INDUSTRIAL AIR CURTAIN **STAVOKLIMA**

Installation and operation manual

AXI SC model

EN

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version B

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Explanation of symbols used

 Instructions for mechanical repairs and maintenance.	 Important safety information, technical information, data and device output.
 Important electric information - read carefully - curtain damage hazard in case of wrong installation.	 Important information - please read carefully.

2. Unpacking, check after transport or warehousing

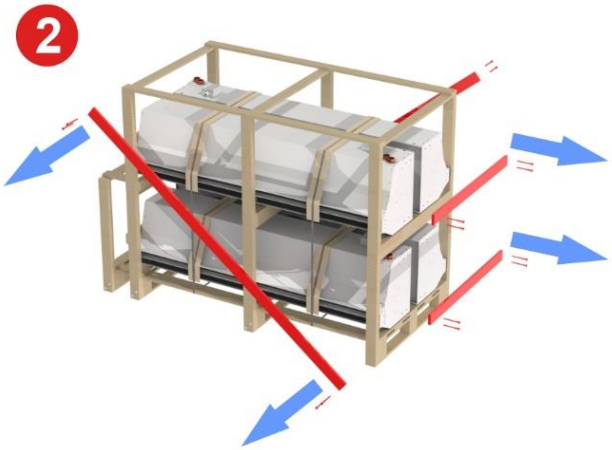
2.1. Unpacking and check

Carefully check the delivery note attached to the delivery. For components identified as extra accessories in the delivery note (not included in the curtain or installed therein), please check completeness to the parcel and perfect condition (usually delivered in a separate box). Report any serious damage to packaging or boxes, and make a basic record to the parcel transport documents. Inform the transport company or manufacturer (if the manufacturer arranges transport) immediately.

All packaging material used is environmentally friendly and may be reused or recycled. Dispose of or reprocess the non-environmentally friendly components correctly.

When unpacking, follow the procedure diagrammatically shown below.

The curtains are protected in the course of the transport by a protective frame.



Remove screws and braces (refer to figure) to access the curtains in the upper portion of the protective frame.

To access the curtains in the lower portion of the protective frame, unscrew the screws that attach the protective frame to the pallet (refer to figure). Then, you can remove the structure.

2.2. Storing of the curtain, additional transport recommendations

- Observe packaging decals on the curtain. The device in its packaging must not be turned or placed in transport positions other than those supplied and recommended by the manufacturer. Packaging also contains production number and curtain type for easy curtain type identification.
- Use genuine packaging for further transport of the curtain. The packaging is tested for re-use, and a different packaging may cause damage to the curtain.
- Use means with certified sufficient loading capacity for transport and handling; properly qualified persons only may operate the transport means.
- Permissible warehousing conditions: -10°C ÷ 50°C, 50-85% humidity without condensation.
- Do not remove genuine packaging until installation is complete (to avoid device damage). At least 2 persons are recommended for safe handling.

3. Safety measures

The curtain has been manufactured in line with the government decrees and Czech standards harmonized with the EU regulations mentioned in the manufacturer's declaration of conformity.

The above mentioned product complies with the following standards:
ČSN EN 60335-1 ed.3 ČSN EN 60335-2-30 ed. 3
ČSN EN IEC 61000-6-2 ed. 4 ČSN EN 61000-6-3 ed. 2

The above mentioned product complies with the following directives:

- Directive 2009/125/EC of the European Parliament and of the Council establishing a framework for the setting of eco-design requirements for energy-related products.
- Government Decree No. 118/2016 Coll. Directive 2014/35/EU of the European Parliament and of the Council on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits.
- Government Decree No. 117/2016 Coll. Directive 2014/30/EU of the European Parliament and of the Council on the harmonisation of the laws of the Member States relating to electromagnetic compatibility.
- Government Decree No. 481/2012 Coll. (Regulation of the European Parliament and of the Council No. 2014/35/EU, Regulation of the European Parliament and of the Council No. 2011/65/EU).
- Government Decree on restriction the use of some hazardous materials found in electrical and electronic products.

Observe generally applicable national provisions and other related regulations. Unplug the curtain from mains before any service intervention. Connection and earthing of the electric device or components thereof must be in line with laws applicable in the country of use. Only qualified staff may carry out any electric service works.

Observe applicable laws, in particular:

- on safety of electric and thermal appliances,
- on central heat distribution systems,
- on fire safety,
- do never exceed working pressure and temperature specified in the production label.

Follow standards and rules applicable in the country of use, in particular the fire safety of appliances and heat sources, and the fire technical properties of materials - flammability levels. Place the curtain 150mm from B, C1, C2 level flammable materials, and 400mm and 1000mm for C3 level easily flammable materials in the radiation direction (air flow from the curtain).

4. Basic information about the curtain and its use

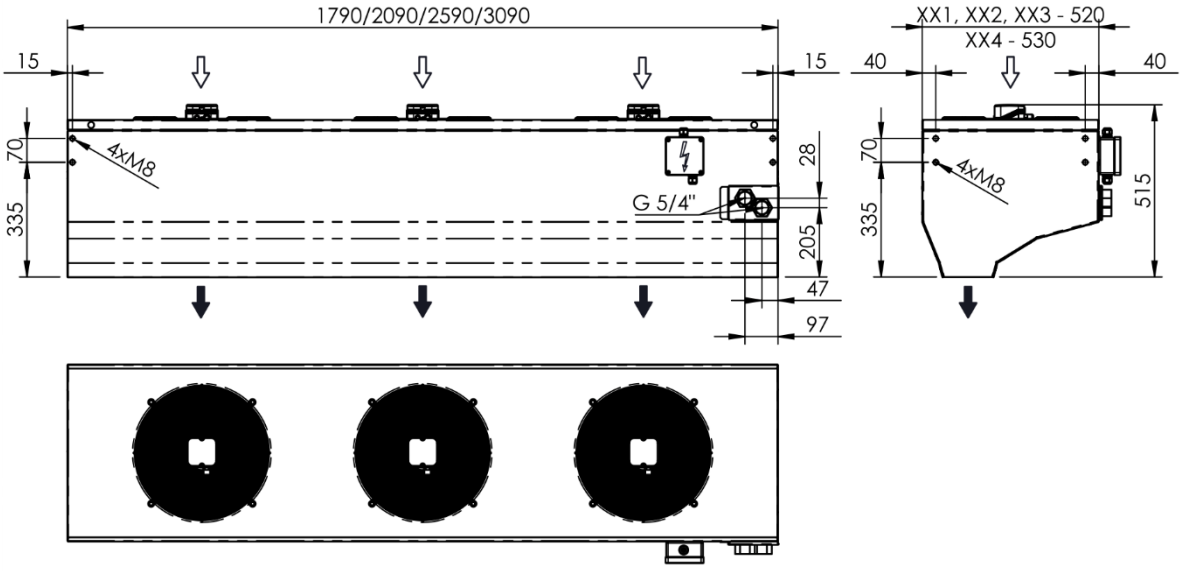
An air curtain is a device, which produces a natural air barrier against penetration of cold air into heat environment (in summer, it operates as a protection against penetration of hot summer air to the spaces being either cooled or air conditioned). These devices are suitable for basic and non-aggressive environment. The permitted temperature range in the space is 5–40 °C.

