



# Air Curtain

## Li-Pico II 100/150/200/250 S IR

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# USER'S MANUAL





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# 2.0 Foreword

## Thank you for choosing Stavoklima!

At Stavoklima we believe in *quality, performance* and *cost-effectiveness*. All our products are hand-built in the Czech Republic, in the heart of Europe, from the best components available. We produce all the metal parts ourselves from carefully selected metal sheets using high-end metal processing machines. We apply very strict quality control from the very beginning of the production process to the moment of delivery to your door. Customer's satisfaction is our highest priority.

The core component of every air curtain are the fans. Inside every Stavoklima unit you will find long-lasting maintenance-free fans from the World fan industry leader – German company Ziehl-Abegg.

The custom-made control unit reflects over 25 years of experience and presents wide variety of control options with high level of reliability. All internal electronics were tested for climatic conditions in the Middle East.

Stavoklima air curtains are made to last & perform. We bring you the European standard of indoor climate protection.

Compliance chart:

	ErP 2015 Fan efficiency European norm
	CE mark Compliant with European Standards
	SASO Certificate Certified for Saudi Arabian market by Intertek institute
	STAVOKLIMA® Quality Control Stavoklima-specific high-degree quality assurance program

# 3.0 Introduction

The Li-pico II IR air curtain is an ideal solution for shops, boutiques, restaurants, households, banks and hotels where compact and effective protection of inner climate is required. The Li-pico II IR air curtain is designed for wall mounting over the door with alternative ceiling mounting options (accessory for ceiling mounting not part of the standard delivery) and offering wide variety of control options.

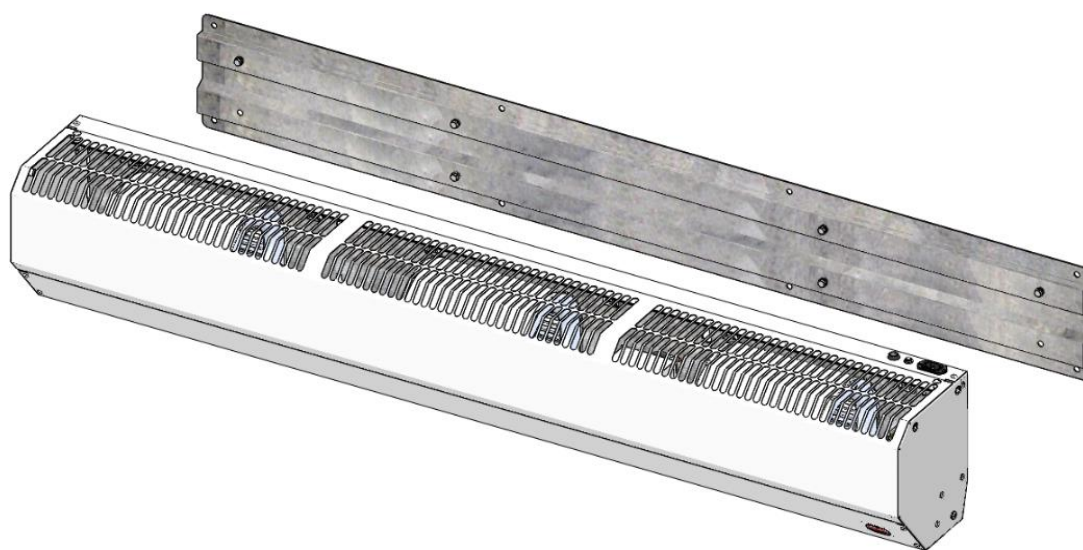
An air curtain significantly contributes to saving costs on air conditioning or heating. It does not only protect the indoor climate, but also prevents dust, insect, odors and other airborne particles from getting indoors.

The air curtain can be operated manually using the remote controller or automatically via magnetic door contact. The supplied remote controller is based on IR technology and it requires visual contact with the air curtain. In conjunction with supplied door contact it constitutes an autonomous system that is switched ON only when needed. The integrated timer complements the longevity of the unit and provides stable operation in situations where doors are opened and closed with high frequency.

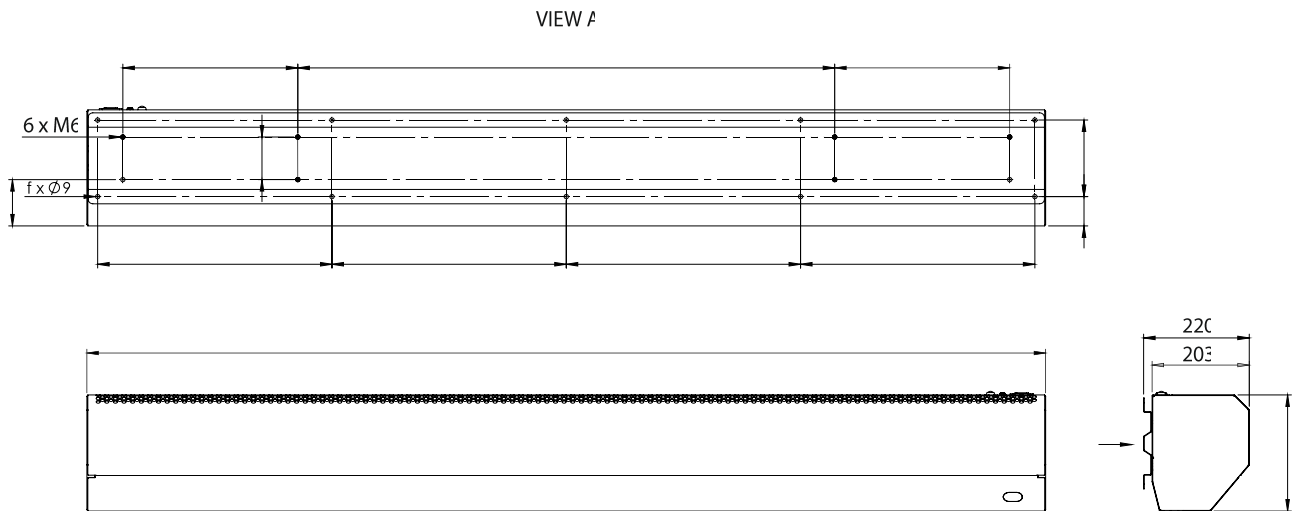
The unit uses high-performance maintenance-free radial fans to generate air barrier in the door area separating the indoor from the outdoor. The outlet should not be blocked by any objects in the direction of exiting air.

