

**VERANO**<sup>®</sup>  
BY MDL SOLUTIONS  
COMPACT LOWER VOLTAGE FAN COILS AND HYDRONIC HEAT | MDLSOLN.COM



# MDL STEEL PREMIUM STANDARD

WALL/FLOOR mounted convectors

After publishing edition of this catalogue, i.e. after 1.01.2018 there might have been changes in products. The manufacturer reserves the right to introduce changes in construction or deviations from the adopted color range. The illustration may include optional equipment. Print technology may cause differences in presented colours.

For further information please contact MDL Solutions regarding  
VERANO CONVECTOR sales representatopn

## NATURAL RADIATION/ CONVECTION



## OPERATING PRINCIPLE OF WALL-MOUNTED AND FLOOR-MOUNTED STEEL PREMIUM HEATERS

Convection heating systems utilize the phenomenon of heat absorption by air particles flowing through heat exchanger. The difference in densities of cold and heated air causes a delicate draft that initiates the airflow that flows gently from the bottom to the top of the unit. Natural air circulation is created in the room, which facilitates uniform heating. The correct air circulation in case of convection radiators take place when the air flows to the radiator from the bottom,

and then rises, and that is why minimum separation distances should always be kept between the walls and other elements surrounding the convector. This principle is the basis for operation of convection heaters that are characterized by low mass of the convectors, its small water capacity and low thermal inertia. This makes the convectors capable of appropriately fast reaction to the changing heat demand of a room, when compared to traditional radiators.

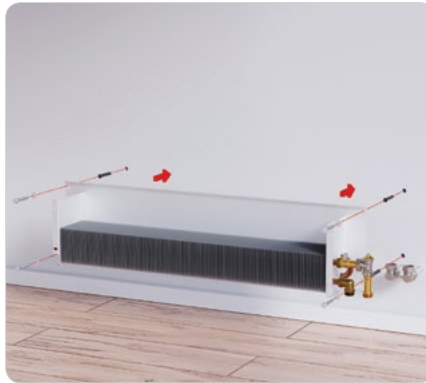
Convectors are considered the easiest to control, which in their case takes the form of controlling the flow of heating fluid through the heater with use of thermostatic valve. Details concerning the installation were included in the Installation and maintenance manual of Wall-mounted and Floor-mounted convectors chapter.

**ADVANTEGES**



**DURABILITY**

High quality of materials of the heat exchanger (copper-aluminium) guarantees corrosion resistance and low sensitivity to poor water quality.



**EASY TO ASSEMBLY AND SERVICE**

Thanks to the universal design of the convector, it's easy to assembly and the future hassle-free maintenance is secured.



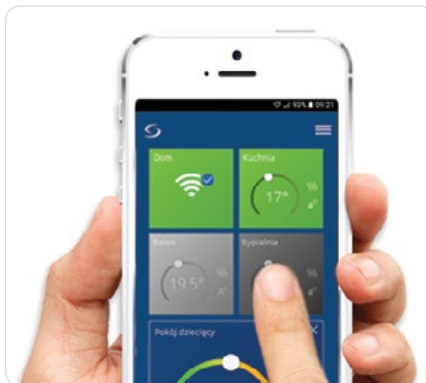
**THE SYSTEM FOR TEMPERATURE CONTROL**

Dedicated and modern room controllers allow full control of heaters operation.



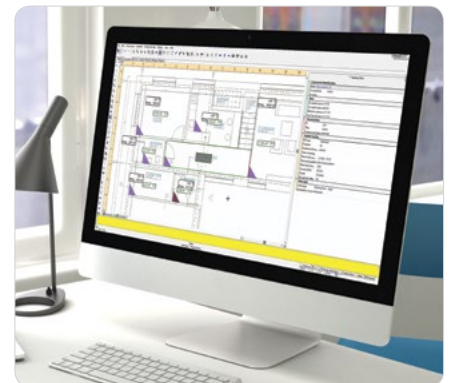
**COMPLY WITH THE EN 442 REQUIREMENTS**

The VERANO convectors were all tested to the compulsory EN 442 harmonized standard. The positive tests result is also an evidence of the units' High quality.



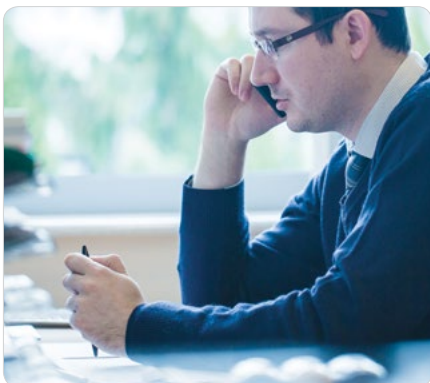
**WIRELESS CONTROL**

From now on you can intelligently control the convectors using your smartphone or tablet with a free application installed.



**TOOLS FOR DESIGNERS**

We offer full product support, i.e. knowledge base by dedicated CPD seminars, or access to BIM drawings and libraries at the project design stage.



**TECHNICAL ADVICE**

We provide specialized consulting throughout your investment, from the design stage, till the completion of construction works.



**MODERN DESIGN**

The convectors with covers casing are a construction based on modern design, with panel casing, masking and traditional grilles.



**WIDE SELECTION OF FINISHES**

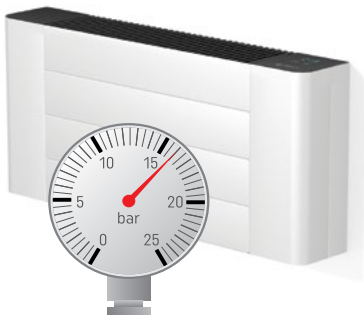
We offer a wide selection of convector units coming with grilles of various types and colours.

## CONFIRMED QUALITY

The wall-mounted and floor-mounted convectors are designed for using in residential, office, service, hotel, sacral and sports utility buildings.

It is advised to consult the selection of radiators with designers and/or using the computer software designed to facilitate the design of C.H. installations.

A proper technical project will secure the optimal selection of convectors sizes and peripheral equipment, and the correct installation and hydraulic regulations of the heating system, which will allow for future seamless and energy-saving operation.



On a foundation of the extensive R&D process that was executed both externally (with Technical Universities of Warsaw, Cracow and Lublin and with Polish Academy of Sciences) we have developed and constructed brand new and extremely efficient high-end heating emitter.

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

According to the EN-442 standard the tightness and pressure resilience tests were performed. Independent, accredited laboratory confirmed, that a pressure of 190 psi resulted no cracks or leaks found in the convectors, while the maximum permissible operating pressure is just 145 psi.

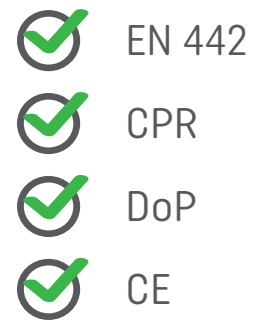
A test according to the PN-EN ISO 4628 standard proved lack of damage to the paint coat of convectors in salt chamber, proving that the VERANO convectors are corrosion resistant.

The units are fully compliant to A1 fire resistance class.

VERANO BY MDL 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 wall-mounted 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.



The tests of the heat output of wall and floor-mounted convectors and the COMODO heating bench were carried out in a specially prepared climatic chamber, in accordance with the requirements of the European standard EN-442.



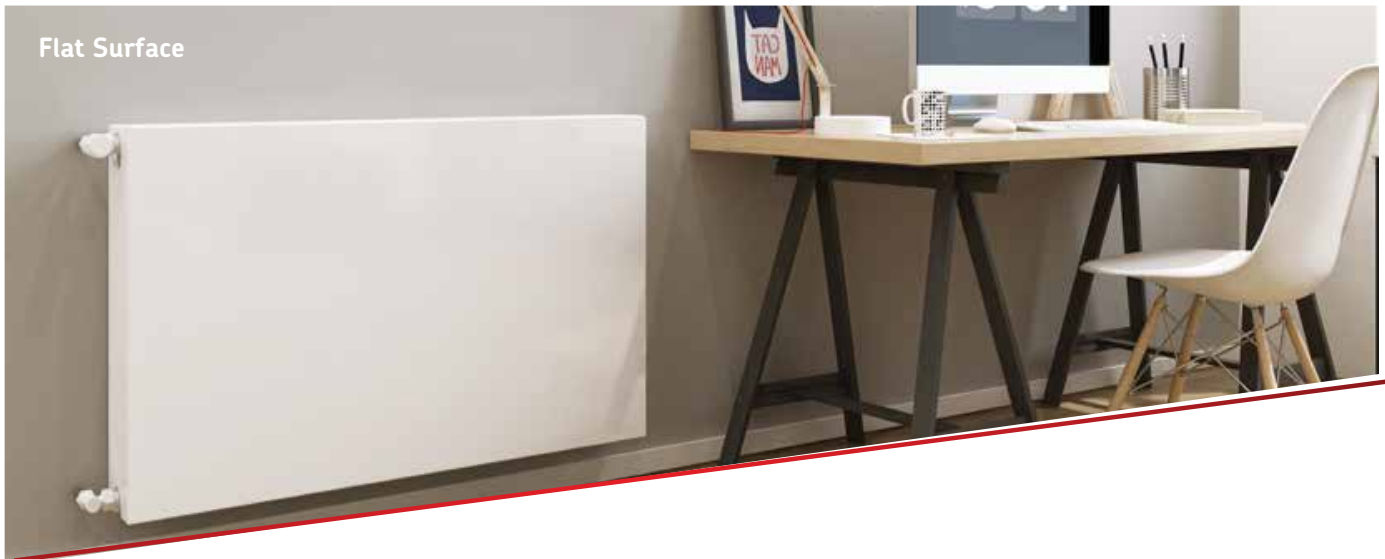
The COMODO heating bench qualified as a FINALIST OF THE 2016 GOOD DESIGN [DOBRY WZÓR] competition, organised by the Institute of The Industrial Design.