For the curtaining purposes, either circulation air of the environment temperature or the circulation air heated by hot-water or electric heater may be used. The use of the device can save high cooling costs in the air conditioned spaces. Full performance of the curtain may be provided only when maintenance is regular and proper. All controls are accessible and well maintained.

Technical conditions for curtain operation:

- max. media working temperature 90°C/pressure 1.6MPa – unless specified otherwise,
- hot water working voltage – 230V/50Hz, electric heater curtain working voltage - 400V/50Hz
- max. surrounding temperature 40 °C,
- IP rating of hot water curtain - IP 54/IP rating of electric heater curtain - IP 20,
- The curtain is specially designed for industrial environment,
- Minimum pressure difference 23kPa must be provided for use of a 2W valve (applies only to a pressure-independent valve).

5. Dimensions of the curtain



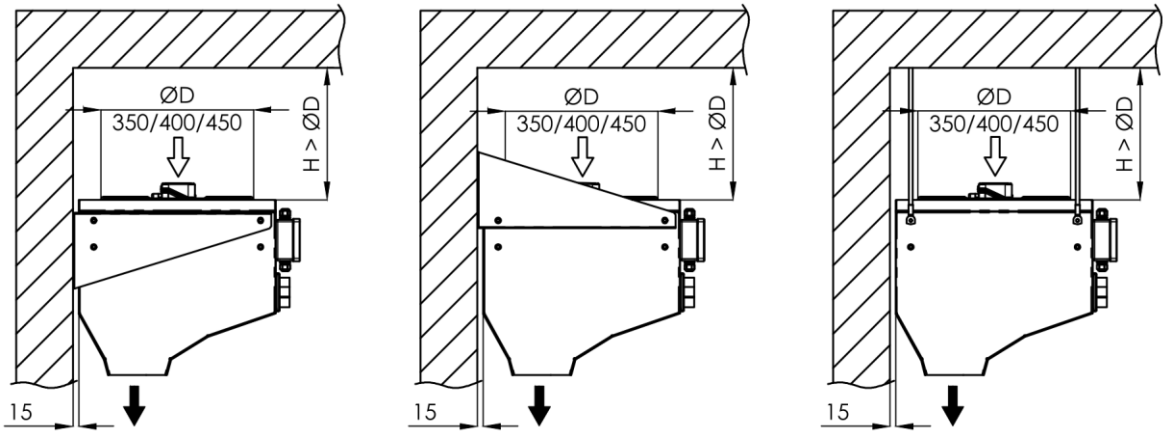
6. Curtain installation - wall-mounting or anchoring

Vertical installation

Horizontal installation

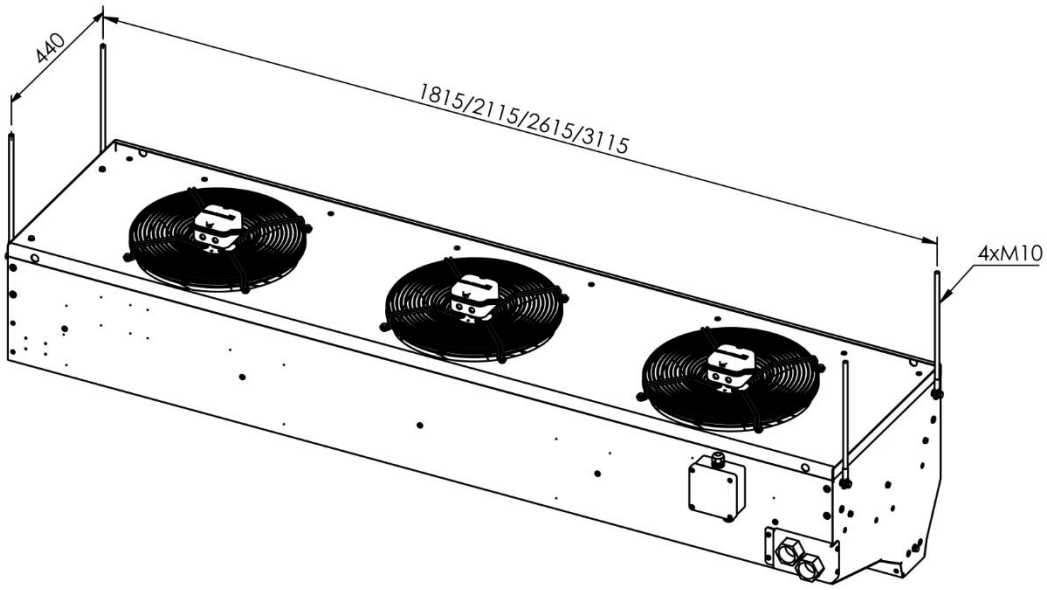
6.1. Horizontal installation

Keep minimum distance from the ceiling and wall in order to fully use the output of the curtain. Regardless orientation of the assembly, always make sure that entry to the air curtain curtain is spaced at least one fan diameter from the wall or ceiling.



