PANEL PLUS VERTICAL WALL-MOUNTED

Clean lines for modern interiors

jaga

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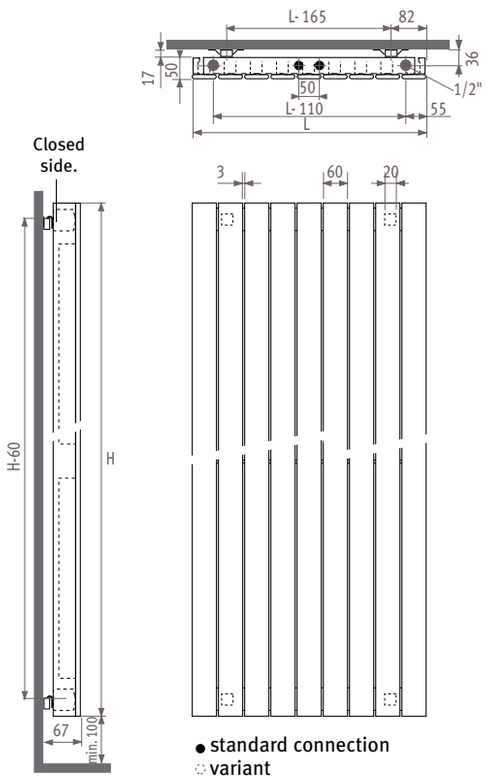
Panel Plus Vertical - Wall-mounted

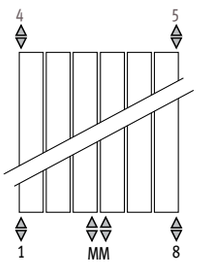
Dimensions

Product code: PPVW



Available lengths	240	310	370	430	500	560	620	690	750	810	870	940
Available heights	1800	2000	2200	2400	2600	2800	3000					

Connections



Key:
1 =flow
2 = return

Standard connection
Order code: MM
Universal central connection code, can flow left of right.
Also possible are connection codes 18 or 81.

Top end connection
Order codes: 45 or 54
Provide an air vent on the central heating tube.

Options

Extended wall fixings
The space between the rear of the collector and the wall is 37mm instead of 17mm. Only possible in combination with connection to the wall and with a Deco-Pro valve.

Order code: 9092.50

All dimensions are shown in millimetres

Outputs

Outputs in watts at 75/65/20°C & 55/45/20°C, in accordance with EN442

Type 11

	code	height	length	type	colour	connection
ORDER CODE:	PPVW.	180	024	11	001	/MM

(Example order code shown is for a 1800mm high radiator, 240mm long)

Height	Length ›	240	310	370	430	500	560	620	690	750	810	870	940
1800	75/65/20	584	730	875	1021	1167	1313	1459	1605	1751	1897	2043	2189
	55/45/20	297	371	444	519	593	667	741	815	889	964	1038	1112
2000	75/65/20	644	805	965	1126	1287	1448	1609	1770	1931	2092	2253	2414
	55/45/20	329	411	493	575	657	739	821	904	986	1068	1150	1232
2200	75/65/20	700	876	1051	1226	1401	1576	1751	1926	2101	2276	2451	2627
	55/45/20	359	450	539	629	719	809	899	988	1078	1168	1258	1348
2400	75/65/20	754	943	1131	1320	1508	1697	1885	2074	2262	2451	2639	2828
	55/45/20	389	486	583	681	777	785	972	1069	1166	1264	1361	1458
2600	75/65/20	805	1006	1207	1408	1610	1811	2012	2213	2414	2616	2817	3018
	55/45/20	417	521	625	730	834	938	1043	1147	1251	1356	1460	1564
2800	75/65/20	852	1066	1279	1492	1705	1918	2131	2344	2557	2770	2983	3197
	55/45/20	444	555	666	777	888	999	1110	1221	1332	1443	1554	1665
3000	75/65/20	897	1121	1345	1569	1794	2018	2242	2466	2690	2915	3139	3363
	55/45/20	470	587	704	821	939	1056	1174	1291	1408	1526	1643	1761

