FLOWAIR
intelligent air flow

Air curtains
ELiS C

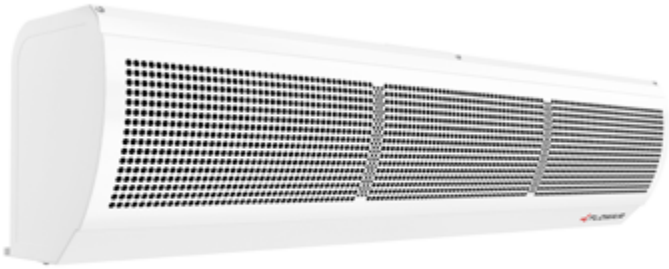


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Air curtain ELiS C	
Max. range[1] [m]	3
Heating capacity[2] [kW]	12,4–32,5
Air flow [m³/h]	900–3000
Weight [kg]	14,5–35,1
Casing	steel
Colour	whitr[3]

[1] Vertical range of isothermal stream, at velocity limit 1,5 m/s
[2] For C-W at inlet/outlet water temperature 90/70°C, inlet air temperature 10°C
[3] RAL 9016

ELiS C air curtains are dedicated for public buildings like markets, sports halls, stores, restaurants, etc. ELiS C units are designed for horizontal installation directly above the door openings, which height does not exceed 3 m.

ELiS C curtains are:
- available in 3 lenghts: 1m, 1,5m or 2 m
- available in 2 versions:
  - with water heat exchanger (W)
  - with electric heaters (E)



C-W/E-100



C-W/E-150



C-W/E-200

DESIGNATIONS OF ELiS C DOOR CURTAINS

C-W-100
1 2 3

1 | C – ELiS C, range of curtain 3m

2 | W – curtain with water heat exchanger
E – curtain with electric heaters

3 | 100/150/200 – air outlet lenght



MOUNTING BRACKET

The device is equipped with mounting bracket, allowing fast and estetic installation on wall.



EASY CONTROL

The curtain cooperates with 3-step fan speed controller allowing seamless and thermostatic modes.



DIAGONAL FAN

Quiet operation due to 3 steps motor propelling set of diagonal rotors made of material.



WIDE RANGE OF UNITS

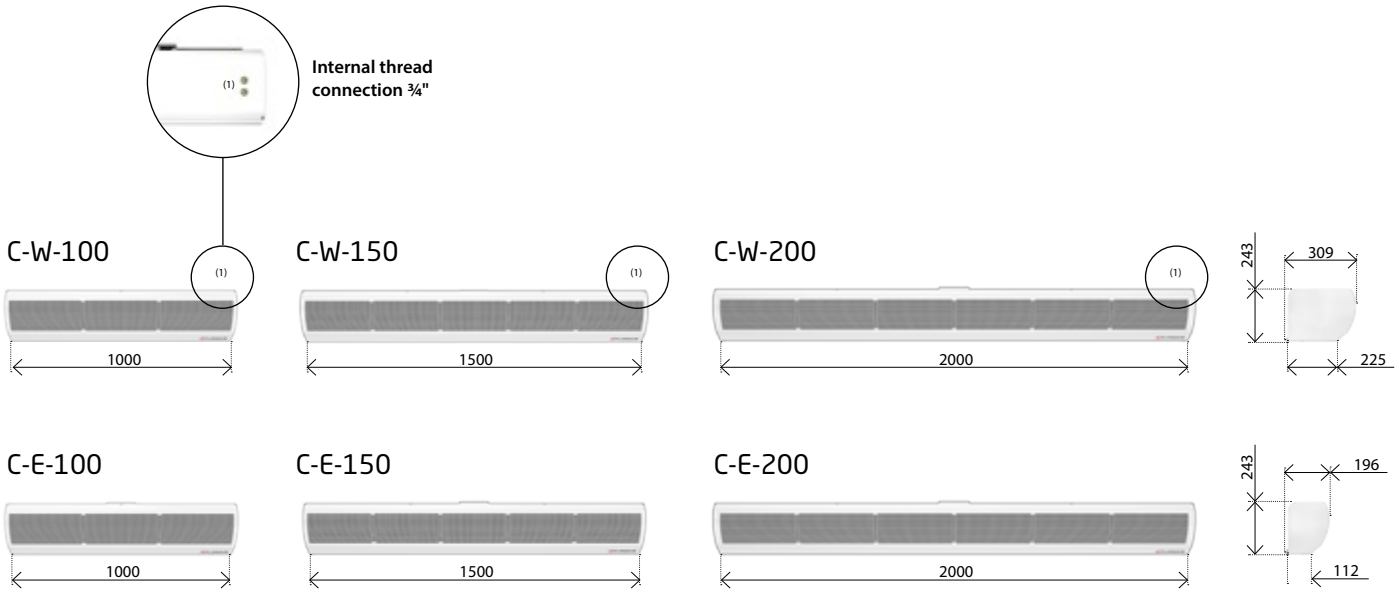
Air curtains with water heat exchanger or electric heaters are available in 3 lengths: 1m, 1,5m and 2 m.



