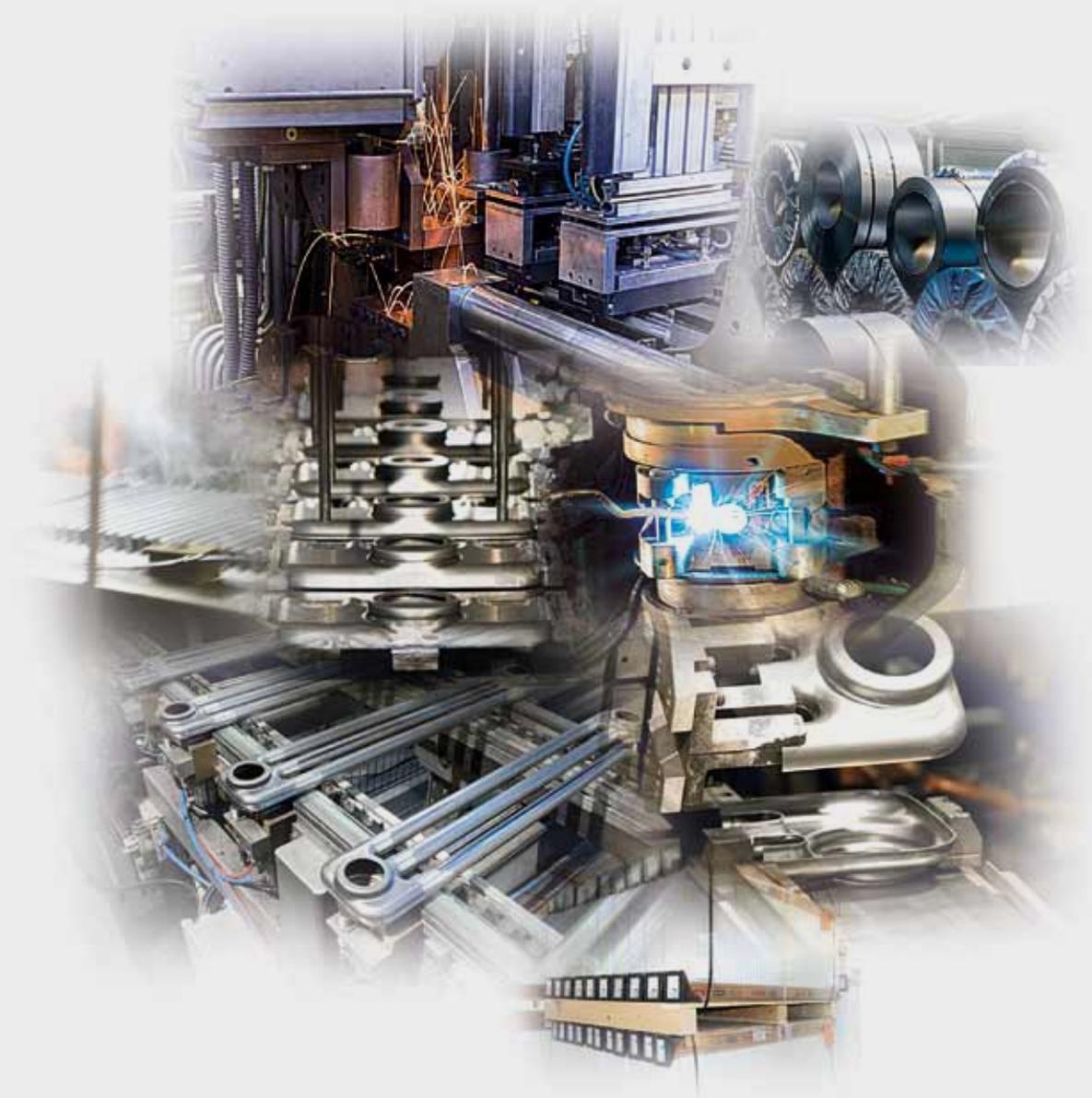


STEEL PANELS



DeLonghi



DL Radiators is a society of the DL Clima Group, new Italian group operating in the HVAC industry (heating, ventilation, air-conditioning).

Starting from 1985, the focus of DL Radiators' business is in the manufacturing and sale of heating radiators.

Production is concentrated entirely in Italy in two factories at Moimacco (Udine) and Fossalta di Piave (Venice), occupying a total surface area of 65,000 squared meter.

Over the years, DL Radiators has successfully tackled and won the challenges brought by constant market evolution through ceaseless technological research and the awareness that quality and innovation are today the essential requisites for business success.

The range includes steel panel radiators, radiant radiators, multicolumn radiators, bathroom radiators, bathroom radiators with integrated fan heaters and decorative and designer radiators, radiators for use with hot water central heating systems or electricity and aluminium electric radiators. The DLR catalogue includes a total of 100 different products to satisfy all heating needs.

Products, Investments, Technology and People are DL Radiators' levers to serve the market and customers, satisfying their needs, while at the same time setting new standards of wellbeing for an ever more comfortable life. Constant attention to market trends and anticipating the demands of the consumer, pioneering design and production techniques, quality and service as fundamental principles all make DLR one of the sector's leading producers.

Ninety per cent of DLR products are exported to more than 100 countries where the company is represented by a streamlined and efficient sales network which includes a number of branches. Our products are sold in leading specialist chain stores, but also through networks of qualified installers.

Steel Panel radiators product range

PROFILED PANELS



COMPACT
4 connections



PHD UNIVERSAL PANEL
integrated valve,
2 lower connections



CENTRAL CONNECTIONS
integrated valve,
2 lower connections

LINEAR PANELS



COMPACT
4 connections



PHD UNIVERSAL PANEL
integrated valve,
2 lower connections



CENTRAL CONNECTIONS
integrated valve,
2 lower connections

VERTICAL PANELS



DE'LONGHI PROFILED
4 connections + central connection



LINEAR
4 connections + central connection

Quality



- ◆ Top quality 1,25mm thick steel ideal for deep moulding
- ◆ 33,3 mm grooves



PAINTING

- ◆ Glossy (RAL 9016) and long-lasting colour
- ◆ High quality und high effectiveness painting process (hot degreasing, iron-phosphatisation, electrophoretic dip coating, epoxy powder)



SECURITY

- ◆ Max. working pressure 10 bar
- ◆ Test pressure 13 bar
- ◆ Max. working temperature 110 °C
- ◆ Screw-fastened side covers
- ◆ Brackets according to VDI6036 norm (security requirements for the stability of the fastening system)



PACKAGING

- ◆ PP corner protections
- ◆ Tough cardboard stripes to protect the edge
- ◆ Heat shrink tape to protect against damp

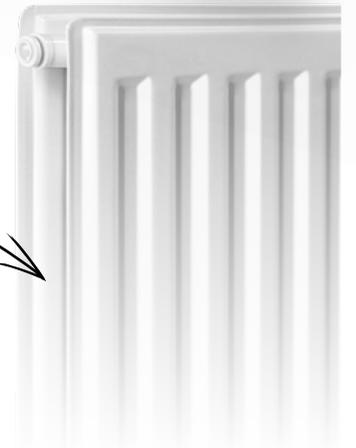
Compact Steel Panel



- 4 x 1/2" connections da 1/2", internal thread
- top grille
- side covers
- 1/2" blind cap, in the package
- 1/2" air vent, in the package



MODELLS: 10 - 11 - 21 - 22 - 33
HEIGHTS: 300 - 400 - 500 - 600 - 700 - 900 mm
LENGTHS: 400 - 500 - 600 - 700 - 800
 900 - 1000 - 1100 - 1200 - 1400 - 1600 - 1800 - 2000
 2300 - 2600 - 3000 mm



		Dimensions				
		10	11	21	22	33
panel depth - excluding back supports	A	63	63	85	100	157
total depth - from the back of the support to the front panel	B	63	74,5	94	109	166
distance from the back support to the connection**	C	16	40	52	59	59
distance from wall to the centre of the connection (mounting the radiators on the GB brackets provided)*	D	34,5	56/64	67,5/75,5	75/83	75/83
total distance from the wall to the front panel (panel mounted on the GP brackets provided as standard)*	E	68	90,5/98,5	110/118	125/133	182/190

(Model 10 mounted on D30 brackets)

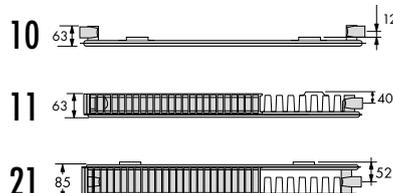
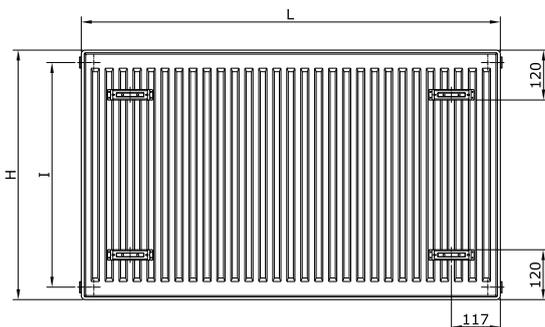
* The total distance varies according to whether the GB bracket is mounted in position A or position B (choice of depth)

** Calculating the total size of the panel (from the wall to the front panel) with the chosen wall brackets: the useful length of the chosen bracket must be added to this measurement (see brackets page).



PACKAGING

PP corner protections • Tough cardboard stripes to protect the edge • Heat shrink tape to protect against damp



Universal Steel Panel



- preset thermostatic valve on the right (on the left side as well) - PHD Radiators are not symmetrical
- Bottom connections 50mm tappings centre, 3/4" outside thread
- models **21, 22, 32, 33**: no welded back supports, valve position not symmetrical
- models **10, 11, 20, 30** have back supports
- the thermostatic head must be ordered separately
- 2 x 1/2" connections, internal thread on opposite side of the thermostatic insert with:
 - 1 x 1/2" blind cap provided, premounted
 - 1 x 1/2" vent plug provided, premounted
- available thermostatic valve for district heating



MODELLS: 10 - 11 - 21 - 22 - 32 - 33
HEIGHTS: 300 - 400 - 500 - 600 - 700 - 900 mm
LENGTHS: 400 - 500 - 600 - 700 - 800 - 900
 1000 - 1100 - 1200 - 1400 - 1600 - 1800
 2000 - 2300 - 2600 - 3000 mm

Types 10-20-30 **HYGIENE**
 (without grille and side covers)

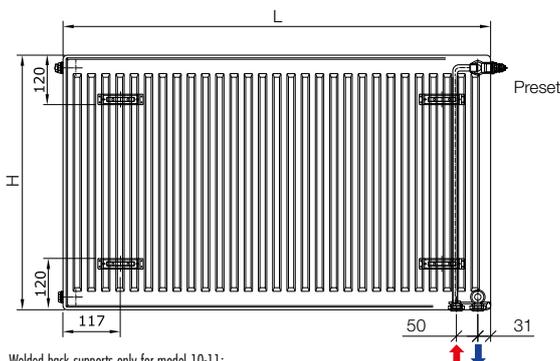


	Dimensions						
		10	11	21	22	32	33
panel depth - excluding back supports	A	63	63	85	100	157	157
total depth - from the back of the support to the front panel	B	63	74,5	85	100	166	166
distance from the back support to the connection**	C	15,5	40	42,5	50	59	59
distance from wall to the centre of the connection (mounting the radiators on correct brackets: F7 for models 21,22,32,33; GB for model 11; D30 for model 10)*	D	34,5	56/64	76,5	84	112,5	112,5
total distance from the wall to the front panel (mounting the radiators on correct brackets: F7 for models 21,22,32,33; GB for model 11; D30 for model 10)*	E	68	90,5/98,5	119	134	191	191

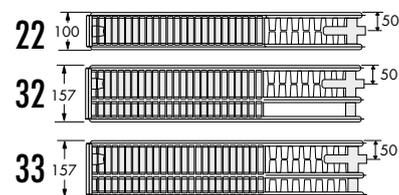
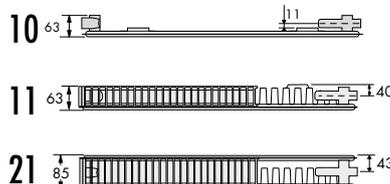
(Model 10 mounted on D30 brackets)

* The total distance varies according to whether the GB bracket is mounted in position A or position B (choice of depth)

** Calculating the total size of the panel (from the wall to the front panel) with the chosen wall brackets: the useful length of the chosen bracket must be added to this measurement (see brackets page)



Welded back supports only for model 10-11;
 Models 21-22-32-33 have no back supports.

