Installation instructions electronic heat cost allocator

EURIS II

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Structuring of Installation instructions according to type of radiator

1 Sectional radiators
11 Sectional radiators made of steel
12 Sectional radiators made of cast iron
13 Sectional radiators made of tubes
14 Sectional radiators made of aluminium

2 Panel radiators
21 Panel radiators vertically contoured
22 Panel radiators horizontally contoured
23 Panel radiators straight front side
24 Panel radiators other contours

3 Flat profile radiators
31 Flat profile radiators with vertical pipe layout
32 Flat profile radiators with horizontal pipe layout
33 Flat profile radiators, special types

4 Radiator with straight pipes
41 Radiator with straight pipes and vertical pipe layout
42 Radiator with straight pipes and horizontal pipe layout
43 Radiator with straight pipes, special types

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61 Lamella type radiators

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70 Convector heaters

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81 Single pipes as heating surface
82 Tube register
83 Pipes

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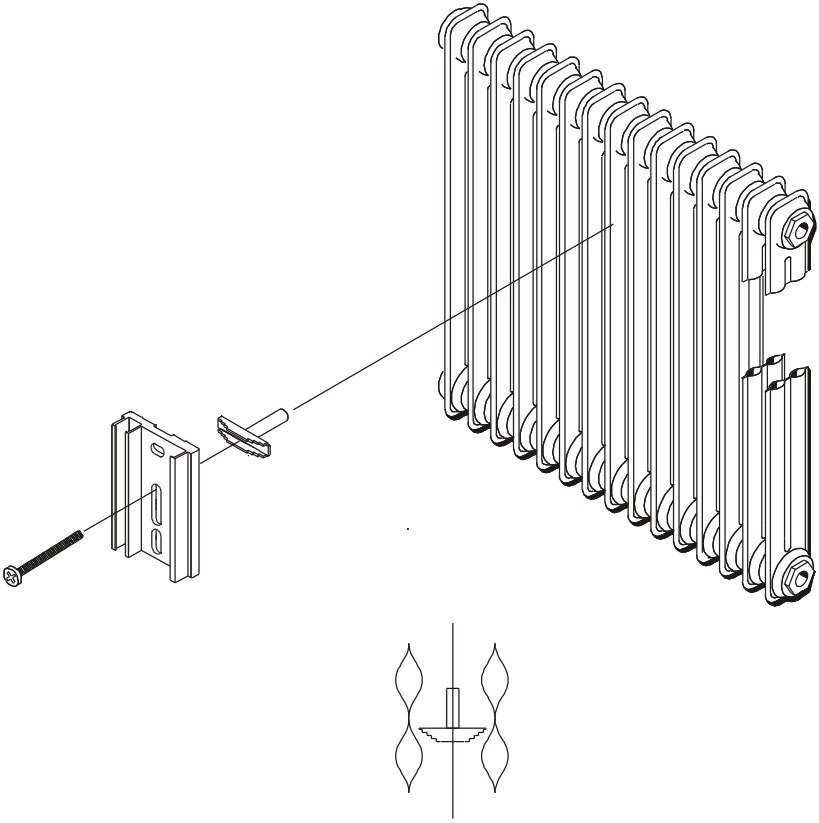
1 Sectional radiators

11 Sectional radiators made of steel
12 Sectional radiators made of cast iron
13 Sectional radiators made of tubes
14 Sectional radiators made of aluminium

Group of radiators	Installation sheet
Sectional radiators made of steel	**11.001**

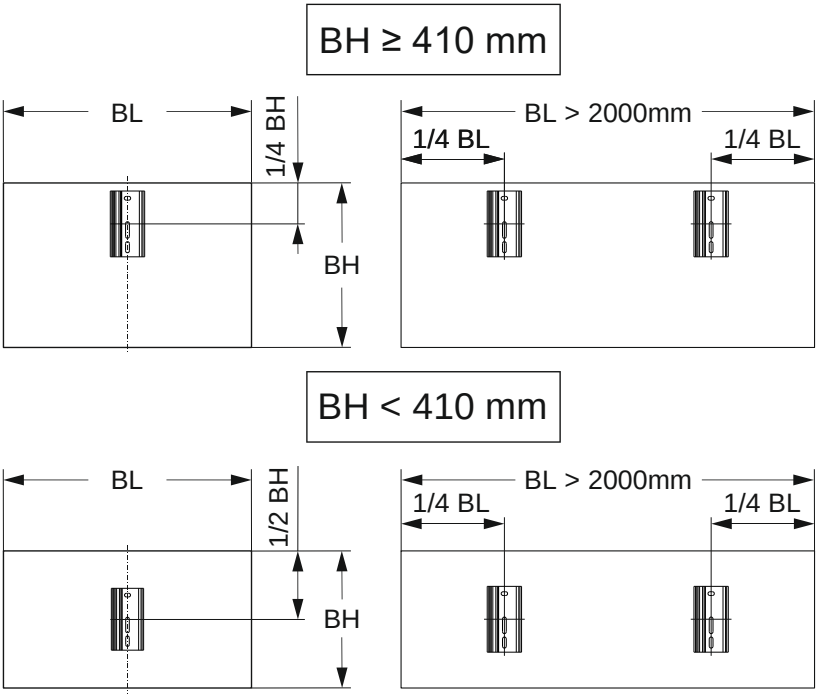


Installation with bolts

Pcs.	Installation material	Ord.no
1	heat conductor	65H010
1	slide nut trapezoidal 35	65H002
1	bolt M4x45	60A191

Pitch 50 mm DIN-steel radiators	Installation sheet 11.001

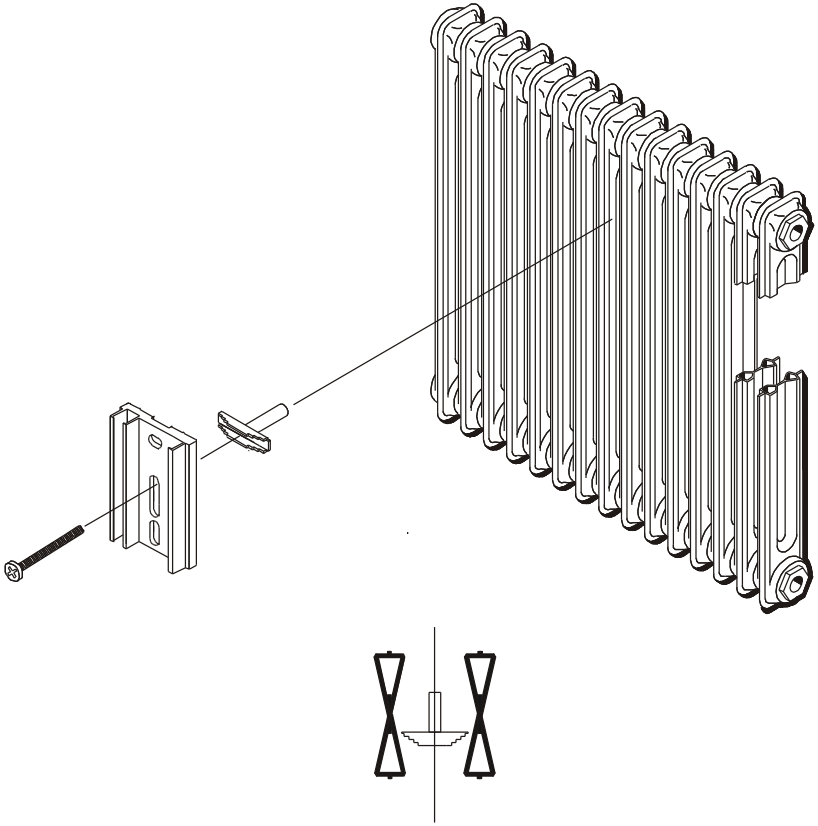
Installation place and amount of heat cost allocators



Installation hints

- **mount the HCA with heat conductor's midpoint at 75% of radiator's height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of heat conductor at 50% of radiator's height (center of radiator)**
- **at radiators with a length greater than 2m have to be installed 2 HCAs**

Group of radiators	Installation sheet
Sectional radiators made of steel	**11.002**

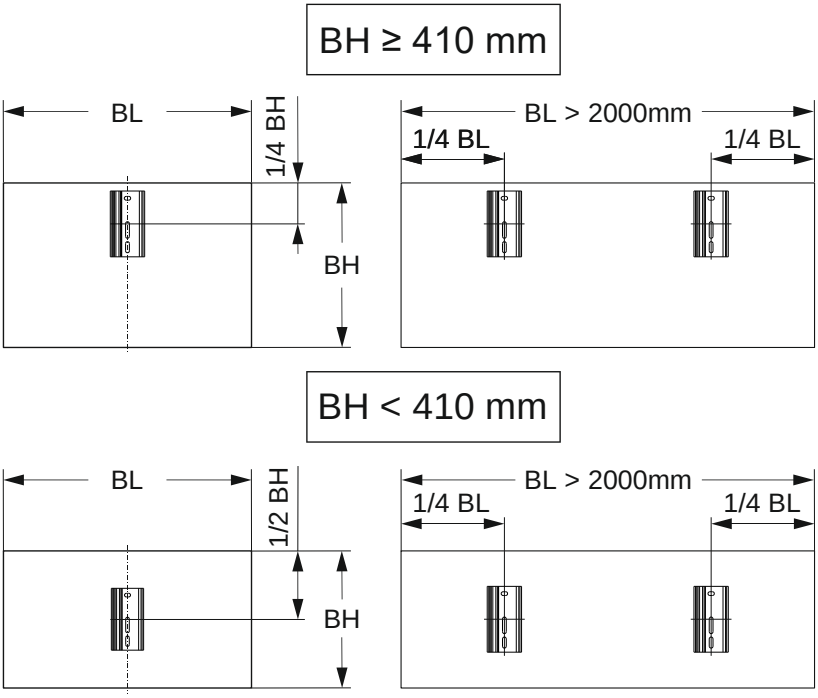


Installation with bolts

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
1	slide nut trapezoidal 35	65H002
1	bolt M4	Length acc. to demand

Pitch 30 to 45 mm Narrow pillars	Installation sheet 11.002

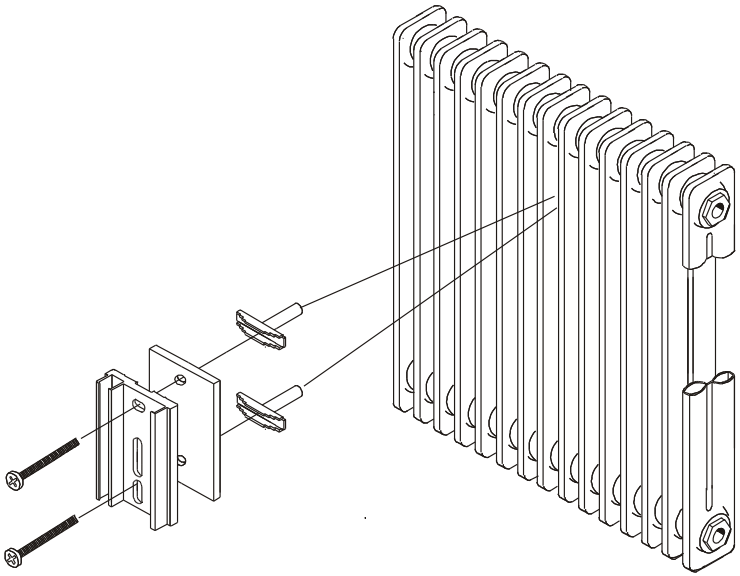
Installation place and amount of heat cost allocators

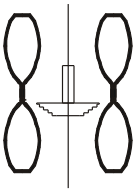


Installation hints

- **mount the HCA with heat conductor's midpoint at 75% of radiators height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiator's height (center of radiator)**
- **at radiators with a length greater than 2m have to be installed 2 HCAs**

Group of radiators	Installation sheet
Sectional radiators made of steel	**11.003**



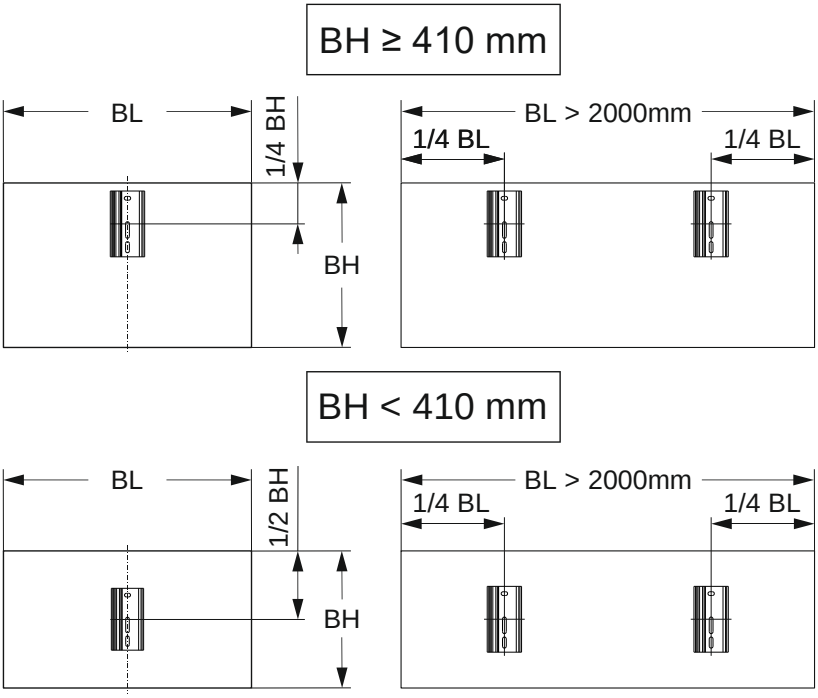


Installation with bolts

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
1	adaptor for heat conductor wide 52	65H063
2	slide nut trapezoidal 35	65H002
2	bolt M4x45	60A191

Pitch 50 mm With flattened side	Installation sheet 11.003

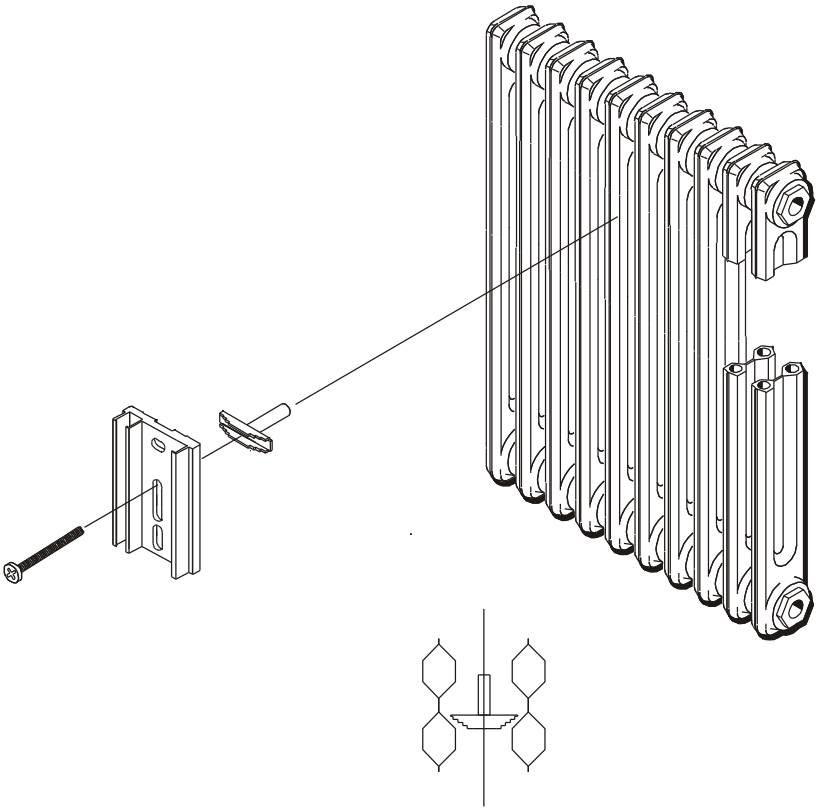
Installation place and amount of heat cost allocators



Installation hints

- **mount the HCA with heat conductor's midpoint at 75% of radiator's height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiator's height (center of radiator)**
- **at radiators with a length greater than 2m have to be installed 2 HCAs**
- **installation using an adaptor for heat conductor wide 52 only**

Group of radiators	Installation sheet
Sectional radiators cast iron DIN 4703	**12.001**

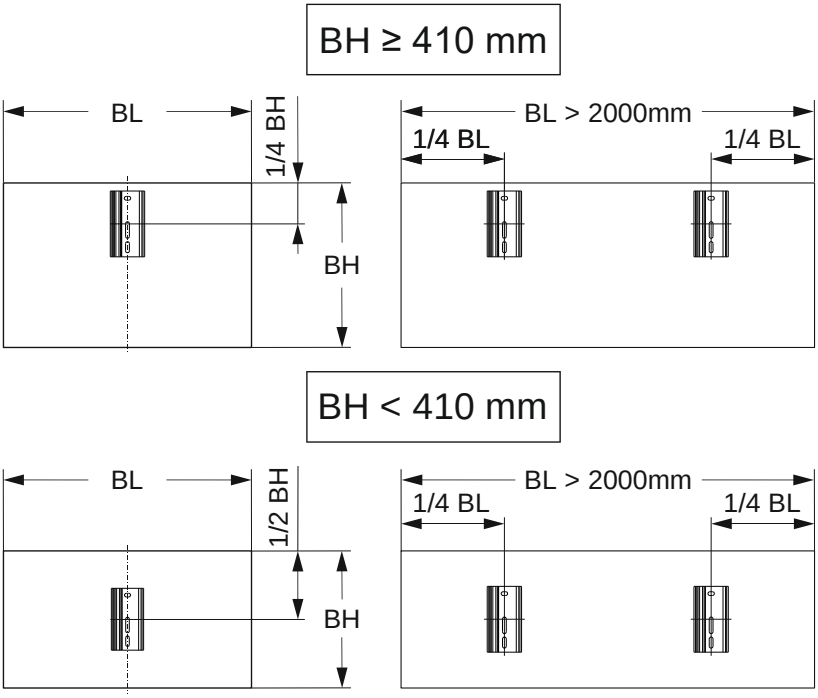


Installation with bolts

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
1	slide nut trapezoidal 35	65H002
1	bolt M4x35	60A188

Pitch 60 mm	Installation sheet 12.001

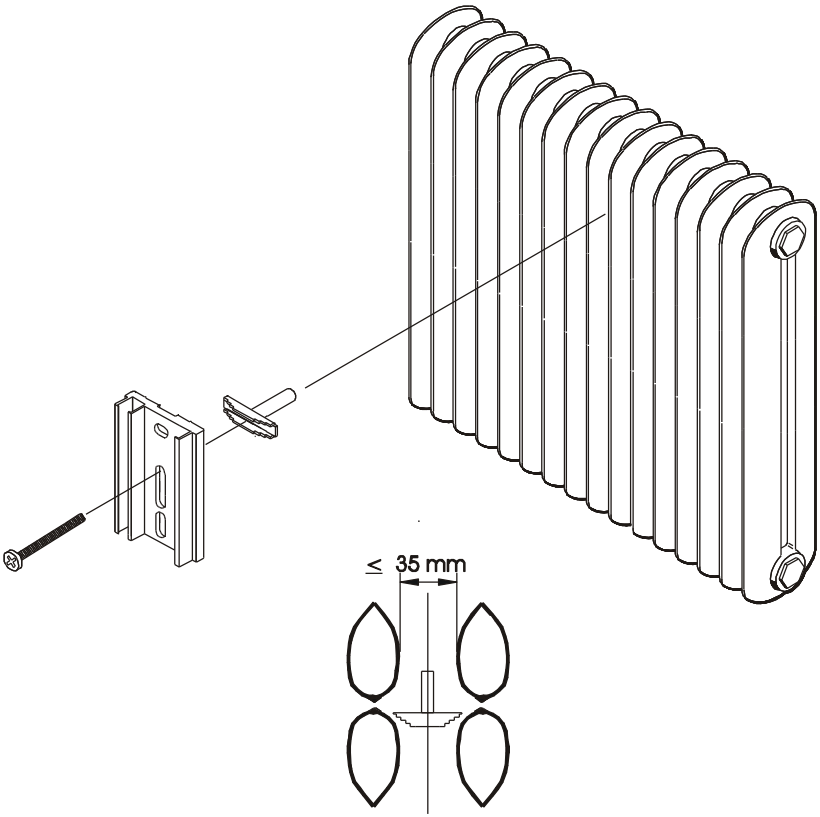
Installation place and amount of heat cost allocators



Installation hints

- **mount the HCA with heat conductor's midpoint at 75% of radiator's height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiator's height (center of radiator)**
- **at radiators with a length greater than 2m have to be installed 2 HCAs**

Group of radiators	Installation sheet
Sectional radiator cast iron	**12.002**

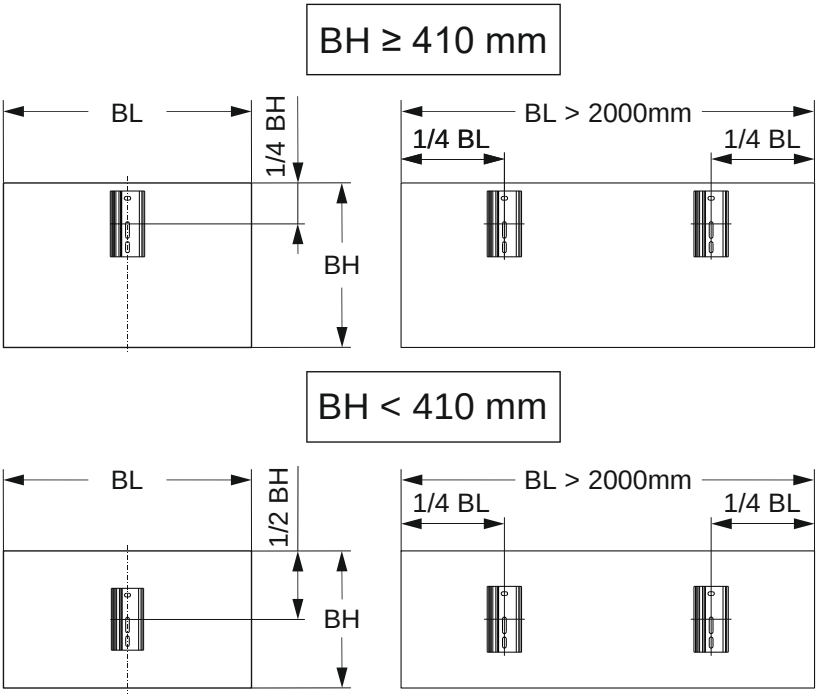


Installation with bolts

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
1	slide nut trapezoidal 35	65H002
1	bolt M4 Length acc. to demand	

Sectional length GL - Thickness of pillar SK ≤ 35 mm	Installation sheet 12.002

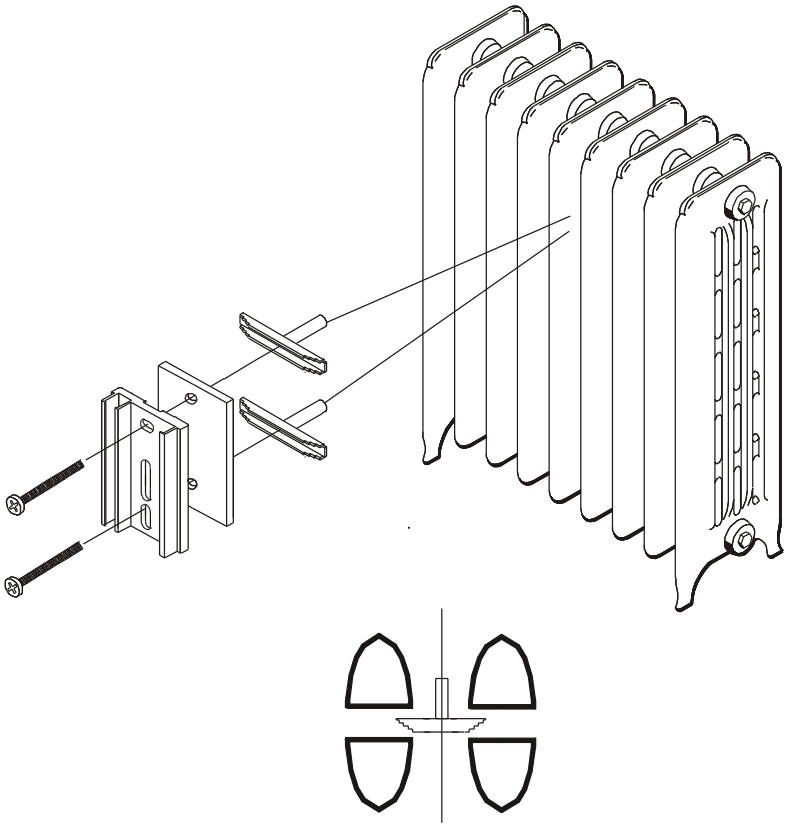
Installation place and amount of heat cost allocators



Installation hints

- **mount the HCA with heat conductor's midpoint at 75% of radiator's height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiator's height (center of radiator)**
- **at radiators with a length greater than 2m have to be installed 2 HCAs**

Group of radiators	Installation sheet
Sectional radiators cast iron	**12.003**

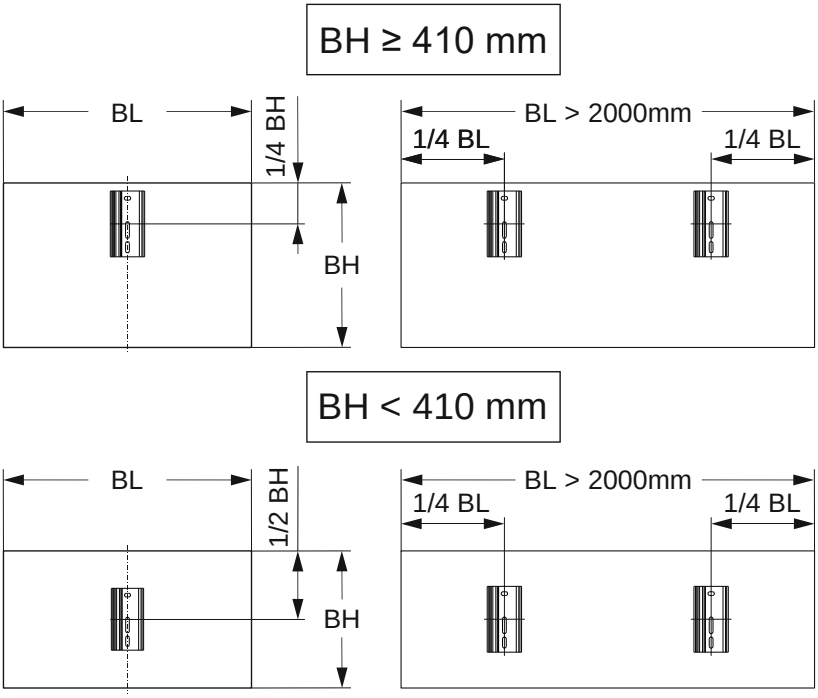


Installation with bolts

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
1	adaptor for heat conductor wide 52	65H063
2	slide nut trapezoidal 55	65H032
2	bolt M4	Length acc. to demand

