

Recycler Guide, TOMRA E1

90138000

50138108, 50138119

50138001, 50138500, 50138850, 50138851

50138320, 50138331, 50138820, 50138831



Original

Contents

Disclaimer.....	3
About this guide.....	4
Safety instructions.....	5
Disassembly instructions.....	7
Disassemble the TOMRA E1 compactor cabinet.....	7
Disassemble the TOMRA E1 feeder unit.....	10
Disassemble the TOMRA E1 recognition unit.....	13
Disassemble the TOMRA E1 singulation unit.....	16
Disassemble the TOMRA E1 V-conveyor.....	19

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.

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.

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"> • Disconnect power before opening or handling • High voltage present • No serviceable parts inside
	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 E1 compactor cabinet

Part ID

Cabinet Comp. 400V (50138108)

Recommended tools

- Socket wrench 10 mm, 13 mm and 17 mm
- Torx screwdrivers T20, T25 and T30
- Hex key 4 mm
- Cross head screwdrivers Poz #1 and #2
- Side-cutting pliers

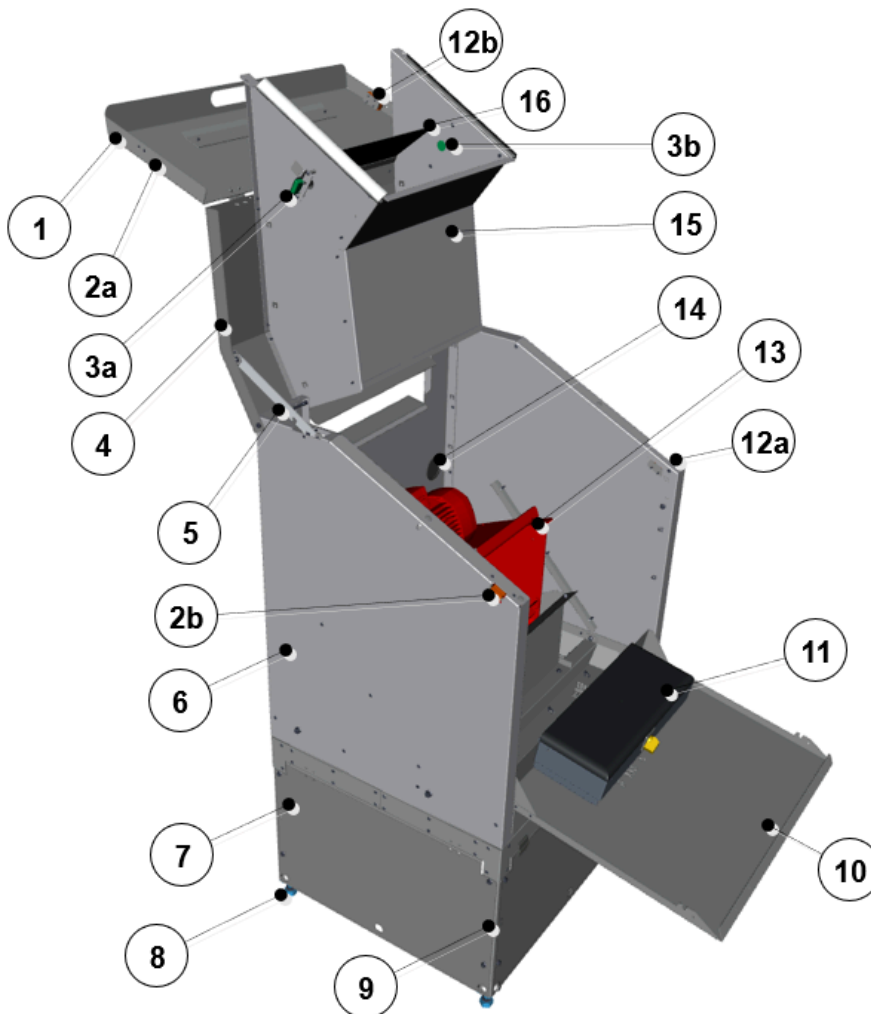


Disassemble all parts and sort the components per material types listed below. Do not mix material types.



NOTE: Circuit boards shall be destroyed/grinded.

