

# Data Sheet

## WÖHR UNDERGROUND WASTE LIFT

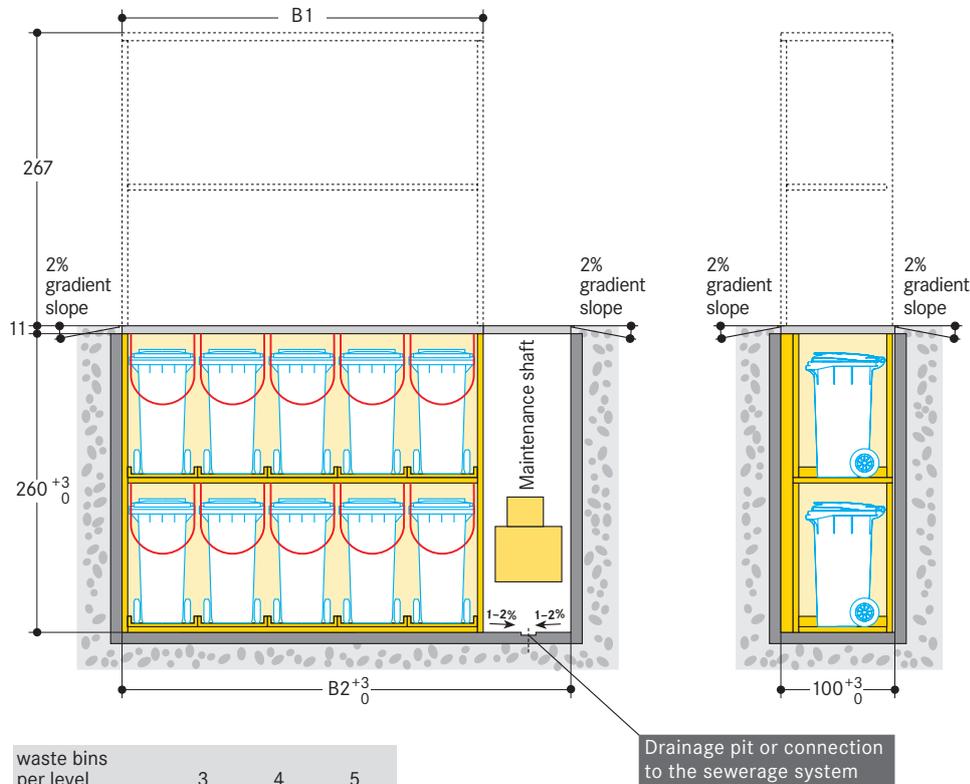


The vertically retractable WÖHR UNDERGROUND WASTE LIFT can be sunk underground to pit floor level, it features variable unit dimensions and offers a variety of different utilisation options. Flexible intermediate levels are also available and the system's cover unit can be designed and finished off to requirements.

**Platform load: weight per each waste bin is max. 110 kg (with a live load per bin of 96 kg)**

The system is engineered in compliance with the German DIN 1055-5 standard for snow load zones II up to 0.75 kN/m<sup>2</sup>.

