

CATALOG

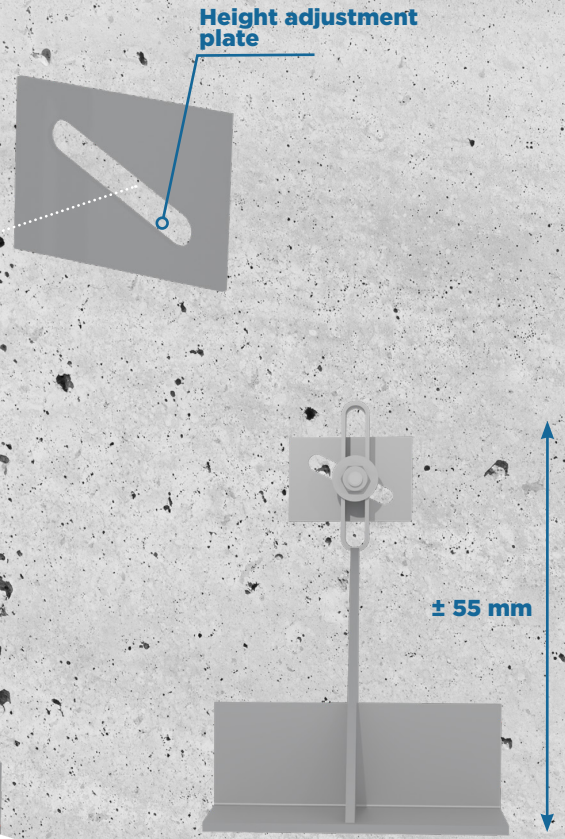
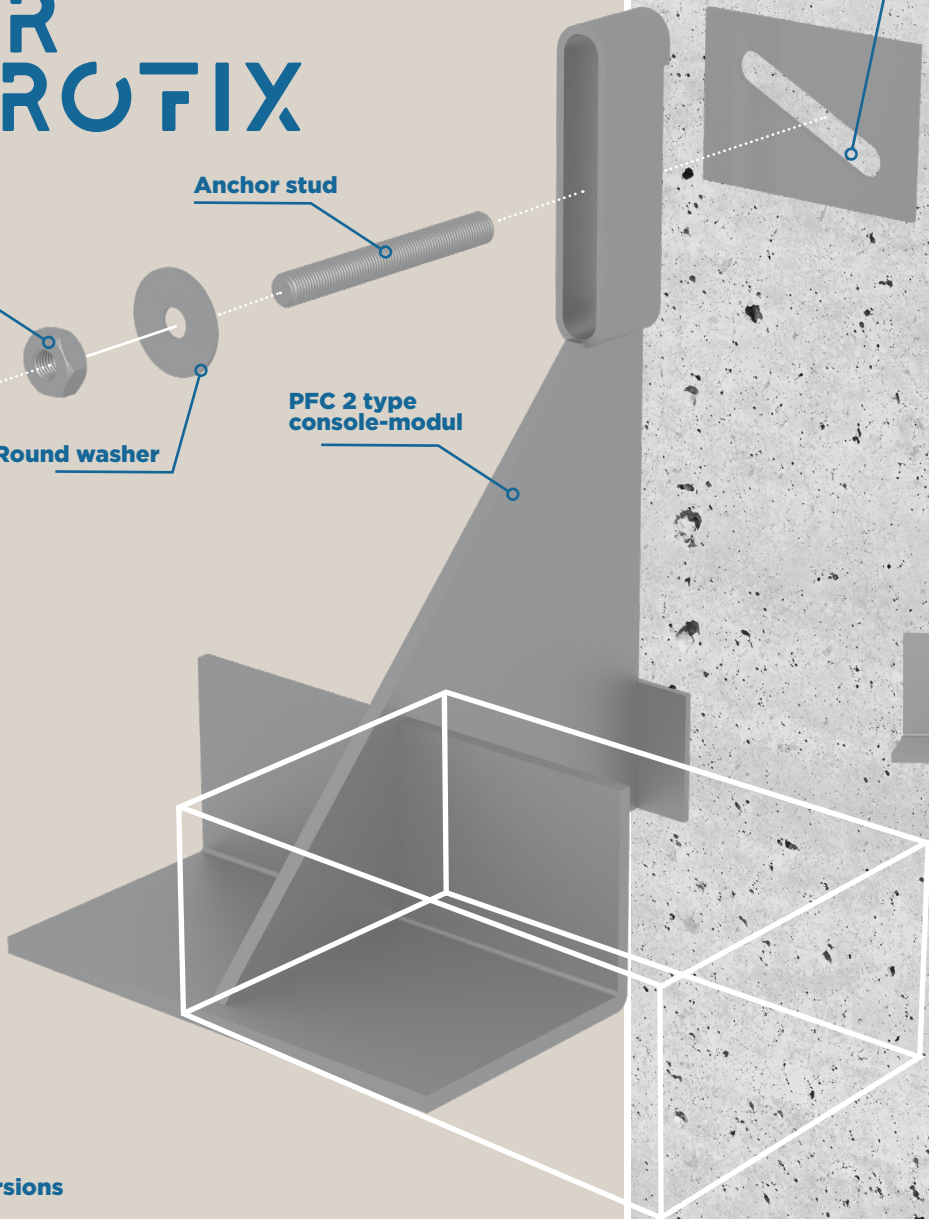
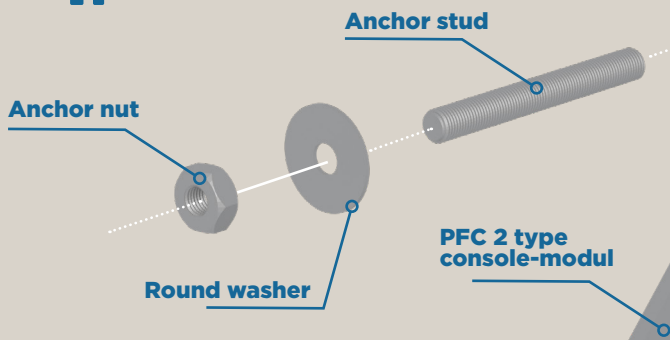
Profix system threaded-holderconsole for brick façade

TYPE: **PFC-2**

 **NATIONAL TECHNICAL ASSESSMENT: A-124/2018**



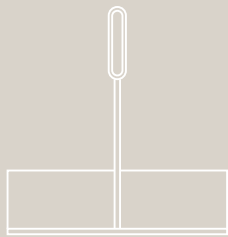
HR PROFIX



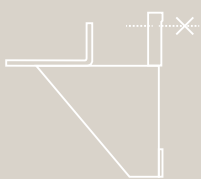
Module versions



V - hanging



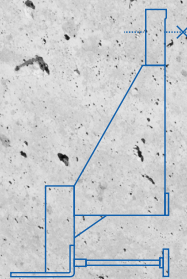
2D - double Anchors



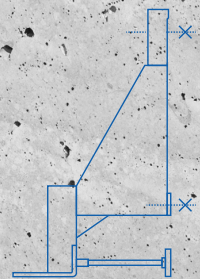
F - reverse



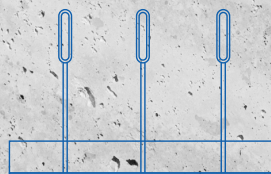
2F - reverse double Anchors



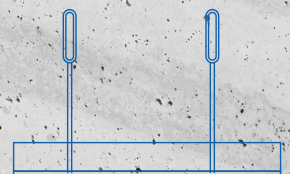
VL-KT with adjustable outrigger



2D-VL-KT double anchors with adjustable outrigger



3M - three modules

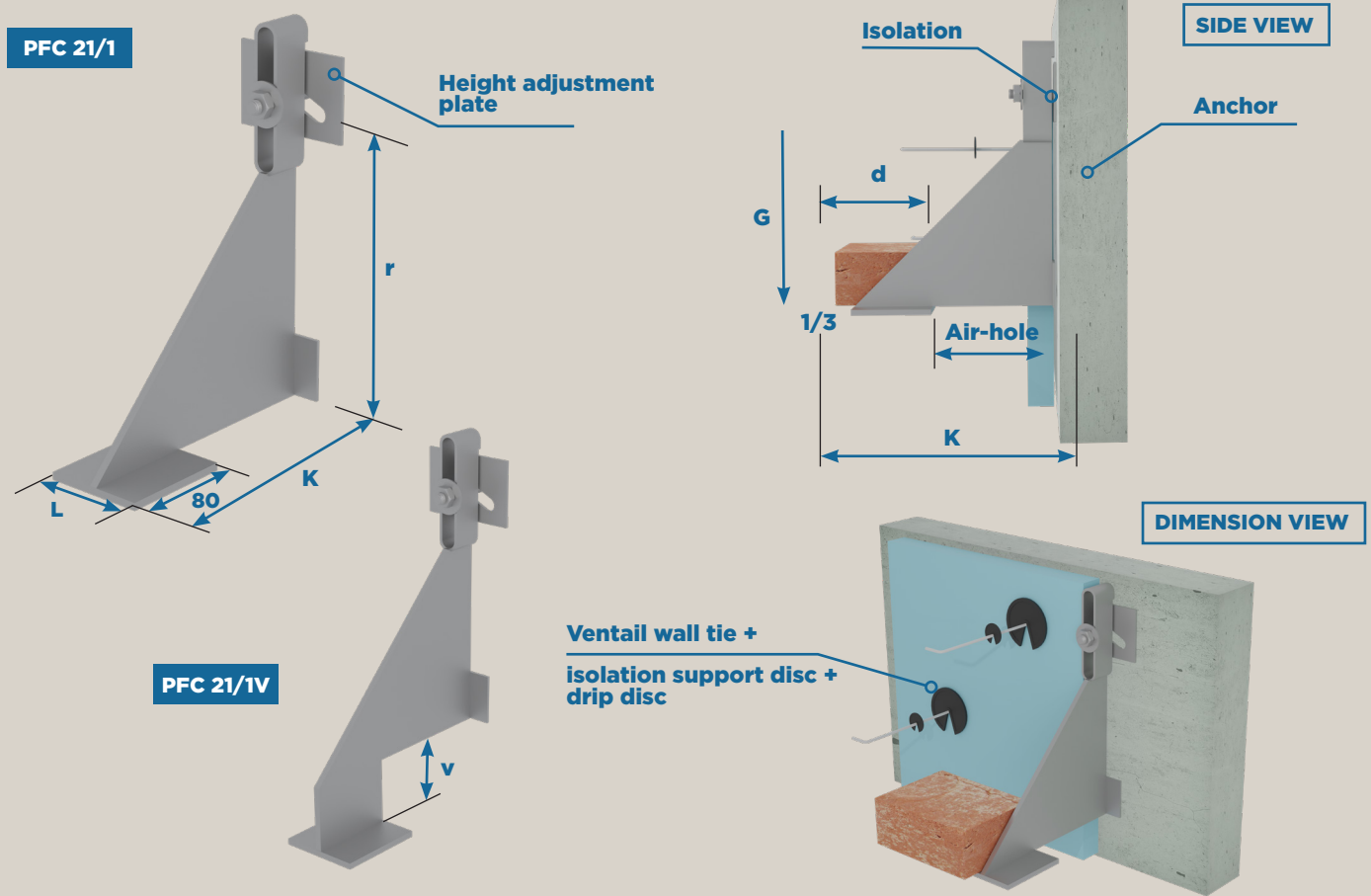


2V - hanging two modules

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PFC 21/1 AND PFC 21/1V SUPPORTING CONSOLE WITH 1 MODULE



Type	Console protrusion k	Fixed height r	Loading capacity G	Anchor
PFC 21/1	150 -250 mm	200 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 21/1	260-350 mm	250 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 21/1	360-400 mm	300 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 21/1	410-500 mm	350 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205

Further dimensions according to additional sizing upon request.

Basic materials: According to claims 308 (1.4301) 316 Ti (1.4571) quality stainless steel

Complete fixing element: 1 pc PFC 21/1 console + 1 pc height adjustment plate

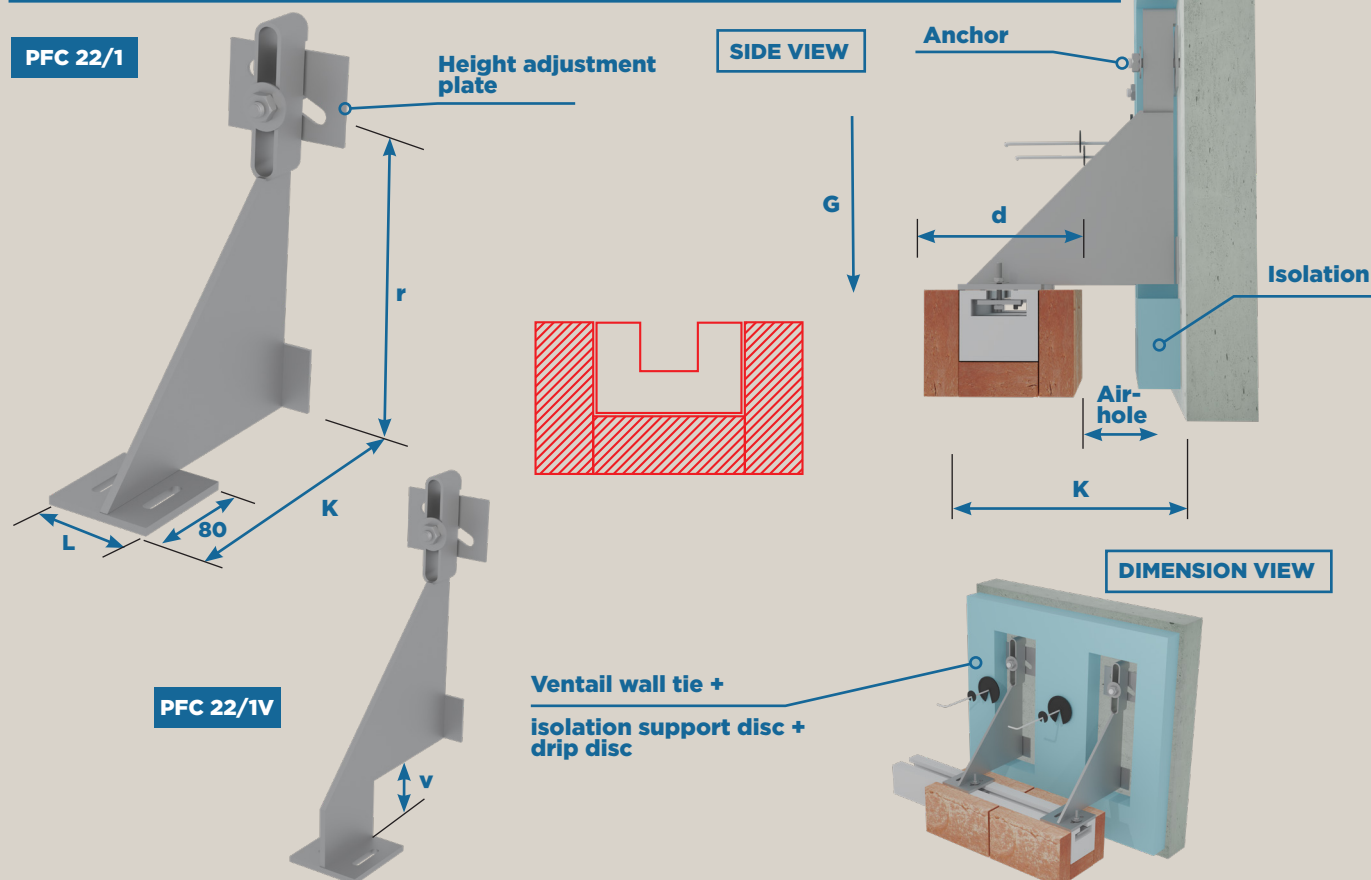
Fixing: The used anchors are according to the producer's technical datas.

Marking: PFC 21/ fixing point - console protrusion (k) / sole size L (80) - Loading (kN)

Example: PFC 21/1-310/80/80-7,0 kN or PFC 21/1V-310/80/80-7,0 kN V=300 mm

Scaling: Stratification = isolation + ventail or wall-difference + d = brick-thickness

PFC 22/1 AND PFC 22/1V HANGING CONSOLE WITH 1 MODULE



Type	Console protrusion k	Fixed height r	Loading capacity G	Anchor
PFC 22/1	150 -250 mm	200 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 22/1	260-350 mm	250 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 22/1	360-400 mm	300 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 62/1	410-500 mm	350 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205

Further dimensions according to additional sizing upon request.

Basic materials: According to claims 308 (1.4301) 316 Ti (1.4571) quality stainless steel

Complete fixing element: 1 pc PFC 22/1 console + 1 pc height adjustment plate

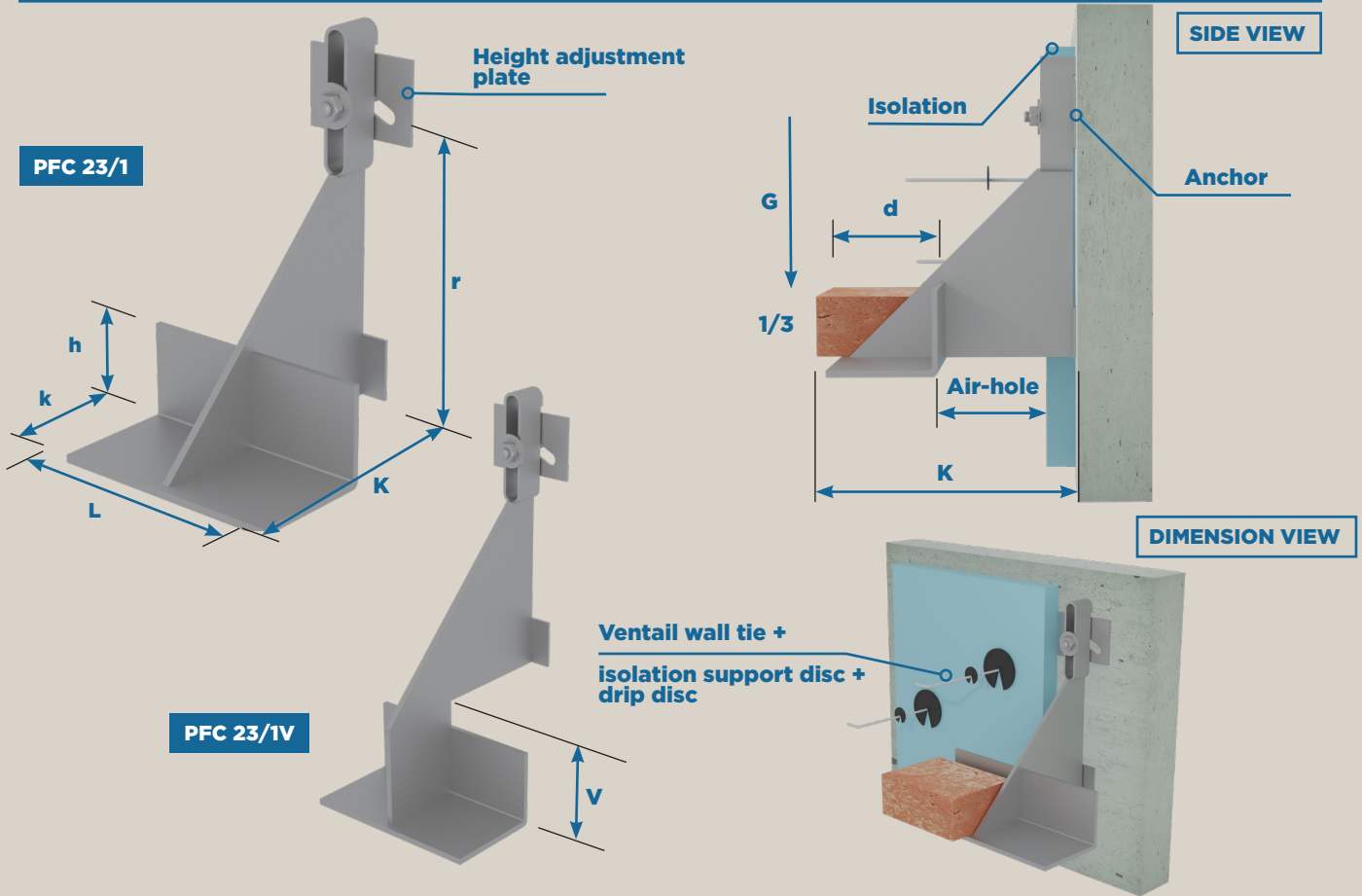
Fixing: The used anchors are according to the producer's technical datas.

Marking: PFC 22/ fixing point - console protrusion (k) / sole size L (100) - Loading (kN)

Example: PFC 22/1-310/100/80-7,0 kN or PFC 22/1V-310/100/80-7,0 kN V=300 mm

Scaling: Stratification = isolation + ventail or wall-difference + d = brick-thickness

PFC 23/1 AND PFC 23/1V SUPPORTING PROFILE-CONSOLE WITH 1 MODULE



Type	Console protrusion k	Fixed height r	Loading capacity G	Anchor
PFC 23/1	150 -250 mm	200 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 23/1	260-350 mm	250 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 23/1	360-400 mm	300 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 23/1	410-500 mm	350 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205

Further dimensions according to additional sizing upon request.

