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Climate Solutions

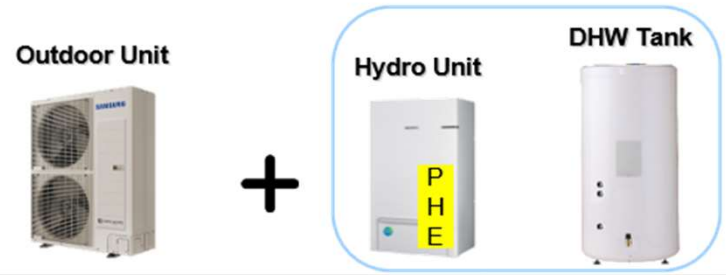
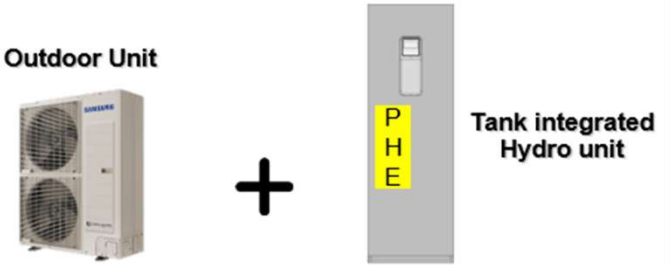
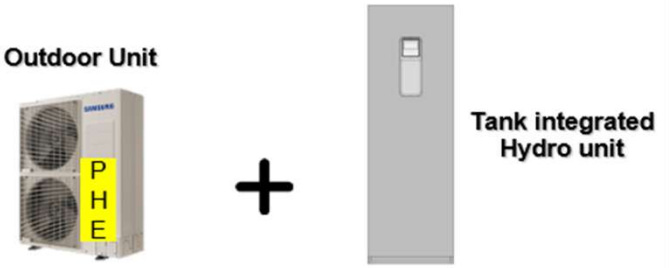
2020 EHS highlights

Samsung heat pump

Portfolio

What is SPLIT EHS?

What is MONO EHS?

Type	Previous EHS (Split, Mono)	Tank integrated EHS
Split		
Mono		

What is TDM PLUS?

Type	Previous EHS (TDM Plus Wall-mounted type)	New TDM Plus Tank integrated type
EHS TDM Plus	Outdoor Unit + Hydro unit + DHW Tank + Air to Air Indoor Unit	Outdoor Unit + Tank integrated Hydro unit + Air to Air Indoor Unit

EHS 2020 Outdoor Lineup

Split: 880 x638x 310
Mono:880x798x310

940x 998 x330

940 x1420x 330

	ODU Type	Phase	4 kW	5 kW	6 kW	8 kW	9 kW	12 kW	14 kW	16 kW	Model code
R32	Split	1-Phase	●	●	●		●				AE***RXEDEG/EU
		3-Phase					●				AE090RXEDGG/EU
	Mono	1-Phase		●		●		●		●	AE***RXYDEG/EU
		3-Phase				●		●		●	AE***RXYDGG/EU
R410a	Split	1- Phase						●		●	AE***XEDEH/EU
		3-Phase						●		●	AE***XEDGH/EU
	TDM+	1- Phase	●		●		●	●		●	AE***MXTPEH/EU
		3-Phase					●	●		●	AE***MXTPGH/EU

Size, mm
(W x H x D)

1-Phase, 220~240V/ 3-Phase, 380~415V

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EHS 2020 Indoor Split Lineup

Model		Capacity (kW)	4	6	9	12	14	16
Split	ODU	Size (mm, W x H x D)	880 x 638 x 310		940 x 998 x 330	940 x 1,420 x 330		
		Image						
		Elec. Spec. (1Φ)	●	●	●	●	●	●
		Elec. Spec. (3Φ)			●	●	●	●
	Hydro	Image						
		Size (mm, W x H x D)	510 x 850 x 315					
		Elec. Spec. (1Φ)	9kW 1Φ IDU			16kW 1Φ IDU		
		Elec. Spec. (3Φ)	-		9kW 3Φ IDU	16kW 3Φ IDU		

Hydro water pump

Different pumps for 9kW and 16kW

Flow rates and pressures for pumps nominal are:

9kW: GRUNDFOS UPM3 25-75

26 L/min (minimum 7 for flow switch)

43kPa ESP

16kW: WILO STRATOS PARA 25/1-9

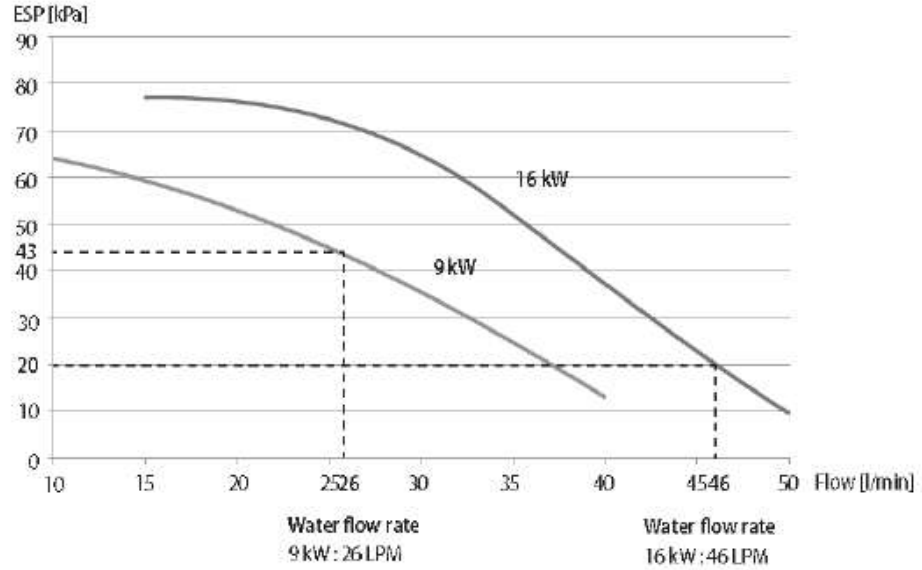
46 l/min (minimum 12 for flow switch)

20kPa ESP

6. Hydraulic Performance

6-1. Water Pump

1) ESP(External Static Pressure) Diagram



The illustration below shows the external static pressure of the unit depending on the water flow and the pump setting.
If the pressure loss of total system is over 43(9 kW) or 20(16 kW)kPa, additional water pump should be installed in series.
Otherwise, the flow rate might decreased, causing insufficient heating or cooling.
When ESP is not enough, additional pump should be installed. In this case, install the PWM control external type pump additionally.

EHS 2020 Product Lineup - Highlights

NEW

1) Introduction of Tank Integrated Hydro Unit for TDM Plus R410A

NEW

2) Replacing Triangle RAC wall mount unit with Wind-Free Avant RAC for TDM Plus

3) Key features of R32 Split EHS heat pump (4-9kW) with or without integrated tank

4) Unique technology of R410A TDM+ EHS heat pumps (4-16kW)

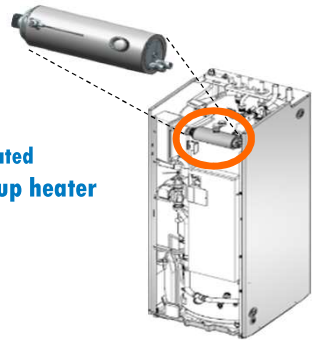
5) Mono EHS heat pump for various installer frendly aplication

1) EHS 2020 Tank integrated Hydro Unit

Total Solution for Heating & DHW

Hydro Unit

DHW Tank 3rd party



Integrated Back-up heater

NEW

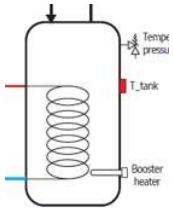
(TDM Plus)

Controller (order separately)
MWR-WW10N

2-zone control
PV Enabled
SmartThings

200L & 260L

Smooth Service via SD Card & Mobile App



Integrated Booster heater

Size, mm
(W x H x D)
595x 1800x 700

Refrigerant	Type	Model	Power	Booster Heater	Backup Heater	Optional Backup Heater
R32	SPLIT	AE200RNWSEG/EU AE260RNWSEG/EU	220~240V, 50Hz, 1Φ	3kW	2kW	4kW : MHC-400FE 6kW : MHC-600FE
	MONO	AE200RNWMEG/EU AE260RNWMEG/EU				
	SPLIT	AE260RNWSGG/EU	380~415V, 50Hz, 3Φ	3kW	6kW	N/A
	MONO	AE260RNWMGG/EU				
R410A	TDM+	AE200TNWTEH/EU	220~240V, 50Hz, 1Φ	3kW	2kW	4kW : MHC-400FE 6kW : MHC-600FE
	TDM+	AE260TNWTEH/EU				

Pump for Climatehub

GRUNDFOS A/S

UPMM 25-95 130 (green line)

All ClimateHUB models SPLIT and MONO have the same water pump

Split 200L and 260L

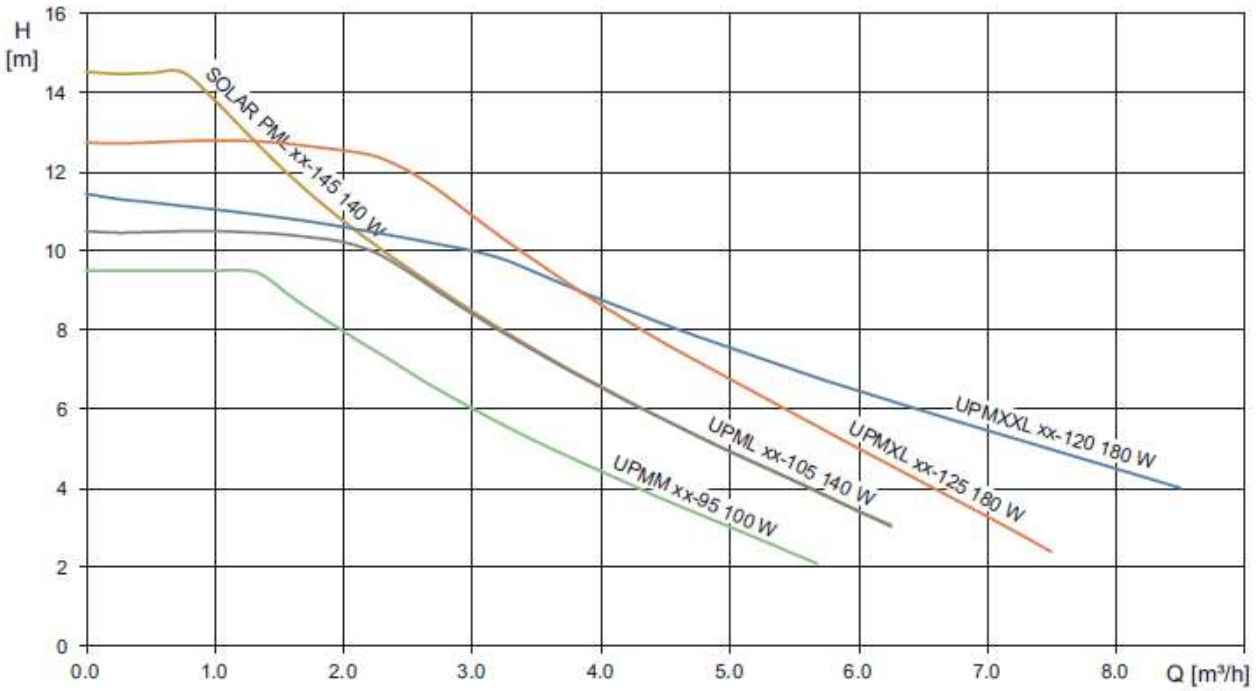
Min water flow 7 L/min (0.42 m3/h), max 48 L/min (2.88 m3/h)

