

*FOCUS* PRODUCTS AND SOLUTIONS

# DEFENDER<sup>1</sup>ONE

1 System, 1 Protection, 1 Vision.

# DEFENDER<sup>1</sup>ONE

*1 System, 1 Protection, 1 Vision.*

Over ten years of experience condensed into a single system. DEFENDER ONE was created to revolutionise the installation of glass balustrades, without compromising on safety or performance.

Three screws, one side, adjustment from above: the glass locks into place, aligns and is secured from the inside using a simple screwdriver. Modular clamps to switch from 8+8 to 10+10 glass on the same channel. Tested up to 6 kN/m with 4-point fixing, to withstand even the most extreme applications. A single system. Endless applications.

***When simplicity, safety and design come together in a single system, it creates something perfect.***



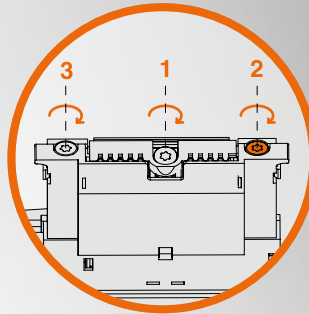


# DEFENDER<sup>1</sup> ONE

*Designed for designers, for installers,  
for everyday users.*

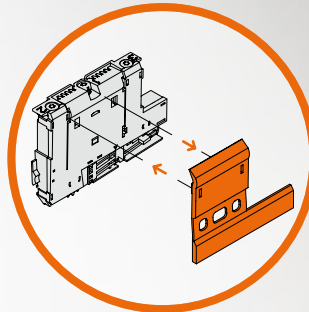
## REVOLUTIONARY ADJUSTMENT SYSTEM

Installation speed never seen before.  
Only 3 screws are needed to adjust  
and secure the glass



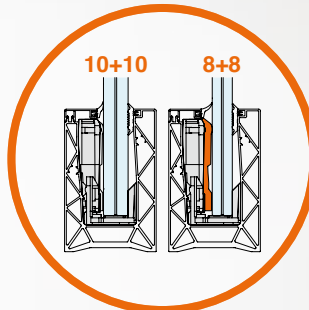
## MODULAR CLAMPS

To switch quickly from 8+8 glass  
to 10+10 glass using the same channel



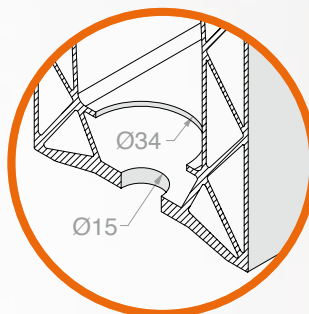
## 8+8 AND 10+10 GLASS

Complete kits ready for installation



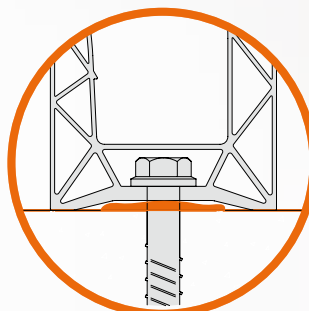
## PRE-DRILLED HOLES 15/34 mm DIAMETER

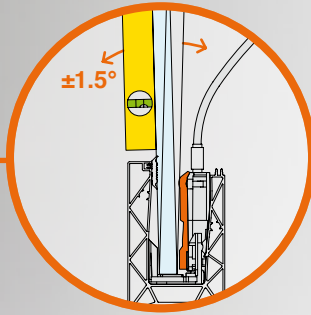
For even faster and  
more effective fixing



## COMPENSATION AREA

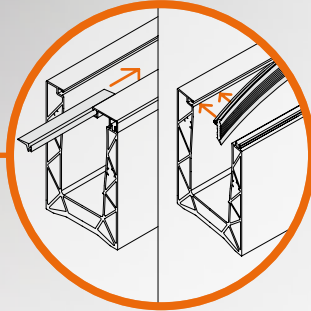
To facilitate the installation  
of chemical anchors  
and waterproofing





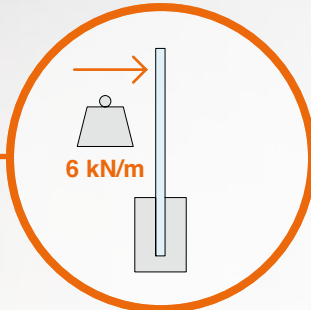
**SINGLE-SIDE ADJUSTMENT ±1.5°**

Glass inclination can be adjusted entirely from the inside using a simple screwdriver



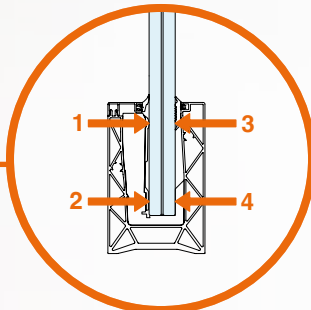
**TPE GASKETS**

Redesigned for maximum installation speed, ensuring high durability



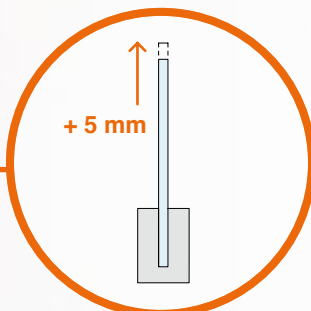
**TESTED UP TO 6 kN/m**

The geometry of the hollow profile makes the most of aluminium's strength, making the profile suitable for use even in extreme applications



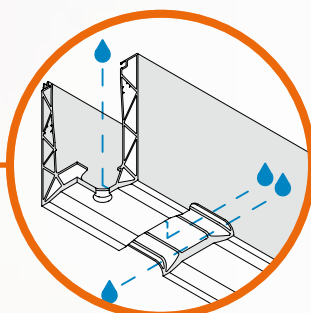
**4-POINT FIXING**

To convey a sense of comfort and security, ensuring maximum glass stability.



**HEIGHT ADJUSTMENT + 5 mm**

Included as standard in every kit, allowing installers to adjust the height of the glass by up to 5 mm



**INTEGRATED DRAINAGE**

New drainage channels for simultaneous drainage of the profile and the surface.