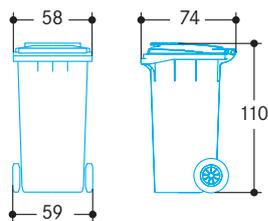
### WÖHR UNDERGROUND WASTE LIFT



waste bins per level	3	4	5
<b>B1</b>	194	256	317
<b>B2</b>	258	319	380

### Standard sized waste bins

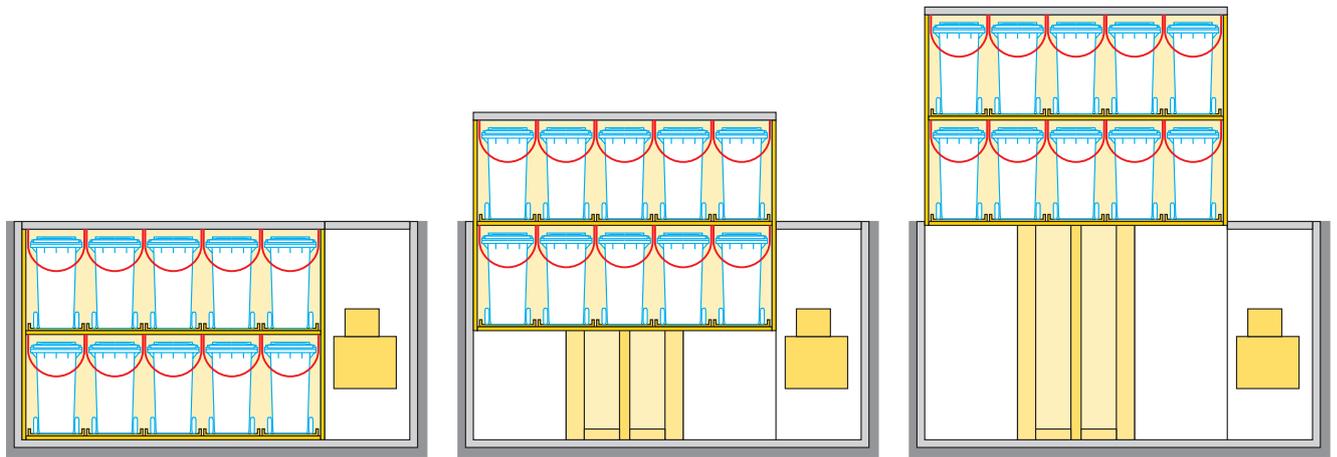
The WÖHR UNDERGROUND WASTE LIFT is capable of housing bin sizes compliant to the DIN EN 840-1 standard provisions, i.e. up to a max. 240 litres.



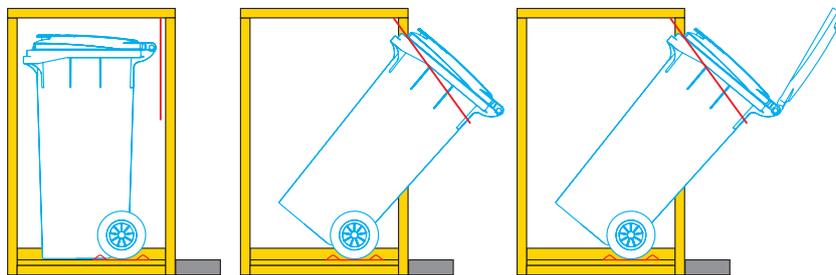
### Notes

1. The system cover unit is a welded structure (finished in compliance with the EN ISO 13920 standard directions to tolerance class C). It is possible to adapt the cover to the existing pavement coverings such as e.g. sand bed/marble slabs, sand bed/gravel slabs, earth bed/gravel, etc. (up to a max. weight of 150 kg/m<sup>2</sup>).
2. When retracted to ground level, the lift cover unit can be driven over (with a max. vehicle weight of 2600 kg, max. wheel load of 650 kg).
3. If additional load capacities are required (e.g. for access by fire brigades), kindly consult with WÖHR accordingly.
4. The pit can be constructed using site-mixed concrete or prefabricated concrete elements. In the event of prefabricated concrete elements, B2 channel grating is to be provided in length-wise direction. Please consult with WÖHR accordingly.
5. After operation, the system must always be retracted into its lowest bottom position (using the key interlock controls).
6. It is necessary to provide a maintenance shaft with an onsite shaft ladder (where needed). The integrated maintenance shaft features a shaft cover lid supplied by WÖHR (100 x 63 cm). The shaft also serves for the installation of a hydraulic power pack and to provide onsite aeration.
7. It is necessary to paint yellow-black, 10 cm wide safety markings on the front end of the system, compliant to the ISO 3864 standard requirements (see page 3 Static calculations and execution of construction works).
8. It is not possible to have channels or undercuts and/or concrete haunches along the pit floor-to-wall joints. In the event that channels or undercuts are necessary, the pit needs to be wider. For any such cases, customised constructions of the system cover units are required.
9. The manufacturer reserves the right to construction or model modifications and/or alterations. Furthermore, the right to any subsequent part modification and/or variations and amendments in procedures and standards due to technical and engineering progresses in the art or due to environmental regulation changes, are also hereby reserved.

