

WISE Parasol Zenith

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
- Complete product with flow control 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 or less.
- Highest possible comfort with provision for individual control on a product or room level
- Simple installation and connection to the WISE system
- Draught-free indoor climate, 4-way air distribution and Swegon's ADC (Anti Draught Control) provide maximum comfort and flexibility, both today and for future needs
- Large working range in one and the same product simplifies planning
- For suspended mounting, a design kit and a coanda frame are available as accessories

Variant		Supply air			Performance	
Size	Air connection	Pa*	l/s	m ³ /h	Total cooling capacity (W)**	Sound level (dB(A))
600	125	75	20	72	493	26
600	125	75	25	90	564	28
600	125	75	30	108	631	30
600	160	75	25	90	566	27
600	160	75	35	126	697	30
600	160	75	45	162	809	33
1200	125	75	25	90	882	26
1200	125	75	35	126	1077	28
1200	125	75	45	162	1218	30
1200	160	75	30	108	900	23
1200	160	75	60	216	1375	28
1200	160	75	80	288	1591	34
1800	200	75	60	216	1590	30
1800	200	75	80	288	1890	33
1800	200	75	100	360	2135	35

*Total pressure duct (Pa)

**Air: $\Delta T_p=7K$ / Water: $\Delta T_{mk}=8.5K$, $t_{water}=14/17^\circ C$

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Technical description

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

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.

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.

Comfort module WISE Parasol Zenith

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

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

WISE Parasol Zenith is available as single, double and triple module units:

Sizes:	600x600; 600x1200; 600x1800
Modules:	Supply air and cooling Supply air, cooling and heating (water)
Installation:	Flush mounting for suspended ceilings

Accessories for suspended mounting

For suspended mounting, a design kit and a coanda frame are available as optional accessories if desired. The design kit and the coanda frame are available in three sizes – 600, 1200 and 1800 – and for air connection on all sides and for dimensions 125, 160 and 200. Both accessories can be ordered in Swegon's standard colours and be ordered individually.

Project design / Typical room

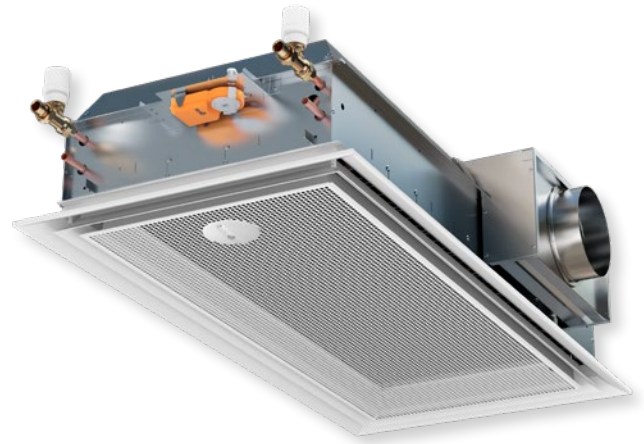
See the separate documentation "WISE System Guide", which is available for download via www.swegon.com.

Maintenance

The product does not require any maintenance/service, except for any cleaning when necessary. See the separate Instructions for Use, available on www.swegon.com.

Environment

The Building Materials Declaration is available from www.swegon.com.



Colour

The product, as well as the design kit and coanda frame, are painted as standard in our standard colour RAL 9003 signal white, gloss ratio 30 ± 6%.

The product, as well as the design kit and coanda frame, can also be ordered in the following colours.

- RAL 7037 dusty grey, gloss ratio 30-40%
- RAL 9010 pure white, gloss ratio 30-40%
- RAL 9005 jet black, gloss ratio 30-40%
- RAL 9006 white aluminium, gloss ratio 70-80%
- RAL 9007 grey aluminium, gloss ratio 70-80%

The product, as well as the design kit and coanda frame, can also be ordered in different colours.

Special types

On request, the product, as well as the design kit and coanda frame can also be obtained with e.g.:

- Optional colour or relief finish paint.
- Face plate with different perforation pattern

For further particulars about special types, get in touch with your nearest Swegon representative.

Compact plug & play unit

WISE Parabol Zenith 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.

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

WISE Parabol Zenith sends its values continuously to SuperWISE and you can see the current airflow 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.

WISE Parabol Zenith works individually and can be easily allocated new functions and setpoint values to realise the demanded room functions or if new functions are required then these can be easily introduced via our new software WISE Design and our 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 an open-plan office to individual offices.

Also see the WISE System Guide on www.swegon.com

WISE Parabol Zenith equipped as standard with the following components:

- WISE CU with built-in pressure sensor and 2 inputs for WISE sensors which communicate over Modbus, it also features a general Modbus input/output. You can also connect sensors for the function, WISE dewpoint monitoring.
- Motor for regulation 0-10 V of the internal damper.
- Temperature sensor for measuring supply air.

Factory fitted components as an option:

- Air quality sensor WISE SMA Multi which measures temperature, RH, VOC and CO₂.
- Presence sensor WISE SMB measures temperature and detects occupancy.
- Condensation sensor CG-IV
- WISE dew point regulation
- Valves and actuator

Loose accessory kit:

There are also several accessory kits for retro-fitting if you should wish to expand your WISE Parabol Zenith with additional functions. (See page 25)

- WISE SMA Multi kit
- WISE CG-IV-kit
- WISE dew point regulation
- WISE face plate with SMB

Factory fitted components

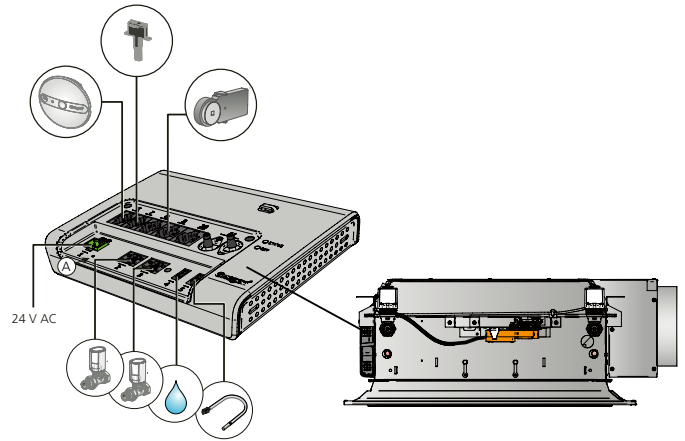


Figure 1. Components that are factory fitted on WISE Parabol Zenith
A: Commissioning button

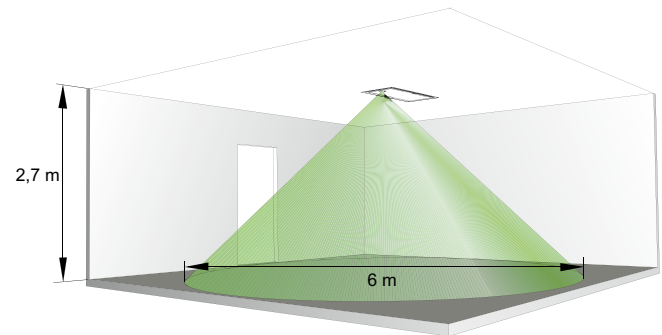


Figure 2. Detection range



Figure 3. WISE Parabol Zenith with the air connection on side 4 and the control equipment installed.

Unique control functions

WISE Parasol Zenith offers Swegon's integrated Flow control, both measuring and regulating the airflow in real-time.

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.

Easy to install

WISE Parasol Zenith's small compact units fit most common modular dimensions making it easy to install. The small dimensions result in simpler handling, especially in when handling the products on the site, which gives less handling damage and a better working environment.

Market-based module dimensions

The order range includes module dimensions to fit the standardised ceiling measurement c-c 600, 625 and 675 mm. In addition, there is a mounting frame for drywall ceilings and ceiling solutions of the clip-in-type.

High capacity

WISE Parasol Zenith with its high capacity, occupies 40-50% less roof space to handle the cooling requirement in a normal office, compared with a traditional climate beam.

Range of application

WISE Parasol Zenith is especially suitable for use in the following premises:

- Conference rooms with a need of demand controlled regulation and normal to high cooling load. There are demands on occupancy control to save energy when the room is vacant. The users must be able to influence and regulate the room temperature for the best comfort.
- Offices with a need of demand controlled regulation and normal to high cooling load. There are demands on occupancy control to save energy when the user is not in the room during the day and after office hours. The user must be able to influence and regulate the room temperature for the best comfort.

WISE Parasol Zenith is also well suited for use in other premises such as:

- Classrooms
- Hotels
- Restaurants
- Hospitals
- Shops
- Shopping centres

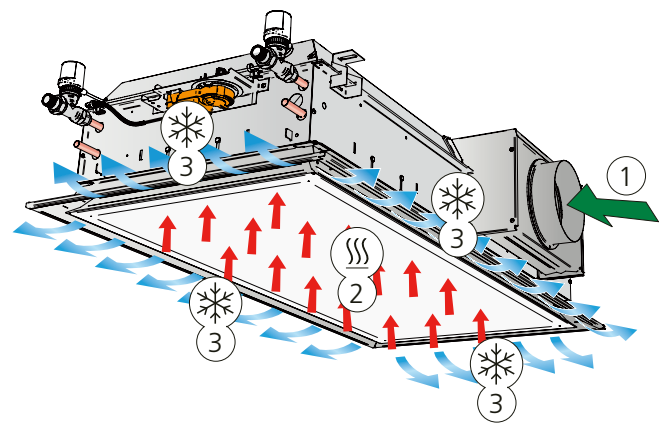


Figure 4. Variant A: Cooling and supply air function
 1 = Primary air
 2 = Induced room air
 3 = Primary air mixed with chilled room air

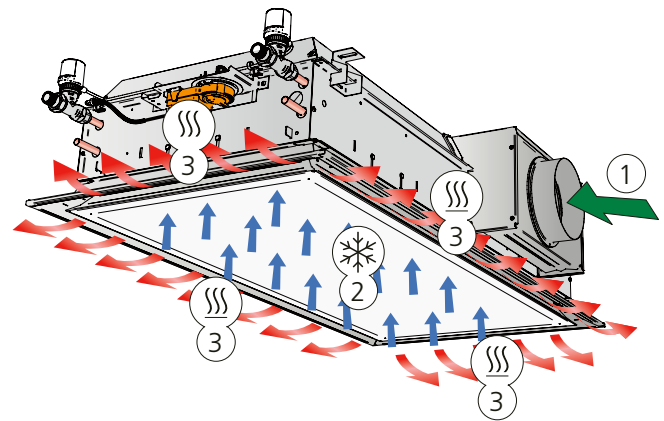


Figure 5. Variant B: Heating and supply air function (also including cooling function)
 1 = Primary air
 2 = Induced room air
 3 = Primary air mixed with heated room air

Induction principle

Primary air (A) from the air handling unit provides WISE Parasol Zenith with supply air via a supply air duct and builds up positive pressure in the unit's plenary.

