

LST FLOOR MOUNTED, PEDESTAL CONVECTORS

MDL: PROFESSIONAL GRADE HVAC SOLUTIONS





NATURAL CONVECTION HEATERS

Convection heating systems operate by heat absorption via air particles flowing past a heat exchanger.

The difference in density between cold and heated air creates a delicate current that flows from the bottom to the top of the unit. Natural air circulation is created in the room, which facilitates uniform heating. With convection radiators, nominal air circulation occurs when the air rises from the bottom of the unit, thus a minimum separation distance should always be kept between the walls and other elements surrounding the convector.

VERANO's convection heaters are characterized by their low water capacity and low thermal inertia. This makes the convectors capable of reacting quickly to the changing heat demands of a room, compared to traditional radiators. VERANO's convectors are easy to control due to their thermostatic valve that controls the flow of heating fluid through the heater.

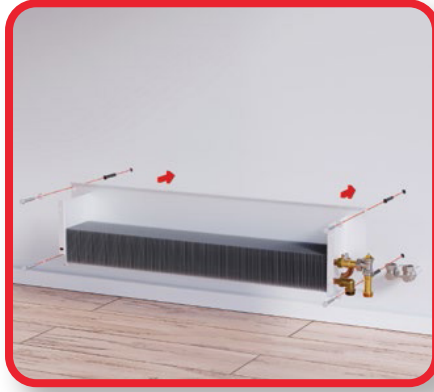


OUR ADVANTAGES



DURABILITY

The heat exchanger is composed of high-quality copper-aluminum, which guarantees corrosion resistance and low sensitivity to poor water quality.



EASY TO ASSEMBLE AND SERVICE

With its universal design, the convector is easy to assemble and assures hassle-free maintenance.



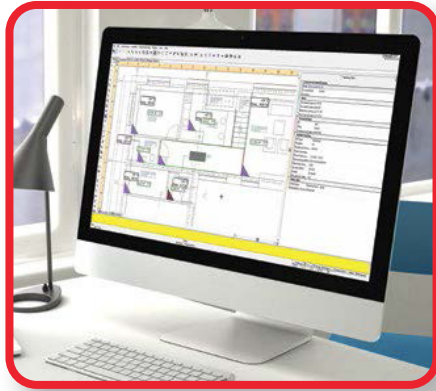
THE SYSTEM FOR TEMPERATURE CONTROL

Dedicated and modern room controllers allow for full control.



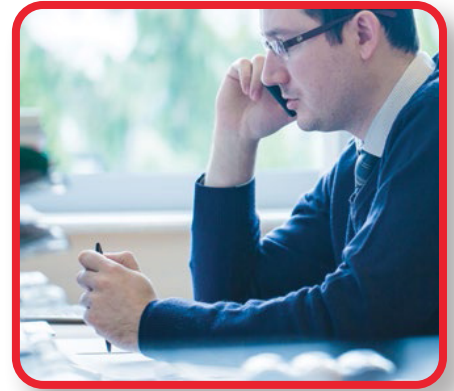
COMPLIANCE WITH EN 442 REQUIREMENTS

All VERANO convectors have been tested to the compulsory EN 442 harmonized standard. Our positive tests results are evidence of our products high quality.



TOOLS FOR DESIGNERS

We offer full product support, including dedicated CPD seminars, as well as access to BIM drawings and libraries at the project design stage.



TECHNICAL ADVICE

We provide help and expert advice throughout the project, from the design stage to the completion of construction.



MODERN DESIGN

Our CALIENTE convector casings are based on a modern design, with panel casing and traditional grilles.



WIDE SELECTION OF FINISHES

We offer a wide selection of convector units coming with grilles of various types and colours.

The manufacturer reserves the right to make changes to the design, colour and specifications of the product shown. All images are for illustrative purposes only and some features such as grilles are optional accessories and not considered as standard equipment.

CONFIRMED QUALITY

Floor-mounted convectors are designed for use in residential, office, service, hotel, sacral and sports utility buildings.

It is advised to consult the selection of radiators with designers and /or our sales engineers. Our sales engineers will help you select the optimal convector size and additional equipment which will allow for a seamless and energy-efficient operation.



Through extensive research and development, in cooperation with the Technical Universities of Warsaw, Cracow and Lublin and the Polish Academy of Sciences, VERANO has developed and constructed a brand new and extremely efficient, high-end heating emitter.

The excellent heating parameters of VERANO products were confirmed during laboratory tests conducted at the HEATEST s.r.o. Notified Body.

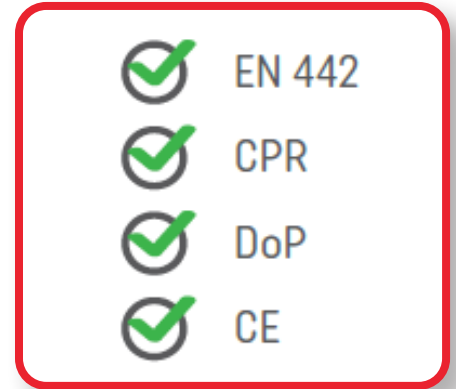
Tightness and pressure resilience tests were performed according to the EN-442 standard. With this testing, we have independent confirmation from accredited sources that a pressure of 1.69 MPa will not result in cracks or leaks in the convectors, even with a maximum permissible operating pressure of 1.0 MPa.

VERANO convectors are corrosion resistant and this has been proven through 1000 hour salt spray testing according to the PNEN ISO 4628 standard.

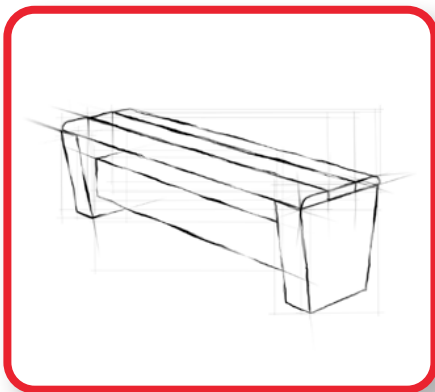
The STANDARD & CALIENTE units are fully compliant to A1 fire resistance. The VERANO convectors are manufactured in Poland, in accordance to EU regulations. The marketing of products takes place according to the Regulation (EU) 305/2011 of the European Parliament and of the Council laying down harmonized conditions for the marketing of construction products (CPR).

VERANO convectors hold all the documents required by European Union regulations:

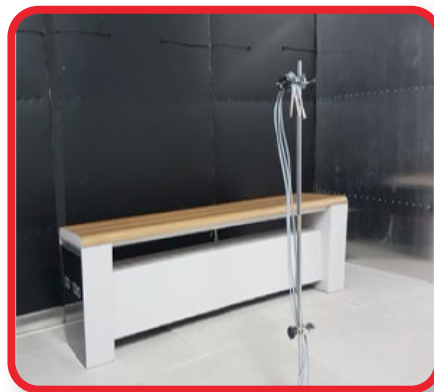
- Declaration of performance characteristics according to EN 442.
- PZH hygienic attestation.



RESEARCH AND DEVELOPMENT



The new casing of the wall and floor-mounted CALIENTE convectors, as well as the COMODO heating bench, were developed by an interdisciplinary team of designers and engineers. The aim of their work was to develop simple and timeless products that will easily fit every modern interior.



Heat output testing for the floor-mounted convector and the COMODO heating bench was carried out in a specially prepared climatic chamber, in accordance with the requirements of the European standard EN-442.



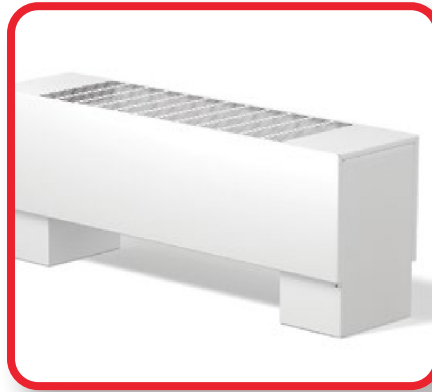
The COMODO heating bench qualified as a finalist of the 2016 Good Design [Dobry Wzór] competition, organized by the Institute of Industrial Design. The goal of the competition is to select the products and services, which stand out with their high quality of design, and support their manufacturers and retailers.

FLOOR-MOUNTED CONVECTORS: STANDARD & CALIENTE

There are two types of casings available for the floor-mounted convectors – STANDARD and CALIENTE. The units do not differ from each other internally and they both use the same technology principle - the casing variant does not influence the heating output, hydraulic resistance and the connections used.

The CALIENTE casings, designed in the spirit of modern elegance, allow for the use of a built-in, dedicated controller.

FEATURE	Available for casing type	
	STANDARD	CALIENTE
TRV head	•	•
Wireless TRV head	•	•
Wireless TRV head or thermal actuator built-in inside the casing	•	•
Built-in temperature controller and thermal actuator	-	•
Casing powder coating in any RAL colour	•	•
Selection of grille type	•	•
Glass masking panels	-	•
Detachable front casing panel	•	•
Connection type C (side) or V (bottom)	•	•
Wall-mounted or Floor-mounted type	•	•



Example of floor-mounted STANDARD type heaters



Example of floor-mounted CALIENTE type heaters



TRV head assembly (classic or wireless type), V-type heater connection



Assembly of TRV wireless head or thermal actuator inside the heater casing, V-type heater, bespoke heater

The classic or wireless TRV head is available for V-type (bottom connection) heaters. The TRV head is to be installed on the thermostatic valve which is built into the heater.

The in-casing assembly of the wireless TRV head or the thermal actuator is available for V-type (bottom connection) heaters and the bespoke heater version. The thermal actuator should be connected to the controller. For CALIENTE heaters with a built-in controller, the thermal actuator is to be installed inside the heater casing.

The manufacturer reserves the right to make changes to the design, colour and specifications of the product shown. All images are for illustrative purposes only and some features such as grilles are optional accessories and not considered as standard equipment.

TYPES OF GRILLES FOR STANDARD TYPE HEATER



Long oval (Standard)



Cross oval



Honeycomb



Oval

TYPES OF GRILLES FOR CALIENTE TYPE HEATER



Modular grille



Roll-up aluminum grille, closed profile



Roll-up aluminum grille, double T-bar grille



Natural wood roll-up grille



Linear aluminum grille

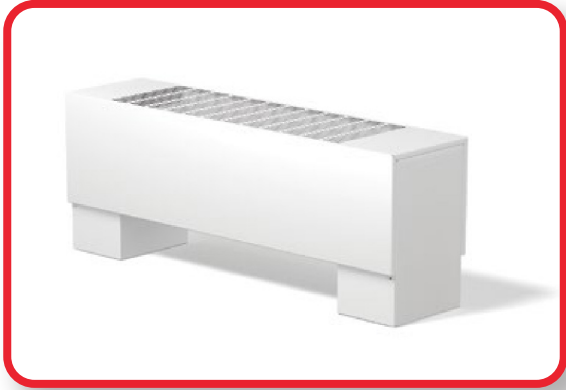


The manufacturer reserves the right to make changes to the design, colour and specifications of the product shown. All images are for illustrative purposes only and some features such as grilles are optional accessories and not considered as standard equipment

STANDARD CASING

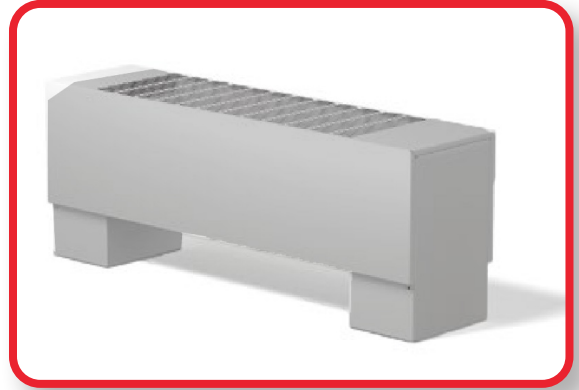
The floor-mounted units with STANDARD casing are a classic convector in a smooth casing made of galvanized steel, with a grille that allows for unobstructed airflow. The convectors are available with bottom connection (V-type) or side connection (C-type). The detachable front panel facilitates easy access for cleaning and maintenance of the heat exchanger and connectors.

The standard heater casing finish is white RAL 9003 paint coat; we also offer other optional RAL colours and grille types. Non-standard options also include the installation of actuator or wireless head inside the convector casing.



FLOOR-MOUNTED STANDARD CASING CONVECTOR

Standard finish: RAL 9003 colour, Long Oval grille, thermostatic head installed outside the radiator casing.



FLOOR-MOUNTED STANDARD CASING CONVECTOR

Example of optional finish: RAL 9007 colour, honeycomb grille, actuator installed inside the radiator casing.

CALIENTE CASING

The floor-mounted units with CALIENTE casings are based on modern design, with panel casing, masking panels and grilles that allow unobstructed airflow. The convectors are available with bottom connection (V-type) or side connection (C-type). The detachable heater cover and grille facilitate cleaning and maintenance of the exchanger and connectors.

The casing (painted RAL 9003 white as a standard) and the masking panels (painted RAL 9005 black as a standard) are also optionally available in any desired RAL palette colour. The basic equipment includes black anodized modular aluminum grille.

The painted masking panels can also be replaced with a glass or a dedicated black or white controller. The modular aluminum grille can be replaced with other grille types.



FLOOR-MOUNTED CALIENTE CASING CONVECTOR

Standard finish: RAL 9003 colour, Long Oval grille, thermostatic head installed outside the radiator casing.



FLOOR-MOUNTED CALIENTE CASING CONVECTOR

Example of optional finish: casing with RAL 9007 color paint finish, black anodized modular grille, VER-34 controller and black glass masking panel. Piping assembly with the thermal actuator is located inside the heater casing.

The manufacturer reserves the right to make changes to the design, colour and specifications of the product shown. All images are for illustrative purposes only and some features such as grilles are optional accessories and not considered as standard equipment.

ADDITIONAL ACCESSORIES FOR CALIENTE CASING CONVECTORS



The paint-coated masking panel can be replaced with black or white colour glass masking panel

The floor-mounted CALIENTE convectors can optionally include the built-in VER-34 controller (currently available only in Europe) in black or white



The manufacturer reserves the right to make changes to the design, colour and specifications of the product shown. All images are for illustrative purposes only and some features such as grilles are optional accessories and not considered as standard equipment



FLOOR-MOUNTED CONVECTORS

DIMENSIONS

DIMENSIONS	[INCH]
Height	4, 6.5, 9, 12
Width	6.5, 8.7, 11.2
Length	34.5 - 101.5

Non-standard (NS) length heaters can be made on order.