The unit is fully capable of running 24/7.

The default paint is RAL 9010 (pure white), side panel in RAL 9007 and galvanized wall rail.



# 3.1 Dimensions



Air curtain		<i>Li pico II IR 100 S</i>	<i>Li pico II IR 150 S</i>	<i>Li pico II IR 200 S</i>	<i>Li pico II IR 250 S</i>
A	mm	1000	1500	2000	2470
B	mm	125	620	1120	520
E	mm	360	365	365	450
f	mm	6	8	10	12
F	mm	480	485	490	485

## 3.2 Product info

Li-pico II IR is the compact variant of the Li product line. It is designed for standard door size not higher than 2.5 meters. Despite its compact dimensions, it is equipped with radial fans with outstanding performance. The air volume is being equally distributed across the entire width of the outlet thanks to specifically angled air chamber (plenum). The height of suspension is informative and has to be considered according to building conditions.

## 3.3 Technical parameters

Technical specifications		<i>Li pico II IR 100 S</i>	<i>Li pico II IR 150 S</i>	<i>Li pico II IR 200 S</i>	<i>Li pico II IR 250 S</i>
Air volume (fan speed 4, 3, 2, 1)	m <sup>3</sup> /h	1375	2050	2750	3425
		1050	1575	1550	2625
		950	1425	1250	2375
		775	1150	950	1925
Length	mm	1000	1500	2000	2470
Power	V	220	220	220	220
Number of fans	pcs	2	3	4	5
Nominal power	kW	0,4	0,6	0,8	1
Nominal current	A	1,7	2,6	3,4	4,3
IP protection level	IP	20	20	20	20
Controller	type	IR	IR	IR	IR
Outlet width	mm	40	40	40	40
Noise level at 3 m (speed 4/3/2/1)	dB	61/53/47/42	63/54/48/43	64/54/48/43	65/55/49/44)
Weight	kg	23	33	43	53

fan speed voltage: stage 4 - 220V, stage 3 - 180V, stage 2 - 160V, stage 1 - 140V

\* fan speed voltage for Li pico II IR 200 S: stage 4 – 220V, stage 3 - 140V, stage 2 - 120V, stage 1 - 100V








fans: safety margin 15% for 60 Hz voltage frequency

technical data can differ according to product models and installed components

# 4.0 Package contents

Every unit is packed in a paper box made of recycled cardboard protected by polystyrene foam. The air curtain itself is wrapped around in a LDPE bag for additional moisture protection.

The contents of the packaging are the following:

	Li-pico II IR air curtain (1x)
	Remote controller (1x)
	Allen key (1x)
	Wall suspension(1x) with screws (6x)
	Power cord (1x)
	Door contact (1x)
	User's manual (1x)



# 5.0 Unboxing

Before unboxing, please check the integrity of the packaging itself. If you spot any visible damage (dents, creases, deformations, bent corners, etc.) do not continue the unboxing process and report these to the supplier. Unboxing a damaged packaging without reporting back to the supplier passes the responsibility for the condition of the contents of the packaging onto the end user.

During unboxing, check carefully the contents of the packaging and inspect all the parts identified in the previous chapter. If you received extra accessories (aside of the packaging), use common sense and/or supplier's instructions to unbox & inspect these.

Make a record of any damaged parts and report back to the supplier.

Transport and handling must be performed with a relevant equipment with adequate capacity. The packaging should be handled with care and by personnel with relevant qualification only.



**WARNING:** Follow the instructions on labels placed on the unit. Packaged units must not be tilted or placed in positions other than as delivered or recommended by the manufacturer. The packaging also bears the serial number and type of the unit for easy identification of the unit type.



**RECYCLING:** Please recycle the packaging in compliance with your local environmental standards.



**STORAGE:** Storage conditions for unopened packaging is temperature range from -10 °C to +50 °C, humidity 50-85% non-condensing.

## 6.0 Safety precautions

Observe the generally applicable country-specific regulations, in particular CSN 12 2002 and other related regulations. The unit must be disconnected from the mains when performing any service. Connections and grounding of the unit or its parts must comply especially with CSN 332190, 332000-5-51, 33 2000-5-54. Any electrical servicing must be performed by personnel with professional qualification in accordance with Section 6 of CBU Regulation no. 50/78 Coll.

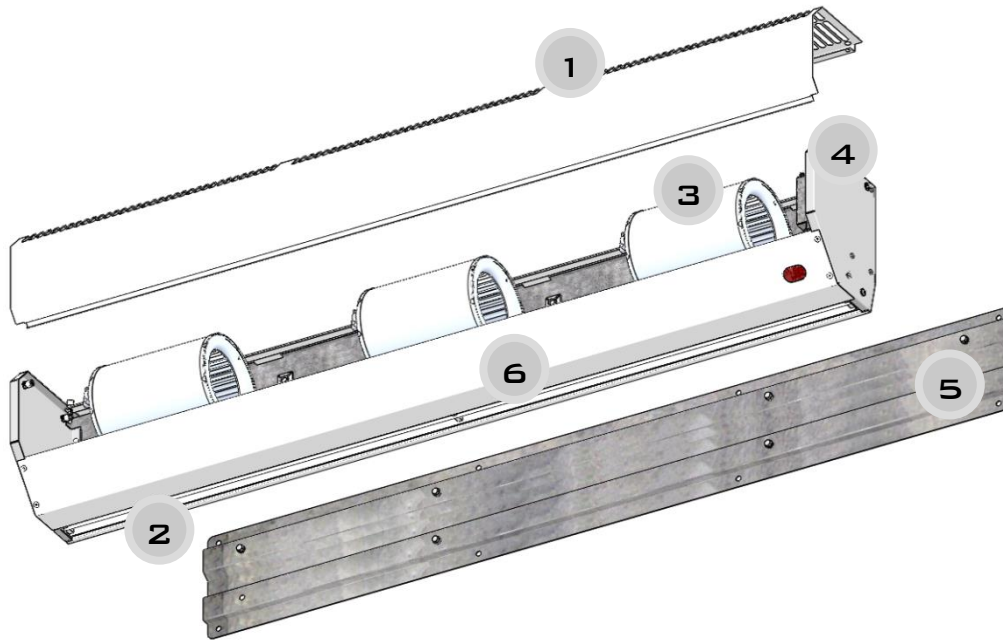
### 6.1 Fire Safety

Observe the country-specific standards and applicable regulations. In particular CSN 061008 – Fire safety of appliances and heat sources, CSN 730823 Fire-technical properties of materials – degrees of combustibility. Install the unit 150 mm from combustible materials of classes B, C1, C2, 400 mm from easily combustible materials (class C3), and 1000 mm in the direction of radiation (air outlet of the unit).



