

Line 1 - Feeding and cleaning of burning biomass, crushed to the furnace for + 500 kg/h of wet material

- HRV metal tank, complete with 2500 x 1500 x H 2500 mm + no-end extraction, motorized, complete with 3500 mm x Ø 150 mm, inclined no-end.
- HRV/BAKKER magnetic plate, with L= 310 x 500 mm, with support rings, to be applied to the carpet.
- Sieve discs, motorized, with 1200 x 1000 mm, HRV, complete, with ground supports + exit ramp / drop of foreign material + deposit of collection of material according, applied in the feeding mat to the furnace, with supports to the ground.
- Endless conveyor, HRV, inclined, extraction of biomass from the sieve's deposit and feeding to the furnace, complete, motorized, with 200 x 8000 mm approx., with soil supports.

Line 2 - Food + cleaning (stones, metals, foreign materials), biomass raw material + dryer extraction, for 4 ton/h of wet input

- 1x metal deposit, HRV, for crushed material, moist, complete, with 2500 x 1500 x H 2500 mm + extraction end, inclined, motorized, complete, with 3500 x Ø 150 mm, with ground supports.
- HRV/BAKKER magnetic plate, with L= 310 x 500 mm, with support rings, to be applied to the carpet.
- 1 x sieve/sieve, HRV/ROLLIER, MF model, complete, vibratory, 1500 x 1000, including support metal structure + thick exit ramp (for crate) and ramp/tank collection of material compliant, with ground supports.
- 1 x carpet in rubber screen, HRV, ribbed, inclined, extraction of material riddled / crushed / uniform and feeding to the stone remover, with 300 x 10000 approx.com soil supports.
- 1 x metal deposit, HRV, reception/entry in the scummer.
- 1 x HRV/ROLLIER stone remover, SBL model, complete with metal support structure + material input + springs + adjustable motor-vibrators + vibration ramps + rock drop ramp + product collection ramp/train.
- 1 x non-stop conveyor, HRV, inclined, extraction of crushed/separate damp material and feeding of the drying/dryer tank, complete with Ø 150 x 10000 mm approx., with soil supports.
- 1 x non-stop conveyor, HRV, extraction of the tank (plate), inclined, with supports and special air column anti-fire, complete with motorization, extraction of dry material coming from the dryer and feeding to the dry tank to refine. It includes ground support and has the dimensions of Ø 150 mm x 10000 mm approx., with soil supports, each (deposit + small).

Line 3 - dry feed + refiner mill, for + 2000 kg/h, dry material

- HRV metal tank, for dry material, with 4000 x 2500 x H2500 mm or more + superior distribution end, motorized, complete, with 3500 Ø 150 mm, with soil supports + extraction redler at the bottom.
- ANDRITZ refining mill, complete, model Multimill 630, 90 kw, consisting of:
 - Reception shake, complete with decompression cover and sleeve.
 - Motorized endless feeder, with speed variator in the gearbox.
 - Extraction of stones and metals + air intake grid.
 - Mill body, with rotor + shafts + hardox steels + chains to fix the grill screens + outer pacifiers + chassis for mill and engine + transmission + temperature check system in the brakes and in the grinding chamber + product bypass/routing valve (engine inversion system).
 - Mill and filter support platform, with handrail/railing and ladder.
 - Mill discharge hopper, complete with access.
 - Extraction endless with air valve, inclined, at the bottom of the tremble, motorized, complete, flanged.
 - HRV/POETH suction filter, applied on the platform, complete with sleeves and racks + fan + air tank + automatic sleeve cleaning controller, adjustable + platform attachment ring, gearmotor support and upper access cover to the racks/sleeves + silencer at fan outlet.
- 1 x non-final conveyor, HRV, complete with Ø 150 x 10000 mm approx., motorized, extraction of the ground/refined product and placement in the intermediate storage of product, with soil supports.

