





**GAS DRIVEN VRF**

## NEW Gas Heat Pump M Series - the perfect solution when you're short of power

SANYO has been developing GHP VRF systems since 1980, during which time we have been committed to delivering ground-breaking technology. As a result, the commercial range of GHP VRF systems is leading the industry in the development of efficient and flexible systems, making them the natural choice for commercial projects, especially for those projects where power restrictions apply. As you would expect, all of our gas driven VRF systems have the highest reliability rates in the industry and a leading customer service program.

The new M Series of gas driven VRF systems offers increase efficiency and performance across the range. Now more powerful than ever before, it can connect to up to 48 indoor units.

Improvements include increased part load performance, reduced gas consumption with a Miller-cycle engine and reduced electrical consumption from using DC fan motors.

- Up to 71kW of cooling from a maximum running capacity of 5 AMPs
- Single phase power supply across the range
- The option of natural gas or LPG as its main power source
- Free hot water! A water heat exchanger to connect to domestic hot water systems 13-25 HP (2-pipe only)
- Option of DX or chilled water for indoor heat exchange
- Option to connect to third party AHU
- Reduced CO<sub>2</sub> emissions

## Power supply problems?

If you are short of electrical power, gas heat pump could be the perfect solution:

- Runs on gas and just needs single phase supply
- Enables the building's electrical power supply to be used for other critical electrical demands
- Reduces capital cost to upgrade power substations to run heating and cooling systems
- Reduces power loadings within a building especially during peak periods
- Electricity supply freed up for other uses such as IT servers, commercial refrigeration, manufacturing, lighting etc

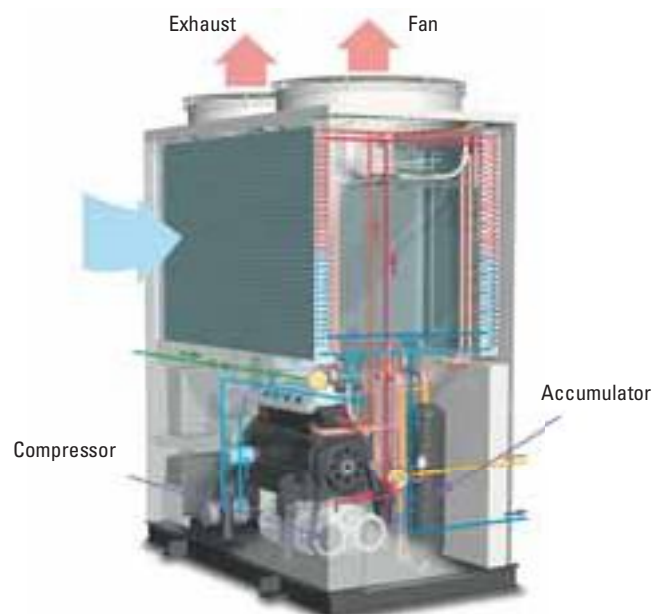
## Benefits

### High-efficiency operation

13-25 HP models are equipped with a high-performance air exchanger and a newly developed refrigerant heat exchanger for high-efficiency operation, making them one of the most energy-efficient solutions on the market.

### Lowest nitrogen oxide emissions

The GHP VRF systems have the lowest nitrogen oxide emissions, 66% below the standard. In a pioneering development, the SANYO GHP features a brand new lean-burn combustion system that utilises air fuel ratio feedback control to reduce NOx emissions to an all time low.





## Excellent economy

The SANYO GHP provides quick and powerful cooling/heating and increases delivery of heat into the space by the efficient recovery of heat from the engine cooling water, which is injected into the refrigerant circuit.

In addition, the use of engine waste heat ensures that our gas heat pump air conditioner requires no defrost cycle, therefore providing continuous 100% heating performance in severe weather conditions with an outside air temperature as low as -20°C. During cooling mode the rejected heat from the engine is available for use with in a DHW system and can supply up to 22 kW of hot water at 65 °C.

## High performance

With its advanced heat exchanger design, this new GHP system offers improved efficiency and reduced running costs, which, coupled with improved engine management systems, have greatly improved the system COP rating.

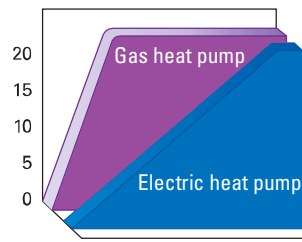
## Water chiller option

Our GHP system is also available with a water chiller option, which can be combined with individual outdoor units or as part of a DX chilled water mix of indoor units. The system can be operated via a BMS system or a SANYO supplied control panel, with chilled water set points from -15°C up to 15°C and heating set points up to 25°C to 55°C.

## New electrical power generator model

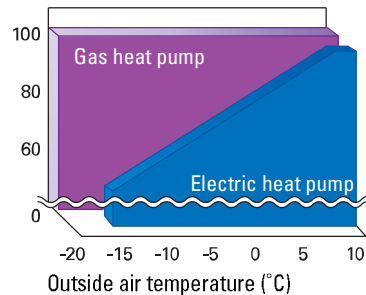
The biggest breakthrough in recent GHP technology is the launch of the ECO G Power, which provides 4.0kW of power. That's enough electricity to power 8 computers or 40 indoor units.

Comparison of the start times for heating operation  
Room temperature (°C)

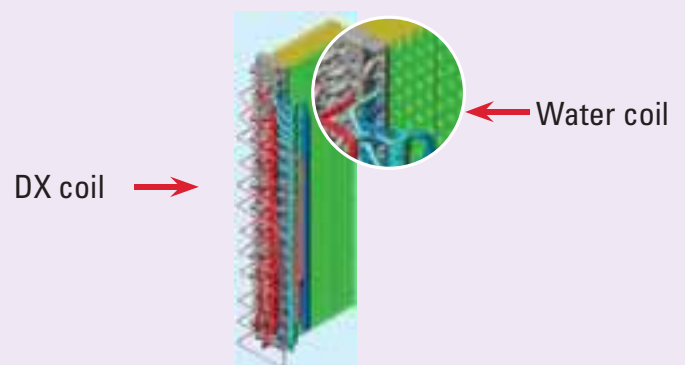


Time axis (in case of the same load)

Comparison of heating capacity  
Heating capacity (%)



## GHP Outdoor Heat Exchanger



- Integrated DX and hot water coil
- No defrost required
- Faster reaction to demand for heating

# ECO G Power - GHP with electricity generation & hot water supply

**NEW**

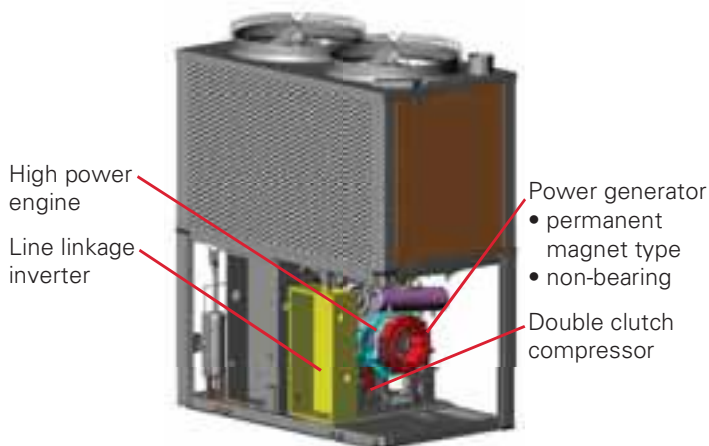
## NEW 2 way gas driven VRF with electrical power generator

SANYO's ECO G Power is a revolution in air conditioning design. Fitted with a permanent magnet, non-bearing type generator, it is the first VRF system that can supply heating, cooling, hot water and now also a supply of electrical power.