Sectional length GL - Thickness of pillar SK > 35 mm	Installation sheet 12.003

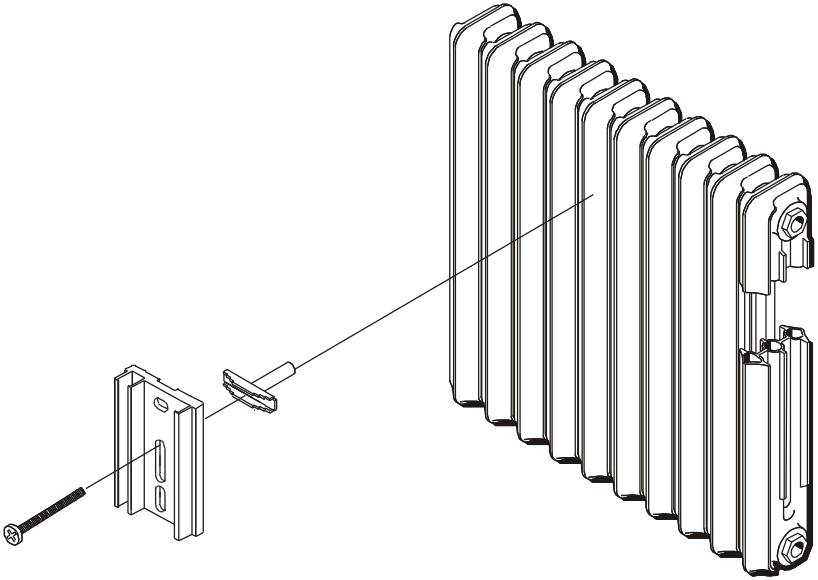
Installation place and amount of heat cost allocators

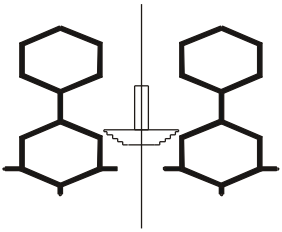


Installation hints

- **mount the HCA with heat conductor's midpoint at 75% of radiator's height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiator's height (center of radiator)**
- **at radiators with a length greater than 2m have to be installed 2 HCAs**

Group of radiators	Installation sheet
Sectional radiators cast iron	**12.004**

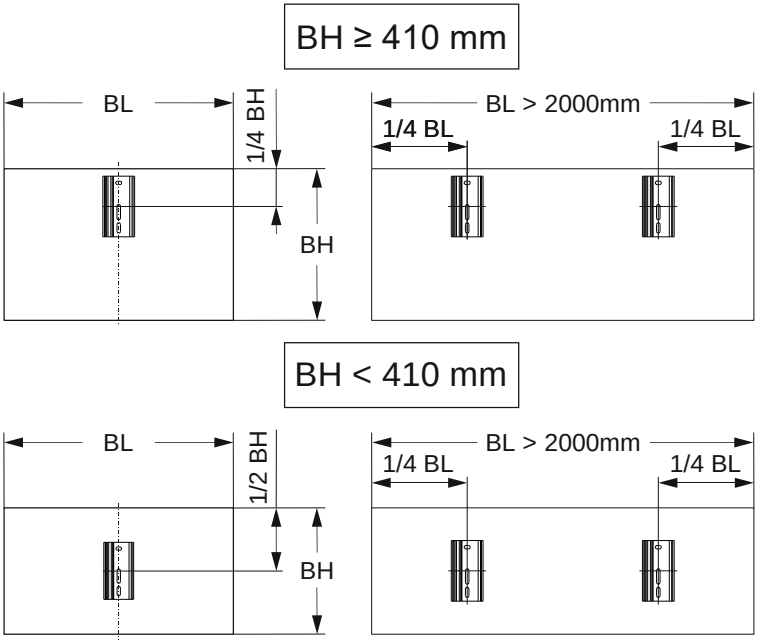




Installation with bolts		
Pcs.	**Installation material**	**Ord.no.**
1	heat conductor	65H010
1	slide nut trapezoidal 35	65H002
2	bolt M4	Length acc. to demand

Radiator with frontal surface area	Installation sheet 12.004

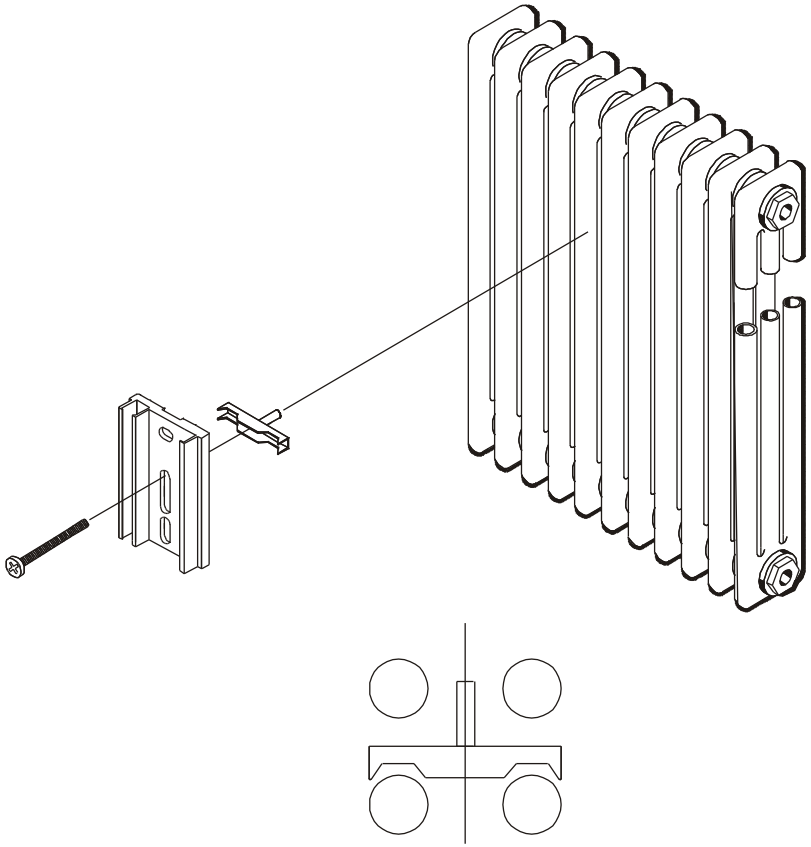
Installation place and amount of heat cost allocators



Installation hints

- **mount the HCA with heat conductor's midpoint at 75% of radiator's height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiators height (center of radiator). This applies also to radiators with a height greater than 410 mm, if an installation at 75% radiator's height is not possible, because the frontal surface area isn't consistent over the entire height of radiator**
- **at radiators with a length greater than 2m have to be installed 2 HCAs**

Group of radiators	Installation sheet
Sectional radiator with tubes	**13.001**

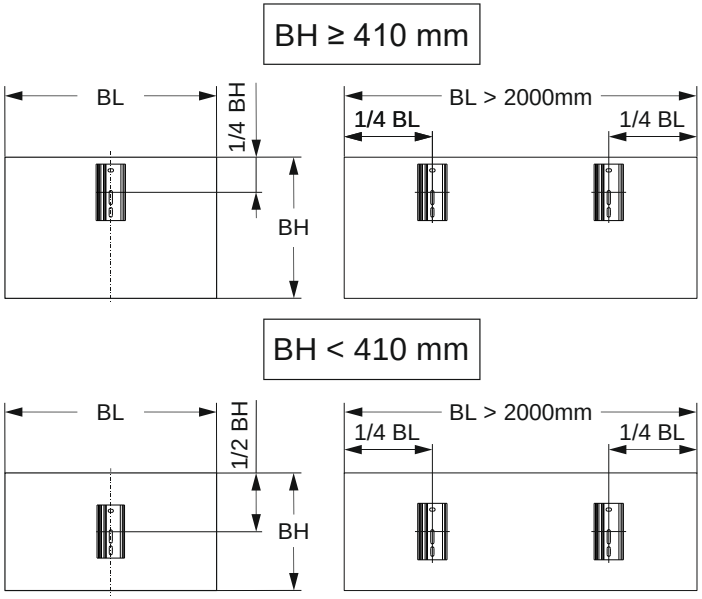


Installation with bolts

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
1	slide nut for pipes 46	65H037
1	bolt M4x45	60A191

Sectional length 45/46 mm	Installation sheet 13.001

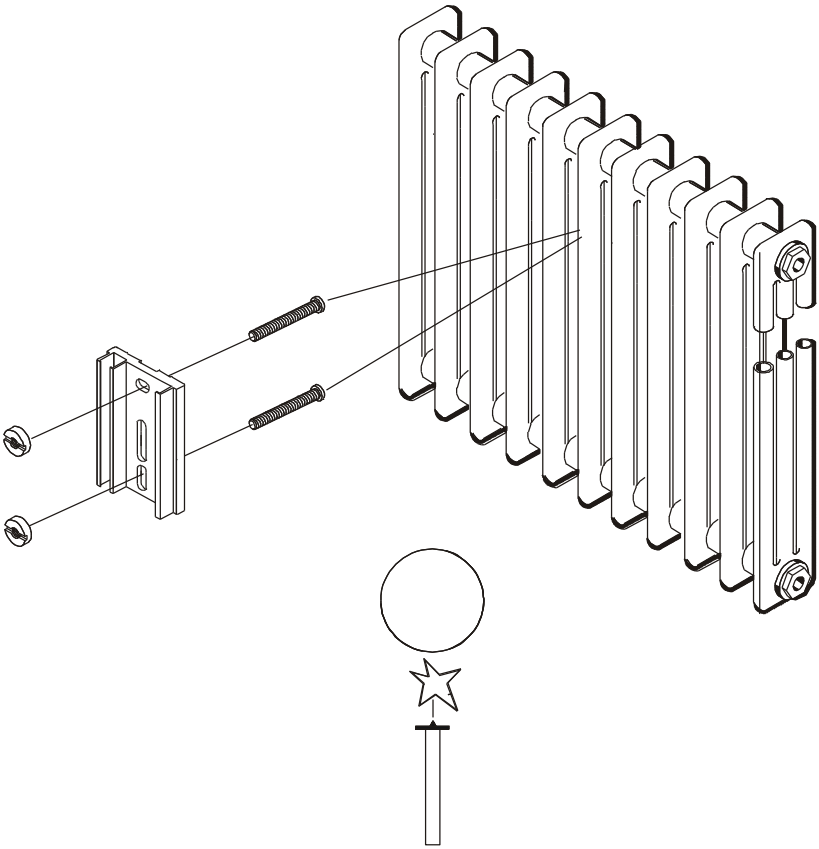
Installation place and amount of heat cost allocators



Installation hints

- **mount the HCA with heat conductor's midpoint at 75% of radiator's height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiator's height (center of radiator).**
- **at radiators with a length greater than 2m have to be installed 2 HCAs**
- **radiators which are installed rotated about 90°, → see Installation sheet 13.004**
- **for installation please use special slide nuts for pipes 46**

Group of radiators	Installation sheet
Sectional radiator with tubes	**13.002**

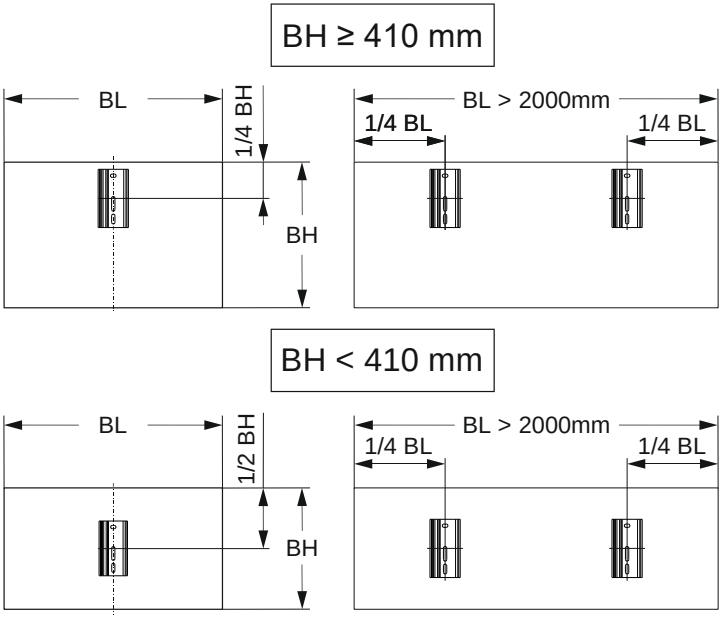


Welded installation

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
2	welding stud M3x10	60A034
2	slotted nut M3	60A007

Sectional length GL > 46 mm	Installation sheet 13.002

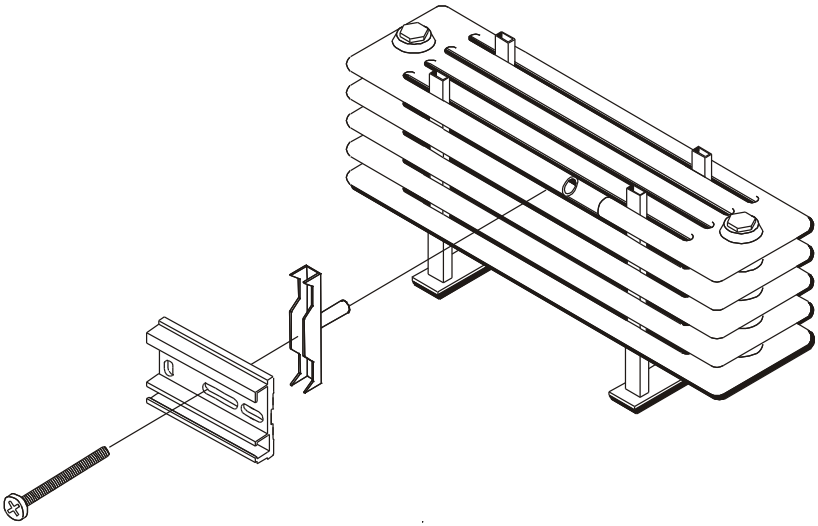
Installation place and amount of heat cost allocators

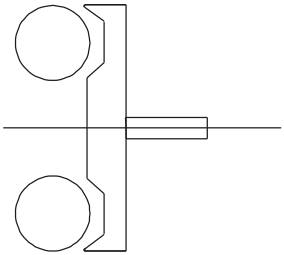


Installation hints

- **mount the HCA with heat conductor's midpoint at 75% of radiator's height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiator's height (center of radiator).**
- **at radiators with a length greater than 2m have to be installed 2 HCAs**
- **radiators which are installed rotated about 90°, → see Installation sheet 13.004**
- **at pitches greater than 46 mm use welded installation**
- **at pitches 45/46 mm see installation sheet 13.001**

Group of radiators	Installation sheet
Sectional radiators with tubes	**13.003**





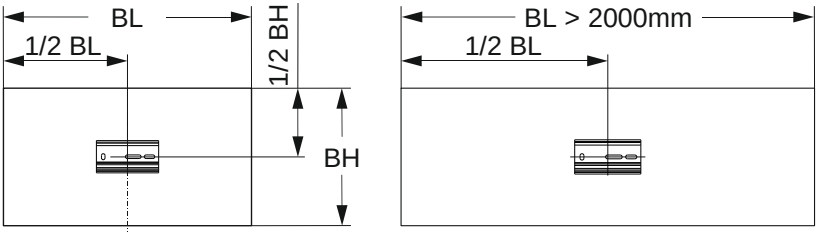
Installation with bolts

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
1	slide nut for pipes 36	65H002
1	bolt M4x35	60A188

Window-sill radiator	Installation sheet 13.003

Installation place and amount of heat cost allocators

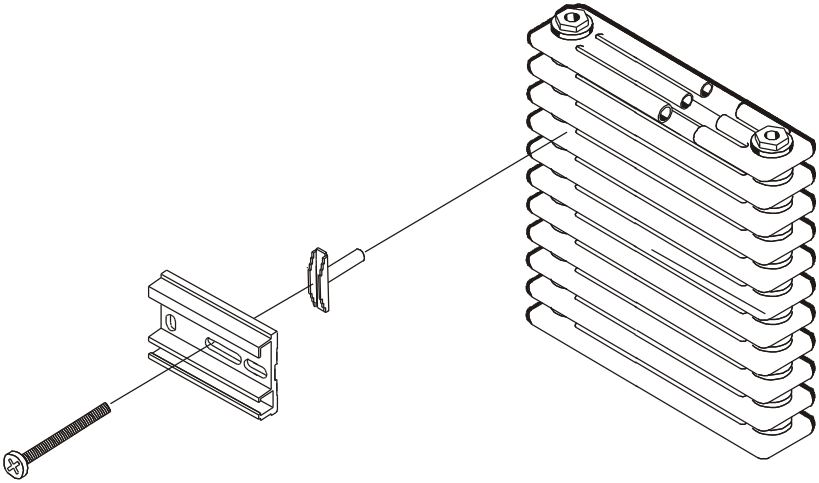
BH < 410 mm

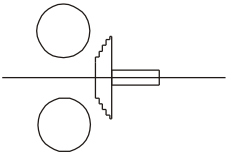


Installation hints

- **install only one HCA also at radiators with a length greater than 2 m**
- **install HCA with heat conductor's midpoint at 50% of radiator's height (center of radiator). If it isn't possible because of the pitch, take the closest installation point to this (above preferred)**
- **installation with vertical rotated slide nut for pipes 46**
- **install HCA horizontal (seal at right side)**

Group of radiators	Installation sheet
Sectional radiators with tubes	**13.004**

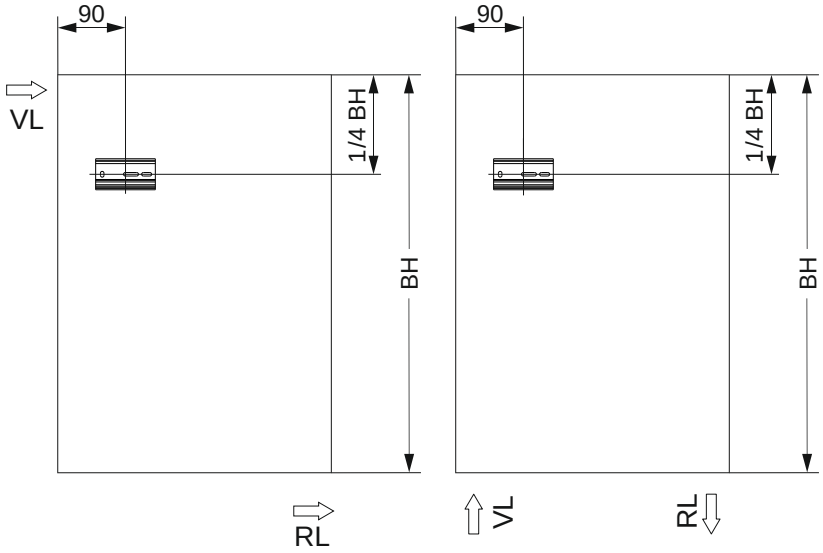




Installation with bolts		
Pcs.	**Installation material**	**Ord.no.**
1	heat conductor	65H010
1	slide nut trapezoidal 35	65H002
1	bolt M4x45	60A191

Installed rotated 90°	Installation sheet 13.004

Installation place and amount of heat cost allocators

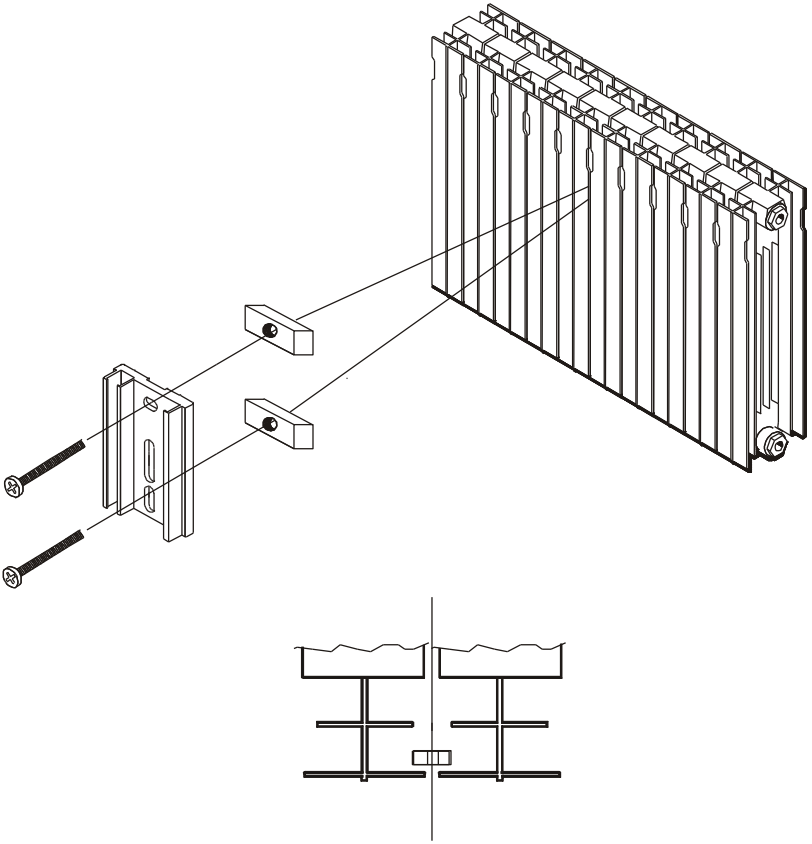


Installation hints

- **mount the center of HCA's heat conductor 90 mm away from heaters edge at fore shot side, 90 degrees rotated.**
- **mount the HCA at 75% of radiator's height (measured from lower edge) also at radiators with a height smaller than 410mm**
- **the slide nut has to be rotated about 90°**
- **install HCA horizontal (seal at right side)**

explanation of abbr.: VL= fore shot, RL= return flow

Group of radiators	Installation sheet
Sectional radiators aluminium	**14.001**

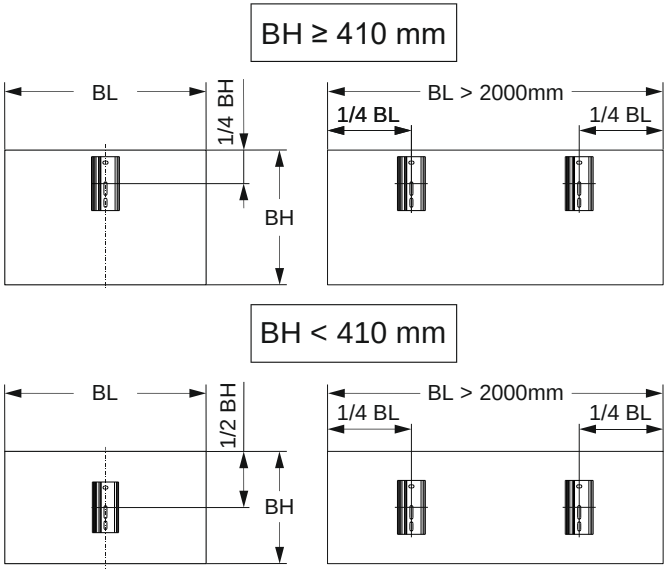


Installation with bolts

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
2	aluminium toggle 4x5x16 mm	65H038
2	bolt M3x25	60A189

Gap between segments > 4 mm	Installation sheet 14.001

Installation place and amount of heat cost allocators

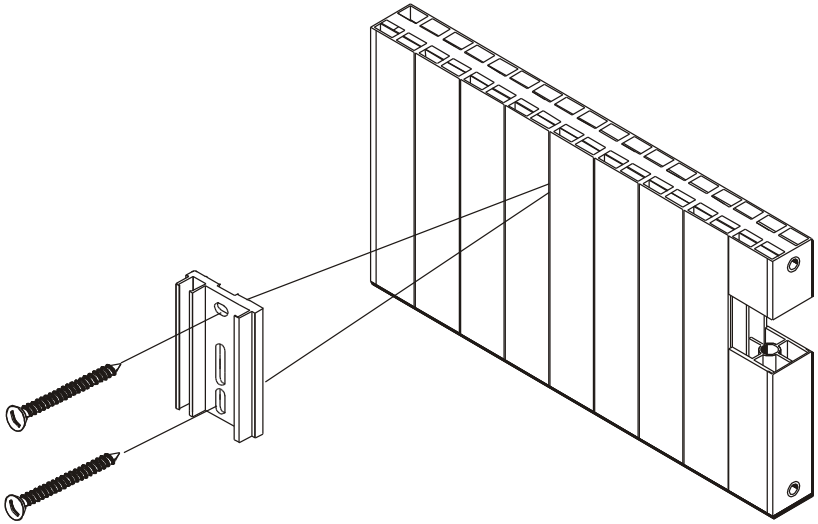


Installation hints

- **mount the HCA with heat conductor's midpoint at 75% of radiators height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiator's height (center of radiator). This applies also to radiators with a height greater than 410mm, if an installation at 75% radiators height (measured from lower edge) is not possible, because the frontal surface area isn't consistent over the entire height of radiator**
- **at radiators with a length greater than 2m have to be installed 2 HCAs**

- **at radiators where a standard slide nut isn't usable, have to be taken aluminium toggles.**

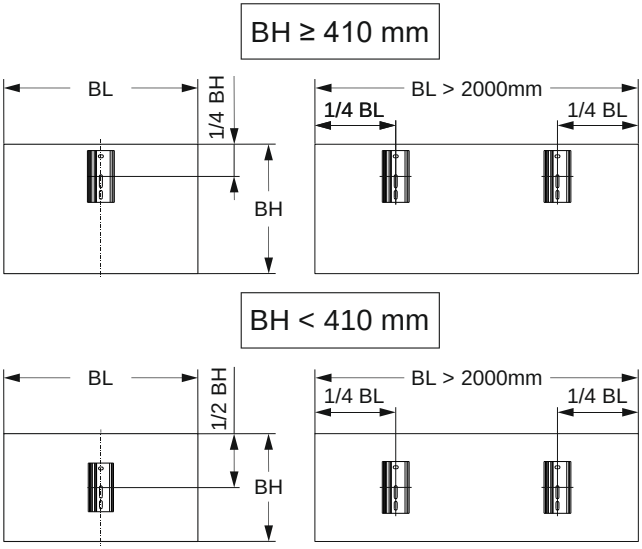
Group of radiators	Installation sheet
Sectional radiators aluminium	**14.002**



Installation with bolts		
Pcs.	**Installation material**	**Ord.no.**
1	heat conductor	65H010
2	sheet metal screw 4,2x25	60A190

Gap between segments < 4 mm	Installation sheet 14.002

Installation place and amount of heat cost allocators



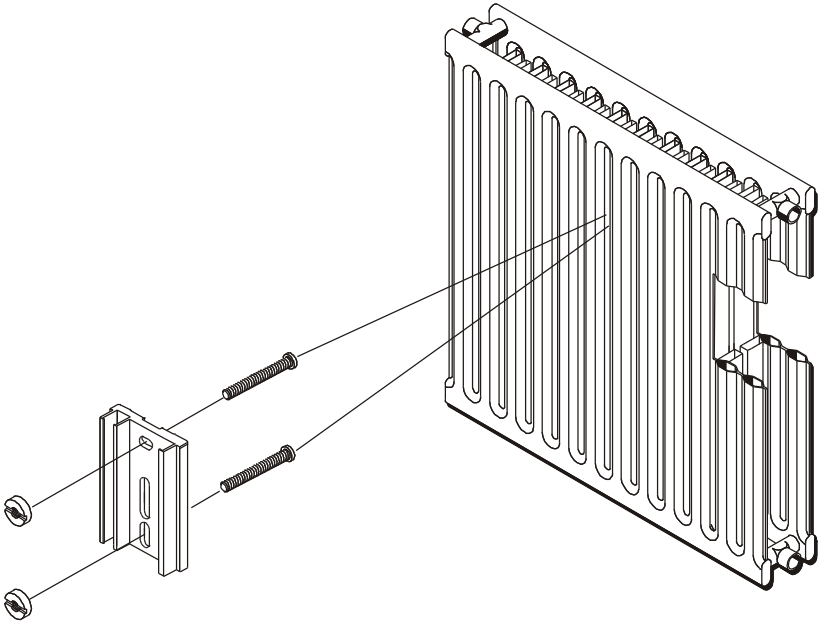
Installation hints

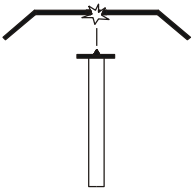
- **mount the HCA with heat conductor's midpoint at 75% of radiator's height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiator's height (center of radiator). This applies also to radiators with a height greater than 410mm, if an installation at 75% radiator's height is not possible, because the frontal surface area isn't consistent over the entire height of radiator**
- **at radiators with a length greater than 2m have to be installed 2 HCAs**
- **for this type of radiator installation has to be done using sheet metal screws mounted in the gap between two radiator segments**

