Ovens for the drum industry – Tailor-made installations
Drying oven program
for the drum industry

Koenig & Bauer MetalPrint drum dryers
are available in a wide choice of versions,
all specifically tailored to the needs of our
customers.

All drum dryers rely on the proven drying technology
which is also used in Koenig & Bauer MetalPrint thermal
drying ovens. Regardless of whether an oven is needed
as multiple-row, as a double tunnel or as a wicket oven,
Koenig & Bauer MetalPrint has the ideal solution.

- Ovens for spray painted or lined drums,
  respectively intermediates or pails in
  1 to 4 row design
- Double tunnel ovens for curing of
  inside lined and outside painted drums
  at the same time
- Wicket ovens, type DBN, for drum
  sheets
- Wicket ovens for drum ends
- Ovens for drum ends in racks
- Inteqrated EcoTNV air purification
  system with flexible main heat-
  exchanger to clean the exhaust air of
  oven and corresponding spray booths
  by using the excess energy for the
  drying process itself
Drying system

To achieve this, Koenig & Bauer MetalPrint drum ovens utilise a hot air convection drying system. Special injection nozzles introduce the hot air into the interior of the drying tunnel. With this injection principle, the amount of hot air circulated between the drums is several times higher than the capacity delivered by the hot air fans. This produces a strong air circulation between the drums while at the same time smaller fans with lower power consumption than normally used are required. The high amount of circulating air and the resulting higher air velocity, achieves a better heat transfer and faster heat up of the drums.

Heating system

Depending on customers requirements and available fuel, drum drying ovens can be designed for either direct gas heating, direct oil heating or for heating by hot purified exhaust air from a fume incineration system.

Depending on the size or capacity of the installation, as well as type of paints and lacquers to be used (solvent-based or water-based paints, high bake or low bake lacquers), drum drying ovens can be equipped with one or several heating units. This ensures that the drying of the drums and/or drum ends at different temperatures in the individual heating zones of the oven will be done with a high degree of temperature accuracy, providing an optimal temperature curve.

Maintaining a precise drying temperature is essential for drying of solvent-based or water-based paints or lacquers.
Drum ovens – multiple-row or double tunnel

The drum drying ovens may be designed with 1, 2, 3 or 4 rows of drums or as double tunnel with 2 x 1 or 2 x 2 rows.

Usually the conveyor system for the standard 55 gallon drums will be a chain conveyor with 2 chains for each drum row. For intermediates and pails alternatively there are also traverse conveyors available.

Wicket oven for drum sheets

If drums are not spray-painted, but will be roller coated, wicket ovens for heavy drum sheets are required. Koenig&Bauer MetalPrint delivers special ovens, type DBN, with 3 conveyor chains and extra large wickets for this purpose.
Drum end ovens

Koenig & Bauer MetalPrint offers two different types of drying ovens for drum ends or lids.

One type is a wicket drying oven where the drum ends will be conveyed in 1 row standing almost vertically in wickets.

The other type is a drying oven for drum ends that are placed in racks. Each rack contains up to 15 drum ends. Loading and unloading the racks may be done either manually, or upon request automatically.
Good cooling is essential for outside painted drums, since usually after leaving the paint line, the drum will be closed and shipped to the filler. If the cooling was not adequate, a vacuum builds up inside the drum creating major problems at the filling stations. This is the reason Koenig & Bauer MetalPrint offers single step as well as multi-step coolers that provide very high air circulation. Cooling time and cooling capacity are designed according to the climatic conditions on site.
EcoTNV – increased efficiency, reduced energy costs

The energetically most economic system is the EcoTNV with its flexible main heat-exchanger. The size of the heat-exchanger automatically adapts to the individual production situation and thus always provides the max. possible heat recovery also during changeover times. An EcoTNV system is required for each individual line.
Koenig & Bauer MetalPrint GmbH

Koenig & Bauer MetalPrint’s high level of competence in drying technology for the metal decorating industry results from over 80 years of experience in the field. With more than 100 installations delivered to the drum industry within the last 2 decades, Koenig & Bauer MetalPrint knows about the specific requirements when curing drums, drum sheets or drum ends.

The name Koenig & Bauer MetalPrint stands for quality, innovation and continuous further development. We offer complete solutions which are tailored specifically to the customer’s individual requirements.
Texts and illustrations refer in part to special features not included in the basic press price. No parts of this publication may be reproduced in any way without the manufacturer’s permission. The manufacturer reserves the right to carry out modifications without prior notice.