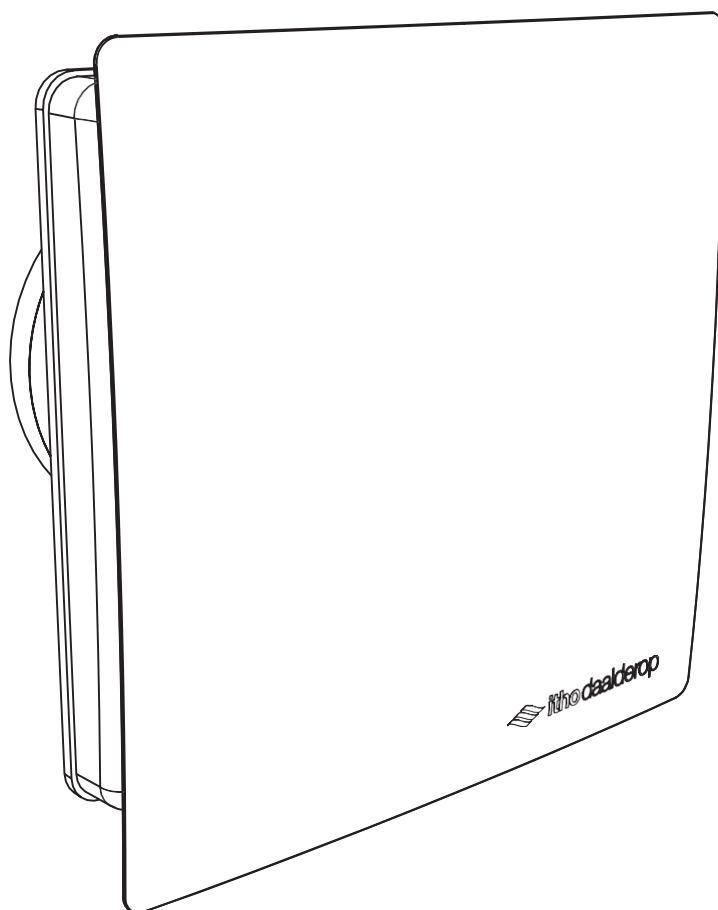


Manual



1. Safety & regulations

1.1. Safety

- Work on the ventilation system may only be carried out by authorised fitters ⁽¹⁾ in accordance with the instructions in the manual. Only accessories and spare parts prescribed by the manufacturer may be used.
- Do not use the product for purposes other than those specified in this manual.
- Handle electrical appliances with care:
 - Never touch the device with wet hands.
 - Never touch the device when you are barefoot.
- This product and/or system may be operated by children aged 8 and above and by persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, if they are supervised or instructed in how to use it safely and are aware of the hazards of the product and/or system.
- Cleaning and maintenance by the user must not be carried out by children or by persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, without supervision.
- Prevent children from playing with the product and/or system.
- Do not use the product in the presence of flammable or volatile substances such as alcohol, insecticides, petrol, etc.
- The unit must absolutely NOT be used for the discharge of hot air into ducts intended for the flue gas of stoves or other combustion appliances. The air must be discharged directly to the outside.
- If, in the same room where the appliance is installed, there is also a fuel-fired appliance (water heater, gas heater, etc., without an enclosed combustion chamber), it is necessary to check that enough new air can enter the room to ensure proper combustion in these appliances, taking precautions to prevent gases coming from the gas exhaust pipe or from other fuel-fired appliances from escaping back into the room.
- The unit must not be used to control fans, other heaters, etc.
- Do not obstruct the air supply or the air outlet in any way. Also check that the air conduction systems are not blocked or closed.
- It is essential that there is a sufficient supply of air in the room where the unit is installed at all times.
- The air to be discharged with the unit must be clean, i.e. free from grease, soot, chemical and corrosive substances, flammable or explosive mixtures.
- Do not immerse the device or its parts in water or other liquids.
- Do not use the product at an ambient temperature above 40°C.

- Safety instructions must be followed in order to avoid physical injury and/or damage to the product.
- Maintenance and cleaning may only be carried out after the appliance has been disconnected from the power supply.
- The product contains rotating parts. Therefore, after disconnecting the power supply, wait at least 10 seconds before opening or touching the product, as these parts continue to rotate for some time.
- Secure the system against unintentional reactivation.
- Maintenance instructions must be followed to prevent damage and excessive wear.
- The product must not be modified.
- The product is only suitable for a 230 V 50 Hz AC system.
- Make sure that the electrical system to which the product is connected fulfils the stipulated conditions.
- The connection systems to the power supply system must allow complete disconnection during Category III overvoltage conditions.
- Do not expose the product to weather conditions.
- Do not place any objects on top of the device.
- Regularly inspect the product for defects. In case of defects, switch off the product and contact your installer or the Itho Daalderop service department immediately.
- Never switch off the product except when:
 - The product does not function properly.
 - You want to clean the product.
 - Want to carry out maintenance on the device.
 - The government advises to close windows and doors in case of calamity.
- Take care not to damage the electrical circuit.
- Do not use the unit for extracting water boilers, heating systems, etc.
- Make sure that the appliance drains into a drain that is suitable and laid out for this purpose and that drains to the outside.
- Keep valves free and clean.
- If the power cable is damaged, it must be replaced by the manufacturer, his agency or a qualified person in order to avoid danger.
- The user/consumer must not open the device.

