

DIZAYN GROUP

Dizayn Group was founded in 1987 with the objective of developing and carrying out projects in heating and plumbing sectors. In September 1992, our company started producing under-floor heating pipes and indoor plumbing pipes called PP-R.

Through promotions and training activities, Dizayn Group has had a great effect on spreading the use of plastic pipes and fittings in Turkey. Furthermore, in a short period of time like 12 years the company has opened three plants; two in Beylikdüzü and one in Çorlu, in which production is realized on 35 thousand m² closed and 100 thousand m² open area.

Dizayn Group appropriates 4% of her turnover on R&D activities. The quality of the products is certified by testing institutes, which are internationally certified. Some of these institutes are as follows: SGS ISO 9001:2000, WQC (England), DVGW, Hygiene Institute (Germany), CMA (China), GOST (Russia), IMA (Germany), ZIK (Croatia), EMI (Hungary), GOST (Ukraine)

Dizayn Group exports her products to 86 countries, primarily to the ones located in Middle East, South America, Western and Eastern Europe, Russia, Northern Africa, Australia, and Far East. While Dizayn Group had 34 patents, this number increased to 85 today. Furthermore, Dizayn group has been awarded in July, 2004 by Turkish Patent Institute for her attribution to technological developments in Turkey and in world.

The success achieved by Dizayn Group in such a short time depends on her three missions. As a result of Product Development Missions, Dizayn Group produces pipes in 12 mm to 1600 mm diameter pipes at high pressure, and 50 mm to 3600 mm diameter pipes at low pressure. These pipes are endurable to heavy soil and traffic load made of Polietilen and Polipropilen through which fluid can easily flow.

Dizayn group produces more than 4000 types of products using 23 complete systems.

Products developed by Dizayn Group are as follow:

- Sanitary product group
- Inbuilding Fresh Water Systems
- Inbuilding Waste Water Systems
- Inbuilding Heating Systems
- Infrastructure Product Group
- Potable Water Systems
- Sewage Systems
- Natural Gas Systems
- Pre-insulation City Heating Systems

Agricultural Irrigation Product Group

- Drip Irrigation System
- Sprinkler Irrigation Systems
- Drilling Pipes

Radiator Product Group

- Panel Radiator
- Towel Radiator

Dizayn Group is the first company to produce 1600 mm diameter pipes at PN 12,5 pressure in October 2001, which is a world record. This product, which is deemed as impossible to manufacture by her competitors in international arena, was produced by Dizayn Group using a newly developed extraordinary technique.

Dizayn Group supports several masters, doctorates, and project studies conducted at several Turkish universities, which are relevant to her field. Furthermore, 26 articles prepared by the support of Dizayn Group were published at various national and international publications like Scientific Index.

By means of her Investor Mission, today, Dizayn Group continues her production activities at three different plants on 35 thousand m² closed area and for the future, through new investments and new international partnerships to be established, Dizayn Group plans to become a very strong company conducting her activities in two main areas classified as domestic and international markets.

As a consequence of Project Development Mission, Dizayn Group takes the flowing substances (water, gas and etc.) from the places where they are plenty and transmits them to the places where they are scarce. This way, Dizayn Group develops projects for city heating, drinking water distribution and agricultural irrigation. In order to achieve this, the company designs complete systems and establishes plants for these projects.

Dizayn Group, which conducts several successful projects in Turkey and abroad, has been awarded with the Water and Water Management prize by UNESCO as a result of the project realized in Khartoum-Sudan. Award ceremony was held in Cannes, France under the title of "Water Symposium" on 25 June 2003 and the award was presented to Mr. İbrahim Mirmahmutoğulları, Dizayn Group President of Board of Directors. The most significant aspect of this award was that, it was given to a private company for the first time in its history.

In addition, at the world final of World Young Business Achiever Competition, which is an international organization to which many countries participate including Germany, England and Holland, Mr. İbrahim Mirmahmutoğulları, represented our country and has been awarded with the Great Prize.

Lastly Dizayn group, along with %50 local partnership, started its production facilities in Azerbaijan.



