# LASERLINE TWIN

**Overall heights**
1000, 1200, 1500 and 1800 mm

**Overall length**
500 mm (10 elements)
600 mm (12 elements)

**Overall depth**
2-column: 63 mm

**Connections**
2x 1/2" internal thread at the bottom in the centre, spacing of 50 mm, Air vent on the top right at the side G 1/2"
**Possible connections**
1 x 1/2" internal thread bottom right for electric heating elements

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

**Max. operating temperature**
110 °C

Guarantee statements are available to download at **www.vogelundnoot.com/download**

- **Laser-welded – no visible welding seams**
- **Highest-precision manufacturing**
- **Highly conducive to cleanliness**
- **With fixings and towel rail**

Design Column radiators are fully laser-welded. Pipes and head pieces are flattened on the exterior to increase the heat output.

**Fixing**
Clip brackets welded on at the back

**Scope of delivery**
Delivery complete with mounting brackets, wall brackets, fixing screws and anchor bolts; includes height-adjustable towel rail in matching radiator colour with chrome-plated holders.

**Coating**
In accordance with DIN 55 900, with electrophoretic immersion coating and cured powder coating in RAL 9016 Traffic White, other RAL colours and bathroom suite colours are available upon request.

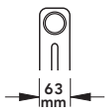
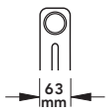
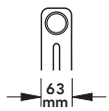
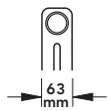
**Safety**
Construction in line with work safety requirements in accordance with the guidelines of the statutory accident insurer (GUV).

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

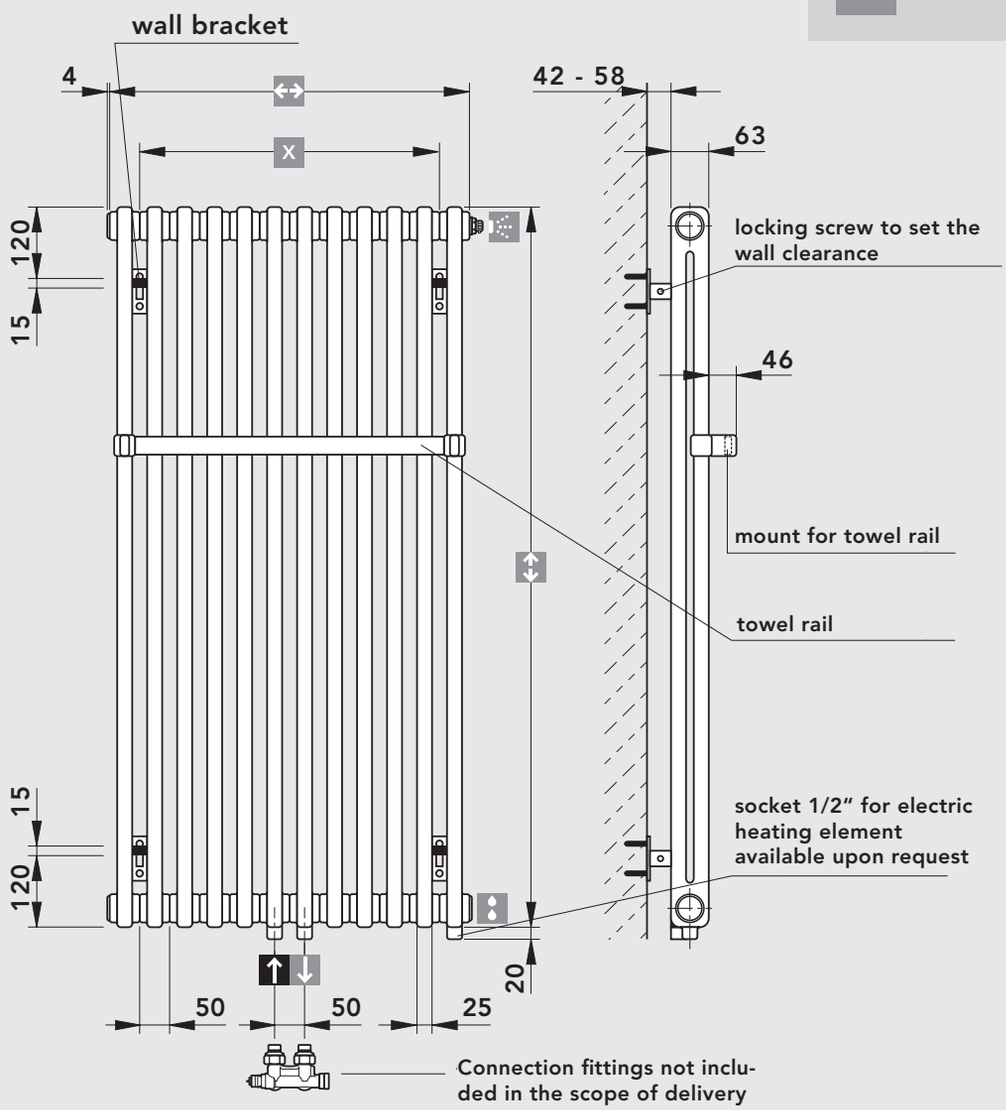
**Connections**
The VOGEL&NOOT Laserline Twin tube radiator is centrally connected via 2 G 1/2" ports on the bottom. The supply port on the radiator is always located on the left, while the return port is on the right. The distance between the ports is 50 mm. If requested, an additional 1/2" port can be added in production to the last element for the purpose of connecting an electric heating element, which is available in the accessories range. This enables the Laserline Twin to also be used when the heating system is switched off.

