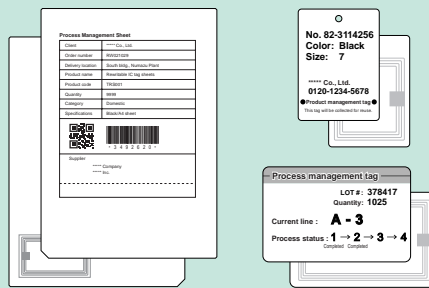


RECO-View™ IC Tag Series

A single rewritable IC tag sheet completely changes your workflow!

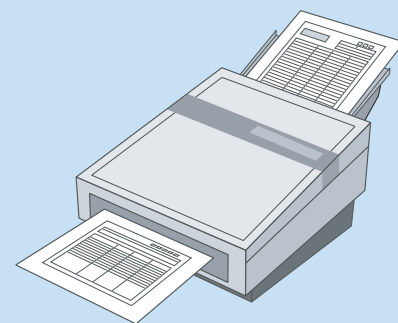


▲The images above show examples of usage of RECO-View IC tags series.

RECO-View IC Tag Series Main Specifications (for A4 and A5 sheets)

Material	125 μm white PET film (* total thickness: approx. 170 μm)
Color	Black
Color density	Optical density of 1.1 or higher (* supporting barcode recognition)
Durability for reuse	Approx. 1000 times (* based on standard Ricoh operating environment)
IC standard	Compliant with ISO18000-3 MODE1
Printable/erasable area	All areas except IC tag section

* Please contact Ricoh for information about products in other sizes or supporting other IC standards.



Printing on the sheet requires a rewritable printer that supports RFID.

Reference Printer Specifications (**Varies depending on printer type)

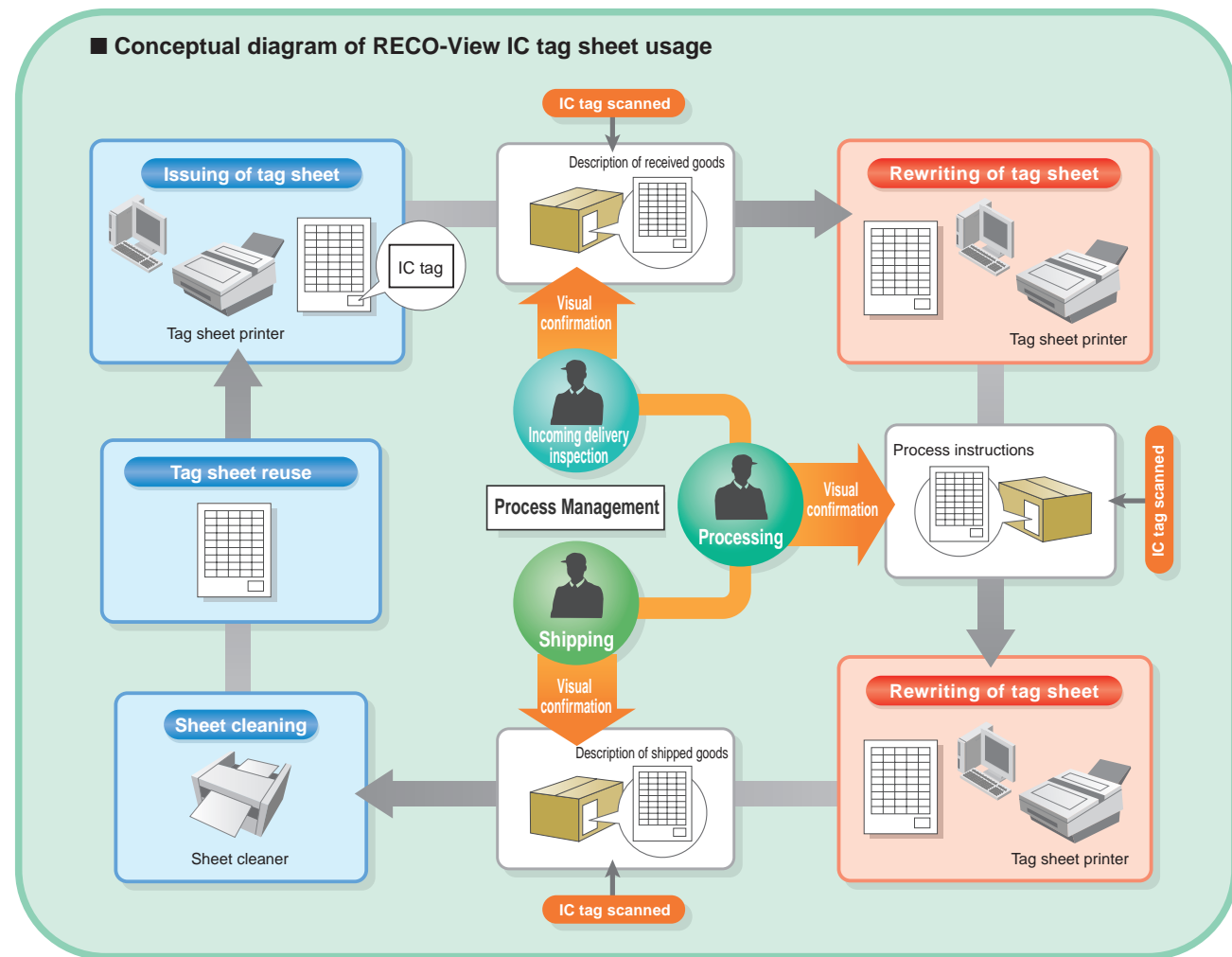
Item	Reference specification
Resolution	300 dpi
Print/Erase speed	50 mm/sec or faster
Supported media size	A4 max.
Media stack size	20 to 50 sheets
Compatible IC standards	ISO 18000-3 Mode 1

