SUBMITTAL DATA

Mini TVR Smart – Outdoor Unit - Heat Pump

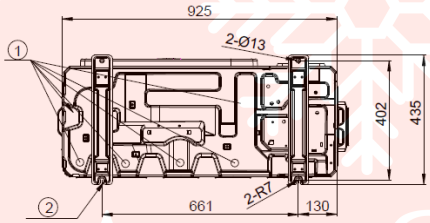
3HP – 220~240V/1Ph/50-60Hz DC Motor

Model: 4TVHS027RF000AA

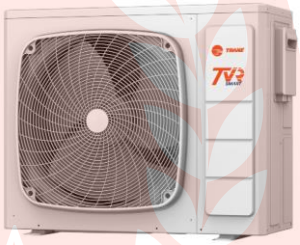
Job Name:		Date:	
Reference:		Location:	

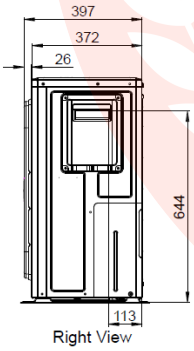
Commercial Air Conditioner > Mini TVR Smart > Outdoor Unit

- **Overall Dimensions**

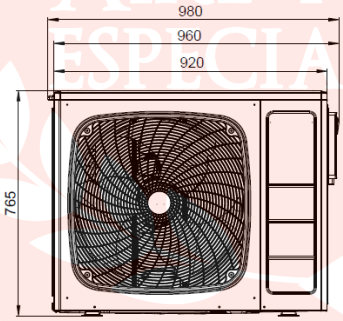


Bottom View

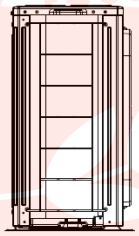




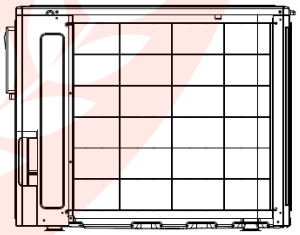
Right View



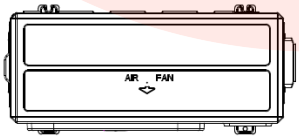
Front View



Left View



Rear View



Top View

No.	Parts Name
1	Drain hole (Ø26)
2	Foundation bolt hole (Ø15)

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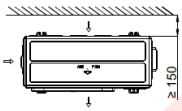
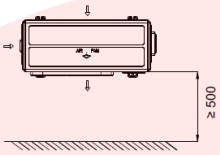
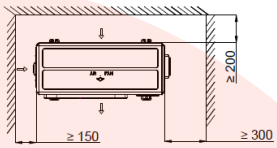
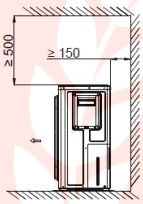
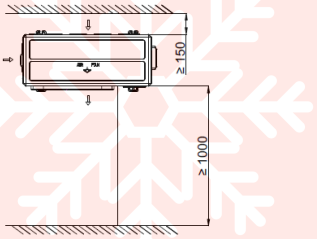
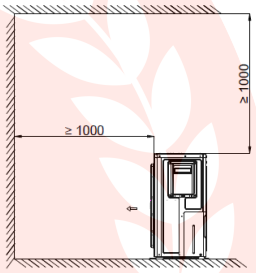
- **Installation Space Requirements**

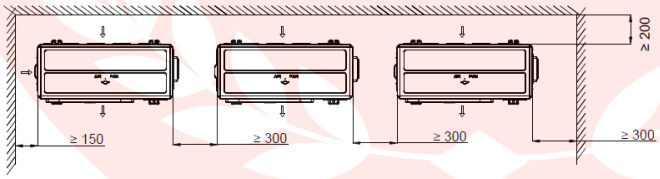
Single Unit Installation

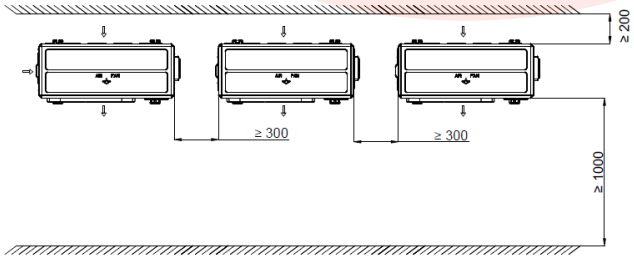
Obstacles at rear only	Obstacles at front only	Obstacles at rear and sides
		 Obstacle height is below unit height

Obstacles at rear and above	Obstacles at front and rear	Obstacles at front and above
		