Supplied as Standard

- Colours: 001 Sandblast grey metallic 201 white or 233 traffic white
- Universal connection MM and 18/81 underneath
- Chrome-plated air vent and drain plug
- Wall fixing

Weight & water content

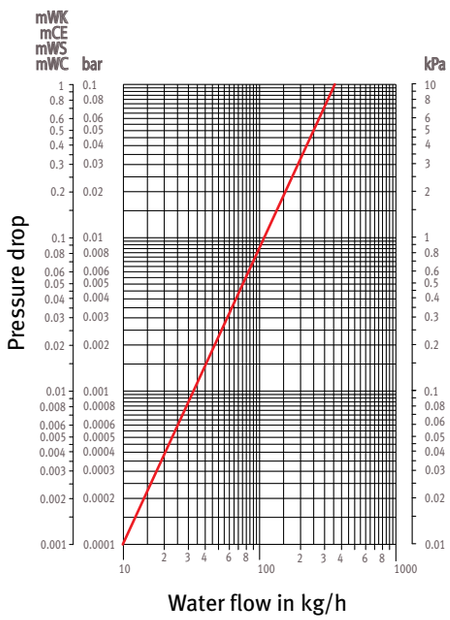
Weight content in litres/cm

H	P11
1800	0.139
2000	0.152
2200	0.164
2400	0.176
2600	0.188
2800	0.201
3000	0.213

Weight in kg/cm

H	P11
1800	0.613
2000	0.675
2200	0.737
2400	0.800
2600	0.862
2800	0.924
3000	1.986

Pressure drop



All dimensions are shown in millimetres

Output measured in accordance with EN442, at a water temperature of 75/65°C and a room temperature of 20°C (ΔT=50).

Connection Sets

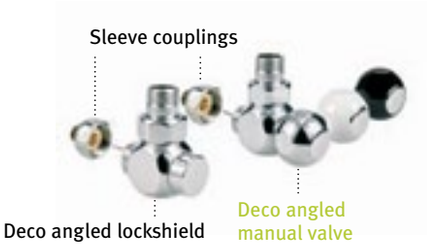
The order code of the connection set will be completed with the sleeve coupling code

Set 31

For connection to the wall

Two pipe

Code	Thermostatic head
CODE.MW2.MW.1...	white
CODE.MW2.MC.1...	chrome
CODE.MW2.MB.1...	black



Set 32

For connection to the floor

Two pipe

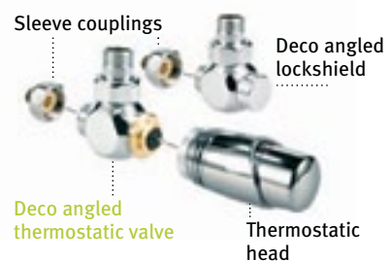
Code	Thermostatic head
CODE.MF2.MW.1...	white
CODE.MF2.MC.1...	chrome
CODE.MF2.MB.1...	black

Set 33 | Set 36

For connection to the wall

Two pipe

33 – Standard Kv	36 – Reduced Kv	
CODE.JW2.DW.1...	CODE.RW2.DW.1...	
CODE.JW2.DC.1...	CODE.RW2.DC.1...	



Set 34 | Set 37

For connection to the floor

Two pipe

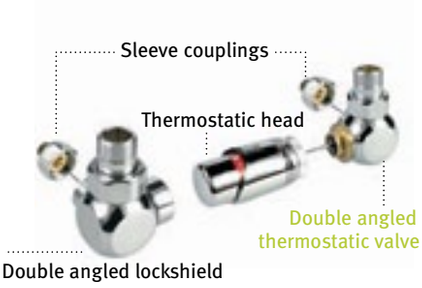
34 – Standard Kv	37 – Reduced Kv	
CODE.JF2.DW.1...	CODE.RF2.DW.1...	
CODE.JF2.DC.1...	CODE.RF2.DC.1...	

Set 35 | Set 38

For connection to the wall

Two pipe

35 – Standard Kv	38 – Reduced Kv	
CODE.JH2.DW.1...	CODE.RH2.DW.1...	
CODE.JH2.DC.1...	CODE.RH2.DC.1...	



