



# Heating

Hydronic heat pumps



## SELECTION

Choose the series that best matches the building layout.

Excellent ecodan's heating performance, even at low outdoor temperature!

R32

### INDOOR UNIT

Hydrobox, Cylinder unit



### OUTDOOR UNIT

Packaged type	Small capacity (Under 5kW)*	Medium capacity (6kW–14kW)*
		 PUZ-HWM140
	 PUZ-WM50	 PUZ-WM60/85/112
Split type	Small capacity (Under 5kW)*	Medium capacity (6kW–14kW)*
		 PUD-S-HWM60/80/100/120/140
		 PUD-SWM60/80/100/120
<b>Eco Inverter</b>	 SUZ-SWM30/40VA2  SUZ-SHWM30/40VAH	 SUZ-SWM60VA2  SUZ-SWM80VA(H)2  SUZ-SWM100VA(H)  SUZ-SHWM60VAH

\*Rated capacity is at conditions A2W35. (according to EN14511)





R32

### INDOOR UNIT

Hydrobox, Cylinder unit



### OUTDOOR UNIT

Split type	Medium capacity (6kW–14kW)*
	 PUHZ-SHWM60/80/100/120/140
	 PUHZ-SWM60/80/100/120/140

\*Rated capacity is at conditions A2W35. (according to EN14511)

R410A

INDOOR UNIT

Hydrobox, Cylinder unit



OUTDOOR UNIT

Split type	Large capacity (≥16kW)*
	 PUAZ-SHW230
	 PUAZ-SW160/200

\*Rated capacity is at conditions A2W35, (according to EN14511)

Other ATW-related system	Mr.SLIM+	PUMY + ecodan	PXZ + ecodan
	<p>R410A</p>  PUAZ-FRP71	<p>R410A</p>  PUMY-P112/125/140	<p>R32</p>  PUAZ-4F75VG PUAZ-5F85VG

# New R32 Eco Inverter Line-up

## Wider line-up

Standard/Hyper heating/Standard with base heater models are available.

SUZ Series		3kW	4kW	6kW	8kW	10kW
Previous	Standard SUZ-SWM	—	✓	✓	✓	—
	Standard SUZ-SWM	✓	✓	✓	✓	✓
New	Hyper Heating* with base heater SUZ-SHWM	✓	✓	✓	—	—
	Standard with base heater SUZ-SWM	—	—	—	✓	✓

\*Hyper Heating model: Keep 100% heating capacity at -15°C.

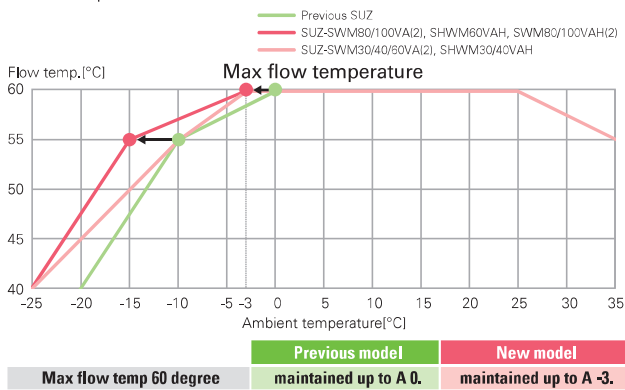


Standard  
SUZ-SWM30/40/60VA(2)  
Hyper Heating with base heater  
SUZ-SHWM30/40VAH

Standard  
SUZ-SWM80/100VA(2)  
Hyper Heating with base heater  
SUZ-SHWM60VAH  
Standard with base heater  
SUZ-SWM80/100VAH(2)

