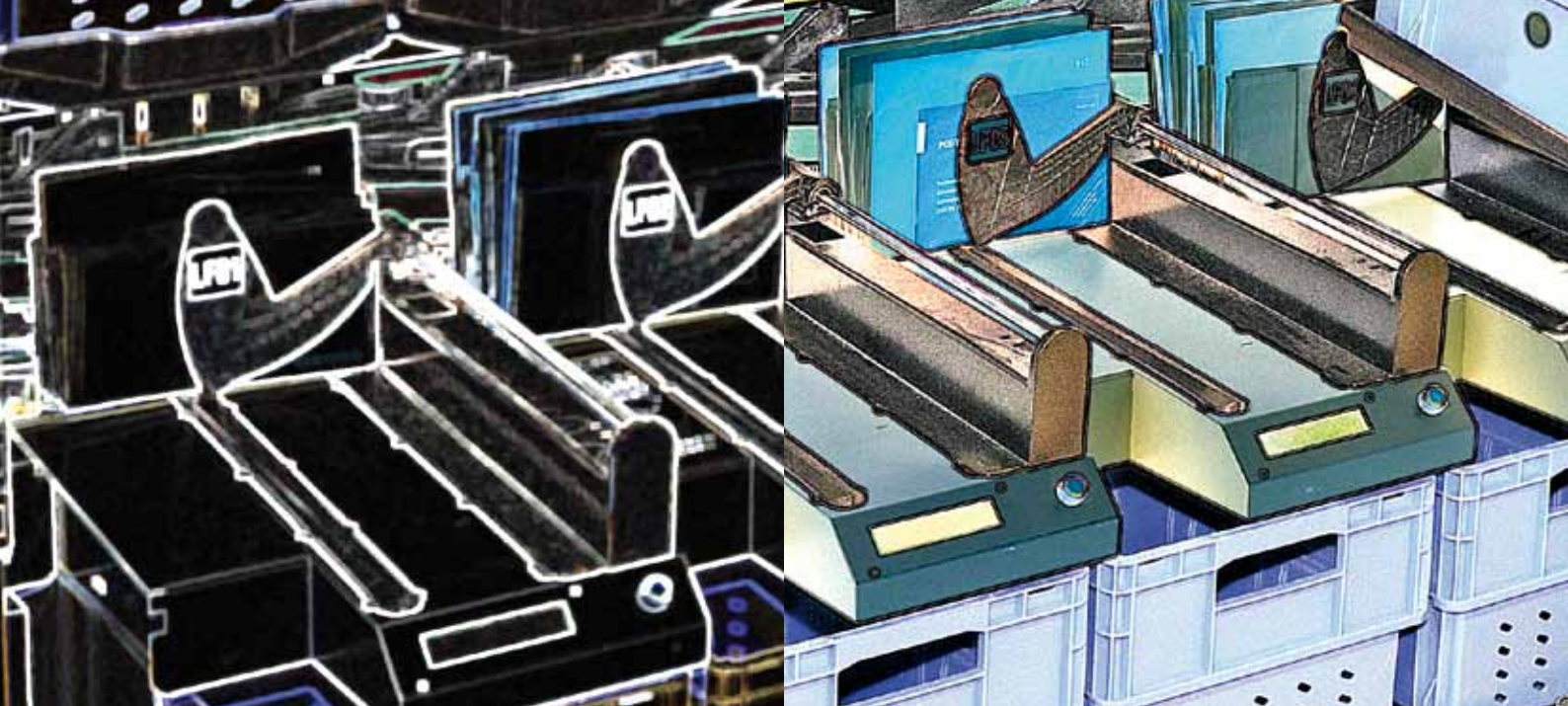


SOLUTION SERVING YOUR MAIL SORTING NEEDS

STAR

The high speed sorting



Future postal solutions

 **SOLYSTIC**
a NORTHROP GRUMMAN company

Custom-made solutions

FROM SIMPLE AND COMPACT SORTING MACHINES TO THE MOST SOPHISTICATED EQUIPMENT.