■ System lifting and lowering operations

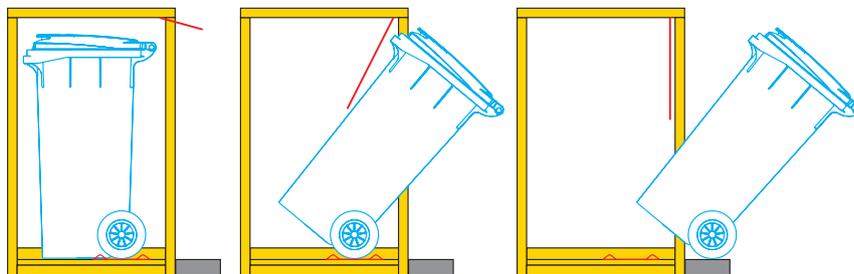


■ Placing waste into the waste bins



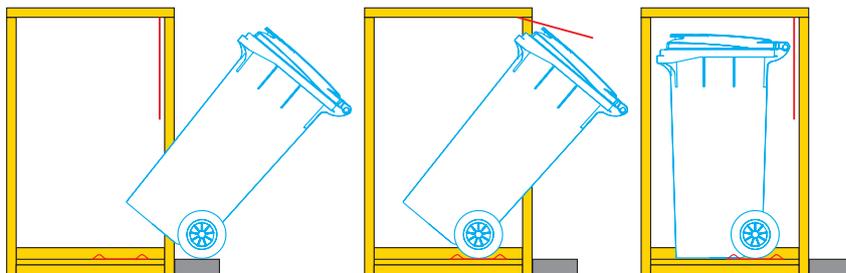
The waste bins are tipped outwards so the waste can be dropped in.  
The safety cable prevents the actual waste bin from toppling out.

■ Wheeling the waste bins out



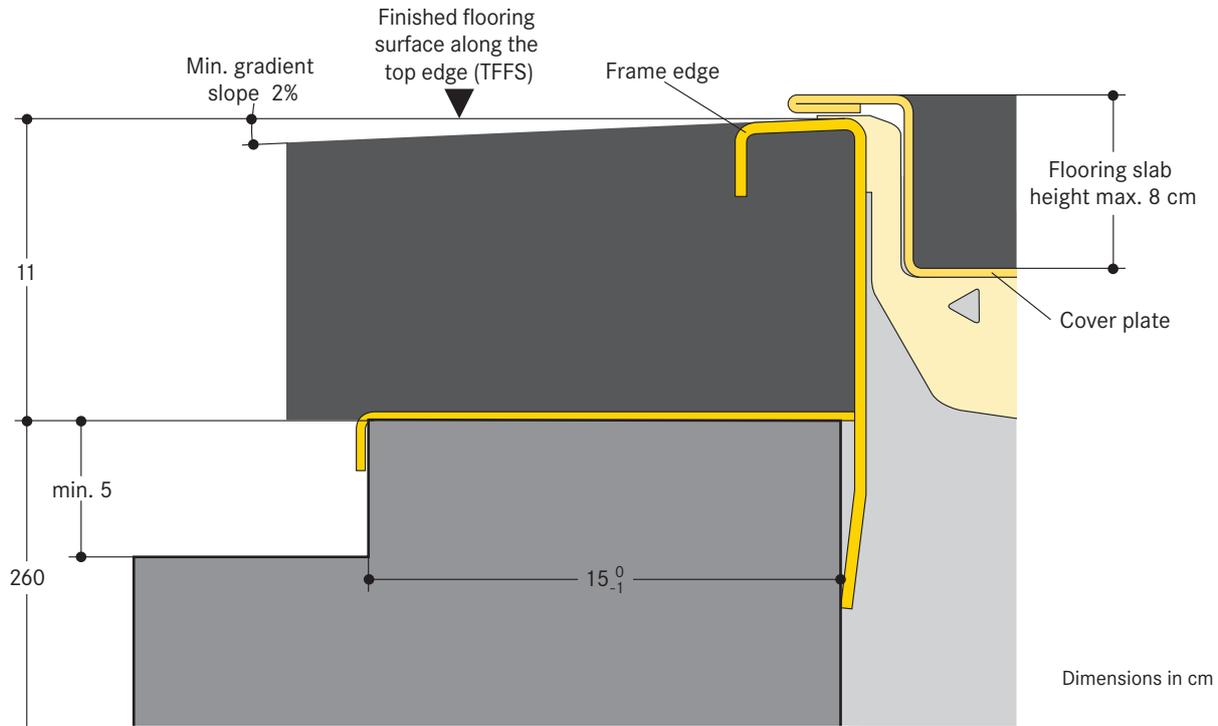
Simply lift the safety cable off and pull on the bins to wheel them away.

■ Wheeling the waste bins in



To wheel the bins in, simply push them in place and lift the safety cable on.

