

# BRUGMAN

## TECHNICAL MANUAL 2021



# BRUGMAN



**Vasco** is a comprehensive supplier of heating and ventilation solutions with sales activities in Europe, but also in such distant export markets as Japan, US, China and New Zealand. The brands belonging to Vasco are: Vasco, Brugman and Superia.

Vasco is a leading producer of designer radiators, ventilation, underfloor heating and cooling and is market leader in bathroom radiators in the Benelux countries.

Brugman and Superia are high-quality brands for panel radiators and belong to the absolute top in their segment. Vasco develops and manufactures products and solutions for a comfortable indoor climate. This is achieved by focusing strongly on the individual needs of the end customer.

The quest for alternative materials, innovative designs and pioneering production processes has already earned Vasco numerous international awards and prizes.

The headquarters of Vasco is established in Dilsen (Belgium). The production plants are located in Tubbergen (Netherlands), Dilsen (Belgium) and Legnica (Poland).

Vasco / Brugman and Superia has ca. 500 employees and is part of the Swiss Arbonia Group.

A company of Arbonia Group

**ARBONIA** 

[www.arbonia.com](http://www.arbonia.com)

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## PRODUCTION AND QUALITY ASPECTS

### QUALITY SPECIFICATIONS

Brugman is ISO 9001: 2015 certified. The radiators are produced from cold-rolled high-strength steel of the finest quality. The radiators are suitable for hot water installations with a maximum temperature of 120°C.

### PRODUCTION

The panel radiators are manufactured on fully-automated production lines that are continuously monitored. Each radiator is individually pressure-tested at the end of each production line, to ensure that it is leak-tight.

### PAINTING PROCESS, IN GENERAL

The finishing of the radiators is performed in a specially-designed and environmentally-friendly installation. The finishing consists of:

#### **Pre-treatment:**

First the radiators are cleaned, degreased and phosphated. Then they are rinsed with demineralised water in order to obtain an optimal surface for the special cataphoresis primer coating.

#### **Primer coating:**

After the pre-treatment, the radiators are baked at a temperature of 200°C.

#### **Finishing coat:**

Then the radiators are given a finishing coat with an epoxy-polyester lacquer in a fully-automatic powder-coating installation and baked once again at 200°C.

The result is a very strong and impact-resistant finishing coat, in the standard colour white RAL 9016.





## ADVANTAGES

- Optimal corrosion resistance.
- Uniform lacquer coat that gives very good cover on the sides, corners and edges.
- No drop formation on the undersides.
- High scratch and impact resistance.

## GUARANTEE

A 10-year guarantee on manufacturing and material defects is given on all panel radiators, provided that they have been properly stored, installed by trained technicians and used under normal circumstances.



See the general terms and conditions on [www.brugman.eu](http://www.brugman.eu)



All radiators with this label are approved for use in senior citizens' residences by the Senior Citizens' Label Project Office.



The Stabu Foundation has developed a system for the generation of construction plans which greatly reduces the number of steps for the construction planner. The products in this catalogue have been integrated into this system.



Vabi is an association active in the automation of construction and installation technology. The products in this catalogue have been integrated into this system.



Krijger BV furnishes the calculation program Bink for the construction and installation sector. The products in this catalogue have been integrated into this system.



ARKEY develops and delivers both drafting and computing software for the construction and installation sector. ARKEY is used on a daily basis by e.g. architects, contractors and installation companies. The products in this catalogue have been integrated into this system.



Stabiplan provides AutoCAD applications for the construction industry. All of the products in this catalogue have been integrated into their applications.



All of the products in this catalogue are suitable for applications in systems that use low temperature heating (LTH) technology.



EN-442 is the standard for the thermal output from heat exchangers in buildings.

All of the products in this catalogue are in compliance with this standard.

# Casual

## Collection

Standard

Standard Zn

Compact 4

Uni 6

Piano Uni 6





## STANDARD

Brugman's horizontal Standard radiator is known for its characteristic appearance. The Standard is recognisable and trusted. The model's name says it all: the Standard is a radiator without frills. This panel radiator stands out for its excellent quality and ease of installation. A traditional model that fits in every room. Flexible, classical and discreet.

<b>Product:</b>	Panel radiator with four side connections
<b>Material:</b>	Steel
<b>Finishing:</b>	Standard
<b>Suspension and accessories:</b>	L-bracket set: blind plug, air vent, lifting protection, silencers, plugs and bolts (delivered standard) VDI-compliant in conformity with VDI 6036 (class III) in option J-bracket set (with the exception of type 10 & 11): blind plug, air vent, plugs and bolts (to be ordered separately)
<b>Connections:</b>	4 x 1/2" internal thread side connections
<b>Packaging:</b>	Each radiator is robustly packaged in high-quality cardboard and then shrink-wrapped. A label describes the radiator characteristics: type – height – length.
<b>Guarantee:</b>	10 years, if the general terms and conditions of Brugman are respected.
<b>Painting process:</b>	All radiators are degreased, phosphated, cathodically primed and powder-coated standard in RAL 9016.
<b>Colour:</b>	RAL 9016 (other colours can also be delivered on request: see colour chart)
<b>Heat meters:</b>	Suitable without restrictions for heat meters, both electrical and using the evaporation principle (in accordance with EN834 835).
<b>Maximum operating pressure:</b>	10 bar (tested at 13 bar)
<b>Maximum operating temperature:</b>	120 °C
<b>Conformity:</b>	In accordance with EN442-1: 2014: radiators and convectors
<b>Types:</b>	10   11   20s   21s   22   33
<b>Heights:</b>	300   400   500   600   700   900 mm
<b>Lengths:</b>	400 => 3000 mm
<b>Depths:</b>	51   73   106   165 mm

TYPE 10 / 11



TYPE 20s / 21s



TYPE 22



TYPE 33



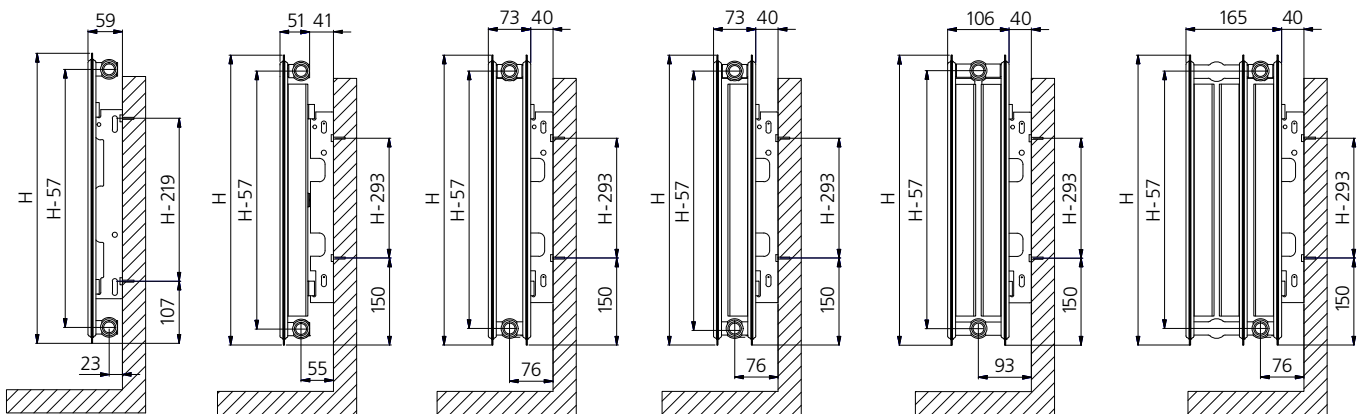


# Casual

TECHNICAL DATA PER RUNNING METRE AT 75/65/20°C

Height (mm)		Type 10	Type 11	Type 20s	Type 21s	Type 22	Type 33
300	W		523			975	1365
	kg		6,92			13,49	20,19
	l		2,20			3,55	5,29
	n		1,31			1,28	1,31
400	W	413	666	743	985	1241	1744
	kg	7,07	9,20	13,78	15,95	18,05	27,02
	l	2,49	2,49	4,42	4,42	4,47	6,71
	n	1,30	1,31	1,29	1,31	1,30	1,31
500	W	511	802		1181	1494	2103
	kg	8,64	11,49		19,82	22,61	33,86
	l	2,82	2,82		5,33	5,38	8,07
	n	1,29	1,30		1,32	1,33	1,32
600	W	607	932	1025	1368	1738	2444
	kg	10,21	13,77	20,05	23,68	27,17	40,70
	l	3,18	3,18	6,22	6,22	6,27	9,39
	n	1,29	1,30	1,30	1,32	1,34	1,32
700	W		1057			1974	2769
	kg		16,08			31,74	47,53
	l		3,56			7,14	10,65
	n		1,30			1,35	1,33
900	W	885	1295	1438	1880	2429	3376
	kg	14,95	20,64	29,47	35,28	40,86	61,19
	l	4,42	4,42	8,77	8,77	8,84	13,02
	n	1,28	1,30	1,31	1,34	1,36	1,36

## L-BRACKETS



type 10

type 11

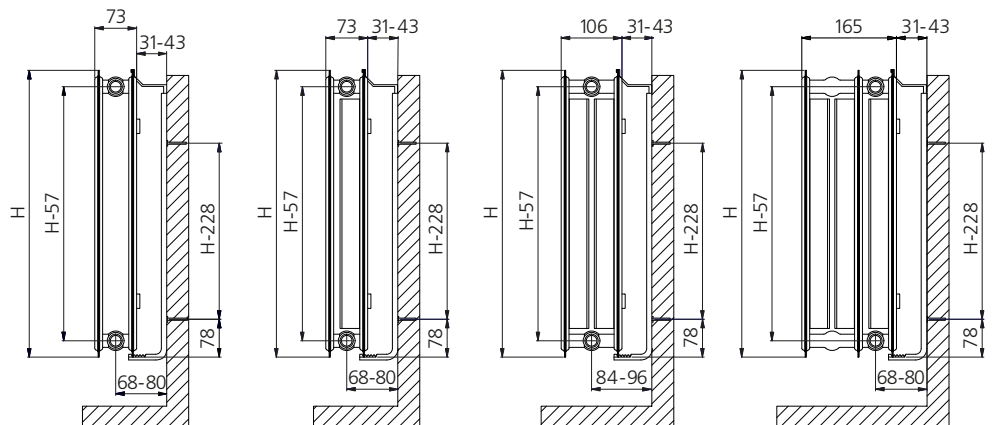
type 20s

type 21s

type 22

type 33

## J-BRACKETS



## STANDARD Zn

The horizontal Standard Zinc radiator is known for its characteristic appearance. The Standard Zinc is recognisable and trusted. The model's name says it all: the Standard Zinc is a radiator without frills.

This panel radiator stands out for its excellent quality and ease of installation. A traditional model that fits in every room. Flexible, classical and discreet.

The radiator is equipped with a protective electrolytically-applied coating of zinc.

<b>Product:</b>	Galvanised panel radiator with four side connections
<b>Material:</b>	Steel (electrolytically galvanised)
<b>Finishing:</b>	Standard
<b>Suspension and accessories:</b>	L-bracket set: blind plug, air vent, lifting protection, silencers, plugs and bolts (delivered standard) VDI-compliant in conformity with VDI 6036 (class III) in option J-bracket set (with the exception of type 10 & 11): blind plug, air vent, plugs and bolts (to be ordered separately)
<b>Connections:</b>	4 x ½" internal thread side connections
<b>Packaging:</b>	Each radiator is robustly packaged in high-quality cardboard and then shrink-wrapped. A label describes the radiator characteristics: type – height – length.
<b>Guarantee:</b>	10 years, if the general terms and conditions of Brugman are respected.
<b>Painting process:</b>	All radiators are degreased, electrolytically galvanised, phosphated, cathodically primed and powder-coated standard in RAL 9016.
<b>Colour:</b>	RAL 9016 (other colours can also be delivered on request: see colour chart)
<b>Heat meters:</b>	Suitable without restrictions for heat meters, both electrical and using the evaporation principle (in accordance with EN834 835).
<b>Maximum operating pressure:</b>	10 bar (tested at 13 bar)
<b>Maximum operating temperature:</b>	120 °C
<b>Conformity:</b>	In accordance with EN442-1: 2014: radiators and convectors
<b>Types:</b>	10   11   20s   21s   22
<b>Heights:</b>	300   400   500   600   700   900 mm
<b>Lengths:</b>	500 => 3000 mm
<b>Depths:</b>	51   73   106 mm

TYPE 10 / 11



TYPE 20s / 21s



TYPE 22

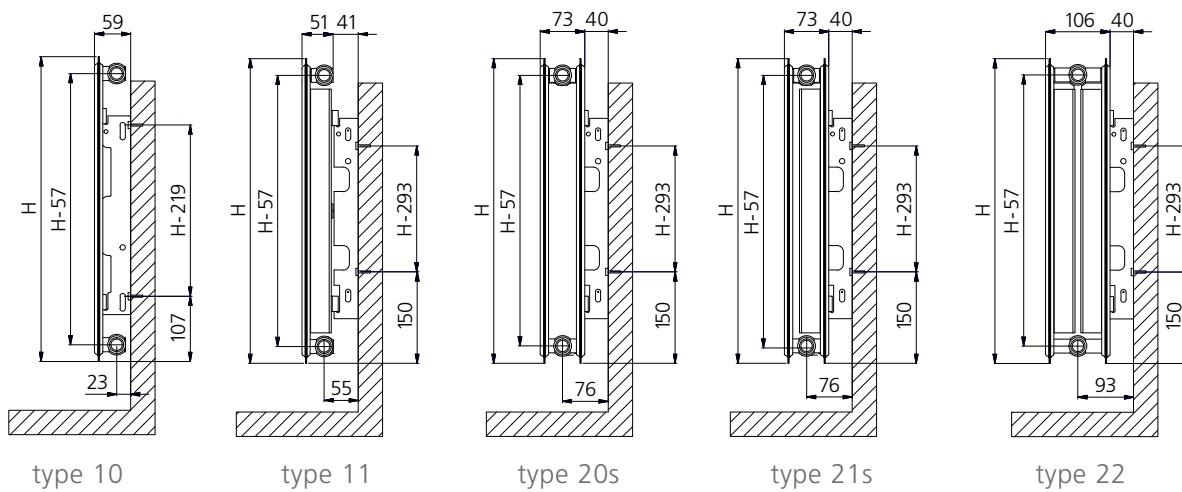


# Casual

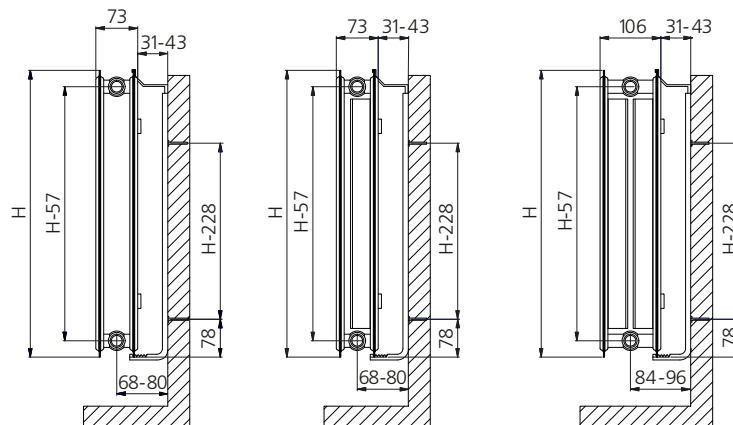
TECHNICAL DATA PER RUNNING METRE AT 75/65/20°C

Height (mm)		Type 10	Type 11	Type 20s	Type 21s	Type 22
300	W					
	kg					
	l					
	n					
400	W	413		743	985	
	kg	7,07		13,78	15,95	
	l	2,49		4,42	4,42	
	n	1,30		1,29	1,31	
500	W	511				
	kg	8,64				
	l	2,82				
	n	1,29				
600	W	607	932	1025	1368	1738
	kg	10,21	13,77	20,05	23,68	27,17
	l	3,18	3,18	6,22	6,22	6,27
	n	1,29	1,30	1,30	1,32	1,34
700	W					1974
	kg					31,74
	l					7,14
	n					1,35
900	W	885	1295	1438	1880	2429
	kg	14,95	20,64	29,47	35,28	40,86
	l	4,42	4,42	8,77	8,77	8,84
	n	1,28	1,30	1,31	1,34	1,36

## L-BRACKETS



## J-BRACKETS



## COMPACT 4

The elegant, robust decorative grille and the fine side panels give the Compact 4 its characteristic look. The traditional appearance of the Standard radiator, but with a bit more flair all its own.

Love the traditional, elegant look of a radiator? Then go for our Compact radiators. Uncomplicated and highly practical. The Compact radiator has four side connections, a decorative grille and side panels. The subtle design eliminates unsafe, sharp edges. As a result, this functional Compact radiator is especially suitable for schools, health care institutions and senior citizens' residences.

<b>Product:</b>	Panel radiator with four side connections
<b>Material:</b>	Steel
<b>Finishing:</b>	Top grille and side panels
<b>Suspension and accessories:</b>	L-bracket set: blind plug, air vent, lift-out protection, silencers, plugs and bolts (delivered standard) VDI-compliant in conformity with VDI 6036 (class III) in option J-bracket set (with the exception of type 11): blind plug, air vent, plugs and bolts (to be ordered separately)
<b>Connections:</b>	4 x ½" internal thread side connections
<b>Packaging:</b>	Each radiator is robustly packaged in high-quality cardboard and then shrink-wrapped. A label describes the radiator characteristics: type – height – length.
<b>Guarantee:</b>	10 years, if the general terms and conditions of Brugman are respected.
<b>Painting process:</b>	All radiators are degreased, phosphated, cathodically primed and powder-coated standard in RAL 9016.
<b>Colour:</b>	RAL 9016 (other colours can also be delivered on request: see colour chart)
<b>Heat meters:</b>	Suitable without restrictions for heat meters, both electrical and using the evaporation principle (in accordance with EN834 835).
<b>Maximum operating pressure:</b>	10 bar (tested at 13 bar)
<b>Maximum operating temperature:</b>	120 °C
<b>Conformity:</b>	In accordance with EN442-1: 2014: radiators and convectors
<b>Types:</b>	11   21s   22   33
<b>Heights:</b>	300   400   500   600   700   900 mm
<b>Lengths:</b>	400 => 3000 mm
<b>Depths:</b>	69   73   106   165 mm

TYPE 11



TYPE 21s



TYPE 22



TYPE 33



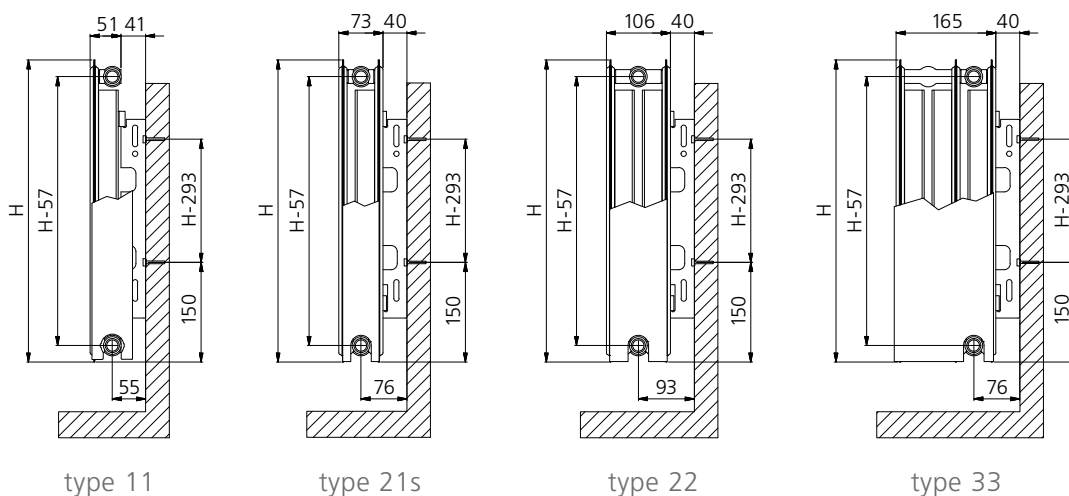


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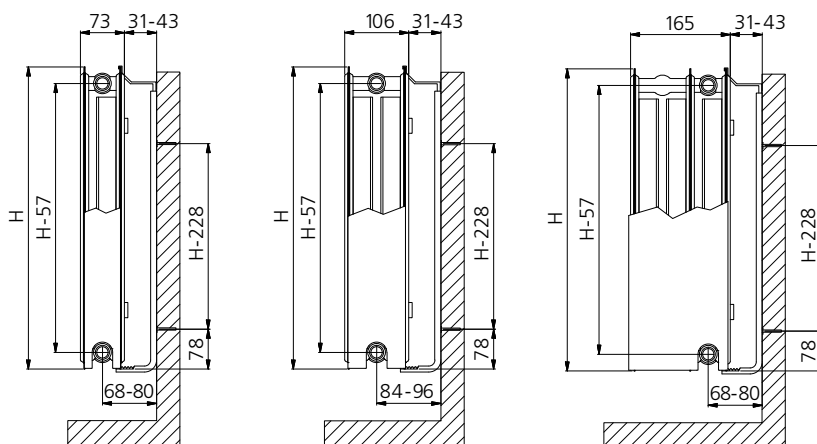
TECHNICAL DATA PER RUNNING METRE AT 75/65/20°C

Height (mm)		Type 11	Type 21s	Type 22	Type 33
300	W		755	942	1319
	kg		12,83	14,72	21,93
	l		4,30	3,55	5,29
	n		1,31	1,31	1,32
400	W	666	953	1202	1679
	kg	10,66	16,82	19,47	29,04
	l	2,49	4,42	4,47	6,71
	n	1,30	1,31	1,32	1,32
500	W	802	1141	1449	2020
	kg	13,13	20,82	24,21	36,14
	l	2,82	5,33	5,38	8,07
	n	1,30	1,32	1,32	1,32
600	W	934	1322	1683	2345
	kg	15,61	24,81	28,96	43,25
	l	3,18	6,22	6,27	9,39
	n	1,30	1,32	1,33	1,32
700	W	1063	1499	1907	2657
	kg	18,11	28,82	33,73	50,35
	l	3,57	7,09	7,14	10,65
	n	1,30	1,32	1,33	1,33
900	W	1312	1841	2326	3248
	kg	23,03	36,77	43,18	64,52
	l	4,42	8,77	8,84	13,02
	n	1,30	1,33	1,34	1,36

## L-BRACKETS



## J-BRACKETS



## UNI 6

The elegant look of the Compact radiator - but with six connections. That's the horizontal Uni 6 from Brugman. The stylish design, including decorative grille and side panels, make this radiator a gift. The Uni 6 radiator also eliminates sharp, unsafe edges. A radiator that is especially suitable for schools, health care institutions and public authorities. The Uni 6 has a 50 millimetre bottom connection which makes mounting very easy. Because the radiator is reversible, one can choose between a left or right bottom connection. Pipes and valve bodies are also fully concealed, so that you can optimally enjoy the classic design of this radiator.

<b>Product:</b>	Valve radiator with both a bottom connection and four side connections. By using the J-bracket it is possible to mirror reverse the radiator, so that the thermostat knob can be mounted on the left or right (with the exception of type 11).
<b>Material:</b>	Steel
<b>Finishing:</b>	Top grille and side panels
<b>Valve:</b>	The valve insert (without thermostatic valve) is compatible with thermostatic valves M30 x 1,5 mm (as an option).
<b>Suspension and accessories:</b>	L-bracket set (type 11): blind plug, air vent, lift-out protection, silencers, plugs and bolts (to be ordered separately) VDI-compliant in conformity with VDI 6036 (class III) in option J-bracket set (type 21s, 22, 33): blind plug, air vent, plugs and bolts (to be ordered separately) VDI-compliant in conformity with VDI 6036 (class III) in option
<b>Connections:</b>	2 x ¾" external thread euroconus right bottom connection, 4 x ½" internal thread side connections
<b>Packaging:</b>	Each radiator is robustly packaged in high-quality cardboard and then shrink-wrapped. A label describes the radiator characteristics: type – height – length.
<b>Guarantee:</b>	10 years, if the general terms and conditions of Brugman are respected.
<b>Painting process:</b>	All radiators are degreased, phosphated, cathodically primed and powder-coated standard in RAL 9016.
<b>Colour:</b>	RAL 9016 (other colours can also be delivered on request: see colour chart)
<b>Heat meters:</b>	Suitable without restrictions for heat meters, both electrical and using the evaporation principle (in accordance with EN834 835).
<b>Maximum operating pressure:</b>	10 bar (tested at 13 bar)
<b>Maximum operating temperature:</b>	120 °C
<b>Conformity:</b>	In accordance with EN442-1: 2014: radiators and convectors
<b>Types:</b>	11   21s   22   33
<b>Heights:</b>	300   400   500   600   700   900 mm
<b>Lengths:</b>	400 => 3000 mm
<b>Depths:</b>	69   73   106   165 mm

TYPE 11



TYPE 21s



TYPE 22



TYPE 33

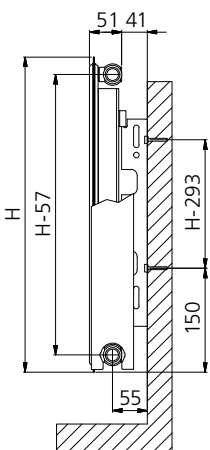


# Casual

TECHNICAL DATA PER RUNNING METRE AT 75/65/20°C

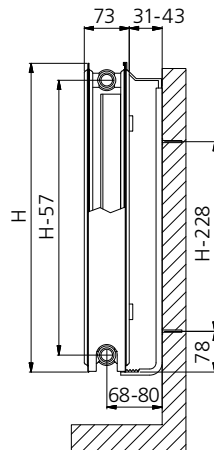
Height (mm)		Type 11	Type 21s	Type 22	Type 33
300	W			942	1334
	kg			14,96	22,19
	l			3,55	5,29
	n			1,31	1,29
400	W	666	953	1202	1700
	kg	10,83	17,13	19,75	29,35
	l	2,49	4,42	4,47	6,71
	n	1,30	1,31	1,32	1,30
500	W	802	1141	1449	2048
	kg	13,36	21,18	24,55	36,50
	l	2,82	5,33	5,38	8,07
	n	1,30	1,32	1,32	1,31
600	W	934	1322	1683	2379
	kg	15,89	25,22	29,35	47,81
	l	3,18	6,22	6,27	9,39
	n	1,30	1,32	1,33	1,32
700	W	1063	1499	1907	2696
	kg	18,44	29,29	34,17	50,82
	l	3,57	7,09	7,14	10,65
	n	1,30	1,32	1,33	1,33
900	W	1312	1841	2326	3297
	kg	23,49	37,37	43,76	65,12
	l	4,42	8,77	8,84	13,02
	n	1,30	1,33	1,34	1,34

## L-BRACKETS

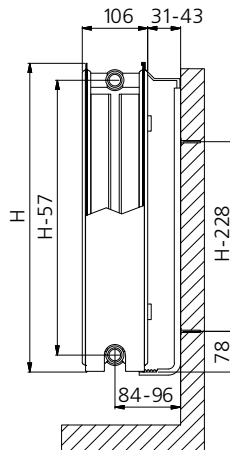


type 11

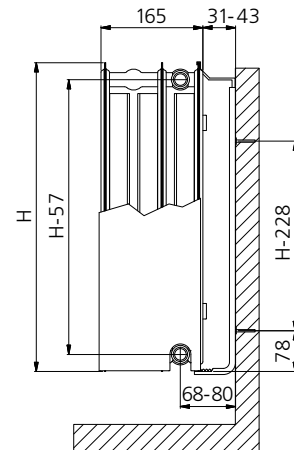
## J-BRACKETS



type 21s



type 22



type 33

## PIANO UNI 6

A minimalist design, discreet and therefore very distinguished. The Piano Uni 6 is known for its elegant, flat design and the familiar, handy bottom connection. The beautiful decorative grille, the flat front panel and the identical housing give the Piano radiators the luxurious aura they deserve. A single whole that, thanks to its fine design, is virtually invisible in your interior. The graceful design also eliminates unsafe, sharp edges. A wide range of authorities, including health care institutions, are therefore saying 'Yes' to these beautiful and highly functional radiators. Characteristic is a choice from six connections, including the simple bottom connection. Along with ease of mounting, the bottom connection has the advantage that pipes are concealed from view. The Piano Uni 6 makes a chic impression and has a very handy bottom connection.

<b>Product:</b>	Valve radiator with both a bottom connection and four side connections. By using J-brackets it is possible to mirror reverse the radiator, so that the thermostat knob can be mounted on the left or right. For this the flat front plate must be dismounted and, after reversing the radiator, mounted back on the radiator.
<b>Material:</b>	Steel
<b>Finishing:</b>	Top grille, side panels and flat front plate
<b>Valve:</b>	The valve insert (without thermostatic valve) is compatible with thermostatic valves M30 x 1,5 mm (as an option).
<b>Suspension and accessories:</b>	J-bracket set: blind plug, air vent, plugs and bolts (to be ordered separately) VDI-compliant in conformity with VDI 6036 (class III) in option
<b>Connections:</b>	2 x ¾" external thread euroconus right bottom connection, 4 x ½" internal thread side connections
<b>Packaging:</b>	Each radiator is robustly packaged in high-quality cardboard and then shrink-wrapped. A label describes the radiator characteristics: type – height – length.
<b>Guarantee:</b>	10 years, if the general terms and conditions of Brugman are respected.
<b>Painting process:</b>	All radiators are degreased, phosphated, cathodically primed and powder-coated standard in RAL 9016.
<b>Colour:</b>	RAL 9016 (other colours can also be delivered on request: see colour chart)
<b>Maximum operating pressure:</b>	10 bar (tested at 13 bar)
<b>Maximum operating temperature:</b>	120 °C
<b>Conformity:</b>	In accordance with EN442-1: 2014: radiators and convectors
<b>Types:</b>	21s   22   33
<b>Heights:</b>	300   400   500   600   700   900 mm
<b>Lengths:</b>	400 => 3000 mm
<b>Depths:</b>	74,5   107,5   166,5 mm

TYPE 21s



TYPE 22



TYPE 33



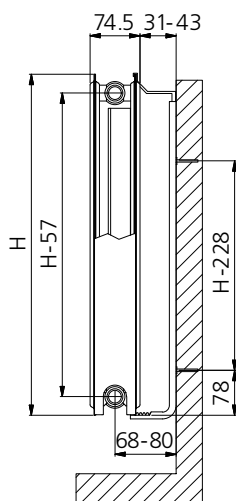


# Casual

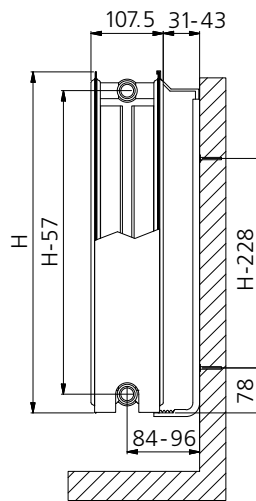
TECHNICAL DATA PER RUNNING METRE AT 75/65/20°C

Height (mm)		Type 21s	Type 22	Type 33
300	W		878	1236
	kg		16,96	24,17
	l		3,55	5,29
	n		1,30	1,32
400	W	868	1104	1532
	kg	19,78	22,42	31,99
	l	4,42	4,47	6,71
	n	1,29	1,30	1,32
500	W	1034	1317	1822
	kg	24,50	27,90	39,82
	l	5,33	5,38	8,07
	n	1,29	1,31	1,32
600	W	1192	1521	2110
	kg	29,20	33,35	47,64
	l	6,22	6,27	9,39
	n	1,30	1,31	1,32
700	W	1342	1717	2399
	kg	33,98	38,89	55,52
	l	7,09	7,14	10,65
	n	1,30	1,30	1,32
900	W	1623	2089	2991
	kg	43,30	49,71	71,05
	l	8,77	8,84	13,02
	n	1,29	1,28	1,32

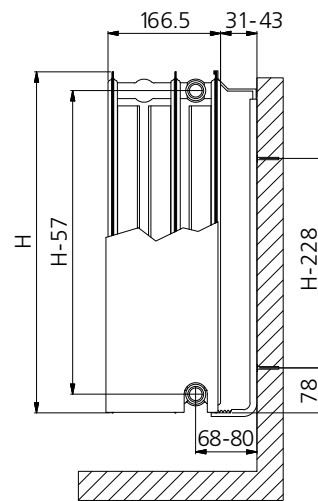
## J-BRACKETS



type 21s

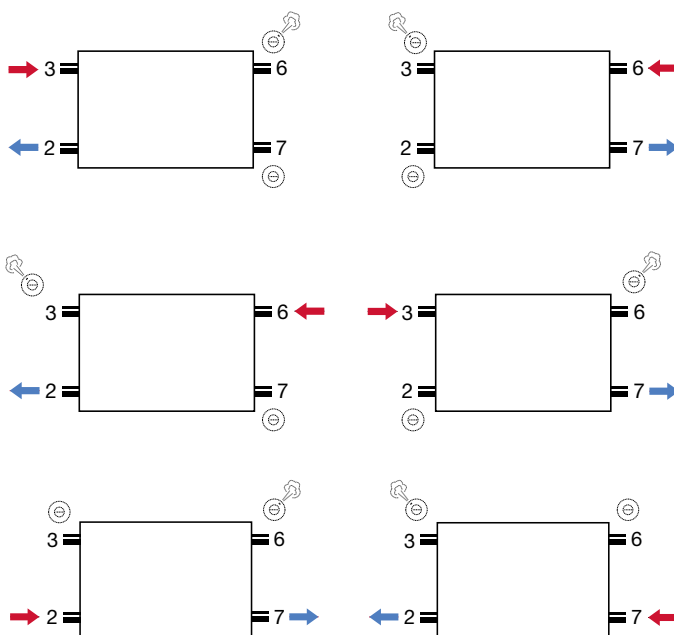


type 22

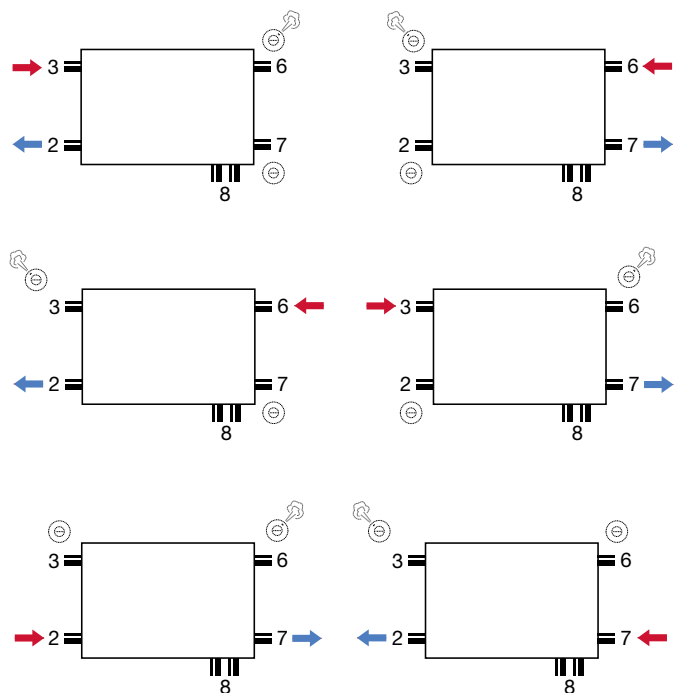
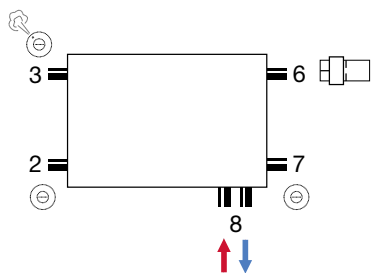


type 33

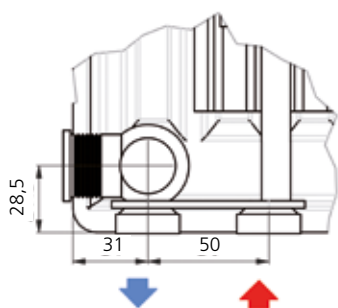
STANDARD, STANDARD Zn  
& COMPACT 4



UNI 6 & PIANO UNI 6



Valve connection



Left version valve connection:

by turning the radiator (with the exception of type 11)

**Attention with type 33:**

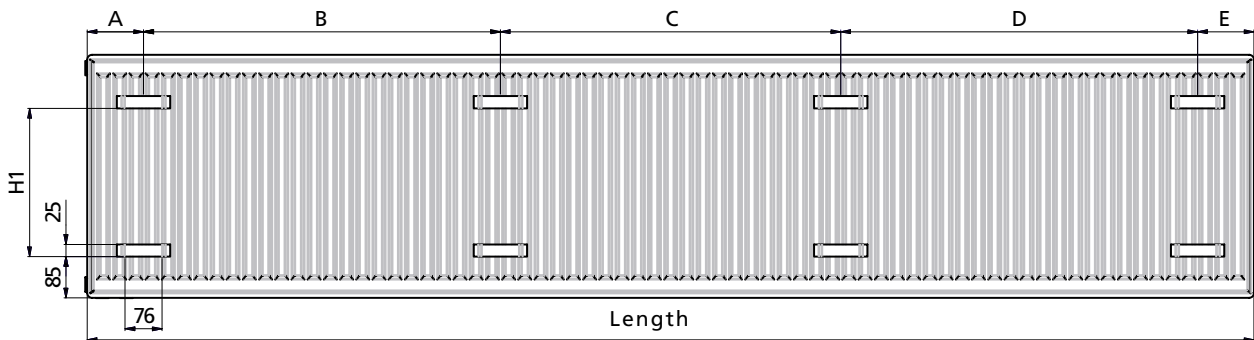
larger distance to the wall

STRIP PLAN HORIZONTAL RADIATORS

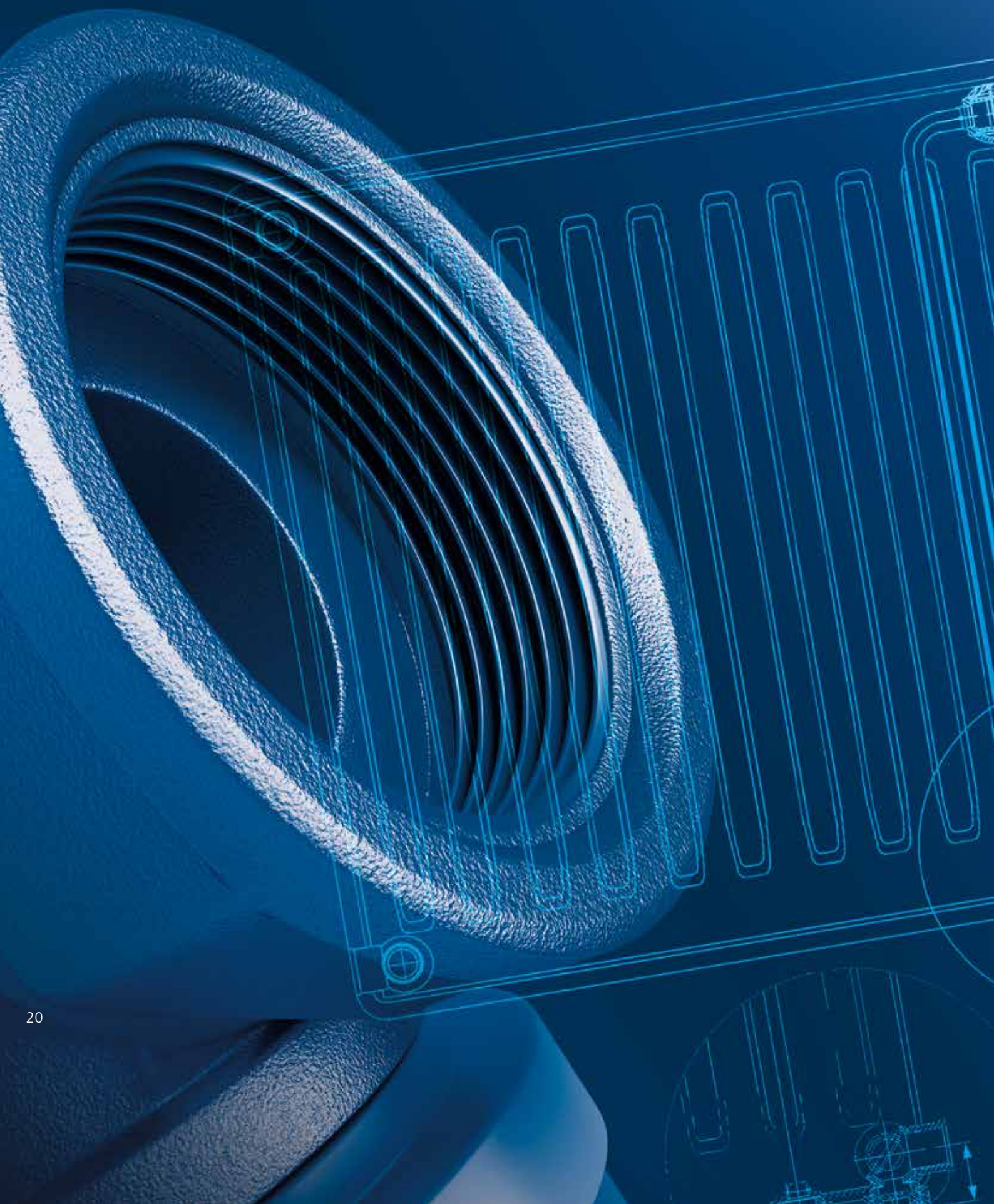
RADIATOR LENGTH (mm)	POSITION OF THE HANGING STRIPS				
	A	B	C	D	E
400	116	-	-	-	116
500	116	-	-	-	116
600	116	-	-	-	116
700	116	-	-	-	116
800	116	-	-	-	116
900	116	-	-	-	116
1000	116	-	-	-	116
1100	116	-	-	-	116
1200	116	-	-	-	116
1300	116	-	-	-	116
1400	116	-	-	-	116
1600	116	668	-	700	116
1800	116	768	-	800	116
2000	116	868	-	900	116
2200	116	968	-	1000	116
2400	116	734	700	734	116
2600	116	767	834	767	116
2800	116	867	834	867	116
3000	116	934	900	934	116

STANDARD  
STANDARD Zn  
COMPACT 4  
UNI 6  
(only type 11)

PIANO UNI 6  
(no strip plan)



Height	H1
300	105
400	205
500	305
600	405
700	505
900	705





**VALVE U2**

Connection adaptor 3/4" euroconus (reversible: floor-wall). One- and two-pipe. Supply and return closable. With bypass control, nickel-plated.