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.

**HORIZONTAL STEEL PREMIUM**



Premium Flat Surface



Flat Surface

## Horizontal Steel Premium

Horizontal Decorative Radiators are most elegant range. Elegant design of Horizontal Decorative Radiators transmits most of the heat through its convectors therefore the flat surface on the front side has a gentle heat that does not give the feeling of high heat on the radiator's surface when touched. This enables Horizontal Decorative Radiators to be working in schools, hospitals and nurseries in safe and comfort. Horizontal Decorative Radiators are also produced in 6 connections (universal type) as well as 4 connections. Users can also choose the type of flat surface for their choice, between the Standard or Premium Flat Surface.



| DIMENSIONS | [inch]               |
|------------|----------------------|
| Height     | 12, 15.5, 19.5, 23.5 |
| Width      | 2.75, 4              |
| Length     | 15.5 to 102.5        |

Test: 13Bar

Colour: RAL 9016

Connection: 4x R 1/2"

Connection: 6x R 1/2"

**VERTICAL STEEL PREMIUM**



Flat Surface



Premium Flat Surface



## Vertical Steel Premium

Flat Surface and Premium Flat Surface Radiators are intended to be used in areas with limited spaces. They can also be installed in schools, hospitals and nurseries in safe and comfort. Vertical Decorative Radiators are only produced in middle bottom connection.

| DIMENSIONS | [inch]     |
|------------|------------|
| Height     | 63, 70, 78 |
| Width      | 19.7       |







## HORIZONTAL WALL STEEL PREMIUM



### EQUIPMENT

#### STANDARD EQUIPMENT :

- Esthetic design, stylish appearance
- Flat surface capable of conducting a large part of heat from the top
- Front surface allowing for freely touching
- Connection option with 4 inputs/outputs and 6 inputs/outputs
- Various heights, lengths and models and types options
- High pressure resistance
- World standard color: RAL 9016, epoxy polyester electrostatic powder paint
- Environment friendly water-based primer
- Corrosion resistant
- Special package resistant to any impacts
- Ready to install with its accessories in the package
- 10 year guaranteed
- Optionally included Piping Cover Panels
- Produced in accordance with EN10130 material standard (Cold rolled, low carbon steel flat product for cold forming)
- DC01 quality steel materials are tested to (190 PSI) 13 bars and are welded using automatic welding processes
- panels have been salt spray test for 700 hours by using immersion wet paint and epoxy powder coatings

ONLY standard heater length available

### DIMENSIONS

| DIMENSIONS | [inch]               |
|------------|----------------------|
| Height     | 12, 15.5, 19.5, 23.5 |
| Width      | 2.75, 4              |
| Length     | 15.5 to 102.5        |

#### ORDER CODE:

**F-P22-23/14,7/Lg S (L)**

Heater Height [cm]

Heater Width [cm]

Heater length Lg [cm]

Casing type S - STEEL

Connection side  
 L- Left  
 P - Right

# HORIZONTAL WALL STEEL MOUNTED



JTH/180310

## Verano® by MDL SOLUTIONS CONVECTOR QUICK SELECTOR

| STYLE               | MDL DESCRIPTION         | MDL#                  | HEIGHT | LENGTH | TYPE | DEPTH  | 180/160/65°   |                |                      |                |
|---------------------|-------------------------|-----------------------|--------|--------|------|--------|---------------|----------------|----------------------|----------------|
|                     |                         |                       | H INCH | L INCH | HX   | D INCH | HEATING BTU/H | FLOWRATE USGPM | PRESSURE DROP FT-H2O | BTU/H PER FOOT |
| STEEL PANEL PREMIUM | MDL STEEL WALL OR FLOOR | FP21-30/07.0/400-STL  | 12     | 15.5   | STL  | 2.75   | 1307          | < 0.15         | LAMINAR              | 2413           |
|                     |                         | FP21-30/07.0/600-STL  |        | 23.5   | STL  |        | 1958          | 0.20           | 0.07                 | 1620           |
|                     |                         | FP21-30/07.0/800-STL  |        | 31.5   | STL  |        | 2613          | 0.26           | 0.13                 | 1394           |
|                     |                         | FP21-30/07.0/1000-STL |        | 39.5   | STL  |        | 3264          | 0.33           | 0.19                 | 1284           |
|                     |                         | FP21-30/07.0/1200-STL |        | 47     | STL  |        | 3915          | 0.39           | 0.27                 | 1236           |
|                     |                         | FP21-30/07.0/1400-STL |        | 55     | STL  |        | 4571          | 0.46           | 0.36                 | 1192           |
|                     |                         | FP21-30/07.0/1600-STL |        | 63     | STL  |        | 5222          | 0.52           | 0.46                 | 1160           |
|                     |                         | FP21-30/07.0/1800-STL |        | 71     | STL  |        | 5877          | 0.59           | 0.57                 | 1137           |
|                     |                         | FP21-30/07.0/2000-STL |        | 78.5   | STL  |        | 6528          | 0.65           | 0.69                 | 1127           |
|                     |                         | FP21-30/07.0/2200-STL |        | 86.5   | STL  |        | 7180          | 0.72           | 0.83                 | 1112           |
|                     |                         | FP21-30/07.0/2400-STL |        | 94.5   | STL  |        | 7835          | 0.78           | 0.97                 | 1100           |
|                     |                         | FP21-30/07.0/2600-STL |        | 102.5  | STL  |        | 8486          | 0.85           | 1.13                 | 1089           |
|                     |                         | FP21-40/07.0/400-STL  | 15.5   | 15.5   | STL  | 2.75   | 1655          | 0.17           | 0.05                 | 3055           |
|                     |                         | FP21-40/07.0/600-STL  |        | 23.5   | STL  |        | 2487          | 0.25           | 0.12                 | 2058           |
|                     |                         | FP21-40/07.0/800-STL  |        | 31.5   | STL  |        | 3315          | 0.33           | 0.20                 | 1768           |
|                     |                         | FP21-40/07.0/1000-STL |        | 39.5   | STL  |        | 4142          | 0.41           | 0.30                 | 1630           |
|                     |                         | FP21-40/07.0/1200-STL |        | 47     | STL  |        | 4970          | 0.50           | 0.42                 | 1569           |
|                     |                         | FP21-40/07.0/1400-STL |        | 55     | STL  |        | 5797          | 0.58           | 0.56                 | 1512           |
|                     |                         | FP21-40/07.0/1600-STL |        | 63     | STL  |        | 6629          | 0.66           | 0.71                 | 1473           |
|                     |                         | FP21-40/07.0/1800-STL |        | 71     | STL  |        | 7457          | 0.75           | 0.89                 | 1443           |
|                     |                         | FP21-40/07.0/2000-STL |        | 78.5   | STL  |        | 8284          | 0.83           | 1.08                 | 1430           |
|                     |                         | FP21-40/07.0/2200-STL |        | 86.5   | STL  |        | 9112          | 0.91           | 1.28                 | 1411           |
|                     |                         | FP21-40/07.0/2400-STL |        | 94.5   | STL  |        | 9940          | 0.99           | 1.51                 | 1395           |
|                     |                         | FP21-40/07.0/2600-STL |        | 102.5  | STL  |        | 10771         | 1.08           | 1.75                 | 1382           |
|                     |                         | FP21-50/07.0/400-STL  | 19.5   | 15.5   | STL  | 2.75   | 1781          | 0.18           | 0.06                 | 3288           |
|                     |                         | FP21-50/07.0/600-STL  |        | 23.5   | STL  |        | 3073          | 0.31           | 0.17                 | 2543           |
|                     |                         | FP21-50/07.0/800-STL  |        | 31.5   | STL  |        | 4097          | 0.41           | 0.29                 | 2185           |
|                     |                         | FP21-50/07.0/1000-STL |        | 39.5   | STL  |        | 5121          | 0.51           | 0.44                 | 2015           |
|                     |                         | FP21-50/07.0/1200-STL |        | 47     | STL  |        | 6145          | 0.61           | 0.62                 | 1941           |
|                     |                         | FP21-50/07.0/1400-STL |        | 55     | STL  |        | 7169          | 0.72           | 0.82                 | 1870           |
|                     |                         | FP21-50/07.0/1600-STL |        | 63     | STL  |        | 8194          | 0.82           | 1.06                 | 1821           |
|                     |                         | FP21-50/07.0/1800-STL |        | 71     | STL  |        | 9218          | 0.92           | 1.31                 | 1784           |
|                     |                         | FP21-50/07.0/2000-STL |        | 78.5   | STL  |        | 10242         | 1.02           | 1.59                 | 1768           |
|                     |                         | FP21-50/07.0/2200-STL |        | 86.5   | STL  |        | 11266         | 1.13           | 1.90                 | 1744           |
|                     |                         | FP21-50/07.0/2400-STL |        | 94.5   | STL  |        | 12290         | 1.23           | 2.24                 | 1725           |
|                     |                         | FP21-50/07.0/2600-STL |        | 102.5  | STL  |        | 13319         | 1.33           | 2.59                 | 1709           |

