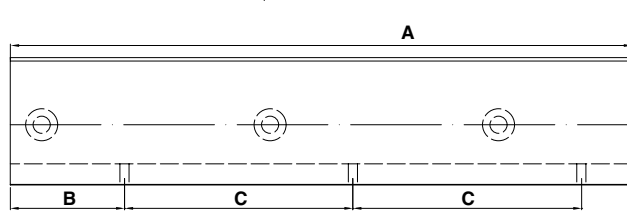
Material: aluminium.

Finishes: matt aluminium, raw

On request (not available in stock)

other anodized finishes or RAL colours

The number of slots in the profile can be increased on request.



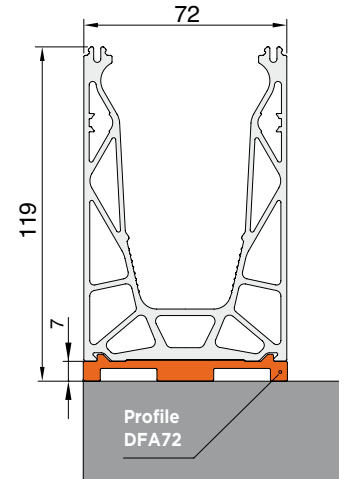
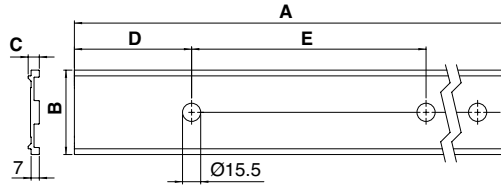
Art.	Dimensions	Drilling	Hole centre distance	Q.ty
DF810FR.60AS	112 x 72 x A 6000	9 holes	B 600 - C 600	1 Pc
DF810FR.30AS	112 x 72 x A 3000	4 holes	B 600 - C 600	1 Pc
DF810FR.15AS	112 x 72 x A 1498	2 holes	B 449 - C 600	1 Pc
DF88FOROAS	Additional hole Ø8 mm			1 Pc

WATER DRAINAGE PROFILE FOR FLOOR INSTALLATION

Material: aluminium

Finishes: brushed stainless steel-effect aluminium,
matt aluminium, raw.

On request (not available in stock)
other anodized finishes or RAL colours



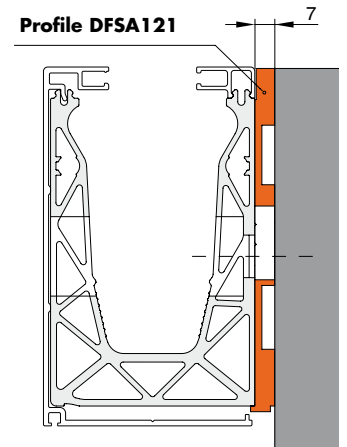
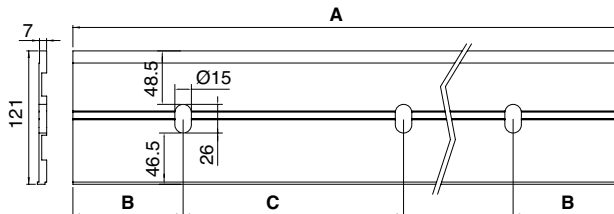
Art.	Dimensions	Drilling	Hole centre distance	Q.ty
DFA7260	A 6000 x B 72 x C 9.5 mm	30 holes	D 100 - E 200	1 Pc
DFA7230	A 3000 x B 72 x C 9.5 mm	15 holes	D 100 - E 200	1 Pc
DFA72054	A 540 x B 72 x C 9.5 mm	3 holes	D 70 - E 200	1 Pz

WATER DRAINAGE PROFILE FOR SLAB INSTALLATION

Material: aluminium

Finishes: brushed stainless steel-effect aluminium,
matt aluminium, raw.

On request (not available in stock)
other anodized finishes or RAL colours



Art.	Dimensions	Drilling	Hole centre distance	Q.ty
DFSA12160	121 x 7 x A 6000	30 holes	B 100 - C 200	1 Pc
DFSA12130	121 x 7 x A 3000	15 holes	B 100 - C 200	1 Pc
DFSA121054	121 x 7 x A 540	3 holes	B 70 - C 200	1 Pc

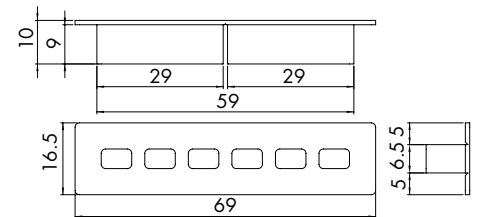
WATER DRAINAGE GRID

Material: POM

Grid for DFA and DFSA water drainage systems.

Adaptable grid through removal of fins for dimensions type **A**, **B**, or **C**.

Finish: grey, stainless steel-effect aluminium



Art.	Dimensions	Q.ty
DFGD	A 69 x 16.5 x 10 - B 69 x 11.5 x 10 - C 34.5 x 16.5 x 10	1 Pc



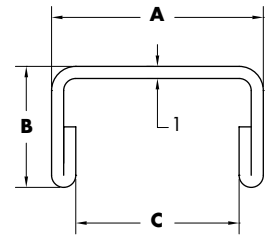
FINISH PROFILES **AISI 316**

Material: stainless steel AISI 316

Finish: polished steel and brushed steel

Package with minimum 5 pcs. even mixed.

Note: install on glass by applying neutral silicone.



Art.	Length	A	B	C	For glass	Q.ty
CPR88	2500 mm	21.5 mm	10 mm	17.6 mm	17.52 mm	1 Pc
CPR1010	2500 mm	25.5 mm	10 mm	21.6 mm	21.52 mm	1 Pc



ALUMINIUM FINISH PROFILES

Material: aluminium

Finishes: brushed stainless steel-effect aluminium, matt aluminium,

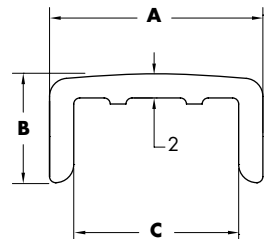
RAL 9010 (polished white), raw

On request (not available in stock)

RAL finishes in other colours

Package with minimum 5 pcs. even mixed.

Note: install on glass by applying neutral silicone.



Art.	Length	A	B	C	For glass	Q.ty
CPRAL88	3000 mm	21.6 mm	9 mm	17.6 mm	17.52 mm	1 Pc
CPRAL1010	3000 mm	25.6 mm	9 mm	21.6 mm	21.52 mm	1 Pc



FINISHING CAP FOR ALUMINIUM PROFILES

Material: aluminium

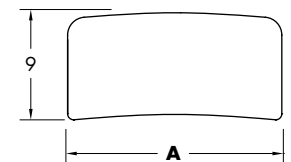
Finishes: brushed stainless steel-effect aluminium, matt aluminium,

RAL 9010 (polished white), raw

On request (not available in stock)

RAL finishes in other colours

Note: install by applying silicone on the entire edge of the finish cap.

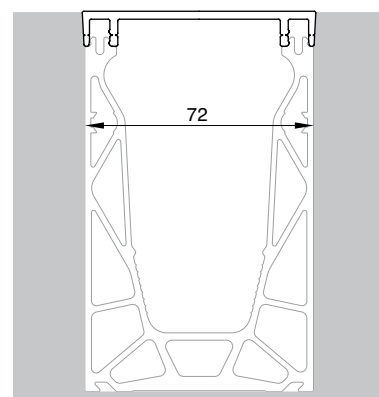
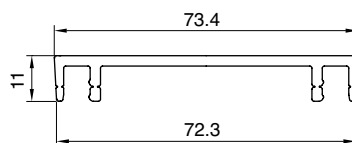


Art.	A	B	Thickness	Q.ty
CPRAL88TP	21.6 mm	9 mm	1 mm	1 Pc
CPRAL1010TP	25.6 mm	9 mm	1 mm	1 Pc



PROTECTIVE AND TEMPORARY CLOSURE CAP

Material: PVC



Art.	Length
DFCLS72.30	3000 mm

Q.ty
1 Pc



FLEXIBLE SCREWDRIVER AND INSERT

Art.	Description	Q.ty
DFFLEX03	Screwdriver with hexagon insert size CH5	1 Pc



MAKITA GUN SCREWDRIVER

- Double speed - Release clutch - LED lighting - Reversible

Voltage: 7.2V	Dimensions: 218 x 44 x 142 mm
Capacity: 1.2Ah	Weight (EPTA): 0.55 kg
Vacuum velocity: 200 - 650 rpm	Metal drilling: 5 mm
Hard coupling tightening torque: 5.6 Nm	Wood drilling: 6 mm
Flexible coupling tightening torque: 3.6 nm	Torque adjustment: 21

Art.	Q.ty
DFMAK21	1 Pc



FLEXIBLE EXTENSION AND INSERT

Usable in combination with MAKITA electric screwdriver art. DFMAK21 or similar

Art.	Description	Q.ty
DFFLEX01	Flexible extension with hexagon insert size CH5	1 Pc
DFFLEX05	Hexagon insert size CH51 Pc	



