

EcoWaste






EcoLogi^(sti)cal solutions for your waste.



Solutions
'EcoLogi^(sti)cal'



Our range of products & services

Incentive charging by weight for semi-underground containers	
Incentive charging by weight for underground containers	
Incentive charging by volume	
Recycling centre	
Level measurement	

Contents

Principles	4
Level measurement.....	6
Access control	7
Charging by volume	8
Charging by weight.....	9
WISE® Application	10
Technical specifications.....	13

EcoWaste SA
Chemin de Budron C 7
CH-1052 Le Mont-sur-Lausanne
Phone: +41 21 804 84 44

E-Mail: info@ecowaste.ch
www.ecowaste.ch

Opening hours:
Monday to Friday
from 8am to 12pm and 1.30-5pm



EcoWaste

EcoLogi(sti)cal™ Solutions and incentive charging for your waste management

Professionals at your service

We have more than 15 years of experience in providing services to local authorities and collectors

We offer:

- Optimization of collection costs and sorting performance
- Reduction of local authorities' overall management costs
- Reduction of the environmental impact of waste logistics
- Implementation of the polluter pays principle with the aid of innovative technological solutions

EcoWaste is an entirely independent Swiss company that was created in 2002 with private capital.

Since then, we have worked hand in hand with different container suppliers, local authorities and collection companies to provide total satisfaction to users. We are most active in the development of smart cities.

Under the EcoWaste brand, we offer a complete range of products and services to optimize the collection of all types of waste. From underground to surface containers, together with compacting skips, we have the solution to meet your management needs. Particular emphasis is given to ease of use and unparalleled value for money.

Thanks to our EcoLogi(sti)cal™ Solutions, a range of products and services for optimal waste management, we offer local authorities, collectors and users a platform of personalized services that are entirely developed and manufactured in Switzerland, enabling optimal waste recovery (with a reduction of up to 60%!) at the best price.

Proof of our work is provided by the 5000 + electro-mechanical solutions that we have installed in Europe.

EcoWaste™, the intelligence of your containers

EcoLogi^(sti)cal Solutions: Reduce the financial and environmental costs of your waste!

A unique platform of high added value solutions that are entirely developed and manufactured in Switzerland.

Our EcoLogi^(sti)cal™ solutions bring together a range of products and services for optimal waste management.

Our approach offers local authorities, collectors and users a platform of personalized services enabling optimal waste recovery (with a reduction of up to 60%!) at the best price.

This result is primarily achieved by applying the 'polluter pays' principle. In other words, a significant proportion of the costs incurred by waste disposal is funded through incentive charging.

Whichever solution your authority chooses, we can advise you on your incentivization choices and on implementing your chosen measures.

Charge by bag, weight or volume

Regardless of the charging system chosen by your town, we are able to meet your requirements.

Our product range covers the technological requirements needed in order to apply the principle of causality, regardless of the principle chosen by your town.