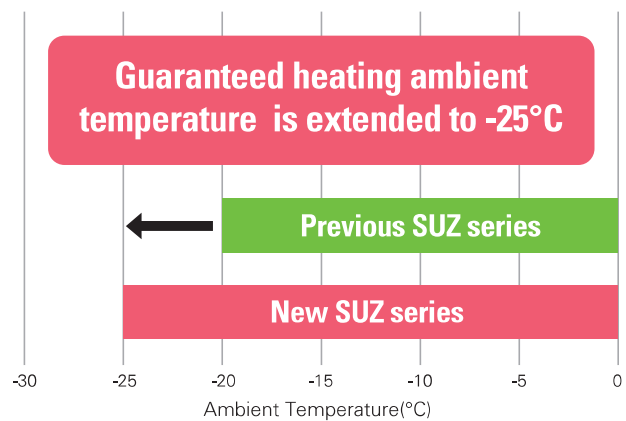
## Performance Guaranteed Range Expansion for Max Outlet Water Temperature

New SUZ achieved to keep max outlet water temperature of 60°C in ambient -3°C. Especially Standard 80/100, Hyper Heating 60, and Standard with base heater 80/100 models can also keep max outlet water temperature of 55°C in ambient -15°C.



## Performance Guaranteed Range Expansion

Performance guaranteed range is extended to -25°C.



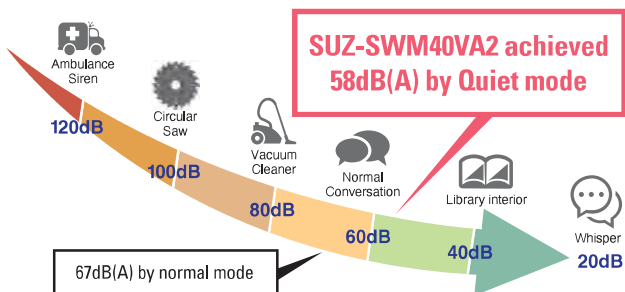
## Quiet mode

Once Quiet mode is activated using the remote controller, SUZ's sound volume becomes lower than normal mode. There are 2 Quiet mode levels in SUZ.

\*Outdoor condition is A-7W35.

\*The cooling and heating capacity may drop if this function is activated.

\*Sound power level values are based on EN12102.



## Improved flexibility for installation

The minimum piping length is reduced to 2m, and the maximum piping length is extended to 46m for SUZ-SWM80/100VA(2), SHWM60VAH, SWM80/100VAH(2)

This enables for flexible installation in any wider properties.

	30	40	60	80	100
Standard [m]	2-26*	2-26*	2-26*	2-46*	2-46*
Hyper Heating with base heater [m]	2-26*	2-26*	2-46*	-	-
Standard with base heater [m]	-	-	-	2-46*	2-46*

\* When piping length is longer than 26m or 46m, please make sure to consult separately.

## Blue fin

A special coating is applied to the heat exchanger to improve corrosion toughness.