DIZAYN PANEL RADIATOR



DIZAYN PANEL RADIATOR

Panel Radiator Specifications

Material: High quality, low carbon, 1.13 mm thickness roll Eregli steel, which is complied with DIN EN 10130-39, is used.

Pitches: 33.3 mm

Corrosion Protection: Pre-processing: Rinsing, degreasing, phosphating.

Main coating: Wet paint, epoxy-polyester powder coating.

Colour: White. Norm RAL 9010. Oven-dried at 180 °C.

Precise Technology

Dizayn Panel Radiators are manufactured with cold milled iron sheet in compliance with TS EN 442 product standards. Thanks to its 33,3 mm pitched water circulation channels and convectors at maximum height that are welded directly onto these channels, your rooms will be heated in a short time. Our panels enable automatic heat control applications. The convectors of Dizayn Panel Radiators are mounted directly on the water channels to provide efficient heat transfer with triplex convector system. Since the radiators have low water volume and high thermal power and efficiency, they heat the medium where they are placed. In addition to comfort they provide, the radiators save from fuel as well.

High Operation and Test Pressure

Our panel radiators can be used conveniently and reliably in multi-storey buildings requiring high operation pressure. Our panel radiators are subjected individually to maximum operation temperature of 120 °C, to 13 bar test pressure for 10 bar operation pressure.

Dizayn Panel Radiators

It is manufactured in accordance with TS EN 442. Radiators, which are subjected to degreasing, phosphating, passivation and naturalized rinsing process by using triple (dipping-spraying) techniques with special chemical materials, are undercoated with wet dip coating process to be perfectly resistant to corrosion. All the surfaces of radiators, which are oven-dried after undercoating, are painted with epoxy-polyester electrostatic powder coating. Therefore, two times painted radiators become resistant to impacts and gain long-lasting product lifetime.

Stylish and Decorative

Dizayn Panel Radiators, owing to their efficiency, slim and delicate design, occupy less space, complete your decoration, provide a decorative appearance and bring an aesthetic coherence to the room. Thus, their smooth surfaces and special louvered door systems prevent to get dusty and enable easy cleaning.

Rich Variety

Manufactured in 4 different heights as 400-900 mm and 27 different lengths as 400-3000 mm.

10-year Warranty

Dizayn Panel Radiators have TS EN 442 certificate and 10-year warranty.

Reliable Packaging

With the help of plastic doors placed on hanging plates and protective corrugated boards attached to the sides, they are easily handled without damaged.



1,13mm thickness roll Eregli steel



DIZAYN PANEL RADIATOR

Radiator Montage Technique

That is the montage technique which was trying to camouflage and nearly cloaked the radiator group. As a prospective result, 20% percent of the energy produced is wasted. For negating the effect of wasting we must install a radiator which is 20% bigger than the initial one. Otherwise, the situations that we mentioned before may cause higher risks for the places that technique used.

Radiator Type	Height	Inter Axis Distance	Width	Weight	Water content
	H (mm)	A (mm)	B (mm)	kg/m	l/m
10-P	400	345	65	8,80	1,95
	500	445	65	11,35	2,30
	600	545	65	13,15	2,68
	900	845	65	19,80	3,79
11-PK	400	345	65	12,20	1,95
	500	445	65	15,10	2,30
	600	545	65	17,90	2,68
	900	845	65	26,90	3,79
21-PKP	400	345	68	20,11	3,73
	500	445	68	25,10	4,42
	600	545	68	29,80	5,16
	900	845	68	43,00	8,25
22-PKPP	400	345	100	24,30	3,85
	500	445	100	30,50	4,54
	600	545	100	35,60	5,28
	900	845	100	52,00	7,46
33-PKKPKP	400	345	154	33,90	5,80
	500	445	154	42,40	6,84
	600	545	154	50,40	7,96
	900	845	154	75,50	11,25

Place Selection For Radiator Mounting

As it is known that, the most heat lost is through the windows of the buildings, even though double-glazing application decreases this loss, It can not change conditions definitely. Due to this reason, the radiators must be mounted to the parapet surface below the window as projected, unless required otherwise. If radiators can not be mounted below the window because of various architectural requirements; in this case, they must be certainly mounted onto the outer wall which heat loss is the greatest. Otherwise, several handicaps may emerge as it is seen from the figures below.