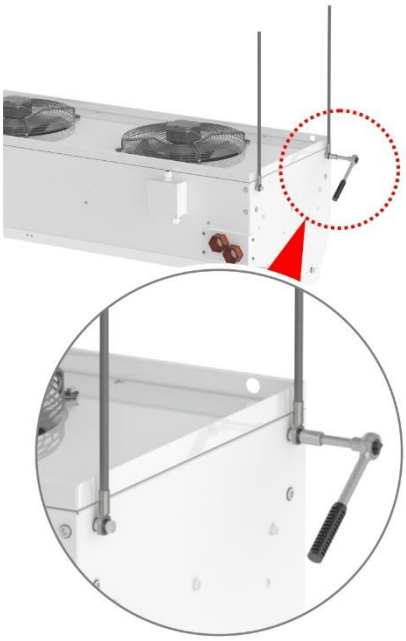
Installation distance by type of the

6.2. Additionally arrested ZS-PA suspensions under ceiling



The door curtain is suspended in four suspension points on the curtain casing. The suspension points are accessible from outside and rivet nuts (M8 threads) are installed on the curtain from production plant.

Upon special purchase order, the following is supplied as accessories to the ZS-PA under-ceiling suspensions:
4 pcs M10x1000 - 8.8 thread bar, 4 pcs M10/40 anchor, 4 pcs M10 suspension lug, 8 pcs M10 - 8.8 nuts, 4 pcs M8x30 - 8.8 bolt, 4 pcs big flat washer size 8, 4 pcs spring washers size 8.



Measure the position of the curtain and its distance from the ceiling, and cut the threaded bars to required length. Mark the anchoring points and drill ceiling holes for installation of the anchors. Fit the threaded rods into the prepared ceiling anchors and rotate the nuts. Fit ends of the threaded bars with suspension lugs. Set the curtain to the required position and attach the suspension lugs to the curtain using the bolts provided.

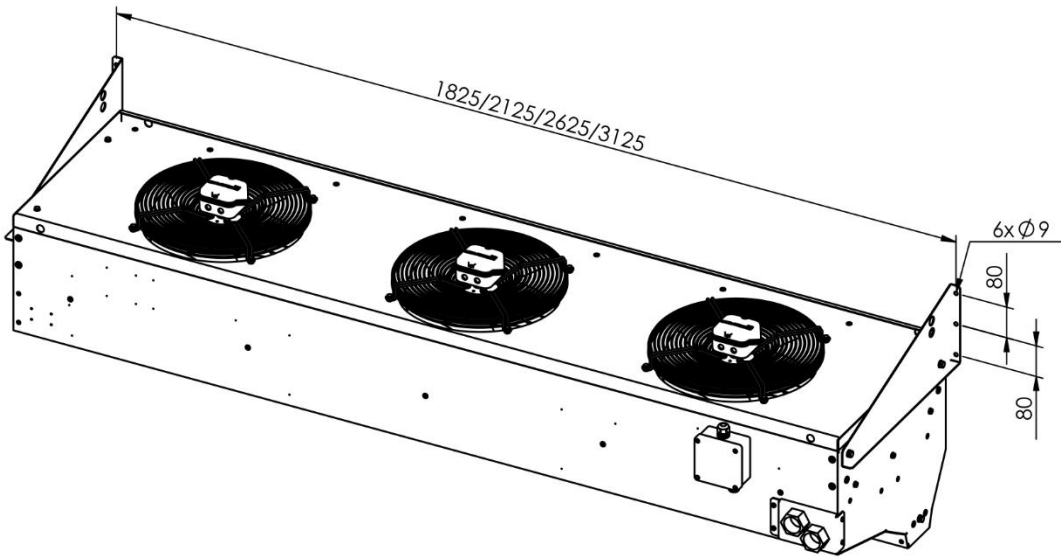
Pay attention to correct fitting of all nuts to all assembly components. Pay attention to the end position of the threads to avoid loosening and falling the curtain by rotation.

Use quality anchors and wall plugs only. Consider installation situation and suitability of anchoring and installation material, including loading capacity of the structure properly. The manufacturer accepts no liability for improperly used wall plugs or other installation and hanging material.

Following the assembly, check for horizontal position in both directions. Make sure that tightening up of individual hangers and sleeves do not cause crossing and twisting of the curtain. Always properly consider loading capacity of the ceiling or of the wall. Install the device to structurally solid beams.

Always suspend the device to all suspension points.