ORDER CODE

SC12-10/15.9/880-C-S

- S- Floor Mounted LST
- C - Classic
G- Grande
- Height[cm]
- Width[cm]
- Length[cm]
- Casing Type
S - Standard
C - CALIENTE

FLOOR-MOUNTED CONVECTORS 4 INCH HIGH

MDL#	HEIGHT (INCH)	LENGTH (INCH)	TYPE HX	WIDTH (INCH)	180/160/65°F			
					HEATING BTU/H	FLOWRATE U _s GPM	PRESSURE DROP FT-H ₂ O	BTU/H PER FOOT
SC12-10/15.9/600	4	23.5	12	6.30	1573	0.16	0.05	1302
SC12-10/15.9/880	4	34.5	12		2049	0.20	0.08	964
SC12-10/15.9/1080	4	42.5	12		2520	0.25	0.12	903
SC12-10/15.9/1330	4	52.5	12		3114	0.31	0.18	859
SC12-10/15.9/1580	4	62	12		3707	0.37	0.24	839
SC12-10/15.9/1830	4	72	12		4296	0.43	0.32	818
SC12-10/15.9/2080	4	82	12		4898	0.49	0.41	805
SC12-10/15.9/2330	4	91.5	12		5491	0.55	0.50	799
SC12-10/15.9/2580	4	101.5	12		6085	0.61	0.61	789
SG14-10/28.4/600	4	23.5	14		11.20	3296	0.33	0.20
SG14-10/28.4/880	4	34.5	14	4279		0.43	0.32	2014
SG14-10/28.4/1080	4	42.5	14	5289		0.53	0.47	1895
SG14-10/28.4/1330	4	52.5	14	6525		0.65	0.69	1800
SG14-10/28.4/1580	4	62	14	7765		0.78	0.96	1858
SG14-10/28.4/1830	4	72	14	9006		0.90	1.26	1715
SG14-10/28.4/2080	4	82	14	10263		1.03	1.60	1687
SG14-10/28.4/2330	4	91.5	14	11532		1.15	1.99	1677
SG14-10/28.4/2580	4	101.5	14	12776		1.28	2.40	1657

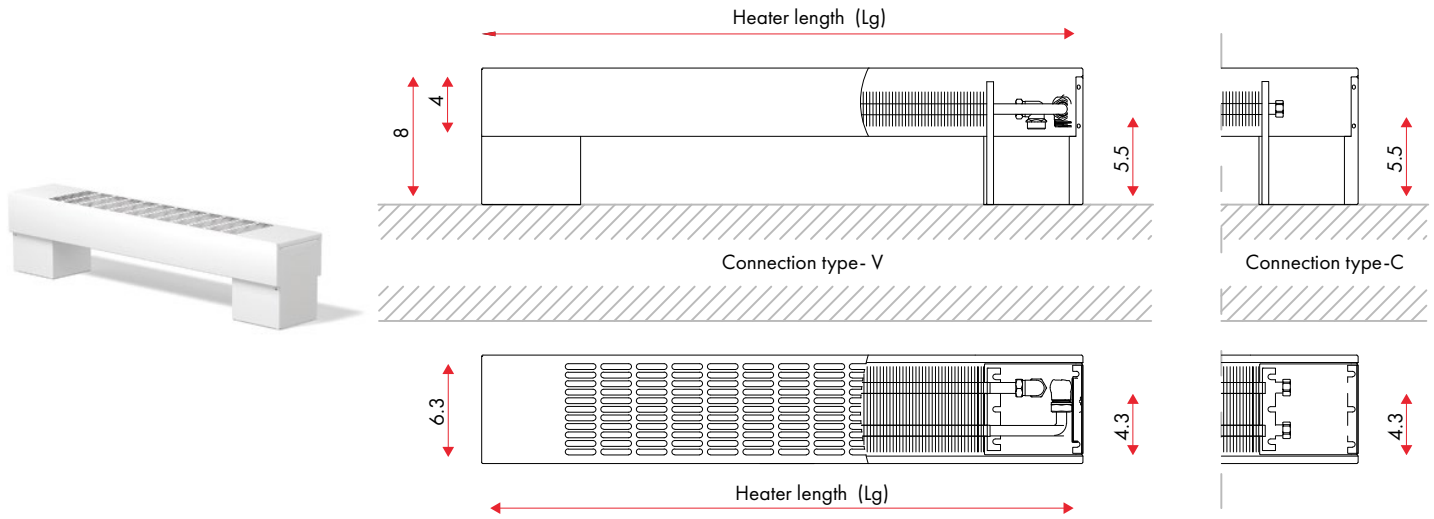
Standard heating output [BTU/H] according to the EN 442-1:2015-02 European Standard, room air temperature $t_{ei} = 65^{\circ}\text{F}$

* ΔT - the difference between mean water temperature (flow water temperature minus return water temperature) and room air temperature. For quick heat output calculating software contact MDL Solutions or local rep.

FLOOR-MOUNTED CONVECTORS 4 INCH HIGH

ORDER CODE: SC12-10/15.9/LG-C-S

STANDARD

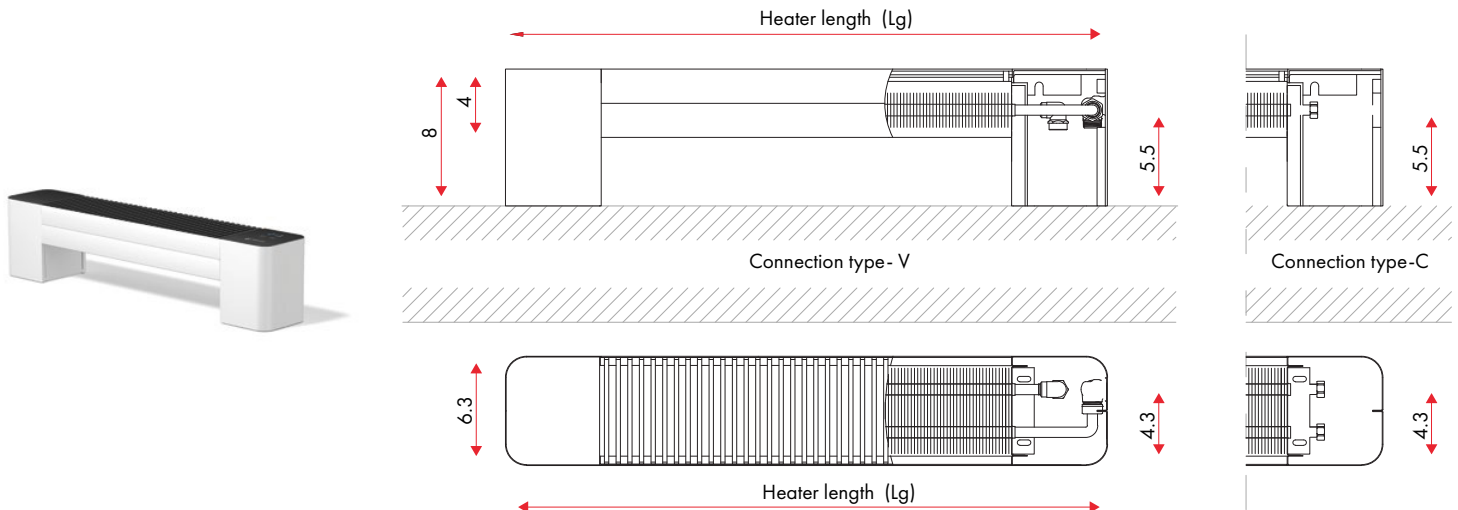


ORDER CODE: SC12-10/15.9/LG-C-C

CALIENTE

DIMENSIONS

DIMENSIONS	[INCH]
Height	4
Width	6.3
Length	34.5 - 101.5

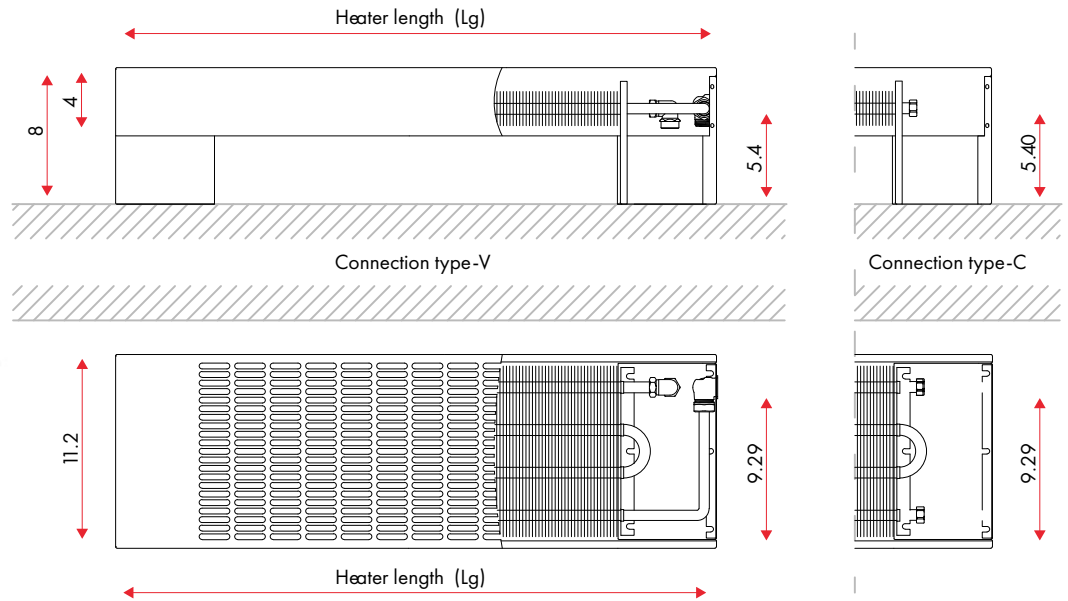


The manufacturer reserves the right to make changes to the design, colour and specifications of the product shown. All images are for illustrative purposes only and some features such as grilles are optional accessories and not considered as standard equipment.

FLOOR-MOUNTED CONVECTORS 4 INCH HIGH

ORDER CODE: SC14-10/28.4/LG-C-S

STANDARD

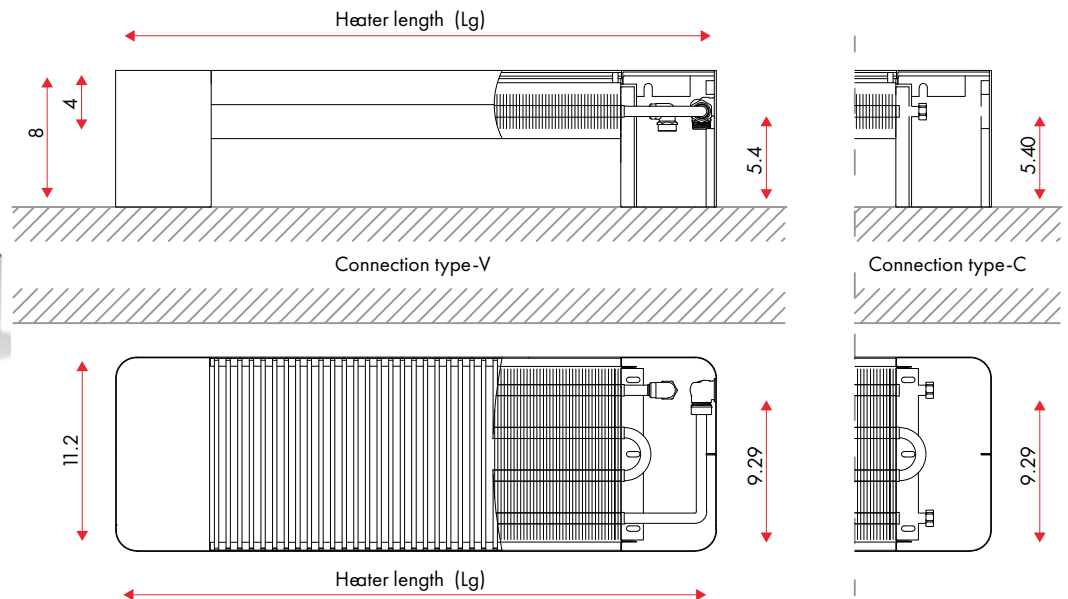


ORDER CODE: SC14-10/28.4/LG-C-C

CALIENTE

DIMENSIONS

DIMENSIONS	[INCH]
Height	4
Width	11.2
Length	34.5 - 101.5



FLOOR-MOUNTED CONVECTORS 6.5 INCH HIGH

MDL#	HEIGHT (INCH)	LENGTH (INCH)	TYPE HX	WIDTH (INCH)	180/160/65°F			
					HEATING BTU/H	FLOWRATE U _s GPM	PRESSURE DROP FT-H ₂ O	BTU/H PER FOOT
SC22-16/15.9/600	6.5	23.5	22	6.30	1886	0.19	0.07	1561
SC22-16/15.9/880	6.5	34.5	22		2454	0.25	0.11	1155
SC22-16/15.9/1080	6.5	42.5	22		3018	0.30	0.17	1081
SC22-16/15.9/1330	6.5	52.5	22		3730	0.37	0.25	1029
SC22-16/15.9/1580	6.5	62	22		4433	0.44	0.34	1004
SC22-16/15.9/1830	6.5	72	22		5146	0.51	0.45	980
SC22-16/15.9/2080	6.5	82	22		5862	0.59	0.57	964
SC22-16/15.9/2330	6.5	91.5	22		6570	0.66	0.70	956
SC22-16/15.9/2580	6.5	101.5	22		7282	0.73	0.85	945
SG22-16/22.2/600	6.5	23.5	23		8.70	4054	0.41	0.29
SG23-16/22.2/880	6.5	34.5	23	5277		0.53	0.47	2483
SG23-16/22.2/1080	6.5	42.5	23	6491		0.65	0.69	2325
SG23-16/22.2/1330	6.5	52.5	23	8015		0.80	1.01	2211
SG23-16/22.2/1580	6.5	62	23	9535		0.95	1.40	2159
SG23-16/22.2/1830	6.5	72	23	11063		1.11	1.84	2107
SG23-16/22.2/2080	6.5	82	23	12609		1.26	2.34	2073
SG23-16/22.2/2330	6.5	91.5	23	14133		1.41	2.90	2056
SG23-16/22.2/2580	6.5	101.5	23	15661		1.57	3.50	2032
SG24-16/28.4/600	6.5	23.5	24	11.20		3162	0.32	0.18
SG24-16/28.4/880	6.5	34.5	24		4679	0.47	0.37	2202
SG24-16/28.4/1080	6.5	42.5	24		6239	0.62	0.64	2235
SG24-16/28.4/1330	6.5	52.5	24		8189	0.82	1.05	2259
SG24-16/28.4/1580	6.5	62	24		10139	1.01	1.57	2296
SG24-16/28.4/1830	6.5	72	24		12088	1.21	2.17	2302
SG24-16/28.4/2080	6.5	82	24		14038	1.40	2.86	2308
SG24-16/28.4/2330	6.5	91.5	24		15988	1.60	3.64	22326
SG24-16/28.4/2580	6.5	101.5	24		17937	1.79	4.50	2327

Standard heating output [BTU/H] according to the EN 442-1:2015-02 European Standard, room air temperature $e_i = 65^\circ\text{F}$

