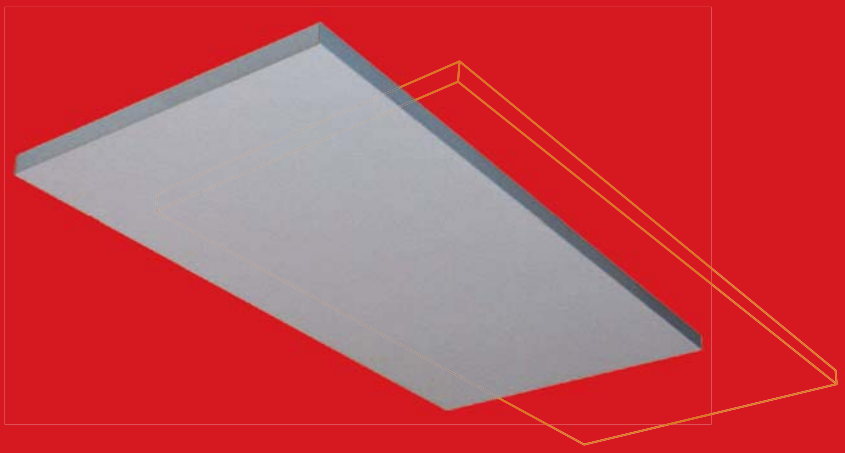
COMPLIANT WITH THE NEW EUROPEAN STANDARD EN 14037



Heating / Air Conditioning

Pulsar P.FE Radiant Panel

ICIM

Quality management systems

ISO 9001 – Cert. n° 0545/5

SABIANA

ENVIRONMENTAL COMFORT

Heating
Air Conditioning

SABIANA

ENVIRONMENTAL COMFORT

CONTENTS

SABIANA is the leading company in Europe in the design, production and sale of radiant panels operating on hot water, high temperature hot water and steam.

Since 1971, over 5 million square metres of panels installed in different environments (small, medium and large industries, hangars, gyms and theatres, small and large offices) prove the quality of the **SABIANA** radiant heating system and products.

Heat by radiation means absolute silence, no movement of air and a uniform temperature in the entire environment. In effect, being distributed better, the heat is more pleasant and comfort is optimised, without increasing the air temperature. The result is a feeling of absolute comfort with an air temperature that is 3°C lower than the operative temperature perceived by people.

The efficiency of the **SABIANA** radiant panels is also economic. In fact, besides the energy savings due to the fact that the operative temperature is different from the air temperature, this totally static product does not, unlike the traditional systems, have an electric motor and does not require maintenance nor the consumption of electricity.

This translates into long-lasting efficiency. The **SABIANA** radiant panels have a practically unlimited duration.

The **SABIANA** radiant panels can be described as the hygienic heating system par excellence. The system does not create noise nor movement of air and therefore dust. In addition, it avoids annoying streams of air and the circulation of germs, dust and fragrances and thus represents an important contribution to the prevention of allergies and illnesses.

Thermal performance

- The ***Pulsar*** radiant panel is totally static (no circulation of air and no movement of dust).
- Very low thermal gradient between the floor and the ceiling.
- Extremely fast response to changes in settings, without thermal inertia.
- The operating principle of ***Pulsar*** radiant panels is reversible, and thus cooling operation is possible using the radiant ceiling panels, by connection to a chiller or heat pump.

Appearance

- None of the peripheral walls are affected by the installation.
- The ***Pulsar*** radiant panel can be perfectly integrated into all types of false ceiling.
- The visible side is perfectly smooth, adapting to any type of architecture.
- Other RAL colours available on request.

Modularity

- Given its modular dimensions and the design of the water connections, ***Pulsar*** panels can be installed in sequence with ceiling light panels, in complete compliance with the regulations on artificial lighting.

Hygiene

- The design of the ***Pulsar*** panel allows it to be installed in any building, including hospitals and clinics. Indeed, its completely smooth visible surface is recommended, as it allows sanitisation by spraying for combating nosocomial illnesses in hospitals.
- The radiation concept, by avoiding considerable movements of air, prevents the spreading of microbes and bacteriological pollution.

Safety

- ***Pulsar*** radiant panels are inaccessible to the people in the room. Therefore there is no risk of burning or electric shock in schools and paramedical environments.
- No risk of vandalism, in any environment.

Comfort

- By design, the ***Pulsar*** radiant panel guarantees a uniform temperature in all seasons.
- The ***Pulsar*** radiant panel is a totally static heating system without the circulation of air and without lifting dust.
- The operation of ***Pulsar*** is completely silent.
- In summer, the ***Pulsar*** panel can be used for cooling without creating steams of air and with a uniform temperature throughout the environment.

Savings

- The heating requirement of a building heated with ***Pulsar*** radiant panels is, according to the EN 12831 standard, much lower than the requirement with traditional heating systems.
- The experience acquired by **SABIANA** in the field of radiant panels guarantees the reliability of ***Pulsar*** over time.
- ***Pulsar*** does not require special maintenance and consequently has no maintenance costs.

Assembly

- The dimensions of ***Pulsar*** radiant panels make them easy to handle on site.
- The panels are connected by flexible pipes without welding.

Version P.FE
installed within false ceiling

Version W.FE
free hanging

Version R.FE
for plasterboard ceilings

CONNECTIONS SUPPLIED NOT MOUNTED

Technical description

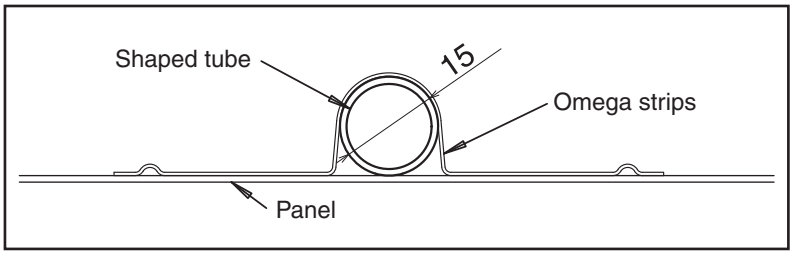
SABIANA *Pulsar* radiant panels are supplied in four sizes, which can be perfectly integrated into any false ceiling.

Indeed, the lengths of 1.20, 1.80, 2.40 and 3.00 m ensure optimum integration into 600 x 600 mm modular ceilings, the standard dimension for false ceiling panels in Europe.

The visible side is perfectly flat, meaning that ***Pulsar*** radiant panels can match all types of false ceiling panels available on the market.

As standard, the panels are supplied in RAL 9016 colour, with a satin finish created by an epoxy-polyester coat dried in a furnace at 180°C. Other RAL colours are also available for the architect to choose from.

The ***Pulsar*** radiant panels are made of a radiating galvanized steel plate, 1 mm thick.
On the panel is fixed a galvanized steel pipe with 15 mm of external diameter, 1.2 mm thick. The galvanized omega strips welded to the panels hold the correct spacing of the tubes and secure the best surface contact between the tube and the panel.



The paint complies with the European Standard 76/769/EEC.

Class of reaction to fire: A1

Emission of the radiant surface: $\epsilon = 0{,}96$

The ***Pulsar*** is supplied with an insulating layer of mineral wool (30 mm thick) protected by an aluminium sheet (25 micron thick) to be mounted on the top of the panel.

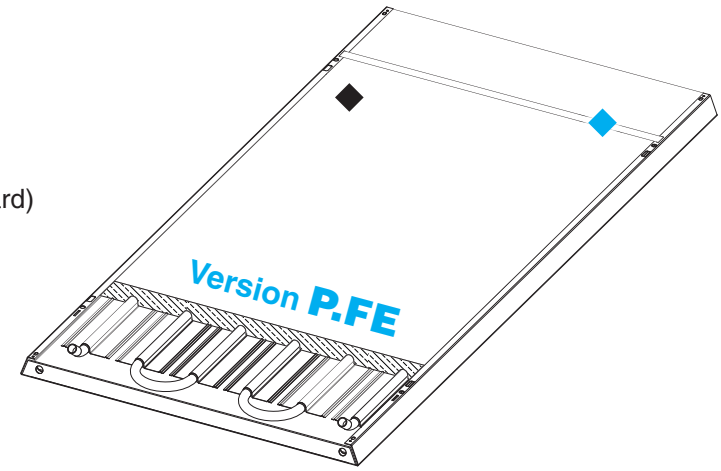
Insulation specifications:

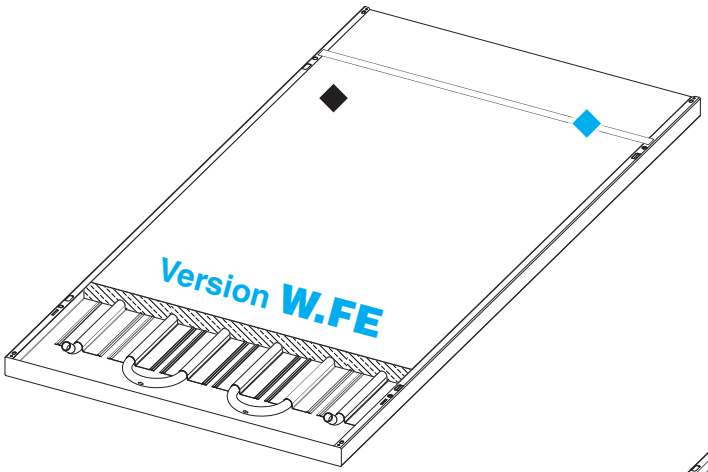
Class A1 according to EN 13501-1 standards

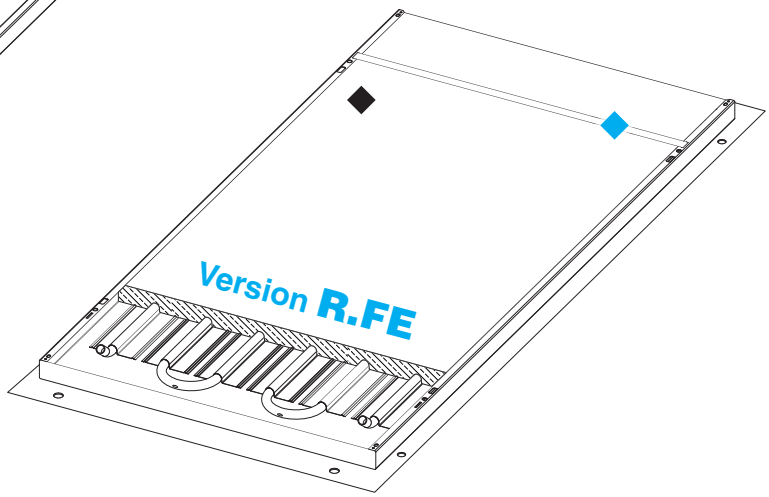
Thermal conductivity 0,037 W/mK
(according to UNI CTI 7745 and UNI FA 112 standard)

Density 14 kg/m^3

Thermal resistance 0,81 m^{2}K/W







◆ Insulation, 30 mm thick (supplied not mounted)

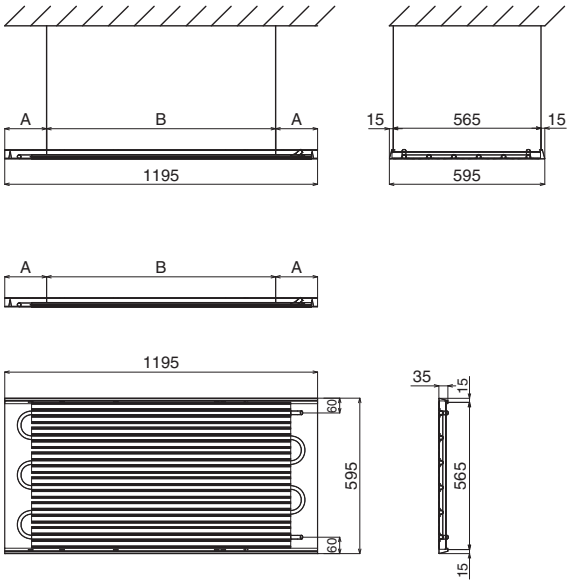
◆ Insulation holding strip

Pulsar P.FE installed within false ceilings

Weights and Dimensions

Pulsar P STANDARD

Size 1



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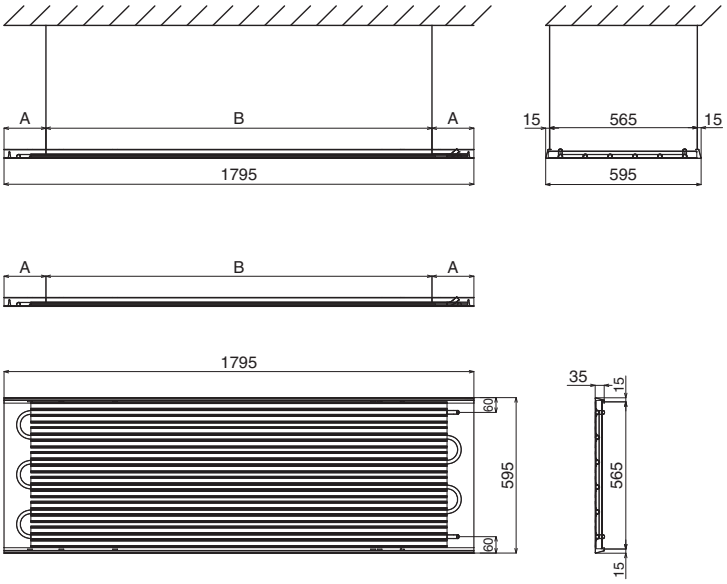