Each ECO G Power unit has a 4.0kW generator, which provides enough power for 40 indoor units or the equivalent of 8 computers.

- Innovative technology that reduces CO<sub>2</sub> emissions by more than 30%
- 2 way air conditioning system providing cooling or heating
- Can provide both electricity and hot water in heating and cooling mode
- Up to 4kW electricity generated
- Provides power for indoor units
- Very efficient generator
- Electricity is output to line linkage converter
- Hot water provided when cooling and when heating above 7°C\*
- 22kW hot water generation capacity
- 20HP model provides 56kW cooling or 63kW heating
- Can connect to up to 24 indoor units
- 200m maximum allowable piping length (L1)
- IU/OU capacity ratio 50 - 130%

\* referring to outside temperature

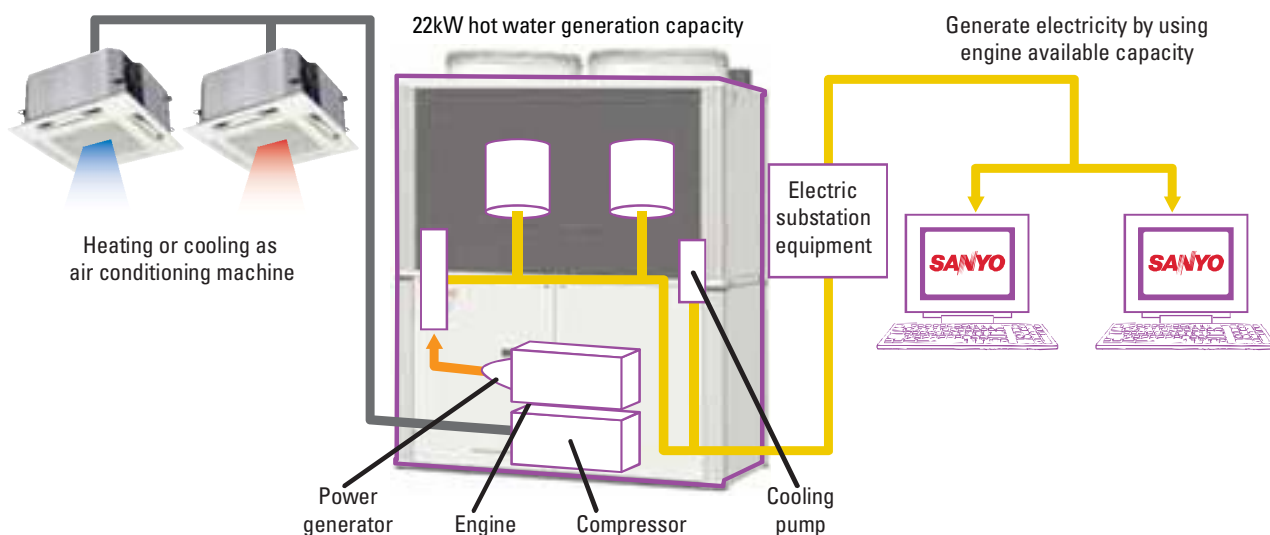
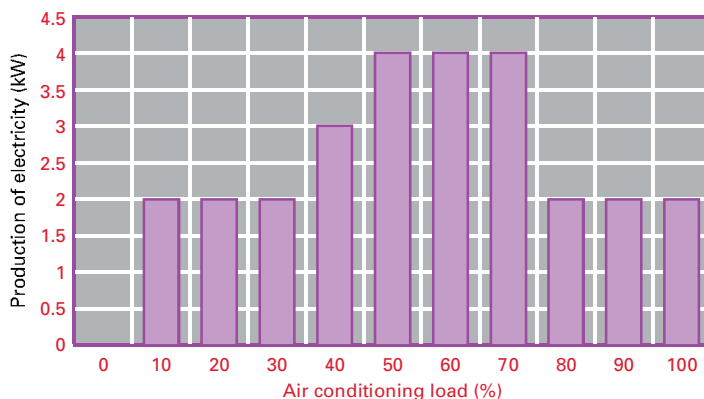


## Generate electricity during heating or cooling operation

Generate electricity and air conditioning (heating or cooling) at the same time by using remaining engine power. ECO G Power can generate from 2.3 to 3.95kW electricity at a generation efficiency of more than 40%.

## Production of electricity

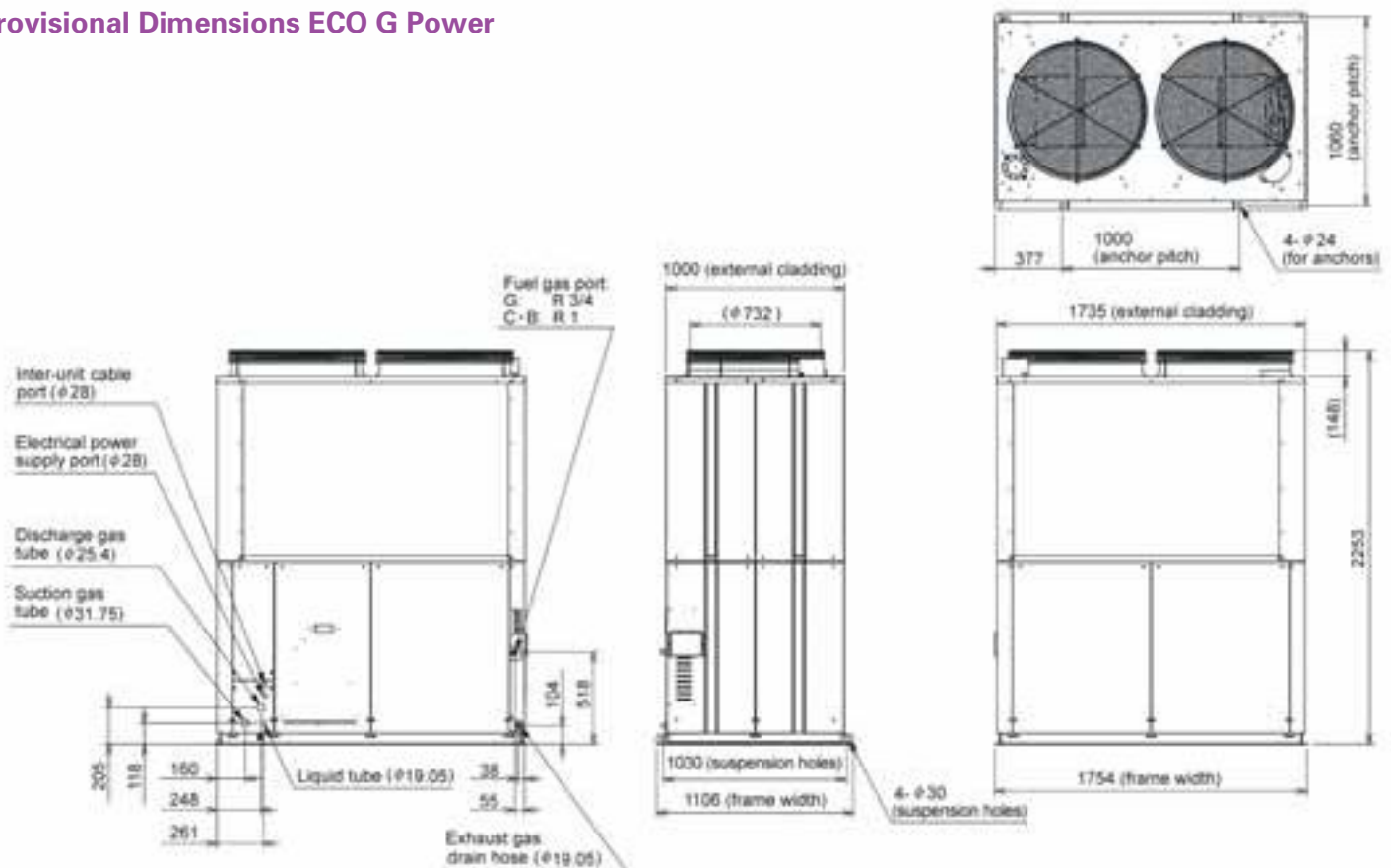
Generates from 2kW to 4kW depending on air conditioning load



