

Totally Integrated Automation System

Siemens controller	HMI Simatic (S7-300) with 315 & 7.5kW frequency converter Process control system with optical, analogue & digital measuring devices
Siemens CPU	The calorific processor measures for temperature & humidity The CPU controls the mineral insulated series resistance heating elements and integrates pressure sensors, linear scales, digital signals and frequency converters to optimise pellet quality, energy, consumption, as well as die, roll and bearing life.

Technical Description Integrated Wood Pellet System

The chemical analysis electronic meter measures the incoming raw material for precise properties. These properties are then activated through the Calorific Processor / Condenser and any excessive moisture is removed through the condenser. This prepared material is then fed into the high-capacity B-mass pellet press. The external rolls and die speed are programmable and automatically adjustable to insure maximum output and minimum energy consumption.

The online optical monitoring of raw material properties combined with indirect heat or dry steam and external condensing unit for moisture removal allow the chemical properties within the material to be brought to an ambient structure for the production of a pellet. The outer roll configuration on the die is due to the principles of force where more force is required to implode a ring than explode one. Pressure detection and rapid roll retraction also prevents die cracking and/or roll and bearing damage originating from foreign objects that may have entered the wood pellet system.

OPERATORS EASE & REDUCED DOWN TIME

- (1) Simplified die clamping system allows operator to change die with ease and not be in direct contact with die surface. Tests show dies can be changed in one hour.
- (2) Quick release and guided roll assembly allows the complete roll assembly to be removed in one action and replaced with a prepared assembly. The used roll assembly can be serviced remotely after the machine is back in operation.

INCREASING DIE, ROLLS & BEARINGS LIFE

- (1) Absolute positioning and pressure detection of rolls ensures rolls and die can never come in contact with each other preventing unnecessary wear on both products.
- (2) Reduced rpm and prepared raw material similarly improves key component life.

Contract & Conditions of Supply

Available on request

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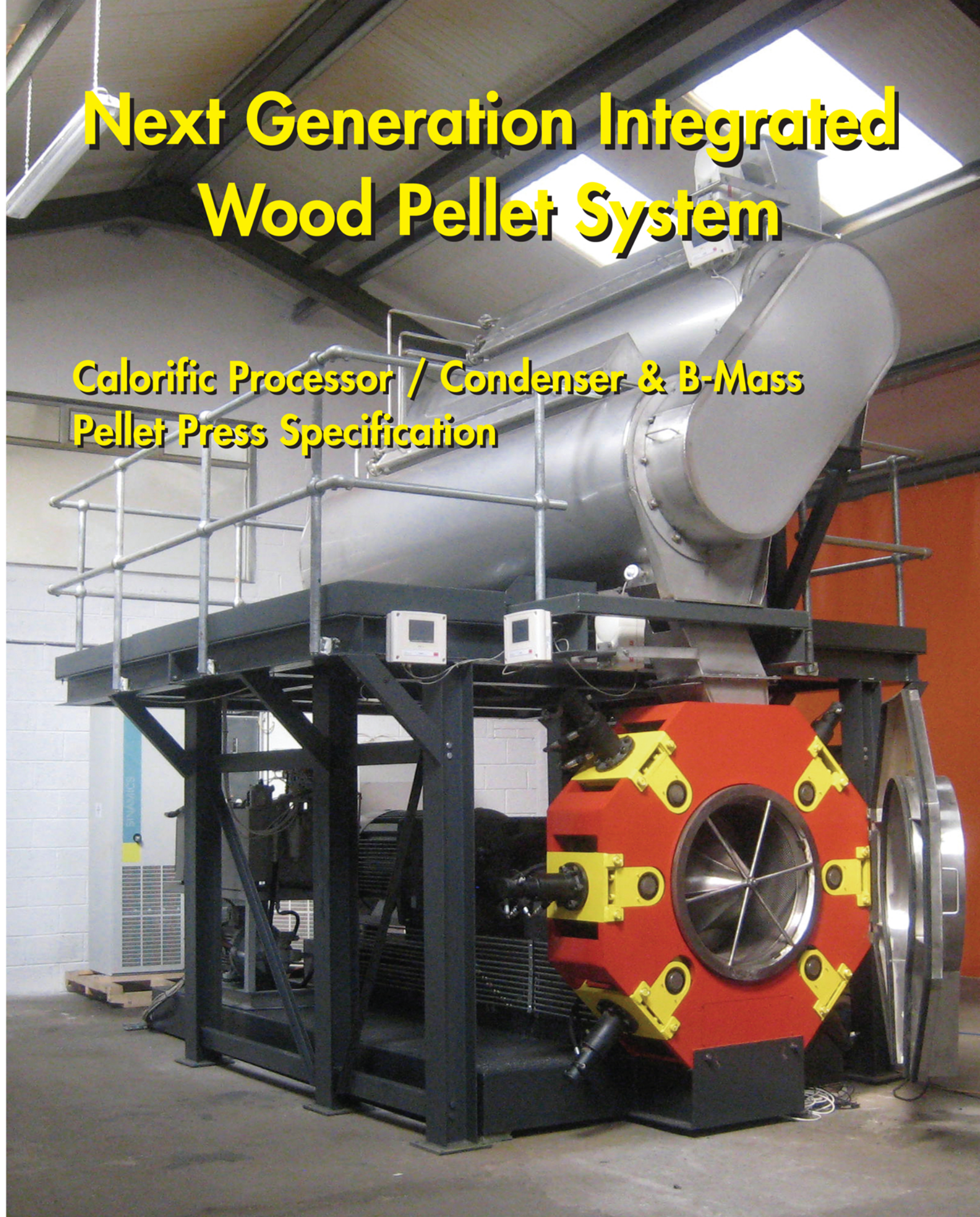