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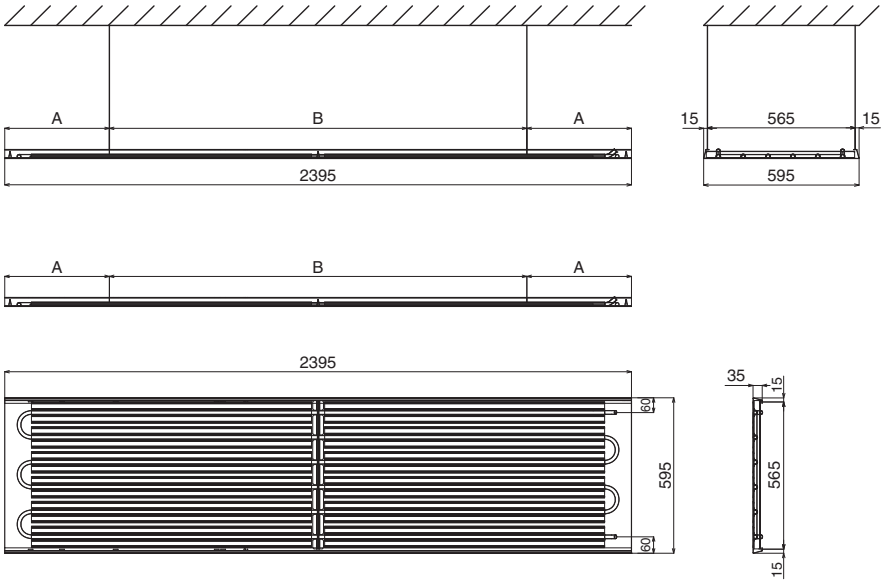
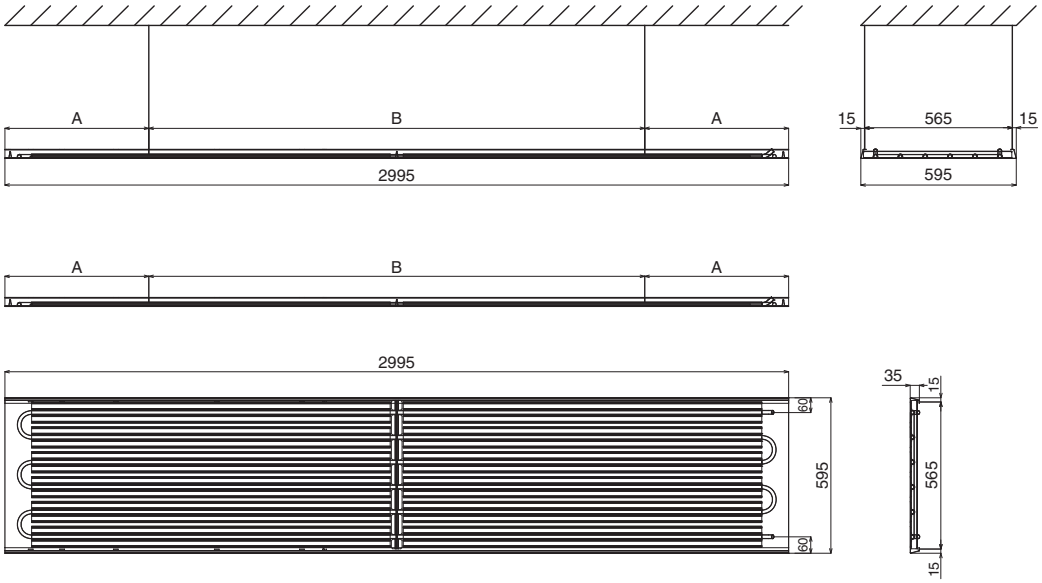


Pulsar P.FE installed within false ceilings

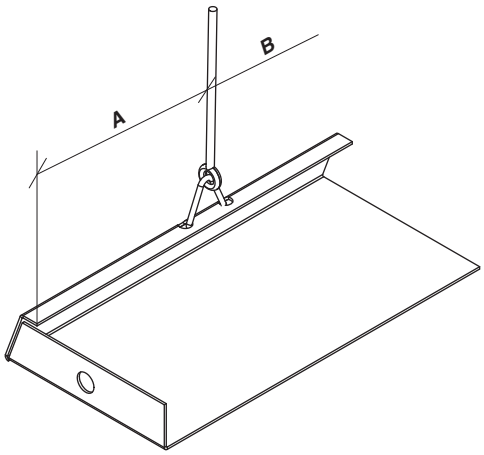
Weights and Dimensions

Pulsar P STANDARD

Size 4



Installation with CLIP



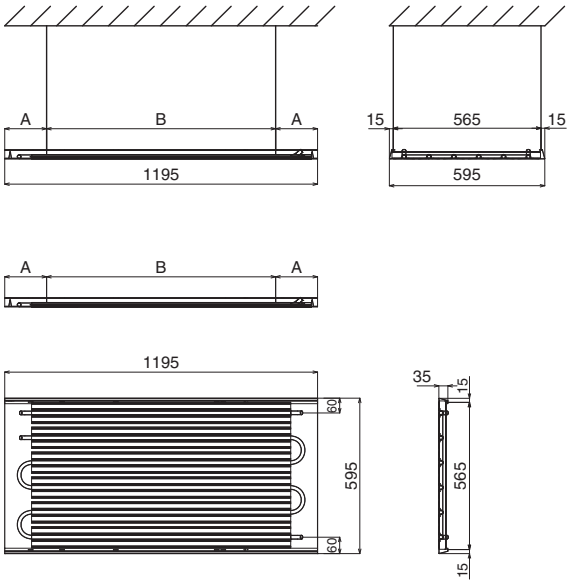
Version	Size	Model	Code	Length (mm)	Hanging brackets (mm) with CLIP: A	Hanging brackets (mm) with CLIP: B	Weight (kg)	Water content (l)
P.FE	1	P.FE 1	0084001	1195	175	845	13,8	1,3
	2	P.FE 2	0084002	1795	175	1445	20,7	2,0
	3	P.FE 3	0084003	2395	415	1565	27,6	2,8
	4	P.FE 4	0084004	2995	565	1865	34,5	3,5

Pulsar P.FE installed within false ceilings

Weights and Dimensions

Pulsar PA

Size 1



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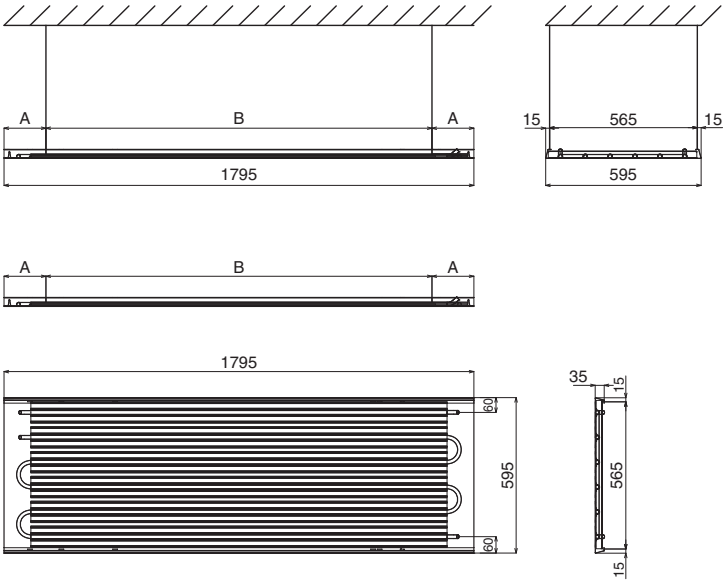

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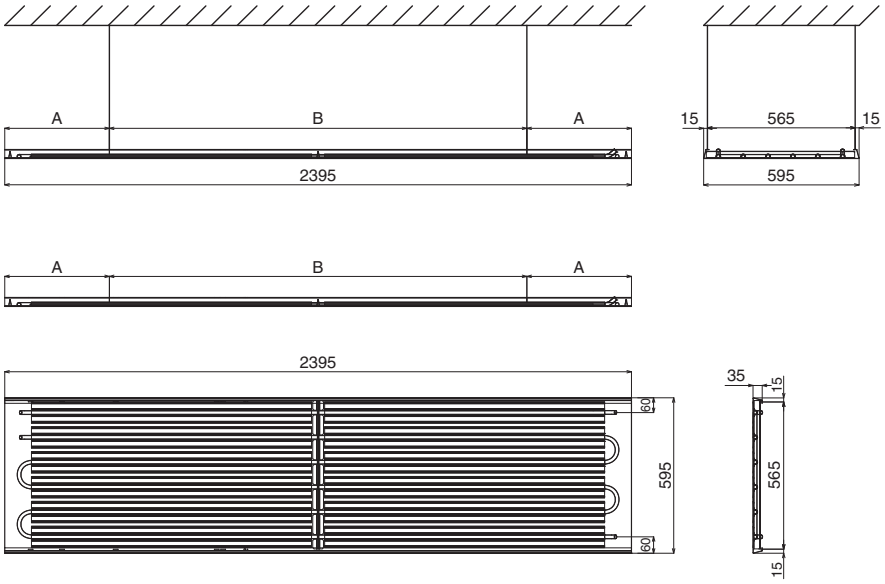
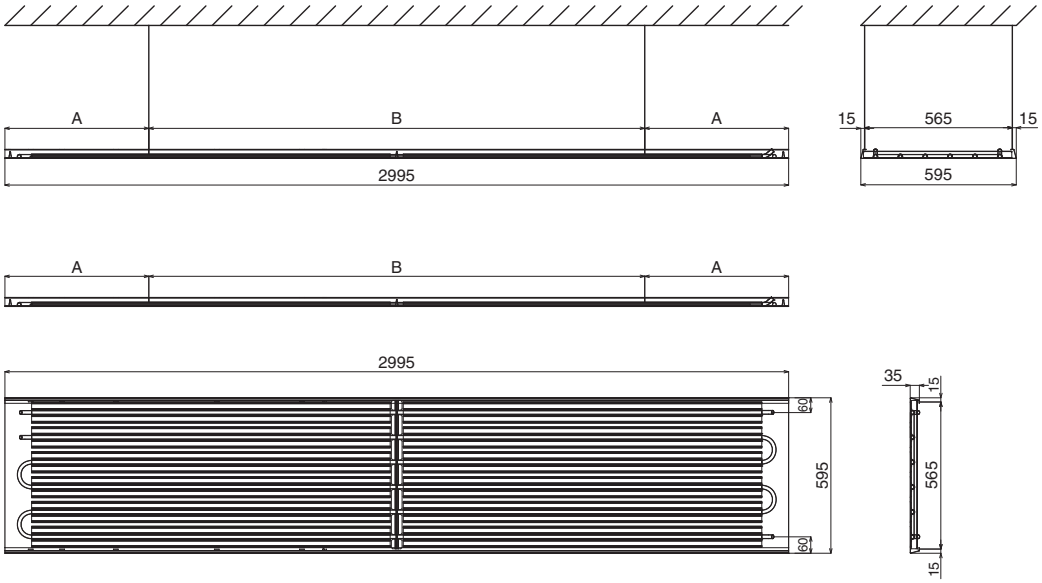


Pulsar P.FE installed within false ceilings

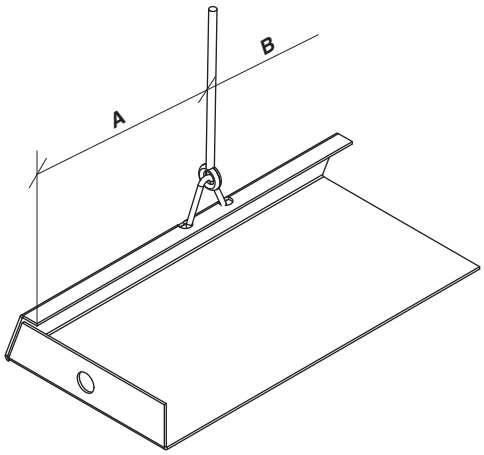
Weights and Dimensions

Pulsar PA

Size 4



Installation with CLIP



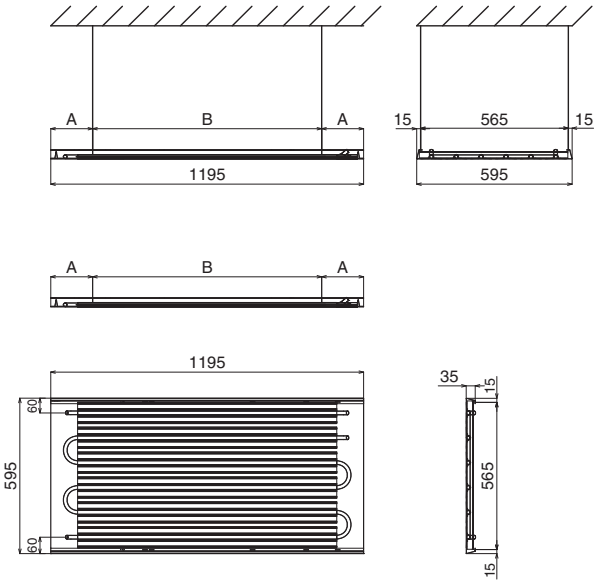
Version	Size	Model	Code	Length (mm)	Hanging brackets (mm) with CLIP: A	Hanging brackets (mm) with CLIP: B	Weight (kg)	Water content (l)
PA.FE	1	PA.FE 1	0084011	1195	175	845	13,8	1,3
	2	PA.FE 2	0084012	1795	175	1445	20,7	2,0
	3	PA.FE 3	0084013	2395	415	1565	27,6	2,8
	4	PA.FE 4	0084014	2995	565	1865	34,5	3,5

Pulsar P.FE installed within false ceilings

Weights and Dimensions

Pulsar PB

Size 1



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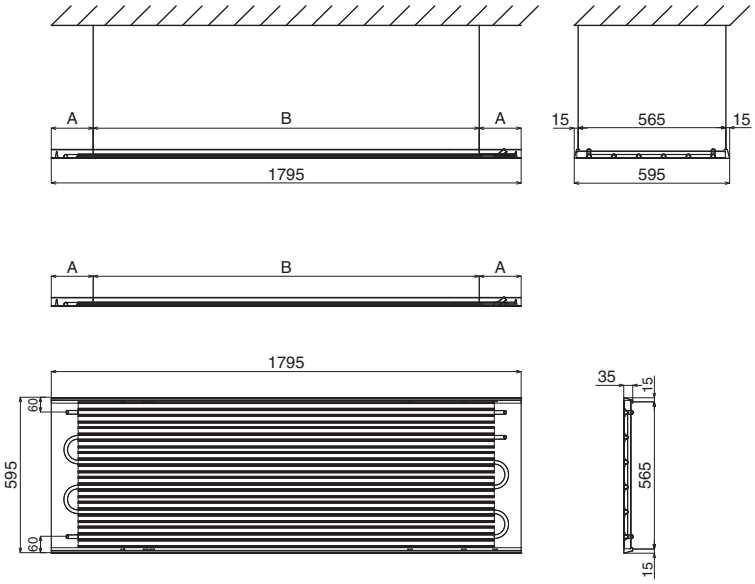

