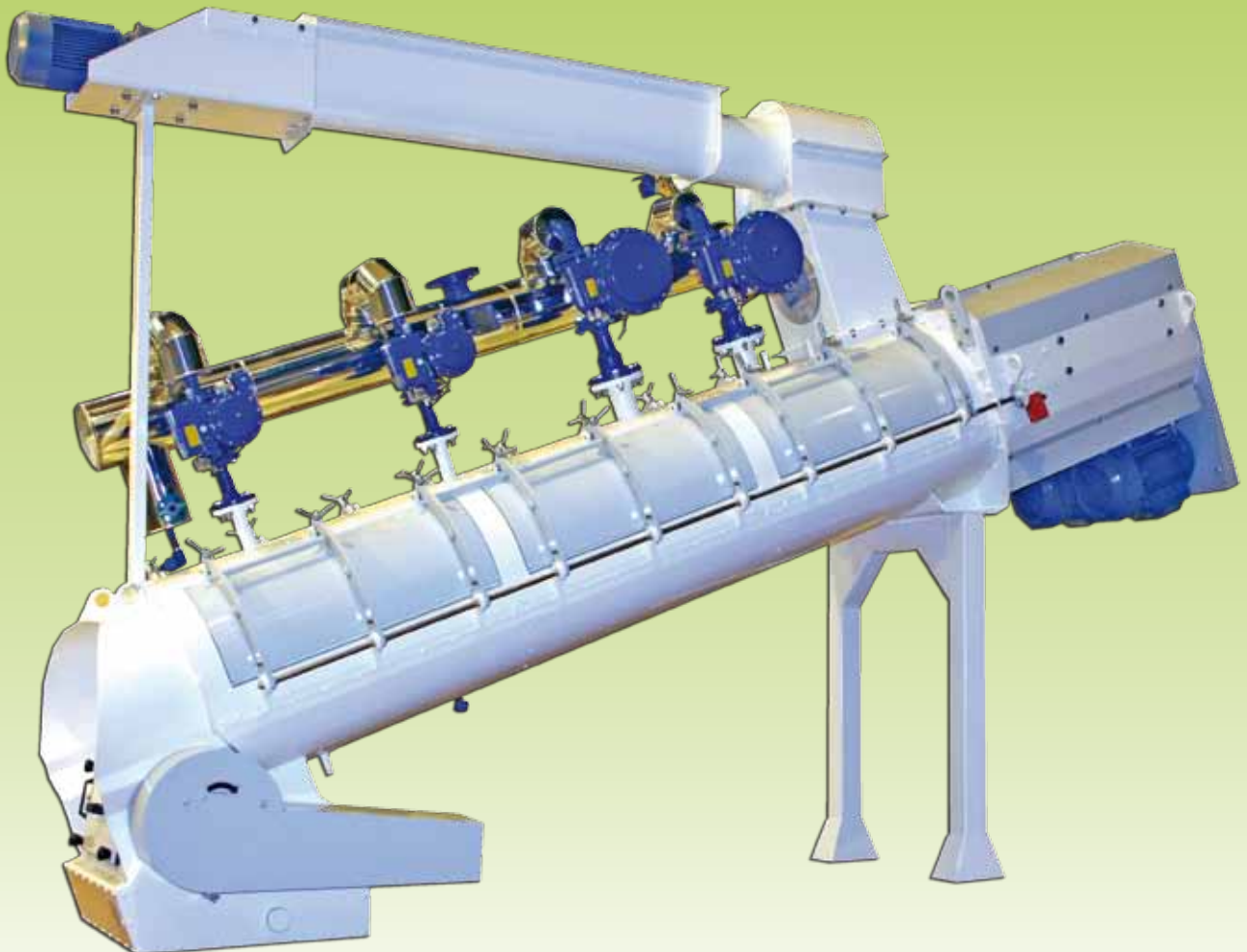


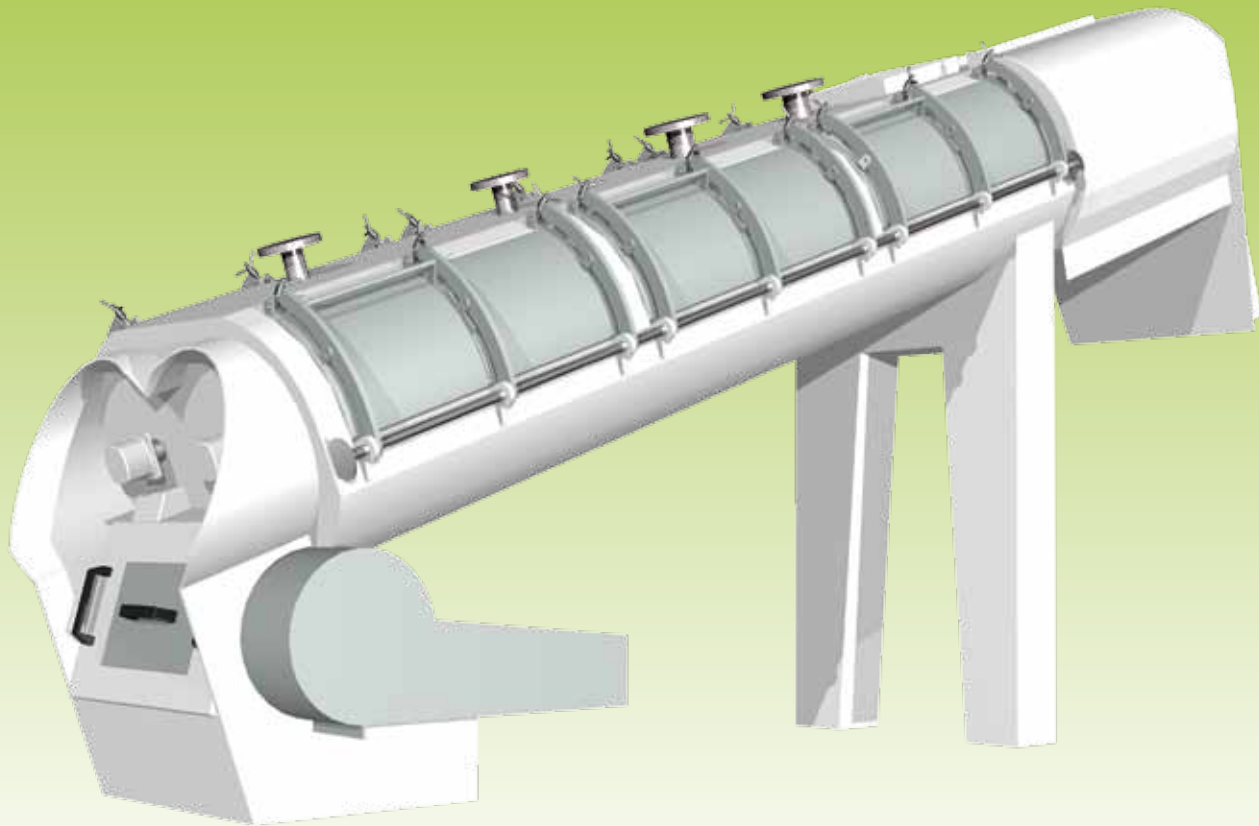


Thermal treatment



Thermal Conditioners

CTID/CTIS



STOLZ thermal conditioner guarantees the sanitary quality, improves the meal flow and starch digestibility and increases the water content of the product.

The super conditioner has an angle of inclination to prevent all deterioration and provides a proper filling and retention time control.

Features

- the unit always operates when completely filled without steam leakage
- fully made with stainless steel



Thermal conditioners CTID/CTIS

Principle

Operating principle

The meal is inserted into the body via a feed screw always ensuring a complete filling of the conditioner. The product is mixed by the rotor blades. It is submitted to a shearing effect and a residence time before discharge until the opening order is given according to the temperature and the selected treatment time.

Such treatment provides a direct steam injection and a homogeneous cooking of the product. The long lasting treatment capacity (up to 6 minutes) of this unit guarantes a perfect mixing of starch and gluten molecules.

The transverse and horizontal shearing suffered by the product increases water addition options into meal thus improving the quality of pellets produced by the pellet mill and decreasing the energy consumption.

