

3D?

SECO/WARWICK GROUP  
a leading global manufacturer  
of heat treatment furnaces and equipment

SECO/WARWICK is a technological leader in innovative heat treatment furnaces. Expertise includes end-to-end solutions in 5 categories: vacuum heat treatment, atmosphere, and aluminum thermal processing, controlled atmosphere brazing of aluminum heat exchangers and vacuum metallurgy. SECO/WARWICK Group with 9 companies located on 3 continents with customers in nearly 70 countries, has its production facilities in Poland and China. In addition, the Group operates a number of service and sales offices in countries such as Germany or Russia. The company provides standard or customized state-of-the-art heat processing equipment and technologies to leading companies in the following industries: automotive, aerospace, electronics, tooling, medical, recycling, energy including nuclear, wind, oil, gas, solar and production of steel, titanium, and aluminum.

Heat Treatment for Additive Manufacturing

- debinding
- sintering
- stress relieving
- aging
- ...and many more
- industry 4.0
- user friendly control system

**COMPLETE POST PROCESSING  
SOLUTIONS FOR METAL 3D PRINTING**

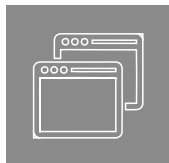
# VECTOR 3D

## VACUUM FURNACE SYSTEM

# VECTOR 3D

## VACUUM FURNACE SYSTEM

### APPLICATIONS:



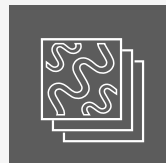
additive manufacturing post-printing solutions and traditional heat treatment processes

### INDUSTRIES:



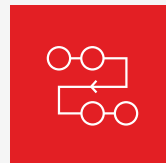
aerospace, automotive, medical, prototyping, other AM applications, commercial heat treatment

### MATERIALS:



speciality alloys based on nickel, chromium, cobalt base alloys, copper... also reactive materials like aluminum or titanium base alloys

### TECHNOLOGIES:



debinding, sintering, stress relieving, aging, solution heat treatment hardening, carburizing, annealing, brazing, coating, tempering and many more...

### PARAMETERS

Size and efficiency can be adjusted to customer needs. Standard working zones are: 250x250x400 (max load 50kg), 400x400x600 (max load 200kg), 600x600x900 (max load 800kg), 900x900x1200 (max load 1500kg). SECO/WARWICK is open to design and manufacture also tailor made solution according to customer requirements.

### SELECTED FURNACE ADVANTAGES DEMANDED BY ADDITIVE MANUFACTURER USERS:

- 4 different types of binder removal system, that guarantee long life of the furnace
- temperature range up to 2300°C
- great heating uniformity meets the highest requirements of aerospace industry
- graphite or all metal chamber helps to achieve expected results and ensure quality for high demand markets such as aerospace, automotive or medical...
- adjustable cooling system that helps in processing different shapes and size of parts
- high efficiency pumping system helps to save time and money during processing
- equipment dedicated for mass production profile as well as prototyping and R&D centers
- world brand components and local support guarantee fast service reaction
- intuitive control system makes furnace operations easy to handle
- besides processing of AM parts, Vector 3D can be also used to heat treat traditional parts, what makes it a very versatile piece of equipment

