

**BRUGMAN**  
TECHNICAL MANUAL 2025



**BRUGMAN**

# 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 Stříbro (Czech Republic), Plattling (Germany), Dilsen (Belgium) and Legnica (Poland).

Vasco / Brugman and Superia has 500 employees.

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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 110°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) 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, 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>	10 bar (tested at 13 bar)
<b>Maximum operating temperature:</b>	110 °C
<b>Conformity:</b>	In accordance with EN442-1: 2014: radiators and convectors
<b>Types:</b>	10   11   21s   22   33
<b>Heights:</b>	300   400   500   600   700   900 mm
<b>Lengths:</b>	400 => 3000 mm
<b>Depths:</b>	64   61   73   106   165 mm

TYPE 10 / 11



TYPE 21s



TYPE 22



TYPE 33



# Casual

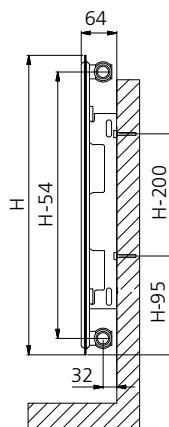
TECHNICAL DATA PER RUNNING METRE AT 75/65/20°C

**NEW**      **NEW**

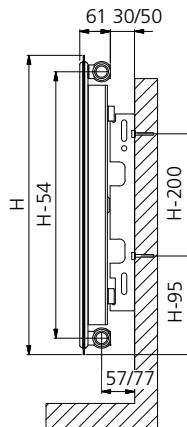
Height (mm)	Type 10	Type 11	Type 21s	Type 22	Type 33
300	W	551		975	1365
	kg	6,92		13,49	20,19
	I	2,20		3,55	5,29
	n	1,22		1,28	1,31
400	W	425	697	985	1241
	kg	7,07	9,20	15,95	18,05
	I	2,49	2,49	4,42	4,47
	n	1,26	1,24	1,31	1,31
500	W	514	840	1181	1494
	kg	8,64	11,49	19,82	22,61
	I	2,82	2,82	5,33	5,38
	n	1,27	1,25	1,32	1,32
600	W	602	979	1368	1738
	kg	10,21	13,77	23,68	27,17
	I	3,18	3,18	6,22	6,27
	n	1,29	1,27	1,32	1,32
700	W		1117		1974
	kg		16,08		31,74
	I		3,56		7,14
	n		1,28		1,35
900	W	872	1390	1880	2429
	kg	14,95	20,64	35,28	40,86
	I	4,42	4,42	8,77	8,84
	n	1,29	1,30	1,34	1,36

64

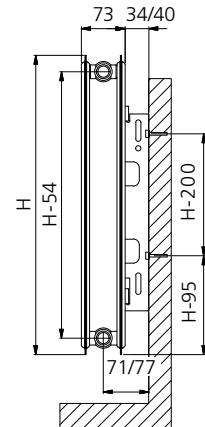
## L-BRACKETS



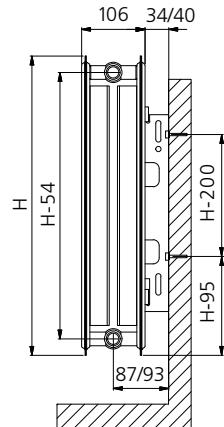
type 10



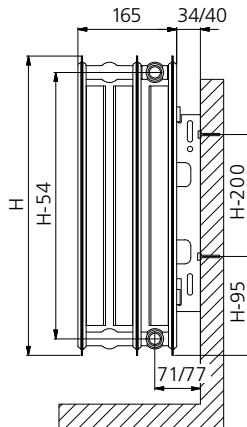
type 11



type 21s

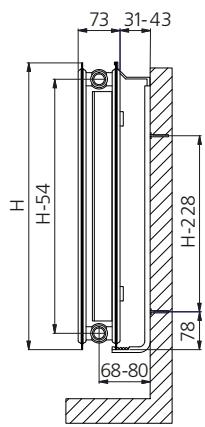


type 22

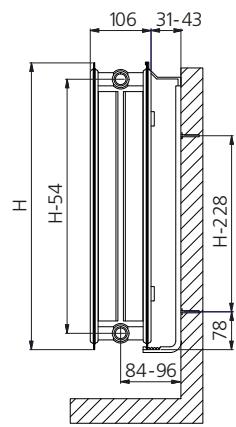


type 33

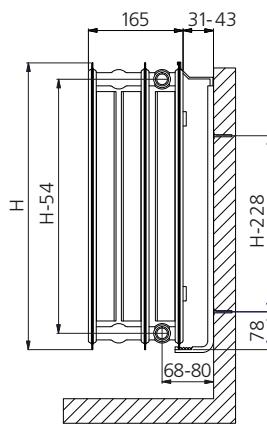
## J-BRACKETS



68-80



84-96



68-80

## 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) 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, 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>	10 bar (tested at 13 bar)
<b>Maximum operating temperature:</b>	110 °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>	64   61   73   106 mm

TYPE 10 / 11



TYPE 20s / 21s



TYPE 22

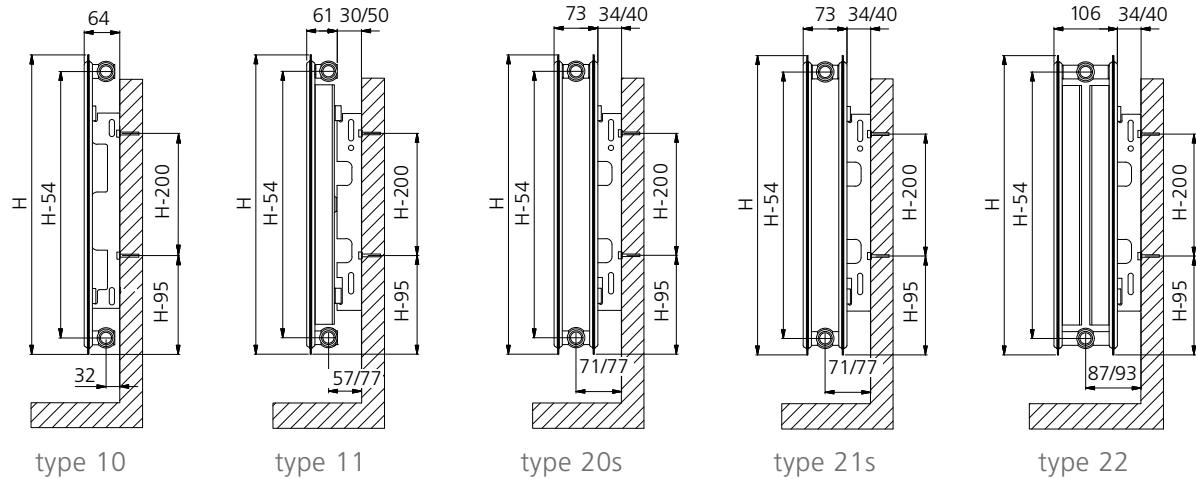


# Casual

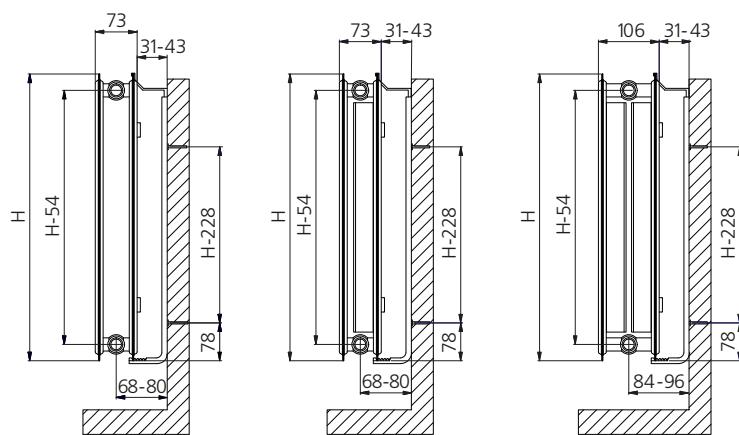
TECHNICAL DATA PER RUNNING METRE AT 75/65/20°C

Height (mm)	NEW		Type 10	NEW		Type 11	Type 20s	Type 21s	Type 22
	W								
300	kg								
	I								
	n								
	W	425			743		985		
400	kg	7,07			13,78		15,95		
	I	2,49			4,42		4,42		
	n	1,26			1,29		1,31		
	W	514							
500	kg	8,64							
	I	2,82							
	n	1,27							
	W	602		979		1025		1368	1738
600	kg	10,21		13,77		20,05		23,68	27,17
	I	3,18		3,18		6,22		6,22	6,27
	n	1,29		1,27		1,30		1,32	1,34
	W								1974
700	kg								31,74
	I								7,14
	n								1,35
	W	872		1390		1438		1880	2429
900	kg	14,95		20,64		29,47		35,28	40,86
	I	4,42		4,42		8,77		8,77	8,84
	n	1,29		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) 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 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, 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>	10 bar (tested at 13 bar)
<b>Maximum operating temperature:</b>	110 °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>	61   73   106   165 mm

TYPE 11



TYPE 21s



TYPE 22



TYPE 33



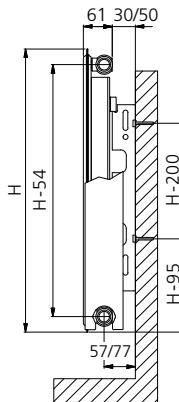
# Casual

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

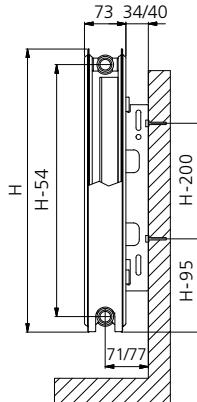
**NEW**

Height (mm)	Type 11	Type 21s	Type 22	Type 33
300	W	755	942	1319
	kg	12,83	14,72	21,93
	I	4,30	3,55	5,29
	n	1,31	1,31	1,32
400	W	697	953	1202
	kg	10,66	16,82	19,47
	I	2,49	4,42	4,47
	n	1,24	1,31	1,32
500	W	840	1141	1449
	kg	13,13	20,82	24,21
	I	2,82	5,33	5,38
	n	1,25	1,32	1,32
600	W	979	1322	1683
	kg	15,61	24,81	28,96
	I	3,18	6,22	6,27
	n	1,27	1,32	1,32
700	W	1117	1499	1907
	kg	18,11	28,82	33,73
	I	3,57	7,09	7,14
	n	1,28	1,32	1,33
900	W	1390	1841	2326
	kg	23,03	36,77	43,18
	I	4,42	8,77	8,84
	n	1,30	1,33	1,36

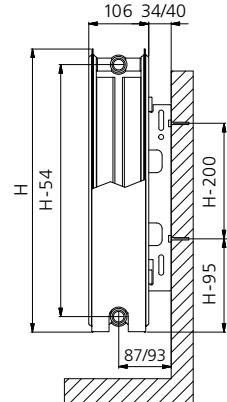
## L-BRACKETS



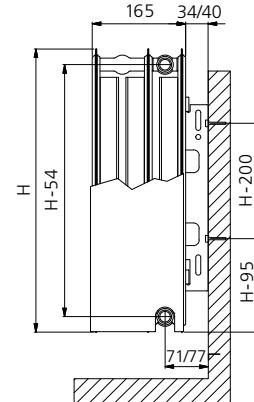
type 11



type 21s



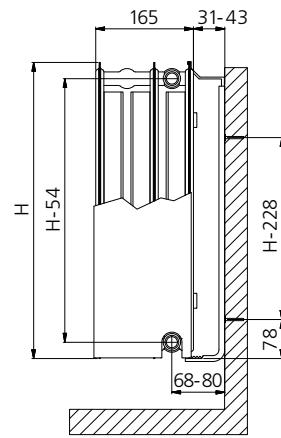
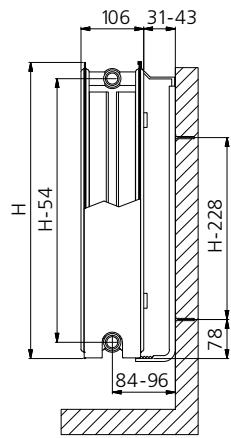
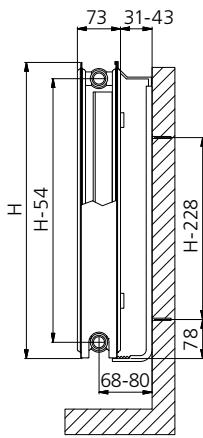
type 22



type 33

**NEW**

## J-BRACKETS



PROJECT  
BUREAU  
senioren  
LABEL

BRUGMAN

## 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) 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 in option
<b>Connections:</b>	2 x $\frac{3}{4}$ " external thread euroconus right bottom connection, 4 x $\frac{1}{2}$ " 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, 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>	10 bar (tested at 13 bar)
<b>Maximum operating temperature:</b>	110 °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>	61   73   106   165 mm

TYPE 11



TYPE 21s



TYPE 22



TYPE 33

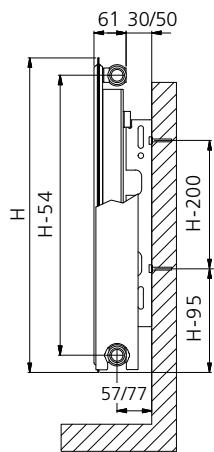


# Casual

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

Height (mm)	NEW			
	Type 11	Type 21s	Type 22	Type 33
300	W		942	1334
	kg		14,96	22,19
	I		3,55	5,29
	n		1,31	1,29
400	W	697	953	1202
	kg	10,83	17,13	19,75
	I	2,49	4,42	4,47
	n	1,24	1,31	1,30
500	W	840	1141	1449
	kg	13,36	21,18	24,55
	I	2,82	5,33	5,38
	n	1,25	1,32	1,31
600	W	979	1322	1683
	kg	15,89	25,22	29,35
	I	3,18	6,22	6,27
	n	1,27	1,32	1,32
700	W	1117	1499	1907
	kg	18,44	29,29	34,17
	I	3,57	7,09	7,14
	n	1,28	1,32	1,33
900	W	1390	1841	2326
	kg	23,49	37,37	43,76
	I	4,42	8,77	8,84
	n	1,30	1,33	1,34

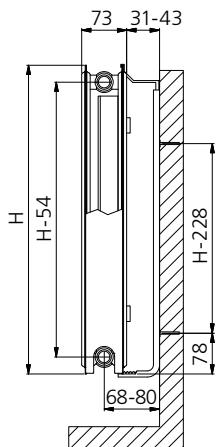
## L-BRACKETS



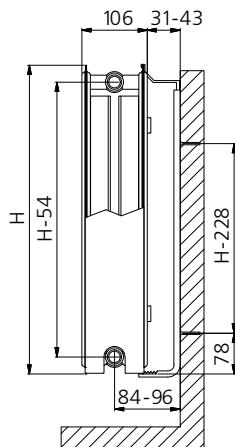
type 11

NEW

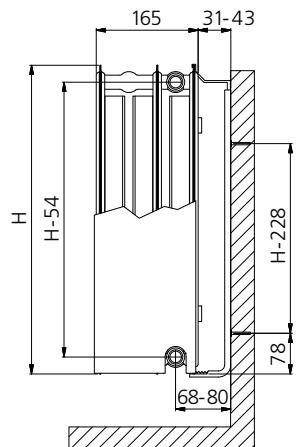
## J-BRACKETS



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 in option
<b>Connections:</b>	2 x $\frac{3}{4}$ " external thread euroconus right bottom connection, 4 x $\frac{1}{2}$ " 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, 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>Maximum operating pressure:</b>	10 bar (tested at 13 bar)
<b>Maximum operating temperature:</b>	110 °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

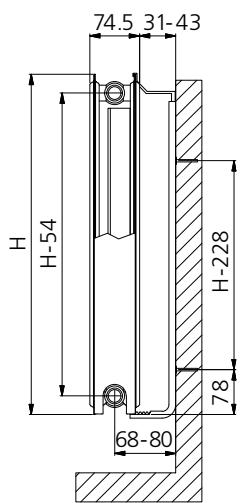


# Casual

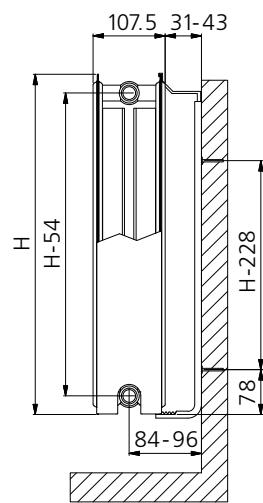
TECHNICAL DATA PER RUNNING METRE AT 75/65/20°C

Height (mm)		Type 21s	Type 22	Type 33
300	W		878	1236
	kg		16,96	24,17
	I		3,55	5,29
	n		1,30	1,32
400	W	868	1104	1532
	kg	19,78	22,42	31,99
	I	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
	I	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
	I	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
	I	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
	I	8,77	8,84	13,02
	n	1,29	1,28	1,32

