




Daikin
Residential Light Commercial
Product & Application

Participant Guide

DAIKIN AC
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Introduction to Daikin



RESIDENTIAL | LIGHT COMMERCIAL | COMMERCIAL

A History of Integrity, Quality, Growth,
and Cutting Edge Technology

Please always call phones now

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Learning Objectives

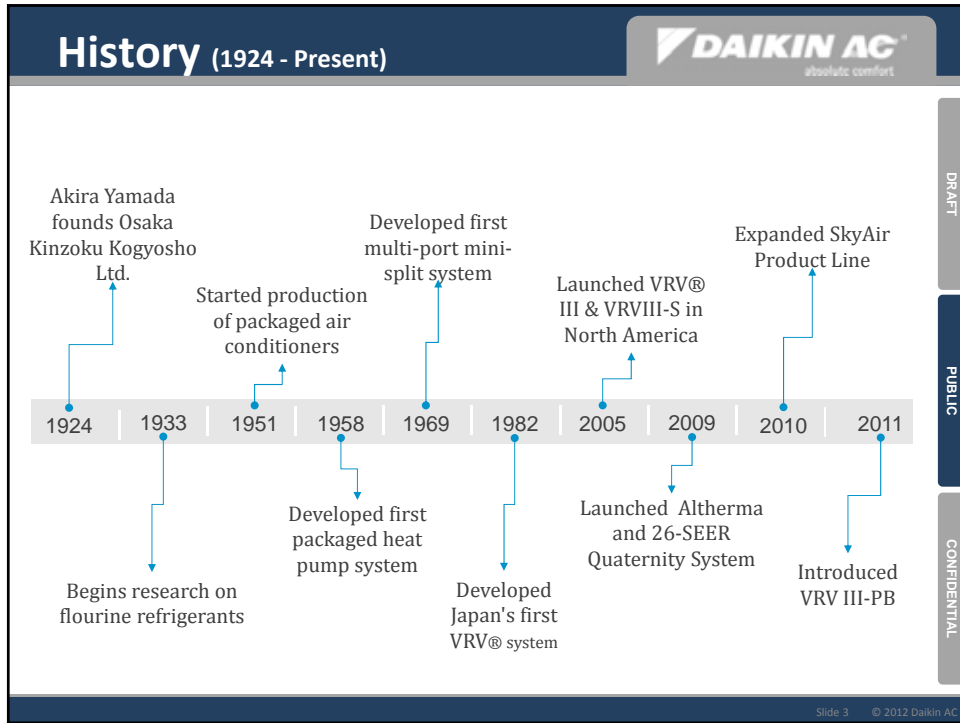
- Basic understanding of Daikin's history and VRV® technology
- Understand Daikin Industries' position in the global marketplace
- Understand where to go for sales and technical support
- Know what other resources are available to you and how to use them to your advantage
- Understand Daikin's commitment to the environment and the industry

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What is VRV?

- Variable Refrigerant Volume is the patented technology that varies the flow of refrigerant to the individually controlled indoor fan coils
- Achieved through a continuously connected piping system
- Advances the comfort and energy efficiency of a building during its heating and cooling cycles

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Daikin's Global Position



- Daikin is the #1 HVAC/R Manufacturer in the world!
- Net sales in HVAC
 - 2010 - \$10.8 Billion
 - 2011 - \$13.0 Billion
- We lead the way in:
 - Energy efficiency
 - Individualized comfort
 - Quality

HVAC Net Sales

▼ Billion



Company	Net Sales (Billion)
Daikin	\$13.0
Carrier	\$8.8
JCI: York	\$8.1
Trane (IR)	\$7.7

Carrier, Daikin, JCI: York, & Ingersoll Rand Investor Relations Publications
Source: Daikin Estimation, SEC Financial Data for 2011

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Global Business Ranking





RANK	COMPANY	COUNTRY	INDUSTRY	SALES (\$BL)	PROFIT (\$BL)	ASSETS (\$BL)	MARKET VALUE (\$BL)
788	Continental	Germany	Tires/automotive	31.10	-4.16	34.37	4.86
789	Enxoreo SGE	United Arab Emirates	Banking	4.75	0.91	29.86	5.65
790	Algom	Canada	Chemicals	9.72	0.17	9.79	10.50
791	Ferrovial	Spain	Construction	10.07	-0.12	10.21	6.40
792	Regions Financial	United States	Banking	8.88	-1.03	140.52	7.83
793	Spain Cement	Spain	Construction	7.16	0.72	30.29	6.08
794	Borsarihof	Germany	Household & Personal Products	8.25	0.54	8.51	10.84
795	Heavy Energy	United States	Materials	6.01	0.45	8.46	13.91
796	GLS	Germany	Capital Goods	17.22	-0.28	21.15	10.86
797	Industrie Ode	Switzerland	Food/Beverages	10.50	0.28	12.21	8.73
798	Bankparibas	Belgium	Banking	5.08	0.42	310.46	1.48
799	Daikin Industries	Japan	Construction	12.35	0.22	11.12	11.33
799	Poplar Inc	United States	Log & Biotechnology	4.08	0.07	6.51	10.51
799	Ashtek/Lucard	France	Technology Hardware & Equip	21.14	-0.75	24.15	7.83
799	C.A.	United States	Software & Services	4.28	0.74	11.16	11.47
799	Multi/United	Kazakhstan	Oil & Gas Operations	4.12	1.08	8.42	10.91
799	Lincoln Digital	United States	Technology Hardware & Equip	0.16	0.06	0.56	9.38
799	American Intl Group	United States	Insurance	80.00	-10.95	207.55	3.45
799	Lebanon National	United States	Insurance	0.80	-0.48	101.42	1.74
799	Chickadee	United States	Oil & Gas Operations	7.76	-0.23	20.91	17.25
799	Hyundai Steel	South Korea	Materials	6.02	0.88	9.49	6.00
799	Heidelberg	United Kingdom/South Africa	Construction Products	5.51	0.42	52.89	4.90
799	Arab Bank	Jordan	Banking	2.26	0.52	10.71	6.35
799	Bank Commercial Bank	Thailand	Banking	2.43	0.42	10.41	6.42
799	Waldhof	Germany	Chemicals	20.88	-0.09	27.51	6.08

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Global 100 Most Sustainable Companies

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- Solid, reliable products
- Profitable for investors
- Progressive environmental policy
- Sound business strategy




2007 - 2008 - 2009

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Daikin Global Sales Revenue

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12.4%
\$1,612,000,000
(1.6 Billion)

\$13.0 Billion USD
World Wide




Region	Percentage
Japan	38.5%
China	15.7%
Europe/Middle East/Africa	19.3%
Asia/Oceania	14.0%
America & Others	12.4%

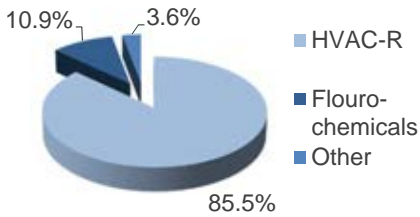
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Daikin's Core Business



- About 85% of Daikin's business is dedicated to HVAC-R.
 - 85.5% HVAC-R
 - Commercial
 - Residential
 - Refrigeration
 - 10.9% Flouro-chemicals
 - Refrigerants
 - Coatings
 - Repellants
 - 3.6% Other Interests
- HVAC-R is Daikin's CORE business!




Category	Percentage
HVAC-R	85.5%
Flouro-chemicals	10.9%
Other	3.6%

Fiscal 2011 - \$13.0B in Sales




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Acquisitions



McQuay	AAF	J&E Hall
<ul style="list-style-type: none">• Indoor/outdoor AHUs• Air/water cooled chillers• Fan coils• PTAC units• Water source heat pumps	<ul style="list-style-type: none">• Filtration systems• Industrial pollution control• "Clean rooms"• Commercial/industrial HVAC• Nuclear applications• Diesel engine exhaust filtration• Home filtration products	<ul style="list-style-type: none">• Commercial/industrial HVAC



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North America

DAIKIN AC (AMERICAS) INTRODUCTION

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Daikin AC (Americas) – Past & Present

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- 2004 - Research and Development (R&D) team formed in New York City
 - Tasked with the development of a North American strategy
 - Sales, Service, & Marketing teams were deployed to implement it
- 2005, Daikin AC (Americas), Inc. was established in Carrollton, TX
- Plan of 50% annual growth put into place
- Employs a distributor based system and will never undercut contractor or distributor by selling directly to the end user

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Daikin AC (Americas) – Our Vision 

Our vision is to be the premier provider of the highest quality air conditioning products, systems, services, and solutions in North America by focusing on outstanding, long-term customer service.

To accomplish this, we will continue to hire the best people, always conduct our business easily and fairly, and operate with the highest degree of integrity in all business practices.

In order to attract and retain the best people, we are committed to providing the best training and creating an atmosphere of teamwork where we help each other grow.

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Daikin AC Sales/Service Locations 



**Daikin AC National Sales Headquarters & Training Center
Carrollton, TX**

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Daikin AC Sales/Service Locations 



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DAIKIN AC Western Regional Sales & Training Center
Irvine, CA

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Daikin AC Sales/Service Locations 



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Queens New York
SERVICE

Daikin AC Eastern Regional Sales & Training Center
Long Island City in Queens, NY

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Daikin AC Sales/Service Locations




- Latin America & Southern Zone Office in Miami, FL
 - On-site and local training
 - Equipment and showroom tours


- Daikin-McQuay Sales & Training Center in Marietta, GA
 - On-site and local training
 - Equipment and showroom tours

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Daikin AC, Inc. Sales Regions



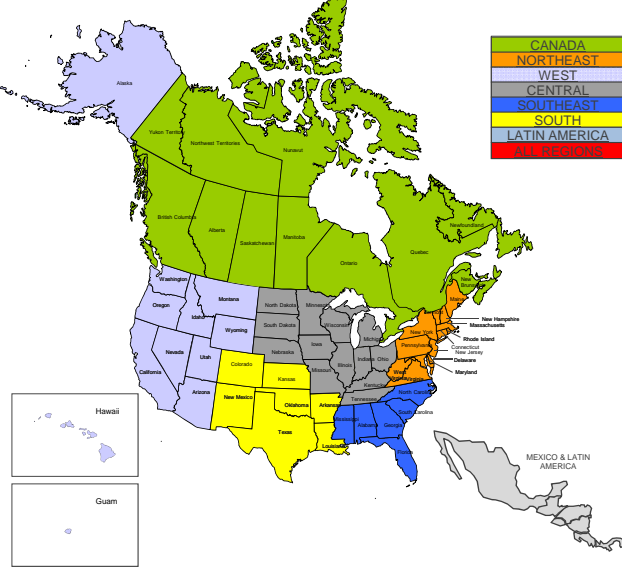


West Region
Central US
Northeast Region
South Region

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Daikin AC, Inc. Service Regions



Legend:

- CANADA
- NORTHEAST
- WEST
- CENTRAL
- SOUTHEAST
- SOUTH
- LATIN AMERICA
- OTHER REGIONS

Director of Service

Tom Pivovar

Call Center

Debi Burgart	AST. Manager
Mike Wortschager	Internal Support
Frank Williams	Internal Support
Blaine Smith	Internal Support
Chris Aldridge	Internal Support
Tim Lee	D-Net Specialist
Satomi Okuyama	Service Planner

Regional Service Manager

James McGory	West/Central Western Canada/Guam
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Field Service Staff

Kris Dryer	Northeast/Eastern Canada
Carl Gratzler	Northeast
Leonard Jefferies	Southeast
Shawn Quigley	Central
Pat Sankolewicz	Central
Fred Weddington	Central
Ariel Rivero	Mexico/Latin America
Kenny Myers	South
Bryan Weymouth	West
Mark Harte	West

Bermuda

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Daikin Support



- **Literature**
 - Brochures
 - Leaflets
 - Submittals
 - Manuals
 - Engineering
 - Service
 - Installation
- **Website**
 - www.Daikinac.com
- **Daikin Representatives and Sales Support Network**



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Daikin Support



- **Software Tools**
 - VRV Xpress
 - Energy Calc
 - TRL Technical Reference Library
 - Spare Parts Bank
 - Dr. Daikin
- **Training**
 - Sales & Applications by Product Line
 - Installation & Commissioning
 - Service & Troubleshooting
 - General Courses
- **Technical Support**
 - Telephone: 866-4DAIKIN (866.432.4546)
 - Email: techsupport@daikinac.com



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Daikin's Social Responsibility

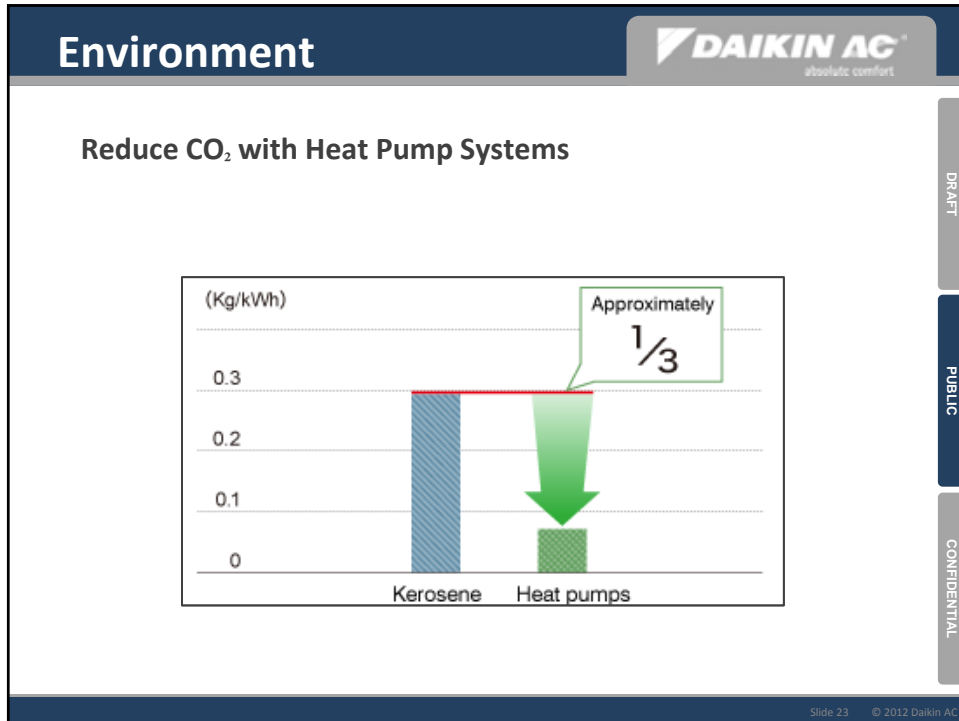


- Recover – Recycle – Reclaim – Reuse
- Partnerships with AHRI, ASHRAE and others



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Learning Objectives

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- Basic understanding of Daikin's history and VRV[®] technology
- Understand Daikin Industries' position in the global marketplace
- Understand where to go for sales and technical support
- Know what other resources are available to you and how to use them to your advantage
- Understand Daikin's commitment to the environment and the industry

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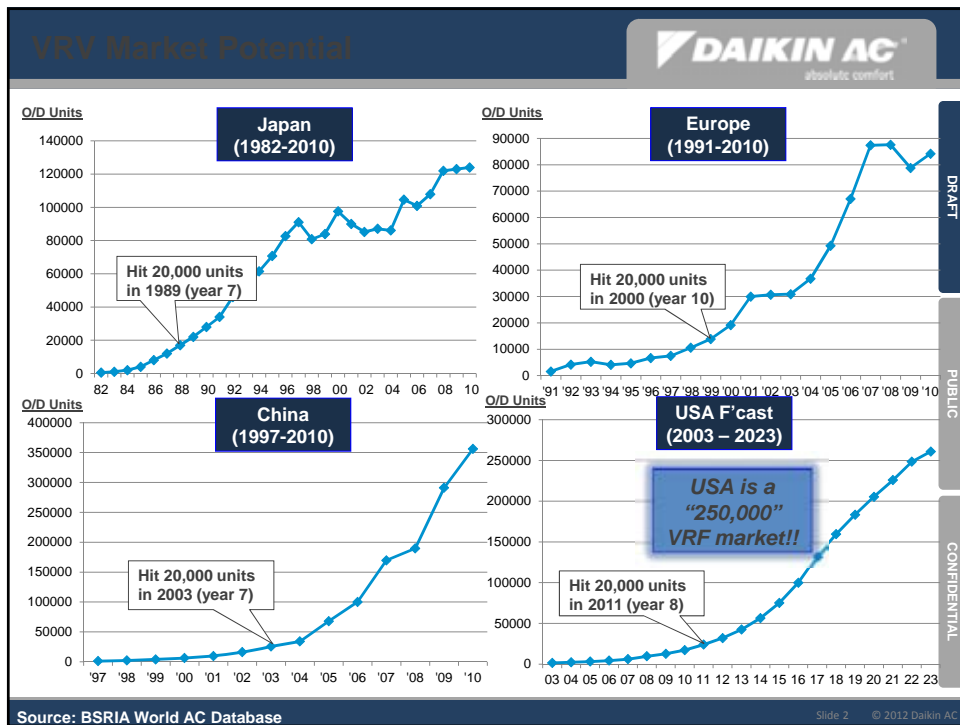
Market Growth and Opportunities

