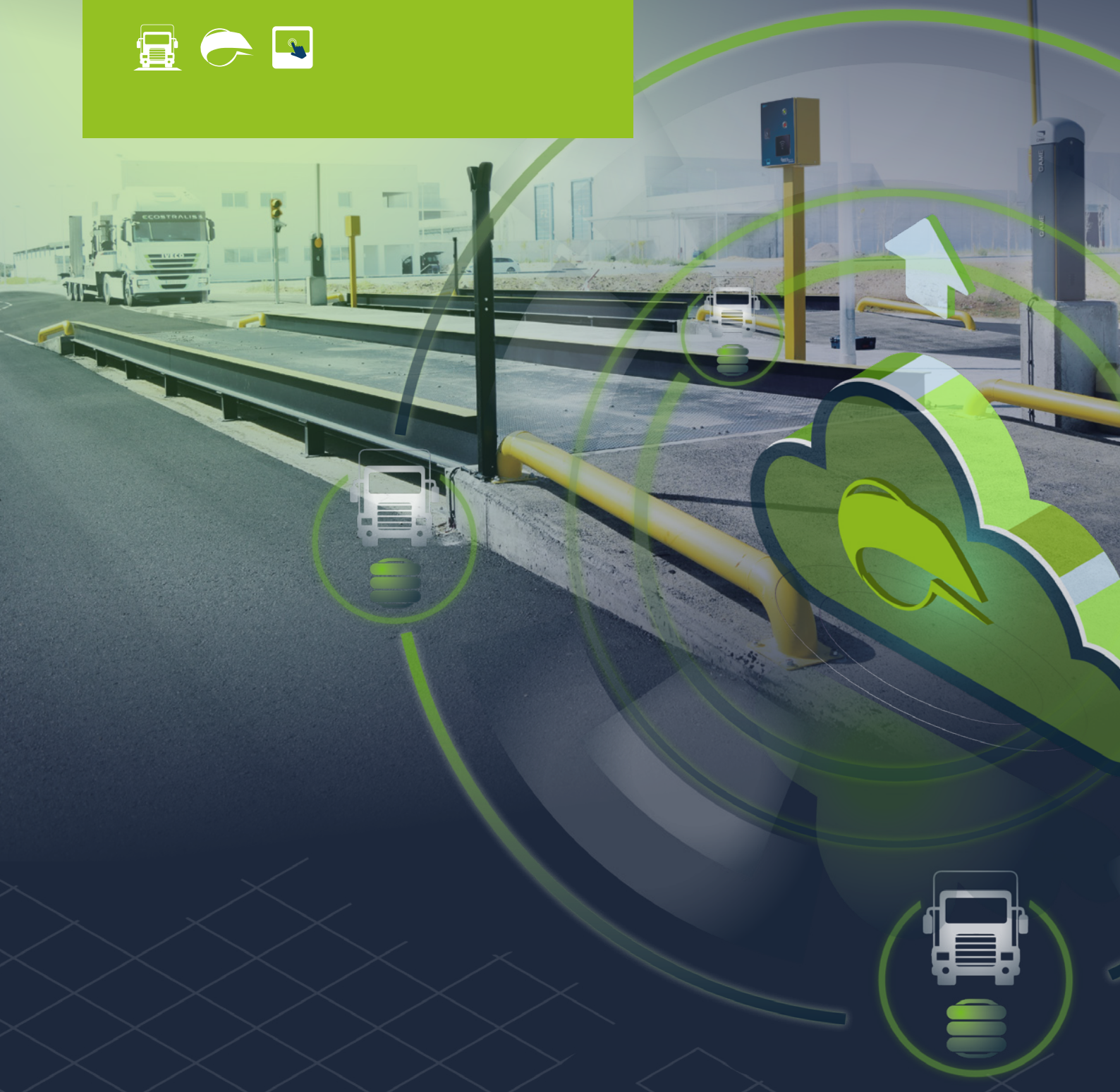


WEIGHING SYSTEMS FOR WASTE TREATMENT

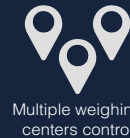


GIROPES

Waste management solutions

In recent years Giropes has made a commitment to innovating waste management with comprehensive weighing systems.

Giropes offers comprehensive solutions for the weighing and management of incoming and outgoing waste in recycling plants, biogas plants, biomass plants, landfills as well as other types of waste management facilities.



Multiple weighing centers control



Statistical summary



Stock display

RECYCLING

Figures in Europe

According to data from the European Parliament in 2016, 2.500 billion tons of waste were generated in the European Union, 8.5% of that waste being household waste. In 2018, that household waste represented 489kg per capita in the EU.