2 Panel radiators

21 Panel radiators vertically contoured
22 Panel radiators horizontally contoured
23 Panel radiators straight front side
24 Panel radiators other contours

Group of radiators	Installation sheet
Panel radiators vertically contoured	**21.001**



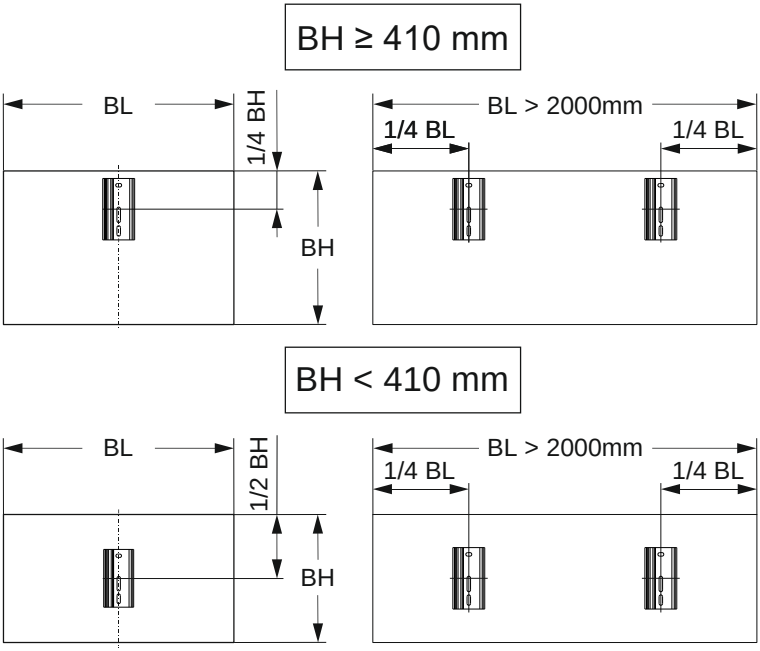


Welded installation

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
2	welded stud M3	Length acc. to demand
2	slotted nut M3	60A007

	Installation sheet 21.001

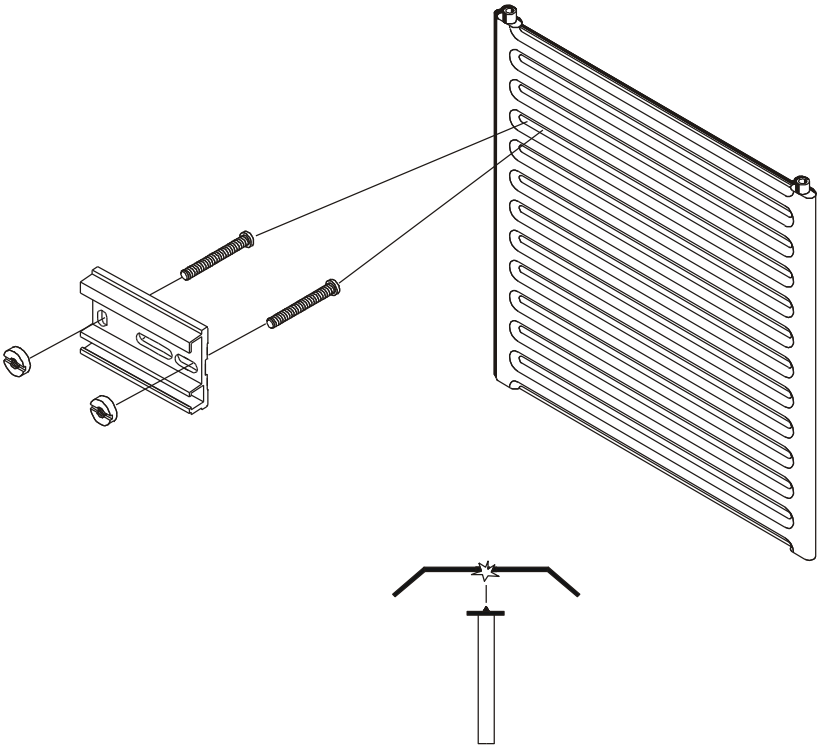
Installation place and amount of heat cost allocators



Installation hints

- **mount the HCA with heat conductor's midpoint at 75% of radiator's height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiator's height (center of radiator).**
- **at radiators with a length greater than 2m have to be installed 2 HCAs**
- **radiators, which are mounted 90° rotated, get special installation instructions**
- **weld the stud in a corrugation of radiator**

Group of radiators	Installation sheet
Panel radiators vertically contoured	**21.002**

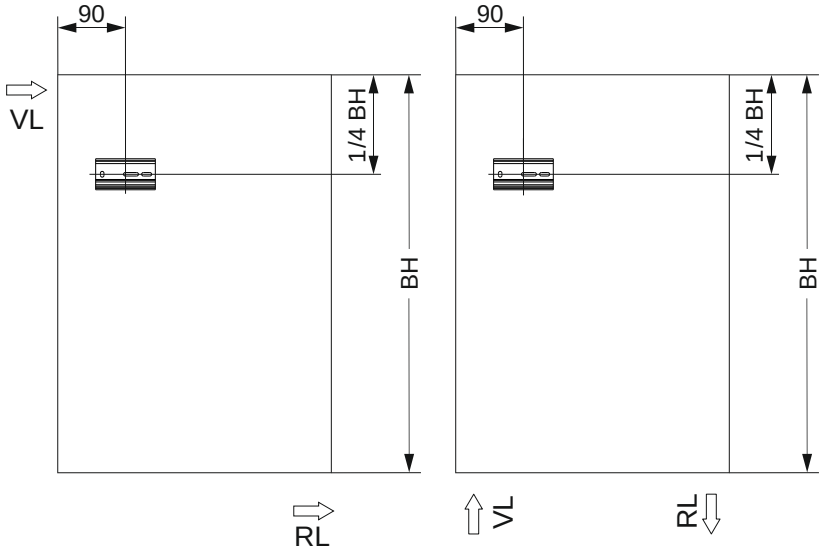


Welded installation

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
2	welding stud M3	Length acc. to demand
2	slotted nut M3	60A007

90° rotated installation	Installation sheet 21.002

Installation place and amount of heat cost allocators

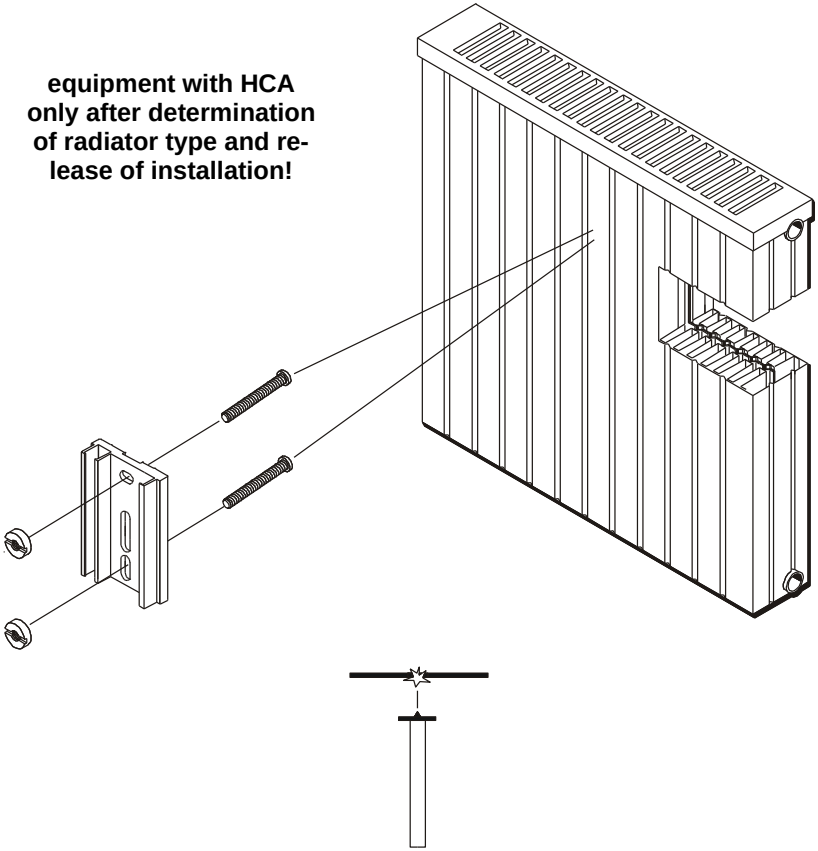


Installation hints

- **<u>Attention</u>:**
  Vertically contoured panel radiators with <u>convection lamellas</u>, which are installed 90° rotated do not equip with HCA!
- **mount the center of heat conductor 90 mm away from heaters edge at fore shot side, 90 degrees rotated**
- **install the HCA with heat conductors midpoint also at 75% of radiators height (measured from lower edge), if the height of radiator is shorter than 410mm**
- **weld the stud in a corrugation of radiator**
- **install HCA horizontal (seal at right side)**

Group of radiators	Installation sheet
Panel radiators vertically contoured	**21.003**

equipment with HCA only after determination of radiator type and release of installation!

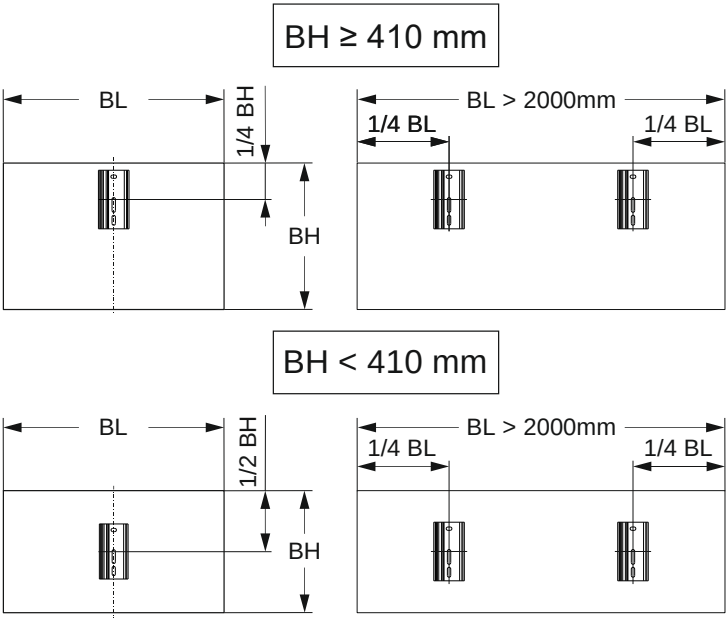


Welded installation

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
2	welding stud M3x10	60A034
2	slotted nut M3	60A007

With convection lamellas at front side and additional cover sheet	Installation sheet 21.003

Installation place and amount of heat cost allocators

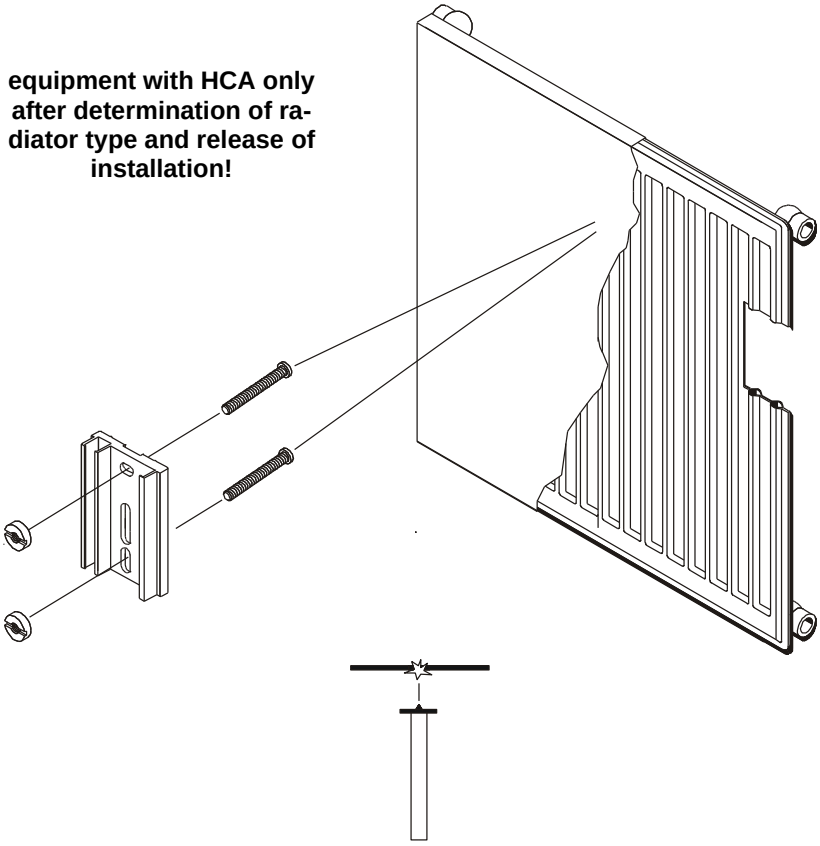


Installation hints

- **<u>Attention</u>:**
  equipment with HCA is only valid after explicit determination of the radiator type and release of installation
- **mount the HCA with heat conductor's midpoint at 75% of radiator's height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiator's height (center of radiator)**
- **at radiators with a length greater than 2m have to be installed 2 HCAs**
- **weld the stud onto the covering metal sheet**

Group of radiators	Installation sheet
Panel radiators vertically contoured	**21.004**

equipment with HCA only after determination of radiator type and release of installation!

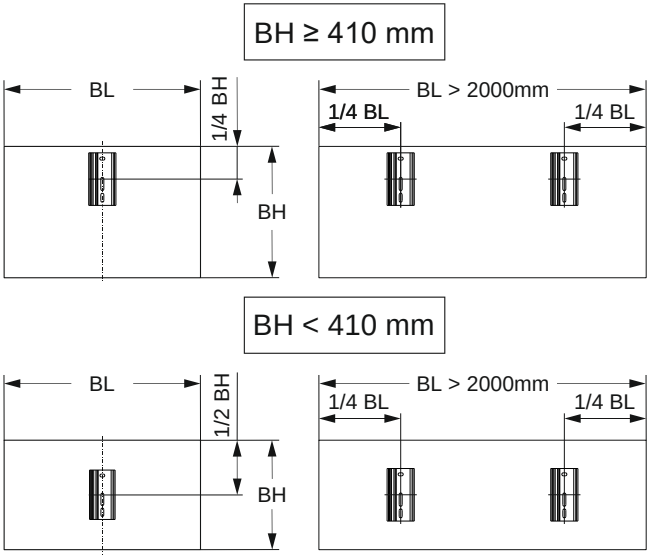


Welded installation

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
2	welding stud M3x10	60A034
2	slotted nut M3	60A007

With front covering metal sheet	Installation sheet 21.004

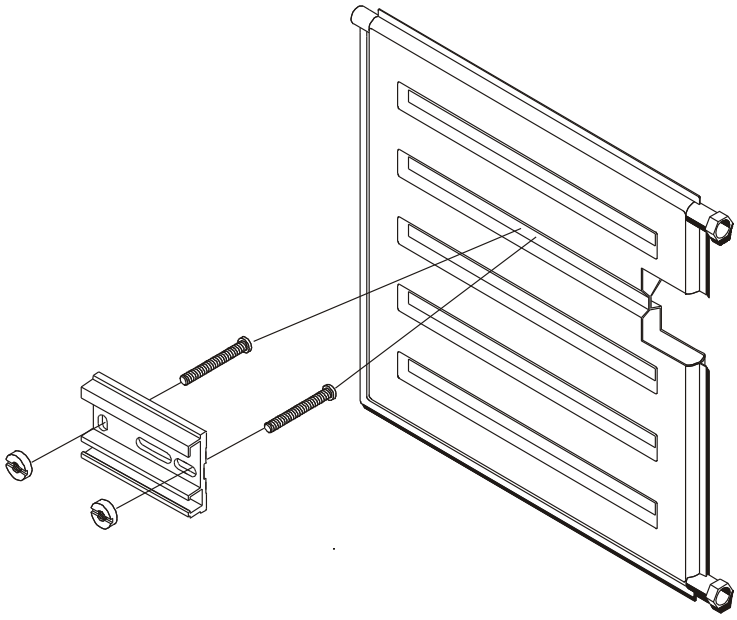
Installation place and amount of heat cost allocators

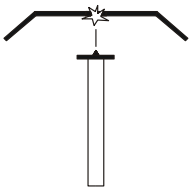


Installation hints

- **<u>Attention</u>:**
  equipment with HCA is only valid after explicit determination of the radiator type and release of installation
- **mount the HCA with heat conductor's midpoint at 75% of radiators height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiator's height (center of radiator)**
- **at radiators with a length greater than 2m have to be installed 2 HCAs**
- **weld the stud onto the covering metal sheet**
- **radiators, which are mounted 90° rotated, get special installation instructions (see installation sheet 21.002)**

Group of radiators	Installation sheet
Panel radiators horizontally contoured	**22.001**



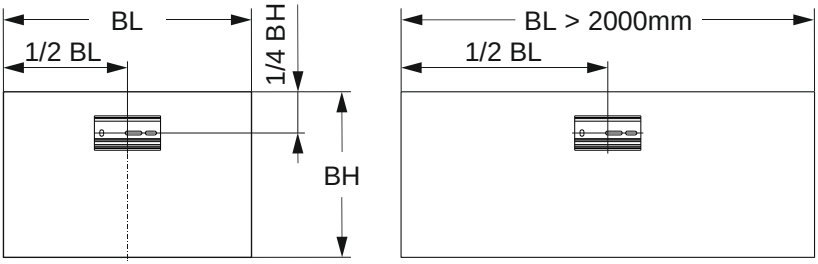


Welded installation		
Pcs.	**Installation material**	**Ord.no.**
1	heat conductor	65H010
2	welding stud M3	Length acc. to demand
2	slotted nut M3	60A007

	Installation sheet 22.001

Installation place and amount of heat cost allocators

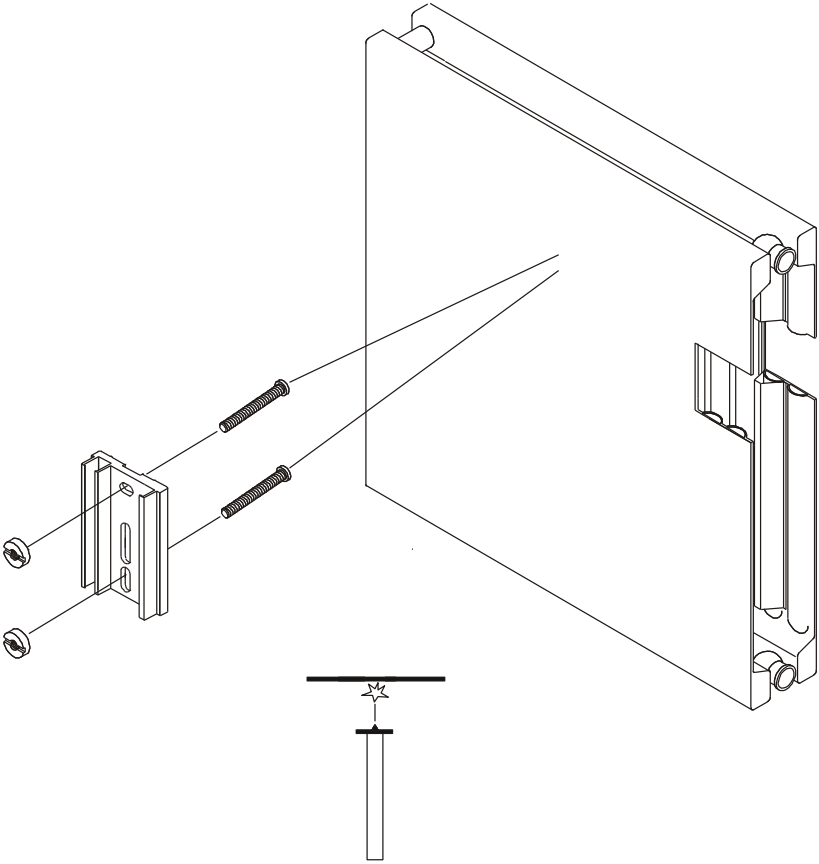
BH ≥ 410 mm
BH < 410 mm



Installation hints

- **install only one HCA also at radiators with a length greater than 2 m**
- **install the HCA (with center of heat conductor) also at 75% of radiators height (measured from lower edge), if the height of radiator is shorter than 410mm**
- **weld the stud in a corrugation of radiator**
- **if an installation is not possible exactly at 75% of radiators height (measured from lower edge) choose an installation point close to this**
- **install HCA horizontal (seal at right side)**

Group of radiators	Installation sheet
Panel radiators with straight front	**23.001**

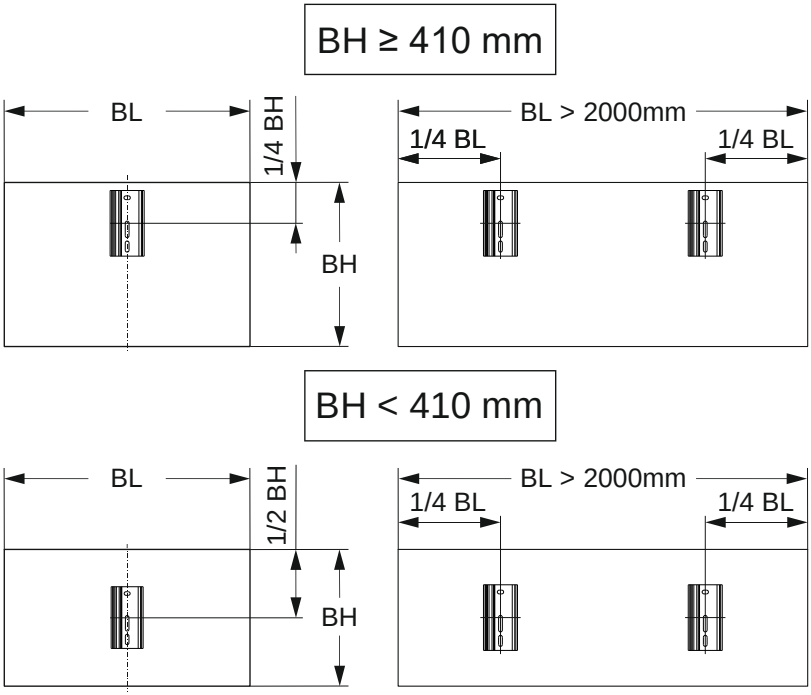


Welded installation

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
2	welding stud M3x10	60A034
2	slotted nut M3	60A007

	Installation sheet 23.001

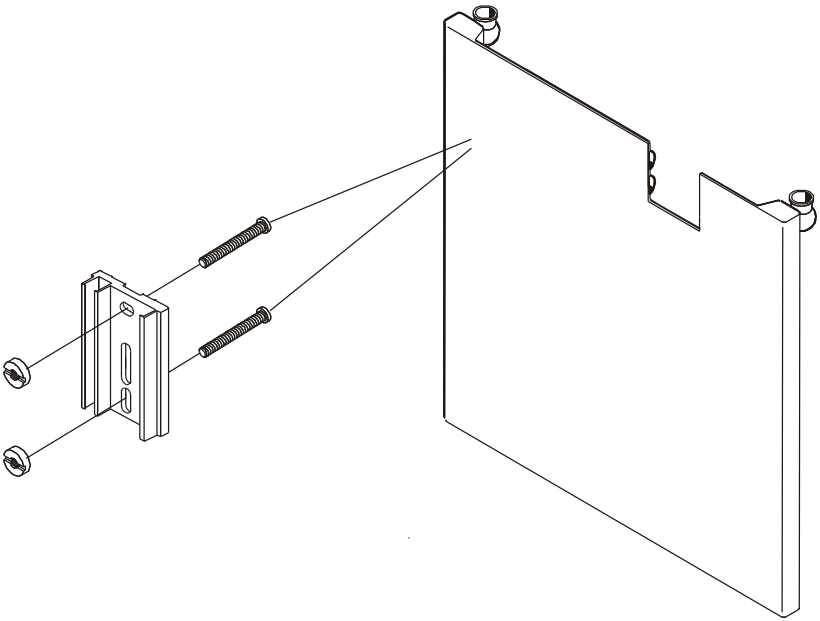
Installation place and amount of heat cost allocators

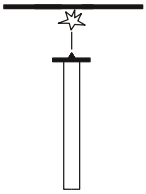


Installation hints

- **mount the HCA with heat conductor's midpoint at 75% of radiator's height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiator's height (center of radiator)**
- **at radiators with a length greater than 2m have to be installed 2 HCAs**
- **radiators, which are mounted 90° rotated, get special installation instructions (see installation sheet 23.002)**

Group of radiators	Installation sheet
Panel radiators with straight front	**23.002**



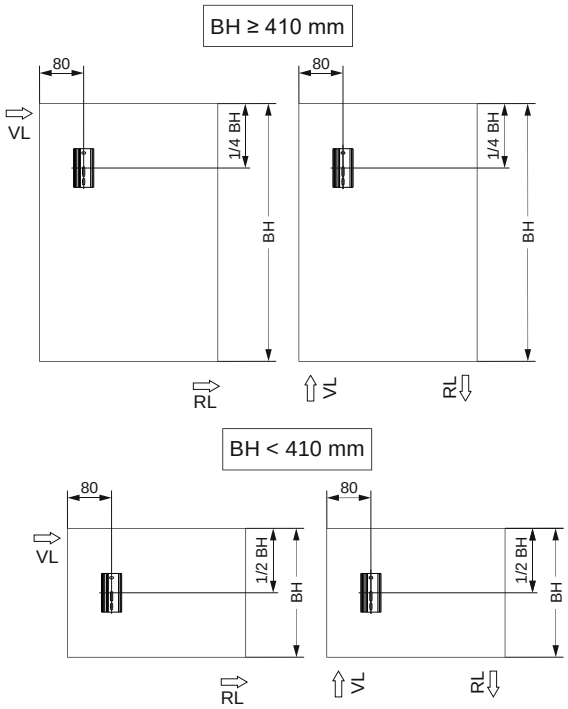


Welded installation

Pcs.	Installation material	Ord.no.
1	Heat conductor	65H010
2	welding stud M3x10	60A034
2	slotted nut M3	60A007

Radiator mounted 90° rotated	Installation sheet 23.002

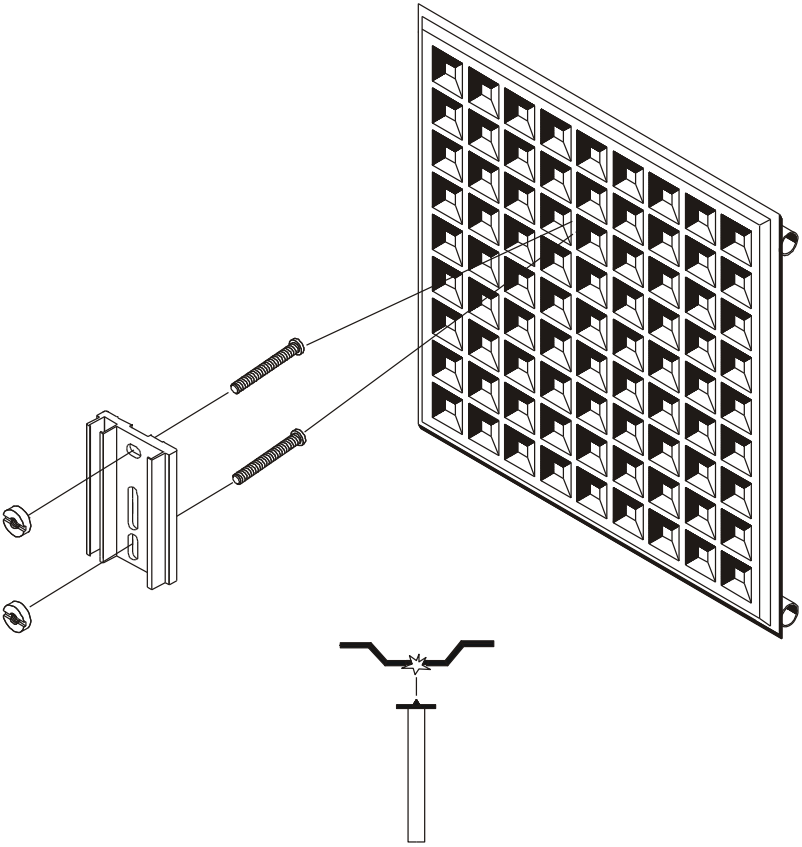
Installation place and amount of heat cost allocators