# HORIZONTAL WALL STEEL MOUNTED



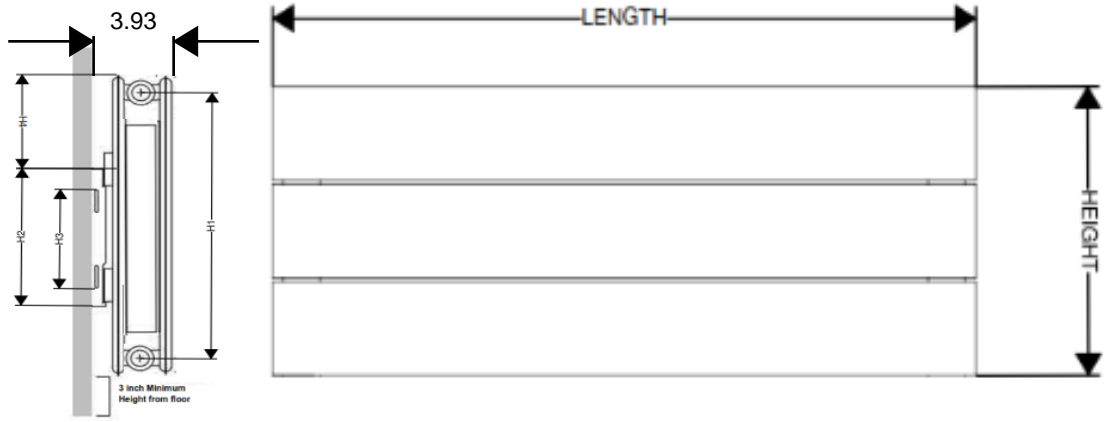
JTH/180310

## Verano® by MDL SOLUTIONS CONVECTOR QUICK SELECTOR

| STYLE               | MDL DESCRIPTION         | MDL#                  | HEIGHT | LENGTH | TYPE | DEPTH  | 180/160/65°   |                |                      |                |
|---------------------|-------------------------|-----------------------|--------|--------|------|--------|---------------|----------------|----------------------|----------------|
|                     |                         |                       | H INCH | L INCH | HX   | D INCH | HEATING BTU/H | FLOWRATE USGPM | PRESSURE DROP FT-H2O | BTU/H PER FOOT |
| STEEL PANEL PREMIUM | MDL STEEL WALL OR FLOOR | FP22-30/10.5/400-STL  | 12     | 15.5   | STL  | 4.00   | 1937          | 0.19           | 0.07                 | 3576           |
|                     |                         | FP22-30/10.5/600-STL  |        | 23.5   | STL  |        | 2908          | 0.29           | 0.15                 | 2407           |
|                     |                         | FP22-30/10.5/800-STL  |        | 31.5   | STL  |        | 3875          | 0.39           | 0.26                 | 2067           |
|                     |                         | FP22-30/10.5/1000-STL |        | 39.5   | STL  |        | 4846          | 0.48           | 0.40                 | 1907           |
|                     |                         | FP22-30/10.5/1200-STL |        | 47     | STL  |        | 5817          | 0.58           | 0.56                 | 1837           |
|                     |                         | FP22-30/10.5/1400-STL |        | 55     | STL  |        | 6783          | 0.68           | 0.74                 | 1769           |
|                     |                         | FP22-30/10.5/1600-STL |        | 63     | STL  |        | 7754          | 0.78           | 0.95                 | 1723           |
|                     |                         | FP22-30/10.5/1800-STL |        | 71     | STL  |        | 8720          | 0.87           | 1.18                 | 1688           |
|                     |                         | FP22-30/10.5/2000-STL |        | 78.5   | STL  |        | 9691          | 0.97           | 1.44                 | 1673           |
|                     |                         | FP22-30/10.5/2200-STL |        | 86.5   | STL  |        | 10662         | 1.07           | 1.72                 | 1651           |
|                     |                         | FP22-30/10.5/2400-STL |        | 94.5   | STL  |        | 11629         | 1.16           | 2.02                 | 1632           |
|                     |                         | FP22-30/10.5/2600-STL |        | 102.5  | STL  |        | 12600         | 1.26           | 2.34                 | 1617           |
|                     |                         | FP22-40/10.5/400-STL  | 15.5   | 15.5   | STL  | 4.00   | 2464          | 0.25           | 0.11                 | 4549           |
|                     |                         | FP22-40/10.5/600-STL  |        | 23.5   | STL  |        | 3691          | 0.37           | 0.24                 | 3055           |
|                     |                         | FP22-40/10.5/800-STL  |        | 31.5   | STL  |        | 4923          | 0.49           | 0.41                 | 2626           |
|                     |                         | FP22-40/10.5/1000-STL |        | 39.5   | STL  |        | 6155          | 0.62           | 0.62                 | 2422           |
|                     |                         | FP22-40/10.5/1200-STL |        | 47     | STL  |        | 7387          | 0.74           | 0.87                 | 2333           |
|                     |                         | FP22-40/10.5/1400-STL |        | 55     | STL  |        | 8619          | 0.86           | 1.16                 | 2248           |
|                     |                         | FP22-40/10.5/1600-STL |        | 63     | STL  |        | 9846          | 0.98           | 1.48                 | 2188           |
|                     |                         | FP22-40/10.5/1800-STL |        | 71     | STL  |        | 9532          | 0.95           | 1.40                 | 1845           |
|                     |                         | FP22-40/10.5/2000-STL |        | 78.5   | STL  |        | 12310         | 1.23           | 2.24                 | 2125           |
|                     |                         | FP22-40/10.5/2200-STL |        | 86.5   | STL  |        | 12923         | 1.29           | 2.45                 | 2001           |
|                     |                         | FP22-40/10.5/2400-STL |        | 94.5   | STL  |        | 14774         | 1.48           | 3.14                 | 2074           |
|                     |                         | FP22-40/10.5/2600-STL |        | 102.5  | STL  |        | 16001         | 1.60           | 3.64                 | 2054           |
|                     |                         | FP22-50/10.5/400-STL  | 19.5   | 15.5   | STL  | 4.00   | 2652          | 0.27           | 0.13                 | 4896           |
|                     |                         | FP22-50/10.5/600-STL  |        | 23.5   | STL  |        | 3976          | 0.40           | 0.28                 | 3290           |
|                     |                         | FP22-50/10.5/800-STL  |        | 31.5   | STL  |        | 5300          | 0.53           | 0.47                 | 2827           |
|                     |                         | FP22-50/10.5/1000-STL |        | 39.5   | STL  |        | 6628          | 0.66           | 0.71                 | 2608           |
|                     |                         | FP22-50/10.5/1200-STL |        | 47     | STL  |        | 7952          | 0.80           | 1.00                 | 2511           |
|                     |                         | FP22-50/10.5/1400-STL |        | 55     | STL  |        | 9276          | 0.93           | 1.33                 | 2420           |
|                     |                         | FP22-50/10.5/1600-STL |        | 63     | STL  |        | 10604         | 1.06           | 1.70                 | 2356           |
|                     |                         | FP22-50/10.5/1800-STL |        | 71     | STL  |        | 11928         | 1.19           | 2.11                 | 2309           |
|                     |                         | FP22-50/10.5/2000-STL |        | 78.5   | STL  |        | 13252         | 1.33           | 2.57                 | 2288           |
|                     |                         | FP22-50/10.5/2200-STL |        | 86.5   | STL  |        | 14580         | 1.46           | 3.07                 | 2258           |
|                     |                         | FP22-50/10.5/2400-STL |        | 94.5   | STL  |        | 15904         | 1.59           | 3.60                 | 2232           |
|                     |                         | FP22-50/10.5/2600-STL |        | 102.5  | STL  |        | 17228         | 1.72           | 4.18                 | 2211           |

