

# REACT V SKNX

## Instructions for Use

REACT V SKNXa (circular), REACT V SKNXb (rectangular)

14/05/2025  
Art. 1546142

## Symbol key

### Symbols on the machine

This product complies with applicable EU directives



### Symbols in this user manual

Warning/Caution!



Risk of crushing



## Application area

The product is a variable flow damper or constant flow damper designed for comfort ventilation indoors. The product is used to regulate the supply air or extract air flow in ventilation ducts.

The product may not be used for anything other than its intended use.

## General



Read through the entire instructions for use before you install/use the product and save the instructions for future reference. It is not permissible to make changes or modify this product other than those specified in this document.

## The packaging contains the following items

1 x REACT V SKNX

1 x Instructions for use

## Protective equipment



Always use appropriate personal protective equipment for the work in question, in the form of gloves, respirators and protective glasses during handling, installation, cleaning and service/maintenance.

## Electrical safety



Permitted voltage, see "Electrical data". It is not permissible to insert foreign objects into the product's connectors or the electronics' ventilation openings; risk for short circuiting.

24 V isolation transformer to be connected should comply with the provisions of IEC 61558-1.

Cable sizing must be carried out for cabling between the product and the power supply source.

Disconnect the power supply when working on products that are not required to run in production.

Always follow the local/national rules for who shall be permitted to carry out this type of electrical installation.

## Other risks



When the product is voltage fed, the damper will either open or close. This can entail a certain risk of pinch injuries to the fingers, for example, if these are placed between the damper blade and ventilation duct when the damper blade is rotating. The product's actuator is equipped with a release button that permits manual control of the damper blade. Always ensure this is activated before working on the internal parts of the damper.



## Handling

- Always use appropriate transport and lifting devices when the product is to be handled to reduce ergonomic loads.
- The product must be handled with care.
- It is not permissible to carry the product by the measuring tubes.

## Installation

- Moist, cold and aggressive environments must be avoided.
- Avoid installing the product near a heat source.
- Assemble the product according to applicable industry regulations.
- Install the product so that it is not accessible by unauthorised persons, for example above a suspended ceiling.
- Install the product for easy access during service/maintenance.
- Supplement the duct system with a cleaning hatch in the vicinity of the product to facilitate cleaning.
- If the product is mounted above a fixed ceiling, an inspection hatch must be available so that the product is accessible for inspection.
- If the product is mounted so that it is possible to gain access to the inside of the product, it must be supplemented with appropriate protection, for example, a ventilation unit.
- If the product is mounted in cold areas, the whole product must be insulated on the outside against condensation.
- For installation, the accessory FSR is recommended.
- The product can be installed position independent.
- It is recommended that the product be installed so that the front is visible.
- The product must be laid down prior to installation so that it cannot fall over.
- Check to make sure that the product does not have any visible defects.
- Make sure that the product is properly secured after it has been installed.
- Use the product's eyes to secure the cables with cable ties.
- Make sure all cables are properly secured after installation.
- Check that the actuator/controller is properly mounted.



The document was originally written in Swedish

**Swegon**

# Installation, torque, dimensions and weights

## Circular design

### Dimensions

Size Ød (mm)	A (mm)	B (mm)	C (mm)	E (mm)	Torque (Nm)	Weight (kg)	Flow range				Tolerance Q* ±5% with at least ±x	
							Min.		Max = Vnom*)			
							l/s	m³/h	l/s	m³/h	l/s	m³/h
100	475	485	190	50	5	1.7	5	18	58	209	2	7
125	475	485	215	50	5	1.9	9	32	95	342	2	7
160	475	485	255	50	5	2.2	16	58	170	612	2	7
200	475	485	300	50	5	2.8	25	90	280	1008	3	11
250	525	535	350	50	5	3.5	40	144	445	1602	5	18
315	560	570	415	50	10	4.6	63	227	730	2628	8	29
400	695	705	505	60	10	6.6	102	367	1190	4284	13	47
500	820	840	605	60	10	9.2	164	590	1870	6732	20	72
630	915	935	735	60	10	14.1	300	1080	2980	10728	32	115

\*Vnom at 120 Pa in pressure reading.

\*Installed according to the instructions.

