


LASERLINE CENTRALLY CONNECTED VALVE



EN 442
 GEPRÜFT


CE


55 45
 DIE neue WÄRME


HEIZKÖRPER
 RAL GÜTEZEICHEN
 AUS STAHL


EN ISO 9001


DIN EN **442**


 **Overall heights** 155 - 3000 mm
 Any height between 300 and 3000 mm is available to the nearest millimetre at the customer's request.

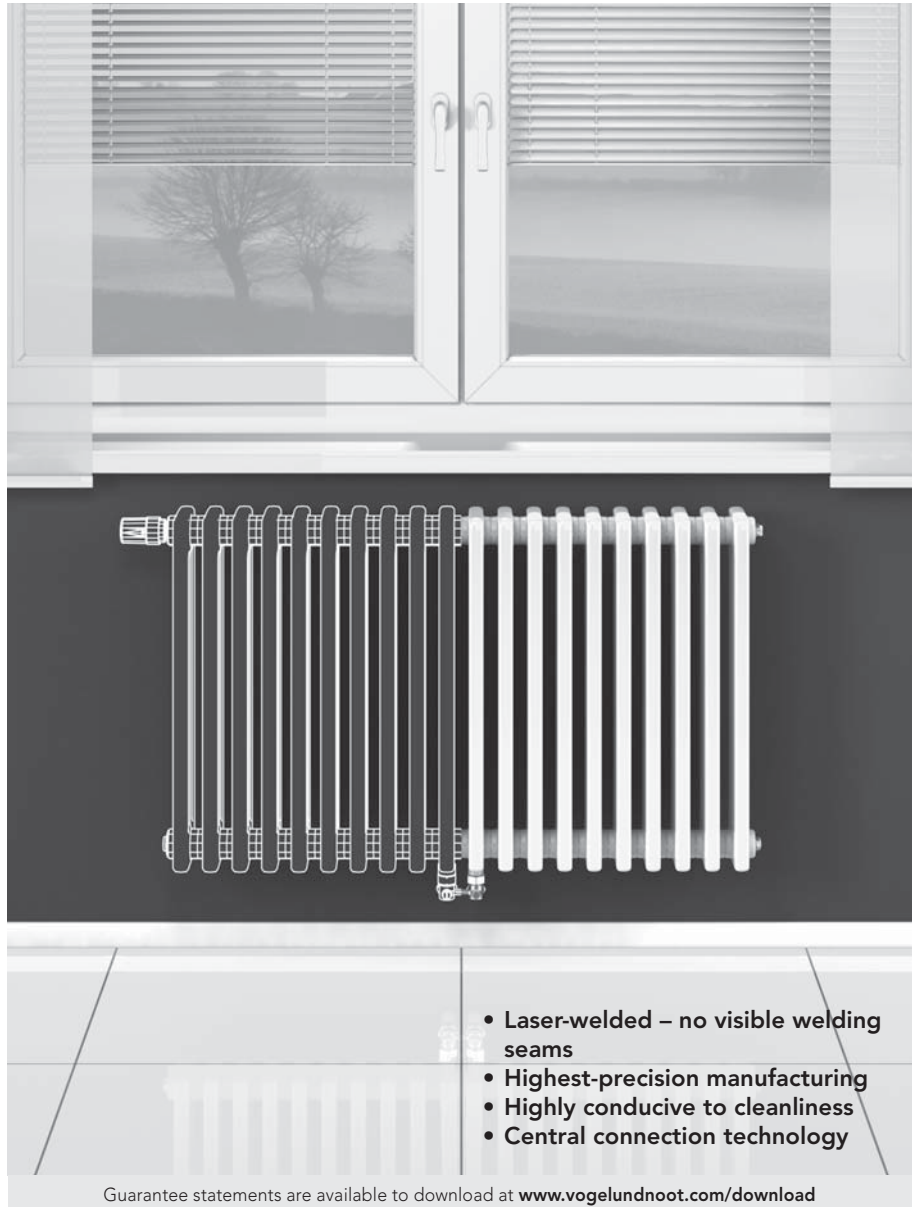
 **Overall lengths**
 200 - max. 1500 mm

 **Overall depth**
 2-column: 63 mm
 3-column: 101 mm
 4-column: 139 mm
 5-column: 177 mm
 6-column: 215 mm

 **Connections**
 4 x 1/2" internal thread front right and left, 2 x 1/2" internal thread at the bottom centrally, distance of 50 mm with integrated thermostatic valve at the top

 **Max. operating pressure**
 10 bar max. 10 Heated bar tables

 **Max. operating temperature** 110 °C



Design Column radiators made from precision-engineered steel pipes and fully laser-welded head pieces connected to completed radiators. Only an even number of elements is possible. Pipes and head pieces flattened on the exterior to increase the heat output. No protruding welding burrs either inside or outside. With built-in presettable control valve.

Packaging

Environmentally friendly transport packaging with side protection (enclosing cardboard packaging), and shrink-wrapped.

Safety

Construction in line with work safety

requirements in accordance with the guidelines of the statutory accident insurer (GUV). Tested and registered in accordance with European standard EN 442 Reg. No. 6R0900. Complies with the old BAGUV guidelines. Awarded a hygiene certificate.

Technical data

Boss size: 1", element length: 50 mm

Attention!

The manufacturer's length tolerance is 0 to + 1%. Please take this into account during pre-assembly!

Note:

The Laserline centrally connected valve radiator consists of one block (according to supply range) and cannot be joined by

nipples.

