

# Positive Input Ventilation (PHS PIV)



SAP approved Energy Efficient  
Positive Input Ventilation  
Low Energy EC Motor  
as standard.



## About

Loft mounted whole-house Positive Input Ventilation unit designed to introduce fresh, clean and filtered air into the dwelling so to dilute, displace and replace the internal stale, contaminated, humid air. Suitable for floor or ceiling installation, in any position.

## Specification

- **Outer fan** casing manufactured from powder coated galvanised sheet steel providing long lasting and robust construction. The unit is finished in white RAL 9010.
- **Top cover** made from strong durable ABS technopolymer.
- **EC external rotor motor**, provided with integral thermal protection, mounted on sealed for life ball bearings, and antivibration supports.
- **Forward curved centrifugal impeller** dynamically balanced and directly driven by the motor to provide a smooth airflow through the unit.
- **External anti-dust washable pre-filter**, easily removable without tools.
- **Internal ISO Coarse 60% (G4)** filter as standard.
- **Design ceiling diffuser** made of high quality ABS technopolymer.
- **2,5m flexible duct** to connect ventilation unit and diffuser.

## Features & Benefits

- **Ease of installation:** fixing eyelets are part of the fan body.
- **Compact profile** to fit in narrow loft spaces.
- **Top cover** easily removable for inspection and maintenance.
- **Acoustic self-extinguishing foam lining** for sound attenuation.
- **Double filtration** level to ensure that the incoming air is cleaned, removing dust, pollen and external air pollutants.
- **Washable pre-filter** to avoid longer contaminated particles being pulled into the main filter and restricting filtration which reduce the filter lifetime.
- **Integral magnet system** to fix and easily remove (without tools) the washable pre-filter.
- **Discreet ceiling diffuser** with adjustable blanking plates to direct the airflow to suit the needs of tenants.
- **EC motor** for energy saving and extremely quiet operation.

- **Effective to improve** indoor air quality, to cure condensation and mould problems and to reduce Radon gas concentration.
- **IAQ filter** (accessory) to filter down to PM2.5 including diesel particulates and to filtrate odours, fumes and vapours.
- **Tested to the latest standards:** units are tested in the TÜV Rheinland recognised laboratory at Passive House Systems, meaning accurate, up to date information on electrical safety, performance and noise level that can be relied upon. Designed and manufactured in accordance with EN60335-2-80 (Low Voltage Directive) and the EMC Directive (Electromagnetic Compatibility).

## Accessories

- IAQ filter.
- Suspension kit.
- Remote humidistat .
- Multi-Controller.
- Thermal insulated duct.

## AGENT DETAILS:

## Example of a complete ventilation system



**Application:** renovation. Does not require any ducting system.

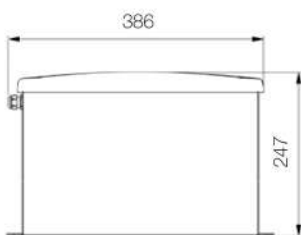
**How it works:** a continuous running centralised single flow supply ventilation unit (PHS\_PIV) gently introduces fresh, clean, filtered air into the dwelling through a ceiling diffuser, to push out and replace the internal stale, contaminated, humid air. The loft mounting provides discrete installation and very quiet operation.

**Energy saving:** the EC brushless motor significantly reduces the electricity consumption.

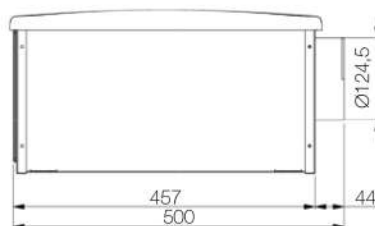
**Indoor Air Quality:** a correctly specified mechanical ventilation system can ensure the quality of the indoor air is constantly maintained for the health and well-being of the occupants as well as of the building. Duly maintained filters ensure that incoming air is suitably filtered of pollutants before it enters the home.