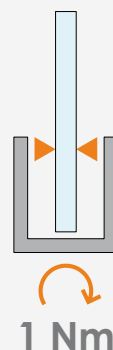
# The technology of DEFENDER<sup>1</sup> ONE

*Innovative one side system for balustrades, designed to simplify installation and ensure maximum precision.*

Thanks to a revolutionary patented top-adjustment mechanism, the glass can be secured, aligned and locked in place entirely from the inside in just three steps, reducing installation time and enhancing safety, reliability and the quality of the final result.

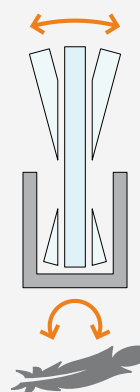


1



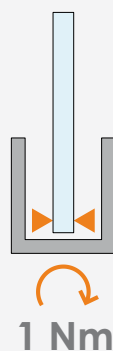
**Top glass locking**  
The first screw acts on the clamp, locking the glass at the top and gently guiding its inclination towards the inside

2



**Inclination adjustment**  
The second screw, which can be easily operated from above using a screwdriver, allows the glass inclination to be adjusted by up to 1.5° on both sides, ensuring precise and rapid alignment.

3



**Final locking at the base**  
Once the desired inclination has been achieved, the third screw is tightened to lock the glass panels at the bottom, ensuring structural stability and a permanent long-lasting fix.



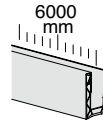
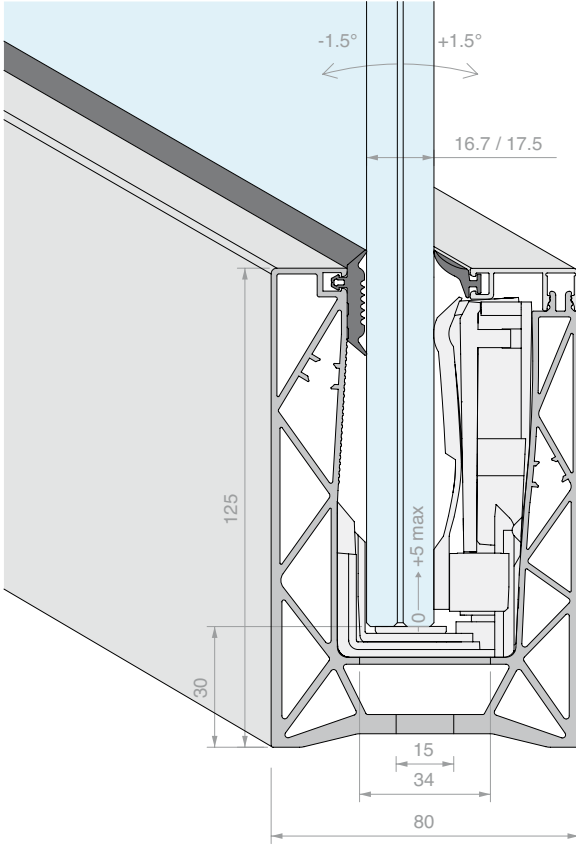


**DEFENDER ONE LM KIT**

ONE SIDE ADJUSTABLE FLOOR MOUNTING  
CONFIGURED FOR 8+8 GLASS

Material: Aluminium

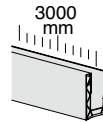
Finish: /6 /10 /97 /R25 /RAL



Kit comprising:

Art.	Description	Qty.
<b>DFPG05.03</b>	Lip profile gasket	2 Pcs
<b>DFPG04.03</b>	Flat profile gasket	2 Pcs
<b>DF106.60</b>	Upper snap-on finishing profile	1 Pc
<b>DFONE1721</b>	ONE clamps for 8+8 glass	24 Pcs
<b>DFONELIFTKIT4</b>	4 height adjustment screws	2 Pcs
<b>DFONELM6.60</b>	Floor profile	1 Pc

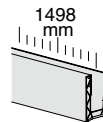
Art.	Length	Qty.
<b>DFONELM617KIT.60</b>	6000 mm	1 Pc



Kit comprising:

Art.	Description	Qty.
<b>DFPG05.03</b>	Lip profile gasket	1 Pc
<b>DFPG04.03</b>	Flat profile gasket	1 Pc
<b>DF106.30</b>	Upper snap-on finishing profile	1 Pc
<b>DFONE1721</b>	ONE clamps for 8+8 glass	12 Pcs
<b>DFONELIFTKIT4</b>	4 height adjustment screws	1 Pc
<b>DFONELM6.30</b>	Floor profile	1 Pc

Art.	Length	Qty.
<b>DFONELM617KIT.30</b>	3000 mm	1 Pc



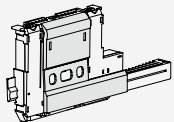
Kit comprising:

Art.	Description	Qty.
<b>DFPG05.015</b>	Lip profile gasket	1 Pc
<b>DFPG04.015</b>	Flat profile gasket	1 Pc
<b>DF106.15</b>	Upper snap-on finishing profile	1 Pc
<b>DFONE1721</b>	ONE clamps for 8+8 glass	6 Pcs
<b>DFONELIFTKIT4</b>	4 height adjustment screws	1 Pc
<b>DFONELM6.15</b>	Floor profile	1 Pc

Art.	Length	Qty.
<b>DFONELM617KIT.15</b>	1498 mm	1 Pc

**DEFENDER ONE MODULAR CLAMPS**

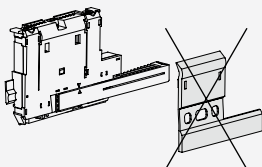
DEFENDER ONE clamps are designed to permit two configurations: 8+8 panes of glass using an adjustable adaptor, and 10+10 panes of glass without the thickness adaptors.



**DFONE1721**

This model of clamp is already configured for 8+8 panes of glass. It uses the thickness adaptors.

The clamp can be reversed by removing the thickness adaptors. It adapts to 10+10 panes of glass.



**DFONE2121**

This model of clamp is already configured for 10+10 panes of glass. It does not use the thickness adaptors.

The clamp can be reversed. Order the thickness adaptors separately and insert them to adapt to 8+8 panes of glass.

