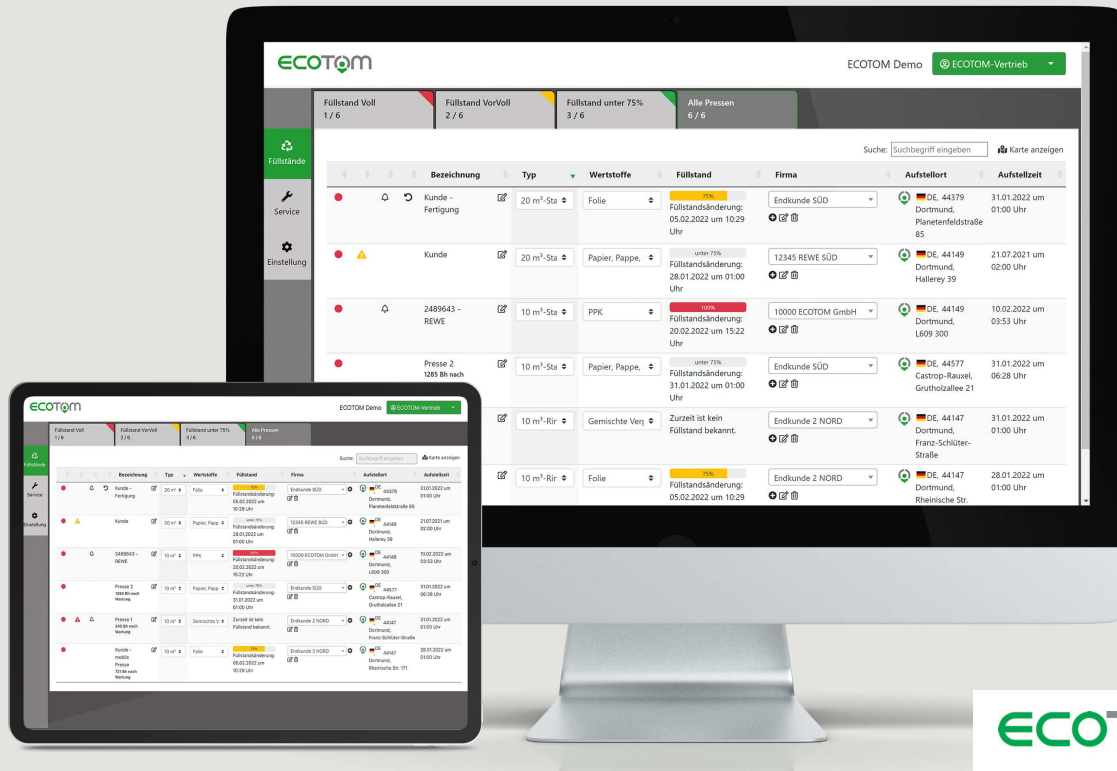# Smart waste diposal with ECOTOM.online

Clarity, overview and efficiency for large waste disposal companies

The innovative and powerful disposal portal ECOTOM.online solves numerous challenges for large disposal companies. The system offers you a meaningful 360-degree all-round view of all your waste disposal equipment. Depending on the hardware equipped, e.g. mobile waste compactors, GPS-controlled filling level information and other relevant status data of your equipment are determined and displayed in an internet portal. All current data can be displayed and communicated via e-mail or directly via data interface to your ERP system. This gives you a quick overview of the status, you can evaluate business data and, on this basis, make well-founded process decisions that comprehensively optimize your processes.

With the current AVOS M model series from Avermann, you also have the option of remote access to your machinery, e.g. to make site-specific settings.

ECOTOM

Configuration of site-specific data

Real-time data collection with Europe-wide data communication and global location determination

ECO PRO 2

Avermann

Filling level overview for all machine locations

Service support through the transmission of status / error messages and setting of the machine parameters

Creation of statistics, e.g. number of emptyings, malfunctions, etc...

Advantages of a smart compactor with ECOTOM.online

Logistics
+ Maximum compactor loads
+ Overview of your machine pool
+ Optimised assignment trips (daily planning for drivers)

Scheduling/Dispatch
+ Possible connection to existing scheduling and accounting systems
+ Optimised planning of transport routes and emptying intervals
+ Real-time information on machine status

Maintenance/Service
+ Error and status messages of the machine
+ Online settings of machine and location parameters
+ Proactive service, e.g. annual safety inspection

Avermann

Hardware specifications ECO Pro 2A:

› Robust, compact and especially suitable for industrial use.
› ECO PRO 2A transmits current operating data and location information that is available for billing or operational control, and monitors areas of use and limit values.

› Power supply and battery: ECO PRO 2A can be connected to machines up to 32 V DC and maintains machine monitoring for up to 5 months when not connected thanks to an integrated battery.
› External GNSS/LTE-M/GSM combi antenna for best possible location determination.
› Only D-network, roaming in Europe including Germany, industry SIM.

› Interfaces: 4 digital inputs, 1 digital signal, 1 digital output. Amongst others, the ECO PRO 2A is connected directly to the Avermann control via an RS232 interface and transmits all status and error messages via this interface.

Technology at a glance:

Supply voltage:
+7 V up to 32 V DC (on-board supply system)

Battery:
Internal battery; battery recharge via on-board supply system

Power consumption:
400 mA at 12 V DC and 200 mA at 24 V DC
(monitoring of inputs and of the motion sensor, GNSS and LTE/GSM activated)
Typical consumption in energy saving mode:
< 1 mA

Motion sensor:
Integrated 3-axle acceleration and vibration sensor

Temperature control:
Integrated temperature sensor

Data transfer:
LTE-M/GSM modem

Determination of position:
72 channel GPS, GLONASS receiver

Antennas:
External GNSS/LTE-M/GSM combi antenna
Cable length 3 metres

In-/Outputs:
4 digital inputs (0 up to 30 V DC)
1 digital signal (external voltage)
1 digital output

Interfaces:
1 RS232
1 One-Wire
1 CAN Bus

Electrical connection:
9-pin connection cable
Cable length 600mm
Cable diameter 0.75mm
Coloured open single conductors

Operating temperature:
-30°C up to +70°C
-20°C up to +60°C in battery mode

Mechanical data:
Plastic housing 150 x 65 x 45mm
9-pin connector
Weight 220g
Protection class IP6K6K
(with screwed antenna connectors)

Act smart and use all technical possibilities online!

Telematik

Advantages of AVOS M and ECOTOM.online:

+ **Optimised performance:** up to date information about filling levels
+ **Individual:** site-related parametrisation
+ **Easy to maintain:** all machine data available online; online service access for easy analysis
+ **Intelligent:** communication interface for further data analysis allows service predictions and optimisation possibilities

■ **Universal:** the data can be transmitted to your ERP system via an interface. This allows the dispatcher to work with a single system.
■ **Data security:** portal in the German data center with redundant design for data security and individual user rights.

■ **Efficiency-raising:** By transmitting pre-full and full messages, the optimal pick-up time for mobile waste compactors can be determined.
■ **Analytical:** Transmitted operating data can be used to further improve route planning and business cost accounting.

Responsive: Optimal display of the web content according to the properties of the end device used, including smart phones and tablets.