50 YEARS
WARMLY
RECOMMENDED
Schwank

THE PRINCIPLE OF RADIANT TUBE HEATERS

Schwank
WARMLY RECOMMENDED

ECONOMIC, FAST, ENVIRONMENTALLY AND INSTALLATION FRIENDLY

We deliver heat - agreeable heat - radiation-heat.
We simply have copied the principle of the sun:
The infrared-rays (heat-radiations) penetrate the air virtually loss-freely and become active only where they impact.
Heat is formed.

A comfortable temperature in connection with the environment-air is the result. One can show this physical relationship on a simple formula:

$$t_E = t_L + t_S$$

felt temperature | room temperature | radiation temperature

We reduce heat-loss
This connection enables a pleasant felt-temperature in spite of a low air-temperature. The radiation-heat manages the balance.

The consequently greater difference between indoors- and outside- air-temperature lowers the transmission- and ventilation-losses:
You save energy!

Furthermore, radiation-heat can be positioned - if wished - "point-exactly" and used for spot heating.
We generate infrared-heat, that is suitable for nearly all halls, greater areas and outdoor heating.

It depends on the project which solution offers more advantages, with gas-infrared-heaters or with radiant tube heaters (Fig. 1 u. 2)

Modern time radiant-heaters for all needs

With diverse appliance-variations, system-solutions and exhaust-system we have certainly the correct solution for you: From work-place heating, frost-free warehouses up to the complete heating of gigantic shipyard-halls; from heating of sports halls and stadium-platforms to temporary heating of for example churches.

Our project-engineers like to adopt the planning of your heating-system. A service, that you get from us free of charge.

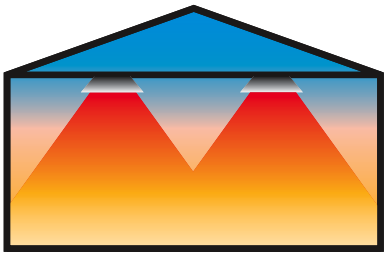
On request we provide also the complete installation package, put the installation into operation and execute the regular maintenance.

Principle points

- Energy-saving and environmentally friendly
- even and comfortable heat
- price-conscious and long working life
- Part- and work-place-heatings
- varied temperatures in one area
- no air-movements
- no draughts
- no dust spreading

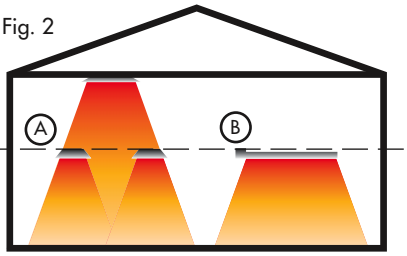
Fig. 1

Conventional heaters extracts the warmed up air from the usable area upward.



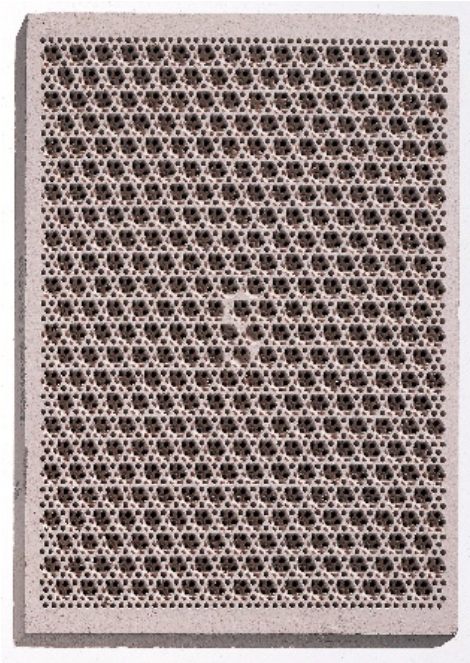
Using Schwank Infrared heating-systems the heat is where it is used.