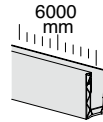
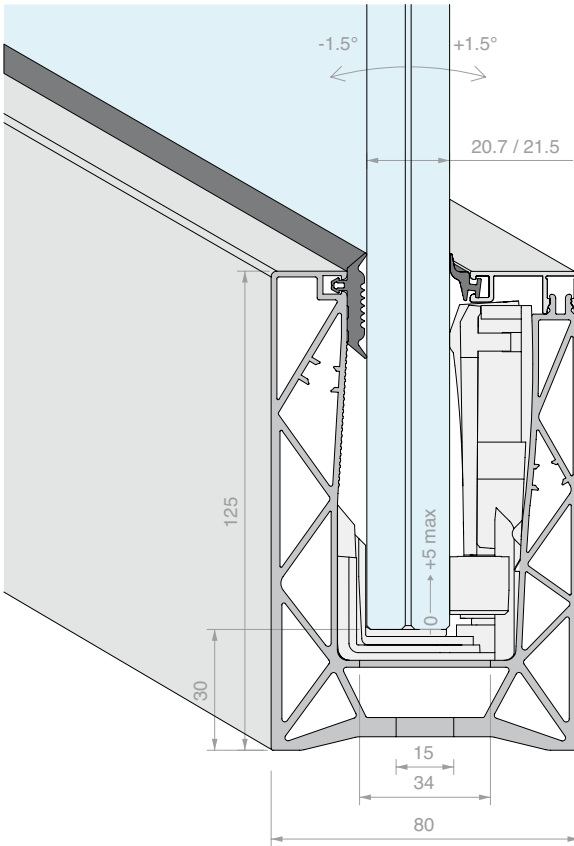
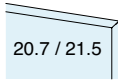
**DEFENDER ONE LM KIT**

ONE SIDE ADJUSTABLE FLOOR MOUNTING

CONFIGURED FOR 10+10 GLASS

Material: Aluminium

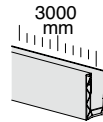
Finish: /6 /10 /97 /R25 /RAL



Kit comprising:

Art.	Description	Qty.
<b>DFPG05.03</b>	Lip profile gasket	2 Pcs
<b>DFPG04.03</b>	Flat profile gasket	2 Pcs
<b>DF106.60</b>	Upper snap-on finishing profile	1 Pc
<b>DFONE2121</b>	ONE clamps for 10+10 glass	24 Pcs
<b>DFONELIFTKIT4</b>	4 height adjustment screws	2 Pcs
<b>DFONELM6.60</b>	Floor profile	1 Pc

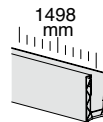
Art.	Length	Qty.
<b>DFONELM621KIT.60</b>	6000 mm	1 Pc



Kit comprising:

Art.	Description	Qty.
<b>DFPG05.03</b>	Lip profile gasket	1 Pc
<b>DFPG04.03</b>	Flat profile gasket	1 Pc
<b>DF106.30</b>	Upper snap-on finishing profile	1 Pc
<b>DFONE2121</b>	ONE clamps for 10+10 glass	12 Pcs
<b>DFONELIFTKIT4</b>	4 height adjustment screws	1 Pc
<b>DFONELM6.30</b>	Floor profile	1 Pc

Art.	Length	Qty.
<b>DFONELM621KIT.30</b>	3000 mm	1 Pc



Kit comprising:

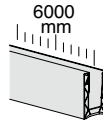
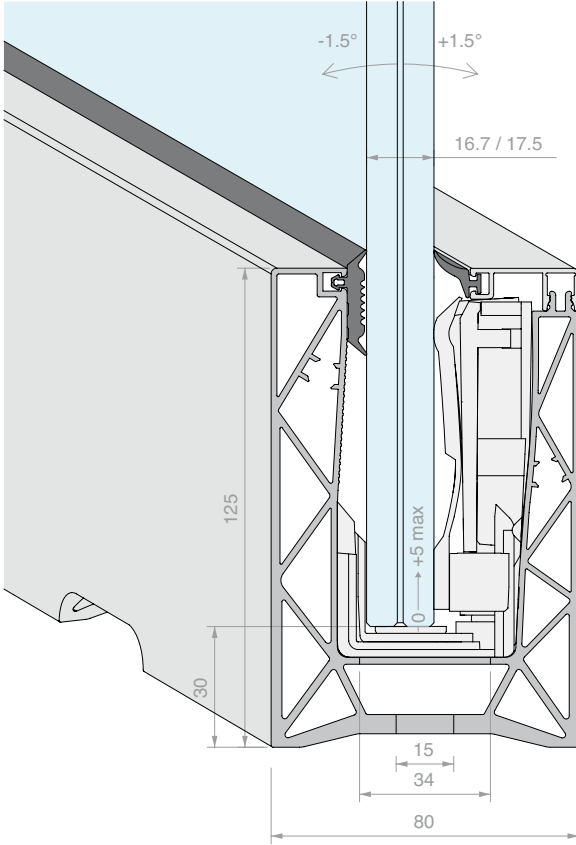
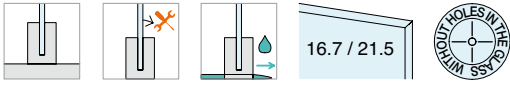
Art.	Description	Qty.
<b>DFPG05.015</b>	Lip profile gasket	1 Pc
<b>DFPG04.015</b>	Flat profile gasket	1 Pc
<b>DF106.15</b>	Upper snap-on finishing profile	1 Pc
<b>DFONE2121</b>	ONE clamps for 10+10 glass	6 Pcs
<b>DFONELIFTKIT4</b>	4 height adjustment screws	1 Pc
<b>DFONELM6.15</b>	Floor profile	1 Pc

Art.	Length	Qty.
<b>DFONELM621KIT.15</b>	1498 mm	1 Pc



**DEFENDER ONE LM KIT**

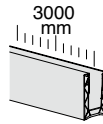
ONE SIDE ADJUSTABLE FLOOR MOUNTING  
WITH DRAINAGE  
CONFIGURED FOR 8+8 GLASS  
Material: Aluminium  
Finish: /10 /97



Kit comprising:

Art.	Description	Qty.
<b>DFPG05.03</b>	Lip profile gasket	2 Pcs
<b>DFPG04.03</b>	Flat profile gasket	2 Pcs
<b>DF106.60</b>	Upper snap-on finishing profile	1 Pc
<b>DFONE1721</b>	ONE clamps for 8+8 glass	24 Pcs
<b>DFONELIFTKIT4</b>	4 height adjustment screws	2 Pcs
<b>DFONELM6W.60</b>	Floor profile	1 Pc

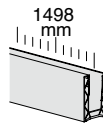
Art.	Length	Qty.
<b>DFONELM617WKIT.60</b>	6000 mm	1 Pc



Kit comprising:

Art.	Description	Qty.
<b>DFPG05.03</b>	Lip profile gasket	1 Pc
<b>DFPG04.03</b>	Flat profile gasket	1 Pc
<b>DF106.30</b>	Upper snap-on finishing profile	1 Pc
<b>DFONE1721</b>	ONE clamps for 8+8 glass	12 Pcs
<b>DFONELIFTKIT4</b>	4 height adjustment screws	1 Pc
<b>DFONELM6W.30</b>	Floor profile	1 Pc

Art.	Length	Qty.
<b>DFONELM617WKIT.30</b>	3000 mm	1 Pc



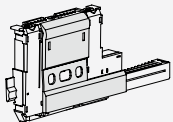
Kit comprising:

Art.	Description	Qty.
<b>DFPG05.015</b>	Lip profile gasket	1 Pc
<b>DFPG04.015</b>	Flat profile gasket	1 Pc
<b>DF106.15</b>	Upper snap-on finishing profile	1 Pc
<b>DFONE1721</b>	ONE clamps for 8+8 glass	6 Pcs
<b>DFONELIFTKIT4</b>	4 height adjustment screws	1 Pc
<b>DFONELM6W.15</b>	Floor profile	1 Pc

Art.	Length	Qty.
<b>DFONELM617WKIT.15</b>	1498 mm	1 Pc

**DEFENDER ONE MODULAR CLAMPS**

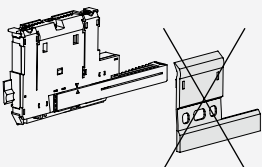
DEFENDER ONE clamps are designed to permit two configurations: 8+8 panes of glass using an adjustable adaptor, and 10+10 panes of glass without the thickness adaptors.



**DFONE1721**

This model of clamp is already configured for 8+8 panes of glass. It uses the thickness adaptors.

The clamp can be reversed by removing the thickness adaptors. It adapts to 10+10 panes of glass.



**DFONE2121**

This model of clamp is already configured for 10+10 panes of glass. It does not use the thickness adaptors.

The clamp can be reversed. Order the thickness adaptors separately and insert them to adapt to 8+8 panes of glass.

**DEFENDER ONE LM KIT**

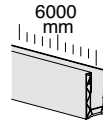
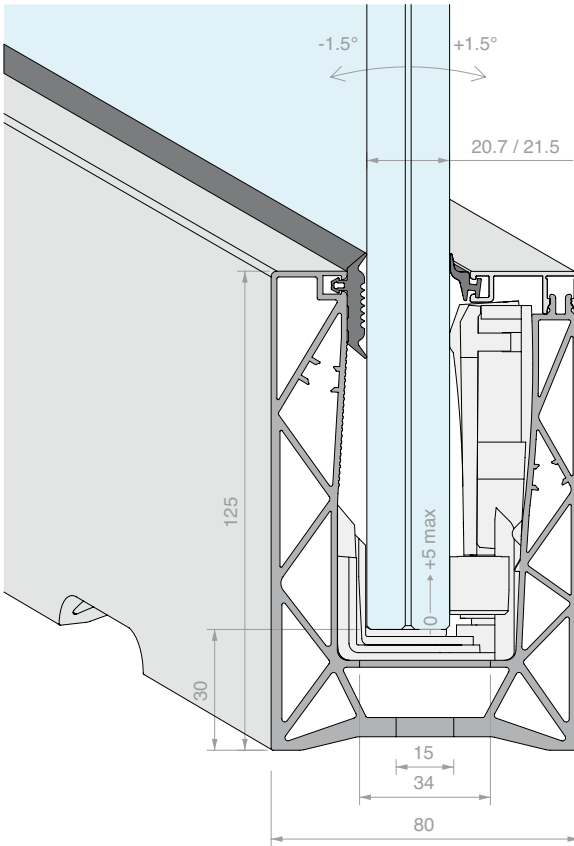
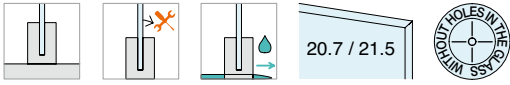
ONE SIDE ADJUSTABLE FLOOR MOUNTING

WITH DRAINAGE

CONFIGURED FOR 10+10 GLASS

Material: Aluminium

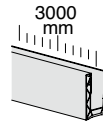
Finish: /10 /97



Kit comprising:

Art.	Description	Qty.
<b>DFPG05.03</b>	Lip profile gasket	2 Pcs
<b>DFPG04.03</b>	Flat profile gasket	2 Pcs
<b>DF106.60</b>	Upper snap-on finishing profile	1 Pc
<b>DFONE2121</b>	ONE clamps for 10+10 glass	24 Pcs
<b>DFONELIFTKIT4</b>	4 height adjustment screws	2 Pcs
<b>DFONELM6W.60</b>	Floor profile	1 Pc

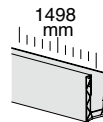
Art.	Length	Qty.
<b>DFONELM621WKIT.60</b>	6000 mm	1 Pc



Kit comprising:

Art.	Description	Qty.
<b>DFPG05.03</b>	Lip profile gasket	1 Pc
<b>DFPG04.03</b>	Flat profile gasket	1 Pc
<b>DF106.30</b>	Upper snap-on finishing profile	1 Pc
<b>DFONE2121</b>	ONE clamps for 10+10 glass	12 Pcs
<b>DFONELIFTKIT4</b>	4 height adjustment screws	1 Pc
<b>DFONELM6W.30</b>	Floor profile	1 Pc

Art.	Length	Qty.
<b>DFONELM621WKIT.30</b>	3000 mm	1 Pc



Kit comprising:

