

**LOADING AND UNLOADING SYSTEM**

# SYSTEM OF LOADING AND UNLOADING

## **ATLAS** – a modern system for loading and unloading bakery ovens

The ATLAS loading and unloading system and IBIS thermal oil ovens guarantee the economy of production, while maintaining the highest quality and even baking results. Owners of artisanal bakery face the problems of „missing hands to work“, the need to reduce costs and constantly raise labor standards. The quality of the bread and the efficiency of the production remain also key factors. The answer to all these issues on the part of the Polish manufacturer of bakery machines and ovens - IBIS - is the ATLAS loading and unloading system designed to fit a modern bakery. It should be borne in mind that automation of a bakery does not mean abandoning the artisanal production.

### **No more carrying heavy setters and unloading with shovels**

Manual loading requires physical brawn. The constant lifting of setters can cause back pain and other injuries resulting from overloads of the musculoskeletal system. The ATLAS loading and unloading system takes over the hardest physical work and at the same time relieves the employees.



For the operation of the set consisting of two PKT 6.270 ovens with a total baking area of 54 m<sup>2</sup> and the ATLAS system, only one operator is required who is responsible for timely placing the trolleys with side setters in the docking station.

Loading and unloading is automatic and takes a very short time, with an accuracy of one second. Only the Thermal oil ovens (due to their construction) allow baking batch after batch for 24 hours while maintaining a unique baking atmosphere and equal baking.

Fast loading and unloading guarantees less cooling of the ovens, while in continuous production, it reduces the production time of bread by up to 20%.

Siemens automation guarantees reliability and continuity of work. The strength of IBIS ATLAS system are servo drives with outstanding performance and reliability in operation. They are used wherever positioning, dynamics of movement and the need for precise control are the key elements.





## Automation of loading and unloading

### There are several ways to load dough onto the loader belt:

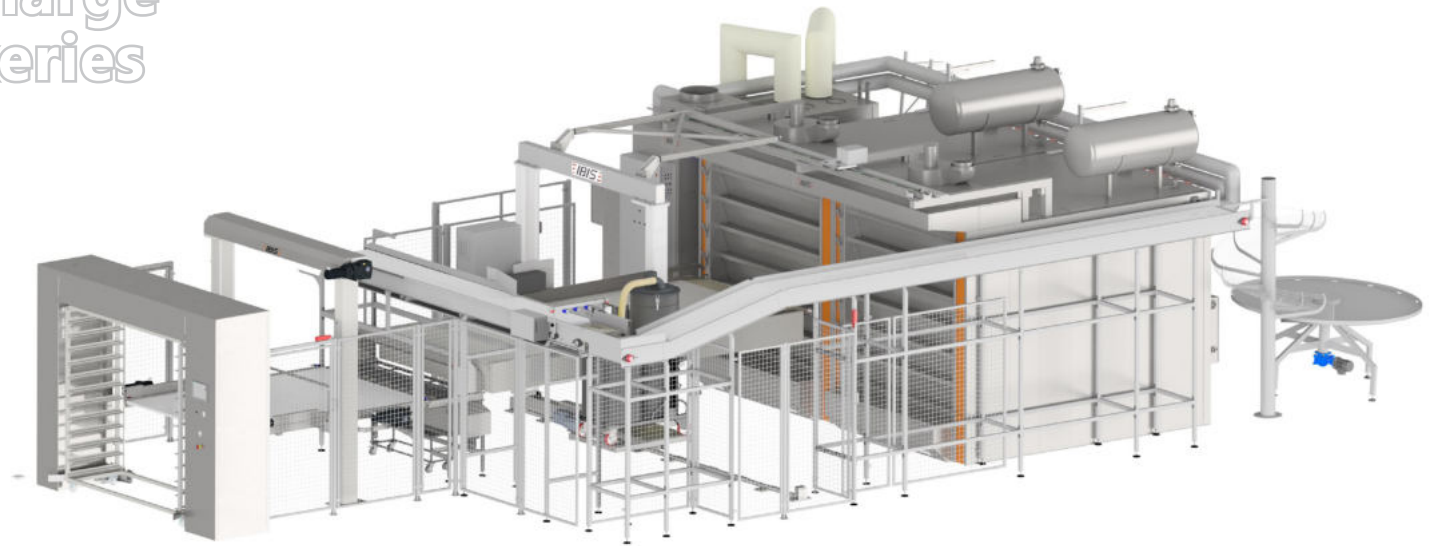
- manual removal of dough from proofing baskets directly onto the belt,
- manual unloading of side setters directly onto the belt,
- automatic picking up of the dough from the setters to the feeding table. The trolley with the setters is placed in the docking station. The ovens and ATLAS system are controlled from the control panel located in the docking station.