Fig. 2



gas-infrared-heaters (A) and radiant tube heaters(B)

Service



- **Energy cost comparison**
  We will calculate and compare for you the energy costs of the suitable heating systems. The result: The best price/ performance ratio for you!
- **Project Planning**
  When a system or a combination has been chosen, we will plan the entire execution.
- **Quotations**
  Clear, detailed and competitive: That's what our quotations are like.
- **Execution**
  Our heating systems are installed in the shortest time. Naturally, the result of the greatest professiona lism.
- **Support in gaining official approval**
  If heating systems are subject to mandatory approval, we will act as your partner to attain this without difficulty.
- **Commissioning**
  We start the system running and stay until everything is running smoothly.
- **Maintenance**
  Our complete systems require little maintenance. If you want, we will maintain them or support your local fitter.
- **Repairs**
  If problems occur, just call. We will keep your system running the way you want it to.
- **Service**
  We remain at your service at all times after our systems have been commissioned. We will advise you and serve you in all matters concer ning heating systems.

Canada:
Schwank Ltd · 210 Brunel Road
Mississauga · Ont. L4Z 1T5
Tel.: 001 - 905-7124766
Fax: 001 - 905-7128336
E-mail: info@schwank.on.ca
www.schwankheaters.com

United Kingdom:
Schwank Ltd
Sunningdale Road · Sutton
Surrey SM1 2JS
Tel.: 0044 - 208 - 6413900
Fax: 0044 - 208 - 6412594
sales@schwank.co.uk
www.schwank.co.uk

Austria:
Schwank GmbH
Ketzergasse 75 · A-1230 Wien
Tel.: 0043 - 1-60913200
Fax: 0043 - 1-6091260
E-mail: schwank@cso.at
www.schwank.at

Hungary:
Schwank GesmbH
Magyarországi Fjóktelepe
Reitter Férec u. 132
H-1131 Budapest

Benelux:
Schwank B.V. · Nijverheidsweg 5 · 4104 AN Culemborg
Tel.: 0031 - 345-513143 ·
Fax: 0031 - 345-518464
E-mail: Schwank@Schwank.nl
www.schwank.nl

Russia:
SIBSchwank · Republic St. 143a
625026 Tyumen · Rußland
Tel.: 8 34 52 - 39 75 60 (22 41 48)
Fax.: 8 34 52 - 11 13 03
E-mail: tpiven@sibnefteprovod.ru

France:
Schwank S.A.R.L.
Les Iles · Marçilly d'Azergues
B.P. 42 · F-69380 Lozanne
Tel.: 0033 - 478 - 430344
Fax: 0033 - 478 - 430238
E-mail: schwank.sarl@wanadoo.fr

USA:
PERFECTION-Schwank Inc.
P.O. Box 749 · Waynesboro
Georgia 30830-0749
Tel.: 001 - 706-554-2101
Fax: 001 - 706-554-9390
E-mail: lhillis.schwank@mindspring.com
www.schwankheaters.com

Schwank
WÄRMSTENS EMPFOHLEN

SCHWANK GmbH
Bremerhavener Str. 43 · D - 50735 Köln
Tel. (0221) 7176 - 0 · Fax (0221) 7176 - 288
E-mail: info@schwank.de · Internet: www.schwank.de

Radiant Tube Heaters

The technology of radiant tubes
Flexibility is our strength, because **Schwank radiant tube heaters** can conform to most different hall-geometries and heating needs.
„There is something inside our tube heaters, that needs not to be hidden."
You can notice it at the installation-efficiency of more than 90%.

Security and Control
Security is top priority for all of our heating-systems.
The **microprocessor-controlled ignition unit** not only monitors the air volume stream and the perfect combustion, but secures also the intelligent programs and required operation.
The customer gets the heater in a clear installation-kit-system plug-ready.
When gas pressure gets too low, the voltage breaks down or combustion stops, the gas-valve closes automatically. Non-burned gas has no chance to leave the system.
Our heating-systems can be regulated according to demand of singles-switch-boxes to a central building control.

