Perfecting the Air



# Underfloor Ducted Systems Heating and cooling solutions







# Perfecting the Air

Every day we breathe in 10,000 litres of air. It nourishes us. Enriches us. A deep breath of clean air is exactly what nature intended. It's amazing that something we can't see can make such a difference to our health and well-being – and it's why we believe every breath should be 'perfect'.

At Daikin, we've been 'perfecting the air' for over 50 years to make your home a calm and comfortable place – for you and your family.

As 'Air Specialists', Daikin is driven to improve all aspects of indoor air quality - from temperature and humidity, to flow and cleanliness.

## Trusted Name Daikin Ducted -

### more for your money

When you choose a Daikin, you can be confident you've made a smart choice for your home and your family.

#### Local after sales service and support

Daikin has an established Service Department including an in-house call centre, spare parts division and support centre for all technical enquiries.

### Daikin exceeds MEPS energy efficiency requirements

In the interests of increasing the overall air conditioning efficiency, all ducted air conditioners with a cooling capacity of up to 65kW sold in Australia or New Zealand must now comply with the Minimum Energy Performance Standards (MEPS), as set out in Australian and New Zealand Standard 3823.2:2013.

All Daikin air conditioners exceed MEPS requirements, in line with Daikin's commitment to providing energy efficient, quiet,

simple to use and reliable air conditioning solutions.

ACCESSION



#### Australian Made Certification

Through our commitment to expand our local manufacturing capability, all Daikin underfloor ducted indoor units have received 'Australian Made' certification.

A registered certification trademark, the Australian Made logo is Australia's most trusted, recognised and widely used country of origin symbol, and is underpinned by a third-party accreditation system, which ensures products that carry the logo are certified as 'genuinely Australian'.

Products that have received Australian Made certification are of the highest quality and have met the criteria set out in the Australian Consumer Law and Australian Made, Australian Grown (AMAG) logo Code of Practice.





# Custom designed for underfloor installations

Daikin's Underfloor Ducted Systems are an ideal solution for homes in colder climates where heating is a focus. In these situations, units are typically installed underfloor to promote even warm air distribution throughout the home. Now utilising R32 refrigerants for lower GWP impact, Daikin's Underfloor Systems are the perfect balance of energy performance and home comfort when paired with Daikin's Zone Controllers.

#### Why is R32 underfloor different?

The Daikin Underfloor Ducted System has been engineered to ensure the safety of all occupants. The system incorporates a leak detector that activates Daikin's Refrigerant Control Strategy in the unlikely event of a refrigerant leak. This sophisticated new built-in monitoring and control technology works to dissipate leaks in order to eradicate any flammability hazards, ensuring the system complies with Australian and New Zealand standard 60335.2.40:2019.

#### How does it work?

- 1. Upon activation of the leak detector, a signal is sent to the Daikin controller
- 2. Daikin controller will then operate the system to dissipate the refrigerant from the ducted system:
- > Compressor is switched off
- > Indoor unit fan operates in fan only mode
- > All zone dampers are open

#### **Compatible Daikin Controllers**

The following Daikin controllers are the only controllers able to implement the Daikin Refrigerant Control Strategy within the R32 Underfloor Ducted System and ensure compliance with Australian and New Zealand standard 60335.2.40:2019.

- > AirHub BRC24T(L)Z4(8)B9
- > Zone Controller
- BRC24(230)Z4(8)B9



# Seasonal Performance

Air conditioning units receive seasonal performance ratings which take into consideration the local climate where the air conditioner is installed and the seasonal temperature differences experienced throughout the year.

The rating system divides Australia into three distinct climate zones; hot, average and cold. Air conditioning systems will perform differently depending on where they're installed, so it's important to choose the right model for your zone.

Each model is given a Total Cooling Seasonal Performance Factor (TCSPF) rating and a Heating Seasonal Performance Factor (HSPF) rating. The greater the TCSPF and HSPF ratings, the more efficient the air conditioner will be.



MOD

FDYUA16 RZAS160

TCSPF/HSPF refers to the seasonal efficiency of an air conditioner as outlined in the GEMS 2019 Determination. TCSPF: Total Cooling Seasonal Performance Factor as per AS/NZS 3823.4.1:2014. HSPF: Heating Seasonal Performance Factor as per AS/NZS 3823.4.2:2014.