Line 4 - feeding + densymmetric table (separation of sands), for 3 ton/h of dry material

- Metal tank, HRV, for dry and refined material, with 2500 x 1500 x H 2500 mm + extraction end, motorized, complete, with 3500 x Ø 150 mm, with ground supports.
- Non-final conveyor, HRV, complete with Ø 150 x 10000 mm approx., motorized, extraction of the product from the tank and feeding the densymmetric table, with ground supports.
- Densymmetric table, HRV/ROLLIER, complete, consisting of:
 - Entry of contaminated material.
 - Heavy output (sands/stones), ramped.
 - Blowing fan.
 - Suction fan.
 - Connection pipe.
 - Fine output.
 - Vibrant, perforated plate.
 - Separation clone.
 - Fine exit lock.

- 2 x Ø 150 mm , complete , motorized, collection and feeding (granulation tank) of clean material (sand-free).

Line 5 - Tank + feeding to the briquette press and/or pelletizer

- Metal tank, HRV, for dry and refined material, with 2500 x 1500 x H 2500 mm + extraction end, motorized, complete, with 3500 x Ø 150 mm, with ground supports.
- Endless conveyor, HRV, complete with Ø 150 x 8000 mm approx., motorized, collection of dry/refined/purified material and feeding to the briquette or granulator tank, with soil supports and valve.
- 1 x pneumatic valve + HRV bowls, deviation of the material to feed granulator or feed briquette press, with soil supports.

Line 6 - Granulation/skirting line 2.5 ton/h

1. Granulator M12 Andritz Matador 160 kw:
 - Metal shake of material, with lid.
 - Stainless steel, non-stop feeder, with gearmotor, stainless steel outer box, connecting phalanges and gearmotor support.
 - Water/liquid injection system in the conditioner or previous no-end, with asperser + pump + flow meter + IBC suction system
 - Stainless steel cone, connecting the output of the conditioner and the entry in the granulator, with inspection hatch with net and magnetic block of metallic separation and supports for magnetic block.
 - Stainless steel granulation door, complete with end-of-stroke protection with key; includes granulated cutting knife, with exterior adjustment system and cone-binding phalanx.
 - Laying platform of the entire granulation unit and main steel engine.
 - Main engine of 160 kw, based on a platform.
 - Direct connection coupling between the main motor and the granulator, in rubber, with external metal protection.
 - Complete Granulation box Andritz Matador M12, with bearings and retainers, including block, main reel, transmission reel, plate, central shaft, feeding blades, roller tuners and roller plate, all mounted on the seating platform and oil in the gearbox.
 - Simple crane for assembly/disassembly of dies.
 - Metal support platform and elevation of the granulator with landing.
 - Safety protection of the rear coupling with end-of-stroke.
 - Stainless steel valve, discharge of granulator and connection to carpet.
2. GEELEN cooler:
 - Motorized carpet HRV, galvanized, inclined with 300 x 6 mts approx., with cover and steam fan with box and tube connecting to the cooler, with special rubber for high temperature.
 - COOLER GEELEN VK 9 x 9 RS, complete, with deposit load + motorized entry lock + top + air outlet + side panels + motorized discharge grille + discharge deposit + seating feet + support structure + over lift structure for grill + end-of-stroke access door + support for product

sensors + fire-fighting pneumatic valve + support/thermostat + discharge adjustment system
+ air outlet phalanx

3. HRV cooling aids:

- Cyclone Ø 800, with hatch.
- 5.5 Kw fan, motorized, complete.
- Cyclone discharge lock.
- Metal cyclone support structure.
- Cooling/cyclone/fan/outdoor connection pipe, Type Spiro.
- HRV silencer at the air outlet.
- Manual flow regulation valve at the coolant outlet.

Line 7 - Cleavage pellets

- Connecting tube/entry into the cleavage grill.
- HRV sieve/sieve, complete with springs, shock absorbers, metal mesh, moto-vibrators, support structure, pellet outlet nozzle, thin outlet nozzle, with ground support.

