



## SAVR-D PRODUCT LAUNCH – 50/60 HZ

HEATING  COOLING  WATER HEATING

# Agenda

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- **Factory Overview:** Manufacturing Capability & Factory video
- **Product**
  - Nomenclature & Product Range
  - What is the difference between SAVR-C and SAVR-D?
  - Product Specifications
  - Product Features
  - Competition Comparison
- **Marketing**
- **Service**
- **Pricing**
- **Wrap Up**



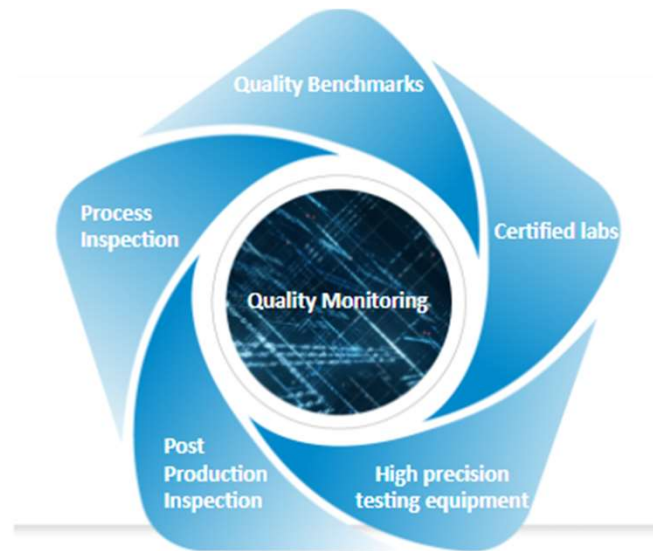
# MANUFACTURING CAPABILITY

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## Manufacturing Capability

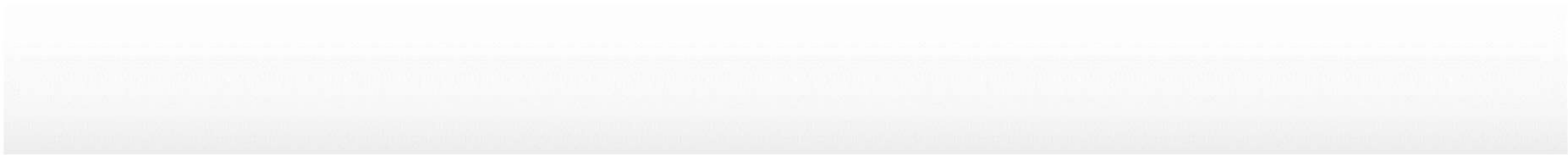
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- ISO 9001 certified state-of-the-art factory located in Ningbo.
- Robust R&D, a strong understanding of design and superior manufacturing processes.
- Capability to conduct quality checks and reliability tests
- ISO 17025: 2017 Laboratory Accreditation Certificate
- Psychrometric, Condensing and Environmental Test labs to develop state-of-the-art VRF Products.

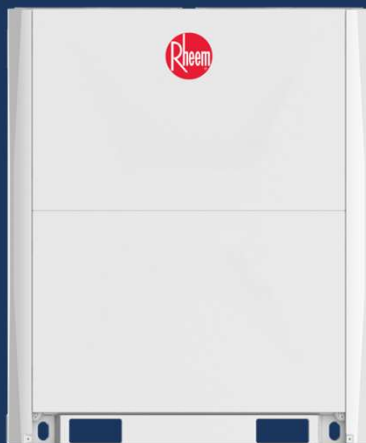


# Manufacturing Video

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## PRODUCT LINE-UP



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## Outdoor Unit Product Line Up

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New Series: Without X panel

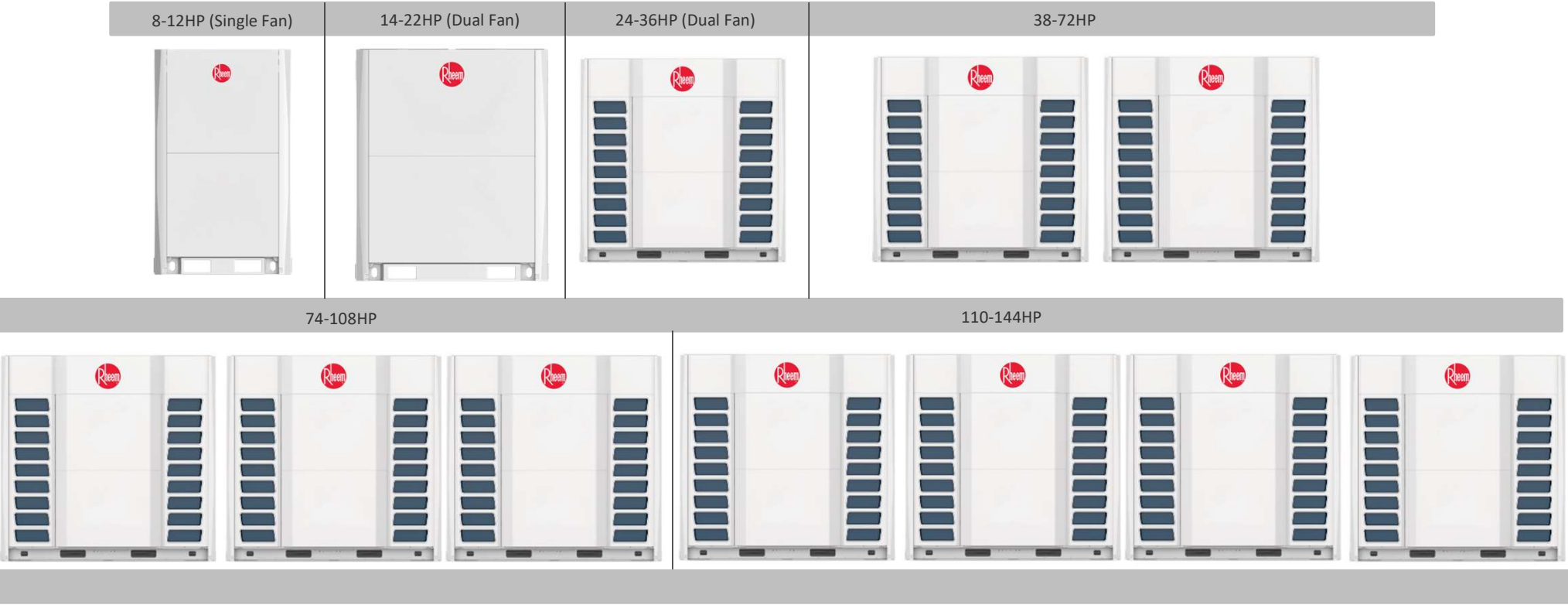


Old Series: With X panel



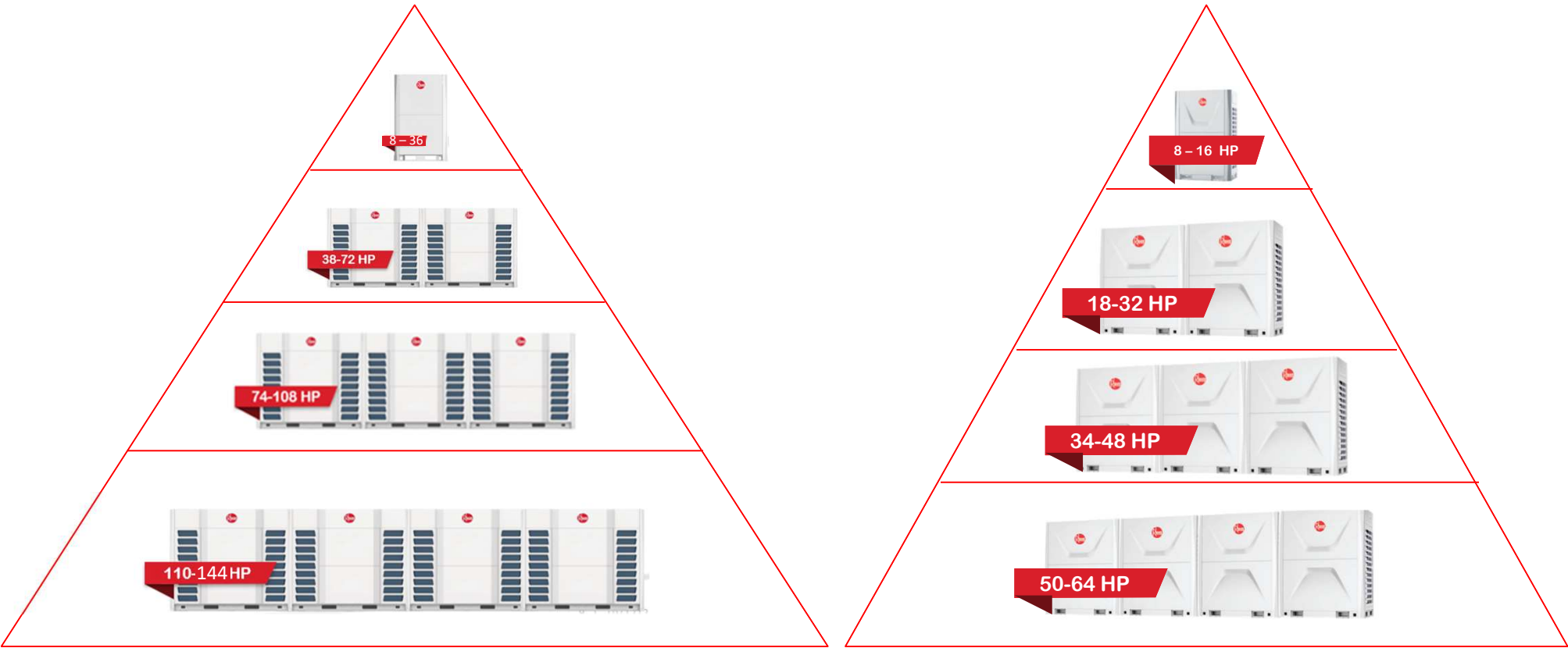
# Outdoor Unit Product Line Up

Widest Capacity Range - The max combination of 4 ODUs can reach up to **144HP**





# Capacity Range Comparison between SAVR-C and SAVR-D



SAVR-D

SAVR-C



## PRODUCT OVERVIEW



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Did you know?

