ICIM
UNI EN ISO 9001:2008
CERTIFIED MANAGEMENT SYSTEM

Cert. n° 0545

Heating

No-Strat Anti-stratification and Heat Economiser Unit

SABIANA
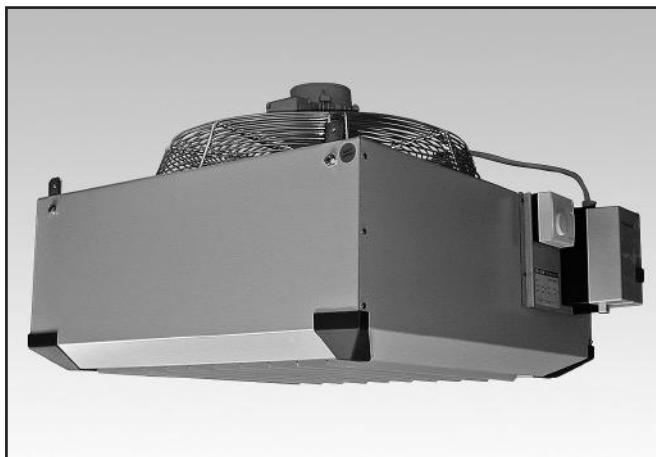IL CLIMA AMICO

A leading brand of AFG

No-Strat: the system to avoid the "open sky" effect and save up to 30% of fuel

No-Strat is an anti-air stratification and heat saving appliance, which can be used on all the existing industrial as well as commercial hot air heating plants.
It is a well known fact that in all large and very high rooms, which are heated with hot air systems (unit heaters, gas fired units, etc.) or which have got technological heat sources like drying ovens, a high heat accumulation can be observed under the ceiling. In fact the heated air rises and is subject to stratification, thus it cannot be used on the height where the personnel operates, while the relative heat gradually escapes to the outside through the ceiling.
No-Strat resolves this serious problem. This appliance, which has to be installed at about two-thirds of the total height of the room, is equipped with a thermostatic control and as soon as the temperature of the higher zone exceeds the predetermined value (i.e. 20°C), the electric fan will be actuated to guide the hot air into the lower part of the room and to distribute it at the right level for use.
With modest expense, which can be recovered in just one season of operation, you can realise an enormous recovery of heat, which otherwise would have been lost, and an effective fuel saving to a percentage of 30-40%.
Moreover in the summer time you can use SABIANA's No-Strat also for environmental ventilation.

Component feature:

• Casing:
The casing is manufactured from galvanised prepainted steel sheet (1 mm thick) finished in dove grey.
The adjustable louvres are held firm by spring loaded pivots.

• Fan assembly:
The fan assembly is made up of the aluminium helicoidal fan, the finger proof support and the three phase 400 V/3 electric motor with 4 or 6 poles, protection IP 44.

• Room thermostat:
A room thermostat is mounted on the unit for the automatic on/off switching of the motor in accordance with the temperature under the ceiling.

• Brackets:
The unit is supplied with 4 suspension plates for ceiling installation.

Choosing the right appliance (example)

How to choose the right model and number of economiser units:
• Choose the speed of the motor (4 pole/1400 rpm or 6 pole/900 rpm) and the size of the unit in accordance to the desired noise level and installation height.
• Once the model is chosen, you have to calculate the number of units.
Sabiana suggest to install a number of units able to recirculate the whole air volume of the room at least twice in an hour.
• Once you have defined the total air volume that must be recirculated, you have to divide this by the air flow provided by the unit choosen previously, obtaining the number of economisers that have to be installed.

EXAMPLE:

- Room of 50 x 20 x 8 m = 8000 m^3.

- Installation height 5 m.

- Comparing the decided installation height with the figures in the table below, we choose the DNS 500/6 model with an air flow of 4400 m^3/h.

- We multiply by 2 the room volume (2x800 = 16000).

- We divide 16000 by 4400 i.e. the air flow of the unit, and we establish that 4 economisers are needed.

