

# ***FAST2CHECK***

*AUTOMATIC TRAY RETURN SYSTEM*







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*SPEED,  
EFFICIENCY AND  
SECURITY  
FOR PASSENGERS*

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Cassioli, an Italian company established in 1943, is, today, one of the world's leading providers of automatic handling and storage systems for products and raw materials.

Cassioli Airport Division, focusing on airport logistics, offers specific automated systems for handling and sorting hold baggage as well as systems for inspecting hand baggage.

Cassioli systems, based on the most advanced technologies and completely

internal know-how, offer solutions that can be customised to each airport's specific needs, optimising the work of operators and increasing throughput without neglecting the machinery's ergonomics and usability.

ISO 9001  
ISO 14001  
OHSAS 18001  
BUREAU VERITAS  
Certification



008





# CASSIOLI FAST2CHECK

## *SECURITY, SPEED AND ADVANCED TECHNOLOGY FOR AIRPORT SECURITY CHECKS*

Reducing waiting times, without compromising the accuracy of safety checks and without sacrificing passenger comfort, is the real challenge that airports face every day.

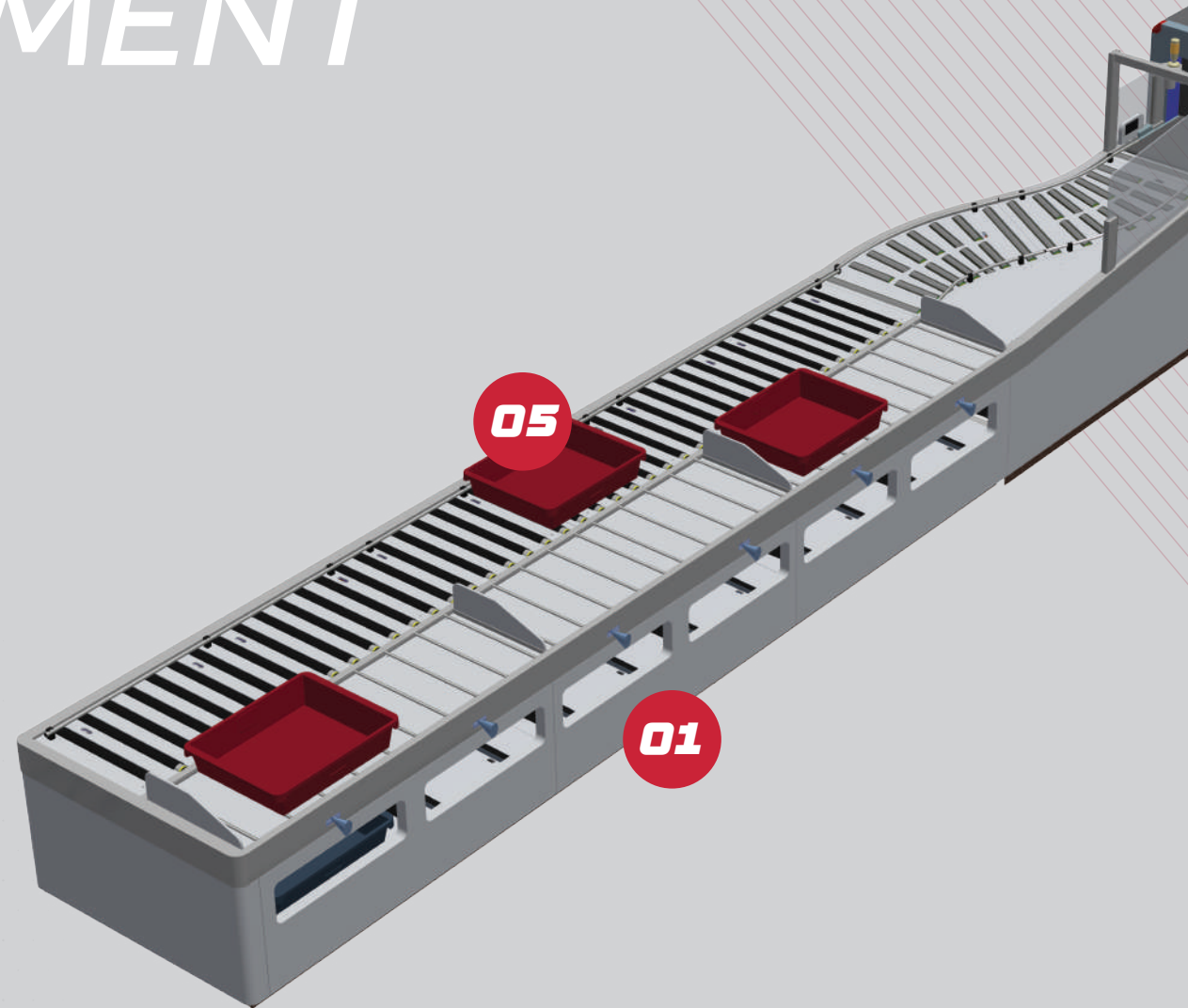
CASSIOLI FAST2CHECK is the answer to that challenge. Designed to deliver the greatest productivity whilst reducing waiting times and increasing passenger throughput, FAST2CHECK meets the needs of every type of airport, from the smallest to major international airports. Innovation in the design helps significantly reduce queues whilst complying with the