According to the Ministry for Ecological Transition, the municipal waste generated by Spanish households, businesses and small industry amounted to more than 21.9 million tonnes in 2018, representing 475 kg/inhabitant per year.

Recycling points

Across Europe the number of both large-scale waste treatment centres and municipal recycling points has grown exponentially. The control and pricing of incoming material to be deposited is key to the optimising these centres.

Comprehensive solution

Many waste treatment and recycling centres automate access points to streamline vehicle entry and exit. The implementation of Giropes Solutions systems (which include software, a terminal and elements such as cameras and barriers as well as truck weighing equipment) provides a solution which is in ever-increasing demand.



SMART PLANT WEIGHING

Weighing software in recycling plants integrated in industry 4.0

INDUSTRY 4.0

We help to improve processes

The global solution offered by Giropes lets you obtain weighing data at the weighbridge in a fast, centralised and reliable way, providing objective data in real time, reducing the cost of decision-making in company or departmental meetings and increasing the capacity to react to unexpected incidents.

We are ready for continuous improvement

Having objective data is the first step to be able to enter into the Lean Management philosophy and use the DMAIC cycle for continuous improvement. You can only improve what you measure.

Centralisation of data onto a single platform

GESNET can be integrated with ERP's and MES, centralising data onto a single platform.

Access management

Using the GESNET software you can manage and control all access to the waste plant, with or without weighing systems and thanks to the ANPR cameras that allow the reading of license plates and the automatic management of control elements such as traffic lights or barriers that will operate automatically.

GESNET stores a record of all accesses, both identified vehicles with license plates stored in its database and new unidentified vehicles, providing full control over the entrances and exits of the facilities.

Connectivity between plants

The CLOUD solution provided by the GESNET software together with the GESNET WEB platform allows the synchronisation of weighing between all the waste and recycling plants managed by the same company, enabling the control and management of all the waste points from the headquarters of the managing company.



GESNET

MANAGE YOUR WEIGHTBRIDGES

“With Gestnet2 you can register and process, quickly and efficiently, the traffic on your weightbridges.”



STOCK ZONE
MANAGEMENT



CLOUD SERVER
CONNECTION



Our company gives full attention to quality, cutting-edge technology and an important activity in development and innovation to offer the best solutions in weighing equipment for any market.

WEB & APP





GesNet2 is the solution that Giropes Solutions offers for the automation and management of weighbridges in recycling plants.

- » It supports different installation structures: from the most basic one (only one working station) to complex installations of autonomous systems of weighing management.
- » The software offers a complete control of the weighing operations of vehicles. With GesNet2 the owners can register and process, in an efficient and quick way, the traffic of their weighbridges. It also allows having relevant information useful for the management departments, inventory control, and management of storage areas, statistical analysis, and more.
- » Access control. It allows the management of different control devices such as: control Access systems to the scales via barriers, vertical signs, automatic recognition of plate numbers via IP video cameras, proximity card readers, bar code reader, the correct placement of the vehicle in the scale, etc.



Gesnet 2 specific functions

DESCENTRALIZED SYSTEM

The control of the different installations with connection and access to data according to the user's necessity: 3G, Ethernet, data server or cloud.

CLEAN POINT SYSTEM

User identification and classification of clean point system. Sorting plant operator for waste/recycling.

DYNAMIC WEIGHING OPTION

For weighing vehicles in motion at low speed for axle scales.

