

# WISE Paragon Wall

Comfort modules for Swegon's WISE System for demand-controlled ventilation



## QUICK FACTS

- Comfort module for demand-controlled indoor climate, integrated in Swegon's control platform WISE
- Designed for installation in the rear edge of the room and ideally is positioned above the adjacent corridor's suspended ceiling
- Complete product with integrated damper for variable air flow control 0-100%
- Energy-efficient operation since the room is ventilated, heated and cooled exactly as called for by the load, neither more nor less
- Highest possible comfort with provision for individual control on a product or room level
- Straightforward installation and connection to the WISE system
- 1-way air distribution that can be distributed with the help of Swegon's ADC (Anti Draught Control) and grille with slats
- Large working range in one and the same product simplifies planning

## KEY FIGURES

Air flow range:		Pressure range:	Cooling capacity total:	Heating capacity, Water:
l/s	m <sup>3</sup> /h	Pa	W	W
0 - 85	0 - 306	20 - 200	Up to 2682	Up to 4274

## SIZE

Length (mm)	Depth (mm)	Height (mm)
800, 1100, 1400	722 (+0-20)	286

# Contents

<b>Technical description .....</b>	<b>3</b>
Compact plug & play unit .....	4
Factory fitted components .....	4
Basic function diagram.....	5
Air distribution.....	6
Control equipment.....	7
<b>Technical data.....</b>	<b>8</b>
Electrical data .....	8
<b>Sizing .....</b>	<b>9</b>
Cooling.....	10
Heating.....	11
<b>Installation .....</b>	<b>12</b>
Suspension .....	12
Air connection .....	12
Connection - Water .....	13
<b>Accessories .....</b>	<b>14</b>
<b>Accessories, factory-fitted.....</b>	<b>15</b>
<b>Loose accessories .....</b>	<b>16</b>
<b>Specification.....</b>	<b>20</b>
Specification .....	20
Delivery demarcation .....	20
Available to order, kit and accessories .....	21
Ordering Key, Accessories .....	21
<b>Specification text.....</b>	<b>22</b>

# Technical description

## The WISE system

Demand-controlled ventilation with the new WISE system has never been easier. For a description of the WISE system, see the WISE System Guide at [www.swegon.com](http://www.swegon.com)

## WISE supports different combinations of indoor climate systems.

The option is now given to combine waterborne and airborne within the building, right down to floor level to zone and room level. WISE makes it possible to combine a number of system solutions at the same time.

## Communicates wirelessly

The WISE system's intelligent room products/nodes communicate wirelessly with the built-in radio transmitter. Products that have a power supply work both as a transmitter and receiver and in some instances, can be used to boost/repeat the system's radio communications. Products powered by a battery act only as transmitters.

## Comfort module WISE Paragon Wall

Comfort module WISE Paragon Wall is a part of the WISE system and demand-controlled air flow and cooling and heating for the best energy efficiency and comfort.

The product can be adapted and combined to meet comfort requirements in most projects, both now and in the future. WISE Paragon Wall is a complete and fully flexible product with an adjustable air distribution pattern – the possibility of factory mounted accessories.

As the product uses the same grille for both the distribution of supplied air and the recirculation of the supply air, this makes a technical installation outside the relevant room possible, which gives several important advantages.

The product is primarily designed for offices with adjoining corridors. By utilising the space above the false ceiling in the adjoining corridor, service can be carried out in the corridor without the need for access to the room served by the unit. With only one grille to take into consideration, only one opening needs to be cut in the wall.

The product is also equipped with VariFlow and ADC for simple adjustment of the air flow and direction of air discharge. Vertical air discharge direction can also be set simply by adjusting the angle of the louvers in the grille.

## Unique control functions

WISE Paragon Wall contains has an integrated damper that regulates the product's slot openings and thus the air flow.

With our unique control sequence, we always ensure that the comfort module supplies the room with the right flow in each operating case. By maintaining a high velocity across the slot openings, we also realise a good coanda effect and with that good comfort.



Figure 1. WISE Paragon Wall, front view



Figure 2. WISE Paragon Wall, back view



[www.eurovent-certification.com](http://www.eurovent-certification.com)  
[www.certiflash.com](http://www.certiflash.com)

## Sizes and variants

The product is available in three different lengths 800, 1100 and 1400 mm.

All sizes can be ordered with the water connection on the left or right short side.

## Design

WISE Paragon Wall is available in the following designs:

Variant A: Ventilation, waterborne cooling.

Variant B: Ventilation, waterborne cooling and heating from a coil.

## Environment

The Building Materials Declaration is available from [www.swegon.com](http://www.swegon.com).

## Project design / Typical room

See the Planning section and the separate documentation "WISE Planning Guide" and "WISE System Guide", which are available for download via [www.swegon.com](http://www.swegon.com).

## Compact plug & play unit

WISE Paragon Wall is supplied with control equipment including a radio unit for pairing with the WISE system. Only a 24 V supply needs to be routed to units, which are then easily paired to the main wireless system SuperWISE and allocated functions.

The product can also be equipped with numerous different accessories that are fitted to the product at the factory.

WISE Paragon Wall sends its values continuous to SuperWISE and you can see the current flow and pressure in real time. The integrated radio node in the product's control unit communicates with the room's setpoint selector switch or any temperature sensor and sensors in the room.

The product works individually and can be easily allocated new functions and set point values to realise the demanded room functions or if new functions are required then these can be an easy introduced via our new software IC Design and our new well-designed web interface SuperWISE. This gives major advantages, for example, in the event of modifications and changes in floor layout such as switching from separate office rooms to an open-plan office.

Also see the WISE System Guide on [www.swegon.com](http://www.swegon.com)

## WISE Paragon Wall as standard is equipped with the following components:

- WISE CU with built-in pressure sensor and 2 inputs for WISE sensors.
- Motor for regulation 0-10 V of the internal damper.

## Factory fitted components as an option:

- The air quality sensor WISE SMA Multi measures temperature, RH, CO2 and VOC is factory fitted.
- Condensation sensor CG-IV
- WISE Temperature sensor PT 1000 for dew-point control
- Valves and actuator

## Loose accessory kit:

There are also several accessory kits available for retrofitting if you wish to expand your WISE Paragon Wall to handle additional features at the room and product level.

- WISE SMA Multi kit
- WISE CG-IV-kit
- WISE dew-point kit

## Factory fitted components

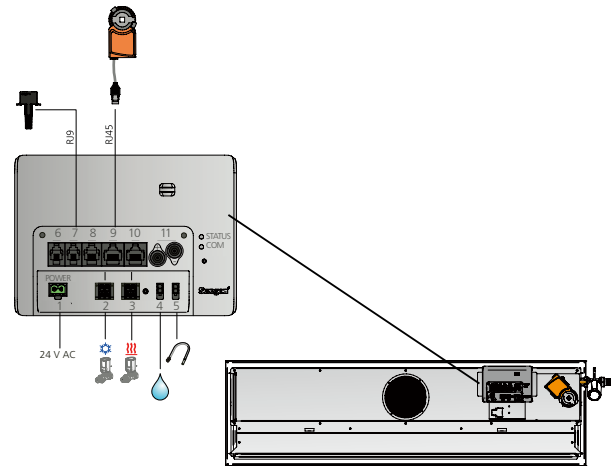


Figure 3. Components that are factory fitted on WISE Paragon Wall



Figure 4. WISE Paragon Wall with water connection on the right-hand side and mounted control equipment.