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

Overview of models, outputs and special designs

| * Standard heat output in accordance with EN 442 in Watts, DIN registration number 6R0900 | | | | | | |
|---|---|---|---|---|---|---|
| Overall height [mm] | | | 1000 | 1200 | 1500 | 1800 |
| | | | 2-columns   | 2-columns   | 2-columns   | 2-columns   |
| Model | | | 2100 | 2120 | 2150 | 2180 |
| Elements | Overall length [mm] | | | | | |
| 10 | 500 | Watt 75/65/20° * | 753 | 893 | 1106 | 1322 |
| | | Water capacity in litres | 10,20 | 11,90 | 14,60 | 17,20 |
| | | Weight when empty in kg | 15,90 | 19,00 | 23,60 | 28,20 |
| | | Radiator exponent n | 1,27 | 1,28 | 1,30 | 1,32 |
| 12 | 600 | Watt 75/65/20° * | 904 | 1072 | 1328 | 1587 |
| | | Water capacity in litres | 12,20 | 14,30 | 17,50 | 20,60 |
| | | Weight when empty in kg | 19,10 | 22,80 | 28,30 | 33,80 |
| | | Radiator exponent n | 1,27 | 1,28 | 1,30 | 1,32 |

## Technical data




**The accessories (valve closure fitting and cover cap) can be found in the price list.**

## 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.*

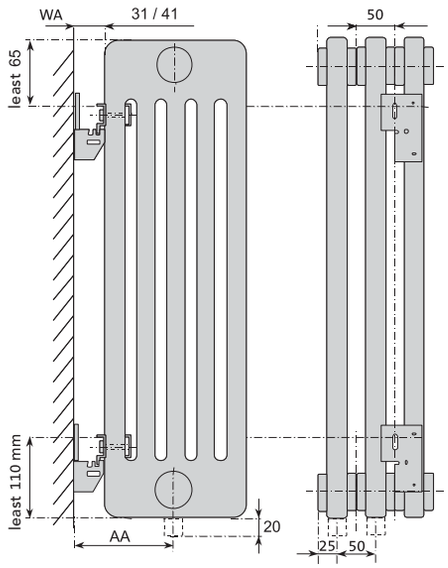
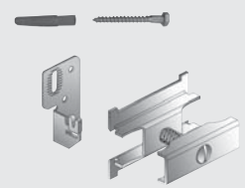
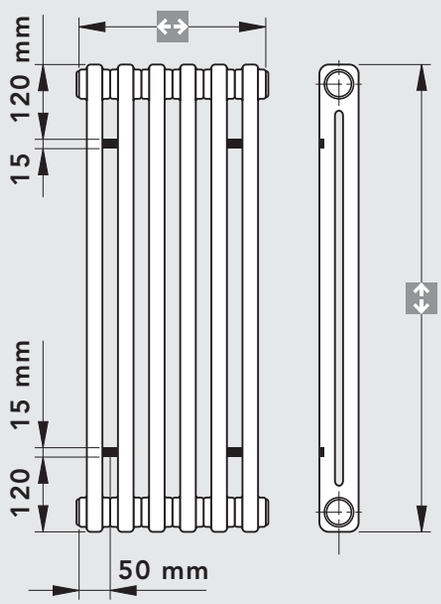


