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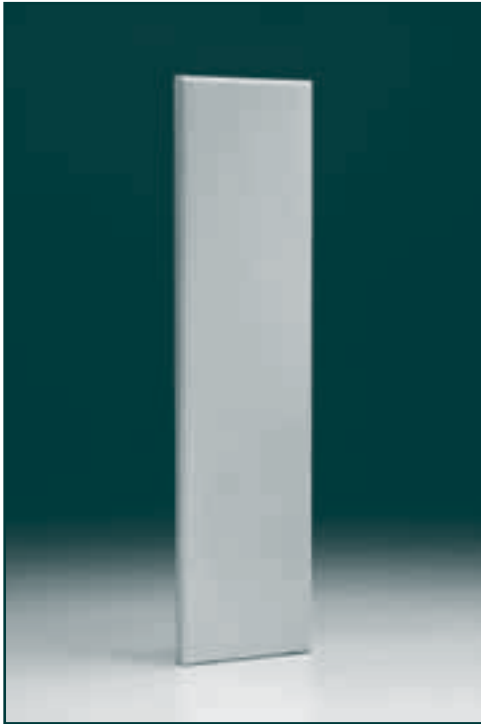


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P5V/P5KV

Features

- Elegant, low profile design with compact footprint and closed sides
- Discreet appearance to compliment any architecture
- Ideal source of heat in rooms with limited wall space
- Extremely robust and durable without any clip-on grilles or side panels
- Easy to clean due to flat front and closed sides
- Available with towel rails or pegs
- Extensive range of P5KV stock sizes available
- Electric element with safety thermofuse, option available



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Product description

P5V and P5KV








	Description	Smooth, flat rebated front plate with solid sides, with pressed steel horizontal waterways. P5KV has convector fins welded on the rear. Water circulates directly behind the front plate.
	Material	Front plate: 2.00 mm steel to DIN 1614, EN 10051 Rear plate: 1.25 mm steel EN 10130 P5KV convector fins: 0.50 mm steel EN 10130
	Test pressure	10 bar
	Max. operating pressure	7.7 bar in accordance with EN 442
	Max. operating temperature	95°C
	Surface treatment	Pre-treatment: <ul style="list-style-type: none">• Degreasing and iron-phosphating Priming: <ul style="list-style-type: none">• Primed with water based paint in pale grey colour Paint finish: <ul style="list-style-type: none">• White RAL 9010: Powder PE, gloss approx. 50%• Other colours: Powder painted as above or wet painted, gloss approx. 50%• Surface treatment in accordance with DIN 55900 and EN 442
	Output	See output tables page 6.2.1



Fig. 6.1.1
Height and length

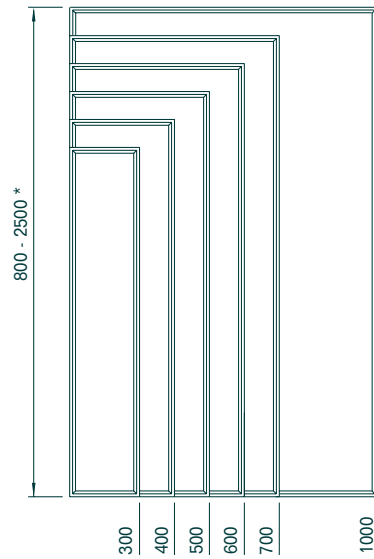


Fig. 6.1.2
P5V, profile

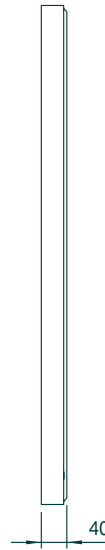
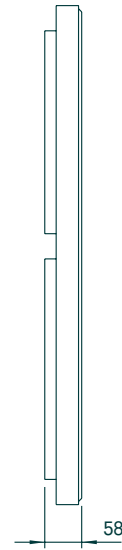