#### Example (seasonal performance - residential)

L	ZONE	TCSPF	HSPF	
0AV1 C2V1	HOT	4.77	3.96	
	AVERAGE	4.37	3.65	
	COLD	4.55	3.21	

# Daikin Technology

Indoor Unit

For over 90 years, Daikin has invested heavily in Research and Development to deliver more effective climate control for you and your family. Daikin technologies help make Daikin air conditioners energy efficient, powerful, reliable and easy to use.





1. Indoor heat exchanger Our new indoor heat exchangers have been designed to deliver maximum capacity output in a compact casing size. Through the use of cutting-edge technologies, our indoor heat exchangers utilise 5mm copper pipes to ensure that your home is heated and cooled efficiently.

#### 2. DC fan motor

Daikin indoor units are equipped with a high-efficiency DC fan motor. By utilising high-power permanent magnets instead of the induced magnetism of conventional AC motors, Daikin's DC motor can deliver significantly higher motor efficiency.



3. Sirocco fan

Daikin's ducted units are fitted with lightweight single injection moulded Sirocco Fans. These fans feature an aerodynamic fan blade design which reduces turbulence for a more efficient and quieter delivery.

# Conventional Inverter

DC Sine Wave Inverter



#### 5. Inverter compressor

Daikin's swing and scroll DC sine wave inverter compressors are guieter and more efficient than conventional compressors thanks to their high pressure dome construction and the usage of high pressure lubrication oil.

#### 6. Reluctance DC motor

Daikin's Reluctance DC motor utilises the magnetic torque of neodymium magnets in conjunction with reluctance torque, resulting in more energy efficient operation. These neodymium magnets are 10 times stronger than conventional ferrite magnets.



#### 4. Refrigerant leak detector

This series features new logic which enables accurate detection and mitigation of R32 refrigerant leaks through the combination of a built-in leak detection sensor and updated controls strategy.



#### 7. Saw edge fan blade

The addition of a saw tooth edge at the rear of the blade smooths air flow over the blade surface, reducing turbulence which in turn results in a quieter, more efficient means of delivering comfort to your home.



#### 8. Refrigerant cooled PCB

The heat produced by the inverter PCB module is cooled by a sub heat exchanger\* that provides stable operation, enhanced reliability and continuous operation up to 50°CDB ambient^.





R32 MODELS

CAPACITY RANGE



THRFF PHASE OPTIONS



## Premium Inverter **Underfloor** Ducted

#### Superior energy performance

Engineered with features such as a redesigned Cross-Pass Heat Exchanger on the outdoor unit, DC Fan motor on the indoor unit and Daikin's patented swing compressor, our new Premium Inverter series takes energy efficiency to the next level.

#### Increased operation limits

Built for the harsh Australian climate, the refrigerant cooled PCB technology incorporated in the outdoor unit enables continuous operations up to 50°C ambient.

#### Design flexibility

The side discharge configuration of the outdoor unit enables convenient installation onto the narrow side access of modern homes. Additionally, the indoor unit can also be separated into 2 sections for easy installation and retrofitted into existing homes.

#### Night Quiet Mode

Our outdoor units are amongst the guietest on the market. If the noise levels need to be further reduced, engaging the Night Quiet Mode feature will reduce the noise levels by 4dBA\*.

#### Automatic Airflow Adjustment

Utilising the DC fan technology on our indoor unit, the Automatic Airflow Adjustment feature ensures the indoor fan operates at the appropriate settings to automatically deliver the optimum airflow to your home always.

## Inverter Underfloor Ducted

#### Improved energy performance

Adopting advanced technologies such as a DC Fan motor, Cross-Pass Heat Exchanger on the outdoor unit with increased heat exchange area and Daikin's patented swing compressor our new Inverter series is designed to operate with improved efficiencies throughout the year.

#### Space saving outdoor unit

The Inverter series outdoor units are more compact than ever before. Models up to 125 Class are now encased in a space saving single fan side discharge outdoor unit, allowing you to easily place the unit under windows.

#### Australian Made



Daikin Ducted Indoor Units are specifically designed and manufactured in Sydney, NSW to perform in Australian Conditions.



#### Compact indoor unit

Today's modern home designs are maximising living spaces with higher ceilings resulting in shallower roof spaces. Our Inverter series features compact indoor units with a low profile height of  $\leq$  360mm allowing them to fit comfortably into modern homes.

#### 3 phase option

Designed for homes with a 3 phase power supply in place, our R32 Underfloor Inverter series ensures a simple and convenient installation without the need to worry about unbalanced electrical loads at your electrical distribution board.

#### **Ultimate Control**



The Airbase Smartphone Interface is an optional accessory that allows you to control your Daikin Underfloor Ducted System from anywhere, anytime.