Figure-1: Wrong Application



Figure-1: Correct Application

Mounting method seen in Figure-1 is a wrong application. Here, the radiator is mounted onto the interior wall of the room. As a general characteristic of radiators, heated air rises from the radiator inside the room, while cold air flows from floor surface towards the radiator and rises again after heated. This is the same for all radiators. In this wrong mounting method, the area where the radiator mounted onto the interior wall will be very hot and the area towards the outer wall will naturally be very cold. Yet, this temperature difference may rise up to 8°C - 10°C. Since this temperature difference will cause a very rapid air circulation, it will be inevitable that you feel your legs and feet cold. Moreover, heated air is compressed against to room ceiling unnecessarily and used inefficiently.

In Figure 2, radiator is mounted onto outer wall below the window after the right mounting place is set. In this application type, heat difference between the floor and the ceiling is almost zero. Therefore, owing to homogeneity of air temperature, air circulation will be formed inside the room and the heat distribution in the radiators will be close to ideal and in a healthy way Besides, residents inside the room will not feel their feet and legs cold anymore (as a result of non-circulation of air). Cold air in the areas close to windows surface will be raised after heated by contacting with the hot air raised over the radiator. Therefore, room air will be heated homogenously.

DIZAYN PANEL RADIATOR

DIZAYN PANEL RADIATOR HEAT CAPACITY TABLE

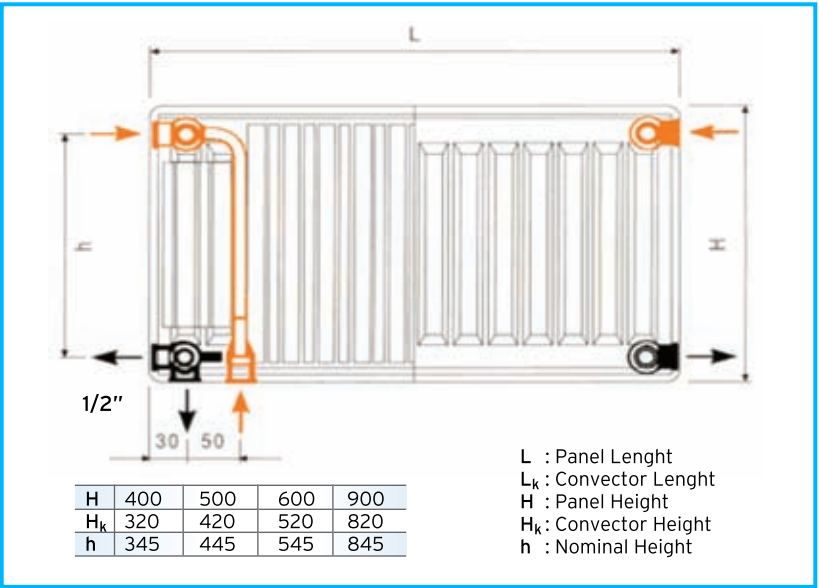
Panel Radiator - Heat Capacity	Radiator Type = PKP - (21)				Radiator Type = PKKP - (22)							
	T = 50 °C		T = 50 °C		T = 50 °C		T = 50 °C		T = 50 °C		T = 50 °C	
	H = 500		H = 600		H = 400		H = 500		H = 600		H = 900	
Radiator Lenght L (mm)	Watt	Kcal/h	Watt	Kcal/h	Watt	Kcal/h	Watt	Kcal/h	Watt	Kcal/h	Watt	Kcal/h
400	445	383	504	433	420	361	512	440	619	533	797	685
500	556	478	630	542	525	452	640	550	774	666	996	857
600	667	574	756	650	630	542	768	660	929	799	1196	1028
700	778	669	882	759	735	632	896	771	1084	932	1395	1199
800	890	765	1008	867	840	722	1024	881	1238	1065	1594	1371
900	1001	861	1134	975	945	813	1152	991	1393	1198	1793	1542
1000	1112	956	1260	1084	1050	903	1280	1101	1548	1331	1993	1714
1100	1223	1052	1386	1192	1155	993	1408	1211	1703	1464	2192	1885
1200	1334	1148	1512	1300	1260	1084	1536	1321	1858	1598	2391	2056
1300	1446	1243	1638	1409	1365	1174	1664	1431	2012	1731	2590	2228
1400	1557	1339	1764	1517	1470	1264	1792	1541	2167	1864	2790	2399
1500	1668	1434	1890	1625	1575	1355	1920	1651	2322	1997	2989	2570
1600	1779	1530	2016	1734	1680	1445	2048	1761	2477	2130	3188	2742
1700	1890	1626	2142	1842	1785	1535	2176	1871	2632	2263	3387	2913
1800	2002	1721	2268	1950	1890	1625	2304	1981	2786	2396	3587	3084
1900	2113	1817	2394	2059	1995	1716	2432	2092	2941	2529	3786	3256
2000	2224	1913	2520	2167	2100	1806	2560	2202	3096	2663	3985	3427
2100	2335	2008	2646	2276	2205	1896	2688	2312	3251	2796	4184	3598
2200	2446	2104	2772	2384	2310	1987	2816	2422	3406	2929	4384	3770
2300	2558	2200	2898	2492	2415	2077	2944	2532	3560	3062	4583	3941
2400	2669	2295	3024	2601	2520	2167	3072	2642	3715	3195	4782	4113