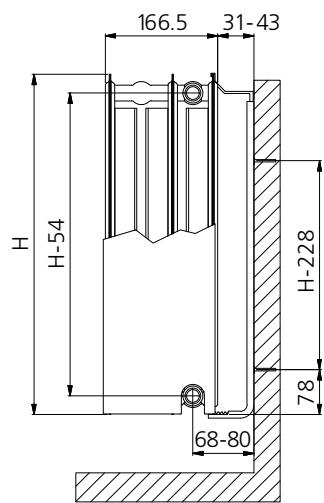
## J-BRACKETS



type 21s

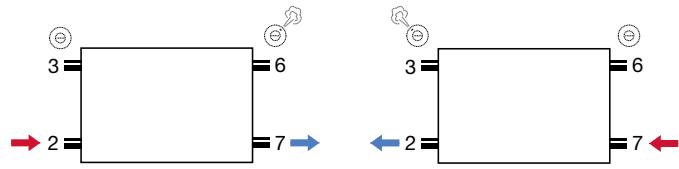
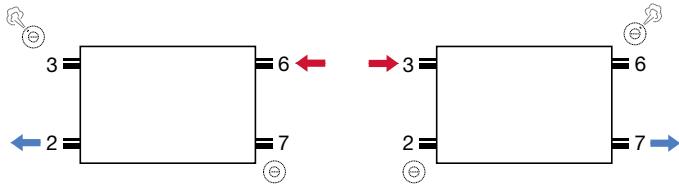
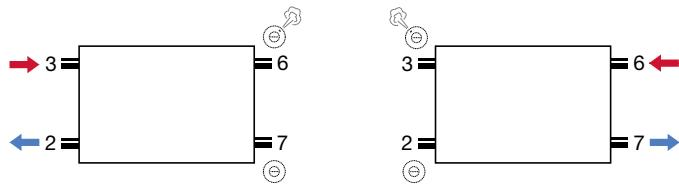


type 22

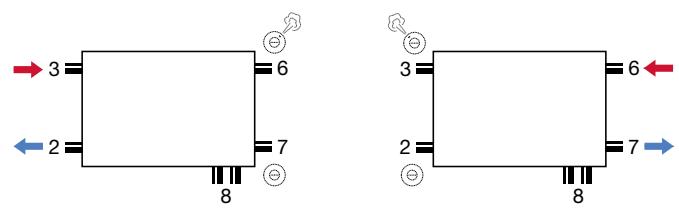
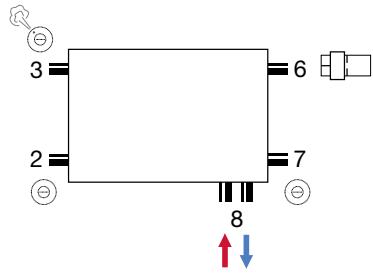


type 33

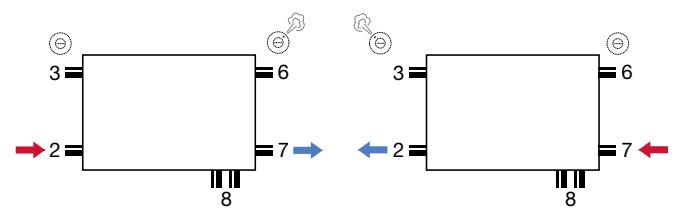
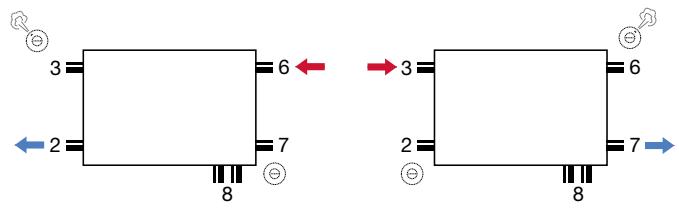
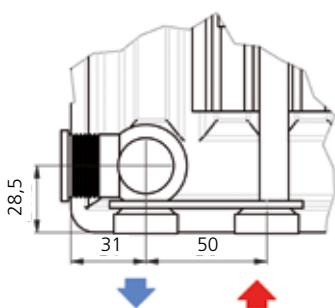
## STANDARD, STANDARD Zn & COMPACT 4



## 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:

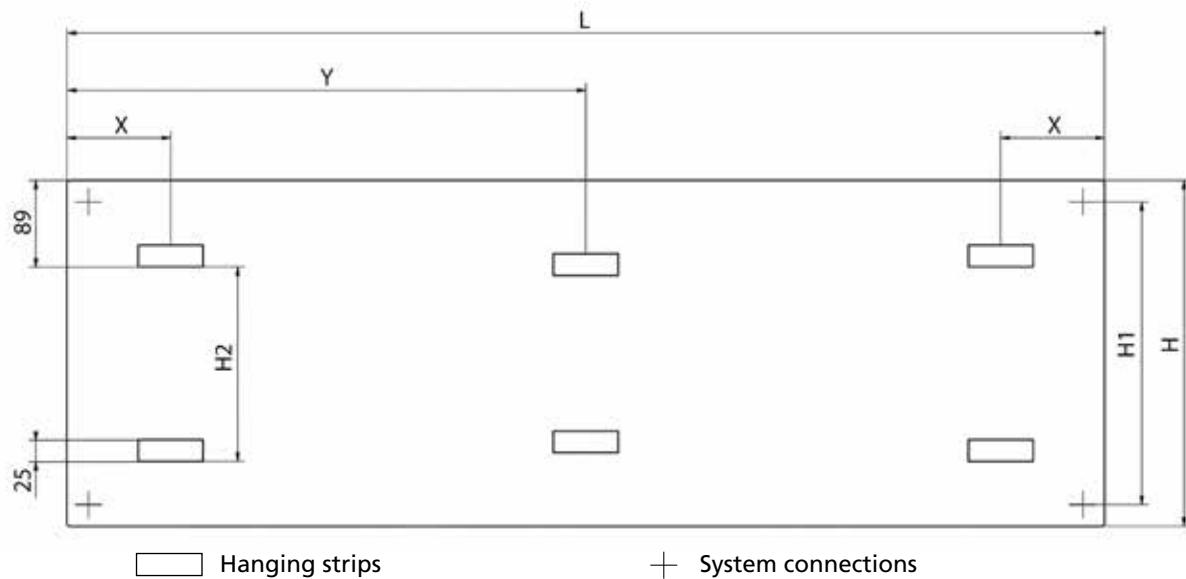
larger distance to the wall

**STANDARD****STANDARD Zn****COMPACT 4****UNI 6**

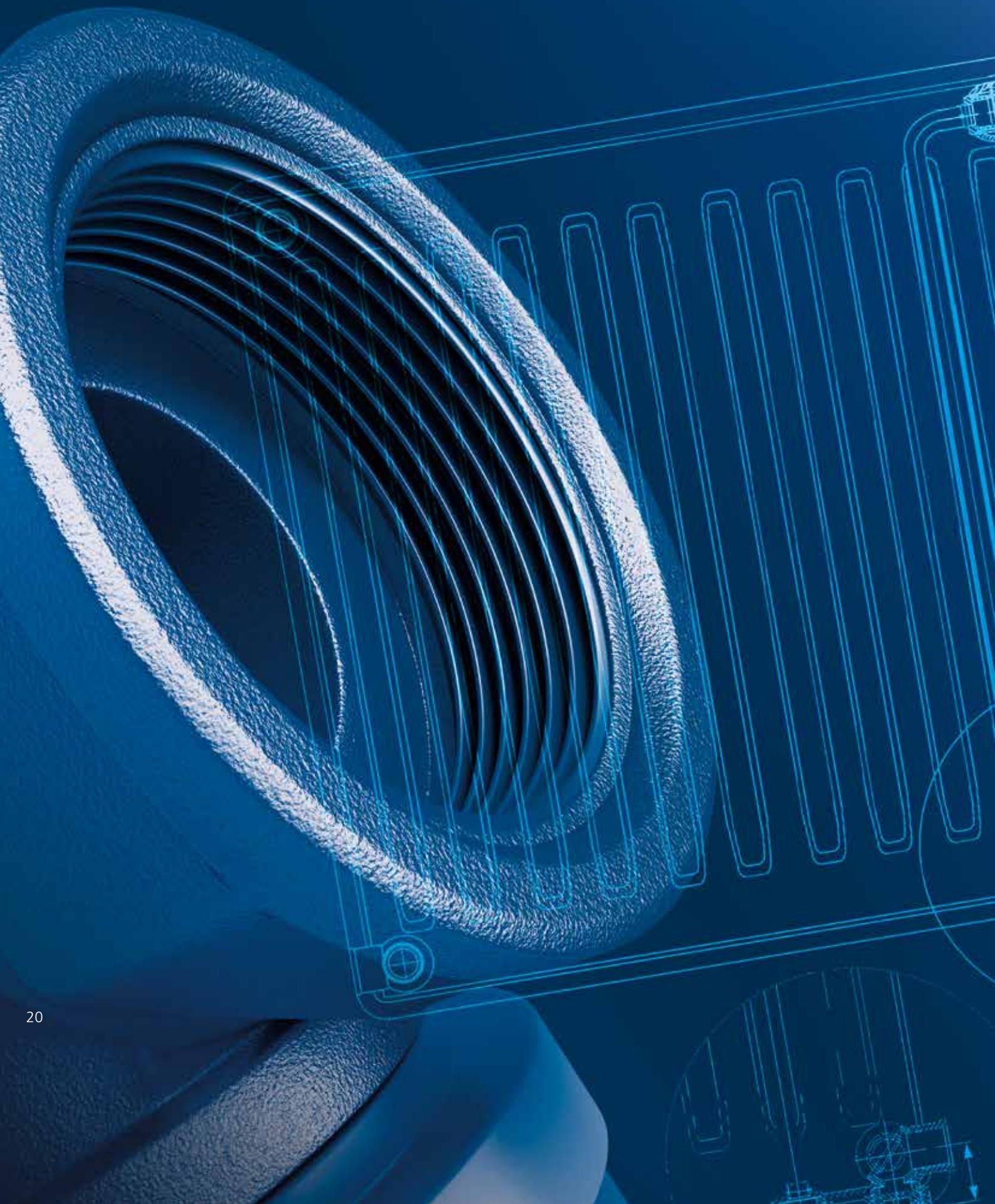
(only type 11)

**PIANO UNI 6**

(no strip plan)

**NEW****STRIP PLAN HORIZONTAL RADIATORS**

POSITION OF THE HANGING STRIPS						
TYPE	L	X	Y( $\geq 1800$ )	H	H1	H2
10	500-1000	140	L/2	400-900	H-54	H-153
11	400-2400	85	L/2	300-900	H-54	H-153
20-33	400 500-3000	100 140	L/2	300-900	H-54	H-153



**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

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

**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

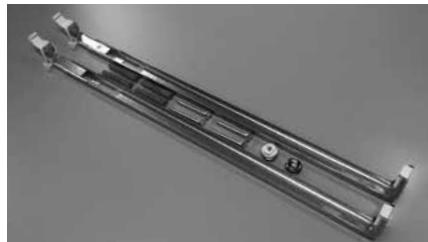
	Art. Nr.	Sizes (mm)	STANDARD	STANDARD Zn	COMPACT 4	UNI 6	PIANO UNI 6
<b>THERMOSTAT KNOB</b> for valve insert M30 x 1,5	13911630101	(white)			•	•	
<b>SET A1</b> Connection copper tube compression 3/4", 2 connections per set. Nickel-plated. Mention diameter when ordering.	13911610116	Ø 16 x 1			•	•	
<b>SET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



	Art. Nr.	Sizes (mm)	STANDARD	STANDARD Zn	COMPACT 4	UNI 6 (TYPE 11)	PIANO UNI 6
		Height					
Suitable for panel radiators from production date 01/2025							
<b>L-BRACKETS SET</b> For type 10 and 11	13921502332 (2 pieces) 13921502342 (2 pieces) 13921502352 (2 pieces) 13921502362 (2 pieces) 13921502372 (2 pieces) 13921502392 (2 pieces)	300 mm 400 mm 500 mm 600 mm 700 mm 900 mm	• • • • • •	• • • • • •	• • • • • •	• • • • • •	• • • • • •
For type 11/20s/21s/22/33	13921502232 (2 pieces) 13921502242 (2 pieces) 13921502252 (2 pieces) 13921502262 (2 pieces) 13921502272 (2 pieces) 13921502292 (2 pieces)	300 mm 400 mm 500 mm 600 mm 700 mm 900 mm	• • • • • •	• • • • • •	• • • • • •	• • • • • •	• • • • • •
Length: L 400-1600 mm L 1800-3000 mm	2 pieces 3 pieces						

**JU-BRACKETS SET**

For type 21s/22/33



Art. Nr.

Sizes (mm)

Height

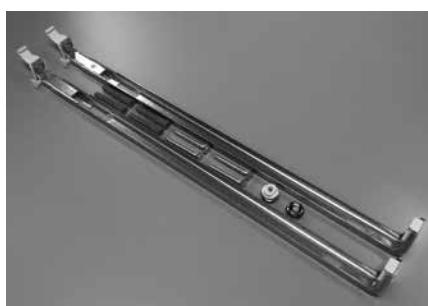
	STANDARD	STANDARD Zn	COMPACT 4	UNI 6 (EX. TYPE 11)	PIANO UNI 6
13911503032 (2 pieces)	300 mm		•	•	•
13911503042 (2 pieces)	400 mm		•	•	•
13911503052 (2 pieces)	500 mm		•	•	•
13911503062 (2 pieces)	600 mm		•	•	•
13911503072 (2 pieces)	700 mm		•	•	•
13911503092 (2 pieces)	900 mm		•	•	•

**JU-set**

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.

**Product:**

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).

**Material:**

Steel

**Finishing:**

Top grille and side panels

**Valve:**

The included valve insert (without thermostatic valve) is compatible with thermostatic valves M30 x 1,5 mm.

**Suspension and accessories:**

L-bracket set (type 11): blind plugs, air vent, valve insert M30x1,5, lift-out protection, silencers, plugs and bolts (delivered standard)

J-bracket set (type 21s, 22, 33): blind plugs, air vent, valve insert M30x1,5, plugs and bolts (delivered standard)

VDI-compliant in option

**Connections:**

2 x  $\frac{3}{4}$ " external thread euroconus middle connection 50 mm (underneath),  
4 x  $\frac{1}{2}$ " internal thread side connections

**Packaging:**

Each radiator is robustly packaged in high-quality cardboard and then shrink-wrapped. A label describes the radiator characteristics:  
type – height – length.

**Guarantee:**

10 years, if the general terms and conditions of Brugman are respected.

**Painting process:**

All radiators are degreased, phosphated, cataphoretically primed and powder-coated standard in RAL 9016.

**Colour:**

RAL 9016 (other colours can also be delivered on request: see colour chart)

**Heat meters:**

Suitable without restrictions for heat meters, both electrical and using the evaporation principle (in accordance with EN834|835).