## Dimensions (mm) and Weight (kg)

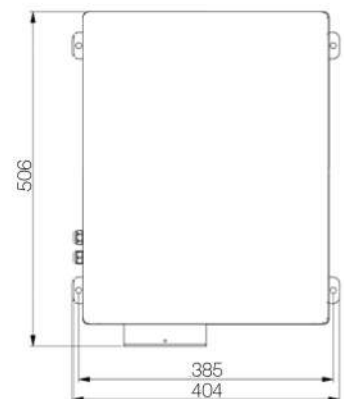
Model	PHS_PIV
Weight	8,3



front view



side view



top view

# Product fiche - ErP Directive, Regulations 1253/2014 - 1254/2014

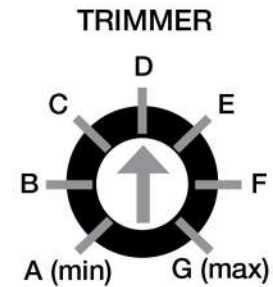
a)	Mark	-	PASSIVE HOUSE SYSTEMS			
b)	Model	-	PHS_PIV-N		PHS_PIV-H	
c)	SEC class	-	C	E	C	E
c1)	SEC warm climates	kWh/m <sup>2</sup> .a	-10	-6,2	-10,3	-6,3
c2)	SEC average climates	kWh/m <sup>2</sup> .a	-24,4	-16,7	-24,6	-16,8
c3)	SEC cold climates	kWh/m <sup>2</sup> .a	-49,5	-35,1	-49,7	-35,2
	Energy label	-	No		No	
d)	Unit typology	-	Residential - unidirectional		Residential - unidirectional	
e)	Type of drive	-	Multi speed drive		Multi speed drive	
f)	Type of Heat Recovery System	-	Absent		Absent	
g)	Thermal efficiency of heat recovery	%	N/A		N/A	
h)	Maximum flow rate @ 100 Pa	m <sup>3</sup> /h	216		216	
i)	Electric power input (maximum flow rate)	W	24		400	
j)	Sound power level (L <sub>WA</sub> )	dB(A)	43		43	
k)	Reference flow rate	m <sup>3</sup> /h	162		162	
l)	Reference pressure difference	Pa	10		10	
m)	Specific power input (SPI)	W/m <sup>3</sup> /h	0,089		0,089	
n1)	Control factor	-	0,65	0,85	0,65	0,85
n2)	Control typology	-	Local demand control	Central demand control	Local demand control	Central demand control
o1)	Maximum internal leakage rate	%	N/A		N/A	
o2)	Maximum external leakage rate	%	N/A		N/A	
p1)	Internal mixing rate	%	N/A		N/A	
p2)	External mixing rate	%	N/A		N/A	
q)	Visual filter warning	-	N/A		N/A	
r)	Instructions to install regulated grilles	-	see installation manual		see installation manual	
s)	Internet address for pre/disassembly instructions	-	www.passivehousesystems.com		www.passivehousesystems.com	
t)	Airflow sensitivity to pressure variations	%	6		6	
u)	Indoor/outdoor air tightness	m <sup>3</sup> /h	67		67	
v1)	AEC - Annual electricity consumption - warm climates	kWh	0,7	1,0	0,6	1,0
v2)	AEC - Annual electricity consumption - average climates	kWh	0,7	1,0	0,6	1,0
v3)	AEC - Annual electricity consumption - cold climates	kWh	0,7	1,0	0,6	1,0
w1)	AHS - Annual heating saved - warm climates	kWh	11,9	8,7	11,9	8,7
w2)	AHS - Annual heating saved - average climates	kWh	26,2	19,2	26,2	19,2
w3)	AHS - Annual heating saved - cold climates	kWh	51,3	37,6	51,3	37,6
	Sound pressure @ 3m <sup>(1)</sup> max	dB(A)	27		27	
	Ambient temperature max	°C	+40		+40	
	Degree of protection	-	IPX2		IPX2	
	Marking	-	CE		CE	

- 230V ~ 50/60Hz.  
- air performance measured according to ISO 5801 a 230V 50Hz, air density 1,2Kg/m<sup>3</sup>.  
- data measured in the TÜV Rheinland  
(1) sound pressure level @ 3m in free field, breakout, for comparative purposes only.

# Performance

## Performance PHS\_PIV-N

Trimmer Position	m <sup>3</sup> /h	l/s	W
A (min)	61	17	3,7
B	76	21	4,3
C	108	30	7,5
D	144	40	12,0
E	180	50	17,3
F	198	55	21,0
G (max)	216	60	24,2



## Performance PHS\_PIV-H

Unit Setting	m <sup>3</sup> /h	l/s	W
Min. speed 1	61	17	3,7
Min. speed 2	76	21	4,3
Min. speed 3	90	25	5,8
Min. speed 4	104	29 (default)	6,9
Min. speed 5	119	33	8,8
Min. speed 6	133	37	10,3
Min. speed 7	148	41	12,5
Min. speed 8	162	45	14,4
Max. speed 1	180	50	17,3
Max. speed 2	216	60	24,2



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