### There are various variants available for unloading of the ovens:

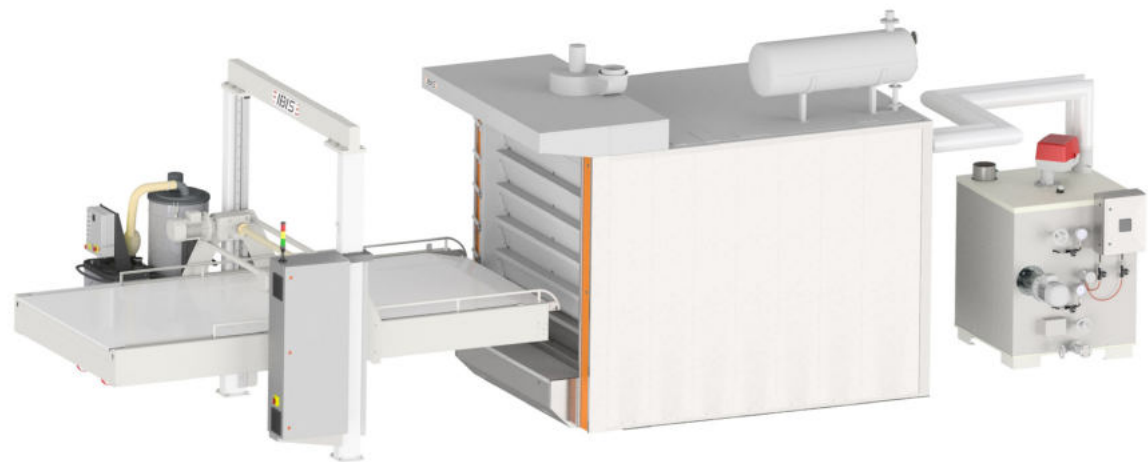
- manual removal of products from the belt and putting them on trolleys to cool,
- automatic unloading of products onto trolleys to cool,
- unloading onto the conveyor belt transporting the products to the warehouse. The tape ends with a slide and a rotating receiving table.



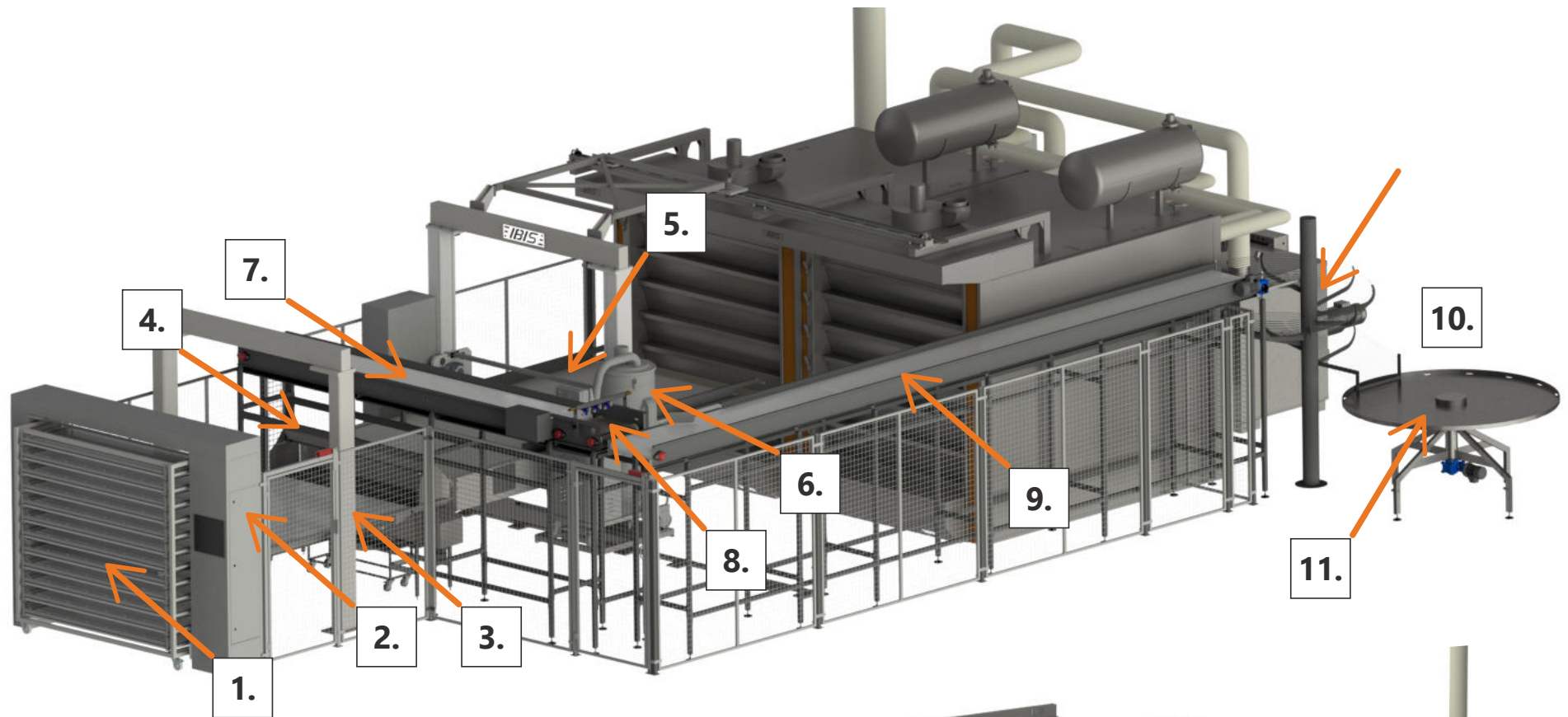
## ATLAS system for large and industrial bakeries