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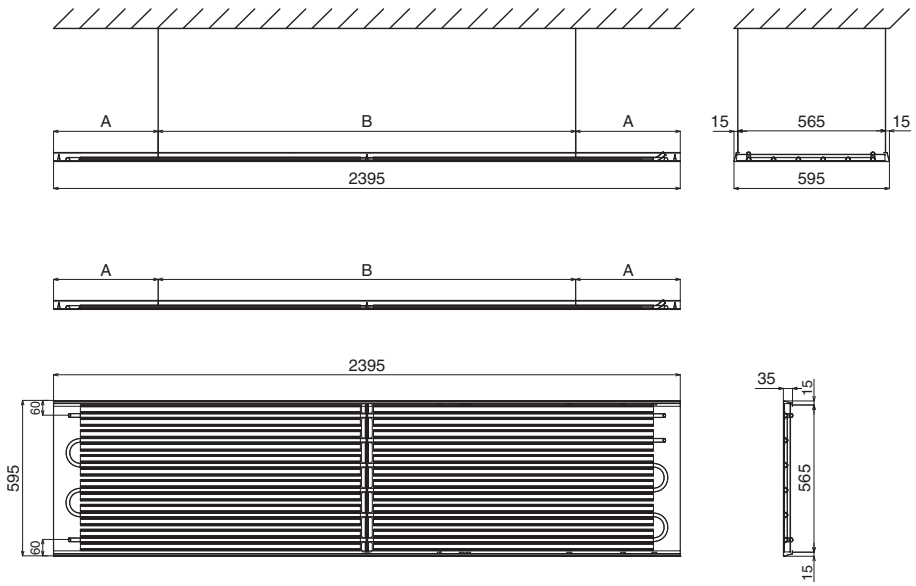
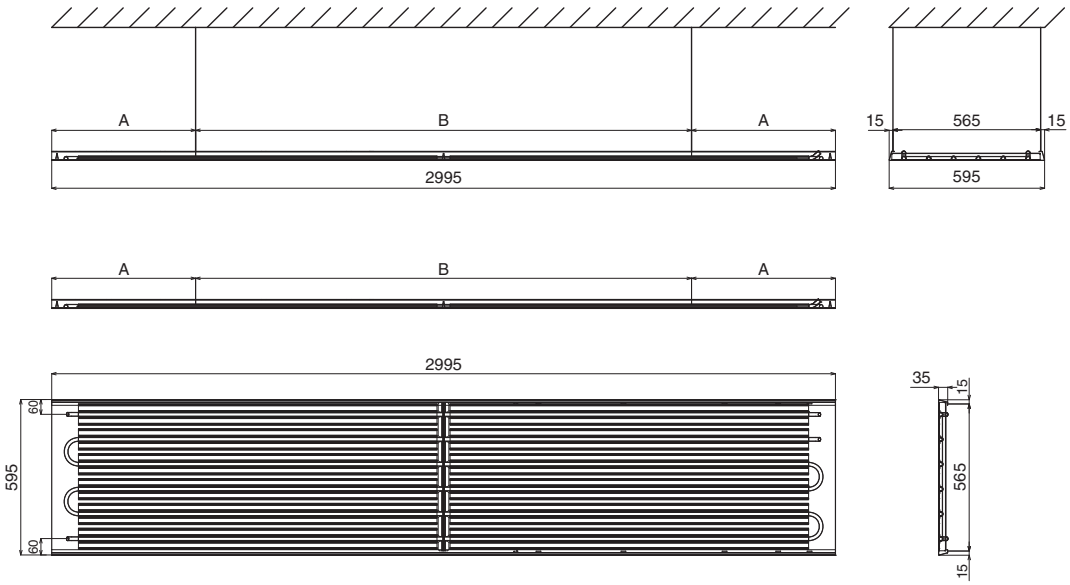


Pulsar P.FE installed within false ceilings

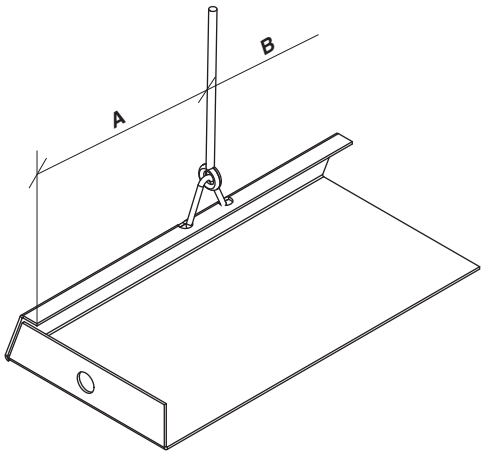
Weights and Dimensions

Pulsar PB

Size 4



Installation with CLIP



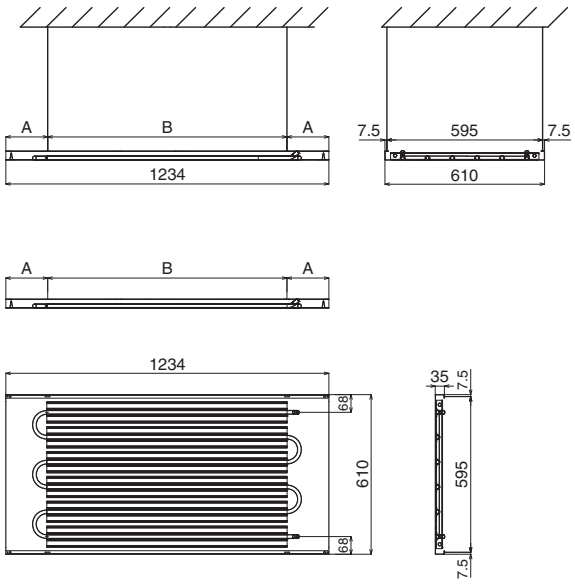
Version	Size	Model	Code	Length (mm)	Hanging brackets (mm) with CLIP: A	Hanging brackets (mm) with CLIP: B	Weight (kg)	Water content (l)
PB.FE	1	PB.FE 1	0084021	1195	175	845	13,8	1,3
	2	PB.FE 2	0084022	1795	175	1445	20,7	2,0
	3	PB.FE 3	0084023	2395	415	1565	27,6	2,8
	4	PB.FE 4	0084024	2995	565	1865	34,5	3,5

Pulsar W.FE free hanging

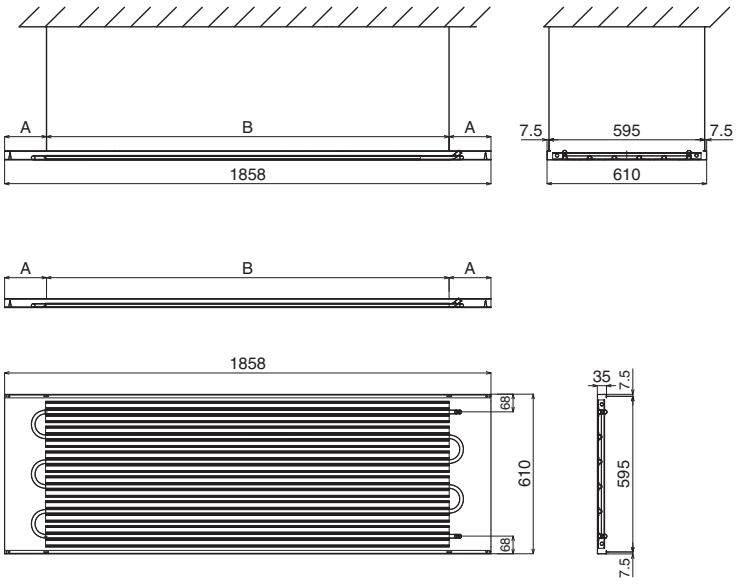
Weights and Dimensions

Pulsar W STANDARD

Size 1



Size 2



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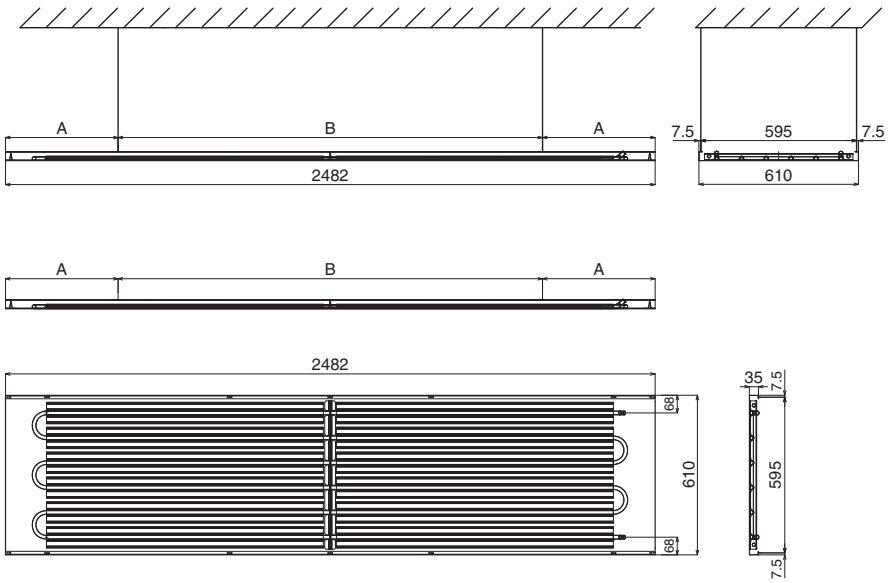
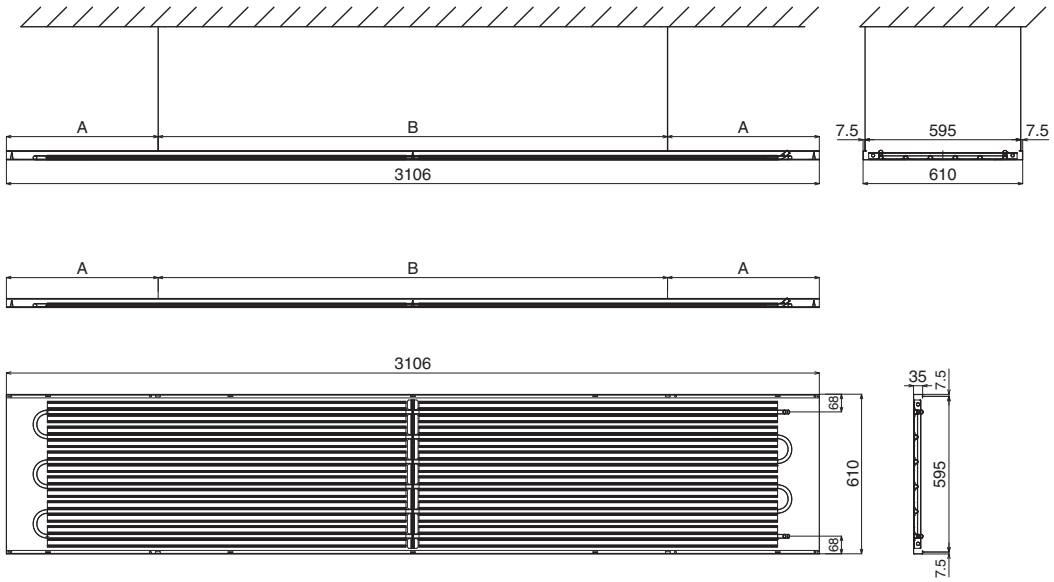


Pulsar W.FE free hanging

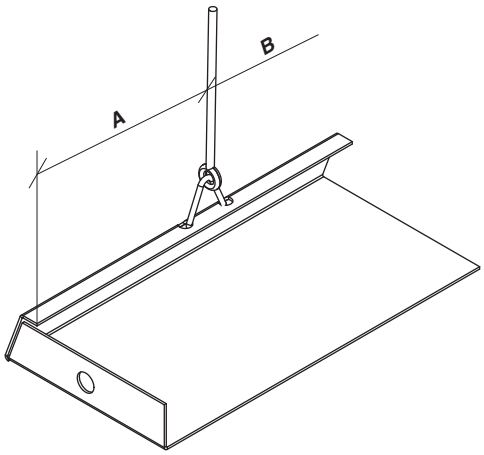
Weights and Dimensions

Pulsar W STANDARD

Size 4



Installation with CLIP



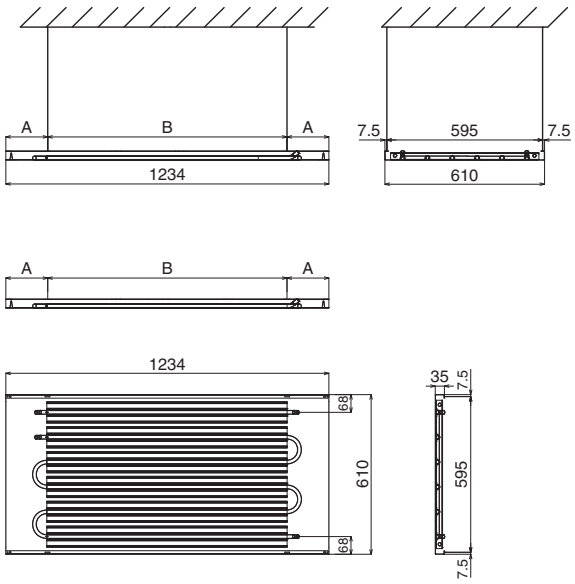
Version	Size	Model	Code	Length (mm)	Hanging brackets (mm) with CLIP: A	Hanging brackets (mm) with CLIP: B	Weight (kg)	Water content (l)
W.FE	1	W.FE 1	0084251	1234	175	884	13,8	1,3
	2	W.FE 2	0084252	1858	175	1508	20,7	2,0
	3	W.FE 3	0084253	2482	445	1592	27,6	2,8
	4	W.FE 4	0084254	3106	595	1916	34,5	3,5

Pulsar W.FE free hanging

Weights and Dimensions

Pulsar WA

Size 1



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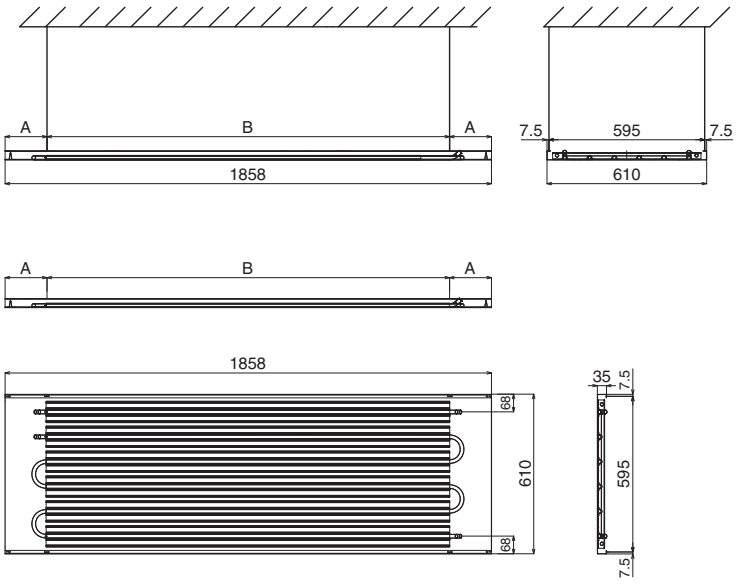

