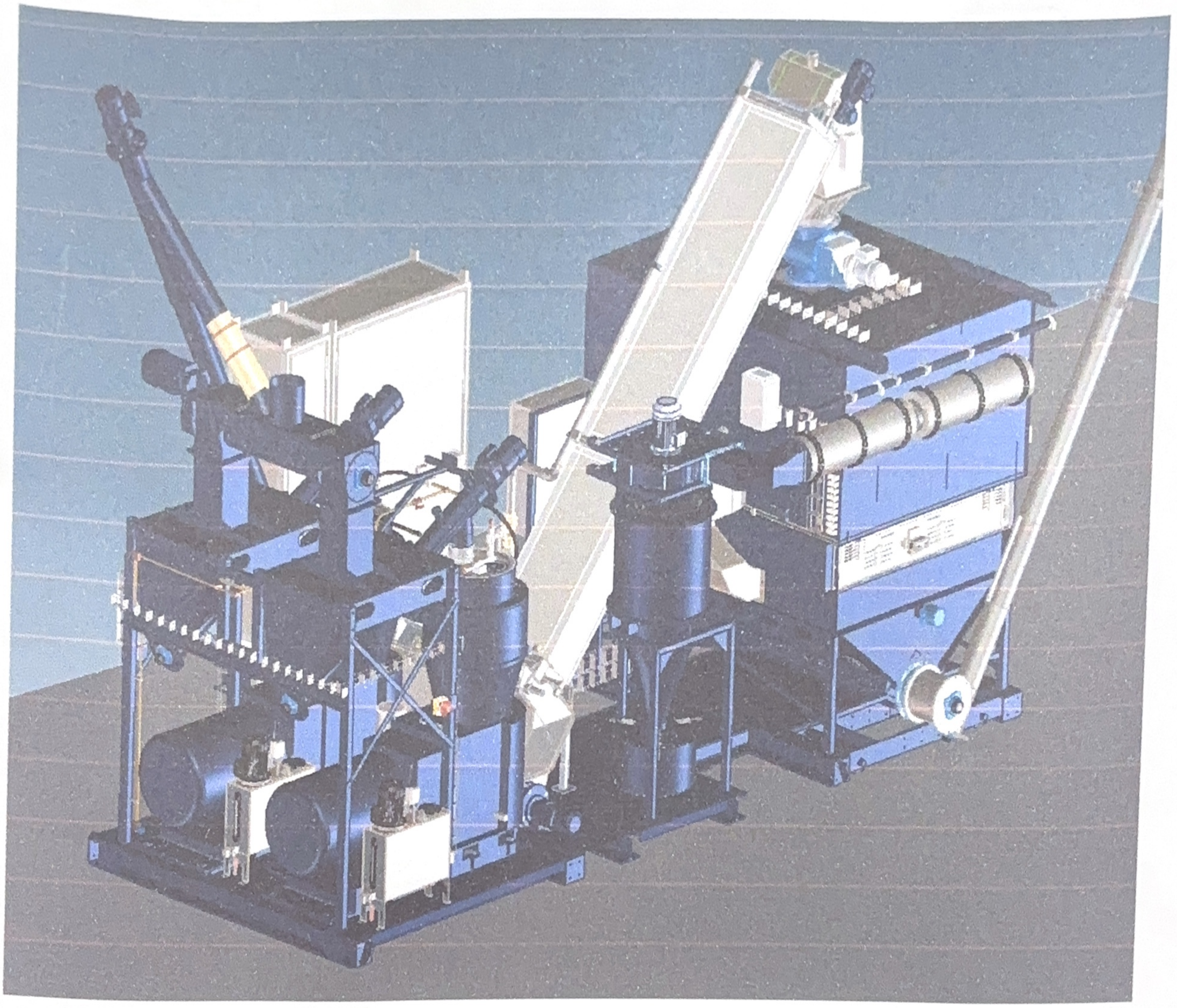
DORSET PELLETING PLANT

The Dorset pelleting plant has been designed to process a wide range of materials into pellets. The system includes an optional sanitation unit for pasteurization, which makes the end product suitable for export and improves storage capabilities.