Daikin's AirHub Touch Zone Controller with its contemporary design, intuitive controls and innovative features will give you the flexibility to deliver precise temperature control and ultimate comfort where it is needed in your home.





#### AirHub comes in two versions

#### **1. ON/OFF ZONE CONTROL**

Allows users to air-condition occupied zones and switch off unoccupied zones. Features Airside Control.



### Daikin AirHub Ultimate air control for your home

#### Features

- > 7" colour resistive touch screen interface housed in a contemporary casing design with a matte white finish.
- > Both On/Off or Linear Control options available in either a 4 or 8 zone design.
- > Flush mounted 11mm off the wall for a clean, minimalistic look.
- Weekly Schedule Timer with individual zone timer, for programming the system and individual zones on or off at set times of the week.
- > Optional wireless remote temperature sensors, ideal for homes with internal brick walls.
- Eco settings such as Setpoint Range Limit, Setpoint Auto Reset and Auto Off Timer enables you to easily reduce your ducted system's energy consumption.



AIRHUB ITEMS					
BRCMTZCB9	Main Zone Controller				
BRCSTZCB9	Sub Zone Controller				
BRC24TZ4B9	4 Zone, On/Off Zone Controller Box (24V)				
BRC24TZ8B9	8 Zone, On/Off Zone Controller Box (24V)				
BRC24TLZ4B9	4 Zone, Linear Zone Controller Box (24V)				
BRC24TLZ8B9	8 Zone, Linear Zone Controller Box (24V)				
BRCS01A-1	Wired Temperature Sensor				
BRYW1B-1	Wireless Temperature Sensor				
BRYW1B-2	Wireless Sensor Receiver				
CONTROLLER SPECIFICATION					
HxWxD (mm) 134x232x64 (11mm Flush) Screen (Diagonal) 7.00"					
SENSOR SPECIFICATION					
Wired - HxWxD Wireless - DIAxD	50x60x20 067x15				
Need a second controller?					

Daikin Airbase is a great option!

compatible

#### What is Airside Control?

As zones are turned off, the indoor unit fan reduces speed between 60-100% of the nominal airflow rate to meet the airflow requirement of the remaining open zones for quieter operation and greater energy savings.

#### What is Optizone Control?

OptiZone Control will automatically regulate the individual zone dampers to deliver precise airflow to meet the temperature settings and heat load of each zone. As the zone dampers adjust, the indoor unit fan speed will intelligently regulate between 30-100% of the nominal airflow rate to deliver the required airflow to maintain the comfort levels of each zone.

On days when the heat load is mild or low, significant energy savings can be achieved through OptiZone Control, truly optimising the system for ultimate comfort.

#### 2. LINEAR ZONE CONTROL

Enables users to switch zones on and off as well as set the zone temperature to within  $\pm 2^{\circ}$ C. Features Opti-Zone Control.



### Zone Controller (On/Off Control Only)

#### Features

- > Backlit display with easy-to-read text.
- > Three different timer and time clock operations for precise, programmable control for your home.
- > Countdown On-Off timer, programmable in 1 hour increments for up to 12 hours.
- > A simple 7-day Time Clock, to program the controller to turn the system on or off at set times any day of the week. Two different on and off programs can be set for each day of the week.
- > An advanced 7-day Time Clock extends the functionality of the Simple 7-day Time Clock with advanced features such as Zone Control and Temperature Sensor Selection, for the ultimate in-home comfort.
- Airside Control when connected with Premium R32 Underfloor Inverter (71-160 Class) and R32 Underfloor Inverter (71-160 Class).

ZONE CONTROLLER MODEL NO:				
BRC230Z4B9	Up to four zones (230-240v)			
BRC230Z8B9	Up to eight zones (230-240v)			
BRC24Z4B9	Up to four zones (24v)			
BRC24Z8B9	Up to eight zones (24v)			
BRCSZC19	Sub Zone Controller			
SPECIFICATION				
HxWxD (mm) Screen (Diagonal)	120x170x24 3.17″			







# Daikin Airbase

#### Control at your fingertips

Daikin Airbase puts your ducted system's frequently used functions at your fingertip with an easy-to-use app.

In conjunction with Daikin's BRP15B61 wireless LAN adaptor, the Airbase app lets you use your smartphone or tablet\* to operate your air conditioning unit via your in-home Wi-Fi or remotely with an internet connection.

Up to 10 systems\*\* can be conveniently monitored and controlled on the app anywhere, anytime.