Fixing

See Accessories (not included in scope of delivery)

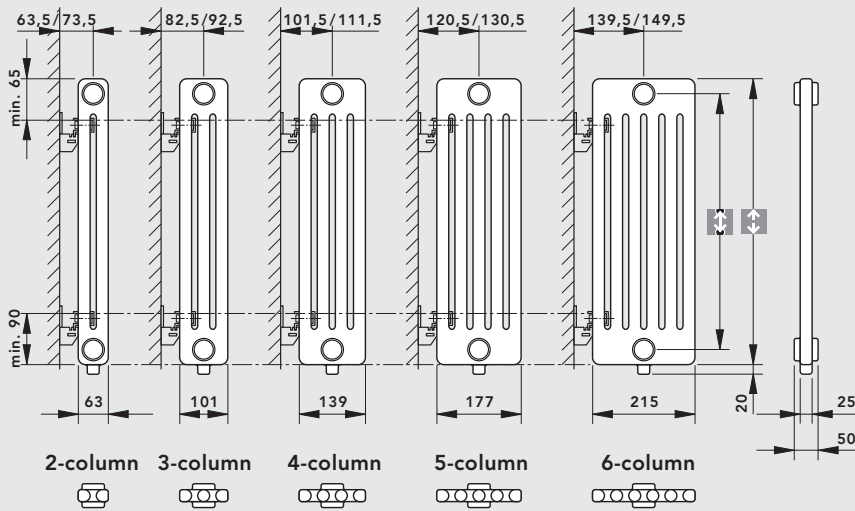
Scope of delivery

Includes thermostatic valve suitable for thermostatic heads with port thread M 30 x 1.5 mm; air vent and 2 x drain plugs G 1/2".

Coating

In accordance with DIN 55900, with electrophoretic immersion coating and cured powder coating in RAL 9016 Traffic White, other RAL colours and bathroom suite colours are available upon request.

Models overview



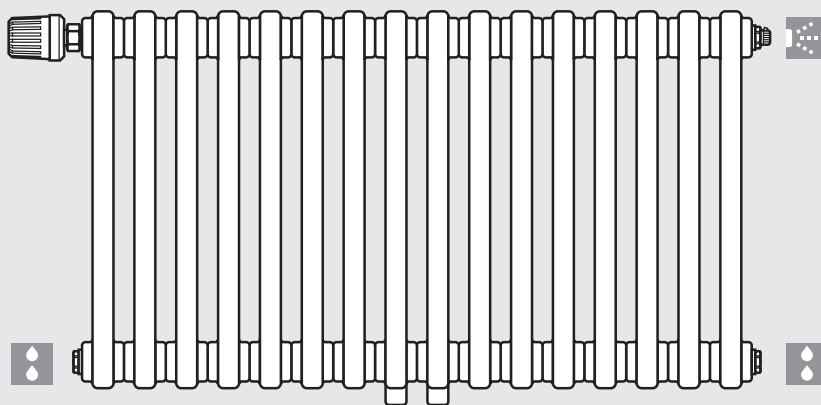
Note:

The entire Laserline centrally connected valve series is manufactured without clip brackets. The delivery does not include fixings, but does include the necessary plugs and thermostatic valve!



Overall height – 65 mm

Connection



Attention: The supply must always be connected on the side with the valve.

Max. number of elements per block

Model	Overall height [mm]	Max. no. of elements per block
2-column	155 - 1000	30
	1001 - 2400	18
	2401 - 3000	16
3-column	155 - 1000	30
	1001 - 2400	18
4-column	155 - 1000	30
	1001 - 2000	18
	2001 - 2200	16
	2201 - 2500	14
	2501 - 2800	12
	2801 - 3000	10
5-column	155 - 800	30
	801 - 1000	26
	1001 - 1500	18
	1501 - 1800	16
	1801 - 2000	14
	2001 - 2200	12
	2201 - 2800	10
2801 - 3000	8	
6-column	155 - 665	30
	666 - 750	28
	751 - 800	26
	801 - 900	24
	901 - 1000	22
	1001 - 1200	18
	1201 - 1400	16
	1401 - 1600	14
	1601 - 1900	12
	1901 - 2300	10
2301 - 3000	8	

Central connection of valve is only possible with an even number of elements! No specially-produced lengths are possible (maximum number of elements!)