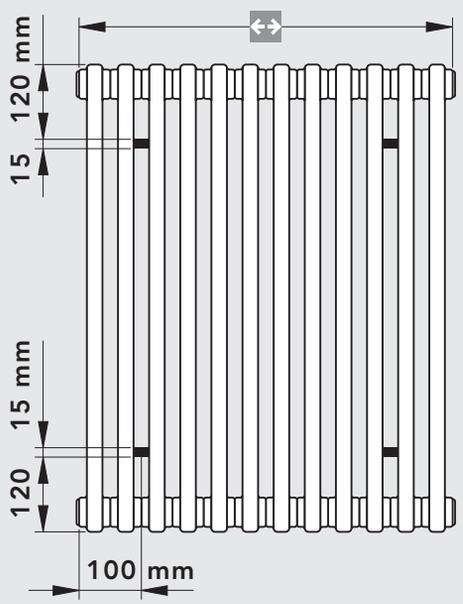

***Fig. 1*** *Fixing and connection dimensions for connection set with angled bracket. The 4-part set includes 4 x the items shown below right, while the 6-part set includes 6 x these items.*

| | | Angled bracket set | |
|---|---|---|---|
| Model | Overall depth | 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 |






**Arrangement of mounting clip brackets from outside for 4-6 elements**




**Arrangement of mounting clip brackets from outside for 7-20 elements**

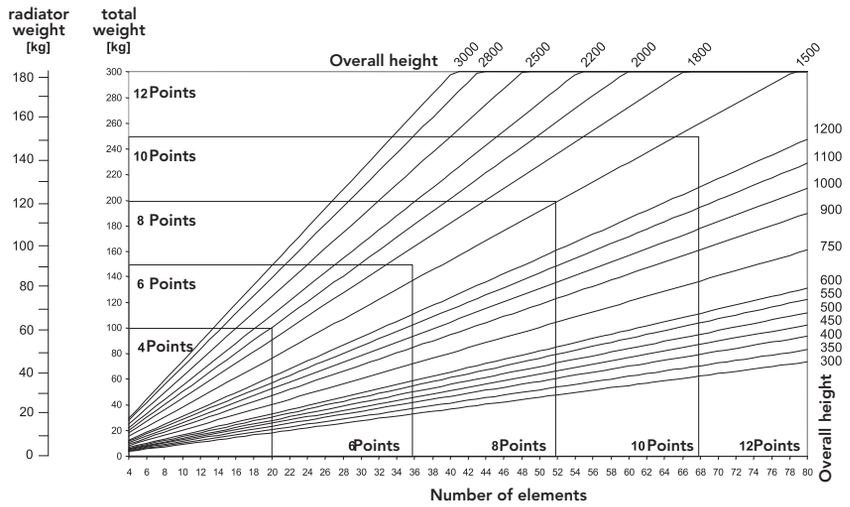
**Overall length:**
n x 50 mm

## Accessories

### 2-column:

Maximum block lengths and required fixing points

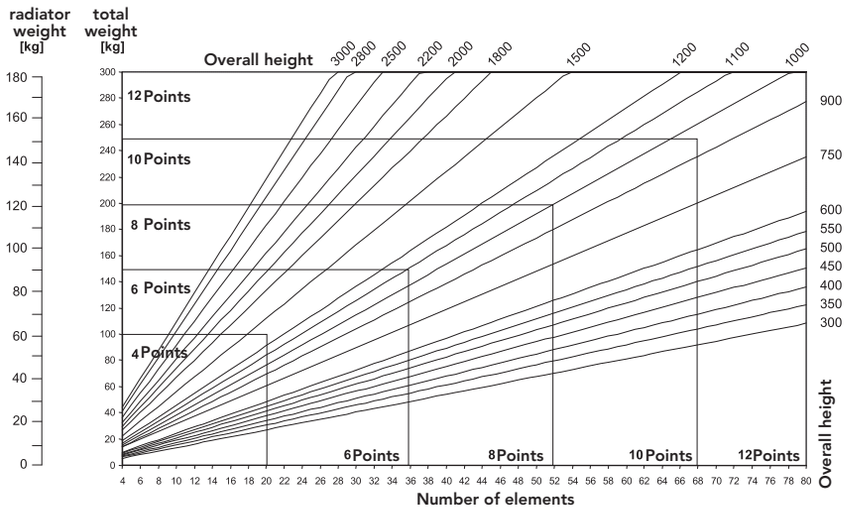
| Overall height [mm] | Max. elements per block |
|---|---|
| up to 1000 | 40 |
| up to 3000 | 19 |