Mono 200L 5kW;8kW

Min water flow 7 L/min (0.42 m3/h)

Mono 200L 12-16kW and 260L 8-16kW

Minimum water flow 12 L/min (0.72 m3/h)



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Nominal water flows for each combination

SPLIT 200L tank and 260L tank (heating / cooling)

4kW: 12.7/14.4 L/min

6kW: 17.3/18.8 L/min

9kW: 26.0/25.1 L/min

MONO 200L tank and 260L tank (heating / cooling)

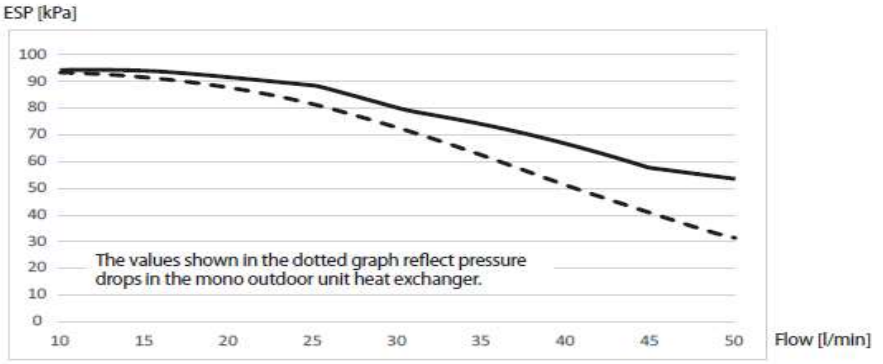
5kW: 14.4/14.4 L/min

8kW: 23.1/21.6 L/min

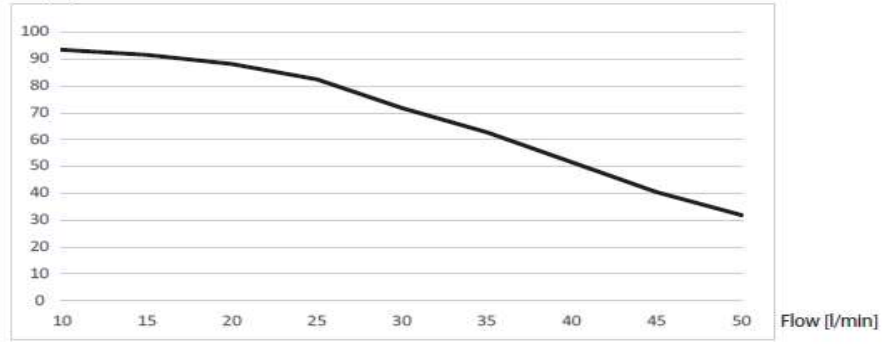
12kW: 34.6/34.6 L/min

16kW: 46.2/40.4 L/min

AE***RNWM**



AE***RNWS**



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1) EHS 2020 Tank integrated Hydro Unit – combination table

Type			Outdoor Unit										
			220~240V, 50Hz, 1Φ							380~415V, 50Hz, 3Φ			
			4kW	5kW	6kW	8kW	9kW	12kW	16kW	8kW	9kW	12kW	16kW
SPLIT	200L	1Φ	●		●		●						
	260L	1Φ	●		●		●						
		3Φ									●		
MONO	200L	1Φ		●		●		●	●				
	260L	1Φ				●		●	●				
		3Φ								●		●	●
TDM+	200L	1Φ	●		●		●				●		
	260L	1Φ	●		●		●	●	●		●	●	●

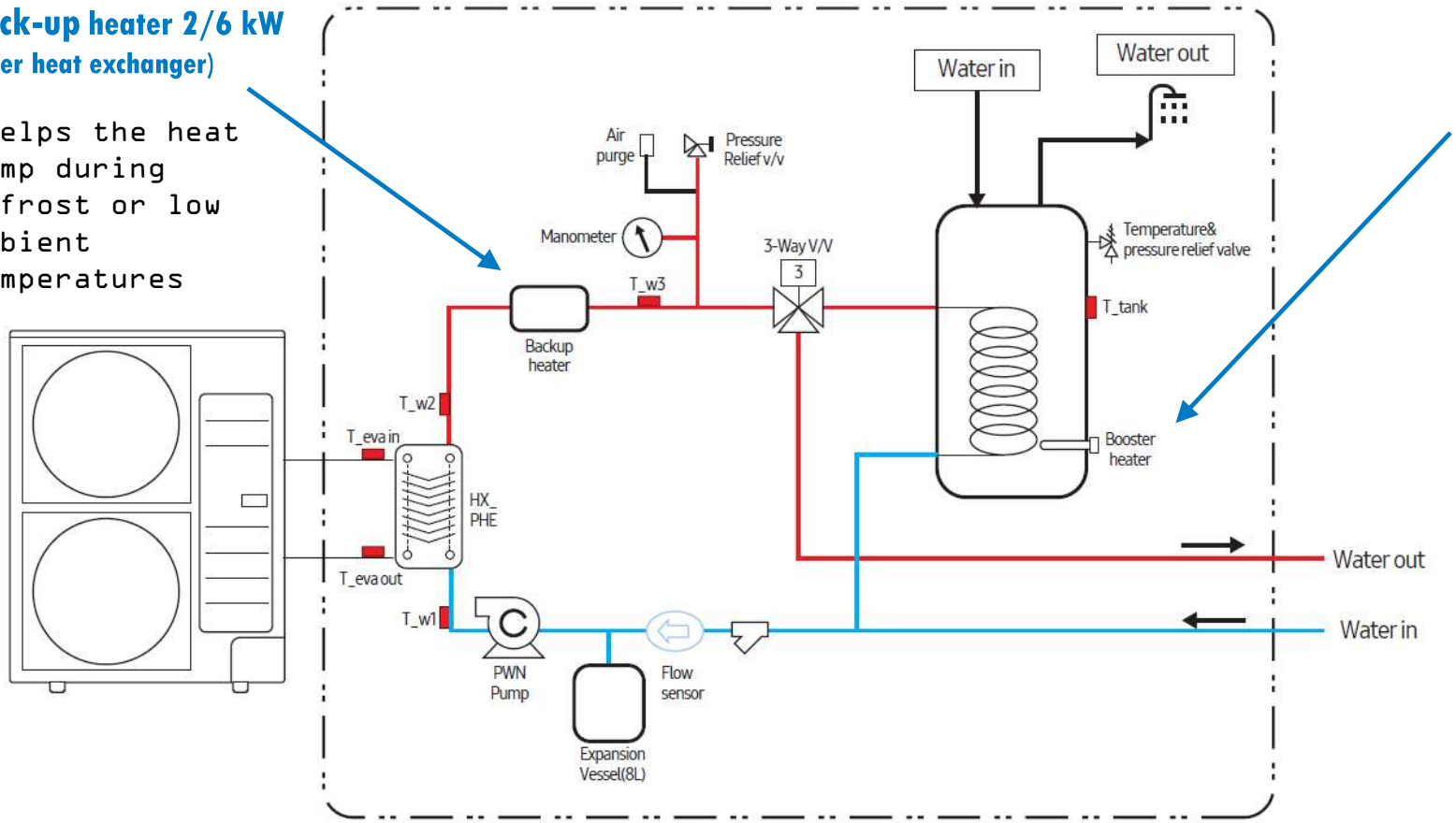
1) EHS 2020 Tank integrated Hydro Unit – electrical heaters

Integrated

Back-up heater 2/6 kW

(after heat exchanger)

*helps the heat pump during defrost or low ambient temperatures



Integrated

Booster heater 3kW

(inside the tank)

*enables the heat pump unit to heat DHW even when there is a malfunction on integrated pump for water circulation and for periodic disinfection (up to 70˚C)

Details about setup of electric heaters are listed in Appendix 1 at the end of this document *EHS Field setting values for electric heaters*

Backup Heater Control logic (Generic)

There are modes for backup heater operation. (defrost reliability, compressor operation reliability [heating mode], heating assist)

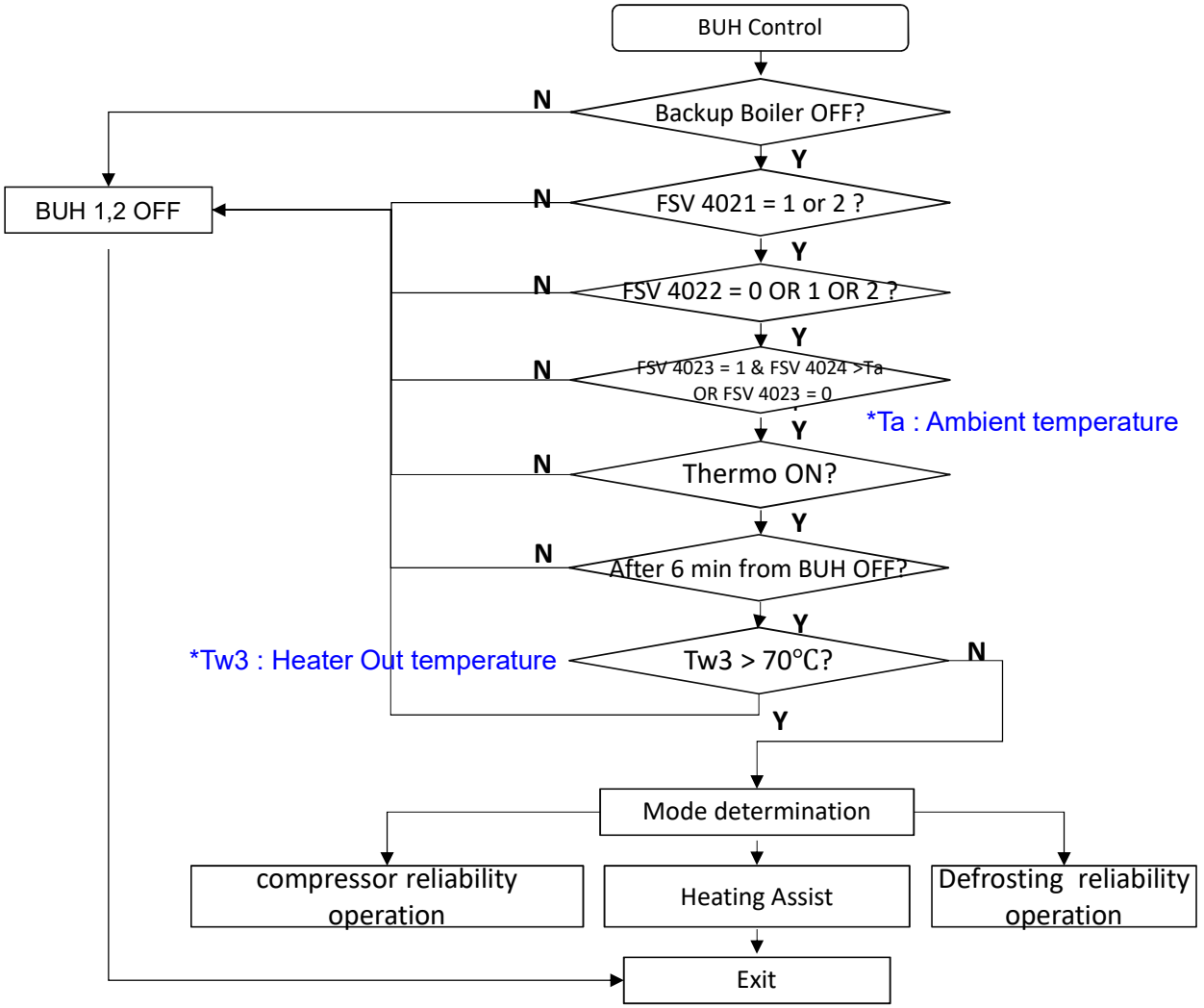
*FSV #4021(Default 0[NO])