The outlet sluice provides for a regular feeding and a quick response time of the pellet mill. It is designed to be cleaned easily and to avoid any leak-off leakage steam.



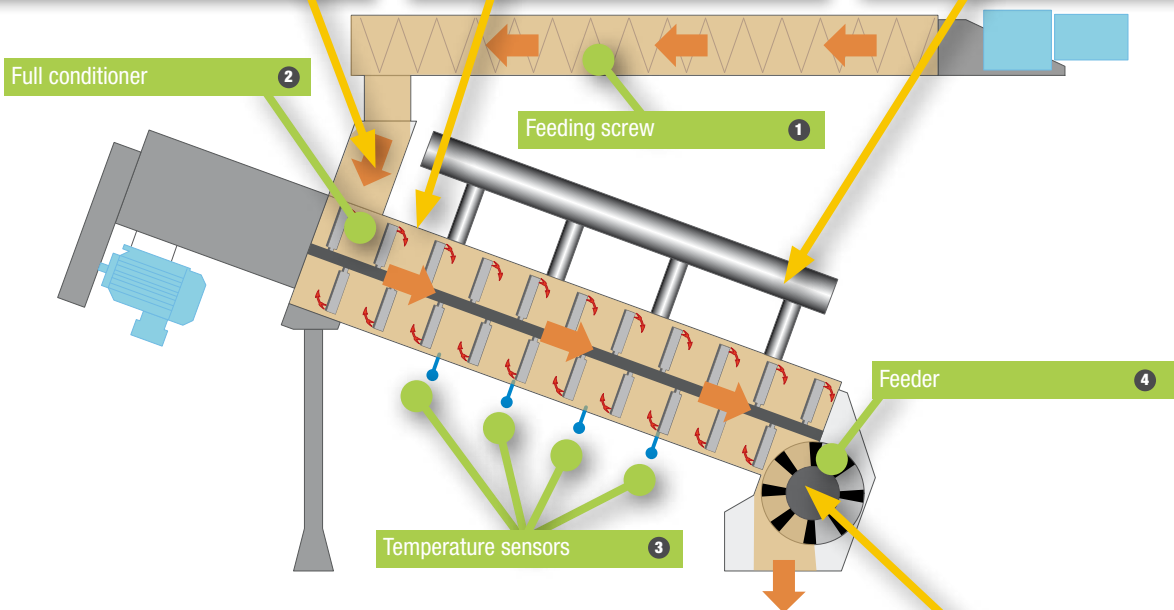
Screw - conditioner connection



Jacket steam piping



Steam injection



- 1 Overfilling
- 2 After overfilling the conditioner, the feeding screw stops
- 3 Steam addition up to the preset point temperature
- 4 Continuous discharging by maintaining a constant product temperature, the conditioner being 100% refilled with material



Variable speed feeder

Mashfeed cooking and heat treatment

Purposes

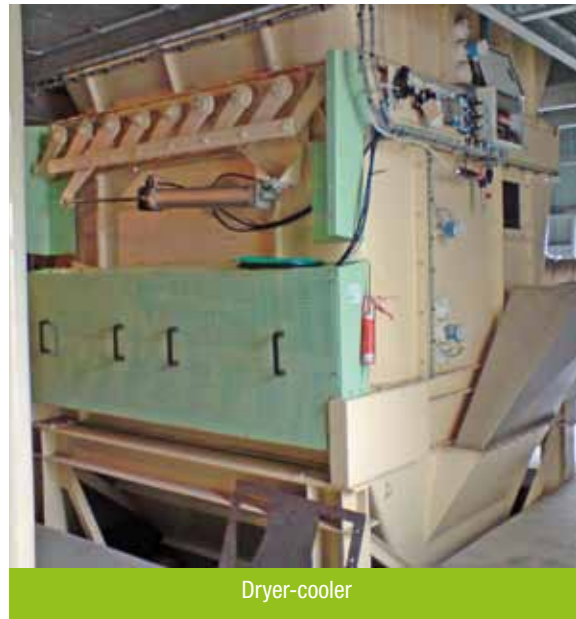
- Digestibility
- Flowability
- Feed integrity
- Higher conversion ratio
- Entero bacterias free