Basic materials: According to claims 308 (1.4301) 316 Ti (1.4571) quality stainless steel

Complete fixing element: 1 pc PFC 23/1 console + 1 pc height adjustment plate

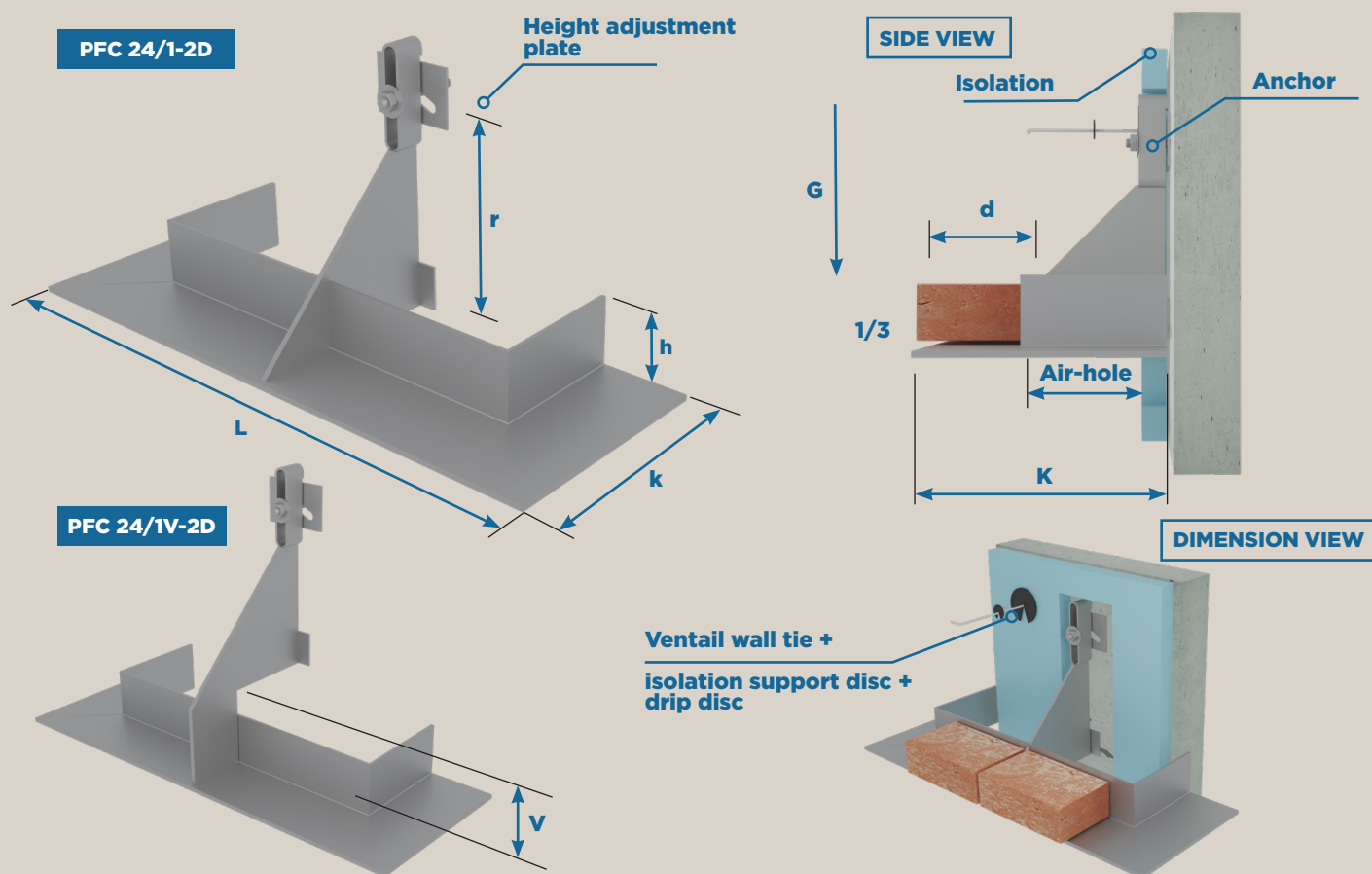
Fixing: The used anchors are according to the producer's technical datas.

Marking: PFC 23/ fixing point - console protrusion (k) / profil lenght (L) - Loading (kN)

Example: PFC 23/1-310/300-7,0 kN or PFC 23/1V-310/300-7,0 kN V=300 mm

Scaling: Stratification = isolation + ventail or wall-difference + d = brick-thickness

PFC 24/1-2D AND PFC 24/1V-2D PILLAR PROFILE-CONSOLE WITH 1 MODULE



Type	Console protrusion k	Fixed height r	Loading capacity G	Anchor
PFC 24/1-2D	150 -250 mm	200 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 24/1-2D	260-350 mm	250 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 24/1-2D	360-400 mm	300 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 24/1-2D	410-500 mm	350 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205

Further dimensions according to additional sizing upon request.

Basic materials: According to claims 308 (1.4301) 316 Ti(1.4571) quality stainless steel

Complete fixing element: 1 pc PFC 24/1-2D console + 2 pc height adjustment plate

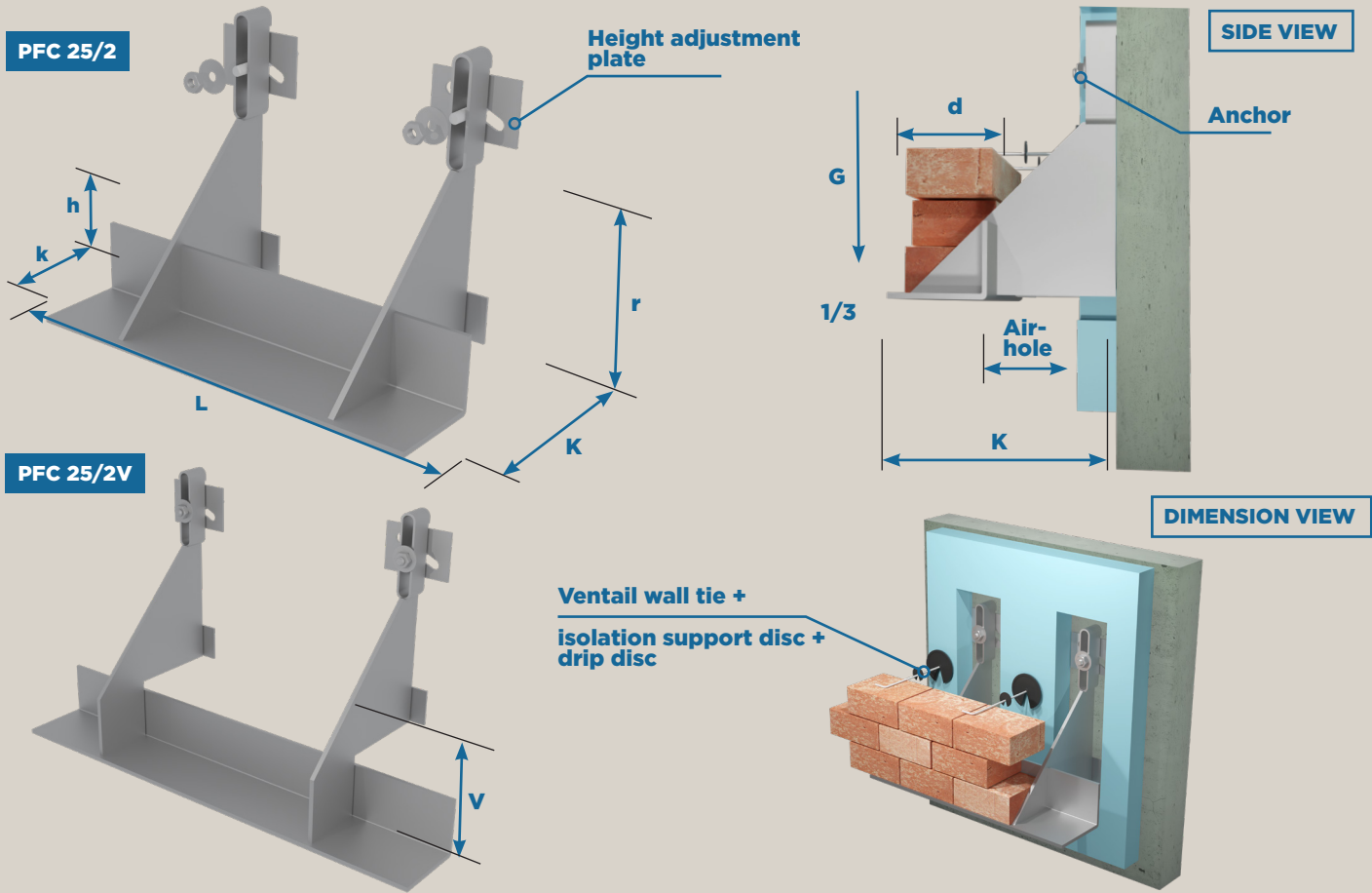
Fixing: The used anchors are according to the producer's technical datas.

Marking: PFC 24/ fixing point - console protrusion (k) / profil lenght (L)- Loading (kN)

Example: PFC 24/1-2D-310/500/200-7,0 kN or PFC 24/1V-2D-310/500/200-7,0 kN V=300 mm

Scaling: Stratification = isolation + ventail or wall-difference + d = brick-thickness

PFC 25/2 AND PFC 25/2V SUPPORTING PROFILE-CONSOLE WITH 2 MODULES

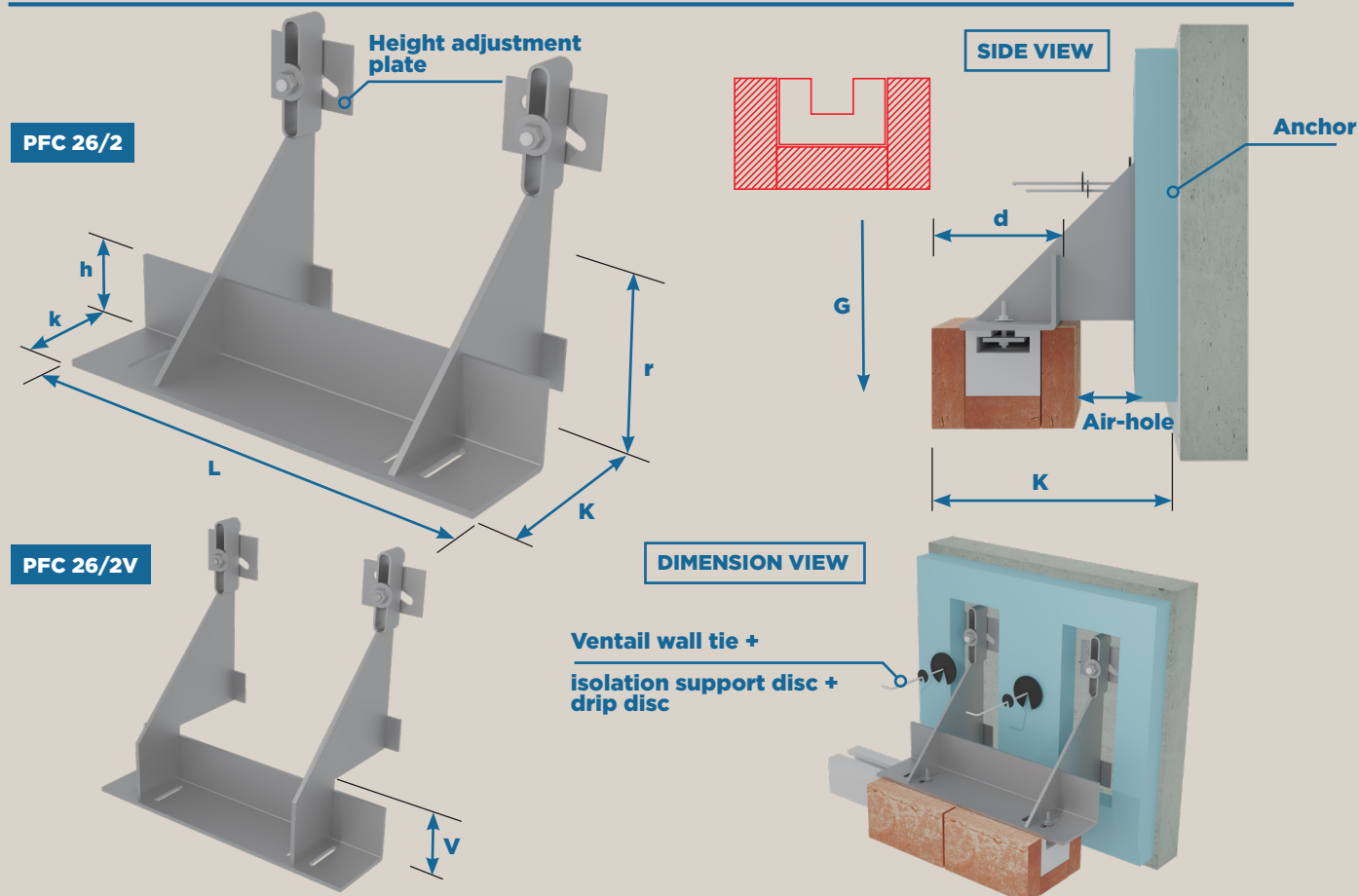


Type	Console protrusion k	Fixed height r	Loading capacity G	Anchor
PFC 25/2	150 -250 mm	200 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 25/2	260-350 mm	250 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 25/2	360-400 mm	300 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 25/2	410-500 mm	350 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205

Further dimensions according to additional sizing upon request.

- Basic materials:** According to claims 308 (1.4301) 316 Ti(1.4571) quality stainless steel
- Complete fixing element:** 1 pc PFC 25/2 console + 2 pc height adjustment plate
- Fixing:** The used anchors are according to the producer's technical datas.
- Marking:** PFC 25/ fixing point - console protrusion (k) / profil lenght (L)- Loading (kN)
- Example:** PFC 25/2-310/1500-7,0 kN or: PFC 25/2V-310/1500-7,0 kN V=300 mm
- Scaling:** Stratification = isolation + ventail or wall-difference + d = brick-thickness

PFC 26/2 AND PFC 26/2V HANGING PROFILE CONSOLE WITH 2 MODULES



Type	Console protrusion k	Fixed height r	Loading capacity G	Anchor
PFC 26/2	150 -250 mm	200 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 26/2	260-350 mm	250 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 26/2	360-400 mm	300 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 26/2	410-500 mm	350 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205

Further dimensions according to additional sizing upon request.

Basic materials: According to claims 308 (1.4301) 316 Ti(1.4571) quality stainless steel

Complete fixing element: 1 pc PFC 26/2 console + 2 pc height adjustment plate

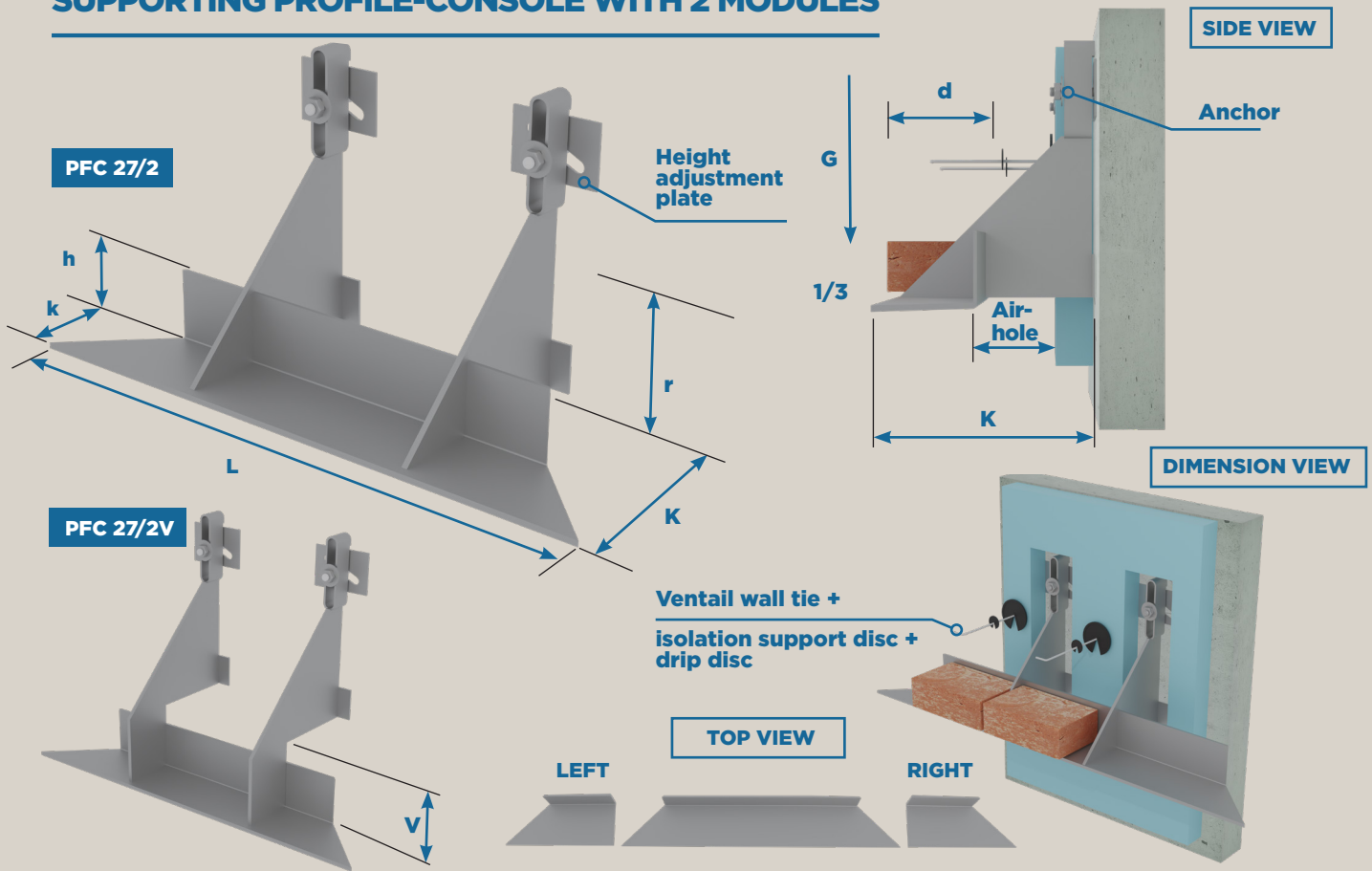
Fixing: The used anchors are according to the producer's technical datas.

Marking: PFC 26/ fixing point - console protrusion (k) / profil lenght (L)- Loading (kN)

Example: PFC 26/2-310/1600-7,0 kN or PFC 26/2V-310/1600-7,0 kN V=300 mm

Scaling: Stratification = isolation + ventail or wall-difference + d = brick-thickness

PFC 27/2 AND PFC 27/2V BEVEL CORNER - SUPPORTING PROFILE-CONSOLE WITH 2 MODULES



Type	Console protrusion k	Fixed height r	Loading capacity G	Anchor
PFC 27/2	150 -250 mm	200 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 27/2	260-350 mm	250 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 27/2	360-400 mm	300 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 27/2	410-500 mm	350 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205

Further dimensions according to additional sizing upon request.