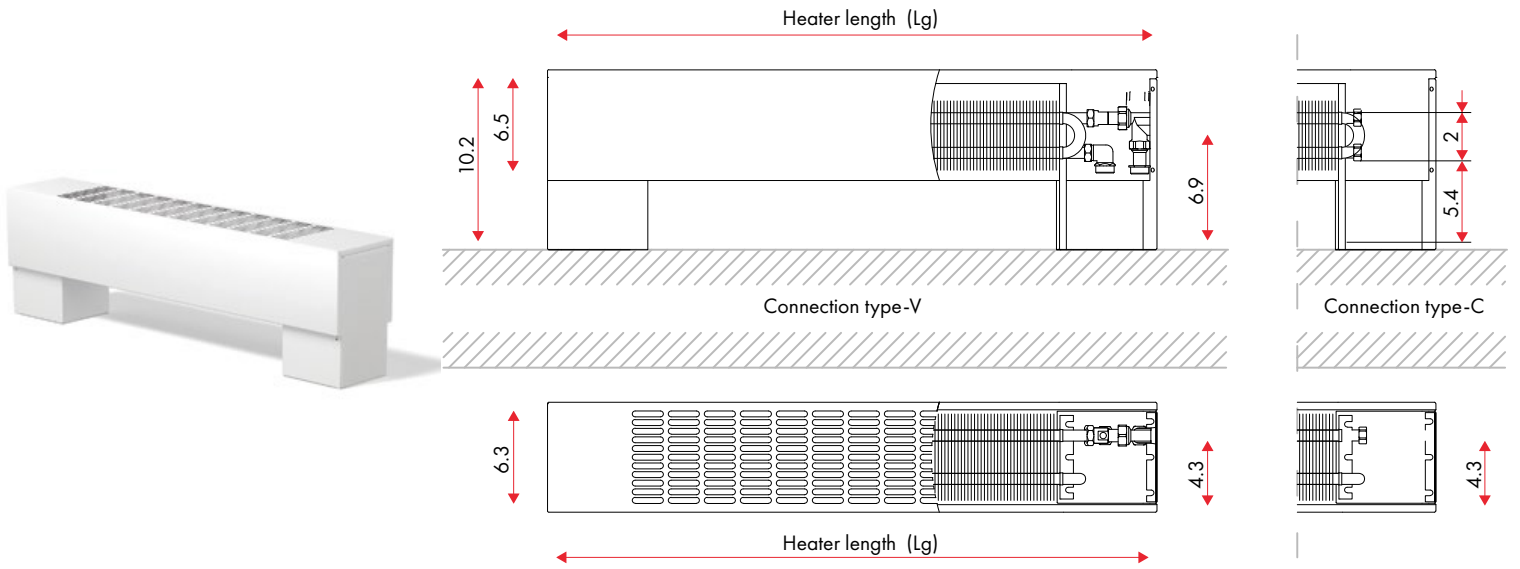
* ΔT - the difference between mean water temperature (flow water temperature minus return water temperature) and room air temperature. For quick heat output calculating software contact MDL Solutions or local rep.

The manufacturer reserves the right to make changes to the design, colour and specifications of the product shown. All images are for illustrative purposes only and some features such as grilles are optional accessories and not considered as standard equipment

FLOOR-MOUNTED CONVECTORS 6.5 INCH HIGH

ORDER CODE: SC22-16/15.9/LG-C-S

STANDARD

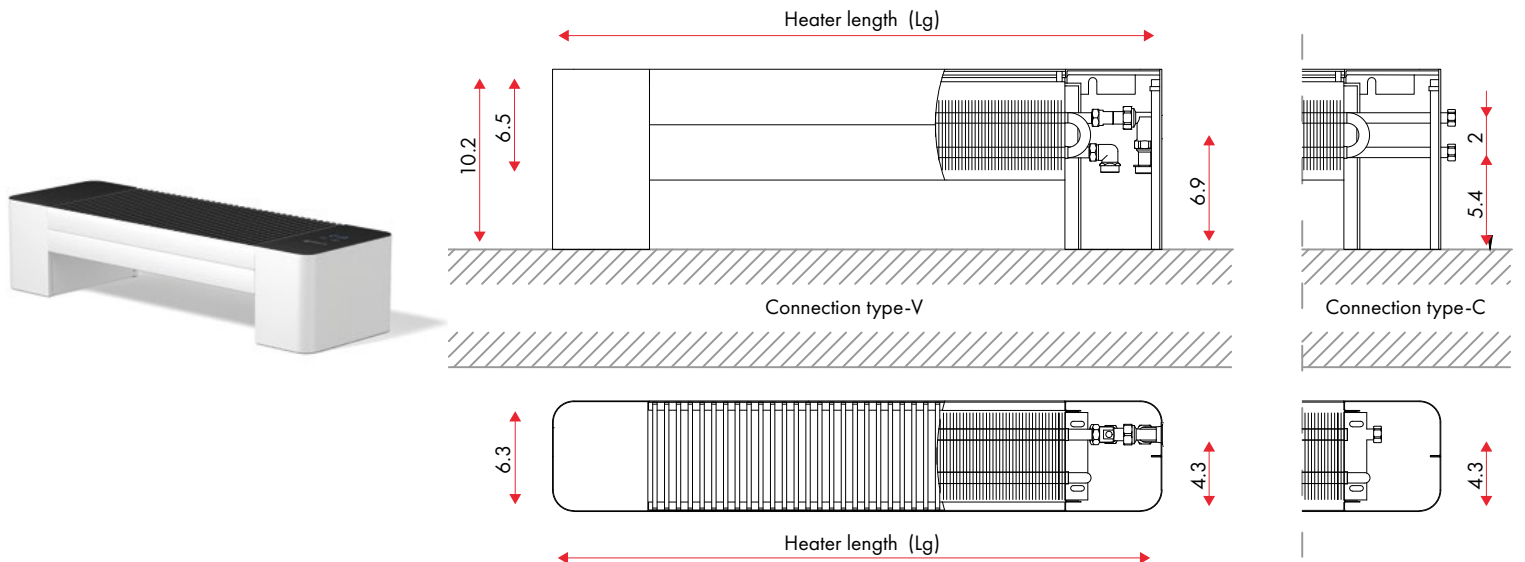


ORDER CODE: SC22-16/15.9/LG-C-C

CALIENTE

DIMENSIONS

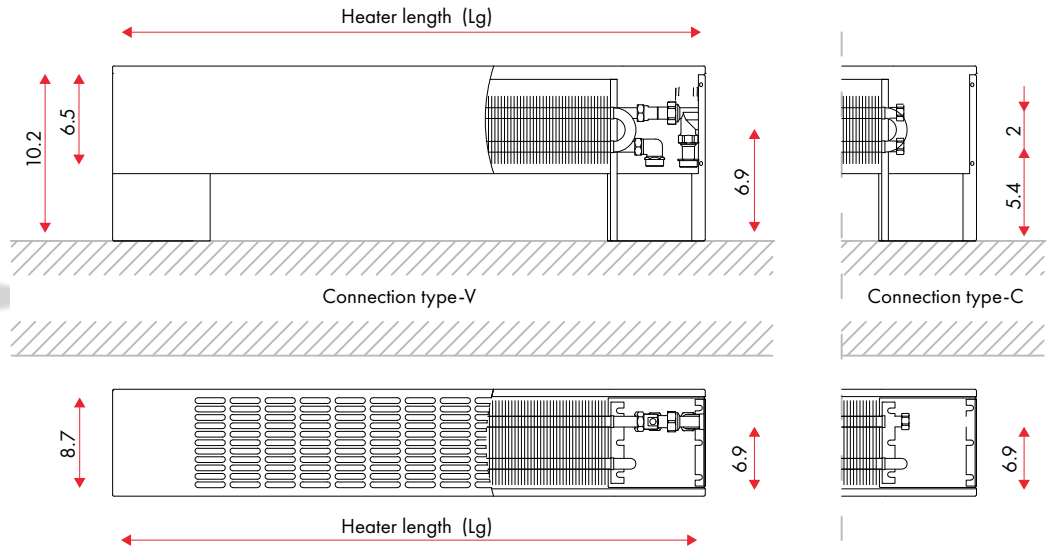
DIMENSIONS	[INCH]
Height	6.5
Width	6.3
Length	34.5 - 101.5



FLOOR-MOUNTED CONVECTORS 6.5 INCH HIGH

ORDER CODE: SG23-16/22.2/LG-C-S

STANDARD

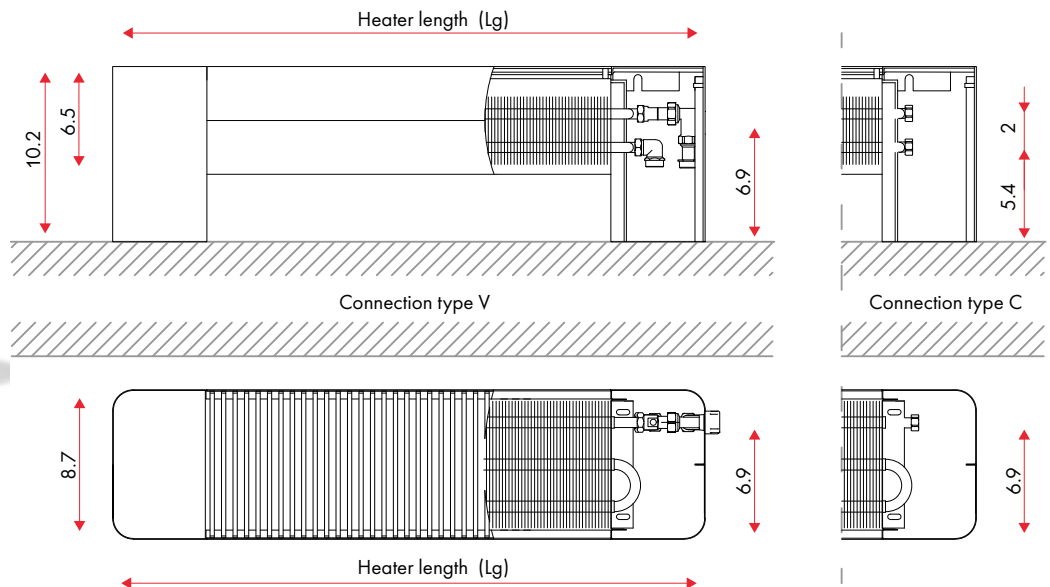


ORDER CODE: SG23-16/22.2/LG-C-C

CALIENTE

DIMENSIONS

DIMENSIONS	[INCH]
Height	6.5
Width	8.7
Length	34.5 - 101.5

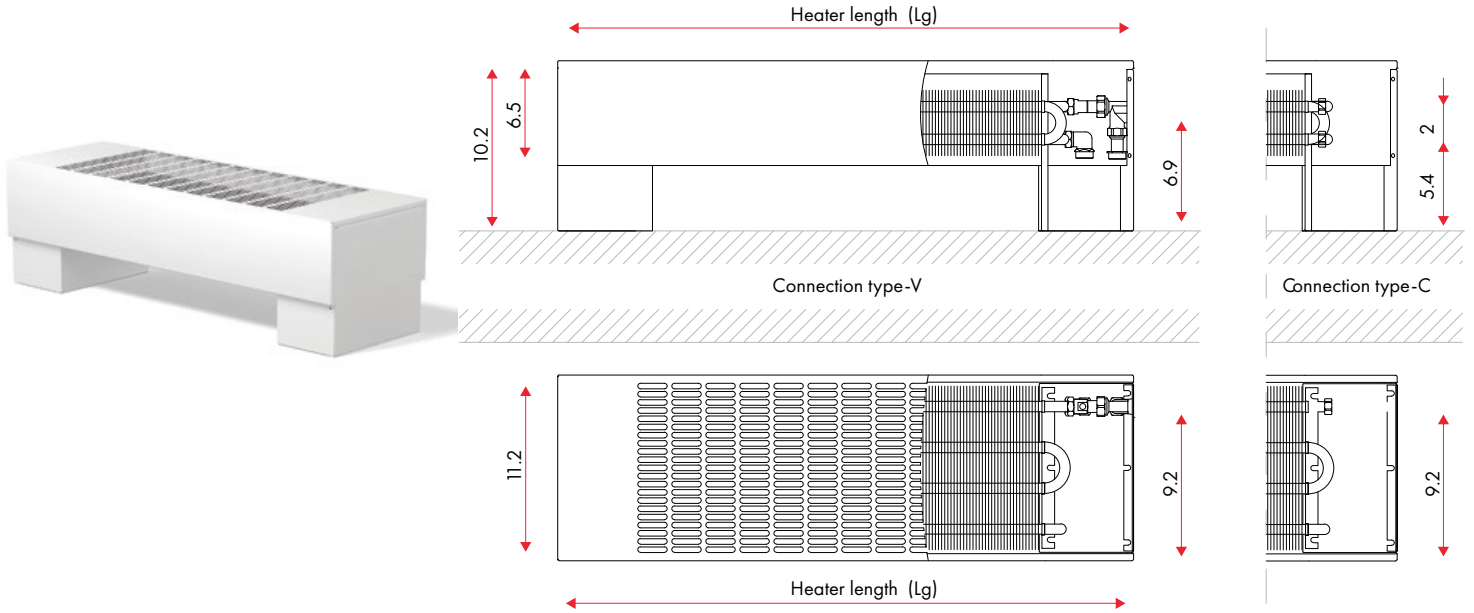


The manufacturer reserves the right to make changes to the design, colour and specifications of the product shown. All images are for illustrative purposes only and some features such as grilles are optional accessories and not considered as standard equipment.

