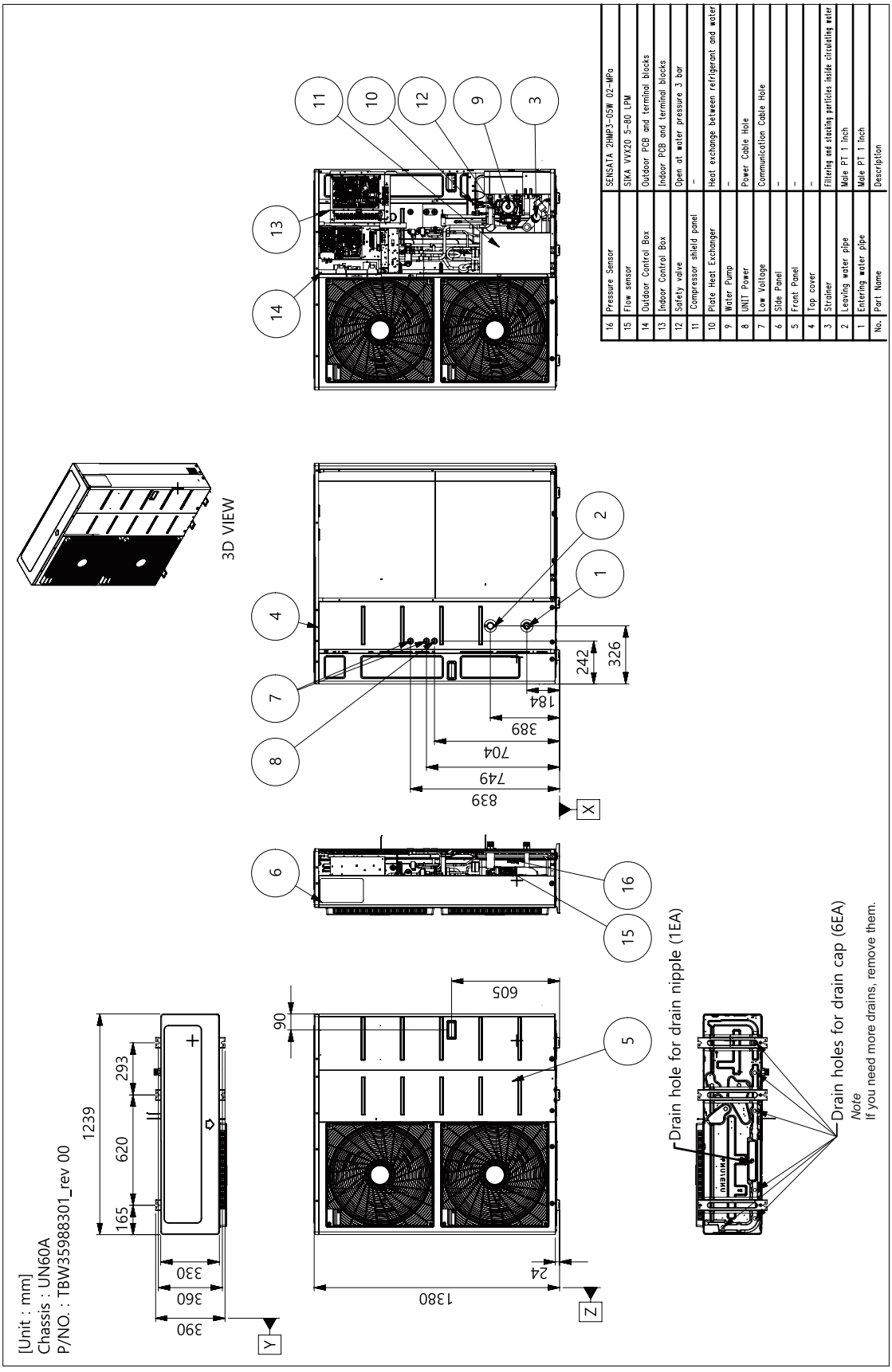
3. Dimensions

◆ ZHBW126A1 [HM121MR U34] / ZHBW146A1 [HM141MR U34] / ZHBW166A1 [HM161MR U34] ZHBW128A1 [HM123MR U34] / ZHBW148A1 [HM143MR U34] / ZHBW168A1 [HM163MR U34]



2. Specification

■ 3 phase Inverter (12 ~ 16 kW)

