DAIKIN

FIT

DAIKIN *FIT* DESIGN AND APPLICATION GUIDE

WARNING

Only personnel that have been trained to install, adjust, service or repair (hereinafter, "service") the equipment specified in this manual should service the equipment. The manufacturer will not be responsible for any injury or property damage arising from improper service or service procedures. If you service this unit, you assume responsibility for any injury or property damage which may result. In addition, in jurisdictions that require one or more licenses to service the equipment specified in this manual, only licensed personnel should service the equipment. Improper installation, adjustment, servicing or repair of the equipment specified in this manual, or attempting to install, adjust, service or repair the equipment specified in this manual without proper training may result in product damage, property damage, personal injury or death.

This Daikin *FIT* Design and Application Guide is intended for **qualified and trained technicians only.**

TABLE OF CONTENTS

SYSTEM OVERVIEW

Features and Benefits of Daikin *FIT* Systems

Daikin has a product range that includes variable speed indoor units and inverter driven compressors, packaged in a side discharge condensing unit. The Daikin side discharge product is known as the **Daikin *FIT*** system.

Daikin *FIT* systems are an efficient, convenient, and quiet alternative to conventional, cube-style Air Conditioners (AC) and Heat Pumps (HP) outdoor units.

Daikin *FIT* can be used with Daikin air handlers, gas furnaces, and modular blowers with DX coils.

Daikin *FIT* can be used with Non-Daikin furnaces in existing AC or HP applications with the new Daikin D24 Gateway* (model #DTA119A73).

Daikin *FIT* can be installed in restricted spaces and areas where installation of conventional AC/HP equipment may not be possible.

ODU = Outdoor unit
IDU = Indoor unit
AC = Air Conditioner
HP = Heat Pump
DF = Dual Fuel

Features and Benefits of Daikin *FIT* Systems

- Daikin variable speed swing compressor.
- Quiet digitally commutated fan motor.
- High-density compressor sound blanket.
- Compatible with Daikin communicating controls.
- Fully communicating, customizable control and alerts for the homeowner and installer.
- Proprietary control algorithmic logic.
- Diagnostic indicator lights, seven-segment LED display, and fault code storage.
- Quiet-mode – Provides enhanced acoustical comfort, up to 3 different sound levels (as low as 45 dBA in quiet mode).
- Field-selectable boost mode increases compressor speed during unusually high loads.
- Sweat connection service valves with easy access to gauge ports.
- Coil and ambient temperature sensors.
- Suction pressure transducer (single fan models) suction and discharge transducer (two fan models).
- Advanced water-shedding drain pan.
- Hot start technology (For all heat pump models).
- Heavy-gauge galvanized steel cabinet with grille-style sound control side design
- High corrosion (ZAM®), unpainted steel bottom frame and legs.
- Custom Ivory white powder-paint finish
- 500-hour salt-spray tested.
- Top and side maintenance access.
- AHRI Certified; ETL Listed.

R32

ZAM® is a registered trademark of NIPPON STEEL CORPORATION.

Features and Benefits of Daikin *FIT* Systems

Designed for comfort, space-saving, and efficiency requirements with ease.

FLEXIBLE. INNOVATIVE. EFFICIENT.

The Daikin *FIT* system is a side discharge, smart HVAC system that is designed for comfort and can connect to ducted solutions in traditional HVAC systems. The low profile of the outdoor unit offers a flexible solution when space is limited. As a complete system, the Daikin *ONE* ecosystem and Daikin *FIT* are a great option for a complete system replacement.

Features and Benefits of Daikin *FIT* Systems

» **AC:** Up to **19 SEER2***
HP: Up to **21 SEER2** | Up to **10 HSPF2***

» **Compact** – The trunk style outdoor unit is great when installation space is limited.

» **Inverter (variable-speed) Compressor** – Ideal indoor comfort and efficiency.

» **Low dBA** – Reclaim outdoor space.

» **Quiet-mode** – Provides quiet acoustical comfort (3 steps of quiet level can be selected).

» **Blue Fin Coat** – Durable condenser coil for reliability

» **Swing Compressor** – Quiet and dependable.

» **Side panel access** – Ease of service.

» **Lightweight** – Easy to handle.

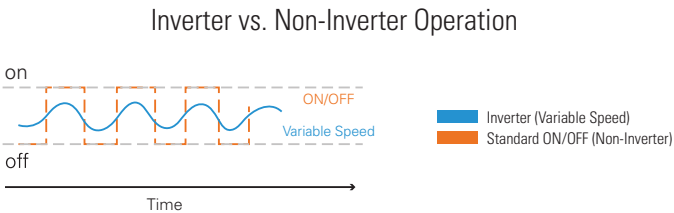
* Based on specific Daikin *FIT* series and models. This information can be found in product specification sheets at www.daikincomfort.com.

VISIT THE DAIKIN *FIT* MICRO SITE TO LEARN MORE:
www.daikincomfort.com/go/fit/

Affordable. Efficient. Space-saving.

When installation space is limited, families shouldn't need to compromise on comfort. Ideal for zero lot lines, roof, wall, or terrace areas, Daikin *FIT* systems can offer a solution to help meet demands of homes with space limitations.

Features and Benefits of Daikin *FIT* Systems



The above illustrates the airflow of a Inverter (Variable Speed) fan vs. a standard ON/OFF (Non-Inverter) fan.

This is a visual depiction of the operation of a Non-Inverter AC system compared to an Inverter AC system.

COMFORT

The Daikin *FIT* system is an Inverter unit which runs continuously but adjusts the compressor's speed to meet the demand. It is designed to maintain temperature consistently to help prevent your home from feeling too hot or too cold.

Learn more about the benefits of Daikin Inverter technology:

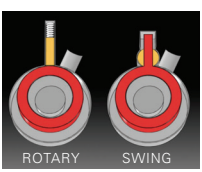
www.daikincomfort.com/go/inverter/

Features and Benefits of Daikin *FIT* Systems

DAIKIN BLUE FIN CORROSION COATING

Daikin *FIT* systems feature our professional engineered hydrophilic Blue Fin coating (500+ hours salt spray rated) as standard. The Blue Fin corrosion coating protects the outdoor unit against weather conditions and friction to allow water to drain quickly from the coil and washes the coil clean.

PROPRIETARY SWING COMPRESSOR



Daikin *FIT* systems are engineered with Daikin swing compressor technology. This technology is designed to bring peace of mind to every homeowner. The main parts are integrated into one main component to protect against wear and tear on the system. This enhanced functionality is designed to help eliminate refrigerant leaks from high side to low side and is an ideal compressor choice for high (under 65,000 Btu/h) efficiency systems, such as the Daikin *FIT*.

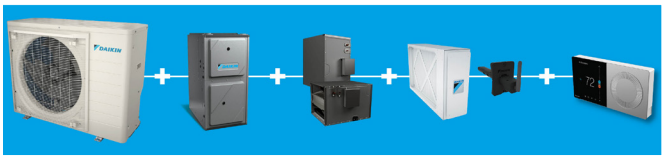
VARIABLE-SPEED DC FAN

Our variable-speed DC fan motor operates with PWM (Pulse Width Modulation). With PWM, Daikin *FIT* systems operate using adequate energy based on load requirements, providing outstanding operational efficiency.

Features and Benefits of Daikin *FIT* Systems

DAIKIN FIT AC SYSTEM OPTIONS

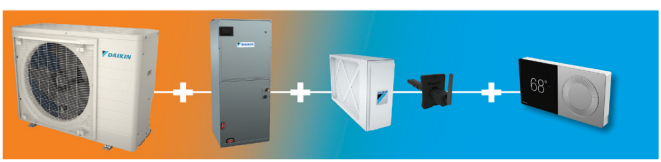
FURNACE + COIL



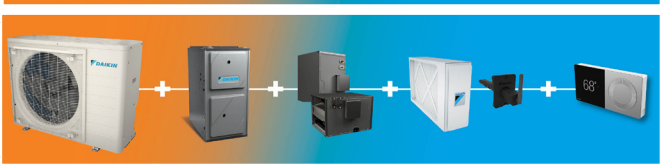
AIR HANDLER

DAIKIN FIT HEAT PUMP SYSTEM OPTIONS

AIR HANDLER



DUAL FUEL (FURNACE + COIL)



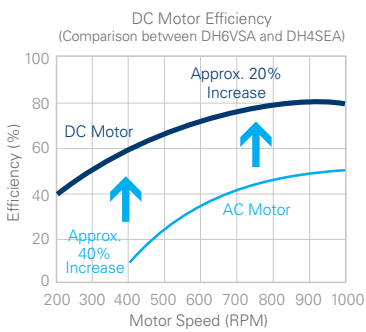
Features and Benefits of Daikin *FIT* Systems

Operational Efficiencies Designed for Energy Efficiency

The inverter compressor is the heart of a Daikin *FIT* system. Daikin's inverter technology is responsible for delivering intelligent comfort with efficiency, based on demand. The inverter (variable-speed) compressor can deliver the capacity required to maintain desired room conditions.

» **Intelligent Defrost Mode*:** The outdoor unit will enable this mode to help prevent frost/ice from building up in cold climate conditions. It can also provide long heating operation time for outstanding comfort for occupants.
  - A selectable defrost backup heat option, when turned off, will limit power consumption during defrost.

» The advanced functionality of the the variable speed DC fan motor offers outstanding efficiency.



Note: Data is based on studies conducted under controlled conditions at a Daikin laboratory.

*Feature only applicable to Daikin *FIT* HP systems.

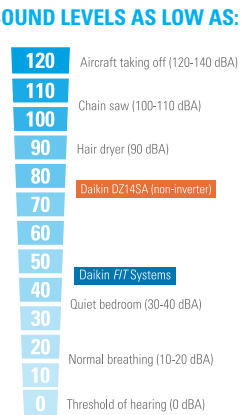
Features and Benefits of Daikin *FIT* Systems

Ideal Temperature And Low Sound Levels

Traditional (single-stage) systems offer basic ON/OFF operation mode only. With the compressor turning ON/OFF constantly, the system works to reach set indoor temperature. With inverter technology, the Daikin *FIT* system can adjust operations to meet the desired comfort levels.

» **Hot Start Technology (for HP models):** When the heating operation starts or when the unit changes from cooling to heating there is no cold draft released into the room.

Undesirable operational sounds can accompany non-inverter (traditional) HVAC systems. These continuous sounds can become a nuisance in yards, or when the system is installed near a window. With the ability to reach sound power levels as low as 45 dBA (in Quiet Mode), the Daikin *FIT* system can help bring additional acoustical comfort to any environment.



Features and Benefits of Daikin *FIT* Systems

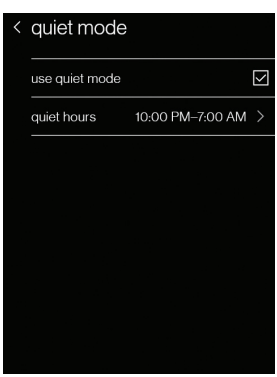
Quiet Mode Sound Levels

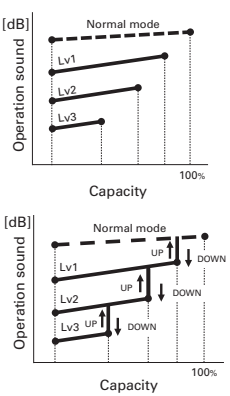
All AC & HP models

» Enables the system to operate at low compressor and fan speeds to satisfy a quiet operation during set hours (typically night-time).
» Meets many local sound ordinances for distance from home to lot lines.
» 3 steps of quiet level can be selected with level 3 being the quietest.
» Capacity over sound can be prioritized (capacity priority setting default is ON).

Daikin *ONE*+ and *ONE* Touch Smart Thermostat Navigation

» QUIET MODE is initiated by user's setting ("ON" or "OFF". Default is "OFF").
» NOTE: "NOISE DOWN LEVEL" is initiated by user's setting. ("LEVEL" "1", "2" or "3". Default is "LEVEL" "2". "LEVEL" "3" is the quietest) If during operation the capacity demand is high, then the quiet mode function will be temporary off by capacity priority function to return the room temperature to the set point. (Default capacity priority setting is ON).
» Quiet Hours – From time x to time x (15 min. increments).
» Capacity Priority – YES default, NO.





Features and Benefits of Daikin *FIT* Systems

Outdoor Unit Installation

» Daikin variable speed swing compressor.

» Daikin *FIT* ODUs can realize a 40% reduction in install space requirements (Comparison between DH6VSA3610-DH5SEA3610).

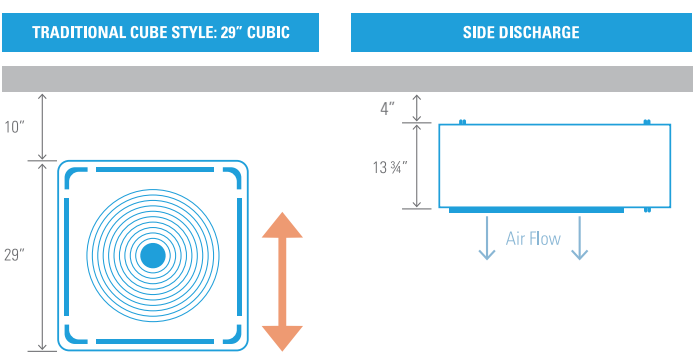
» The unit can sit as close as 4" away from a property wall.

» The HX coil location provides protection against adverse weather.

» Where lack of floor space or heavy snow is an issue, Daikin *FIT* units can be mounted above floor level on wall mounting brackets.

» Single fan ODUs can be transport by a single worker or with a dolly.

