

# Air curtain-fan heater combo units ELiS DUO











**Air curtain-fan heater combo units ELiS DUO**

| | |
|---|---|
| **Max. range[1] [m]** | 2,5 |
| **Heating capacity[2] [kW]** | 15,5–29 |
| **Air flow [m³/h]** | 1200–3700 |
| **Weight [kg]** | 23,9–41,1 |
| **Colour** | grey/white[3] |
| **Casing** | steel, plastic |

[1] Range of vertical isothermal air stream, at velocity limit above 2 m/s
[2] For DUO-W at inlet/outlet water temperature 90/70°C, inlet air temperature 10°C
[3] RAL 9006 / RAL 9010

**Application:**

Buildings with high aesthetic values, wherever there is a need of heating the room and ensuring air barrier on door opening simultaneously, e.g. in small grocery stores, gas stations etc. ELiS DUO is an 2-in-1 unit, designed to operate indoors. Its main task is to protect door opening. Additionally, the auxiliary air stream enables heating the room.

**Available types of units:**

Available in 2 lengths: 1 m or 2 m.
Available in 2 versions:

- W – curtain with water heat exchanger
- E – curtain with electric heaters

## Technical data

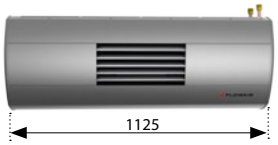
| | ELiS DUO-W-100 | ELiS DUO-E-100 | ELiS DUO-W-200 |
|---|---|---|---|
| | Curtain \| Heater | Curtain \| Heater | Curtain \| Heater |
| **Power supply [V/Hz]** | 230/50 | 3x400/50 | 230/50 |
| **Power consumption [kW]** | 0,25 | 10,1 | 0,43 |
| **Current consumption [A]** | 1,1 | 14,7 | 1,85 |
| **IP** | 21 | 21 | 21 |
| **Connection ["]** | ½" | – | ½" |
| **Air flow [m³/h]** | 1400 \| 700 | 1400 \| 700 | 3000 \| 700 |
| **Acoustic pressure level [dB(A)][1]** | 46 | 46 | 49 |
| **Max. heating water temperature [°C]** | 95 | – | 95 |
| **Max. operating pressure [MPa]** | 1,6 | – | 1,6 |
| **Air temperature rise (ΔT) [°C][2]** | 30 | 20 | 23 |
| **Weight of unit [kg]** | 23,9 | 28,5 | 41,1 |
| **Weight of unit filled with water [kg]** | 25,3 | – | 42,8 |
| **Range [m][3]** | 2,5 \| 8 | 2,5 \| 8 | 2,5 \| 8 |

[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] For DUO-W at inlet/outlet water temperature 90/70°C and inlet air temperautre 10°C / for DUO-E at inlet air temperature 10°C
[3] Range of curtain's vertical isothermal air stream, at velocity limit above 2 m/s, range of heater's horizontal isothermal air streem, at velocity limit equal to 0,5 m/s

