



# Industrial Ovens Catalog

Benko Products, Inc is a recognized leader in industrial heating technology, with over 30 years of oven manufacturing experience and thousands of ovens operating successfully in the field.

Benko Products combines industry expertise with high quality products and excellent customer service to deliver a complete heating solution.









BENKO PRODUCTS ENGINEERED TO BE MORE





Each **Sahara Industrial Oven** is designed for ease of use and reliable performance in the harshest environments.

"We custom build each industrial oven to our customer's specification because there is no size that is universal to everyone. Each application is unique," says John Benko, President of Benko Products. "We proudly engineer our industrial ovens to the highest standards and give you the exact product that you need at the price you need. That is why nobody beats Benko."

Benko Product's innovative manufacturing process enables cost effective modification to basic oven designs so that the right oven is supplied every time.

Please review our catalog and contact us for a quote today!





The Sahara Industrial Batch Oven has many unique features:

- Custom-built to your specifications
- Precise temperature control, including a thermocouple actuated PID digital temperature controller and adjustable PID digital over temperature protection
- Motor control push buttons
- On-off heat switch
- LED pilot lights
- 2-year Manufacturer's warranty.

## **Materials of Construction**

Rugged, steel construction includes:

- 12 gauge interior walls and 14 gauge exterior walls
- Integrated framing and structural members ensure toughness
- 304 stainless steel construction available

#### Insulation

3" to 6" thick, 6# density mineral wool

### **Heating Medium**

- Electricity or Gas
- Steam, hot oil, or hot water models available.

## **Temperature Range**

Room temperature to 500°F (Ratings for 650°F or 800°F optional)

## **Air Circulation**

- Air circulation with internal plenums for uniform airflow within the oven.
- Custom arrangements per application

#### Finish

- Exterior finished with acrylic enamel or corrosion resistant urethane system
- Interior finished with heat resistant silver
- Stainless steel available

## Installation

ERED TO BE

Shipped completely assembled. Set in place and hook up power supply.

MORE



# Industrial Ovens Batch Ovens

Sahara Industrial Batch Ovens offer a range of sizes and heating arrangements to meet a variety of batch heating applications.

Challenge us with your toughest oven applications! Benko Products is not restricted to industrial oven standard model sizes and, instead, will custom build an industrial oven to meet your specifications.

## Engineering

Custom engineered, computer designed units are available. Contact us for more information.

#### Options

- Custom shelves, carts + trucks made to accompany any style oven
- Exhaust vent with damper
- Interior door latch
- Outdoor use package
- Chart recorder
- Door switch
- Adjustable timer
- Ethernet or serial bus communication
- Profile temperature control with ramp and hold capability
- Industrially hardened SCADA (supervisory control and data acquisition) system capable of controlling 20 ovens
- Integrated PLC controls with touch screen
- Class "A" oven controls with powered exhaust systems are readily available upon request

Designed and Manufactured by: Benko Products Inc. · 5350 Evergreen Pkwy · Sheffield Village, Ohio • 44054 Phone (440) 934-2180 · Fax (440) 934-4052 · email: info@benkoproducts.com www.benkoproducts.com

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# Industrial Ovens Batch Ovens

#### Sahara Industrial Ovens can

be designed to meet a variety of Batch processes, including:

- Curing
- Baking
- Drying
  - Aging
- Preheating

Available in many convenient arrangements:

- Walk-In
- Truck-In
- Cart Ovens
- Top Loading
- Reach-In / Shelf
- Cabinet



Batch oven with ergonomic tray loading system.





N.F.P.A. Class A Batch Oven



Contact us for more information on a custom solution for your application!





The Sahara Industrial Conveyor Oven has many unique features:

- Custom-built to your specifications
- Precise temperature control, including a thermocouple actuated PID digital temperature controller and adjustable PID digital over temperature protection.
- Motor control push buttons
- On-off heat switch
- LED pilot lights
- 2-year Manufacturer's warranty.