Nominal Capacity and Nominal Input					ZHBW128A1 [HM123MR U34]	ZHBW148A1 [HM143MR U34]	ZHBW168A1 [HM163MR U34]
-	-	Outdoor Temp (°C) DB / WB	Leaving Water Temp (°C)	-			
Capacity	Cooling	35 / 24	18	kW	12.00	14.00	16.00
			7	kW	12.00	14.00	16.00
	Heating	7 / 6	35	kW	12.00	14.00	16.00
			55	kW	11.00	11.50	12.00
		2 / 1	35	kW	11.00	12.00	13.80
Power Input	Cooling	35 / 24	18	kW	2.53	3.26	4.00
			7	kW	3.64	4.24	5.16
	Heating	7 / 6	35	kW	2.45	2.92	3.40
			55	kW	3.79	4.04	4.29
		2 / 1	35	kW	3.01	3.31	3.83
EER	Cooling	35 / 24	18	W/W	4.75	4.30	4.00
			7	W/W	3.30	3.30	3.10
COP	Heating	7 / 6	35	W/W	4.90	4.80	4.70
			55	W/W	2.90	2.85	2.80
		2 / 1	35	W/W	3.65	3.63	3.60
SCOP (Low temp. Average Climate)*					4.67	4.62	4.53
SCOP ((Medium temp. Average Climate)*					3.47	3.46	3.45
Rated Water Flow Rate (at LWT 35 ºC)				LPM	34.5	40.3	46.0

Electrical Specifications			ZHBW128A1 [HM123MR U34]	ZHBW148A1 [HM143MR U34]	ZHBW168A1 [HM163MR U34]
Power Supply		V, Ø, Hz	380-415, 3, 50	380-415, 3, 50	380-415, 3, 50
Peak Control Running Current		A	8.0	9.0	10.0
Rated Running Current	Cooling	A	3.7	4.8	5.9
	Heating	A	3.6	4.3	5.0
Circuit breaker		A	16	16	16
Wiring Connections	Power Supply Cable (included Earth, H07RN-F)	mm² x cores	4.0 x 5C	4.0 x 5C	4.0 x 5C

Technical Specifications				ZHBW128A1 [HM123MR U34]	ZHBW148A1 [HM143MR U34]	ZHBW168A1 [HM163MR U34]
Sound Power Level	Heating	Day Max.	dB(A)	65	66	66
		Rated	dB(A)	60	61	61
		Low noise	dB(A)	56	57	57
Dimensions	Unit	W × H × D	mm	1,239 × 1,380 × 330	1,239 × 1,380 × 330	1,239 × 1,380 × 330
	Packed Unit	W × H × D	mm	1,364 × 1,532 × 461	1,364 × 1,532 × 461	1,364 × 1,532 × 461
Weight	Unit		kg	119.1	119.1	119.1
	Packed Unit		kg	134.1	134.1	134.1
Exterior	Color		-	Warm Gray	Warm Gray	Warm Gray
	RAL Code		-	RAL 7044	RAL 7044	RAL 7044

Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national codes. And “Electric characteristics” chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound power level is measured on the rated condition in the accordance with ISO 9614 standard.
   Therefore, these values can be increased owing to ambient conditions during operation.
   Rated sound power level is according to the EN12102-1 under conditions of the EN14825
4. Performances are accordance with EN14511 and reflect ErP testing conditions. Above gives the declared values at rated conditions acc. ErP regulation. For max. capacities, refer to Performance Data.
   - Rated running current : Outdoor Temp. 7°CDB / 6°CWB, LWT 35℃
5. This product contains Fluorinated greenhouse gases.

* : This values are accordance with EN14825.