## ATLAS loading system for small and artisan bakeries



## Two thermal oil deck ovens PKT 6.270 with automatic system of loading and unloading and bread transport system to the packing station.



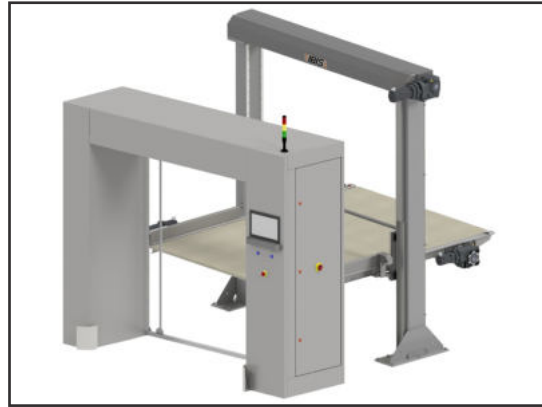
1. Trolley with side loading setters
2. Docking station for trolleys with loading setters
3. Feeding table
4. Dough sprinkler
5. Automatic loading and unloading
6. Vacuum cleaner
7. Bread receiving conveyor
8. Bread sprinkler
9. Conveyor
10. Spiral slider
11. Rotary bread receiving table







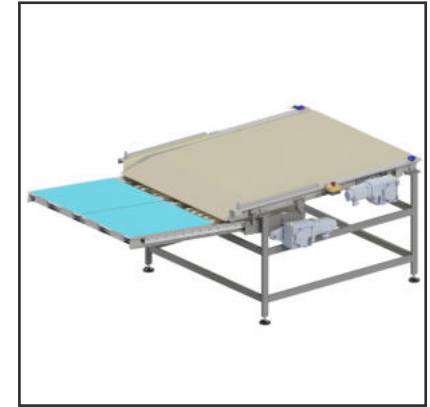
Automatic loading and unloading system  
**ATLAS**



Docking station with automatic feeding  
table which pick up from side setters



Feeder table for dough taking out  
from baskets and for operating  
with loading side setters



