

MITCHELLS

PROCESS AND PRODUCT
HANDLING SPECIALISTS




MITCHELLS
EUROPE

MODULAR FEEDMILLS

DESIGN & FEATURES
SAFETY & QUALITY
CAPACITIES

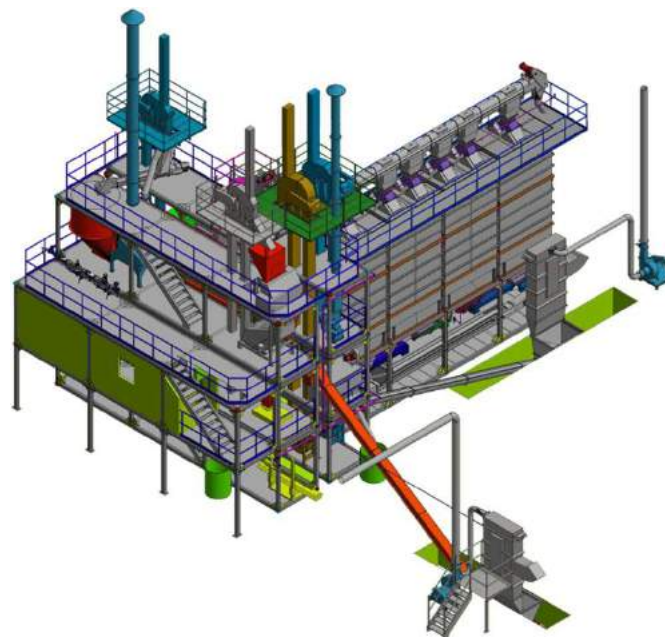
Complete conveying solutions across a range of industries.

1. THE MODULAR MILL CONCEPT

The Mitchell Modular Mill delivers to the customer a turnkey feed factory in Modular form.

The design concept is very specific, and is targeted to customers that can accept and appreciate the limitations that come with a genuine Modular Mill.

We have designed the Modular Mill to encapsulate the equipment inside individual modules.



There are some items such as cross over connections between modules and the elevators and equipment above the top module that require on-site installation.

All loose supplied equipment has been pre-fitted in our factory then disassembled for shipping. Re-installation of these loose items is therefore not labour intensive.

The Modular Mill design assures that all components of the mill are properly fitted and matched.

The result is a feed plant that can be installed and brought into production within 4 to 6 weeks.

Our in-factory assembly and limited test running will also dramatically reduce the lost time associated with new plant start-ups.

2. MODULAR MILL DESCRIPTION

Receival & Ingredient Storage

In the standard package the Modular Mill will come with the following:

- 0.6m³ receival hopper with Dust collector
- 50mt/hr rotary scalper with 20mm x 20mm screen opening
- 30mt/hr intake conveyor system from receival hopper to ingredient bins.
- 12 ingredient bins which are of the following sizes
 - 4 x 15m³
 - 8 x 7.5m³
- Options and Variations available to customer (price will be offered when requirements are confirmed)
 - 10m³ receival hopper with incline screw discharger
 - Additional bulk storage, the customer may choose not to purchase the receival and storage package and install another bulk storage package. Mitchells can do the engineering and supply of the required equipment and tie into the processing modules.

Ingredient Batching

In the standard package the Batching Module will come with the following:

- 10 x Single screw dischargers, 2 x Twin screw dischargers
- Batching hopper fitted with load cells
- Batching scale discharge chain conveyor



Macros Storage & Batching

In the standard package the MACROS STORAGE & BATCHING package will include the following:

- Tote and hand bag unloading station, 2 x Tote bags & 2 x Hand bag dump stations
- Dust collection
- Conveying system to Macros storage bins – 20mt/hr
- 10 x Macros storage bins, each of 2m³ capacity
- 10 x Macro bin discharge screw conveyors
- 1m³ batching hopper with load cells, slide gates and discharge conveyor

Micros Handling

In the standard package the MICROS HANDLING package will include the following:

- Hand dump station with integral dust collector
- Pneumatic conveying system to convey Micros from hand dump station to Mixer

* It is assumed that the Micros will be prepared by others and manually added into the Hand dump station. A partially automated Micros storage and batching system can be offered at an additional cost as requested.

