



Comfort Door
Air Curtains

Li3



www.stavoklima.eu

Air curtain configuration

The design of the Li3 comfort air curtains makes them suitable for prestige interiors. They are a harmonic element of the space, and they meet all functional requirements at the same time.

With its design, which provides high reliability, the Li3 air curtain may be installed also in a 24/7 operated facility. The air curtain forms a natural air barrier against penetrating cold air in the heated environment and vice versa, the air curtain prevents from hot air entering the air-conditioned environment in summer, and protects against undesirable smell, insects, and dust. In these installations, the air curtain will meet all requirements for the energy-saving equipment and thermal comfort in the building.

- location: horizontal only
- version: cold air/hot air (hot water)



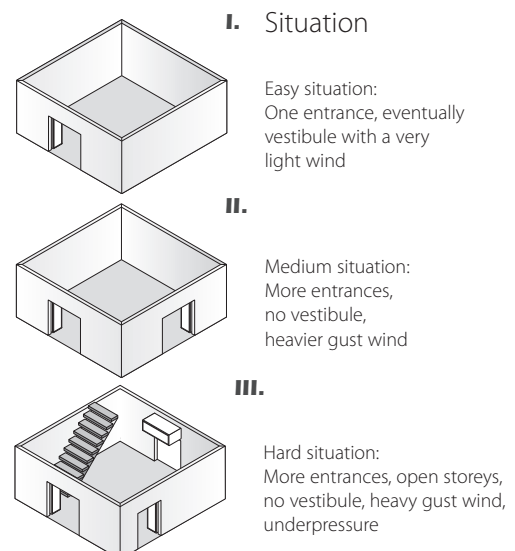
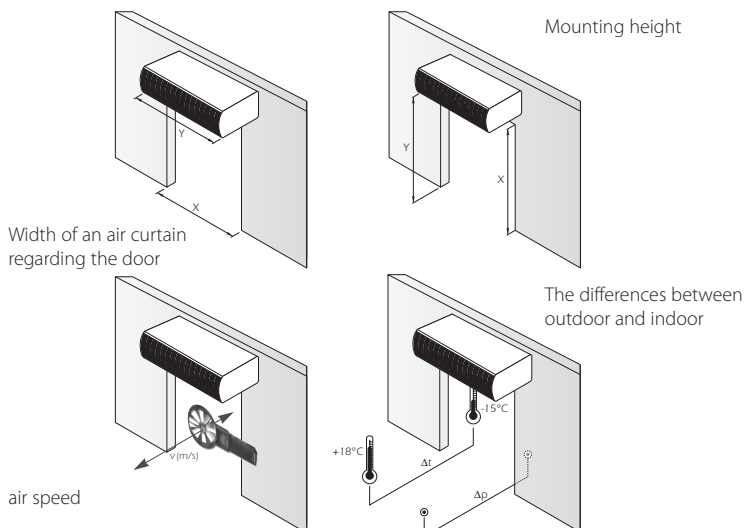
Comfort air curtains Li are suitable especially for installation in:

- banks and hotels
- office buildings
- light industrial buildings
- shopping malls and supermarkets

To cover the doorspace there are the following possibilities:

- use of circulating inside air - room temperature air only
- use of circulating inside air - heated by electrical or hot water heat exchanger
- fresh air and circulating air - heated by electrical or hot water heat exchanger (on demand)