Charging by weight: Individual weighing of bags

Charging by bag: Access control

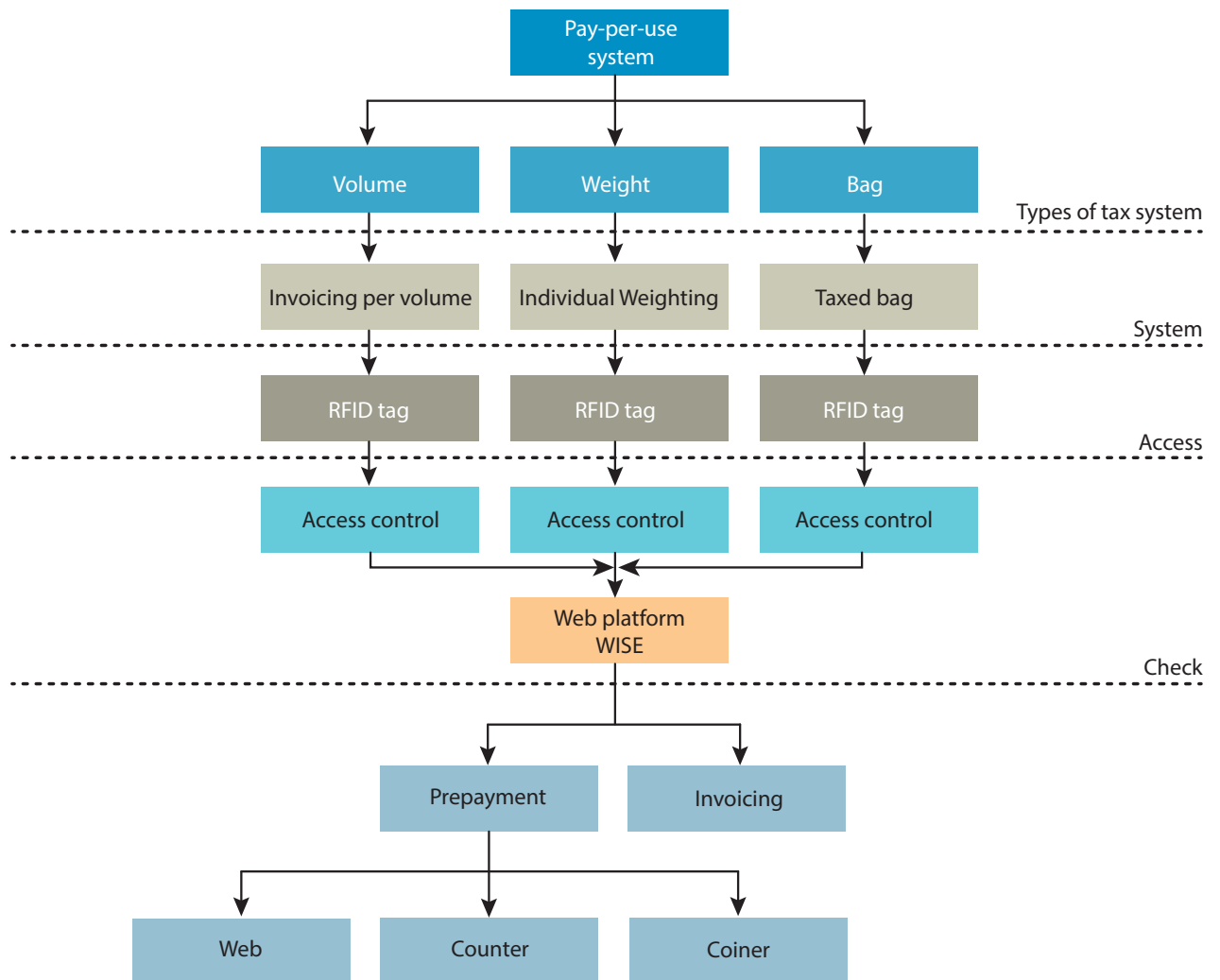
Charging by volume: Access control with double drum

Our WISE® web platform will enable you to manage containers and users simply and effectively, regardless of the principle chosen.

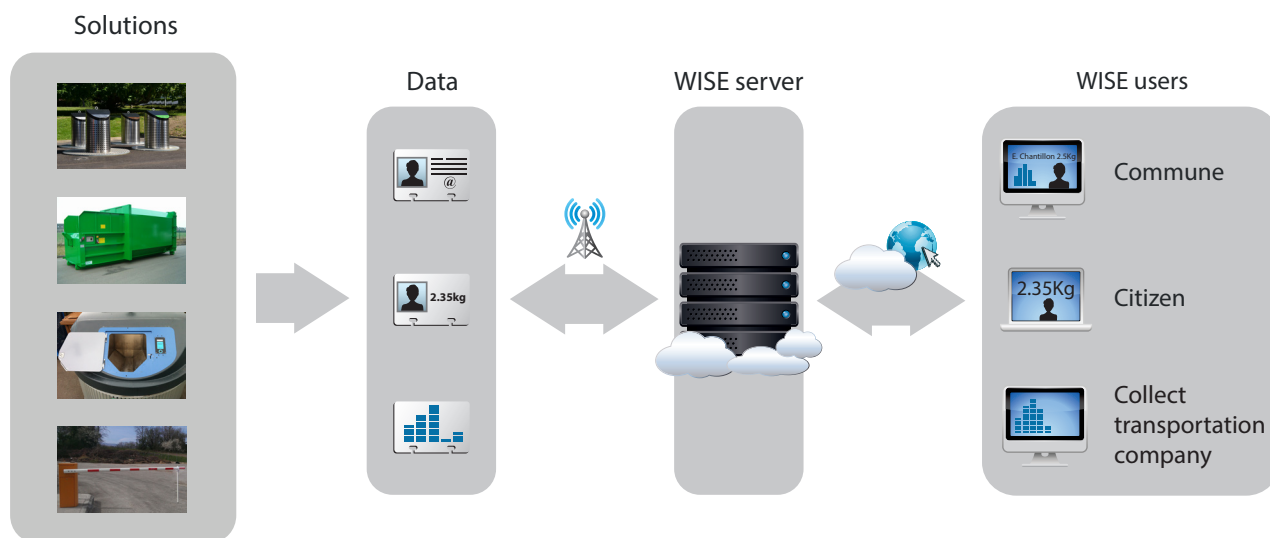


Individual bag weighing module developed for semi-underground containers. This module can be installed on most semi-underground containers on the market.