Installation hints

- **<u>Attention</u>:**
  Panel radiators with convection lamellas, which are mounted 90° rotated do not equip with HCA!
- **Install the heat conductor 80mm away from the edge (fore shot side) of radiator with heat conductor's midpoint at 75% of radiators height (measured from lower edge)**
- **At radiators with a height <u>shorter than 410mm</u> mount the heat conductor with its center <u>at 50% of radiator's height</u>**

Group of radiators	Installation sheet
Panel radiators other contours	**24.001**

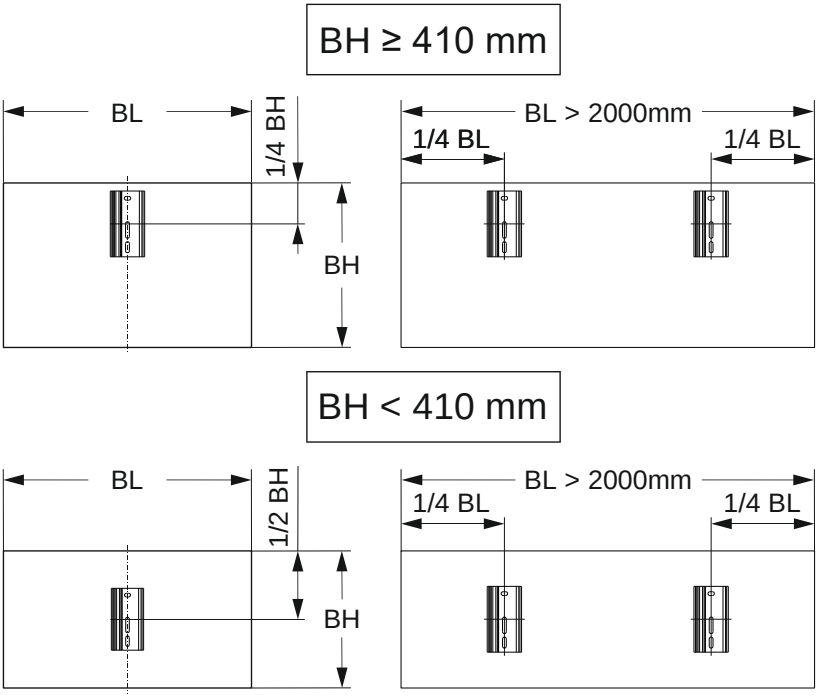


Welded installation

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
2	welding stud M3	Length acc. to demand
2	slotted nut M3	60A007

	Installation sheet 24.001

Installation place and amount of heat cost allocators



Installation hints

- **mount the HCA with heat conductor's midpoint at 75% of radiator's height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiator's height (center of radiator)**
- **at radiators with a length greater than 2m have to be installed 2 HCAs**
- **weld the stud onto vertical water canal**

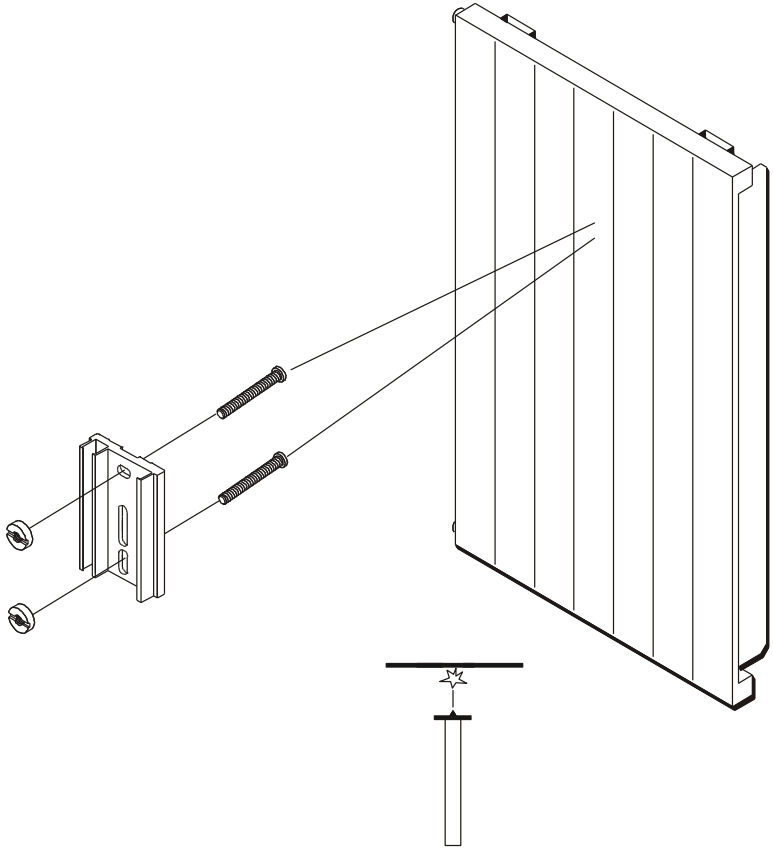
3 Flat profile radiators

31 Flat profile radiators with vertical pipe layout

32 Flat profile radiators with horizontal pipe layout

33 Flat profile radiators, special types

Group of radiators	Installation sheet
Flat profile radiators	**31.001**

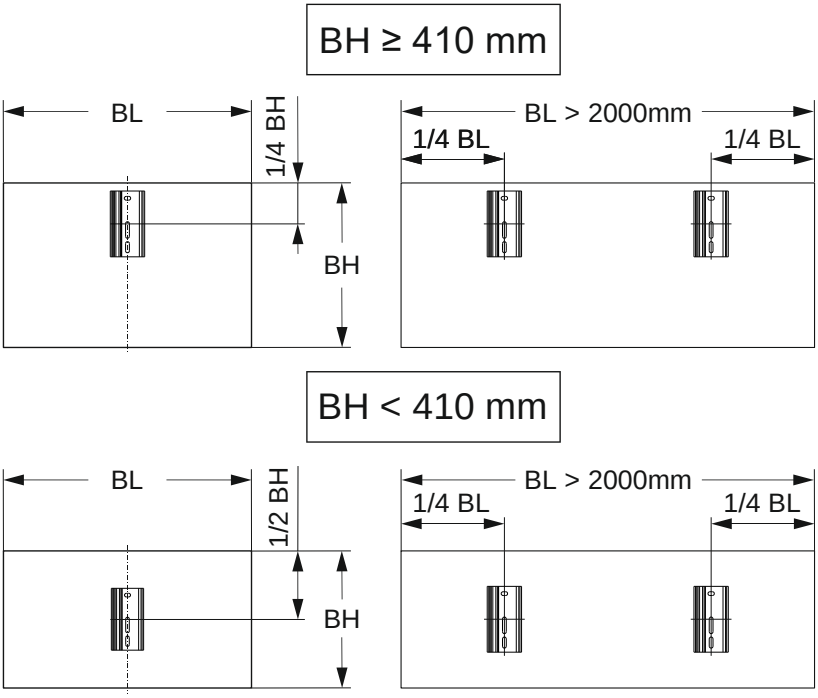


Welded installation

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
2	welded stud M3x10	60A034
2	slotted nut M3	60A007

Radiators with vertical pipe layout	Installation sheet 31.001

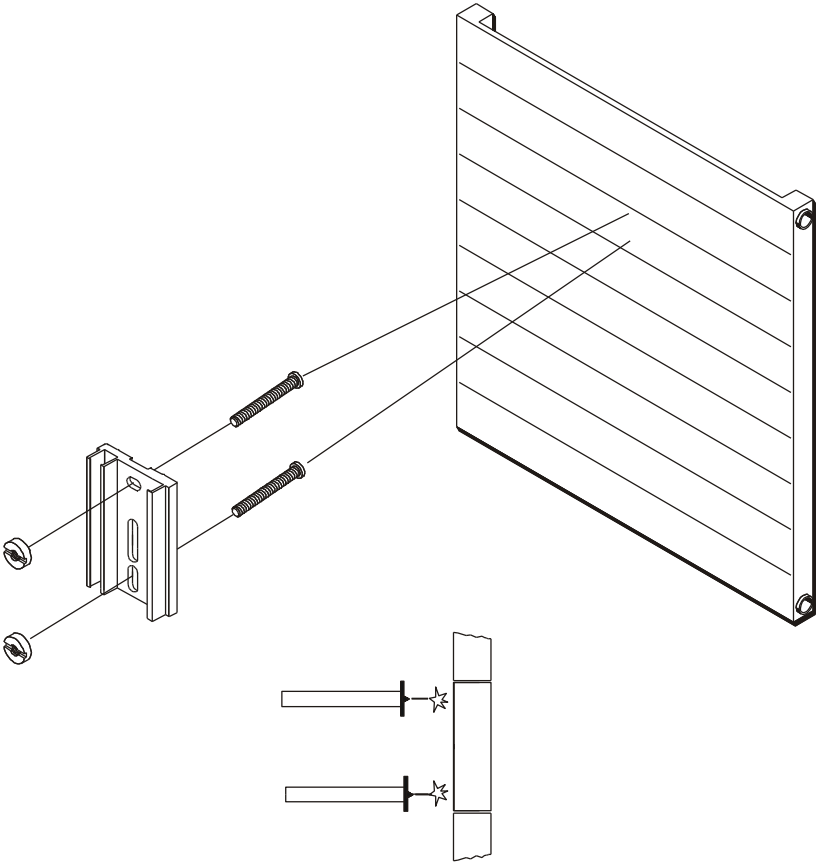
Installation place and amount of heat cost allocators



Installation hints

- **mount the HCA with heat conductor's midpoint at 75% of radiator's height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiator's height (center of radiator)**
- **at radiators with a length greater than 2m have to be installed 2 HCAs**

Group of radiators	Installation sheet
Flat profile radiators	**32.001**

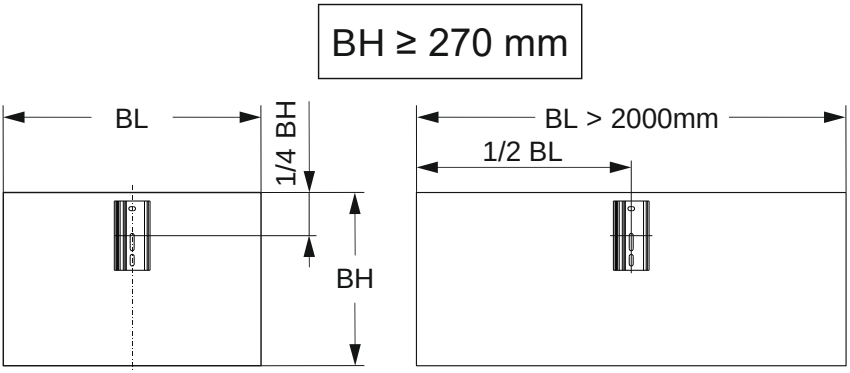


Welded installation

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
2	welded stud M3x10	60A034
2	slotted nut M3	60A007

Radiators with horizontal pipe layout - front without lamellas -	Installation sheet 32.001

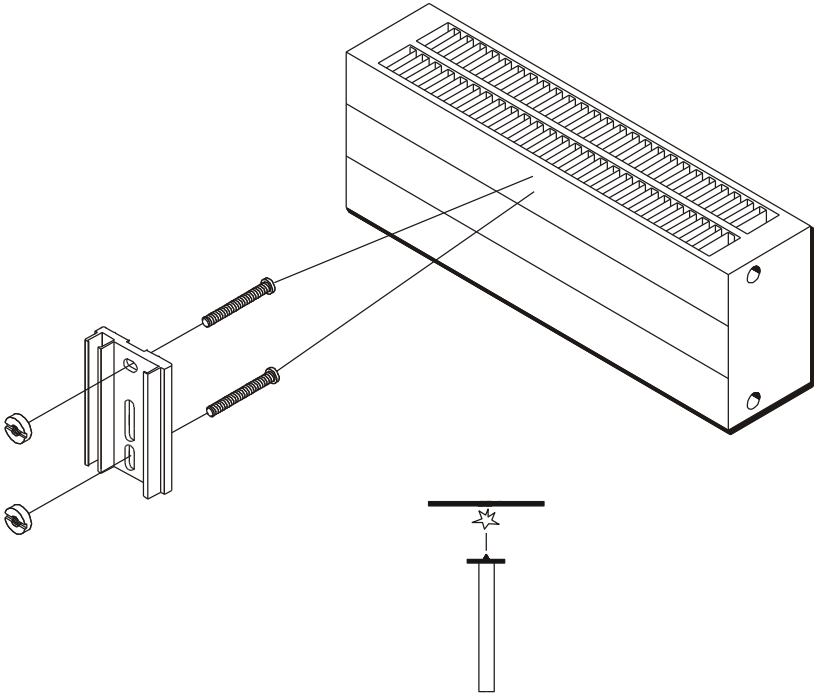
Installation place and amount of heat cost allocators



Installation hints

- **mount the HCA with heat conductor's midpoint at 75% of radiator's height (measured from lower edge)**
- **install only one HCA also at radiators with a length greater than 2 m**
- **install the HCA according to installation sheet 32.002 at radiators with a height shorter than 270mm**
- **Take care, that the HCA will be mounted centered on a tube profile during definition of installation height. If necessary it can deviate slightly from the exact value, preferably up.**

Group of radiators	Installation sheet
Flat profile radiators	**32.002**



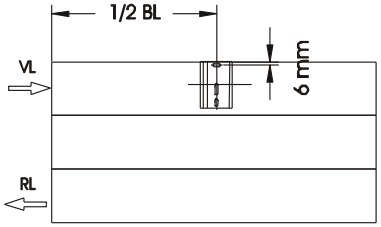
Welded installation

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
2	welding stud M3x10	60A034
2	slotted nut M3	60A007

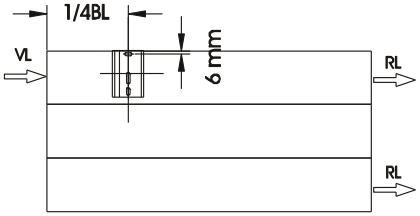
With horizontal pipe layout - front without lamellas -	Installation sheet 32.002

Installation place and amount of heat cost allocators

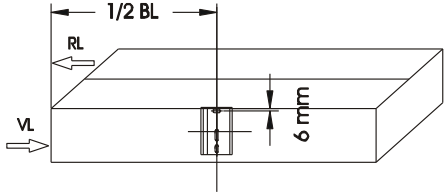
BH < 270 mm



2- to 3-layer radiator with synchronistically-way connection



1- to 3-layer radiator with either-way connection



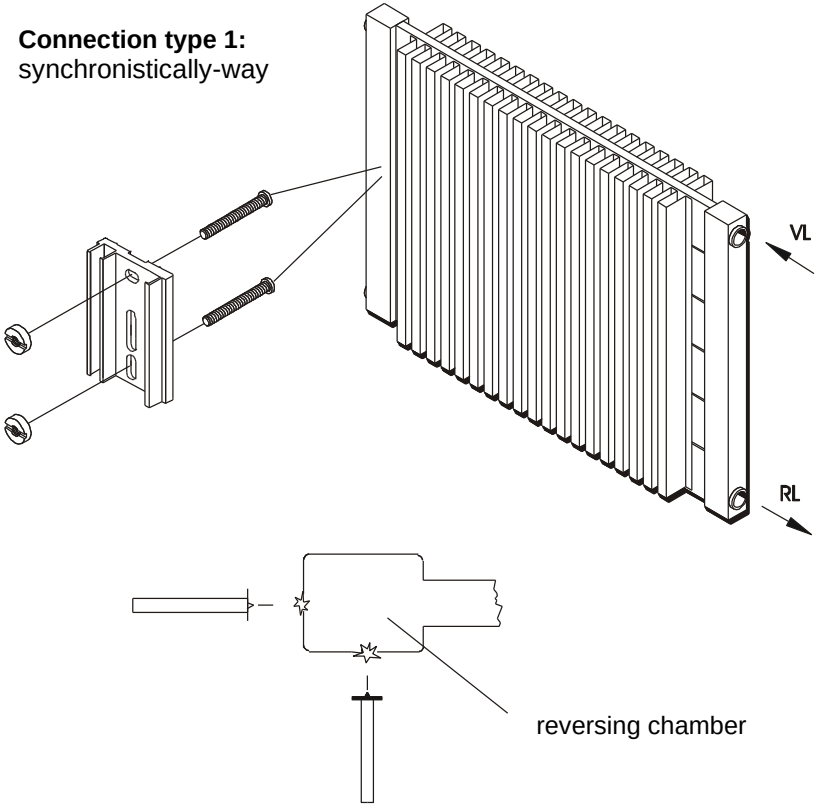
1- to 3-layer radiator with synchronistically-way connection 2-lines

Installation hints

- **install only one HCA also at radiators with a length greater than 2m**
  explanation of abbr.: VL= fore shot, RL= return flow

Group of radiators	Installation sheet
Flat profile radiators	**32.003**

Connection type 1:
synchronistically-way



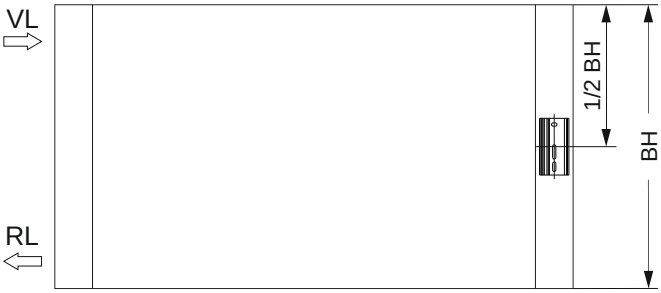
Welded installation

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
2	welding stud M3x10	60A034
2	slotted nut M3	60A007

Horizontal pipe layout - front with lamellas -	Installation sheet 32.003

Installation place and amount of heat cost allocators

BH ≥ 270 mm



connector 1:
synchronistical

BH < 270 mm

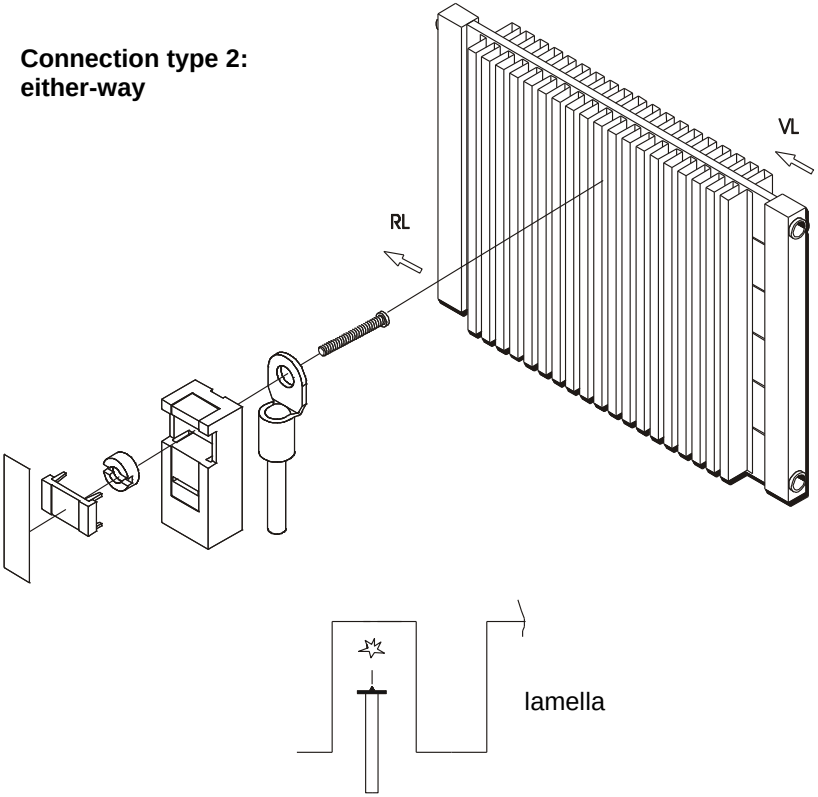
1..3 profile pipes

Installation hints

- **install the HCA centered on the reversing chamber at 50% of radiators height at synchronistical-way connected radiators**
- **install only one HCA also at radiators with a length greater than 2m**

Group of radiators	Installation sheet
Flat profile radiator	**32.004**

Connection type 2:
either-way



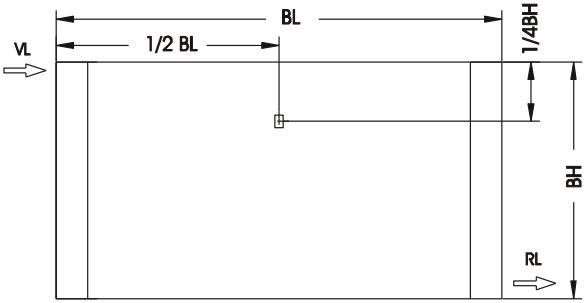
Welded installation

Pcs.	Installation material	Ord.no.
1	remote sensor	
1	welding stud M3	Length acc. to demand
1	slotted nut M3	60A007

Horizontal pipe layout - front with lamellas -	Installation sheet 32.004

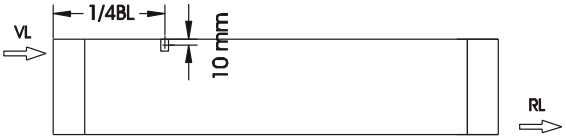
Installation place and amount of heat cost allocators

BH ≥ 270 mm



Connection type 2 : either-way

BH < 270 mm

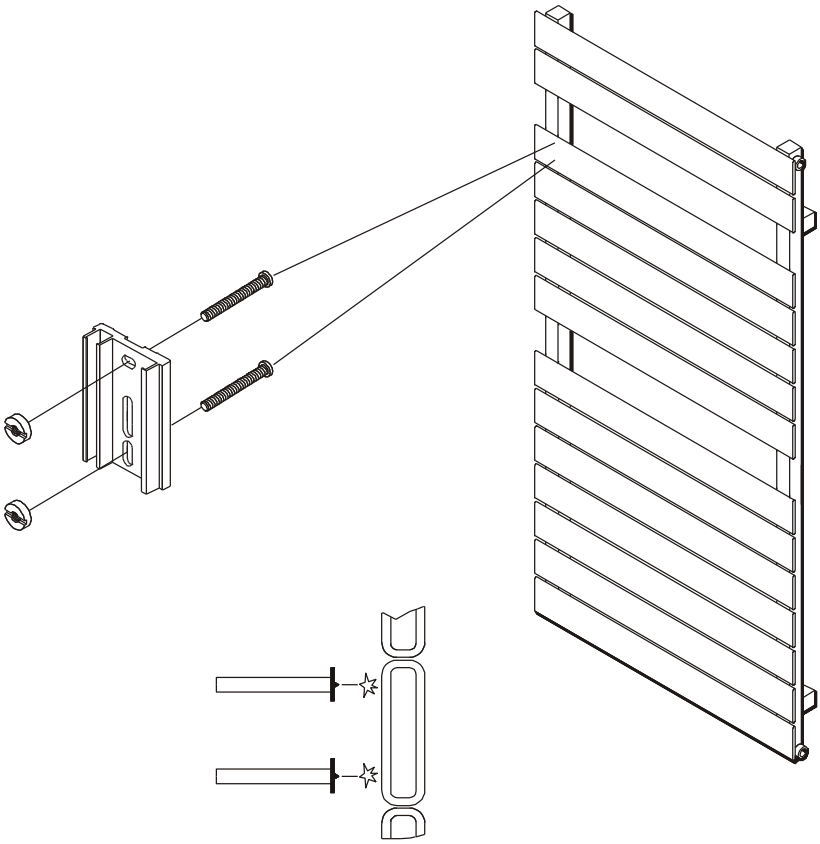


1..3 Profilrohre

Installation hints

- **mount the HCA's remote sensor at 75% of radiators height (measured from lower edge)**
- **at radiators with heights shorter than 270mm install the HCA at 25% of radiator length. This is valid for radiators with 1...3 profiled tubes and either-way connection of the radiator**
- **mount the HCA's remote sensor welding the stud between lamellas at radiators with either-way connection**
- **install only one HCA also at radiators with a length greater than 2m**

Group of radiators	Installation sheet
Flat profile radiators	**33.001**

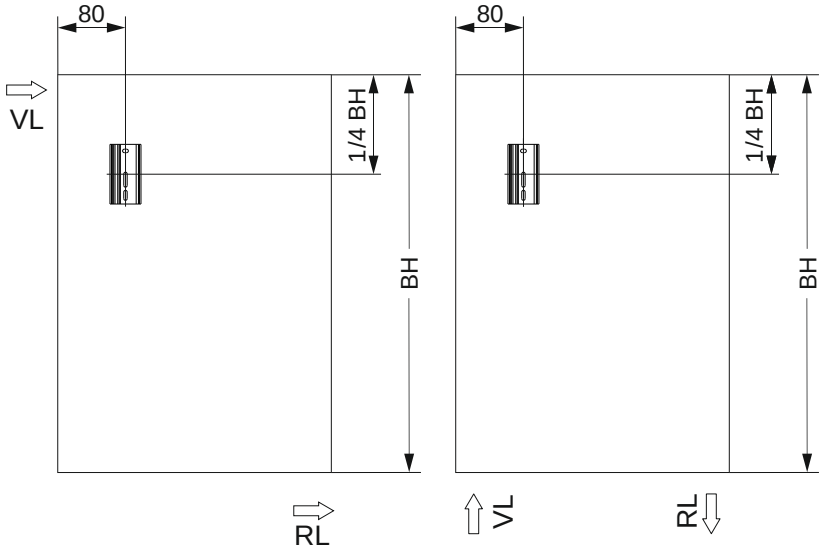


Welded installation

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
2	welding stud M3x10	60A034
2	slotted nut M3	60A007

Special radiator types	Installation sheet 33.001

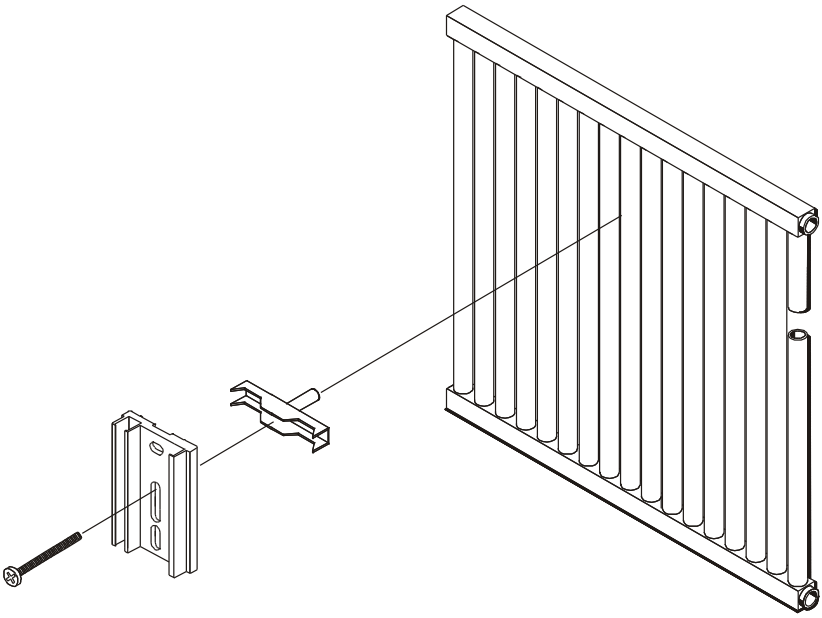
Installation place and amount of heat cost allocators