Basic materials: According to claims 308 (1.4301) 316 Ti (1.4571) quality stainless steel

Complete fixing element: 1 pc PFC 27/2 console + 2 pc height adjustment plate

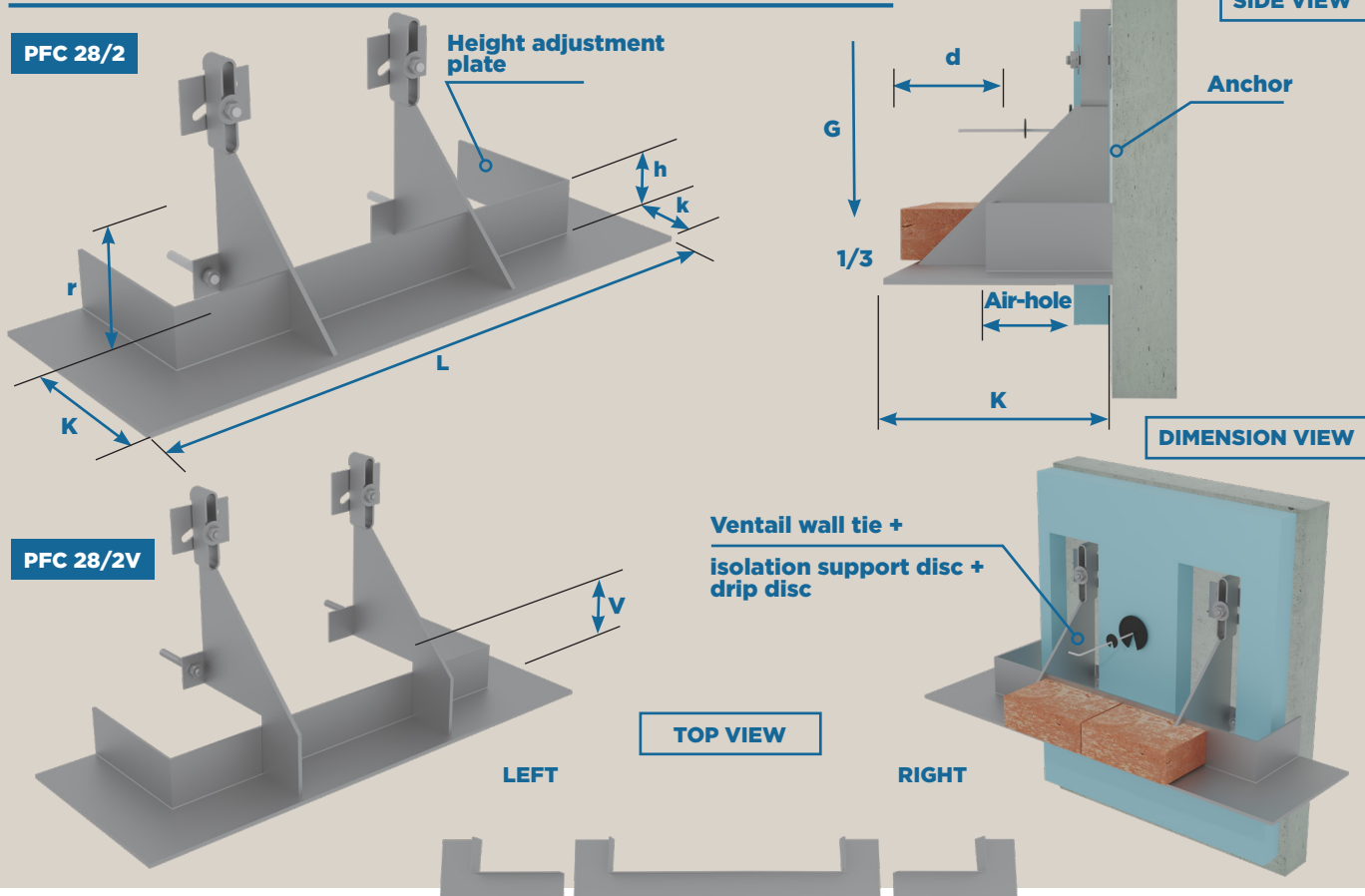
Fixing: The used anchors are according to the producer's technical datas.

Marking: PFC 27/ fixing point - console protrusion (k) / profil lenght (L)- Loading (kN)

Example: PFC 27/2-310/J-1450-7,0 kN or PFC 27/2V-310/B-1650-7,0 kN V=300 mm

Scaling: Stratification = isolation + ventail or wall-difference + d = brick-thickness

PFC 28/2 AND PFC 28/2V CORNER PLATED SUPPORTING PROFILE-CONSOLE WITH 2 MODULES



Type	Console protrusion k	Fixed height r	Loading capacity G	Anchor
PFC 28/2	150 -250 mm	200 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 28/2	260-350 mm	250 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 28/2	360-400 mm	300 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 28/2	410-500 mm	350 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205

Further dimensions according to additional sizing upon request.

Basic materials: According to claims 308 (1.4301) 316 Ti (1.4571) quality stainless steel

Complete fixing element: 1 pc PFC 28/2 console + 2 pc height adjustment plate

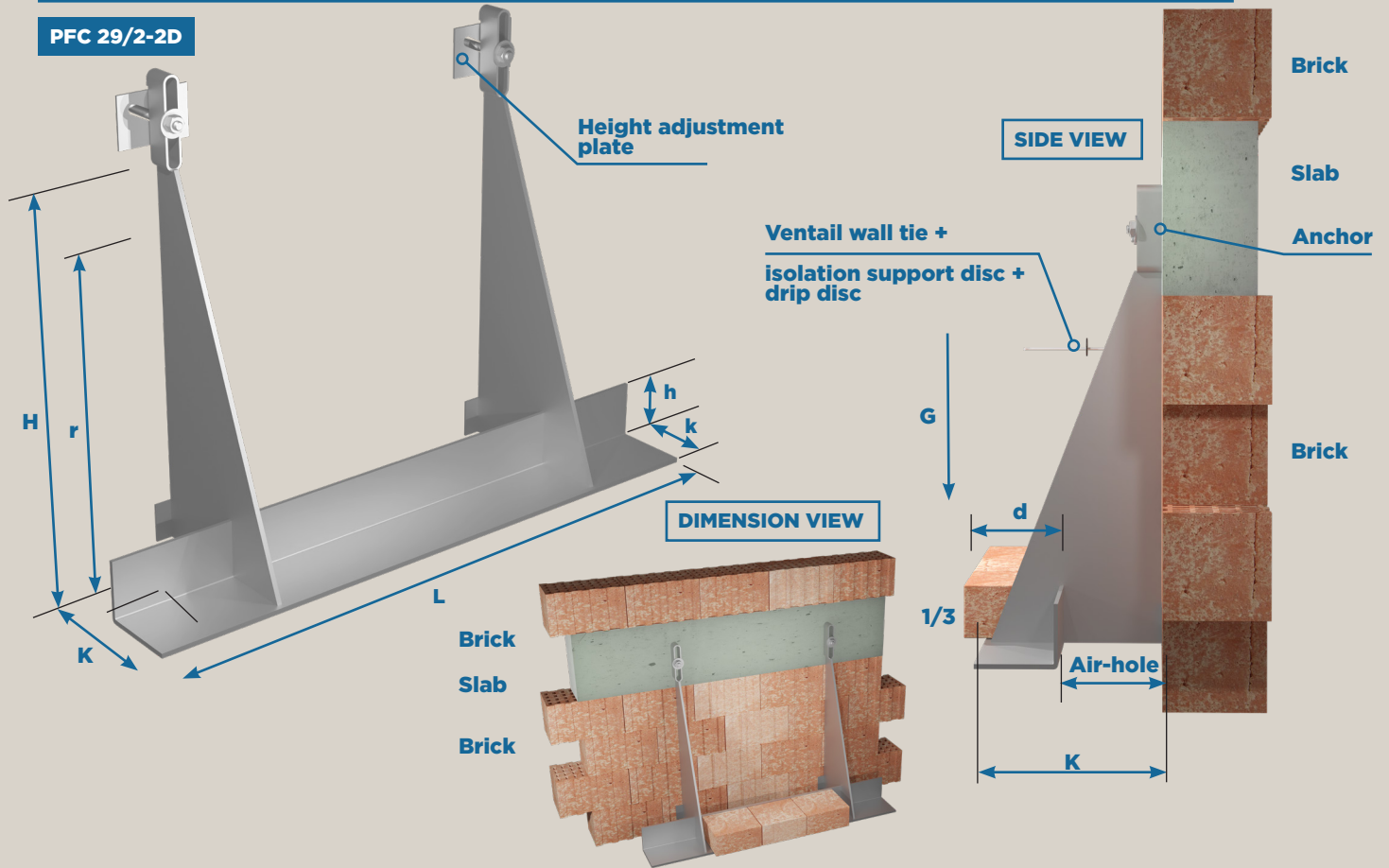
Fixing: The used anchors are according to the producer's technical datas.

Marking: PFC 28/ fixing point - console protrusion (k) / profil lenght (L)- Loading (kN)

Example: PFC 28/2-310/J-1550-7,0 kN or PFC 28/2V-310/JB-1600-7,0 kN V=300 mm

Scaling: Stratification = isolation + ventail or wall-difference + d = brick-thickness

PFC 29/2-2D SLAB SUPPORTING PROFILE-CONSOLE WITH 2 MODULES



Type	Console protrusion k	Fixed height r	Loading capacity G	Anchor
PFC 29/2-2D	150 -250 mm	Based on a plan	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 29/2-2D	260-350 mm	Based on a plan	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 29/2-2D	360-400 mm	Based on a plan	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 29/2-2D	410-500 mm	Based on a plan	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205

Further dimensions according to additional sizing upon request.

Basic materials: According to claims 308 (1.4301) 316 Ti (1.4571) quality stainless steel

Complete fixing element: 1 pc PFC 29/2 console + 4 pc height adjustment plate

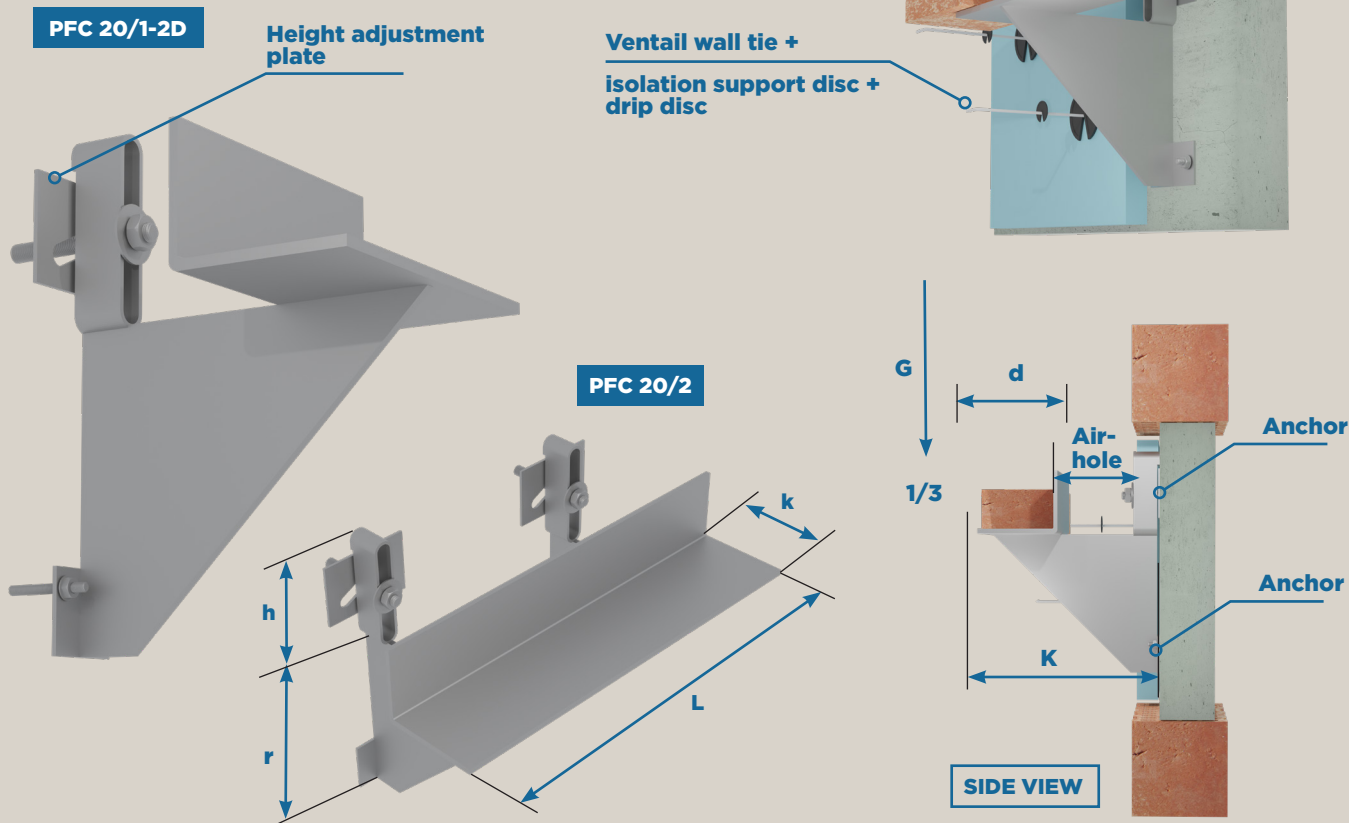
Fixing: The used anchors are according to the producer's technical datas.

Marking: PFC 29/ fixing point - console protrusion (k) / profil lenght (L)/ console height (H)- Loading (kN)

Example: PFC 29/2-2D-310/1600/650-7,0 kN H=650 mm

Scaling: Stratification = isolation + ventail or wall-difference + d = brick-thickness

PFC 20/1-2D AND 20/2 UPPER SUPPORT PROFILE-CONSOLE WITH 1 - 2 MODULES



Type	Console protrusion k	Fixed height r	Loading capacity G	Anchor
PFC 20/1-2D PFC 20/2	150 -250 mm	200 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 20/1-2D PFC 20/2	260-350 mm	250 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 20/1-2D PFC 20/2	360-400 mm	300 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205
PFC 20/1-2D PFC 20/2	410-500 mm	350 mm	3,5 kN	M10x165
			7,0 kN	M12x185
			10,5 kN	M16x205

Further dimensions according to additional sizing upon request.

Basic materials: According to claims 308 (1.4301) 316 Ti (1.4571) quality stainless steel

Complete fixing element: 1 pc PFC 20/1-2D console + 2 pc height adjustment plate

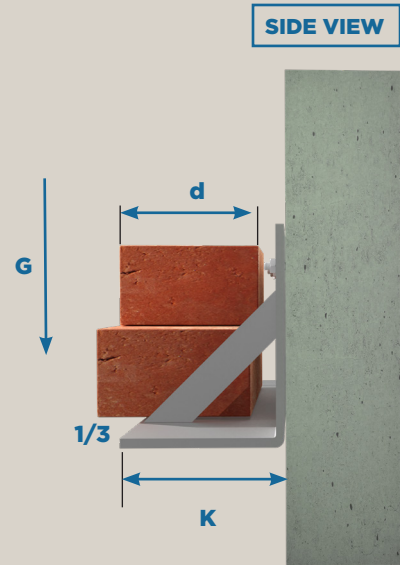
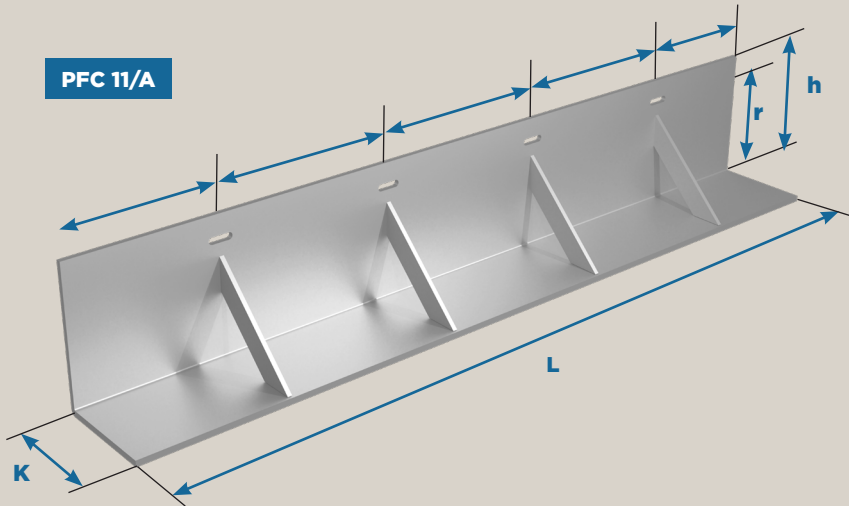
Fixing: The used anchors are according to the producer's technical datas.

Marking: PFC 20/ fixing point - console protrusion (k) / profil lenght (L)- Loading (kN)

Example: PFC 20/1-2D-310/300-7,0 kN or PFC 20/2-310/1250-7,0 kN

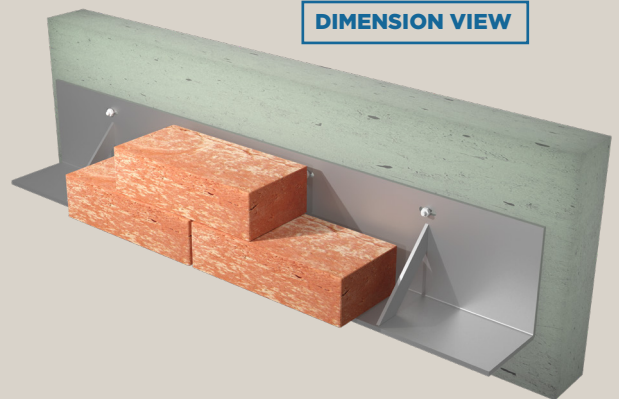
Scaling: Stratification = isolation + ventail or wall-difference + d = brick-thickness

PFC 11/A LOWER-SUPPORTING CONSOLE PROFILE WITH DIAPHRAGM



PFC 11/AK

Fixing with hanging loops above openings



Type	Console protrusion k	Fixed height r	Console height h	Loading capacity G	Anchor
PFC 11/A	60 - 90 mm	75 - 105 mm	90 - 120 mm	3,5 kN	M10x110
				7,0 kN	M12x140
PFC 11/A	100 - 110 mm	115 - 125 mm	130 - 140 mm	3,5 kN	M10x110
				7,0 kN	M12x140
PFC 11/A	120 - 130 mm	135 - 145 mm	150 - 160 mm	3,5 kN	M10x110
				7,0 kN	M12x140
PFC 11/A	140 - 160 mm	155 - 175 mm	170 - 190 mm	3,5 kN	M10x110
				7,0 kN	M12x140

Further dimensions according to additional sizing upon request.

Basic materials: According to claims 308 (1.4301) 316 Ti (1.4571) quality stainless steel

Complete fixing element: 1 pc PFC 11/A console

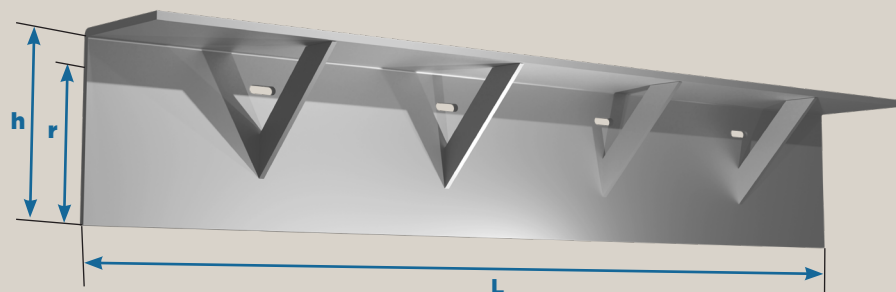
Fixing: The used anchors are according to the producer's technical datas.

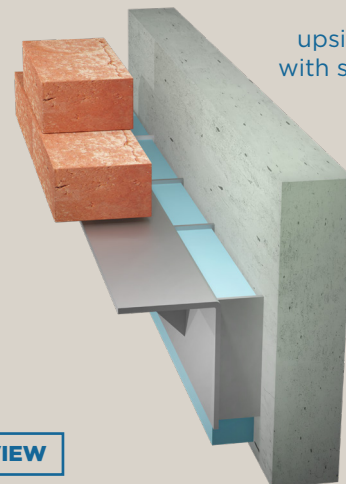
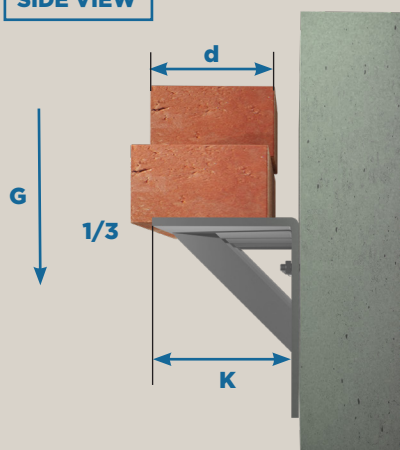
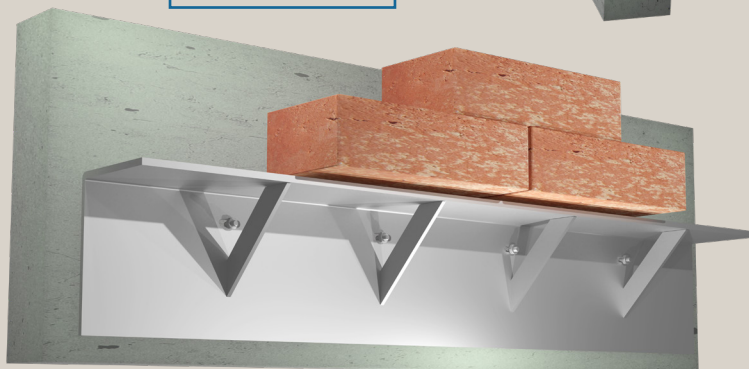
Marking: PFC 11/fixing point - console protrusion (k) / console height (h)- profil lenght (L)- Loading (kN)

Example: PFC 11/A-4-160/190-1000-3,5 kN

Scaling: Stratification = isolation + ventail or wall-difference + d = brick-thickness

PFC 11/F UPPER-SUPPORTING CONSOLE PROFILE WITH DIAPHRAGM

PFC 11/F

PFC 11/FT

 Fixing
 upside - down
 with supporting
 backplate

SIDE VIEW

DIMENSION VIEW


Type	Console protrusion k	Fixed height r	Console height h	Loading capacity G	Anchor
PFC 11/F	60 - 90 mm	75 - 105 mm	90 - 120 mm	3,5 kN	M10x110
				7,0 kN	M12x140
PFC 11/F	100 - 110 mm	115 - 125 mm	130 - 140 mm	3,5 kN	M10x110
				7,0 kN	M12x140
PFC 11/F	120 - 130 mm	135 - 145 mm	150 - 160 mm	3,5 kN	M10x110
				7,0 kN	M12x140
PFC 11/F	140 - 160 mm	155 - 175 mm	170 - 190 mm	3,5 kN	M10x110
				7,0 kN	M12x140

Further dimensions according to additional sizing upon request.

