

R410A

HITACHI

# HITACHI SELF-CONTAINED AIR CONDITIONERS

## Models

RUA-NP4ATS • RUA-NP5ATS  
RUA-NP6ATS • RUA-NP8ATS  
RUA-NP9ATS • RUA-NP10ATS  
RUA-NP13ATS • RUA-NP15ATS  
RUA-NP20ATS • RUA-NP25ATS  
RUA-NP30ATS



## Nominal Cooling Capacity

12.2	kW	to	94.4	kW
10,500	kcal/h	to	81,200	kcal/h
41,600	Btu/h	to	322,100	Btu/h

### All R410A RUA models are equipped with new design high efficient Hitachi scroll compressors for high ambient environment

1. Scroll portion is using asymmetric involute scroll, suction portion can increase 20% compression space, and reduce heat loss to have better efficiency.
2. Oil supply is using Trochoid pump supplying oil volume stably to ensure fully lubrication and improve reliability.
3. Two roller bearings (Main/Sub) design is increasing the strength of bearing, and stabilize operation to reduce mechanical loss.
4. Improving the route of refrigerant to lower compressor motor coil temperature.

### All inclusive protection functions, higher reliability, longer duration

Equipped with 3 phases overcurrent transformer, high/low pressure switch, and compressor internal thermostat to improve compressor reliability greatly under tough environment.

# New R410A RUA model features

## New design step fin heat exchanger

New Ø7 tubes, Step Fin and multi route design high efficient heat exchanger to have better performance.

## New development PCB control to fully improve unit protection and performance

1. Multi-compressors starting sequence can be controlled automatically to avoid particular compressor starting frequently and extend compressor duration.
2. Each protection devices can be detected independently, when abnormal condition occurs, the alarm code will be displayed.
3. PCB memory is able to save 5 failure resumes that can be retrieved to help inspection and service.

## Using galvanized steel base

Improving unit structure strength and also to reduce unit damage risk during transportation and warehouse.

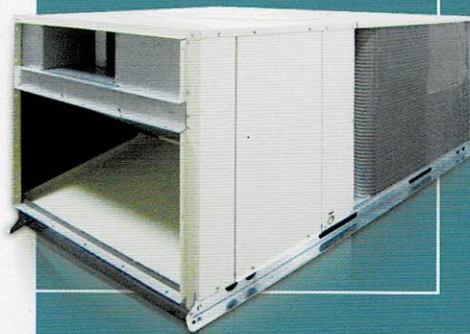
## More optional functions and accessories can meet various demands

Optional functions items :

Air filter, Filter box, Strainer & Dryer, Sight glass, Anti-corrosion fin, Double layers insulator for indoor service cover, Condenser protected net, Soft starter for indoor motor.

## More environment friendly

Using R410A refrigerant and reducing usage of woods in order to lower the impact of environment.



## FEATURES

### EFFICIENT, RELIABLE AND DURABLE NEW SERIES

#### Baked Paint Galvanized Steel Panels

##### Corrosion Resistant Cabinet

The weather proof characteristics of the panels have been significantly reinforced by the adoption of galvanized steel panel which have been coated with synthetic resin paint through our unique baking process. The resistant panels ensure long-lasting fine appearance, and maintenance work has been minimized.

#### Reliable Protection System

##### Compressor Protection

Each compressor is protected with the following components: reverse phase protection, overcurrent protector, internal thermostat, high pressure switch, low pressure switch and delay timer. This wide variety of protection devices provides perfect compressor guarding functions, assuring fewer service calls from customers.

##### Fan Motor

The evaporator fan motor is protected with thermal overcurrent relay and the condenser fan motors are protected with an internal thermostat.

#### Energy-Saving Design

##### Highly-Efficient Compressor

Low power input is achieved by specially developed compressors and heat exchanger and their suitable combinations.

##### Condenser

The adoption of a highly efficient step fin heat exchanger provides low operation cost.

##### Evaporator

Highly efficient step fin coils and inner grooved tube have been applied, to provide a large cooling capacity with low noise.

##### Insulated Indoor Compartment

This insulation compartment effectively eliminates heat loss.

##### Capacity Control (Dual or Multi Circuit Units)

Each unit is equipped with two, three or four compressors and two, three or four independent refrigeration cycle, so that one compressor operation can reduce the operation cost against a half load of one large compressor.