Feeder table with table for  
peelboard pickup



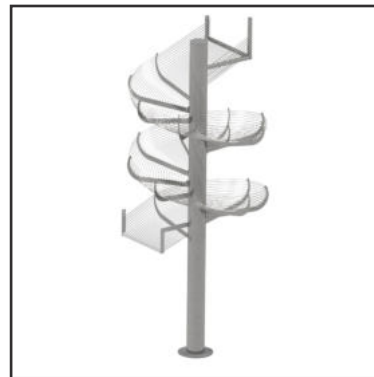
Dough sprinkler



Intermediate receiving  
conveyor



Conveyor



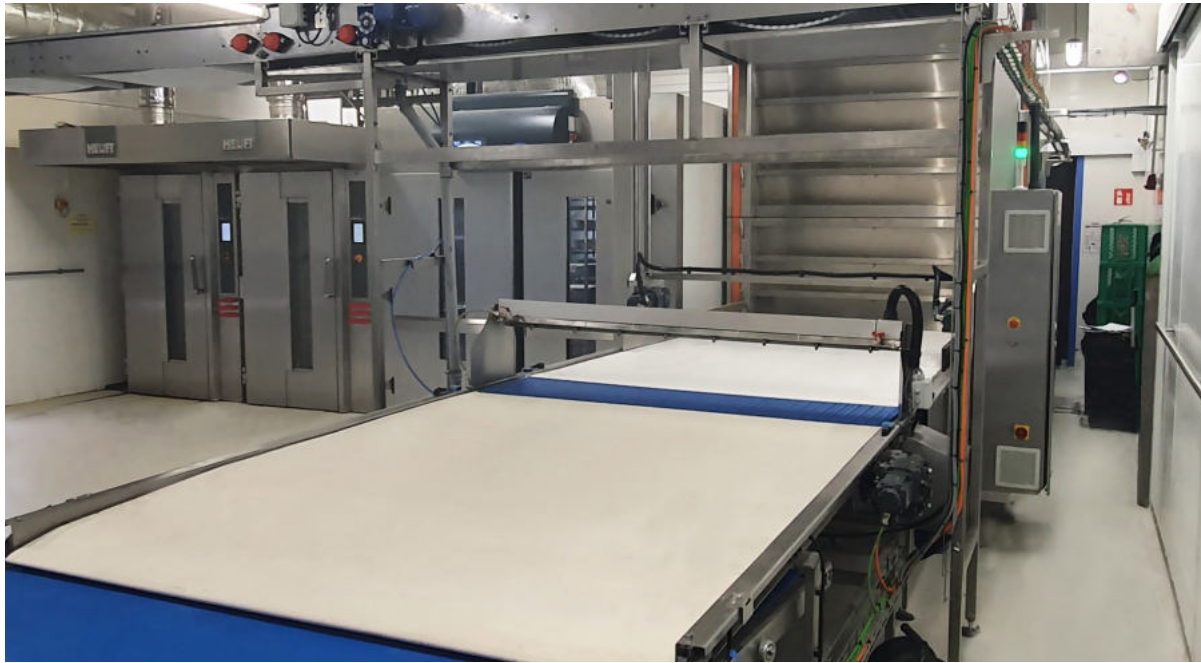
Spiral slider



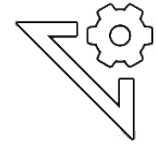
Rotary bread  
receiving table



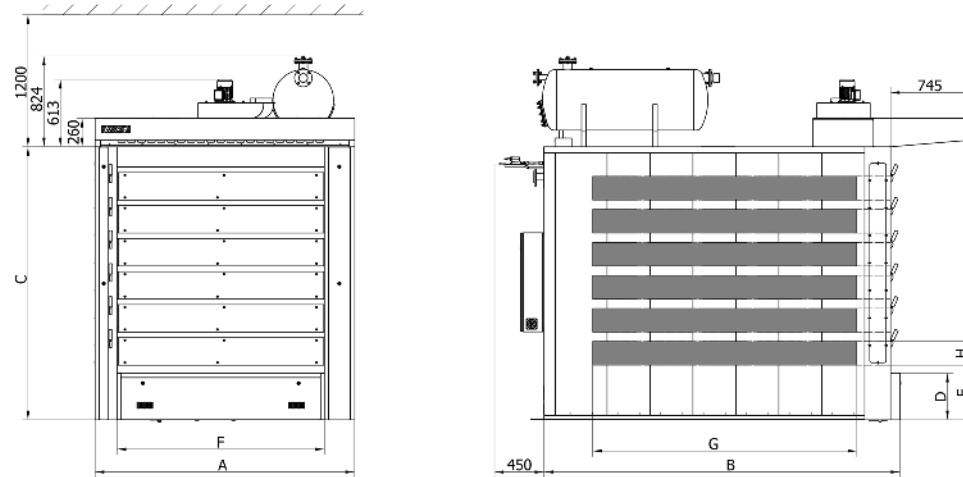




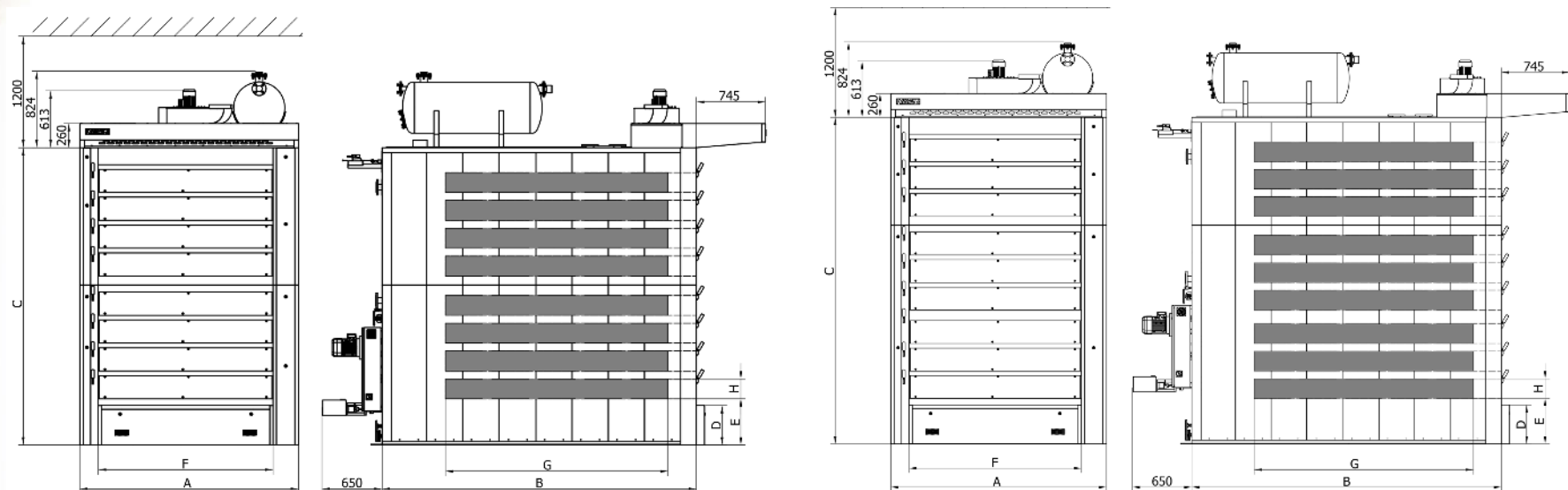
# TECHNICAL PARAMETERS



## THERMAL OIL DECK OVENS

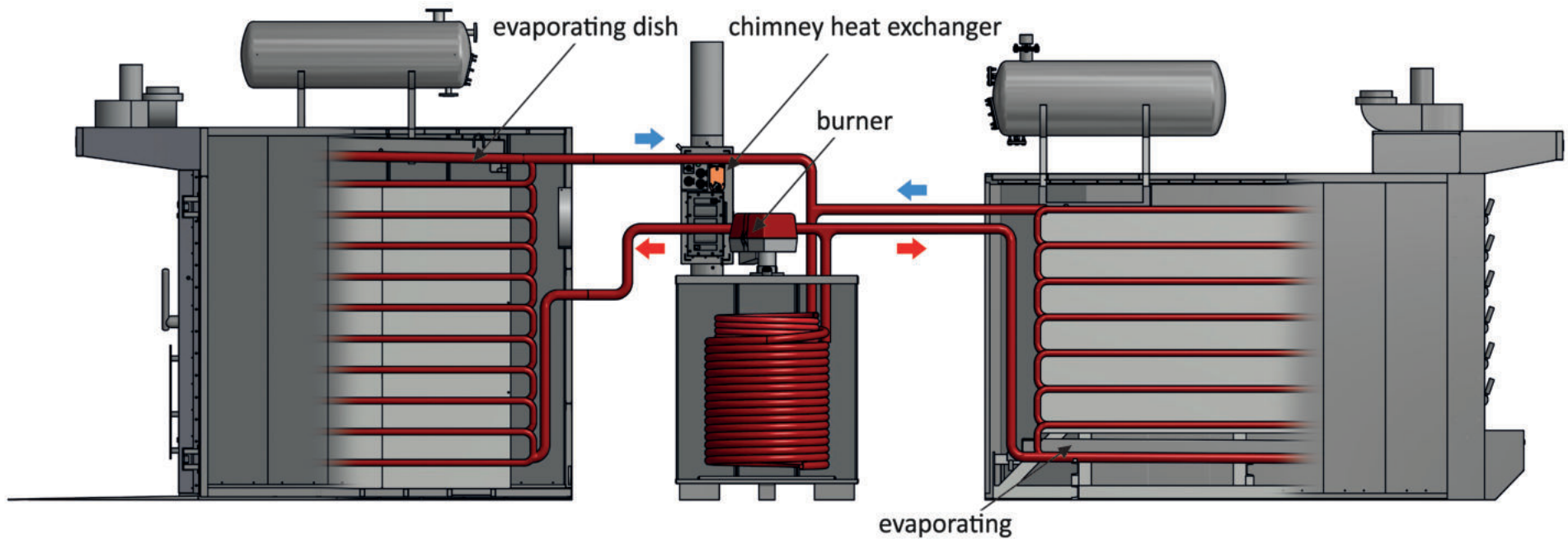


## THERMAL OIL DECK OVENS WITH SEGMENTS



<b>MODEL</b>	<b>Baking surface</b>	<b>Number of chambers</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>
<b>PKT 4.120</b>	12 m <sup>2</sup>	4	1795	3240	2105	535	782	1240	2400	225
<b>PKT 4.150</b>	15 m <sup>2</sup>	4	2360	2840	2105	535	782	1860	2000	225
<b>PKT 5.150</b>	15 m <sup>2</sup>	5	1795	3240	2390	535	782	1240	2400	225
<b>PKT 6.180</b>	18 m <sup>2</sup>	6	1795	3240	2360	425	497	1240	2400	225
<b>PKT 6.180 MONO-DUO</b>	18 m <sup>2</sup>	6	1795	3480+650	2490	425	497	1240	2400	225
<b>PKT 5.180</b>	18 m <sup>2</sup>	5	2360	2840	2390	535	782	1860	2000	225
<b>PKT 4.180</b>	18 m <sup>2</sup>	4	2360	3240	2180	535	797	1860	2400	225
