when Quality Matters.

Quote date February 14, 2018

Subject Quotation Bag filling machine, palletiser and pallet wrapper

As a result of our last contact, I can offer you the following:

- Votech bag filling machine for milkpowders (calfmilk)
  * Sewing and crepe tape
  * Sample taker
  * Labelprinter for empty bags (Sato)
  * Labeldetector

- Product supply system
  * Silo in stainless steel 3.500 liter
  * Horizontal dosing screw
  * Engineering of Frame and platform above bag filling machine and around silo

- Metaldetection (Loma)
- Checkweigher with integrated reject unit

- Palletiser VPB (standard)
  * Empty palletstorage
  * Stacking box
  * Sheetdispenser

- Palletwrapper (standard)
  * Rainproof topsheetdispenser
  * Sealstar unit

- Pallet print and apply unit (Sato)

Yours sincerely,

Rolf Michiels
Votech B.V.

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When Quality Matters...

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1 Productsupply

1.1 Silo 3500 liter (in stainless steel 304)

Silo for product storage above the dosing unit. The silo is executed in stainless steel 304.
-Extraction point on top of hopper.

1.2 Levelprobes (suitable for ATEX)

Two levelprobes are placed inside the silo. Each probes works by a rotating wing. One levelprobe will check the high level and the other probe will check the low level of the product in the silo.

1.3 Horizontal dosing screw (in stainless steel 304)

The product is being transported out of the silo into the Votech hopper by a horizontal screw feeder.

1.4 Engineering frame and platform

Votech takes care of a detailed engineering of the support frame for the weighing and dosing unit.
* The customer is responsible for the construction- and necessary work of the support frame.

1.5 Staircase steps (28x)

Steel galvanized staircase steps

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2 Bag filling machine

2.1 Bag filling machine VLR-B, basis

Machine basis consists of:

Bag-placer with empty bag storage

After the first stack of bags is finished the second stack of empty bags will be moved by pens towards the pick up position. Than the operator is able to place a new stack of empty bags on the available position. The length and width of the positions are mechanically adjustable .
*The operator is able to place a new stack of empty bags without stopping the machine.

The empty bag, at the pick up position, will be picked up at the bottom by suction pads. When the bottom of the bag is lifted a conveyor moves underneath the bag. Than the complete bag lays flat onto the conveyor and the open side of the bag is being moved towards the opening position.
* It is possible to place a label on the bag at this position (optional)

After the bag has been positioned it will be opened and placed onto the filling spout by the bag-placer. The bag-placer has always a precise distance to the spout which is easy adjustable in the display.

Vertical screw feeder by servo driven valve

- Vertical Screw Feeder
- Hopper capacity + / - 275 liters
- High and low levelcontrol
- High level detector
- Agitator

The product level in the storage silo is continuously monitored by the high - and low- level signal. Once the hopper reaches a critical level the machine stops and the operator will have the choice to start and run the machine empty to or to wait until the hopper is refilled till its correct level. This is very important to maintain constant pressure on the dosing screw. This results in a constant dosage of the products and an accurate final weight result . The dosingspeed of the screw feeder is easy to adjust in the operation display. An agitator ensures a constant product flow to the vertical screw and ensures that the product remains in motion. The dosing opening is determined by the servo motor. This ensures a precise and accurate dosing.

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* The hopper of the filling machine has to be fed very controlled by the customers product supply. (start/stop function of product supply will be connected with the productlevel control of the Votech hopper) This results in a constant pressure and productflow in the hopper.
* Dosage is approvable
* The vertical screw is especially designed for hygienic areas.
* The dosage is easy to clean .
* The discharge tube is removable so the screw is easy to clean .

Filling spout (gross), with vertical movement

The filling spout takes care to fill the bag as efficient as possible. The filling spout is provided with inner- and outerjaws for clamping the bag to the filling point. There will be automatically checked if there is a bag on the spout before the dosing starts. When there is no bag on the spout the machine will stop and give an alarm.

The spout is suspended with three load cells for weighing the bag. The bag is weighed during dosing. The weighing spout is connected to an Electronic weighing system control type PENKO Smart. The electronic weighing system is connected to the dosing screw. In the event of an incorrect weight the machine will automatically stop and give an alarm.

The bag will be placed on the conveyor by a vertical movement of the filling spout. This way the bag will be kept under control till it is taken over by the bag-top support. Depending on the size of the bag the dosing screw gets into the bag. So dosing can start near to the bottom of the bag. During dosing the spout with bag moves downwards.
Benefits:
* Minimal dust generation because of the small distance between the dosing screw and the product level.
* Very accurate dosing because of a minimal product free fall
* Minimal air inclusion during dosing because of the small distance between the dosing screw and the product.
* No cross contamination

Conveyor belt for sideways bag transport

Height adjustable conveyor belt on which the bags are transported sideways through the filling machine. Both under the filling position, de-aeration unit and stretch/seal position a vibrationunit is inserted to divide and de-aerate the product in the bag. The number of knock pulses is adjustable from the display.

Bag supporting system

The bag will be supported during the bag transport from the spout towards the second position in the closing line. The bag supporting system is integrated in the conveyor so the machine is easy to clean. The bag support is equipped with shields to transport opened bags stable.

