Advanced Waste Collection System

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UNDERGROUND MULTI-WASTE COLLECTION SYSTEM

ISOLA G.m.b.H., I - Bozen  Mendelstrasse 49/B - www.isola.cc  e-mail: info@isola.cc
ISOLA is an innovative underground waste and recyclable material collection system. It takes into account modern waste management concepts that comply even today with future extant waste collection regulations and supports a modern urban development and better structural planning.

The ISOLA system perfectly combines the advantages of a bring system with the possibilities of a door-to-door and household garbage bin collection of waste and recyclable material. The unwanted side-effects of a conventional bring system are being eliminated by the underground instalment.

Key components of the technology are patented.

**Future-oriented system ISOLA**

⇒ Improves cityscape and ensures public space hygiene

ISOLA belongs to the so-called sub-floor systems. Only the aperture is visible above-ground shaping a more harmonious urban landscape. Thus ISOLA is perfectly suited for the use in historic old town sections.

The underground waste storage prevents odour nuisance. Since garbage bins are no more visible the cityscape appears much cleaner. In addition, incentives for illegal waste deposits that negatively influence the urban landscape are being reduced.

Depending on the waste separation type till 200 households can be connected to ISOLA.
Fulfils the raised requirements of modern waste management concepts

ISOLA is a "Multi-Waste system" that collects all intended waste types through only one inserting flap. ISOLA ensures the underground separation of waste and recycling material – a fully patented technology.

The underground platform can include up to 8 large refuse containers (DIN-EN 840). Thus, up to 8 different types of waste and recyclable materials can be stored separately corresponding to increasing requirements for domestic waste separation.

The garbage bins used in the ISOLA system can be freely assigned to the collected waste types. Thus ISOLA can be optimally designed for the needs of the respective municipality and its waste management.

Examples:
- 4x residual waste / 1x glass / 2x paper / 1x plastics
- 2x residual waste / 1x glass / 3x paper / 2x plastics
- 5x residual waste / 3x paper

Leads to a sustainable reduction of collection costs

- through waste compressing

ISOLA optimally utilizes the existing container volume through the integrated compressing system. In average the waste volume is being compacted in a 5:1 ratio. Compacting implies different degrees of pressure depending on the waste type. The compressing system can also be disabled if not needed, e.g. when collecting glass.

ISOLA S.r.l., I-39100 Bozen Mendelstrasse 49/b
C.F./P.I. 02355810215 internet: www.isola.cc e-mail: info@isola.cc
• through electronic level measuring

The waste collecting service providers is being informed via an integrated mod-
dem if containers reach 80% of their respective maximum filling level.

⇒ Allows for a consumption based billing of waste collection

In the area of household collection, modern waste management requires billing via
collection or volume based tariffs according to the polluter pays principle. This is not
possible using conventional bring systems such as depot containers.

The ISOLA system ensures consumption based invoicing. Each user identifies himself
via a smart card. The weight of the inserted waste or recycling material is determined
via an integrated calibrated balance and assigned to the card owner. Thus for each
user can be billed reliable and secure.

⇒ Can be handled fully flexible through the system software

The ISOLA software allows for an optimal system configuration depending on the re-
spective installation site. Individual customisation based on the environment variables
can be done via programming of compacting pressure, frequency of compacting or
consideration of the different waste types.

All throw-in, their weights etc. can be controlled via remote monitoring. The deter-
mined collection fees can also be monitored centrally and changed if needed.

⇒ Is very user-friendly

The user communicates with the system via a big coloured touch-screen monitor of
15" in the desired language. The operation is designed very intuitively.
After choosing the type of waste a stainless steel flap opens and the garbage can be inserted. After a maximum of 5 seconds following the closing of the flap the system is again ready for use.

The aperture is about 75/80 cm above ground, being suitable for every potential user.

**Further Highlights:**

- The waste collection can be carried out using conventional rear loaders. No special weighing or detection devices are necessary. This ensures that public bodies responsible for waste management can put the waste disposal services out for tender.

- The aperture has a loading volume of about 60 litres. This prevents bulky and inappropriate waste from getting into the system.

- The system can be linked with other underground collection systems.

**Summary:**

ISOLA is a state-of-the-art and innovative waste collection system that entirely fulfils ecological and economic needs.

The system is fully flexible and be customized for the use in different places. The cityscape is being improved and contamination significantly reduced.

Due to waste compressing and a high rate of connected households the ISOLA system reduces collection cost by up to 60% compared to a conventional door-to-door collection. Thus ISOLA offers public waste management authorities a significant potential for cost reduction.

Recurrent operating costs play only a minor role through a low power consumption and minimal maintenance.

ISOLA is a proven technology that has being used successfully on a long-term basis and that is ready for series production.