CALCULATION AND SLANTED CUT

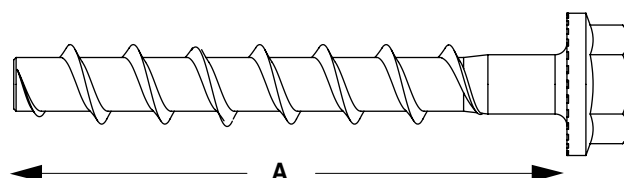
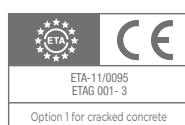
Slanted cut on design (22° - 89°)

Art.	Q.ty
DFTAGLIO	1 Pc

ANCHORS FOR CONCRETE

Material: galvanised steel / A4 stainless steel

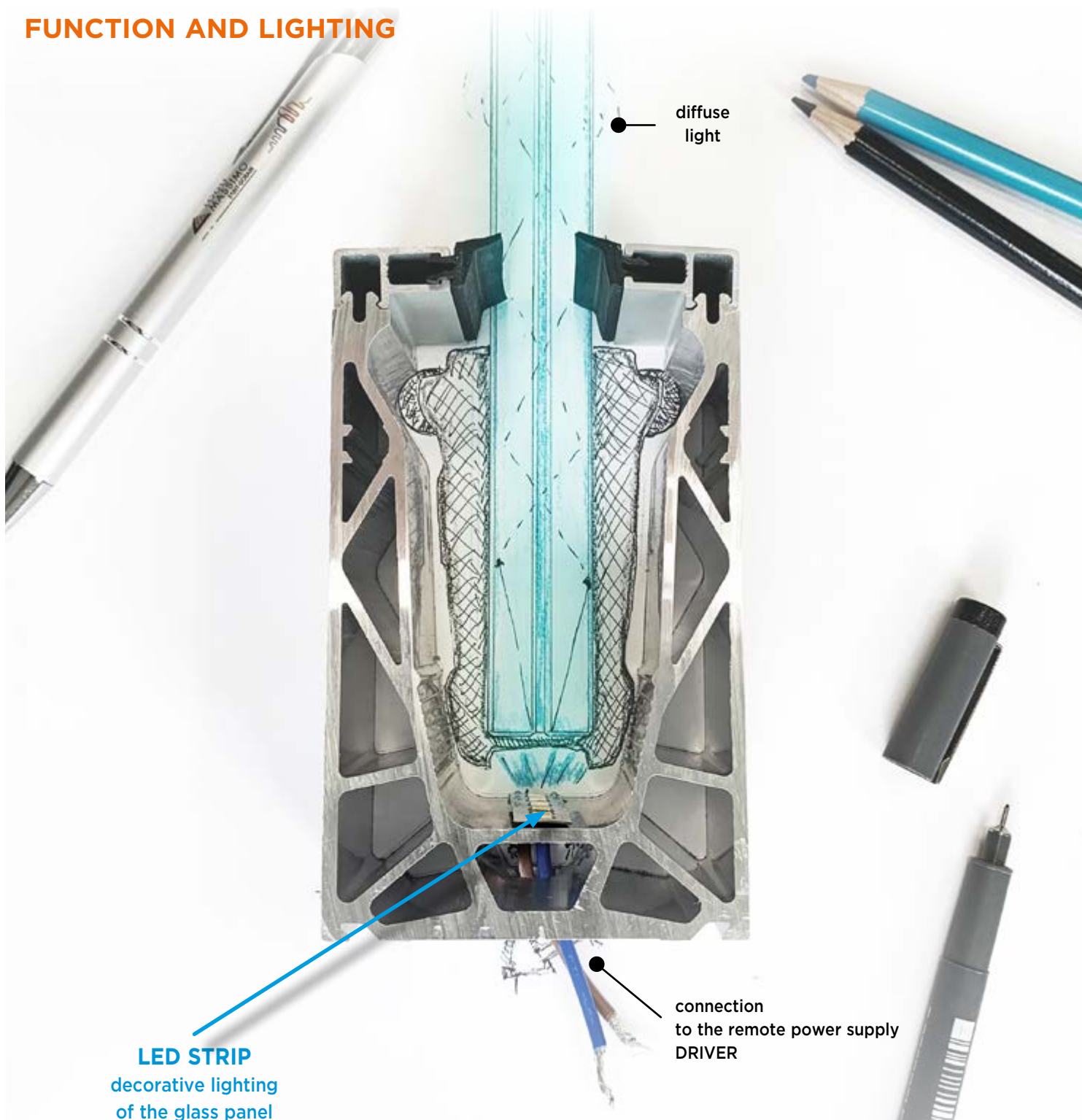
Features: High performance mechanical anchor for concrete with resistance class from C20/25 to C50/60, cracked and non-cracked. **Package: 15 pcs.**



For information about anchor performance contact the Technical Customer Care Service
Logli Massimo Saint-Gobain (ufficio.tecnico@loglimassimo.it).

Art.	A - Anchor length	B - hole Ø	Hole depth	Tightening wrench	Material	Q.ty
DFFH10ZN	100 mm	10 mm	110 mm	SW16	Galvanised steel	1 Pc
DFFH10A4	100 mm	10 mm	110 mm	SW16	A4 stainless steel	1 Pc
DFFH12ZN	110 mm	12 mm	120 mm	SW17	Galvanised steel	1 Pc
DFFH12A4	110 mm	12 mm	120 mm	SW17	A4 stainless steel	1 Pc

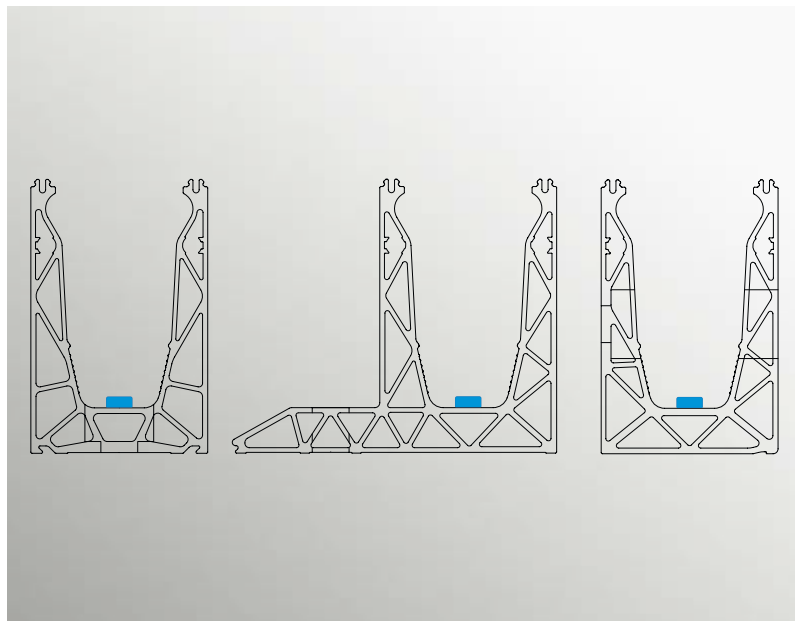
FUNCTION AND LIGHTING



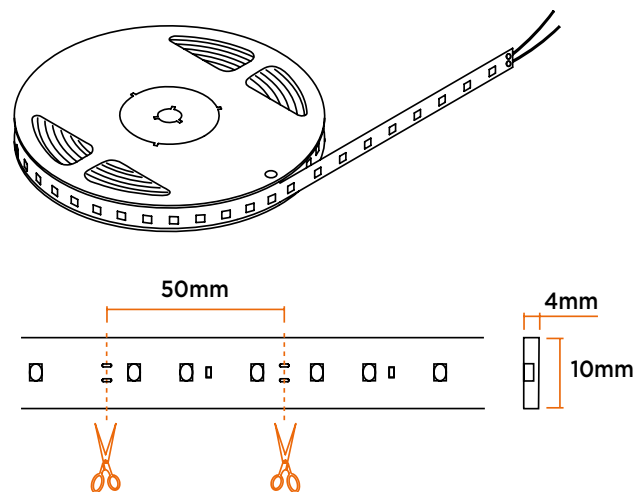
For applications of over 5 linear metres of LED STRIP, the use of multiple power supply units is recommended to reduce the effects of natural voltage drops. Applications with multiple derivations are allowed if power supply unit DRIVERS of the appropriate size are used. Where necessary, silicone for outdoor use is recommended to ensure adequate protection of cables against atmospheric agents. A qualified technician is recommended for the connection to the LED STRIP network.

LED STRIP : decorative lighting for the glass pane (recommended LEDST001)

The decorative lighting effect of glass can enhance the defects present on the surface and inside the panes, which generate the diffuse light effect. These defects become more evident as the light intensity increases. The utmost care is recommended during production of the panels and the use of a LED STRIP with moderate light intensity. It is recommended to verify the functionality of every LED STRIP prior to installation.