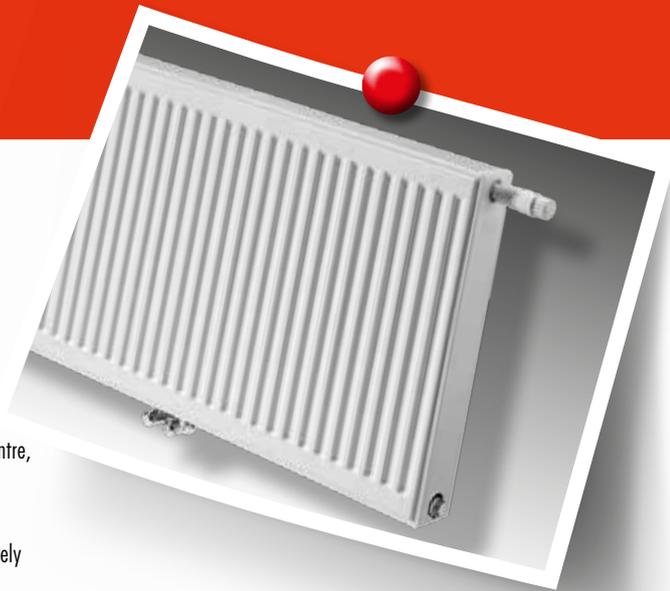


PACKAGING

- PP corner protections
- Tough cardboard stripes to protect the edge
- Polystyrene protection for the valve
- Heat shrink tape to protect against damp

Universal

Steel Panel with central connections



- thermostatic valve on the right (on the left side as well)
- Bottom central connections 50mm tappings centre, 3/4" outside thread
- all models have back supports
- the thermostatic head must be ordered separately
- 1 x 1/2" blind cap provided, premounted
- 1 x 1/2" vent plug provided, premounted
- available thermostatic valve for district heating



MODELLS: 10 - 11 - 21 - 22 - 33
HEIGHTS: 300 - 400 - 500 - 600 - 700 - 900 mm
LENGTHS: 400 - 500 - 600 - 700 - 800
 900 - 1000 - 1100 - 1200 - 1400 - 1600 - 1800 - 2000
 2300 - 2600 - 3000 mm



scon-
torna-
re



	Dimensions			
	11	21	22	33
panel depth - excluding back supports	A 63	85	100	157
total depth - from the back of the support to the front panel	B 74,5	94	109	166
distance from the back support to the connection**	C 40	52	59	59
distance from wall to the centre of the connection (mounting the radiators on correct brackets: F7 for models 21,22,32,33; GB for model 11; D30 for model 10)*	D 56/64	67,5/75,5	75/83	75/83
total distance from the wall to the front panel (mounting the radiators on correct brackets: F7 for models 21,22,32,33; GB for model 11; D30 for model 10)*	E 90,5/98,5	110/118	125/133	182/190

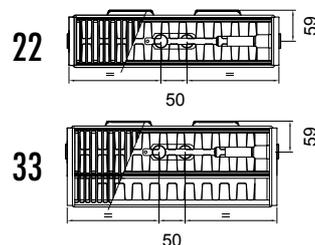
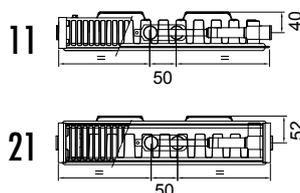
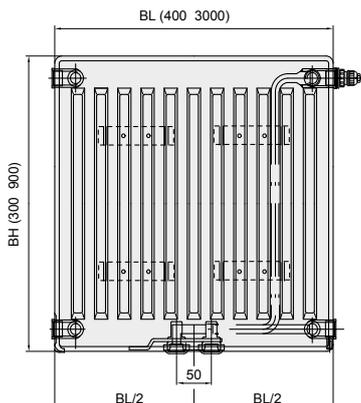
* The total distance varies according to whether the GB bracket is mounted in position A or position B (choice of depth)

** Calculating the total size of the panel (from the wall to the front panel) with the chosen wall brackets: the useful length of the chosen bracket must be added to this measurement (see brackets page)

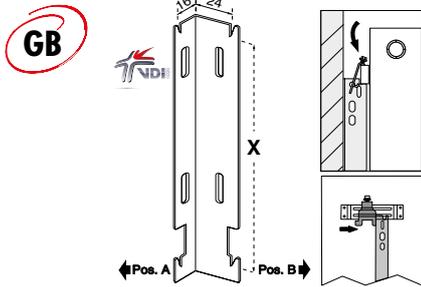


PACKAGING

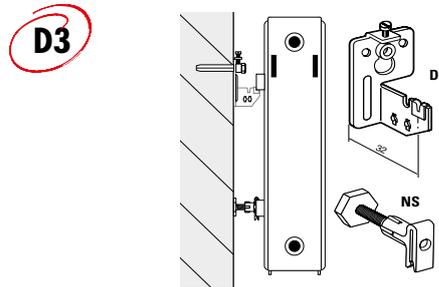
PP corner protections • Tough cardboard stripes to protect the edge • Polystyrene protection for the valve • Heat shrink tape to protect against damp



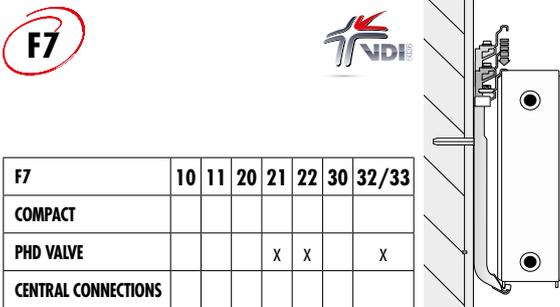
Wall brackets



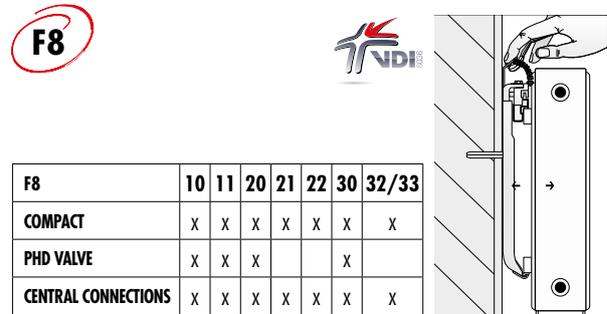
GB	10	11	20	21	22	30	32/33
COMPACT	X	X	X	X	X	X	X
PHD VALVE	X	X	X			X	
CENTRAL CONNECTIONS	X	X	X	X	X	X	X



D3	10	11	20	21	22	30	32/33
COMPACT	D30	X	X	X	X	X	X
PHD VALVE	D30	X	X			X	
CENTRAL CONNECTIONS	D30	X	X	X	X	X	X

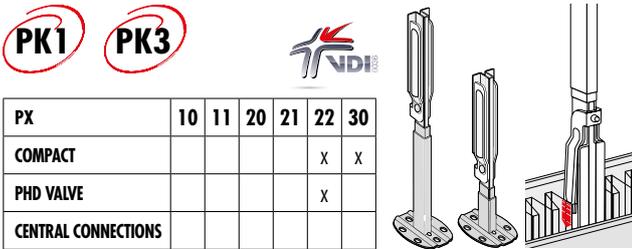


F7	10	11	20	21	22	30	32/33
COMPACT							
PHD VALVE				X	X		X
CENTRAL CONNECTIONS							

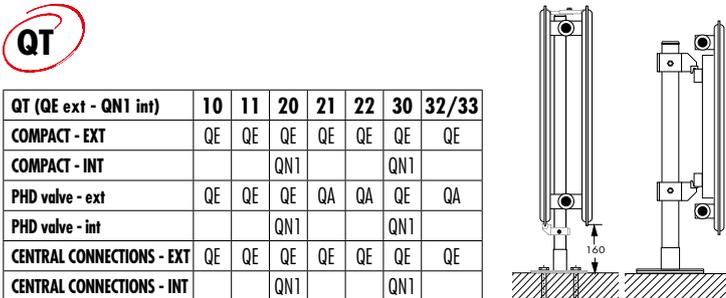


F8	10	11	20	21	22	30	32/33
COMPACT	X	X	X	X	X	X	X
PHD VALVE	X	X	X			X	
CENTRAL CONNECTIONS	X	X	X	X	X	X	X

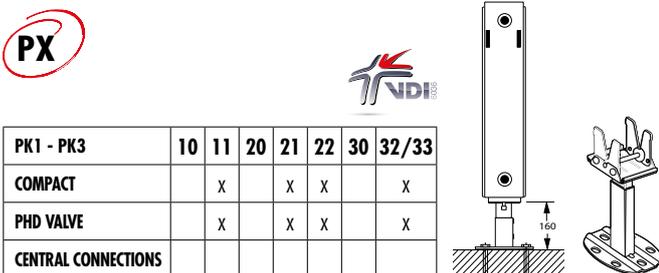
Floor anchors



PX	10	11	20	21	22	30
COMPACT					X	X
PHD VALVE					X	
CENTRAL CONNECTIONS						

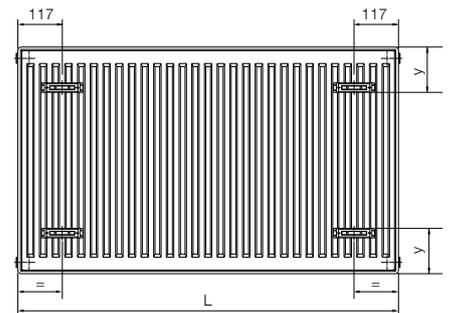


QT (QE ext - QN1 int)	10	11	20	21	22	30	32/33
COMPACT - EXT	QE	QE		QE	QE	QE	QE
COMPACT - INT				QN1		QN1	QN1
PHD valve - ext	QE	QE	QE	QA	QA	QE	QA
PHD valve - int				QN1		QN1	
CENTRAL CONNECTIONS - EXT	QE	QE	QE	QE	QE	QE	QE
CENTRAL CONNECTIONS - INT			QN1			QN1	



PK1 - PK3	10	11	20	21	22	30	32/33
COMPACT		X		X	X		X
PHD VALVE		X		X	X		X
CENTRAL CONNECTIONS							

Quantity of brackets



Y=120 mm

Standard 75/65-20 power outputs

(Compact panel and Valve panel with Central Connections) according to EN442 norm, tested ad Politecnico of Milano

Height (H) 400

		10	11	20	21	22	30	33
Widths	62 mm	1,316	1,293	1,273	1,286	1,305	1,275	1,299
	63 mm	167	279	290	415	509	411	716
Exponent n	159 mm	208	349	362	519	636	513	895
	Length (L mm)	250	418	435	623	764	616	1,074
400	600	292	488	507	727	891	719	1,253
	700	333	558	579	831	1,018	821	1,432
900	800	375	628	652	935	1,146	924	1,610
	1,000	417	697	724	1,039	1,273	1,027	1,789
1,100	1,100	458	767	797	1,143	1,400	1,129	1,968
	1,200	500 <td>837</td> <td>869</td> <td>1,246</td> <td>1,527</td> <td>1,232</td> <td>2,147</td>	837	869	1,246	1,527	1,232	2,147
1,400	1,400	583	976	1,014	1,454	1,782	1,437	2,505
	1,600	667	1,116	1,159	1,662	2,036	1,643	2,863
1,800	1,800	750	1,255	1,304	1,870	2,246	1,848	3,221
	2,000	833	1,395	1,449	2,077	2,546	2,053	3,579
2,300	2,300	958	1,604	1,666	2,389	2,927	2,362	4,116
	2,600	1,083	1,813	1,883	2,701	3,309	2,670	4,652
3,000	1,250	2,092	2,173	3,116	3,818	3,080	5,368	

Height (H) 300

		10	11	20	21	22	30	33
Widths	62 mm	1,320	1,301	1,276	1,278	1,298	1,265	1,285
	63 mm	131	210	231	332	398	331	563
Exponent n	159 mm	164	262	288	415	498	413	704
	Length (L mm)	196	315	346	497	597	496	844
700	800	229	367	404	580	697	579	985
	900	262	420	462	663	797	662	1,126
1,000	1,000	295	472	519	746	896	744	1,267
	1,100	327	525	577	829	996	827	1,407
1,200	1,200	360	577	635	912	1,095	910	1,548
	1,300	393	630	692	995	1,195	992	1,689
1,400	1,400	458	735	808	1,161	1,394	1,158	1,970
	1,600	524	840	923	1,326	1,593	1,323	2,252
1,800	1,800	589	945	1,038	1,492	1,792	1,489	2,533
	2,000	655	1,050	1,154	1,658	1,992	1,654	2,815
2,300	2,300	753	1,207	1,327	1,907	2,290	1,902	3,237
	2,600	851	1,364	1,500	2,155	2,589	2,150	3,659
3,000	982	1,574	1,731	2,487	2,987	2,481	4,222	

Height (H) 600

		10	11	20	21	22	30	33
Widths	62 mm	1,308	1,276	1,264	1,301	1,319	1,296	1,327
	63 mm	238	406	400	576	708	568	992
Exponent n	159 mm	298	508	500	710	885	710	1,240
	Length (L mm)	357	610	599	864	1,062	852	1,488
700	800	417	711	699	1,008	1,240	994	1,736
	900	477	813	799	1,152	1,417	1,136	1,984
1,000	1,000	536	914	899	1,297	1,594	1,278	2,232
	1,100	596	1,016	999	1,441	1,771	1,420	2,480
1,200	1,200	655	1,118	1,099	1,585	1,925	1,562	2,728
	1,400	715	1,219	1,199	1,729	2,125	1,704	2,976
1,600	1,600	834	1,423	1,399	2,017	2,479	1,988	3,472
	1,800	953	1,626	1,598	2,305	2,833	2,272	3,968
2,000	2,000	1,191	2,032	1,998	2,593	3,187	2,556	4,464
	2,300	1,370	2,337	2,298	3,313	4,073	3,265	5,704
2,600	2,600	1,549	2,642	2,597	3,746	4,604	3,691	6,448
	3,000	1,787	3,048	2,997	4,322	5,312	4,259	7,440

Height (H) 500

		10	11	20	21	22	30	33
Widths	62 mm	1,312	1,285	1,270	1,293	1,312	1,285	1,313
	63 mm	202	345	346	497	612	491	858
Exponent n	159 mm	253	431	432	621	765	614	1,073
	Length (L mm)	303	517	518	745	918	737	1,288
700	800	354	603	605	869	1,071	860	1,502
	900	405	689	691	993	1,224	983	1,717
1,000	1,000	455	775	778	1,117	1,378	1,105	1,931
	1,100	506	861	864	1,242	1,531	1,228	2,146
1,200	1,200	556	948	951	1,366	1,684	1,351	2,361
	1,400	607	1,034	1,037	1,490	1,837	1,474	2,575
1,600	1,600	708	1,206	1,210	1,738	2,143	1,719	3,004
	1,800	809	1,378	1,383	1,987	2,449	1,965	3,434
2,000	2,000	910	1,551	1,555	2,235	2,755	2,211	3,863
	2,300	1,012	1,723	1,728	2,483	3,061	2,456	4,292
2,600	2,600	1,163	1,981	1,988	2,856	3,520	2,825	4,936
	3,000	1,315	2,240	2,247	3,228	3,980	3,193	5,580
3,000	1,517	2,584	2,592	3,725	4,592	3,685	6,438	