Grinding

In the standard package the GRINDING Module will come with the following:

- Buhler Grinder – 10mt/hr complete with feeder and magnet
- Dust collector
- Discharge hopper

Mixing

In the standard package the MIXING Module will come with the following:

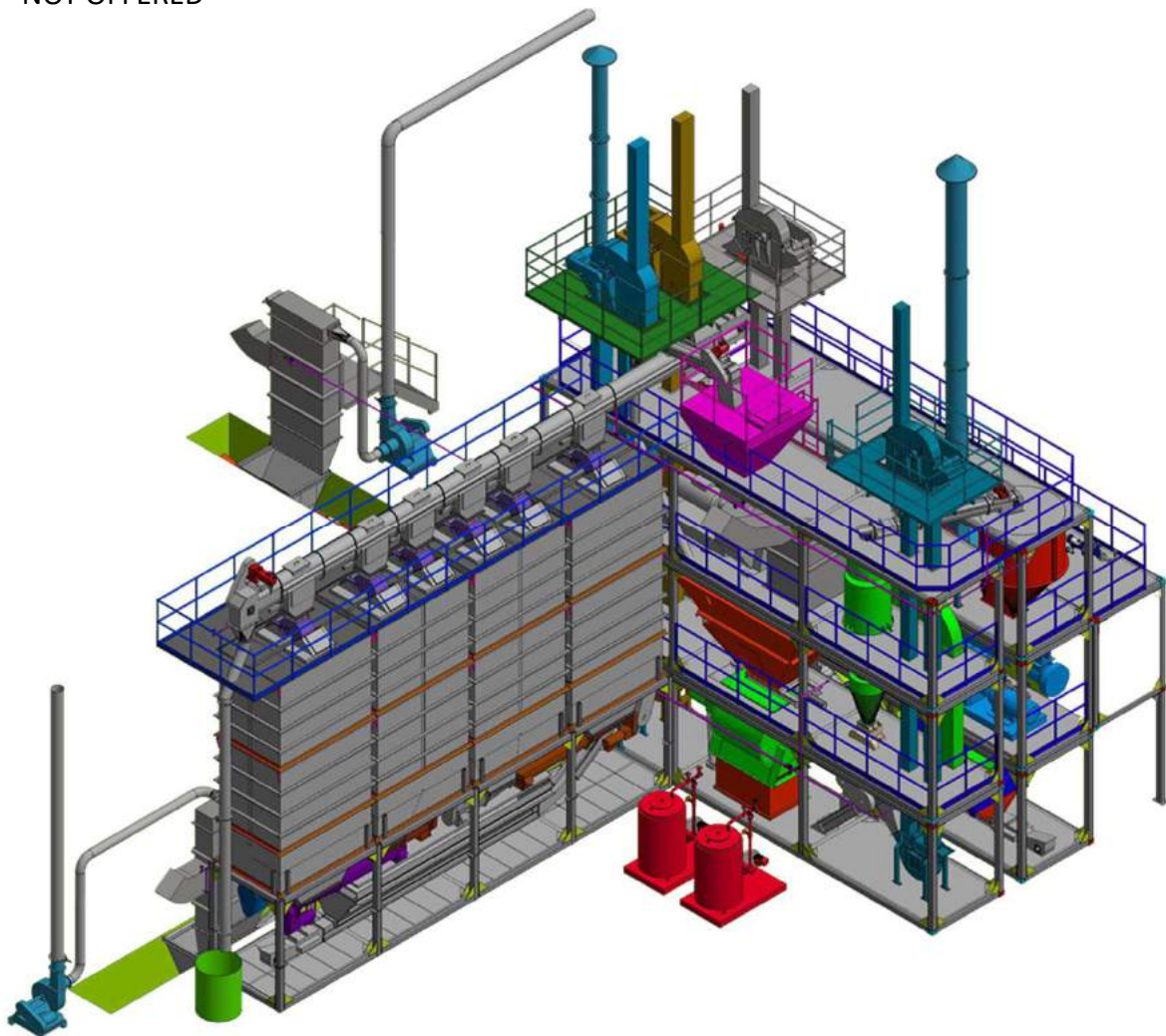
- Buhler AFML-2000, 1mt batch size with liquids addition.
- Discharge hopper
- Conveying system, 15mt/hr