PROCESSING AND ENCODING MATERIALS

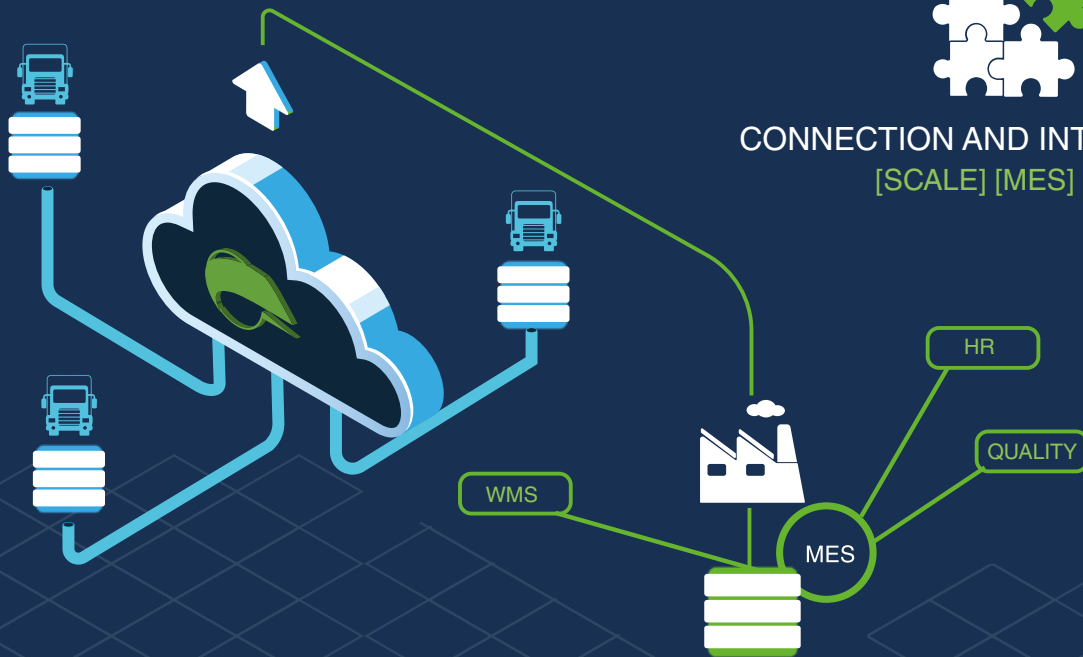
Valuation and distribution of waste.

CONTAINER LOAD CONTROL

Identification of the level of waste stored inside the container for the management of its collection.



CONNECTION AND INTEGRATION
[SCALE] [MES] [ERP]



GESNET

WEIGHBRIDGES MANAGEMENT IN RECYCLING PLANTS

FUNCTIONS:

- » Vehicle weighing register
- » Static and dynamic weighing
- » Net weight
- » Tare
- » System information management
- » Manual data import and export system
- » Tickets and reports printing
- » Users identification
- » System of users and roles management and limitation
- » Management of origins and destinations
- » Automatic backup system
- » Procurement, warehousing and stock management
- » Visualization of statistical data analysis
- » Scale operator for Recycling Plants
- » European Waste List (EWL)
- » Materials coding and treatment
- » Vehicle routes management

REQUIREMENTS:

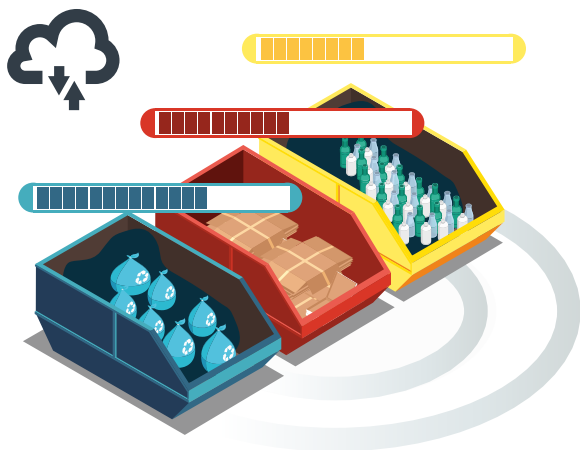
- » Desk items applications (Windows 7, 8 or 10).
- » 32 bits (x86) or 64 bits processor (x64) at 2.3 GHz or more.
- » 4GB RAM Memory or more.
- » 16 GB or more of available disk space.





CONTROL SYSTEMS FOR AUTOMATIC CONTAINER FILLING

- » *CONTAINER WEIGHING SCALE - BPGEM*
- » *GESNET INTEGRATED CALCULATION*



WEIGHING SYSTEMS AT RECYCLING CENTRES

NET WEIGHT

Logging the person who comes to deposit the materials in the recycling plant. This can be done with or without scales.

ENTRANCE / EXIT WEIGHT

The user enters with their vehicle and passes through the scales twice to obtain the weight of the material they have come to deposit.

ENTRANCE / EXIT WITH NET WEIGHT

The user enters with their vehicle and passes through the scales twice to obtain the weight of the material they have come to deposit. The operator distributes the weight of each deposited material by % manually or with a floor scale.



PRIVATE AREA

Summary by company.
The client can register and view the weighing data.

Weights display
STATISTICS

ADMIN'S ACCESS

- » Definition of materials
- » Empowerment of vehicles
- » Possibility to control different weighing centres
- » Visualization of the state of the different containers of the centre

USER'S ACCESS

Visualization of the data of the company:

- » Statistical brief
- » Possibility to download invoices
- » Access to bonus system

BILLING

- » The function to determine recycling surpluses is activated.

INTEGRATION API

RECYCLING BONUS

- » Function activated to subsidise to the users according to personalized parameters.
- » The parameters included can be: days, user, kilograms of delivered material, etc.
- » Bonus applicable in waste rate

CLOUD management solution



G2APP

It allows the capture of the weighing and sends it to the GesNet2Web.