*FSV #4022(Default 0 [BOTH] → wall-mounted type

Default 2 [BSH] → Tank integrated type)

*FSV #4023(Default 1[YES])

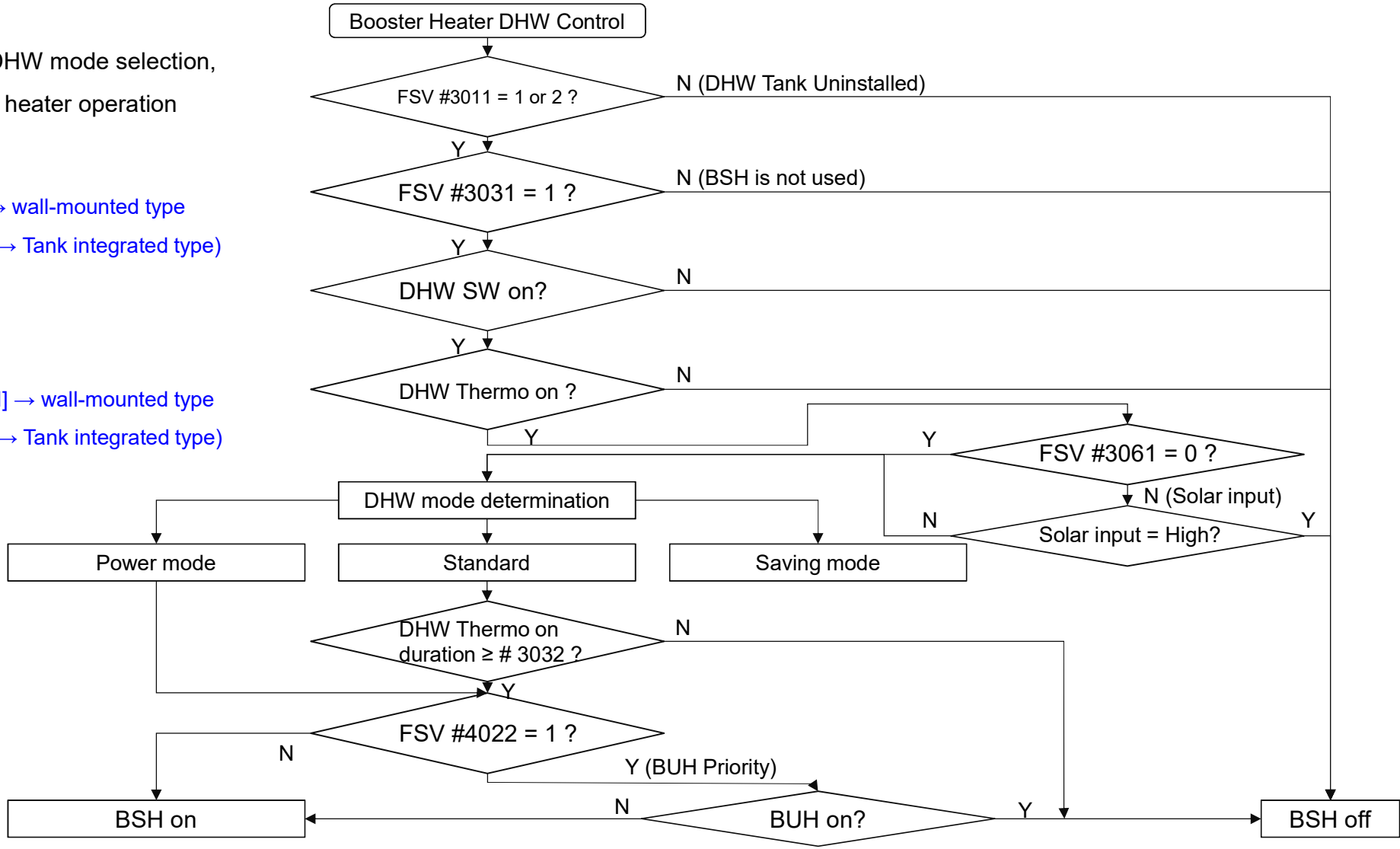
*FSV #4024(Default 0))



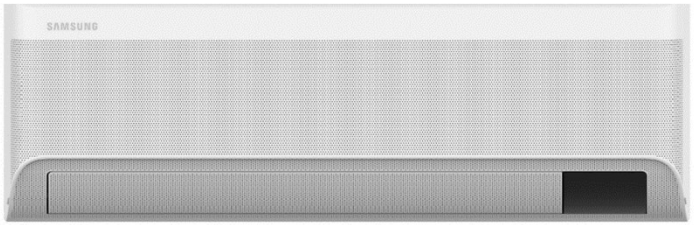
Booster Heater Control logic (DHW Tank)

According to the user's DHW mode selection, the delay time of booster heater operation changes or not.

*FSV #3011(Default 0[NO] → wall-mounted type
Default 1[YES] → Tank integrated type)
*FSV #3031(Default 1[YES])
*FSV#3061(Default 0[NO])
*FSV#3032(Default 20)
*FSV#4022 (Default 0[BOTH] → wall-mounted type
Default 2[BSH] → Tank integrated type)

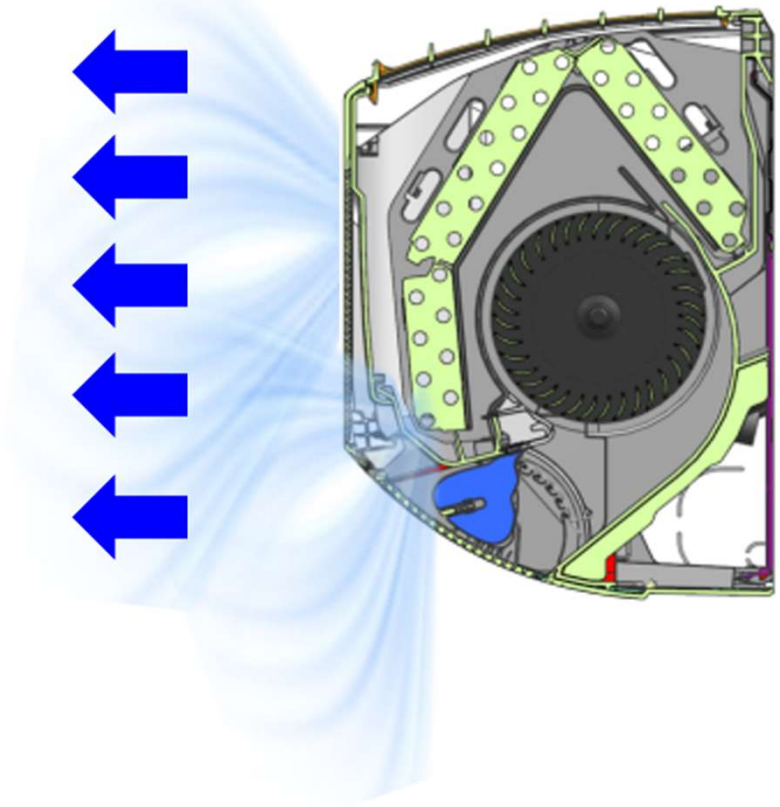


2) TDM+ Wall-Mounted Wind-Free Avant



NEW

'Designed by Thoughtfulness'



Wind-Free™ Cooling

- ✓ Disperses air through 23,000 micro holes to deliver comfortable cooling with capacities 2.2/2.8/3.6/5.6/7.1 kW

NASA communication protocol

- ✓ NASA communication system can connect wired remote controller, central control system

3) 2020 Key features of R32 Split EHS heat pump

a) Complete R32 Lineup - Mono 5-16kW, Split 4-9 kW, Wall-Mounted Hydro Unit, Tank Integrated Hydro Unit, Mono Control Kit

b) Top Class Energy Efficiency - Average SCOP for R32 lineup LWT 35°C/ 55°C is A+++/A++

c) 4-step Quiet Mode - Available in Split 6 kW & 9KW R32 model codes, sound pressure level can be set down to **35 dB(A)** for quiet night operation

d) Compact Tank Integrated Hydro Unit - Available for Mono & Split & **TDM+** ODU with 2 different options **200L & 260L up to 65°C** * leaving water temperature. In case of ODU malfunction, continuous heating is guaranteed with integrated **back-up (2, 4 or 6kW) and booster heater (3kW inside the tank)**

e) User-friendly 2-zone controller with SmartThings -
Controller enables users to manage different temperature settings per zone. The controller has termometer integrated and also can be connected to 3rd party additional termometer. Using the optional Wi-Fi Kit, the different aspects of the system can be controlled through the Samsung SmartThings App on your smartphone * *

SmartThings

* 65°C down to +10°C (max. 60°C down to -5°C)

** Available on iPhones and Android devices. A network connection is required. Samsung application account is necessary.

a) Complete R32 Line up

Properties of R32:

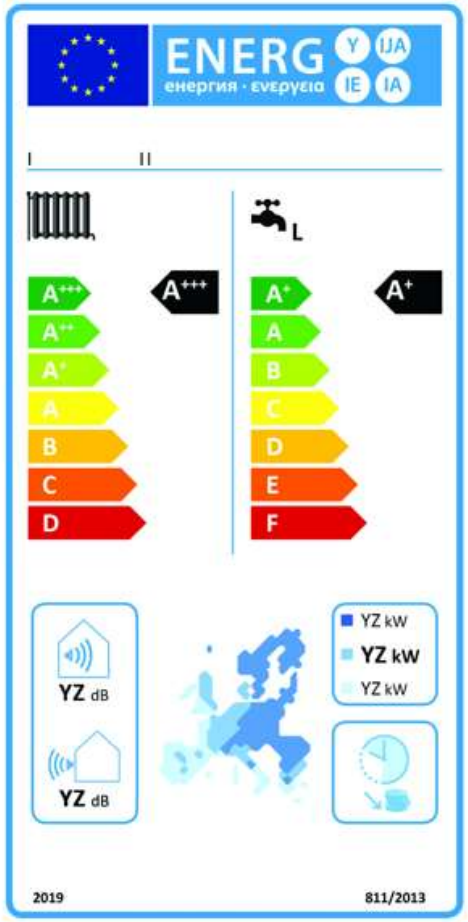
Class: HFC
GWP: 675
ODP: 0
Critical temperature: **78.11°C***
Safety group: **A2L****
Oil: POE