Pelletizing

In the standard package the PELLETIZING Module will come with the following:

- Andritz-Sprout PM615 Pellet Mill, including conditioner, steam harness
- Counter flow pellet cooler – 7mt/hr for 3 – 4mm pellets
- Buhler DFZL-1000 crumbler 10mt/hr
- Buhler DFTA-13, 3 deck oscillating screener, 10mt/hr
- Conveying system, 20mt/hr

Bagging – NOT OFFERED



Bulk Finished Goods Storage

If required Mitchells can provide a modular Bulk finished goods storage system comprising the following:

- 2 x Bin modules each having 4 x 27m³ square bins. Total 8 storage bins
- 2 x Twin screw discharge for difficult to handle materials
- 6 x Manual and pneumatic slide gates on bin discharges
- Conveying system, Infeed - 20 mt/hr, Loadout at 40 mt/hr
- NOT INCLUDED – Loadout weighing system
- NOT INCLUDED – Conveyor between modular plant and finished product storage

Liquids Handling

In the standard package the LIQUIDS HANDLING package will include the following:

- 2 x 1000 L liquid tanks, insulated and fitted with electric heaters
- 2 x dosing pumps and liquid flow meters
- NOT INCLUDED are Bulk liquid storage tanks

Utilities

The standard UTILITIES package will include the following:

- Control and Automation – Allan Bradley or Equivalent, including 2 operator interface units in control room
- Electrical MCC and cables – Allan Bradley MCC components or equivalent. Multiple starters in panel.
- Air Compressor – Atlas Copco including dryer, filters and receiver
- Boiler – Fulton, 1000kg/hr including water treatment



3. DETAILED EQUIPMENT LIST

Please request and refer to our excel spreadsheets for a detailed list of equipment and capacities offered



4. KEY EQUIPMENT DESCRIPTION

BUHLER Grinder Model: DFZC-1265

- Motor power: 132KW, 1500RPM
- With round-hole perforated screen 2.5mm



BUHLER Mixer Model: DFML-2000

- Motor power – 30kw
- Mixing volume: max. 2000dm³
- Mix-product weight: Max.1400kg Min. 280kg



ANDRITZ-SPROUT Pellet Mill Feeder Model: D260R

ANDRITZ-SPROUT Conditioner Model: CM901

ANDRITZ-SPROUT Pellet Mill: PM615

- Motor power: 132kw OR 160kw for XW die



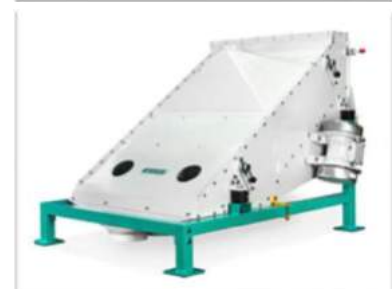
GEELEN Counterflow cooler Model: VK14x19RS

- RS-Triple Grid discharger
- Motor power: 1.1 Kw



BUHLER Oscillating Screener Model: DFTA-13

- 3 sieve decks, each 1.5m² active screen area
- Aspiration connection, 4 outlet spouts
- 2 vibro motor 0.37 Kw



KEY EQUIPMENT DESCRIPTION

ATLAS COPCO Air Compressor & Air Dryer Model: GA22P-7.5 ELII
Nominal working pressure: 7bar
Motor power: 22kW

FULTON Boiler Model RB-600A

Rated steam: 1000kg/h

Working pressure: 10kg/cm² (10 bar)

Fuel: #0 oil / natural gas

Boiler will come skid mounted and also include the following:

Water softener 1000 L/hr

Fuel oil pump (Fuel oil storage tank NOT included)

Water treatment system (NOT including chemicals)

Condensate pumps

8m S/S boiler stack including stack temperature monitoring

Pipework and valves (NOT including the steam and condensate pipework from Boilerhouse to Pellet mill, Mitchells can provide is required at additional cost once location of Boiler is confirmed.)