21-PKP
Panel radiator 2 P
with 1 convector.



22-PKKP
Panel radiator 2 P
with 2 convectors.



DIZAYN TOWEL RADIATOR



DIZAYN TOWEL RADIATOR

Towel Radiator Properties

After joining to the family of products for indoor heating systems, it has got a significant market share in a short time with its advantages offered. Thereby, Dizayn Group makes radiator heat emitter as a decorative accessory, which takes the best place of your room by removing from its old place in behind the armchair or sofa. Besides having a good appearance, it is produced in a form that enables the things hung on it to dry, so that its functionality is increased.

Produced with a variety of colors, it can be supplied with colors suited for the decoration inside the building. Since electrostatic coating is applied, color fading in time is not an issue. It can be supplied as chrome coated as well. Chrome coated towel radiators in same dimensions provide about 30% less heat comparing electrostatic coated ones. However, due to its perfect aesthetic, its demand is increasing along with coated towel radiators. Towel radiator is a product that is designed with the intention that its functionality is increased, heat efficiency is kept at desired values. During the production process, Before the welding operation, the ends of circulation pipes (horizontal pipes) are grinded, so this enables the horizontal pipes to overlap with vertical pipe perfectly without any problem. With this method only applied by Dizayn, the quality problems are eliminated. At the same time, after drilling holes on the vertical pipes, surrounding area is grinded.

Therefore, a wider welding profile having no tension load is obtained. Steel Sheets are transformed into a product as combined each other with silver welding methods. Dizayn towel radiators products are protected from oxidation of oxygen inherit in the water and corrosive effects with galvanized coating. Each towel radiator is subjected to "underwater air test" at 13 bar pressure.

Subsequent to galvanized coating process, it is painted with desired colors with electrostatic coating. With the existing method, high quality, non-fading, non-peeled product is gotten. In the chrome-coated products, surface is coated first copper, next nickel and finally chrome.

With these intermediate coatings, non-peeling, non-swelled product having high sealing capability is obtained.

There are not any vanes equipped in its structure, rather just pipes. These pipes equipped in towel radiator diffuse heat with the methods of convection and radiation.

In radiation method, heat begins to circulate and when reflected by the object, it leaves its energy at the surface it related. Therefore, it heats the objects instead of air. Since the main purpose of towel radiator is to heat the objects hung on it and then heat the environment, its structure is designed accordingly.



DIZAYN TOWEL RADIATOR

Decorative Radiator Installation Types

The suitable installation methods for decorative radiator are listed below. Any other installation methods may lead radiator loss its status or radiator may not work completely.