2. Specification

Technical Specifications (Water side)				ZHBW128A1 [HM123MR U34]	ZHBW148A1 [HM143MR U34]	ZHBW168A1 [HM163MR U34]
Operation Range (Leaving Water Temp.)	Cooling	Min. ~ Max.	°C	5 ~ 27	5 ~ 27	5 ~ 27
	Heating	Min. ~ Max.	°C	15 ~ 65	15 ~ 65	15 ~ 65
	DHW *	Min. ~ Max.	°C	15 ~ 80	15 ~ 80	15 ~ 80
Water Pump	Type		-	Canned type for hot water circulation		
	Model		-	UPML 20-105 CHBL / GRUNDFOS		
	Motor Type		-	BLDC		
	Steps of Pumping Performance		-	Variable speed 10% to 100%		
	Power input (100% Capacity)	Min. / Rated	W	3.5 / 125	3.5 / 135	3.5 / 140
	Water Flow Rate	Min. / Rated	ℓ/min	0 / 34.5	0 / 40.3	0 / 46.0
Water Pump_2	Type		-	Canned type for hot water circulation		
	Model		-	ODM-061P / OH SUNG		
	Motor Type		-	BLDC		
	Steps of Pumping Performance		-	Variable speed 10% to 100%		
	Power input (100% Capacity)	Min. / Rated	W	17 / 130	17 / 140	17 / 145
	Water Flow Rate	Min. / Rated	ℓ/min	0 / 34.5	0 / 40.3	0 / 46.0
Heat Exchanger	Type		-	Brazed Plate HEX		
	Quantity		-	1	1	1
	Number of Plate		EA	76	76	76
	Water Volume		ℓ	1.0	1.0	1.0
	Water Flow Rate	Min. / Rated	ℓ/min	13 ~ 70	13 ~ 70	13 ~ 70
Expansion Vessel	Volume	Max.	ℓ	8	8	8
	Water pressure	Max.	bar	3	3	3
		Pre-charged	bar	1	1	1
Flow Sensor	Model			SIKA VVXC9SNBUC00252P		
	Measuring range	Min. ~ Max.	ℓ/min	5~80	5~80	5~80
	Flow (Trigger point)	Min.	ℓ/min	15	15	15
Water Pressure sensor	Model			Sensata OFM(2HMP)		
	Measuring range	Min. ~ Max.	bar(G)	0~20	0~20	0~20
Piping Connections	Inlet		inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)		
	Outlet		inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)		
Strainer	Mesh size		-	30 mesh	30 mesh	30 mesh
	Max. particle size		mm	0.6	0.6	0.6
	Material		-	Stainless Steel		
Relief Valve	Pressure Limit	Upper Limit	bar	3.0	3.0	3.0
Devices for Water Circuit			-	Relief valve / Flow Sensor		
			-	Drain hose		
			-	Pressure Sensor / Air vent		

Note

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3. Sound power level is measured on the rated condition in the accordance with ISO 9614 standard.
   Therefore, these values can be increased owing to ambient conditions during operation.
   Rated sound power level is according to the EN12102-1 under conditions of the EN14825
4. Performances are accordance with EN14511 and reflect ErP testing conditions. Above gives the declared values at rated conditions acc. ErP regulation. For max. capacities, refer to Performance Data.
   - Rated running current : Outdoor Temp. 7°CDB / 6°CWB, LWT 35℃
5. This product contains Fluorinated greenhouse gases.

* DHW 58~80℃ Operating is available only when the booster heater is operating.

2. Specification

Technical Specifications (Refrigerant side)				ZHBW128A1 [HM123MR U34]	ZHBW148A1 [HM143MR U34]	ZHBW168A1 [HM163MR U34]
Operation Range (Outdoor Temp.)	Cooling	Min. ~ Max.	°C DB	5 ~ 48	5 ~ 48	5 ~ 48
	Heating	Min. ~ Max.	°C DB	-25 ~ 35	-25 ~ 35	-25 ~ 35
Compressor	Type		-	Hermetic Sealed Scroll		
	Model		Model × No.	RJB036MAA × 1		
	Motor Type		-	BLDC		
	Displacement		cm³/Rev.	31.6	31.6	31.6
Refrigerant	Type		-	R32	R32	R32
	GWP (Global Warming Potential)		-	675.0	675.0	675.0
	Precharged Amount		g	2,000	2,000	2,000
	t-CO2 eq.		-	1.350	1.350	1.350
	Control		-	Electronic Expansion Valve		
Refrigerant Oil	Type		-	FW68D		
	Charged Volume		cc × No.	1,100	1,100	1,100
Heat Exchanger	Type			Fin & Tube	Fin & Tube	Fin & Tube
	Quantity			2	2	2
	Specification	Row	EA	32	32	32
		Column	EA	2	2	2
		FPI	EA	18	18	18
Fan	Type		-	Propeller		
	Air Flow Rate	Rated	m³/min × No.	60.0 × 2	60.0 × 2	60.0 × 2
Fan Motor	Type		-	BLDC		
	Output		W × No.	124 × 2	124 × 2	124 × 2

Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national codes. And “Electric characteristics” chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound power level is measured on the rated condition in the accordance with ISO 9614 standard.
   Therefore, these values can be increased owing to ambient conditions during operation.
   Rated sound power level is according to the EN12102-1 under conditions of the EN14825
4. Performances are accordance with EN14511 and reflect ErP testing conditions. Above gives the declared values at rated conditions acc. ErP regulation. For max. capacities, refer to Performance Data.
   - Rated running current : Outdoor Temp. 7°CDB / 6°CWB, LWT 35℃
5. This product contains Fluorinated greenhouse gases.

* DHW 58~80℃ Operating is available only when the booster heater is operating.