Local regulations need to be checked to ensure that the boiler offered will meet the local requirements.

BUCKET ELEVATOR PROTECTION SYSTEM

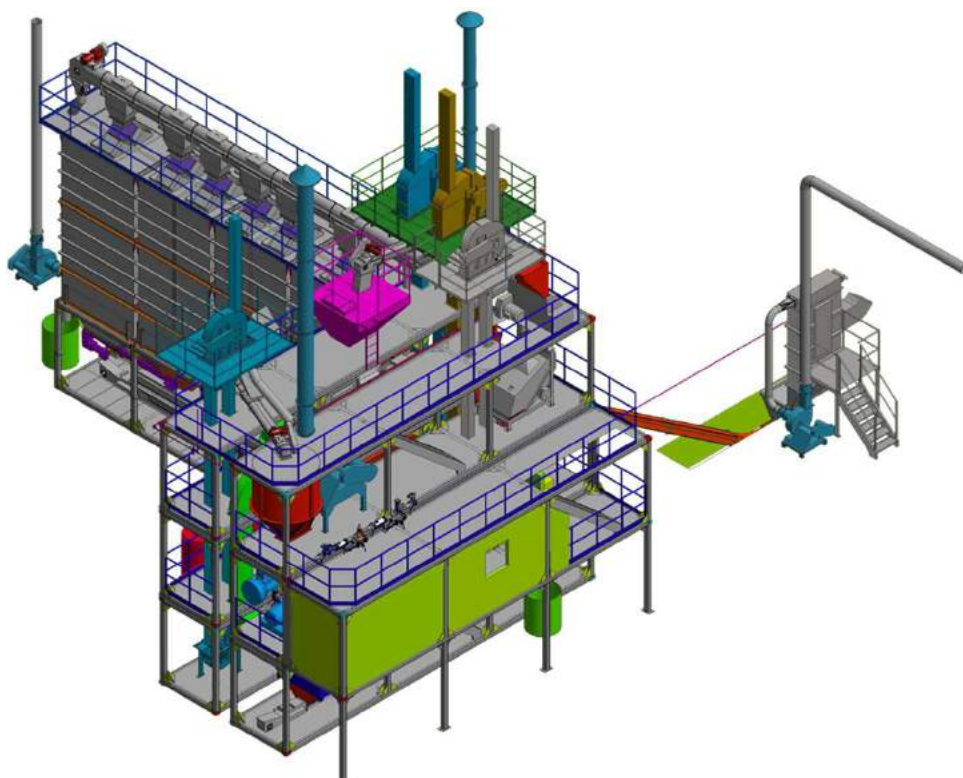
Each Bucket Elevator will come with the following safety devices