Basic materials: According to claims 308 (1.4301) 316 Ti (1.4571) quality stainless steel

Complete fixing element consists: 1 pc PFC 11/F console

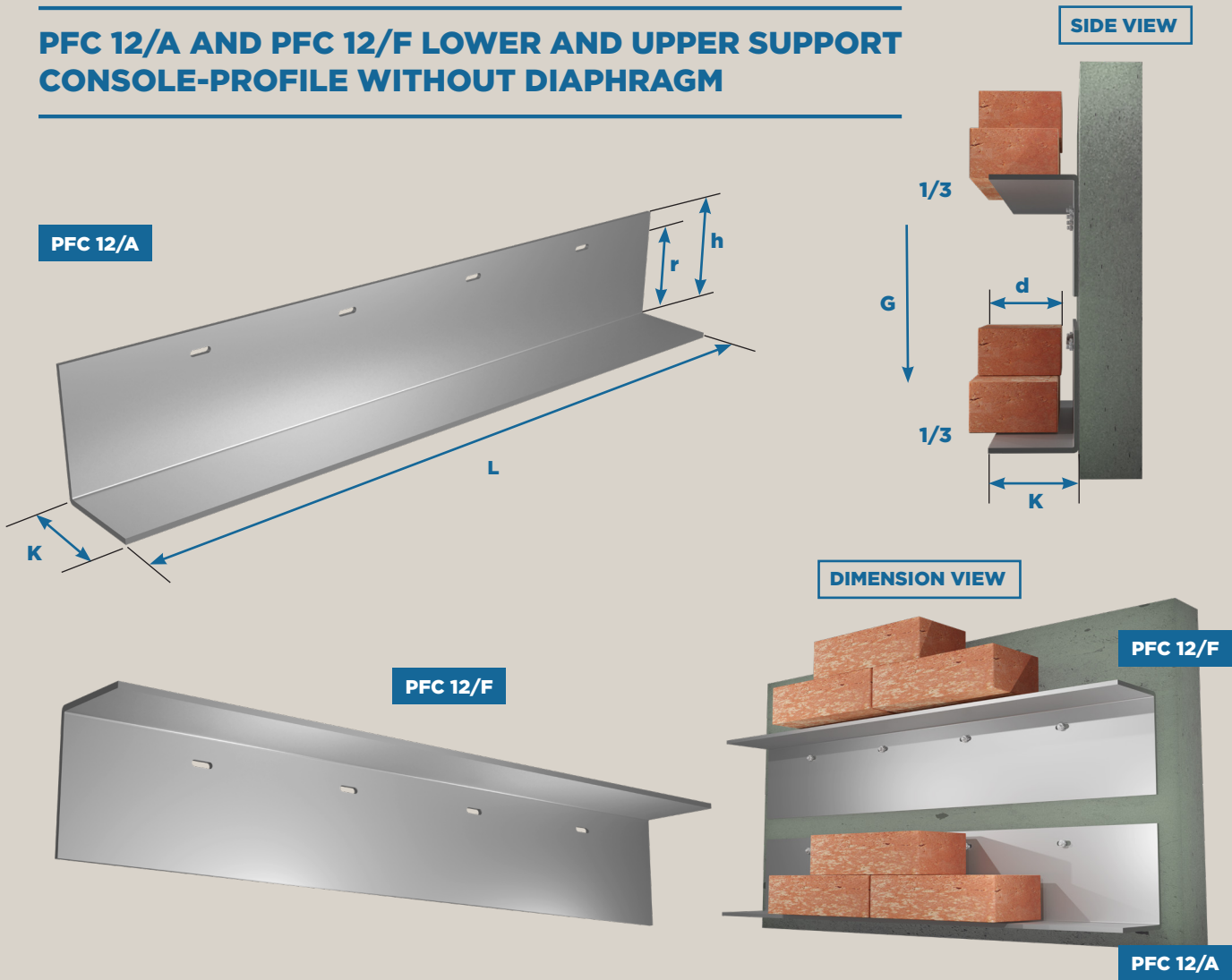
Fixing: The used anchors are according to the producer's technical datas.

Marking: PFC 11/fixing point - console protrusion (k) / console height (h)- profil lenght (L)- Loading (kN)

Example: PFC 11/F-4-160/190-1000-3,5 kN

Scaling: Stratification = isolation + ventail or wall-difference + d = brick-thickness

PFC 12/A AND PFC 12/F LOWER AND UPPER SUPPORT CONSOLE-PROFILE WITHOUT DIAPHRAGM



Type	Console protrusion k	Fixed height r	Console height h	Loading capacity G	Anchor
PFC 12/F-A	40 - 50 mm	55 - 65 mm	$h = r + 15 \text{ mm}$	3,5 kN	M10x110
				7,0 kN	M12x140
PFC 12/F-A	60 - 70 mm	75 - 85 mm	$h = r + 15 \text{ mm}$	3,5 kN	M10x110
				7,0 kN	M12x140
PFC 12/F-A	80 - 90 mm	95 - 105 mm	$h = r + 15 \text{ mm}$	3,5 kN	M10x110
				7,0 kN	M12x140
PFC 12/F-A	100 - 110 mm	115 - 125 mm	$h = r + 15 \text{ mm}$	3,5 kN	M10x110
				7,0 kN	M12x140

Further dimensions according to additional sizing upon request.

Basic materials: According to claims 308 (1.4301) 316 Ti (1.4571) quality stainless steel

Complete fixing element consists: 1 pc PFC 12/A console

Fixing: The used anchors are according to the producer's technical datas.

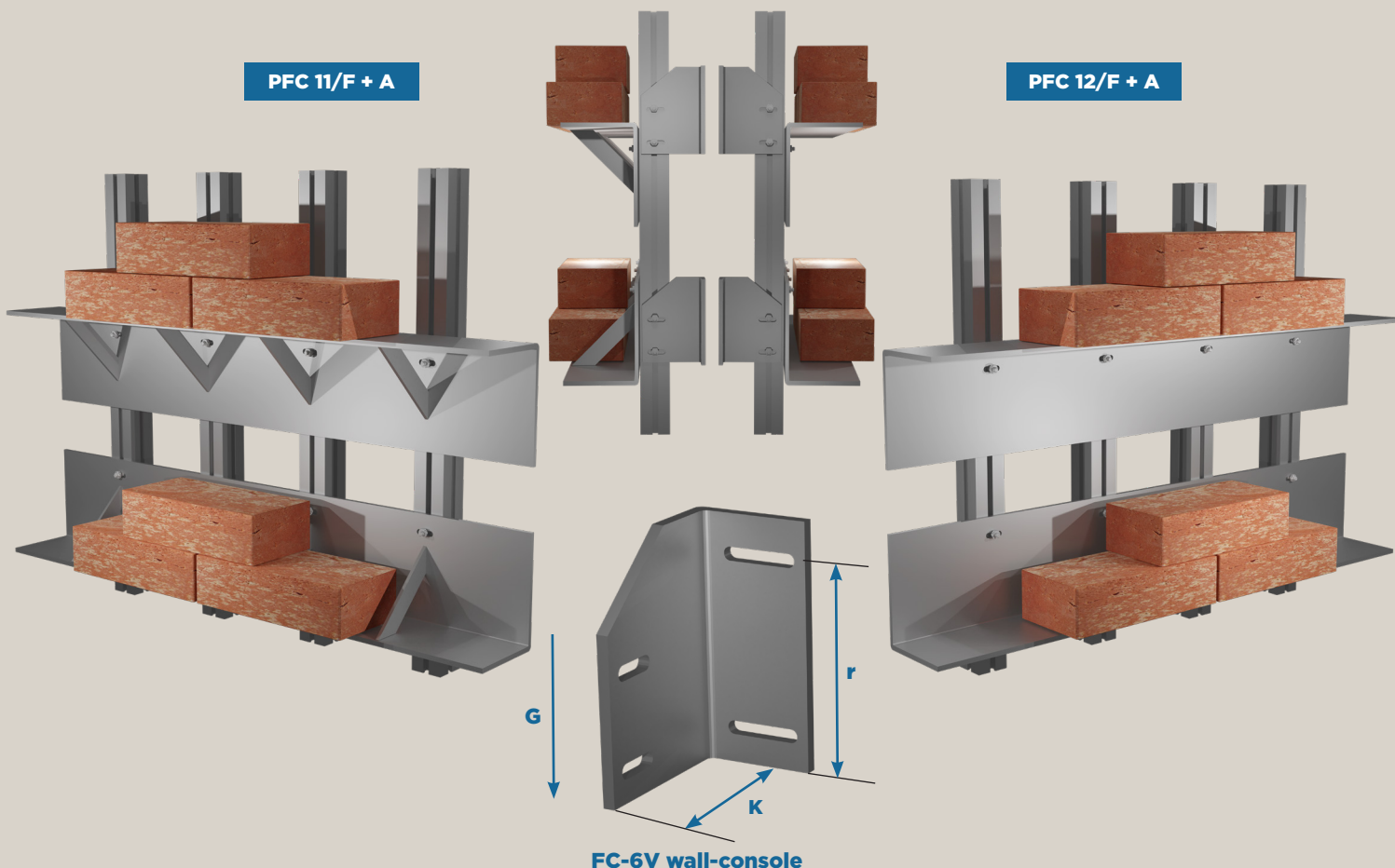
Marking: PFC 12/ ((A or F)- fixing point - console protrusion (k) / console height (h)- profil lenght (L)- Loading (kN)

Example: PFC 12/A2-40/60-600-3,5 kN or PFC 12/F3-60/90-850-3,5 kN

Scaling: Stratification = isolation + ventail or wall-difference + d = brick-thickness

PFC 11 OR PFC 12 PFK ALU MOUNTING PROFILE WITH LOWER AND UPPER SUPPORT CONSOLE-PROFILE WITH OR WITHOUT DIAPHRAGM + FC WALL CONSOLE

Lower and upper console-profile with PFC mounting aluprofile and FC wall-console



Type	Console protrusion k	Fixed height r	Loading capacity G	Anchor
FC-6V	40-100 mm	Based on a plan	3,5 kN	M10x110
			7,0 kN	M12x140
FC-6V	110-190 mm	Based on a plan	3,5 kN	M10x110
			7,0 kN	M12x140
FC-6V	200-250 mm	Based on a plan	3,5 kN	M10x110
			7,0 kN	M12x140
FC-6V	260-300 mm	Based on a plan	3,5 kN	M10x110
			7,0 kN	M12x140

Further dimensions according to additional sizing upon request.

Basic materials: According to claims 308 (1.4301) 316 Ti (1.4571) quality stainless steel

Complete fixing element: 1 pc PFK alu mounting profile + FC wall console

Fixing: The used anchors are according to the producer's technical datas.

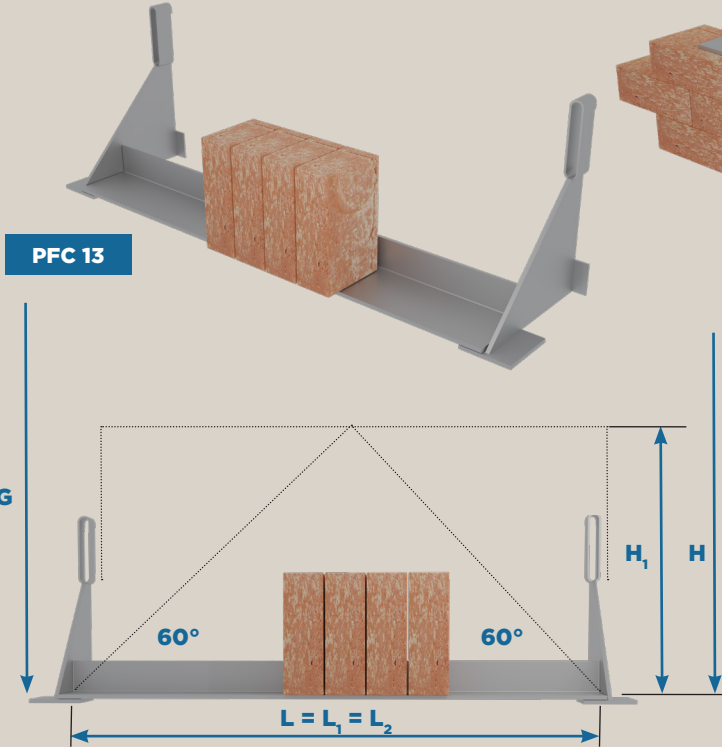
Marking: FC-6V/ (A or F)- fixing point - console protrusion (k) / console height (h)- profil length (L)- Loading (kN)

Example: FC-6V/2 -160/200-3,5 kN+PFK 45/45-2 000 + FC 6V/2-160/200-3,5 kN

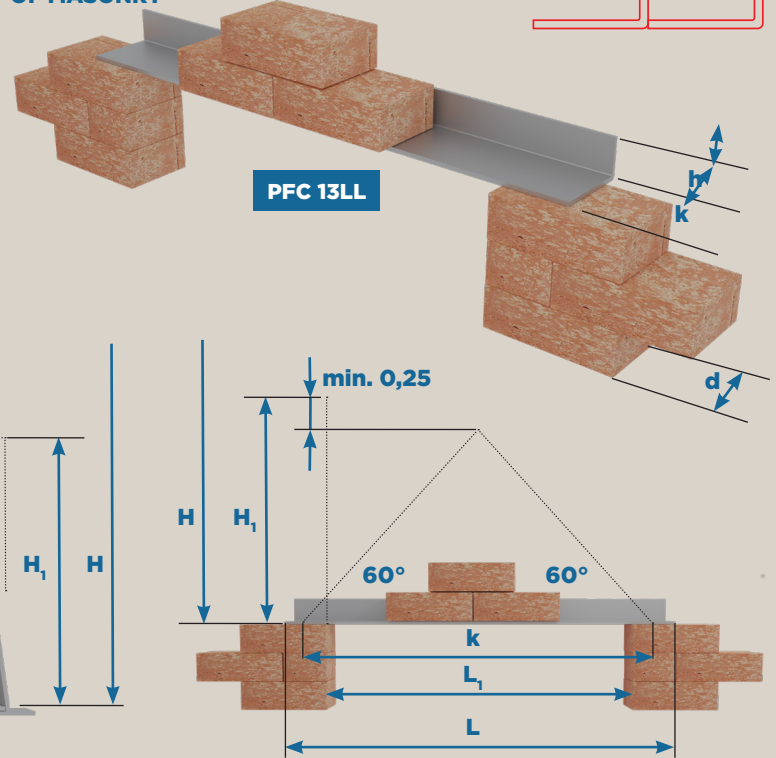
Scaling: Stratification = isolation + ventail or wall-difference + d = brick-thickness

PFC 13, PFC 13/D AND PFC 13LL BRIDGING PROFILE AND WITH DIAPHRAGM AND WITH DOUBLE PROFILES

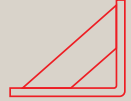
BRIDGING PROFILE BETWEEN 2 SUPPORT CONSOLES



BRIDGING PROFILE LAID ON BOTH SIDES OF MASONRY



PFC 13D



PFC 13LL



SCALING

Bridging profile length: L (m)
 Supported width: $L_1 = L - (2 \times 0,10 \text{ m})$
 Load below vaulting limit: $G_1 = H_1 \times d \times \gamma$ (kN/m)
 Vaulting limit: $H_1 = \text{max. } 0,866 \times L_1$ (m)
 Load above the vaulting limit: $G_1 = H_1 \times d \times \gamma$ (kN/m)
 Vaulting limit: $H_1 = \text{min. } 0,866 \times L_1$ (m)

Bridging profile length	L (mm)	700	1000	1200	1500	1700	2000	2500	3000
Bridging height	L_1 (mm)	500	800	1000	1300	1500	1800	2300	2800
Bridging profile length	H_1 (mm)	~685	~950	~1120	~1400	~1550	~1800	~2250	~2675

TECHNICAL DATAS

Type	Console protrusion k	Bridging height h	Bridging profile length L
PFC 13	60/90 mm	60 mm	700-3000 mm
PFC 13	60/90 mm	90 mm	700-3000 mm
PFC 13	90/100 mm	90-100 mm	700-3000 mm
PFC 13	100/120 mm	100-120 mm	700-3000 mm

Further dimensions according to additional sizing upon request.

Basic materials: According to claims 308 (1.4301) 316 Ti (1.4571) quality stainless steel

Complete fixing element consists: 1 pc PFC 13 bridging profile

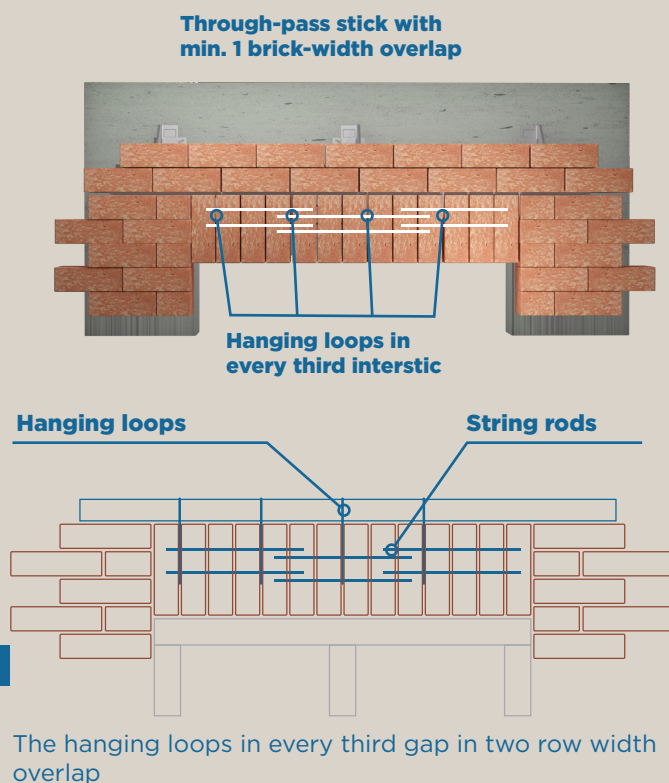
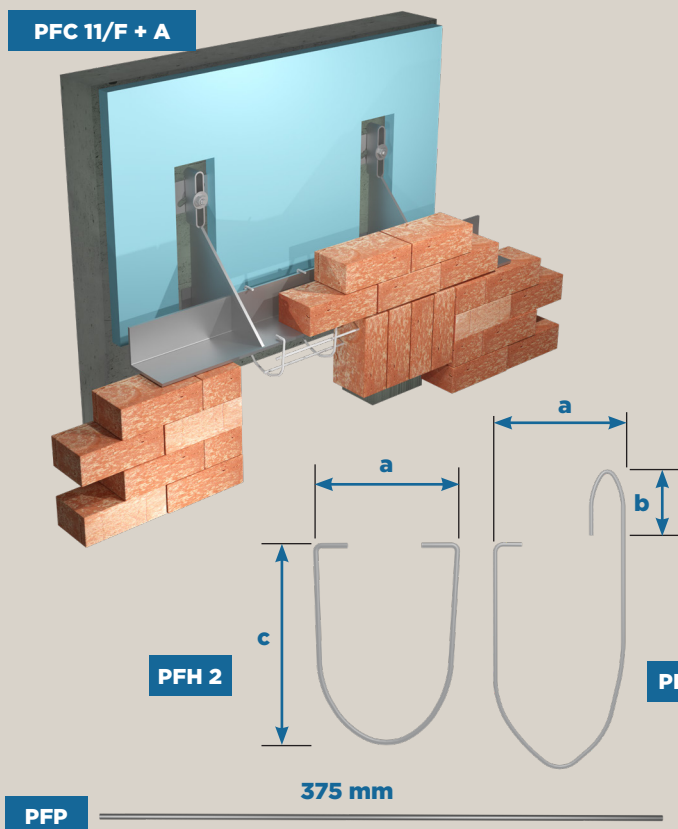
Fixing: The used anchors are according to the producer's technical datas.

