

# Residential & Light Commercial Heat Pump System

**TOSHIBA**  
*Carrier*

Indoor Model: RAV-SM422BTP-UL

Outdoor Model: RAV-SP422AT2P-UL

## Submittal Data

Job Name \_\_\_\_\_ Location \_\_\_\_\_

Tag \_\_\_\_\_



A221038

### OUTDOOR UNIT STANDARD FEATURES

- Digital inverter compressor technology
- System can operate in cooling only mode with heating locked out
- Line lengths up to 246 ft
- Low-ambient cooling down to 5°F
- System diagnostics

OUTDOOR UNIT MODEL		RAV-SP422AT2P-UL
SYSTEM PERFORMANCE		
Nominal Cooling Capacity†	Btu/h	42,000
SEER		19.3
EER		10.1
Nominal Heating Capacity†	Btu/h	47,000
HSPF		10.6
COP		12.2
REFRIGERANT LINES		
Total Piping Length	ft	246
Vertical Lift	ft	98
Suction Line Size	in	5/8
Liquid Line Size	in	3/8
AMBIENT OPERATING RANGE		
Cooling DB Min ~ Max	F	-13~115
Heating DB Min ~ Max	F	-13~59
REFRIGERANT		R410A
FACTORY CHARGE	lbs	7.3

AIRFLOW		
Cooling	CFM	3570
Heating	CFM	3290
SOUND PRESSURE LEVEL		
Cooling	db(A)	54
Heating	db(A)	54
ELECTRICAL		
Power Supply	V/Ph/Hz	208-230/1/60
Minimum Circuit Amps (MCA)	A	32
Recommended Fuse Size	A	40
Maximum Over Current Protection (MOCP)	A	40
PHYSICAL DATA		
Unit Width	in	35-3/8
Unit Height	in	52-3/4
Unit Length	in	12-5/8
Unit Weight - Net / Gross	lbs	234 / 247

### Legend

**db** — Dry Bulb  
**SEER** — Seasonal Energy Efficiency Ratio  
**HSPF** — Heating Seasonal Performance Factor  
**wb** — Wet Bulb

†Rated per AHRI (Air-Conditioning, Heating and Refrigeration Institute) 210/240 Standard.  
Cooling: Indoor 80°F (27°C) db/67°F (20°C) wb; Outdoor 95°F (35°C) db  
Heating: Indoor 70°F (21°C) db; Outdoor 47°F (8°C) db/43°F (6°C) wb



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#### RAV-SM422BTP-UL STANDARD DUCT FEATURES

- R-410A refrigerant
- Six sizes from 12,000 to 48,000 Btu/h
- Optional fresh air intake
- Quiet operation (as low as 32 dBA)
- Standard condensate pump with 24.3 in. lift capacity
- Auto or manually set three fan speeds
- Rear return configurable for bottom return

INDOOR UNIT MODEL		RAV-SM422BTP-UL
PERFORMANCE		
Cooling Rated Capacity	Btu/h	42,000
Heating Rated Capacity	Btu/h	47,000
Fan Type (Qty)		Turbo (1)
External Static Pressure (ESP)	in.WG	0.2 (factory default) 0.6 (Max)
Airflow (H/M/L)	CFM	1130/955/810
Sound Pressure (H/M/L)	dBA	38/35/32
ELECTRICAL		
Power Supply	V/Ph/Hz	From ODU
FILTER		
Type		Washable
Quantity		1
MERV Corresponding Value		5
Dimensions (H x W x D)	in.	10-5/8 x 27-5/8 x 5/8

PHYSICAL DATA		
Pipe Connection Size - Liquid (High Pressure)	in	3/8 (Flare)
Pipe Connection Size - Gas (Low Pressure)	in	5/8 (Flare)
Condensate Drain Connection	in	1-1/4
External Finish		Zinc Hot Dipping Steel Plate
Unit Width	in	55-1/4
Unit Height	in	10-7/8
Unit Depth	in	29-5/8
Unit Net Weight	lb	93
MOTOR		
Motor Type		DC
Motor Watts	W	250

#### ACCESSORIES

- ☐ Wired Remote Controller (7-Day Programmable) RBC-AMS54E-UL
- ☐ Simple Wired Remote Controller RBC-AS41UL
- ☐ Stand-Alone Receiver with Wireless Remote Controller TCB-AX32UL
- ☐ Remote Sensor TCB-TC41LUL
- ☐ Wired Remote Controller RBC-AMT32UL
- ☐ Auxiliary OA Flange TCB-FF151US-UL
- ☐ Zoning Duct Flange TCB-SF56C6BP-UL

**DETAIL A**

Mounting bolt hole  
( $\varnothing 0.512$  x 0.7 (17) long hole)

1.6" (40)

**DETAIL B**

Mounting bolt hole  
( $\varnothing 0.512$  x 0.7 (17) long hole)

0.5" (12)

1.6" (40)

**Z VIEW**

Knockout for bottom piping

0.3" (7)

3.3" (83)

0.3" (7)

2.6" (65)

Refrigerant piping knockout

2.5" (64)

0.5" (12)

3.7" (95)

2.2" (55)

1.0" (24)

52.8" (1340)

12.6" (320)

1.2" (30)

Conduit connection hole

Refrigerant piping knockout

2.0" (50)

5.1" (130)

3.4" (85)

2.2" (56)

0.7" (18)

3.9" (99)

2.3" (58)

15.7" (400)