Optimized processing

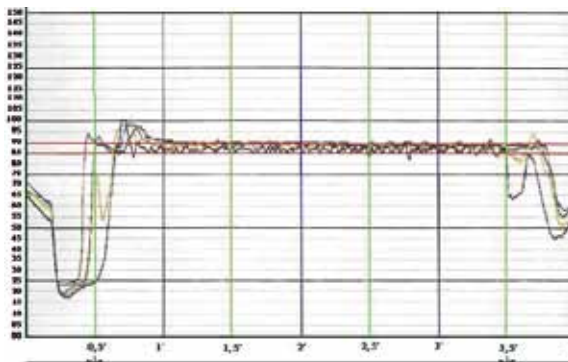
- FIFO
- 100% refilling level
- Regular flowrates
- Digestibility
- Accurate monitoring of residence time and temperatures

Drying-cooling

- Specific design for mash feed
- Exchange areas optimized
- Fines agglomeration



Dryer-cooler



Stable product temperature - resident time



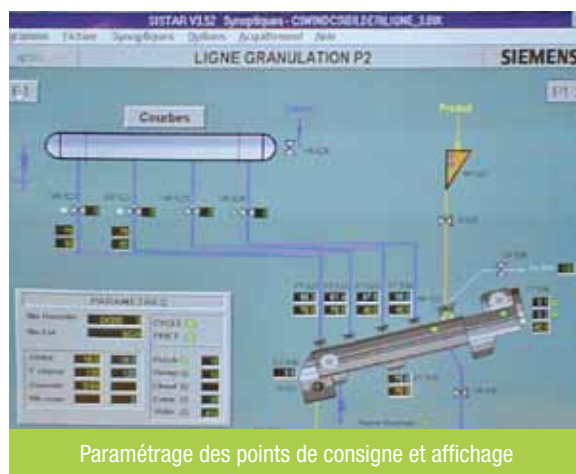
Layer equalizer and stirrer



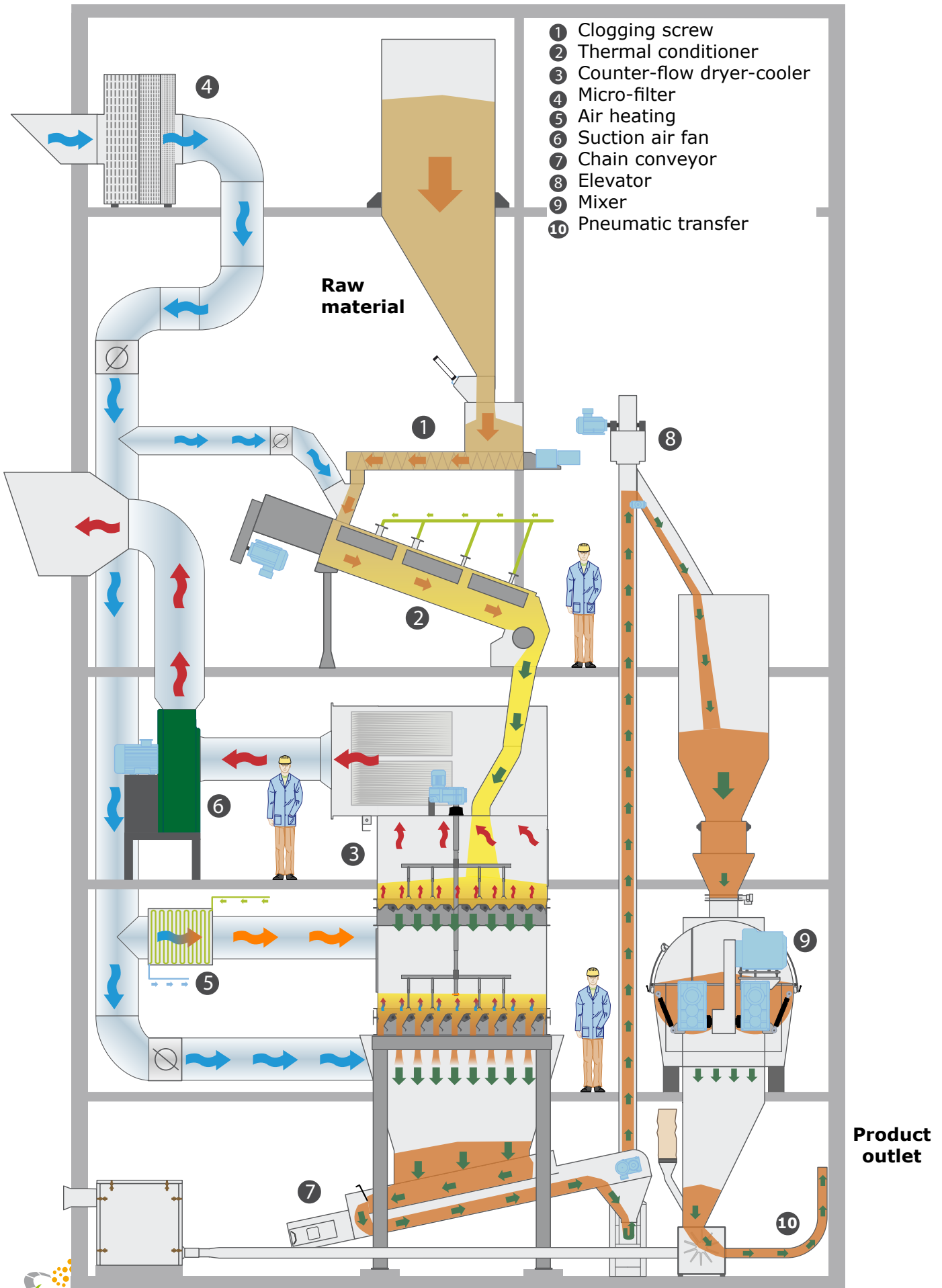
Before heat treatment

After heat treatment

Product flowability measurement



Paramétrage des points de consigne et affichage



Photos et schémas non contractuels / Non contractual drawings and pictures