**Maximum operating pressure:**

10 bar (tested at 13 bar)

**Maximum operating temperature:**

110 °C

**Conformity:**

In accordance with EN442-1: 2014: radiators and convectors

**Types:**

11 | 21s | 22 | 33

**Heights:**

300 | 400 | 500 | 600 | 700 | 900 mm

**Lengths:**

400 => 3000 mm

**Depths:**

61 | 73 | 106 | 165 mm

TYPE 11



TYPE 21s



TYPE 22



TYPE 33



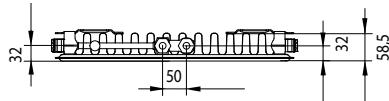
# Centric

BOTTOM VIEW

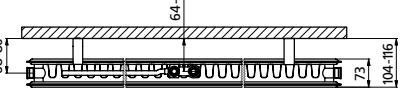
Mounted on the right



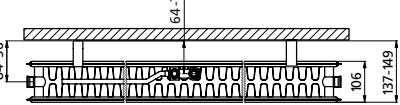
Type 11



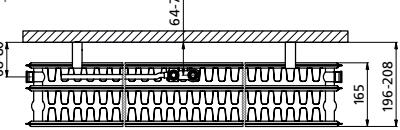
Type 21s



Type 22

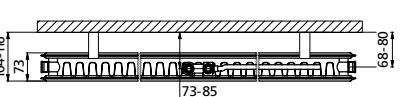


Type 33

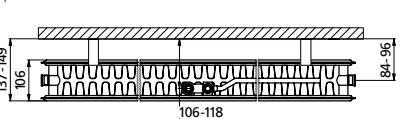


Mounted on the left

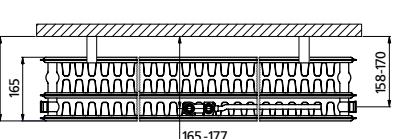
Type 21s



Type 22



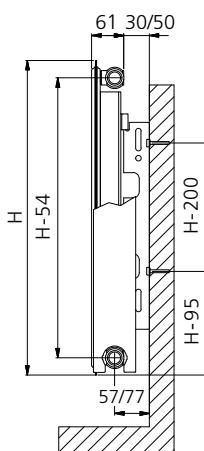
Type 33



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

Height (mm)	NEW			
	Type 11	Type 21s	Type 22	Type 33
300	W	-	755	942
	kg	-	13,92	15,65
	I	-	3,50	3,55
	n	-	1,31	1,31
400	W	697	953	1202
	kg	11,53	18,00	20,49
	I	2,49	4,42	4,47
	n	1,24	1,31	1,32
500	W	840	1141	1449
	kg	14,05	22,09	25,20
	I	2,82	5,33	5,38
	n	1,25	1,32	1,32
600	W	979	1322	1683
	kg	16,60	26,14	30,04
	I	3,18	6,22	6,27
	n	1,27	1,32	1,32
700	W	1117	1499	1907
	kg	19,16	29,59	34,24
	I	3,57	7,09	7,14
	n	1,28	1,32	1,33
900	W	1390	1841	2326
	kg	24,23	38,06	44,50
	I	4,42	8,77	8,84
	n	1,30	1,33	1,34

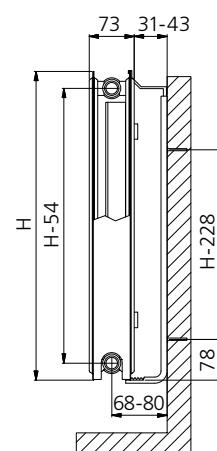
## L-BRACKETS



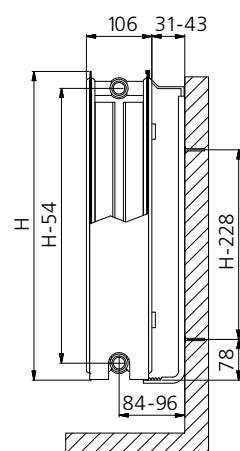
type 11



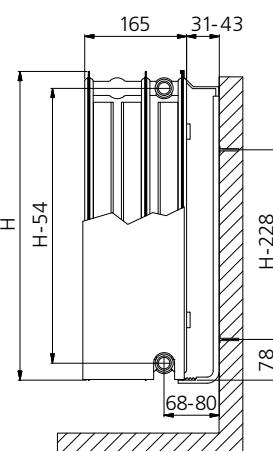
## J-BRACKETS



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 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 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 in option
<b>Connections:</b>	2 x $\frac{3}{4}$ " external thread euroconus middle connection 50 mm (underneath), 4 x $\frac{1}{2}$ " 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, 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>Maximum operating pressure:</b>	10 bar (tested at 13 bar)
<b>Maximum operating temperature:</b>	110 °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

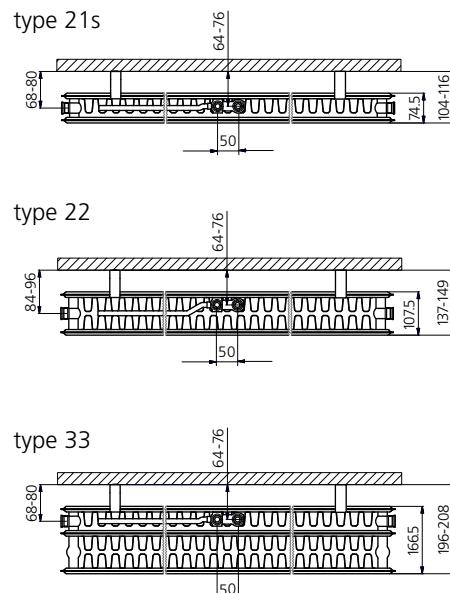


# Centric

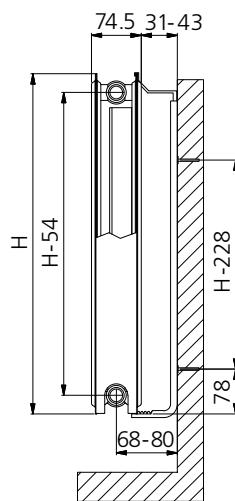
TECHNICAL DATA PER RUNNING METRE AT 75/65/20°C

Height (mm)		Type 21s	Type 22	Type 33
300	W	690	878	1236
	kg	16,15	17,89	25,11
	I	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
	I	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
	I	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
	I	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
	I	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
	I	8,77	8,84	13,02
	n	1,29	1,28	1,32

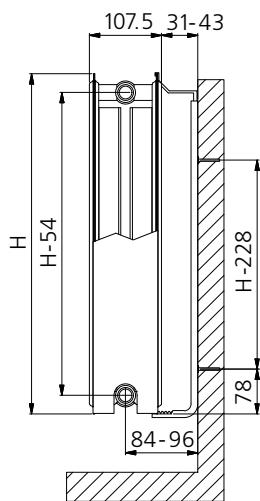
## BOTTOM VIEW



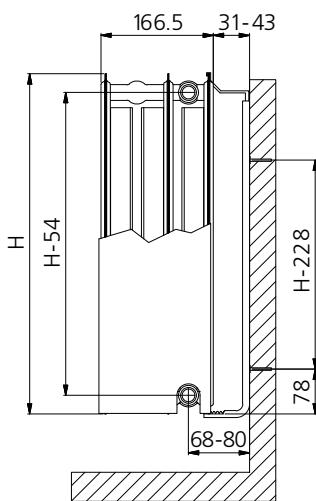
## J-BRACKETS



type 21s



type 22



type 33

## 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.

**Product:**

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.

**Material:**

Steel

**Finishing:**

Top grille, side panels and flat front plate with horizontal lines

**Valve:**

The included valve insert (without thermostatic valve) is compatible with thermostatic valves M30 x 1,5 mm.

**Suspension and accessories:**

J-bracket set: blind plugs, air vent, valve insert M30x1,5, plugs and bolts (delivered standard)

VDI-compliant in option

**Connections:**

2 x  $\frac{3}{4}$ " external thread euroconus middle connection 50 mm (underneath),  
4 x  $\frac{1}{2}$ " internal thread side connections

**Packaging:**

Each radiator is robustly packaged in high-quality cardboard and then shrink-wrapped. A label describes the radiator characteristics:  
type – height – length.

**Guarantee:**

10 years, if the general terms and conditions of Brugman are respected.

**Painting process:**

All radiators are degreased, phosphated, cataphoretically primed and powder-coated standard in RAL 9016.

**Colour:**

RAL 9016

**Maximum operating pressure:**

10 bar (tested at 13 bar)

**Maximum operating temperature:**

110 °C

**Conformity:**

In accordance with EN442-1: 2014: radiators and convectors

**Types:**

21s | 22 | 33

**Heights:**

300 | 400 | 500 | 600 | 700 | 900 mm

**Lengths:**

400 => 3000 mm

**Depths:**

74,5 | 107,5 | 166,5 mm

TYPE 21s



TYPE 22



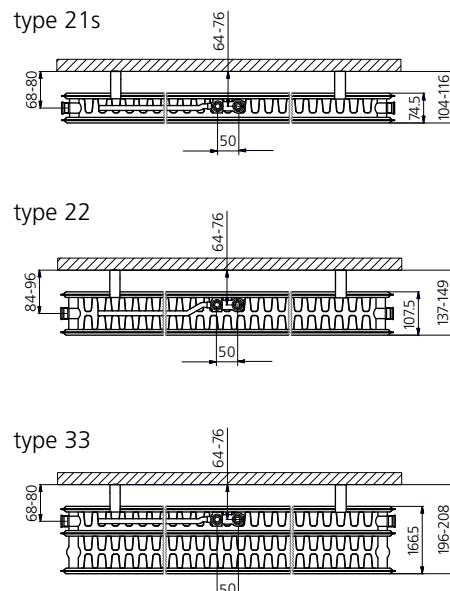
TYPE 33



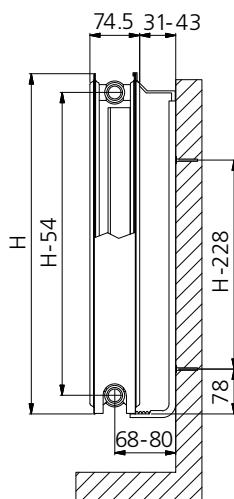
## TECHNICAL DATA PER RUNNING METRE AT 75/65/20°C

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

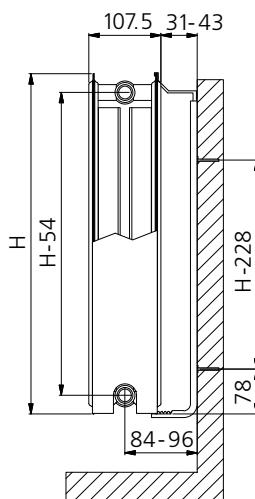
## BOTTOM VIEW



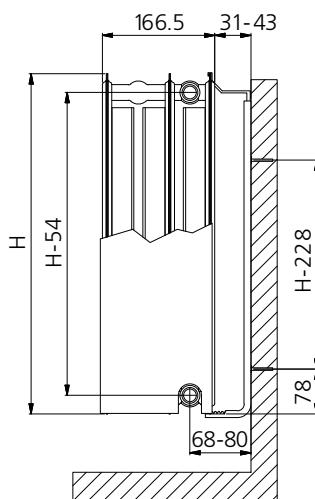
## J-BRACKETS



type 21s

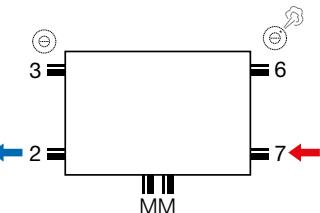
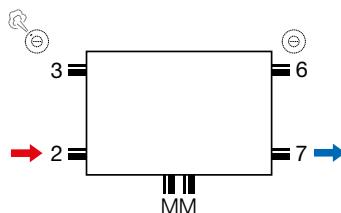
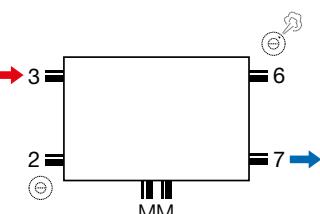
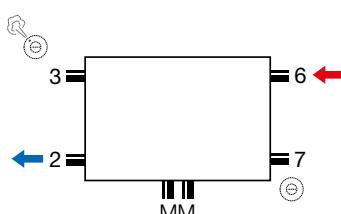
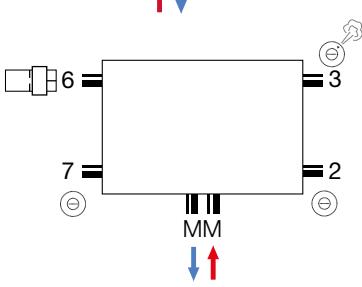
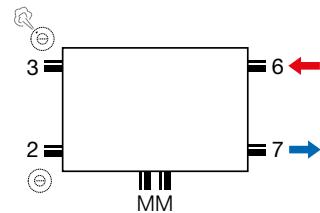
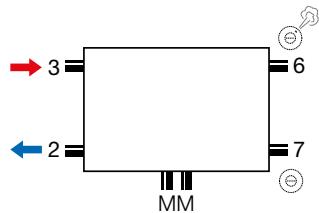
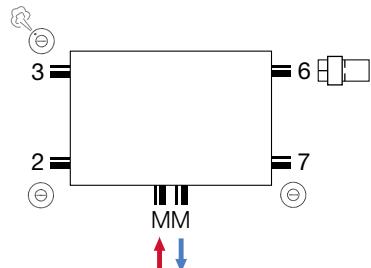


type 22



type 33

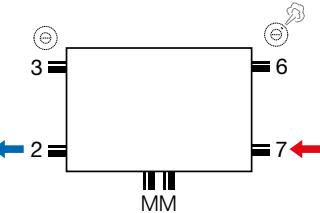
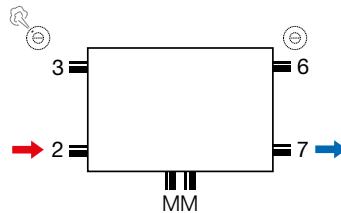
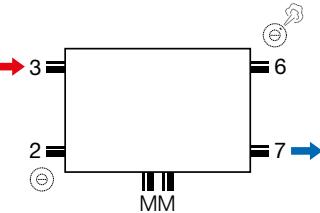
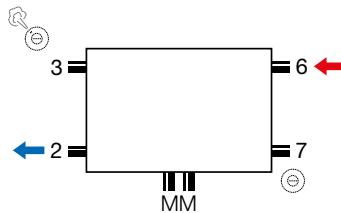
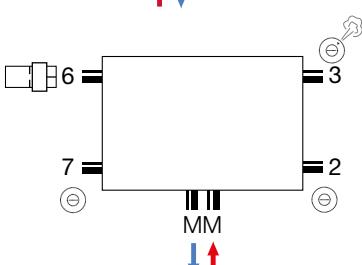
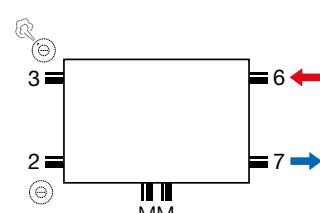
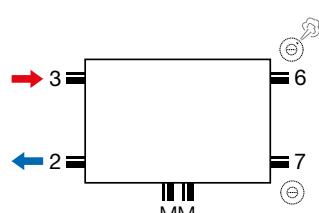
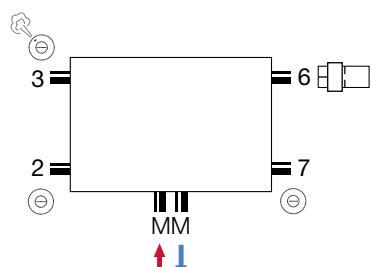
## CENTRIC



**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 &amp; CENTRIC LINE



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

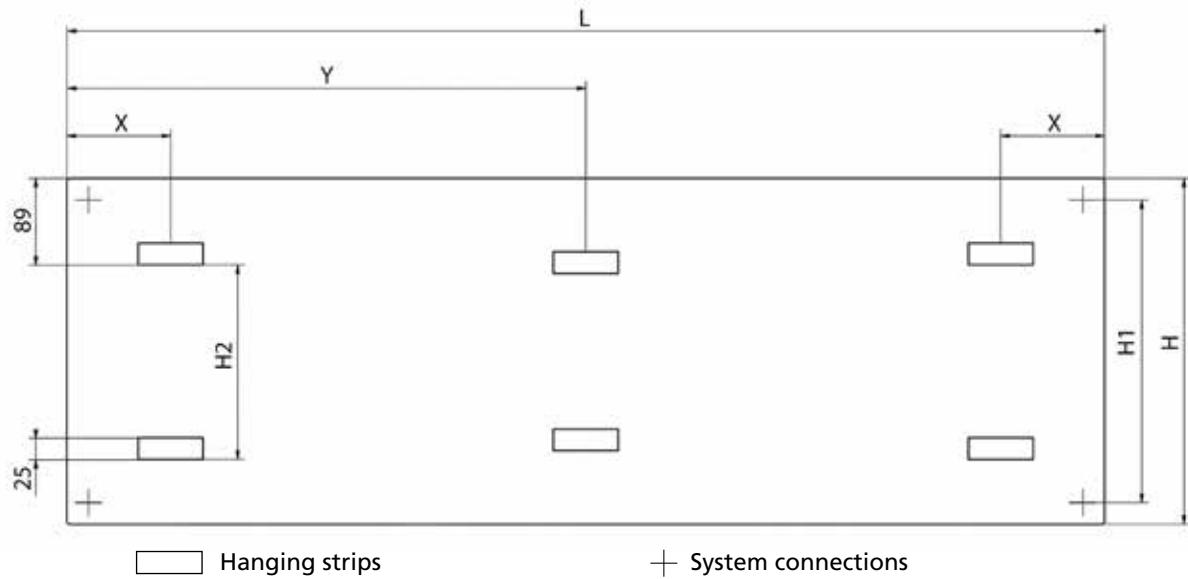
**Attention with type 33:**  
larger distance to the wall

**CENTRIC**

(only type 11)

**NEW**

## STRIP PLAN CENTRIC RADIATORS



POSITION OF THE HANGING STRIPS						
TYPE	L	X	Y( $\geq 1800$ )	H	H1	H2
11	400-2000	85	L/2	300-900	H-54	H-153

# Centric

## Collection

### Piano Centric





		Art. Nr.	Sizes (mm)	CENTRIC	PIANO CENTRIC	CENTRIC LINE
<b>VALVE D2/50</b>		Connection adaptor 3/4" euroconus (floor). One- and two-pipe. Supply and return closable. With bypass control, nickel-plated.	13911610202	•	•	•
<b>VALVE E2/50</b>		Connection adaptor 3/4" euroconus (wall). One- and two-pipe. Supply and return closable. With bypass control, nickel-plated.	13911610203	•	•	•
<b>REVERSIBLE CONNECTION ADAPTOR</b>		Connection adaptor 3/4" euroconus (reversible: floor-wall), nickel-plated.	13911600200	•	•	•
<b>SET A1</b>		Connection copper tube compression 3/4", 2 connections per set. Nickel-plated. Mention diameter when ordering.	13911610116	Ø 16 x 1	•	•
<b>SET A3</b>		Connection PE tube euroconus 3/4", 2 connections per set. Nickel-plated. Mention diameter when ordering.	13911610216	Ø 16 x 1,5	•	•
<b>SET A3</b>		Connection for multi-layer tube, 2 connections per set. Nickel-plated. Mention diameter when ordering.	13911611620	Ø 16 x 2	•	•