FLOOR-MOUNTED CONVECTORS 6.5 INCH HIGH

ORDER CODE: SG24-16/24.8/LG-C-S

STANDARD

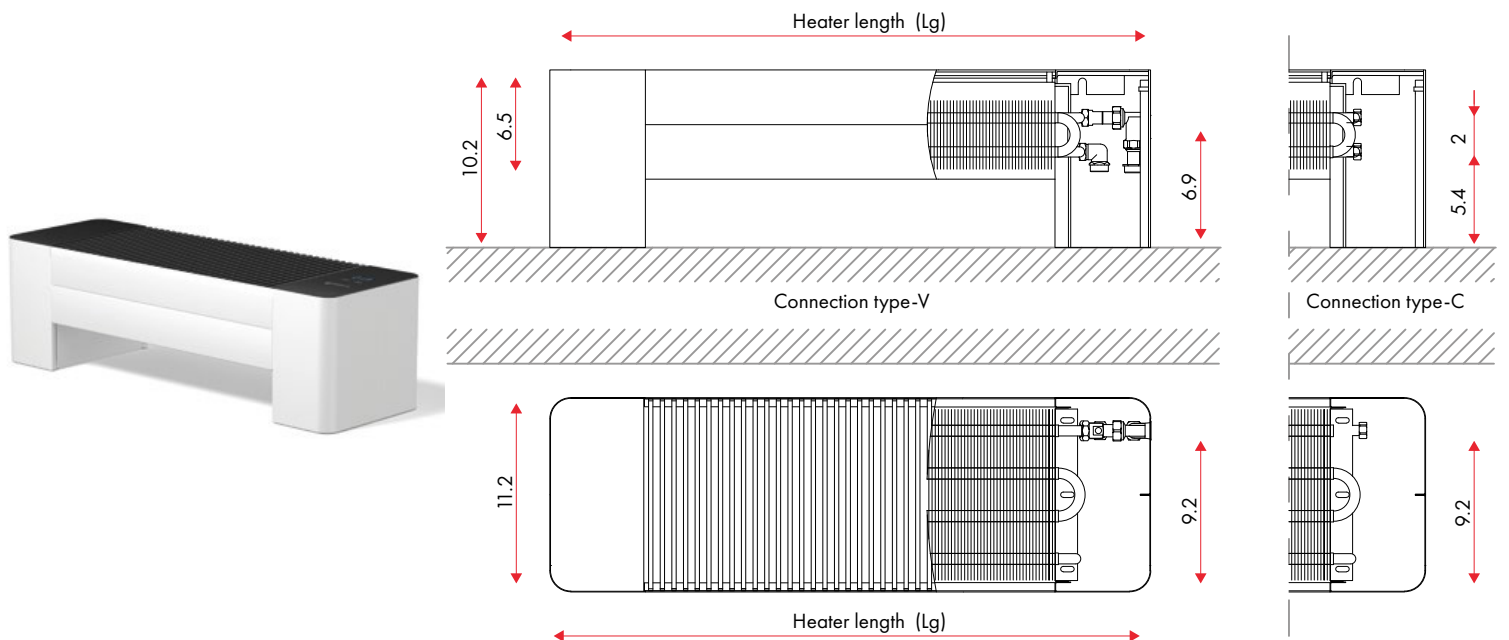


ORDER CODE: SG24-16/24.8/LG-C-C

CALIENTE

DIMENSIONS

DIMENSIONS	[INCH]
Height	6.5
Width	11.2
Length	34.5 - 101.5



FLOOR-MOUNTED CONVECTORS 9 INCH HIGH

MDL#	HEIGHT (INCH)	LENGTH (INCH)	TYPE HX	WIDTH (INCH)	180/160/65°F			
					HEATING BTU/H	FLOWRATE U _s GPM	PRESSURE DROP FT-H ₂ O	BTU/H PER FOOT
SC22-23/15.9/600	9	23.5	22	6.30	1886	0.19	0.07	1561
SC22-23/15.9/880	9	34.5	22		2607	0.26	0.13	1227
SC22-23/15.9/1080	9	42.5	22		3480	0.35	0.22	1247
SC22-23/15.9/1330	9	52.5	22		4565	0.46	0.36	1259
SC22-23/15.9/1580	9	62	22		5650	0.57	0.53	1279
SC22-23/15.9/1830	9	72	22		6739	0.67	0.73	1284
SC22-23/15.9/2080	9	82	22		7824	0.78	0.97	1286
SC22-23/15.9/2330	9	91.5	22		8914	0.89	1.23	1297
SC22-23/15.9/2580	9	101.5	22		9999	1.00	1.53	1297
SG23-23/22.2/600	9	23.5	23		8.70	4744	0.47	0.38
SG23-23/22.2/880	9	34.5	23	6174		0.62	0.62	2905
SG23-23/22.2/1080	9	42.5	23	7595		0.76	0.92	2721
SG23-23/22.2/1330	9	52.5	23	9378		0.94	1.35	2587
SG23-23/22.2/1580	9	62	23	11156		1.12	1.87	2526
SG23-23/22.2/1830	9	72	23	12944		1.29	2.46	2466
SG23-23/22.2/2080	9	82	23	14752		1.48	3.13	2425
SG23-23/22.2/2330	9	91.5	23	16535		1.65	3.87	2405
SG23-23/22.2/2580	9	101.5	23	18323		1.83	4.68	2377
SG24-23/28.4/600	9	23.5	24	11.20		3162	0.32	0.18
SG24-23/28.4/880	9	34.5	24		5319	0.53	0.41	2503
SG24-23/28.4/1080	9	42.5	24		7091	0.71	0.81	2540
SG24-23/28.4/1330	9	52.5	24		9308	0.93	1.34	2568
SG24-23/28.4/1580	9	62	24		11524	1.15	1.98	2609
SG24-23/28.4/1830	9	72	24		13741	1.37	2.75	2617
SG24-23/28.4/2080	9	82	24		15958	1.60	3.63	2623
SG24-23/28.4/2330	9	91.5	24		18170	1.82	4.61	2643
SG24-23/28.4/2580	9	101.5	24		20387	2.04	5.71	2645

Standard heating output [BTU/H] according to the EN 442-1:2015-02 European Standard, room air temperature $t_{ei} = 65^{\circ}\text{F}$

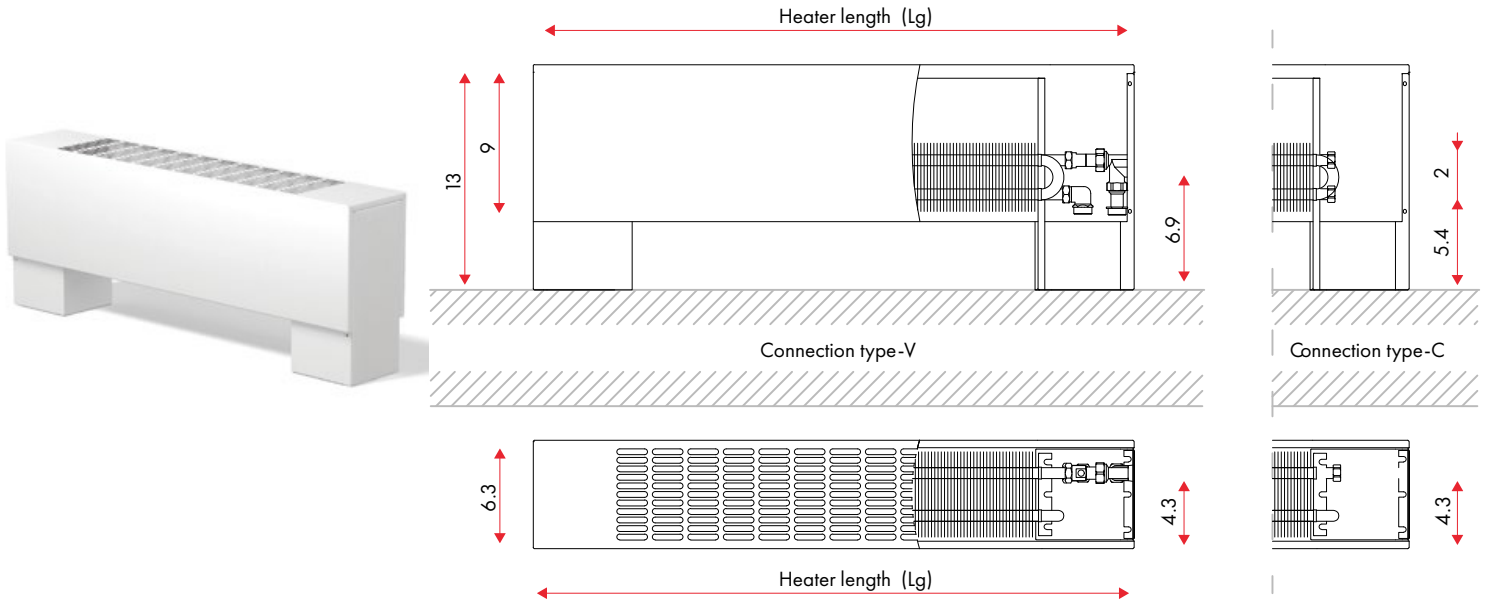
* ΔT - the difference between mean water temperature (flow water temperature minus return water temperature) and room air temperature. For quick heat output calculating software contact MDL Solutions or local rep.

The manufacturer reserves the right to make changes to the design, colour and specifications of the product shown. All images are for illustrative purposes only and some features such as grilles are optional accessories and not considered as standard equipment

FLOOR-MOUNTED CONVECTORS 9 INCH HIGH

ORDER CODE: SC22-23/15.9/LG-C-S

STANDARD

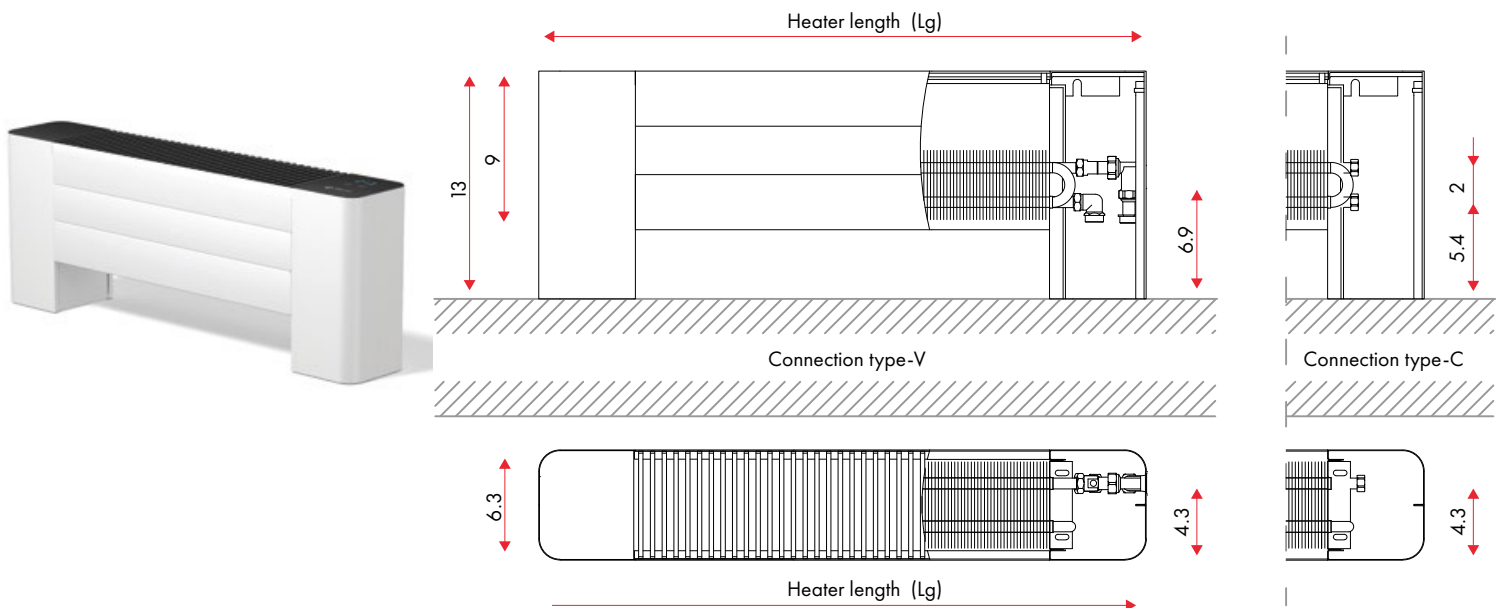


ORDER CODE: SC22-23/15.9/LG-C-C

CALIENTE

DIMENSIONS

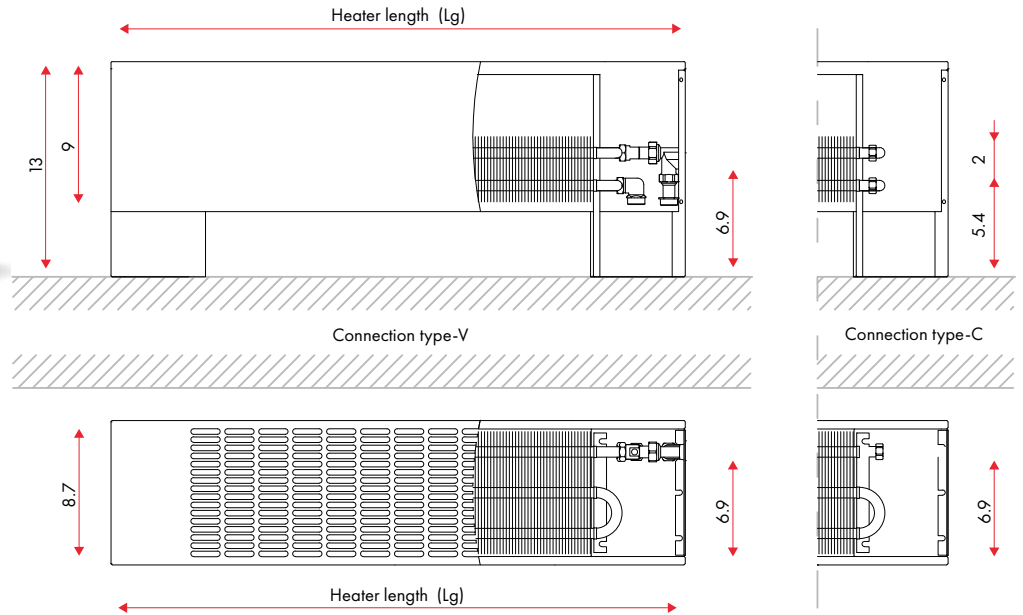
DIMENSIONS	[INCH]
Height	9
Width	6.3
Length	34.5 - 101.5