# PUMY+ecodan

Air-to-Air and Air-to-Water Hybrid Multi Split System

1 Unit, 2 Roles – Total Comfort Year-round

Air Conditioning and Hot Water Supply Matching the Needs of Each Room

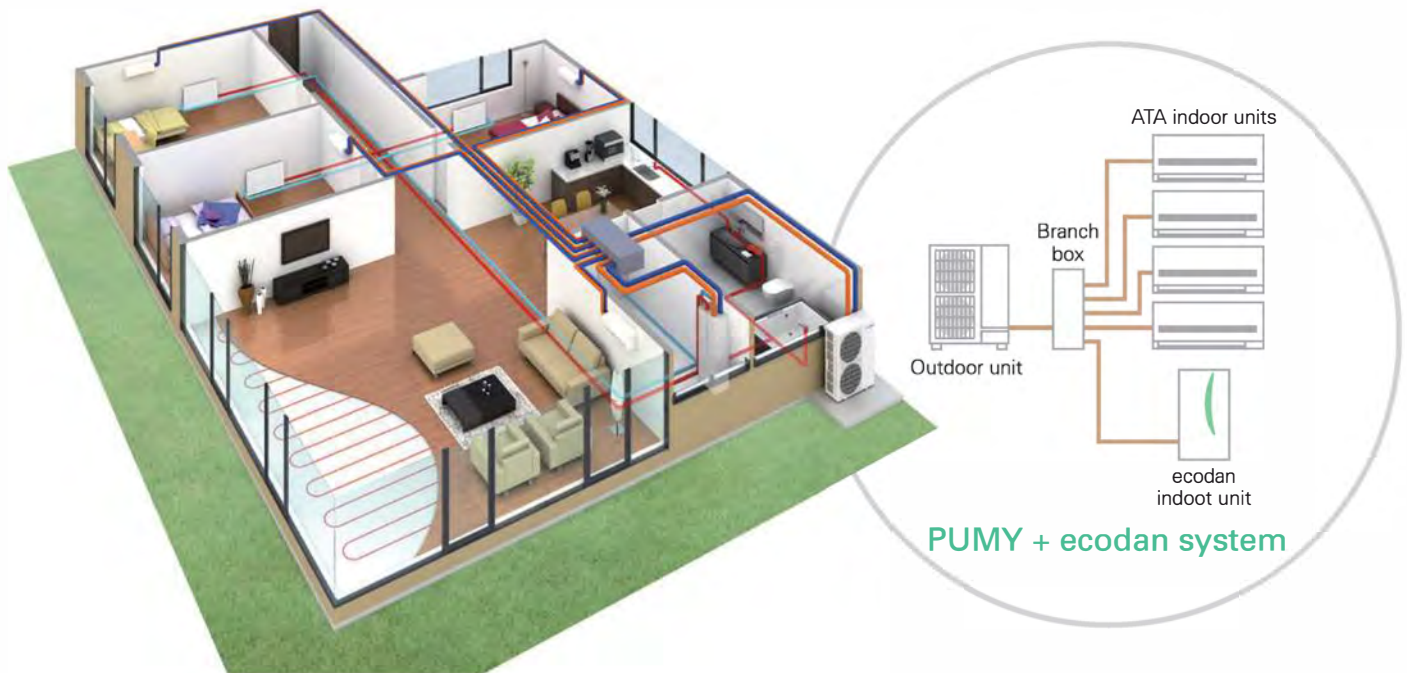
All-in-one outdoor unit (air conditioning, domestic hot water supply and hot water heating)

**PUMY for Air-to-Air**

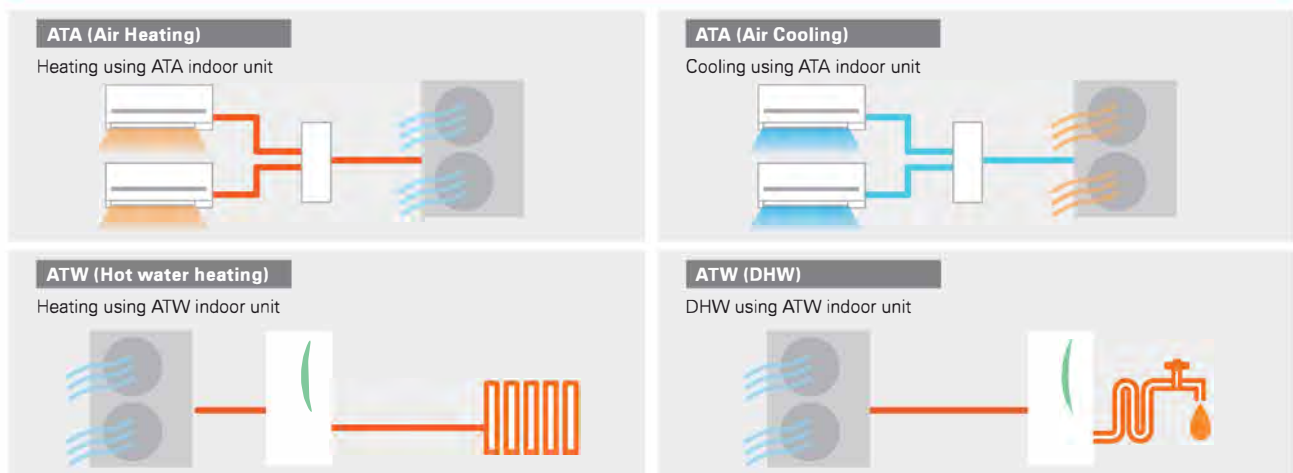
PUMY utilises various indoor units, enabling the air conditioning or heating of multiple rooms, and controls each unit individually.