The combustion
The gas-air-mixture is created in an especially constructed burner chamber (Fig. 1). This mixture is forced through a ceramic slab – an invention by us – and is ignited on the surface of the frontside with an ignition electrode. With this construction, non-polluting natural gas or liquid-gas is burned in a laminated and extremely non-polluting flame that is up to 5 m long (Fig. 2)
The tube is heated by the long flame and exhaust flue and emits radiation heat.
An integrated stainless-steel flame-protector and turbulators ensure an even temperature distribution over the total length of the tube.
The exhaust flue takes place through a quiet fan at the end of the tube

Air/Exhaust Requirements
The exhaust flue of the radiant tube is transported by a fan through an exhaust system to the outside. The combustion air can be taken from inside the hall or from the outside through an exhaust/air-sytem.

Individual heaters and heating-systems
Beside the air/exhaust-system for individual heaters it is possible to connect our heaters to flue-collecting-systems with a central flue fan. Do not hesitate to ask us for the calculation of such systems (up to 10 heaters for each system).

The radiant tube heater construction
We put highest quality into our products: The tubes consist of fire-aluminized steel with high temperature-constancy and corrosion-solidity for long life. They go through a particular **thermal surface-treatment** by which the emission-factor is clearly increased so that the radiation-performance rises considerably. We like to guarantee this to our customers.
The radiation-optimized and robust reflector-construction steers the heat-radiation to the area where they are used. This increases the radiation-performance and the comfort additionally.