Long term conditioning before pelletizing



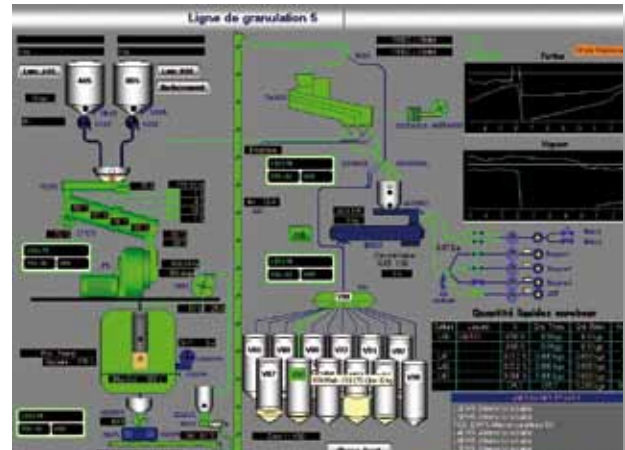
Super conditioner preparation stage on pellet mill

When installed upstream a pellet mill, the super conditioner increases its capacity from 15 to 30%, and dramatically improves its P.D.I. (Pellets Durability Index).

The super conditioner has a slope angle improving avoiding any damage of the mixing and allowing a good filling control and retention time.

Purposes

- Easy maintenance
- Low running costs
- Lack of steam leakage
- Decrease of wearing



Typical flowsheet

- Capacity improvement
- Energy saving
- Management of shrinkage
- Improved durability