Main parts



1. Top hatch
2. a - Reed switch magnet
b - Door switch
3. a - Optical detector (inlet sensor)
b - Reflector
4. Top cover
5. Top cover stay
6. Compactor cabinet
7. Compactor support
8. Adjustable feet

9. Door switch



NOTE: DPG switch on the opposite side, not shown

10. Front hatch
11. Power box
12. a - DPG switch
b - Reed switch magnet
13. Compactor with motor
14. Chute with bottle guide
15. Rubber plug
16. Rubber curtain

Material types

Material	Weight (kg)
Steel and iron	194.0
Aluminium	-
Electrical, electronic and electromechanical (EEE) parts	10
Plastic	1.0
Rubber	1.0
Glass	-
Cables	1.0

Recommended disassembly procedure

Step	Materials
1 Remove the inlet sensor.	EEE parts, plastic
2 Remove the reflector.	Plastic
3 Remove the magnets and switches.	Steel
4 Remove the compactor motor.	Motor
5 Remove the rubber curtain and plugs.	Rubber
6 Remove the power box.	EEE parts
7 Remove the cables and switches.	EEE parts
8 Remove the compactor cabinet with support	Steel

Disassemble the TOMRA E1 feeder unit

Part ID

Feeder Singulator Complete (50138119)

Recommended tools

- Socket wrench 10 mm, 13 mm and 17 mm
- Torx screwdrivers T20, T25 and T30
- Hex key 4 mm
- Cross head screwdrivers Poz #1 and #2
- Side-cutting pliers