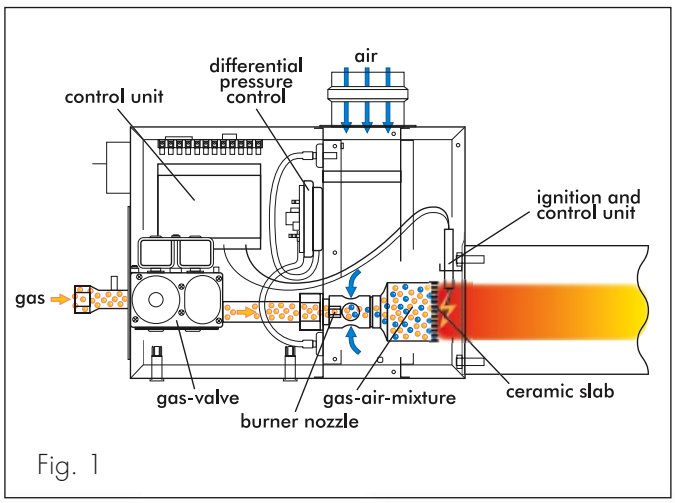


Fig. 1

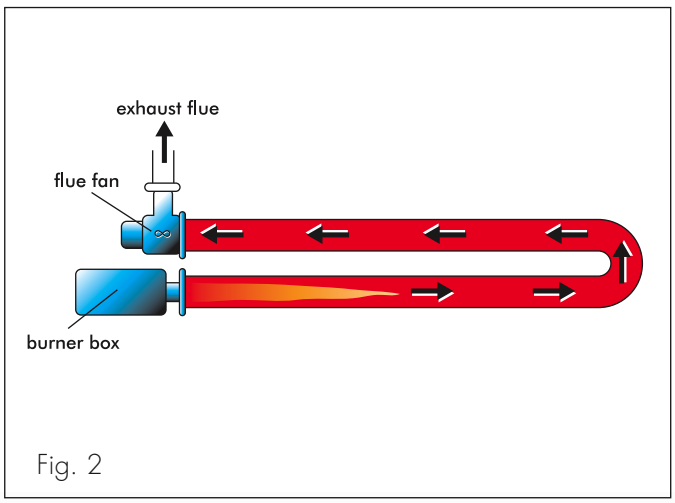


Fig. 2

Radiant Tube Heaters

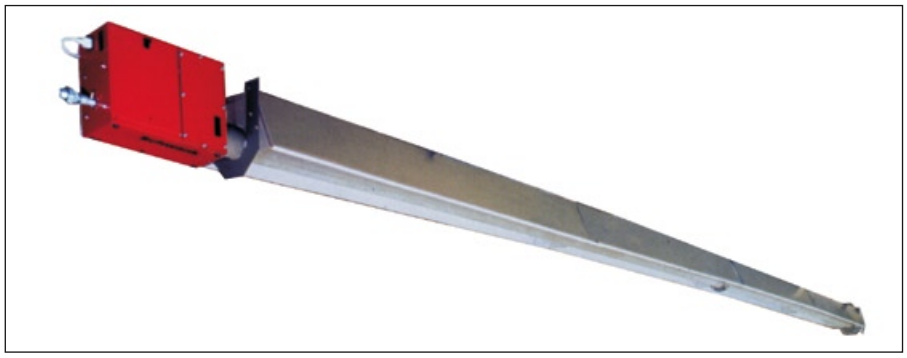
infraSchwank

The inexpensive alternative with low investment-costs.

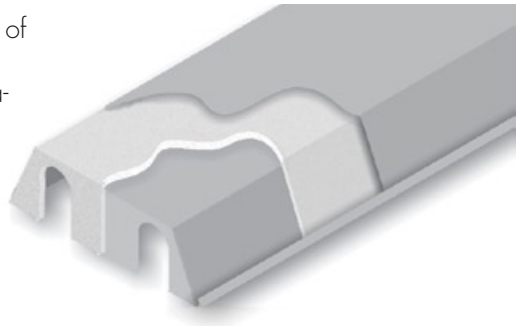
With the **infraSchwank** we place standards.
With an optimized and environment-gentle combustion on the surface of the ceramic slab and the mature construction of tubes and reflectors, this radiant tube heater guarantees a **high radiation-efficiency,** so that noticeable energy-saving and long lifespan.

calorSchwank

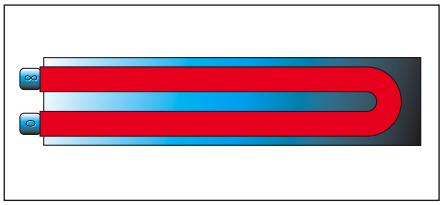
The fully insulated with less gas consumption



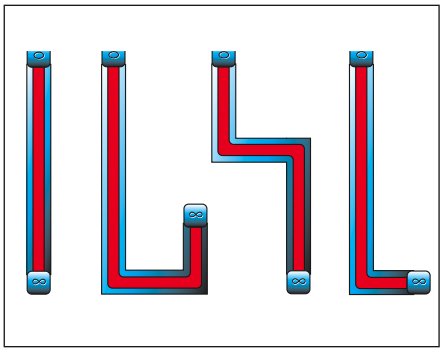
The **calor Schwank,** our top-model of the radiant tube heaters, with 10% less gas consumption than the infra-Schwank with only a small higher investment-costs.
That's possible because of the high-quality casing-insulation: The heat is only transfered in the area to be heated.



flexibility and variety is our strength
All heaters of the series **infraSchwank** and **calorSchwank** are available L- and U-version:



The U-version: An even heat distribution with high radiation density caused by the U-shaped, parallel tubes.



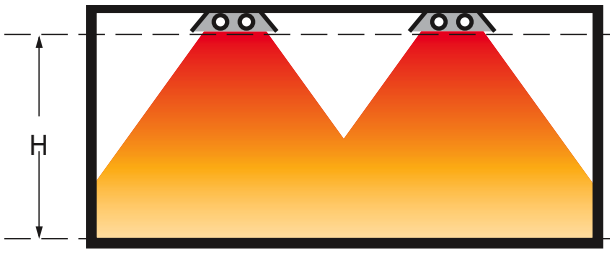
The L-version: If less performance is needed, large areas can be heated with single tube heaters. The L-version of our radiant tube heaters can be delivered with straight and 90°-angled tubes. So, it's possible to fit the heater for the conditions of the buildings.

Radiant Tube Heaters

The even distribution of radiation in the hall is important. An uneven distribution leads to zones with lower temperatures, like "shadows" in the light-technology. This can make sense in some cases (zones of stores), but should be avoided for even heating.

The Schwank-employees like to support you with the exact planning. Approximately you can calculate as follows:

Radiant tube heater horizontal installation



Radiant tube heater angled installation