2 x Belt alignment sensors

2 x Bearing temperature sensors

1 x Tail pulley motion sensor

1 explosion vent in head discharging to atmosphere



5. POTENTIAL EQUIPMENT SUPPLIED BY CUSTOMER

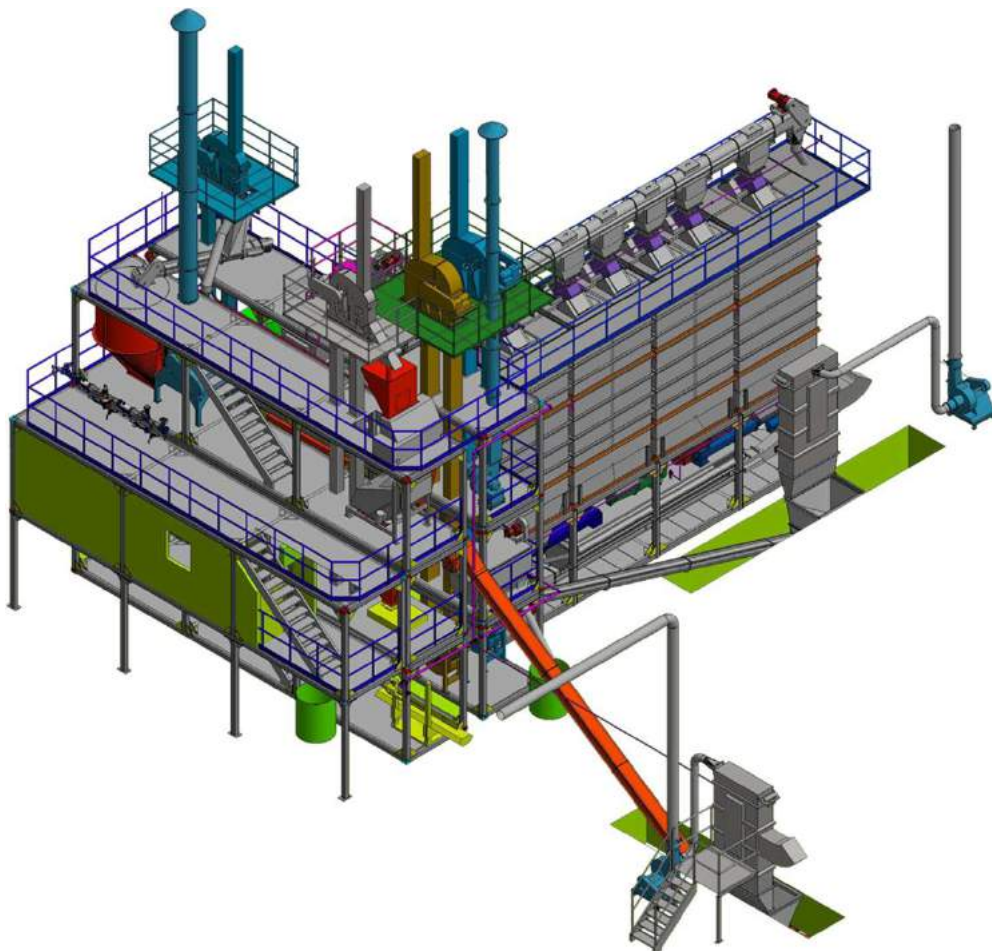
Below is a list of items the customer can choose to remove from Mitchells supply and then supply under his own scope. Each of these items is shown with individual pricing.

There is also a customer mandatory supply list in SECTION 6 in this section. All other equipment being supplied forms part of an integral system that provides the performance of the Modular Mill design.

Mitchells Equipment does not allow removal of any of these items from the scope of supply.

If the customer elects to provide any of the below systems they must also provide Mitchells Equipment full details of the replaced item. We want to ensure that your choices will be compatible with the overall design, and performance of the Modular Mill. Following this procedure is in the best interests of our customer as it ensures that we are fully aware of your equipment choices and accept it as being suitable.

- Electrical wiring, cable trays & MCC
- Control and Automation – Wiring & PLC
- Boiler package (Please note the steam harness is supplied with the Modular Mill and is pre-fitted to the Pellet Mill)
- Air Compressor