Art. Nr.

13911610200

**VALVE N2**

Connection adaptor 3/4" euroconus (reversible: floor-wall). Two-pipe. Supply and return closable, nickel-plated.



13911610201

**VALVE D2/50**

Connection adaptor 3/4" euroconus (floor). One- and two-pipe. Supply and return closable. With bypass control, nickel-plated.



13911610202

**VALVE E2/50**

Connection adaptor 3/4" euroconus (wall). One- and two-pipe. Supply and return closable. With bypass control, nickel-plated.



13911610203



**REVERSIBLE CONNECTION ADAPTOR**

Connection adaptor 3/4" euroconus (reversible: floor-wall). Nickel-plated.



13911600200

STANDARD	STANDARD Zn	COMPACT 4	UNI 6	PIANO UNI 6
			•	•
			•	•
			•	•
			•	•

	Art. Nr.	Sizes (mm)	STANDARD	STANDARD Zn	COMPACT 4	UNI 6	PIANO UNI 6
<b>MANUAL KNOB</b> for insert M30 x 1,5	13911650200 (white)					•	•
<b>THERMOSTAT KNOB</b> for valve insert M30 x 1,5	13911630101 (white) 13911631101 (chrome)					• •	• •
<b>SET A1</b> Connection copper tube compression 3/4", 2 connections per set. Nickel-plated. Mention diameter when ordering.							
	13911610112 13911610114 13911610116	Ø 12 x 1 Ø 14 x 1 Ø 16 x 1				• • •	• • •
<b>SET A3</b> Connection PE tube euroconus 3/4", 2 connections per set. Nickel-plated. Mention diameter when ordering.							
	13911610212 13911610216	Ø 12 x 1,1 Ø 16 x 1,5	• •	• •	• •	• •	• •
<b>SET A3</b> Connection for multi-layer tube, 2 connections per set. Nickel-plated. Mention diameter when ordering.							
	13911611220 13911611620 13911611622	Ø 12 x 2 Ø 16 x 2 Ø 16 x 2,2	• • •	• • •	• • •	• • •	• • •
<b>SET Nr. 11</b> Composed of: insert M30 x 1,5 with protective cap and 1 blind plug.							
Insert clamp connection	13911600131					•	•
Insert M30 x 1,5	13911630131					•	•
<b>SET Nr. 21</b> Composed of: insert M30 x 1,5 with protective cap, 1 blind plug and 1 manual knob.							
Insert clamp connection	13911600161					•	•
Insert M30 x 1,5	13911630161					•	•

**SET Nr. 22**

Composed of: insert M30 x 1,5 with protective cap,  
1 blind plug and 1 thermostat knob.

**Insert clamp connection**

Art. Nr. 13911600162

**Insert M30 x 1,5**

13911630162

**FLOOR SUPPORT BRACKET FOR TYPE 20s/21s (white)**

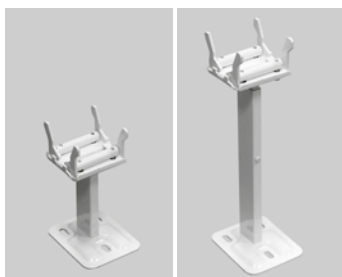
For mounting on the screed (short type) (H = 135-200 mm)  
and in the screed (long type) (H = 285-345 mm)



short 13911830913  
long 13911830914

**FLOOR SUPPORT BRACKET FOR TYPE 22/33 (white)**

For mounting on the screed (short type) (H = 135-200 mm)  
and in the screed (long type) (H = 285-345 mm)



short 13911830917  
long 13911830918

**TOWEL RAIL (white)**

for horizontal panel radiators



13911982040  
13911982050  
13911982060  
13911982080  
13911982100

**TOWEL RAIL (chrome)**

for horizontal panel radiators



13911983050  
13911983060  
13911983070  
13911983080

**SPRAY CAN AND PAINT STICK**



Spray can  
13919020307  
Paint stick  
13919020306

Sizes (mm)	STANDARD	STANDARD Zn	COMPACT 4	UNI 6	PIANO UNI 6
				•	•
				•	•
	•	•	•	•	•
	•	•	•	•	•
Length					
400 mm	•	•	•	•	•
500 mm	•	•	•	•	•
600 mm	•	•	•	•	•
800 mm	•	•	•	•	•
1000 mm	•	•	•	•	•
Length					
500 mm	•	•	•	•	•
600 mm	•	•	•	•	•
700 mm	•	•	•	•	•
800 mm	•	•	•	•	•
	•	•	•	•	•
	•	•	•	•	•

**L-BRACKETS SET**

For type 10

Art. Nr.

Sizes (mm)

Height

STANDARD

STANDARD Zn

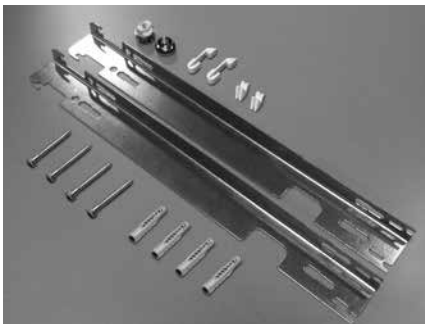
COMPACT 4

UNI 6

PIANO UNI 6

13921502042	(2 pieces)	400 mm	•	•		
13921502043	(3 pieces)	400 mm	•	•		
13921502052	(2 pieces)	500 mm	•	•		
13921502053	(3 pieces)	500 mm	•	•		
13921502062	(2 pieces)	600 mm	•	•		
13921502063	(3 pieces)	600 mm	•	•		
13921502092	(2 pieces)	900 mm	•	•		
13921502093	(3 pieces)	900 mm	•	•		

For type 11/20s/21s/22/33



13921502132	(2 pieces)	300 mm	•	•	•	•
13921502133	(3 pieces)	300 mm	•	•	•	•
13921502142	(2 pieces)	400 mm	•	•	•	•
13921502143	(3 pieces)	400 mm	•	•	•	•
13921502152	(2 pieces)	500 mm	•	•	•	•
13921502153	(3 pieces)	500 mm	•	•	•	•
13921502162	(2 pieces)	600 mm	•	•	•	•
13921502163	(3 pieces)	600 mm	•	•	•	•
13921502172	(2 pieces)	700 mm	•	•	•	•
13921502173	(3 pieces)	700 mm	•	•	•	•
13921502192	(2 pieces)	900 mm	•	•	•	•
13921502193	(3 pieces)	900 mm	•	•	•	•

Length:

≤ 1400 mm:	2 pieces
1600 - 2200 mm:	3 pieces
2400 - 3000 mm:	4 pieces

Art. Nr.

Sizes (mm)

Height

STANDARD

STANDARD Zn

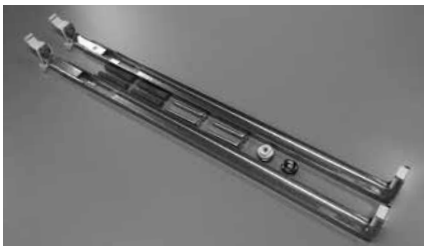
COMPACT 4

UNI 6

PIANO UNI 6

**JU-BRACKETS SET**

For type 21s/22/33



**JU-set**

13911503032	(2 pieces)	300 mm				
13911503042	(2 pieces)	400 mm				
13911503052	(2 pieces)	500 mm				
13911503062	(2 pieces)	600 mm				
13911503072	(2 pieces)	700 mm				
13911503092	(2 pieces)	900 mm				

**JU-SET VDI-compliant (class III)**

13921520032	(2 pieces)	300 mm				
13921520042	(2 pieces)	400 mm				
13921520052	(2 pieces)	500 mm				
13921520062	(2 pieces)	600 mm				
13921520072	(2 pieces)	700 mm				
13921520092	(2 pieces)	900 mm				

**JS-BRACKETS SET**



**JS-set**

13911500032	(2 pieces)	300 mm	•	•		
13911500042	(2 pieces)	400 mm	•	•		
13911500052	(2 pieces)	500 mm	•	•		
13911500062	(2 pieces)	600 mm	•	•		
13911500072	(2 pieces)	700 mm	•	•		
13911500092	(2 pieces)	900 mm	•	•		





# Horizontal Centric

Collection

Centric

Piano Centric

Centric Line



# CENTRIC

Home is still the place where we feel best. The Centric ensures that it is also a warm place. Where a suitable central heating comfort ensures that we can optimally enjoy that home at all times. The Centric adds to this another major plus: stylish design.

The radiator is not only very beautifully finished, it is equipped with an intelligent, fixed middle connection, which turns it into a beautifully harmonious whole. And thanks to this middle connection, it can also be mounted very quickly.

<b>Product:</b>	Valve radiator with both a middle connection (underneath) and four side connections with valve insert included. By using the J-bracket it is possible to mirror reverse the radiator, so that the thermostat knob can be mounted on the left or right (with the exception of type 11).
<b>Material:</b>	Steel
<b>Finishing:</b>	Top grille and side panels
<b>Valve:</b>	The included valve insert (without thermostatic valve) is compatible with thermostatic valves M30 x 1,5 mm.
<b>Suspension and accessories:</b>	L-bracket set (type 11): blind plugs, air vent, valve insert M30x1,5, lift-out protection, silencers, plugs and bolts (delivered standard) VDI-compliant in conformity with VDI 6036 (class III) in option J-bracket set (type 21s, 22, 33): blind plugs, air vent, valve insert M30x1,5, plugs and bolts (delivered standard) VDI-compliant (class III) in option
<b>Connections:</b>	2 x ¾" external thread euroconus middle connection, 4 x ½" internal thread side connections
<b>Packaging:</b>	Each radiator is robustly packaged in high-quality cardboard and then shrink-wrapped. A label describes the radiator characteristics: type – height – length.
<b>Guarantee:</b>	10 years, if the general terms and conditions of Brugman are respected.
<b>Painting process:</b>	All radiators are degreased, phosphated, cathodically primed and powder-coated standard in RAL 9016.
<b>Colour:</b>	RAL 9016 (other colours can also be delivered on request: see colour chart)
<b>Heat meters:</b>	Suitable without restrictions for heat meters, both electrical and using the evaporation principle (in accordance with EN834 835).
<b>Maximum operating pressure:</b>	10 bar (tested at 13 bar)
<b>Maximum operating temperature:</b>	120 °C
<b>Conformity:</b>	In accordance with EN442-1: 2014: radiators and convectors
<b>Types:</b>	11   21s   22   33
<b>Heights:</b>	300   400   500   600   700   900 mm
<b>Lengths:</b>	400 => 3000 mm
<b>Depths:</b>	69   73   106   165 mm

TYPE 11



TYPE 21s



TYPE 22



TYPE 33

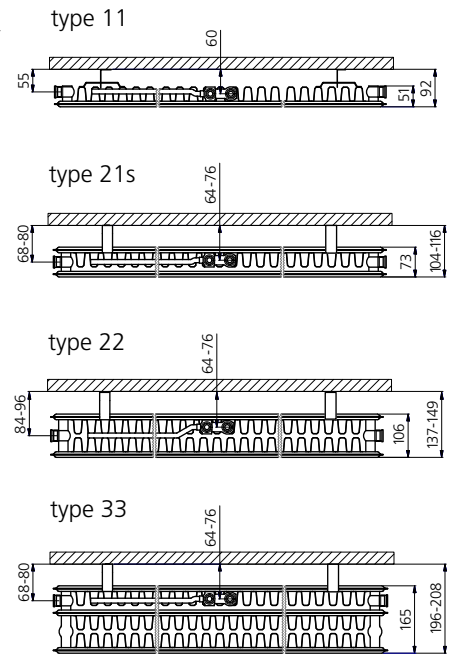


# Centric

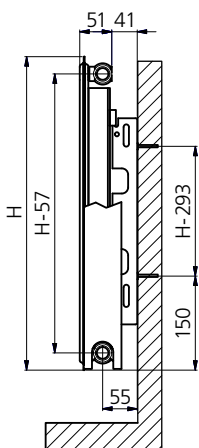
TECHNICAL DATA PER RUNNING METRE AT 75/65/20°C

Height (mm)		Type 11	Type 21s	Type 22	Type 33
300	W		755	942	1334
	kg		13,92	15,65	22,87
	l		4,30	3,55	5,29
	n		1,31	1,31	1,29
400	W	666	953	1202	1700
	kg	11,53	18,00	20,49	30,03
	l	2,49	4,42	4,47	6,71
	n	1,30	1,31	1,32	1,30
500	W	802	1141	1449	2048
	kg	14,05	22,09	25,20	37,22
	l	2,82	5,33	5,38	8,07
	n	1,30	1,32	1,32	1,31
600	W	934	1322	1683	2379
	kg	16,60	26,14	30,04	44,43
	l	3,18	6,22	6,27	9,39
	n	1,30	1,32	1,33	1,32
700	W	1063	1499	1907	2696
	kg	19,16	29,59	34,24	50,97
	l	3,57	7,09	7,14	10,65
	n	1,30	1,32	1,33	1,33
900	W	1312	1841	2326	3297
	kg	24,23	38,06	44,50	65,95
	l	4,42	8,77	8,84	13,02
	n	1,30	1,33	1,34	1,34

## BOTTOM VIEW

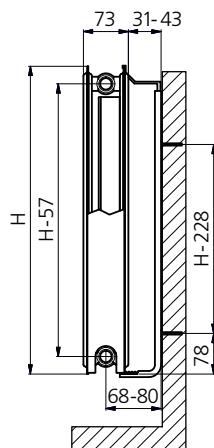


## L-BRACKETS

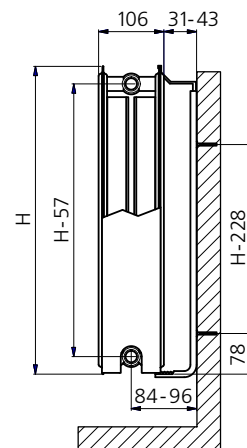


type 11

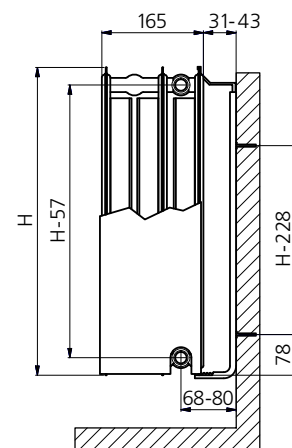
## J-BRACKETS



type 21s



type 22



type 33

## PIANO CENTRIC

The Piano Centric offers an added value for every interior.

A simple, efficient and elegant radiator ... a class apart! Designed to charm you with its looks and performance. The most beautiful example of contemporary comfort in the broadest sense. A CH solution that heats your living space according to your needs and with style. With the intelligent middle connection, it fulfils your every wish.

<b>Product:</b>	Valve radiator with both a middle connection (underneath) and four side connections with valve insert included. By using the J-bracket it is possible to mirror reverse the radiator, so that the thermostat knob can be mounted on the left or right. For this the flat front plate must be dis-mounted and, after reversing the radiator, mounted back on the radiator.
<b>Material:</b>	Steel
<b>Finishing:</b>	Top grille, side panels and flat front plate
<b>Valve:</b>	The included valve insert (without thermostatic valve) is compatible with thermostatic valves M30 x 1,5 mm.
<b>Suspension and accessories:</b>	J-bracket set: blind plugs, air vent, valve insert M30x1,5, plugs and bolts (delivered standard) VDI-compliant (class III) in option
<b>Connections:</b>	2 x ¾" external thread euroconus middle connection, 4 x ½" internal thread side connections
<b>Packaging:</b>	Each radiator is robustly packaged in high-quality cardboard and then shrink-wrapped. A label describes the radiator characteristics: type – height – length.
<b>Guarantee:</b>	10 years, if the general terms and conditions of Brugman are respected.
<b>Painting process:</b>	All radiators are degreased, phosphated, cathoretically primed and powder-coated standard in RAL 9016.
<b>Colour:</b>	RAL 9016 (other colours can also be delivered on request: see colour chart)
<b>Maximum operating pressure:</b>	10 bar (tested at 13 bar)
<b>Maximum operating temperature:</b>	120 °C
<b>Conformity:</b>	In accordance with EN442-1: 2014: radiators and convectors
<b>Types:</b>	21s   22   33
<b>Heights:</b>	300   400   500   600   700   900 mm
<b>Lengths:</b>	400 => 3000 mm
<b>Depths:</b>	74,5   107,5   166,5 mm

TYPE 21s



TYPE 22



TYPE 33

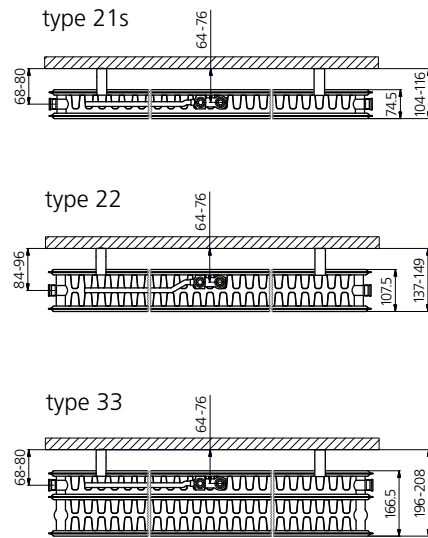


# Centric

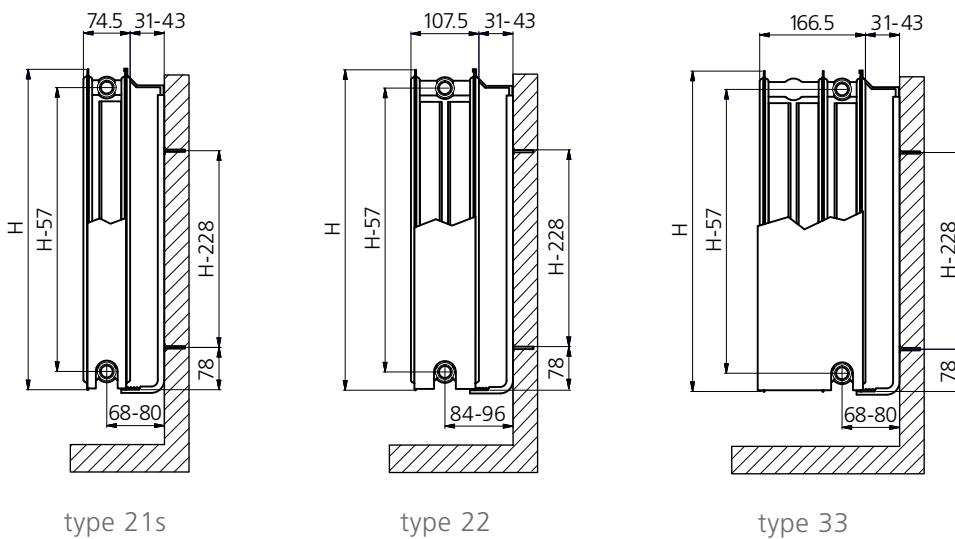
TECHNICAL DATA PER RUNNING METRE AT 75/65/20°C

Height (mm)		Type 21s	Type 22	Type 33
300	W	690	878	1236
	kg	16,15	17,89	25,11
	l	3,50	3,55	5,29
	n	1,28	1,30	1,32
400	W	868	1104	1532
	kg	20,96	23,45	32,99
	l	4,42	4,47	6,71
	n	1,29	1,30	1,32
500	W	1034	1317	1822
	kg	25,77	28,88	40,91
	l	5,33	5,38	8,07
	n	1,29	1,31	1,32
600	W	1192	1521	2110
	kg	30,53	34,43	48,81
	l	6,22	6,27	9,39
	n	1,30	1,31	1,32
700	W	1342	1717	2399
	kg	34,75	39,40	56,14
	l	7,09	7,14	10,65
	n	1,30	1,30	1,32
900	W	1623	2089	2991
	kg	44,59	51,03	72,48
	l	8,77	8,84	13,02
	n	1,29	1,28	1,32

BOTTOM VIEW



## J-BRACKETS





## CENTRIC LINE

The Centric Line offers an added value for every interior. A simple, efficient and elegant radiator ... a class apart! Designed to charm you with its looks and performance.

With its flat front plate with horizontal lines, the Centric Line assures a tight design in every interior. A CH solution that heats your living space according to your needs and with style. With the intelligent middle connection, it fulfils your every wish.

<b>Product:</b>	Valve radiator with both a middle connection (underneath) and four side connections with valve insert included. By using the J-bracket it is possible to mirror reverse the radiator, so that the thermostat knob can be mounted on the left or right. For this the flat front plate must be dismounted and, after reversing the radiator, mounted back on the radiator.
<b>Material:</b>	Steel
<b>Finishing:</b>	Top grille, side panels and flat front plate with horizontal lines
<b>Valve:</b>	The included valve insert (without thermostatic valve) is compatible with thermostatic valves M30 x 1,5 mm.
<b>Suspension and accessories:</b>	J-bracket set: blind plugs, air vent, valve insert M30x1,5, plugs and bolts (delivered standard) VDI-compliant (class III) in option
<b>Connections:</b>	2 x ¾" external thread euroconus middle connection, 4 x ½" internal thread side connections
<b>Packaging:</b>	Each radiator is robustly packaged in high-quality cardboard and then shrink-wrapped. A label describes the radiator characteristics: type – height – length.
<b>Guarantee:</b>	10 years, if the general terms and conditions of Brugman are respected.
<b>Painting process:</b>	All radiators are degreased, phosphated, cataphoretically primed and powder-coated standard in RAL 9016.
<b>Colour:</b>	RAL 9016
<b>Maximum operating pressure:</b>	10 bar (tested at 13 bar)
<b>Maximum operating temperature:</b>	120 °C
<b>Conformity:</b>	In accordance with EN442-1: 2014: radiators and convectors
<b>Types:</b>	21s   22   33
<b>Heights:</b>	300   400   500   600   700   900 mm
<b>Lengths:</b>	400 => 3000 mm
<b>Depths:</b>	74,5   107,5   166,5 mm

TYPE 21s



TYPE 22



TYPE 33

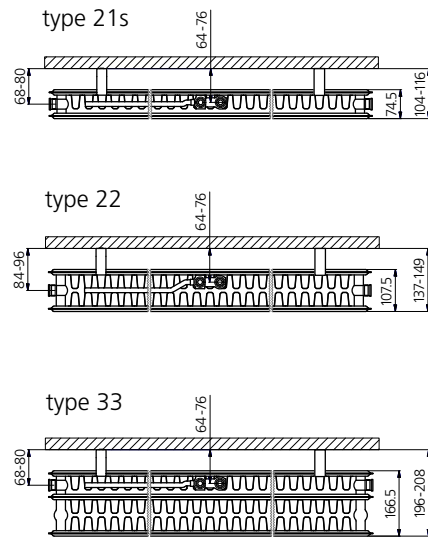


# Centric

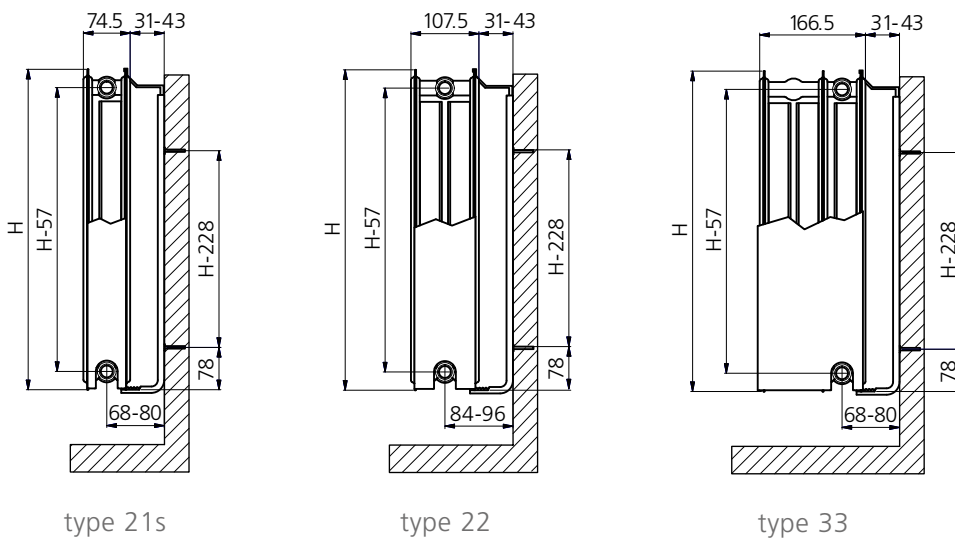
TECHNICAL DATA PER RUNNING METRE AT 75/65/20°C

Height (mm)		Type 21s	Type 22	Type 33
300	W	690	878	1236
	kg	16,15	17,89	25,11
	l	3,50	3,55	5,29
	n	1,28	1,30	1,32
400	W	868	1104	1532
	kg	20,96	23,45	32,99
	l	4,42	4,47	6,71
	n	1,29	1,30	1,32
500	W	1034	1317	1822
	kg	25,77	28,88	40,91
	l	5,33	5,38	8,07
	n	1,29	1,31	1,32
600	W	1192	1521	2110
	kg	30,53	34,43	48,81
	l	6,22	6,27	9,39
	n	1,30	1,31	1,32
700	W	1342	1717	2399
	kg	34,75	39,40	56,14
	l	7,09	7,14	10,65
	n	1,30	1,30	1,32
900	W	1623	2089	2991
	kg	44,59	51,03	72,48
	l	8,77	8,84	13,02
	n	1,29	1,28	1,32

BOTTOM VIEW



## J-BRACKETS

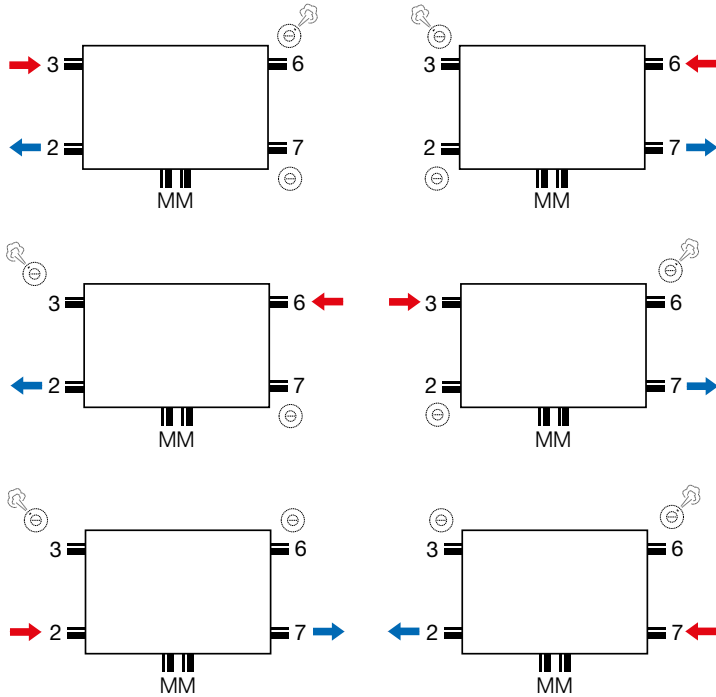
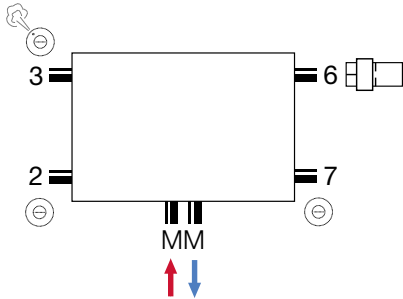


type 21s

type 22

type 33

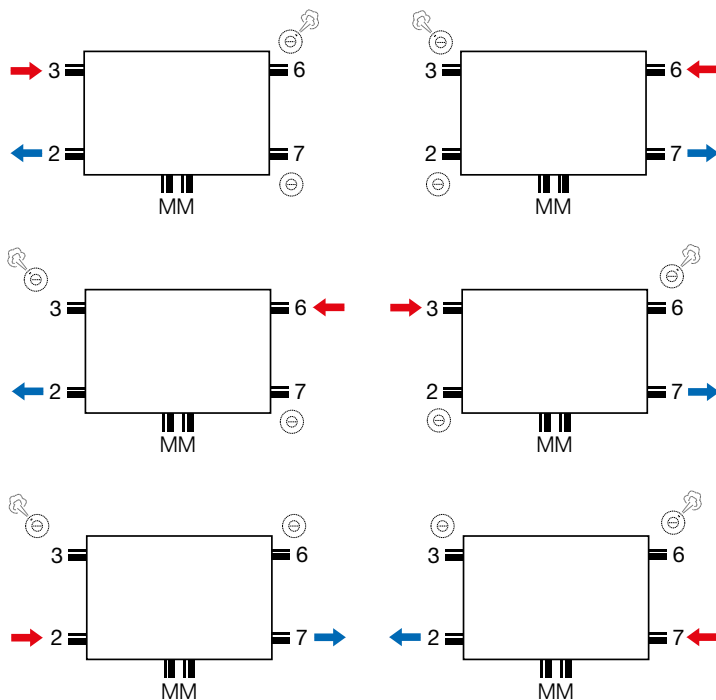
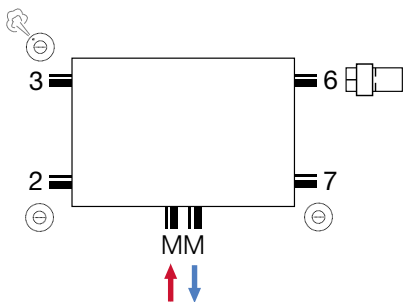
CENTRIC



**Left version valve connection:**  
by turning the radiator  
(with the exception of type 11)

**Attention with type 33:**  
larger distance to the wall

PIANO CENTRIC & CENTRIC LINE



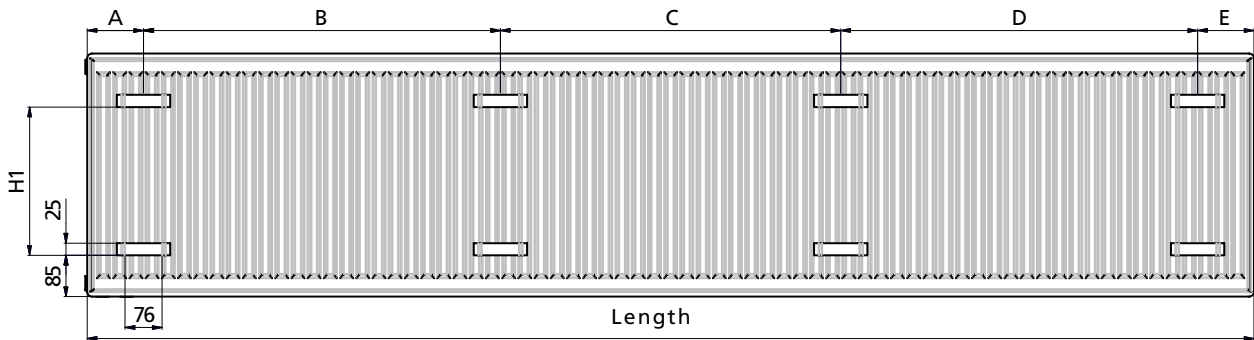
**Left version valve connection:**  
dismount flat front plate,  
reverse radiator, remount front plate.

**Attention with type 33:**  
larger distance to the wall

STRIP PLAN CENTRIC RADIATORS

RADIATOR LENGTH (mm)	POSITION OF THE HANGING STRIPS				
	A	B	C	D	E
400	116	-	-	-	116
500	116	-	-	-	116
600	116	-	-	-	116
700	116	-	-	-	116
800	116	-	-	-	116
900	116	-	-	-	116
1000	116	-	-	-	116
1100	116	-	-	-	116
1200	116	-	-	-	116
1300	116	-	-	-	116
1400	116	-	-	-	116
1600	116	668	-	700	116
1800	116	768	-	800	116
2000	116	868	-	900	116
2200	116	968	-	1000	116
2400	116	734	700	734	116
2600	116	767	834	767	116
2800	116	867	834	867	116
3000	116	934	900	934	116

CENTRIC  
(only type 11)



Height	H1
300	105
400	205
500	305
600	405
700	505
900	705

# Centric

Collection

Piano Centric







**VALVE D2/50**

Connection adaptor 3/4" euroconus (floor).  
One- and two-pipe. Supply and return closable.  
With bypass control, nickel-plated.



Art. Nr.

13911610202

**VALVE E2/50**

Connection adaptor 3/4" euroconus (wall).  
One- and two-pipe. Supply and return closable.  
With bypass control, nickel-plated.



13911610203

**REVERSIBLE CONNECTION ADAPTOR**

Connection adaptor 3/4" euroconus  
(reversible: floor-wall), nickel-plated.



13911600200

**SET A1**

Connection copper tube compression 3/4", 2 connections  
per set. Nickel-plated. Mention diameter when ordering.



13911610112

13911610114

13911610116

Sizes (mm)	CENTRIC	PIANO CENTRIC	CENTRIC LINE
		•	•
	•	•	•
	•	•	•
Ø 12 x 1	•	•	•
Ø 14 x 1	•	•	•
Ø 16 x 1	•	•	•

**SET A3**

Connection PE tube euroconus 3/4", 2 connections per set.  
Nickel-plated. Mention diameter when ordering.



Art. Nr.

Sizes (mm)

CENTRIC

PIANO CENTRIC

CENTRIC LINE

13911610212  
13911610216

Ø 12 x 1,1  
Ø 16 x 1,5

• • •  
• • •

**SET A3**

Connection for multi-layer tube, 2 connections per set.  
Nickel-plated. Mention diameter when ordering.