**ecodan for Air-to-Water**

- ✓Domestic hot water (DHW) supply
- ✓Heating for multiple rooms



## Main Operation Patterns



## Optional Operation Patterns\* (simultaneous)



\*When using optional simultaneous operation, there are some restrictions, such as connectable indoor units, operation range and DHW flow temp.

Model name				PUMY-P112VKM6	PUMY-P125VKM6	PUMY-P140VKM6	PUMY-P112YKM5	PUMY-P125YKM5	PUMY-P140YKM5	
Power supply				1-phase 220 - 230 - 240V, 50Hz			3-phase 380 - 400 - 415V, 50Hz			
Air-to-Air (ATA)	Cooling (nominal)*1	Capacity	kW	12,5	14,0	15,5	12,5	14,0	15,5	
		Power input	kW	4,34	5,00	5,17	4,34	5,00	5,17	
		EER		2,88	2,80	3,00	2,88	2,80	3,00	
	Temp. range of cooling	Indoor temp.	W.B.	15 - 24°C						
		Outdoor temp.*2	D.B.	-5 - 52°C						
	Heating (nominal)*1	Capacity	kW	14,0	16,0	18,0	14,0	16,0	18,0	
		Power input	kW	3,49	4,06	4,63	3,49	4,06	4,63	
		COP		4,01	3,94	3,89	4,01	3,94	3,89	
Temp. range of heating	Indoor temp.	W.B.	15 - 27°C							
	Outdoor temp.	D.B.	-20 - 15°C							
Air-to-Water (ATW)	Nominal flow rate (for heating)			L/min	35,8					
	Heating*3	A7W35	Capacity	kW	12,5					
			Power input	kW	3,06					
			COP		4,08					
	A2W35	Capacity	kW	10,0						
		Power input	kW	3,50						
		COP		2,86						
	Guaranteed operating range	ATA	Heating	D.B.	-20 - +21°C					
			DHW	D.B.	-20 - +35°C					
			ATA + ATW	D.B.	7 - +21°C					
ATA + ATW	ATA heating + DHW	D.B.	-10 - +21°C							
	ATA heating + ATW heating *4	D.B.	-10 - +21°C							
Maximum Outlet water temp.			°C	55						
Outdoor unit	Indoor unit connectable	ATA only	Total capacity		50 to 130% of outdoor unit capacity					
			Model/Quantity	Branch box system	15-100/8	15-100/8	15-100/8	15-100/8	15-100/8	15-100/8
		Mixed system*12		15-140*5/10	15-140*5/10*6	15-140*5/10*6	15-140*5/10	15-140*5/10*6	15-140*5/10*6	
		ATA + ATW individual operation	Total capacity		ATA : Max 130% of outdoor unit capacity + ATW (EHST20C or EHSC) *7					
	ATA + ATW simultaneous operation	Model/Quantity	Branch box system	15-100/8	15-100/8	15-100/8	15-100/8	15-100/8	15-100/8	
		Mixed system*12		15-140*5/10	15-140*5/10*6	15-140*5/10*6	15-140*5/10	15-140*5/10*6	15-140*5/10*6	
	ATA + ATW simultaneous operation		Total capacity		Max 100% of outdoor unit capacity : ATA + ATW (EHST20C or EHSC) *7					
	Model/Quantity	ATA*12	15/1*8	15-25/2*9	15-42*11/3*10	15/1*8	15-25/2*9	15-42*11/3*10		
	ATW	ATW (EHST20C or EHSC) / 1								
	Sound pressure level (measured in anechoic room)			dB<A>	49 / 51	50 / 52	51 / 53	49 / 51	50 / 52	51 / 53
	Sound power level (measured in anechoic room)			dB<A>	69 / 71	70 / 72	71 / 73	69 / 71	70 / 72	71 / 73
	Refrigerant piping diameter			Liquid pipe	9.52 flare					
	Gas pipe			mm	15.88 flare					
	Fan	Type x Quantity		Propeller fan x 2						
		Airflow rate		m³/min	110					
		L/s	1,883							
		cfm	3,884							
Compressor	Motor output		0,074 + 0,074							
	Type x Quantity		Scroll hermetic compressor x 1							
	Starting method		Inverter							
Motor output			kW	2,9	3,5	3,9	2,9	3,5	3,9	
External dimensions (H x W x D)			mm	1,338 x 1,050 x 330 (+40)						
Weight			kg	123			YKM: 125 / YKME: 136			