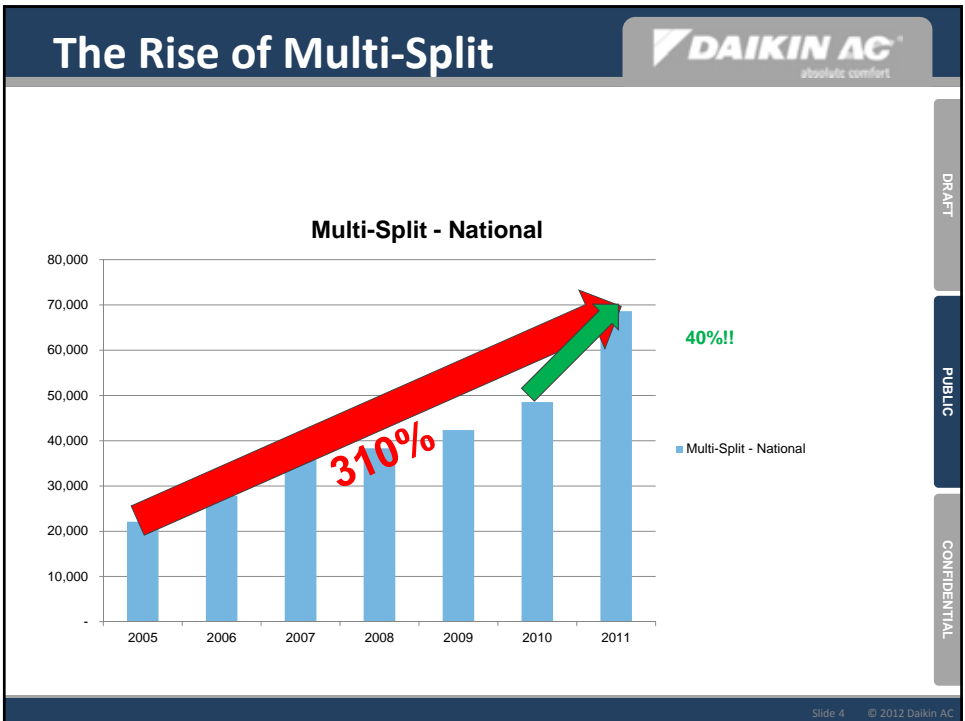
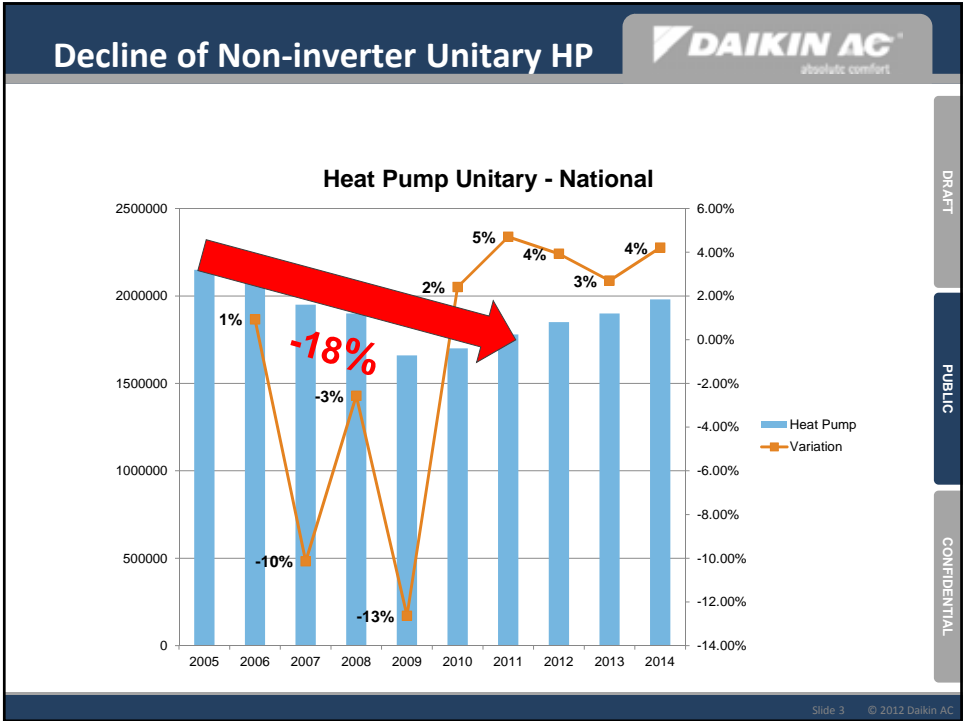


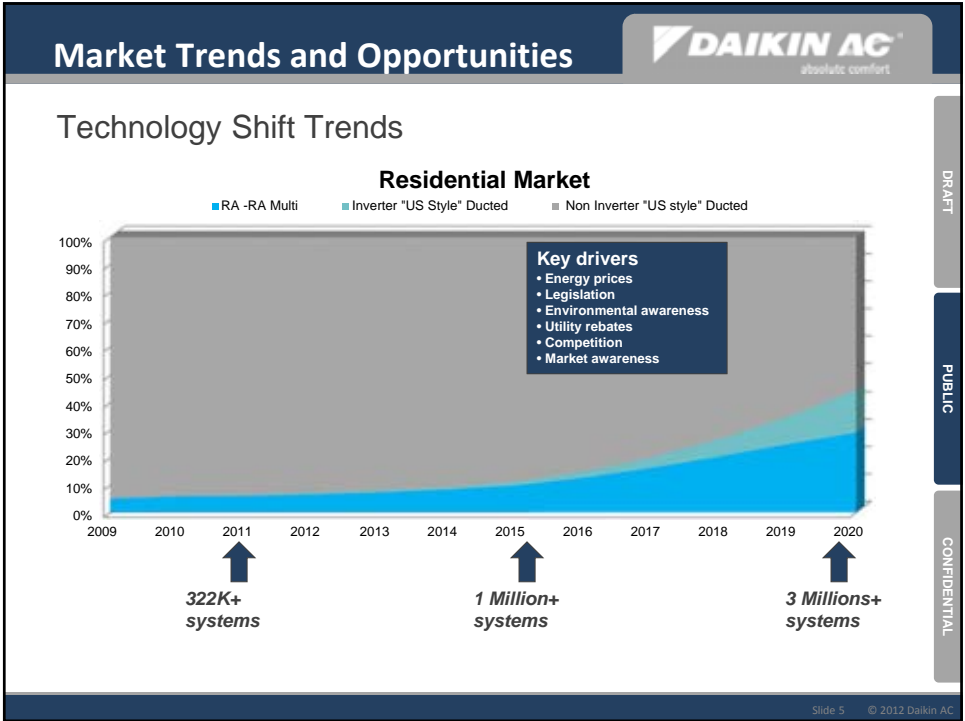


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Thank You

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The Daikin Difference



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Learning Objectives

- Understand how the following make Daikin the product and brand of choice:
 - Product innovation
 - Inverter technology
 - Compressors
- Be able to explain the Daikin difference to your customers
- Understand customer cues and how to best position Daikin's product line to satisfy those cues:
 - Energy efficiency
 - Individualized comfort
 - Quality

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The Way



- Daikin's technological advantage
 - Inverter technology
 - Compressors
 - Neodymium magnets
 - Aero fans
 - Corrosion resistant coils
 - Electronic expansion valves
- Summary of Daikin difference


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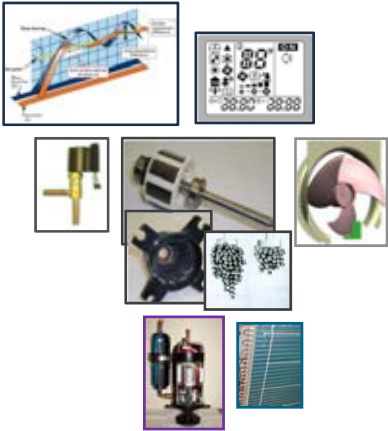
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Daikin HVAC Technological Advantage



1. Inverter Technology
2. Direct Digital Controls
3. Reluctance Digitally Commutated Compressor Motors
4. Neodymium Magnets
5. Aero Spiral Fan
6. DC Fan Motors
7. Corrosion Resistant Coated Fins
8. Galbarium Steel Base
9. Stepper Motor Electronic Expansion Valves
10. Swing Compressor




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Why is an Inverter Different?



- An inverter is a variable speed drive that changes the electrical frequency being fed to a motor.
- When this technology is applied to a compressor's motor, we can easily vary the air conditioning systems operating capacity.
- Think of the inverter drive controlling a compressor like a throttle pedal controls a cars engine.


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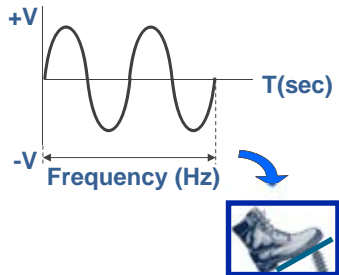
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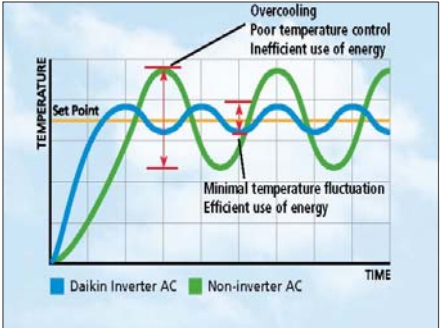
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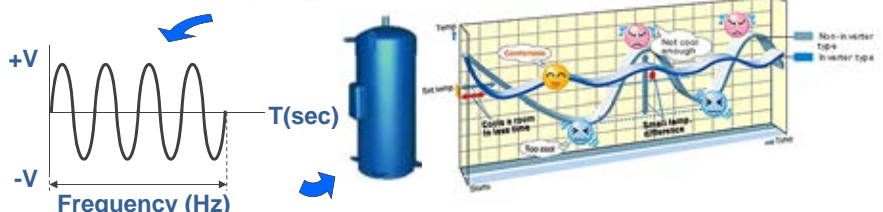
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Inverter Technology










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Other Inverter Advantages




- Very low startup amperage
- No locked rotor amps
- No stress on windings or compressor frame
- No “light flicker”
- Lubrication of bearings increases before speed increases
- System pressures increase gradually reducing noise and stress on piping
- Quiet compressor startup
- Increased reliability due to 70% to 80% operational time is less the maximum speed (less wear)
- Ideal for backup generator and off grid photo voltaic solar applications

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Inverter technology benefit for Daikin



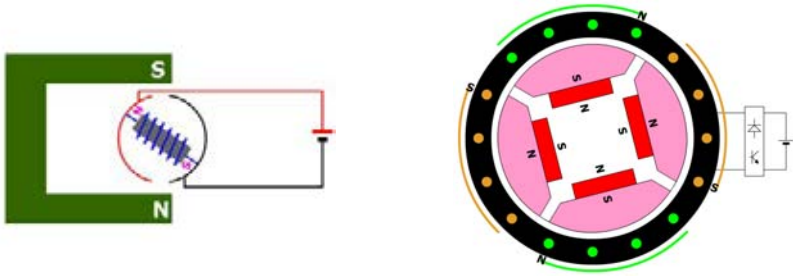
- **Great Heating Performance**
 - Allows compressor to increase speed during cold outdoor ambient conditions.
 - Generates higher
 - Head pressure
 - Discharge gas temperatures
 - Discharge air temperatures
 - Attains same heat output as competitive systems with Electric Booster Heat, but doesn't use the extra energy.
 - Improves performance throughout the entire run sequence.

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Compressors

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The left diagram shows a cross-section of a swing compressor motor with a central rotor and stator windings. The right diagram shows a scroll compressor motor with a central rotor and stator windings, and a scroll mechanism.

Digitally Commutated (DC) Motors in both Swing and Scroll Compressors

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Neodymium Magnets

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- Neodymium magnet in the rotor – 7 times stronger than ferrite
- Increased power & decreased energy usage



The image shows a hand holding a small, rectangular neodymium magnet. To the right is a photograph of a larger, rectangular neodymium magnet.

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Reluctance DC Motor

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Reluctance DC Motor

Rotor

Rotary Swing

Neodymium magnet

Neodymium magnet: increased to 6 pieces.

Rotation of motor is smoother for energy savings.

Stator

Rotary Swing

Distributed Winding Concentrated Winding

Heat transfer coil: Distributed Winding

Concentrated Winding The heat is reduced.

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Aero Fan

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Smooth Inflow

Smooth Air Inlet Bell Mouth

Aero Spiral Fan


Escaping eddies are drawn in by the angled blade edges, reducing the amount of turbulence.

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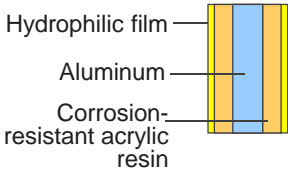
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Corrosion Resistant Coil Fins



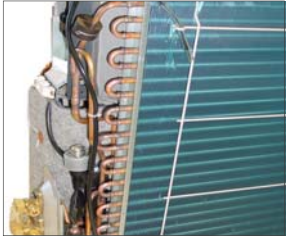
Corrosion resistance rating		
	Non-treated	Anticorrosion treated
Salt corrosion	1	5 to 6
Acid rain	1	5 to 6



Hydrophilic film

Aluminum


Corrosion-resistant acrylic resin




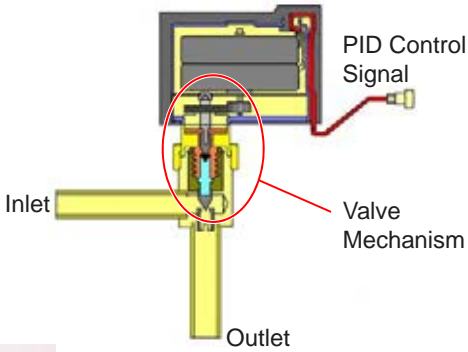
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Electronic Expansion Valve








Inlet

Outlet

Valve Mechanism

PID Control Signal



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Compressors

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G Series Scroll Compressor


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Compressors

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Daikin Swing Compressor

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Scroll Compressor Technology

- Reluctance DC Motor
- Optimized Scroll (R-410A)
- High Pressure Shell
- Stronger Shell material
 - Improved Sealing
- Stable oil temperature
 - Improved efficiency
 - Improved Reliability
- Discharge gas cooled windings prevent heat-shock
- Less heat transfer to suction gas

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Daikin Swing Compressor

- Roller and blade are integrated with the piston
- Friction and refrigerant leakage are suppressed
- Improved efficiency with increased energy savings
- Compressor life time is increased

Competitors: *Rotary*

Daikin: *Swing*

Daikin Swing Compressor Features and Benefits	
Features	Benefits
Smooth rotation, little friction	High operation efficiency, energy savings
Smooth piston motion	Low vibrations, low sound levels
Few parts rubbing each other	High performance, high reliability

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Daikin Swing Compressor

- Roller and blade are integrated with the piston
- Friction and refrigerant leakage are suppressed
- Improved efficiency with increased energy savings
- Compressor life time is increased

Reluctance DC Motor
Swing compressor

Neodymium magnets are used in the pink-coloured area.

Swing bush
Integral piston of blade and roller

The 32nd Champion Award
Daikin Swing Compressor

Daikin Swing Compressor Features and Benefits	
Features	Benefits
Smooth rotation, little friction	High operation efficiency, energy savings
Smooth piston motion	Low vibrations, low sound levels
Few parts rubbing each other	High performance, high reliability

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Daikin Swing Compressor

- Large energy savings
- Smooth rotation with little friction and refrigerant gas compression with low loss, allowing high operation efficiency
- Low vibrations and low noise
- High durability
- Fewer moving parts during operation, achieving high performance and reliability

Single or Double Swing

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Installation Tools

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Recommended Tools



Min. 600 PSI
Delivery
Pressure



Metric Allen
Wrenches



5/16" to 1/4"
Adapter

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The Daikin Difference

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Through Prod/Tech:

- Inverter Technology
- Direct Digital Control
- R-410A
- Reluctance DC Motors
- Neodymium magnets

➔

Superior:

- Technology
- Flexibility
- Humidity control
- Comfort control
- Energy savings

➔

Customer Cues:


- Energy Efficiency
- Individualized Comfort
- Quality

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Check for Understanding




1. What does “DC” refer to with regard to Daikin Inverter driven compressors?
2. What type of magnets do we use in Daikin compressor motors?
3. The magnets from question 2 above increase _____ and produce a higher power output to electrical input.
4. What color are the Daikin outdoor coils? Why?
5. List the three customer cues.

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Closing & Review



- Understand how the following make Daikin the product and brand of choice:
 - Product innovation
 - Inverter technology
 - Compressors
- Be able to explain the Daikin difference to your customers
- Reinforce customer cues and how to best position Daikin’s product line to satisfy those cues:
 - Energy efficiency
 - Individualized comfort
 - Quality

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Features, Functions & Benefits Residential & Light Commercial



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Learning Objectives

- Understand the meaning of features, functions, and benefits and how to use them to your advantage in a sales setting.
- Understand and be able to discuss the full Daikin residential and light commercial family of products.
- Understand the “core” features, functions, and benefits (FFB) of Daikin products as a whole.
- Understand the FFB for each product category and be able to explain them to a potential buyer in a sales setting.

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The Way



- Introduction to features, functions, and benefits and working definitions for each concept
- Introduction to Daikin's residential and light commercial product line
 - RA single-split
 - Quaternity
 - RA multi-split (2-4 port)
 - RA Multi-PLUS (8 port)
 - SkyAir
 - VRVIII-S
- FFB for each product category

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Features, Functions & Benefits Defined




- Feature – a prominent aspect of something; a single or bundle of tangible and intangible attributes that a seller offers to a buyer for purchase.
- Function – what something is used for; what something does; in this case, what the feature *does*.
- Benefit – something that aids or promotes well-being; something that improves or helps to gain advantage; in this case, it is the benefit the buyer gets from the feature.

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FFB - Example

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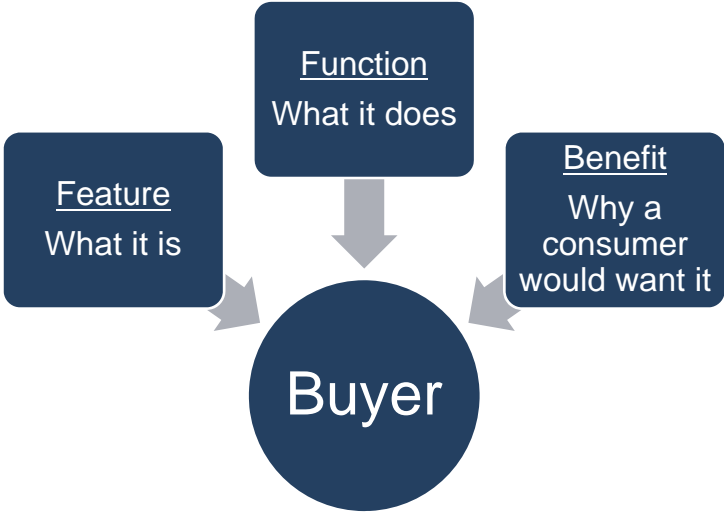
- Feature: Cruise control in a vehicle
- Function: Automatically sets and controls speed
- Benefits:
 - Improves M.P.G.
 - Enhances safety
 - Ensures travel time
 - Eliminates costly speeding tickets!