Height (H) 900

		10	11	20	21	22	30	33
Widths	62 mm	1,292	1,291	1,270	1,334	1,346	1,319	1,350
	63 mm	350	569	554	812	959	782	1,347
Exponent n	159 mm	438	711	693	1,015	1,199	977	1,683
	Length (L mm)	526	853	831	1,218	1,439	1,173	2,020
700	800	613	995	970	1,421	1,679	1,368	2,357
	900	701	1,137	1,108	1,624	1,919	1,564	2,694
1,000	1,000	789	1,280	1,247	1,827	2,159	1,759	3,030
	1,100	876	1,422	1,385	2,030	2,399	1,955	3,367
1,200	1,200	964	1,564	1,524	2,233	2,638	2,150	3,704
	1,400	1,051	1,706	1,662	2,436	2,878	2,346	4,040
1,600	1,600	1,227	1,900	1,939	2,841	3,358	2,737	4,714
	1,800	1,377	2,093	2,159	3,187	3,838	3,128	5,060
2,000	2,000	1,552	2,283	2,359	3,535	4,317	3,519	6,060
	2,300	1,732	2,543	2,771	4,059	4,977	3,910	7,234
2,600	2,600	2,015	3,270	3,186	4,668	5,517	4,496	8,744
	3,000	2,278	3,696	3,602	5,277	6,236	5,083	8,754
3,000	2,629	4,265	4,156	6,089	7,196	5,865	10,101	

Height (H) 700

		10	11	20	21	22	30	33
Widths	62 mm	1,308	1,281	1,262	1,312	1,328	1,303	1,335
	63 mm	238	464	452	655	798	641	1,118
Exponent n	159 mm	298	581	565	819	997	802	1,397
	Length (L mm)	357	697	678	983	1,197	962	1,676
700	800	417	813	791	1,146	1,396	1,123	1,956
	900	477	929	904	1,310	1,596	1,283	2,235
1,000	1,000	536	1,045	1,017	1,474	1,795	1,443	2,514
	1,100	596	1,161	1,130	1,638	1,995	1,604	2,794
1,200	1,200	655	1,277	1,243	1,801	2,194	1,764	3,073
	1,400	715	1,393	1,356	1,965	2,394	1,924	3,353
1,600	1,600	834	1,626	1,582	2,293	2,793	2,245	3,911
	1,800	953	1,858	1,807	2,620	3,192	2,566	4,470
2,000	2,000	1,072	2,090	2,033	2,948	3,591	2,887	5,029
	2,300	1,191	2,322	2,259	3,275	3,990	3,207	5,888
2,600	2,600	1,370	2,671	2,598	3,766	4,588	3,688	6,426
	3,000	1,549	3,019	2,937	4,258	5,186	4,169	7,264
3,000	1,787	3,484	3,389	4,913	5,984	4,811	8,381	

from June 2013 = new Type 21 narrow - Depth 68 mm

Standard 75/65-20 power outputs

(Universal steel Panel PHD) according to EN442 norm, tested ad Politecnico of Milano

Height (H) 300

Widths Exponent n Length (L mm)	10	11	20	21	22	30	32	33
	62 mm 1,320	69 mm 1,301	69 mm 1,276	85 mm 1,278	102 mm 1,298	159 mm 1,265	159 mm 1,290	159 mm 1,285
400	131	210	226	325	382	324	399	552
500	164	262	283	406	478	405	499	690
600	196	315	339	487	574	486	599	827
700	229	367	396	569	669	567	699	965
800	262	420	452	650	765	648	799	1,103
900	295	472	509	731	860	729	899	1,241
1.000	327	525	565	812	956	810	998	1,379
1.100	360	577	622	894	1,052	892	1,098	1,517
1.200	393	630	678	975	1,147	973	1,198	1,655
1.300	426	682	730	1,056	1,242	1,062	1,317	1,793
1.400	458	735	792	1,137	1,338	1,135	1,397	1,931
1.500	491	787	854	1,218	1,433	1,212	1,486	2,069
1.600	524	840	905	1,300	1,530	1,297	1,597	2,207
1.700	557	892	966	1,381	1,627	1,378	1,708	2,345
1.800	589	945	1,018	1,462	1,721	1,459	1,796	2,482
1.900	622	997	1,070	1,543	1,816	1,540	1,884	2,620
2.000	655	1,050	1,131	1,625	1,912	1,621	1,996	2,758
2.100	688	1,102	1,192	1,704	2,007	1,706	2,084	2,896
2.200	721	1,154	1,253	1,783	2,102	1,787	2,172	3,034
2.300	753	1,207	1,300	1,869	2,199	1,864	2,296	3,172
2.400	786	1,259	1,352	1,950	2,296	1,945	2,419	3,310
2.500	819	1,311	1,404	2,031	2,393	2,026	2,542	3,448
2.600	852	1,363	1,456	2,112	2,486	2,107	2,595	3,586
2.700	885	1,415	1,508	2,193	2,579	2,188	2,748	3,724
2.800	918	1,467	1,560	2,274	2,672	2,269	2,891	3,862
2.900	951	1,519	1,612	2,355	2,765	2,350	3,034	4,000
3.000	982	1,571	1,664	2,437	2,868	2,431	3,177	4,137

Height (H) 400

Widths Exponent n Length (L mm)	10	11	20	21	22	30	32	33
	62 mm 1,316	62 mm 1,293	69 mm 1,273	85 mm 1,286	102 mm 1,305	159 mm 1,275	159 mm 1,302	159 mm 1,299
400	167	279	284	407	489	402	503	701
500	208	349	355	509	611	503	628	877
600	250	418	426	611	733	604	754	1,052
700	292	488	497	713	855	704	879	1,228
800	333	558	568	814	978	805	1,005	1,403
900	375	628	639	916	1,100	906	1,130	1,578
1.000	417	697	710	1,018	1,222	1,006	1,256	1,754
1.100	458	767	781	1,120	1,344	1,107	1,382	1,929
1.200	500	837	852	1,222	1,466	1,207	1,507	2,104
1.300	541	907	924	1,324	1,588	1,309	1,629	2,279
1.400	583	976	994	1,425	1,711	1,409	1,758	2,455
1.500	624	1,046	1,066	1,527	1,833	1,511	1,880	2,631
1.600	667	1,116	1,136	1,629	1,955	1,610	2,010	2,806
1.700	708	1,186	1,207	1,731	2,077	1,712	2,132	2,981
1.800	750	1,255	1,278	1,832	2,199	1,811	2,261	3,157
1.900	791	1,325	1,350	1,934	2,321	1,913	2,390	3,332
2.000	833	1,395	1,420	2,036	2,444	2,012	2,512	3,507
2.100	874	1,464	1,490	2,138	2,566	2,114	2,634	3,682
2.200	915	1,534	1,561	2,240	2,688	2,216	2,756	3,857
2.300	956	1,604	1,633	2,341	2,810	2,318	2,878	4,032
2.400	997	1,674	1,704	2,443	2,932	2,420	3,000	4,207
2.500	1,038	1,744	1,774	2,545	3,054	2,522	3,122	4,382
2.600	1,079	1,814	1,844	2,647	3,177	2,624	3,244	4,557
2.700	1,120	1,884	1,914	2,749	3,301	2,726	3,366	4,732
2.800	1,161	1,954	1,984	2,851	3,423	2,828	3,488	4,907
2.900	1,202	2,024	2,054	2,953	3,545	2,930	3,610	5,082
3.000	1,243	2,094	2,124	3,055	3,666	3,032	3,732	5,257

Height (H) 500

Widths Exponent n Length (L mm)	10	11	20	21	22	30	32	33
	62 mm 1,312	62 mm 1,285	69 mm 1,270	85 mm 1,293	102 mm 1,312	159 mm 1,285	159 mm 1,313	159 mm 1,313
400	202	345	339	487	588	481	599	841
500	253	431	423	608	735	602	749	1,052
600	303	517	508	730	882	722	899	1,262
700	354	603	593	852	1,029	843	1,049	1,472
800	405	689	678	973	1,176	963	1,199	1,682
900	455	775	762	1,095	1,322	1,083	1,348	1,893
1.000	506	861	847	1,217	1,469	1,204	1,498	2,103
1.100	556	948	932	1,338	1,616	1,324	1,648	2,313
1.200	607	1,034	1,016	1,460	1,763	1,444	1,797	2,524
1.300	657	1,120	1,102	1,582	1,910	1,565	1,947	2,734
1.400	708	1,206	1,186	1,703	2,057	1,685	2,097	2,944
1.500	758	1,292	1,272	1,825	2,204	1,806	2,247	3,154
1.600	809	1,378	1,355	1,947	2,351	1,926	2,397	3,365
1.700	859	1,464	1,441	2,069	2,498	2,047	2,544	3,575
1.800	910	1,551	1,524	2,190	2,645	2,167	2,692	3,786
1.900	960	1,637	1,609	2,312	2,792	2,289	2,839	3,997
2.000	1,012	1,723	1,694	2,434	2,939	2,407	2,986	4,206
2.100	1,063	1,809	1,776	2,556	3,086	2,525	3,133	4,415
2.200	1,113	1,895	1,857	2,678	3,233	2,643	3,280	4,624
2.300	1,163	1,981	1,948	2,799	3,380	2,768	3,426	4,833
2.400	1,213	2,067	2,029	2,920	3,527	2,893	3,572	5,042
2.500	1,263	2,153	2,115	3,041	3,674	3,018	3,719	5,251
2.600	1,313	2,239	2,201	3,162	3,820	3,143	3,866	5,460
2.700	1,363	2,325	2,282	3,283	3,967	3,268	3,999	5,669
2.800	1,413	2,411	2,364	3,404	4,114	3,393	4,132	5,878
2.900	1,463	2,497	2,445	3,525	4,261	3,518	4,265	6,087
3.000	1,513	2,583	2,524	3,645	4,408	3,641	4,398	6,296

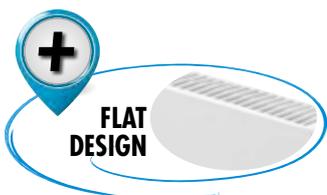
Height (H) 600

Widths Exponent n Length (L mm)	10	11	20	21	22	30	32	33
	62 mm 1,308	62 mm 1,276	69 mm 1,264	85 mm 1,301	102 mm 1,319	159 mm 1,296	159 mm 1,323	159 mm 1,327
400	238	406	392	565	680	557	691	972
500	298	508	490	706	850	696	863	1,215
600	357	610	587	847	1,020	835	1,037	1,458
700	417	711	685	988	1,190	974	1,209	1,701
800	477	813	783	1,129	1,360	1,113	1,382	1,944
900	536	914	881	1,271	1,530	1,252	1,555	2,187
1.000	596	1,016	979	1,412	1,700	1,391	1,728	2,430
1.100	655	1,118	1,077	1,553	1,870	1,530	1,900	2,674
1.200	715	1,219	1,175	1,694	2,040	1,670	2,073	2,917
1.300	774	1,320	1,271	1,835	2,210	1,810	2,216	3,160
1.400	834	1,423	1,371	1,977	2,380	1,948	2,419	3,403
1.500	893	1,526	1,472	2,119	2,550	2,088	2,562	3,646
1.600	953	1,628	1,566	2,259	2,720	2,226	2,765	3,889
1.700	1,012	1,729	1,662	2,400	2,890	2,366	2,908	4,132
1.800	1,072	1,829	1,762	2,541	3,060	2,504	3,110	4,375
1.900	1,131	1,928	1,854	2,682	3,230	2,644	3,353	4,618
2.000	1,191	2,027	1,948	2,823	3,400	2,783	3,455	4,861
2.100	1,250	2,126	2,049	2,964	3,570	2,922	3,657	5,104
2.200	1,309	2,225	2,150	3,105	3,740	3,061	3,859	5,347
2.300	1,368	2,324	2,251	3,246	3,910	3,200	3,974	5,590
2.400	1,427	2,423	2,352	3,387	4,080	3,339	4,176	5,833
2.500	1,486	2,522	2,453	3,528	4,250	3,478	4,378	6,076
2.600	1,545	2,621	2,554	3,669	4,420	3,617	4,492	6,319
2.700	1,604	2,720	2,655	3,810	4,590	3,756	4,694	6,562
2.800	1,663	2,819	2,756	3,951	4,760	3,895	4,896	6,805
2.900	1,722	2,918	2,857	4,092	4,930	4,034	5,098	7,048
3.000	1,781	3,017	2,958	4,233	5,100	4,174	5,183	7,291

Height (H) 700

Widths Exponent n Length (L mm)	10	11	20	21	22	30	32	33
	62 mm 1,308	62 mm 1,281	69 mm 1,262	85 mm 1,312	102 mm 1,328	159 mm 1,303	159 mm 1,332	159 mm 1,335
400	238	464	443	642	766	629	778	1,095
500	298	581	554	802	958	786	973	1,369
600	357	697	664	963	1,149	943	1,168	1,643
700	417	813	775	1,123	1,341	1,100	1,362	1,917
800	477	929	886	1,284	1,532	1,257	1,557	2,190
900	536	1,045	996	1,444	1,724	1,414	1,751	2,464
1.000	596	1,161	1,107	1,605	1,915	1,572	1,946	2,738
1.100	655	1,277	1,218	1,765	2,107	1,729	2,141	3,012
1.200	715	1,393	1,328	1,926	2,298	1,886	2,335	3,286
1.300	774	1,509	1,443	2,087	2,489	2,047	2,528	3,559
1.400	834	1,626	1,550	2,247	2,681	2,2		