HEATING ELEMENTS

ELIS C-E air curtains are equipped with PTC heating elements, self-adjusting its temperature to air flow.

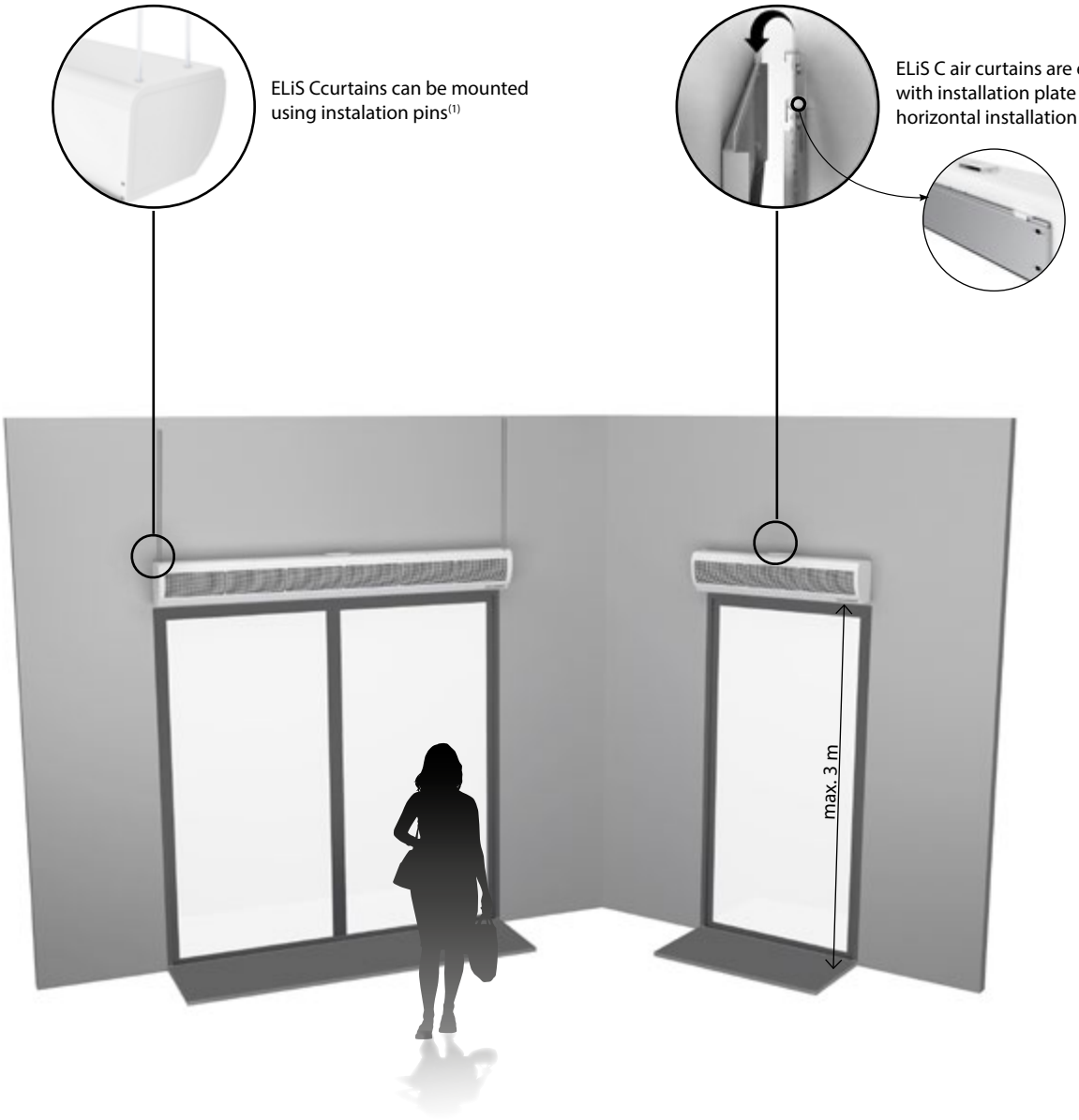
Dimensions



Technical data

	ELiS C-W/E-100			ELiS C-W/E-150			ELiS C-W/E-200		
Fan setting	I step	II step	III step	I step	II step	III step	I step	II step	III step
Fan	Single phase motor with diagonal rotor								
Fan power supply [V/Hz]	230/50								
Max. fan current consumption [A]	0,65			0,95			1,2		
Fan power consumption [kW]	140			210			260		
IP	21								
Max. acoustic pressure level(1) [dB(A)]	44,5	46,5	48,5	46,5	48,5	50,5	48,5	50,5	52,5
Max air stream range(2) [m]	3								
	ELiS C-W-100			**ELiS C-W-150**			**ELiS C-W-200**		
Fan setting	I step	II step	III step	I step	II step	III step	I step	II step	III step
Heat exchanger	Cu–Al, two rows								
Curtain air flow stream [m³/h]	1050	1250	1400	1600	1850	2100	2300	2600	3000
Heating capacity(3)[kW]	12,4	13,8	14,9	19,2	21,1	22,8	27,5	29,8	32,5
Curtain's air temperature rise (ΔT)(3) [°C]	35,0	32,5	31,0	35,5	33,5	32,0	35,0	33,5	32,0
Max. operating pressure [MPa]	1,6								
Max. water temperature [°C]	95								
Connection ["]	¾" Inner thread								
Unit weight [kg]	19,0			27,5			35,1		
Unit weight filled with water [kg]	19,9			28,8			36,8		
	ELiS C-E-100			**ELiS C-E-150**			**ELiS C-E-200**		
Fan setting	I step	II step	III step	I step	II step	III step	I step	II step	III step
Heat exchanger	PTC heating element								