ULOW-E2

Profile panel radiators

Plan panel radiators

Vertical radiators



General information

Preformed plate system

Stapler system

Special systems



Towel warmers

Design radiators



Standard Column radiators

Centrally connected Column radiators

Double pipe operation

Double pipe operation

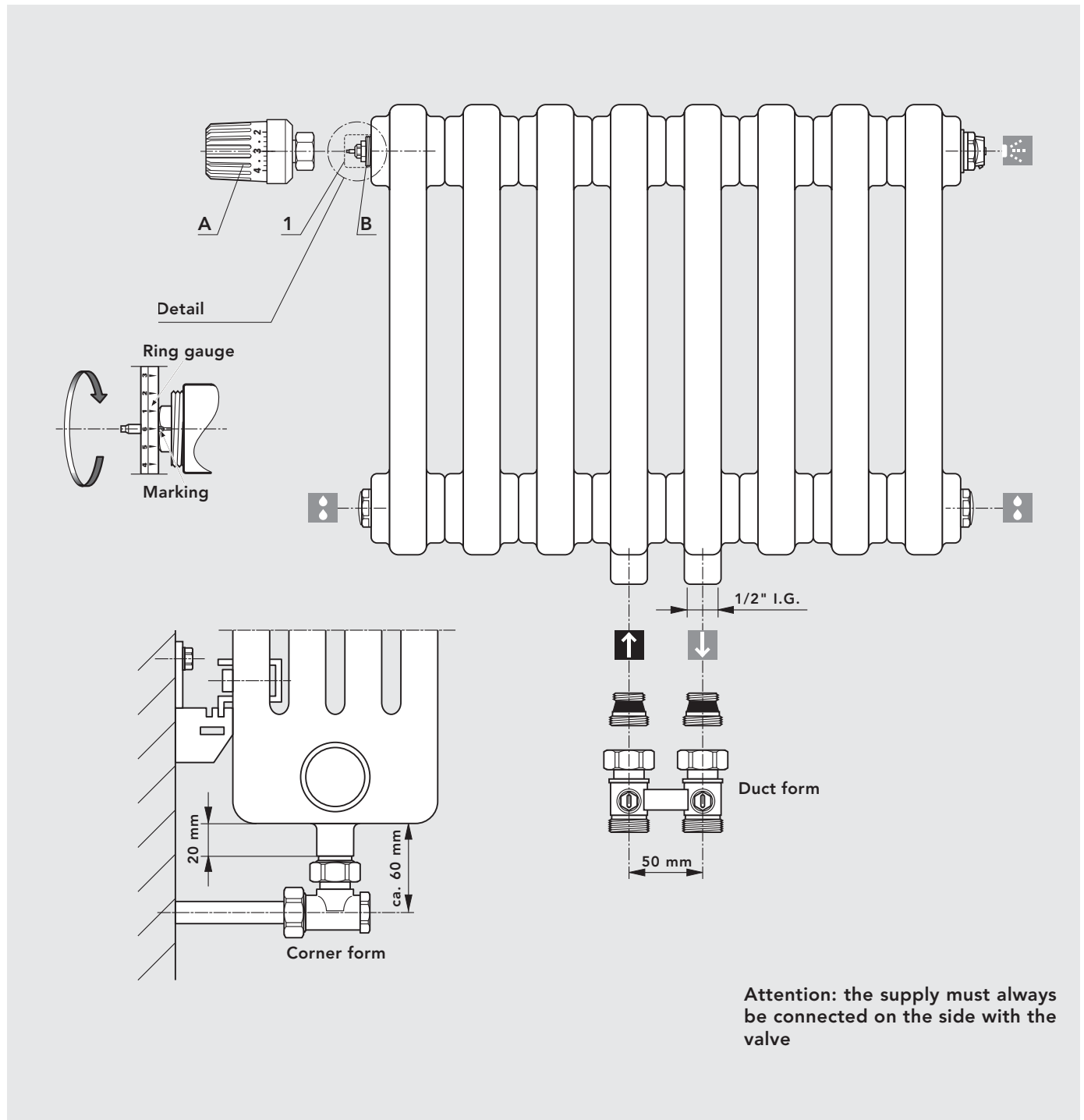
The desired setting values can be set easily and accurately without the need for special tools (see diagram below). The radiator is supplied with the protective cap already fitted. After removing the protective cap (item 1) the thermostatic heads (item A not in the scope of delivery) with M 30 x 1.5 mm port threads of the brands Heimeier, Honeywell-MNG and Oventrop, or special thermostatic heads "RAW-K" made by Danfoss and the Herz "H"

thermostatic head can be fitted directly onto the built in valve (item B) .

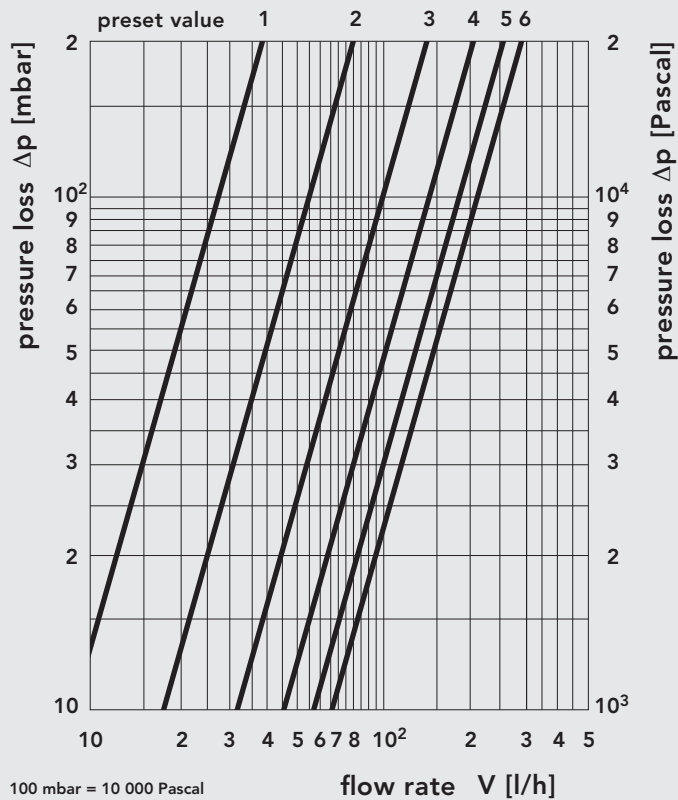
Setting notes:

- Remove the protective cap or thermostatic head
- Turn the ring gauge anti-clockwise to the desired setting – the desired setting value (1-6) must be positioned above the marking
- The pre-set value can be selected in increments of 1 and 6