The supply air is forced out at high speed through small slots (B). The high speed means that the surrounding air is drawn in and mixed with supply air, which generates negative pressure above the unit's integrated heat exchanger (C). Room air (D) is continuously drawn up from the room through the water-based heat exchanger where, if necessary, it is cooled or heated before it mixes with the supply air.

The mixed air is then distributed to the room via aerodynamically designed outlets. The outlets are designed to ensure that the distributed air follows the suspended ceiling by utilising the so-called Coanda effect (E). The supplied air is then mixed with additional room air, which further lowers the air velocity and lessening the temperature difference before it reaches the occupied zone.

The proportion of recirculated room air drawn through the heat exchanger is typically about 3-5 times the proportion of primary air, i.e. if 20 l/s supply air comes from the air handling unit, then approximately 60-100 l/s room air will pass through the exchanger and be tempered.

Condensation-free cooling

WISE Parasol Zenith has been developed to work condensation-free and therefore requires no drainage system or filter. Normally inlet temperatures between 14-16 °C are used for the cooling water.

High comfort – today and tomorrow.

A good indoor climate is characterized by good air quality and the correct room temperature without draughts and noise. Different requirements are made on air flow, cooling capacity and heating capacity depending on the type of building in question and how this will be used.

As greater demands are made on being able to offer customised office solutions and to easily change the floor layout for new or existing tenants if changed needs arise, it is important to take this into consideration as early as the design phase. As this will minimise future costs for rebuilding. Regardless of the scenario, new WISE Parasol Zenith gives - through its simplicity in terms of air flow range, operation and commissioning - all the possibilities to find this flexible and optimal solution.

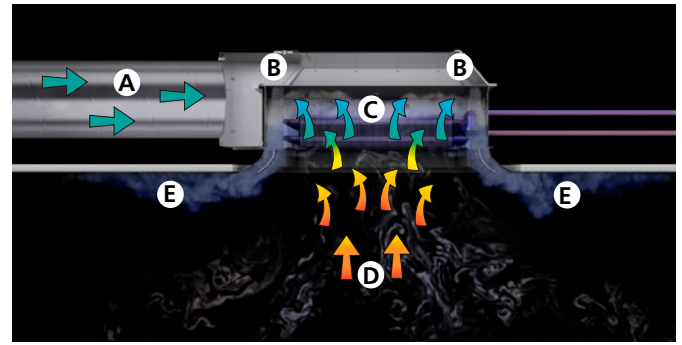


Figure 6. Induction principle in WISE Parasol Zenith

Large working range

The work area related to the smallest to the largest air flow in one and the same product is very large for WISE Parasol Zenith. In practice this means that one and the same product can handle a variety of room types, by being adjusted as required. The large work area is made possible by WISE Parasol Zenith being equipped with slots for versatile and easy air flow adjustment. This also gives the following advantages:

- Fewer product variants
- Products are easy to adjust during commissioning
- Simple commissioning

In order to clarify the large work area of WISE Parasol Zenith we can compare the curves for cooling capacity/ air flow with the cooling requirements for seven different types of rooms:

- A, B Individual office room (1 person)
- C, D Office for customer visits (3 people)
- E, F, G, H Conference room (4, 6, 8 and 12 people)

The individual office and the office for customer visits are assumed to be placed at the façade, while the conference room is assumed to be placed on the floor’s inner zone.

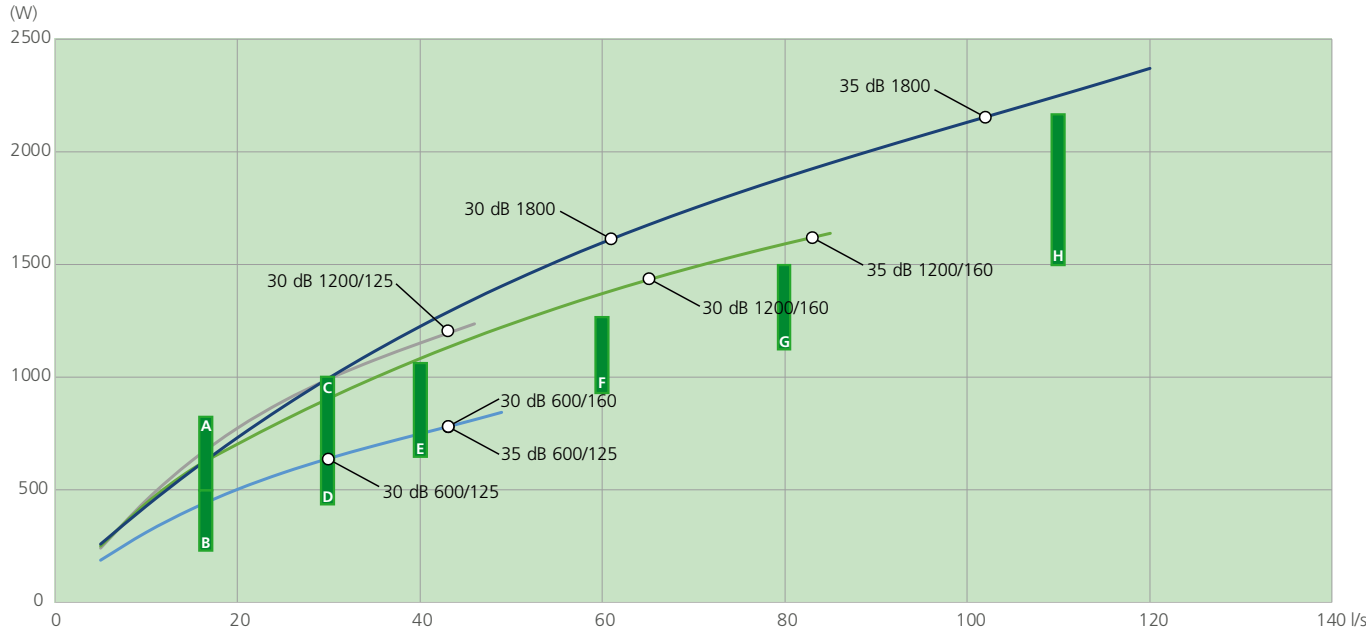
In diagram 1, we can clearly see that the same product can handle most types of rooms. All that is required is to adjust the size of the slot openings as needed.

You can also see that the products can give a higher cooling capacity than the demand. This allows several options:

- Use the full capacity to quickly correct the deviations in room temperature
- Lower the driving pressure in the supply air duct and save fan energy
- Increase the supply flow temperature of the cooling water and save energy (chiller)

Total cooling capacity, air and water

Diagram 1: Capacity range



A: Individual offices, south facing 12 m² 15 l/s 500-800 W cooling load	D: Individual office for customer visits, solar protection 12 m² 30 l/s 450-750 W cooling load	G: Conference room 12 m² 80 l/s 1150-1500 W cooling load
B: Individual office, solar protection 12 m² 15 l/s 250-500 W cooling load	E: Conference room 8 m² 40 l/s 700-1100 W cooling requirement	H: Conference room 18 m² 110 l/s 1500-2200 W cooling requirement
C: Individual offices for customer visits 12 m² 30 l/s 700-1000 W cooling load	F: Conference room 10 m² 60 l/s 900-1300 W cooling requirement	Prerequisites: Supply air: $\Delta P_s = 75 \text{ Pa}$; $\Delta T_s = 7\text{K}$ Cooling water $t_{in} = 14^\circ\text{C}$; $t_{out} = 17^\circ\text{C}$ Room: $t_{room} = 24^\circ\text{C}$

ADC

All the comfort modules are supplied with the ADC air deflector.

ADC stands for Anti Draught Control, which enables you to set the diffusion pattern of the air being distributed to avoid risk of draught. A number of ADC sections with four air deflectors per section are arranged on each side of the unit. Each section is adjustable from a straight setting to 40° air deflection to the right or left in increments of 10°. This provides great flexibility and can be easily adjusted without having to affect the system as a whole.

The ADC does not affect the sound level or static pressure at all. The water capacity is reduced by 5 - 10% if the ADC is adjusted to "fan-shape".