Note Airbase is not compatible with Sub Zone Controller





Google/Amazon Smart Speaker and Home Automation Ecosystem Purchased Separately



Enabled





#### Features

FUNCTION	DUCTED WITH ON/OFF ZONE CONTROL	DUCTED WITH LINEAR ZONE CONTROL
Start/stop operation	$\checkmark$	✓
Temperature setting	$\checkmark$	$\checkmark$
Fan speed settings	$\checkmark$	×
Mode selection (cool/heat/fan/dry)	$\checkmark$	$\checkmark$
Zone on/off	$\checkmark$	$\checkmark$
Zone Temperature (±2°C)	×	$\checkmark$
24 hour on/off timer	$\checkmark$	$\checkmark$
Enter zone names	$\checkmark$	$\checkmark$
Error notification	$\checkmark$	$\checkmark$
Room temperature display	$\checkmark$	$\checkmark$
Filter clean reminder	$\checkmark$	$\checkmark$
Push notification (on/off alerts)	$\checkmark$	$\checkmark$
Automatic adaptor firmware update	$\checkmark$	$\checkmark$
Setup Wizard in app	$\checkmark$	$\checkmark$

#### **Product Specification Premium Inverter - Single Phase**

#### Product Specification Inverter - Single Phase and Three Phase



INDOOR UNIT		FDYUA71AV1	FDYUA125AV1	FDYUA160AV1	
OUTDOOR UNIT		RZAS71C2V1	RZAS125C2V1	RZAS160C2V1	
Data d Caracaitu	Cool (kW)	7.1	12.5	16.0	
Rated Capacity	Heat (kW)	7.5	15.0	18.0	
Canacity Dance	Cool (kW)	3.2-8.0	5.0-14.0	7.3-17.0	
Capacity Range	Heat (kW)	3.5-9.0	5.1-16.0	7.3-20.0	
Devuer le reut (Dete d)	Cool (kW)	1.90	3.45	4.85	
Power input (Rated)	Heat (kW)	1.75	3.80	4.65	
E.E.R/C.O.P	C/H	3.74/4.29	3.62/3.95	3.30/3.87	
TCSPF (Residential)	Hot/Average/Cold	5.20/4.50/4.55	4.96/4.47/4.59	4.77/4.37/4.55	
HSPF (Residential)	Hot/Average/Cold	3.87/3.80/3.51	4.43/3.92/3.36	3.96/3.65/3.21	
Airflow Rate (Nominal/Max)	l/s	425/566	755/840	950/1120	
Indoor Sound Level (H) @ 1.5m	dBA (C/H)	37.3/40.5	44.8/46.2	47.2/49.6	
Piping Length	m	75			
Indoor Fan Speeds		H/M/L			
	Indoor (mm)	300x1210x900	360x1520x935	400x1505x980	
Dimensions (HXWXD)	Outdoor (mm)	990x940x320 1430x940x320			
Walaht	Indoor (kg)	40	56	60	
weight	Outdoor (kg)	69	93	99	
Power Supply	V/Hz		1 Phase, 220-240V, 50Hz		
Compressor Type		ŀ	Hermetically Sealed Swing Typ	e	
Refrigerant			R32		
	Liquid (mm)	9.5 (Flared)			
Pipe Sizes	Gas (mm)	15.9 (Flared)			
	Drain (mm)	ID 25 / OD 32			
Supply Air Opening	mm (HxW, Flange)	185x852	245x1152	295x1152	
Return Air Opening	mm	1x400 (Oval)	2x400	(Oval)	
Outdoor Operating Dapage	Cool (°CDB)	-5 to 50			
Outdoor Operating Range	Heat (°CWB)	-15 to 16			
EPA Sound Power Level	dBA	67	71	75	
Outdoor Sound Level (H) @ 1m	Pressure dBA (C/H)	48/50	52/54	56/58	

Notes:

i. The Rated Capacity, Power Input and Running Current are measured in accordance with AS/NZS 3823.1.2 Cooling: Indoor temp: 27°CDB/19°CWB, Outdoor temp: 35°CDB/24°CWB

Heating: Indoor temp: 20°CDB/15°CWB, Outdoor temp: 7°CDB/6°CWB

ii. Indoor and outdoor sound levels are determined in an anechoic chamber and may differ once the unit is installed due to ambient conditions iii, TCSPF: Total Cooling Seasonal Performance Factor & HSPF: Heating Seasonal Performance Factor as defined under GEMS 2019 Determination