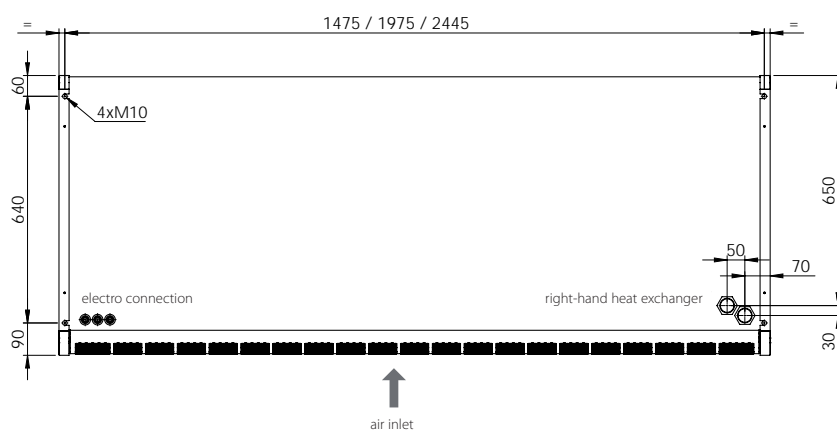
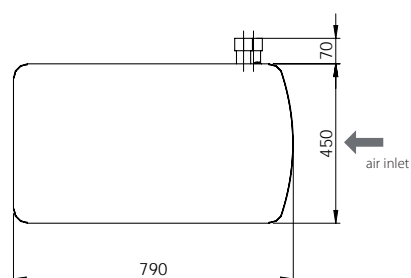
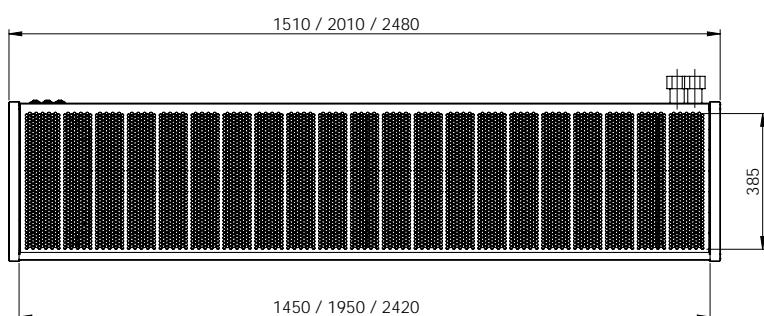
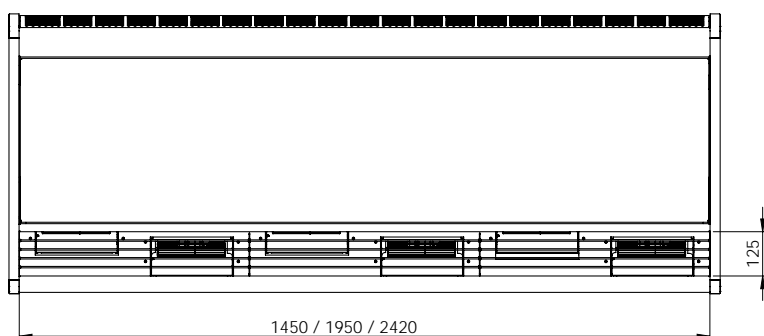
Mounting specifications to be considered:



Technical data - dimensions



- suitable for door heights: under 4.2m
- suitable for door widths: 1.5, 2.0, 2.5m
- case finish: RAL 9010 (white) in standard
- air intake grid colour: RAL 9006 (metallic white aluminium) in standard
- all RAL colours upon request
- air curtain is not equipped with filter



Technical data

Technical data – the air curtains without heating and fitted with AC and EC fans

Technical data		SHCP-150 -4-Li3	SHCP-200 -4-Li3	SHCP-250 -4-Li3
Air handling capacity	m³/h	8300	12300	14600
AC fan				
fan power input	[W]	1280	1920	2240
fan current	[A]	10	15	17,5
fan voltage	[V]	230	230	230
Controller type		DITRONIC TOUCH		
Protection degree		IP20	IP20	IP20
Noise level	db(A)	65	67	67
Weight	[kg]	126	151	180

Technical data		SHCP-150 -4-Li3 EC	SHCP-200 -4-Li3 EC	SHCP-250 -4-Li3 EC
Air handling capacity	m³/h	8300	12300	14600
EC fan				
fan power input	[W]	1300	1980	2310
fan current	[A]	10	15	17,5
fan voltage	[V]	230	230	230
Controller type		DITRONIC TOUCH		
Protection degree		IP20	IP20	IP20
Noise level	db(A)	65	67	67
Weight	[kg]	112	131	156

Technical data – the air curtains with heating and fitted with AC and EC fans

Technical data		THCP-150 -4-Li3N	THCP-200 -4-Li3N	THCP-250 -4-Li3N
Air handling capacity	m³/h	7800	11000	13500
hot water heater (water 70/50/18°C)				
i=18°C / capacity	[kW]	42,9	60,5	80,5
pressure loss	[kpa]	23,1	12,3	8,1
flow volume rate	[m³/h]	1,84	2,59	3,46
hot water heater (water 60/40/18°C)				
i=18°C / capacity	[kW]	24,5	34,1	45,1
pressure loss	[kpa]	9	4,7	3
flow volume rate	[m³/h]	1,04	1,44	1,9
connection	[DN]	20	20	20
AC fan				
fan power input	[W]	1280	1920	2240
fan current	[A]	10	15	17,5
fan voltage	[V]	230	230	230
Controller type		DITRONIC TOUCH		
Protection degree		IP20	IP20	IP20
Noise level	db(A)	64	66	66
Weight	[kg]	150	180	215