	Art. Nr.	Sizes (mm)	CENTRIC	PIANO CENTRIC	CENTRIC LINE
<b>FLOOR SUPPORT BRACKET FOR TYPE 21s/22/33 (white)</b>					
	For mounting on the screed (short type) (H = 135-200 mm) and in the screed (long type) (H = 285-345 mm)	13911830913 short 13911830914 long	• •	• •	• •
					
<b>FLOOR SUPPORT BRACKET FOR TYPE 21s/22/33 (white)</b>					
	For mounting on the screed (short type) (H = 135-200 mm) and in the screed (long type) (H = 285-345 mm)	13911830917 short 13911830918 long	• •	• •	• •
					
<b>THERMOSTAT KNOB</b> for valve insert M30 x 1,5	13911630101	(white)	•	•	•
<b>TOWEL RAIL (white)</b> for horizontal panel radiators					
	13911982040 13911982050 13911982060 13911982080 13911982100	Length 400 mm 500 mm 600 mm 800 mm 1000 mm	• • • • •	• • • • •	• • • • •
<b>TOWEL RAIL (chrome)</b> for horizontal panel radiators					
	13911983050 13911983060 13911983070 13911983080	Length 500 mm 600 mm 700 mm 800 mm	• • • •	• • • •	• • • •
<b>SPRAY CAN AND PAINT STICK</b>					
	Spray can 13919020307  Paint stick 13919020306		• •	• •	• •



# Vertical Centric

## Collection

Centric Verti Standard

Centric Verti

Piano Centric Verti

Centric Verti Line

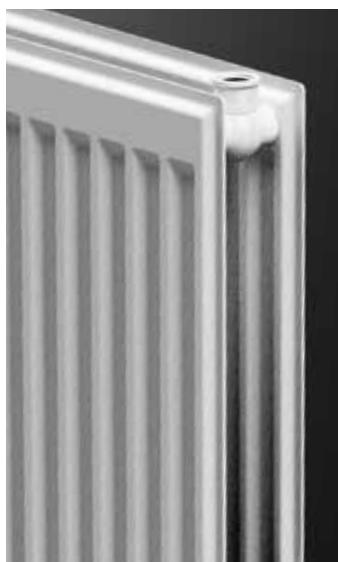


## CENTRIC VERTI STANDARD

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>	Wall bracket set short (Type 10) or J-bracket set (Type 20) (supplied as standard) Blind plug (1x) and air vent (1x) supplied with the suspension. Blind plug in connection top left (4) and bottom left (1) already pre-fitted at the factory.
<b>Connections:</b>	Type 10: 4 x $\frac{1}{2}$ " internal thread (1 and 4 already sealed at the factory) 2 x $\frac{1}{2}$ " internal thread (center-bottom) (already sealed at the factory) Type 20: 4 x $\frac{1}{2}$ " internal thread (1 and 4 already sealed at the factory) 2 x $\frac{3}{4}$ " external thread (center-bottom) (already sealed at the factory)
<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
<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>	110 °C
<b>Conformity:</b>	In accordance with EN442-1: 2014: radiators and convectors
<b>Types:</b>	10   20
<b>Heights:</b>	1600   1800   2000   2200 mm
<b>Widths:</b>	400   500   600   700   800 mm
<b>Depths:</b>	Type 10: 61mm / Type 20: 73mm



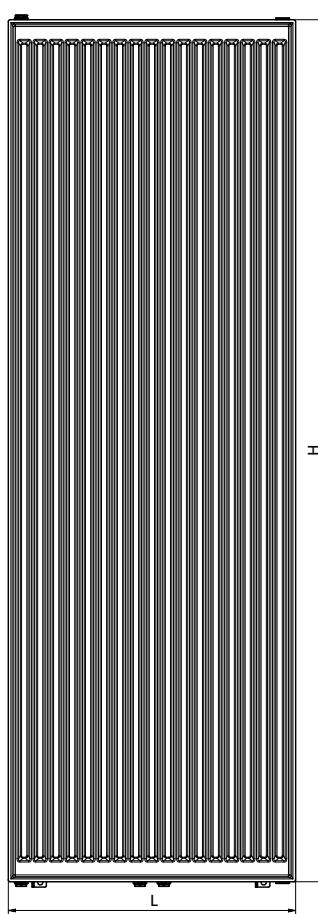
TYPE 10 / 20

# Centric

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

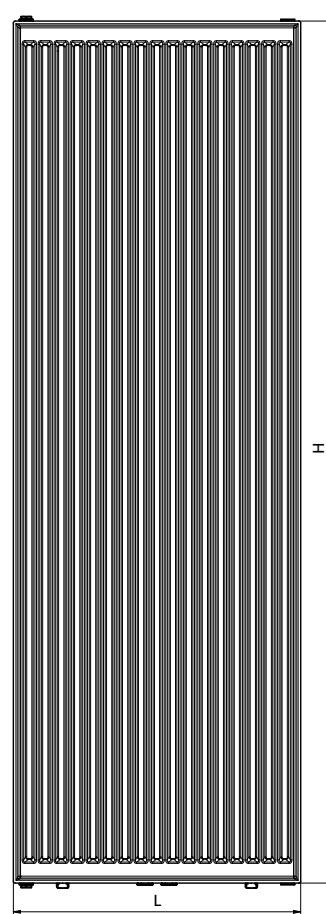
Height (mm)		Type 10	Type 20s
1600	W	1760	2606
	kg	29,62	64,40
	l	7,68	12,96
	n	1,35	1,29
1800	W	1954	2886
	kg	33,06	70,66
	l	8,10	16,30
	n	1,38	1,29
2000	W	2150	3170
	kg	36,48	76,92
	l	8,54	19,64
	n	1,36	1,33
2200	W	2348	3456
	kg	39,92	84,12
	l	8,96	21,62
	n	1,35	1,30

type10



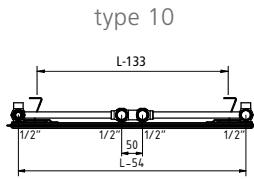
Front view

type 20

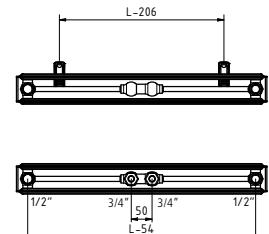


Front view

type 10



type 20



Side view

Bottom view

## 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 (supplied as standard), VDI-compliant (class III). Blind plug (1x) and air vent (1x) supplied with the suspension. Blind plug in connection top left (4) and bottom left (1) already pre-fitted at the factory.
<b>Connections:</b>	4 x 1/2" internal thread (1 and 4 already sealed at the factory), 2 x 3/4" external thread (center-bottom) (already sealed at the factory)
<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>	10 bar (tested at 13 bar)
<b>Maximum operating temperature:</b>	110 °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>	Type 21s: 73   Type 22: 106 mm

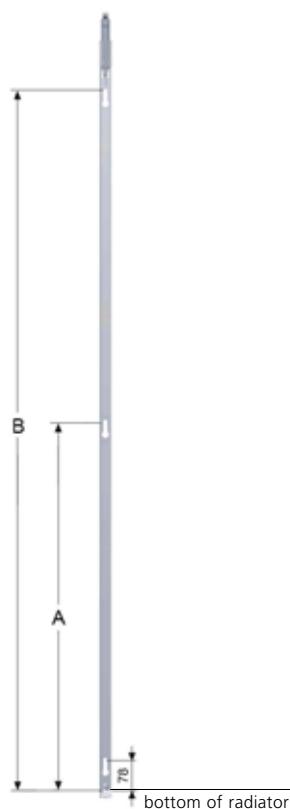


TYPE 21s / 22

# 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

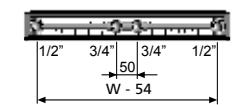
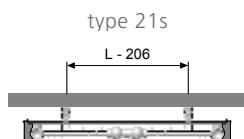


Front view

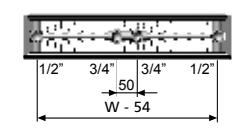
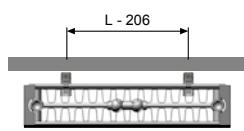
Side view

Bottom view

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



type 22



## 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 (supplied as standard), VDI-compliant (class III). Blind plug (1x) and air vent (1x) supplied with the suspension. Blind plug in connection top left (4) and bottom left (1) already pre-fitted at the factory.
<b>Connections:</b>	4 x $\frac{1}{2}$ " internal thread (1 and 4 already sealed at the factory), 2 x $\frac{3}{4}$ " external thread (center-bottom) (already sealed at the factory)
<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>	10 bar (tested at 13 bar)
<b>Maximum operating temperature:</b>	110 °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>	Type 21s: 75   Type 22: 108 mm

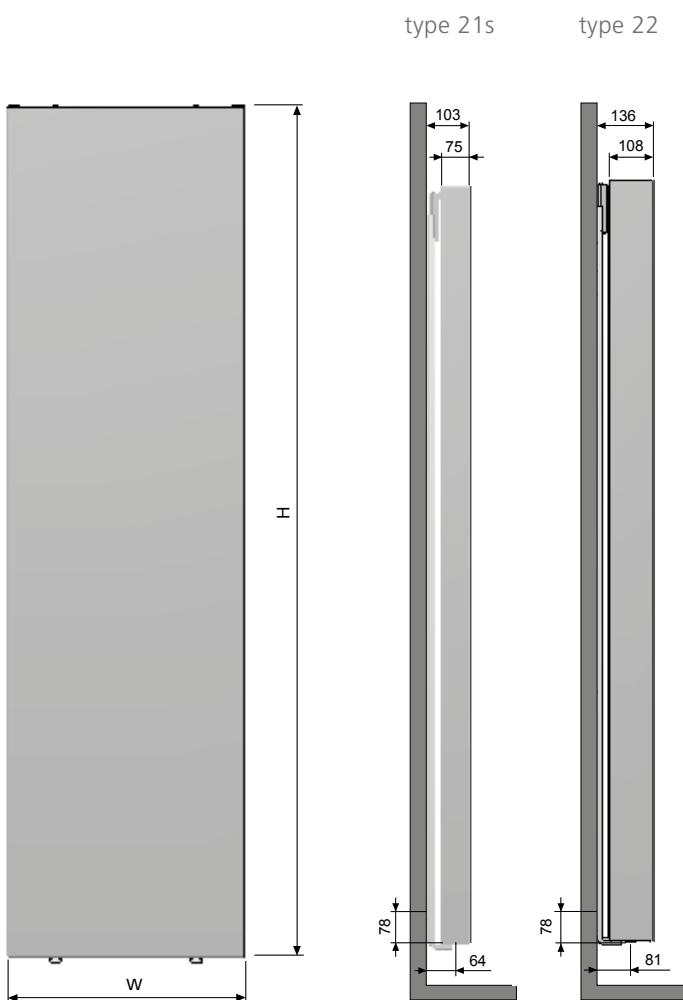
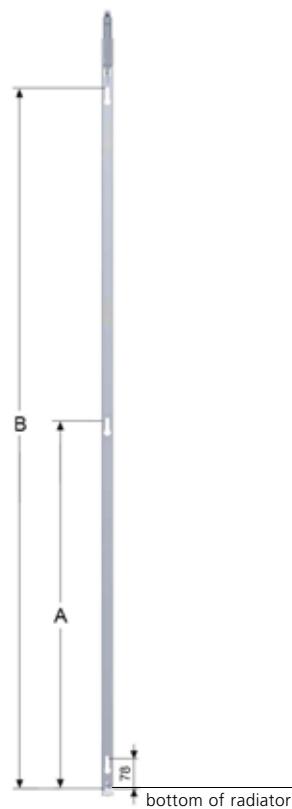


TYPE 21s / 22

# 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

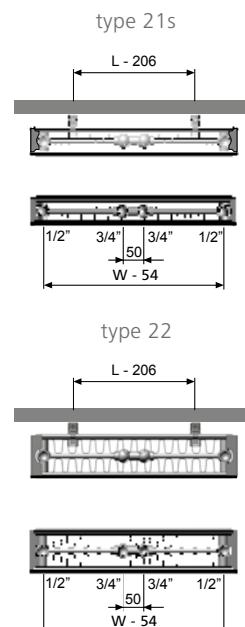


Front view

Side view

Bottom view

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



## 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.
<b>Material:</b>	Steel
<b>Finishing:</b>	Side panels and flat front plate having vertical lines
<b>Suspension and accessories:</b>	J-bracket set (supplied as standard), VDI-compliant (class III). Blind plug (1x) and air vent (1x) supplied with the suspension. Blind plug in connection top left (4) and bottom left (1) already pre-fitted at the factory.
<b>Connections:</b>	4 x $\frac{1}{2}$ " internal thread (1 and 4 already sealed at the factory), 2 x $\frac{3}{4}$ " external thread (center-bottom) (already sealed at the factory)
<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>	10 bar (tested at 13 bar)
<b>Maximum operating temperature:</b>	110 °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>	Type 21s: 75   Type 22: 108 mm

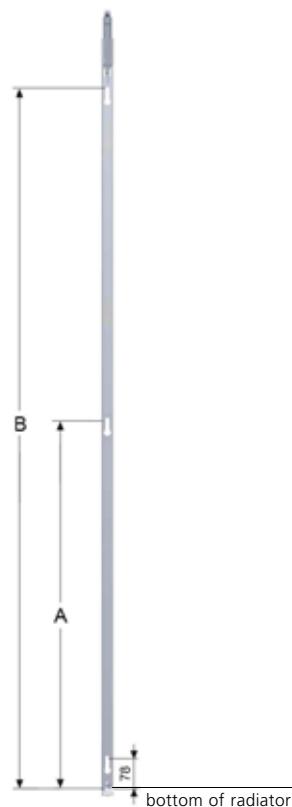


TYPE 21s / 22

# Centric

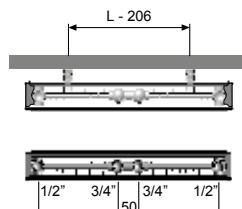
TECHNICAL DATA PER RUNNING METRE AT 75/65/20°C

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

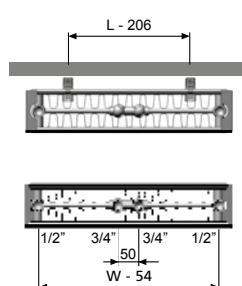


H	A	B
1600	748	1418
1800	848	1618
2000	948	1818
2200	1048	2018

type 21s

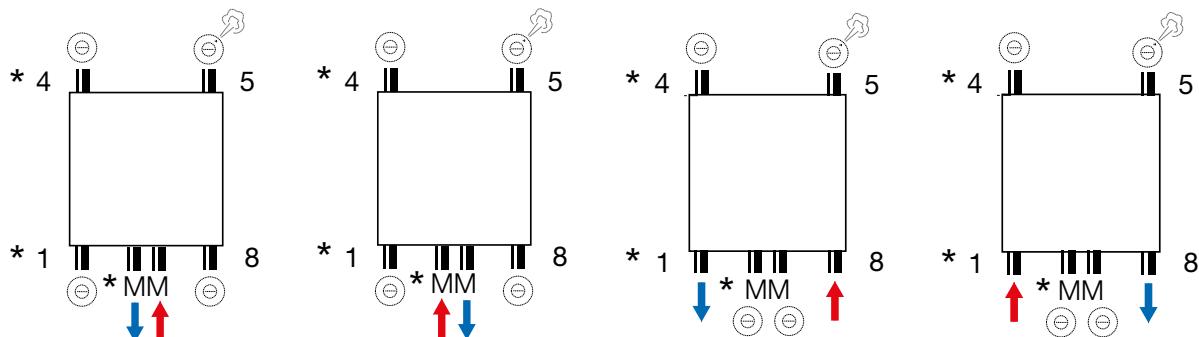


type 22



Bottom view

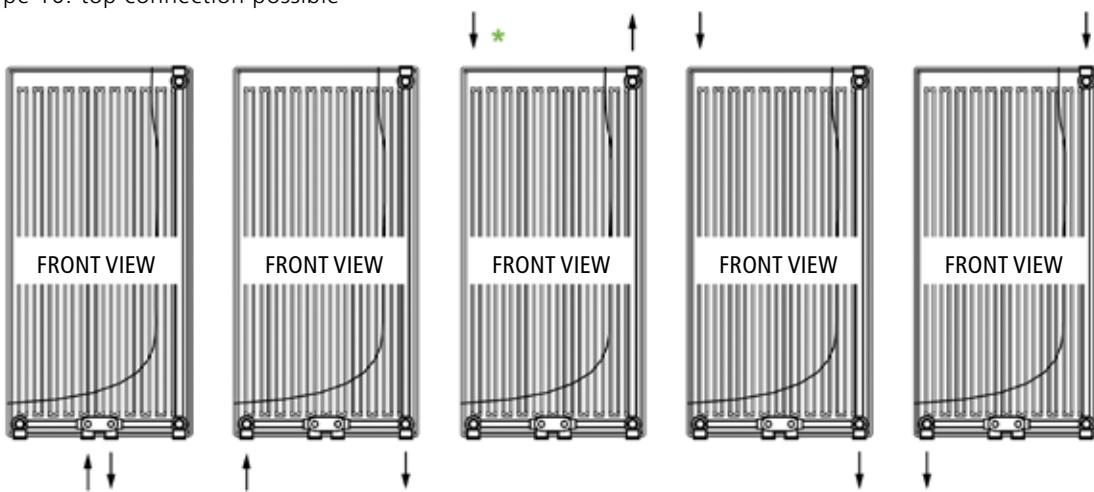
CENTRIC VERTI STANDARD  
 CENTRIC VERTI  
 PIANO CENTRIC VERTI  
 CENTRIC VERTI LINE



\*Connection MM, 1 and 4 already sealed at the factory

**Comment:**

\* Type 10: top connection possible



Type 20-22: top connection with separation plug 13911990010 possible

When connected from above, the power reduction can reach 15%.