need for the most stringent security standards. The modular design offers outstanding system flexibility, permitting different configurations based on each individual airport's needs.

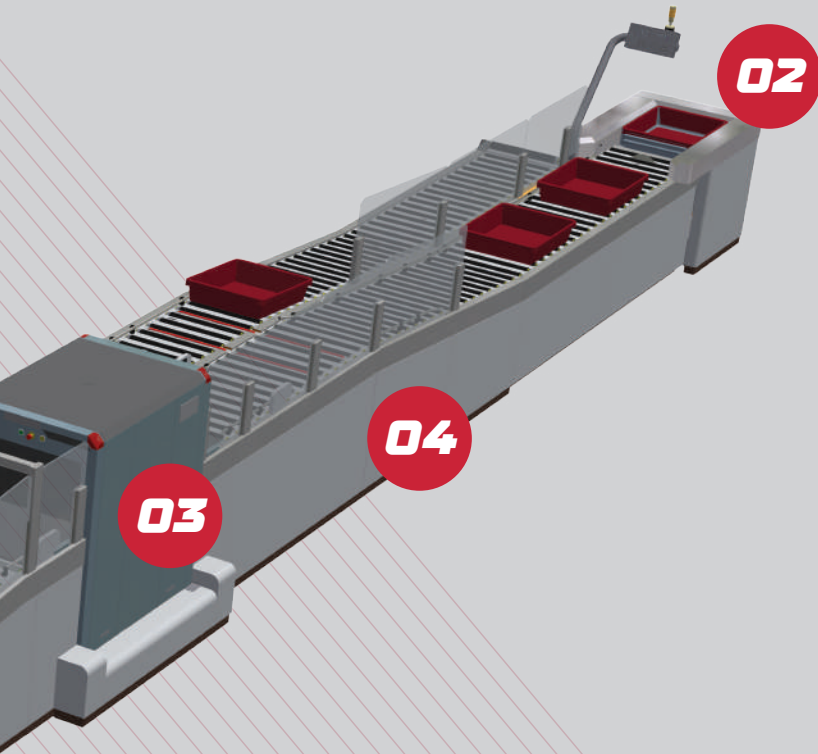
Thanks to the advanced FAST2CHECK technology, airport personnel no longer need to spend time on secondary operations such as dealing with empty trays; they can, instead, concentrate more on security procedures and service quality. All the system units operate with low voltage, direct current motors, thereby guaranteeing the highest possible efficiency and

eliminating any electrical risk to passengers and operators who are in direct contact with the system; the high quality of the materials used in the components ensures the machinery's superior reliability, with availability greater than 99.5%, even when in use 24 hours a day.

# ***AUTOMATIC TRAY RETURN & MANAGEMENT SYSTEM***







**01** *Queue Beater*

**02** *Visual Check System and Automatic Recirculation*

**03** *Modular and Flexible*

**04** *Customization*

**05** *Personalised Trays*

**01**

# QUEUE BEATER

*THE SYSTEM DESIGNED  
TO REDUCE WAITING  
TIMES AND STREAMLINE  
THE INSPECTION PHASE*

Cassioli has always stood out for its development of innovative solutions that improve the operation, usability and productivity of its machinery.

With this in mind, we designed and built the "Queue Beater", an innovative system that reduces passenger waiting time during the hand baggage inspection phase thanks to the parallelisation of the process which can handle up to 9 passengers simultaneously.



In the normal security check process, the passenger takes a tray and starts to put his/her belongings into it, then he/she pushes the tray towards the X-ray machine. With this process design (which has remained unchanged for decades), less experienced or slower passengers can delay the entire line, impacting business passengers and frequent flyers who, with their greater experience and less baggage, are quicker through the security checks. The main innovation brought by the Queue Beater is the fact that, thanks to the support line placed parallel to the conveyor, more passengers can put their items into their trays at the same time, taking up all the available positions. Passenger positioning is indicated on the floor by special pictograms. Once the tray is ready with the passenger's items, it is simply pushed onto the motorised line which takes it to the X-ray machine.