## **Materials of Construction**

Rugged, steel construction includes:

- 12 gauge interior walls and 14 gauge exterior walls
- Integrated framing and structural members ensure toughness
- 304 stainless steel construction available

#### Insulation

3" to 6" thick, 6# density mineral wool

#### **Heating Medium**

- Electricity or Gas
- Steam, hot oil, or hot water models available.

#### **Temperature Range**

Room temperature to 500°F (Ratings for 650°F or 800°F optional)

## **Air Circulation**

• Air circulation with internal plenums for uniform airflow within the oven.

#### Finish

- Exterior finished with acrylic enamel or corrosion resistant urethane system
- Interior finished with heat resistant silver
- Stainless steel available

## Installation

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Shipped completely assembled. Set in place and hook up power supply.



# Industrial Ovens Conveyor Ovens

#### Sahara Industrial Conveyor Ovens

offer a range of sizes and heating arrangements to meet a variety of heating applications.

Benko Products is not restricted to industrial oven standard model sizes and, instead, will custom build an industrial oven to your specifications.

## Engineering

Custom engineered, computer designed units are available. Contact us for more information.

#### Options

- Exhaust vent with damper
- Interior door latch
- Outdoor use package
- Chart recorder
- Door switch
- Adjustable timer
- Ethernet or serial bus communication
- Profile temperature control with ramp and hold capability
- Industrially hardened SCADA (supervisory control and data acquisition) system capable of controlling 20 ovens
- Integrated PLC controls with touch screen
- Class "A" oven controls with powered exhaust systems are readily available upon request

Designed and Manufactured by:



Industrial Ovens Conveyor Ovens

Sahara Industrial Conveyor Oven shown in stainless steel with side-mounted access doors.







Contact us for more information on a custom solution for your application!





The Sahara Industrial Cabinet / Reach-In Oven has many unique features:

- Custom-built to your specifications
- Precise temperature control, including a thermocouple actuated PID digital temperature controller and adjustable PID digital over temperature protection.
- Motor control push buttons
- On-off heat switch
- LED pilot lights
- 2-year Manufacturer's warranty.

## **Materials of Construction**

Rugged, steel construction includes:

- 12 gauge interior walls and 14 gauge exterior walls
- Integrated framing and structural members ensure toughness
- 304 stainless steel construction available

#### Insulation

3" to 6" thick, 6# density mineral wool

#### **Heating Medium**

- Electricity or Gas
- Steam, hot oil, or hot water models available.

## **Temperature Range**

Room temperature to 500°F (Ratings for 650°F or 800°F optional)

## **Air Circulation**

• Air circulation with internal plenums for uniform airflow within the oven.

#### Finish

- Exterior finished with acrylic enamel or corrosion resistant urethane system
- Interior finished with heat resistant silver
- Stainless steel available

## Installation

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Shipped completely assembled. Set in place and hook up power supply.

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## Industrial Ovens Cabinet Ovens

Sahara Industrial Cabinet / Reach In Ovens offer a range of sizes and heating arrangements to meet a variety of heating applications.

Benko Products is not restricted to industrial oven standard model sizes and, instead, will custom build an industrial oven to your specifications.

## Engineering

Custom engineered, computer designed units are available. Contact us for more information.

#### Options

- Available with fixed or removable shelving, per customer specifications
- Exhaust vent with damper
- Interior door latch
- Outdoor use package
- Chart recorder
- Door switch
- Adjustable timer
- Ethernet or serial bus communication
- Profile temperature control with ramp and hold capability
- Industrially hardened SCADA (supervisory control and data acquisition) system capable of controlling 20 ovens
- Integrated PLC controls with touch screen
- Class "A" oven controls with powered exhaust systems are readily available upon request

Designed and Manufactured by:



## Industrial Ovens Cabinet Ovens







Contact us for more information on a custom solution for your application!





The Sahara Industrial Walk-In Oven has many unique features:

- Custom-built to your specifications
- Precise temperature control, including a thermocouple actuated PID digital temperature controller and adjustable PID digital over temperature protection.
- Motor control push buttons
- On-off heat switch
- LED pilot lights
- 2-year Manufacturer's warranty.

