



PKV.

PASSIVE CHILLED BEAM IN NOMINAL LENGTHS OF UP TO 3000 MM AND WITH A HORIZONTAL HEAT EXCHANGER

Passive chilled beam with 2-pipe heat exchanger for ceiling installation, either freely suspended or above an open cell ceiling

- For room heights from 2.60 m
- Comfortable room cooling
- Water connection from the side or from the top
- 3 standard widths and heights for optimum dissipation of heat loads

Optional equipment and accessories

- Control package
- Aluminium frame with perforated metal facing
- Heat exchanger powder-coated black
- Powder coating in many different colours, e.g. RAL CLASSIC or NCS

Application



Application

- Passive chilled beam of Type PKV for ceiling installation, either freely suspended or above an open cell ceiling, suitable for room heights from 2.60 m
- Dissipation of high heat loads using a 2-pipe heat exchanger
- Energy-efficient solution since water is used as a medium for heating and cooling
- Passive chilled beam (no supply air) for new buildings and refurbishment projects

Special characteristics

- Air-water component for the dissipation of heat loads
- Horizontal heat exchanger as 2-pipe system
- Aesthetic frame and perforated metal facing for freely suspended installation in comfort areas
- Water connections at the narrow side, Ø12 mm Cu pipe, with plain tails, either straight or 90° bent upwards

Description



Variants

- PKV-0: Casing and heat exchanger
- PKV-L: Including perforated metal facing
- PKV-R-L: Including frame and perforated metal facing

Construction

- PKV-0 (without frame): Powder-coated RAL 9005, black, gloss level 70 %
- PKV-L (with perforated metal facing): Powder-coated RAL 9010, pure white, gloss level 50 %
- PKV-R-L (with frame and perforated metal facing): Powder-coated RAL 9010, pure white, gloss level 50 %
- P1: Powder-coated in any other RAL colour, gloss level 70 %
- G3: Heat exchanger, powder-coated RAL 9005, black, gloss level 70 %

Attachments

- Frame
- Perforated metal facing

Useful additions

- Connecting hoses
- Control equipment consisting of control panel including a controller with integral room temperature sensor; valve and valve actuator; and compression coupler

Materials and surfaces

- Casing and perforated metal facing made of galvanised sheet steel
- Frame (PKV-R) made of aluminium
- Heat exchanger with copper tubes and aluminium fins, and with galvanised flanges
- Casing without frame: powder-coated black (RAL 9005) as standard
- Casing with frame and/or perforated metal facing: powder-coated pure white (RAL 9010) as standard

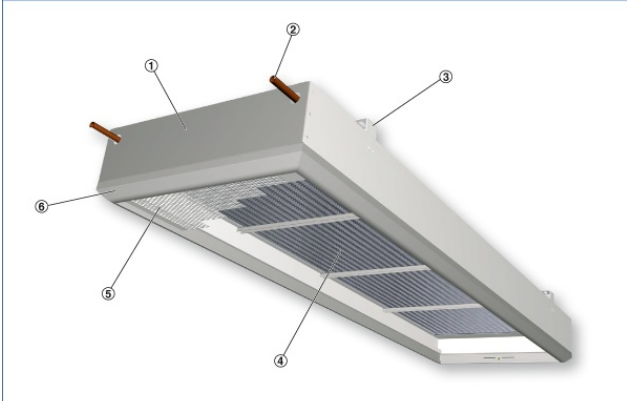
TECHNICAL INFORMATION

Functional description

Passive chilled beams are used to dissipate high heat loads.

Warm room air rises due to thermal buoyancy, is cooled by the heat exchanger, then slowly flows downwards again to the occupied zone.

Schematic illustration of the PKV



- | | |
|--|--------------------------------------|
| ① Casing | ④ Heat exchanger |
| ② Water connections, \varnothing 12 mm, straight (90° bent upwards as an option) | ⑤ Perforated metal facing (optional) |
| ③ Hanging bracket | ⑥ Aluminium frame (optional) |

Functional description

Passive chilled beams are used to dissipate high heat loads.

Warm room air rises due to thermal buoyancy, is cooled by the heat exchanger, then slowly flows downwards again to the occupied zone.