FLOOR-MOUNTED CONVECTORS 9 INCH HIGH

ORDER CODE: SG23-23/22.2/LG-C-S

STANDARD

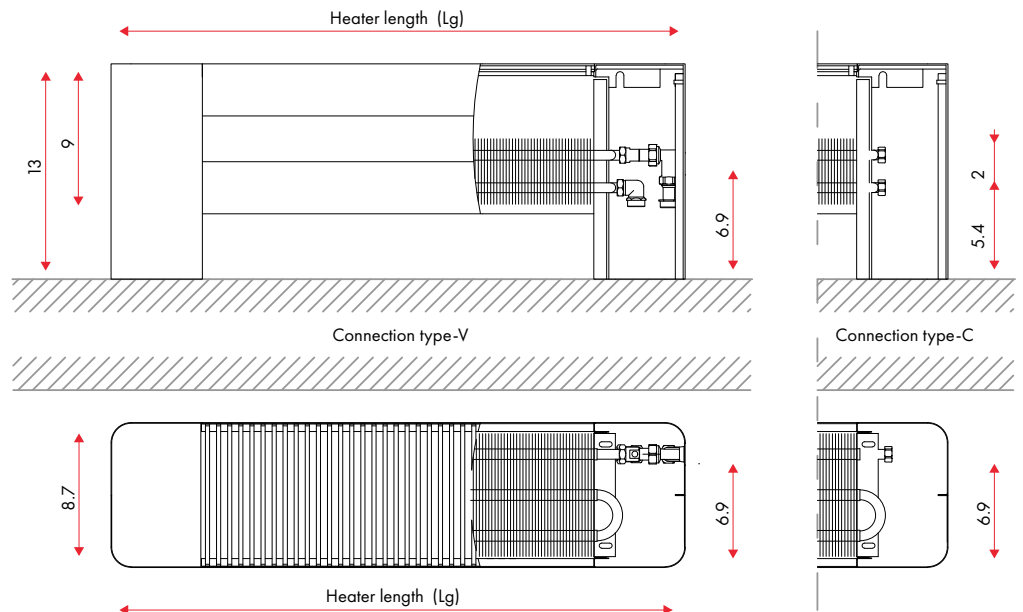


ORDER CODE: SG23-23/22.2/LG-C-C

CALIENTE

DIMENSIONS

DIMENSIONS	[INCH]
Height	9
Width	8.7
Length	34.5 - 101.5

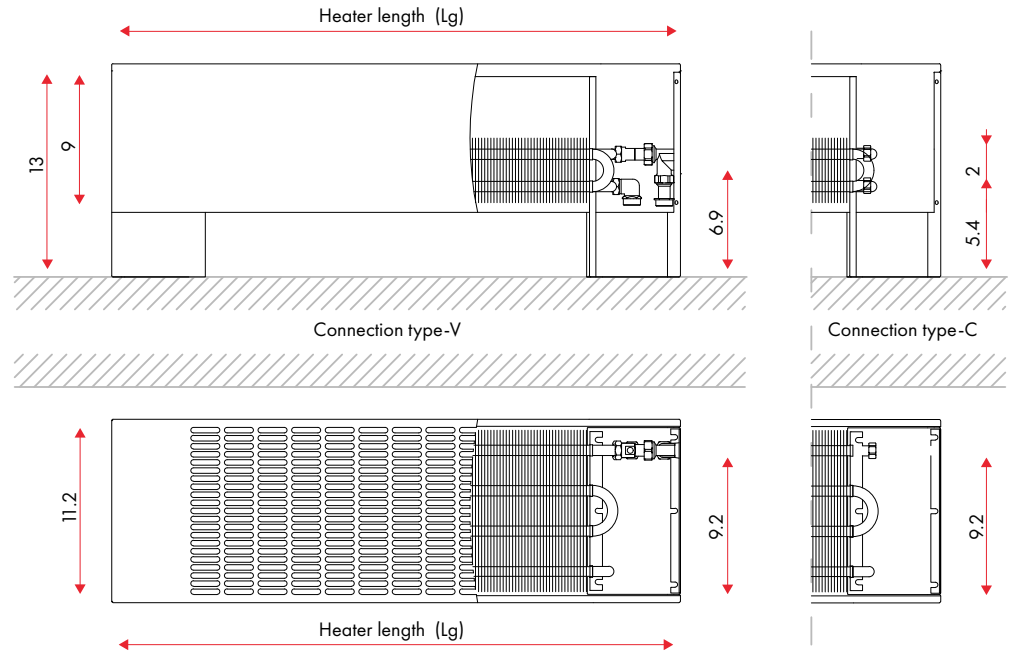


The manufacturer reserves the right to make changes to the design, colour, and specifications of the product shown. All images are for illustrative purposes only and some features such as grilles are optional accessories and not considered as standard equipment.

FLOOR-MOUNTED CONVECTORS 9 INCH HIGH

ORDER CODE: SG24-23/28.4/LG-C-S

STANDARD



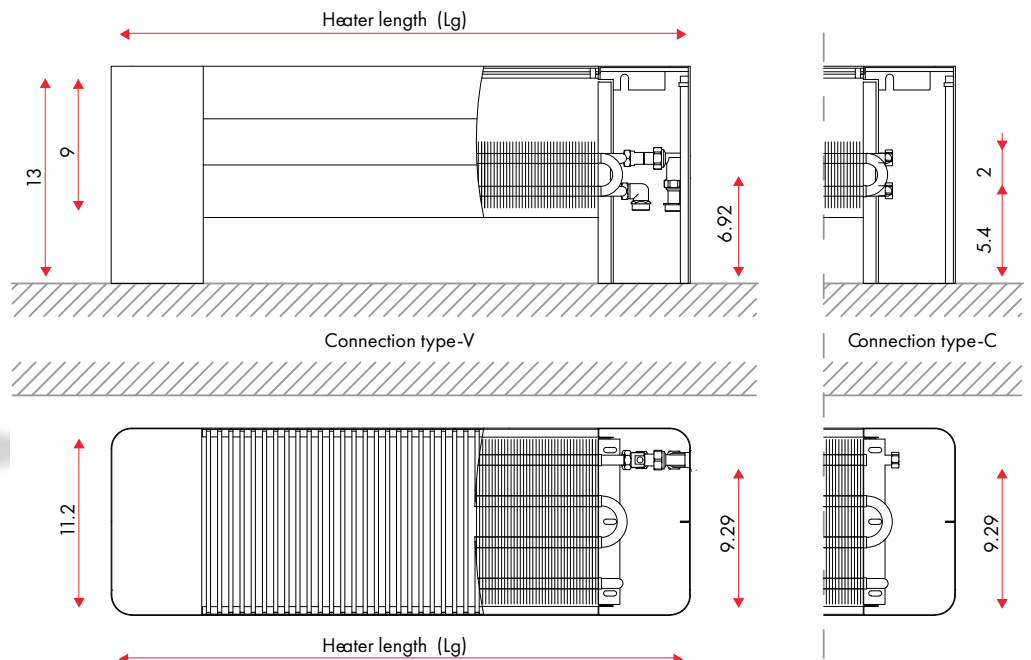
ORDER CODE: SG24-23/28.4/LG-C-C

CALIENTE

DIMENSIONS

DIMENSIONS	[INCH]
Height	9
Width	11.2
Length	34.5 - 101.5

Non-standard heater length available on request



The manufacturer reserves the right to make changes to the design, colour and specifications of the product shown. All images are for illustrative purposes only and some features such as grilles are optional accessories and not considered as standard equipment

FLOOR-MOUNTED CONVECTORS 12 INCH HIGH

MDL#	HEIGHT (INCH)	LENGTH (INCH)	TYPE HX	WIDTH (INCH)	180/160/65°F			
					HEATING BTU/H	FLOWRATE USGPM	PRESSURE DROP FT-H ₂ O	BTU/H PER FOOT
SC22-30/15.9/600	12	23.5	22	6.30	1886	0.19	0.07	1561
SC22-30/15.9/880	12	34.5	22		2958	0.30	0.16	1392
SC22-30/15.9/1080	12	42.5	22		3942	0.39	0.27	1412
SC22-30/15.9/1330	12	52.5	22		5175	0.52	0.45	1428
SC22-30/15.9/1580	12	62	22		6404	0.64	0.67	1450
SC22-30/15.9/1830	12	72	22		7638	0.76	0.93	1455
SC22-30/15.9/2080	12	82	22		8871	0.89	1.22	1458
SC22-30/15.9/2330	12	91.5	22		10100	1.01	1.55	1469
SC22-30/15.9/2580	12	101.5	22		11334	0.56	0.51	4593
SG23-30/22.2/600	12	23.5	23		8.70	5550	0.56	0.51
SG23-30/22.2/880	12	34.5	23	7224		0.72	0.84	3400
SG23-30/22.2/1080	12	42.5	23	8886		0.89	1.23	3183
SG23-30/22.2/1330	12	52.5	23	10972		1.10	1.81	3027
SG23-30/22.2/1580	12	62	23	13052		1.31	2.50	2955
SG23-30/22.2/1830	12	72	23	15145		1.51	3.29	2885
SG23-30/22.2/2080	12	82	23	17260		1.73	4.19	2837
SG23-30/22.2/2330	12	91.5	23	19346		1.93	5.18	2814
SG23-30/22.2/2580	12	101.5	23	21438		2.14	6.26	2781
SG24-30/28.4/600	12	23.5	24	11.20		3162	0.32	0.18
SG24-30/28.4/880	12	34.5	24		5955	0.60	0.58	2802
SG24-30/28.4/1080	12	42.5	24		7943	0.79	1.00	2845
SG24-30/28.4/1330	12	52.5	24		10422	1.04	1.65	2875
SG24-30/28.4/1580	12	62	24		12906	1.29	2.45	2922
SG24-30/28.4/1830	12	72	24		15390	1.54	3.39	2931
SG24-30/28.4/2080	12	82	24		17870	1.79	4.47	2938
SG24-30/28.4/2330	12	91.5	24		20353	2.04	5.69	2960
SG24-30/28.4/2580	12	101.5	24		22833	2.28	7.04	2962

Standard heating output [BTU/H] according to the EN 442-1:2015-02 European Standard, room air temperature $t_{ei} = 65^{\circ}\text{F}$

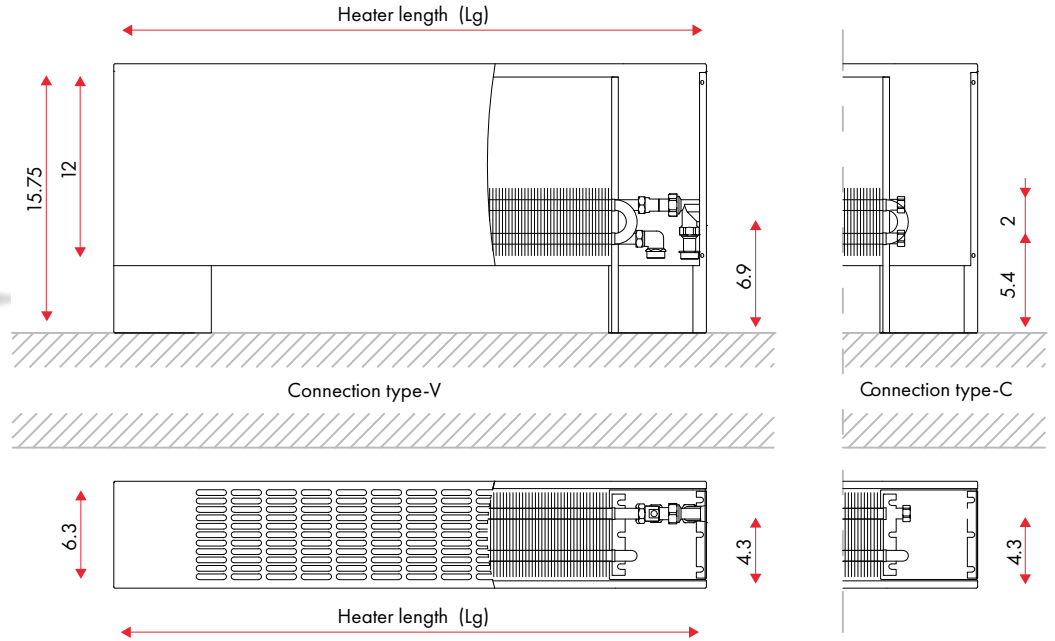
* ΔT - the difference between mean water temperature (flow water temperature minus return water temperature) and room air temperature. For quick heat output calculating software contact MDL Solutions or local rep.

The manufacturer reserves the right to make changes to the design, colour and specifications of the product shown. All images are for illustrative purposes only and some features such as grilles are optional accessories and not considered as standard equipment

FLOOR-MOUNTED CONVECTORS 12 INCH HIGH

ORDER CODE: SC22-30/15.9/LG-C-S

STANDARD



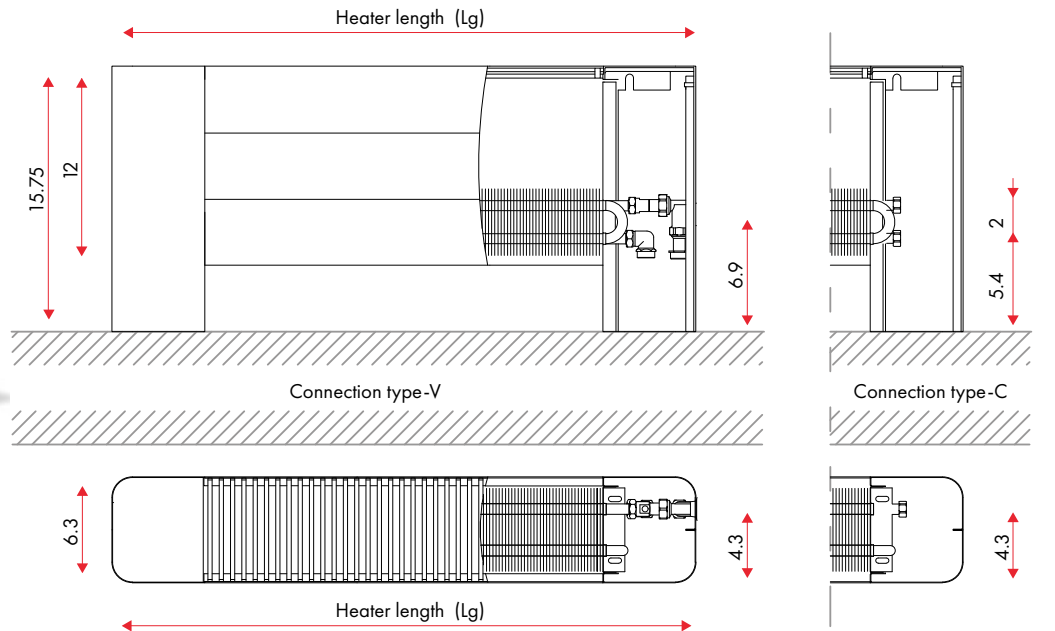
ORDER CODE: SC22-30/15.9/LG-C-C

CALIENTE

DIMENSIONS

DIMENSIONS	[INCH]
Height	12
Width	6.3
Length	34.5 - 101.5

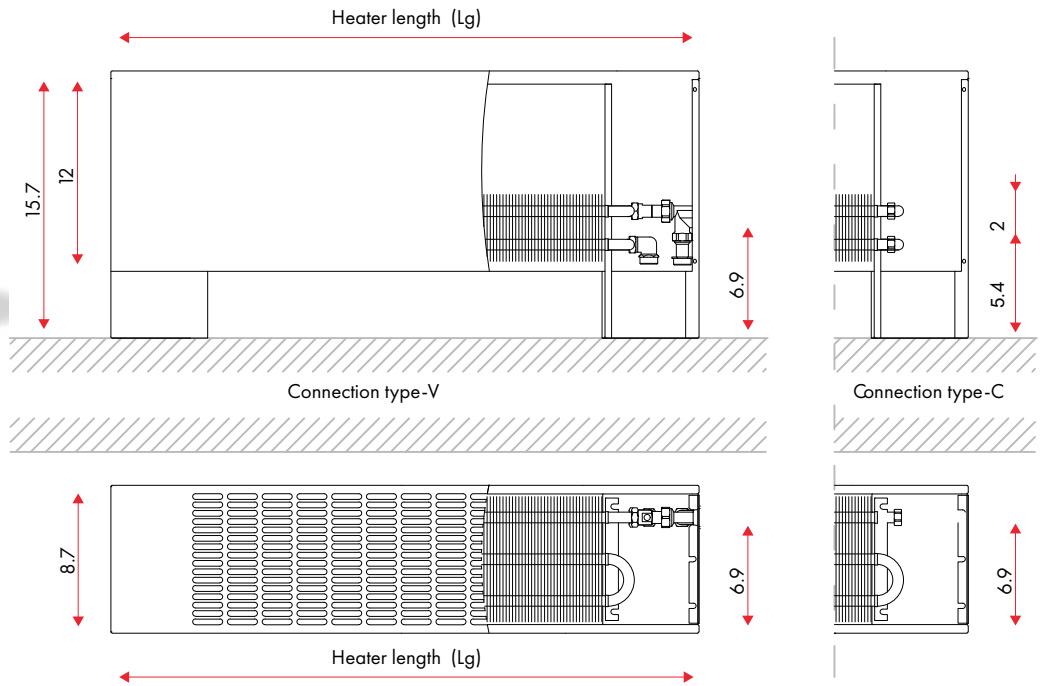
Non-standard heater length available on request