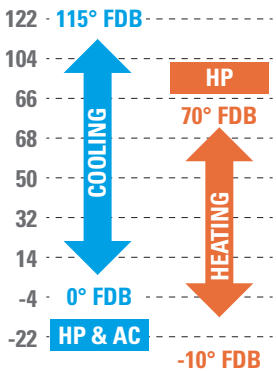
Installation Clearances



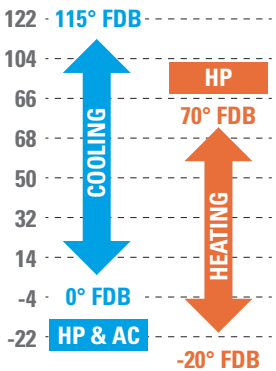
Features and Benefits of Daikin *FIT* Systems

Operation Range

DX cooling and heating operation:



Daikin *FIT* Standard & Enhanced Range DH6VS/DH7VS



Daikin *FIT AURORA* Cold Climate Range DH9VSA

Installation Clearances

Wall Facing One Side

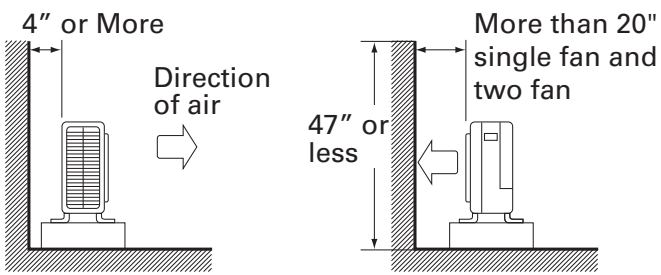
» Where a wall or other obstacle is in the path of the outdoor unit's intake or exhaust airflow, follow the installation space requirements in the install manual.

» For any of the below installation patterns, the wall height on the outlet side should be 47" or less.

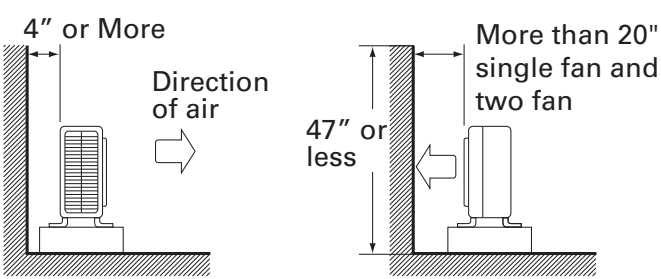
Please confirm with current installation manual for the most current installation requirements.

SIDE VIEW

1.5 - 3.0 ton single fan and two fan models



3.5 - 5.0 ton single fan and two fan models

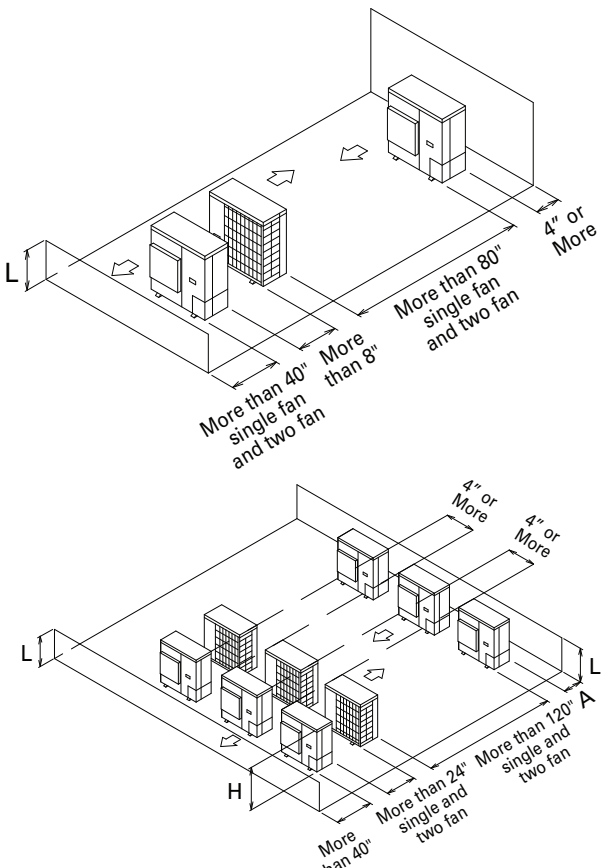


Installation Clearances

Units Back-To Back

ISOMETRIC VIEW

1.5 - 3.0 * 3.5 - 5.0 ton single fan and two fan models



A and L -
See installation manual

Installation Clearances

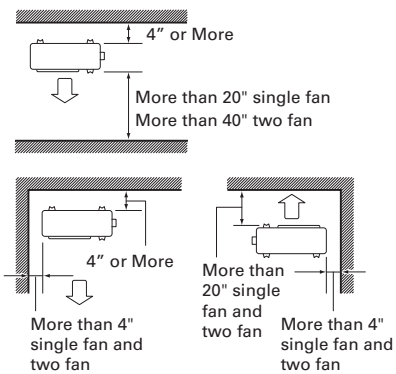
Wall Facing Two Sides

» The Daikin *FIT* ODUs can be located at ground floor level or on flat rooftops.

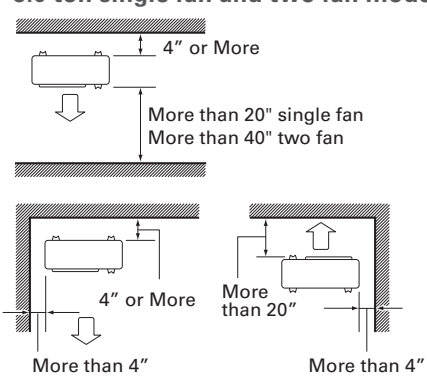
» At ground level, the unit must be on a solid, level foundation that will not shift or settle.

TOP VIEW

1.5 - 3.0 ton single fan and two fan models



3.5 - 5.0 ton single fan and two fan models

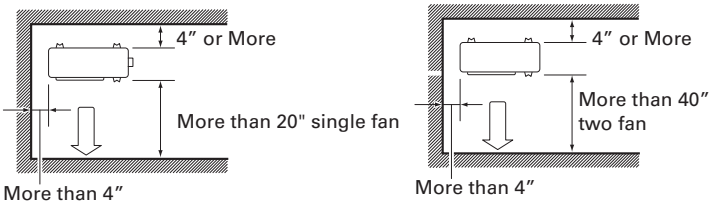


Installation Clearances

Wall Facing Three Sides

TOP VIEW

Single and two fan models

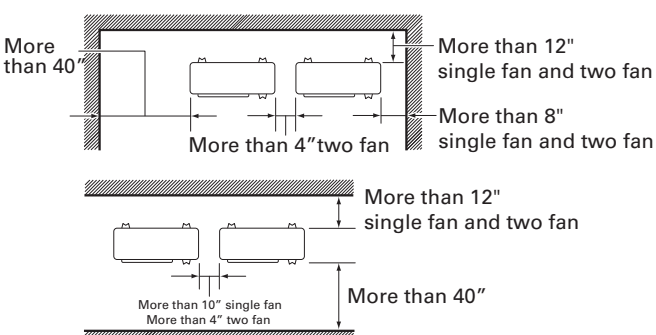


Note: In constrained areas, consider installing an Air Adjustment Grille to mitigate air short cycling (an image of these grilles in-position is shown on Page 24).

Two Unit Installation

» If the distance between two units is greater than 40″, follow single unit installation clearance.

Single fan and two fan models

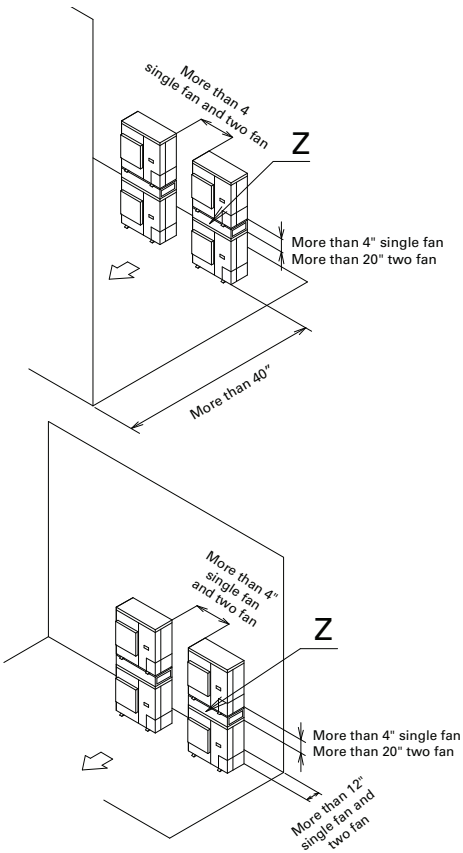


Installation Clearances

Units Stacked

ISOMETRIC VIEW

1.5 - 3.0 * 3.5 - 5.0 ton single fan and two fan models



Installation Clearances

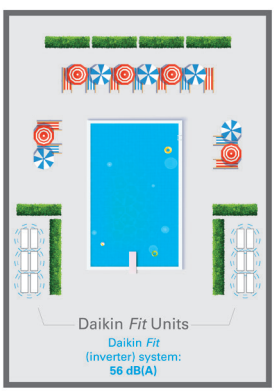
Reclaim Valuable Rooftop Space

Using 3-Ton 14SEER DH4SEA3610 e.g.:

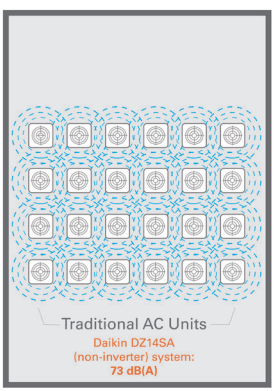
» Reduces structural design with over – 1000 lbs. weight savings on the roof

» Reduces almost 300 ft. of roof space because Daikin *FIT* units are able to be double stacked.

Stack



24 DH6VSA3610 Units
(Double stacked)
Units occupy 54 sq. ft of roof area



24 Daikin DH4SEA Units
Units occupy 350 sq. ft of roof area

Installation Clearances (Real Examples)

Daikin *FIT* Installation

Go beyond limitations of the traditional HVAC box.

An ideal solutions for balcony, terrace, patio, wall-mount, and roof installation.

Air Conditioning, Heat Pump, or Dual Fuel?

There are three types of systems available across the brands:

» Air Conditioning (only)

» Heat Pump

» Dual Fuel

Each system type can be further customized to suit specific project demands.

AIR CONDITIONING

» AC only systems can be utilized with air handlers or gas furnaces

» In cooling dominant environments, AC only systems can be paired with air handlers housing electric heat kits

» For colder climates AC units are often paired with gas furnaces

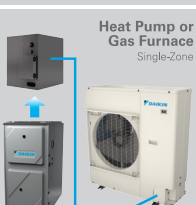
HEAT PUMP

» HP systems are commonly used in warmer climates where heat is less of a demand

» HP systems are commonly used with air handlers in warmer climates

» HP can also be used with optional electric heat kits for back up heat

DUAL FUEL



» Dual Fuel systems combine HP technology with a gas furnace

» Can be utilized in warm or cold climates

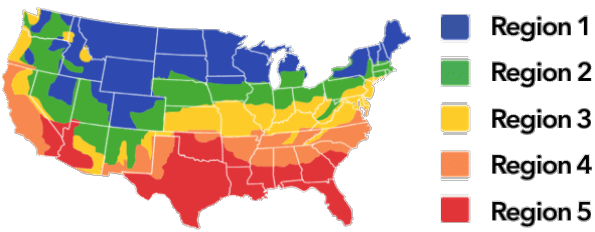
» In heating mode, the system will use the HP for the first stage of heat*

» Once the system cannot meet set temperature the gas furnace will engage for the second stage of heat

* True only if outdoor temperature is above the Balance Point setting on thermostat

Key Points for Selection

Accurate design and selection of HVAC equipment is an essential key to any successful project installation. There is no difference for Daikin *FIT* systems where their unique properties need to be considered. Replacing existing equipment in a "like-for-like" manner may result in poor results.



Accurate load calculation based on the region:

- Use load calc tools to ensure accuracy
- Correct ODU for low ambient HP applications
- If the primary source of heating is DX HP, selection may require a larger ODU

Properly matched components for the application (IDU-ODU):

- Certain applications may be served better by different tonnages between IDU & ODU HP

Key Points for Selection

Air flow balance, duct sizing for .5" static pressure or less:

» Not all of the existing ductwork may be suitable for the replacement equipment

» Accurate calculation of static pressure & variable system airflows is critical

ODU installation location and protection from outdoor conditions:

» Consider climate conditions when positioning the ODU to maximize system performance

» Ensure proper clearances as per the installation manual

» Ensure condensate from ODU does not interfere with heavy traffic areas

» Use available accessories to further protect against extreme climate conditions

Check equipment limitations:

» Not all of the existing ductwork may be suitable for the replacement equipment

» Accurate calculation of static pressure & variable system airflows is critical

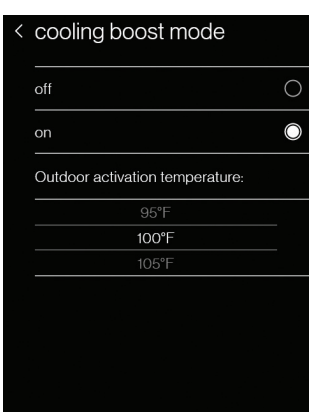
Design Features

Boost Mode

Boost Mode allows the compressor to operate at a higher RPS (Revolution Per Second) than factory max. The Max RPS value is hard coded into the software and cannot be changed. On Daikin *ONE*+ smart thermostats you may select the Max RPS Offset. This allows you to adjust ± 10 RPS from the factory Max RPS. Please note that outdoor equipment operational sound levels may increase while the equipment is running in Boost Mode.

COOLING BOOST MODE Is ON by default and is activated when the outdoor temperature reaches 100°F. Outdoor activation temperature can be adjusted in the boost mode menu. Boost mode will operate after the ambient temperature increases beyond the selected activation temperature and the compressor has achieved its max RPS.

HEATING BOOST MODE is enabled/disabled by selecting On/Off. Enables the system to operate at increased compressor speed while in heating mode, regardless of outdoor ambient temperature. HEATING BOOST MODE should always be set to "ON" as a default.



Design Features

Daikin *FIT* Heat Pump Defrost Operation

Defrost interval every **2, 6, 12, or 24 hours** is selected from the thermostat menu. If defrost sensor drops below freezing temp. during the selected interval, ODU PCB initiates defrost cycle.

