Air Conditioning

VRF systems



systemair

Systemair Trust

We consider your trust in Systemair as supplier as an important goal. It is always included in our work on all levels and in all areas whether it is a question of cooperation, quality, deliveries or documentation. This catalogue is of course a part of this work.

With this catalogue, which features products of air conditioning, we want to give our customers a general overview of what Systemair can offer within this field. More detailed information is available in our online catalogue at www.systemair.com, where you also can find a downloadable software with further information. Systemair's range of fans, air distribution products and accessories also appears in our printed main catalogue.

Our product development leads the field - latest technologies in unit design, fans, motors, heat recovery, chillers, fan coils and more interact to give high efficiency and with that low power consumption. Systemair has grown each year since the start and we aim to continue with this trend.

Systemair strives to be a reliable supplier of quality products. We help our customers to focus on their own business. Reliable deliveries give the customers greater possibilities to quickly complete a job and move on to the next project.

At Systemair we call this trust.

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Systemair products in the community

Systemair helps create a healthy, comfortable and safe indoor climate in most areas where people spend time daily. We do this in the knowledge that good air quality contributes to a better quality of life. We also do this in an energyefficient way to contribute to a more sustainable society. Systemair offers a wide range of solutions suitable across all application areas and applications.



Application Area

Hospitality and Entertainment

Ventilation and air conditioning technology to regulate temperature and climate for employees and guests.

Application Area

Education

Ventilation systems for the best indoor air quality and variable operation.

Application Area

Residential

Enjoy the feeling of fresh, clean air - in every indoor area.



Application Area
Office building

Comfortable and good indoor climate.

Application Area
Healthcare

Hygienic ventilation and air conditioning technology for the healthcare sector.

Application Area
Data Centre

Secure, energy-efficient cooling systems that offer high profitability and maximum uptime.

Application Area
Infrastructur and Transport

Ventilation and air conditioning systems for subways and railroads, airports, tunnels, parking garages and cruise ships.

Application Area
Industrial

Reliable, efficient and health and safety-compliant ventilation and air conditioning systems - built for long-term performance.



SYSVRF multi-zone solutions: light commercial and commercial VRF systems

The SYSVRF modular systems are the most valuable solutions for room space from 100 to 2000 sq.m. with large independence of climatic zones - hotels, restaurants, retail, office buildings, etc. Up to 3 modular outdoor units can be combined in one single refrigerant system thus reaching up to 270 kW of cooling capacity and connecting up to 64 indoor units (2-pipe system). In the same system they are able to fulfill the increasing demands of air comfort still having low operating costs.

All SYSVRF systems are equipped with DC inverter compressors and DC fans which gives enhanced system performance and very low operating noise. The new generation of 2-pipe systems includes new outstanding features like EVI compressors and floating refrigerant temperature which delivers superior comfort pleasure and reduces tremendously the electricity consumption.
The wide selection of VRF-AHU kits allows the perfect combination with the well-known AHUs of Systemair.

The SYSVRF3 2-pipe outdoor units of Systemair are available with different configurations:

The Mini VRF SYSVRF3 080-180 AIR EVO32 HP Q/R are equipped with R32 and have side discharge air. The compact SYSVRF3 252-615 AIR EVO-S HP R with side-discharge has small footprint and is for individual use. The SYSVRF3 M 335-900 AIR EVO HP R with top discharge among each other to achieve a higher performance for a system.

All SYSVRF3 Indoor units can be used for the refrigerant R410A and as well for R32.

SYSVRF Mini, Modular Heat Pump

SYSVRF2 224-280 AIR EVO A HP R 10



SYSVRF3 080-180 AIR EVO32 HP 20



SYSVRF3 252-615 AIR EVO-S HP R 22



SYSVRF3 M 335-900 AIR EVO HP R 26



SYSVRF3 WALL 22-56 Q 30



SYSVRF3 CASSETTE MINI 22-63 32



SYSVRF3 CASSETTE 71-140 Q 34



SYSVRF3 CASSETTE 1W 22-36 Q 36



SYSVRF3 CEILING 36-140 Q 38



SYSVRF3 DUCT 22-140 Q 40



SYSVRF3 AHU BOX 22-560 42



Accessories 44

VRF Systemair - SYSVRF

Multi-zone air conditioning system
VRF systems are most beneficial for space up to 1500-2000 sq.m. with large independence of climatic zones – hotels, restaurants, retail space, office buildings, etc.
In the same system they are able to fulfil the increasing demands of the parameters of air in each room and still have low operating costs.



The most comfortable temperature
An important advantage of the multi-zone air-conditioning is a smooth and rapid achievement of a comfortable temperature, as well as maintaining the specified parameters accurate to ± 0,5 °C. Such high performance was achieved thanks to an accurate control of the refrigerant flow and the mechanism of redistribution of refrigerant between the several units. This was implemented with the help of electronic expansion valves.

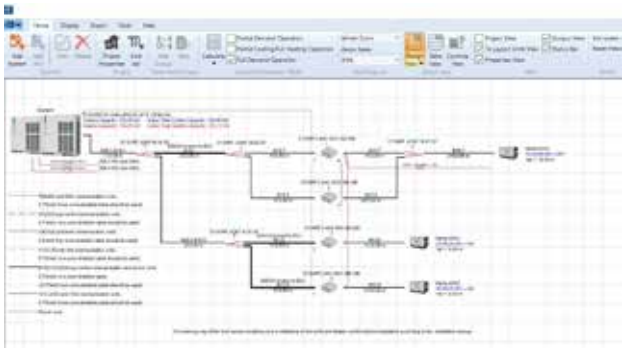
High energy efficiency
The efficiency of multi-zone systems is very high, because each time the electric power is consumed as much as necessary to carry out user requirements.
If the indoor units work only in a few areas of the building, then the power consumption is reduced proportionally by changing the refrigerant flow.

Low noise
Low noise of both outdoor and indoor units makes the job of a multi-zone system virtually inconspicuous.

A balanced lineup
The lineup of multi-zone VRF series are continuously optimized. In response to market demands Systemair offers several types and sizes of indoor units: wall-mounted, cassette, floor-ceiling and duct.
Outdoor units Mini, despite the compact dimensions, solve different tasks of air conditioning on small objects.
Three modular outdoor units can be combined in one refrigerant system thus reaching a total cooling capacity of up to 270 kW.
Separately, to highlight the 3 pipe heat recovery system for independent and simultaneous cooling and heating operation.

Continuous development in the field of management
In modern air-conditioning systems the demand for automation and control systems integrated with other infrastructure building systems is continuously increasing. These are exactly the principles on the basic of the development of the control systems of Systemair.
In addition to the traditional control systems of air conditioning, the user has different possibilities of control that can solve the various needs of the building management. Examples for thatare the possibility to control via personal computer or the Internet network connection.

Simplicity of design
Systemair provides full integration and coordination of all elements of a multi-zone system, greatly simplifies the task of the designer. The selection process can be performed in maximum short period of time by using a simple and complete selection and designing software.





Mini VRF Heat Pump Outdoor Unit
SYSVRF2 224-280 AIR EVO A HP R



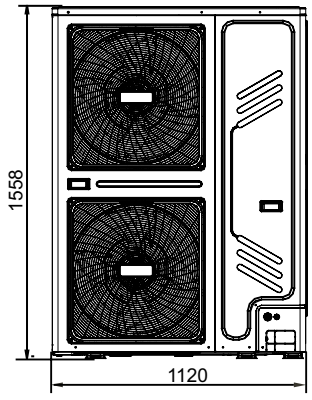
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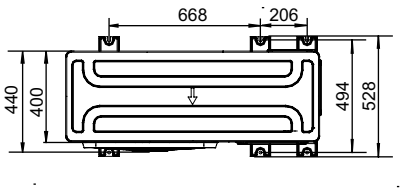
Features

- Full DC inverter Mini VRF with DC inverter compressor and DC fan motor
- Compact size and small foot print
- High efficiency at partial load
- Maximum 16 indoor units connection
- Twin-rotary DC inverter compressor and DC fan motor provide wide capacity output and precise temperature control
- Centralized control via touch screen controllers, BMS connection and web access potential
- Hydrophilic Golden Fin Coil enhances durability and protection against corrosion and it is more eco-friendly
- Auto-addressing can distribute automatically addresses to indoor unit making easy the installation
- Refrigerant cooling of the PCB assures safe and stable operation even at very high outdoor temperatures
- Intelligent defrosting and precise oil control technology
- Can be combined with AHU control kit

Dimensions

SYSVRF2 224-280





Technical features

Model Outdoor unit		SYSVRF2	224 AIR EVO A HP R	260 AIR EVO A HP R	280 AIR EVO A HP R
Art. no.			319124	319125	319163
Power supply		V/Ph/Hz	380-415/3+N/50		
Cooling capacity		kW	22,4	26,0	28,5
Power input		kW	6,83	9,63	12,28
EER		kW/ kW	3,28	2,70	2,32
SEER/SCOP			5,90 / 3,80	5,50 / 3,75	5,90 / 4,26
Heating capacity		kW	22,4	26,0	28,5
Power input		kW	4,98	5,53	6,16
COP		kW/ kW	4,50	4,70	4,63
Max. fuse current		A	25	25	25
Compressor	Quantity	pcs	1 DC inverter/ Twin-rotary		
	Start-up method		Soft start		
	Refrigerant oil	ml	3.000	3.000	3.000
Fan	Type/motor		2 Axial/ DC motor		
	Air flow	m^3/h	9.000	10.000	11.000
Sound power level		dB(A)	78	78	78
Sound pressure level		dB(A)	58	59	60
Refrigerant	Type		R410A		
	Factory charge	kg	6,5	6,5	6,5
Dimension (LxWxH)		mm	1.120x528x1.558		
Packing (LxWxH)		mm	1.270x565x1.720		
Net/gross weight		kg	143/159	144/160	144/160
Piping dimension	Liquid pipe	mm (in)	9,5 (3/8")	9,5 (3/8")	9,5 (3/8")
	Gas pipe	mm (in)	19,1 (3/4")	22,2 (7/8")	22,2 (7/8")
Max quantity indoor units connection		pcs	13	15	16
Operating ambient temperature range		°C	Cooling -5 ... +48 / Heating -20 ... +24		

Data are provided according to Eurovent conditions and with Duct indoor units.

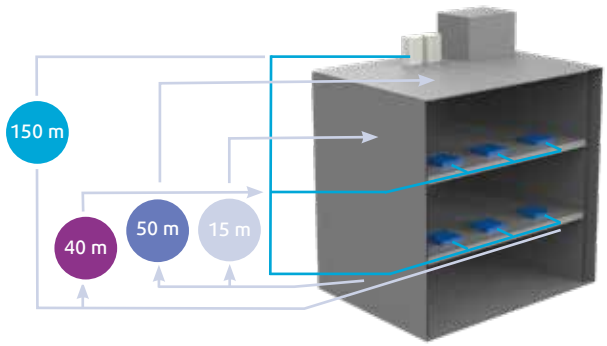
Operating conditions

	Indoor unit	Outdoor unit	Piping length	Level difference
Cooling mode	27°C DB, 19°C WB	35°C DB, 24°C WB	7,5 m	0 m
Heating mode	20°C DB, 15°C WB	7°C DB, 6°C WB	7,5 m	0 m

The sound pressure level is measured at position 1m in front of the unit and 1m above the floor in a semi-anechoic chamber

Piping Length

- Maximum piping equivalent length.
- Maximum piping (the farthest IDU from the first indoor unit branch) equivalent length.
- Maximum outdoor unit-indoor unit drop height.
- Maximum indoor unit to indoor unit drop height.



Outdoor units SYSVRF3 AIR EVO HP			Permitted value
Piping length	Total piping length (actual)		150 m
	Maximum piping	Actual length	100 m
		Equivalent length	110 m
	Piping (the farthest IDU from the first indoor unit branch) equivalent length		40 m
Drop height	Outdoor unit-indoor unit drop height	Outdoor unit up	50 m
		Outdoor unit down	40 m
	Indoor unit to indoor unit drop height		15 m

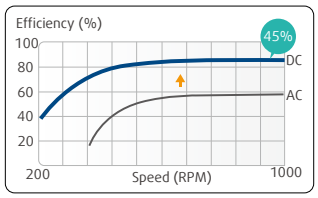
SYSVRF3 Benefits

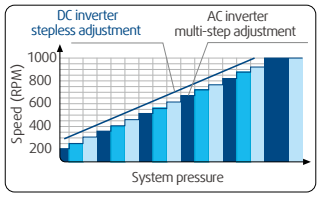
Full DC inverter for outdoor components (*)

The SYSVRF3 uses full DC inverter compressor and fan motor to achieve high precision stepless speed adjustment according to system operation and ensures that the system is always in optimum condition. That means the system is operating more efficiently, more consistently and with less noise.









Wider frequency adjustment range

Faster cooling and heating

Higher energy efficiency

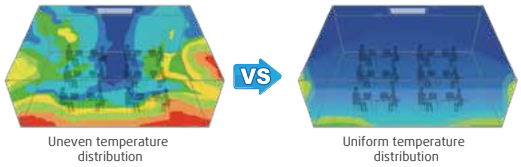
Full DC inverter for indoor components (*)

All power devices such as indoor fan motor, drain pump and electric control board are fully DC, which increases electrical efficiency by 20 % and results in more accurate temperature control, a more constant indoor temperature and higher energy efficiency.


Fan motor

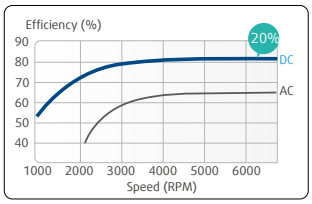

Drain pump


Electric control board



Uneven temperature distribution

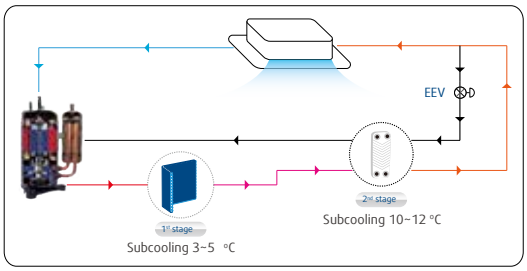
Uniform temperature distribution



20% Efficiency improvements

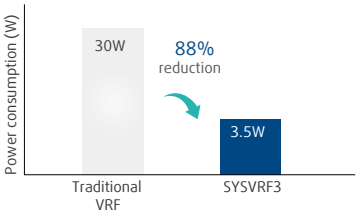
Advanced Subcooling Technology (*)

The SYSVRF3 uses a plate heat exchanger to further cool the refrigerant and the refrigerant system can achieve 15 °C refrigerant subcooling, which can further improve the refrigerant heat transfer efficiency while reducing the sound of refrigerant flow.