- The valve is set to the pre-set value 6 by the manufacturer



Flow rate at 2 K P-deviation



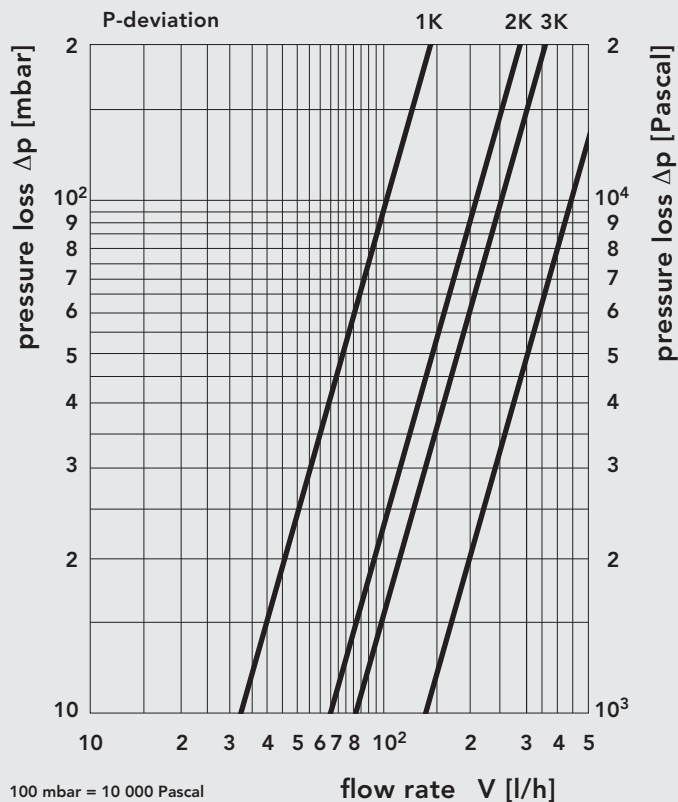
VE*	1	2	3	4	5	6
k_v	0,047	0,126	0,269	0,417	0,6	0,7

* VE = preset value

The presettable control valve is built in by the manufacturer and is delivered with the thermostatic valve. Port thread M 30 x 1.5 mm.

The available models and heat outputs are in line with the tables on the next pages. The thermostatic valve is located in the upper boss of the radiator on the front left.

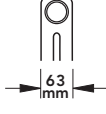
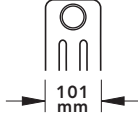
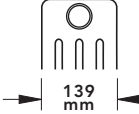
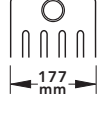
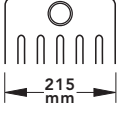


















Flow rate at preset value 6



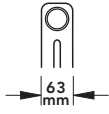
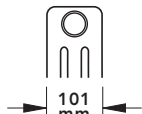
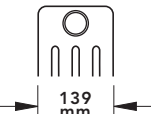
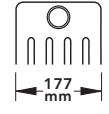
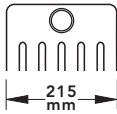








LASERLINE-VM

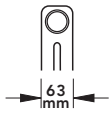
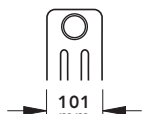
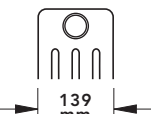
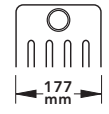
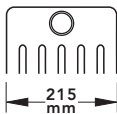






232 LASERLINE CENTRALLY CONNECTED VALVE

Output tables

Standard heat output (Watts) at 75/65/20 °C in accordance with EN 442, DIN registration number 6R0900							
Attention: the height 155 mm cannot be mounted using the radiator mounts!		2-columns	3-columns	4-columns	5-columns	6-columns	
							
Increments		All lengths from 200 to 1500 mm in increments of 100 mm, the element width is 50 mm.					
	Overall height	Model	2016	3016	4016	5016	6016
	155 mm	Output/element in Watts	12,66	17,51	22,83	28,71	34,80
	Boss spacing 90 mm	Water capacity/element in litres	0,27	0,39	0,51	0,63	0,75
		Weight when empty/element in kg	0,30	0,45	0,61	0,76	0,93
	Overall height	Model	2030	3030	4030	5030	6030
	300 mm	Output/element in Watts	25,24	35,40	45,56	55,98	66,39
	Boss spacing 235 mm	Water capacity/element in litres	0,40	0,57	0,75	0,93	1,11
		Weight when empty/element in kg	0,52	0,78	1,05	1,30	1,57
	Overall height	Model	2035	3035	4035	5035	6035
	350 mm	Output/element in Watts	28,96	40,50	52,04	63,99	75,93
	Boss spacing 285 mm	Water capacity/element in litres	0,44	0,64	0,84	1,03	1,23
		Weight when empty/element in kg	0,60	0,89	1,20	1,49	1,86
	Overall height	Model		3037	4037	5037	6037
	365 mm	Output/element in Watts		42,01	53,96	66,36	78,76
	Boss spacing 300 mm	Water capacity/element in litres		0,66	0,86	1,06	1,27
		Weight when empty/element in kg		0,91	1,22	1,54	1,86
	Overall height	Model	2040	3040	4040	5040	6040
	400 mm	Output/element in Watts	32,63	45,52	58,40	71,87	85,33
	Boss spacing 335 mm	Water capacity/element in litres	0,49	0,70	0,92	1,14	1,35
		Weight when empty/element in kg	0,68	1,00	1,35	1,67	2,02
	Overall height	Model	2045	3045	4045	5045	6045
	450 mm	Output/element in Watts	36,26	50,47	64,68	79,64	94,60
	Boss spacing 385 mm	Water capacity/element in litres	0,53	0,76	1,01	1,24	1,48
		Weight when empty/element in kg	0,75	1,12	1,49	1,86	2,24
	Overall height	Model	2050	3050	4050	5050	6050
	500 mm	Output/element in Watts	39,87	55,38	70,88	87,32	103,76
	Boss spacing 435 mm	Water capacity/element in litres	0,57	0,83	1,09	1,34	1,60
		Weight when empty/element in kg	0,83	1,23	1,64	2,04	2,46
	Overall height	Model	2055	3055	4055	5055	6055
	550 mm	Output/element in Watts	43,46	60,25	77,03	94,93	112,83
	Boss spacing 485 mm	Water capacity/element in litres	0,62	0,89	1,17	1,45	1,73
		Weight when empty/element in kg	0,91	1,34	1,79	2,23	2,68
	Overall height	Model	2060	3060	4060	5060	6060
	600 mm	Output/element in Watts	47,02	65,07	83,12	102,48	121,83
	Boss spacing 535 mm	Water capacity/element in litres	0,66	0,96	1,26	1,55	1,85
		Weight when empty/element in kg	0,98	1,46	1,94	2,42	2,91

