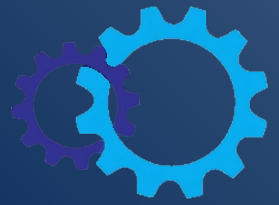


PROJECT PROPOSAL

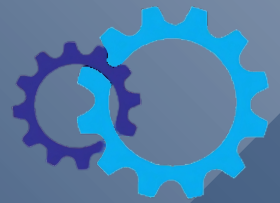
The design and construction
of a new container chicken
abattoir made in South Africa
with German Technology.



EXECUTIVE SUMMARY

Vision at a Glance

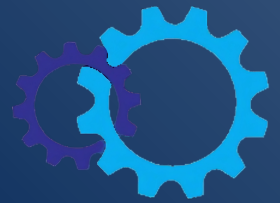
- Our in house chicken specialist, Ivan Beling will analyse the existing business and operation before decisions are made how to go forward.
- The complete processing plant will be constructed and commissioned in my workshop and thereafter dismantled and transported to site.
- The construction on site doesn't require specialized labour or tools due to the fabrication and commissioning process.
- The chicken abattoir is designed to process 5.000 chickens per shift in phase one and 10.000 chickens per shift in phase two.



PRODUCT OFFERING

- Design and construction of containerized building.
- Supply and install all necessary slaughtering and processing equipment.
- Supply and install all necessary refrigeration equipment
- Supply and install all necessary utilities.
- Supply of all engineering certificates and drawings.
- Supply of a complete project schedule with all time frames from the approval of plans to hand over.
- Supply of periodic progress reports to identify the progress of the project at any time.
- Supply of a complete project schedule with all time frames from the approval of plans to hand over.
- Supply of a complete project schedule with all time frames from the approval of plans to hand over.
- Project management.
- Site management.
- Hand over with complete documentation and all revised drawings.
- Staff training

Presented By :
RENE PAWLETTA



PROCESSING

The chicken abattoir is designed to process 5.000 chickens per shift in phase one and 10.000 chickens per shift in phase two. This proposal covers all equipment necessary for phase 1 which is as follows:

Complete building consisting of all containers required

Part 1

Slaughtering and evisceration equipment for processing 5000 chickens per shift.

Part 2

Refrigeration equipment for freezing 5000 chickens per day

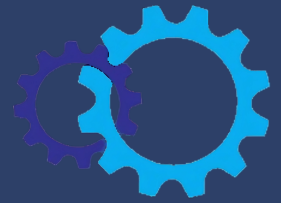
Part 3

Processing equipment for cutting, packing, weighing, labelling and palletizing.

Part 4

All utilities namely hot water, cold water, electricity, water treatment plant for waste water water treatment plant for feed water and standby generator.

The power requirement for phase one is 320 KVA. To upgrade from phase one to phase two requires an additional 250 KVA. The water consumption will be 3 liters per chicken.



PROPOSED SCOPE OF WORK

- Containers installed with all necessary supports, joints, openings and doors.
- Insulation of all containers made from insulated panels to meet the HACCP standards complete with freezer room doors.
- Factory floors constructed from polystyrene sheets and stainless steel plates.
- Stainless steel gutters covered with grating in each container, connected to a central drain pipe.
- Electrical installation of all lights, plugs, connection points for the production equipment, electric main panel with incomer and metering section, sub DB's, external lighting.
- Two entrances fitted with foot baths, wash basins and disinfectors.
- Height adjustable plinths for containers to level the entire building and provide space for the drains.
- Frames for evaporative condensers.
- Frames for generator set and hot water boiler.
- Steel plat form and stair case to plant room.
- Plumbing
- Ammonia detection system for plant room.
- Despatch office
- Pipe and cable supports
- Ventilation system for evisceration area and receiving area.
- Mechanical Installation
- Consumables, crange, transport in SA
- Camera System
- Signage
- Project management & site management.

PROJECT REQUIREMENTS & EXCLUSIONS



The installation of the containerized processing plant requires concrete foundations which are excluded from this quotation. GFM Industrial Refrigeration will supply the necessary drawings for the foundations.

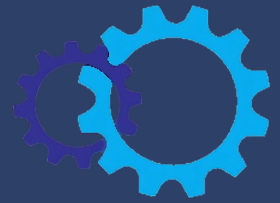
Height adjustable steel plinths allow an accurate leveling of the entire building to guarantee the required slopes for the drains and pipe supports.

Additional offices, change rooms for staff or ware houses are excluded from this quotation and need to be discussed separately.

The plant room and all utilities will be installed next to the processing area, namely the refrigeration compressors, the refrigeration separator vessels and pumps, the generator set, the boiler, the heat recovery system, the cold water system, the evaporative condensers and the air handling unit for the working areas.

The blood tank will be positioned outside as well as the feather separator.

GFM INDUSTRIAL REFRIGERATION PRODUCT OFFERING



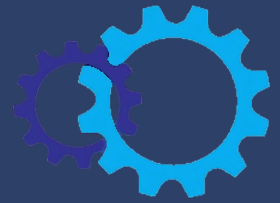
The factory will be fitted with a receiving area, a killing & evisceration area, a heads & feet processing area, one heads & feet / mala freezer, one cutting area, three blast freezers, offices for production and dispatch management, stores for crates and boxes, two crate washer areas, four freezer stores and one packing and dispatch area. Due to the space required for meat processing, we could accommodate four blast freezers and four holding freezers. All blast freezers have the capacity to freeze the entire production of one shift over a period of 8 hours. One blast freezer is required for the heads, feet and mala, two blast freezers are required for the chicken meat and the fourth one of off for defrosting and cleaning. Four holding freezers of the same size as the blast freezers provide storage capacity for four days of production.

