

# ROOFTOP PACKAGE UNIT



Perfecting the Air

- BUILT-IN DEMAND RESPONSE (DRED)
- ELECTRONIC EXPANSION VALVE (EEV)
- SEQUENTIAL DEFROST OPERATION
- EASE OF INSTALLATION



UAYN-AFY1A

COMMERCIAL SOLUTIONS

## ROOFTOP PACKAGED UNIT UAYN-AFY1A

37.2kW -TO- 1,950  
94.9kW -TO- 5,300L/s **8**  
CAPACITY RANGE CAPACITY RANGE MODELS

Daikin's RT Series (UAYN-AFY1A) is designed and manufactured in Australia with emphasis on reliability and easy installation for commercial solutions.



### FEATURES

- Footprint ideal for replacement market
- Indoor EC plug (fixed speed control only), adjustable with up to 300Pa ESP increase over rated
- EC motor driven outdoor propeller fans with ESP of 30Pa
- Dual fixed speed scroll compressors (2 step, 50 & 100% capacity)
- Hydrophilic blue fin indoor & outdoor coils
- Foil faced 20mm PEThermobreak insulated panels
- Built-in 2" return air filter rails with MERV 8 filters (Optional)
- Built-in demand response (DRED) capability
- After hours push button is included
- Optional vibration mounting kit & remote temperature sensor (25m)
- Built-in economy cycle function (dry bulb only)\*

### SEQUENTIAL DEFROST OPERATION

The dual outdoor heat exchangers allow each heat exchanger to enter defrost cycle separately\*\*. If both heat exchangers require defrost, the 2nd heat exchanger will enter defrost cycle once the first one is completed. Improves comfort as reduced heating capacity can still be provided to the indoor environment.

\*Outdoor air & return air dampers, rain sensor, cables & connectors are not included (all field supplied).

\*\*Only applicable when indoor fan is set to run during defrost (default setting), if fan set to off both heat exchangers will run defrost simultaneously.

\*\*\*Can be extended up to 50m using field supplied cable (power: 2 core AWG 12-20 & comm: 3 core AWG 20-22)



### RT Touch Controller

- 4.3" resistive touch screen LCD controller (480 x 270 resolution)
- Wall mounted: 88(H) x 152(W) x 32(D) mm
- Flush mounted: 88(H) x 152(W) x 9(D) mm
- Check operation at a glance with built-in operation status LED
- User operation & service configuration available on the same controller
- Wire harness (15m) included for connection to rooftop packaged unit\*\*\*

- GREEN - Unit On, Fan Only
- RED - Unit Error Lockout
- RED (BLINKING) - Unit Error
- OFF - Unit Off
- CYAN - Unit On, Cooling
- YELLOW - Unit On, Heating

## TECHNOLOGY

### 1. HYDROPHILIC BLUE FIN HEAT EXCHANGER

- Aluminium corrugated (waffle) fins with Ø7mm copper pipes
- Dual heat exchangers each with 2 rows\* at 16 fins per inch
- PE coated – an acrylic & hydrophilic coat for corrosion resistance

\*3 rows for 530 Class.

### 2. DUAL FIXED SPEED SCROLL COMPRESSORS

- 2 step control, 50 & 100% capacity
- Compressor balance loading function, ensures the accumulated run time of each compressor is similar to extend compressor longevity

### 3. ELECTRONIC EXPANSION VALVE (EEV)

- Expansion valve is electronically operated for precise control of refrigerant flow into the evaporator
- Greater efficiency due to better superheat control\*
- Enables fast & accurate response to heat load changes

\*Compared to Thermostatic Expansion Valve (TEV)

### 4. EASY TO ACCESS ELECTRICAL BOX

- Complete rooftop system is IP44 rated
- External cables are conveniently fed from the bottom & through the rubber grommets
- All-in-one electrical box, gain access to:
  - Rooftop power supply terminals
  - RT Touch Controller terminals
  - After hours push button contacts
  - DRED Contacts (DRM1, 2, 3\* & common)