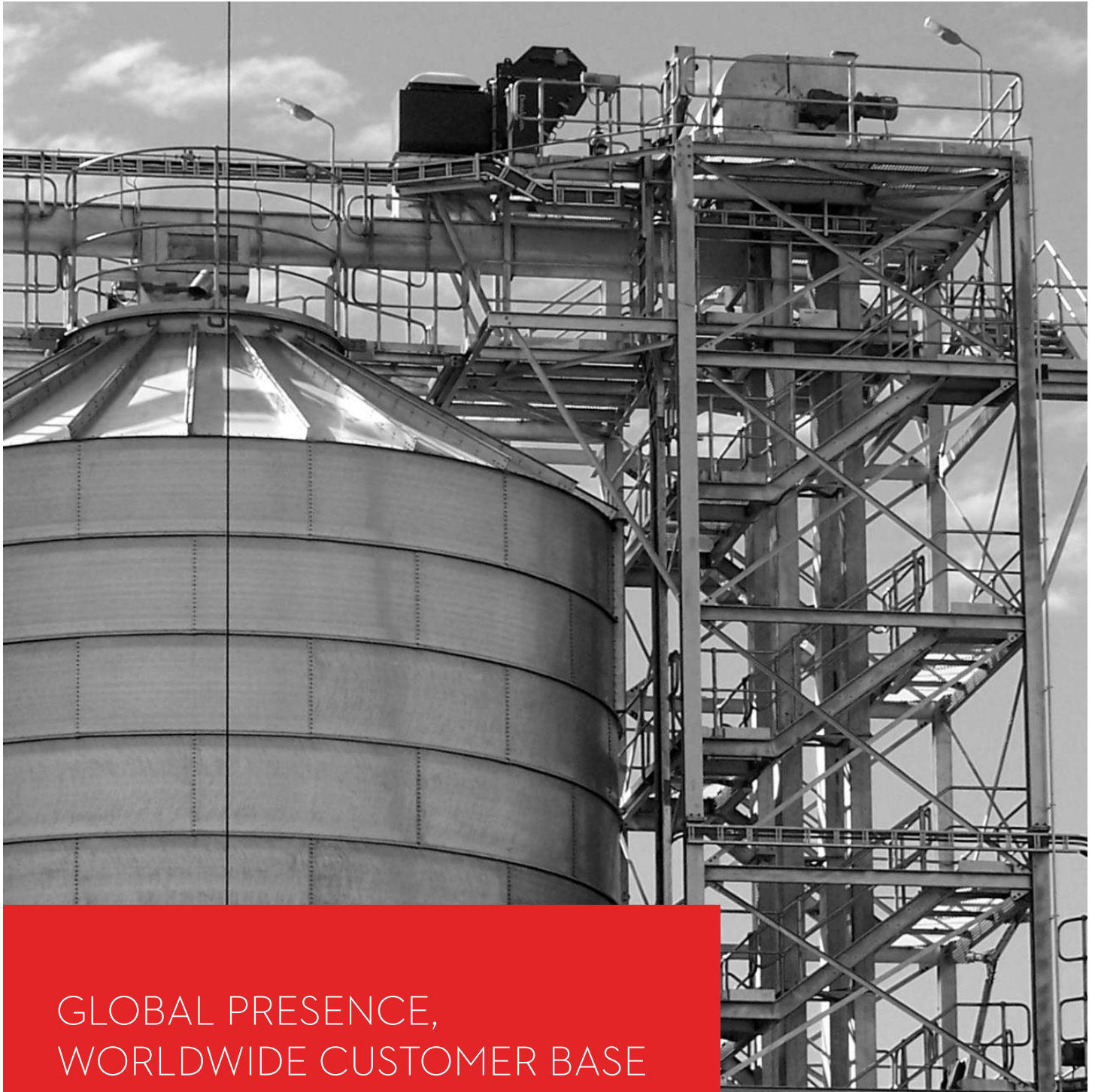
6. CUSTOMERS SUPPLY

- Truck scale for weighing products in and out of the mill site.
- Outside main storage tanks and transfer pumps for Liquids eg. tallow and molasses or other liquids.
- Building to house Boiler and Air compressor
- Bulk storage tank to Boiler Fuel Oil if applicable
- On site vibration analysis or dynamic balancing adjustments of all process equipment.
- On site touch up paint and painting services.
- Supply and install of Penthouse (if required) including all metal works and flashings to enclose the modular mill top and its equipment.
- Warehousing to enclose the modular mill and for bagged raw and finished goods.
- Utility supply to the Modular Mill including but not limited to Main electrical supply, town water connection, drainage

The following is also the responsibility of the customer

- Customs and Duty fees at the port of arrival.
- Transport of equipment to the site.
- Local fees and clearances at the installation site for any and all services.





GLOBAL PRESENCE,
WORLDWIDE CUSTOMER BASE

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HANDLING SPECIALISTS




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