Towel Radiator Mounting Technique

1- Inlet from Bottom- Outlet from Bottom Connection

Regardless of the shape of the radiator, it is the most ideal connection type. This type of installation enables your radiator to operate with the highest efficiency and the highest performance.

2- Cross Connection

In the connection type illustrated in Figure-2, an aesthetic appearance cannot be obtained. Nevertheless, the radiator operates normally. In this type of connection, especially in the radiator, above a specific height, opening or closing the valve might be difficult.

3- Inlet from Top - Outlet from Top (NOT TO BE APPLIED)

Connection type illustrated in Figure-3 must not be applied. Because, according to the physics law heated water will rise to upper side, therefore a short circuit will occur at the top section and so it is not possible to heat bottom section up. Even if choice is made correctly, due to inefficient operation of radiator, it will not be possible to heat the room. That is why; this kind of connection must not be applied.



Figure - 1

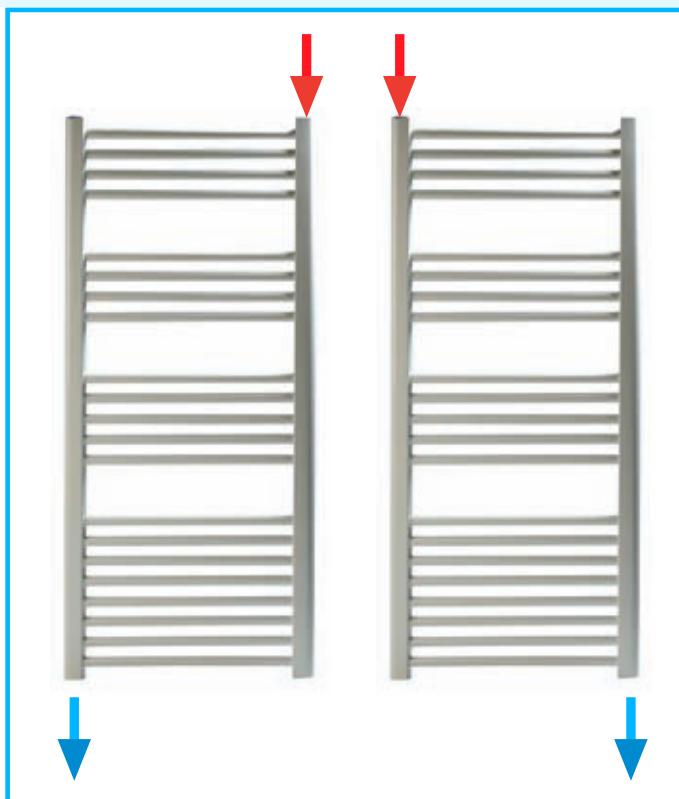


Figure - 2

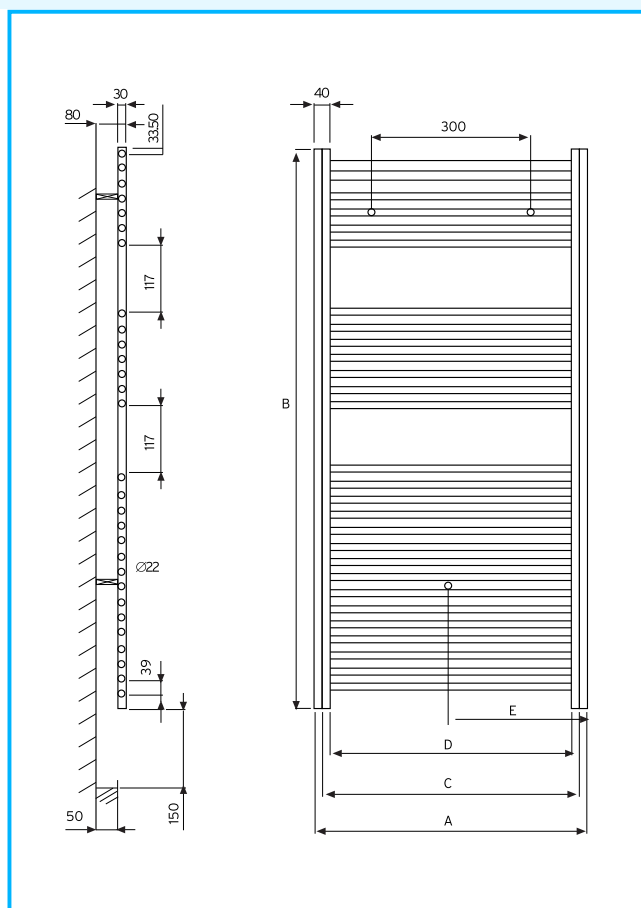


Figure - 3

DIZAYN TOWEL RADIATOR

Towel radiator Mounting Guide

- Take out the towel radiator from its carton packaging.
- Assemble the towel radiator by drilling holes to nylon from where you attach the mounting parts. Remove nylon completely after mounting, painting and coating are finished.
- Assemble the radiator by locating at least 10 cm above the ground.
- Mark the position of the points where mounting parts to be attached on the wall according to the measurements given by figure and table.
- Place the dowels by drilling the wall by 8's drill bit from the marked points.
- Attach the 3 wall mounting parts into the holes on the wall with wooden screws, while the holes are in vertical position.