## **Materials of Construction**

Rugged, steel construction includes:

- 12 gauge interior walls and 14 gauge exterior walls
- Integrated framing and structural members ensure toughness
- 304 stainless steel construction available

#### Insulation

3" to 6" thick, 6# density mineral wool

#### **Heating Medium**

- Electricity or Gas
- Steam, hot oil, or hot water models available.

#### **Temperature Range**

Room temperature to 500°F (Ratings for 650°F or 800°F optional)

## **Air Circulation**

• Air circulation with internal plenums for uniform airflow within the oven.

#### Finish

- Exterior finished with acrylic enamel or corrosion resistant urethane system
- Interior finished with heat resistant silver
- Stainless steel available

## Installation

ERED TO BE

Shipped completely assembled. Set in place and hook up power supply.



# Industrial Ovens Walk-In Ovens

#### Sahara Industrial Walk-In Ovens

offer a range of sizes and heating arrangements to meet a variety of heating applications.

Benko Products is not restricted to industrial oven standard model sizes and, instead, will custom build an industrial oven to your specifications.

## Engineering

Custom engineered, computer designed units are available. Contact us for more information.

#### **Options**

- Companion trucks available to meet your specifications.
- Exhaust vent with damper
- Interior door latch
- Outdoor use package
- Chart recorder
- Door switch
- Adjustable timer
- Ethernet or serial bus communication
- Profile temperature control with ramp and hold capability
- Industrially hardened SCADA (supervisory control and data acquisition) system capable of controlling 20 ovens
- Integrated PLC controls with touch screen
- Class "A" oven controls with powered exhaust systems are readily available upon request

Designed and Manufactured by:



## **Industrial Ovens** Walk-In Ovens







Contact us for more information on a custom solution for your application!





The Sahara Industrial Truck-In Oven has many unique features:

- $\boldsymbol{\cdot}$  Custom-built to your specifications
- Available with insulated floor and wheel tracks
- Precise temperature control, including a thermocouple actuated PID digital temperature controller and adjustable PID digital over temperature protection.
- Motor control push buttons
- On-off heat switch
- LED pilot lights
- $\cdot$  2-year Manufacturer's warranty.

## **Materials of Construction**

Rugged, steel construction includes:

- 12 gauge interior walls and 14 gauge exterior walls
- Integrated framing and structural members ensure toughness
- 304 stainless steel construction available

## Insulation

3" to 6" thick, 6# density mineral wool

### **Heating Medium**

- Electricity or Gas
- Steam, hot oil, or hot water models available.

## **Temperature Range**

Room temperature to 500°F (Ratings for 650°F or 800°F optional)

## **Air Circulation**

• Air circulation with internal plenums for uniform airflow within the oven

#### Finish

- Exterior finished with acrylic enamel or corrosion resistant urethane system
- Interior finished with heat resistant silver
- Stainless steel available

## Installation

ERED TO BE

Shipped completely assembled. Set in place and hook up power supply.



# Industrial Ovens Truck-In Ovens

#### Sahara Industrial Truck-In Ovens

offer a range of sizes and heating arrangements to meet a variety of heating applications.

Benko Products is not restricted to industrial oven standard model sizes and, instead, will custom build an industrial oven to your specifications.

## Engineering

Custom engineered, computer designed units are available. Contact us for more information.

#### Options

- Companion trucks and carts built to your specification
- Exhaust vent with damper
- Interior door latch
- Outdoor use package
- Chart recorder
- Door switch
- Adjustable timer
- Ethernet or serial bus communication
- Profile temperature control with ramp and hold capability
- Industrially hardened SCADA (supervisory control and data acquisition) system capable of controlling 20 ovens
- Integrated PLC controls with touch screen
- Class "A" oven controls with powered exhaust systems are readily available upon request

Designed and Manufactured by:



## Industrial Ovens Truck-In Ovens



This electrically heated Truck-In Oven, with 3 roll-in carts, was designed for the automotive industry.

Providing an operating temperature up to 450°F, the oven maintains superior temperature uniformity due to the cross-flow air circulation design.

The carts feature adjustable shelving and heavy duty casters. Double-doors on both ends allow for easier loading and unloading.







Contact us for more information on a custom solution for your application!