LED STRIP 24V DC IP67 9.6 W/m 140 LED/m**ALSO SUITABLE FOR OUTDOOR USE**

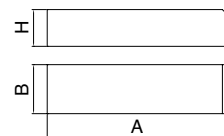
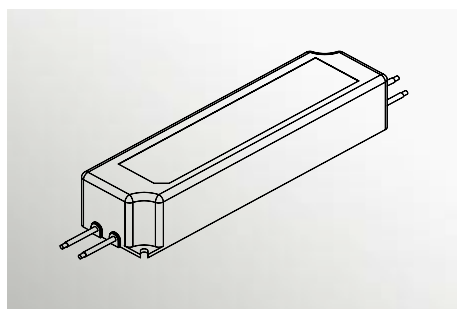
LED strip 24V DC IP 67, power 9.6 W/m 140 LED/m
CCT 4000K - lm/m 920 - lm/W 96



Art.	Description	Q.ty
LEDST001	LED STRIP 24V DC IP67 9.6 W/m 140 LED/m - L. 5000 mm	1 Pc

POWER SUPPLY UNITS 24V DC**ALSO SUITABLE FOR OUTDOOR USE**

Power supply unit 24Vdc 35W to 150W IP67
IN/OUT cables - Protection rating 2
Function 100-240V



Art.	Description	Dimensions	Q.ty
LED24035IP	Power supply unit 24V DC 35W IP67	A=150 mm - B=40 mm - H=30 mm	1 Pc
LED24060IP	Power supply unit 24V DC 60W IP67	A=162 mm - B=42 mm - H=32 mm	1 Pc
LED24100IP	Power supply unit 24V DC 100W IP67	A=190 mm - B=52 mm - H=37 mm	1 Pc
LED24150IP	Power supply unit 24V DC 150W IP67	A=222 mm - B=68 mm - H=38 mm	1 Pc

- Pay attention to the electric polarity of products.
- Only use stabilised power supply units with 24v dc voltage.
- After calculating the total absorption of devices to be installed, choose a power supply unit that always has a power margin, which is 15-20% higher than the one calculated.
- In case of maintenance, remove voltage.

Connecting multiple devices in parallel:

To avoid damaging the LED lights, complete all connections before switching on the power.

Max continuous length 5 m

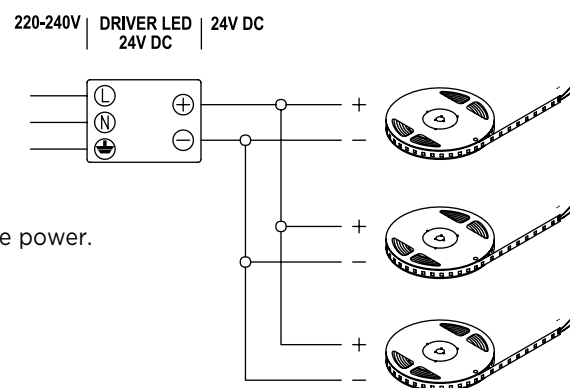
Example: STRIP length 3 m

type LED STRIP 1 24 Vdc MAX 9.6 W/m (art. LEDST001)

Choosing the power supply unit DRIVER: absorption type LED x LED length + 15%
(minimum increase due to voltage drop) $9.6 \times 3 \times 1.15 = 33.15 \text{ W (MIN)}$

The power supply unit DRIVER to be chosen: 24 Vdc 35 W (art. LED24035IP)

Complete list of items: LEDST001 1 pc. - LED24035IP 1 pc.

CONNECTION DIAGRAM - PARALLEL CIRCUIT



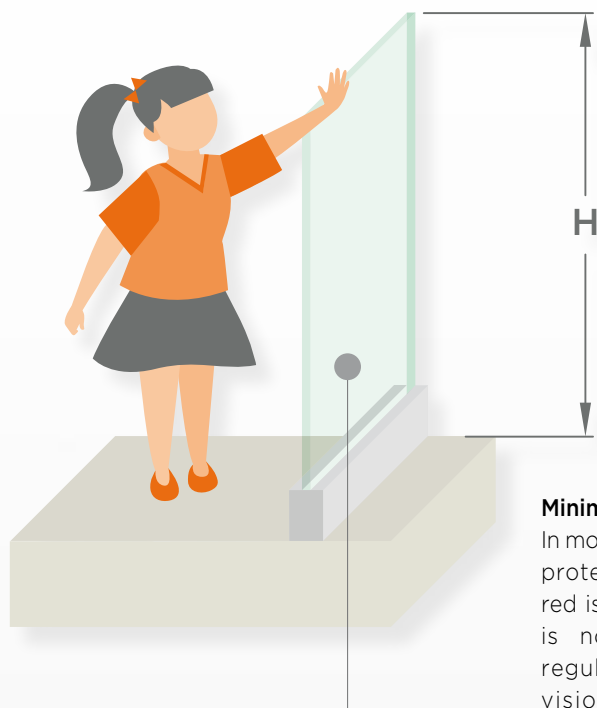


ENDLESS VIEW

The Defender system allows you to better appreciate your outdoor space and make your rooms unique without borders.

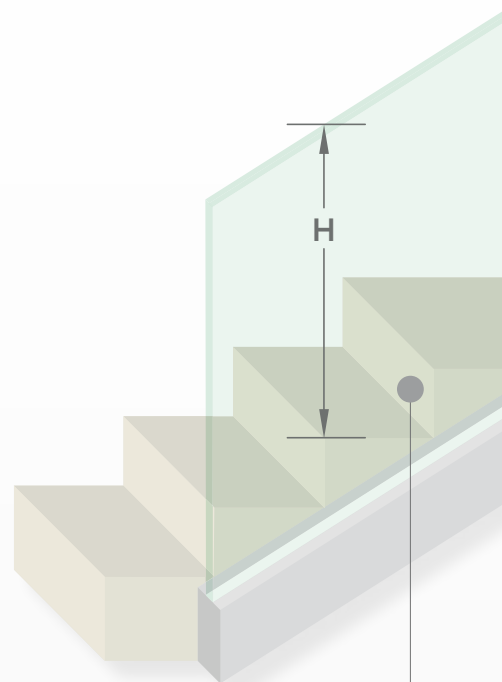
The **DEFENDER 810** system, developed and patented by Logli Massimo Saint-Gobain, is the latest and most innovative system for creating all-glass parapets. Please bear in mind the following when designing your **DEFENDER** parapet.

ESSENTIAL REQUIREMENTS



Minimum height

In most cases, the minimum protective height required is 100 cm. However, it is no rare event that regulations, local provisions or particular situations make it mandatory to comply with higher limits, with a minimum height of 110 - 120 cm.

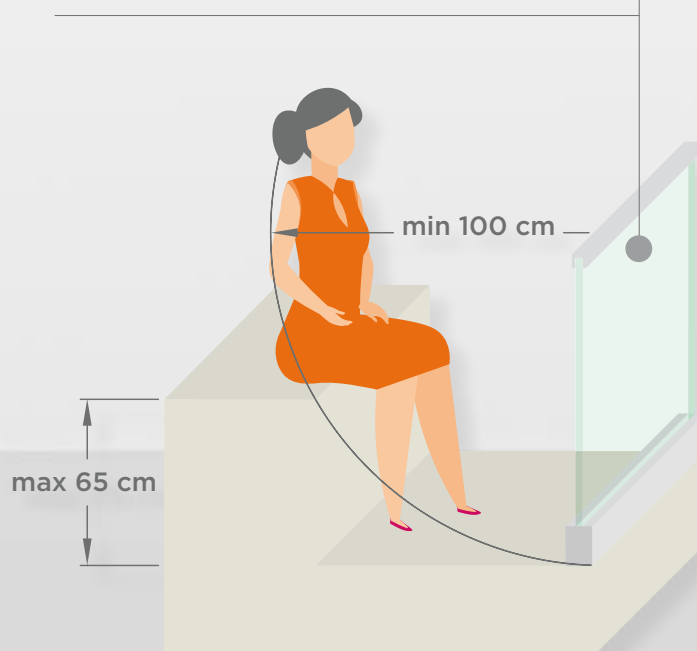
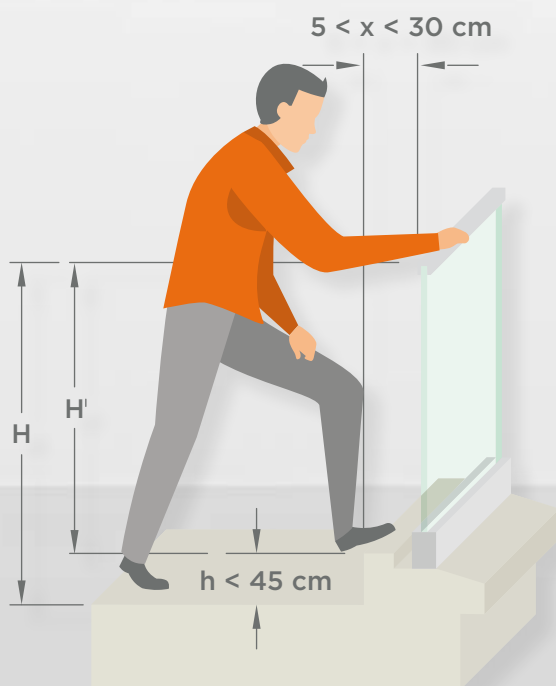