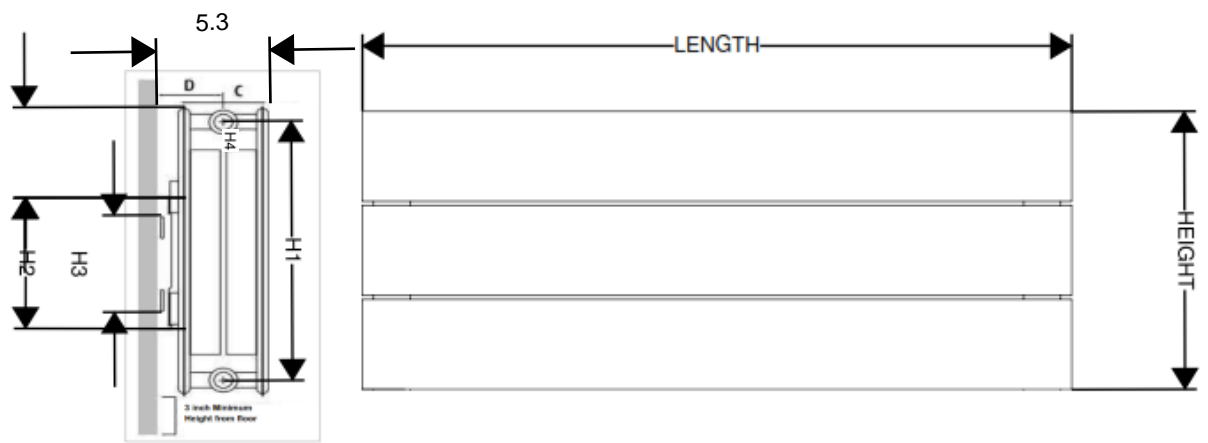
**HORIZONTAL WALL STEEL PREMIUM**

**F-P21-HH/DD/LL-STL**



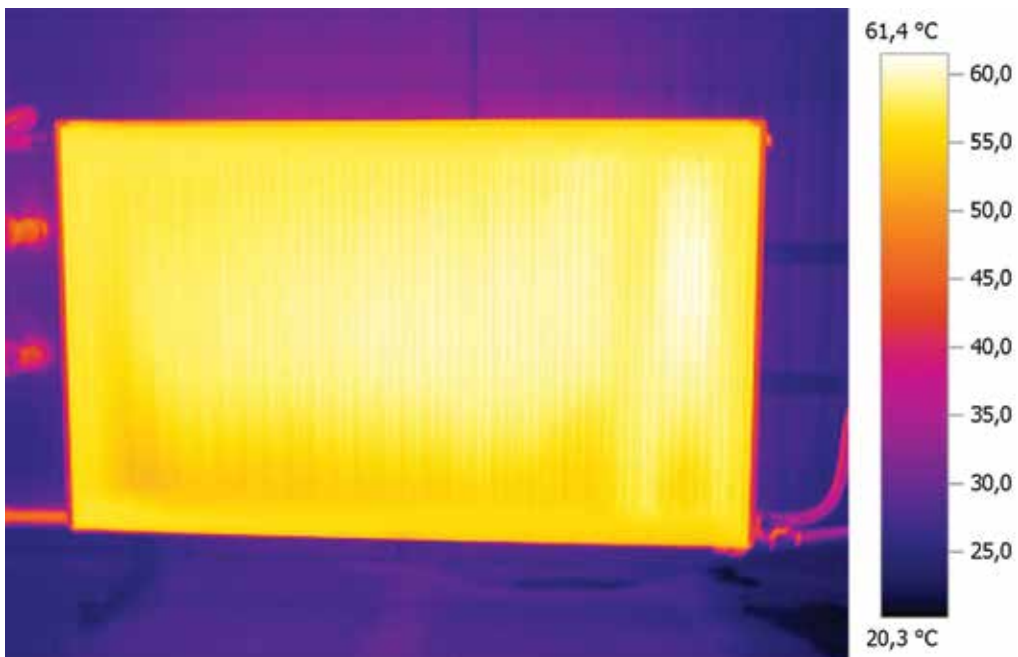
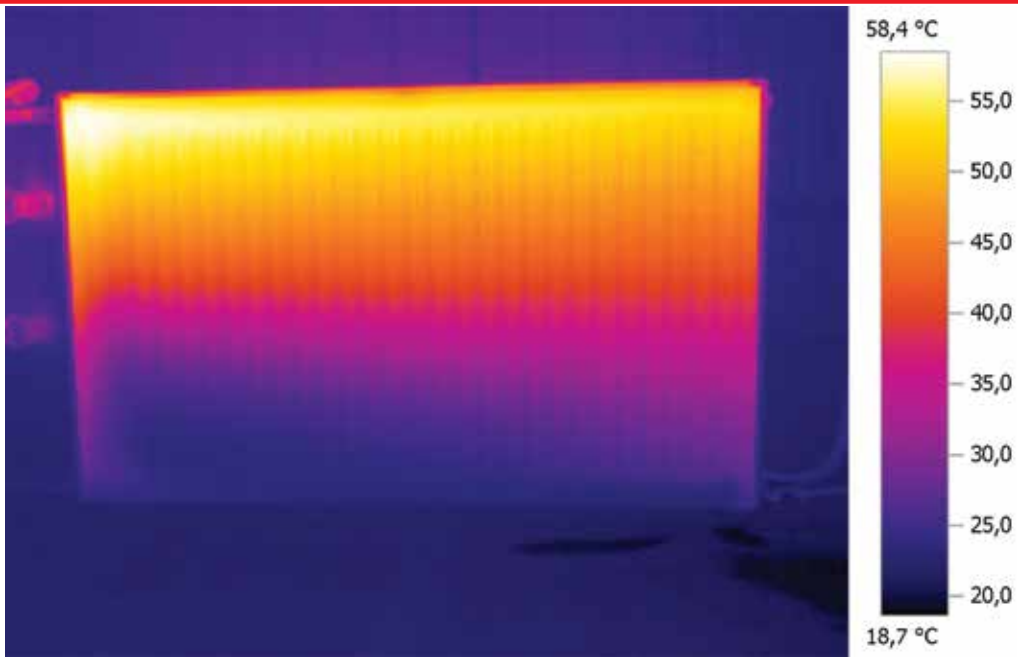
| RAD HEIGHT | H1  | H2  | H3  | H4  |
|------------|-----|-----|-----|-----|
| 12         | 9.6 | 7.0 | 5.3 | 2.9 |
| 15.5       | 14  | 7   | 5   | 5   |
| 19.5       | 18  | 11  | 9   | 5   |

**F-P22-HH/DD/LL-STL**



| RAD HEIGHT | H1  | H2  | H3  | H4  |
|------------|-----|-----|-----|-----|
| 12         | 9.6 | 7.0 | 5.3 | 2.9 |
| 15.5       | 14  | 7   | 5   | 5   |
| 19.5       | 18  | 11  | 9   | 5   |

**THERMAL IMAGING FLUID CIRCULATION**



FOR DIFFERENT TEMPERATURES (f) CORRECTION FACTOR TABLE

$$f = \left[ \frac{t_g - t_c}{60 \ln \left[ \frac{t_g - t_o}{t_c - t_o} \right]} \right]^n$$

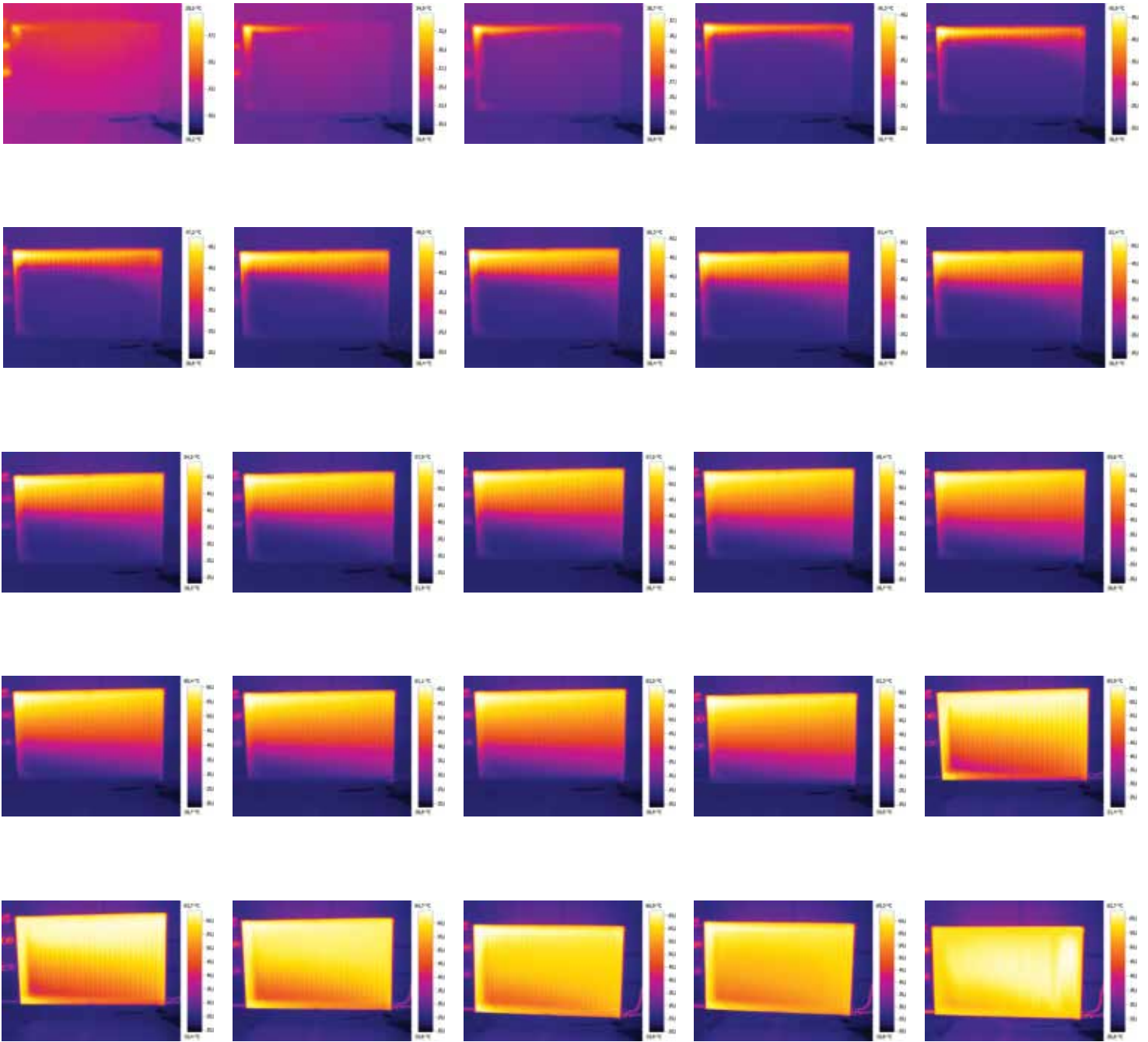
$$Q_n = Q_h \times f$$

f : Correction factor  
 Qn : New heat output  
 n : Average; 1,35  
 Qh : Heat output at (90/70-20°C)  
 tg = Inletwater temperature. °C  
 tc = Outletwater temperature. °C  
 to = Room temperature. °C