Fig. 6.1.3
P5KV, profile



* Maximum standard height is 2500 mm

Length	P5V/P5KV: 300, 400, 500, 600, 700 and 1000 mm
Height	800-2500 mm. Sectional increments of 33.33 mm. Heights between 2500 mm and 4000 mm are available. VARIANT
Depth	P5V: 40 mm P5KV: 58 mm
Tappings	1/2" standard. Adapter for 3/8" and 3/4"
Mounting	Wall mounted, see pages 6.3.1 Brackets with coach screws, wall plugs and washers are included, see page 6.3.1 Air vent is supplied, see page 6.6.1
Colour	Powder coated in white RAL 9010 Option: Painted in other standard RAL and BS colours VARIANT
Packing	Packed securely in environmentally friendly materials. Mounting is possible without unpacking, for protection. NOTE: Max. flow temperature when using before unpacking of radiator is 70°C
Optional extras (Variant or Individual)	<ul style="list-style-type: none"> • Built-in valve, see page 6.4.1



Technical specifications

P5V and P5KV

Output

Table 6.2.1

Output for radiator height 1000 mm

P5V Length mm	Output			Water content		Weight	
	W/metre 75/65-20	W/metre 90/70-20	W/section 90/70-20	litres/ metre	litres/ section	kg/ metre	kg/ section
300	313	395	13.2	0.8	0.03	8.1	0.27
400	417	527	17.6	1.1	0.04	10.8	0.36
500	521	659	22.0	1.4	0.05	13.5	0.45
600	625	791	26.4	1.6	0.05	16.1	0.54
700	729	923	30.8	1.9	0.06	18.8	0.63
1000	1042	1318	43.9	2.7	0.09	26.9	0.90

Table 6.2.2

Output for radiator height 1000 mm

P5KV Length mm	Output			Water content		Weight	
	W/metre 75/65-20	W/metre 90/70-20	W/section 90/70-20	litres/ metre	litres/ section	kg/ metre	kg/ section
300	346	432	14.4	0.8	0.03	10.8	0.36
400	461	576	19.2	1.1	0.04	14.4	0.48
500	577	720	24.0	1.4	0.05	18.0	0.60
600	692	864	28.8	1.6	0.05	21.6	0.72
700	807	1008	33.6	1.9	0.06	25.2	0.84
1000	1153	1440	48.0	2.7	0.09	36.0	1.20

NOTE: A full list of outputs is available in Hudevads output tables.

Tapping designation



P5V/P5KV with bottom tappings

Fig. 6.2.3
Tapping designation, flow and return

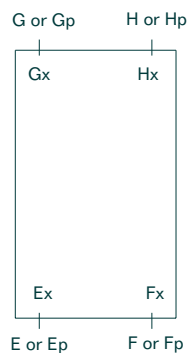
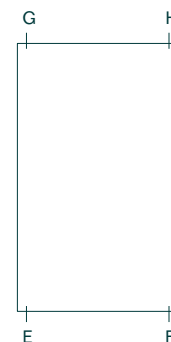


Fig. 6.2.4
Tapping designation, air vent and drain



BOTTOM FLOW & RETURN TAPPINGS (50 MM IN FROM EDGE)

Radiators requiring bottom tappings will have a rear tube, on the flow pipe, for optimum water flow, i.e. Ep or Fp. The return tapping will NOT have a rear tube, i.e. F or E. Please refer to fig. 6.2.5

TOP FLOW & RETURN TAPPINGS (50 MM IN FROM EDGE)

Radiators requiring top tappings will have a rear tube, on the return pipe, for optimum water flow, i.e. Gp or Hp. The flow tapping will NOT have a rear tube, i.e. H or G. Please refer to fig. 6.2.5

DIAGONALLY OPPOSITE TOP AND BOTTOM

Tapping positions E, F, G & H should only be used for flow or return if the radiator is connected diagonally opposite with the flow at the top.