Technical data

MODEL	Motor speed	Air flow	Motor	Amps	Installation height	Surface	Noise level at 5 mt. (*)
	r.p.m.	m³/h	W	400 V	m	m²	dB(A)
DNS-450/4	1400	4.300	260	0,60	4,5 ÷ 6,5	100	61
DNS-450/6	900	2.800	100	0,26	3,5 ÷ 6	60	52
DNS-500/4	1400	5.500	260	0,60	5 ÷ 8	150	66
DNS-500/6	900	3.750	140	0,30	4 ÷ 8	90	56
DNS-550/4	1400	6.300	360	0,87	6,5 ÷ 9	200	69
DNS-550/6	900	4.600	150	0,40	5 ÷ 8,5	120	60
DNS-650/6	900	9.100	870	1,65	6,5 ÷ 11	300	67
DNS-750/6	900	13.200	870	1,65	7 ÷ 13	400	68

(*) = *The sound pressure levels dB(A) are measured at a distance of 5m, directional factor Q = 2, compliant with the EN 3744 standard.*

1 Motor

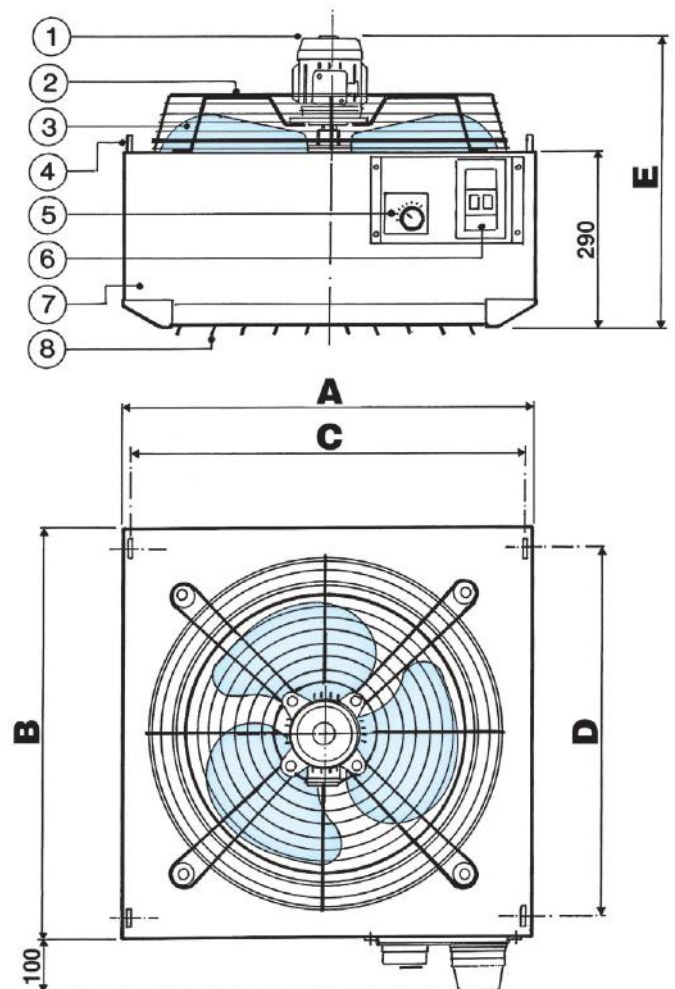2 Motor support
   with safety guard

3 Aluminium fan

4 Brackets

5 Entering air thermostat

6 Switch
   with thermal relay

7 Galvanised and
   prepainted steel case

8 Adjustable louvres

Dimensions and weight

Economiser Models		A	B	C	D	E	Weight kg
DNS-450/4	DNS-450/6	634	634	629	537	488	20
DNS-500/4	DNS-500/6	688	688	683	591	488	23
DNS-550/4	DNS-550/6	742	742	737	645	513	25
–	DNS-650/6	900	900	895	803	575	33
–	DNS-750/6	1010	1010	1005	913	595	42

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