unit: mm

Multiple Units Installation

Obstacles at rear and sides


Obstacles at front and rear


unit: mm

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- **Specifications**

Model		Unit	4TVHS027RF000AA
Capacity		HP	3
Connectable Indoor Units Ratio ※1		%	50≤x≤130
Max. Number of Connectable Indoor Units		Piece	4
Rated Cooling ※2	Capacity	kW	8.0
		kBtu/h	27.3
	Power Input	kW	1.95
	Current	A	8.86
	EER	-	4.10
Rated Heating ※2	Capacity	kW	9.0
		kBtu/h	30.7
	Power Input	kW	1.95
	Current	A	8.86
	COP	-	4.62
Max. Power Input	Cooling	kW	3.50
	Heating	kW	2.85
Electrical Characteristics	Power Supply	Ph/V/Hz	1/220~240/50/60
	Communication Cable ※3	mm^2	≥2*0.75mm2 shielded wire
	Power Cable	mm^2	2*6
	Earth Wire	mm^2	1*6
	Min. Circuit Amps (MCA)	A	22.80
	Max. Fuse Amps (MFA)	A	32
Casing	Color	-	Light Grey
	Material	-	Galvanized steel plate
Heat exchanger	Number of Rows	-	2.5
	Tube Pitch	mm	21
	Row Pitch	mm	18.186
	Fin Spacing	mm	1.4
	Fin Material	-	Hydrophilic aluminum
	Fin Coating Type	Optional	Clear lacquer
	Salt Spray Test Duration	hour	168
	Tube OD. Diameter	mm	Ø7
	Tube Type	-	Inner grooved
	Dimension (W*D*H)	mm	936*54.6*714
	Number of Circuits(In/Out)	-	9/17
Compressor	Brand	-	MITSUBISHI ELECTRIC
	Model	-	SYB220FWXMC-L4
	Type	-	Twin Rotary
	Quantity	-	1
	Power Input	W	2180
	Rated Load Amps. (RLA)	A	17.20
	Crankcase Heater Quantity	-	1
	Crankcase Heater Power	W	27
	Compressor Oil Brand	-	IDEMITSU
	Compressor Oil Model	-	FW68S
	Compressor Oil Charge	ml	650
	Starting Method	-	Soft start
Fan	Brand	-	Langdi
	Material	-	ABS+20%GF
	Type	-	Axial Fan
	Quantity	-	1
	Diameter	mm	Ø570
	Height	mm	184

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SUBMITTAL DATA

Mini TVR Smart – Outdoor Unit - Heat Pump

3HP – 220~240V/1Ph/50-60Hz DC Motor

Model: 4TVHS027RF000AA

Model		Unit	4TVHS027RF000AA
Fan Motor	Brand	-	WOLONG
	Model	-	WZD-A02160L-01AL
	Type	-	DC
	Quantity	-	1
	Voltage	V	310
	Rated Current	A	0.63
	Full Load Amps(FLA)	A	1.30
	Power Input	W	200
	Power Output	W	160
	IP Class	-	IP44
	Insulation Class	-	B
	Safe Class	-	I
	Max. Fan Speed	rpm	800
Max. Airflow Rate		m³/h	5050
		CFM	2970
Max. External Static Pressure		Pa	30
Max. Sound Power Level		dB	72
Max. Sound Pressure Level ※4		dB(A)	54
Cabinet Coating	Coating Type	-	Powder Coating
	Salt Spray Test Duration	hour	72
	Sheet Metal Material	-	Galvanized steel plate
	Sheet Metal Thickness	mm	0.8
Four Way Valve	Brand	-	SANHUA
	Model	-	SHF-9H-35U
	Quantity	-	1
Electronic Expansion Valve (LEVA1)	Brand	-	SANHUA
	Diameter	mm	φ2.5
	Model	-	DPF-TS1025-042-RK
Electronic Expansion Valve (LEVB)	Brand	-	FUJIKOKI
	Diameter	mm	φ1.5
	Model	-	D15FKS-2R
Dimension	Net Dimensions (W*D*H)	mm	920*372*765
	Package Dimensions (W*D*H)	mm	1036*478*820
Weight	Net Weight	kg	63
	Gross Weight	kg	68.5
Defrost Method		-	Reverse defrosting
Refrigerant	Type	-	R410A
	Default Refrigerant Charge	kg	3.00
	Refrigerant Control	-	Electric expansion valve
Refrigerant Pipe	Liquid Pipe OD. Diameter (Connection Method)	mm	Ø9.52 (Flared)
	Gas Pipe OD. Diameter (Connection Method)	mm	Ø15.88 (Flared)
	Total Single Way Pipe Length	m	120
	Max. Single Way Pipe Length (Actual)	m	60
	Max. Height Difference between Indoor and Outdoor Units	m	30(Outdoor higher than indoor) 20(Indoor higher than outdoor)
	Max. Height Difference between Indoor Units	m	10
	Max. Communication Cable Length between Indoor and Outdoor Unit	m	150
Electrical Control Box IP Class		Standard	IPX4
Design Pressure		MPa	4.15
Safety Devices		-	High pressure switch, Fan driver PCB overload protection, Overcurrent fuse, Inverter PCB overload protection
Standard Accessories		-	1.Drainage elbow，2EA
Working Temperature	Cooling(Min.~Max.)	℃ DB	-10~55
	Heating(Min.~Max.)	℃ DB	-25~27

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Notes:

※1 When the system combination ratio exceeds 100%, it is advisable to operate only a portion of the indoor units simultaneously to keep the ratio within 100%. Alternatively, you can run the indoor units that exceed the 100% capacity at a low fan speed to minimize the impact on system performance.
※2 Rated Condition:
Indoor temperature (cooling): 27°C DB/19°C WB, indoor temperature (heating): 20°CDB/14.5°CWB.
Outdoor temperature(cooling): 35°CDB/24°CWB, outdoor temperature(heating): 7°CDB/6°CWB
The data is measured with 7.5m equivalent pipe and 0 m height difference.
※3 When applying the "Power off PMV control" function: Use a 2-core x 1.5mm² shielded wire. The communication cable resistance should be < 1.33Ω/100m. When not applying the "Power off PMV control" function: Use a ≥2-core x 0.75mm² shielded wire.
For the "Power off PMV control" function, one refrigerant system can control up to 10 indoor units, with a maximum communication line length of 200 meters. For longer distances, repeaters are needed. Each repeater can extend the connection by 200 meters or add 10 indoor units. One refrigerant system can accommodate up to 2 repeaters, supporting a maximum communication line length of 600 meters or communication with 30 indoor units.
※4 The noise level will be measured in the third-octave band limited values in the semi-anechoic chamber, using a Real-Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

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