It allows to manage all the parties involved in a weighing process (companies, vehicles, materials, etc.)

Linking to GesNet2 or the G2App will allow you complete control of your recycling plants.

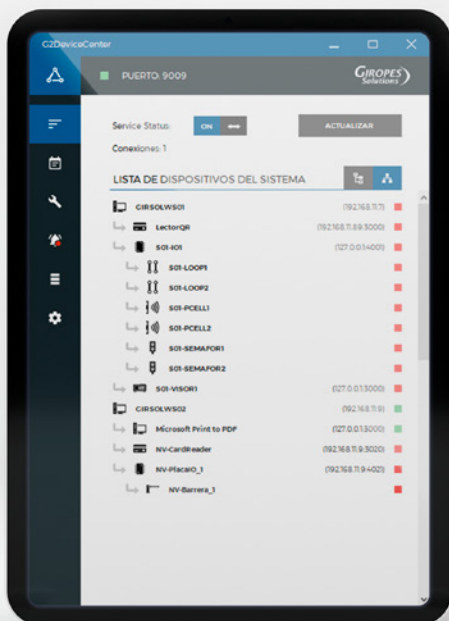
- » It allows the capture of the weighing and sends it to the GesNet2Web. This structure, via a mobile and web application enables the device to become the new portable generation of the GesNet2.
- » Complete management of data collection during the entrance of the materials and details of the vehicle.
- » It is available in Play Store for Android tablets and mobile phones.



offline / online



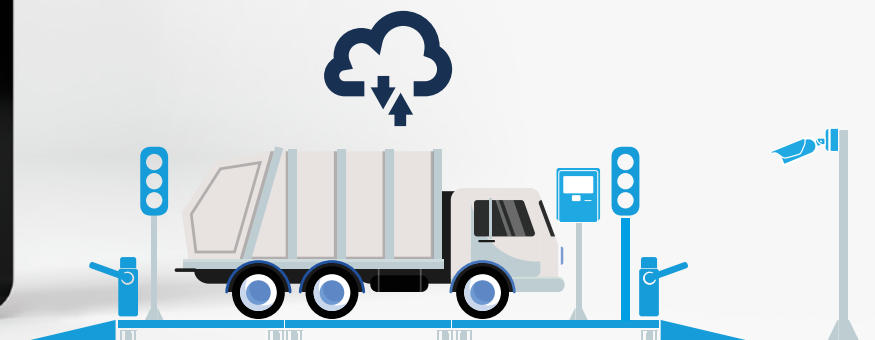
Device MONITORING

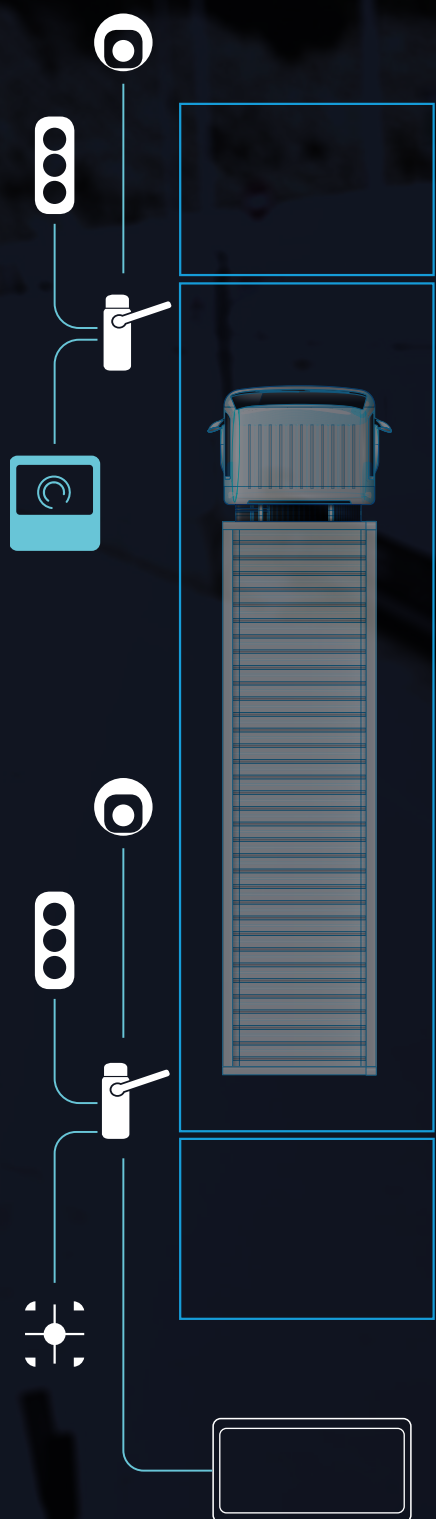


G2DEVICECENTER

Communicates with and monitors all system devices (scales, cameras, traffic lights, etc). Facilitating its installation and subsequent control by those responsible for the installation and maintenance.