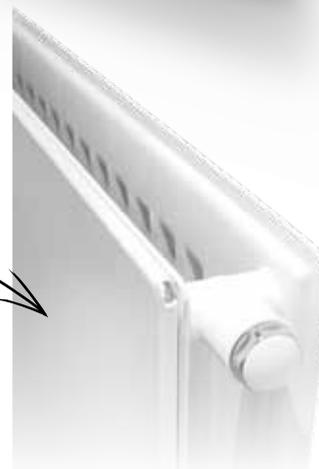
Linear Compact panel



- 4 x 1/2" connections da 1/2", internal thread
- top grille
- side covers
- flat design



MODELLS: 10 - 20 - 21 - 22 - 33
HEIGHTS: 300 - 400 - 500 - 600 - 700 - 900 mm
LENGTHS: 400 - 500 - 600 - 700 - 800
 900 - 1000 - 1100 - 1200 - 1400 - 1600 - 1800 - 2000
 2300 - 2600 - 3000 mm

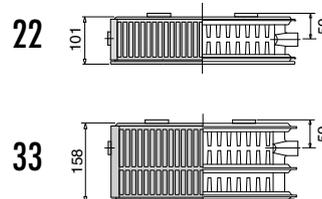
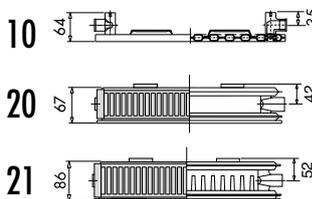
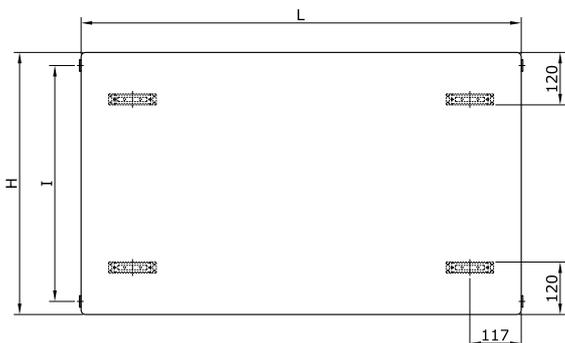


		Dimensions				
		10	20	21	22	33
panel depth - excluding back supports	A	64	67	86	101	158
total depth - from the back of the support to the front panel	B	64	76	95	110	167
distance from the back support to the connection**	C	15,5	42	51,5	59	59
distance from wall to the centre of the connection (mounting the radiators on the GB brackets provided)*	D	34,5	59/67	68,5/76,5	76/84	76/84
total distance from the wall to the front panel (panel mounted on the GP brackets provided as standard)*	E	69	92/100	111/119	126/134	183/191

(Model 10 mounted on D30 brackets)

* The total distance varies according to whether the GB bracket is mounted in position A or position B (choice of depth)

** Calculating the total size of the panel (from the wall to the front panel) with the chosen wall brackets: the useful length of the chosen bracket must be added to this measurement (see brackets page).

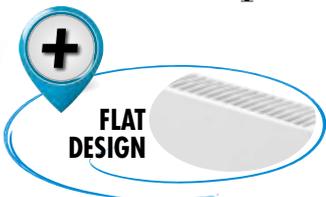


PACKAGING

Reinforced cardboard stripes both at the side and at the top and bottom • front cardboard plate to protect the flat surface • polystyrene protections on the back supports • heat shrink tape

Linear

Universal panel

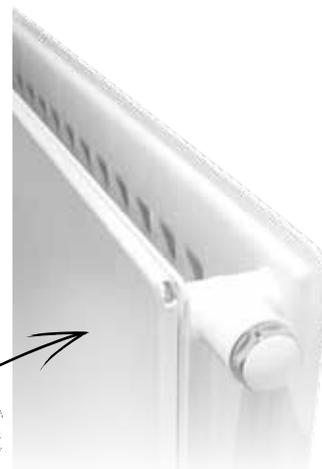


- preset thermostatic valve on the right (on the left side as well) - PHD Radiators are not symmetrical
- Bottom connections 50mm tappings centre, 3/4" outside thread
- all models have back supports
- flat design
- the thermostatic head must be ordered separately
- 2 x 1/2" connections, internal thread on opposite side of the thermostatic insert with:
 - 1 x 1/2" blind cap provided, premounted
 - 1 x 1/2" vent plug provided, premounted
- available thermostatic valve for district heating



MODELLS: 10 - 20 - 21 - 22 - 33
HEIGHTS: 300 - 400 - 500 - 600 - 700 - 900 mm
LENGTHS: 400 - 500 - 600 - 700 - 800 - 900 - 1000 - 1100 - 1200
 1400 - 1600 - 1800 - 2000 - 2300 - 2600 - 3000 mm

Types 10-20-30 **HYGIENE**
 (without grille and side covers)



	Dimensions					
		10	20	21	22	33
panel depth - excluding back supports	A	64	67	86	101	158
total depth - from the back of the support to the front panel	B	64	76	95	110	167
distance from the back support to the connection**	C	15,5	42	51,5	59	59
distance from wall to the centre of the connection (mounting the radiators on correct brackets: F7 for models 21,22,32,33; GB for model 11; D30 for model 10)*	D	34,5	59/67	68,5/76,5	76/84	76/84
total distance from the wall to the front panel (mounting the radiators on correct brackets: F7 for models 21,22,32,33; GB for model 11; D30 for model 10)*	E	69	92/100	111/119	126/134	183/191

(Model 10 mounted on D30 brackets)

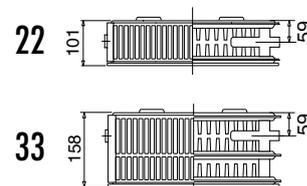
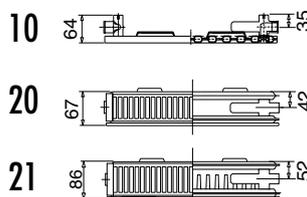
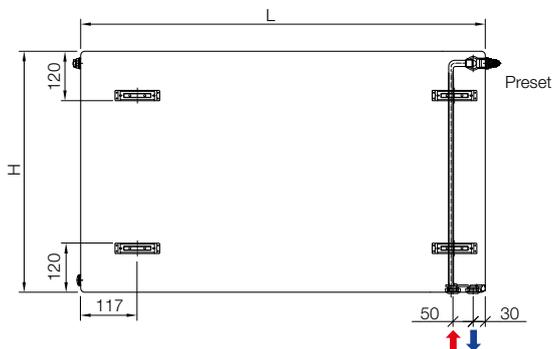
* The total distance varies according to whether the GB bracket is mounted in position A or position B (choice of depth)

** Calculating the total size of the panel (from the wall to the front panel) with the chosen wall brackets: the useful length of the chosen bracket must be added to this measurement (see brackets page).

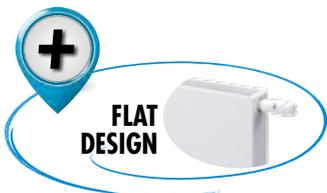


PACKAGING

Reinforced cardboard stripes both at the side and at the top and bottom • front cardboard plate to protect the flat surface • polystyrene protections on the back supports • polystyrene cap to protect the valve • heat shrink tape



Linear Universal panel with central connections



- thermostatic valve on the right (on the left side as well)
- Bottom central connections 50mm tapping centre, 3/4" outside thread
- all models have back supports
- flat design
- the thermostatic head must be ordered separately
- 1 x 1/2" blind cap provided, premounted
- 1 x 1/2" vent plug provided, premounted
- available thermostatic valve for district heating

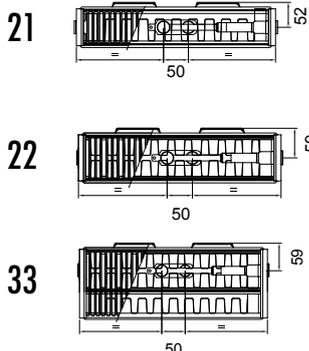
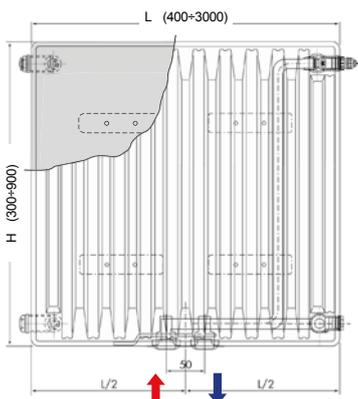


MODELLS: 21 - 22 - 33
HEIGHTS: 300 - 400 - 500 - 600 - 700 - 900 mm
LENGTHS: 400 - 500 - 600 - 700 - 800
 900 - 1000 - 1100 - 1200 - 1400 - 1600 - 1800 - 2000
 2300 - 2600 - 3000 mm



		Dimensions		
		21	22	33
panel depth - excluding back supports	A	86	101	158
total depth - from the back of the support to the front panel	B	95	110	167
distance from the back support to the connection**	C	51,5	59	59
distance from wall to the centre of the connection (mounting the radiators on correct brackets: F7 for models 21,22,32,33; GB for model 11; D30 for model 10)*	D	68,5/76,5	76/84	76/84
total distance from the wall to the front panel (mounting the radiators on correct brackets: F7 for models 21,22,32,33; GB for model 11; D30 for model 10)*	E	111/119	126/134	183/191

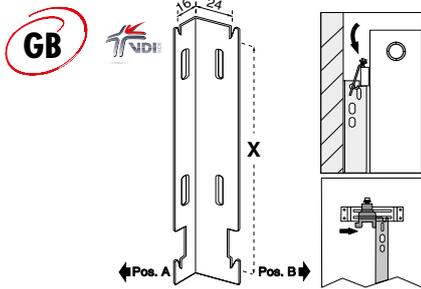
* The total distance varies according to whether the GB bracket is mounted in position A or position B (choice of depth)
 ** Calculating the total size of the panel (from the wall to the front panel) with the chosen wall brackets: the useful length of the chosen bracket must be added to this measurement (see brackets page)



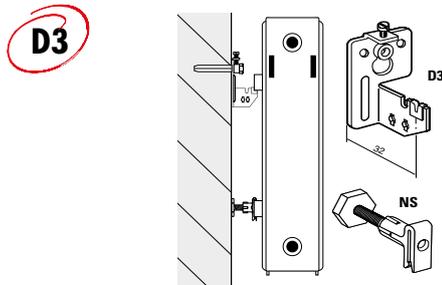
PACKAGING

Reinforced cardboard stripes both at the side and at the top and bottom • front cardboard plate to protect the flat surface • polystyrene protections on the back supports • polystyrene cap to protect the valve • heat shrink tape

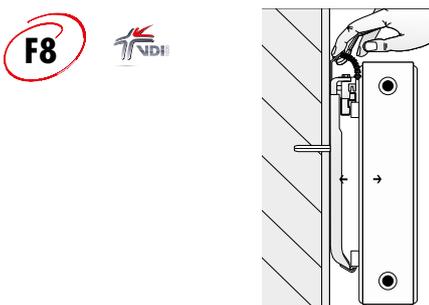
Wall brackets



GB	10	11	20	21	22	30	32/33
COMPACT	X	X	X	X	X	X	X
PHD VALVE	X	X	X	X	X	X	X
CENTRAL CONNECTIONS	X	X	X	X	X	X	X

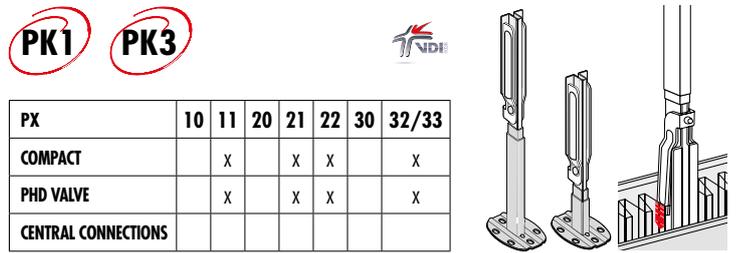


D3	10	11	20	21	22	30	32/33
COMPACT	D30	X	X	X	X	X	X
PHD VALVE	D30	X	X	X	X	X	X
CENTRAL CONNECTIONS	D30	X	X	X	X	X	X

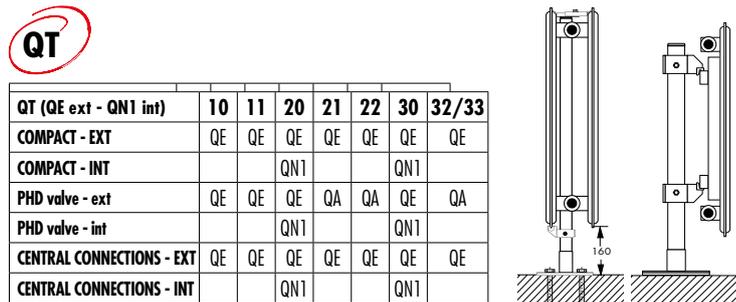


F8	10	11	20	21	22	30	32/33
COMPACT	X	X	X	X	X	X	X
PHD VALVE	X	X	X	X	X	X	X
CENTRAL CONNECTIONS	X	X	X	X	X	X	X

Floor anchors

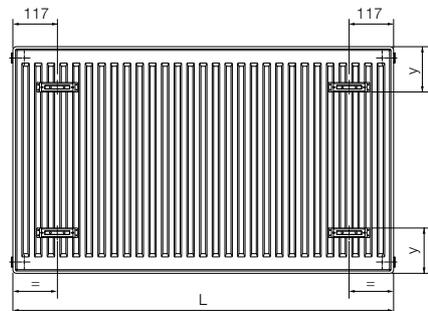


PX	10	11	20	21	22	30	32/33
COMPACT		X		X	X		X
PHD VALVE		X		X	X		X
CENTRAL CONNECTIONS							



QT (QE ext - QN1 int)	10	11	20	21	22	30	32/33
COMPACT - EXT	QE	QE	QE	QE	QE	QE	QE
COMPACT - INT			QN1			QN1	
PHD valve - ext	QE	QE	QE	QA	QA	QE	QA
PHD valve - int			QN1			QN1	
CENTRAL CONNECTIONS - EXT	QE	QE	QE	QE	QE	QE	QE
CENTRAL CONNECTIONS - INT			QN1			QN1	