\*1

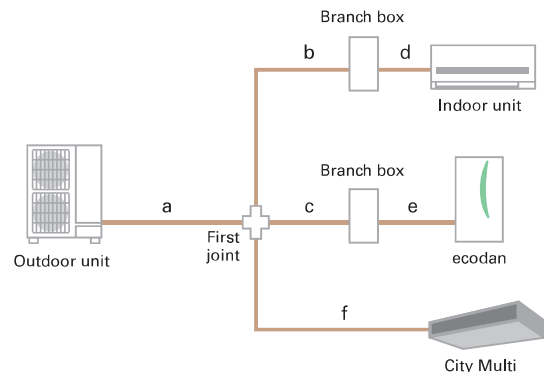
	Indoor	Outdoor	Piping length	Level difference
Cooling	27°C DB / 19°C WB	35°C DB	7,5m	0m
Heating	20°C DB	7°C DB / 6°C WB	7,5m	0m

- \*2 10 to 52°C D.B.: When connecting PKFY-P15/20/25VBM, PFFY-P20/25/32VKM, PFFY-P20/25/32VLE(R)M, PEFY-P+VMA3 or M, S and P series indoor unit.
- \*3 In the case of ATW single connection. Input to circulation pump is not included.
- \*4 In the case of simultaneous operation of ATA heating and ATW heating, target flow temperature range is restricted to 45-55°C and when the ambient temp is under 7°C, the flow temp is lowered.
- \*5 Up to P100 when connecting via branch box.
- \*6 Up to 11 units when connecting via 2 branch boxes.
- \*7 Only one ecodan unit can be connected.
- \*8 Exceptionally, one MSZ-SF15VA or MSZ-AP15VF can be connected.
- \*9 Exceptionally, two MSZ-SF15VA or MSZ-AP15VF can be connected.
- \*10 Exceptionally, three MSZ-SF15VA or MSZ-AP15VF can be connected.
- \*11 In the case of City Multi connection, maximum is P32.
- \*12 PKFY and PFFY series are not connectable.

Piping specifications

Total piping length	m	150*	a+b+c+d+e+f
Farthest piping length	m	80	a+b+d or a+c+e
		85	a+f
Total piping length between outdoor unit and branch box	m	55	a+b+c
Total piping length between branch boxes and indoor units	m	95	d+e
Farthest piping length from the first joint	m	30	b or c or f
Farthest piping length after branch box	m	25	d or e
Height difference (Outdoor upside / Outdoor downside)	m	50 / 40	

\*When an ecodan is connected, the maximum piping length is 150m.



## PUMY+ ecodan Compatibility Table

ATW branch box connection compatibility table

Series	Type	Model name	Compatibility	Type	Model name	Compatibility	Type	Model name	Compatibility
ATW	Cylinder unit	EHST20C-VM2/6D	●	Hydro box	EHSC-VM2/6D	●	Branch box	PAC-MK53BC	●
		EHST20C-YM9D	●		EHSC-YM9D	●		PAC-MK33BC	●

### Connectable indoor unit capacity

For individual operation ATA+ATW (no simultaneous operation) ATA: Max 130% of outdoor unit capacity + ATW (EHST20C or EHSC)

Outdoor capacity 12.5kW	ATW indoor unit (Cylinder or Hydro box) 11.2kW	Connectable ATA indoor unit total capacity: Max.16.2kW (130%)
Outdoor capacity 14.0kW	ATW indoor unit (Cylinder or Hydro box) 11.2kW	Connectable ATA indoor unit total capacity: Max.18.2kW (130%)
Outdoor capacity 15.5kW	ATW indoor unit (Cylinder or Hydro box) 11.2kW	Connectable ATA indoor unit total capacity: Max.20.2kW (130%)