FLOOR-MOUNTED CONVECTORS 12 INCH HIGH

ORDER CODE: SG23-30/22.2/LG-C-S

STANDARD



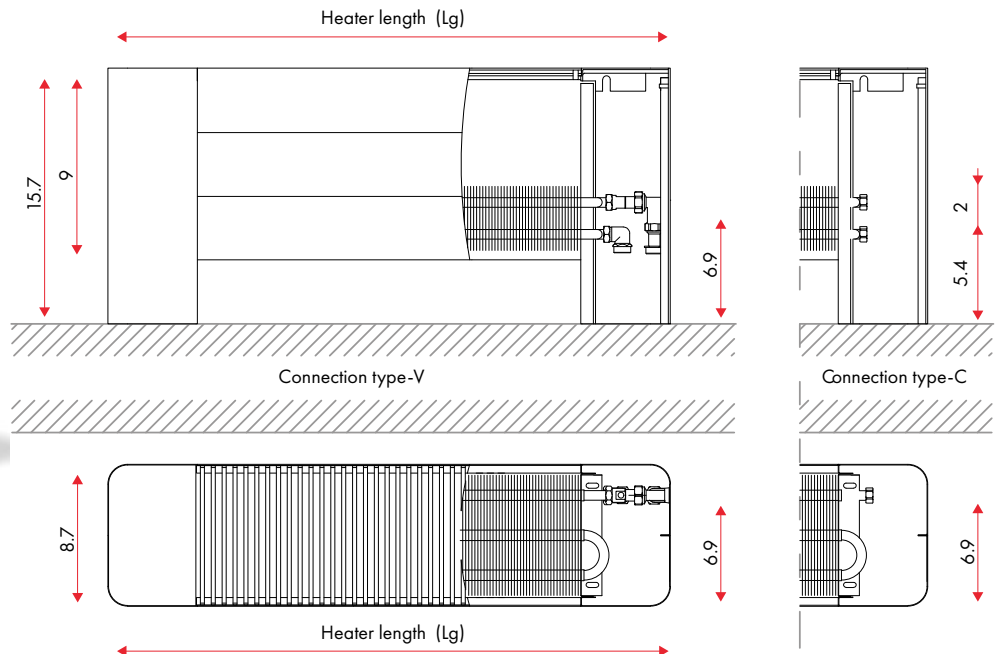
ORDER CODE: SG23-30/22.2/LG-C-C

CALIENTE

DIMENSIONS

DIMENSIONS	[INCH]
Height	12
Width	8.7
Length	34.5 - 101.5

Non-standard heater length available on request

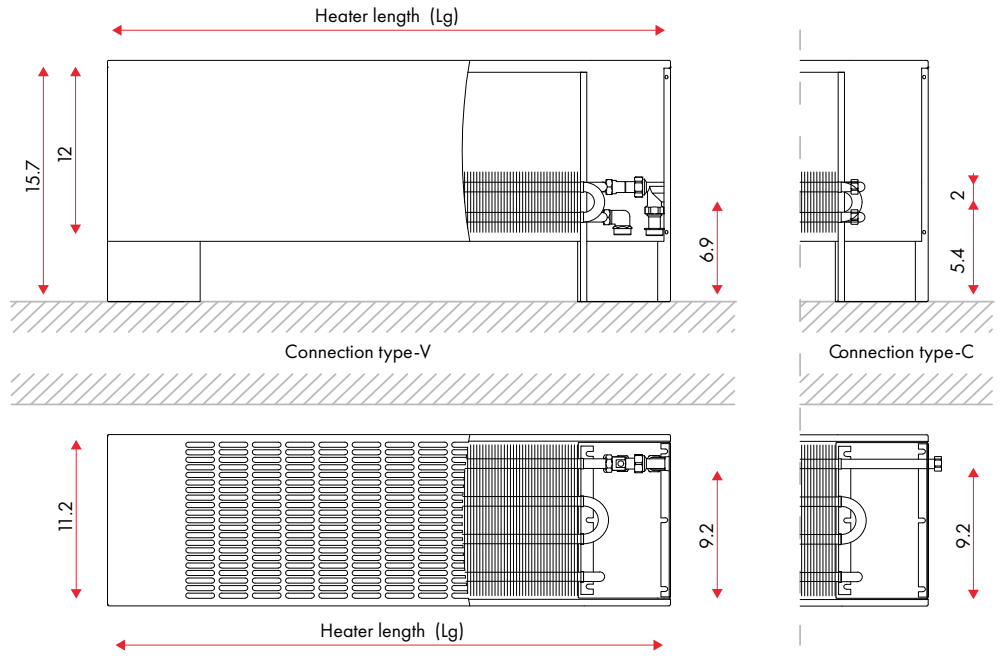


The manufacturer reserves the right to make changes to the design, colour and specifications of the product shown. All images are for illustrative purposes only and some features such as grilles are optional accessories and not considered as standard equipment.

FLOOR-MOUNTED CONVECTORS 12 INCH HIGH

ORDER CODE: SG24-30/28.4/LG-C-S

STANDARD



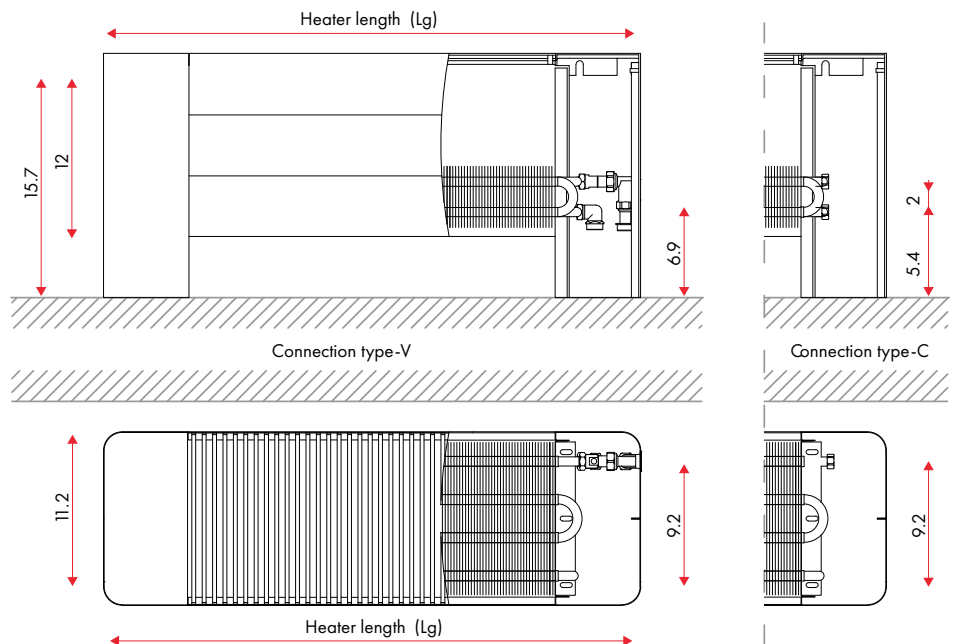
ORDER CODE: SG24-30/28.4/LG-C-C

CALIENTE

DIMENSIONS

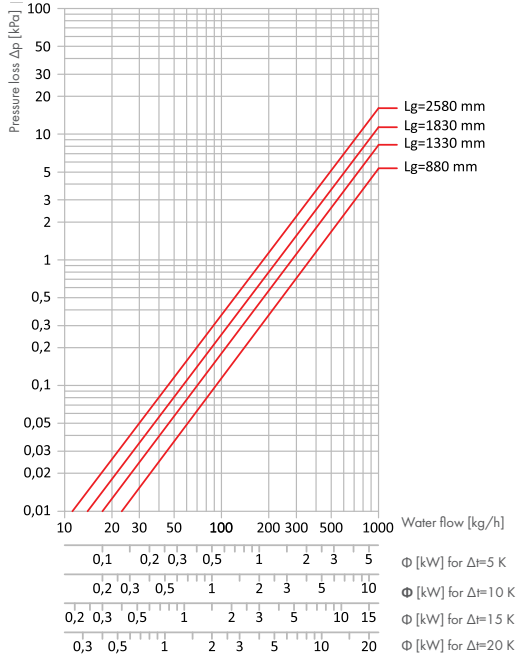
DIMENSIONS	[INCH]
Height	12
Width	11.2
Length	34.5 - 101.5

Non-standard heater length available on request

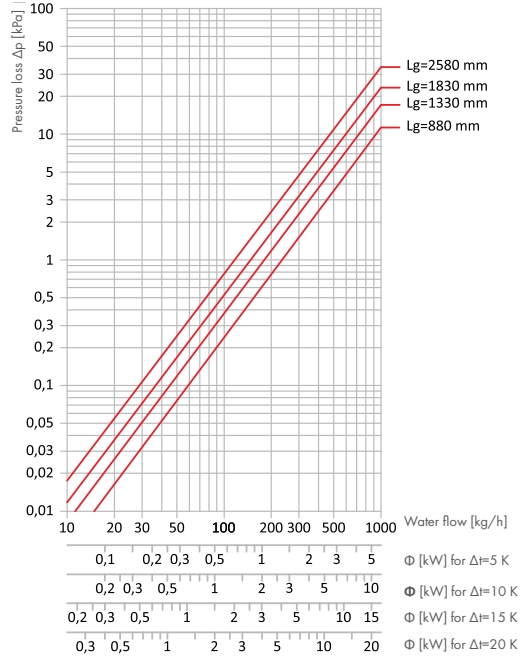


PRESSURE LOSS

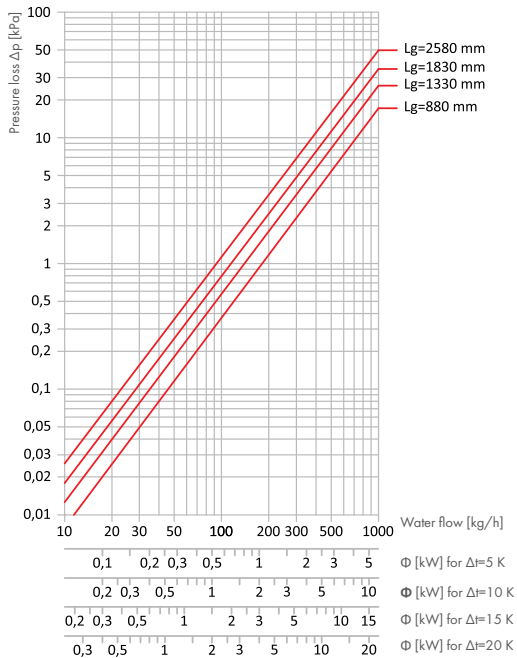
- SC12-10/15.9/Lg



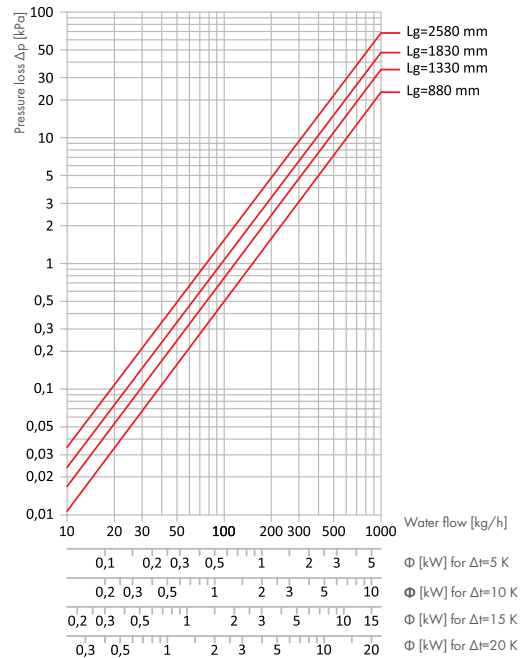
- SG14-14/28.4/Lg
- SC22-16/15.9/Lg
- SC22-23/15.9/Lg
- SC22-30/15.9/Lg



- SG23-16/22.2/Lg
- SG23-23/22.2/Lg
- SG23-30/22.2/Lg



- SG24-16/28.4/Lg
- SG24-23/28.4/Lg
- SG24-30/28.4/Lg



The manufacturer reserves the right to make changes to the design, colour and specifications of the product shown. All images are for illustrative purposes only and some features such as grilles are optional accessories and not considered as standard equipment

HEATER SELECTION

Example calculations for the following convector: N-C22-60/14.7/133

Heat output for 75/65/20°: $\Phi=1577$ W

Installation temperatures: $t_z/t_p/\Theta_i = 65/55/20^\circ\text{C}$

EXAMPLE 1

Based on the corrective factors

Refer to the right corrective factor for project installation temperatures - flow and return temperature and room air temperature. In this case, corrective factors is 0.753. Next step is to multiple heat output value for standard installation parameters 75/65/20°C by corrective factor: Heat output for 65/55/20°C: $\Phi=1594 \cdot 0.753 = 1200$ W.

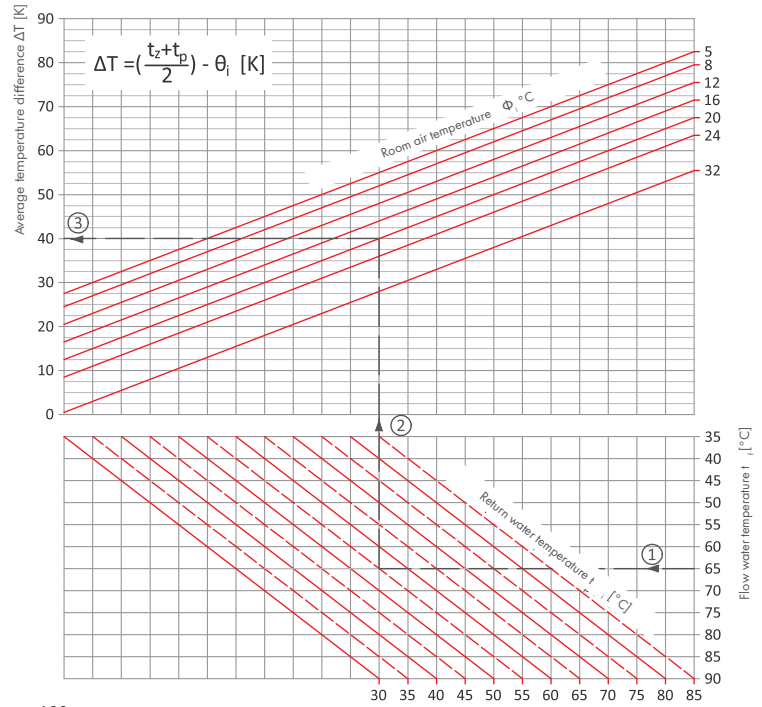
EXAMPLE 2

Based on heating output formula for different installation temperatures

Calculate/read the average temperature difference for respective parameters, using the graph.

