

HAORI: RAS - 10J2AVSG-E1 - 16J2AVSG-E1

- Power supply to indoor or outdoor unit.
- Outdoor unit silent operation down to 39 dB(A).
- Wi-Fi compatible with advanced energy monitoring.
- Energy Class A+++ / A+++ cooling and heating modes.
- Toshiba Inverter and compressor technology with R32.



Hi - Res Image 

Retail Price (interactive icons):



UK



ROI



HIGH TIER PRODUCT RANGE

Performance					
Outdoor Unit		RAS-	10J2AVSG-E1	13J2AVSG-E1	16J2AVSG-E1
Operating Range	Cooling	C°	-15 ~ 46	-15 ~ 46	-15 ~ 46
	Heating		-15 ~ 24	-15 ~ 24	-15 ~ 24
Air Flow	High	m ³ /h - l/s	1890 - 524	1950 - 540	2040 - 566
Sound	Pressure High Cooling/Heating/Silent	dB(A)	44 - 46	46 - 48	48 - 50
	Power High Cooling/Heating/Silent	dB(A)	59 - 59	59 - 61	61 - 63
Unit	Height x Width x Depth	mm	550x780x290	550x780x290	550x780x290
	Weight	kg	26	30	33
Pipe Connection	Flare Connections (gas-liquid)	inch	3/8" - 1/4"	3/8" - 1/4"	1/2" - 1/4"
	Min.-Max. Length	m	2-20	2-20	2-20
	Maximum Height Difference	m	±12	±12	±12
	Drain Port Connection	mm	16	16	16
Refrigerant Charge	Base Charge/Chargeless Length	m	0.55/15	0.8/15	0.8/15
	Additional Charge	g/m	20	20	20
Run Current	Maximum	Amps	3.25	4.80	6.75
Power Cable	Outdoor to Indoor		3 core + earth	3 core + earth	3 core + earth
Power Supply	Suggested Fuse Size	V/ph/Hz-A	220-240/1/50-10	220-240/1/50-10	220-240/1/50-16

Related Items - 10J2AVSG-E1:

- [Full Specification](#)
- [Dimensional Drawing](#)
- [Wiring Diagram](#)
- [Noise Curve Data](#)
- [Data-book](#)
- [Installation Manual](#)



Related Items - 13J2AVSG-E1:

- [Full Specification](#)
- [Dimensional Drawing](#)
- [Wiring Diagram](#)
- [Noise Curve Data](#)
- [Data-book](#)
- [Installation Manual](#)

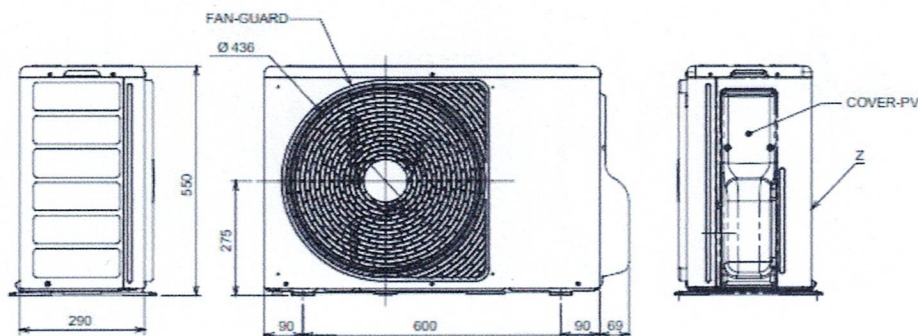


Related Items - 16J2AVSG-E1:

- [Full Specification](#)
- [Dimensional Drawing](#)
- [Wiring Diagram](#)
- [Noise Curve Data](#)
- [Data-book](#)
- [Installation Manual](#)