Product de-aeration unit

The probes will move downwards into the product. The air inside the product will be removed by the vacuum probe(s). This results in a stable bag, stable transport through the closing unit and an optimal stack result onto the pallet. The de-aeration time is adjustable for each product. The probes are easy to clean.

Stretch, de-aerate and sealing unit

The top of the bag will be stretched out by the bag stretcher. During stretching the bag top air will be pressed out and the stretchpens are blowing the sealzone clean. The sealing zone will be cleaned from product with compressed air. So it will become a perfect seal. This results in a stable stacking onto the pallets.
* Equipped with dust extraction points

Connection point for dust extraction

The following components in the machine will contain a connection point for dust extraction:
- Vertical screw feeder
- Filling spout
- Stretch, de-aerate and sealing unit
- Product de-aeration unit

The minimal dust extraction capacity which is needed is 2.275 m³ and V=20m/s
De vereiste minimale afzuigcapaciteit is 2275 bij V=20 m/s.

Outfeed conveyor

The outfeed conveyor is placed behind the bag filling machine. The tilted bag is transported onto this conveyor. The belt has a hinge point, which makes it possible to adjust the height of the belt depending on the size of the bag.
Width: 500 mm

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Type: Plastic modular

Control cabinet
The control cabinet is placed on the floor and is equipped with a control display. The operator is able to operate the machine very simply.
*** when the cabinet is placed separately of the machine this may influence the price.**

Control
The control of the machine has a modular set-up. This means each operable part of the machine is controlled by its own module. Each module is designed in the same way and have their own parameters.
*** The recipes can be stored in files which are easy to re-use.**
*** Alarms are visible in the display. In case of an alarm the frame turns into red.**
*** Language is easy adjustable.**

Communication with system
The Votech machine has an Ethernet connection for exchanging information with other systems. Examples of communication:
- Product
- Bag code
- Total counter
- Bag counter
- Capacity
- Logging of alarms
*** The connection between the Votech machine and a central control system and other special information** requirements, those who aren't mentioned above, have to be discussed and are not included in this quotation

Excluded:
- Programming and engineering Ethernet protocols
- Connection with central control system
- Data processing (printing systems)

Service
A remote control takes care of an easy connection with the machine. Therefore is Votech able to guarantee a 24/7 service for fault- and alarm messages. The machine also contains WIFI for an internet connection

Machine safety
The bag filling machine is shielded by panels all around. Single panels are designed as a door by being provided with a switch. When the door is opened during production the machine gets in emergency stop. The machines safety measures are according to CE.

2.2 Sewing machine with bagtop cutter and crêpe tape

The bagtop support transports the bagtop into the sewing machine.
Machine consists of:
- Bagtop support unit
- Bagtop cutter
- Newlong sewing machine suitable for crêpe tape
- Crêpe roll support
- Support for sewing thread
- Suspension in frame

The bag top support is transporting the bag into the bag top cutter. Here the bag top will be cut straight (max. 70 mm). The cut-off part will be suctioned by an exhaust pipe. After that the bag top is provided with crepe tape and closed with stitches.
*** Thread breakage alarm is available**
*** Crêpe breakage alarm is available**

2.3 Bag pusher/kicker

After the bag has been closed the bag will be transported to the bag pusher which places the bag on the outfeed conveyor. It is possible to push out the bag headfirst or bottom first by manually adjusting the bag pusher/kicker.

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2.4 Additional intermediate conveyor

The empty bag storage is loaded to the rear so an intermediate conveyor can be mounted between the bag storage and the bag placer. This leads to a greater distance between the bag storage and the spout and results in a higher capacity of the empty bag placer. The intermediate conveyor features fencing with an access door.
Optional: this position can be used as a labeling position.

2.5 ATEX execution

The machine is executed in ATEX zone 22 from the outfeed of the dosing screw ,with a radius of 1 meter cylindrical, down to the floor. Within the dosing screw zone 20 is applied. The machine parts outside of this zone are non ATEX and considered as non-hazardous zone.
* All main components in the entire machine will be grounded.
* Dust extraction points are grounded on to both sides.
* Price depends on ATEX zone classification and ignition point of product