Length	1000, 1500, 2000, 2500, 3000 mm
Width	295, 455, 575 mm
Height	110, 200, 300 mm
Width of heat exchanger	280, 440, 560 mm
Cooling capacity	Up to 1000 W
Max. operating pressure, water side	6 bar
Max. operating temperature	75 °C

Quick sizing – nominal cooling capacity [W] to EN 14518

Length	Width	Height	$\Delta t_{\text{min-out}} = 8 \text{ K}; \Delta t_w = 2 \text{ K}$		
			Distance to ceiling		
			100 mm	200 mm	300 mm
mm			W		
1000	295	110	72	76	76
		200	92	98	98
		300	110	117	117
1500		110	120	128	128
		200	162	174	175
		300	203	218	219
2000		110	182	197	198
		200	253	271	272
		300	310	330	331
2500	110	256	274	275	
	200	342	364	365	
	300	409	433	435	
3000	110	328	349	350	
	200	426	451	453	
	300	504	532	534	
1000	455	110	95	108	112
		200	123	142	149
		300	150	178	187
1500		110	178	213	224
		200	249	290	302
		300	304	347	361
2000		110	291	334	347
		200	377	426	441
		300	442	497	513
2500	110	392	442	457	
	200	493	552	570	
	300	572	638	658	
3000	110	486	544	562	
	200	604	674	696	
	300	698	777	801	
1000	575	110	111	135	139
		200	149	191	198
		300	190	242	250
1500		110	244	300	307
		200	324	384	392
		300	382	446	455
2000		110	421	443	452
		200	472	546	556
		300	543	625	637
2500	110	498	575	585	
	200	610	700	713	
	300	697	799	813	
3000	110	612	702	797	
	200	744	852	867	
	300	848	970	987	

Passive chilled beams of Type PKV, without frame for installation above open cell ceilings, or with frame for freely suspended installation, suitable for the dissipation of high heat loads.

Special characteristics

- Air-water component for the dissipation of heat loads
- Horizontal heat exchanger as 2-pipe system
- Aesthetic frame and perforated metal facing for freely suspended installation in comfort areas
- Water connections at the narrow side, Ø12 mm Cu pipe, with plain tails, either straight or 90° bent upwards

Materials and surfaces

- Casing and perforated metal facing made of galvanised sheet steel
- Frame (PKV-R) made of aluminium
- Heat exchanger with copper tubes and aluminium fins, and with galvanised flanges
- Casing without frame: powder-coated black (RAL 9005) as standard
- Casing with frame and/or perforated metal facing: powder-coated pure white (RAL 9010) as standard

Construction

- PKV-0 (without frame): Powder-coated RAL 9005, black, gloss level 70 %
- PKV-L (with perforated metal facing): Powder-coated RAL 9010, pure white, gloss level 50 %
- PKV-R-L (with frame and perforated metal facing): Powder-coated RAL 9010, pure white, gloss level 50 %
- P1: Powder-coated in any other RAL colour, gloss level 70 %
- G3: Heat exchanger, powder-coated RAL 9005, black, gloss level 70 %

Technical data

- Nominal length: 1000, 1500, 2000, 2500, 3000 mm
- Nominal width: 295, 455, 575 mm
- Nominal height: 110, 200, 300 mm
- Width of heat exchanger: 280, 440, 560 mm
- Cooling capacity: up to 1000 W
- Max. operating pressure, water side: 6 bar
- Max. operating temperature: 75 °C

PKV

PKV – R – L – G – W / 2500 x 455 x 200 / P1 – RAL ... / G3 / VS

1 2 3 4 5 6 7 8 9 10 11

1 Type

PKV Passive chilled beam

2 Aluminium frame

No entry: none

R With

3 Perforated metal facing

No entry: none

L With

4 Water connection

G Pipe connection, Ø12 mm, straight

B Pipe connection, Ø12 mm, 90° bent upwards

5 Suspension

W Hanging brackets

6 Length [mm]

L

1000

1500

2000

2500

3000

7 Width [mm]

B

295

455

575

8 Height [mm]

H

110

200

300

9 Surface of casing

No entry: no frame

RAL 9005, black

No entry: with frame and/or perforated metal facing,

RAL 9010, pure white

P1 Powder-coated, specify RAL CLASSIC colour

Gloss level:

RAL 9010 50 %

RAL 9006 30 %

All other RAL colours 70 %

10 Surface of heat exchanger

No entry: untreated

G3 RAL 9005, black

11 Valves and actuators

No entry: none

VS With