RZA71C2

		SINGLE PHASE				THREE PHASE		
INDOOR UNIT		FDYUAN71AV1	FDYUAN125AV1	FDYUAN160AV1	FDYUAN71AV1	FDYUAN125AV1	FDYUAN160AV1	
OUTDOOR UNIT		RZA71C2V1	RZA125C2V1	RZA160C2V1	RZA71C2Y1	RZA125C2Y1	RZA160C2Y1	
Datad Canaaitu	Cool (kW)	7.1	12.5	15.5	7.1	12.5	15.5	
Rated Capacity	Heat (kW)	7.5	15.0	18.0	7.5	15.0	18.0	
Capacity Range	Cool (kW)	1.8-8.0	4.0-14.0	7.3-16.3	3.2-8.0	4.0-14.0	7.3-16.3	
	Heat (kW)	2.0-9.0	4.1-16.0	7.3-18.2	3.5-9.0	4.1-16.0	7.3-18.2	
Power Input (Rated)	Cool (kW)	2.20	3.94	4.95	2.20	3.94	4.95	
	Heat (kW)	1.93	4.00	4.90	1.93	4.00	4.90	
E.E.R/C.O.P	C/H	3.23/3.89	3.17/3.75	3.13/3.67	3.23/3.89	3.17/3.75	3.13/3.67	
TCSPF (Residential)	Hot/Average/Cold	4.42/3.86/3.92	4.25/3.90/4.01	4.05/3.76/3.86	4.44/3.91/3.98	4.25/3.90/4.01	4.05/3.76/3.86	
HSPF (Residential)	Hot/Average/Cold	4.17/3.85/3.41	4.31/3.31/2.77	3.87/3.53/3.12	4.17/3.90/3.55	4.31/3.31/2.77	3.87/3.53/3.12	
Airflow Rate (Nominal/Max)	l/s	425/566	755/840	950/1120	425/566	755/840	950/1120	
Indoor Sound Level (H) @ 1.5m	dBA (C/H)	37.3/40.5	44.2/45.5	47.9/50.7	37.3/40.5	44.2/45.5	47.9/50.7	
Piping Length	m	50						
Indoor Fan Speeds				H/M	//L			
Dimensions	Indoor (mm)	300x1210x900	360x1520x935		300x1210x900	360x1520x935		
(HxWxD)	Outdoor (mm)	595x845x300	990x940x320	1430x940x320	595x845x300	990x940x320	1430x940x320	
\//aiabt	Indoor (kg)	40	55	56	40	55	56	
weight	Outdoor (kg)	45	78	99	45	78	99	
Power Supply	V/Hz	1	Phase, 220-240V, 50I	Hz	3 Phase, 380-415V, 50Hz			
Compressor Type		Hermetically Sealed Swing Type						
Refrigerant		R32						
	Liquid (mm)	9.5 (Flared)						
Pipe Sizes	Gas (mm)	15.9 (Flared)						
	Drain (mm)	ID 25 / OD 32						
Supply Air Opening	mm (HxW, Flange)	185x852	245x1152		185x852	245x1152		
Return Air Opening	mm	1x400 (Oval)	Oval) 2x400 (Oval) 1x400 (Oval) 2x400 (Oval)		(Oval)			
Outdoor Operating	Cool (°CDB)	-5 to 46						
Range	Heat (°CWB)	-15 to 16						
EPA Sound Power Level	dBA	68	72	75	72	73	75	
Outdoor Sound Level (H) @ 1m	Pressure dBA (C/H)	48/51	53/54	56/58	53/56	54/56	56/58	

Notes:

i. The Rated Capacity, Power Input and Running Current are measured in accordance with AS/NZS 3823.1.2 Cooling: Indoor temp: 27°CDB/19°CWB, Outdoor temp: 35°CDB/24°CWB Heating: Indoor temp: 20°CDB/15°CWB, Outdoor temp: 7°CDB/6°CWB

ii. Indoor and outdoor sound levels are determined in an anechoic chamber and may differ once the unit is installed due to ambient conditions

iii. TCSPF: Total Cooling Seasonal Performance Factor & HSPF: Heating Seasonal Performance Factor as defined under GEMS 2019 Determination

RZA160C2





#### **ASSUMPTIONS**

#### **QUALITY CERTIFICATIONS**

**Commercial Air Conditioning** 

#### ENVIRONMENTAL CERTIFICATIONS

#### **Pty Limited** (ISO 9001)

(ISO 45001)

Daikin Europe N.V (ISO 9001)



(ISO 14001)

ISO 45001



CONTACT



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