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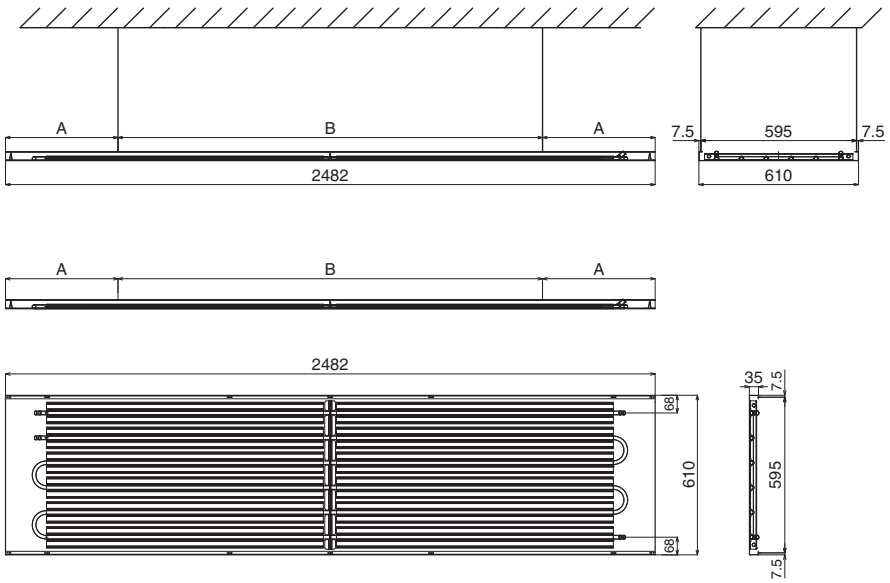
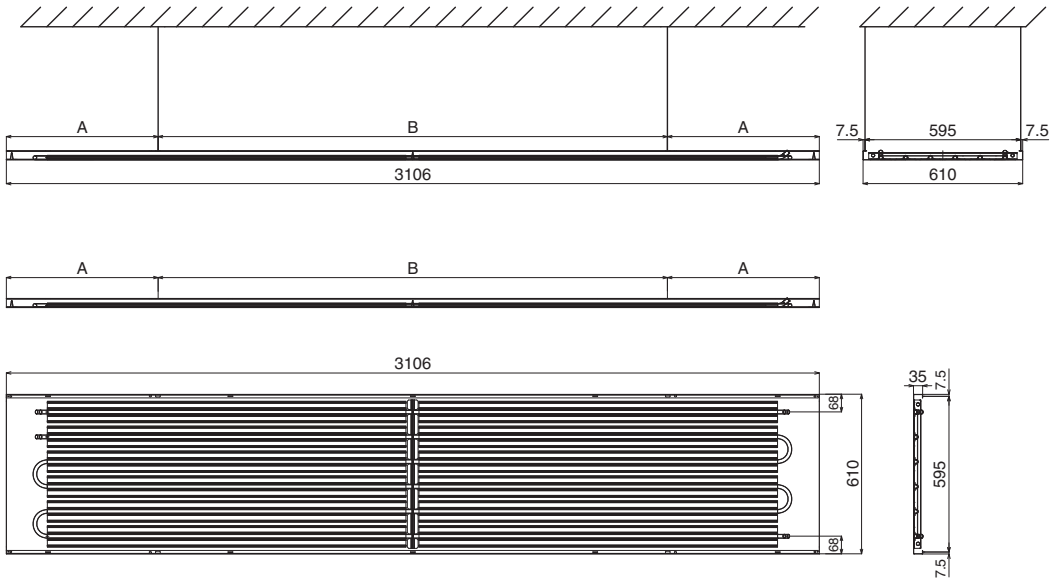


Pulsar W.FE free hanging

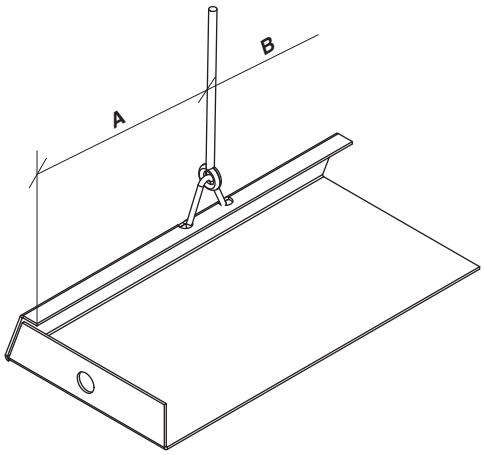
Weights and Dimensions

Pulsar WA

Size 4



Installation with CLIP



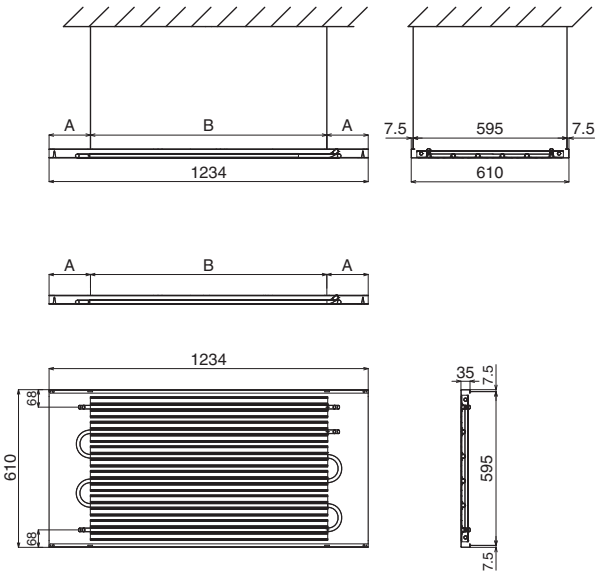
Version	Size	Model	Code	Length (mm)	Hanging brackets (mm) with CLIP: A	Hanging brackets (mm) with CLIP: B	Weight (kg)	Water content (l)
WA.FE	1	WA.FE 1	0084261	1234	175	884	13,8	1,3
	2	WA.FE 2	0084262	1858	175	1508	20,7	2,0
	3	WA.FE 3	0084263	2482	445	1592	27,6	2,8
	4	WA.FE 4	0084264	3106	595	1916	34,5	3,5

Pulsar W.FE free hanging

Weights and Dimensions

Pulsar WB

Size 1



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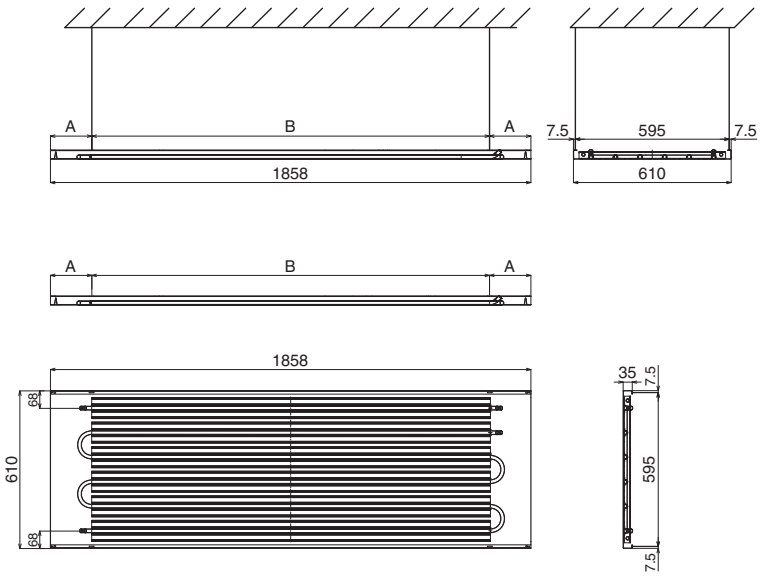

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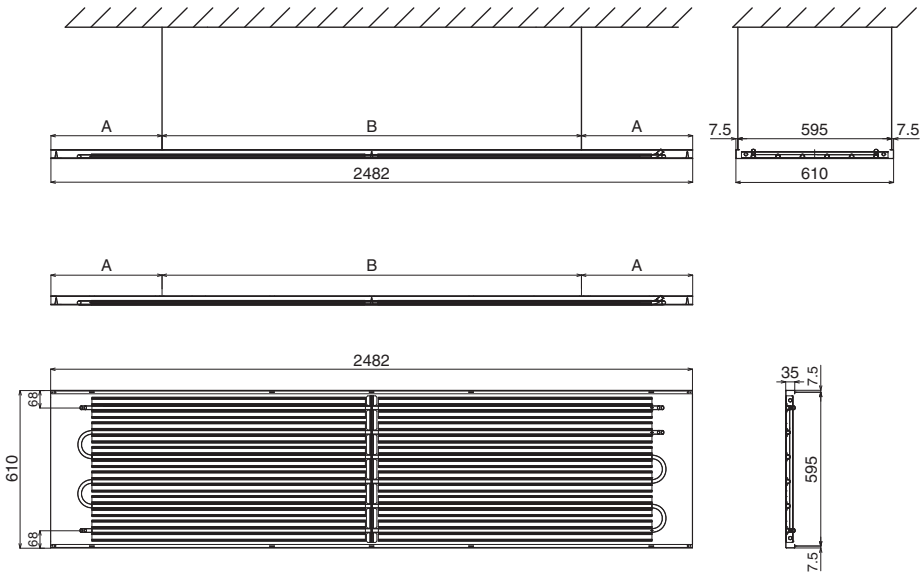
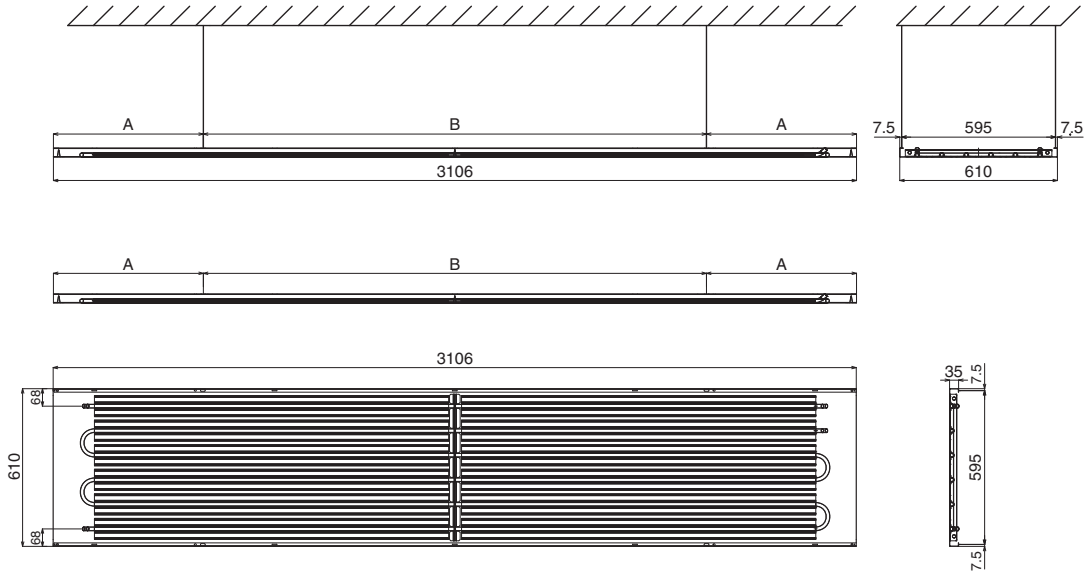


Pulsar W.FE free hanging

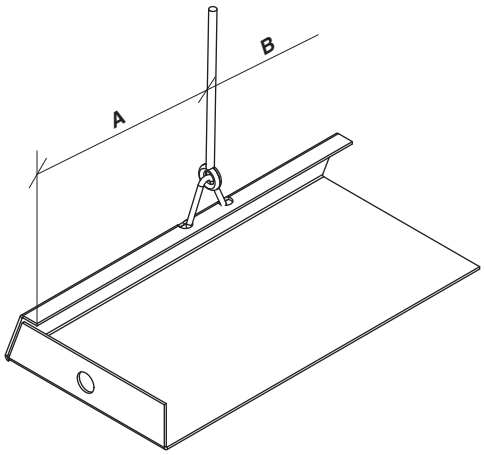
Weights and Dimensions

Pulsar WB

Size 4



Installation with CLIP



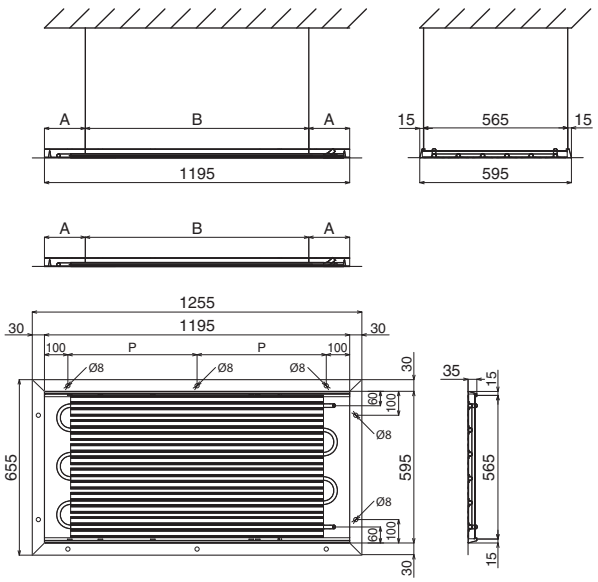
Version	Size	Model	Code	Length (mm)	Hanging brackets (mm) with CLIP: A	Hanging brackets (mm) with CLIP: B	Weight (kg)	Water content (l)
WB.FE	1	WB.FE 1	0084271	1234	175	884	13,8	1,3
	2	WB.FE 2	0084272	1858	175	1508	20,7	2,0
	3	WB.FE 3	0084273	2482	445	1592	27,6	2,8
	4	WB.FE 4	0084274	3106	595	1916	34,5	3,5