HP			20	33	36	40	45	
Model name			SGP-EGW190M2G2W	SGP-EW120M2G2W SGP-EGW190M2G2W	SGP-EW150M2G2W SGP-EGW190M2G2W	SGP-EGW190M2G2W	SGP-EW240M2G2W	
Capacity	Cooling		kW	56.0	91.5	101.0	112.0	127.0
	Heating	STD	kW	63.0	103.0	113.0	126.0	143.0
		Low temp*1	kW	67.0	109.5	120.0	134.0	142.0
	Hot water (cooling mode)		kW	22.0	34.0	37.5	44.0	52.0
Power generator capacity at rating			kW	DC 2.5 (Max 4.3)	DC 2.5 (Max 4.3)	DC 2.5 (Max 4.3)	DC 5.0 (Max 8.6)	DC 2.5 (Max 4.3)
Electricity	Cooling		kW	1.35	2.20	2.70	2.70	2.70
	Heating		kW	1.01	2.02	2.02	2.02	2.55
Gas consumption	Cooling		kW	44.0 (38.3)*	68.5	75.6	88.0	104.9
	Heating STD		kW	48.7 (43.0)*	76.8	84.8	97.4	101.0
	Heating LOW		kW	62.1 (56.4)*	98.9	109.4	124.2	121.3
C O P	Air conditioning only	Cooling		1.33 (1.41)*	1.29	1.29	1.23	1.18
		Heating		1.34 (1.43)*	1.31	1.30	1.27	1.38
		AVE		1.34 (1.42)*	1.30	1.30	1.25	1.28
Max COP (Inc generator, hot water)			Cooling	1.78	1.81	1.80	1.78	1.69
Size	Height	mm	2,248	2,248				
	Width	mm	1,800	1,800 + 100 (Min distance) + 1,800				
	Depth			1,000 (+60)				
Weight			kg	875	1,660	1,685	1,740	1,720
Starter amperes			A	30	30			
Pipe	Gas		ø28.58	ø31.75	ø31.75	ø38.1	ø38.1	
	Liquid		ø15.88	ø19.05	ø19.05	ø19.05	ø19.05	
	Balance		ø9.52	ø9.52				
	Fuel gas				R3/4 (bolt, thread)			
	Exhaust drain port	mm			ø25 rubber hose			
Operation sound			dB(A)	58	61	61	61	63
Indoor/outdoor capacity ratio					50-130%			
Number of connections indoor*				28		48		

\*In case of not generator working. \*1 Low temp condition: outdoor temperature 2°C

## Provisional Dimensions ECO G Power



# ECO G 2 Way Heat Pump VRF System

## ECO G W-Multi 2 Way for Heat Pump Applications

The new and improved M Series 2 Way not only offers improved performance but also increased flexibility. Now available as multi-systems, many combinations are possible, from 13HP to 50HP, allowing for more power and enabling accurate matching of a system building load. Additional new features include part load engine management and compressor run hour equalisation.

- Reduced gas consumption by Miller-cycle engine
- Reduced electrical power consumption by using DC motors
- New lightweight design by use of aluminium engine block reduces weight by 110kg
- Part load efficiencies increased
- Connectability increased - now up to 48 indoor units
- Multi-systems with combinations from 13HP up to 50HP
- 200m maximum allowable piping length (L1)
- Diversity ratio 50-200% (single modls only; excluding ECO G Power)
- Extended pipe runs (total 780m)
- Equivalent sound levels to electric VRF systems



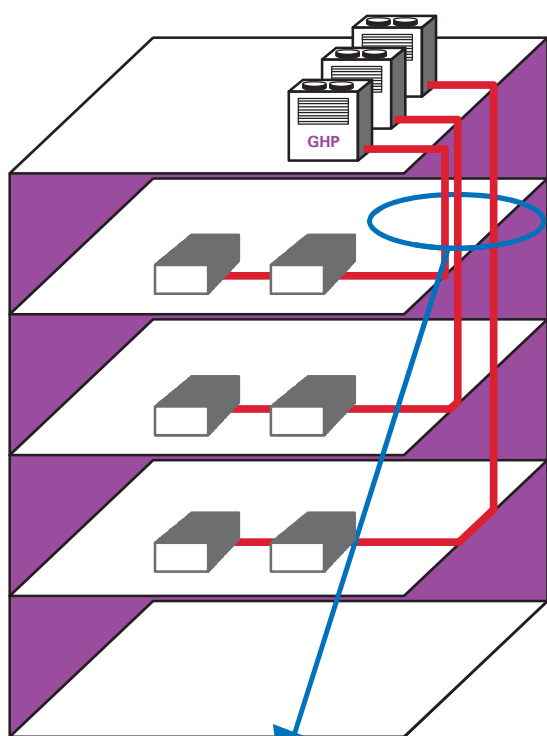
- Quiet mode offers a further 2dB(A) reduction
- Chiller option
  - 9HP (25kW cooling - 30kW heating)
  - 18HP (50kW cooling - 60kW heating)
- 10,000 run hours between engine service intervals (equivalent to one maintenance every 3.2 years\*)
- Full heating capacity down to -20°C
- No defrost cycle