Marking: PFC 13/ bridging profile width (k) x bridging profile height (h) -bridging lenght (L)

Example: PFC 13/90x60-2 250

Scaling: Stratification = isolation + ventail or wall-difference + d = brick-thickness

PFH HANGING LOOPS, PFP STRING RODS AND PFF HANGING CONSOLE



PFH 1 -a/b/c hanging loops

Type	a (mm)	b (mm)	c (mm)
PFH 1-100/30/180	100	30	180
PFH 1-100/45/180	100	45	180
PFH 1-100/60/180	100	60	180
PFH 1-100/90/180	100	90	180
PFH 1-120/120/180	120	120	180

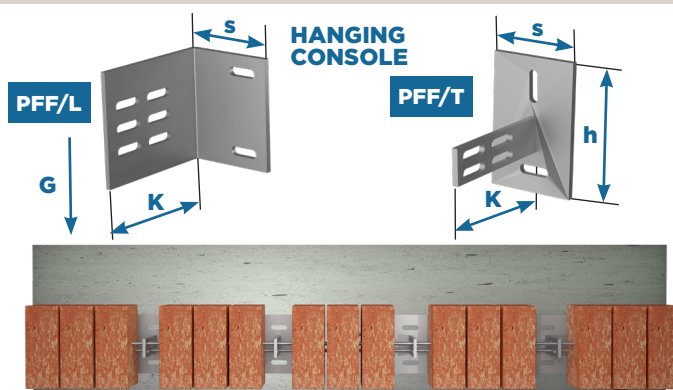
PFH 2 -a/c hanging loops

Type	a (mm)	c (mm)
PFH 2-80/180	80	180

PFP /l String rods

Type	l (mm)
PFP/375	375

Further dimensions according to additional sizing upon request.



PFF hanging console (3 per gap)

Type	Console protrusion k	Loading capacity
PFF/T+L - K/G	50-100 mm	3,5 kN
PFF/T+L - K/G	110-150 mm	3,5 kN
PFF/T+L - K/G	160-200 mm	3,5 kN
PFF/T+L - K/G	210-250 mm	3,5 kN
PFF/T+L - K/G	260-300 mm	3,5 kN

Basic materials: According to claims 308 (1.4301) 316 Ti (1.4571) quality stainless steel

Complete fixing element: 1 pc PFH hanging loops or PFF hanging console

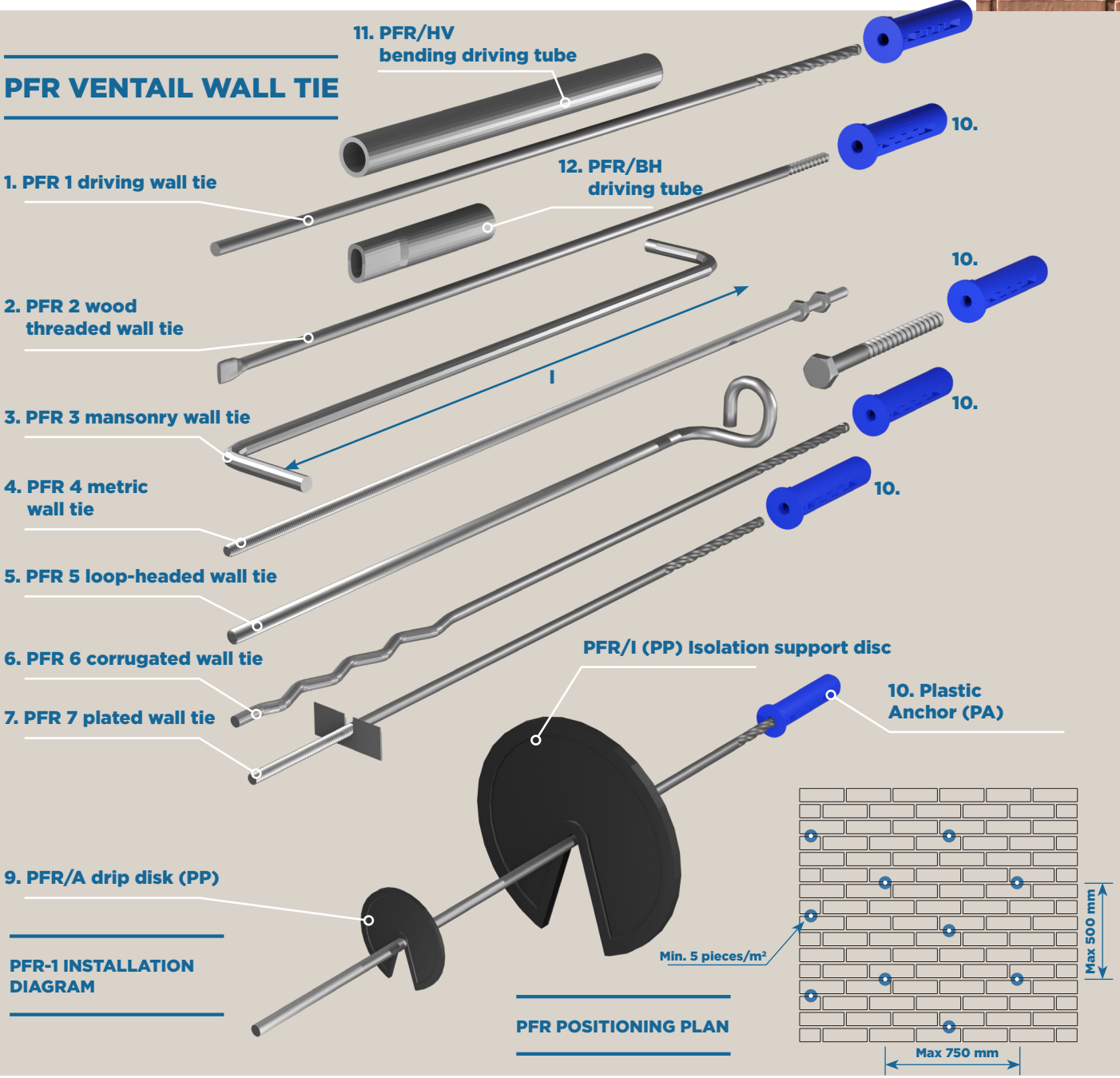
Fixing: The used anchors are according to the producer's technical datas.

Marking: PFH 1-protrusion (a) / height (b) / hanging(c) or PFF-protrusion (k)/Loading (kN)

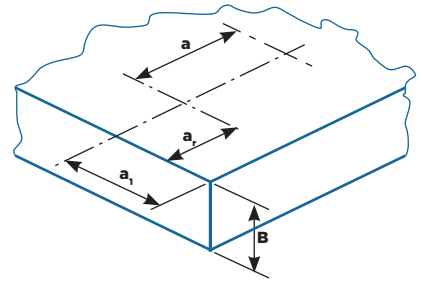
Example: PFH 1-90/60/180 or PFF-180/3,5 kN

Scaling: L profile size of hanging console protrusion

PFR VENTAIL WALL TIE



Installation data pieces/sqm				
Protrusion size	Concrete C20/25	Hollow brick	Solid brick	Aerated concrete P2
130-250	5	7	5	7
260-350	6	8	6	8
350<	7	9	7	9

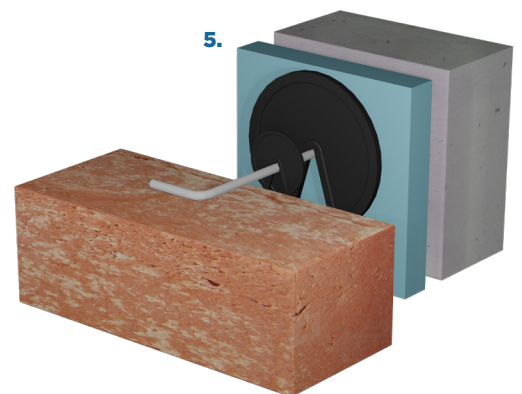
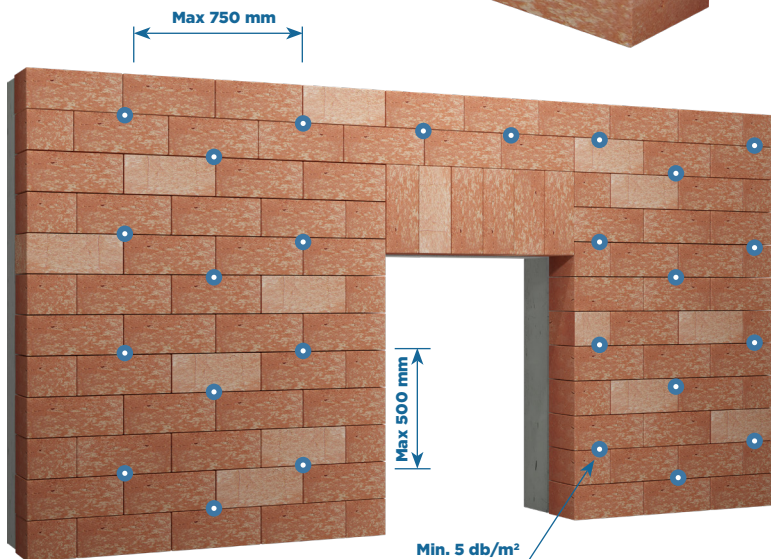
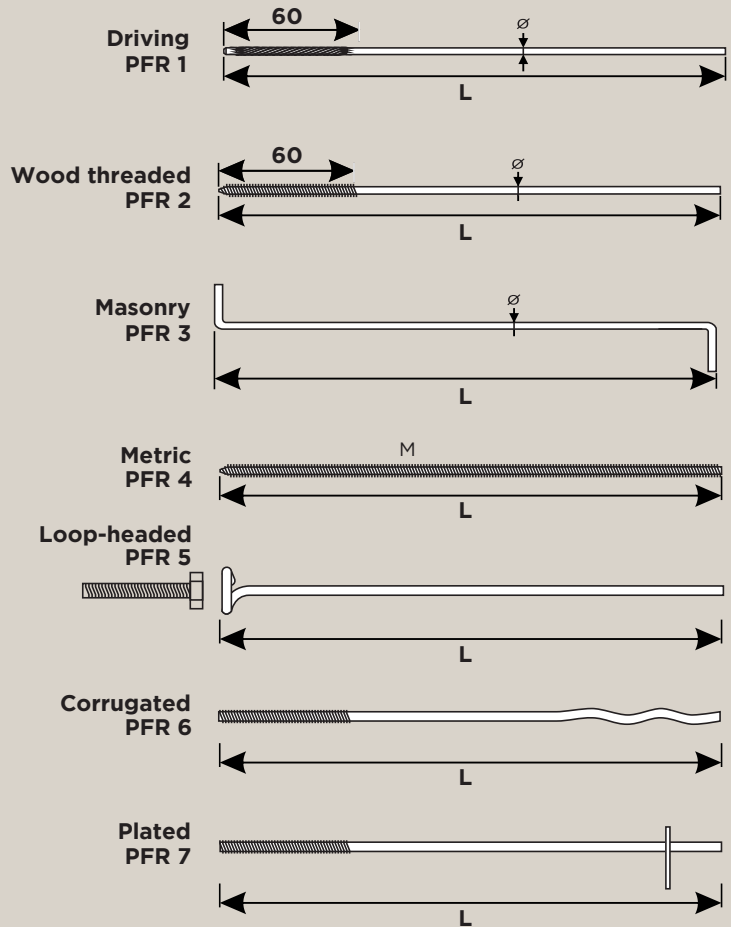
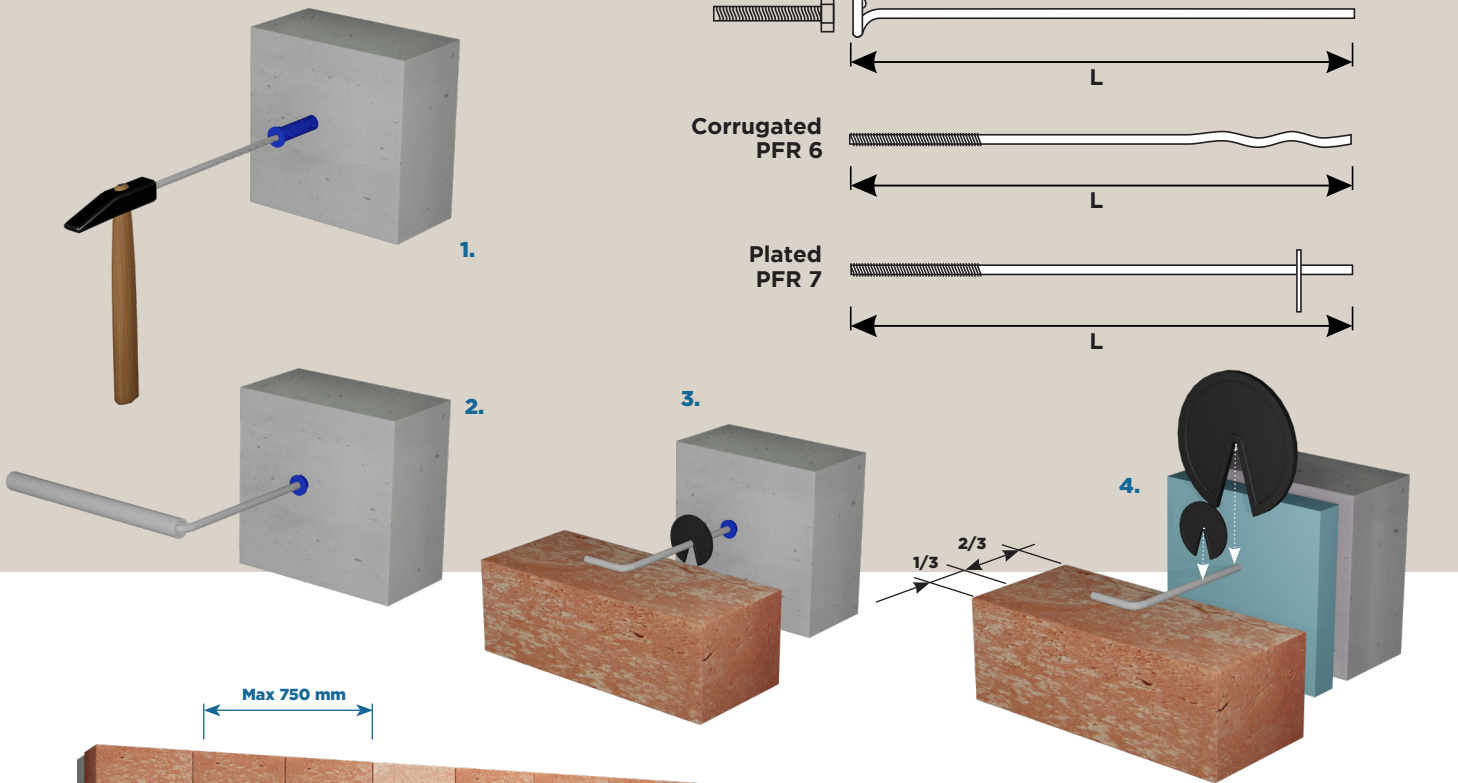
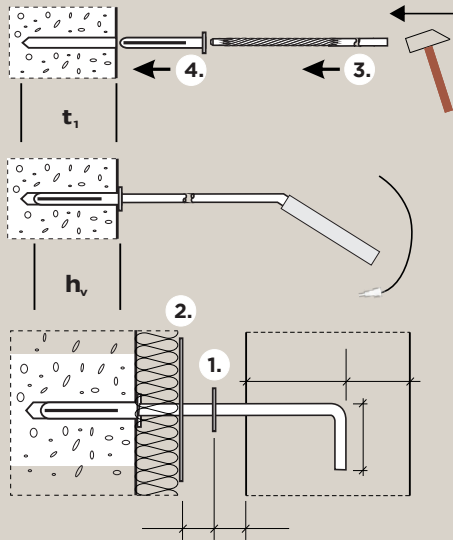


Type Tip/dxl	Total lenght l (mm)	Hole depth l1 (mm)	Hole diameter d (mm)	Axis distance a (mm)	Edge distance ar (mm)	Wall thickness B (mm)
1/4x130-400	130-400 mm	60-90	8	100	250	100
2/4x130-400	130-400 mm	60-90	8	100	250	100
3/4x130-400	130-400 mm	-	-	-	-	120/100
4/4x130-400	130-400 mm	-	M4-5-6	100	250	-
5/4x130-400	130-400 mm	60-90	8	100	250	200
6/4x130-400	130-400 mm	60-90	8	100	250	100
7/4x130-400	130-400 mm	60-90	8	100	250	100

Further dimensions according to additional sizing upon request.

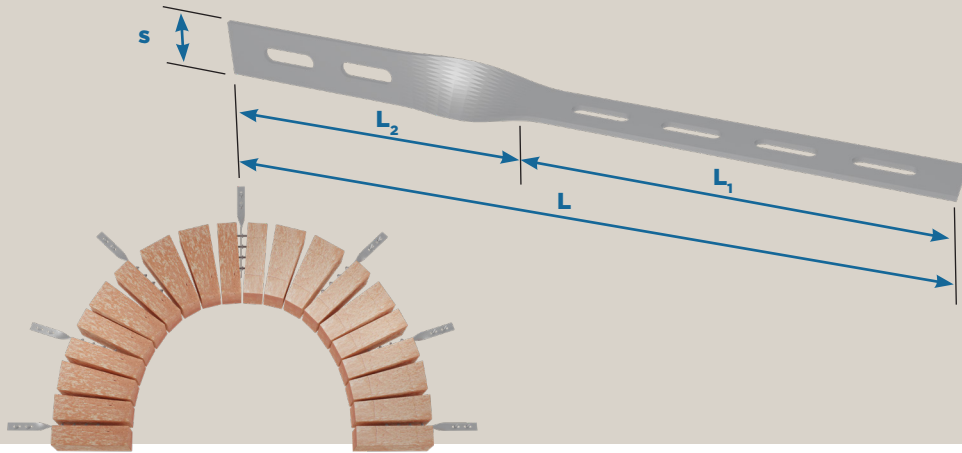
PFR INSTALLATION GUIDE

PFR 1

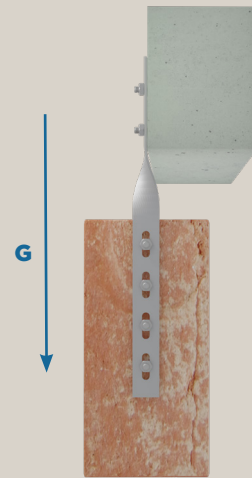


PFI VAULT HANGER

PFI



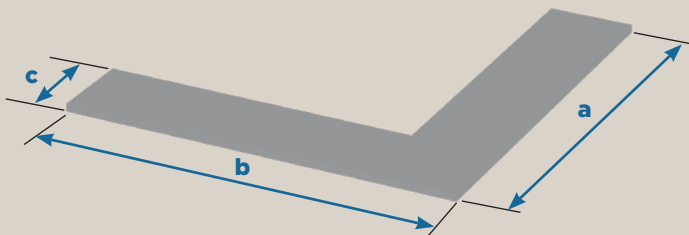
SIDE VIEW



Type	Hanging down L_1 (mm)	Fixed-height L_2 (mm)	Cantilever - width s (mm)	Full -length L (mm)	Loading
PFI 120/100/30-220	120 mm	100 mm	30 mm	220 mm	3,5 kN
PFI 150/100/30-250	150 mm	100 mm	30 mm	250 mm	3,5 kN
PFI 120/180/30-300	120 mm	180 mm	30 mm	300 mm	3,5 kN
PFI 150/180/30-330	150 mm	180 mm	30 mm	330 mm	3,5 kN

PFL CORNER PLATE

PFL



Type	a (mm)	b (mm)	c (mm)	Loading capacity
PFL 150x150x40	150 mm	150 mm	40 mm	1,5 kN
PFL 200x200x60	200 mm	200 mm	60 mm	3,5 kN
PFL 250x250x80	250 mm	250 mm	80 mm	7,0 kN
PFL 300x300x100	300 mm	300 mm	100 mm	10,5 kN

Further dimensions according to additional sizing upon request.