The Sahara Industrial Preheat Oven has many unique features:

- Custom-built to your specifications
- Precise temperature control, including a thermocouple actuated PID digital temperature controller and adjustable PID digital over temperature protection.
- Motor control push buttons
- On-off heat switch
- LED pilot lights
- 2-year Manufacturer's warranty.

## **Materials of Construction**

Rugged, steel construction includes:

- 12 gauge interior walls and 14 gauge exterior walls
- Integrated framing and structural members ensure toughness
- 304 stainless steel construction available

#### Insulation

3" to 6" thick, 6# density mineral wool

### **Heating Medium**

- Electricity or Gas
- Steam, hot oil, or hot water models available.

#### **Temperature Range**

Room temperature to 500°F (Ratings for 650°F or 800°F optional)

## **Air Circulation**

• Air circulation with internal plenums for uniform airflow within the oven.

#### Finish

- Exterior finished with acrylic enamel or corrosion resistant urethane system
- Interior finished with heat resistant silver
- Stainless steel available

## Installation

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Shipped completely assembled. Set in place and hook up power supply.



# Industrial Ovens Preheat Ovens

#### Sahara Industrial Preheat Ovens

offer a range of sizes and heating arrangements to meet a variety of heating applications.

Benko Products is not restricted to industrial oven standard model sizes and, instead, will custom build an industrial oven to your specifications.

## Engineering

Custom engineered, computer designed units are available. Contact us for more information.

#### Options

- Exhaust vent with damper
- Interior door latch
- Outdoor use package
- Chart recorder
- Door switch
- Adjustable timer
- Ethernet or serial bus communication
- Profile temperature control with ramp and hold capability
- Industrially hardened SCADA (supervisory control and data acquisition) system capable of controlling 20 ovens
- Integrated PLC controls with touch screen
- Class "A" oven controls with powered exhaust systems, which are readily available upon request

Designed and Manufactured by:



## **Industrial Ovens** Preheat Ovens

Preheating large steel cores of varying sizes (some up to 80' long) posed a few challenges- namely how to load the fragile cores into the oven and how to ensure temperature uniformity.

This custom designed top loading oven with counterbalanced doors made loading easy while electric zone heating made oven operation efficient and temperatures uniform.









'Sahara Hot Box' Industrial Drum / Tote Warming Ovens have many unique features:

- Custom-built to your specifications
- Precise temperature control, including a thermocouple actuated PID digital temperature controller and adjustable PID digital over temperature protection.
- Motor control push buttons
- On-off heat switch
- LED pilot lights
- $\cdot$  2-year Manufacturer's warranty.

## **Materials of Construction**

Rugged, steel construction includes:

- 12 gauge interior walls and 14 gauge exterior walls
- Integrated framing and structural members ensure toughness
- 304 stainless steel construction available

## Insulation

3" to 6" thick, 6# density mineral wool

#### **Heating Medium**

- Electricity or Gas
- Steam, hot oil, or hot water models available.

#### **Temperature Range**

Room temperature to 350°F (Options for 500°F, 650°F or 800°F)

## **Air Circulation**

• Air circulation with internal plenums for uniform airflow within the oven.

#### Finish

- Exterior finished with acrylic enamel or corrosion resistant urethane system
- Interior finished with heat resistant silver
- Stainless steel available

## Installation

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Shipped completely assembled. Set in place and hook up power supply.



# **Industrial Ovens** Drum / Tote Warming

#### The 'Sahara Hot Box' Industrial Drum / Tote Warming Oven is designed to heat from 1 to 32 fifty-five gallons drums or 8 IBC

fifty-five gallons drums, or 8 IBC Totes, at the same time.

Benko Products is not restricted to industrial oven standard model sizes and, instead, will custom build an industrial oven to your specifications.

## Engineering

Custom engineered, computer designed units are available. Contact us for more information.

#### Options

- Exhaust vent with damper
- Interior door latch
- Outdoor use package
- Chart recorder
- Door switch
- Adjustable timer
- Ethernet or serial bus communication
- Profile temperature control with ramp and hold capability
- Industrially hardened SCADA (supervisory control and data acquisition) system capable of controlling 20 ovens
- Integrated PLC controls with touch screen
- Class "A" oven controls with powered exhaust systems, which are readily available upon request

Designed and Manufactured by:



**Industrial Ovens** Drum / Tote Warming 'Sahara Hot Box'







Standard designs available for heating up to 32 drums or 8 totes.