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Single Model for 36 HP



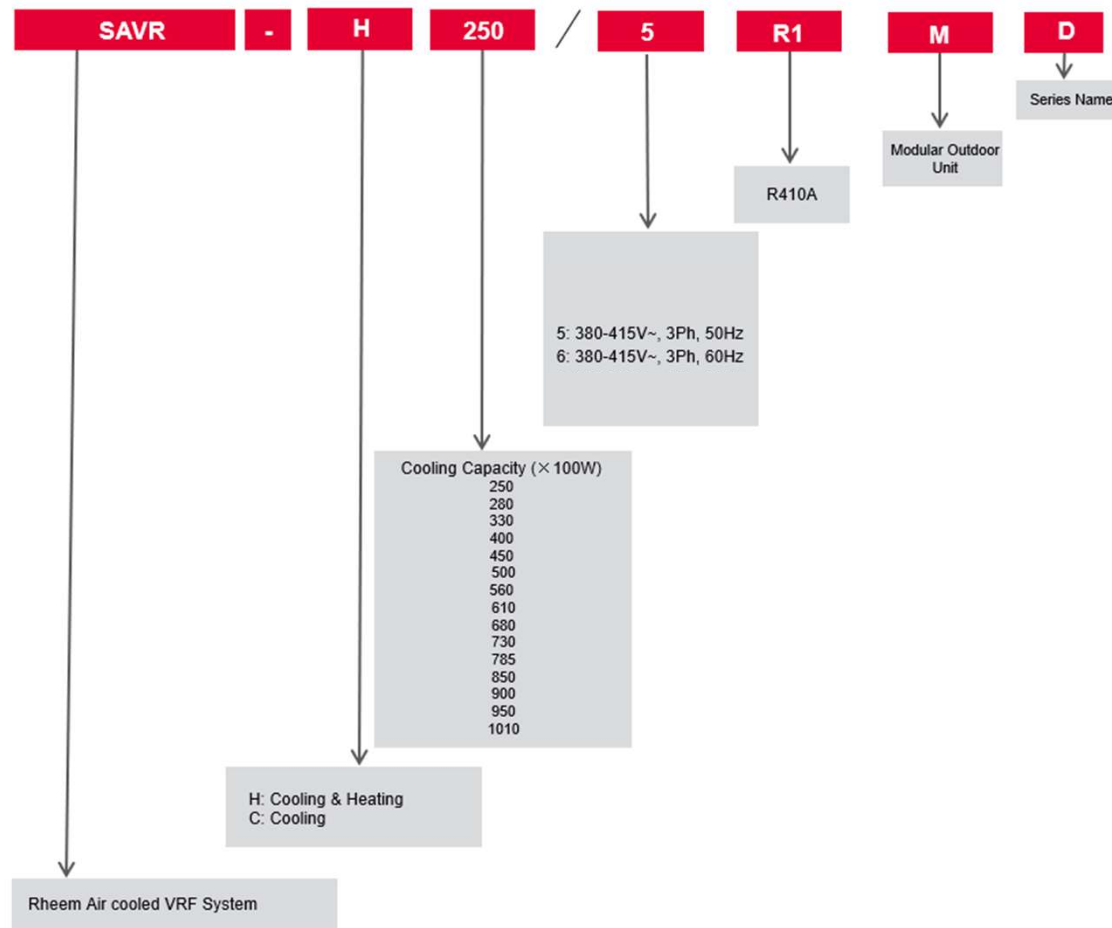
Two models to cover 36 HP



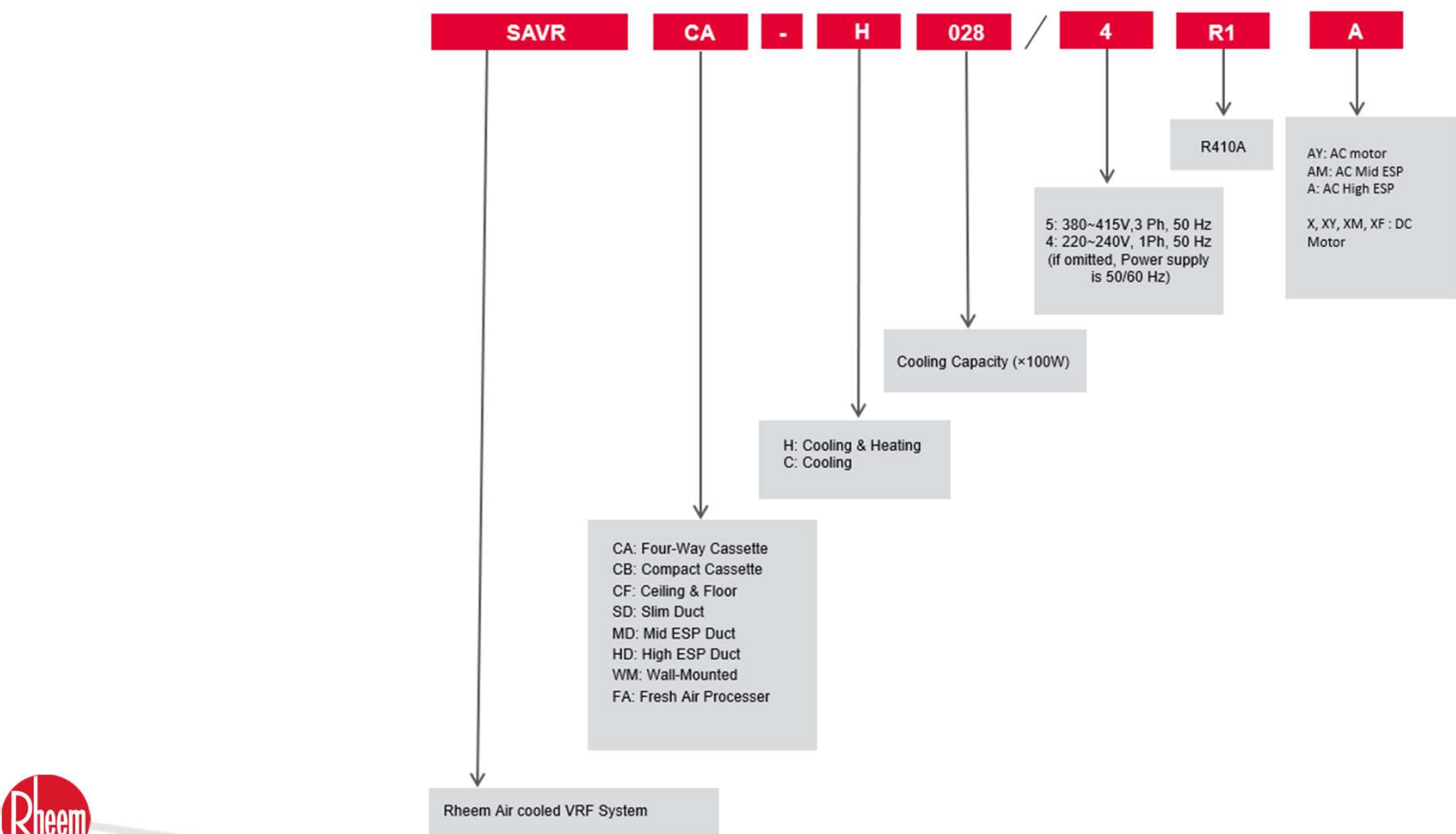
Two models to cover 36 HP



# Rheem Outdoor Unit Nomenclature



# Rheem Indoor Unit Nomenclature



## Combinations



Misconception: Any random combinations can be connected to meet the desired capacity.

Only Tested Combinations can be connected.

A Quick Selection Guide is also launched to simplify this.

38 HP



14 HP



24 HP



# Quick Selection Guide



Series Name	Model Names	HP	Combination type	T1 (100 % CR)			T3 (100 % CR)			CSPF Btu/h/W	Compressor Type x Quantity
				Cooling Capacity (kW)	Power Input (kW)	EER (W/W)	Cooling Capacity (kW)	Power Input (kW)	EER (W/W)		
SAVR-D	SAVR-H250/5R1MD	8	8	25.2	5.99	14.35	22.2	7.55	10.05	16.00	DC Inverter Scroll x 1
SAVR-D	SAVR-H280/5R1MD	10	10	27.9	6.98	13.65	24.9	9.02	9.40	15.30	DC Inverter Scroll x 1
SAVR-D	SAVR-H330/5R1MD	12	12	33.3	8.62	13.15	29.4	10.24	9.75	14.80	DC Inverter Scroll x 1
SAVR-D	SAVR-H400/5R1MD	14	14	40	10.67	12.80	33.6	11.62	9.90	14.10	DC Inverter Scroll x 1
SAVR-D	SAVR-H450/5R1MD	16	16	45	13.04	11.80	37.2	13.73	9.20	14.00	DC Inverter Scroll x 1
SAVR-D	SAVR-H500/5R1MD	18	18	50	13.70	12.45	42	15.73	9.05	13.80	DC Inverter Scroll x 2
SAVR-D	SAVR-H560/5R1MD	20	20	56	16.14	11.80	44	17.05	8.85	13.60	DC Inverter Scroll x 2
SAVR-D	SAVR-H610/5R1MD	22	22	61.5	18.64	11.25	46	18.40	8.55	13.50	DC Inverter Scroll x 2
SAVR-D	SAVR-H680/5R1MD	24	24	67	19.42	11.75	52	20.00	8.90	13.40	DC Inverter Scroll x 2
SAVR-D	SAVR-H730/5R1MD	26	26	73	23.17	10.80	57	22.35	8.70	13.35	DC Inverter Scroll x 2
SAVR-D	SAVR-H785/5R1MD	28	28	78.5	25.74	10.40	61	24.40	8.50	13.30	DC Inverter Scroll x 2
SAVR-D	SAVR-H850/5R1MD	30	30	85	28.33	10.25	63.5	25.60	8.45	13.25	DC Inverter Scroll x 2
SAVR-D	SAVR-H900/5R1MD	32	32	90	30.20	10.20	65	26.53	8.35	13.20	DC Inverter Scroll x 2
SAVR-D	SAVR-H950/5R1MD	34	34	95	32.20	10.05	67.5	27.89	8.25	13.10	DC Inverter Scroll x 2
SAVR-D	SAVR-H1010/5R1MD	36	36	101	34.47	10.00	71.5	29.79	8.20	13.05	DC Inverter Scroll x 2



# Compressor Quantity in Outdoor units

SAVR-D Lineup

Compressor quantity	8-16 HP	18-36 HP	38-42 HP	44-72 HP	74-78 HP	80-108 HP	110-44 HP
1	X						
2		X					
3			X				
4				X			
5					X		
6						X	
8							X