Installation hints

- **Install the HCA 80 mm away from edge (fore shot) at front side, upper hole of heat conductor at 75% of radiators height (measured from lower edge of radiator)**
- **Install the HCA also at 75% of radiators height (measured from lower edge of radiator) if its height is shorter than 410mm**
- **Take care, that the HCA will be mounted centered onto a profiled tube during definition of installation height. If it is not possible to install the HCA at 75% of radiators height (measured from lower edge) because of it, choose an installation point closest to this height**

Group of radiators	Installation sheet
Radiator with straight pipes	**41.001**

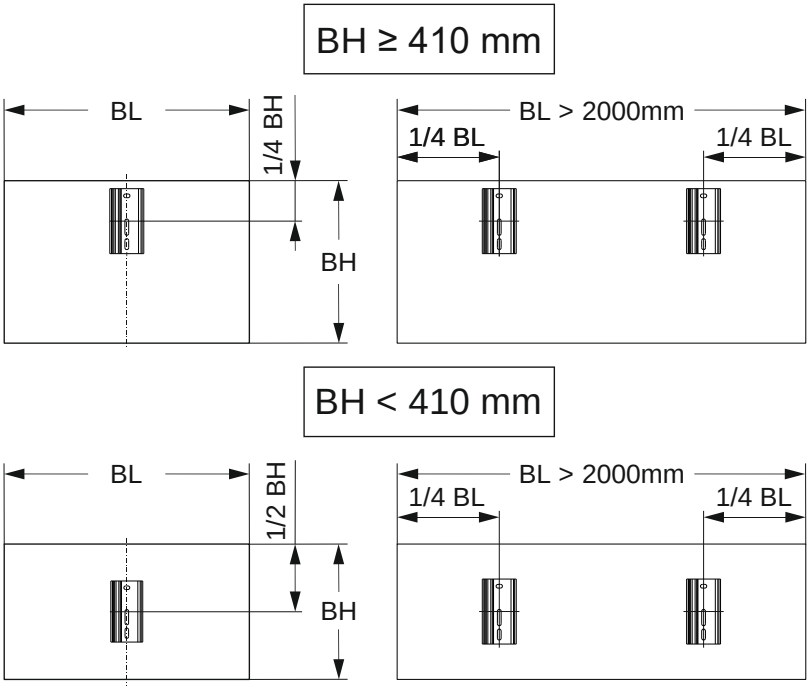


Installation with bolts

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
1	slide nut for pipes 36	65H036
1	bolt M4x45	60A191

Vertical pipe layout	Installation sheet 41.001

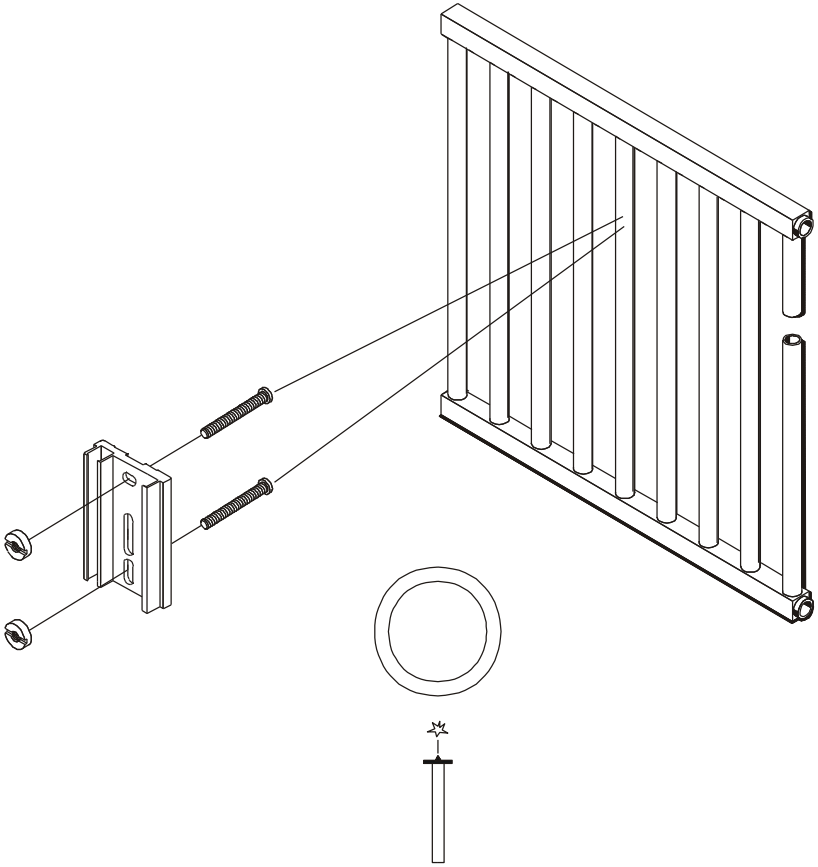
Installation place and amount of heat cost allocators



Installation hints

- **mount the HCA with heat conductor's midpoint at 75% of radiators height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiator's height (center of radiator)**
- **at radiators with a length greater than 2m have to be installed 2 HCAs**
- **use special slide nuts for pipe radiators 36 mm for installation**

Group of radiators	Installation sheet
Radiator with straight pipes	**41.002**

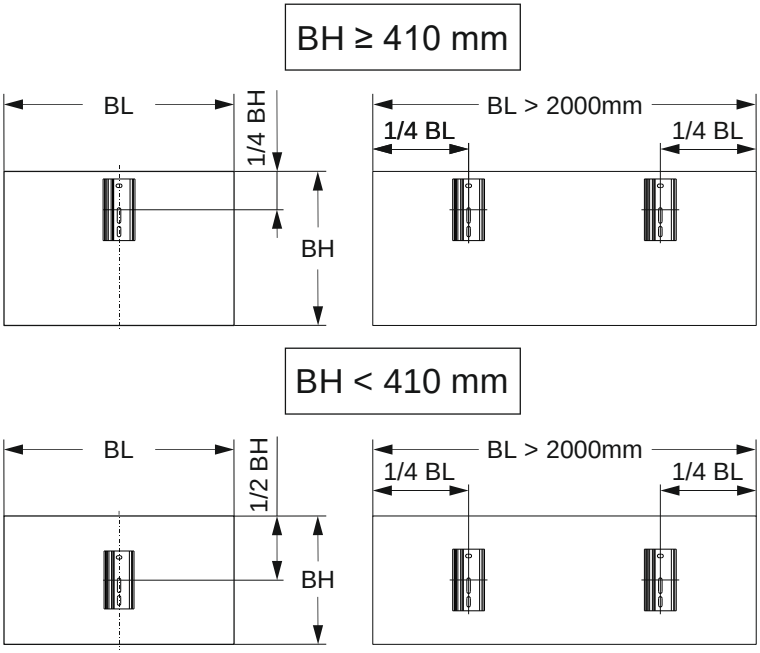


Welded installation

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
2	welding stud M3x10	65H034
2	slotted nut M3	60A007

Vertical pipe layout Distance between pipes > 46 mm	Installation sheet 41.002

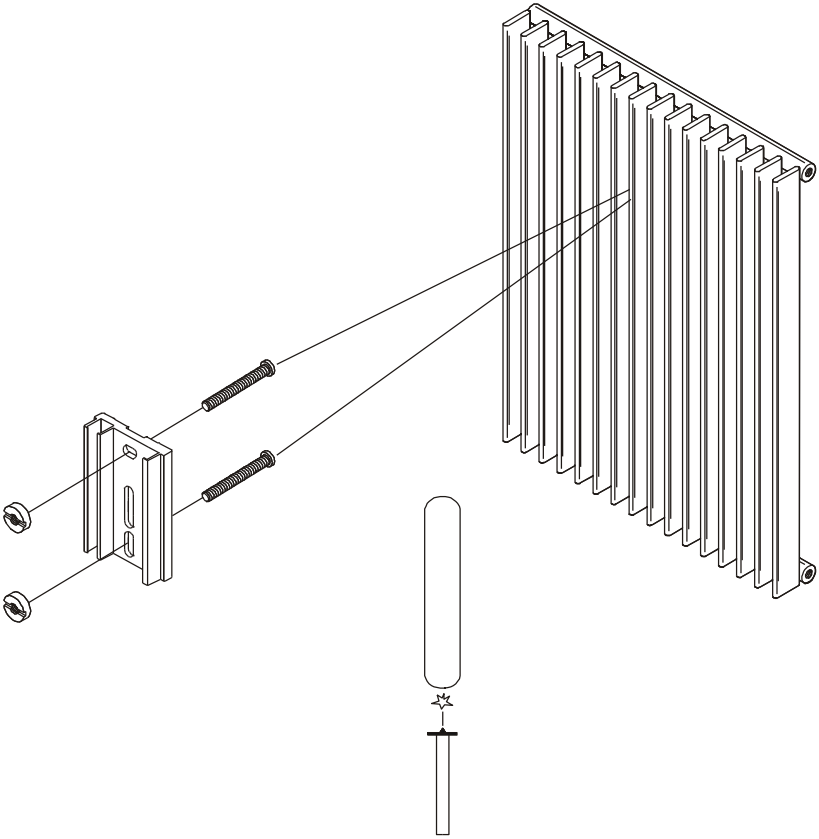
Installation place and amount of heat cost allocators



Installation hints

- **<u>Attention!</u>**
  For installation of HCA at radiators with a distance between pipes greater than 46 mm have to be used welding studs
- **mount the HCA with heat conductor's midpoint at 75% of radiator's height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiator's height (center of radiator)**
- **at radiators with a length greater than 2 m have to be installed 2 HCAs**

Group of radiators	Installation sheet
Radiator with straight pipes	**41.003**

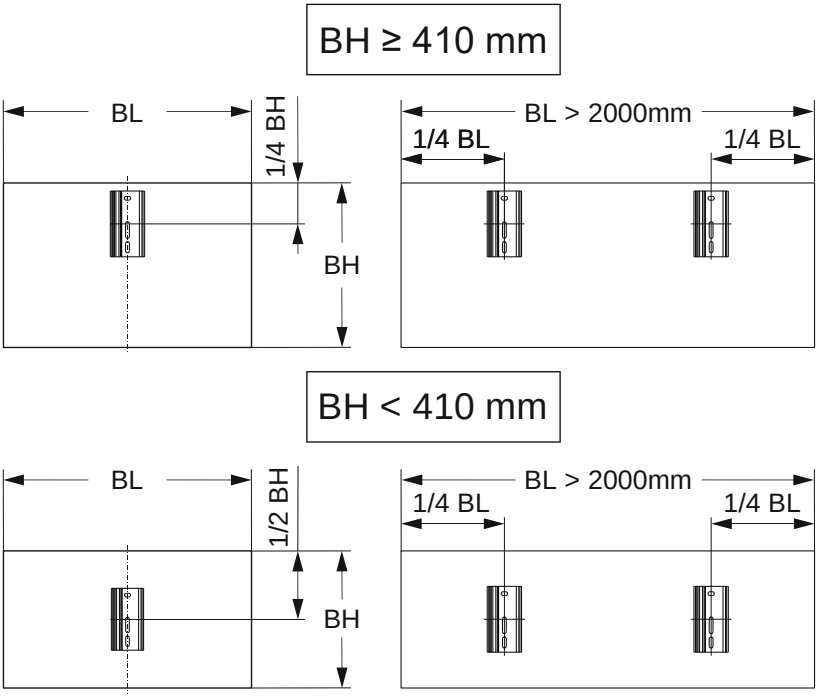


Welded installation

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
2	welding stud M3x10	65H034
2	slotted nut M3	60A007

Vertical pipe layout	Installation sheet
Gallery radiators	41.003

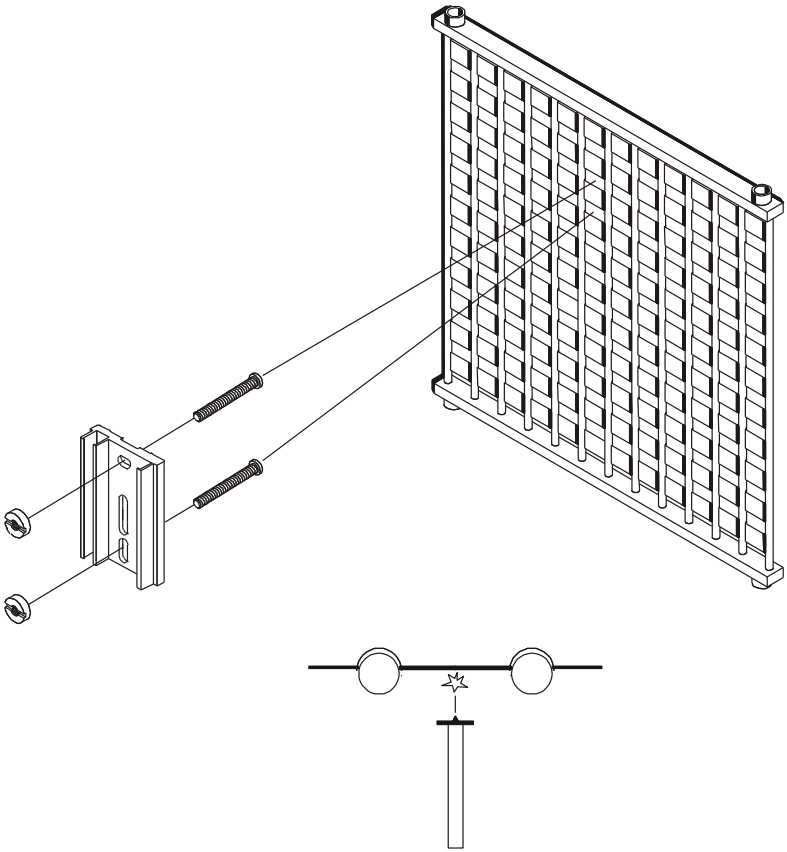
Installation place and amount of heat cost allocators



Installation hints

- **mount the HCA with heat conductor's midpoint at 75% of radiators height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiator's height (center of radiator)**
- **at radiators with a length greater than 2 m have to be installed 2 HCAs**

Group of radiators	Installation sheet
Radiator with straight pipes	**41.004**



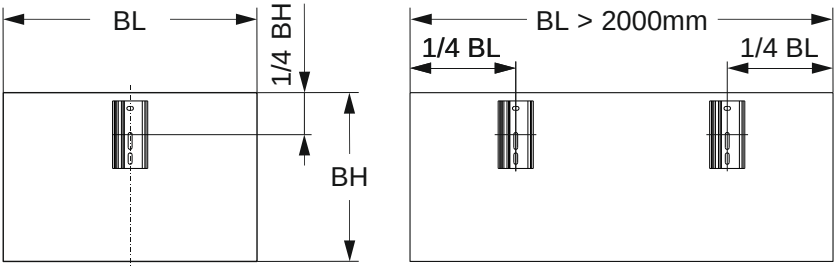
Welded installation

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
2	welding stud M3	Length acc. to demand
2	slotted nut M3	60A007

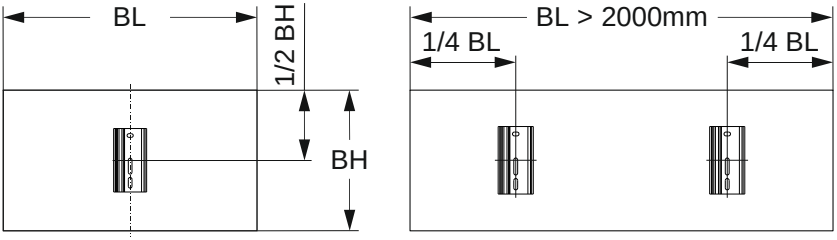
Vertical pipe layout Heating grid	Installation sheet 41.004

Installation place and amount of heat cost allocators

BH ≥ 410 mm



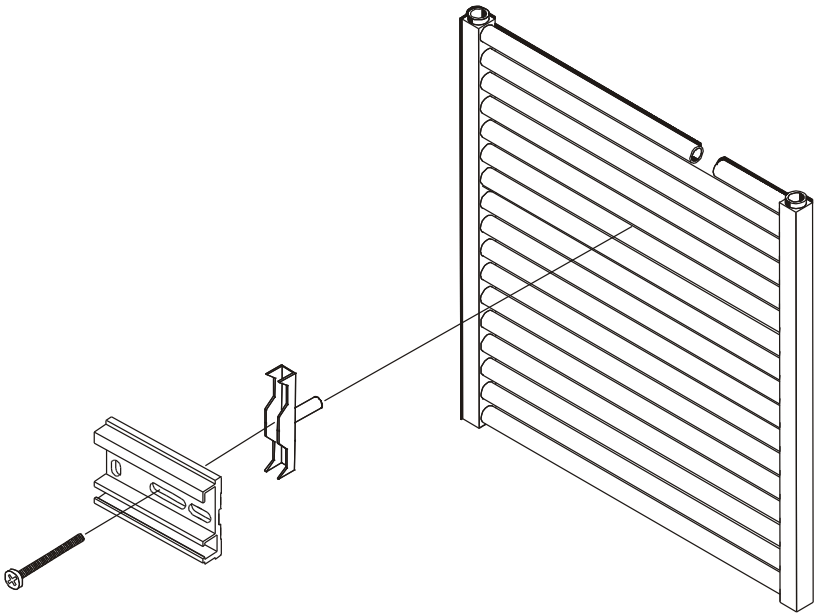
BH < 410 mm

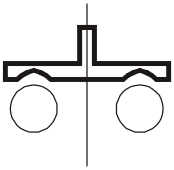


Installation hints

- **Mounting of welding studs on bands**
- **mount the HCA with heat conductor's midpoint at 75% of radiators height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiator's height (center of radiator)**
- **at radiators with a length greater than 2 m have to be installed 2 HCAs**

Group of radiators	Installation sheet
Radiator with straight pipes	**42.001**



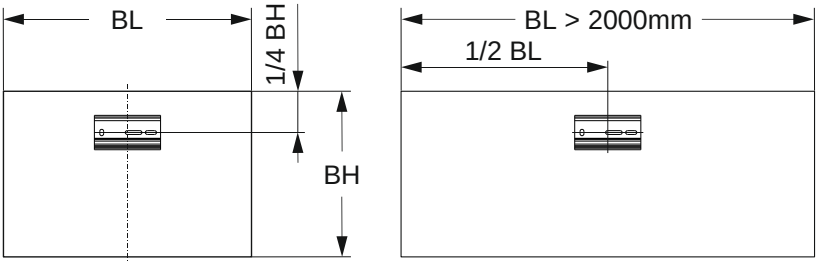


Installation with bolts		
Pcs.	**Installation material**	**Ord.no.**
1	heat conductor	65H010
1	slide nut for pipes 36	65H036
1	bolt M4x45	60A191

Horizontal pipe layout	Installation sheet 42.001

Installation place and amount of heat cost allocators

BH ≥ 410 mm
BH < 410 mm

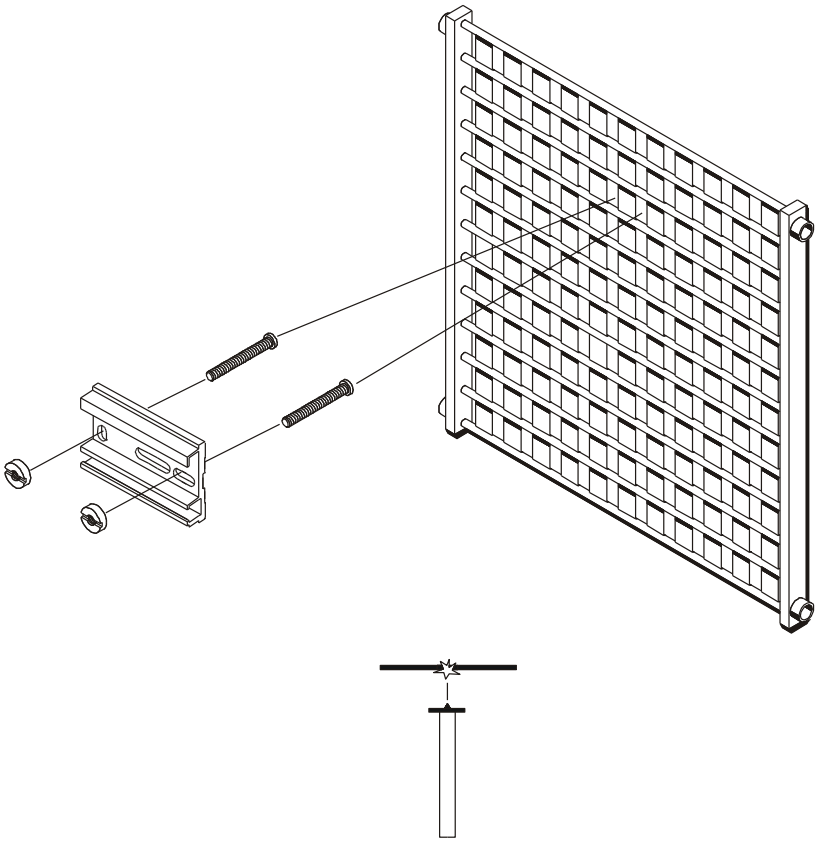


Mounting as bath heater see installation sheet 43.001

Installation hints

- **Install the HCA also at 75% of radiators height (measured from lower edge of radiator) if its height is shorter than 410mm**
- **use a slide nut for pipe radiators 36mm for installation of HCA**
- **install HCA horizontal (seal at right side)**
- **install only one HCA also at radiators with a length greater than 2m**

Group of radiators	Installation sheet
Radiator with straight pipes	**42.002**



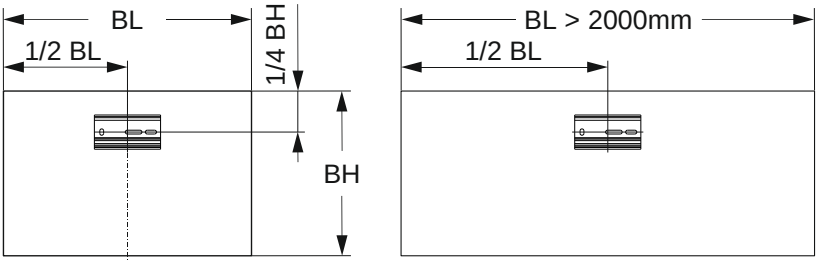
Welded installation

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
2	welding stud M3	Length acc. to demand
2	slotted nut M3	60A007

With horizontal pipe layout Horizontal heating grid	Installation sheet 42.002

Installation place and amount of heat cost allocators

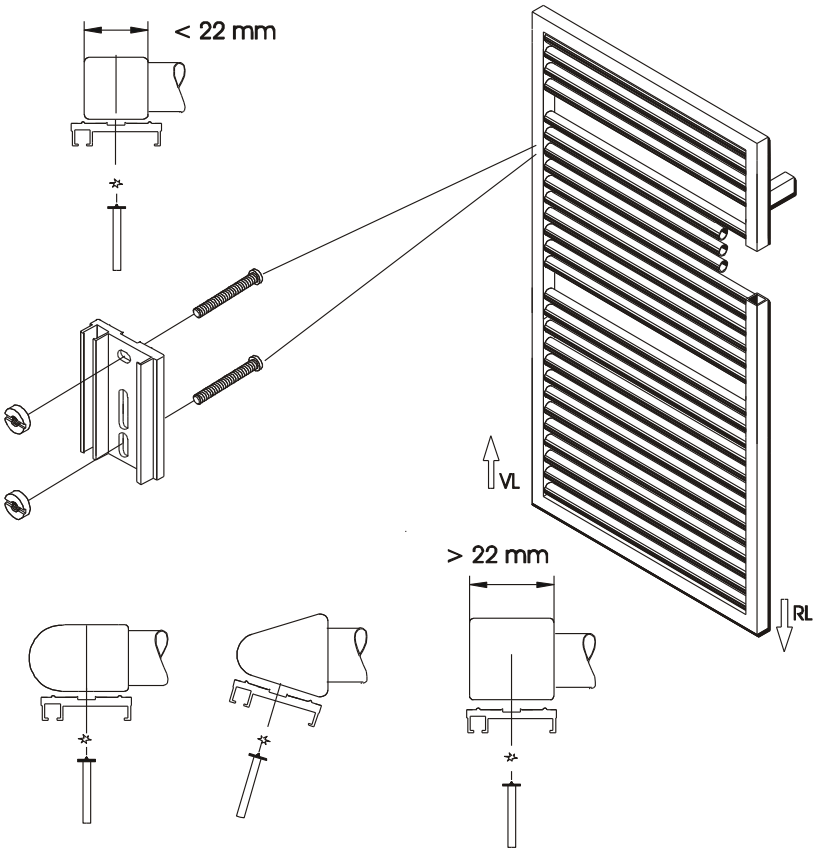
BH ≥ 410 mm
BH < 410 mm



Installation hints

- **Mounting of welding studs on bands**
- **Install the HCA also at 75% of radiators height (measured from lower edge of radiator) if its height is shorter than 410mm**
- **install HCA horizontal (seal at right side)**
- **install only one HCA also at radiators with a length greater than 2m**

Group of radiators	Installation sheet
Radiator with straight pipes	**43.001**

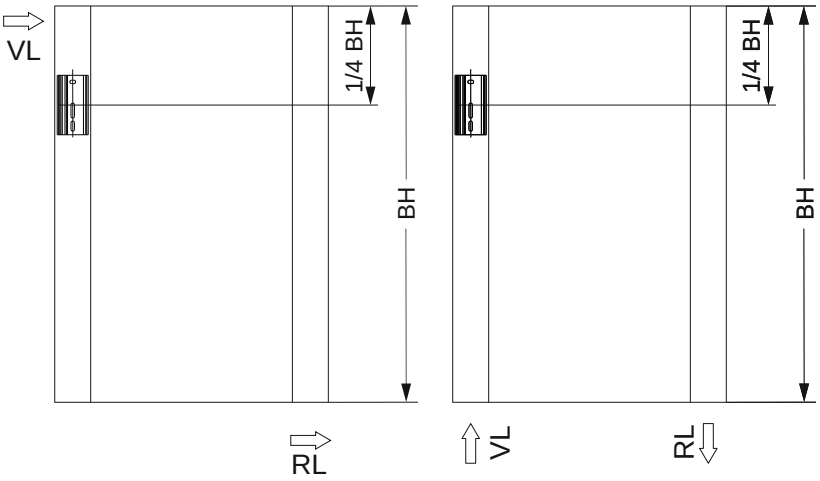


Welded installation

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
2	welding stud M3x10	60A034f
2	slotted nut M3	60A007

Special types – towel radiator With lateral distributing and collecting canal	Installation sheet 43.001