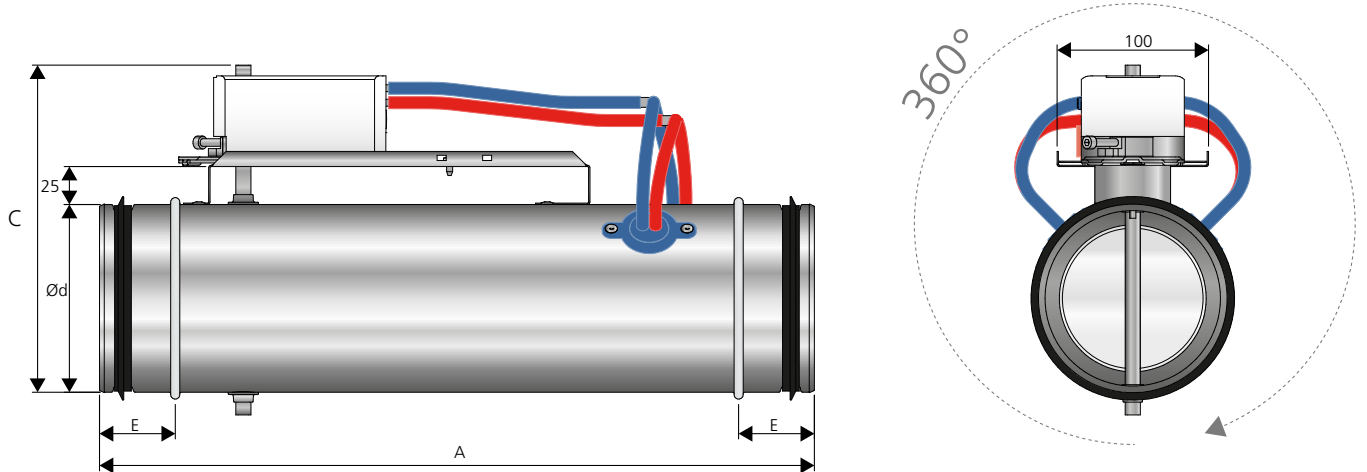


Figure 1. Dimensions (mm), REACT V SKNX circular. The damper can be installed at an optional angle.

## Mounting

- The product's air flow measurement requires a straight duct section as per the installation figures.
- In unfavourable conditions before or with disruption, the product's tolerances cannot be guaranteed.
- Installation is position independent.
- The product can be installed horizontally or vertically.
- Instructions for Use are supplied on delivery, but can also be downloaded from [www.swegon.com](http://www.swegon.com).

### Demand for straight section

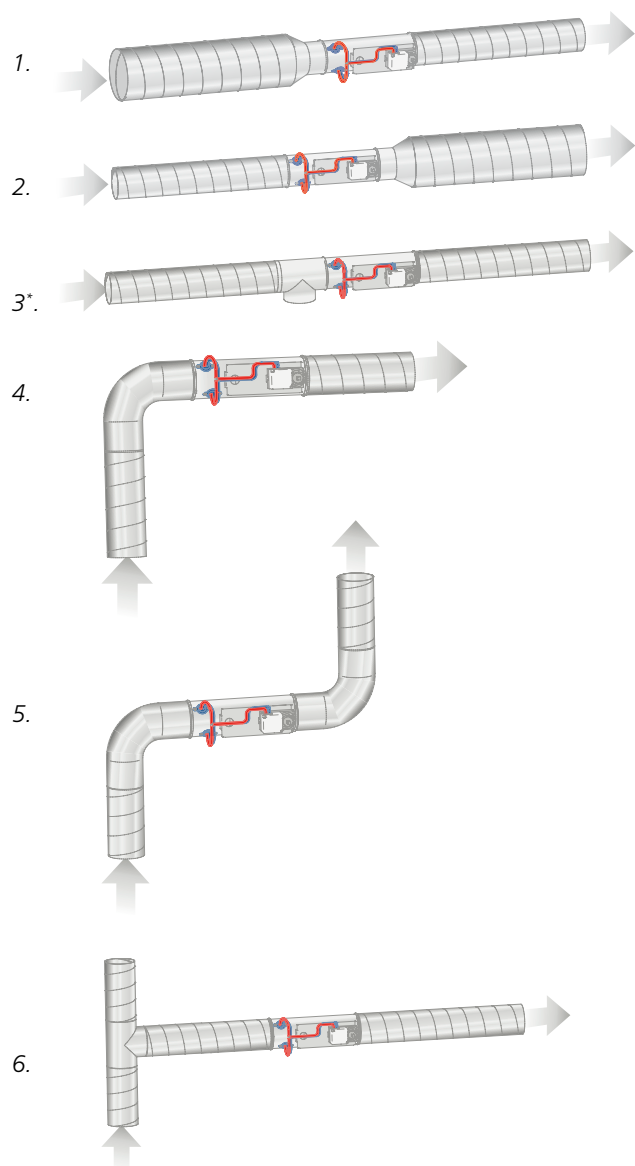


Figure 2. Demand for a straight section in circular ducts, number  $\varnothing$  before product:

Images 1-5 require no straight duct section (image 3\* illustrates a T piece with cleaning hatch).