For simultaneous operation of ATA+ATW Max 100% of outdoor unit capacity: ATA + ATW (EHST20C or EHSC)

Outdoor capacity 12.5kW	ATW indoor unit (Cylinder or Hydro box) 11.2kW	ATA capacity Max. 1.3kW	*Exceptionally, one MSZ-SF15VA or MSZ-AP15VF can be connected.
Outdoor capacity 14.0kW	ATW indoor unit (Cylinder or Hydro box) 11.2kW	ATA capacity Max. 2.8kW	*Exceptionally, two units of MSZ-SF15VA or MSZ-AP15VF can be connected.
Outdoor capacity 15.5kW	ATW indoor unit (Cylinder or Hydro box) 11.2kW	ATA capacity Max. 4.3kW	*Exceptionally, three units of MSZ-SF15VA or MSZ-AP15VF can be connected.



# Split Type Specifications


				NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW
Outdoor unit				Eco Inverter							
				Standard model				Hyper Heating model		Standard with base heater model	
Model name				SUZ-SWM40VA2	SUZ-SWM60VA2	SUZ-SWM80VA2	SUZ-SWM100VA	SUZ-SHWM40VAH	SUZ-SHWM60VAH	SUZ-SWM80VAH2	SUZ-SWM100VAH
Refrigerant				R32*1							
Dimensions		HxWxD	mm	714x800x285	714x800x285	880x840x330	880x840x330	714x800x285	880x840x330	880x840x330	880x840x330
Weight			kg	39	40	53	53	40	53.5	53.5	53.5
Power supply (V / Phase / Hz)				230 / 1-ph / 50							
Heating	A7W35*2	Nominal	kW	3.0	5.0	6.0	7.5	3.0	5.0	6.0	7.5
		COP		5.11	4.85	5.10	4.85	4.77	4.95	5.10	4.85
	A2W35*2	Nominal	kW	4.0	6.0	7.5	9.0	4.0	6.0	7.5	9.0
		COP		3.90	3.62	3.50	3.12	3.61	3.47	3.31	3.00
Average climate water outlet 35°C*3		Class		A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++
		ηs		200%	189%	187%	182%	176%	178%	178%	177%
Average climate water outlet 55°C*3		Class		A++	A++	A++	A++	A++	A++	A++	A++
		ηs		135%	136%	135%	134%	126%	128%	130%	129%
DHW 200L Load Profile*4		Class		A+	A+	A+	A+	A+	A+	A+	A+
		ηwh		147%	142%	142%	142%	142%	144%	142%	142%
Max outlet water temperature			°C	60	60	60	60	60	60	60	60
Cooling	A35W7*2	Nominal	kW	4.5	5.0	6.7	7.3	4.5	6.0	6.7	7.3
		EER		3.31	3.18	3.20	3.00	3.33	3.28	3.20	3.00
	A35W18*2	Nominal	kW	5.6	6.0	6.7	8.1	5.6	6.0	6.7	8.1
		EER		4.71	4.65	5.06	4.44	4.70	5.21	5.06	4.44
PWL (Heating)*5			dB(A)	57	60	60	62	58	60	60	62
Max operating current			A	13.5	13.5	17.3	17.3	13.5	17.3	17.3	17.3
Breaker size			A	16	16	20/16*6	20/16*6	16	20/16*6	20/16*6	20/16*6
Piping	Diameter	Liquid/Gas	mm	6.35/12.7	6.35/12.7	6.35/12.7	6.35/12.7	6.35/12.7	6.35/12.7	6.35/12.7	6.35/12.7
	Length	Out-In	m	2-26	2-26	2-46	2-46	2-26	2-46	2-46	2-46
	Height	Out-In	m	Max. 26	Max. 26	Max. 30	Max. 30	Max. 26	Max. 30	Max. 30	Max. 30
Guaranteed Operating Range	Heating	°C		-25°C~24°C	-25°C~24°C	-25°C~24°C	-25°C~24°C	-25°C~24°C	-25°C~24°C	-25°C~24°C	-25°C~24°C
	DHW	°C		-25°C~35°C	-25°C~35°C	-25°C~35°C	-25°C~35°C	-25°C~35°C	-25°C~35°C	-25°C~35°C	-25°C~35°C
	Cooling	°C		10°C~46°C	10°C~46°C	10°C~46°C	10°C~46°C	10°C~46°C	10°C~46°C	10°C~46°C	10°C~46°C