Pulsar R.FE for plasterboard ceilings

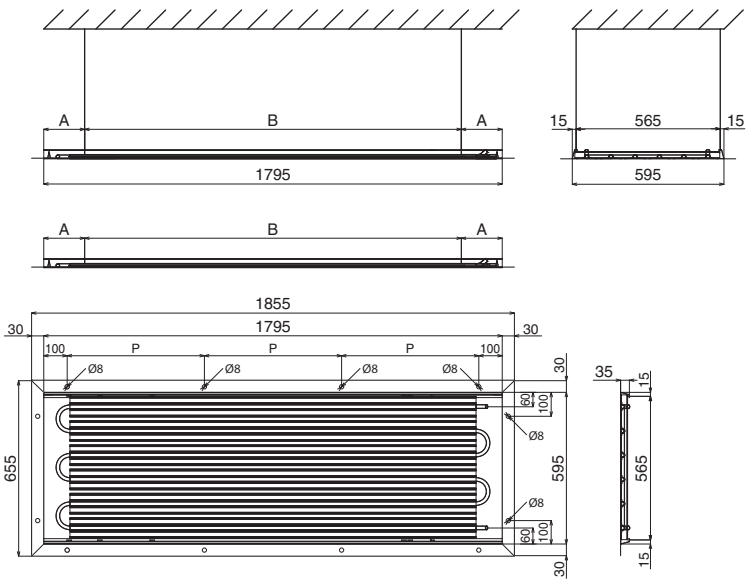
Weights and Dimensions

Pulsar R STANDARD

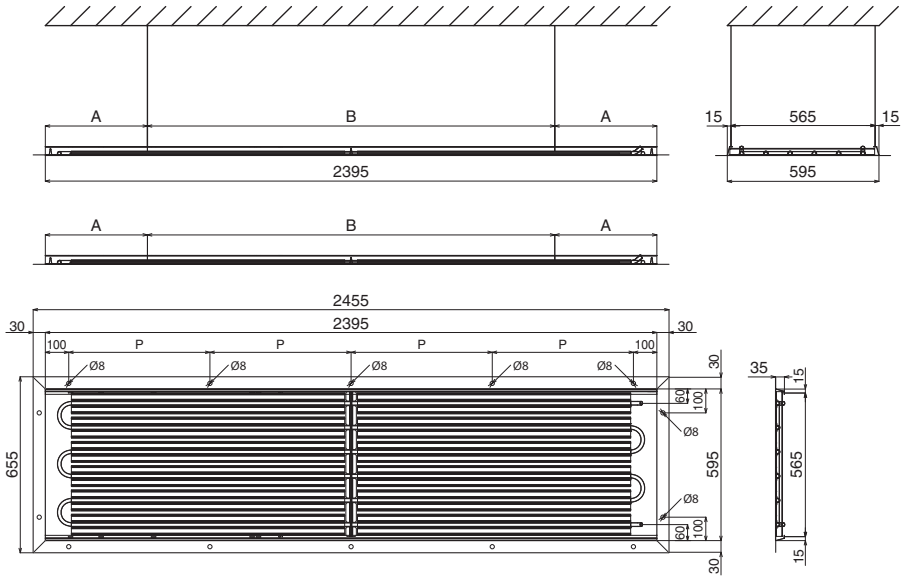
Size 1



Size 2



Size 3

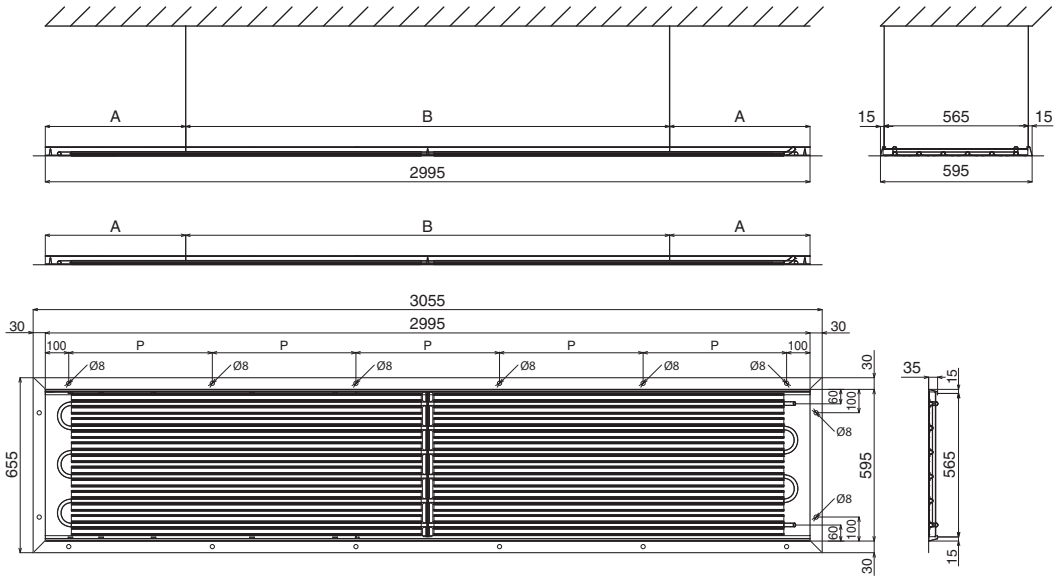


Pulsar R.FE for plasterboard ceilings

Weights and Dimensions

Pulsar R STANDARD

Size 4



Version	Size	Model	Code	Length (mm)	Holes		Weight (kg)	Water content (l)
					P	N° of P		
R.FE	1	R.FE 1	0084041	1195	527,5	2	14,9	1,3
	2	R.FE 2	0084042	1795	551,5	3	22,3	2,0
	3	R.FE 3	0084043	2395	564,0	4	29,7	2,8
	4	R.FE 4	0084044	2995	571,0	5	37,1	3,5

Emission

Characteristic curve of the ***Pulsar*** taken from tests carried out as per the EN 14037 standard:

$$Q = K \cdot (\Delta Tm)^n$$

Q = emission W/m
K = heating coefficient of the unit = 3,28086 W/m
ΔTm = difference between the mean water temperature and the room temperature
n = heating exponent of the unit = 1,1536

The emission of the Sabiana ***Pulsar*** radiant panels has been certified
by the laboratory at the University of Stuttgart H.L.K.
applying the harmonised European Standard EN 14037, with the report number DC210 D12.2956

Example:

Nominal emission for a meter of Pulsar panels with ΔTm = 55°C : 334 W/m

Total nominal emission of Pulsar panels with ΔTm = 55°C

Pulsar 1	***Pulsar 2***	***Pulsar 3***	***Pulsar 4***
W = 396	W = 596	W = 797	W = 997

CE
10

EN 14037
Ceiling
radiant panels

Pulsar P.FE thermal emissions in accordance with the European Standard EN 14037-1

ΔTm °C	***Emission*** W/m	***ΔTm*** °C	***Emission*** W/m	***ΔTm*** °C	***Emission*** W/m	***ΔTm*** °C	***Emission*** W/m	***ΔTm*** °C	***Emission*** W/m
89	582	75	478	61	376	47	279	33	185
88	574	74	470	60	369	46	272	32	179
87	567	73	463	59	362	45	265	31	172
86	559	72	456	58	355	44	258	30	166
85	552	71	448	57	348	43	251	29	160
84	544	70	441	56	341	42	245	28	153
83	537	69	434	55	334	41	238	27	147
82	529	68	427	54	327	40	231	26	141
81	522	67	419	53	320	39	225	25	134
80	515	66	412	52	313	38	218	24	128
79	507	65	405	51	306	37	211	23	122
78	500	64	398	50	299	36	205	22	116
77	492	63	391	49	292	35	198	21	110
76	485	62	383	48	285	34	192	20	104

Δtm = difference between the average water temperature and the room temperature.

Pulsar P.FE cooling emissions in accordance with the European Standard EN 14037-4

	Cooling emission			
Δtm	With insulation		Without insulation	
°C	W/m	W/m²	W/m	W/m²
5	24	40	33	56
6	29	49	40	68
7	35	58	48	80
8	40	68	55	92
9	46	77	62	105
10	52	87	70	118
11	57	96	78	130
12	63	106	85	143
13	69	116	93	156
14	75	126	101	169
15	81	136	108	182

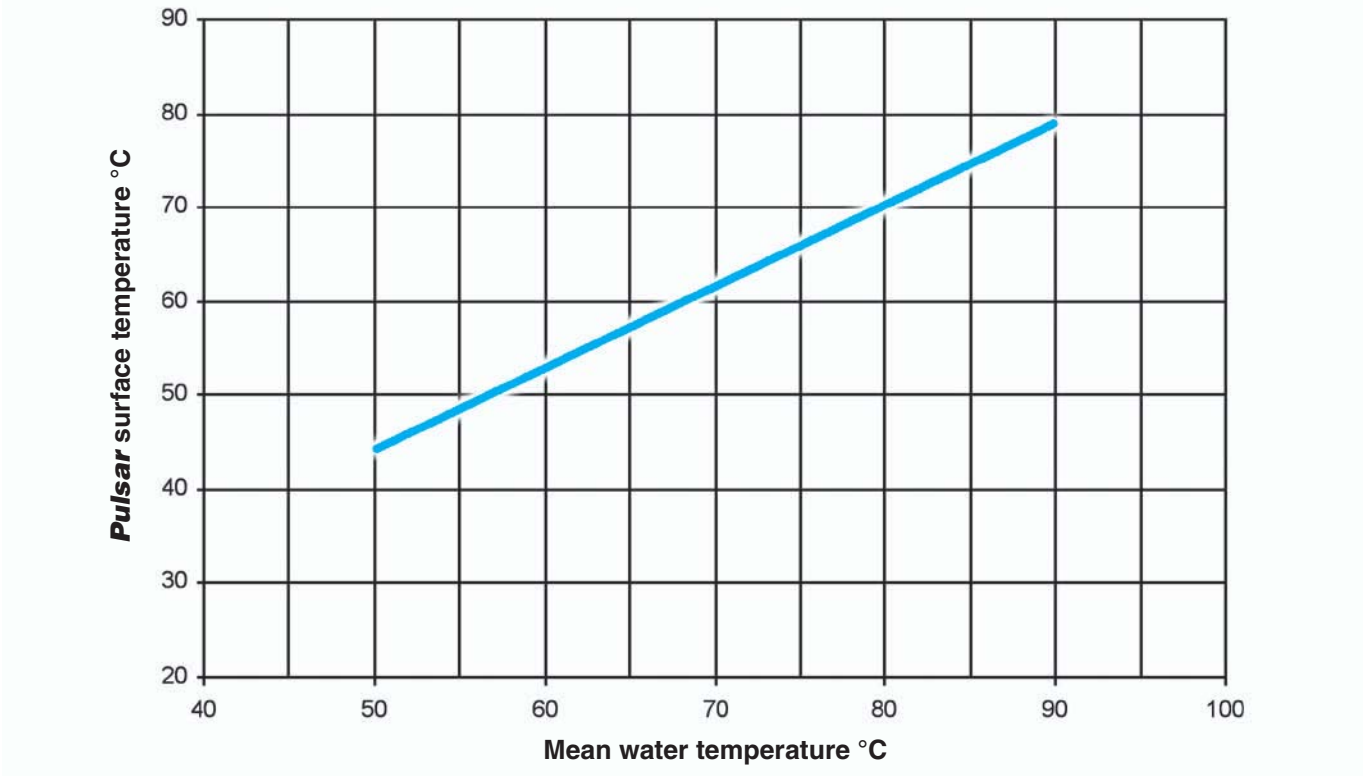
Example:

Water temperature 17/21°C, air temperature 28°C - 50% means Δtm = 9°C.

The cooling emission of the ***Pulsar*** is 46 W/m.

Δ*tm* = difference between the average water temperature and the room temperature.

Mean surface temperature

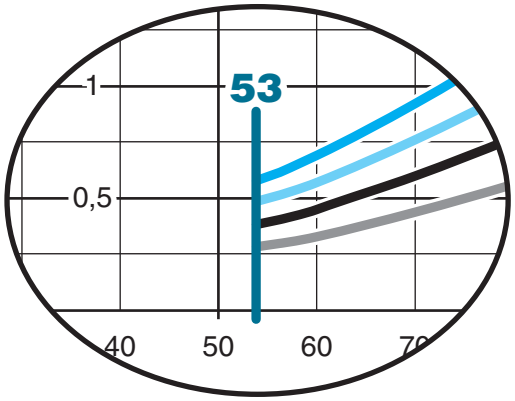


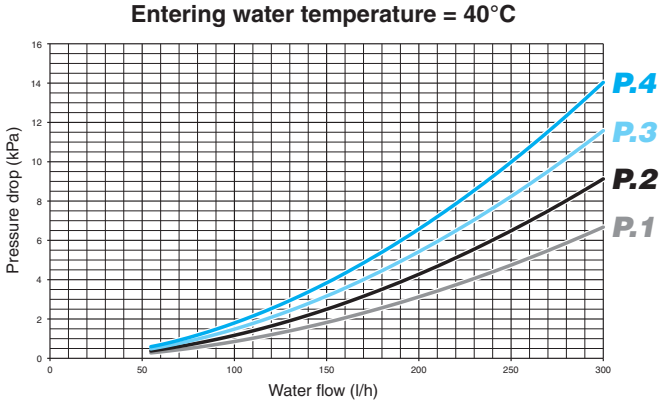
Lowest water flow – *Version P.FE/W.FE*

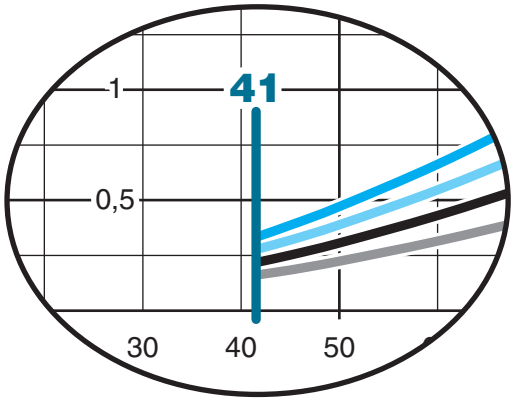
Lowest water flow to be supplied in order to obtain the correct emission.