Curtain air flow stream [m³/h]	900	1100	1300	1450	1650	1950	2100	2300	2700
Electric heaters power [kW]	6,1	6,4	6,5	9,5	9,7	10	12,5	12,8	13
Curtain's air temperature rise (ΔT)(3) [°C]	18	16	15	18	16	15	18	16	15
Heating elements power supply [V/Hz]	3x400/50 or 1x230/50(4)								
Rated current [A]	8,8	9,1	9,4	13,7	14	14,5	18,1	18,5	18,7
Unit weight [kg]	14,5			19,9			25,1		

(1) Acoustic pressure level measured for optimum installation height, on second step of efficiency, in the room with medium capability of sound absorption, capacity 500 m³, at distance of 3 m from the unit
(2) Range of vertical isothermal air stream, at velocity limit 1,5 m/s
(3) At heating factor's temperature 90/70°C, inlet air temperature 10°C
(4) Detailed parameters for ELiS C-E curtain powered with 230V/50Hz on page 11



(1) on order option

Control systems functions

	TS control
	
Controlling options	
Manual 3-step air flow control	✔
Modes	
Heating / Ventilation	✔
Operation depending on door sensor and temperature	✔
Weekly programmer	
BMS	
Curtain switch off delay	
Idle speed mode	
Integration with Flowair SYSTEM	
Max. number of connected units	
Directly via controller	2
With 1 RX splitter	6[1]
With 2 RX splitters	12[1]
With 3 RX splitters	18[1]
Type of fan	
AC – standard 3-step fan	✔

[1] Concern ELiS C-W

TS Control

ELiS C air curtain is equipped with a control system, which enables the connection of:

- DCm / DCet mechanical door sensor,
- TS 3-step fan speed controller with thermostat.