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Next Generation Integrated Wood Pellet System

Calorific Processor / Condenser & B-Mass Pellet Press Specification



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Scope of Supply Calorific Processor/Condenser

- Calorific processor
- Condensers
- Double Heating Chambers
- Electronic monitoring product sensors
- Product moisture / temperature monitors
- Drive unit complete with electric motor, chains & guards

CONDENSER

- Condenser hood with internal cold water flow system
- Condensed water outlet

CALORIFIC PROCESSOR PLATFORM

- Steel construction with steps
- Railing and maintenance walks
- Support structure of sectional steel, platform cover of checker plate

CONNECTION INSTALLATION FOR THE PLANT

- Connections for cold water to condensers
- Connections for cold water return from condensers
- Connection for condensed water from condensers
- Connection to convey material to calorific processor
- Electrical connection to motor

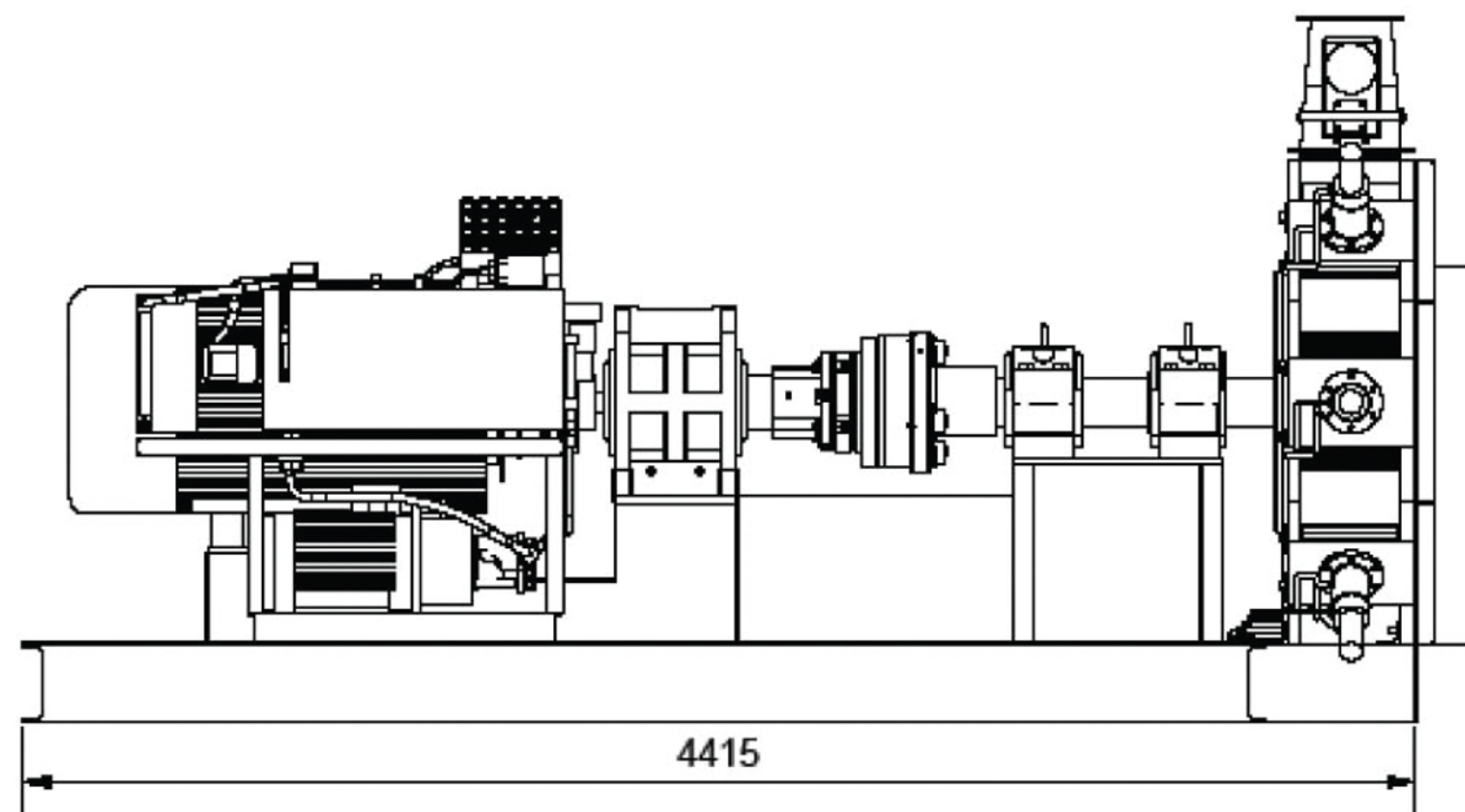
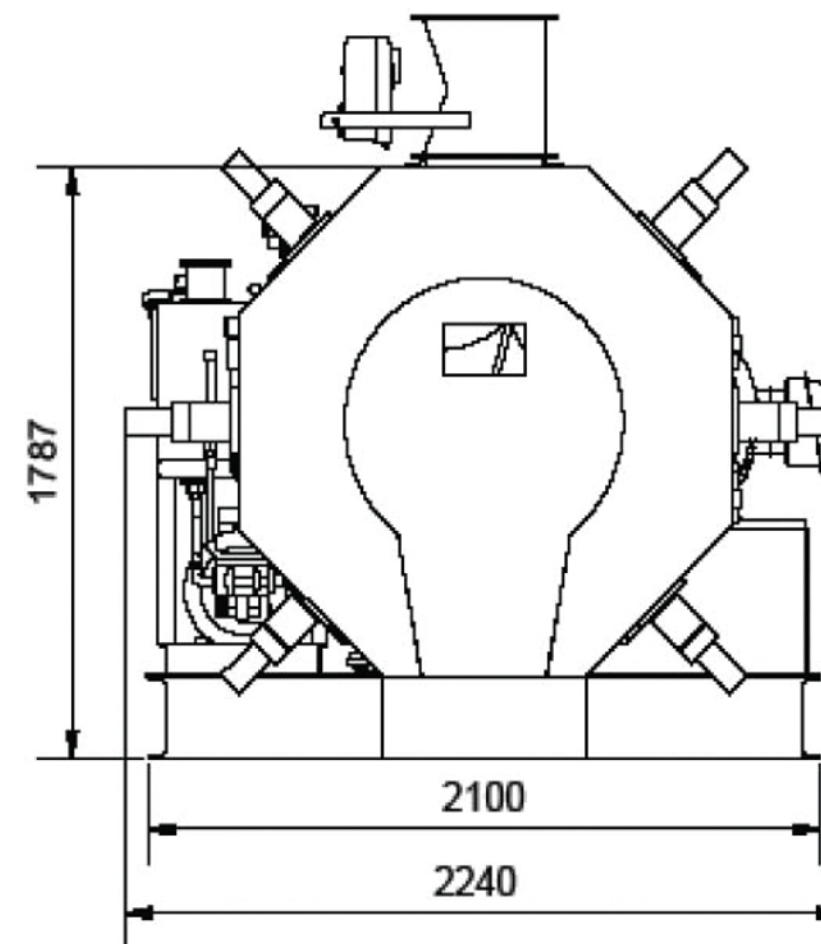
CALORIFIC PROCESSOR COLOUR