## Basic function diagram

### Offices

The primary air is supplied via duct connection in the rear edge of the unit and this builds up positive pressure inside the unit. The positive pressure distributes the primary air with relatively high velocity via the slots. The high velocity of the primary air creates negative pressure which generates induction of the room air.

The recirculation air is sucked into the unit through the same grille that is used for distributing air into the room.

The recirculation air is then conveyed through the coil where it is cooled, heated, if required, or just passes untreated, before it mixes with the primary air and is discharged into the room.

The air is ideally distributed to office rooms by discharging it in a fan shape and utilising as much of the ceiling and any intermediate walls as possible for preventing draughts in the occupied zone.

Horizontal air distribution is achieved by means of the ADC (Anti-Draught Control) feature. If vertical air distribution is desirable, this is achieved by setting the outlet grille vanes to slant upward or downward.

Our new generation WISE Paragon Wall has variable k-factor setting and large air flow range.

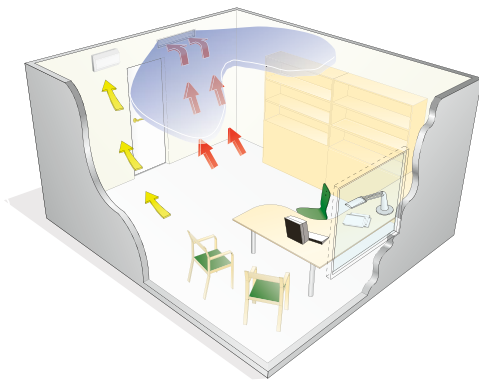


Figure 5. Air distribution with the Paragon Wall VAV in a separate office room

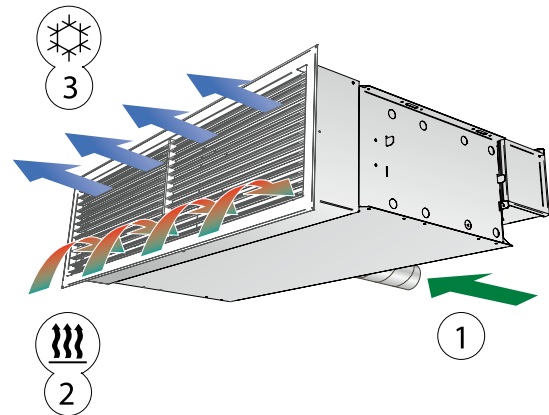


Figure 6 – Cooling function

1 = Primary air

2 = Induced room air

3 = Primary air mixed with chilled room air

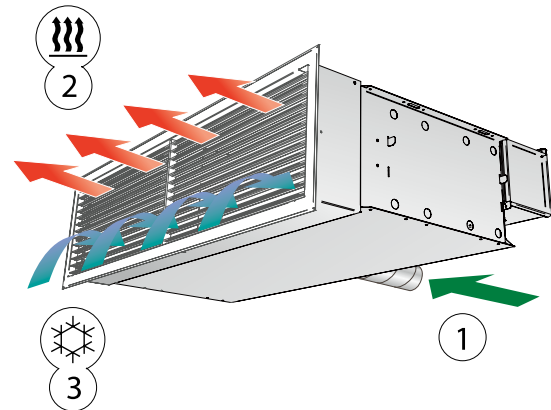


Figure 7 – Heating function (waterborne)

1 = Primary air

2 = Primary air mixed with heated room air

3 = Induced room air

## Air distribution

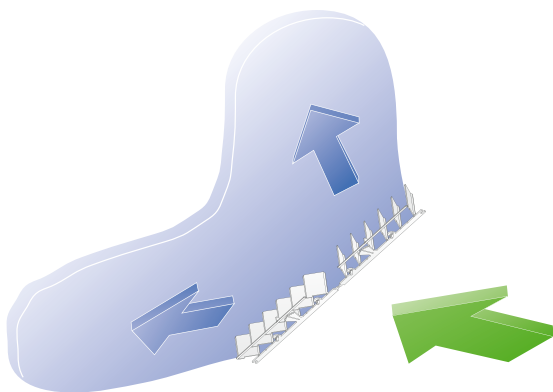


Figure 8 – Horizontal air distribution with ADC

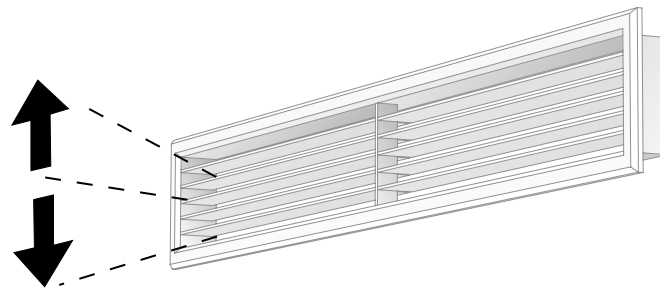


Figure 10. Vertical air distribution with adjustable louvers in the supply air grille.

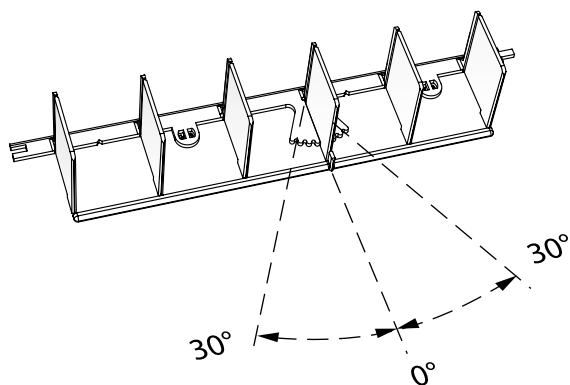


Figure 9. PARAGON ADC

## Control equipment

Occupancy in an office varies daily and also over the day. The room has different needs depending on both occupancy/non-occupancy, but also individual needs depending on the individual in the room. The best solution to ensure the highest possible comfort in the room is with the help of our WISE system, which delivers both energy and cost efficiently exactly as needed, no more and no less.

With the WISE system, the needs of the room are managed precisely according to presence and preferences. For example, when the occupancy sensor (or equivalent) is activated in the room, the air flow increases from the dimensioned non-occupancy flow to normal flow or maximum flow depending on the system settings.

The temperature is also adjusted to the selected comfort level by opening and closing the water valves. When the room is empty, the ventilation and temperature return to economic low flow. Based on the design set points, the user of the room can manually adjust the desired temperature.