\* Assuming 3120 running hrs per year - 12 hrs x 5 days x 52 weeks

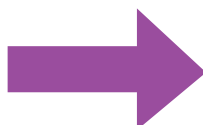
## New M-Series 2-way W-Multi

Previous Model - K Series 3 x 45kW units (135kW)

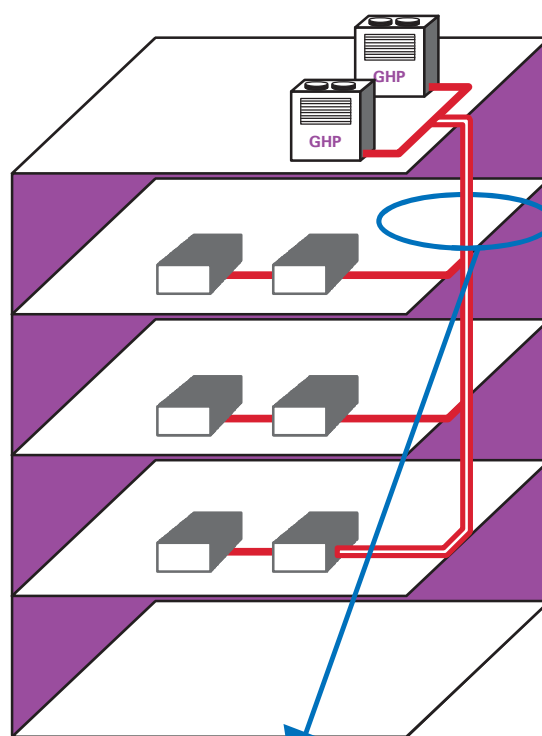
New M Series 2 Way W Multi 2 x 71kW (142kW)



3 systems = 6 pipes



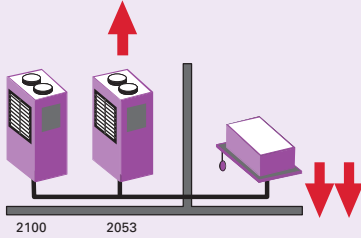
- max. 50HP
- 48 indoor units



1 system = 2 pipes

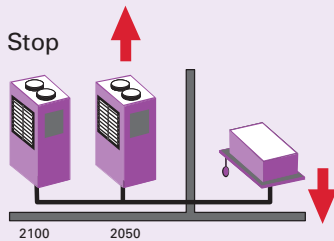
## Advantages of ECO G W-Multi

Depending on buildings requirements load can be quickly and efficiently increased or decreased

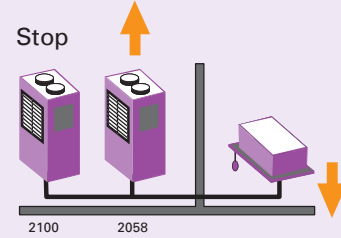


Increasing load

Rotate function averages out running hours



More efficient start  
(Max Diff 50hr)



Decreasing load

- Running hours reduced by 40% by load sharing
- Back-up mode means no down time during maintenance

## Hot water supply function

SGP-EW120M2G2W - SGP-EW150M2G2W - SGP-EW190M2G2W - SGP-EW240M2G2W

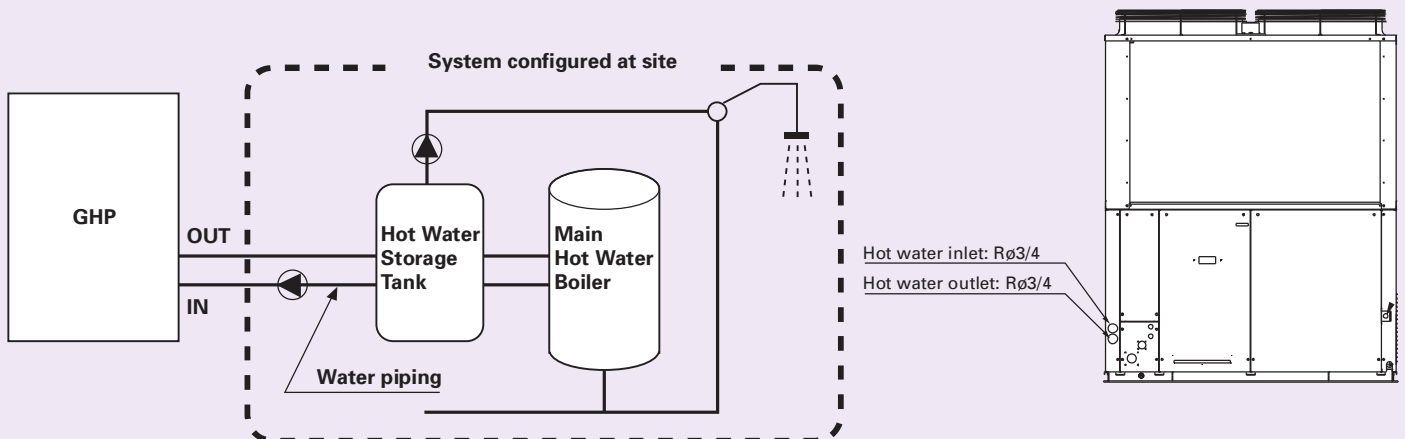
The engine waste heat, which is normally exhausted into the atmosphere, is recovered via the heat exchanger and effectively used as hot water, so the GHP chiller acts as a subsystem that alleviates the load on the client's main hot water system and therefore offers "free" hot water.

Water heating capacity up to 22kW (of 75°C hot water)

