

GALAHAD

Automatic Bag-slitting & Emptying Machine



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SAMPLING • DOSING • MIXING • STORAGE • CONVEYING • DEDUSTING • DISCHARGING • FILLING • ENGINEERING



'Galahad' Bag-slitting and emptying machine

For automatic, dust-free and continuous discharging of bags

Manual emptying and handling of bags is very labour intensive and can generate an unacceptably high dust level. Problems like product waste and contamination are hard to eliminate. Many of the products handled can be dangerous if inhaled or if they come into contact with the skin. It creates a working environment with serious health dangers resulting in a lowering of operator efficiency and production capacity. An effective bag emptying and discharge system can make the difference.

Perfect solution for all your bag discharge problems

The 'Galahad' machine ends all your dust and discharge problems once and for all. The automatic bag-slitter is suitable for the continuous and dust-free handling of all types of single- or multi-layered bags. Paper, plastic, large, small, dense- or light-filled with granular or powdered products, the 'Galahad' will cut and empty them without problems. Depending on the properties of the product and the condition of the bags, capacities up to 50 tons per hour can be obtained. The standard execution will handle approximately 20 tons per hour.

Efficient bag handling

The method of operation is simple but very effective. It ensures that the bags are emptied with minimal residue (0,01% - 0,5% for free flowing products). By the appropriate design, the "Galahad" can be operated by one man only and offers you an economic solution for your bag emptying problems. The 'Galahad' machine can be directly placed above a discharge point. If this is impossible or not desired, then TBMA can offer you a wide range of pneumatic and mechanical conveying systems to suit your specific needs.

Dust-free and safe working conditions

All access ways to the machine interior are fitted with safety switches. The machine allows simple cleaning in order to handle various products without contamination. A dust filter with extraction fan can be mounted directly on top of the machine or pipe connections can be mounted to allow ducting to a free standing filter unit or central dust collecting system.



Debagging of pigments and fillers

'Bags to Bulk' systems for plastic granules and powders incorporating 'Galahad' automatic bag emptying machines





Method of operation

1. Bag centralization – Machine inlet

The bags can be fed to the inlet of the machine by roller conveyor or belt conveyor. By either method the bags are presented to a set of grip faced powered rollers situated within the machine inlet. The powered rollers propel the bags forward between adjustable side guides. These side guides centralise the bags prior to the main twin chain conveyor of the 'Galahad' machine.



2. Automatic location

A bag passing through the centralising guides is automatically collected by the twin chain conveyor. The twin chain conveyor is equipped with a series of knife points to grip the edges of the bag. A set of adjustable rollers exert pressure on the bags, to ensure that they are fully impaled on the knife points of the conveying chains.



3. Bag slitting

The conveyor chains transport the bags directly to a centrally mounted circular rotating knife which is driven by a separate motor. The rotating knife is adjustable for cutting depth. Bags are conveyed across the rotating knife and are slit open lengthwise.



4. Product discharge

After being opened the bags remain firmly held by the knife points of the conveyor chains. The bulk of the bag contents are now discharged by gravity via the flanged outlet connection.



5. Vibration of bags

In order to ensure optimum discharge and minimal retention of product, the conveyor chains are vibrated by pneumatic vibrator units. The vibration effect is adjustable for frequency.



6. Empty bag discharge

The empty bags progress to the head shaft of the chain conveyor and are released from the knife points by a rotating discharge drum. The empty bags are discharged down the exit chute of the machine where they can be collected by either a bag compactor or automatic baling press.



Special Applications

Stainless steel execution

Suitable for food installations or corrosive products etc. All metal product contact parts are then manufactured from stainless steel

Widened execution

For handling bags with extra large width

Extended execution

For handling difficult flowing products or to increase the discharge capacity by means of a longer and/or faster bag transport

Tilting ceiling doors and extra access doors

To accommodate a better accessibility the machine can be fitted with 2 tilting ceiling doors and 2 extra access door. This will greatly simplify the cleaning and exchange of internal machine parts



Complete bag slitting machine with cleaning unit, bag compactor and enclosed belt conveyor





Ancillary Equipment - Complete Installations "Made to Order"

The unit can be supplied with a wide range of ancillary equipment. Platforms, supports and catwalks are designed to any client specifications in order to convert the unit into a complete bag handling installation. For example:

Dust filter unit

Mechanical- or Reverse Jet dust filter in several executions place on top or next to the machine. An integrated dust filter is placed on top of the machine directly above the cutting- and vibration area. The 'Galahad' can be fitted with 3 pipe connections for ducting to an externally placed dust filter. Choice of type of filter is determined by the product handled.

Operator/control panel

Fitted with motor contactors and motor protectors. Control facilities include door mounted LCD display for all alarm and event messages and PLC controller with Start/Stop sequence.

Tilting/Scissor lift table

For easy intake of bags from pallets at a suitable working height

Belt conveyor in various executions

Almost any desired type of belt conveyor can be fitted to the bag slitting unit for automatic bag in feed. Choice of belt conveyor type is subject to local situation, type of bag and desired working height. Belt width varies from 500 till 600 mm with a maximum elevation angle of approx. 35°.