# 7.0 Unit description

The description of the individual parts of the unit is for informative purposes only.  
Disassembly of the unit should be performed by authorized personnel only!



<b>1</b>	Front cover with inlet grill
<b>2</b>	Manually positionable outlet louvres
<b>3</b>	Radial fans with condenser and connection rack
<b>4</b>	Control unit cabinet with IR receiver
<b>5</b>	Wall-mounting bracket
<b>6</b>	Air curtain chasis with angled air chamber (plenum) and IR receiver plastic cover

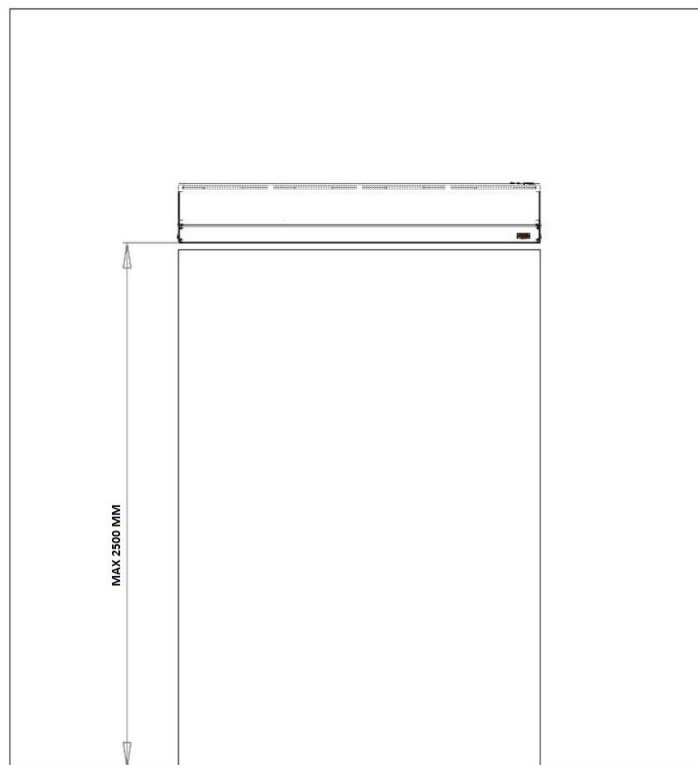
# 8.0 Installation

The air curtain is suspended at four suspension points located on both sides of the unit – two on top right and two on the top left side. Connection is performed using screws with standard M8 threads. These screws are included. During the installation, always make sure all screws and fasteners are used and properly tightened.

Use adequate wall plugs and anchors only. Consider carefully the installation situation and the suitability of used fasteners and anchors as well as the strength of the structure. Make sure the wall is capable of supporting the weight of the unit. The manufacturer is not liable for improperly used wall plugs or other inappropriate fastening or suspending material.

Follow all local safety regulations and use common sense to avoid injury of self or others.

**For proper performance, do not install the unit any higher than 2 meters.**

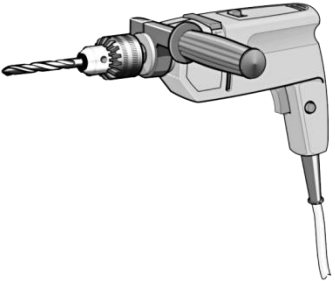








**WARNING:** Installation is performed at one's own risk. Any damage resulting from inappropriate handling is not covered by the warranty.

## 8.1 Required tools

In order to successfully install the air curtain, additional tools are needed. Make sure the selection of the tools corresponds to the material of the wall. If not, alter the required tools list accordingly.

List of recommended tools:

	Electric drill tool (1x) Not part of the packaging
	Wall plug and M8 screw (4x) or other fasteners suitable for given situation Not part of the packaging
	Allen key (1x)
	Chemical anchor (1x) Not part of the packaging
	Water Level (1x) Not part of the packaging
	Ratchet with extension for M8 Not part of the packaging
	Meter measure (1x) Not part of the packaging