*) A recognised installer is an installer working at a central heating or mechanical installation company that is registered with the Chamber of Commerce and listed in the SEI recognition register (Stichting Erkenning Installatiebedrijven) or that has Sterkin recognition.

1.1.1. Standards and guidelines

Warning!

The specifications and settings of the appliance comply exclusively with the standards and laws of the country in which the appliance is sold.

Applications outside this country can lead to very dangerous situations!

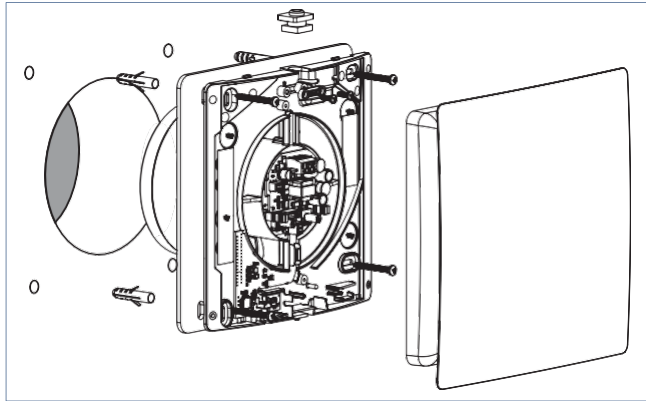
The installer must ensure that the entire installation meets the legal requirements, the regulations contained in this document and any other applicable manufacturer's documentation.

For all legal requirements and regulations, supplements, amendments or legal requirements and regulations that come into force later apply at the time of installation.

After installation, there must be no more safety, health and environmental risks in accordance with the applicable CE directives. This also applies to other products included in the installation.

2. Product information

The BTV-ssst is a fan with a propeller for direct air extraction, possibly via a short pipe, suitable for installation in the wall or ceiling.



2.1. Versions

Article	Type	Description
53-00355	BTV-ssst	Bathroom and toilet fan white, choice of 2 speeds*
53-00356	BTV-ssst T	Bathroom and toilet fan white, choice of 2 speeds, and Timer*.
53-00357	BTV-ssst HT	Bathroom and toilet fan white, choice of 2 speeds, timer and Hygrostat*

These versions are equipped with a non-return valve. The purpose of the non-return valve is to prevent cold air (draught) when the fan is switched off. It also helps to prevent the hygrostat from unintentionally starting up due to condensation when the temperature drops at night.

2.2. Technical specifications

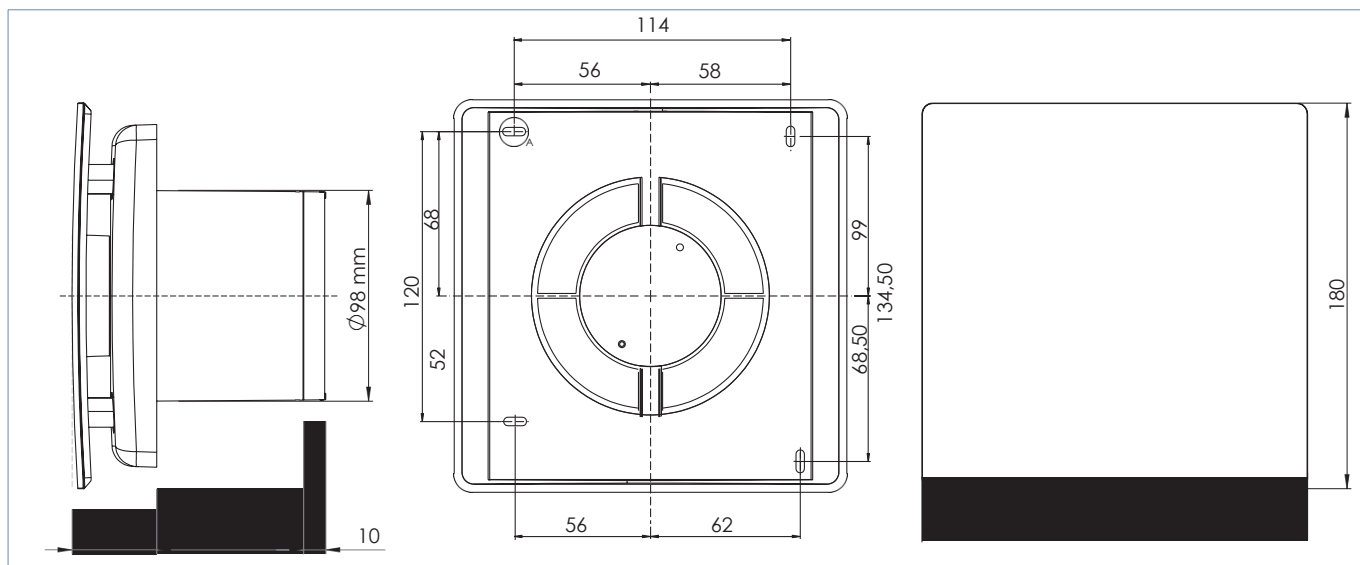
Description	Symbol	Unit	BTV			
			BTV-ssst		BTV-ssst T	BTV-ssst HT
DIMENSIONS AND WEIGHT						
Dimensions (HxWxD)	- —	mm	180 x 180 x118			
Weight	- —	kg	0,69			
CONNECTIONS						
Outer diameter	- —	mm	Ø 98 external			
GENERAL						
Colour	- —	- —	RAL 9003			
IP classification	- —	- —	IPX4*			
Safety class	- —	- —	II; double insulated			
Supply voltage	- —	- —	~ 230V - 50Hz			
Power connection	- —	- —	zero +switching wire	zero + phase + switch wire	zero + phase + switch wire	
Post-running time (adjustable)	- —	minus	-	3-25		
Bearings	- —	- —	Plain Bearings			
TECHNICAL PARAMETERS						
Maximum flow rate at high flow setting		m3/h	78			
Maximum flow rate at low flow setting		m3/h	45			
Electrical input power of the fan drive, at high quality	- —	W	10,4			
Electrical input power of the fan drive, at low position	- —	W	4,8			
APPLICATION						
Temperature range		°C	0-40			
Relative humidity range		%	5-95 (non-condensing)			

