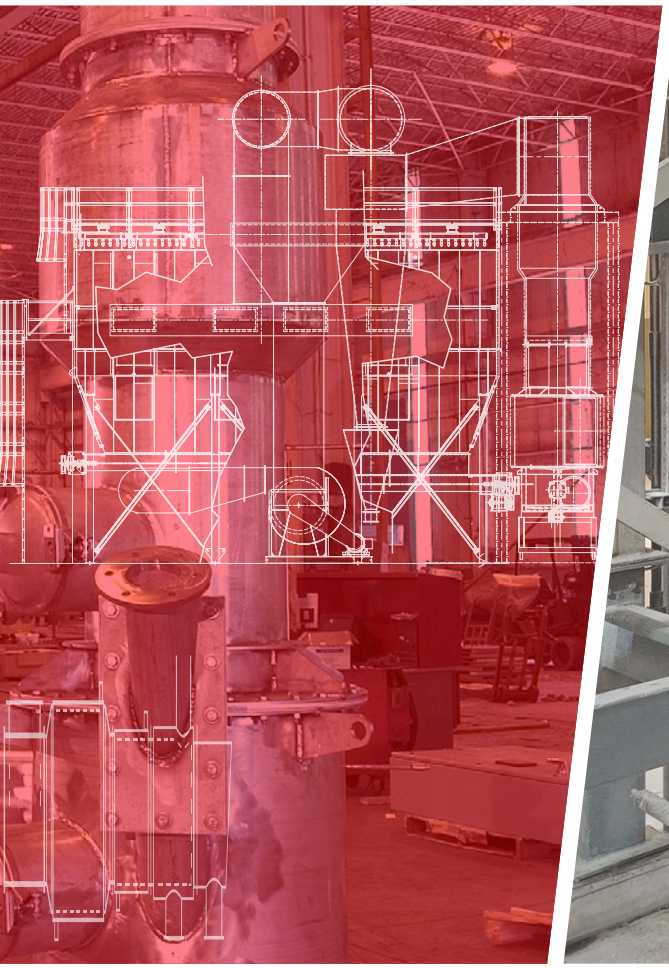
Flash & Tornesh Dryers

Carrier Vibrating Equipment provides custom engineered flash and tornesh drying systems to a wide variety of industries around the world. Carrier's flash dryer delivers an inexpensive solution to drying problems. Our flash dryers instantly dry high moisture powders or granular materials with high heat transfer efficiency in the constant rate drying period.

Carrier's tornesh dryer improves upon conventional flash drying designs with an innovative configuration to increase residence time. Its feeding-dispersing chamber creates a multi-phase, cyclonic flow of gas and powder to help break up agglomerates, often to its discrete particle size. Tornesh dryers handle a wide range of wet powders and solids from one micron up to one-half inch pellets and reach drying capacity in the falling rate drying period.



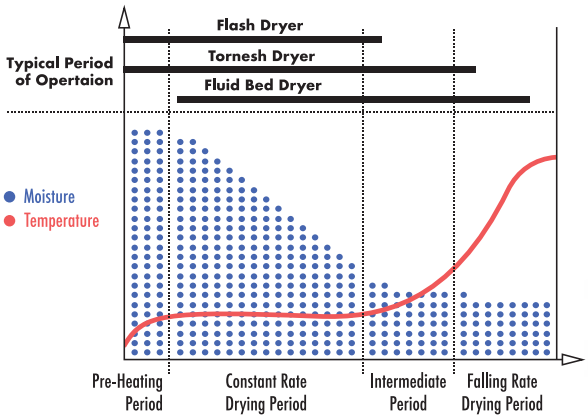
Typical Applications:

- Coal
- Diatomaceous Earth
- Lime
- Graphite
- Kaolin Clay
- Calcium Carbonate
- Alumina Trihydrate
- Potash
- Sodium Bicarbonate
- Solid Chemicals
- Plastics, Polymers & Resins
- Gypsum
- Food & Dairy
- Sawdust & Wood