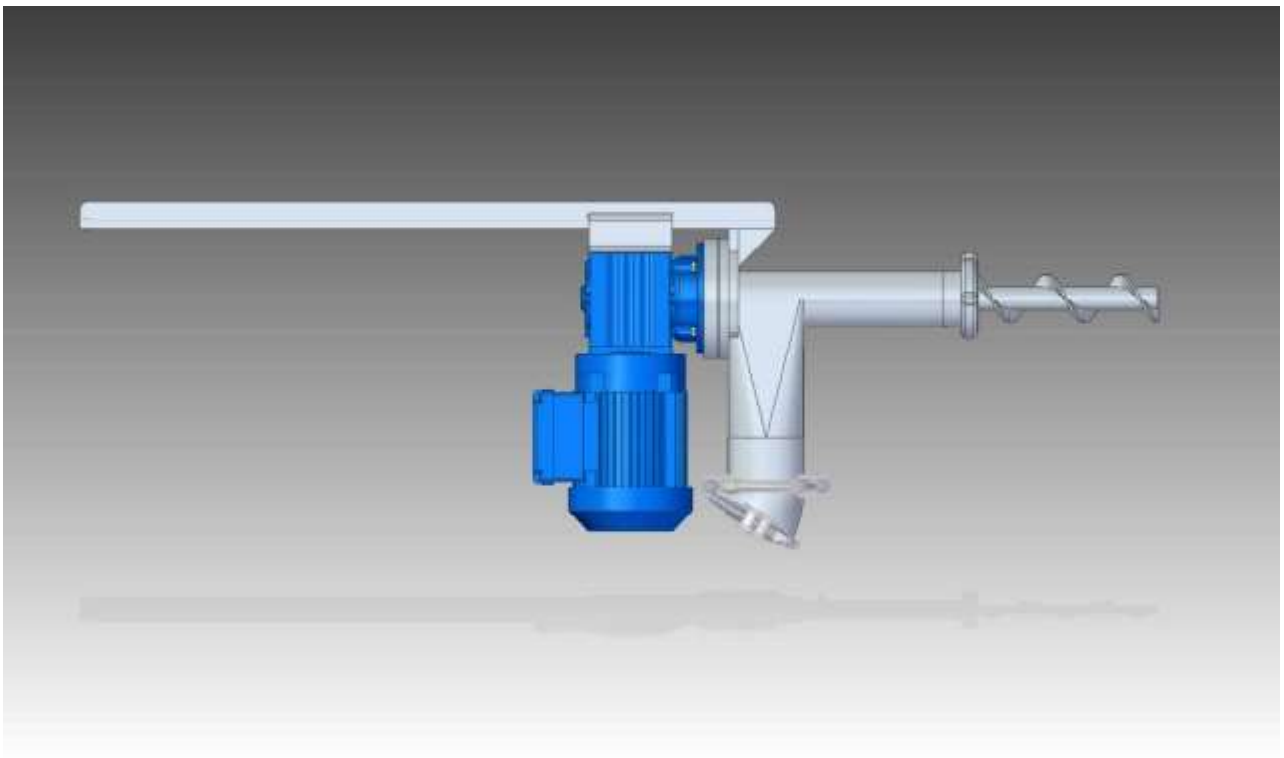
2.6 Distributor roll (motor driven)

The distributor roll will be placed just above the conveyor belt. The will divide the product in the bag. The height of the roll is manually adjustable.
*Extra safety measurements aren't provided

2.7 Bag leakage detection

A sensor is placed for detecting leak bags. The sensor can be placed in front or behind a conveyor belt. When product has been detected the installation stops directly. The operator is able to remove the bag and restart the installation by using the reset button. Another possibilty is to send a signal to a reject unit were bags has been rejected automatically.

2.8 Automatic sampling unit



In the dosing hopper a sampling unit will be placed. A small screw will takes some product out of the hopper. This product will be dropped into a plastic sampling bag. In the display of the filling machine the operator chooses in what frequency the samples has to be taken. The screw and motor are easy to pull back via the guiding. This makes it easy to clean.

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* standard 1 position

2.9 CPL Labelprinter (with Sato engine) *incl. dust extraction point

Print and apply unit for labels on empty bags
including:

- Control by Siemens PLC
- 1 side labeling.
- Backside consists of stainless steel housing
- Printer is suitable voor several different types of printengines
  Sato: M84xxSe and S84xx Serie
  Zebra: 110 PAX and 170 PAX
Avery: DPM and PEM Serie
- Alarmbeacon with 2 lights
- Aplicatormodule, smart tamp
- Labelsize: approx. 100 x 150 mm

Excluded:
Commissioning and testing on site at Volac.
Travel and accommodation costs for commissioning and testing the labelprinter on site at Volac

2.10 Manual X/Y movement and suspension label printer

In the empty bag storage the label printer will be placed. Manually, the printer can be adjusted, so that the label is placed in the right position on the bag.

2.11 Labeldetector

Detector scans the presence for a label or a print (not both)
As soon as a label or print is missing the machine runs in emergency stop.
* The detector can not distinguish between different labels on the label or print
* The label or print must contain a repetitive detail each time

2.12 Integration labelprinter and labeldetector in Votech machine

The labelprinter will be integrated mechanically and program technical in the Votech machine.
* Specific communication or control purposes are excluded and have to be further discussed.
* The exact type of labelprint should be discussed. Possible labelprinter with Sato engine is quoted as option

2.13 Operation machines

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See example

2.14 I/O screen in display

All actual in- and outfeed signals are shown in this screen
*** The palletiser contains the same screen to check its in- and outfeed signals.**

2.15 Specifications bag filling machine

Environment

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Conditioned, clean and dry
+5°C to +40°C

Product/bag details

Product: Milkpowder (calf milk)
Density: 0,53 - 0,66 Kg/liter (further to discuss)
Length empty bag: min. 600 mm en max. 1.000 mm
Width empty bag: min. 370 mm en max. 600 mm
Weight/volume: min. 5Kg and max. 25Kg
Bagtype: Openmouth bags with block bottom
Bagmaterial: Paper with PE inliner

Standard machine details

Mainframe colour: RAL 9007
Machine parts colour: RAL 9007
Electrical connection: 3x400V+N+PE and 50 Hz
Electrical parts in machine: According to IP- 54 norm
Current (amperage): Depending on project size
Control power (PLC): 24VDC
Pneumatic connection: 6 bar, 1,5"
Air use: Depending on project size
PLC control: Sigmatek with 500 free adjustable menus
Machine safety: According to CE
Construction parts: steel 37.
Finishing: powdercoated

Specific machine details

Product touching parts: Stainless steel 304
Bag closure by means of sealing and sewing with crepe tape
Maximum machine capacity:
320 bags/hour at 25Kg
Capacity depends on:
- Product flow ability
- Closing ability of the bag (Sealtime)
- Smallest bag size (width) and maximum spout (the wider the spout the faster the product gets in the bag)

3 Added options bag filling machine

3.1 Extra stackposition for empty bags (3x)

The empty bag storage will be expanded with and extra position for empty bags. The machine will have longer production time before the operator must place a new supply of empty bags.
5 stacking positions for empty bags in total.