Typical flowsheet

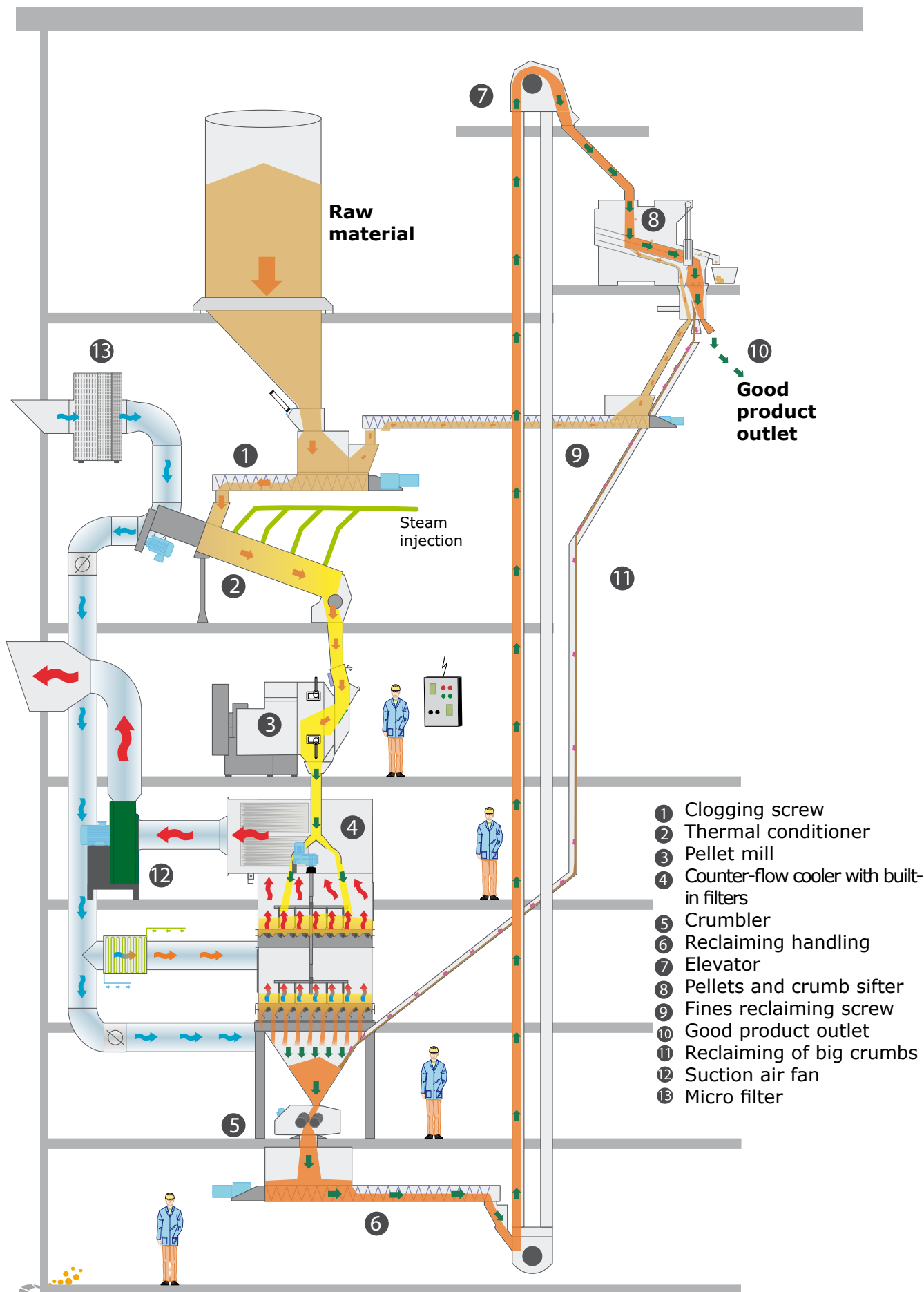
- Adjustable feeding
- Long term conditioning
- Adjustable flowrates
- Pelletizing
- Cooling



Rotors detail on CTID 700



Super conditioner preparation stage on pellet mill



- ① Clogging screw
- ② Thermal conditioner
- ③ Pellet mill
- ④ Counter-flow cooler with built-in filters
- ⑤ Crumbler
- ⑥ Reclaiming handling
- ⑦ Elevator
- ⑧ Pellets and crumb sifter
- ⑨ Fines reclaiming screw
- ⑩ Good product outlet
- ⑪ Reclaiming of big crumbs
- ⑫ Suction air fan
- ⑬ Micro filter

Photos et schémas non contractuels / Non contractual drawings and pictures

Horizontal coolers

RHS



The cooler is designed to lower the temperature and moisture of the product to values close to ambient temperature. Such operation improves the durability and preservation of the pellets.

Principle

The warm products produced by the pellet mill are placed into the horizontal cooler via a swivelling valve distributing them uniformly all over the machine width.