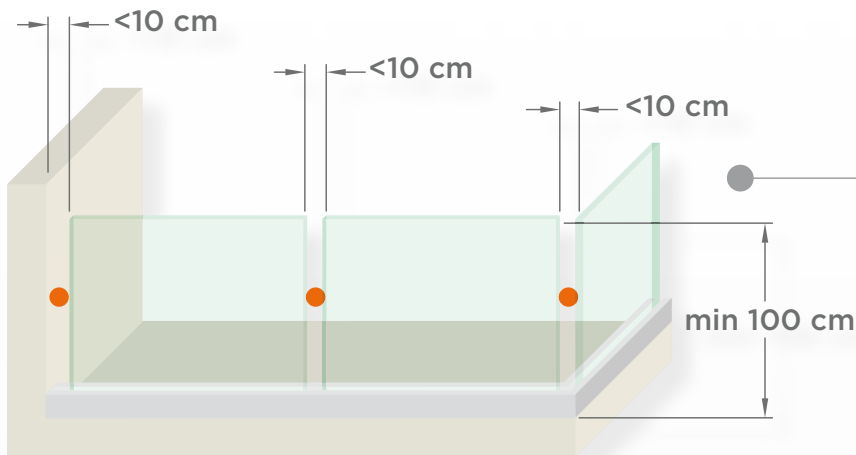
Flights of stairs

The protective height is measured starting from the external corner of the tread and starts with a minimum of 90 cm.

Scalability

The protective height must be measured from the first **viable surface**. It is important to check whether there are risks associated with stable walking surfaces close to the parapet, generally 5-30 cm wide, or with the presence of large steps or raised fixed surfaces. Elements such as these will have to be evaluated considering whether they can be used to facilitate the **crossing of the barrier**: if so, it will be useful to increase its height.





Impenetrable

To ensure safety both upstream and downstream of the parapet, it is necessary to prevent **objects from falling** through the various elements that make up the barrier: as a minimum requirement, a sphere with a diameter of 10 cm must be prevented from passing through each point.

Resistance...

The mechanical strength of a parapet is expressed as load per width unit. This **design load** may vary according to standards and intended use. Generally, in case of crowds, the resistance provided by the system should be higher. In addition to the load, checks may be required against impact from heavy or hard objects. If not properly considered, such actions could not only locally damage the panes or systems, but impair overall safety. Another aspect not to be underestimated is wind pressure! For high parapets or those very much exposed to gusts of wind, wind pressure could become a determining factor.



...along with rigidity!

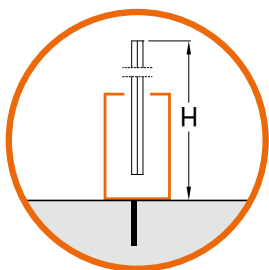
Safety is essential in "exceptional" situations, but the **perception of safety** associated with the behaviour of the parapet in normal, everyday use is not less important! It is understandable that a flexible or wobbly system can lead users to perceive it as "unsafe", this considerably decreasing the comfort and usability of spaces. **DEFENDER** systems have always been ahead of others in combining rigidity and strength, to achieve both maximum **well-being** and **safety**. We also strongly recommend the use of glass with rigid interlayers in our systems.



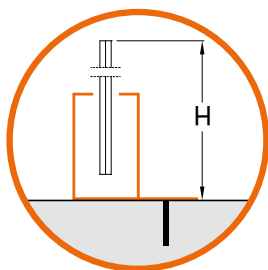
DEFENDER: A CHOICE OF COMFORT AND SAFETY

The following pages contain tables that can be used to identify and select the **most suitable system** for the installation one has to carry out, imposed by the technical regulations. The essential data are presented in a simple and concise manner, but do not exempt **designers** and **installers** from referring to the full text of the standards and the technical documentation of the systems, which can be downloaded from the website www.loglimassimo.it or available through the Logli Massimo Saint-Gobain Technical Customer Care Service (ufficio.tecnico@loglimassimo.it).

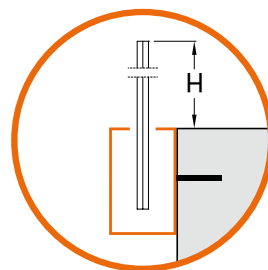
DEFENDER 810



DEFENDER810LM



DEFENDER810DK



DEFENDER810FR

ITALY (NTC 2018 / UNI 11678)

Pose	System DEFENDER (panes)	max. system ⁽¹⁾ height [cm]	max. centre distance of anchors ⁽²⁾ [cm]	pane composition		Intended use ⁽³⁾		
						private stairs	residential buildings or offices	crowded places
				interlayer	glass	1.0 kN/m	2.0 kN/m	3.0 kN/m
	DF810LM17 (8+8)	110	40	PVB	T/I	✓	✓	
				EVA	T/I	✓	✓	
			20	SentryGlas®	T/T	✓	✓	✓
		120 ⁽⁴⁾	40	PVB	T/I	✓	✓	
				EVA SECURE	T/T	✓	✓	
				DG41	T/T	✓	✓	
				SentryGlas®	T/T	✓	✓	
	DF810LM21 (10+10)	110	20	PVB	T/I	✓	✓	✓
				EVA	T/I	✓	✓	✓
				EVA SECURE	T/T	✓	✓	✓
				DG41	T/T	✓	✓	✓
	DF810DK17 (8+8)	110	40	SentryGlas®	T/T	✓	✓	✓
		120 ⁽⁴⁾	60	PVB	T/I	✓	✓	
				EVA	T/I	✓	✓	
				EVA SECURE	T/T	✓	✓	
				DG41	T/T	✓	✓	
	DF810DK21 (10+10)	110	40	PVB	T/I	✓	✓	✓
				EVA	T/I	✓	✓	✓
				EVA SECURE	T/T	✓	✓	✓
				DG41	T/T	✓	✓	✓
		120 ⁽⁴⁾		SentryGlas®	T/T	✓	✓	✓
	DF810FR17 (8+8)	110	40	PVB	T/I	✓	✓	
				EVA	T/I	✓	✓	
	DF810FR21 (10+10)	110	20	SentryGlas®	T/T	✓	✓	✓
		120 ⁽⁴⁾	20	PVB	T/I	✓	✓	
				EVA	T/I	✓	✓	
				EVA SECURE	T/T	✓	✓	
				DG41	T/T	✓	✓	

FRANCE (NF 1991-1-1 / Cahier 3034 du CSTB)

Pose	System DEFENDER (panes)	max. system ⁽¹⁾ height [cm]	max. centre distance of anchors ⁽²⁾ [cm]	pane composition		Intended use ⁽³⁾	
						private	public ⁽⁴⁾
				interlayer	glass	0.6 kN/m	1.0 kN/m
	DF810LM17 (8+8)	110	40	PVB	T/T (HST)	✓	
			20	EVA Daylight	T/T (HST)	✓	
	DF810LM21 (10+10)	120 ⁽⁴⁾	20	PVB	T/T (HST)	✓	✓
				PVB	T/T (HST)	✓	✓
				Evalam Visual	D/D	✓	✓
				EVA Daylight	T/T (HST)	✓	✓
	DF810DK17 (8+8)	110	60	PVB	T/T (HST)	✓	
			40	EVA Daylight	T/T (HST)	✓	
	DF810DK21 (10+10)	120 ⁽⁴⁾	40	SentryGlas®	T/T (HST)	✓	✓
				PVB	T/T (HST)	✓	✓
				EVA Daylight	T/T (HST)	✓	✓
				Evalam Visual	D/D	✓	✓
	DF810FR17 (8+8)	110	40	PVB	T/T (HST)	✓	
			20	EVA Daylight	T/T (HST)	✓	
	DF810FR21 (10+10)	120	20	SentryGlas®	T/T (HST)	✓	✓
				Evalam Visual	D/D	✓	✓
				PVB	T/T (HST)	✓	✓
				EVA Daylight	T/T (HST)	✓	✓

UNITED KINGDOM (BS 6180)

Pose	System DEFENDER (panes)	max. system ⁽¹⁾ height [cm]	max. centre distance of anchors ⁽²⁾ [cm]	pane composition		Intended use ⁽³⁾		
						Residential buildings and offices	public places	crowded places
				interlayer	glass	0.74 kN/m	1.5 kN/m	3.0 kN/m
	DF810LM17 (8+8)	60	40	PVB	T/T	✓	✓	✓
		100		PVB	T/T	✓	✓	
		110	20	PVB	T/T	✓		
		120		SentryGlas®	T/T	✓	✓	
	DF810LM21 (10+10)	80	20	SentryGlas®	T/T	✓		
		110		PVB	T/T	✓	✓	✓
		120		PVB	T/T	✓	✓	
		140		SentryGlas®	T/T	✓	✓	
	DF810DK17 (8+8)	60	60	PVB	T/T	✓	✓	✓
		100		PVB	T/T	✓	✓	
		120		PVB	T/T	✓		
		110		SentryGlas®	T/T	✓	✓	
	DF810DK21 (10+10)	120	40	SentryGlas®	T/T	✓		
		80		PVB	T/T	✓	✓	✓
		120		PVB	T/T	✓	✓	
		140		SentryGlas®	T/T	✓	✓	
	DF810FR17 (8+8)	60	20	PVB	T/T	✓	✓	✓
		100	40	PVB	T/T	✓	✓	
		110		PVB	T/T	✓		
	DF810FR21 (10+10)	80	20	PVB	T/T	✓	✓	✓
		110		SentryGlas®	T/T	✓	✓	
		140		SentryGlas®	T/T	✓		