Low Standby Power Consumption (*)

Compared to the standby power consumption of traditional VRF of about 30 W, the SYSVRF3 uses optimized control scheme to further reduce standby power consumption to as low as 3.5 W.

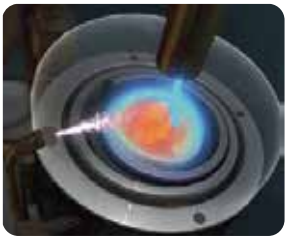


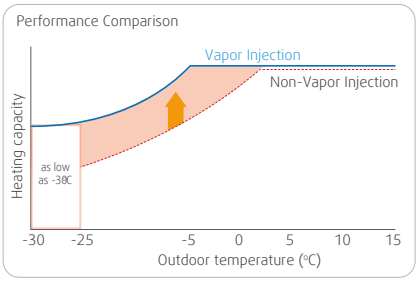
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Enhanced Vapor Injection (EVI) Compressor (**)

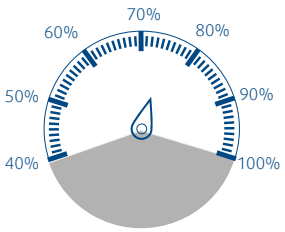
The enhanced vapor injection DC inverter compressor increases refrigerant circulation and improves both cooling and heating capacity.





60-step Energy Management (*)

For projects with temporary electricity supply restrictions, the outdoor unit supports 60-step energy management which can be set to output 40-100 % capacity in 1 % increments. It prevents tripping during conditions of restricted electricity supply and allows the system to continue to operate.



High Reliability

Sensor Backup (*)

Through digital algorithms, each physical sensor generates a corresponding virtual sensor that acts as a backup to each other, ensuring that the failure of one sensor does not affect the normal operation of the system.



SuperSense (*)

SYSVRF3 uses up to 19 sensors for each outdoor unit and 4 sensors for each indoor unit. The operating status of the system refrigerant is clearly visible, which can achieve intelligent analysis of operation parameters, intelligent error diagnosis and forecasting and visualized energy saving.



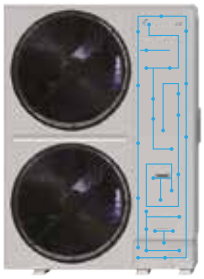
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Depending on the outdoor unit either 13, 18 or 19 sensors are distributed throughout the refrigerant system and the status of the refrigerant is known anywhere throughout the process, ensuring stable operation. At the same time, combined with the digital twin technology of the refrigerant system, a virtual sensor can be created in the event of a physical sensor failure, so that the system does not shut down in the event of a sensor failure, ensuring comfort.

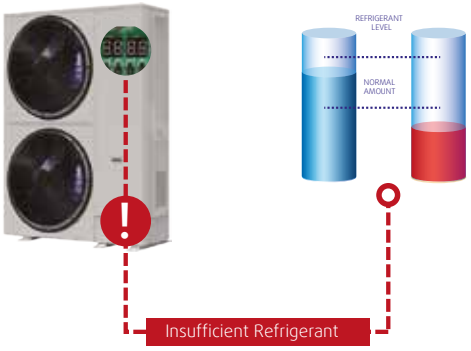
Complete Sensors (*)

The SYSVR3 has the industry's most comprehensive range of 18 condition sensors with built-in data models for compressors, heat exchangers, throttling components and more. By analyzing sensor data in real time, it can sense the status of the refrigerant anywhere in the system.



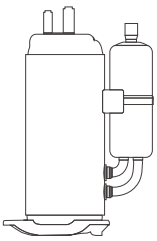
Refrigerant Amount Diagnosis (*)

Thanks to the complete sensors, the refrigerant running state is clearly visible, so as to accurately diagnose the amount of refrigerant.



Precise Oil Control (*)

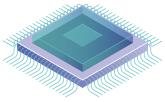
Three stages of oil control technology ensure all outdoor compressor oil is always kept at a safe level, eliminating any compressor oil shortage problems.



1.
Compressor internal oil separation.



2.
High-efficiency centrifugal oil separator (with separation efficiency of up to 99 %) ensures that oil is separated from the discharge gas and returned to the compressors in a timely fashion



3.
The automatic oil return program determines the oil return through the running time and the oil discharge amount, enabling precise oil return.

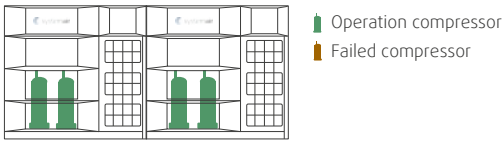
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*** only for SYSVRF3 M 335-900 AIR EVO HP R

Quadruple Backup

In two fans two compressors and multiple units are included. In case of a failure these are able to run in backup for another one. Additionally, the SYSVRF3 series generates a corresponding virtual sensor for each physical sensor with the help of a digital algorithm, which serves as a backup for each other, ensuring no shutdown in the event of a fault, and further guaranteeing comfort.

Unit Backup (***)

In a multi-unit system, the different units act as a backup to each other, ensuring that the system can continue to operate if one unit fails.



Intelligent load-bearing between units during normal operation



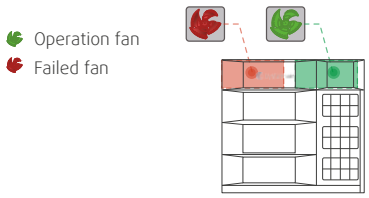
Continue operating in case of failure of one unit

Fan Backup (**)

In unit with two fans, the two fans act as a backup to each other, ensuring that the system can continue to operate if one fan fails.



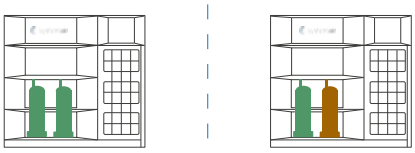
In normal operation, each fan runs on demand



Automatic backup operation of another fan in case of failure of one fan

Compressor Backup (***)

In unit with two compressors, the two compressors act as a backup to each other, ensuring that the system can continue to operate if one compressor fails.



Intelligent load-bearing between compressors during normal operation

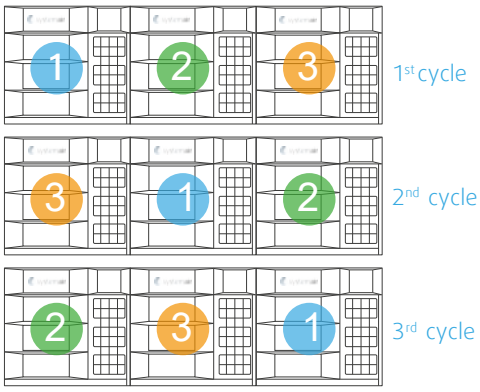
Continue operating in case of failure of one compressor

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Double Duty Cycling (***)

Unit Duty Cycling

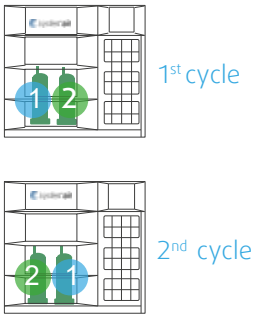
In a multi-unit system, duty cycling equalizes the running time of each outdoor unit, what leads to a significant extension of the unit lifespan.



Note: The duty cycling sequence shown in the figure is only a schematic reference. The actual duty cycling sequence is not a fixed sequence. Please refer to the technical manual for specific rotation rules.

Compressor Duty Cycling

In units with two compressors, duty cycling equalizes the running time of each compressor, what leads to a significant extension of the unit lifespan.

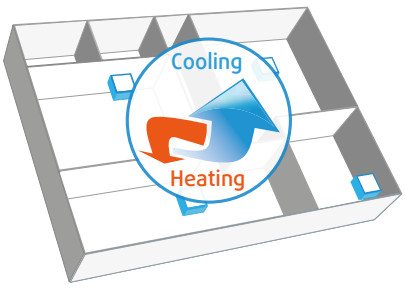


Compressor start-up sequence

Enhanced Comfort

Auto Cooling-heating Changeover (*)

Automatically selects cooling or heating mode to achieve the set temperature.



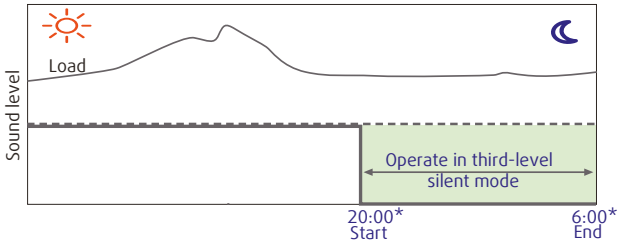
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Advanced Silent Technology (*)

15-step silent mode (5-step for SYSVRF3 080-180 AIR EVO32 HP) provide more freedom and convenience to match the customer needs.

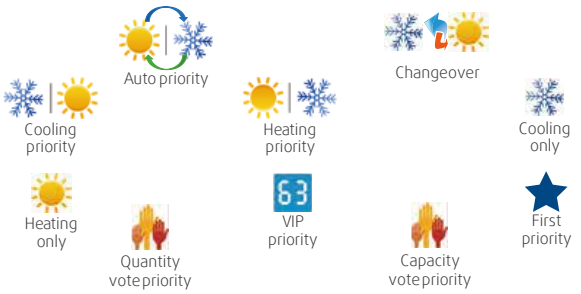


Night silent mode (***)



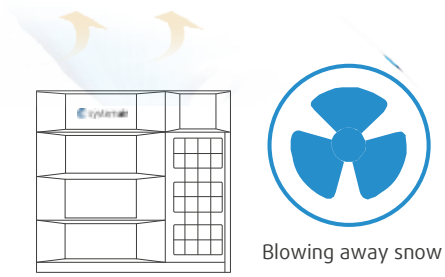
10 Priority Modes (*)

10 priority mode options provide more freedom and convenience to match the customer needs.



Auto Snow-blowing Function (***)

The innovatively designed auto snow-blowing function enables the outdoor unit to prevent the accumulation of snow.



Auto Dust-clean Function (***)

The innovatively designed dust-clean function enables the outdoor unit to prevent from dust.



* only for SYSVRF3 080-180 AIR EVO32 HP , SYSVRF3 252-615 AIR EVO-S HP R , SYSVRF3 M 335-900 AIR EVO HP R
** only for SYSVRF3 252-615 AIR EVO-S HP R , SYSVRF3 M 335-900 AIR EVO HP R
*** only for SYSVRF3 M 335-900 AIR EVO HP R

Easy Installation and Service

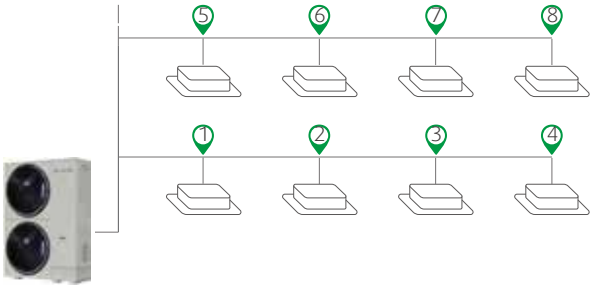
Free Wiring (*)

HyperLink communication technology supports any wiring pattern rather than just daisy chain connection, reducing the installation cost and the possibility of incorrect connection. It has stronger anti-interference ability, achieving communication distance up to 2000 m.



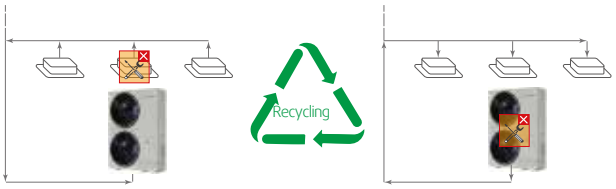
Auto Addressing (*)

Addresses for all indoor unitscan be assigned automatically by the SYSVFR3 system what simplifies the further installation.



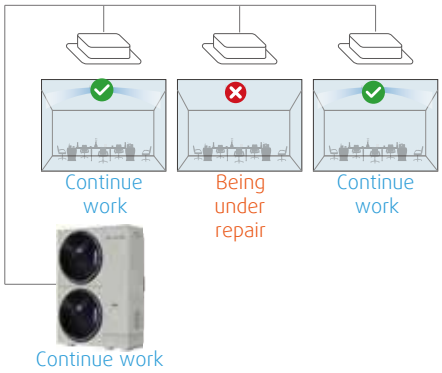
Automatic Refrigerant Recycling (*)

When an indoor unit fails, the refrigerant can be recycled into the outdoor unit. When the outdoor unit fails, the refrigerant can be recycled into the indoor units. Two types of refrigerant recycling make the maintenance easier and more efficient.



Maintenance Mode (**)

The maintenance mode allows the shutdown of some indoor units without shutting down the whole VRF system. Further it can be activated on site during maintenance period as the remaining indoor units continue to operate.

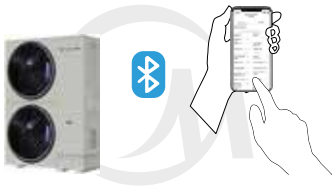


Smart Commissioning / Maintenance Tool (*)

With the recent developed smart tool (Bluetooth module and special Bluetooth after-sales kit) system settings, operating parameter queries, trial runs and programme upgrades can be done without opening the cabinet.