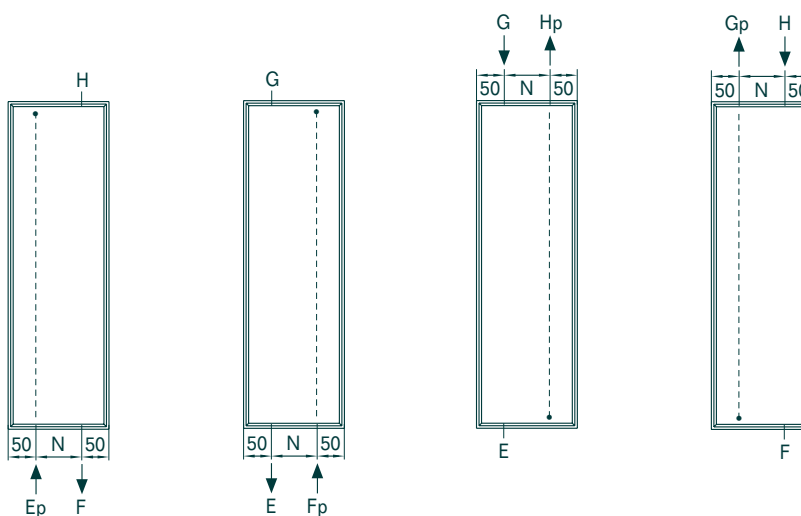
Example: 1/2" flow at H, 1/2" return at E, 1/2" airvent at G or
1/2" flow at G, 1/2" return at F, 1/2" airvent at H

Top and bottom tapplings Ep, Fp, Gp, Hp, E, F, G, H

Sizes 1/2" standard. Adapter for 3/8" and 3/4"

Positions
Flow: Ep, Fp, G or H
Return: F, E, Hp or Gp
Air vent: G, H
Drain: E, F

Fig. 6.2.5
P5V/P5KV, top and bottom tapplings, radiator length 300 - 700 & 1000 mm



Centre distance N, see table 6.2.6

NOTE: For connection Ep/F - Fp/E or Gp/H - Hp/G positions G or H is used for venting and E or F is used for draining

Table 6.2.6
Centre distance N

Radiator length L, mm	Centre distance N, mm
	Flow/Return
300	200
400	300
500	400
600	500
700	600
1000	900

Technical specifications

P5V and P5KV

Fig. 6.2.7
P5V, profile

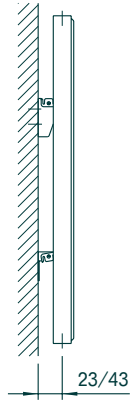


Fig. 6.2.8
P5KV, profile

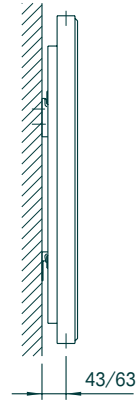
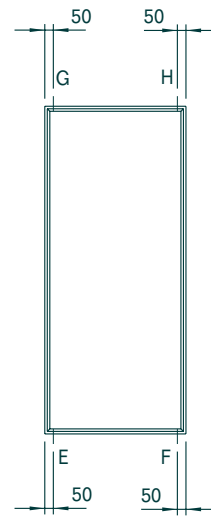


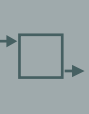
Fig. 6.2.9
Air vent and drain



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6.2.3

Rear tapplings

Ex, Fx, Gx, Hx

VARIANT

Sizes

1/2" standard. Adapter for 3/8" and 3/4"

Positions

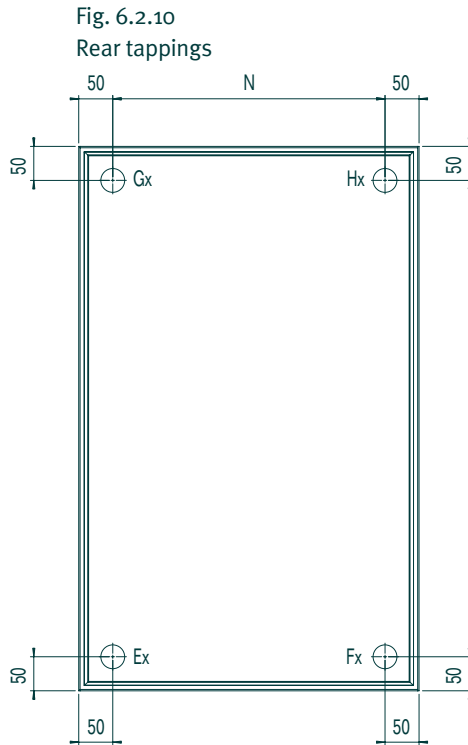


Fig. 6.2.11
P5V, profile



Fig. 6.2.12
P5KV, profile

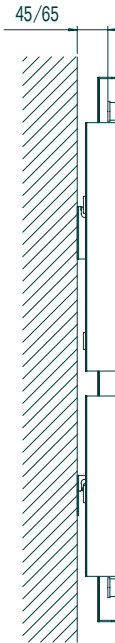


Table 6.2.13
Centre distance N for Gx-Hx and Ex-Fx tapplings

Radiator-length, mm	Centre distance N, mm
300	200
400	300
500	400
600	500
700	600
1000	900

Vertical centre distance for Gx-Ex and Hx-Fx is calculated as:
Radiator height – 100 mm

For optimum performance we recommend Gx-Fx or Hx-Ex.