Pay-per-use tax system



How it works



The containers transfer data to the gateway through the GSM network. The gateway sends the data to the production server, which enables you to view your information.

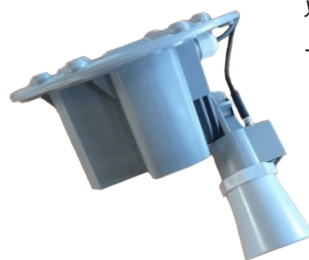
Level measurement

Control emptying and collections thanks to intake measurement.

A reliable level sensor linked to a measurement algorithm will enable you and your collector to optimize your logistics.

In conjunction with the access control system, level measurement enables the container to be automatically locked when it is full. An indicator (a flashing red LED) warns the user that the container is locked.

Level measurement requires a subscription to our WISE® management application. This subscription enables you, amongst other things, to set warning levels, to view the status of containers graphically and to consult emptying forecasts.



All the containers (55)						
Identifier	Flow type	Container type	Last collection	Forecast	Filling	
671	Ordures Ménagères	Erdia	2014-10-28	2014-12-05	38%	
562	Ordures Ménagères	Erdia	2014-11-07	2014-11-26	82%	
661	Ordures Ménagères	Erdia	2014-11-07	2014-11-25	81%	
551	Ordures Ménagères	Erdia	2014-11-12	2014-11-24	71%	
491	Ordures Ménagères	Erdia	2014-11-03	2014-11-26	81%	
482	Ordures Ménagères	Erdia	2014-11-07	2014-11-27	58%	
481	Ordures Ménagères	Erdia	2014-11-07	2014-12-08	20%	
472	Ordures Ménagères	Erdia	2014-11-11	2014-12-05	26%	
471	Ordures Ménagères	Erdia	2014-11-11	2014-11-27	44%	
462	Ordures Ménagères	Erdia	2014-11-03	2014-12-13	45%	
461	Ordures Ménagères	Erdia	2014-11-03	2014-11-30	42%	
451	Ordures Ménagères	Erdia	2014-11-12	2014-12-01	25%	
431	Ordures Ménagères	Erdia	2014-10-27	2014-11-26	60%	
412	Ordures Ménagères	Erdia	2014-11-10	2014-12-05	12%	

WISE®: Forecasts and fill rates page view

		Item No.
Level measurement	<ul style="list-style-type: none"> Probe EcoLog CPU Solar panel 	EML N
Subscription	Level management	ELW-COMAV



Access control with or without individual weighing

Access control

Electronic locking of the container.

Comprising a card reader and a solid lock, the access control ensures that your container remains closed and prevents uncontrolled dumping of waste in your town, by enabling identification of users.

The access control can of course be adapted to the various types of underground and semi-underground containers on the market.

Thanks to the flexibility of the IT management system provided, you can divide your town into zones and limit access to certain containers to one or several users. This prevents the wrong residents from accessing containers that are not assigned to them. It also enables the most recently deposited waste to be traced, and therefore prevents fraud.

RFID contactless cards are crucial for access control and can be distributed by your local authority. They can be printed on both sides in your town's colours, or with a personalized design. They can also be used in conjunction with other services (e.g. opening of a recycling centre).

The access console is a very practical control measure for tax by bag. As the most recent openings are recorded, you can target users in the event of improper or fraudulent use.



It can be installed in conjunction with level measurement and individual bag weighing.

Smart containers

Containers are equipped with CPUs which enable them to control the electronic options and to communicate with our servers via the GSM network.

Our electronic systems are self-powered through a solar panel, and therefore do not require any mains connection.

There is an option to remotely access containers to, for example, change certain settings, perform updates, leave a container permanently open or lock it.

It also provides access to monitoring various data such as the battery life and temperatures.



		Item No.
Access control	• Screenless access console	EML GAB
	• Locking system	
	• EcoLog CPU	
	• Solar panel	
	• Screenless	
Subscription	Without user management	ELW-PRECARD
	With user management	ELW-COMAC
Combinations	With level	EML GABN
	With weighing (tax on weight)	EML PI 5 13



CPU, the brain of the container

Charging by volume

An alternative to tax by bag and charging by weight.