RECOGNISED QUALITY

The variety of the mail pieces to be processed, the number of its customers and the specificity of each of them gave to SOLYSTIC a know-how which makes it a leading supplier in the postal market. Today, many operators made the choice of using STAR sorting machines in their mail processing centres.

LARGE MODULARITY

STAR machines are one or two-sided, configured in an L or U shaped as well as mirrored machines. Trays, bins or both can be proposed for outputs. However it may be noticed that the machine with 2 tier stackers (STAR Duplex) is the general trend claimed by the postal operators.

REDUCED FOOTPRINT

STAR Duplex outputs are configured in two levels and grouped together in modules of 16. They can be provided in an L or U shaped configuration to make a more compact machine.

Sliding tray supports are positioned under each output to avoid handling errors and facilitate evacuation of the mail.

HIGH THROUGHPUT

Thanks to a sophisticated destacking unit and a long feeding belt onto the mail is loaded, STAR handles up to 53,000 mail pieces/hour depending on the length of the pieces processed. A mail loading mechanism which can help the operator is proposed in option.

WIDE RANGING

STAR handles a wide variety of mail up to format B5 and 8 mm in thickness. This significantly reduces the volume of mail pieces handled manually and contributes to increase the automated sorting productivity.

WELL-DESIGNED ERGONOMICS

Ergonomics has played an important role in the design of the machine: analysis of all workstations, search of the best trade-off between productivity and the welfare of the operators, noise level reduction, as well as number of monitoring lamps or audio signals positioned strategically all along the machine. Signalling and Man/Machine dialogue also contribute to the performance of the equipment. They improve operators' reactivity and productivity.

Lastly, the system has been designed for a mail processing environment including take away and supply conveyors.



Ergonomics simulation software



Loading magazine

STAR



Mail range

127 ↔ 292 mm

88 ↔ 176 mm

0,15 ↔ 8 mm

1,2 ↔ 100 g

COMPATIBILITY

STAR is compatible with all of the other SOLYSTIC products. It is also compatible with competitors' products. Every mail processing solution or OCR is connected to the same network, thus providing a complete and modular solution, reduced integration time, guaranteed expandability and upgradeability.

Furthermore, STAR has been designed to be connected to the SOLYSTIC Management Information System or to any other supervision system, both for operations and maintenance.

MAINTENANCE

Good accessibility, associated with high performance test and adjustment tools, contribute to making maintenance teams interventions all the more efficient. As an option, a vacuuming device to remove dust generated by mail items can be proposed.

WEB MONITORING

STAR machines can be monitored remotely in real time, from anywhere that the Internet can be accessed, using SOLYSTIC's web monitoring tool *easy-View*. Standard tools such as web browsers, smartphones or tablets are used to consult the machine. This monitoring feature enables technical support teams to respond more quickly, thereby significantly reducing costs.

STAR, a proven and manufactured solution.



Image acquisition unit



Double level stackers

- Wide range of mail processed
- High throughput
- Well-designed ergonomics
- Optimised maintenance
- Tried and tested product
- Open interfaces

Identification and coding

MAIL PIECES ARE SORTED ACCORDING TO THE ATTRIBUTES DETECTED ON THE ENVELOPE AND SPECIFIC PRINTED CODES.

ENVELOPE PROCESSING

The acquisition unit captures the mail piece's image in different levels of grey and in colour. Several binary images are thus generated. The OCR – Optical Character Recognition – reads the addresses. To round off this automatic reading equipment, SOLYSTIC offers an on-line and/or off-line video-coding system. In on-line configuration, a mechanical delay line offers up to 30 seconds of latency time.

As an option, the image is also used for customer bar code reading. Bar codes are read either through image acquisition, or by means of a specific reader. All types of codes can be read – including symbols, formats or 2D – and are printed using fluorescent or black ink on the front or back of the envelope.

The system can also recognise specific attributes such as stamps, logos, cancelling marks, RFID, etc.

Mail processing through STAR is getting optimum when the following services are integrated inside the machine:

- window detector: address block localizer,
- multiple feed detector,
- culling of non-machinable mail pieces: based on thickness, rigidity, height and length criteria,
- metal detector.