Image 6 requires a straight duct section before the damper equivalent to  $4 \times$  the diameter of the duct.

### Straight duct section requirements in case of sound attenuator with baffle

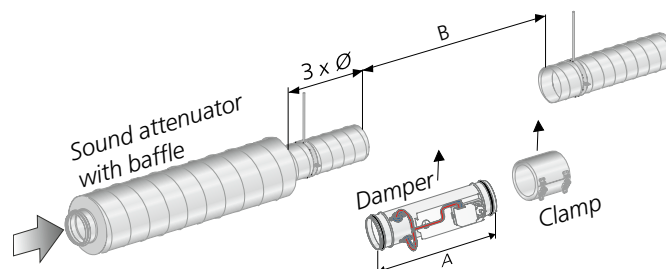


Figure 3. Straight duct section requirement of  $3 \times \varnothing$  for sound attenuator with baffle or centre body.

### Installation in the duct system

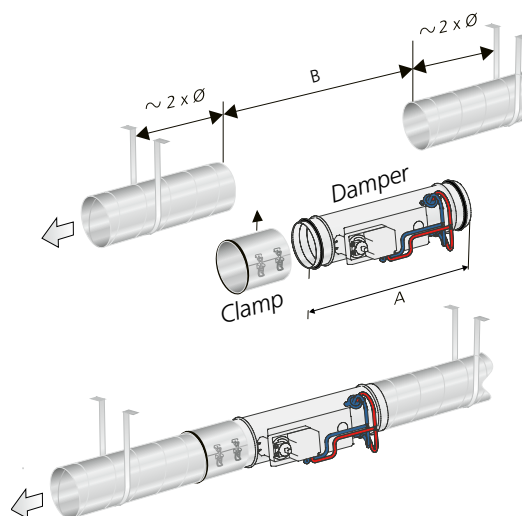


Figure 4. Installation in the duct system. The ducts must be firmly fixed to the frame of the building on each side of the product.

## Rectangular design

### Dimensions

Size BxH (mm)	Torque (Nm)	Weight (kg)	Flow range				Tolerance Q* ±5% with at least ±x	
			Min.		Max = Vnom*)			
			l/s	m³/h	l/s	m³/h	l/s	m³/h
200 x 200	5	6.1	67	241	365	1314	8	29
300 x 200	5	7.3	100	360	548	1973	12	43
400 x 200	5	8.4	133	479	730	2628	17	61
500 x 200	5	9.6	167	601	913	3287	21	76
600 x 200	5	10.6	200	720	1095	3942	25	90
700 x 200	5	11.8	233	839	1278	4601	29	104
800 x 200	5	13.0	267	961	1460	5256	33	119
1000 x 200	5	15.2	333	1199	1825	6570	42	151
300 x 300	5	8.9	152	547	834	3002	19	68
400 x 300	5	10.1	203	731	1112	4003	25	90
500 x 300	5	11.4	254	914	1390	5004	32	115
600 x 300	5	12.7	305	1098	1668	6005	38	137
700 x 300	5	13.8	355	1278	1946	7006	44	158
800 x 300	5	15.2	406	1462	2224	8006	51	184
1000 x 300	5	17.7	508	1829	2780	10008	63	227
400 x 400	5	12.1	273	983	1495	5382	34	122
500 x 400	5	13.5	341	1228	1869	6728	43	155
600 x 400	5	14.8	409	1472	2243	8075	51	184
700 x 400	5	16.4	478	1721	2616	9418	60	216
800 x 400	5	17.8	546	1966	2990	10764	68	245
1000 x 400	5	20.6	682	2455	3738	13457	85	306
1200 x 400	10	23.4	819	2948	4485	16146	102	367
1400 x 400	10	26.2	955	3438	5233	18839	119	428
1600 x 400	10	29.1	1092	3931	5980	21528	136	490
500 x 500	5	15.3	429	1544	2347	8449	54	194
600 x 500	5	16.8	514	1850	2816	10138	64	230
700 x 500	10	18.5	600	2160	3286	11830	75	270
800 x 500	10	19.9	686	2470	3755	13518	86	310
1000 x 500	10	23.1	857	3085	4694	16898	107	385
1200 x 500	10	26.2	1028	3701	5633	20279	129	464
1400 x 500	10	29.3	1200	4320	6572	23659	150	540
1600 x 500	10	32.4	1371	4936	7510	27036	171	616
600 x 600	10	19.1	618	2225	3388	12197	77	277
700 x 600	10	20.9	722	2599	3952	14227	90	324
800 x 600	10	22.4	825	2970	4517	16261	103	371
1000 x 600	10	26.0	1031	3712	5646	20326	129	464
1200 x 600	10	29.3	1237	4453	6775	24390	155	558
1400 x 600	10	33.2	1443	5195	7904	28454	180	648
1600 x 600	10	36.2	1649	5936	9033	32519	206	742
700 x 700	10	22.1	844	3038	4622	16639	105	378
800 x 700	10	24.8	964	3470	5282	19015	121	436
1000 x 700	10	28.4	1205	4338	6602	23767	151	544
1200 x 700	10	32.1	1446	5206	7923	28523	181	652
1400 x 700	10	35.8	1688	6077	9243	33275	211	760

\*Vnom at 120 Pa in pressure reading.