Art.	Description	Qty.
<b>DFPG05.015</b>	Lip profile gasket	1 Pc
<b>DFPG04.015</b>	Flat profile gasket	1 Pc
<b>DF106.15</b>	Upper snap-on finishing profile	1 Pc
<b>DFONE2121</b>	ONE clamps for 10+10 glass	6 Pcs
<b>DFONELIFTKIT4</b>	4 height adjustment screws	1 Pc
<b>DFONELM6W.15</b>	Floor profile	1 Pc

Art.	Length	Qty.
<b>DFONELM621WKIT.15</b>	1498 mm	1 Pc

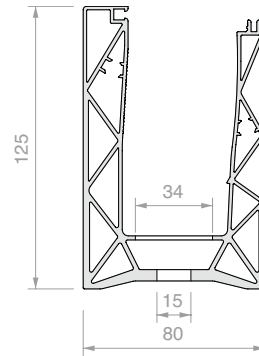


### DEFENDER ONE ONE SIDE FLOOR PROFILE

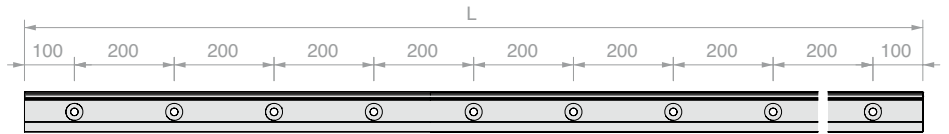
Material: Aluminium (6063-T6)

Finish: /6 /10 /97 /R25 /RAL

\* The position of the first and last holes are given for information only. For specific requests, please contact Customer Care.



#### HOLE SPACING



Art.	L	Qty.
<b>DFONELM6.60</b>	<b>6000 mm</b>	<b>1 Pc</b>
<b>DFONELM6.30</b>	<b>3000 mm</b>	<b>1 Pc</b>
<b>DFONELM6.15</b>	<b>1498 mm</b>	<b>1 Pc</b>

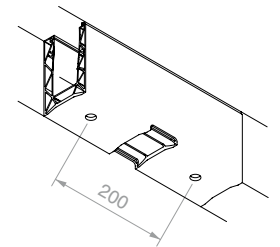
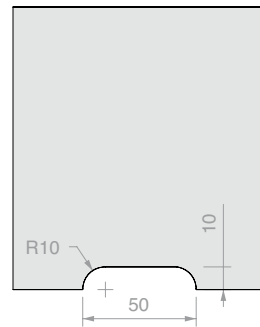
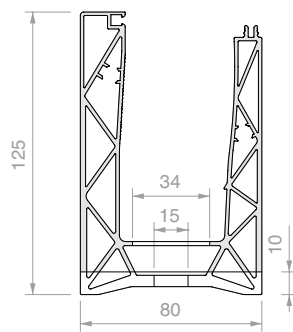


### DEFENDER ONE ONE SIDE FLOOR PROFILE WITH WATER DRAINAGE

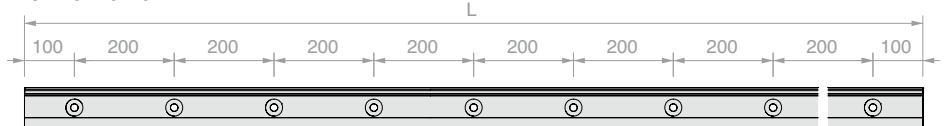
Material: Aluminium (6063-T6)

Finish: /10 /97

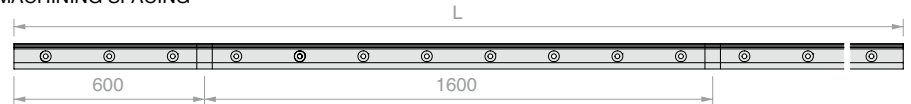
\* The position of the first and last holes, as well as that of the first and last machining, are given for information only. For specific requests, please contact Customer Care.



#### HOLE SPACING



#### MACHINING SPACING



Art.	L	no of drains	Qty.
<b>DFONELM6W.60</b>	<b>6000 mm</b>	<b>4</b>	<b>1 Pc</b>
<b>DFONELM6W.30</b>	<b>3000 mm</b>	<b>2</b>	<b>1 Pc</b>
<b>DFONELM6W.15</b>	<b>1498 mm</b>	<b>1</b>	<b>1 Pc</b>

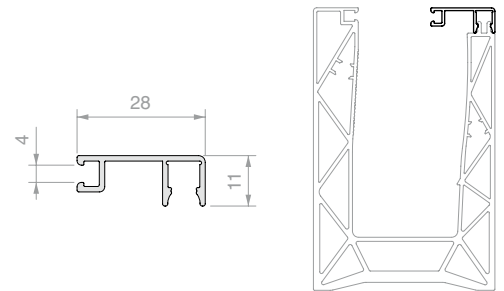


### UPPER SNAP-ON FINISHING PROFILE FOR DEFENDER ONE

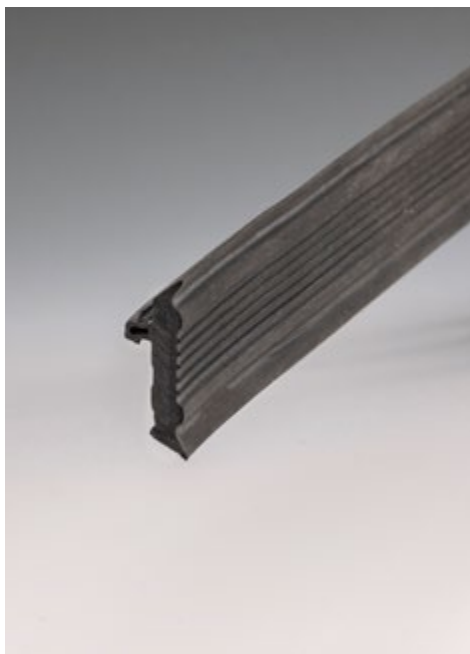
Material: Aluminium

Finish:  /6  /10  /97  /R25  /RAL

**Note:** For installation, apply silicone along the entire length of the profile.



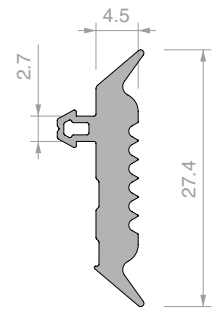
Art.	Length	Qty.
<b>DF106.60</b>	<b>6000 mm</b>	<b>1 Pc</b>
<b>DF106.30</b>	<b>3000 mm</b>	<b>1 Pc</b>
<b>DF106.15</b>	<b>1498 mm</b>	<b>1 Pc</b>