**THE QUEUE BEATER  
SIGNIFICANTLY  
INCREASES PASSENGER  
THROUGHPUT AND  
SIMULTANEOUSLY  
IMPROVES THE USE OF  
THE MACHINERY.**

The command and control panel has a PLC, with a serial software interface with the X-ray machine, in order to synchronise emergencies and to stop the conveyor in the event that the X-ray machine stops or if baggage is waiting in the discard area: this is the typical Fast in, Fast Out configuration. After putting the tray onto the motorised conveyor, the passenger goes to the body scanner.

## TRAY COLLECTION

At the end of the line, following the Queue Beater philosophy, Cassioli has provided a static surface for passengers to easily collect their items, thus ensuring that this recovery process does not stop the line or the flow of trays back to waiting passengers. One advantage of this system is an estimated total throughput increase of over 60%.



## 02

# ***VISUAL CHECK SYSTEM AND AUTOMATIC RECIRCULATION***

The tray collection, accumulation and recirculation system is placed at the end of the main line. It includes a device that can automatically detect if items have been left in a tray; in this event, the tray is not added to the accumulation and recirculation system until all the items in the tray have been removed. Once the tray is empty, it is added to the recirculation process - completely automatically - and taken to the start of the FAST2CHECK line via a high speed handling system.



## TRAY CHECK

Thanks to the simultaneous use of several different detection methods, the special sensor detects whether any items are in the tray. The accuracy of the hybrid IR/3D technology allows even very small and thin items to be detected such as, for example, documents, boarding passes, coins and rings.

For as long as the tray is not empty, the system prevents its progress. An automatic stop prevents any accidental movement of a tray that is not empty (due, for example, to other passengers pushing). As soon as the device detects that the tray is completely empty, the mobile stop releases the path and allows the tray to enter the accumulation system.



## 03

# MODULAR AND FLEXIBLE

With over 20 years of experience in the airport sector, Cassioli knows how important space is within the terminal.

That is why Cassioli has designed a modular system that can be adapted to the space available at each individual airport.

FAST2CHECK can be adapted, without constraint, to any layout and to the various X-ray machines available on the market. The in-house design and build of the various modules allows machinery to be created that is “made to measure” and 100% customisable based on the various shape, length, size and additional module requirements.



## 04

# CUSTOMISATION

*BASED ON THE CLIENT'S NEEDS, THE DESIGN AND COLOURS OF FAST2CHECK CAN BE CUSTOMISED.*

The structure is in satin-finished stainless steel with lateral panels on the passenger side and guards, on the upper line and on each part of the machinery's modules in which passengers or personnel take or deposit trays. The panels, both lateral and upper, can be delivered in a broad range of colours and finishes, depending on the client's choice, in order to match the aesthetics of the space in which the machinery is to be installed. The materials used are fire-resistant; the machinery can

be coated in Corian or Krion, special materials that deliver a superior aesthetic finish together with great resistance to wear. It is also possible to customise the machinery by adding corporate logos.

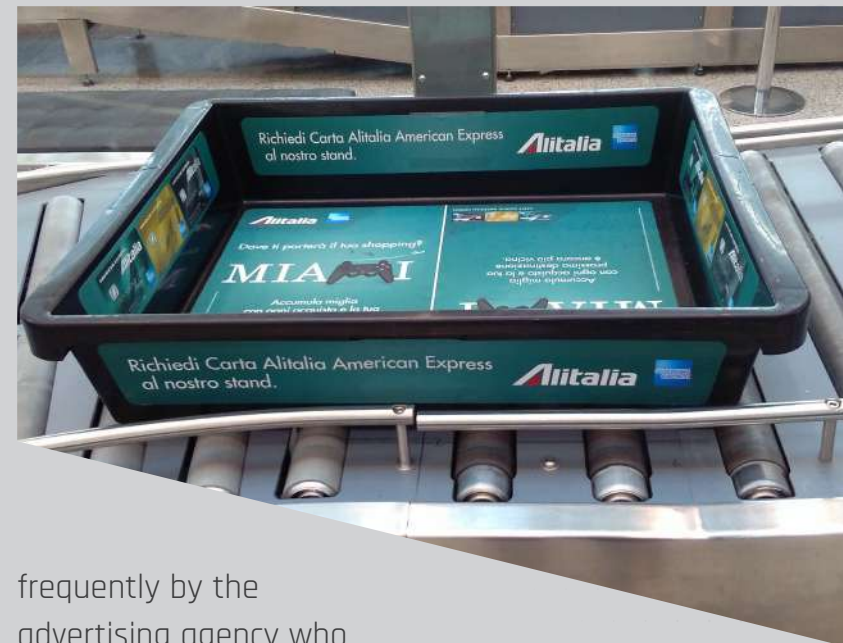




# PERSONALISED TRAYS

The checking device can distinguish between items and the graphics on the tray bed, making it possible to customise the entire tray with sponsorships and designs based on the needs of the various clients.