\*Installed according to the instructions.

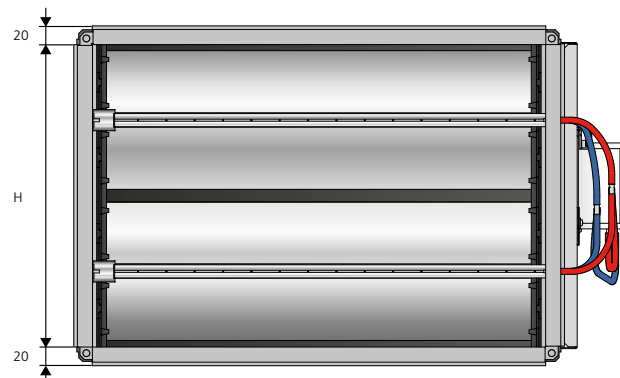
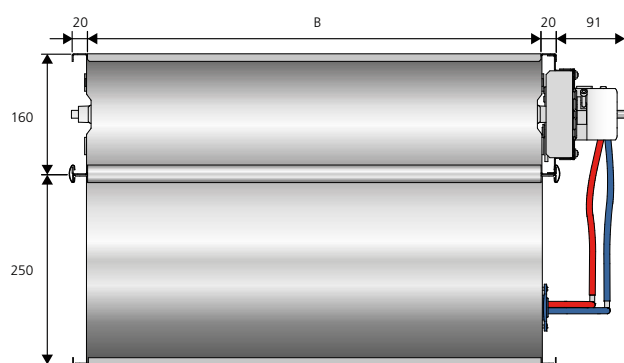


Figure 5. Dimensions (mm), REACT V SKNX rectangular.

## Installation

- The product's air flow measurement requires a straight duct section as per the installation figures.
- In unfavourable conditions before or with disruption, the product's tolerances cannot be guaranteed.
- Damper spindles must be installed horizontally.
- For rectangular ducts, the damper is always installed so that the controller/actuator is placed along the side of the duct.
- Instructions for Use are supplied on delivery, but can also be downloaded from [www.swegon.com](http://www.swegon.com).

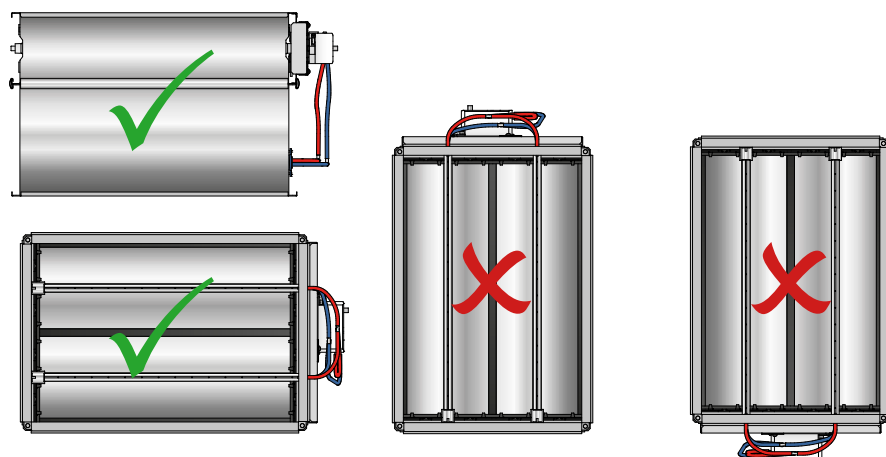


Figure 6. Installation - For rectangular ducts, the damper is always installed so that the controller/actuator is placed along the side of the duct.