3.2 Extraction unit for cutted paper

A frame is placed nearby the bag filling machine. A Big bag is able to be hung in this frame. The extraction unit is placed on top of the frame. The cutted strokes are transported by pipework into the big bag.
* powdercoated steel

Including

- control of extraction unit and adjustment in PLC
- pipework and mountingmaterial (max. 10 meters)

3.3 Viwateq threatment for stainless steel parts

The stainless steel 304 parts will have a Viwateq treathment

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3.4 Collecting the dust extraction points

The dust extraction points in the bag filling machine will collected to one point.
*Galvanized tubing

3.5 Closing the machine

The bag filling machine will be closed with rubber flaps in order to create a conditioned environment. The frame and platform will be extended
The rubber flaps will be placed untill the floor and above untill the platform.

* conditioning system is not included and has to be provided by Volac

4 Checkweigher and metaldetector

4.1 Metaldetection conveyor (Loma)

The metaldetector is placed around a conveyor belt. When metal in the bag has been detected, the belt will stop and the bag can be taken of the belt. (Optional de bag can be rejected by a reject system).
Metaldetector with standard control:
- Measurements (WxH) 650 mm x 350 mm
- Stainless steel cabinet
- Including test sticks
- Dust- and waterproof according to IP-65
- Length conveyor: 2.000 mm
- Width conveyor: 600 mm
- Mounted onto adjustable feet
- Support for Sensor
- Color touchscreen
- USB connection
- Ethernet

Optimal sensitivity without any effect on the product
- Fe/nfe: 2,0-3,0 mm, SS304: 3,0-4,0 mm, diameter
  * the exact sensitivity can be determined by testing a productsample.

4.2 Checkweigher with integrated reject unit

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A conveyor is placed on a frame by 4 loadcells. The loadcells are connected with a control cabinet. The control cabinet is provided with a Penko weighing indicator. Every bag is standing still during weighing. A bag pusher is posted on the conveyor belt of the checkweiger. When a bag doesn't has the right weight, metal has been detected or in case of a bag leak detection, the bag will be pushed out by the reject unit. Software is carried out that info about weight and metal detecting can be communicated to the bag pusher.
Capacity: 700 bags/hour
Checkweigher is provided with an Ethernet connection to communicate weights and averages to an external system.
- Including sensor for bagdetection
- Control through display

4.3 Light indicators

The reject unit will be provided with two light indicators for showing the reason for rejecting.
1 color for incorrect weight
1 color for metal detection

5 Bag transporting system

5.1 Inclined conveyor L= 4.060 mm (including safety guides)

The inclined conveyor will transport the bags towards the palletiser. The conveyor is provided with profile for good grip. The conveyor is easy to control by the display. The belt is provided with a photocell for bag detection
* The exact length of the conveyor depends on the layout and may have influence on the price.

5.2 Corner conveyor (2x)

90° corner conveyor for transporting the bags. Conveyor width will be 700 mm. The belt is provided with a photocell for bag detection and will be easy to control by the display
Type plastic modular.

5.3 Support for corner conveyors and inclined conveyors

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The corner conveyors and inclined conveyors will be supported by a frame.

5.4 Inclined conveyor L= 3.370 mm (including safety guides)

The inclined conveyor will transport the bags towards the palletiser. The conveyor is provided with profile for good grip. The conveyor is easy to control by the display. The belt is provided with a photocell for bag detection
* The exact length of the conveyor depends on the layout and may have influence on the price.

5.5 Control and cabling bag transporting system

Votech shall place the necesarry cables, to control the bag transporting system, from the motors to the electrical cabinet. Control will be integrated in the display.
Including:
- cabletrays
- cables (bundled)
- clamps
- ty-ribs

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6 Palletiser

6.1 Palletiser VPB-K

Palletiser for cross-stacking the bags.

Machine consists of:

High speed infeed conveyor:
This conveyor receives the bags. The belt will accelerate very quickly to shoot the bag into the turning head.

Turning head:
The turning head is suspended in an angle. The bag will slide to the rear of the turning head automatically. The rotation movement is frequency controlled, this results in a high speed and controlled rotation. The stopping position of the turning section is adjustable by the control display.

X-Y movement:
The x-y movement of the turning head is frequency driven. Turning head moves from the pick-up position to the deposit position. In the operating display the exact deposit position of the bale is free programmable.

Movable stops:
Stops for locking up of a completely formed layer on the forming table. The movement is adjustable from the display.

Forming table:
When the complete layer is assembled, motor-driven dams compress the layer into the correct size to ensure proper alignment and stability of the pallet load.
The distance travelled by the side dams is pre-set within the menu and adjustable for different pallet sizes. The two motor-driven sections move apart and the layer is deposited onto the pallet. The forming tables are opened and closed by a crank rod mechanism without use of chains.

