

# Recycler Guide, TOMRA R1

90430000



Original

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## About this guide

This product contains electrical and electronic components that should be recycled by a specialist electronics recycler. Disposal and recycling of products containing electrical and electronic components may be governed by national environmental legislation.

This guide provides information pertaining to the decommissioning and recycling of TOMRA reverse vending machines and backroom equipment pursuant to the European Community directive 2012/19/EU on waste electrical and electronic equipment (WEEE).

This information shall identify the different EEE components and materials, as well as the location of dangerous substances and mixtures in EEE so that they can be properly handled. If you have any questions or feedback regarding this guide, please contact us on [www.tomra.com](http://www.tomra.com).

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## Disclaimer

This Recycler Guide is intended only for information purposes. It does not guarantee the composition of any product or that the product will retain a specific composition for a specific period.

The Recycler Guide provides information on the disassembly process of a product to assign the components to the correct recycling channels. The values given are only valid in this specified context and cannot be used to create the environmental compatibility assessment of a product.

Reuse of disassembled components is not permitted. TOMRA therefore assumes no liability for errors or consequences that may result from the use of this information for anything other than assigning the product components to the correct recycling channels.

# Safety instructions

## Introduction

TOMRA Systems ASA is not liable for any damage caused by incorrect actions taken during the disassembly of the product/system.

The recycler is responsible for ensuring the safety of its employees performing disassembly of TOMRA products.







## Safety symbols

Safety symbols are used on the safety labels on TOMRA machines. The table below lists the commonly used symbols and explains what they mean. Not all warnings will be relevant for all products.






**NOTE:** These symbols are designed for machine use during operation. Not all warnings may be relevant for the purpose of recycling but may be useful to understand the components that are being disassembled.







**Table 1: Mandatory actions**

Symbol	Description
	Refer to the instructions.
	Use protective gloves.
	Use ear protection.
	Use eye protection.
	Switch off power before carrying out maintenance or repair.
	Disconnect the mains power cable before carrying out maintenance or repair.

**Table 2: Prohibited actions**

Symbol	Description
	Do not reach in.
	Do not clean with a hose or spray with water.
	Do not step on this surface.

**Table 3: Warnings**

Symbol	Description
	General warning sign. Indicates a warning, caution or presence of a hazard, specified by text or symbol.
	Electricity hazard: <ul style="list-style-type: none"> <li>• Disconnect power before opening or handling</li> <li>• High voltage present</li> <li>• No serviceable parts inside</li> </ul>
	The system can start without warning.
	Drawing in and crush hazard. Keep hands and clothes clear.
	Indicates an overhead obstacle.
	Tip-over hazard. The machine is top-heavy and may tip over when transported.

# Disassembly instructions

## Disassemble the TOMRA R1 recognition unit

### Part ID

TOMRA R1 Recognition Unit (90430001)

TOMRA R1 Recognition Unit-2 (90430002)

### Recommended tools

- Socket wrenches 10 and 13 mm
- Torx screwdrivers T20, T25 and T30
- Hex key 4 mm
- Crosshead screwdrivers PZ1 and PZ2
- Side-cutting pliers