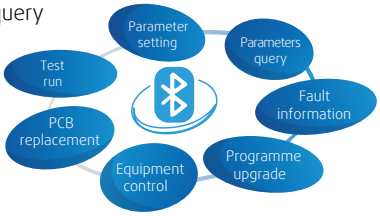
Useful in the following situations:

- Installation
- Service maintenance



Main functions:

- Fault information storage
- Operating parameters query
- Start commissioning test run
- System parameter setting
- Quick after-sales PCB replacement
- Equipment control
- Indoor and outdoor units programme upgrade



* only for SYSVRF3 080-180 AIR EVO32 HP , SYSVRF3 252-615 AIR EVO-S HP R , SYSVRF3 M 335-900 AIR EVO HP R
** only for SYSVRF3 252-615 AIR EVO-S HP R , SYSVRF3 M 335-900 AIR EVO HP R

R32 Mini VRF Heat Pump Outdoor Unit

SYSVRF3 080-180 AIR EVO32 HP Q/R



R32

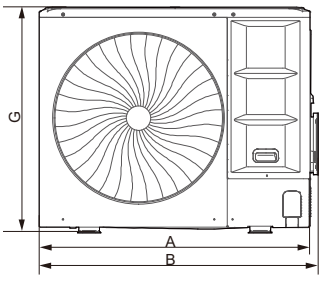
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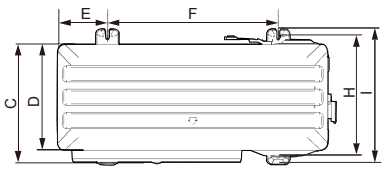
Features

- DC inverter compressor and DC fan motor
- Heat exchanger for advanced subcooling technology improve the refrigerant heat transfer efficiency while reducing the sound of refrigerant flow
- 3,5 W and lower standby power consumption
- Energy management between 40 - 100 % output capacity
- Sensor backup ensuring that the failure of one sensor does not affect the normal operation of the system
- Super sense up to 13 sensors for intelligent analysis
- Three stages of oil control technology
- Advanced silent technology up to 5 Silent modes can be set
- Multiple priority modes
- HyperLink communiction technology. Daisy chain, tree, star or ring connetion (with SYSVRF3 Indoor units combinations only)
- Refrigerant recycling to outdoor or indoor unit
- Wide Combination Ratio of 50 - 160 % (with SYSVRF3 Indoorunits combinations)
- Flexible Pipe Connection
- Auto adressing
- Up to 35 Pa external static pressure of the outdoor unit fan
- Smart Commissioning and Maintenance via Bluetooth

Dimensions

SYSVRF3 AIR EVO32 080-180





Model	A	B	C	D	E	F	G	H	I
080 - 180	1038	1073	454	409	191	656	864	463	523

Technical features

Model Outdoor unit		SYSVRF3	080 AIR EVO32 HP Q	120 AIR EVO32 HP Q	140 AIR EVO32 HP R	160 AIR EVO32 HP R	180 AIR EVO32 HP R
Art. no.			449393	449394	449395	449396	449397
Power supply		V/Ph/Hz	220-240/1/50		380-415/3+N/50		
Cooling capacity		kW	7,20	12,30	14,00	15,50	17,50
Power input		kW	1,95	3,73	4,67	5,34	6,46
EER			3,70	3,30	3,00	2,90	2,71
SEER			5,80	7,80	7,40	7,35	7,10
Heating capacity (rated)*		kW	7,20	12,30	14,00	15,50	17,50
Power input (rated)*		kW	1,80	2,86	3,29	3,73	4,49
COP (rated)*			4,00	4,30	4,25	4,15	3,90
SCOP			3,80	4,90	4,80	4,80	4,80
Heating capacity (max)		kW	9,00	14,00	16,00	17,50	19,50
Power input (max)		kW	2,50	3,59	4,21	4,73	5,57
COP (max)			3,60	3,90	3,80	3,70	3,50
SEER/SCOP			5,80 / 3,80	7,80 / 4,90	7,40 / 4,80	7,35 / 4,80	7,10 / 4,80
ηs,c			-	309	293	291	281
ηs,h			-	193	189	189	189
Energy efficiency class (cooling/heating)			A+ / A	-	-	-	-
Annual Energy consumption (cooling/heating)		kWh	434 / 2063	-	-	-	-
Max. fuse current (Recommondation)		A	25	32		20	
Compressor	Quantity	pcs	1 DC inverter				
	Start-up method		Soft start				
	Oil type		FVC68D				
Fan	Type/motor		1 Axial/ DC motor				
	Air flow	m³/h	5.200	5.000	5.000	5.000	5.500
Sound power level [1]		dB(A)	68	70	71	72	73
Sound pressure level [1]		dB(A)	53	55	56	56	58
Refrigerant	Type		R32				
	Factory charge	kg	2,0	2,85	2,85	2,85	2,85
Dimension (WxHxD)		mm	1038x864x409				
Packing (WxHxD		mm	1120x980x560				
Net/gross weight		kg	77 / 88	94 /105	110 / 121	110 / 121	110 / 121
Piping dimension	Liquid pipe	mm (in)	9,52 (3/8")				9,52 (3/8")
	Gas pipe	mm (in)	15,9 (5/8")				19,1 (3/4")
Max quantity indoor units connection		pcs	5	8	10	11	12
Operating ambient temperature range		°C	Cooling -15 ... +52 / Heating -20 ... +30				

* Data are provided according to Eurovent conditions and with Duct indoor units.
(1) Sound level: Anechoic chamber conversion value, measured at a point 1 m in front of the unit at a height of 1m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

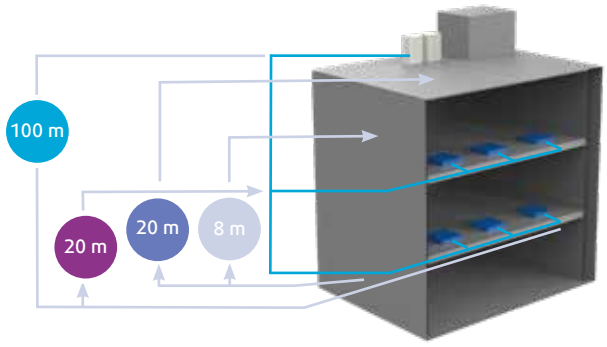
Operating conditions

	Indoor unit	Outdoor unit	Piping length	Level difference
Cooling mode	27°C DB, 19°C WB	35°C DB, 24°C WB	5 m	0 m
Heating mode	20°C DB, 15°C WB	7°C DB, 6°C WB	5 m	0 m

The sound pressure value may vary depending on ambient conditions.

Piping Length

- Maximum piping equivalent length.
- Maximum piping (the farthest IDU from the first indoor unit branch) equivalent length.
- Maximum outdoor unit-indoor unit drop height.
- Maximum indoor unit to indoor unit drop height.



Outdoor units SYSVRF AIR EVO HP			Permitted value
Piping length	Total piping length (actual)		300 m (150 m SYSVRF3 080)
	Maximum piping	Actual length	100 m (50 m SYSVRF3 080)
		Equivalent length	120 m (60 m SYSVRF3 080)
	Piping (the farthest IDU from the first indoor unit branch) equivalent length		40 m (30 m SYSVRF3 080)
Drop height	Outdoor unit-indoor unit drop height	Outdoor unit up	50 m (30 m SYSVRF3 080)
		Outdoor unit down	40 m (20 m SYSVRF3 080)
	Indoor unit to indoor unit drop height		15 m

Individual Side Discharge
VRF Heat Pump Outdoor Unit
SYSVRF3 252-615 AIR EVO-S HP R



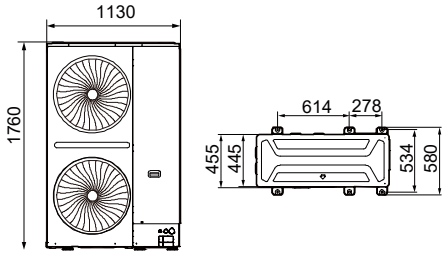
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Features

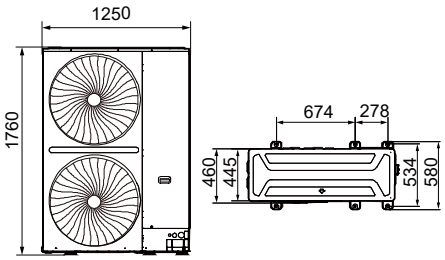
- DC inverter compressor and DC fan motor
- Heat exchanger for advanced Subcooling Technology improve the refrigerant heat transfer efficiency while reducing the sound of refrigerant flow
- 3,5 W and lower standby power consumption
- Energy management between 40 - 100 % output capacity
- Double Backup supports a fan and sensor backup to ensure that there is no shutdown in the event of a failure, further increasing convenience
- Super sense up to 13 sensors for intelligent analysis
- Three stages of oil control technology
- Advanced silent technology up to 15 Silent modes can be set
- Multiple priority modes
- HyperLink communiction technology. Daisy chain, tree, star or ring connetion (with SYSVRF3 Indoor units combinations only)
- Refrigerant recycling to outdoor or indoor unit
- Wide combination ratio of 50 - 130 % (with SYSVRF3 Indoorunits combinations)
- Flexible pipe connection
- Auto adressing
- Smart Commissioning and Maintenance via Bluetooth

Dimensions

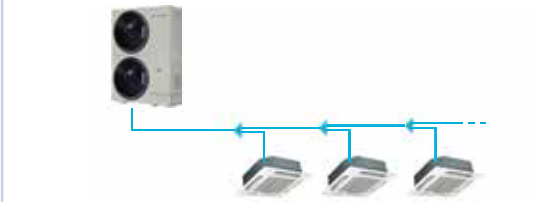
SYSVRF3 252-400



SYSVRF3 450-615



SYSVRF3 252-615 AIR EVO-S HP R



Individual use SYSVRF3 ...
Cannot be connected together thus they are suitable for single refrigerant systems.

Technical features

Model Outdoor unit		SYSVRF3	252 AIR EVO-S HP R	280 AIR EVO-S HP R	335 AIR EVO-S HP R	400 AIR EVO-S HP R
Art. no.			455467	455468	455469	452565
Power supply		V/Ph/Hz	380-415/3+N/50			
Cooling capacity		kW	25,20	28,00	33,50	40,00
Power input		kW	7,60	9,10	11,60	15,70
EER			3,30	3,09	2,90	2,54
Heating capacity (rated)*		kW	25,20	28,00	33,50	40,00
Power input (rated)*		kW	6,10	7,00	9,10	11,70
COP (rated)*			4,10	4,02	3,68	3,42
Heating capacity (max)		kW	27,00	31,50	37,50	45,00
Power input (max)		kW	7,80	9,50	11,50	14,60
COP (max)			3,47	3,30	3,25	3,09
SEER/SCOP			7,10/4,15	6,80/4,10	6,38/4,11	6,23/4,00
ηs,c			287	279	273,4	263
ηs,h			163	161,4	161,4	163
Max. fuse current (Recommondation)		A	20	25	32	
Compressor	Quantity	pcs	1 DC inverter			
	Start-up method		Soft start			
	Oil type		FVC68D			
Fan	Type/motor		1 Axial/ DC motor			
	Air flow	m^3/h	11800	12500	12500	12500
Sound power level [1]		dB(A)	76	79	81	82
Sound pressure level [1]		dB(A)	56	57	58	59
Refrigerant	Type		R410A			
	Factory charge	kg	6,1	6,1	6,4	7,4
Dimension (WxHxD)		mm	1130×1760×580			
Packing (WxHxD		mm	1210×1916×597			
Net/gross weight		kg	182 / 196	182 / 196	185 / 199	187 / 201
Piping dimension	Liquid pipe	mm (inch)	12,7 (1/2")			
	Gas pipe	mm (inch)	25,4 (1")			
Max quantity indoor units connection		pcs	13	16	19	22
Operating ambient temperature range		°C	Cooling -15 ... +55 / Heating -30 ... +30			

* Data are provided according to Eurovent conditions and with Duct indoor units.
(1) Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber. .

Operating conditions

	Indoor unit	Outdoor unit	Piping length	Level difference
Cooling mode	27°C DB, 19°C WB	35°C DB, 24°C WB	5 m	0 m
Heating mode	20°C DB, 15°C WB	7°C DB, 6°C WB	5 m	0 m

The sound pressure value may vary depending on ambient conditions.

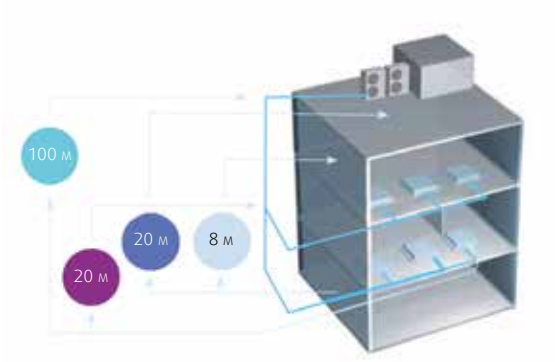
Technical features

Model Outdoor unit		SYSVRF3	450 AIR EVO-S HP R	500 AIR EVO-S HP R	560 AIR EVO-S HP R	615 AIR EVO-S HP R
Art. no.			452566	452567	452568	452569
Power supply		V/Ph/Hz	380-415/3+N/50			
Cooling capacity		kW	45,00	50,00	56,00	61,50
Power input		kW	16,00	19,50	22,90	28,10
EER			2,82	2,57	2,45	2,19
Heating capacity (rated)*		kW	45,00	50,00	56,00	61,50
Power input (rated)*		kW	12,2	13,7	15,50	18,80
COP (rated)*			15,70	18,10	20,30	22,50
Heating capacity (max)		kW	50,00	56,50	63,00	69,00
Power input (max)		kW	15,70	18,10	20,30	22,50
COP (max)			3,19	3,12	3,10	3,07
SEER/SCOP			6,15/4,10	6,08/4,15	5,95/4,07	5,80/4,00
ηs,c		η	267,8	255,8	249	243
ηs,h		η	166,2	163,8	159,8	157
Max. fuse current (Recommondation)		A	40	40	50	
Compressor	Quantity	pcs	1 DC inverter			
	Start-up method		soft start			
	Oil type		FVC68D			
Fan	Type/motor		1 Axial/ DC motor			
	Air flow	m^3/h	18500	20000	18500	19000
Sound power level [1]		dB(A)	86	88	89	89
Sound pressure level [1]		dB(A)	60	61	61	62
Refrigerant	Type		R410A			
	Factory charge	kg	8,0	8,0	8,5	8,5
Dimension (WxHxD)		mm	1250×1760×580			
Packing (WxHxD		mm	1330×1916×597			
Net/gross weight		kg	214 / 229	214 / 229	234 / 249	234 / 249
Piping dimension	Liquid pipe	mm (inch)	15,9 (5/8")			
	Gas pipe	mm (inch)	28,6 (1 1/8")			
Max quantity indoor units connection		pcs	26	29	32	35
Operating ambient temperature range		°C	Cooling -15 ... +55 / Heating -30 ... +30			

* Data are provided according to Eurovent conditions and with Duct indoor units.
(1) Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber.