Basic materials: According to claims 308 (1.4301) 316 Ti (1.4571) quality stainless steel

Complete fixing element: 1 pc PFI vault hanger or PFL corner plate

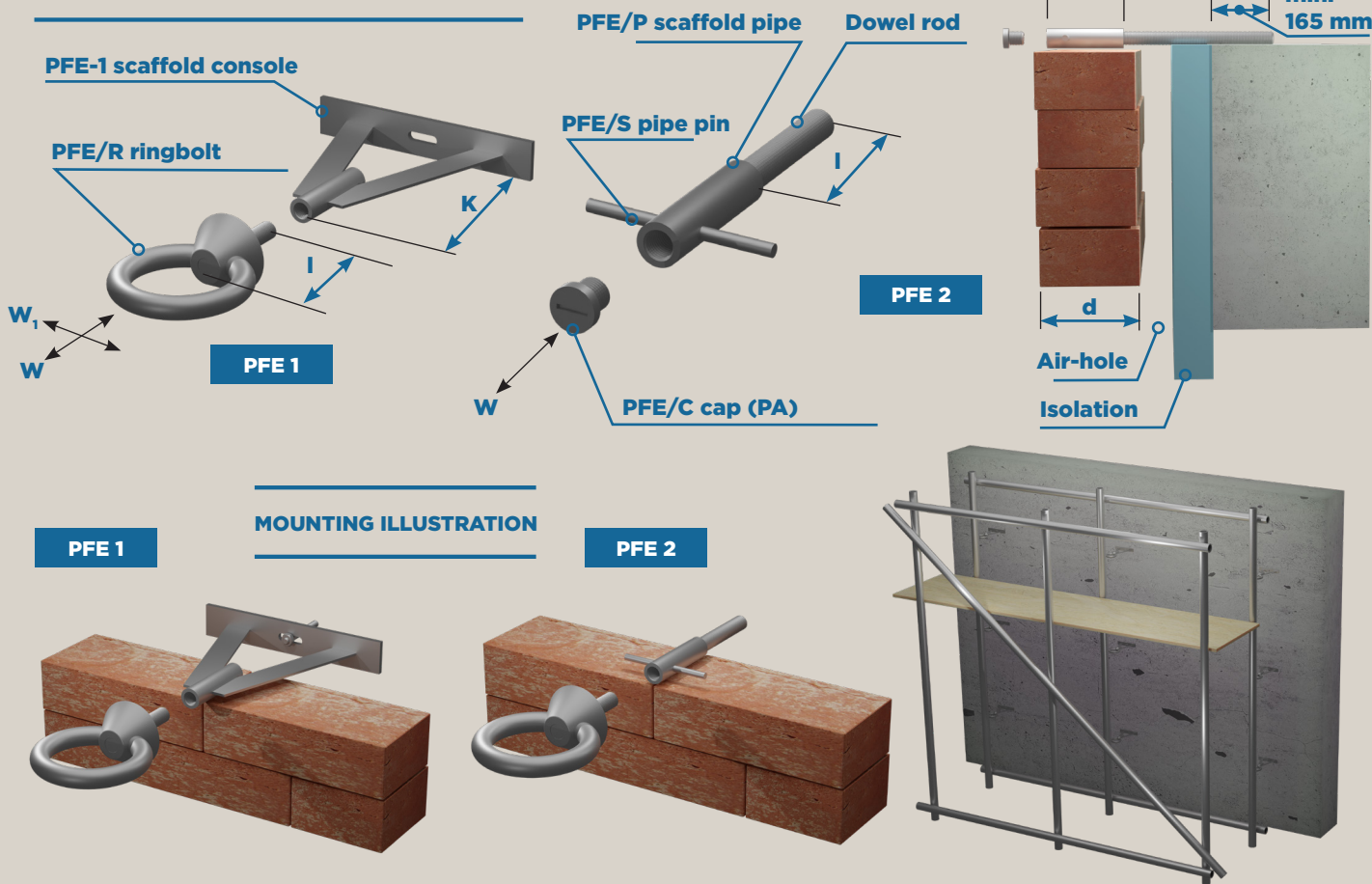
Fixing: The used anchors are according to the producer's technical datas.

Marking: PFI $L_1/L_2/s$ - L or PFL a x b x c - kN

Example: PFI 120 / 100 / 30 - 220 or PFL 150 x150 x 40

Scaling: Stratification = isolation + ventail or wall-difference + d = brick-thickness

PFE SCAFFORD ANCHORING



Type	Console protrusion k	W_1 (kN)	W (kN)
PFE-1 scaffold console	300-400 mm	2,0 kN	5,5 kN

Type	Scaffold pipe protrusion k	Dowel rod l (mm)	W (kN)
PFE-2 scaffold pipe	300-400 mm	260-360 mm	5,5 kN

Type	Thread	Dowel rod l (mm)	Size
PFE/R ringbolt	M12	60-100 mm	M12x60-100

Type	Thread
PFE/C cap	M12

Type	Thread
PFE/S pipe pin	Ø4-5x100

Type	Size	Internal thread
PFE/P scaffold pipe	Ø14x65	M12x30

Type	Thread	Lenght (mm)
l/M12 x l dowel rod	M12	240-550

Further dimensions according to additional sizing upon request.

Basic materials: According to claims 308 (1.4301) 316 Ti (1.4571) quality stainless steel

Complete fixing element consists: 1 pc PFE-1 scaffold console + PFE/R ringbolt + dowel rod or PFE-2 scaffold pipe + PFE/R ringbolt + dowel rod

Fixing: The used anchors are according to the producer's technical datas.

Marking: PFE-1 /k + PFE-2/L

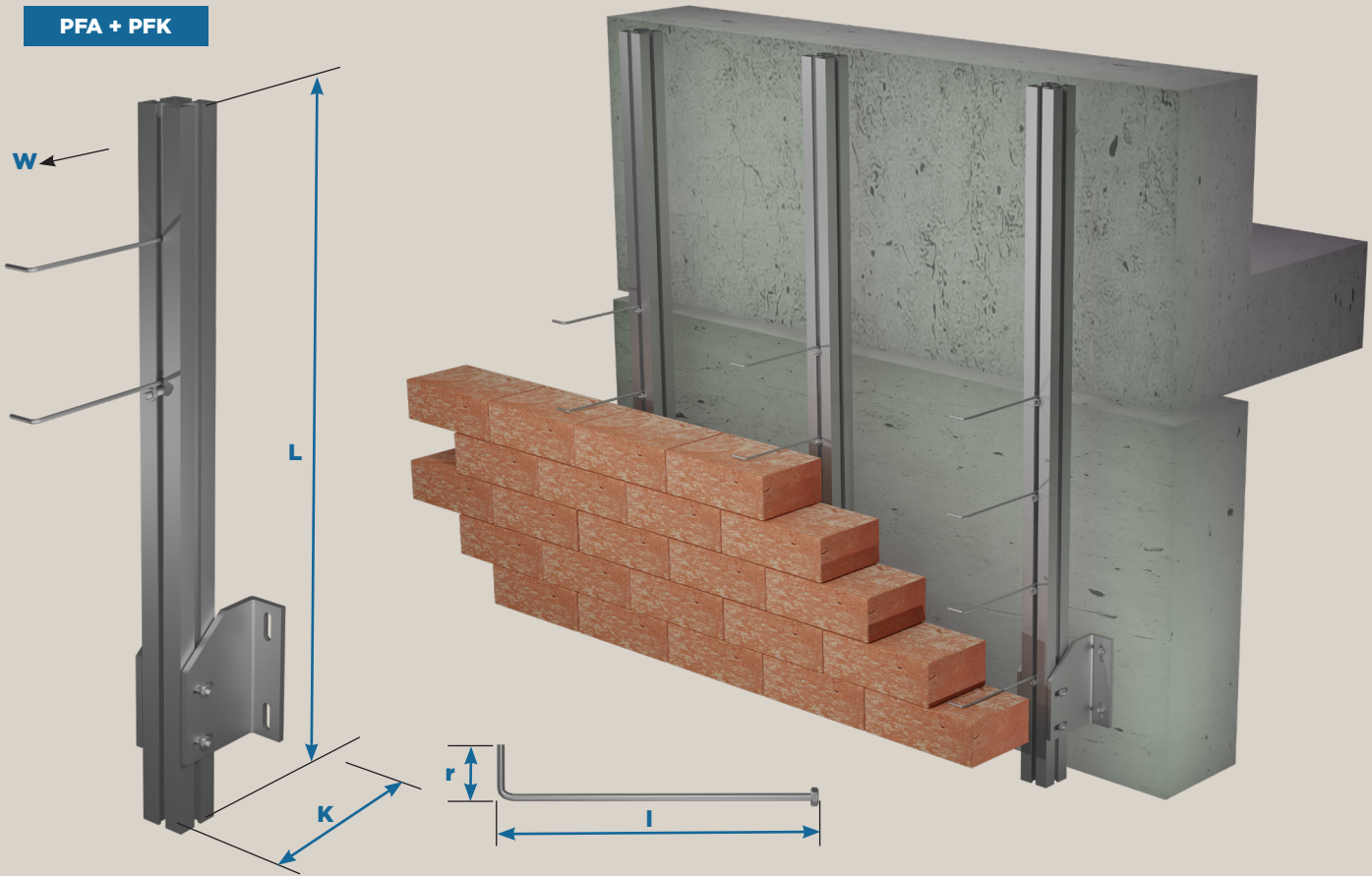
Example: PFE-1/360 or PFE-2/500

Scaling: Stratification = isolation + ventail or wall-difference + d = brick-thickness

PFA ATTIC FIXING WITH CONSOLE AND TIE



PFA + PFK

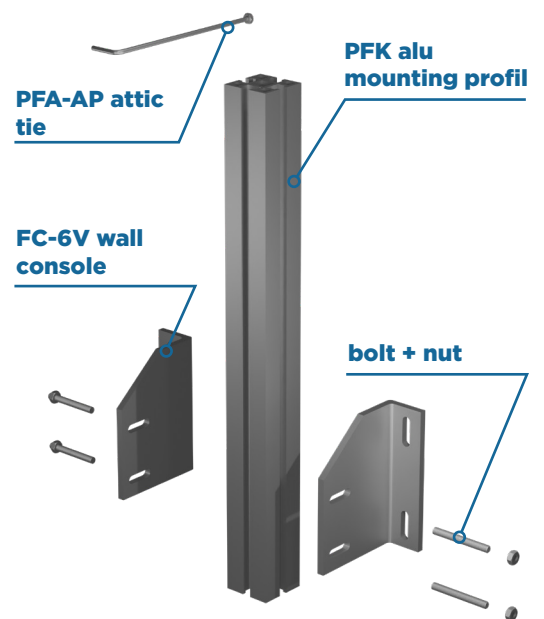


PFA-FC-6V-wall console

Type	Console protrusion k (mm)	Alu profil lenght (L)	Extraction value (kN)
FC-6V/PFR 160/500	160 mm	500 mm	2,5 kN
FC-6V/PFR 160/750	160 mm	750 mm	2,5 kN
FC-6V/PFR 160/1000	160 mm	1000 mm	2,5 kN
FC-6V/PFR 200/500	200 mm	500 mm	2,5 kN
FC-6V/PFR 200/750	200 mm	750 mm	2,5 kN
FC-6V/PFR 200/1000	200 mm	1000 mm	2,5 kN

PFA-AP attic tie

Type	Diametric	Bending (r)	Lenght (l)
AP 100-200	4-5-6	20-40	100-200



Further dimensions according to additional sizing upon request.

Basic materials: According to claims 308 (1.4301) 316 Ti (1.4571) quality stainless steel

Complete fixing element consists: 1 pc PFA attic console + PFK aluprofil + PFA-AP attic tie

Fixing: The used anchors are according to the producer's technical datas.

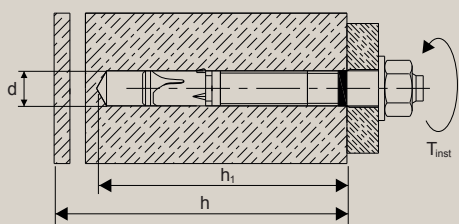
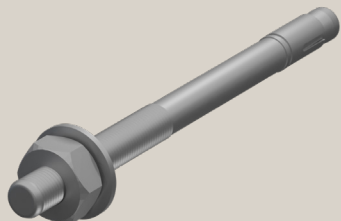
Marking: PFA console protrusion k / profile length L + AP tie length l

Example: PFA 160/750+200

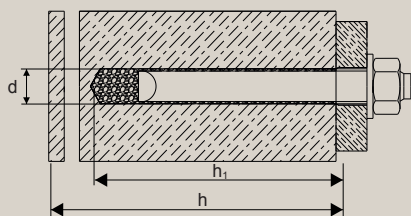
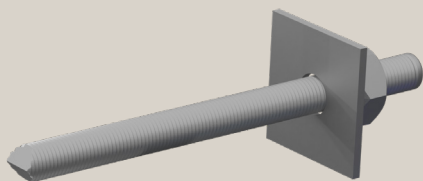
Scaling: Stratification = isolation + ventail or wall-difference + d = brick-thickness

ANCHOR FIXING

EXPANSION ANCHOR



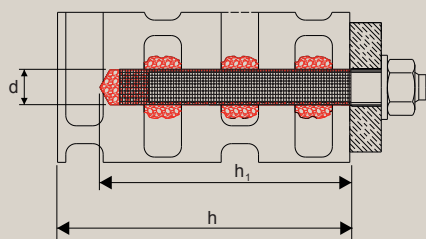
1/2" DOWEL ROD + NUT



1/2" DOWEL ROD + NUT + SIEVE TUBE



sieve tube



EXPANSION ANCHOR solid masonry

Hilti-ETA 11/0374 + RAWL-ETA 17/0183

Type: Hilti + RAWL	HSA-R2	R-XPT	HSA-R2	R-XPT
Anchor size	M10x83	M10x95	M12x115	M12x120
Tensile kN	4,8	4,3	8,5	8
Shearing kN	8,1	8,2	11,9	13,3
Drill bit d (mm)	10	10	12	12
Base material thickness h (mm)	100	100	140	136
Drill hole depthness h_1 (mm)	70	80	95	90
Minimum spacing S_{min} (mm)	55	55	75	75
Minimum edge distance C_{min} (mm)	65	50	90	65
Torque moment T_{inst} (mm)	30	30	50	50

INJECTABLE USE concrete masonry

Hilti ETA-17/0005 + R-KEM ETA 21/0243

Type: Hilti + RAWL	HIT-1	R-KEM	HIT-1	R-KEM	HIT-1	R-KEM
Anchor size	M10x165	M10x165	M12x185	M12x185	M16x205	M16x205
Tensile kN	8,6	8,3	19,8	11,5	24,0	16,6
Shearing kN	13,8	12,6	12,0	18,3	22,3	34,0
Drill bit d (mm)	12	12	14	14	18	18
Base material thickness h (mm)	130	130	160	160	185	185
Drill hole depthness h_1 (mm)	100	100	155	155	170	170
Minimum spacing S_{min}	50	50	60	50	80	54
Minimum edge distance C_{min}	50	50	60	50	80	54
Torque moment T_{inst}	20	20	40	40	80	80

INJECTABLE USE

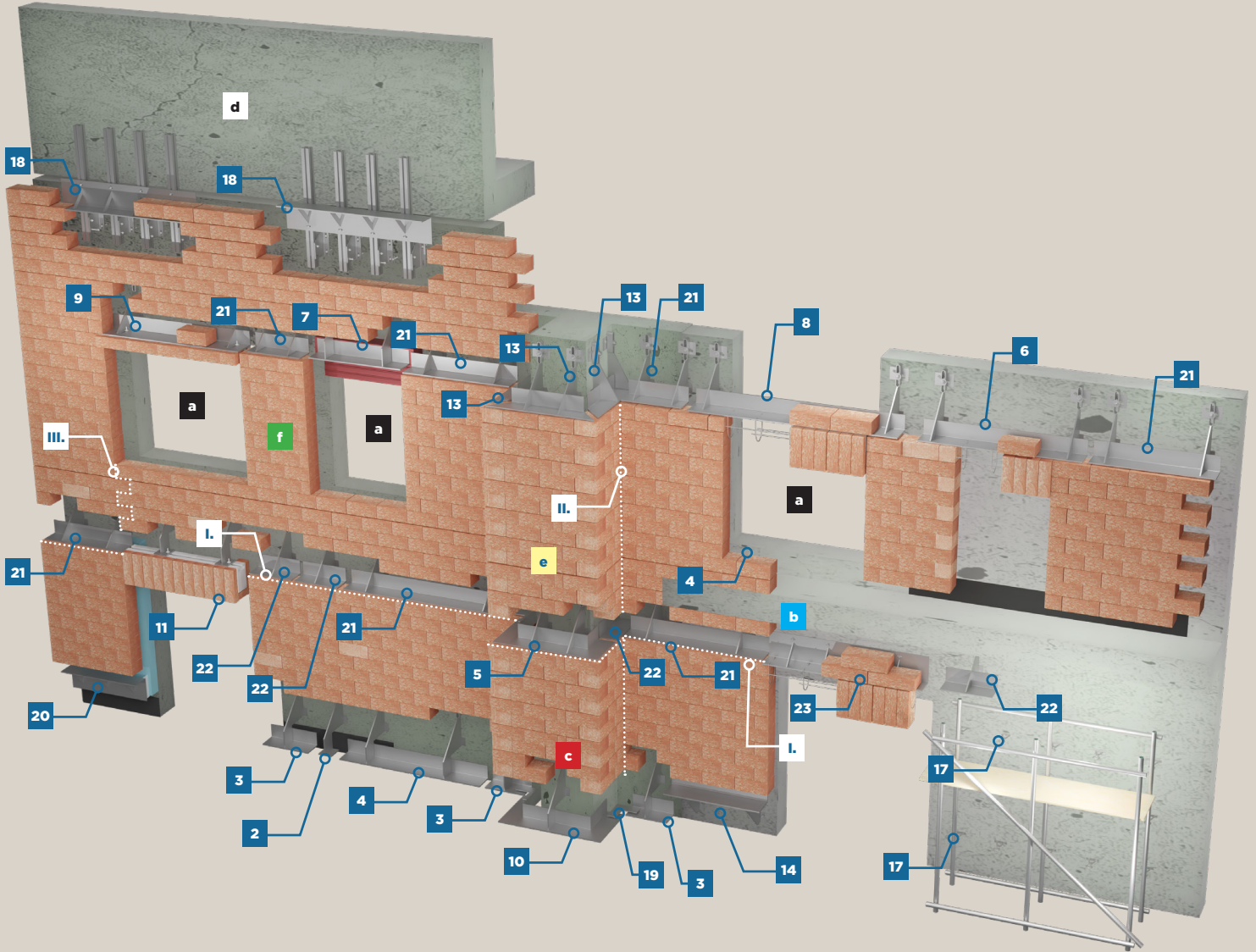
hollow or perforated masonry Hilti ETA-17/0005 + R-KEM ETA 21/0243

Type: Hilti + RAWL	HIT-1	R-KEM	HIT-1	R-KEM
Anchor size	M10x165	M10x165	M12x185	M12x185
Tensile kN	0,8	0,7	1,0	1,0
Shearing kN	0,8	0,7	1,0	1,0
Drill bit d (mm)	16	16	16	16
Base material thickness h (mm)	160	160	160	160
Drill hole depthness h_1 (mm)	135	135	135	135
Minimum spacing S_{min} (mm)	80	50	90	50
Minimum edge distance C_{min} (mm)	50	50	50	50
Torque moment T_{inst} (mm)	4	4	4	6
Sieve tube size d x l (mm)	16x85	15x135	16x85	15x135

Further dimensions according to additional sizing upon request.