6.3. ZN-PA wall-mounting suspension



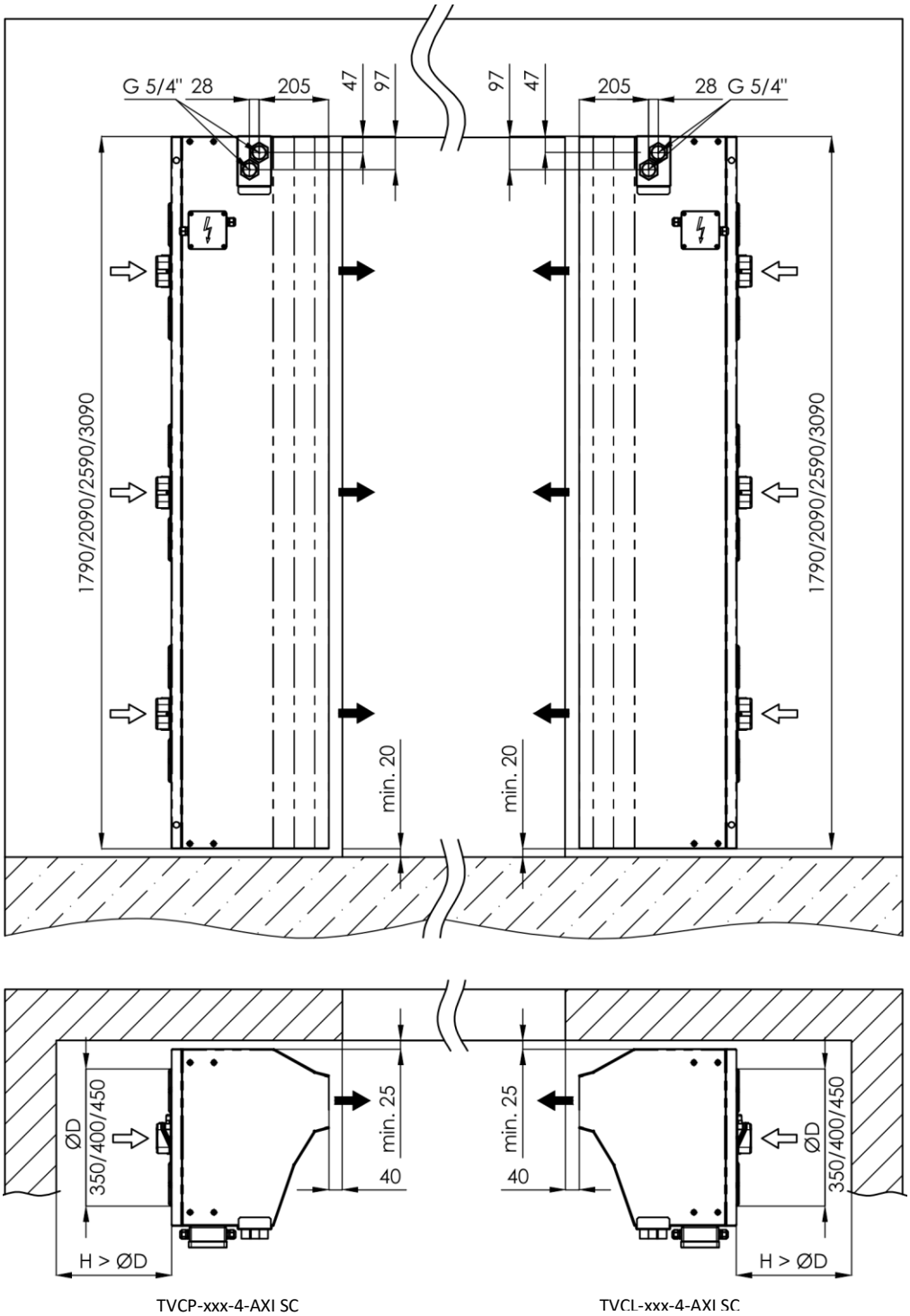
The door curtain is suspended in four suspension points on the curtain casing using the ZN-PA set. The suspension points are accessible from outside and rivet nuts (M8 threads) are installed on the curtain from production plant.

Upon special purchase order, the following is supplied as accessories to the ZN-PA wall-mounting suspensions:
2 pcs of wall mounted bracket, 4 pcs M8x30 - 8.8 bolt, 4 pcs of flat washer size 8, 4 pcs spring washers size 8.

Measure out the position of the curtain and the wall-mount. Mark the anchoring points and drill holes in the wall for installation of wall plugs (not included in the supply). Connect the wall-mounted hanger to the wall using an adequate fixing material (not included in the supply). Install the wall-mounted hanger to the curtain using the supplied bolts and washers. Pay attention to fitting of full amount of bolts and all important fixing material.

Use quality anchors and wall plugs only. Consider installation situation and suitability of anchoring and installation material, including loading capacity of the structure properly. The manufacturer accepts no liability for improperly used wall plugs or other installation and hanging material.

6.4. Vertical installation



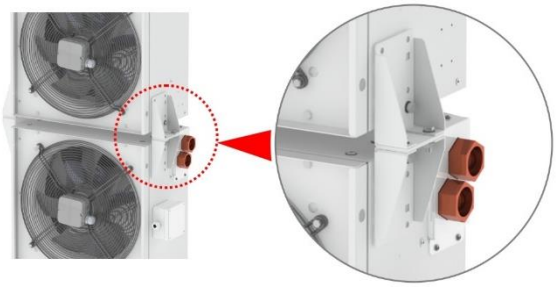
TVCP-xxx-4-AXI SC TVCL-xxx-4-AXI SC

Installation distance by type of the

6.5. Anchoring/connecting set SPS-PA

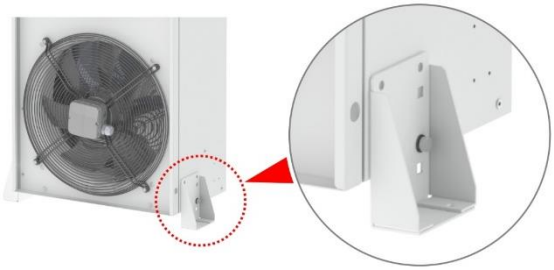
The SPS-PA set permits:

- Combination of AXI SC air curtains (vertically and horizontally).
- Anchoring of the AXI SC air curtains to the floor in case of the vertical installation.
- Anchoring of the upper part of AXI SC air curtains to the side wall in case of the vertical installation.



The following accessories for the SPS-4PA kit (based on a special purchase order) is available:
4 pcs of triangle profile, 12 pcs M8x30 - 8.8 bolts, 4 pcs M8 - 8.8 nuts, 12 pcs spring washer size 8, 12 pcs washer size 8.

All AXI SC industrial air curtain can be combined into a single assembly. In case of the horizontal installation, any number of the curtains can be combined to cover doors wider than one curtain. Such a set of the curtains may require additional support, and each curtain is suspended on all four suspension brackets.



Due to loading capacity, the vertical connection of the curtains is limited to two!

The SPS-PA connection set permits three different mounting positions depending on the required tolerance between the connected curtains or distance from the wall (vertical assembly).

6.6. PS-PI silent blocks

The vertically installed AXI SC industrial air curtains may tend to transfer the vibrations generated by the axial fans to surface they are mounted to. To minimize the effect, we recommend that SPS-SI set of silent blocks (optional accessories) are installed between the floor and the SPS-PA anchoring set.

The following accessories for the SPS-PI kit (based on a special purchase order) is available:
4 pcs M8x30 silent blocks, 4 pcs M8 - 8.8 nuts, 4 pcs spring washer size 8, 4 pcs washer size 8.

