



# PLATE FREEZING PROCESS AUTOMATION

INCREASE YOUR  
PRODUCTIVITY





## PLATE FREEZING PROCESS AUTOMATION – DESIGNED TO INCREASE YOUR PRODUCTIVITY

We offer equipment and systems for automating the plate freezing process from unloading the freezers to palletizing, weighing and wrapping the frozen plates.

### **User-friendly and safe handling**

By automating the heavy manual handling of frozen blocks you can cut down the risks of work-related accidents. The plate freezing system is easy to use by just one person.

### **Hygienic and easy to service**

The system is easy to clean and disinfect in order to avoid cross contamination between raw materials.

It is built with as few moving parts as possible making it easy to service. Fully automatic systems and semiautomatic systems come with all the necessary equipment for several years of service.

### **Options**

We are able to provide various options for all your needs. The line can be equipped with e.g. pallet size according to customer needs, buffering conveyors, full pallet wrapping, weighing or labelling.



# PLATE FREEZING SYSTEMS

## LOADING PLATE FREEZERS

When loading a plate freezer, it is important to choose the correct filling system that suits the raw material requirements.

### Tipping for gentle handling

A bin running on rails enables you to tip the materials into the plate freezer gently, without the risk of crushing them.

### Pumping for efficiency

The pump filling system runs on rails above the freezers and has a swivel arm that is moved to fill the freezer. This technology is recommended when freezing grinded material or small fish.



## UNLOADING PLATE FREEZERS

We offer efficient unloading devices that lift all blocks from the plate freezer at the same time.

The devices are mounted on an overhead crane that moves blocks to stacking.

## Process automation

The whole process can be automated or semi-automated. The operator uses an unloading device to pick up the blocks from the freezer and the crane automatically drives to the stacking table for unloading the blocks.

After unloading, the crane automatically continues to the next plate freezer. It is also possible to automate the unloading of the next completed plate freezer.



**1** Loading by tipping or pumping

**2** Unloading

**3** Automated or manual crane

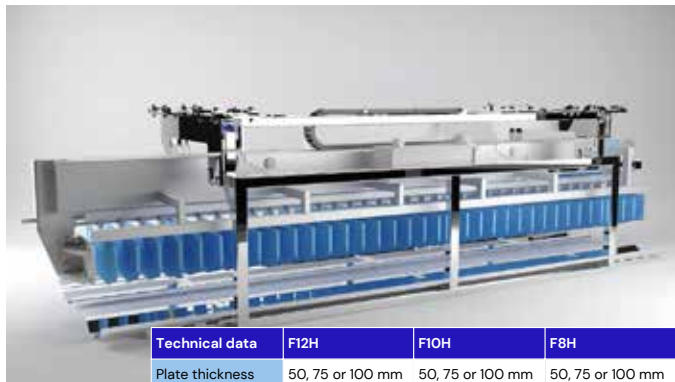
**4** Metal detector

**5** Stacking with robot, automatic manipulator or manual stacking

**6** Wrapping, weighing and plastic interleave

## Hydraulic unloader

for vertical plate freezer



Technical data	F12H	F10H	F8H
Plate thickness	50, 75 or 100 mm	50, 75 or 100 mm	50, 75 or 100 mm
Plate size	1210 x 400 mm	1060 x 530 mm	800 x 600 mm
Plate amount	22-36*	22-36*	22-36*
Total length	2260-5110 mm**	2260-5110 mm**	2302-5180 mm**
Lifting capacity	Up to 1800 kg	Up to 1800 kg	Up to 1800 kg
IP-class	IP66***	IP66***	IP66***
Oil	Food grade	Food grade	Food grade

\* optional up to 44 plates \*\* depending on the amount and thickness of plates \*\*\* except hydraulic unit

### Advantages

-  Stainless Steel
-  Easy to clean
-  High capacity
-  Low need of maintenance
-  Wireless control
-  Safe to use

## Pneumatic unloader

for vertical flat top freezer.



Technical data	F10P	F8P
Plate thickness	50, 75 or 100 mm	50, 75 or 100 mm
Plate size	1060 x 530 mm	800 x 600 mm
Plate amount	22-36*	22-36*
Total length	2230-5150 mm**	2230-5150 mm**
Lifting capacity	Up to 1800 kg	Up to 1800 kg
IP-class	IP69K	IP69K

\* optional up to 44 plates \*\* depending on the amount and thickness of plates

## Automatic stacking unit



Technical features	FA		
Stacking	Fully automatic	Electrical cabinets & metal detector IP class	IP69K
Capacity	Up to 15 ton/h	Options:	
Foreign body detection	Metal detector	Plastic between block layers	Automatic
Unloading and tilting conveyor	Automatic	Weighing	Automatic
Reject	Automatic	Wrapping	Automatic
Pallet loading unit	Automatic	PLC Control	Siemens
Pallet size	EUR pallet, other sizes as option	Communication	With ERP on demand

The stacking unit picks the blocks up from the table one by one and automatically stacks them on a pallet. The system stacks the blocks in a criss-cross layout creating a more stable pallet, which is safe to store and transport.