Please contact Ricoh for a list of suitable manufacturers and models for your specific environment.

- **Rewritable viewing system** for easy printing and erasing
- **Black printing** for high legibility
- **Maximum A4 size** for displaying lots of data
- **High durability** with little bending and staining

IC tag data can now be displayed and rewritten on a sheet. With visualization of digital data, workflow is dramatically improved!

The RECO-View™ IC tag series is a new product line combining IC tags with rewriting capability. It features visualization of IC tag data, rewriting capability at any time, and reusability for lower costs and environmental burden. It can even be used with existing bar code systems. This automatic recognition and visualization enables efficient and reliable realtime management and improved work processes.



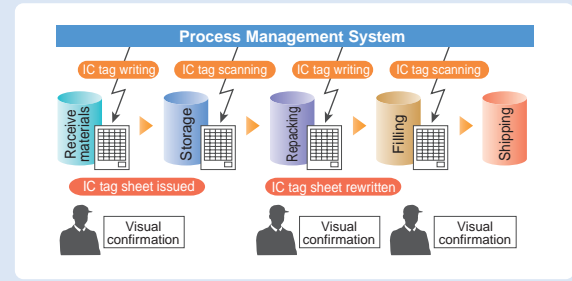
RECO-View IC tag sheets are being used to improve work processes in many fields and hold new possibilities for the future.

Case 1 Eliminating human error in plant process management

Rewritable IC tag sheets can be used for process management tags on production lines.

Example: Usage in toner filling line at the Ricoh Numazu plant.

- Current issues**
- Process information in electronic form is difficult to confirm at the site.
 - When information is changed at the last minute, it is not fully conveyed to the site.
 - If a wrong materials tank is installed, the resulting cleaning work and line stoppage harms productivity.
 - Delivery inspection instructions and other transfer documents result in a large printing volume.
- Problems resolved with the RECO-View IC tag sheet**
- Information for the toner materials tank is displayed by attaching a rewritable IC tag sheet to the tank. The operator can confirm visually at the site. If the IC tag information is changed, the sheet is automatically rewritten by a rewritable printer.
- Elimination of human error by displaying information in realtime without requiring separate data entry.
 - Sheet recycling for reduced environmental burden.

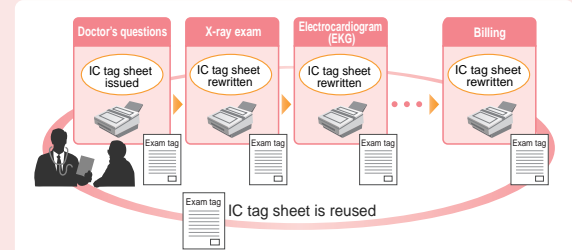


Case 2 Eliminating human error at medical health exam centers

Rewritable IC tag sheets can be used for exam tags in health exams.

Example: Usage at a health exam center.