WISE Paragon Wall is designed with demand-controlled ventilation, fully equipped with valves, actuators and control unit for wireless communications, for full integration with Swegon's WISE system. The product comes as standard with the WISE CU control unit, a motor for the integrated damper and actuators and valves on the water side. The product can also be delivered with additional, factory-fitted control equipment, such as WISE SMA Multi and WISE temperature sensor to support the WISE dew-point control function.



Figure 11. WISE Paragon Wall, complete with a factory-installed WISE CU control unit, actuators, and valves and valve actuators for cooling and heating water.



Figure 12. WISE Paragon Wall with water connection on the left-hand side. Complete product with factory-installed WISE CU control unit, actuators, and valves and valve actuators for cooling and heating water.



# Technical data

Cooling capacity total, max.	2682 W
Heating capacity, water, max.	4274 W
Air flow	0-85 l/s
	0-306 m <sup>3</sup> /h
Pressure range	20-200 Pa
Dimensions: Size 800, 1100, 1400	722 (+0-20)/286 mm

See the dimensional drawing for exact measurements

## Electrical data

Power supply:	24V AC $\pm 15\%$ 50 - 60Hz
Connections pipe dim.	
Power:	Screw terminal max. 2.5mm <sup>2</sup>
Valve actuator:	Push-in spring connection, max. 1.5 mm <sup>2</sup>
Max. power consumption:	See table below

WISE Paragon Wall in standard design:	VA / unit	Standard VA total
WISE CU	2.3	4.8
Damper motor (UM24)	2.5	

Option:	VA / unit		
	x 1	x 2	x 3
Valve actuator, ACTUATORc	6	12	18
WISE SMA Multi	0.8		
WISE SMB	0.6		

Example:

WISE Paragon Wall in standard version with the following options: Actuators for cooling and heating as well as WISE SMA Multi, gives a total power consumption of  $4.8 + 6 + 0.8 = 11.6$  VA

## Designations

P: Capacity (W, kW)

v: Velocity (m/s)

q: Flow (l/s)

p: Pressure, (Pa, kPa)

t<sub>r</sub>: Room temperature (°C)

t<sub>m</sub>: Mean water temperature (°C)

$\Delta T_m$ : Temperature difference [t<sub>r</sub>-t<sub>m</sub>] (K)

$\Delta T$ : Temperature difference, between inlet and return (K)

$\Delta T_i$ : Temperature difference, between room and supply air (K)

$\Delta p$ : Pressure drop (Pa, kPa)

k<sub>p</sub>: Pressure drop constant

Supplementary index:

k = cooling, l = air, v = heating, i = commissioning

## Recommended limit values, water

Max. recommended operating pressure (above coil only): 1600 kPa \*

Max. recommended test pressure (across coil only): 2400 kPa \*

\* Applicable without control equipment mounted

Max. recommended pressure drop across the CCO valve: 20 kPa

Max. recommended pressure drop across a standard valve: 20 kPa

Min. permissible heating water flow: 0.013 l/s

Max. permissible supply flow temperature: 60 °C

Min. permissible cooling water flow: 0.04 l/s

Lowest permissible supply flow temperature: Must always be sized so that the system works without condensation



# Sizing

## Easy and quick calculation of room products

Single Product Calculator "SPC" is a simple quick calculation for room products. Capacities, sounds, flows, isovels, etc. can be calculated and printouts can be made.

SPC is accessible from our product pages at [www.swegon.se](http://www.swegon.se) where there is a "Calculate" button. No login or software download needed, incredibly quick and easy!

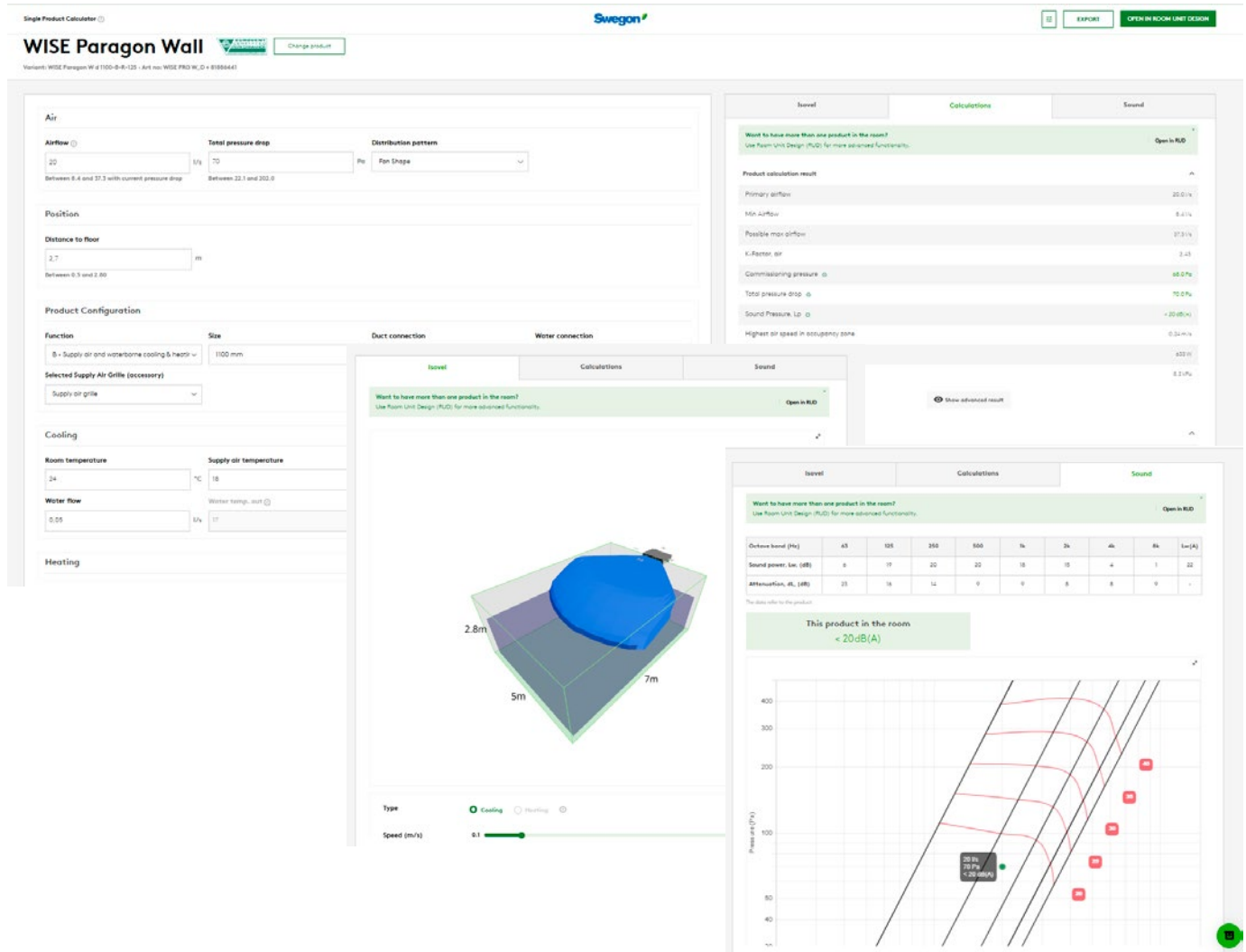


Figure 13. Calculations in SPC

## Cooling

### Cooling capacity

Table 1-2 shows the cooling capacities achieved from both the primary air and chilled water for various lengths of unit and air flows.