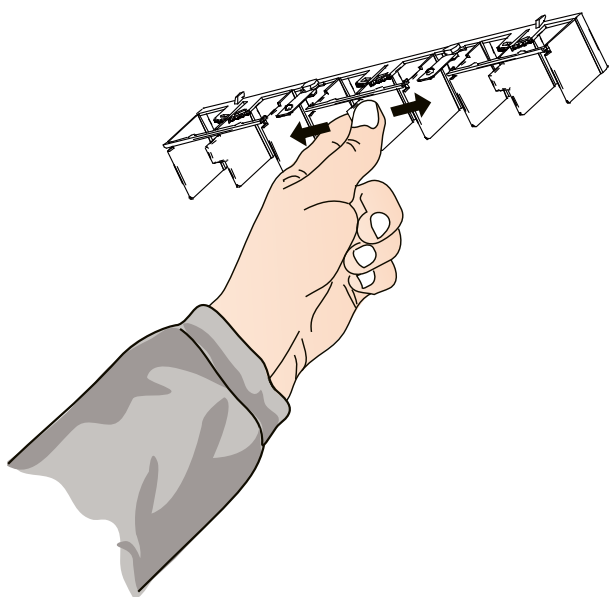


Figure 7. ADC, setting range from -40° to +40° in increments of 10°

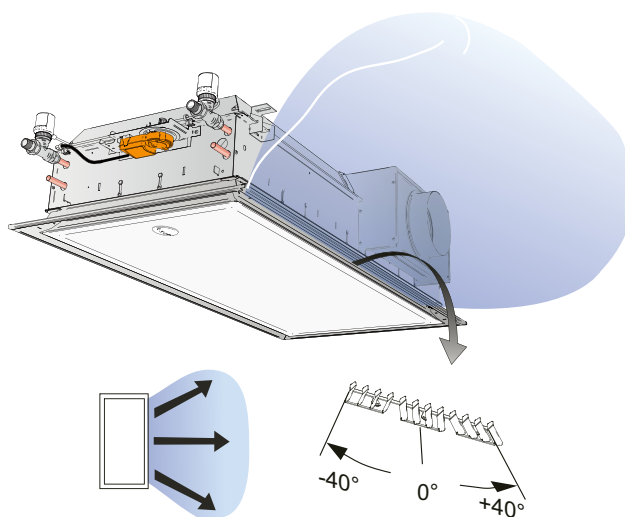


Figure 8. Possible settings for the ADC, Fan-shape

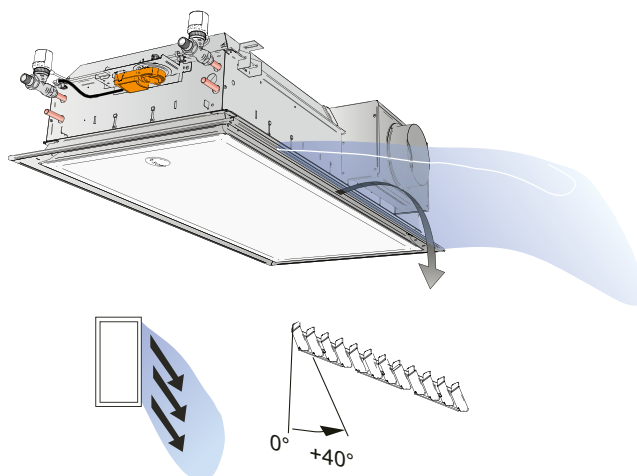


Figure 9. Possible settings for the ADC, X-shape

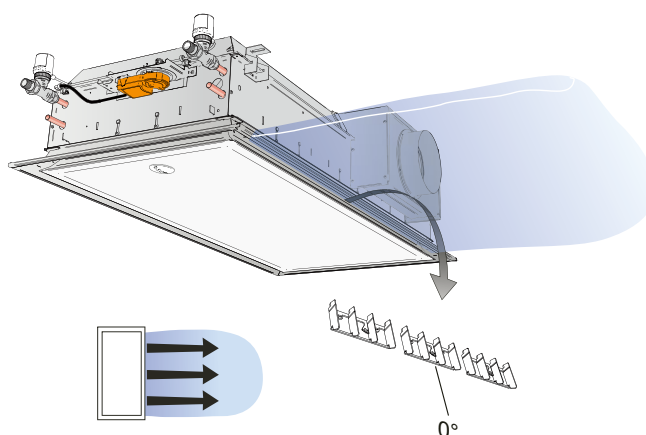


Figure 10. Setting options ADC, Straight setting

Easy installation

WISE Parasol Zenith is built on a platform with very compact dimensions. In many cases the design permits installation in the existing T-bar system without the need of dismantling, provided that there is at least 300 mm of space between the suspended ceiling and the joists.

The slim design and lightweight result in simpler handling, especially when handling the products on the site, which gives less handling damage and a better working environment. WISE Parasol Zenith's compact units fit most common modular dimensions and fit most suspended ceiling system on the market. As standard the units include four mounting brackets. These are adjustable +/- 20 mm in both directions and in doing so create the adjustment range normally required during installation.

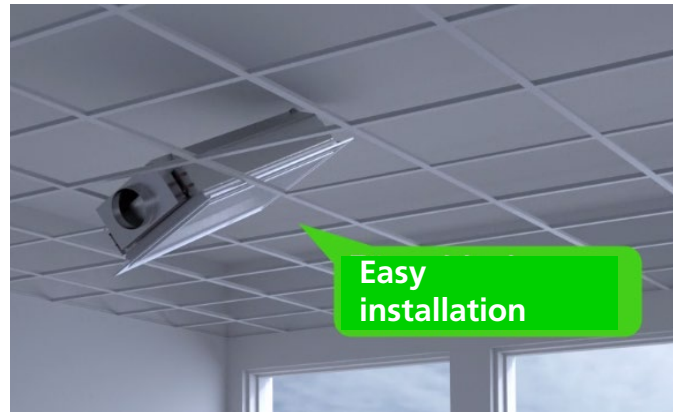


Figure 11. Installation in existing T-bar system

Hygienic design

WISE Parasol Zenith is available as a variant with a fold-out coil for easy access to the complete heat exchanger.

A dust-free environment is especially important in rooms with elevated hygiene demands. Over time large amounts of room air pass through WISE Parasol Zenith's coil (heat exchanger). Dust particles, which fasten on the coil, not only result in less capacity, but also fail to comply with the hygiene requirements that apply to the room. WISE Parasol Zenith has, as an option, the possibility of fold-out coils to meet these requirements.

In addition to normal cleaning, by wiping off dust from the white painted surfaces exactly as you clean other surfaces in the room, the option of more thorough cleaning is now possible.

1. It is recommended to vacuum clean the coil several times a year. More frequently in a room with a lot of textiles and a high rate of air change. The face plate is opened or dismantled to gain access to the coil, see figure 12.
2. In environments with elevated hygiene demands additional cleaning of the comfort module may be a requirement. The use of flexible connection hoses and the possibility to fold out the coil permits cleaning of the top of the coil in these instances, see figure 13.



Figure 12. Removing the face plate to access the coil



Figure 13. Removing the face plate and folding out the coil for accurate cleaning in the event of high hygiene requirements.

Note! requires the product to be ordered with the accessory, fold-out coil, and that flexible connection hoses are used on the water side.

Alternative air connections

To simplify the duct installation and reduce the number of duct bends gives several advantages. Installation time is shorter and the cost of materials decreases while the pressure drop and noise generation are also reduced.

Installations frequently appear as in figure 14. Straight ducts are of course always preferable.

Depending on the size, you can order PARASOL Zenith with air connections on any long or short side, see table and figures 15-16.

It's also possible to change the air connection side at a later date, see page 12 for more information.

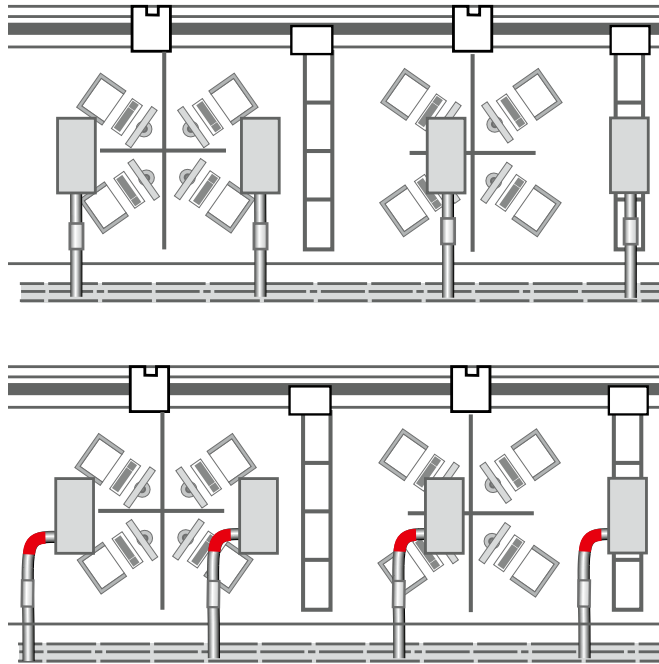


Figure 14. Installation example. Straight air connection, alternative with 90° bend.

Selectable air connection sides

When ordering, depending on the length, it is possible to choose connection side 1, 2, 3 or 4 as set out in the table below, also see figure 16.

Length	Air connection side			
	1	2	3	4
600	Yes	No	Yes	No
1200, 1800	Yes	Yes	Yes	Yes

Easily accessible water connections

The water pipes are very easily accessible, which facilitates connection, particularly if e.g. press couplings and associated tools are used.

This saves installation time and simplifies a safe water connection.