This software is always installed as standard in GESNET or GE-STRUCK installations.





AUTOMATION

IN AND OUT DEVICES

TERMINALS & SOFTWARE

For autonomous or semi-autonomous management of weighing stations by users without the need for a scale operator

VISUAL MONITORING

CCTV and ANPR cameras for visual monitoring through the control panel and license plate reading for entrance and exit management directly through the weighing terminals.

TRAFFIC MANAGEMENT

Traffic lights, barriers, light curtains and inductive loops for traffic detection and management in the weighing area. This allows the efficient control of the scale's inputs and outputs.



For all types of industry

At Giropes we understand that weighing is an essential function in most sectors, whether it is to keep control of materials, to ensure safety or to improve production processes, among many other functions.

To this end, we know that a scale capable of recording the weight of the vehicle is often not enough, but that a complete weighing solution is needed that offers autonomy, recording and analysis of the entire process.

That is why in recent years Giropes has made a major commitment to the development of multi-functional indicators, self-service terminals, specialised software and many other products that make it possible to complete an installation in line with the user's needs.

Being able to offer the right solution for every situation has become a company philosophy, expanding the range of products related to weighbridges.

Software&Terminals

SELF-SERVICE TERMINALS GST SERIE

“The terminals automate the weighing systems and manage vehicle traffic in the plant, acquiring data from the various access control and weighing devices.

This is all thanks to the software designed and developed by the Giropes Solutions team”.



"Software & terminals"

Software for industrial plant management and access control terminals.



Terminals
software
GST4

G2 TERMINAL

Weighing process in lorries in a semi-autonomous way, requesting for the interaction of the driver.

G2
terminal



Terminals
software
GST4

ECO TERMINAL

Weighing process at Green points, such as a semi-autonomous operation, requesting for a minimum interaction of the operator.

eco
terminal



Terminals
software
GST4

G2 TERMINAL NW

Created to perform in the easiest possible way the weighing process in net weight. The system works in a semi-autonomous way, and it can function together with some little interaction by the weighing operator or the driver.

G2nw
terminal



Terminals
software
GST1-GST2

G2 AUTOMATIC

It is a completely automatic software which is in charge of weighing without needing the interaction of a working operator. Through this all the devices and modules that intervene in the weighing system are controlled.

G2auto
terminal

“Software &
Terminals”



GST1-GST2 TERMINALS

Self-service terminals with integrated RFID reader

INCLUDED

- » RFID/MFARÉ reader
- » Card management system
- » 2 LED indicators
- » 2 buttons (only GST2)
- » Pantalla LCD (solo GST2)
- » 10 RFID cards

OPCIONAL (only GST2)

- » Interphone*
- » Barcode reader, includes 2D barcode manager system
- » Alphanumeric Keyboard or alphanumeric anti-vandal Keyboard (override buttons)
- » Thermal printer
- » EMBEDDED system (GESTRUCKPRO Software integrated)

VERSIONS

- » Terminal in painted steel
- » Terminal in stainless steel

Software for GST1-GST2 autonomous terminals

G2auto
terminal



GST4 TERMINAL

Self-service terminals with touch screen

INCLUDED

- » Touch screen
- » RFID lector cards, Card Manager System
- » Stainless steel visor design
- » 10 RFID cards

OPTIONAL

- » Interphone*
- » Barcode reader, includes 2D barcode manager system*
- » Thermal printer
- » Camera
- » Communication 3G/4G

VERSIONS

- » Terminal in painted steel
- » Terminal in stainless steel

**It is needed an indoor switchboard: Switchboard with 3 channels, 5 channels or 10 channels.*

Software for GST4 autonomous terminal

eco
terminal

G2
terminal

G2nw
terminal

Access control

ACCESS CONTROL

WITH OR WITHOUT A WEIGHING SYSTEM

“The solutions designed by Giropes let you have complete management of the accesses to the waste plant with or without a weighing system, allowing you to control all the vehicles that enter the facilities without the need to be weighed”