Piping Length

- Maximum piping equivalent length.
- Maximum piping (the farthest IDU from the first indoor unit branch) equivalent length.
- Maximum outdoor unit-indoor unit drop height.
- Maximum indoor unit to indoor unit drop height.



Outdoor units SYSVRF AIR EVO HP			Permitted value
Piping length	Total piping length (actual)		560 m
	Maximum piping	Actual length	150 m
		Equivalent length	175 m
	Piping (the farthest IDU from the first indoor unit branch) equivalent length		40/90 m
Drop height	Outdoor unit-indoor unit drop height	Outdoor unit up	50 m
		Outdoor unit down	40 m
	Indoor unit to indoor unit drop height		15 m



Modular VRF Heat Pump Outdoor Unit
SYSVRF3 M 335-900 AIR EVO HP R

SYSVRF3 335 AIR EVO HP R



SYSVRF3 615 AIR EVO HP R



SYSVRF3 785-900 AIR EVO HP R



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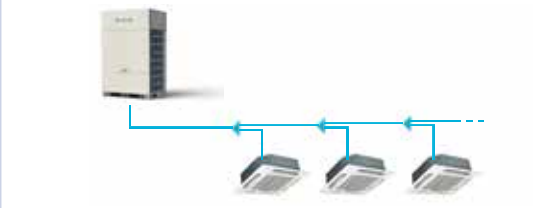
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Features

- Usable as individual or modular combination
- SYSVRF3 M-Series are combinable, capacity up to 270 kW
- DC inverter compressor and DC fan motor
- Heat exchanger for advanced subcooling technology improve the refrigerant heat transfer efficiency while reducing the sound of refrigerant flow
- 3,5 W and lower standby power consumption
- Energy management between 40 - 100 % output capacity
- Unit, Compressor*, Fan* and Sensor Backup ensuring no shutdown in the event of a fault
- Compressor* and Multi-unit Duty Cycling
- Super Sense up to 19 Sensors for intelligent analysis
- Four stages of oil control technology
- Auto Snow-blowing Function
- Auto Dust-clean Function
- Advanced silent technology up to 15 Silent modes can be set
- Multiple priority modes
- HyperLink communiction technology. Daisy chain, tree, star or ring connetion (with SYSVRF3 Indoor units combinations only)
- Refrigerant recycling to outdoor or indoor unit
- Wide combination ratio of 50 - 130 % (with SYSVRF3 Indoorunits combinations)
- Flexible pipe connection
- Auto adressing
- Up to 20 Pa external static pressure of the outdoor unit fan
- Smart Commissioning and Maintenance via Bluetooth

* not valid for SYSVRF3 M 335 AIR EVO HP R

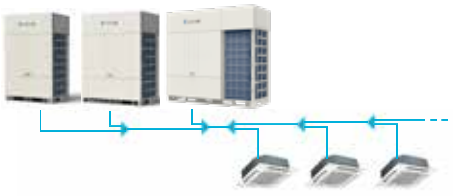
SYSVRF3 M ... AIR EVO HP R



Individual use SYSVRF3 ...

Cannot be connected together thus they are suitable for single refrigerant systems.

SYSVRF3 M ... AIR EVO HP R



Modular combination SYSVRF3 M ...

Only models 335, 615, 785 and 900 can be connected together in the same refrigerant circuit thus creating a modular system with capacity ranging from 95 kW up to 270 kW.
Look at pages 24-25 for the available combinations.

Technical features

Model Outdoor unit		SYSVRF3 M	335 AIR EVO HP R	615 AIR EVO HP R	785 AIR EVO HP R	900 AIR EVO HP R
Art. no.			452281	452392	452395	452397
Power supply		V/Ph/Hz	380-415/3+N/50-60			
Cooling capacity		kW	33,5	61,5	78,5	90,0
Power input		kW	13,5	27,7	32,4	43,9
EER			2,48	2,22	2,42	2,05
Heating capacity (rated)*		kW	33,5	61,5	78,5	90
Power input (rated)*		kW	10,8	18,4	24,5	29,9
COP (rated)*			3,09	3,35	3,20	3,01
Heating capacity (max)		kW	37,50	69,0	87,5	100,00
Power input (max)		kW	12,90	22,0	29,9	35,1
COP (max)			3,60	3,50	2,93	2,85
SEER/SCOP			6,32 / 4,09	5,93 / 4,21	5,93 / 4,12	5,75 / 3,95
ηs,c			249,8	234,2	234,2	227
ηs,h			160,6	165,4	161,8	155
Max. fuse current (Recommondation)		A	32	50	63	80
Compressor	Quantity	pcs	1 DC inverter/ Scroll	2 DC inverter/ Scroll		
	Start-up method		Soft start			
Fan	Type/motor		1 Axial/ DC motor	2 Axial / DC motor		
	Static pressure		0-20 (selectable by dip-switch)			
	Air flow	m^3/h	13500	21500	28000	28000
Sound power level [1]		dB(A)	85	89	93	93
Sound pressure level [1]		dB(A)	61	66	68	68
Refrigerant	Type		R410A			
	Factory charge	kg	7	11,96	11,96	11,96
Dimension (WxHxD)		mm	940x1760x825	1340x1760x825	1880x1760x825	1880x1760x825
Packing (WxHxD		mm	1005x1945x890	1405x1945x890	1945x1945x890	1945x 1945x890
Net/gross weight		kg	195 / 213	315 / 335	396/426	396 / 426
Piping dimension	Liquid pipe	mm (in)	12,7 (1/2")	15,9 (5/8")	22,2 (7/8")	22,2 (7/8")
	Gas pipe	mm (in)	25,4 (1")	28,6 (1 1/8")	34,9 (1 3/8")	34,9 (1 3/8")
Max quantity indoor units connection		pcs	19	36	46	53
Operating ambient temperature range		°C	Cooling -15 ... +55 / Heating -30 ... +30			

* Data are provided according to Eurovent conditions and with Duct indoor units.
(1) Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber.

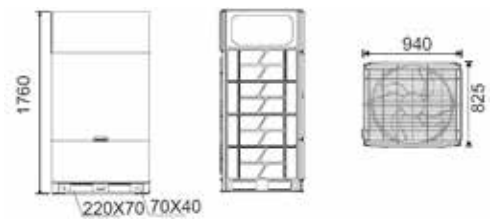
Operating conditions

	Indoor unit	Outdoor unit	Piping length	Level difference
Cooling mode	27°C DB, 19°C WB	35°C DB, 24°C WB	5 m	0 m
Heating mode	20°C DB, 15°C WB	7°C DB, 6°C WB	5 m	0 m

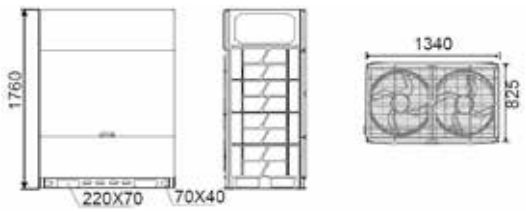
The sound pressure value may vary depending on ambient conditions.

Dimensions

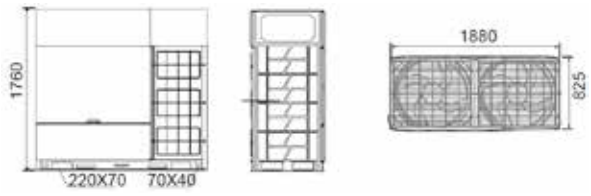
SYSVRF3 M 335 AIR EVO HP R



SYSVRF3 M 615 AIR EVO HP R



SYSVRF3 M 785/900 AIR EVO HP R



Outdoor unit combination
SYSVRF3 M AIR EVO HP

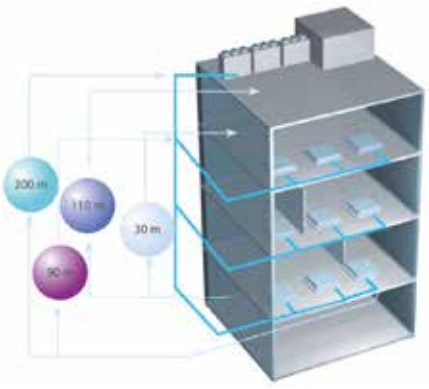
Design	Cooling/ Heating capacity kW	Model	Recommended combination	Outdoor branch	Max. indoor unit qty
	33,5/33,5	SYSVRF3 M 335 AIR EVO HP R	-	-	19
	61,5/61,5	SYSVRF3 M 615 AIR EVO HP R	-	-	36
	78,5/78,5	SYSVRF3 M 785 AIR EVO HP R	-	-	46
	90/90	SYSVRF3 M 900 AIR EVO HP R	-	-	53

Design	Cooling/ Heating capacity kW	Model	Recommended combination	Outdoor branch	Max. indoor unit qty
	67/67	SYSVRF3 M 670 AIR EVO HP R	SYSVRF3 M 335 AIR EVO HP R x2	SYSVRF2 JOINT OUT 02 HP	38
	95/95	SYSVRF3 M 950 AIR EVO HP R	SYSVRF3 M 335 AIR EVO HP R + SYSVRF3 M 615 AIR EVO HP R	SYSVRF2 JOINT OUT 02 HP	55
	112/112	SYSVRF3 M 1120 AIR EVO HP R	SYSVRF3 M 335 AIR EVO HP R + SYSVRF3 M 785 AIR EVO HP R	SYSVRF2 JOINT OUT 02 HP	63
	123/123	SYSVRF3 M 1230 AIR EVO HP R	SYSVRF3 M 615 AIR EVO HP R x2	SYSVRF2 JOINT OUT 02 HP	64
	140/140	SYSVRF3 M 1400 AIR EVO HP R	SYSVRF3 M 615 AIR EVO HP R + SYSVRF3 M 785 AIR EVO HP R	SYSVRF2 JOINT OUT 02 HP	64
	157/157	SYSVRF3 M 1570 AIR EVO HP R	SYSVRF3 M 785 AIR EVO HP R 2x	SYSVRF2 JOINT OUT 02 HP	64
	168,5/168,5	SYSVRF3 M 1685 AIR EVO HP R	SYSVRF3 M 785 AIR EVO HP R + SYSVRF3 M 900 AIR EVO HP R	SYSVRF2 JOINT OUT 02 HP	64
	180/180	SYSVRF3 M 1800 AIR EVO HP R	SYSVRF3 M 900 AIR EVO HP R x2	SYSVRF2 JOINT OUT 02 HP	64

Design	Cooling/ Heating capacity kW	Model	Recommended combination	Outdoor branch	Max. indoor unit qty
	185/185	SYSVRF3 M 1850 AIR EVO HP R	SYSVRF3 M 335 AIR EVO HP R + SYSVRF3 M 615 AIR EVO HP R + SYSVRF3 M 900 AIR EVO HP R	SYSVRF2 JOINT OUT 03 HP	63
	202/202	SYSVRF3 M 2020 AIR EVO HP R	SYSVRF3 M 335 AIR EVO HP R + SYSVRF3 M 785 AIR EVO HP R + SYSVRF3 M 900 AIR EVO HP R	SYSVRF2 JOINT OUT 03 HP	63
	213/213	SYSVRF3 M 2130 AIR EVO HP R	SYSVRF3 M 615 AIR EVO HP R x2 + SYSVRF3 M 900 AIR VO HP R	SYSVRF2 JOINT OUT 03 HP	64
	230/230	SYSVRF3 M 2300 A IR EVO HP R	SYSVRF3 M 615 AIR EVO HP R + SYSVRF3 M 785 AIR EVO HP R + SYSVRF3 M 900 AIR EVO HP R	SYSVRF2 JOINT OUT 03 HP	64
	247/247	SYSVRF3 M 2470 AIR EVO HP R	SYSVRF3 M 785 AIR EVO HP R x2 + SYSVRF3 M 900 AIR EVO HP R	SYSVRF2 JOINT OUT 03 HP	64
	258,5/258,5	SYSVRF3 M 2585 AIR EVO HP R	SYSVRF3 M 785 AIR EVO HP R + SYSVRF3 M 900 AIR EVO HP R x2	SYSVRF2 JOINT OUT 03 HP	64
	270/270	SYSVRF3 M 2700 AIR EVO HP R	SYSVRF3 M 900 AIR EVO HP R x3	SYSVRF2 JOINT OUT 03 HP	64

Piping Length

- Maximum piping equivalent length.
- Maximum piping (the farthest IDU from the first indoor unit branch) equivalent length.
- Maximum outdoor unit-indoor unit drop height.
- Maximum indoor unit to indoor unit drop height.



Outdoor units SYSVRF3 252 to 2700 AIR EVO HP R			Permitted value
Piping length	Total piping length (actual)		1.100 m
	Maximum piping	Actual length	220 m
		Equivalent length	260 m
	Piping (the farthest IDU from the first indoor unit branch) equivalent length		40 m / 120 m*
Drop height	Outdoor unit-indoor unit drop height	Outdoor unit down	110 m
		Outdoor unit up	110 m
	Indoor unit to indoor unit drop height		40 m

* The longest length after first branch is 40m as standard but can be extended to up to 120m under certain conditions.