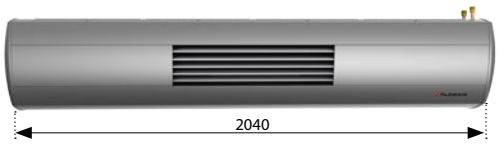


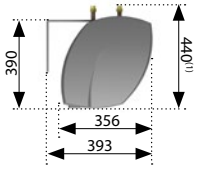
## Dimensions

DUO-W/E-100



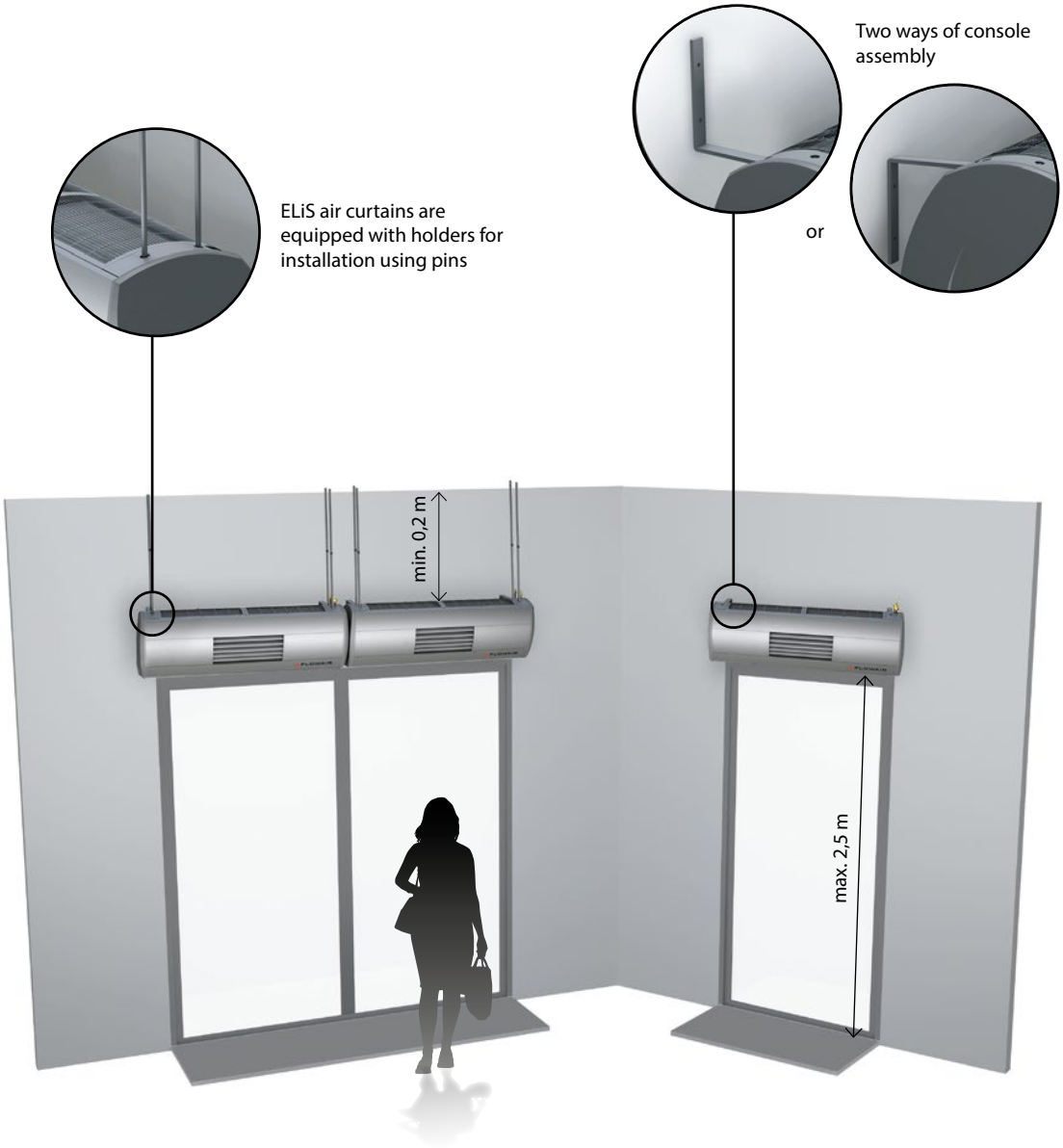

DUO-W-200




(1) Concerns ELiS DUO-W

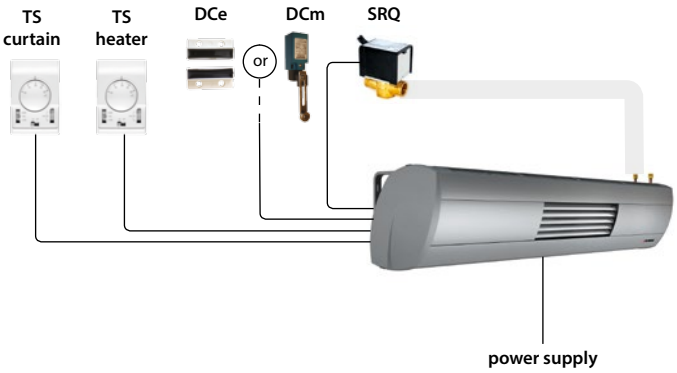
## Installation





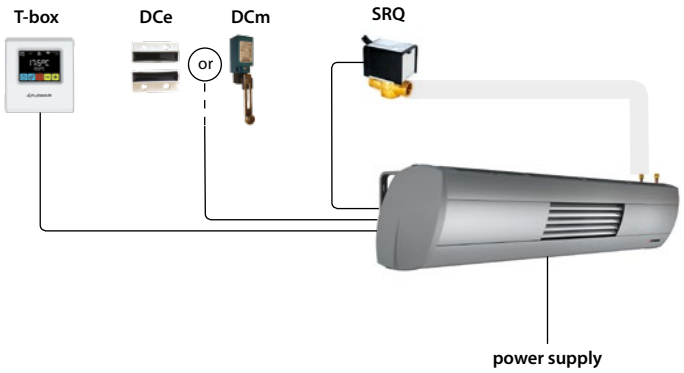

## Connection diagrams

### Air curtains ELiS DUO
### TS REGULATION




**ELEMENTS:**
- TS – 3-step fan speed controller with thermostat
- DCe – magnetic door sensor
- DCm – mechanical door sensor
- SRQ – valve with actuator

### Air curtains ELiS DUO
### T-box REGULATION




**ELEMENTS:**
- T-box – intelligent controller with touch screen
- DCe – magnetic door sensor
- DCm – mechanical door sensor
- SRQ – valve with actuator

## Examples of installation

Objects with high aesthetic value, wherever there is a simultaneous need of heating the room and providing the air barrier of the door, e.g. small grocery stores, gas stations, etc.



**ELiS DUO – air barrier + heating in one unit**



## Heating capacities

### ELiS DUO
### WITH WATER HEAT EXCHANGER

**ELiS DUO-W-100**

| Air curtain part | | | | | | Fan heater part | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Tp1** | **V** | **PT** | **Qw** | **Δpw** | **Tp2** | **V** | **PT** | **Qw** | **Δpw** | **Tp2** |
| °C | m³/h | kW | l/h | kPa | °C | m³/h | kW | l/h | kPa | °C |