The pipes are placed in a standardised fashion, which means irrespective of product, the cooling/heating pipes are always positioned in the same way, which facilitates installation

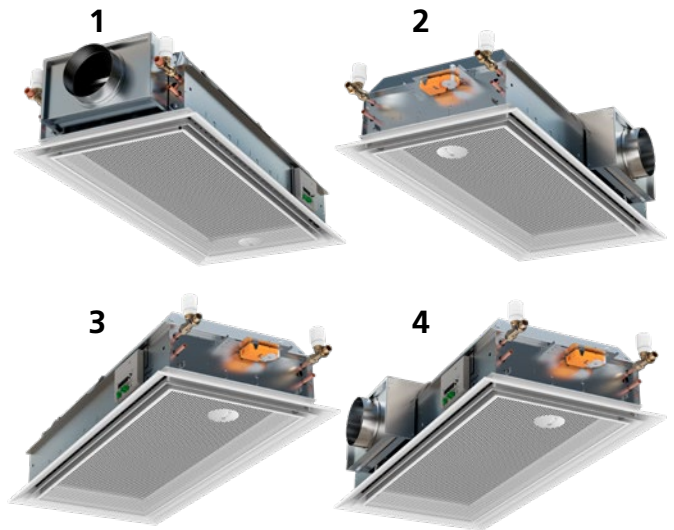


Figure 15. Air connection on side 1, 2, 3 and 4

Air connection	
Side 1	Side 2
Side 3	Side 4

Figure 16. Selectable air connection sides, (view from above).

Symbol key

- Water pipes
- Motor
- Control equipment WISE CU
- Air connection

Installation

Recommended ceiling types

WISE Parasol Zenith is designed for use in most T-bar and clip-in ceiling systems both in terms of length and width. In order to guarantee a good fit in T-bar systems, we recommend T sections with a width of 24 mm.

Suspension

WISE Parasol Zenith has four mounting brackets for suspension and are installed using one threaded drop rod in each mounting bracket (figure 17). A double threaded rod with a thread lock should be used if there is substantial distance between the overhead slab and the unit.

Threaded drop rods and assembly fitting SYST MS M8 (figure 18) are ordered separately.

Quick bracket

In order to facilitate suspension, there is also an accessory kit available consisting of 2 fixed brackets to suspend WISE Parasol Zenith.

The fixed brackets are fastened to the ceiling, after which the product can be pushed into place without the use of tools. The brackets also feature an integrated fine adjustment of approx. 50 mm in height.

Centring kit

The centring kit can ideally be used on the ceiling system such as FOCUS E, FOCUS D and similar ceilings with concealed T-bar system or shadow line.

The kit consists of 6 centring rails that are used to centre the product in specific suspended ceiling systems (figure 20).

Accessories for suspended mounting

For suspended mounting, a design cover and a coanda frame are available, if required (Figure 21).

- PARASOL Z DK (Design kit)
- PARASOL Z CF (Coanda frame)

PARASOL Z DK is available in the following variants:

- Sizes 600, 1200 and 1800
- Cooling and cooling/heating
- Air connection Ø120, Ø160 and Ø200
- Air connection on all four sides

PARASOL Z CF is available in the following variants:

- Sizes 600, 1200 and 1800

PARASOL Z DK and PARASOL Z CF can be ordered in Swegon's standard colours and be ordered individually.

For installation, see the installation instructions.

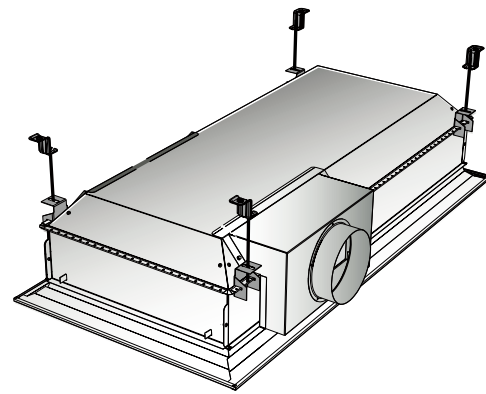


Figure 17. Suspension double-module units

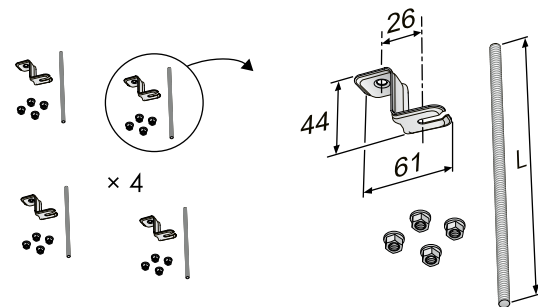


Figure 18. Assembly piece SYST MS M8-1, ceiling mount and threaded rod

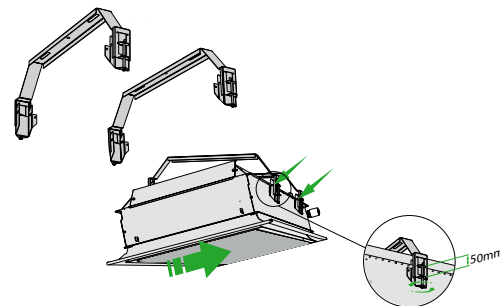


Figure 19. Installation with quick bracket PARASOL Z QUICK SUSPENSION KIT

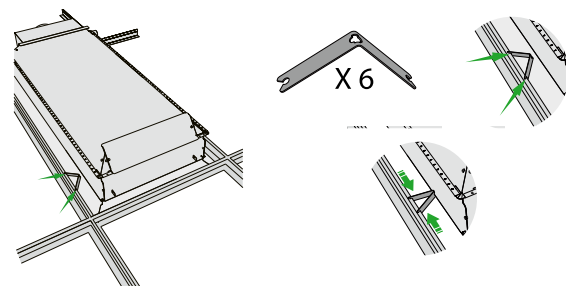


Figure 20. Centring kit SYST CENTRING KIT PARASOL

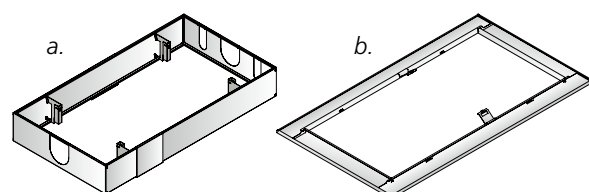


Figure 21. Design kit and coanda frame
a. PARASOL Z DK
b. PARASOL Z CF

Connections

Water

Connection sizes

With factory fitted valves:

Unit (mm)	Cooling Return	Heating Return
600, 1200	DN15 male thread	DN15 male thread
1800	DN20 male thread	DN15 male thread

With factory fitted valves:

Unit (mm)	Cooling Supply and return	Heating Supply and return
600, 1200	plain pipe ends (Cu) Ø 12 x 1.0 mm	plain pipe ends (Cu) Ø 12 x 1.0 mm
	plain pipe ends (Cu) Ø 15 x 1.0 mm	plain pipe ends (Cu) Ø 12 x 1.0 mm

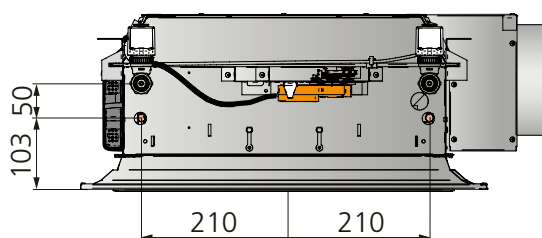


Figure 22. Dimensions, water connection length 600, 1200, 1800



Figure 23. Water connection - Length 600, 1200 and 1800*

- A1 = Supply cooling water Ø12x1.0 mm (Cu)
- A1 = Supply cooling water Ø15x1.0 mm (Cu) *(Size 1800)
- A2 = Return cooling water Ø12x1.0 mm (Cu)
- A2 = Return cooling water Ø15x1.0 mm (Cu) *(Size 1800)
- B1 = Supply heating water Ø12x1.0 mm (Cu)
- B2 = Return heating water Ø12x1.0 mm (Cu)

Connecting water

The water pipes are always placed on the product's short side, regardless of the air connection side of the product.

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.

Air

Unit (mm)	Air connection, diameter Ø		
	Ø 125	Ø 160	Ø 200
600, 1200	yes	yes	no
1800	no	no	yes

To connect the air

WISE Parasol Zenith comes with an open air connection on the selected side 1, 2, 3 or 4.

On delivery the sleeve faces inwards. During installation the sleeve is turned outwards and is secured with the enclosed screws to then be connected to the primary air duct.

If you subsequently want to change the air connection side than that ordered, you can change the positions of the cover and connection sleeve as set out below.

Possibility to change the connection side

- From side 1 to side 2 or 4. (Does not apply to length 600)
- From side 2 to side 3 or 4.
- From side 3 to side 2 or 4. (Does not apply to length 600)
- From side 4 to side 2 or 3.

WISE Parasol Zenith with bend

We recommend a straight section of at least 1xØ for the product's built-in airflow measurement to function correctly and 3xØ to maintain the tolerances specified in the table on page 13.

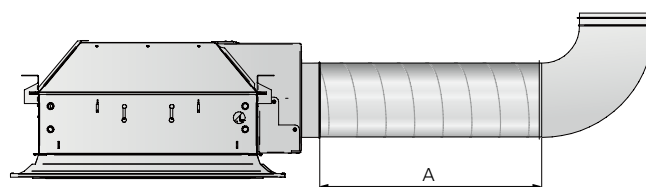


Figure 24. Dimensional drawing, long side connection with bend

Recommendations for accurate flow measurement

Air connection size (mm)	A (mm)
125	375
160	480
200	600

Control equipment

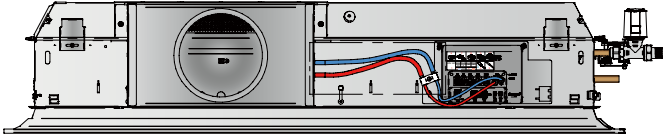
Factory mounted control equipment is connected to WISE CU.

Any other control equipment is connected in to WISE CU according to the label and wiring diagram in the enclosed Instructions for Use.

Flow Control

Check measure

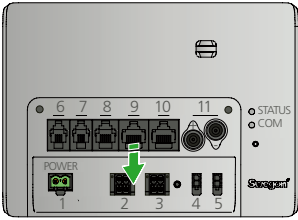
1. Disconnect the RJ45 from the regulator, which comes from the damper actuator.
2. Carefully disconnect the pressure hoses from the measuring probe that is mounted in the couplings before the regulator.
3. Measure the differential pressure.
4. Calculate the airflow using the formula $q = k \cdot \sqrt{\Delta p}$.
5. Reconnect the pressure hoses to the couplings (ensure the hoses are connected to the correct ports).
6. Reconnect the RJ45 plug from the damper actuator to the regulator.