# Compressor Comparison

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SAVR-D Lineup

Compressor Quantity	8-16 HP	18-36 HP
1	X	
2		X

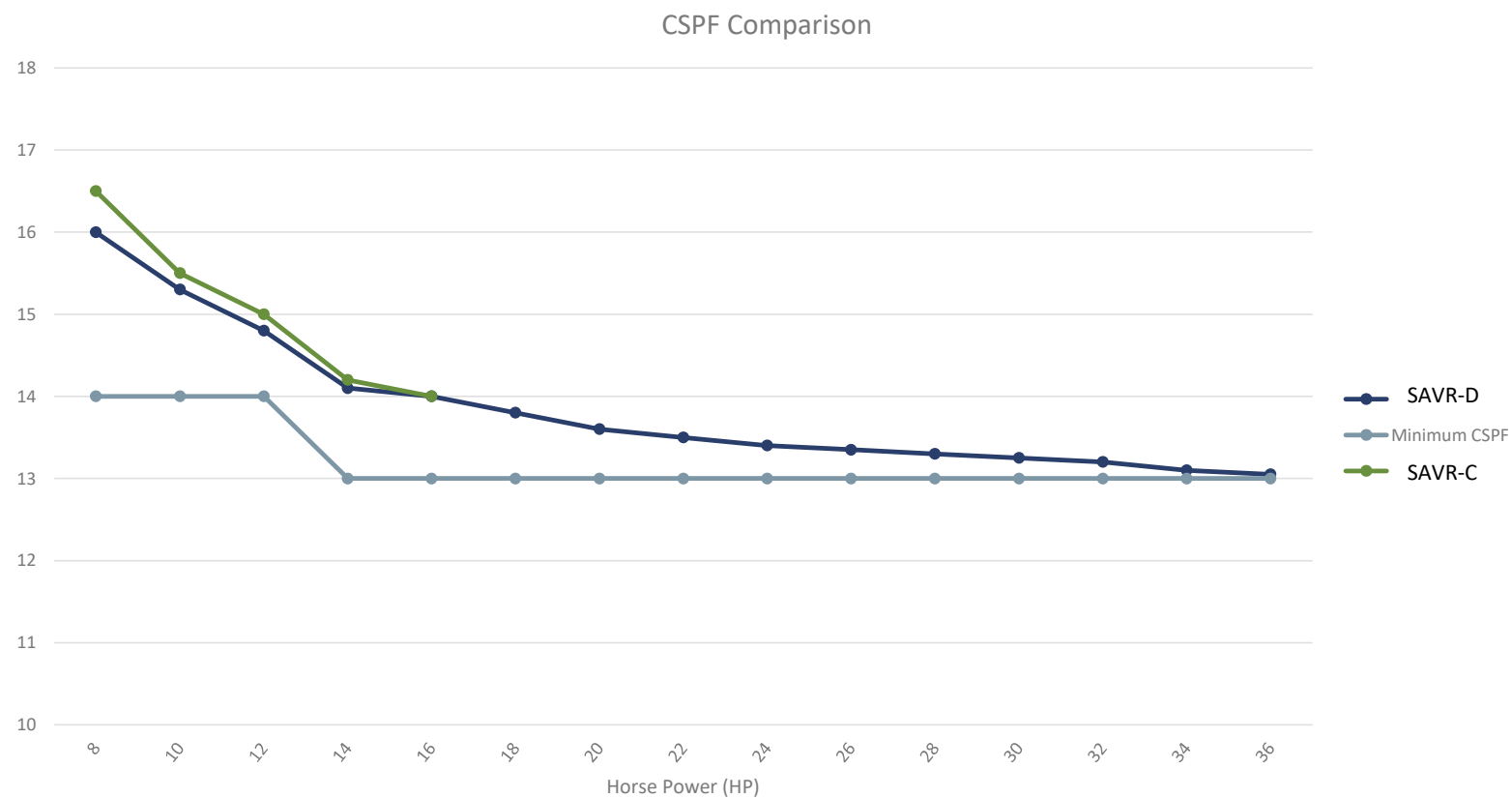
*\*2 models of Compressors*

SAVR-C Lineup

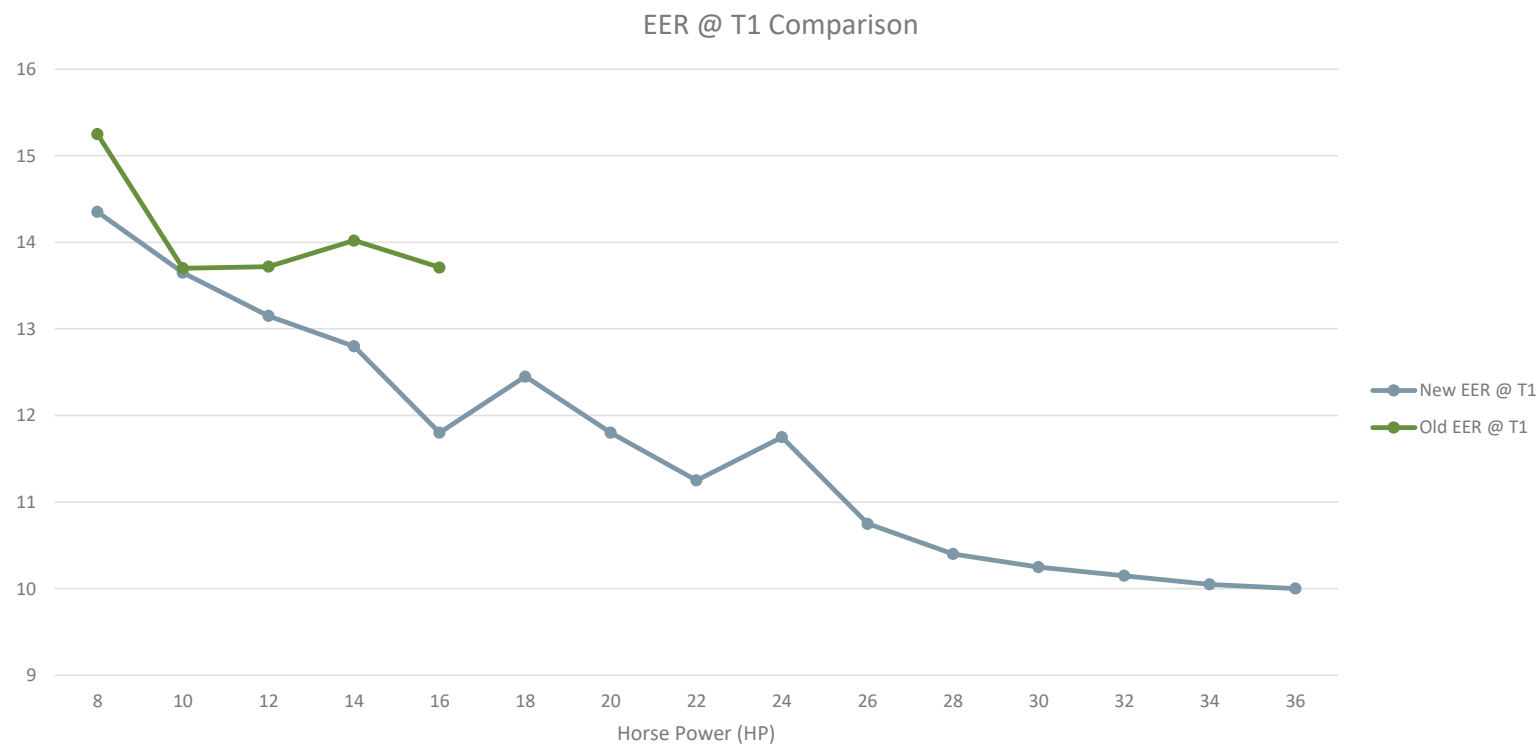
Compressor Quantity	8-12 HP	14-16 HP
1	X	
2		X