* According to standard IEC 60529 2001-02

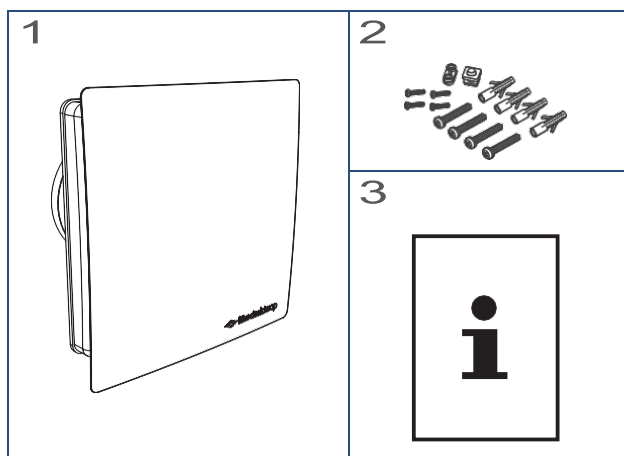
2.3. Product card information

Itho Daalderop		BTV			
Description	Symbol	Unit	BTV-ssst	BTV-ssst T	BTV-ssst HT
Specific energy consumption class	- —	- —	F	D	D
Specific energy consumption, under cold climate conditions	SEC	kWh/(m².a)	-23	-48	
Specific energy consumption, under moderate climate conditions	SEC	kWh/(m².a)	-9	-23	
Specific energy consumption, under warm climate conditions	SEC	kWh/(m2.a)	-2	-9	
Type of ventilation unit	VE	- —	Residential ventilation unit (RVE) One-way ventilation unit (EVE)		
Type of drive	- —	- —	On/Off		
Type of heat recovery system	HRS	- —	No		
Thermal efficiency of the heat recovery system	ηt	%	Not applicable		
Maximum flow rate	qmax	m3/h	78		
Electrical input power of the fan drive, at maximum flow rate	Pmax	W	10,3		
Sound power level	LWA	dB	50		
Reference flow	qref	m3/s	0,0217		
Reference pressure difference	ΔPref	Pa	10		
Specific input power	SPI	W/(m3/h)	0,132		
Ventilation control	- —	- —	Manual control (no DCV)		
Control factor	CTRL	- —	Manual	Local	
Percentage for external leakage for one-way ventilation units with air ducts	- —	%	Not applicable		
Instructions for installing regulated suction/intake extraction grilles in the facade for natural air intake/exhaustion	- —	- —	Not applicable		
Instructions for pre-assembly/disassembly	- —	- —			
Airflow sensitivity to pressure variations at + 20 Pa and - 20 Pa	- —	- —	Not applicable		
Air tightness between inside and outside	- —	- —	Not applicable		
Annual electricity consumption	AEC	kWh	182	118	
Heating saved annually, under cold climate conditions	AHS	kWh	2732	5131	
Annual heating savings, under moderate climate conditions	AHS	kWh	1397	2623	
Heating saved annually, under warm climate conditions	AHS	kWh	632	1186	

2.4. Scale drawings



2.5. Scope of delivery



Legend

- | | |
|---|-----------------|
| 1 | Fan |
| 2 | Fixing material |
| 3 | Documentation |

2.6. Unpacking and checking

- Carefully take the equipment out of the box.
- Check the nameplate data and the type for correctness as shown on the sticker on the box.
- Check the equipment for damage and completeness.
- Check whether the appliance is packed with the necessary documentation and accessories.