Personalising trays allows airports to offer the tray bed as an advertising space, thereby generating revenue and having the trays replaced



frequently by the advertising agency who will directly replace the trays once the sponsorship period has expired.



# FAST2CHECK: THE MODELS

Depending on the space available, the necessary ergonomics and the client's budget,

*CASSIOLI CAN  
PROPOSE VARIOUS  
SOLUTIONS TO FIND  
THE MOST SUITABLE  
FAST2CHECK  
SYSTEM THAT  
MEETS THE CLIENT'S  
NEEDS.*

From the Easy model, which is aimed at airports with limited available space, to the Advanced model, which is the ideal solution for facilities with have high throughput requirements.





## ALL OUR MACHINERY HAS BEEN DEVELOPED TO GUARANTEE:

### SECURITY

*Advanced screening system*

*Compliance with regulations regarding safety and security*

*Elimination of electrical risk and accidental finger trapping*

### SPEED

*Reducing queues and waiting times for check-in operations*

*Maximum operational efficiency*

*Reducing labour requirements*

### ADVANCED TECHNOLOGY

*Ergonomic for both passengers and operators*

*High quality materials and components used*

*"Made to measure" solutions thanks to design and manufacturing done in-house*

### ECONOMY

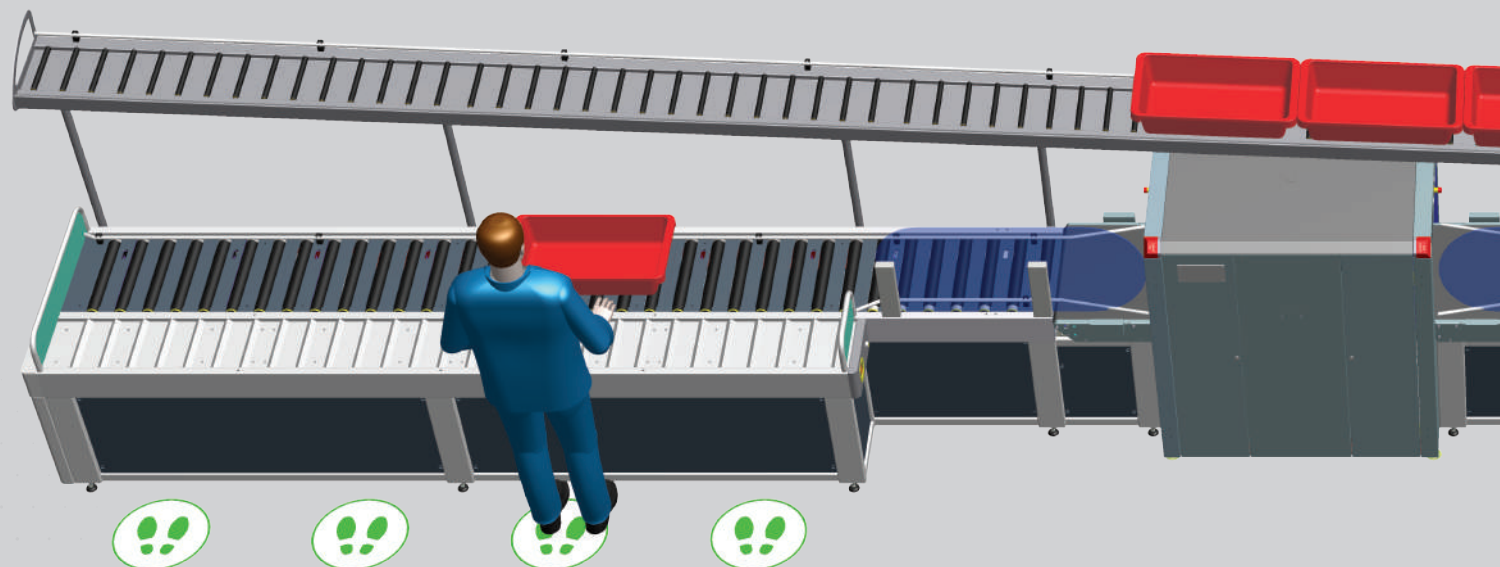
*Reducing the number of people needed for secondary operations*

*Allowing a fast return on capital investment*

*Potential revenue from advertising space in the tray*

# FAST2CHECK EASY

## MINIMUM FOOTPRINT, MAXIMUM EFFICIENCY



FAST2CHECK EASY is the most compact model that Cassioli has designed to inspect passenger hand baggage. Thanks to its particularly compact arrangement, the EASY model is best suited for airports that have limited available space

but which nevertheless need an advanced, fast and secure screening system.