<b>PKT 7.210</b>	21 m <sup>2</sup>	7	1795	3240	2675	425	497	1240	2400	225
<b>PKT 6.220</b>	22 m <sup>2</sup>	6	2360	2840	2390	425	497	1860	2000	225
<b>PKT 6.220 MONO-DUO</b>	22 m <sup>2</sup>	6	2360	3080+650	2460	425	497	1860	2000	225
<b>PKT 5.230</b>	23 m <sup>2</sup>	5	2360	3240	2480	535	797	1860	2000	225
<b>PKT 8.240 2 SEGMENTS</b>	24 m <sup>2</sup>	8	1795	3240	3080	425	497	1240	2400	225
<b>PKT 7.260</b>	26 m <sup>2</sup>	7	2360	2840	2675	425	497	1860	2000	225
<b>PKT 9.270 3 SEGMENTS</b>	27 m <sup>2</sup>	9	1795	3240	3435	425	497	1240	2400	225
<b>PKT 6.270</b>	27 m <sup>2</sup>	6	2360	3240	2480	425	497	1860	2400	225
<b>PKT 6.270 MONO-DUO</b>	27 m <sup>2</sup>	6	2360	3480+650	2550	425	497	1860	2400	225
<b>PKT 8.290 2 SEGMENTS</b>	29 m <sup>2</sup>	8	2360	2840	3080	425	497	1860	2400	225
<b>PKT 7.320</b>	32 m <sup>2</sup>	7	2360	3240	2780	425	497	1860	2400	225
<b>PKT 9.330 3 SEGMENTS</b>	33 m <sup>2</sup>	9	2360	2840	3435	425	497	1860	2000	225
<b>PKT 8.360 2 SEGMENTS</b>	36 m <sup>2</sup>	8	2360	3240	3270	425	497	1860	2400	225
<b>PKT 9.400 3 SEGMENTS</b>	40 m <sup>2</sup>	9	2360	3240	3570	425	497	1860	2400	225