By combining the access control with a volume drum defined by you, you have the option of very easily implementing charging by volume, with no special bag being required. The user has access to a limited volume, into which he/she simply places his/her bag of waste and closes the drum. A non-return system prevents any deposited waste from not being recorded.



Container fitted with a drum and access control for volume charging.



		Item No.
Drum	<ul style="list-style-type: none"> • Anti-return double drum • Level measurement • EcoLog CPU • Solar panel 	EL-GA-TAMDOU60-13
Subscriptions	WISE® access management	ELW-COMAC

Charging by weight

Scales for individual bag weighing if charging by weight.

With suitable facilities, charging by weight is by far the most effective system for reducing incinerated waste. It will enable you to achieve a reduction of up to 60%!

Our scales, which are developed and manufactured in Switzerland, can be installed in most 5000L semi-underground containers, or in underground containers using our 'SimplyCity' inlet.

The accuracy and reliability of scales is a priority if charging by weight. This is why our scales are **certified by the Swiss Federal Office of Metrology in accordance with European standards**, and provide measurements with an accuracy of +/- 50g.

WISE®- Our management application

Our **WISE®** web platform gives you control of your data and information. The export features enable you to transfer data into your own billing system.

Our IT department can also develop the gateways required for your management applications (user accounts, billing etc.) and **WISE®** to communicate.

Deferred installation option

Do you already have containers and wish to move to a charging by weight system? No problem. Thanks to its flexibility, the weighing module can be installed in an existing container at any time!



		Item No.
Individual bag weighing	<ul style="list-style-type: none"> • Individual scales • Access console with screen • Locking system • EcoLog CPU • Solar panel 	EML PI 5 13
Subscription	Comprehensive WISE® management	ELW-COMAVCP



Very easy to use. The card reader screen indicates each step and the weight measured.



Weighing module for a semi-underground container with cover, optimized for a greater load capacity.

WISE® management platform

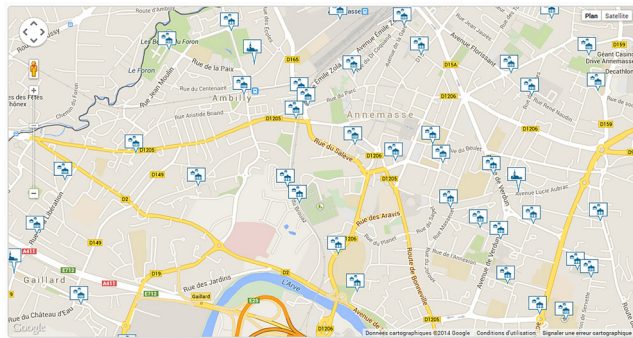
Manage your containers and accounts from any computer connected to the internet!

Our application enables you to manage all of the components required for your Ecologi^(sti)cal™ solution to work effectively.



Key features

- Management of container and flow types (together with their features)
- Management of accounts and pre-payment cards (web top-ups, kiosks etc.)
- Management of collections, maintenance and transfer
- Optimized route calculations (collections)
- Access administration
- Easy addition of new accounts
- Export of your data (accounts, waste etc.)
- Waste billing (by weight or volume)
- Billing summaries
- Location mapping
- Dashboards
- Monitoring fill level of containers
- Assistance with emptying forecasts
- Configuring SMS/e-mail alerts
- Automatic alarm trigger
- No software to install or update
- Online data available at all times



WISE®: Geographical location of EcoPoints

024542	Horisberger	Benoit	active	personn	Prepay
Info	Waste of the account	History	Cards of the account (1)		
<div>2013</div> <div>Jan Feb Mar Apr Mai Jun Jul Aug Sep Oct Nov Dec 2015</div>					
Deposit date	Flow type	Quantity	Price	Card	Container
2014-11-19 14:16:00	Ordures Ménagères	2.95 Kg	1.59 CHF	01947	472 X
2014-11-01 14:33:00	Ordures Ménagères	2.60 Kg	1.40 CHF	01947	472 X

WISE®: User account data view

WISE® subscriptions

Subscription type		Item No.
Level management	Subscribe to manage level measurement	ELW-COMAV
Access management	Subscribe to manage accounts and container access without level measurement	ELW-COMAC
Access and level management	Subscribe to a system comprising level and access management for the same container	ELW-COMAVC
Access management with drum	Subscribe to manage accounts, access, and billing data where required	ELW-COMAC
Weighing management	Subscribe to manage accounts, access, levels and billing data	ELW-COMAVCP
Recycling centre access management	Manage users, access history	ELW-ADECH