Slaughtering and evisceration for 5.000 chickens per shift: Due to the small throughput of 550 chickens per hour we recommend to eviscerate manually. The entire product load will be cut up in portions and packed in crates. The crates are loaded into the blast freezers to freeze the product over night. The crates will be taken out the next morning and the frozen chicken portions get packed into bags. The bags will be labeled and packed into boxes. The boxes will be stored in the freezer store. All cutting, packing, weighing and labeling equipment is included. The chicken is not injected. Brine injection requires instant freezing. Therefore we recommend installing a spiral freezer and to upgrade the refrigeration plant accordingly.

The processing equipment consists of the following:

- Receiving conveyor with scale
- Receiving crate washer
- Shackle cleaner
- Optical bird counter
- Water stunner
- Sterilizer
- Bleeding tunnel complete with blood pump and piping
- Scalding tank
- Plucker
- Spray cleaning cabinet
- Feather separator with feather pump and pack table
- All overhead conveyors and hanging lines
- Gizzard skinner
- Giblet cleaner
- Giblet pack tables with scales
- Manual vent cutters
- Evisceration forks
- Pneumatic cutters
- Inside/ Outside washer
- Crate washer
- Manual cut up tables with portion saws and conveyors
- Scales for portions
- Crates, knives
- Electric panels
- Mechanical and electrical installation

Presented By :
RENE PAWLETTA



PROPOSED PROCESSING EQUIPMENT

REFRIGERATION EQUIPMENT FOR FREEZING 5.000 CHICKENS PER DAY:

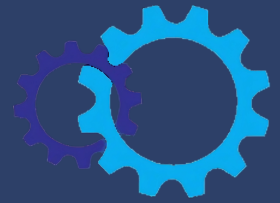
The refrigeration plant consists of the plant room installation and the factory installation. Page 4 The plant room is situated on top of the processing plant and accommodates two compressor units. One unit is required to operate the entire plant, the second unit is purely standby. In case the production will be increased you can use the second compressor to meet the new requirement and install a standby compressor unit at a later stage. All components are designed for future expansions. Freezers and chillers can be added without major shut downs.

Plant room:

- Two compressor units
- One economizer vessel for chilling applications
- One low stage ammonia separator with two ammonia pumps for freezing applications.
- One liquid receiver vessel
- Pipe work
- Insulation of all cold pipes and vessels
- Two evaporative condensers with galvanized steel frame
- Electric panel
- Electrical and mechanical installation
- Consumables, steel for brackets
- First charge of ammonia and refrigeration oil Inspection and x-rays
- Cold water plate heat exchanger
- Hot water plate heat exchangers

Processing plant:

- Four blast freezers, each with a freezing capacity of 6300 kg in 8 hours. Two blast freezers are required for freezing 5.000 chickens per day, the third freezer is off for cleaning and defrosting.
- One heads & feet/ mala blast freezer.
- Four freezer holding rooms, with a capacity of 4 days of production.
- One spin chiller.
- One air handling unit to cool the processing area to 10 deg C.
- One heads & feet/ mala processing area
- One cutting area
- One packing/ dispatch area



PROPOSED UTILITIES PROCESSING 5000 CHICKENS PER SHIFT

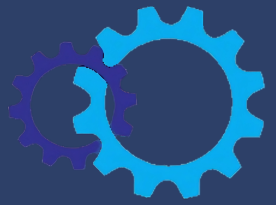
VARIOUS EQUIPMENT IS NEEDED TO SUPPLY THE PROCESS EQUIPMENT

The water treatment plant will be positioned outside the building to catch the entire waste water from the plant for removal of bacteria. After the treatment the water can be used for irrigation. The water treatment plant for the feed water consists of one container housing the pumps, one tank and the dosage plant. The plant will be positioned according to the requirements near the processing plant. The diesel storage tank will be installed in one container complete with pumps and sump and positioned outside the plant for hazardous reasons. All pipe work between the water treatment plants, the diesel tank and the factory are included. The supply to the water treatment plant and the electrical supply to the processing plant are excluded from this quotation and need to be priced separately after a site inspection.

- Water treatment plant for waste water to remove bacteria.
- Water treatment plant for feed water to correct ph value, complete with buffer tank.
- Water treatment plant for evaporative condensers.
- Boiler for hot water complete with diesel storage tank.
- Heat recovery system for refrigeration plant.
- Dosage plant for disinfectants.
- Air compressors and pipe works.
- Diesel tank.
- Blood tank.
- Feather storage.

Transport and site installation:

After the mechanical and electrical completion of the plant, it will be commissioned and test run in Johannesburg to guarantee a trouble free start up on site. The plant will be dismantled after commissioning and transported to the site, approx. 50 km outside Harare. The installation on site will take approx. 4 weeks, under the condition, that all necessary civil works are completed. Thereafter the processing plant will be recommissioned and all production and maintenance staff trained to assure the correct operation of all machinery. All transport costs for the containers, staff and tools are included in this quotation as well as clearance and customs, site work, commissioning, training, accommodation and outside allowance.



Let's work together

Guarantee: One Year

Exclusions: VAT, transformer and supply cable to factory, water supply to water treatment plant, vehicles and forklifts, consumables for processing, site security, import duty if applicable, civil works.

Delivery: 5 month, 1 month site installation

Terms of Payment: Processing plant Site work 30% down payment 70% as monthly progress payments till completion of plant and acceptance of performance tests 100% after completion