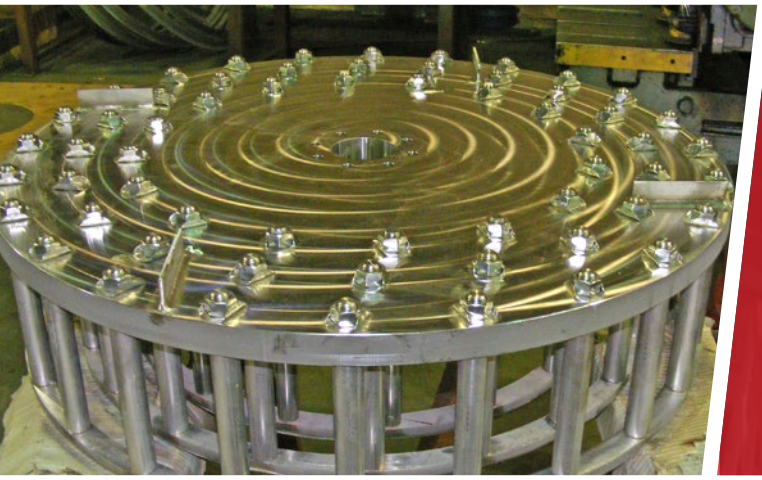
Carrier®

Flash Dryer Features & Benefits

- High gas temperature and active heat exchange design quickly processes and simultaneously transports materials
- Flash design is capable of processing high capacities in a relatively small amount of space
- Accommodates a wide range of powders and granular materials including heat sensitive materials
- Pneumatic conveying while flash drying eliminates additional equipment



Advantages: Flash & Tornesh Dryers



Multi-Processing

Conveys and elevates while drying and is ideal for fine powders where entrainment would be high in other drying technologies.

Efficient & Economical

Provides an efficient yet economical solution to drying powders and granular materials. The flash and tornesh dryer's acceleration and expansion chamber walls can be jacketed for hot water, steam, or hot oil to maximize drying capability.

Options

High Temperature Designs

High process gas temperatures can be used in custom flash dryer designs to reduce size and increase capacity.

Mechanical Slinger

If size reduction is not desired, a mechanical slinger is available for dispersing cohesive materials into the flash chamber.

Deagglomeration Equipment

Optional cage mills or mechanical slingers can be included to provide deagglomeration of lumps. Much of the drying is performed in the cage mill, increasing the thermal efficiency of the flash dryer.

Tornesh Dryer Features & Benefits

- Innovative design provides quick drying of wet materials without adhesion of powders
- Feeding-dispersing chamber provides cyclonic flow of gas/solids for increased residence time
- Simple tubular main body construction with no protruding parts for easy cleaning
- Adjustable retention time provides precise process control
- Process gas can be re-circulated to reduce emissions, save energy or recover vapors

Compact Design

Requires minimal installation space because of its small footprint, making it ideal for use as a pre-dryer to expand production capacity on existing process lines.

Reliable & Low Maintenance

Delivers reliability in a simple, proven design and has no internal moving parts for a low maintenance drying solution.

Options

Feed Designs

Custom designed feeders and air slides are available for feeding wet solids.

Body Designs

The main body can be clamped or bolted together for interior access.

Clean-In-Place

Clean in place (C.I.P.) spray nozzles can be installed for applications requiring frequent clean out such as food and dairy.

Feed Chambers

The feed chamber basket is customized with specially designed directional holes to eliminate weepage.

Expansion Chambers

Optional expansion chambers may be considered to increase residence time.

Single & Two-Stage Dryers

Single-stage and two-stage dryer combinations are available.

Integrated Systems

Carrier designs and manufactures additional processing equipment that can be integrated upstream or downstream for complete multistep process lines.