## Straight duct section requirements

Type of disruption	Tolerance Q $\pm 5\%$	Tolerance Q $\pm 10\%$
One 90° bend	$E = 3 \times B$	$E = 2 \times B$
T piece	$E = 3 \times B$	$E = 2 \times B$

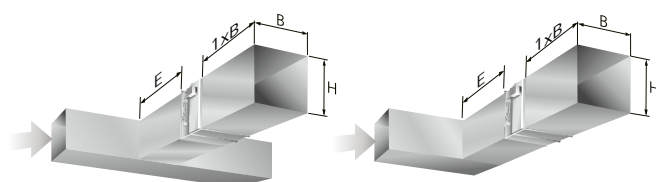


Figure 7. Straight duct section requirements in rectangular ducts.  
 $E$  = Straight duct section  
 $B$  = Width of duct  
 $H$  = Height of duct

## Straight duct section requirements in case of sound attenuator with baffle

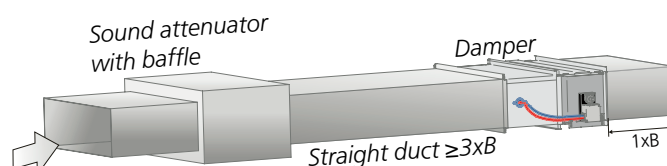


Figure 8. Straight duct section requirements  $3 \times B$  in case of sound attenuator with baffle. Applies to both supply and extract air.

# Connection

## Communication (green cable)

1 – KNX-TP CE+

2 – KNX-TP CE-

Communication is galvanically insulated.

Load on communication: max 5 mA.

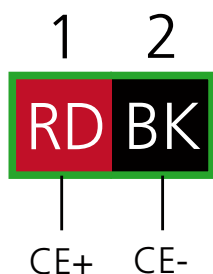


Figure 9. Communication (green cable).

## Supply voltage (black cable)

1 – G 24 V AC

2 – G0 24 V AC

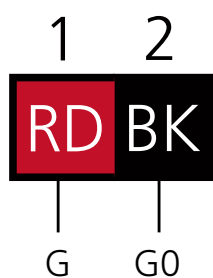


Figure 10. Supply voltage (black cable).

# Use

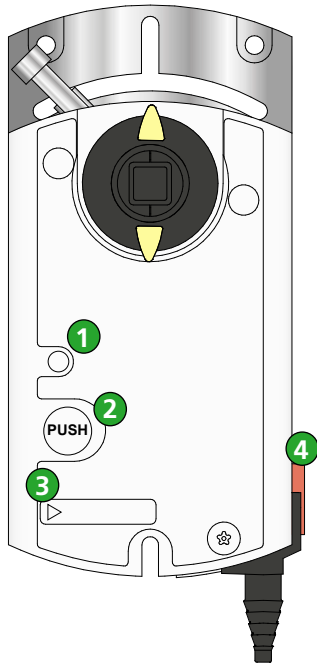


Figure 11. Siemens actuator.

## 1 LED lighting

Off:	No power or fault during operation
On, green:	Connection test has been carried out successfully*
Flashing, orange:	Reset in progress If a connection test has been enabled: wait*
On, red:	The actuator is in programming/addressing mode If a connection test has been enabled: the connection test failed*

## 2 Pushbutton

Enable/disable addressing mode	Button press <1 sec:	LED turns red or goes out
PL-Link connection test	Button press >1 sec but <20 sec*:	LED flashes orange once
Reset to base settings from subcontractor	Button press >20 sec:	LED flashes orange until the actuator restarts

### Resetting to base settings from subcontractor

The actuator must not be reset with the pushbutton. This resets Vnom to the base settings from the subcontractor, which cannot be undone.

### Addressing and bus test via pushbutton

The actuator can be set to addressing/programming mode with the pushbutton

This is done by pressing the button for more than 0.1 seconds but less than 1 second

If the KNX bus connection is not OK, the LED light remains off

If the KNX bus connection is OK, the LED light remains on until addressing/programming is completed

## 3 Service port

For connection of the hand-held terminal Siemens AST20

## 4 Release button

Pressed button:	The actuator is disengaged, the motor stops, manual overriding possible
Released button:	Returns to standard mode

\*The function or parts of the function are only accessible during PL-Link operation.

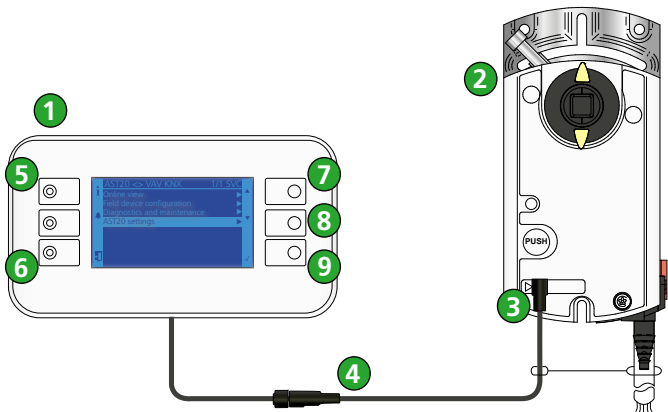


Figure 12. Siemens AST20 - Hand-held terminal for setting and reading the actuator's parameters.