Photos are taken by thermal camera at 20 °C room temperature to show movement of hot water and ΔT calculation

Water inlet 75 °C  
 Water outlet 65 °C  
 ΔT= (75+65)/2-20  
 ΔT= 50

## HORIZONTAL STEEL PREMIUM

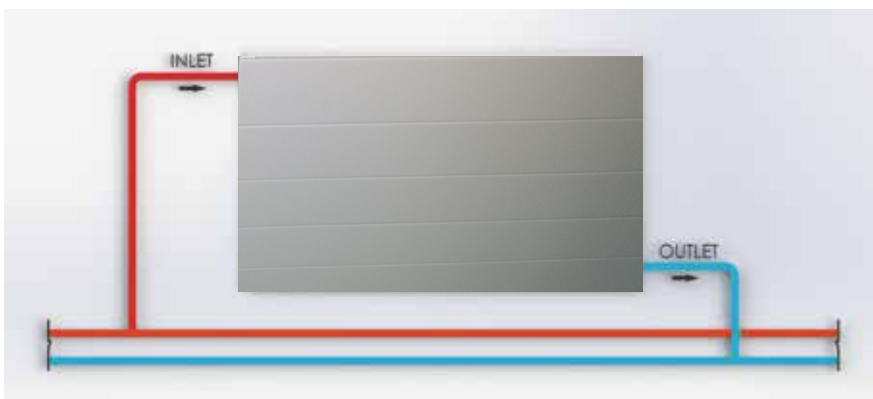


The circulation of hot water in radiators were taken by the thermal camera step by step. The movement of the yellow color indicates the portions of the hot water in the radiator.

## Installation Methods of Panel Radiators



Hot water enters from top, exits from bottom of the same side. Most energy efficient and used type.

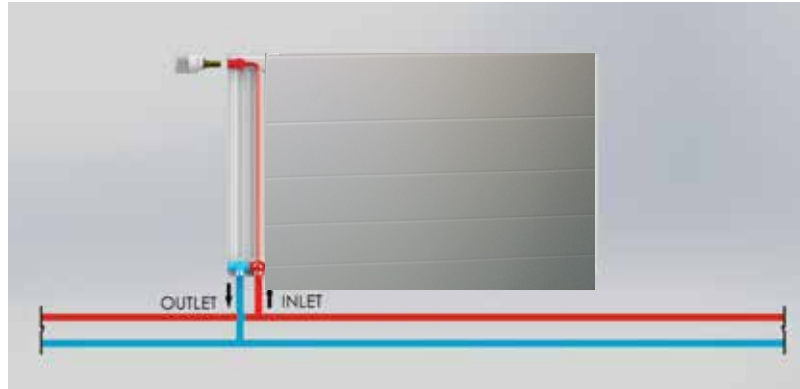


This method is advised for long radiators which is three times longer than relevant height.

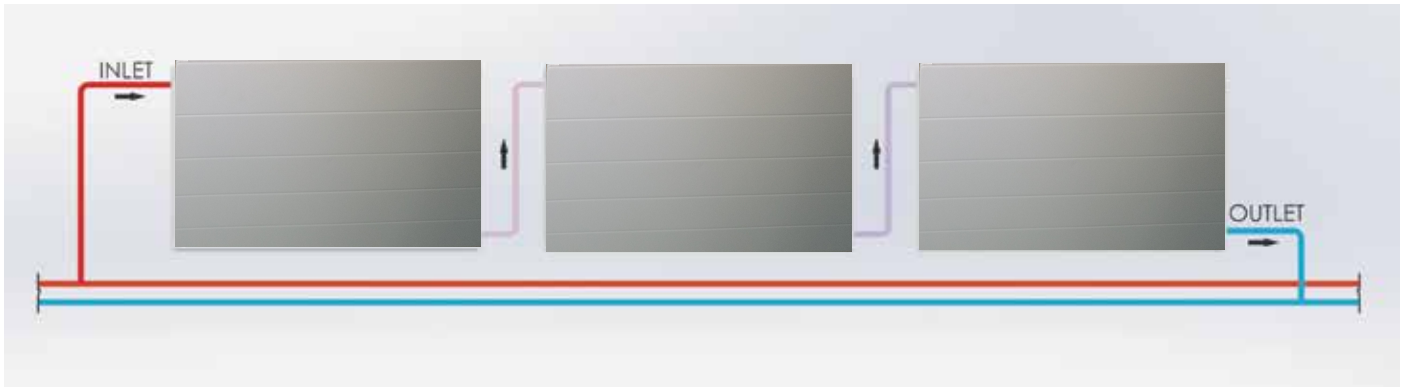


This connection is not advised, efficiency of radiator is reduced by %20 when this method is used.

## Installation Methods of Panel Radiators



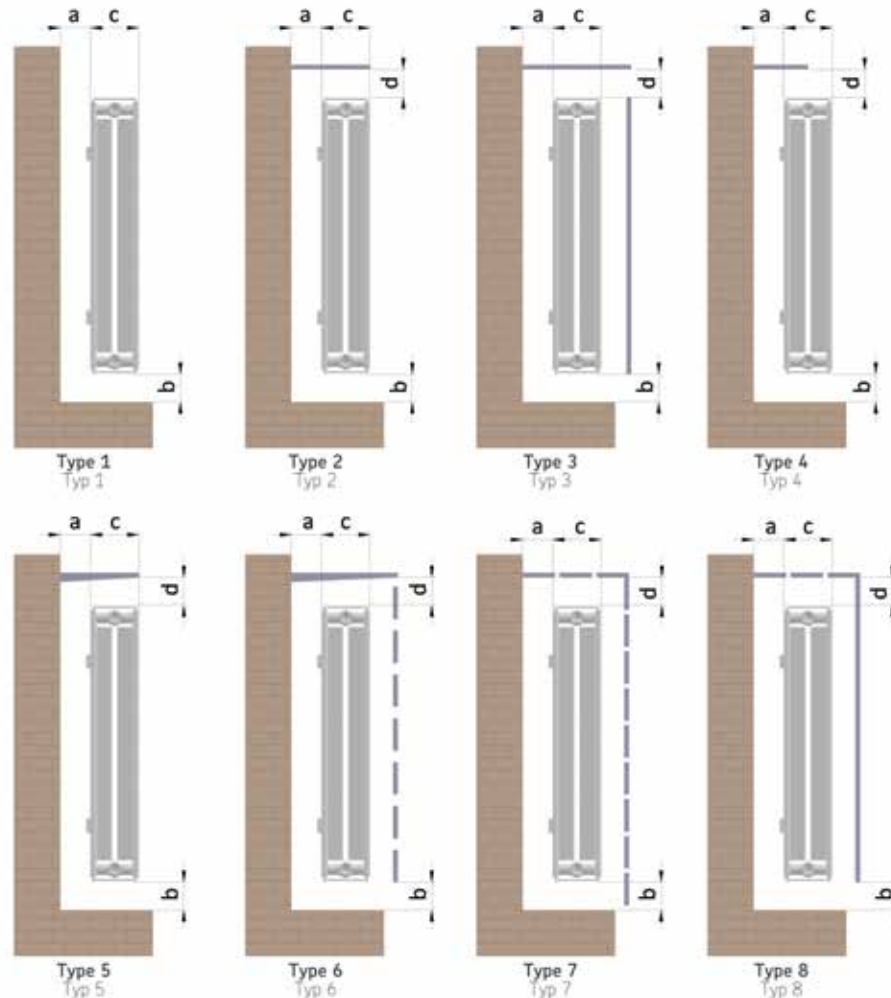
This method is for Universal Panel Radiator to be connected from bottom side.



Serial connection method. Total heat output shouldn't exceed 8000-9000 watt. Important point for this connection method is that the selection of radiator as each of the following radiator's water inlet temperature will be lower than previous one due to the heat used.