Control system provides 2 operating modes:

- continuous mode – fan operation independent of temperature setting; thermostat gives signal for heating,
- thermostatic mode – fan operation depending on thermostat setting.

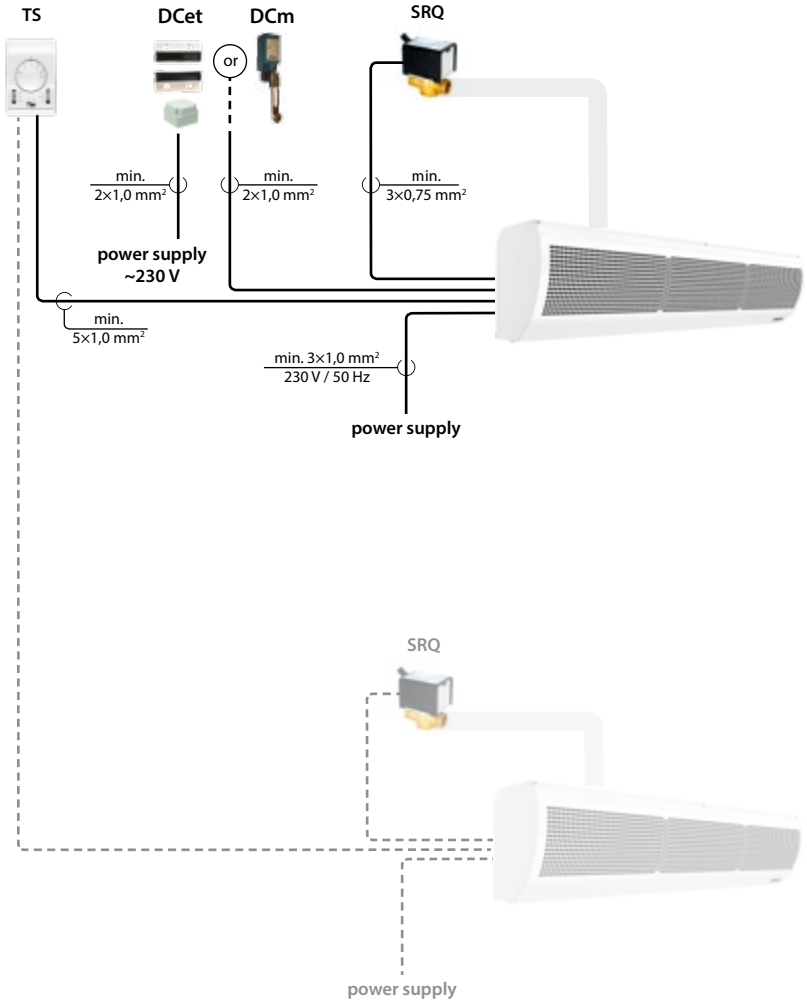
CHAINING OF CURTAINS:

It is possible to connect two ELiS C air curtains to a single TS controller.