- 1. Hand-held terminal Siemens AST20
- 2. Actuator
- 3. Service port
- 4. Connection cable (7-pole)\*
- 5. Reset button for Siemens AST20
- 6. Cancels change/leaves sub menu
- 7. Browses up, and changes values/status
- 8. Browses down, and changes values/status
- 9. Confirms selected value/goes to selected sub menu

\*If an incorrect connection cable is used (e.g. 6-pole cable on 7-pole connector), the actuator can be damaged.

Settings for actuator

Overview

AST20 <> VAV KNX	Online view	Description
Online view	Setpoint: flow	Shows the set point as a percentage
Field device configuration	0 m³/h	Shows the set point in the selected unit
Diagnostics and maintenance	Actual flow	Shows the actual value as a percentage
AST20 settings	0 m³/h	Shows the actual value in the selected unit
	Diff. pressure	Differential pressure in pascal
	Override ctrl	Off
	Off	Forced control
	User value	Normal function
	Stop	The damper is regulated to the selected set point
	Fully close	The actuator stops at the current position
	Fully open	Closes the damper fully
		Opens the damper fully

Configuration

AST20 <> VAV KNX	Field device configuration	Description
Online view	Operating mode	VAV mode
Field device configuration	VAV mode	Operating mode
Diagnostics and maintenance	Position control	VAV control
AST20 setting	Opening dir	Control of position
	CCW	Direction of rotation
	CW	Clockwise
	CCW	Anti-clockwise (standard, may not be changed)
	Adaptive pos	Off
	Off	Adaptive damper position
	On	Off
	Vn	1.58
	Vmin	0%
	Vmax	100%
	Vnom	0 m³/h
	Altitude level	500m
	Unit vol. flow	m³/h
	m³/h	Change of unit for air flow
	l/s	
	Unit Vmin&Vmax	%
	%	Change of unit for Vmin & Vmax
	m³/h (l/s)	



## Service and maintenance

### Information

AST20 <> VAV KNX	Diag. and maintenance	Field device info	Description
Online view ▶	Field device info ▶	FID type VAV KNX	Damper designation
Field device configuration ▶	Field device statistics ▶	Firmware Base-PCB 123	Software version
Diagnostics and maintenance ▶	OEM default settings ▶	Running time 150s	Running time
AST20 setting ▶			

### Statistics

AST20 <> VAV KNX	Diag. and maintenance	Field device statistics	Description
Online view ▶	Field device info ▶	Cum. running time 0h 0m	Operation time
Field device configuration ▶	Field device statistics ▶	Cnt. Repositionings 0	Number of repositionings
Diagnostics and maintenance ▶	OEM default settings ▶		
AST20 setting ▶			

### Reset to OEM default settings

AST20 <> VAV KNX	Diag. and maintenance	OEM default settings	Description
Online view ▶	Field device info ▶	Reset to OEM default settings	Reset to OEM default settings
Field device configuration ▶	Field device statistics ▶	Show OEM default settings ▶	OEM default settings
Diagnostics and maintenance ▶	OEM default settings ▶		
AST20 setting ▶			

### OEM default settings

AST20 <> VAV KNX	Diag. and maintenance	OEM default settings	OEM default settings	Description
Online view ▶	Field device info ▶	Reset to OEM default settings	Operating mode VAV mode	Operating mode
Field device configuration ▶	Field device statistics ▶	Show OEM default settings ▶	Opening dir CCW	Direction of rotation
Diagnostics and maintenance ▶	OEM default settings ▶		Adaptive pos Off	Adaptive damper position
AST20 setting ▶			Vn value 1.58	Vn coefficient
			Vmin 0%	Min. air flow
			Vmax 100%	Max. air flow
			Vnom 0 m³/h	Nominal air flow
			Altitude level 500m	Number of metres above sea level

## Settings for hand-held terminal Siemens AST20

### Authorisation level

AST20 <> VAV KNX	AST20 settings	Description
Online view ▶	Authorisation level SVC	Authorisation level
Field device configuration ▶	Handheld tool settings ▶	Handheld tool settings
Diagnostics and maintenance ▶	Enter OEM password ▶	OEM Password
AST20 settings ▶		

### Handheld tool settings

AST20 <> VAV KNX	AST20 settings	Handheld tool settings	Description
Online view ▶	Authorisation level SVC	Language EN	Change of language
Field device configuration ▶	Handheld tool settings ▶	EN	English
Diagnostics and maintenance ▶	Enter OEM password ▶	TR	Turkish
AST20 settings ▶		FR	French
		DE	German
		Backlight colour Blue	Change of background colour
		Blue	Blue
		White	White
		Backlight turn off time 300s	Duration of background lighting
		Brightness 75	Change of brightness
		Contrast 60	Change of contrast
		AST20 FW Version 123	Software version

## Trouble shooting

### The product does not communicate over KNX

- Make sure that the product is energised.
- Check the product's KNX connection.