» The ODU fan motor and compressor will de-energize & energize to remove the snow accumulated over coil.

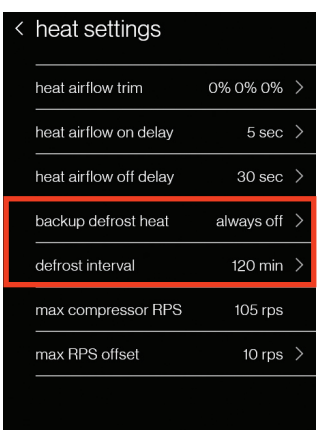
» The reversing valve switches from heating to cooling operation.

» ODU PCB communicates to energize back up heat, if enabled.

» The coil and defrost sensor temperatures are monitored **every 5 seconds** to control defrost based on outdoor temperature.

Back-up Defrost Heat (Electric)

» You can select the desired outdoor temperature for heat pump operation to stop and backup heat to activate (30°F to 65°F or ON/OFF).



Design Features

Intelligent Defrost*: Designed for Energy Savings

The outdoor unit will enable this mode to help prevent frost/ice from building up in cold climate conditions. It can also provide long heating operation time for outstanding comfort for occupants.

» A selectable defrost backup heat option, when turned off, will lower power consumption during defrost.

Short duration of defrost, and long time between cycles:

» If it takes longer than 5 minutes to reach target coil temperature, then the initial time interval you selected will be shortened for entering the next defrost mode. For instance, if you had selected 2 hours as the defrost interval, it would enter the next defrost mode sooner, say at 60 minutes interval. If it takes less than 5 minutes during the defrost mode to reach the target coil temperature, then it will lengthen the interval before entering the next defrost mode.

*Feature only applicable to the Daikin *FIT* HP systems.

Design Features

Auxiliary Heat & Temperature Lockouts

Aux (Electric Strip Heat) and backup gas heat can engage above lockout temperature In the following conditions:

» The space temperature is approximately 4° lower than the set point.

» There is a demand between 110% - 200% from the system.

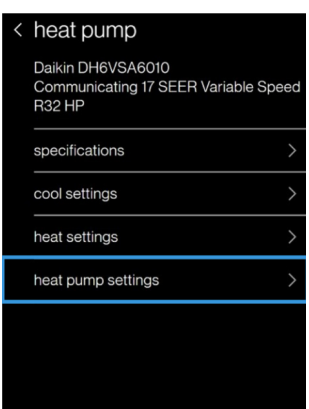
For Dual Fuel operation only, you can select to prioritize efficiency or comfort.

» Selecting prioritize efficiency, The selected balance point will be a hard lockout.

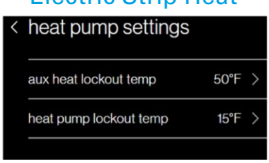
» Heat pump operation above balance point.

» Furnace operation below balance point.

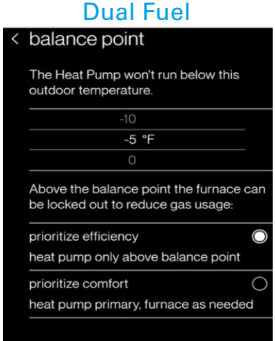
» Selecting prioritize comfort will cause the system to run with the logic listed above.



Electric Strip Heat



Dual Fuel



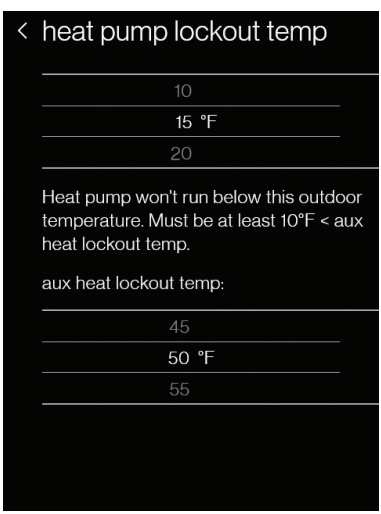
Design Features

Heat Pump with Outdoor Temperature Lockouts

It is recommended to set the outdoor temperature lockouts during the initial thermostat set up.

Compressor lockout temperature will enable the compressor to be turned off and switch heating source from refrigeration to auxiliary/secondary heating under low outdoor ambient conditions.

Backup heat lockout temperature will enable auxiliary/secondary heating to be turned on when outdoor temperature is much lower than indoor temperature, (compressor might stop operating under this circumstance).



Design Features

Hot Start

Hot Start Technology*

When the heating operation starts or when the unit changes from cooling to heating there is no cold draft released into the room.

» Warm air movement at start of heating cycle.
- Starts compressor during heating cycle.
- Builds heating capacity before indoor blower starts.

*Feature only applicable to Daikin *FIT* HP systems.

Design Features

Dehumidification

» The installation and operations manual provides instructions for changing dehumidification settings for additional dehumidification control.

» The CFM curve during Dehumidification mode can be selectable between “Standard Dehum. CFM” and Enhanced Dehum. CFM”. This can improve S/T ratio.

» The system can provide Dehumidification operation in setting “A”, “B” or “C” based on dehumidification demand. In the Enhanced Dehumidification the indoor airflow is lower than Standard Dehumidification. See Figure 1.

» The minimum compressor speed during Dehumidification can be selected from 3 types A, B, or C. Setting “A” allows for the widest compressor range with lower cfm than standard dehumidification. Setting “B” limits compressor operation range and keeps high dehumidification capacity. In setting “C” the system runs fixed at 100% compressor and airflow. See Figure 1.

» In applications with unusually cold return temperatures, such as basements, the system will increase CFM automatically if coil temperature is low. New airflow trim settings have been added to the “Cool Airflow Trim” settings.

Design Features

Dehumidification (cont.)

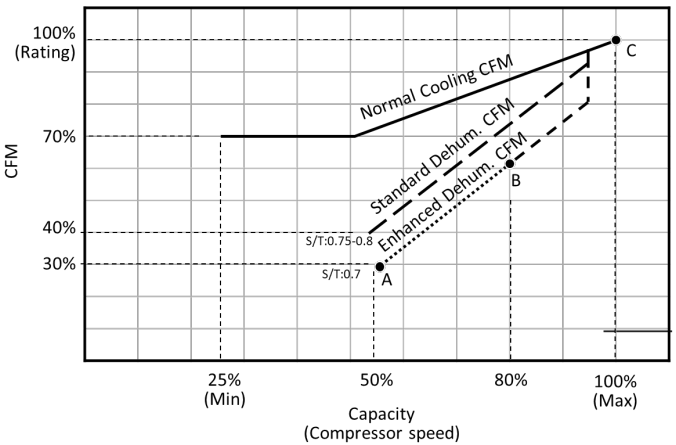


Figure 1

» The latest Manual can be obtained from the website "DAIKIN CITY (Installation Manual/Unitary Split System)" or "PartnerLink (Info-FinderPlus/Literature)".

https://library.daikincity.com/home

Design Features

Circulation Selection

This setting can be used to switch circulation factor ON and OFF to avoid automatically increasing the indoor CFM by circulation control.

When it is ON, the system may increase indoor CFM to circulate indoor air in the event the outdoor control detected low evaporative temperature.

When it is OFF, even if the outdoor control detects low evaporative temperature, it will NOT increase CFM.

ON is recommended, but when a zoning controller is connected, it is recommended to be set OFF to avoid unexpected high static pressure.

Nomenclature

Daikin *FIT* Systems

D	C	6	V	S	S	36	1	0	A	A

BRAND
D: Daikin

OUTDOOR TYPE
C: Condenser R-32
H: Heat Pump R-32

SEER2
6 - 16.0 - 16.9
7 - 17.0 - 17.9
9 - 19.0+

COMPRESSOR
V: Variable-Speed

FEATURE
S: Side Discharge Communicating

SALES REGION
A: All Region
S: Southeast & North

NOMINAL CAPACITY
18 - 1.5 Tons
24 - 2.0 Tons
30 - 2.5 Tons
36 - 3.0 Tons
42 - 3.5 Tons
48 - 4.0 Tons
60 - 5.0 Tons

ELECTRICAL
1: 208/230 V, 1 Phase, 60 Hz

VARIATION
W: Southwest Region
C: All-Climate

MAJOR REVISION
A: Initial Release
B: 1st Revision

MINOR REVISION
A: Initial Release
B: 1st Revision

Nomenclature

Air Handler

D	F	V	E	60	D	P	1	3	00	B	A

MINOR REVISION

MAJOR REVISION

00: No Electric Heat

3: R-32

ELECTRICAL

1: 208/230 V, 1 Phase, 60 Hz
0: 115 V, 1 Phase, 60 Hz

P: Painted
U: Unpainted

D: Daikin AH
A: Corporate

W: Wall Mount
F: *FIT* Compatible Multi-Position

V: VS-ECM Communicating
F: *FIT* Compatible

E: Electronic Expansion Valve

NOMINAL CAPACITY

12 - 1.0 Ton 36 - 3.0 Tons
18 - 1.5 Tons 42 - 3.5 Tons
24 - 2.0 Tons 48 - 4.0 Tons
30 - 2.5 Tons 60 - 5.0 Tons

DF: Series DW – Series
B: 17.5" S - 20.2"
C: 21.0" L - 24"
D: 24.5

Nomenclature

MBVK Modular Blower

MB	V	K	16	C	H	1	X	00	A	A

BRAND
Modular Blower

MOTOR SPEED
V: Variable

COMMUNICATING CONTROLS PROTOCOL
B: ComfortBridge
K: ClimateTalk

AIRFLOW DELIVERED
12 - 1200 CFM
16 - 1600 CFM
20 - 2000 CFM

CABINET WIDTH
B: 17.5"
C: 21.0"
D: 24.5"

CABINET
H: High Efficient All-Climate
P: Standard

ELECTRICAL
1 - 208/230V, 1 Phase, 60Hz
0 - 115V, 1 Phase, 60Hz

CIRCUIT BREAKER
X: No Circuit Breaker

FACTORY INSTALLED HEAT KIT, KW
00: No Electric Heat

MAJOR REVISION

MINOR REVISION

Nomenclature

Heater Kit

HKTA	D	15	X	1

UNIT TYPE

HKTA: Electric heater kit for MBVC/MBVK

HKTS: Electric heater kit for DFVE

HKTZ*: Electric heater kit for MBVK16CH only

* HKTZ is 3 stage and only available in 15KW

SERVICE DISCONNECT

D: Service disconnect
N: No service disconnect

HEATING CAPACITY @ 240v

3: 3kW
5: 5kW
6: 6kW
8: 7kW
10: 7kW
15: 15kW
20: 20kW

CABINET SIZE

X: All Cabinets
C: C Cabinet
D: D Cabinet

ELECTRICAL

A - Single phase 208v
B - Single phase 240v
1 - Single phase 208/240v
3 - Three phase 208/240v

Nomenclature

DX Cooling Coil

C	A	H	E	A	36	30	C	3	A	A

PRODUCT CATEGORY
C: Indoor Coil

APPLICATION
A: Upflow/Downflow
H: Horizontal
S: Slab Coil

CABINET FINISH
U: Uncased
P: Cased Painted
H: High Efficiency Multi-Position

EXPANSION DEVICE
F: Flowrater
T: TXV
E: Electronic Expansion Valve

COIL CONFIGURATION (7mm)
A: A Coil

NOMINAL CAPACITY

18 - 1.5 Ton	42 - 3.5 Ton
24 - 2 Ton	48 - 4 Ton
30 - 2.5 Ton	60 - 5 Ton
36 - 3 Ton	

CA HEIGHT / CH WIDTH / CS DEPTH

12 - 12" Coil	22 - 22" Coil
14 - 14" Coil	26 - 26" Coil
18 - 18" Coil	30 - 30" Coil

CA/CS WIDTH / CH HEIGHT

S - 25.5"	A - 14"
M - 33.5"	B - 17.5"
L - 39.5"	C - 21"
	D - 24.5"

REFRIGERANT
3- R32

MAJOR REVISION

MINOR REVISION

Nomenclature

Furnaces

D	R	96	T	C	060	3	B	N	A	A

D: Daikin

R: Uplflow / Horizontal
D: Downlflow / Horizontal

80: 80% AFUE
96: 96% AFUE
97: 97% AFUE

M: Modulating
S: Single-Stage
T: Two Stage

C: Variable-Speed ECM / Communicating

040 - 40,000 BTU/h
060 - 60,000 BTU/h
080 - 80,000 BTU/h
100 - 100,000 BTU/h
120 - 120,000 BTU/h

3: 1200 CFM
4: 1600 CFM
5: 2000 CFM

A: 14"
B: 17.5"
C: 21"
D: 23.5"

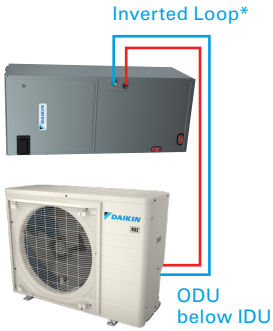
N: Natural Gas ≥ 40 NG/J NOx
N: Low NOx (90%+) ≤ 40 NG/J NOx
x: Low NOx (80%) ≤ 40 NG/J Nox
U: Ultra Low NOx ≤ 14 NG/J NOx

MAJOR REVISION

MINOR REVISION

Refrigerant Piping

Single Fan Pipe Requirements



* **NOTE:** When the outdoor unit sits BELOW the indoor unit an inverted loop in the suction line adjacent or near the connection to the indoor unit. The top of the loop must be slightly higher than the top of the evaporator coil. The trap prevents liquid compression of the compressor during start-up period. The liquid line does not require this however typical pipe install practice will likely see the pipes run together.

SYSTEM CAPACITY	MAX LINE SET		
	Actual	Equivalent	Vertical
1.5 Ton	100'	125'	90'
2.0 Ton	100'	125'	90'
2.5 Ton	100'	125'	90'
3.0 Ton	100'	125'	90'
3.5 Ton	100'	125'	90'
4.0 Ton	100'	125'	90'
5.0 Ton	100'	125'	90'

What is Equivalent Length?