2.7. Arrangements

2.7.1. Standard regulation

The BTV-ssst is the standard version with standard control only. With this standard control, the fan starts ventilating at high speed as soon as it is switched on and continues until it is switched off by the (light) switch.

2.7.2. Timer control

The BTV-ssst T and BTV-ssst HT are equipped with a time switch and are ideal for applications where post-ventilation is required, such as in toilets. The fan is switched on via the light switch or a separate switch and continues to run for approximately 10 minutes after it has been switched off. The so-called follow-up time is set at approx. 10 minutes on delivery. If required, this time can be changed by turning the potentiometer.

2.7.3. Hygostat and timer control

The BTV-ssst HT is equipped with a timer and a humidity control and is ideal for applications where humidity control and post-ventilation are required, such as in bathrooms, showers, laundry rooms and kitchens.

Switching to high mode by the humidity control occurs automatically if the humidity level in the room exceeds the set value. The switching point (relative humidity) is adjustable between 40% and 95% by means of the setting potentiometer. After the relative humidity has fallen to the setpoint,

the fan will continue to run at high speed for the set follow-up time.

Upon delivery, the humidity control is set to approximately 75%.

2.7.4. Operating the fan

The BTV-ssst is operated using the light switch or a separate switch. As soon as the switch is turned on, the fan switches on. As soon as the switch is turned off, the fan also switches off or continues to run temporarily, depending on the control.

2.8. Recycle

Sustainable materials have been used in the manufacture of this product. This product must be disposed of responsibly at the end of its life cycle. The government can provide you with information about this.

The product packaging is recyclable. These materials must be disposed of responsibly and in accordance with official regulations.



In order to draw attention to the obligation to separate batteries from household electrical waste, the product bears the symbol of a waste bin with a cross through it. This means that the product must not be disposed of with normal household waste at the end of its service life. The product must be taken to a specialised waste collection centre in the municipality or to a point of sale that provides this service.

The separate disposal of batteries and household appliances avoids possible negative consequences for the environment and health caused by inappropriate treatment. It ensures that the materials that make up the appliance can be recovered to achieve significant savings in energy and raw materials.

3. Installation

3.1. Installation requirements

Please observe the following before installation: Mount the BTV:

- At a height of 2.3 metres above the ground in the wall, or in the ceiling (not in the floor or in a sloping wall!).
- In a room where there is sufficient supply air.
- in the vicinity of a 230 V, 50 Hz wall socket.

Warning!

The fan should discharge the exhaust air directly to the outside.

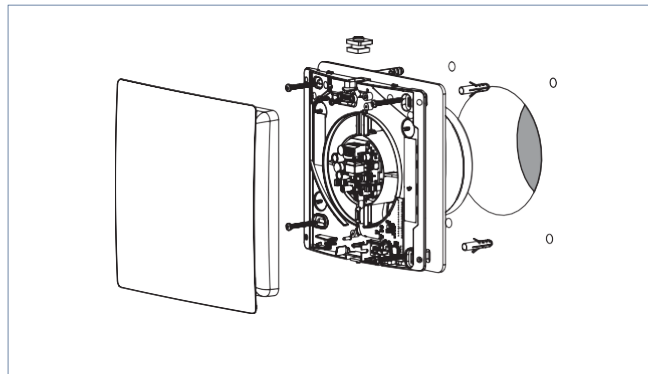
Warning!

The duct to the outside must be leak-tight connected to the fan and installed at a slope.

Ensure low resistances by using as many short, straight and smooth ducts as possible. When using flexibles, we recommend using a larger duct diameter. Also use a wall duct with low resistance.

3.2. Installing the fan

The bathroom toilet fan BTV-ssst should be mounted in the wall or ceiling.



Mount the fan as follows:

- a) Make sure that any remaining dirt is removed from the hole.
- b) Check whether there is a power supply connection at the location where the fan is to be installed.

The fan is suitable for a connection diameter of 100 mm. Placement against a connection diameter up to 125 mm is possible, but may slightly affect performance.

Warning!

When using a cable tray, a suitable power cable with an outer diameter of 5 to 7 mm must be passed through the rubber cable duct and strain relief provided.

Warning!

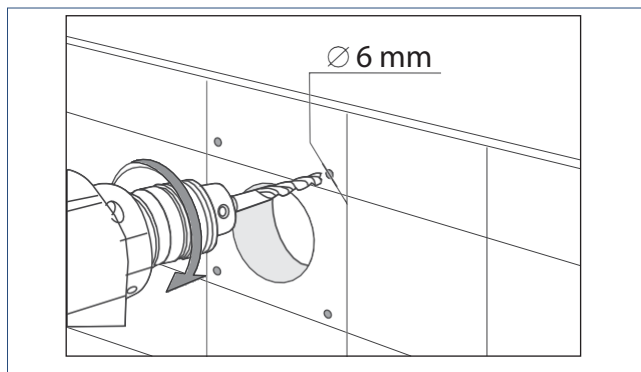
Before starting the electrical installation (connecting the wiring), de-energise the group to which the fan is connected. Do not re-energise the group until AFTER the installation has been completed.