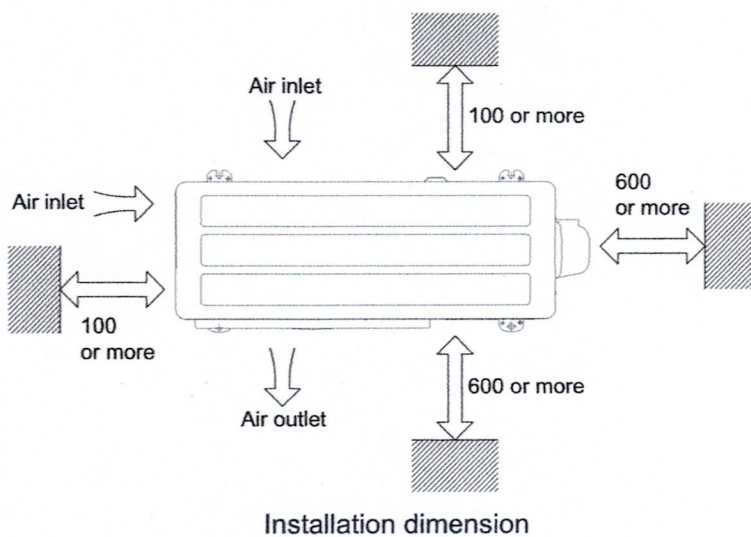
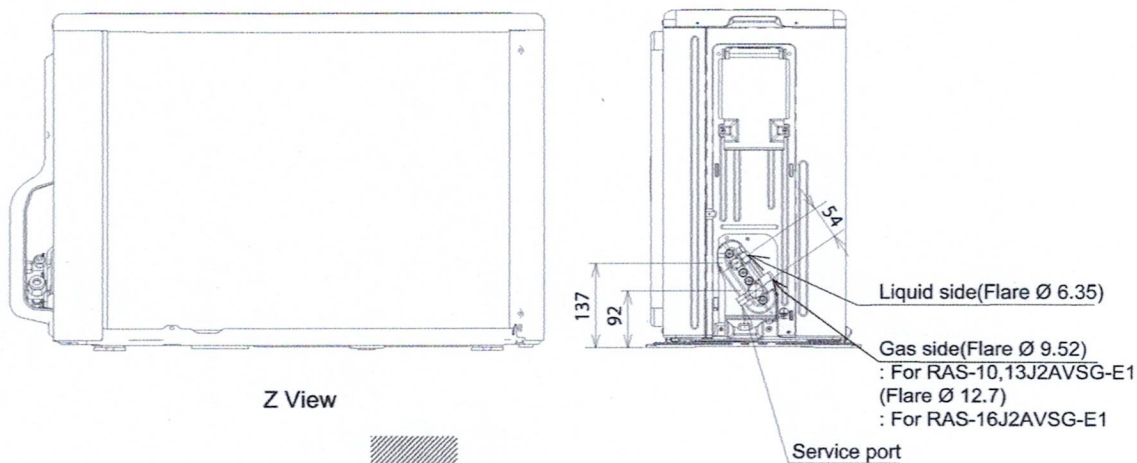