The total cooling capacity for one unit is the sum of the cooling capacity of the primary air and the chilled water.

**Table 2 – Cooling capacity, 70 Pa**

Length of the Unit	Air flow		Sound level 1)	Cooling capacity air (W) at $\Delta T$				Cooling capacity water (W) at $\Delta T_{mk}$ 2)							Pressure drop constant, air
	mm	l/s	m <sup>3</sup> /h	dB(A)	6	8	10	12	6	7	8	9	10	11	12
800	8.4	30.1	<20	60	80	100	120	214	250	285	320	356	391	427	1
800	16.7	60.2	<20	120	161	201	241	319	370	422	473	524	575	626	2
800	27.6	99.4	22	199	265	331	398	360	420	480	540	600	659	719	3.3
1100	8.4	30.1	<20	60	80	100	120	236	274	311	349	386	423	460	1
1100	25.1	90.4	<20	181	241	301	361	445	519	594	668	743	818	893	3
1100	39.3	141.6	27	283	378	472	566	512	599	687	774	862	949	1037	4.7
1400	8.4	30.1	<20	60	80	100	120	263	306	348	391	433	475	517	1
1400	25.1	90.4	<20	181	241	301	361	497	581	665	749	833	917	1002	3
1400	50.2	180.7	29	361	482	602	723	612	717	822	927	1033	1139	1245	6

**Table 2 – Cooling capacity, 100 Pa**

Length of the Unit	Air flow		Sound level 1)	Cooling capacity air (W) at $\Delta T$				Cooling capacity water (W) at $\Delta T_{mk}$ 2)							Pressure drop constant, air
	mm	l/s	m <sup>3</sup> /h	dB(A)	6	8	10	12	6	7	8	9	10	11	12
800	10	36	21	72	96	120	144	258	302	345	389	432	476	520	1
800	20	72	21	144	192	240	288	373	435	496	556	617	678	738	2
800	33	118.8	27	238	317	396	475	423	493	562	630	699	768	836	3.3
1100	10	36	21	72	96	120	144	297	344	390	437	483	529	574	1
1100	30	108	25	216	288	360	432	524	613	703	793	883	974	1064	3
1100	47	169.2	32	338	451	564	677	596	697	799	901	1003	1105	1207	4.7
1400	10	36	22	72	96	120	144	324	378	433	487	542	597	651	1
1400	30	108	24	216	288	360	432	585	684	784	883	983	1082	1182	3
1400	60	216	35	432	576	720	864	715	833	950	1068	1185	1302	1419	6

1) Room attenuation = 4 dB

2) The specified capacities are based on a complete unit including standard distribution and recirculation grille. Without grille the water capacity increases by approx. 5%. With ADC adjusted to Fan shape you lose approx. 5% in water capacity. The primary air capacity is not affected.

NOTE! The total cooling capacity is the sum of the airborne and waterborne cooling capacities.

## Heating

### Heating capacity

**Table 3 – Heating capacity, 70 Pa**

Length of the Unit	Air flow		Sound level 1)	Heating capacity water (W) at $\Delta T_{mk}$							Pressure drop constant, air
mm	l/s	m <sup>3</sup> /h	dB(A)	5	10	15	20	25	30	35	k
800	8,4	30,1	<20	100	196	302	412	524	636	751	1
800	16,7	60,2	<20	134	281	436	598	764	933	1104	2
800	27,6	99,4	22	145	299	461	626	794	964	1135	3,3
1100	8,4	30,1	<20	105	219	344	474	609	745	883	1
1100	25,1	90,4	<20	190	385	598	821	1044	1271	1504	3
1100	39,3	141,6	27	200	415	649	886	1132	1383	1637	4,7
1400	8,4	30,1	<20	140	297	458	624	792	963	1135	1
1400	25,1	90,4	<20	230	474	735	997	1262	1535	1787	3
1400	50,2	180,7	29	268	541	832	1128	1429	1738	2045	6

**Table 4 – Heating capacity, 100 Pa**

Length of the Unit	Air flow		Sound level 1)	Heating capacity water (W) at $\Delta T_{mv}$							Pressure drop constant, air
mm	l/s	m <sup>3</sup> /h	dB(A)	5	10	15	20	25	30	35	k
800	10,0	36,0	21	105	221	343	467	593	721	851	1
800	20,0	72,0	21	153	316	489	667	848	1036	1223	2
800	33,0	118,8	27	160	331	510	695	880	1071	1260	3,3
1100	10,0	36,0	21	120	255	400	547	700	854	1012	1
1100	30,0	108,0	25	204	431	672	919	1171	1427	1686	3
1100	47,0	169,2	32	220	464	723	996	1269	1553	1840	4,7
1400	10,0	36,0	22	165	341	530	719	916	1115	1313	1
1400	30,0	108,0	24	260	540	829	1123	1421	1722	2030	3
1400	60,0	216,0	35	290	597	922	1253	1589	1929	2272	6

1) Room attenuation = 4 dB

Water flow = 0,051 l/s, Room temperature = 20°C

# Installation

## Suspension

The WISE Paragon Wall has two holes on each short side for suspension and is mounted with a threaded rod in each hole.

For installation use the assembly fitting containing threaded rods, ceiling brackets and nuts to all four mounting brackets. Threaded rod length from 200 mm. In the event of large distances between ceiling and unit, double threaded rods with thread locks are used. Assembly fittings SYST MS M8 (Figure 15) are ordered separately.

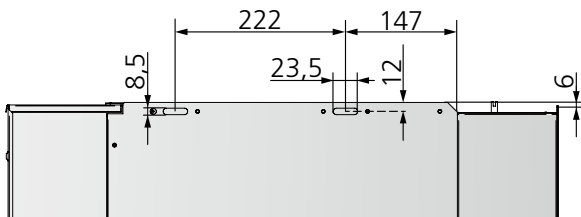


Figure 14. Dimensions suspension

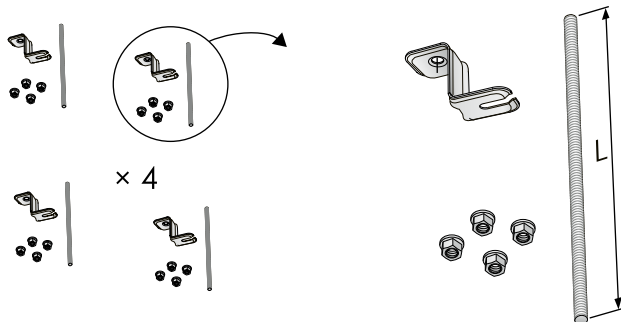


Figure 15. Assembly fitting SYST MS M8-1, ceiling mount and threaded rod

## Installation

The covering work can begin once the WISE Paragon Wall has been completely installed. The product is designed to be placed at the rear of the room adjacent to the corridor and installed in the space above the suspended ceiling in the corridor.

