



# HEAT TREATMENT

Sanification and total disinfestation of silos by heat against pests of flour and powdery food products, and micro-organisms such as bacteria and fungi.

**Total disinfestation of all life stages of common flour pests such as tribolium, sitophilus and plodias, included eggs**

**Zero environmental impact as no chemicals are used**

**Increased hygiene and food safety**

**User friendly and doesn't require a patent**

**Bio friendly**

**Protects the health of workers**

**Doesn't require downtime after application as there won't be chemical residuals from treatment**

**Process can be done repeatedly as needed (even weekly)**

COMPLETELY  
ECOSUSTAINABLE



Heat treatment eliminates insect pests and microorganisms such as bacteria and fungi from empty vertical silos. The treatment is run by blowing high temperature air inside the silo through an ATEX certified air heater.

Heat treatment has total insecticidal efficacy against common flour pests such as tribolium, sitophilus and plodias, with a high mortality of all life stages included eggs. According to the tests we carried out, it has an excellent bactericidal and fungicidal power with a reduction of the charge up to by 100%.

The treatment with high temperatures is a technique with no environmental impact, and completely eco-sustainable as it doesn't employ chemical products or toxic gases (such as phosphine or sulfuryl fluoride).

Heat treatment improves hygiene and food safety. It is ideal for bio productions as no chemicals are employed, and very used-friendly as it doesn't require patents and doesn't carry risks for the workers. It can be performed directly by food industry operators according to the needs of each production process.

Heat treatment doesn't require downtime after application as there is no need to check for residuals from the treatment since no chemicals are employed. It can be done repeatedly as needed (even weekly).

### INDUSTRIES



BAKERY



CONFECTIONERY



PASTA & CEREALS



PREMIX



BABY FOOD



FUNCTIONAL FOOD



PET FOOD



BEVERAGES

### AUTOMATION



OPERATOR  
PANEL



PROCESS  
CONTROL



TRACEABILITY



1 ATEX certified air heater

2 Operator display

3 Flexible mobile tube

4 Air inlet from hermetic inspection hatch

5 Extraction of hot air from overpressure valve's connection

Structure in aluminum alloy

Channeled air flow

Automatic temperature regulation  
via digital thermostat

Remote control (optional)

Equipped with USB port for download  
and data acquired during its operation

Easy transport (can be folded and dismantled)