Thermostatic heads

DW

Chrome/ White

DC

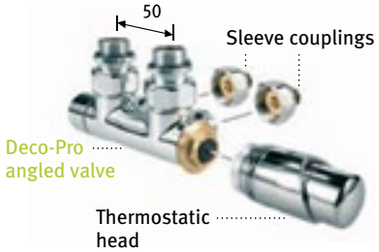
Chrome

Set 41 | Set 45

For connection to the wall

Two pipe

41 – Standard Kv	45 – Reduced Kv	
CODE.PW3.DW.1...	CODE.RW3.DW.1...	
CODE.PW3.DC.1...	CODE.RW3.DC.1...	

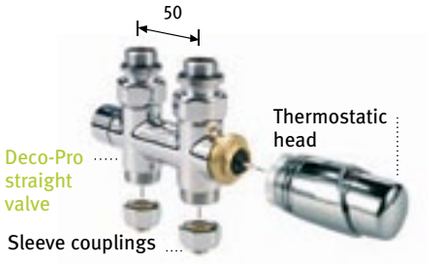


Set 42 | Set 46

For connection to the floor

Two pipe

42 – Standard Kv	46 – Reduced Kv	
CODE.PF3.DW.1...	CODE.RF3.DW.1...	
CODE.PF3.DC.1...	CODE.RF3.DC.1...	

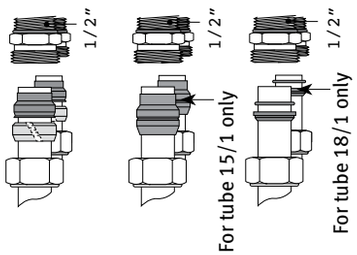


Sleeve Couplings

For Jaga valve - M24

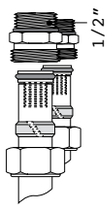
For flexible steel or copper tube

Code	Tube Ø
110	10/1
112	12/1
114	14/1
115	15/1
116	16/1
118	18/1



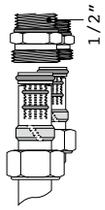
For synthetic tube

Code	Tube Ø
212	12/2
214	14/2
219	16/1.5
216	16/2
217	17/2
218	18/2



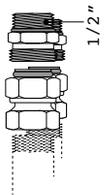
For RPE/ALU tube

Code	Tube Ø
314	14/2
316	16/2
326	16/2.2
318	18/2



Steel tube for CH

Code	Tube Ø
501	1/2”
503	3/8”



Complete ordering code with sleeve couplings according to the material used and diameter of the tube. *The correct type of sleeve coupling is determined by the ordering code of the connection set* **Example:** CODE. PW2.DW. 32. (insert relevant code from above)

Correction factors

Average correction factors according to EN442 - 75/65/20°C

TV	TL	TR_20	25	30	35	40	45	50	55	60	65	70	75	80	85
90	20	0.63	0.69	0.75	0.81	0.87	0.94	1.00	1.07	1.13	1.20	1.27	1.34	1.41	1.48
	24	0.54	0.59	0.65	0.71	0.77	0.83	0.90	0.96	1.03	1.09	1.16	1.23	1.29	1.36
85	20	0.57	0.63	0.69	0.75	0.81	0.87	0.94	1.00	1.07	1.13	1.20	1.27	1.314	
	24	0.48	0.54	0.59	0.65	0.71	0.77	0.83	0.90	0.96	1.03	1.09	1.16	1.23	
80	20	0.51	0.57	0.63	0.69	0.75	0.81	0.87	0.94	1.00	1.07	1.13	1.20		
	24	0.43	0.48	0.54	0.59	0.65	0.71	0.77	0.83	0.90	0.96	1.03	1.09		
75	20	0.46	0.51	0.57	0.63	0.69	0.75	0.81	0.87	0.94	1.00	1.07			
	24	0.37	0.43	0.48	0.54	0.59	0.65	0.71	0.77	0.83	0.90	0.96			
70	20	0.41	0.46	0.51	0.57	0.63	0.69	0.75	0.81	0.87	0.94				
	24	0.32	0.37	0.43	0.48	0.54	0.59	0.65	0.71	0.77	0.83				
65	20	0.35	0.41	0.46	0.51	0.57	0.63	0.69	0.75	0.81					
	24	0.27	0.32	0.37	0.43	0.48	0.54	0.59	0.65	0.71					
60	20	0.30	0.35	0.41	0.46	0.51	0.57	0.63	0.69						
	24	0.23	0.27	0.32	0.37	0.43	0.48	0.54	0.59						
55	20	0.26	0.30	0.35	0.41	0.46	0.51	0.57							
	24	0.18	0.23	0.27	0.32	0.37	0.43	0.48							
50	20	0.21	0.26	0.30	0.35	0.41	0.46								
	24	0.14	0.18	0.23	0.27	0.32	0.37								
45	20	0.16	0.21	0.26	0.30	0.35									
	24	0.13	0.17	0.22	0.26	0.31									
40	20	0.10	0.14	0.18	0.23	0.27									
	24	0.12	0.16	0.21	0.26										
35	20	0.06	0.10	0.14	0.18										
	24	0.08	0.12	0.16											
30	20	0.03	0.06	0.10											
	24	0.05	0.08												