The graph allows for easy readout of the average temperature difference ΔT for the selected parameters of heating water t_f and t_r , depending on the room temperature Θ_i .

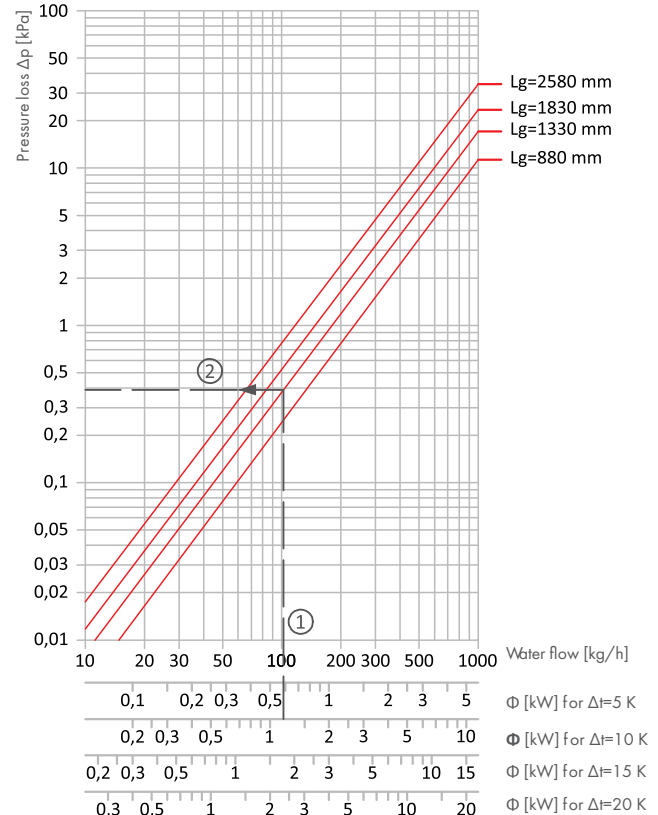
1. First draw a horizontal line from flow temperature $t_f=65^\circ\text{C}$ to its crossing with the slanted line of outlet temperature $t_r=55^\circ\text{C}$
2. Then draw a vertical line from the crossing point with the slanted line of room temperature $\Theta_i=20^\circ\text{C}$
3. Draw a horizontal line and read the temperature difference of $\Delta T=40$ K. Then use the equation for heating output of convectors for different conditions, for the CALIENTE N-C22-60/14,7/133 heater it will be: $\Phi=11,0649 \cdot \Delta T^{1,2705}$ [W]
4. Heating power for the selected parameters 65/55/20°C: $\Phi=11,0649 \cdot 40^{1,2705} = 1200$ W



PRESSURE LOSS READOUT

Based on radiator selection data presented above we selected the heating output of 1200 W for 65/55/20°C temperatures. Cooling temperature (the difference between flow and return temperatures) is $\Delta t=10^\circ\text{C}$.

1. Using the axis for 10°C cooling temperature draw a vertical line from the 1.20kW heat output to its crossing with the slanted line representing the length of the convector $L_k=1330$ mm.
2. Draw a horizontal line from that crossing and read the pressure loss $\Delta p=0,39$ kPa.



CONTROL METHODS FOR FLOOR-MOUNTED CONVECTORS

The floor-mounted convectors are equipped with a heat exchanger. The V-type convectors have a built-in thermostatic valve, which allows for different heating water-flow control methods. The V-type radiators have a thermostatic head in the built-in valve.

Use of a room controller and actuator allows for the simultaneous control of several convectors and the ability to schedule their operation. A simple connection between the actuators, controllers, and power supply facilitate their operation.

Floor-mounted heaters may be adjusted to work with actuators using special valves that allow the assembly of actuators inside the radiator casing.

Please contact us prior to finalizing your order if you require optional convector adjustment to internal actuator installation. Another option is wireless control, that allows for the connection of multiple elements with minimum interference (*only available in Europe*).

The V-type heaters in the CALIENTE finish can be equipped with built -in actuators and a dedicated controller.

The C-type radiators do not have a built-in thermostatic valve – instead, the unit is regulated by a valve and thermostatic head between the convector and the installation.

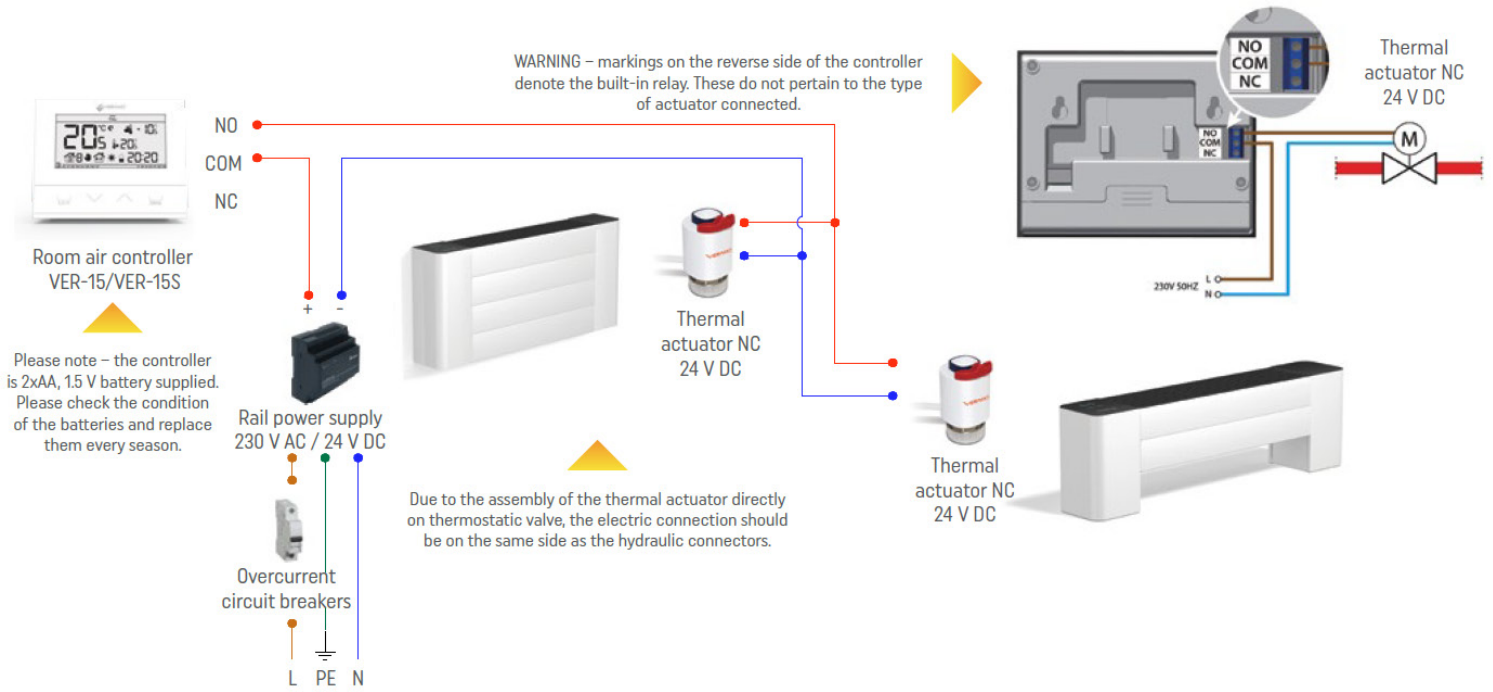
WARNING!

Installation should only be performed by MDL Verano approved personnel, in accordance with local codes and standards. All electrical wiring must follow MDL Verano instructions and deviations must be approved by the factory before installation. Units are designed for operation with 24 V DC power supply only. Never connect directly to mains 120-230 V AC power grid.

THERMOSTATIC HEADS FOR VERANO FLOOR-MOUNTED CONVECTORS

NAME	DESCRIPTION		
Thermostatic head SH Diamant White Cat. No. 600100001			
Thermostatic head SH Diamant Plus White- Chrome Cat. No. 600100011			
Thermostatic head SH Brillant White–Chrome Cat. No. 600200001			
Thermostatic head SH Brillant White Cat. No. 600200002	Schlösser thermostatic heads with connection thread M30x1.5 cooperate with all Schlösser valves as well as with other valves with inserts M30x1.5 and closing dimension 0.5 inches		
Thermostatic head SH Brillant Chrome Cat. No. 600200003			
Thermostatic head SH Brillant Satin Cat. No. 600200004			
Thermostatic head SH Brillant Steel Cat. No. 600200005			
Thermostatic head SH Brillant Gold Cat. No. 600200007			
Programmable TRV GP60		Fully programmable thermostatic head	

CONTROLLING THE OPERATION WITH USE OF ACTUATORS AND THE VER-15S CONTROLLER



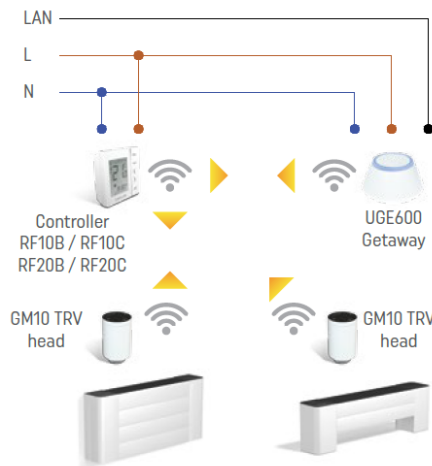
CONTROL WITH A WIRELESS SYSTEM

Example of connection for several heaters with one room air controller and ON/OFF NC thermal actuators

The floor-mounted controller allows one to program the set room temperature and enables the simultaneous control of as many as six separate heaters equipped with wireless heads. Depending on the type, the controller can be battery-powered (4xAAA) or 230 V mains-powered (RF10B/RF10C). Each of the heating zones should be equipped with a separate controller.

The wireless head is installed on the thermostatic valve and communicates with the room controller, adjusting the flow of heating water through the thermostatic valve accordingly. The head is battery-powered (2 xAA) and the batteries should be replaced every heating season.

If the remote control of the installation is not required the Internet gateway can be replaced with C010 network coordinator.



Example connection diagram for wireless system

CONTROLLING THE CALIENTE CONVECTORS THE BUILT-IN VER-34 CONTROLLER

The floor-mounted CALIENTE casing convectors can be equipped with built-in VER-34 controller as an option.

This controller has a glass finish, LED display and intuitive buttons VER-34 allows for precise setting of expected room temperature and readout of current temperature.

The VER-34 controller is available in black or white. The VER-34 controller forms an integral part of the CALIENTE casing heater.

The controller set includes:

- VER-34 Controller
- Glass masking panel in the same colour as the controller
- SST24 actuator to be assembled on the thermostatic valve

The CALIENTE convector with built-in controller is designed for assembly of the actuator within the heater casing. The built-in VER-34 controller can be used in CALIENTE radiators that are 6.3 inches or higher.

NOTE – the controller can only be installed on the right side of the convector. *Currently, this feature is only available in Europe.*



VER-34 CONTROLLER

The VER-34 controller is designed to work with floor-mounted CALIENTE convectors. It allows the user to set the room temperature. Once this temperature is reached, the controller closes the heater valve via a thermal actuator.

The room temperature is measured with a built-in sensor.

In idle mode, the controller screen displays the current room temperature. After pressing the PLUS or MINUS button the set temperature will be displayed. The value of the set temperature can be adjusted by pressing the PLUS and MINUS buttons.

The built-in light intensity sensor adjusts the screen brightness to the current room conditions.

Currently, this feature is only available in Europe.



CONTROLLERS FOR FLOOR-MOUNTED RADIATORS

- S-C22 type, white or black VERSC22B or VERSC22C
- S-G23 type, white or black VERSG23B or VERSC23C
- S-G24 type, white or black VERSG24B or VERSC24C

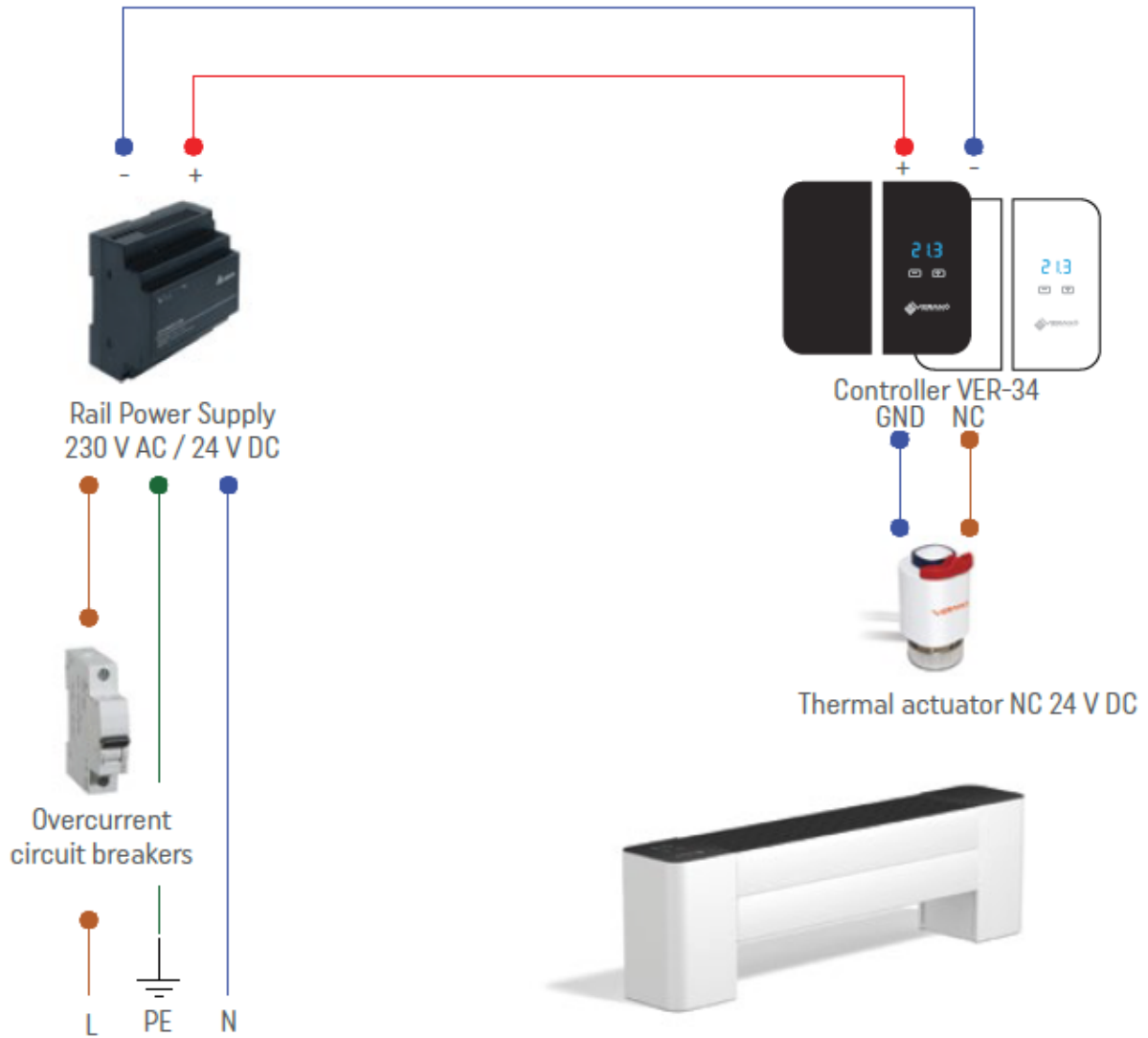
CONTROLLERS FOR WALL-MOUNTED CONVECTORS

- N-C22 type, white or black VERNC22B or VERNC22C
- N-C23 type, white or black VERNG23B or VERNG23C

All controllers are to be supplied with 24 V DC voltage.

