



Designed to be installed on the fans discharge side.

The minimum air speed through the heater must be 2 m/s.

Maximum air temperature through the heater: 40°C.

The heaters are fitted with:

- Armoured heating elements to connect to the three phase net (3x400).
- Double protection circuit to connect to the heater control circuit by means of a safety overheat automatic thermostat (60°), connected in series with another safety overheat manual reset thermostat (RESET).

- Wiring box IP43.

Available temperature sensors in the duct, ambient temperature sensors and speed controllers to complete the installation and to adjust the air temperature according to every need.

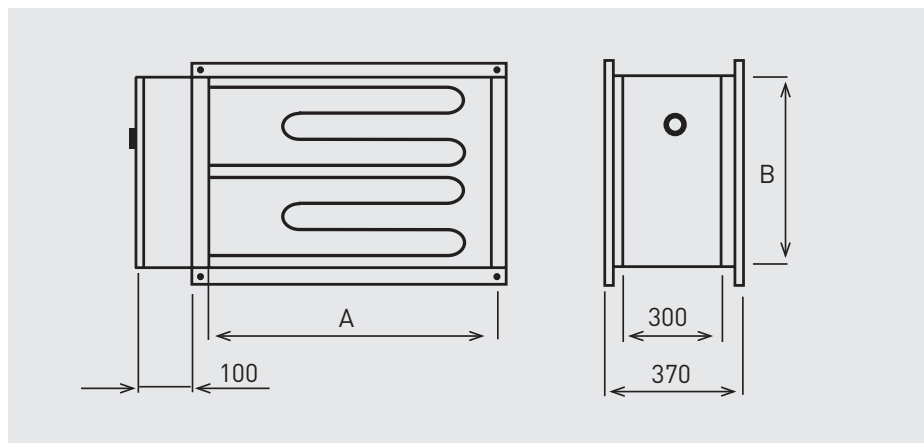
By means of this system the supplied air can reach up to 50°.

(See the electrical accessories section).

## TECHNICAL CHARACTERISTICS

Models	Supply voltage (V)	Power (kW)	Heater element subdivisions (kW)	Minimum airflow (m³/h)	Controller type
IBE-200/9T	3/400	9	3x3	580	TTC-25 / TTC-2000
IBE-225/16,5T	3/400	16,5	3x5,5	900	TTC-25 / TTC-2000
IBE-315/30T	3/400	30	4x7,5	1500	TTC-2000 + TT-S1
IBE-355/30T	3/400	30	4x7,5	2000	TTC-2000 + TT-S1
IBE-400/50T	3/400	50	3x16,7	2400	TTC-40F + TT-S4/D
IBE-450/67T	3/400	67	4x16,7	3600	TTC-40F + TT-S4/D

**DIMENSIONS (mm)**



Minimum distance between the fan and the heater, 2,5xA (inner width of the flange)

Model	A	B
IBE-200	400	198
IBE-225	500	248
IBE-250	500	298
IBE-285	600	298
IBE-315	600	348
IBE-355	700	398
IBE-400	800	498
IBE-450	1000	498

**PERFORMANCE CURVES**

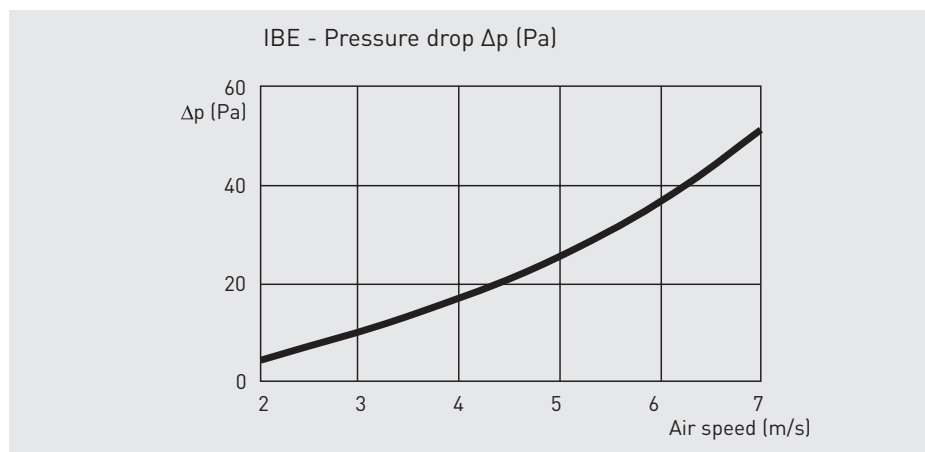


Diagram 1

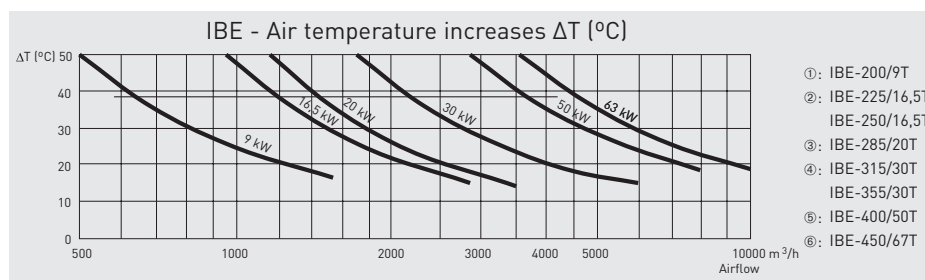


Diagram 2

**SELECTION EXAMPLE**

DATA:  
 - Airflow: 3300 m³/h (Q)  
 - Temp. of supplied air: -5°C  
 - Temp. of exhausted air: 20°C

ELECTRIC HEATER POWER REQUIRED:  
 $P = Q \times 0,36 \times \Delta T = 3300 \times 0,36 \times (20 - (-5)) = 29700$   
 $W = 29,7 \text{ kW}$

SELECTION OF IBE -315/30T or IBE-355/30T HEATER (Diagram 2):  
 The final selection depends on:  
 - Total system pressure drop  
 - Desired sound level  
 - Available space

**ELECTRIC HEATER ACCESSORIES**

For more information see electrical accessories.



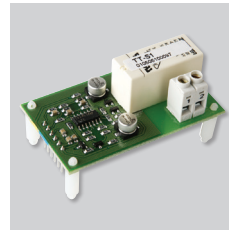
**PULSER**  
Single phase electric heater controller.



**TTC-25 and TTC-40F**  
Three phase electric heater controller.



**TTC-2000**  
Three phase electric heater controller.



**TT-S1**  
Additional PCB to increase the output power controlled.



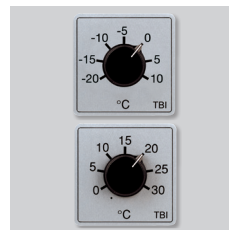
**TG-R**  
Room temperature sensor.  
TG-R430: Adjustable  
TG-R530: Not adjustable



**TG-K**  
Duct temperature sensor.



**PRESOSTATO DPS**  
Differential pressure switch.



**TBI-10 / TBI-30**  
External potentiometer.



**TT-S4/D**  
Module to increase the controller power TTC-40F, up to 66kW.



**TRAF0-15D**  
Transformer to power the TT-S4/D to 24V.