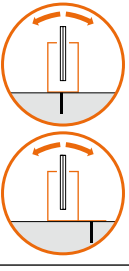
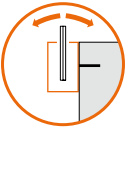


SWITZERLAND (SIA 261)

Pose	System DEFENDER (panes)	Installation type	max. system ⁽¹⁾ height [cm]	max. centre distance of anchors ⁽²⁾ [cm]	pane composition		Application classes	
					interlayer	glass	in residential, commercial zones and offices	Public areas ⁽⁵⁾
							0.8 kN/m	1.6 kN/m
	DF810LM17 DF810DK17 (8+8)	indoor	50	40	PVB	I/I	✓	✓
			90	20	SentryGlas®		✓	✓
			110	40	PVB		✓	
			130	20	SentryGlas®		✓	
		outdoor	50	20	PVB		✓	✓
			70	20	SentryGlas®		✓	✓
	DF810LM21 DF810DK21 (10+10)	indoor	110	20	SentryGlas®		✓	
			100	20	PVB	I/I	✓	✓
			130	20	PVB		✓	
		outdoor	130	20	SentryGlas®		✓	✓
			100	20	SentryGlas®		✓	✓
			130	20	PVB		✓	
	DF810FR17 (8+8)	indoor	80	20	SentryGlas®	I/I	✓	✓
			100	40	PVB		✓	
			120	20	SentryGlas®		✓	
		outdoor	60	20	SentryGlas®		✓	✓
			100	20	SentryGlas®		✓	
	DF810FR21 (10+10)	indoor	90	20	PVB	I/I	✓	✓
			120	20	PVB		✓	
			120	20	SentryGlas®		✓	✓
		outdoor	120	20	SentryGlas®		✓	✓
			90	20	SentryGlas®		✓	
			120	20	PVB		✓	

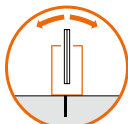
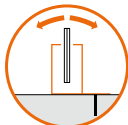
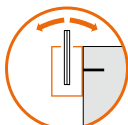


THE NETHERLANDS (NEN-EN 1991-1-1)

Pose	System DEFENDER (panes)	handrail	max. system ⁽¹⁾ height [cm]	max. centre distance of anchors ⁽²⁾ [cm]	pane composition		Application classes ⁽³⁾		
					interlayer	glass	private resi- dential areas	common resi- dential areas	Public areas ⁽⁴⁾
							0.3 kN/m	0.5 kN/m	0.8 kN/m
	DF810LM17 DF810DK17 (8+8)	no	110	40	PVB	T/T	✓		
		yes	110	40	PVB		✓	✓	
			130	40	SentryGlas®		✓	✓	
	DF810LM21 DF810DK21 (10+10)	no	110	20	PVB	T/T	✓	✓	
		yes	120	20	PVB		✓	✓	✓
			130	20	SentryGlas®		✓	✓	✓
	DF810FR17 (8+8)	no	110	40	PVB	T/T	✓		
		yes	110	20	PVB		✓	✓	
			120	20	SentryGlas®		✓	✓	
	DF810FR21 (10+10)	no	110	20	PVB	T/T	✓	✓	
		yes	100	20	PVB		✓	✓	✓
			120	20	SentryGlas®		✓	✓	✓



BELGIUM (NBN B 03-004)

	System DEFENDER (panes)	max. system ⁽¹⁾ height [cm]	max. centre distance of anchors ⁽²⁾ [cm]	pane composition		Application classes ⁽⁶⁾	
						private	public ⁽⁴⁾
				interlayer	glass	0.5 kN/m	1.0 kN/m
	DF810LM17 (8+8)	110	40	DG41	F/F	②	
			20		T/T	⑤	④
					T/T	⑥	⑤
		120	40		F/F	①	
			20		T/T	④	③
					T/T	⑤	④
	DF810LM21 (10+10)	110	40		F/F	⑦	⑥
		120	20		T/T	⑦	⑦
	DF810DK17 (8+8)	110	60	DG41	F/F	②	
		120			F/F	①	
	DF810DK21 (10+10)	110			F/F	⑦	⑥
		120			F/F	⑥	⑤
	DF810FR17 (8+8)	110	40	DG41	F/F	③	
			20		T/T	③	③
		120	40		F/F	②	
			20		T/T	②	②
	DF810FR21 (10+10)	110	20		F/F	⑥	⑤
		120			F/F	⑤	④

Glass type legend: F = annealed float glass EN 572, I = hardened glass EN 1863 (in compositions T-I, hardened glass is placed on the external side), T = tempered glass EN 12150, (HST) = "heat soak test" according to standard EN 14179 is required on tempered glass panes.

These laminated glass configurations are mere examples and are not to be as exhaustive as far as the installation options are concerned. Many alternative solutions are known and used on the market, performing equally well or potentially better for several important technical aspects (e.g., rigidity, resistance to delamination, post-breakage behaviour, stability with respect to temperature variations, etc.).

The final assessment regarding compliance with the safety requirements is up to the qualified technician in charge of the installation. It is up to this technician to verify the applicability of the technical specifications of all system components considering the actual installation conditions (system loads, characteristics of the bearing structure, temperature effects, type and sizing of anchors, etc.).

(1) Protection height H depending on the type of fixing; this measurement is carried out differently for floor or slab systems.

(2) value indicated for the correct functioning of the aluminium and glass system; the strength test of individual anchors and of the base structure needs to be evaluated case-by-case, and it is possible that a greater number of anchoring points may be required. Regardless of the centre distances, no bar must be secured with less than 3 anchor points to the base structure.

(3) values that are circled (③) refer to positions having test certificates performed by specialised and independent institutes; values that are not circled refer to positions that have been recognised as satisfactory on the basis of internal tests, of similar tests on identical glass compositions or more cumbersome tests, which provide technical information in terms of safety.

(4) In cases where it is possible to design without taking into account the wind action and the support profile is not recessed below the walkway surface, the height of the parapet may be higher than this value (the tests to be carried out would be similar to those made)

(5) with the exception of areas liable to exceptional crowding, such as concert halls, stadiums, flight of steps and tribunes.

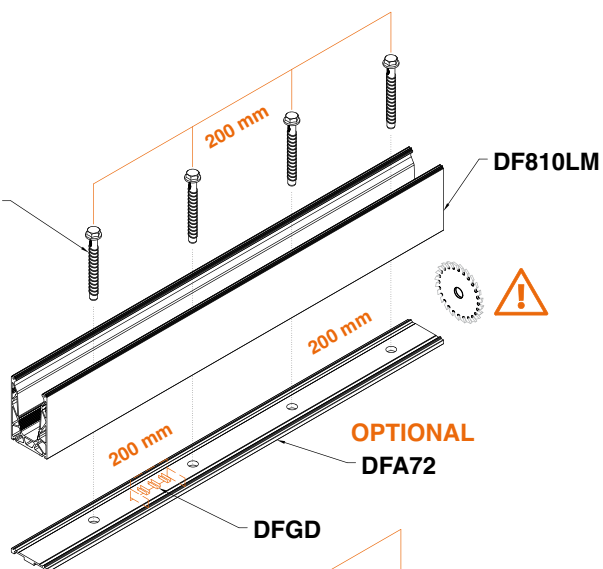
(6) the values contained in the selection cells refer to the wind exposure category. These indications refer to similar locations validated with identical glass panes; these validations consider a -2 exposure coefficient in order to take into account the most severe conditions in each part of the building.



