

Panel Radiators

Introduction and User Manual

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Technical Characteristics

Operating Pressure	: 10 Bar
Plant Test Pressure	: 13 Bar
Maximum Operating Heat	: 110°C
Radiator Types	: 10 P, 11 PK, 21 PKP, 22 PKKP, 33 DKEK.
Radiator Heights (mm)	: 300, 400, 500, 600, 700, 750, 900.
Height dimensions (mm)	: 400, 500, 600,, 1500, 1600, 1800, 2000, 2200, 2400, 2600, 2800, 3000
Colour of paint	: White, Ral 9016
Guarantee term	: 10 years

1. Max. operating pressure of radiators is 10 bars. Pressure reducer should be used at installation.
2. Radiators should be assembled with hanging components, air vent plug, blank plug, dowels, screws, vibration plastics which are in the package. Radiators should be assembled according to drawings and measurements given.

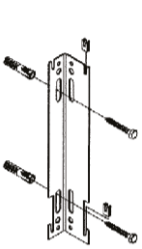


Figure 1: Cornered dual bracket

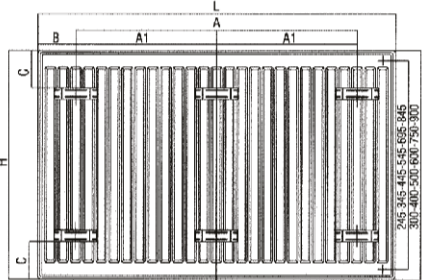


Figure 2: Marking the place where the bracket is located and installed.

Towelrads radiators are installed by using dual brackets (Figure 3) as below:

- Hang radiator using the brackets provided in it's allocated position where it is required.
- Position of the brackets is marked according to Figure 2 and Table 1. minimum distance between the radiator and the basement must not be less than 75% of the equipment depth.
- In a distance of 105 mm above the upper side of radiator, wall should be drilled and dowel and screw inserted. A distance of 5 mm approximately must be kept between the wall and screw-head.
- After brackets are inserted on

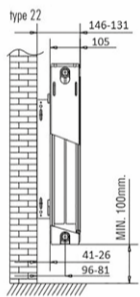


Figure 3

the screws, screws are tightened; plastic parts for anti-vibration are installed as shown in the Figure 1 and radiator is located on to the brackets.

- Radiator is joined to heating system.
 - Air vent plug must be fitted on the upper plug.
3. Adjusting equipment must be installed on the outlet and return piping of the system.
 4. To ensure homogeneous heating of the radiators, one of the upper plugs of the radiators must be absolutely an air-vent plug. If requires, the trapped air in radiator must be released by screwing off the air-vent plug until the water comes out.
 5. Draining the heating system any more than 15 days a year is not recommended. For the purpose of avoiding the hazard of a hydraulic impact in the heating system, to prevent the water flow from radiator, it would be enough to only turn off the special plug armature of the lower section of radiator.
 6. To avoid freezing, it is recommended that the radiator system not to be installed in open areas. Temperature must not be less than 5°C. Temperature must not be less than 5°C.

L (mm)	A (mm)	B (mm)	C (mm)	A1 (mm)	Number of Hangers
400	166.8	116.6	70		4
500	266.8	116.6	70		4
600	366.8	116.6	70		4
700	466.8	116.6	70		4
800	566.8	116.6	70		4
900	666.8	116.6	70		4
1000	766.8	116.6	70		4
1100	866.8	116.6	70		4
1200	966.8	116.6	70		4
1300	1066.8	116.6	70		4
1400	1166.8	116.6	70		4
1500	1266.8	116.6	70		4
1600	1366.8	116.6	70		4
1800		116.6	70	783	6
2000		116.6	70	883	6
2200		116.6	70	983	6
2400		116.6	70	1083	6
2600		116.6	70	1183	6
2800		116.6	70	1283	6
3000		116.6	70	1383	6

Table 1: Radiator sizes

7. It is necessary to fit the radiator properly by a qualified person.
 - If the distance between the lower section of radiator and the basement is less than 75% of the depth of equipment, heat transfer efficiency decreases and makes the cleaning harder for the lower side of radiator.
 - Being too close to the wall of the radiators installed on the brackets made by other companies impairs the heat conducting system and causes dust particles on equipment.
8. In cases where the distance between the lower section of radiator and the basement is more than 150% of the depth of equipment, the gradient of air temperature, particularly in the lower sections increases depending on the distance.
 - In cases where the distance between the upper side of radiator and the window side is too narrow (less than 90% of the depth for radiators in length of 500 mm and less than 75% of the depth for radiators in length of 300 mm), heat efficiency of radiators reduces (see Figure 4).

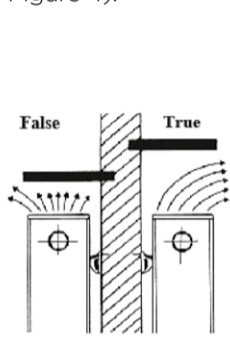


Figure 4: Diagram of radiator installed next to the window.