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FFB Simplified

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```
graph TD; F[Feature  
What it is] --> B((Buyer)); Fu[Function  
What it does] --> B; Be[Benefit  
Why a consumer would want it] --> B;
```


Feature
What it is

Function
What it does


Benefit
Why a consumer would want it

Buyer

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Core Features, Functions & Benefits		
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FEATURES	FUNCTIONS	BENEFITS
R-410A refrigerant	High capacity heat transfer	High heating performance High system efficiency Ozone Friendly-No Chlorine
Inverter “variable-speed” technology	Controls or modulates system capacity to match the load as it changes	Energy efficiency by taking advantage of part load conditions
Digitally commutated compressors/neodymium magnets	Maximize torque and boost efficiency	Energy savings
Aero spiral fan	Reduces resistance and turbulence	Quiet operation
Self-diagnostic	Displays problem codes on LCD panel	Less repair time/costs
Corrosion-resistant coil fins	Provides 5-6 times greater resistance to corrosion	Increased endurance and reliability
Compact size	Uses a smaller footprint	Less space taken from home Less obtrusive

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Check for Understanding – FFB		 absolute comfort	
<ol style="list-style-type: none"> 1. “What it is” describes a _____ of a product. 2. “Why a consumer would want it” describes a _____ of a product. 3. “What it does” describes a _____ of a product. 			
Match the features on the left side with the benefits on the right.			
	Feature		Benefit
4.	Self-diagnostic	a.	Minimal temperature fluctuation; increased comfort; quiet operation
5.	Compact size	b.	Quiet operation
6.	Inverter “variable-speed” technology	c.	Increased efficiency; environmentally friendly
7.	Corrosion-resistant coil fins	d.	Less space taken from home; less obtrusive
8.	Aero spiral fan	e.	Increased endurance and reliability
9.	Digitally commutated compressors/neodymium magnets	f.	Less repair time/costs
10.	R-410A refrigerant	g.	Energy savings

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Check for Understanding – Answers



1. “What it is” describes a **feature** of a product.
 2. “Why a consumer would want it” describes a **benefit** of a product.
 3. “What it does” describes a **function** of a product.

Match the features on the left side with the benefits on the right.

	Feature		Benefit
4.	Self-diagnostic E	a.	Minimal temperature fluctuation; increased comfort; quiet operation
5.	Compact size D	b.	Quiet operation
6.	Inverter “variable-speed” techn A	c.	Increased efficiency; environmentally friendly
7.	Corrosion-resistant coil fins E	d.	Less space taken from home; less obtrusive
8.	Aero spiral fan B	e.	Increased endurance and reliability
9.	Digitally commutated compressors/neodymium magnets G	f.	Less repair time/costs
10.	R-410A refrigerant C	g.	Energy savings

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Daikin Residential/Light Commercial Product Line





Residential Single-Split
RKN/RXN/RXS



Quaternity





Residential Multi-Split
2/3/4MXS



Daikin Inverter
Ducted (Unitary)



8-Port Multi
RMXS

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Daikin Residential/Light Commercial Product Line Cont.

SkyAir

VRV8III-S

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Number 1! Product diversity - Residential

Efficiency and Features

- Commodity Wall Mount Systems**
 - Ductless split for cooling
 - Fresh cleaner - air purifier
 - 9 MBH - 25 MBH heat pump
- LV Series Wall Mount Systems**
 - Up to SEER 24.5
 - Intelligent Eye Feature
 - Weekly Timer
 - 9 MBH - 24 MBH heat pump
- E2 Series Wall Mount Systems**
 - SEER 18 and HSPF 8.5
 - 9 MBH - 24 MBH in-heat pump and cooling only
- LV Series Slim Duct Systems**
 - Built-in insulation, concealed and slim in size
 - Up to SEER 15.5
 - 9 MBH - 12 MBH heat pump

Features and Flexibility

- Public Address Air to Water Heat Pump System**
 - 3 in 1 Combination system for heating, cooling, and Domestic hot water
 - Flexible configuration for Radiant Floor, Radiators and Fan Coil/Convector
 - Optional solar thermal connection for hot water heating
- VRV8III-S Multi-Zone System**
 - Up to 8 Zones
 - Up to 25.1 SEER
 - 22 indoor unit styles
 - 100% connection ratio
 - Intelligent and remote level controls
 - Long piping lengths
- 2, 3, 4 and 8 Multi-Zone System**
 - Connect up to four units on a single outdoor unit
 - Individual room control
 - 18 MBH - 32 MBH heat pump
 - 2 and 3 Zone systems: non-ducted combination Energy Star rated
- DC Inverter Systems**
 - Alternative to traditional split air handlers
 - Excellent for cooling or split applications
 - Up to SEER 27.5
 - 28 MBH - 42 MBH heat pump and cooling only
- Smarter Ducted Unitary System**
 - Traditional style split system with Daikin's energy efficient inverter
 - Up to SEER 20.0 (Tier 1) cooling, Tier 1 for 42 MBH
 - Up to 200% non-cooling capacity at 34 °F WB
 - 28 MBH - 42 MBH heat pump

SINGLE ZONE


MULTI-ZONE


WHOLE HOUSE

Energy Star Rated

Slide 12 © 2012 Daikin AC

3 Tier RA Line Up Positioning




Tier Grade	Product	Target Market	Specification
Flagship	 High SEER & function	Residential	<p>Daikin's flagship model with extremely high efficiency of up to 26.1SEER, superior heating performance down to -4F, the ability to control to a RH setting without over cooling the space and built in flash streamer air cleaner. Available in 3 size 9-15MBH this product shows Daikin as the overall market leader and innovator</p>
Best	Up to 24.5 SEER Premium Line	Residential 60% Commercial 40%	<p>Premium lineup with high features and functions available in 9-24 MBH HP with best in class efficiency for overall lineup (up to 24.5 SEER, 12.5HSPF & 15.3 EER) aligning with rebate opportunities (achieving CEE tier 2) Excellent heating and cooling performance with operation to 0F</p>
Better	18.0 SEER High Value Line	Residential 40% Commercial 60%	<p>Excellent Value and good specification available in 9-24 MBH HP and C/O options Good piping & ambient specification for residential and commercial projects With Cooling to 0F Positioned as high quality option in value segment</p>

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"KE-Series" 18 SEER Single-Split






FTXN

RKN: Cooling Only
RXN: Heat Pump


- 9,000 to 24,000 MBtu/h Capacity
- **Cool Only or Heat Pump**
- 18.0 SEER (HSPF 8.5)
- Two cabinet sizes
- Cooling range 0° to 115° F with optional wind baffle
- Heating range 5° to 77° F
- **Pre-charged for up to 33 feet of liquid line**
- **66ft or 98ft of piping length**
- Sound Levels as low as 43 dB for outdoor unit
- **Optimized for maximum efficiency at a competitive cost**


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“KE-Series” 18 SEER Single-Split





Features/Functions/Benefits



Wide Angle Louvers



Vertical Auto Swing



Comfort Mode



Automatic Operation*



Program Dry Function



Auto Fan Speed



Wipe Clean Flat Panel



Mold Proof Air Filter



Econo Mode



Powerful Operation



Titanium Apatite Air Purifying Filter



LCD Wireless Remote Control


Remote Controller with Backlit Display


Auto Restart


Self Diagnosis with Digital Display



Anti-Corrosion Treatment


24 Hour On/Off Timer

FEATURES	FUNCTIONS	BENEFITS
Standby electric	Reduces electricity usage when outdoor unit is off	Energy savings
Econo mode *Only available in 9 and 12 Mbtu/h	Limits max. operating current and power consumption by 30% at start-up	Energy saving and reduce load on electrical circuit when used simultaneously with other devices
Comfort mode	Adjusts delivery angle of air depending on operation mode	Improved air-flow Increased comfort


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“KE-Series” 18 SEER Single-Split



Features/Functions/Benefits

FEATURES	FUNCTIONS	BENEFITS
Titanium apatite photocatalytic air-purifying filter	Titanium apatite is a new photocatalytic material with superior adsorption power. Besides mold and odors, this material also effectively adsorbs and decomposes microscopic particles that can carry bacteria and virus across its entire surface. The photocatalyst is activated simply by exposure to natural light.	Cleaner air



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“KE-Series” 18 SEER Single-Split



Key Applications - Residential



Use wherever:

- Require quietness, zoning and comfort
- Not all features are necessary

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“KE-Series” 18 SEER Single-Split



Key Applications – Light Commercial




Use wherever:

- Cooling Only is needed
- Small zone, independent, hot spot/cool spot
- Perfect for applications that do not accommodate duct work




Slide 18 © 2012 Daikin AC

3 Tier RA Line Up Positioning



absolute comfort

Tier Grade	Product	Target Market	Specification
Flagship	 High SEER & function	Residential	Dakin's flagship model with extremely high efficiency of up to 26.1SEER , superior heating performance down to -4F , the ability top control to a RH setting without over cooling the space and built in flash streamer air cleaner . Available in 3 size 9-15MBH this product shows Daikin as the overall market leader and innovator
Best	Up to 24.5 SEER Premium Line	Residential 60% Commercial 40%	Premium lineup with high features and functions available in 9-24 MBH HP with best in class efficiency for overall lineup (up to 24.5 SEER , 12.5HSPF & 15.3 EER) aligning with rebate opportunities (achieving CEE tier 2) Excellent heating and cooling performance with operation to 0F
Better	18.0 SEER High Value Line	Residential 40% Commercial 60%	Excellent Value and good specification available in 9-24 MBH HP and C/O options Good piping & ambient specification for residential and commercial projects With Cooling to 0F Positioned as high quality option in value segment

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“LV-Series” 20+ SEER Single-Split



absolute comfort

- Single phase power supply to outdoor unit
- System capacities of 9,000 to 24,000 Btu/h
- Inverter drive technology
- Up to 24.5 (RXS) SEER Condensing Units
- Cooling operation down to 0°F with wind baffle

Standard wireless controller, optional wired controller



FTXS09/12LVJU



RXS09/12LVJU

Also Available



FDXS09/12LVJU
Achieve up to 15.5 SEER



FTXS15/18/24LVJU



RXS15/18LVJU



BRC944B2-A08
wired option



RXS24LVJU

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“LV-Series” 20+ SEER Single-Split



absolute comfort



FDXS09/12LVJU



FTXS09/12LVJU




RXS09/12LVJU

- **Wall mounted** 9,000 to 24,000 Btu/h Capacity
- **Slim duct** 9,000 & 12,000 Btu/h
- Up to 24.5 SEER (HSPF 8.5) when connected to FTXN indoor unit
- Two cabinet sizes
- Cooling range 0° to 115° F with optional wind baffle
- Heating range 5° to 77° F
- **Pre-charged for up to 33 feet of liquid line**
- Sound Levels as low as 44 dB for outdoor unit
- **Optimized for maximum efficiency at a competitive cost**



























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“LV-Series” 20+ SEER Single-Split



absolute comfort

Features/Functions/Benefits (Wall mounted)

 Wide Angle Louvers	 Powerful Airflow Dual Flaps	 Vertical Auto Swing	 Horizontal Auto Swing	 3-D Airflow	 Comfort Mode	 Automatic Operation	 Program Dry Function
 Intelligent Eye	 Outdoor Quiet Operation	 Indoor Quiet Operation	 Econo Mode	 Powerful Mode	 Mold Proof Air Filter	 Titanium Apatite Air Purifying Filter	 Weekly Timer
 Hot Start	 LCD Wireless Remote Control with Backlit Display	 Remote Controller	 24 Hour On/Off Timer	 Indoor Unit On/Off Switch	 Self Diagnosis with Digital Display	 Auto Restart	 Anti-Corrosion Treatment
 Auto Fan Speed	 Wipe Clean Flat Panel						

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DAIKIN AC
absolute comfort

“LV-Series” 20+ SEER Single-Split

Features/Functions/Benefits

FEATURES	FUNCTIONS	BENEFITS
3D Airflow	Combines vertical and horizontal auto-swing to circulate cool/warm air to the corners of large spaces.	Comfort and energy savings
Intelligent Eye	The intelligent eye is an infrared sensor with the ability to sense movement in the room.	Energy saving
Outdoor unit quiet operation	Outdoor unit sound levels can be reduced by 3dB for times when quieter operation is needed.	Comfort (neighbors)
Weekly timer	Enter up to four settings per day for each day of the week (on/off time, Temperature, etc).	Convenience

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DAIKIN AC
absolute comfort

“LV-Series” 20+ SEER Single-Split

Key Applications - Residential



Living Room



Kitchen

Use wherever:

- Energy efficiency is required
- In/out traffic (intelligent eye)
- Features are necessary
 - Airflow (3D)
 - Sound Level requirements
 - Timer

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“LV-Series” 20+ SEER Single-Split



Key Applications - Residential

- Slim design, quiet operation, perfect built-in/recessed design
 - Soffit, closet installation




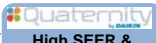

Use wherever:

- No wall units are acceptable
- Very low sound is required
- Can build a soffit, a closet or space above ceiling
- Possible to use a short duct to a remote location

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3 Tier RA Line Up Positioning



Tier Grade	Product	Target Market	Specification
Flagship	 High SEER & function	Residential	DAIKIN's flagship model with extremely high efficiency of up to 26.1SEER , superior heating performance down to -4F , the ability to control to a RH setting without over cooling the space and built in flash streamer air cleaner . Available in 3 size 9-15MBH this product shows Daikin as the overall market leader and innovator
Best	Up to 24.5 SEER Premium Line	Residential 60% Commercial 40%	Premium lineup with high features and functions available in 9-24 MBH HP with best in class efficiency for overall lineup (up to 24.5 SEER , 12.5HSPF & 15.3 EER) aligning with rebate opportunities (achieving CEE tier 2) Excellent heating and cooling performance with operation to 0F
Better	18.0 SEER High Value Line	Residential 40% Commercial 60%	Excellent Value and good specification available in 9-24 MBH HP and C/O options Good piping & ambient specification for residential and commercial projects With Cooling to 0F Positioned as high quality option in value segment

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Highlights

DAIKIN AC
absolute comfort

Quaternity
by **DAIKIN**

Dehumidifying Function

Set your preferred humidity setting for your optimum comfort and Quaternity will do the rest.

Cleaner Air

Daikin's advanced Flash Streamer air purifying unit effectively eliminates all unpleasant odors, such as cooking odors, pet odors, cigarette smoke, allergens, viruses and bacteria.

User Friendly

Take advantage of the simple to use Wireless Remote Controller and abundance of functions to set your Quaternity System exactly to your liking.

Energy Savings

Operate Quaternity with the comfort of knowing its INVERTER compressor and innovative technology is one of the most energy efficient systems available on the market today.


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Features

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absolute comfort