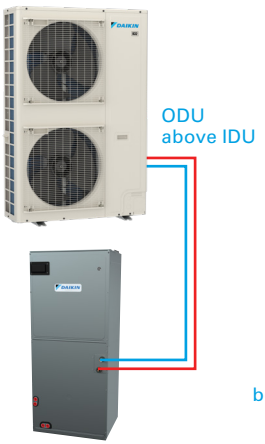
Equivalent length allows the designer to calculate pipe limits using derates for suction pipe bends to minimize capacity loss.

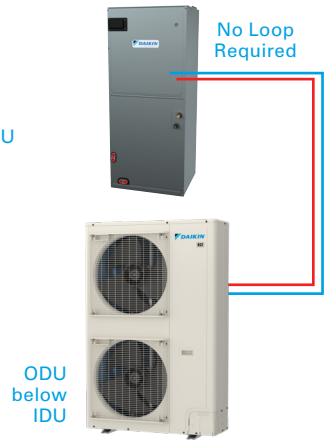
This table lists the equivalent lengths to be added per bend to the actual pipe length from ODU to IDU.

TYPE OF ELBOW-FITTING	INSIDE DIAMETER		
	3/4"	7/8"	1-1/8"
90° Short Radius	1.7'	2'	2.3'
90° Long Radius	1.5'	1.7'	1.6'
45° Radius	0.7'	0.8'	1'

Refrigerant Piping

Two-Fan All-Climate or Dual Fan All-Climate.





ALL-CLIMATE SYSTEM CAPACITY	MAX LINE SET (FT)		
	Actual	Equivalent	Vertical
2 Ton	150'	187.5'	90'
3 Ton	150'	187.5'	90'
4 Ton	150'	187.5'	90'
5 Ton	150'	187.5'	90'

TYPE OF ELBOW-FITTING	INSIDE DIAMETER		
	3/4"	7/8"	1-1/8"
90° Short Radius	1.7'	2'	2.3'
90° Long Radius	1.5'	1.7'	1.6'
45° Radius	0.7'	0.8'	1'

Refrigerant Charge

- The base charge is enough to run any circuit up to 15 ft (ODU to IDU)
- Additional (trim) charge will vary based on:
  - the pipe size selection
  - indoor unit tonnage selection
- Always confirm additional charge in the installation manual
- System should be charged by weight as specified in the installation manual

Electrical Data

Power Supply

This table (listing Daikin *FIT* electrical data) applies to all models.

Daikin recommends the use of a voltage monitor and surge protection to protect the inverter driven equipment from any voltage fluctuations or electrical surges.

MODEL NAME	PHASE & FREQ.	VOLTAGE	MCA (Min. circuit amperage)	MOP (Max. overcurrent protective device)	COMM. WIRE SELECTION
DC6VS*181*	1 Phase 60Hz	208/230v	12.8 A	15 A	18 AWG (Typical)
DC6VS*241*			16.8A	20 A	
DC6VS*301*			22.4 A	25 A	
DC6VS*361*			22.4 A	25 A	
DC6VS*421*			31.8 A	35 A	
DC6VS*481*			31.8 A	35 A	
DC6VS*601*			37.5 A	40 A	
DC9VSA2410	1 Phase 60Hz	208/230v	22.4 A	25 A	18 AWG (typical)
DC9VSA3610			31.8 A	35 A	
DC9VSA4810			37.5 A	40 A	
DC9VSA6010			34.4 A	40 A	
DH6VSA1810	1 Phase 60Hz	208/230v	12.8 A	15 A	18 AWG (Typical)
DH6VSA2410			16.8 A	20 A	
DH6VSA3010			22.4 A	25 A	
DH6VS03610			22.4 A	25 A	
DH6VSA4210			31.8 A	35 A	
DH6VSA4810			31.8 A	35 A	
DH6VSA6010			37.5 A	40 A	
DH7VSA2410	1 Phase 60Hz	208/230v	22.4 A	25 A	18 AWG (Typical)
DH7VSA3610			31.8 A	35 A	
DH7VSA4210			37.5 A	40A	
DH7VSA4810			37.5 A	40 A	
DH7VSA6010			34.4A	40A	

Ratings are for single fan models.

Electrical Data

Power Supply, Continued

MODEL NAME	PHASE & FREQ.	VOLTAGE	MCA (Min. circuit amperage)	MOP (Max. overcurrent protective device)	COMM. WIRE SELECTION
DH9VSA241C	1 Phase 60Hz	208/230v	17.4 A	20 A	18 AWG (Typical)
DH9VSA361C			21.8A	25 A	
DH9VSA4810			34.4 A	40 A	
DH9VSA6010			34.4 A	40 A	

Image of typical voltage monitor

NOTE:

- Voltage monitors and surge protectors are third party, field supply.
- Daikin's limited warranty* does not cover unit damage or failure of the unit starting up due to interruption or insufficient electrical service.

UNIT TYPE	UNIT SUPPLY VOLTAGE (VAC)		
	Voltage	Min.	Max.
EEV Air Handler, Modular Blower	208/230	197	253
EEV Air Handler, Gas Furnaces	115	103	126
EEV Cased Coil	24	22.6	25.5
Outdoor unit	208/230	197	253

This chart indicates the voltage limitations of the equipment range. A voltage monitor can help ensure that these limitations are not exceeded

* Complete warranty details available from your local dealer or at www.daikincomfort.com.

SYSTEM SELECTION

Indoor Unit Range — Daikin *FIT*

INDOOR UNIT	MODEL SERIES	APPLICATION	SPECS
AIR HANDLER			
	DFVE-208/230V DFVE-115V ** Electric heat is not compatible with 115V models.	Air Conditioning Heat Pump Heat Pump with Electric Heat	2-5 Ton AC/HP 115V-208/230V 1PH
MODULAR BLOWER			
	MBVK12BP1X00/0X00 MBVK16CP1X00/0X00 MBVK20DP1X00/0X00 MBVK16CH1X00/0X00*	Air Conditioning Heat Pump Heat Pump with Electric Heat	1200/1600/2000 CFM 208/230V 1PH 1.5-5 Ton AC/HP Capacity
DX COIL			
	CAPEA CHPEA CAHEA*	Air Conditioning Heat Pump Must Use with Electric Heat	1.5-5 Ton AC/HP Capacity R32 Integrated Sensor Must Use with Gas Furnace or MBVK Modular Blower
GAS FURNACE (80% AFUE)			
	DR80TC/DD80TC	Air Conditioning Heat Pump Gas Heat is 2nd Stage in HP	115V 1PH 40K-120K BTU Heat Capacity 1200/1600/2000 CFM
GAS FURNACE (96-97% AFUE)			
	DR97MC/DD97MC DR96TC/DD96TC	Air Conditioning Heat Pump Gas Heat is 2nd Stage in HP	115V 1PH 40K-120K BTU Heat Capacity 1200/1600/2000 CFM

*** These models have been added to the product range specifically for All-Climate applications, and work together as a two piece air handler 115V MBVK and DFVE models are not compatible with electric heat kits.**

Daikin *FIT* — Air Conditioners

OUTDOOR UNIT	MODEL SERIES	SPECIFICATIONS	CAPACITIES
SOUTHWEST REGION			
	DC6VSA181W	208/230V 1PH MOP 15A 36-5/8"W 13-3/4"D 27-3/8"H	17,100 Btu/H Cooling Range 0°-115°F
	DC6VSA241W	208/230V 1PH MOP 20A 36-5/8"W 13-3/4"D 27-3/8"H	23,200 Btu/H Cooling Range 0°-115°F
	DC6VSA301W	208/230V 1PH MOP 25A 36-5/8"W 13-3/4"D 27-3/8"H	28,400 Btu/H Cooling Range 0°-115°F
	DC6VSA361W	208/230V 1PH MOP 25A 36-5/8"W 13-3/4"D 27-3/8"H	33,600 Btu/H Cooling Range 0°-115°F
SOUTHEAST AND NORTH REGIONS			
	DC6VSS1810	208/230V 1PH MOP 35A 37"W 12-5/8"D 39"H	17,100 Btu/H Cooling Range 0°-115°F
	DC6VSS2410	208/230V 1PH MOP 35A 37"W 12-5/8"D 39"H	23,200 Btu/H Cooling Range 0°-115°F
	DC6VSS3010	208/230V 1PH MOP 40A 37"W 12-5/8"D 39"H	28,400 Btu/H Cooling Range 0°-115°F
	DC6VSS3610	208/230V 1PH MOP 25A 36-5/8"W 13-3/4"D 27-3/8"H	34,200 Btu/H Cooling Range 0°-115°F
	DC6VSS4210	208/230V 1PH MOP 35A 37"W 12-5/8"D 39"H	41,000 Btu/H Cooling Range 0°-115°F
	DC6VSS4810	208/230V 1PH MOP 35A 37"W 12-5/8"D 39"H	45,500 Btu/H Cooling Range 0°-115°F
	DC6VSS6010	208/230V 1PH MOP 35A 37"W 12-5/8"D 39"H	53,500 Btu/H Cooling Range 0°-115°F

Daikin *FIT* — Air Conditioners

OUTDOOR UNIT	MODEL SERIES	SPECIFICATIONS	CAPACITIES
ALL REGIONS			
	DC9VSA2410	208/230V 1PH MOP 25A 36-5/8"W 13-3/4"D 27-3/8"H	23,200 Btu/H Cooling Range 0°-115°F
	DC9VSA3610	208/230V 1PH MOP 35A 37"W 12-5/8"D 39"H	35,000 Btu/H Cooling Range 0°-115°F
	DC9VSA4810	208/230V 1PH MOP 40A 37"W 12-5/8"D 39"H	46,500 Btu/H Cooling Range 0°-115°F
	DC9VSA6010 * Two fan model is 5 ton only.	208/230V 1PH MOP 40A 37"W 12-5/8"D 56-3/8"H	57,000 Btu/H Cooling Range 0°-115°F * "BA" revision will be 53,500 Btu/H

Daikin *FIT* — Heat Pumps

OUTDOOR UNIT	MODEL #	SPECIFICATIONS	CAPACITIES
ALL REGIONS			
	DH6VSA1810	208/230V 1PH MOP 15A 36-5/8"W 13-3/4"D 27-3/8"H	17,100 Btu/H Cooling Range 0°-115°F Heating Range -10°-70°F
	DH6VSA2410	208/230V 1PH MOP 20A 36-5/8"W 13-3/4"D 27-3/8"H	23,200 Btu/H Cooling Range 0°-115°F Heating Range -10°-70F
	DH6VSA3010	208/230V 1PH MOP 25A 36-5/8"W 13-3/4"D 27-3/8"H	28,400 Btu/H Cooling Range 0°-115°F Heating Range -10°-70°F
	DH6VSA3610	208/230V 1PH MOP 25A 36-5/8"W 13-3/4"D 27-3/8"H	34,200 Btu/H Cooling Range 0°-115°F Heating Range -10°-70°F
	DH6VSA4210	208/230V 1PH MOP 35A 37"W 12-5/8"D 39"H	41,000 Btu/H Cooling Range 0°-115°F Heating Range -10°-70°F
	DH6VSA4810	208/230V 1PH MOP 35A 37"W 12-5/8"D 39"H	45,500 Btu/H Cooling Range 0°-115°F Heating Range -10°-70°F
	DH6VSA6010	208/230V 1PH MOP 40A 37"W 12-5/8"D 39"H	53,500 Btu/H Cooling Range 0°-115°F Heating Range -10°-70°F

Daikin *FIT* — Heat Pumps

OUTDOOR UNIT	MODEL #	SPECIFICATIONS	CAPACITIES
ALL REGIONS			
	DH7VSA2410	208/230V 1PH MOP 25A 36-5/8"W 13-3/4"D 27-3/8"H	23,200 Btu/H Cooling Range 0°-115°F Heating Range -10°-70°F
	DH7VSA3610	208/230V 1PH MOP 35A 37"W 12-5/8"D 39"H	35,000 Btu/H Cooling Range 0°-115°F Heating Range -10°-70°F
	DH7VSA4210	208/230V 1PH MOP 1540A 37"W 12-5/8"D 39"H	41,000 Btu/H Cooling Range 0°-115°F Heating Range -10°-70°F
	DH7VSA4810	208/230V 1PH MOP 40A 37"W 12-5/8"D 39"H	46,500 Btu/H Cooling Range 0°-115°F Heating Range -10°-70°F
	DH7VSA6010 * Two fan model is 5 ton only.	208/230V 1PH MOP 40A 37"W 12-5/8"D 56-5/16"H	52,000 Btu/H Cooling Range 0°-115°F Heating Range -10°-70°F
	DH9VSA241C	208/230V 1PH MOP 20A 37"W 12-5/8"D 56-5/16"H	24,000 Btu/h Cooling Range 0°-115°F Heating Range -20°-70°F
	DH9VSA361C	208/230V 1PH MOP 25A 37"W 12-5/8"D 56-5/16"H	34,200 Btu/H Cooling Range 0°-115°F Heating Range -20°-70°F
	DH9VSA4810	208/230V 1PH MOP 40 37"W X 12-5/8"D X 56-3/8"H	46,000 Btu/h Cooling Range 0°-115°F Heating Range -20°-70°F
	DH9VSA6010	208/230V 1PH MOP 40 37"W X 12-5/8"D X 56-3/8"H	54,000 BTU/h Cooling Range -20°-115°F Heating Range -20°-70°F

Upcoming New Releases for 2026

NEW! Daikin *FIT* Multi-Family Heat Pump

- 1 Ton – 3 Ton Models for flexibility
- Improved SEER2 rating for efficiency (DH6VSA**1M ratings improved from DH6VSA**10)
- Engineered for multi-family properties

MULTI-FAMILY MODEL NUMBERS	PHASE FREQUENCY	VOLTAGE	MCA	MOP	COMM. WIRE
DH6VSA121M	Single Phase 60Hz	208/230V	12.8A	15A	18AWG
DH6VSA181M			12.8A	15A	
DH6VSA241M			16.8A	20A	
DH6VSA301M			22.4	25A	
DH6VSA361M			22.4A	25A	