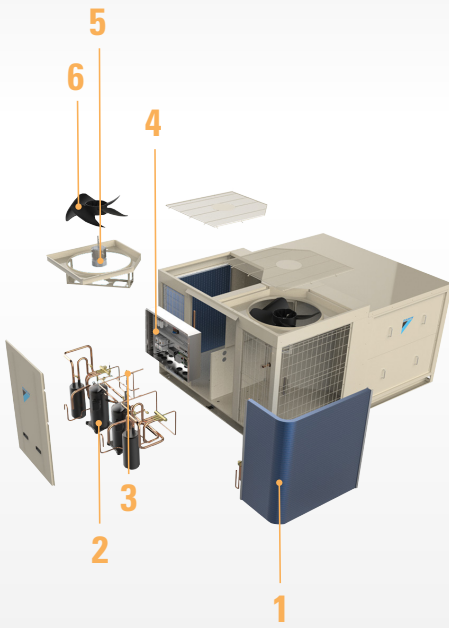
\*DRM 1: Compressor Off, DRM 2: 50% Power Limit, DRM 3: 75% Power Limit

### 5. EC MOTOR

- Electronically commutated (EC) motor
- Exceeds IE4 efficiency
- IP44 rated (IP55 for 640 - 840 Class)
- Fan speed is modulated according to operation mode (cool or heat) & exchanger temp.

### 6. PROPELLER FAN

- Sharp edge fan blade curvature reduces vibration and pressure loss
- Large diameter fan quietly delivers high air volume
- ESP of up to 30Pa (for ducting)



## SPECIFICATIONS

MODEL			UAYN350AFY1A	UAYN400AFY1A	UAYN470AFY1A	UAYN530AFY1A	UAYN640AFY1A	UAYN750AFY1A	UAYN840AFY1A	UAYN940AFY1A
Rated Capacity (Cooling) <sup>1,2</sup>	Net	kW	37.2	40.8	45.8	53.4	66.1	73.1	81.9	94.9
	Net	kW	34.3	37.6	44.1	54.3	64.9	71.8	82.0	94.0
Rated Power Input (Cooling) <sup>2</sup>		kW	10.7	11.8	14.3	17.3	20.0	22.7	26.5	31.2
Rated Power Input (Heating) <sup>3</sup>		kW	9.0	10.7	12.8	16.7	19.5	21.9	26.3	29.9
Rated EER (Cooling) <sup>4</sup>		kW/kW	3.48	3.45	3.21	3.08	3.30	3.21	3.09	3.04
Rated COP (Heating) <sup>4</sup>		kW/kW	3.81	3.52	3.45	3.26	3.32	3.28	3.12	3.14
Power Supply		V/Ph/Hz	380-415 / 3N~ / 50							
Refrigerant Charge		kg	3.9kg / 3.9kg	5.8kg / 5.8kg	5.8kg / 5.8kg	6.0kg / 6.0kg	8.7kg / 8.7kg	9.3kg / 9.3kg	13.0kg / 13.0kg	12.8kg / 12.8kg
Refrigerant Type / Control			R410a / EXV							
Evaporator	Air Flow Rate	l/s	1950	2200	2595	2750	3610	4100	4580	5300
	External Static Pressure	Pa	210	230	300	350			400	200
	Condensate Drain Size	mm	25.4							
Condensator	Sound Pressure Level <sup>5</sup>	dBA	66	69		70		67	71	
	Sound Pressure Level <sup>6</sup>	dBA	86	88		87	90		95	
Compressor Quantity			Fix Scroll / 2							
Dimensions	Height	mm	1276	1360		1403	1757		1980	
	Width	mm	1914		1914		2220		2207	
	Depth	mm	2525	2525		2484		2835		
Net Weight (without packaging)		kg	630	640		730	980	1030	1165	

\*1 = Net capacities, include indoor fan motor heat.

\*2 = Cooling capacity and power input is based on indoor temperature 27°CDB, 19°CWB and outdoor temperature 35°CDB, 24°CWB, according to AS/NZS 3823.1.2.

\*3 = Heating capacity and power input is based on indoor temperature 20°CDB, 15°CWB and outdoor temperature 7°CDB, 6°CWB, according to AS/NZS 3823.1.2.

\*4 = Calculation of EER and COP according to AS/NZS 3823.1.2

\*5 = Microphone position: 1m away from service panel of the unit and 1m above floor level.

\*6 = Sound power level testing is according to ISO 3744:2010.

**ZERL (Residential)** refers to 'Zoned Energy Rating Label' residential star rating as outlined in the Energy Efficiency (Energy Using Products) Amendment Regulations 2020.

- Notes:
- The rated capacity is measured in accordance with AS/NZS 3823.1.1
  - The cooling (or heating) output capacity will be reduced below the rated value as the outdoor temperature approaches the maximum (or minimum) outdoor temperature operating range limit.

- The specifications, designs & information in this flyer are subject to change without notice. Unit colours shown are as close as possible to actual unit colours. Colours depicted in this flyer may vary slightly.

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