Quaternity
by **DAIKIN**

- 4-wire, one-to-one application.
- Up to 26.1-SEER and 15.8-EER!
- Ability to set and monitor relative humidity (RH%).
- Integrated "Flash Streamer" air cleaner for improved IAQ.
- Simple, user-friendly remote controller.
- Comfort and sound set-back ability.
- Improved "max" capacity up to 18,000 Btu/h cooling and 21,200 heating.





FTXG09/12/15HVJU



RXG09/12/15HVJU

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Energy Efficiency

	High Energy Efficiency and Low Estimated National Average Annual Operating cost*		
	9,000Btu/h Class	12,000Btu/h Class	15,000Btu/h Class
SEER	26.1	24.2	21
EER	15.8	14	12.9
Cooling cost	\$40	\$57	\$82
HSPF	11	10.55	10
COP	4.51	4.04	3.99
Heating cost	\$167	\$262	\$368

* All data is based on AHRI 210/240 performance values

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Features/Functions/Benefits

FEATURES	FUNCTIONS	BENEFITS
Flash Streamer Air Purification System	Discharges electrons that analyze and remove unwanted indoor air pollutants	Cleaner and healthier indoor air

Flash Streamer

Plasma Ionizer

Dust and pollen are positively charged and then sent to the electrostatic filter.

Electrostatic dust collection filter (front of pleated filter)

Positively charged dust and pollen are absorbed by the negatively charged filter.

Titanium Apatite Photocatalytic Filter (back of pleated filter)

Odors collected on the front side are broken down. Bacteria, mold spores and viruses are also absorbed and thoroughly removed.

Streamer deodorizing catalyst

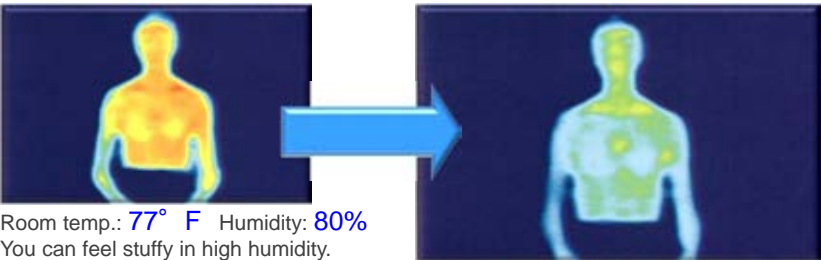
Odors are powerfully removed by the synergistic effect of the Flash Streamer. This makes the air even cleaner.

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Features/Functions/Benefits **DAIKIN AC**
absolute comfort

Quaternity
by DAIKIN


Lower humidity creates a comfortable environment even when the room temperature is the same.



Room temp.: 77° F Humidity: 80%
You can feel stuffy in high humidity.

Room temp.: 77° F Humidity: 50%
You feel comfortable at the same temperature but with lower humidity.

The thermograph shows the temperature distribution of the skin 30 min. after entry into the room.



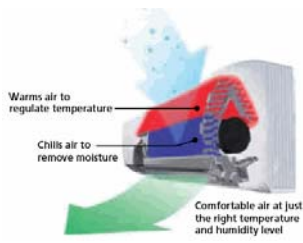
86.0 95.0 104.0° F

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Features/Functions/Benefits **DAIKIN AC**
absolute comfort

Quaternity
by DAIKIN

FEATURES	FUNCTIONS	BENEFITS
Dehumidification	Dehumidifies while maintaining temperature	Year-round comfort



Warms air to regulate temperature


Chills air to remove moisture

Comfortable air at just the right temperature and humidity level


Utilizing intelligent indoor heat exchanger technology, the system mixes cool dry air with warm air to provide dehumidification to a relative humidity set point while maintaining room temperature. Whether dehumidifying is needed on a hot summer day or a warm rainy night, Quaternity can provide a refreshingly cool experience.


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Quaternity Single-Split




Key Applications - Residential





Use wherever:

- Very high Energy Efficiency is required
- Tightly sealed home (dehumidifies)
- High humidity climate
- Homeowner has:
 - Allergies
 - Pets
 - Smoke



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Number 1! Product diversity - Residential



EFFICIENCY AND FEATURES

- Quaternity Wall Mount Systems**
 - Dehumidify to RH setting
 - Fresh Streamer - Air Purifier
 - 8 MBH - 15 MBH Heat Pump
- LV Series Wall Mount Systems**
 - Up to SEER 24.3
 - Intelligent Eye Feature
 - Weekly Timer
 - 8 MBH - 24 MBH Heat Pump
- W Series Wall Mount Systems**
 - SEER 18 and HSPF 8.5
 - 8MBH - 24 MBH in heat pump and cooling only
- LV Series Slim Duct Systems**
 - Built-in insulation, concealed and slim in size
 - Up to SEER 15.5
 - 8 MBH - 12 MBH Heat Pump

FEATURES AND FLEXIBILITY

- DAIKIN Air-to-Water Heat Pump System**
 - 3 in 1 Combination system for heating, cooling and domestic hot water
 - Flexible configuration for Radiant floor, Radiators and Fan Coils or Convectors
 - Optional solar thermal connection for hot water heating
- VRV/S Multi-Zone System**
 - Up to 8 Zones
 - Up to 15.1 SEER
 - 20 indoor unit styles
 - 100% connection ratio
 - Intelligent and centralized controls
 - Long piping lengths
- 1, 2, 4 and 8 Multi-Zone Systems**
 - Connect up to four units on a single outdoor unit
 - Individual point control
 - 18 MBH - 32 MBH Heat Pump
 - 2 and 3 Zone systems in non-ducted combinations Energy Star rated
- DC Duct Systems**
 - Alternative to traditional vertical air handlers
 - Excellent for ceiling or attic applications
 - Up to SEER 17.3
 - 18 MBH - 42 MBH Heat Pump and cooling only
- Inverter Ducted Utility System**
 - Traditional style split system with DAIKIN's energy efficient inverter
 - Up to SEER 15.8 (Tier 1 rating, Tier 1 for 42 MBH)
 - Up to 100% nominal heating capacity at 14" T/W
 - 18 MBH - 42 MBH Heat Pump



SINGLE ZONE



MULTI-ZONE



WHOLE HOUSE

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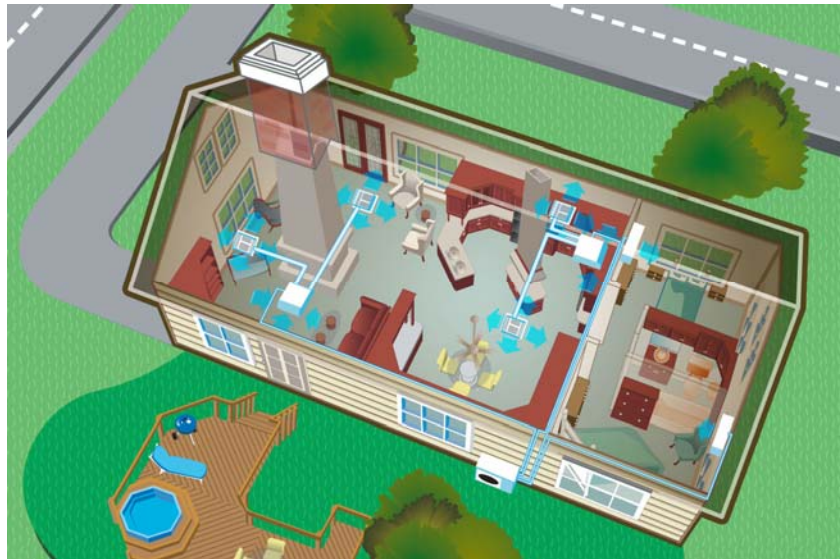
Residential Multi-Split - Highlights



- Daikin's 2-port, 3-port, and 4-port multi-split systems can serve up to four rooms from a single outdoor unit.
- With indoor unit options consisting of streamlined wall-mounted units, built-in slim duct units, or a combination of both, multi-split systems offer over 1,000 possible connection combinations, creating a powerful and energy efficient system.



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Multi-Split – Line up




Outdoor Units


	Model #	Description	Capacities	SEER *
1	2MXS18GVJU	2-port, 2-zone system	18	13-19.5
2	3MXS24JVJU	3-port, 3-zone system	24	13-16.6
3	4MXS32GVJU	4-port, 4-zone system	30.5	13.3-17.2



2MXS




3MXS




4MXS

Indoor Units


	Model #	Description	Capacities
1	CTXS	Wall-Mounted	07, 09, 12
2	FTXS	Wall-Mounted	15, 18
3	FDXS	Ducted	09, 12
4	CDXS	Ducted	15, 18




CTXS



FTXS, L-Series



FDXS/CDXS



RMS


* SEER rating will vary depending on indoor unit match-up.
2MXS and 3MXS combined with non-ducted indoor unit is Energy Star

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Multi-Split 2-Port

DAIKIN AC
absolute comfort

- Nominal capacity – 18,000 Btu/h cooling and 22,000 Btu/h heating
- Connects to CTXS and FDXS indoor units
- Up to 19.5-SEER / 12.6-EER
- Tier 2 Energy Star Rated (with wall mount only)
- 164 feet total pipe length
- 82 feet max on one leg
- Pre-charged for up to 98.4' of liquid line
- Sound Levels - 50 to 51 decibels
- Operating Range
 - Cooling 14° to 115° F
 - Heating 5° to 72° F



Model 2MXS18JVJU




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Multi-Split 3-Port

DAIKIN AC
absolute comfort

- Nominal Cooling Capacity – 24,000 Btu/h (Heating 30,000 Btu/h)
- Connects to CTXS, FDXS, and FTXS indoor units
- Up to 16.6 SEER (HSPF 9.0)
- Tier 2 Energy Star Rated (with wall mount only)
- 230 feet total pipe length
- 82 feet max on one leg
- Pre-charged for up to 131.6 feet of liquid line
- Sound Levels - 52 to 54 decibels
- Operating Range
 - Cooling 14° to 115° F
 - Heating 5 ° to 72° F




Model 3MXS24JVJU




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Multi-Split 4-Port




- Nominal Cooling Capacity – 30,500 Btu/h (Heating 34,000 Btu/h)
- Up to 17.2 SEER (HSPF 9.3)
- Connects to CDXS, CTXS, FDXS, and FTXS indoor units
- 230 feet total pipe length
- 82 feet max on one leg
- Pre-charged for up to 131.6 feet of liquid line
- Sound Levels - 52 to 54 decibels
- Operating Range
 - Cooling 14° to 115° F
 - Heating 5 ° to 72° F



Model 4MXS32GVJU

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Multi-Split Features/Functions/Benefits




FEATURES	FUNCTIONS	BENEFITS
Zoning	Settable room priority to achieve true zoning	Better control of temperatures from room to room (zoning) Better overall energy efficiency Better overall comfort
Intelligent Eye*	Detects movement; goes to energy saving mode	Energy savings
Powerful operation	Maximizes power for 20-minute period	Maximum comfort during high demand periods
3-D Airflow *	Combines vertical and horizontal auto-swing to circulate air to corners of large spaces	Improved air flow Improved comfort No hot/cold spots

*Note – Intelligent Eye and 3-D Airflow apply only to wall-mount units.


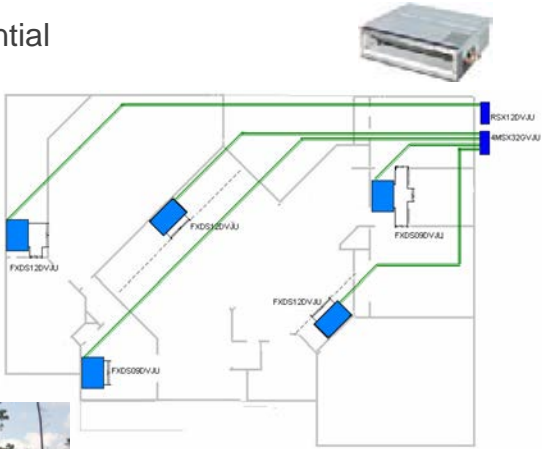
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Multi-Split Applications



Slim Duct – Residential

- Residential single house
 - Long piping length
- Condos / apartment
 - Compact / Quiet



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Multi-Split Applications



Wall mounted - Residential




The Challenge:
Jayna Cooper wanted to maximize her living space but the heating and cooling equipment would require setting aside scarce space to accommodate bulky HVAC ductwork.

Use wherever:

- Tight spaces
- Low sound level is required
- Energy Efficiency



Daikin's Solution:
With Daikin's 4-Port Multi-Split ductless system, Cooper regained use of valuable space and kept her commitment to sustainability with a system rated SEER 17.2 and HSPF 9.3.

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Multi-Split Applications

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absolute comfort

Light Commercial Applications



Use wherever:


- Small rooms
- Individual control
- Available for ducted or ductless

- Gives contractor a zoning / easy to install solution for light commercial applications
- Cost competitive
- Very quiet

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8 Zone Multi Split System RMXS + BPMKS

DAIKIN AC[®]
absolute comfort



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DAIKIN AC[®]
absolute comfort

Multi-Split Lineup

Up to 8 Zone - Heat Pump Systems

18,000 – 48,000 Btu/h

Daikin's full line of multi-split systems offer reliable, advanced technology in a space saving design. From 2 to 8 zone solutions, a single outdoor unit connects to multiple indoor units in a variety of indoor styles and capacities. 2, 3, and 4 zone systems are great for retrofit and add-ons while the new 8 zone is ideal for light commercial and whole house solutions.

<p>2-Zone 2MXS18GVJU</p>	<p>3-Zone 3MXS24JVJU</p>	<p>4-Zone 4MXS32GVJU</p>	<p>8-Zone RMXS48LVJU</p>
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DAIKIN AC[®]
absolute comfort

NEW

8 Zone Multi

Super Multi PLUS Split System

up to **18.8** SEER


up to **11.3** HSPF

The RMXS is an energy efficient, high-capacity multi-split system which combines the power and easy installation of a VRF outdoor unit with the quiet operation of residential indoor units. With the ability to connect from 2 to 8 indoor units in a variety of styles to a single outdoor unit, this 4 ton (48,000 Btu/h) system complements the current multi-split lineup and is a great fit for light commercial applications, residential additions, and as a whole house solution.




An inverter driven compressor allows precise capacity adjustments to match variations in room and outside temperatures and long piping lengths provide planning and installation flexibility.

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Product Comparison




4- Port Multi vs. 8 Zone Multi vs. VRVIII-S

System		4-Port RA Multi (4MXS)	8 Zone Multi (RMXS)	VRVIII-S (RXYMQ)
				
Price		Least Expensive	MXS < RMXS < VRVIII-S	Most Expensive
Nominal Cooling Capacity	Btu/h	30,600	48,000	47,000
Nominal Heating Capacity	Btu/h	32,000	54,000	52,500
Max. Connection Capacity	Btu/h	45,000	130% (62,000)	130% (62,000)
Maximum Number of Indoor Units		4	8	8
Power Supply		208/230V Single Phase One Power Supply	208/230V Single Phase Indoor Supply from BP Units	208/230V Single Phase Separate Indoor Supply
MCA	A	18.0	27.0	27.0
MOCP	A	20.0	30.0	30.0
SEER / EER		Up to 17.2 / 9.3	Up to 18.8 / 11.3	Up to 15.1 / 9.0
HSPF / COP		Up to 9.3 / 3.4	Up to 11.3 / 3.0	Up to 9.1 / 2.7
Total Piping Length	ft.	230.0	443.0	984.0
Customer		Residential Homeowner	Residential and Light Commercial Dealer / D&B Contractor	Light Commercial D&B Contractor / Engineer
Perception		Mini-split with contractor familiarity and an easier sell	VRV technology from a residential focused multi-split solution	VRV technology in small package with special training for more customizable projects
Features and Functions		Residential driven features	Residential features with consideration for options	Limited consumer functions, commercial interface

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System Compatibility



Indoor and Outdoor Compatibility


Model Number	Outdoor Unit				Standard Controller			Optional Controller			
	2MXS18GVJU	3MXS24VJU	4MXS32GVJU	RMXS48LVJU	ARC452A9	ARC452A21	ARC452A23	Daikin ENVI	BRC7E830	BRC944B2	BRC1E72
CTXS07LVJU	✓	✓	✓	✓	✓			✓		✓	
CTXS09HVJU	✓	✓	✓	✓	✓			✓		✓	
CTXS12HVJU		✓	✓	✓	✓			✓		✓	
FTXS15LVJU		✓	✓	✓		✓		✓		✓	
FTXS18LVJU		✓	✓	✓		✓		✓		✓	
FTXS24LVJU				✓		✓		✓		✓	
FDXS09LVJU	✓	✓	✓	✓			✓	✓		✓	
FDXS12LVJU		✓	✓	✓			✓	✓		✓	
CDXS15LVJU		✓	✓	✓			✓	✓		✓	
CDXS18LVJU		✓	✓	✓			✓	✓		✓	
CDXS24LVJU				✓			✓	✓		✓	
FFQ09LVJU	✓	✓	✓	✓					✓		✓
FFQ12LVJU		✓	✓	✓					✓		✓
FFQ15LVJU		✓	✓	✓					✓		✓
FFQ18LVJU		✓	✓	✓					✓		✓

✓ Official combination

= New additions to Daikin Product Portfolio

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Daikin RMXS vs. Competitor



absolute comfort

Technical Specification vs. Competing Manufacturer = Best in Class, 4-T Capacity

Manufacturer		Daikin AC RMXS4BLVJU	Company M	Company F	Company L
Nominal Cooling Capacity	Btu/h	48,000	48,000	48,000	54,000
Maximum Cooling Capacity	Btu/h	54,000	54,000	51,100	63,200
Nominal Heating Capacity at 47 °F	Btu/h	54,000	54,000	54,000	58,000
Maximum Heating Capacity at 47 °F	Btu/h	61,000	60,000	57,000	64,000
SEER / HSPF	Non Ducted	18.8 / 11.3	15.0 / 8.7	17.0 / 9.8	18.4 / 8.7
	Mixed	16.5 / 10.5	14.8 / 8.8	15.8 / 9.5	17.1 / 8.3
	Ducted	14.1 / 9.6	14.7 / 8.9	14.7 / 9.3	15.8 / 8.0
EER / COP 47F	Non Ducted	10.3 / 3.0	8.3 / 3.28	9.25 / -	10.3 / 3.1
	Mixed	9.8 / 2.9	7.8 / 3.14	8.97 / -	MDNS
	Ducted	9.3 / 2.7	7.4 / 3.00	8.70 / -	MDNS
Maximum Overcurrent Protection	MOP (A)	30A	50A	40A	MDNS
Minimum Circuit Amps	MCA (A)	27A	32A	MDNS	MDNS
Connected Capacity	%	50 – 130	22 – 130	80 – 130	* – 135
Connectable Indoor Capacity	Btu/h	24,000 - 62,400	70,200	62,000	73,000
Cooling Operating Range	°F	23 – 115	23 – 115	23 – 115	14 – 118.4
Heating Operating Range	°F	5 – 75	5 – 70	5 – 75	0 – 75
Max. Pipe Length ft	Total	443.0	377.0	377.0	475.7
	OU to IU	230.0	230.0	180.0	295.3
Max Pipe Height Difference ft	Box to IU	49.2	49.0	49.0	49.2
	IU to Box	98.4	49.0	98.0	MDNS
	IU to IU	49.2	39.0	49.0	49.2
	OU to IU	98.4	98.0	98.0	98.4


MDNS = Manufacturer Does Not Specify

Indoor Type	Wall Mounted						Duct Mounted						2' X 2' 4 Way Ceiling Cassette			
	07	09	12	15	18	24	09	12	15	18	24	09	12	15	18	24
Daikin AC	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Company M	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Company L	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Company F	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

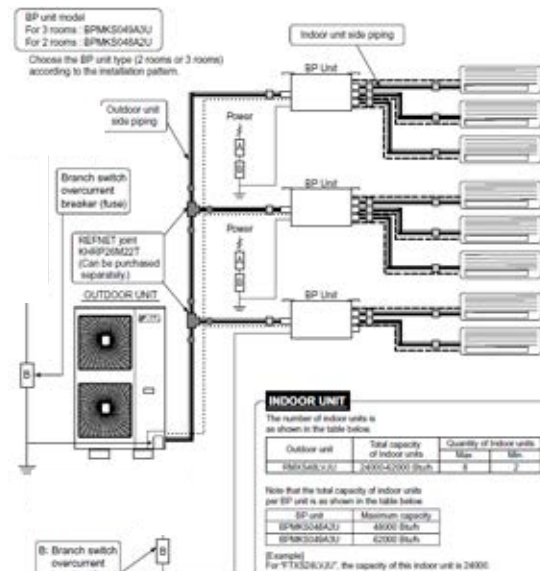
Note: Other Indoor unit styles are also available from competitors

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RMXS System Layout



absolute comfort



BP unit model
For 3 rooms: BP-RMXS4BLVJU