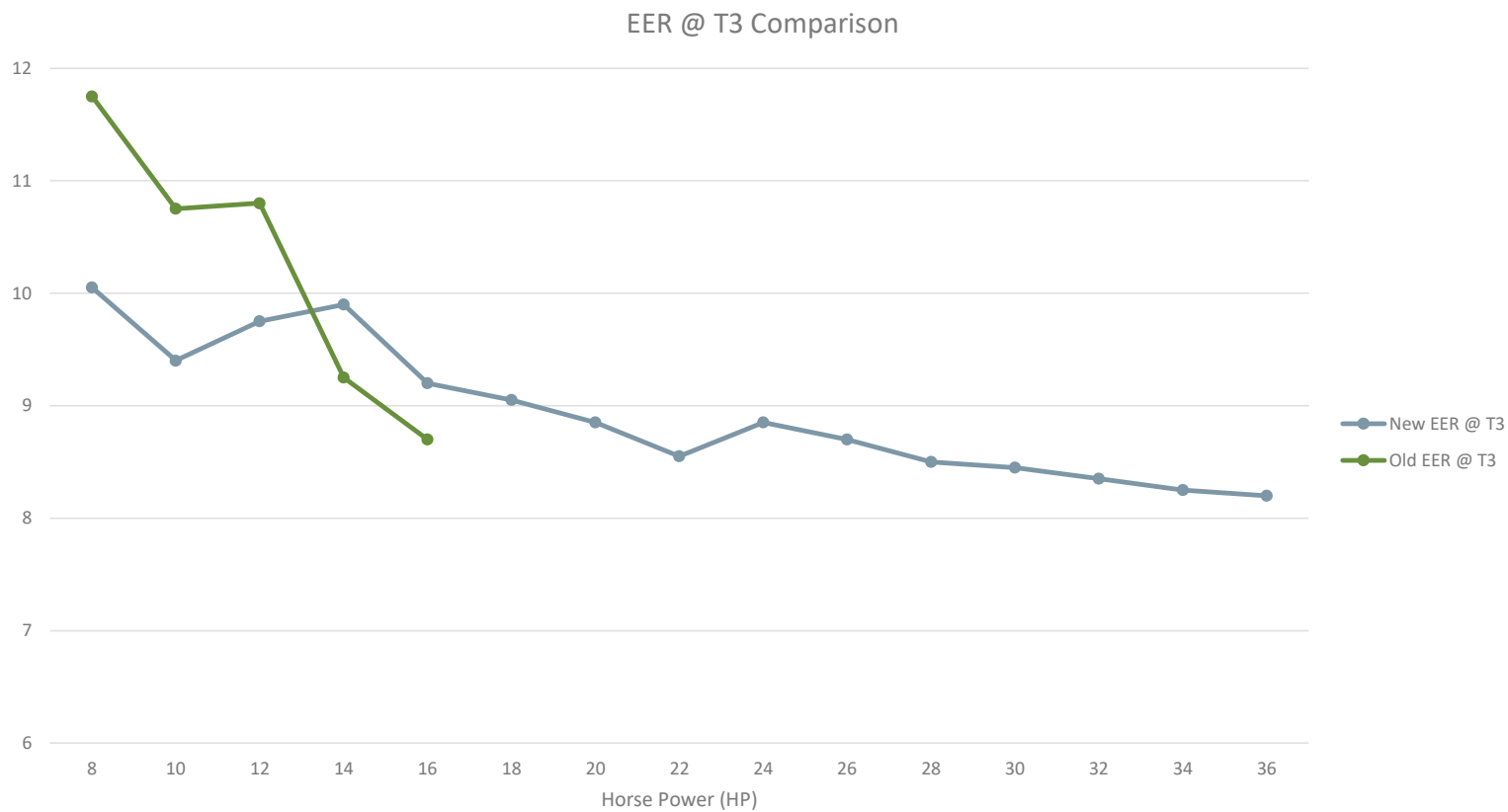
# Comparison with the old SAVR-C series



# Comparison with the old SAVR-C series



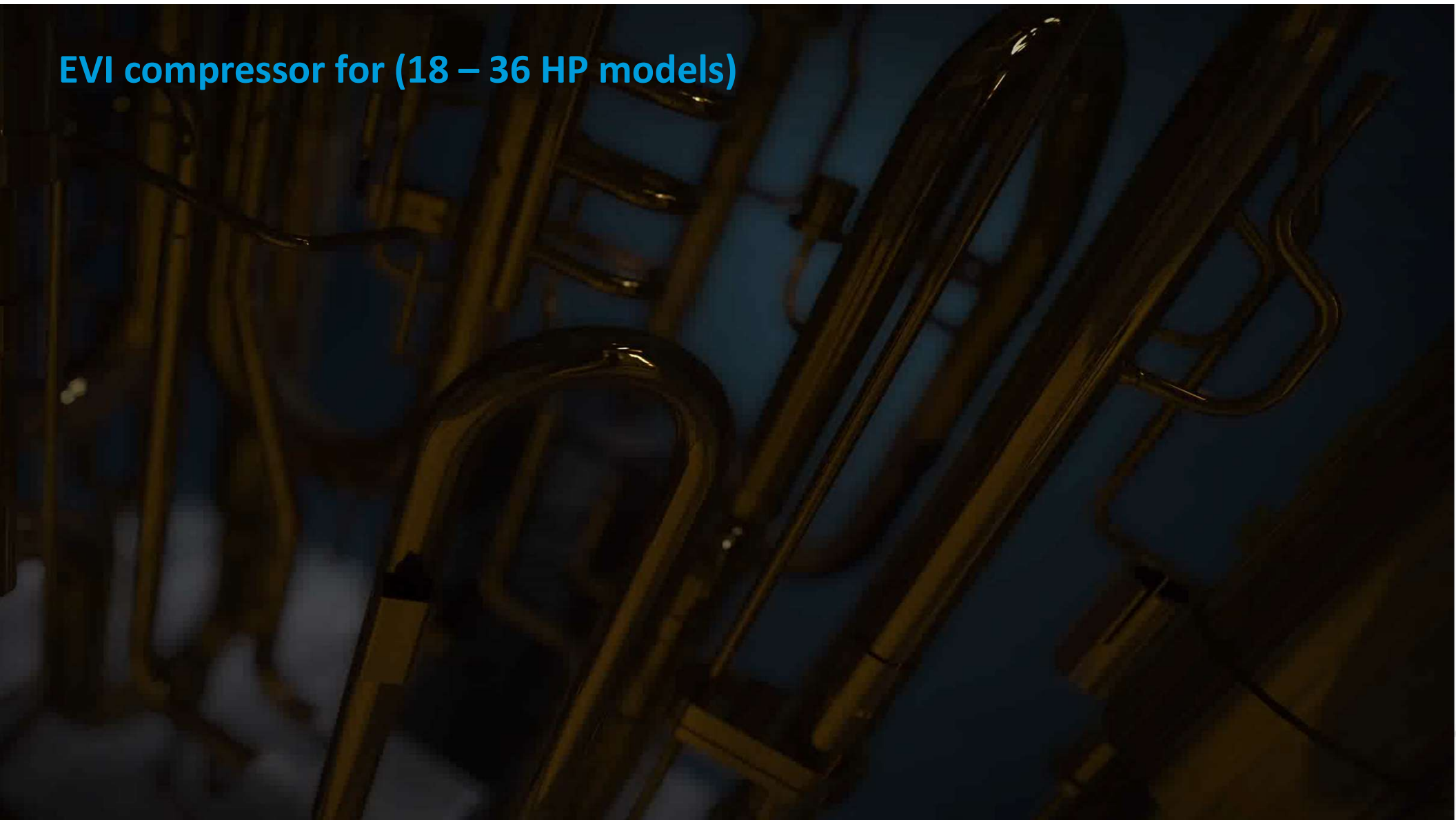
# Comparison with the old SAVR-C series



# PRODUCT FEATURES

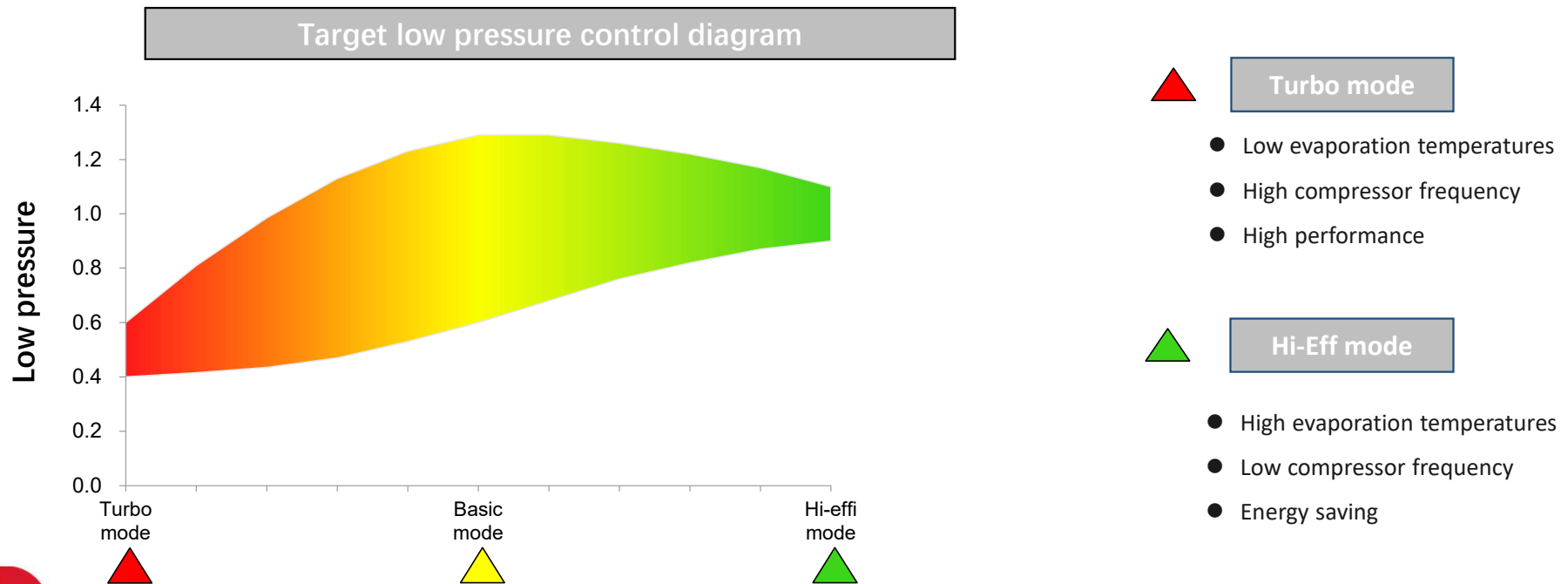
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**EVI compressor for (18 – 36 HP models)**



# Multiple Energy-Saving Control

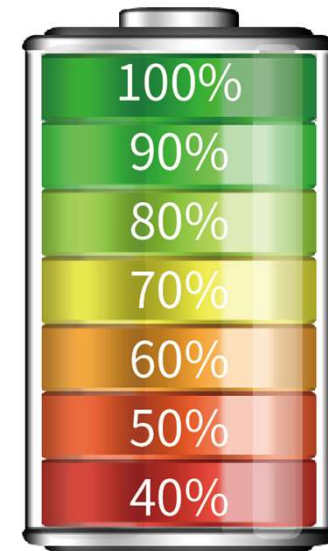
There are 3 different control modes that can be adjusted which will adjust the refrigerant pressure adjustment to achieve different evaporation temperatures. **The purpose of this is to achieve High performance OR Energy saving.**



## Seven-levels of Limited Usage

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- The Outdoor unit supports seven levels of output capacity control.
- It prevents tripping and keeps the Outdoor unit running during electricity supply restriction conditions.

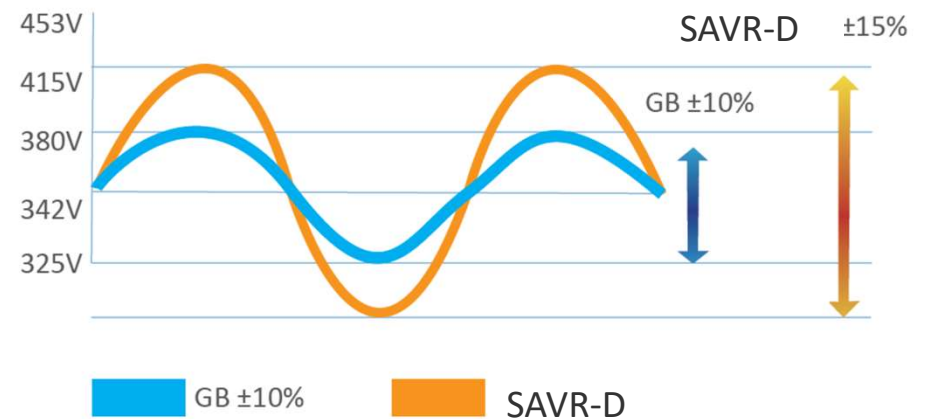




## Wide Operation Range

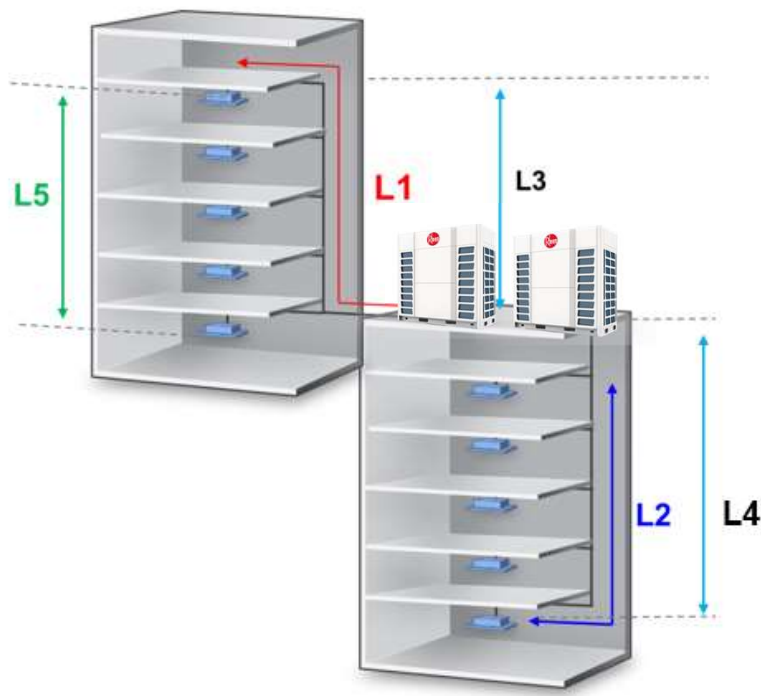
Cooling mode ambient temperature range :  $-15^{\circ}\text{C}$  to  $55^{\circ}\text{C}$