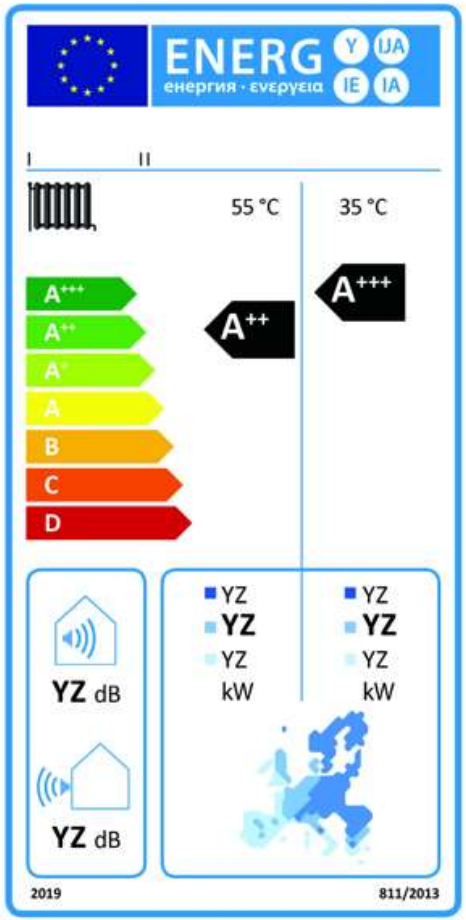
* critical temperature represents teoretical maximum temperature which can be present in refrigerant cycle

** safety group of A2L indicates mild flammability of R32 which is why this refrigerant has restrictions in use on bigger systems (refer to EN378 norm and Appendix 3 of the document Flammability restrictions by EN378)

Since R32 is flammable, quantity of refrigerant charge is limited inside heating/cooling system (dependable on smallest indoor conditioned room). Because of that Samsung is keeping R410A heat pumps for larger systems (12-16kW) and for TDM+

b) Top Class Energy Efficiency





Two types of energy labels:

1. for heating and DHW (on the left)

2. for high and low temperature heating (on the right)

Type	SPLIT R32			MONO R32			
Capacity	4 kW	6 kW	9 kW	5 kW	8 kW	12 kW	16 kW
SCOP	4.58	4.58	4.45	4.46	4.44	4.69	4.48
Energy label	**A+++**	**A+++**	**A+++**	**A+++**	**A+++**	**A+++**	**A+++**

c) 4-step Quiet Mode

Adjustable, 4-step, low-noise operation

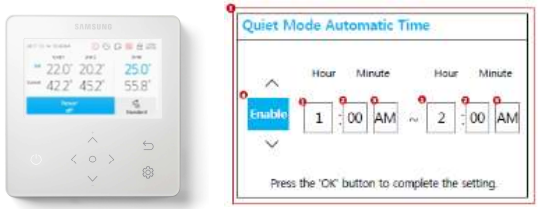
Makes less noise when you need to, so it doesn't disturb you or your neighbors. The 4-Step Quiet Mode enables adjustable low-noise operation to meet strict sound level requirements*. Simply select from four different steps to reduce the sound level by 3dB, 5dB, 7dB* or keep it as low as 35dB(A)*.

*Based on internal testing of the 6kW and 9kW SPLIT outdoor units (AE060RXEDEG, AE090RXEDEG, AE090RXEDGG). The noise level is measured 3m away from the front of the outdoor unit, in an anechoic room with an outside temperature of 7°C. Results may vary depending on the model (capacity), environmental factors and individual use.

How to enter default (4th step) silent mode

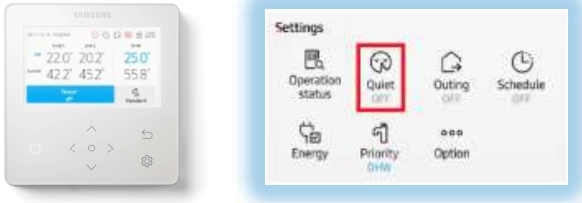
(*Priority : 1 > 2 > 3)

1. Enter quiet mode automatically by wired remote controller (schedule)



2. Enter quiet mode by signal of external contact

3. Enter quiet mode manually by wired remote controller



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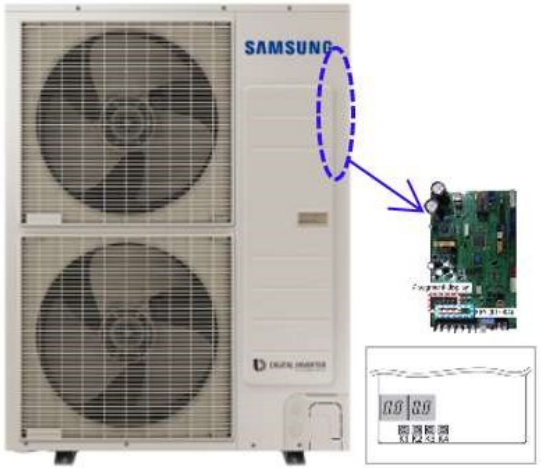
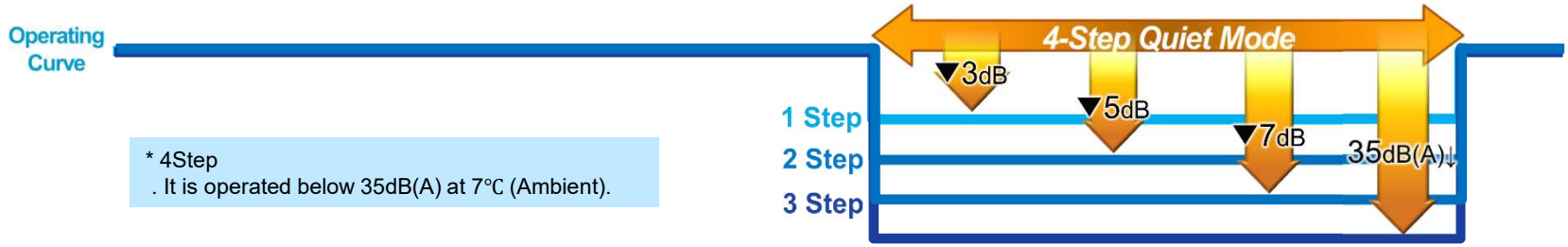
c) 4-step Quiet Mode - setup



- **Setting the option switch for function of low noise**

1. Press the K2 switch for 2 seconds, only if compressor stop.
2. Press the **K1** switch shortly to change the **option number** (SEG1, SEG2)
3. Press the **K2** switch shortly to change the **option value** (SEG3, SEG4)
4. Press the **K2** switch for **2 seconds to store** the changed option

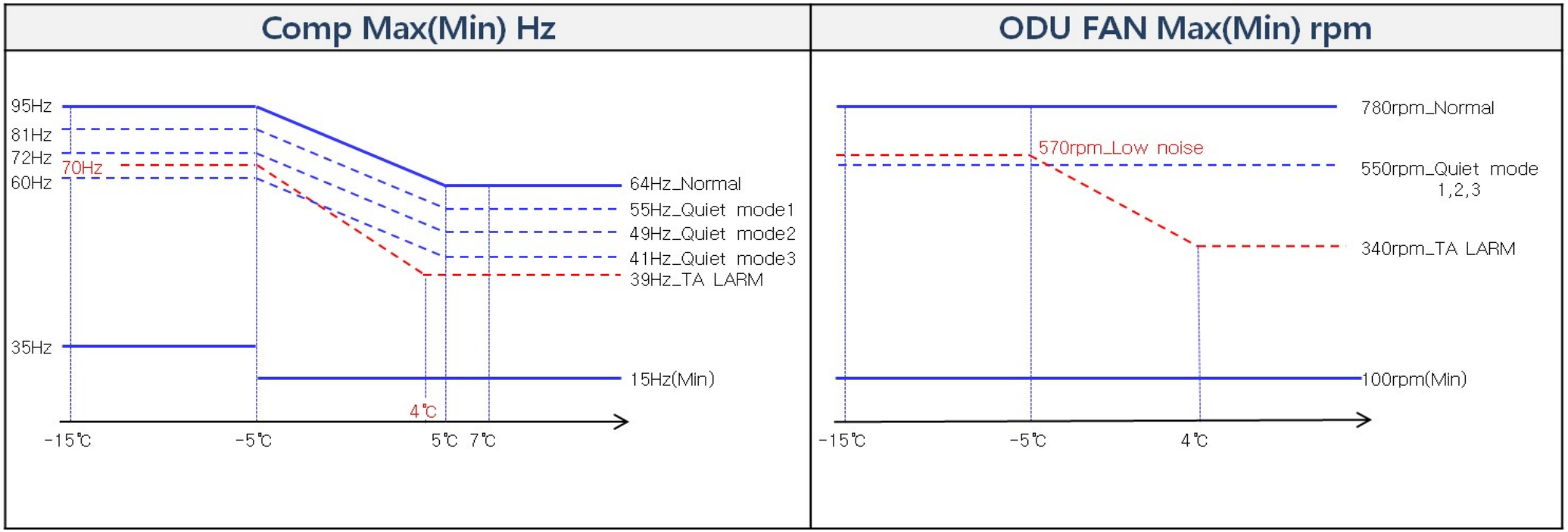
Option	Input unit	SEG1	SEG2	SEG3	SEG4	Function of the option
Silent mode	Main	0	4	0	0	Manual Silent mode (-3 dB)
				0	1	Manual Silent mode * 0.9 (-5 dB)
				0	2	Manual Silent mode * 0.75 (-7 dB)
				0	3	Manual Silent mode (-3 dB)
				0	4	Low-noise Silent mode (default)