Hot water piping allowable pressure 0.7 MPa

Hot water circulation rate 2 - 3.9m<sup>3</sup>/h

Hot water pipe size 3/4 inch



# ECO G 2 Way Outdoor Unit Specifications

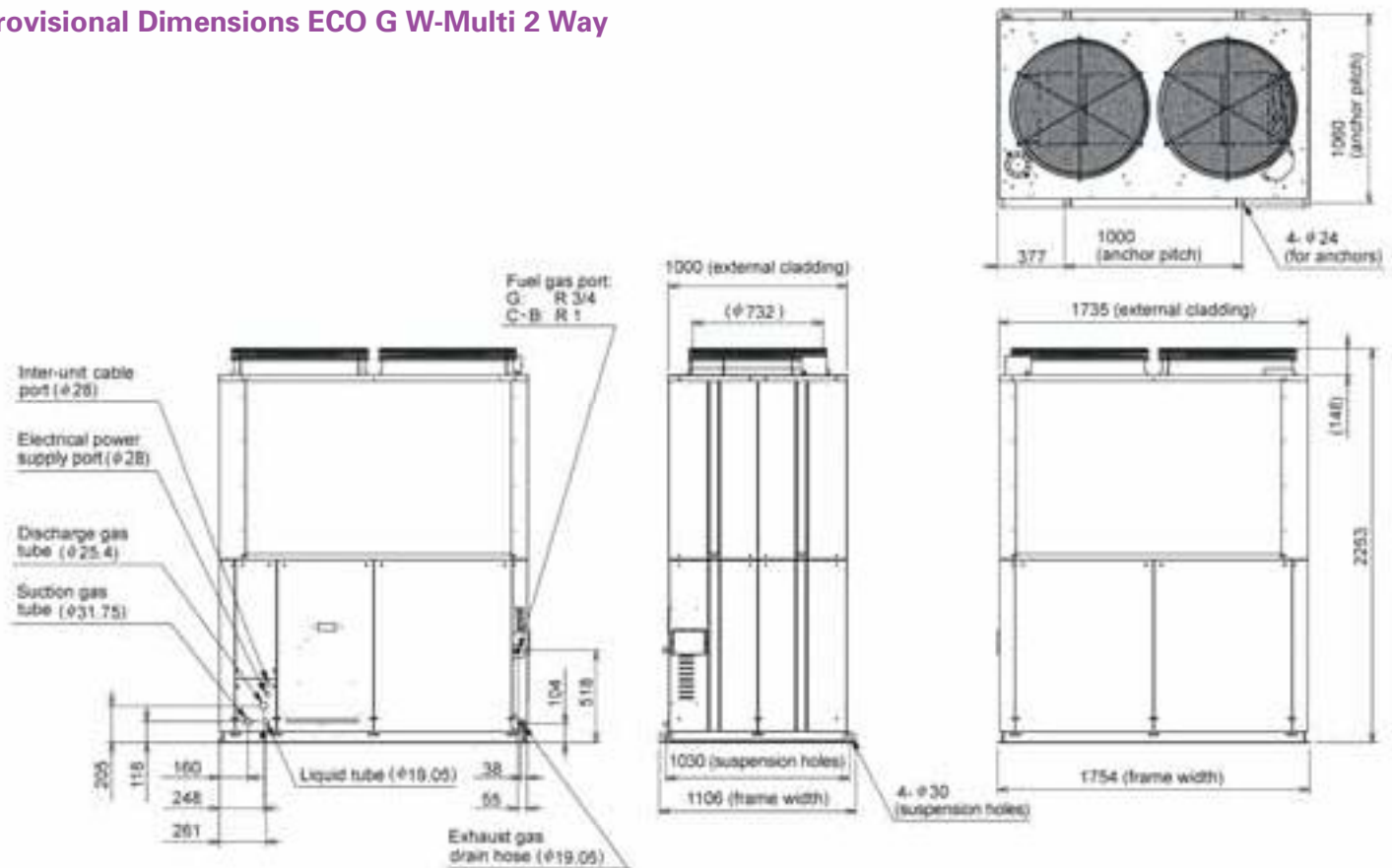
HP		13	16	20	25	26	29	32	33*	36*	40*	45*	50
Model name		SGP- EW120M2G2W	SGP- EW150M2G2W	SGP- EW190M2G2W	SGP- EW240M2G2W	SGP- EW120M2G2W	SGP- EW120M2G2W	SGP- EW150M2G2W	SGP- EW150M2G2W	SGP- EW190M2G2W	SGP- EW190M2G2W	SGP- EW240M2G2W	SGP- EW240M2G2W
Capacity	Cooling	kW											
		35.5	45.0	56.0	71.0	71.0	80.5	90.0	91.5	101.0	112.0	127.0	142.0
	Heating	STD	40.0	50.0	63.0	80.0	80.0	90.0	100.0	103.0	113.0	126.0	143.0
		Low temp*1	42.5	53.0	67.0	75.0	85.0	95.5	106.0	109.5	120.0	134.0	142.0
	Hot water (cooling mode)	kW											
		12.0	16.0	20.0	25.0	24.0	28.0	32.0	32.0	36.0	40.0	45.0	50.0
Electricity	Cooling	kW											
		0.85	1.35	1.35	1.35	1.70	2.20	2.70	2.20	2.70	2.70	2.70	2.70
	Heating	kW											
		1.01	1.01	1.01	1.54	2.02	2.02	2.02	2.02	2.02	2.02	2.55	3.08
Gas consumption	Cooling	kW											
		24.5	31.6	38.3	60.9	49.0	56.1	63.2	62.8	69.9	76.6	99.2	121.8
	Heating STD	kW											
		28.1	36.1	43.0	58.0	56.2	64.2	72.2	71.1	79.1	86.0	101.0	116.0
	Heating LOW	kW											
		36.8	47.3	56.4	64.9	73.6	84.1	94.6	93.2	103.7	112.8	121.3	129.8
C O P	Cooling												
		1.40	1.37	1.41	1.14	1.40	1.38	1.37	1.41	1.39	1.41	1.25	1.14
	Heating												
		1.37	1.35	1.43	1.34	1.37	1.36	1.35	1.41	1.39	1.43	1.38	1.34
	AVE												
		1.39	1.36	1.42	1.24	1.39	1.37	1.36	1.41	1.39	1.42	1.31	1.24
Max COP (inc hot water)	Cooling												
		1.87	1.85	1.92	1.54	1.87	1.86	1.85	1.90	1.89	1.92	1.69	1.54
Size	Height	mm											
	Width	mm											
	Depth	mm											
Weight		kg											
Starter amperes		A											
Pipe	Gas	mm											
	Liquid	mm											
	Balance	mm											
	Fuel gas	mm											
	Exhaust drain	mm											
Operation sound		dB(A)											
Indoor/outdoor capacity ratio		%											
Number of indoor connections													

\*In these combinations, EGW190M2G2W is able to connect to a W-multi system instead of a EW190M2G2W.

\*1 Low temp condition: outdoor temperature 2°C.

Specifications subject to change without notice.

## Provisional Dimensions ECO G W-Multi 2 Way



**Still the only 3 way GHP system in Europe, the new M Series ECO G 3 Way offers even more performance and outstanding features when you need simultaneous heating and cooling. Now with capacities available from 16HP to 25HP, SANYO offers the greatest choice and flexibility to solve any power problem or site requirement.**

- Simultaneous heating and cooling for total control
- Reduced gas consumption by Miller-cycle engine
- Reduced electrical power consumption by using DC motors
- New use of aluminium engine block reduces weight by 110kg
- Part load efficiencies increased
- Connectability increased to up to 32 indoor units
- Now available in 16, 20 and 25HP
- 200m maximum allowable piping length
- Diversity ratio 50-130%
- Extended pipe runs (total 780m)
- Quiet mode offers a further 2dB(A) reduction
- 10,000 run hours between engine service intervals (equivalent to one maintenance every 3.2 years\*)
- Full heating capacity down to -20°C
- No defrost cycle

\* Assuming 3120 running hrs per year - 12 hrs x 5 days x 52 weeks

### **ECO G 3 Way is ideal for the following types of application:**

- Office buildings with a diverse range of room temperatures due to differing load profiles e.g. amounts of sunshine.
- Buildings with computer rooms requiring year round cooling.

### **Additional parts**

By taking its power supply from the nearest indoor unit, the SANYO solenoid valve (change-over box) does not require any additional fused spur and at only 150mm high can be easily installed within a 200mm void space.



### **LPG option**

The option of using LPG as a power supply increases flexibility and avoids the problems of potential site restrictions in the future. The purer fuel is also excellent for further reductions in CO<sub>2</sub> emissions - a fact recognised by the government.