Consideration should be given to the positioning of valves, if rear tapplings are ordered.

Other option

Rear tapplings can be tailored to your requirements.

INDIVIDUAL

Water resistance

Maximum expected pressure loss - calculated from the largest possible radiator.

Water temperature - flow	t_f	°C	75	70	70	65	90	55
Water temperature - return	t_r	°C	65	40	55	35	70	45
At P5V: H = 2500 mm and L = 1000 mm								
Pressure loss		kPa	0.42	0.03	0.15	0.03	0.22	0.15
At P5KV: H = 2500 mm and L = 1000 mm								
Pressure loss		kPa	0.63	0.04	0.22	0.03	0.25	0.22
Pressure losses for other heights/lengths can be approximated on a proportional basis								

Mounting

P5V and P5KV

Bracket BP10/30

Accessory for

P5V and P5KV, supplied unless otherwise specified.

Construction

Bracket and spacer in galvanised mild steel with nylon inserts for noise suppression. Coach screws, wall plugs and washers are included. Optional wall distance: 10 or 30 mm to the rear of the radiator.

Fig. 6.3.1
Bracket BP10/30

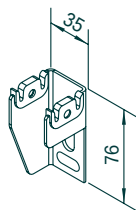


Fig. 6.3.2
Bracket BP10/30

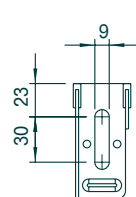
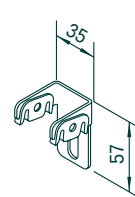


Fig. 6.3.3
Spacer for bracket BP10/30



NOTE: For tamperproof installation the spacer should be fixed to the wall, see page 6.3.2

Dimensions

P5V/P5KV: All radiator lengths 300 - 700 & 1000 mm

Fig. 6.3.4
P5V, profile

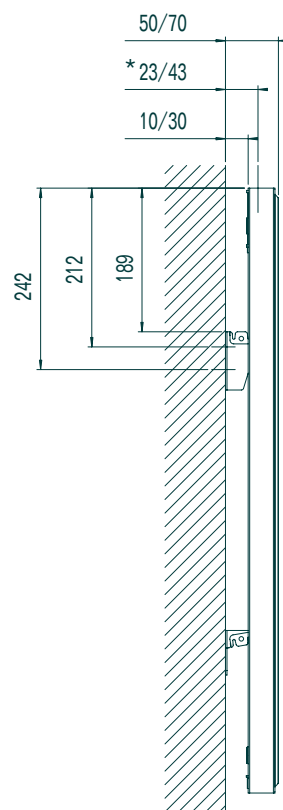
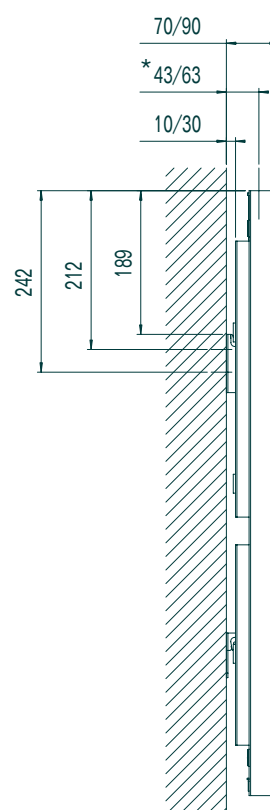