For 2 rooms: BP-RMXS4BLVJU
Choose the BP unit type (2 rooms or 3 rooms) according to the installation pattern.

INDOOR UNIT
The number of indoor units is as shown in the table below:

Outdoor unit	Total capacity of indoor units	Quantity of indoor units
RMXS4BLVJU	24000-42000 Btu/h	1 2 3

Note that the total capacity of indoor units per BP unit is as shown in the table below:

BP unit	Maximum capacity
BP-RMXS4BLVJU	48000 Btu/h
BP-RMXS4BLVJU	62000 Btu/h

[Example] For "RMXS4BLVJU", the capacity of this indoor unit is 24000.

Design Details

- Minimum 2 indoor units required
- Separate 208/230V power supply for outdoor unit and BP units
- BP units supply power to indoor units
- 4 wires to indoor unit

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Outdoor Unit



Outdoor Unit (RMSX)



Key Features

- Design flexibility with the ability to connect from **2 zones to 8 zones on a single system**
- Ability to connect up to 130% of indoor unit capacity
- Long piping lengths for indoor installation flexibility
- Slim design for a space saving an unobtrusive look to a home's exterior
- Cooling operating range 23 - 115°F DB
- Heating operating range 5 - 75°F DB

Installation

Typical Application
Where there is an obstacle on the suction side:

a) No obstacle above
1) Stand-alone installation
Obstacle on the suction side only



Residential Application (i.e. Between Homes)

a) No obstacle above
1) Stand-alone installation




Enclosed Application
Obstacle on the suction side and both sides



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Technical Specifications



Outdoor Unit

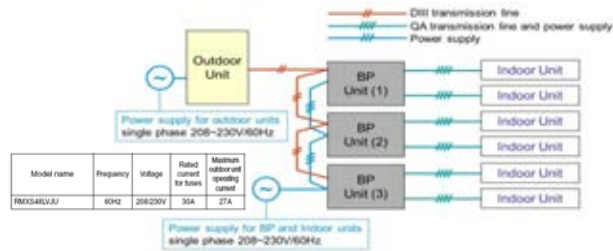
Model Name		Outdoor Unit	RMSX48LVJU
Cooling Capacity	Nominal	Btu/h	48,000
	Maximum	Btu/h	54,000
Heating Capacity	Nominal	Btu/h	54,000
	Maximum	Btu/h	61,000
SEER / HSPF		Non Ducted	18.8 / 11.3
		Mixed	16.5 / 10.5
		Ducted	14.1 / 9.6
EER / COP		Non Ducted	10.3 / 3.0
		Mixed	9.8 / 2.9
		Ducted	9.3 / 2.7
Power Supply			Single phase 60Hz 208/230V
Minimum Circuit Amps		A	27.0
Maximum Overcurrent Protection		A	30.0
Sound Pressure - (Cooling/Heating)		dB(A)	57/58
Connection Ratio (Max Capacity to Outdoor Unit)			50% (24,000) - 130% (62,000)
Number of Connectable Indoor Units			2 to 8
Number of Connectable BP Units			1 to 3
Total Piping Length (Liquid Line Only)	Total Pipe Network	ft.	443
	OU - BP	ft.	180.4
	BP - IU	ft.	262.5
Max. Piping Length	BP - IU	ft.	49.2
	1st Branch - IU	ft.	131.2
Max. Height Difference	Total	ft.	433.0
	OU - BP	ft.	98.4
	OU - IU	ft.	98.4
	BP - BP	ft.	49.2
	IU - IU	ft.	49.2
Piping Connections - Liquid (O.D.)		in.	Ø 3/8
Piping Connections - Gas (O.D.)		in.	Ø 3/4
Piping Connection Kit			KHRP26A22T
Operating Range - Cooling		°F DB	23 - 115
Operating Range - Heating		°F DB	5 - 75
Dimensions (H x W x D)		in.	52-15/16 x 35-7/16 x 12-5/8
Net Weight		lbs.	283.0

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Electrical Wiring



The outdoor unit and branch port (BP) units operate from separate 208/230V single-phase power supplies, eliminating the need of power supply between them. Therefore, wiring size from the outdoor unit to the branch port (BP) units can be reduced and ease installation.

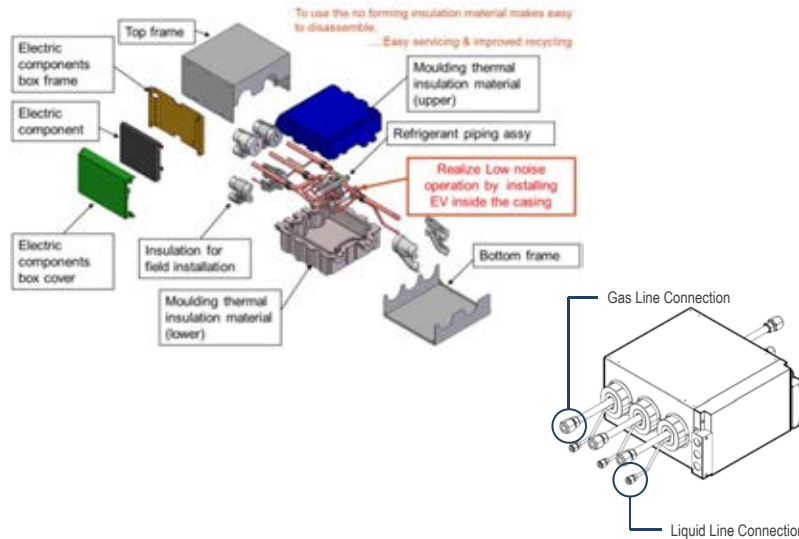


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Branch Port Unit




The Branch Port (BP) unit varies the refrigerant volume to meet the cooling or heating requirements. It's easy to disassemble and makes repairs and recycling simple.




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Branch Port Unit



absolute comfort

Branch Port (BP) Unit - BPMKS



The Branch Port (BP) unit varies the refrigerant volume to meet the cooling or heating requirements. It's easy to disassemble and makes repairs and recycling simple.

Installation Ease

- Flare nut connections to facilitate the use of standard mini-split line sets
- No dedicated breaker needed (typically) as power is derived from the outdoor unit

Flexibility

- Choice of 2-zone or 3-zone BP units to match the system selection to individual requirements

Technical Specifications

BP Box

Model Name	BPMKS048A2U	BPMKS049A3U																		
Power Supply	Single phase 60Hz 208/230V																			
Power Consumption	W 10.0	10.0																		
Minimum Circuit Amps (MCA)	A 15.0	15.0																		
Running Current	A 0.05	0.05																		
Sound Pressure - (Cooling/Heating)	dB(A) 32/32	32/32																		
Number of Connectable Indoor Units	1 to 2	1 to 3																		
Min. Connection Combination	7,000	7,000																		
Max. Connection Combination	48,000	62,000																		
Piping Connections (O.D.)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td rowspan="2">Liquid</td> <td>Outdoor Unit Side</td> <td>in.</td> <td>Ø 3/8 x 1</td> </tr> <tr> <td>Indoor Unit Side</td> <td>in.</td> <td>Ø 1/4 x 2 Ø 1/4 x 3</td> </tr> <tr> <td rowspan="2">Gas</td> <td>Outdoor Unit Side</td> <td>in.</td> <td>Ø 5/8 x 1</td> </tr> <tr> <td>Indoor Unit Side</td> <td>in.</td> <td>Ø 5/8 x 2 Ø 5/8 x 3</td> </tr> <tr> <td>Drain</td> <td>in.</td> <td colspan="2">Not required</td> </tr> </table>		Liquid	Outdoor Unit Side	in.	Ø 3/8 x 1	Indoor Unit Side	in.	Ø 1/4 x 2 Ø 1/4 x 3	Gas	Outdoor Unit Side	in.	Ø 5/8 x 1	Indoor Unit Side	in.	Ø 5/8 x 2 Ø 5/8 x 3	Drain	in.	Not required	
Liquid	Outdoor Unit Side	in.		Ø 3/8 x 1																
	Indoor Unit Side	in.	Ø 1/4 x 2 Ø 1/4 x 3																	
Gas	Outdoor Unit Side	in.	Ø 5/8 x 1																	
	Indoor Unit Side	in.	Ø 5/8 x 2 Ø 5/8 x 3																	
Drain	in.	Not required																		
Reducer	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>pc.</td> <td>1 (Ø 3/8 → Ø 1/4)</td> </tr> <tr> <td>pc.</td> <td>4 (Ø 5/8 → Ø 1/1)</td> </tr> <tr> <td>pc.</td> <td>3 (Ø 5/8 → Ø 3/8)</td> </tr> </table>		pc.	1 (Ø 3/8 → Ø 1/4)	pc.	4 (Ø 5/8 → Ø 1/1)	pc.	3 (Ø 5/8 → Ø 3/8)												
pc.	1 (Ø 3/8 → Ø 1/4)																			
pc.	4 (Ø 5/8 → Ø 1/1)																			
pc.	3 (Ø 5/8 → Ø 3/8)																			
Dimensions (H x W x D)	in. 7-1/16 x 11-9/16 x 13-3/4																			
Net Weight	lbs. 18.0	20.0																		

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Indoor Units



absolute comfort

The Super Multi Plus offers a wide capacity range of indoor units in a variety of styles





Wall Mount
CTXS & FTXS
Blends with any décor with it's sleek and sophisticated design

Concealed Slim Duct
CDXS & FDXS
Maximizes floor and wall space with it's compact and concealed design

FFQ
2' X 2' Ceiling Cassette
Enhanced comfort with uniform airflow and temperature distribution great for open plan spaces





Indoor Unit Availability

Indoor Type	Capacity					
	7 MBH	9 MBH	12 MBH	15 MBH	18 MBH	24 MBH
Wall Mount	■	■	■	■	■	■
Slim Duct		■	■	■	■	■
2' X 2' Cassette		■	■	■	■	

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Individual Zone Control



Daikin ENVI (DACA-TS1-1)

Daikin ENVI is the new intelligent thermostat with smart controls for wall mount or slim duct indoor units. This controller features convenient accessibility via web, smart phone, or tablet for control anytime, anywhere, trend reports to track your cooling and heating usage, diagnostic system alerts, and live weather updates.

Key Features and Functions:

- Cool, Heat, and Auto modes with dual set-points
 - Weekly scheduling for residential use
 - Setback control
 - Optimum start
 - Hold, Quick save, and Vacation settings
 - Fan On/Auto, Fan speed, and Louver direction
-
- Error code with plain text explanation
 - Wi-Fi enabled – accessible through PC web, Smart phone/Tablet
 - Dealer Web Portal – Alert Email and Trend Graph Display
 - Room temperature/relative humidity display
 - Outdoor temperature and weather forecast
- Other**
- Backlit
 - Fahrenheit/Celsius selectable
 - Current operation status
 - Room temperature sensor
 - Relay for AUX heater connection (manually switch over from HP to AUX is required by user)

Available July 2013



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Individual Zone Control



Navigation Remote Controller (BRC1E72)

Daikin's Navigation Remote Controller is compatible with the 2' X 2' 4-way ceiling cassette (FFQ) and offers advanced features in a configurable display to provide as little or as much control as desired. Advanced scheduling and set-point capabilities provide comfort control and energy saving features at the touch of a button.

Key Features and Functions:

- Configurable display – Standard, Detailed, and Simple
- Dual or single Cool and Heat set-points for occupied periods
- Setback set-points for unoccupied periods
- Unwanted buttons/operation modes can be disabled
- Power off eliminates set-point and mode adjustment – configurable
- Set-point range limitation
- Individual button prohibits
- Automatic adjustment for Daylight Savings Time (DST) Schedule
- Weekly schedule – 7 day, weekday plus Saturday and Sunday (5 + 1 + 1), weekday plus weekend (5 + 2) and Everyday (1)
- Allows programming up to 5 events per day with Cool and Heat or single set-points
- Setback configuration with Cool and Heat set-points

Display

- Detailed display mode
- Standard display mode
- Simple display mode (new)
- Face decal option to eliminate unnecessary buttons



with optional face plate



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Individual Zone Control



Wireless Remote Controller (ARC452)

Daikin's wireless remote controller comes standard on wall mount indoor units and concealed slim duct units and provides comfort control at the touch of a button wherever you are in the room. Frequently used buttons are instantly accessible on the front display while less often used buttons are accessible beneath the sliding cover.

Key Features and Functions:

- Swing Function
- Fan Function
- Mode Selection (Auto, Dry, Cool, Heat (heat pump only))
- Powerful Function
- Intelligent Eye (select units)
- Quiet Operation
- On/Off Timer
- Self-Diagnosis with Digital Display
- Night Set Mode



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Individual Zone Control



Wired Remote Controller (BRC944B)

The wired remote controller offers a simple, and easy to use fixed option for residential and light commercial applications.

Key Features and Functions:

- Built in one time or daily timer functionality with up to 2 timer actions per day
- LCD lets you display set point temperature in 1°F or 1°C units
- Monitors room temperature and preset temperature by microcomputer and can select cool / heat / dry operator modes automatically
- Selectable auto / cool / heat / dry operation modes with adjustable temperature and airflow rates
- Approximately two hour battery backup
- Required remote control adapter PCB included
- Controller can be used in conjunction with the factory supplied standard wireless remote controller



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Features



Operating Mode

Numerous control features exist to customize your system operation to suit your needs and lifestyle.

Space Saving Design

Daikin's range of multi-split systems offers reduced installation space even when connecting up to as many as eight indoor units to a single outdoor unit, maintaining a beautiful home exterior. With indoor unit options consisting of streamlined wall mount units, built-in slim duct units, or a combination of both, multi-split systems offer over 1,000 possible connection combinations, creating a flexible, powerful and energy efficient system.

Low Operating Sounds

Systems offer low sound levels during operation, minimizing noise inside the home and to the neighbor while maintaining cooling and comfort.



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Operating Mode Selection



Cool / Heat Mode Lock

During initial installation, you can enable programming that can set the system to force either Cool or Heat mode operation. This function is convenient when you wish to set all indoor units connected to the same operation mode.

Selecting the Operation Mode

When more than one indoor unit is operating, priority is given to the first unit that is switched on. If the first unit started operates in FAN mode, then any subsequent call for HEAT operation from another unit will be given priority.

Intelligent Eye Mode

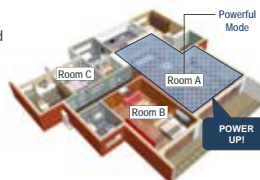
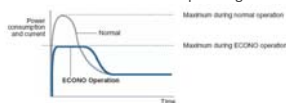
This function detects the presence of people in a room via a motion sensor and reduces operating capacity and changes target set-points when a room is empty to help save energy.

Powerful operation mode

When powerful operation is selected, the fan speed and target temperature are set to maximum to enable the full capability of Cooling or Heating capacity to be delivered.

Econo Operation Mode

This function is convenient for energy saving oriented users and when this function is initiated, the system reduces the maximum operating current and power consumption.



Note: Not all functions exist on all indoor units

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Space Saving Design



absolute comfort

Space Saving Design

More than 60% in physical space savings
More than 80% in total (including clearances) space savings


Installation Space





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Low Operating Sounds




absolute comfort

Low Operating Sounds

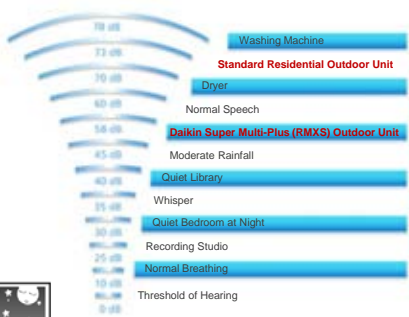
Daikin's Super Multi PLUS outdoor units operate at lower sound levels than standard residential outdoor units. With sound levels at 58 dB, quieter than normal speech, these outdoor units operate without a disturbance to surrounding neighbors.

These standard sound levels can be further enhanced with the use of the "Night Quiet" Sound Mode.

[Example] Using the OUTDOOR UNIT QUIET operation during the night.



The noise level of the outdoor unit will be lower. This is convenient when you need to consider for your neighborhood.



78 dB	Washing Machine
73 dB	Standard Residential Outdoor Unit
70 dB	Dryer
60 dB	Normal Speech
58 dB	Daikin Super Multi-Plus (RMXS) Outdoor Unit
54 dB	Moderate Rainfall
43 dB	Quiet Library
35 dB	Whisper
30 dB	Quiet Bedroom at Night
25 dB	Recording Studio
20 dB	Normal Breathing
0 dB	Threshold of Hearing

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Residential & Light Commercial

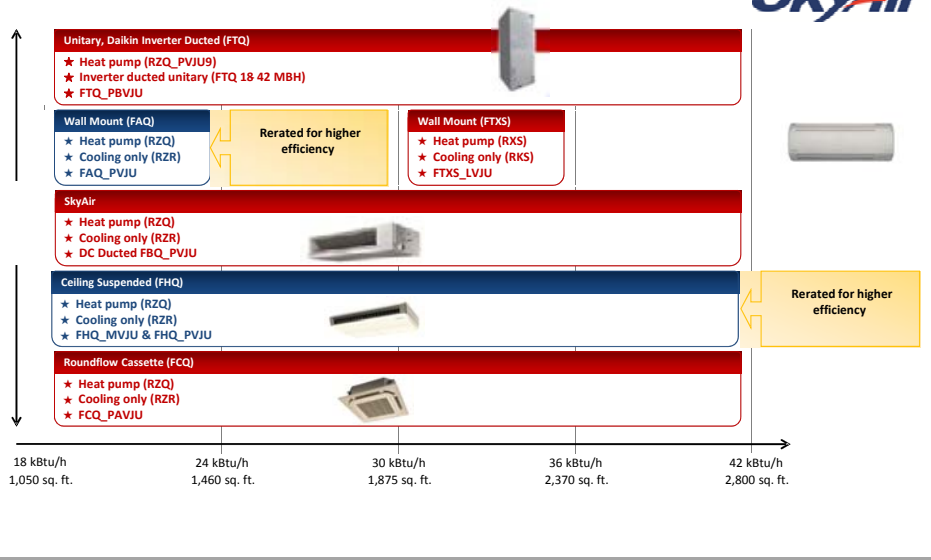
FEATURES, FUNCTIONS & BENEFITS

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Number 1! Product diversity – Light Commercial





Capacity (kBTU/h)	Capacity (sq. ft.)	Unit Type	Features	Notes
18	1,050	Unitary, Daikin Inverter Ducted (FTQ)	<ul style="list-style-type: none"> ★ Heat pump (RZQ_PVIJ9) ★ Inverter ducted unitary (FTQ 18 42 MBH) ★ FTQ_PBVJU 	
24	1,460	Wall Mount (FAQ)	<ul style="list-style-type: none"> ★ Heat pump (RZQ) ★ Cooling only (RZR) ★ FAQ_PVIJU 	Rerated for higher efficiency
36	2,370	Wall Mount (FTXS)	<ul style="list-style-type: none"> ★ Heat pump (RXS) ★ Cooling only (RKS) ★ FTXS_LVJU 	
30	1,875	SkyAir	<ul style="list-style-type: none"> ★ Heat pump (RZQ) ★ Cooling only (RZR) ★ DC Ducted FBQ_PVIJU 	
30	1,875	Ceiling Suspended (FHQ)	<ul style="list-style-type: none"> ★ Heat pump (RZQ) ★ Cooling only (RZR) ★ FHQ_MVIJU & FHQ_PVIJU 	Rerated for higher efficiency
42	2,800	Roundflow Cassette (FCQ)	<ul style="list-style-type: none"> ★ Heat pump (RZQ) ★ Cooling only (RZR) ★ FCQ_PAVJU 	

