

Electric Air Heaters

Our portfolio for industry and workshops



Type KE

element for ventilation ducts

Type GE

element for apparatus fitting

Type EE

insert element

Special types

Special housings, high temperature, changeable insert elements, high pressure, GL-approved

In general

NOLTE-Electrical Air Heaters are used for heating of air and non-explosive, gaseous media. They are mainly used in applications of the air- and air-conditioning technology, the drying technology and the process technology.

Tubular heaters

Plain tubular heaters with stainless steel casing are fitted in NOLTE-Electric Air Heaters as standard.

The plain tubular heaters have an outside diameter of 8,5 mm and are sealed with silicone containing sealant at the ends as standard.

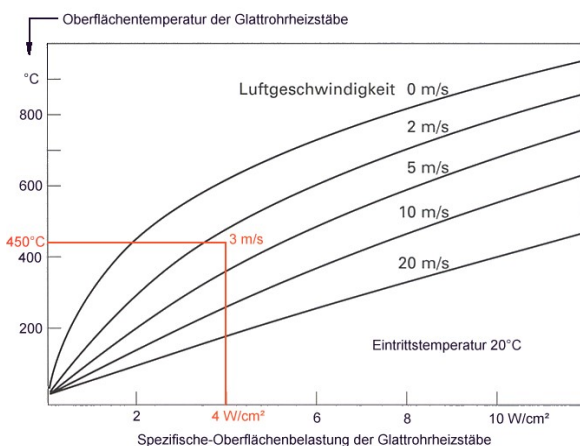
Tubular heaters are available from stock up to a length of 5000 mm and will be bended tailor made.

The fitting of the plain tubular heaters into the NOLTE-Electric Air Heaters is carried out by pressing zinc coated nipples onto the ends and bolting directly to the terminal box. Stainless steel nipples are available, too. For operation on ships or as air-tight version, the nipples are soldered to the tubes.

load-bearing capacity

The specific surface load-bearing capacity of the tubular heaters is ca. 4 W/cm².

NOLTE-Electric Air Heaters are usually designed for an air speed of 3 m/s. As result the tube surface temperature is 450° C at an intake temperature of 20° C.



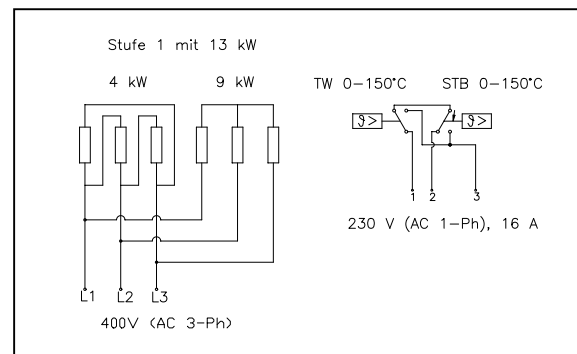
Terminal box

The wiring of the Electric Air Heaters normally is carried out internally on terminal blocks with silicone cable. The electric supply needed is 230 V or 3 phase

400 V. Special electrical voltage can be made upon request. Metric plastic screws are used as grommet. The protection of the terminal box is IP 41. A wiring diagram is glued to the terminal box cover.

Wiring

The tubular heaters are usually wired in triangle or star, depending on the voltage. If there are multiple levels or higher performance, combinations of triangle and star wiring is used.



Safety equipment

The heaters usually are supplied with one adjustable temperature monitor TW and with one adjustable safety temperature limiter STB each. The STB has a reset-button.

The adjustable temperature monitor and the adjustable safety temperature limiter have a DIN 3440 type approval and Ü-label.



Note

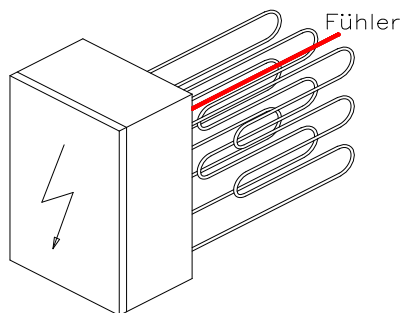
Electrical Air Heaters in ventilation- and air-conditioning systems always have to be locked electrically against the fan. If possible, run out of the fan via a time relay has to be provided.

Housing types

NOLTE-Electric Air Heaters are offered with three different housing types, as standard. Our strength is to make good value special housings according to your individual needs.