Basic material: According to claims 308 (1.4301) 316 Ti (1.4571) quality stainless steel

FACADE PATTERN



POSITIONS

- 1. PFR tie 28. side 1. picture
- 2. PFC 21/1V 28. side 2. picture
- 3. PFC 23/1V 28. side 3. picture
- 4. PFC 25/2V 28. side 4. picture

- 5. PFC 28/2V/J 29. side 5. picture
- 6. PFC 13 29. side 6. picture
- 7. PFC 25/2V 29. side 7. picture
- 8. PFC 25/2 29. side 8. picture

- 9. PFC 26/2V 30. side 9. picture
- 10. PFC 24/1V 30. side 10. picture
- 11. PFC 22/1V 30. side 11. picture
- 12. PFC 28/2J 30. side 12. picture

- 13. PFC 27/2-BJ45 31. side 13. picture
- 14. PFC 20/2 31. side 14. picture
- 15. PFC 28/2-JB 31. side 15. picture
- 16. PFC 29/2 31. side 16. picture

- 17. PFE scaffold 24. side
- 18. PFA attic fixing 25. side
- 19. PFL corner plate 22. side
- 20. PFC 11/F console-profile 15. side

- 21. PFC 25/2 8. side left upper picture
- 22. PFC 23/1 6. side left upper picture
- 23. PFC 11/AK 14. side

Dilatation interstice:

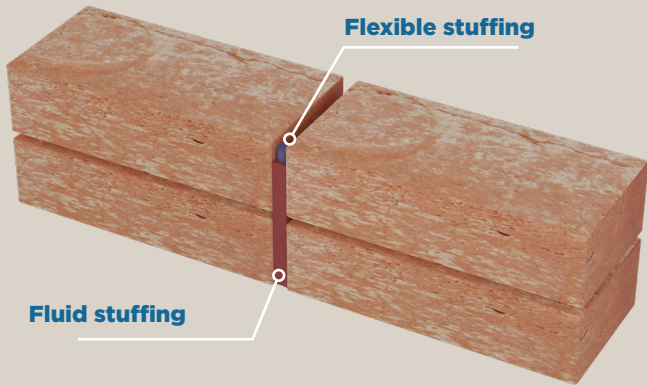
- I. Horizontal
- II. Vertical
- III. Serrated

Building elements:

- a. Openings
- b. Slab
- c. Corner
- d. Attic
- e. Pillar
- f. Wall disc

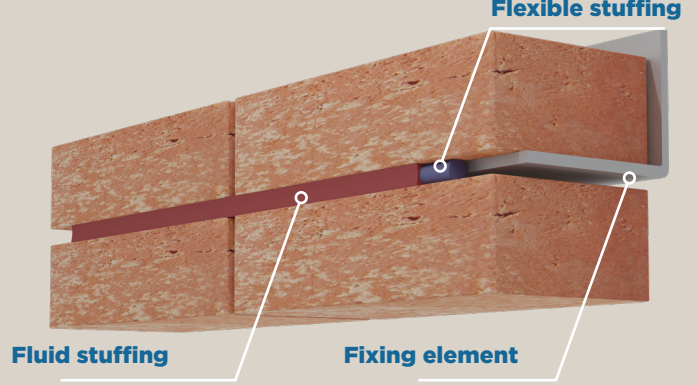
DILATATION GAP

SHAPING THE GAP

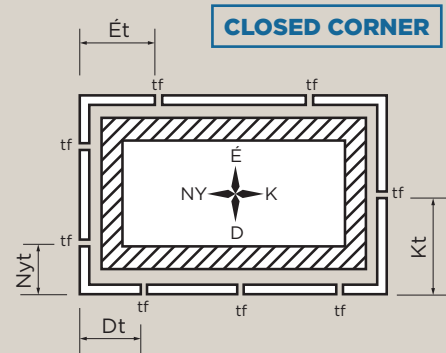
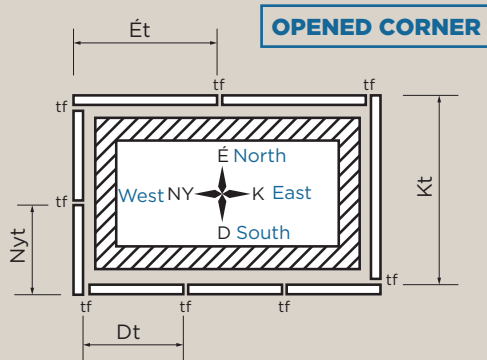


VERTICAL DIRECTION

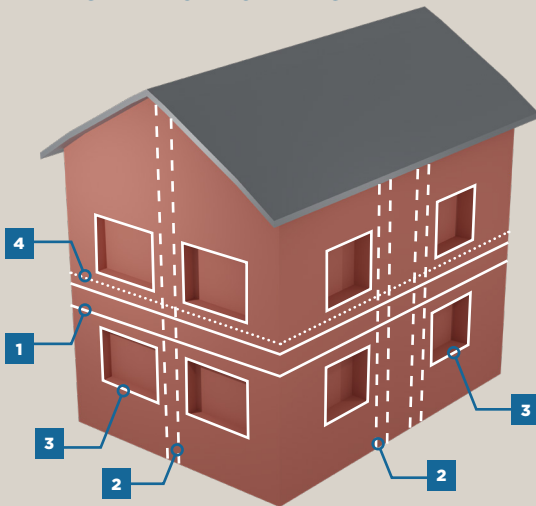
HORIZONTAL DIRECTION



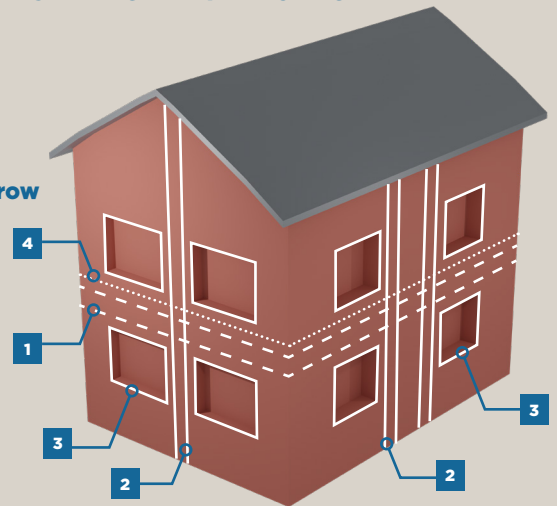
POSITIONS OF GAP BY FOUR CARDINAL POINTS



SHAPING THE HORIZONTAL GAP



SHAPING THE VERTICAL GAP



1. Horizontal gap
2. Vertical gap
3. Expanding field
4. Fixing element row

DISTANCE OF THE INTERSTICES SHAPED BY CARDINAL POINTS

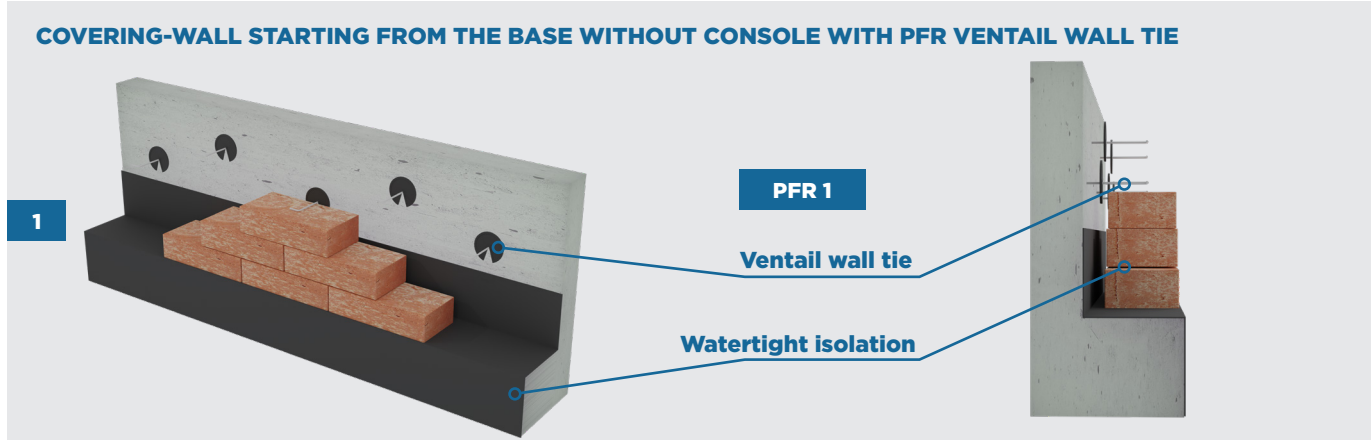
The datas concern to the general rules of the thermal dilatation.

Type	Shaping of the corner	Ét (m)		Dt (m)		Nyt (m)		Kt (m)	
		With airspace	Without airspace	With airspace	Without air-space	With airspace	Without air-space	With airspace	Without air-space
Covering brick	Opened	8	8	6	5	5	4	7	6
	Closed	4	3	3	3	3	2	4	3
Lime-sand brick	Opened	12	8	7	5	6	5	10	7
	Closed	6	5	4	4	4	4	5	5
Klinker brick	Opened	14	10	9	6	8	7	12	9
	Closed	7	5	4	3	4	3	6	5

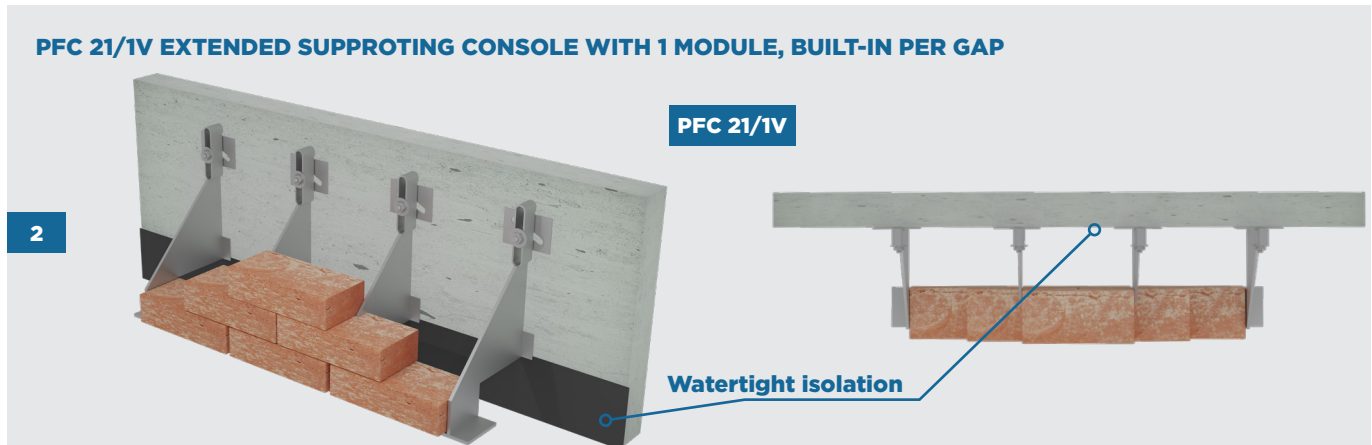


USING PATTERNS

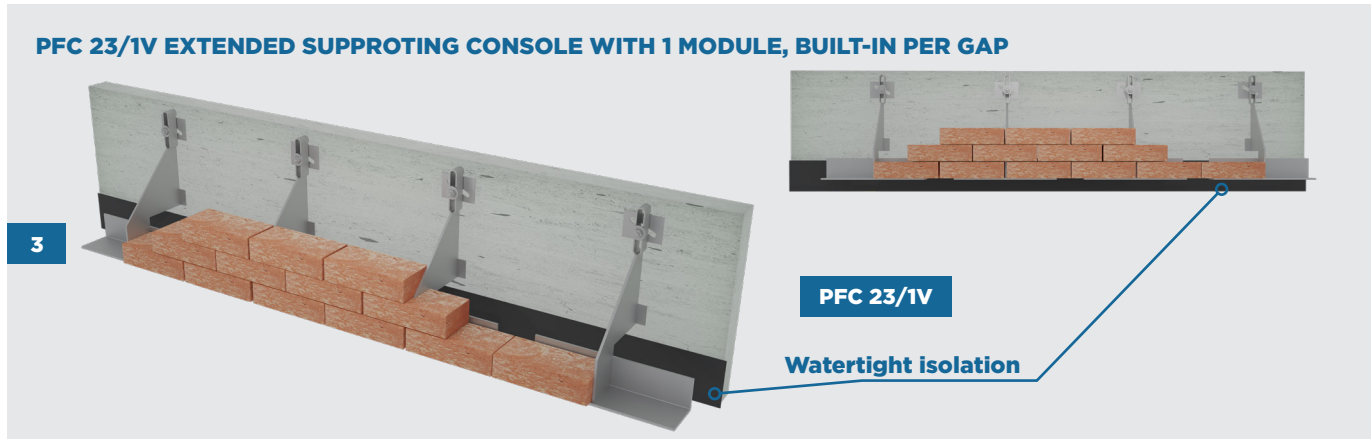
COVERING-WALL STARTING FROM THE BASE WITHOUT CONSOLE WITH PFR VENTAIL WALL TIE



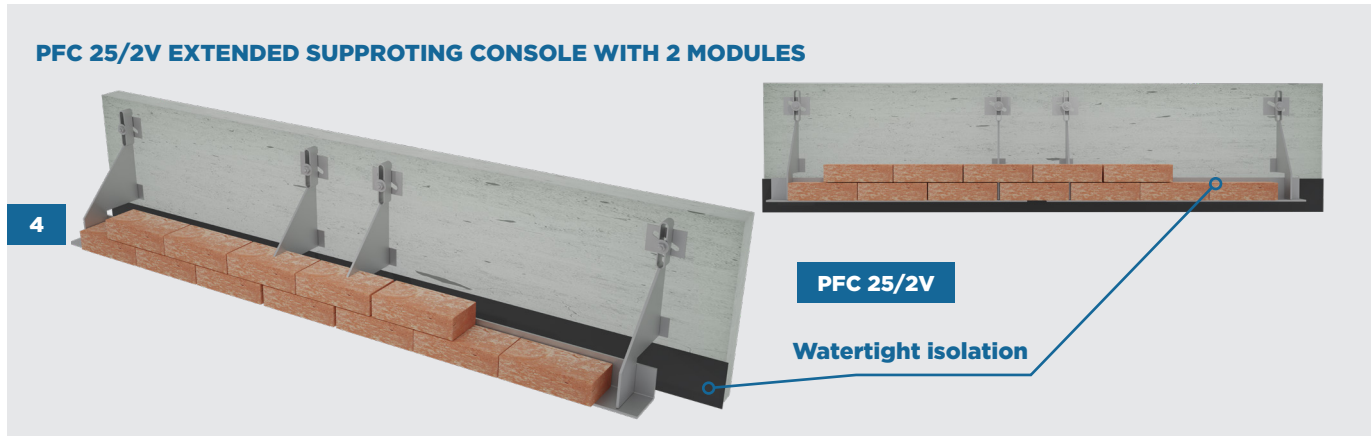
PFC 21/1V EXTENDED SUPPROTING CONSOLE WITH 1 MODULE, BUILT-IN PER GAP



PFC 23/1V EXTENDED SUPPROTING CONSOLE WITH 1 MODULE, BUILT-IN PER GAP

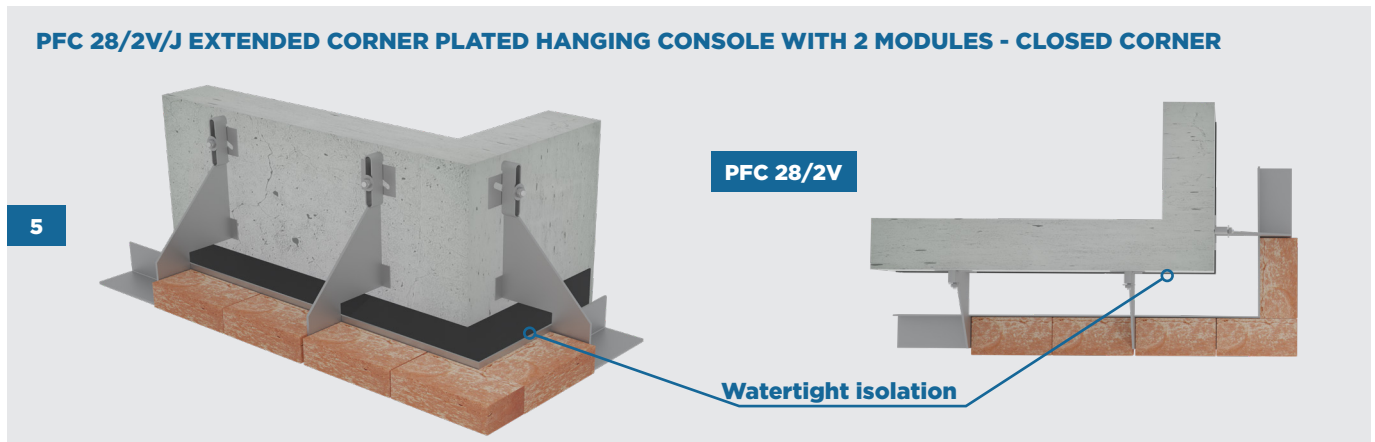


PFC 25/2V EXTENDED SUPPROTING CONSOLE WITH 2 MODULES

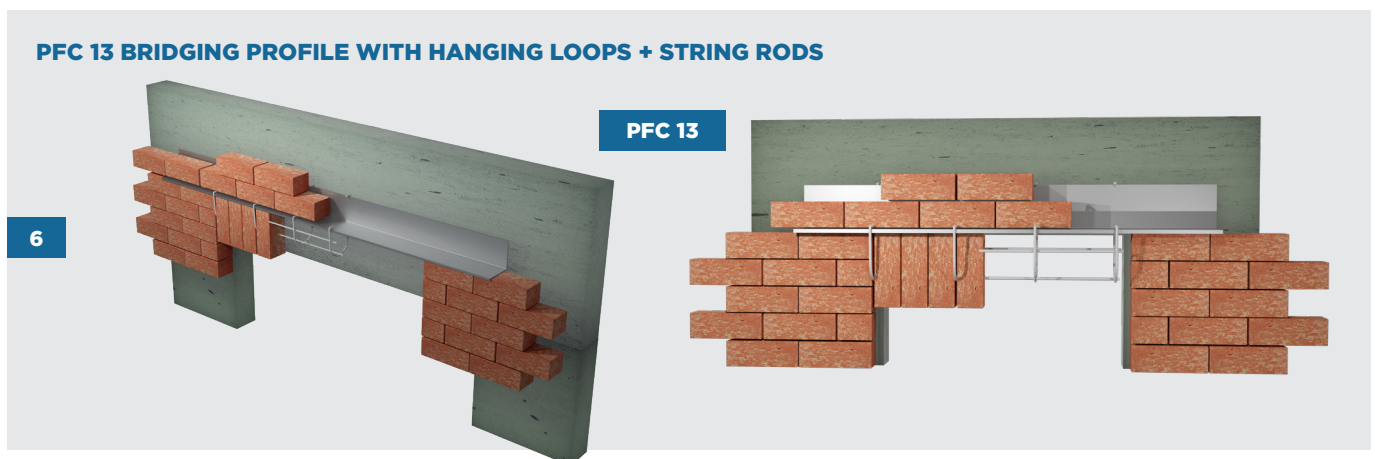


USING PATTERNS

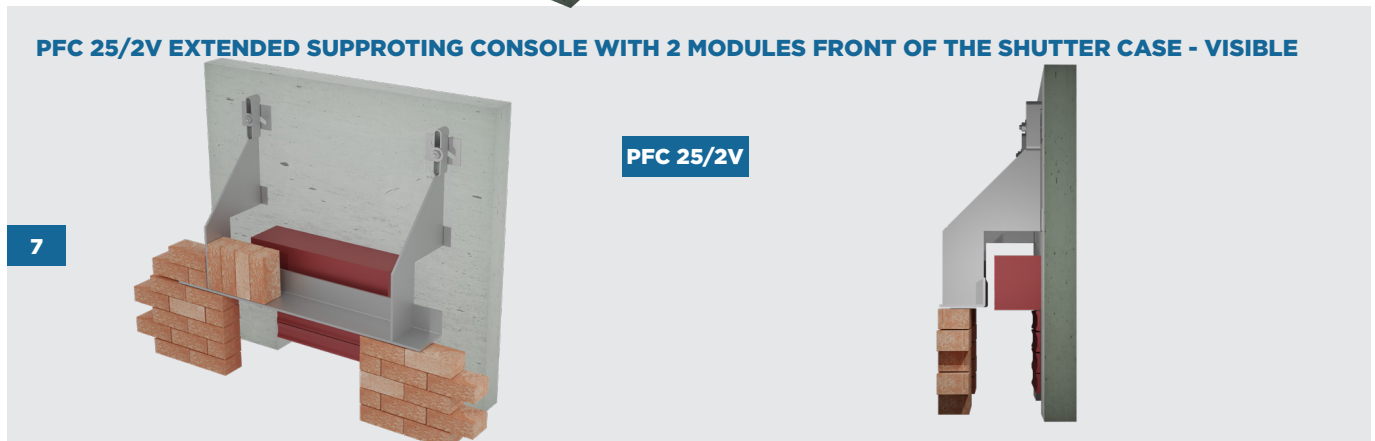
PFC 28/2V/J EXTENDED CORNER PLATED HANGING CONSOLE WITH 2 MODULES - CLOSED CORNER



PFC 13 BRIDGING PROFILE WITH HANGING LOOPS + STRING RODS



PFC 25/2V EXTENDED SUPPROTING CONSOLE WITH 2 MODULES FRONT OF THE SHUTTER CASE - VISIBLE



PFC 25/2 SUPPROT CONSOLE WITH 2 MODULES AND HANGING LOOPS IN SUSPENDED BRICKS - ROW LOOPS IN SUSPENDED BRICKS-ROW

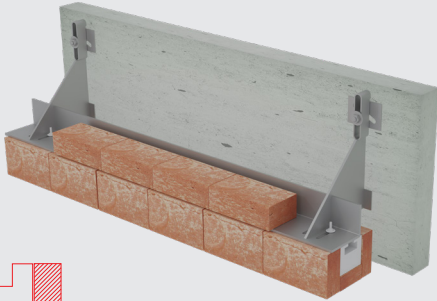
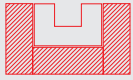