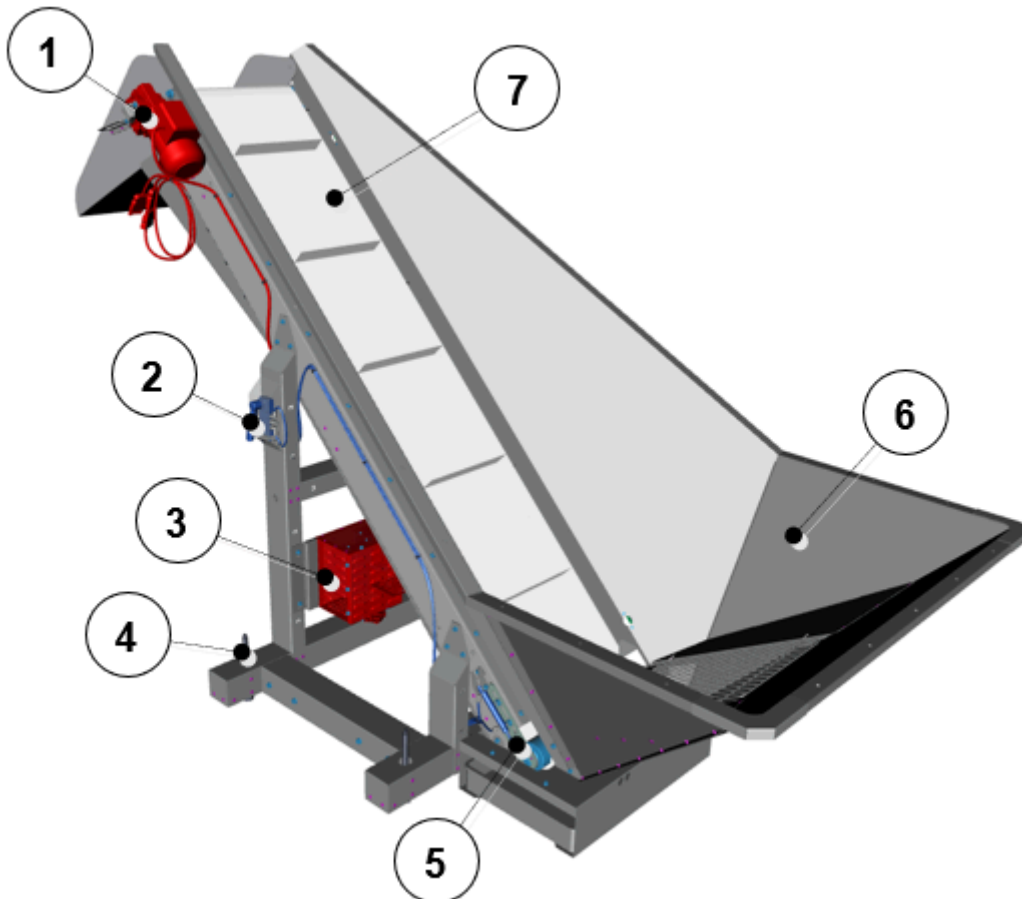


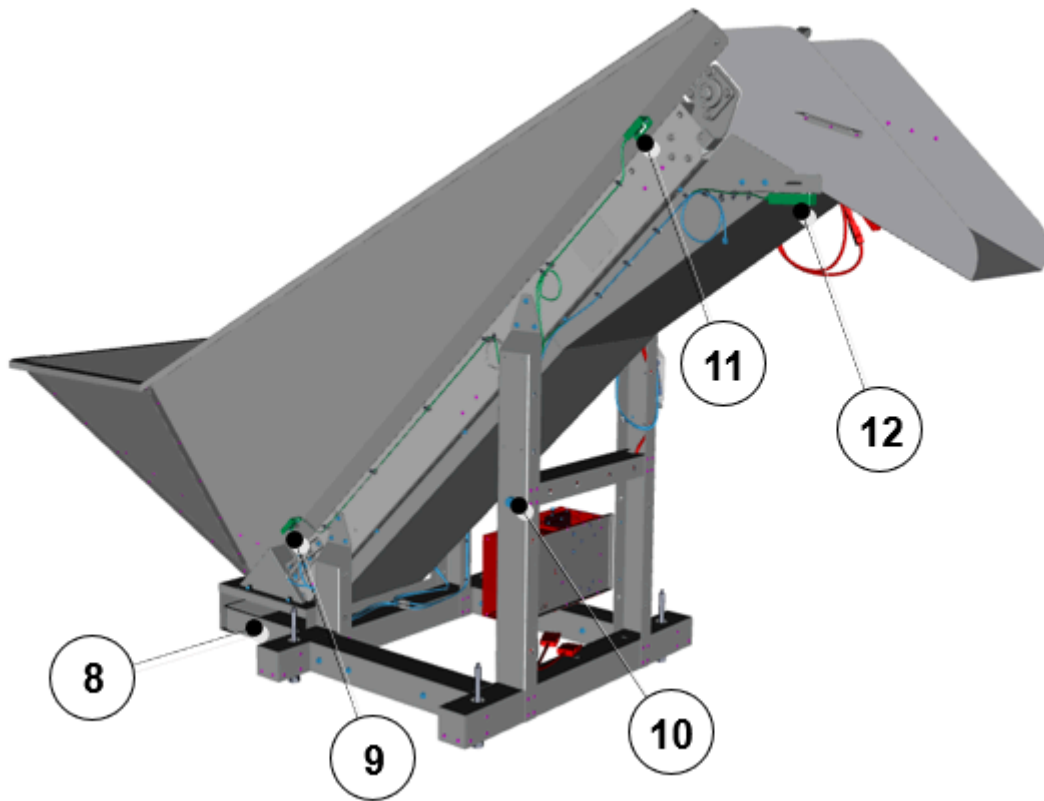
Disassemble all parts and sort the components per material types listed below. Do not mix material types.



NOTE: Circuit boards shall be destroyed/grinded

Main parts





- | | |
|--|---|
| 1. Belt motor | 8. Spill tray |
| 2. Pneumatic valve | 9. Ultrasonic sensor (start) |
| 3. Inverter unit (with CAN I/O converter and S421 control box) | 10. Push button (Add to previous batch) |
| 4. Adjustable feet | 11. Ultrasonic sensor (stop) |
| 5. Air cylinder (belt adjustment) | 12. Ultrasonic sensor (bin full) |
| 6. Receiving trough | |
| 7. Belt | |

Material types



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

Material	Weight (kg)
Steel and iron	120.0
Aluminium	-
Electrical, electronic and electromechanical (EEE) parts	35.0
Plastic	17.0
Rubber	-
Glass	-
Cables	1.0