### EFFECTIVELY MATCHED SELECTION FOR INDIVIDUAL APPLICATIONS

#### Optimum Matched Choice

##### High Temperature Operation

Designed for high outdoor temperatures, these units guarantee reliable operation even under condition up to an ambient temperature of 52°C(125°F).

##### Attractive Fan Performance

Adequate external static pressure by the evaporator fan can be obtained for individual ducting applications.

#### Minimum Installation Arrangement

##### Easy Installation

This easy-to-install and ready-to-operate unit ensure rapid and low cost installation work.

##### Pre-Drilled Duct Flange

Flanges are prepared at the supply and return duct connections so that they can reduce duct connection work at the site.

##### Factory-Completed

Only system connection work is required, excluding the installation work for auxiliary equipment.

#### Quiet Operation

##### Compressor

Noise and vibration have been effectively reduced by the adoption of new hermetic compressor.

##### Condenser Fan

This direct driven propeller fan is dynamically balanced to ensure smooth airflow.

##### Evaporator Fan

The centrifugal fan and fan casing are optimum shaped for efficient and low noise operation.

#### Reduced Maintenance Work

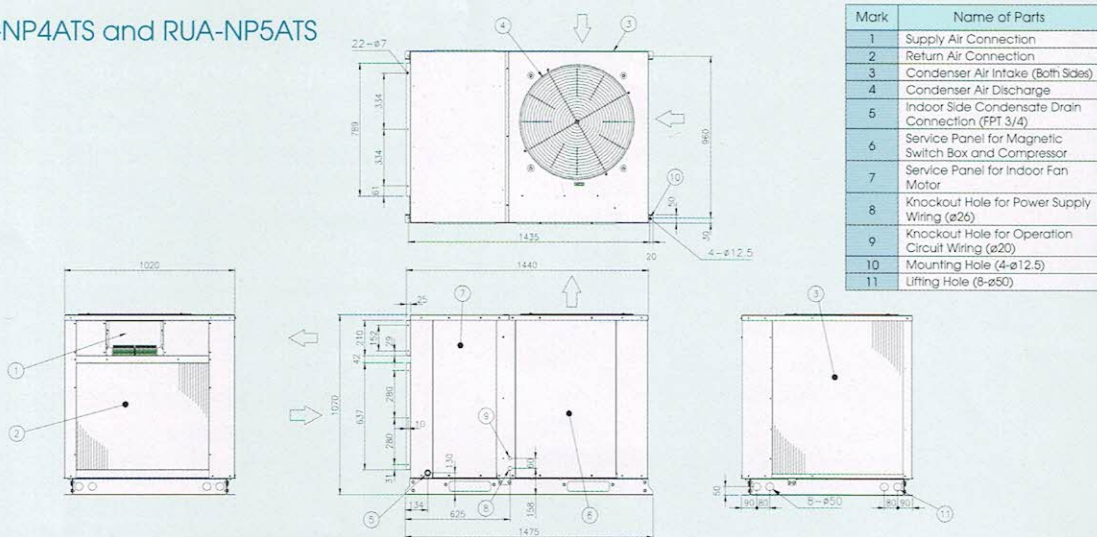
##### Easy Maintenance

Large service spaces and rapidly removable service panels have been provided for easy maintenance work.