Empty pallet storage (forks)
The pallets are being lifted by width adjustable forks. The forks are transported in to the second pallet of the stack. Than the complete stack is being lifted by the forks so that the lower pallet can go on the roller conveyor towards the machine. The roller conveyor is provided with a sensor for palletdetection.
Maximum total weight pallets: 550 Kg

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Hoisting rollerconveyor:
A frequency controlled rollerconveyor for stacking the pallets. The conveyor is provided with a mechanical stop and palletdetection to place the pallet on the correct position. The hoist conveyor will lift the pallet just below the underside of the formingtable. Each completed layer is place onto the pallet and the hoist conveyor will then press the pallet against the underside of the formingtable.
* pressing time is per layer adjustable in the display

Stacking box:
The lifting conveyor is placed in a shaft. Displays the pallet stacked. The box is adjustable for 5 modes. Once the pallet is ready the doors will open and run the full pallet and an empty pallet entered.
Pallet sizes
1.200 x 800 mm
1.200 x 1.000 mm
1.150 x 1.300 mm
1.120 x 1.120 mm

The stacking box prevents bags hanging over the edge of the pallet. The bags will stay nicely within the size of the pallet. This creates a major advantage for transporting pallets for example in containers.

Platform and stairs:
The machine is provided with a platform and stairs to give the operator more accessibility to the machine.

Outfeed conveyor:
Frequency controlled rollerconveyor to transport the pallet out of the palletiser.

Safety light curtains
Safety light curtains are placed at the outfeed of the palletiser. When a light curtain is activated during the machine process, the machine stops in emergency stop.

Machine safety:
The machine will be surrounded by safety fencing. The fencing will be interrupted by an access door. These doors are provided with a switch and when the door opens, the machine will get in emergency stop. Machine safety is according to the CE standard.

Control Cabinet:
The control cabinet is placed on floor space and is equipped with a control display from which the pattern can be set.

Control
The control of the machine has a modular set-up. This means each operable part of the machine is controlled by its own module. Each module is designed in the same way and have their own parameters.
* The recipes can be stored in files which are easy to re-use.
* Alarms are visible in the display. In case of an alarm the frame turns into red.
* Language is easy adjustable.

Communication with system
The Votech machine has an Ethernet connection for exchanging information with other systems. Examples of communication:
- Product
- Bag code
- Total counter
- Bag counter
- Capacity
- Logging of alarms

* The connection between the Votech machine and a central control system and other special information requirements, those who aren't mentioned above, have to be discussed and are not included in this quotation

Excluded:
- Programming and engineering Ethernet protocols
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- Data processing (printing systems)

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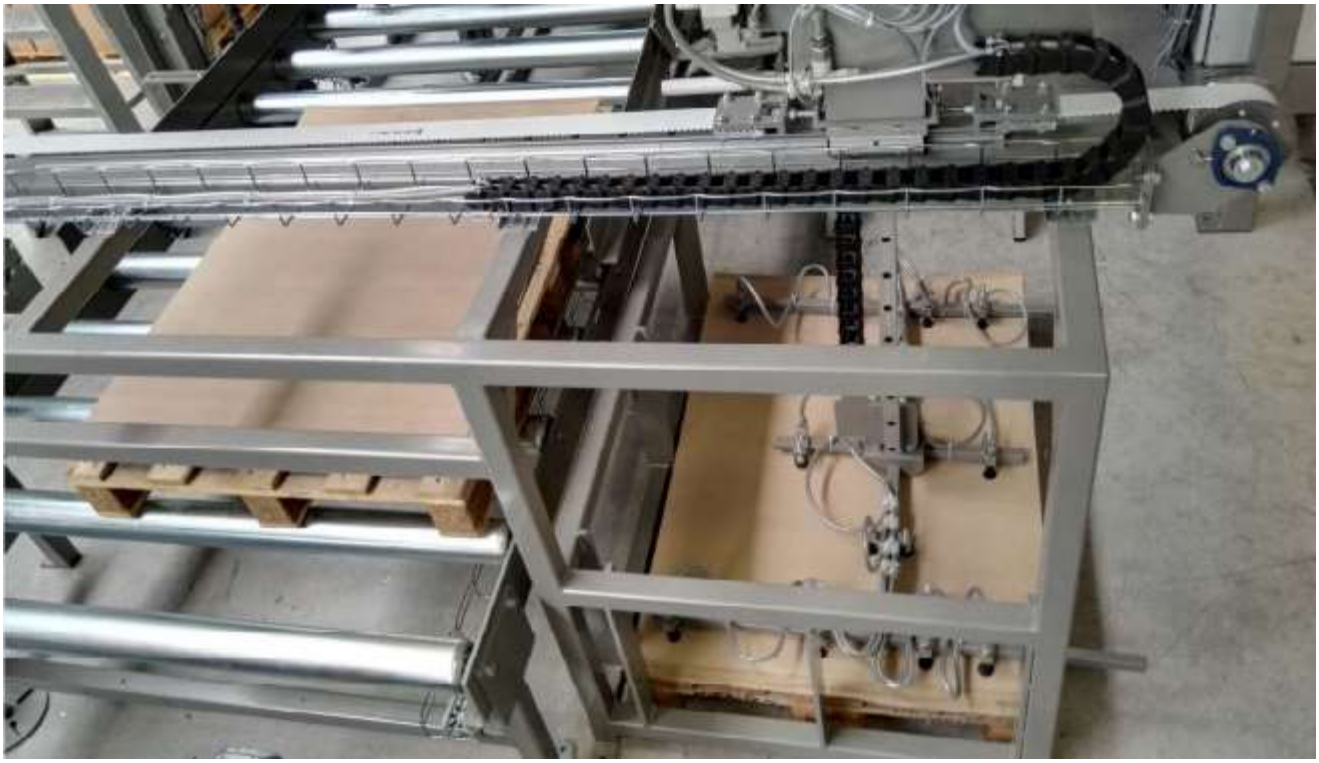
Service
A remote control takes care of an easy connection with the machine. Therefore is Votech able to guarantee a 24/7 service for fault- and alarm messages. The machine also contains WIFI for an internet connection