1

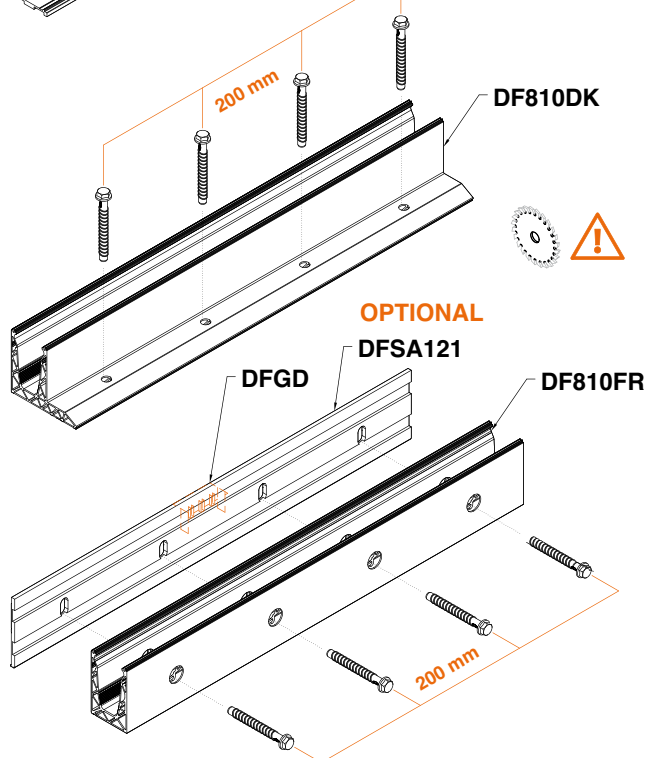
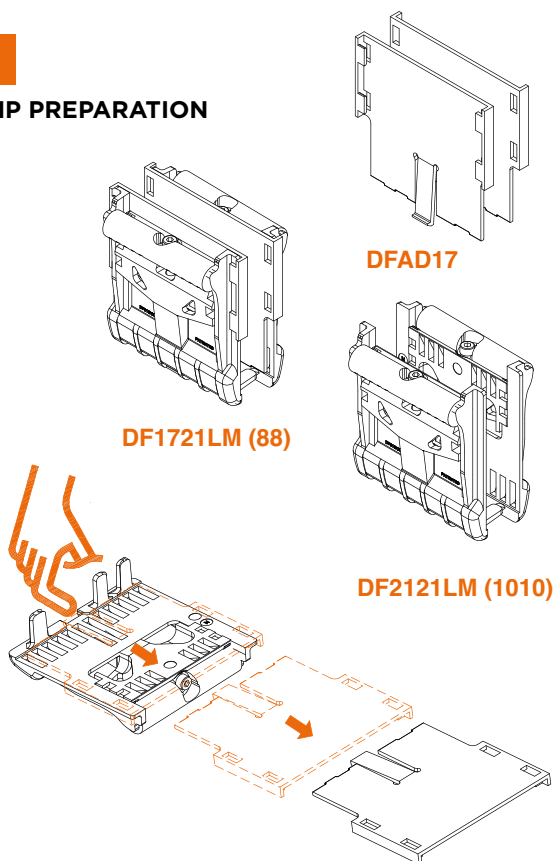
PROFILE PREPARATION

DFFH10ZN
DFFH10A4
DFFH12ZN
DFFH12A4



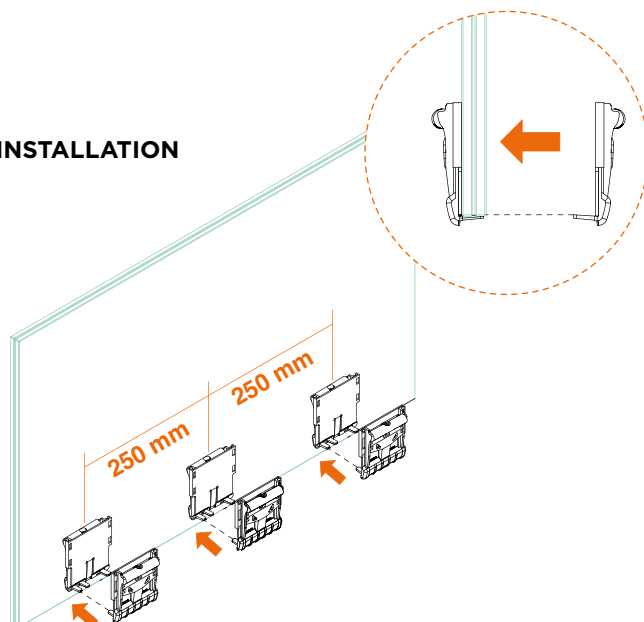
2

CLAMP PREPARATION



3

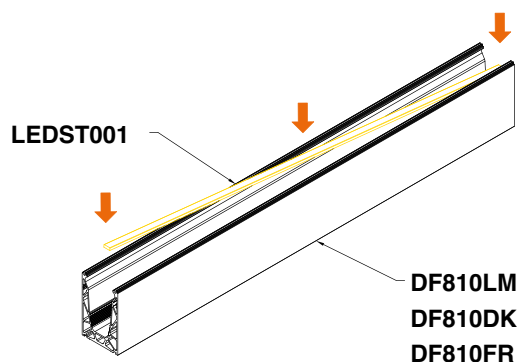
CLAMP INSTALLATION



4

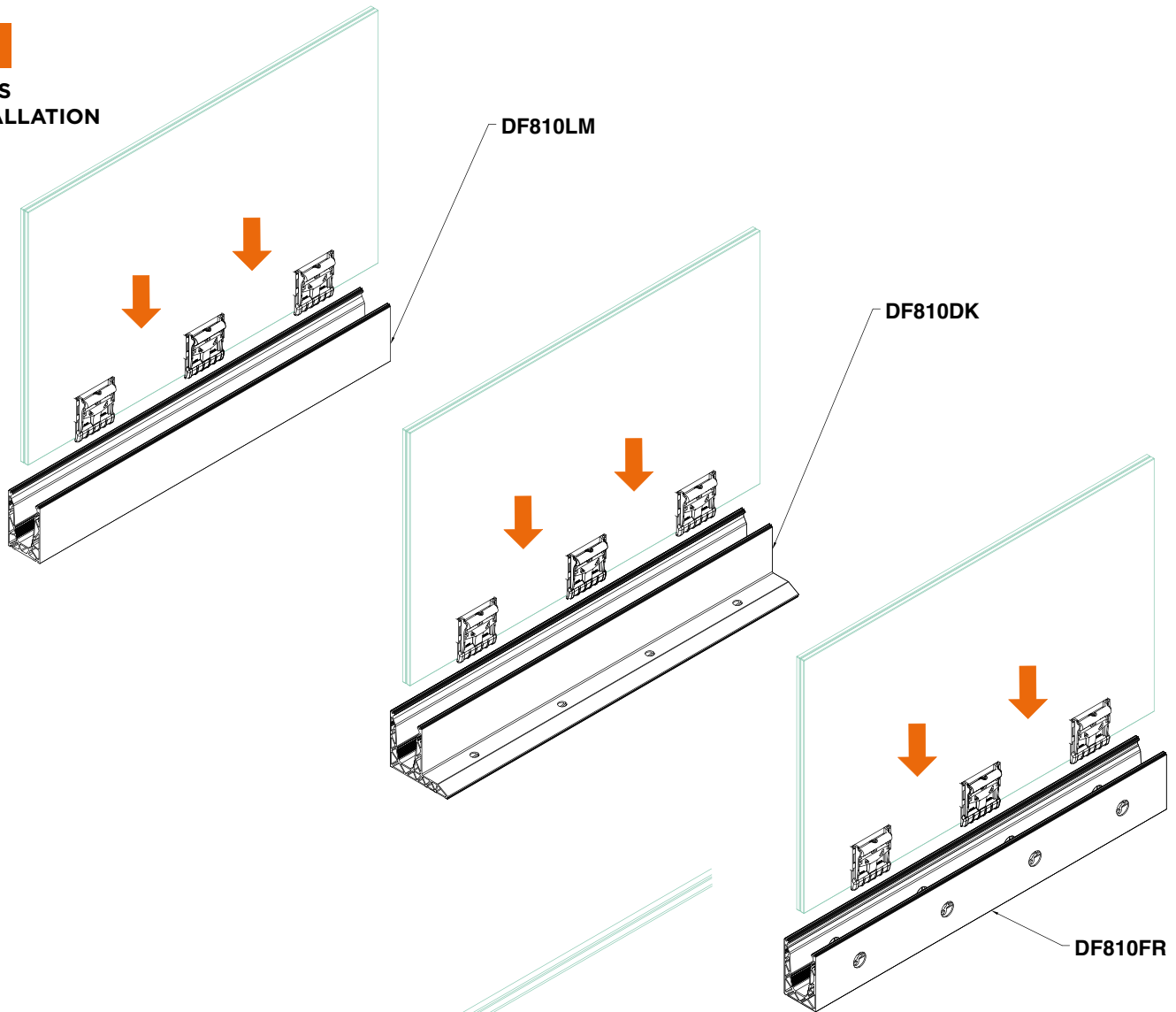
LED INSTALLATION

OPTIONAL (P.30-31)