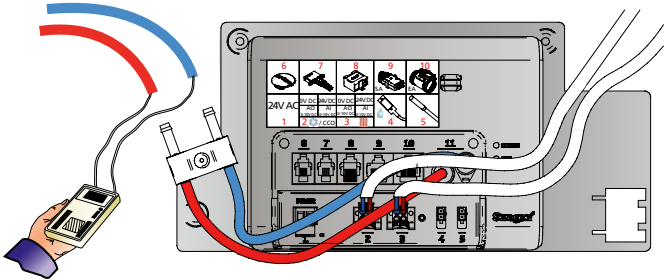
Flow tolerance

Air connection ∅	Minimum flow **			Tolerance Q* ±5 % but at least ±x		
	l/s	m³/h	cfm	l/s	m³/h	cfm
125	5	18	10	2	7	4
160	10	36	21	2	7	4
200	15	54	32	2	7	4

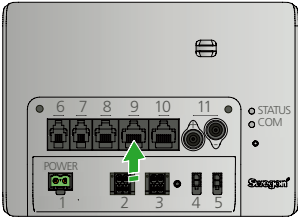
* Installed according to instructions
 ** For flows below the lowest specified level, we cannot guarantee the tolerances.



Disconnect the RJ45 from the regulator, which comes from the damper actuator.



Carefully disconnect the pressure hoses from the measuring probe that is mounted in the couplings before the regulator.
 Measure the differential pressure.
 Calculate the airflow using the formula $q = k \cdot \sqrt{\Delta p}$.
 Reconnect the pressure hoses to the couplings (ensure the hoses are connected to the correct ports).



Reconnect the RJ45 plug from the damper actuator to the regulator.

Technical data

Total cooling capacity, max.	2055 W
Heating capacity, water, max.	2700 W
Air flow	
Single module unit	7-49 l/s
Double module unit	7-85 l/s
Triple module unit	7-110 l/s
Length	
Single-module unit	584; 592; 598; 617; 623; 642; 667 mm
Double module unit	1184; 1192; 1198; 1242; 1248; 1292; 1342 mm
Three-module unit	1784; 1792; 1798; 1842 1848; 1892; 1942 mm
Width	
	584; 592; 598; 617; 623; 642; 667 mm
Height	
Unit 600 ø125	220 mm
Unit 600 ø160	250 mm
Unit 1200 ø125	220 mm
Unit 1200 ø160	250 mm
Unit 1800 ø200	290 mm

Dimensions of the units have a tolerance of (±2) mm.

Electrical data

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

WISE Parasol Zenith 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	0.8		
WISE SMB	0.6		

Example:

WISE Parasol Zenith in standard design with the following options: Actuator for cooling and heating as well as WISE SMA, gives a total power consumption of $4.8 + 6 + 0.8 = 11.6$ VA

*Valid for products with CU ver. 2, delivered from 01/10/2019

Recommended limit values

Pressure levels

Coil working pressure, max.	1600 kPa *
Coil test pressure, max.	2400 kPa *

* Applicable without control equipment mounted

Nozzle pressure

Recommended lowest nozzle pressure, cooling	Air flow (l/s)	Nozzle pressure (pa)
	<10	50
	10-30	25
	>30	20

Recommended lowest nozzle pressure if coil heat is used. 70 Pa

Water flow

Ensures evacuation of any air pockets in the system.

Cooling water, min.	0.030 l/s
Heating water (1200), min.	0.013 l/s

Temperature differentials

Cooling water, temperature increase	2-5 K
Heating water, drop in temperature	4-10 K

Temperature differences are always expressed in Kelvin (K).

Supply flow temperature

Cooling water	**
Heating water, max.	60 °C

** Cooling water must always be kept at a level that ensures that no condensation is formed.

Cooling

Standard

Cooling capacities are measured in conformity with EN 15116

Table 1. Cooling capacity for natural convection

Unit	Cooling capacity (W) for temperature difference, room - water ΔT_{mk} (K)						
(mm)	6	7	8	9	10	11	12
600	28	33	39	44	55	56	62
1200	69	83	97	111	125	141	155
1800	89	106	123	143	160	179	199

Table 2. Pressure drop constant - water, K_{pk}

Unit (mm)	Function, k_{pk} cooling	
	A2	B2
600*	0.0218	0.0246
1200*	0.0161	0.0180
1800**	0.0320	0.0341

A2 = Cooling and supply air, serial connected double row coil

B2 = Cooling, heating and supply air, serial connected double row coil

* K_{pk} -values for the water flow 0.05l/s.

** K_{pk} values for the water flow 0.10 l/s.

Table 3 – Data – Cooling. Sizing Guide for WISE Parasol Zenith at 75 Pa

Unit	Air flow		Sound level	Cooling capacity of primary air at ΔT_1 (K)				Cooling capacity, water at ΔT_{mk} (K)					Pressure drop constant, air	
	mm	l/s		m ³ /h	dB(A)	6	8	10	12	6	7	8		9
600 A Ø125	10	36	36	21	72	96	120	144	167	194	222	250	278	1.16
	20	72	72	26	144	192	240	288	227	265	303	341	379	2.34
	30	108	108	30	216	288	360	432	266	311	355	399	444	3.56
	40	144	144	33	288	384	480	576	290	339	387	435	484	4.86
	46	166	166	36	331	442	552	662	295	344	393	442	491	5.7
600 A Ø160	10	36	36	20	72	96	120	144	167	194	222	250	278	1.16
	20	72	72	25	144	192	240	288	229	267	305	343	381	2.32
	30	108	108	29	216	288	360	432	269	313	358	403	448	3.49
	40	144	144	32	288	384	480	576	296	345	394	443	493	4.69
	49	176	176	34	353	470	588	706	305	355	406	457	508	5.8
600 B Ø125	10	36	36	21	72	96	120	144	152	178	203	228	254	1.16
	20	72	72	26	144	192	240	288	202	235	269	303	336	2.34
	30	108	108	30	216	288	360	432	236	276	315	354	394	3.56
	40	144	144	33	288	384	480	576	254	296	338	380	423	4.86
	46	166	166	36	331	442	552	662	260	304	347	390	434	5.7
600 B Ø160	10	36	36	20	72	96	120	144	152	178	203	228	254	1.16
	20	72	72	25	144	192	240	288	203	236	270	304	338	2.32
	30	108	108	29	216	288	360	432	238	277	317	357	396	3.49
	40	144	144	32	288	384	480	576	259	302	345	388	431	4.69
	49	176	176	34	353	470	588	706	271	316	361	406	451	5.8
1200 A Ø125	10	36	36	<20	72	96	120	144	273	319	364	410	455	1.16
	20	72	72	25	144	192	240	288	415	484	553	622	691	2.34
	30	108	108	27	216	288	360	432	510	595	680	765	850	3.57
	40	144	144	29	288	384	480	576	571	666	761	856	951	4.89
	45	162	162	30	324	432	540	648	590	688	786	884	983	5.59
1200 A Ø160	10	36	36	<20	72	96	120	144	275	321	367	413	459	1.16
	25	90	90	23	180	240	300	360	419	489	559	629	699	2.90
	40	144	144	25	288	384	480	576	518	605	691	777	864	4.69
	60	216	216	28	432	576	720	864	616	718	821	924	1026	7.19
	86	310	310	36	619	826	1032	1238	654	763	872	981	1090	10.76
1200 B Ø125	10	36	36	<20	72	96	120	144	260	303	346	389	433	1.16
	20	72	72	25	144	192	240	288	380	444	507	570	634	2.34
	30	108	108	27	216	288	360	432	456	532	608	684	760	3.57
	40	144	144	29	288	384	480	576	509	594	679	764	849	4.89
	45	162	162	30	324	432	540	648	531	620	708	797	885	5.59
1200 B Ø160	10	36	36	<20	72	96	120	144	239	278	318	358	398	1.16
	25	90	90	23	180	240	300	360	389	453	518	583	648	2.90
	40	144	144	25	288	384	480	576	480	560	640	720	800	4.69
	60	216	216	28	432	576	720	864	566	661	755	849	944	7.19
	86	310	310	36	619	826	1032	1238	611	713	815	917	1019	10.76
1800 B Ø200	10	36	36	21	72	96	120	144	235	274	313	352	391	1.16
	40	144	144	29	288	384	480	576	609	711	812	914	1015	4.65
	60	216	216	30	432	576	720	864	761	888	1015	1142	1269	7.03
	80	288	288	33	576	768	960	1152	854	996	1138	1280	1423	9.48
	100	360	360	35	720	960	1200	1440	907	1058	1209	1360	1511	12.03
1800 B Ø200	10	36	36	21	72	96	120	144	229	267	305	343	381	1.16
	40	144	144	29	288	384	480	576	581	678	775	872	969	4.65
	60	216	216	30	432	576	720	864	710	828	946	1064	1183	7.03
	80	288	288	33	576	768	960	1152	790	921	1053	1185	1316	9.48
	100	360	360	35	720	960	1200	1440	844	984	1125	1266	1406	12.03

Locked ΔT 3K on the water side, temperature inlet flow +14°C, return flow +17°C.

The specified sound level applies to straight connection without damper or with fully open damper. Room attenuation = 4 dB

Heating

Heating function

As the comfort module is able to quickly mix the primary air with room the air, WISE Parasol Zenith is ideal to manage both cooling and heating. Heating spaces with air heated above room temperature discharged from the ceiling is a good alternative to conventional radiator heating solutions. The benefits achieved include lower installation costs, simpler installation and perimeter walls free from piping and radiators.