AWVE MF MODELS
AWVE12SU1300-AA
AWVE18SU1300-AA
AWVE24SU1300-AA
AWVE30SU1300-AA
AWVE36SU1300-AA

NEW! Daikin FIT Wall-Mount Air Handler

- 1 Ton – 3 Ton models
- 1 to 1 match with *FIT* HP
- Increased efficiency
- Engineered for the multi-family properties

NEW! Daikin HKTW heat kit for the AWVE Air Handler

- Available in 3KW for 230V models
- Compatible with 2.5-3 Ton models only
- Field installed

Accessories

Outdoor Units (All)

ACCESSORY	DESCRIPTION	DC6VS*	DC9VS*	DH9VSA	DH7VSA	DH9VSA
KPW5G112	Wind Baffle	18K-60K	24K-60K 2X for 60K	18K-60K	24K-60K 2X for 60K	24K-60K 2X for 24/36K
130-DK-006	Hail Guard	18K-36K	24K	18K-36K	18K	–
130-DK-008	Hail Guard	42K-60K	36K-48K	42K-60K	36K-48K	–
0270R02063 (130-DK-017)	Hail Guard	–	60K	–	60K	24K-36K
DACA-WB-3	Wall Mount Bracket	18K-60K	24K-48K	18K-60K	24K-48K	–
KPS00501	Snow Guard – Front	–	–	18K-36K	18K	–
KPS00502	Snow Guard – Rear	–	–	18K-36K	18K	–
KPS00503	Snow Guard – Side	–	–	18K-36K	18K	–
KPS00504	Snow Guard – Full Set	–	–	18K-36K	18K	–
KPS00601	Snow Guard – Front	–	–	42K-60K	36K-48K	–
KPS00602	Snow Guard – Rear	–	–	42K-60K	36K-48K	–
KPS00603	Snow Guard – Side	–	–	42K-60K	36K-48K	–
KPS00604	Snow Guard – Full Set	–	–	42K-60K	36K-48K	–
3K020967-2	Snow Guard – Front	–	–	–	60K	24K-36K
3P434587-5	Snow Guard – Rear	–	–	–	60K	24K-36K
3P434588-1	Snow Guard – Side	–	–	–	60K	24K-36K
KEH3P573598	Drain Pan Heater	–	–	18K-36K	18K	–
KEH3P573567	Drain Pan Heater	–	–	42K-60K	36K-48K	–
KEH3P648291	Drain Pan Heater	–	–	–	60K	24K-36K

☐ Non-compatible accessories ■ HP only accessories ■ AC only accessories

Accessories

Indoor Air Handlers (All)

ACCESSORY	DESCRIPTION	MBVK 208/230V Modular Blower	DFVE 115V Air Handler	DFVE 230V Air Handler
HKTSN03X1	3KW Heater	–	–	24K-60K
HKTSN05X1	5KW Heater	–	–	24K-60K
HKTSN06X1	6KW Heater	–	–	24K-60K
HKTSN08X1	8KW Heater	–	–	24K-60K
HKTSN10X1	10KW Heater	–	–	24K-60K
HKTSD05X1	5KW Heater w/breaker	–	–	24K-60K
HKTSD08X1	8KW Heater w/breaker	–	–	24K-60K
HKTSD10X1	10KW Heater w/breaker	–	–	24K-60K
HKTSD15XA	15KW Heater w/breaker	–	–	36K-60K
HKTSD15XB	15KW Heater w/breaker	–	–	36K-60K
HKTSD19CA	19KW Heater w/breaker	–	–	36K-60K
HKTSD19CB	19KW Heater w/breaker	–	–	36K-60K
HKTSD20DA	20KW Heater w/breaker	–	–	48K-60K
HKTSD20DB	20KW Heater w/breaker	–	–	48K-60K
HKTSD25D1	25KW Heater w/breaker	–	–	60K
HKTSD25DA	25KW Heater w/breaker	–	–	60K
HKTSD25DB	25KW Heater w/breaker	–	–	60K
SPW-01	Single Point Kit	1200-2000 CFM	–	24K-60K

Accessories

Indoor Air Handlers (All)

ACCESSORY	DESCRIPTION	MBVK 208/230V Modular Blower	DFVE 115V Air Handler	DFVE 230V Air Handler
HKTAN031	3KW Heater	1200-2000 CFM	–	–
HKTAN051	5KW Heater	1200-2000 CFM	–	–
HKTAN061	6KW Heater	1200-2000 CFM	–	–
HKTAN081	8KW Heater	1200-2000 CFM	–	–
HKTAN101	10KW Heater	1200-2000 CFM	–	–
HKTAD051	5KW Heater w/breaker	1200-2000 CFM	–	–
HKTAD081	8KW Heater w/breaker	1200-2000 CFM	–	–
HKTAD101	10KW Heater w/breaker	1200-2000 CFM	–	–
HKTAD151	15KW Heater w/breaker	1200-2000 CFM	–	–
HKTAD201	20KW Heater w/breaker	2000 CFM	–	–
HKTZD15X1*	15KW 3 Stage Heater w/breaker	MBVK16CH1X00 only.	–	–
CAHEA*	AC/HP Cold Climate DX Coil	MBVK16CH0X00/ 1X00	–	–
CAPEA/CHPEA	AC/HP Coils	1200-2000 CFM	–	–
DFKE-02	Downflow Kit	–	24K-60K	24K-60K

Accessories

Indoor Air Handlers (All)

ACCESSORY	DESCRIPTION	MBVK 208/230V Modular Blower	DFVE 115V Air Handler	DFVE 230V Air Handler
CMK0015	Condensate Management Kit	–	24K B-Chassis	24K
CMK0016	Condensate Management Kit	–	36K-48K C-Chassis	36K-48K
CMK0017	Condensate Management Kit	–	48K-60K D-Chassis	48K-60K D-Chassis
HHK0001	High Humidity Kit	–	24K B-Chassis	24K B-Chassis
HHK0002	High Humidity Kit	–	36K-42K C-Chassis	36K-42K C-Chassis
HHK0003	High Humidity Kit	–	48K-60K D-Chasis	48K-60K D-Chassis
HHK0011	High Humidity Kit	–	48K C-Chassis	48K C-Chassis
DV1-15-2117-AB	MERV 15 Air Cleaner	–	B-Chassis	B-Chassis
DV1-15-2121-AC	MERV 15 Air Cleaner	–	C-Chasis	C-Chassis
DV1-15-2124-AD	MERV 15 Air Cleaner	–	D-Chassis	D-Chassis
UC18S15-24	5" Single Lamp UV Coil Purifier	–	24k-60k	24K-60K
UC18S15-24B	15" Single Lamp UV Coil Purifier	–	24k-60k	24K-60K
DSEN-HAQA	Daikin ONE Home Air Monitor	1200-2000 CFM	24K-60K	24K-60K

Accessories

Daikin DR97MC Furnace Accessories

UPFLOW TYPE						
ACCESSORY	**DESCRIPTION**	**DR97MC 0603BN**	**DR97MC 0803BN**	**DR97MC 0804BN**	**DR97MC 1005CN**	**DR97MC 1205DN**
72950	Concentric Vent Kit – 2"	■	■	■	■	–
72951	Concentric Vent Kit – 3"	■	■	■	■	■
RF000142	Drain Kit Horizontal Left Vertical Flue	■	■	■	■	■
0170K00000S	Flush Mount Vent Kit – 3" or 2"	■	■	■	■	■
0170K00001S	Flush Mount Vent Kit – 2"	■	■	■	■	–
AFE18-60A	Fossil Fuel Kit (Dual Fuel)	■	■	■	■	■
HAMFK-01	High Altitude Kit	■	■	■	■	■
0270F05404	Horizontal Drain Tubing Kit	■	■	■	■	■
LPM-35	LP Conversion Kit	■	■	■	■	■

■ Indicates compatibility with this model

Accessories

Daikin DD97MC Furnace Accessories

DOWNFLOW TYPE					
ACCESSORY	DESCRIPTION	DD97MC 0603BN	DD97MC 0803BN	DD97MC 0804BN	DD97MC 1005CN
72950	Concentric Vent Kit – 2"	■	■	■	■
72951	Concentric Vent Kit – 3"	■	■	■	■
CFSB17	Downflow Sub-Base 17.5"	■	■	–	–
CFSB21	Downflow Sub-Base 21"	–	–	■	■
RF000142	Drain Kit Horizontal Left Vertical Flue	■	■	■	■
0170K00000S	Flush Mount Vent Kit – 3" or 2"	■	■	■	■
0170K00001S	Flush Mount Vent Kit – 2"	■	■	■	■
AFE18-60A	Fossil Fuel Kit (Dual Fuel)	■	■	■	■
HAMFK-01	High Altitude Kit	■	■	■	■
0270F05404	Horizontal Drain Tubing Kit	■	■	■	■
LPM-35	LP Conversion Kit	■	■	■	■

■ Indicates compatibility with this model

Accessories

Daikin Furnace Accessories

All Compatible Furnaces: DR97MC/DD97MC DR96TC/DD96TC DR80TC/DD80TC				
ACCESSORY	**DESCRIPTION**	**B CHASIS**	**C CHASIS**	**D CHASIS**
DSEN-HAQA	Daikin *ONE* Home Air Monitor	■	■	■
DV1-15-2817-FB	Daikin *ONE* Premium Air Cleaner	■	–	–
DV1-15-2821-FC	Daikin *ONE* Premium Air Cleaner	–	■	–
DV1-15-2824-FD	Daikin *ONE* Premium Air Cleaner	–	–	■

■ Indicates compatibility with this model

• For installation in Canada, gas furnaces are certified only to 4,500' elevation

Accessories

Daikin DR96TC Furnace Accessories

UPFLOW TYPE								
ACCESSORY	**DESCR.**	**DR976C 0403BN**	**DR96TC 0603BN**	**DR96TC 0803BN**	**DR96TC 804CN**	**DR96TC 1005CN**	**DR96TC 1005DN**	**DR96TC 1205CN**
72950	Concentric Vent Kit – 2"	■	■	■	■	■	■	–
72951	Concentric Vent Kit – 3"	■	■	■	■	■	■	■
RF000142	Drain Kit Horizontal Left Vertical Flue	■	■	■	■	■	■	■
0170K 00000S	Flush Mount Vent Kit – 3" or 2"	■	■	■	■	■	■	■
0170K 00001S	Flush Mount Vent Kit – 2"	■	■	■	■	■	■	–
AFE18-60A	Fossil Fuel Kit (Dual Fuel)	■	■	■	■	■	■	■
HASFK	High Altitude Kit – Nat. Gas	HSFK 1	HSFK 1	HHSFK 1	HSFK 2	HSFK 3	N/A	HSFK 2
HASFK	High Altitude Kit – LP Gas	HSFK 1	HSFK 1	HSFK 1	HSFK 2	HSFK 2	N/A	HSFK 2
0270F05404	Horizontal Drain Tubing Kit	■	■	■	■	■	■	■
LPM-35	LP Conversion Kit	■	■	■	■	■	■	■

■ Indicates compatibility with this model

Accessories

Daikin DD96TC Furnace Accessories

DOWNFLOW TYPE						
ACCESSORY	**DESCR.**	**DD976C 0403BN**	**DD96TC 0603BN**	**DD96TC 804CN**	**DD96TC 1005CN**	**DD96TC 1205DN**
72950	Concentric Vent Kit – 2"	■	■	■	■	–
72951	Concentric Vent Kit – 3"	■	■	■	■	■
CFSB17	Downflow Sub-Base 17.5"	■	■	–	–	–
CFSB21	Downflow Sub-Base 21"	–	–	■	■	–
CFSB24	Downflow Sub-Base 24"	–	–	–	–	■
RF000140	Drain Kit Horiz. Left Vertical Flue	■	■	■	■	■
0170K 00000S	Flush Mount Vent Kit – 3" or 2"	■	■	■	■	■
0170K 00001S	Flush Mount Vent Kit – 2"	■	■	■	■	–
AFE18-60A	Fossil Fuel Kit (Dual Fuel)	■	■	■	■	■
HASFK	High Altitude Kit – Nat. Gas	HSFK 1	HHSFK 1	HSFK 2	HSFK 3	HSFK 3
HASFK	High Altitude Kit – LP Gas	HSFK 1	HSFK 1	HSFK 2	HSFK 2	HSFK 3
0270F05405	Hor. Drain Tubing Kit	■	■	■	■	■
LPM-34	LP Conv. Kit	■	■	■	■	■

■ Indicates compatibility with this model

Accessories

Daikin DR80TC Furnace Accessories

UPFLOW TYPE								
ACCESSORY	**DESCR.**	**DR806C 0603B***	**DR80TC 0604B***	**D806TC 0803B***	**DR80TC 804C***	**DR80TC 805C***	**DR80TC 805D***	**DR80TC 1005D***
AFE18-60A	Fossil Fuel Kit (Dual Fuel)	■	■	■	■	■	■	■
HA-04	High Altitude Kit (2000-5400 Ft.)	–	–	■	■	■	■	■
HA-05	High Altitude Kit (2000-5400 Ft.)	■	■	–	–	–	–	–
HA-04	High Altitude Kit (2000-7800 Ft.)	–	–	–	–	–	–	–
HA-05	High Altitude Kit (2000-7800 Ft.)	■	■	■	■	■	■	■
LPM-35	LP Conversion Kit	■	■	■	■	■	■	■

■ Indicates compatibility with this model

Accessories

Daikin DD80TC Furnace Accessories

DOWNFLOW TYPE					
ACCESSORY	**DESCR.**	**DD80TC 0603BX**	**DD80TC 0803BX**	**DD80TC 0805CX**	**DD80TC 1005CX**
SBT17	Downflow Sub-Base 17.5"	■	■	–	–
SBT21	Downflow Sub-Base 21"	–	–	■	■
AFE18-60A	Fossil Fuel Kit (Dual Fuel)	■	■	■	■
HA-04	High Altitude Kit (2000-5400 Ft.)	–	■	■	■
HA-05	High Altitude Kit (2000-5400 Ft.)	■	–	–	–
HA-04	High Altitude Kit (2000-7800 Ft.)	–	–	–	–
HA-05	High Altitude Kit (2000-7800 Ft.)	■	■	■	■
LPM-35	LP Conversion Kit	■	■	■	■