Recommended disassembly procedure

Step	Materials
1 Remove the belt motor.	Motor
2 Remove the inverter unit.	EEE parts (cables, motors)
3 Remove the CAN I/O converter and the S421 control box.	EEE parts
4 Remove the sensors.	EEE parts
5 Remove the pneumatic valve, the air hoses and the air cylinders	Steel, plastic
6 Remove the belts and rollers.	Plastic
7 Remove the feeder chassis.	Steel
8 Remove the cables and switches.	EEE parts (cables)

Disassemble the TOMRA E1 recognition unit

Part ID

Recognition System (90138000)

Recommended tools

- Socket wrench 10 mm
- Wrenches 24 and 30 mm
- Torx driver T20
- Hex key 2 mm
- Power drill with 4 mm drill bit
- Side-cutting pliers

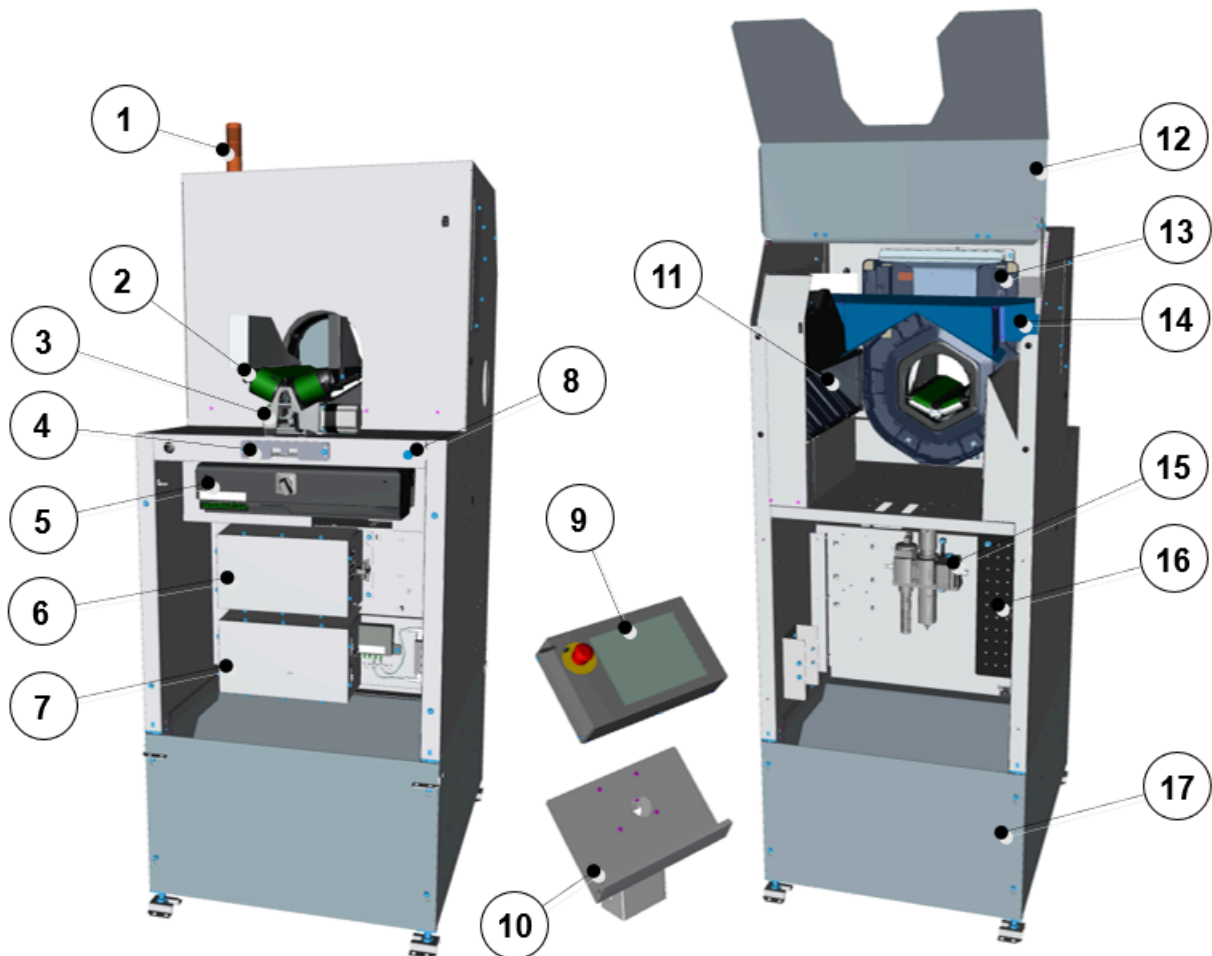


Disassemble all parts and sort the components per material types listed below. Do not mix material types.