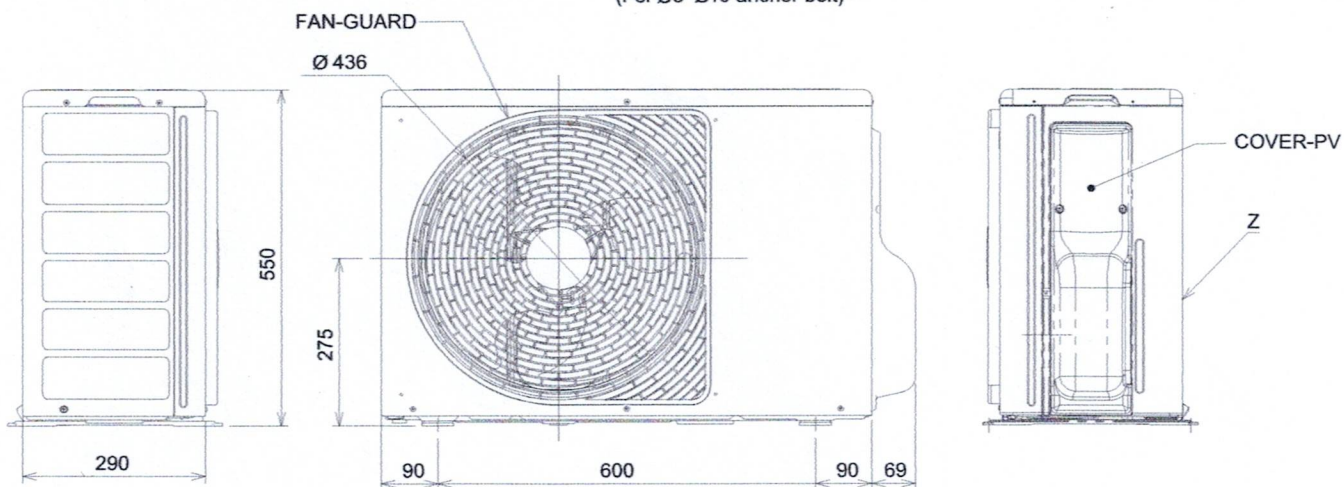
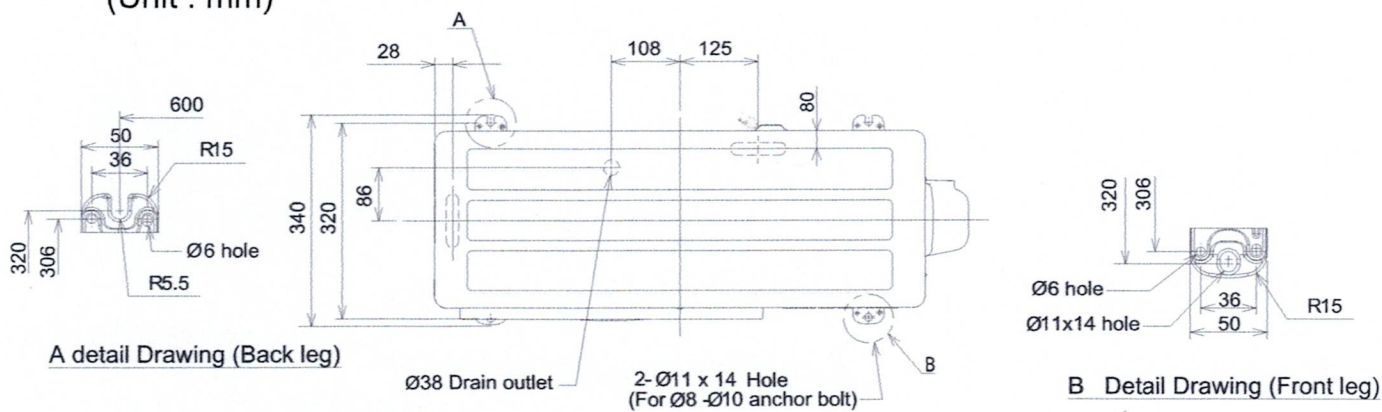