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Highlights



SkyAir

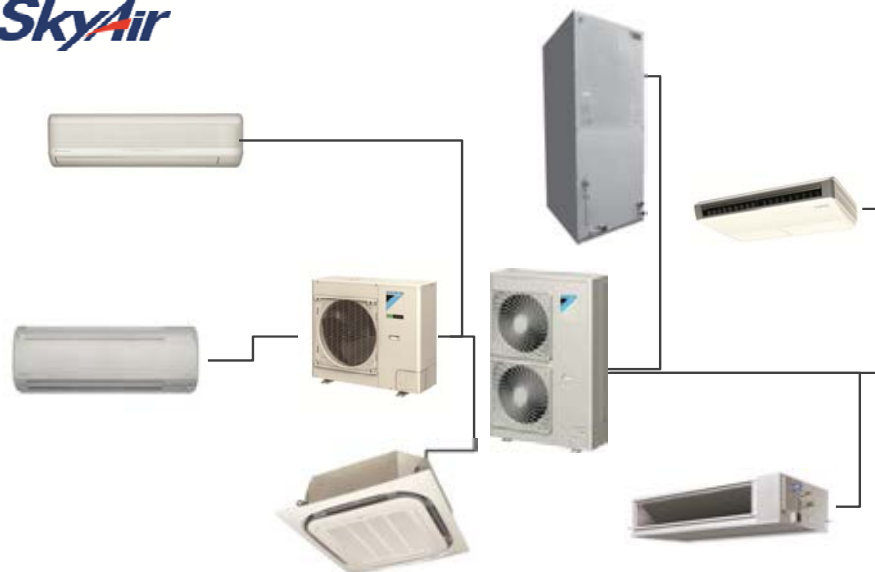
- Single phase power supply
- Capacities range from 18,000 to 42,000 Btu/h
- Efficiencies range from 13.8 SEER to 20 SEER
- The ultimate duct-free solution for restaurants, shops, small offices, data/server rooms and more light commercial applications.
- Also great for large residential bonus rooms, new additions, etc.
- With a choice of six indoor units and a long piping length of up to 230 feet, this system offers greater flexibility of installation.
- Largest one-to-one application with capacity up to 42,000 Btu/h.
- Cooling operating range as low as -40° with optional wind baffle and Low Ambient kit

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Highlights



SkyAir



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SkyAir – Indoor Units






	Model #	Description	Capacities
1	FAQ	Wall-Mounted	18, 24
2	FTXS	Wall-Mounted	30, 36
3	FCQ	Round flow Cassette	18, 24, 30, 36, 42
4	FHQ	Ceiling Suspended	18, 24, 30, 36, 42
5	FTQ	Vertical Air-Handler	18, 24, 30, 36, 42
6	FBQ	DC Duct	18, 24, 30, 36, 42




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SkyAir – Outdoor Units



■ Two outdoor heat pump models RZQ and RXS:

	Model #	Piping Length/Height Diff.
1	RZQ18PVJU9	164 / 98
2	RZQ24PVJU9	164 / 98
3	RZQ30PVJU	164 / 98
4	RZQ30PVJU9	164 / 98
5	RZQ36MVJU9	230 / 164
6	RZQ42MVJU9	230 / 164
7	RXS30HVJU	98 / 66
8	RXS36HVJU	98 / 66



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SkyAir – Outdoor Units



Two outdoor cooling only models RZR and RKS:

	Model #	Piping Length/Height Diff.
1	RZR18PVJU	164 / 98
2	RZR24PVJU	164 / 98
3	RZR30PVJU	164 / 98
4	RZR36PVJU	230 / 164
5	RZR42PVJU	230 / 164
6	RKS30HVJU	98 / 66
7	RKS36HVJU	98 / 66



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FFB – All Sky Air Outdoor Units



FEATURES	FUNCTIONS	BENEFITS
Larger capacity from 18,000 to 42,000Btu/h	Allows for a wide range of applications	Versatility
Low ambient cooling operation (0°)	Fulfills needed versatility for cooling	Maximum comfort in high demand conditions
Up to 230 ft. piping	Allows for a wide range of applications	Versatility
Can mount on wall-brackets	Allows installers to overcome less than ideal building characteristics	Versatility
Self-diagnostic capability	Provides error codes for faster diagnostic	Added reliability
Maximum height separation of 164 ft.	Allows for a wide range of applications	Versatility

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FFB – FAQ Wall Mounted Unit




absolute comfort

FEATURE	FUNCTIONS	BENEFITS
Power airflow dual flaps and auto swing louvers	Distributes air with better velocity and distribution	Improved comfort
Flexible choice of remote controllers	Offers convenient control	Convenience Ease of use
Optional condensate pump	Assists with drainage	Added reliability





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FFB – FTXS Wall Mounted Unit




absolute comfort


FEATURE	FUNCTIONS	BENEFITS
Quick warming function	Allows for faster warming of a large space	Quick comfort
Wide angle louvers	Promote better and more even distribution of air	Improved comfort Elimination of hot/cold spots
Titanium Apatite Photo-catalytic Filter	Cleans and purifies the air	Cleaner, safer indoor air
Powerful operation	Maximizes power for 20-minute period	Maximum comfort during high demand periods
3-D Airflow	Combines vertical and horizontal auto-swing to circulate air to corners of large spaces	Improved air flow Improved comfort Elimination of hot/cold spots
Intelligent Eye	Detects movement; goes to energy saving mode	Energy savings



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FFB – FCQ Round Flow Unit





FEATURES	FUNCTIONS	BENEFITS
Draft prevention technology	Eliminates draftiness	Increased comfort
Ceiling stain prevention technology	Eliminates unsightly stains around unit	Clean appearance
Twenty three airflow distribution patterns	Allows for customization of airflow	Improved comfort Elimination of hot/cold spots
Integration of outside air	Allows fresh air ventilation if desired	More air exchanges
Optional flap shutoff	Allows for corner installation when needed	Versatility
Standard built-in condensation pump	Eliminates drainage problems	Reliability Performance
Optional wireless controller	Allows for control from anywhere in the space	Convenience Ease of use

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FCQ Round Flow Unit





Round Flow



There are much fewer areas of uneven temperature.


Use wherever:

- There is no space on the walls
- Can be installed centrally located and 360 airflow is ideal
- High energy efficiency (up to 35% higher than previous models)
- Low sound levels required




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FFB – FHQ Ceiling Suspended Unit



FEATURES	FUNCTIONS	BENEFITS
Auto-swing capability - 100° pattern	Allows for better air distribution	Improved comfort Elimination of hot/cold spots
Lateral servicing space	Allows for corner, narrow space, wall and ceiling installations	Versatility Ease of use
Concealed piping	Allows installers to hide piping from view	No adverse effect on home/store décor
Optional wireless controller	Allows for control from anywhere in the space	Convenience Ease of use
Optional condensate pump	Eliminates drainage problems	Reliability Performance



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FHQ Ceiling Suspended Unit








Use wherever:

- There is no space on the walls
- There is no space in the ceiling


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FTQ Daikin Inverter Ducted



FTQ Specifications


- One of the first Variable Speed “Unitary”
- Indoor unit **made in Japan**
- **Larger capacity** range up to 3.5T (and very quiet)
- High energy **efficiency up to 20.0 SEER**– Premium positioning
- All models are **CEE Tier 2 (except 42MBH)**



Inverter Ducted Specifications		1.5 Ton	2.0 Ton	2.5 Ton	3.0 Ton	3.5 Ton
Model Name	Indoor	FTQ18PBVJU	FTQ24PBVJU	FTQ30PBVJU	FTQ36PBVJU	FTQ42PBVJU
	Outdoor	RZQ18PVJU9	RZQ24PVJU9	RZQ30PVJU	RZQ36PBJU9	RZQ42PVJU9
System Specifications						
Efficiency	SEER	20.0	19.0	19.5	18	17
	EER	14.0	12.5	13.5	12.5	12
	HSPF	12.0	11.5	10.0	9.5	8.5
Power Supply	Single phase 60Hz 208/230V					
Rated Cooling Capacity	Btu/h	18,000	24,000	30,000	36,000	40,000
Rated Heating Capacity	Btu/h	20,000	27,000	34,000	40,000	44,500

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FFB – FTQ Daikin Inverter Ducted



FEATURES	FUNCTIONS	BENEFITS
Wide lineup of field-installed electric heater options	Allows for a wide range of applications	Versatility
Integrated heater control relays and logic	Reduces run times	Cost savings
Electric booster heater operation in combination with heat pump operation	Allows for a wide range of applications	Versatility
Reduced operational dead-band	Reduces on/off cycles resulting in longer run times at lower speeds	Increased comfort More even temps Less wear/tear
During electric heater operation, the indoor unit fan is fixed in H (High) speed regardless of the controller setting	Distributes more heat when it's needed the most	Increased comfort
Operating condition of the electric heater is programmable via a field setting	Allows for a wide range of applications	Versatility Cost savings


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Daikin Inverter Ducted




FTQ Applications (Residential)

- Competes with higher end tier of the Ducted Unitary market
- Automatically adjusts the static pressure









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FFB – FBQ DC Ducted







FEATURES	FUNCTIONS	BENEFITS
ECM blower motor	Varies speed and output based on demand	Improved efficiency
Auto adjust external static pressure	Adapts fan speed to lower curve	Proper air-flow Quiet operation
Low profile design	Less than 12" high	Versatility of installation
Built-in condensate lift pump	Eliminates drainage problems	Improved performance & reliability
Indoor air quality options	Optional MERV-8 and MERV-13 filters and filter box	Improved indoor air quality
Service access from below	Allows for easy access	Improved service & maintenance

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SkyAir Horizontal Ducted



FBQ Specifications




- Excellent for **residential** ceiling/attic applications
- Target **multi-family residences**
- **Efficiencies up to 17.5 SEER**


Horizontal Ducted Specifications		1.5 Ton	2.0 Ton	2.5 Ton	3.0 Ton	3.5 Ton
Model Name	Indoor	FBQ18PVJU	FBQ24PVJU	FBQ30PVJU	FBQ36PVJU	FBQ42PVJU
	Outdoor HP	RZQ18PVJU9	RZQ24PVJU9	RZQ30PVJU	RZQ36PVJU9	RZQ42PVJU9
	Outdoor C/O	RZR18PVJU	RZR24PVJU	RZR30PVJU	RZR36PVJU	RZR42PVJU
System Specifications						
Efficiency	SEER	17.5	16.5	16.0	17.5	16.0
	EER	14.1	12.0	10.5	11.2	10.2
	HSPF	10.6	10.5	9.2	9.1	8.8
Power supply		Single phase 60Hz 208/230V				
Rated cooling capacity	Btu/h	18000	24000	30000	36000	42000
Rated heating capacity	Btu/h	20000	27000	34000	40000	47000
Indoor Specifications						
Dimensions (HxWxD)	Inch	11-13/16x39-3/8x27-9/16			11-13/16x55-1/8x 27-9/16	
Weight	Lbs	80			102	
Airflow rate (HH/H/L)	CFM	635/582/529	688/618/565	882/794/706	1130/953/81	1377/1165/988
Static pressure	inH2O	0.80-0.20 Standard 0.40				
Drain pump		Standard equipment				
Sound level	dBA	41/39/37	42/40/38	43/41/39	43/41/39	44/42/40

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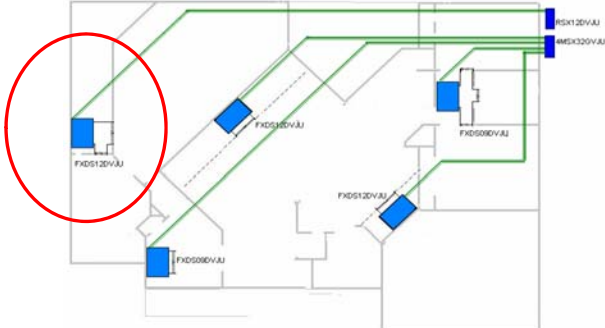
SkyAir Horizontal Ducted



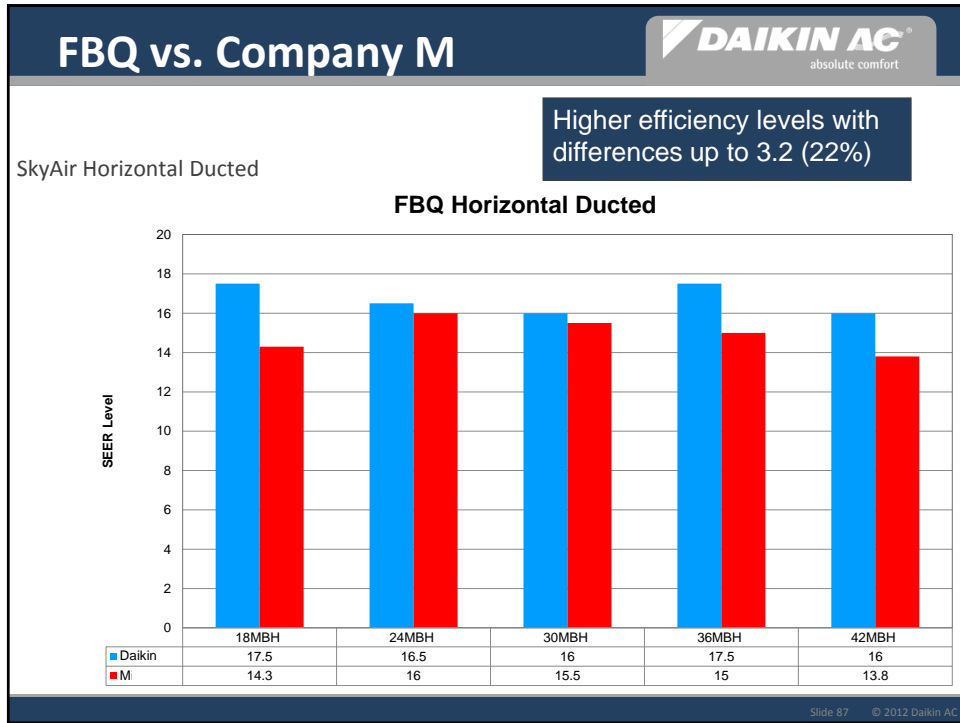
FBQ Applications (Residential)




- Great add-on / continuity in line with FDXS slim duct
- If a zone requirement is greater than 12MBH, use as an alternative



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Sky Air – Light Commercial



- Broadly position this product!
 - Not just for data rooms
 - Not just an add on to VRV

- Thinking outside the data room
 - Banks
 - Boutiques
 - Chain Stores
 - Strip malls
 - Convenience stores
 - Restaurants
 - Fast Food



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Check for Understanding – SkyAir



1. True or False – the SkyAir system is available in both one-to-one and multi-port configurations?
2. How many options are there for the indoor unit and what are they?
3. What is the range of available Btu/h capacities for the SkyAir system?
4. What is the optimum SEER achievable by these systems?
5. True/False – the SkyAir outdoor unit can be mounted on wall brackets?
6. Select the SkyAir feature you like best and in your own words, tell me/us how you would explain it to a potential buyer.

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Check for Understanding – Answers



1. True or False – the SkyAir system is available in both one-to-one and multi-port configurations? False – only available in one-to-one.
2. How many options are there for the indoor unit and what are they? Six– FAQ and FTXS wall-mounted, FCQ round flow cassette, FHQ ceiling suspended, FBQ DC Duct, and FTQ vertical air handler.
3. What is the range of available Btu/h capacities for the SkyAir system? 18,000 – 42,000.
4. What is the optimum SEER achievable by these systems? 19.3.
True/False – the SkyAir outdoor unit can be mounted on wall brackets? True.
5. Select the SkyAir feature you like best and in your own words, tell me/us how you would explain it to a potential buyer.

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absolute comfort

VRV[®]-S



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VRV[®] Technology

DAIKIN AC
absolute comfort

- Inverter-driven compressor varies or modulates capacity based on demand.
- Delivers solution that constantly responds to the demand, delivering an unparalleled level of both temperature control and Absolute Comfort™.
- Ideal for today's "intelligent" buildings such as hotels, banks, offices and hospitals.

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VRVIII-S Highlights



- Independent zoning control with maximum flexibility and energy savings
- Up to eight indoor units to one outdoor unit
- Light commercial
 - High efficiency solution for small commercial buildings
 - Ducted and ductless indoor units
- Residential
 - Excellent alternative for residential new construction, renovations and add-ons
 - Long piping length allows for multiple floors to be served by a single outdoor condensing unit

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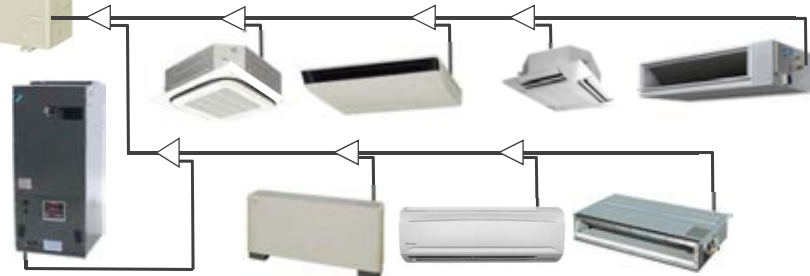
VRV Systems



VRVIII-S Heat Pump RXYMQ36&48P





- 208/230vac 1Ph - 30 amp power to Outdoor Unit
- Outdoor unit Models: 36,000 & 48,000 Btu/h
- Single Inverter scroll compressor
- Indoor unit capacities 7,000 to 48,000 Btu/h
- Single 2-Pipe refrigerant circuit
- Connection of up to 6 or 8 indoor units
- Connection ratio of 50% to 130% possible
- 1000' - Maximum refrigerant piping length
- Operating Range – Cool: 23° to 115°F Heat: 0° to 77 °F



7

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VRVIII-S – Outdoor Units		DAIKIN AC [®] absolute comfort			
	Model #	Configuration	Nominal Cooling Capacity (Btu/hr)	Nominal Heating Capacity (Btu/hr)	SEER
1	RXYMQ36PVJU	Ductless	36,000	42,000	14.9
2	RXYMQ36PVJU	Ducted	36,000	42,000	14.0
3	RXYMQ36PVJU	Mixed	36,000	42,000	14.5
4	RXYMQ48PVJU	Ductless	47,500	52,500	15.1
5	RXYMQ48PVJU	Ducted	47,500	52,500	13.2
6	RXYMQ48PVJU	Mixed	47,500	52,500	14.2


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VRVIII-S – Piping Specifications		DAIKIN AC [®] absolute comfort	
Piping Specs		Feet	
Linear piping between condensing unit and furthest located fan coil in unit (equivalent)		492 (580)	
Total “one-way” piping in the complete piping network		984	
Vertical (height) separation between condensing unit and fan coil units (if outdoor unit is below)		164 (130)	
Vertical (height) separation between fan coil units		49	
Linear piping between first REFNET* and furthest located fan coil unit		130	

* REFNET joints in the copper line set distribute an equal flow of refrigerant in every branch of piping network.

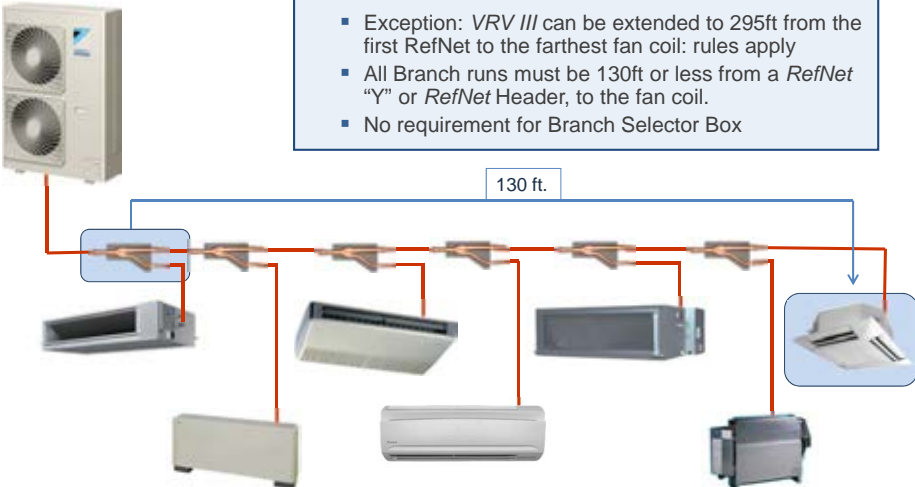
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VRV Refrigerant Piping




RefNet Piping Length Requirements

- The Standard maximum distance from the first **RefNet** to the farthest fan coil is 130ft.
 - Exception: *VRV III* can be extended to 295ft from the first RefNet to the farthest fan coil: rules apply
 - All Branch runs must be 130ft or less from a RefNet "Y" or RefNet Header, to the fan coil.
 - No requirement for Branch Selector Box




4
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VRV8-S Outdoor Model RXY



Nomenclature

RXY	M	Q	36	P	VJ	U
-----	---	---	----	---	----	---



- Standard compatibility symbol U: United States of America
- Power supply symbol VJ: 1 phase, 208/230V, 60 Hz
- Indicates major design category
- Capacity indication in cooling –36: 36,000 Btu/h, 48: 48,000 Btu/h
- Refrigerant and type – Q: R-410A Heat pump,
- System type – M: Trunk-shaped VRV system
- Unit category – RXY: Heat pump

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VRVIII-S - Indoor Ducted Units





FXTQ_PAVJU




FXMQ_PVJU




FXDQ_MVJU

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VRVIII-S – Indoor *Ducted* Units






Three options:


	Model #	Description	Capacities
1	FXTQ_PAVJU	Vertical air-handler	12,18, 24, 30, 36, 42, 48, 54