**Straight connection adaptor with white thermostat knob**

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

Art. Nr.

13911630147

CENTRIC VERTI STANDARD	CENTRIC VERTI	PIANO CENTRIC VERTI	CENTRIC VERTI LINE
•	•	•	•

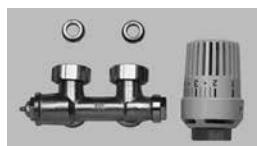


**Straight connection adaptor with chrome thermostat knob**

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

13911631147

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

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

13911630141

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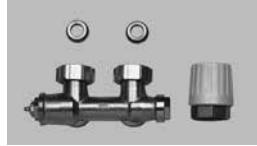


**Right-angled connection adaptor with chrome thermostat knob**

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

13911631141

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

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

13911630151

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**Straight connection adaptor with manual knob**

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

13911630157

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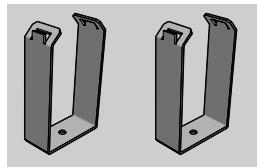


**VALVE N3**

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

13911610144

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**FLOOR SUPPORT BRACKET**

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

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

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

13911825000

13911825001

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**SET A1**

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

Art. Nr.

Sizes (mm)

	CENTRIC VERTI STANDARD	CENTRIC VERTI	PIANO CENTRIC VERTI	CENTRIC VERTI LINE
Ø 16 x 1	•	•	•	•

**SET A3**

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

13911610216

Ø 16 x 1,5

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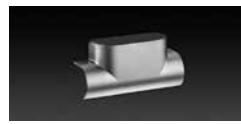
**SET A3**

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

13911611620

Ø 16 x 2

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**COVER PLATE**

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

13911630331

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

13911630431

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13911630330

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13911630430

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**TOWEL RAIL WHITE / CHROME**

WHITE

13911986040

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13911986050

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13911986060

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13911986070

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13911986080

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**Length**

400 mm

•	•	•	•
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500 mm

•	•	•	•
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600 mm

•	•	•	•
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700 mm

•	•	•	•
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800 mm

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CHROME

13911987040

•	•	•	•
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13911987050

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13911987060

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13911987070

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13911987080

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**TOWEL RAIL WHITE / CHROME**

WHITE

13911984040

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13911984050

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13911984060

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13911984070

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13911984080

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CHROME

13911985040

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13911985050

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13911985060

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13911985070

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13911985080

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**TOWEL RAIL STAINLESS STEEL**STAINLESS  
STEEL

13911980040

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13911980050

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13911980060

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13911980070

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13911980080

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# 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>Blind plug and air vent:</b>	To be ordered separately 13911990031 blind plug ½" (10 pieces) 13911990040 air vent ½" (1 piece)
<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>	110 °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



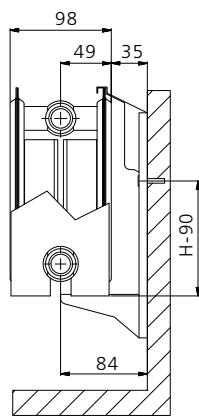
TYPE 22 / 33 / 34

# Mini

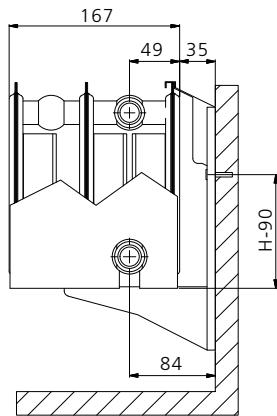
TECHNICAL DATA PER RUNNING METRE AT 75/65/20°C

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

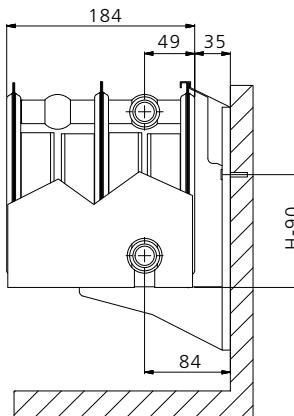
type 22



type 33

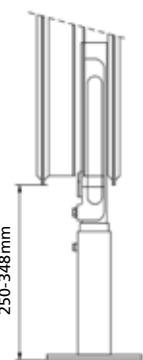
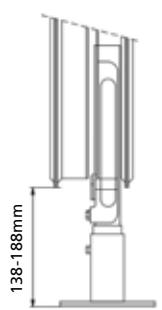


type 34

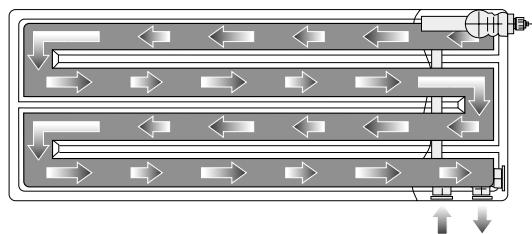


## BRACKETS

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.

**Product:**

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.

**Material:**

Steel

**Finishing:**

Top grille, side panels and flat front plate on 1 side

**Suspension and accessories:**

Wall or foot bracket (to be ordered separately)

**Blind plug and air vent:**

To be ordered separately

13911990031 blind plug  $\frac{1}{2}$ " (10 pieces)

13911990040 air vent  $\frac{1}{2}$ " (1 piece)

**Connections:**

2 x  $\frac{3}{4}$ " external thread euroconus right bottom connection,  
4 x  $\frac{1}{2}$ " internal thread connections

**Packaging:**

Each radiator is robustly packaged in high-quality cardboard.  
A label describes the radiator characteristics: type – height – length.

**Guarantee:**

10 years, if the general terms and conditions of Brugman are respected.

**Painting process:**

All radiators are degreased, phosphated, cataphoretically primed and powder-coated standard in RAL 9016.

**Colour:**

RAL 9016 (other colours can also be delivered on request: see colour chart)

**Heat meters:**

Suitable without restrictions for heat meters, both electrical and using the evaporation principle (in accordance with EN834|835).

**Maximum operating pressure:**

8 bar (tested at 11 bar)

**Maximum operating temperature:**

110 °C

**Conformity:**

In accordance with EN442-1: 2014: radiators and convectors

**Types:**

22 | 33 | 34

**Heights:**

150 | 200 mm

**Lengths:**

800 => 3000 mm

**Depths:**

100 | 169 | 186 mm



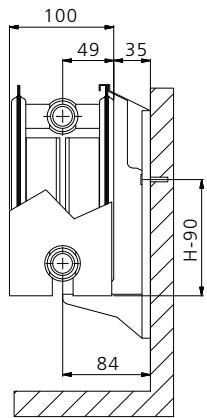
TYPE 22 / 33 / 34

# Mini

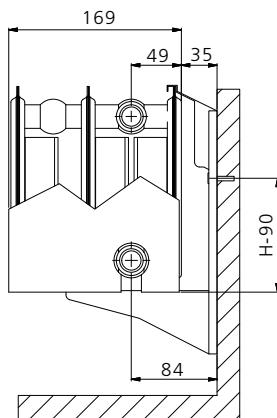
TECHNICAL DATA PER RUNNING METRE AT 75/65/20°C

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

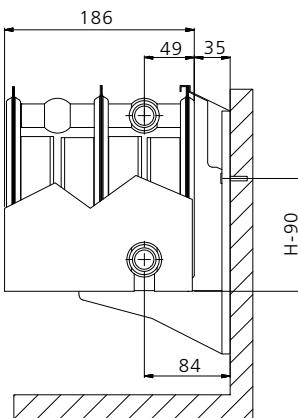
Type 22



Type 33

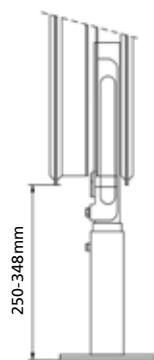
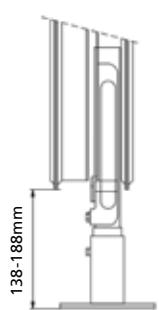


Type 34

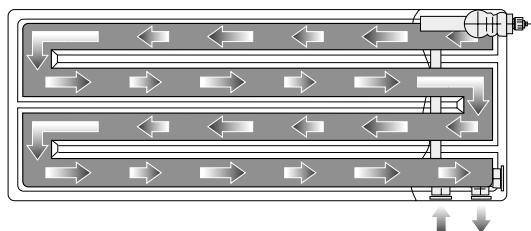


## BRACKETS

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.

**Product:**

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.

**Material:**

Steel

**Finishing:**

Top grille, side panels and flat front plate on both sides

**Suspension and accessories:**

Wall or foot bracket (to be ordered separately)

**Blind plug and air vent:**

To be ordered separately

13911990031 blind plug  $\frac{1}{2}$ " (10 pieces)

13911990040 air vent  $\frac{1}{2}$ " (1 piece)

**Connections:**

2 x  $\frac{3}{4}$ " external thread euroconus right bottom connection,  
4 x  $\frac{1}{2}$ " internal thread connections

**Packaging:**

Each radiator is robustly packaged in high-quality cardboard.  
A label describes the radiator characteristics: type – height – length.

**Guarantee:**

10 years, if the general terms and conditions of Brugman are respected.

**Painting process:**

All radiators are degreased, phosphated, cataphoretically primed and powder-coated standard in RAL 9016.

**Colour:**

RAL 9016 (other colours can also be delivered on request: see colour chart)

**Heat meters:**

Suitable without restrictions for heat meters, both electrical and using the evaporation principle (in accordance with EN834|835).

**Maximum operating pressure:**

8 bar (tested at 11 bar)

**Maximum operating temperature:**

110 °C

**Conformity:**

In accordance with EN442-1: 2014: radiators and convectors

**Types:**

22 | 33 | 34

**Heights:**

150 | 200 mm

**Lengths:**

800 => 3000 mm

**Depths:**

102 | 171 | 188 mm



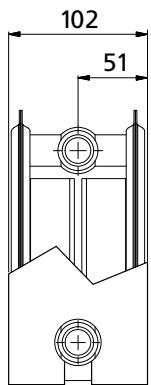
TYPE 22 / 33 / 34

# Mini

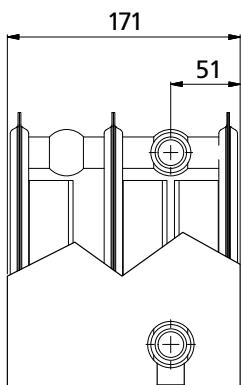
## TECHNICAL DATA PER RUNNING METRE AT 75/65/20°C

Height (mm)		Type 22	Type 33	Type 34
150	W	573	827	965
	kg	13,06	18,88	20,33
	I	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
	I	3,10	4,60	4,70
	n	1,24	1,24	1,25

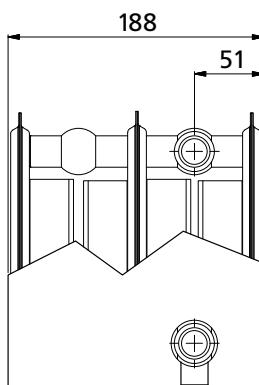
Type 22



Type 33

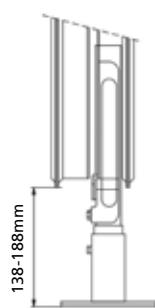


Type 34

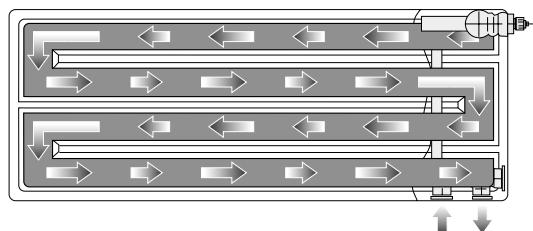


## BRACKETS

Free-standing bracket  
Side view



Forced water flow for a high thermal output



Free-standing bracket  
floor version



Free-standing bracket  
cement screed version



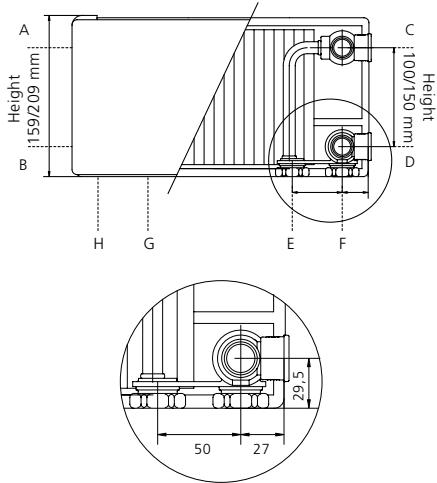
## MINI COMPACT

### PIANO MINI 1

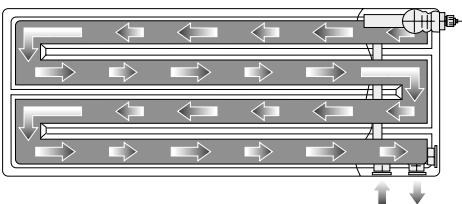
### PIANO MINI 2

## CONNECTIONS

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



Forced water flow for a high thermal output



### NOTE! IMPORTANT!

With every order indicate the desired connection variant according to the adjacent schedule!

This does not incur any additional costs.

The connections are as follows:\*

- A** 1/2" internal thread, possibly suitable for the valve-mounting
- B** 1/2" internal thread
- C** 1/2" internal thread, possibly suitable for the valve-mounting
- D** 1/2" internal thread
- E/G** 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

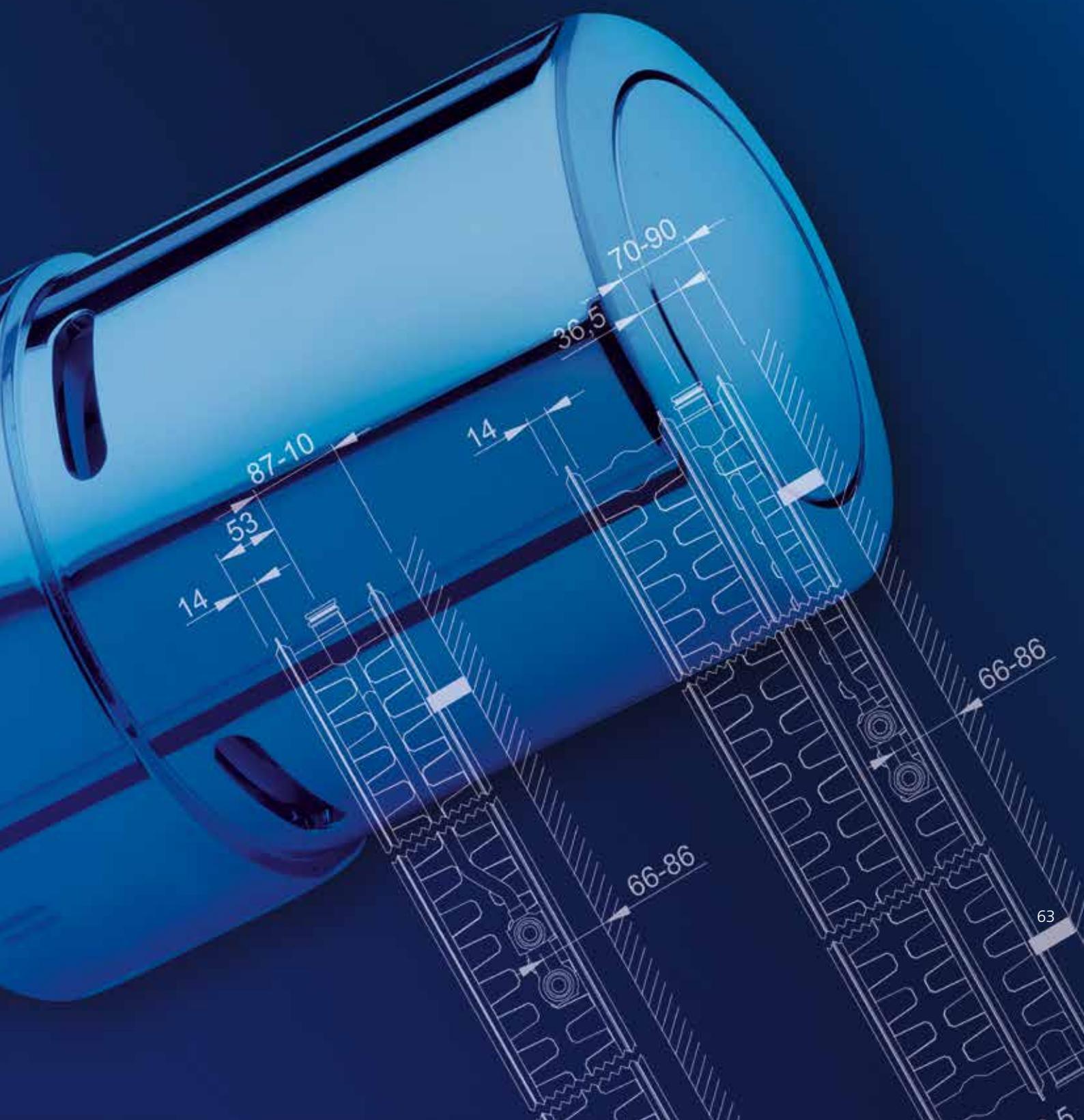
## CONNECTION VARIANTS FOR PARALLEL SYSTEMS.