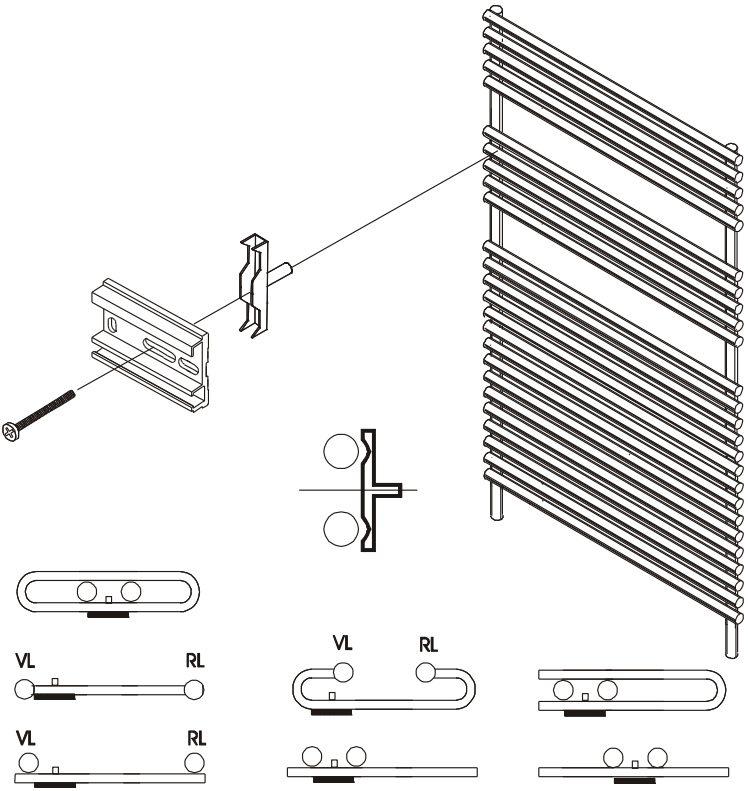
Installation place and amount of heat cost allocators



Installation hints

- **mount the HCA with heat conductor's midpoint at 75% of radiators height (measured from lower edge)**
- **Install the HCA also at 75% of radiators height (measured from lower edge of radiator) if its height is shorter than 410mm**
- **weld the stud onto the laterally (water) canal at fore shot**

Group of radiators	Installation sheet
Radiator with straight pipes	**43.002**

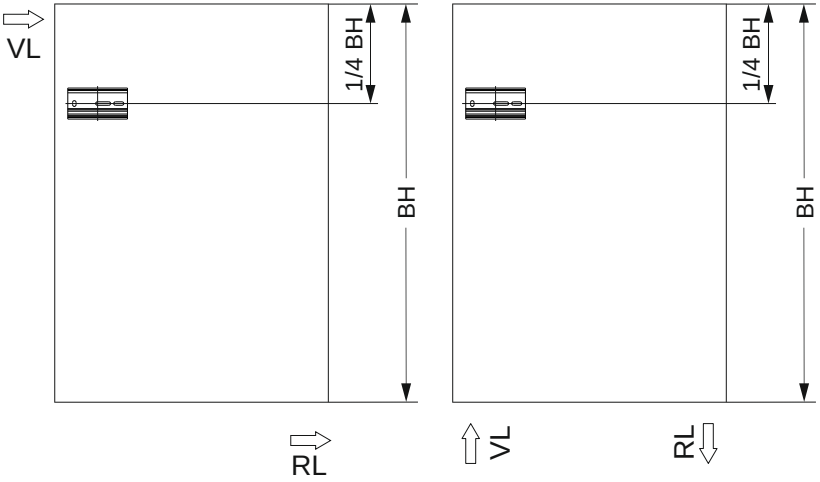


Installation with bolts

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
1	slide nut for pipes 36 or slide nut for pipes 46 or slide nut trapezoidal 35	65H036 65H037 65H002
1	bolt M4	Length acc. to demand

Special types – towel radiator Without lateral distributing and collecting canal	Installation sheet 43.002

Installation place and amount of heat cost allocators



Installation hints

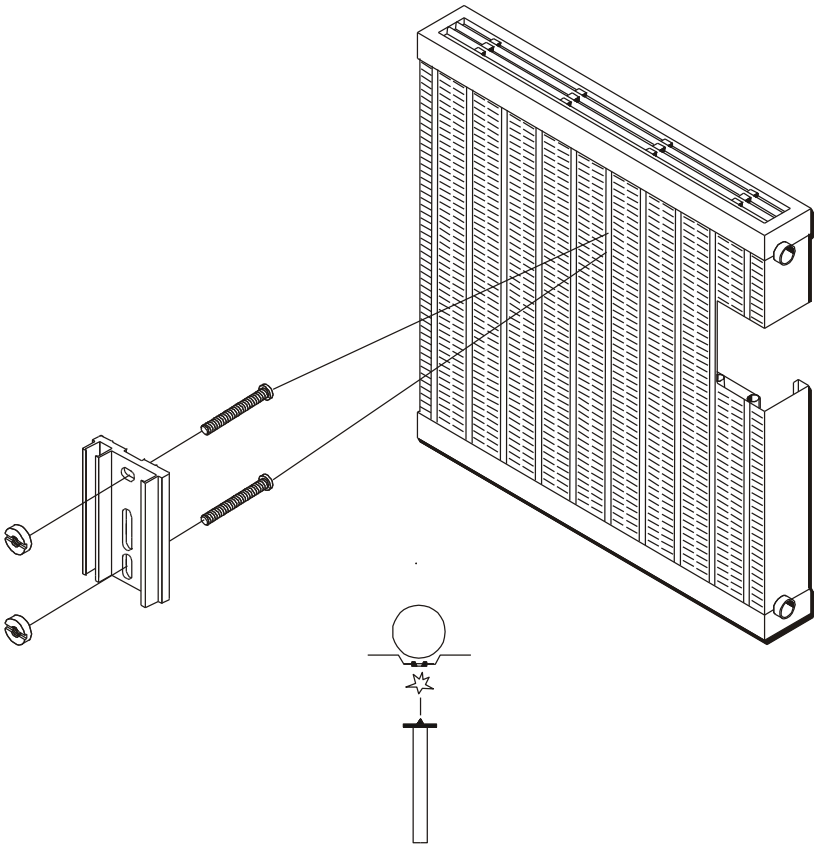
- **install the HCA rotated about 90° on the horizontal tubes at fore shot side at 75% of radiators height (measured from lower edge)**
- **Install the HCA also at 75% of radiators height (measured from lower edge of radiator) if its height is shorter than 410mm**
- **use a slide nut for pipe radiators 36mm or 46mm or a trapezoidal slide nut for installation**
- **install HCA horizontal (seal at right side)**

5 Radiators with internal tube register

51 Radiators with internal tube register, box-like convective parts

52 Radiators with internal tube register, other convective parts

Group of radiators	Installation sheet
Radiators with internal tube register	**51.001**

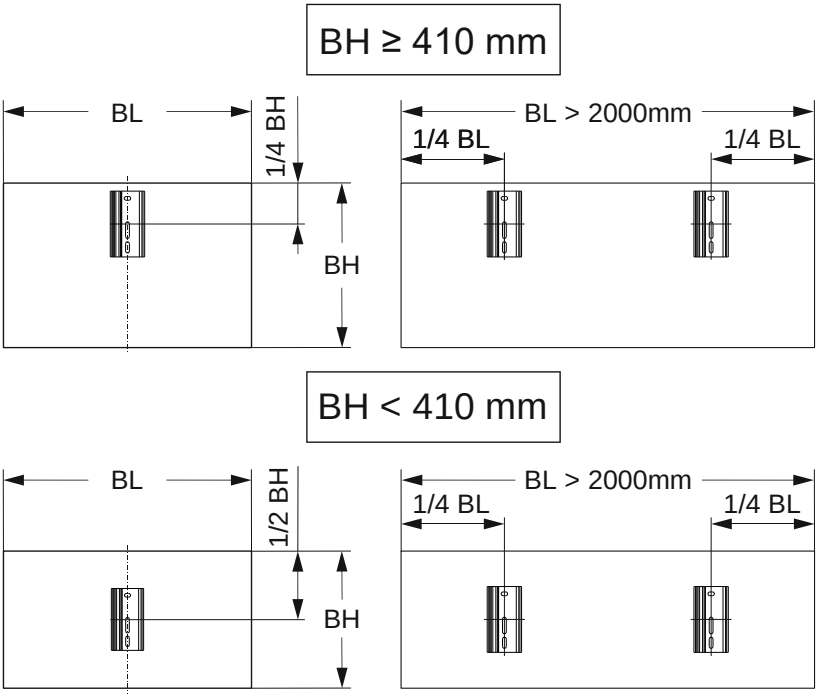


Welded installation

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
2	welding stud M3x10	60A034
2	slotted nut M3	60A007

Radiators with internal tube register, box-like convective parts - channel flow embossed -	Installation sheet 51.001

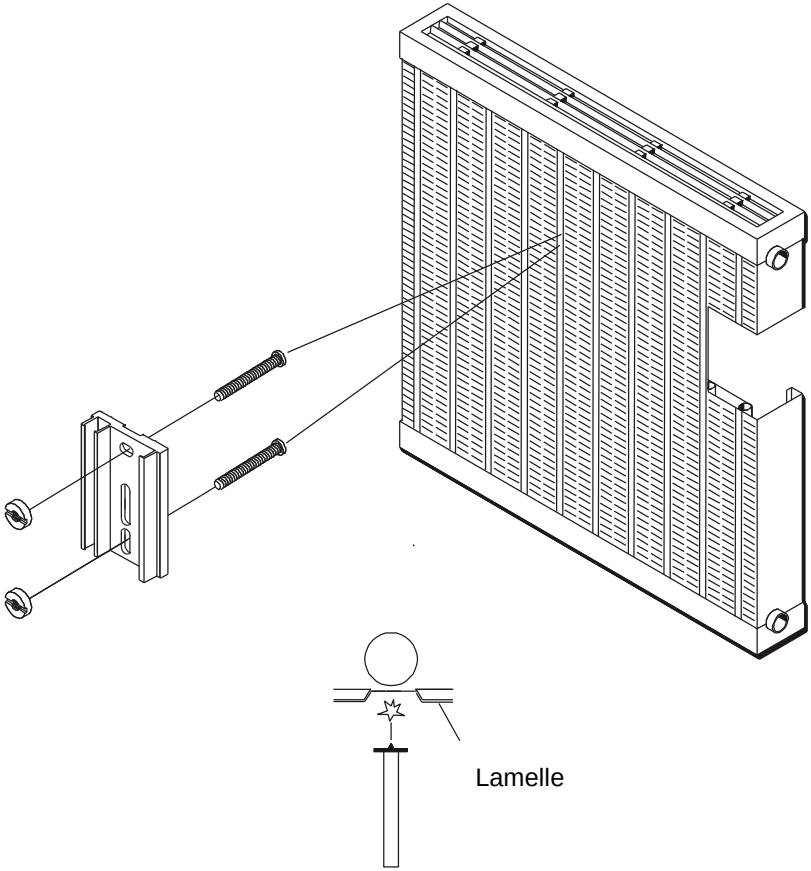
Installation place and amount of heat cost allocators



Installation hints

- **weld the stud always on the channel flow (tube)**
- **mount the HCA with heat conductor's midpoint at 75% of radiators height (measured from lower edge)**
- **at radiators with an height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiators height (center of radiator)**
- **at radiators with a length greater than 2 m have to be installed 2 HCAs**

Group of radiators	Installation sheet
Radiators with internal tube register	**51.002**

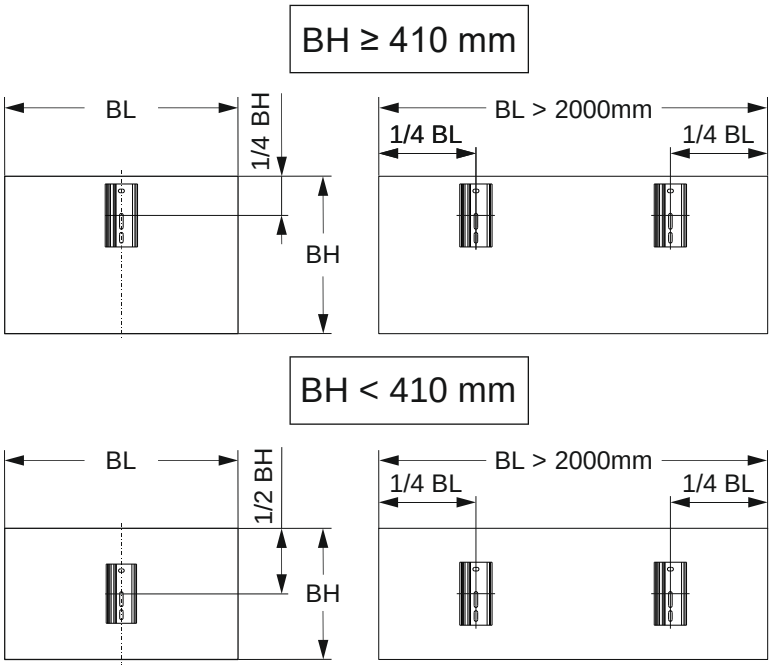


Welded installation

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
2	welding stud M3	Length acc. to demand
2	slotted nut M3	60A007

With box-like convective parts - channel flow not embossed - - lamellas embossed -	Installation sheet 51.002

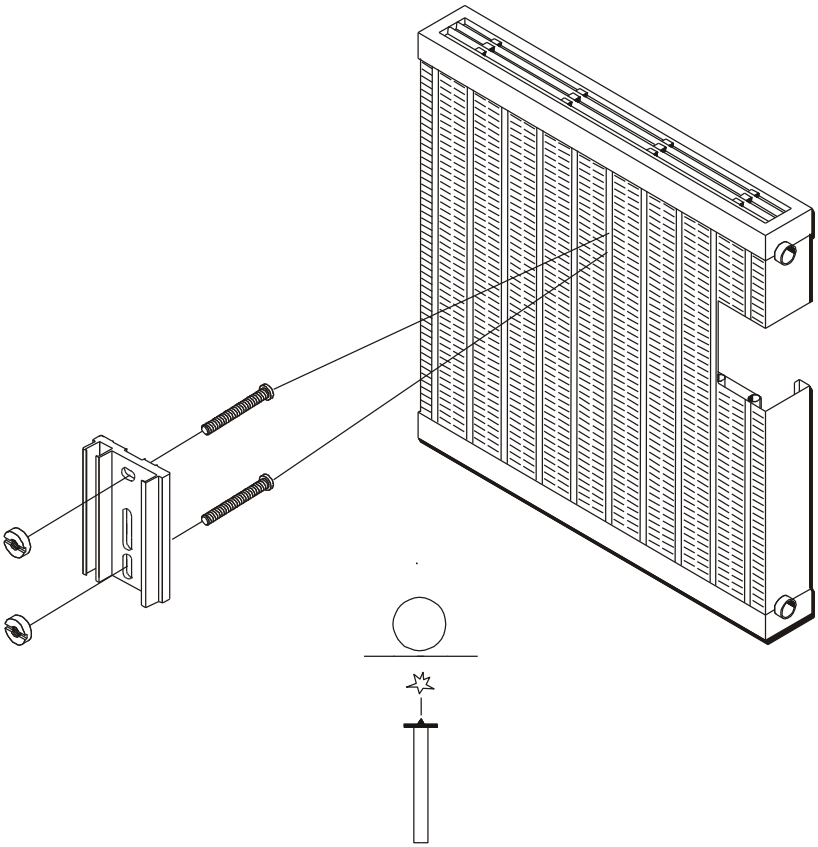
Installation place and amount of heat cost allocators



Installation hints

- **weld the stud always on the channel flow (tube)**
- **mount the HCA with heat conductor's midpoint at 75% of radiators height (measured from lower edge)**
- **at radiators with an height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiators height (center of radiator)**
- **at radiators with a length greater than 2 m have to be installed 2 HCAs**

Group of radiators	Installation sheet
Radiators with internal tube register	**51.003**

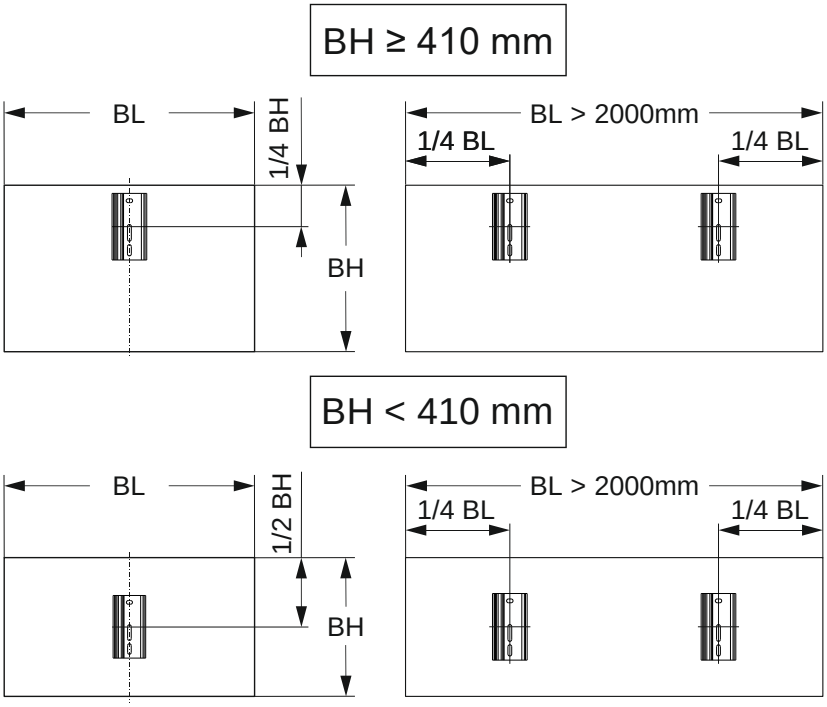


Welded installation

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
2	welding stud M3x10	60A034
2	slotted nut M3	60A007

With box-like convective parts - channel flow not embossed - - lamellas at front not embossed -	Installation sheet 51.003

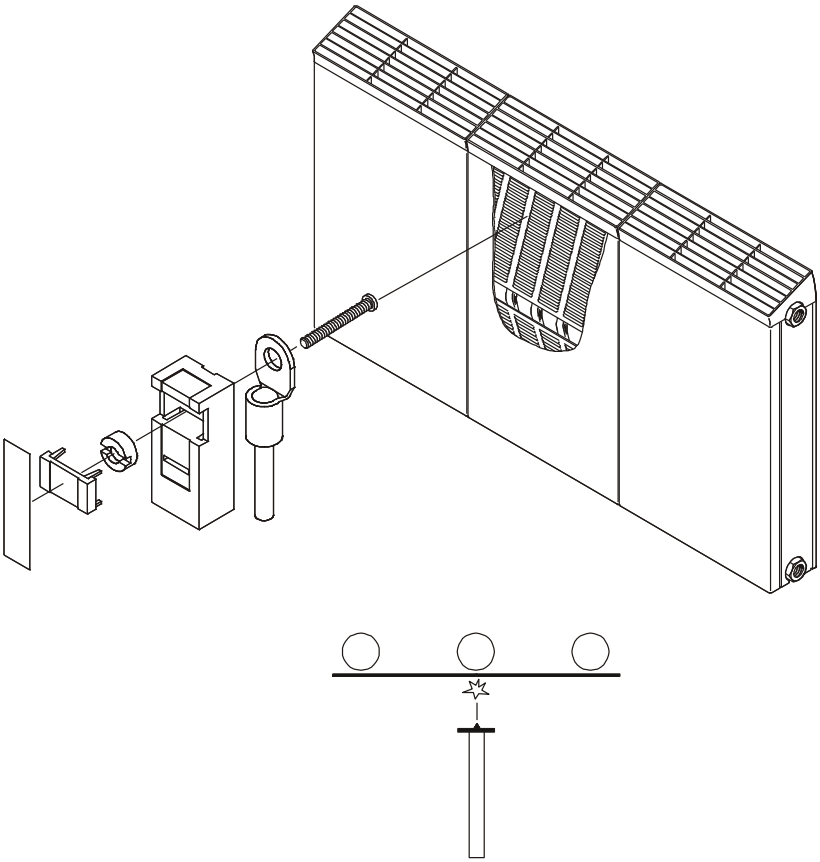
Installation place and amount of heat cost allocators



Installation hints

- **weld the stud always on the channel flow (tube)**
- **mount the HCA with heat conductor's midpoint at 75% of radiator's height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiators height (center of radiator)**
- **at radiators with a length greater than 2 m have to be installed 2 HCAs**

Group of radiators	Installation sheet
Radiators with internal tube register	**51.004**



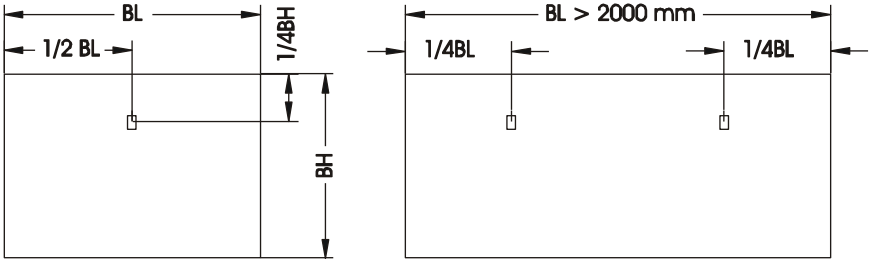
Welded installation

Pcs.	Installation material	Ord.no.
1	welding stud M3x6	60A216
1	slotted nut M3	60A007

With box-like convective parts - channel flow not embossed - - slanting tube register -	Installation sheet 51.004

Installation place and amount of heat cost allocators

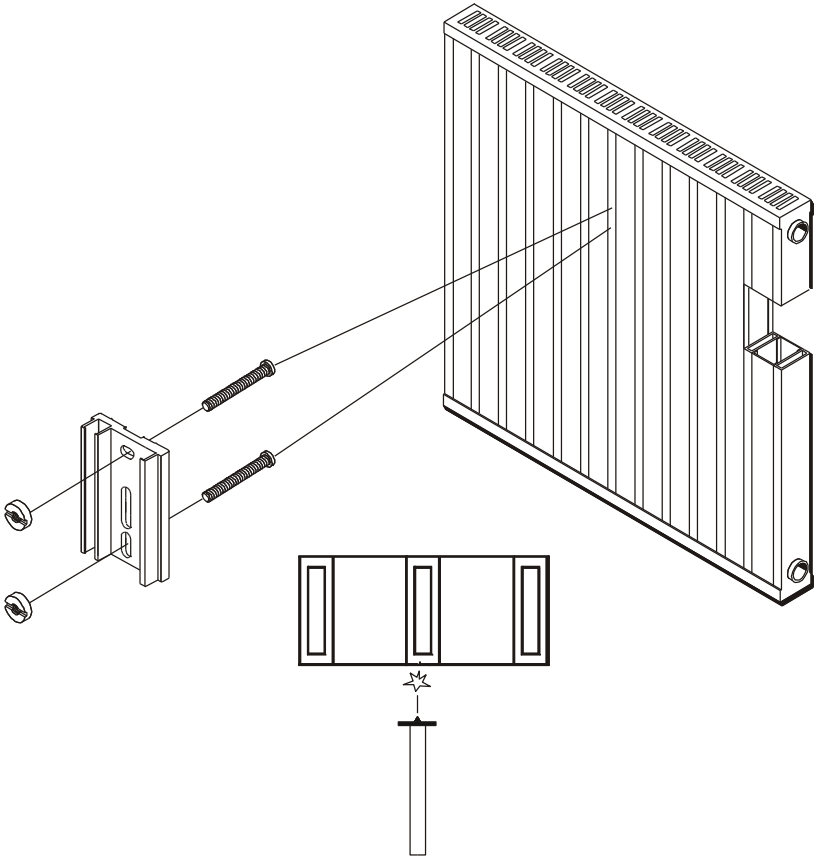
BH ≥ 410 mm
BH < 410 mm



Installation hints

- **<u>Attention!</u>**
  Dismount the covering segment before installation of HCA
- **weld the stud always on the channel flow (tube)**
- **Install the HCA's remote sensor also at 75% of radiators height (measured from lower edge of radiator) if its height is shorter than 410mm**
- **at radiators with a length greater than 2 m have to be installed 2 HCAs**

Group of radiators	Installation sheet
Radiators with internal tube register	**51.005**

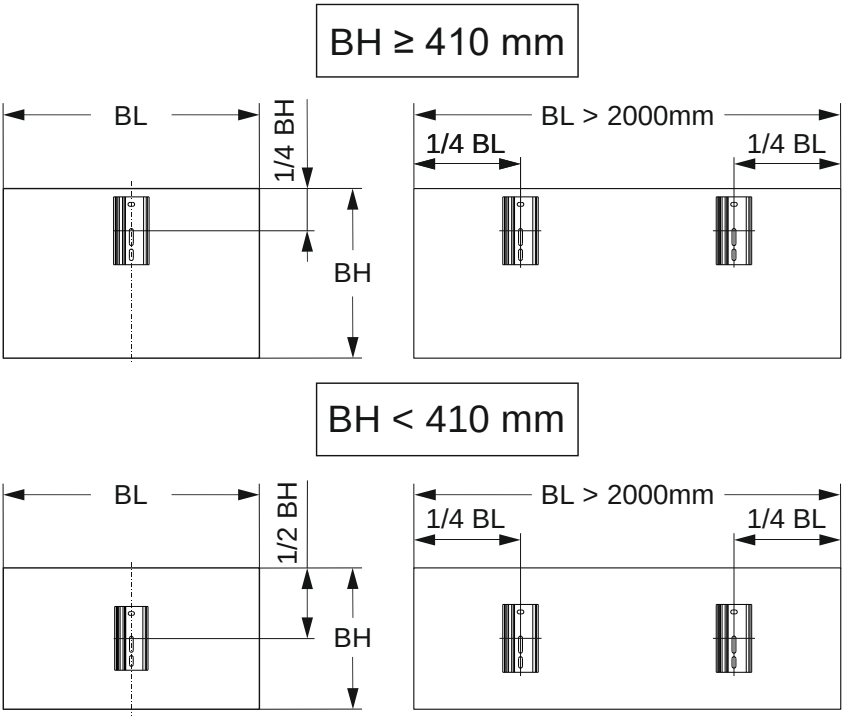


Welded installation

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
2	welding stud M3x10	60A034
2	slotted nut M3	60A007

With box-like convective parts	Installation sheet 51.005

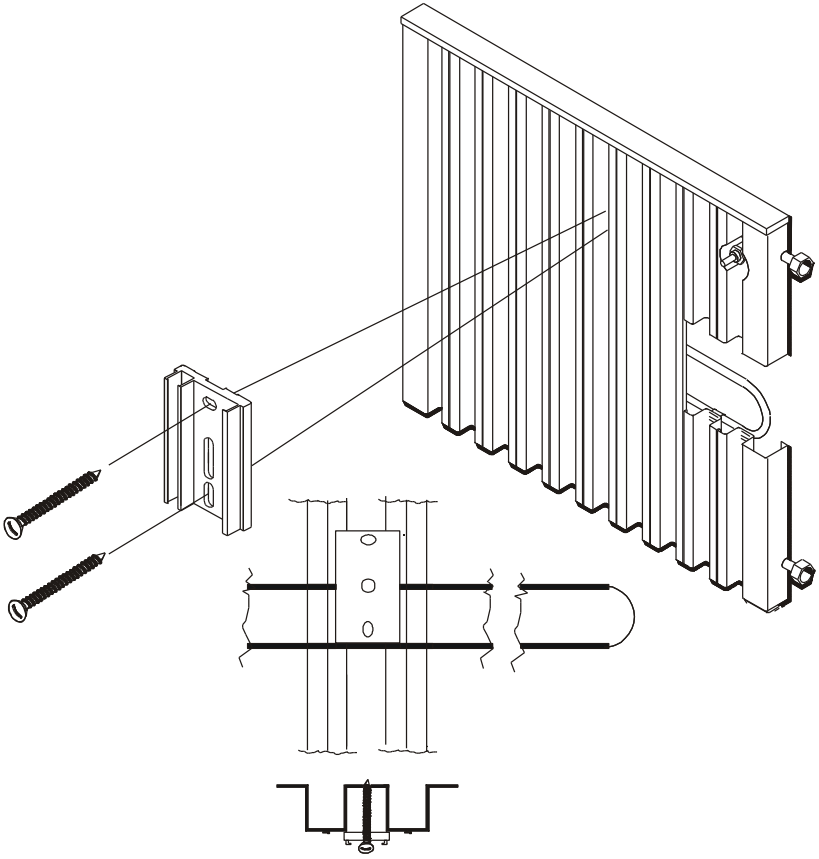
Installation place and amount of heat cost allocators