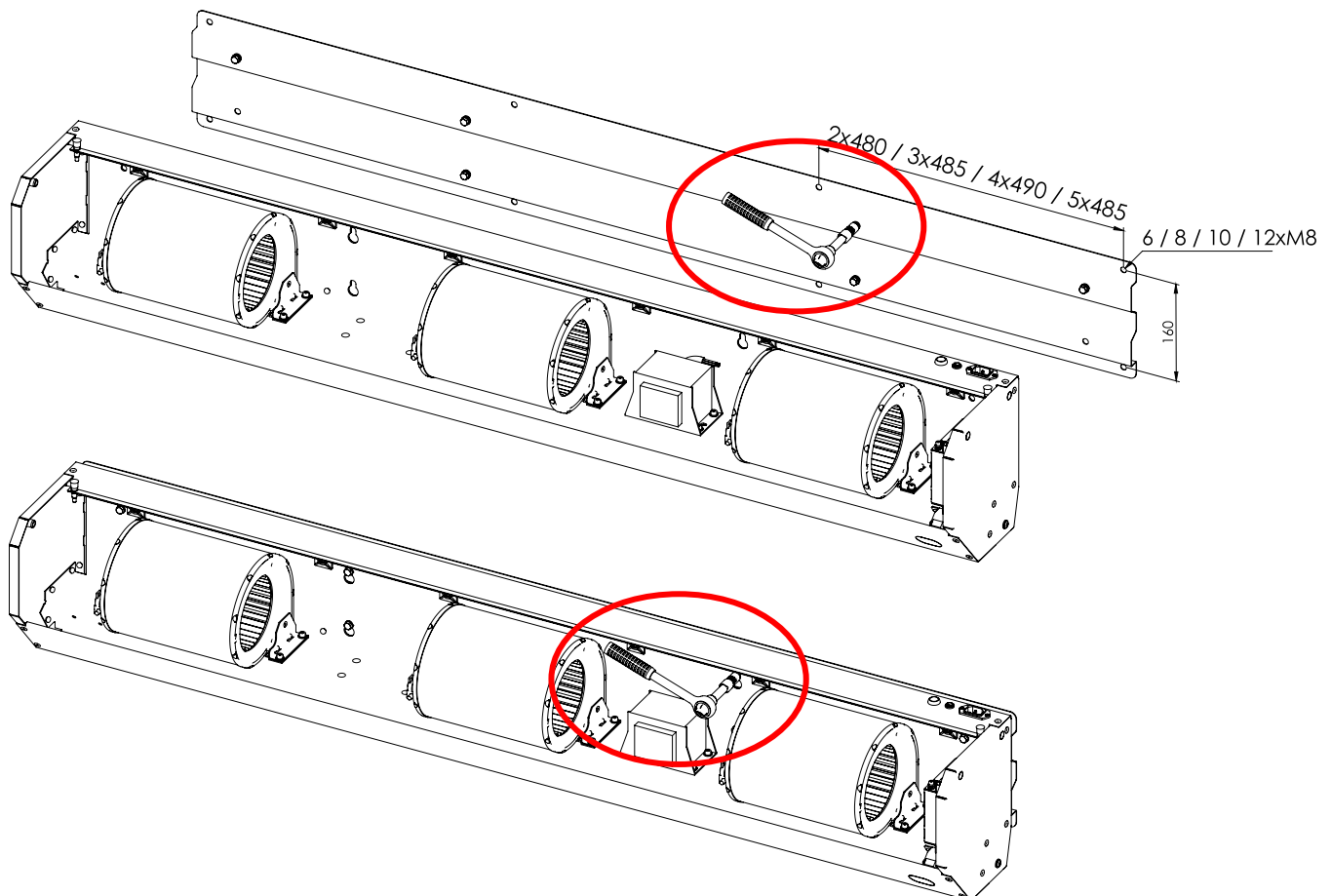
**WARNING:** Any damage resulting from the use of unsuitable tools or inadequate fasteners is not covered by the warranty.

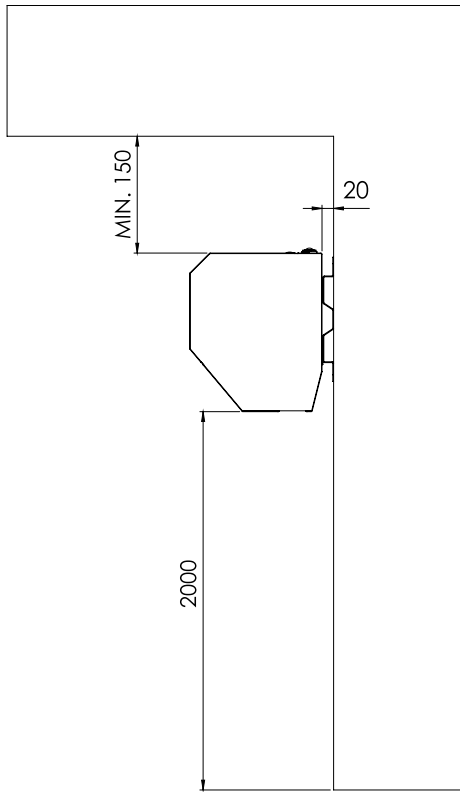
## 8.2 Wall mounting

Please follow these steps in order to mount the air curtain on the wall:

- 1) Using the meter measure and water level, mark the drilling points for the wall brackets on the wall. Follow the drilling spacing at the bottom of this page.
- 2) Drill the holes for wall plugs and anchors. Always use adequate drill bit for selected wall plugs.
- 3) Apply chemical anchor inside the drill holes.
- 4) Insert the wall plugs into the wall.
- 5) Screw in the M8 screws or equivalent fasteners.
- 6) Screw M8 in to the wall ledge (Do not fully tighten (allow approx. 5 mm distance between the screw head and the wall-mounting).
- 7) Allow the chemical anchor to harden (if used).
- 8) Lift the air curtain using appropriate handling tools.
- 9) Hang the curtain on the screws by inserting through the holes in the backplate of the curtain.
- 10) Control if the curtain is stabilized in oval holes and tighten the screws.
- 11) After that fix the curtain by the screws, which are placed in the circular holes on sides of the curtain.  
(holes are placed approx. 10cm from the sides.)
- 12) Control and eventually tighten all screws that are mend for hanging.
- 13) Tighten the screws. If done properly, the wall bracket should be tightly attached to the wall.
- 14) Lift the air curtain using appropriate handling tools.

### Drilling spacing and recommended mounting





The unit should be supported for the entire time until all four screws are properly fastened.

When mounted, make sure the unit is stable and fit for operation. Check the wall around the mounting points regularly.



**WARNING:** Use suitable lifting equipment and keep the unit secured for the entire time of the installation. Any damage resulting from the use of inadequate lifting equipment or handling is not covered by the warranty.



**ALTERNATIVE MOUNTING:** If conditions does not allow wall mounting, please contact the supplier for alternative mounting options.



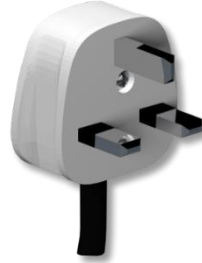
**OPTIMAL MOUNTING:** In order to achieve the best performance, make sure the unit is centered above the door, it covers the entire width of the door and it is mounted in proximity of the top of the door. The offset of the door shouldn't exceed 30 cm.