Quantity of brackets



Y=120 mm

Standard 75/65-20 power outputs

(Linear Compact and Central Connections) according to EN442 norm, tested ad Politecnico of Milano

Height (H) 400

Width	10		20		21		22		33	
	63	103	69	103	86	103	86	103	160	160
Exponent n	1,315	1,297	1,297	1,295	1,276	1,295	1,295	1,295	1,302	1,302
Length (L - mm)	400	400	254	397	397	481	481	481	481	481
400	172	318	318	496	496	601	601	601	601	601
500	206	382	382	595	595	722	722	722	722	722
600	241	445	445	695	695	842	842	842	842	842
700	275	509	509	794	794	962	962	962	962	962
800	309	572	572	893	893	1083	1083	1083	1083	1083
900	344	636	636	992	992	1203	1203	1203	1203	1203
1000	378	700	700	1092	1092	1323	1323	1323	1323	1323
1100	412	763	763	1191	1191	1443	1443	1443	1443	1443
1200	446	827	827	1290	1290	1563	1563	1563	1563	1563
1300	480	890	890	1389	1389	1684	1684	1684	1684	1684
1400	514	954	954	1488	1488	1804	1804	1804	1804	1804
1500	548	1017	1017	1587	1587	1924	1924	1924	1924	1924
1600	582	1081	1081	1686	1686	2044	2044	2044	2044	2044
1700	616	1144	1144	1785	1785	2164	2164	2164	2164	2164
1800	650	1208	1208	1884	1884	2284	2284	2284	2284	2284
1900	684	1271	1271	1983	1983	2404	2404	2404	2404	2404
2000	718	1335	1335	2082	2082	2524	2524	2524	2524	2524
2100	752	1398	1398	2181	2181	2644	2644	2644	2644	2644
2200	786	1462	1462	2280	2280	2764	2764	2764	2764	2764
2300	820	1525	1525	2379	2379	2884	2884	2884	2884	2884
2400	854	1589	1589	2478	2478	3004	3004	3004	3004	3004
2500	888	1652	1652	2577	2577	3124	3124	3124	3124	3124
2600	922	1716	1716	2676	2676	3244	3244	3244	3244	3244
2700	956	1779	1779	2775	2775	3364	3364	3364	3364	3364
2800	990	1843	1843	2874	2874	3484	3484	3484	3484	3484
2900	1024	1906	1906	2973	2973	3604	3604	3604	3604	3604
3000	1058	1970	1970	3072	3072	3724	3724	3724	3724	3724

Height (H) 300

Width	10		20		21		22		33	
	63	103	69	103	86	103	86	103	160	160
Exponent n	1,301	1,327	1,327	1,285	1,264	1,285	1,285	1,285	1,291	1,291
Length (L - mm)	400	400	198	388	314	388	388	388	558	558
400	140	248	248	485	485	593	593	593	697	697
500	168	298	298	582	582	697	697	697	837	837
600	195	347	347	679	679	794	794	794	976	976
700	223	397	397	776	776	893	893	893	1116	1116
800	251	446	446	873	873	992	992	992	1255	1255
900	279	496	496	970	970	1091	1091	1091	1395	1395
1000	307	546	546	1067	1067	1190	1190	1190	1534	1534
1100	335	595	595	1164	1164	1289	1289	1289	1674	1674
1200	363	644	644	1261	1261	1388	1388	1388	1814	1814
1300	391	693	693	1358	1358	1487	1487	1487	1953	1953
1400	419	742	742	1455	1455	1586	1586	1586	2093	2093
1500	447	791	791	1552	1552	1685	1685	1685	2232	2232
1600	475	840	840	1649	1649	1784	1784	1784	2372	2372
1700	503	889	889	1746	1746	1883	1883	1883	2512	2512
1800	531	938	938	1843	1843	1982	1982	1982	2652	2652
1900	559	987	987	1940	1940	2081	2081	2081	2792	2792
2000	587	1036	1036	2037	2037	2180	2180	2180	2932	2932
2100	615	1085	1085	2134	2134	2279	2279	2279	3072	3072
2200	643	1134	1134	2231	2231	2378	2378	2378	3212	3212
2300	671	1183	1183	2328	2328	2477	2477	2477	3352	3352
2400	699	1232	1232	2425	2425	2576	2576	2576	3492	3492
2500	727	1281	1281	2522	2522	2675	2675	2675	3632	3632
2600	755	1330	1330	2619	2619	2774	2774	2774	3772	3772
2700	783	1379	1379	2716	2716	2873	2873	2873	3912	3912
2800	811	1428	1428	2813	2813	2972	2972	2972	4052	4052
2900	839	1477	1477	2910	2910	3071	3071	3071	4192	4192
3000	867	1526	1526	3007	3007	3170	3170	3170	4332	4332

Height (H) 600

Width	10		20		21		22		33	
	63	103	69	103	86	103	86	103	160	160
Exponent n	1,343	1,236	1,236	1,301	1,301	1,316	1,316	1,316	1,323	1,323
Length (L - mm)	400	400	357	549	549	659	659	659	955	955
400	195	447	447	687	687	823	823	823	1194	1194
500	244	536	536	824	824	988	988	988	1433	1433
600	293	626	626	962	962	1152	1152	1152	1671	1671
700	342	715	715	1099	1099	1317	1317	1317	1910	1910
800	391	804	804	1236	1236	1482	1482	1482	2149	2149
900	440	894	894	1374	1374	1646	1646	1646	2388	2388
1000	488	983	983	1511	1511	1811	1811	1811	2626	2626
1100	537	1072	1072	1648	1648	1976	1976	1976	2865	2865
1200	586	1161	1161	1785	1785	2141	2141	2141	3104	3104
1300	634	1250	1250	1922	1922	2305	2305	2305	3343	3343
1400	683	1339	1339	2059	2059	2469	2469	2469	3582	3582
1500	731	1428	1428	2196	2196	2633	2633	2633	3821	3821
1600	780	1517	1517	2333	2333	2797	2797	2797	4060	4060
1700	828	1606	1606	2470	2470	2961	2961	2961	4299	4299
1800	877	1695	1695	2607	2607	3125	3125	3125	4538	4538
1900	925	1784	1784	2744	2744	3289	3289	3289	4777	4777
2000	974	1873	1873	2881	2881	3453	3453	3453	5016	5016
2100	1022	1962	1962	3018	3018	3617	3617	3617	5255	5255
2200	1071	2051	2051	3155	3155	3781	3781	3781	5494	5494
2300	1119	2140	2140	3292	3292	3945	3945	3945	5733	5733
2400	1168	2229	2229	3429	3429	4109	4109	4109	5972	5972
2500	1216	2318	2318	3566	3566	4273	4273	4273	6211	6211
2600	1265	2407	2407	3703	3703	4437	4437	4437	6450	6450
2700	1313	2496	2496	3840	3840	4601	4601	4601	6689	6689
2800	1362	2585	2585	3977	3977	4765	4765	4765	6928	6928
2900	1410	2674	2674	4114	4114	4929	4929	4929	7167	7167
3000	1459	2763	2763	4251	4251	5093	5093	5093	7406	7406

Height (H) 500

Width	10		20		21		22		33	
	63	103	69	103	86	103	86	103	160	160
Exponent n	1,329	1,366	1,366	1,306	1,289	1,306	1,306	1,306	1,312	1,312
Length (L - mm)	400	400	307	475	475	571	571	571	827	827
400	165	384	384	594	594	713	713	713	1034	1034
500	206	461	461	713	713	856	856	856	1241	1241
600	248	538	538	831	831	999	999	999	1448	1448
700	289	615	615	950	950	1142	1142	1142	1655	1655
800	330	691	691	1069	1069	1284	1284	1284	1862	1862
900	372	768	768	1188	1188	1427	1427	1427	2069	2069
1000	413	845	845	1306	1306	1570	1570	1570	2275	2275
1100	454	922	922	1425	1425	1712	1712	1712	2482	2482
1200	495	1000	1000	1544	1544	1854	1854	1854	2689	2689
1300	536	1077	1077	1						

Standard 75/65-20 power outputs

(Linear Universal Panel PHD) according to EN442 norm, tested ad Politecnico of Milano

Height (H) 300

Width	10		20		21		22		33	
	63	86	69	103	86	103	86	103	160	160
Exponent n	1,301	1,327	1,264	1,285	1,264	1,285	1,264	1,285	1,291	1,291
Length (L: mm)	400	400	400	400	400	400	400	400	400	400
400	112	194	373	308	373	308	373	308	547	547
500	140	243	466	385	466	385	466	385	683	683
600	168	292	559	462	559	462	559	462	870	870
700	195	340	652	539	652	539	652	539	957	957
800	223	389	745	616	745	616	745	616	1094	1094
900	251	437	838	693	838	693	838	693	1230	1230
1000	279	486	931	770	931	770	931	770	1367	1367
1100	307	535	1025	847	1025	847	1025	847	1504	1504
1200	335	583	1118	924	1118	924	1118	924	1640	1640
1400	391	681	1264	1078	1264	1078	1264	1078	1914	1914
1600	447	778	1422	1232	1422	1232	1422	1232	2187	2187
1800	503	875	1586	1386	1586	1386	1586	1386	2460	2460
2000	558	972	1750	1540	1750	1540	1750	1540	2734	2734
2300	642	1118	1971	1771	1971	1771	1971	1771	3144	3144
2600	726	1264	2202	2002	2202	2002	2202	2002	3554	3554
3000	838	1458	2310	2294	2310	2294	2310	2294	4101	4101

Height (H) 400

Width	10		20		21		22		33	
	63	86	69	103	86	103	86	103	160	160
Exponent n	1,315	1,297	1,276	1,295	1,276	1,295	1,276	1,295	1,302	1,302
Length (L: mm)	400	400	400	400	400	400	400	400	400	400
400	137	249	389	462	389	462	389	462	682	682
500	172	312	486	577	486	577	486	577	852	852
600	206	374	583	693	583	693	583	693	1023	1023
700	241	436	681	808	681	808	681	808	1193	1193
800	275	499	778	924	778	924	778	924	1364	1364
900	309	561	875	1039	875	1039	875	1039	1534	1534
1000	344	623	972	1155	972	1155	972	1155	1704	1704
1100	378	686	1070	1270	1070	1270	1070	1270	1875	1875
1200	412	748	1167	1386	1167	1386	1167	1386	2045	2045
1400	481	873	1361	1617	1361	1617	1361	1617	2386	2386
1600	550	997	1556	1848	1556	1848	1556	1848	2727	2727
1800	619	1122	1750	2078	1750	2078	1750	2078	3068	3068
2000	687	1247	1945	2309	1945	2309	1945	2309	3409	3409
2300	791	1484	2237	2656	2237	2656	2237	2656	3920	3920
2600	894	1671	2528	3002	2528	3002	2528	3002	4431	4431
3000	1031	1870	2917	3464	2917	3464	2917	3464	5113	5113

Height (H) 500

Width	10		20		21		22		33	
	63	86	69	103	86	103	86	103	160	160
Exponent n	1,329	1,266	1,289	1,306	1,289	1,306	1,289	1,306	1,312	1,312
Length (L: mm)	400	400	400	400	400	400	400	400	400	400
400	165	301	466	548	466	548	466	548	811	811
500	206	376	562	685	562	685	562	685	1014	1014
600	248	452	698	822	698	822	698	822	1216	1216
700	289	527	815	959	815	959	815	959	1419	1419
800	330	602	931	1096	931	1096	931	1096	1622	1622
900	372	678	1047	1233	1047	1233	1047	1233	1824	1824
1000	413	753	1164	1370	1164	1370	1164	1370	2027	2027
1100	454	828	1280	1507	1280	1507	1280	1507	2230	2230
1200	495	904	1397	1644	1397	1644	1397	1644	2433	2433
1400	578	1054	1629	1918	1629	1918	1629	1918	2838	2838
1600	660	1205	1862	2192	1862	2192	1862	2192	3243	3243
1800	743	1355	2095	2466	2095	2466	2095	2466	3649	3649
2000	826	1506	2328	2740	2328	2740	2328	2740	4054	4054
2300	949	1732	2677	3151	2677	3151	2677	3151	4662	4662
2600	1073	1958	3026	3562	3026	3562	3026	3562	5271	5271
3000	1238	2259	3491	4109	3491	4109	3491	4109	6081	6081

Height (H) 600

Width	10		20		21		22		33	
	63	86	69	103	86	103	86	103	160	160
Exponent n	1,343	1,236	1,301	1,316	1,301	1,316	1,301	1,316	1,323	1,323
Length (L: mm)	400	400	400	400	400	400	400	400	400	400
400	195	350	538	632	538	632	538	632	936	936
500	244	438	673	790	673	790	673	790	1170	1170
600	293	525	808	948	808	948	808	948	1404	1404
700	342	613	942	1106	942	1106	942	1106	1638	1638
800	391	701	1077	1264	1077	1264	1077	1264	1872	1872
900	440	788	1212	1422	1212	1422	1212	1422	2106	2106
1000	488	876	1346	1580	1346	1580	1346	1580	2340	2340
1100	537	963	1481	1738	1481	1738	1481	1738	2574	2574
1200	586	1051	1615	1897	1615	1897	1615	1897	2808	2808
1400	684	1226	1885	2213	1885	2213	1885	2213	3276	3276
1600	781	1401	2154	2529	2154	2529	2154	2529	3744	3744
1800	879	1576	2423	2845	2423	2845	2423	2845	4212	4212
2000	977	1752	2692	3161	2692	3161	2692	3161	4680	4680
2300	1123	2014	3096	3635	3096	3635	3096	3635	5382	5382
2600	1270	2277	3500	4109	3500	4109	3500	4109	6084	6084
3000	1465	2627	4039	4741	4039	4741	4039	4741	7020	7020