When the radiator collectors are not horizontally located, the heat indicator is impaired,

- Setting up a decorative screen in front of the radiators (not considered in heating calculations) or blocking with curtains negatively impacts the heat exchange and hygienic characteristics of equipment and damages the functioning of thermostat.
- It is recommended to locate the automatic thermostats at a distance of 150 mm from the balcony door; 200 mm from window-sides and to utilize the scaled thermostat.

9. For the safety of equipment, it is recommended to carry the equipment inside it's protective packaging. During carrying process, the panel and supports must not be handled.
10. When stocking the radiators up, radiators of Type 22 model must not be stocked up with more than 14 rows of overlapping.
11. Radiators must not be operated with corrosives or various chemical mixtures with high rate of acidity. That may cause damage to the radiator surface.
12. Panel radiator tops have to be open, there has to be minimum 10 cm between the underside of the panel and the floor, on the back side there has to be minimum 40 mm space between the back of the panel and wall. Please do not seal the top of the panel with materials such as wood or marble.
13. To improve the heat efficiency of the radiators and to ensure comfort it is suggested that the panel should be installed under the window. For the panels which are mounted in front of the wall it is recommended that an insulating plate is fixed in front of the wall at the back side of the panel.
14. Please do not remove the packaging before construction, or painting occurs on site.
15. Please be careful to not drop the panel while carrying.
16. Radiators surface has to be moped with a lint cloth, acidic and corrosive materials should not be used.
17. When radiators are installed into the building, you should test them to check for leaking and any other production problems.
18. Although you use pressure reducer in the system you should check direct connection to system. You should use combi boiler, central heating system etc.

RADIATOR GUARANTEE CERTIFICATE

Guarantee Conditions:

1. Guarantee duration starts with delivery date of Towelrads product and extends to 10 years for Panel Radiators, 2 years for Towel Radiators.
2. Goods, together with all installation pieces are in the scope of our company guarantee.
3. When goods break down inside of the guarantee duration, repair time is added to guarantee duration. Repair time is maximum 30 working days. This period starts when the fault issue is given to service station, if there is no service station, inform the seller of goods, franchiser, agency, representation, importer or manufacturer-producer. If the defected product cannot be replaced within 15 days, the manufacturer-producer or importer will have to give an appropriate replacement product to the customer until the repair of the goods can be completed.
4. The guarantee does not cover poor or incorrect installation of the Towelrads.

- Service station of the firm, If there is no service station; seller, franchiser, agency, representation, importer or manufacturer-producer should arrange the report and this report will determine whether repair is possible, if repair is not possible the consumer can request to change the product free of charge, or request a substitute return.
5. Defects to the product which are related to incorrect installation –not following processes described in the user manual will invalidate the guarantee.
 6. Problems about the guarantee certificate can be lodged with the Industry and Trade Ministry Competition Conservation Directorship.
 7. Guarantee conditions are current as radiators connect to the combi boiler or central heating system etc.

Topics below are not covered by guarantee

1. Defects on the products which are related to the situations that are described in the user manual.
2. Defect caused by incorrect assembly or /and wrong pipe connection.
3. Other defects caused by fire, lightning, flood and other natural disasters.
4. Dropping product during loading or after delivery, transportation, unloading, storage and assembly. Strike or another defects on the product.
5. Using the products over 10 bar without the pressure reducing tool.
6. Defects caused by construction conditions around product.
7. Defects caused by freezing.
8. Using acid or other chemicals for cleaning the product.
9. In case of absence of approval of an authorized sales and service on the warranty card, and damaging of the warranty card.
10. Damage caused by maintenance and repairs carried out by unauthorized people.
11. Damage caused by not to use a pressure reducer in installation or in case out of function of that.
12. The surface faults and other defaults caused by inadequate storage conditions and environmental damage caused by construction conditions around product.
13. Damage caused by problems due to piping and fittings installment defects.
14. Damage caused by not operating the product in 5-10 bar which is normal operating pressure.
15. Damage caused by used the products with tap water and faults occurring as a result of frost.
16. Damage caused by inadequate ventilation, and steam and any negative effects of corrosive chemicals used on product.
17. Damage caused by using the products improperly, and misuse.
18. Any defaults caused by stone, mud, burrs, sand, etc. particles effects from the installation or furring.
19. Damage that may occur during transportation and/ or delivery of the goods to the customer, to supply non-standard hot water to the system, as a result of atmospheric events or frosting or icing problems in case of using the product outside.
20. The faults arising from not using original spare parts of this product and performing modifications without the company's prior approval.
21. In cases of not to validating the warranty certificate or inability to show invoice of the product.
22. The defaults caused by not carrying out the periodic maintenance out and inability to perform routine cleaning requirements as explained in the User Guide.
23. To fix any of the above-mentioned defects a charge will be incurred. Assembly and shipping fees of the product are not included in the product price.
24. Please ask to have the product warranty verified by the authorized dealer when the product is delivered. The original of copy of the invoice should be kept along with the warranty certificate.