Technical data		THCP-150 -4-Li3N EC	THCP-200 -4-Li3N EC	THCP-250 -4-Li3N EC
Air handling capacity	m³/h	7400	10750	12900
hot water heater (water 70/50/18°C)				
i=18°C / capacity	[kW]	41,7	59,7	78,5
pressure loss	[kpa]	22,0	12,0	7,7
flow volume rate	[m³/h]	1,43	2,56	3,35
hot water heater (water 60/40/18°C)				
i=18°C / capacity	[kW]	23,8	33,7	44,1
pressure loss	[kpa]	9	4,6	3
flow volume rate	[m³/h]	1,00	1,44	1,9
connection	[DN]	20	20	20
EC fan				
fan power input	[W]	1320	1980	2310
fan current	[A]	9,6	14,4	16,8
fan voltage	[V]	230	230	230
Controller type		DITRONIC TOUCH		
Protection degree		IP20	IP20	IP20
Noise level	db(A)	64	66	66
Weight	[kg]	136	160	191



2-way and 3-way valves for temperature regulation

According to the customer requirements, the water heat exchanger can be delivered with integrated 2-way or 3-way valve with a regulation head. The valve gearing can be thermostatic or electrothermic.

Thermostatic valve head is always delivered with separate sensor (20 - 50°C), that is installed behind the heat exchanger - regulation of outlet air.

Thermoelectric valve gearing can be delivered integrated in the heat exchanger. It is characterized by silent and reliable function. If the gearing is in voltage, the sensor is getting warm and after a time delay the gearing continuously closes. When the voltage is out, the gearing starts to continuously open. The gearing is always open with no voltage.

Electrical data: 230V/50Hz - 3V, IP 42.



Technical data for valves	kv*** value	admissible working temperature [°C]	admissible working pressure [bar]	admissible pressure difference [bar]
2-way valve - DN 25 (1")	2,5	120	10	0,25
2-way valve - DN 32 (5/4")	3,8	120	10	0,25
2-way valve - DN 25 XXL (1")*	4,3	120	16	0,20

* high flow valve

** for DN25, 32 valid for (K) 3.0, for DN25 XXL valid for (K) 6.0

*** with thermoelectric gearing only

Technical data for valves	kv*** value	admissible working temperature [°C]	admissible working pressure [bar]	admissible pressure difference [bar]
3-way valve - DN 25 (1")	4,6	100	10	0,50
3-way valve - DN 32 (5/4")	6,4	100	10	0,25
3-way valve - DN 32 XXL (5/4")***	10,0	120	10	0,20
3-way valve - DN 40 XXL (2")***	12,0	120	10	0,20



Door contact: 24V

DKM – mechanical door contact

DKMG – magnetic door contact



Room thermostat: 230V

- Wall mounting

- version: basic, with a switch, digital or industry with IP54



PPH – connection flexible tubes

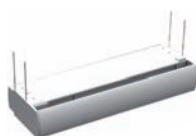
- 300mm long flexible connection pipes with stainless steel or braided reinforcement for ease of connection from the air curtain connections to the system connections.

Set consists of 2 number pipes to DN 20, 25, 32



BMS 0-10V

- controlling the unit by BMS 0-10V



ZSA – Under ceiling suspension

- Under ceiling suspension with adjustable length of 1000 mm.

- incl. the anchoring material for hanging the air curtain

Air curtain control

Ditronic Touch controller

Ditronic controller is fitted with an intelligent processor regulator, designed specifically for Comfort and Design air curtains that are fitted with AC or EC fans. Due to the units sleek design and readable blue colour screen, it is suitable for most kinds of interior design applications (from a basic type to the more expensive stylish type). The controller offers local control, control from superior system (BMS) or Modbus compatibility.