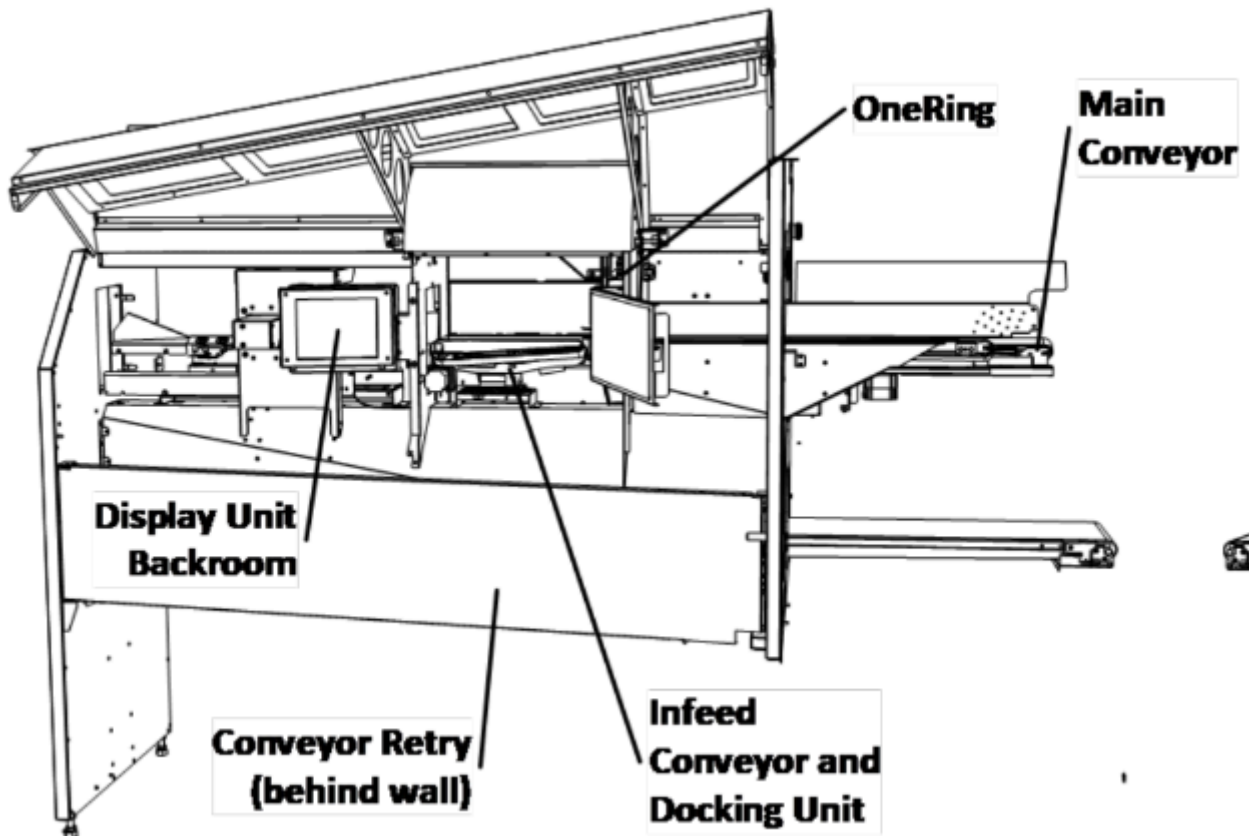


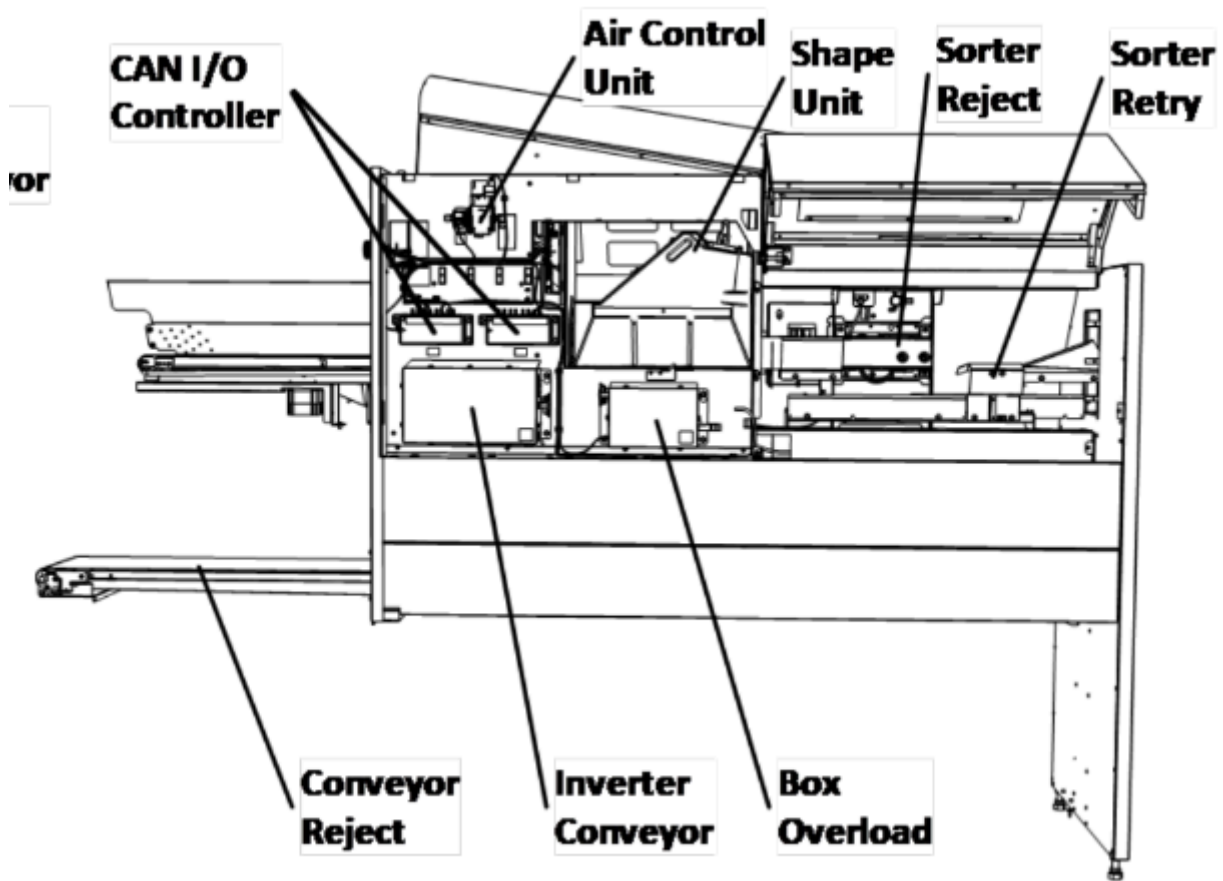
Disassemble all parts and sort the components per material types listed below. Do not mix material types.