13911611220  
13911611620  
13911611622

Ø 12 x 2  
Ø 16 x 2  
Ø 16 x 2,2

• • •  
• • •  
• • •

**MANUAL KNOB**

for insert M30 x 1,5

13911650200 (white)

• • •

**THERMOSTAT KNOB**

for valve insert M30 x 1,5

13911630101 (white)  
13911631101 (chrome)

• • •  
• • •

**TOWEL RAIL (white)**

for horizontal panel radiators



13911982040  
13911982050  
13911982060  
13911982080  
13911982100

Length

400 mm  
500 mm  
600 mm  
800 mm  
1000 mm

• •  
• •  
• •  
• •  
• •

**TOWEL RAIL (chrome)**

for horizontal panel radiators



13911983050  
13911983060  
13911983070  
13911983080

Length

500 mm  
600 mm  
700 mm  
800 mm

• •  
• •  
• •  
• •

**SPRAY CAN AND PAINT STICK**



Spray can  
13919020307

Paint stick  
13919020306

• • •

• • •



# Vertical Centric

## Collection

Centric Verti Standard

Centric Verti

Piano Centric Verti

Centric Verti Line



## CENTRIC VERTI STANDARD

The Centric Verti Standard is a vertical panel radiator. It combines superior heat supply with future-oriented technology and a stylish aura. It has all the advantages and characteristics of its horizontal brother: the effective technology, the timeless look and the intelligent middle connection.

But above all, the ability to allow all of these unique characteristics to optimally perform in places with limited wall space.

<b>Product:</b>	Vertical panel radiator with both a middle connection (underneath) and two bottom connections (side). The two top connections are for installing the air vent.
<b>Material:</b>	Steel
<b>Finishing:</b>	Standard
<b>Suspension and accessories:</b>	D30-bracket (delivered standard) Blind plug (3x) and air vent (1x) (delivered with suspension)
<b>Connections:</b>	2 x ¾" external thread euroconus middle connection (underneath), 4 x ½" internal thread connections
<b>Packaging:</b>	Each radiator is robustly packaged in high-quality cardboard. A label describes the radiator characteristics: type – height – length.
<b>Guarantee:</b>	10 years, if the general terms and conditions of Brugman are respected.
<b>Painting process:</b>	All radiators are degreased, phosphated, cathodically primed and powder-coated standard in RAL 9016.
<b>Colour:</b>	RAL 9016 (other colours can also be delivered on request: see colour chart)
<b>Heat meters:</b>	Suitable without restrictions for heat meters, both electrical and using the evaporation principle (in accordance with EN834 835).
<b>Maximum operating pressure:</b>	10 bar (tested at 13 bar)
<b>Maximum operating temperature:</b>	120 °C
<b>Conformity:</b>	In accordance with EN442-1: 2014: radiators and convectors
<b>Types:</b>	10   11
<b>Heights:</b>	1600   1800   2000   2200 mm
<b>Widths:</b>	400   500   600   700   800 mm
<b>Depths:</b>	51 mm

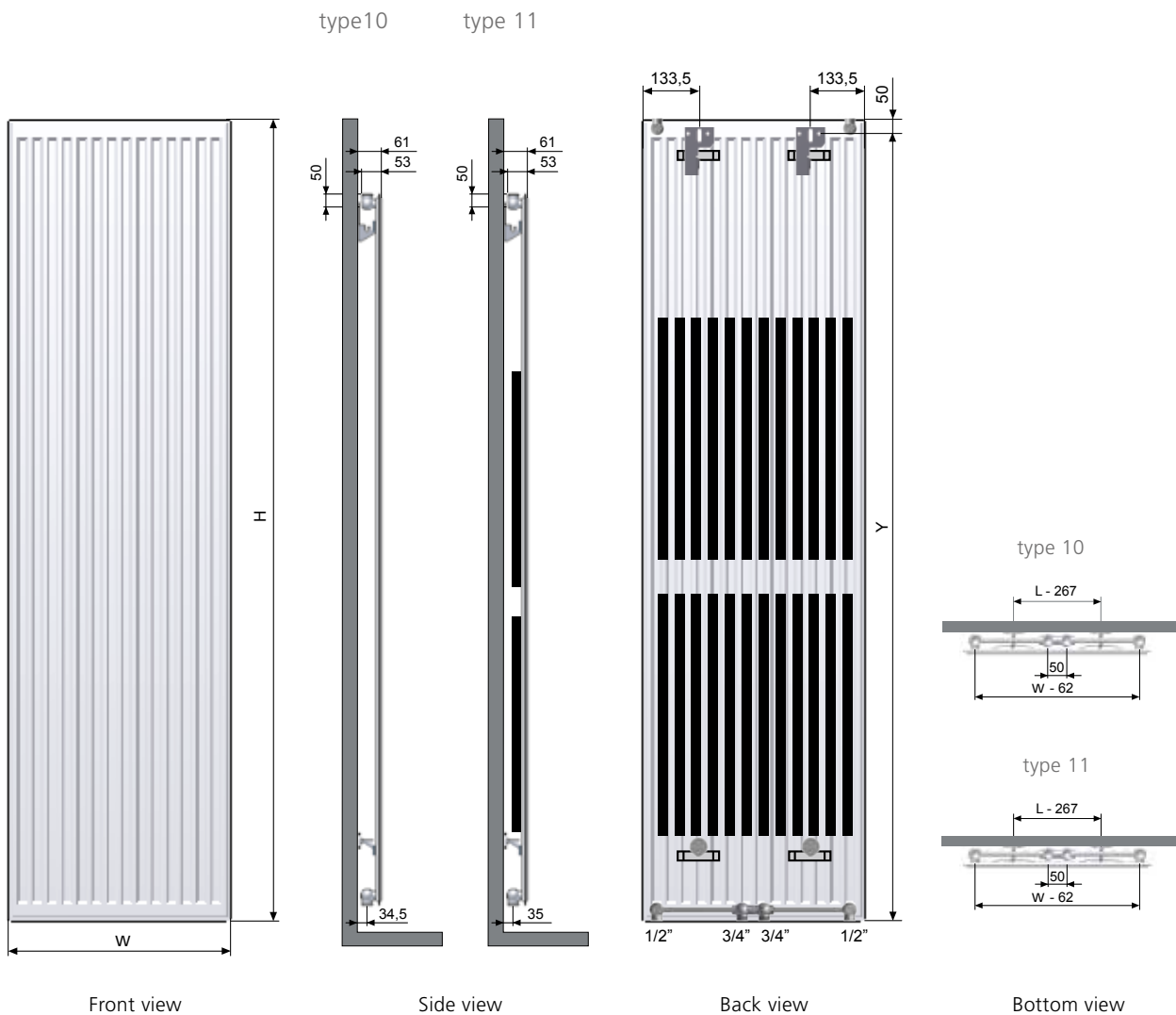


TYPE 10 / 11

# Centric

TECHNICAL DATA PER RUNNING METRE AT 75/65/20°C

Height (mm)		Type 10	Type 11
1600	W	1702	2116
	kg	31,58	40,70
	l	4,01	3,99
	n	1,29	1,35
1800	W	1898	2284
	kg	35,28	44,36
	l	4,49	4,48
	n	1,31	1,35
2000	W	2088	2448
	kg	38,98	48,00
	l	4,98	4,98
	n	1,33	1,35
2200	W	2274	2610
	kg	42,76	52,10
	l	5,46	5,39
	n	1,25	1,35



## CENTRIC VERTI

The Centric Verti is a vertical panel radiator. It combines superior heat supply with future-oriented technology and a stylish aura. It has an effective technology, a timeless look, tightly finished side panels and an intelligent middle connection. But above all, the ability to allow all of these unique characteristics to optimally perform in places with limited wall space.

<b>Product:</b>	Vertical panel radiator with both a middle connection (underneath) and two bottom connections (side). The two top connections are for installing the air vent.
<b>Material:</b>	Steel
<b>Finishing:</b>	Side panels
<b>Suspension and accessories:</b>	J-bracket set: blind plug (3x) and air vent (1x) (delivered standard) VDI-compliant (class III) including
<b>Connections:</b>	2 x ¾" external thread euroconus middle connection (underneath), 4 x ½" internal thread connections
<b>Packaging:</b>	Each radiator is robustly packaged in high-quality cardboard. A label describes the radiator characteristics: type – height – length.
<b>Guarantee:</b>	10 years, if the general terms and conditions of Brugman are respected.
<b>Painting process:</b>	All radiators are degreased, phosphated, cathodically primed and powder-coated standard in RAL 9016.
<b>Colour:</b>	RAL 9016 (other colours can also be delivered on request: see colour chart)
<b>Heat meters:</b>	Suitable without restrictions for heat meters, both electrical and using the evaporation principle (in accordance with EN834 835).
<b>Maximum operating pressure:</b>	10 bar (tested at 13 bar)
<b>Maximum operating temperature:</b>	120 °C
<b>Conformity:</b>	In accordance with EN442-1: 2014: radiators and convectors
<b>Types:</b>	21s   22
<b>Heights:</b>	1600   1800   2000   2200 mm
<b>Widths:</b>	400   500   600   700   800 mm
<b>Depths:</b>	73   106 mm

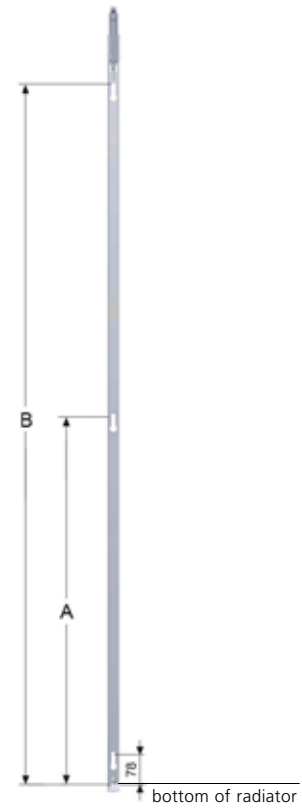


TYPE 21s / 22

# Centric

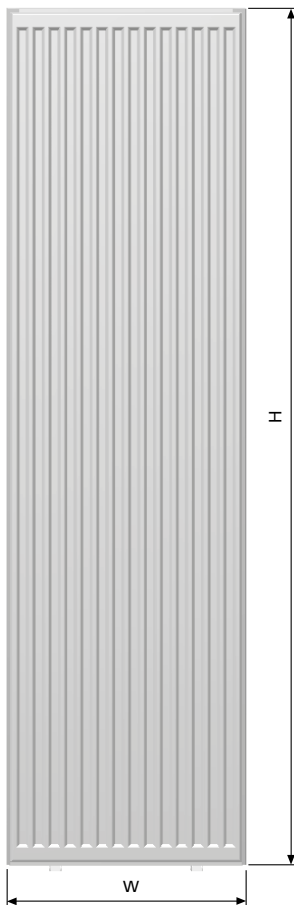
TECHNICAL DATA PER RUNNING METRE AT 75/65/20°C

Height (mm)		Type 21s	Type 22
1600	W	2962	3608
	kg	77,60	86,16
	l	13,38	13,63
	n	1,35	1,38
1800	W	3242	3896
	kg	83,92	94,58
	l	15,13	16,46
	n	1,34	1,36
2000	W	3516	4190
	kg	90,22	103,00
	l	16,88	19,29
	n	1,32	1,33
2200	W	3782	4488
	kg	98,50	111,62
	l	19,38	22,14
	n	1,36	1,45

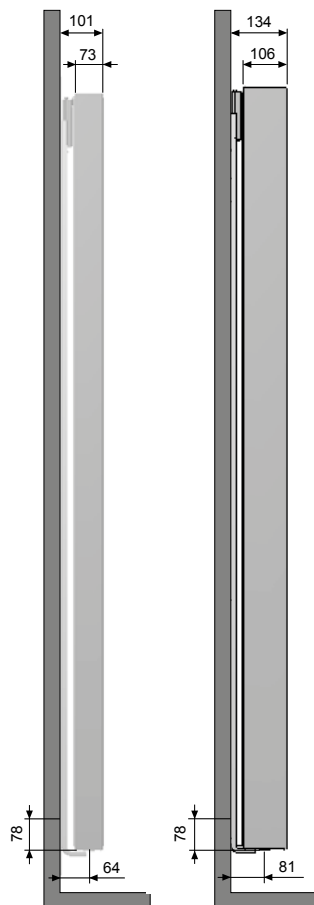


H	A	B
1600	748	1418
1800	848	1618
2000	948	1818
2200	1048	2018

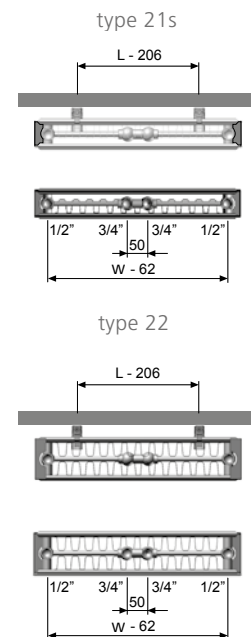
type 21s      type 22



Front view



Side view



Bottom view

## PIANO CENTRIC VERTI

The Piano Centric Verti is a vertical panel radiator with flat front plate. It combines superior heat supply with future-oriented technology and a stylish aura. Through its mix of simplicity, efficiency and aesthetics, further enhanced by the intelligent, fixed middle connection, the panel radiator forms a harmonious whole in every living and working space.

<b>Product:</b>	Vertical panel radiator with both a middle connection (underneath) and two bottom connections (side). The two top connections are for installing the air vent. The radiator is covered with a flat front plate.
<b>Material:</b>	Steel
<b>Finishing:</b>	Side panels and flat front plate
<b>Suspension and accessories:</b>	J-bracket set: blind plug (3x) and air vent (1x) (delivered standard) VDI-compliant (class III) including
<b>Connections:</b>	2 x ¾" external thread euroconus middle connection (underneath), 4 x ½" internal thread connections
<b>Packaging:</b>	Each radiator is robustly packaged in high-quality cardboard. A label describes the radiator characteristics: type – height – length.
<b>Guarantee:</b>	10 years, if the general terms and conditions of Brugman are respected.
<b>Painting process:</b>	All radiators are degreased, phosphated, cathodically primed and powder-coated standard in RAL 9016.
<b>Colour:</b>	RAL 9016 (other colours can also be delivered on request: see colour chart)
<b>Heat meters:</b>	Suitable without restrictions for heat meters, both electrical and using the evaporation principle (in accordance with EN834 835).
<b>Maximum operating pressure:</b>	10 bar (tested at 13 bar)
<b>Maximum operating temperature:</b>	120 °C
<b>Conformity:</b>	In accordance with EN442-1: 2014: radiators and convectors
<b>Types:</b>	21s   22
<b>Heights:</b>	1600   1800   2000   2200 mm
<b>Widths:</b>	400   500   600   700   800 mm
<b>Depths:</b>	73   106 mm

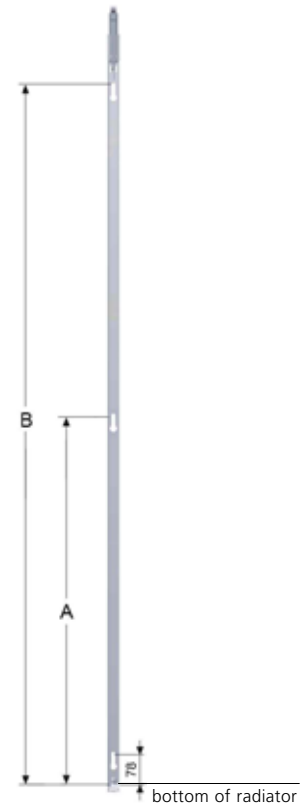


TYPE 21s / 22

# Centric

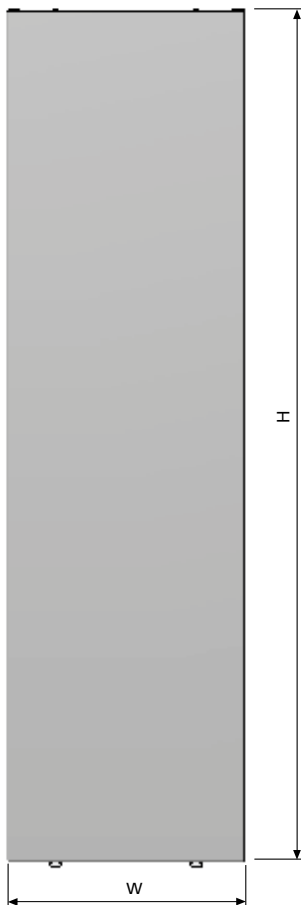
TECHNICAL DATA PER RUNNING METRE AT 75/65/20°C

Height (mm)		Type 21s	Type 22
1600	W	2618	3202
	kg	88,38	99,66
	l	13,38	13,63
	n	1,33	1,40
1800	W	2800	3486
	kg	98,36	109,48
	l	15,13	16,46
	n	1,35	1,44
2000	W	2996	3772
	kg	108,36	119,30
	l	16,88	19,29
	n	1,36	1,48
2200	W	3208	4064
	kg	117,10	130,20
	l	19,38	22,14
	n	1,46	1,35

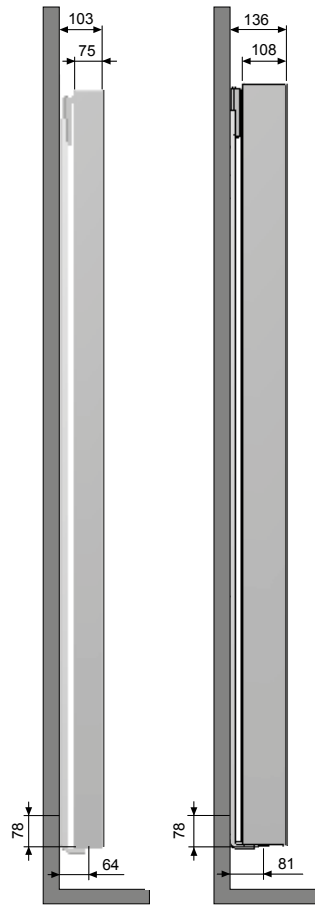


H	A	B
1600	748	1418
1800	848	1618
2000	948	1818
2200	1048	2018

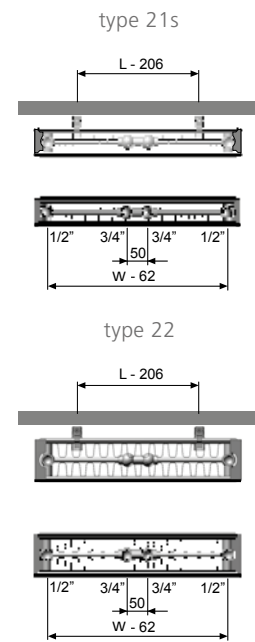
type 21s      type 22



Front view



Side view



Bottom view



## CENTRIC VERTI LINE

The Centric Verti Line is a vertical panel radiator with flat front plate having vertical lines. It combines superior heat supply with future-oriented technology and a stylish aura. Through its mix of simplicity, efficiency and aesthetics, further enhanced by the intelligent, fixed middle connection, the panel radiator forms a harmonious whole in every living and working space.

<b>Product:</b>	Vertical panel radiator with both a middle connection (underneath) and two bottom connections (side). The two top connections are for installing the air vent. The radiator is covered with a flat front plate having vertical lines.
<b>Material:</b>	Steel
<b>Finishing:</b>	Side panels and flat front plate having vertical lines
<b>Suspension and accessories:</b>	J-bracket set: blind plug (3x) and air vent (1x) (delivered standard) VDI-compliant (class III) including
<b>Connections:</b>	2 x ¾" external thread euroconus middle connection (underneath), 4 x ½" internal thread connections
<b>Packaging:</b>	Each radiator is robustly packaged in high-quality cardboard. A label describes the radiator characteristics: type – height – length.
<b>Guarantee:</b>	10 years, if the general terms and conditions of Brugman are respected.
<b>Painting process:</b>	All radiators are degreased, phosphated, cathodically primed and powder-coated standard in RAL 9016.
<b>Colour:</b>	RAL 9016 (other colours can also be delivered on request: see colour chart)
<b>Heat meters:</b>	Suitable without restrictions for heat meters, both electrical and using the evaporation principle (in accordance with EN834 835).
<b>Maximum operating pressure:</b>	10 bar (tested at 13 bar)
<b>Maximum operating temperature:</b>	120 °C
<b>Conformity:</b>	In accordance with EN442-1: 2014: radiators and convectors
<b>Types:</b>	21s   22
<b>Heights:</b>	1600   1800   2000   2200 mm
<b>Widths:</b>	400   500   600   700   800 mm
<b>Depths:</b>	73   106 mm

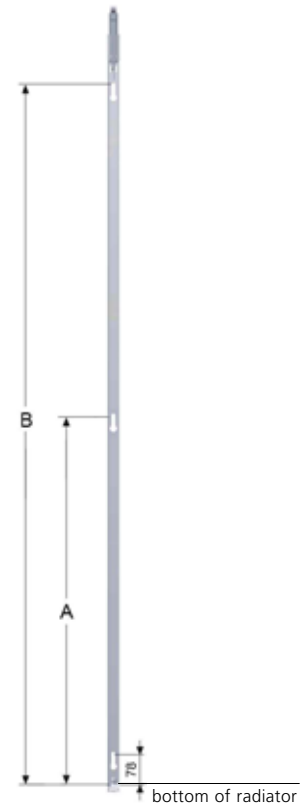


TYPE 21s / 22

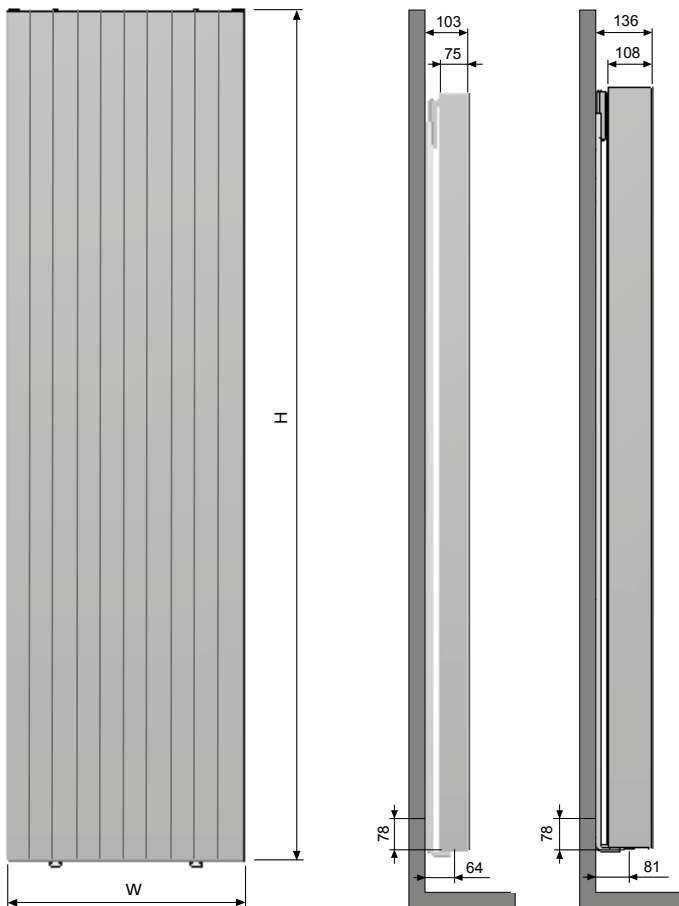
# Centric

TECHNICAL DATA PER RUNNING METRE AT 75/65/20°C

Height (mm)		Type 21s	Type 22
1600	W	2618	3202
	kg	88,38	99,66
	l	13,38	13,63
	n	1,33	1,40
1800	W	2800	3486
	kg	98,36	109,48
	l	15,13	16,46
	n	1,35	1,44
2000	W	2996	3772
	kg	108,36	119,30
	l	16,88	19,29
	n	1,36	1,48
2200	W	3208	4064
	kg	117,10	130,20
	l	19,38	22,14
	n	1,46	1,35



type 21s      type 22

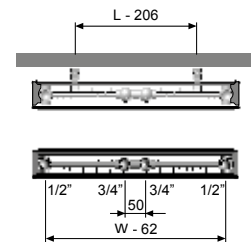


Front view

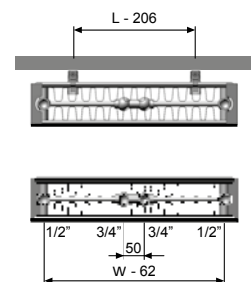
Side view

H	A	B
1600	748	1418
1800	848	1618
2000	948	1818
2200	1048	2018

type 21s

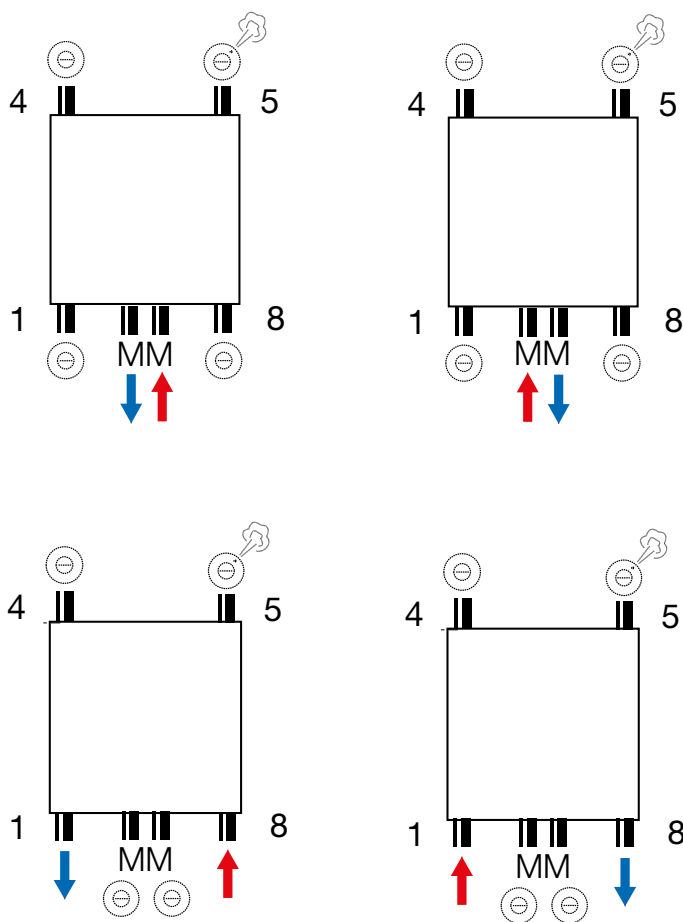


type 22



Bottom view

CENTRIC VERTI STANDARD  
CENTRIC VERTI  
PIANO CENTRIC VERTI  
CENTRIC VERTI LINE



**Comment:** no top connection possible





**Straight connection adaptor with white thermostat knob**

Set consists of: 1 connection adaptor with integrated valve, thermostat knob.

Art. Nr.

13911630147



**Straight connection adaptor with chrome thermostat knob**

Set consists of: 1 connection adaptor with integrated valve, thermostat knob.

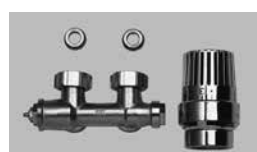
13911631147



**Right-angled connection adaptor with white thermostat knob**

Set consists of: 1 connection adaptor with integrated valve, thermostat knob.

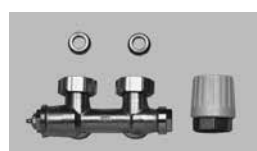
13911630141



**Right-angled connection adaptor with chrome thermostat knob**

Set consists of: 1 connection adaptor with integrated valve, thermostat knob.

13911631141



**Right-angled connection adaptor with manual knob**

Set consists of: 1 connection adaptor with integrated valve and manual knob.

13911630151



**Straight connection adaptor with manual knob**

Set consists of: 1 connection adaptor with integrated valve and manual knob.

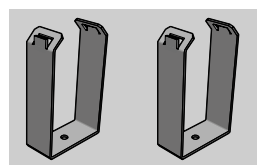
13911630157



**VALVE N3**

Connection adaptor 3/4" euroconus (thermostatic) (reversible: floor-wall).  
One- and two-pipe.  
Supply and return closable.  
Nickel-plated.

13911610144



**FLOOR SUPPORT BRACKET**

Floor support bracket for vertical radiators (to be used as extra support for wall support).

**Type 21s:** (H) 156 x (L) 86 x (D) 44 mm

**Type 22:** (H) 156 x (L) 99 x (D) 44 mm

13911825000

13911825001

	CENTRIC VERTI STANDARD	CENTRIC VERTI	PIANO CENTRIC VERTI	CENTRIC VERTI LINE
13911630147	•	•	•	•
13911631147	•	•	•	•
13911630141	•	•	•	•
13911631141	•	•	•	•
13911630151	•	•	•	•
13911630157	•	•	•	•
13911610144	•	•	•	•
13911825000	•	•	•	•
13911825001	•	•	•	•



**SET A1**  
 Connection copper tube  
 compression 3/4", 2 connections  
 per set.  
 Nickel-plated. Mention diameter  
 when ordering.

Art. Nr.

13911610112  
 13911610114  
 13911610116

Sizes (mm)

Ø 12 x 1  
 Ø 14 x 1  
 Ø 16 x 1

CENTRIC VERTI STANDARD	CENTRIC VERTI	PIANO CENTRIC VERTI	CENTRIC VERTI LINE
------------------------	---------------	---------------------	--------------------



**SET A3**  
 Connection PE tube euroconus  
 3/4", 2 connections per set.  
 Nickel-plated.  
 Mention diameter when ordering.

13911610212  
 13911610216

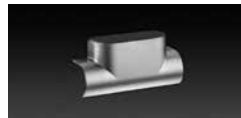
Ø 12 x 1,1  
 Ø 16 x 1,5

**SET A3**  
 Connection for multi-layer tube, 2  
 connections per set. Nickel-plated.  
 Mention diameter when ordering.

13911611220  
 13911611620  
 13911611622

Ø 12 x 2  
 Ø 16 x 2  
 Ø 16 x 2,2

COVER PLATE



Cover plate chrome (right-angled)  
 Cover plate chrome (straight)  
 Cover plate white (right-angled)  
 Cover plate white (straight)

13911630331  
 13911630431  
 13911630330  
 13911630430

Length

TOWEL RAIL WHITE / CHROME

WHITE

13911986040  
 13911986050  
 13911986060  
 13911986070  
 13911986080

400 mm  
 500 mm  
 600 mm  
 700 mm  
 800 mm

•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•



CHROME

13911987040  
 13911987050  
 13911987060  
 13911987070  
 13911987080

400 mm  
 500 mm  
 600 mm  
 700 mm  
 800 mm

•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•

TOWEL RAIL WHITE / CHROME

WHITE

13911984040  
 13911984050  
 13911984060  
 13911984070  
 13911984080

400 mm  
 500 mm  
 600 mm  
 700 mm  
 800 mm

•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•



CHROME

13911985040  
 13911985050  
 13911985060  
 13911985070  
 13911985080

400 mm  
 500 mm  
 600 mm  
 700 mm  
 800 mm

•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•

TOWEL RAIL STAINLESS STEEL

STAINLESS  
 STEEL

13911980040  
 13911980050  
 13911980060  
 13911980070  
 13911980080

400 mm  
 500 mm  
 600 mm  
 700 mm  
 800 mm

•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•







# Mini

## Collection

Mini Compact

Piano Mini 1

Piano Mini 2



# MINI COMPACT

The Mini Compact is a modest radiator with a typical look, high thermal output and graceful aura. The elegant, robust decorative grille and the fine side panels give this model a characteristic appearance. Love the traditional, elegant look of a radiator? Then go for our Mini Compact radiator. Pipes and valve bodies are fully concealed, so that you can optimally enjoy the classic design. The Mini Compact, with a height of only 150 to 200 mm, is ideal as a plinth radiator under high, large windows. The thermal output of this small radiator is on a very high level. The Mini Compact is available in a wall model or free-standing set-up.

<b>Product:</b>	Plinth radiator with both a right bottom connection and four side connections with included valve insert. By using the brackets it is possible to mirror reverse the radiator, so that the thermostat knob can be mounted on the left or right.
<b>Material:</b>	Steel
<b>Finishing:</b>	Top grille and side panels
<b>Suspension and accessories:</b>	Wall or foot bracket (to be ordered separately)
<b>Connections:</b>	2 x ¾" external thread euroconus right bottom connection, 4 x ½" internal thread connections
<b>Packaging:</b>	Each radiator is robustly packaged in high-quality cardboard. A label describes the radiator characteristics: type – height – length.
<b>Guarantee:</b>	10 years, if the general terms and conditions of Brugman are respected.
<b>Painting process:</b>	All radiators are degreased, phosphated, cathodically primed and powder-coated standard in RAL 9016.
<b>Colour:</b>	RAL 9016 (other colours can also be delivered on request: see colour chart)
<b>Heat meters:</b>	Suitable without restrictions for heat meters, both electrical and using the evaporation principle (in accordance with EN834 835).
<b>Maximum operating pressure:</b>	8 bar (tested at 11 bar)
<b>Maximum operating temperature:</b>	120 °C
<b>Conformity:</b>	In accordance with EN442-1: 2014: radiators and convectors
<b>Types:</b>	22   33   34
<b>Heights:</b>	150   200 mm
<b>Lengths:</b>	800 => 3000 mm
<b>Depths:</b>	98   167   184 mm

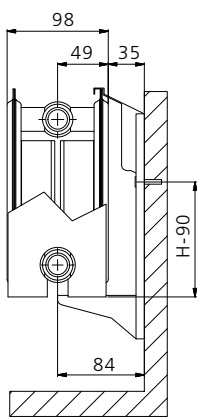


TYPE 22 / 33 / 34

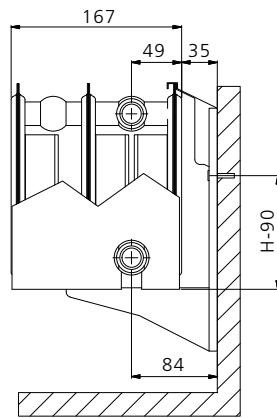
TECHNICAL DATA PER RUNNING METRE AT 75/65/20°C

Height (mm)		Type 22	Type 33	Type 34
150	W	591	844	984
	kg	10,30	16,12	17,58
	l	2,30	3,50	3,60
	n	1,24	1,24	1,24
200	W	715	1029	1205
	kg	13,29	20,51	22,34
	l	3,10	3,50	4,70
	n	1,25	1,26	1,26

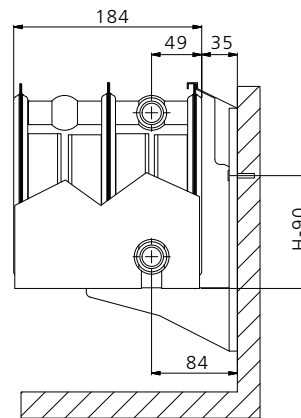
type 22



type 33

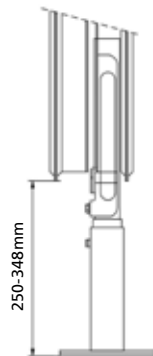
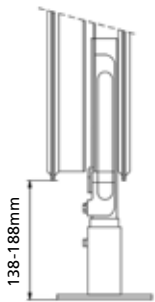


type 34

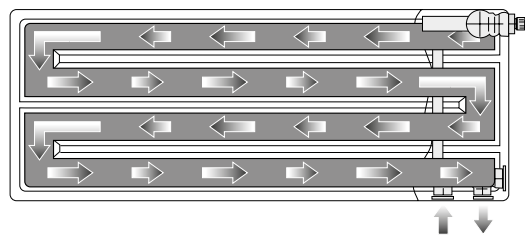


## BRACKETS

Free-standing bracket  
Side view



Forced water flow for a high thermal output



Free-standing bracket  
floor version



Free-standing bracket  
cement screed version



Wall bracket type 22



Wall bracket type 33/34





## PIANO MINI 1

The Piano Mini 1 is a plinth radiator with flat front plate on 1 side. The tight, flat body, the fine, flawless finishing with flat front plate produces a delight for the eyes. It is discreetly present in your interior, but provides generous amounts of heat thanks to the carefully-studied forced water flow. As a result you can be certain of a maximum thermal output, while you cleverly save space in your interior and euros off your energy bill.

The Piano Mini 1 with single flat front plate is available in a wall model or free-standing set-up.