# ECO G 3 Way Outdoor Unit Specifications

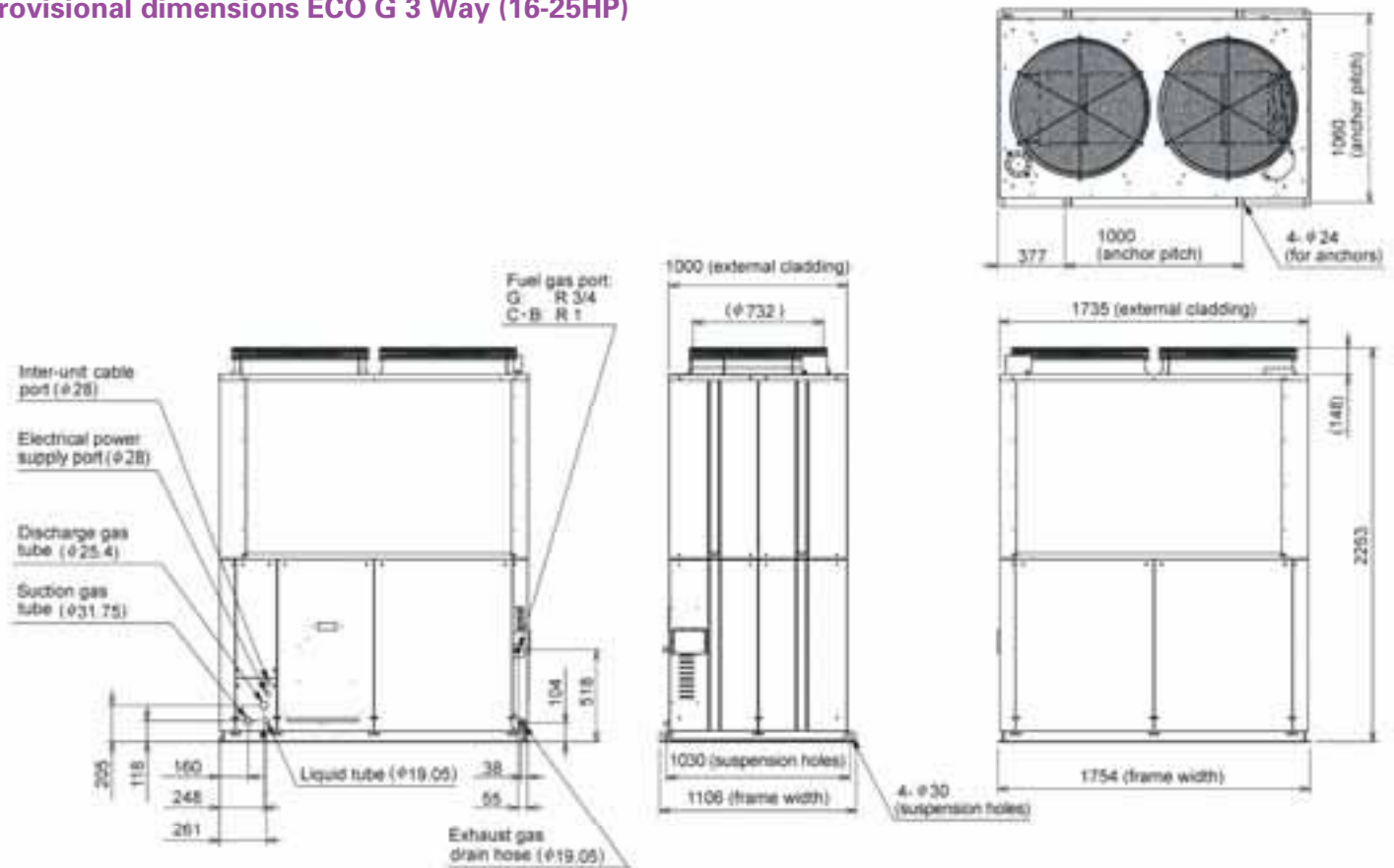
# R410A

HP			16	20	25	
Model name			SGP-EZ150M2G2	SGP-EZ190M2G2	SGP-EZ240M2G2	
Capacity	Cooling	kW	45.0	56.0	71.0	
	Heating	STD	kW	50.0	63.0	80.0
		Low temp*	kW	53.0	67.0	75.0
Electricity	Cooling	kW	1.35	1.35	1.35	
	Heating	kW	1.01	1.01	1.54	
Gas consumption	Cooling	kW	31.6	38.3	60.9	
	Heating STD	kW	36.1	43.0	58.0	
	Heating LOW	kW	47.3	56.4	64.9	
C O P	Cooling		1.37	1.41	1.14	
	Heating		1.35	1.43	1.34	
	AVE		1.36	1.42	1.24	
Size	Height	mm		2,248		
	Width	mm		1,800		
	Depth	mm		1,000 (+60)		
Weight		kg	845	845	875	
Starter amperes		A	30	-	-	
Pipe	Gas			ø28.58		
	Discharge		ø22.22	ø25.4	-	
	Liquid			ø19.05		
	Fuel gas			R3/4 (bolt thread)		
	Exhaust drain	mm		ø 25 rubber hose		
Operation sound		dB(A)	57	58	62	
Indoor/outdoor capacity ratio				50-200% *1		
Number of indoor connections			24	28	32	

\*Low temp condition: outdoor temperature 2°C

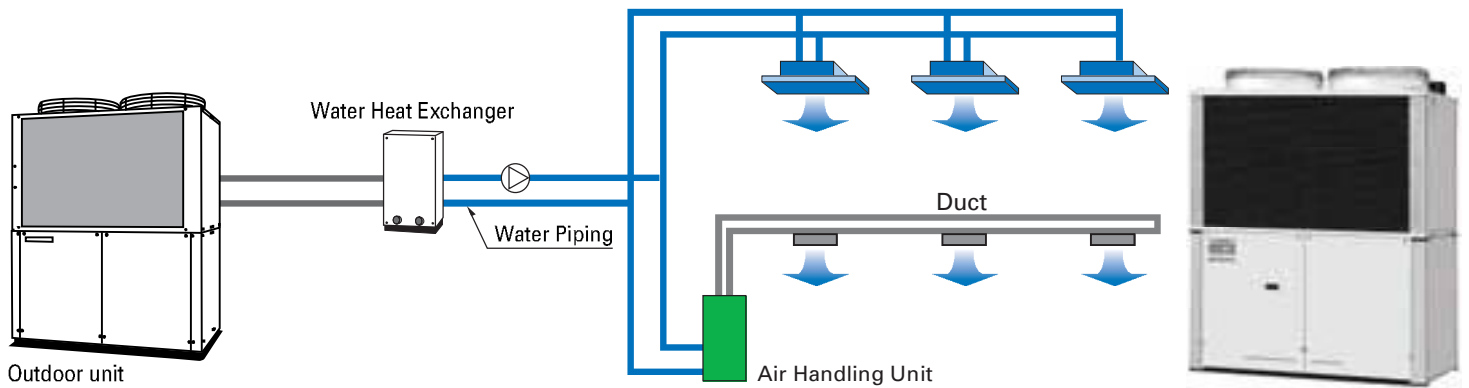
\*1 Indoor unit can be connected to up to 16kW model (model size 60)