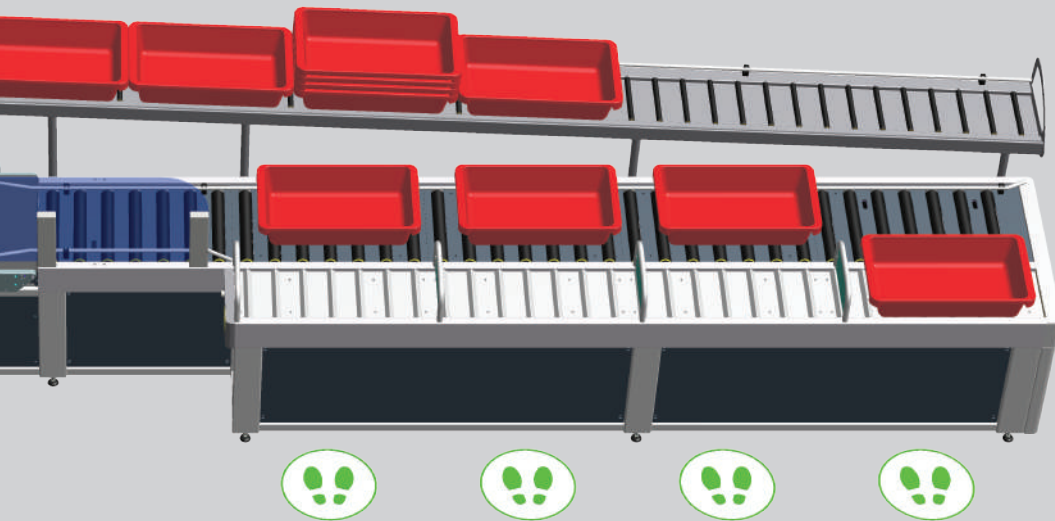
FAST2CHECK EASY was created to meet the need to optimise throughput. Most tray recirculation systems on the market require an overall

surface area of between 16 and 20 metres in order to guarantee a significant increase in traffic and performance.

The new Cassioli system lets airports leverage the advantages of parallel simultaneous management, even up to 4

passengers, with a total footprint of less than 12 metres.

## KEY FEATURES



The «Queue Beater» allows queues to be distributed in an ordered and efficient way, increasing throughput and easing inspections by operators. Once baggage has been checked, empty trays return to the start by a raised gravity

conveyor return line. FAST2CHECK EASY is, therefore, the most intelligent and economic solution to meet an airport's basic needs, delivering maximum efficiency with a minimum surface area footprint.



MINIMUM FOOTPRINT

IDEAL FOR SMALL AIRPORTS OR WHERE SPACE IS LIMITED

GRAVITY CONVEYOR RETURN LINE

QUEUE BEATER

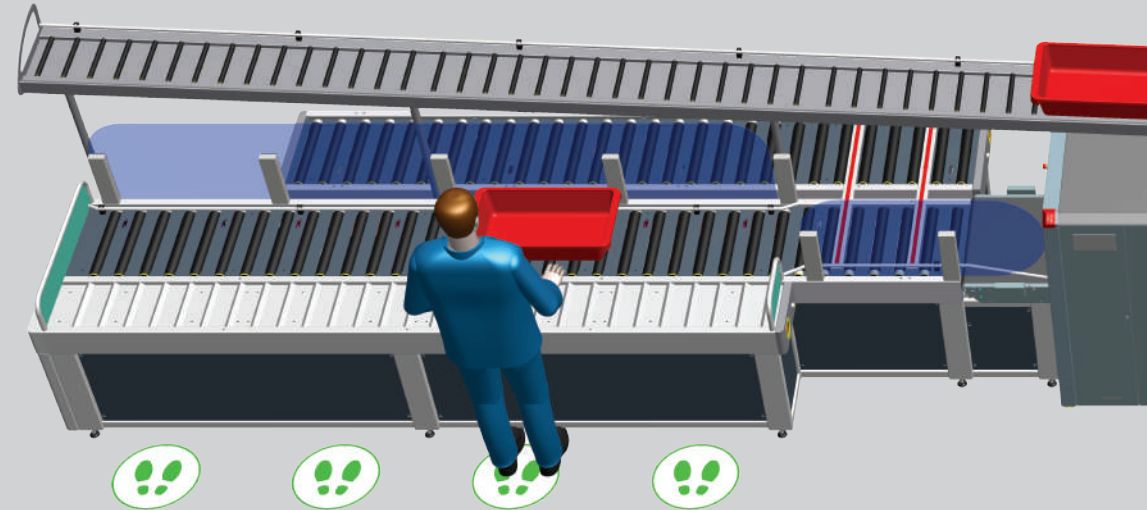
# FAST2CHECK EASY PLUS

## WITH SPECIAL SUSPICIOUS BAGGAGE SORTING LINE

FAST2CHECK EASY PLUS is the ideal checkpoint model for any airport that has to speed up baggage check procedures, despite having limited space but still needing advanced management of suspicious baggage. Just like the EASY model, FAST2CHECK EASY PLUS offers the Queue Beater system in the initial part and tray recirculation with gravity