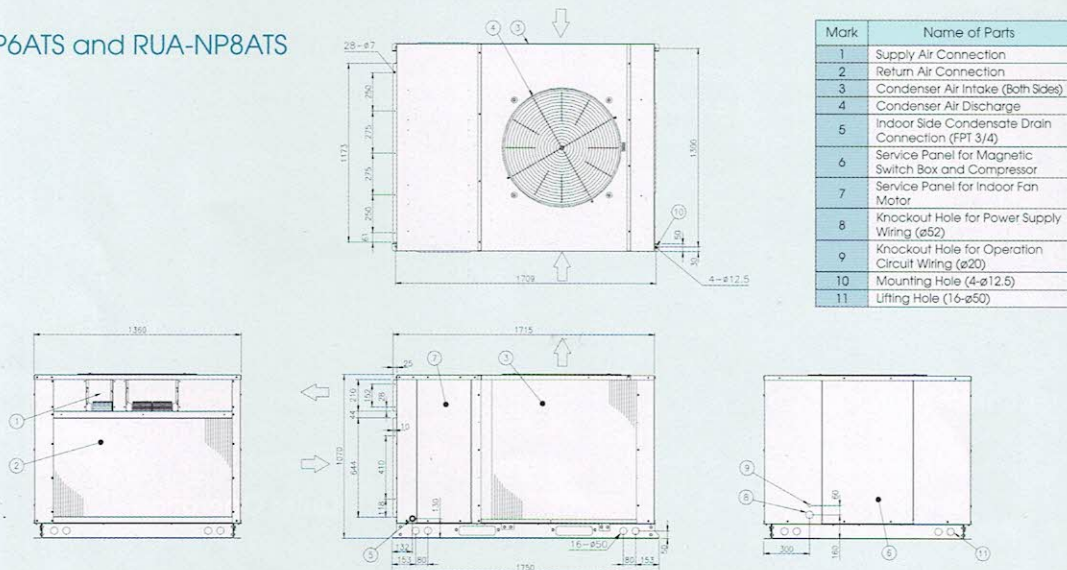
# UNIT DIMENSIONS



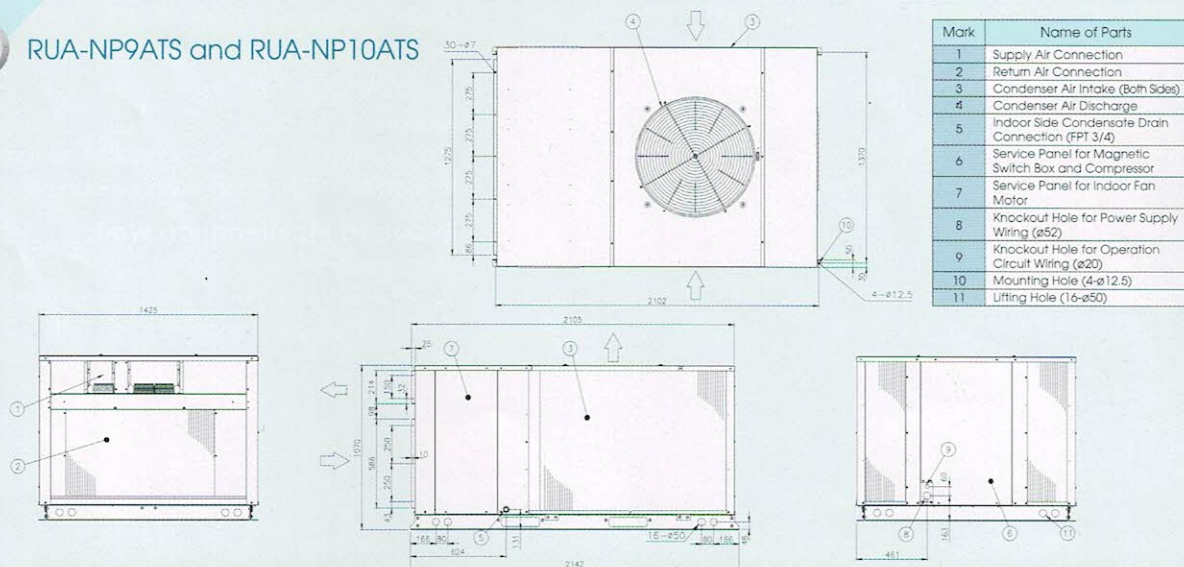
## RUA-NP4ATS and RUA-NP5ATS



## RUA-NP6ATS and RUA-NP8ATS