6.2 Sheetdispenser



To place cardboard sheets onto the pallet. The sheetdispenser is able to move vertical and horizontal. The sheets can be placed into the sheetdispenser at a previous fixed position. Than the sheet is picked up by suction pads. When different sizes of sheets have to be produces it is possible to ajdust the suction pads.
*** palletrange between: 800 x 1.200mm and 1.150 x 1.300 mm**

6.3 Operation palletiser

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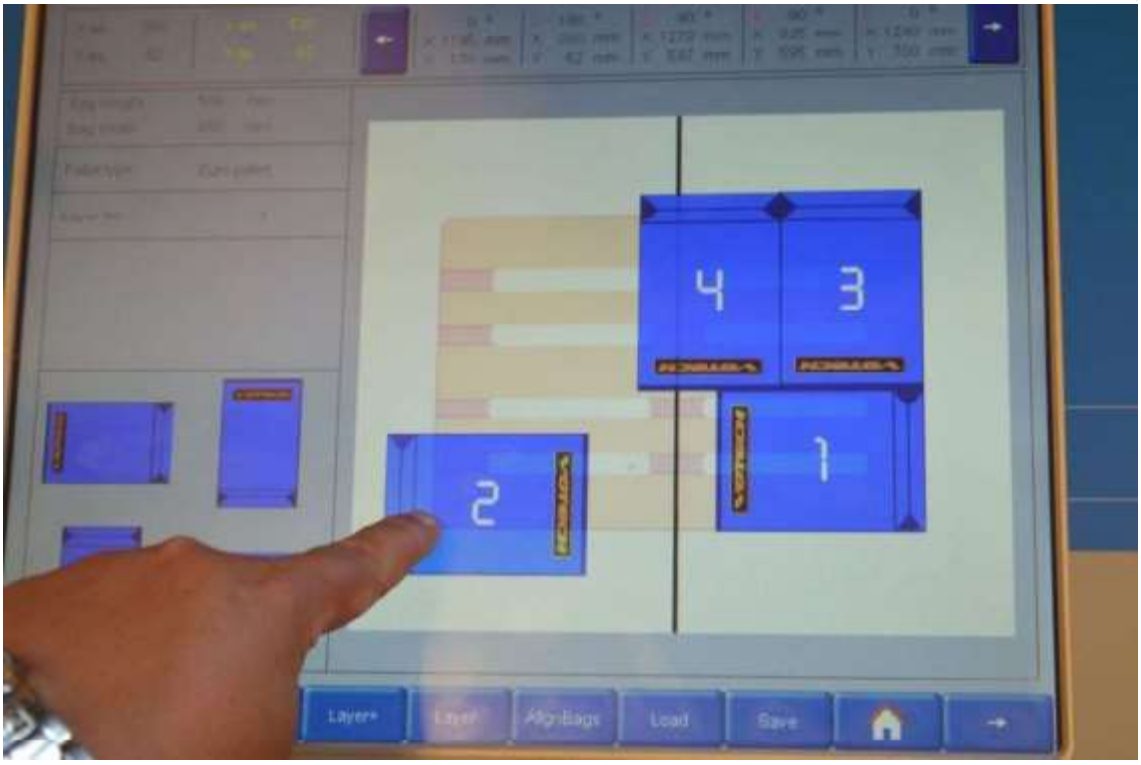

See example
*** The palletiser also contains a screen to check the in- and outfeed signals like the bag filling machine**

6.4 Specifications palletiser

Environment
Dry, not aggressive
+5°C to +40°C

Product/bag details
Product: Bags with milkpowder
Weight/Volume: 5 - 25 Kg
Length filled bag: min. 500 mm and max. 900 mm
Width filled bag: min. 300 mm and max. 450 mm
Height filled bag: min. 100 mm and max. 250 mm
Bagtype: Openmouth bags with blockbottom
Bagmaterial: Paper

Standard machine details
Mainframe colour: RAL 9007
Machine parts colour: RAL 9007
Roller conveyor colour: RAL 9007
Fence colour: RAL 9005 (black)
Electrical connection: 3x400V+N+PE and 50Hz
Electrical parts in machine: According to IP- 54 norm
Current (amperage): Depending on project size
Control power (PLC): 24VDC
Pneumatic connection: 6 bar, 1"
Air use: Depending on project size
PLC control: Sigmatek with 500 free adjustable menus
Machine safety: According to CE
Rollerconveyor height: 600 mm
Rollerconveyor speed: 10,6 mtr/min.
Constructionparts: Steel 37
Finishing: Powdercoated