Warning!

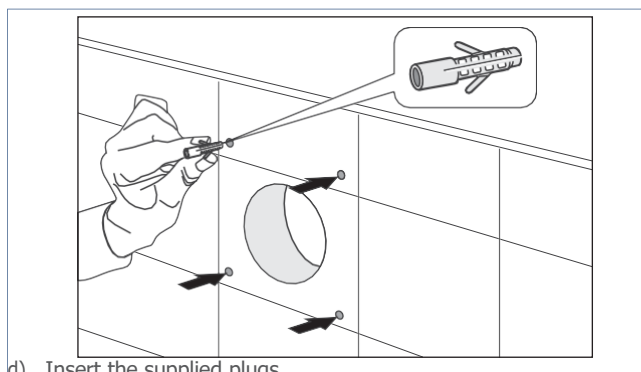
Never connect the device with an extension lead!

Warning!

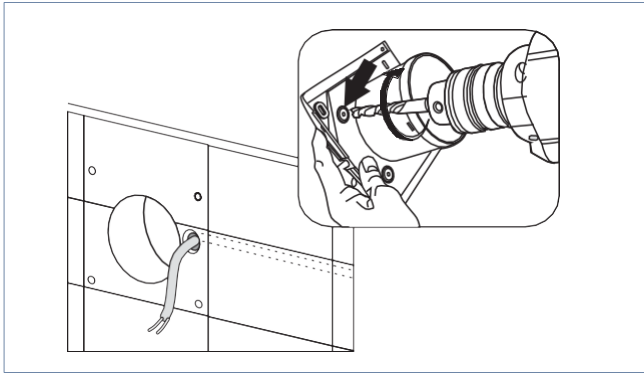
Never connect the device with a damaged power cable!



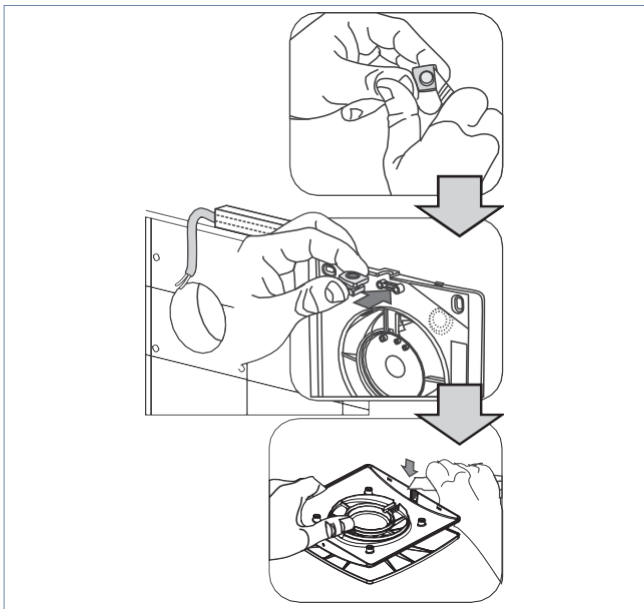
- c) Drill the necessary holes for the plugs supplied. Use the rear part of the fan itself as a marking template or use the dimensional drawings.



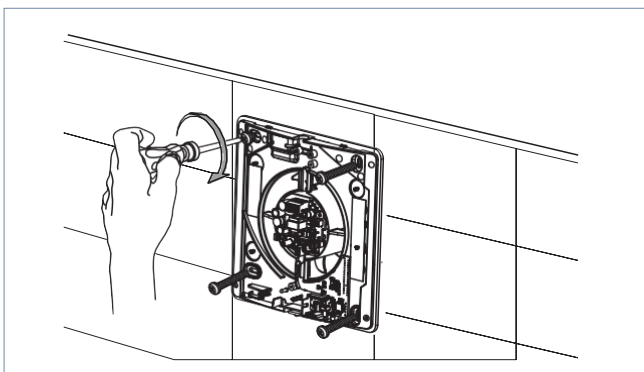
- d) Insert the supplied plugs.