- Since the holes behind the wall mounting part provide opportunity to slide up and down, it will provide convenience while taking the towel radiator into scale.
- Adjust the fixing parts of the towel radiator to fasten horizontal pipe of the towel radiator and adjust the distance from the towel radiator to the wall with a screw by placing the fixing parts on the wall mounting part.
- Fix the mounting screw of the towel radiator with fixing screw.
- At this stage, adjust the towel radiator branch ducts.

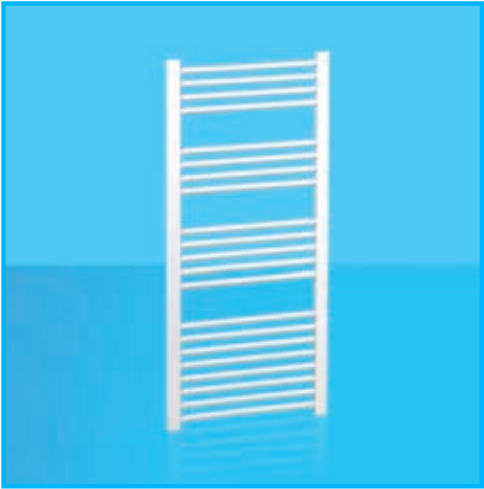


DİZAYN MILLENIUM TOWEL RADIATOR

TECHNICAL SPECIFICATIONS

Product Code	Width (mm)	Height (mm)	Connection distance (mm)	D	E	Number of Pipes (Unit)	Number of Gaps (Unit)
DH-4/7	400	688	355	330	200	13	2
DH-4/11	400	1118	355	330	200	22	2
DH-4/17	400	1760	355	330	200	34	3
DH-5/7	500	688	455	430	250	13	2
DH-5/11	500	1118	455	430	250	22	2
DH-5/17	500	1760	455	430	250	34	3
DH-6/7	600	688	555	530	300	13	2
DH-6/11	600	1118	555	530	300	22	2
DH-6/17	600	1760	555	530	300	34	3

Product Code	Width (mm)	Height (mm)	Distance Between Axes (mm)	Number of Pipes (Unit)	Number of Gaps (Unit)	Water Capacity (Lt)	Weight (mm)	Electrostatic Powder Coating				Chrome Coated			
								ΔT =60		ΔT =50		ΔT =60		ΔT =50	
								Watt	Kcal/h	Watt	Kcal/h	Watt	Kcal/h	Watt	Kcal/h
DH-4/7	400	688	355	13	2	2.75	5.35	506	435	395	374	423	364	315	284
DH-4/11	400	1118	355	22	2	4.44	8.28	790	616	644	610	660	567	506	443
DH-4/17	400	1760	355	34	3	7.03	13.2	1283	1143	1027	966	795	684	620	533
DH-5/7	500	688	455	13	2	3.03	6.16	583	501	455	431	466	401	363	313
DH-5/11	500	1118	455	22	2	4.89	9.45	909	782	709	672	727	625	567	488
DH-5/17	500	1760	455	34	3	7.74	15.75	1476	1269	1151	1082	875	753	683	587
DH-6/7	600	688	555	13	2	3.33	7.09	684	588	534	506	547	470	427	367
DH-6/11	600	1118	555	22	2	5.37	11.3	1004	863	783	743	648	557	505	435
DH-6/17	600	1760	555	34	3	8.5	18.1	1707	1468	1331	1262	1049	902	818	704