				Power Inverter, Heating only			ZUBADAN, Heating only			
Model name				PUD-SWM80V/YAA	PUD-SWM100V/YAA	PUD-SWM120V/YAA	PUD-SHWM80V/YAA	PUD-SHWM100V/YAA	PUD-SHWM120V/YAA	PUD-SHWM140V/YAA
Refrigerant				R32*1						
Dimensions		HxWxD	mm	1020x1050x480	1020x1050x480	1020x1050x480	1020x1050x480	1020x1050x480	1020x1050x480	1020x1050x480
Weight			kg	101/114	105/118	105/118	102/115	108/121	108/121	110/122
Power supply (V / Phase / Hz)				YAA: 230 / 1-ph / 50, YAA: 400 / 3-ph / 50						
Heating	A7W35*2	Nominal	kW	6.0	8.0	10.0	6.0	8.0	10.0	12.0
		COP		4.76	5.00	4.70	5.03	5.00	4.80	4.70
	A2W35*2	Nominal	kW	8.0	10.0	12.0	8.0	10.0	12.0	14.0
		COP		3.55	3.30	3.24	3.75	3.45	3.30	3.05
Average climate water outlet 35°C*3		Class		A+++	A+++	A+++	A+++	A+++	A+++	A+++
		ηs		178%/176%	178%/177%	177%/176%	181%/179%	180%/178%	179%/177%	179%/177%
Average climate water outlet 55°C*3		Class		A++	A++	A++	A++	A++	A++	A++
		ηs		131%/130%	131%/130%	129%/128%	135%/134%	136%/135%	135%/134%	134%/134%
DHW 200(L) Load Profile (Average climate)*4		Class		A+ / A	A+ / A	A+ / A	A+ / A	A+ / A	A+ / A	A+ / A
		ηwh		141%	141%	141%	141%	141%	141%	136%
Max outlet water temperature			°C	60	60	60	60	60	60	60
PWL (Heating)*5			dB(A)	56	59	60	56	59	60	62
Max operating current			A	22/8	26/10	28/12	22/8	26/10	28/12	35/12
Breaker size			A	25/16	30/16	32/16	25/16	30/16	32/16	40/16
Piping	Diameter	Liquid/Gas	mm	6.35/12.7	6.35/12.7	6.35/12.7	6.35/12.7	6.35/12.7	6.35/12.7	6.35/12.7
	Length	Out-In	m	2 - 30	2 - 30	2 - 30	2 - 30	2 - 30	2 - 30	2 - 25
	Height	Out-In	m	Max. 30	Max. 30	Max. 30	Max. 30	Max. 30	Max. 30	Max. 25
Guaranteed Operating Range	Heating	°C		-25°C~24°C	-25°C~24°C	-25°C~24°C	-28°C~24°C	-28°C~24°C	-28°C~24°C	-28°C~24°C
	DHW	°C		-25°C~35°C	-25°C~35°C	-25°C~35°C	-28°C~35°C	-28°C~35°C	-28°C~35°C	-28°C~35°C

\*1 Refrigerant leakage contribute to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP, if leaked to the atmosphere. This appliance contains a refrigerant fluid with a GWP equal to 550. This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be 550 times higher than 1 kg of CO<sub>2</sub>, over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional. The GWP of R32 is 675 in the IPCC 4th Assessment Report.

\*2 Air-to-Water values are measured based on EN14511 (Circulation pump input is not included.). \*3 ηs values are measured based on EN14825.


\*4 ηwh values are measured based on EN16147. \*5 Sound power levels are measured based on EN12102. \*6 In case of jumper wire cut.