Refrigerant pipe connecting part  
( $\varnothing 0.4$ " (9.5) flare at liquid side)

Refrigerant pipe connecting part  
( $\varnothing 0.6$ " (15.9) flare at liquid side)

24.1" (613)

23.8" (605)

35.4" (900)

21.7" (550)

2.0" (52)

22.9" (581)

21.0" (534)

2.9" (74)

4.8" (121)

22.9" (581)

21.0" (534)

14.2" (360)

3.3" (85)

2.7" (68)

2.7" (70)

7" (17.8)

7" (17.8)

20.4" (518)

12.9" (327)

5.9" (150)

23.6" (383)

15.1" (383)

3.0" (75)

1.8" (46)

1.3" (34)

6.7" (170)

2.4" (60)

7.9" (200)

15.0" (380)

Drain hole  
( $\varnothing 1.0$ " (25) burring hole)

2.1" (54)

1.9" (48)

1.5" (39)

3.8" (96)

2.8" (70)

5.0" (128)

4.6" (118)

2.9" (74)

0.7" (17.5)

14.4" (365)

0.7" (17.5)

5/8" Drain hole  
( $\varnothing 0.875$  (22) x 3.5 (88) burring hole)

Air intake

Air Discharge

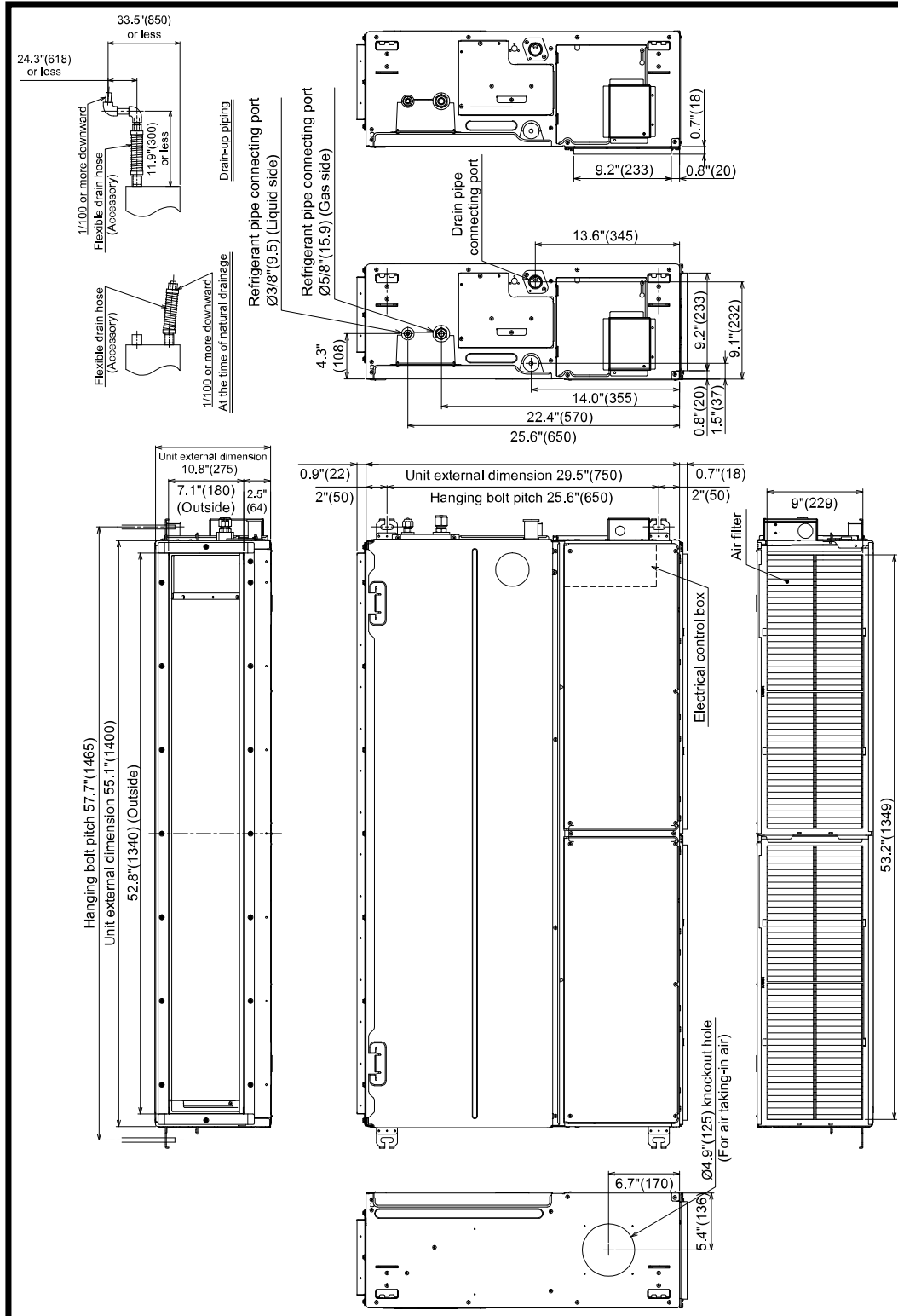
unit : in (mm)

Mounting hole sold separately  
44- $\varnothing 0.1$  (3) emboss



# DIMENSIONAL DRAWING

## INDOOR UNIT STANDARD DUCT RAV-SP422BTP-UL



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**DIMENSIONAL DRAWING**  
**INDOOR UNIT STANDARD DUCT RAV-SP422BTP-UL (CONT.)**