## 8.4 Connecting the unit

The air curtain requires connection to electrical network of 220 V (AC) at 60 Hz using TYPE G electrical connector (UK plug) with circuit breaker rated to 13 A. Therefore a BS 1363 electrical socket is required (British Standard 13 A socket-outlet) for powering the air curtain:



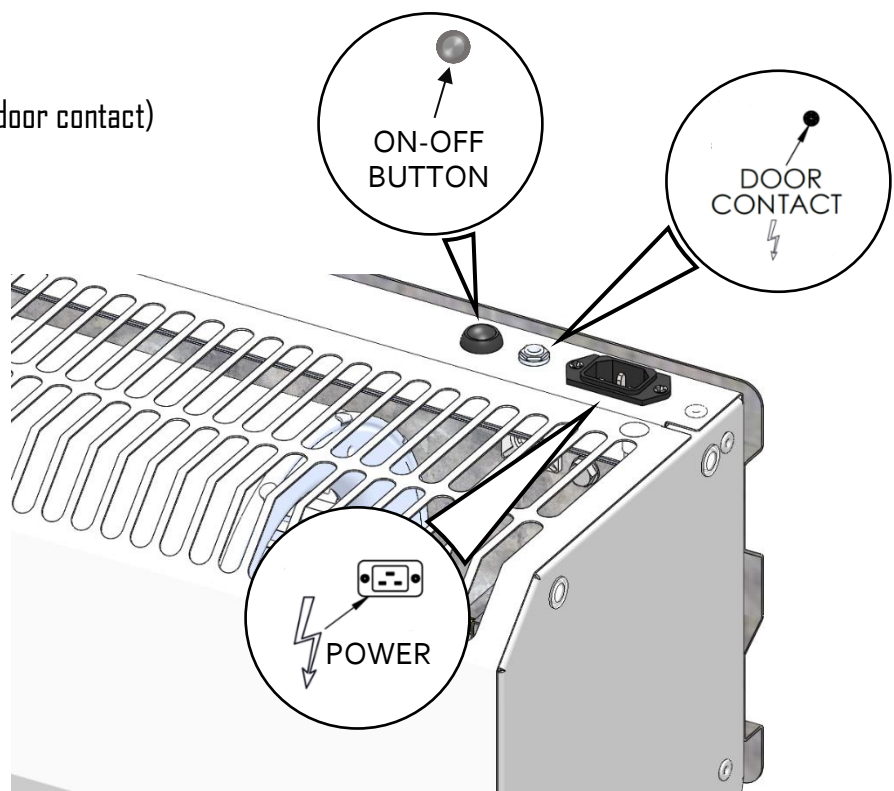
BS 1363 (TYPE G) socket



BS 1363 (TYPE G) plug

Connecting points are located on the top of the unit. Please use only supplied power cable and door contact.

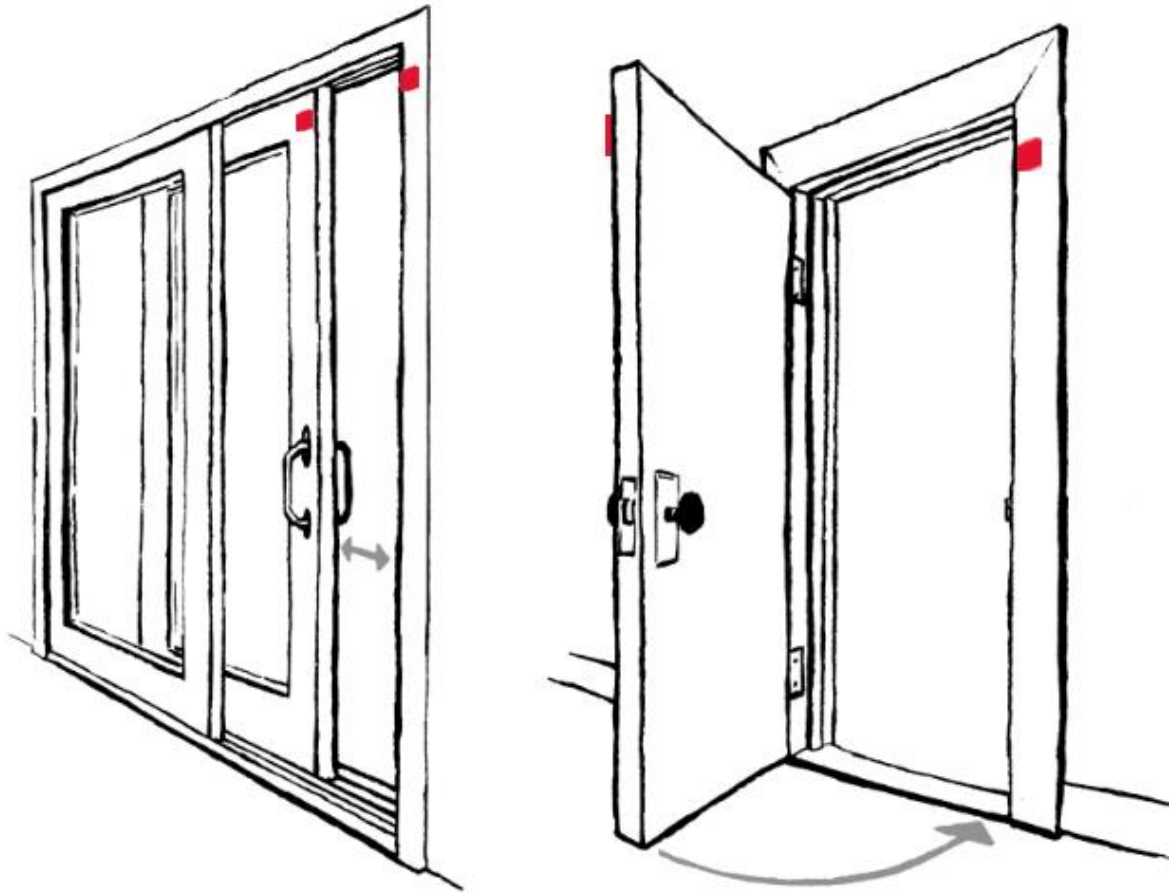
Connection points (Power + door contact)



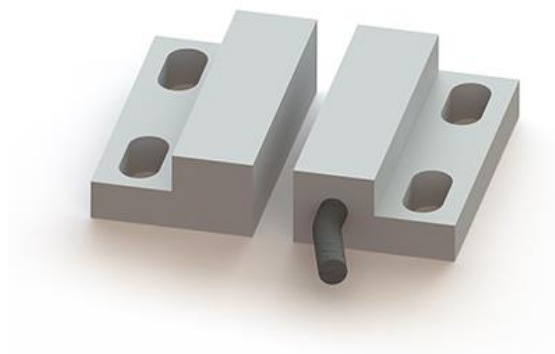
**WARNING:** Connecting is performed at one's own risk. Prior to connecting the air curtain to the electrical network, check the integrity of all supplied cables. If you detect any damage, do not connect the unit and contact the supplier. Any damage resulting from inadequate handling is not covered by the warranty.