**Split type**


Small capacity (Under 5kW)\*

Medium capacity (6.0kW-14kW)\*







PUD-SHWM  
80/100/120/140




PUZ-SHWM  
80/100/120/140






PUD-SWM  
80/100/120




PUZ-SWM  
80/100/120/140


**Eco Inverter**



SUZ-SWM40VA  
SUZ-SHWM40VA



SUZ-SWM60VA



SUZ-SWM60/100VA(H)  
SUZ-SHWM60VAH



# Split Type Specifications

## Outdoor unit





Model name				Power Inverter			
				PUHZ-SW160YKA(-BS)		R410A*1	
Refrigerant				R410A*1			
Dimensions		HxWxD	mm	1338x1050x330		1338x1050x330	
Weight		kg		136		136	
Power supply (V / Phase / Hz)				VAA, VHA: 230 / 1-ph / 50, YAA, YHA, YKA: 400 / 3-ph / 50			
Heating	A7W35*2	Nominal		kW		22.0	
		COP				4.20	
	A2W35*2	Nominal		kW		16.0	
		COP				3.11	
Average climate water outlet 35°C*3		Class		A++		A++	
		ηs		161		163	
Average climate water outlet 55°C*3		Class		A++		A++	
		ηs		125		127	
DHW 200L(L)/300L(XL) Load Profile (Average climate)*4		Class		-		-	
		ηwh		-		-	
Max outlet water temperature (°C)				-			
Cooling	A35W7*2	Nominal		kW		16.0	
		EER				2.76	
	A35W18*2	Nominal		kW		18.0	
		EER				4.56	
PWL (Heating)*5				dB(A)		78	
Max operating current				A		19.0	
Breaker size				A		25	
Piping	Diameter	Liquid/Gas	mm	9.52/25.4		12.7/25.4	
	Length	Out-In	m	80		80	
	Height	Out-In	m	30		30	
Guaranteed Operating Range	Heating		°C	-20°C-21°C		-20°C-21°C	
	DHW		°C	-20°C-35°C		-20°C-35°C	
	Cooling		°C	-15°C-46°C		-15°C-46°C	

Model name				ZUBADAN			
				PUHZ-SHW230YKA2		R410A*1	
Refrigerant				R410A*1			
Dimensions		HxWxD	mm	1338x1050x330			
Weight		kg		143			
Power supply (V / Phase / Hz)				VAA, VHA: 230 / 1-ph / 50, YAA, YHA, YKA: 400 / 3-ph / 50			
Heating	A7W35*2	Nominal		kW		23.0	
		COP				3.65	
	A2W35*2	Nominal		kW		23.0	
		COP				2.37	
Average climate water outlet 35°C*3		Class		A++		A++	
		ηs		164		164	
Average climate water outlet 55°C*3		Class		A++		A++	
		ηs		127		127	
DHW 200L(L)/300L(XL) Load Profile (Average climate)*4		Class		-		-	
		ηwh		-		-	
Max outlet water temperature (°C)				60			
Cooling	A35W7*2	Nominal		kW		20.0	
		EER				2.22	
	A35W18*2	Nominal		kW		20.0	
		EER				3.55	
PWL (Heating)*5				dB(A)		75	
Max operating current				A		20	
Breaker size				A		25	
Piping	Diameter	Liquid/Gas	mm	12.7/25.4			
	Length	Out-In	m	80			
	Height	Out-In	m	30			
Guaranteed Operating Range	Heating		°C	-25°C-21°C			
	DHW		°C	-25°C-35°C			
	Cooling		°C	-15°C-46°C			

\*1 Refrigerant leakage contribute to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP, if leaked to the atmosphere. This appliance contains a refrigerant fluid with a GWP equal to 550. This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be 550 times higher than 1 kg of CO<sub>2</sub>, over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional. The GWP of R410A is 2088 in the IPCC 4th Assessment Report.

\*2 Air-to-Water values are measured based on EN14511 (Circulation pump input is not included.).

\*3 ηs values are measured based on EN14825. \*4 ηwh values are measured based on EN16147. \*5 Sound power levels are measured based on EN12102.

R410A	Split type	Large capacity (≥16kW)
		PUHZ-SHW230
		PUHZ-SW160/200