KEY
Tv = flow temperature
Tr = return temperature
Tl = desired air temperature

The indicated outputs with ΔT 50°c and ΔT 30°c are the exact outputs. ΔT 50°c outputs are measured in accordance with EN442 and ΔT 30°c outputs are calculated according to EN442.

An average correction factor is given in this table for outputs at other ΔT and is applicable for all dimensions.

How to choose the right radiator?

Rapid estimation of heat losses

Calculate the volume of the room (L x W x H) and multiply this by the Watts/m³ figure given in the table below. Choose according to the level of insulation and the desired room temperature.

Insulation	20°	24°
excellent	45	55
good	65	75
average	85	95
poor	100	115

Required output in Watts/m³

Example

Use the table to determine the relevant correction factor with a water temperature of 80/60°c with a room temperature of 24°C.

The correction factor = 0.90

Required output 1000 watts : 1000 divided by 0.90 = 1111 watts therefore search in this leaflet's standard output table for a product with an output of at least 1111 watts. Alternatively use the "Radiator Finder" search function on www.jaga.co.uk to identify all Jaga heating products with this required output.

EN 442 EURONORM

Output calculated in accordance with EN442, at a water temperature of 75/65°C and a room temperature of 20°C (ΔT=50).

Product description

Panel Plus Vertical wall-mounted

Material
Composed of steel single or double vertical collectors at rear end with steel horizontal radiation tubes. The radiation tubes are welded on the inside of the collector by gas, and with steel as a sole addition. Therefore no welding seams are visible on the outside of the radiator.
Pressure test: 6 bar
Working pressure: 4.6 bar

Composition
The oval radiation tubes (60 x 10.4 x 1.5mm) are vertically and parallel placed lengthways on the horizontal collector (37mm x 35mm x 2mm) with an interdistance of 3mm.
The radiation tubes are provided with convection fins.
All fixing points are welding to the radiator.
The supports to fit the wall are supplied with the standard delivery.
No transparency.

Finish
The radiators are sandblasted, degreased, phosphated, electrostatically lacquered with epoxy-polyester powder and finally stove enameled at 200°C. This high quality finish offers an optimal scratch resistance and is very easy to maintain.
Thickness of the lacquer: min80 µ

Connections
The sockets ½" are integrated in the collectors and hence invisible. The customer may choose and order connections for top or bottom. Provided with a chrome plated air vent ½" and drain plug ½"

How to install
The building services engineer chooses the radiators considering the following conditions:

- A heat output calculation according to the standard.
- The heat output and the dimensions of the Panel Plus radiators according to EN 442.
- The radiators may be wall fitted with the wall fixings supplied.
- The specially designed thermostatic connection sets/ thermostatic Jaga Deco/ Jaga-pro valves/ manual Jaga Deco valves can be connected to plastic central heating service pipes/ RPE/ALU. Tube / copper tube/ steel pipe.
- Jaga thermostatic heads/Jaga Deco thermostatic heads chrome/ White/ Jaga Comap thermostatic heads silver/not to be/ to be fitted.