NOTE: Circuit boards shall be destroyed/ grinded.

Main parts



1. Signal light (optional)
2. Infeed conveyor with side guides
3. Docking station

4. Position bracket for singulation unit
5. Power box
6. Inverter unit, conveyor
7. Inverter controller
8. System-reset button
9. Display unit
10. Stand for display unit or external control panel
11. Shape-recognition unit
12. Hatch (optional)
13. OneRing reader
14. Arch reflector (optional)
15. Air controller
16. Calibration plate
17. Platform assembly (high version)

Material types



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

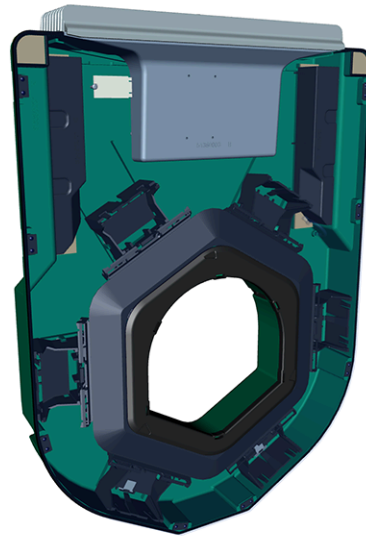
Material	Weight (kg)
Steel and iron	105.0
Aluminium	2.0
Electrical, electronic and electromechanical (EEE) parts	7.0
Plastic	5.0
Rubber	-
Glass	5.2
Cables	1.0

Recommended disassembly procedure

Step	Materials
1 Remove the infeed conveyor and the infeed docking-station.	EEE parts (cables, circuit boards, motor), plastic
2 Remove the transport monitor and the OneRing reader*.	Steel, EEE parts (circuit boards), plastic, glass
3 Remove the air controller.	Steel, iron, EEE parts
4 Remove the power box.	EEE parts (cables, circuit boards), plastic
5 Remove the inverter unit, conveyor and the inverter controller.	Steel, EEE parts (cables, circuit boards), plastic
6 Remove the display module.	Steel, EEE parts (circuit boards)
7 Remove the cables and switches.	EEE parts (cables)

Step**Materials**

*The OneRing reader has a glass cover that shall be removed and recycled.



Disassemble the TOMRA E1 singulation unit

Part ID

- Singulator 2 (50138001)
- Singulator 2 Counterclockwise (50138500)
- Singulator 2 LPB (50138850)
- Singulator 2 CCW LPB (50138851)

Recommended tools

- Socket wrenches 5.5, 10, 13 and 17 mm
- Wrenches 10, 24 and 30 mm
- Torx driver T20
- Hex keys 4 mm and 10 mm
- Power drill with 4 mm and 5 mm drill bits
- Side-cutting pliers