2	FXMQ_PVJU	DC concealed ceiling	7.5, 09,12,18, 24, 30, 36, 48
3	FXDQ_MVJU	Slim duct built-in concealed	7.5, 09,12,18, 24



FXTQ_PAVJU



FXMQ_PVJU



FXDQ_MVJU

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VRVIII-S - Indoor Ductless Units





1 - FXFQ_PVJU



2 - FXZQ_M7VJU



3 - FXAQ_PVJU



4 - FXHQ_MVJU




5 - FXLQ_MVJU




6 - FXNQ_MVJU

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VRVIII – Indoor *Duct-Free* Units








Six options:


	Model #	Description	Capacities
1	FXFQ_PVJU	Round flow ceiling mounted cassette	09, 12,18, 24, 30, 36, 48
2	FXZQ_M7VJU	2' x 2' 4-way ceiling mounted cassette	7.5, 09,12,18
3	FXAQ_PVJU	Wall mounted	7.5, 09,12,18, 24
4	FXHQ_MVJU	Ceiling suspended	12, 24, 36
5	FXLQ_MVJU	Floor standing exposed	12, 18, 24
6	FXNQ_MVJU	Floor standing concealed	12, 18, 24



FXFQ


FXZQ


FXAQ



FXHQ


FXLQ


FXNQ

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VRVIII-S - FFB




Daikin has taken a unique approach with the FFB for the VRVIII-S product line via its “7S for Success” concept:

FEATURES	FUNCTIONS	BENEFITS
Single-phase	Perfect solution for light commercial and residential applications	Ease of installation
Smaller capacity	Allows precise temperature control over entire space	Flexible application
Space-saving design	Requires minimal footprint outside	Concealable / non obtrusive
Superior energy efficiency	Uses less energy especially under partial load conditions	Energy savings
Soft sound level	Promotes quieter indoor units	Quiet operation
Single-supplier	Factory engineered, 80% complete upon delivery and industry-leading warranty	Reliability Quality
Straight-forward maintenance	Self-diagnostic function that offers straight-forward maintenance/service	Reliability/ease of service

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Check for Understanding – VRVIII-S






- The key characteristic of VRV technology is that the unique and highly intelligent inverter-driven compressor varies or modulates _____ based on _____ .
- The VRVIII-S system allows for up to _____ indoor units to _____ outdoor units.
- The 36,000 Btu/h outdoor unit can connect to _____ indoor units while the 48,000 Btu/h unit can connect to _____ indoor units.
- You learned that Daikin offers three indoor ducted units for the VRVIII-S system. Name all three.

Write the letter from the images after the matching descriptions:


- FXHQ_MVJU ceiling suspended ____
- FXAQ_MVJU wall mounted ____
- FXNQ_MVJU floor standing concealed ____
- FXFQ_PVJU round flow ceiling mounted ____
- FXZQ_M7VJU 4-way ceiling mounted ____
- FXLQ_MVJU floor standing exposed unit ____

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Check for Understanding – Answers






1. The key characteristic of VRV technology is that the unique and highly intelligent inverter-driven compressor varies **output** based on **demand**.
2. The VRVIII-S system allows for up to **eight** indoor units to **one** outdoor units.
3. The 36,000 Btu/h outdoor unit can connect to **six** indoor units while the 48,000 Btu/h unit can connect to **eight** indoor units.
4. You learned that Daikin offers three indoor ducted units for the VRVIII-S system. Name all three - **FTXQ vertical air-handler, FXMQ ceiling concealed, and FXDQ slim duct built-in concealed.**

Write the letter from the images after the matching descriptions:


5. FXHQ_MVJU ceiling suspended **D**
6. FXAQ_PVJU wall mounted **C**
7. FXNQ_MVJU floor standing concealed **F**
8. FXFQ_PVJU round flow ceiling mounted **A**
9. FXZQ_M7VJU 4-way ceiling mounted **B**
10. FXLQ_MVJU floor standing exposed unit **E**






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Daikin 3D Warranty - US



To Support You - The standard warranty provides a solid level of protection with the warranty plus program offering additional protection – the best warranty program in the ductless industry.



Daikin Warranty Schedule		Standard Warranty	Warranty Plus
Product		C/P/L	C/P/L
Quaternary, L-Series, Single Split and Multi-Split		7/5/0	10/7/0
KE-series Single Split		6/2/0	7/6/0
SkyAir Systems		7/5/0	10/7/0
VRV Systems		6/1/0	7/5/0
Daikin Altherma	Outdoor and Hydrobox	7/5/0	10/7/0
	Fan Coil Unit	5/0	5/0
	Tank	5/0	10/0

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Aspen Mini Aqua Pump Kit

DACA-CP1-1

(L) 3" x (D) 1.5" (H) 1.5" →

← (L) 6.5" x (D) 1.1" (H) 1.1"

- Power supply 100 – 250 vac
- Indoor unit capacities up to 24 MBH.
- Pump capacity 3.7 GPH @ 0 head, 0.8 GPH @ 26ft head.
- Maximum recommended head of 26 ft.
- Mounts inside evaporator casing or inside the line set cover.
- Sound level 21 dB (A) @ 3 ft.
- ETL Listed.
- Ideal for FXAQ__MVJU, FTXS__DVJU & CTXS__DVJU indoor evaporators.

Note: Pump can be mounted 48" above and from float assembly.

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Low Ambient Wind Baffle



Can be applied to reduce operating temperature range or to re-direct discharge air



PT# KPW945A4




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Controls Overview




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Remote Controllers




- Full Featured
- Easy to use



**Daikin Envi
(DACA-TS1-1)**




**ARC
(wireless remote)**



**BRC
(wired wall-mount)**

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FTXS & CTXS Wireless Remote



Fan Speed Select

Powerful Mode
Max Cool or Heat

Mode Select
AUTO-DRY-COOL-HEAT-FAN

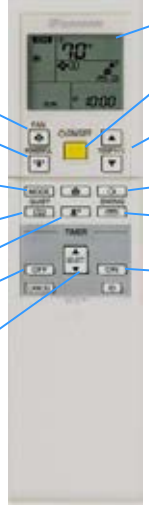
Outdoor Quiet Mode

Intelligent Eye Mode

Timer OFF

Timer Select

Standard Remote
Controller for all RA Wall-
mount Fan Coils



Backlit LCD Display

System On / Off

Set-Point Temp Up/Down

Vertical Louver Button

Horizontal Louver Button

Timer ON


Factory Supplied RC

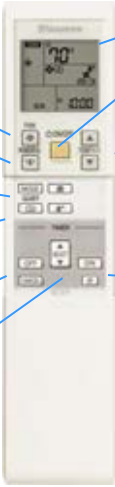
ARC452A21: CTXS07LVJU
FTXS09LVJU
FTXS12LVJU
FTXS15LVJU
FTXS18LVJU
FTXS24LVJU
FTXS30HVJU & LVJU
FTXS36HVJU & LVJU

ARC452A9 CTXS09HVJU
CTXS12HVJU

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FDXS Slim Duct Remote





- Fan Speed Select
- Powerful Mode
Max Cool or Heat
- Mode Select
AUTO-DRY-COOL-HEAT-FAN
- Outdoor Quiet Mode
- Timer OFF
- Timer Select
- Backlit LCD Display
- System On / Off
- Set-Point Temp Up/Down
- Timer ON

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Optional BRC944B2 Wired




- Provides the option of a wall mounted controller for light commercial applications.
- For use with all *Daikin* RA Single and Multi models.
- Can be used in conjunction with the wireless remote controller.

	Controller Features	
	Start / Stop	
	Operation Mode	
	Temperature Setting (18-32 C, 64-90 F)	
	One Time / Daily Timer	
	Fahrenheit or Celsius Display	
	Fan Speed	
	Airflow Direction	

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Daikin Envi - DACA-TS1-1

- Provides the option of a wall mounted controller for residential and light commercial applications.
- For use with all *Daikin* RA Single and Multi models.
- Can be used in conjunction with the wireless remote controller.



Controller Features


Cool, Heat, and Auto modes with dual set-points
Weekly scheduling for residential use
Setback control
Wi-Fi enabled – accessible through PC web, Smart phone/Tablet
Hold, Quick save, and Vacation settings
Fan On/Auto, Fan speed, and Louver direction



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Local Remote Controllers

BRC1E72




Navigation Remote Controller

BRC2A71



Simplified

BRC7C/7E/4C



Hand-held Wireless

DIII – NET 16vdc digital control network

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Remote Sensor KRCS01-1B (4B)



- **VRV** Fan Coil Units incorporate a built-in return air thermistor temperature sensor as standard (excl. FXTQ)
- KRCS01-1B (4B) Remote Sensor is offered to replace the return air thermistor when:
 - Outside fresh air is brought in to the fan coil return air
 - Ceiling height of fan coil return is 13ft or more
 - Above ceiling plenum return is used
- Standard 39ft cable - Plenum Rated 40ft and 80ft cable optional



NOTE: KRCS01-4B Remote Sensor Kit for FXMQ_P, FXFQ_P and FXTQ Fan Coil Units

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Multi-Zone Controls



Intelligent Manager



Intelligent Controller



BACnet



LonWorks



Centralized Controller




Unified On/Off




Schedule Timer

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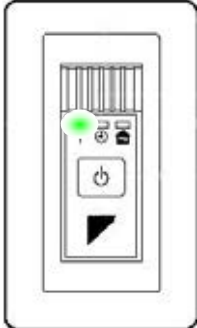
System Fault Indication



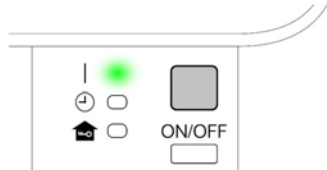
- The green operation lamp on the indoor unit's front panel will flash when:
 - A protection device in the indoor or outdoor unit activates
 - A thermistor malfunctions
 - A signal transmission error occurs



CTXS/FTXS09/12DVJU




FDXS09/12DVJU



FTXS15/18/24DVJU

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Controls – Features, Functions & Benefits



FEATURES	FUNCTIONS	BENEFITS
Home leave operation	System adjusts capacity to reach a selected preset temperature	“Smart” comfort Energy savings Return to comfortable room
Powerful operation	Maximizes power for 20-minute period	Maximum comfort during high demand periods
Intelligent Eye	Detects movement; goes to energy saving mode	Energy savings
Night set mode	Gently raises or lowers temperature just before the unit stops	Increased comfort

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Check for Understanding – Controls



1. What are the two types of controllers available for the units we've reviewed today?
2. Which of the two types of controllers comes standard with the system?
3. What is visible on a remote controller that indicates normal operation?
4. What indication does the user get when there is a problem?
5. Select the controller feature you like best and in your own words, tell how you would explain the FFB to a potential buyer.

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Check for Understanding – Answers



1. What are the two types of controllers available for the 4 wire units we've reviewed today? Hand-held wireless and wall mounted wired.
2. Which of the two types of controllers comes standard with the system? Hand-held wireless.
3. What is visible on a remote controller that indicates normal operation? A steady green light.
4. What indication does the user get when there is a problem? Flashing green light.
5. Select the controller feature you like best and in your own words, tell how you would explain the FFB to a potential buyer.

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Closing & Review



- Understand the meaning of features, functions, and benefits and how to use them to your advantage in a sales setting.
- Understand and be able to discuss the full Daikin residential and light commercial family of products.
- Understand the “core” features, functions, and benefits (FFB) of Daikin products as a whole.
- Understand the FFB for each product category and be able to explain them to a potential buyer in a sales setting.

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Thank You

SA-RLC-0113-PP0-01C

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Daikin Resources



RESIDENTIAL | LIGHT COMMERCIAL | COMMERCIAL

Please silence cell phones now.

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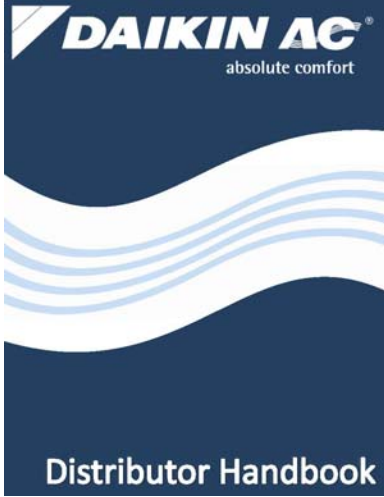

DAIKIN AC
absolute comfort

Learning Objectives

- Gain a basic understanding of the Distributor's Handbook.
- Gain a basic understanding of the Dealer's Handbook
- Understand what the Technical Resource Library (TRL) is and what it can do for you.
- Become familiar with the Dr. Daikin service and how to use it.
- Learn basic information about the Daikin Spare Parts Group and the services they provide.
- Understand who Daikin AC University is and how to use them as a resource to learn more about Daikin from technical, business and sales perspectives.

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Distributor's Handbook



Distributors Only

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Distributor's Handbook - Highlights



- Who?
 - *Designed, developed and maintained by Daikin for all Daikin distributors.*
- What?
 - *An important resource for all Daikin distributors.*
- When?
 - *In stock now.*
- Where?
 - *Available through D-Link.*
- How?
 - *Follow the registration process that is included with your handbook to automatically receive updates.*


Distributors Only

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Distributor's Handbook - Contents 


- Contacts/Contact Information
- Product Information
 - Portfolio
 - Compatibility
 - Model Nomenclature
 - Efficiency Data
- Policies & Procedures
 - Commissioning
 - Order & Shipment
 - Warranty
 - Returns

Distributors Only Slide 5 © 2012 Daikin AC

Distributor's Handbook - Contents 


- Service
 - Tech Call Center
 - Parts
 - Service Procedures
 - Troubleshooting
 - FAQ
- Sales
 - Daikin 3D Dealer Program
 - Co-op
 - Discount Authorization

Distributors Only Slide 6 © 2012 Daikin AC

Distributor's Handbook - Contents 

- Training
 - Daikin AC University
 - Professional Development
 - Instructor-Led Courses/Course Descriptions
 - On-Site Training
 - Registration Process
 - Web-Based Training



Distributors Only Slide 7 © 2012 Daikin AC

Distributor's Handbook - Contents 

- Marketing
 - Setting Up a New Store
 - Literature
 - Merchandising
 - Advertising
 - Trade Shows
- Tools
 - Technical Resource Library
 - Competitor Comparison Tool
 - VRV Xpress
 - Energy Calculation Tool

Distributors Only Slide 8 © 2012 Daikin AC


Dealer's Handbook

Dealers and Representatives Only

Slide 9 © 2012 Daikin AC

Dealer's Handbook - Highlights




- Who?
 - Designed, developed, and maintained by Daikin AC for all Daikin Representatives and Dealers.
- What?
 - An important resource for all Daikin Representatives and Dealers.
- When?
 - In stock now.
- Where?
 - Available through the Dealer portal, on Daikinlink.com, and provided in your dealer welcome kit.

Dealers and Representatives Only

Slide 10 © 2012 Daikin AC

Dealer's Handbook - Contents



- Training - Daikin AC University, Web Based Training, On-Site Training
- Warranty – Program Levels, Process Flow, Daikin Care, Standard Limited and Warranty Plus documents
- Marketing Services – Advertising
- Portals – Daikin Link, Daikin 3D Dealer Program Portal
- Marketing Guidelines – Logos and Styles
- Product Info – Product Portfolio
- Tools – Competitor and Performance Comparison Tools, Energy Calculation Tool, and Daikin Altherma Tool

Dealers and Representatives Only Slide 11 © 2012 Daikin AC

Dealer's Sales Tools



Dealers and Representatives Only Slide 12 © 2012 Daikin AC

DAIKIN AC[®]
absolute comfort

Technical Resource Library

Slide 13 © 2012 Daikin AC

DAIKIN AC[®]
absolute comfort


TRL - Highlights


- Who?
 - *Designed, developed and maintained by Daikin's Product Marketing Group for all Daikin distributors, representatives, and employees.*
- What?
 - *An important library of information for those same groups.*
- When?
 - *Available on an ongoing basis.*
- Where?
 - *Downloaded to your computer.*
- How?
 - *Access is given by your Daikin sales representative.*

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TRL - Contents

- General info
- Contact info
- News
- Split & Sky Air
- Multi-Split
- VRV
- Quotations
- Other info







Slide 15 © 2012 Daikin AC

TRL – General Info


- The “General” tab is similar to the home page of a web site