Regardless of the type of heating system installed it is important to consider the operative temperature in a room. Most people are comfortable when the operative temperature in winter is in between 20–24°C, and the optimal comfort requirements are normally met when the room temperature is 22 °C. This means that for a room with a cold perimeter wall, the air temperature must be higher than 22 °C to compensate for the chilling effect of the wall. In new buildings with normal insulated perimeter walls and normal standards of window glazing, the difference between the room air temperature and the operative temperature is small. But for older buildings with worse windows, it may be necessary to raise the air temperature to compensate for the chilling effect. Different operating scenarios can be simulated easily using the Swegon ESBO software to calculate the heat balance where both the room air temperature and operative temperature are specified.

Supplying heated air from the ceiling results in some stratification of the air. With a maximum supply flow temperature of 40 °C, the stratification is non-existent, while at 60 °C it can be around 4 K in the occupied zone. This only applies during the warming-up phase, when the room is unused and there is no internal load. When the room is being used and lighting and people are present, the stratification is reduced or disappears depending on the heating load.

When heating with WISE Parasol Zenith, use of an external temperature sensor or additional sensor module in the room is recommended.

Table 4. Pressure drop constant - water, K_{pv}

Unit (mm)	Function, K_{pv} heating*	
	A2	B2
600	-	0.0389
1200	-	0.0287
1800	-	0.0243

B2 = Cooling, heating and supply air, serial connected double row coil

** K_{pv} -values for the water flow 0.03l/s.*

Table 5 – data – heating. Sizing Guide for WISE Parasol Zenith at 75 Pa

Unit mm	Air flow		Sound level dB(A)	Heating capacity, water at ΔT_{mv} (K)						Pressure drop constant, air k_{pl}
	l/s	m ³ /h		10*	15	20	25	30	35	
600 B Ø125	10	36	21	145*	242*	345*	454*	567*	685*	1.16
	20	72	26	184*	304*	435*	518	649	786	2.34
	30	108	30	203*	339*	486*	582	732	888	3.56
	40	144	33	213*	357*	513*	616	775	942	4.86
	46	166	36	215*	361*	519*	624	787	956	5.7
600 B Ø160	10	36	20	145*	240*	345*	573*	568*	686*	1.16
	20	72	25	184*	305*	435*	520	650	787	2.32
	30	108	29	205*	340*	489*	584	735	890	3.49
	40	144	32	217*	362*	519*	622	783	950	4.69
	49	176	34	220*	369*	530*	636	802	974	5.8
1200 B Ø125	10	36	<20	346*	429*	637*	856*	1056*	1260*	1.16
	20	72	25	350*	498	755	1034	1342	1648	2.34
	30	108	27	408*	587	891	1220	1587	1905	3.57
	40	144	29	438*	629	947	1292	1665	1996	4.89
	45	162	30	453*	654	987	1379	1728	2074	5.59
1200 B Ø160	10	36	<20	165*	289*	422*	550*	683*	819*	1.16
	25	90	23	364*	520	780	1059	1389	1668	2.90
	40	144	25	440*	628	934	1265	1619	1941	4.69
	60	216	28	500*	716	1060	1457	1805	2162	7.19
	86	310	36	516*	743	1104	1512	1876	2251	10.76
1800 B Ø200	10	36	29	140*	235*	334*	374*	545*	655*	1.16
	40	144	30	560*	950	1372	1815	2135	2770	4.65
	60	216	31	654*	1105	1590	2100	2420	3200	7.03
	80	288	33	707*	1200	1730	2295	2610	3500	9.48
	100	360	35	773*	1297	1860	2460	2760	3730	12.03

Locked ΔT 10K on the water side, temperature rum +20°C

*) ΔT 5K on the water side

The specified sound level applies to straight connection without damper or with fully open damper. Room attenuation = 4 dB

Acoustics

Table 6. Cross-talk

Typical R_w values between offices with WISE Parasol Zenith where the partition wall finishes against the suspended ceiling (with good sealing properties). Assumes that the partition wall has at least the same R_w value as in the table.

Design	False ceiling	With WISE Parasol Zenith
	R_w (dB)	R_w (dB)
Light acoustic suspended ceiling. Mineral wool or perforated steel/ aluminium cassettes or screen.	28	28
Light acoustic suspended ceiling. Mineral wool or perforated steel/ aluminium cassettes or screen. The suspended ceiling is covered with 50 mm mineral wool*.	36	36
Light acoustic suspended ceiling. Mineral wool or perforated steel/ aluminium cassettes or screen. Upright 100 mm mineral wool slab used as acoustic insulation between the offices*.	36	36
Perforated plaster panels in T-bar system Acoustic insulation on the top side (25 mm).	36	36
Sealed plaster suspended ceiling with insulation on top side.	45	44

*Overview: Rockwool 70 kg/m, Gullfiber 50 kg/m.

Natural attenuation and end reflection

Natural attenuation ΔL (dB) including end reflection.

Table 7. Natural attenuation ΔL (dB)

WISE Parasol Zenith 600 Ø125

K-factor (COP)	Octave band (Hz)							
	63	125	250	500	1k	2k	4k	8k
0	20	19	16	16	13	15	20	26
1	19	16	8	6	7	8	12	19
3	19	15	7	6	6	7	10	16
4	19	14	7	6	6	6	9	15
5.8	17	14	7	5	6	5	9	14

Table 8. Natural attenuation ΔL (dB)

WISE Parasol Zenith 600 Ø160

K-factor (COP)	Octave band (Hz)							
	63	125	250	500	1k	2k	4k	8k
0	21	21	20	16	13	16	23	24
1	21	18	9	8	8	9	15	20
3	18	16	9	5	6	6	11	15
4	19	14	9	6	5	5	10	13
5.8	15	11	6	4	5	5	10	13

Table 9. Natural attenuation ΔL (dB)

WISE Parasol Zenith 1200 Ø125

K-factor (COP)	Octave band (Hz)							
	63	125	250	500	1k	2k	4k	8k
0	22	18	11	11	11	13	18	24
2	20	16	7	7	7	7	11	18
4	19	14	7	6	6	6	9	16
5.6	20	15	6	6	6	6	9	15

Table 10. Natural attenuation ΔL (dB)

WISE Parasol Zenith 1200 Ø160

K-factor (COP)	Octave band (Hz)							
	63	125	250	500	1k	2k	4k	8k
0	18	16	13	11	12	13	20	22
2	17	13	8	6	7	7	12	18
4	16	13	7	5	6	6	10	16
6	18	13	7	5	5	5	9	15
8	17	13	7	4	5	4	9	14
11	15	13	7	4	5	4	9	13

Table 11. Natural attenuation ΔL (dB)

WISE Parasol Zenith 1800 Ø200

K-factor (COP)	Octave band (Hz)							
	63	125	250	500	1k	2k	4k	8k
0	19	15	11	7	7	9	15	19
3	18	14	10	6	6	6	13	17
7	18	14	10	5	5	5	1	16
11	18	14	10	5	5	5	9	15
14.6	18	14	9	5	4	4	9	13

Accessories, factory-fitted

Air quality sensor, WISE SMA Multi (Sensor Module Advanced)

WISE SMA Multi is a sensor that measures temperature, RH, VOC and CO₂.

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.



Presence sensor, WISE SMB (Sensor Module Basic)

WISE SMB measures temperature and detects occupancy and indicates status via its LED.

WISE SMB can be factory fitted in air diffusers or climate products in the WISE system and which are equipped with a WISE CU.

The unit is powered by a 5V DC from WISE CU and communicates via Modbus with this.



Valve, cooling & heating

Factory fitted valves for cooling and heating.

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

Unit	Function	Type	Dim.	K _v (m ³ /h)
600, 1200	Cooling/ heating	VDN215	DN15 (½")	0.07-0.89
1800	Heating			
1800	Cooling	VDN220	DN20 (¾")	0.22-1.41



For more information about the valve, see the separate product data sheet on www.swegon.com.

Actuator, cooling & heating, ACTUATORc 24V 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.



Transformer, 30 VA

Transformer for the voltage supply of products.

Protective transformer with Euro plug or WAGO

Input voltage 230 V 50-60 Hz

Output voltage 24 V AC

Power 30 VA

Double insulation

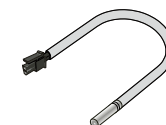
Enclosure IP33



WISE dewpoint monitoring

The PT1000 sensor measures the supply temperature on water pipes in order to give the function WISE dewpoint monitoring.

Note that other accessories that measure RH and temperature are needed in combination with the PT1000-sensor to realise this function.

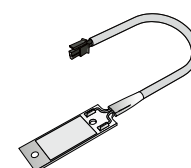


Condensation sensor, CG IV

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.

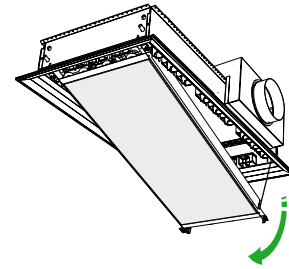


The aforementioned factory-fitted accessories, in addition to WISE SMA and WISE SMB, are available to order as loose items.

Fold-out coil

WISE Parasol Zenith can be ordered as a variant with fold-out coil for easy access and cleaning of the complete coil.

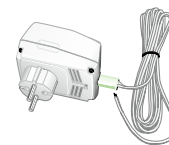
WISE Parasol Zenith with fold-out coil is well suited for use in rooms where stringent demands are made on hygiene. The accessory requires the use of flexible hose connections on the water side.