Wall-Mounted Indoor Unit
SYSVRF3 WALL 22-56 Q





Infrared remote controller
SYSVRF3 RM12
Art. no. 456126
(optional)



Wired controller
SYSVRF3 WGC86T
Art. no. 456127
(optional)

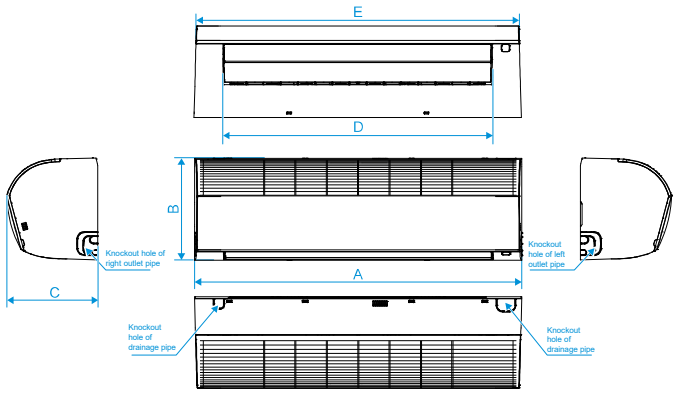


Wired controller
SYSVRF3 WGC86S
Art. no. 456128
(optional)

Features

- For R410A and R32 refrigerant
- Only 3 cm distance to the ceiling is required
- Front panel of modern design that fits into any interior decor
- All models are equipped with high efficient DC fan motor
- 7-speed fan control provides an high flexibility in supplying the correct air flow in the room
- Even and smooth air distribution due to auto swing function
- Multi-refrigerant outlet pipe method: left/right/rear, more flexible for installation
- Hydrophilic aluminium fins
- Washable air filter, easy for insertion and removal
- Built-in electronic expansion valve (EXV) ensuring precise refrigerant flow control
- Functional port for remote on/off contact and alarm output
- Infrared receiver with integrated display

Dimensions



Model	A	B	C	D	E
22 - 36	750	295	265	581	736
45 - 56	950	295	265	781	936

Technical features

Model Indoor unit		SYSVRF3	WALL 22 Q	WALL 28 Q	WALL 36 Q
Art. no.			455457	455458	455459
Power Supply		V/Ph/Hz	220-240/1/50-60		
Cooling capacity		kW	2,2	2,8	3,6
Heating capacity		kW	2,4	3,2	4,0
Power input		W	21	24	27
Indoor fan motor			DC motor		
Air flow		m^3/h	500/470/440/410/390/370/340	540/510/470/430/400/370/340	580/540/500/460/420/380/340
Sound pressure level		dB(A)	33/32/31/30/29/28/27	35/34/33/32/31/30/28	37/35/33/32/31/30/29
Sound power level		dB(A)	46/45/44/43/42/41/40	50/49/48/47/46/44/42	54/53/51/50/48/46/44
Dimension LxWxH		mm	750×295×265		
Packing LxWxH		mm	875×390×360		
Net/gross weight		kg	9,0 / 11,5	10,0 / 12,5	11,4/15,5
Refrigerant			R410A / R32		
Piping dimension	Liquid pipe	mm (in)	6,35 (1/4")		
	Gas pipe	mm (in)	12,7 (1/2")		
Drain pipe		mm	OD Φ16		
Operating ambient temp. range		°C	Cooling +17 ... +32 / Heating +10 ... +28		

Model Indoor unit		SYSVRF3	WALL 45 Q	WALL 56 Q
Art. no.			455460	455461
Power Supply		V/Ph/Hz	220-240/1/50-60	
Cooling capacity		kW	4,5	5,6
Heating capacity		kW	5,0	6,3
Power input		W	30	40
Indoor fan motor			DC motor	
Air flow		m^3/h	720/670/620/560/510/460/410	860/780/700/620/550/480/410
Sound pressure level		dB(A)	37/35/33/32/31/30/29	41/39/37/35/33/31/29
Sound power level		dB(A)	56/54/52/50/48/46/44	56/54/52/50/48/46/44
Dimension LxWxH		mm	950×295×265	
Packing LxWxH		mm	1075×390×360	
Net/gross weight		kg	11,5 / 14	
Refrigerant			R410A / R32	
Piping dimension	Liquid pipe	mm (in)	6,35 (1/4")	
	Gas pipe	mm (in)	12,7 (1/2")	
Drain pipe		mm	OD Φ16	
Operating ambient temp. range		°C	Cooling +17 ... +32 / Heating +10 ... +28	

Operating conditions

	Indoor unit	Outdoor unit	Piping length	Level difference
Cooling mode	27°C DB, 19°C WB	35°C DB	7,5 m	0 m
Heating mode	20°C DB, 15°C WB	7°C DB	7,5 m	0 m

The sound pressure value may vary depending on ambient conditions.

Compact Cassette Indoor Unit
SYSVRF3 CASSETTE MINI 22-63





Panel for Cassette mini
SYSPANEL CASSETTE MINI SYSVRF3
Art. no. 455437
(accessory)



Infrared remote controller
SYSVRF3 RM12
Art. no. 456126
(optional)



Wired controller
SYSVRF3 WGC86T
Art. no. 456127
(optional)

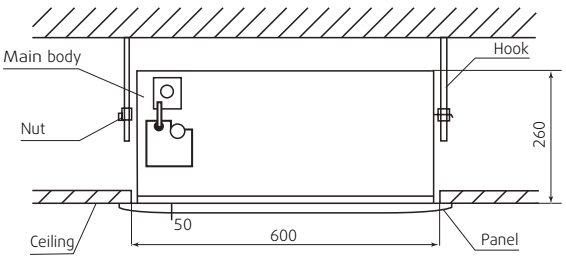


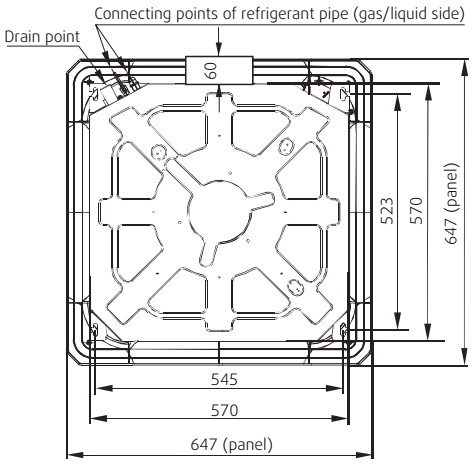
Wired controller
SYSVRF3 WGC86S
Art. no. 456128
(optional)

Features

- For R410A and R32 refrigerant
- 360° airflow panel providing strong circulating air flow to cool or heat every corner of the room
- Individual louver control of all four louvers
- airflow angles from 40° to 70° and is equipped with a 5-step louver control and automatic swing mode to better meet the needs of different customers
- Compact casing making it match perfectly with ambient decoration
- Advanced 3D spiral fan design reducing the air resistance and operation noise
- All models are equipped with high efficient DC fan motor
- 7-speed fan control provides an high flexibility in supplying the correct air flow in the room
- Integrated drain pump with a head of 1200 mm.
- Fresh air hole and reserved ports for duct connection
- The electronic expansion valve (EXV) ensures precise refrigerant flow control
- Functional port for remote on/off contact and alarm output
- Infrared receiver integrated in the panel

Dimensions





Technical features

Model Indoor unit		SYSVRF3	CASSETTE MINI 22 Q	CASSETTE MINI 28 Q	CASSETTE MINI 36 Q
Model Panel unit		SYSPANEL	CASSETTE MINI SYSVRF3	CASSETTE MINI SYSVRF3	CASSETTE MINI SYSVRF3
Art. no. Indoor unit			455431	455432	455433
Art. no. Panel unit			455437		
Power Supply		V/Ph/Hz	220-240/1/50-60		
Cooling capacity		kW	2,2	2,8	3,6
Heating capacity		kW	2,4	3,2	4,0
Power Input		W	14	16	18
Indoor fan motor			DC motor		
Air flow		m^3/h	450/425/400/370/ 345/320/295	510/480/455/425/ 395/370/340	530/500/470/440/ 405/375/345
Sound pressure level		dB(A)	29/28/27/ 27/26/26/25	30/29/28/27/ 26/26/25	31/30/29/28/ 27/26/25.5
Sound power level		dB(A)	40/39/39/39/ 38/38/38	42/41/40/39/ 39/38/38	42/40/39/38/ 38/38/38
Unit	Dimension (W×H×D)	mm	575×235×638		
	Packing (W×H×D)	mm	690×285×690		
	Net/gross weight	kg	13/15		14/16
Panel	Dimension (W×H×D)	mm	620×65×620		
	Packing (W×H×D)	mm	680×80×665		
	Net/gross weight	kg	2,4/3,2		
Refrigerant			R410A / R32		
Piping dimension	Liquid pipe	mm (in)	6,35 (1/4")		
	Gas pipe	mm (in)	12,7 (1/2")		
Drain pipe		mm	OD Φ25		
Operating ambient temp. range		°C	Cooling +17...+32 / Heating +10...+28		

Model Indoor unit		SYSVRF3	CASSETTE MINI 45 Q	CASSETTE MINI 56 Q	CASSETTE MINI 63 Q
Model Panel unit		SYSPANEL	CASSETTE MINI SYSVRF3	CASSETTE MINI SYSVRF3	CASSETTE MINI SYSVRF3
Art. no. Indoor unit			455434	455435	455436
Art. no. Panel unit			455437		
Power Supply		V/Ph/Hz	220-240/1/50-60		
Cooling capacity		kW	4,5	5,6	6,3
Heating capacity		kW	5,0	6,3	7,1
Power Input		W	25	35	50
Indoor fan motor			DC motor		
Air flow		m^3/h	640/605/570/530/ 495/460/425	810/765/720/670/ 625/580/535	905/855/805/755/ 705/655/605
Sound pressure level		dB(A)	36.5/35/33/31 /29/28/26.5	39/38/37/36/35/34/32	43/42/40/38/36/35/33.5
Sound power level		dB(A)	44/44/43/42/ 41/41/41	48/46/45/43/42/42/41	51/50/48/46/45/44/42
Unit	Dimension (W×H×D)	mm	575×235×638		
	Packing (W×H×D)	mm	690×285×690		
	Net/gross weight	kg	14/16	15/17	
Panel	Dimension (W×H×D)	mm	620×65×620		
	Packing (W×H×D)	mm	680×80×665		
	Net/gross weight	kg	2,4/3,2		
Refrigerant			R410A / R32		
Piping dimension	Liquid pipe	mm (in)	6,35 (1/4")		9,52 (1/4")
	Gas pipe	mm (in)	12,7 (1/2")		15,9 (1/2")
Drain pipe		mm	OD Φ25		
Operating ambient temp. range		°C	Cooling +17...+32 / Heating +10...+28		

Operating conditions

	Indoor unit	Outdoor unit	Piping length	Level difference
Cooling mode	27°C DB, 19°C WB	35°C DB	5 m	0 m
Heating mode	20°C DB, 15°C WB	7°C DB	5 m	0 m

The sound pressure value may vary depending on ambient conditions.

Slim Cassette Indoor Unit
SYSVRF3 CASSETTE 71-140 Q





Panel for Slim Cassette
SYSPANEL CASSETTE EVO SYSVRF3
Art. no. 455446
(accessory)



Infrared remote controller
SYSVRF3 RM12
Art. no. 456126
(optional)



Wired controller
SYSVRF3 WGC86T
Art. no. 456127
(optional)

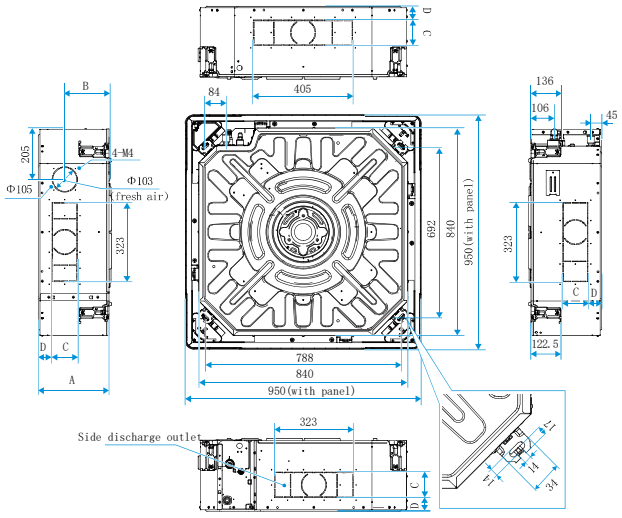


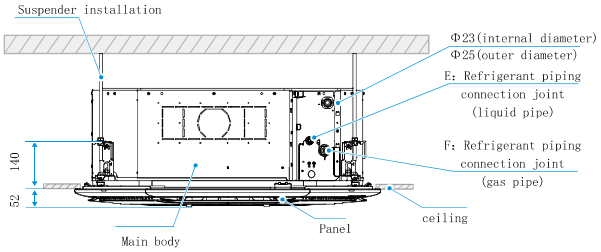
Wired controller
SYSVRF3 WGC86S
Art. no. 456128
(optional)

Features

- For R410A and R32 refrigerant
- 360° airflow panel providing strong circulating air flow to cool or heat every corner of the room
- Individual louver control of all four louvers
- airflow angles from 40° to 70° and is equipped with a 5-step louver control and automatic swing mode to better meet the needs of different customers
- Up to two air discharge ports can be blocked with air baffle to optimize air distribution in irregular shaped rooms. Air outlets can be blocked with accessories, which can be found in the packing material
- Compact casing making it match perfectly with ambient decoration
- Advanced 3D spiral fan design reducing the air resistance and operation noise
- All models are equipped with high efficient DC fan motor
- 7-speed fan control provides an high flexibility in supplying the correct air flow in the room
- Integrated drain pump with a head of 1200 mm
- Fresh air hole and reserved ports for duct connection
- The electronic expansion valve (EXV) ensures precise refrigerant flow control
- Functional port for remote on/off contact and alarm output
- Infrared receiver integrated in the panel

Dimensions





Model (kW)	SYSVRF3	A	B	C	D	E	F
7,1 - 9,0	mm	246	163	103	41,5	Ø15,9	Ø9,52
10,0 - 14,0	mm	288	190	103	56,5	Ø15,9	Ø9,52