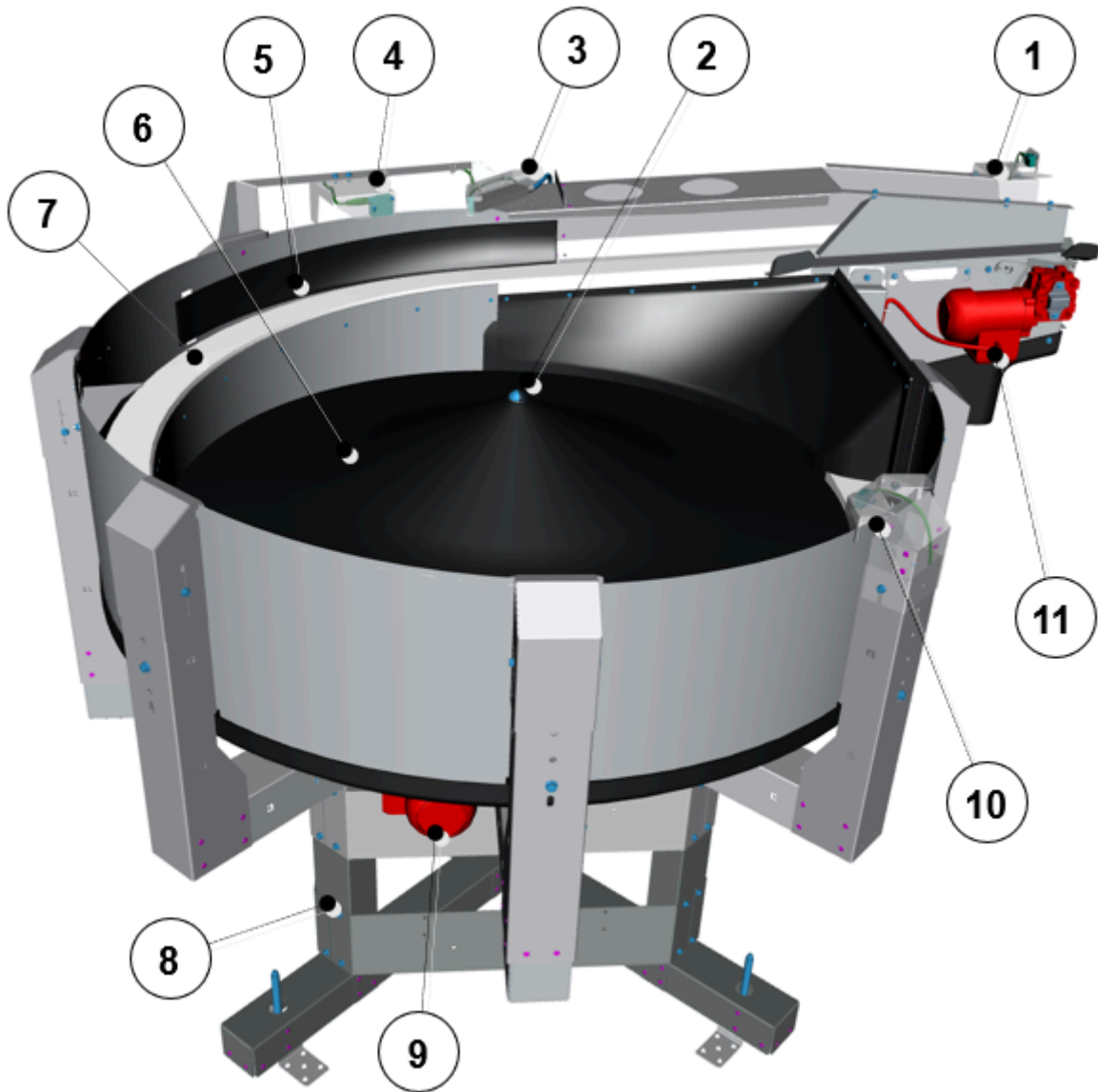


Disassemble all parts and sort the components per material types listed below. Do not mix material types.



NOTE: Circuit boards shall be destroyed/grinded.

Main parts



- | | |
|---|-------------------------------|
| 1. Exit sensor | 7. Module belt |
| 2. Air nozzle | 8. Bottom-structure extension |
| 3. Air curtain and sensor | 9. Disc motor |
| 4. LPB sensor bracket with sensor (if applicable) | 10. Disc sensor |
| 5. Narrowing guide | 11. Conveyor motor |
| 6. Rotating disc | |

Material types



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

Material

Steel and iron

Aluminium

Weight (kg)

175.0

23.0

Material	Weight (kg)
Electrical, electronic and electromechanical (EEE) parts	-
Plastic	33.0
Rubber	2.0
Glass	-
Cables	2.0
Motors	15.0

Recommended disassembly procedure

Step	Materials
1 Remove the disc motor and the conveyor motor.	Motors
2 Remove the disc and the spill trays.	Plastic
3 Remove the conveyor with the belt.	Steel, aluminum, plastic, rubber
4 Remove the cables.	EEE parts (cables)
5 Disassemble the remainder of the parts.	Steel, iron, EEE parts (cables, circuit boards), plastic, rubber, motor