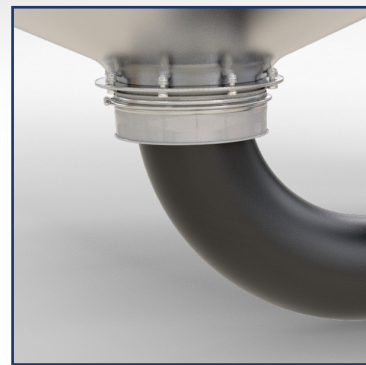
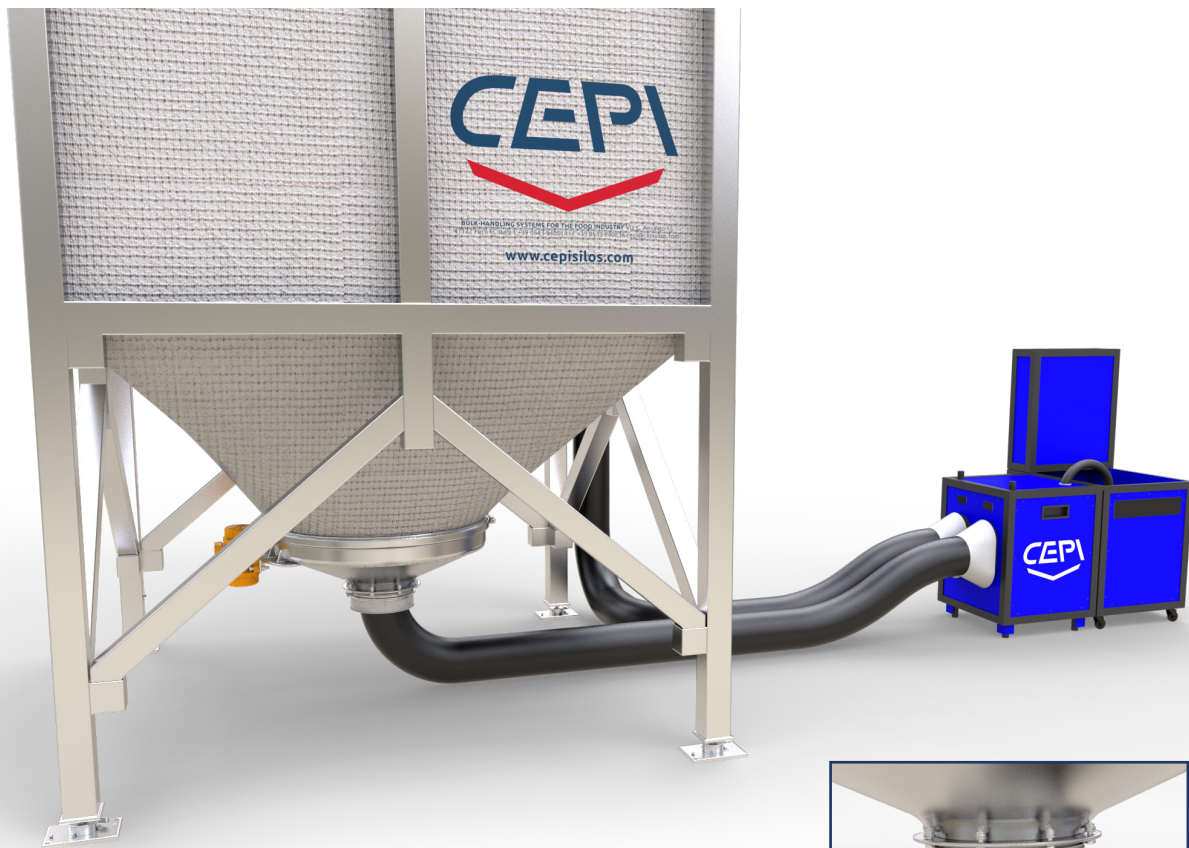
ATEX certification for use in Zone 21



Voltage	V	380
Phases	f	3
Hertz	HZ	50
Maximum current	A	35
Fan power	kW	1,1
Electric battery power	kW	25
Protection class	IP	55
Electric battery ranks	N°	1
Electric battery stages	N°	1
Speed	N°	1
Dimensions W x D x H	mm	794 x 594 x 1465
Weight	Kg	190
Room temperature	°C	-20 °C ≤ T <sub>AMB</sub> ≤ +50°C

## PHOSPHINE VS HEAT

Phase	Magnesium phosphide (=Phosphine PH3)	Heat (T °C >45-60)
-1 day	No silo preparation	Preparation of electrical connections and pipes
1° day	3 days with exposure phase >20°C  If T°C < 10°C not possible  If >10°C < 20° 5 days exposure	24 hours > 55°
2° day		If T°C > 45°C 36 hours
3° day		Goods can be introduced
4° day	Drainage and ventilation phase 2 gg	
5° day		
6° day	Goods can be introduced	