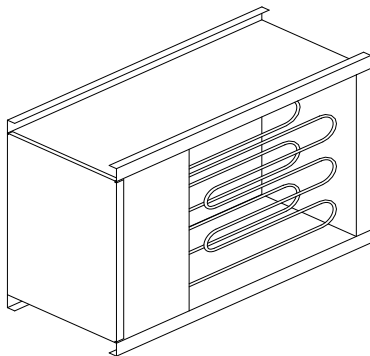
Type EE insert element

- Terminal box made from zinc coated sheet metal
- Fixing of the heating tubes at the terminal box bottom



Type GE element for apparatus fitting

- Terminal box and housing made from zinc coated sheet metal
- Framework at least 20mm strong
- Also suitable for ventilation ducts

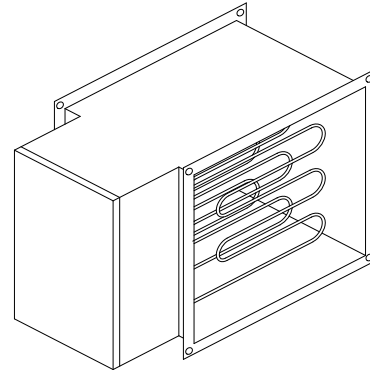


Type KE element for ventilation ducts

- Terminal box and housing made from zinc coated sheet metal
- Duct frame profile SBM 20mm resp. SBM 30mm or angle profile

Special versions

- Silicon-free apparatus (plain tube heating elements / wiring)
- Apparatus with changeable insert elements



- Plain tube heating elements made from other metals
- Plain tube heating elements with lower spec. surface load (W/cm^2)
- Plain tube heating elements with elongated cold coil-ends ($L_0 > 100\text{ mm}$)
- Housing made from stainless steel or other materials
- Higher protection class of terminal box
- Special voltages
- Ex.proof-heating register
- Wiring according to GL-standard
- Finned tubular heaters

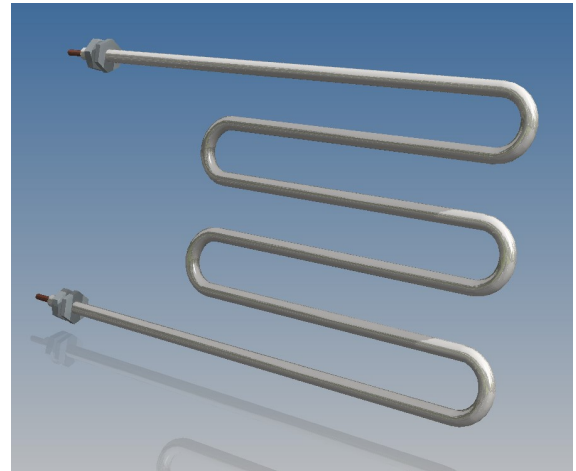
More special versions available upon request.



Example: Heater GL appr. special version

Standard power data

Power		immersion depth (mm)	
single coil	gradually		
230V/AC 1Ph	400V/AC 3Ph	min.	max.
(W)	(W)		
333	1.000	65	234
500	1.500	65	234
667	2.000	179	334
833	2.500	179	334
1.000	3.000	229	434
1.333	4.000	201	734
1.500	4.500	201	734
1.667	5.000	201	734
2.000	6.000	183	984
2.500	7.500	175	1.234
3.000	9.000	169	1.484
3.333	10.000	174	1.684
4.000	12.000	201	1.984
-	15.000	220	2.184



The **immersion depth** specifies, how deep the Plain tube heating elements immerse into the canal. The minimum width of the canal is calculated by this value.

$$W = ID + S$$

W = minimum width of the canal

ID = immersion depth

S = safety distance to canal wall (min. 30 mm)

The lower the immersion depth, the higher the necessary canal height.

Alfred Nolte GmbH ♦ Dieselstraße 2 ♦ 21465 Reinbek
Tel. 040 / 727 789-0 ♦ Fax 040 / 727 789-26 ♦ E-Mail: info@alfred-nolte.de
 Please visit our website www.alfred-nolte.de

Rechtsform
GmbH
Sitz der Gesellschaft
Reinbek

Handelsregister
Lübeck HRB 15687 HL
USt-ID-Nr.
DE 305 473 435

Geschäftsführer
Nils Albers
Postanschrift
Dieselstraße 2, 21465 Reinbek

E-Mail
info@alfred-nolte.de
Homepage
www.alfred-nolte.de

Telefon
040/727 789 - 0
Telefax
040/727 789 - 26

\\SERVER\Daten\DOC\Prospekte\Elektrolufterhitzer\Prospekt E-Erhitzer Engl A4 160705.doc