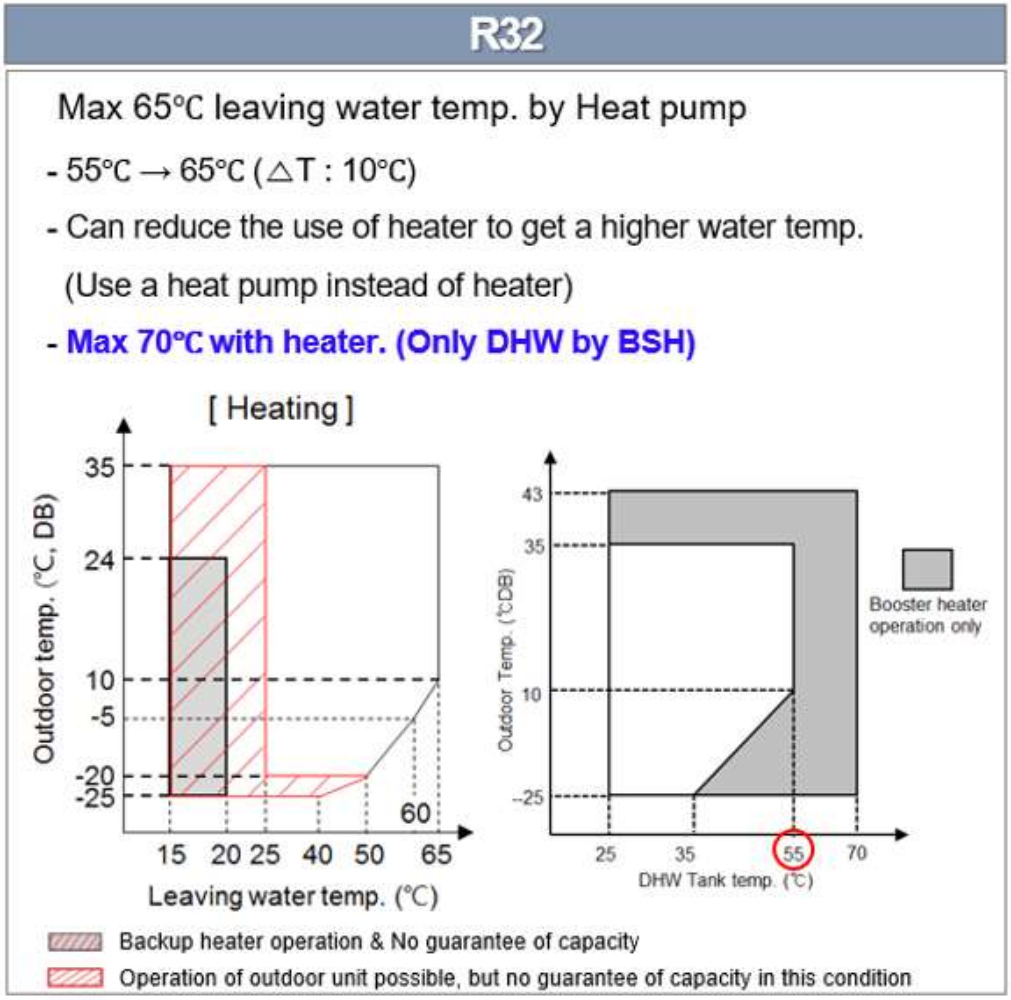
* 4Step
. It is operated below 35dB(A) at 7℃ (Ambient).

c) 4-step Quiet Mode - properties

- Example of Operation Hz & RPM for Split 9kW quiet modes



d) Compact Tank Integrated Hydro Unit



Temperature graph:

- leaving temperature from heat pump and temperatures inside water tank strongly depend on outdoor temperatures that are below -10°C

- if temperatures are above -10°C, we have the following tempertures:

DHW temperature: **55°C**
Heating LWT: **65°C**

Advantages for tank integrated:
1. Backup heater 2-6kW
2. Booster heater 3kW
3. SmartThings WiFi connectivity
4. 260l biggest tank

e) User-friendly 2-zone controller with (Wi-Fi kit)

Convenient and intuitively easy control

New Wired Remote Control

Monitor and adjust the conditions in your home quickly and intuitively.

A new Wired Remote Control has a large and bright color display, touch control and a choice of languages*. It can be installed in your preferred location and allows you to use different temperature settings in each zone. **For controlling 2 zones**, we can use additional temperature senzor or additional controller

*EN (English)/DE (German)/FR (French)/IT (Italian)/ES (Spanish)/PL (Polish)

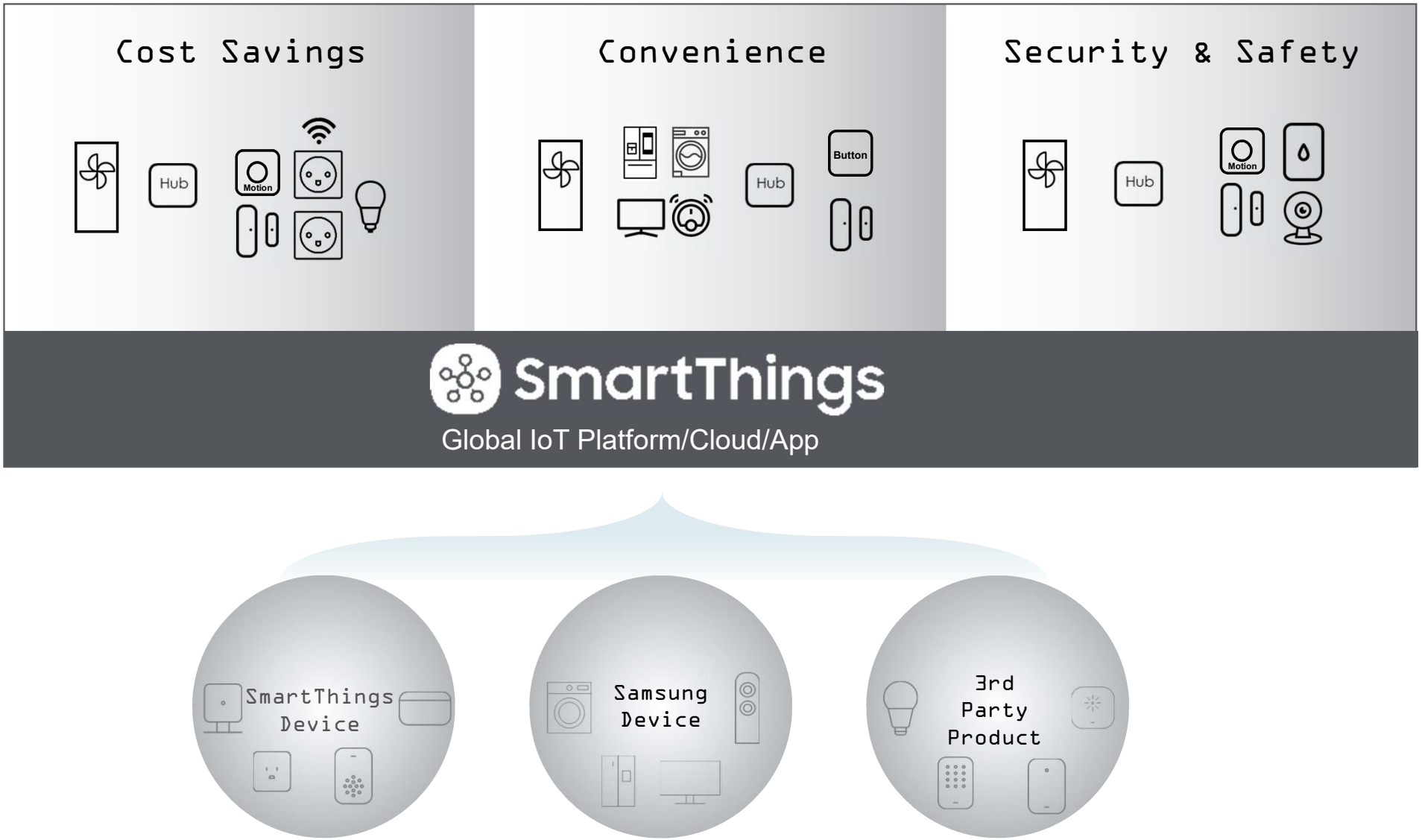
Remote control with a smartphone – requires Wi-Fi kit

Control your Samsung EHS on the go. Smart Connectivity lets you turn it on/off anytime and anywhere using the SmartThings App*. Thanks to the touch controller, you can control the mode and settings, schedule it to start/stop, monitor energy use, adjust summer time settings and identify errors.

Detail WiFi kit aplication and access to SmartThings features is presented in Appendix 2 of this document Description of Wi-Fi kit: MIM-H04EN and SmartThings features

Optional Wi-Fi Kit

* Available on iPhones and Android devices. A network connection is required. Samsung application account is necessary.


Cost Savings
Hub
Motion
Convenience
Hub
Button
Security & Safety
Hub
Motion
SmartThings
Global IoT Platform/Cloud/App
SmartThings Device
Samsung Device
3rd Party Product

List of Samsung product connectable to SmartThings

TVs
All 2020 models have WiFi

Washers
WW10M86INOA/LE - Q-Drive
WW90M741NOA/LE - Q-Drive
WW90M644OPX/LE - Q-Drive
WW80M644OPW/LE - Q-Drive
WW70M644OPW/LE - Q-Drive
WW10N644RPW/LE - Add-wash

Combo (washer / dryer)
WD90N644OOW/LE - Q-Drive

Dryer
DV90N8287AW/LE - Q-Drive matching dryer
DV90N62632W/LE - Q-Drive matching dryer
DV90N62632X/LE - Q-Drive matching dryer

Refrigerators – blue without dongle
RS68N8240S9/EF - RS8000 (SBS) Wi-Fi Dongle Ready
RS68N8240WW/EF - RS8000 (SBS) Wi-Fi Dongle Ready
RS68N8240B1/EF - RS8000 (SBS) Wi-Fi Dongle Ready
RS68N8671SL/EF - RS8000 (SBS) Wi-Fi Dongle Ready
RT58K7105SL/EO - RT7000 (TMF - Top mount freezer) Wi-Fi Dongle Ready
RF50N5970B1/EO - RF5000 (Slim FDR - French door) Wi-Fi Dongle Ready
RF50K5920S8/EO - RF5000 (Slim FDR - French door) Wi-Fi Dongle Ready
RF23M8090SG/EF - RF8000 (FDR - French door)
BRB260087WW/EF - BRB6000 (Built-in BMF Bottom mount freezer) Wi-Fi Dongle Ready
BRB260176WW/EF - BRB6000 (Built-in BMF Bottom mount freezer) Wi-Fi Dongle Ready
BRB260178WW/EF - BRB6000 (Built-in BMF Bottom mount freezer) Wi-Fi Dongle Ready
BRB260187WW/EF - BRB6000 (Built-in BMF Bottom mount freezer) Wi-Fi Dongle Ready
BRB260189WW/EF - BRB6000 (Built-in BMF Bottom mount freezer) Wi-Fi Dongle Ready

Owen
NV73J9770RS/EO

Hub
NZ64N7757GK/E2
Hood
NK24N9804VB/UR - Autoconnectivity with Cooktop (Bluetooth)