## Provisional dimensions ECO G 3 Way (16-25HP)



# Water Heat Exchanger for Chiller and Hot Water Applications

GHP Chiller available with outdoor unit capacities from 20 kW to 56 kW

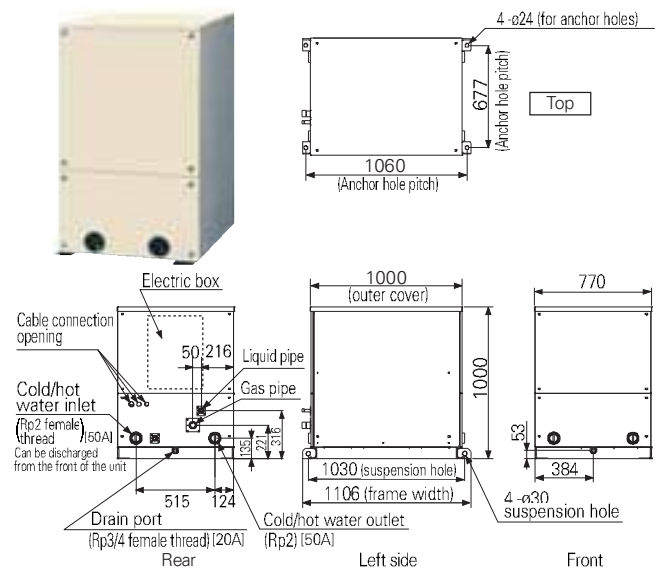


The SANYO ECO G Water Heat Exchanger can provide water at a wide range of temperatures suitable for a wide variety of commercial applications ranging from comfort air conditioning to food processing or the replacement of boilers and other systems.

- New 25 kW and 50 kW capacity models
- In cooling (chiller) mode provides water from -15°C to 15°C
- In heating mode can provide hot water up to 55°C, for example for under floor heating applications
- Includes water flow protection to prevent freezing
- Temperature sensor included, but not connected!
- S-Link communication is connectable with any controllers
- High flexibility
- Lighter and smaller
- Range of new water terminal/fan coil units
- Split system means reduced installation cost and the use of a less powerful circulation pump
- One touch changeover between cooling and heating operation
- The system can accommodate up to 120m (actual length) of piping between the outdoor unit and the water heat exchanger, allowing flexibility of installation location
- The system uses antifreeze coolant, so it can produce cold water even at -15°C, thereby complying with "brine specifications"
- Water Heat Exchanger remote controller is available

Model No.		SGP-WE80M1	SGP-WE170M1	
SGP-EW120M2G2W	Cooling capacity	kW	25	30
	Heating capacity	kW	30	35.5
SGP-EW150M2G2W	Cooling capacity	kW	25	37.5
	Heating capacity	kW	30	45
SGP-EW190M2G2W and SGP-EGW190M2G2W	Cooling capacity	kW	25	50
	Heating capacity	kW	30	60
SGP-EW240M2G2W	Cooling capacity	kW	25	56
	Heating capacity	kW	30	67
Electrical rating	Cooling power input	kW	0.01	0.01
	Heating power input	kW	0.01	0.01
Power supply		220/230/240V Single Phase 50Hz		
Size	Height	mm	1,000	
	Width	mm	550	
	Depth	mm	965	
Weight		kg	125	160
Standard cold/hot water flow rate		m <sup>3</sup> /h	4.3	8.6
Hydrostatic loss		kPa	8.5	11.3
Holding water quantity inside the unit		m <sup>3</sup>	0.01	0.02
Minimum holding water quantity outside the unit		m <sup>3</sup>	0.28	0.50
Piping refrigerant	Gas pipe	mm	ø22.22	ø28.58
	Liquid pipe	mm	ø9.52	ø15.88
Heat exchanger		hot/cold heat exchanger		
Water circuit limit pressure		MPa	0.686	
Anti-freezing protection system		Protective thermostat		

Specifications subject to change without notice



Operating condition	Cooling	Heating (standard)	Heating (low temperature)
Water temperature of water heat exchanger unit	Outlet 7°C	Outlet 45°C	Outlet 45°C
Outdoor side intake air temperature	35°C DB	7°C DB, 6°C WB	2°C DB, 1°C WB


Note: The gas consumption can be 110% of the specification value depending on the operating conditions.