Installation hints

- **weld the stud above the thin channel**
- **mount the HCA with heat conductor's midpoint at 75% of radiators height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiators height (center of radiator)**
- **at radiators with a length greater than 2 m have to be installed 2 HCAs**

Group of radiators	Installation sheet
Radiators with internal tube register	**51.006**

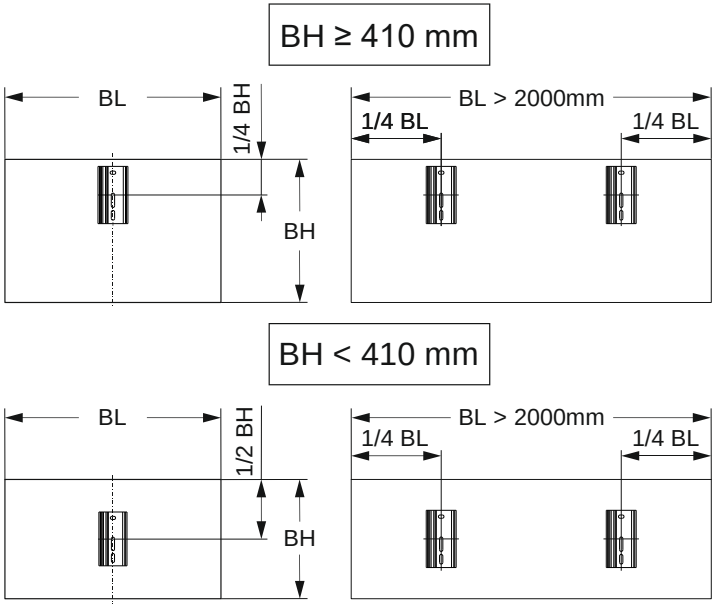


Welded installation

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
2	sheet-metal screw	Length acc. to demand

With box-like convective parts	Installation sheet 51.006

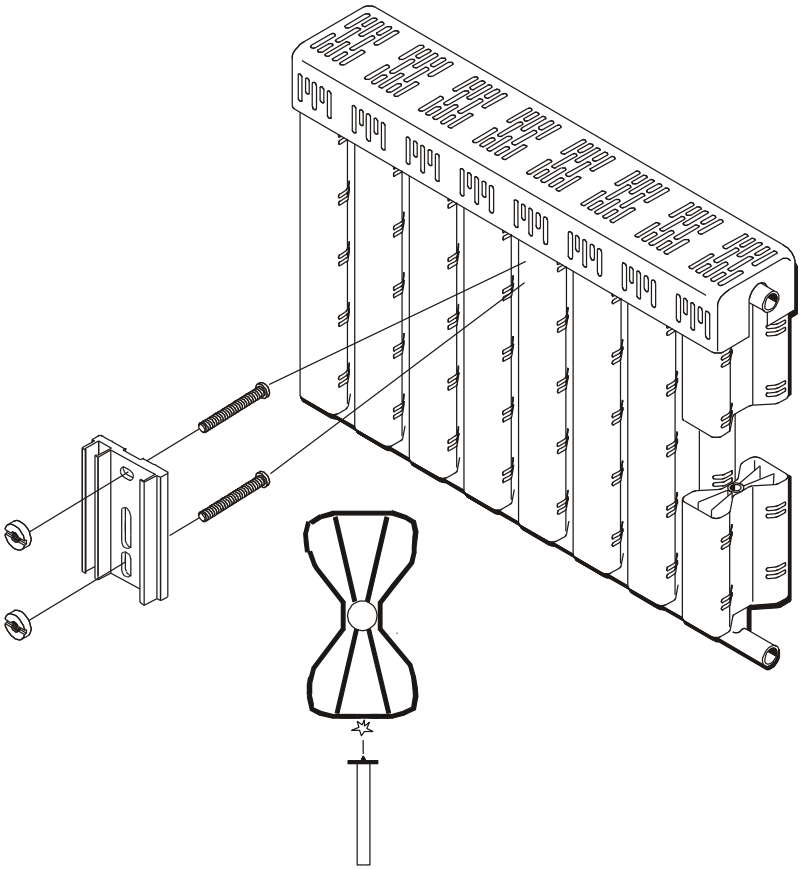
Installation place and amount of heat cost allocators



Installation hints

- **Mount the heat conductor using two sheet-metal screws. Set a drill hole above and below a tube at each time. Please take the closest installation point to the exact, if an exact installation is not possible because of this postulation. Caution: Do not drill into a tube!**
- **mount the HCA with heat conductor's midpoint at 75% of radiators height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiators height (center of radiator)**
- **at radiators with a length greater than 2 m have to be installed 2 HCAs**

Group of radiators	Installation sheet
Radiators with internal tube register	**52.001**

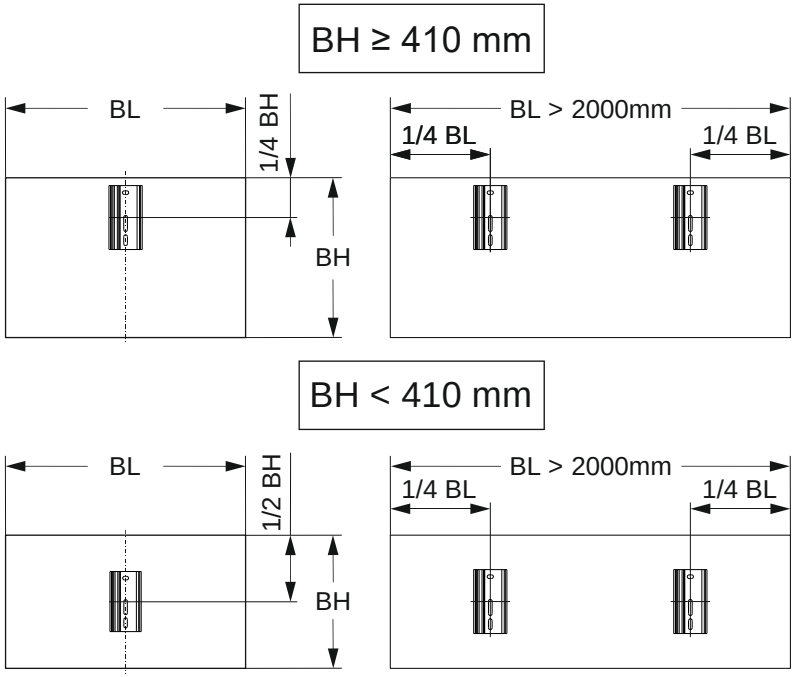


Welded installation

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
2	welding stud M3x10	60A034
2	slotted nut M3	60A007

With other convective parts	Installation sheet 52.001

Installation place and amount of heat cost allocators



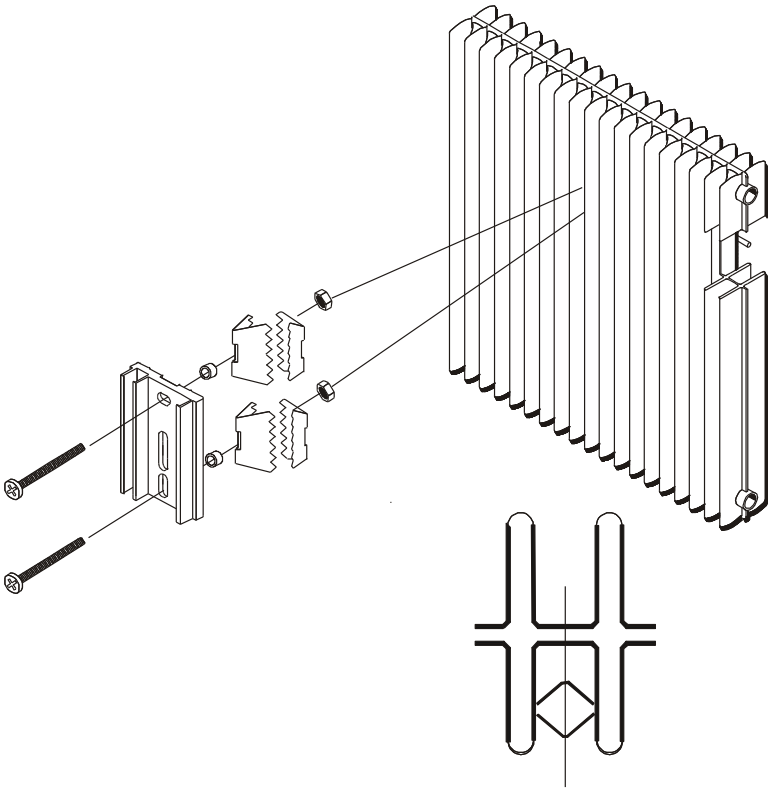
Installation hints

- **weld the studs onto the convection plates**
- **mount the HCA with heat conductor's midpoint at 75% of radiators height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiators height (center of radiator)**
- **at radiators with a length greater than 2 m have to be installed 2 HCAs**

6 Lamella type radiators

61 Lamella type radiators

Group of radiators	Installation sheet
Lamella type radiators	**61.001**



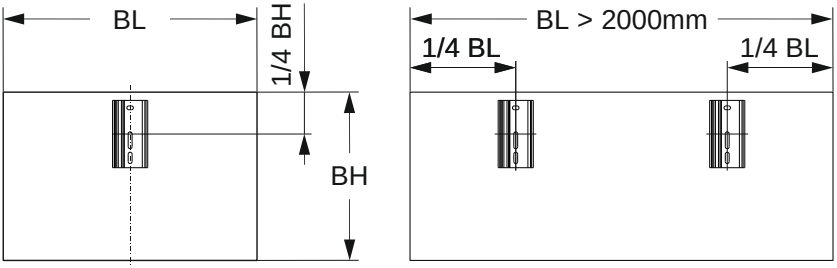
Installation with bolts

Pcs.	Installation material	Ord.no.
1	heat conductor	65H010
4	expanding bracket	60H005
2	spacer sleeve	60H035
2	hexagonal nut M4	60A014
2	bolt M4	Length acc. to demand

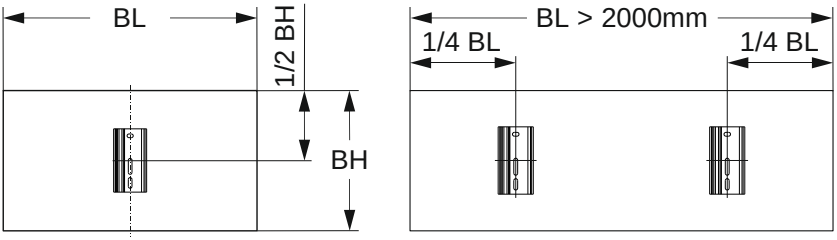
	Installation sheet 61.001

Installation place and amount of heat cost allocators

BH ≥ 410 mm



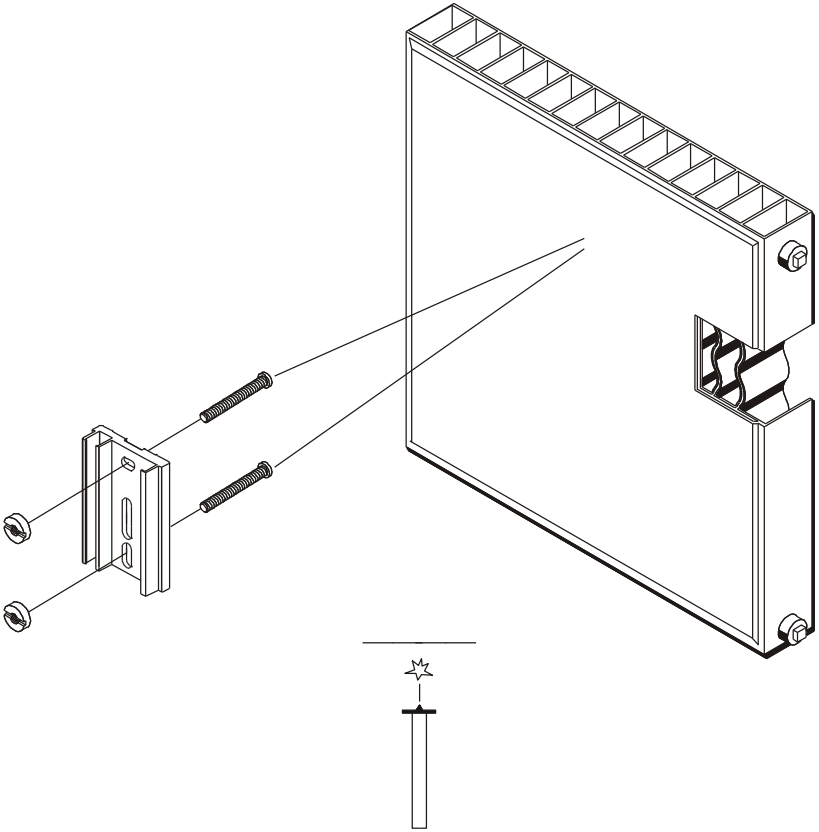
BH < 410 mm



Installation hints

- **use special expanding brackets for installation**
- **mount the HCA with heat conductor's midpoint at 75% of radiators height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiators height (center of radiator)**
- **at radiators with a length greater than 2 m have to be installed 2 HCAs**

Group of radiators	Installation sheet
Lamella type radiator	**61.002**

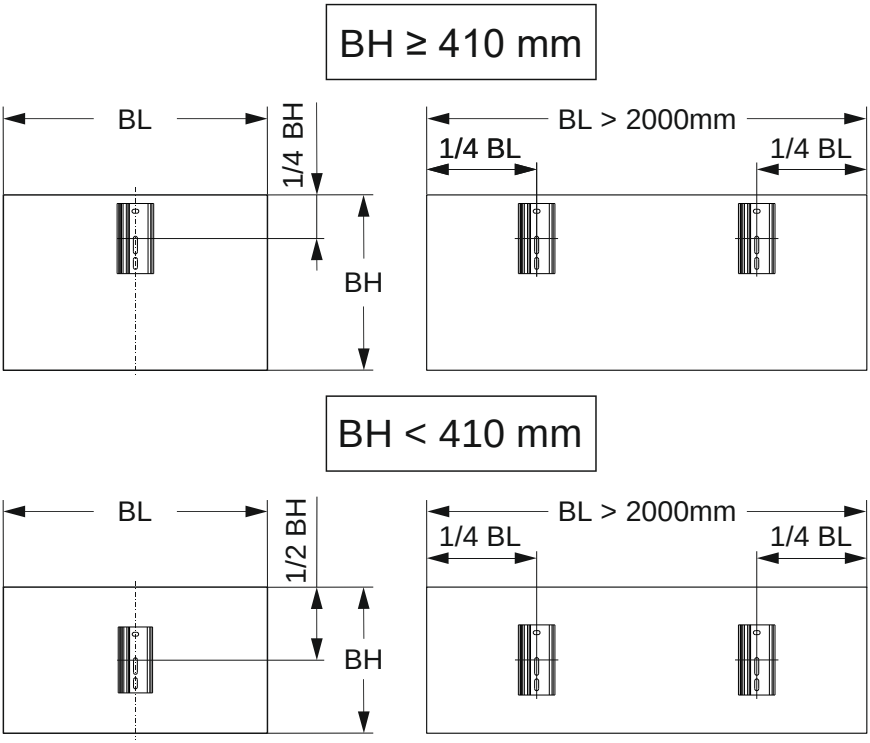


Welded installation

Pcs.	Installation material	Ord.no.
1	Heat conductor	65H010
2	Welding stud M3x10	60A034
2	Slotted nut M3	60A007

Front side straight	Installation sheet 61.002

Installation place and amount of heat cost allocators



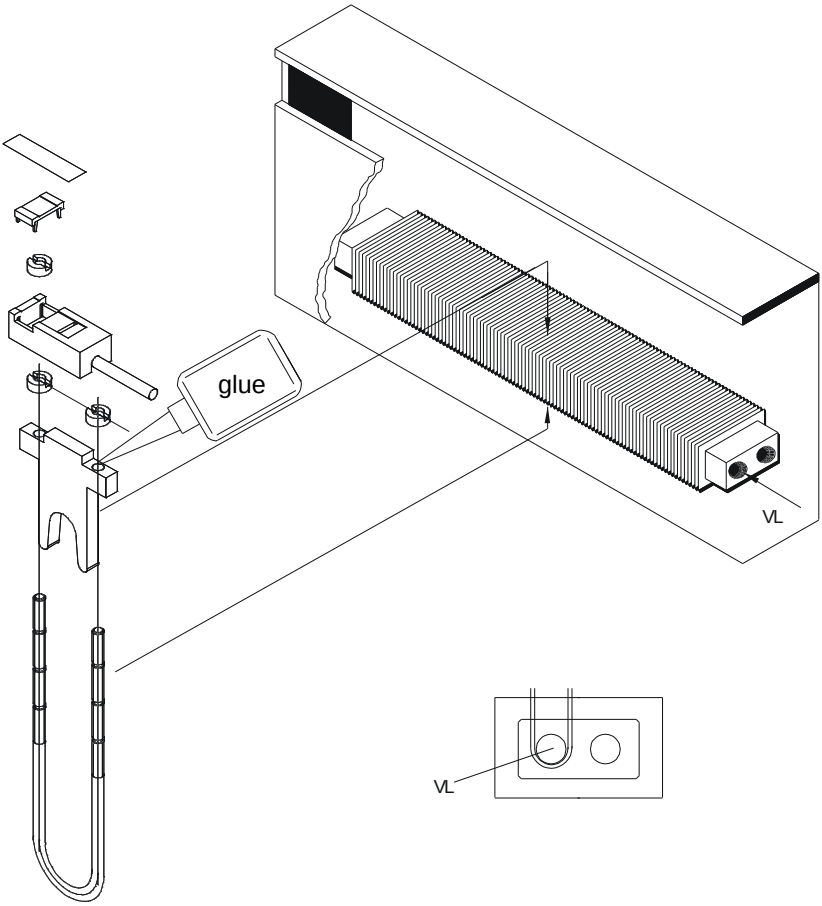
Installation hints

- **mount the HCA with heat conductor's midpoint at 75% of radiators height (measured from lower edge)**
- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiators height (center of radiator)**
- **at radiators with a length greater than 2 m have to be installed 2 HCAs**

7 Convector heater

70 Convector heater

Group of radiators	Installation sheet
Convector heater	**70.001**



Installation with bolts

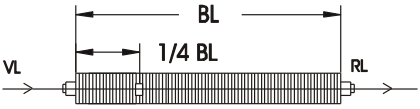
Pcs.	Installation material	Ord.no.
1	U-bolt set	65H024
1	glue Best MK 4422	65H065

One-layer	Installation sheet 70.001

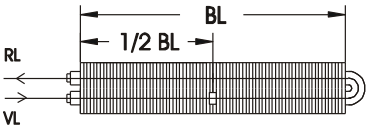
Installation place and amount of heat cost allocators

BL ≤ 2000 mm

convector one-layer either-way connection

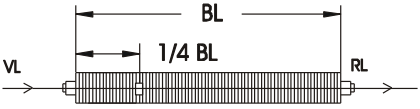


convector one-layer synchronistically-way connection

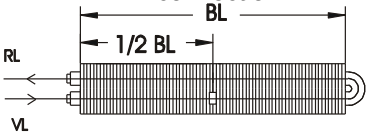


BL > 2000 mm

convector one-layer either-way connection



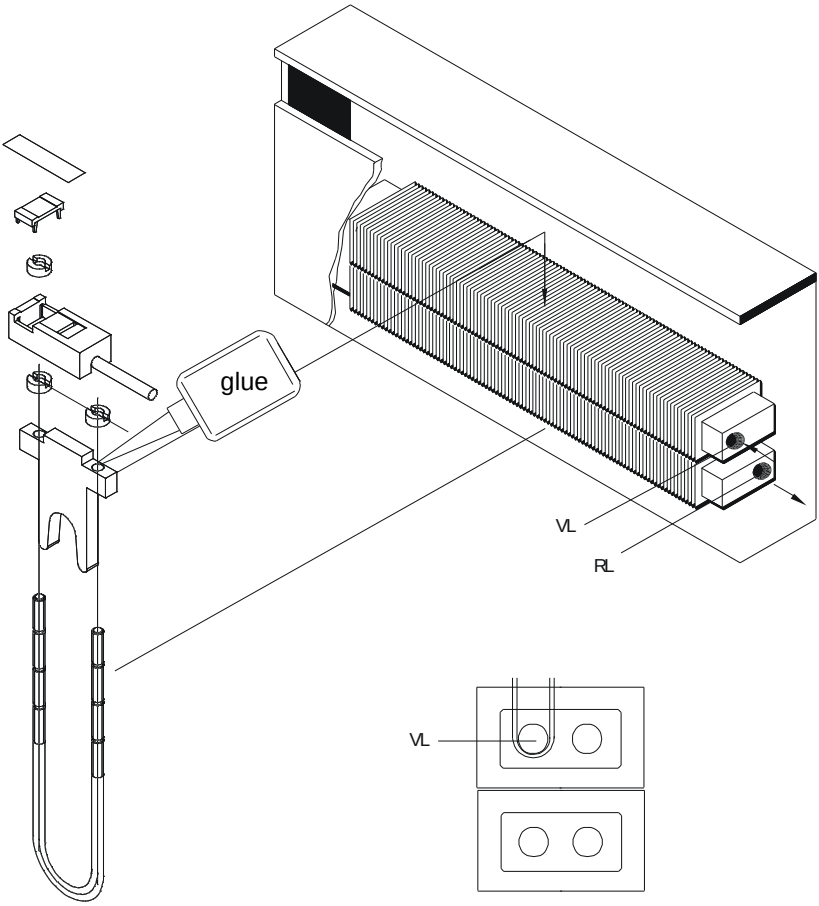
convector one-layer synchronistically-way connection



Installation hints

- **The installation has to be done over fore shot at ¼ water flow distance, that means:**
  - **at either-way connection install the HCA at ¼ convectors length over fore shot, at synchronistically-way connection installation at ½ convector length over fore shot**
- **install only one HCA also at radiators with a length greater than 2m**
- **Please take notice of the specific installation instructions "convector trestle"!**

Group of radiators	Installation sheet
Convector heater	**70.002**



Installation with bolts

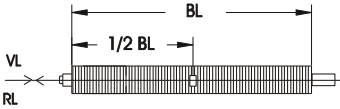
Pcs.	Installation material	Ord.no.
1	U-bolt set	65H024
1	glue Best MK 4422	65H065

Two-layers, three-layers	Installation sheet 70.002

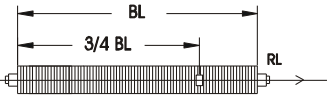
Installation place and amount of heat cost allocators

BL ≤ 2000 mm

convector two-layers synchronistically-way connection

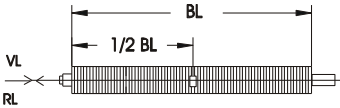


convector three-layers either-way connection

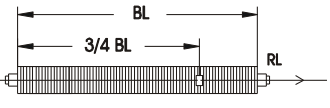


BL > 2000 mm

convector two-layers synchronistically-way connection



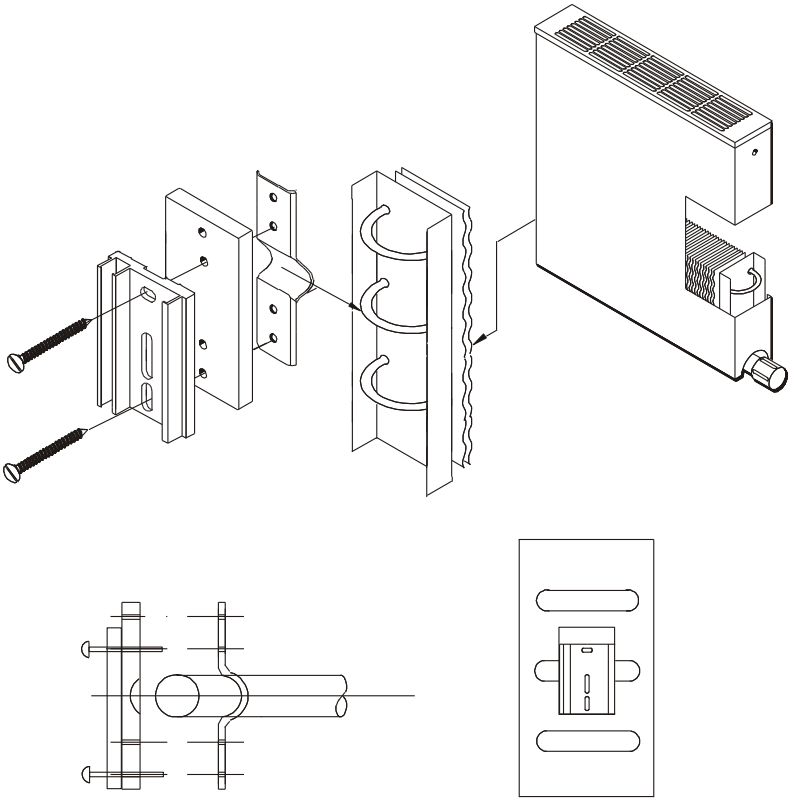
convector three-layers either-way connection



Installation hints

- **The installation has to be done over fore shot at ¼ water flow distance, that means:**
  - **at convector with two layers and synchronistically-way connection install the HCA at ½ convector length over fore shot**
  - **at convectors with three-layers and either-way connection install the HCA at ¾ convector length over fore shot**
- **install only one HCA also at radiators with a length greater than 2m**
- **Please take notice of the specific installation instructions "convector trestle"!**

Group of radiators	Installation sheet
Convector heater	**70.003**

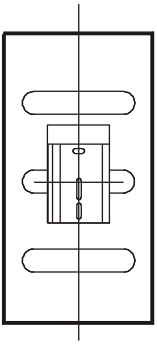


Installation with bolts

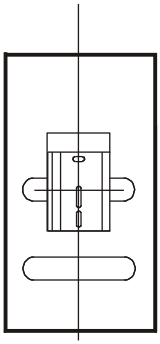
Pcs.	Installation material	Ord.no.
1	Heat conductor	65H010
1	choose console for HCA depending on radiators depth Helitherm-Euroklima GmbH with sheet metal screws	for depth 75mm 11530 for depth 110mm 11510 for depth 170mm 11511 for depth 220mm 11571

Complete convector Vama, Helitherm	Installation sheet 70.003

Installation place and amount of heat cost allocators



At 3 pipes over the middle pipe respectively near h/H=50% of lamella height



At 2 pipes over upper pipe

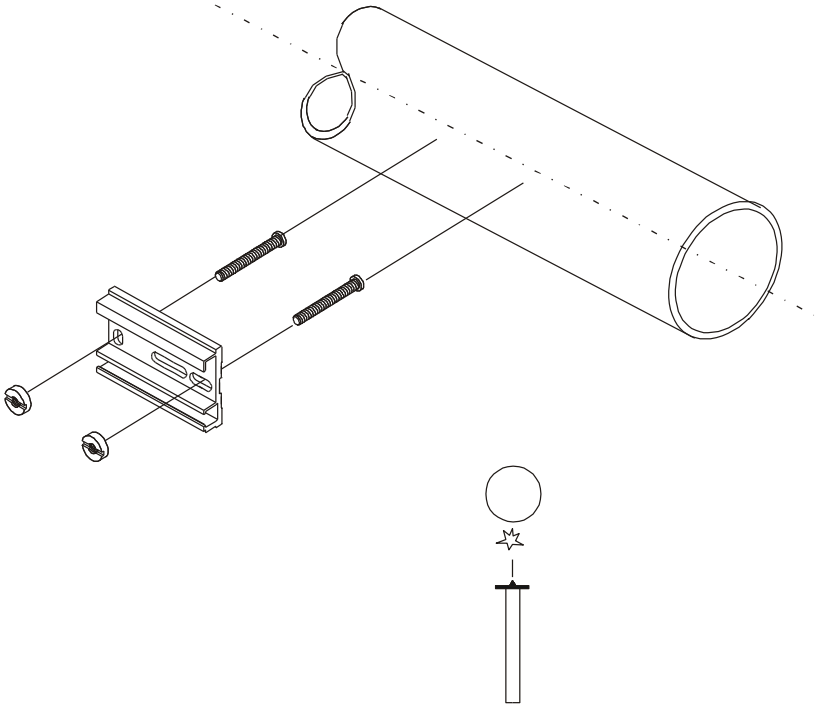
Put on gloves after taking-off the facing!