conveyor return line. In addition to this, the Plus model includes a special **dedicated suspicious baggage sorting line**.

Once the trays exit from the X-ray machine, any suspicious baggage is selected and directed onto a parallel line where an operator can carry out detailed checks of the material deemed unsuitable.

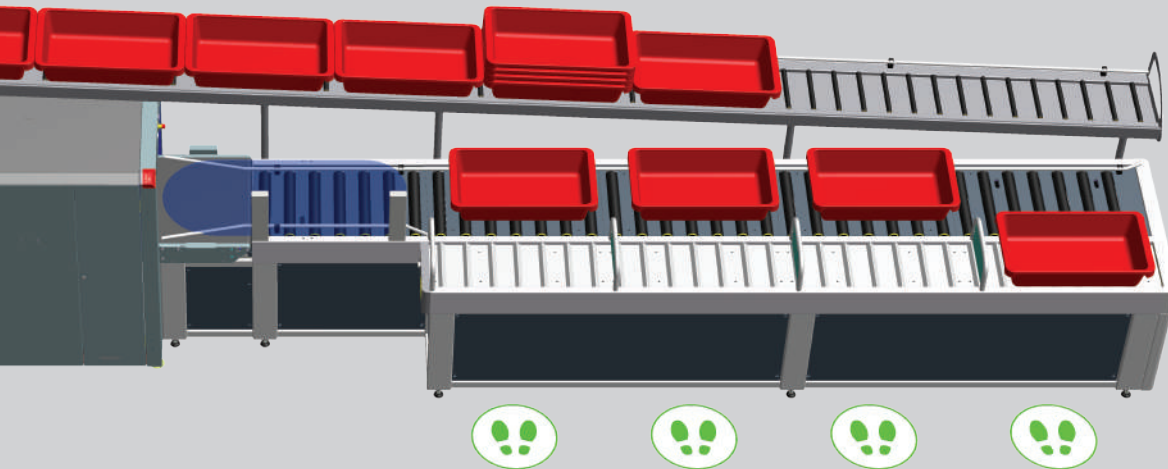


### **FOCUS**

#### **SUSPICIOUS BAGGAGE SORTING LINE**

*The innovative separation line for suspicious baggage allows trays deemed «suspicious», or which do not comply with security regulations, to be selected, both quickly and completely automatically.*

## KEY FEATURES



*Trays are moved through a high-speed exchange system. The time needed to make such a deviation is less than 1.5 seconds. This special system guarantees rapid response times without impacting the tray path (tray jamming is prevented).*

Once baggage has been checked, empty trays return to the start by a raised gravity conveyor return line. It is still possible, however, to employ a motorised conveyor to return trays, even in this type of configuration.



QUEUE BEATER

REDUCED FOOTPRINT

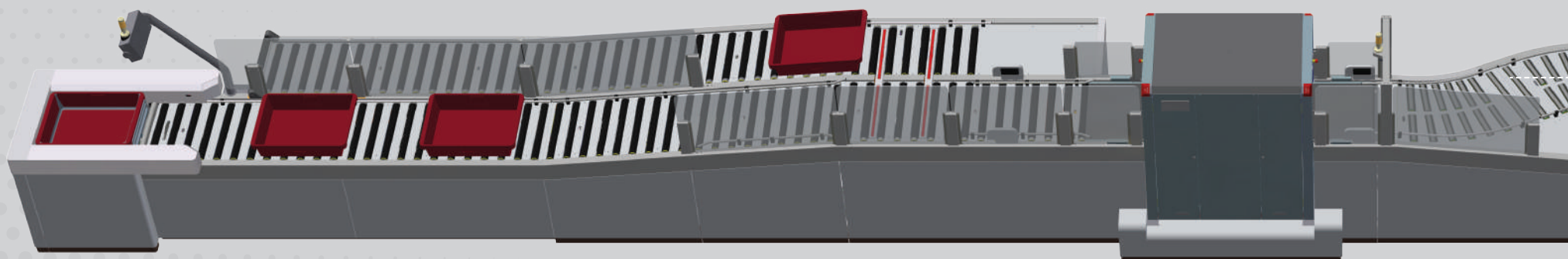
IDEAL FOR SMALL AIRPORTS OR WHERE SPACE IS LIMITED