### FLAT GASKET

Material: TPE

Finish:  /6



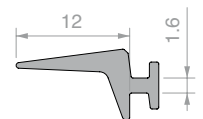
Art.	Package	Qty.
<b>DFPG04.015</b>	<b>1.5 m profile</b>	<b>1 Pc</b>
<b>DFPG04.03</b>	<b>3 m profile</b>	<b>1 Pc</b>



### GASKET WITH SHORT LIP

Material: TPE

Finish:  /6



Art.	Package	Qty.
<b>DFPG05.015</b>	<b>1.5 m profile</b>	<b>1 Pc</b>
<b>DFPG05.03</b>	<b>3 m profile</b>	<b>1 Pc</b>

**DEFENDER ONE ADJUSTABLE ONE SIDE CLAMPS**

Material: POM and PPA

Clamp configured for 8+8 glass, fitted with the DFONEAD17 adapter; by removing the adapter, it can be used for 10+10 glass.

Art.	For glass	Quantity	Qty.
<b>DFONE1721KIT3</b>	From 16.7 to 21.5 mm	3 clamps	1 Pc
<b>DFONE1721</b>	From 16.7 to 21.5 mm	1 clamp	1 Pc



Clamp configured for 10+10 glass, does not include DFONEAD17 adapters.

Art.	For glass	Quantity	Qty.
<b>DFONE2121KIT3</b>	From 20.7 to 21.5 mm	3 clamps	1 Pc
<b>DFONE2121</b>	From 20.7 to 21.5 mm	1 clamp	1 Pc

**4 mm THICKNESS ADAPTER FOR DEFENDER ONE CLAMPS**

Material: POM

Art.	For glass	Qty.
<b>DFONEAD17</b>	From 16.7 to 17.5 mm	1 Pc

**4 HEIGHT ADJUSTERS**

Suitable for DEFENDER ONE clamps

Art.	Qty.
<b>DFONELIFTKIT4</b>	1 Pc

**FLEXIBLE EXTENSION FOR SCREWDRIVERS**

Art.	Qty.
<b>DFFLEX</b>	1 Pc

**TORX INSERT T25**

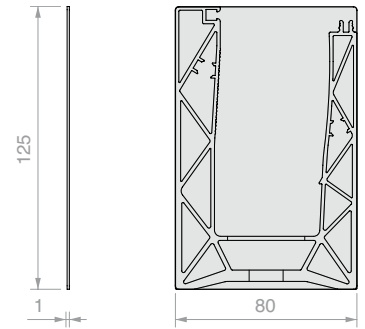
Suitable for the DEFENDER ONE clamp adjuster

Art.	Qty.
<b>DFFLEX08</b>	1 Pc

**CLOSED END CAP**

Material: Aluminium

Finish: /6 /10 /97 /R25 /RAL

**Note:** For installation, apply silicone to the entire surface of the cap.

Art.

**DF12580AL**

For profiles

DFONELM6 - DFONELM6W

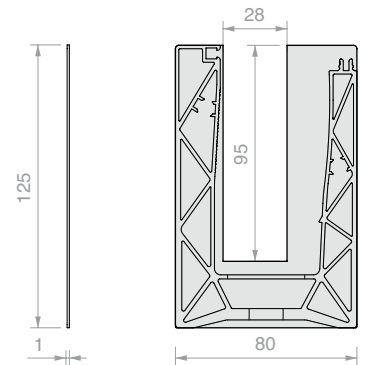
Qty.

1 Pc

**OPEN END CAP**

Material: Aluminium

Finish: /6 /10 /97 /R25 /RAL

**Note:** For installation, apply silicone to the entire surface of the cap.

Art.

**DF12580UAL**

For profiles

DFONELM6 - DFONELM6W

Qty.

1 Pc



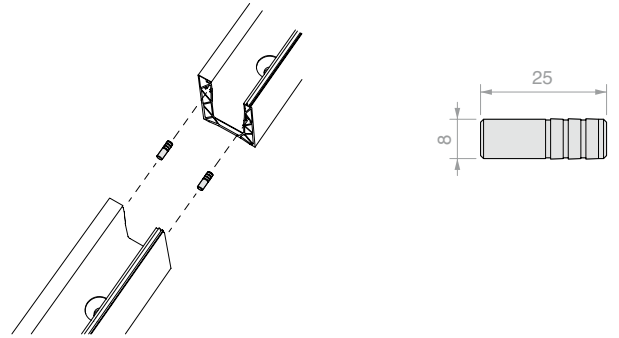






**2 IN-LINE CENTRING PINS**

Material: Aluminium  
Finish: aluminium



Art.

**DF25**

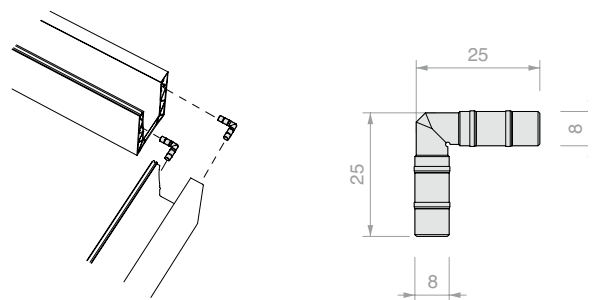
Qty.

1 Pc



**2 X 90° CENTRING PINS**

Material: Grivory®  
Finish: black



Art.

**DF2525**

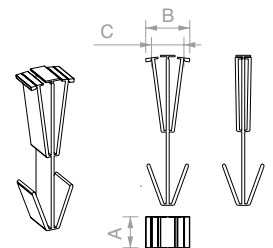
Qty.

1 Pc



**EXPANDABLE COVER CAP FOR DF810 / DFONE PROFILES**

Material: POM  
Finishes: black, grey



Art.

**DFTEC88**

B

18 / 26 mm

C

10 / 18.5 mm

For glass - A

17.5 mm

Finishes

Black

Qty.