<b>Product:</b>	Plinth radiator with both a right bottom connection and four side connections with included valve insert. By using the brackets it is possible to mirror reverse the radiator, so that the thermostat knob can be mounted on the left or right.
<b>Material:</b>	Steel
<b>Finishing:</b>	Top grille, side panels and flat front plate on 1 side
<b>Suspension and accessories:</b>	Wall or foot bracket (to be ordered separately)
<b>Connections:</b>	2 x ¾" external thread euroconus right bottom connection, 4 x ½" internal thread connections
<b>Packaging:</b>	Each radiator is robustly packaged in high-quality cardboard. A label describes the radiator characteristics: type – height – length.
<b>Guarantee:</b>	10 years, if the general terms and conditions of Brugman are respected.
<b>Painting process:</b>	All radiators are degreased, phosphated, cathodically primed and powder-coated standard in RAL 9016.
<b>Colour:</b>	RAL 9016 (other colours can also be delivered on request: see colour chart)
<b>Heat meters:</b>	Suitable without restrictions for heat meters, both electrical and using the evaporation principle (in accordance with EN834 835).
<b>Maximum operating pressure:</b>	8 bar (tested at 11 bar)
<b>Maximum operating temperature:</b>	120 °C
<b>Conformity:</b>	In accordance with EN442-1: 2014: radiators and convectors
<b>Types:</b>	22   33   34
<b>Heights:</b>	150   200 mm
<b>Lengths:</b>	800 => 3000 mm
<b>Depths:</b>	100   169   186 mm

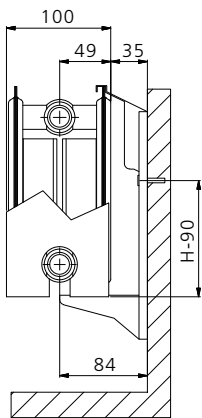


TYPE 22 / 33 / 34

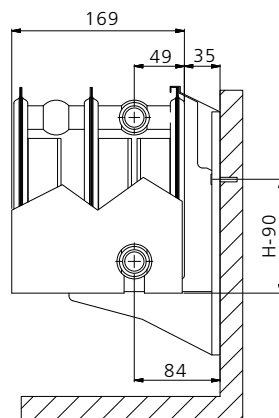
TECHNICAL DATA PER RUNNING METRE AT 75/65/20°C

Height (mm)		Type 22	Type 33	Type 34
150	W	591	848	1014
	kg	12,25	18,25	19,80
	l	2,30	3,50	3,60
	n	1,23	1,24	1,25
200	W	688	1011	1189
	kg	15,85	23,20	25,30
	l	3,10	4,60	4,70
	n	1,25	1,27	1,25

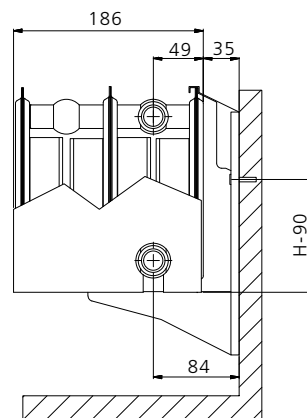
Type 22



Type 33

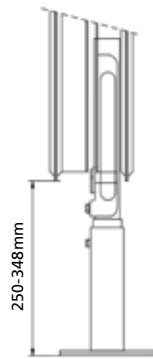
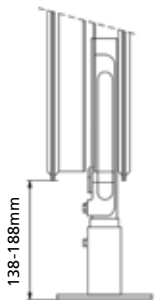


Type 34

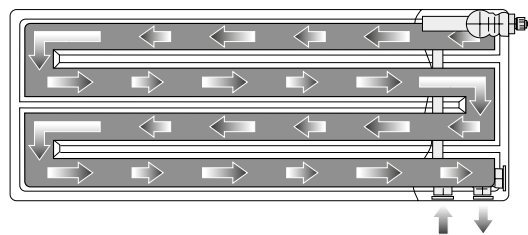


## BRACKETS

Free-standing bracket  
Side view



Forced water flow for a high thermal output



Free-standing bracket  
floor version



Free-standing bracket  
cement screed version



Wall bracket type 22



Wall bracket type 33/34





## PIANO MINI 2

The Piano Mini 2 is a plinth radiator with flat front plate on both sides. The tight, flat body, the fine, flawless finishing with double flat front plate produces a delight for the eyes. It is discreetly present in your interior, but provides generous amounts of heat thanks to the carefully-studied forced water flow. As a result you can be certain of a maximum thermal output, while you cleverly save space in your interior and euros off your energy bill. The Piano Mini 2 with flat front plate on both sides is available in a wall model or free-standing set-up.

<b>Product:</b>	Plinth radiator with both a right bottom connection and four side connections with included valve insert. By using the brackets it is possible to mirror reverse the radiator, so that the thermostat knob can be mounted on the left or right.
<b>Material:</b>	Steel
<b>Finishing:</b>	Top grille, side panels and flat front plate on both sides
<b>Suspension and accessories:</b>	Wall or foot bracket (to be ordered separately)
<b>Connections:</b>	2 x ¾" external thread euroconus right bottom connection, 4 x ½" internal thread connections
<b>Packaging:</b>	Each radiator is robustly packaged in high-quality cardboard. A label describes the radiator characteristics: type – height – length.
<b>Guarantee:</b>	10 years, if the general terms and conditions of Brugman are respected.
<b>Painting process:</b>	All radiators are degreased, phosphated, cataphoretically primed and powder-coated standard in RAL 9016.
<b>Colour:</b>	RAL 9016 (other colours can also be delivered on request: see colour chart)
<b>Heat meters:</b>	Suitable without restrictions for heat meters, both electrical and using the evaporation principle (in accordance with EN834 835).
<b>Maximum operating pressure:</b>	8 bar (tested at 11 bar)
<b>Maximum operating temperature:</b>	120 °C
<b>Conformity:</b>	In accordance with EN442-1: 2014: radiators and convectors
<b>Types:</b>	22   33   34
<b>Heights:</b>	150   200 mm
<b>Lengths:</b>	800 => 3000 mm
<b>Depths:</b>	102   171   188 mm

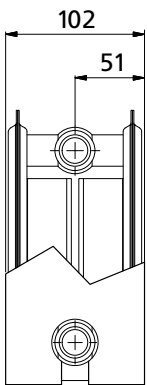


TYPE 22 / 33 / 34

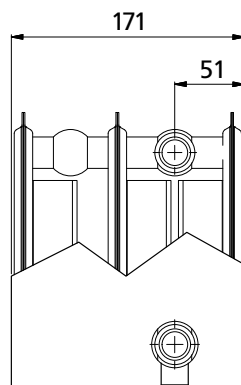
TECHNICAL DATA PER RUNNING METRE AT 75/65/20°C

Height (mm)		Type 22	Type 33	Type 34
150	W	573	827	965
	kg	13,06	18,88	20,33
	l	2,30	3,50	3,60
	n	1,23	1,22	1,22
200	W	684	999	1171
	kg	16,82	24,05	25,88
	l	3,10	4,60	4,70
	n	1,24	1,24	1,25

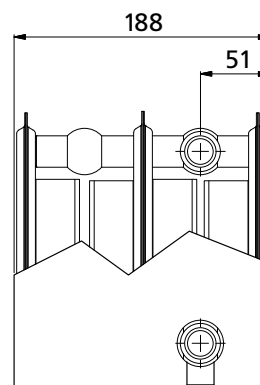
Type 22



Type 33

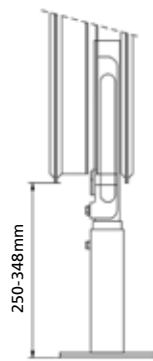
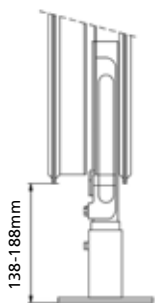


Type 34

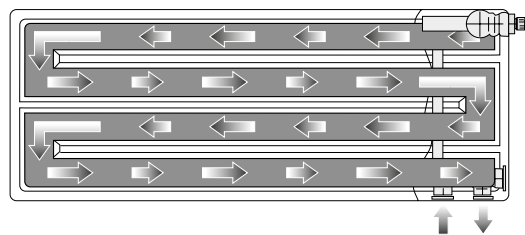


## BRACKETS

Free-standing bracket  
Side view



Forced water flow for a high thermal output



Free-standing bracket  
floor version



Free-standing bracket  
cement screed version



MINI COMPACT  
PIANO MINI 1  
PIANO MINI 2

In part because of the forced water flow, several different connection variants are possible.

The desired connection possibilities must therefore be indicated when an order is placed; please consult the charts on the right in this regard.

The Mini models with the order code E/F and G/H are equipped with a built-in set of pipes for direct mounting from the floor.

The connections are as follows:\*

- C** 1/2" internal thread, possibly suitable for the valve-mounting
- A, B, D** 1/2" internal thread
- G, E** 3/4" external thread (with internal Euroconus) (inlet side)\*
- F, H** 3/4" external thread (with internal Euroconus) (outlet side)\*

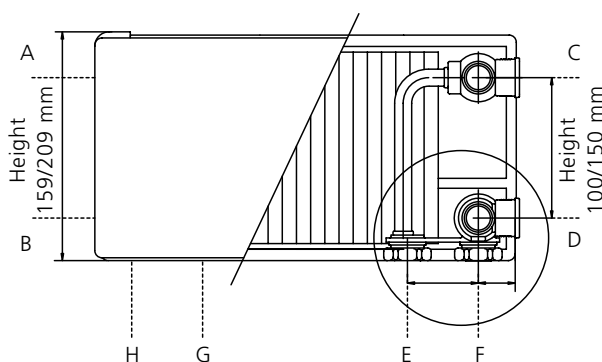
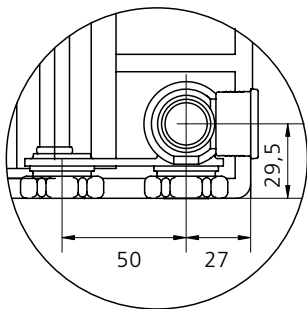
\* Depending on the order code

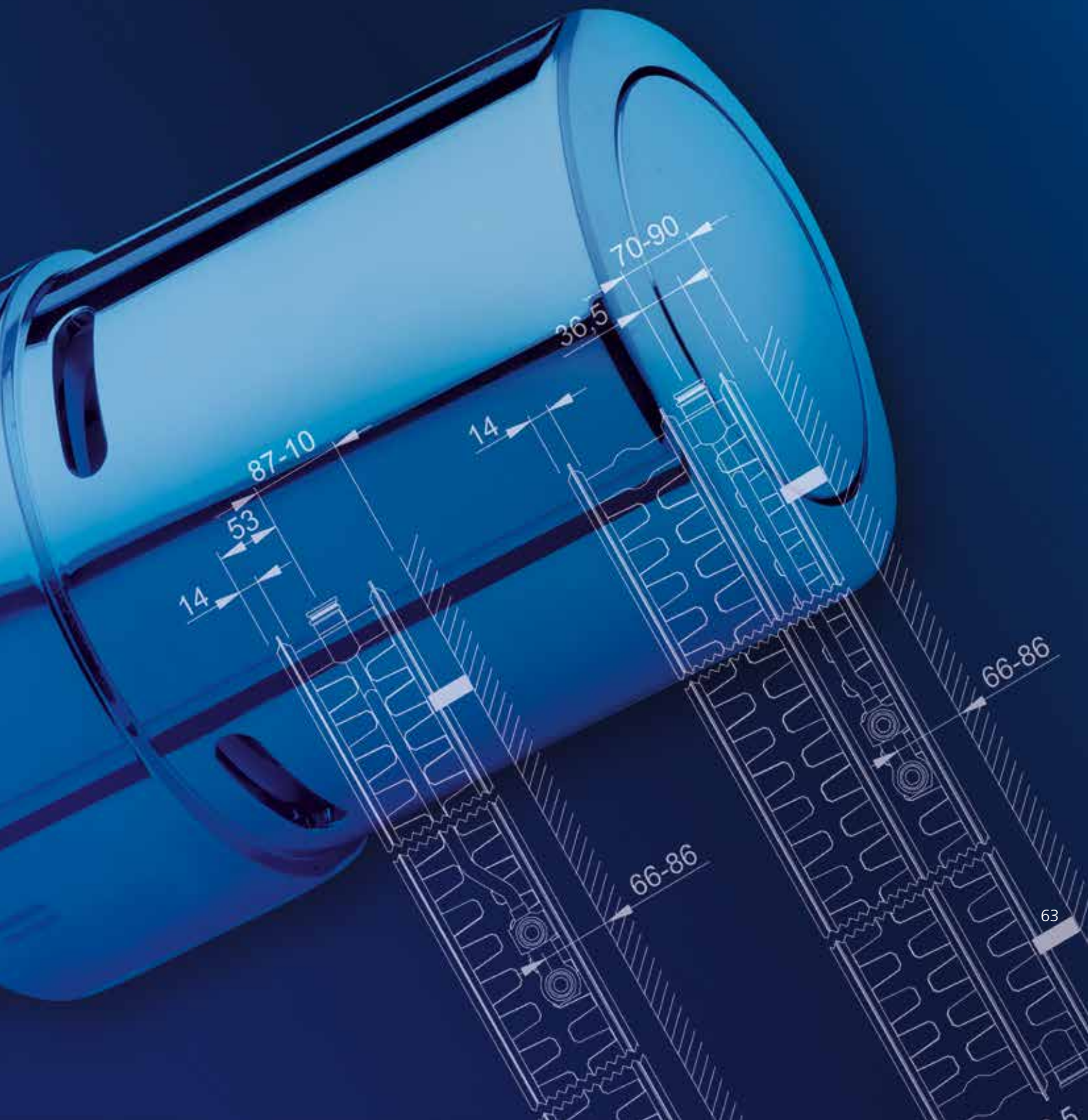
Inlet side	Outlet side	Air vent	Code	CONNECTIONS	
A,C	D,B	-	AB/CD-s (17)		4
A	B	C	A/B-s (18)		4
C	D	A	C/D-s (19)		4

Connection variants for series systems.

Inlet side	Outlet side	Air vent	Code	CONNECTIONS	
A	D	C	A/D (10)		4
C	B	A	C/B (14)		4
A	B	C	A/B (12)		4
C	D	A	C/D (13)		4
B	D	C	B/D (20)		4
D	B	A	D/B (20)		4
E	F	A	E/F (26)		6
G	H	C	G/H (25)		6

Connection variants for parallel systems.





The following brackets are available for the Mini radiator:



For mounting on the floor covering (short type)  
Floor brackets Mini short (H = max. 188 mm)

1 set = 2 pieces (including radiator pipe covers)

**Art. Nr.**

13912015200

Floor support bracket set structure Mini short (H = max. 188 mm)



For mounting in the floor covering (long type)  
Floor brackets Mini long (H = max. 348 mm)

1 set = 2 pieces (including radiator pipe covers)

**Art. Nr.**

13912015201

Floor support bracket set immured Mini long (H = max. 348 mm)



Wall bracket type 22



Wall bracket type 33/34

**Wall brackets  
for Mini Compact and Piano Mini 1**

**150 mm (2 pieces)**

Type 22

Type 33/34

**Art. Nr.**

1391201515022

139120151503334

**200 mm (2 pieces)**

Type 22

Type 33/34

**Art. Nr.**

1391201520022

139120152003334



# Bano

## Collection

Malta (Rondo)

Bano (BM-BMR)



## MALTA (RONDO)

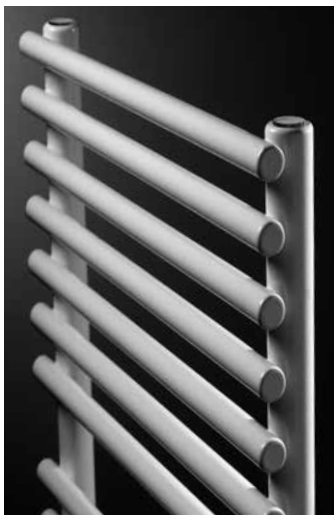
Malta: the bathroom radiator par excellence. This radiator (in both the straight and curved versions) has a characteristically refined look that makes your bathroom complete.

Nowhere in your home is comfort so important as in the bathroom. But not just that. Thanks to its favourable price-quality ratio, the Malta is ideal for your projects.

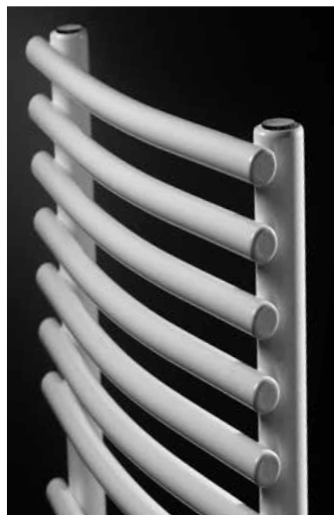
Do you want a straight or curved radiator? There's something for everyone. The Malta Rondo is a curved radiator with a playful effect. Do you prefer classical? Then Brugman's Malta, a straight radiator, is ideal.

<b>Product:</b>	Bathroom radiator with horizontal round tubes (Ø 22 mm) on a round collector (Ø 35 mm). Type Rondo: tubes are curved 10°
<b>Material:</b>	Steel
<b>Suspension and accessories:</b>	Wall bracket, blind plugs and air vent (delivered standard)
<b>Connections:</b>	4 x ½" internal thread connections
<b>Packaging:</b>	Each radiator is robustly packaged in high-quality cardboard and then shrink-wrapped. A label describes the radiator characteristics: type – height – length.
<b>Guarantee:</b>	10 years, if the general terms and conditions of Brugman are respected.
<b>Painting process:</b>	All radiators are degreased, phosphated, cathodically primed and powder-coated standard in RAL 9016.
<b>Colour:</b>	RAL 9016
<b>Maximum operating pressure:</b>	10 bar (tested at 13 bar)
<b>Maximum operating temperature:</b>	120 °C
<b>Conformity:</b>	In accordance with EN442-1: 2014: radiators and convectors
<b>Types:</b>	Straight or curved
<b>Heights:</b>	908   1230   1782 mm
<b>Widths:</b>	600   600   750 mm
<b>Depths:</b>	57 mm

MALTA



MALTA RONDO





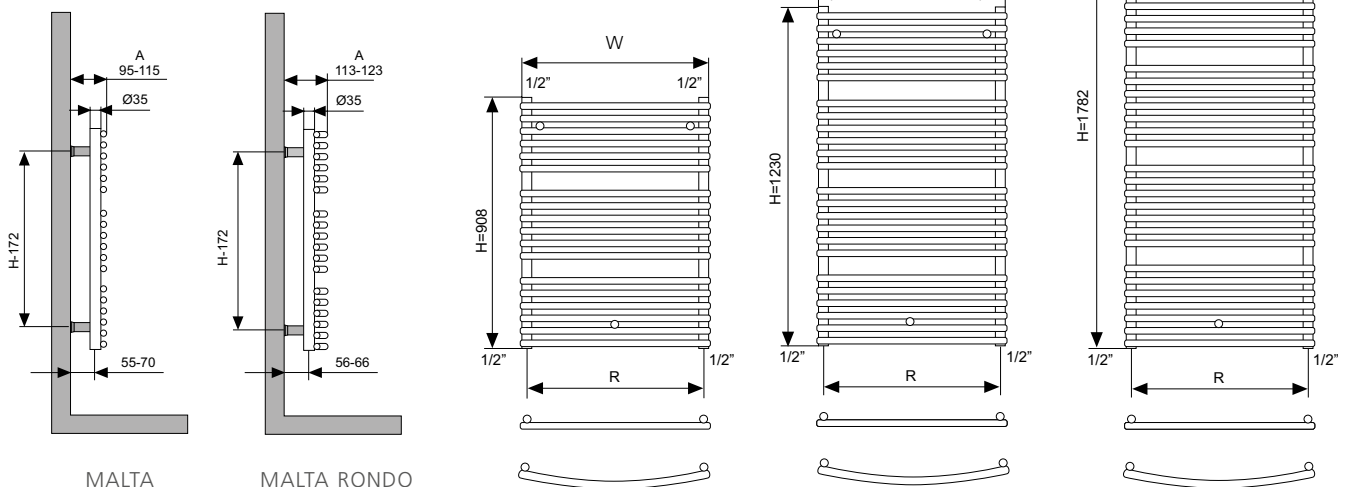
# Bano

## TECHNICAL DATA AT 75/65/20°C

TYPE	Number of tubes	Thermal output (Watt)		n-exponent	Electrical resistance (Watt)
		75/65/20 (φ50K)	55/45/20 (φ30K)		
MALTA (RONDO)	18	475	258	1,18	500
MALTA (RONDO)	18	562	307	1,17	500
MALTA (RONDO)	18	689	380	1,15	750
MALTA (RONDO)	24	628	363	1,06	500
MALTA (RONDO)	24	741	428	1,06	750
MALTA (RONDO)	24	909	526	1,06	750
MALTA (RONDO)	35	908	486	1,21	750
MALTA (RONDO)	35	1072	577	1,20	1000
MALTA (RONDO)	35	1316	711	1,19	1250

Dimensions	H (mm)	W (mm)	R (mm)	A (mm)	Dimensions	H (mm)	W (mm)	R (mm)	A (mm)
MALTA	908	500	460	95-115	MALTA RONDO	908	500	450	113-123
MALTA	908	600	560	95-115	MALTA RONDO	908	600	550	113-123
MALTA	908	750	710	95-115	MALTA RONDO	908	750	700	113-123
MALTA	1230	500	460	95-115	MALTA RONDO	1230	500	450	113-123
MALTA	1230	600	560	95-115	MALTA RONDO	1230	600	550	113-123
MALTA	1230	750	710	95-115	MALTA RONDO	1230	750	700	113-123
MALTA	1782	500	460	95-115	MALTA RONDO	1782	500	450	113-123
MALTA	1782	600	560	95-115	MALTA RONDO	1782	600	550	113-123
MALTA	1782	750	710	95-115	MALTA RONDO	1782	750	700	113-123

All dimensions in mm



## BANO (BM-BMR)

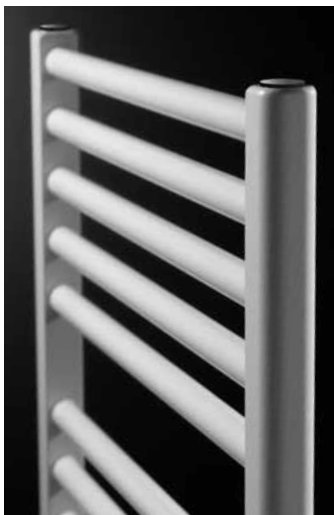
The days when the radiator seemed out of place in your bathroom are long past. The Bano is a strikingly refined radiator that lends atmosphere to your interior. An integral part of your bathroom.

The thin, round tubes of the Bano (in both the straight and curved versions) give your bathroom an elegant aura and plenty of towel space.

A strong, everyday project radiator with a favourable price-quality ratio.

<b>Product:</b>	Bathroom radiator with horizontal round tubes (Ø 22 mm) in a collector with D-profile (34x34 mm). Type BMR: tubes are curved 10°
<b>Material:</b>	Steel
<b>Suspension and accessories:</b>	Wall bracket, blind plugs and air vent (delivered standard)
<b>Connections:</b>	4 x ½" internal thread connections
<b>Packaging:</b>	Each radiator is robustly packaged in high-quality cardboard and then shrink-wrapped. A label describes the radiator characteristics: type – height – length.
<b>Guarantee:</b>	10 years, if the general terms and conditions of Brugman are respected.
<b>Painting process:</b>	All radiators are degreased, phosphated, cathodically primed and powder-coated standard in RAL 9016.
<b>Colour:</b>	RAL 9016
<b>Maximum operating pressure:</b>	10 bar (tested at 13 bar)
<b>Maximum operating temperature:</b>	120 °C
<b>Conformity:</b>	In accordance with EN442-1: 2014: radiators and convectors
<b>Types:</b>	Straight or curved
<b>Heights:</b>	702   1186   1450   1714   1978 mm
<b>Widths:</b>	450   500   600   750 mm
<b>Depths:</b>	34 mm

BM



BMR



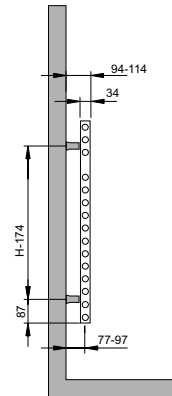
# Bano

## TECHNICAL DATA AT 75/65/20°C

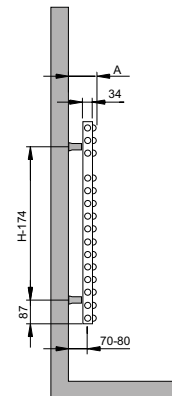
TYPE	Number of tubes	Thermal output (Watt)		n-exponent	Electrical resistance (Watt)
		75/65/20 (φ50K)	55/45/20 (φ30K)		
BM & BMR	15	316	167	1,23	300
BM & BMR	15	347	185	1,22	300
BM & BMR	25	574	309	1,20	500
BM & BMR	25	676	364	1,20	750
BM & BMR	30	698	370	1,23	750
BM & BMR	30	822	435	1,23	750
BM & BMR	35	823	436	1,23	750
BM & BMR	35	970	516	1,22	1000
BM & BMR	35	1184	630	1,22	1250
BM & BMR	40	949	508	1,21	1000
BM & BMR	40	1118	592	1,23	1250
BM & BMR	40	1365	715	1,25	1500

Dimensions	H (mm)	W (mm)	R (mm)	A (mm)
BM	702	450	416	94-114
BM	702	500	466	94-114
BM	1186	500	466	94-114
BM	1186	600	566	94-114
BM	1450	500	466	94-114
BM	1450	600	566	94-114
BM	1714	500	466	94-114
BM	1714	600	566	94-114
BM	1714	750	716	94-114
BM	1978	500	466	94-114
BM	1978	600	566	94-114
BM	1978	750	716	94-114

Dimensions	H (mm)	W (mm)	R (mm)	A (mm)
BMR	702	450	412	119-129
BMR	702	500	461	120-130
BMR	1186	500	461	120-130
BMR	1186	600	561	126-136
BMR	1450	500	461	120-130
BMR	1450	600	561	126-136
BMR	1714	500	461	120-130
BMR	1714	600	561	126-136
BMR	1714	750	710	136-146
BMR	1978	500	461	120-130
BMR	1978	600	561	126-136
BMR	1978	750	710	136-146

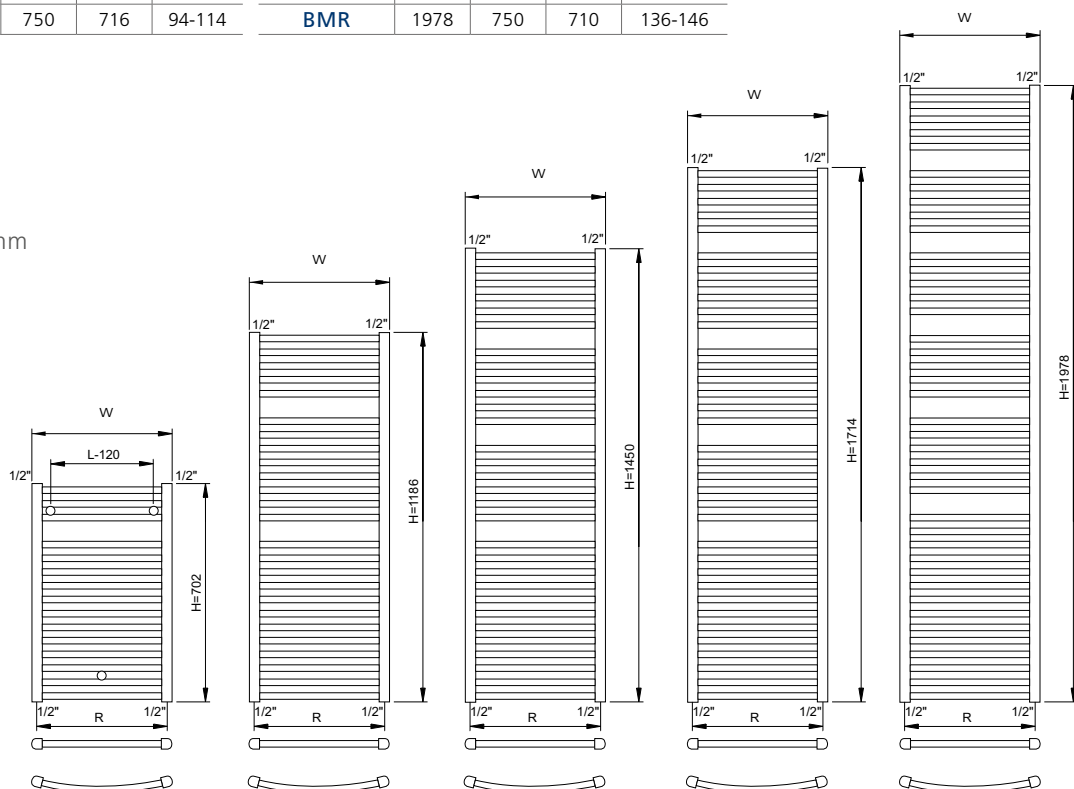


BANO BM



BANO BMR

All dimensions in mm



POSSIBLE CONNECTIONS FOR MIXED RADIATORS

**Connection of the central heating:**

to connection 18 via the T-piece.

**Resistance:**

mounted in the right collector.



**T-piece**

Art. Nr. 5058500

In case of use of an electrical resistance, the connection measures change.



**One-point system**

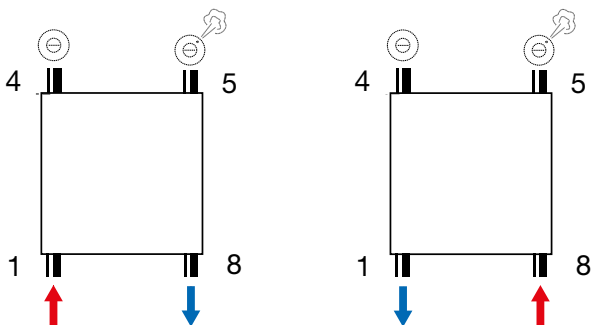
The one-point valve with valve-jet pipe is mounted in the left collector of the radiator according to our instructions. The electrical resistance is mounted in the second collector. Via the return tube, a free expansion to the expansion tank of the central heating installation has to be secured in case of closed radiator valve (in summer).

**Two-pipe system**

The electrical resistance and the radiator valve are mounted according to the diagram in the T-piece which is chrome-plated in case of electrical resistance (extra charge) Ø 1/2". The return connection is of course screwed into the second collector. The resistance can only be connected in the right collector.

Via the return tube, a free expansion to the expansion tank of the central heating installation has to be secured in case of closed radiator valve (in summer).

CONNECTION POSSIBILITIES



**E-VOLVE E-V REGULATION**



Height : 75 mm - Width : 140 mm - Depth : 35 mm

- Operating voltage: 230V AC, 50 Hz
- Weekly and daily programming
- Control of room temperature from 7°C to 30°C
- Boost command: standard 60 minutes
- Auto, Comfort, Eco or frost protection mode
- Set programmes P1, P2 and P3 can be changed
- IPX4 Class II
- Cable length: 0.8 m (preferably use a direct fixed wall outlet)
- Energy-consumption indication
- Indicator of open window detection
- Control can be mounted onto the radiator at the bottom right-hand side

**Remember:**

- Connecting the E-V control: brown = live, blue = neutral and black = command wire (to be used only in France; should be shielded in case of non-use)
- Double insulated devices have no earthing.

**E-VOLVE E-V-RF REGULATION**



Height : 75 mm - Width : 140 mm - Depth : 35 mm

- Operating voltage of the receiver: 230V AC, 50 Hz
- Thermostat: 2x Alkaline 1.5V
- Weekly and daily programming
- Control of room temperature from 7°C to 30°C
- Boost command: standard 60 minutes
- Auto, Comfort, Eco or frost protection mode
- Set programmes P1, P2 and P3 can be changed
- Receiver: IPX4 Class II
- Thermostat: IP30
- Cable length: 0.8 m (preferably use a direct fixed wall outlet)
- Energy-consumption indication
- Indicator of open window detection
- Receiver can be mounted onto the radiator at the bottom right-hand side
- RF communication between the receiver and the thermostat (to be connected)

**Remember:**

- Connecting the E-V-RF RF receiver: brown = live, blue = neutral and black = command wire (to be used only in France; should be shielded in case of non-use)
- Double insulated devices have no earthing
- The thermostat should be connected with the receiver according to the instructions in the manual of the RF thermostat.

**E-VOLVE E-V-RF / RF-THERMOSTAT**



Height : 95 mm - Width : 120 mm - Depth : 25 mm

All thermostats and resistances usable for:  
300 / 500 / 750 / 1000 / 1250 / 1500 Watt



# Classic

Collection  
Column









## COLUMN

The Column is a traditional column radiator, fully custom-made and ideal for all rooms. This radiator is characterised by its nostalgic look. In our search for authenticity, we like to reach back to the past. Traditional designs that help give our home a retro-look and instant atmosphere. It's OK for interiors to be warm and luxurious again. The robust, voluminous columns of the radiators ensure an extra high thermal output.

The serial production of the Column radiator is a unique advantage. Along with our standard dimensions, you can also define the number of columns yourself, up to a maximum of 60. A radiator that fits in every room.

<b>Product:</b>	Horizontal radiator composed of vertical columns with a centre-to-centre distance of 50 mm
<b>Material:</b>	Steel
<b>Suspension and accessories:</b>	Wall or foot bracket
<b>Connections:</b>	4 x 1/2" internal thread connections, (1/1", 3/4", 3/8" or 1/8" connections on request)
<b>Packaging:</b>	Each radiator is robustly packaged in high-quality cardboard and then shrink-wrapped A label describes the radiator characteristics: type – height – length.
<b>Guarantee:</b>	10 years, if the general terms and conditions of Brugman are respected.
<b>Painting process:</b>	All radiators are degreased, phosphated, cathodically primed and powder-coated standard in RAL 9016.
<b>Colour:</b>	RAL 9016 (other colours can also be delivered on request: see colour chart)
<b>Maximum operating pressure:</b>	5 bar (tested at 7 bar)
<b>Maximum operating temperature:</b>	120 °C
<b>Conformity:</b>	In accordance with EN442-1: 2014: radiators and convectors
<b>Type:</b>	Columns with a width of 50 mm
<b>Heights:</b>	300   450   600   1000 mm
<b>Widths:</b>	500 => 3000 mm (as a function of the height)
<b>Depths:</b>	110   160   220   250 mm

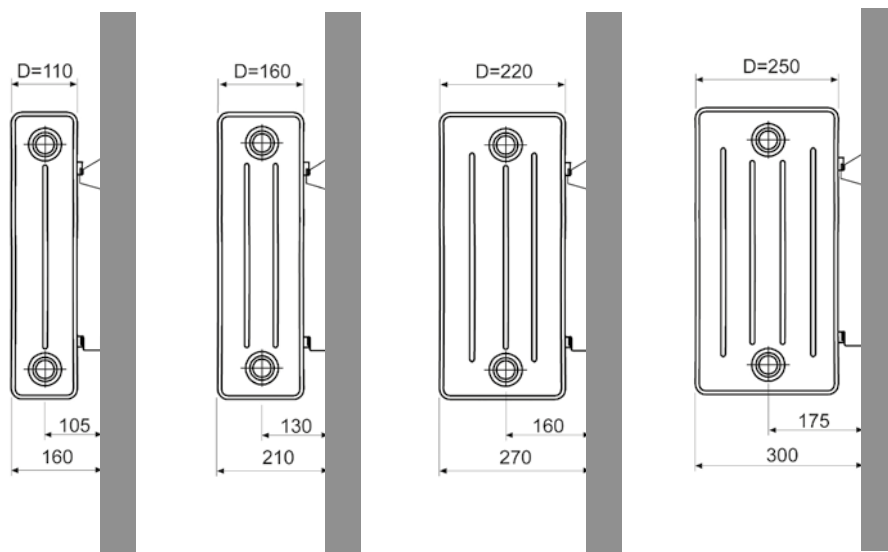
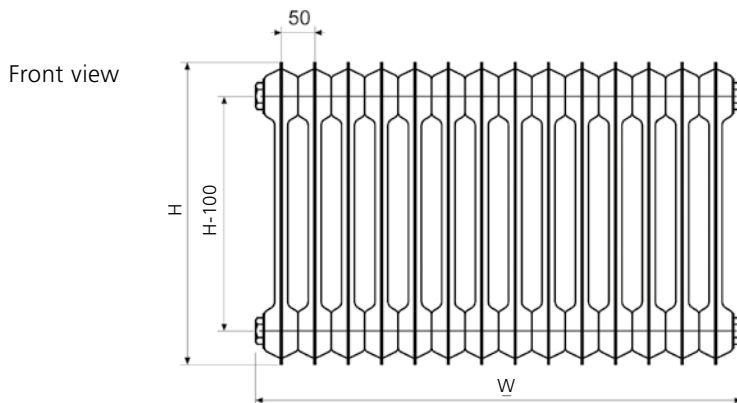


COLUMN

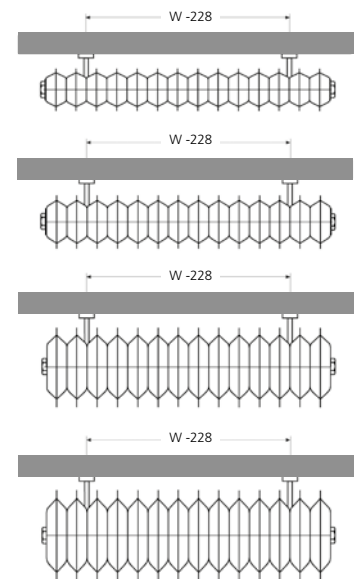
# Classic

## TECHNICAL DATA AT 75/65/20°C PER COLUMN

Height (mm)	Depth (mm)	110	160	220	250
300	Number of columns				5-60
	75/65/20 °C				62
	90/70/20 °C				78
	Weight of column				1,53 Kg
450	Number of columns		5-60	5-60	
	75/65/20 °C		58	75	
	90/70/20 °C		73	94	
	Weight of column		1,49 Kg	2,04 Kg	
600	Number of columns	5-60	5-60	5-50	
	75/65/20 °C	55	73	94	
	90/70/20 °C	69	92	118	
	Weight of column	1,39 Kg	2,01 Kg	2,62 Kg	
1000	Number of columns	5-45	5-30	5-30	
	75/65/20 °C	84	111	145	
	90/70/20 °C	106	140	182	
	Weight of column	2,20 Kg	3,21 Kg	4,56 Kg	



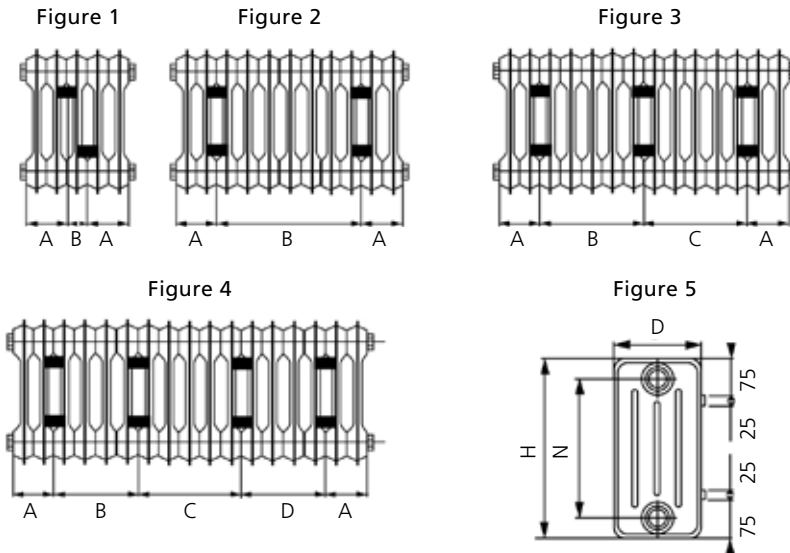
Side view



Top view

# COLUMN

## PLACEMENT OF HANGING STRIPS FOR COLUMN RADIATORS ACCORDING TO FACTORY STANDARD (OPTION)



Front view for figures 1 through 4; side view for figure 5.