| **Tw1/Tw2 = 90/70 °C** | | | | | | | | | | |
| 0 | 800/1100/1400 | 12,1/14,9/17,2 | max. 1141 | max. 12,8 | 42/37/34 | 400/550/700 | 6,1/7,4/8,6 | max. 1141 | max. 12,8 | 42/37/34 |
| 5 | | 11,2/13,7/15,9 | | | 44/40/37 | | 5,6/6,9/8,0 | | | 44/40/37 |
| 10 | | 10,3/12,6/14,7 | | | 47/43/40 | | 5,2/6,3/7,3 | | | 47/43/40 |
| 15 | | 9,4/11,6/13,4 | | | 49/46/43 | | 4,7/5,8/6,7 | | | 49/46/43 |
| 20 | | 8,6/10,5/12,2 | | | 52/48/46 | | 4,3/5,3/6,1 | | | 52/48/46 |
| **Tw1/Tw2 = 70/50 °C** | | | | | | | | | | |
| 0 | 800/1100/1400 | 8,7/10,7/12,4 | max. 811 | max. 7,3 | 30/27/24 | 400/550/700 | 4,35/5,3/6,2 | max. 811 | max. 7,3 | 30/27/24 |
| 5 | | 7,8/9,6/11,1 | | | 32/30/27 | | 3,9/4,8/5,6 | | | 32/30/27 |
| 10 | | 6,9/8,5/9,9 | | | 35/32/30 | | 3,5/4,3/4,9 | | | 35/32/30 |
| 15 | | 6,1/7,5/8,7 | | | 37/35/33 | | 3/3,7/4,3 | | | 37/35/33 |
| 20 | | 5,2/6,4/7,5 | | | 39/37/36 | | 2,6/3,2/3,7 | | | 39/37/36 |
| **Tw1/Tw2 = 60/40 °C** | | | | | | | | | | |
| 0 | 800/1100/1400 | 7,0/8,5/9,9 | max. 646 | max. 5,0 | 24/21/20 | 400/550/700 | 3,5/4,3/4,9 | max. 646 | max. 5,0 | 24/21/20 |
| 5 | | 6,1/7,5/8,6 | | | 26/24/22 | | 3,0/3,7/4,3 | | | 26/24/22 |
| 10 | | 5,2/6,4/7,4 | | | 29/27/25 | | 2,6/3,2/3,7 | | | 29/27/25 |
| 15 | | 4,3/5,3/6,2 | | | 31/29/28 | | 2,2/2,7/3,1 | | | 31/29/28 |
| 20 | | 3,5/4,3/5,0 | | | 33/32/31 | | 1,7/2,1/2,5 | | | 33/32/31 |