To simplify the work, cut-out dimensions are given in separate installation instructions at [www.swegon.com](http://www.swegon.com).

## Air connection

All variants have the air connection Ø125.

The standard variant has the air connection centred at the rear of the product for easy access from both ends and the rear and to avoid confusing the units logistically on site.

Back view

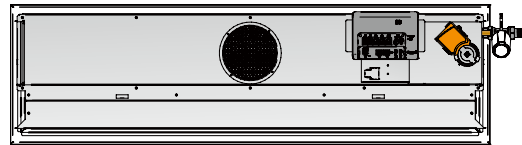


Figure 16. Centred air connection at the rear.

Connection - Water

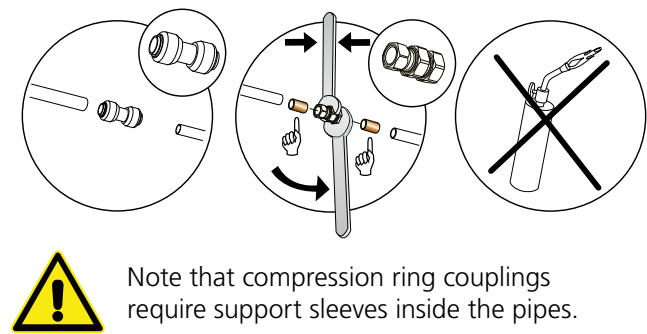
Connection sizes

Standard variant with factory-fitted valves:

Length	Cooling	Heating
(mm)	Return	Return
800, 1100, 1400	DN15 male thread	DN15 male thread

Standard variant without factory fitted valves:

Length	Cooling	Heating
(mm)	Supply and return	Supply and return
800, 1100, 1400	plain pipe ends	plain pipe ends
	(Cu) Ø 12 x 1.0 mm	(Cu) Ø 12 x 1.0 mm



Connection of water

The water pipes are placed on the left or right short side of the product depending on the choice made.

Connect the water pipes using push-on couplings or compression ring couplings when the product is ordered without valves.

Note that compression ring couplings require support sleeves inside the pipes.

Do not use solder couplings to connect the water pipes.

High temperatures can damage the unit's existing soldered joints.

Flexible connecting hoses for water are available for flat-end pipes and valves, and can be ordered separately.

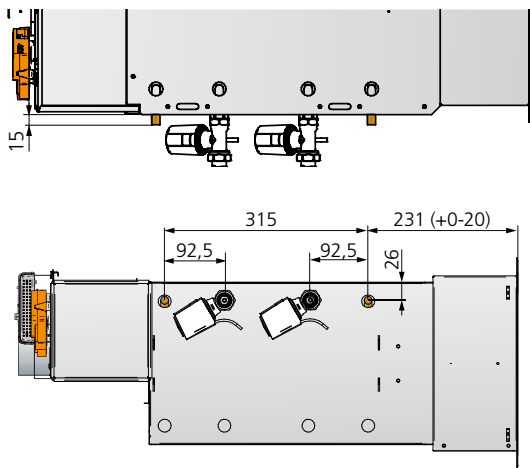
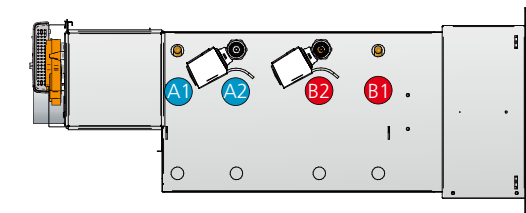


Figure 18. Dimensions water connection

Water connection on the right-hand side "R"

Cooling and heating R. all sizes



Cooling R, all sizes

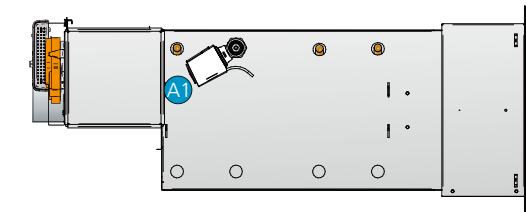
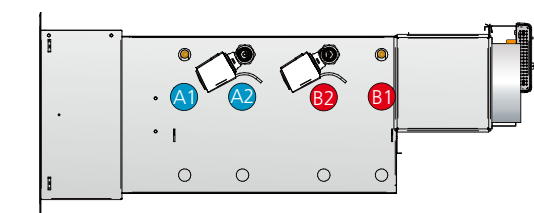


Figure 17. Water connection on right-hand side (R).

- A1 = Cooling water, supply
- A2 = Cooling water, return
- B1 = Heating water, supply
- B2 = Heating water, return

Water connection on the left-hand side "L"

Cooling and heating L. all sizes



Cooling L, all sizes

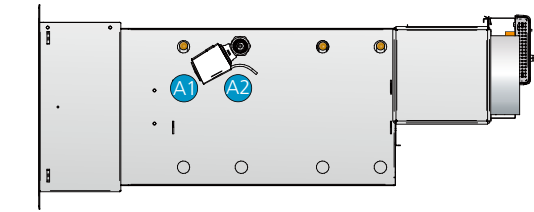


Figure 19. Water connection on left-hand side. (L).

- A1 = Cooling water, supply
- A2 = Cooling water, return
- B1 = Heating water, supply
- B2 = Heating water, return

# Accessories

## Factory-fitted optional extras

Factory-fitted control equipment makes the installation work simple. All components are accessible from the back of the product.

### A selection of our optional factory-fitted extras:

Module Controller	WISE Paragon CU
Actuator	WISE Paragon SA
Valve cooling	SYST VDN 215 Straight valve
Valve heating	SYST VDN 215 Straight valve
Valve actuator, cooling	ACTUATOR 24 V NC
Valve actuator, heating	ACTUATOR 24 V NC
Condensation sensor	CG IV
Air quality sensor	WISE SMA Multi
Temperature sensor	WISE TEMP SENSOR PT-1000

## Room accessories

Hand-held terminal, TuneWISE  
 Dongle for hand-held terminal, ConnectWISE USB  
 Scanner, Scanner TuneWISE  
 Temp. sensor (WISE DPS Modbus)  
 Set point selector switch with integrated temperature sensor, WISE RTA  
 Sensors (VOC, CO2, RH, Temp), WISE IAQ MULTI  
 Sensors (CO2, RH, Temp), WISE IAQ CO2  
 Sensors (VOC, RH, Temp), WISE IAQ VOC  
 Temperature sensor (IR) WISE IRT  
 Occupancy sensors (Occupancy, RH, Temp), WISE OCS  
 Window/door contact WISE WCS  
 Temperature sensor WISE RTS  
 Sensor, Input radio extender for junction boxes, (analogue/digital) WISE IRE  
 Sensor for wall mounting, Input radio extender (analogue/digital) WISE IRE-W