■ Indicates compatibility with this model

Daikin *FIT* AC Compatibility Chart

COMPATI-BILITY	DFVE - 230V	CAPEA CHPEA	MBVK	DR80TC DD80TC	DR96TC DD96TC	DR97MC DD97MC
AC Condenser	Air Handler	DX Coil	Mod Blower	80% Furnace	96% Furnace	97% Furnaces
DC6VSA181W	24BP1300A 36CP1300A	24**3A 30**3A	12BP1X00A 16CP1X00A	0603/4* 0803/4/5*	0403* 0603* 0803/4*	0603* 0803/4*
DC6VSA241W	24BP1300A 36CP1300A	24**3A 30**3A 36**3A	12BP1X00A 16CP1X00A	0603/4* 0803/4/5*	0403* 0603* 0803/4*	0603* 0803/4*
DC6VSA301W	36CP1300A	30**3A 36**3A	12BP1X00A 16CP1X00A	0603/4* 0803/4/5* 1005**	0403* 0603* 0803/4* 1005**	0603* 0803/4* 1005**
DC6VSA361W	42CP1300A	36**3A 48**3A	12BP1X00A 16CP1X00A 20DP1X00A	0804/5* 1005*	0804* 1005* 205*	0804* 1005* 1205*
DC6VSS1810	24BP1300A	24**3A 30**3A	12BP1X00A 16CP1X00A	0603/4* 0803/4/5*	0403* 0803/4	0603* 0403/4*
DC6VSS2410	24BP1300A	24**3A 30**3A 36**3A	12BP1X00A 16CP1X00A	0603/4* 0803/4/5*	0403* 0603* 0803/4*	0603* 0803/4*
DC6VSS3010	36CP1300A	30**3A 36**3A	12BP1X00A 16CP1X00A	0603/4* 0803/4/5* 1005*	0403* 0603* 0803/4* 1005*	0603* 0803/4* 1005*
DC6VSS3610	36CP1300A 42CP1300A	36**3A	12BP1X00A 16CP1X00A 20DP1X00A	0603/4* 0803/4/5* 1005*	0603* 0803/4* 1005* 1205*	0603* 0803/4* 1005** 1205*
DC6VSS4210	42CP1300A 48*P1300A 60DP1300A	48**3A 60**3A	16CP1X00A 20DP1X00A	0804/5* 1005*	0804* 1005* 1205*	0804* 1005* 1205*
DC6VSS4810	48*P1300A 60DP1300A	48**3A 60**3A	16CP1X00A 20DP1X00A	0804/5* 1005*	0804* 1005* 1205*	0804* 1005* 1205*
DC6VSS6010	60DP1300A	60**3A	16CP1X00A 20DP1X00A	0804/5* 1005*	0804* 1005* 1205*	0804* 1005* 1205*
DC9VSA2410	36CP1300A	36**3A	12BP1X00A 16CP1X00A	0603/4* 0803/4/5* 1005*	0403* 0603* 0803/4* 1005*	0603* 0803/4* 1005*
DC9VSA3610	42CP1300A 48*P1300A 60DP1300A	48**3A 60**3A	16CP1X00A 20DP1X00A	0804/5* 1005*	0804* 1005* 1205*	0804* 1005* 1205*
DC9VSA4810	60DP1300A	60**3A	16CP1X00A 20DP1X00A	0804/5* 1005*	0804* 1005* 1205*	0804* 1005* 1205*
DC9VSA6010	60DP1300A	60**3A	16CP1X00A 20DP1X00A	0804/5* 1005*	0804* 1005* 1205*	1005* 1205*

Mod Blower/Gas Furnace require matching DX Coil for full system

Daikin *FIT* HP Compatibility Chart

COMPATI-BILITY	DFVE - 115V	DFVE - 230V	CAPEA CHPEA CAHEA	MBVK	DR80TC DD80TC	DR96TC DD96TC	DR97MC DD97MC
Heat Pump	Air Handler	Air Handler	DX Coil	Mod Blower	80% Furn.	96% Furn.	97% Furn.
DH6VSA1810	24BP0300A	24BP1300A	24**3A 30**3A	12BP1X00A 16CP1X00A	0603/4* 0803/4/5*	0403* 0603* 0803/4*	0603* 0803/4*
DH6VSA2410	24BP0300A	24BP1300A	24**3A 30**3A	12BP1X00A 16CP1X00A	0603/4* 0803/4/5*	0403* 0603* 0803/4*	0603* 0803/4*
DH6VSA3010	36CP0300A	36CP1300A	30**3A	12BP1X00A 16CP1X00A	0603/4* 0803/4/5* 1005*	0403* 0603* 0803/4* 1005*	0603* 0803/4* 1005*
DH6VSA3610	36CP0300A 42CP0300A	36CP1300A 42CP1300A	36**3A	12BP1X00A 16CP1X00A 20DP1X00A	0603/4* 0803/4/5* 1005*	0403* 0603* 0803/4* 1005* 1205*	0603* 0803/4* 1005* 1205*
DH6VSA4210	42CP0300A 48*P0300A 60DP0300A	42CP1300A 48*P1300A 60DP1300A	48**3A 60**3A	16CP1X00A 20DP1X00A	0804/5* 1005*	0804* 1005* 1205*	0804* 1005* 1205*
DH6VSA4810	48*P0300A 60DP0300A	48*P1300A 60DP1300A	48**3A 60**3A	16CP1X00A 20DP1X00A	0804/5* 1005*	0804* 1005* 1205*	0804* 1005* 1205*
DH6VSA6010	60DP0300A	60DP1300A	60**3A	16CP1X00A 20DP1X00A	0804/5* 1005*	0804* 1005* 1205*	0804* 1005* 1205*

Mod Blower/Gas Furnace require matching DX Coil for full system

* Indicates new product compatible with DH9VSA24/36 ODU's

Daikin *FIT* HP Compatibility Chart

COMPATI-BILITY	DFVE - 115V	DFVE - 230V	CAPEA CHPEA CAHEA	MBVK	DR80 DD80	DR96 DD96	DR97 DD97
Heat Pump	Air Handler	Air Handler	DX Coil	Mod Blower	80% Furn.	96% Furn.	97% Furn.
DH7VSA2410	36CP0300A	36CP1300A	30**3A 36**3A	12BP1X00A 16CP1X00A	0603/4* 0803/4/5* 1005*	0403* 0603* 0803/4* 1005*	0603* 0803/4* 1005*
DH7VSA3610	42CP0300A 48*P0300A 60DP0300A	42CP1300A 48*P1300A 60DP1300A	48**3A 60**3A	12BP1X00A 16CP1X00A 20DP1X00A	0804/5* 1005*	0804* 1005* 1205*	0804* 1005* 1205*
DH7VSA4210	60DP0300A	60DP1300A	60**3A	16CP1X00A 20DP1X00A	0804/5* 1005*	0804* 1005* 1205*	0804* 1005* 1205*
DH7VSA4810	60DP0300A	60DP1300A	60**3A	16CP1X00A 20DP1X00A	0804/5* 1005*	0804* 1005* 1205*	0804* 1005* 1205*
DH7VSA6010	60DP0300A	60DP1300A	60**3A	16CP1X00A 20DP1X00A	0804/5* 1005*	0804* 1005* 1205*	1005* 1205*
DH9VSA241C	48CP0300A	48CP1300A	48**3A CAHEA3630C3*	16CP1X00A 20DP1X00A 16CH1X004	0804/5* 1005*	0804* 1005*	0804* 1005*
DH9VSA361C	48*P0300A	48*P1300A 60DP1300A	60**3A CAHEA3630C3*	16CP1X00A 20DP1X00A 16CH1X00A	0804/5* 1005*	0804* 1005*	0804* 1005*
DH9VSA4810	60DP0300A	60DP1300A	48**3A 60**3A CAHEA3630C3	16CP1X001A 20DP1X00A 16CH1X00A	0804/5* 1005*	0804* 1005* 1205*	0804* 1005* 1205*
DH9VSA6010	60DP0300A	60DP1300A	60**3A CAHEA3630C3	16CP1X001A 20DP1X00A 16CH1X00A	0804/5* 1005*	0804* 1005* 1205*	1005* 1205*

Mod Blower/Gas Furnace require matching DX Coil for full system

* Indicates new product compatible with DH9VSA24/36 ODU's

Daikin *ONE* Ecosystem

Daikin *ONE* Home Air Monitor

Detect:

» The Daikin *ONE* home air monitor will monitor and learn baseline air quality in the home, over 7 days, then provide a rolling 7-day average baseline.

» When potential particulate and/or chemical events occur outside of this average baseline, the system can detect the potential deviation and send alerts to the Daikin *ONE*+ smart thermostat.

Visualize:

» From the Daikin *ONE*+ smart thermostat, visualize the estimated indoor air quality in real-time directly on the thermostat or through the smartphone app.

» Indoor Air Quality Event Monitor – from this option, see when monitored particles or chemicals are elevated compared to the 7-day baseline* to help to understand and control your indoor air quality.

The readings will include:

– **Green** - typical concentrations in the home

– **Yellow** - elevated concentrations in the home

– **Orange** - very elevated concentrations in the home

Act:

» With built-in *Air Intelligence*, the Daikin *ONE* home air monitor and Daikin *ONE* ecosystem provide adaptive solutions homeowners advance through their Daikin *ONE*+ smart thermostat based on air quality alerts.

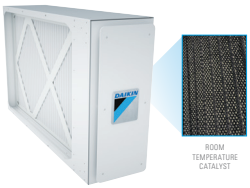
– Turn on the furnace or air handler to increase filtration through the high-efficiency Daikin *ONE* premium air cleaner to address particles.

– Turn on exhaust/ventilation or open a window to help reduce detected chemicals within the home.

* The Daikin Indoor Air Quality Event monitor readings are based on the sensor readings during your home's 7-day baseline range.

Daikin *ONE* Ecosystem

Daikin *ONE* Premium Air Cleaner



The Daikin *ONE* Premium Air Cleaner is an in-line air cleaner that treats home air for certain airborne particulate matter and chemicals found in the home.

- Intuitively designed with outer dimensions that match original equipment furnace and air handler cabinets for quick installation.
- Magnetic door design ensures tool-less, easy access to filter components for quick and easy filter changes.
- Insulated cabinet to reduce risk of condensation.
- Designed for multi-position horizontal or vertical installations.
- Filter frame designed with dual pull tabs for easy removal.
- All cabinet mounting holes are slotted and designed to lineup with original equipment flanges for quick installation.

Daikin *ONE* Ecosystem

CLEAN COMFORT®
INDOOR AIR ESSENTIALS

Clean Comfort IAQ Essentials are an extension of the Daikin *ONE* ecosystem. To learn more, ask your Daikin *Pro* what options would fit your project and be an ideal fit to the Daikin *FIT* and Daikin *ONE* ecosystem.

SCAN TO LEARN MORE OR VISIT:
CLEANCOMFORT.COM

DESIGN OPTIMIZATION

Load Calculation — Manual J

It is critical to avoid the practice of replacing existing equipment "like-for-like". There are too many variables that could result in poor system performance.

A combination of talking to the customer and performing accurate load calculations, can help mitigate against potential issues occurring post installation.

» Was the last system selected correctly?

» Did the previous system provide satisfactory cooling, heating & air movement?

» Are the air flow rates of the new system comparable?

» Was the previous method of heating balanced and efficient?

» Is humidity control a priority?

» Accurate load calculation is crucial for determining the correct size of heating & cooling equipment for each individual application.

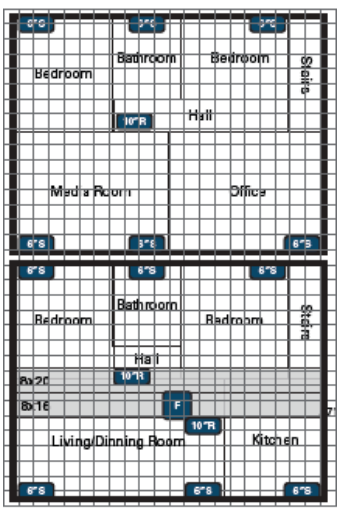
» Load calculation can help ensure optimal performance, energy efficiency, and overall cost savings.

» Improperly sized equipment, whether that be undersized or oversized could potentially lead to various problems. These may include increased energy consumption, uncomfortable temperature, high humidity, or premature equipment failure.

Load Calculation — Manual J

ACCA (Air Conditioning Contractors of America) sets the parameters for measuring heat loads for homes and residential spaces.

This is known as the **Manual J standard** which considers factors like building size, insulation value, window orientation, and local climate.



There are numerous sites and methods available for the designer to choose from.

The following list includes a few sites and methods that may be available:

- Conduit Tech Web-Based Load Calculator
- Amply Web-Based Load Calculator
- CoolCalc: web-based tool for Manual J
- Wrightsoft Right-J: Popular software
- Field Promax Free Manual J Calculator
- Service Titan HVAC Calculator
- HVAC.com
- EnergyPlus
- Elite Software's Chvac

Duct Design Guide

As important as it is to avoid replacing existing equipment “like-for-like”, it is also important to avoid the assumption that any existing ductwork on site can be utilized without first checking its suitability.

Proper duct sizing is critical to help ensure an efficient and effective HVAC system. Leaky, outdated, or improper ducts lead to various problems, impacting efficiency, cost, comfort, and air quality. Heat pumps may require more airflow than the existing system to operate efficiently.

Correctly sized ducts can help ensure even airflow distribution, optimal system performance, and energy efficiency leading to lower operating cost and a more comfortable indoor environment. To help ensure optimal performance and customer satisfaction, evaluating, sizing, and testing ducts before installing a new system is crucial.

The lifespan of ductwork can vary (15- 30 years), so it is important to evaluate and test if planning to reuse ductwork for a new HVAC system. This thorough approach can help facilitate proper function and customer comfort.

Manual D

There are several sites available to assist with the optimization of duct design using Manual D.