The Sahara Industrial Curing Oven has many unique features:

- Custom-built to your specifications
- Precise temperature control, including a thermocouple actuated PID digital temperature controller and adjustable PID digital over temperature protection.
- Motor control push buttons
- On-off heat switch
- LED pilot lights
- 2-year Manufacturer's warranty.

## **Materials of Construction**

Rugged, steel construction includes:

- 12 gauge interior walls and 14 gauge exterior walls
- Integrated framing and structural members ensure toughness
- 304 stainless steel construction available

#### Insulation

3" to 6" thick, 6# density mineral wool

#### **Heating Medium**

- Electricity or Gas
- Steam, hot oil, or hot water models available.

## **Temperature Range**

Room temperature to 500°F (Ratings for 650°F or 800°F optional)

## **Air Circulation**

• Air circulation with internal plenums for uniform airflow within the oven

#### Finish

- Exterior finished with acrylic enamel or corrosion resistant urethane system
- Interior finished with heat resistant silver
- Stainless steel available

## Installation

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Shipped completely assembled. Set in place and hook up power supply.

MORE



# Industrial Ovens Curing Ovens

# Sahara Industrial Curing Ovens offer a range of sizes and heating

arrangements to meet a variety of curing applications.

Benko Products is not restricted to industrial oven standard model sizes and, instead, will custom build an industrial oven to your specifications.

## Engineering

Custom engineered, computer designed units are available. Contact us for more information.

#### Options

- Available with fixed or removable shelving, per customer specifications
- Exhaust vent with damper
- Interior door latch
- Outdoor use package
- Chart recorder
- Door switch
- Adjustable timer
- Ethernet or serial bus communication
- Profile temperature control with ramp and hold capability
- Industrially hardened SCADA (supervisory control and data acquisition) system capable of controlling 20 ovens
- Integrated PLC controls with touch screen
- Class "A" oven controls with powered exhaust systems are readily available upon request

Designed and Manufactured by:



## Industrial Ovens Curing Ovens

An adhesive manufacturer needed an oven to cure vials of epoxy in cardboard boxes. The temperature uniformity of each box was critical for consistent curing times.

Twelve material temperature sensors with timers were linked to digital temperature controllers to operate the oven. Horizontal air circulation with internal plenums ensured the proper airflow within the oven.





This steam heated curing oven was designed for the rubber industry.

It's stainless steel construction, horizontal airflow pattern and removable shelves made it ideal for curing thin layers of rubber compound.

Contact us for more information on a custom solution for your application!





The Sahara Industrial Drying Oven has many unique features:

- Custom-built to your specifications
- Precise temperature control, including a thermocouple actuated PID digital temperature controller and adjustable PID digital over temperature protection.
- Motor control push buttons
- On-off heat switch
- LED pilot lights
- 2-year Manufacturer's warranty.

## **Materials of Construction**

Rugged, steel construction includes:

- 12 gauge interior walls and 14 gauge exterior walls
- Integrated framing and structural members ensure toughness
- 304 stainless steel construction available

#### Insulation

3" to 6" thick, 6# density mineral wool

#### **Heating Medium**

- Electricity or Gas
- Steam, hot oil, or hot water models available.

## **Temperature Range**

Room temperature to 500°F (Ratings for 650°F or 800°F optional)

## **Air Circulation**

- Air circulation with internal plenums for uniform airflow within the oven.
- Separate exhaust blower with adjustable damper

#### Finish

- Exterior finished with acrylic enamel or corrosion resistant urethane system
- Interior finished with heat
  resistant silver
- Stainless steel available

## Installation

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Shipped completely assembled. Set in place and hook up power supply.

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# Industrial Ovens Drying Ovens

## Sahara Industrial Drying Ovens offer a range of sizes and heating

arrangements to meet a variety of drying applications.