**Pit edges**



**Sealing off the cut surfaces**

For onsite sealing off of the cut surfaces (e.g. of the frame edges, of electric system openings, of any cut surfaces in the prefabricated concrete elements), WÖHR recommends that the relative dimensioning be specified by specialist concerns.

**Installation and assembly**

A crane is required for onsite installation and assembly.  
Hook clearance min. 350 cm over entrance height, crane load approx. 600 kg.

**Statics and construction requirements**

The pit can be constructed using site-mixed concrete or prefabricated concrete elements. In the event of prefabricated concrete elements, B2 channel grating is to be provided in length-wise direction. Please consult with WÖHR accordingly.

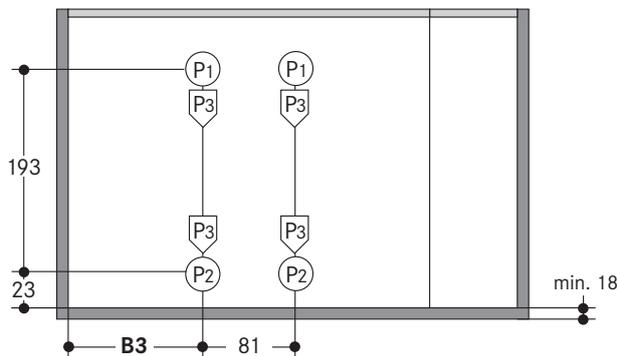
The system is locked in by means of metal splay dowels, and/or adhesive anchors in case of waterproof concrete, subject to prior consent to be given by WÖHR.

Borehole depth 8–12 cm. For concrete construction works: the quality of the concrete must be compliant to the static requirements of the building, with at least a grade C20/25 concrete in the dowel fastening sections.

The walls are to be built in concrete. The wall surfaces are to be completely evened out and must have absolutely no protruding elements such as pipes, etc. It is furthermore necessary to ensure that relative evenness and angularity tolerances are compliant to the German DIN 18202 standard requirements.

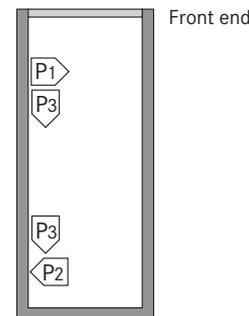
The specified lengths to the frame support points are expressed as mean values. Exact values can be determined provided that the exact position of the frame support points is given.

**Section**



waste bins per level	3	4	5
<b>B3</b>	56,5	87,5	118

**Side view**



P1 = -14,6 kN*
P2 = +14,6 kN
P3 = + 7 kN

**Top view**



Front end ↑ Markings compliant to ISO 3864

\* all load data comprise the weight of the waste bins (up to max. 110 kg per bin, with max. 96 kg live load per bin).

**Electrical data**

Item	Performance	Quantity	Designation	Position	Frequency
1	by customer	1 unit	electric meter	in the feed cable	
2	by customer	1 unit	fuse or automatic circuit breaker 3 x 16 A slow blow, acc. to DIN VDE 0100 p. 430	in the feed cable	1 x per power pack
3	by customer	as locally required	acc. to local power supply regulations 3 Ph + N + PE* 230/400 V, 50 Hz	feed cable to main switch	1 per power pack
4	by customer	each 10 m	grounding and potential equalisation lead-out connection	corner pit floor/ rear wall	
5	by customer	1 unit	grounding and potential equalisation compliant to DIN EN 60204	from the lead-out connection to the system	1 per unit
6	by customer	as locally required	empty pipe DN40 with taut wire	base pit/operating device	1 x per unit
7	by customer	as locally required	switch post		1 x per unit

Items 8-15 are included in WÖHR's scope of delivery unless otherwise specified in the offer/order.

\* DIN VDE 0100 part 410 + 430 (not under permanent load) 3 PH + N + PE (three-phase current)

The power supply cabling must be provided onsite for the date set for the start of the assembly procedures at the very latest. Lay-in and hook-up to the lockable main switch must strictly be performed onsite during the assembly procedures. Our assembly technicians working onsite can also be available to work together with the Electricians in order to verify the system's func-

tional capabilities. Should a verification of the system's functional capabilities be requested at a later date, said verification can be performed by WÖHR against compensation.

Grounding and potential equalisation is to be performed by the customer compliant to DIN EN 60204.