Air Conditioners (only indoor units presented)
RAC and FJM
AR07TXFYAWKNEU;AR09TXFYAWKNEU;AR12TXFYAWKNEU;AR18TXFYAWKNEU;AR24TXFYAWKNEU
AR07TXFCAWKNEU;AR09TXFCAWKNEU;AR12TXFCAWKNEU;AR18TXFCAWKNEU;AR24TXFCAWKNEU
AR07TXEAAWKNEU;AR09TXEAAWKNEU;AR12TXEAAWKNEU;AR18TXEAAWKNEU;AR24TXEAAWKNEU
AR07TXCAAWKNEU;AR09TXCAAWKNEU;AR12TXCAAWKNEU
EHS – needs WiFi kit MIM-H04EN
AE260RNWMGG/EU;AE200RNWMEG/EU;AE200RNWSEG/EU;AE260RNWSEG/EU;AE260RNWSGG/EU
AE090RNYDEG/EU;AE090RNYDGG/EU
AE160JNYDEH/EU;AE160MNYDEH/EU;AE160JNYDGH/EU;AE160MNYDGH/EU
AE090MNYDEH/EU;AE090MNYDGH/EU
DVM – needs WiFi kit MIM-H04EN
All indoor units up to 16 pcs per WiFi kit and per system
CAC – needs WiFi kit MIM-H04EN
All indoor units up to 16 pcs per WiFi kit and per system

Robot vacuums
VR9000H
VR7000M
VR7200R
VM5000RM

Dishwasher
Due to come end of the year

SmartThings devices
Smart HUB
Smart plug
Smart bulb
Smart outlet
Water leak sensor
Tracker
Arrival sensor
Motion sensor
Multipurpose sensor
Water leak sensor
Smart Cam
Smart Button

3rd party - 2200+ Devices, 177 Brands

(As of Feb 2020)

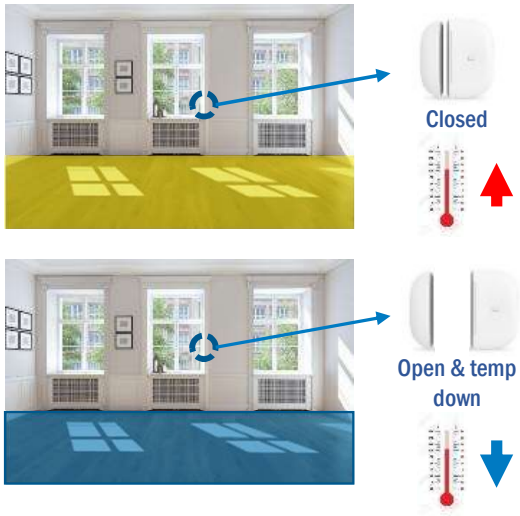
Cost Savings

Energy Management Kit includes:

SEACE HVAC + SmartThings Hub/Link + SmartThings Motion + SmartThings Multipurpose + SmartThings Outlet + SmartThings Light Bulb + SmartThings Wi-Fi Plug

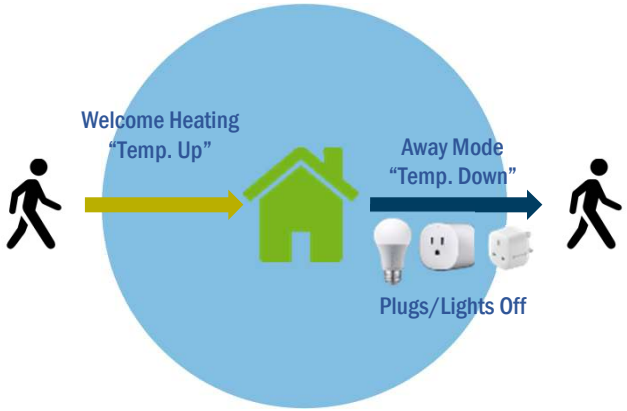
Heat Loss Prevention

Temperature lowers if window is open



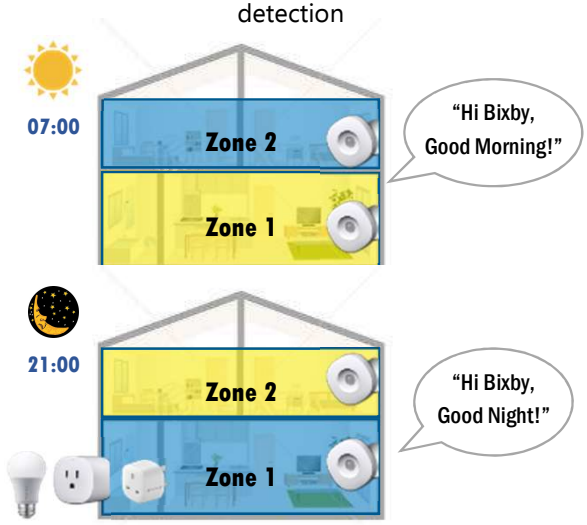
Geofencing

Temperature adjusts based on presence (arrive/depart home)



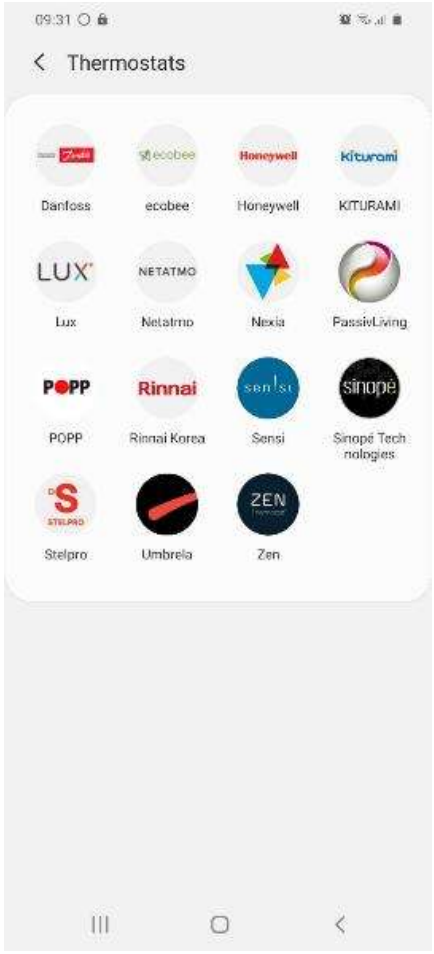
Turn Off Unused Rooms

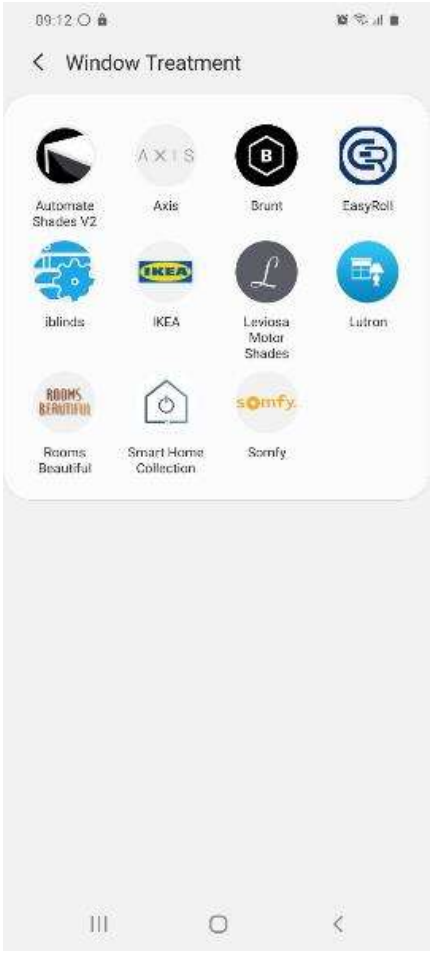
Temperature adjusts based on schedule and/or motion detection



Cost Savings

Complementary 3rd Party Products (WWST)





Convenience

Convenience Kit includes:

SEACE HVAC

+

Samsung TV & Appliances

+

SmartThings Hub/Link

+

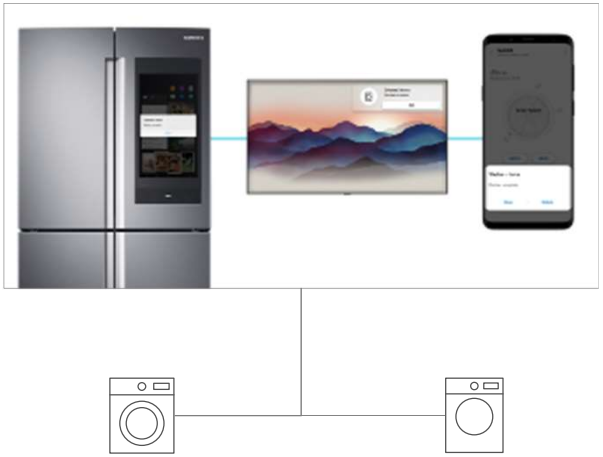
SmartThings Multipurpose

+

SmartThings Button

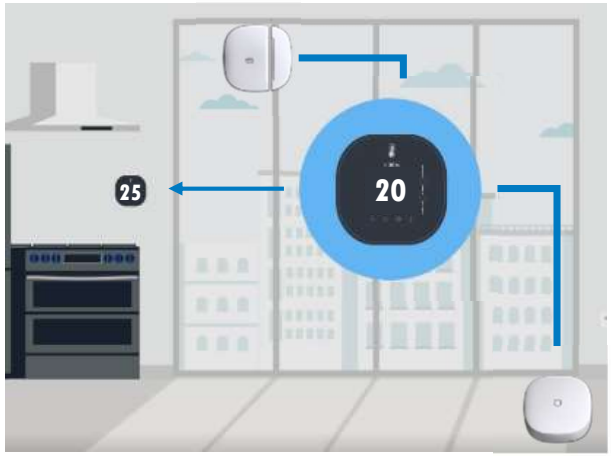
Appliances Notification

Receive alert when washer/dryer cycle is complete



Granular Temperature Control

SmartThings Button and Multipurpose can act as temperature sensors



On/Off Master Control with Single Button

Water tank heat up

Blinds open (3rd party)

Smart Outlet (Coffee) On

Indoor Unit Quiet Mode

Lights Off

Blinds close (3rd party)

Robot Vacuum Return Home

Indoor Unit Quiet Mode

Lights Off

Home Security & Safety

Security & Safety Kit includes:

SEACE HVAC +

SmartThings Hub/Link +

SmartThings Motion +

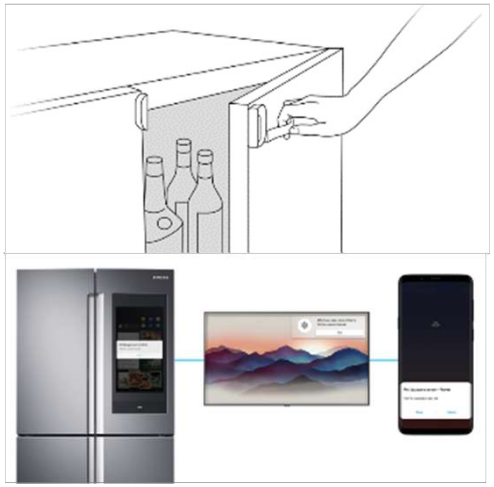
SmartThings Multipurpose +

SmartThings Water Leak +

SmartThings Camera

Keep Your Kids Safe

Receive alert when kids open cabinets containing dangerous items



Safety Hazard Detection

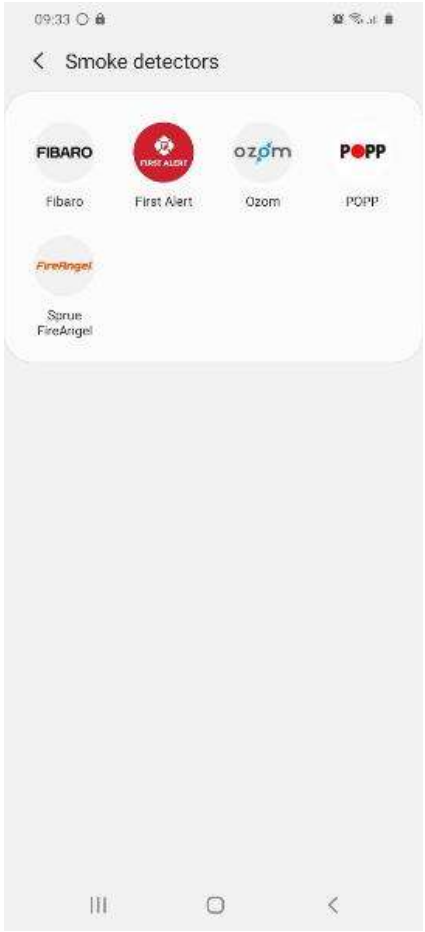
Receive alert when water leak or smoke/CO is detected

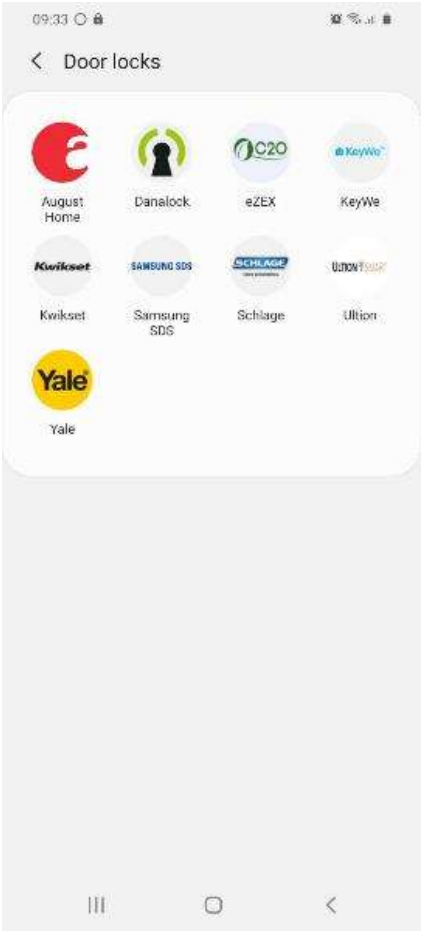
Home Monitoring

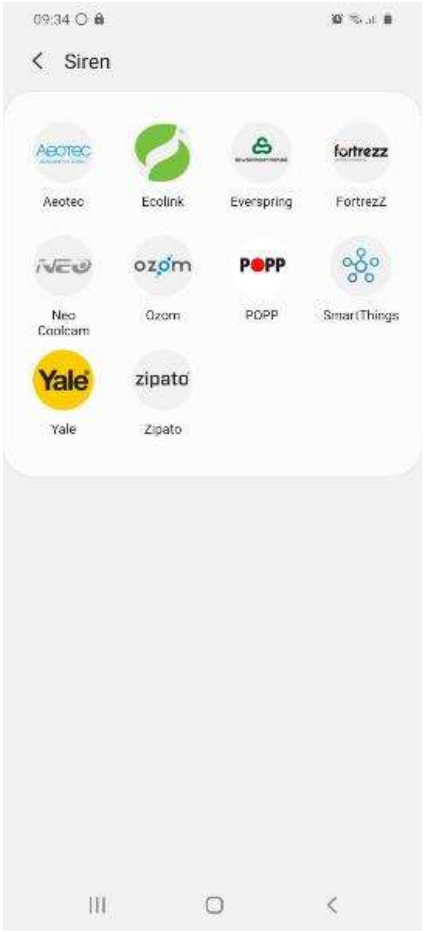
Keep an eye on home

Home Security & Safety

Complementary 3rd Party Products (WWST)





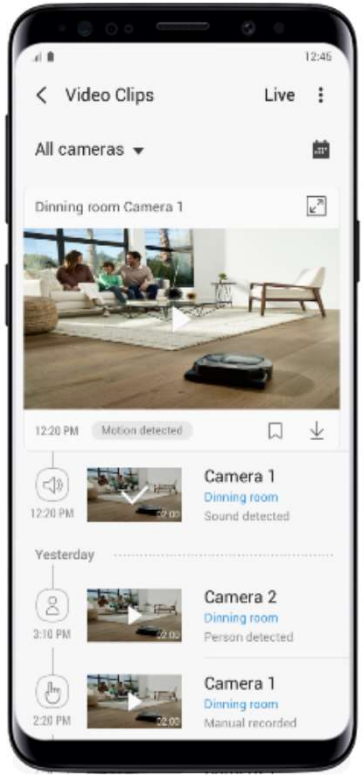


Services

Home Security & Protection

SmartThings Video

Event triggered video recording (Cloud storage)
On-demand live stream viewing

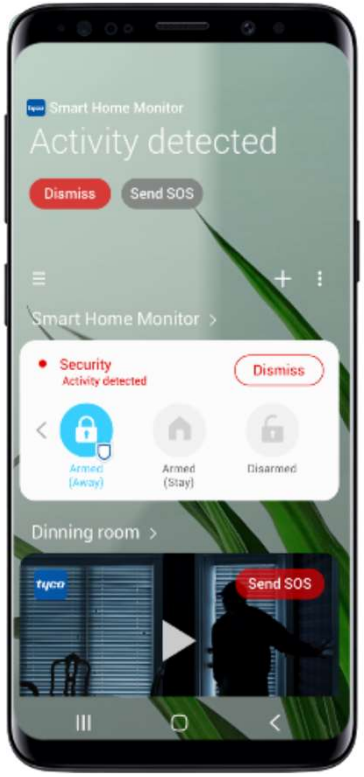


SmartThings Home Monitor

Easy to setup home monitor
Intrusion/Water leak/Smoke monitor

SmartThings Home Monitor Pro

24/7 professional home monitoring
Guard dispatch, Panic button



Bixby voice commands for EHS

	Eng. (Alt1.)	Eng. (Alt2.)
EHS (Eco Heating System)	Turn off EHS	Turn off air-to-water heat pump
	Turn on the Hot-Water of EHS	Turn on the Hot-water
	Turn off the Hot-Water of EHS	Turn off the Hot-water
	Set the temperature of EHS to 25℃	
	Set the Hot-Water temp of EHS to 50℃	Set the Hot-water to 50C
	Set the mode of EHS to Cooling	Set to Cooling
	Set the mode of EHS to Heating	Set to Heating
	Set the mode of EHS to Auto	Set to Auto
	Set the mode of EHS to Dry	Set to Dry
	Set the mode of EHS to Fan	Set to Fan
	Set the mode of EHS to Standard	Set to Standard
	Set the mode of EHS to Power	Set to Power
	Set the mode of EHS to Forced	Set to Force
	Set the mode of EHS to Economic	Set to Economic
	Set the mode of EHS to Goint Out	Set to Going Out
	Cancel the Going Out in the EHS	Cancel Going Out or Cancel Going Out mode
	Check the temp of Hot-water for EHS	
	Check the mode of Hot-Water for EHS	
	Check the temp of Cooling/Heating for EHS	
	Check the mode of EHS	check the mode of the air-to-water heat pump

EHS R32

e) User-friendly 2-zone controller with SmartThings (Wi-Fi kit)

color graphic 4.3"

TFT Color LCD Display

Provides required screen/Icon to improve visibility

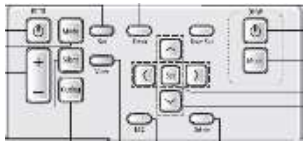
Intuitive UI

before

now

Simplified Design & Control

From button control to navigation control


before

now

Shows additional Information

Display of indoor model number

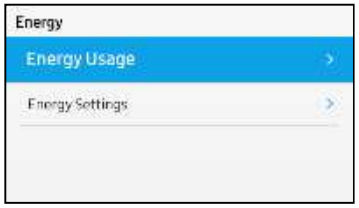
All of Errors display

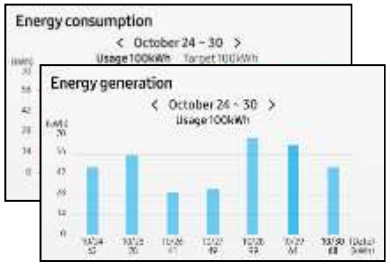
before

now

Energy Saving mode & Monitoring of Energy consumption

Available with EHS R32





* Available on iPhones and Android devices. A network connection is required. Samsung application account is necessary.

SAMSUNG

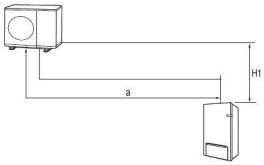
e) User-friendly 2-zone controller with SmartThings (Wi-Fi kit)

NEW

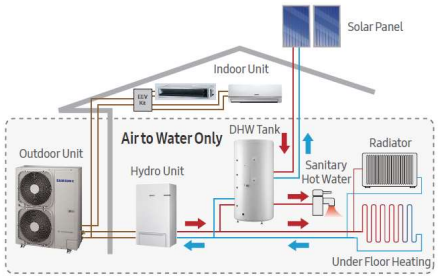
Item	-	MWR-WW10N
Product Size (mm)	120*124*20	120*120*19
LCD Size (mm)	98*45	95*55
Color display	X	●
Space heating operation	Heating/Cooling/Auto	Heating/Cooling/Auto
DHW operation	ECO/STD/POWER	ECO/STD/POWER
Max. Zone control	1	2
Schedule / Holiday mode	● / ●	● / ●
Energy monitoring	X	●
Error history	● (Max 1 error)	● (Max 10 errors)
Commissioning	X	●
Smart Grid Ready	X	●
Solar Photovoltaic Ready	X	●
Bivalent (2nd heat source)	●	●
Solar Thermal Ready	●	●
Language type	EN	6 Languages (EN,DE,FR,IT,ES,PL)
Summer time setting	●	●

4) 2020 Unique technology of R410A TDM+ and Split EHS

a) Complete R410A Lineup – Split 12-16 kW, TDM+ 4-16kW, Wall-Mounted Hydro Unit, Tank Integrated Hydro Unit, wall mounted RAC, ducted and console units



b) Leading piping lengths - up to 70 meters pipe length when selecting TDM+ which can be mounted even in Split version with only hydro unit inside



c) TDM Plus - unique Samsung solution with hydro units plus indoor units (wall mount / ducted / console) all connected to one outdoor unit

d) Compact Tank Integrated Hydro Unit – Available for Mono & Split & **TDM+** ODU with 2 different options **200L & 260L up to 55°C** * leaving water temperature. In case of ODU malfunction, continuous heating is guaranteed with integrated **back-up (2, 4 or 6kW) and booster heater (3kW inside the tank)**

e) User-friendly 2-zone controller with SmartThings

– Controller enables users to manage different temperature settings per zone. The controller has termometer integrated and also can be connected to 3rd party additional termometer. Using the optional Wi-Fi Kit, the different aspects of the system can be controlled through the Samsung SmartThings App on your smartphone * *