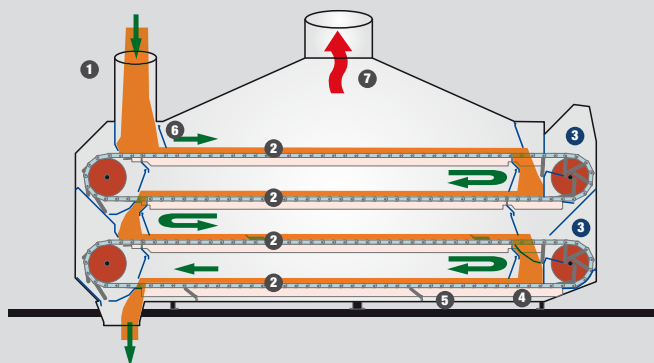
The pellets to be cooled down are thus laid down onto a metal belt made of bored components conveying them and preventing them from moving, thus not breaking them, for a preset time and speed to reach a temperature between 5 to 10°C maximum above the ambient temperature.



Horizontal coolers RHS

Features and options

Operating principle



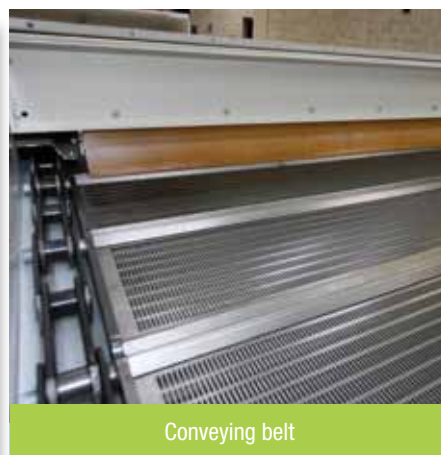
- ❶ A swivelling valve ensure a uniform and regular feeding all over the belt width.
- ❷ Conveying belt designed with bored components assembled on traction chains. The sliding paths of the chains are isolated from the product avoiding any risks of damaging the pellets
- ❸ Automatic device for pellets cooling level change ensuring the layer height uniformity. A permanent cleaning device is installed at the end of each level.
- ❹ Guide flaps forcing the air to pass through the pellets layer.
- ❺ Complete cleaning of the cooler with a silent bottom scraping brush device.
- ❻ Flap for layer height control.
- ❼ Warm air suction.



2 - way cooler fitted with filters



2 - way cooler fitted with filters

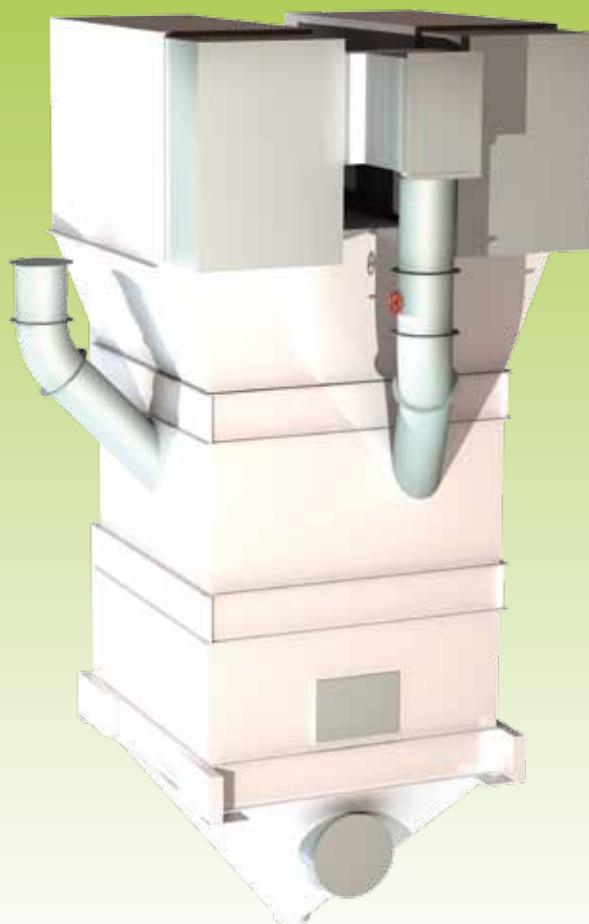


Conveying belt

Range	Number of passages	Max length	Width	Height
		m	mm	mm
RHS 10	1	12	1275	1775
RHS 15	2	12	1740	2000
RHS 17	3	12	1990	3160
RHS 20	4	12	2240	3410

Vertical counter-flow coolers

RCCS



The cooler is designed to lower the temperature and moisture of the products to values close to ambient temperature. This operation improves the durability and preservation of the pellets.