**Noise protection**

Basis here are the provisions set forth in the German DIN 4109 »Noise abatement in above ground level buildings« standard provisions. In compliance to said provisions, any devices, machinery and/or equipment installed into collectively-owned building facilities are to be provided with the necessary protection against the propagation of airborne and structure-borne noises.

**Operating device**

The position of the operating device depends on the project (switch post, house wall). From bottom of the shaft to the operating device an empty pipe DN40 with taut wire is necessary.

**Conformity test**

All our systems are checked according to EC machinery directive 2006/42/EC.

**Dimensions**

All dimensions shown are minimum. Construction tolerances must be taken into consideration. All dimensions in cm.

**Temperature**

The installation is designed to operate between -20° and +40°C. Atmospheric Humidity: 50% at +40°C. If the local circumstances differ from the above please contact WÖHR.

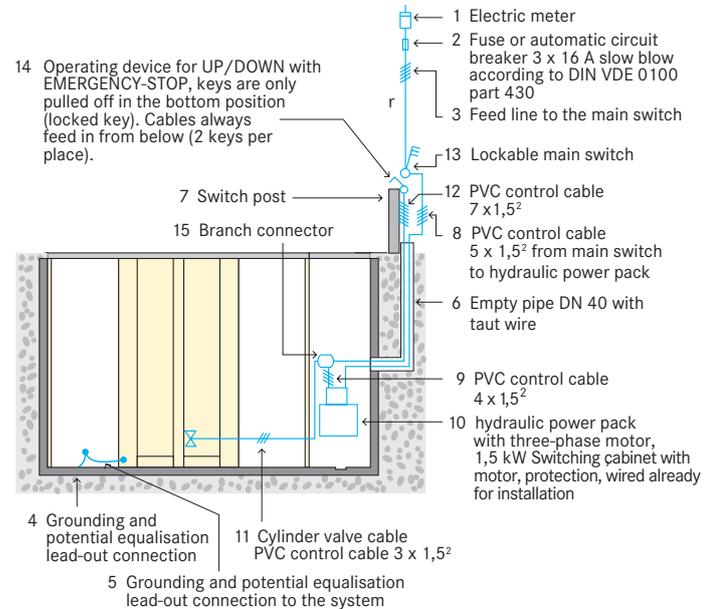
**Hydraulic power pack**

The power pack will be placed in the shaft for maintenance.

**Important notes**

**Warning: If the sides and/or the rear of the system can be freely accessed, additional safety features may have to be provided (guard rails, safety marking, electric safety rope switch and similar). Said features are to be designed per individual project requirements.**

**Installation diagram**



**Railings**

During the building phase the pit has to be safeguarded by the customer.

**Drainage (to be performed by the customer)**

- The area around the system is to be provided with a 2 % gradient slope against possible water penetration.
- For the drainage of considerable quantities of water out of the overall yard area, WÖHR recommends a circumferential drainage channel to be provided onsite around the pit.
- A drainage channel, either connected up to a floor drain or to a drainage pit, must also be provided in the maintenance shaft area. Should this not be possible, the pit needs to be emptied onsite using a drainage pump.
- To prevent any possibility of contamination of the ground water we recommend giving the pit floor an oil resistant coating as a means of protecting the environment. If this is to be connected to the sewerage system, it is advisable to provide oil and/or petrol separators.

**Aeration**

WÖHR recommends an aeration system aimed at providing continuous air exchange cycles for the reduction of water condense accumulation at low outdoor temperatures. This will

contribute to a considerable reduction in and/or prevention of corrosion and any system failures possibly occurring as a result thereof.

**Maintenance**

WÖHR and its foreign partners have an assembly and customer network. Annual maintenance is performed at conclusion of a maintenance contract.

**Protection against corrosion**

Independent of a maintenance workings have to be carried out acc. to WÖHR Cleaning and Maintenance Instruction regularly.

Clean up galvanized parts and platforms of dirt and road salt as well as other pollution (corrosion danger)!

**Maintenance shaft**

It is necessary to provide a maintenance shaft with an onsite shaft ladder (if needed). The integrated maintenance shaft features a shaft cover lid supplied by WÖHR (100 x 63 cm). The shaft also serves for the installation of a hydraulic power pack and to provide onsite aeration.

**Fire safety**

Each and every fire safety requirement and all possible mandatory item(s) and equipment(s) (fire extinguishing systems and fire alarm systems, etc.) are to be provided by the customer.