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Specific machine details

Maximum palletheight (incl. palletheight): 2.400 mm including pallet
Pallet sizes:
Euro (1.200 x 800 mm)
Industrial (1.200 x 1.000 mm)
1.150 x 1.300 mm
1.120 x 1.120 mm
Maximum pallet weight: 1.500 Kg
Maximum weight in storage: 550 Kg
Maximum machine capacity:
900 bags/hour with 5 bags a layer

6.5 Stacking box

The lifting conveyor is placed in a shaft. Displays the pallet stacked. The box is adjustable for 4 modes. Once the pallet is ready the doors will open and run the full pallet and an empty pallet entered.

The stacking box prevents bags hanging over the edge of the pallet. The bags will stay nicely within the size of the pallet. This creates a major advantage for transporting pallets for example in containers.

6.6 Necessary adjustments for several pallet sizes

- Adjustment mechanism into the palletiser such as additional cylinders, valves and guides etc.
- The extra adjustment components are needing more space inside the palletiser. This means adjustments related to the main frame, forming tables, stacking box etc.

6.7 Extra set of safety guards at empty pallet storage

The empty pallet storage will be executed with an extra set of safety life guards. When the life guard is inturrupted during production the machine get in emergency stop directly.

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7 Pallet transporting system behind palletiser

7.1 Rollerconveyor L= 1.475 mm (with set-up position)

For transporting the pallets. This rollerconveyor can be used as a setup position.
The conveyor is provided with a photocell for pallet detection.
L = 1.475 mm, W = 1.300 mm.
The distance between the electrolytic galvanized rolls is 125 mm
The forklift driver is able to attach a menunumber with the pallet

7.2 Collision protection

Protection for the roller conveyor when picking up or setting up stacked pallets by a forklift.

7.3 Extra fencing for safety

The outfeed position will be provided with extra safety fencing. The palletiser and wrapper will be completely surrounded for safety protection.

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8 Pallet wrapper

8.1 Palletwrapper (turntable)

Fully automatic pallet-stretch wrapper. The pallet is turned around by a turning table.

Consisting of:
- **Mast and turntable are built on an adjustable sub frame**
- **Rotating Ø 1.860 mm turntable (max. 2.000 kg) with driven conveyor**
- **Colour touch panel mounted in a separate desk beside the wrapping machine**
- **Film clamp mounted beside the conveyor on the turntable, in the centre of the wrapper**
- **Wrapping from the bottom to the top and backwards**
- **Air pipe mounted under the film clamp, air blows the begin film tail up, this piece will be wrapped in with the next wrap**
- **Film brush-on and cutting system. The turning point is beside the wrapper. This system turns in at the end of the wrapping cycle. The film will be cut by a knife and will be brushed on to the load**
- **Film carriage will be driven through a toothed belt mounted on a linear construction, the film carriage has a fall prevention device**
- **Loading height detection by photocell on the film carriage**
- **Frequency controlled SEW motors, for turntable, film carriage and film feed system**
- **Up and down speed of the film carriage is step less adjustable by the touch panel**
- **Number of wraps at the top and at the bottom of the pallet is adjustable by the touch panel**
- **Driven Pre-Stretch system including feedback system. Pre-Stretch by means of gear wheels up till 300% pre stretch.**
- **Film feed (tension in the film between film carriage and load) is adjustable by the touch panel. Every load does have 3 levels, pallet bottom, base and pallet top. The tension can be independent adjusted on these 3 levels. On this way very various loads can be wrapped.**
- **Air reduce unit with slow start air valve**
- **Free programmable PLC**
- suitable for 15 R. P.M. (allmenu's do have the same rotation speed)
- **Automatic in- and out feed of pallets**
- **5 Wrapping menus**
- **Pallet counter, total counter (not reset able), day counter (reset able)**
- **CE-mark**

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- Pallet bottom wrapping program (higher film feed at pallet level)

Specifications wrapper

max. pallet height:	**2.400mm (incl. pallet)**
max. pallet weight	**2.000 Kg**
max. pallet size	**1.200 x 800 mm**
	1.200 x 1.000 mm
	1.150 x 1.300 mm
	1.120 x 1.120 mm
max. film widht	**500 mm**
filmroll diameter max.	**250 mm**
filmthickness:	**15-30 micron**
Capacity:	**45 pallets/hour**

Components
Motors: SEW
Pneumatic: Feste, Origa
Electric: Leuze, Phoenix, Moeller, SEW, Weidmuller

8.2 Safety (wrapper)

· Fence around the installation with one door (± 18 m.)
· safety and muting photocells on in feed and out feed conveyor
· safety relays for emergency stop

8.3 Topsheet dispenser (waterproof)

8.4 Sealstar

The sealstar is mounted on the turntable. Sealing is part of the cycle.
· The Film brush**-on and cutting system consist a sealstar**
· The sealstar wil lbe pressed against the load. The cuttingdevice in this unit cut the film.
· The hot sealstar melt the layers together.
· The sealstar consist of bloc aluminium and is covered with a Teflon layer. The Teflon avoids film waste.