Output tables

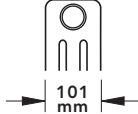
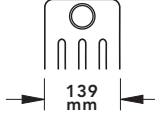
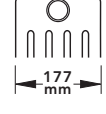
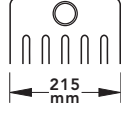














Standard heat output (Watts) at 75/65/20 °C in accordance with EN 442, DIN registration number 6R0900						
		2-columns 	3-columns 	4-columns 	5-columns 	6-columns 
Increments	All lengths from 200 to 1500 mm in increments of 100 mm, the element width is 50 mm.					
 Overall height 665 mm	Model	2067	3067	4067	5067	6067
	Output/element in Watts	51,64	71,31	90,97	112,20	133,42
 Boss spacing 600 mm	Water capacity/element in litres	0,72	1,04	1,37	1,69	2,01
	Weight when empty/element in kg	1,08	1,60	2,14	2,66	3,20
 Overall height 750 mm	Model	2075	3075	4075	5075	6075
	Output/element in Watts	57,65	79,40	101,15	124,80	148,45
 Boss spacing 685 mm	Water capacity/element in litres	0,80	1,15	1,51	1,86	2,22
	Weight when empty/element in kg	1,21	1,79	2,39	2,97	3,58
 Overall height 900 mm	Model	2090	3090	4090	5090	6090
	Output/element in Watts	68,22	93,57	118,92	146,79	174,65
 Boss spacing 835 mm	Water capacity/element in litres	0,93	1,34	1,76	2,17	2,59
	Weight when empty/element in kg	1,44	2,13	2,84	3,53	4,24
 Overall height 1000 mm	Model	2100	3100	4100	5100	6100
	Output/element in Watts	75,26	102,97	130,67	161,31	191,95
 Boss spacing 935 mm	Water capacity/element in litres	1,02	1,47	1,93	2,38	2,84
	Weight when empty/element in kg	1,59	2,36	3,14	3,91	4,69

Standard heat output (Watts) at 75/65/20 °C in accordance with EN 442, DIN registration number 6R0900						
		2-columns 	3-columns 	4-columns 	5-columns 	6-columns 
Increments	All lengths from 200 to 1000 mm in increments of 100 mm, the element width is 50 mm.					
 Overall height 1065 mm	Model		3107	4107	5107	6107
	Output/element in Watts		109,07	138,29	170,72	203,15
 Boss spacing 1000 mm	Water capacity/element in litres		1,55	2,04	2,52	3,00
	Weight when empty/element in kg		2,46	3,24	4,15	4,98
 Overall height 1100 mm	Model	2110	3110	4110	5110	6110
	Output/element in Watts	82,30	112,34	142,38	175,77	209,16
 Boss spacing 1035 mm	Water capacity/element in litres	1,11	1,60	2,10	2,59	3,10
	Weight when empty/element in kg	1,75	2,59	3,44	4,28	5,14
 Overall height 1200 mm	Model	2120	3120	4120	5120	6120
	Output/element in Watts	89,35	121,70	154,04	190,17	226,29
 Boss spacing 1135 mm	Water capacity/element in litres	1,19	1,73	2,27	2,80	3,33
	Weight when empty/element in kg	1,90	2,81	3,74	4,65	5,58

LASERLINE-VM

234 LASERLINE CENTRALLY CONNECTED VALVE

Output tables

Standard heat output (Watts) at 75/65/20 °C in accordance with EN 442, DIN registration number 6R0900						
		2-columns 	3-columns 	4-columns 	5-columns 	6-columns 
Increments		All lengths from 200 to 1000 mm in increments of 100 mm, the element width is 50 mm.				
 Overall height 1500 mm	Model	2150	3150	4150	5150	6150
	Output/element in Watts	110,64	149,80	188,95	233,18	277,41
 Boss spacing 1435 mm	Water capacity/element in litres	1,46	2,11	2,77	3,42	4,08
	Weight when empty/element in kg	2,36	3,49	4,64	5,77	6,92
 Overall height 1800 mm	Model	2180	3180	4180	5180	6180
	Output/element in Watts	132,23	178,08	223,92	276,14	328,35
 Boss spacing 1735 mm	Water capacity/element in litres	1,72	2,49	3,27	4,04	4,82
	Weight when empty/element in kg	2,82	4,17	5,53	6,88	8,25
 Overall height 2000 mm	Model	2200	3200	4200	5200	6200
	Output/element in Watts	146,83	197,10	247,36	304,85	362,34
 Boss spacing 1935 mm	Water capacity/element in litres	1,90	2,75	3,61	4,46	5,31
	Weight when empty/element in kg	3,12	4,62	6,13	7,63	9,15
 Overall height 2200 mm	Model	2220	3220	4220	5220	6220
	Output/element in Watts	161,63	216,28	270,93	333,68	396,42
 Boss spacing 2135 mm	Water capacity/element in litres	2,08	3,01	3,94	4,87	5,81
	Weight when empty/element in kg	3,43	5,07	6,73	8,38	10,04
 Overall height 2500 mm	Model	2250	3250	4250	5250	6250
	Output/element in Watts	184,23	245,44	306,30	377,21	447,78
 Boss spacing 2435 mm	Water capacity/element in litres	2,34	3,39	4,45	5,50	6,55
	Weight when empty/element in kg	3,89	5,75	7,63	9,49	11,37
 Overall height 2800 mm	Model	2280	3280	4280	5280	6280
	Output/element in Watts	207,36	275,09	342,82	421,18	499,53
 Boss spacing 2735 mm	Water capacity/element in litres	2,61	3,78	4,95	6,12	7,29
	Weight when empty/element in kg	4,34	6,43	8,53	10,61	12,71
 Overall height 3000 mm	Model	2300	3300	4300	5300	6300
	Output/element in Watts	223,10	295,18	367,25	450,78	534,30
 Boss spacing 2935 mm	Water capacity/element in litres	2,79	4,03	5,29	6,53	7,79
	Weight when empty/element in kg	4,65	6,88	9,12	11,35	13,60