Line 8 - Weighing/snare of pellets

- HRV mat, motorized, inclined, with approx. 300 x 10 mts, feeding the heater, with sleepers and ground supports.
- Feeding shake to hrv bagging, metallic with brackets and decompression cover and sleeve.
- Support for big-bags, with deposit and flow/dosing regulating valve for bag.
- TECHNIPES weighing mat, complete, motorized, with flow cutting valve.
- Metal balance/dosing support structure.
- Pneumatic bag mouth, complete with supports and load cells.
- HRV mat, horse neck type, for sewing line.
- Bag sewing column, telescopic, complete, with portable sewing machine+ automatic wire cutting system.
- Simple WRAP EMBALCER, complete for pallets up to 1000 kgs, with rotary plate + plastic bobbin holder + control frame.

Line 9 - Rotary dryer drum Teixeira Tech

- Drying system + 1.3 Mw fixed grate furnace system.
- Triple pass dryer with capacity between 2 and 3 ton/h, according to the inlet humidity.
- Special support structure of the Triple Pass Dryer.
- Motorization driven by current.
- Decanting box at the Dryer Outlet.
- Rotary Valve at Dryer Outlet.
- No discharge of dry material at the outlet of the Dryer.
- x1 No discharge of dry fine product at the exit of the cyclone.
- Cyclone separation of fine particles.
- Medium Pressure Fan.
- Ash separator.
- x1 Rotating Ash Separator Valve.
- 1 Air Mixer.

- Connection pipe upstream of the Dryer.
- Downstream Dryer Connection Pipe.
- Fixed Grid Furnace 1.3 MW.
- Grecon system with Sparks Containment and Extinction with 2 outputs.
- Electrical Installation of all Equipment.
- Electrical Control Board for all Equipment.
- Hardware and software for the operation of the Drying System.
- - Thermal Insulation of all equipment, with rock wool and aluminium foil.

Line 10 - Electricity/automation

- Electric frames of motive force and general command, with full Siemens PLC/UNIOP + licensed software and touchscreen.
- Development of plc program + flow design.
- Level sensors + rotation sensors + emergency button-ins, applied to the equipment.
- Electrical frame + PENKO software/processor for the heating line + wiring + power/connection to carpets and the wrapping with sensors.

Line 11 - Electrical processing post

- PT with monoblock type ISOBET-1T-5900-3P, special 36 kv equipped with:
 - Compact frame from MT to 36 kv with 2 cells of motorized lines, 1 PTC cutting cell with interlocking lock associated with a net panel with distributor/client separator door
 - PTC general cutting cell with interlocking lock
 - PTC counting cell; – Power transformer protection cell with 36kv-50A APC fuses, trigger coil and jam lock
 - Power transformer of 1250 kva, 36kv/0.42V 15 kv Ecodesign standard with contact thermometers
 - QGBT client according to the electrical scheme in the project
 - DMA-type telecount box
 - Lands of protection and service

Line 12 - Compressed air system/compressor + line

- Compressed air line in the building complete with UXAIR X10 VSD compressor + air dryer + tank + piping + purges + air gun hoses + electrification frame.

Line 13 - Miscellaneous equipment

- Telescopic loader Manitou MT1235 S.
- Mini loader Komatsu SK714 year 2007.
- Various tools and consumables.
- Computer systems.
- Various office equipment.
- Matrices, rollers, grill screens and miscellaneous replacement material.
- Hyster Stacker 2.5 year 2007.
- Weigh-in/weighing scale 60 ton, with control system.
- Peugeot Partner year 2009.
- Pellet mill Pelletfire of 150 kgs/h.
- Refining mill 150 kgs/h
- Portable sewing machine.

Line 14 - Laboratory equipment

- Complete laboratory for pellet analysis and quality control according to ENPLUS A1 standards, with the following equipment:
 - Full Muffle oven.
 - Endecotts vibratory system.
 - Humidity meter.
 - Durameter.
 - Pellet mill.
 - Calibrated mug.
 - Agitator of grill surface.
 - Calibration network.