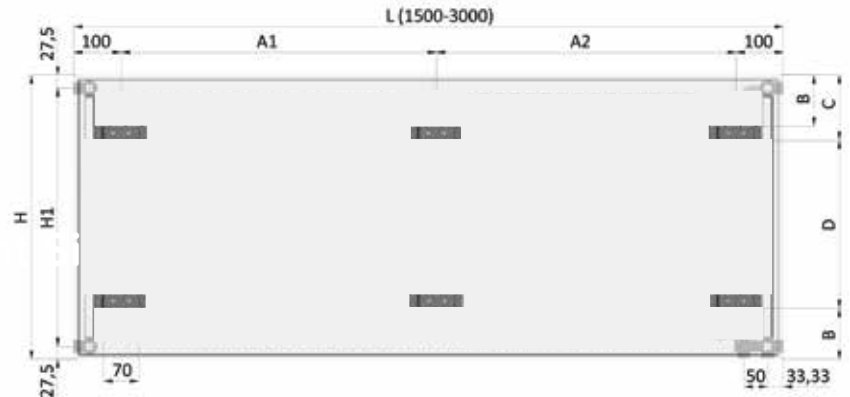
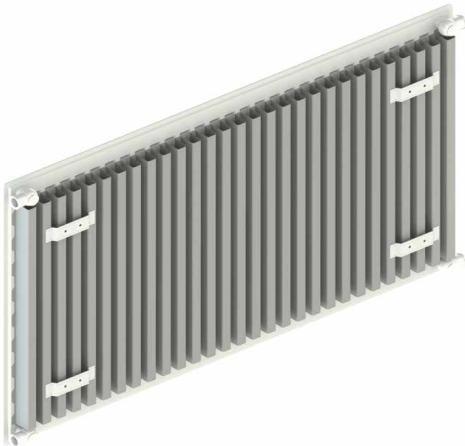
## Installation Methods of Panel Radiators



In order to meet the maximum level of heating output on the radiators, it is highly recommended to install the radiators under the window level. Optimally, under the window frame. Transmission of the heat is coming % 80 from convection and % 20 from radiation. Hanging clothes, covering top grill, reduces the radiator heat output. Under normal conditions, the radiator's surrounding area should preferably open not close to the place furniture.

| DIMENSION  | TYPE 1 | TYPE 2 | TYPE 3 | TYPE 4 | TYPE 5 | TYPE 6 | TYPE 7 | TYPE 8 |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|
| a (inch)   | 1.8    | 1.8    | 1.8    | 1.8    | 1.8    | 1.8    | 1.8    | 1.8    |
| b (inch)   | 4      | 4      | 4      | 4      | 4      | 4      | 4      | 4      |
| c (inch)   | 4.13   | 4.13   | 4.13   | 4.13   | 4.13   | 4.13   | 4.13   | 4.13   |
| d (inch)   | 0.00   | 4      | 4      | 3      | 3      | 3      | 3      | 3      |
| EFFICIENCY | 100%   | 97%    | 90%    | 996%   | 90%    | 75%    | 90%    | 85%    |

## Installation Methods of Panel Radiators



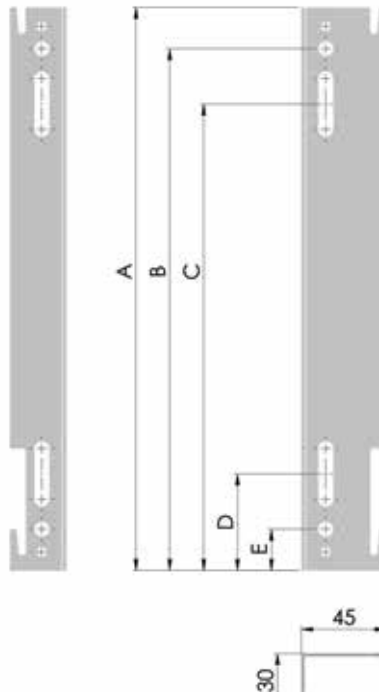
| RAD HEIGHT | H1  | D   | C   | B   |
|------------|-----|-----|-----|-----|
| 12         | 9.7 | 6.1 | 3.4 | 2.3 |
| 15.5       | 14  | 6   | 5   | 4   |
| 19.5       | 18  | 10  | 5   | 4   |

**A = L - 7.87in (200mm)**  
 valid for the radiator lengths upto (55inch) 1400 mm

Upto (55inch) 1400 mm lengths radiator have 4 hooks.  
 (60inch) 1500 mm and longer radiator have 6 hooks.

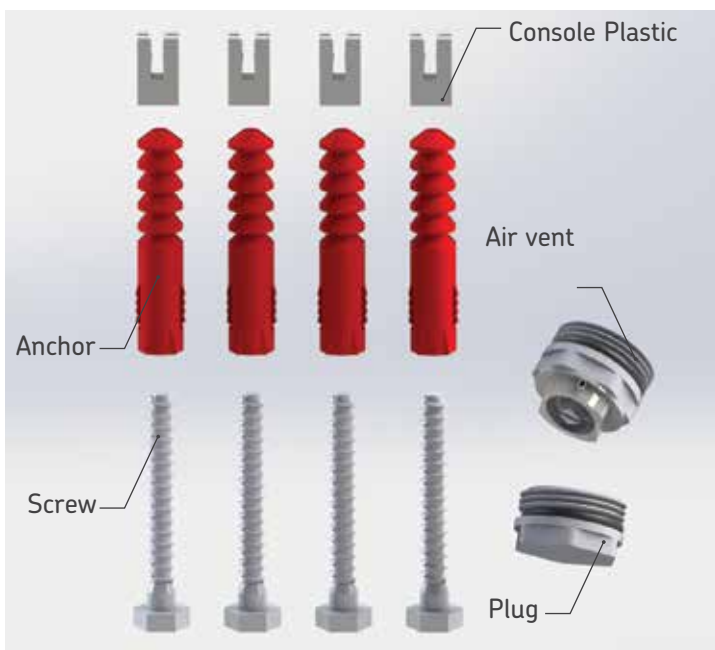
| RAD LENGTH | A1   | A2   |
|------------|------|------|
| 59.1       | 26.2 | 24.9 |
| 63.0       | 27.6 | 27.6 |
| 66.9       | 30.2 | 28.9 |
| 70.9       | 31.5 | 31.5 |
| 74.8       | 34.1 | 32.8 |
| 78.7       | 35.4 | 35.4 |
| 82.7       | 38.0 | 36.7 |
| 86.6       | 39.4 | 39.4 |
| 90.6       | 42.0 | 40.7 |
| 94.5       | 43.3 | 43.3 |
| 98.4       | 45.9 | 44.6 |
| 102.4      | 47.2 | 47.2 |
| 106.3      | 49.8 | 48.5 |
| 110.2      | 51.2 | 51.2 |
| 114.2      | 53.8 | 52.5 |
| 118.1      | 55.1 | 55.1 |

## Mounting Accessories



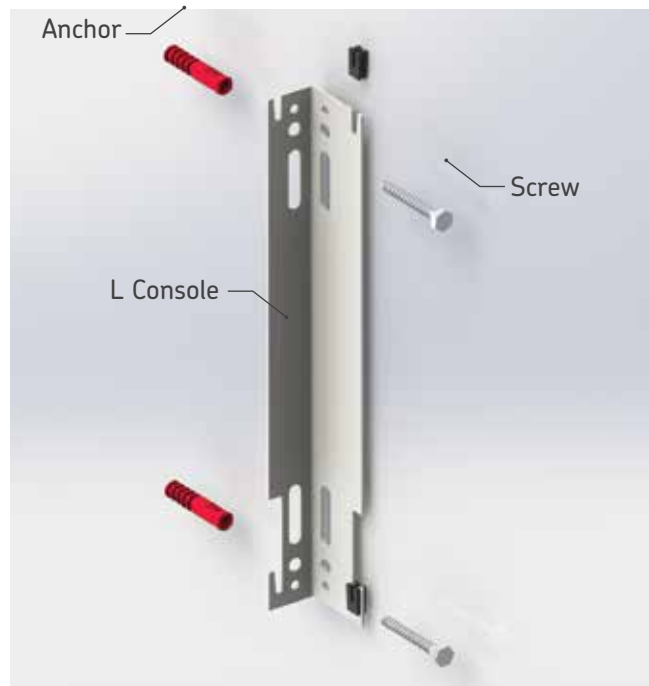
| RAD HEIGHT | 12   | 15.5 | 19.5 |
|------------|------|------|------|
| a (inch)   | 7.0  | 7.0  | 10.9 |
| b (inch)   | 6    | 6.1  | 10.0 |
| c (inch)   | 4.94 | 4.9  | 8.9  |
| d (inch)   | 2.00 | 2.0  | 2.0  |
| e (inch)   | 86%  | 0.9  | 0.9  |

## Assembly Kit



| ASSEMBLY KIT           |                |                |
|------------------------|----------------|----------------|
| Compact 4 inlet-outlet |                |                |
| Panel lenght/          | 300-1400 mm    | 1500-3000 mm   |
| Console                | 2 pieces/Stück | 3 pieces/Stück |
| Console Plastic        | 4 pieces/Stück | 6 pieces/Stück |
| Anchor                 | 4 pieces/Stück | 6 pieces/Stück |
| Screw                  | 4 pieces/Stück | 6 pieces/Stück |
| Plug                   | 1 piece/Stück  | 1 piece/Stück  |
| Air vent               | 1 piece/Stück  | 1 piece/Stück  |