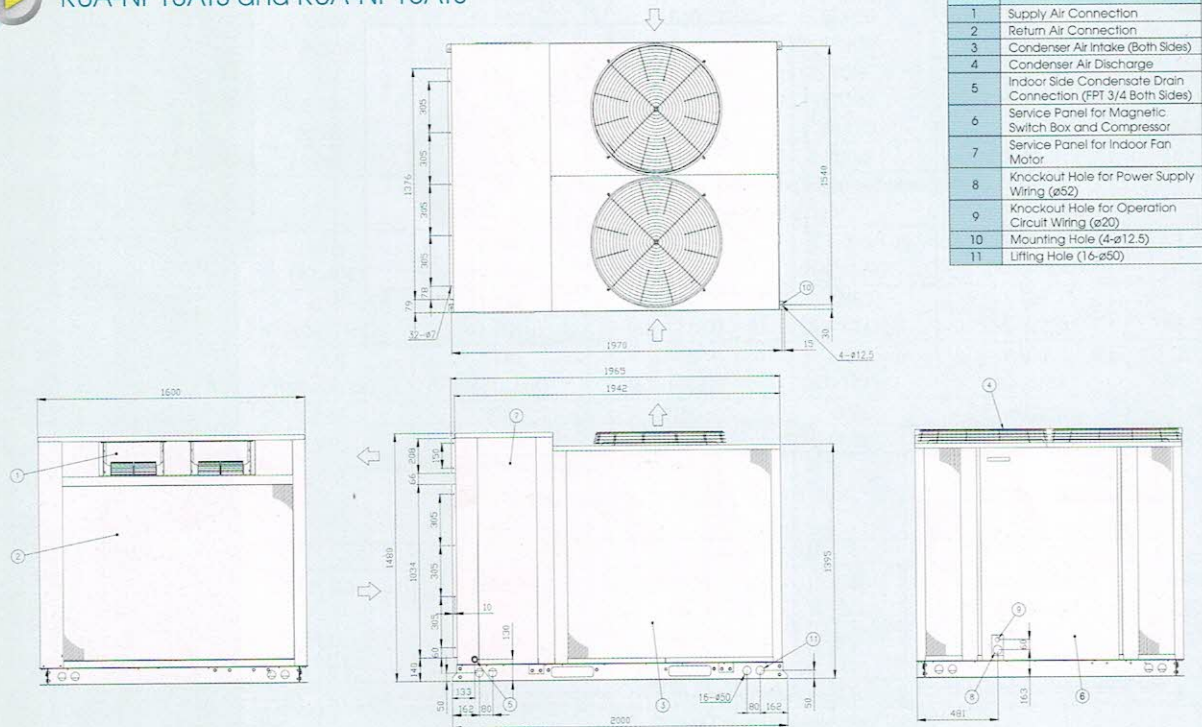
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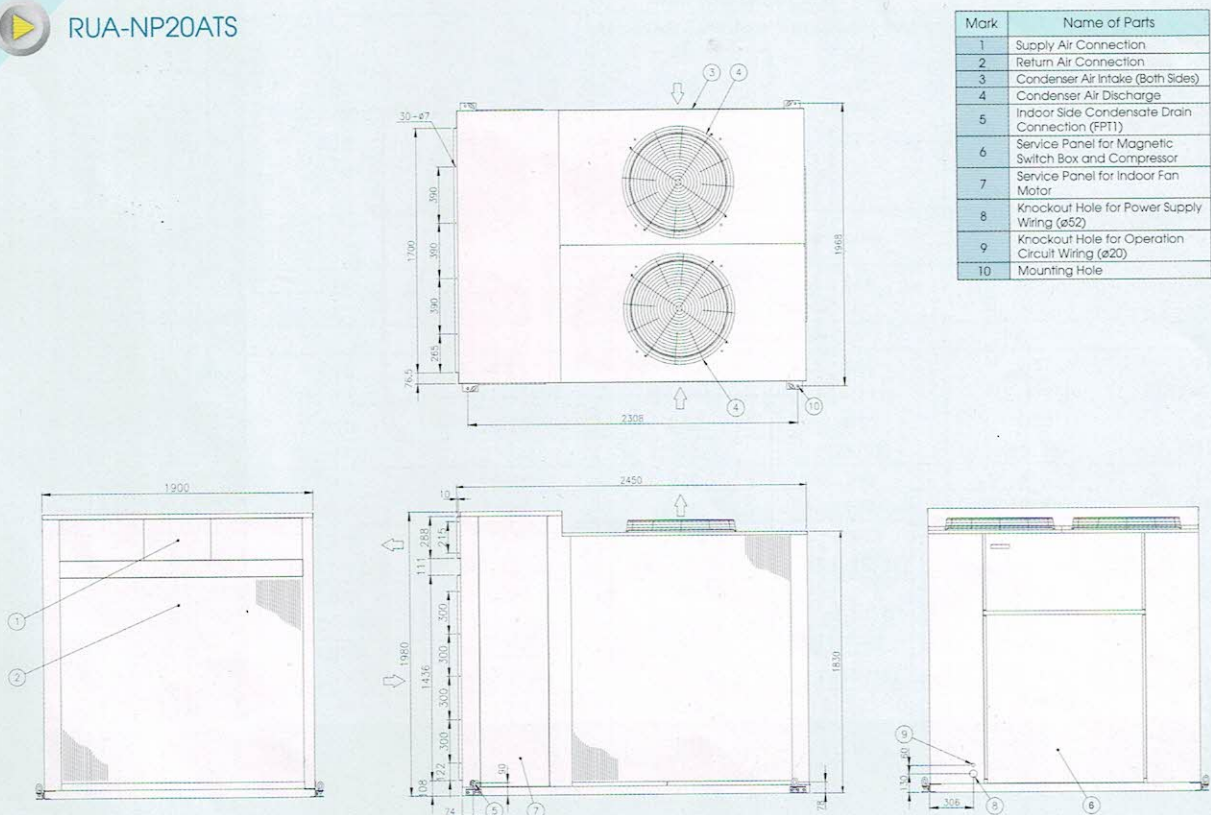
## UNIT DIMENSIONS