### Height 150mm:

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

### Height 200mm:

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



The following brackets are available for the Mini radiator:



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

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 immured Mini long (H = max. 348 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



**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

# 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, 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>Maximum operating pressure:</b>	5 bar (tested at 7 bar)
<b>Maximum operating temperature:</b>	110 °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



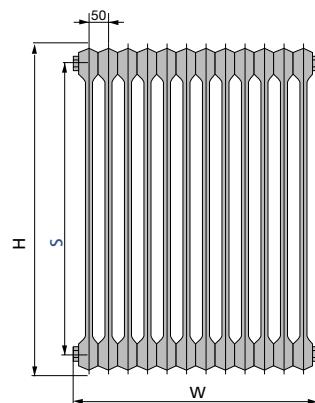
COLUMN

# Classic

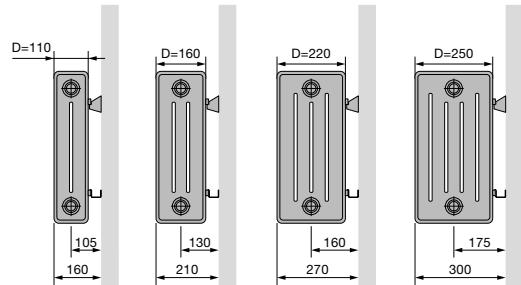
## TECHNICAL DATA AT 75/65/20°C PER COLUMN

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	

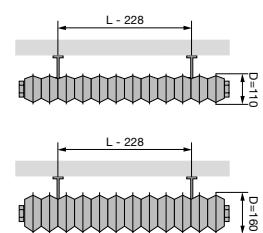
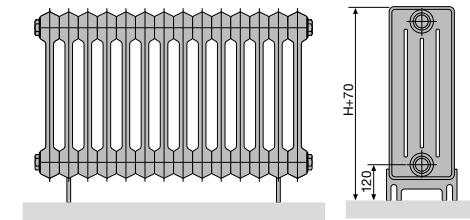
Front view



Side view

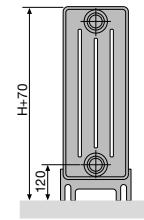
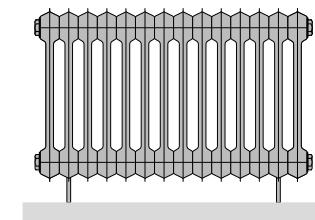


Top view



### VINTAGE 50 (FLOOR MOUNTING)

Number of columns	2-25	26-50	51-60
Number of feet	2	3	4

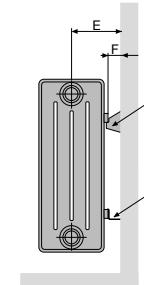
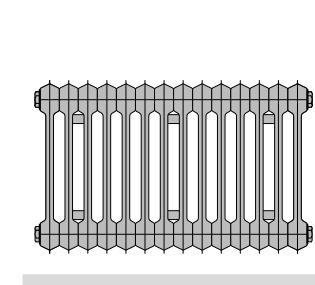


### VINTAGE 50 (WALL MOUNTING) LD 50 + LW 50

Depth (D)	110	160	220	250
Distance between wall and connection (E)	105	130	160	175
Distance between wall and backside radiator (F)	50			

### VINTAGE 50 (WALL MOUNTING)

Number of columns	3-5	6-25	26-50	51-60
Number of wall brackets set LD 50 + LW 50	1	2	3	4



# COLUMN

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

Figure 1

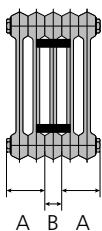


Figure 2

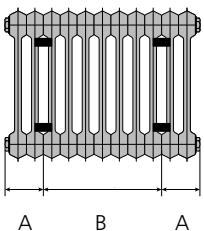


Figure 3

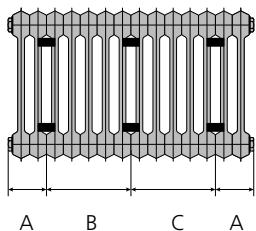


Figure 4

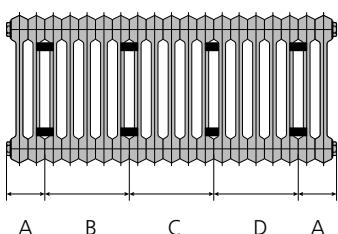
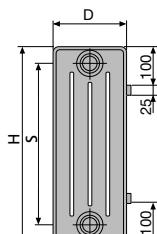


Figure 5



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	-	-

Number of columns	Figure	A	B	C	D
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	-

Number of columns	Figure	A	B	C	D
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.**

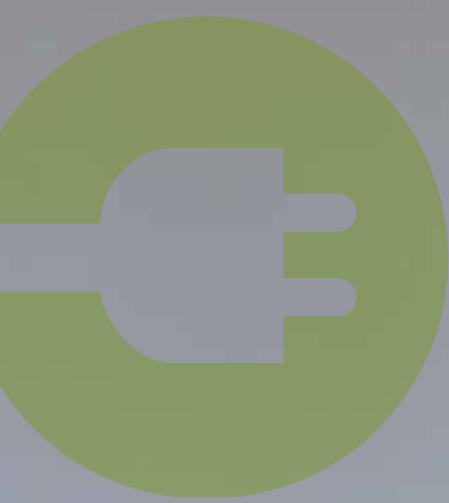
13912140220



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, 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>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

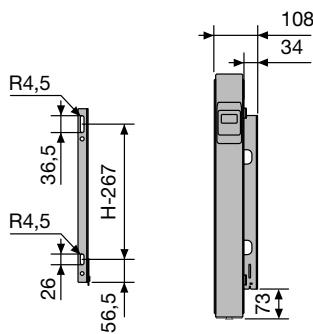
Type	Width (mm)	Height (mm)	Depth (mm)	Electrical output (Watt)
HORIZONTAL RIBBED	500	600	73	500
	600	600	73	750
	800	600	73	1000
	1000	600	73	1250
	1001	600	73	1500
	1200	600	73	1750
	1201	600	73	2000

## Technical data:

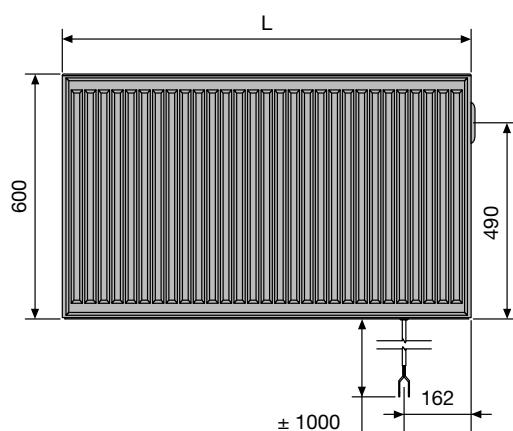
- Operating voltage: 230V AC, 50 Hz
- Weekly and daily programming
- Control of room temperature from 7°C to 30°C
- Auto, Comfort, Eco or frost protection mode
- Set programmes P1, P2 and P3 can be changed
- IPX4 Class II
- Cable length: 0.8 m (preferably use a direct fixed wall outlet)
- Energy-consumption 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



Side view



Front view



Console



Bottom view

## E-PANEL HORIZ. 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, 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>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 HORIZ. FLAT



# E-Collection

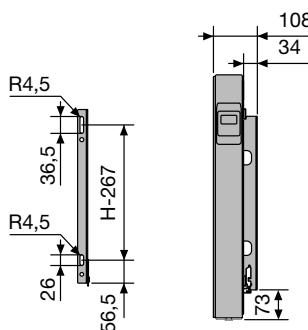
Type	Width (mm)	Height (mm)	Depth (mm)	Electrical output (Watt)
HORIZONTAL FLAT	500	600	73	500
	600	600	73	750
	800	600	73	1000
	1000	600	73	1250
	1001	600	73	1500
	1200	600	73	1750
	1201	600	73	2000

## Technical data:

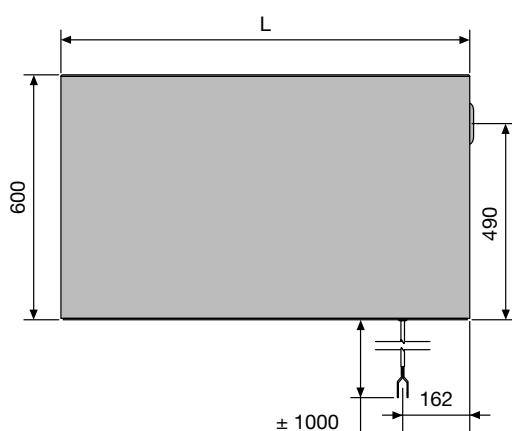
- Operating voltage: 230V AC, 50 Hz
- Weekly and daily programming
- Control of room temperature from 7°C to 30°C
- Auto, Comfort, Eco or frost protection mode
- Set programmes P1, P2 and P3 can be changed
- IPX4 Class II
- Cable length: 0.8 m (preferably use a direct fixed wall outlet)
- Energy-consumption 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



Side View



Front view



Console



Bottom view

## 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, 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>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

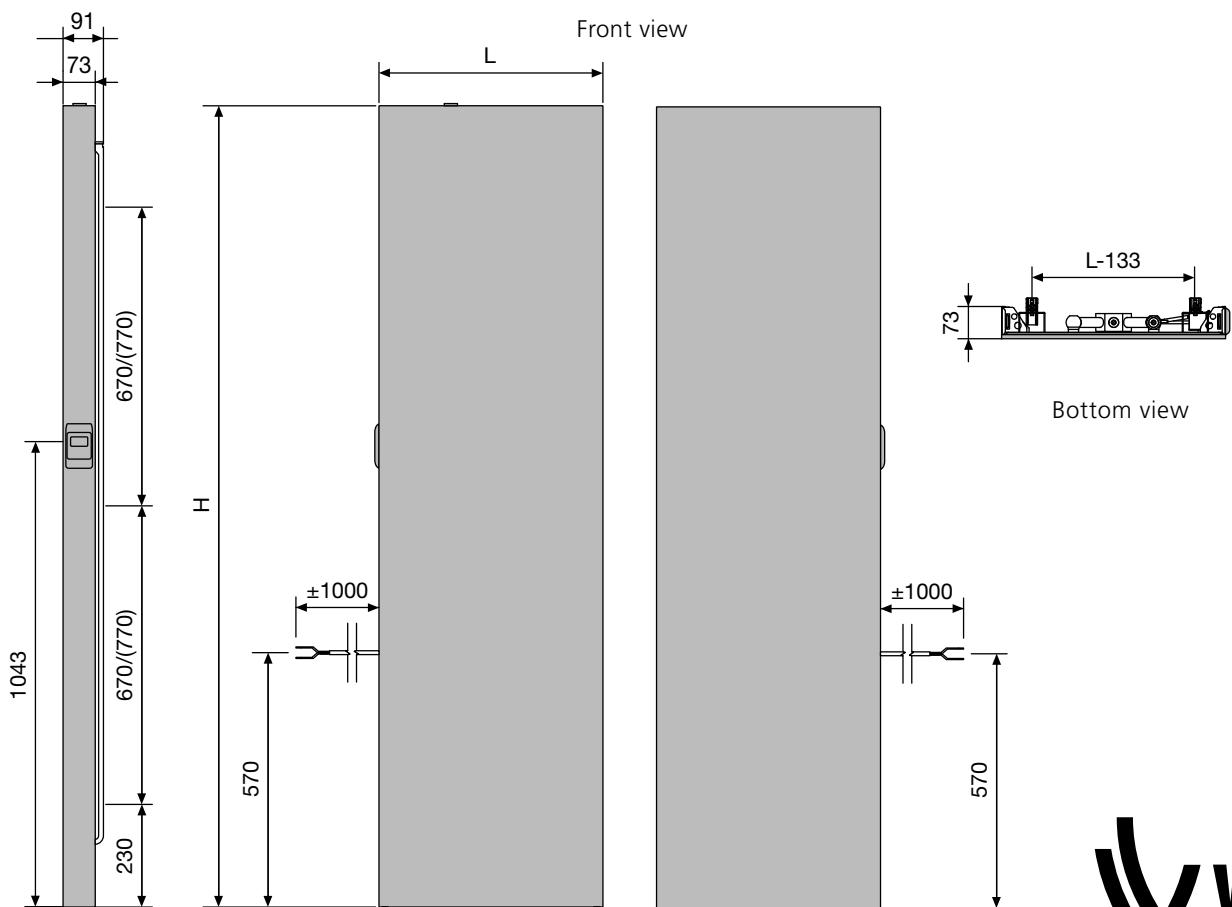
Type	Width (mm)	Height (mm)	Depth (mm)	Electrical output (Watt)
VERTICAL FLAT	400	1800	73	750
	400	1801	73	1000
	500	1800	73	1250
	500	2000	73	1500
	600	2000	73	1750

## 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



Side View



# PRESSURE LOSSES OF RADIATORS AND VALVE INSERTS

## RADIATOR

### CALCULATION EXAMPLE

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

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

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

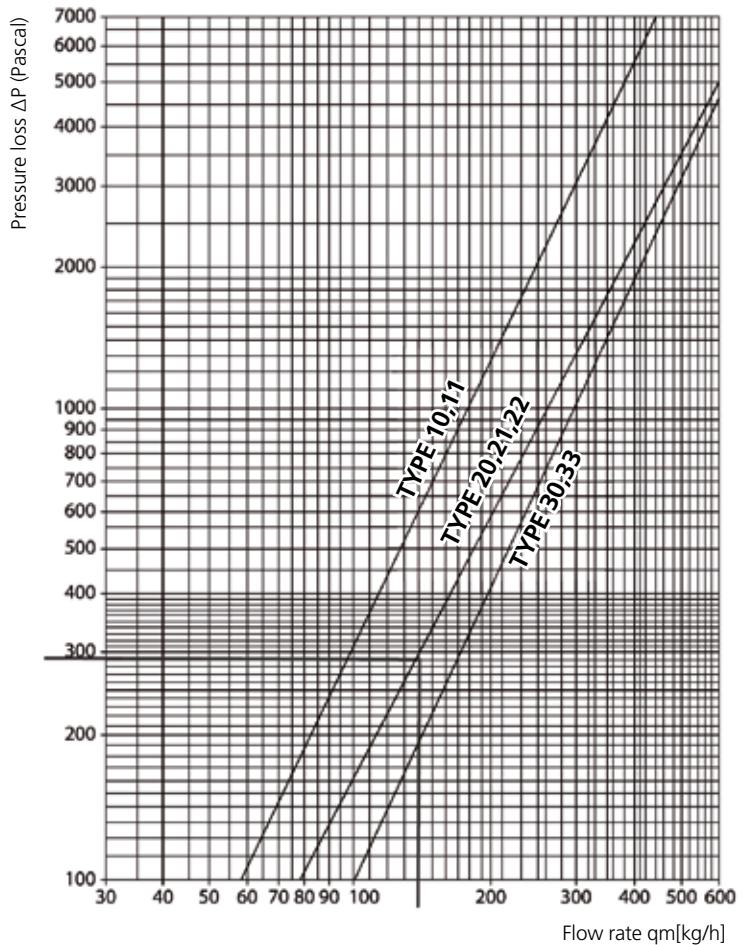
$$q_m = \frac{P \cdot 3600}{4200 \cdot \Delta T} = \frac{1683 \cdot 3600}{4200 \cdot 10} = 144 \text{ (kg/h)}$$