### 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 |

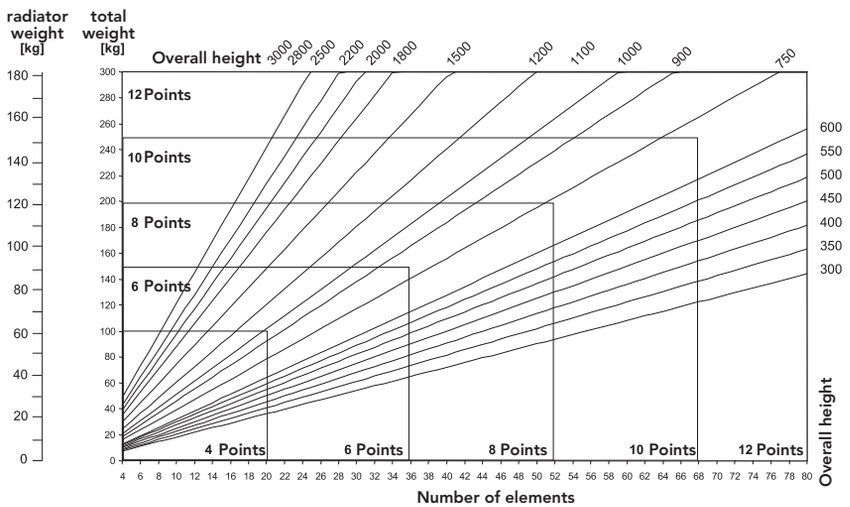


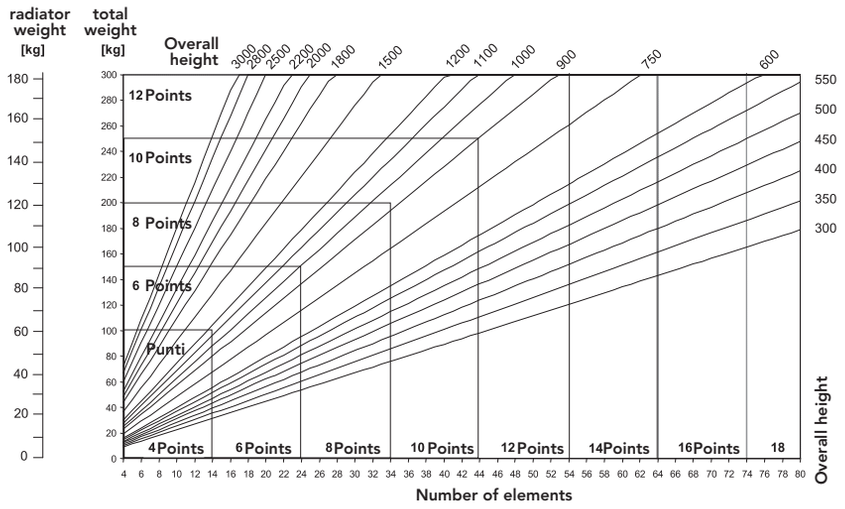

***Fig. 2*** *Determining the necessary fixing points for the 2-, 3- and 4-Column radiators. A fixing point above (recommended position directly underneath the boss) and a fixing point at the bottom in each case (Fig. 1) form a vertical fixture axis.*

## 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 |

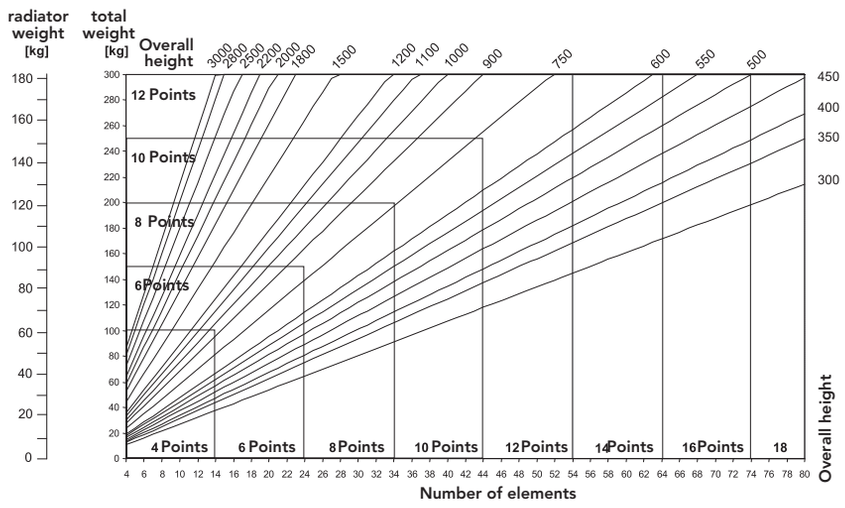



***Abb. 3*** *Determining the necessary fixing points for the 5- and 6-Column radiators. A fixing point above (recommended position directly underneath the boss) and a fixing point at the bottom in each case (Fig. 1) form a vertical fixture axis.*

***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.*