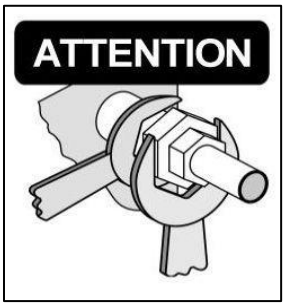
Check vertical position after assembly. In case of floor unevenness, the curtain must be moderately underlaid..

6.7. Protective shock absorbing frame ONR

In case of vertical installation, use of the protective shock absorbing frame is recommended as an optional accessories. It is suitable as the curtain protection against damage by handling trucks or other transportation means. The frame is made from zinc-coated steel in standard (varnished or stainless steel upon request).

7. Connection of the curtain to heating system

Please check all hot water connections for readiness and perfect condition before connecting media to the curtain. Furthermore, please check the hot distribution for components or other measures to ensure zero transmission of static, dynamic, and dilatation forces at the input and output neck connections. No excessive force may be applied when connecting the hot water circuit of the building to the curtain's heat exchanger. By the neck of the air conditioner there is a mark that notes use of two keys so that no stressing of the necks occurs in the course of tightening or loosening. **When bolting and tightening up the screw union of the heat exchanger must be secured by a clamp against undesired rotation that may subsequently result in deformations or damage to pipe necks on the heat exchanger**.



Considering the above the manufacturer clearly recommends that flexible connection hoses are used for connection of the heat exchanger necks (available as PPH accessories, length 300mm, DN32) or a bellows compensator.

Any non-compliance with the instructions above results in rejection of any complaint.

By default, neck for the hot water heater is located on the right hand side on the front part of the curtain (may be placed elsewhere upon request). The inputs are identified by round marks – medium input red with arrow pointing inside, and medium output blue with arrow pointing outside.

Media input Media output

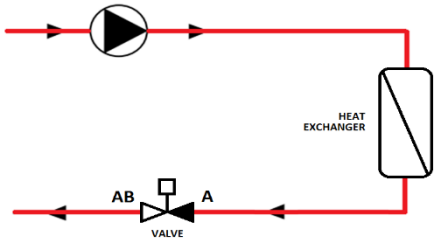
Do not swap the return and supply neck positions - this may cardinally change performance and parameters of the heater with consequent impact on the hydraulic system. Do not exceed max temperature and pressure for which the curtain is rated.

The value of thermostatic head is pre-set, and the function of the electrothermic valve drive is given by a control type. The connection is then made directly on the neck for media input (third neck is blind). For setting up the thermostatic head, refer to article 7.1 of the function of the electrothermic drive, refer to article 7.2.

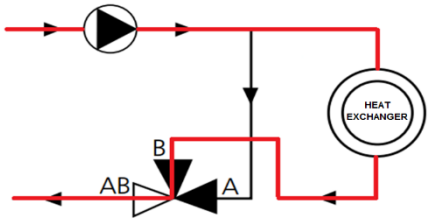
Pay attention to quality of media fed to the curtain; check for installation of cleaning valve downstream the curtain (not included in the supply). Observe max temperature and media pressure to avoid heat exchanger damage. To make sure the heat exchanger operates correctly, drain the exchanger (sludge valve) and purge the cleaning valve because construction or assembly impurities may be present in the system. Deaerate the heat exchanger for perfect operation of the heat exchanger. Install the closing valves on both pipes downstream the curtain (ball valves) ⋈. Connection thread right above the curtain must be removable and not fixed.

As required by the customer, a not embedded 2-way or 3-way valve with control head can be delivered for the hot water heat exchanger. The valve drive may be either self-acting (thermostatic) or electrothermic.

Instructions for electric connection of the valve is included in the wiring scheme for connection of the curtain. Specific wiring scheme or valve instructions are available upon request only.



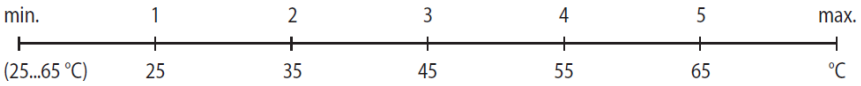
Connection of 2-way TV, ETVQ valve



Connection of 3-way TV, ETVT valve

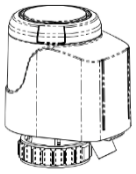
7.1. Heat exchanger control using a valve with thermostatic head

The thermostatic head for 2-way (TV) and 3-way (TVT) valves is always supplied with the sensor separated (temperature range 25–65 °C) – exhaust air temperature control. Setting of the required closing temperature is made on the head scale (1–5). Temperature degrees with respect to the numbers on the head are expressed as follows:



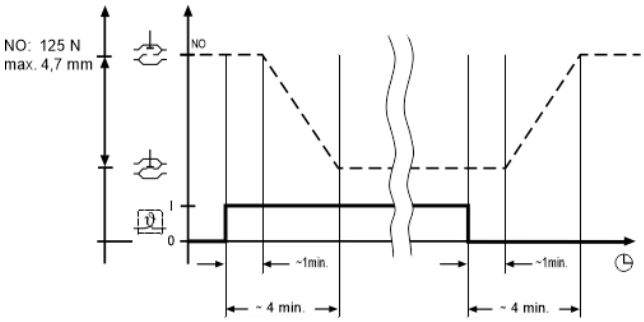
7.2. Heat exchanger control with a valve with electrothermic head

The electrothermic valve drive can be supplied to the hot water heat exchanger as embedded either as 2-way (ETVQ) or 3-way (ETVT).



"Normally open" version (NO).

When the thermal drive is under voltage, the electrically heated sensor heats up Upon "dead time" expiration for continuous opening of thermic drive due to cooling down of the sensor.

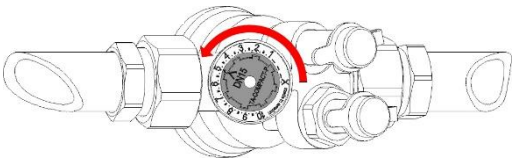


Note:

The time delay (dead time) needs to be considered during the functional test; the opening and closing time depends on surrounding temperature. Electric data: 230V/50Hz-3V, IP 54.