*All [Accessories / Controls](#)



4-2. Outdoor Unit

(Unit : mm)



2. SPECIFICATIONS

2-1. Specification

Unit model		Indoor		RAS-B10N4KVRG-E		RAS-B13N4KVRG-E		
		Outdoor		RAS-10J2AVSG-E1		RAS-13J2AVSG-E1		
Cooling capacity				(kW)	2.50		3.50	
Cooling capacity range				(kW)	0.89-3.20		1.00-4.10	
Heating capacity				(kW)	3.20		4.20	
Heating capacity range				(kW)	0.90-4.7		1.00-5.30	
Power supply				1Ph/220-240V/50Hz				
Electric characteristic	Indoor	Operation mode		Cooling	Heating	Cooling	Heating	
		Running current		(A)	0.25-0.23	0.25-0.23	0.28-0.26	0.28-0.26
		Power consumption		(W)	35	35	40	40
		Power factor		(%)	63	63	65	65
	Outdoor	Operation mode		Cooling	Heating	Cooling	Heating	
		Running current		(A)	2.57-2.35	3.30-3.02	4.23-3.86	4.92-4.54
		Power consumption		(W)	505	705	760	1040
		Power factor		(%)	87	95	82	96
		Starting current		(A)	2.82-2.58	3.55-3.25	4.51-4.12	5.20-4.80
COP (Cooling / Heating)				4.63/4.32		4.38/3.89		
Operating noise	Indoor	High	(Cooling / Heating)	(dB-A)	41/41		43/43	
		Medium	(Cooling / Heating)	(dB-A)	31/31		34/34	
		Low	(Cooling / Heating)	(dB-A)	22/22		23/23	
	Outdoor	(Cooling / Heating)		(dB-A)	44/46		46/48	
	Indoor unit	Unit model			RAS-B10N4KVRG-E		RAS-B13N4KVRG-E	
Dimension		Height	(mm)	300		300		
		Width	(mm)	987		987		
		Depth	(mm)	210		210		
Net weight			(kg)	11		11		
Fan motor output			(W)	30		30		
Air flow rate			(Cooling / Heating)	(m ³ / hr.)	600/610		670/680	
Outdoor unit	Unit model			RAS-10J2AVSG-E1		RAS-13J2AVSG-E1		
	Dimension	Height	(mm)	550		550		
		Width	(mm)	780		780		
		Depth	(mm)	290		290		
	Net weight			(kg)	26		30	
	Compressor	Motor output		(W)	550		620	
		Type		Single rotary type with DC-inverter variable speed control				
	Model			KSK75D43UEZA		KSK89D53UFZ		
	Fan motor output			(W)	43			
	Air flow rate			(Cooling / Heating)	(m ³ / hr.)	1890/1890		1950/1950
Piping connection	Type			Flare connection				
	Indoor unit	Liquid side	(mm)	Ø6.35				
		Gas side	(mm)	Ø9.52				
	Outdoor unit	Liquid side	(mm)	Ø6.35				
		Gas side	(mm)	Ø9.52				
	Maximum length			(m)	20			
	Maximum charge-less length			(m)	15			
	Maximum height difference			(m)	12			
Refrigerant	Name of refrigerant			R32				
	Weight			(kg)	0.55		0.80	
Wiring connection	Power supply			3 Wires: Includes earth (Outdoor)				
	Interconnection			4 Wires: Includes earth				
Usable temperature range		Indoor	(Cooling / Heating)	(°C)	21-32/ -28			
		Outdoor	(Cooling / Heating)	(°C)	-15,46/-15,24			
Accessory	Indoor unit	Installation plate		1				
		Wireless remote controller		1				
		Batteries		2				
		Remote controller holder		1				
		Toshiba Ultra pure filter		2				
		Mounting screw		10(Ø4x25L)				
		Remote controller holder		2(Ø3.1x16L)				
		Flat head wood screw						
		Installation manual		1				
		Owner's manual		1				

* The specification may be subject to change without notice for purpose of improvement.

HAORI - R32 Performance data

Outdoor unit		RAS-10J2AVSG-E1	RAS-13J2AVSG-E1	RAS-16J2AVSG-E1
Indoor unit		RAS-B10N4KVRG-E	RAS-B13N4KVRG-E	RAS-B16N4KVRG-E
Cooling capacity	kW	2.5	3.5	4.6
Cooling range (min. - max.)	kW	(0.89 - 3.20)	(1.00 - 4.10)	(1.20 - 5.30)
EER	W/W	4.63	4.38	3.41
SEER		8.60	8.70	7.80
Energy efficiency class		C	A+++	A+++
Seasonal electricity consumption	kWh/a	102	142	206
Heating capacity	kW	3.2	4.2	5.5
Heating range (min. - max.)	kW	(0.90 - 4.70)	(1.00 - 5.30)	(1.10 - 6.30)
Pdesignh	kW	2.5	3.2	4.00
COP	W/W	4.32	3.89	3.62
SCOP		5.10	5.10	4.60
Energy efficiency class		H	A+++	A+++
Seasonal electricity consumption	kWh/a	684	876	1214

HAORI - R32 Physical data indoor unit

Indoor unit			RAS-B10N4KVRG-E	RAS-B13N4KVRG-E	RAS-B16N4KVRG-E
Sound pressure level (h/a)	dB(A)	C	41/19	43/19	45/21
Sound power level (h)	dB(A)	C	54	56	58
Air flow (h)	m³/h - l/s	C	600 - 166	670 - 186	690 - 180
Sound pressure level (h/a)	dB(A)	H	41/19	43/19	45/22
Sound power level (h)	dB(A)	H	54	56	58
Air flow (h)	m³/h - l/s	H	610 - 169	680 - 189	730 - 186
Dimensions (hwxwd)	mm		300x987x210	300x987x210	300x987x210
Weight	kg		11	11	12
Remote controller			WH-UA01UE	WH-UA01UE	WH-UA01UE