Height (H) 700

Width	10		20		21		22		33	
	63	86	69	103	86	103	86	103	160	160
Exponent n	1,307	1,250	1,302	1,324	1,302	1,324	1,302	1,324	1,330	1,330
Length (L: mm)	400	400	400	400	400	400	400	400	400	400
400	229	397	609	716	609	716	609	716	1058	1058
500	286	496	761	894	761	894	761	894	1323	1323
600	343	596	913	1073	913	1073	913	1073	1587	1587
700	400	695	1065	1252	1065	1252	1065	1252	1852	1852
800	457	794	1237	1431	1237	1431	1237	1431	2116	2116
900	515	893	1369	1610	1369	1610	1369	1610	2381	2381
1000	572	993	1521	1789	1521	1789	1521	1789	2646	2646
1100	629	1092	1673	1968	1673	1968	1673	1968	2910	2910
1200	686	1191	1826	2147	1826	2147	1826	2147	3175	3175
1400	800	1390	2130	2504	2130	2504	2130	2504	3704	3704
1600	915	1588	2434	2862	2434	2862	2434	2862	4233	4233
1800	1029	1787	2738	3220	2738	3220	2738	3220	4762	4762
2000	1143	1985	3043	3578	3043	3578	3043	3578	5291	5291
2300	1315	2283	3499	4114	3499	4114	3499	4114	6085	6085
2600	1486	2581	3955	4651	3955	4651	3955	4651	6879	6879
3000	1715	2978	4564	566	4564	566	4564	566	7937	7937

Height (H) 900

Width	10		20		21		22		33	
	63	86	69	103	86	103	86	103	160	160
Exponent n	1,235	1,278	1,304	1,340	1,304	1,340	1,304	1,340	1,346	1,346
Length (L: mm)	400	400	400	400	400	400	400	400	400	400
400	307	484	741	882	741	882	741	882	1297	1297
500	383	605	926	1102	926	1102	926	1102	1622	1622
600	460	726	1111	1322	1111	132				

Verticale De'Longhi



- 4 x 1/2" connections, internal thread
- 1 central connection with 50 mm tapings centre (1/2" inside thread)
- 3 x 1/2" blind caps provided
- 1 x 1/2" vent plug provided
- available in two different configurations: with central connection at the bottom (configuration AB) or at the top (configuration AA)
- The 20, 21 and 22 models of vertical panel are finished with side covers; in the AB configuration they also have a top grille (model 10 has no grille or side covers)
- VDI6036-guideline-ready brackets available

MODELLS: 10 - 20 - 21 - 22

HEIGHTS: 1400 - 1600 - 1800 - 2000 - 2200 - 2400 mm

LENGTHS: 300 - 400 - 500 - 600 - 700 - 900 mm

Central connections



		Dimensions			
		10	20	21	22
panel depth - excluding back supports	A	63	70	70	102
total depth - from the back of the support to the front panel	B	63	79	79	111
distance from the back support to the connection**	C	-	43	43	60
distance from wall to the centre of the connection (mounting the radiators on the GB brackets provided)*	D	35	58/66	58/66	74/82
total distance from the wall to the front panel (panel mounted on the GP brackets provided as standard)*	E	70	93/101	93/101	125/133

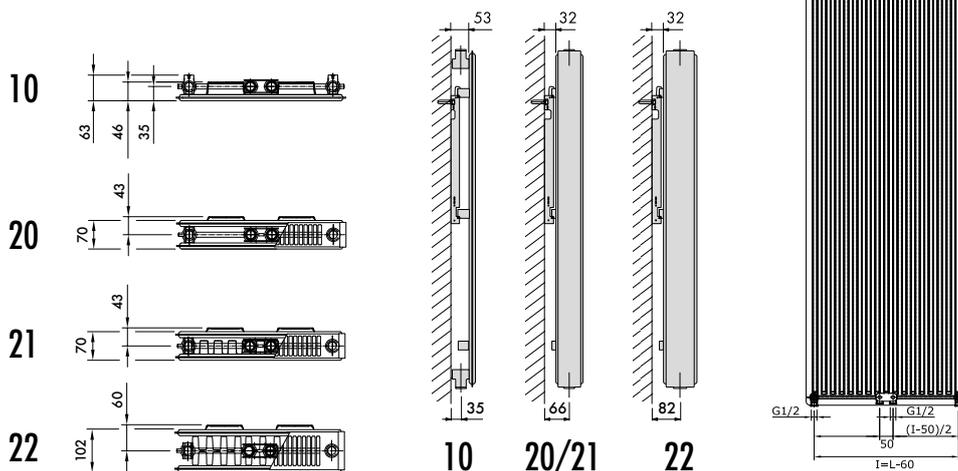
* The total distance varies according to whether the GB bracket is mounted in position A or position B (choice of depth)

** Calculating the total size of the panel (from the wall to the front panel) with the chosen wall brackets: the useful length of the chosen bracket must be added to this measurement (see brackets page).



PACKAGING

PP corner protections • Tough cardboard stripes to protect the edge • Heat shrink tape to protect against damp



Verticale Linear



scontor-
nare

- 4 x 1/2" connections, internal thread
- 1 central connection with 50 mm tappings centre (1/2" inside thread)
- flat surface on the front plate
- 3 x 1/2" blind caps provided
- 1 x 1/2" vent plug provided
- available in two different configurations: with central connection at the bottom (configuration AB) or at the top (configuration AA)
- The 20, 21 and 22 models of vertical panel are finished with side covers; in the AB configuration they also have a top grille (model 10 has no grille or side covers)
- VDI6036-guideline-ready brackets available

MODELLS: 10 - 20 - 21 - 22

HEIGHTS: 1400 - 1600 - 1800 - 2000 - 2200 - 2400 mm

LENGTHS: 300 - 400 - 500 - 600 - 700 - 900 mm

Central connections



		Dimensions			
		10	20	21	22
panel depth - excluding back supports	A	63	70	70	102
total depth - from the back of the support to the front panel	B	63	79	79	111
distance from the back support to the connection**	C	-	43	43	60
distance from wall to the centre of the connection (mounting the radiators on the GB brackets provided)*	D	35	58/66	58/66	74/82
total distance from the wall to the front panel (panel mounted on the GP brackets provided as standard)*	E	70	93/101	93/101	125/133

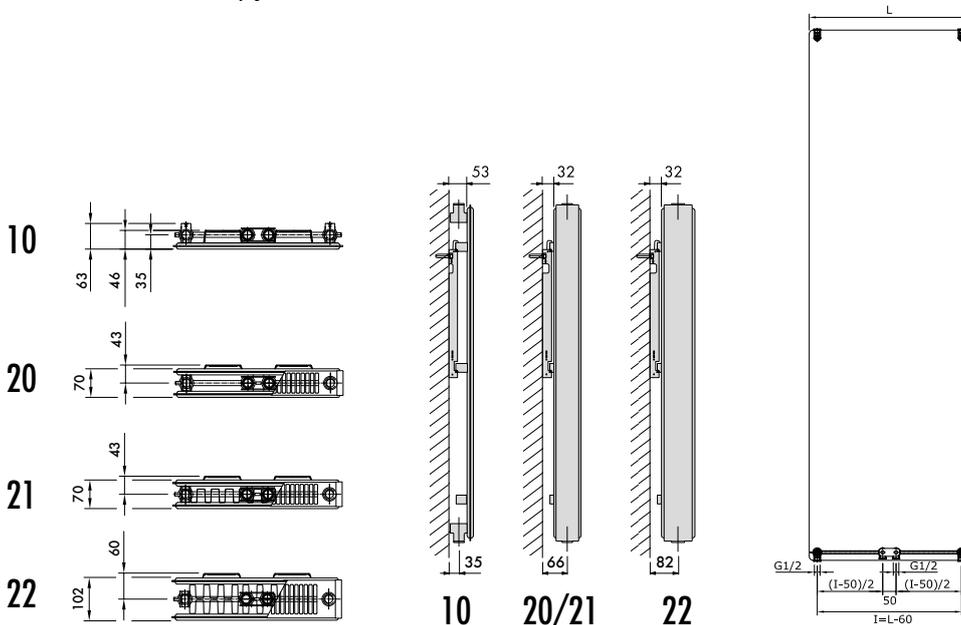
* The total distance varies according to whether the GB bracket is mounted in position A or position B (choice of depth)

** Calculating the total size of the panel (from the wall to the front panel) with the chosen wall brackets: the useful length of the chosen bracket must be added to this measurement (see brackets page).



PACKAGING

- PP corner protections
- Tough cardboard stripes to protect the edge
- Heat shrink tape to protect against damp



Standard 75/65-20 power outputs

(Vertical Radiators) according to EN442 norm, tested at Politecnico di Milano

De'Longhi Linear

Height (H) 1600

	De'Longhi				Linear			
	10	20	21	22	10	20	21	22
Width (mm)	62	77	77	111	63	78	78	112
Exponent n	1,349	1,310	1,322	1,371	1,289	1,268	1,318	1,333
Length (L mm)	Toppings center l (mm)							
300	240	473	730	882	1069	415	652	809
400	340	630	974	1176	1426	554	869	1079
500	440	788	1217	1470	1782	692	1087	1349
600	540	946	1460	1764	2139	831	1304	1619
700	640	1103	1704	2058	2495	969	1521	1888
900	840	1418	2191	2646	3208	1246	1956	2428

De'Longhi Linear

Height (H) 2000

	De'Longhi				Linear			
	10	20	21	22	10	20	21	22
Width (mm)	62	77	77	111	63	78	78	112
Exponent n	1,351	1,313	1,345	1,385	1,330	1,287	1,341	1,356
Length (L mm)	Toppings center l (mm)							
300	240	587	888	1038	1265	506	811	944
400	340	782	1184	1384	1687	674	1082	1258
500	440	978	1480	1730	2109	843	1352	1573
600	540	1174	1776	2076	2531	1011	1623	1887
700	640	1369	2072	2422	2953	1180	1893	2202
900	840	1760	2664	3114	3796	1517	2434	2831

De'Longhi Linear

Height (H) 2400

	De'Longhi				Linear			
	10	20	21	22	10	20	21	22
Width (mm)	62	77	77	111	63	78	78	112
Exponent n	1,346	1,306	1,338	1,425	1,332	1,288	1,339	1,354
Length (L mm)	Toppings center l (mm)							
300	240	700	1049	1182	1490	625	994	1071
400	340	934	1398	1576	1987	833	1325	1428
500	440	1167	1748	1970	2484	1042	1657	1785
600	540	1400	2098	2364	2981	1250	1988	2142
700	640	1634	2447	2758	3478	1458	2319	2499
900	840	2101	3146	3546	4471	1875	2982	3213

De'Longhi Linear

Height (H) 1400

	De'Longhi				Linear			
	10	20	21	22	10	20	21	22
Width (mm)	62	77	77	111	62	77	77	111
Exponent n	1,363	1,313	1,294	1,379	1,363	1,313	1,294	1,379
Length (L mm)	Toppings center l (mm)							
300	240	423	649	802	982	649	802	982
400	340	564	865	1070	1309	865	1070	1309
500	440	705	1081	1337	1636	1081	1337	1636
600	540	846	1297	1604	1963	1297	1604	1963
700	640	987	1513	1872	2290	1513	1872	2290
900	840	1269	1946	2407	2945	1946	2407	2945

De'Longhi Linear

Height (H) 1800

	De'Longhi				Linear			
	10	20	21	22	10	20	21	22
Width (mm)	62	77	77	111	63	78	78	112
Exponent n	1,336	1,308	1,350	1,363	1,343	1,292	1,337	1,352
Length (L mm)	Toppings center l (mm)							
300	240	527	810	961	1164	457	729	878
400	340	703	1080	1281	1552	609	972	1170
500	440	879	1350	1601	1940	762	1214	1463
600	540	1055	1620	1921	2328	914	1457	1755
700	640	1231	1890	2241	2716	1066	1700	2048
900	840	1582	2430	2882	3491	1371	2186	2633

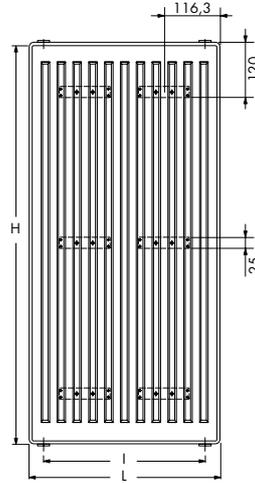
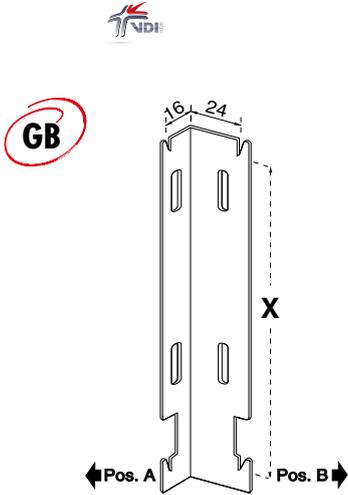
De'Longhi Linear

Height (H) 2200

	De'Longhi				Linear			
	10	20	21	22	10	20	21	22
Width (mm)	62	77	77	111	63	78	78	112
Exponent n	1,366	1,318	1,339	1,407	1,331	1,289	1,335	1,350
Length (L mm)	Toppings center l (mm)							
300	240	651	965	1114	1378	565	902	1007
400	340	868	1286	1486	1837	753	1203	1343
500	440	1085	1608	1857	2296	942	1503	1678
600	540	1302	1930	2228	2756	1130	1804	2014
700	640	1519	2251	2600	3215	1318	2105	2350
900	840	1953	2894	3343	4133	1695	2706	3021