SmartThings

* 55°C down to -10°C (max. 35°C down to -25°C)

** Available on iPhones and Android devices. A network connection is required. Samsung application account is necessary.

a) Complete R410A Line up

Properties of R410A:

Class: HFC
GWP: **2088****
ODP: 0
Critical temperature: **71.34°C***
Safety group: A1
Oil: POE

* critical temperature represents teoretical maximum temperature which can be present in refrigerant cycle

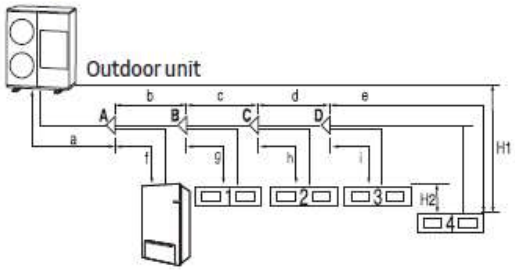
** Global warming potential of 2088 means this refrigerant will be banned in EU for small AC systems (less than 3kg) by Y2025

Since R32 is flammable, quantity of refrigerant charge is limited inside heating/cooling system (dependable on smallest indoor conditioned room). Because of that Samsung is keeping R410A heat pumps for larger systems (12-16kW) and for TDM+

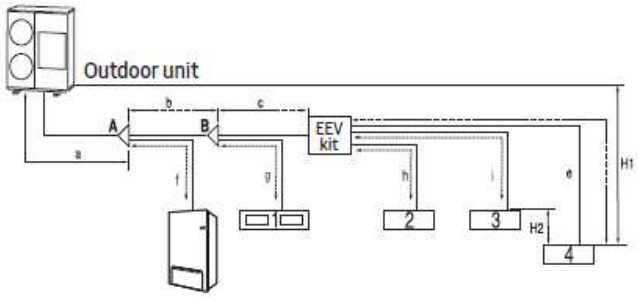
b) Leading piping lengths

AE120/160MXTP✱H

Using only Y-joint



Using EEV kit



Item				Example	Remarks
Maximum allowable length of pipe	Outdoor unit ~ Indoor units	Longest piping length	Less than 70m	a+b+c+d+e ≤ 70m	
		Equivalent length	Less than 85m	Y-joint and EEV kit : 0.5m	
		Total length	Less than 200m	a+b+c+d+e+f+g+h+i ≤ 200m	10m ≤ Total length ≤ 200m
Maximum allowable height	Outdoor unit ~ Indoor units	Less than 30m		H1	If outdoor unit is located lower position H1 ≤ 25m
	Indoor unit ~ Indoor unit	Height difference between indoor units	Less than 15m	H2	
Maximum allowable length of pipe	First Y-joint ~ Last indoor unit	Actual piping length	Less than 40m	b+c+d+e ≤ 40m (between first Y-joint and indoor unit) h≤20m(between EEV kit and indoor unit)	
Additional refrigerant calculation	R=Basic Charge + Additional charge by the piping length + Additional charge by (A2A)Indoor Basic Charge : Up to 10m When Installing A2W only = 3500g Additional charge by the piping length : 3/8" - 60g/m, 1/4" - 20g/m Additional charge by (A2A)Indoor : Refer to the 113 page 'Amount of additional refrigerant for each indoor unit' table.				

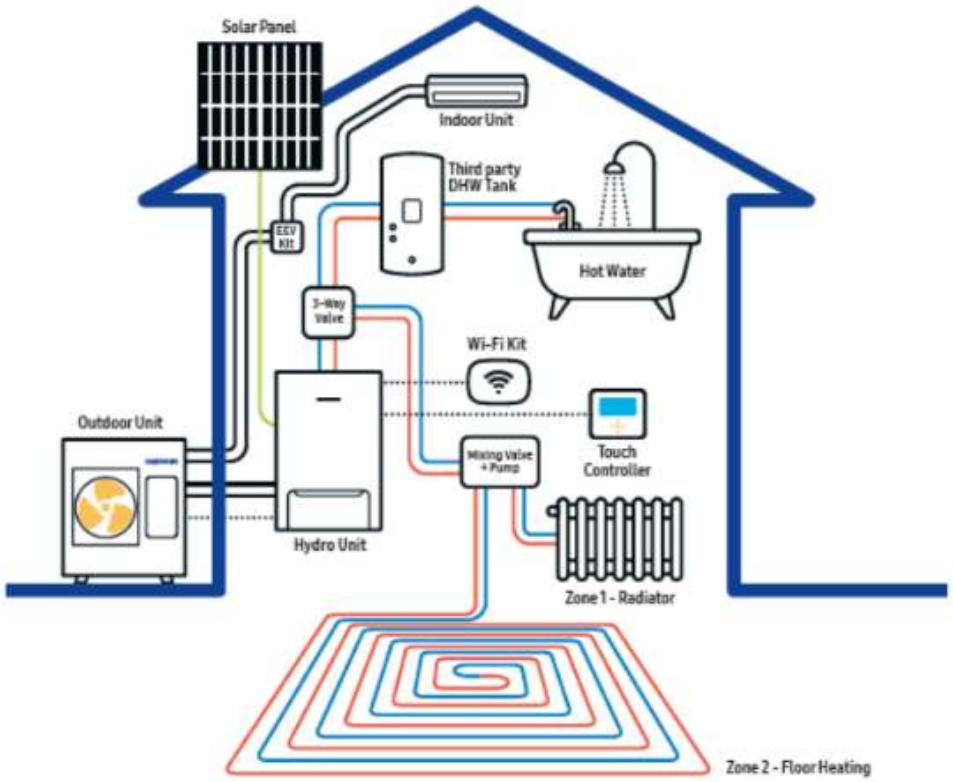
Leading piping lengths for heat pumps:

Total piping lengths for models from 12kW and 16kW is up to 70 meters which can be beneficial when aplication is highrise building or apartment building.

This combination for TDM+ units can also be utilized only in split version of TDM+ by selecting only hydro unit and outdoor unit as combination

c) TDM Plus

TDM Plus



The TDM Plus system is an **'All-In-One'** Air-to-Water **(A2W)** and Air to-Air **(A2A)** system for a complete home climate solution.

It can be used throughout the year for cooling and heating to meet a variety of different user situations and needs. It enables underfloor heating/cooling and radiator heating, as well as offering air-to-air cooling/heating with various options for air conditioning (console, wall mount or ducted).

What is new for 2020?

1- Tank Integrated Hydro Unit

2- Wall-mounted RAC **Wind-Free**

c) TDM Plus - Indoor Line up

Capacity (kW)		Picture	2.2	2.8	3.6	5.6	7.1	9.0	16.0	Model Code
Wall-Mounted Hydro Unit	1-Phase							●	●	AE***MNYDEH/EU
	3-Phase							●	●	AE***MNYDGH/EU
Wall Mount RAC	A3050 (Good1) *Without EEV		●	●	●	●	●			AE***MNADEH/EU
NEW	Wind-Free Avant QMD *Without EEV		●	●	●	●	●			AE***TNXDEH/EU
Duct	Slim Duct		●	●	●	●				AE***MNLDEH/EU
	MSP Duct (Duct S)						●	●		AE***MNMPEH/EU
Console	Console		●	●	●	●				AE***MNJDEH/EU

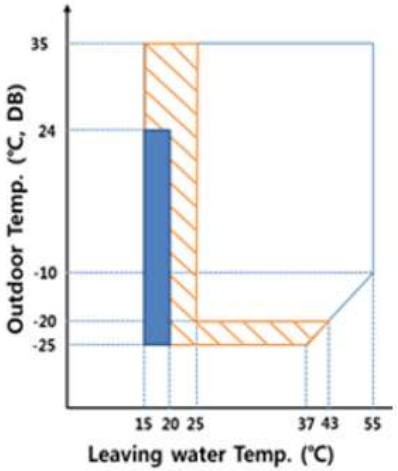
* For units without EEV there is a need for external EEV kit which can be single or multiple.

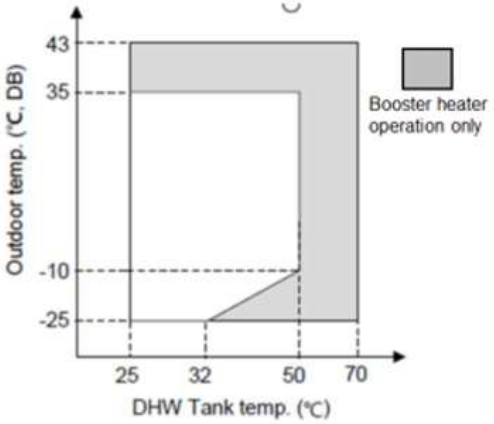
d) Compact Tank Integrated Hydro Unit

R410a

Max 55℃ leaving water temp. by Heat pump

- 50℃ → 55℃ (△T : 5℃)
- Heat pump is stopped from 50℃ during DHW mode.





Back up heater operation

Operation is available but capacity cannot be guaranteed

Temperature graph:

- leaving temperature from heat pump and temperatures inside water tank strongly depend on outdoor temperatures that are below -10℃

- if temperatures are above -10℃, we have the following tempertures:

DHW temperature: 50℃
Heating LWT: 55℃

Advantages for tank integrated:

1. Backup heater 2-6kW
2. Booster heater 3kW
3. SmartThings WiFi connectivity
4. 260l biggest tank

5) Mono EHS heat pump – installer frendly

In case of outdoor MONO heat pump selection (refrigerant is inside of outdoor unit) there is no limitations with placement of indoor units since water pipes connect indoor and outdoor unit. In this configuration Samsung line up of indoor equipment is:

A. Control kit for connecting required signals to outdoor (has flow meter inside)

Mono Control Kit

Size, mm (W x H x D)

only for Mono

290x 110x370

- New Color Wired Remocon
- 2 Zone Control, PV Enable, SG Ready
- New PBA
- Upgraded wire hole for R32

	Capacity	Control Kit	Model code
R32	5-16kW	●	MIM-E03CN

B. Tank integrated indoor unit which has all neccessary piping with pump and tank already mounted inside

Size, mm (W x H x D)

595x 1800x 700

	1-Phase	200L	260L	Model code
R32	Mono	●	●	AE***RNWMEG/EU
	Split	●	●	AE***RNWSEG/EU
	3-Phase	**200L**	**260L**	**Model code**
R32	Mono		●	AE260RNWMGG/EU
	Split		●	AE260RNWSGG/EU

Tank integrated Hydro Unit

SAMSUNG

Climate Solutions

Thank you!

SEACE PM I Samsung Electronics Air Conditioner Europe B.V.

samsung.com/climate
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P.O. Box 75810, 1118 ZZ Schiphol,Netherlands, T+31 (0)8 81 41 61 00