

ENVIROWEIGHTM Y(b)

Waste management solutions for wheeled bins



the vehicle & bin weighing people

Dynamic British bin weighing

RFID Tagging

OWL Compliant

Simple Software Solutions

Approved for Pay by Weight

Fixed Cost Bin Weighing Hire

Fixed Cost Service and Data Transfer

Designed and Manufactured in the UK

Pinpoint Profitable and Loss Making Clients



From the UK's leading manufacturer
of onboard vehicle weighing and
wheeled bin weighing systems.

AW.co.uk

Weigh and control

Enviroweigh is an approved dynamic weighing system to accuracy Class Y(b). It provides individual bin weights whilst displaying a running total of collected weights, helping crews to prevent overloads.

It installs to most type of RCV lifting hoist and weighs the precise weight of wastes collected from wheeled bin containers to accuracies of 0.5% or better during the normal loading cycle,

there's no need to stop the lifter. Each lifting chair is installed with a weighing loadcell and weighs two different bins independently and simultaneously. All made in the UK.

- Integrates with recycling incentive schemes
- Approved for pay-by-weight services
- Reject unwanted bins
- Pinpoint profitable or loss making customers
- Track the performance of each collection route
- Streamline routes without compromising service

Monitor customers operating within a banding charge system to ensure that they are invoiced correctly for the amount of waste they produce. Enviroweigh works with telemetry systems, enabling remote monitoring and back office fault diagnosis helping to reduce vehicle downtime whilst providing a better service. Vehicle data can be analysed before it returns to the depot providing a real-time solution to such issues as uncollected bin queries and fraudulent collections or re-routing the truck for an urgent collection.

Back office software allows operators to monitor and plan the vehicles load carrying capacity, reducing the risk of future prosecutions for vehicle overload, monitoring periods of inactivity and inefficient half loads. Controlling and preventing the collection of unwanted and unknown bins is essential for an effective collection operation. Cases for rejecting unwanted bins include: the bin has no tag or an unknown tag or the collection has been frozen through non-payment. Emptied or not, all transactions are recorded on an exception report.

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- Pinpoint poor recycling habits & highlight excessive use
 - Record 'not-out', missed and inaccessible bins
 - Manage contaminated and damaged bins
 - Cut down on fraudulent collections
 - Real-time missed bin enquiries
 - Monitor legal compliance
 - Maximise your profit



Data collection, transfer and management

Customer weight data is transferred to the waste management software system via several selectable options to update the system database with new customer transactions.



collect waste data



transfer data



manage data

Pinpoint Profits
Manage Routes
Order Processing
Recycling Incentives
Increase Productivity
Prevent Overloading
Pay-by-Weight Invoices
Stop Fraudulent Collections
Key Performance Indicators
Stop Recycling Contamination
Fleet Performance Analysis
Waste Collection Data Stats
Waste Fraction Analysis
Return on Investment
Target Excessive Users
Measure Participation
White & Black Lists
Waste Data Flow
Resolve Disputes

Data Collections and Transfer Options

Data logger	Stores an electronic record of every weighing transaction
Printer	A tally-roll printer stores a hard copy of every weighing transaction
Qwerty keyboard	To input data such as customer, material or bin type at the point of collection
Barcode wand	To scan on and off customers site or assign a customer to a lift
Numeric keypad	To enter a numerical code to link the weight transaction to the customer
Tracking	We supply an entry level weight & location system (see OWL page 5)
Telemetry	Enviroweigh integrates easily with telemetry systems

Enviroweigh interfaces with most waste management software systems. Alternatively, we have our own entry level software and portable PDA recording system with web based remote vehicle tracking showing loaded weights. Exporting weight and ID data is easy, external devices such as trackers with GPRS over-air data or a portable PC, will connect directly to the RS232 port on the M350S weighing controller. An optional data logger stores every weighing transaction together with bin tag ID number, time and date in CSV format for importing into existing software suites. As well as

recognising bins using established RFID techniques, Enviroweigh can be fitted with devices for inputting customer and/or container numbers. The M350S and data logger stores customer data together with weight, time and date. An alternative method of registering customer's bins is a barcode scanner; drivers scan from a prepared list prior to weighing the bin weight, time and date is then assigned to an account. VWS is a British engineering company. Should you have any particular requirement not covered here, VWS is happy to discuss your requirements in detail and provide a solution.