1 Pc

**DFTEC88G**

18 / 26 mm

10 / 18.5 mm

17.5 mm

Grey

1 Pc

**DFTEC1010**

18 / 26 mm

10 / 18.5 mm

21.5 mm

Black

1 Pc

**DFTEC1010G**

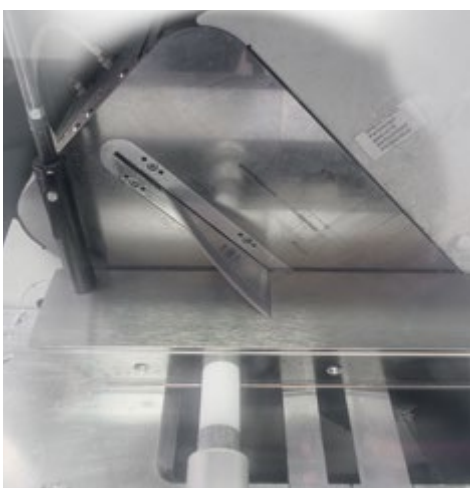
18 / 26 mm

10 / 18.5 mm

21.5 mm

Grey

1 Pc



**CALCOLO, LAVORAZIONE E TAGLIO A DISEGNO**

Art.

**DFTAGLIO**

Description

Custom inclined cut (22° - 89°)

Qty.

1 Pc

**DFTAG90**

Straight cut

1 Pc

**DFFORO3415**

Slotted hole Ø34mm, through hole Ø15mm (for bars up to 3000mm)

1 Pc

**DFFOROSA**

Milling for water drainage

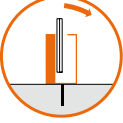
1 Pc



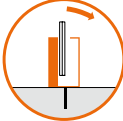
**TESTED FOR  
BALUSTRADES  
UP TO 2 METRES HIGH**

**SIZING TABLE FOR DEFENDER ONE SYSTEMS**

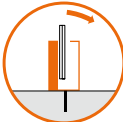
**UNITED KINGDOM** British Standard 6180

System DEFENDER	Composition	Height <sup>(1)</sup> [cm]	Fixings <sup>(2)</sup> [cm]	pane composition <sup>(3)</sup>		Intended use <sup>(4)</sup>		
						Private	Public	Stadiums
				Interlayer	Glass	0.74 kN/m	1.5 kN/m	3.0 kN/m
 DFONE LM	8+8	70	40	PVB	T/T	✓	✓	✓
		90	40	PVB	T/T	✓	✓	
		110	40	PVB	T/T	✓		
		80	40	SentryGlas®	T/T	✓	✓	✓
		100	40	SentryGlas®	T/T	✓	✓	
		120	40	SentryGlas®	F/F	✓		
	10+10	80	40	PVB	T/T	✓	✓	✓
		100	40	PVB	T/T	✓	✓	
		120	40	PVB	F/F	✓		
		90	20	SentryGlas®	T/T	✓	✓	✓
		110	20	SentryGlas®	T/T	✓	✓	
		140	20	SentryGlas®	F/F	✓		

**FRANCE** NF 1991-1-1/Cahier CSTB 3034

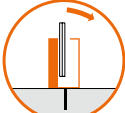
System DEFENDER	Composition	Height <sup>(1)</sup> [cm]	Fixings <sup>(2)</sup> [cm]	pane composition <sup>(3)</sup>		Intended use <sup>(4)</sup>		
						Private	Public	Stadiums
				Interlayer	Glass	0.6 kN/m	1.0 kN/m	3.0 kN/m
 DFONE LM	8+8	160	20	PVB	H/H	✓	⊙	
		160	40	EVA	H/H	✓	⊙	
	10+10	160	40	PVB	I/I	✓	✓	
		160	40	EVA	I/I	✓	⊙	

**BELGIUM** NBN B 03-004:2017

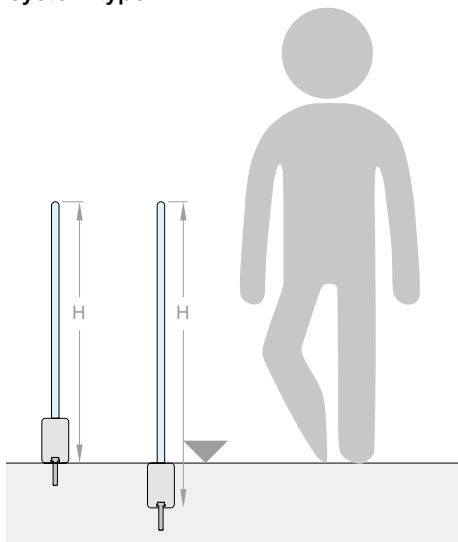
System DEFENDER	Composition	Height <sup>(1)</sup> [cm]	Fixings <sup>(2)</sup> [cm]	pane composition <sup>(3)</sup>		Intended use <sup>(6)</sup>		
						Private	Public	Stadiums
				Interlayer	Glass	0.5 kN/m	1.0 kN/m	3.0 kN/m
 DFONE LM	8+8	110	40	DG41	F/F	0		
		110	40	DG41	F/F	3		
		120	40	DG41	T/T	4	4	
		140	40	DG41	T/T	2	2	
	10+10	110	40	DG41	F/F	5	5	
		120	20	DG41	T/T	7	7	
		165	20	DG41	T/T	2	2	



## ITALY NTC 2018 - UNI 11678

System DEFENDER	Composition	Height <sup>(1)</sup> [cm]	Fixings <sup>(2)</sup> [cm]	pane composition <sup>(3)</sup>		Intended use <sup>(4)</sup>		
						Private stairs	Private	Public
				Interlayer	Glass	1.0 kN/m	2.0 kN/m	3.0 kN/m
 <b>DFONE LM</b>	8+8	110	40	PVB	T/I	✓	⊙	
			40	EVA	T/I	✓	⊙	
			20	AB-AR	T/T	✓	✓	⊙
		120	40	Saflex DG41	T/T	✓ <sup>(5)</sup>	⊙ <sup>(5)</sup>	
			20	SentryGlas®	T/T	✓	✓	⊙
			20	AB-AR	T/T	✓	✓	
	10+10	110	20	PVB	T/I	✓	✓	⊙
			20	EVA	T/I	✓	✓	⊙
		120	20	PVB	T/T	✓	✓	⊙ <sup>(5)</sup>
			20	AB-AR	T/T	✓	✓	✓
			20	SentryGlas®	T/T	✓	✓	✓
		200	20	SentryGlas®	T/T	✓	✓	✓