The blocks can be wrapped individually or a plastic film can be placed between each block. The completed pallets are fed out of the stacking unit when they are ready.

The unit can also be equipped with a block breaking unit or a pallet dispenser, which feeds the palletising unit with a new pallet in order to achieve continuous production.

Stacking can be automated or semi-automated. A robot can be used to pick up the blocks from the table and automatically stack them on a pallet.

## Semi-automatic stacking unit

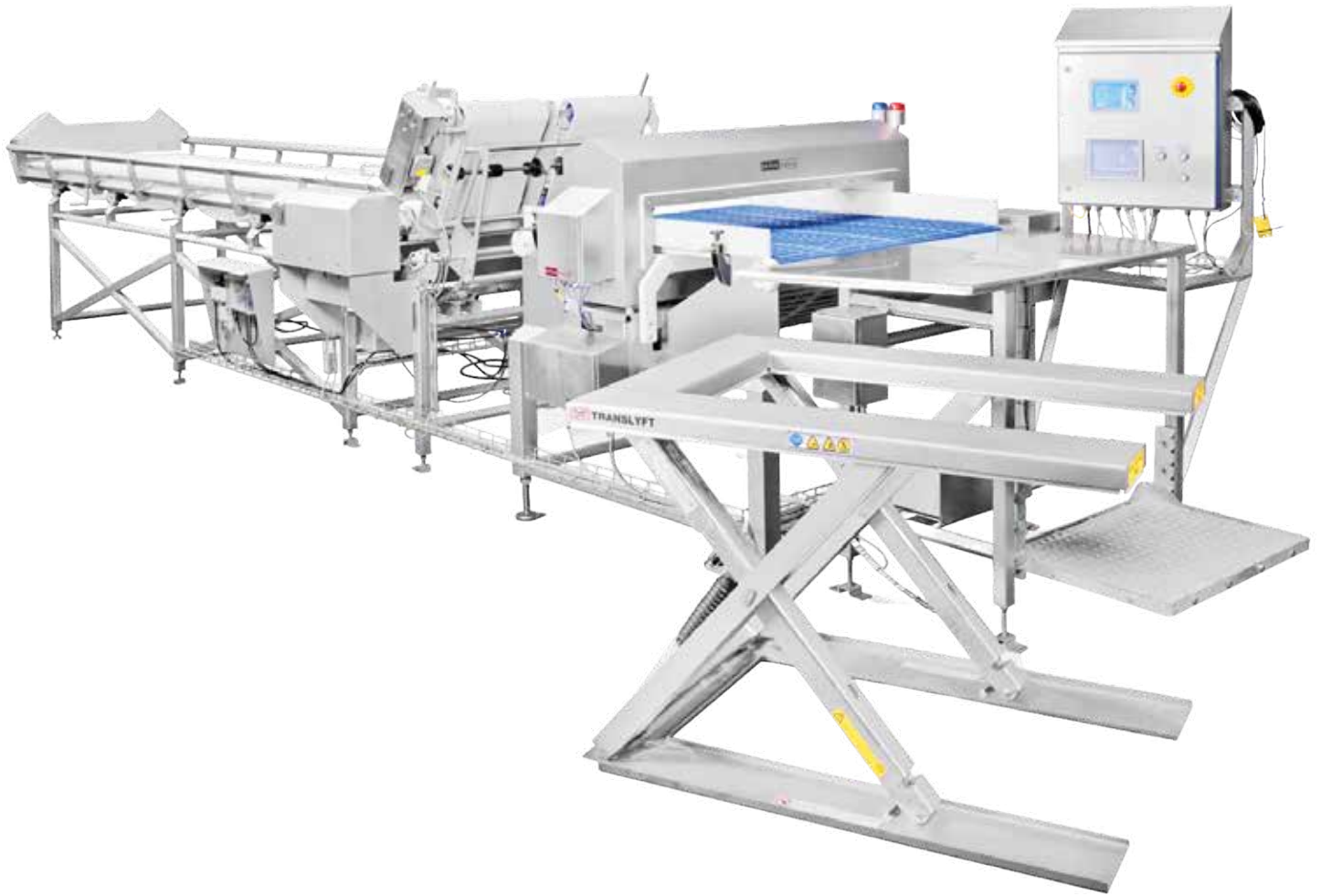


Technical features	SA		
Stacking	Semi-automatic	Options:	
Foreign body detection	Metal detector	Plastic between block layers	Semi-automatic
Unloading and tilting conveyors	Automatic	Weighing	Manual
Reject	Manual	Wrapping	Manual
Pallet loading unit	Manual	PLC Control	Siemens
Pallet size	EUR pallet, other sizes as option	Communication	Eith ERP on demand
Electrical cabinets & metal detector IP-class	IP69K	Ergonomics	Scissor lifter

### Advantages

-  Stainless Steel
-  High volume production
-  Easy to clean
-  Low need of maintenance
-  Safe to use
-  Ergonomic

Technical details: see data sheet.



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