### The product shows incorrect/no air flow

- Make sure that the product is energised.
- Check that the product's set size corresponds with the physical size.
- Make sure that the product is installed according to the recommended distance to disruptions, see "Installation".
- Check that there is an air flow.
- Make sure that the product is correctly oriented in terms of air direction. The air flow must follow the instructions on the product.
- Check that the measuring tubes are mounted correctly, plus to plus (red), minus to minus (blue).
- Check that the measuring tubes are undamaged and not creased.
- Check with the help of the k-factor and pressure difference between the red and blue measuring tubes that the flow is within the product's measurement range.

### The product does not regulate the air flow

- Make sure that the product is energised.
- Check that the damper motor has not become detached from the damper spindle.
- Check that the damper motor works by pressing in the motor's release button, turn the damper spindle, release the release knob and then see whether the damper motor starts to move.
- Check that the product is connected correctly.
- Check that the product is not force controlled.

### The product does not regulate on the desired air flow

- Check that the settings for Vmin and Vmax correspond with the required regulation range.
- Check that the KNX communication is correct.

## Cleaning

Ideally, the product should be cleaned in connection with the cleaning of the rest of the ventilation system.

### Cleaning of electrical components

- If needed, use a dry cloth to clean the components.
- Never use water, detergent and cleaning solvent or a vacuum cleaner.

### External cleaning

- If necessary use tepid water and a well-wrung cloth.
- Never use detergent and cleaning solvent or a vacuum cleaner.

### Internal cleaning

- When cleaning the ventilation system, the product must be dismantled if there are no cleaning hatches close to the product.
- Cleaning equipment such as whisks and the like must not be fed through the product.
- If necessary remove dust and other particles that can be present in the product.
- Never use detergent and cleaning solvent or a vacuum cleaner.

## Service/maintenance

- The product does not require any maintenance, except for cleaning when necessary.
- In connection with a service, mandatory ventilation inspection or cleaning of the ventilation system, check that the general condition of the product appears to be good. Pay particular attention to the suspension, cables and that they sit firmly in place.
- It is not permissible to open or repair electrical components.
- If you suspect that the product or a component is defective, please contact Swegon.
- A defective product or component must be replaced by an original spare part from Swegon.

## Materials and surface treatment

All sheet-metal parts are galvanised sheet steel (Z275).

## Disposal

Waste must be handled according to local regulations.

## Product warranty

The product warranty or service agreement will not be valid/will not be extended if: (1) the product is repaired, modified or changed, unless such repair, modification or change has been approved in writing by Swegon AB; or (2) the serial number on the product has been made illegible or is missing.

## Replacing the damper motor

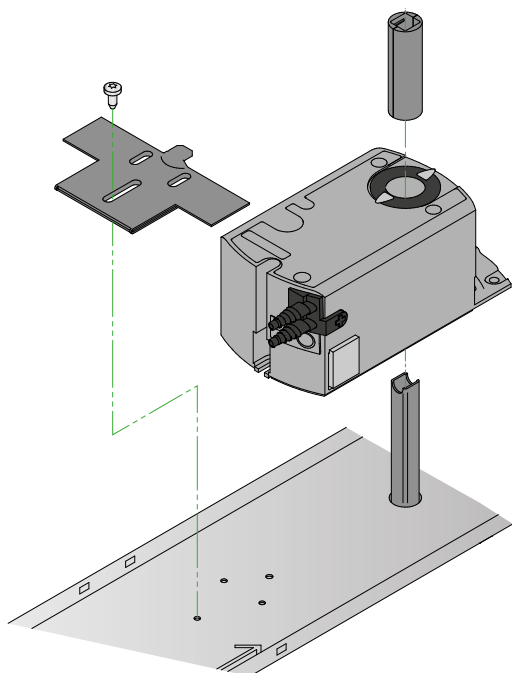


Figure 13. Dismantling the damper motor.

1. Disconnect the cable.
  2. Disconnect the measuring tubes.
  3. Set damper motor to the open position.
  4. Loosen the nuts on the spindle clamp (nut: 4 mm).
  5. Remove 1 screw for the locking strip in the circular design and 2 screws for the locking strip in the rectangular design (screw: TX20).
  6. Lift off the damper motor and spindle adapter  
(The rectangular design has a round damper spindle and no spindle adapter).
  7. Reassemble in the reverse order.
- Note! Positioning of the damper blade and locking strip, see figures 14 and 15.