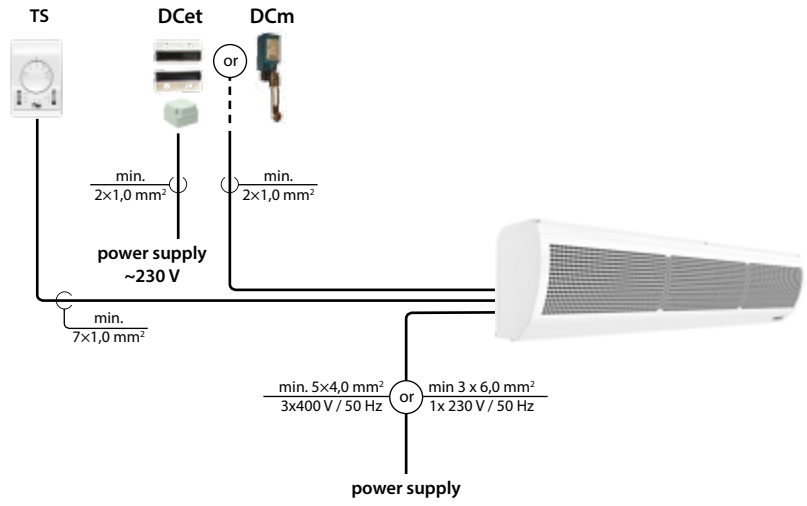
Category	Name	Picture	Technical data
Controller	TS 3-step fan speed controller with thermostat		Protection degree: IP30 Temperature adjustment range: +10 … +30°C Operating temperature range: 0 … +40°C Contacts load: inductive 5 A, resistance 6 A
Door sensors	DCet magnetic door sensor wit relay cabinet		Operating temperature range: -5 … +60°C Protection degree: IP64 Material: plastic Length of connection wire: 2 m Jumpers: NO Inductive contacts load: 3 A Max. contacts voltage: 230 VDC Max. distance between contacts: 8 mm
	DCm mechanical door sensor		Operating temperature range: -10 … +80°C Protection degree: IP65 Material: plastic Length of connection wire: none Jumpers: 1xNC i 1xNO Inductive contacts load: 3 A Max. contacts voltage: 300 VAC or 250 VDC
Valves with actuator	SRQ2d two-way valve ¾" with actuator		Protection degree: IP20 Power supply: 200–240 V 50/60 Hz Max. water temperature: +93°C Max. water pressure: 1,6 MPa Kvs: 3,0 m^3/h Installation: on water outlet pipe Opening/closing time: 18s/5s Dimensions (HxWxD): 108x86x66 mm
	SRQ3d three-way valve ¾" with actuator		Protection degree:IP20 Power supply: 200–240 V 50/60 Hz Max. water temperature: +93°C Max. water pressure: 2 MPa Kvs: 3,4 m^3/h Installation: on water inlet pipe Opening/closing time: 18s/5s Dimensions (HxWxD): 118x86x66 mm

ELiS C-W – TS control

Easy connection slat access located on upper case of the unit.
Terminal block ensures the control of the curtains by DCet or DCm mechanical door sensor and TS 3-step fan speed controller with thermostat.



ELiS C-E – TS control



ELiS C with water heat exchanger

ELiS C-W-100

Tp1	V	PT	Qw	Δpw	Tp2	PT	Qw	Δpw	Tp2
°C	m³/h	kW	l/h	kPa	°C	kW	l/h	kPa	°C
		Tw1/Tw2 = 90/70°C				**Tw1/Tw2 = 80/60°C**			
0	1050/1250/1400	14,2/15,8/17,0	625/698/749	15,4/18,8/21,3	40,0/37,5/36,0	12,2/13,6/14,6	537/599/643	12,0/14,7/16,7	34,5/32,5/31,0
5		13,3/14,8/15,9	587/655/703	13,7/16,7/19,0	42,5/40,0/38,5	11,3/12,7/13,6	498/556/596	10,5/12,8/14,5	37,0/35,0/33,5
10		12,4/13,8/14,9	547/611/655	12,1/14,7/16,7	45,0/42,5/41,0	10,4/11,6/12,5	458/512/549	9,1/11,0/12,5	39,5/37,5/36,5
15		11,5/12,8/13,8	507/566/608	10,5/12,9/14,6	47,0/45,0/44,0	9,5/10,6/11,4	418/467/501	7,7/9,4/10,6	41,5/40,0/39,0
20		10,6/11,8/12,7	467/522/560	9,1/11,1/12,6	49,5/47,5/46,5	8,6/9,6/10,3	378/422/453	6,4/7,8/8,9	44,0/42,5/41,5
		Tw1/Tw2 = 70/50°C				**Tw1/Tw2 = 60/40°C**			
0	1050/1250/1400	10,3/11,5/12,3	449/501/538	9,0/11,0/12,5	29,0/27,0/26,0	8,3/9,3/9,9	361/403/432	6,4/7,8/8,8	23,5/22,0/21,0
5		9,4/10,5/11,2	410/457/491	7,7/9,3/10,6	31,5/29,5/28,5	7,4/8,2/8,8	322/359/385	5,2/6,3/7,1	26,0/24,5/23,5
10		8,5/9,4/10,1	370/413/443	6,4/7,8/8,8	33,5/32,0/31,5	6,5/7,2/7,7	282/314/337	4,1/5,0/5,6	28,0/27,0/26,5
15		7,5/8,4/9,0	330/368/395	5,2/6,3/7,2	36,0/35,0/34,0	5,5/6,2/6,6	241/269/288	3,1/3,8/4,3	30,5/29,5/29,0
20		6,6/7,4/7,9	289/323/346	4,1/5,0/5,7	38,5/37,5/36,5	4,6/5,1/5,5	199/222/238	2,2/2,7/3,1	32,5/32,0/31,5

