

Residential & Light Commercial Heat Pump System

TOSHIBA
Carrier

Indoor Model: RAV-SM422UTP-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		22.1
EER		11.7
Nominal Heating Capacity†	Btu/h	47,000
HSPF		11.1
COP		12.0
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-SM422UTP-UL 4-WAY CASSETTE FEATURES

- R-410A refrigerant
- Six sizes from 18,000 to 48,000 Btu/h
- Optional fresh air intake
- Quiet operation (as low as 36 dBA)
- Standard condensate pump with 26 in. lift capacity
- Independent louver control (fixed or swing)
- Optional wired or wireless controls
- Auto or manually set three fan speeds
- Easy to remove cleanable filter

INDOOR UNIT MODEL		RAV-SM422UTP-UL
PERFORMANCE		
Cooling Rated Capacity	Btu/h	42,000
Heating Rated Capacity	Btu/h	47,000
Fan Type (Qty)		Turbo (1)
Airflow (H/M/L)	CFM	1250/870/650
Sound Pressure (H/M/L)	dBA	46/40/36
ELECTRICAL		
Power Supply	V/Ph/Hz	From ODU
FILTER		
Type		Washable
Quantity		1
MERV Corresponding Value		5
Dimensions (W x L x D)	in.	21-3/8 x 21-7/8 x 3/4

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
Refrigerant		R-410A
External Finish		Zinc Hot Dipping Steel Plate
Unit Width	in	33-1/8
Unit Height	in	12-5/8
Unit Depth	in	33-1/8
Unit Net Weight	lb	55
Panel Width	in	37-3/8
Panel Height	in	1-1/4
Panel Depth	in	37-3/8
Panel Weight	lb	10.0
MOTOR		
Motor Type		DC
Motor Watts	W	130

ACCESSORIES (Optional)

- ☐ Wired Remote Controller (7-Day Programmable) RBC-AMS54E-UL
- ☐ Simple Wired Remote Controller RBC-AS41UL
- ☐ Integral Receiver with Wireless Remote RBC-AX32U(W)-UL
- ☐ Stand Alone Receiver with Wireless Remote TCB-AX32-UL
- ☐ Remote Sensor TCB-TC41LUL
- ☐ Wired Remote Controller RBC-AMT32UL
- ☐ Grille Panel RBC-U32PGP-UL
- ☐ Spacer for Height Adjustment TCB-SP1602UUL
- ☐ Air Discharge Direction Kit TCB-BC1602UUL
- ☐ Fresh Air Chamber TCB-GFC1602UUL
- ☐ Fresh Air Inlet Box TCB-GB1602UUL
- ☐ Auxiliary Fresh Air Flange TCB-FF101URUL

DETAIL A
Mounting bolt hole
($\varnothing 0.5(12) \times 0.7(17)$ long hole)
1.6"(40)

DETAIL B
Mounting bolt hole
($\varnothing 0.5(12) \times 0.7(17)$ U-shape 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)

Front View
5.0"(128)
0.7"(17.5)
14.4"(365)
4.6"(118)
2.9"(74)
0.7"(17.5)
5.9"(150)
23.6"(383)
15.1"(383)
3.0"(75)
1.8"(46)
7.9"(200)
15.0"(380)
2.4"(60)
6.7"(170)
1.3"(34)
1.9"(48)
2.1"(54)
3.8"(96)
1.5"(39)
2.8"(70)
35.4"(900)
21.7"(550)
2.0"(52)
22.9"(581)
21.0"(534)
25.8"(655)
4.8"(121)
2.9"(74)
22.9"(581)
21.0"(534)
14.2"(360)
3.3"(85)
2.7"(70)
2.4"(60)
2.7"(68)
7"(17.8)
7"(17.8)
20.4"(518)
12.9"(327)
24.1"(613)
23.8"(605)
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)
Conduit connection hole
1.2"(30)
2.0"(50)
5.1"(130)
3.4"(85)
2.2"(56)
0.7"(18)
3.9"(99)
2.3"(58)
15.7"(400)
1.0"(24)
2.2"(55)
3.7"(95)
0.5"(12)
2.5"(64)
Refrigerant piping knockout