Wall brackets

Current

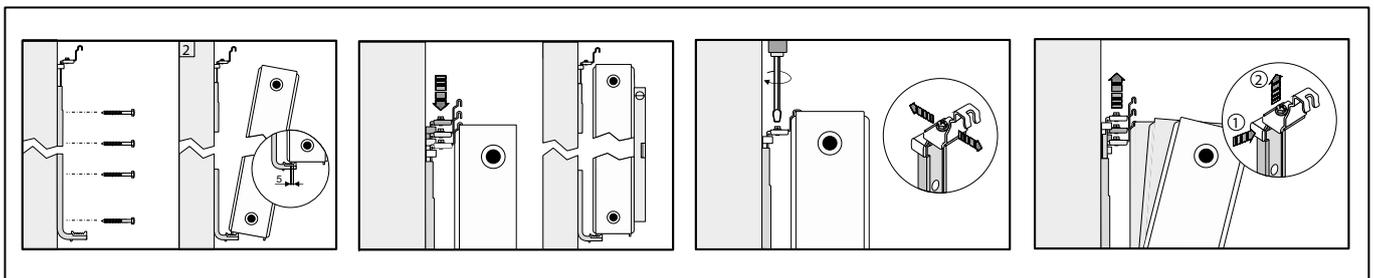
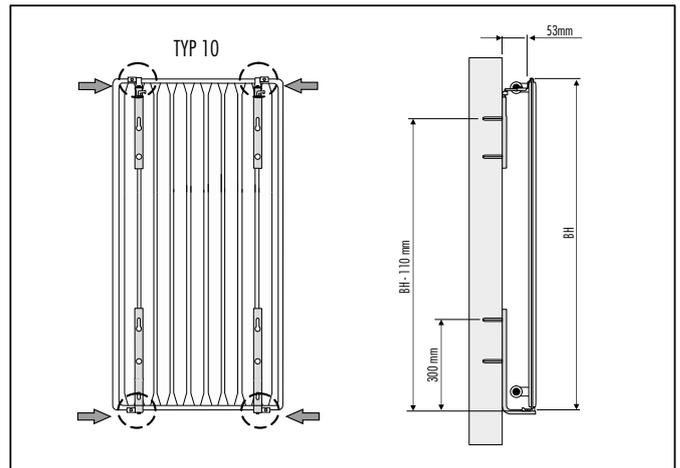
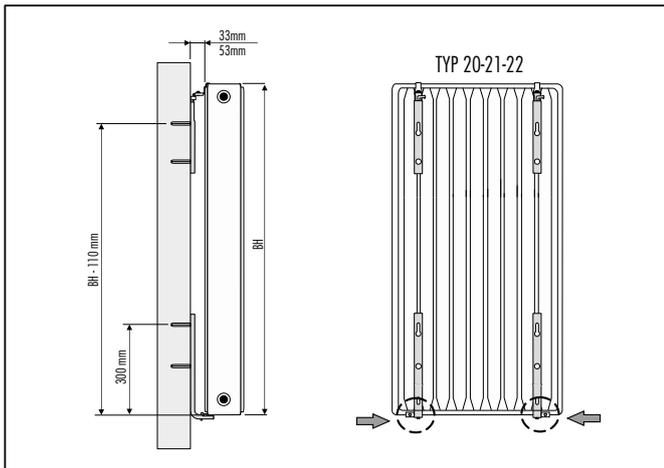


The 400mm wide radiators have got 2 supports, but in order to respect the norm VDI6036 it's recommended to use anyway 2 brackets. The other vertical radiators have got 4 supports (so 2 brackets are needed)



from June 2013

Mounting Instructions

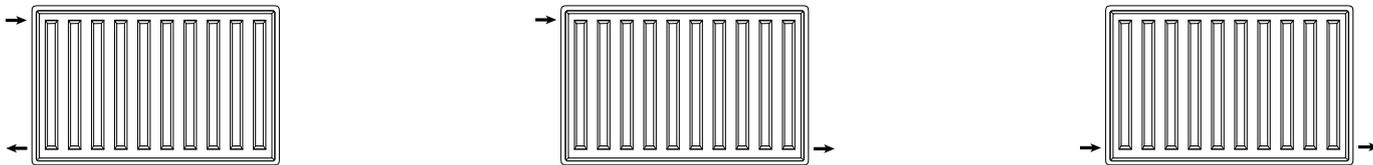


Technical Information

COMPACT STEEL PANELS

Connection

Two-pipes

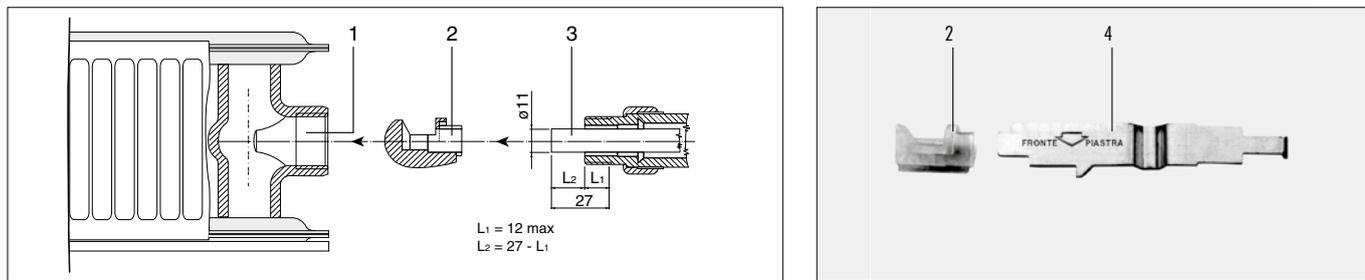


The connection methods described here are symmetric.

De'Longhi Compact radiators can be connected with a two-pipe connection as follows: **top/bottom same side** (all EN442 heat outputs are calculated and verified with this type of connection), **top/bottom opposite side** (the best way to connect radiators longer than 1000 mm), **bottom/bottom opposite side** (this connection method reduces heat output by about 10%).

Two-pipe connection requires a thermostatic valve (possibly with thermostatic head) and lockshield.

One-pipe



De'Longhi Compact radiators can be connected with a one-pipe connection using the special De'Longhi flow deviator (2) inserted in the connection point (1) using the De'Longhi key (4). To connect to a one-pipe installation, a one-pipe valve with probe (not available from De'Longhi) is required. The probe must have a maximum length of 11 mm and the length of the external probe and the thread inside the valve must not exceed 27 mm (3).

Pressure drops

Two-Pipe

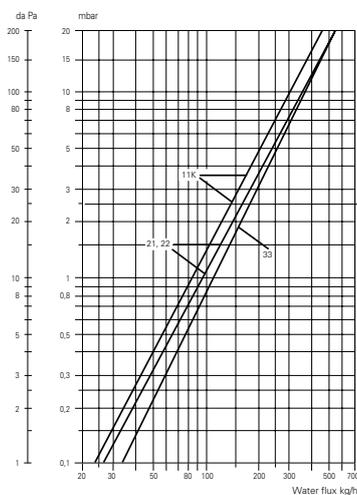


Chart 1: Pressure drop two-pipe

Pressure drops Δp are expressed by daPa and mbar.

1 mm H₂O = 0,0981 mbar

Pressure drop chart for De'Longhi Compact Panels

The values are obtained with the connection 1/2 G by one side.

model 11K - model 21 e 22 - model 33

One-Pipe

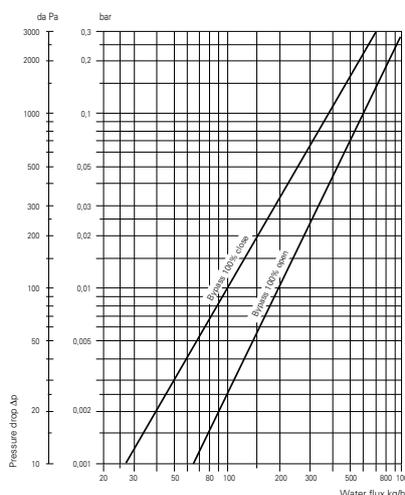


Chart 2: Pressure drop one-pipe

Pressure drops refer to panels with valve for one-pipe loop with the special De'Longhi flow deviator. They are esprese by daPa and bar.

Pressure drop chart shows the outer values of pressure drops for De'Longhi Compact Panels for models 21, 22 e 33.

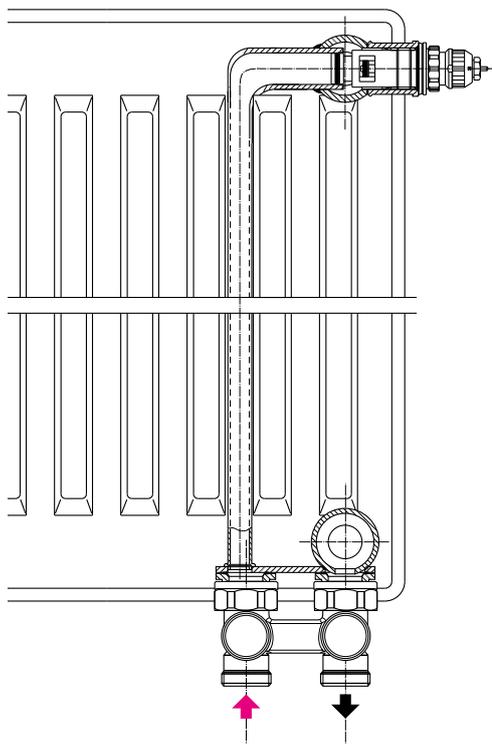
Care of instructions for one-pipe valve.

Technical Information

UNIVERSAL STEEL PANELS

Pressure drops and valve regulation by a Two-pipe system (PHD steel panels have got a preset valve)

In order to connect to a two-pipe system a steel panel with integrated valve a two-pipe H-valve is needed.



Square or straight distributors can be used in two-pipe installations. These distributors incorporate two gate valves to intercept the input and output flows. UNIVERSAL series radiators can also be used without distributors.

To ensure the thermostatic head maintains room temperature precisely, the built-in Danfoss 013G0372 thermostatic valve must be adjusted to achieve a pressure drop of 0.1 bar in the radiator (use diagram 1).

REGULATION

The value obtained from the diagram can be set on the Danfoss thermostatic valve easily without using tools (for maximum accessibility, it may be more convenient to regulate the valve before assembly):

- Remove the protective cap
 - Turn the adjustment ring until the pointer corresponds to the required value on the graduated scale (fig. 1)
- The setting is continuous from 1 to 7 (fig. 2). In position N, the valve is fully open.

Example:

- ◆ Model 21/600-1100
- ◆ Power output = 1412 W
- ◆ With $\Delta t = 15\text{ }^\circ\text{C}$ and $\Delta p = 0,1\text{ bar}$ from chart 1 you obtain the valve regulation value: 3 (water flux)

Fig. 1

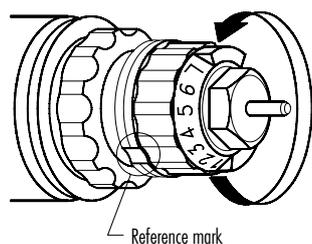


Fig. 2

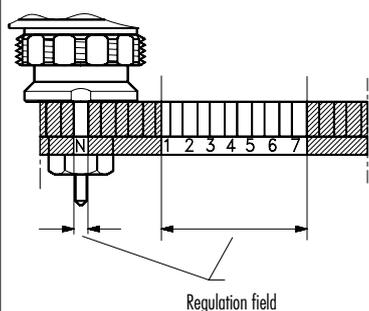
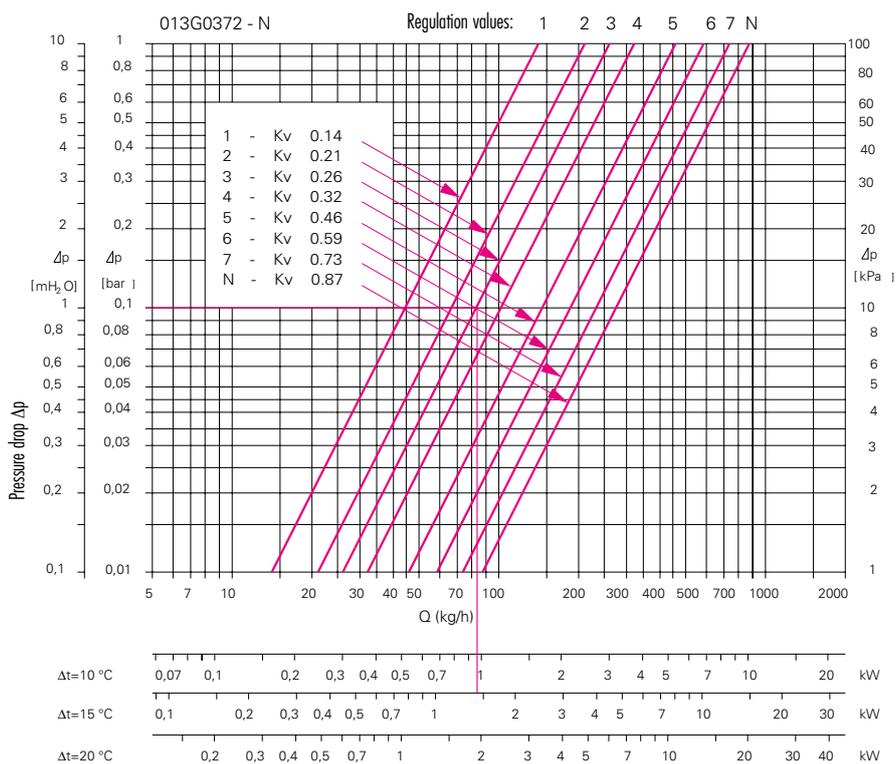