Benko Products is not restricted to industrial oven standard model sizes and, instead, will custom build an industrial oven to your specifications.

## Engineering

Custom engineered, computer designed units are available. Contact us for more information.

#### Options

- Available with fixed or removable shelving, per customer specifications
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- Interior door latch
- Outdoor use package
- Chart recorder
- Door switch
- Adjustable timer
- Ethernet or serial bus communication
- Profile temperature control with ramp and hold capability
- Industrially hardened SCADA (supervisory control and data acquisition) system capable of controlling 20 ovens
- Integrated PLC controls with touch screen
- Class "A" oven controls with powered exhaust systems, which are readily available upon request

Designed and Manufactured by:



## Industrial Ovens Drying Ovens

This oven was designed for a food manufacturer who needed a method to dry moisture from small pellets on removable trays. Gentle airflow was necessary to avoid product displacement, but temperature uniformity was critical.

Internal plenums with properly sized air circulation and properly placed heating elements provided the perfect solution.





This oven was designed to remove moisture from refurbished electric transformers. It's large interior chamber accommodates a variety of load sizes.

Heat is delivered via internal plenums from both sides of the oven for uniform operating temperatures. An exhaust blower, with adjustable damper, aids in removing moisture from the oven.





# Industrial Ovens Additional Specifications

### **Heating Mediums**

#### **Electric:**

- 240 or 480 volt, 3 phase is standard voltage
- Alternate voltages available
- PID digital temperature controls with over temperature protection
- Housed in NEMA 12 or NEMA 4
  enclosures

#### Gas:

- Direct fired gas systems with integrated controls
- Honeywell flame safety controls

#### Steam:

- Schedule 40 finned tube heating coils rated for saturated steam up to 200 psig
- Includes inverted bucket steam traps
- Temperature controlled via self-acting temperature control package or digital temperature control system with control valves.
- Can be made suitable for use in Class 1, Div 1 areas

#### Hot Oil or Hot Water:

- Finned tube recirculating heating coils require a minimum of 5 gpm flow rate
- Temperature controlled via self acting temperature control package or digital temperature control system with control valves
- Can be made suitable for use in Class 1, Div 1 areas

Benko Product's innovative manufacturing process enables cost effective modification to basic oven designs so that the right oven is supplied every time.

### **Temperature Uniformity**

The design of each Sahara Industrial Oven is centered around temperature uniformity:

- Temperature uniformity is critical to the proper operation of an oven
- Heating process and load placement will dictate the required airflow pattern
- All heaters, blowers, and exhaust systems will be custom designed and integrated to meet the customer's specific airflow requirements

## **Industry Standards**

- The National Fire Protection Association's Standard NFPA 86 discusses guidelines for the safe operation of industrial ovens and furnaces. All Sahara Industrial Ovens are built to meet these requirements
- Class A ovens are built to meet NFPA 70 and 79 standards for ovens and furnaces
- Ovens can be field-audited to satisfy CSA (via ESA) and UL 508 inspections and certifications

#### Refrigeration

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- Refrigeration systems are available to maintain temperatures from room temperature down to 35 degrees F
- Can be incorporated into any oven design

## **Spare Parts - Documentation**

- Spare and replacement parts can be easily matched to any oven
- Most spare parts are kept in stock.
- Detailed records are kept for each oven manufactured by Benko Products, Inc., which includes an "as-built" drawing, model number, and a list of accessory equipment

#### **Testing and Inspection**

- Each oven is subjected to a stringent 20 point quality inspection
- Each oven is functionally tested for temperature control regularity and temperature uniformity
- All over-current devices are preset to proper load prior to shipping

#### Warranty

- Additional years of warranty protection are available
- All products manufactured by Benko Products, Inc. have a two (2) year warranty (unless otherwise specified) from the date of purchase against defects in workmanship or material. Any part or component, except items covered by warranties of other manufacturers, returned to the factory or service center freight prepaid by the owner, found upon examination by Benko Products, Inc. to be defective or the result of improper workmanship by the factory will be repaired or replaced without charge and returned to the owner freight prepaid. Benko Products, Inc. does not guarantee product capacity if alterations are made.

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