



 **ELKOPLAST**

Underground containers



Underground containers 3, 4, and 5 m³
Filling level monitoring

Underground containers

3, 4, and 5 m³ underground containers



By installation of our containers, you will be able to use the collection point space better and simultaneously improve its aesthetic appearance and tidiness. They are suitable for collecting glass, paper, plastic and residual mixed municipal waste. Manufactured in accordance with EN 13071.

Our containers are characterized by aesthetic design, functionality, easy operation and long service life without maintenance. Their appearance does not disturb the urban development but they suitably complement it on the contrary.

Main advantages

- a significantly higher collection point capacity, all the container capacity is moved underground,
- collection frequency reduction, leading to lower costs and reducing negative impacts on the environment (less CO₂ emissions, less noise and traffic),
- all the waste is stored below the ground level with lower and more stable temperature, slowing waste decomposition and odor reduction,
- waste is stored up to a height of 2.7 m, resulting in better compaction by its own weight,
- reduction of vandalism and the possibility of re-collecting waste, incl. access of animals,
- aesthetic appearance and cleanliness of the collection point that does not overflow with garbage,
- access restriction using a card (option),
- remote filling monitoring (option).



Modern and certified manufacturing in accordance with ISO 9001

Platform

The 1600 x 1600 mm platform comprises a pedestrian section of the container. Its surface treatment can be tiled, galvanized 4/6 mm steel with a structure to improve adhesion or other surface.

Appropriate applications can also be found in areas with longer collection distances, as large capacity allows for an extension of the loading interval and a reduction in the cost of transport. Emptying 1 container takes 3-4 minutes. Bottom opening systems: pedal, double hook, or Kinshofer.

Our containers are made of steel and embedded into the ground, protected by an external concrete silo. Total volume variations include 3, 4, and 5 m³. Accessibility for authorised residents can be limited mechanically, electronically, or with a chip key. Access data to the containers can be transmitted wirelessly to an operation centre.



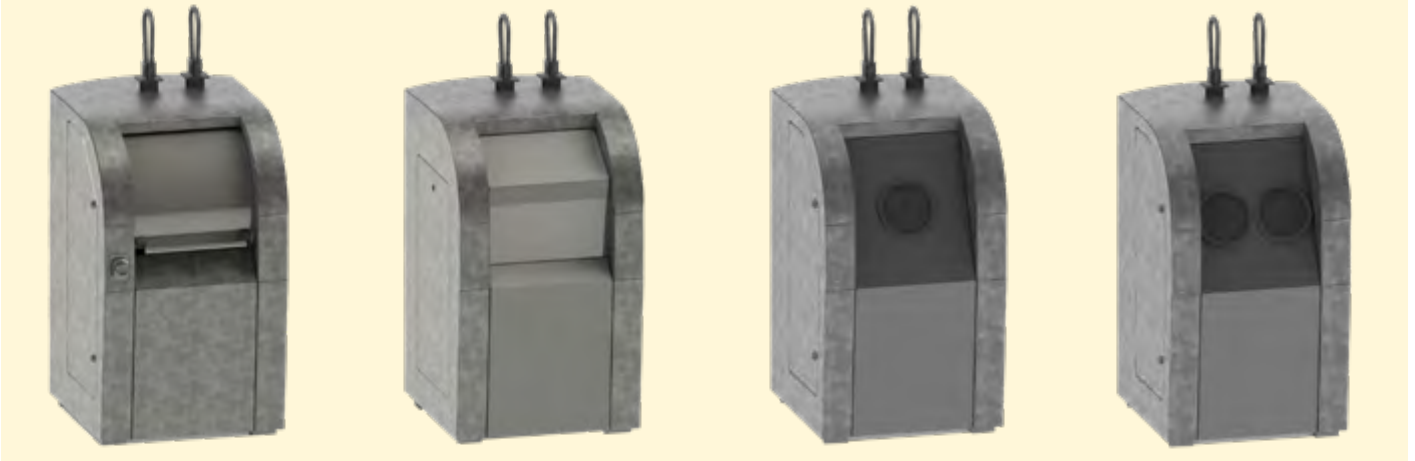
Lifting system



Internal removable container

If separation in one container necessary, the internal space can be divided into 2 or 3 chambers. Its high durability and long lifespan is guaranteed by 3 mm hot-dip galvanized sheets.

Inlet openings



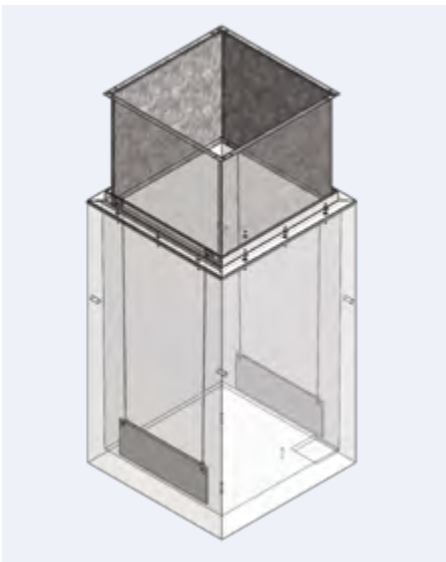
Concrete silo

A robust 5 t cast from waterproof concrete protects the container from the pressure of the surrounding earth and groundwater that could result in container flooding.