## RUA-NP13ATS and RUA-NP15ATS



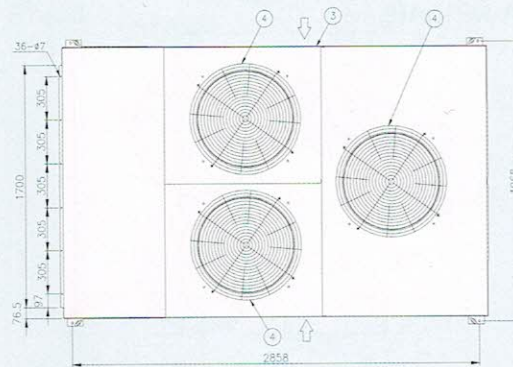
## RUA-NP20ATS



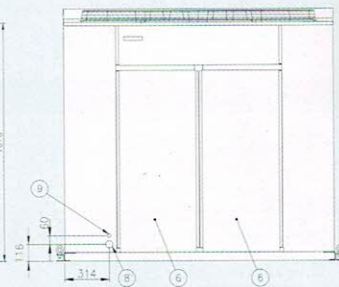
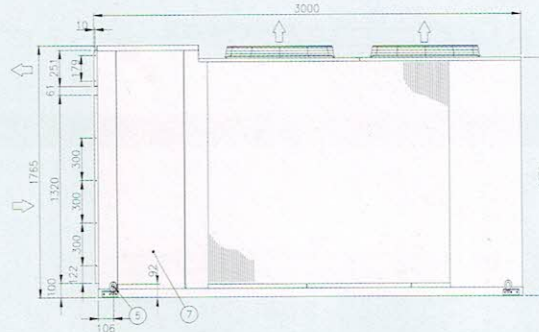
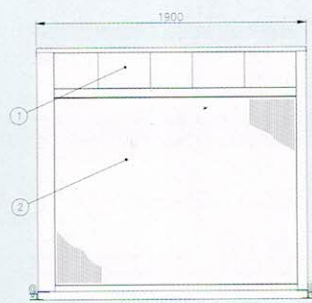
# UNIT DIMENSIONS