- Updated periodically, it provides general information that may be relevant



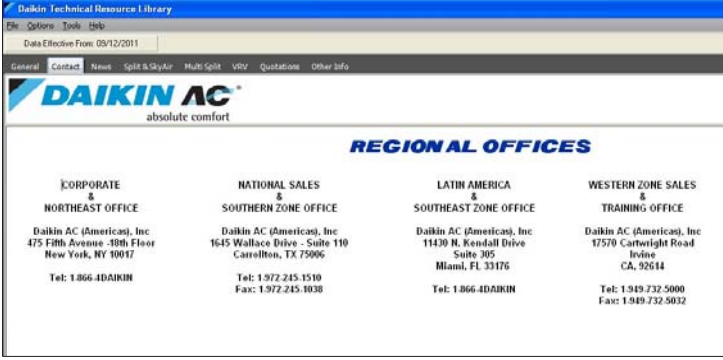


Slide 16 © 2012 Daikin AC

TRL – Contact Info



- Lists contact information for Daikin’s regional offices




REGIONAL OFFICES


<p style="text-align: center;">CORPORATE & NORTHEAST OFFICE</p> <p>Daikin AC (America), Inc 475 Fifth Avenue -18th Floor New York, NY 10017</p> <p style="text-align: center;">Tel: 1.866.4DAIKIN</p>	<p style="text-align: center;">NATIONAL SALES & SOUTHERN ZONE OFFICE</p> <p>Daikin AC (America), Inc 1645 Wallace Drive - Suite 110 Carrollton, TX 75006</p> <p style="text-align: center;">Tel: 1.972.245.1510 Fax: 1.972.245.4038</p>	<p style="text-align: center;">LATH AMERICA & SOUTHEAST ZONE OFFICE</p> <p>Daikin AC (America), Inc 11430 N. Kendall Drive Suite 305 Miami, FL 33176</p> <p style="text-align: center;">Tel: 1.866.4DAIKIN</p>	<p style="text-align: center;">WESTERN ZONE SALES & TRAINING OFFICE</p> <p>Daikin AC (America), Inc 17570 Cartwright Road Irvine CA, 92614</p> <p style="text-align: center;">Tel: 1.949.732.5000 Fax: 1.949.732.5032</p>
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TRL - News



- Contains new information related to any/all of the following:
 - Products
 - Literature
 - Marketing
 - Case studies
 - Industry
 - Events
 - More



THAT'S DAIKIN® AC™
THAT'S ABSOLUTE COMFORT™


Continuity Literature offering...

Daikin AC is glad to announce the availability of a new consumer flyer that can be used in conjunction to the tri-fold document.

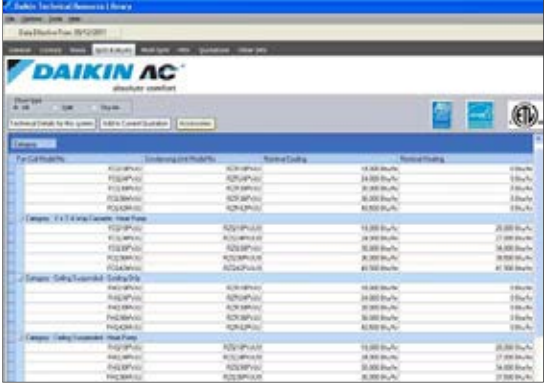
How to use:
This set of literature was designed to promote the Daikin brand and its products to the consumer marketplace. We encourage you to make this material available to your customers and provide the use of the tri-fold with the selected flyer inserted into the pocket, with your business card placed in the slot available on the tri-fold. The dealer can then leave behind only the flyer relevant to the products to be considered for the project, reducing cost compared to having the bigger tri-fold system structure. Click on following links to download flyers and tri-folds.

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TRL – Split & Sky Air




- All-in-one stop for:
 - Model numbers
 - Combinations (indoor/outdoor)
 - Nominal cooling & heating capacities
 - Technical specs
 - Images
 - Efficiency ratings
 - Approximate pricing
 - Accessories
 - Quotations

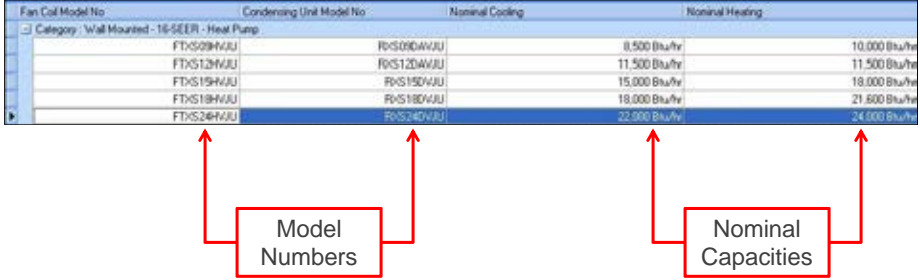


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TRL – Split & Sky Air – Example



- Example: 16-SEER 2-ton wall-mounted heat pump system
- Model numbers and indoor/outdoor combinations
- Nominal cooling and heating capacities



Fan Coil Model No	Condensing Unit Model No	Nominal Cooling	Nominal Heating
Category: Wall Mounted - 16-SEER - Heat Pump			
FTXS28HWJU	RCX090AWJU	8,500 Btu/hr	10,000 Btu/hr
FTXS12HWJU	RCX120AWJU	11,500 Btu/hr	11,500 Btu/hr
FTXS19HWJU	RCX150AWJU	15,000 Btu/hr	18,000 Btu/hr
FTXS18HWJU	RCX180AWJU	18,000 Btu/hr	21,600 Btu/hr
FTXS24HWJU	RCX240AWJU	22,500 Btu/hr	24,000 Btu/hr

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TRL – Split & Sky Air – Example

- Example: 16-SEER 2-ton wall-mounted heat pump system
- Click on “Technical Details for this system” for specs

Technical Details

Documents

General Details		Technical Details	
Indoor unit model No.	PT1524H3U	Est. Annual Cooling Cost (US\$)	150
Outdoor unit model No.	R1524DV3U	Est. Annual Heating Cost (US\$)	470
Nominal Rated (Cooling)	22,000 Btu/hr	Capacity Index Limit	
Serviceable Rated (Cooling)	14,100 Btu/hr	Additional Charge (Oz/Ft)	0.22
Nominal Rated (Heating)	24,000 Btu/hr	Precharged for (ft)	33 ft
Technical Details		Holding Charge (lb)	3.75
Power Supply	208-230 60 1ph	Air Flow Rate (High) (CFM)	536
Rated Load Amps	12.3	Air Flow Rate (Medium) (CFM)	473
Maximum Starting Current (amps)		Air Flow Rate (Low) (CFM)	409
Max Fuseable Amps (amps)	20	Nominal Ext. Static Pressure (inH ₂ O)	0
Min Circuit Amps (amps)	15.0	Max Ext. Static Pressure (inH ₂ O)	0
Power Supply Connections	L1, L2, Ground	Sound Pressure (High) (dBA)	46
Pipe Size Gas (inch)	5/8	Sound Pressure (Low) (dBA)	37
Pipe Size Liquid (inch)	1/4	Sound Pressure (Outdoor) (dBA)	54
High/Low Pressure Line		Sound Power (Indoor) (dBA)	
High/Low Equalizer Line		Sound Power (Outdoor) (dBA)	
Max Pipe Length (Total ft)	98.4 ft	Indoor Height (inch)	11-7/16
Max Pipe Length (Vertical)	65.6 ft	Indoor Width (inch)	41-5/16
Max Indoor to Indoor Piping		Indoor Depth (inch)	9-3/8
EER	9.3	Outdoor Height (inch)	28-15/16
SEER	15	Outdoor Width (inch)	32-1/2
IEER		Outdoor Depth (inch)	13-1/16
COP	2.72	Indoor Weight (lb)	26.5
HSPF	9.2	Outdoor Weight (lb)	121
COP17		Max Number of Indoor Units	

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TRL – Split & Sky Air – Example

- Within the “Technical Details” window, click on “Documents” for:
 - Installation manuals
 - Operation manuals
 - Product brochures
 - Guide specs
 - All downloadable and printable!

Technical Details

Documents

Installation Manual ▶


Operation Manual

Product Brochure

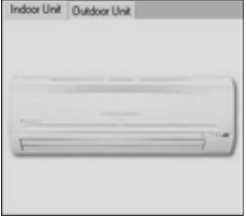
Guide Specs

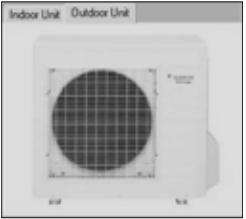
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TRL – Split & Sky Air – Example




- Example: 16-SEER 2-ton wall-mounted heat pump system
- Click on “Indoor Unit” to see image of fan coil
- Click on “Outdoor Unit” to see image of condensing unit






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TRL – Split & Sky Air – Example




- Example: 16-SEER 2-ton wall-mounted heat pump system
- Efficiency ratings
- Approximate pricing



SEER	15
HSPF	9.2
COP	2.72
EER	9.3
Rated Cooling Capacity	22,000 Btu/hr
Rated Heating Capacity	24,000 Btu/hr
Power Supply	208-230 60 1ph
System List Price	\$2,825.00
Net Price	\$2,825.00

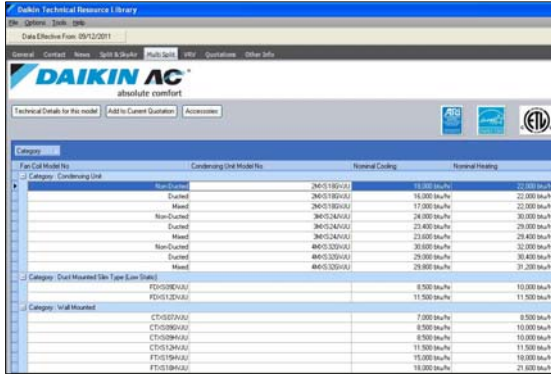
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TRL – Multi-Split




- All-in-one stop for:
 - Model numbers
 - Combinations (indoor/outdoor)
 - Nominal cooling & heating capacities
 - Technical specs
 - Images
 - Efficiency ratings
 - Approximate pricing
 - Quotations
 - Accessories

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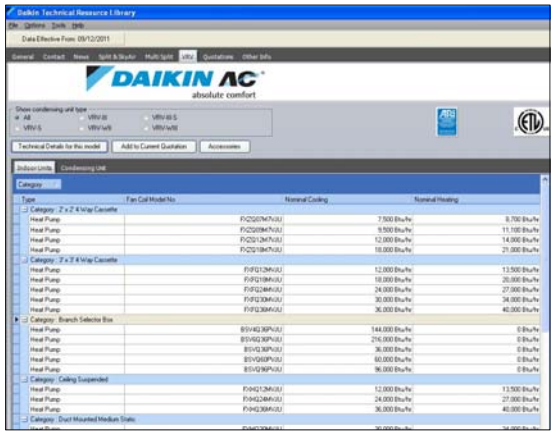
Category	Fan Coil Model No.	Condensing Unit Model No.	Nominal Cooling	Nominal Heating
Category: Condensing Unit	Non-Ducted	240-S180V(U)	16,000 Btu/hr	22,000 Btu/hr
	Ducted	240-S180V(U)	16,000 Btu/hr	22,000 Btu/hr
	Mixed	240-S180V(U)	17,000 Btu/hr	22,000 Btu/hr
	Non-Ducted	240-S240V(U)	24,000 Btu/hr	30,000 Btu/hr
	Ducted	240-S240V(U)	23,400 Btu/hr	29,000 Btu/hr
	Mixed	240-S240V(U)	23,400 Btu/hr	29,400 Btu/hr
Category: Duct Mounted Slim-Type (Low Static)	Non-Ducted	840-S320V(U)	30,000 Btu/hr	33,000 Btu/hr
	Ducted	840-S320V(U)	29,000 Btu/hr	30,400 Btu/hr
Category: Duct Mounted Slim-Type (Low Static)	Non-Ducted	840-S320V(U)	29,000 Btu/hr	31,200 Btu/hr
	Mixed	840-S320V(U)	29,000 Btu/hr	31,200 Btu/hr
Category: Wall Mounted	FD050R(U)		8,500 Btu/hr	10,000 Btu/hr
	FD0712R(U)		11,500 Btu/hr	13,500 Btu/hr
	CT050R(U)		7,000 Btu/hr	8,500 Btu/hr
	CT070R(U)		8,500 Btu/hr	10,000 Btu/hr
	CT090R(U)		11,500 Btu/hr	13,500 Btu/hr

TRL – VRV




- All-in-one stop for:
 - Model numbers
 - Combinations (indoor/outdoor)
 - Nominal cooling & heating capacities
 - Technical specs
 - Images
 - Efficiency ratings
 - Approximate pricing
 - Quotations
 - Accessories

Slide 26 © 2012 Daikin AC

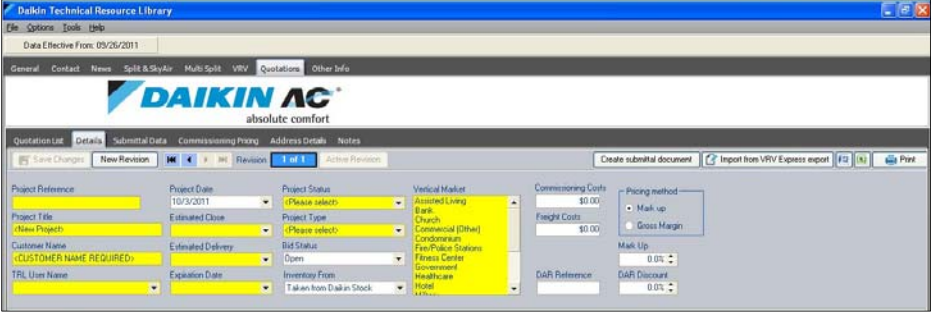


Category	Type	Fan Coil Model No.	Nominal Cooling	Nominal Heating
Category: 2 x 2 & 4-Wire Cascade	Head Pump	F0207M(U)	7,500 Btu/hr	8,700 Btu/hr
	Head Pump	F0208M(U)	8,500 Btu/hr	11,100 Btu/hr
	Head Pump	F0212M(U)	12,000 Btu/hr	14,000 Btu/hr
Category: 2 x 2 & 4-Wire Cascade	Head Pump	F0207M(U)	18,000 Btu/hr	21,000 Btu/hr
	Head Pump	F0208M(U)	20,000 Btu/hr	23,000 Btu/hr
	Head Pump	F0212M(U)	24,000 Btu/hr	27,000 Btu/hr
Category: Branch Selective Box	Head Pump	F0207M(U)	36,000 Btu/hr	42,000 Btu/hr
	Head Pump	B0142R(U)	144,000 Btu/hr	0 Btu/hr
	Head Pump	B0142R(U)	216,000 Btu/hr	0 Btu/hr
Category: Ceiling Suspended	Head Pump	F0403M(U)	12,000 Btu/hr	13,500 Btu/hr
	Head Pump	F0403M(U)	24,000 Btu/hr	27,000 Btu/hr
	Head Pump	F0403M(U)	36,000 Btu/hr	42,000 Btu/hr

TRL – Quotations



- Click on “Quotations” from Main Menu to get a blank quotations screen
- Build quote using entry fields and drop down menus



The screenshot shows the 'Quotations' screen with the following fields and options:

- Project Reference:** [Blank]
- Project Date:** 10/3/2011
- Project Status:** (Please select)
- Vertical Market:** Assisted Living, Bank, Church, Commercial (Other), Condominium, Fire/Pulse Stations, Fitness Center, Government, Healthcare, Hotel, Other
- Commissioning Costs:** \$0.00
- Pricing method:** Mask up, Gross Margin
- Freight Cost:** \$0.00
- Mask Up:** 0.0%
- DAR Preference:** [Blank]
- DAR Discount:** 0.0%

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TRL – Other Info



- Other Info
 - PDF Documents
 - Links
 - Software




The screenshot shows the 'Other Info' screen with the following sections:


- PDF documents:**
 - VRV Indoor Options
 - VRV Basic Op Guide
 - VRV Combo Guide
 - VRV B Tech Guide
 - VRV full Tech Guide
 - BPIC/ET Engineering Data
 - Error Code Summary
- Links:**
 - Daikin Trade Price Book
 - Daikin AC Data
 - Daikin Industries
 - Hi-Group International
 - VRV DirectBuy
 - AD-PAE
 - ESGRC FLUED
 - EnergyCalc Tool
 - Purchase EnergyPlus
- Software:**
 - VRV Spacing
 - VRV Tool/Spacing
 - VRV Software
 - Psychrometric
 - Links Converter

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Daikin eEquip App




- **Please note: Access to modules requires registration through the Daikin eEquip app (Wifi or Cellular service required). Users will be designated a user type based on registration criteria and will have access to select modules and functions.**
- **How do I get it?** Search “Daikin eEquip” in the Apple App Store or Android Market for a quick and easy download. Best of all, it’s free!
- **Is my smart phone or tablet compatible with Daikin eEquip?** Daikin eEquip is available for Apple devices running iOS 5.0 or higher and Android devices running Android 4.1 or higher.
- **Features Fit for Your On-the-Go Needs** Instantly search, share, and send information via email or text such as:
 - Technical data
 - Product manuals and documents
 - Marketing flyers and brochures
 - Pricing and availability of spare parts and generated quotations
 - Daikin 3D Dealers by city along with their direct contact information



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Dr. Daikin



- Quick and easy way to identify fault codes related to Daikin VRV, SkyAir and RA systems
- Instantly receive information related to error code
- Unlimited 24 x 7 x 365 access to Dr. Daikin at no charge via three methods:
 - Web via PC – www.drdaikin.com
 - Mobile web via smart phone – www.mobile.drdaikin.com
 - SMS text messaging (standard SMS text rates per carrier apply) to [32705](tel:32705)

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Dr. Daikin - Results



- Error details
- Location of problem
- Malfunction
- Causes
- Applicable products



DAIKIN AC
Dr. Daikin Diagnosis

Error Code: **A3**

A3
Error Details

Indoor Unit
Malfunction
Malfunction of drain level control system

Causes
Drain pipe clogging, improper drain piping work
Defect of drain pump
Defect of float switch

Applicable Products
SkyAir
VRV
RA



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Spare Parts Group



- Highly trained staff dedicated to managing all aspects of parts needs and requirements
- Primary responsibility is efficient and timely processing of all spare parts needs including:
 - Assistance with parts identification and availability
 - Provide model parts diagrams
 - Processing parts orders
 - Handling RMAs for parts

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Spare Parts Group



- Other key responsibilities include:
 - Parts inventory
 - Parts sales history for past 5 years
 - Stocking levels of parts (minimum & maximums, lead times)
 - Warranty failure rates by part, model, region
 - Identify functional importance of each part
 - Quickly respond to customer's inquiries and needs

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Spare Parts Group – Contact Info



1645 Wallace Drive, Suite 110
Carrollton, Texas, 75006

Tel: 1-866-4DAIKIN
Tel: 972-512-1957

Fax: 1-866-367-4750
Fax: 972-245-1038

Web: www.daikinac.com

E-mail: spareparts@daikinac.com



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Daikin AC University



Committed to your success!



Slide 35 © 2012 Daikin AC

Daikin AC University – Our Mission



Our mission is to offer our customers the best training in the industry, exhibited by a variety of quality training programs designed to provide the tools and resources needed for our customers to be successful.



Slide 36 © 2012 Daikin AC

Daikin AC University – Commitment



We embrace and stand by this commitment through the development of our state-of-the-art training centers, highly trained and experienced instructional staff and professionally developed curriculum.



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Daikin AC University – Curriculum



- Courses designed by training professionals around specific objectives based on industry needs and job task analysis
- Choice of instructional settings based on the program goals and our students' needs including:
 - On-line/on-demand web-based training (WBT)
 - Instructor-led webinars
 - Instructor-led on-site training
 - Instructor-led classroom training at Daikin Authorized training facilities.



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Professional Development Hours



- The majority of states require professional engineers and others to complete professional development hours for license renewal.
- Ten professional development hours count towards one continuing education unit.
- Daikin AC is pleased to provide professional development hours in most states.



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NATE Testing



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Daikin AC University – Contact Info



1645 Wallace Drive, Suite 110
Carrollton, Texas, 75006

Tel: 1-866-4DAIKIN
Tel: 972-245-1510

Fax: 972-245-1038


Web: www.daikinuniversity.com

E-mail: training@daikinac.com



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Closing & Review



- Learning Objectives:
 - Gain a basic understanding of the Distributor's Handbook.
 - Understand what the Technical Resource Library (TRL) is and what it can do for you.
 - Become familiar with the Dr. Daikin service and how to use it.
 - Gain a basic understanding of the Daikin Spare Parts Group and how to use them as a resource.
 - Understand who Daikin AC University is and what they can do for you.

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RLC Product & Applications SA-RLC-0113-TTK-01A



2013

Scheduled Time	Activity
Day 1	
Pre-Class	Coffee/Continental Breakfast
	Welcome, Logistics, Introductions, Etc.
	Module 1.0: Introduction to Daikin
	Module 2.0: Market Opportunities
	Module 3.0: The Daikin Difference
	Module 4.0: Features, Functions, & Benefits
	Module 5.0: Daikin Resources