Thermal oil technology enables combination of several ovens with one boiler fired by: gas, oil or pellet burner. The boiler can be placed in the basement, warehouse or garage, just where the space is. Additionally, due to the use of only one burner in the thermal oil system, only one flue gas chimney is required in the bakery.

Sample of the oven's combinations:

- two thermal-oil deck ovens 18m<sup>2</sup> + boiler 160kW
- two thermal-oil trolley ovens PW82.9 + boiler 160kW
- two thermal-oil deck ovens 27m<sup>2</sup> + boiler 290kW
- thermal-oil deck oven 22m<sup>2</sup> + thermal-oil trolley oven PW103.9 + boiler 290kW

# THERMAL OIL OVENS

Thermal oil ovens designed to intensive use are an ideal solution for craft, large and industrial bakeries. They are dedicated to bakers requiring the highest quality baking. The production technology and the highest quality materials ensure their long service life, while generating significant energy savings. Ovens occupy a small area in a bakery in relation to their baking area. The oven construction ensures an even temperature distribution in the heating plates, because the thermal oil (heat carrier) is constantly pressed by the pump with a magnetic seal.

The applied heating technology and the oven's construction guarantee even baking and ensures repeatability of baking for the baker. Thermal oil ovens are equipped with a modern computer-based control system that constantly monitors the proper operation of the devices.

The principle of heating is similar to the central heating system used in residential construction (central boiler with a network of pipes and radiators), with the difference that the heat transfer fluid (heating medium) is not water, but synthetic oil with high heat capacity.

The boiler is a complete unit, consisting of a heat exchanger, burner, circulation pump, electrical control and all sensors and regulators necessary for operation and safety. The heating surface of the boiler consists of pipes resistant to high temperatures, arranged in two cylindrical spirals (coils). The tube bundle is arranged in such a way that optimal combustion conditions can be achieved with a minimum load on the heating surface.