- Priming colour
- Top coat

DOCUMENTATION

- Technical documentation in English
- Documentation contains drawings for operation, ordering of spare parts and the maintenance of the system

Overall Dimensions



6 ROLL EXTERNAL ROLL MACHINE

Die	Diameter:	840mm
	Die Speed:	Variable
	Track width:	320mm
	Pellet diameter:	8mm
Roll	Diameter:	250mm
	Flute:	Wide flute
	Length:	312mm
Power Pack Unit	Electric Motor:	11kW
	Pump Type:	Piston Pump
	Tank Capacity:	200 Litres
	Flow Rate:	14.4 Litres / min
	Max Pressure:	150 Bar
	Working Pressure:	Variable
Hydraulic Cylinder	Bore:	100mm
	Rod:	70mm
	Stroke:	42mm
	Mounting:	Front Flange

TRANSMISSION

Gearbox	Input Shaft:	60mm
	Output Shaft:	170mm
	Gear Ratio:	14:1 Reduction
Electric Motor	Power:	315kW
	Voltage:	400V
	Frequency:	50Hz
	Max Speed:	1490 RPM
	Max Torque:	2020 Nm
Slip Clutch	Clutch Type:	Element
	Override:	Manual
	Input Hub:	170mm
	Output Hub:	160mm
Coupling	Type:	Flexible
	Torque Rating:	5047Nm
	Input Bore:	95mm
	Output Bore:	60mm

- Diameter die 840mm
- External rolls (6 rolls)
- Hydraulic cylinders (6 hydraulic cylinders each independently adjusted for pressure & distance)

TRANSMISSION SYSTEM

- Bearings & housing
- Rotor slip hub
- Reduction gearbox
- Electric motor
- Motor inverter

HYDRAULIC POWER PACK

- Hydraulic tank
- Electric motor
- Piston pump
- Flow control valves
- Check valves
- Proportional valves
- Directional control valves

CONNECTION INSTALLATION FOR THE PLANT

- Electrical connection for 315kW motor
- Electrical connection to power pack
- Connection for conveying of wood pellets

PELLET PRESS COLOUR

- Priming colour
- Top coat

HYDRAULIC PACK

- Hydraulic power pack: RAL 9006 (white aluminium)
- Gearbox
- Electric motor
- Base unit

Output 10 ton/hour*
 Power Consumption 450 Kw

* Output may vary depending on the quality (moisture & partial size) and type (hard wood or softwood) of the feedstock.

Technical Data Calorific 6M Processor/Condenser

Cylinders Length: 3000mm
 Diameter: 600mm
 Paddle RPM: 20RPM

Cylinder Drive: Drive: Geared Motor
 Power: 7.5kW
 Drive Type: Chain & Sprocket
 Drive Ratio: 1:2