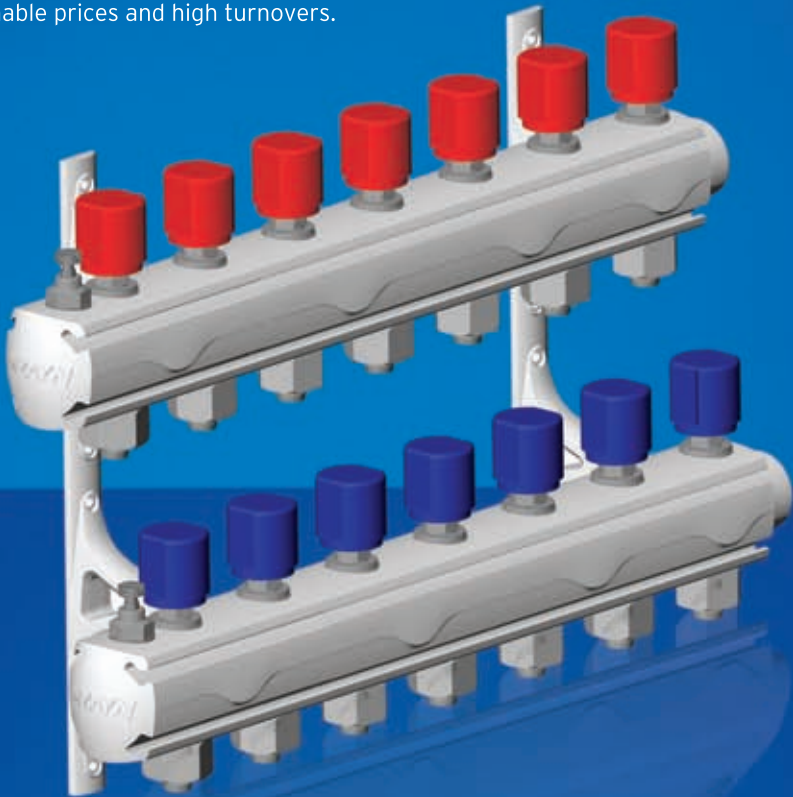


Model	1000	1200	1500	1800	2000	2500	3000
Power (kW)	1.0	1.2	1.5	1.8	2.0	2.5	3.0
Flow (l/min)	100	120	150	180	200	250	300
Pressure (bar)	1.0	1.2	1.5	1.8	2.0	2.5	3.0
Height (mm)	1000	1200	1500	1800	2000	2500	3000

Safe and economical solutions for heating systems.

REINFORCED MANIFOLD (COLLECTOR) WITH AIR VENT AND VALVE

- Fast installation due to valve involved in the product
- Maximum endurance at high temperatures
- Easy installation by means of specially designed bracket
- Economical installation with reasonable prices and high turnovers.



REINFORCED MANIFOLD (COLLECTOR) WITH AIR VENT AND VALVE

Code	Part * pcs	Per Package (unit)	Package Dimension (m)	Package Weight (kg)
811	2 x 1	30	43x35x22	5,18
812	3 x 1	20	43x35x22	14,84
813	4 x 1	14	43x35x22	13,85
814	5 x 1	20	43x35x22	16,63
815	6 x 1	20	43x35x22	24,41
816	7 x 1	16	BAG	16,93
817	8 x 1	10	BAG	19,32
818	9 x 1	10	BAG	21,70
819	10 x 1	10	BAG	24,10

CERTIFICATES

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Dizayn offers

a warm and comfortable environment with
high quality products.



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