## STANDARD EQUIPMENT:

**MAGNETIC CIRCULATION PUMP**  
**SYNTHETIC OIL**

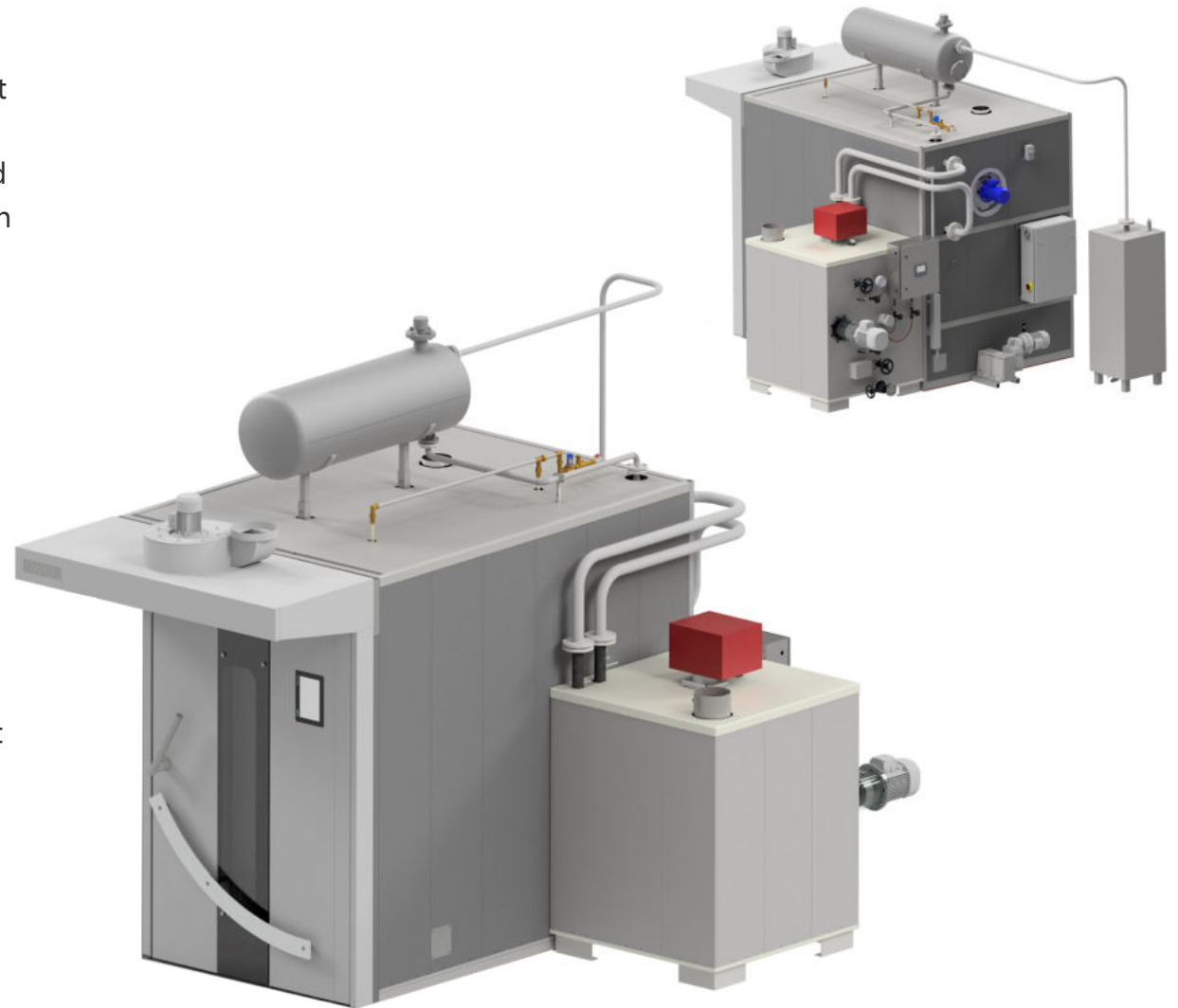
# TROLLEY THERMAL OIL OVENS

IBIS PW trolley thermal oil ovens are extremely efficient and versatile in their use, combining the advantages of rotary ovens with classic deck ovens. They are convenient in loading and unloading, as this process involves the entry and exit of trolleys. In 3-trolley ovens, the entry and exit process is additionally supported mechanically, which significantly improves and speeds up service.

Carrying out traditional baking of the assortment on hearth plates and baking with the use of tray or baking mold trolleys in one oven is not a problem, because the set can be equipped with trolleys with hearth plates and special loading and unloading trolleys.

It is a technical solution that combines the tradition of deck ovens with modernity, as only about one minute of time is needed to fill a baking area of 16m<sup>2</sup> by an experienced person. Gentle heat radiation, the use of hot air and a very efficient steam system ensure excellent baking quality.

The ovens have many different functions and retrofitting options, which are selected according to the individual needs of customers.