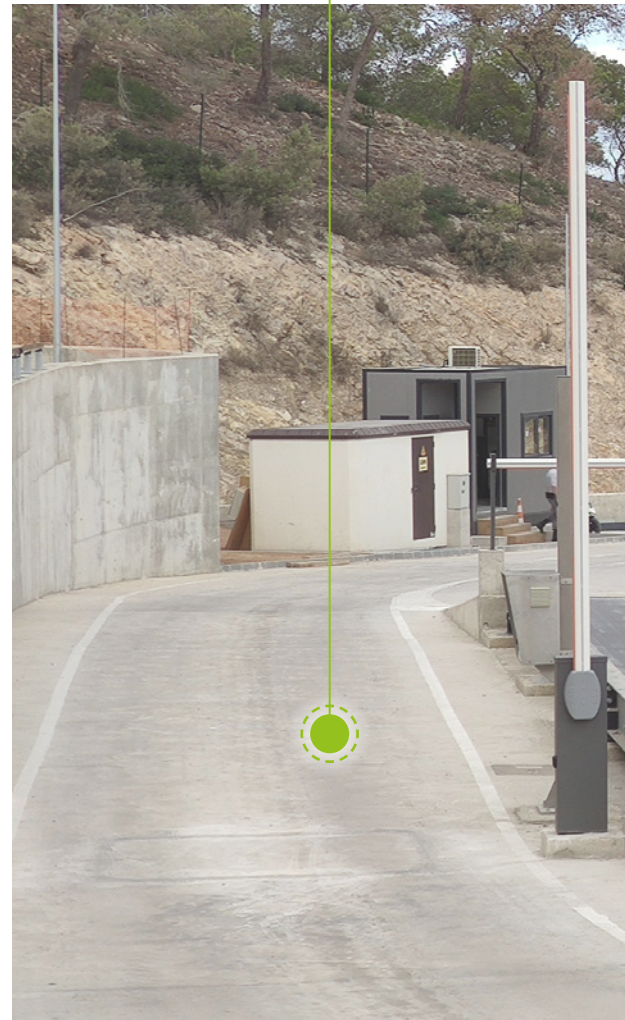
WITHOUT A WEIGHING SYSTEM

Control over the facility's entrances and exits

Over the last few years and due to increasing demand, Giropes has developed a comprehensive solution for a waste management plant that allows total control over access points, both with or without a weighing system.

This solution is ideal for larger waste and recycling plants that need to provide a non-weighing vehicle access to ease the traffic through the weighing system.

This access (which is free from a weighing system) can have CCTV/ANPR cameras with license plate reading, inductive loops, photocell sensors, GST1/GST2 terminals, barriers and/or traffic lights. Thanks to license plate reading, automatic access can be set up for authorized vehicles and, in turn, an operator can keep track of unregistered vehicles accessing the facilities.



WITH A WEIGHING SYSTEM

Full traffic control at the weighbridge

The investment in R&D and the growth of the Giropes Solutions division has allowed Giropes to offer a comprehensive solution for the complete management of access to the weighing system, providing specific software, self-service terminals and different control elements that manage the traffic on the scale.

This solution is ideal for all types of waste and recycling plants that want to have complete control over the vehicles entering the facilities and unloading waste, controlling both access and the amount of waste unloaded thanks to the weight control carried out by the weighing system installed.

It can have CCTV/ANPR cameras with license plate reading, inductive loops, photocell sensors, self-service terminals, barriers and/or traffic lights.



Successful projects

“Our background supports us”

WEIGHING STATION FOR A WASTE PLANT

Installation of an automated weighing station for a waste plant in the Balearic Islands.



The new controlled waste deposit at Ca na Putxa has been designed to comply with European landfill regulations. The award was for UTE Giref who will operate the 50,000 square meter plant. This new plant, although it will employ about 60 workers, has been designed to be fully automated.

This automation, in terms of vehicle and truck access control, has been made possible thanks to Giropes' solutions. With two scales and a complete vehicle detection system the weighing operation is automatically recorded and transmitted to the control room.

Giropes' participation consisted in the supply, assembly, calibration and commissioning of two truck scales of 16 metres long, 3 metres wide with a capacity of 60 tons. The scale is coated with 4CM paint designed for marine environments and was complemented with a weight control system based on the GestruckPRO software, and a comprehensive access control system.

The access control system consists of GST2 unattended terminals with intercom, several sets of ANPR cameras for reading and recording number plates, automatic barriers with a vehicle detection system.

In order to provide the station with total autonomy, weight repeaters were also installed so that the drivers could see the weight at the time of weighing.

All this allows autonomous circulation through the weighing system and a registration of the vehicle and the transported materials controlled from the main offices of the plant, optimising the time invested in the weighing process and saving the time spent in the entry and exit of vehicles.