Side View
12.6"(320)
52.8"(1340)
1.2"(30)
2.0"(50)
5.1"(130)
3.4"(85)
2.2"(56)
0.7"(18)
3.9"(99)
2.3"(58)
15.7"(400)
1.0"(24)
2.2"(55)
3.7"(95)
0.5"(12)
2.5"(64)
Refrigerant piping knockout

Top View
2.0"(52)
22.9"(581)
21.0"(534)
25.8"(655)
4.8"(121)
2.9"(74)
22.9"(581)
21.0"(534)
14.2"(360)
3.3"(85)
2.7"(70)
2.4"(60)
2.7"(68)
7"(17.8)
7"(17.8)
20.4"(518)
12.9"(327)
24.1"(613)
23.8"(605)
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)
Conduit connection hole
1.2"(30)
2.0"(50)
5.1"(130)
3.4"(85)
2.2"(56)
0.7"(18)
3.9"(99)
2.3"(58)
15.7"(400)
1.0"(24)
2.2"(55)
3.7"(95)
0.5"(12)
2.5"(64)
Refrigerant piping knockout

Bottom View
2.0"(52)
22.9"(581)
21.0"(534)
25.8"(655)
4.8"(121)
2.9"(74)
22.9"(581)
21.0"(534)
14.2"(360)
3.3"(85)
2.7"(70)
2.4"(60)
2.7"(68)
7"(17.8)
7"(17.8)
20.4"(518)
12.9"(327)
24.1"(613)
23.8"(605)
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)
Conduit connection hole
1.2"(30)
2.0"(50)
5.1"(130)
3.4"(85)
2.2"(56)
0.7"(18)
3.9"(99)
2.3"(58)
15.7"(400)
1.0"(24)
2.2"(55)
3.7"(95)
0.5"(12)
2.5"(64)
Refrigerant piping knockout

Drain hole
($\varnothing 1.0(25)$ burring hole)
2.4"(60)
6.7"(170)
1.3"(34)
1.9"(48)
2.1"(54)
3.8"(96)
1.5"(39)
2.8"(70)
35.4"(900)
21.7"(550)
2.0"(52)
22.9"(581)
21.0"(534)
25.8"(655)
4.8"(121)
2.9"(74)
22.9"(581)
21.0"(534)
14.2"(360)
3.3"(85)
2.7"(70)
2.4"(60)
2.7"(68)
7"(17.8)
7"(17.8)
20.4"(518)
12.9"(327)
24.1"(613)
23.8"(605)
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)
Conduit connection hole
1.2"(30)
2.0"(50)
5.1"(130)
3.4"(85)
2.2"(56)
0.7"(18)
3.9"(99)
2.3"(58)
15.7"(400)
1.0"(24)
2.2"(55)
3.7"(95)
0.5"(12)
2.5"(64)
Refrigerant piping knockout

Air intake
5-Drain hole
($\varnothing 0.8(20) \sim 3.5(88)$ burring hole)
0.7"(17.5)
14.4"(365)
4.6"(118)
2.9"(74)
0.7"(17.5)
5.9"(150)
23.6"(383)
15.1"(383)
3.0"(75)
1.8"(46)
7.9"(200)
15.0"(380)
2.4"(60)
6.7"(170)
1.3"(34)
1.9"(48)
2.1"(54)
3.8"(96)
1.5"(39)
2.8"(70)
35.4"(900)
21.7"(550)
2.0"(52)
22.9"(581)
21.0"(534)
25.8"(655)
4.8"(121)
2.9"(74)
22.9"(581)
21.0"(534)
14.2"(360)
3.3"(85)
2.7"(70)
2.4"(60)
2.7"(68)
7"(17.8)
7"(17.8)
20.4"(518)
12.9"(327)
24.1"(613)
23.8"(605)
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)
Conduit connection hole
1.2"(30)
2.0"(50)
5.1"(130)
3.4"(85)
2.2"(56)
0.7"(18)
3.9"(99)
2.3"(58)
15.7"(400)
1.0"(24)
2.2"(55)
3.7"(95)
0.5"(12)
2.5"(64)
Refrigerant piping knockout

unit : in (mm)

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



Unit : in (mm)