Accessories

Fixing

The standard delivery of Laserline Column radiators does not include any fixings. These are to be selected depending on use from the range of accessories and are to be ordered separately. However, connection sets with angle brackets and connection sets with drilled brackets are available as standard fixtures. These sets each include the appropriate number of brackets, radiator mounts, the necessary screws and anchor bolt (suitability to be checked by the customer!) and an instruction sheet*. When installing, it is recommended that the upper radiator brackets are mounted immediately below the upper boss.

In addition, the accessories range includes drilled tension brackets, floor brackets and wall brackets in various designs and sizes for fixing in conjunction with radiator mounts. A special adjustable wall bracket makes it possible to set a very wide range of wall clearances.

The Laserline tube radiator is also available in a special design with welded-on clip brackets.

It is essential to note in each case the number of fixing points that are required (see next pages). A fixing point is understood to be any load-bearing fixture (spacing brackets and clamping holders are not fixing points). A fixing point above (recommended position directly underneath the boss) and a fixing point underneath (Fig. 1) in each case form a vertical fixture axis.

The load-bearing capacity and stability of the walls must be checked as to whether they can support the intended load in each case. Clip brackets are not supplied with the standard design of the Laserline tube radiator.

Both floor brackets and circular floor brackets are available for free-standing installation of the Laserline Column radiators. The floor brackets also offer the option to fit a height-adjustable window Heated benches support. Both brackets can be used for radiator lengths of up to 1000 mm. A SINGLE floor bracket/circular floor bracket is recommended per fixture axis. In the case of extraordinary loads, it is recommended that the wall bracket for use in public areas should be used (e.g. in schools).

*Attention: the radiator with the overall height of 155 mm can only be mounted with circular floor brackets or with wall brackets WK 155.

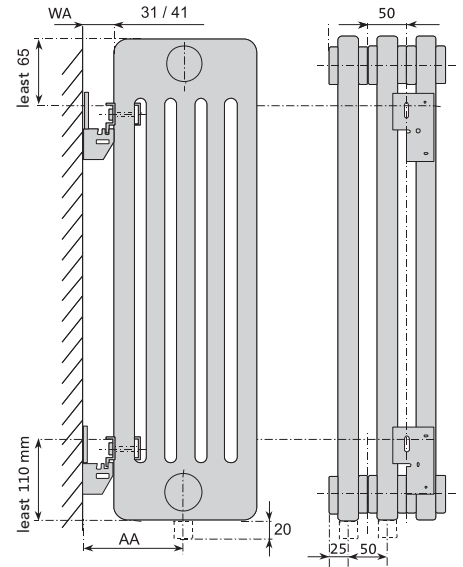
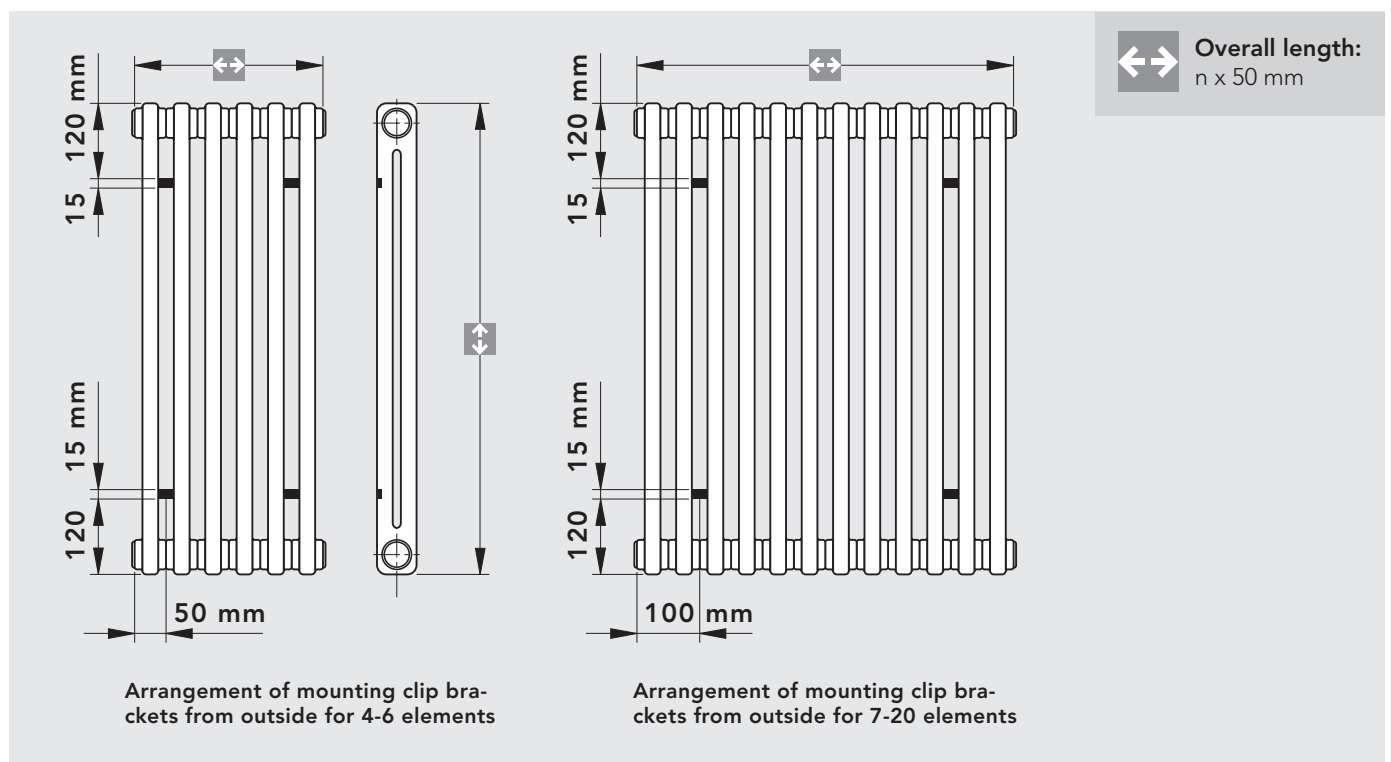