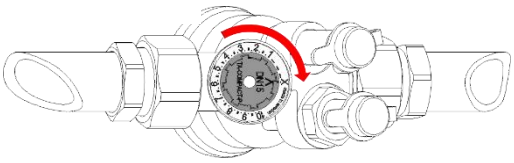
7.3. Setting of independent valve flow pressure (ETVQ)

Setup



Turn the setting wheel to required value, e.g., 5.0

Closing



Turn the setting wheel counterclockwise to position X.

q_{max} values

Setup

	1	2	3	4	5	6	7	8	9	10
DN 25	370	610	830	1050	1270	1490	1720	1870	2050	2150
DN 32	800	1220	1620	2060	2450	2790	3080	3350	3550	3700

q_{max} = l/h for each setting with the control cone fully open

8. Types of controllers and options for controlling

8.1. AXI SC – 230V air hot water curtains

Ox

The O series controller is a five-step transformer controller of revolutions for fans powered by 230V and provided with a standalone button for light signalling of the connection. The O series controllers allow for connection of multiple curtains. The selection of an appropriate controller type must consider the power input of the curtain (output power limitation in "A").

Type of control	O2	O3	O5	O7	O10
For max. curtain(s) current	2A	3A	5A	7A	10A
IP rating	IP 54		IP 54		IP 54
Dimensions (w x h x d)	86x166x91mm		123x240x125mm		146x272x140mm

ROJ Light

The three-level output controller, electronic components for the curtain control with accessories are housed in steel metal sheet cabinet with cooling apertures, protection and power elements included, preparation for 24V door contact control (potential-free contact), curtain fan rundown with optional additional configuration 0.5s–10H, built-in circuit breaker. The ROJ Light series controllers allow for connection of multiple curtains. The selection of an appropriate controller type must consider the power input of the curtain (output power limitation in "A").

Type of control	ROJ Light 14-10	ROJ Light 30-10
For max. curtain(s) current	14A	30A
IP rating	IP 20	IP 20
Dimensions (w x h x d)	180x322x140mm	220x350x180mm

ROJ

The three-level output controller, electronic components for the curtain control with accessories are housed in steel metal sheet cabinet with cooling apertures, protection and power elements included, input for room thermostat, output for anti-freeze protection, output for ETVQ or ETVT valve control, built-in circuit breaker, anti-freeze protection output, output for circulating pump control up to 6A/230V, input for automatic operation contact, the controller is made for control using the LS-AX-03 external control for 3-level fan revolutions control, optional linking of ROJ controllers. The controller allow for connection of multiple curtains. The selection of an appropriate controller type must consider the power input of the curtain (output power limitation in "A"). The ROJ 14-21 and ROJ 30-21 series have failure-operation function in addition.

Type of control	ROJ 14-20	ROJ 14-21	ROJ 30-20	ROJ 30-21
For max. curtain(s) current	14A		30A	
IP rating	IP 20		IP 20	
Dimensions (w x h x d)	400x500x210mm		400x600x210mm	

UNIREG

UNIREG is the distribution board suitable for hot water curtains with 230V motor where it is not possible to integrate the control electronics into the curtain. The system permits the use of all functions offered by Ditronic Touch and Econ controllers, or BMS input switch. The selection of an appropriate Unireg type must consider the power input of the curtain (output power limitation in "A"). **For each of the controllers (Ditronic or Econ), refer to specific user manuals.**

Type of control	Unireg				Unireg				Unireg				Unireg		
	DIT 4,5	DIT 6	DIT 9	DIT 14	ECON 4,5	ECON 6	ECON 9	ECON 14	BMS 4,5	BMS 6	BMS 9	BMS 14	DIT EC	ECON EC	BMS EC
For max. curtain(s) current	4,5A	6A	9A	14A	4,5A	6A	9A	14A	4,5A	6A	9A	14A	14A	14A	14A
IP rating	IP 20														
Dimensions (w x h x d)	300x400x170mm														

8.2. AXI SC – 400V air hot water curtains

OTx

Revolutions switch 0-1-2 for 400V motors without option for connection of the door contact. Connection of the room thermostat is a standard feature. The selection of an appropriate controller OT type is given by the power input of the curtain.

Type of control	OT4	OT8	OT10	OT15
For max. curtain(s) current	4A	8A	10A	15A
IP rating	IP 65			
Dimensions (w x h x d)	275x220x140mm			

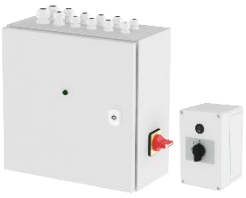
RTx

Revolutions controller 0-1-2 for 400V motors with option for connection of the door contact including fan time rundown and the room thermostat. The selection of an appropriate controller RT type is given by the power input of the curtain.

Type of control	RT4	RT8	RT10	RT15
For max. curtain(s) current	4A	8A	10A	15A
IP rating	IP 65			
Dimensions (w x h x d)	275x220x140mm			

ROTx

Revolutions controller 0-1-2 for 400V motors with option for connection of the door contact including fan time rundown and the room thermostat. Standard option to connect the anti-freeze thermostat (to be specified as extra optional accessories), electrothermic valve control according to the room thermostat, serial option for linking of the power controllers with the use of one LS-AXT-02 control. The selection of an appropriate controller ROT type is given by the power input of the curtain. The ROT4-1, ROT10-1, ROT 15-1 series have failure-operation function in addition.