The supplied door contact can be used with both – sliding door and standard door. The sensor (part with cable attached) is meant to be mounted on the door frame. The magnet (part without cable) should be placed on the moving part of the door in a spot where it meets its counterpart mounted on the door frame. The distance of magnet and the sensor should be as close as conditions allow.



Installation spots on sliding and standard door



Magnetic Door contact



**OPTIMAL MOUNTING:** Use self-tapping screws for mounting the door contact into position. If the situation doesn't allow solid fastening method, use heavy duty glue to secure the door contact in place. Prior to permanent mounting, tape the door contact to the door and test the functionality.

## 8.5 Commission

Prior to the first startup of the unit, check the following:

- integrity of the unit's covers and chassis
- stability of mechanical mounting and anchoring of the unit
- proper connection of the power cable and the door contact
- sufficient circuit breaker in the electrical cabinet supervising the electrical socket the unit uses
- absence of mechanical objects or debris in and around the unit

After positive checkup of the unit the air curtain can be turned ON by pressing **RED** power ON button on the remote controller. From this point the fans of the unit should be working and air should be coming out of the unit's outlet.



**STARTUP ISSUES:** If you encounter difficulties commissioning the unit, refer to the Troubleshooting chapter (11.0) prior to contacting the supplier.

Follow the steps!



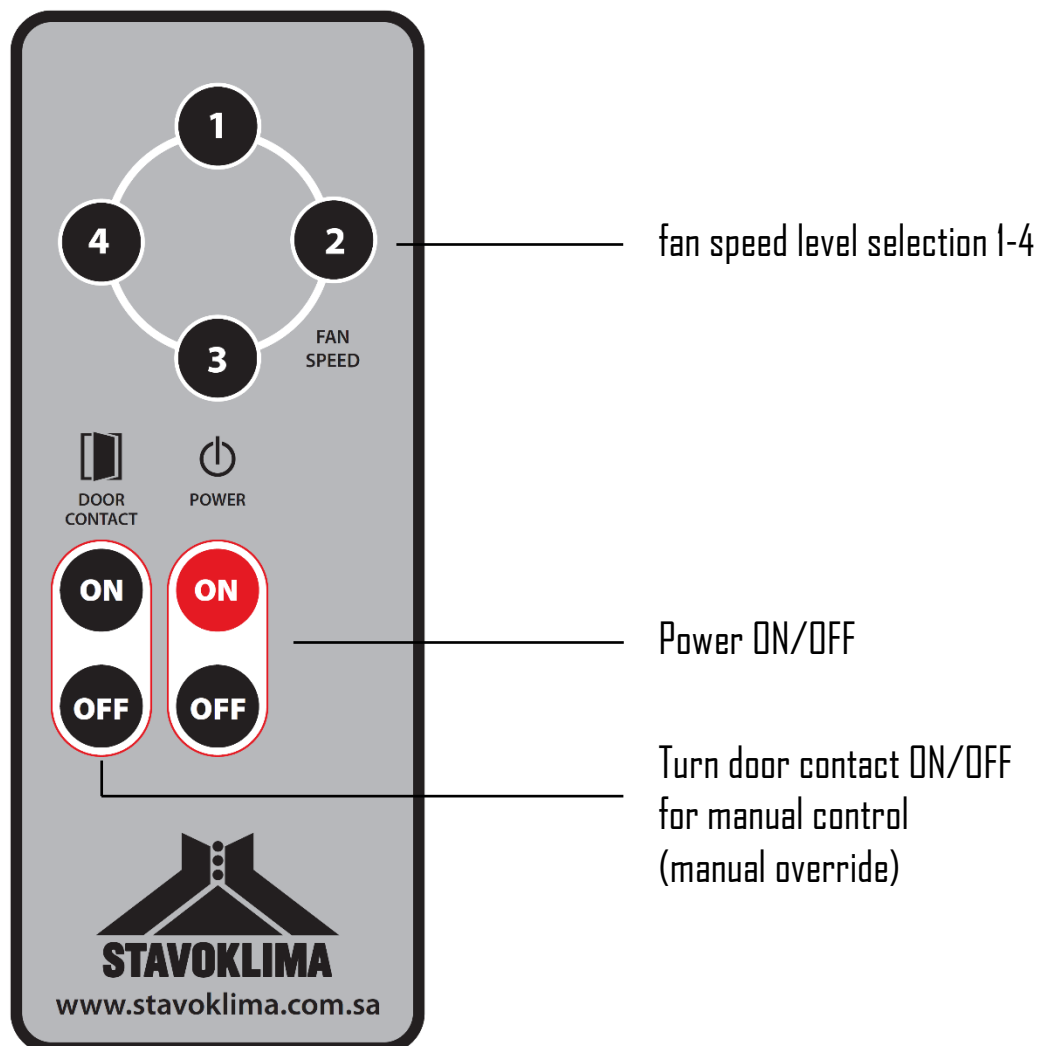
# 9.0 Remote controller

The air curtain is controlled using a remote IR (infrared) controller that is supplied with the unit. For reliable control, visual contact between the unit and the remote controller is required. Pointing the remote controller at the air curtain is an important factor of a successful control. The air curtain reacts to successful reception of a command with a blink of a red LED indicator.

The controller is universal and can be used to control any Stavoklima air curtain equipped with IR receiver.