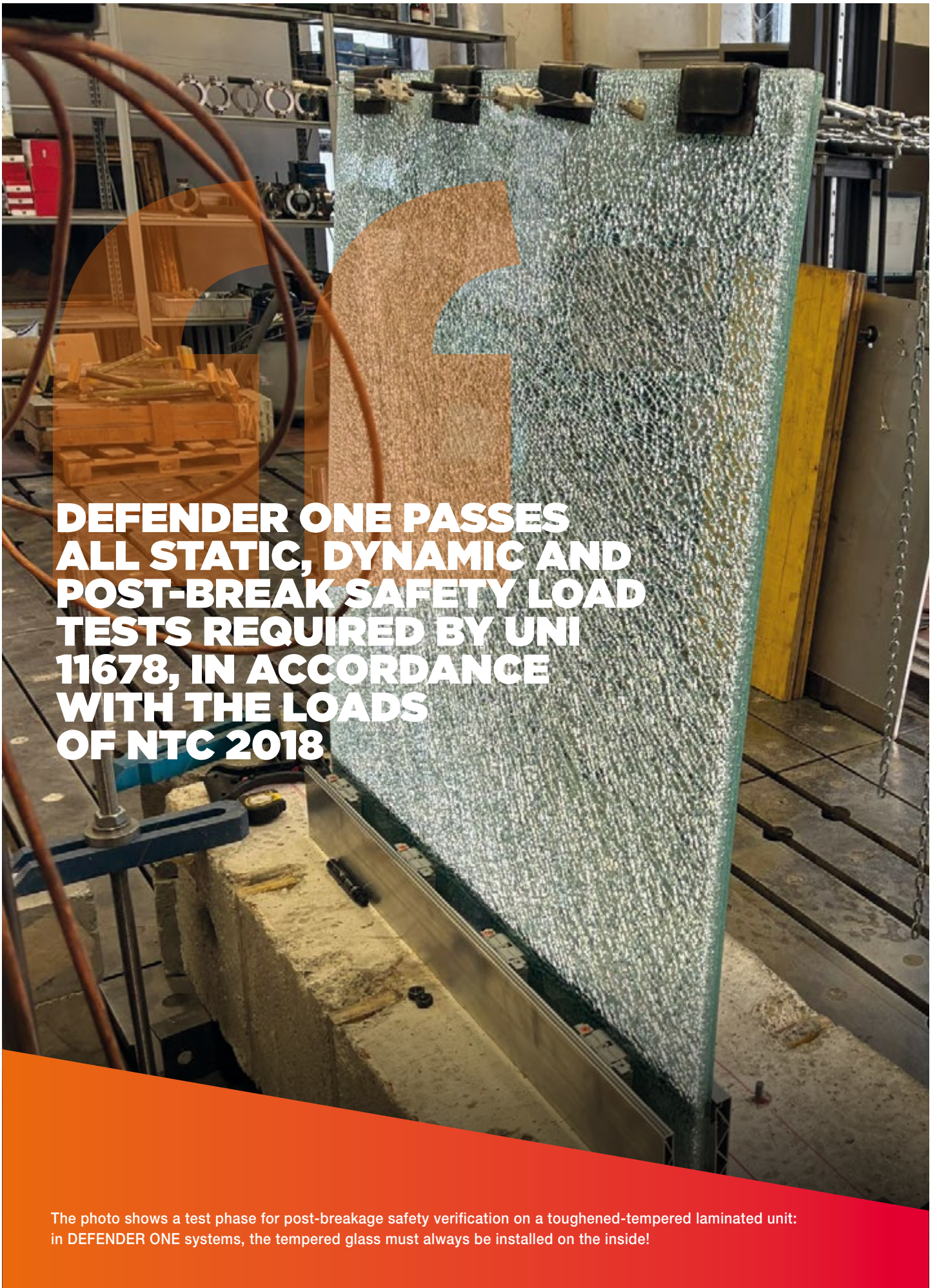
### Reference protection height H based on system type



### Legend

- 1 height H calculated based on the position of the fixing and the walking surface
- 2 value refers to the correct functioning of the aluminium and glass system; the strength of the anchors and the structure must be assessed on a case-by-case basis and may require a greater number of fixing points. It is recommended not to fix any bar with fewer than three anchors.
- 3 "F" float glass (EN 572), "I" toughened glass (EN 1863), "T" tempered glass (EN 12150), "H" tempered glass with HST (EN 14179).
- 4 Circled values ⊙ indicate solutions for which specific test reports are available in accordance with relevant national standards. values not circled ✓ refer to solutions that may be deemed satisfactory based on similar glass compositions or extrapolations from more severe tests. It is recommended to check the documentation before finalising your choice of system.
- 5 Use of a structural handrail is recommended, connecting adjacent panels or anchored laterally to the structure.
- 6 The numerical values refer to the wind exposure category for an exposure coefficient  $C_e=2$ . Values on a black background ①②...⑥ indicate solutions for which testing certificates are available. The other values ⊙②...⑥ refer to solutions that may be recognised as satisfactory on the basis of tests on similar glass compositions or extrapolations from more severe tests.

The information provided in the tables constitutes a simplified summary of the state of the art, based on the documentation and experience of Saint-Gobain Logli. The technical solutions indicated may be derived from tests or calculations and may not be applicable in other countries. The information is provided for informational and guidance purposes only and does not replace the full content of the applicable technical standards. The designer is required to consult the official regulatory texts and to verify the system's compliance with safety requirements in relation to the actual installation conditions. For further information, please contact Saint-Gobain Logli Customer Care.



**DEFENDER ONE PASSES  
ALL STATIC, DYNAMIC AND  
POST-BREAK SAFETY LOAD  
TESTS REQUIRED BY UNI  
11678, IN ACCORDANCE  
WITH THE LOADS  
OF NTC 2018**

The photo shows a test phase for post-breakage safety verification on a toughened-tempered laminated unit: in DEFENDER ONE systems, the tempered glass must always be installed on the inside!



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