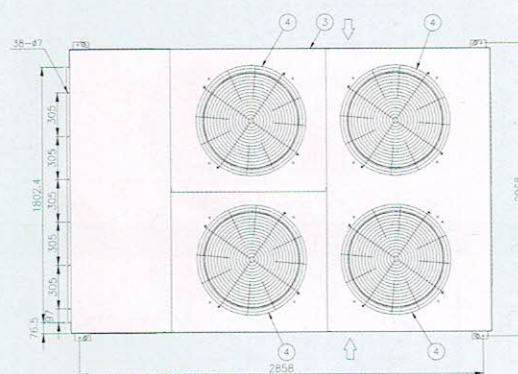
RUA-NP25ATS



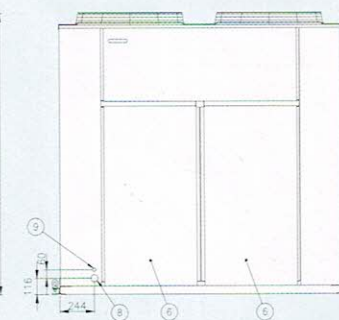
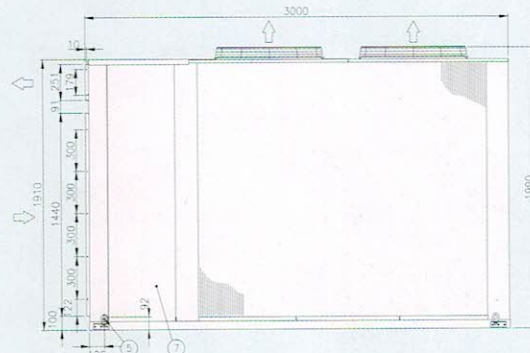
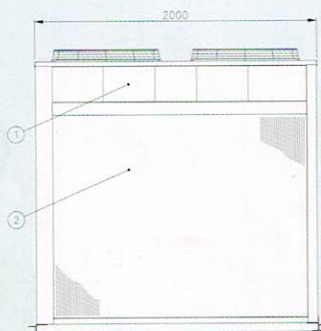
Mark	Name of Parts
1	Supply Air Connection
2	Return Air Connection
3	Condenser Air Intake (Both Sides)
4	Condenser Air Discharge
5	Indoor Side Condensate Drain Connection (FPT1)
6	Service Panel for Magnetic Switch Box and Compressor
7	Service Panel for Indoor Fan Motor
8	Knockout Hole for Power Supply Wiring (ø52)
9	Knockout Hole for Operation Circuit Wiring (ø20)
10	Mounting Hole



RUA-NP30ATS



Mark	Name of Parts
1	Supply Air Connection
2	Return Air Connection
3	Condenser Air Intake (Both Sides)
4	Condenser Air Discharge
5	Indoor Side Condensate Drain Connection (FPT1)
6	Service Panel for Magnetic Switch Box and Compressor
7	Service Panel for Indoor Fan Motor
8	Knockout Hole for Power Supply Wiring (ø52)
9	Knockout Hole for Operation Circuit Wiring (ø20)
10	Mounting Hole