## Mounting Accessories

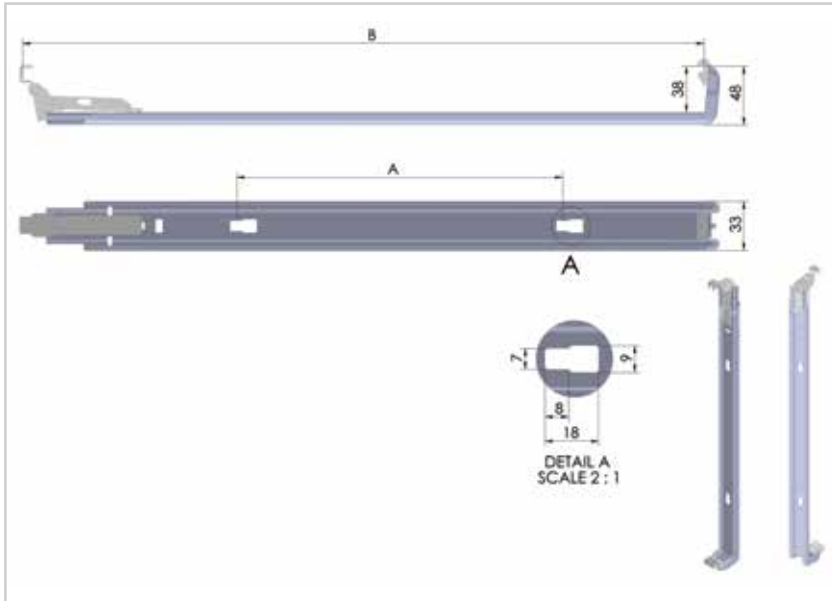


## Assembly steps of Panel Radiator with L console

- Connect L console to the wall with screw similar to the drawing No.1
- Put L console plastic in the appropriate place
- Cut L console area packaged radiator and take safety plastics on the hooks
- Hang radiator to the L consoles
- Arrange radiator straight position by moving up and down.
- Mark with a pen suitable position of L consoles
- Put the radiator on the floor again
- Mark assembly holes on the wall
- Take off L consoles
- Drill assembly holes and put anchor.
- Put L consoles and screw to the anchors
- Hang radiator to the wall
- After completing installation unpackage radiator



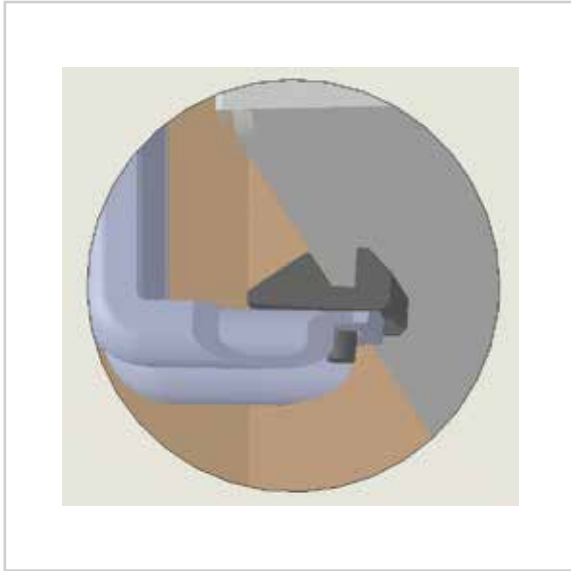
## Mounting Accessories



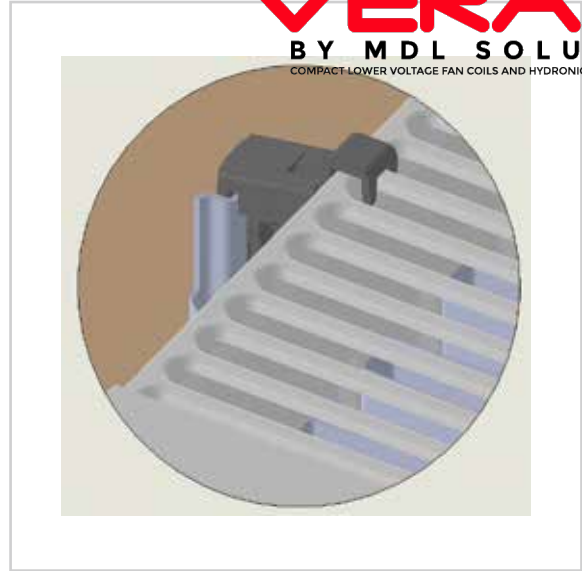
| RAD LENGTH | A    | B    |
|------------|------|------|
| 12.0       | 4.1  | 11.8 |
| 15.5       | 8.1  | 15.7 |
| 19.5       | 12.0 | 19.6 |

C Consoles should be assembled min. 10 cm higher than floor and relevant drilling points should be marked accordingly. Installing should be as per the pictures below: drilling holes, putting anchors then screwing C consoles to the wall.





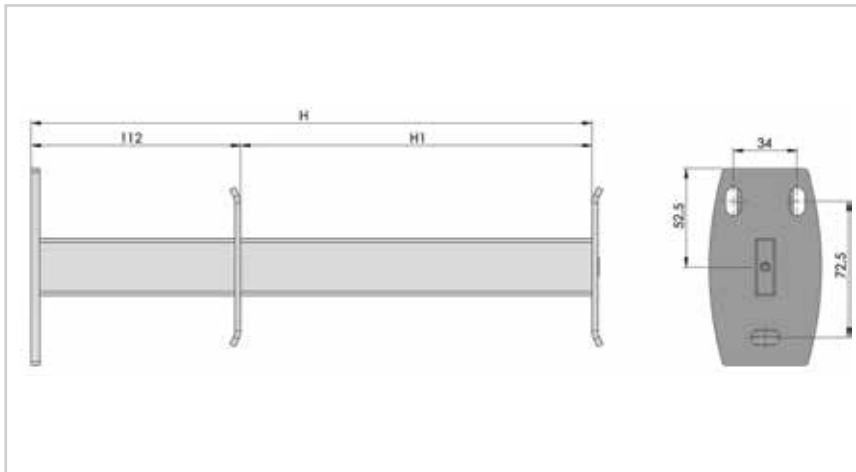
Slightly bend the radiator and put it on the C console plastic nail. Pull up the springy top nail of C console then the radiator to the wall.



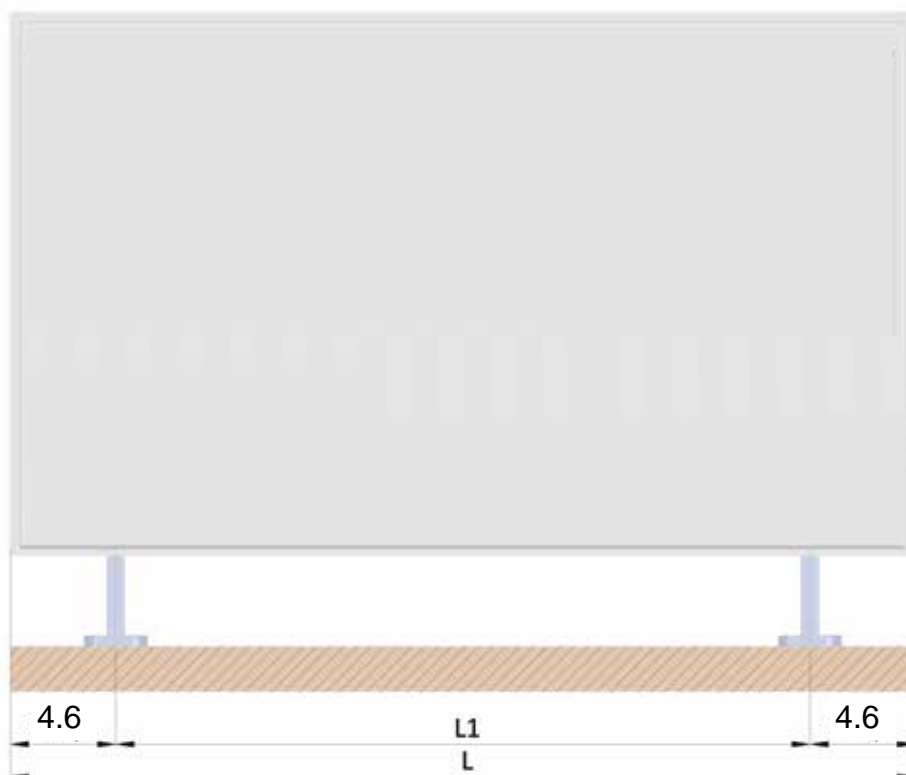
Release the springy nail and make sure it is connected with the grill.