## In addition to the factory-installed options, loose accessories and kits (not factory-fitted) are also available:

Kits and accessories are easily mounted during installation

## Loose kits and accessories

Valve cooling	VDN 215 Straight valve
Valve heating	VDN 215 Straight valve
Actuator cooling	ACTUATOR 24 V NC
Actuator heating	ACTUATOR 24 V NC
6-way valve, kit	CCO-KIT
Condensation sensor, kit	Condensation sensor, CG IV-KIT
Dew-point kit	Dew-point KIT WISE Paragon
Supply air/return air grille	PARAGON T-SG/RG
Grille lock	Paragon T- GL
Transformer	Power ADAPT 20 VA (ARV)
Transformer	SYST TS-1
Assembly piece	SYST MS M8
Flexible hoses	SYST FH
Venting nipple	SYST AR-12
Connection fitting, air – nipple	SYST AD1
Connection fitting, air – elbow	SYST CA
Supply air kit	Supply Air Kit 125
Return air kit	Extract Air Kit WISE-CRT-125
Return air kit	Extract Air Kit WISE-WD-125
ADC	ADC-2-105

# Accessories, factory-fitted

## Valve, cooling & heating, SYST VDN 215

Factory fitted valves for cooling and heating.

The valve is mounted on the product and preset fully open.

Function	Type	Dim.	K <sub>v</sub> (m <sup>3</sup> /h)
Cooling/heating	VDN215	DN15 (½")	0.07-0.89

For more information about the valve, see the separate product data sheet on [www.swegon.com](http://www.swegon.com).



## Actuator cooling & heating, ACTUATOR 24 V NC

Factory fitted valve actuators for cooling and heating.

24V AC/DC, NC (Normally Closed).

For more information about the actuator, see the separate product data sheet on [www.swegon.com](http://www.swegon.com).

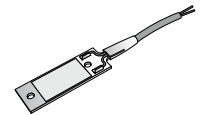


## Condensation sensor, CG IV

The condensation sensor is supplied fitted and connected from the factory. The actual sensor element consists of a circuit board with gold plated conductive paths that react when condensation occurs between these. When condensation arises, the cooling valve closes the incoming water flow to the product. When the condensation on the conductive paths has been wiped off, the cooling valve is permitted to open again.

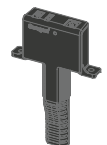
The sensor is positioned on the coil fins by the cooling supply.

For more information about the condensation sensor, see the separate product data sheet on [www.swegon.com](http://www.swegon.com).



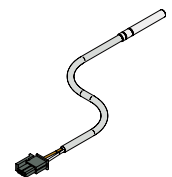
## The air quality sensor, WISE SMA Multi (Sensor Module Advanced)

WISE SMA Multi is a sensor that measures temperature, RH, CO2 and VOC. WISE SMA Multi can be factory fitted in climate products, dampers or air diffusers in the WISE system and which are equipped with a WISE CU. The unit is powered by a 5 V DC from WISE CU and communicates via Modbus with this.



## Temperature sensor, WISE TEMP SENSOR PT-1000

The PT-1000 sensor is mounted on the inlet pipe and connected to CU and measures the inlet temperature of water pipes to obtain the WISE dew-point control function. Please note that the WISE SMA Multi that measures RH and temperature is needed in combination with the PT-1000 sensor to achieve this function.

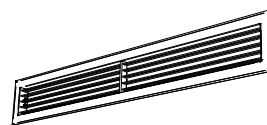




## Loose accessories

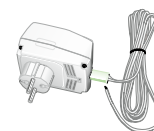
### Supply/extract air grille, PARAGON Wall SG/RG

Front grille for PARAGON Wall, available for products with the length, 800, 1100, 1400 mm



### Transformer, Power ADAPT 20 VA (ARV)

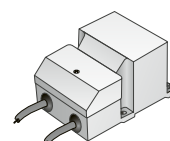
Input voltage 230 V, 50-60 Hz, Output voltage 24 V AC  
Power 20 VA, Enclosure IP33



### Transformer, SYST TS-1

Double-insulated protective transformer 230 V, AC/24 V AC  
Input voltage 230 V, 50-60 Hz, Output voltage 24 V AC,  
Power 20 VA, Enclosure IP33

For more information, see the separate product data sheet on [www.swegon.com](http://www.swegon.com).



### Dew-point kit, Dew-point KIT WISE PARAGON

Includes WISE temperature sensor PT-1000 and cable ties for retrofitting on incoming cooling pipe to achieve the dew-point control function.



### Condensation sensor, CG IV-KIT

The condensation sensor's sensor element consists of a circuit board with gold plated conductive paths that react when condensation occurs between these. When condensation arises, the cooling valve closes the incoming water flow to the product. When the condensation on the conductive paths has been wiped off, the cooling valve is permitted to open again.

Sensor is positioned on the coil fins by the cooling supply.

For more information about the condensation sensor, see the separate product data sheet on [www.swegon.com](http://www.swegon.com).



### Valve, SYST VDN215

Straight valves for cooling and heating.

VDN215 is preset fully open on  $K_v$  0.89.

For more information about the valve, see the separate product data sheet on [www.swegon.com](http://www.swegon.com).

Function	Type	Dim.	$K_v(m^3/h)$
Cooling/heating	VDN215	DN15 (1/2")	0.07-0.89



### Valve actuator, cooling & heating, ACTUATOR 24 V NC

Valve actuators for cooling and heating.

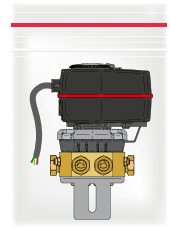
24V AC/DC, NC (Normally Closed).

For more information about the actuator, see the separate product data sheet on [www.swegon.com](http://www.swegon.com).



### 6-way valve, CCO-KIT

Compact Change Over valve, for maximum utilisation of the coil.



### Grille lock, PARAGON VAV T- GL

Grille lock for fixing the position of the supply air grille.



### Assembly fitting, SYST MS M8

For installation use the assembly fitting containing threaded rods, ceiling brackets and nuts to all four mounting brackets. Threaded rod length from 200 mm. In the event of large distances between ceiling and unit, double threaded rods with thread locks are used.



### Flexible connection hoses, SYST FH

Flexible hoses are available with quick-fit, push-on couplings as well as clamping ring couplings for quick and simply connection. The hoses are also available in various lengths. Note that compression ring couplings require support sleeves inside the pipes.

Flexible hoses also reduce the risk of movement in the piping system due to thermal expansion.

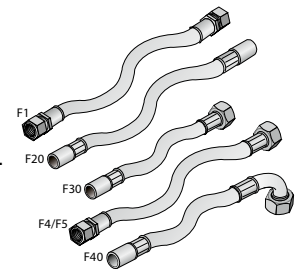
F1 = Clamping ring couplings at both ends.

F20 = Push-on couplings at both ends.

F30 = Push-on coupling at one end and union nut G20ID at the other end.