PRINTING

When the attributes are recognised, the system prints a routing bar code or an ID-tag on the front or back of the mail pieces, in accordance with S18 or S19 UPU Standards.

As an option, the machine can be equipped with:

- a bar code verifier to check the bar code printing quality,
- a vacuuming device to remove the ink mist emitted by inkjet printers.

V-ID™

ID-tag may advantageously be replaced with a V-Id™ (virtual identification tag). The principle is to identify each item of mail through its image without previously having printed an ID-tag. The fact that no ink or solvents are therefore used does reduce operating costs as well as capital costs.



A high modularity

ATTENTIVE TO ITS CUSTOMERS'NEEDS, SOLYSTIC IS OFFERING SEVERAL TYPES OF OUTPUTS.

SEVERAL OUTPUT TYPES

SOLYSTIC advises the double level stacker solution. It is especially well adapted to centralised letter sequencing.

Other options are available such as:

500 mm stackers

One-sided or double-sided stackers can be proposed. The maximum configuration can be 224 outputs.

Bins

Grouped together in modules of 40, the bins are configured over 5 levels with a maximum of 400 directions.

Mixed outputs

In its maximum configuration the STAR-TPF can group together 64 stackers and 280 bins. The equipment is usually U-shaped configured to make it more compact.

Mini-stackers

The machine called COSMOS is fitted with mini-stackers grouped together in modules of 32 and configured over 4 levels.

HIGH PRODUCTIVITY

Numerous options can be integrated on request; they contribute to the equipment's efficiency:

- a shut-down device independent of the levels. Should a jam occur, only the level concerned is shut down,
- fill level detection of containers,
- emptying operators are guided by a special display.

Sorting module can also be equipped with:

- LCD display per output,
- label printers for tray identification,
- warning lights for cut-off times.



Tray Label Printer

MAN/MACHINE INTERFACE

The colour touch-sensitive screen makes it simple for the operator to access a number of parameters, including sort modes, sort plans, mail batches, etc. During operation, information is displayed in real time and the operator can optimise the machine's operation at any time by modifying these parameters. In addition, statistical data can be viewed in the form of graphs.

STANDARDISATION

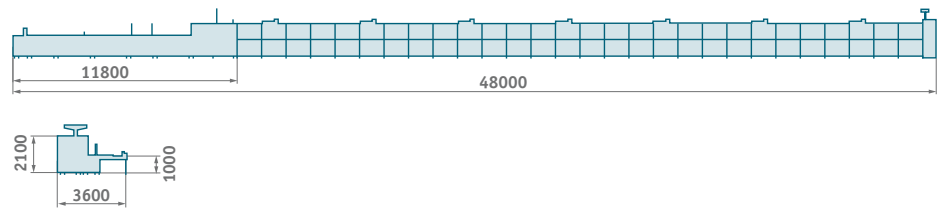
Whether the machine is a STAR, MARS or TOP 2000:

- the Man/Machine Interface used to pilot the equipment is always based on the same principles. Many screens are common to the three types of machine,
- a number of components are the same for SOLYSTIC's solutions, thus reducing spare parts stocks.

Moreover many interfaces used to connect STAR to other systems such as OCR's, VCS or Information System, are designed to be fully opened such those developed by CEN (TC 331) and UPU.

TECHNICAL CHARACTERISTICS

Nominal throughput	Up to 53,000 mail pieces/hour depending on the length of the mail piece
Feeder capacity	> 2 m
Double level stackers	Capacity 410 mm , up to 416 stackers, 16 stackers/module
One-sided stackers	Capacity 500 mm, up to 96 stackers, 8 stackers/module
Two-sided stackers	Capacity 500 mm, up to 224 stackers, 16 stackers/module
Bins	Capacity 120 mm, up to 400 bins, 40 bins/module
Stackers + bins	Up to 64 one-sided stackers and 280 bins
Mini-stackers	Capacity 365 mm, up to 256 stackers, 32 mini-stackers/module
Noise level	≤ 70 dB
Environmental conditions	Temperature: between 15° C and 40° C – Operating conditions Relative humidity: 20 % to 80 % without condensation



Dimensional area (mm)



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