Fig. 1 Fixing and connection dimensions for connection set with angled bracket. The 4-part set includes 4 x the items shown below right, while the 6-part set includes 6 x these items.

Model	Overall depth	Angled bracket set	
		wall clearance WA	connection clearance AA
2-column	63	31 / 41	63,5 / 73,5
3-column	101	31 / 41	82,5 / 92,5
4-column	139	31 / 41	101,5 / 111,5
5-column	177	31 / 41	120,5 / 130,5
6-column	215	31 / 41	139,5 / 149,5

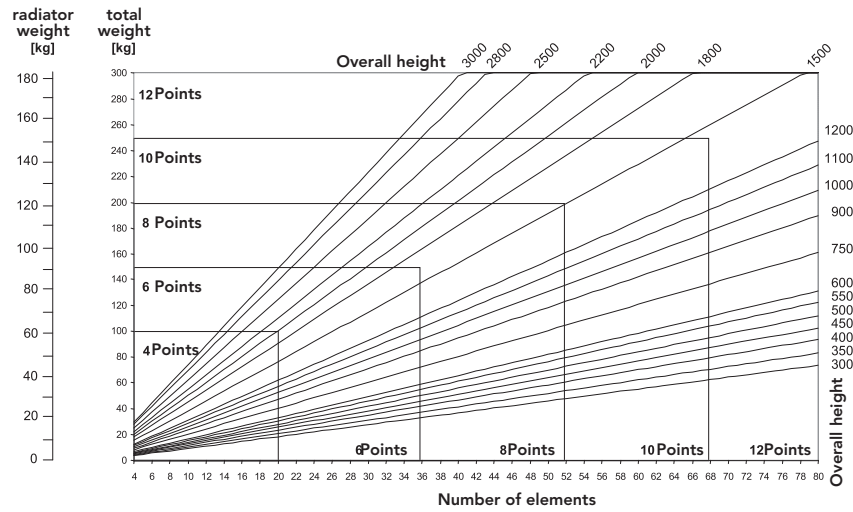


Accessories

2-column:

Maximum block lengths and required fixing points

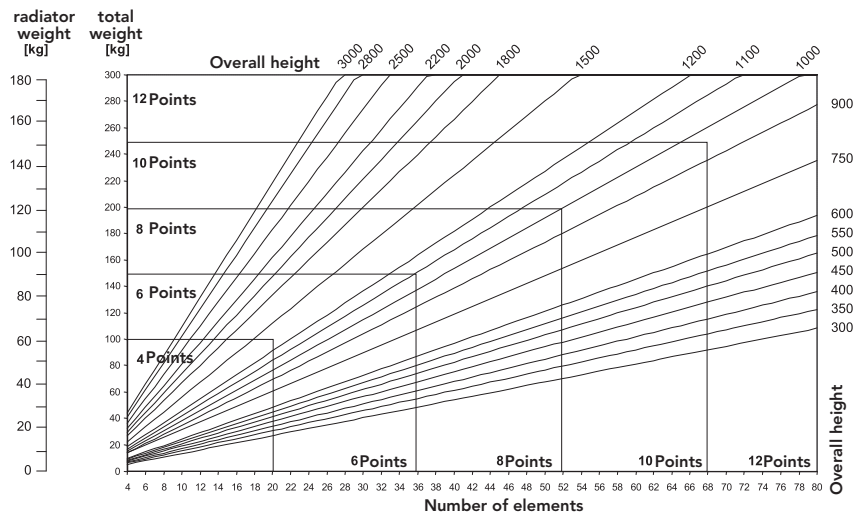
Overall height [mm]	Max. elements per block
up to 1000	40
up to 3000	19



3-column:

Maximum block lengths and required fixing points

Overall height [mm]	Max. elements per block
up to 1000	40
up to 2200	19
up to 3000	14



4-column:

Maximum block lengths and required fixing points

Overall height [mm]	Max. elements per block
up to 750	40
up to 1000	30
up to 1500	19
up to 2200	14
up to 3000	10