Disassemble the TOMRA E1 V-conveyor

Part ID

- Conveyor Depot 2000 (50138320)
- Conveyor Depot 3100 (50138331)
- Conveyor E1 2000 LPB (50138820)
- Conveyor E1 3100 LPB (50138831)

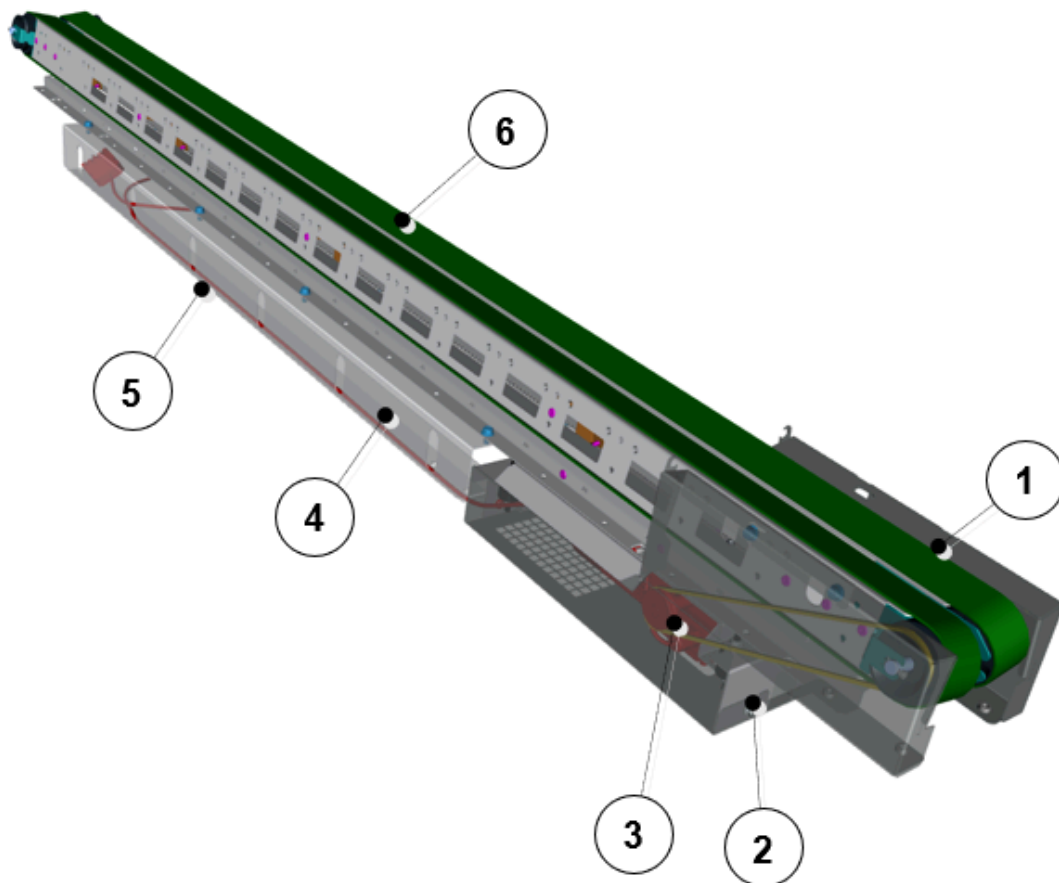
Recommended tools

- Socket wrench 10 mm
- Hex key 2.5, 3 and 4 mm
- Power drill with 4 and 4.8 mm drill bit
- Side-cutting pliers



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

Main parts



1. Pulley covers
2. Motor cover
3. Motor and drive belt
4. Conveyor frame
5. Motor cable
6. Transport belts

Material types

Material	Weight (kg)
Steel and iron	30.0
Aluminium	-
Electrical, electronic and electromechanical (EEE) parts	-
Plastic	0.5
Rubber	0.5
Glass	-
Other parts	3.0

Recommended disassembly procedure

Step	Materials
1 Remove the pulley and motor covers	Steel
2 Remove the motor with the cable	Steel, iron, EEE parts (cables, motors)
3 Remove the belts	Rubber
4 Remove the pulleys	Plastic
5 Remove the frame	Steel



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