Features

The RCCS is a machine with a simple and compact design.

It is designed to lower the maintenance costs, to limit the remaining particles that can contaminate the product or increase the amount of bacteria and mould.

The limited power cost results from an optimization of the internal air flow.

Several types and variants can meet any application with or without built-in filters.



Vertical counter-flow coolers RCCS

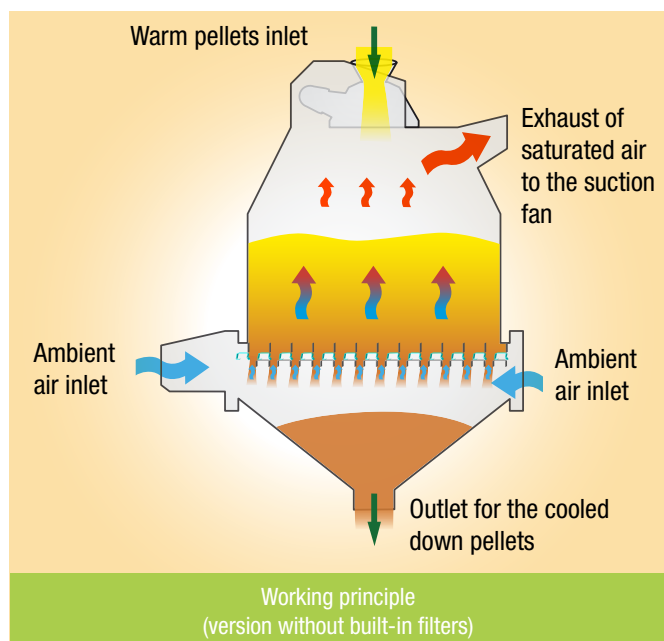
Features and options

Features

- First In First Out
- Optimized filling rate
- Output evenness
- Reliability and simplicity
- Control of the residence times and temperatures
- Dynamic optimization of the exchange areas

Options

- Possibility of several levels to lower time waste between 2 batches
- Thermal insulation
- Built-in filters
- Driven mechanically
- Drying level
- Extracting system by rotating flaps
- Inerting by gas injection
- Product layer levelling system



Range	Length mm	Width mm	Area m ²	Theoretical capacity in t/h (P.S. 0.60)				
				Pellets Ø2 mm	Pellets Ø3.5 mm	Pellets Ø6 mm	Pellets Ø8 mm	Pellets Ø10 mm
RCCS 9x8	900	900	0,8	2,7	2,2	1,7	1,4	1,2
RCCS 19x17	900	1900	1,70	5,8	4,7	3,7	3,1	2,6
RCCS 19x26	1400	1900	2,60	9,4	7,7	6,0	5,0	4,2
RCCS 19x36	1900	1900	3,60	13,0	10,6	8,3	6,9	5,8
RCCS 19x45	2400	1900	4,50	18,0	14,7	11,6	9,5	8,1
RCCS 19x55	2900	1900	5,50	22,0	18,0	14,1	11,6	9,9
RCCS 22x64	2900	2200	6,40	25,6	20,9	16,5	13,6	11,5
RCCS 22x78	3525	2200	7,75	31,0	25,4	19,9	16,4	14,0
RCCS 28x88	3200	2740	8,75	35,0	28,6	22,5	18,5	15,8
RCCS 28x100	3840	2740	10,00	40,0	32,7	25,7	21,2	18,0
RCCS 29x125	4320	2880	12,5	50	41	32,4	26,5	22,5
RCCS 29x135	4720	2880	13,5	54	44	35	28,6	24,3
RCCS 29x170	6000	2880	17	68	56	43,7	36	30,6



STOLZ

Du végétal à la vie

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