Fig. 6.3.5
P5KV, profile



* Tapping designation

Fig. 6.3.6
P5V/P5KV, position of goal posts,
rear view, 300 mm

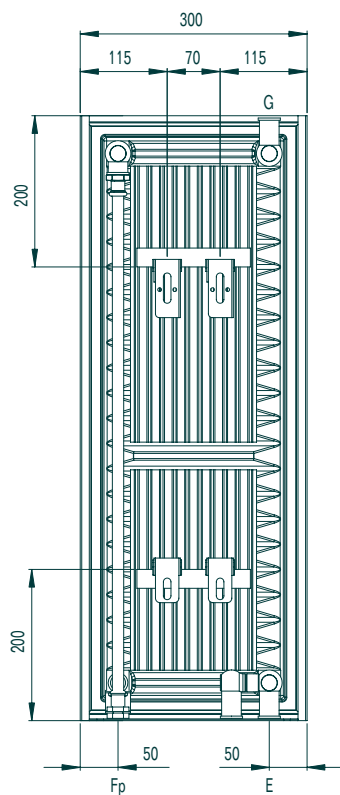


Fig. 6.3.7
P5V/P5KV, position of goal posts,
rear view, 400 - 700 & 1000 mm

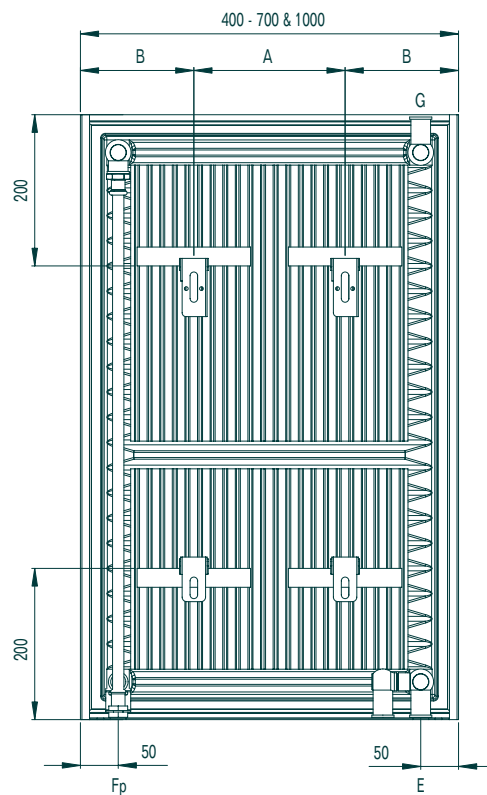


Table 6.3.8
P5V/P5KV, no. of goal posts/rails

Radiator length L, mm	Radiator height H, mm	No. of sections	No. of brackets/spacers/goal posts
300	800 - 2500	24 - 75	2/2/2
400-700 & 1000	800 - 2500	24 - 75	2/2/4
300	2500 - 4000	75 - 120	4/2/3
400-700 & 1000	2500 - 4000	75 - 120	4/2/6

Table 6.3.9
P5V/P5KV, position of goal posts/rails

Radiator length L, mm	A mm	B mm
400	100	150
500	200	150
600	300	150
700	400	150
1000	700	150

Tamperproof installation

Spacer can be used for tamperproof installation of radiator, see fig. 6.3.10 - 12

Fig. 6.3.10
Loosely mounted spacer

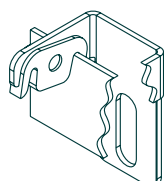


Fig. 6.3.11
Fixed spacer, elevated for fixing

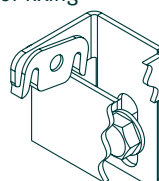
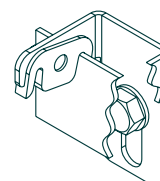


Fig. 6.3.12
Spacer in fixed position



Mounting

P5V and P5KV

Adjustable brackets BP28-70, BP48-90, BP68-110

VARIANT

Accessory for

P5V and P5KV

Application

For use where variable wall distance is required, or where uneven walls prevent the use of fixed brackets.

Construction

Bracket in galvanised mild steel with nylon inserts for noise suppression. Spacer in galvanised mild steel with adjuster screw. Coach screws, wall plugs and washers are included.