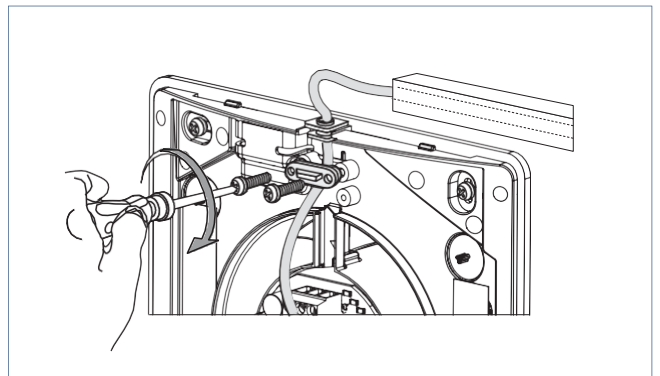
- e) Drill a hole for the power cable in the rear of the enclosure, or go to step f if a cable tray is used. Go to step h if no cable tray is used.
- f) Power supply connection with cable duct:



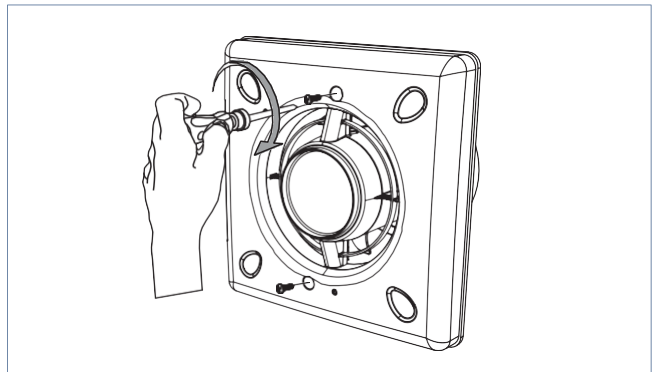
- g) Prepare and mount the supplied wire grommet on the top side.
- h) If necessary, set the desired flow rate according to the section Setting the flow rate.



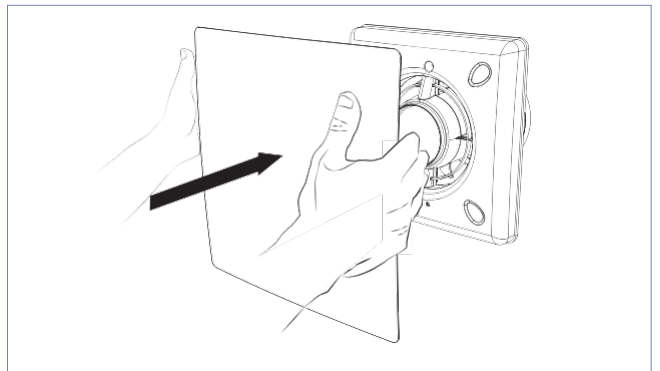
- i) Place the fan (with the supplied white foam between the wall and the fan to reduce vibrations and air leakage) and screw it into the wall or ceiling.



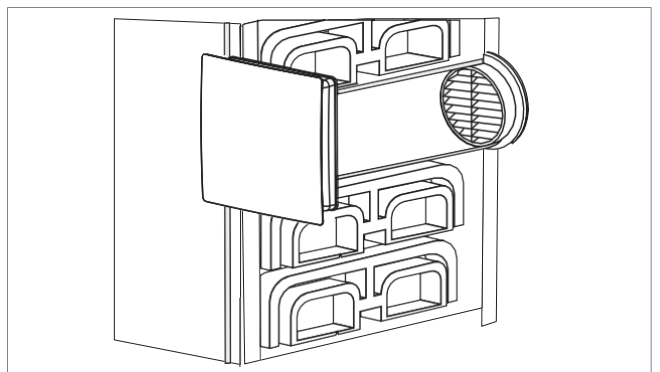
- j) Mount the cable with the supplied strain relief. Connect the wiring as indicated in the chapter "Connecting the power supply".



- k) Mount the cover plate on the fan and screw it on.



- l) Replace the housing.



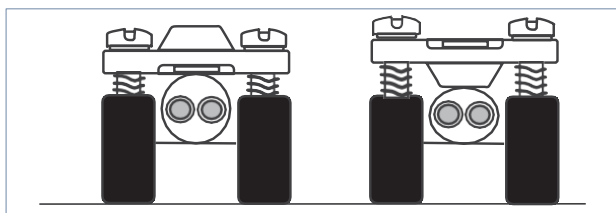
Note

Use a short duct and outer wall grille with as little resistance as possible.

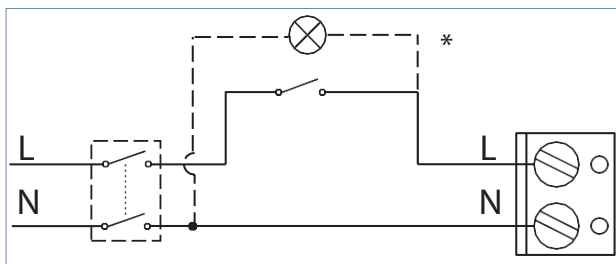
3.3. Electric connection

Warning!

When using a cable tray, a suitable power cable with an outer diameter of 5 to 7 mm must be passed through the rubber cable duct and strain relief provided.