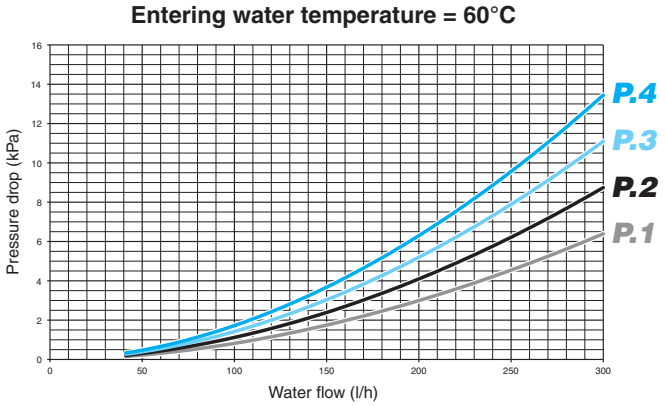
Leaving water temperature °C	40	60	70	80
Lowest water flow l/h	53	41	36	32

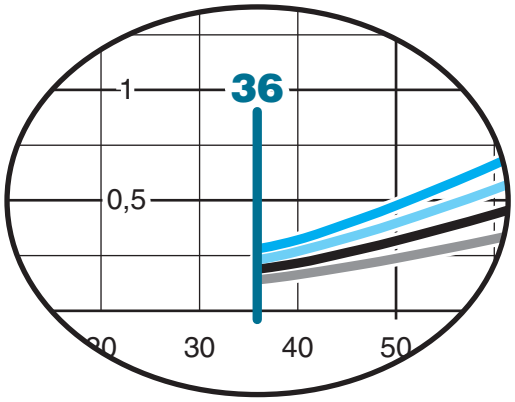
Pressure drop – *Version P.FE/W.FE*

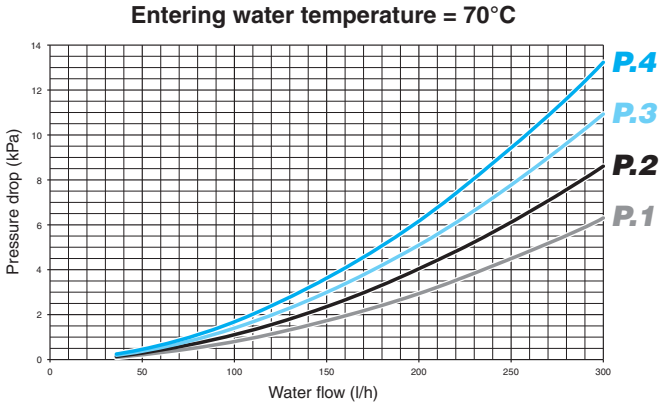


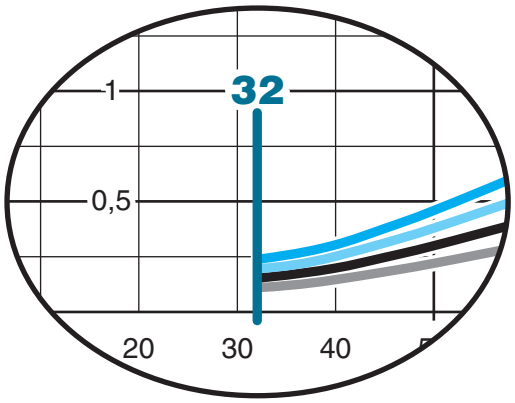


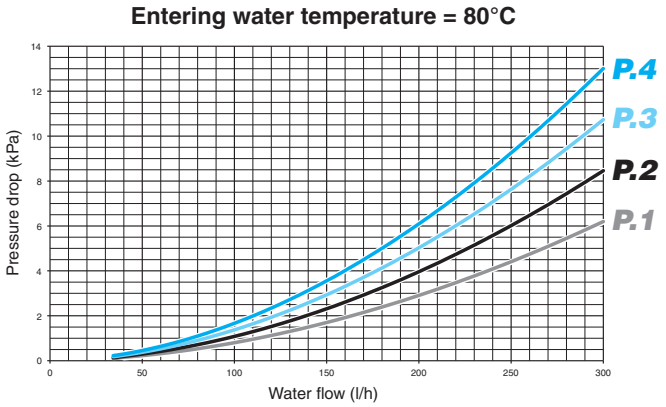


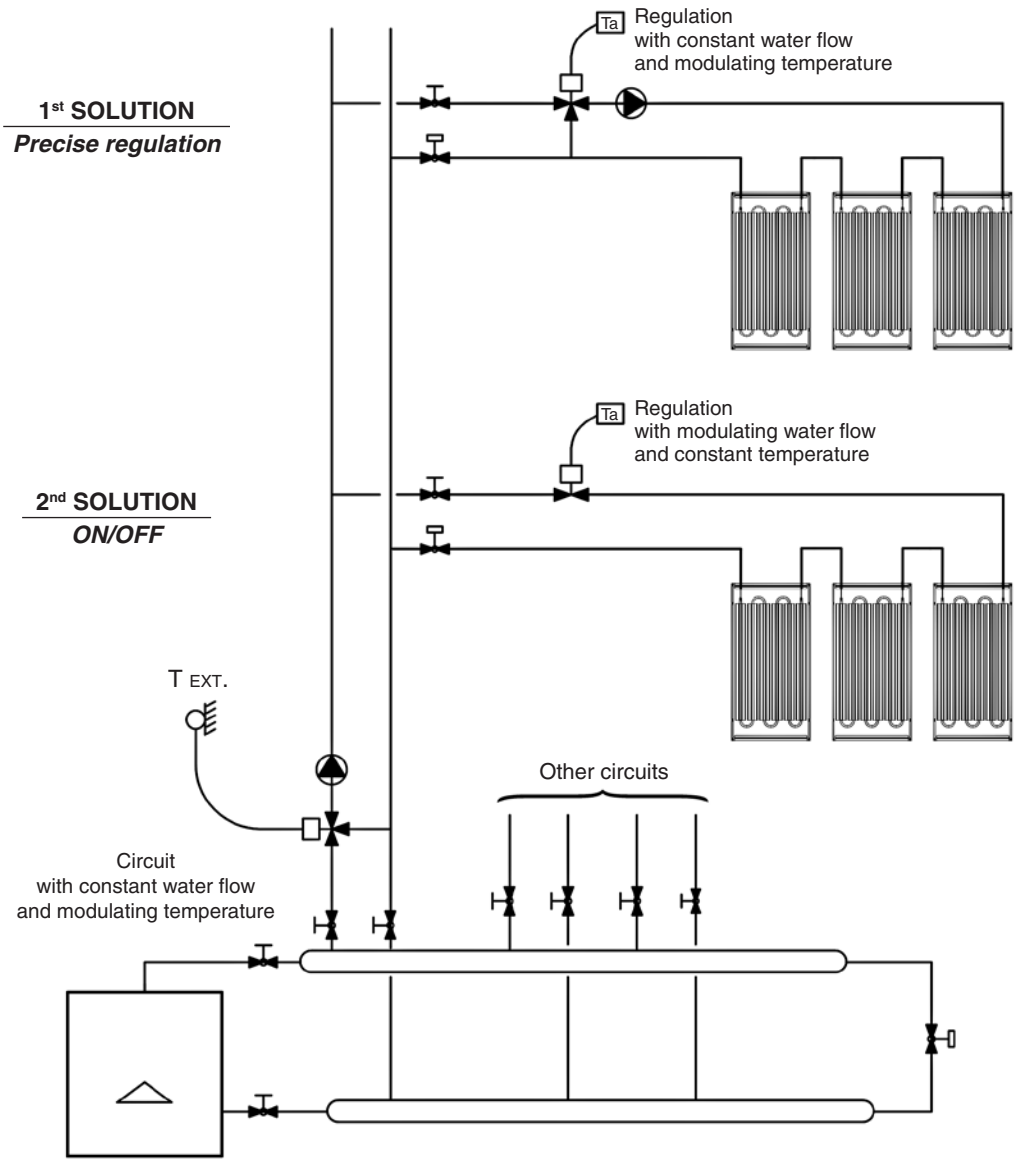




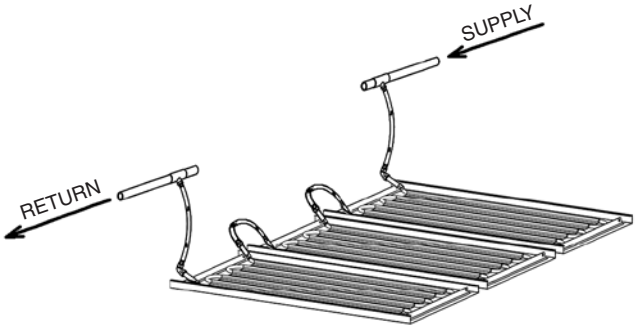




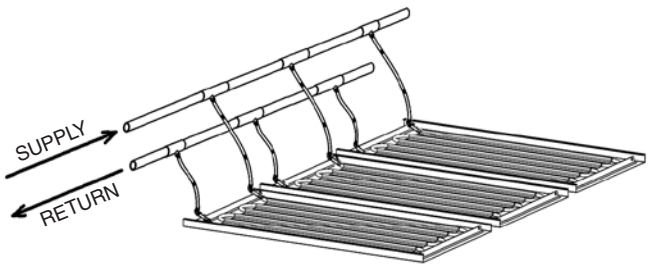




Connection in series



Connection in parallel



Operating limits

Water circuit	Maximum entering water temperature: +90°C

Suggested lowest installation height

(in m above the floor)

Maximum water temperature °C	*m*
50	2,5
60	2,7
70	2,9
80	3,1
90	3,3

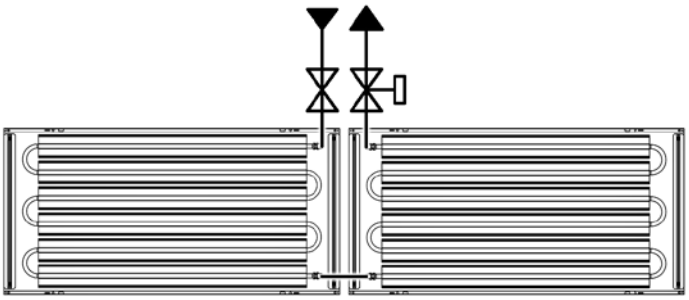
Table of possible combinations

	P Model	
Total length *(m)*	***Composition* without *intermediate panel***	***Composition* with *intermediate panel (*)***
1,20	P.1	–
1,80	P.2	–
2,40	P.3	–
3,00	P.4	P.1 + Panel 600 x 600 (mm) + P.1
3,60	2 x P.2	–
4,20	P.2 + P.3	P.2 + Panel 600 x 600 (mm) + P.2
4,80	2 x P.3	–
5,40	P.3 + P.4 or 3 x P.2	P.3 + Panel 600 x 600 (mm) + P.3
6,00	2 x P.4	–
6,60	2 x P.3 + 1 x P.2	P.4 + Panel 600 x 600 (mm) + P.4
7,20	3 x P.3	–
8,40	2 x P.4 + 1 x P.3	P.3 + Panel 600 x 600 (mm) + P.3 + Panel x 600 (mm) + P.3
9,00	3 x P.4	–

	W Model	
Total length *(m)*	***Composition* without *intermediate panel***	***Composition* with *intermediate panel (*)***
1,20	W.1	–
1,80	W.2	–
2,40	W.3	–
3,00	W.4	W.1 + Panel 600 x 600 (mm) + W.1
3,60	2 x W.2	–
4,20	W.2 + W.3	W.2 + Panel 600 x 600 (mm) + W.2
4,80	2 x W.3	–
5,40	W.3 + W.4 or 3 x W.2	W.3 + Panel 600 x 600 (mm) + W.3
6,00	2 x W.4	–
6,60	2 x W.3 + 1 x W.2	W.4 + Panel 600 x 600 (mm) + W.4
7,20	3 x W.3	–
8,40	2 x W.4 + 1 x W.3	W.3 + Panel 600 x 600 (mm) + W.3 + Panel 600 x 600 (mm) + W.3
9,00	3 x W.4	–

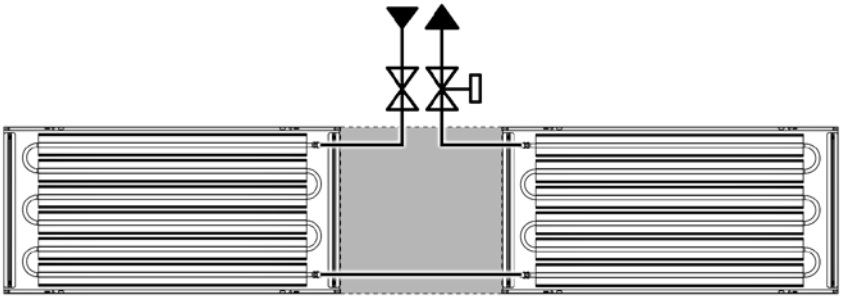
Longer length possible according to suitable **Δp**

Connection in series



***without** intermediate panel*

Accessory:
TB–466 flexible pipe

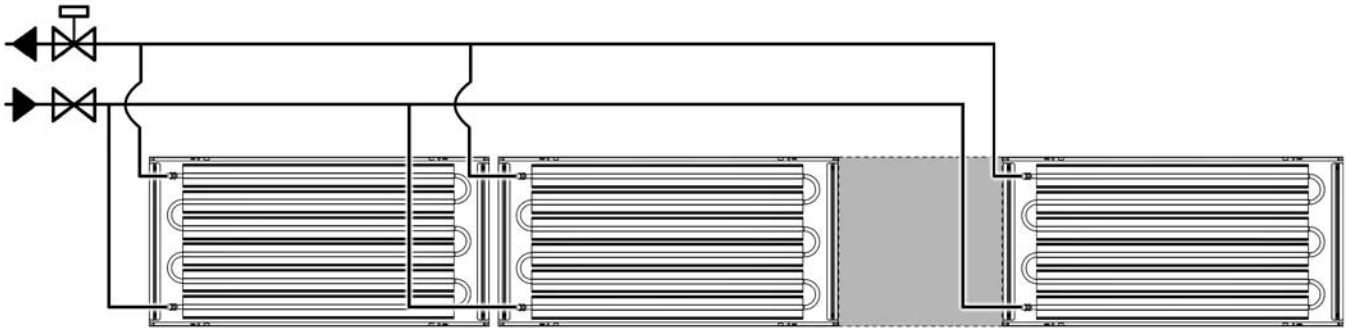


***with** intermediate panel (*)*

Accessory:
TC–1550 flexible pipe

Connection in parallel

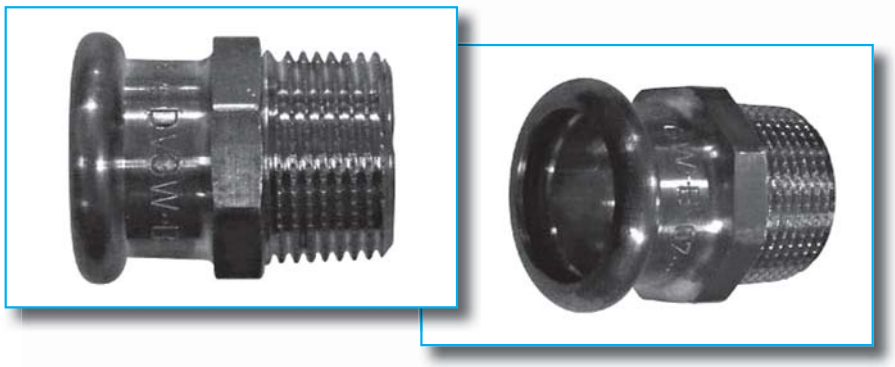
***with** or **without** intermediate panel (*)*
(⚠ lower water flow for panel)