This list includes some sites that may be available:

» ASHRAE through Accuris Standards Store
» H2x Engineering
» Field Promax
» Elite Software
» Service Titan
» Modernize
» HVAC Charts

Duct Design Guide

Duct Testing Overview

Testing of ductwork both before and after system installation can help provide an optimized installation.

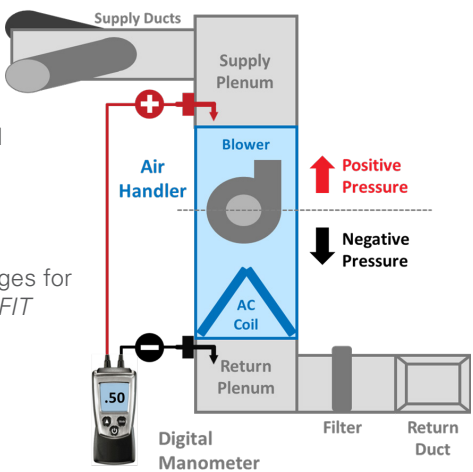
The following pages provide a step-by-step guide to this process:

Pre-system change out:

- ☐ Test the duct system for CFM and static pressure.
- ☐ Calculate the necessary changes for the new Daikin *FIT* system.

Post-system change out:

- ☐ After necessary changes have been made to the duct system:
  - ☐ Re-test the CFM and static pressure
  - ☐ Ensure the system is maintaining max CFM according to installation manual recommendation.



Manometer is used to test CFM and static pressure

Duct Design Guide

DUCT RETROFIT DECISION GUIDE

ACCEPTABLE FOR USE:

- ✓ The ducts pass a visual evaluation.
- ✓ The total external static pressure (TESP) is within the manufacturer's acceptable range.
- ✓ Duct sizing meets the airflow requirements of the heat pump.
- ✓ The duct system is reasonably balanced.
- ✓ No leaks or compressions exist.
- ✓ Return ducts are designed for heating AND cooling.
- ✓ Ducts are insulated or in a conditioned space.

MODIFY EXISTING DUCTS:

- ✓ Duct sizing can be adjusted to meet airflow requirements.
- ✓ Ducts or grilles can be adjusted to balance the system.
- ✓ Duct branches have compressions or leaks.
- ✓ A return duct is needed for addition of heating or cooling.
- ✓ Duct insulation has gaps or tears.
- ✓ Registers blow air directly onto occupants.

REPLACE OR ABANDON IF:

- ✓ Ducts are in poor condition or deteriorating.
- ✓ Duct size will not meet airflow requirements.
- ✓ Ducts are uninsulated and in an unconditioned space.

Interview the Homeowner

The homeowner may have knowledge or complaints that will lead to easy diagnoses and fixes of the duct system. Problems they are noticing with the existing system will likely carryover to the heat pump if left unaddressed

Ask about the age of the system, comfort from room to room, noise from ducts or registers, registers that blow too much or too little, filter clean/replace habits, maintenance habits, and any recent work or assessments.

Duct Design Guide

Evaluate the Ducts

Conducting a brief evaluation can detect early symptoms of a struggling or aging duct system requiring replacement, considering various performance-affecting factors. Collect lengths and sizes of duct plenums and branches while evaluating.

1. Turn the HVAC system on and turn the fan settings to high.
2. Verify air is flowing from all registers.
3. Check the accessible ducts for visible gaps or tears in insulation.
4. Trace each branch, checking for compressed ducts and sharp bends or kinks.
5. Check all joints and connections for air leakage
6. Duct leaks lead to imbalances, energy loss, and poor air quality.
7. Noise/vibration of ductwork may indicate interior deterioration, incorrect sizing, or inadequate securing.
8. Check if filters are excessively dirty and when they were last replaced.
9. If the ducts are found to be in acceptable condition, seal air leaks, fix minor bends, secure cuts, and clean the filters as necessary.

Duct Design Guide

Test the Ductwork / Static Pressure

Ducted HVAC units depend on duct airflow for proper air distribution, with total external static pressure (TESP) as a key comfort indicator; employ a manometer to measure static pressure and test TESP, and filter pressure drop.

☐ Plug your pressure probes into the digital manometer and turn it on

- » Attach your pressure hoses to each input point and then attach the static pressure probes to each hose
- » If the manometer has a magnet on the back, place it on the furnace for easy access

☐ Insert Probes

- » Insert the channel A probe into the air handler before the fan. Point the very end of your probe downward toward the airflow of the fan.
- » Put the channel B probe into the air handler after the fan. Point the end of the probe downward toward the airflow of the air handler.

☐ Measure TESP

- » If one of the numbers is negative, treat it like a positive when you add your numbers together.
- » Add the numbers on the manometer display to get a reading for the TESP in inches of water column.
- » Check the manufacturer recommended TESP for the model installed. Compare the measured value to this value.

Test the Ductwork / Static Pressure, *continued*

- » Insert the probes around the filter to test the area for pressure.
- » Place channel A probe above the filter and channel B probe below the filter in the test port that is already there. Check the channel B probe on the manometer to see what it is reading.
- » Change the filter if the filter pressure is higher than 0.1 inches (0.25 cm), and then test it again to see if your TESP went down

Verify Duct Sizing

Proper duct sizing and design involve understanding dimensions, lengths, and materials. While challenging in the field, conducting an ACCA Manual D is crucial during new installations or when integrating a new air handler to to help provide accurate sizing and design.

Checking duct capacity and balancing can assist in identifying necessary modifications, yet they don't substitute for Manual D or testing in confirming precise duct replacement requirements.

Check the Duct Capacity

For a swift evaluation of the ducts system's adequacy for the new air handler, consult the National Comfort Institute's sizing tables, which provide estimated duct capacities. If inadequacies arise, consider upsizing or adding extra branches or plenums, though these values serve as an initial check and not a definitive sizing solution.

Duct Design Guide

Test the Ductwork / Static Pressure

Ducted HVAC units depend on duct airflow for proper air distribution, with total external static pressure (TESP) as a key health indicator; employ a manometer to measure static pressure and test TESP, and filter pressure drop.

☐ How much air is the cut system supposed to handle?

- » Check the heat pump manufacturer specifications and use the listed value, usually 350-400 CFM per ton is minimum for a heat pump.
- » A heat pump may require more airflow than the existing system. Ducts that are too small may result in inefficiencies, poor comfort, or noise.
- » If the manometer has a magnet on the back, place it on the furnace for easy access.

☐ Are the supply trunks able to handle the airflow?

- » List the sizes of all supply plenums coming from the air handler.
- » Use the airflow table to sum the capacity of all supply plenums.
- » Confirm this number is larger than the required airflow found in step 1.

☐ Are the supply branches able to handle the airflow?

- » Repeat step 2 for the supply branches coming from the supply plenum.
- » Confirm the supply branch capacity is larger than the required airflow found in step 1.

Test the Ductwork / Static Pressure, *continued*

☐ Are the return ducts able to handle the airflow?

- » Repeat step 2 for the supply branches coming from the supply plenum.
- » Confirm the supply branch capacity is larger than the required airflow found in step 1.

☐ Does the duct system behave as expected?

- » Confirm the calculations by turning the system on high and testing the CFM at each register.
- » If the airflow at any register is lower than expected when compared to the table or other similar ducts, the duct may be too small, compressed, misshapen, or deteriorating.
- » Higher airflow than expected may result in discomfort from noisy airflow or the feel of air blowing harshly into populated areas.

NOTE: When sizing for a heat pump, the ducts should be sized to the larger of the heating & cooling loads (design load).

Duct Design Guide

Verify Duct Sizing

Duct balancing ensures even heating and cooling distribution throughout the home avoiding discomfort, energy waste, and temperature imbalances.

A properly balanced system can provide the correct ratio of heating or cooling to each room. While minor adjustments can be made with dampers, installing a new heat pump can allow comprehensive system balancing. To balance the system, a Manual J should be completed, and the zonal loads should be known.

A simple way to check the balance of a duct system is to measure the airflow exiting the registers.

1) With the existing system fan on high, use an anemometer or balancing hood to measure the airflow in CFM at each register.
2) Sum all registers in a single room to get the total airflow into the room.
3) Divide the room's airflow by its design load to get the room's balancing ration (CFM/BTU).

Cold Climate Application

Cold climate best practices

One of the key elements of optimized design is maximizing protection of the outdoor unit (ODU).

- Protect from ODU from prevailing winds by locating the ODU on a relatively protected side of the building. If this is not possible, consider some form of coil protection from adverse weather.
- In areas with high wind exposure the ODU should be mounted with the suction side against the wall.
- Outdoor unit should be located away from areas of snow drift build-up.
- Outdoor unit should be mounted 20" above the average snow line.
- Avoid high traffic areas where condensate pooling can freeze and cause a hazard. Otherwise ensure any run-off is channeled away from pathways.
- Suitable duct insulation for local demands can help maximize system efficiency.
- Commissioning of the Daikin *ONE* control to optimize the system for cold climate operation is important.

Here is an example of a Daikin *FIT* heat pump located on the ground. The heat exchange coil is not protected and has frozen over.

This can reduce performance and can eventually shut down as a protection measure.

Any condensate not channeled away may pool under the unit or create a slip hazard.

Cold Climate Application

A Daikin *FIT* heat pump system is installed to optimize performance.

The HP is mounted above the average snow fall line and sits on a side of the building away from prevailing winds.

Condensate drops away from the unit to mitigate ice build-up.

Cold Climate Accessories

Installation of cold climate accessories is recommended for efficiency and harsh locations.

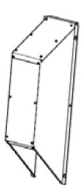
These propriety accessories are available for all Daikin *FIT* systems.

Baffle Plate

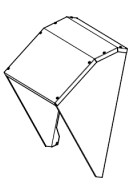
Baffle plates act as a physical barrier shielding the ODU from wind, snow hail and rain.

Snow Guards

Snow guards can be added to protect the air flow of the ODU in areas of heavy snow fall.



Side Snow Guard



Front Snow Guard

Rear Snow Guard

Cold Climate Application

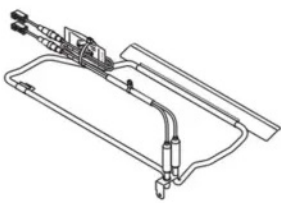
Wall Mounting Bracket

Powder-coated wall brackets allow an ODU to be mounted off the floor, where space is limited, or to elevate above the local average snow fall line.

Drain Pan Heater

The main function is to mitigate condensation and rain from freezing in the bottom of the ODU.

In areas where the outdoor temperature is below 5°F (-15°C) for more than 12 hours, use a drain pan heater (optional accessory) to prevent condensation from freezing in the bottom frame.



System Controls and Features

Room Controls Portfolio

One of the **key elements** of optimized design is maximizing protection of the outdoor unit (ODU).

» Fully communicating control that provides optimal comfort.

» Easy step by step commissioning.

» Compatible with the *SkyportCare*.

» Easy to use, energy efficient, reliable, and can help ensure the system is set up properly.

» Installers and homeowners can utilize the daikincomfort.com website for added features and benefits.

» www.daikincomfort.com, click professional, click resources and then learn more.

System Controls and Features

Daikin *ONE* Touch Smart Thermostat

» *SkyportHome* mobile app compatible
» 1 Aux Output
» Full-color Bit-mapped Display Capacitive Touchscreen
» On-board Set-up and Commissioning

Daikin *ONE*+ Smart Thermostat

» *SkyportHome* mobile app compatible
» 2 Aux Output Full-color Bit-mapped Display Capacitive Touchscreen
» Rotating Dial
» Light Pipe
» On-board Set-up and Commissioning

SkyportHome App

» Allows remote monitoring and control of HVAC equipment. Compatible with all Daikin *ONE* thermostats

Daikin *ONE* Home Air Monitor

» The Daikin *ONE* Home Air Monitor is installed in your ductwork to detect and visualize air quality, and recommend actions to help you improve your indoor air quality

System Controls and Features

Daikin *ONE*+ and *ONE* Touch Smart Thermostats

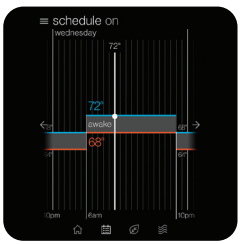
Comfort You Can See

1 Getting Started

Tap the bottom navigation icons to move between the 4 main screens:

Home **Schedule** **Away** **Air Quality**

The **home screen** displays the current temperature, the current system mode, and adjustment slider, as well as icons leading to the top level screens.



The **schedule screen** displays upcoming set-point changes and scheduled times. It also offers access to edit mode, where you can adjust the schedule.

The **away screen** displays energy efficient set-points. Away Mode can be invoked manually or automatically when the mobile app recognizes everyone is away.

The **air quality screen*** displays indoor air quality levels when a Daikin *ONE* home air monitor is connected. Outdoor air quality and weather will be displayed when connected to the internet and thermostat added in the mobile app under home location.

* Actual screen may vary for different indoor unit models. The Daikin *ONE* home air monitor only works with ducted units.

System Controls and Features

Daikin *ONE*+ and *ONE* Touch Smart Thermostats (cont.)

DIRECT CONTROL from the Daikin *ONE*+ Smart Thermostat.

Control directly from the thermostat or the *SkyportHome* app will also seamlessly integrate with open smart home architectures, including Amazon Alexa and Google Assistant, enabling consumers to effortlessly use features such as voice control.

REMOTE CONTROL via the *SkyportHome* App.

An integrated Wi-Fi radio connects to the internet (via a home router) to the cloud and onto the homeowner mobile application.

System Controls and Features

Daikin *ONE*+ and *ONE* Touch Smart Thermostats (cont.)

NEW! Daikin Wireless Room Sensor DSEN-TH-BWS-A

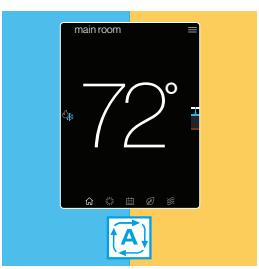
- Wireless and Battery-Powered: Easy to mount anywhere — no wiring needed
- Zonal Comfort and Efficiency: Measures and averages temperature and humidity across
- Compatible with Daikin *ONE*+ smart thermostat
- Sub-GHz Communication: No Wi-Fi required
- Battery Life: Up to 1 year
- Pairing wizard for signal strength, sensor naming, and calibration.
- Multi-Sensor Support: Up to 8 sensors per thermostat
- App Integration: Control and monitoring via *SkyportHome* (homeowners) and
- *SkyportCare* (dealers) apps

System Controls and Features

Daikin *ONE*+ and *ONE* Touch Smart Thermostats (cont.)