HAORI - R32 Physical data indoor unit

Outdoor unit			RAS-10J2AVSG-E1	RAS-13J2AVSG-E1	RAS-16J2AVSG-E1
Sound pressure level (h)	dB(A)	C	44	46	48
Sound pressure level (Silent CDU#2)	dB(A)	C	37	39	40
Sound power level (h)	dB(A)	C	57	59	61
Operating range	°C	C	-15-46	-15-46	-15-46
Sound pressure level (h)	dB(A)	H	46	48	50
Sound pressure level (Silent CDU#2)	dB(A)	H	39	43	43
Sound power level (h)	dB(A)	H	59	61	63
Operating range	°C	H	-15-24	-15-24	-15-24
Dimensions (hwxwd)	mm		550x780x290	550x780x290	550x780x290
Weight	kg		26	30	33
Compressor type	Toshiba		DC Rotary	DC Rotary	DC Rotary
Flare connections (gas-liquid)	inch		3/8" - 1/4"	3/8" - 1/4"	1/2" - 1/4"
Minimum pipe length	m		2	2	2
Maximum pipe length	m		20	20	20
Maximum height difference	m		12	12	12
Chargeless pipe length	m		15	15	15
Refrigerant charging (R32)	kg		0.55	0.8	0.8
Power supply	V-ph-Hz		230-1-50	230-1-50	230-1-50

C: cooling mode
H: heating mode



TOSHIBA Air Conditioning participates in the ECP program for Comfort Air Conditioners (AC). Check ongoing validity of certificate: www.eurovent-certification.com



Better Air Solutions

MULTI: RAS - 2M18G3AVG-E

- Supports Wi-Fi control.
- Best in class energy efficiency A++ / A++.
- Dyna Doctor port for easy service connection.
- Supports energy monitoring on compatible indoor units.
- New compact outdoor unit size for 2M10 and 2M14 models.



Hi - Res Image

Retail Price (interactive icons):



UK



ROI



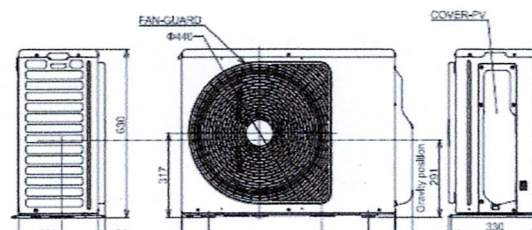
CODE		52	
Performance			
Outdoor Unit		RAS-	2M18G3AVG-E
Indoor Units Connected		Min.-Max.	2-2
Capacity Code	2 x Indoor Connection	Min.-Max.	10-32
	3+ Indoor Connection	Min.-Max.	-
Nominal	Cooling Capacity	kW	5.2
	Heating Capacity	kW	5.6
	EER/COP	W/W	4.33 / 4.91
Cooling EN14825	Range Min. - Max.	kW	1.6 - 6.5
	Power Input	kW	1.20
	Pdesign	kW	5.2
	SEER/Energy Efficiency Class		8.7 / A+++
	Seasonal Energy Consumption	kWh/a	243
Heating EN14825	Range Min. - Max.	kW	1.30 - 8.20
	Power Input	kW	1.14
	Pdesign	kW	3.2
	SCOP/Energy Efficiency Class		4.8 / A++
	Seasonal Energy Consumption	kWh/a	914
Outdoor Data			
Operating Range	Cooling	°C	-10/46
	Heating		-20/24
Air Flow	High	m3/h - l/s	2600-722
Sound	Pressure High/Low	dB(A)	50/44
	Power High	dB(A)	63
Unit	Height x Width x Depth	mm	630 x 800 x 300
	Weight	kg	43
Pipe Connection	Flare Connections (gas - liquid)	inch	3/8" x 2 - 1/4" x 2
	Min.-Max. Length	m	2-30
	Maximum Pipe Length Per Unit	m	20
	Maximum Height Difference	m	10
	Drain Port Connection	mm	16
Refrigerant R410A	Base Charge/Chargeless Length	m	1.2 / 30
	Additional Charge	g/m	0
Run Current	Maximum	Amps	8.20
Power Cable	Outdoor to Indoor		3 core + earth
Power Supply	Suggested Fuse Size	V/ph/Hz-A	220-240/1/50-16