Heating mode ambient temperature range :  $-30^{\circ}\text{C}$  to  $24^{\circ}\text{C}$



# Long Piping Length

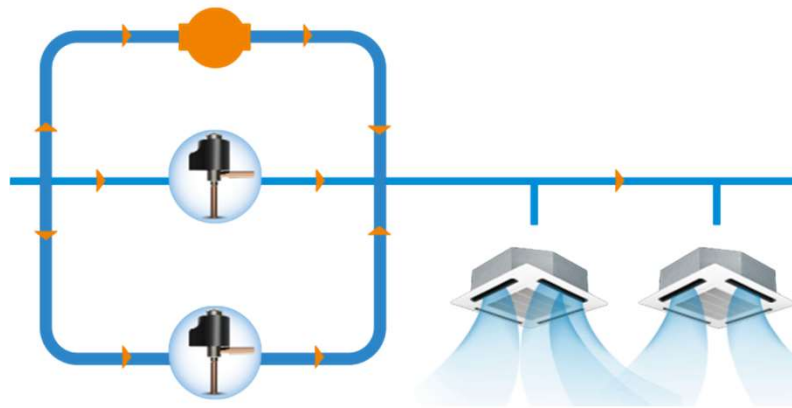
Long piping capability allows designer/installer more flexible installation design.



-----	Piping length	
-----	Total piping	1000m
L1	Longest length – actual (equivalent)	200m
L2	Longest length after first branch	90m
L3	Largest height difference between IDU and ODU (down)	130m
L4	Largest height difference between IDU and ODU (up)	110m
L5	Largest height difference between IDUs	30m

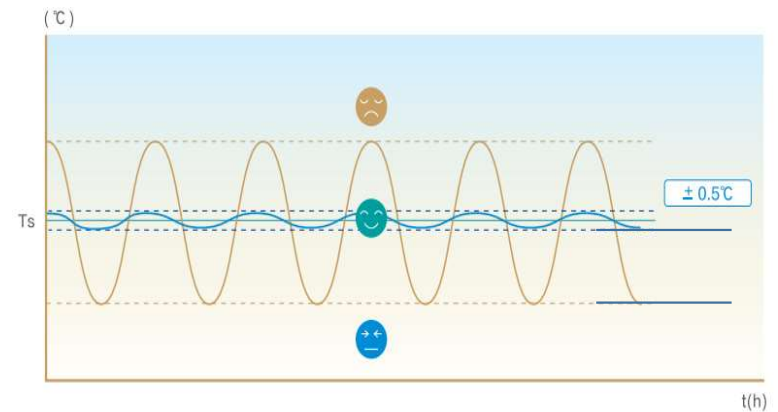


## High Precise Control



### Double EXV with by-pass valve

Stepless regulation of refrigerant flow

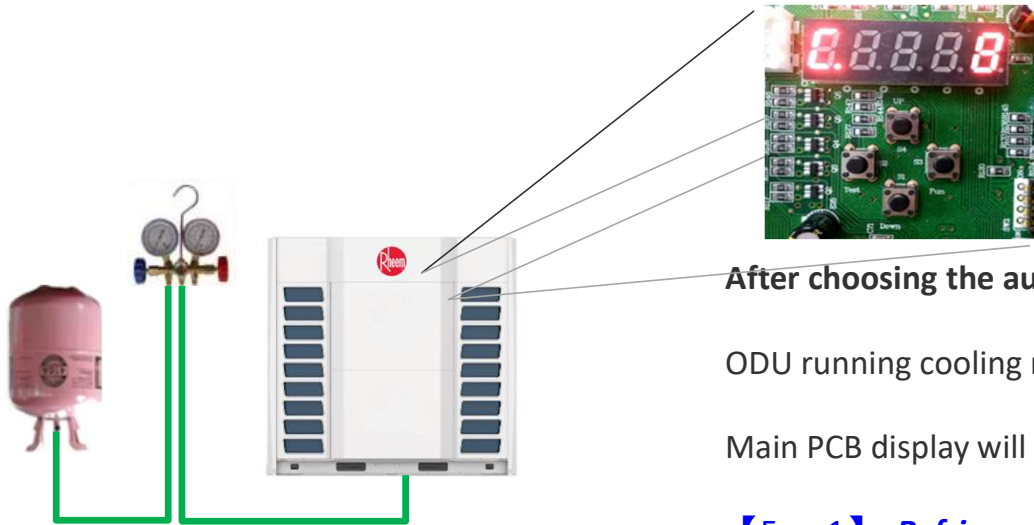


### 0.5°C Fluctuation temperature control

Optimized thermal on/off control logic, through target super-heat and temperature difference between set and room temperature to adjust pulse of EXV, achieve high precise control, less temperature fluctuation.

# Automatic Refrigerant Charging

- Pressure sensors built-in that monitor the status of the refrigerant and ensure that the adequate amount is charged.
- This enables easier installation and maintenance.



**After choosing the automatic refrigerant charging function**

ODU running cooling mode automatic, according running parameters,

Main PCB display will show *Refrigerant state*:

**【F.....1】 : Refrigerant is not enough**

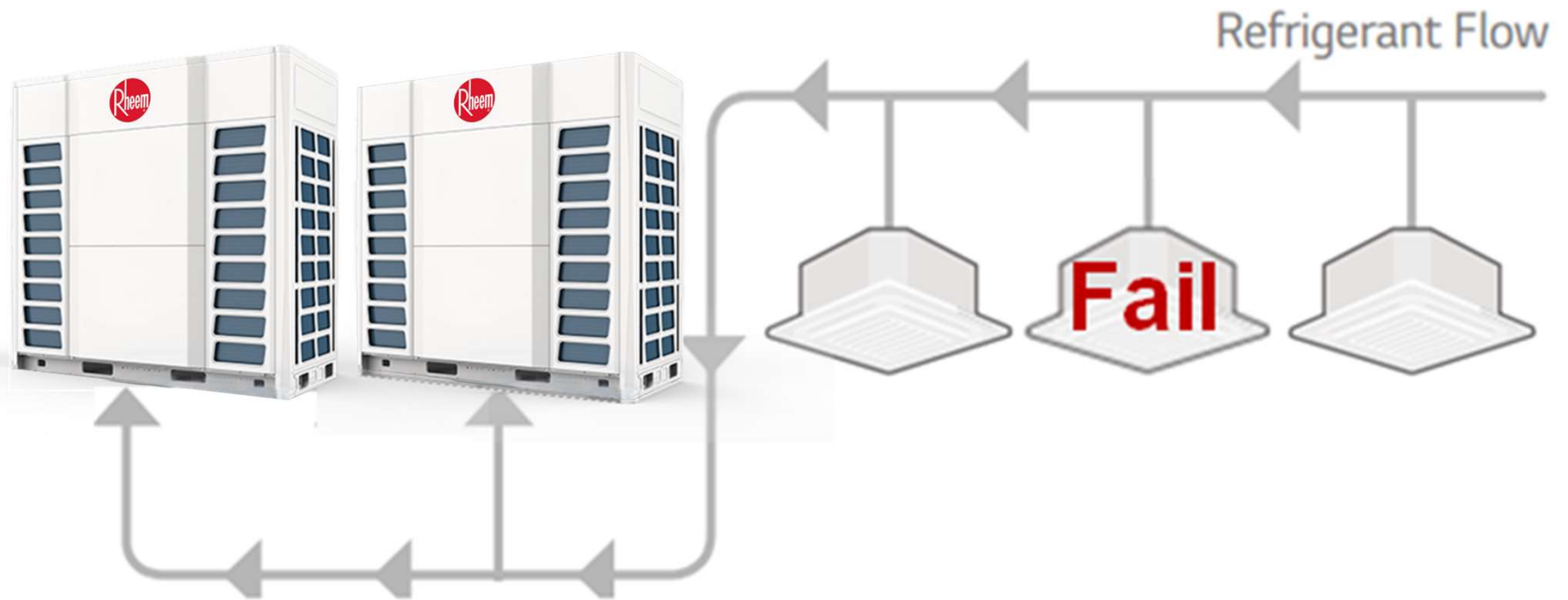
**【F.....2】 : Refrigerant is enough**

**【F.....3】 : Excess of refrigerant**



## Automatic refrigerant recycling

All refrigerant can be recycled to the outdoor unit.



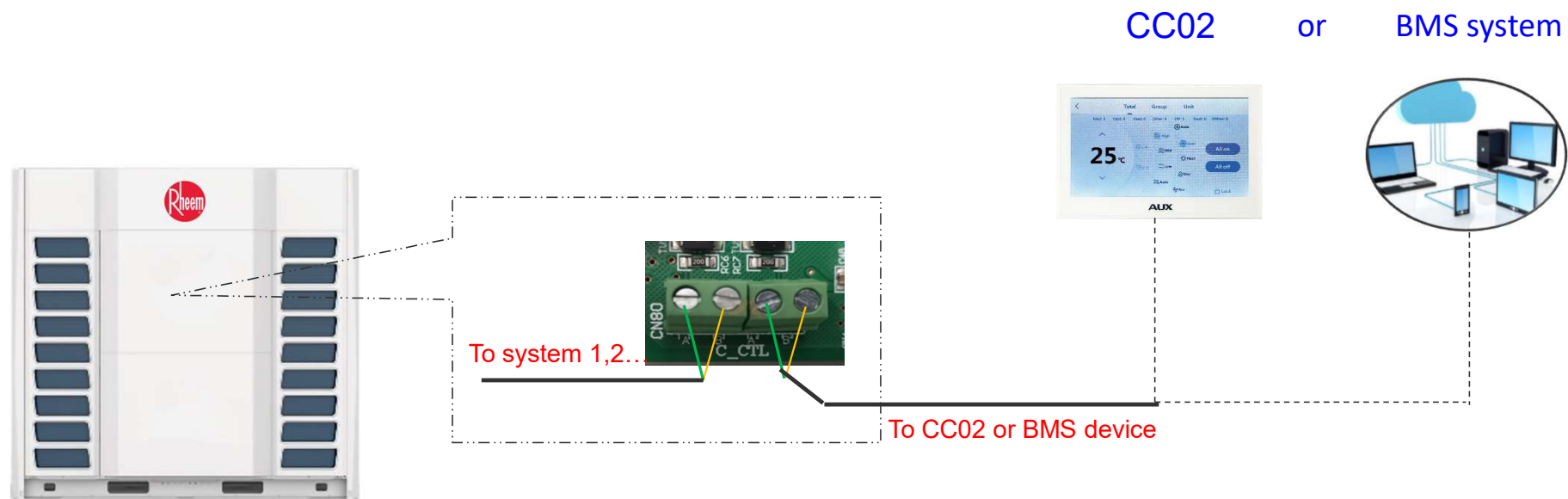
## Alternative Operation Module

The alternative operation module equalizes the running time of outdoor units in a VRF system that has multiple ODU's and rotates the operation for each of the compressors in each unit, thus significantly extending compressor lifespan.