## Mounting Accessories



| RAD HEIGHT | 12   | 15.5 | 19.5 |
|------------|------|------|------|
| H          | 14.9 | 18.8 | 22.8 |
| H1         | 11   | 14.4 | 18.3 |



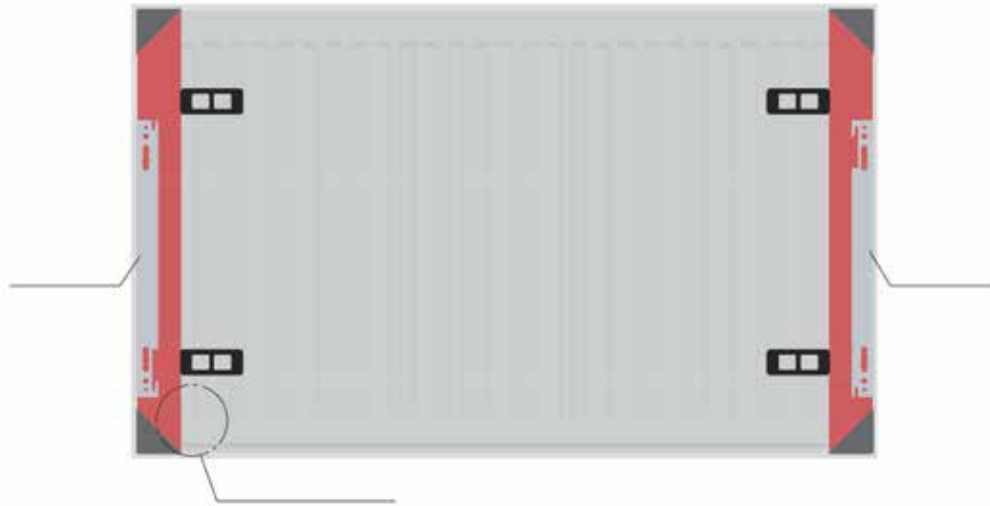
L= Panel Length Heizkörper-Länge  
 L1=  $L - 2 \cdot (116,5)$

Quantity of floor fixing consoles for different lengths;

L (300-1400 mm) 2 pcs  
 L (1500-3000 mm) 3 pcs

## Shipping

- Radiators must be installed by authorised plumber.
- Please Protect the package and the product from any damaging factors.
- After unpacking the product , dispose the waste material to the suitable disposal area.
- Package should not be opened before finishing paint or stucco work.
- Assembly kits are inside, right side of the package.



"L" Console

"L" Console

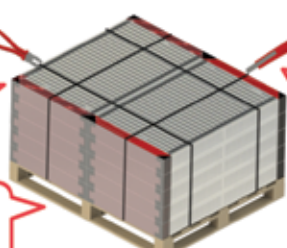
Assembly Kit





## Shipping

**1**

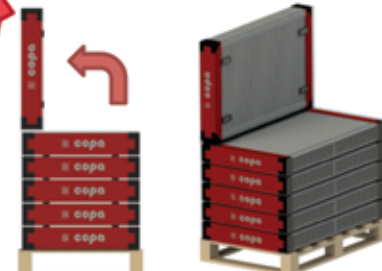


Carefully cut banding.

Carefully cut through the shrink-wrap plastic. Make sure not to damage the surface of radiators.

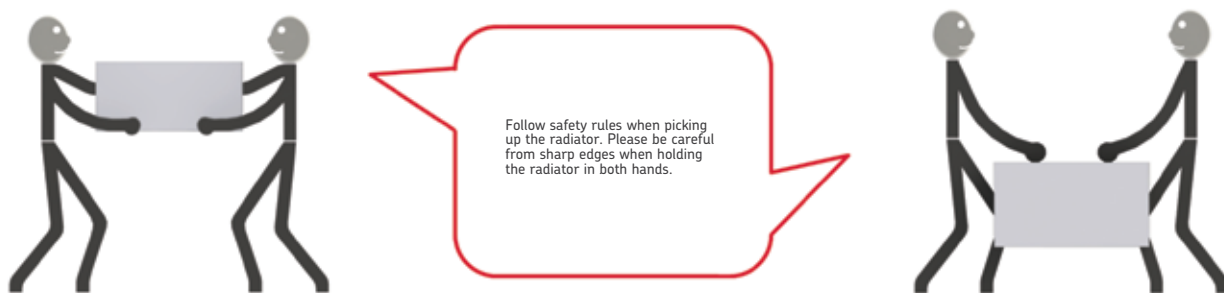
Roll up banding and dispose of all packaging materials correctly.

**2**



Rotate the radiator from top on pallet vertically as per picture. Avoid sliding and scraping.

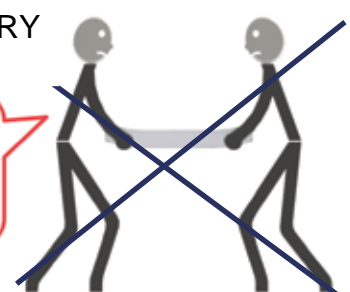
**3**



Follow safety rules when picking up the radiator. Please be careful from sharp edges when holding the radiator in both hands.

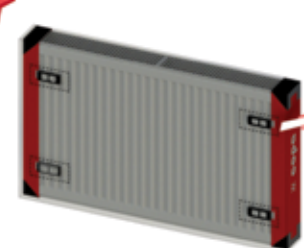
**4**

**DO NOT CARRY FLAT**



Radiators should not be lifted or carried in flat position. Such way can result stooping and back strain. It may also damage the radiator especially sectional type.

**5**



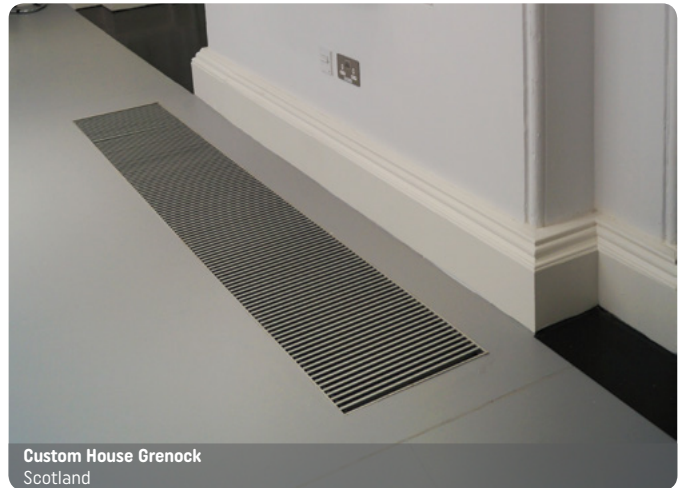
Ensure that the wall bracket clamps are fitted closely onto the radiator front. Make sure the brackets are securely fixed. Such pre-installation precautions are to avoid unnecessary handling.

\* During the unloading using forklift, any kind of damage is not covered under the warranty.

**Please read our warranty condition carefully before installing the radiator.**

**The instructions below must also be followed otherwise the warranty may be voided:**

- Radiators should be transported with care, in dry and closed freight spaces.
- During carrying or transporting, avoid dropping, hitting or bending the radiator.  
This kind of damages is not covered under the warranty.
- During the unloading using forklift, any kind of damage is not covered under the warranty.
- When goods arrive to the customer warehouse, it is absolutely required to take pictures of the damaged goods on pallets before unloading them.
- Radiators can only be stored in dry, closed storage spaces.  
It is forbidden to store radiators in open air or damp storage spaces.
- Extra attention should be considered when cutting the package to take out the assembly kit.
- During installation packaging should not be opened. Only the hooks areas should be cut carefully.
- The packaging will prevent scratches and damages on the radiator surface or paint. Keep the packaging on the radiator even after installing it until all construction or restoration work is finished.
- Radiators are guaranteed 10 years and produced according to the EN442 standard.
- It is prohibited to use panel radiators in rooms with high humidity level and with impact of corrosive agents e.g. in bathrooms, bathhouses, swimming pool etc. in this case it is not covered under warranty. We advise the customer to use Towel radiators instead.
- The product must be installed and used according to accepted plumbing practices or other national/local standards. Moreover, the person who installs the radiator must be experienced enough to avoid screwing the air vents, valves and stoppers against the connections threads, thus damage them.
- Panel radiators tested at (190PSI)13 bar. After assembly, radiators must be tested max. (150PSI)10 bar pressure water by means of pressure regulator.
- Never connect directly to city network water for making test. Sometimes city network water's pressure can be upper than 10 bar and in this case the radiator is not covered under warranty.
- Our guarantee does not cover damage caused by sudden rise of the pressure due to the city network water or a disfunction in the water system relating the radiators.
- In case of sound of water flow inside the radiator, the water inlet valve should be opened more than the water outlet valves.
- Changes in temperature can cause the radiator expansion and consequently create noise when functioning. To avoid such case the L console plastic should be used before installation.
- The surface of the radiator should never be cleaned with detergents containing solvents, acids or with other corrosion-causing substances.
- Inside of the radiator must never remain dry or empty. Water must be added when needed. However, the customer should not forget: Adding or changing water frequently accelerates the corrosion (oxidation) since the radiator will be filled with new oxygen. This kind of radiators is leaking due to corrosion effects and radiator is not covered under warranty.
- Take precautions against freezing risk. Frozen water in the radiator will damage the radiator when its volume increases.
- Use an anti-corrosion agent in the system if the water is aggressive or acidic.
- Radiators should be used in closed circuit installations of heating systems, protected with expansion vessels.
- Radiators must be filled with and replenished of water with required quality. The main water quality indicators should not exceed values listed below:
  - The total content of chloride and sulphate ions cannot exceed 150 mg / l  
(50 mg / l for copper pipes installations )
  - Oxygen content cannot exceed 0.1 mg / l
  - Water pH should not exceed the range of 9.5-11.5
  - General hardness cannot exceed 30 ppm CaCo<sub>3</sub>
  - IMPORTANT NOTE: Please use an anti-corrosion agent in the system if the water is aggressive or acidic.









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