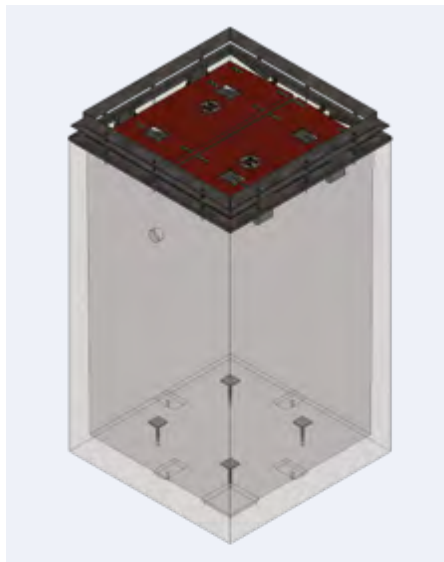
Protection against falls into the outer silo

Protects operating personnel and citizens from falling into the outer silo. Customers can choose among a safety floor, double flap or wall enclosure.

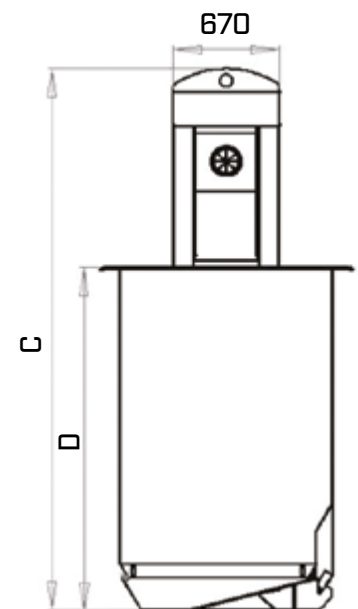
volume [m ³]	length A (mm)	width B (mm)	total height C (mm)	height of underground section D (mm)
3,0	1600	1600	2910	1810
4,0	1600	1600	3410	2160
5,0	1600	1600	3980	2730



Wall enclosure



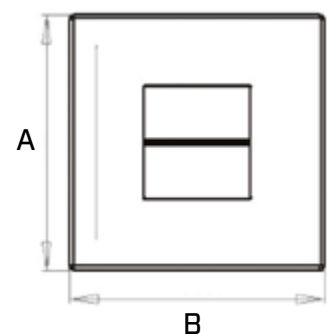
Double flap



Safety floor



Double flap



Pillars



UNO-S, UNO-M, UNO-L, DUO-S, DUO-M

Pillar

Pillar – a visible, above-ground section of the container. Surface treatment comprises a powder-coating with anti-graffiti layer for easy removal of paint and stickers. The simple UNO pillar is designed in sizes S, M, and L. The DUO double pillars for selective collection in one container come in sizes S and M. Larger pillars allow for the use of larger inlet openings for larger waste. The tops of the pillars feature lifting system attachments of the 1/2/3 hooks or Kinshofer type.



The UNO simple pillar

pillar size	S	M	L
type of inlet opening	opening dimensions		
round (mm)	Ø 160 Ø 225	Ø 160 Ø 225	Ø 160 Ø 225
flap (mm)	100x400 150x400 200x400	100x500 150x500 200x500	100x600 150x600 200x600
drum (l)	60	80	100



Filling level monitoring



The filling level monitoring system provides collection company or city dispatchers with updated information on the filling of individual containers. This system is the fundamental pillar of collection route planning, and thus aids significantly in the optimisation of expenses and timely emptying of the containers, i.e. there is no risk of overflowing collection points or hygiene issues at the sites, resident complaints, reduced sorting quality, etc.

The main advantages of the monitoring system

- access to information of the current filling of each container,
- data on the quantity and approximate weight of collected waste,
- effective planning of collection routes, which can significantly reduce operational expenses,
- significant reduction of emissions, wear of collection equipment, and work time,
- access to statistical data and trends that can be used for the optimisation of collection planning (i.e. for various seasons, holidays, etc.),
- low operational costs thanks to low energy use and optimised data transmission.

Sensors

- based on ultrasound technology,
- sturdy, waterproof, shock-proof,
- a wide range of operational temperatures,
- depth measurement of 1500–4500 mm,
- container temperature measurements,
- GPS positioning,
- fire warning (option).



Compatible data transmission networks

- GSM,
- BN-IoT,
- LoRaWAN,
- SIGFOX,
- 4GLTE.

Batteries

- high-performance replaceable batteries,
- status and charge monitoring.

Control system includes

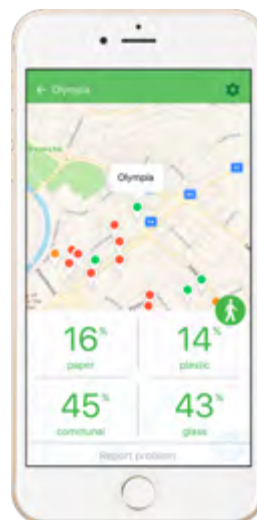
- cloud data transfer,
- data processing,
- creating reports, exporting, visualisations, graphs,
- planning optimal routes,
- processing information from residents (reporting pollution and other issues),
- web/desktop/tablet version.



Straightforward data handling for dispatchers



Easy collection route planning



Filling data access for residents



Example of sensor attachment to the container



Between nature and human



ELKOPLAST CZ, s.r.o.

Štefánikova 2664
760 01 Zlín
Czech Republic
e-mail: elkoplast@elkoplast.cz

tel.: +420 575 571 000
fax: +420 575 571 099