Fig. 6.3.13
Bracket BP28-70,
BP48-90 and BP68-110

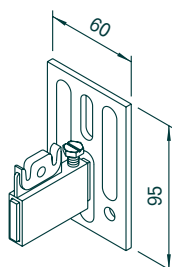


Fig. 6.3.14
Bracket BP28-70,
BP48-90 and BP68-110

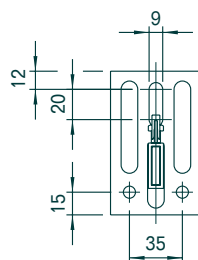
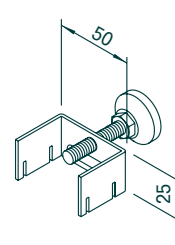


Fig. 6.3.15
Spacer for brackets BP28-70
BP48-90 and BP68-110



Dimensions

Fig. 6.3.16
P5V, profile

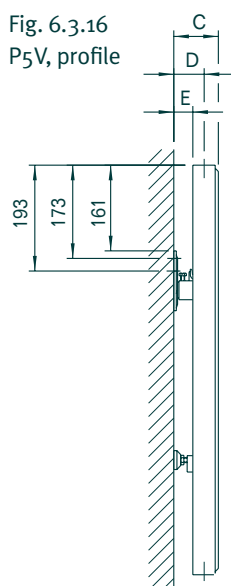


Fig. 6.3.17
P5KV, profile

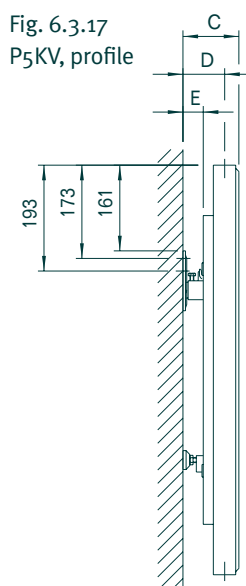


Table 6.3.18
P5V, wall dimensions

Bracket	C, mm	D, mm	E, mm
BP28-70	68-110	41-83	28-70
BP48-90	88-130	61-103	48-90
BP68-110	108-150	81-123	68-110

Table 6.3.19
P5KV, wall dimensions

Bracket	C, mm	D, mm	E, mm
BP28-70	88-130	61-103	28-70
BP48-90	108-150	81-123	48-90
BP68-110	128-170	101-143	68-110

Position of goal posts/ rails and no. of brackets

See pages 6.3.1 - 2



Built-in valve

VARIANT



P5V/P5KV with built-in valve Format 1

Application

For use where a thermostatic valve is to be integrated within the radiator, where discreet pipework is required or for the ease of installation.

Construction

The valve and associated pipework are fitted behind the radiator. On P5KV the number of convector fins is reduced to accommodate the built-in valve, resulting in a total output loss of approx 30-50 watts depending on height. The sensor head projects through a hole in front of the radiator (Format 1). A special integrated valve with pre-setting for limiting the maximum water flow is used.

There are different valve head options to suit the following valve bodies:

- 1: Danfoss type RA-N Integrated valve body to suit Danfoss heads having click-on coupling.
- 2: Danfoss type RA-N Integrated valve body, with M30 x 1.5 mm connection thread adapter, to suit Oventrop, Heimeier, MNG, Drayton and Honeywell sensors.

Tappings

1/2" bottom tappings

Position of goal posts/rails

See pages 6.3.1 - 2



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Built-in valve

P5V and P5KV

Format 1

Sensor head through front plate and 1/2" downward facing tappings

VARIANT

Fig. 6.4.1

P5V and P5KV, radiator length 300 - 700 & 1000 mm, with built-in valve Format 1

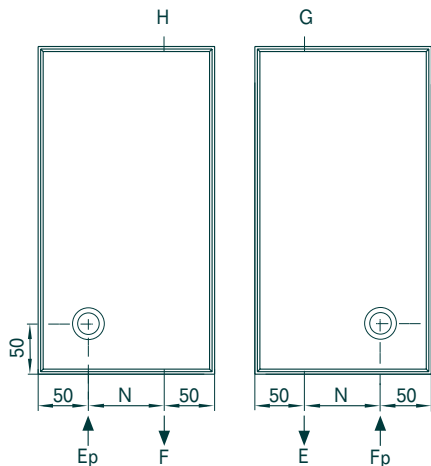


Fig. 6.4.2

P5V, built-in valve Format 1, profile

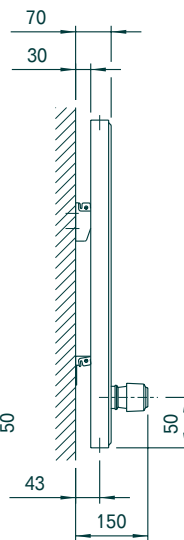
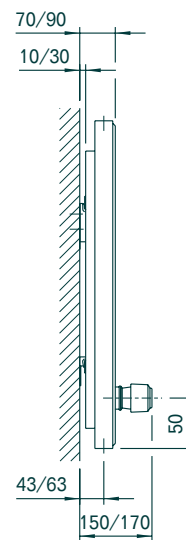


Fig. 6.4.3

P5KV, built-in valve Format 1, profile



NOTE: Measurement is for Danfoss sensor head RA 2990.