# VRF Indoor Unit Range for ECOi and GHP


Wide choice of models depending on the indoor requirements


Model size		7	9	12	16	18	22	25	
Page	Capacity kW	Cooling	2.2	2.8	3.6	4.5	5.6	6.4	7.3
		Heating	2.5	3.2	4.2	5.0	6.3	7.0	8.0
	Capacity BTU/h	Cooling	7,500	9,600	12,000	15,000	19,000	22,000	25,000
		Heating	8,500	11,000	14,000	17,000	21,000	24,000	27,000
85	X Type Semi-Concealed Cassette		SPW-X075XH Panel PNR-XD484GHAB	SPW-X095XH Panel PNR-XD484GHAB	SPW-X125XH Panel PNR-XD484GHAB	SPW-X165XH Panel PNR-XD484GHAB	SPW-X185XH Panel PNR-XD484GHAB		SPW-X255XH Panel PNR-XD484GHAB
86	<b>NEW</b> XM Type Semi-Concealed		SPW-XM075XH Panel PNR-XM185	SPW-XM095XH Panel PNR-XM185	SPW-XM125XH Panel PNR-XM185	SPW-XM165XH Panel PNR-XM185	SPW-XM185XH Panel PNR-XM185		
88	XMR Type 600 x 600 Semi-Concealed Cassette		SPW-XMR74EXH56B Panel PNR-XM184EHA	SPW-XMR94EXH56B Panel PNR-XM184EHA	SPW-XMR124EXH56B Panel PNR-XM184EHA	SPW-XMR164EXH56B Panel PNR-XM184EHA	SPW-XMR184EXH56B Panel PNR-XM184EHA		
89	ADR Type Semi-Concealed Cassette 1-Way Air Discharge		SPW-ADR74GXH56B Panel PNR-AD124GHB	SPW-ADR94GXH56B Panel PNR-AD124GHB	SPW-ADR124GXH56B Panel PNR-AD124GHB				
90	SR Type Semi-Concealed Cassette 2-Way Air Discharge		SPW-SR74GXH56B Panel PNR-S124GHB	SR94GXH56B Panel PNR-S124GHB	SR124GXH56B Panel PNR-S124GHB	SR164GXH56B, Panel PNR-S124GHB	SR184GXH56B Panel PNR-S124GHB		SPW-SR254GXH56B Panel PNR-S253GHANB
91	LDR Type Semi-Concealed Slim Cassette			SPW-LDR94GXH56B Panel PNR-LD254GHAB	SPW-LDR124GXH56B Panel PNR-LD254GHAB	SPW-LDR164GXH56B Panel PNR-LD254GHAB	SPW-LDR184GXH56B Panel PNR-LD254GHAB		SPW-LDR254GXH56B Panel PNR-LD254GHAB
92	DR Type Concealed Duct								SPW-DR254GXH56B
93	<b>NEW</b> US Type Concealed Duct		SPW-US075XH	SPW-US095XH	SPW-US125XH	SPW-US165XH	SPW-US185XH		
94	U Type Concealed Duct		SPW-U075XH	SPW-U095XH	SPW-U125XH	SPW-U165XH	SPW-U185XH		SPW-U255XH
96	<b>NEW</b> UR Type with filter Concealed Duct		SPW-U075SXHT	SPW-U095SXHT	SPW-U125SXHT	SPW-U165SXHT	SPW-U185SXHT		SPW-U255SXHT
98	FUR Type Floor/Ceiling Slim Concealed Duct		SPW-FUR74EXH56B	SPW-FUR94EXH56B	SPW-FUR124EXH56B	SPW-FUR164EXH56B	SPW-FUR184EXH56B	SPW-FUR224EXH56B	
99	UMR Type Concealed Duct		SPW-UMR74EXH56B	SPW-UMR94EXH56B	SPW-UMR124EXH56B	SPW-UMR164EXH56B	SPW-UMR184EXH56B	SPW-UMR224EXH56B	
100	FTR Type Floor/Ceiling Mounted Units		SPW-FTR74EXH56B	SPW-FTR94EXH56B	SPW-FTR124EXH56B	SPW-FTR164EXH56B	SPW-FTR184EXH56B	SPW-FTR224EXH56B	
101	T Type Ceiling-Mounted Unit				SPW-T125XH	SPW-T165XH	SPW-T185XH		SPW-T225XH
102	<b>NEW</b> K Type Wall Mounted Unit		SPW-K075XH	SPW-K095XH	SPW-K125XH				
104	KR Type Wall Mounted Unit		SPW-KR74GXH56B	SPW-KR94GXH56B	SPW-KR124GXH56B	SPW-KR164GXH56B	SPW-KR184GXH56B		SPW-KR254GXH56B
105	FR Type Floor Standing Unit		SPW-FR74GXH56B	SPW-FR94GXH56B	SPW-FR124GXH56B	SPW-FR164GXH56B	SPW-FR184GXH56B		SPW-FR254GXH56B
106	FMR Type Concealed Floor Standing Unit		SPW-FMR74GXH56B	SPW-FMR94GXH56B	SPW-FMR124GXH56B	SPW-FMR164GXH56B	SPW-FMR184GXH56B		SPW-FMR254GXH56B
107	GU Type Total Heat Exchanger			SPW-GU055XH		SPW-GU075XH	SPW-GU105XH		


# R410A


Wider operation 

Self-diagnosing function 


Automatic fan operation 




















































































































































Mild dry 

Comfortable auto-flap control 

Automatic restart function for power failure 





Air Sweep 

Built-in drain pump 

		30	36	48	60	76	96	Wireless remote control		
		9.0	10.6	14.0	16.0	22.4	28.0	Type with built-in reception part	Type with separately installed reception part	Functions
		10.0	11.4	16.0	18.0	25.0	31.5			
		30,000	36,000	47,800	54,600	76,400	95,500			
		34,000	39,000	54,600	61,500	85,300	107,500			
			SPW-X365XH Panel PNR-XD484GHAB	SPW-X485XH Panel PNR-XD484GHAB	SPW-X605XH Panel PNR-XD484GHAB			•		       
								•	•	       
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								•	•	       
								•	•	       
			SPW-DR364GXH56B	SPW-DR484GXH56B		SPW-DR764GXH56B	SPW-DR964GXH56B		•	       
									•	      
			SPW-U365XH	SPW-U485XH	SPW-U605XH				•	      
SPW-U305SXHT	SPW-U365SXHT	SPW-U485SXHT	SPW-U605SXHT						•	      
									•	      
									•	      
								•	•	       
			SPW-T365XH	SPW-T485XH				•	•	       
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# Individual Control Systems Overview

A wide variety of control options to meet the requirements of different customers.

Operation system	Individual control systems			Timer operation
Requirements	Normal operation	Operation from each seat	Simple operation	Daily and weekly program
External appearance				
Type, model name	Timer wired remote controller <b>RCS-TM80BG</b>	Wireless remote controller <b>RCS-SH80BG.WL</b> <b>RCS-TH80BG.WL</b> <b>RCS-BH80AG.WL</b> <b>RCS-TRP80BG.WL</b> <b>RCS-SH1BG</b>	Simplified remote controller <b>RCS-KR1AGB</b>	Schedule timer <b>SHA-TM64AGB</b>
Number of indoor units which can be controlled	1 group, 8 units	1 group, 8 units	1 group, 8 units	64 groups, max. 64 units
Use limitations	Up to 2 units can be connected per group.	Up to 2 units can be connected per group.	Up to 2 units can be connected per group.	Power supply from the system controller. When there is no system controller, connection is possible to the T10 terminal of an indoor unit.
Connectable indoor unit	4/5 series indoor unit	4/5 series indoor unit	4/5 series indoor unit	4/5 series indoor unit
Function				
ON/OFF	●	●	●	-
Mode setting	●	●	●	-
Fan speed setting	●	●	●	-
Temperature setting	●	●	●	-
Air flow direction	● <sup>*1</sup>	● <sup>*1</sup>	● <sup>*1</sup>	-
Permit/Prohibit switching	-	-	-	-
Weekly program	●	-	-	●
Page	110	110	111	111

\*1 Setting is not possible when a remote control unit is present. (Use the remote control for setting.)

For further information see page 110-117

Centralised control systems				
	Operation with various function from central station	Only ON/OFF operation from central station	Simplified charge ratio for each tenant	
			Touch screen panel	Personal computer (field supply)
External appearance			 <b>Web application</b>	
Type, model name	System controller <b>SHA-KC64AGB</b>	ON/OFF controller <b>SHA-KC16KAGB</b>	Intelligent controller <b>SHA-KT256EG</b>	Communication adaptor <b>SHA-KA128AGB</b>
Number of indoor units which can be controlled	64 groups, max. 64 units	16 groups, max. 64 units	64 units x 4 networks, max. 256 units	2 systems, max. 128 units
Use limitations	Up to 10 units can be connected to one system. Main unit/sub unit (1 main unit + 1 sub unit) connection is possible. Use without remote controller is possible.	Up to 8 units (4 main units + 4 sub units) can be connected to one system. Use without remote controller is impossible.	A communication adaptor (SHA-KA128AGB) must be installed for three or more networks.	Maximum 500 indoor units (128 per communication adaptor)
Connectable indoor unit	4/5 series indoor unit	4/5 series indoor unit	4/5 series indoor unit	4/5 series indoor unit
Function				
ON/OFF	●	●	●	●
Mode setting	●	-	●	●
Fan speed setting	●	-	●	●
Temperature setting	●	-	●	●
Air flow direction	*1 ●	-	*1 ●	*1 ●
Permit/Prohibit switching	●	●	●	●
Weekly program		-	●	●
	112	114	113	113