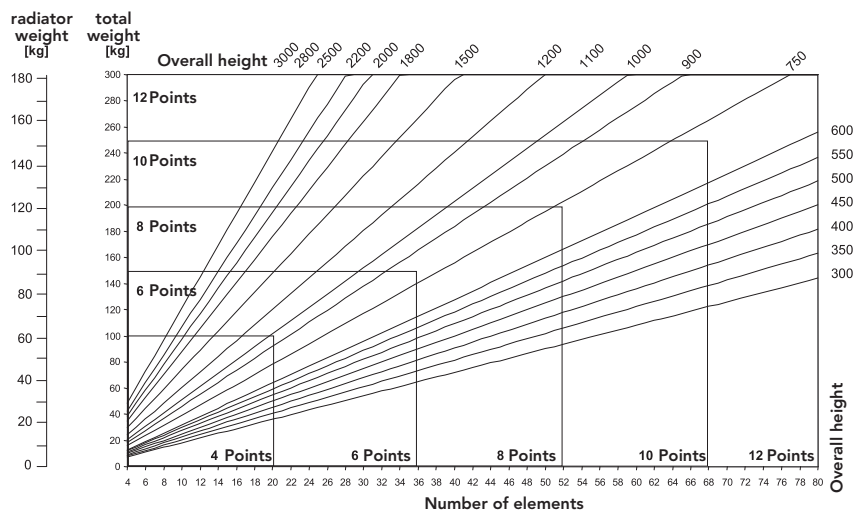


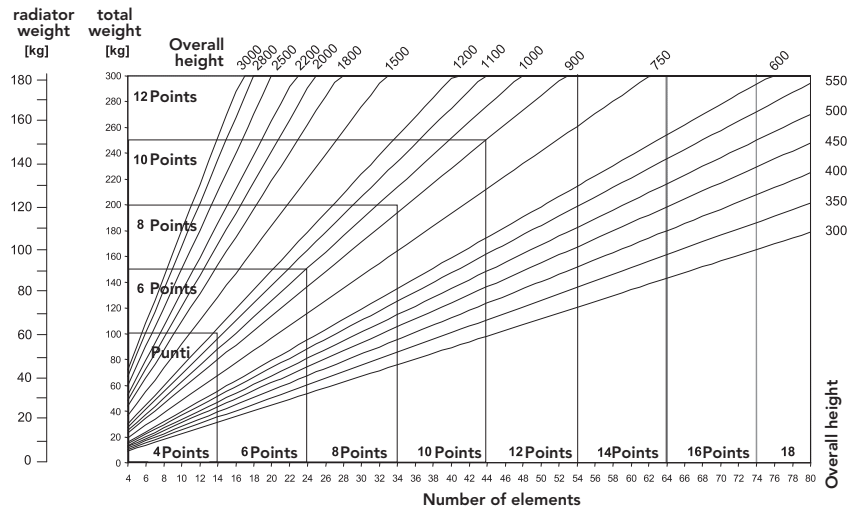
Fig. 2 Determining the necessary fixing points for the 2-, 3- and 4-Column radiators. A fixing point above (recommended position directly underneath the boss) and a fixing point at the bottom in each case (Fig. 1) form a vertical fixture axis.

Accessories

5-column:

Maximum block lengths and required fixing points

Overall height [mm]	Max. elements per block
up to 600	40
up to 665	35
up to 750	30
up to 1000	25
up to 1200	19
up to 1500	15
up to 2500	10
up to 3000	8



6-column:

Maximum block lengths and required fixing points

Overall height [mm]	Max. elements per block
up to 500	40
up to 600	35
up to 665	30
up to 750	25
up to 1000	20
up to 1200	15
up to 1500	13
up to 2000	10
up to 2500	8
up to 3000	7

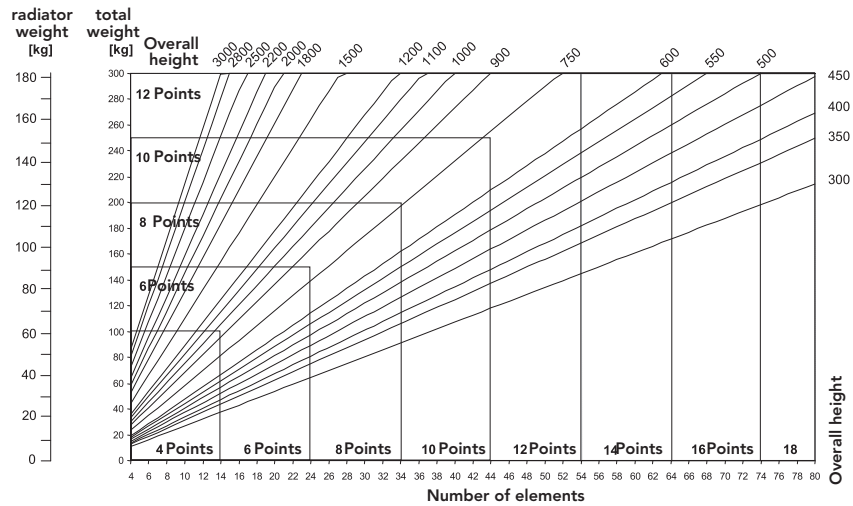


Abb. 3 Determining the necessary fixing points for the 5- and 6-Column radiators. A fixing point above (recommended position directly underneath the boss) and a fixing point at the bottom in each case (Fig. 1) form a vertical fixture axis.

Note:

A SINGLE floor bracket/circular floor bracket is recommended per fixture axis.

The radiator with the overall height of 155 mm can only be mounted with circular floor brackets or with wall brackets WK 155.