**NOTE:** Circuit boards shall be destroyed/grinded.

### Main parts





**Material types**



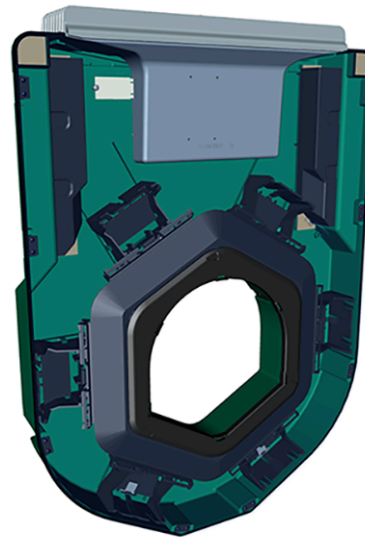
**NOTE:** There are variants of this machine, minor weight differences may occur.

Material	Weight (kg)
Steel and iron	240.0
Aluminium	1.0
Electrical, electronic and electromechanical (EEE) parts	25.0
Plastic	5.0
Rubber	0.5
Glass	5.2

**Recommended disassembly procedure**

Step	Materials
1 Remove the covers and lids.	Steel, rubber
2 Remove the conveyors:	Steel, EEE parts (cables, motor)
• Main conveyor	
• Retry and reject conveyors	

<b>Step</b>	<b>Materials</b>
<p><b>3</b> Remove the internal modules:</p> <ul style="list-style-type: none"> <li>• Infeed conveyor</li> <li>• Infeed docking-station</li> <li>• Shape-recognition unit</li> <li>• Shape reflector</li> <li>• OneRing reader</li> <li>• Inverter conveyor</li> <li>• Overload box</li> <li>• 2 x CAN I/O controller board</li> <li>• Display unit, backroom</li> <li>• Air control unit</li> <li>• Sorter blower</li> <li>• Reject sorter</li> </ul>	<p>Steel, EEE parts (cables, circuit boards, motor), plastic</p>
<p><b>4</b> Remove the cables</p>	<p>EEE parts (cables)</p>
<p><b>5</b> Disassemble the assembled units:</p> <ul style="list-style-type: none"> <li>• Infeed conveyor</li> <li>• Infeed docking-station</li> <li>• Shape-recognition unit</li> <li>• OneRing reader*</li> <li>• Inverter conveyor</li> <li>• Overload box</li> <li>• 2 x CAN I/O controller board</li> <li>• Display unit, backroom</li> <li>• Air control unit</li> <li>• Sorter blower</li> <li>• Reject sorter</li> <li>• Main conveyor</li> <li>• Retry and reject conveyors</li> </ul>	<p>Steel, aluminium, EEE parts (cables, circuit boards, motor), plastic, glass</p> <p>*The OneRing reader has a glass cover that shall be removed and recycled.</p>



# Disassemble the TOMRA R1 singulation unit

**Part ID**

TOMRA R1 Singulation Unit (90430000)

**Recommended tools**

- Socket wrenches 10 and 13 mm
- Torx screwdrivers T20, T25 and T30
- Hex key 4 mm
- Crosshead screwdrivers PZ1 and PZ2
- Side-cutting pliers