USING PATTERNS

PFC 26/2V HANGING PROFILE CONSOLE WITH 2 MODULES AND PREPRODUCED HORIZONTAL CONCRETE BRIDGING

9

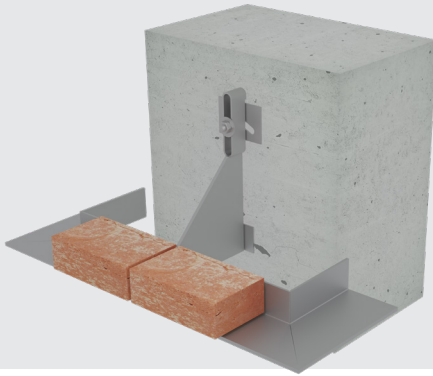


PFC 26/2V



PFC 24/1 PILLAR SUPPORT CONSOLE WITH 1 MODULE - CLOSING THE FACADE WALL-FACE

10

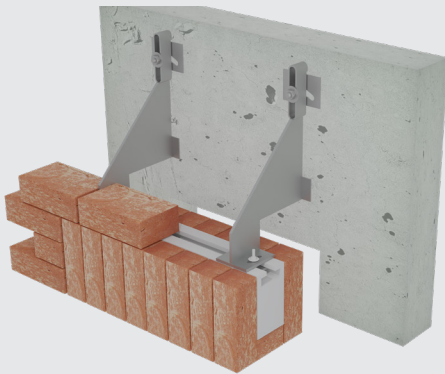


PFC 24/1

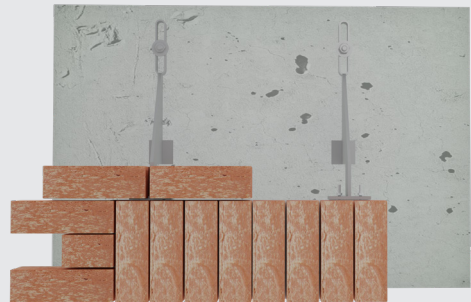


PFC 22/1V HANGING CONSOLE WITH 1 MODULE WITH PREPRODUCED VERTICAL CONCRETE BRIDGING

11

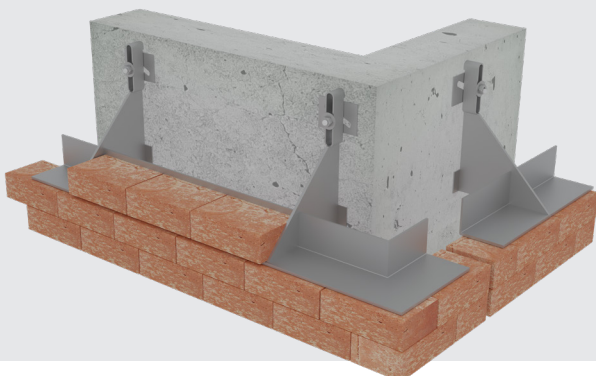


PFC 22/1V



PFC 28/2J CORNER PLATED CONSOLE WITH 2 MODULE - CORNER WITH OPENED GAP

12



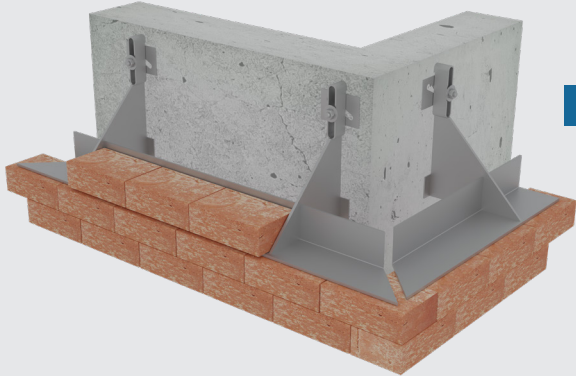
PFC 28/2-J



USING PATTERNS

PFC 27/2-J45 BEVEL CORNER SUPPORTING CONSOLE- CORNER WITH CLOSED GAP

13

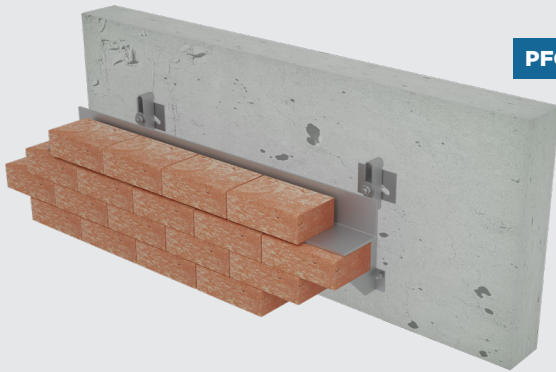


PFC 27/2-J45



PFC 20/2 UPPER SUPPORTING CONSOLE WITH 2 MODULES

14

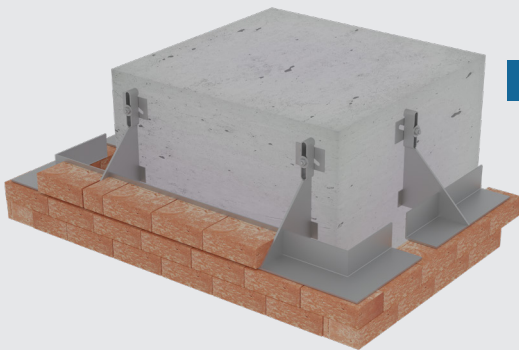


PFC 20/2



PFC 28/2-JB 2 CORNER PLATED CONSOLE WITH 2 MODULES - CORNER AROUND THE PILLAR

15

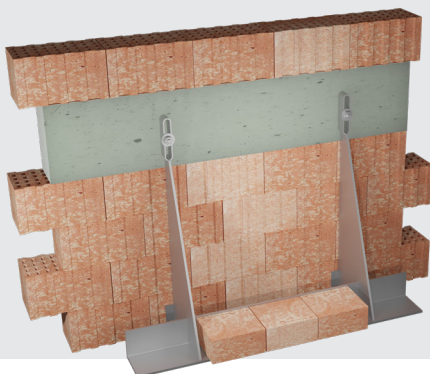


PFC 28/2-JB

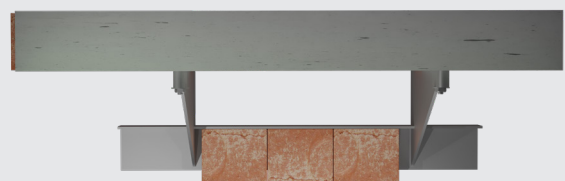


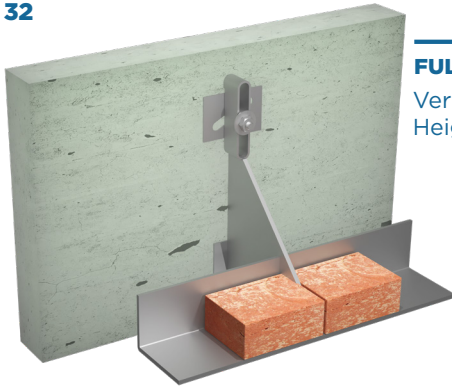
PFC 29/2 SLAP SUPPORTING CONSOLE WITH 2 MODULES

16



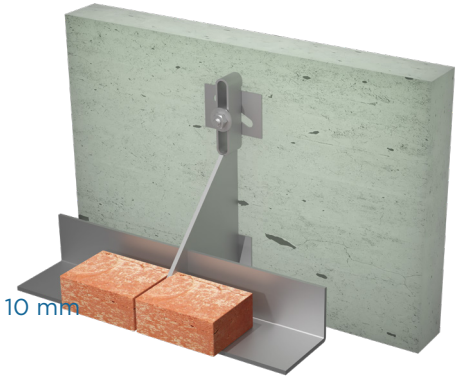
PFC 29/2





FULL SUPPORT

Vertical adjustment of console: ± 30 mm
Height of masonry: max. 12 m



AT LEAST 2/3 SUPPORT

Horizontal brick adjustment: ± 10 mm
Height of masonry: max. 6 m

- 01.** After checking the building's dimensions, line up the openings, corner shapings and the locations of vertical dilatation gaps, and align the course-joint flagstone rows for vertical dilatation gaps according to brick size.
- 02.** Cut an adequate size opening in the insulation material for the console elements; put it aside and then reinsert the insulation material following the mounting of the element.
- 03.** After marking, drill the levelled mounting points according to the anchor table, clean them and insert the mounting anchor into the bore-hole with the forced coupling suited to its type. The shortest distances between the edge and the bore-holes should be taken into consideration.
- 04.** Push the rear height adjustment shimming plate with tilted oval bore-hole onto the mounted anchor. Insert the console with the square washer and fix it with a nut. Fasten it with a torque wrench according to the specified value after final adjustment.
- 05.** Set the console holding the masonry roughly in a vertical plane then perform fine adjustment with the rear height adjustment plate by ± 30 mm. Check whether the corner plate of the console rests on the wall-face properly (at least 25 mm from the edge).
- 06.** The console can be adjusted by ± 10 mm over its support in a horizontal direction, but support for the brick must be ensured by at least 2/3 of its size.
- 07.** The L-profiles holding the covering resting on the holder consoles must be supported until the masonry consolidates.
- 08.** The implementation of horizontal dilatation gaps shall take place in the lower plane of the support console row. During installation, you must keep in mind that horizontal supporting may not hinder vertical dilatation.
- 09.** Heat insulation shall be mounted with heat insulation mat discs via ventail tie on the wall-face; remove the condensed vapour from the covering or heat insulation with a drip disk to prevent soaking.
- 10.** Install at least 5 ventail tie per square meter, though this will also depend on the wall structure and the size of the protrusion.
- 11.** For a pleasant appearance, use rated continuous bridging pieces over the openings in the case of visible support.
- 12.** In the vertical brick rows above openings, the suspension loop fixing at every third course-joint with two rows of horizontal rods. Support with shuttering is required until consolidation of the vaultage.
- 13.** The installation of scaffold anchoring to the background masonry replaces the ring bolts from the scaffolding in the brick covering. The installation of scaffold anchoring must be documented in order to enable the implementation of scaffolding in the future.
- 14.** The attic parapet profil is fixed vertically every 75 cm and fixed into the covering horizontally with anchoring plates in every three rows

LOADING AND SIZING CONCERNING TO FRAME

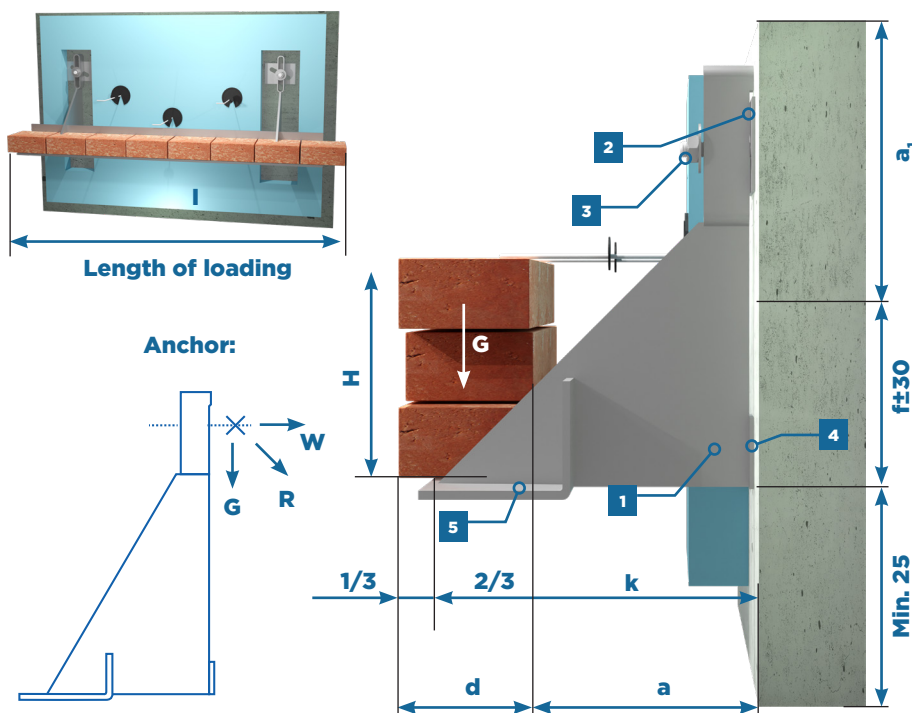
LOAD HAVING AN INFLUENCE ON BRICK-COVERING

SPECIFIC GRAVITY OF BRICK

Type	kN/m ³
Lime-sand brick	20,0
Hollow brick	17,0
Solid clinker	25,0
Small hollow clinker	20,0
Large hollow clinker	18,0
Mortar-frogged clinker	23,0

LOADING LEVELS ACCORDING TO COHERENT DATAS

Levels	I.	II.	III.
Console	3,5 kN	7,0 kN	10,5 kN
Anchor	M10x165	M12x185	M16x205



CALCULATING THE LOAD ON A CONSOLE

Spec.gravity of brick [kN/m³]

Thickness of brick [m] d

Air space [m] a

Hight of walling [m] H

Thickness of interstice [m] f

Length of loading [m] l

Fixing hight [m] r

Protrusion of console [m] k

Edge distance [m] a_r

Loading of walling [kN] G

Resultant force [kN] R

Pull-out force [kN] W

NAMING THE PARTS OF THE CONSOLE

- 1 Module
- 2 Square washer-plate for hight setting
- 3 Anchor with washer and nutl
- 4 Corner-plate
- 5 Supporting

LOAD BEARING CONSOLE ELEMENT:

$$G \text{ [kN]} = \gamma \text{ d [m]} \times H \text{ [m]} \times l \text{ [m]}$$

LOAD BEARING FIXING ELEMENT:

For straight pull-out:

$$W \text{ [kn]} = (a \text{ [m]} + d/2 \text{ [m]}) \times G \text{ [kN]} / (r-0,03 \text{ [m]}) - f \text{ [m]}$$

For angle pull-out: loading

$$R \text{ [kN]} = \sqrt{W^2 + G^2}$$

CALCULATION EXAMPLE:

DATAS

Spec.gravity of brick = 20,0 kN/m³

Thickness of brick d = 0,12 m

Air space a = 0,10 m

Hight if walling H = 2,80 m

Thickness of interstice f = 0,01 m

Length of loading l = 1,04 m

Fixing hight r = 0,19 m

Number of modules n = 2 db

CALCULATION:

$$G = 20 \times 0,12 \times 2,80 \times 1,04 / 2 = 3,49 < 3,5 \text{ kN}$$

Type PFC 25/2 - 190 / 960 - 3,5

CHOOSING OF FIXING ELEMENT

$$W = (0,10 + 0,12/2) \times 3,49 / (0,19 - 0,03) - 0,01 = \mathbf{3,72 \text{ kN}} < 8,3 \text{ kN}$$

$$R = \sqrt{3,72^2 + 3,49^2} = \mathbf{5,1 \text{ kN}} < 12,6 \text{ kN}$$

Type: M10 injectable dowel rod

Per fixing points: 3,5-7,0-10,5 kN

Security factor: 3x f + EC-8 = 4 f

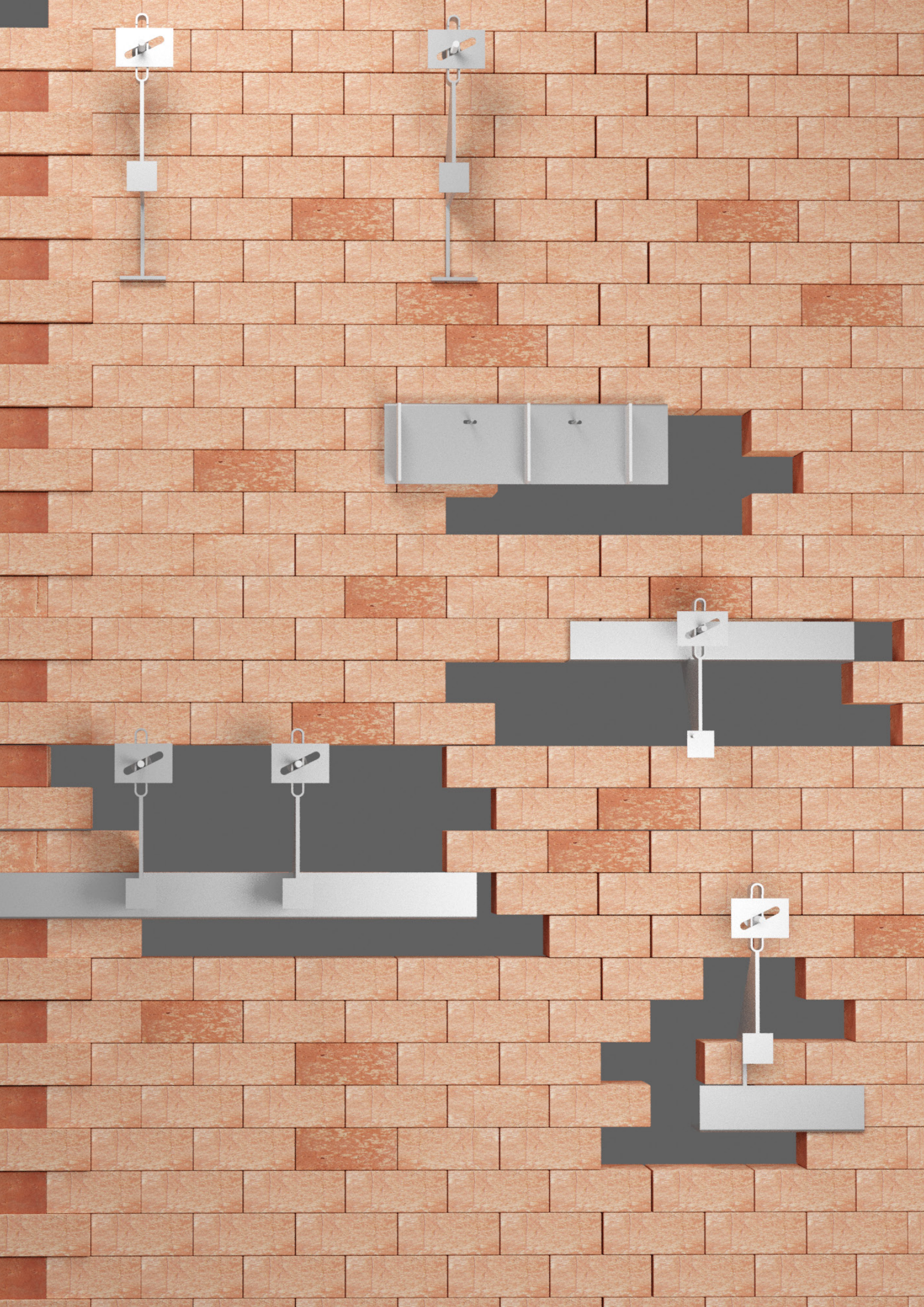


34 EU standards:

DIN EN 18515	Cladding for External walls
DNI EN 18516	Cladding for External walls - ventilated at rear
DIN 1053-1	Brickfacade specifications - former, withdrawn
DIN EN 1996-1-1 (EC-6)	Design of masonry structures - valid

EUROCODE	General standards	Standards	Stainless steel
EN 1990 EC	Basis of structural design	EN 10088	List of stainless steels
EN 1991 EC-1	Actions on structures	EN 1011	Recommendations for welding of stainless steel
EN 1993 EC-3	Design of steel structures	EN ISO 3506	Corrosion-resistant stainless steel fasteners
EN 1998 EC-8	Design of structures for earthquake resistance	EN 10163	Hot-rolled steel plates
EN 1999 EC-9	Design of aluminium structures		Aluminium structures
	Load bearing standards	EN 573	Aluminium and aluminium alloys
DIN EN 1045	Reinforced concrete structures	EN AW 6060	Mounting aluminium profiles
DIN EN 1055	Action on structures	EN AW 6060	Moulded aluminium profiles
EN 771	Hollow masonry units	EN AW 5754	Cold-rolled alloy sheets

1. The aerated, layered brick façade is made with openly ventilated air vents.
2. The thermal cross-section of the layered façade system satisfies the basic insulation and damp-proofing requirements, and creates an energy efficient, maintenance-free and aesthetic external look.
3. The advantages of the façade cladding are its shading effect and its ventilation gap efficiency. The ability of the air vent to drain off moisture depends on the height of the air column. In order to equalize the vapour diffusion pressure, open horizontal and vertical joints are used.
4. The width of the air vent should be at least 30-40 mm. Traces of mortar should be wiped from the inner side of the brick cladding to maintain the flushing and drying effect.
5. One of the prerequisites of the state-of-the-art architecture is the technical installation of elements in such a way that thermal expansion movements should take place without damage. Movements and forces due to different thermal loads are not transferred between the elements, they are equalised on the expansion joints.
6. A dilation gap of at least 15 mm of width should be applied where the outer layer meets the doors and windows.
7. A brick façade thinner than 90 mm is considered as covering, so the number of wall ties should be doubled. The thin structure of the masonry requires support at every floor.
8. A brick façade thicker than 90 mm is considered cladding, it requires support at least at every second floor.
9. A façade higher than 20 m should only be made of 120 mm thick brick cladding with full support.
10. In the case of the cladding of a frontispiece, support console should be applied at every 4 metres. The brick should protrude no further than 15 mm from the outer edge of the console.
11. Lower and upper air vents should be installed between the horizontal support of the brick cladding.
12. In the case of the plinth, lower air vents should be installed from the third row or the snow line.
13. The lower air vents drain off the condensed moisture, the upper air vents help prevent condensation. The continuous ventilation between the two layers create a funnel effect, so the inner, insulated cladding is not in direct contact with the outer weather conditions.
14. The brick cladding built upon the waterproof plinth base plate should be anchored immediately above the bent-up edge of the waterproof base plate.
15. In the case of vaults, expansion gaps should be designed with adequate clearance above and adjacent to the doors and windows.
16. The combined value of all forces and movements acting on the façade should be taken into account for the structural calculations to define the appropriate type of stainless steel support and suspension consoles to use.





HR
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FACADE MOUNTING TECHNOLOGY

+36 20 377 1361

+36 25 503 730

info@hrprefix.com

H-2400 Dunaújváros, Neumann János street 7.

www.hrprefix.com