**ELiS DUO-W-200**

| Air curtain part | | | | | | Fan heater part | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Tp1** | **V** | **PT** | **Qw** | **Δpw** | **Tp2** | **V** | **PT** | **Qw** | **Δpw** | **Tp2** |
| °C | m³/h | kW | l/h | kPa | °C | m³/h | kW | l/h | kPa | °C |
| **Tw1/Tw2 = 90/70 °C** | | | | | | | | | | |
| 0 | 1700/2250/3000 | 19/23/26,6 | max. 1465 | max. 18,9 | 34/30/27 | 400/550/700 | 4,7/5,8/6,6 | max. 1465 | max. 18,9 | 34/30/27 |
| 5 | | 17,8/21,1/24,9 | | | 36/33/30 | | 4,4/5,3/6,2 | | | 36/33/30 |
| 10 | | 16,6/19,7/23,2 | | | 39/36/33 | | 4,1/4,9/5,8 | | | 39/36/33 |
| 15 | | 15,4/18,2/21,5 | | | 42/39/36 | | 3,8/4,6/5,4 | | | 42/39/36 |
| 20 | | 14,2/16,8/19,8 | | | 45/42/40 | | 3,5/4,2/5,0 | | | 45/42/40 |
| **Tw1/Tw2 = 70/50 °C** | | | | | | | | | | |
| 0 | 1700/2250/3000 | 13,6/16,2/19 | max. 1039 | max. 10,6 | 24/21/19 | 400/550/700 | 3,4/4/4,7 | max. 1039 | max. 10,6 | 24/21/19 |
| 5 | | 12,3/14,6/17,3 | | | 27/24/22 | | 3,1/3,7/4,3 | | | 27/24/22 |
| 10 | | 11,1/13,2/15,6 | | | 30/27/26 | | 2,8/3,3/3,9 | | | 30/27/26 |
| 15 | | 9,8/11,8/13,8 | | | 32/30/29 | | 2,5/2,9/3,5 | | | 32/30/29 |
| 20 | | 8,6/10,3/12,1 | | | 35/33/32 | | 2,2/2,6/3,0 | | | 35/33/32 |
| **Tw1/Tw2 = 60/40 °C** | | | | | | | | | | |
| 0 | 800/1100/1400 | 10,8/12,9/15,1 | max. 826 | max. 7,2 | 19/17/15 | 400/550/700 | 2,7/3,2/3,8 | max. 826 | max. 7,2 | 19/17/15 |
| 5 | | 9,6/11,4/13,4 | | | 22/20/19 | | 2,4/2,9/3,4 | | | 22/20/19 |
| 10 | | 8,4/9,9/11,7 | | | 25/23/22 | | 2,1/2,5/2,9 | | | 25/23/22 |
| 15 | | 7,1/8,4/9,9 | | | 27/26/25 | | 1,8/2,1/2,5 | | | 27/26/25 |
| 20 | | 5,8/6,9/8,2 | | | 30/29/28 | | 1,4/1,7/2 | | | 30/29/28 |

V – air flow
PT – air flow
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