Technical features

Model Indoor unit		SYSVRF3	CASSETTE 71 Q	CASSETTE 90 Q
Model Panel unit		SYSPANEL	CASSETTE EVO SYSVRF3	CASSETTE EVO SYSVRF3
Art. no. Indoor unit			455442	455443
Art. no. Panel unit			455446	
Power Supply		V/Ph/Hz	220-240/1/50-60	
Cooling capacity		kW	7,1	9,0
Heating capacity		kW	8,0	10,0
Power Input		W	31	43
Indoor fan motor			DC motor	
Air flow		m^3/h	1000/943/886/829/772/715/658	1330/1239/1148/1057/965/874/783
Sound pressure level		dB(A)	37/36/34/33/32/30/29	38/37/35/34/32/31/29
Sound power level		dB(A)	51/50/49/48/47/46/46	54/53/52/51/50/49/48
Unit	Dimension (W×H×D)	mm	840×246×840	
	Packing (W×H×D)	mm	940×295×940	
	Net/gross weight	kg	22/24,5	
Panel	Dimension (W×H×D)	mm	950x53x950	
	Packing (W×H×D)	mm	1020×90×1020	
	Net/gross weight	kg	5,6/7,3	
Refrigerant			R410A / R32	
Piping dimension	Liquid pipe	mm (in)	9,52 (3/8")	
	Gas pipe	mm (in)	15,9 (5/8")	
Drain pipe		mm	Ø25	
Operating ambient temp. range		°C	Cooling +17...+32 / Heating +10...+28	

Model Indoor unit		SYSVRF3	CASSETTE 112 Q	CASSETTE 140 Q
Model Panel unit		SYSPANEL	CASSETTE EVO SYSVRF3	CASSETTE EVO SYSVRF3
Art. no. Indoor unit			455444	455445
Art. no. Panel unit			455446	
Power Supply		V/Ph/Hz	220-240/1/50-60	
Cooling capacity		kW	11,2	14,0
Heating capacity		kW	12,5	16,0
Power Input		W	61	89
Indoor fan motor			DC motor	
Air flow		m^3/h	1600/1497/1393/1290/1186/1083/979	1730/1624/1518/1412/1306/1200/1094
Sound pressure level		dB(A)	41/40/38/37/36/34/33	43/42/40/39/37/36/34
Sound power level		dB(A)	57/56/55/54/53/52/51	58/57/56/55/54/53/52
Unit	Dimension (W×H×D)	mm	840×288×840	
	Packing (W×H×D)	mm	940×335×940	
	Net/gross weight	kg	24/26,5	26,5/29
Panel	Dimension (W×H×D)	mm	950x53x950	
	Packing (W×H×D)	mm	1020×90×1020	
	Net/gross weight	kg	5,6/7,3	
Refrigerant			R410A / R32	
Piping dimension	Liquid pipe	mm (in)	9,52 (3/8")	
	Gas pipe	mm (in)	15,9 (5/8")	
Drain pipe		mm	Ø25	
Operating ambient temp. range		°C	Cooling +17...+32 / Heating +10...+28	

Operating conditions

	Indoor unit	Outdoor unit	Piping length	Level difference
Cooling mode	27°C DB, 19°C WB	35°C DB	7,5 m	0 m
Heating mode	20°C DB, 15°C WB	7°C DB	7,5 m	0 m

The sound pressure value may vary depending on ambient conditions.

1Way Cassette Indoor Unit

SYSVRF3 CASSETTE 1W 22-36 Q





Panel for 1 Way Cassette
SYSPANEL CASSETTE EVO SYSVRF3
Art. no. 455446
(accessory)



Infrared remote controller
SYSVRF3 RM12
Art. no. 456126
(optional)



Wired controller
SYSVRF3 WGC86T
Art. no. 456127
(optional)

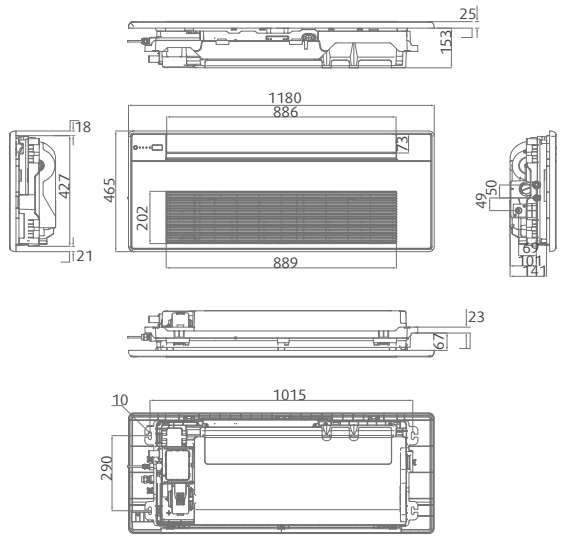


Wired controller
SYSVRF3 WGC86S
Art. no. 456128
(optional)

Features

- For R410A and R32 refrigerant
- Stylish look with new decorative panel
- Ultra-thin chassis for easy installation in false ceiling
- All models are equipped with high efficient DC fan motor
- 7-speed fan control provides an high flexibility in supplying the correct air flow in the room
- Integrated drain pump with a head of 1200 mm
- Built-in electronic expansion valve (EXV) ensuring precise refrigerant flow control
- Functional port for remote on/off contact and alarm output
- Infrared receiver as standard equipment

Dimensions



Technical features

Model Indoor unit		SYSVRF3	CASSETTE 1W 22 Q	CASSETTE 1W 28 Q	CASSETTE 1W 36 Q
Model Panel unit		SYSPANEL	CASSETTE 1W VRF3	CASSETTE 1W VRF3	CASSETTE 1W VRF3
Art. no. Indoor unit			456086	456085	456087
Art. no. Panel unit			456088		
Power Supply		V/Ph/Hz	220-240/1/50-60		
Cooling capacity		kW	2,2	2,8	3,6
Heating capacity		kW	2,6	3,2	4,0
Power Input		W	25	30	30
Indoor fan motor			DC motor		
Air flow		m^3/h	380/355/330/300/ 286/263/240	460/440/410/380/ 355/330/300	
Sound pressure level		dB(A)	30/28/27/26/ 25/24/22	37/36/35/34/ 32/31/30	38/37/35/34/ 32/31/30
Sound power level		dB(A)	44/42/41/40/ 39/38/36	51/50/49/48/ 46/45/44	52/51/49/48/ 46/45/44
Unit	Dimension (WxHxD)	mm	1054×153×428		
	Packing (WxHxD)	mm	1155×245×490		
	Net/gross weight	kg	11.5/14.5	11.8/14.8	
Panel	Dimension (WxHxD)	mm	1180×25×465		
	Packing (WxHxD)	mm	1232×107×517		
	Net/gross weight	kg	3.5/4.7		
Refrigerant			R410A / R32		
Piping dimension	Liquid pipe	mm (in)	6,4 (1/4")		
	Gas pipe	mm (in)	12,7 (1/2")		
Drain pipe		mm	Ø25		
Operating ambient temp. range		°C	Cooling +17...+32 / Heating +10...+28		

Operating conditions

	Indoor unit	Outdoor unit	Piping length	Level difference
Cooling mode	27°C DB, 19°C WB	35°C DB	5 m	0 m
Heating mode	20°C DB, 15°C WB	7°C DB	5 m	0 m

The sound pressure value may vary depending on ambient conditions.

Ceiling and Floor Indoor Unit
SYSVRF3 CEILING 36-140 Q





Infrared remote controller
SYSVRF3 RM12
Art. no. 456126
(optional)



Wired controller
SYSVRF3 WGC86T
Art. no. 456127
(optional)

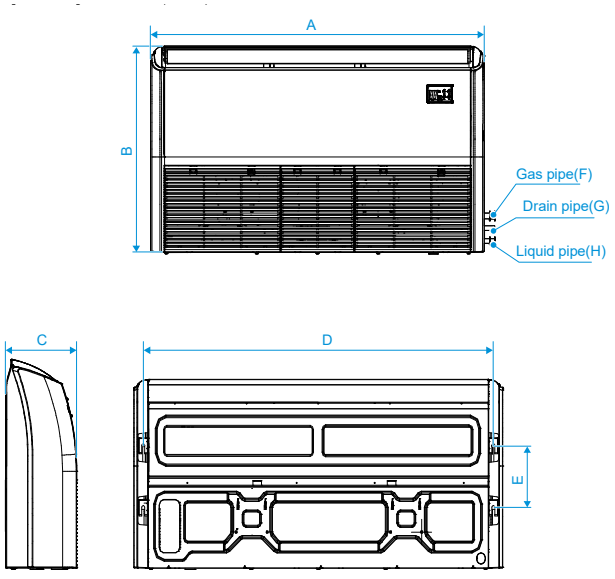


Wired controller
SYSVRF3 WGC86S
Art. no. 456128
(optional)

Features

- For R410A and R32 refrigerant
- Flexible vertical or horizontal installation, even into a corner of the ceiling
- Even and smooth air distribution thanks to the autoswing function of the air louvers
- All models are equipped with high efficient DC fan motor
- 7-speed fan control provides an high flexibility in supplying the correct air flow in the room.
- Wide angle air flow
- Low noise operation
- Washable air filter, easy for insertion and removal
- Built-in electronic expansion valve (EXV) ensuring precise refrigerant flow control.
- Functional port for remote on/off contact and alarm output
- Infrared receiver as standard equipment.

Dimensions



Model (kW)	SYSVRF3	A	B	C	D	E	E	F	G
bis 5,6	mm	1069	674	234	984	221	Ø12,7	Ø25	Ø6,35
5,6 - 9,0	mm	1284	674	234	1199	221	Ø15,9	Ø25	Ø9,52
9,0 - 14,0	mm	1649	674	234	1565	221	Ø15,9	Ø25	Ø9,52

Technical features

Model Indoor unit		SYSVRF3	CEILING 36 Q	CEILING 45 Q	CEILING 56 Q	CEILING 71 Q
Art. no.			459352	459353	459354	459355
Power Supply		V/Ph/Hz	220-240/1/50-60			
Cooling capacity		kW	3,6	4,5	5,6	7,1
Heating capacity		kW	4,0	5,0	6,3	8,0
Power Input		W	16	24	40	42
Indoor fan motor			DC motor			
Air flow		m^3/h	564/539/514/492/ 467/445/424	712/674/637/603/ 565/531/500	927/883/840/794/ 751/707/665	1128/1062/1024/926/ 860/791/729
Sound pressure level		dB(A)	32/30/29/28/ 27/26/25	36/35/34/33/ 32/31/30	43/41/40/38/ 36/34/33	43/40/39/37/ 35/34/33
Sound power level		dB(A)	43/42/40/39/ 38/38/37	47/45/45/43/ 42/41/40	54/53/51/50/ 48/47/45	54/53/52/51/ 49/48/48
Dimension (WxHxD)		mm	1069×674×234			1284×674×234
Packing (WxHxD)		mm	1190×755×313			1405×755×323
Net/gross weight		kg	24,7/29,5			29,8/34,8
Refrigerant			R410A / R32			
Piping dimension	Liquid pipe	mm (in)	6,35 (1/4")		9,52 (3/8")	
	Gas pipe	mm (in)	12,7 (1/2")		15,9 (5/8")	
Drain pipe		mm	OD Φ25			
Operating ambient temp. range		°C	Cooling +17...+32 / Heating +10...+28			

Model Indoor unit		SYSVRF3	CEILING 90 Q	CEILING 112 Q	CEILING 140 Q
Art. no.			459357	459359	459361
Power Supply		V/Ph/Hz	220-240/1/50-60		
Cooling capacity		kW	9,0	11,2	14,0
Heating capacity		kW	10,0	12,5	16,0
Power Input		W	75	65	140
Indoor fan motor			DC motor		
Air flow		m^3/h	1480/1397/1302/1218/ 1138/1056/979	1648/1530/1469/1292/ 1178/1067/956	2206/2070/1937/1810/ 1677/1516/1402
Sound pressure level		dB(A)	48/47/46/44/ 42/40/37	44/42/41/39/ 37/35/33	51.5/50/48/46/ 44/42/40
Sound power level		dB(A)	58/57/55/54/ 52/50/49	56/54/53/51/ 49/47/45	63/62/60/58/ 56/54/53
Dimension (WxHxD)		mm	1284×674×234	1649×674×234	
Packing (WxHxD)		mm	1405×755×323	1770×755×323	
Net/gross weight		kg	29,8/34,8	36.4/42.7	
Refrigerant			R410A / R32		
Piping dimension	Liquid pipe	mm (in)	9,52 (3/8")		
	Gas pipe	mm (in)	15,9 (5/8")		
Drain pipe		mm	OD Φ25		
Operating ambient temp. range		°C	Cooling +17...+32 / Heating +10...+28		

Operating conditions

	Indoor unit	Outdoor unit	Piping length	Level difference
Cooling mode	27°C DB, 19°C WB	35°C DB	7,5 m	0 m
Heating mode	20°C DB, 15°C WB	7°C DB	7,5 m	0 m

The sound pressure value may vary depending on ambient conditions.