Waste management software solutions - not one size fits all

Enviroweigh integrates with most proprietary software giving you the option to choose the most suitable software for your operation either new or existing. A wide range of providers offer solutions

tailored to all kinds of waste and recycling operations, most software houses integrate to Enviroweigh, some of the leading solution providers we work with are:



P & L Waste Management Software



Total Waste Systems



Bartec Systems



Waste Recycling Solutions



Vehicle Weighing Solutions



Whitespace Waste Software Solutions



CMS SupaTrak



Dataset IT Systems



Isys Waste Software



Chobham Systems

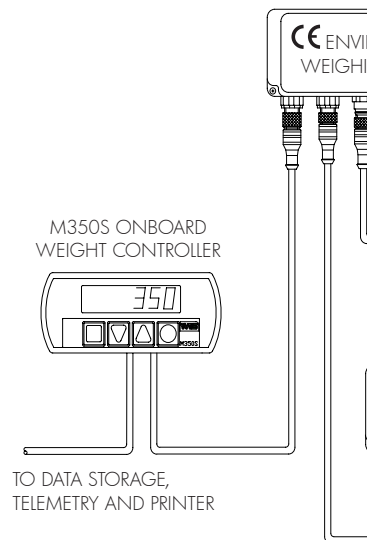
ENVIROWEIGH™ - BRITIS

Modular	Integrated	Certified	Accurate
			
Plug and play	Fits all lifter makes	OIML R60 & R51 ACWI	Quality assured
We use IP68 fully moulded connectors and very low profile weighing controller enclosures on a digital CAN electronics network for ease of installation, set-up, calibration and diagnostics.	Enviroweigh installs to all makes and types of standard wheeled bin lifting hoists which includes: Otto, Zoeller, Dennis Beta lift, Terberg, LinkTip, Incomol, Geesink Norba, Heil, NTM, Garwood, Ecoprocess, etc.	VWS weighing loadcells are made in the UK and individually approved to OIML R60. Loadcells conform to R51 and are rated to 2 tonnes each.	VWS uses the best quality materials and parts produced to QA BS 9001.2008. VWS is no ordinary engineering company; we design, manufacture, install & we service all our systems specifically for waste operations.

The ENVIROWEIGH™ modular connection system uses IP68 fully waterproofed connectors and low profile controller enclosures. It's compatible with all lifter electronics and existing onboard vehicle management devices.

ENVIROWEIGH™ comprises; M350S weighing controller, weighing loadcells, a weighing module, an input/output control module, an RFID control module, RFID tag readers and a choice of optional or bespoke peripherals.

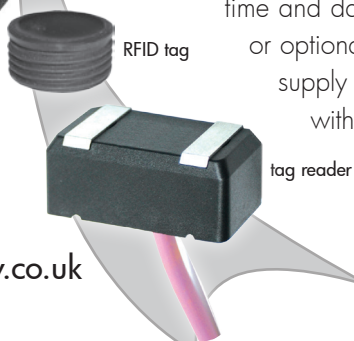
Radio frequency identification (RFID) tags or micro chips are fitted to the bin. The bin tag is read by a tag reader installed to the lifting comb. Enviroweigh identifies and reads a unique number, thus validating the bin prior to lifting and emptying.



Standard system schematic

Identify and record bin data

An industry standard **tag reader** replaces a tooth on the lifting hoist and reads the wheeled bin mounted chip number. This identifies and verifies the customer, bin and materials. Transactions, time and date are stored on the memory card or optionally transferred telematically. VWS supply the right tag for the job and assist with bin tag fitting and roll outs.



ENVIROWEIGH™

Enviroweigh is a wheeled bin weighing and bin identification system installed to the bin lifting hoist of RCVs. Two and four wheeled bins are weighed independently and dynamically (whilst moving) during the normal lift cycle without stopping. This means two weighing systems - one on each lifting 'chair' side-by-side are capable of weighing two different domestic bins with different weights or a four wheeled trade bin. Each truck can differ, the key elements are illustrated opposite.

H bin weighing at its best

Flexible



Adaptable



Data solutions



Aftercare



Customer identification Data tags & options

A selection of read only and read-write RFID data tags in low, medium and high frequency band widths are fitted as standard. ID options to suit all waste requirements are available.