# Centralized controller/MODBUS

The lineup doesn't need a gateway to connect CC02 or BMS system, making installation easier and convenient.



Same function: CC02(Max.64 systems&256 indoor units); MODBUS(Max.255 systems)



## Refrigerant Cooling PCB

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Special piping design, refrigerant runs behind the PCB part, to prevent it from over-heating.

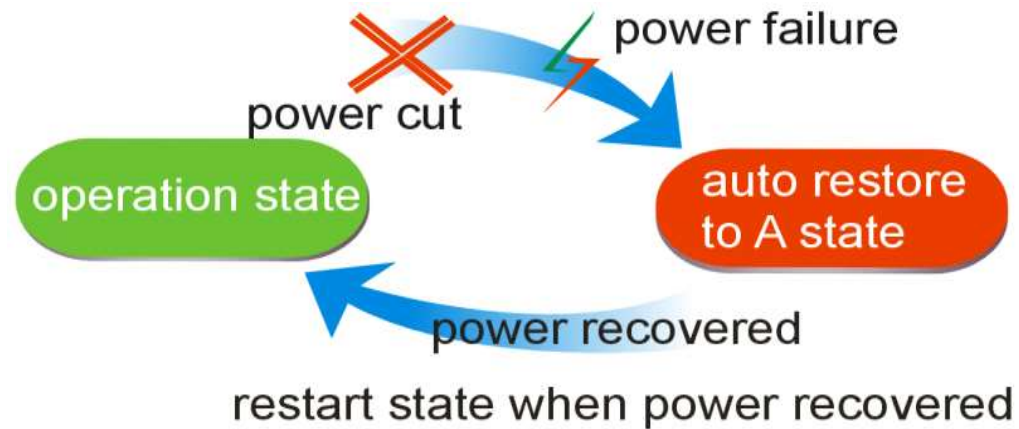




## Auto Restart Function

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The VRF system memorizes the operation settings so in case power is cut off accidentally, it will return to system setting if the power resumes.



# Back Up Technology

## Module Back-up



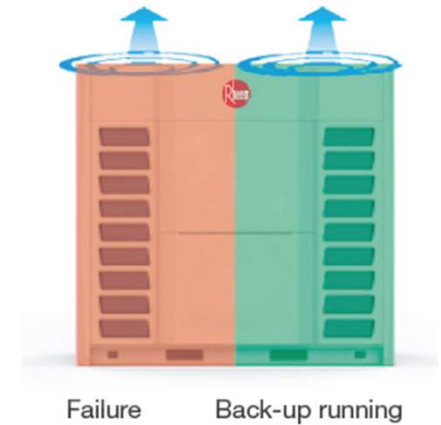
In case one module breaks down, the rest of modules in the same refrigerant system will operate.

## Compressor Back-up



In case one compressor breaks down, the other compressor will ensure that the outdoor unit is operating normally.

## Fan Back-up



In case one fan breaks down, the other fan will ensure that the outdoor unit operates normally



# Product Video

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# SELECTION SOFTWARE

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# VRF Software

Newest Version of the software



ODU

Placement floor number:

Installation height(m):

The max pipe length from ODU to IDU(m):

Height difference(m):

Same system:

Selection mode:

Selected ODU:

Recommended ODU:

Special ratio:

Model	Combination ratio (%)
SAVR-H250/6R1MD	60%
SAVR-H280/6R1MD	54%

Product series: VRF-SAVR-D(SASO)

Model: SAVR-H250/6R1MD

Module combinations

Cooling capacity(kW): 25.2

Heating capacity(kW): 25.2

Dimension

Length(mm): 990

Unit width(mm): 765

Height(mm): 1635

Electricity Power

Rated cooling power(kW): 5.99

Rated heating power(kW): 4.8

Maximum operating cur...: 18

Power type: 60Hz

Electricity Power: 380-415V, 3P

EER: 4.21

COP: 5.25

Pipe size

Gas pipe(mm): 22.2

Liquid pipe(mm): 12.7

Enlarged gas pipe(mm): 25.4

Enlarged liquid pipe(mm): 12.7

Branch joint type

Enlarged branch joint

Gather pipe

Other

Rated water flow rate(L/s): 0

Refrigerant type: R410A

Total factory-charged (kg): 10

Maximum additional refr...: 0

Power factor: 0.9

Maximum number of IDU: 64

Weight(kg): 215

Noise (dB(A)): 58

Export

Ok

Cancel



# VRF Software

Newest Version of the software



ODU

Placement floor number

Installation height(m)

The max pipe length from ODU to IDU(m)

Height difference(m)

Same system

Selection mode

Selected ODU

Recommended ODU

☒ Special ratio

Series

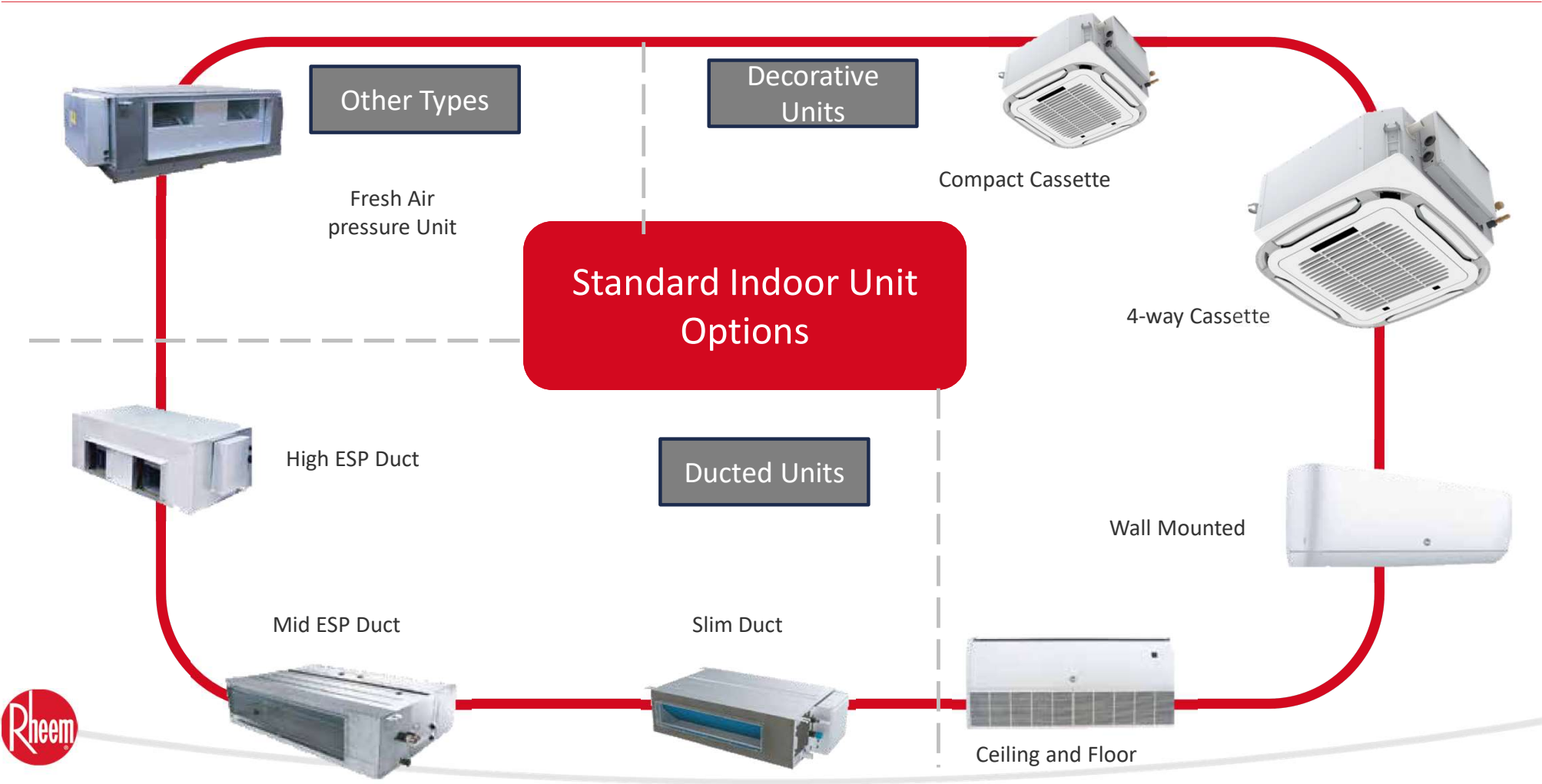
Model	Combination ratio (%)	
SAVR-H250/5R1MC	61%	+
SAVR-H280/5R1MC	55%	+