GEO-FENCING

The Daikin *ONE*+ and *ONE* touch smart thermostats supports casual temperature adjustment, automatic settings changes driven by an easy-to-program schedule, and an energy efficiency mode invoked manually or by geo-fencing on a mobile app. When activated on the app, the system can recognize when everyone is away and changes settings which is designed to help reduce energy usage.



AUTO CHANGEOVER

The ability to switch between heating and cooling, automatically.

In addition to the usual heat-only and cool-only modes, the Daikin *ONE*+ and *ONE* touch also have a hassle-free "auto" mode. When switched on, the thermostat can automatically heat and cool to keep the indoor temperature within a comfort zone.

LIGHT BAR*

A thin LED light bar sits flush within the bottom surface and runs from edge to edge delicately illuminating the wall beneath. The light bar indicates the current system mode: red for heating and blue for cooling.

* Available on Daikin *ONE*+ only

JUST ASK alexa

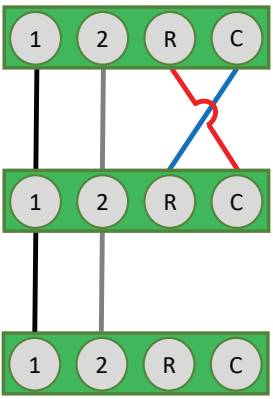
works with the Google Assistant

LEARN MORE ABOUT THE DAIKIN *ONE*+ SMART THERMOSTAT FEATURES:

YOUTUBE/CVUFOTTLKDE

System Controls and Features

Air Handler



Communicating Thermostat
(Both Daikin *ONE+* and *ONE* touch smart thermostats)

125 ft. (*)

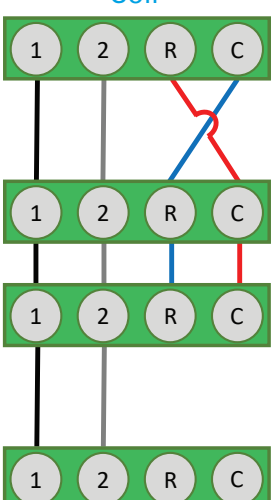
Air Handler Blower
Integrated Control Module

250 ft. (*)

Outdoor Unit Integrated
Control Module

(*) Allowable Maximum Length

Coil



Communicating Thermostat
(In case of Daikin *ONE+*
Smart Thermostat)

125 ft. (*)

Cased Coil
Integrated Control Module

Gas Furnace or Module Blower
Integrated Control Module

250 ft. (*)

Outdoor Unit Integrated
Control Module

System Controls and Features

Control Wiring Specification

» When using residual current operated circuit breakers, be sure to use a high-speed type (0.1 seconds or less) 200mA rated residual operating current.

» Use copper conductors and insulated power wiring only.

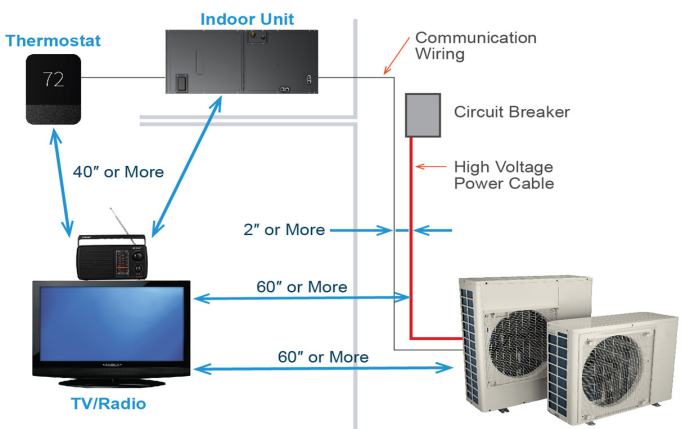
» For best results, 18AWG should be used.

» Select the power supply cable type and size in accordance with local codes.

Communicating Cable Installation Requirements

» It is important to mitigate communication interference from third-party equipment.

» Ensure the following minimum distances are met when installing the control wiring.



ADDITIONAL INFORMATION

Daikin *FIT* System

Limited Warranty Support

The commitment and length of our limited warranties reflect the high standards of our manufacturing processes. That's why the Daikin brand products provide outstanding limited* warranty protection.

DAIKIN *FIT* LIMITED* WARRANTIES

Owner Occupied Residence[1]	Non-Owner Occupied Residence[2]	Commercial[3]
		

[1] Complete warranty available from your local dealer or at www.daikincomfort.com. To receive the 12-Year Unit Replacement Limited Warranty and 12-Year Parts Limited Warranty, online registration must be completed within 60 days of installation. The duration of warranty coverage may depend on the state in which you reside. Some states and provinces do not allow warranty coverage to be conditioned on registration. For a list of states and provinces that do not allow warranty coverage to be conditioned on registration, please visit www.daikincomfort.com/warranty-information or, to request a paper copy of this information, please call us at 1-855-502-3903. Additional requirements for annual maintenance are required for the 12-Year Unit Replacement Limited Warranty. Changes in law, regulations, or technology may result in an equivalent unit not being available. Other limitations and exclusions apply, refer to complete warranty details for full list of limitations and exclusions, as well as rights and obligations should an equivalent unit not be available.

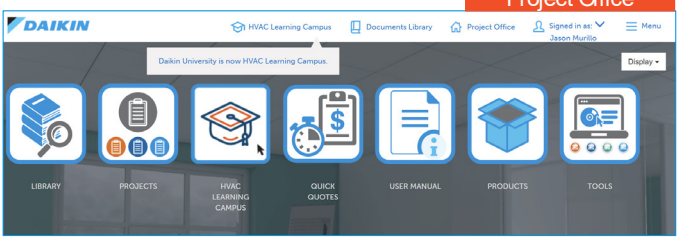
[2] To receive the 10-Year Parts Non-Owner Occupied Warranty, online registration must be completed within 60 days of installation. The duration of warranty coverage may depend on the state in which you reside. Some states do not allow warranty coverage on a unit installed at residential real property to be conditioned on registration. For a list of states that do not allow warranty coverage on a unit installed at residential real property to be conditioned on registration, please visit www.daikincomfort.com/warranty-information or, to request a paper copy of this information, please call us at 1-855-502-3903. Other limitations and exclusions apply, refer to complete warranty details for full list of limitations and exclusions.

[3] Complete warranty details available from your local dealer or at www.daikincomfort.com.

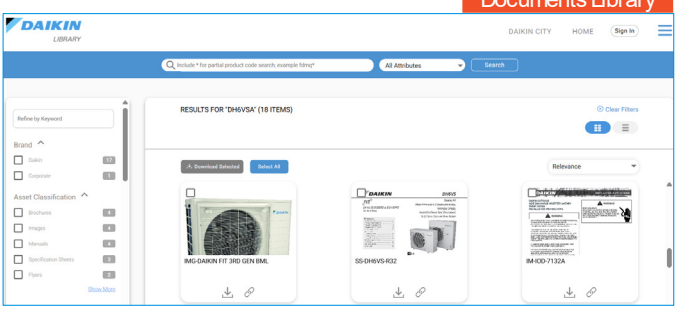
Digital Sales Selection Tools

Use the 'Daikin City' website to locate specification sheets, submittal data sheets, engineering manuals, operating manuals, and installation manuals.

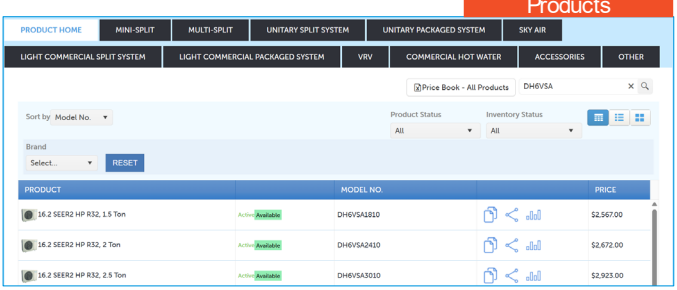
Project Office



Documents Library



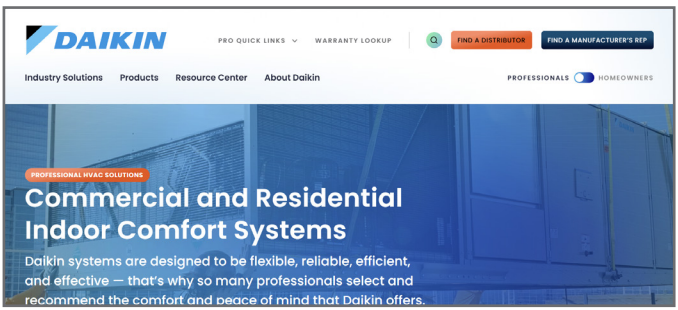
Products

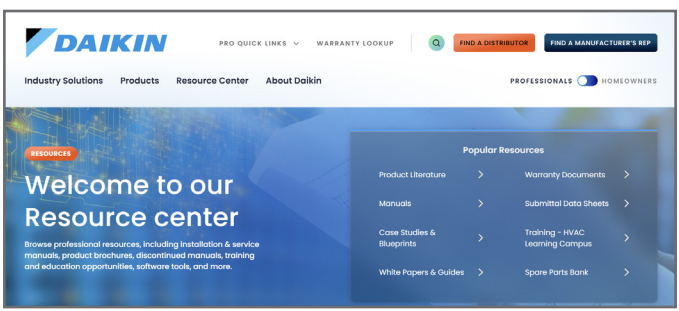


https://www.daikincity.com

Digital Sales Selection Tools

DaikinComfort.com is another location to find documents, manuals, and brochures. You can also find training, parts, software tools, digital calculator, and how to become a Daikin *Pro*.

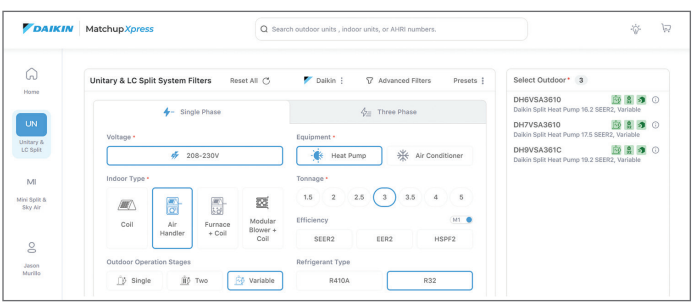


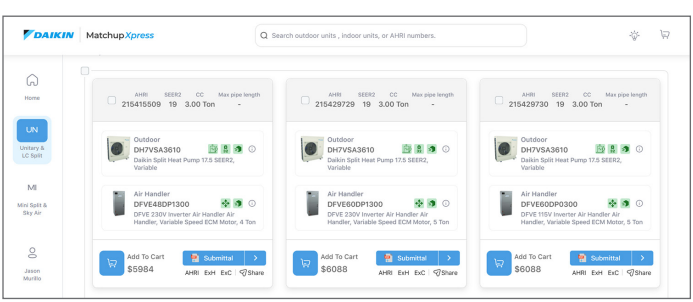


Digital Sales Selection Tools

MatchupXpress

Use the *MatchupXpress* tool to ensure the system is a match and add to open projects in DaikinCity. You can also email AHRI certifications, submittal sheets, extended heating/cooling data directly from the tool.





Technical Resources

Our Applications Engineering team is available to provide project level support to our sales team, distributors, and reps:

Applications.Engineering@daikincomfort.com

Documents Available for your use:

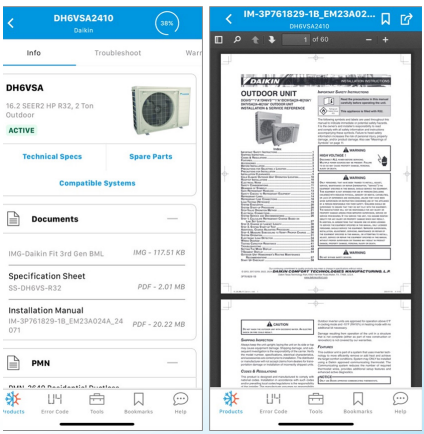
- » Submittal Datasheets
- » Specification Sheets
- » Installation Manuals
- » Engineering Manuals
- » Dimensional Drawings
- » Parts Manuals
- » Product Flyers
- » Limited Warranty* Certificate

Daikin *Tech Hub*

Documents can be downloaded and stored on your mobile device.

Helpful if you need those documents but are outside of internet or cell service range.

* Complete warranty details available from your local dealer or at www.daikincomfort.com.



Technical Resources

Daikin *FIT* Data.

Documents are available through DaikinCity, Daikincomfort.com, and through Applications Engineering Support.

About Daikin:

Daikin Industries, Ltd. (DIL) is a Fortune 1,000 company with more than 100,000 employees worldwide and a leading indoor comfort solutions provider. Daikin Comfort Technologies North America, Inc. (DNA) is a subsidiary of DIL, providing Daikin, Goodman, Amana Brand, and Quietflex brand products. DNA and its affiliates manufacture heating and cooling systems for residential, commercial, and industrial use that are sold via independent HVAC contractors. DNA engineering and manufacturing is headquartered at Daikin Texas Technology Park near Houston, TX. For additional information, visit www.daikincomfort.com.

A WORLD LEADING MANUFACTURER OF HVAC PRODUCTS

FOUNDED IN 1924

For more information:

Sales and Technical Support: 1-855-DAIKIN1

www.daikincity.com

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Scan the QR code to get the *TechHub* mobile app.
Available in Apple App Store and Google Play Store.
https://airintelligence.com/software-tools/techhub/training/

R32

www.R32reasons.com

ADDITIONAL INFORMATION

Before purchasing this appliance, read important information about its estimated annual energy consumption, yearly operating cost, or energy efficiency rating that is available from your retailer.

PM-DKFIT_03-26