Other placement - please contact Hudevad.

Table 6.4.4

Centre distance N

Radiator length L, mm	Centre distance N, mm
300	200
400	300
500	400
600	500
700	600
1000	900

Format 3

Please contact Hudevad.

VARIANT

Format 4

Built-in valve concealed behind the radiator front plate for remote sensor/adjuster or motorised valve, please contact Hudevad.

INDIVIDUAL

Ordering

When ordering please state the built-in valve format, type of sensor head connections, position of valve - left or right hand - and the tapping requirements.

Example: P5V 1800/40 - 500, Format 1, Danfoss, left, 1/2" Ep & F

P5KV 1800/58 - 500, Format 1, Danfoss, right, 1/2" Fp & E

For other sensor heads

Please contact Hudevad.

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6.4.2

Accessories
P5V and P5KV



Air vent with O-ring 1/2". Supplied when ordering a 1/2" air vent.



Air vent with O-ring and revolving spout 1/2"



Plug with O-ring 1/2"



Square key for air vents



Sensor head Danfoss, RA 2990



Electrical heating Supplied separately by Hudevad in combination with radiator prepared for electrical heating element



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Specification clauses

P5V and P5KV

P5V

“Hudevad P5V model radiator with smooth, flat 2.00 mm thick rebated front plate with solid sides with 1.25 mm rear plate and pressed steel horizontal waterways. Water circulates directly behind the front plate.

No detachable clip-ons or covers. Primed and painted with oven dried powder coat or wet coat.

Surface treatment in accordance with DIN 55900 and EN 442.

Test and operating pressure 10, 7.7 bar respectively.”

P5KV

“Hudevad P5KV model radiator with smooth, flat 2.00 mm thick rebated front plate with solid sides with 1.25 mm rear plate and pressed steel horizontal waterways and 0.50 mm convector fins welded on the waterways.

Water circulates directly behind the front plate.

No detachable clip-ons or covers. Primed and painted with oven dried powder coat or wet coat.

Surface treatment in accordance with DIN 55900 and EN 442.

Test and operating pressure 10, 7.7 bar respectively.”

Built-in valve (page 6.4.1)

Format 1:

“Built-in valve Format 1 with sensor head through front plate and bottom tappings.”

Format 3:

“Please contact Hudevad”.

Format 4:

“Built-in valve concealed behind the radiator front plate for remote sensor/adjuster or motorised valve, please contact Hudevad”.

Order guide

When stating the size and type of radiator, please use the following format: Model height / depth - length. All measurements are to be stated in mm.

P5V 1800/40 - 500 1/2” Ep, 1/2” F, 1/2” H

Please state flow and return position

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Maintenance

Painting of primed radiators

Paint suitable for steel surfaces should be used.

Repair of powder or wet coated radiators

Water based acrylic paint obtained from a decorating wholesaler can be used.

Recoating of powder or wet coated radiators

After cleaning, powder or wet coated radiators can be recoated with the following:

Powder coat: PE powder

Wet coat: Synthetic, non yellowing coat. Water based or similar acrylic paint

Hardening: 180°C curing temperature for 10 min.

Packaging

Packaging can be left on the radiators for protection against damage etc. during fitting and re-decoration, but the flow temperature should not exceed 70°C.

Venting

Venting of the radiators is required at commissioning, or if the heating system has been drained. It is recommended that radiators are vented, using a cloth to prevent splashing, when the system is cold and the pump is off.

Cleaning

Light household cleaning materials can be used for painted surfaces. Abrasive materials such as scouring powder should not be used. The rear of the radiator can be cleaned with a soft brush, if necessary, together with a vacuum cleaner.



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