Normal

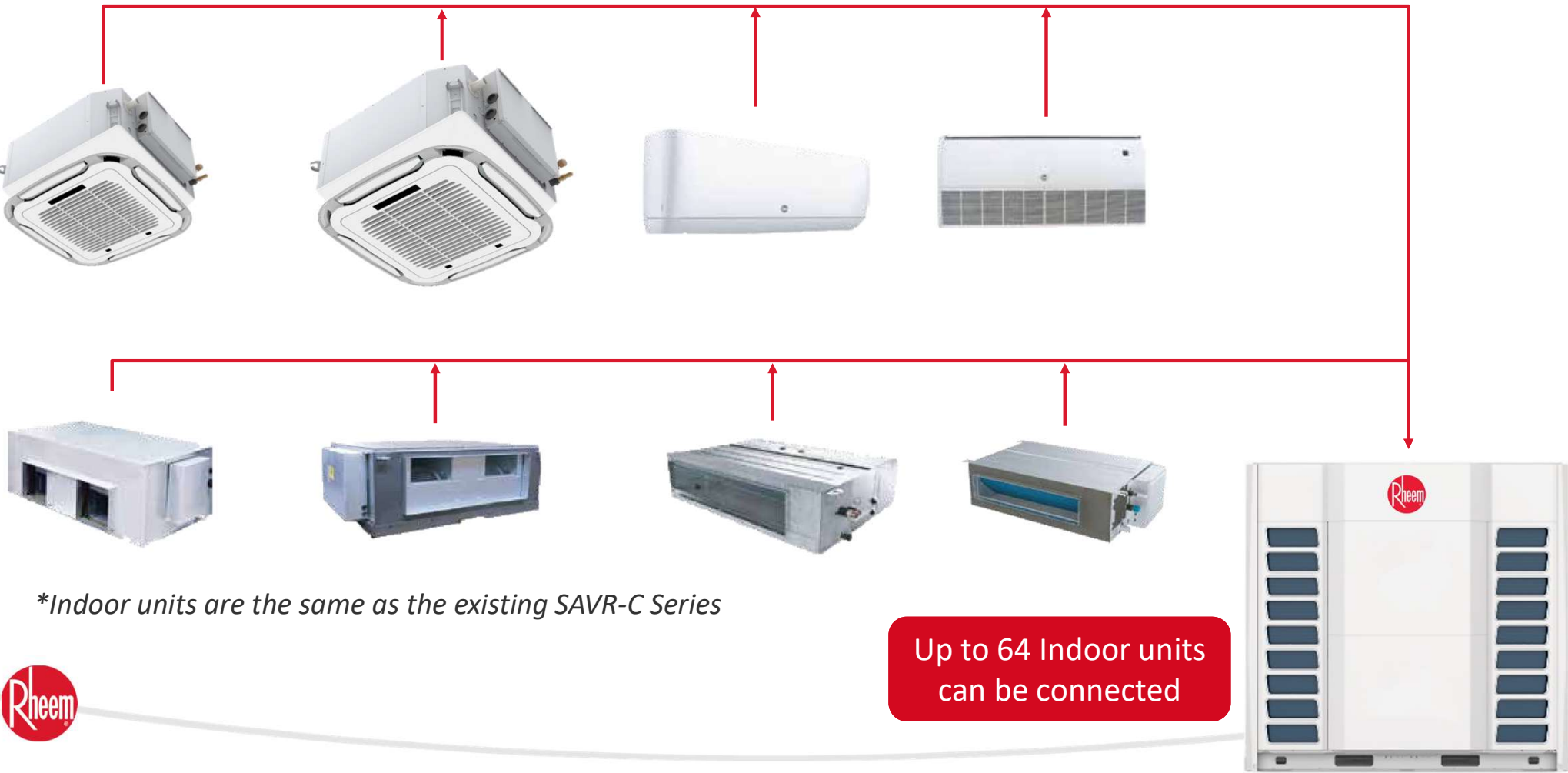
Product series	VRF-SAVR-C(ESMA)
Model	SAVR-H250/5R1MC
Module combinations	
Cooling capacity(kW)	25.2
Heating capacity(kW)	25.2
Dimension	
Length(mm)	990
Unit width(mm)	765
Height(mm)	1635
Electricity Power	
Rated cooling power(kW)	5.64



# Indoor Units



# Indoor Unit connections



*\*Indoor units are the same as the existing SAVR-C Series*



Up to 64 Indoor units  
can be connected



# COMPETITON COMPARISON

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		SAVR-D	Midea	LG	Samsung	Daikin	Mitsubishi
	Top Discharge VRF (Nominal Capacity kW)	25.2 - 101	22.4 - 90	22.4 - 61.6	22.4 - 67.2	22.4 - 45	22.4 - 56
Configuration	Maximum Combinable Modules	4	3	3	3	3	3
	Heat Pump	●	●	●	●	●	●
Specifications	Refrigerant	R410A	R410A	R410A	R410A	R410A	R410A
	Floating Refrigerant Temperature	●	●			●	
	Enhanced Vapor Injection	●	●	●	●		
	Plate Heat Exchanger for Subcooling	●	●		●		
	4 Side Condenser Coil	●	●	●	●	●	
	Operation Range	-15 Deg C to 55Deg C	-24 Deg C to 54Deg C	-20 Deg C to 54Deg C	-24 Deg C to 54Deg C	-20 Deg C to 52Deg C	-20 Deg C to 54Deg C
Piping	Total Pipe Length (m)	1000	1000	1000	1000	1000	1000
	Longest Piping Length (m)	200	175	200	200	165	165
	Level Difference Between IDU and ODU (m)	90	90	110	110	50	50
	Level Difference Between IDUs (m)	30	30	40	50	30	15
Features	Night Silent Mode	●	●	●	●	●	●
	Refrigerant Cooled PCB	●	●	●	●	●	
	Automatic Refrigerant Charging	Standard	Optional			●	
	Real Time Refrigerant Amount Monitoring	Standard	●	●			
	Auto Snow Blowing Function	Custom	Custom	Custom			
	Dust Clean Function	Custom	Custom	Custom			

# COMPLIANCE WITH REGULATIONS

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## Compliance with Regulations

Model Names	HP	Compliance with SASO SASO 2874: 2016	Compliance with QCC-PCS- ASP017.01:2016	Compliance with ESMA UAE.S 5010- 5:2019
SAVR-H250/5R1MD	8	Meets	Meets	Meets
SAVR-H280/5R1MD	10	Meets	Meets	Meets
SAVR-H330/5R1MD	12	Meets	Meets	Meets
SAVR-H400/5R1MD	14	Meets	Meets	Meets
SAVR-H450/5R1MD	16	Meets	Meets	Meets
SAVR-H500/5R1MD	18	Meets	Meets	Meets
SAVR-H560/5R1MD	20	Meets	Meets	Meets
SAVR-H610/5R1MD	22	Meets	Meets	Meets
SAVR-H680/5R1MD	24	Meets	Meets	Meets
SAVR-H730/5R1MD	26	Meets		Meets
SAVR-H785/5R1MD	28	Meets		Meets
SAVR-H850/5R1MD	30	Meets		Meets
SAVR-H900/5R1MD	32	Meets		Meets
SAVR-H950/5R1MD	34	Meets		Meets
SAVR-H1010/5R1MD	36	Meets		Meets



# SERVICE

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# MODULE & COMPRESSOR RUN TIME EQUALIZATION

Cycle 1   Cycle 2

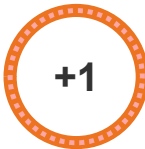


- Load between 0-18%
- Load between 18-36%
- Load between 36-54%
- Load between 54-72%
- Load between 72-90%
- Load > 90%

- Load between 0-18%
- Load between 18-36%
- Load between 36-54%
- Load between 54-72%
- Load between 72-90%
- Load > 90%



Module Runtime  
Equalization



Compressor Run time  
Equalization

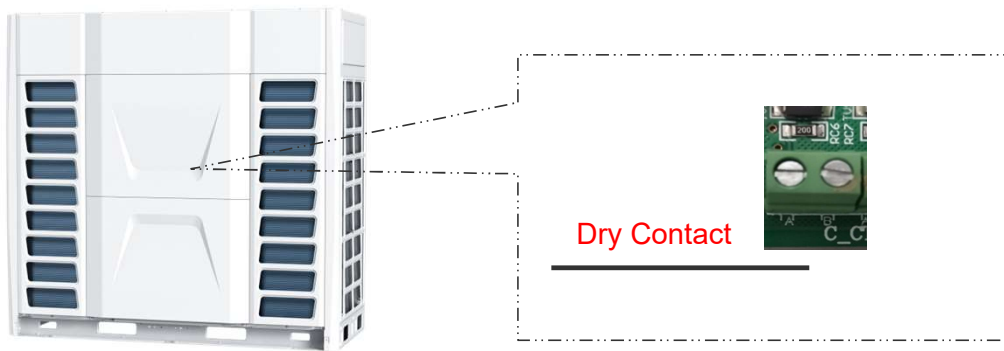
**Benefits:**

Longer life  
Lower maintenance



# Dry Contact for Fire alarm Signal or Insufficient power

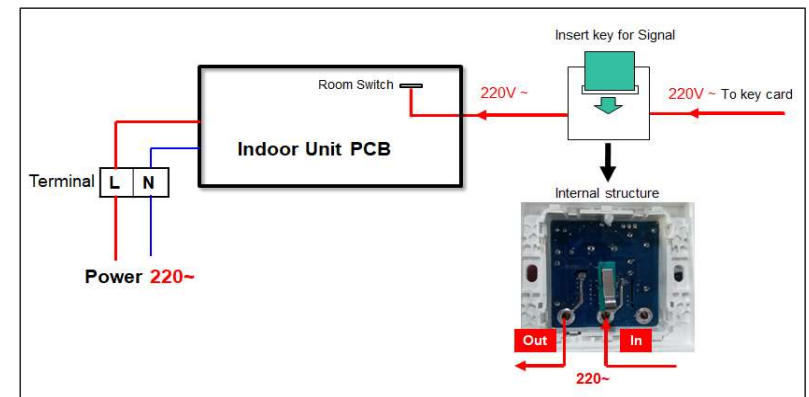
## Dry Contact



- 0: Fire alarm signal(default)
- 1: insufficient power signal (90%)
- 2: insufficient power signal (80%)
- 3: insufficient power signal (70%)
- 4: insufficient power signal (60%)
- 5: insufficient power signal (50%)
- 6: insufficient power signal (40%)



## Room Key card Function



360

VRF IDU Turns off when Key card is removed

+1

Setback Mode is activated

Maintains Room Temperature at 28 C

# MARKETING

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# BRANDING

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## Branding on outdoor unit

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Color logos to be used on the outdoor units for enhanced brand visibility at site



Video




# POINT-OF-SALE

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# Roll up Banners



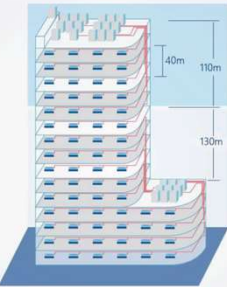
The new degree of comfort\*

## TECHNOL<sup>o</sup>GY

WITH INDUSTRY LEADING FEATURES



360° Installability™






### Long Piping Length

Thanks to the DC inverter control technology and sub-cooling circuit technology, it is possible to design a system with longer piping and elevation difference which make it easier to design and installation.

Max. Total piping length — 1100m  
Max piping length between ODU and farthest IDU — 220m  
Max. piping length from 1st indoor branch to the farthest indoor unit — 40m/120m\* Max. Level difference between indoor units — 40m  
Max. Level difference between ODU and IDU units — 110m/130m

\*The longest length after first branch is 40m as standard can be extended to up to 90m under certain conditions. Please contact your local dealer for further information.