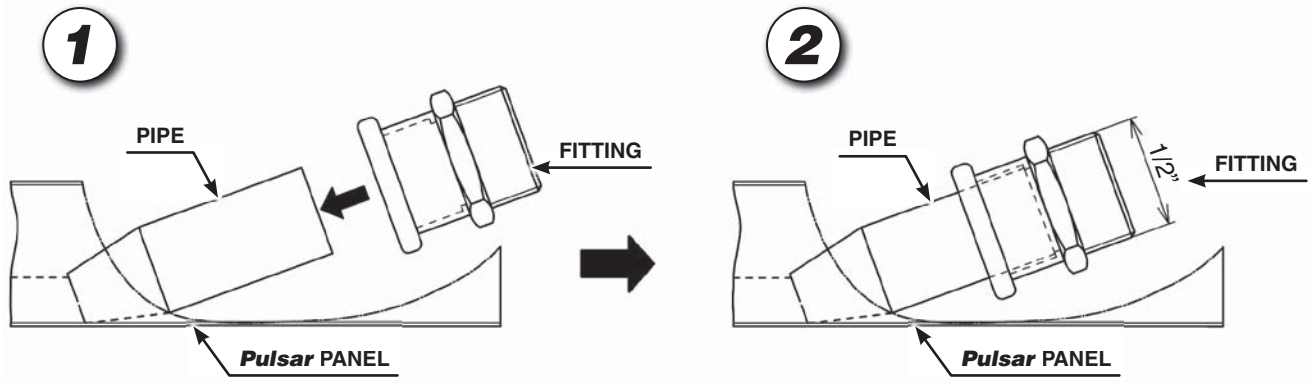
(*) This may be a false ceiling panel, a light or one of the *Pulsar* non-active aesthetic panels

FITTINGS

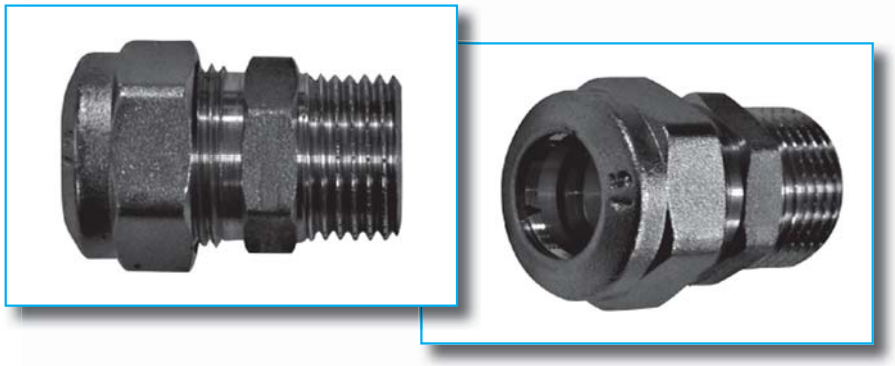
Pressfittings (Geberit)



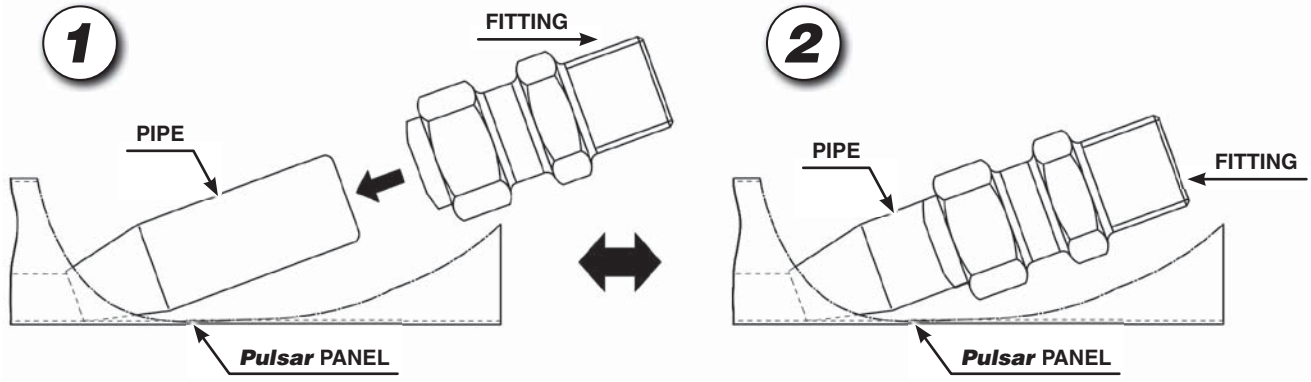
Code 9084407



Screw fittings (Caleffi) – *Torque: 25 Nm - Black O-ring only*



Code 9084408



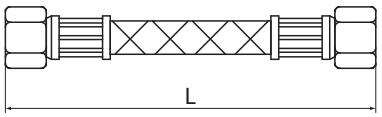
NOTE: two kits of fittings must be used for *PA*, *PB*, *WA* and *WB* panels (1 kit = 2 fittings).

Flexible pipe compliant with CSTB standard

- Diameter 1/2”
- Made of: EPDM rubber
- With external AISI 304 stainless steel layer
- Operation between -15°C and +90°C

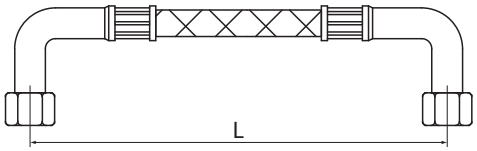
Straight flexible pipe – 1/2” female fittings

Flexible pipe length (mm)	Code	Identification
350	6084010	TA–370



90° flexible pipe – 1/2” female fittings

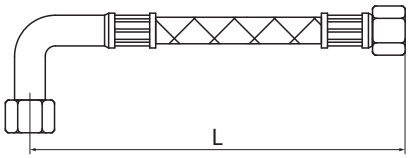
Flexible pipe length (mm)	Code	Identification
350	6084011	TB–466



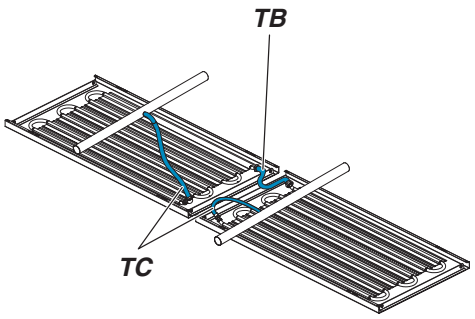
90°/Straight flexible pipe – 1/2” female fittings

Flexible pipe length (mm)	Code	Identification
850	6084012	TC–950
1450	6084014	TC–1550
2000	6084015	TC–2100

For panels in series

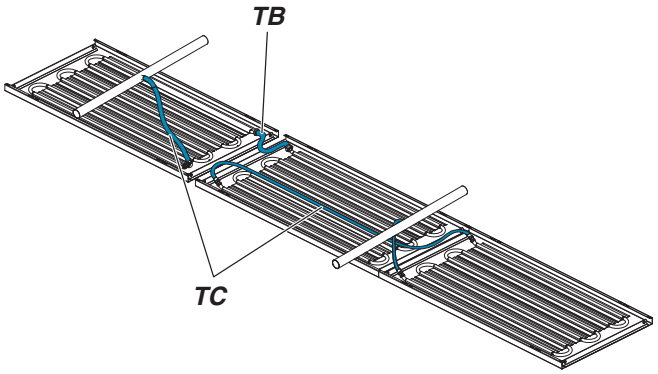


Assembly of 2 Standard *Pulsar*

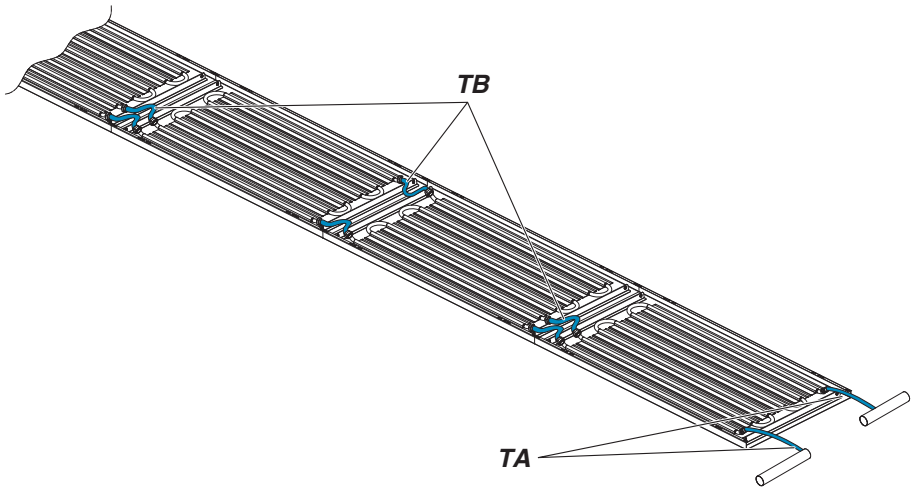


Assembly of 3 Standard *Pulsar*

(for connections up to 2 m)

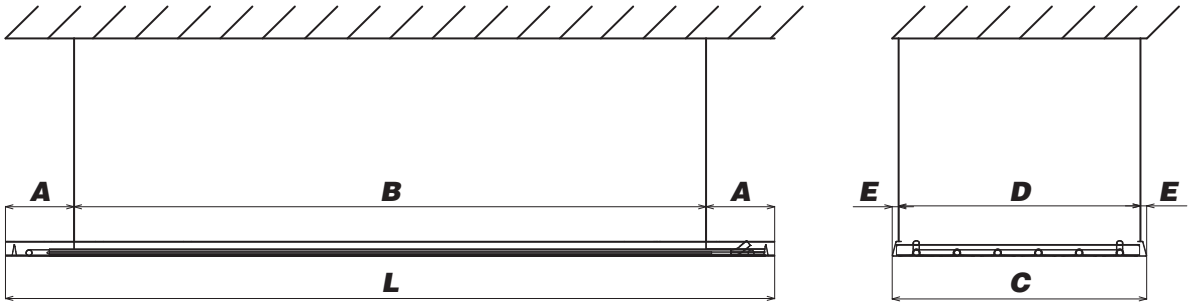


Assembly of several **PA**/**WA** and **PB**/**WB** panels in series



Hanging brackets

*Versions **P** and **W***



		WITH CLIP				
MODEL	***L*** *(mm)*	***A*** *(mm)*	***B*** *(mm)*	***C*** *(mm)*	***D*** *(mm)*	***E*** *(mm)*
P.1	1195	175	845	595	565	15
P.2	1795	175	1445	595	565	15
P.3	2395	415	1565	595	565	15
P.4	2995	565	1865	595	565	15
W.1	1234	175	884	610	595	7,5
W.2	1858	175	1508	610	595	7,5
W.3	2482	445	1592	610	595	7,5
W.4	3106	595	1916	610	595	7,5

The maximum vertical bending **f** of the Pulsar radiant panels between two suspension points is less than 2 mm.

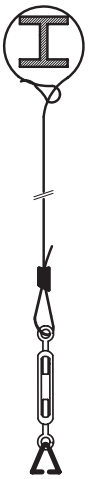
Suspension kits

*Installation **with CLIP***

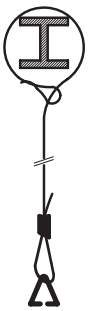
KIT	CODE
KIT-A	9084411

KIT	CODE
KIT-T	9084412

KIT	CODE
KIT-TM	9084413



WIRE LENGTH *(m)*	KIT	CODE
1	KIT-TC1	9084414
2	KIT-TC2	9084415



WIRE LENGTH *(m)*	KIT	CODE
1	KIT-C1	9084416
2	KIT-C2	9084417

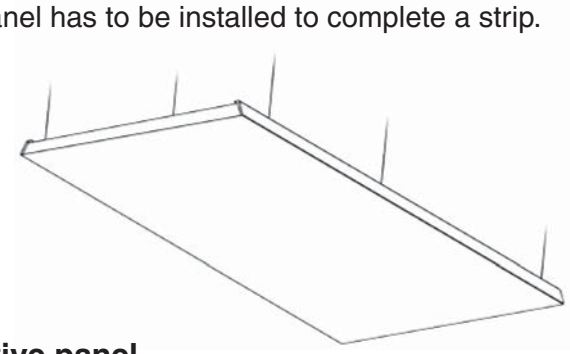
Non-active aesthetic panel – *Version P*

The aesthetic panels are used when the active panels do not need to be installed and when, for aesthetic reasons or local specifications, a non-active panel has to be installed to complete a strip.

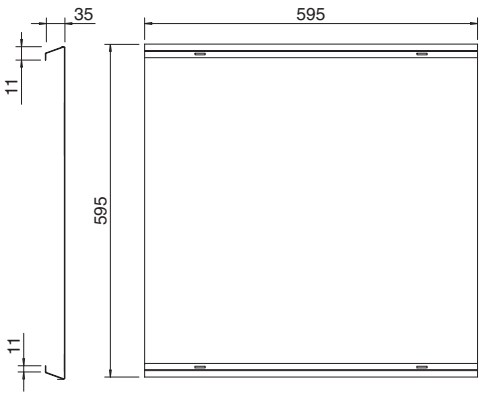
Available in 2 models:

SIZE	LENGTH (mm)	CODE
1	595	9084420
2	1195	9084421

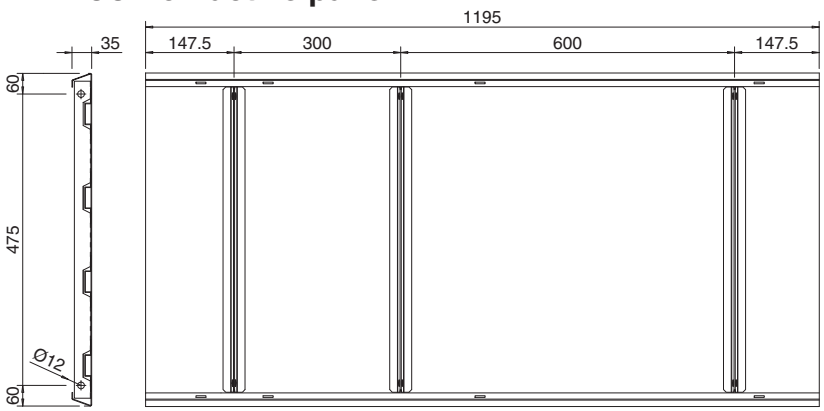
Can be cut to measure on site.



600 non-active panel



1200 non-active panel



Hanging holes on the lateral sides of the panel.