Chart 1

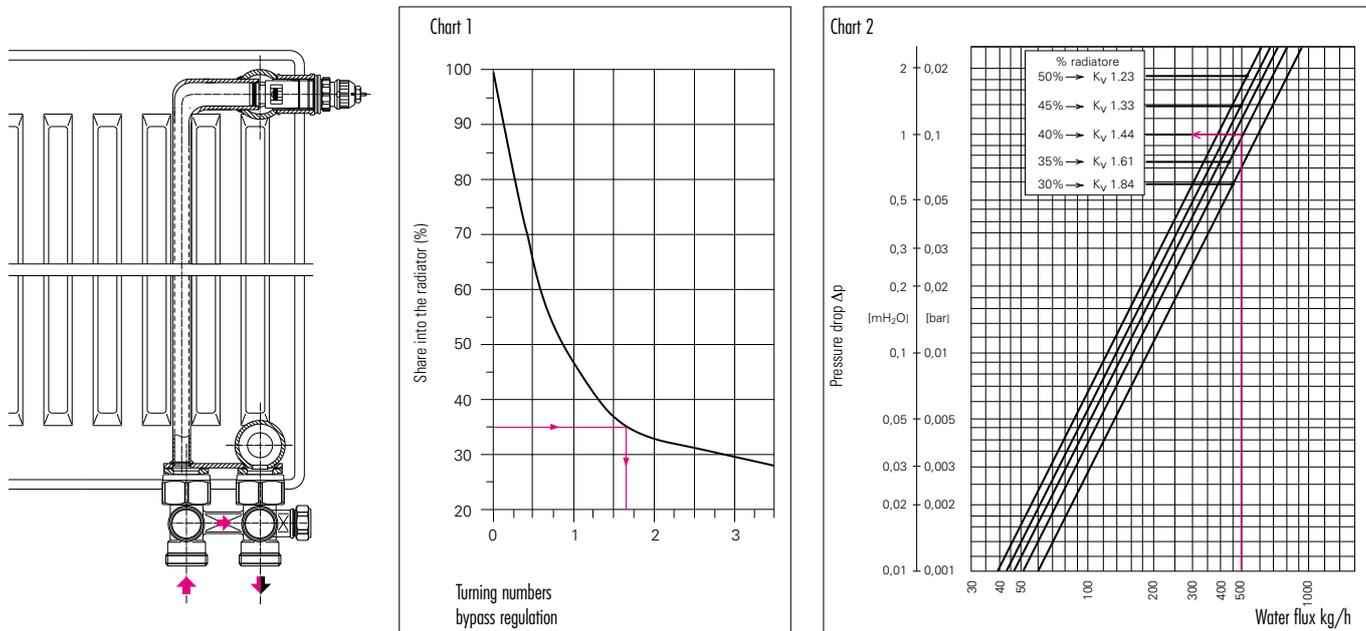


Technical Information

UNIVERSAL STEEL PANELS

Pressure drops and valve regulation by a One-pipe system (PHD steel panels have got a preset valve)

In order to connect to a one-pipe system a steel panel with integrated valve a one-pipe H-valve is needed.



For one-pipe installations, a straight or square distributor with adjustable by-pass is required. The Danfoss Nr. 013G0372 thermostatic valve must be placed in the N position. When the percentage flow rate in the radiator is known (with respect to the total flow in the installation), the no. of turns to be set on the by-pass can be obtained from diagram 1. The by-pass under the cover A of the distributor can then be adjusted using an Allen key by the number of turns indicated in the table. To know the pressure drop in the radiator, use diagram 2. Once the total flow in the installation and the percentage flow in the radiator are known, the pressure drop in metres of water column or bars can be obtained. The flow rate in the radiator can be regulated subsequently, including during operation. The distributor can also be used as a blind bridge if the radiator is mounted subsequently or dismantled, without having to empty the installation.

Preset charts - PHD panels

MODELL	10					
Lenght	300	400	500	600	700	900
400	2	2	2	2	2	2
500	2	2	2	2	2	2
600	2	2	2	2	2	2
700	2	2	2	2	2	2
800	2	2	2	2	2	2
900	2	2	2	2	2	2
1000	2	2	2	2	2	2
1100	2	2	2	2	2	2
1200	2	2	2	2	2	2
1400	2	2	2	2	2	2
1600	2	2	2	2	2	4
1800	2	2	2	2	4	4
2000	2	2	2	2	4	4
2300	2	2	4	4	4	6
2600	2	2	4	4	4	6
3000	2	2	4	4	6	6

MODELL	11					
Lenght	300	400	500	600	700	900
400	2	2	2	2	2	2
500	2	2	2	2	2	2
600	2	2	2	2	2	2
700	2	2	2	2	2	2
800	2	2	2	2	2	2
900	2	2	2	2	2	2
1000	2	2	2	2	2	4
1100	2	2	2	2	4	4
1200	2	2	2	2	4	4
1400	2	2	2	4	4	4
1600	2	2	4	4	4	6
1800	2	2	4	4	4	6
2000	2	4	4	4	6	6
2300	2	4	4	6	6	6
2600	4	4	6	6	6	6
3000	4	4	6	6	6	N

MODELL	20					
Lenght	300	400	500	600	700	900
400	2	2	2	2	2	2
500	2	2	2	2	2	2
600	2	2	2	2	2	2
700	2	2	2	2	2	4
800	2	2	2	2	4	4
900	2	2	2	2	4	4
1000	2	2	2	4	4	4
1100	2	2	4	4	4	4
1200	2	2	4	4	4	6
1400	2	4	4	4	6	6
1600	2	4	4	4	6	6
1800	4	4	4	6	6	6
2000	4	4	4	6	6	6
2300	4	4	6	6	6	N
2600	6	6	6	6	N	N
3000	6	6	6	N	N	N

MODELL	21					
Lenght	300	400	500	600	700	900
400	2	2	2	2	2	2
500	2	2	2	2	2	2
600	2	2	2	2	2	2
700	2	2	2	2	2	4
800	2	2	2	2	4	4
900	2	2	2	2	4	4
1000	2	2	2	4	4	4
1100	2	2	4	4	4	6
1200	2	2	4	4	4	6
1400	2	4	4	4	6	6
1600	2	4	4	6	6	6
1800	4	4	6	6	6	6
2000	4	4	6	6	6	6
2300	4	6	6	6	N	N
2600	6	6	6	6	N	N
3000	6	6	6	N	N	N

MODELL	22					
Lenght	300	400	500	600	700	900
400	2	2	2	2	2	2
500	2	2	2	2	2	2
600	2	2	2	2	2	4
700	2	2	2	2	4	4
800	2	2	2	4	4	4
900	2	2	4	4	4	6
1000	2	2	4	4	4	6
1100	2	4	4	4	6	6
1200	2	4	4	6	6	6
1400	4	4	6	6	6	6
1600	4	4	6	6	6	N
1800	4	4	6	6	6	N
2000	4	6	6	6	N	N
2300	6	6	6	N	N	N
2600	6	6	N	N	N	-
3000	6	6	N	N	-	-

MODELL	30					
Lenght	300	400	500	600	700	900
400	2	2	2	2	2	2
500	2	2	2	2	4	4
600	2	2	2	4	4	4
700	2	2	4	4	4	6
800	2	4	4	4	6	6
900	2	4	4	4	6	6
1000	4	4	6	6	6	6
1100	4	4	6	6	6	6
1200	4	4	6	6	6	6
1400	4	6	6	6	N	N
1600	4	6	6	6	N	N
1800	6	6	6	6	N	N
2000	6	6	N	N	N	N
2300	6	6	N	N	N	N
2600	6	N	N	N	N	N
3000	6	N	N	N	N	N

MODELL	32					
Lenght	300	400	500	600	700	900
400	2	2	2	2	2	2
500	2	2	2	2	4	4
600	2	2	2	4	4	4
700	2	2	4	4	4	6
800	2	4	4	4	6	6
900	2	4	4	6	6	6
1000	4	4	6	6	6	6
1100	4	4	6	6	6	6
1200	4	6	6	6	6	N
1400	4	6	6	6	N	N
1600	6	6	6	N	N	N
1800	6	6	N	N	N	N
2000	6	6	N	N	N	N
2300	6	N	N	N	N	N
2600	6	N	N	N	N	N
3000	N	N	N	N	N	N

MODELL	33					
Lenght	300	400	500	600	700	900
400	2	2	2	2	2	2
500	2	2	2	2	4	4
600	2	2	2	4	4	4
700	2	2	4	4	4	6
800	2	4	4	4	6	6
900	2	4	4	6	6	6
1000	4	4	6	6	6	6
1100	4	4	6	6	6	6
1200	4	6	6	6	6	N
1400	4	6	6	6	N	N
1600	6	6	6	N	N	N
1800	6	6	N	N	N	N
2000	6	6	N	N	N	N
2300	6	N	N	N	N	N
2600	6	N	N	N	N	N
3000	N	N	N	N	N	N

Technical Information

VERTICAL RADIATORS

Connection possibilities

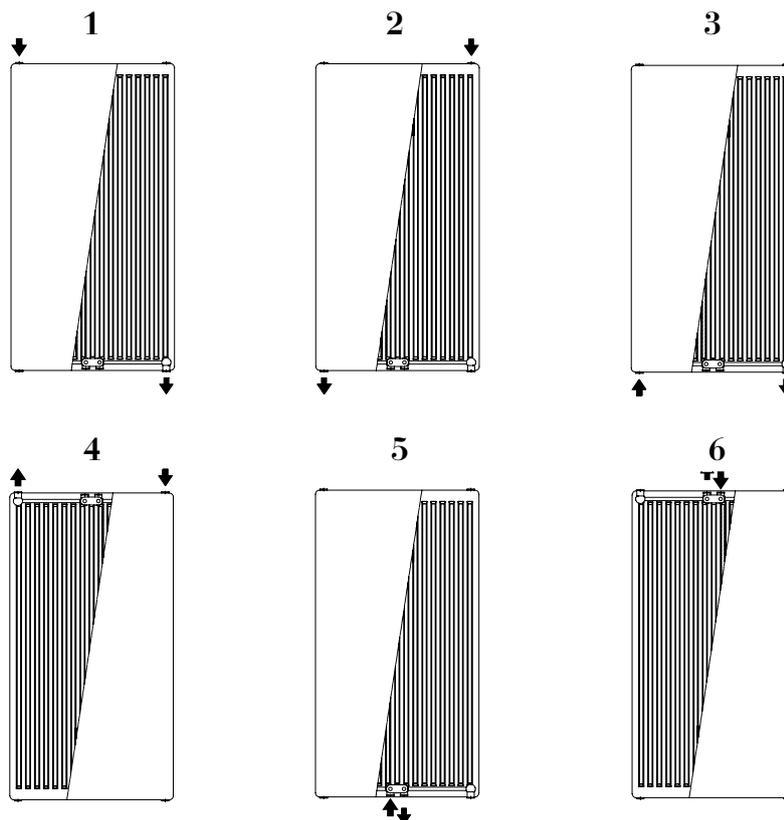
Vertical radiators can be connected to a two-pipe connection as follows: top/bottom opposite side (1, 2), bottom/bottom opposite side (3), top/top opposite side (4) connections and in the configuration with bottom (5) or top (6) central connection. The top/top opposite side connection (4) and top central connection (6) are applicable only and exclusively with the panel in configuration AA (top central connection) as in this case a deflector is installed in the radiator.

Configurations 3, 4, 5 and 6 are symmetrical with respect to the indications in the drawings below (the output and input indicated by the arrows can be reversed).

Two-pipe connection with side connections requires a thermostatic valve (possibly with thermostatic head) and lockshield.

When connecting with side connections, the central connection must be sealed with two blind caps.

Vertical radiators can be connected to a one-pipe installation using a one-pipe valve with external probe only.



Central connection with valve/lockshield kit

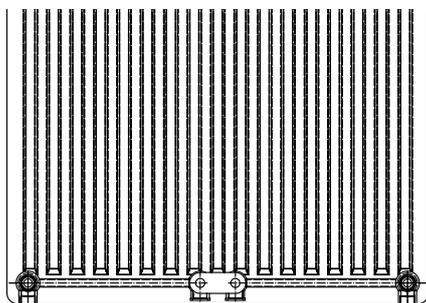
In a two-pipe connection, Vertical radiators can be connected with a central connection using a valve/lockshield group with 50mm tappings centre (to be ordered separately) which can be connected to the central connection of the panel via two 3/4" - 1/2" nipples.

The setting for the valve in the valve/lockshield group with 50mm tappings centre (two-pipe connection) is obtained from the flow rate Q diagrams (expressed in kg/h) – Pressure drop Δp (expressed in bars or kPa). Starting from the Δt set in the system and the power of the radiator (EN442 standard output), the intersection with the pressure drop value on the X axis determines the nearest kv at which to set the insert (for example: position 3 or 4).

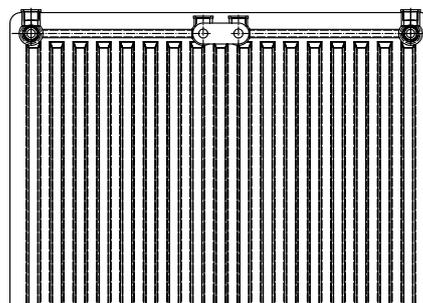
For further technical details, see the Radiators Technical Catalogue downloadable from our new site www.dlradiators.com.

The valve/lockshield group can be thermostatically controlled by fitting the De'Longhi thermostatic head (to be ordered separately).

CONFIGURATION AB



CONFIGURATION AA



DeLonghi

DL RADIATORS

DL Radiators Spa
Treviso, via Seitz 47, 31100 - Italy
Headquarters: Moimacco (UD), via Nazionale 21, 33040 - Italy
Tel. +39 0432 705511 - Fax +39 0432705578
<http://www.dlradiators.com>