Loose accessories

Transformer, Power ADAPT 20 VA (ARV)

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



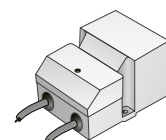
Transformer, 30 VA

Transformer for the voltage supply of products.
 Protective transformer with Euro plug or WAGO
 Input voltage 230 V 50-60 Hz
 Output voltage 24 V AC
 Power 30 VA
 Double insulation
 Enclosure IP33



Transformer, SYST TS-1

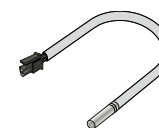
Double-insulated protective transformer 230 V, AC/24 V AC
 Input voltage 230 V, 50-60 Hz
 Output voltage 24 V AC,
 Power 72 VA,
 Enclosure IP33



For more information, see the separate product data sheet on www.swegon.com.

Temperature sensor, TEMP. SENSOR PT-1000

The temperature sensor is used to measure the supply temperature on water pipes in order to give the function WISE dewpoint monitoring. NOTE! Other accessories that measure RH and temperature are needed in combination with the TEMP SENSOR PT-1000-sensor to realise the dewpoint monitoring function.



Can also be used to measure the temperature of the main pipe in change-over systems.

Length: 1000 mm

Valve, SYST VDN215 / SYST VDN220

Straight valves for cooling and heating.

Unit	Function	Type	Dim.	K _v (m ³ /h)
600, 1200	Cooling/heating	VDN215	DN15 (½")	0.07-0.89
1800	Heating			
1800	Cooling	VDN220	DN20 (¾")	0.22-1.41



VDN215 is preset fully open on Kv 0.89. VDN220 is preset fully open on Kv 1.41

For more information about the valve, see the separate product data sheet on www.swegon.com.

Valve actuator, cooling & heating, ACTUATORc 24V 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.



Card switch, SYST SENSO II

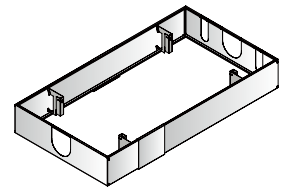
Key card holder for hotel rooms.



Design kit - PARASOL Z DK

Design kit for stylish design in case of suspended mounting. Consists of brackets, screws and all four side covers, which are easily assembled.

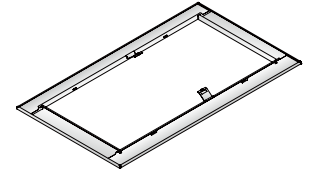
The design kit is available in sizes 600, 1200 and 1800 mm, cooling and cooling/heating as well as for air connection on all four sides and for dimensions 125, 160 and 200.



Coanda frame - PARASOL Z CF

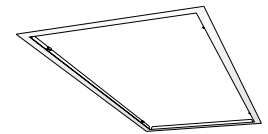
Coanda frame for stylish design in case of suspended mounting. Consists of four parts, which are easily assembled to create a frame with the enclosed screws.

The coanda frame is available in sizes 600, 1200 and 1800 mm.



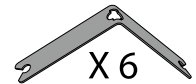
Drywall ceiling frame Parasol c T-FPB

Frame to create a neat transition between WISE Parasol Zenith and holes in drywall ceilings.



Centring kit, SYST CENTRING KIT PARASOL

The kit consists of 6 centring rails that can be used to centre the product in specific suspended ceiling systems.



Assembly fitting, SYST MS M8

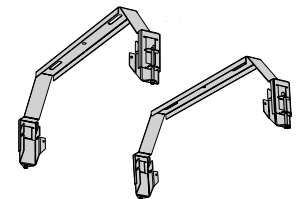
For installation use the assembly fitting containing threaded rods, ceiling brackets and nuts to all four mounting brackets.



Assembly fitting, PARASOL Z QUICK SUSPENSION KIT

The kit consists of 2 fixed brackets to suspend WISE Parasol Zenith.

The fixed brackets are fastened to the ceiling, either surface mounted on the ceiling or with SYST MS M8. For products from 1200 and upwards, four fastening points are always recommended due to the weight. The product can, after installation, then be pushed into place without the use of tools. The brackets also feature an integrated fine adjustment of approx. 50 mm in height.



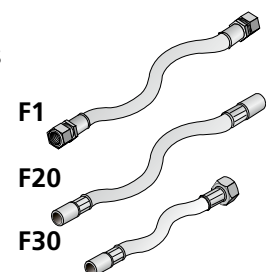
Flexible connection hoses, SYST FH

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.

F1 = Flexible hose with clamping ring couplings.

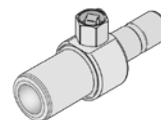
F20 = Flexible hose with quick couplings (push-on)

F30 = Flexible hose with quick couplings (push-on) on one end and the G20ID sleeve nuts on 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 the WISE Parasol Zenith 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.



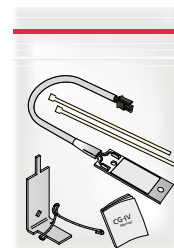
Kit for upgrade to functions in the WISE system

Upgrade kit WISE CG-IV-KIT

The upgrade kit includes condensation sensor and assembly parts

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 opens 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 and installation instructions on www.swegon.com.



Upgrade kit WISE dew point regulation

The upgrade kit includes temperature sensor PT1000



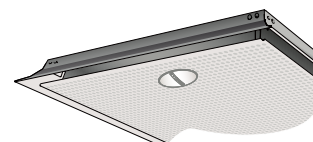
Upgrade kit WISE SMA Multi

The upgrade kit includes WISE SMA Multi incl. RJ9 cable and assembly plate.



Upgrade kit WISE face plate with WISE SMB

The upgrade kit includes WISE SMB incl. RJ9 cable and face plate.
NOTE! Face plate only with standard pattern.



Dimensions and weights

WISE Parasol Zenith

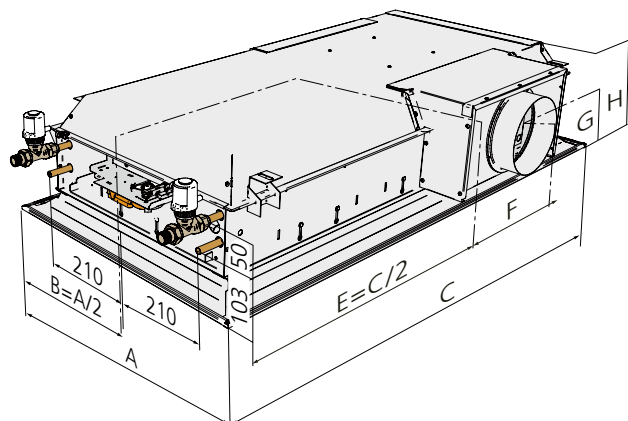


Figure 25. Dimensional drawing - long side connection (the length 1200 with air connection on side 2 is shown in the example).

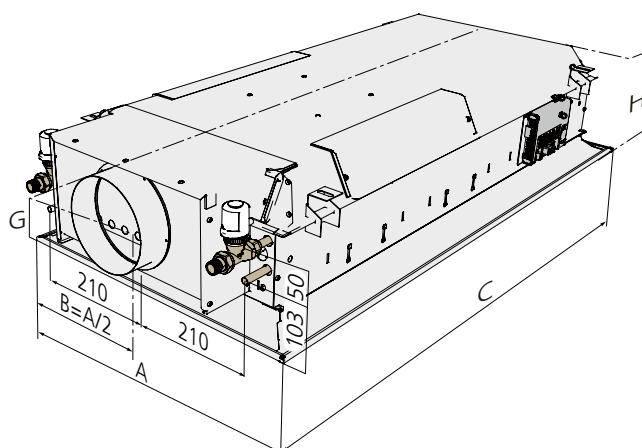


Figure 26. Dimensional drawing - short side connection (the length 1200 with air connection on side 1 is shown in the example).

Table 12. Dimensions

Length 600							
Dimensions (mm)							
A	B	C	ØD*	E	F	G**	H**
584	292	584	125/160	292	178	137/153	220/250
592	296	592	125/160	296	178	137/153	220/250
598	299	598	125/160	299	178	137/153	220/250
617	308.5	617	125/160	308.5	178	137/153	220/250
623	311.5	623	125/160	311.5	178	137/153	220/250
642	321	642	125/160	321	178	137/153	220/250
667	333.5	667	125/160	333.5	178	137/153	220/250

Length 1200							
Dimensions (mm)							
A	B	C	ØD*	E	F	G**	H**
584	292	1184	125/160	592	178	137/153	220/250
592	296	1192	125/160	596	178	137/153	220/250
598	299	1198	125/160	599	178	137/153	220/250
617	308.5	1242	125/160	621	178	137/153	220/250
623	311.5	1248	125/160	624	178	137/153	220/250
642	321	1292	125/160	646	178	137/153	220/250
667	333.5	1342	125/160	671	178	137/153	220/250

Length 1800							
Dimensions (mm)							
A	B	C	ØD	E	F	G**	H**
584	292	1784	200	892	478	173	290
592	296	1792	200	896	478	173	290
598	299	1798	200	899	478	173	290
617	308.5	1823	200	911,5	478	173	290
623	311.5	1867	200	933.5	478	173	290
642	321	1873	200	936.5	478	173	290
667	333.5	1942	200	971	478	173	290

* Dimensions refer to products with air connection ø125 or ø160.

** When WISE SMB is installed in the face plate the height measurement (C and H) increases by 12 mm

Table 13. Weight

Length 600					
Length mm	Type	Dim. Ø	Dry weight (kg)	Water volume (l)	
				cooling	heating
600	A	125	13.1	1.08	
600	B	125	13.3	0.84	0.34
600	A	160	13.7	1.08	
600	B	160	13.8	0.84	0.34

Length 1200					
Length mm	Type	Dim. Ø	Dry weight (kg)	Water volume (l)	
				cooling	heating
1200	A	125	23.8	2.4	
1200	B	125	23.8	1.8	0.7
1200	A	160	24.6	2.4	
1200	B	160	24.6	1.8	0.7

Length 1800					
Length mm	Type	Dim. Ø	Dry weight (kg)	Water volume (l)	
				cooling	heating
1800	A	200	35.9	3.8	-
1800	B	200	35.9	2.7	1.1

Weights above are excl.:

WISE SMB (0.1 kg).