# UNIT GENERAL DATA

Models			RUA-NP4ATS	RUA-NP5ATS	RUA-NP6ATS	RUA-NP8ATS	RUA-NP9ATS	RUA-NP10ATS
Nominal Cooling Capacity at 35°C outdoor temperature*	kW		12.2	15.2	18.0	23.0	27.4	30.6
	kcal/h		10,500	13,100	15,500	19,800	23,600	26,300
	Btu/h		41,600	51,900	61,400	78,500	93,500	104,400
Nominal Cooling Capacity at 46°C outdoor temperature**	kW		10.5	13.0	15.8	20.0	23.2	25.9
	kcal/h		9,000	11,200	13,600	17,200	19,900	22,300
	Btu/h		35,500	44,400	53,900	68,200	79,200	88,400
Nominal Cooling Capacity at 48°C outdoor temperature***	kW		10.4	12.9	15.7	20.0	22.8	25.7
	kcal/h		8,900	11,100	13,500	17,200	19,600	22,100
	Btu/h		35,500	44,000	53,600	68,200	77,800	87,700
Capacity Control	%		100.0	100.0	100.0	100.0	100.55.0	100.50.0
Cabinet Color (MUNSELL CODE)			Synthetic Resin Paint Baked on Galvanized Steel Plates Beige (2.5Y 8/2)					
Outer Dimensions	Height	mm (in.)	1,070 (42-1/8)	1,070 (42-1/8)	1,070 (42-1/8)	1,070 (42-1/8)	1,070 (42-1/8)	1,070 (42-1/8)
	Width	mm (in.)	1,020 (40-3/16)	1,020 (40-3/16)	1,360 (53-17/32)	1,360 (53-17/32)	1,425 (56-3/32)	1,425 (56-3/32)
	Depth	mm (in.)	1,440 (56-11/16)	1,440 (56-11/16)	1,715 (67-17/32)	1,715 (67-17/32)	2,105 (82-7/8)	2,105 (82-7/8)
Net Weight		kg (lbs.)	230 (507)	230 (507)	310 (683)	330 (728)	410 (904)	420 (926)
Refrigerant Flow Control Number of Circuits			R410A Capillary Tube 1				R410A Capillary Tube 2	
Compressor Model Motor		kW (hp)	Hermetic Scroll					
Quantity			E406DH 3.0 (4) 1	E506DH 3.75 (5) 1	E626DH 4.5 (6) 1	E856DH 6.4 (8.5) 1	E506DH/E406DH 3.75/3.0 (5)/(4) 1/1	E506DH 3.75 (5) 2
Condenser Fan		m³/min kW (hp)	Multi-Pass Cross-Finned Tube Direct Driven Propeller Fan					
Air Flow			132	132	150	150	175	175
Motor			0.3 (2/5)	0.3 (2/5)	0.3 (2/5)	0.3 (2/5)	0.3 (2/5)	0.3 (2/5)
Quantity			1	1	1	1	1	1
Evaporator Fan		m³/min m³/s L/s kW (hp)	Multi-Pass Cross-Finned Tube Multi-Blade Centrifugal Fan (Double Suction)					
Nominal Air Flow			37	46	65	69	82	90
			0.62	0.77	1.08	1.15	1.37	1.5
			620	770	1,080	1,150	1,370	1,500
Motor			0.55 (3/4)	0.55 (3/4)	0.75 (1)	0.75 (1)	1.5 (2)	1.5 (2)
Quantity			1	1	1	1	1	1
Connections Condensate Drain		FPT	Female Piping Thread Screw					
Size			3/4	3/4	3/4	3/4	3/4	3/4
Quantity			1	1	1	1	1	1
Wiring Hole Main		mm (in.)	Knockout Hole					
			Φ 26 (1-1/32)	Φ 26 (1-1/32)	Φ 52 (2-1/16)	Φ 52 (2-1/16)	Φ 52 (2-1/16)	Φ 52 (2-1/16)
Control			mm (in.)	Φ 20 (25/32)	Φ 20 (25/32)	Φ 20 (25/32)	Φ 20 (25/32)	Φ 20 (25/32)
Shipping Weight		kg (lbs.)	240 (529)	240 (529)	320 (705)	340 (750)	430 (948)	440 (970)
Approximate Packing List	Height	mm (in.)	1,115 (43-29/32)	1,115 (43-29/32)	1,115 (43-29/32)	1,115 (43-29/32)	1,115 (43-29/32)	1,115 (43-29/32)
	Width	mm (in.)	1,070 (42-1/8)	1,070 (42-1/8)	1,410 (55-1/2)	1,410 (55-1/2)	1,475 (58-1/16)	1,475 (58-1/16)
	Depth	mm (in.)	1,500 (59-1/16)	1,500 (59-1/16)	1,775 (69-7/8)	1,775 (69-7/8)	2,165 (85-1/4)	2,165 (85-1/4)
Measurements		m³	1.79	1.79	2.79	2.79	3.56	3.56

## Notes :

- The capacities are gross capacities, which include the effect of evaporator fan motor heat.
- The nominal cooling capacity is according to JIS B8616-2006, and based on the following condition.

### Evaporator Air Inlet Temperature

\*27°C DB/19°C WB (80°F DB/66°F WB)

\*\*29°C DB/19°C WB (84°F DB/66°F WB)

\*\*\*26.6°C DB/19.4°C WB (80°F DB/67°F WB)

### Condenser Air Inlet Temperature

35°C DB (95°F DB)

46°C DB (115°F DB)

48°C DB (118°F DB)