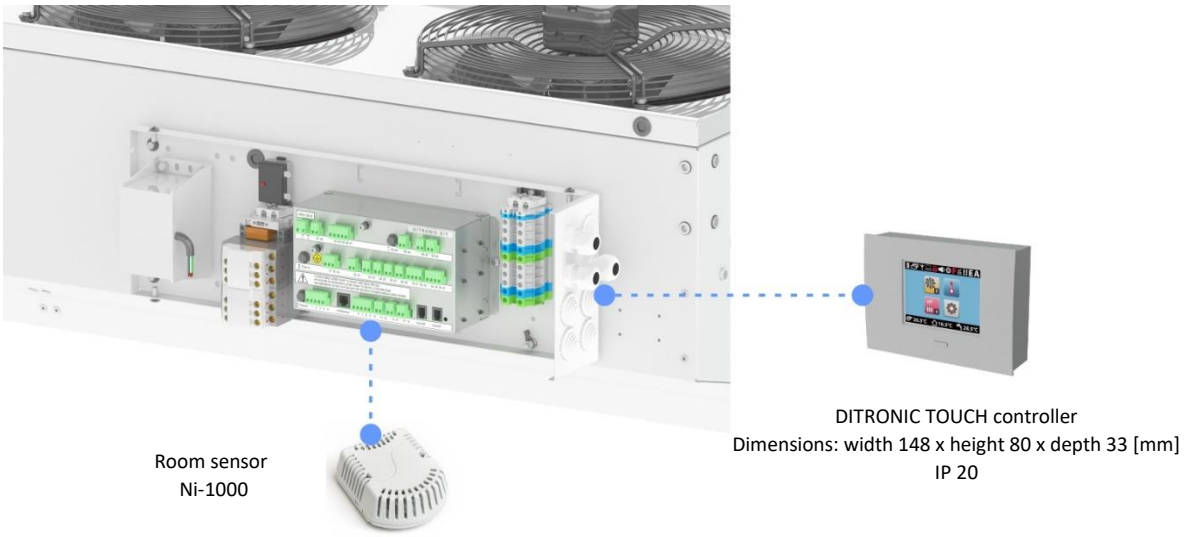


Type of control	ROT4	ROT4-1	ROT10	ROT10-1	ROT15	ROT15-1
For max. curtain(s) current	4A		10A		15A	
IP rating	IP 65					
Dimensions (w x h x d)	400 x 400 x 210					

8.3. AXI SC air electric curtains

The Ditronic Touch controller is highly comfortable controller for fan and heater control (hot water heater and electric one) with optional connection of external elements (door contact, BMS, etc.). Controller function is defined by type of the electric documentation. The controller is designed for wall-mounted installation and a separate instructions manual is available. Included to the controller is the Ni-1000 room sensor to be connected to the control board according to the electric wiring documentation.

The connection between the air curtain and the controller is made using a UTP cable with RJ 45 connector (available as optional accessories in various lengths).



Room sensor
Ni-1000

DITRONIC TOUCH controller
Dimensions: width 148 x height 80 x depth 33 [mm]
IP 20

Right version of the curtain is displayed

9. Electric connection of the curtain

The curtain must be protected by a suitable circuit breaker according to its electric parameters – refer to attached electric wiring. Connect the ready-to-install cables to the terminals following the attached electric wiring schemes, make connection check, equipotential bonding, and finally turn the power supply on. Use the cable wires with cross section suitably rated according to the current load – refer to electric wiring documentation.

Make sure the cable is neither twisted nor deformed in any way. Keep free ends of the cable wires sufficiently long for easy handling and cut the wire only after you are sure the wire is long enough.

Observe generally applicable national provisions, particularly ČSN 12 2002 and other related regulations. Unplug the curtain from mains before any service intervention. Provisions of ČSN 332190, 332000-5-51 ed. 3, and 33 2000-5-54 ed. 3 must be observed for connecting and earthing of the electric devices. Qualified electrician only may perform any electric service works (qualification according to Section 6 of Decree of ČBU No. 50/78 Coll.).

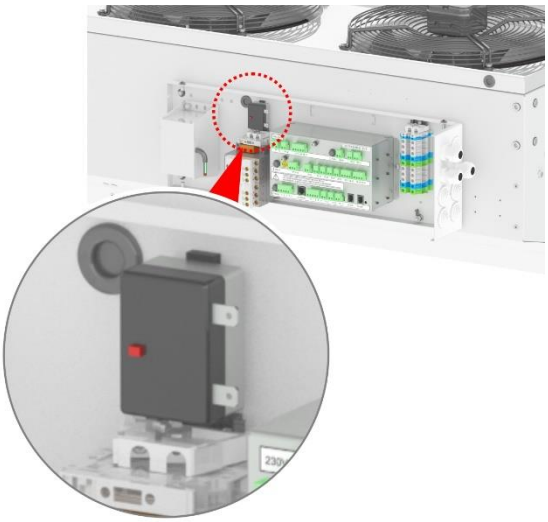
During assembly, carefully check everything and carry out the initial review of the device. Check operation of the FU1-FU3 electric fuses (Ditronic) for interior circuits (for fuse values, refer to the box of electronics), and make sure that the external components (accessories), which may have an essential impact on correct function of the device, operate.

ATTENTION: The delivery note serves as a warranty sheet!

9.1. Unlocking of emergency thermostat for curtains with the electric heater

The curtains fitted with the electric heater are provided with operation thermostat with automatic reset feature (located on each heater) and emergency thermostat with manual reset.

When permitted limit temperature inside the curtain is exceeded, heating circuit is turned off by the emergency thermostat = pushbutton sprung up. The button is used to unlock the safety thermostat in case of the device failure. After cooling down the thermostat button needs to be pressed back to default position (refer to figure).



ATTENTION – unblocking of the emergency thermostat does not resolve failure of the curtain! Always remedy the cause of the thermostat overheating!

Covering of the air curtain with any strange objects is prohibited ►risk of fire!!!

10. Commissioning, starting of the curtain

Before commissioning make and check:

- covers and shell of the curtain are in perfect condition,
- mechanic fixing and anchoring of the curtain,
- ability to remove the filter and its cleanliness,*/**
- function of circulating pump (not included in the device),**
- correct connection of media and tight connections,**
- tightness and function of the valves,*/**
- availability of power voltage,
- correct connection of all curtain cables,
- fitting and setting of a pre-circuit breaker (not included in the device),
- free from mechanical impurities or objects.