For all operations

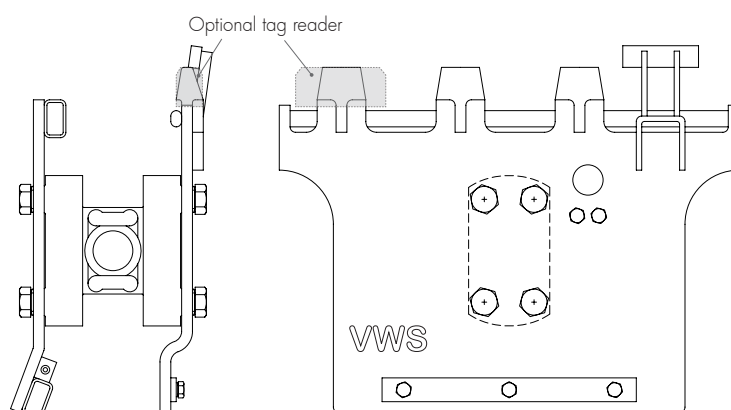
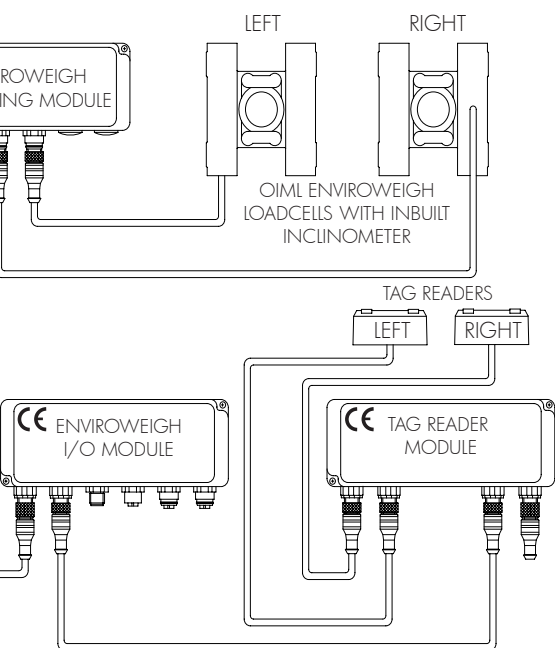
Enviroweigh is suitable for all types of waste recycling operations collecting all kinds of wastes in wheeled bins, whether on multi-bin domestic collections or multi-site trade rounds.

Flexibly manipulate data

We offer a host of data collection, transfer and manipulation solutions for new or existing IT infrastructures, whether a stand alone system for one truck or a centrally controlled system managing dozens of trucks.

Nationwide service

Our service team installs and calibrates systems anywhere in the UK. We've more dedicated onboard weighing engineers than anyone else, we can service any make or type of onboard weighing system.



custom made comb plates to suit any lift



Increase crew safety and protect public assets



The Optimised Waste Logistics (OWL) partnership developed by Vehicle Weighing Solutions with our established partners provides operators with a fully integrated system to help safely operate RCV's and crews.

$$\text{WVS} + \text{OWL} + \text{Established Partners} = \text{Best Practice}$$

VEHICLE WEIGHING SOLUTIONS Optimised Waste Logistics

OWL brings together technologies that allows operators to benefit from established best practice solutions that optimises waste collection operations whilst protecting the vehicle, the crew, residents and vehicle owners.

- Reduce fuel use with effective driver behaviour management
- Guard against fraudulent claims with live and recorded 360° CCTV
- Reduce the risk of running overloaded, reduce vehicle maintenance costs
- Know exactly what weight is collected from client
- Tyre pressure monitoring and alert
- Identify 'grey lifts' with trade route profiling and video evidencing
- Protect crews with health and safety alerts integrated with CCTV

VWS OWL has brought together industry specialists to provide one integrated, end-to-end waste collection solution to support all kinds of waste operations, large or small, public or private, residential or trade routes. OWL ticks all the boxes for municipal vehicle specifiers who need to maximise safety and security, minimise running costs, and increase vehicle

utilisation whilst reducing ongoing maintenance costs. By using CANbus enabled systems together with chassis and body CANbus data, live and recorded 360 degree video, carbon footprint management, payload data, bin weight and bin identification information, in-cab job control and driver behaviour management optimises the utilisation of the truck.



Vehicle Weighing Solutions

We are widely regarded as market leaders in the supply of vehicle weighing systems, an accolade earned through consistent attention to detail, use of best quality materials and innovative design ideas.

Tried and tested

Our weighing technology is widely used across municipalities and commercial waste contractors all over Europe. We install standard and bespoke designed systems to suit the requirements of operators public and private, large and small. Since 2005, we've been installing bin weighing solutions using the expertise and facilities across the AW family of companies.

We manufacture OIML compliant loadcells, together with the complete Enviroweigh electronic system to ISO 9001.2008 using the best quality components.