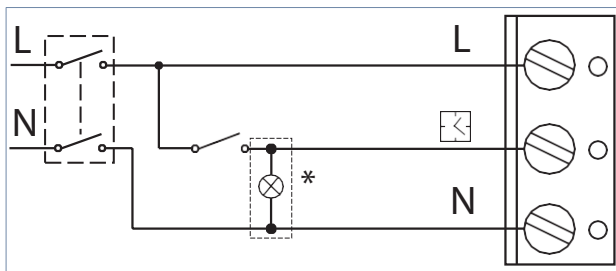


Mounting the power cable under the strain relief



Connection diagram BTV-ssst

Connection of light point

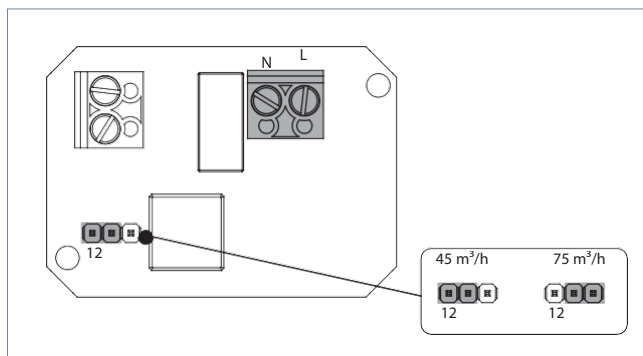


Wiring diagram for BTV-ssst T and HT

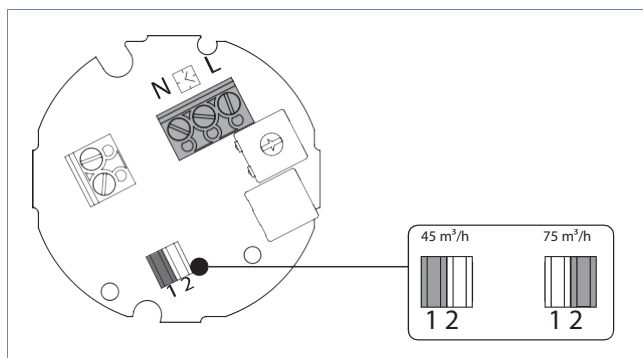
* Connection of light point

3.4. Setting the flow rate

The ventilation flow rate of the fan is adjustable. By default, the flow rate is set to position 1, the low speed (45m³/h). By removing the jumper and replacing it in position 2, the fan is set to a higher flow rate (75m³/h).



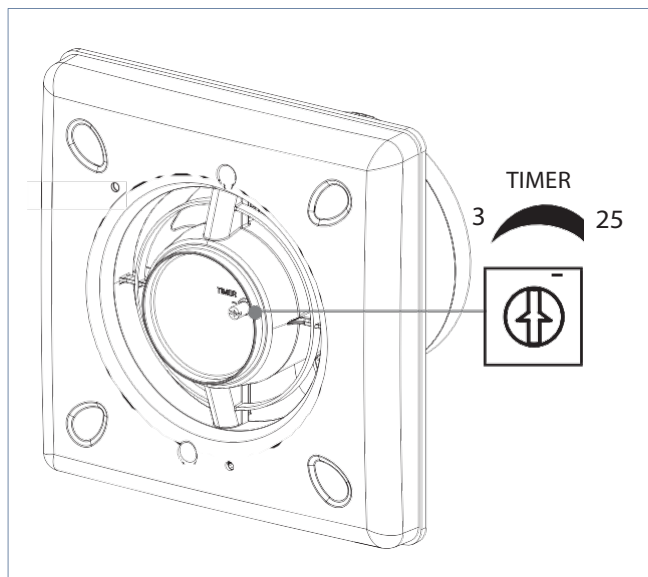
Jumper positions for the BTV-ssst



Jumper positions for the BTV-ssst T and HT

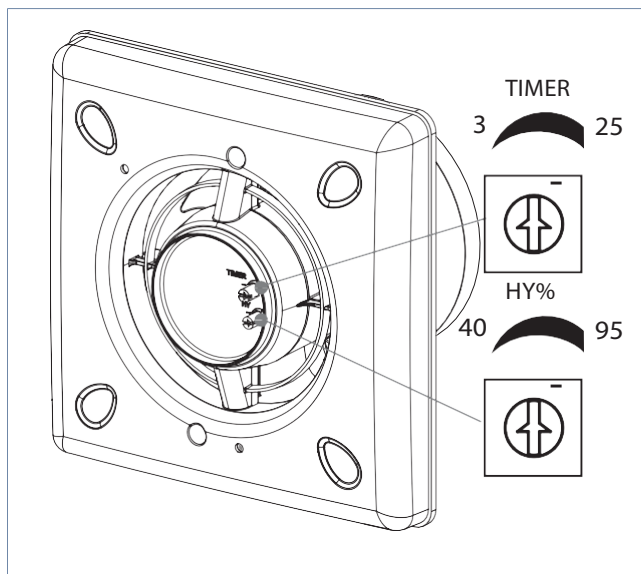
4. Set up

4.1. Setting the Timer



The timer (delay time) can be set. On delivery, the shut-off delay is set to approximately 10 minutes. If required, this time can be altered by turning the adjusting potentiometer (behind the curved trim panel) from 3 minutes (anti-clockwise) to 25 minutes (clockwise). The time must be determined by experiment.