* if installed
** hot-water version only

Initial review of the electric appliance according to ČSN 331500 and ČSN 33 2000-6-61 ed. 2 must be made upon commissioning.

11. Optional accessories - depending on equipment level

The most frequent accessories include thermostatic or electrothermic valves for the temperature control (chapter 7.1 and 7.2). The valves are supplied as **not embedded**, for all available valve types refer to the catalogue.

Another accessory used is the door contact (either magnetic or mechanic). The contacts are placed on the door wings or door parts in order to signal the position of the door.

An optional accessories may be e.g., room thermostat, hanging of the curtain, 0–10V signal control of the curtain over the superior BMS, and more. Selection of an appropriate type of accessories must be supported by the controller type.

For all accessories offered for the AXI SC curtain, refer to the catalogue documentation.

12. Basic service and maintenance information

All curtains are thoroughly checked and tested by the manufacturer before dispatch. The most frequent errors root from misunderstanding of the curtain function or incorrect cabling and connection. For this, observe instructions from the manufacturer to avoid complex troubleshooting. In no case try to operate the curtain when connected in a different way - the curtain may operate for a while as you wish or expect but this irreversible step may result in damage beyond repair and loss. No warranty claims can be accepted with respect to this damage.

The AXI SC air curtains are supplied **without a filter** in front of the heat exchanger in standard, and therefore, special attention needs to be paid to the heat exchanger condition check. The regularity of checks depend on environment in which the device is operated. To access the heat exchanger, demount the upper plate of the curtain (with fans) being fixed around the circumference by bolts.

Before any work with the curtain, disconnect the electric power supply, mains supply for the curtain. Electric shock hazard!!!

Observe generally applicable national provisions, particularly ČSN 12 2002 and other related regulations. Unplug the curtain from mains before any service intervention. Provisions of ČSN 332190, 332000-5-51 ed. 3, and 33 2000-5-54 ed. 3 must be observed for connecting and earthing of the electric devices. Qualified electrician only may perform any electric service works (qualification according to Decree of ČBU No. 50/78 Coll., § 6 is required).

Please contact your vendor or distributor for a service agreement. You will get regular service and excellent care of your curtain.

Quarterly checks:

- Curtain hanging and tightening of all bolt connections. Then, check tightening of exhaust spline bolts – they are accessible on the side of the curtain; rotate the splines to tighten up the central splines (by tightening of inner treaded pin).
- Disconnect the closest fan from the power box to check the space of the heat exchanger and to remove dirt or objects, if any. Then, demount the top plate with the fans. Use vacuum cleaner to remove dust from the heat exchanger. When using steam for cleaning, set as lowest temperature as possible and as lowest pressure as possible for not to damage the heat exchanger.*
- Before winter, check in particular the anti-frost protection function, superior circulating pump (not included in the supply of the device), setting of thermostatic or electrothermic valve.*
- Re-test tightness of the curtain or of installed fittings on the water side. If a sludge filter is installed before the curtain – clean the filter and check deaeration of the heat exchanger.*

- Check cleanliness of the motor suction grid and inner or outer parts of the curtain. Do not wash the motor body with water! Wipe with lukewarm towel only – motor winding damage hazard; after the motor is cleaned, do not turn the curtain on for at least 60 minutes – let the curtain dry. Use vacuum cleaner to remove dust from the suction grid. Proceed carefully when wiping the exhaust splines!
- Check curtain safety with respect to electric shock hazard according to applicable ČSN or national standards, including earthing inspection.
- Thorough cleaning of the exhaust splines (tighten up, if necessary).

* if installed

12.1. Troubleshooting

Problem	Possible cause	Remedy
The curtain can not be turned on	Curtain circuit-breaker is off	Turn on
	Mains failure	Inspection
	Door contact*	Check connection or interconnection
	Anti-frost protection*	Inspection
	Controller position “0”	Check, > position than “0”
	External contact*	Check connection or interconnection
Noisy motor	Defective motor mount	Check - replacement
Motor overheats (motor thermal contact turns off)	Defective motor mount or winding	Replace fan curtain
	Heavily soiled motor – insufficient cooling	Check, clean
	Excessive temperature of intake air	Inspection
The fan delivers little air only	Soiled suction grid of the fan	Check – clean
The curtain does not heat	Broken or clogged medium supply	Check - replacement
	Little air flows through the heat exchanger	Check - remove
	Soiled heat exchanger splines	Check – clean
	Insufficient media temperature	Remove
	Medium does not circulate	Check, deaerate
	Temperature achieved in line with controller setup	Controller setup
	Defective drive of electrothermic valve	Check setup, or replace if defective
Automatic operation disconnection	Overheated motor	Find out and clear the cause
	Door contact	Check correct function (refer to controller description)
	External clock	Check correct function (refer to controller description)

* if installed

13. Decommissioning – disposal

After the expiration of the service life, the curtain must be disassembled and disposed of. Only qualified company may disassemble the device. The product or components thereof must be disposed in environmentally-friendly manner at the end of its service life.

The components of the curtain must be separated and sorted out by type of material for disposal. Dispose of the metal and plastic components at your local collection yard. The transport packaging of the product is made of common recyclable material (paper, polyethylene, wood) and is labelled as such according to ČSN 77 0052-2.

As far as disposal is concerned, it is operator's responsibility to comply with applicable national provisions in the country of use. In addition, follow regulations and laws of your country applicable to waste disposal. Separated collection and recycling of the products may help to protect environment and human health.

14. Important notes

The door curtains are intended to avoid heat or cold loss, filtration, and heating, or for ventilation in combination with mixing accessories. Other uses are not intended. The manufacturer accepts no liability for damage resulting from use other than intended. Observe this manual in operation of the curtains.

Installation, electric connection, and repairs must be carried out by qualified persons according to § 6 of Decree No. 50/78 Coll. or according to applicable national standards and regulations. An expert company is needed to connect the heating medium.

Before the start of the heating season, it is necessary to provide the required amount of heating medium with the design values for curtains with the hot water heater.

The manufacturer reserves right to changes for marketing or production reasons without prior notice!

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