Radiators longer than the maximum number of columns that is indicated cannot be delivered by the factory. If longer radiators are desired, then the additional sections must be attached with pipe joints on the worksite by the installer.

Pipe joint connections that are done by the installer are always at his own risk!

As of 25 columns, the radiators are equipped with an internal reinforcement strip. In that case, it is not possible to connect further sections with pipe joints.

If the radiators are ordered with hanging strips, corresponding wall brackets are also delivered.

If the radiators are ordered without hanging strips, support feet for the columns are provided.

## TABLE FOR HANGING STRIP INTERVAL DIMENSIONS FOR COLUMN RADIATORS

Number of columns	Figure	A	B	C	D
5	1	100	50	-	-
6	2	100	100	-	-
7	2	100	150	-	-
8	2	100	200	-	-
9	2	100	250	-	-
10	2	100	300	-	-
11	2	100	350	-	-
12	2	100	400	-	-
13	2	100	450	-	-
14	2	100	500	-	-
15	2	100	550	-	-
16	2	100	600	-	-
17	2	100	650	-	-
18	2	100	700	-	-
19	2	100	750	-	-
20	2	100	800	-	-
21	2	100	850	-	-
22	2	100	900	-	-
23	2	100	950	-	-
24	2	100	1000	-	-
25	2	100	1050	-	-
26	3	100	550	550	-
27	3	100	550	600	-
28	3	100	600	600	-
29	3	100	600	650	-
30	3	100	650	650	-
31	3	100	650	700	-
32	3	100	700	700	-
33	3	100	700	750	-
34	3	100	750	750	-
35	3	100	750	800	-
36	3	100	800	800	-
37	3	100	800	850	-
38	2	100	850	850	-
39	3	100	850	900	-
40	3	100	900	900	-
41	3	100	900	950	-
42	3	100	950	950	-
43	3	100	950	1000	-
44	3	100	1000	1000	-
45	3	100	1000	1050	-
46	3	100	1050	1050	-
47	3	100	1050	1100	-
48	3	100	1100	1100	-
49	3	100	1100	1150	-
50	3	100	1150	1150	-
51	4	100	750	800	800
52	4	100	800	800	800
53	4	100	800	800	850
54	4	100	800	850	850
55	4	100	850	850	850
56	4	100	850	850	900
57	4	100	850	900	900
58	4	100	900	900	900
59	4	100	900	900	950
60	4	100	900	950	950
-	-	-	-	-	-



**Radiator pipe-joint**

(one half is provided with a right-hand thread, and the other half with a left-hand thread)

**Art. Nr.**

13912150005



**Radiator sealing ring**

Sealing ring. 1,5 mm thick for warm and hot water heating systems

**Art. Nr.**

13912150004

(Required: 2 pipe-joints and 2 sealing rings to joint 2 DIN-blocs).

FASTENING MATERIALS



**Suspension brackets: Type LD**

LD brackets are included for column radiators with strips.

(Required: 1 suspension bracket per strip on the top).

**Art. Nr.**

13912140002



**Spacer: Type LW**

LW brackets are included for column radiators with strips.

(Required: 1 spacer per strip on the bottom).

**Art. Nr.**

13912140003

SECTION SUPPORT FOOT

Choice from: strips, with wall attachment and no strips, with feet. Section support feet are included for column radiators without strips. (Required: 2 section support feet for radiators up to and including 25 sections, 3 section support feet up to and including 50 sections and 4 section support feet up to and including 60 sections).



Section support foot 110mm

**Art. Nr.**

13912140110



Section support foot 160mm

**Art. Nr.**

13912140160



Section support foot 220mm

**Art. Nr.**

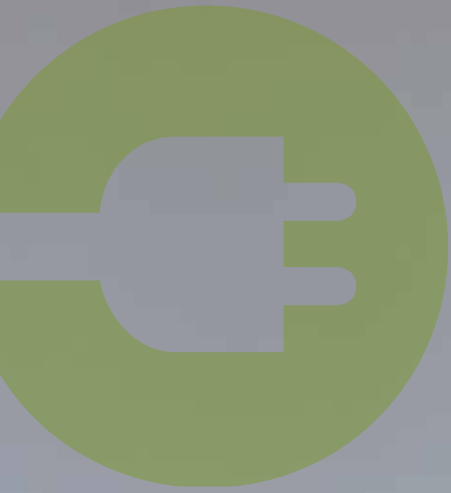
13912140220



Section support foot 250mm

**Art. Nr.**

13912140250



# E-Collection

E-Panel Horizontal Ribbed

E-Panel Horizontal Flat

E-Panel Verti Flat

E-Bano (by Vasco)



## E-PANEL HORZ. RIBBED

Brugman presents the E-Panel Horizontal Ribbed. An electric radiator based on a traditional panel radiator. The E-Panel has a classic design with profiled front panel, robust decorative grille and fine side panels. From now on you can heat stylishly, elegantly and electrically! The E-Panel radiator is very easy to operate and also features the nostalgic look of a traditional radiator.

Electric heating works fast, and also gives you the ability to precisely regulate the consumption by means of an internal temperature sensor. So you always know exactly how warm it is in the house.

<b>Product:</b>	Horizontal panel radiator with the control panel on the right or left-hand side
<b>Material:</b>	Steel
<b>Finishing:</b>	Top grille and side panels
<b>Suspension and accessories:</b>	Locked click bracket and mounting instructions (delivered standard)
<b>Connections:</b>	230VAC, 50 Hz, IPX4 Class II
<b>Packaging:</b>	Each radiator is robustly packaged in high-quality cardboard. A label describes the radiator characteristics: type – height – length.
<b>Guarantee:</b>	2 years on electrical components and 10 years on paint and leak tightness, if the general terms and conditions of Brugman are respected.
<b>Painting process:</b>	All radiators are degreased, phosphated, cathodically primed and powder-coated standard in RAL 9016.
<b>Colour:</b>	RAL 9016 (other colours can also be delivered on request: see colour chart)
<b>Version:</b>	Completely filled with oil, an electrical heating element and a connection cable of 0,8 m
<b>Conformity:</b>	CE
<b>Output:</b>	500   750   1000   1250   1500   1750   2000 W
<b>Heights:</b>	600 mm
<b>Widths:</b>	500 => 1201 mm
<b>Depth:</b>	73 mm

### E-PANEL HORZ. RIBBED

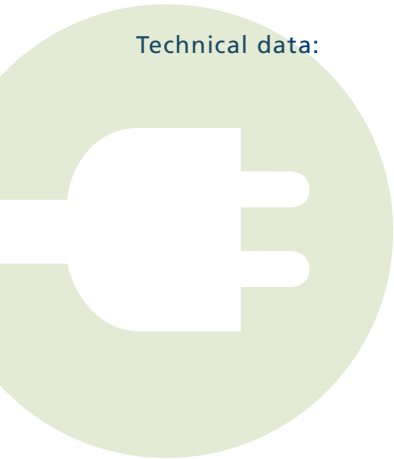




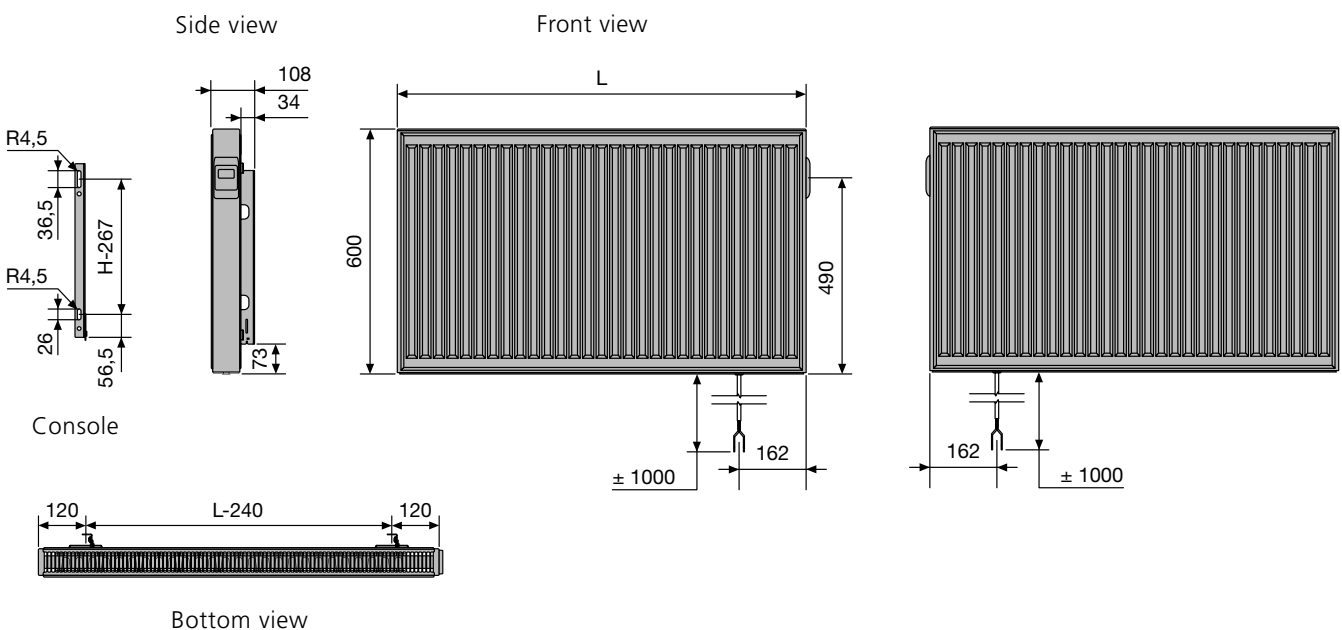
# E-Collection

Type	Width (mm)	Height (mm)	Depth (mm)	Electrical output (Watt)
HORIZONTAL RIBBED	500	600	73	500
	600	600	73	750
	800	600	73	1000
	1000	600	73	1250
	1001	600	73	1500
	1200	600	73	1750
	1201	600	73	2000

## Technical data:



- Operating voltage: 230V AC, 50 Hz
- Weekly and daily programming
- Control of room temperature from 7°C to 30°C
- Auto, Comfort, Eco or frost protection mode
- Set programmes P1, P2 and P3 can be changed
- IPX4 Class II
- Cable length: 0.8 m (preferably use a direct fixed wall outlet)
- Energy-consumption indication
- Indicator of open window detection
- Control mounted onto the radiator at the right or left-hand side (included in the price).
- Connecting the receiver: brown = live, blue = neutral and black = command wire (to be used only in France; should be shielded in case of non-use)
- Double insulated devices do not have earthing



## E-PANEL HORZ. FLAT

The E-Panel with its flat front panel is a little gem. The radiator offers the convenience of electrical operation and the look of a designer radiator.

‘Charming and amazingly attractive’. The E-Panel positively exudes design. It’s the perfect finishing touch for your living room, bedroom or modern office.

Electric heating works fast, and also gives you the ability to precisely regulate the consumption by means of an internal temperature sensor. So you always know exactly how warm it is in the house.

<b>Product:</b>	Horizontal panel radiator with the control panel on the right or left-hand side
<b>Material:</b>	Steel
<b>Finishing:</b>	Top grille, side panels and flat front plate
<b>Suspension and accessories:</b>	Locked click bracket and mounting instructions (delivered standard)
<b>Connections:</b>	230VAC, 50 Hz, IPX4 Class II
<b>Packaging:</b>	Each radiator is robustly packaged in high-quality cardboard. A label describes the radiator characteristics: type – height – length.
<b>Guarantee:</b>	2 years on electrical components and 10 years on paint and leak tightness, if the general terms and conditions of Brugman are respected.
<b>Painting process:</b>	All radiators are degreased, phosphated, cathodically primed and powder-coated standard in RAL 9016.
<b>Colour:</b>	RAL 9016 (other colours can also be delivered on request: see colour chart)
<b>Version:</b>	Completely filled with oil, an electrical heating element and a connection cable of 0,8 m
<b>Conformity:</b>	CE
<b>Output:</b>	500   750   1000   1250   1500   1750   2000 W
<b>Heights:</b>	600 mm
<b>Widths:</b>	500 => 1201 mm
<b>Depth:</b>	73 mm

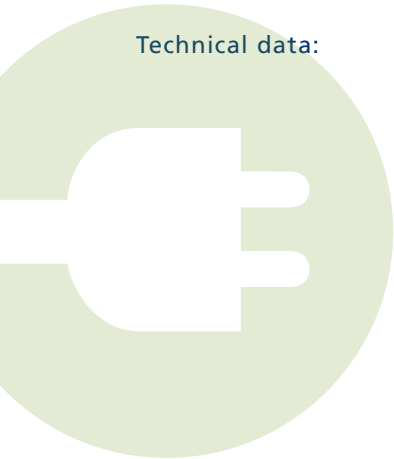
### E-PANEL HORZ. FLAT



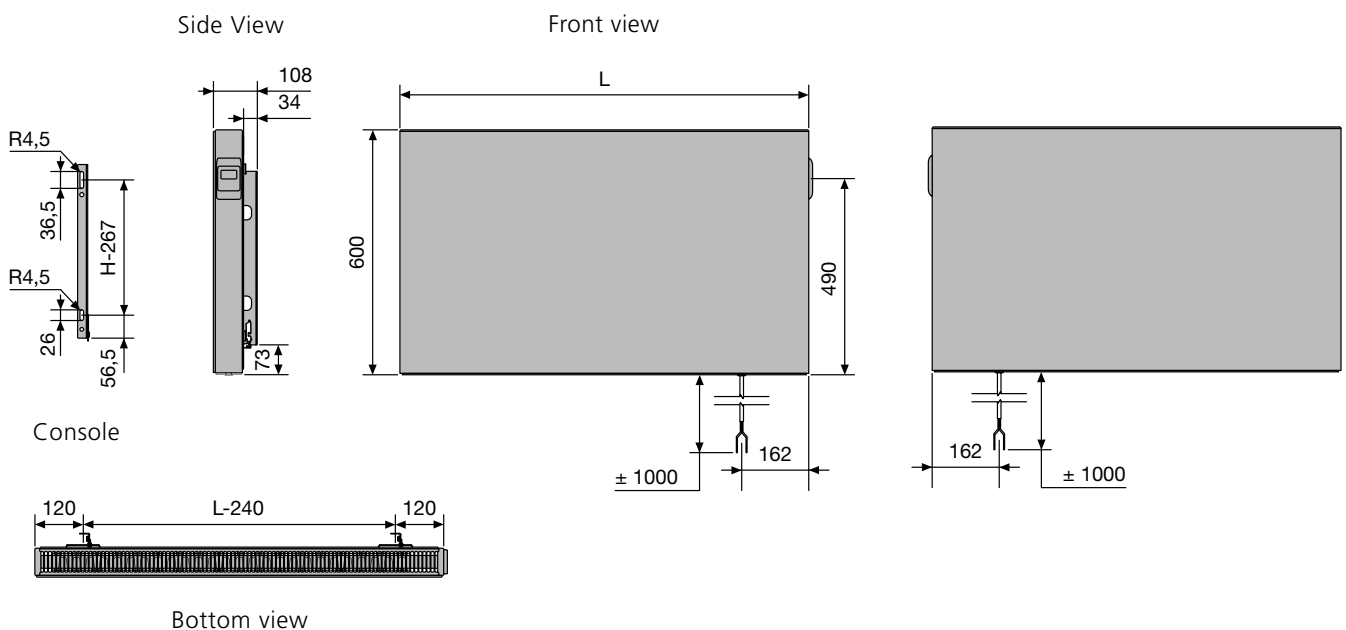
# E-Collection

Type	Width (mm)	Height (mm)	Depth (mm)	Electrical output (Watt)
HORIZONTAL FLAT	500	600	73	500
	600	600	73	750
	800	600	73	1000
	1000	600	73	1250
	1001	600	73	1500
	1200	600	73	1750
	1201	600	73	2000

## Technical data:



- Operating voltage: 230V AC, 50 Hz
- Weekly and daily programming
- Control of room temperature from 7°C to 30°C
- Auto, Comfort, Eco or frost protection mode
- Set programmes P1, P2 and P3 can be changed
- IPX4 Class II
- Cable length: 0.8 m (preferably use a direct fixed wall outlet)
- Energy-consumption indication
- Indicator of open window detection
- Control mounted onto the radiator at the right or left-hand side (included in the price).
- Connecting the receiver: brown = live, blue = neutral and black = command wire (to be used only in France; should be shielded in case of non-use)
- Double insulated devices do not have earthing



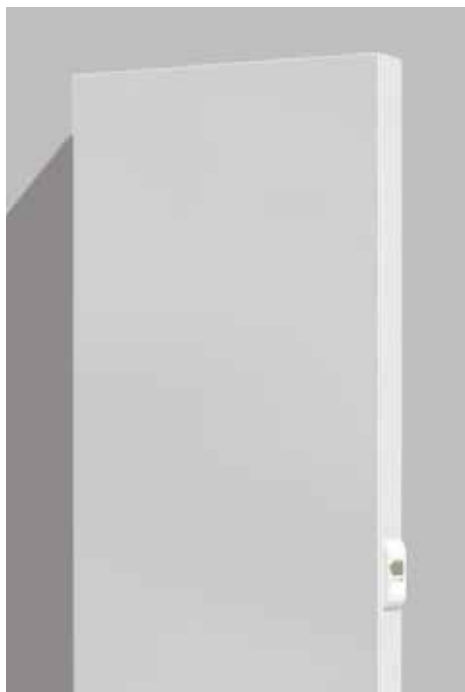
## E-PANEL VERTI FLAT

This vertical, flat electric radiator takes up only a limited amount of space, is very intelligent and has the look of a designer radiator. 'Charming and amazingly attractive'. The E-Panel positively exudes design. It's the perfect finishing touch for your living room, bedroom or modern office.

Electric heating works fast, and also gives you the ability to precisely regulate the consumption by means of an internal temperature sensor. So you always know exactly how warm it is in the house.

<b>Product:</b>	Vertical panel radiator with the control panel on the right or left-hand side
<b>Material:</b>	Steel
<b>Finishing:</b>	Top grille, side panels and flat front plate
<b>Suspension and accessories:</b>	Locked click bracket and mounting instructions (delivered standard)
<b>Connections:</b>	230VAC, 50 Hz, IPX4 Class II
<b>Packaging:</b>	Each radiator is robustly packaged in high-quality cardboard. A label describes the radiator characteristics: type – height – length.
<b>Guarantee:</b>	2 years on electrical components and 10 years on paint and leak tightness, if the general terms and conditions of Brugman are respected.
<b>Painting process:</b>	All radiators are degreased, phosphated, cathodically primed and powder-coated standard in RAL 9016.
<b>Colour:</b>	RAL 9016 (other colours can also be delivered on request: see colour chart)
<b>Version:</b>	Completely filled with oil, an electrical heating element and a connection cable of 0,8 m
<b>Conformity:</b>	CE
<b>Output:</b>	750   1000   1250   1500   1750 W
<b>Heights:</b>	1800   2000 mm
<b>Widths:</b>	400   500   600 mm
<b>Depth:</b>	73 mm

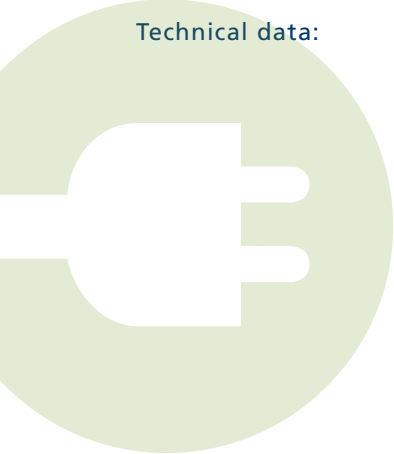
### E-PANEL VERTI FLAT



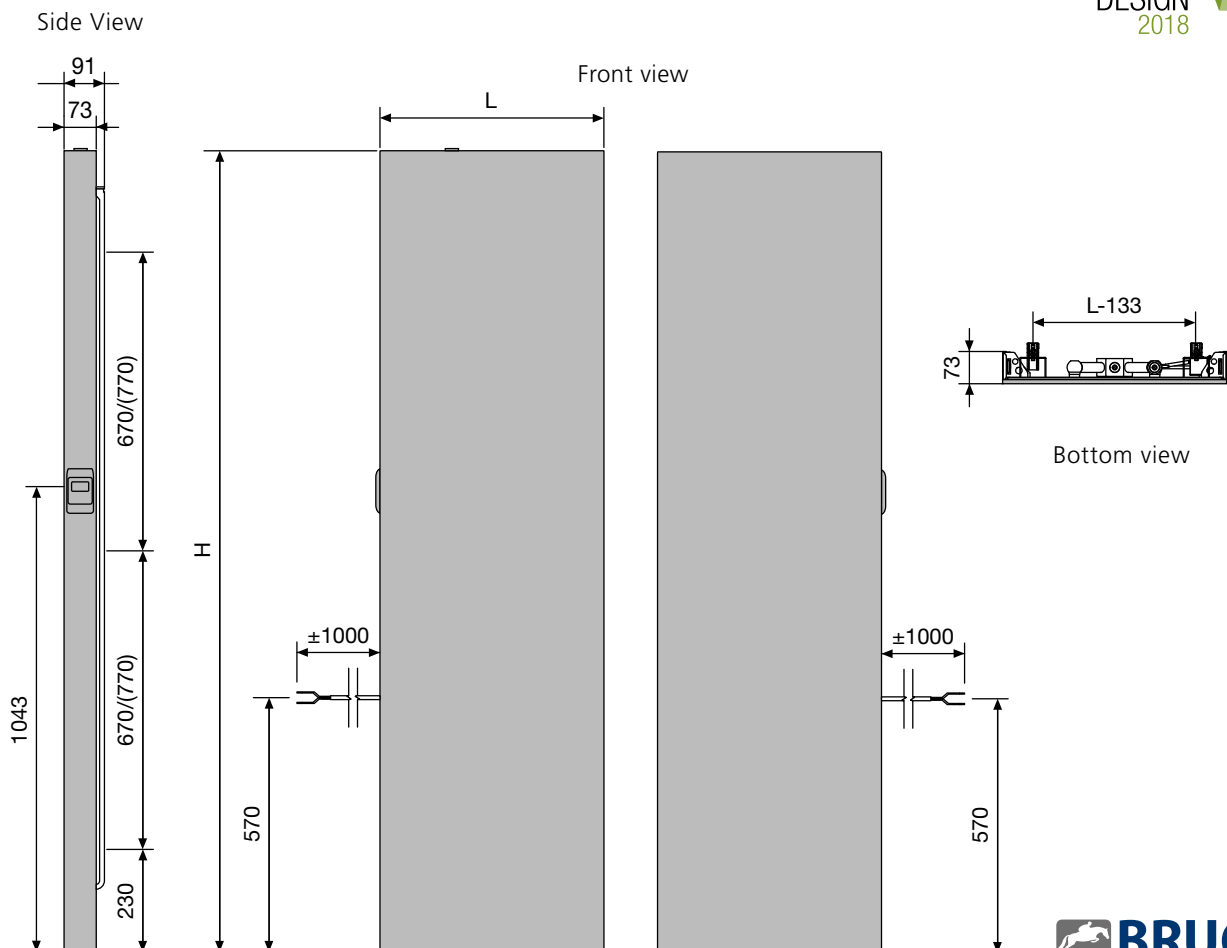
# E-Collection

Type	Width (mm)	Height (mm)	Depth (mm)	Electrical output (Watt)
VERTICAL FLAT	400	1800	73	750
	400	1801	73	1000
	500	1800	73	1250
	500	2000	73	1500
	600	2000	73	1750

## Technical data:



- Operating voltage: 230V AC, 50 Hz
- Weekly and daily programming
- Control of room temperature from 7°C to 30°C
- Auto, Comfort, Eco or frost protection mode
- Set programmes P1, P2 and P3 can be changed
- IPX4 Class II
- Cable length: 0.8 m (preferably use a direct fixed wall outlet)
- Energy-consumption indication
- Indicator of open window detection
- Control mounted onto the radiator at the right or left-hand side (included in the price).
- Connecting the receiver: brown = live, blue = neutral and black = command wire (to be used only in France; should be shielded in case of non-use)
- Double insulated devices do not have earthing



## E-BANO (BY VASCO)

The electric towel radiator E-Bano is the answer to all of today's bathroom comfort requirements. It offers comfort on every level - and it's beautiful to look at.

Together, the horizontal round tubes and the vertical collectors in D-profile form an elegant, balanced whole. As a result it exudes calm and simplicity, which is essential for the feeling of wellness in today's bathrooms.

You can set the temperature quickly and easily, thanks to an individual thermostat. Moreover, it is usefully pre-assembled on the radiator.

<b>Product:</b>	Electric bathroom radiator with horizontal round tubes (Ø 22 mm) in a collector with D-profile (34x34 mm)
<b>Material:</b>	Steel
<b>Suspension and accessories:</b>	Control already pre-assembled and wall bracket (delivered standard)
<b>Packaging:</b>	Each radiator is robustly packaged in high-quality cardboard. A label describes the radiator characteristics: type – height – length.
<b>Guarantee:</b>	2 years on electrical components and 5 years on paint and leak tightness, if the general terms and conditions of Vasco are respected.
<b>Painting process:</b>	All radiators are degreased, phosphated, cataphoretically primed and powder-coated standard in RAL 9016.
<b>Colour:</b>	RAL 9016
<b>Version:</b>	Completely filled with oil. An electrical heating element including control with boost function
<b>Conformity:</b>	CE
<b>Type:</b>	Straight
<b>Output:</b>	500   750   1000   1250 W
<b>Heights:</b>	878   1274   1714   1802 mm
<b>Widths:</b>	500   600 mm
<b>Depth:</b>	34 mm

E-BANO (BY VASCO)

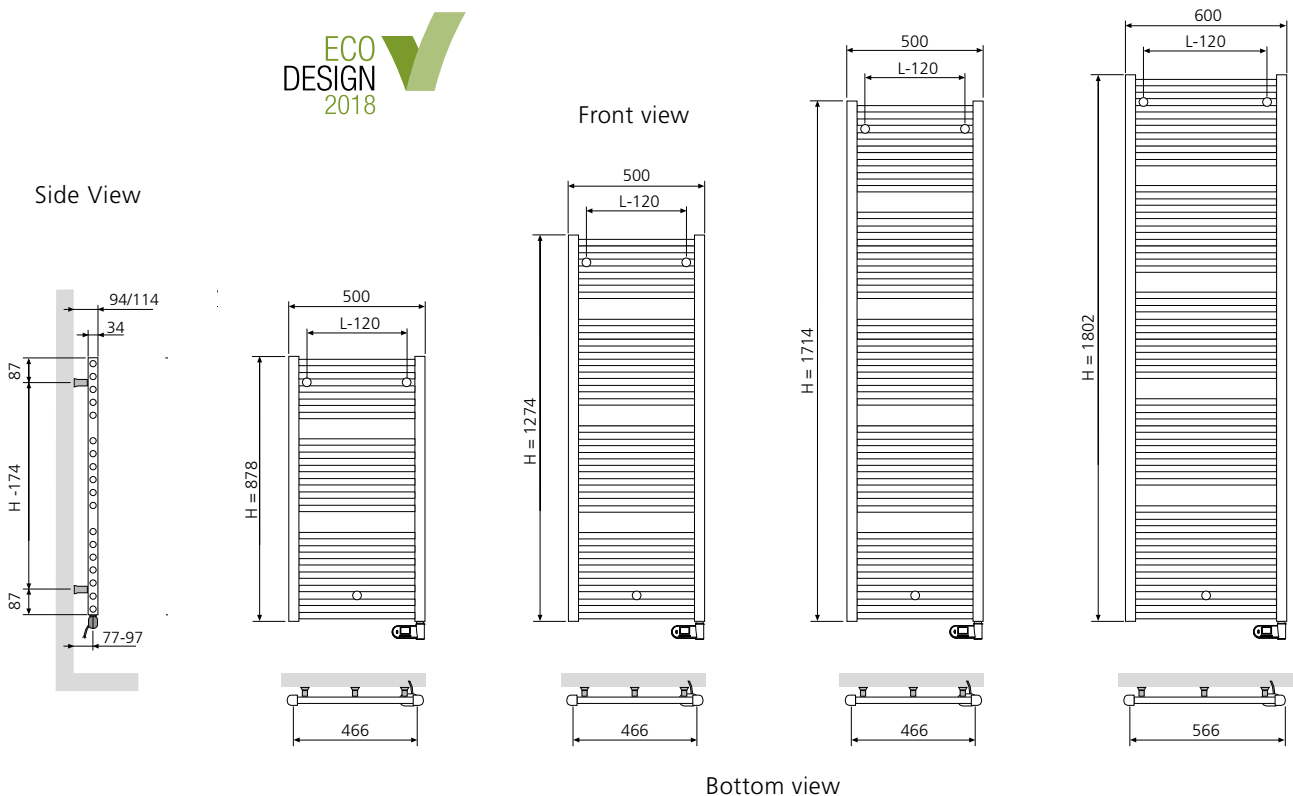
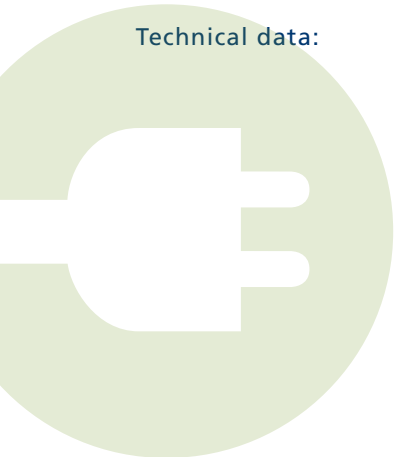


# E-Collection

Type	Number of tubes	Width (mm)	Height (mm)	Electrical output (Watt)
E-BANO	18	500	878	500
	26	500	1274	750
	35	500	1714	1000
	37	600	1802	1250

## Technical data:

- Electrically laser welded (invisible weld seams)
- KTL priming coat, powder coating
- Operating voltage: 230V AC, 50 Hz
- Control of room temperature from 5°C to 30°
- Control of the room temperature according different modes: auto / comfort / eco / frost protection
- Mode auto: 9 preprogrammed weekly programs and 4 that you can set yourself
- BOOST cycle duration: 2 hours
- IP44, Insulation class II
- Power cable: 1,2 m: brown = phase, blue = neutral, black = command wire (to be used only in France; should be shielded in case of non-use). Preferably use a direct fixed wall outlet.
- Indicator of open window detection and self-adjusting temperature control
- Control can be mounted onto the radiator at the bottom right-hand side (included in the price).
- Double insulated devices do not have earthing.
- Dimension control: H = 75mm, W = 155mm, D = 40mm





# PRESSURE LOSSES OF RADIATORS AND VALVE INSERTS

## RADIATOR

### CALCULATION EXAMPLE

Type 22, 600 x 1000 mm  
 Radiator output (75/65/20°C) = 1683 Watt

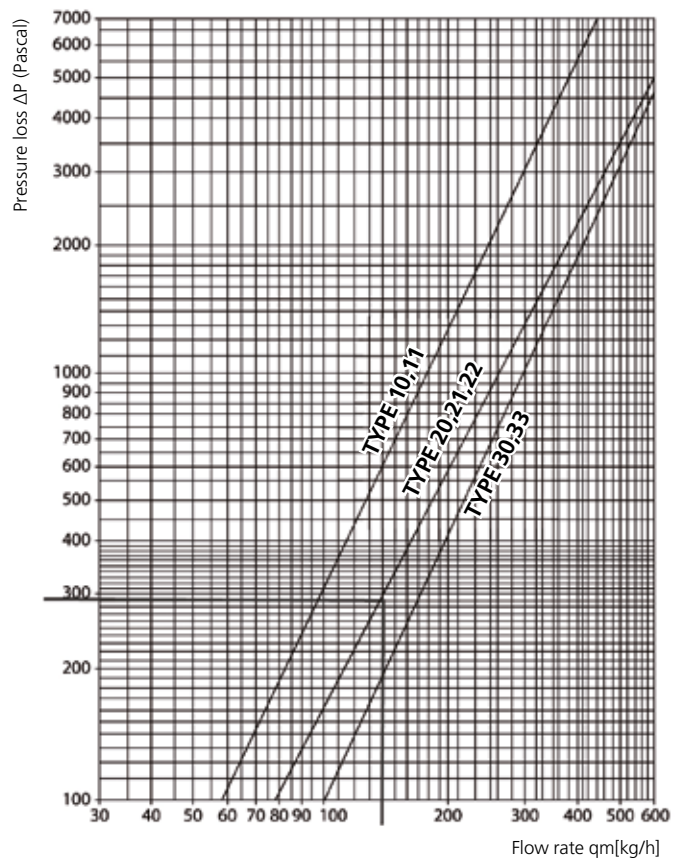
$$T_a = 75\text{ (}^\circ\text{C)} - T_r = 65\text{ (}^\circ\text{C)} - T_i = 20\text{ (}^\circ\text{C)}$$

$$\Delta T = T_a - T_r = 75\text{ (}^\circ\text{C)} - 65\text{ (}^\circ\text{C)} = 10\text{ (}^\circ\text{C)}$$

$$q_m = \frac{P \cdot 3600}{4200 \cdot \Delta T} = \frac{1683 \cdot 3600}{4200 \cdot 10} = 144\text{ (kg/h)}$$

$$\Delta P = 290\text{ Pa}$$

- $T_a$  = Temperature inlet side
- $T_r$  = Temperature outlet side
- $T_i$  = Ambient temperature

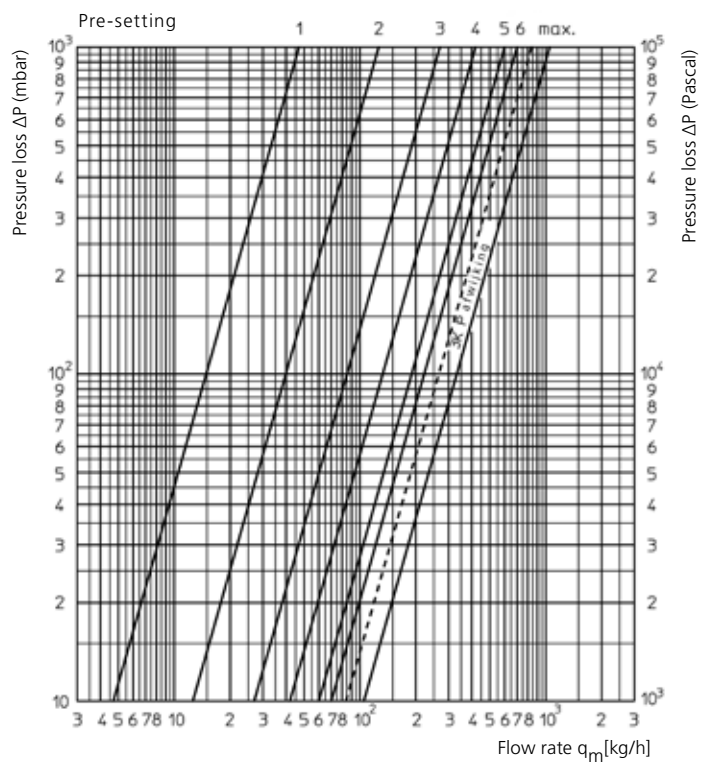


## VALVE INSERT (M30 X 1,5)



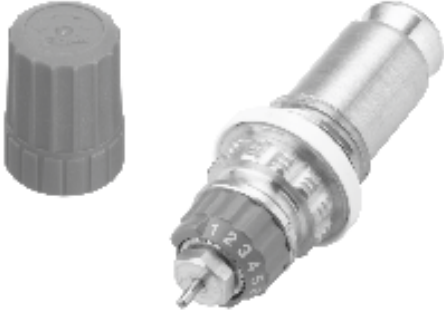
- UNI 6
- PIANO UNI 6
- CENTRIC
- PIANO CENTRIC
- CENTRIC LINE

(INSERTS FOR DISTRICT HEATING ON REQUEST)

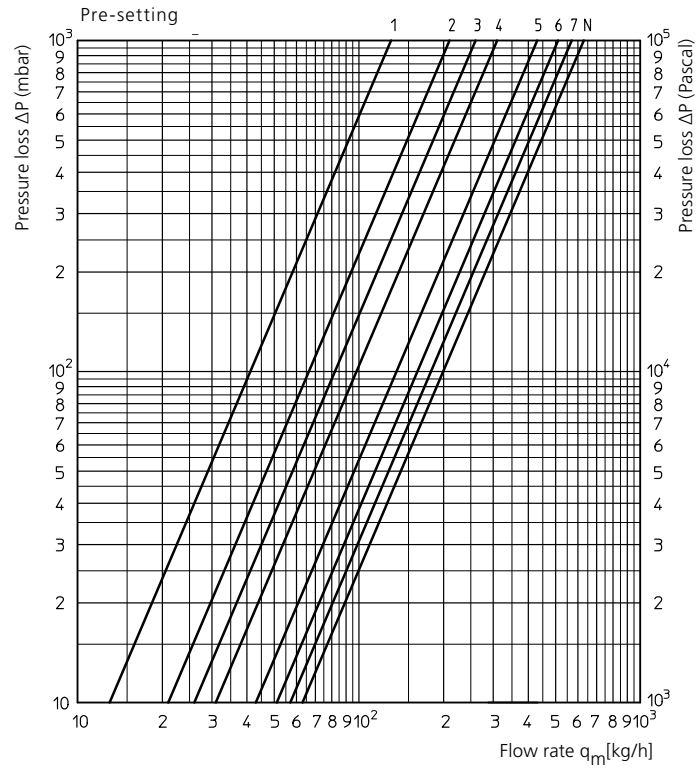


Type	Pre-setting						
	1	2	3	4	5	6	$K_V$
Insert M30 x 1,5	0,05	0,13	0,27	0,42	0,60	0,70	1,50

