

## TECHNICAL REFERENCE SHEET

### SAS - Sacks opening station and Absorption System



#### OPERATION AND MAIN FEATURES

SAS provides a sacks lifting assembly for mail sacks opening and an air depression system for the absorption of the originated dust. The mail discharged from sacks is automatically conveyed to an output belt for manual segregation.

The machine is available in two configurations:

- SAS – MAN: stand alone.
- SAS – AUT:linked through a belt conveyor to the CFC machine, to feed it.

The main functions of SAS are:

- Sacks Lifting,
- Dust Absorption,
- Manual Segregation,
- Feeding mail to the following manual or automated processes.

SAS has been designed with the most advanced technologies of belt transport and air depression and filtering, and it is composed by the following parts:

- Sacks Lifting Device
- Hopper Bucket
- Dust Absorption subsystem
- Extraction Belt
- Segregation Belt
- Control Panel

#### SACKS LIFTING DEVICE

It allows the operator to easily clamp, lift and position the sack just over the bucket, with very limited effort.

It may handle loads up to 50 Kg and it is based on a hoist sliding on an overhead guide bolted to the machine frame.

Sack is clamped to the hoist by the operator just at the side of the bucket, then it is lifted (up to 2 mt.) and slid just over the hopper bucket, where it is opened leaving the mail items falling down into it.

The clamping device is based on a leverage system acting with a resulting strength directly proportional to the weight of the sack.

A lever handle allows the operator to easily open the clamp, to insert or release a sack.



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### HOPPER BUCKET

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Its inside walls are built of stainless steel, suitably perforated to allow the dust sucking by the air depression and filtering system.

The external border of the hopper bucket has height and shape suitable for manual loading of lighter sacks.

Buffering capacity is of about 3 sacks of mail.

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### DUST ABSORPTION SYSTEM

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The air depression and filtering circuit is powered by two exhaust fans which suck dusty air through the inside walls (perforated) of the hopper bucket and release clean air to the surrounding environment after an accurate two-levels filtering.

Filtered air is released from the upper side (2,5 mt off ground) of the SAS, to avoid any inconvenience to the operators.

A set of primary filters is placed just behind the hopper bucket to trap most of the dust, whereas a set of secondary filters is provided for a second step fine filtering to prevent any dispersion of dust in the environment.

Filters have been designed to be inspected and cleaned or replaced in a very easy way.

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### EXTRACTION BELT

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SAS may process mixed mail items, including letters, flats, bundles and packets.

The extraction belt conveyor is suitably inclined and made of appropriate material (high grip) in order to extract mail items out of the bucket without jams and to move them to the segregation belt conveyor.

The extraction belt is powered by the same motor powering also the segregation belt conveyor.

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### SEGREGATION BELT

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The segregation belt conveyor is horizontal, it has a low grip belt to make easier the manual segregation of mail items and it is powered by a drum mechanically tied to the motor of the extraction belt.

The segregation belt is about 700mm wide and its surface is at about 900mm height from ground. Lateral areas separated from the belt by a small rib (about 2 cm) are provided to allow for storing of culled out items.

#### **SAS-MAN Segregation task**

- Up to 4 Operator positions are foreseen (2 people at each machine side) for the mail segregation task, depending upon the mail flow to be processed.
- Segregation belt receives mail fed by the extraction belt and allows the operators to manually open bundles of letters and flats, to segregate non-machinable items and to fill trays with homogeneous mail formats to be fed to the following manual or automated mail processing steps.
- Belt STOP and RESTART are manually given by the operators, accordingly to their operational needs.

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### CONTROL PANEL

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Control Panel is the power and control cabinet of the SAS. It provides electrical power to motors, pushbuttons, selector and signalling devices of SAS.



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