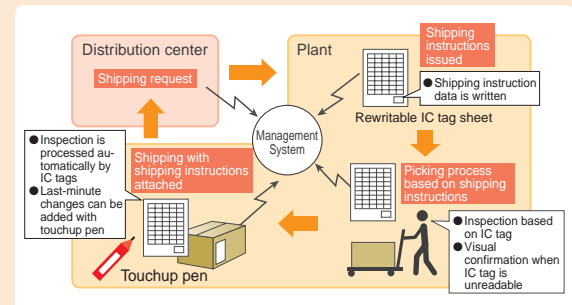
- Current issues**
- Since many people receive health exams, errors can occur with the exam data.
 - A smooth flow of patients is preferred to avoid concentration in a single location.
- Problems resolved with the RECO-View IC tag sheet**
- A rewritable IC tag sheet is given to the patient so that the examiner can visually confirm the information at the exam site. After the exam, the sheet is automatically rewritten by a rewritable printer.
- Elimination of human error by displaying exam information in realtime.
 - IC tag information is managed for providing optimal guidance to patients.
 - Sheet recycling for reduced environmental burden.



Case 3 Higher efficiency in distribution, shipping, and receiving processes

Rewritable IC tag sheets can be used for shipping instructions between a distribution center and plant.

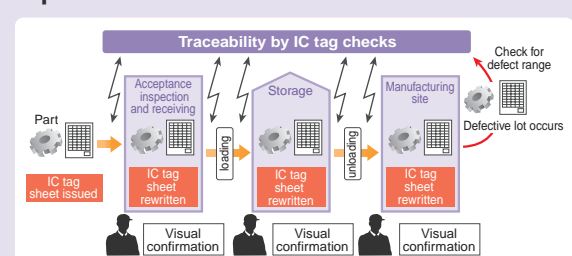
- Current issues**
- Processes from picking to inspection and then shipping are time-consuming when using shipping instructions printed on paper.
 - Mistakes can occur in the picking process with only visual confirmation.
 - If an IC tag is unreadable, rechecking of the shipping information is time consuming.
 - Printing of shipping instructions results in a large printing volume and high paper and waste disposal costs.
- Problems resolved with the RECO-View IC tag sheet**
- Shipping information from the distribution center is written to an IC tag and displayed as shipping information on a rewritable IC tag sheet at the same time. Both system and visual confirmation ensure an accurate picking process.
- IC tag and system are linked to enable speedy and reliable automatic processing of inspection operations.
 - If an IC tag is unreadable, the information can be confirmed visually on the sheet.
 - Sheet recycling for reduced environmental burden.



Case 4 Enabling traceability in lot units for parts management at plants

Rewritable IC tag sheets can be used for the parts packing tags in plants.

- Current issues**
- Input of warehouse management data for incoming and outgoing materials is a labor-intensive process.
 - Finding parts is a time-consuming process.
 - Tracking lots is difficult after a defective part is found.
- Problems resolved with the RECO-View IC tag sheet**
- Rewritable IC tag sheets are used as part packaging tags for eliminating the troublesome process of entering incoming and outgoing management data. Passing the packaging tags through checkpoints enables traceability in part lot units.
- Easy parts searching.
 - Recovery of defective lots is possible based on the checkpoint passage history.
 - Sheet recycling for reduced environmental burden.



Take Advantage of Rewriting Capability!

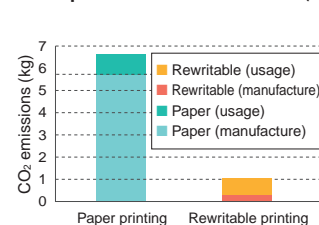
① Combines IC tags and data visualization for reduced human error!

The digital data in the IC tag matches exactly the information on the sheet for preventing human error in visual operations such as work instructions. This visualization also prevents accidents in the case of unreadable IC tags.

② Reusable for reduced environmental burden!

The reusable design enables repeated usage for reducing paper waste. Ricoh's exclusive thermal media technology also eliminates the use of ink and toner. The result is a dramatic reduction in CO₂ emissions compared to regular paper. This also helps significantly in acquiring ISO14001 environmental management system certification.

■ Comparison of CO₂ Emissions (for 1000 prints)



Environmental Burden Data

- Applicable scope
- Media: Material and manufacturing process
Printers: Rewritable printer
Calculated from power usage
Laser printer
Calculated from power usage and toner

Survey conducted by Ricoh

③ Reusable for lower paper costs

The IC tag and sheet can both be used repeatedly for lower running costs.