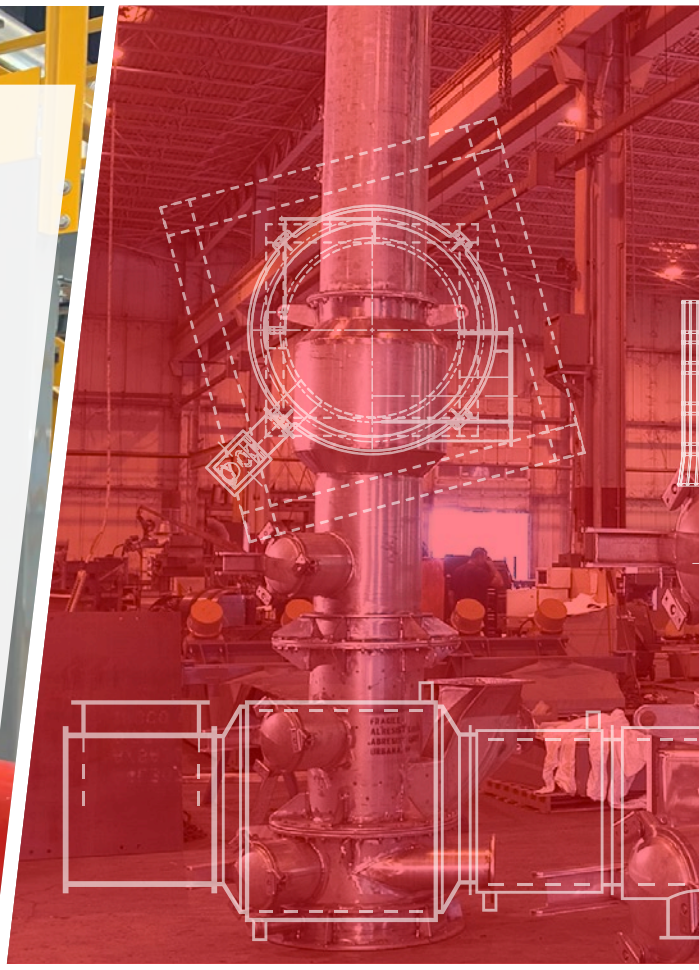
Engineering & Manufacturing

- Technology profile of over 150 patents
- Equipment designs are verified using Finite Element Analysis (FEA) to ensure trouble-free service and long life
- 3D equipment modeling
- State-of-the-art manufacturing facilities on 3 continents with robotic cutting and welding
- Manufacturing expertise working with mild steel, various grades of stainless steel, duplex steels and other exotic alloys for specialty applications
- Welders certified to ASME & AWS standards
- ISO 9001:2015 certified

Lab Testing

Be confident that your powder and bulk solids processing is efficient with CPEG's 15,000 ft^2 state-of-the-art test lab. With our lab, you have access to the most extensive testing capabilities in the industry. Multiple pieces of equipment can be combined for multistep and multistage testing to simulate field operation, validate new equipment designs and provide complete process solutions. Combined with our full analysis of material characteristics and measurements of material behavior in specific processing applications, you are assured an efficient, reliable and safe solution, all backed by our process warranty.

Field testing with rental equipment is available when lab testing would not effectively simulate process operating environments.



AMERICAS
Carrier Vibrating Equipment, Inc.
3400 Fern Valley Rd
Louisville, KY 40213, United States
Tel: +1-502-969-3171 | Fax: +1-502-969-3172
carriervibrating.com | cve@carriervibrating.com

EUROPE
Carrier Europe SA
Rue Joseph Luns 52
B-1401 Nivelles, Belgium
Tel: +32 67 40 01 40
carriereurope.be | ceur@carriereurope.be

CHINA
Carrier Vibrating Equipment (Shanghai) Co., Ltd.
#1 Bldg., #88 Shenzhou Road, Fengcheng Town
Fengxian District | Shanghai, 201411 China
Tel: +86 21-33925800
cves@carriervibrating.com.cn

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