GRAVITY CONVEYOR RETURN LINE

SPECIAL SUSPICIOUS BAGGAGE SORTING LINE



# FAST2CHECK ADVANCED

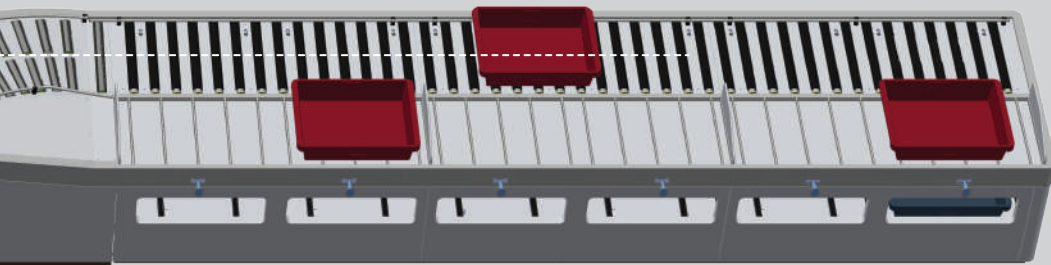


**THE MOST  
ADVANCED  
SOLUTION FOR  
PASSENGER SAFETY**

FAST2CHECK Advanced is the fastest, most innovative passenger baggage check system thanks to the **complete automation of the entire inspection process**. Just like the FAST2CHECK and FAST2CHECK Plus models,

FAST2CHECK Advanced comes with the innovative «Queue Beater» system, which allows the security process for several passengers to be done in parallel and queues to be rationally distributed thereby increasing the speed of checks.

## KEY FEATURES



The main element in the Advanced model is the **automatic tray recovery system**, complete with the **visual check module with** hybrid IR/3D technology **for empty trays**. After having checked the baggage contained in the tray, the

tray, once emptied, is returned to passengers waiting at the start of the process by an automatic, high-speed return system.



### QUEUE BEATER

IDEAL FOR MAJOR INTERNATIONAL AIRPORTS OR FOR AIRPORTS WITH HIGH THROUGHPUT REQUIREMENTS

ADVANCED CHECK TO DETECT EMPTY TRAYS AT THE END OF THE LINE

AUTOMATIC TRAY RECIRCULATION SYSTEM

OPTION TO HANDLE TRAYS WITH CUSTOMISED TRAY BED OR IN-TRAY ADVERTISING

FAST AND EFFICIENT SECURITY SYSTEM



# TECHNICAL INFORMATION

LENGTH	MIN. 15.5 METRES. MAX RECOMMENDED 22.
QUEUE BEATER POSITION	FROM 2 TO 8
QUEUE BEATER SHAPE	PARALLEL / INCLINED 30 DEGREES, 90 DEGREES
QUEUE BEATER AT EXIT POINT	YES/NO
AUTOMATIC RECIRCULATION	YES/NO
SMART WORKSTATION	YES/NO
X-RAY	RAPISCAN/SMITH/L3/NUCTECH/VOTI/GILARDONI AND ALL THE OTHER MAJOR APPROVED BRANDS
AVERAGE THROUGHPUT FOR EACH SINGLE LINE	FROM 445 TO 470 TRAYS/HOUR
PEAK THROUGHPUT (MORE THAN 2 HOURS OF CONTINUOUS OPERATION) FOR EACH SINGLE LINE	FROM 510 TO 550 TRAYS/HOUR (DEPENDING ON THE SPEED OF THE X-RAY MACHINE)
TRAYS/PASSENGER AVERAGE RATIO	FROM 1 TO 2.2, DEPENDING ON SEASON, FLIGHT DESTINATION AND MAIN AIRPORT TRAFFIC TYPOLOGY
MAX PASSENGER THROUGHPUT REGISTERED AT METAL DETECTOR DOOR	FROM 320 TO 350 PASSENGERS/HOUR



# PLUS

## SMART WORKSTATION

«SMART WORKSTATION» is the solution developed by Cassioli to manage and reconcile baggage deemed suspicious which is sent to a recheck station.

This special system has specific features which operate on images, **independently** of the type and brand of the X-ray machine, all without impacting their operation and certification.