SST24 actuator: 24 V AC/DC power supply; PVC 2 x .02" 3.2 ft connection cable, M30x1.5

ELECTRICAL CONNECTION DIAGRAM



Connection diagram for the VER-34 controller and SST24 actuator and the CALIENTE convector.

The VER-34 controller requires 24 V DC power supply. Connection of the power cable and the actuator circuit should be executed, as per the attached diagram. Due to the use of the VER-34 controller the power should be connected to the right side of the convector.

WARNING!

Installation should only be performed by MDL Verano approved personnel, in accordance with local codes and standards. All electrical wiring must follow MDL Verano instructions and deviations must be approved by the factory before installation. Units are designed for operation with 24 V DC power supply only. Never connect directly to mains 120-230 V AC power grid.

HEATEST, s. r. o.
 Byšev č. p. 84, PSC 276 01, Česká republika
 oznámená laborator 2693
 notified laboratory 2693

**PROTOKOL
 O POSOUZENÍ VLASTNOSTÍ VÝROBKŮ
 PRODUCT PERFORMANCE ASSESSMENT
 REPORT**

podle nařízení Evropského parlamentu a Rady (EU) č. 305/2011 ze dne 9. března 2011, (nařízení o stavebních výrobcích – CPR), příloha V, čl. 1.4 (systém 3) v platném znění
 in accordance with regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 (construction product regulation – CPR), annex V, par. 1.4 (System 3), as amended

č. / No. 2693-CPR-0003-2017

Základ č. / Application No.: 0042017

Počet stran protokolu včetně strany titulní a příloh: 11 Počet příloh / Enclosures: 1
 Number of pages including title page and enclosures Výstisk č. / Copy No.: 1
 Počet výstisků / Number of copies: 2

Otopená tělesa S-G23-45,3/42 pro použití v budovách
 Connectors for the use in buildings

dle / in accordance with CSN EN 442-1 ed. 2: 2015

kladem byla vyrobena výrobcem nebo pro výrobce / manufactured by or manufactured for
VERANO Ryszard Miązga,
 Vetterow 7A,
 20-277 Lublin, Poland

ve výrobě / at manufacturing site
Vetterow 7A,
 20-277 Lublin, Poland

Protokol zhotovili / Edited by
 Zastupce oznámené laboratorie 2693
 Representative of the notified laboratory 2693

Ing. Jiří Brzd, Ph.D., hodnotitel
 Ing. Vojtěch Hrnčík, vedoucí ZL, jednatel

31-06-2017

HEATEST, s. r. o., Byšev č. p. 84, PSC 276 01, Česká republika, CZ 276091, DIC CZ276091
 Tel: +420 737 284 443, info@heatest.cz, www.heatest.cz

VERANO

DEKLARACJA WŁAŚCIWOŚCI UŻYTKOWYCH
 nr 002-2017-07-01

1. **Nazwa i nazwa handlowa wyrobu budowlanego:**
 Konwektor stojący z rur obrobionych – ławka grzewcza (zgodnie z rys. G.8):
 S-G23-45,3/42

2. **Oznaczenie typu wyrobu budowlanego:**
 Oznakowanie typu wyrobu (wg pkt.1), nazwy producenta oraz partii produkcyjnej znajduje się na etykietkach umieszczonych na obudowie grzejnika oraz dodatkowo na etykietkach znajdujących się na opakowaniu wyrobu.

3. **Zamierzone zastosowanie lub zastosowania:**
 Przewidziane przez producenta zamierzone zastosowanie wyrobu budowlanego zgodnie z normą PN-EN 442-1:2015-02. W instalacjach grzewczych w budynkach, Grzejniki i konwektory zamontowane na ścianie w instalacjach centralnego ogrzewania budynków, zasilane wodą grzewczą z zewnętrznych źródeł ciepła.

4. **Nazwa i adres siedziby producenta oraz miejsce produkcji wyrobu:**
VERANO Ryszard Miązga
 ul. Vetterow 7A, 20-277 Lublin
 Tel: +48 81 44-08-330, Fax: +48 81 44-08-333
 www.v-k.pl info@v-k.pl

5. **Nazwa i adres siedziby upoważnionego przedstawiciela:**
 nie dotyczy

6. **Krajowy system zastosowany do oceny i weryfikacji stałości właściwości użytkowych:**
 System 3

7. **Norma zharmonizowana:**
 PN-EN 442-1:2015-02

8. **Jednostka oceny technicznej:**
 Nazwa akredytowanej jednostki certyfikującej: HEATEST, s.r.o.

Numer akredytacji: 2693

Numer certyfikatu: 2693-CPR-0003-2017

VERANO Ryszard Miązga
 20-277 Lublin, ul. Vetterow 7A
 Tel: +48 81 44-08-330, Fax: +48 81 44-08-333
 www.v-k.pl info@v-k.pl

HEATEST, s. r. o.
 Byšev č. p. 84, PSC 276 01, Česká republika
 oznámená laborator 2693
 notified laboratory 2693

**PROTOKOL
 O POSOUZENÍ VLASTNOSTÍ VÝROBKŮ
 PRODUCT PERFORMANCE ASSESSMENT
 REPORT**

podle nařízení Evropského parlamentu a Rady (EU) č. 305/2011 ze dne 9. března 2011, (nařízení o stavebních výrobcích – CPR), příloha V, čl. 1.4 (systém 3) v platném znění
 in accordance with regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 (construction product regulation – CPR), annex V, par. 1.4 (System 3), as amended

č. / No. 2693-CPR-0004-2017

Základ č. / Application No.: 0042017

Počet stran protokolu včetně strany titulní a příloh: 16 Počet příloh / Enclosures: 1
 Number of pages including title page and enclosures Výstisk č. / Copy No.: 1
 Počet výstisků / Number of copies: 2

Otopená tělesa S-C12-16/18,9; S-G14-16/28,4 S-C22-16/18,9; S-G23-16/22,2; S-G24-16/28,4 pro použití v budovách
 Connectors for the use in buildings
 S-C22-23/18,9; S-G23-23/22,2; S-G24-23/28,4
 S-C22-30/15,9; S-G23-30/22,2; S-G24-30/28,4

dle / in accordance with CSN EN 442-1 ed. 2: 2015

kladem byla vyrobena výrobcem nebo pro výrobce / manufactured by or manufactured for
VERANO Ryszard Miązga,
 Vetterow 7A,
 20-277 Lublin, Poland

ve výrobě / at manufacturing site
Vetterow 7A,
 20-277 Lublin, Poland

Protokol zhotovili / Edited by
 Zastupce oznámené laboratorie 2693
 Representative of the notified laboratory 2693

Ing. Jiří Brzd, Ph.D., hodnotitel
 Ing. Vojtěch Hrnčík, vedoucí ZL, jednatel

31-06-2017

HEATEST, s. r. o., Byšev č. p. 84, PSC 276 01, Česká republika, CZ 276091, DIC CZ276091
 Tel: +420 737 284 443, info@heatest.cz, www.heatest.cz

VERANO

DEKLARACJA WŁAŚCIWOŚCI UŻYTKOWYCH
 nr 001-2017-07-01

1. **Nazwa i nazwa handlowa wyrobu budowlanego:**
 Konwektor stojący z rur obrobionych (zgodnie z rys. G.8):
 S-C12-16/18,9; S-G14-16/28,4
 S-C22-16/18,9; S-G23-16/22,2; S-G24-16/28,4
 S-C22-23/18,9; S-G23-23/22,2; S-G24-23/28,4
 S-C22-30/15,9; S-G23-30/22,2; S-G24-30/28,4

2. **Oznaczenie typu wyrobu budowlanego:**
 Oznakowanie typu wyrobu (wg pkt.1), nazwy producenta oraz partii produkcyjnej znajduje się na etykietkach umieszczonych na obudowie grzejnika oraz dodatkowo na etykietkach znajdujących się na opakowaniu wyrobu.

3. **Zamierzone zastosowanie lub zastosowania:**
 Przewidziane przez producenta zamierzone zastosowanie wyrobu budowlanego zgodnie z normą PN-EN 442-1:2015-02. W instalacjach grzewczych w budynkach, Grzejniki i konwektory zamontowane na ścianie w instalacjach centralnego ogrzewania budynków, zasilane wodą grzewczą z zewnętrznych źródeł ciepła.

4. **Nazwa i adres siedziby producenta oraz miejsce produkcji wyrobu:**
VERANO Ryszard Miązga
 ul. Vetterow 7A, 20-277 Lublin
 Tel: +48 81 44-08-330, Fax: +48 81 44-08-333
 www.v-k.pl info@v-k.pl

5. **Nazwa i adres siedziby upoważnionego przedstawiciela:**
 nie dotyczy

6. **Krajowy system zastosowany do oceny i weryfikacji stałości właściwości użytkowych:**
 System 3

7. **Norma zharmonizowana:**
 PN-EN 442-1:2015-02

8. **Jednostka oceny technicznej:**
 Nazwa akredytowanej jednostki certyfikującej: HEATEST, s.r.o.

Numer akredytacji: 2693

Numer certyfikatu: 2693-CPR-0004-2017

VERANO Ryszard Miązga
 20-277 Lublin, ul. Vetterow 7A
 Tel: +48 81 44-08-330, Fax: +48 81 44-08-333
 www.v-k.pl info@v-k.pl

HEATEST, s. r. o.
 Byšev č. p. 84, PSC 276 01, Česká republika
 oznámená laborator 2693
 notified laboratory 2693

**PROTOKOL
 O POSOUZENÍ VLASTNOSTÍ VÝROBKŮ
 PRODUCT PERFORMANCE ASSESSMENT
 REPORT**

podle nařízení Evropského parlamentu a Rady (EU) č. 305/2011 ze dne 9. března 2011, (nařízení o stavebních výrobcích – CPR), příloha V, čl. 1.4 (systém 3) v platném znění
 in accordance with regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 (construction product regulation – CPR), annex V, par. 1.4 (System 3), as amended

č. / No. 2693-CPR-0005-2017

Základ č. / Application No.: 0042017

Počet stran protokolu včetně strany titulní a příloh: 14 Počet příloh / Enclosures: 1
 Number of pages including title page and enclosures Výstisk č. / Copy No.: 1
 Počet výstisků / Number of copies: 2

Otopená tělesa N-C22-23/14,7; N-G23-23/21,0; N-C22-30/14,7; N-G23-30/21,0; N-C22-40/14,7; N-G23-40/21,0; N-C22-60/14,7; N-G23-60/21,0 pro použití v budovách
 Connectors for the use in buildings

dle / in accordance with CSN EN 442-1 ed. 2: 2015

kladem byla vyrobena výrobcem nebo pro výrobce / manufactured by or manufactured for
VERANO Ryszard Miązga,
 Vetterow 7A,
 20-277 Lublin, Poland

ve výrobě / at manufacturing site
Vetterow 7A,
 20-277 Lublin, Poland

Protokol zhotovili / Edited by
 Zastupce oznámené laboratorie 2693
 Representative of the notified laboratory 2693

Ing. Jiří Brzd, Ph.D., hodnotitel
 Ing. Vojtěch Hrnčík, vedoucí ZL, jednatel

12-07-2017

HEATEST, s. r. o., Byšev č. p. 84, PSC 276 01, Česká republika, CZ 276091, DIC CZ276091
 Tel: +420 737 284 443, info@heatest.cz, www.heatest.cz

VERANO

DEKLARACJA WŁAŚCIWOŚCI UŻYTKOWYCH
 nr 051-2017-07-12

1. **Nazwa i nazwa handlowa wyrobu budowlanego:**
 Konwektor naścienny z rur obrobionych (zgodnie z rys. G.8)
 N-C22-23/14,7; N-G23-23/21,0
 N-C22-30/14,7; N-G23-30/21,0
 N-C22-40/14,7; N-G23-40/21,0
 N-C22-60/14,7; N-G23-60/21,0

2. **Oznaczenie typu wyrobu budowlanego:**
 Oznakowanie typu wyrobu (wg pkt.1), nazwy producenta oraz partii produkcyjnej znajduje się na etykietkach umieszczonych na obudowie grzejnika oraz dodatkowo na etykietkach znajdujących się na opakowaniu wyrobu.

3. **Zamierzone zastosowanie lub zastosowania:**
 Przewidziane przez producenta zamierzone zastosowanie wyrobu budowlanego zgodnie z normą PN-EN 442-1:2015-02. W instalacjach grzewczych w budynkach, Grzejniki i konwektory zamontowane na ścianie w instalacjach centralnego ogrzewania budynków, zasilane wodą grzewczą z zewnętrznych źródeł ciepła.

4. **Nazwa i adres siedziby producenta oraz miejsce produkcji wyrobu:**
VERANO Ryszard Miązga
 ul. Vetterow 7A, 20-277 Lublin
 Tel: +48 81 44-08-330, Fax: +48 81 44-08-333
 www.v-k.pl info@v-k.pl

5. **Nazwa i adres siedziby upoważnionego przedstawiciela:**
 nie dotyczy

6. **Krajowy system zastosowany do oceny i weryfikacji stałości właściwości użytkowych:**
 System 3

7. **Norma zharmonizowana:**
 PN-EN 442-1:2015-02

8. **Jednostka oceny technicznej:**
 Nazwa akredytowanej jednostki certyfikującej: HEATEST, s.r.o.

Numer akredytacji: 2693

Numer certyfikatu: 2693-CPR-0005-2017

VERANO Ryszard Miązga
 20-277 Lublin, ul. Vetterow 7A
 Tel: +48 81 44-08-330, Fax: +48 81 44-08-333
 www.v-k.pl info@v-k.pl

VERANO[®]

BY MDL SOLUTIONS

COMPACT LOWER VOLTAGE FAN COILS AND HYDRONIC HEAT | MDLSOLN.COM

The data presented in this document is correct at time of publication. Illustrations may include optional accessories. Due to continuous research and development, and the desire to improve the quality of our products, MDL Solutions reserves the right to make changes regarding design and specifications without prior notice.