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

T<sub>a</sub> = Temperature inlet side

T<sub>r</sub> = Temperature outlet side

T<sub>i</sub> = Ambient temperature

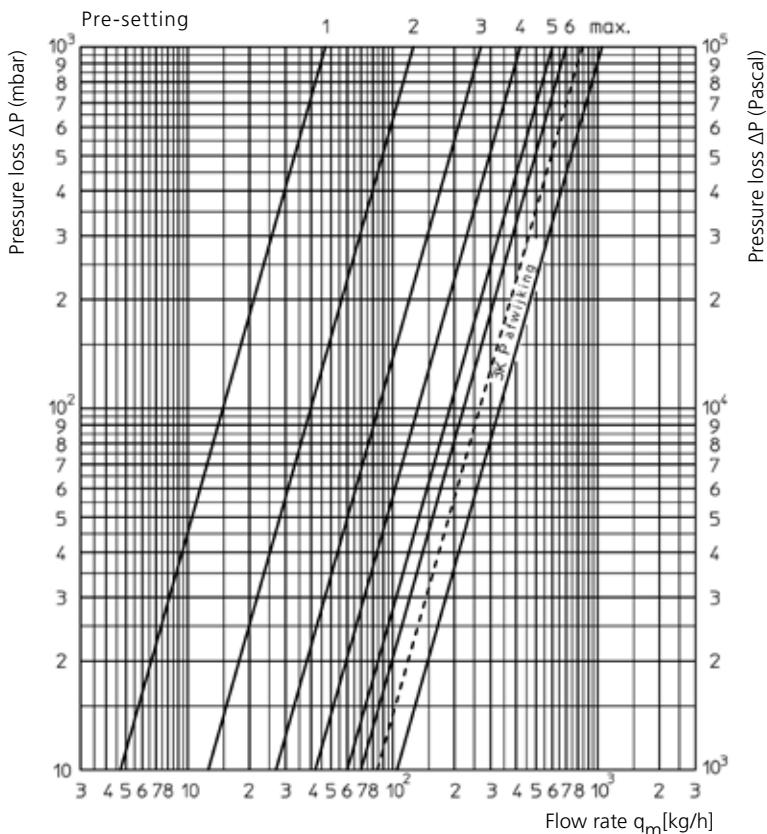


## VALVE INSERT (M30 X 1,5)



UNI 6  
PIANO UNI 6  
CENTRIC  
PIANO CENTRIC  
CENTRIC LINE  
MINI

(INSERTS FOR DISTRICT HEATING ON REQUEST)



Type	Pre-setting						
	1	2	3	4	5	6	K <sub>V</sub>
Insert M30 x 1,5	0,05	0,13	0,27	0,42	0,60	0,70	1,50

# 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	-	-	-	-				

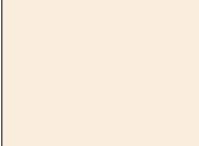
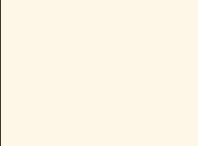
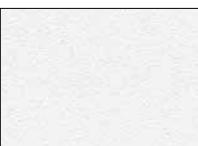
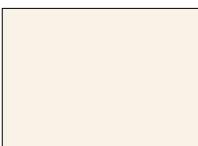
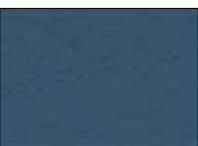
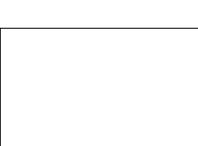
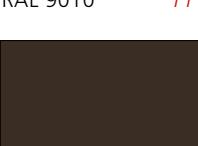
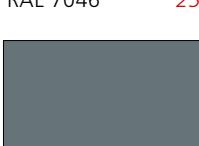
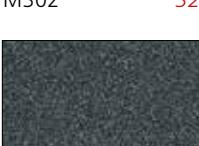
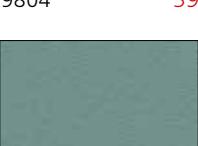
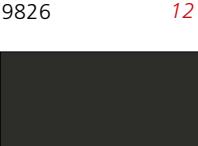
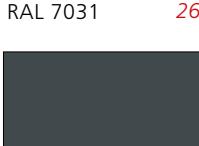
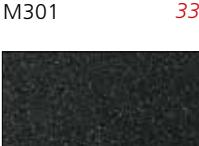
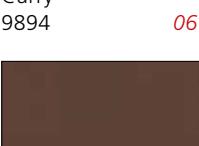
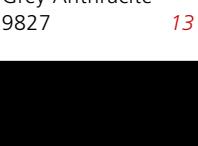
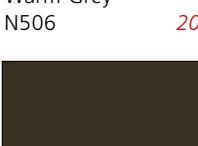
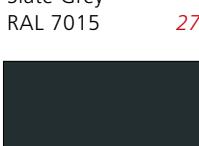
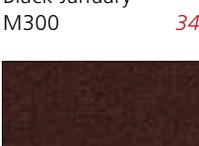
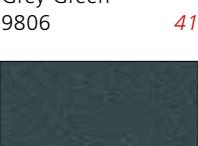
## CORRECTION TABLE

n=	1,30														
Ta	Ti	Tr	25	30	35	40	45	50	55	60	65	70	75	80	85
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	1,13	1,20			
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	0,95						
60	15	0,46	0,51	0,57	0,63	0,69	0,75	0,81	0,88						
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	0,60							
55	12	0,47	0,53	0,58	0,64	0,70	0,76	0,82	0,88						
55	15	0,41	0,46	0,51	0,57	0,63	0,69	0,75	0,81						
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	0,70	0,76							
50	15	0,35	0,41	0,46	0,51	0,57	0,63	0,69							
50	16	0,33	0,39	0,44	0,49	0,54	0,59	0,65							
50	18	0,29	0,34	0,40	0,45	0,50	0,56	0,62							
50	19	0,27	0,32	0,37	0,43	0,48	0,54	0,60							
50	20	0,26	0,30	0,35	0,41	0,46	0,51	0,57							
50	22	0,22	0,26	0,31	0,36	0,42	0,47	0,53							
50	24	0,18	0,23	0,27	0,32	0,37	0,43	0,48							
45	12	0,36	0,42	0,47	0,53	0,58	0,64	0,70							
45	15	0,30	0,35	0,41	0,46	0,51	0,57	0,63							
45	16	0,28	0,33	0,39	0,44	0,49	0,55	0,61							
45	18	0,25	0,29	0,34	0,40	0,45	0,50	0,56							
45	19	0,23	0,27	0,32	0,37	0,43	0,48	0,54							
45	20	0,21	0,26	0,30	0,35	0,41	0,46	0,51							
45	22	0,17	0,22	0,26	0,31	0,36	0,42	0,47							
45	24	0,14	0,18	0,23	0,27	0,32	0,37	0,43							
40	12	0,31	0,36	0,42	0,47	0,53	0,58	0,64							
40	15	0,26	0,30	0,35	0,40	0,45	0,51	0,57							
40	16	0,24	0,28	0,32	0,37	0,43	0,48	0,54							
40	18	0,20	0,25	0,29	0,34	0,40	0,45	0,51							
40	19	0,18	0,23	0,27	0,32	0,37	0,43	0,48							
40	20	0,16	0,21	0,26	0,31	0,36	0,42	0,47							
40	22	0,13	0,17	0,22	0,27	0,32	0,37	0,43							
40	24	0,10	0,14	0,19	0,24	0,29	0,34	0,40							
35	12	0,26	0,31	0,36	0,42	0,47	0,53	0,58							
35	15	0,21	0,26	0,31	0,36	0,41	0,46	0,51							
35	16	0,19	0,24	0,29	0,34	0,39	0,44	0,49							
35	18	0,16	0,20	0,25	0,30	0,35	0,40	0,45							
35	19	0,14	0,18	0,23</											

# Centric

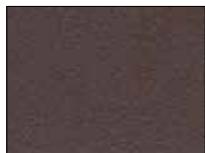
Collection  
Centric Verti Line

# COLOURS

NOBLE	WHITE BLACK	NATURAL GREY MATT	PURE GREY MATT	METALIC GREY STRUCTURE	BLUE GREEN MINERAL
					
Pergamon SAN 0019 <b>01</b>	Cream White RAL 9001 <b>08</b>	Mist White N500 <b>15</b>	Signal White RAL 9003 <b>22</b>	Grey Aluminium M307 <b>29</b>	Dark Blue 9801 <b>36</b>
					
Pink 3012 <b>02</b>	White Fine Texture S600 <b>09</b>	Sand Light N502 <b>16</b>	Tele Grey 4 RAL 7047 <b>23</b>	White Aluminium M306 <b>30</b>	Mid Blue 9802 <b>37</b>
					
Silver 9898 <b>03</b>	Traffic White RAL 9016 <b>10</b>	Sand N503 <b>17</b>	Widow Grey RAL 7040 <b>24</b>	Grey White January M303 <b>31</b>	Grey Blue 9803 <b>38</b>
					
Pearl Beige 1035 <b>04</b>	Pure White RAL 9010 <b>11</b>	Platina Grey N504 <b>18</b>	Tele Grey 2 RAL 7046 <b>25</b>	Aluminium Grey January M302 <b>32</b>	Forest Green 9804 <b>39</b>
					
Gold 9899 <b>05</b>	Brown Black 9826 <b>12</b>	Dust Grey N505 <b>19</b>	Blue Grey RAL 7031 <b>26</b>	Anthracite January M301 <b>33</b>	Jade Green 9805 <b>40</b>
					
Curry 9894 <b>06</b>	Grey Anthracite 9827 <b>13</b>	Warm Grey N506 <b>20</b>	Slate Grey RAL 7015 <b>27</b>	Black January M300 <b>34</b>	Grey Green 9806 <b>41</b>
					
Bronze 9893 <b>07</b>	Jet Black RAL 9005 <b>14</b>	Brown Grey N507 <b>21</b>	Anthracite Grey RAL 7016 <b>28</b>	Brown January M304 <b>35</b>	Warm Green 9807 <b>42</b>

# COLOURS

TERRA-COTTA  
MINERAL



Dark Brown  
9808

UNI COLOURS  
FINE TEXTURE



Melon Yellow  
9815

Dark Brown

43

Rust Brown  
9809

44

9815

50

Carmine Red  
9816

51



Quartz Brown  
9810

45

9817

52

Claret Violet  
9817

52



Light Beige  
9811

46

Night Blue  
9818

53

9818

53



Orange Brown  
9812

47

Pigeon Blue  
S601

54

S601

54



Blood Red  
9813

48

Yellow Green  
9820

55

9820

55



Purple Red  
9814

49

Moss Green  
9821

56

9821

56

## BRUGMAN COLOURS YOUR HEATING COMFORT

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

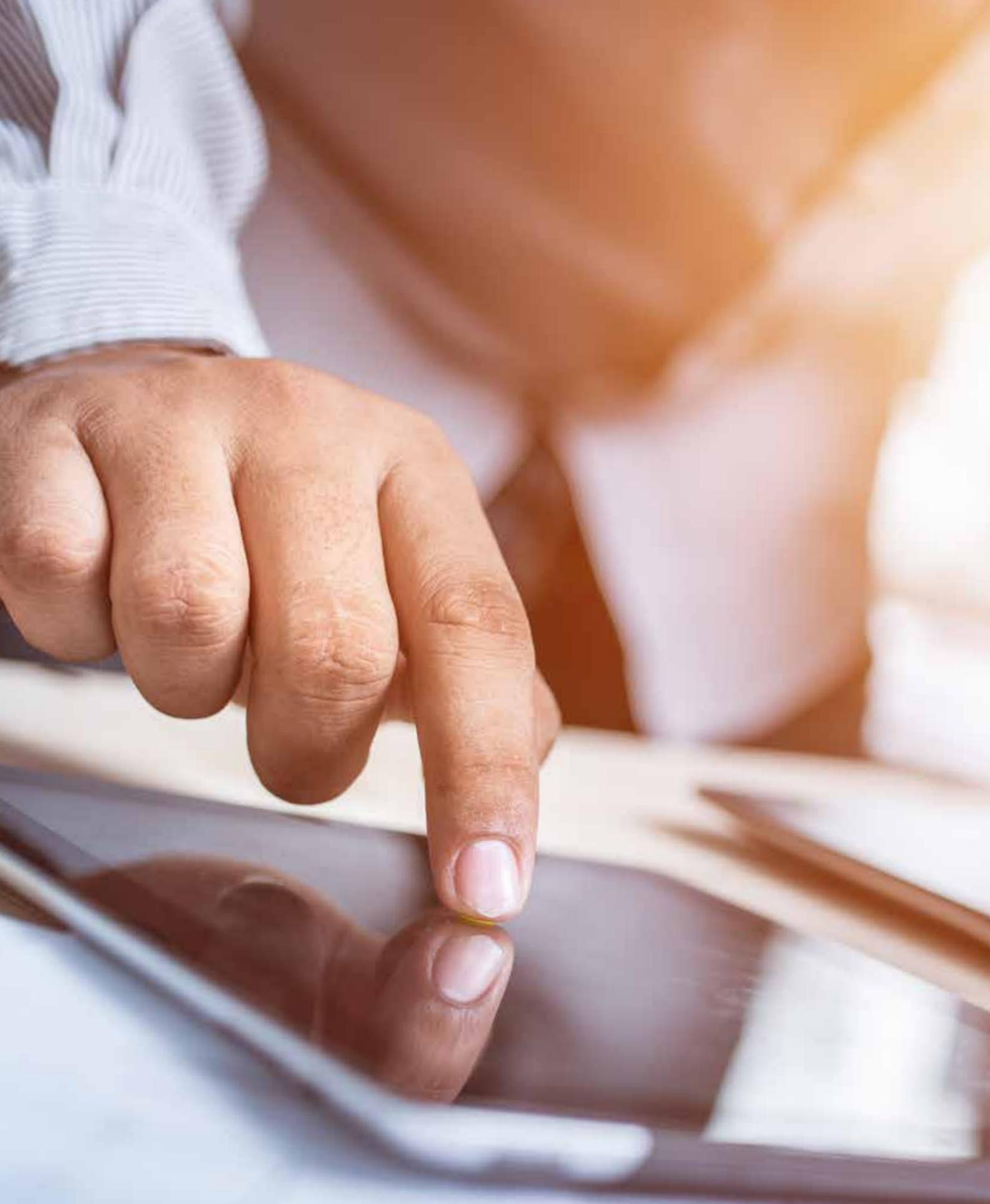
Whatever colour you have in mind, Brugman ensures flawless, colourfast painting.

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



# THERMAL OUTPUT PER RADIATOR TYPE

**NEW****STANDARD**

TYPE 10		Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors		
Height (mm)	W/m 75/65/20 (φ50K)	400	500	600
n-exponent	1,26	514	602	872
Length (mm)	Watt	Watt	Watt	Watt
500	213	257	301	436
600	255	308	361	523
800	340	411	482	698
1000	425	514	602	

TYPE 10		Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors		
Height (mm)	W/m 70/55/20 (φ42,5K)	400	500	600
n-exponent	1,26	414	483	700
Length (mm)	Watt	Watt	Watt	Watt
500	172	207	242	350
600	206	248	290	420
800	275	331	387	560
1000	344	414	483	

TYPE 10		Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors		
Height (mm)	W/m 55/45/20 (φ30K)	400	500	600
n-exponent	1,26	266	309	447
Length (mm)	Watt	Watt	Watt	Watt
500	111	133	154	223
600	133	160	185	268
800	178	213	247	358
1000	222	266	309	

# Casual

NEW

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 ( $\phi$ 50K)	551	697	840	979	1117	1390	
n-exponent	1,22	1,24	1,25	1,27	1,28	1,30	
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt	
400		279	336	392	447	556	
500	276	349	420	490	559	695	
600	331	418	504	587	670	834	
700			588	685	782	973	
800	441	558	672	783	894	1112	
900		627	756	881	1005	1251	
1000		697	840	979	1117	1390	
1200		836	1008	1175	1340		
1400	771	976	1176	1371	1564		
1600		1115	1344	1567			
1800		1255	1512	1762	2011		
2000		1394	1680	1958	2234		
2200		1534	1848	2154			
2400		1673	2016	2350			

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 ( $\phi$ 42,5K)	448	565	679	789	899	1114	
n-exponent	1,22	1,24	1,25	1,27	1,28	1,30	
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt	
400		226	272	316	359	446	
500	224	283	339	394	449	557	
600	269	339	407	473	539	668	
700			475	552	629	780	
800	358	452	543	631	719	891	
900		509	611	710	809	1003	
1000		565	679	789	899	1114	
1200		678	815	947	1078		
1400	627	791	951	1105	1258		
1600		904	1086	1262			
1800		1017	1222	1420	1617		
2000		1130	1358	1578	1797		
2200		1243	1494	1736			
2400		1356	1630	1894			

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 ( $\phi$ 30K)	293	368	439	507	576	708	
n-exponent	1,22	1,24	1,25	1,27	1,28	1,30	
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt	
400		147	176	203	230	283	
500	147	184	220	254	288	354	
600	176	221	264	304	345	425	
700			307	355	403	496	
800	235	294	351	406	460	567	
900		331	395	457	518	638	
1000		368	439	507	576	708	
1200		441	527	609	691		
1400	411	515	615	710	806		
1600		588	703	812			
1800		662	791	913	1036		
2000		736	878	1015	1151		
2200		809	966	1116			
2400		883	1054	1218			

## 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 ( $\phi$ 50K)		985	1181	1368	1880
n-exponent		1,31	1,32	1,32	1,34
Length (mm)		Watt	Watt	Watt	Watt
400					752
500			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
1200		1182	1417	1642	
1400		1379	1653	1915	
1600		1576	1890	2189	
1800		1773	2126	2462	
2000		1970	2362	2736	
2200		2167	2598		
2400		2364			
2800		2758			

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 ( $\phi$ 42,5K)		796	953	1104	1512
n-exponent		1,31	1,32	1,32	1,34
Length (mm)		Watt	Watt	Watt	Watt
400					609
500			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
1200		955	1144	1325	
1400		1115	1334	1545	
1600		1274	1525	1766	
1800		1433	1715	1987	
2000		1592	1906	2208	
2200		1751	2097		
2400		1911			
2800		2229			