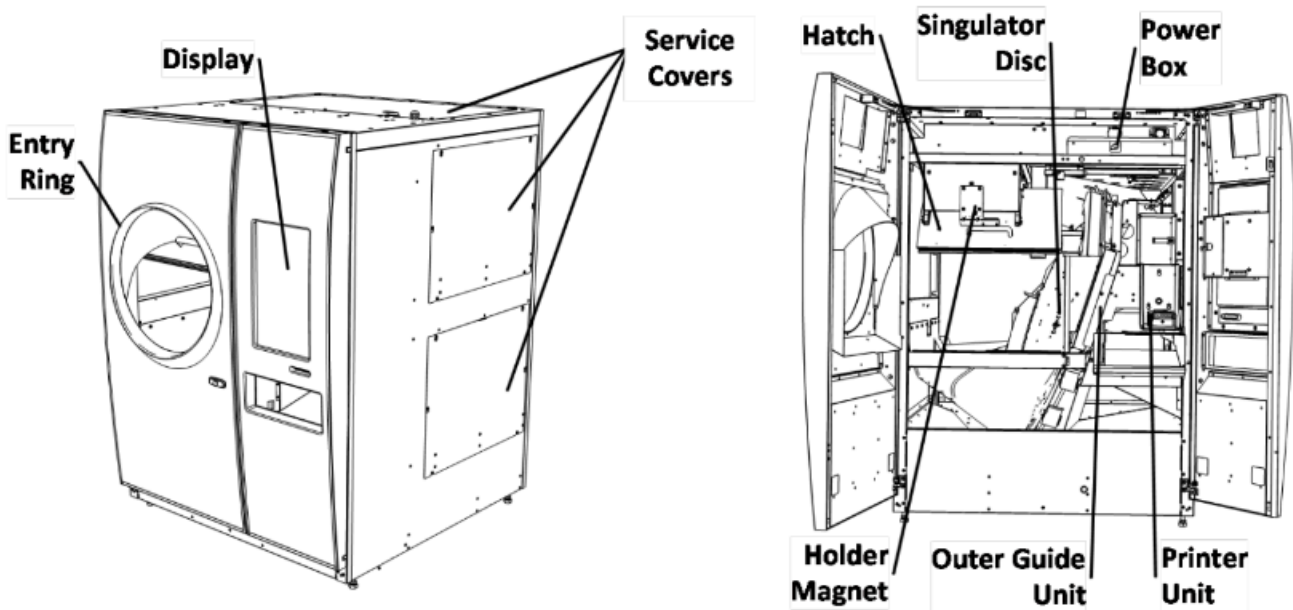


Disassemble all parts and sort the components per material types listed below. Do not mix material types.



**NOTE:** Circuit boards shall be destroyed/grinded.

## Main parts



## Material types



**NOTE:** There are variants of this machine, minor weight differences may occur.

Material	Weight (kg)
Steel and iron	287.0
Aluminium	14.0
Electrical, electronic and electromechanical (EEE) parts	11.0
Plastic	18.0
Rubber	-
Glass	-

## Recommended disassembly procedure

Step	Materials
1 Remove the covers.	Steel
2 Open the doors and remove all internal components in the doors: <ul style="list-style-type: none"> <li>• Touch display</li> <li>• Decor panels and entry ring</li> <li>• Disassemble the steel parts</li> <li>• Disassemble the door frames from the hinges</li> </ul>	Steel, EEE parts (cables), plastic
3 Remove the internal components: <ul style="list-style-type: none"> <li>• Power box</li> <li>• 2 x C639 housing, CAN I/O controller</li> <li>• Infeed hatch with pivot arm and magnet holder</li> <li>• Outer guide-unit</li> <li>• Reservoir and spill trolley</li> <li>• Inner guide including support and reservoir sensor</li> <li>• Singulation disc and motor</li> <li>• Printer unit</li> <li>• Discrete metal parts</li> <li>• All cables and sensors</li> </ul>	Steel, EEE parts (cables, circuit boards, motor), plastic
4 Disassemble the assembled units: <ul style="list-style-type: none"> <li>• Power box</li> <li>• Singulation disc</li> <li>• 2 x C639 housing, CAN I/O controller</li> <li>• Magnet holder</li> </ul>	Steel, aluminium, EEE parts (cables, circuit boards, motor), plastic



TOMRA Systems ASA  
Drengsrudhagen 2  
NO-1385 Asker  
NORWAY

[www.tomra.com](http://www.tomra.com)