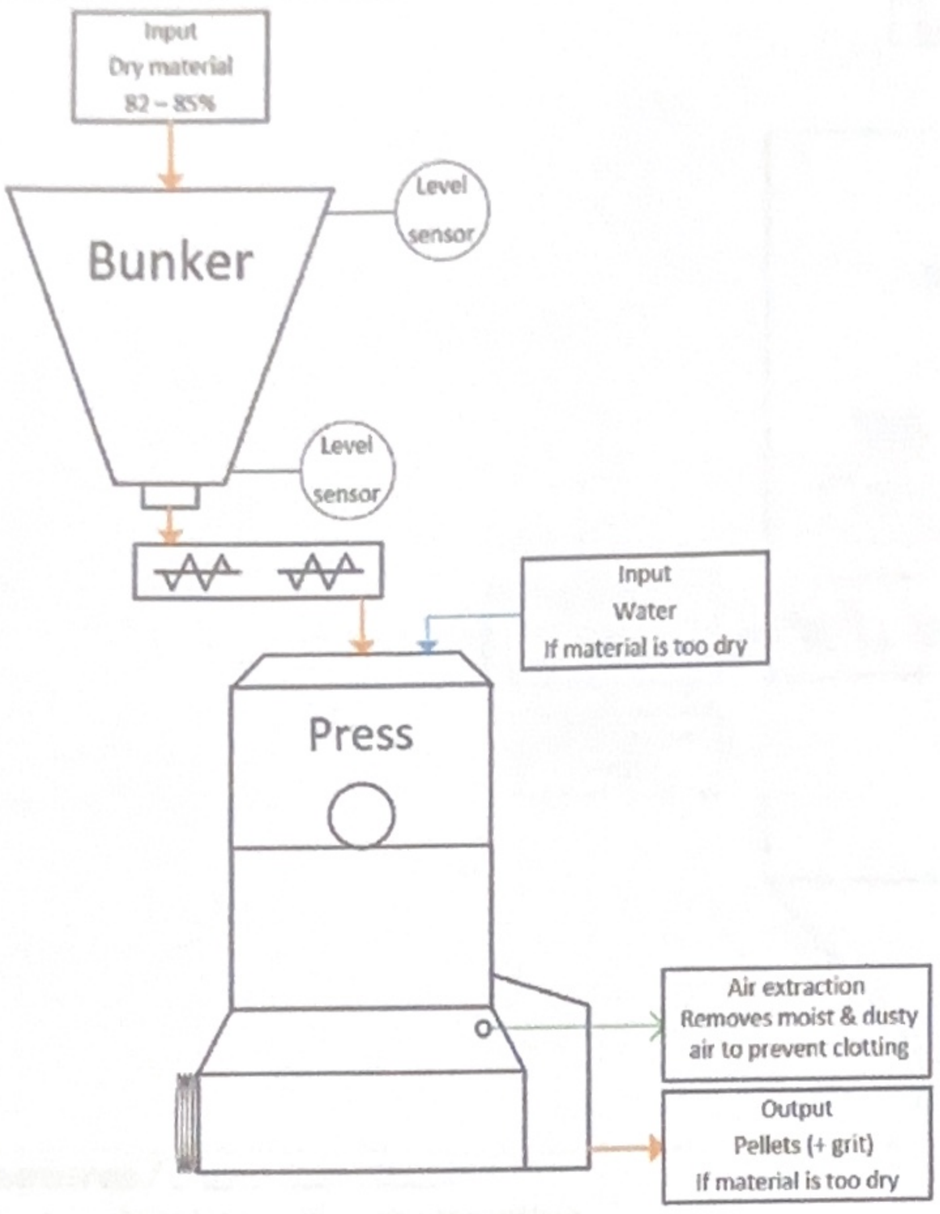


Dorset pelleting plant 800 kg/h incl. sanitation

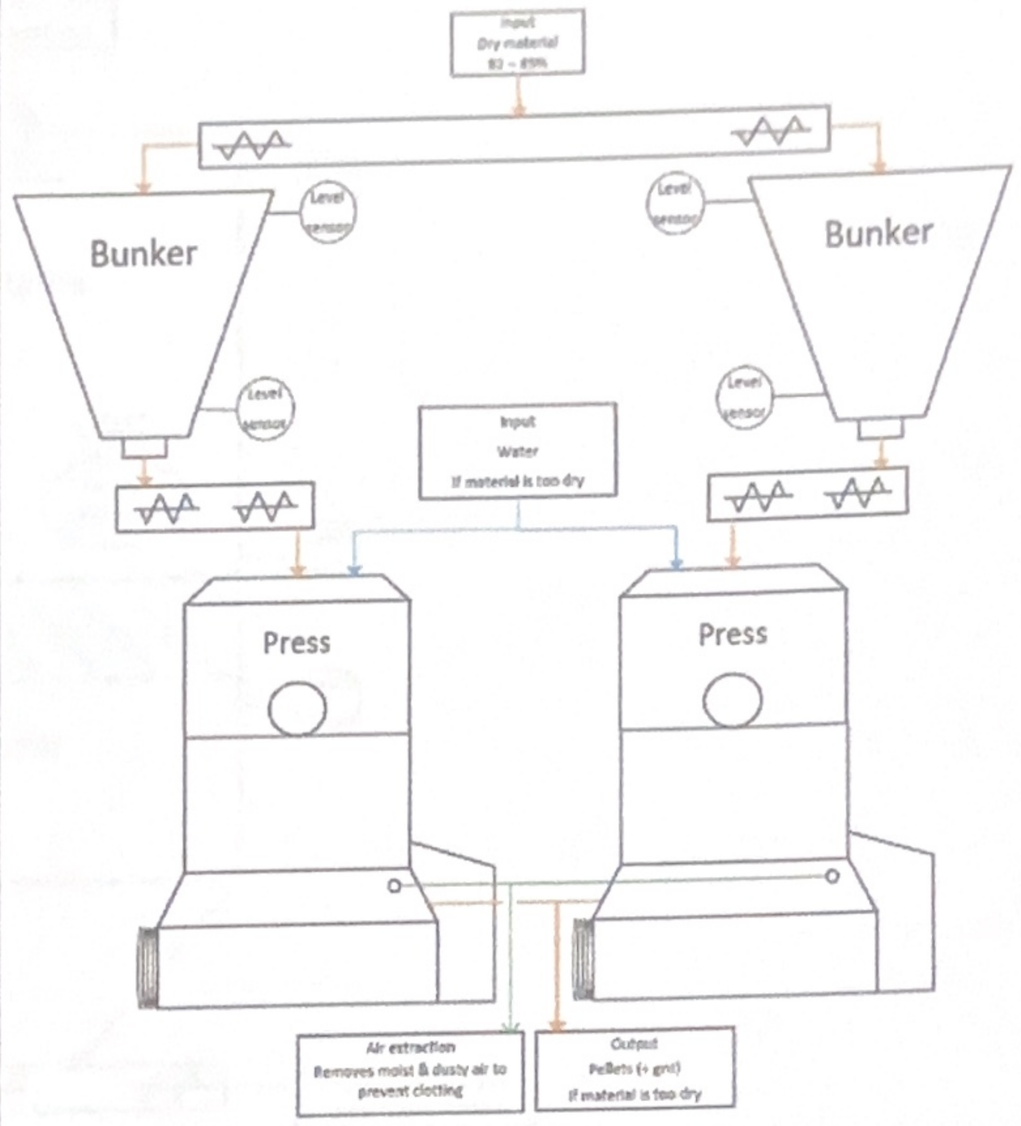
Dorset item number	**Type**
019.877	Pelleting Plant 400 kg/h including sanitation
019.878	Pelleting Plant 400 kg/h excluding sanitation
012.831	Pelleting Plant 800 kg/h including sanitation
019.429	Pelleting Plant 800 kg/h excluding sanitation