An example installation  
of the thermal oil oven with boiler



# THERMAL OIL DECK OVENS

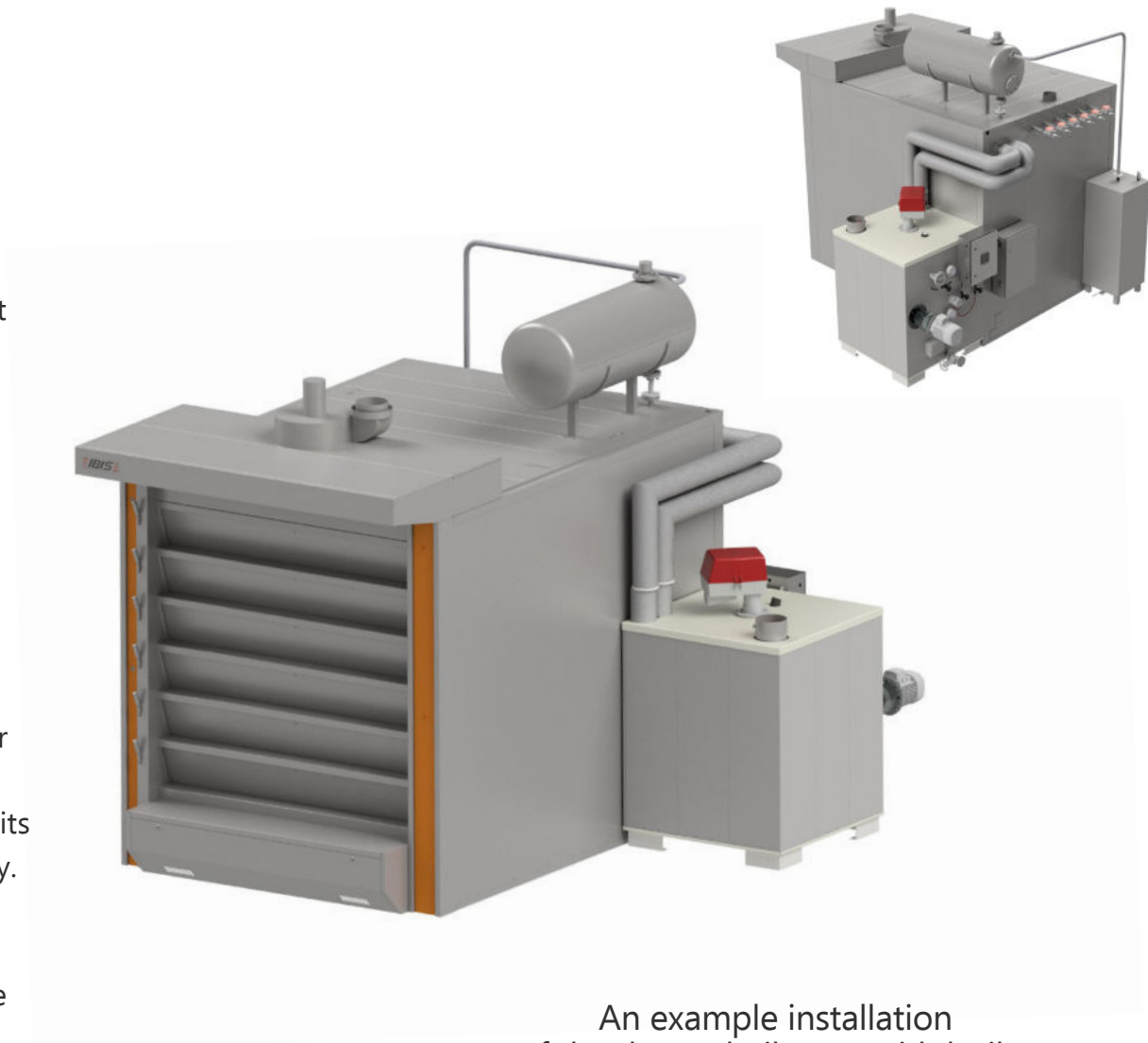
Thermal oil deck ovens are suitable for baking a wide range of bakery and confectionery products due to the perfect uniformity and quality of baking as well as temperature stability.

Thermal oil systems manufactured by IBIS are characterized by a short time of readiness to operation. The heating-up time for the oven with a baking surface of 27m<sup>2</sup> from the temperature of 25°C to 250°C does not exceed 30 minutes.

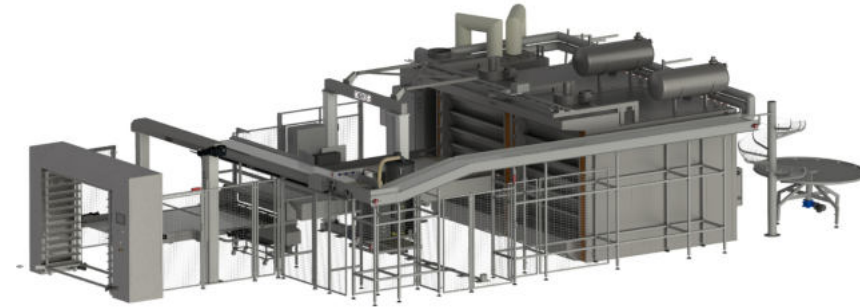
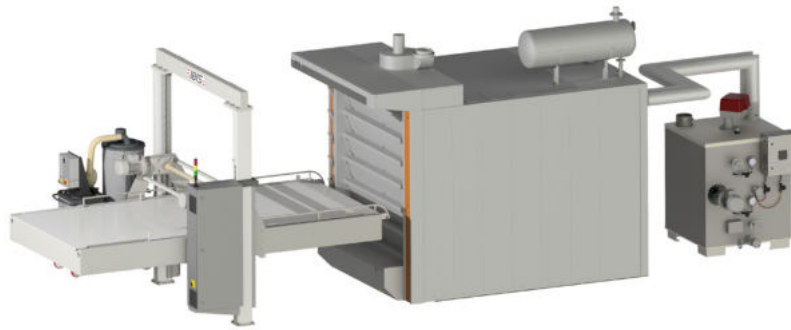
The properties of synthetic oil and the applied thick thermal insulation allow for the accumulation of large amounts of energy. This feature contributes to the fact that thermal oil ovens lose their temperature very slowly after baking.

The temperature drop with the oven off is <10°C per hour of standstill. Extremely short heating time allows for quick baking of products batch by batch and excellent baking quality. The construction of the oven guarantees its longevity, but most of all allows it to work 24 hours a day.

Thermal oil ovens are famous for their very efficient steamers with a unique design, which are able to provide up to 15kg of steam on board per hour of operation, i.e. up to 7.5kg per one chamber per baking.



An example installation of the thermal oil oven with boiler



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