### Evaporator Air Flow

Nominal Air Flow

Nominal Air Flow

Max. Air Flow

# UNIT GENERAL DATA

Models			RUA- NP13ATS	RUA- NP15ATS	RUA- NP20ATS	RUA- NP25ATS	RUA- NP30ATS
Nominal Cooling Capacity at 35°C outdoor temperature*	kW		36.4	46.8	61.3	73.8	94.4
	kcal/h		31,300	40,200	52,700	63,500	81,200
	Btu/h		124,200	159,700	209,200	251,800	322,100
Nominal Cooling Capacity at 46°C outdoor temperature**	kW		32.7	42.1	53.2	65.3	84.2
	kcal/h		28,100	36,200	45,700	56,100	72,400
	Btu/h		111,600	143,600	181,500	222,800	287,300
Nominal Cooling Capacity at 48°C outdoor temperature***	kW		32.4	41.5	52.4	65.1	83.2
	kcal/h		27,900	35,700	45,100	56,000	71,500
	Btu/h		110,500	141,600	178,800	222,100	283,900
Capacity Control		%	100,60,0	100,50,0	100,62,0	100,66,0	100,50,0
Cabinet Color (MUNSELL CODE)			Synthetic Resin Paint Baked on Galvanized Steel Plates Beige (2.5Y 8/2)				
Outer Dimensions	Height	mm (in.)	1,480 (58-9/32)	1,480 (58-9/32)	1,980 (77-15/16)	1,765 (69-1/2)	1,990 (78-11/32)
	Width	mm (in.)	1,600 (63)	1,600 (63)	1,900 (74-13/16)	1,900 (74-13/16)	2,000 (78-3/4)
	Depth	mm (in.)	1,965 (77-3/8)	1,965 (77-3/8)	2,450 (96-15/32)	3,000 (118-1/8)	3,000 (118-1/8)
Net Weight		kg (lbs.)	580 (1,278)	610 (1,344)	790 (1,740)	900 (1,982)	1,055 (2,324)
Refrigerant Flow Control Number of Circuits			R410A Capillary Tube 2		R410A Capillary Tube 3		R410A Capillary Tube 4
Compressor			Hermetic Scroll				
Model			E856DH/E506DH	E856DH	E856DH/E506DH/E856DH	E856DH	E856DH
Motor	kW (hp)		6.4/3.75 (8.5)/(5)	6.4 (8.5)	6.4/3.75/6.4 (8.5)/(5)/(8.5)	6.4 (8.5)	6.4 (8.5)
Quantity			1/1	2	1/1/1	3	4
Condenser			Multi-Pass Cross-Finned Tube				
Fan			Direct Driven Propeller Fan				
Air Flow	m³/min		280	300	375	530	700
Motor	kW (hp)		0.3 (2/5)	0.3 (2/5)	0.3 (2/5)	0.3 (2/5)	0.3 (2/5)
Quantity			2	2	2	3	4
Evaporator			Multi-Pass Cross-Finned Tube				
Fan			Multi-Blade Centrifugal Fan (Double Suction)				
Nominal Air Flow	m³/min		110	130	175	234	260
	m³/s		1.83	2.17	2.92	3.9	4.33
	L/s		1,830	2,170	2,920	3,900	4,330
Motor	kW (hp)		2.2 (3)	2.2 (3)	3.7 (5)	5.5 (7.5)	5.5 (7.5)
Quantity			1	1	1	1	1
Connections			Female Piping Thread Screw				
Condensate Drain							
Size	FPT		3/4	3/4	1	1	1
Quantity			1	1	1	1	1
Wiring Hole			Knockout Hole				
Main	mm (in.)		Φ 52 (2-1/16)	Φ 52 (2-1/16)	Φ 52 (2-1/16)	Φ 52 (2-1/16)	Φ 52 (2-1/16)
	mm (in.)		Φ 20 (25/32)	Φ 20 (25/32)	Φ 20 (25/32)	Φ 20 (25/32)	Φ 20 (25/32)
Shipping Weight		kg (lbs.)	610 (1,344)	640 (1,410)	960 (2,115)	1,085 (2,390)	1,250 (2,753)
Approximate Packing List	Height	mm (in.)	1,525 (60-1/32)	1,525 (60-1/32)	2,110 (83-1/16)	1,945 (76-9/16)	2,170 (85-7/16)
	Width	mm (in.)	1,650 (64-31/32)	1,650 (64-31/32)	2,100 (82-11/16)	2,100 (82-11/16)	2,200 (86-5/8)
	Depth	mm (in.)	2,005 (78-15/16)	2,005 (78-15/16)	2,570 (101-3/16)	3,100 (122-1/16)	3,100 (122-1/16)
Measurements		m³	5.05	5.05	11.39	12.66	14.80

## Notes :

- The capacities are gross capacities, which include the effect of evaporator fan motor heat.
- The nominal cooling capacity is according to JIS B8616-2006, and based on the following condition.

### Evaporator Air Inlet Temperature

- \*27°C DB/19°C WB (80°F DB/66°F WB)
- \*\*29°C DB/19°C WB (84°F DB/66°F WB)
- \*\*\*26.6°C DB/19.4°C WB (80°F DB/67°F WB)

### Condenser Air Inlet Temperature

- 35°C DB (95°F DB)
- 46°C DB (115°F DB)
- 48°C DB (118°F DB)

### Evaporator Air Flow

- Nominal Air Flow
- Nominal Air Flow
- Max. Air Flow

Specifications in this catalog are subject to change without notice, in order that HITACHI may bring the latest innovations to our customers.