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 ( $\phi$ 30K)		504	602	697	948
n-exponent		1,31	1,32	1,32	1,34
Length (mm)		Watt	Watt	Watt	Watt
400					387
500			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
1200		605	722	836	
1400		706	842	976	
1600		807	963	1115	
1800		908	1083	1255	
2000		1009	1203	1394	
2200		1110	1324		
2400		1211			
2800		1412			

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## 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 ( $\phi$ 50K)	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			1643	1912		
1200	1170	1489	1793	2086	2369	2915
1400	1365	1737	2092	2433		
1600	1560	1986	2390	2781		
1800	1755	2234	2689	3128		
2000	1950	2482	2988	3476		
2200	2145	2730	3287			
2400	2340	2978	3586	4171		
2600	2535	3227	3884	4519		
2800	2730	3475	4183			
3000		3732	4482			

**TYPE 22** Watts 70/55/20 conform EN442-1: 2014: radiatoren en convectoren

Height (mm)	300	400	500	600	700	900
W/m 70/55/20 ( $\phi$ 42,5K)	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			1324	1538		
1200	950	1206	1444	1677	1902	2337
1400	1109	1407	1685	1957		
1600	1267	1607	1926	2237		
1800	1425	1808	2166	2516		
2000	1584	2009	2407	2796		
2200	1742	2210	2648			
2400	1901	2411	2889	3355		
2600	2059	2612	3129	3634		
2800	2217	2813	3370			
3000		3014	3611			

**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 ( $\phi$ 30K)	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			833	964		
1200	608	767	909	1052	1189	1455
1400	710	894	1060	1227		
1600	811	1022	1212	1402		
1800	913	1150	1363	1578		
2000	1014	1278	1515	1753		
2200	1115	1405	1666			
2400	1217	1533	1818	2104		
2600	1318	1661	1969	2279		
2800	1420	1789	2121			
3000		1916	2272			

## 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 ( $\phi$ 50K)		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
500				1052		1385	1688
600				1262	1466		2026
700				1472		1938	2363
800	1092	1395	1682	1955			2701
1000		1744	2103	2444	2769		3376
1200		2093	2524	2933			4051
1400	1911	2442	2944	3422			
1600	2184	2790	3365	3910			
1800	2457	3139	3785	4399			
2000	2730	3488	4206	4888			
2200	3003	3837					
2400	3276	4186					
2600		4534					
2800	3822	4883					
3000		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 ( $\phi$ 42,5K)		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
500				852		1121	1367
600				1022	1187		1640
700				1192		1569	1913
800	884	1129	1362	1583			2187
1000		1412	1702	1979	2242		2733
1200		1694	2043	2374			3279
1400	1547	1977	2383	2770			
1600	1768	2259	2724	3156			
1800	1989	2541	3064	3561			
2000	2210	2824	3405	3957			
2200	2431	3106					
2400	2652	3389					
2600		3671					
2800	3094	3953					
3000		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 ( $\phi$ 30K)		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
500				542		713	869
600				650	755		1043
700				758		998	1216
800	562	718	866	1006			1390
1000		898	1083	1258	1425		1738
1200		1077	1299	1510			2085
1400	984	1257	1515	1761			
1600	1124	1436	1732	2013			
1800	1265	1616	1948	2264			
2000	1405	1795	2165	2516			
2200	1546	1975					
2400	1686	2155					
2600		2334					
2800	1967	2514					
3000		2693					

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## STANDARD Zn

TYPE 10		Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors			
Height (mm)	W/m 75/65/20 (φ50K)	400	500	600	900
n-exponent	1,26	425	514	602	872
Length (mm)		Watt	Watt	Watt	Watt
400					
500		213	257	301	436
600		255	308	361	523
700					
800		340	411	482	698

TYPE 10		Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors			
Height (mm)	W/m 70/55/20 (φ42,5K)	400	500	600	900
n-exponent	1,26	344	414	483	700
Length (mm)		Watt	Watt	Watt	Watt
400					
500		172	207	242	350
600		206	248	290	420
700					
800		275	331	387	560

TYPE 10		Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors			
Height (mm)	W/m 55/45/20 (φ30K)	400	500	600	900
n-exponent	1,26	222	266	309	447
Length (mm)		Watt	Watt	Watt	Watt
400					
500		111	133	154	223
600		133	160	185	268
700					
800		178	213	247	358



TYPE 11		Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors			
Height (mm)	W/m 75/65/20 (φ50K)	300	400	500	600
n-exponent	1,22	551	697	840	979
Length (mm)		Watt	Watt	Watt	Watt
400					
500				490	
600				587	

TYPE 11		Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors			
Height (mm)	W/m 70/55/20 (φ42,5K)	300	400	500	600
n-exponent	1,22	448	565	679	789
Length (mm)		Watt	Watt	Watt	Watt
400					
500				394	
600				473	

TYPE 11		Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors			
Height (mm)	W/m 55/45/20 (φ30K)	300	400	500	600
n-exponent	1,22	293	368	439	507
Length (mm)		Watt	Watt	Watt	Watt
400					
500				254	
600				304	

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## 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 ( $\phi$ 50K)		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 ( $\phi$ 42,5K)		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 ( $\phi$ 30K)		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
W/m 75/65/20 ( $\phi$ 50K)		985	1181	1368
n-exponent		1,31	1,32	1,32
Length (mm)		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
W/m 70/55/20 ( $\phi$ 42,5K)		796	953	1104
n-exponent		1,31	1,32	1,32
Length (mm)		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
W/m 55/45/20 ( $\phi$ 30K)		504	602	697
n-exponent		1,31	1,32	1,32
Length (mm)		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

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## COMPACT 4

TYPE 11		Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors				
Height (mm)	W/m 75/65/20 (φ50K)	400	500	600	700	900
n-exponent	1,24	1,25	1,27	1,28	1,30	
Length (mm)	Watt	Watt	Watt	Watt	Watt	
400	279	336	392	447	556	
500	349	420	490	559	695	
600	418	504	587	670	834	
700	488	588	685	782	973	
800	558	672	783	894	1112	
900	627	756	881	1005	1251	
1000	697	840	979	1117	1390	
1100	767	924	1077	1229	1529	
1200	836	1008	1175	1340	1668	
1300	906	1092	1273	1452	1807	
1400	976	1176	1371	1564	1946	
1600	1115	1344	1567	1787	2224	
1800	1255	1512	1762	2011	2502	
2000	1394	1680	1958	2234	2780	

TYPE 11		Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors				
Height (mm)	W/m 70/55/20 (φ42,5K)	400	500	600	700	900
n-exponent	1,24	1,25	1,27	1,28	1,30	
Length (mm)	Watt	Watt	Watt	Watt	Watt	
400	226	272	316	359	446	
500	283	339	394	449	557	
600	339	407	473	539	668	
700	396	475	552	629	780	
800	452	543	631	719	891	
900	509	611	710	809	1003	
1000	565	679	789	899	1114	
1100	622	747	868	988	1225	
1200	678	815	947	1078	1337	
1300	735	883	1026	1168	1448	
1400	791	951	1105	1258	1560	
1600	904	1086	1262	1438	1783	
1800	1017	1222	1420	1617	2005	
2000	1130	1358	1578	1797	2228	

TYPE 11		Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors				
Height (mm)	W/m 55/45/20 (φ30K)	400	500	600	700	900
n-exponent	1,24	1,25	1,27	1,28	1,30	
Length (mm)	Watt	Watt	Watt	Watt	Watt	
400	147	176	203	230	283	
500	184	220	254	288	354	
600	221	264	304	345	425	
700	257	307	355	403	496	
800	294	351	406	460	567	
900	331	395	457	518	638	
1000	368	439	507	576	708	
1100	405	483	558	633	779	
1200	441	527	609	691	850	
1300	478	571	660	748	921	
1400	515	615	710	806	992	
1600	588	703	812	921	1133	
1800	662	791	913	1036	1275	
2000	736	878	1015	1151	1417	

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## 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 ( $\phi$ 50K)		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 ( $\phi$ 42,5K)		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 ( $\phi$ 30K)		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 ( $\phi 50K$ )		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 ( $\phi 42,5K$ )		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 ( $\phi 30K$ )		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 ( $\phi$ 50K)		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 ( $\phi$ 42,5K)		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 ( $\phi$ 30K)		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			



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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)		697	840	979	1117	1390
n-exponent		1,24	1,25	1,27	1,28	1,30
Length (mm)		Watt	Watt	Watt	Watt	Watt
400		279	336	392	447	556
500		349	420	490	559	695
600		418	504	587	670	834
700		488	588	685	782	973
800		558	672	783	894	1112
900		627	756	881	1005	1251
1000		697	840	979	1117	1390
1100		767	924	1077	1229	1529
1200		836	1008	1175	1340	1668
1300		906	1092	1273	1452	1807
1400		976	1176	1371	1564	1946
1600		1115	1344	1567	1787	2224
1800		1255	1512	1762	2011	2502
2000		1394	1680	1958	2234	2780

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)		565	679	789	899	1114
n-exponent		1,24	1,25	1,27	1,28	1,30
Length (mm)		Watt	Watt	Watt	Watt	Watt
400		226	272	316	359	446
500		283	339	394	449	557
600		339	407	473	539	668
700		396	475	552	629	780
800		452	543	631	719	891
900		509	611	710	809	1003
1000		565	679	789	899	1114
1100		622	747	868	988	1225
1200		678	815	947	1078	1337
1300		735	883	1026	1168	1448
1400		791	951	1105	1258	1560
1600		904	1086	1262	1438	1783
1800		1017	1222	1420	1617	2005
2000		1130	1358	1578	1797	2228

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)		368	439	507	576	708
n-exponent		1,24	1,25	1,27	1,28	1,30
Length (mm)		Watt	Watt	Watt	Watt	Watt
400		147	176	203	230	283
500		184	220	254	288	354
600		221	264	304	345	425
700		257	307	355	403	496
800		294	351	406	460	567
900		331	395	457	518	638
1000		368	439	507	576	708
1100		405	483	558	633	779
1200		441	527	609	691	850
1300		478	571	660	748	921
1400		515	615	710	806	992
1600		588	703	812	921	1133
1800		662	791	913	1036	1275
2000		736	878	1015	1151	1417

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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 ( $\phi 50K$ )		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 ( $\phi 42,5K$ )		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 ( $\phi 30K$ )		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			

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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 ( $\phi$ 50K)	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 ( $\phi$ 42,5K)	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 ( $\phi$ 30K)	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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**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 ( $\phi 50K$ )	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 ( $\phi 42,5K$ )	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 ( $\phi 30K$ )	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 ( $\phi$ 50K)	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 ( $\phi$ 42,5K)	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 ( $\phi$ 30K)	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 ( $\phi$ 50K)		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 ( $\phi$ 42,5K)		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 ( $\phi$ 30K)		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 ( $\phi$ 50K)	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 ( $\phi$ 42,5K)	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 ( $\phi$ 30K)	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 ( $\phi$ 50K)		697	840	979	1117	1390
n-exponent		1,24	1,25	1,27	1,28	1,30
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400	279	336	392	447	556	
500	349	420	490	559	695	
600	418	504	587	670	834	
700	488	588	685	782	973	
800	558	672	783	894	1112	
900	627	756	881	1005	1251	
1000	697	840	979	1117	1390	
1100	767	924	1077	1229	1529	
1200	836	1008	1175	1340	1668	
1400	976	1176	1371	1564	1946	
1600	1115	1344	1567	1787	2224	
1800	1255	1512	1762	2011	2502	
2000	1394	1680	1958	2234	2780	
2200						
2400						
2600						
2800						
3000						

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 ( $\phi$ 42,5K)		565	679	789	899	1114
n-exponent		1,24	1,25	1,27	1,28	1,30
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400	226	272	316	359	446	
500	283	339	394	449	557	
600	339	407	473	539	668	
700	396	475	552	629	780	
800	452	543	631	719	891	
900	509	611	710	809	1003	
1000	565	679	789	899	1114	
1100	622	747	868	988	1225	
1200	678	815	947	1078	1337	
1400	791	951	1105	1258	1560	
1600	904	1086	1262	1438	1783	
1800	1017	1222	1420	1617	2005	
2000	1130	1358	1578	1797	2228	
2200						
2400						
2600						
2800						
3000						

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 ( $\phi$ 30K)		368	439	507	576	708
n-exponent		1,24	1,25	1,27	1,28	1,30
Length (mm)	Watt	Watt	Watt	Watt	Watt	Watt
400	147	176	203	230	283	
500	184	220	254	288	354	
600	221	264	304	345	425	
700	257	307	355	403	496	
800	294	351	406	460	567	
900	331	395	457	518	638	
1000	368	439	507	576	708	
1100	405	483	558	633	779	
1200	441	527	609	691	850	
1400	515	615	710	806	992	
1600	588	703	812	921	1133	
1800	662	791	913	1036	1275	
2000	736	878	1015	1151	1417	
2200						
2400						
2600						
2800						
3000						

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 ( $\phi$ 50K)	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 ( $\phi$ 42,5K)	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 ( $\phi$ 30K)	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			

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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		

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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 ( $\phi$ 50K)	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 ( $\phi$ 42,5K)	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 ( $\phi$ 30K)	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			

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		

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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	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	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	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 ( $\phi$ 50K)		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	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 ( $\phi$ 42,5K)		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	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 ( $\phi$ 30K)		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	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 ( $\phi 50K$ )	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 ( $\phi 42,5K$ )	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 ( $\phi 30K$ )	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 ( $\phi 50K$ )		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
700				1072	1275	1477	1679
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 ( $\phi 42,5K$ )		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 ( $\phi 30K$ )		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)	W/m 75/65/20 (φ50K)	1600	1800	2000
n-exponent	1,35	1,38	1,36	1,35
Width (mm)	Watt	Watt	Watt	Watt
400		801	881	961
500		977	1075	1174
600		1150	1265	1381
700	1189	1320	1452	1586
800	1340	1488	1637	1787

TYPE 10		Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors		
Height (mm)	W/m 70/55/20 (φ42,5K)	1600	1800	2000
n-exponent	1,35	1,38	1,36	1,35
Width (mm)	Watt	Watt	Watt	Watt
400		618	682	747
500		773	853	934
600		928	1024	1121
700	980	1082	1194	1308
800	1120	1237	1365	1494

TYPE 10		Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors		
Height (mm)	W/m 55/45/20 (φ30K)	1600	1800	2000
n-exponent	1,35	1,38	1,36	1,35
Width (mm)	Watt	Watt	Watt	Watt
400		384	426	469
500		480	532	586
600		576	638	703
700	613	672	745	820
800	701	768	851	938

TYPE 20		Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors		
Height (mm)	W/m 75/65/20 (φ50K)	1600	1800	2000
n-exponent	1,29	1,29	1,33	1,30
Width (mm)	Watt	Watt	Watt	Watt
400	1065	1179	1295	1413
500	1303	1443	1585	1728
600	1536	1701	1868	2038
700	1765	1955	2147	2342
800	1992	2206	2423	2643

TYPE 20		Watts 70/55/20 in accordance with EN442-1: 2014: radiators and convectors		
Height (mm)	W/m 70/55/20 (φ42,5K)	1600	1800	2000
n-exponent	1,29	1,29	1,33	1,30
Width (mm)	Watt	Watt	Watt	Watt
400	838	928	1012	1109
500	1047	1160	1265	1386
600	1256	1391	1518	1663
700	1466	1623	1771	1940
800	1675	1855	2024	2218

TYPE 20		Watts 55/45/20 in accordance with EN442-1: 2014: radiators and convectors		
Height (mm)	W/m 55/45/20 (φ30K)	1600	1800	2000
n-exponent	1,29	1,29	1,33	1,30
Width (mm)	Watt	Watt	Watt	Watt
400	538	594	650	707
500	673	743	813	884
600	808	892	976	1061
700	942	1040	1138	1238
800	1077	1189	1301	1414

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

## PIANO CENTRIC VERTI

TYPE 21s		Watts 75/65/20 in accordance with EN442-1: 2014: radiators and convectors		
Height (mm)	W/m 75/65/20 ( $\phi$ 50K)	1600	1800	2000
n-exponent	1,33	2618	2800	2996
Width (mm)	Watt	1,35	1,36	1,46
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)	W/m 70/55/20 ( $\phi$ 42,5K)	1600	1800	2000
n-exponent	1,33	2109	2248	2402
Width (mm)	Watt	1,35	1,36	1,46
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)	W/m 55/45/20 ( $\phi$ 30K)	1600	1800	2000
n-exponent	1,33	1327	1405	1496
Width (mm)	Watt	1,35	1,36	1,46
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)	W/m 75/65/20 ( $\phi$ 50K)	1600	1800	2000
n-exponent	1,40	3202	3486	3772
Width (mm)	Watt	1,44	1,48	1,52
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)	W/m 70/55/20 ( $\phi$ 42,5K)	1600	1800	2000
n-exponent	1,40	2550	2759	2966
Width (mm)	Watt	1,44	1,48	1,55
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)	W/m 55/45/20 ( $\phi$ 30K)	1600	1800	2000
n-exponent	1,40	1566	1671	1771
Width (mm)	Watt	1,44	1,48	1,55
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

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

THERMAL OUTPUT PER RADIATOR TYPE

# 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	
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	
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	
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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