RAS Indoor Model (B-Code)	Cooling	Heating	Seiya	Shorai Edge (B&W)	Haori	Daiseikai (9&10)	Console	Cassette	Ducted
05	1.5	2.0	✓	✗	✗	✗	✗	✗	✗
07	2.0	2.7	✓	✗	✗	✗	✗	✗	✓
10	2.7	4.0	✓	✓	✓	✓	✓	✓	✓
13	3.7	5.0	✓	✓	✓	✓	✓	✓	✓
16	4.5	5.5	✓	✓	✓	✓	✗	✓	✓
18	5.0	6.0	✓	✓	✗	✗	✓	✗	✗
22	6.0	7.0	✗	✓	✗	✗	✗	✗	✓
24	7.1	8.1	✓	✓	✗	✗	✗	✗	✓

*All [Accessories / Controls](#)

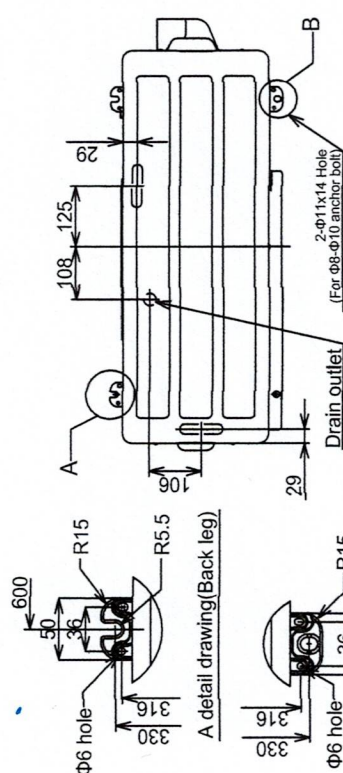
Related Items:

- [Full Specification](#)
- [Dimensional Drawing](#)
- [Wiring Diagram](#)
- [Combinations](#)
- [Noise Curve Data](#)
- [Installation Manual](#)



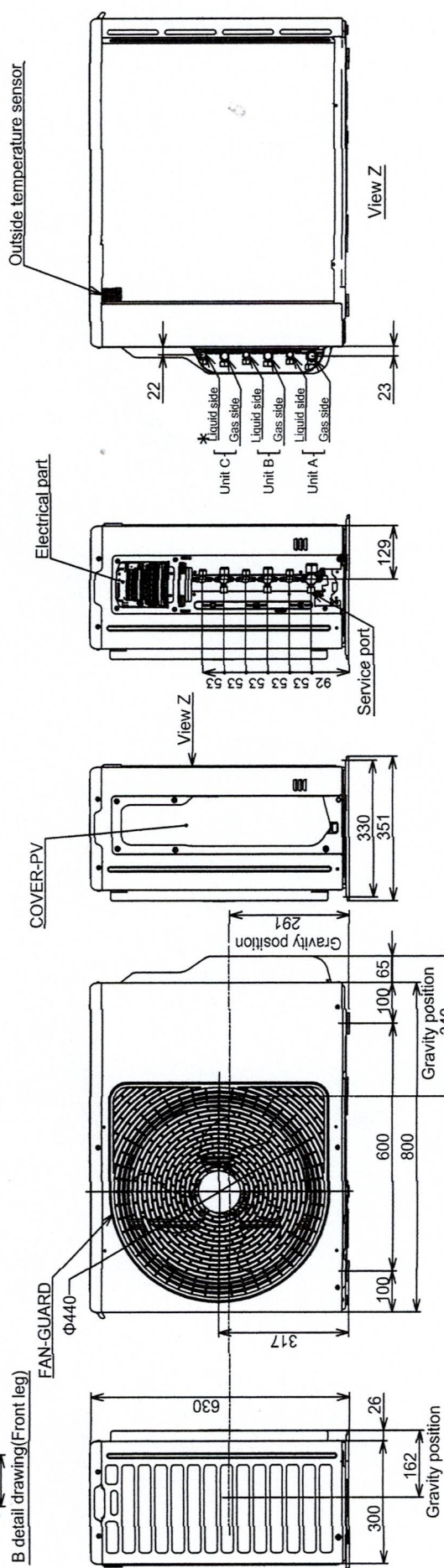
Outdoor Unit : RAS-2M18G3AVG-E/TR

* Diameter of pipe connecting port	Unit C	Liquid side	Model name	
		Gas side		
	Unit B	Liquid side		
		Gas side		
	Unit A	Liquid side		
		Gas side		



A detail drawing(Back leg)

3 detail drawing(Front leg)



(Unit : mm)

Installation dimension
(Upper side view)