Control plate with WISE CU (0.33 kg).

Specification

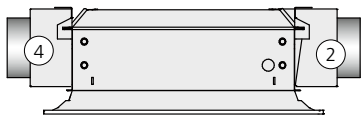
Table 14. Dimensions, different ceiling types

Ceiling type	Dimensions of the face plate (mm)	
	600 module	1200 module
T-bar system	600 module	1200 module
c-c 600	592x592	1192x592
c-c 600 SAS130/15	584x584	1184x584
c-c 625	617x617	1242x617
c-c 650	642x642	1292x642
c-c 675	667x667	1342x667

Clip in/ metal cassette	600 module	1200 module
	c-c 600	598x598
c-c 625	623x623	1248x623

The tolerance is ±2 mm.

Function	The units can be ordered in various functional versions: A = Cooling and supply air B = Cooling, heating and supply air
ADC	Factory-fitted ADC supplied as standard
Size of connection sleeve	Ø125 (sizes 600 and 1200) Ø160 (sizes 600 and 1200) Ø200 (size 1800)
Placement of air connection sleeve	Connection on the short side: 1 = Air and water on the same side 3 = Air and water on the opposite side Connection on the long side: 2=Connection on the right-hand side* 4=Connection on the left-hand side*
Software configuration	The product is supplied unconfigured from the factory. When commissioning it is paired with SuperWISE and is allocated functions and setpoint parameters that have been set up via WISE Design.
Colour	The units are supplied painted in Swegon's standard shade of white, RAL 9003, gloss ratio 30 ± 6%
Communication	Modbus RTU



* Seen from the short side with water connections

Contractor demarcation

Swegon's delivery ends at the connection points for water and air and the connection of the room control equipment (see figures 22-26).

For further information, see also the relevant documentation at www.swegon.com

WISE Parasol Zenith Instructions for Use

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WISE Project Planning Guide - Electricity & Control

WISE System Guide

- The pipe contractor connects the connections points for water to the plain pipe ends and fills the system, bleeds it and tests the pressure. When the room control equipment is installed at the factory, the cooling and heating water's return line is connected to the valve.

Unit	Function	Type	Dim.
600, 1200	Cooling/heating	VDN215	DN15 (½")
1800	Heating	VDN215	DN15 (½")
1800	Cooling	VDN220	DN20 (¾")

- The ventilation contractor connects ducting to the air connecting piece.
- 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 mm². For safe operation, we recommend cable ends with ferrules.

Ordering key - Product

WISE Parasol Zenith 600

WISE Parasol Zenith	e	aaa-	b-	ccc-	1
Version:					
Size:					
584 x 584; 592 x 592					
598 x 598; 603 x 603					
617 x 617; 623 x 623					
642 x 642; 667 x 667					
Function:					
A = Cooling and supply air (serial connected double row coil)					
B = Cooling, heating and supply air (serial connected double row coil)					
Dimensions connection sleeves:					
125 = Ø125 connection, product height 220 mm					
160 = Ø160 connection, product height 250 mm					
Positioning of connection sleeves:					
1 = Short side same side as the water connection					
3 = Short side opposite the water connection					

WISE Parasol Zenith 1800

WISE Parasol Zenith	e	aaaa-	b-	200-	d
Version:					
Size:					
1784 x 584; 1792 x 592					
1798 x 598; 1823 x 603					
1867 x 617; 1873 x 623					
1942 x 642; 2017 x 667					
Function:					
A = Cooling and supply air (serial connected double row coil)					
B = Cooling, heating and supply air (serial connected double row coil)					
Dimensions connection sleeves:					
200 = Ø200 connection, product height 290 mm					
Positioning of connection sleeves:					
1 = Short side the same side as the water connection					
2 = Long side, right side of the water connection					
3 = Short side, opposite side as the water connection					
4 = Long side, left side of the water connection					

WISE Parasol Zenith 1200

WISE Parasol Zenith	e	aaaa-	b-	ccc-	d
Version:					
Size:					
1184 x 584; 1192 x 592					
1198 x 598; 1213 x 603					
1242 x 617; 1248 x 623					
1292 x 642; 1342 x 667					
Function:					
A = Cooling and supply air, (serial connected double row coil)					
B = Cooling, heating and supply air (serial connected double row coil)					
Dimensions connection sleeves:					
125 = Ø125 connection, product height 220 mm					
160 = Ø160 connection, product height 250 mm					
Positioning of connection sleeves:					
1 = Short side the same side as the water connection					
2 = Long side, right side of the water connection					
3 = Short side, opposite side as the water connection					
4 = Long side, left side of the water connection					

Ordering key - Accessories

Design kit	PARASOL Z DK	aaaa-	b-	ccc-	d
Size:					
600, 1200, 1800					
Function:					
A: Cooling					
B: Cooling and heating					
Dimensions connection sleeves:					
125, 160, 200 = Ø125, Ø160 or Ø200					
Positioning of connection sleeves:					
1 = Short side the same side as the water connection					
2 = Long side, right side of the water connection					
3 = Short side, opposite side as the water connection					
4 = Long side, left side of the water connection					

Coanda frame	PARASOL Z CF	aaaa
Size:		
600, 1200, 1800		

Type: WISE Parasol Zenith e aaaa- b- ccc- d xx items

PARASOL Z DK aaaa- bbbb -c xx items

PARASOL Z CF aaaa xx items

Factory fitted room control and accessories

- Control unit
 - WISE CU
- Transformer
 - Transformer 30 VA (optional)
- Valves and actuators for cooling and heating
 - Straight valve, VDN 215/VDN220 (optional)
 - Actuator, 24V NC (optional extra)
- Sensors
 - Air quality sensor, WISE SMA Multi (optional)
 - Presence sensor, WISE SMB (optional)
 - WISE dewpoint monitoring (optional)
 - Temperature sensor for supply air
 - Condensation sensor, CG IV (optional)
 - Temp. sensor (WISE DPS Modbus)

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, CO2, RH, Temp), WISE IAQ MULTI, xx items
- Sensor (CO2, RH, Temp), WISE IAQ CO2, 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
- Control unit Input/output radio extender, WISE IORE, 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
- Card switch, SYST SENSO II, xx items

Product accessories

- Transformer, POWER Adapt 20 VA (ARV), xx items
- Transformer, 30 VA, xx items
- Transformer, SYST TS-1, xx items
- Temperature sensor, TEMP. SENSOR PT-1000, xx items
- Condensation sensor KIT for subsequent fitting CONDENSATION SENS CG IV-KIT, xx items
- Assembly fitting, SYST MS M8 aaaa-b-cccc, xx items
- Flexible connection hose, SYST FH aaa- bbb-12, 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
- Design kit, PARASOL Z DK, aaaa-b-ccc-d, xx items
- Coanda frame, PARASOL Z CF, aaaa, xx items
- Mounting frame for drywall ceilings PARASOLc T-FPB-aaaa xx items
- Tool for nozzle adjustment, SYST TORX-6-200, xx items
- ADC for subsequent installation, SYST ADC-2-105, xx items
- Valve actuator, ACTUATORc 24V NC, xx items
- Valve straight, SYST VDN 215/VDN220, xx items

Upgrade kits

- Upgrade kit, WISE CG-IV-KIT
- Upgrade kit, WISE dew point regulation
- Upgrade kit, WISE SMA Multi
- Upgrade kit, WISE face plate with WISE SMB

Further information is available for download from www.swegon.com

WISE System Guide

WISE Project Planning Guide - Heating, Cooling & Ventilation

WISE Project Planning Guide - Electricity & Control

WISE Parasol Zenith Instructions for Use

Specification text

Example of a specification text according to VVS AMA.

PTD.4 Duct connected room devices for heating and cooling

Make: Swegon

Type: WISE Parasol Zenith

Specification

Power supply:	24V AC ±15% 50 - 60Hz
Total cooling capacity, max:	2055 W
Heating capacity, water, max:	2700 W
Air flow single module unit:	7-49 l/s
Air flow double module unit:	7-85 l/s
Air flow double module unit:	7-110 l/s

Comfort module for Swegon's system WISE, for integrated installation in suspended ceilings or exposed installation, with the following functions:

- Waterborne cooling and heating
- Ventilation
- Complete product with flow control for variable air flow control 0-100%
- ADC Comfort guarantee with adjustable function
- Integrated circulating air opening in face plate
- Enclosed version for circulating air
- Cleanable air duct for long side connection
- Fixed measurement tapping with hose
- Suitable for T-bar system with modular dimensions: 600; 625; and 675 mm; T-profile 24 mm (optional)
- Wireless communication in Swegon's demand-controlled indoor climate system WISE
- Contractor demarcation at the connection points for water and air according to dimensional drawings
- The contractor demarcation for electric connection point according to dimension print
- At the connection points, the pipe contractor connects the piping to plain pipe ends:

Unit (mm)	Cooling, supply and return	Heating, supply and return
600, 1200	(Cu) Ø 12 x 1.0 mm	(Cu) Ø 12 x 1.0 mm
1800	(Cu) Ø 15 x 1.0 mm	(Cu) Ø 12 x 1.0 mm

As the unit is equipped with in-built room control equipment, the pipe contractor connects to:

Unit (mm)	Cooling, return	Heating, return
600, 1200	DN15 male thread	DN15 male thread
1800	DN20 male thread	DN15 male thread

The ventilation contractor connects to connection spigots ø125/160/200 mm.

- The pipe contractor fills. vents, tests the pressure and assumes responsibility for the design water flows reaching each branch of the system and the index unit
- The ventilation contractor conducts initial commissioning of the air flows