## VALVE INSERT MINI



MINI COMPACT  
PIANO MINI 1  
PIANO MINI 2



Type	Pre-setting $K_v$							
	1	2	3	4	5	6	7	N
Valve insert MINI	0,13	0,21	0,26	0,31	0,43	0,51	0,57	0,63

# PRESSURE LOSSES OF RADIATORS AND VALVE INSERTS

## PRE-SETTING INSERT CENTRIC

75/65/20°C

Setting valve insert "M30x1,5" at 100mbar pressure loss (factory setting = 6)

Length (mm)	Height 300 (mm)				Height 400 (mm)				Height 500 (mm)			
	type 11	type 21s	type 22	type 33	type 11	type 21s	type 22	type 33	type 11	type 21s	type 22	type 33
400	1	2	2		2	2	2		2	2	2	
500	2	2	2	2	2	2	2	3	2	2	3	3
600	2	2	2	3	2	2	3	3	2	2	3	3
700	2	2	2	3	2	2	3	3	2	3	3	3
800	2	2	3	3	2	3	3	3	2	3	3	4
900	2	2	3	3	2	3	3	4	3	3	3	4
1000	2	3	3	3	2	3	3	4	3	3	3	4
1100	2	3	3	3	3	3	3	4	3	3	4	4
1200	2	3	3	4	3	3	3	4	3	3	4	5
1400	3	3	3	4	3	3	4	5	3	4	4	5
1600	3	3	4	4	3	4	4	5	3	4	5	5
1800	3	3	4	5	3	4	4	5	3	4	5	6
2000	3	4	4	5	3	4	5	6	4	4	5	
2200	3	4	4	5	3	4	5	6	4	5	5	
2400	3	4	4	5	4	4	5	-	4	5	6	
2600	3	4	5	6	4	5	5	-	4	5	6	
2800	3	4	5	6	4	5	6	-	4	5	-	
3000	4	4	5	-	4	5	6	-	5	6	-	

Length (mm)	Height 600 (mm)				Height 700 (mm)				Height 900 (mm)			
	type 11	type 21s	type 22	type 33	type 11	type 21s	type 22	type 33	type 11	type 21s	type 22	type 33
400	2	2	2		2	2	3		2	3	3	
500	2	2	3	3	2	3	3	3	2	3	3	4
600	2	3	3	3	2	3	3	4	3	3	3	4
700	2	3	3	4	3	3	3	4	3	3	4	5
800	3	3	3	4	3	3	4	4	3	3	4	5
900	3	3	4	4	3	3	4	5	3	4	4	5
1000	3	3	4	5	3	4	4	5	3	4	5	5
1100	3	3	4	5	3	4	4	5	3	4	5	6
1200	3	4	4	5	3	4	4	5	4	4	5	-
1400	3	4	5	6	4	4	5	6	4	5	5	-
1600	4	4	5	6	4	5	5	-	4	5	6	-
1800	4	5	5	-	4	5	6	-	5	6	-	-
2000	4	5	6	-	4	5	6	-	5	6	-	-
2200	4	5	6	-	5	5	-					
2400	4	5	-	-	5	6	-					
2600	5	6	-	-	5	-	-					
2800	5	6	-	-	5	-	-					
3000	5	-	-	-	5	-	-					

## PRE-SETTING INSERT PIANO CENTRIC / CENTRIC LINE

75/65/20°C

Setting valve insert "M30x1,5" at 100mbar pressure loss (factory setting = 6)

Length (mm)	Height 300 (mm)			Height 400 (mm)			Height 500 (mm)		
	type 21s	type 22	type 33	type 21s	type 22	type 33	type 21s	type 22	type 33
400	2	2		2	2		2	2	
500	2	2	2	2	2	3	2	2	3
600	2	2	3	2	2	3	2	3	3
700	2	2	3	2	3	3	3	3	3
800	2	3	3	2	3	3	3	3	3
900	2	3	3	3	3	3	3	3	4
1000	2	3	3	3	3	4	3	3	4
1200	3	3	3	3	3	4	3	4	4
1400	3	3	4	3	4	4	3	4	5
1600	3	3	4	3	4	5	4	4	5
1800	3	4	4	4	4	5	4	5	5
2000	4	4	5	4	4	5	4	5	6
2200	4	4	5	4	5	6	4	5	-
2400	4	4	5	4	5	6	5	5	-
2600	4	4	5	4	5	-	5	6	-
2800	4	5	6	5	5	-	5	6	-
3000	4	5	6	5	6	-	5	-	-

Length (mm)	Height 600 (mm)			Height 700 (mm)			Height 900 (mm)		
	type 21s	type 22	type 33	type 21s	type 22	type 33	type 21s	type 22	type 33
400	2	2		2	2		2	3	
500	2	3	3	2	3	3	3	3	4
600	3	3	3	3	3	3	3	3	4
700	3	3	3	3	3	4	3	3	4
800	3	3	4	3	3	4	3	4	5
900	3	3	4	3	4	4	3	4	5
1000	3	4	4	3	4	5	4	4	5
1200	3	4	5	4	4	5	4	5	6
1400	4	4	5	4	5	6	4	5	-
1600	4	5	6	4	5	6	5	6	-
1800	4	5	6	5	5	-	5	6	-
2000	5	5	-	5	6	-	5	-	-
2200	5	6	-	5	6				
2400	5	6	-	5	-				
2600	5	-	-	6	-				
2800	6	-	-	6	-				
3000	6	-	-	-	-				

# CORRECTION TABLE

n=	1,30													
Tr		25	30	35	40	45	50	55	60	65	70	75	80	85
Ta	Ti													
90	12	0,88	0,95	1,01	1,08	1,15	1,21	1,28	1,35	1,42	1,49	1,56	1,64	1,71
90	15	0,81	0,87	0,94	1,00	1,07	1,13	1,20	1,27	1,34	1,41	1,48	1,55	1,62
90	16	0,78	0,85	0,91	0,97	1,04	1,11	1,17	1,24	1,31	1,38	1,45	1,52	1,59
90	18	0,74	0,80	0,86	0,92	0,99	1,05	1,12	1,19	1,25	1,32	1,39	1,46	1,53
90	19	0,71	0,77	0,83	0,90	0,96	1,03	1,09	1,16	1,23	1,29	1,36	1,43	1,51
90	20	0,69	0,75	0,81	0,87	0,94	1,00	1,07	1,13	1,20	1,27	1,34	1,41	1,48
90	22	0,64	0,70	0,76	0,82	0,88	0,95	1,01	1,08	1,15	1,21	1,28	1,35	1,42
90	24	0,59	0,65	0,71	0,77	0,83	0,90	0,96	1,03	1,09	1,16	1,23	1,29	1,36
85	12	0,82	0,88	0,95	1,01	1,08	1,15	1,21	1,28	1,35	1,42	1,49	1,56	
85	15	0,75	0,81	0,87	0,94	1,00	1,07	1,13	1,20	1,27	1,34	1,41	1,48	
85	16	0,72	0,78	0,85	0,91	0,97	1,04	1,11	1,17	1,24	1,31	1,38	1,45	
85	18	0,68	0,74	0,80	0,86	0,92	0,99	1,05	1,12	1,19	1,25	1,32	1,39	
85	19	0,65	0,71	0,77	0,83	0,90	0,96	1,03	1,09	1,16	1,23	1,29	1,36	
85	20	0,63	0,69	0,75	0,81	0,87	0,94	1,00	1,07	1,13	1,20	1,27	1,34	
85	22	0,58	0,64	0,70	0,76	0,82	0,88	0,95	1,01	1,08	1,15	1,21	1,28	
85	24	0,54	0,59	0,65	0,71	0,77	0,83	0,90	0,96	1,03	1,09	1,16	1,23	
80	12	0,76	0,82	0,88	0,95	1,01	1,08	1,15	1,21	1,28	1,35	1,42		
80	15	0,69	0,75	0,81	0,87	0,94	1,00	1,07	1,13	1,20	1,27	1,34		
80	16	0,66	0,72	0,78	0,85	0,91	0,97	1,04	1,11	1,17	1,24	1,31		
80	18	0,62	0,68	0,74	0,80	0,86	0,92	0,99	1,05	1,12	1,19	1,25		
80	19	0,59	0,65	0,71	0,77	0,83	0,90	0,96	1,03	1,09	1,16	1,23		
80	20	0,57	0,63	0,69	0,75	0,81	0,87	0,94	1,00	1,07	1,13	1,20		
80	22	0,53	0,58	0,64	0,70	0,76	0,82	0,88	0,95	1,01	1,08	1,15		
80	24	0,48	0,54	0,59	0,65	0,71	0,77	0,83	0,90	0,96	1,03	1,09		
75	12	0,70	0,76	0,82	0,88	0,95	1,01	1,08	1,15	1,21	1,28			
75	15	0,63	0,69	0,75	0,81	0,87	0,94	1,00	1,07	1,13	1,20			
75	16	0,61	0,66	0,72	0,78	0,85	0,91	0,97	1,04	1,11	1,17			
75	18	0,56	0,62	0,68	0,74	0,80	0,86	0,92	0,99	1,05	1,12			
75	19	0,54	0,59	0,65	0,71	0,77	0,83	0,90	0,96	1,03	1,09			
75	20	0,51	0,57	0,63	0,69	0,75	0,81	0,87	0,94	1,00	1,07			
75	22	0,47	0,53	0,58	0,64	0,70	0,76	0,82	0,88	0,95	1,01			
75	24	0,43	0,48	0,54	0,59	0,65	0,71	0,77	0,83	0,90	0,96			
70	12	0,64	0,70	0,76	0,82	0,88	0,95	1,01	1,08	1,15				
70	15	0,57	0,63	0,69	0,75	0,81	0,87	0,94	1,00	1,07				
70	16	0,55	0,61	0,66	0,72	0,78	0,85	0,91	0,97	1,04				
70	18	0,50	0,56	0,62	0,68	0,74	0,80	0,86	0,92	0,99				
70	19	0,48	0,54	0,59	0,65	0,71	0,77	0,83	0,90	0,96				
70	20	0,46	0,51	0,57	0,63	0,69	0,75	0,81	0,87	0,94				
70	22	0,42	0,47	0,53	0,58	0,64	0,70	0,76	0,82	0,88				
70	24	0,37	0,43	0,48	0,54	0,59	0,65	0,71	0,77	0,83				
65	12	0,58	0,64	0,70	0,76	0,82	0,88	0,95	1,01					
65	15	0,51	0,57	0,63	0,69	0,75	0,81	0,87	0,94					
65	16	0,49	0,55	0,61	0,66	0,72	0,78	0,85	0,91					
65	18	0,45	0,50	0,56	0,62	0,68	0,74	0,80	0,86					
65	19	0,43	0,48	0,54	0,59	0,65	0,71	0,77	0,83					
65	20	0,41	0,46	0,51	0,57	0,63	0,69	0,75	0,81					
65	22	0,36	0,42	0,47	0,53	0,58	0,64	0,70	0,76					
65	24	0,32	0,37	0,43	0,48	0,54	0,59	0,65	0,71					
60	12	0,53	0,58	0,64	0,70	0,76	0,82	0,88						
60	15	0,46	0,51	0,57	0,63	0,69	0,75	0,81						
60	16	0,44	0,49	0,55	0,61	0,66	0,72	0,78						
60	18	0,40	0,45	0,50	0,56	0,62	0,68	0,74						
60	19	0,37	0,43	0,48	0,54	0,59	0,65	0,71						
60	20	0,35	0,41	0,46	0,51	0,57	0,63	0,69						
60	22	0,31	0,36	0,42	0,47	0,53	0,58	0,64						
60	24	0,27	0,32	0,37	0,43	0,48	0,54	0,59						
55	12	0,47	0,53	0,58	0,64	0,70	0,76							
55	15	0,41	0,46	0,51	0,57	0,63	0,69							
55	16	0,39	0,44	0,49	0,55	0,61	0,66							
55	18	0,34	0,40	0,45	0,50	0,56	0,62							
55	19	0,32	0,37	0,43	0,48	0,54	0,59							
55	20	0,30	0,35	0,41	0,46	0,51	0,57							
55	22	0,26	0,31	0,36	0,42	0,47	0,53							
55	24	0,23	0,27	0,32	0,37	0,43	0,48							
50	12	0,42	0,47	0,53	0,58	0,64								
50	15	0,35	0,41	0,46	0,51	0,57								
50	16	0,33	0,39	0,44	0,49	0,55								
50	18	0,29	0,34	0,40	0,45	0,50								
50	19	0,27	0,32	0,37	0,43	0,48								
50	20	0,26	0,30	0,35	0,41	0,46								
50	22	0,22	0,26	0,31	0,36	0,42								
50	24	0,18	0,23	0,27	0,32	0,37								
45	12	0,36	0,42	0,47	0,53									
45	15	0,30	0,35	0,41	0,46									
45	16	0,28	0,33	0,39	0,44									
45	18	0,25	0,29	0,34	0,40									
45	19	0,23	0,27	0,32	0,37									
45	20	0,21	0,26	0,30	0,35									
45	22	0,17	0,22	0,26	0,31									
45	24	0,14	0,18	0,23	0,27									
40	12	0,31	0,36	0,42										
40	15	0,26	0,30	0,35										
40	16	0,24	0,28	0,33										
40	18	0,20	0,25	0,29										
40	19	0,18	0,23	0,27										
40	20	0,16	0,21	0,26										
40	22	0,13	0,17	0,22										
40	24	0,10	0,14	0,18										
35	12	0,26	0,31											
35	15	0,21	0,26											
35	16	0,19	0,24											
35	18	0,16	0,20											
35	19	0,14	0,18											
35	20	0,12	0,16											
35	22	0,09	0,13											
35	24	0,06	0,10											
30	12	0,22												
30	15	0,16												
30	16	0,15												
30	18	0,12												
30	19	0,10												
30	20	0,08												
30	22	0,06												
30	24	0,03												

Example of a conversion to a different regime than  $\phi 50K$ :  
 Required output: 1050 Watt under the following conditions:  
 Room temperature:  $T_i = 22^\circ C$   
 Water temperature inlet side:  $T_a = 70^\circ C$   
 Water temperature outlet side:  $T_r = 50^\circ C$   
 => on the basis of these data you can find the correction factor in the above table = 0,70.  
 You look in the price list with  $\phi 50K$  for a radiator that lies in the neighbourhood of:  $1050 : 0,70 = 1500$  Watt

Vertical

# Centric

Collection

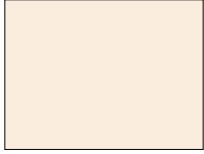
Piano Centric Verti





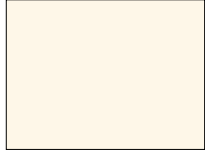
# COLOURS

## NOBLE



Pergamon  
SAN 0019

## WHITE BLACK



Cream White  
RAL 9001

## NATURAL GREY MATT



Mist White  
N500

## PURE GREY MATT



Signal White  
RAL 9003

## METALLIC GREY STRUCTURE



Grey Aluminium  
M307

## BLUE GREEN MINERAL



Dark Blue  
9801



Pink  
3012



White Fine Texture  
S600



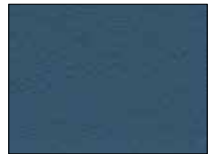
Sand Light  
N502



Tele Grey 4  
RAL 7047



White Aluminium  
M306



Mid Blue  
9802



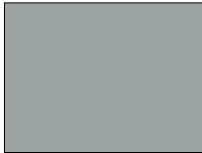
Silver  
9898



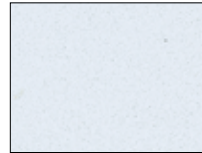
Traffic White  
RAL 9016



Sand  
N503



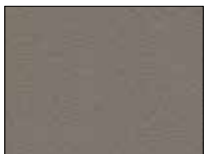
Window Grey  
RAL 7040



Grey White January  
M303



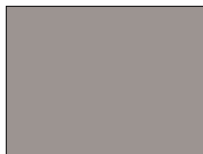
Grey Blue  
9803



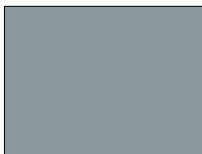
Pearl Beige  
1035



Pure White  
RAL 9010



Platina Grey  
N504



Tele Grey 2  
RAL 7046



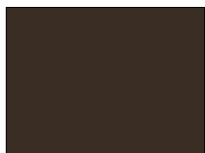
Aluminium Grey January  
M302



Forest Green  
9804



Gold  
9899



Brown Black  
9826



Dust Grey  
N505



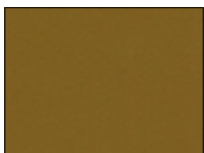
Blue Grey  
RAL 7031



Anthracite January  
M301



Jade Green  
9805



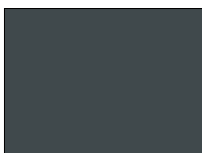
Curry  
9894



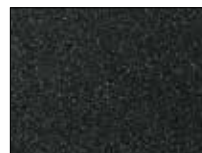
Grey Anthracite  
9827



Warm Grey  
N506



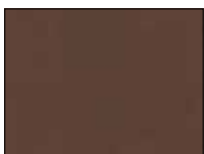
Slate Grey  
RAL 7015



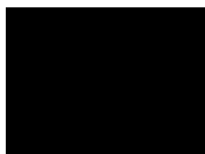
Black January  
M300



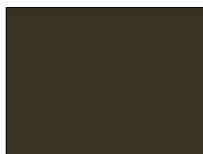
Grey Green  
9806



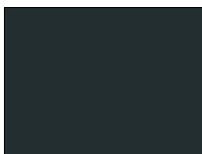
Bronze  
9893



Jet Black  
RAL 9005



Brown Grey  
N507



Anthracite Grey  
RAL 7016



Brown January  
M304



Warm Green  
9807

# COLOURS

## TERRA-COTTA MINERAL



Dark Brown  
9808



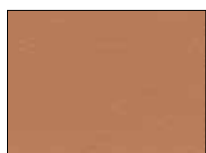
Rust Brown  
9809



Quartz Brown  
9810



Light Beige  
9811



Orange Brown  
9812



Blood Red  
9813



Purple Red  
9814

## UNI COLOURS FINE TEXTURE



Melon Yellow  
9815



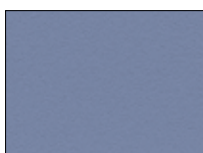
Carmine Red  
9816



Claret Violet  
9817



Night Blue  
9818



Pigeon Blue  
S601



Yellow Green  
9820



Moss Green  
9821

## BRUGMAN COLOURS YOUR HEATING COMFORT

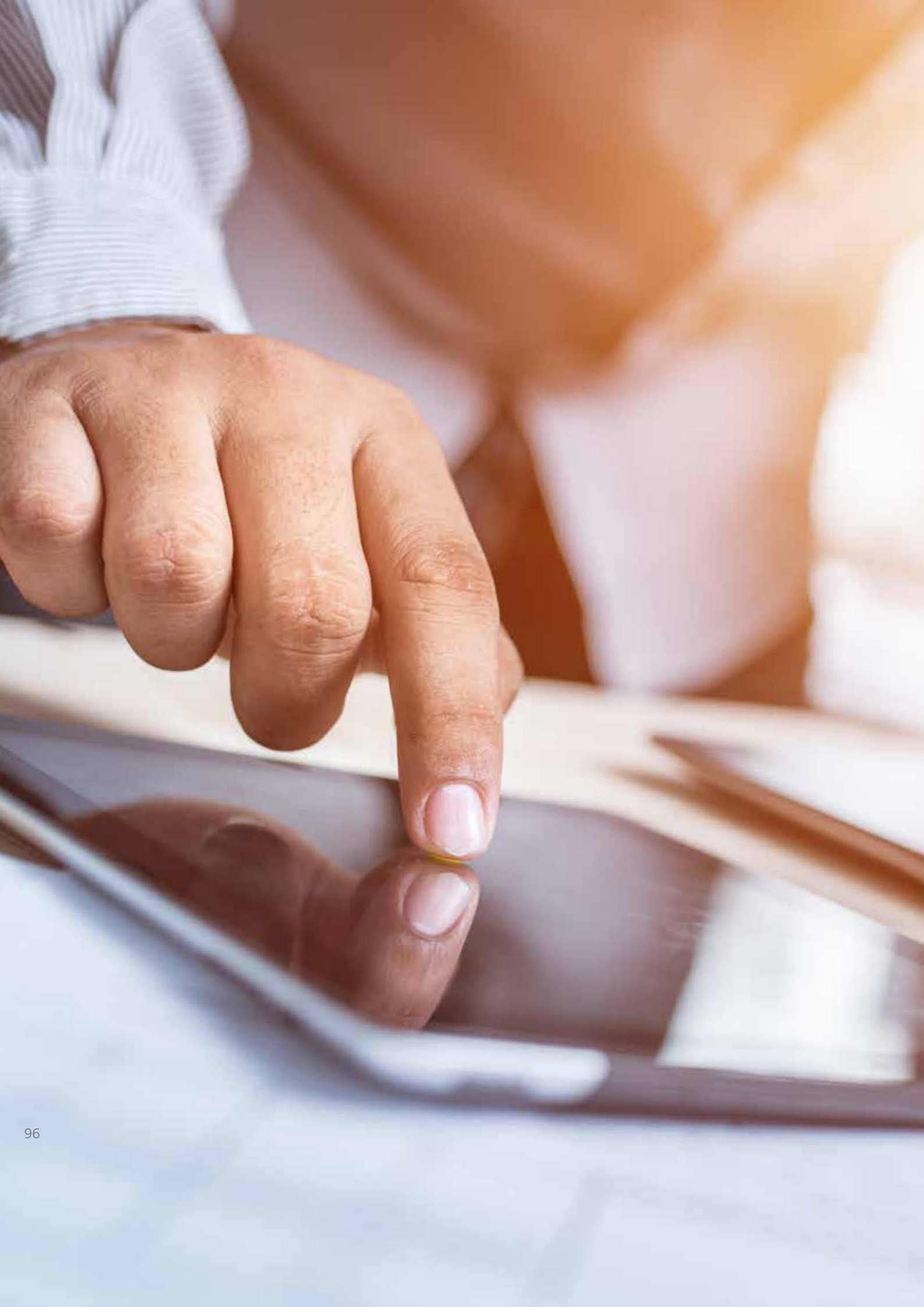
Opting for a colourful interior and beautifully matching CH radiators? Brugman offers you a range of fresh, contemporary hues.

Whatever colour you have in mind, Brugman ensures flawless, colourfast painting.

Would you like more information about Brugman radiators? Talk with a specialist.

Contact us via [www.brugman.eu](http://www.brugman.eu) or via the address on the back of this brochure.

- RADIATORS: standard colour RAL 9016  
Extra charge for colour on request.
- HORIZONTAL CENTRIC LINE: only RAL 9016
- BANO Collection: only RAL 9016
- E-BANO: only RAL 9016



# THERMAL OUTPUT PER RADIATOR TYPE

STANDARD

**TYPE 10** Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	900
W/m 75/65/20 (φ50K)	413	511	607	885
n-exponent	1,30	1,29	1,29	1,28
<b>Length (mm)</b>	<b>Watt</b>	<b>Watt</b>	<b>Watt</b>	<b>Watt</b>
400				
500	207	256	304	443
600	248	307	364	531
700				620
800	330	409	486	708
900				
1000	413	511	607	885
1100	454	562	668	
1200	496	613	728	
1300				
1400		715	850	
1600		818	971	
1800			1093	
2000			1214	
2200				
2400				
2600				
2800				
3000				

**TYPE 10** Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	900
W/m 70/55/20 (φ42,5K)	334	414	492	719
n-exponent	1,30	1,29	1,29	1,28
<b>Length (mm)</b>	<b>Watt</b>	<b>Watt</b>	<b>Watt</b>	<b>Watt</b>
400				
500	167	207	246	359
600	201	249	295	431
700				503
800	267	331	394	575
900				
1000	334	414	492	719
1100	368	456	541	
1200	401	497	591	
1300				
1400		580	689	
1600		663	788	
1800			886	
2000			984	
2200				
2400				
2600				
2800				
3000				

**TYPE 10** Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	900
W/m 55/45/20 (φ30K)	213	264	314	460
n-exponent	1,30	1,29	1,29	1,28
<b>Length (mm)</b>	<b>Watt</b>	<b>Watt</b>	<b>Watt</b>	<b>Watt</b>
400				
500	106	132	157	230
600	128	159	188	276
700				322
800	170	212	251	368
900				
1000	213	264	314	460
1100	234	291	345	
1200	255	317	377	
1300				
1400		370	440	
1600		423	502	
1800			565	
2000			628	
2200				
2400				
2600				
2800				
3000				

# Casual

## STANDARD

**TYPE 11** Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 75/65/20 (φ50K)	523	666	802	932	1057	1295
n-exponent	1,31	1,31	1,30	1,30	1,30	1,30
<b>Length (mm)</b>	<b>Watt</b>	<b>Watt</b>	<b>Watt</b>	<b>Watt</b>	<b>Watt</b>	<b>Watt</b>
400			321	373	423	518
500	262	333	401	466	529	648
600	314	400	481	559	634	777
700		466	561	652	740	907
800	418	533	642	746	846	1036
900		599	722	839	951	1166
1000	523	666	802	932	1057	1295
1100		733	882	1025	1163	1425
1200	628	799	962	1118	1268	1554
1300		866	1043	1212	1374	1684
1400	732	932	1123	1305	1480	1813
1600		1066	1283	1491	1691	2072
1800		1199	1444	1678	1903	2331
2000		1332	1604	1864	2114	2590
2200		1465	1764	2050		
2400		1598	1925	2237		
2600						
2800						
3000						

**TYPE 11** Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	423	538	649	755	856	1048
n-exponent	1,31	1,31	1,30	1,30	1,30	1,30
<b>Length (mm)</b>	<b>Watt</b>	<b>Watt</b>	<b>Watt</b>	<b>Watt</b>	<b>Watt</b>	<b>Watt</b>
400		215	260	302	342	419
500	211	269	325	377	428	524
600	254	323	390	453	513	629
700		377	454	528	599	734
800	338	431	519	604	685	839
900		484	584	679	770	944
1000	423	538	649	755	856	1048
1100		592	714	830	941	1153
1200	507	646	779	905	1027	1258
1300		700	844	981	1112	1363
1400	592	754	909	1056	1198	1468
1600		861	1039	1207	1369	1677
1800		969	1169	1358	1540	1887
2000		1077	1299	1509	1711	2097
2200		1184	1428	1660		
2400		1292	1558	1811		
2600						
2800						
3000						

**TYPE 11** Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 55/45/20 (φ30K)	268	341	413	480	544	667
n-exponent	1,31	1,31	1,30	1,30	1,30	1,30
<b>Length (mm)</b>	<b>Watt</b>	<b>Watt</b>	<b>Watt</b>	<b>Watt</b>	<b>Watt</b>	<b>Watt</b>
400		136	165	192	218	267
500	134	171	206	240	272	333
600	161	205	248	288	326	400
700		239	289	336	381	467
800	214	273	330	384	435	533
900		307	372	432	490	600
1000	268	341	413	480	544	667
1100		375	454	528	599	733
1200	321	409	495	576	653	800
1300		443	537	624	707	867
1400	375	478	578	672	762	933
1600		546	661	768	871	1067
1800		614	743	864	979	1200
2000		682	826	959	1088	1333
2200		750	908	1055		
2400		819	991	1151		
2600						
2800						
3000						



STANDARD

**TYPE 20s** Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	600	900
W/m 75/65/20 (φ50K)	743	1025	1438
n-exponent	1,29	1,30	1,31
Length (mm)	Watt	Watt	Watt
400			
500		513	719
600		615	863
700			
800	594	820	1150
900			
1000		1025	
1100		1128	
1200		1230	
1300			
1400		1435	
1600			
1800			
2000			
2200			
2400			
2600			
2800			
3000			

**TYPE 20s** Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	600	900
W/m 70/55/20 (φ42,5K)	602	830	1162
n-exponent	1,29	1,30	1,31
Length (mm)	Watt	Watt	Watt
400			
500	301	415	581
600	361	498	697
700			
800	482	664	930
900			
1000		830	
1100		913	
1200		996	
1300			
1400		1162	
1600			
1800			
2000			
2200			
2400			
2600			
2800			
3000			

**TYPE 20s** Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	600	900
W/m 55/45/20 (φ30K)	384	528	736
n-exponent	1,29	1,30	1,31
Length (mm)	Watt	Watt	Watt
400			
500		264	368
600		317	442
700			
800	308	422	589
900			
1000		528	
1100		580	
1200		633	
1300			
1400		739	
1600			
1800			
2000			
2200			
2400			
2600			
2800			
3000			

# Casual

## STANDARD

TYPE 21s Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	900
W/m 75/65/20 (φ50K)	985	1181	1368	1880
n-exponent	1,31	1,32	1,32	1,34
Length (mm)	Watt	Watt	Watt	Watt
400				752
500	493	591	684	940
600	591	709	821	1128
700		827	958	1316
800	788	945	1094	1504
900		1063	1231	1692
1000	985	1181	1368	1880
1100	1084	1299	1505	
1200	1182	1417	1642	
1300	1281	1535	1778	
1400	1379	1653	1915	
1500	1478	1772	2052	
1600	1576	1890	2189	
1800	1773	2126	2462	
2000	1970	2362	2736	
2200	2167	2598	3010	
2400	2364			
2600	2561			
2800	2758			
3000	2955			

TYPE 21s Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	900
W/m 70/55/20 (φ42,5K)	796	953	1104	1512
n-exponent	1,31	1,32	1,32	1,34
Length (mm)	Watt	Watt	Watt	Watt
400				609
500	398	476	552	756
600	478	572	662	907
700		667	773	1058
800	637	762	883	1210
900		858	993	1361
1000	796	953	1104	1512
1100	876	1048	1214	
1200	955	1144	1325	
1300	1035	1239	1435	
1400	1115	1334	1545	
1500	1194	1429	1656	
1600	1274	1525	1766	
1800	1433	1715	1987	
2000	1592	1906	2208	
2200	1751	2097	2429	
2400	1911			
2600	2070			
2800	2229			
3000	2388			

TYPE 21s Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	900
W/m 55/45/20 (φ30K)	504	602	697	948
n-exponent	1,31	1,32	1,32	1,34
Length (mm)	Watt	Watt	Watt	Watt
400				387
500	252	301	349	474
600	303	361	418	569
700		421	488	664
800	404	481	558	759
900		542	627	853
1000	504	602	697	948
1100	555	662	767	
1200	605	722	836	
1300	656	782	906	
1400	706	842	976	
1500	757	903	1046	
1600	807	963	1115	
1800	908	1083	1255	
2000	1009	1203	1394	
2200	1110	1324	1533	
2400	1211			
2600	1312			
2800	1412			
3000	1513			

## STANDARD

TYPE 22 Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 75/65/20 (φ50K)	975	1241	1494	1738	1974	2429
n-exponent	1,28	1,30	1,33	1,34	1,35	1,36
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400			598	695	790	972
500	488	621	747	869	987	1215
600	585	745	896	1043	1184	1457
700			1046	1217	1382	1700
800	780	993	1195	1390	1579	1943
900			1345	1564	1777	2186
1000	975	1241	1494	1738	1974	2429
1100	1073	1365	1643	1912	2171	2672
1200	1170	1489	1793	2086	2369	2915
1300	1268	1613	1942	2259	2566	
1400	1365	1737	2092	2433	2764	
1600	1560	1986	2390	2781	3158	
1800	1755	2234	2689	3128		
2000	1950	2482	2988	3476		
2200	2145	2730	3287	3824		
2400	2340	2978	3586	4171		
2600	2535	3227	3884	4519		
2800	2730	3475	4183	4866		
3000	2925	3723	4482	5214		

TYPE 22 Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	792	1005	1204	1398	1585	1947
n-exponent	1,28	1,30	1,33	1,34	1,35	1,36
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400			481	559	634	779
500	396	502	602	699	793	974
600	475	603	722	839	951	1168
700			843	979	1110	1363
800	634	804	963	1118	1268	1558
900			1083	1258	1427	1753
1000	792	1005	1204	1398	1585	1947
1100	871	1105	1324	1538	1744	2142
1200	950	1206	1444	1677	1902	2337
1300	1029	1306	1565	1817	2061	
1400	1109	1407	1685	1957	2219	
1600	1267	1607	1926	2237	2536	
1800	1425	1808	2166	2516		
2000	1584	2009	2407	2796		
2200	1742	2210	2648	3075		
2400	1901	2411	2889	3355		
2600	2059	2612	3129	3634		
2800	2217	2813	3370	3914		
3000	2376	3014	3611	4194		

TYPE 22 Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 55/45/20 (φ30K)	507	639	757	877	990	1213
n-exponent	1,28	1,30	1,33	1,34	1,35	1,36
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400			303	351	396	485
500	254	319	379	438	495	606
600	304	383	454	526	594	728
700			530	614	693	849
800	406	511	606	701	792	970
900			682	789	891	1091
1000	507	639	757	877	990	1213
1100	558	703	833	964	1090	1334
1200	608	767	909	1052	1189	1455
1300	659	830	985	1140	1288	
1400	710	894	1060	1227	1387	
1600	811	1022	1212	1402	1585	
1800	913	1150	1363	1578		
2000	1014	1278	1515	1753		
2200	1115	1405	1666	1928		
2400	1217	1533	1818	2104		
2600	1318	1661	1969	2279		
2800	1420	1789	2121	2454		
3000	1521	1916	2272	2630		

# Casual

## STANDARD

**TYPE 33** Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 75/65/20 (φ50K)	1365	1744	2103	2444	2769	3376
n-exponent	1,28	1,32	1,33	1,33	1,33	1,34
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400						
500			1052	1222	1385	1688
600		1046	1262	1466	1661	2026
700			1472	1711	1938	2363
800	1092	1395	1682	1955	2215	2701
900						3038
1000	1365	1744	2103	2444	2769	3376
1100	1502	1918	2313	2688	3046	3714
1200	1638	2093	2524	2933	3323	4051
1300	1775	2267	2734	3177	3600	4389
1400	1911	2442	2944	3422	3877	4726
1600	2184	2790	3365	3910	4430	5402
1800	2457	3139	3785	4399		
2000	2730	3488	4206	4888		
2200	3003	3837				
2400	3276	4186				
2600	3549	4534				
2800	3822	4883				
3000	4095	5232				

**TYPE 33** Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	1105	1412	1702	1979	2242	2733
n-exponent	1,28	1,32	1,33	1,33	1,33	1,34
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400						
500			852	989	1121	1367
600		847	1022	1187	1345	1640
700			1192	1385	1569	1913
800	884	1129	1362	1583	1793	2187
900						2459
1000	1105	1412	1702	1979	2242	2733
1100	1216	1553	1872	2176	2466	3007
1200	1326	1694	2043	2374	2690	3279
1300	1437	1835	2213	2572	2914	3553
1400	1547	1977	2383	2770	3139	3826
1600	1768	2259	2724	3156	3586	4373
1800	1989	2541	3064	3561		
2000	2210	2824	3405	3957		
2200	2431	3106				
2400	2652	3389				
2600	2873	3671				
2800	3094	3953				
3000	3315	4236				

**TYPE 33** Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 55/45/20 (φ30K)	703	898	1083	1258	1425	1738
n-exponent	1,28	1,32	1,33	1,33	1,33	1,34
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400						
500			542	629	713	869
600		538	650	755	855	1043
700			758	881	998	1216
800	562	718	866	1006	1140	1390
900						1564
1000	703	898	1083	1258	1425	1738
1100	773	987	1191	1384	1568	1912
1200	843	1077	1299	1510	1711	2085
1300	914	1167	1407	1635	1853	2259
1400	984	1257	1515	1761	1996	2433
1600	1124	1436	1732	2013	2280	2781
1800	1265	1616	1948	2264		
2000	1405	1795	2165	2516		
2200	1546	1975				
2400	1686	2155				
2600	1827	2334				
2800	1967	2514				
3000	2108	2693				

STANDARD Zn

**TYPE 10** Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	900
W/m 75/65/20 (φ50K)	413	511	607	885
n-exponent	1,30	1,29	1,29	1,28
Length (mm)	Watt	Watt	Watt	Watt
400				
500	207	256	304	443
600	248	307	364	531
700				
800	330	409	486	708

**TYPE 10** Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	900
W/m 70/55/20 (φ42,5K)	334	414	492	719
n-exponent	1,30	1,29	1,29	1,28
Length (mm)	Watt	Watt	Watt	Watt
400				
500	167	207	246	359
600	201	249	295	431
700				
800	267	331	394	575

**TYPE 10** Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	900
W/m 55/45/20 (φ30K)	213	264	314	460
n-exponent	1,30	1,29	1,29	1,28
Length (mm)	Watt	Watt	Watt	Watt
400				
500	106	132	157	230
600	128	159	188	276
700				
800	170	212	251	368

**TYPE 11** Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 75/65/20 (φ50K)	523	666	802	932	1057	1295
n-exponent	1,31	1,31	1,30	1,30	1,30	1,30
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400						
500				466		648
600				559		777

**TYPE 11** Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	423	538	649	755	856	1048
n-exponent	1,31	1,31	1,30	1,30	1,30	1,30
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400						
500				377		524
600				453		629

**TYPE 11** Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 55/45/20 (φ30K)	268	341	413	480	544	667
n-exponent	1,31	1,31	1,30	1,30	1,30	1,30
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400						
500				240		333
600				288		400

# Casual

## STANDARD Zn

**TYPE 20s** Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	600	900
W/m 75/65/20 (φ50K)	743	1025	1438
n-exponent	1,29	1,30	1,31
Length (mm)	Watt	Watt	Watt
400			
500		513	719
600		615	863
700			
800	594	820	1150

**TYPE 20s** Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	600	900
W/m 70/55/20 (φ42,5K)	602	830	1162
n-exponent	1,29	1,30	1,31
Length (mm)	Watt	Watt	Watt
400			
500		415	581
600		498	697
700			
800	482	664	930

**TYPE 20s** Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	600	900
W/m 55/45/20 (φ30K)	384	528	736
n-exponent	1,29	1,30	1,31
Length (mm)	Watt	Watt	Watt
400			
500		264	368
600		317	442
700			
800	308	422	589

