



CJ Waterhouse Co Ltd

MATERIALS HANDLING ▼ WEIGHING SYSTEMS ▼ PROCESS SOLUTIONS

PLANT CONTROL ▼ BESPOKE MACHINERY ▼ AUTOMATION

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Animal Feed Supplement Plant - Europe

C J waterhouse Co. Ltd. were approached by an American Feed Supplement manufacturer to design, manufacture and install a complete turn-key facility at their new plant in Europe.

Our customer is a global leader in the manufacture of equine feed supplement's and following their aquisition of a new site in Belgium required a company to supply a complete production facility. The scope of our supply included: bulk material intake, batch weighing, screening, pneumatic conveying, blending, packing and automation.

Coupled with full project management, complete facility installation and commissioning services we provided a truly turn-key solution for our customer.

Material Intake
Batch Weighing
Screening
Conveying
Blending
Packing
Automation



Material Intake System

Raw materials are delivered to the plant by bulk tanker, FIBC bags and 25Kg sacks. Bulk deliveries are stored in two external silos and fed into the production line via inclined screw feeders.

Three FIBC discharge stations are located inside the main production facility at ground level and deliver material to the process line using inclined screw feeders.

Sack materials are introduced into the system either via the manual sack tip station for smaller batch quantities or via an automatic sack emptying machine for larger quantities. Both systems utilise horizontal screw feeders to dose material to the downstream process.



Material Weighing



The two external bulk silos each feed directly into two dedicated batch weighers located just inside the building. This is done via screw feeders with automatic shut-off valves passing through the building wall.



A third central weigher accepts material from the three bulk bag discharge stations and both the manual sack tip station and the automatic sack emptying

All three weighers incorporate a 4 point loadcell weigh frame with rectangular hopper and a full length discharge screw feeder each with a 2000Kg capacity. Material is discharged from the weighers via flexible connections into linear vibratory screens.



Screening & Conveying & Blending



The three vibratory screens are situated at the in-feed point of the pneumatic conveying system and remove any oversize particles. Material is then dispensed into the conveying line via blow through rotary valves.

Transfer of material to the downstream blender is via three lean phase positive pressure conveying lines utilising 3 HPC blower units feeding a bespoke



Manifold arrangement allowing any of the blowers to be selected to feed any of the conveying routes. Each line is fitted with a pinch valve near its destination to permit line isolation and prevent material back flow from the mixer. Product mixing is via an existing trough blender which was modified to incorporate a radial gate discharge system and a top mounted reverse jet filter unit.

Situated below the mixer is a full batch capacity holding hopper to allow the following batch to be mixed while the holding hopper batch is fed to the packing lines therefore increasing production throughput rates.



Packing System



Material is fed from the holding hopper via an inclined transfer screw to a twin outlet dosing screw which discharges to either the bulk bag or the sack filling line.

The bulk bag line automatically fills FIBC's to a desired weight of between 1000Kg and 2000Kg and the existing bagging line provides automated filling and sealing of 25Kg sacks.