Route planner



WISE® is an application which assists with planning and collection management

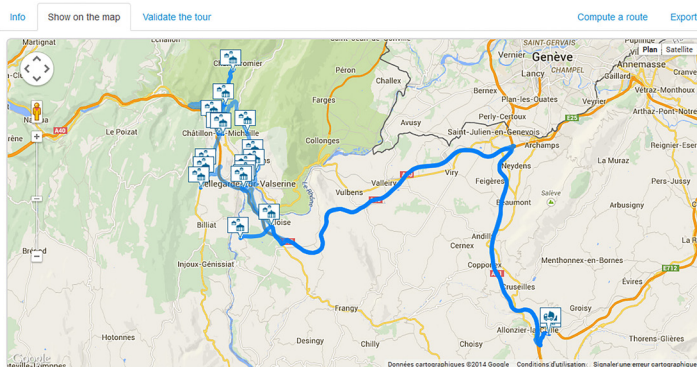
Collection assistance is a logical addition which is crucial for providing information on the fill level of containers on the ground. It also has many benefits:

- Eliminating overfilling
- Eliminating early collections
- Determining the 'ideal' daily collection routes in accordance with actual collection needs

Its many beneficial consequences include:

- Reducing frequency of collections
- Reducing collection costs (fuel, wear and tear, labour costs etc.)
- Reducing obstructions on the ground (traffic circulation)
- Improving environmental impact (pollution, CO2 etc.)

WISE® includes a Collection Assistance Tool - Multi Truck Multi Flow (OAC – MCMF).



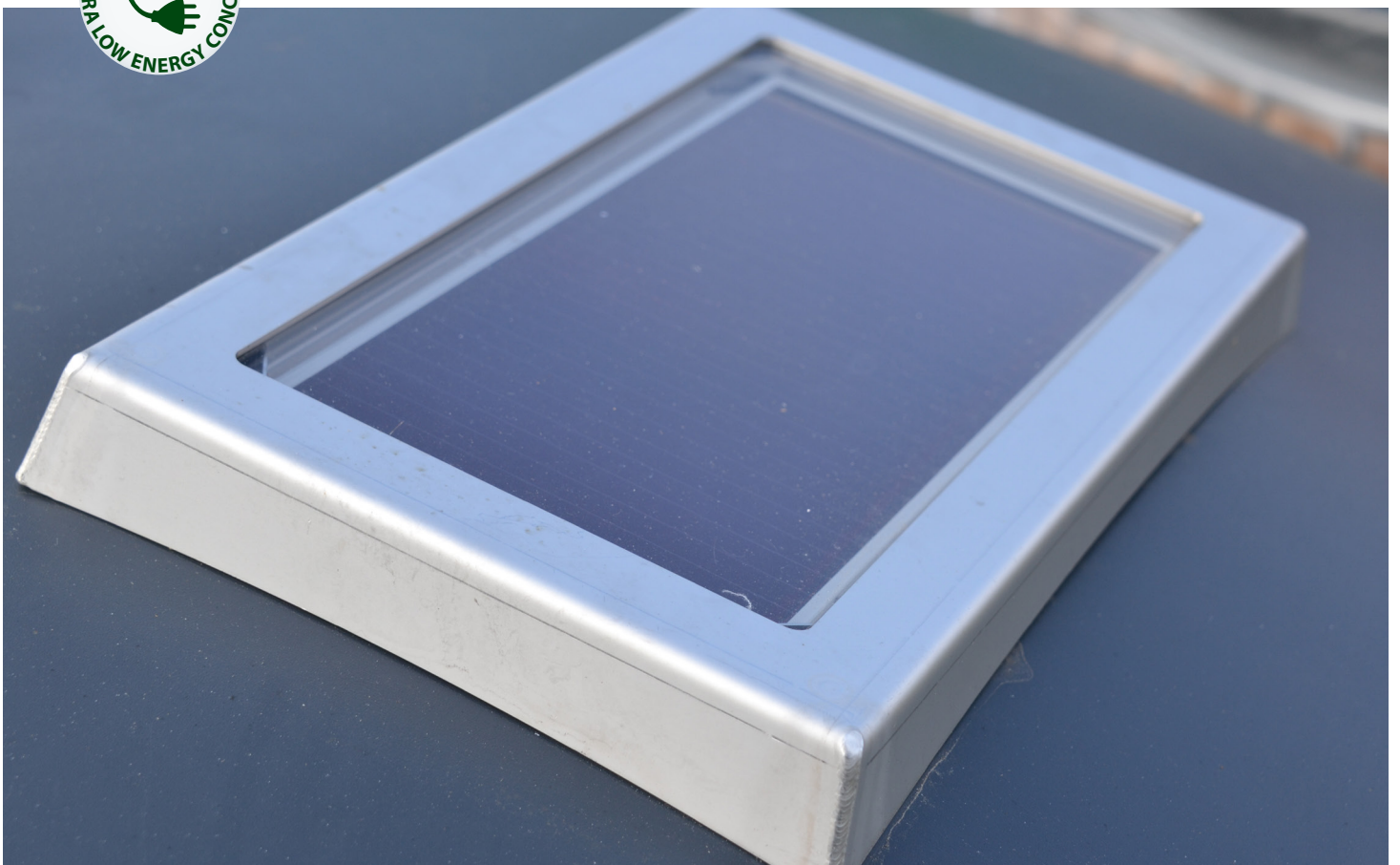
The route planner also includes:

- Unloading points by flow
- Start points of the various vehicles
- Features of the various vehicles (skip volume, load capacity, crane type etc.)
- Costs associated with each vehicle (fuel consumption, age etc.)
- Specific schedules (public holidays, one-off events etc.)

Once the initial configuration is complete (which can be freely and easily changed), WISE® is always available so that you can edit your 'ideal collection routes' as you wish, according to requirements and the human and material resources available.



*All of our devices are
standalone (using solar
panels). No mains
connection required!*



Technical specifications

Level measurement EML N	
Sensor type	<ul style="list-style-type: none"> • Ultrasound
Firmware	<ul style="list-style-type: none"> • Developed in Switzerland • ProSensic™ Algorithm
Measurement	<ul style="list-style-type: none"> • Directional measurement cone • Up to 3m • Measurement frequency: Every 10 min.
Power	<ul style="list-style-type: none"> • via CPU

Access console	
Card reader	RFID 125 KHz or 13 MHz, Multitag
Cards	<ul style="list-style-type: none"> • 125KHz or 13MHz cards, personalizable front and back printing • Set of maintenance cards for authorities and transporters
Button	<ul style="list-style-type: none"> • Mechanical type (pressured) in Teflon® black, watertight, ice and shock resistant
Screen	<ul style="list-style-type: none"> • VFD, 12x54mm • 2-line high-contrast display • Choice of 5 languages, bilingual display option
Lock	<ul style="list-style-type: none"> • Mechanical 2-position lock, remote management option
Power	<ul style="list-style-type: none"> • via CPU

Individual bag weighing EML PI	
Supported models	<ul style="list-style-type: none"> • 5000L semi-underground containers • 5000L underground containers
Accuracy	<ul style="list-style-type: none"> • +/- 50g • Minimum billable amount 500g
EU certification	<ul style="list-style-type: none"> • European certification by the Swiss Federal Office of Metrology (METAS) • Certified load: 0.5 to 20Kg • Accuracy class III
Operating temperature	<ul style="list-style-type: none"> • -20°C to +60°C
Power	<ul style="list-style-type: none"> • Solar
Total weight	<ul style="list-style-type: none"> • Approx. 50Kg

CPU EcoLog	
Build	<ul style="list-style-type: none"> • Developed and manufactured in Switzerland
Firmware	<ul style="list-style-type: none"> • Developed in Switzerland • Remote update option (OTA)
Features	<ul style="list-style-type: none"> • SIM Card • Transfer of data through GPRS • Programmable usage time slot • Malfunction alerts
Power	<ul style="list-style-type: none"> • 6 to 12V batteries or 12V solar panel • No mains connection required • 2A, 7A or 17A battery according to system
Protection	<ul style="list-style-type: none"> • IP68
Solar panels	<ul style="list-style-type: none"> • Current and voltage on maximum power: at 200 W per m² (moderate coverage): 7 mA /14 V at 1000 W per m² (clear): 35 mA/15 V • I x L x E in mm: 150 x 150 x 3.2 • Glass stand • Stainless steel frame: Watertight EVA/Tedlar finish with anti-corrosion edge • RoHS Compliance



*EcoWaste, the brand
synonymous with quality for
innovative 'ecologi(sti)cal'
solutions.*

Your notes

[illegible]



EcoWaste SA
Chemin de Budron C 7
CH-1052 Le Mont-sur-Lausanne

T +41 21 804 84 44
E info@ecowaste.ch
I www@ecowaste.ch