The system, completely developed by Cassioli, uses the images generated by the X-ray machine and increases the possibilities and options available to the first-level operator, supporting his/her decision making and giving him/her the opportunity to indicate and report the position and type of risk. The correspondence between the

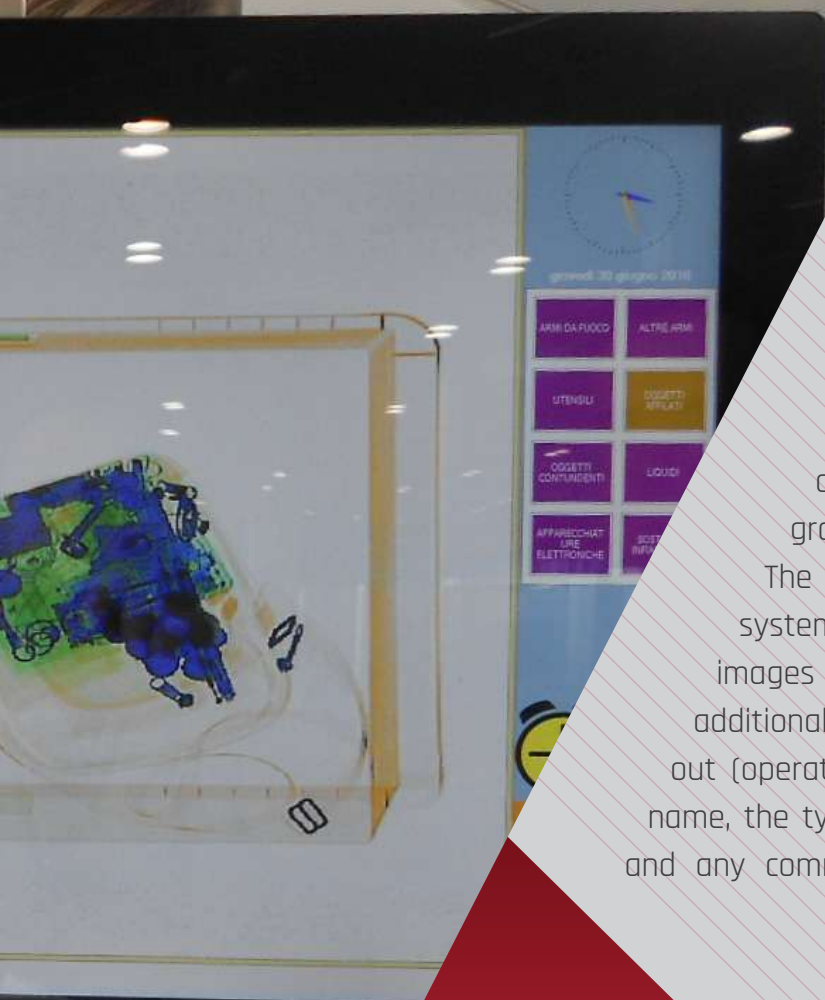
images viewed and the baggage, as well as tracking to follow the baggage redirected onto the suspicious baggage line, is provided by an RFID system on each tray used in the system.

In this way, the second-level operator receives much more detailed information on the possible risk, avoiding the need for any verbal communication between colleagues.

This information also includes additional images, including external ones taken of the baggage before it enters







the machinery, in order to ensure further security in the reconciliation and match phase.

All the information is then made available in a database which stores the data, photographs, the results and the operators involved.

The second-level workstation has an operating system developed by Cassioli and manages the images coming from the video camera, the tray IDs, additional records to register the operations carried out (operator ID, the passenger's first name and last name, the type of risk, the flight, the actions performed and any comments) and the images coming from the

first-level workstation.

The interface and the process are entirely managed on a touch-screen monitor provided by Cassioli.

All the smart workstations are networked, so the baggage redirected onto a line can even be checked, if necessary, by the second-level station on another line.

The SMART WORKSTATION system, in addition to optimising and speeding up the security process and managing suspicious baggage, contributes directly to increasing total passenger throughput.

# **GLOBALLY PRESENT LOCALLY INVOLVED**

CASSIOLI is an international group providing industrial handling and automation solutions.

With 3 manufacturing plants and offices and commercial partners around the world, Cassioli is organised into 4 divisions: the Intralogistics Division; the Manufacturing Division; the Airport Division; the Tire Division.

Whenever you need to transport or handle

finished products, semi-finished products, component kits or even raw materials in a more or less automatic way, CASSIOLI has the most suitable transport and storage systems in terms of operating capacity, cost, safety and ergonomics.

Automated warehouses, assembly and servicing lines, testing systems, automated laser-guided or inductive-guided vehicles (AGV - LGV), rail-guided vehicles (RGV), picking systems and robotised areas with

visual systems, but also handling systems equipped with roller conveyor, chain conveyor, slat conveyor, belt conveyor or tape conveyor. Being able to rely on a broad yet highly specialised manufacturing base allows CASSIOLI to offer clients the most effective solution to meet their specific needs.



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