SCHEMATIC DRAWINGS

400 kg/h press



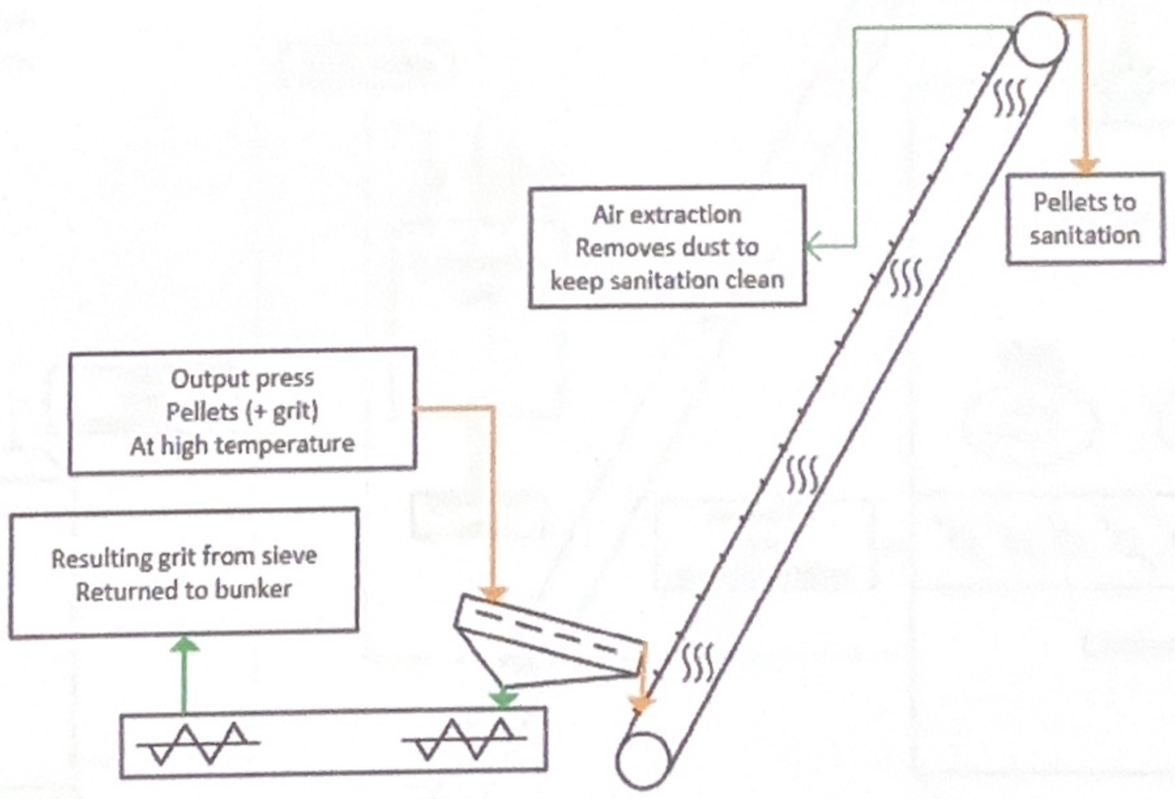
800 kg/h press



Features/characteristics

- Dry matter content 82,5 – 90%
- Water can be added if material is too dry
- Pellets length adjustable
- Greasing & lubricating system