ELiS C-W-150

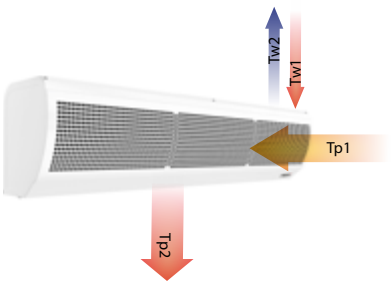
Tp1	V	PT	Qw	Δpw	Tp2	PT	Qw	Δpw	Tp2
°C	m³/h	kW	l/h	kPa	°C	kW	l/h	kPa	°C
		Tw1/Tw2 = 90/70°C				**Tw1/Tw2 = 80/60°C**			
0	1600/1850/2100	21,9/24,1/26,1	968/1062/1150	16,6/19,6/22,7	40,5/38,5/36,5	18,9/20,8/22,5	832/912/988	13,0/15,3/17,7	35,0/33,0/31,5
5		20,6/22,6/24,4	908/996/1078	14,8/17,5/20,2	43,0/41,0/39,5	17,6/19,3/20,8	772/846/916	11,3/13,4/15,4	37,5/35,5/34,5
10		19,2/21,1/22,8	847/930/1006	13,0/15,4/17,8	45,5/43,5/42,0	16,2/17,7/19,2	710/779/843	9,8/11,5/13,3	40,0/38,0/37,0
15		17,8/19,5/21,1	786/862/933	11,4/13,4/15,5	47,5/46,0/44,5	14,8/16,2/17,5	649/712/770	8,3/9,8/11,3	42,0/40,5/39,5
20		16,4/18,0/19,5	724/794/860	9,8/11,6/13,4	50,0/48,5/47,0	13,4/14,6/15,8	587/643/696	6,9/8,2/9,4	44,5/43,0/42,0
		Tw1/Tw2 = 70/50°C				**Tw1/Tw2 = 60/40°C**			
0	1600/1850/2100	15,9/17,5/18,9	696/764/826	9,7/11,5/13,2	29,5/28,0/26,5	12,9/14,1/15,3	561/615/666	6,9/8,1/9,3	24,0/22,5/21,5
5		14,5/15,9/17,2	636/697/754	8,3/9,8/11,2	32,0/30,5/29,0	11,5/12,6/13,6	500/548/593	5,6/6,6/7,6	26,0/25,0/24,0
10		13,1/14,4/15,6	574/630/681	6,9/8,1/9,4	34,0/33,0/32,0	10,0/11,0/11,9	438/480/519	4,4/5,2/6,0	28,5/27,5/26,5
15		11,7/12,8/13,9	512/562/608	5,6/6,6/7,6	36,5/35,5/34,5	8,6/9,4/10,2	375/411/445	3,4/4,0/4,5	31,0/30,0/29,5
20		10,3/11,3/12,2	449/493/533	4,5/5,2/6,0	39,0/38,0/37,0	7,1/7,8/8,5	311/341/368	2,4/2,8/3,3	33,0/32,5/32,0