On-site service, calibrations and training

Professional on-site service keeps your onboard weigher working. Our team of experienced onboard weighing engineers - the largest of any onboard weighing company in the UK - are trained and skilled to repair all makes quickly and efficiently including: PM, Napper, Mx, and Red Forge. Help is only a phone call away, for service please call: 0161 643 0202.

What gives VWS the edge is flexibility, we aim to operate efficiently and productively to meet every type of customer need. Once you've taken delivery of your system we provide full on-site technical back-up, should you need assistance, we're always available to help.

Spares

Should a component get damaged i.e. reversing the truck into a wall and damaging a loadcell, a replacement OIML approved UK made stainless steel loadcell is available at a reasonable cost. We recognise cost of ownership must not be expensive and that Enviroweigh gives great value.

Service & calibration contracts; fixed cost ownership

We offer service levels for all kinds of operations at very competitive and transparent pricing levels, please see our service brochure for more details. Typically, your first 12 months warranty is included, there is a full service package available at around 10% of the purchase cost. This also includes data transfer, LOLER inspections and full calibrations. This is paid for in advance after the first full 12 months. This should be built into your costings and is a necessity for accurate and reliable bin weighing.

Common RCV and lifter makes we successfully work with:

Dennis Eagle	Geesink	McNeilus REL	Semat
Beta	Grange	Norba lifter	Terberg
Ecofar lifter	Heil	NTM	Zoeller
Farid	Huffman	Otto	
Faun	Incomol	Ros Roca	
Garwood	LinkTip	Ecoprocess	

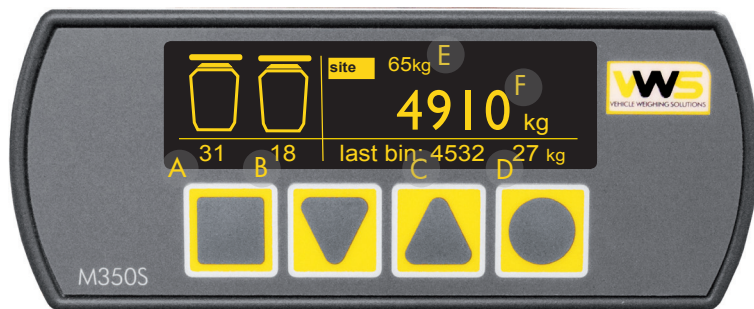


Service catalogue

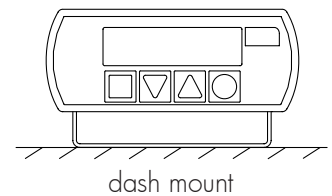


Installations

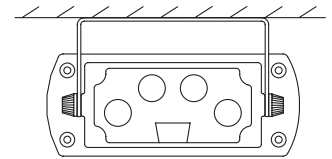
Enviroweigh is installed to new or existing trucks in our workshops using ISO9001 QA parts. The **M350S** weighing controller has a clear bright display showing crews the weight of waste collected and total net load. Radio, dash, panel or weatherproof mount for out-of-the-cab access is available as standard.



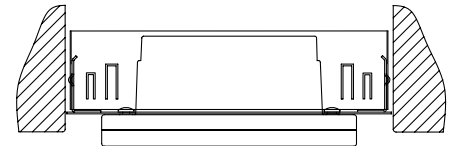
- | | |
|-----------------------|-----------------------------------|
| A Left bin weight | D Last bin weight |
| B Right bin weight | E Weight collected from site |
| C Last bin tag number | F Total weight collected on round |



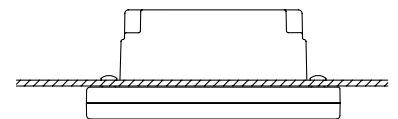
dash mount



roof mount



radio DIN mount



panel mount



weather proof mount



loadcell installation

recent installations



LOLER examination

LOLER examinations

Lifting Operations and Lifting Equipment Regulations (LOLER) means annual examinations are required on wheeled bin lifting hoists. LOLER states that employers shall ensure that lifting equipment exposed to conditions causing deterioration and liable to result in dangerous situations is thoroughly inspected at suitable intervals between examinations to ensure health and safety conditions are maintained and any deterioration is detected and remedied.

An Enviroweigh system should be routinely serviced and calibrated every 12 months (minimum). LOLER examinations are carried out as part of a service contract during a routine calibration to minimise downtime. Separate or one-off examinations are done on request. We offer fixed cost service maintenance and LOLER examinations for the first 12 months service cover free of charge. Then we charge approximately 10% of installed cost per year.

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you weigh o you measure o you control