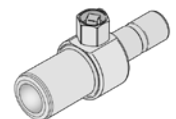
F4/F5 = Clamping ring coupling at one end and union nut with flat seal at the other end.

F40 = Push-on coupling at one end, union nut 90° at the other end.



### Venting nipple, SYST AR-12

A venting nipple is available as a complement to the flexible hoses with push-on couplings. The venting nipple fits directly in the push-on hose coupling and can be fitted in an instant.



## Connection piece, air – insertion joint, SYST AD1

SYST AD1 is used as a joint between PARAGON VAV and the duct system.  
Available in two sizes: Ø125 and Ø160 mm.



## Connection piece, air, SYST CA

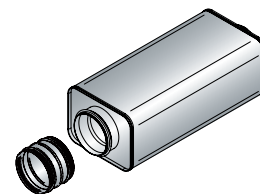
90° duct bend

Available in two sizes: Ø125 and Ø160 mm.



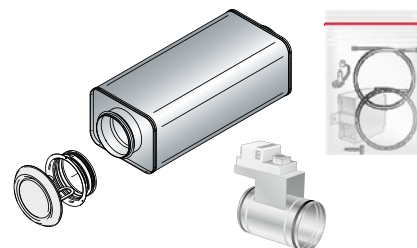
## Supply Air Kit 125

The supply air kit contains a sleeve and sound attenuator CLA, d=125 mm.



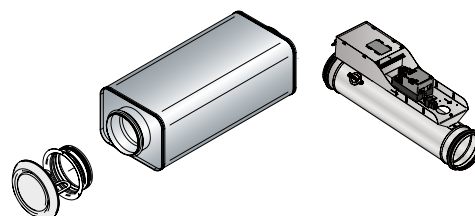
## Extract Air Kit WISE-CRT-125

Extract air kit adapted for WISE Paragon Wall.  
The kit includes sound attenuator CLA, d=125mm,  
CRT motorised damper 2-10 V and pressure sensor, 0.5 m hose,  
nipple and screw, control valve EXC



## Extract Air Kit WISE-WD-125

Extract air kit adapted for WISE Paragon Wall.  
The kit contains sound attenuator CLA, d=125 mm,  
WISE Damper, control valve EXC



# Dimensions and weights

## Weight

### WISE Paragon Wall 800

Length	Type	Dim.	Dry weight* (kg)		Water volume (l)	
mm		Ø	Without grille	incl. grille	cooling	heating
800 R	A	125	17.4	19.6	1.39	
800 L	A	125	17.4	19.6	1.38	
800 R	B	125	17.4	19.6	1.39	0.38
800 L	B	125	17.4	19.6	1.38	0.37
800 R	X	125	17.4	19.6	1.39	
800 L	X	125	17.4	19.6	1.38	

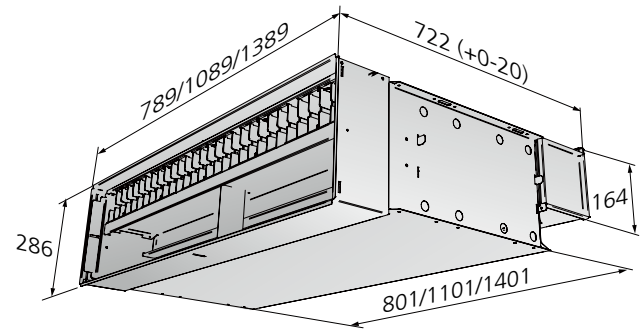


Figure 20. Dimensional drawing without grille

### WISE Paragon Wall 1100

Length	Type	Dim.	Dry weight* (kg)		Water volume (l)	
mm		Ø	Without grille	incl. grille	cooling	heating
1100 R	A	125	22.6	25.5	1.93	
1100 L	A	125	22.6	25.5	1.92	
1100 R	B	125	22.6	25.5	1.93	0.52
1100 L	B	125	22.6	25.5	1.92	0.51
1100 R	X	125	22.6	25.5	1.93	
1100 L	X	125	22.6	25.5	1.92	

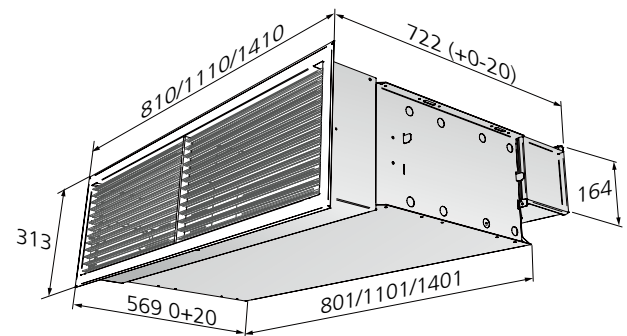


Figure 21. Dimensional drawing with grille

### WISE Paragon Wall 1400

Length	Type	Dim.	Dry weight* (kg)		Water volume (l)	
mm		Ø	Without grille	Incl. grille	cooling	heating
1400 R	A	125	27.6	31.2	2.47	
1400 L	A	125	27.6	31.2	2.46	
1400 R	B	125	27.6	31.2	2.47	0.65
1400 L	B	125	27.6	31.2	2.46	0.64
1400 R	X	125	27.6	31.2	2.47	
1400 L	X	125	27.6	31.2	2.46	

\*Added weight for air diffuser: 0.26 kg

# Specification

## Specification

WISE Paragon Wall for cooling, heating and ventilation with built-in control equipment for integration into the WISE system. As standard, factory fitted components are included for plug & play installation.

## Delivery demarcation

Swegon's limits of supply are at the connection points for water.

At these connection points, the RE pipework contractor connects to plain pipe end and/or male threads towards valves, fills the system, bleeds it and tests the pressure in the circuits.

The ventilation contractor connects to the duct connections with dimensions as specified on the basic size drawing in the section "Dimensions".

EE electrical equipment contractor provides a 24 V AC network power supply or earthed 230 V outlets for a transformer, as well as a junction box, if required, installed in a wall for a room thermostat.

The building contractor cuts the openings in corridor wall for the supply air duct, in the interior wall and suspended ceiling for the supply air and extract air grilles and in the bathroom ceiling for the extract air duct.

The electrical contractor connects the power (24V) and signal cables to the connection terminals with spring-loaded snap-in connections.

Maximum cable cross section 2.5 mm<sup>2</sup>. For safe operation, we recommend cable ends with ferrules.

## Maintenance

Ideally the product should be cleaned twice a year by vacuuming the coil to remove loose dust.

In fibre-dense environments, an initial cleaning is recommended, about three months after use. Thereafter, cleaning is recommended at an interval of one to two times per year. A simple visual inspection of connections is recommended when cleaning.

Avoid aggressive cleaning agents which may harm painted surfaces. Normally a mild soap or alcohol solution is fully adequate for cleaning. Also see the maintenance section in the product's instructions.