In addition, it will allow the management of the plant to be fully logged where the final result will be the packaging of the waste to be taken to the Peninsula and recycled, improving the treatment and recovery of recyclable materials. *ento y recuperación de los materiales reciclables.*



WEIGHING STATION FOR A BIOMASS PLANT

Installation of an automated weighing station for a biomass plant



Giropes has participated in the creation of one of the most important biomass plants in Spain, located in Cubillos del Sil (León), with the installation of two weighbridges to control access to the plant.

This ambitious project is not the first time Giropes has demonstrated its commitment to participating in projects related to preserving the planet and the environment; we have already installed scales at dozens of recycling points and waste plants. We also have facilities in other plants related to Biomass or wood treatment for the conservation of forests and forest areas.

Spain is one of the countries in Europe that generate the largest amount of biomass of all types. They are able to take advantage of this natural resource to produce energy while also reducing CO2 production.

Annual production of CO2 in an average biomass plant is 200,000 tons less than a conventional coal-fired power plant. It also takes advantage of natural forest resources by protecting the country's forest areas against fires which can be ignited by the dead matter found there. Specifically, the biomass plant in Cubillos del Sil will produce 500 times less pollution than a conventional coal-fired power plant.

The Cubillos del Sil biomass plant is about to become one of the largest forest biomass plants in the Iberian Peninsula and in Southern Europe. The plant will occupy an area of approximately 100,000 square meters and will produce 49.9MW of power, supplying up to 50,000 homes.

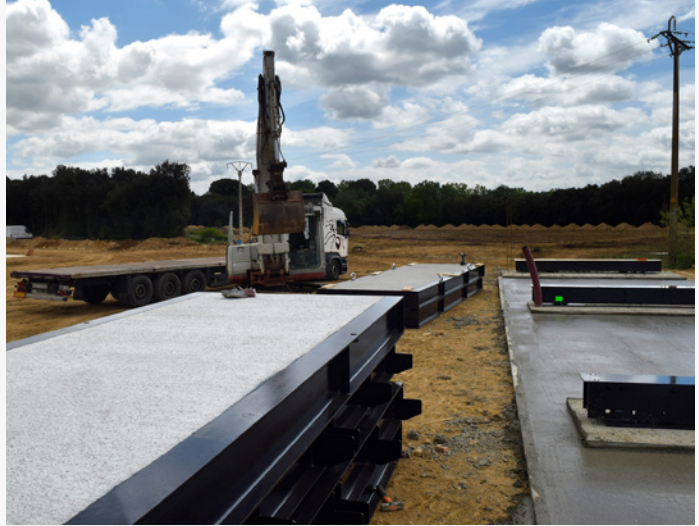
A few months after the Cubillos del Sil plant opened and went into operation, it was estimated that a plant of this size would need around 280,000 tonnes of biomass every year to operate at full capacity and achieve the highest possible efficiency.

The Cubillos del Sil biomass plant will also have a positive impact on local farmers, who will benefit from the opportunity to sell cereal straw. This will provide a boost to the primary sector and revive agricultural activity in the area.

Giropes has installed two BPGSM weighbridges with entry and exit control systems to regulate traffic onto them. These scales have allowed Forestalia, the company that is responsible for the plant's operation, to thoroughly control all of the biomass that enters the plant and, consequently, the efficiency of the plant and the energy it produces.

WEIGHING STATION FOR A BIOGAS PLANT

Installation of a weighbridge with a weighing-truck firmware indicator for a Biogas plant



Giropes has installed a BPPSE EVO weighbridge at the new biogas plant built and managed by Apergas and located in Vilanant, Girona.

Apergas is a pioneering company in the creation of biogas, being the second in Spain to open a plant of this type when it did so in Sant Esteve de Guialves (Girona) in 2009. Already at this first biogas installation Giropes had installed one of its weighbridges, in this case a BPGSH, to control the entry of waste into the plant.

With the inauguration of a new biogas plant, Apergas seeks to contribute to the generation of a more sustainable waste management model by converting waste into energy. Thanks to this, they will help mitigate emissions into the atmosphere and produce cleaner energy, as well as make better use of agricultural and livestock waste.

The new plant that has just come into operation is based on the treatment of livestock waste and other organic waste from the agri-food industry. This plant will help to supply the farm to which it is connected by transforming the waste it generates and, in the future, it is expected that, by means of an extension, it will be able to connect directly to the electricity grid to supply energy.

Currently, in the first phase of operation, the plant generates thermal energy, producing a total of 946,599m3 of biogas per year for self-sufficiency. Even so, when it is extended in the second phase in which the generation of electricity will be added, it is expected to produce, in addition to the same amount of biogas, a total of 2,522 MWh per year which will be distributed between self-consumption for the plant itself and injection into the electricity grid.