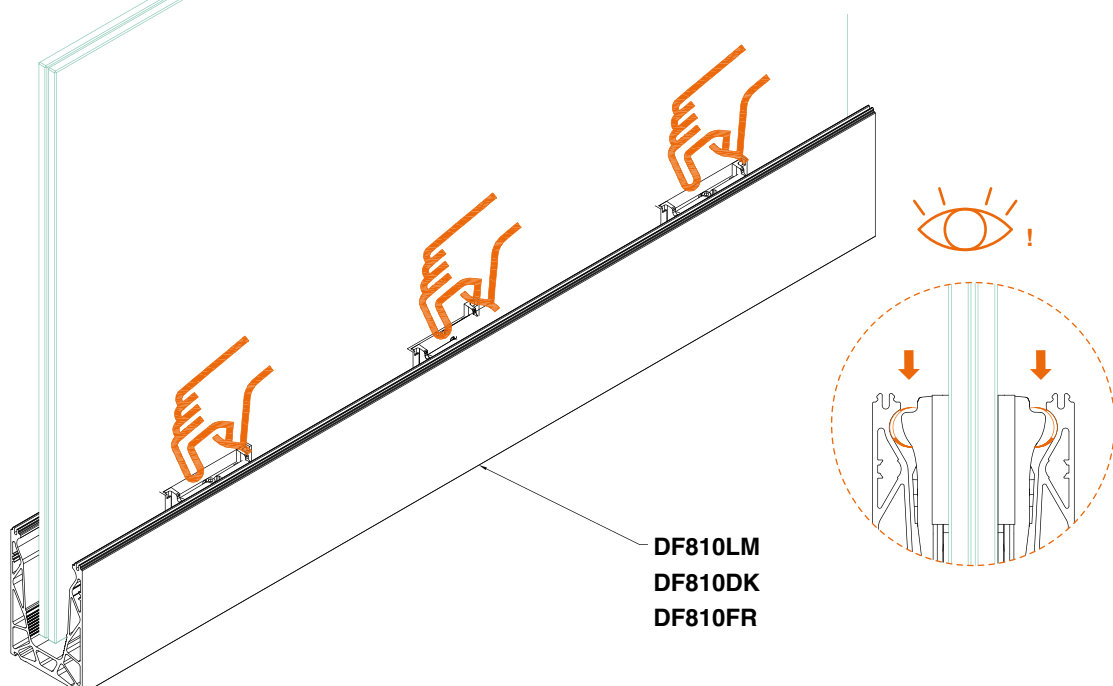
5

GLASS INSTALLATION



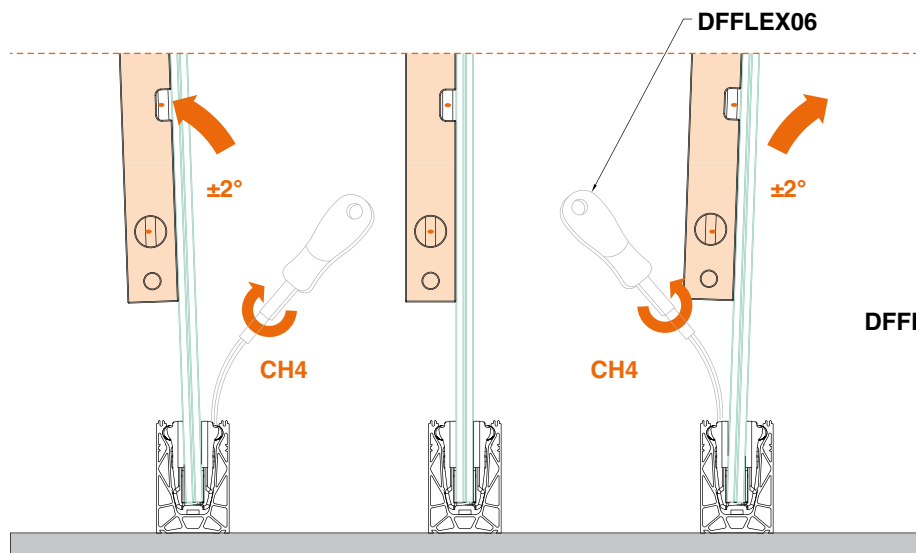
6

LOCKING



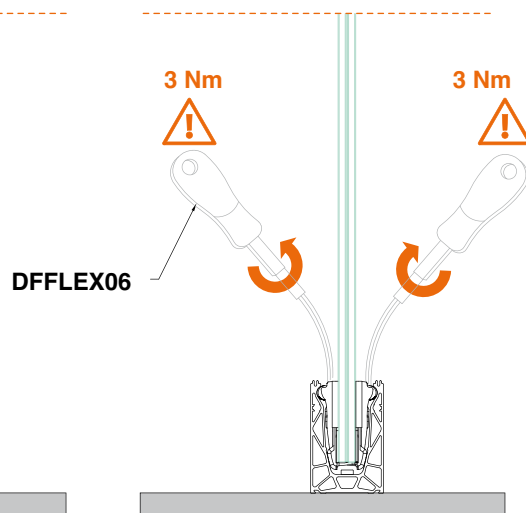
7

ADJUSTMENT



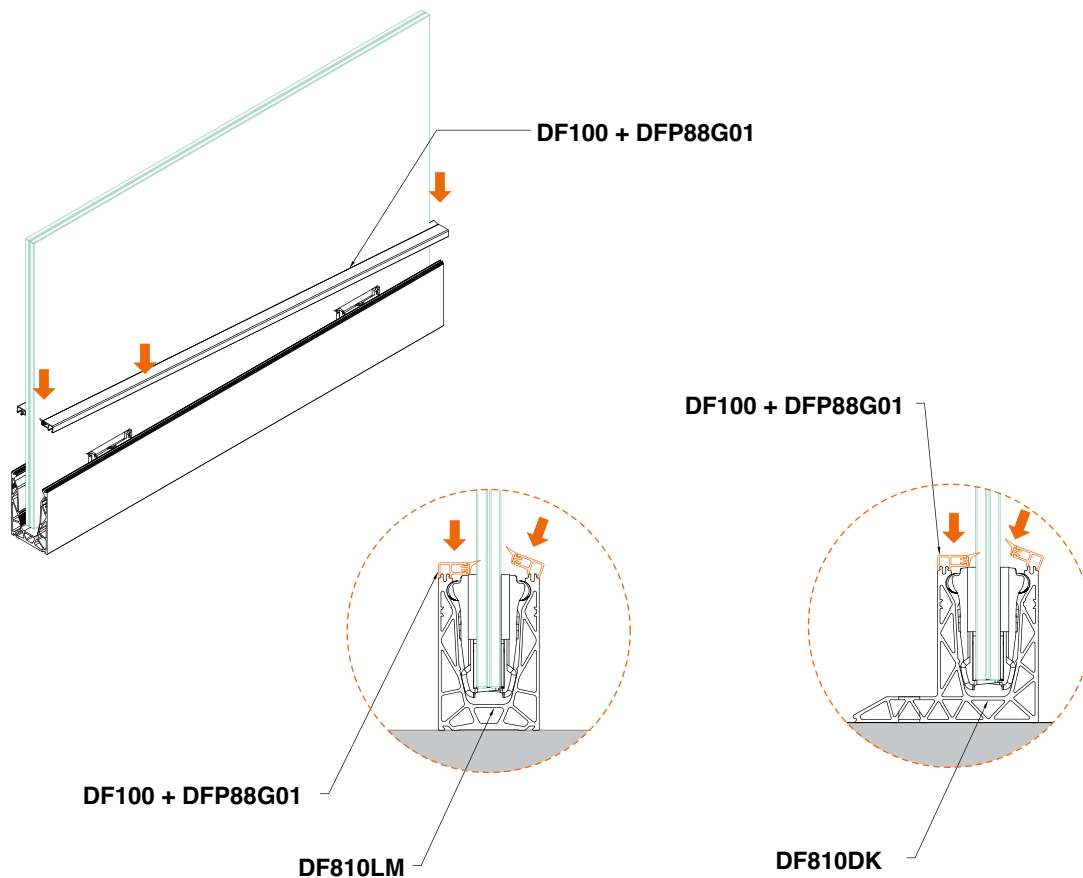
8

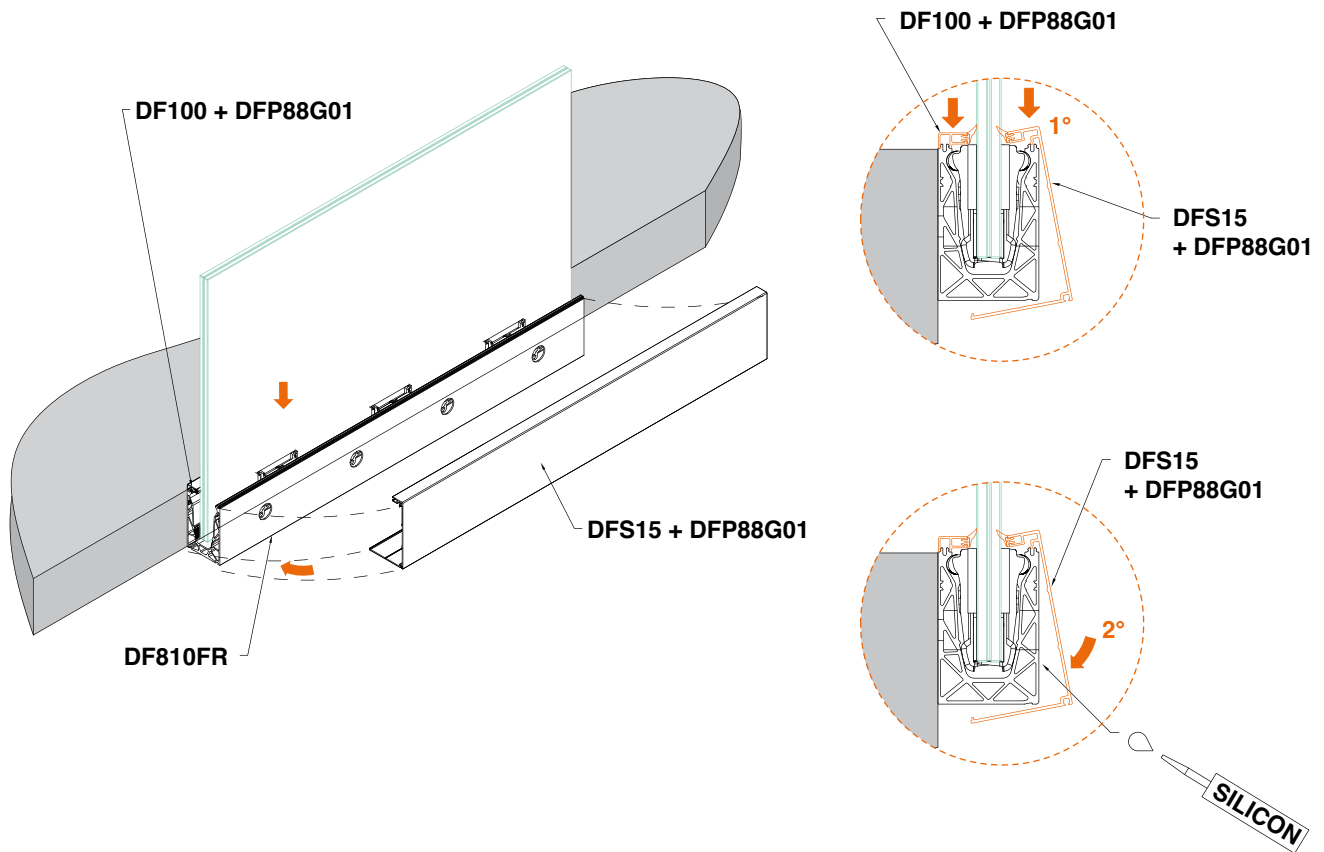
TIGHTENING



9

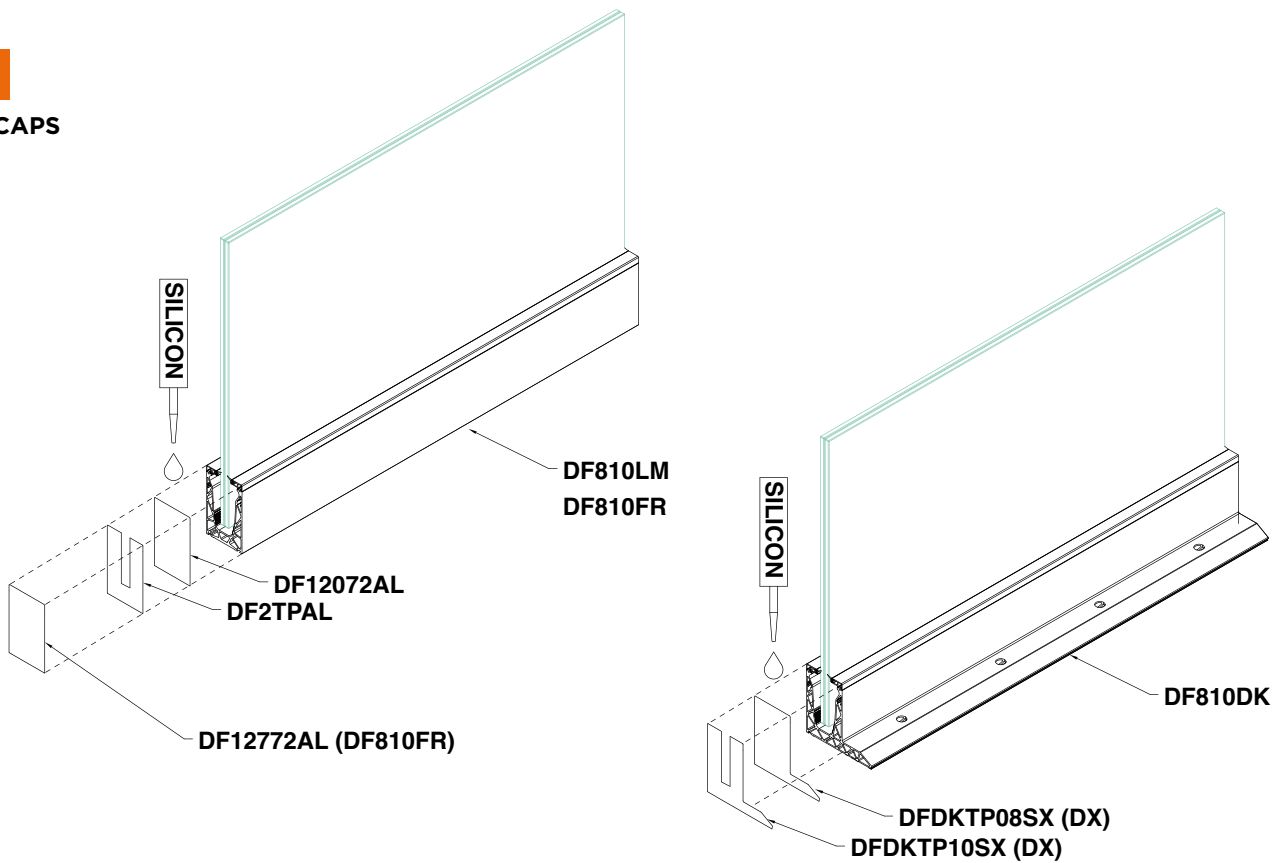
OUTDOOR FINISHES





10

SIDE CAPS



RAL & SPECIAL FINISHES ON REQUEST



RAL 9005
MATT/R2

RAL 7021
MATT/R14

RAL 7016
MATT/R13

RAL 7024
MATT/R20

RAL RUST
GRAINZ/R25

RAL 1004
POLISHED/R23

RAL 9010
POLISHED/RAL



QUALITAL

CLASS 20 Minimum anodization thickness **20 micron**
Suitable for outdoor installations, even in aggressive environments

* for requests for RAL finishes there are production times to be considered, which are evaluated case by case.
In case of requests for anodised finishes there are production times and minimum order quantities which are evaluated case by case.

RAL COLOURS ON REQUEST

SCRATCH-RESISTANCE PROTECTION

EXPOSED SIDES OF PROFILES CAN BE PROTECTED
ON REQUEST TO PREVENT SCRATCHES
DURING INSTALLATION



SPECIAL SLOTS ON REQUEST



CUSTOMER CARE:



RAPID ORDER PROCESSING AND DISPATCH:



INSTRUCTIONS FOR INSTALLATION

The following precautions are recommended during installation:

- Neutral detergents can be used to remove dirt, greasy stains and residue of adhesives. Never use abrasive materials.
- To protect cuts and holes made after anodization against corrosion, it is recommended to use sealants (e.g., silicone or butyl), paints (e.g., zinc metal spray) or other suitable corrosion inhibitors.

If installation is performed in winter, it is recommended to take into account the thermal expansion that will take place in summer due to the increased temperature, providing appropriate expansion joints.

The thermal expansion coefficient of aluminium is $2.3 \times 10^{-5} \text{ }^{\circ}\text{C}^{-1}$: for example, if the increase in temperature is equal to 35°C , the dilation of a 3 m bar amounts to $2.3 \times 10^{-5} \text{ }^{\circ}\text{C}^{-1} \times 35^{\circ}\text{C} \times 3 \text{ m} = 2.4 \times 10^{-3} \text{ m}$ or 2.4 mm.

ANODIZATION