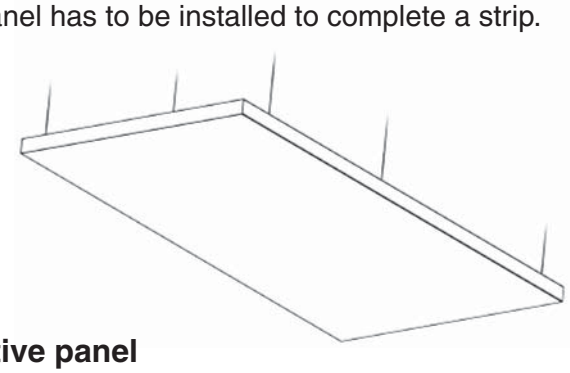
Non-active aesthetic panel – *Version W*

The aesthetic panels are used when the active panels do not need to be installed and when, for aesthetic reasons or local specifications, a non-active panel has to be installed to complete a strip.

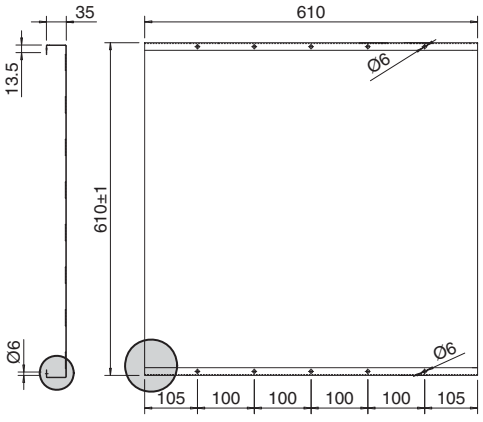
Available in 2 models:

SIZE	LENGTH (mm)	CODE
1	610	9084430
2	1234	9084431

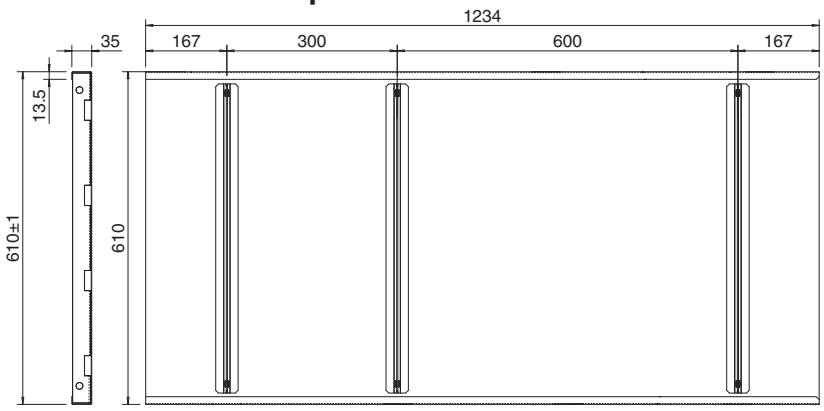
Can be cut to measure on site.



600 non-active panel



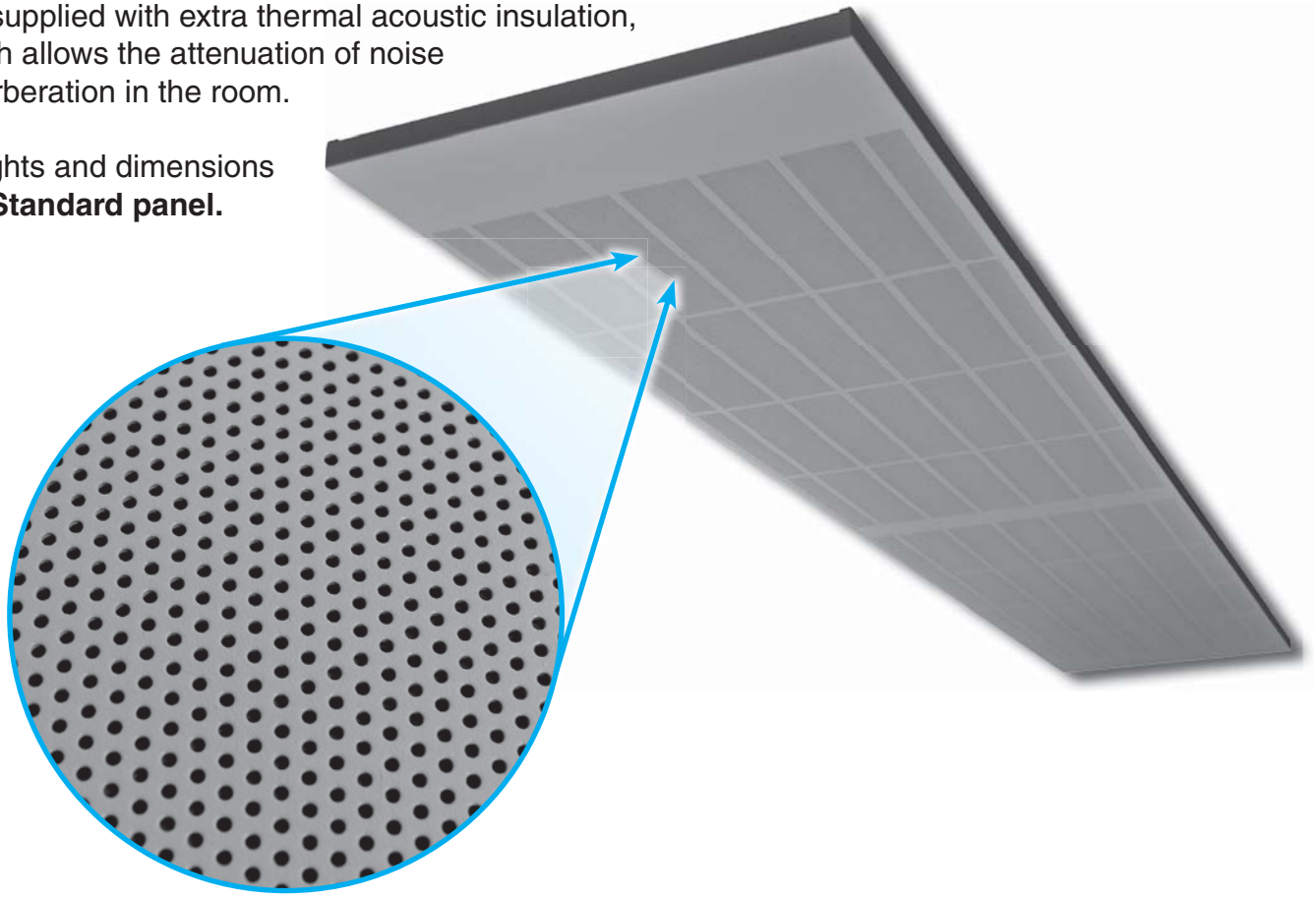
1200 non-active panel



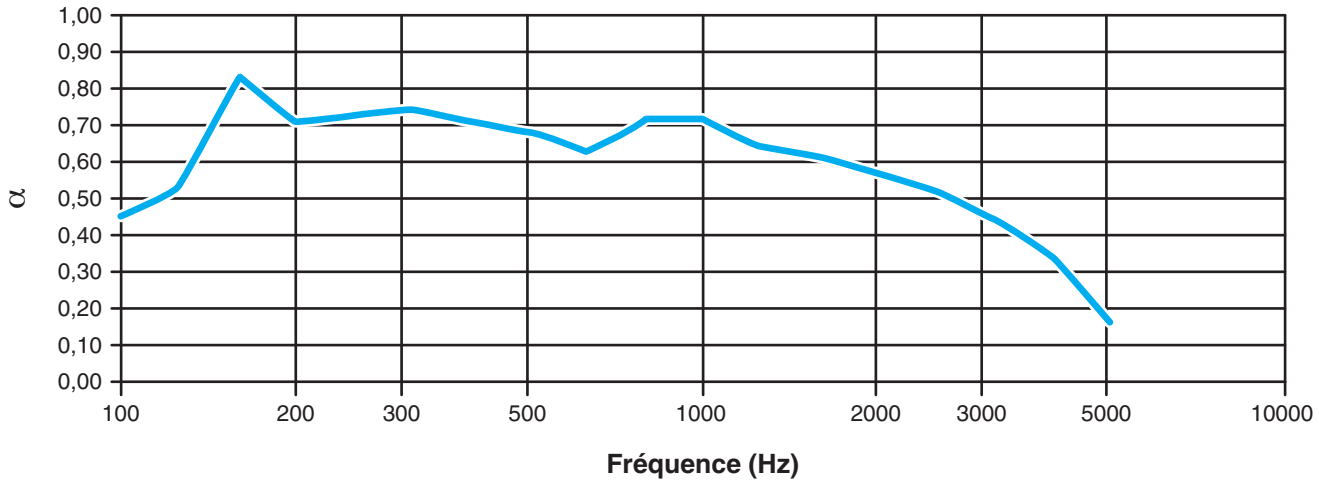
Hanging holes on the lateral sides of the panel.

Special version with perforated panel:
it is supplied with extra thermal acoustic insulation, which allows the attenuation of noise reverberation in the room.

Weights and dimensions like **Standard panel.**



Sound absorption coefficient



α = *Sound absorption coefficients*

CSTB
le futur en construction

Organisme certificateur

CSTBat

CERTIFICAT

Flexibles de raccordement

Flexibles de raccordement souples

LUX

Le CSTB atteste que le(s) produit(s) ci-dessus est (sont) conforme(s) à des caractéristiques décrites dans le référentiel de certification n° 19, après évaluation selon les modalités de contrôle définies dans ce référentiel.

Le CSTB accorde à :

La société LUXOR SPa
Via Zanardelli 88
IT - 25013 CARPENEDOLO (Brescia)

Usine de IT - 25013 CARPENEDOLO (Brescia)

le droit d'usage de la marque CSTBat Flexibles de raccordement pour le(s) produit(s) objet(s) de cette décision, pour toute sa durée de validité et dans les conditions prévues par les exigences générales de la marque CSTBat et le référentiel mentionné ci-dessus.

Décision de reconduction n° 273-07-1693 du 2 février 2012
Cette décision annule et remplace la décision de reconduction n° 244-07-1058 du 13 avril 2011

CSTBat -07-1693

Sauf retrait, suspension ou modification, ce certificat est valable jusqu'au 31/10/2016. La liste des certificats en cours de validité est tenue à jour et disponible sur le site internet www.cstb.fr.

CARACTÉRISTIQUES CERTIFIÉES

Conformité à l'Avis Technique n°14/11-1693

Caractéristiques physiques et physico-chimiques de l'élastomère
- dureté
- résistance à la rupture
- allongement à la rupture
- déformation rémanente après compression
- variations de dureté et des caractéristiques en traction après vieillissement
- tenue à l'ozone

Caractéristiques mécaniques des produits finis
- résistance à la pression à 90°C, à 3 fois la pression maximale admissible
- résistance aux pressions cycliques à 5/50 bars à 90°C

Ce certificat comporte 1 page.

Correspondant
Philippe PEREIRA
Tél. : 01 64 68 89 61
Fax : 01 64 68 84 44

Pour le CSTB
Pour le Directeur Technique
Yannick LEMOIGNE

Quiconque présente ce certificat doit également produire le volet de l'Avis Technique correspondant.

CENTRE SCIENTIFIQUE ET TECHNIQUE DU BATIMENT
SIÈGE SOCIAL : 84 AVENUE JEAN JAURÈS | CHAMPS-SUR-MARNE | 77447 MARNE-LA-VALLÉE CEDEX 2
TÉL. (33) 01 64 68 82 82 | FAX. (33) 01 60 05 70 37 | www.cstb.fr
MARNE-LA-VALLÉE | PARIS | GRENOBLE | NANTES | SOPHIA-ANTIPOLIS

Report nr. 12030MAL-06CA270
The results are referred to the unit indicated at page 1 only.

IMQ CLIMA

IMQ CLIMA
Centro di Innovazione Tecnologica Agemont S.p.A.

Amaro, 18/12/2012

Test Report n° 12030MAL-06CA270
REVERBERATION ROOM
Sound absorption

Date of reception of the unit: 23/11/2012
Date of test: 14/12/2012

DATA OF THE TESTED UNIT

- Customer/manufacturer: SABIANA S.p.A.
  Via Piave, 53
  20011 Corbetta (MI)
- Test unit: Ceiling panels PULSAR
- Mounting type: E-300

The tests are performed in compliance with the *EN ISO 354:2004 "Acoustics –Measurement of sound absorption in a reverberation room* and *EN ISO 11654:1997 "Sound absorbers for use in buildings" Rating for sound absorption.*

The results presented in this report are valid for the tested unit only.

Executed and approved by:

Technical Manager
Ing. Andrea Mazzolini

Note: This report consists of 9 pages.
The tested unit has been chosen by the customer/manufacturer.
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pag. 1 of 9

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www.icim.it

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www.iqnet-certification.com

CERTIFICATO n. 0545/5
CERTIFICATE No.

SI CERTIFICA CHE IL SISTEMA DI GESTIONE PER LA QUALITA' DI
WE HEREBY CERTIFY THAT THE QUALITY MANAGEMENT SYSTEM OPERATED BY

SABIANA S.p.A.

UNITA' OPERATIVE
OPERATIVE UNITS

Sede e Unità Operativa
Via Piave, 53 - 20011 Corbetta (MI)
Unità Operativa
Via Virgilio, 2 - 20013 Magenta (MI)
Italia

E' CONFORME ALLA NORMA
IS IN COMPLIANCE WITH THE STANDARD

UNI EN ISO 9001:2008

PER LE SEGUENTI ATTIVITA'
FOR THE FOLLOWING ACTIVITIES

EA: 18

Progettazione, produzione e assistenza di apparecchiature per il riscaldamento e il condizionamento dell'aria (aerotermi, termostrisce radianti, ventilconvettori e unità trattamento aria) e canne fumarie.

Design, production and service of heating and air conditioning equipment (unit heaters, radiant panels, fan coil units and air handling units) and chimneys.

Riferirsi al Manuale della Qualità per l'applicabilità dei requisiti della norma di riferimento.
Refer to Quality Manual for details of application to reference standard requirements.

Il presente certificato è soggetto al rispetto del regolamento per la certificazione dei sistemi di gestione per la qualità delle aziende.
The use and the validity of this certificate shall satisfy the requirements of the rules for the certification of company quality management systems.

Data emissione	Emissione corrente	Data di scadenza
First issue	*Current issue*	*Expiring date*
10/06/1996	10/04/2012	09/04/2015

ICIM S.p.A.
Piazza Don Enrico Mapelli, 75 - 20099 Sesto San Giovanni (MI)

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CISQ is the Italian Federation of management system Certification Bodies.

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Heating / Air Conditioning

Pulsar P.FE Radiant Panel

PULSAR - EX - 02/14 E/02/14
Cod. A4830100

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ENVIRONMENTAL COMFORT

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