Galvanizing furnaces
FOR BATCH GALVANIZING

OPTIMAL HEAT TRANSFER
LOW ENERGY COSTS
PRECISE CONTROL
The galvanizing furnace is the heart of any galvanizing line. Its design has decisive influence on the quality of the zinc coating and on the costs of production. Galvanizing furnaces from Zink KÖRNER incorporate a wide gamut of design features that ensure highest efficiency of the batch galvanizing process: By implementing modulating, infinitely adjustable flat flame burners, a wall construction with less heat transfer and a novel reflecting refractory coating, Zink KÖRNER significantly increases the energy efficiency of batch galvanizing.

**Efficient**

Zink KÖRNER is the only supplier of furnaces that use burners specifically developed for batch galvanizing. Thanks to these burners, galvanizing furnaces reach efficiencies of up to 75 percent – which is 5 to 10 percent better than conventional plants.

Unlike the burners commonly used in the past, the gas-fired flat flame burners of the FL 20/50 type operate in a modulating mode. They are infinitely adjustable within a range of 1:10. They guarantee the same smooth and mild heating as previously only achievable by electrically heated furnaces.

The control system permanently adjusts the power to the throughput rate of the furnace and avoids abrupt temperature changes, which may cause excessive stresses in the galvanizing tank structure.
Energy-conscious

Energy consumption is minimized as a result of various specific design features. Diffusor plates mounted on the burners direct the gas flow along the inner furnace wall. This produces a combination of radiant and convective heat, which has the positive effect that a high input of heat into the galvanizing tank is achieved at relatively low furnace temperatures.

The multi-layer, up to 300-mm-thick insulation reduces heat loss. Additionally, the innovative ceramic coating applied to the fibrous insulation reflects the radiant heat towards the interior of the furnace.

Eco-friendly

Furnaces from Zink KÖRNER are friendly to the environment: The flue gas temperature of a furnace with a throughput rate of 10 t/h is only 507 °C. As a comparison, in conventional furnaces flue gases often reach temperatures above 625 °C. This is a clear indication of how efficiently Zink KÖRNER furnaces operate.

Cost-effective

Compared with plants using impulse burners, the flat flame burners employed by Zink KÖRNER use much less energy. For example, a furnace with a throughput of 15 t/h operated in two shifts for 4,000 hours per year consumes about 500,000 kWh less. At a price of 5 cents per kWh, this results in cost savings of 25,000 euros per year.
ABOUT ZINK KÖRNER

Zink KÖRNER GmbH designs and manufactures the complete array of hot-dip galvanizing equipment for single items, tubes and pipes, miscellaneous small parts and centrifugal parts.

The supply range encompasses complete galvanizing lines, including pretreatment and handling equipment. The company provides design, engineering, manufacture, erection, commissioning and after sales service. Zink KÖRNER maintains a worldwide network of branches and licensees.

Zink KÖRNER has launched many pioneering developments during its company history. For example, as early as at the beginning of the 1970s the company built the first automated centrifugal galvanizing plants, which have markedly enhanced the quality of the end products and the energy efficiency of the galvanizing process. The company took another innovative move when it developed dedicated burner technology for hot-dip galvanizing applications.

Zink KÖRNER is a company of the KÖRNER Group, which was established in 1928. Thus the Group builds on more than 80 years of experience in industrial furnace technology and auxiliary equipment.

Within the Group, Wire KÖRNER GmbH designs heat treatment equipment for wire and narrow strip. TVT KORDT GmbH develops plants for thermal process technology, with a focus on industrial furnaces for the heat treatment of steels, special steels and non-ferrous metals.