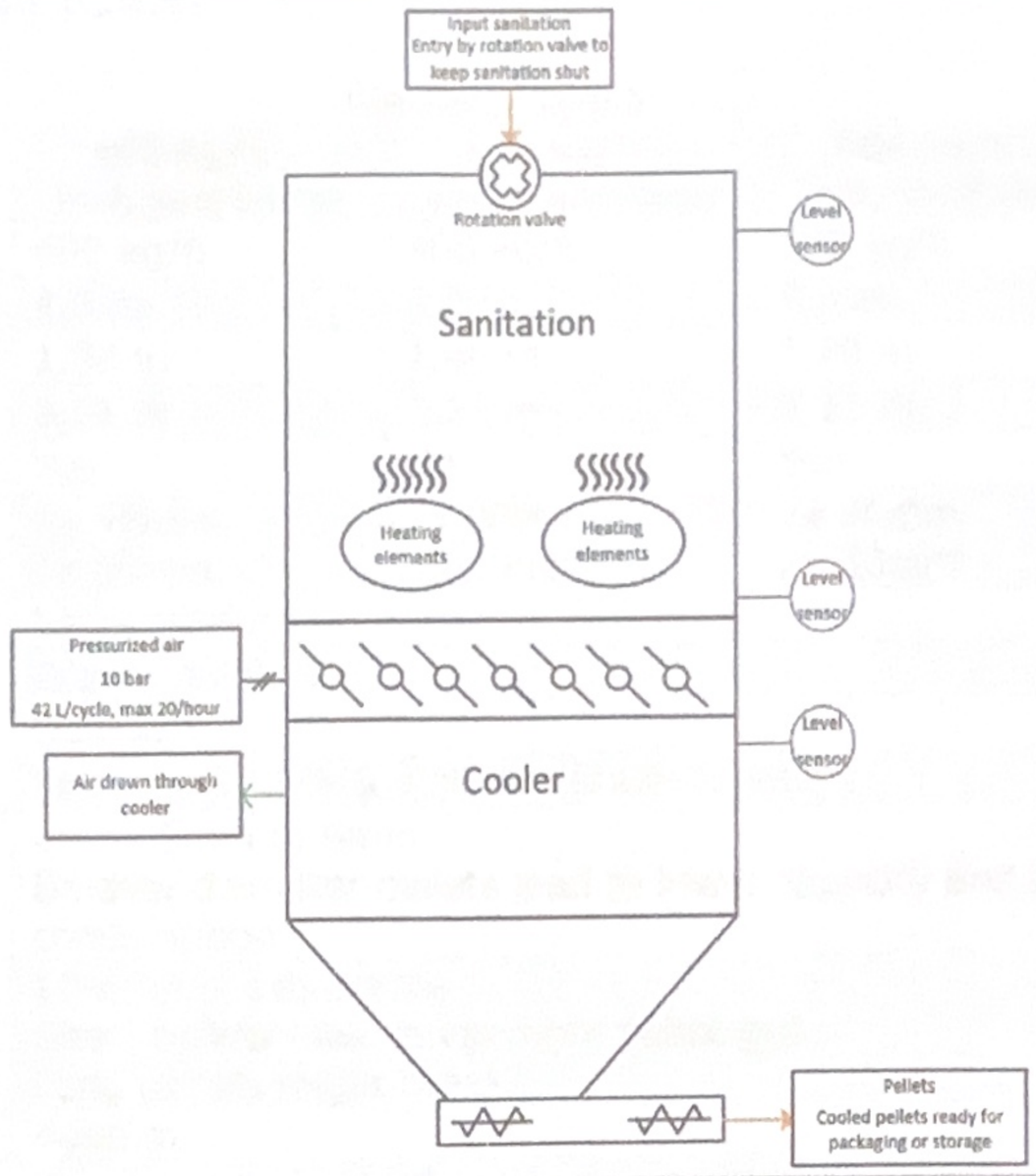
Conveyor belt



Features/characteristics

- Output is sieved
- Grit returned to bunker
- Sieve scraper to guide material across the sieve
- If sanitation is included: heated & isolated belt to keep pellets at temperature