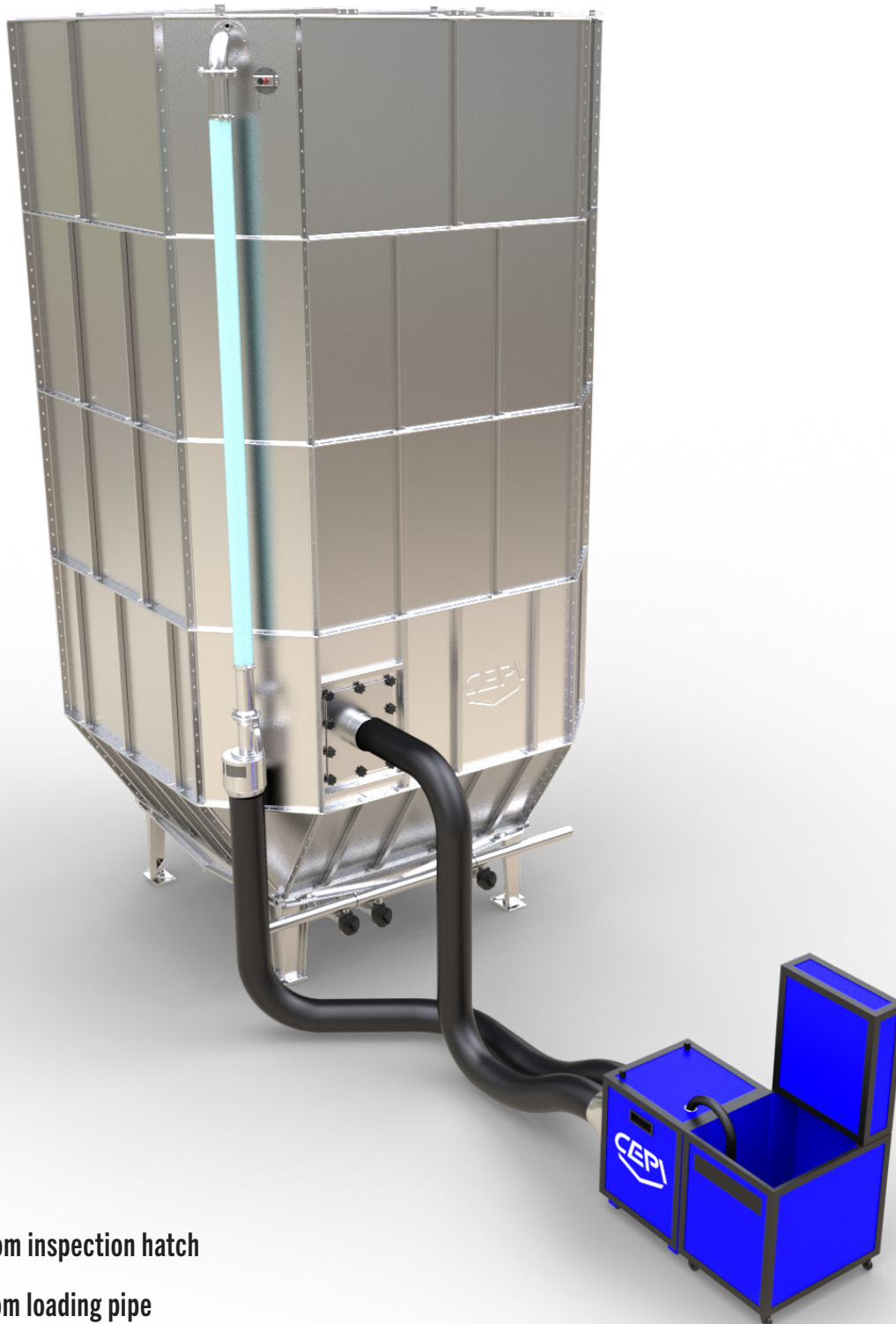
## SILSYSTEM

**Air inlet from vibrating cone**

**Air intake from loading pipe  
with dedicated component**

**Flanged component to connect  
with vibrating cone**





## SILBOX

Air enters from inspection hatch

Air intake from loading pipe  
with dedicated component

Special applications are the ingredient management technologies that CEPI developed to complete storage, transport and dosing operations. Our goal is to offer a turnkey solution that covers the entire process from the input of the ingredients to their dosing in an organic way. *Our motto is: if your process needs it, we can do it. If we cannot do it yet, we will develop it, just for you.* Our solutions evolve to match each individual demand from the manufacturer side, leading to unparalleled technological range:

**Fermentation technology**

**Flour cooling**

**Sugar mill**

**Bread and biscuit rework**

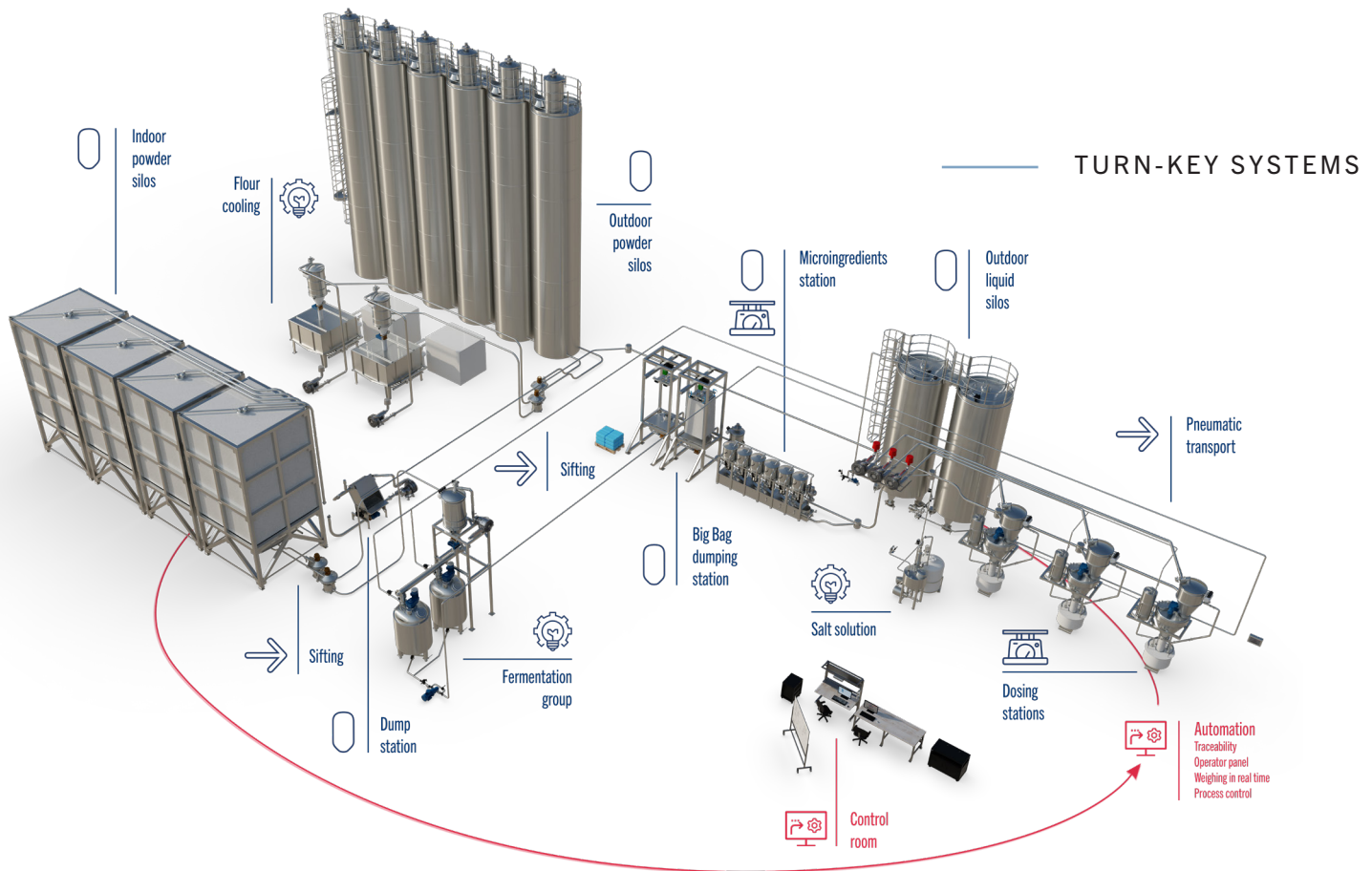
**Production, storage and dosing of invert sugar**

**Production, storage and dosing of salt solution**

**Fat tanks**

**Cold fat dosing in paste form**

**Heat treatment**



CEPI designs, manufactures and commissions bulk-handling systems for the storage, transport and dosing of raw materials, as well as fully integrated automation and technologies to complete all food production processes. Since 1985, we have worked with the most important companies from all sectors of food manufacturing.



STORAGE



TRANSPORT



DOSING



SPECIAL



AUTOMATION