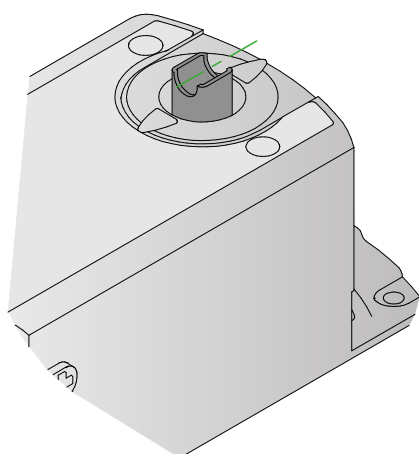


Figure 14. Recess in the damper spindle indicates the position of the damper.

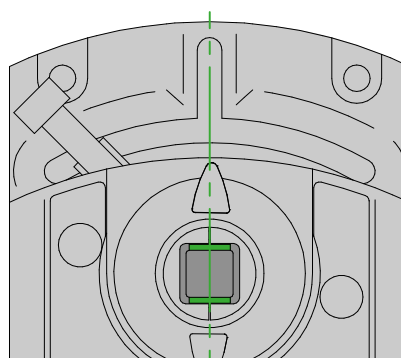


Figure 15. Damper open. Jumper to the left.

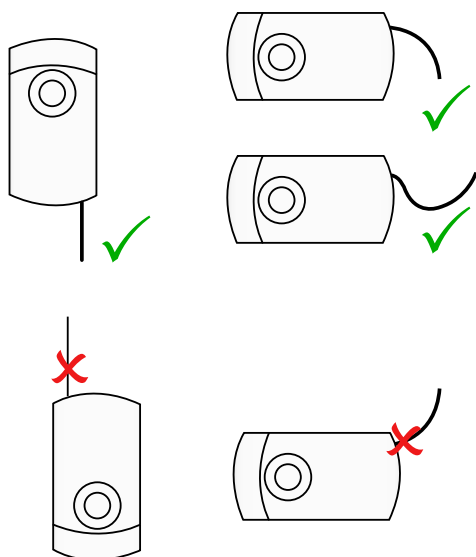
## Technical data

IP class:	IP54
Corrosivity class:	C3
Pressure class:	A
Leakage classes according to SS-EN 1751	
- Leakage class, casing:	C
- Leakage class circular damper, closed:	4
- Leakage class rectangular damper, closed:	3
Running times open/closed (90°):	
5 / 10 Nm:	150 sec (50Hz)
5 / 10 Nm:	125 sec (60Hz)
Ambient temperature	
Operation:	0 – +50°C
Storage:	-5 – +45°C
RH:	5 – 95% (non condensing)
CE marking:	2006/42/EC (MD) 2014/30/EU (EMC) 2011/65/EU (RoHS2)

## Electrical data

Power supply:	24 V AC ±20% 50 - 60 Hz
Fixed connection cable, 900 mm with cable size	2 x 0.75 mm <sup>2</sup>
Communication:	
Fixed connection cable, 900 mm with cable size	2 x 0.75 mm <sup>2</sup>
Power consumption, for transformer rating:	
REACT V SKNX 5 Nm	2.5 W 3.0 VA
REACT V SKNX 10 Nm	2.5 W 3.0 VA

To retain enclosure class (IP54), the actuator must be installed as follows.



## Declaration of Conformity

Swegon AB hereby affirms that:

REACT V SKNXa complies with the essential characteristic demands and relevant regulations specified in the directives, 2006/42/EC (MD), 2014/30/EU (EMC) and 2011/65/EU (RoHS2):

The following standards have been observed:

EN ISO 12100:2010	Safety of machinery - General principles for design - Risk assessment and risk mitigation
EN 60204-1:2006	Safety of machinery - Electrical equipment of machines - Part 1: Generic standards
EN 60730-1:2011	Automatic electrical controls and control units for household use - Part 1: Generic standards
EN 61000-6-2:2007	Electromagnetic compatibility (EMC). Generic standards. Immunity for industrial environments
EN 61000-6-3:2007	Electromagnetic compatibility (EMC). Generic standards. Emission standard for residential, commercial and light-industrial environments



Person responsible for this declaration:

Name: Freddie Hansson, R&D Manager Tomelilla

Address: Industrigatan 5, 273 21 Tomelilla, Sweden

Date: 27/04/2023

This declaration is applicable only if the product has been installed according to the instructions in this document and if no modifications or changes have been made on this product.

## References

[www.swegon.com](http://www.swegon.com)

Building Materials Declaration

REACT V SKNX Product data sheet

REACT Siemens – KNX settings