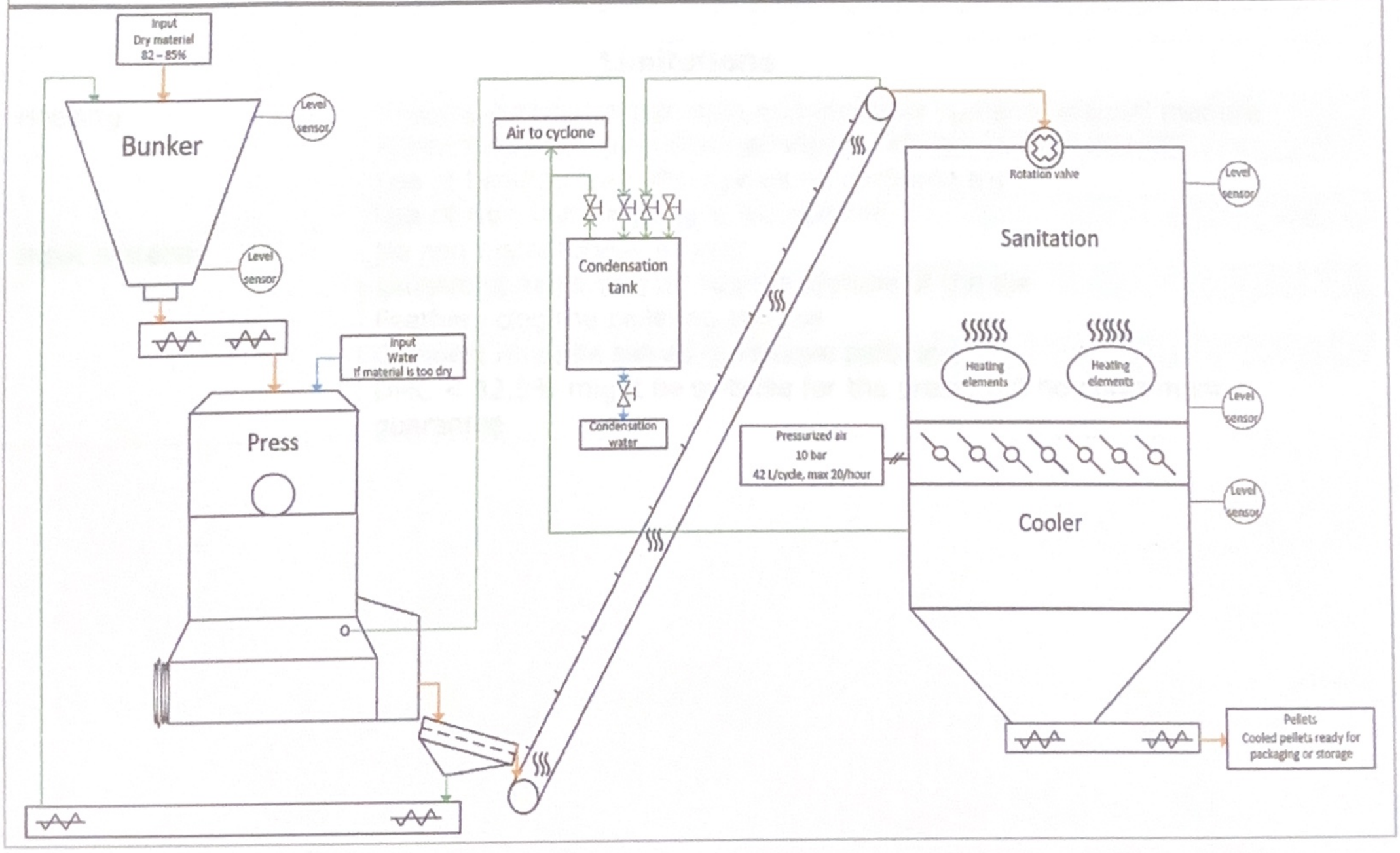
Sanitation



Features/characteristics

- Rotation valve for isolation
- Heating elements if temperature drops.
- Dimensions of bunker ensures 1 hour sanitation time
- Valve-bottom to get sanitized pellets in cooler.

Complete pelleting plant



DATASHEET PELLETING PLANT

General data				
Type	**400 kg/h – incl. sanitation**	**400 kg/h – excl. sanitation**	**800 kg/h – incl. sanitation**	**800 kg/h – excl. sanitation**
Capacity	400 kg/h	400 kg/h	800 kg/h	800 kg/h
Length (installed)	4,8 m	4,8 m	4,8 m	4,8 m
Width (installed)	1,88 m	1,88 m	1,88 m	1,88 m
Height (installed)	3,21 m	3,21 m	3,21 m	3,21 m
Pressurized air required	Yes	No	Yes	No
Number of dies delivered	1x 40mm 1x 30mm	1x 40mm 1x 30mm	2x 40mm 2x 30mm	2x 40mm 2x 30mm
Input material	Layer manure			
	Broiler manure			
	Compost			
Dry matter	Between 82,5% & 90% dry matter content			
Pellet diameters	4mm, 5mm or 6mm Smaller diameter pellets lead to lower capacity and higher energy consumption			
Pellet length	10-60mm, adjustable Short pellets may cause more pellet grit Long pellets might break			
Die diameter	400mm			
Die thickness	30mm, used for DMC > 85,5% and high percentage poultry grit in feed 40mm, used for DMC < 85,5%			
Cooling	Pellets cooled to 8°C above ambient temperature			
Lubrication	Grease for rollers, oil for gears & bearings			
Connection: power	3 phase, grounding, neutral			
Connection: water	Geka connection, 1,5 bar			
Connection: air (only if sanitation is included)	10mm push-in fitting, 10 bar, 42 L/cycle, max. 20 cycles/hour			