Medium Static Pressure Duct Indoor Unit
SYSVRF3 DUCT 22-140 Q





Infrared remote controller
SYSVRF3 RM12
Art. no. 456126
(optional)



Wired controller
SYSVRF3 WGC86T
Art. no. 456127
(optional)

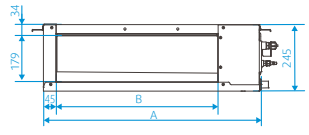


Wired controller
SYSVRF3 WGC86S
Art. no. 456128
(optional)

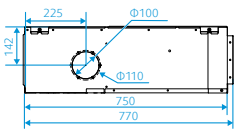
Features

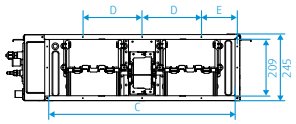
- For R410A and R32 refrigerant
- External static pressure up to 160 Pa.
- All models are equipped with high efficient DC fan motor
- 7-speed fan control provides an high flexibility in supplying the correct air flow in the room
- Washable air filter placed in an aluminum frame which is removable downward from the bottom
- Fresh air hole, air inlet/outlet flange are standard for easy duct connection
- Air inlet from back as standard and from bottom as optional with the same flange plate
- Integrated drain pump with a head of 1200 mm
- Electronic expansion valve (EXV) fixed inside of the indoor unit
- Functional port for remote on/off contact and alarm output
- Display board with infrared receiver as standard equipment

Dimensions

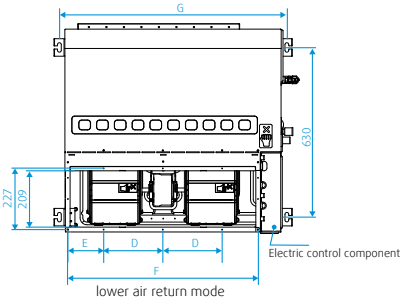


Air return opening size





Rear air return mode



Electric control component

lower air return mode

Indoor unit SYSVRF3	A	B	C	D	E	F	G
DUCT 22 Q - 45 Q	600	400	490	87,5	165	506	645
DUCT 56 Q - 71 Q	800	600	690	220	134	706	845
DUCT 90 Q	1050	850	940	220	146	956	1095
DUCT 112 Q - 140 Q	1400	1200	1290	220	213	1306	1445

Technical features

Model Indoor unit		SYSVRF3	DUCT22 Q	DUCT28 Q	DUCT36 Q	DUCT45 Q	DUCT56 Q
Art. no.			455447	455448	455449	455450	455451
Power Supply		V/Ph/Hz	220-240/1/50-60				
Cooling capacity		kW	2,2	2,8	3,6	4,5	5,6
Heating capacity		kW	2,5	3,2	4,0	5,0	6,3
Power Input		W	36	40	50	70	70
Indoor fan motor			DC motor				
Air flow		m^3/h	500/467/433/ 400/367/333/300	540/503/467/ 430/393/357/320	575/535/495/ 455/415/375/335	665/623/580/ 538/495/453/410	970/904/838/ 773/707/641/575
Sound pressure level		dB(A)	26.5/26/25/24/ 23/22.5/22	26.5/26/25/24/ 23/22.5/22	29/28/27/26/ 25/23/22	33/32/29.5/28/ 26.5/25/24	33/32/31/30/ 27.5/26/25
Sound power level		dB(A)	47/45.5/44/42.5/ 41/39.5/38	47/45.5/44/42.5/ 41/39.5/38	50/48.5/47/45/ 43/41/39	53/51/49/47/ 45/43/41	55/53/51/49/ 47/45/43
External static pressure Rated/Range		Pa	30 / (10-160)				
Dimension (WxHxD)		mm	710×245×770			710×245×770	910×245×770
Packing (WxHxD)		mm	765×305×890			765×305×890	965×305×890
Net/gross weight		kg	18.5/21			19.5/22	24/27.5
Refrigerant			R410A/R32				
Piping dimension	Liquid pipe	mm (in)	6,35 (1/4")				
	Gas pipe	mm (in)	12,7 (1/2")				
Drain pipe		mm	OD Φ25				
Operating ambient temp. range		°C	Cooling +17...+32 / Heating +10...+28				

Model Indoor unit		SYSVRF3	DUCT71 Q	DUCT90 Q	DUCT112 Q	DUCT140 Q	Duct 160 Q
Art. no.			455452	455453	455454	455455	455456
Power Supply		V/Ph/Hz	220-240/1/50-60				
Cooling capacity		kW	7,1	9,0	11,2	14,0	16,0
Heating capacity		kW	8,0	10,0	12,5	16,0	18,0
Power Input		W	96	110	138	172	210
Indoor fan motor			DC motor				
Air flow		m^3/h	1150/1068/986/ 904/822/740/660	1420/1323/1225/ 1128/1030/933/835	1950/1817/1683/ 1550/1417/1283/1150	2105/1971/1837/ 1703/1568/1434/1300	2350/2160/2015/ 1871/1776/1533/1400
Sound pressure level		dB(A)	35/33.5/32/30.5/ 29/27.5/26	37/35.5/34/32.5/ 31/29.5/28	39/37/35/33/ 31/29/28	40/38/36/34/ 32/30/29	42/40/38/36/ 34/33/31
Sound power level		dB(A)	58/56/54/51.5/ 48/47/45	59/57/55/53/ 50.5/48/46	60/58/56.5/55/ 53.5/52/50	64/62/61.5/59.5/ 57.5/55/53	65/63/61/58.5/ 56.5/54/52
External static pressure Rated/Range		Pa	30 / (10-160)	40 / (10-160)		50 / (10-160)	
Dimension (WxHxD)		mm	910×245×770	1160×245×770		1510×245×770	
Packing (WxHxD)		mm	965×305×890	1215×305×890		1565×305×890	
Net/gross weight		kg	25/28.5	31/34.5	37/41.5	39/43.5	39/43.5
Refrigerant			R410A/R32				
Piping dimension	Liquid pipe	mm (in)	9,52 (3/8")				
	Gas pipe	mm (in)	15,9 (5/8")				
Drain pipe		mm	OD Φ25				
Operating ambient temp. range		°C	Cooling +17...+32 / Heating +10...+28				

Operating conditions

	Indoor unit	Outdoor unit	Piping length	Level difference
Cooling mode	27°C DB, 19°C WB	35°C DB	7,5 m	0 m
Heating mode	20°C DB, 15°C WB	7°C DB	7,5 m	0 m

The sound pressure value may vary depending on ambient conditions.

Communication box for AHUs and Air-curtains
SYSVRF3 AHU BOX





Wired controller
SYSVRF3 WGC86S
(standard)



Infrared remote controller
SYSVRF3 RM12
Art. no. 456126
(optional)

Features

- For R410A and R32 refrigerant
- External evaporators with a capacity of 2.2 kW to 56 kW can be integrated into a Systemair SYSVRF Heat Pump and as well as Mini VRF system
- Up to four SYSVRF3 AHU BOX can be used in parallel, allowing a total capacity range up to 224 kW in a single refrigerant circuit
- The external register can be controlled either by a control of an external operator or by the supplied remote control. 0-10 V capacity control for 0-100 % capacity demand or setpoint shift (return air temperature control)
- Terminals for external fan
- Connection terminals for external condensate pump and float switch
- Master/Slave control (224 kW)
- Return or supply air temperature control
- Included 6 temperature probes with cable extension
- Electronic expansion valve (EXV) removable for split design
- Wired remote controller WGC86S for maintenance or control (standard)
- Digital outputs: operation message, defrost, alarm
- Digital inputs: Fan mode, heating mode, cooling mode, remote On/Off
- Analog inputs: 0-10 V
- Protection against splashing water on all sides

Connection diagram



Technical features

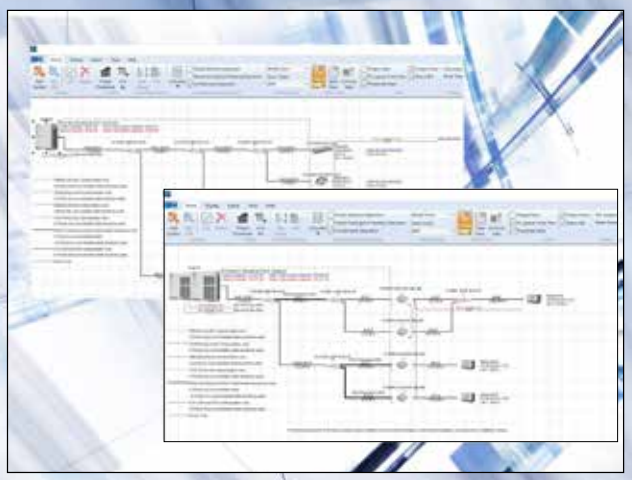
Model AHU box	SYSVRF3	AHU BOX 22-90	AHU BOX 90-200	AHU BOX 200-360	AHU BOX 360-560
Art. no.		466571	466572	466573	466574
Power supply	V/Ph/Hz	220-240/1/50-60			
DX coil capacity	kW	2,2-9	9-20	20-36	36-56
Dimensions (LxWxH)	mm	479x134x384			
Packing (LxWxH)	mm	565×220×470			
Net/gross weight	kg	6,2/8,8	6,2/8,8	6,4/9,0	6,4/9,0
Piping diameters in/out	mm	8/8	8/8	12,7/12,7	12,7/12,7
IP-class		IPX4			
Operation range of the air handling unit	°C	Cooling +17 ... +43 / Heating +10 ... +30			

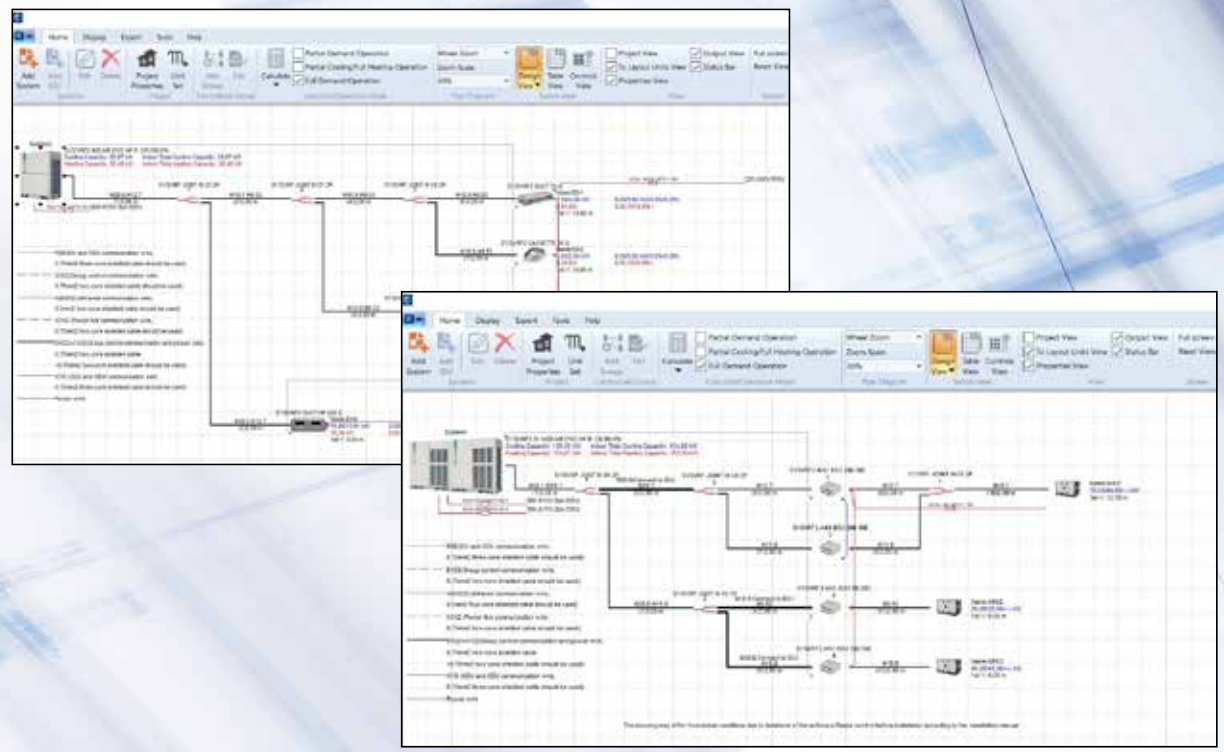
SYSVRF selection and designing software

SYSVRF3 is a selection and designing software for all SYSVRF3 systems, 2-pipe and Mini-VRF.

Main features:

- Calculation of the heat loads and selection of the necessary cooling /heating capacity, type and location of outdoor and indoor units.
- Calculation of the refrigerant piping diameters and the required additional amount of refrigerant.
- Selection of an optimal set of piping joints.
- Building Management System.
- Automatic check of the circuit for compliance requirements and limits on the maximum length of refrigerant pipelines and indoor-outdoor elevations.
- Output of project documentation - specifications, piping and wiring drawings, and print out of all documents.
- Export of refrigerant and wiring diagrams in DWG format.
- Selection of the DX-coil connected to the SYSVRF3 AHU BOX unit.





SYSVRF Control systems



Infrared Remote Controller
SYSVRF3 RM12
Art. no. 456126

Infrared remote control for controlling various indoor devices from the SYSVRF3 and SYSVRF2 model series.

- Setting mode Cool/Heat/Auto/Dry/Fan
- Temperature setting (0,5 or 1°C steps)
- 7-speed fan control
- Auto swing/5-step swing louver
- Address setting
- 24h On/Off timer
- Sterilization function setting*
- Eco mode
- Silent mode
- Display shut-off of indoor unit
- Keyboard lock
- LCD backlight
- Indoor unit parameter setting
- ETA function

Dimensions (HxWxD): 170×48×20 mm
*only for SYSVRF3 indoor units



Wired Remote Controller
SYSVRF3 WGC86S
Art. no. 456128

Bi-directional wired control for controlling various indoor units from the SYSVRF3 and SYSVRF2 model series. One controller can be used to unify the settings across up to 16 indoor units. Two permission levels ensure that users can easily access control functions and allow administrators convenient access to operating parameters. The integrated temperature sensor allows the follow me function.

- On/Off Control
- Setting mode Cool/Heat/Auto/Dry/Fan
- Temperature setting (0,5 or 1 °C steps)
- 7-speed fan control
- Auto swing/5-step swing louver
- Setting the address of indoor units
- Follow me
- ETA Mode
- Room temperature display
- °F/°C display
- Keyboard lock
- Background light
- Daily 24 h On/Off timer
- Auto restart
- 2 permission levels
- 2 way communication
- Group control up to 16 indoor units
- Main or secondary controller setting
- Silent mode operation
- Remote signal receiver for the infrared remote controller
- Indication of air filter cleaning
- Error check function
- Buzzer Sound On/Off
- System setting control

Dimensions (HxWxD): 86x86x18 mm



Wired Remote Controller
SYSVRF3 WGC86T
Art. no. 456127

Bi-directional wired control for controlling various indoor units from the SYSVRF3 and SYSVRF2 model series. The settings for up to 16 indoor units can be standardized with one controller. 2 permission levels ensure users can easily access control functions and allow administrators convenient access to operating parameters. With integrated temperature sensor which allows the the follow me function.