ELiS C-W-200

Tp1	V	PT	Qw	Δpw	Tp2	PT	Qw	Δpw	Tp2
°C	m³/h	kW	l/h	kPa	°C	kW	l/h	kPa	°C
		Tw1/Tw2 = 90/70°C				**Tw1/Tw2 = 80/60°C**			
0	2300/2600/3000	31,4/34,0/37,1	1386/1498/1638	39,4/45,4/53,5	40,5/38,5/36,5	27,2/29,4/32,1	1194/1290/1411	30,9/35,6/41,9	35,0/33,5/31,5
5		29,5/31,9/34,8	1301/1406/1538	35,1/40,5/47,6	43,0/41,0/39,5	25,2/27,3/29,8	1108/1198/1310	27,0/31,1/36,6	37,5/36,0/34,5
10		27,5/29,8/32,5	1215/1313/1436	31,0/35,7/42,0	45,0/43,5/42,0	23,3/25,1/27,5	1022/1105/1207	23,3/26,9/31,6	40,0/38,5/37,0
15		25,6/27,6/30,2	1128/1219/1333	27,1/31,2/36,7	47,5/46,0/44,5	21,3/23,0/25,1	935/1010/1104	19,9/22,9/26,8	42,0/41,0/39,5
20		23,6/25,5/27,9	1040/1125/1229	23,4/26,9/31,7	50,0/48,5/47,0	19,3/20,8/22,8	847/915/1000	16,6/19,1/22,4	44,5/43,5/42,0
		Tw1/Tw2 = 70/50°C				**Tw1/Tw2 = 60/40°C**			
0	2300/2600/3000	22,9/24,8/27,1	1003/1084/1185	23,3/26,8/31,5	29,5/28,0/26,5	18,7/20,2/22,0	813/879/961	16,6/19,1/22,4	24,0/23,0/22,0
5		21,0/22,7/24,8	917/991/1084	19,8/22,8/26,8	32,0/30,5/29,5	16,7/18,0/19,7	727/786/859	13,6/15,6/18,3	26,5/25,5/24,5
10		19,0/20,5/22,4	830/897/981	16,6/19,1/22,4	34,5/33,0/32,0	14,7/15,9/17,3	639/691/755	10,8/12,4/14,5	29,0/28,0/27,0
15		17,0/18,3/20,0	743/802/877	13,6/15,6/18,2	36,5/35,5/34,5	12,6/13,6/14,9	550/595/650	8,3/9,5/11,1	31,0/30,5/29,5
20		14,9/16,1/17,6	654/706/772	10,8/12,4/14,6	39,0/38,0/37,0	10,6/11,4/12,5	460/497/543	6,0/6,9/8,1	33,5/33,0/32,0

To obtain operating parameters concerning other water temperatures, please contact Sales Office.

PT – heating capacity
Tp1 – inlet air temperature
Tp2 – outlet air temperature
Tw1 – inlet water temperature
Tw2 – outlet water temperature
Qw – water stream flow in the heat exchanger
Δpw – water pressure drop in the heat exchanger



ELiS C with electric heaters

	C-E-100			C-E-150			C-E-200		
	1st step	2nd step	3rd step	1st step	2nd step	3rd step	1st step	2nd step	3rd step
Power supply [V/Hz]	3x400/50								
Rated current(1) [A]	8,8	9,1	9,4	13,7	14,0	14,5	18,1	18,5	18,7
Heating capacity(1) [kW]	6,1	6,4	6,5	9,5	9,7	10,0	12,5	12,8	13,0
Curtain's air temperature rise (ΔT)(1) [°C]	18	16	15	18	16	15	18	16	15
	C-E-100			C-E-150			C-E-200		
	1st step	2nd step	3rd step	1st step	2nd step	3rd step	1st step	2nd step	3rd step
Power supply [V/Hz]	1x230/50								
Rated current(1)(2) [A]	7,8/17,3/26,5	8,7/18,2/27,3	9,5/19,1/28,2	12,6/26,9	13,4/27,7	14,3/28,6	17,3	17,8	18,6
Heating capacity(1)(2) [kW]	1,8/4,0/6,1	2,0/4,2/6,4	2,2/4,4/6,5	2,9/6,2	3,1/6,4	3,3/6,6	4,0	4,1	4,3
Curtain's air temperature rise (ΔT)(3) [°C]	8/13/18	7/12/16	6/11/15	8/13	7/12	6/11	8	7	6

(1) At inlet air temperature 10°C
(2) Unit power parameters depending on power connection. The producer does not reccomend using units where power consumption is more than 32 A
(3) Average outlet air temperature for ambient temperature 10°C