Limitations	
Housing	Housing with automatic manure removal is suitable, manual manure removal can cause contamination(e.g. stones, foreign objects)
	Use of bedding may affect pelleting performance
	Use of woodchip bedding is not suitable
Input material	No non metal foreign objects
	Limestone negatively affects the lifetime of the die
	Feathers clog the pelleting process
	Compost must be sieved to remove particles
	DMC < 82,5% might be suitable for the press, but no performance guarantee

INSTALLED POWER

Installed power pelleting				
Type	400 kg/h – incl. sanitation	400 kg/h – excl. sanitation	800 kg/h – incl. sanitation	800 kg/h – excl. sanitation
Motor dividing auger	-	-	1,50 kW	1,50 kW
Motor dosing auger	0,37 kW	0,37 kW	0,74 kW	0,74 kW
Motor press	37,00 kW	37,00 kW	74,00 kW	74,00 kW
Motor sieve scraper	0,25 kW	0,25 kW	0,50 kW	0,50 kW
Motor grease pump	0,18 kW	0,18 kW	0,36 kW	0,36 kW
Motor oilpump	0,37 kW	0,37 kW	0,74 kW	0,74 kW
Heating element hydraulics	0,75 kW	0,75 kW	1,50 kW	1,50 kW
Subtotal pelleting	**38,92 kW**	**38,92 kW**	**79,34 kW**	**79,34 kW**

Installed power conveyor belt				
Type	400 kg/h – incl. sanitation	400 kg/h – excl. sanitation	800 kg/h – incl. sanitation	800 kg/h – excl. sanitation
Motor belt drive	0,55 kW	0,55 kW	0,55 kW	0,55 kW
Heating element	2,00 kW	-	2,00 kW	-
Subtotal conveyor belt	**2,55 kW**	**0,55 kW**	**2,55 kW**	**0,55 kW**

Installed power sanitation				
Type	400 kg/h – incl. sanitation	400 kg/h – excl. sanitation	800 kg/h – incl. sanitation	800 kg/h – excl. sanitation
Motor rotary valve	0,37 kW	-	0,37 kW	-
Heating element	7,00 kW	-	9,00 kW	-
Subtotal sanitation	**7,37 kW**	**-**	**9,37 kW**	**-**

Installed power cooler				
Type	400 kg/h – incl. sanitation	400 kg/h – excl. sanitation	800 kg/h – incl. sanitation	800 kg/h – excl. sanitation
Motor rotary valve	-	0,37 kW	-	0,37 kW
Motor cyclone	3,00 kW	3,00 kW	3,00 kW	3,00 kW
Motor auger	0,55 kW	0,55 kW	0,55 kW	0,55 kW
Subtotal cooler	**3,55 kW**	**3,92 kW**	**3,55 kW**	**3,92 kW**

Total installed power				
Type	400 kg/h – incl. sanitation	400 kg/h – excl. sanitation	800 kg/h – incl. sanitation	800 kg/h – excl. sanitation
Pelleting	38,92 kW	38,92 kW	79,34 kW	79,34 kW
Conveyor belt	2,55 kW	0,55 kW	2,55 kW	0,55 kW
Sanitation	7,37 kW	-	9,37 kW	-
Cooler	3,55 kW	3,92 kW	3,55 kW	3,92 kW
Total	**52,39 kW**	**43,39 kW**	**94,81 kW**	**83,81 kW**

VISUAL EXAMPLES

Good quality pellets

Input with the right dry matter content, 82% to 85%.

Characteristics:

- Pellets have a matte gloss/look
- No or few cracks visible
- Little grit in output press

Poor quality pellets

Input material is too dry, dry matter content > 85%.

Characteristics:

- Pellets shine, metallic look
- Lots of visible cracks
- Pellets are short because of weak binding

Poor quality pellets

Input material is too wet, dry matter content < 82%.

Characteristics:

- No shine at all
- Cracks in pellets
- Rounded edges
- Some pellets are be curved
- Weak outer shell, pellets break down under own weight. E.g. in a bunker such as cooler & sanitation.