- On/Off Control
- Setting mode Cool/Heat/Auto/Dry/Fan
- Temperature setting (0,5 or 1°C steps)
- Dual temperatur setting point
- App control
- 7-speed fan control
- Auto swing/5-step swing louver
- Setting the address of indoor units
- Follow me
- ETA Mode
- Room temperature display
- °F/°C display
- Keyboard lock
- Background light
- Daily 24h On/Off timer
- Weekly schedule timer
- Extension function
- Daylight saving time
- Clock display
- One to more control
- Auto restart
- 2 permission levels
- 2 way communication
- Group control up to 16 indoor units
- Main or secondary controller setting
- Silent mode operation
- Remote signal receiver for the infrared remote controller
- Indication of air filter cleaning
- Error check function
- Buzzer Sound On/Off
- System setting control

Dimensions (HxWxD): 86x86x18 mm



Extension Kit for SYSVRF3 systems
SYSVRF3 XYE-Extension Kit
Art. no. 466112

SYSVRF3 XYE-Extension Kit should connect to the X, Y and E ports of the VRF system and independent 2-way X, Y and E ports shall be extended to meet the application scenario where the VRF system requires two centralized control platforms at the same time. It is suitable for all SYSVR3 series units.

Power supply: 12 V DC, 2A

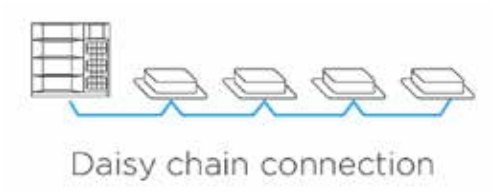


Repeater
SYSVRF3 M1/M2-Repeater
Art. no. 466114

The VRF3 Series offers two connection possibilities PQE and M1/M1 Communication between VRF3 Indoor and VRF3 Outdoor Unit.

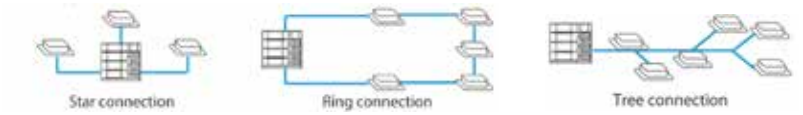
PQE Communication

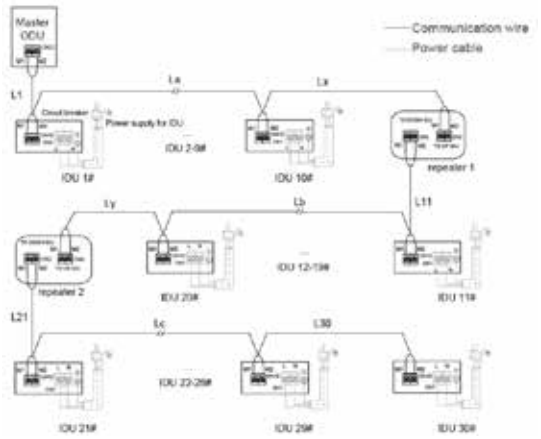
The standard communication is with the PQE Bus. Therefore a flexible, shielded cable with 3 black wires are equired. The PQE-Bus offers the daisy chain connection up to 1000 m cable length.



M1/M2 communication line

The M1/M2-Communication is only available when the indoor and outdoor units are SYSVRF3 systems. Only a flexible, shielded cable with two wires are needed.





The SYSVRF3 M1/M2 Repeater is only for the Hyperlink communication bus M1/M2. The repeater is needed when the IDUs are powered separately and the number of connected IDUs is more than ten or the communication distance is larger than 200.



Central Control Solutions



Central Wired Controller with 10,1" touch screen
SYSVRF3 CWC 10
Art. no. 456129

The controller SYSVRF3 CWC 10 provides centralized management functions for SYSVRF3 units. It is compatible with all SYSVRF3 series units, that used, SYSVRF3 ODUs and SYSVRF3 IDUs. The product supports 6 RS-485 buses, and each RS-485 bus can be connected to up to 8 SYSVRF3 refrigerant systems (8 refrigerant systems can have a maximum of 64 IDUs). This results that a centralized controllercan be connected to a maximum of 48 refrigerant systems (48 refrigerant systems can have a maximum of 384 IDUs).

- On / Off Control
- Setting mode Cool/Heat/Auto/Dry/ Fan
- Temperature setting (0,5 or 1 °C steps)
- 7-speed fan control
- Auto swing/ 5-step swing louver
- Room temperature display
- Holiday setting
- °F/°C display
- Schedule management
- Clock display
- 2 permission levels
- Indoor unit type/model recognition
- Indoor unit with capacity larger than 16 kW recognition
- Energy management
- Group management
- Error check function
- USB output
- Error report and operation record
- Operation log
- LAN access

Power supply: 24 V AC, 1A
Dimensions (WxHxD): 270x183x27 mm



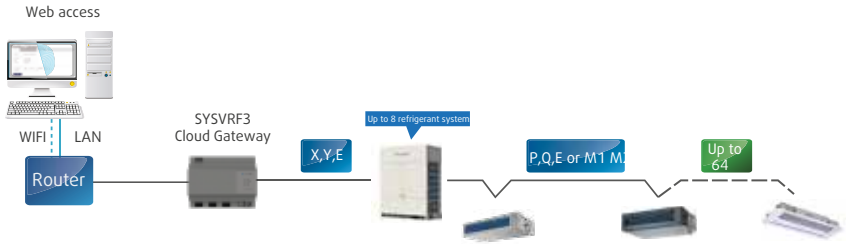
Central Wired Cloud Gateway for SYSVRF3 and SYSVR2 systems
SYSVRF3 Cloud Gateway
Art. no. 466111

This SYSVRF3 Cloud Gateway is used for uploading the VRF system devices information to the cloud. The cloud service and control product can be use to centrally manage and control your project and device via internet anytime and anywhere. It provides the ability to manage the indoor units from a PC, tablet or smartphone and other intelligent terminals and enables the connection of maximum eight systems consisting of 64 IDUs and three ODUs of each system.

- Emergency Stop: Short circuit connection signal port for Emergency shutdown all IDUs in on state.
- Web site function: Network Settings, Firmware Upgrading.
- Built-in web server allows you to organize access through the cloud service.
- Intelligent HVAC Management System: Cloud project and permission management.

The user can check and set the following functions: On/Off, setting temperature, operating mode and fan speed. It allows individual and group controlling, setting weekly timer, locking the operating parameters and the remote controller, indicates the status of each indoor unit and at least provides the list of error codes.

Power supply: 12 V DC, 2A
Dimensions (WxHxD): 154x124x52 mm



Control Solutions



BACnet Gateway

SYSVRF3 BAC-GW

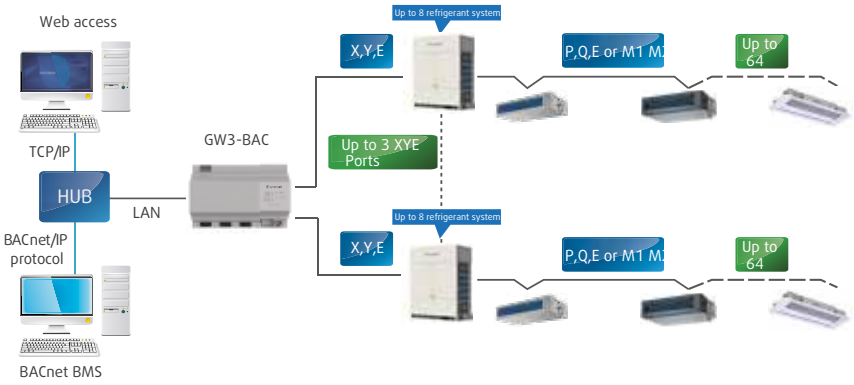
Art. no. 456133

Full Integration

The BACnet Gateway enables seamless connection of SYSVRF3 systems with building management systems built on the BACnet communication protocol.

Network Flexibility

The gateway can be connected to master outdoor units' XYE ports directly.



Features

Model		
Max number of indoor units		192
Max. number of refrigerant systems		24
Indoor unit control	On / Off	●
	Mode selection	●
	Temperature setting	●
	Fan speed	●
	Swing	●
	Energy management	●
Indoor unit monitoring	Room temperature display	●
	Running status	●
	Error status	●
	EXV status	●
Outdoor unit control	Emergency Stop	●
Outdoor unit monitoring	Operating mode	●
	Outdoor ambient temperature	●
	Fan speed	●
	Compressor operating frequency	●
	Exhaust Temperature	●
	System pressure	●
	Error status	●
	Error alarms	●
LAN access		●
Dimensions (HxWxD)(mm)		154×124×51.5
Power supply		24 V AC/DC, 2A
Unit Series		Pure SYSVRF3 System

Note:
● equipped as standard



KNX Gateway

SYSVRF3 KNX-GW

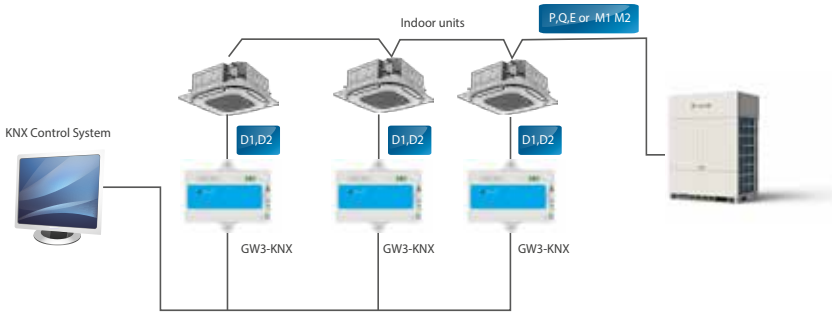
Art. no. 456130

Full Integration

The KNX Gateway enables seamless connection of SYSVRF systems with home and building management systems built on the KNX communication protocol.

Network Flexibility

The gateway can be connected to indoor units' D1D2 port directly.



Features

Model		
Max number of indoor units		1
Control	On / Off	●
	Mode selection	●
	Temperature setting	● (1°C steps)
	7-speed fan control	● (3-speed)
	Swing	●
Monitoring	On / Off	●
	Mode selection	●
	Temperature setting	●
	Fan speed	●
	Swing	●
	Room Temperature	●
	Error alarm	●
Dimensions (HxWxD)(mm)		85×51×16
Power supply		29 V DC (KNX bus supply)
Indoor unit series		Pure SYSVRF3 System

Control Solutions



Modbus Gateway

SYSVRF3 MOD-GW

Art. no. 456135

Two types of register addresses

By IDU/ODU address or by IDU/ODU Parameter Type (Continuous Addresses). For the below mentioned parameter types continuous addresses can be checked: IDU Operating mode status, IDU Operating fan speed status, IDU Set Temperature, IDU Ambient Temperature, IDU On/O status, IDU online status, IDU Fault status, ODU Operating status, ODU Fault status, ODU online status and all IDU control register.

Full Integration

The Modbus Gateway enables seamless connection of SYSVRF3 System with building management systems built on the Modbus communication protocol.

Network Flexibility

The gateway can be connected to master outdoor units' XYE ports directly.



Features

Model		
Max number of indoor units		64
Max. number of refrigerant systems		8
Indoor unit control	On / Off	●
	Mode selection	●
	Temperature setting	●
	Fan speed	●
	Energy management	●
	Group on/off	●
Indoor unit monitoring	Online status	●
	Room temperature	●
	Error status	●
	Operating mode	●
Outdoor unit monitoring	Operating mode	●
	Number of operating IDUs	●
	Outdoor ambient temperature	●
	Error status	●
LAN access		●
Dimensions (HxWxD)(mm)		154×124×51.5
Power supply		12 V DC, 2A
Unit Series		Pure SYSVRF3 System

Note:
● equipped as standard

Piping joints for 2-pipe refrigerant system

SYSVRF JOINT



Outdoor unit

Model	Art. no.	Packing LxWxH (mm)	Gross weight (kg)	Use
SYSVRF3 JOINT OUT 02 HP	316270	255x150x185	1,5	Connect two outdoor units of SYSVRF3 AIR EVO HP R series
SYSVRF3 JOINT OUT 03 HP	316271	345x160x285	3,4	Connect three outdoor units of SYSVRF3 AIR EVO HP R series



Indoor unit

Model	Art. no.	Packing LxWxH (mm)	Gross weight (kg)	Use
SYSVRF JOINT IN 01 2P	314149	290x105x100	0,4	For 2-pipe and 3-pipe systems after the SYSVRF BOX
SYSVRF JOINT IN 02 2P	314150	290x105x100	0,6	For 2-pipe and 3-pipe systems after the SYSVRF BOX
SYSVRF JOINT IN 03 2P	314151	310x130x125	0,9	For 2-pipe and 3-pipe systems after the SYSVRF BOX
SYSVRF JOINT IN 04 2P	314152	350x180x170	1,5	For 2-pipe and 3-pipe systems after the SYSVRF BOX
SYSVRF JOINT IN 05 2P	314153	365x195x215	1,9	For 2-pipe and 3-pipe systems after the SYSVRF BOX
SYSVRF JOINT IN 06 2P	314154	390x230x255	3,1	For 2-pipe and 3-pipe systems after the SYSVRF BOX
SYSVRF JOINT IN 07 2P	316272	390x230x255	3,4	For 2-pipe and 3-pipe systems after the SYSVRF BOX

Vibration damping base



Model	Art. No.	Length [mm]	Load capacity [kg]	Description
Vibration-damping base 600	251968	600	700	The vibration-damping base consists of 2-floor plinths that are suitable for the cushioned installation of Split and VRF outdoor units or for laying pipes. The floor plinth is made of SBR rubber granulate with an integrated aluminium profile rail 21x15 mm.
Vibration-damping base 1200	251969	1.200	700	

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