Anodization (also called anodic oxidation) is an electro-chemical process by which the formation of oxide (alumina) is induced on the extruded aluminium surface. **This treatment provides the product with the following characteristics:**

- resistance to corrosion
- surface hardness
- resistance to abrasion

The colour applied on the products has a purely aesthetic impact and does not alter the protective action of anodization.

The raw-finish aluminium profiles, specifically without anodizing or painting, sold by Logli Massimo S.p.A. are intended for suitable coating to be applied by the customer. The customer exempts Logli Massimo S.p.A. from all liability for any problems resulting from using raw finish material. Furthermore, the customer accepts all liability regarding the finish applied by them to the raw finish profile.

Note: Galvanic corrosion: the phenomenon can develop at the interface between two different metals when there is an electrolyte (e.g., water, especially if salted). It is an electrochemical process that causes the metal with lower electric potential to dissolve. In the most common metal combinations, it is almost always aluminium that plays the role of anode and thus undergoes corrosion. Of course, this only happens when the aluminium surface is not adequately protected.

MAINTENANCE AND CLEANING

Regular cleaning of the product is of crucial importance to preserve the original aspect. In a marine environment or in an urban environment (polluting emissions into the atmosphere), cleaning the surfaces at least once every three months is recommended. In relatively cleaner outdoor environments, washing every six months is recommended. Even for indoor installations, cleaning the product at least once a year is recommended.

Washing can be performed with warm water and neutral soap. Use a soft cloth or a non-abrasive sponge. Rinse thoroughly with clean water. Dry with a soft cloth.

The information provided is for explanatory purposes only. Logli Massimo S.p.A. reserves the right to make changes at any time and without prior notice to one or more products, and even to cease their production.

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ANODISERS ASSOCIATION
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