Options
Jage Deco valves

Jaga colours

For Panel Plus

Standard colours

RAL 9010 201 White	RAL 9016 233 Traffic White	001 Sandblast Grey Metallic

Premium colours

RAL 9010 301 White	212 312 Bahama	222 322 Capri
RAL 9001 202 302 Off-white	RAL 6009 213 313 English Green	223 323 Natural
RAL 7035 203 303 Light Grey	214 314 Whisper Rose	224 324 Edelweis
RAL 9005 204 304 Black	RAL 5018 215 315 Turquoise	225 325 Jasmine
205 305 Pergamon	216 316 Bermuda	RAL 3003 226 326 Ruby Red
206 306 Manhattan	RAL 8017 217 317 Chocolate Brown	228 328 Classic White
RAL 5003 208 308 Sapphire Blue	RAL 5015 218 318 Azure	RAL 6000 229 329 Patina Green
RAL 7011 209 309 Dark Grey	RAL 4008 219 319 Violet	230 330 Aloa Blue
RAL 1004 210 310 Golden Yellow	220 320 Aegean	RAL 7016 231 331 Anthracite Grey
RAL 3000 211 311 Flaming Red	221 321 Calypso	232 332 Sunrise
		RAL 9016 333 Traffic White

Special colours

002 Hammerstroke Silver/Black
003 Claret Metallic
005 Smooth Grey Metallic
RAL 9006 006 Aluminium
007 Anthracite Metallic
008 Anthracite Structure

As it's impossible to reproduce colours with 100% accuracy, this colour chart is intended as a guide only. Colour swatches are available on request.

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Jaga Guarantee Information

1 The guarantee is valid only if the equipment is properly and correctly used, by its first owner and if installed in accordance with the norms and instructions as detailed in the instruction leaflet and current industry standard practices.

2 The guarantee only applies to the equipment and the spare parts supplied by Jaga. Jaga has the choice between repair and replacement of the equipment or the spare parts. If any modifications have been made by Jaga to the standard product design, Jaga reserves the right to replace the guaranteed equipment with equivalent products or spare parts.

3 The period of guarantee is mentioned in this certificate. The guarantee decreases every year on a straight line basis by an equal percentage in order to reach a zero guarantee at the end of the guarantee period (e.g. for a period of 10 years the annual decrease of the guarantees 10% of the invoiced value). Repaired or replaced product is guaranteed through to the end of the original guarantee period.

4 The guarantee is valid only on products displaying the appropriate identification information concerning product type and series. No guarantee is granted on equipment or spare parts lacking this information, on equipment where this information has been removed or altered, or on equipment that has been repaired or modified by persons not authorised by Jaga to carry out this work.

5 The customer is responsible for any damage caused as a result of errors in installation or use of incorrect fittings, or for any damage caused by electrical connections, faulty or damaged electrical installations or appliances, erroneous voltage or hydraulic pressure and all other errors not directly related to the product delivered by Jaga. The guarantee is also revoked when unsuitable parts or components are used. The guarantee for our heat exchangers is not valid if they are regularly drained, or if they are heated by means of industrial water, steam or water saturated by excessive quantities of oxygen. The quality of the system ater has to be in accordance with the VDI 2035-2 directives. The guarantee is also not applicable if the heat exchangers are placed in unsuitable atmospheric surroundings, such as but not exclusively ammonia, caustic substances etc.

6 This guarantee excludes damage due to incorrect handling and/or use of the equipment, or due to formation of lime deposits, incorrect use of the safety valve, or to all equipment that is incorporated into the building in a way that means it cannot be accessed normally.

7 Any work undertaken or product supplied as a result of a guarantee claim that proves not to be valid will be charged for. Product supplied will be invoiced at the customer's standard purchasing terms, and labour will be charged at £50 per hour with a minimum labour charge of £200.

8 The guarantee period starts from the date of the invoice for supply of the products covered by the guarantee. If the invoice is not available, the date of production will be used based on the product ID number/series.

9 Only the courts of judicial district Hasselt (Belgium) are authorised to deal with disputes arising from this guarantee. It will apply Belgian law even when sales involved are subjects of EU member states as well as non-EU member countries.

Casings and components

Valves

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