**TYPE 21s** Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	900
W/m 75/65/20 (φ50K)	985	1181	1368	1880
n-exponent	1,31	1,32	1,32	1,34
Length (mm)	Watt	Watt	Watt	Watt
400				
500			684	940
600			821	1128
700				
800	788		1094	1504

**TYPE 21s** Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	900
W/m 70/55/20 (φ42,5K)	796	953	1104	1512
n-exponent	1,31	1,32	1,32	1,34
Length (mm)	Watt	Watt	Watt	Watt
400				
500			552	756
600			662	907
700				
800	637		883	1210

**TYPE 21s** Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	900
W/m 55/45/20 (φ30K)	504	602	697	948
n-exponent	1,31	1,32	1,32	1,34
Length (mm)	Watt	Watt	Watt	Watt
400				
500			349	474
600			418	569
700				
800	404		558	759



## STANDARD Zn

TYPE 22 Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 75/65/20 (φ50K)	975	1241	1494	1738	1974	2429
n-exponent	1,28	1,30	1,33	1,34	1,35	1,36
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400						
500					987	1215
600				1043	1184	1457
700					1382	1700
800				1390	1579	1943

TYPE 22 Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	792	1005	1204	1398	1585	1947
n-exponent	1,28	1,30	1,33	1,34	1,35	1,36
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400						
500					793	974
600				839	951	1168
700					1110	1363
800				1118	1268	1558

TYPE 22 Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 55/45/20 (φ30K)	507	639	757	877	990	1213
n-exponent	1,28	1,30	1,33	1,34	1,35	1,36
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400						
500					495	606
600				526	594	728
700					693	849
800				701	792	970

# Casual

## Collection



COMPACT 4

**TYPE 11** Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	700	900
W/m 75/65/20 (φ50K)	666	802	934	1063	1312
n-exponent	1,30	1,30	1,30	1,30	1,30
Length (mm)	Watt	Watt	Watt	Watt	Watt
400	266	321	374	425	525
500	333	401	467	532	656
600	400	481	560	638	787
700	466	561	654	744	918
800	533	642	747	850	1050
900	599	722	841	957	1181
1000	666	802	934	1063	1312
1100	733	882	1027	1169	1443
1200	799	962	1121	1276	1574
1300	866	1043	1214	1382	1706
1400	932	1123	1308	1488	1837
1600	1066	1283	1494	1701	2099
1800	1199	1444	1681	1913	2362
2000	1332	1604	1868	2126	2624

**TYPE 11** Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	539	649	756	861	1062
n-exponent	1,30	1,30	1,30	1,30	1,30
Length (mm)	Watt	Watt	Watt	Watt	Watt
400	216	260	302	344	425
500	270	325	378	430	531
600	323	390	454	516	637
700	377	454	529	602	743
800	431	519	605	688	850
900	485	584	681	774	956
1000	539	649	756	861	1062
1100	593	714	832	947	1168
1200	647	779	907	1033	1275
1300	701	844	983	1119	1381
1400	755	909	1059	1205	1487
1600	863	1039	1210	1377	1699
1800	970	1169	1361	1549	1912
2000	1078	1299	1512	1721	2124

**TYPE 11** Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	700	900
W/m 55/45/20 (φ30K)	343	413	481	547	675
n-exponent	1,30	1,30	1,30	1,30	1,30
Length (mm)	Watt	Watt	Watt	Watt	Watt
400	137	165	192	219	270
500	171	206	240	274	338
600	206	248	288	328	405
700	240	289	337	383	473
800	274	330	385	438	540
900	309	372	433	492	608
1000	343	413	481	547	675
1100	377	454	529	602	743
1200	411	495	577	657	810
1300	446	537	625	711	878
1400	480	578	673	766	945
1600	549	661	769	875	1081
1800	617	743	865	985	1216
2000	686	826	962	1094	1351

# Casual

## COMPACT 4

**TYPE 21s** Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 75/65/20 (φ50K)	755	953	1141	1322	1499	1841
n-exponent	1,31	1,31	1,32	1,32	1,32	1,33
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400		381	456	529	600	736
500	378	477	571	661	750	921
600	453	572	685	793	899	1105
700		667	799	925	1049	1289
800	604	762	913	1058	1199	1473
900		858	1027	1190	1349	1657
1000		953	1141	1322	1499	1841
1200		1144	1369	1586	1799	2209
1400		1334	1597	1851	2099	2577
1600		1525	1826	2115	2398	2946
1800		1715	2054	2380	2698	3314
2000		1906	2282	2644	2998	3682
2200		2097	2510	2908		
2400		2287	2738	3173		
2600		2478	2967	3437		
2800		2668	3195	3702		
3000		2859	3423	3966		

**TYPE 21s** Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	610	770	921	1067	1210	1483
n-exponent	1,31	1,31	1,32	1,32	1,32	1,33
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400		308	368	427	484	593
500	305	385	460	533	605	742
600	366	462	552	640	726	890
700		539	644	747	847	1038
800	488	616	737	853	968	1187
900		693	829	960	1089	1335
1000		770	921	1067	1210	1483
1200		924	1105	1280	1451	1780
1400		1078	1289	1493	1693	2076
1600		1232	1473	1707	1935	2373
1800		1386	1657	1920	2177	2670
2000		1540	1841	2134	2419	2966
2200		1695	2026	2347		
2400		1849	2210	2560		
2600		2003	2394	2774		
2800		2157	2578	2987		
3000		2311	2762	3200		

**TYPE 21s** Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 55/45/20 (φ30K)	387	488	581	674	764	933
n-exponent	1,31	1,31	1,32	1,32	1,32	1,33
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400		195	233	269	306	373
500	193	244	291	337	382	467
600	232	293	349	404	458	560
700		342	407	472	535	653
800	309	390	465	539	611	747
900		439	523	606	687	840
1000		488	581	674	764	933
1200		586	698	808	917	1120
1400		683	814	943	1069	1307
1600		781	930	1078	1222	1493
1800		879	1046	1212	1375	1680
2000		976	1163	1347	1528	1866
2200		1074	1279	1482		
2400		1171	1395	1617		
2600		1269	1512	1751		
2800		1367	1628	1886		
3000		1464	1744	2021		

## COMPACT 4

TYPE 22 Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 75/65/20 (φ50K)	942	1202	1449	1683	1907	2326
n-exponent	1,31	1,32	1,32	1,33	1,33	1,34
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400		481	580	673	763	930
500	471	601	725	842	954	1163
600	565	721	869	1010	1144	1396
700	659	841	1014	1178	1335	1628
800	754	962	1159	1346	1526	1861
900	848	1082	1304	1515	1716	2093
1000	942	1202	1449	1683	1907	2326
1100	1036	1322	1594	1851	2098	2559
1200	1130	1442	1739	2020	2288	2791
1300	1225	1563	1884	2188	2479	3024
1400	1319	1683	2029	2356	2670	3256
1600	1507	1923	2318	2693	3051	3722
1800	1696	2164	2608	3029	3433	4187
2000	1884	2404	2898	3366	3814	4652
2200	2072	2644	3188	3703		
2400	2261	2885	3478	4039		
2600	2449	3125	3767	4376		
2800	2638	3366	4057	4712		
3000	2826	3606	4347	5049		

TYPE 22 Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	761	970	1169	1356	1536	1871
n-exponent	1,31	1,32	1,32	1,33	1,33	1,34
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400		388	468	542	615	748
500	381	485	585	678	768	935
600	457	582	702	814	922	1122
700	533	679	818	949	1075	1310
800	609	776	935	1085	1229	1497
900	685	873	1052	1220	1383	1684
1000	761	970	1169	1356	1536	1871
1100	837	1067	1286	1491	1690	2058
1200	914	1164	1403	1627	1844	2245
1300	990	1261	1520	1763	1997	2432
1400	1066	1358	1637	1898	2151	2619
1600	1218	1552	1871	2169	2458	2993
1800	1370	1746	2105	2441	2765	3367
2000	1523	1940	2338	2712	3073	3742
2200	1675	2134	2572	2983		
2400	1827	2328	2806	3254		
2600	1980	2522	3040	3525		
2800	2132	2716	3274	3796		
3000	2284	2910	3508	4068		

TYPE 22 Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 55/45/20 (φ30K)	482	612	738	853	967	1173
n-exponent	1,31	1,32	1,32	1,33	1,33	1,34
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400		245	295	341	387	469
500	241	306	369	427	483	587
600	289	367	443	512	580	704
700	338	429	517	597	677	821
800	386	490	591	683	773	938
900	434	551	664	768	870	1056
1000	482	612	738	853	967	1173
1100	531	674	812	938	1063	1290
1200	579	735	886	1024	1160	1408
1300	627	796	960	1109	1257	1525
1400	675	857	1034	1194	1353	1642
1600	772	980	1181	1365	1547	1877
1800	868	1102	1329	1536	1740	2112
2000	965	1225	1477	1706	1933	2346
2200	1061	1347	1624	1877		
2400	1158	1470	1772	2048		
2600	1254	1592	1920	2218		
2800	1351	1715	2067	2389		
3000	1447	1837	2215	2559		

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## COMPACT 4

**TYPE 33** Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 75/65/20 (φ50K)	1319	1679	2020	2345	2657	3248
n-exponent	1,29	1,30	1,31	1,32	1,33	1,34
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400					1063	1299
500			1010	1173	1329	1624
600		1007	1212	1407	1594	1949
700		1175	1414	1642	1860	2274
800	1055	1343	1616	1876	2126	2598
900	1187	1511	1818	2111	2391	2923
1000	1319	1679	2020	2345	2657	3248
1100	1451	1847	2222	2580	2923	3573
1200	1583	2015	2424	2814	3188	3898
1300	1715	2183	2626	3049	3454	4222
1400	1847	2351	2828	3283	3720	4547
1600	2110	2686	3232	3752	4251	5197
1800	2374	3022	3636	4221	4783	5846
2000	2638	3358	4040	4690	5314	6496
2200	2902	3694	4444	5159		
2400	3166	4030	4848	5628		
2600	3429	4365	5252	6097		
2800	3693	4701	5656	6566		
3000	3957	5037	6060	7035		

**TYPE 33** Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	1068	1359	1635	1898	2151	2629
n-exponent	1,29	1,30	1,31	1,32	1,33	1,34
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400					861	1052
500			818	950	1076	1315
600		815	981	1139	1290	1578
700		951	1145	1329	1506	1841
800	854	1087	1308	1519	1721	2103
900	961	1223	1472	1709	1936	2366
1000	1068	1359	1635	1898	2151	2629
1100	1175	1495	1799	2089	2366	2893
1200	1282	1631	1962	2278	2581	3156
1300	1388	1767	2126	2468	2796	3418
1400	1495	1903	2289	2658	3012	3681
1600	1708	2174	2616	3037	3441	4207
1800	1922	2446	2944	3417	3872	4733
2000	2136	2718	3271	3797	4302	5259
2200	2349	2990	3598	4176		
2400	2563	3262	3925	4556		
2600	2776	3534	4252	4936		
2800	2990	3806	4579	5316		
3000	3203	4078	4906	5695		

**TYPE 33** Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 55/45/20 (φ30K)	679	864	1040	1207	1368	1672
n-exponent	1,29	1,30	1,31	1,32	1,33	1,34
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400					547	669
500			520	604	684	836
600		518	624	724	821	1003
700		605	728	845	957	1171
800	543	691	832	966	1094	1337
900	611	778	936	1087	1231	1505
1000	679	864	1040	1207	1368	1672
1100	747	951	1144	1328	1505	1839
1200	815	1037	1248	1449	1641	2006
1300	883	1124	1352	1569	1778	2173
1400	951	1210	1456	1690	1915	2341
1600	1086	1383	1664	1931	2188	2675
1800	1222	1556	1872	2173	2462	3009
2000	1358	1729	2080	2414	2735	3344
2200	1494	1901	2288	2656		
2400	1630	2074	2496	2897		
2600	1765	2247	2703	3138		
2800	1901	2420	2911	3380		
3000	2037	2593	3119	3621		

## UNI 6

TYPE 11 Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	700	900
W/m 75/65/20 (φ50K)	666	802	934	1063	1312
n-exponent	1,30	1,30	1,30	1,30	1,30
Length (mm)	Watt	Watt	Watt	Watt	Watt
400	266	321	374	425	525
500	333	401	467	532	656
600	400	481	560	638	787
700	466	561	654	744	918
800	533	642	747	850	1050
900	599	722	841	957	1181
1000	666	802	934	1063	1312
1100	733	882	1027	1169	1443
1200	799	962	1121	1276	1574
1300	866	1043	1214	1382	1706
1400	932	1123	1308	1488	1837
1600	1066	1283	1494	1701	2099
1800	1199	1444	1681	1913	2362
2000	1332	1604	1868	2126	2624

TYPE 11 Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	539	649	756	861	1062
n-exponent	1,30	1,30	1,30	1,30	1,30
Length (mm)	Watt	Watt	Watt	Watt	Watt
400	216	260	302	344	425
500	270	325	378	430	531
600	323	390	454	516	637
700	377	454	529	602	743
800	431	519	605	688	850
900	485	584	681	774	956
1000	539	649	756	861	1062
1100	593	714	832	947	1168
1200	647	779	907	1033	1275
1300	701	844	983	1119	1381
1400	755	909	1059	1205	1487
1600	863	1039	1210	1377	1699
1800	970	1169	1361	1549	1912
2000	1078	1299	1512	1721	2124

TYPE 11 Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	700	900
W/m 55/45/20 (φ30K)	343	413	481	547	675
n-exponent	1,30	1,30	1,30	1,30	1,30
Length (mm)	Watt	Watt	Watt	Watt	Watt
400	137	165	192	219	270
500	171	206	240	274	338
600	206	248	288	328	405
700	240	289	337	383	473
800	274	330	385	438	540
900	309	372	433	492	608
1000	343	413	481	547	675
1100	377	454	529	602	743
1200	411	495	577	657	810
1300	446	537	625	711	878
1400	480	578	673	766	945
1600	549	661	769	875	1081
1800	617	743	865	985	1216
2000	686	826	962	1094	1351



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## UNI 6

TYPE 21s Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	700	900
W/m 75/65/20 (φ50K)	953	1141	1322	1499	1841
n-exponent	1,31	1,32	1,32	1,32	1,33
Length (mm)	Watt	Watt	Watt	Watt	Watt
400	381	456	529	600	736
500	477	571	661	750	921
600	572	685	793	899	1105
700	667	799	925	1049	1289
800	762	913	1058	1199	1473
900	858	1027	1190	1349	1657
1000	953	1141	1322	1499	1841
1100	1048	1255	1454	1649	2025
1200	1144	1369	1586	1799	2209
1300	1239	1483	1719	1949	2393
1400	1334	1597	1851	2099	2577
1600	1525	1826	2115	2398	2946
1800	1715	2054	2380	2698	3314
2000	1906	2282	2644	2998	3682
2200	2097	2510	2908		
2400	2287	2738	3173		
2600	2478	2967	3437		
2800	2668	3195	3702		
3000	2859	3423	3966		

TYPE 21s Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	770	921	1067	1210	1483
n-exponent	1,31	1,32	1,32	1,32	1,33
Length (mm)	Watt	Watt	Watt	Watt	Watt
400	308	368	427	484	593
500	385	460	533	605	742
600	462	552	640	726	890
700	539	644	747	847	1038
800	616	737	853	968	1187
900	693	829	960	1089	1335
1000	770	921	1067	1210	1483
1100	847	1013	1173	1331	1631
1200	924	1105	1280	1451	1780
1300	1001	1197	1387	1572	1928
1400	1078	1289	1493	1693	2076
1600	1232	1473	1707	1935	2373
1800	1386	1657	1920	2177	2670
2000	1540	1841	2134	2419	2966
2200	1695	2026	2347		
2400	1849	2210	2560		
2600	2003	2394	2774		
2800	2157	2578	2987		
3000	2311	2762	3200		

TYPE 21s Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	700	900
W/m 55/45/20 (φ30K)	488	581	674	764	933
n-exponent	1,31	1,32	1,32	1,32	1,33
Length (mm)	Watt	Watt	Watt	Watt	Watt
400	195	233	269	306	373
500	244	291	337	382	467
600	293	349	404	458	560
700	342	407	472	535	653
800	390	465	539	611	747
900	439	523	606	687	840
1000	488	581	674	764	933
1100	537	639	741	840	1027
1200	586	698	808	917	1120
1300	634	756	876	993	1213
1400	683	814	943	1069	1307
1600	781	930	1078	1222	1493
1800	879	1046	1212	1375	1680
2000	976	1163	1347	1528	1866
2200	1074	1279	1482		
2400	1171	1395	1617		
2600	1269	1512	1751		
2800	1367	1628	1886		
3000	1464	1744	2021		

UNI 6

TYPE 22 Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 75/65/20 (φ50K)	942	1202	1449	1683	1907	2326
n-exponent	1,31	1,32	1,32	1,33	1,33	1,34
Length (mm)	Watt	Watt	Watt	Watt	Watt	watt
400		481	580	673	763	930
500	471	601	725	842	954	1163
600	565	721	869	1010	1144	1396
700	659	841	1014	1178	1335	1628
800	754	962	1159	1346	1526	1861
900	848	1082	1304	1515	1716	2093
1000	942	1202	1449	1683	1907	2326
1100	1036	1322	1594	1851	2098	2559
1200	1130	1442	1739	2020	2288	2791
1300	1225	1563	1884	2188	2479	3024
1400	1319	1683	2029	2356	2670	3256
1600	1507	1923	2318	2693	3051	3722
1800	1696	2164	2608	3029	3433	4187
2000	1884	2404	2898	3366	3814	4652
2200	2072	2644	3188	3703		
2400	2261	2885	3478	4039		
2600	2449	3125	3767	4376		
2800	2638	3366	4057	4712		
3000	2826	3606	4347	5049		

TYPE 22 Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	761	970	1169	1356	1536	1871
n-exponent	1,31	1,32	1,32	1,33	1,33	1,34
Length (mm)	Watt	Watt	Watt	Watt	Watt	watt
400		388	468	542	615	748
500	381	485	585	678	768	935
600	457	582	702	814	922	1122
700	533	679	818	949	1075	1310
800	609	776	935	1085	1229	1497
900	685	873	1052	1220	1383	1684
1000	761	970	1169	1356	1536	1871
1100	837	1067	1286	1491	1690	2058
1200	914	1164	1403	1627	1844	2245
1300	990	1261	1520	1763	1997	2432
1400	1066	1358	1637	1898	2151	2619
1600	1218	1552	1871	2169	2458	2993
1800	1370	1746	2105	2441	2765	3367
2000	1523	1940	2338	2712	3073	3742
2200	1675	2134	2572	2983		
2400	1827	2328	2806	3254		
2600	1980	2522	3040	3525		
2800	2132	2716	3274	3796		
3000	2284	2910	3508	4068		

TYPE 22 Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 55/45/20 (φ30K)	482	612	738	853	967	1173
n-exponent	1,31	1,32	1,32	1,33	1,33	1,34
Length (mm)	Watt	Watt	Watt	Watt	Watt	watt
400		245	295	341	387	469
500	241	306	369	427	483	587
600	289	367	443	512	580	704
700	338	429	517	597	677	821
800	386	490	591	683	773	938
900	434	551	664	768	870	1056
1000	482	612	738	853	967	1173
1100	531	674	812	938	1063	1290
1200	579	735	886	1024	1160	1408
1300	627	796	960	1109	1257	1525
1400	675	857	1034	1194	1353	1642
1600	772	980	1181	1365	1547	1877
1800	868	1102	1329	1536	1740	2112
2000	965	1225	1477	1706	1933	2346
2200	1061	1347	1624	1877		
2400	1158	1470	1772	2048		
2600	1254	1592	1920	2218		
2800	1351	1715	2067	2389		
3000	1447	1837	2215	2559		

## UNI 6

**TYPE 33** Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 75/65/20 (φ50K)	1334	1700	2048	2379	2696	3297
n-exponent	1,29	1,30	1,31	1,32	1,33	1,34
Length (mm)	Watt	Watt	Watt	Watt	Watt	watt
400						
500			1024	1190	1348	1649
600		1020	1229	1427	1618	1978
700		1190	1434	1665	1887	2308
800	1067	1360	1638	1903	2157	2638
900	1201	1530	1843	2141	2426	2967
1000	1334	1700	2048	2379	2696	3297
1100	1467	1870	2253	2617	2966	3627
1200	1601	2040	2458	2855	3235	3956
1300	1734	2210	2662	3093	3505	4286
1400	1868	2380	2867	3331	3774	4616
1600	2134	2720	3277	3806	4314	5275
1800	2401	3060	3686	4282	4853	5935
2000	2668	3400	4096	4758	5392	6594
2200	2935	3740	4506	5234		
2400	3202	4080	4915	5710		
2600	3468	4420	5325	6185		
2800	3735	4760	5734	6661		
3000	4002	5100	6144	7137		

**TYPE 33** Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	1082	1376	1655	1920	2172	2652
n-exponent	1,29	1,30	1,31	1,32	1,33	1,34
Length (mm)	Watt	Watt	Watt	Watt	Watt	watt
400						
500			828	960	1086	1326
600		826	993	1152	1303	1591
700		963	1159	1344	1520	1856
800	865	1101	1324	1536	1738	2121
900	974	1239	1490	1728	1955	2387
1000	1082	1376	1655	1920	2172	2652
1100	1190	1514	1821	2112	2389	2917
1200	1298	1651	1986	2304	2606	3182
1300	1406	1789	2152	2496	2824	3447
1400	1514	1927	2317	2688	3041	3713
1600	1731	2202	2648	3071	3475	4243
1800	1947	2477	2979	3455	3909	4773
2000	2163	2752	3311	3839	4344	5304
2200	2380	3028	3642	4223		
2400	2596	3303	3973	4607		
2600	2812	3578	4304	4991		
2800	3029	3853	4635	5375		
3000	3245	4129	4966	5759		

**TYPE 33** Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 55/45/20 (φ30K)	690	875	1049	1212	1367	1663
n-exponent	1,29	1,30	1,31	1,32	1,33	1,34
Length (mm)	Watt	Watt	Watt	Watt	Watt	watt
400						
500			524	606	683	831
600		525	629	727	820	998
700		613	734	849	957	1164
800	552	700	839	970	1093	1330
900	621	788	944	1091	1230	1497
1000	690	875	1049	1212	1367	1663
1100	759	963	1154	1333	1503	1829
1200	828	1050	1259	1455	1640	1995
1300	897	1138	1363	1576	1777	2162
1400	966	1225	1468	1697	1913	2328
1600	1104	1400	1678	1939	2187	2660
1800	1242	1575	1888	2182	2460	2993
2000	1380	1750	2098	2424	2733	3326
2200	1518	1925	2307	2667		
2400	1656	2100	2517	2909		
2600	1795	2275	2727	3152		
2800	1933	2450	2937	3394		
3000	2071	2625	3147	3636		

PIANO UNI 6

TYPE 21s Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	700	900
W/m 75/65/20 (φ50K)	868	1034	1192	1342	1623
n-exponent	1,29	1,29	1,30	1,30	1,29
Length (mm)	Watt	Watt	Watt	Watt	Watt
400	347	414	477	537	649
500	434	517	596	671	812
600	521	620	715	805	974
700	608	724	834	939	1136
800	694	827	954	1074	1298
900	781	931	1073	1208	1461
1000	868	1034	1192	1342	1623
1100	955	1137	1311	1476	1785
1200	1042	1241	1430	1610	1948
1300	1128	1344	1550	1745	2110
1400	1215	1448	1669	1879	2272
1600	1389	1654	1907	2147	2597
1800	1562	1861	2146	2416	2921
2000	1736	2068	2384	2684	3246
2200	1910	2275	2622		
2400	2083	2482	2861		
2600	2257	2688	3099		
2800	2430	2895	3338		
3000	2604	3102	3576		

TYPE 21s Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	704	838	965	1086	1316
n-exponent	1,29	1,29	1,30	1,30	1,29
Length (mm)	Watt	Watt	Watt	Watt	Watt
400	282	335	386	435	526
500	352	419	482	543	658
600	422	503	579	652	790
700	493	587	675	760	921
800	563	671	772	869	1053
900	633	755	868	978	1184
1000	704	838	965	1086	1316
1100	774	922	1061	1195	1448
1200	845	1006	1158	1304	1579
1300	915	1090	1254	1412	1711
1400	985	1174	1351	1521	1842
1600	1126	1342	1544	1738	2106
1800	1267	1509	1737	1956	2369
2000	1408	1677	1930	2173	2632
2200	1548	1845	2123		
2400	1689	2012	2316		
2600	1830	2180	2509		
2800	1971	2348	2702		
3000	2112	2515	2895		

TYPE 21s Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	700	900
W/m 55/45/20 (φ30K)	449	535	614	691	840
n-exponent	1,29	1,29	1,30	1,30	1,29
Length (mm)	Watt	Watt	Watt	Watt	Watt
400	180	214	245	276	336
500	225	267	307	345	420
600	269	321	368	414	504
700	314	374	430	484	588
800	359	428	491	553	672
900	404	481	552	622	756
1000	449	535	614	691	840
1100	494	588	675	760	924
1200	539	642	736	829	1008
1300	584	695	798	898	1092
1400	629	749	859	967	1176
1600	719	856	982	1105	1344
1800	808	963	1104	1243	1511
2000	898	1070	1227	1382	1679
2200	988	1177	1350		
2400	1078	1284	1473		
2600	1168	1391	1595		
2800	1257	1498	1718		
3000	1347	1605	1841		

# Casual

## PIANO UNI 6

TYPE 22 Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 75/65/20 (φ50K)	878	1104	1317	1521	1717	2089
n-exponent	1,30	1,30	1,31	1,31	1,30	1,28
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400	351	442	527	608	687	836
500	439	552	659	761	859	1045
600	527	662	790	913	1030	1253
700	615	773	922	1065	1202	1462
800	702	883	1054	1217	1374	1671
900	790	994	1185	1369	1545	1880
1000	878	1104	1317	1521	1717	2089
1100	966	1214	1449	1673	1889	2298
1200	1054	1325	1580	1825	2060	2507
1300	1141	1435	1712	1977	2232	2716
1400	1229	1546	1844	2129	2404	2925
1600	1405	1766	2107	2434	2747	3342
1800	1580	1987	2371	2738	3091	3760
2000	1756	2208	2634	3042	3434	4178
2200	1932	2429	2897	3346		
2400	2107	2650	3161	3650		
2600	2283	2870	3424	3955		
2800	2458	3091	3688	4259		
3000	2634	3312	3951	4563		

TYPE 22 Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	711	894	1064	1229	1390	1697
n-exponent	1,30	1,30	1,31	1,31	1,30	1,28
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400	284	357	426	492	556	679
500	355	447	532	615	695	848
600	426	536	639	738	834	1018
700	498	626	745	861	973	1188
800	569	715	852	983	1112	1357
900	640	804	958	1106	1251	1527
1000	711	894	1064	1229	1390	1697
1100	782	983	1171	1352	1529	1866
1200	853	1072	1277	1475	1668	2036
1300	924	1162	1384	1598	1807	2206
1400	995	1251	1490	1721	1946	2375
1600	1137	1430	1703	1967	2224	2715
1800	1279	1609	1916	2213	2502	3054
2000	1422	1787	2129	2459	2780	3393
2200	1564	1966	2342	2705		
2400	1706	2145	2555	2950		
2600	1848	2324	2768	3196		
2800	1990	2502	2980	3442		
3000	2132	2681	3193	3688		

TYPE 22 Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 55/45/20 (φ30K)	452	568	674	779	884	1086
n-exponent	1,30	1,30	1,31	1,31	1,30	1,28
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400	181	227	270	312	354	435
500	226	284	337	389	442	543
600	271	341	405	467	530	652
700	316	398	472	545	619	760
800	362	455	540	623	707	869
900	407	511	607	701	795	978
1000	452	568	674	779	884	1086
1100	497	625	742	857	972	1195
1200	542	682	809	935	1061	1304
1300	588	739	877	1013	1149	1412
1400	633	796	944	1091	1237	1521
1600	723	909	1079	1246	1414	1738
1800	814	1023	1214	1402	1591	1955
2000	904	1137	1349	1558	1768	2173
2200	994	1250	1484	1714		
2400	1085	1364	1619	1869		
2600	1175	1478	1754	2025		
2800	1265	1591	1889	2181		
3000	1356	1705	2023	2337		

PIANO UNI 6

TYPE 33 Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 75/65/20 (φ50K)	1236	1532	1822	2110	2399	2991
n-exponent	1,32	1,32	1,32	1,32	1,32	1,32
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400						
500			911	1055	1200	1496
600		919	1093	1266	1439	1795
700		1072	1275	1477	1679	2094
800	989	1226	1458	1688	1919	2393
900	1112	1379	1640	1899	2159	2692
1000	1236	1532	1822	2110	2399	2991
1100	1360	1685	2004	2321	2639	3290
1200	1483	1838	2186	2532	2879	3589
1300	1607	1992	2369	2743	3119	3888
1400	1730	2145	2551	2954	3359	4187
1600	1978	2451	2915	3376	3838	4786
1800	2225	2758	3280	3798	4318	5384
2000	2472	3064	3644	4220	4798	5982
2200	2719	3370	4008	4642		
2400	2966	3677	4373	5064		
2600	3214	3983	4737	5486		
2800	3461	4290	5102	5908		
3000	3708	4596	5466	6330		

TYPE 33 Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	997	1236	1470	1703	1936	2414
n-exponent	1,32	1,32	1,32	1,32	1,32	1,32
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400						
500			735	851	968	1207
600		742	882	1022	1161	1448
700		865	1029	1192	1355	1689
800	798	989	1176	1362	1549	1931
900	898	1113	1323	1532	1742	2172
1000	997	1236	1470	1703	1936	2414
1100	1097	1360	1617	1873	2129	2655
1200	1197	1483	1764	2043	2323	2896
1300	1297	1607	1911	2213	2517	3138
1400	1396	1731	2058	2384	2710	3379
1600	1596	1978	2352	2724	3097	3862
1800	1795	2225	2646	3065	3484	4344
2000	1995	2472	2940	3405	3872	4827
2200	2194	2720	3234	3746		
2400	2394	2967	3529	4086		
2600	2593	3214	3823	4427		
2800	2793	3461	4117	4767		
3000	2992	3709	4411	5108		

TYPE 33 Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 55/45/20 (φ30K)	630	781	928	1075	1222	1524
n-exponent	1,32	1,32	1,32	1,32	1,32	1,32
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400						
500			464	538	611	762
600		468	557	645	733	914
700		546	650	753	856	1067
800	504	624	743	860	978	1219
900	567	703	836	968	1100	1372
1000	630	781	928	1075	1222	1524
1100	693	859	1021	1183	1345	1676
1200	756	937	1114	1290	1467	1829
1300	819	1015	1207	1398	1589	1981
1400	882	1093	1300	1505	1711	2134
1600	1008	1249	1485	1720	1956	2438
1800	1134	1405	1671	1935	2200	2743
2000	1260	1561	1857	2150	2445	3048
2200	1385	1717	2042	2365		
2400	1511	1873	2228	2580		
2600	1637	2030	2414	2795		
2800	1763	2186	2599	3010		
3000	1889	2342	2785	3225		

# Centric

Collection





## CENTRIC

TYPE 11 Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	700	900
W/m 75/65/20 (φ50K)	666	802	934	1063	1312
n-exponent	1,30	1,30	1,30	1,30	1,30
Length (mm)	Watt	Watt	Watt	Watt	Watt
400	266	321	374	425	525
500	333	401	467	532	656
600	400	481	560	638	787
700	466	561	654	744	918
800	533	642	747	850	1050
900	599	722	841	957	1181
1000	666	802	934	1063	1312
1100	733	882	1027	1169	1443
1200	799	962	1121	1276	1574
1400	932	1123	1308	1488	1837
1600	1066	1283	1494	1701	2099
1800	1199	1444	1681	1913	2362
2000	1332	1604	1868	2126	2624
2200	1465	1764	2055		
2400	1598	1925	2242		
2600	1732	2085	2428		
2800	1865	2246	2615		
3000	1998	2406	2802		

TYPE 11 Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	539	649	756	861	1062
n-exponent	1,30	1,30	1,30	1,30	1,30
Length (mm)	Watt	Watt	Watt	Watt	Watt
400	216	260	302	344	425
500	270	325	378	430	531
600	323	390	454	516	637
700	377	454	529	602	743
800	431	519	605	688	850
900	485	584	681	774	956
1000	539	649	756	861	1062
1100	593	714	832	947	1168
1200	647	779	907	1033	1275
1400	755	909	1059	1205	1487
1600	863	1039	1210	1377	1699
1800	970	1169	1361	1549	1912
2000	1078	1299	1512	1721	2124
2200	1186	1428	1663		
2400	1294	1558	1815		
2600	1402	1688	1966		
2800	1510	1818	2117		
3000	1617	1948	2268		

TYPE 11 Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	400	500	600	700	900
W/m 55/45/20 (φ30K)	343	413	481	547	675
n-exponent	1,30	1,30	1,30	1,30	1,30
Length (mm)	Watt	Watt	Watt	Watt	Watt
400	137	165	192	219	270
500	171	206	240	274	338
600	206	248	288	328	405
700	240	289	337	383	473
800	274	330	385	438	540
900	309	372	433	492	608
1000	343	413	481	547	675
1100	377	454	529	602	743
1200	411	495	577	657	810
1400	480	578	673	766	945
1600	549	661	769	875	1081
1800	617	743	865	985	1216
2000	686	826	962	1094	1351
2200	754	908	1058		
2400	823	991	1154		
2600	891	1073	1250		
2800	960	1156	1346		
3000	1028	1238	1442		

TYPE 21s Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 75/65/20 (φ50K)	755	953	1141	1322	1499	1841
n-exponent	1,31	1,31	1,32	1,32	1,32	1,33
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400	302	381	456	529	600	736
500	378	477	571	661	750	921
600	453	572	685	793	899	1105
700	529	667	799	925	1049	1289
800	604	762	913	1058	1199	1473
900	680	858	1027	1190	1349	1657
1000	755	953	1141	1322	1499	1841
1100	831	1048	1255	1454	1649	2025
1200	906	1144	1369	1586	1799	2209
1400	1057	1334	1597	1851	2099	2577
1500	1133	1430	1712	1983	2249	2762
1600	1208	1525	1826	2115	2398	2946
1800	1359	1715	2054	2380	2698	3314
2000	1510	1906	2282	2644	2998	3682
2200	1661	2097	2510	2908		
2400	1812	2287	2738	3173		
2600	1963	2478	2967	3437		
2800	2114	2668	3195	3702		
3000	2265	2859	3423	3966		

TYPE 21s Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	610	770	921	1067	1210	1483
n-exponent	1,31	1,31	1,32	1,32	1,32	1,33
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400	244	308	368	427	484	593
500	305	385	460	533	605	742
600	366	462	552	640	726	890
700	427	539	644	747	847	1038
800	488	616	737	853	968	1187
900	549	693	829	960	1089	1335
1000	610	770	921	1067	1210	1483
1100	671	847	1013	1173	1331	1631
1200	732	924	1105	1280	1451	1780
1400	854	1078	1289	1493	1693	2076
1500	915	1155	1381	1600	1814	2225
1600	976	1232	1473	1707	1935	2373
1800	1098	1386	1657	1920	2177	2670
2000	1220	1540	1841	2134	2419	2966
2200	1342	1695	2026	2347		
2400	1465	1849	2210	2560		
2600	1587	2003	2394	2774		
2800	1709	2157	2578	2987		
3000	1831	2311	2762	3200		

TYPE 21s Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 55/45/20 (φ30K)	387	488	581	674	764	933
n-exponent	1,31	1,31	1,32	1,32	1,32	1,33
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400	155	195	233	269	306	373
500	193	244	291	337	382	467
600	232	293	349	404	458	560
700	271	342	407	472	535	653
800	309	390	465	539	611	747
900	348	439	523	606	687	840
1000	387	488	581	674	764	933
1100	425	537	639	741	840	1027
1200	464	586	698	808	917	1120
1400	541	683	814	943	1069	1307
1500	580	732	872	1010	1146	1400
1600	619	781	930	1078	1222	1493
1800	696	879	1046	1212	1375	1680
2000	773	976	1163	1347	1528	1866
2200	851	1074	1279	1482		
2400	928	1171	1395	1617		
2600	1005	1269	1512	1751		
2800	1083	1367	1628	1886		
3000	1160	1464	1744	2021		

## CENTRIC

TYPE 22 Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 75/65/20 (φ50K)	942	1202	1449	1683	1907	2326
n-exponent	1,31	1,32	1,32	1,33	1,33	1,34
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400		481	580	673	763	930
500	471	601	725	842	954	1163
600	565	721	869	1010	1144	1396
700	659	841	1014	1178	1335	1628
800	754	962	1159	1346	1526	1861
900	848	1082	1304	1515	1716	2093
1000	942	1202	1449	1683	1907	2326
1100	1036	1322	1594	1851	2098	2559
1200	1130	1442	1739	2020	2288	2791
1400	1319	1683	2029	2356	2670	3256
1600	1507	1923	2318	2693	3051	3722
1800	1696	2164	2608	3029	3433	4187
2000	1884	2404	2898	3366	3814	4652
2200	2072	2644	3188	3703		
2400	2261	2885	3478	4039		
2600	2449	3125	3767	4376		
2800	2638	3366	4057	4712		
3000	2826	3606	4347	5049		

TYPE 22 Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	761	970	1169	1356	1536	1871
n-exponent	1,31	1,32	1,32	1,33	1,33	1,34
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400		388	468	542	615	748
500	381	485	585	678	768	935
600	457	582	702	814	922	1122
700	533	679	818	949	1075	1310
800	609	776	935	1085	1229	1497
900	685	873	1052	1220	1383	1684
1000	761	970	1169	1356	1536	1871
1100	837	1067	1286	1491	1690	2058
1200	914	1164	1403	1627	1844	2245
1400	1066	1358	1637	1898	2151	2619
1600	1218	1552	1871	2169	2458	2993
1800	1370	1746	2105	2441	2765	3367
2000	1523	1940	2338	2712	3073	3742
2200	1675	2134	2572	2983		
2400	1827	2328	2806	3254		
2600	1980	2522	3040	3525		
2800	2132	2716	3274	3796		
3000	2284	2910	3508	4068		