DITRONIC TOUCH

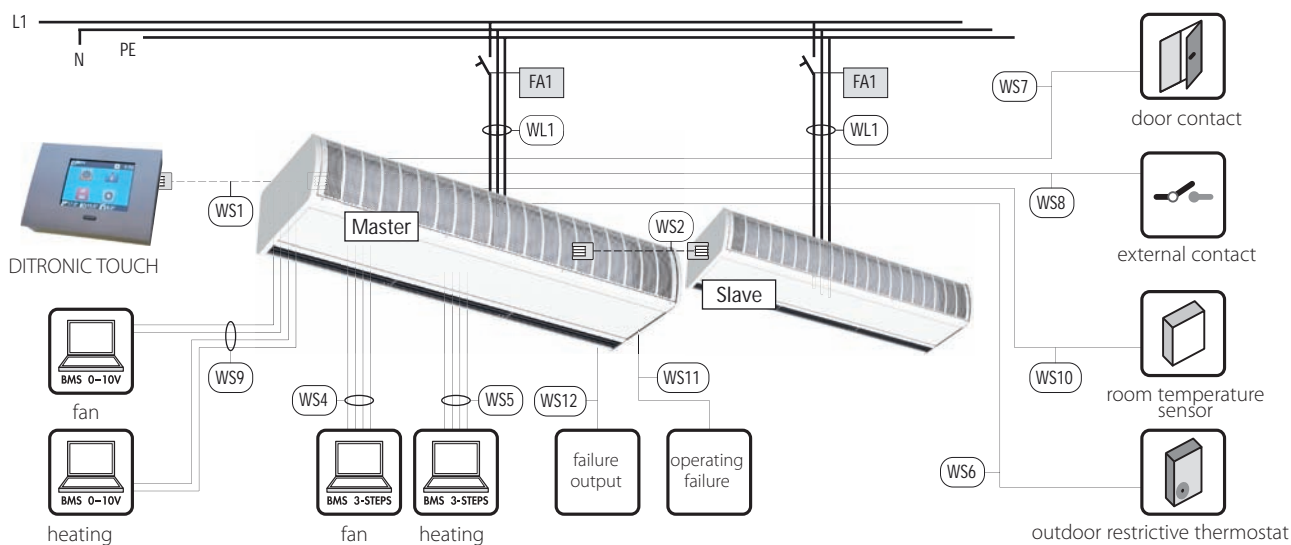


Dimensions of the controller: 125 mm long x 90 mm high x 32 mm deep

The controller is suitable for the wall mounting and IP20 environment. The controller is to be connected via cable with the RJ45 connector, see picture below.



Water heated air curtains - diagram



Cables and Protection - water heated air curtains

FA1	1 x 16 A/C	WS1	4 x 2 x 0,5	WS7	2A x 1(1,5)	WS10	2A x 1(1,5)
WL1	3C x 2,5	WS4	5D x 1(1,5)	WS8	2A x 1(1,5)	WS11	2A x 1(1,5)
WS5	5D x 1(1,5)	WS6	2A x 1(1,5)	WS9	5D x 1(1,5)	WS12	2D x 1(1,5)

* valid for ambient units too

Description of standard functions of Ditronic Touch controller for air curtain regulation

**Week time clock**

The unit is programable with simple calendar settings in order to run in different mode on working days and during the weekend (options: 1-7 or 1-5 and 6-7).

**Anti-frost protection**

All water heated air curtains are equipped with anti-frost protection. This protection works in two stages. When the risk of freezing is detected, the valve opens, the fans turn off and a signal sign is displayed on Ditronic.

**Room anti-frost protection**

The room sensor controls the temperature inside of the room and sends a signal to the Ditronic controller to avoid the risk of freezing.

**Indication of the room and outlet temperature**

The room, outlet and required temperature is displayed on the front panel.

**Door contact**

The unit can be controlled with the door contact. After the door is closed, the delayed running is activated. The delayed time period is adjustable.

**Regulation via room or outlet temperature settings.**

The system allows to control the temperature according to the room or outlet air temperature. There is an inbuilt function to restrict the min. outlet temperature at the same time.

**Superior system – 3-step BMS**

The whole unit can be regulated by the superior regulation system. 3-grade control of heating and fan is inbuilt in standard. At this kind of control the unit is completely controlled by BMS (building management system).