Giropes took part in this new installation with the incorporation of a BPPSE EVO mixed ground level weighbridge, with a length of 18 metres and a width of 3.3 metres. In addition, this model of lorry weighbridge is designed with a modular structure, facilitating the handling and assembly of its parts.

The weighbridge is complemented by a GI430 indicator with lorry weighing software with an integrated printer, which allows control of waste inputs for conversion into renewable energy, specifically biogas. In addition, cleaner fertilizer is also generated to supply the fields in the area.

WEIGHING STATION FOR SOME WASTE PLANTS

Installation of different weighing stations in recycling plants managed by the GBI Grup



In June 2021, coinciding with the population increase that affects towns on the Costa Brava in summer, Giropes has extended the weighing station at the Platja d'Aro waste and recycling plant, with the addition of a 6 metre-long BPPCE EVO weighbridge scale ideal for logging the weight, both private vehicles and refuse collection lorries that manage municipal waste collection.

The new BPPCE EVO scale, installed by Giropes, will perform the weighing of vehicles as they exit the plant, allowing the pre-existing scale to perform the weighing function on entry, providing better management of vehicular traffic.

This new weighbridge scale is managed through a GI430 truck weighing firmware indicator with printer, enabling tickets to be issued directly to justify the amount of waste managed.

This Giropes installation includes one additional weighing station in waste plants managed by the GBI Group, a benchmark in waste recycling plants in northeastern area of Catalonia. The installation completed by GBI Platja d'Aro is the fourth one managed by the same company following the installations in Lloret, Pedret i Marzà and Solius.

Other installations for GBI GRUP:



GBI Pedret i Marzà waste plant

AUTOMATED WEIGHING SYSTEM FOR A WASTE PLANT

Installation of an automated weighing system with a touch screen terminal for the management of weighings from the weighed vehicle.



Giropès has carried out the installation of an automated weighing system which allows the user to control completely the recycling plant and the waste treatment.

Sersall is a business group which has been dealing with the domestic waste collection for more than 50 years. Over the years it has expanded its range of services until it has become a company of reference in the management and treatment of waste in Girona.

Among most of the services that Sersall offers there is the selective collection, the grinding of wood, the destruction of vessels or the collection of furniture and other things, among others. They stand out because Sersall is in charge of the selective collection of packaging waste, paper, cardboard and glass in 64 different municipalities in Alt Empordà, in the province of Girona.

The new installations of Sersall in Vilamallà are going to include a complete computerized weighing system, completely designed, manufactured and installed by Giropès. This weighing system includes a BPPCE EVO weighbridge installed on ground and controlled through a GST4 self-service terminal and a traffic light to control the entrance and exit of the scale.

Esta instalación es la primera que incorpora el GST4 terminal, diseñado y fabricado por el equipo de Giropès Solutions. Este terminal permite al usuario tener un control completo del sistema de pesaje y toda la planta, gestionando la apertura de la puerta de la planta al finalizar la pesaje del camión.

The whole automated system related to the weighing system is setting up and managed through the GESNET software, which has been designed specifically to be used in Waste Treatment Plants. This system enables the user to have a complete control both truck scale and the GST4 self-service terminal.

AUTOMATED WEIGHING SYSTEM FOR A WASTE PLANT

Installation of an automated weighing station for a waste and recycling plant



Giropès has installed an automated weighing system that allows total control of the recycling and waste treatment plant.

Everest Containers (Public Containers of Catalonia) has been serving the construction industry's waste management needs for 45 years. The company utilises the best waste management infrastructure, where the weighing process is a vital part of management.

Having total control of the waste that is deposited at the plants is one of the most important issues when it comes to waste management and to excel in doing so, an automated weighing system was installed in one of its most important facilities, the Intercomarcal Recycling Plant.

This facility is responsible for collecting and managing all the recycled wood from construction sites (doors, frames, windows, etc.) which is then crushed and sent to treatment plants to provide a water purification service.

The weighing installation installed in the Intercomarcal Recycling Plant is made up of an above-ground BPPCE EVO truck scale which is accompanied by rolling guides to provide safety to the truck driver.

Furthermore, in order to offer an autonomous service to the weighing station, the BPPCE EVO scale was installed with Gestruck Pro software,

two GST2 terminals with a barcode reader and the vehicle registration plate reading module.

Thanks to this installation Everest Corporation allows transporters to carry out the weighing process completely autonomously, being in total control of the inflow and outflow of materials without the need of a scale operator.



GIROPES
WEIGHING SOLUTIONS



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