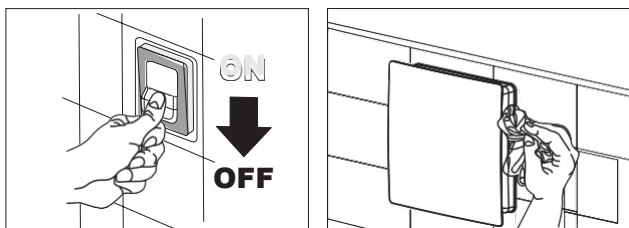
4.2. Setting the Hygostat



Switching on by the humidity switch takes place automatically if the humidity level in the room exceeds the set value. The switching point (relative humidity) can be set between 40% (counterclockwise) and 95% (clockwise) by means of the setting potentiometer. The adjusting potentiometer is located behind the decorative plate.

5. Service & Maintenance

The fan requires little maintenance. Wiping with a slightly damp cloth is usually sufficient.



Warning!

If the fan is internally contaminated, it must be cleaned by a recognised installer. The user/consumer must not unscrew the device. However, the decorative cap (magnetic lock) can be removed to wipe the surfaces with a slightly damp cloth.

6. Faults

Warning!

The user/consumer must not open the device!

The fan does not run any more

Cause	Solution
a) The main switch is in the OFF position.	<ul style="list-style-type: none"> Set the main switch to On.
b) The fan is not (properly) electric connected.	<ul style="list-style-type: none"> Connect the fan correctly electrically.
c) The fan is jammed due to extreme contamination.	<ul style="list-style-type: none"> Clean the fan. Internal cleaning may only be carried out by a The work must be done by a recognised installer.
D) The fan is defective.	<ul style="list-style-type: none"> Replace the entire fan.

The fan makes (too) much noise

Cause	Solution
a) The fan is not properly mounted.	<ul style="list-style-type: none"> Mount the fan correctly (with the supplied with dowels and screws).
b) The drain has a lot of resistance.	<ul style="list-style-type: none"> Clean the duct. Internal cleaning may only be carried out by a The work must be done by a recognised installer.
c) The fan moves too much air.	<ul style="list-style-type: none"> Change the flow settings. See chapter 3.4.
d) The fan is running.	<ul style="list-style-type: none"> Clean the fan. Internal cleaning may only be carried out by a The work must be done by a recognised installer.
e) The fan is jammed due to deformation of the housing. The ring in which the non-return valve mounted is taken off	<ul style="list-style-type: none"> Replace the attachment ring on the round housing part. The non-return valves may be removed.
f) The fan is defective.	<ul style="list-style-type: none"> Replace the entire fan.

The fan does not discharge enough air

Cause	Solution
a) The flow rate setting of the fan is too low.	<ul style="list-style-type: none"> Change the flow settings. See chapter 3.4.
b) The installation has too much resistance (dirt, long, curved, flexible duct, external wall grille is closed, etc.).	<ul style="list-style-type: none"> Remove the resistors from the fan. Internal cleaning may only be performed by a recognised installer be done.
c) Insufficient air supply in the room.	<ul style="list-style-type: none"> Make sure that sufficient air can be supplied, for example at least 3 cm under the door.

7. Warranty

For all Itho Daalderop products, a standard factory guarantee of two years applies. Within this period, the product or its parts will be repaired or replaced free of charge.

Provisions and exclusions are included in our guarantee conditions.

Please refer to the product's page on our website for full warranty terms and/or additional warranty terms or conditions.

If there are problems with the operation of our product, we advise the consumer to consult the manual first. If the problems persist, please contact the installer who installed the product or the Itho Daalderop service department. You will find the contact details at the end of the manual or on our website.

8. Statements

EC declaration of conformity

Itho Daalderop Group BV
PO Box 7
4000 AA Tiel
Netherlands

Declares that the following ventilation units comply with the following directives and standards.

- BTV-ssst: Bathroom and toilet fan choice of 2 speeds
- BTV-ssst T: Bathroom and toilet fan with timer and choice of 2 speeds
- BTV-ssst HT: Bathroom and toilet fan with timer and humidity sensor and choice of 2 speeds

DirectivesHarmonised	European standards
Directive 2009/125/EC (Ecodesign)	-EN ISO 5801:2017
Directive 2011/65/EU	EN IEC 63000:2018
Directive 2014/30/EU (EMC)	<ul style="list-style-type: none">- EN 55014-1:2017+A11:2020- EN 55014-2:1997 +AC:1997 +A1:2001 +A2:2008- EN 62233:2008 +AC:2008- EN 61000-3-2:2014- EN 61000-3-3:2013
Directive 2014/35/EU (LVD)	<ul style="list-style-type: none">- EN 60335-1:2012 +AC11:2014 +A13:2017 +A1:2019 +A2:2019 +A14:2019- EN 60335-2-80:2003 +A1:2004 +A2:2009

Tiel, 1 April 2021.



Coen Schut
Innovation Manager Ventilation

Netherlands

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