## Ordering key

WISE Paragon Wall	d	aaaa-	b-	c-	125
Version:					
Length (mm)					
800, 1100 and 1400					
Function:					
A = Cooling					
B = Cooling and heating (water)					
Connection side - water (seen from the back of the product)					
R - Right					
L - Left					
Air connection					
Ø125					

## Factory-fitted optional extras

Factory-fitted control equipment makes the installation work simple.

### Our optional factory-fitted extras:

Control unit	WISE Paragon CU
Actuator	WISE Paragon SA
Valve cooling	VDN215 Straight valve
Valve heating	VDN215 Straight valve
Valve actuator, cooling	ACTUATOR 24 V NC
Valve actuator, heating	ACTUATOR 24 V NC
Condensation sensor	CG IV
Air quality sensor	WISE SMA Multi
Temperature sensor	WISE TEMP SENSOR PT-1000

## Available to order, kit and accessories

**In addition to the factory-installed options, loose accessories and kits (not factory-fitted) are also available:**

Kits and accessories are easily mounted during installation

### Loose accessories

Valve cooling	VDN 215 Straight valve
Valve heating	VDN 215 Straight valve
Actuator cooling	ACTUATOR 24 V NC
Actuator heating	ACTUATOR 24 V NC
6-way valve, kit	CCO-KIT
Condensation sensor, kit	Condensation sensor, CG IV-KIT
Dew-point kit	Dew-point KIT WISE Paragon
Supply/return air grille	PARAGON T-SG/RG
Grille lock	Paragon T- GL
Transformer	Power ADAPT 20 VA (ARV)
Transformer	SYST TS-1
Card switch	SYST SENSO II
Assembly piece	SYST MS M8
Flexible hoses	SYST FH
Venting nipple	SYST AR-12
Connection fitting, air – nipple	SYST AD1
Connection fitting, air – elbow	SYST CA
Supply air kit	Supply Air Kit 125
Return air kit	Extract Air Kit WISE-CRT-125
"	Extract Air Kit WISE-WD-125
ADC	ADC-2-105

## Ordering Key, Accessories

Supply/return air grille	PARAGON d T-	SG/RG	bbbb
Type:			
SG/RG = Supply/return air grille			
Length of the product (mm): 800, 1100, 1400			

Assembly fitting	SYST MS M8	aaaa-	b
Length threaded rod (mm):			
200; 500; 1000			
Type:			
1=One threaded rod			
2=Two threaded rods and one thread lock			

Flexible connection hose, (x1)	SYST FH F1-	aaa-	12
Compression ring (Ø12 mm) against pipe at both ends (excl. support sleeves)			
Length (mm):			
300, 500, 700			

Flexible connection hose, (x1)	SYST FH F20-	aaa-	12
Quick-connector push-on (Ø12 mm) against pipe at both ends			
Length (mm):			
275, 475, 675			

Flexible connection hose, (x1)	SYST FH F30-	aaa-	12
Quick-fit coupling, push-on (12 mm dia.) against pipe on one end, G20ID sleeve nut on the other end.			
Length (mm):			
200, 400, 600			

## Room accessories

- Hand-held terminal, TuneWISE, xx items
- Dongle for hand-held terminal, ConnectWISE USB, xx items
- Scanner, Scanner TuneWISE xx items
- Temp. sensor (WISE DPS Modbus)
- Setpoint selector switch with integrated temperature sensor, WISE RTA, xx items
- Sensor (VOC, CO<sub>2</sub>, RH, Temp), WISE IAQ MULTI, xx items
- Sensor (CO<sub>2</sub>, RH, Temp), WISE IAQ CO<sub>2</sub>, xx items
- Sensor (VOC, RH, Temp), WISE IAQ VOC, xx items
- Temperature sensor (IR) WISE IRT, xx items
- Occupancy sensor (Occupancy, RH, Temp), WISE OCS, xx items
- Window/door contact WISE WCS, xx items
- Temperature sensor WISE RTS, xx items
- Sensor, Input radio extender for junction boxes, (analogue/digital) WISE IRE, xx items
- Sensor for wall mounting, Input radio extender (analogue/digital) WISE IRE-W, xx items

## Product accessories

- Dew-point kit, Dew-point KIT WISE Paragon, xx items
- Condensation sensor KIT for retrofitting, CG IV-KIT, xx items
- ADC for subsequent installation, SYST ADC-2-105, xx items
- Valve actuator, ACTUATORc 24 V NC, xx items
- Valve straight, SYST VDN 215/VDN220, xx items
- Supply/return air grille, PARAGON T-SG/RG aaaa, xx items

## Accessory kits:

- Controller KIT WISE PARAGON CU xx items
- Actuator motor KIT WISE PARAGON SA xx items
- Condensation sensor kit, Condensation sensor CG IV-KIT
- 6-way valve, kit, CCO-kit xx items
- Supply Air Kit 125 xx items
- Extract Air Kit WISE-CRT-125 xx items
- Extract Air Kit WISE-WD-125 xx items

## Other accessories:

- Transformer, POWER Adapt 20 VA (ARV), xx items
- Transformer, SYST TS-1, xx items
- Assembly fitting, SYST MS M8 aaaa-b-cccc, xx items
- Venting nipple, push-on, SYST AR-12, xx items
- Connection piece, air – nipple, SYST AD1-aaa, xx items
- Connection piece, air (90°elbow), SYST CA-aaa-90, xx items
- Flexible connection hose, SYST FH F1 aaa- 12 xx pcs.
- Flexible connection hose, SYST FH F20 aaa- 12 xx pcs.
- Flexible connection hose, SYST FH F30 aaa- 12 xx pcs.
- Venting nipple, SYST AR 12 xx pcs.

etc.

Specify the quantities individually or with reference to the drawing.

## Specification text

Example of a specification text according to VVS AMA.

PCT.312 Duct connected chilled beams.

PTD.4 Duct connected room devices for heating and cooling.

KB XX

Comfort module WISE Paragon Wall with integrated supply air damper in the product for Swegon's WISE system. Designed for rear-edge mounting in the ceiling/wall with the following functions:

- Waterborne cooling
- Waterborne heating
- Ventilation
- Variable pressure-independent air flow regulation
- Wireless communication in Swegon's demand-controlled indoor climate system WISE
- Comfort guarantee ADC with adjustable function +-30 degrees
- Ø125 mm duct connection
- WISE Paragon Wall comfort module can be supplied with accessories to achieve the WISE dew-point control function from the factory.
- Mounted air quality sensor WISE SMA Multi that measures RH, Temp and VOC in the recirculation air
- Integrated circulating air opening in face plate
- Cleanable
- Fixed measurement tapping with hose
- Eurovent certified
- Grilles in standard colour RAL 9003

Contractor demarcation at connection point for water and air as in outline drawing.

- At the points of connection the pipe contractor connects to 12 mm plain pipe end after which the ventilation contractor connects the Ø125 mm insertion piece (sleeve).
- The pipe contractor fills, bleeds, tests the pressure and assumes responsibility for the design water flows reaching each branch of the system and the unit.
- The ventilation contractor conducts initial commissioning of the air flows