Installation hints

- **Use the specific installation material of radiators manufacturer Vama/Helitherm. Depending on radiators depth have to be used the appropriate consoles for installation of HCA**
- **Install the HCA on the middle pipe bend (turning bow) respectively at pipe bend which is closest to h/H=50% of lamellas height. That means that the installation has to be done on the middle pipe bend at radiators with 3 pipes and on the upper pipe at radiators with 2 pipes**
- **install only one HCA also at radiators with a length greater than 2m**

8 Pipes

Group of radiators	Installation sheet
Single pipes and pipe meanders as heating area	**81.001**

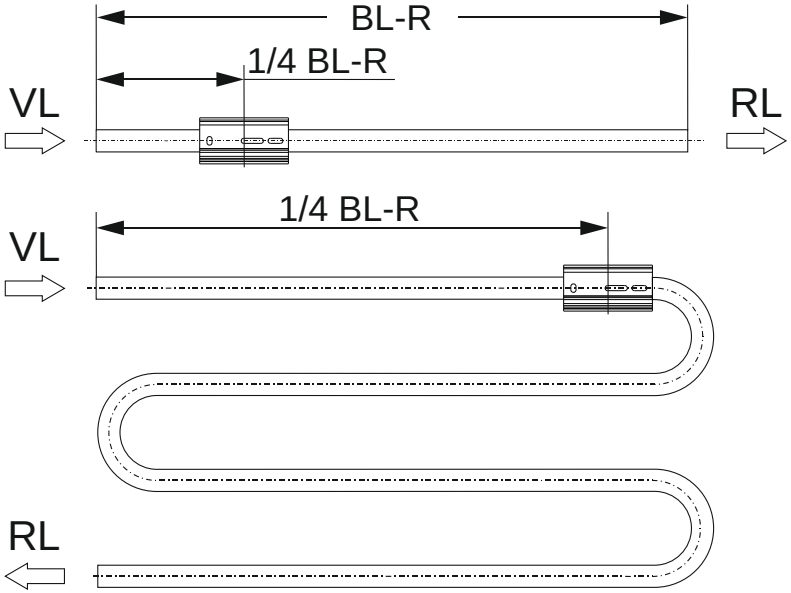


Welded installation

Pcs.	Installation material	Ord.no.
1	Heat conductor	65H010
2	Welding stud M3x10	60A034
2	Slotted nut M3	60A007

horizontal, no ribbs	Installation sheet 81.001

Installation place and amount of heat cost allocators

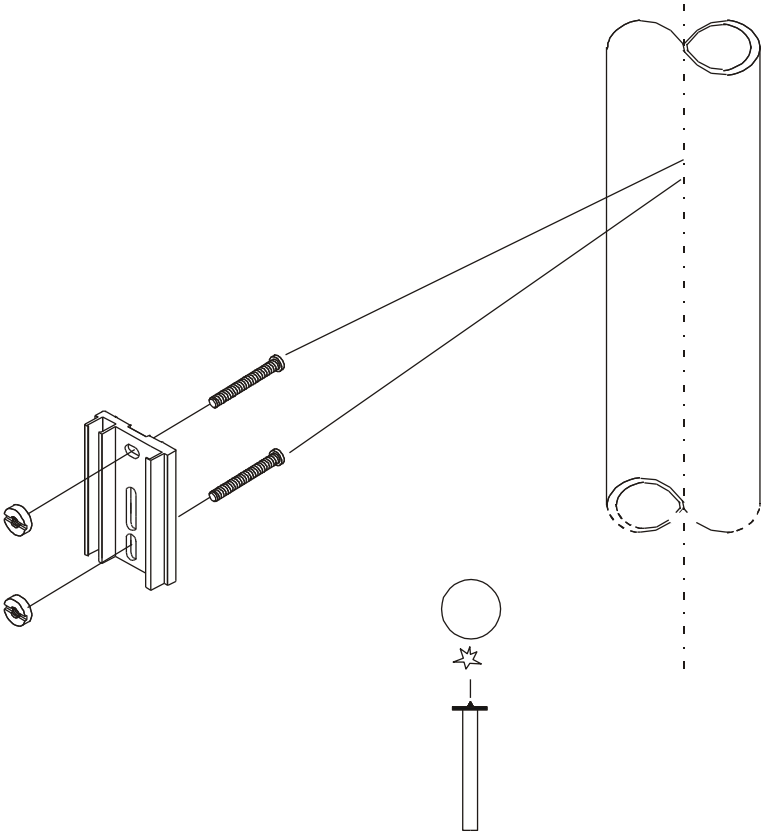


Installation hints

- **Mount the heat conductor, with midpoint, at ¼ of pipe length at fore shot side**
- **Install always one HCA/radiator only**
- **weld the studs along the pipe axis**
- **install HCA horizontal (seal at right side)**

explanation of abbr.: VL= fore shot, RL= return flow

Group of radiators	Installation sheet
Single pipes and pipe meanders as heating area	**81.002**

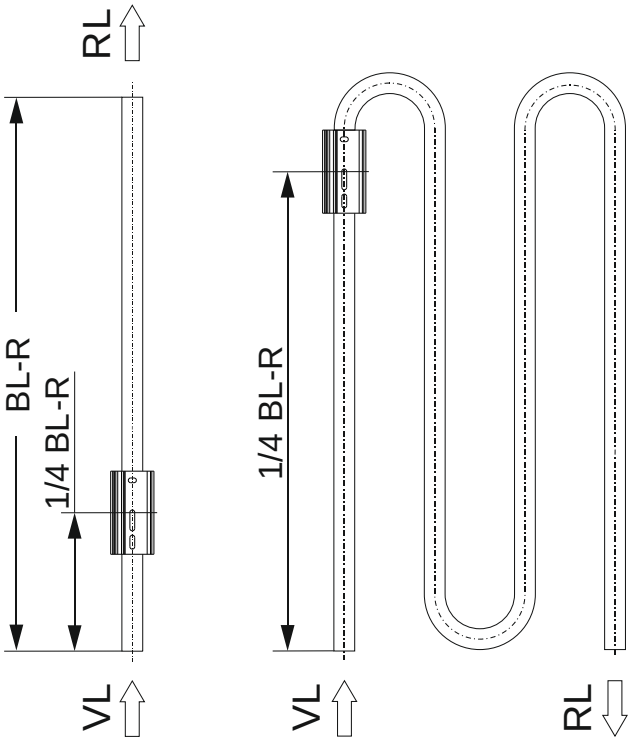


Welded installation

Pcs.	Installation material	Ord.no.
1	Heat conductor	65H010
2	Welding stud M3x10	60A034
2	Slotted nut M3	60A007

vertical, no ribbs	Installation sheet 81.002

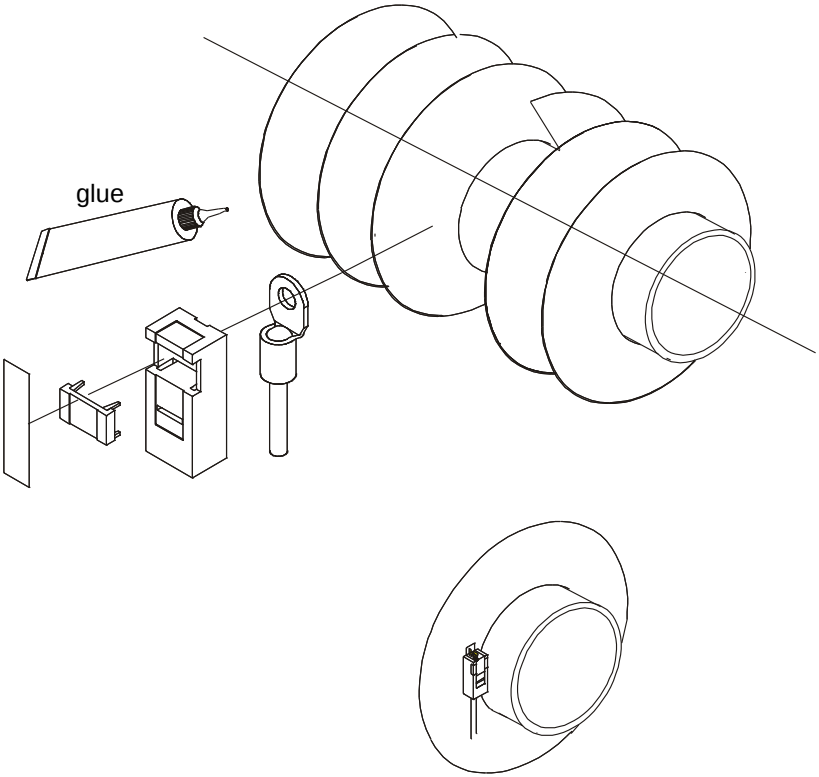
Installation place and amount of heat cost allocators



Installation hints

- **Mount the heat conductor, with midpoint, at ¼ of pipe length at fore shot side**
- **Install always one HCA/radiator only**
- **weld the studs along the pipe axis**
- **install the HCA vertically**

Group of radiators	Installation sheet
Single pipes and pipe meanders as heating area	**81.003**

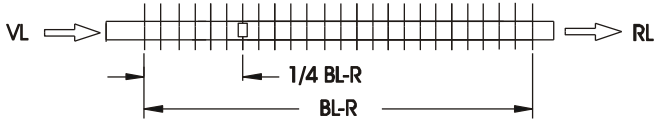


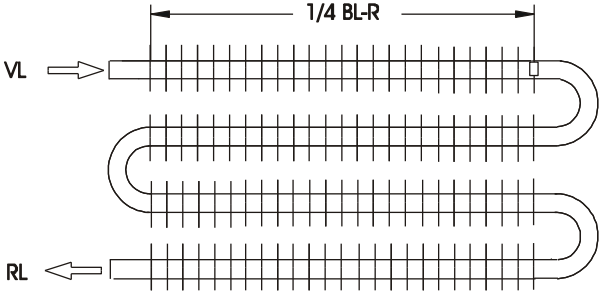
Klebemontage

Pcs.	Installation material	Ord.no.
1	glue Loctite 4204	65H064
1	Siegelfolie	

horizontal, ribbed	Installation sheet 81.003

Installation place and amount of heat cost allocators



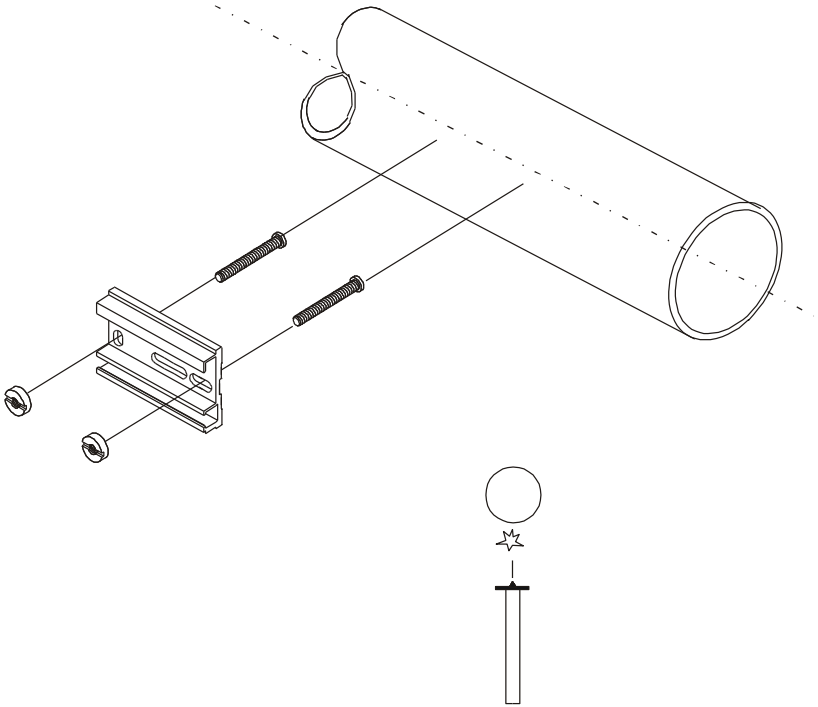


Installation hints

- **Use a HCA with remote sensor. Mount the sensor at fore shot side at ¼ of length of ribbed pipe**

  Install always one HCA/radiator only
- **Grind the glue surface between the ribs, coat the ring terminal and the sensors housing with glue, press it on the prepared radiator surface tightly. Close the sensor housing with cap and tape it with seal.**

Group of radiators	Installation sheet
Tube register	**82.001**

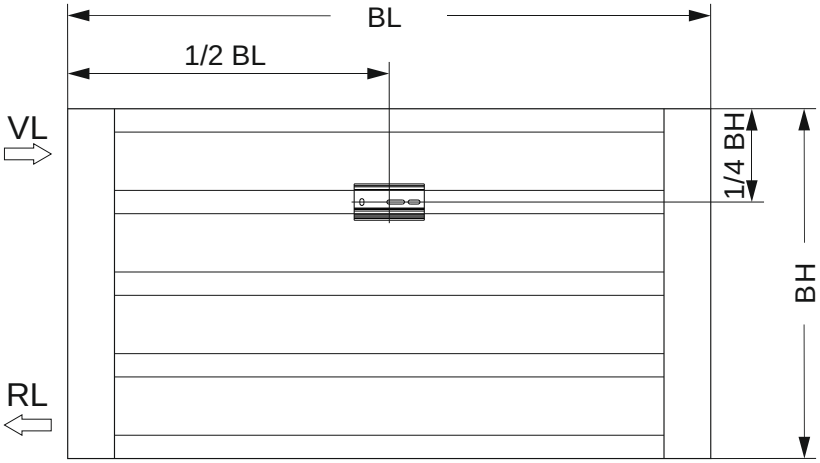


Welded installation

Pcs.	Installation material	Ord.no.
1	Heat conductor	65H010
2	Welding stud M3x10	60A034
2	Slotted nut M3	60A007

horizontal, no ribbs	Installation sheet 82.001

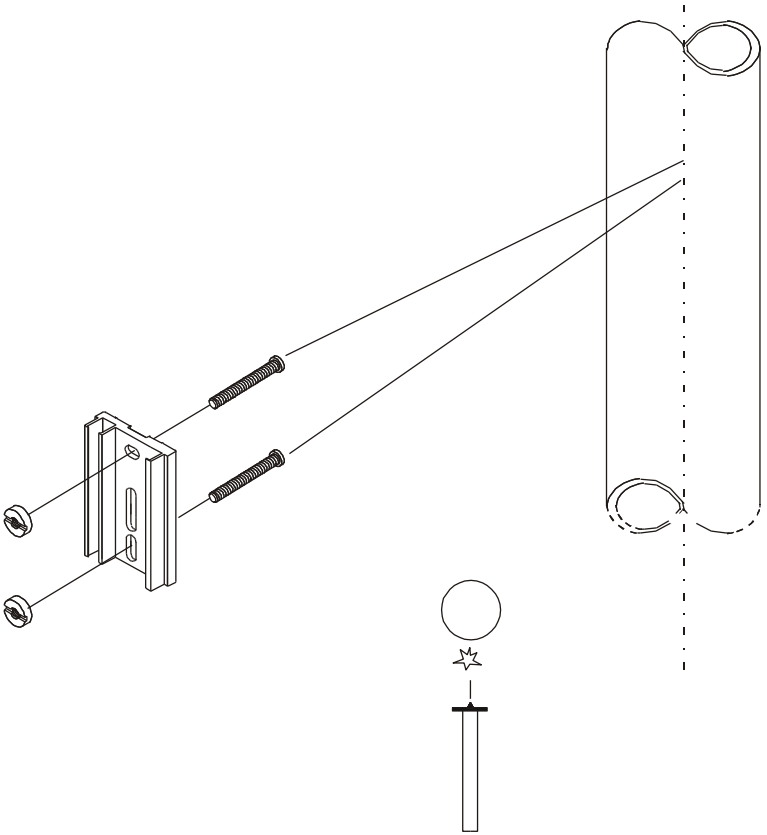
Installation place and amount of heat cost allocators



Installation hints

- **Mount the heat conductor's midpoint at 75% of radiators height respectively onto the pipe, which is closest to the exact installation point and at 50% of radiators length**
- **Install always one HCA/radiator only**
- **Install HCA horizontal (seal at right side)**

Group of radiators	Installation sheet
Tube register	**82.002**

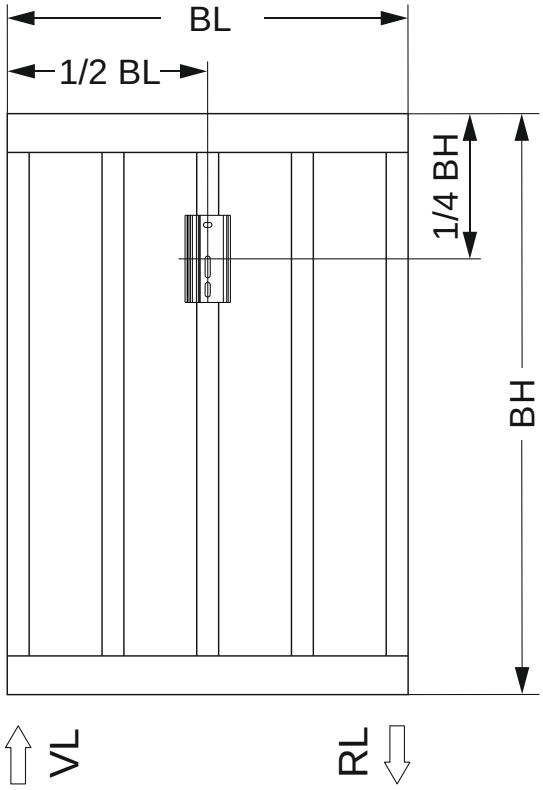


Welded installation

Pcs.	Installation material	Ord.no.
1	Heat conductor	65H010
2	Welding stud M3x10	60A034
2	Slotted nut M3	60A007

vertical, no ribbs	Installation sheet 82.002

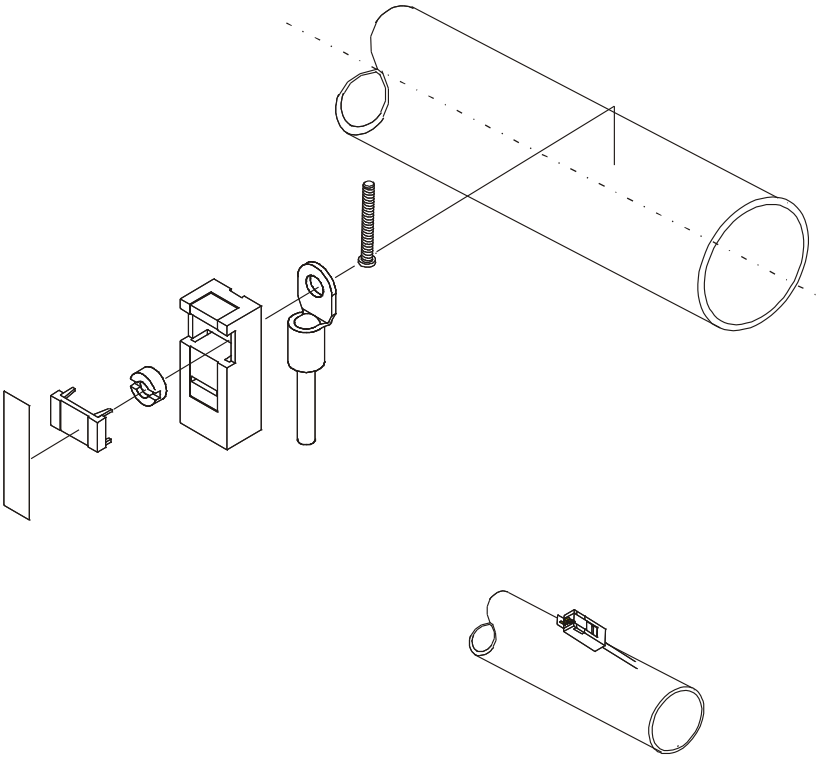
Installation place and amount of heat cost allocators



Installation hints

- **Mount the HCA with heat conductor's midpoint at 75% of radiators height (measured from lower edge) and at 50% of radiators length**
- **Install always one HCA/radiator only**
- **Install the HCA vertically, welding the studs along the pipe axis**

Group of radiators	Installation sheet
Single pipes as connection line	**83.001**

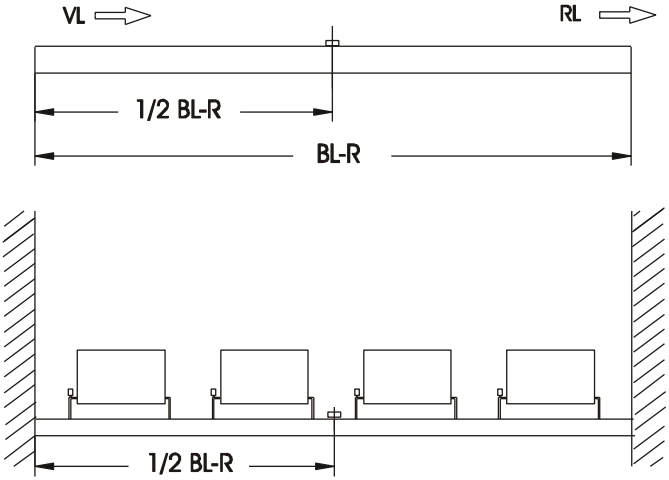


Welded installation

Pcs.	Installation material	Ord.no.
1	Welding stud M3x6	60A216
1	Slotted nut	60A007

horizontal	Installation sheet 83.001

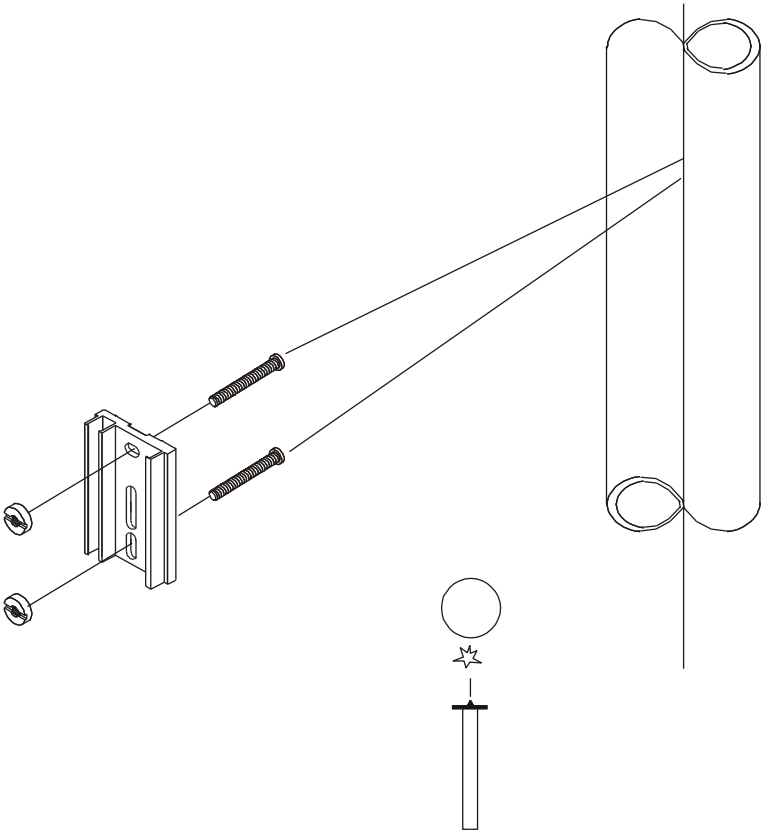
Installation place and amount of heat cost allocators



Installation hints

- **Install the remote sensor of HCA at 50% of pipe length onto the pipe**

Group of radiators	Installation sheet
Single pipes as connection line	**83.002**

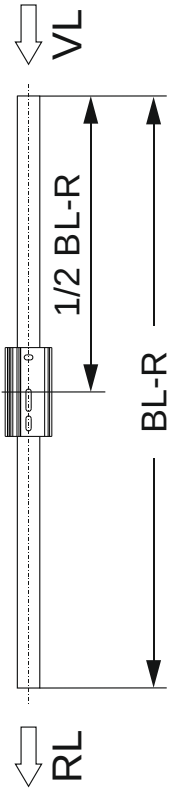


Welded installation

Pcs.	Installation material	Ord.no.
1	Heat conductor	65H010
2	Welding stud M3x10	60A034
2	Slotted nut M3	60A007

vertical	Installation sheet 83.002

Installation place and amount of heat cost allocators



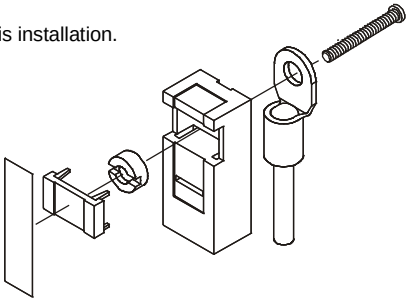
Installation hints

- **Mount the heat conductor with its center at ½ of pipe length**
- **Install always one HCA/radiator only**
- **Install the HCA vertical, welding the studs along the pipe axis**

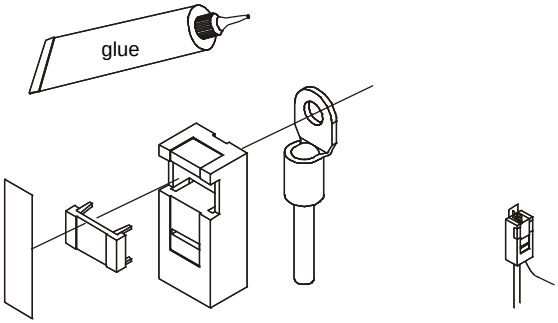
9 Other radiators

Group of radiators	Installation sheet
Other radiators	**90.001**

remote sensor installation :
If the radiator is not accessible, has to be abstained from radiator specific HCA installation and a HCA with remote sensor has to be used.
Use a welding stud for this installation.



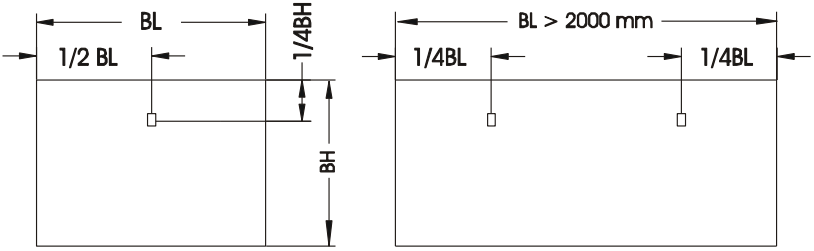
At iron cast radiators use glueing of remote sensor for installation



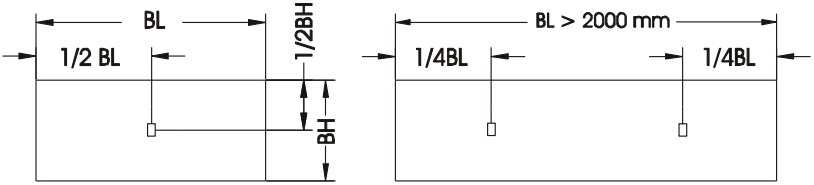
	Installation sheet 90.001

Installation place and amount of heat cost allocators

BH ≥ 410 mm



BH < 410 mm



Installation hints

- **at radiators with a height shorter than 410mm the HCA has to be mounted with the center of the heat conductor at 50% of radiators height (center of radiator)**
- **at radiators with a length greater than 2 m have to be installed 2 HCAs**