Crusher / lump breaker

For breaking down lumps and agglomerates from product after discharge

Rotating-brush cleaning-unit

To prevent contamination of product when bags are used with dirt or dust on the outside, a rotating-brush cleaning-unit can be placed at the bag inlet of the 'Galahad' machine

Screw conveyor

For mechanical conveying of product after discharge

Rotating sieve or built-in vibrating screen

For removal of contaminants and lumps from product after discharge

Rotary blowing seal

A blowing seal can be fitted directly under the product hopper to accommodate pneumatic conveying of product after discharge

Bag compactor

A screw compactor can be fitted at the discharge chute of the machine. Bags are compacted and discharged into plastic bags secured to the outlet of the compactor

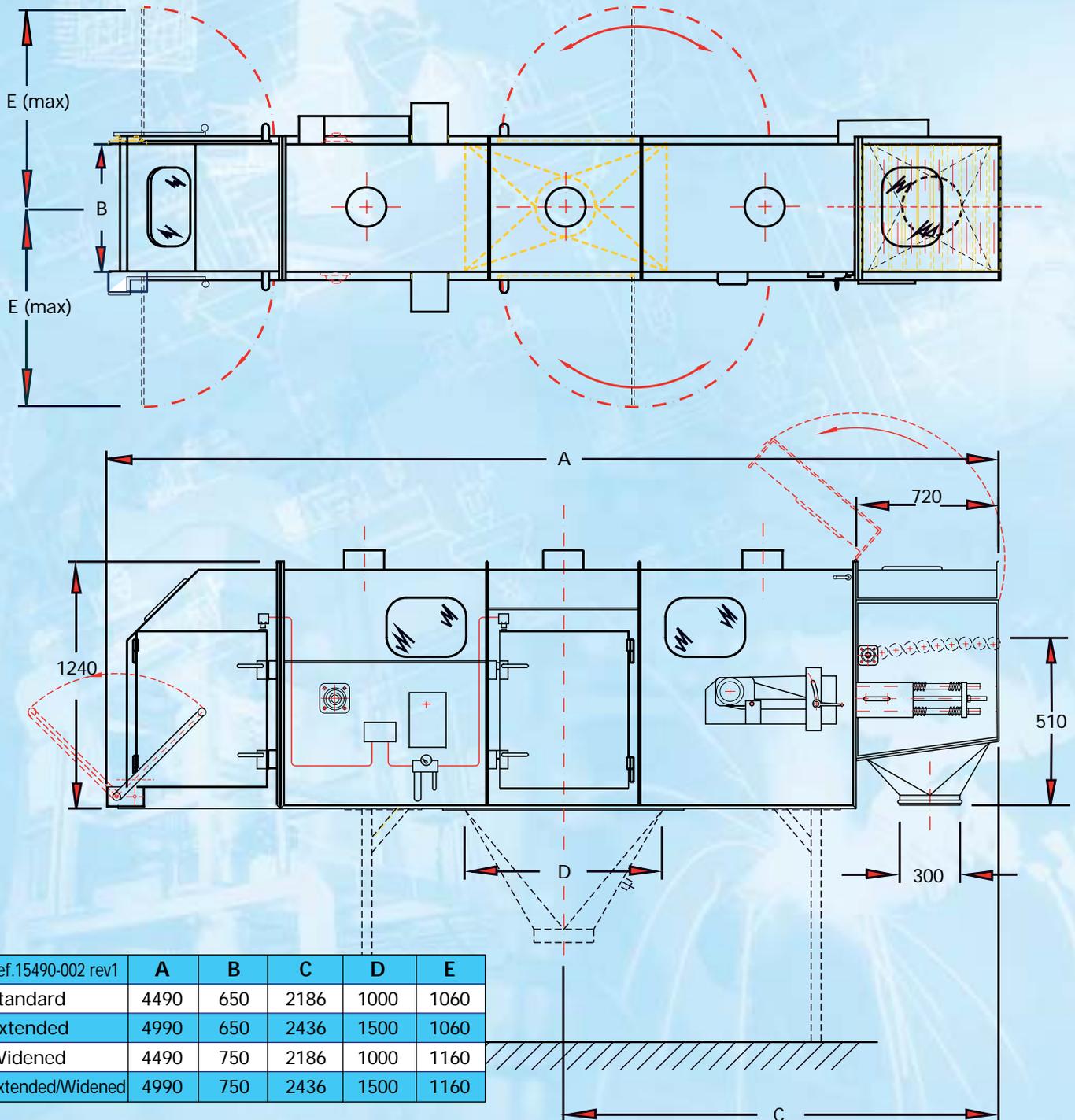
Automatic baling press

A baling press can be connected to the 'Galahad' by means of a closed discharge chute. Various configurations are possible. The bags are compacted to form a bale, automatically tied with annealed wire and pressed out of the baling unit. Length of the bale is adjustable. Flange connections are provided on the baling press for ducting to the dust filter on the 'Galahad'.

TBMA has a wide range of expertise in the application of this type of equipment with proven reliability in practice that is essential for a correct assessment of the right type of system for your particular situation.

It is our business to provide the solution to your process problems, whether you require a single unit for a specific problem or a complete bag handling system. TBMA can make the difference. Contact us and find out!!

Technical specifications



Weight standard Galahad:	1000 kg
Bag thickness:	max. 250 mm
Bag width adjustment range:	390-520 mm standard • 360-620 mm optional
Rotating knife:	hard chrome plated standard • Tungsten Carbide coated optional
Conveying chain speed:	8 mtr./min standard • 5 tot 18 mtr./min optional (depending on product)
Material execution:	steel coated or stainless steel
Drive:	0,75 kW bag transport • 0,75 kW rotating knife
Chain tension:	automatic and self-adjusting
Inspection / maintenance:	4 access doors standard / 6 access doors • 2 tilting ceiling doors optional
Safety features:	safety switches on all access doors

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