## 9.1 Buttons

The command is repeated as long as a button is pressed. The buttons have the following functions:

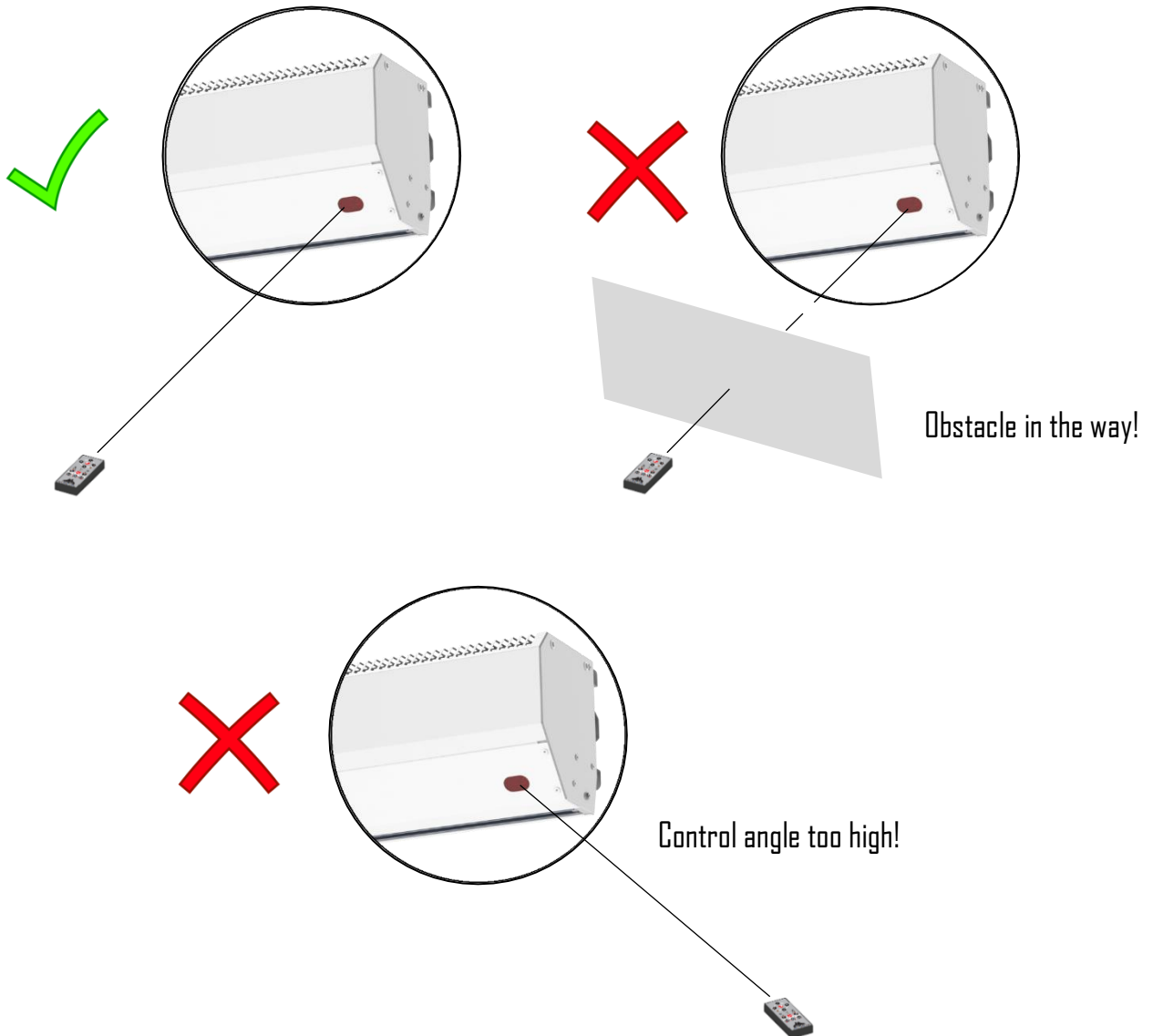


## 9.2 Control Range

For optimal use, make sure the remote controller has direct line of sight with the receiver of the air curtain (the red rounded-shaped plastic window) and no obstacles are located in the way. The angle of control should have minimal deviation.







**WARNING:** The range of the remote controller can be decreased by many factors (low battery, room layout, insufficient visual contact, not pointing the remote controller directly at the IR receiver, etc.). Suboptimal control range do not establish a legitimate argument to raise a claim.





## 9.3 Fan Speed Regulation

Four different fan speed levels can be selected using the IR remote controller. Higher fan speed levels entail decreased sound comfort and vice versa. Changing fan speed levels with door contact enabled does not require the door to be opened.

	<b>First fan speed level</b> The fans are set on low speed
	<b>Second fan speed level</b> The fans are set on medium speed
	<b>Third fan speed level</b> The fans are set on high speed
	<b>Fourth fan speed level</b> The fans are set on maximal speed



## 9.4 Door Contact

The remote controller is equipped with door contact switch that enables switching between autonomous control (door-controlled) and manual control. To preserve the longevity of the fans, the door contact has integrated timer that keeps the air curtain running for 10, 30, 60, or 300 seconds after the door close. If the door are opened during this period, the 10, 30, 60, or 300 seconds interval resets and starts over.

	<b>Autonomous mode activated</b> The air curtain is controlled by the door contact
	<b>Manual mode activated</b> The air curtain is controlled manually, door contact ignored

## 9.5 Power

The air curtain can be powered ON and OFF using the ON/OFF switch on the remote controller. The air curtain stores the last used setting in the internal memory when powered down (including power shortage). When the unit is powered back ON (or the power is restored), it resumes last used setting.

	<b>Power ON</b> The air curtain is turned ON, last used setting is restored
	<b>Power OFF</b> The air curtain is turned OFF, the last used setting is stored

## 9.6 Batteries

Stavoklima remote controller is powered by standard 1,5V AAA batteries. **Batteries are not part of the packaging.** The use of rechargeable AAA batteries is not recommended for their lower voltage of 1.2 V. The controller doesn't indicate low batteries. Exchange batteries when control of the unit becomes suboptimal from within the active zone.



**RECYCLING:** Please recycle used batteries in compliance with your local environmental standards.

# 10.0 Maintenance

All the units are always factory-checked and tested carefully prior to dispatch. The most frequent errors stem from misunderstanding the function of the unit or from incorrect connection. Therefore, observe carefully the manufacturer's instructions to avoid complicated troubleshooting. Under no circumstances operate the unit in contradiction with the User's manual.

The unit is designed for electrical networks of 220V/60 Hz [let technical department check]. Running the unit under different conditions may result into irreversible damage to the unit. Such damage is not covered by the warranty.



**WARNING:** Disconnect the unit from electrical supply prior to any work on the device. Risk of electric shock.

## 10.1 Maintenance schedule

The Li-pico II IR air curtains are made of high-quality components that do not require any special maintenance. To ensure long life of the unit, we recommend maintaining it in the specified intervals or more often (based on your operational experience). The environments with high density of airborne particles will cause the filter to clog up more and the air curtain would require more frequent cleaning/exchange of the filter.