TYPE 22 Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 55/45/20 (φ30K)	482	612	738	853	967	1173
n-exponent	1,31	1,32	1,32	1,33	1,33	1,34
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400		245	295	341	387	469
500	241	306	369	427	483	587
600	289	367	443	512	580	704
700	338	429	517	597	677	821
800	386	490	591	683	773	938
900	434	551	664	768	870	1056
1000	482	612	738	853	967	1173
1100	531	674	812	938	1063	1290
1200	579	735	886	1024	1160	1408
1400	675	857	1034	1194	1353	1642
1600	772	980	1181	1365	1547	1877
1800	868	1102	1329	1536	1740	2112
2000	965	1225	1477	1706	1933	2346
2200	1061	1347	1624	1877		
2400	1158	1470	1772	2048		
2600	1254	1592	1920	2218		
2800	1351	1715	2067	2389		
3000	1447	1837	2215	2559		

**TYPE 33** Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 75/65/20 (φ50K)	1334	1700	2048	2379	2696	3297
n-exponent	1,29	1,30	1,31	1,32	1,33	1,34
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400						
500			1024	1190	1348	1649
600		1020	1229	1427	1618	1978
700		1190	1434	1665	1887	2308
800	1067	1360	1638	1903	2157	2638
900	1201	1530	1843	2141	2426	2967
1000	1334	1700	2048	2379	2696	3297
1100	1467	1870	2253	2617	2966	3627
1200	1601	2040	2458	2855	3235	3956
1400	1868	2380	2867	3331	3774	4616
1600	2134	2720	3277	3806	4314	5275
1800	2401	3060	3686	4282	4853	5935
2000	2668	3400	4096	4758	5392	6594
2200	2935	3740	4506	5234		
2400	3202	4080	4915	5710		
2600	3468	4420	5325	6185		
2800	3735	4760	5734	6661		
3000	4002	5100	6144	7137		

**TYPE 33** Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	761	970	1169	1356	1536	1871
n-exponent	1,31	1,32	1,32	1,33	1,33	1,34
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400						
500			828	960	1086	1326
600		826	993	1152	1303	1591
700		963	1159	1344	1520	1856
800	865	1101	1324	1536	1738	2121
900	974	1239	1490	1728	1955	2387
1000	1082	1376	1655	1920	2172	2652
1100	1190	1514	1821	2112	2389	2917
1200	1298	1651	1986	2304	2606	3182
1400	1514	1927	2317	2688	3041	3713
1600	1731	2202	2648	3071	3475	4243
1800	1947	2477	2979	3455	3909	4773
2000	2163	2752	3311	3839	4344	5304
2200	2380	3028	3642	4223		
2400	2596	3303	3973	4607		
2600	2812	3578	4304	4991		
2800	3029	3853	4635	5375		
3000	3245	4129	4966	5759		

**TYPE 33** Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 55/45/20 (φ30K)	690	875	1049	1212	1367	1663
n-exponent	1,29	1,30	1,31	1,32	1,33	1,34
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400						
500			524	606	683	831
600		525	629	727	820	998
700		613	734	849	957	1164
800	552	700	839	970	1093	1330
900	621	788	944	1091	1230	1497
1000	690	875	1049	1212	1367	1663
1100	759	963	1154	1333	1503	1829
1200	828	1050	1259	1455	1640	1995
1400	966	1225	1468	1697	1913	2328
1600	1104	1400	1678	1939	2187	2660
1800	1242	1575	1888	2182	2460	2993
2000	1380	1750	2098	2424	2733	3326
2200	1518	1925	2307	2667		
2400	1656	2100	2517	2909		
2600	1795	2275	2727	3152		
2800	1933	2450	2937	3394		
3000	2071	2625	3147	3636		

## PIANO CENTRIC

TYPE 21s Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 75/65/20 (φ50K)	690	868	1034	1192	1342	1623
n-exponent	1,28	1,29	1,29	1,30	1,30	1,29
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400	276	347	414	477	537	649
500	345	434	517	596	671	812
600	414	521	620	715	805	974
700	483	608	724	834	939	1136
800	552	694	827	954	1074	1298
900	621	781	931	1073	1208	1461
1000	690	868	1034	1192	1342	1623
1100	759	955	1137	1311	1476	1785
1200	828	1042	1241	1430	1610	1948
1400	966	1215	1448	1669	1879	2272
1600	1104	1389	1654	1907	2147	2597
1800	1242	1562	1861	2146	2416	2921
2000	1380	1736	2068	2384	2684	3246
2200	1518	1910	2275	2622		
2400	1656	2083	2482	2861		
2600	1794	2257	2688	3099		
2800	1932	2430	2895	3338		
3000	2070	2604	3102	3576		

TYPE 21s Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	560	704	838	965	1086	1316
n-exponent	1,28	1,29	1,29	1,30	1,30	1,29
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400	224	282	335	386	435	526
500	280	352	419	482	543	658
600	336	422	503	579	652	790
700	392	493	587	675	760	921
800	448	563	671	772	869	1053
900	504	633	755	868	978	1184
1000	560	704	838	965	1086	1316
1100	616	774	922	1061	1195	1448
1200	672	845	1006	1158	1304	1579
1400	785	985	1174	1351	1521	1842
1600	897	1126	1342	1544	1738	2106
1800	1009	1267	1509	1737	1956	2369
2000	1121	1408	1677	1930	2173	2632
2200	1233	1548	1845	2123		
2400	1345	1689	2012	2316		
2600	1457	1830	2180	2509		
2800	1569	1971	2348	2702		
3000	1681	2112	2515	2895		

TYPE 21s Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 55/45/20 (φ30K)	359	449	535	614	691	840
n-exponent	1,28	1,29	1,29	1,30	1,30	1,29
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400	144	180	214	245	276	336
500	179	225	267	307	345	420
600	215	269	321	368	414	504
700	251	314	374	430	484	588
800	287	359	428	491	553	672
900	323	404	481	552	622	756
1000	359	449	535	614	691	840
1100	395	494	588	675	760	924
1200	431	539	642	736	829	1008
1400	502	629	749	859	967	1176
1600	574	719	856	982	1105	1344
1800	646	808	963	1104	1243	1511
2000	718	898	1070	1227	1382	1679
2200	789	988	1177	1350		
2400	861	1078	1284	1473		
2600	933	1168	1391	1595		
2800	1005	1257	1498	1718		
3000	1076	1347	1605	1841		

## PIANO CENTRIC

**TYPE 22** Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 75/65/20 (φ50K)	878	1104	1317	1521	1717	2089
n-exponent	1,30	1,30	1,31	1,31	1,30	1,28
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400		442	527	608	687	836
500	439	552	659	761	859	1045
600	527	662	790	913	1030	1253
700	615	773	922	1065	1202	1462
800	702	883	1054	1217	1374	1671
900	790	994	1185	1369	1545	1880
1000	878	1104	1317	1521	1717	2089
1100	966	1214	1449	1673	1889	2298
1200	1054	1325	1580	1825	2060	2507
1400	1229	1546	1844	2129	2404	2925
1600	1405	1766	2107	2434	2747	3342
1800	1580	1987	2371	2738	3091	3760
2000	1756	2208	2634	3042	3434	4178
2200	1932	2429	2897	3346		
2400	2107	2650	3161	3650		
2600	2283	2870	3424	3955		
2800	2458	3091	3688	4259		
3000	2634	3312	3951	4563		

**TYPE 22** Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	711	894	1064	1229	1390	1697
n-exponent	1,30	1,30	1,31	1,31	1,30	1,28
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400		357	426	492	556	679
500	355	447	532	615	695	848
600	426	536	639	738	834	1018
700	498	626	745	861	973	1188
800	569	715	852	983	1112	1357
900	640	804	958	1106	1251	1527
1000	711	894	1064	1229	1390	1697
1100	782	983	1171	1352	1529	1866
1200	853	1072	1277	1475	1668	2036
1400	995	1251	1490	1721	1946	2375
1600	1137	1430	1703	1967	2224	2715
1800	1279	1609	1916	2213	2502	3054
2000	1422	1787	2129	2459	2780	3393
2200	1564	1966	2342	2705		
2400	1706	2145	2555	2950		
2600	1848	2324	2768	3196		
2800	1990	2502	2980	3442		
3000	2132	2681	3193	3688		

**TYPE 22** Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 55/45/20 (φ30K)	452	568	674	779	884	1086
n-exponent	1,30	1,30	1,31	1,31	1,30	1,28
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400		227	270	312	354	435
500	226	284	337	389	442	543
600	271	341	405	467	530	652
700	316	398	472	545	619	760
800	362	455	540	623	707	869
900	407	511	607	701	795	978
1000	452	568	674	779	884	1086
1100	497	625	742	857	972	1195
1200	542	682	809	935	1061	1304
1400	633	796	944	1091	1237	1521
1600	723	909	1079	1246	1414	1738
1800	814	1023	1214	1402	1591	1955
2000	904	1137	1349	1558	1768	2173
2200	994	1250	1484	1714		
2400	1085	1364	1619	1869		
2600	1175	1478	1754	2025		
2800	1265	1591	1889	2181		
3000	1356	1705	2023	2337		

## PIANO CENTRIC

TYPE 33 Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 75/65/20 (φ50K)	1236	1532	1822	2110	2399	2991
n-exponent	1,32	1,32	1,32	1,32	1,32	1,32
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400						
500			911	1055	1200	1496
600		919	1093	1266	1439	1795
700		1072	1275	1477	1679	2094
800	989	1226	1458	1688	1919	2393
900	1112	1379	1640	1899	2159	2692
1000	1236	1532	1822	2110	2399	2991
1100	1360	1685	2004	2321	2639	3290
1200	1483	1838	2186	2532	2879	3589
1400	1730	2145	2551	2954	3359	4187
1600	1978	2451	2915	3376	3838	4786
1800	2225	2758	3280	3798	4318	5384
2000	2472	3064	3644	4220	4798	5982
2200	2719	3370	4008	4642		
2400	2966	3677	4373	5064		
2600	3214	3983	4737	5486		
2800	3461	4290	5102	5908		
3000	3708	4596	5466	6330		

TYPE 33 Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	997	1236	1470	1703	1936	2414
n-exponent	1,32	1,32	1,32	1,32	1,32	1,32
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400						
500			735	851	968	1207
600		742	882	1022	1161	1448
700		865	1029	1192	1355	1689
800	798	989	1176	1362	1549	1931
900	898	1113	1323	1532	1742	2172
1000	997	1236	1470	1703	1936	2414
1100	1097	1360	1617	1873	2129	2655
1200	1197	1483	1764	2043	2323	2896
1400	1396	1731	2058	2384	2710	3379
1600	1596	1978	2352	2724	3097	3862
1800	1795	2225	2646	3065	3484	4344
2000	1995	2472	2940	3405	3872	4827
2200	2194	2720	3234	3746		
2400	2394	2967	3529	4086		
2600	2593	3214	3823	4427		
2800	2793	3461	4117	4767		
3000	2992	3709	4411	5108		

TYPE 33 Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 55/45/20 (φ30K)	630	781	928	1075	1222	1524
n-exponent	1,32	1,32	1,32	1,32	1,32	1,32
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400						
500			464	538	611	762
600		468	557	645	733	914
700		546	650	753	856	1067
800	504	624	743	860	978	1219
900	567	703	836	968	1100	1372
1000	630	781	928	1075	1222	1524
1100	693	859	1021	1183	1345	1676
1200	756	937	1114	1290	1467	1829
1400	882	1093	1300	1505	1711	2134
1600	1008	1249	1485	1720	1956	2438
1800	1134	1405	1671	1935	2200	2743
2000	1260	1561	1857	2150	2445	3048
2200	1385	1717	2042	2365		
2400	1511	1873	2228	2580		
2600	1637	2030	2414	2795		
2800	1763	2186	2599	3010		
3000	1889	2342	2785	3225		



## CENTRIC LINE

**TYPE 21s** Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 75/65/20 (φ50K)	690	868	1034	1192	1342	1623
n-exponent	1,28	1,29	1,29	1,30	1,30	1,29
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400	276	347	414	477	537	649
500	345	434	517	596	671	812
600	414	521	620	715	805	974
700	483	608	724	834	939	1136
800	552	694	827	954	1074	1298
900	621	781	931	1073	1208	1461
1000	690	868	1034	1192	1342	1623
1100	759	955	1137	1311	1476	1785
1200	828	1042	1241	1430	1610	1948
1400	966	1215	1448	1669	1879	2272
1600	1104	1389	1654	1907	2147	2597
1800	1242	1562	1861	2146	2416	2921
2000	1380	1736	2068	2384	2684	3246
2200	1518	1910	2275	2622		
2400	1656	2083	2482	2861		
2600	1794	2257	2688	3099		
2800	1932	2430	2895	3338		
3000	2070	2604	3102	3576		

**TYPE 21s** Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	560	704	838	965	1086	1316
n-exponent	1,28	1,29	1,29	1,30	1,30	1,29
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400	224	282	335	386	435	526
500	280	352	419	482	543	658
600	336	422	503	579	652	790
700	392	493	587	675	760	921
800	448	563	671	772	869	1053
900	504	633	755	868	978	1184
1000	560	704	838	965	1086	1316
1100	616	774	922	1061	1195	1448
1200	672	845	1006	1158	1304	1579
1400	785	985	1174	1351	1521	1842
1600	897	1126	1342	1544	1738	2106
1800	1009	1267	1509	1737	1956	2369
2000	1121	1408	1677	1930	2173	2632
2200	1233	1548	1845	2123		
2400	1345	1689	2012	2316		
2600	1457	1830	2180	2509		
2800	1569	1971	2348	2702		
3000	1681	2112	2515	2895		

**TYPE 21s** Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 55/45/20 (φ30K)	359	449	535	614	691	840
n-exponent	1,28	1,29	1,29	1,30	1,30	1,29
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400	144	180	214	245	276	336
500	179	225	267	307	345	420
600	215	269	321	368	414	504
700	251	314	374	430	484	588
800	287	359	428	491	553	672
900	323	404	481	552	622	756
1000	359	449	535	614	691	840
1100	395	494	588	675	760	924
1200	431	539	642	736	829	1008
1400	502	629	749	859	967	1176
1600	574	719	856	982	1105	1344
1800	646	808	963	1104	1243	1511
2000	718	898	1070	1227	1382	1679
2200	789	988	1177	1350		
2400	861	1078	1284	1473		
2600	933	1168	1391	1595		
2800	1005	1257	1498	1718		
3000	1076	1347	1605	1841		

## CENTRIC LINE

TYPE 22 Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 75/65/20 (φ50K)	878	1104	1317	1521	1717	2089
n-exponent	1,30	1,30	1,31	1,31	1,30	1,28
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400		442	527	608	687	836
500	439	552	659	761	859	1045
600	527	662	790	913	1030	1253
700	615	773	922	1065	1202	1462
800	702	883	1054	1217	1374	1671
900	790	994	1185	1369	1545	1880
1000	878	1104	1317	1521	1717	2089
1100	966	1214	1449	1673	1889	2298
1200	1054	1325	1580	1825	2060	2507
1400	1229	1546	1844	2129	2404	2925
1600	1405	1766	2107	2434	2747	3342
1800	1580	1987	2371	2738	3091	3760
2000	1756	2208	2634	3042	3434	4178
2200	1932	2429	2897	3346		
2400	2107	2650	3161	3650		
2600	2283	2870	3424	3955		
2800	2458	3091	3688	4259		
3000	2634	3312	3951	4563		

TYPE 22 Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	711	894	1064	1229	1390	1697
n-exponent	1,30	1,30	1,31	1,31	1,30	1,28
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400		357	426	492	556	679
500	355	447	532	615	695	848
600	426	536	639	738	834	1018
700	498	626	745	861	973	1188
800	569	715	852	983	1112	1357
900	640	804	958	1106	1251	1527
1000	711	894	1064	1229	1390	1697
1100	782	983	1171	1352	1529	1866
1200	853	1072	1277	1475	1668	2036
1400	995	1251	1490	1721	1946	2375
1600	1137	1430	1703	1967	2224	2715
1800	1279	1609	1916	2213	2502	3054
2000	1422	1787	2129	2459	2780	3393
2200	1564	1966	2342	2705		
2400	1706	2145	2555	2950		
2600	1848	2324	2768	3196		
2800	1990	2502	2980	3442		
3000	2132	2681	3193	3688		

TYPE 22 Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 55/45/20 (φ30K)	452	568	674	779	884	1086
n-exponent	1,30	1,30	1,31	1,31	1,30	1,28
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400		227	270	312	354	435
500	226	284	337	389	442	543
600	271	341	405	467	530	652
700	316	398	472	545	619	760
800	362	455	540	623	707	869
900	407	511	607	701	795	978
1000	452	568	674	779	884	1086
1100	497	625	742	857	972	1195
1200	542	682	809	935	1061	1304
1400	633	796	944	1091	1237	1521
1600	723	909	1079	1246	1414	1738
1800	814	1023	1214	1402	1591	1955
2000	904	1137	1349	1558	1768	2173
2200	994	1250	1484	1714		
2400	1085	1364	1619	1869		
2600	1175	1478	1754	2025		
2800	1265	1591	1889	2181		
3000	1356	1705	2023	2337		

## CENTRIC LINE

**TYPE 33** Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 75/65/20 (φ50K)	1236	1532	1822	2110	2399	2991
n-exponent	1,32	1,32	1,32	1,32	1,32	1,32
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400						
500			911	1055	1200	1496
600		919	1093	1266	1439	1795
700		1072	1275	1477	1679	2094
800	989	1226	1458	1688	1919	2393
900	1112	1379	1640	1899	2159	2692
1000	1236	1532	1822	2110	2399	2991
1100	1360	1685	2004	2321	2639	3290
1200	1483	1838	2186	2532	2879	3589
1400	1730	2145	2551	2954	3359	4187
1600	1978	2451	2915	3376	3838	4786
1800	2225	2758	3280	3798	4318	5384
2000	2472	3064	3644	4220	4798	5982
2200	2719	3370	4008	4642		
2400	2966	3677	4373	5064		
2600	3214	3983	4737	5486		
2800	3461	4290	5102	5908		
3000	3708	4596	5466	6330		

**TYPE 33** Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 70/55/20 (φ42,5K)	997	1236	1470	1703	1936	2414
n-exponent	1,32	1,32	1,32	1,32	1,32	1,32
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400						
500			735	851	968	1207
600		742	882	1022	1161	1448
700		865	1029	1192	1355	1689
800	798	989	1176	1362	1549	1931
900	898	1113	1323	1532	1742	2172
1000	997	1236	1470	1703	1936	2414
1100	1097	1360	1617	1873	2129	2655
1200	1197	1483	1764	2043	2323	2896
1400	1396	1731	2058	2384	2710	3379
1600	1596	1978	2352	2724	3097	3862
1800	1795	2225	2646	3065	3484	4344
2000	1995	2472	2940	3405	3872	4827
2200	2194	2720	3234	3746		
2400	2394	2967	3529	4086		
2600	2593	3214	3823	4427		
2800	2793	3461	4117	4767		
3000	2992	3709	4411	5108		

**TYPE 33** Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	300	400	500	600	700	900
W/m 55/45/20 (φ30K)	630	781	928	1075	1222	1524
n-exponent	1,32	1,32	1,32	1,32	1,32	1,32
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400						
500			464	538	611	762
600		468	557	645	733	914
700		546	650	753	856	1067
800	504	624	743	860	978	1219
900	567	703	836	968	1100	1372
1000	630	781	928	1075	1222	1524
1100	693	859	1021	1183	1345	1676
1200	756	937	1114	1290	1467	1829
1400	882	1093	1300	1505	1711	2134
1600	1008	1249	1485	1720	1956	2438
1800	1134	1405	1671	1935	2200	2743
2000	1260	1561	1857	2150	2445	3048
2200	1385	1717	2042	2365		
2400	1511	1873	2228	2580		
2600	1637	2030	2414	2795		
2800	1763	2186	2599	3010		
3000	1889	2342	2785	3225		

CENTRIC VERTI  
STANDARD

TYPE 10 Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	1600	1800	2000	2200
W/m 75/65/20 (φ50K)	1702	1898	2088	2274
n-exponent	1,29	1,31	1,33	1,25
Width (mm)	Watt	Watt	Watt	Watt
400	681	759	835	910
500	851	949	1044	1137
600	1021	1139	1253	1364
700	1191	1329	1462	1592
800	1362	1518	1670	1819

TYPE 10 Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	1600	1800	2000	2200
W/m 70/55/20 (φ42,5K)	1380	1534	1682	1856
n-exponent	1,29	1,31	1,33	1,25
Width (mm)	Watt	Watt	Watt	Watt
400	552	614	673	742
500	690	767	841	928
600	828	920	1009	1114
700	966	1074	1177	1299
800	1104	1227	1346	1485

TYPE 10 Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	1600	1800	2000	2200
W/m 55/45/20 (φ30K)	881	972	1058	1201
n-exponent	1,29	1,31	1,33	1,25
Width (mm)	Watt	Watt	Watt	Watt
400	352	389	423	480
500	441	486	529	601
600	529	583	635	721
700	617	680	741	841
800	705	778	846	961

TYPE 11 Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	1600	1800	2000	2200
W/m 75/65/20 (φ50K)	2116	2284	2448	2610
n-exponent	1,35	1,35	1,35	1,35
Width (mm)	Watt	Watt	Watt	Watt
400	846	914	979	1044
500	1058	1142	1224	1305
600	1270	1370	1469	1566
700	1481	1599	1714	1827
800	1693	1827	1958	2088

TYPE 11 Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	1600	1800	2000	2200
W/m 70/55/20 (φ42,5K)	1699	1834	1966	2096
n-exponent	1,35	1,35	1,35	1,35
Width (mm)	Watt	Watt	Watt	Watt
400	680	734	786	838
500	850	917	983	1048
600	1019	1100	1180	1258
700	1189	1284	1376	1467
800	1359	1467	1573	1677

TYPE 11 Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	1600	1800	2000	2200
W/m 55/45/20 (φ30K)	1062	1146	1228	1310
n-exponent	1,35	1,35	1,35	1,35
Width (mm)	Watt	Watt	Watt	Watt
400	425	458	491	524
500	531	573	614	655
600	637	688	737	786
700	743	802	860	917
800	850	917	982	1048

## CENTRIC VERTI

**TYPE 21s** Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	1600	1800	2000	2200
W/m 75/65/20 (φ50K)	2962	3242	3516	3782
n-exponent	1,35	1,34	1,32	1,36
Width (mm)	Watt	Watt	Watt	Watt
400	1185	1297	1406	1513
500	1481	1621	1758	1891
600	1777	1945	2110	2269
700	2073	2269	2461	2647
800	2370	2594	2813	3026

**TYPE 21s** Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	1600	1800	2000	2200
W/m 70/55/20 (φ42,5K)	2378	2608	2837	3032
n-exponent	1,35	1,34	1,32	1,36
Width (mm)	Watt	Watt	Watt	Watt
400	951	1043	1135	1213
500	1189	1304	1419	1516
600	1427	1565	1702	1819
700	1665	1826	1986	2122
800	1902	2086	2270	2426

**TYPE 21s** Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	1600	1800	2000	2200
W/m 55/45/20 (φ30K)	1486	1635	1791	1888
n-exponent	1,35	1,34	1,32	1,36
Width (mm)	Watt	Watt	Watt	Watt
400	594	654	716	755
500	743	818	896	944
600	892	981	1075	1133
700	1040	1145	1254	1322
800	1189	1308	1433	1510

**TYPE 22** Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	1600	1800	2000	2200
W/m 75/65/20 (φ50K)	3608	3896	4190	4488
n-exponent	1,38	1,36	1,33	1,45
Width (mm)	Watt	Watt	Watt	Watt
400	1443	1558	1676	1795
500	1804	1948	2095	2244
600	2165	2338	2514	2693
700	2526	2727	2933	3142
800	2886	3117	3352	3590

**TYPE 22** Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	1600	1800	2000	2200
W/m 70/55/20 (φ42,5K)	2883	3123	3376	3546
n-exponent	1,38	1,36	1,33	1,45
Width (mm)	Watt	Watt	Watt	Watt
400	1153	1249	1350	1418
500	1442	1562	1688	1773
600	1730	1874	2026	2128
700	2018	2186	2363	2482
800	2306	2498	2701	2837

**TYPE 22** Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	1600	1800	2000	2200
W/m 55/45/20 (φ30K)	1783	1945	2124	2140
n-exponent	1,38	1,36	1,33	1,45
Width (mm)	Watt	Watt	Watt	Watt
400	713	778	850	856
500	892	973	1062	1070
600	1070	1167	1274	1284
700	1248	1362	1487	1498
800	1426	1556	1699	1712

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CENTRIC VERTI

TYPE 21s Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	1600	1800	2000	2200
W/m 75/65/20 (φ50K)	2618	2800	2996	3208
n-exponent	1,33	1,35	1,36	1,46
Width (mm)	Watt	Watt	Watt	Watt
400	1047	1120	1198	1283
500	1309	1400	1498	1604
600	1571	1680	1798	1925
700	1833	1960	2097	2246
800	2094	2240	2397	2566

TYPE 21s Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	1600	1800	2000	2200
W/m 70/55/20 (φ42,5K)	2109	2248	2402	2530
n-exponent	1,33	1,35	1,36	1,46
Width (mm)	Watt	Watt	Watt	Watt
400	844	899	961	1012
500	1055	1124	1201	1265
600	1265	1349	1441	1518
700	1476	1574	1681	1771
800	1687	1798	1922	2024

TYPE 21s Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	1600	1800	2000	2200
W/m 55/45/20 (φ30K)	1327	1405	1496	1522
n-exponent	1,33	1,35	1,36	1,46
Width (mm)	Watt	Watt	Watt	Watt
400	531	562	598	609
500	664	703	748	761
600	796	843	898	913
700	929	984	1047	1065
800	1062	1124	1197	1218

TYPE 22 Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	1600	1800	2000	2200
W/m 75/65/20 (φ50K)	3202	3486	3772	4064
n-exponent	1,40	1,44	1,48	1,35
Width (mm)	Watt	Watt	Watt	Watt
400	1281	1394	1509	1626
500	1601	1743	1886	2032
600	1921	2092	2263	2438
700	2241	2440	2640	2845
800	2562	2789	3018	3251

TYPE 22 Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	1600	1800	2000	2200
W/m 70/55/20 (φ42,5K)	2550	2759	2966	3263
n-exponent	1,40	1,44	1,48	1,35
Width (mm)	Watt	Watt	Watt	Watt
400	1020	1104	1186	1305
500	1275	1380	1483	1632
600	1530	1655	1780	1958
700	1785	1931	2076	2284
800	2040	2207	2373	2610

TYPE 22 Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	1600	1800	2000	2200
W/m 55/45/20 (φ30K)	1566	1671	1771	2039
n-exponent	1,40	1,44	1,48	1,35
Width (mm)	Watt	Watt	Watt	Watt
400	626	668	708	816
500	783	836	886	1020
600	940	1003	1063	1223
700	1096	1170	1240	1427
800	1253	1337	1417	1631

## CENTRIC VERTI LINE

**TYPE 21s** Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	1600	1800	2000	2200
W/m 75/65/20 (φ50K)	2618	2800	2996	3208
n-exponent	1,33	1,35	1,36	1,46
Width (mm)	Watt	Watt	Watt	Watt
400	1047	1120	1198	1283
500	1309	1400	1498	1604
600	1571	1680	1798	1925
700	1833	1960	2097	2246
800	2094	2240	2397	2566

**TYPE 21s** Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	1600	1800	2000	2200
W/m 70/55/20 (φ42,5K)	2109	2248	2402	2530
n-exponent	1,33	1,35	1,36	1,46
Width (mm)	Watt	Watt	Watt	Watt
400	844	899	961	1012
500	1055	1124	1201	1265
600	1265	1349	1441	1518
700	1476	1574	1681	1771
800	1687	1798	1922	2024

**TYPE 21s** Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	1600	1800	2000	2200
W/m 55/45/20 (φ30K)	1327	1405	1496	1522
n-exponent	1,33	1,35	1,36	1,46
Width (mm)	Watt	Watt	Watt	Watt
400	531	562	598	609
500	664	703	748	761
600	796	843	898	913
700	929	984	1047	1065
800	1062	1124	1197	1218

**TYPE 22** Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	1600	1800	2000	2200
W/m 75/65/20 (φ50K)	3202	3486	3772	4064
n-exponent	1,40	1,44	1,48	1,35
Width (mm)	Watt	Watt	Watt	Watt
400	1281	1394	1509	1626
500	1601	1743	1886	2032
600	1921	2092	2263	2438
700	2241	2440	2640	2845
800	2562	2789	3018	3251

**TYPE 22** Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	1600	1800	2000	2200
W/m 70/55/20 (φ42,5K)	2550	2759	2966	3263
n-exponent	1,40	1,44	1,48	1,35
Width (mm)	Watt	Watt	Watt	Watt
400	1020	1104	1186	1305
500	1275	1380	1483	1632
600	1530	1655	1780	1958
700	1785	1931	2076	2284
800	2040	2207	2373	2610

**TYPE 22** Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

Height (mm)	1600	1800	2000	2200
W/m 55/45/20 (φ30K)	1566	1671	1771	2039
n-exponent	1,40	1,44	1,48	1,35
Width (mm)	Watt	Watt	Watt	Watt
400	626	668	708	816
500	783	836	886	1020
600	940	1003	1063	1223
700	1096	1170	1240	1427
800	1253	1337	1417	1631



# Mini Collection



## MINI COMPACT

Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

	Type 22		Type 33		Type 34	
Height (mm)	150	200	150	200	150	200
W/m 75/65/20	591	715	844	1029	984	1205
n-exponent	1,24	1,25	1,24	1,26	1,24	1,26
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
800	473	572	675	823	787	964
900	532	644	760	926	886	1085
1000	591	715	844	1029	984	1205
1100	650	787	928	1132	1082	1326
1200	709	858	1013	1235	1181	1446
1300	768	930	1097	1338	1279	1567
1400	827	1001	1182	1441	1378	1687
1500	887	1073	1266	1544	1476	1808
1600	946	1144	1350	1646	1574	1928
1800	1064	1287	1519	1852	1771	2169
2000	1182	1430	1688	2058	1968	2410
2200	1300	1573	1857	2264	2165	2651
2400	1418	1716	2026	2470	2362	2892
2600	1537	1859	2194	2675	2558	3133
2800	1655	2002	2363	2881	2755	3374
3000	1773	2145	2532	3087	2952	3615

Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

	Type 22		Type 33		Type 34	
Height (mm)	150	200	150	200	150	200
W/m 70/55/20	483	584	690	838	804	982
n-exponent	1,24	1,25	1,24	1,26	1,24	1,26
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
800	387	467	552	671	644	785
900	435	525	621	755	724	884
1000	483	584	690	838	804	982
1100	531	642	759	922	885	1080
1200	580	700	828	1006	965	1178
1300	628	759	897	1090	1046	1276
1400	676	817	966	1174	1126	1375
1500	725	875	1035	1258	1207	1473
1600	773	934	1104	1342	1287	1571
1800	870	1050	1242	1509	1448	1767
2000	966	1167	1380	1677	1609	1964
2200	1063	1284	1518	1845	1770	2160
2400	1160	1401	1656	2012	1931	2356
2600	1256	1517	1794	2180	2091	2553
2800	1353	1634	1932	2348	2252	2749
3000	1449	1751	2070	2515	2413	2946

Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

	Type 22		Type 33		Type 34	
Height (mm)	150	200	150	200	150	200
W/m 55/45/20	314	378	448	541	522	633
n-exponent	1,24	1,25	1,24	1,26	1,24	1,26
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
800	251	302	358	432	418	506
900	282	340	403	487	470	570
1000	314	378	448	541	522	633
1100	345	415	493	595	575	696
1200	376	453	538	649	627	760
1300	408	491	582	703	679	823
1400	439	529	627	757	731	886
1500	471	566	672	811	783	950
1600	502	604	717	865	836	1013
1800	565	680	806	973	940	1140
2000	627	755	896	1081	1045	1266
2200	690	831	986	1189	1149	1393
2400	753	906	1075	1297	1253	1519
2600	816	982	1165	1406	1358	1646
2800	878	1057	1254	1514	1462	1773
3000	941	1133	1344	1622	1567	1899

PIANO MINI 1

Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

	Type 22		Type 33		Type 34	
	150	200	150	200	150	200
Height (mm)	150	200	150	200	150	200
W/m 75/65/20	591	688	848	1011	1014	1189
n-exponent	1,23	1,25	1,24	1,27	1,25	1,25
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
800	473	550	678	809	811	951
900	532	619	763	910	913	1070
1000	591	688	848	1011	1014	1189
1100	650	757	933	1112	1115	1308
1200	709	826	1018	1213	1217	1427
1300	768	894	1102	1314	1318	1546
1400	827	963	1187	1415	1420	1665
1500	887	1032	1272	1517	1521	1784
1600	946	1101	1357	1618	1622	1902
1800	1064	1238	1526	1820	1825	2140
2000	1182	1376	1696	2022	2028	2378
2200	1300	1514	1866	2224	2231	2616
2400	1418	1651	2035	2426	2434	2854
2600	1537	1789	2205	2629	2636	3091
2800	1655	1926	2374	2831	2839	3329
3000	1773	2064	2544	3033	3042	3567

Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

	Type 22		Type 33		Type 34	
	150	200	150	200	150	200
Height (mm)	150	200	150	200	150	200
W/m 70/55/20	484	562	693	822	828	970
n-exponent	1,23	1,25	1,24	1,27	1,25	1,25
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
800	387	449	555	658	662	776
900	436	505	624	740	745	873
1000	484	562	693	822	828	970
1100	532	618	763	905	910	1067
1200	581	674	832	987	993	1164
1300	629	730	901	1069	1076	1262
1400	677	786	971	1151	1159	1359
1500	726	842	1040	1234	1241	1456
1600	774	898	1109	1316	1324	1553
1800	871	1011	1248	1480	1490	1747
2000	968	1123	1386	1645	1655	1941
2200	1065	1235	1525	1809	1821	2135
2400	1161	1348	1664	1974	1986	2329
2600	1258	1460	1802	2138	2152	2523
2800	1355	1572	1941	2303	2317	2717
3000	1452	1685	2080	2467	2483	2911

Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

	Type 22		Type 33		Type 34	
	150	200	150	200	150	200
Height (mm)	150	200	150	200	150	200
W/m 55/45/20	315	363	450	528	535	628
n-exponent	1,23	1,25	1,24	1,27	1,25	1,25
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
800	252	291	360	423	428	502
900	284	327	405	476	482	565
1000	315	363	450	528	535	628
1100	347	400	495	581	589	691
1200	378	436	540	634	643	753
1300	410	472	585	687	696	816
1400	441	509	630	740	750	879
1500	473	545	675	793	803	942
1600	504	581	720	846	857	1005
1800	568	654	810	951	964	1130
2000	631	727	900	1057	1071	1256
2200	694	799	990	1163	1178	1381
2400	757	872	1080	1268	1285	1507
2600	820	945	1170	1374	1392	1632
2800	883	1017	1260	1480	1499	1758
3000	946	1090	1350	1585	1606	1884

## PIANO MINI 2

Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors

	Type 22		Type 33		Type 34	
Height (mm)	150	200	150	200	150	200
W/m 75/65/20	573	684	827	999	965	1171
n-exponent	1,23	1,24	1,22	1,24	1,22	1,25
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
800	458	547	662	799	772	937
900	516	616	744	899	869	1054
1000	573	684	827	999	965	1171
1100	630	752	910	1099	1062	1288
1200	688	821	992	1199	1158	1405
1300	745	889	1075	1299	1255	1522
1400	802	958	1158	1399	1351	1639
1500	860	1026	1241	1499	1448	1757
1600	917	1094	1323	1598	1544	1874
1800	1031	1231	1489	1798	1737	2108
2000	1146	1368	1654	1998	1930	2342
2200	1261	1505	1819	2198	2123	2576
2400	1375	1642	1985	2398	2316	2810
2600	1490	1778	2150	2597	2509	3045
2800	1604	1915	2316	2797	2702	3279
3000	1719	2052	2481	2997	2895	3513

Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors

	Type 22		Type 33		Type 34	
Height (mm)	150	200	150	200	150	200
W/m 70/55/20	469	559	678	817	791	956
n-exponent	1,23	1,24	1,22	1,24	1,22	1,25
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
800	375	447	543	653	633	765
900	422	503	610	735	712	860
1000	469	559	678	817	791	956
1100	516	615	746	898	871	1051
1200	563	671	814	980	950	1147
1300	610	727	882	1062	1029	1242
1400	657	783	950	1143	1108	1338
1500	704	839	1017	1225	1187	1434
1600	751	895	1085	1307	1266	1529
1800	845	1006	1221	1470	1425	1720
2000	938	1118	1357	1633	1583	1911
2200	1032	1230	1492	1797	1741	2103
2400	1126	1342	1628	1960	1899	2294
2600	1220	1454	1763	2123	2058	2485
2800	1314	1566	1899	2287	2216	2676
3000	1408	1677	2035	2450	2374	2867

Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors

	Type 22		Type 33		Type 34	
Height (mm)	150	200	150	200	150	200
W/m 55/45/20	306	363	443	530	517	618
n-exponent	1,23	1,24	1,22	1,24	1,22	1,25
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
800	245	290	355	424	414	495
900	275	327	399	477	466	557
1000	306	363	443	530	517	618
1100	336	399	488	583	569	680
1200	367	436	532	636	621	742
1300	397	472	576	689	673	804
1400	428	508	621	742	724	866
1500	459	545	665	795	776	928
1600	489	581	710	848	828	989
1800	550	653	798	954	931	1113
2000	611	726	887	1060	1035	1237
2200	673	799	976	1167	1138	1360
2400	734	871	1064	1273	1242	1484
2600	795	944	1153	1379	1345	1608
2800	856	1017	1242	1485	1449	1731
3000	917	1089	1330	1591	1552	1855







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