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## TECHNOL<sup>o</sup>GY

WITH INDUSTRY LEADING FEATURES

**Efficiency:** Not only does this make installation and maintenance easier, but it also eliminates any energy waste associated with central duct systems.

**Flexibility:** VRF systems provide flexibility to accommodate almost any building or Villa requirement.

**Reliability:** Effectively prevent bacteria breeding unique anti-corrosive golden coating on the condenser can withstand the rain, salty air and other corrosive elements.







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The new degree of comfort\*

## C<sup>o</sup>MMERCIAL

AIR CONDITIONER - VRF SYSTEM

**Efficiency:** Ability to connect several indoor units to a single outdoor unit, VRF systems provide flexibility to accommodate almost any building requirement.







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# DIGITAL PLAN

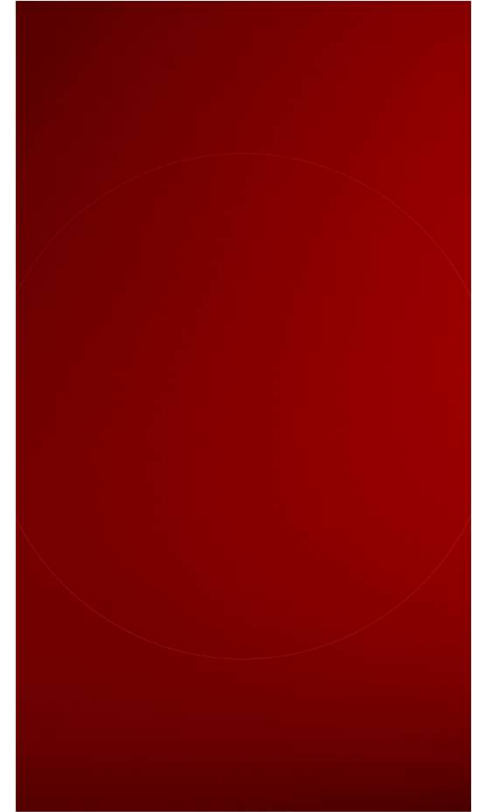
HEATING  COOLING  WATER HEATING

## VRF – Launch Communication

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### Social Media

- Prior to the launch of the VRF series, we released a teaser post to generate buzz on social media and peak the interest of our audience.
- We will then announce the launch with another engaging video with the objective of awareness and impressions.





# VRF – Post-Launch Communication

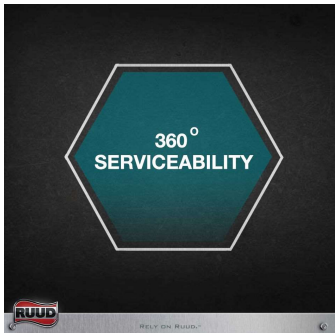
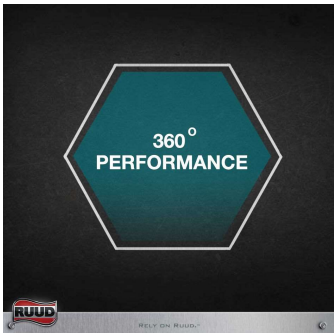
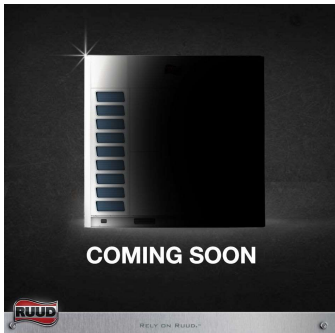
## Social Media



- Post-launch, our social media content will focus on educating our audience on the key features and benefits of the VRF series.
- We will boost these posts on Instagram and LinkedIn to maximize impressions and awareness.



# RUUD Assets



## VRF – Post-Launch Communication

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### Press Release

- We will also issue a press release, to be shared with top tier trade media publications.

- **Media list:**

*MEP Middle East | Construction Week | Construction Business News ME | Big Projects | Middle East Consultant | Gulf Construction | Climate Control ME | Technical Review Middle East | Middle East Construction News*

***“Rheem Middle East launches new range of VRF systems in the MEA region.”***



### Blog

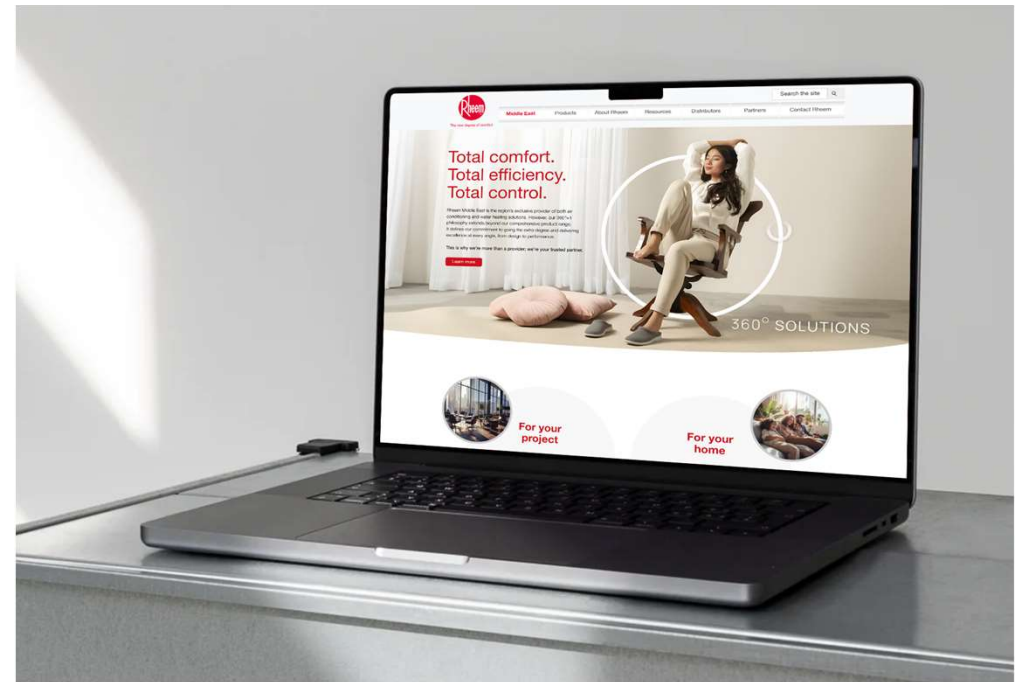
- Finally, we will write a blog that targets end-consumers with the objective of educating them on Rheem’s innovative VRF technology and its benefits.

### ***“The Power of Smart Controls”***



## Rheem Landing Page – In process

We've designed a dedicated campaign landing page that serves as the focal point for driving traffic from both social media and paid media activities. The page will effectively convey Rheem's product range and our commitment to quality, aligning perfectly with the core message of our campaign, while resonating equally with the B2B and B2C customer.



# VRF – Launch Communication

Timeline (Fri 13<sup>th</sup> Oct – Fri 17<sup>th</sup> Nov)

Week 1	Launch	Week 3	Week 4	Week 5
Social Media				
Launch Teaser	Fri 20th Oct Launch Animation <i>(boosted content)</i>	Educational Carousel	Video of Key Features <i>(boosted content)</i>	FAQs
		Link to Press Release		
PR				
		Tue 24th Oct Press Release		
Blog				
		Educational Article		
Landing Page				
		Product Spotlight		



# PRICING

HEATING  COOLING  WATER HEATING

## Price Comparison Overview: New Vs Existing Series ODUs

Existing Series ODUs			New Series ODUs			List Price Variance		
8HP	SAVR-H250/5R1MC	SAVR-H250/5R1MD	-7.7%	38HP	SAVR-H1060/5R1MC	SAVR-H1060/5R1MD	-18.8%	
10HP	SAVR-H280/5R1MC	SAVR-H280/5R1MD	-10.1%	40HP	SAVR-H1120/5R1MC	SAVR-H1120/5R1MD	-18.7%	
12HP	SAVR-H330/5R1MC	SAVR-H330/5R1MD	-9.3%	42HP	SAVR-H1170/5R1MC	SAVR-H1170/5R1MD	-24.1%	
14HP	SAVR-H400/5R1MC	SAVR-H400/5R1MD	-9.7%	44HP	SAVR-H1230/5R1MC	SAVR-H1230/5R1MD	-19.2%	
16HP	SAVR-H450/5R1MC	SAVR-H450/5R1MD	-9.8%	46HP	SAVR-H1280/5R1MC	SAVR-H1280/5R1MD	-24.5%	
18HP	SAVR-H500/5R1MC	SAVR-H500/5R1MD	-25.4%	48HP	SAVR-H1340/5R1MC	SAVR-H1340/5R1MD	-23.5%	
20HP	SAVR-H560/5R1MC	SAVR-H560/5R1MD	-26.4%	50HP	SAVR-H1400/5R1MC	SAVR-H1400/5R1MD	-32.4%	
22HP	SAVR-H610/5R1MC	SAVR-H610/5R1MD	-24.3%	52HP	SAVR-H1450/5R1MC	SAVR-H1450/5R1MD	-32.3%	
24HP	SAVR-H660/5R1MC	SAVR-H680/5R1MD	-24.6%	54HP	SAVR-H1510/5R1MC	SAVR-H1510/5R1MD	-23.4%	
26HP	SAVR-H730/5R1MC	SAVR-H730/5R1MD	-32.3%	56HP	SAVR-H1560/5R1MC	SAVR-H1560/5R1MD	-23.7%	
28HP	SAVR-H785/5R1MC	SAVR-H785/5R1MD	-28.7%	58HP	SAVR-H1624/5R1MC	SAVR-H1624/5R1MD	-26.6%	
30HP	SAVR-H850/5R1MC	SAVR-H850/5R1MD	-31.9%	60HP	SAVR-H1680/5R1MC	SAVR-H1680/5R1MD	-26.7%	
32HP	SAVR-H900/5R1MC	SAVR-H900/5R1MD	-28.4%	62HP	SAVR-H1730/5R1MC	SAVR-H1730/5R1MD	-30.0%	
34HP	SAVR-H950/5R1MC	SAVR-H950/5R1MD	-37.2%	64HP	SAVR-H1790/5R1MC	SAVR-H1790/5R1MD	-28.4%	
36HP	SAVR-H1010/5R1MC	SAVR-H1010/5R1MD	-34.4%					





Average Price Advantage

Capacity	Existing Combination	New Combination	Price Advantage over Existing Combination
8-16HP	Single	Single	-9.4%
18-32HP	Two	Single	-28.0%
34-36HP	Three	Single	-35.8%
38-48HP	Three	Two	-21.6%
50-64HP	Four	Two	-27.9%





THANK YOU!

HEATING  COOLING  WATER HEATING