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· The temperature accurate adjustable on the touch panel.
· The sealstar is strongly recommended in cold areas. The clingladhesion of the film decreases in lower temperatures.
· Also in automatic warehousing is a seal unit recommended
· Including roping device on the film carriage.

8.5 Necessary adjustments for a total of 4 palletsizes

The wrapper will be adjusted for 4 different pallet sizes

1.200 x 800 mm
1.200 x 1.000 mm
1.150 x 1.300 mm
1.120 x 1.120 mm

9 Pallet transporting system behind wrapper

9.1 Rollerconveyor L= 1.475 mm (2x)

Rollerconveyor is transporting the wrapped pallets.
L= 1.475 mm, W= 1.300 mm
- provided with a sensor for palletdetection
The distance between the electrolytic galvanized rolls is 125 mm

9.2 Rollerconveyor L= 2.975 mm (2x)

Rollerconveyor is transporting the pallets.
L= 2.975 mm, W= 1.300 mm
- provided with a sensor for palletdetection
The distance between the electrolytic galvanized rolls is 125 mm

9.3 Palletstop on rollerconveyor

At the end of the last roller conveyor a stop is placed in case a sensor doesn't give a signal. For safety

9.4 Collision protection

Protection for the roller conveyor when picking up or setting up stacked pallets by a forklift.

9.5 Control and cabling of pallettransportingsystem

Votech shall place the necesarry cables, to control the pallettransporting system, from the engines to the electrical cabinet. Control will be integrated in the display.
Including:
- cabletrays
- cables (bundled)
- clamps
- ty-ribs

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10 Pallet print and apply sytem (2 sides)

10.1 Pallet print and apply unit (Sato printengine)

Sytem for 2-side labeling during standstill at a repeatable and constant position
Consists of:
- **labeprinter applicator**
- **Printengine Sato S84 6" 200 dpi**
- **Labelsize 148 x 210 mm (A5)**
- **Control unit: PLC, Siemens**
- **Alarmbeacon: red en green**
- **Frame mounted to the floor**
- **Control cabinet in stainless steel (backside)**
- **Cabinet (aluminium) for printer protection**
- **Must talk to Nice label**

Excluded:
Commissioning and testing on site at Volac
Travel and accommodation costs for commissioning and testing the labelprinter on site at Volac

10.2 Integration pallet print and apply system in Votech line

The pallet print and apply system will be integrated mechanically and program technical in the Votech line.
*** Specific communication or control purposes are excluded and have to be further discussed.**

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11 Installation and commissioning

11.1 Installation and commissioning (including 5 days of training)

To ensure the smooth installation and commissioning of the Votech equipment, the client must take into account the following requirements:

- **Electrical connection and power supply to the machine(s) is already present**
- **Compressed air connection to the machine(s) is already present**
  - *** Power supply and compressed air is supplied to the machine by the client**
- **Client ensures an Ethernet connection with internet for remote service**
- **The floor on which the machine is located is paved and flat. Preferably concrete**
- **If necessary adjustments to the floor may be made during installation of the machine. These adjustments are for example drilling and welding.**
  - *** There should be no reinforcement in the floor**
- **All construction work will be provided by the client**
- **A forklift, hoist, crane etc. should be available during unloading of the machine(s)**
- **The passage to the site must conform to the transport dimensions of the machine.**
- **During installation of the machine(s) a forklift without a driver is available**
- **During the test run and start-up of the machine (s), there must be sufficient suitable product and packaging material for constant production.**
  - * for example: (empty) bags, relevant testproduct, pallets, sheets, foil etc___
- **During the test runs and start up of the machine(s) there should be at least one operator available for assistance. The operator learns how to work with the machine(s).**
  - *** This is a part of the training**
- **The client must appoint a contact person for communication during preparation, installation and commissioning of the machine(s)**
- **The client ensures a safe and free working environment during the entire installation and commissioning of the machine(s)**
  - *** The client informs Votechin advance of the internal safety and/or hygiene regulations**

Hours of delay and extra costs for the technical employees of Votech during installation, commissioning and start-up at location will be charged, if the client has not been able to meet the above requirements.These hours will then also be reported separately and / or indicated on the work reports and submitted to the client for approval.

12 Material price increase

12.1 Steel price increase

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13 Materiallist

13.1 Material list

Pneumatic >> SMC
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Bearings >> O.a. Askubal
Chains >> Renold, AS
Rod ends >> Askubal
Bullet shells >> INA
Rail guides >> Franke
Electrical cabinet >> Eldon/Rittal
Contractor >> Eaton Moeller
Thermal relays >> Eaton Moeller
Circuit breakers >> Eaton Moeller
Proximity switches >> Contrinex
Terminal strip >> Wago
Photocells >> Sunx, Continex, Sick
Safety light curtains >> Datalogic
Control equipment >> Eaton Moeller
Control cable >> Oflex Lappkabel
Signal cable >> Unitronic Lappkabel
Maintenance switch >> Eaton Moeller
Safety switch >> Fortress, Bti
Safety relay >> Eaton Moeller
Clamp box >> Sarel
Control >> Sigmatek
Electric motor (standard) >> SEW
Electric motor suitable for invertors >> SEW
Invertor >> SEW
Ty-raps >> Votech standard
Mounting material, cable trays and the like. galvanized

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