Every six months	<b>Wall mount check</b> Check the wall bracket and the wall around the mounting points for signs of structural instability (cracks, unevenness, compromised integrity of the wall, loose wall plugs, etc.). Check tightening of all the fasteners and bolted connections. In addition, check tightening of the bolts of the outlet louvres – they are accessible on the inner sidewall of the curtain. Tightening of the central vanes is done by turning the louvres (by tightening the internal threaded pin).
Every six months	<b>Internals check &amp; cleaning</b> Check the fan housing and the internal/external parts of the unit and clean them. Do not wash the fan body with water! Use a damp cloth to remove the dust from the surfaces – otherwise the fan windings may be damaged. Allow min. 60 minutes for the water to completely dry out before starting the unit. Work carefully when wiping the outlet louvres. Fragile – risk of damage!
Once a year	<b>Safety check</b> Check the safety of the unit in terms of electric-shock protection in accordance with applicable country-specific standards, incl. checks of the grounding system.
Every three months	<b>Intake cleaning</b> Complete cleaning of the intake grill and tighten it, if needed.
Once a month	<b>Battery change</b> Exchange the batteries in the remote controller for a pair of fresh ones.



**WARNING:** Disregarding the maintenance schedule may result into irreversible damage to the unit. Such damage is not covered by the warranty.



# 11.0 Troubleshooting

Please refer to the following list of situations before contacting the supplier:

<p>The unit won't start upon pressing the Power ON button</p>	<p><b>1) Door contact check</b> If door contact is enabled, open the door to activate the unit or turn the door contact OFF. The unit should respond immediately.</p> <p><b>2) Power cable check</b> Check whether the power cable is plugged in the power socket and make sure it is connected to the connector on the top of the unit.</p> <p><b>3) Circuit breaker check</b> Check the circuit breaker inside the electrical cabinet and make sure it matches the minimal requirements for operating the air curtain.</p> <p><b>4) Battery check</b> Replace the batteries in the remote controller and try again.</p>
<p>The unit won't stop upon closing the door (with door contact ON)</p>	<p><b>1) Timer check</b> The air curtain is programmed to switch the fans OFF 30 seconds after closing of the door. Make sure the door stay closed for more than 30 seconds.</p> <p><b>2) Door contact check</b> Check thoroughly the door contact, it's integrity and mounting position. The sensor is very likely too far from the magnet and the state of the door is constantly OPEN. Mount the sensor and/or the magnet closer to each other.</p> <p><b>3) Door check</b> Check the door are for objects blocking the door from fully closing and remove them.</p>
<p>The unit won't stop upon pressing the Power OFF button (with door contact OFF)</p>	<p><b>1) Control position check</b> Make sure the remote controller has got visual contact with the receiver of the unit (red oval plastic cover in the bottom right corner of the front mask) and it is pointing directly at it.</p> <p><b>2) Battery check</b> Replace the batteries in the remote controller and try again.</p>
<p>The unit doesn't respond to pressing buttons on the remote controller</p>	<p><b>1) Control position check</b> Make sure the remote controller has got visual contact with the receiver of the unit (red oval plastic cover in the bottom right corner of the front mask) and it is pointing directly at it.</p> <p><b>2) Battery check</b> Replace the batteries in the remote controller and try again.</p> <p><b>3) Power cable check</b> Check whether the power cable is plugged in the power socket and make sure it is connected to the connector on the top of the unit.</p> <p><b>4) Circuit breaker check</b> Check the circuit breaker inside the electrical cabinet and make sure it matches the minimal requirements for operating the air curtain.</p>

<p>The strange noises are coming from inside of the unit</p>	<p><b>1) Internals check</b>          Check the internals of the unit including the outlet. Remove any foreign objects.</p> <p><b>2) Fans check</b>          Check the fans for signs of wear and damage. If you detect any signs of a faulty fan, contact your supplier of air curtains.</p>
<p>The unit's performance is low</p>	<p><b>1) Fan speed check</b>          Switch the unit into higher fan speed level.</p> <p><b>2) Fans check</b>          Check the fans for signs of wear and damage. If you detect any signs of a faulty fan, contact your supplier of air curtains.</p> <p><b>4) Specifications check</b>          Check the User's manual for maximal recommended mounting height and make sure this height is not exceeded.</p> <p><b>5) Negative conditions check</b>          There are factors that can have negative impact the air barrier generated by the air curtain – for example chimney effect, pressure difference, draft, etc. These factors need to be minimized in order to provide best conditions for the air curtain to function properly.</p>
<p>The power shortage occurred and the stopped working</p>	<p><b>1) Restore the power supply</b>          Once the power supply is restored, the unit will continue operation with last active setting loaded in the memory before the power down.</p>

# 12.0 Important Warnings

Door air curtains are designed to prevent losses of heat or cold, to ensure filtration and heating, or to ensure ventilation with mixing facilities. Any other use is not the intended application. The manufacturer cannot be held liable for any damage resulting from misapplication. Observe this manual when operating these units.

Installation, wiring and repairs must be performed by qualified personnel in accordance with applicable country-specific regulations and standards

This warranty does not apply:

- 1) To consumables, such as filters, unless failure has occurred due to a defect in materials.
- 2) Damage caused by accident, abuse, misuse, liquid contact, fire, electrical shocks, earthquake or other external cause.
- 3) Shortage in fulfilment of safety provisions and instructions.
- 4) Operating the unit outdoor.
- 5) Modified and altering functionality or capability without the written permission of manufacturer.
- 6) Improper installation, commissioning, and using weak hanging materials.
- 7) Installing the unit vertically. Only horizontal installation is permitted.
- 8) Storing the units in humid areas like swimming pools.



**WARNING:** Do not try to insert paper or foreign objects through air inlet or discharge opening as this may block the air movement and damage the air curtain.

## 13.0 Contact Info

STAVOKLIMA Saudi

Email: [sales@stavoklima.com.sa](mailto:sales@stavoklima.com.sa)

Tel: + 966 500577504

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[www.stavoklima.com.sa](http://www.stavoklima.com.sa)