**Setting the valve door contact**

The user has the option to choose whether the valve is dependent on door contact (when the door is closed, the valve closes) or independent (if the temperature difference shows the requirement for heating, the valve remains opened after door closes).

**Failure signalization**

The unit is equipped with outputs for failure and operation to signalize the failure on the display.

**Medium temperature indication**

Current medium temperature is indicated on the display (water heated units only).

**Restrictive exterior thermostat**

When the required temperature is reached, the heating (or the whole unit) can be switched off via the restrictive thermostat.

**MASTER/SLAVE**

The units can be connected in series as Master and Slaves. The room sensor is used for MASTER unit only.

**External contact**

The Air curtain can be switched on/off from a distant place with the external contact.

AUTO**Automatic mode**

The unit can run in the automatic mode. When the door is closed, the unit runs on the first step (fan and heating). When the door opens, the fans and heating run on the second or third step depending on the controller settings.

**Additional heating mode**

If necessary, the unit can cover a sudden drop of temperature by turning on the additional heating mode. High heating capacity will be reached in a very short time.

**Superior system Modbus**

The controller offers the user the option to control devices using Modbus protocol.

Additional accessories for Ditronic controller

**BMS 0-10V**

To control the unit by BMS 0-10V it is necessary to order an additional module.

**Wireless controller**

Wireless controller consists of two parts: a receiver, which has to be installed inside of the air curtain and a remote switch to turn the unit on and off.

Order code

Connection and Position

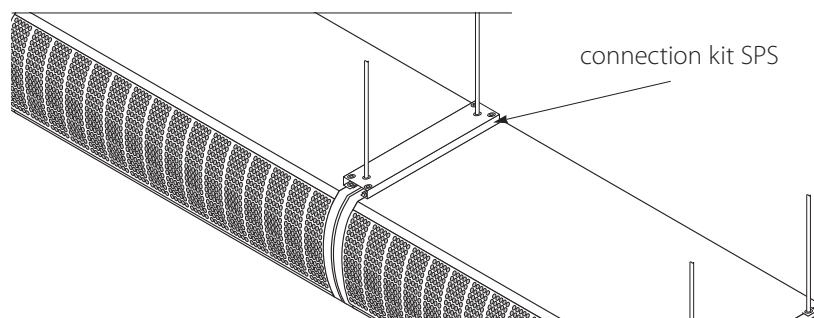
wall suspension



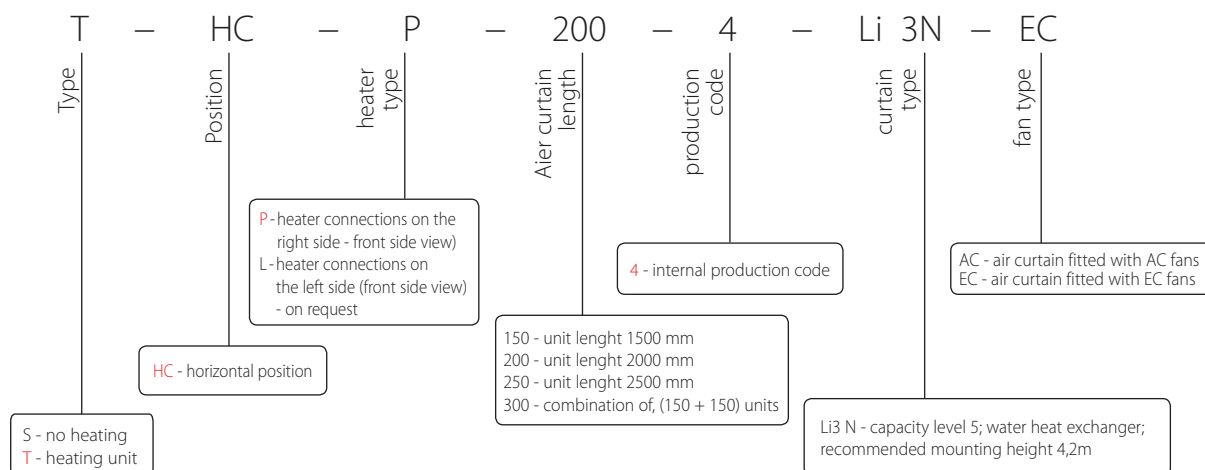
underceiling suspension



connection



Order code



Li3 05/18

Dealership