



# BIOGAS

*get the highest efficiency  
to produce more and green energy*



OEM | 04  
WEIGHING COMPONENTS  
AND INTEGRATED SOLUTIONS



# BIOGAS SYSTEM

*define the organic substance  
obtain the  
maximum efficiency*



**BIOGAS SYSTEM**

## THE PRODUCT

Weighing unit or complete weighing system for BIOGAS plant in order to control the material loaded in the digester. The system integrated with the nir sensor can recalculate the weight to have in real time the exact value of the organic substance.

## FEATURES AND ADVANTAGES

- Online analysis of Dry Matter, organic Dry Matter, Starch, ADF, NDF, crude protein and crude fat
- Controlled biogas plant feeding
- Automatic execution and correction of feeding recipes
- Decreasing of biomass costs
- Highest energy production
- Controlled Fermentation
- Reduction of block risk



## AUTOMATIC WEIGHT ADJUSTMENT

Today, in biogas plants, the controls are carried on from the digester onwards, but everything that enters in the digester is not monitored in the best way.

With dinamica generale® complete system, you get an optimal view of the biomass state before it is thrown into the digester and this means to obtain the maximum efficiency of the biogas plant.



**NIR**  
TECHNOLOGY  
INSIDE

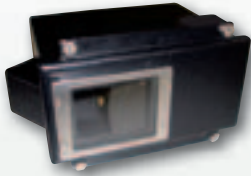


# APPLICATIONS

**CHECK THE QUALITY OF YOUR INGREDIENTS TO PRODUCE MORE ENERGY**

**NIR Analyzer on the machine to analyze the material during the loading of the tank**

## SELF-PROPELLED SOLUTION

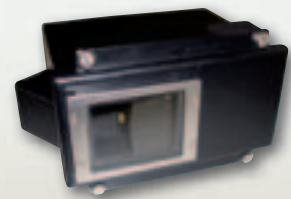


## FRONT LOADER SOLUTION



**NIR Analyzer installed on the digester entrance to analyze the real value of the biomass**

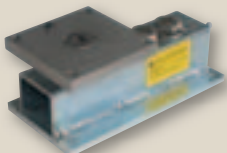
## ON-LINE SOLUTION



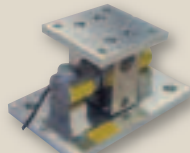
Every installation is customized in function of the BIOGAS plant, our R&D department is at your disposal to study the right solution



## Weighing Units



**5 ton**



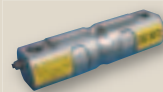
**From 10 ton to 100 ton**



**From 5 ton to 100 ton**



**Complete Unit or single load cells**



**Complete Unit or single load cells**

*\* available also installation plates*

## Weighing Controller



**weighing controller directly on the tank with data interface for the communication with the PLC (4-20mA, CAN BUS, ISO BUS, PROFIBUS)**



# BIOGAS SYSTEM

## COMPLETE MANAGEMENT FROM THE IN-COMING MATERIALS



### DINA3

Weigh the in-coming material to update your stock inventory



### AgriNIR

Analyze the in-coming material to know the real quality of your ingredients

The data are directly transferred in the DTM™ data base

Stock management

*Detailed reports for easy and quick statistic analysis*



### DTM™ DATA BASE

Formulation of the recipes based on the real fermentation values of the ingredients

Wireless transmission of the recipes to the operator (Incab Scale)

The analysis and execution data are transferred directly into the DTM™ database via wireless for statistics and cost analysis



WIRELESS

Real time biomass analysis during the loading and AUTOMATIC WEIGHT RECALCULATION BASED ON THE REAL MATERIAL ORGANIC SUBSTANCE

INPUT

DATA ACQUISITION AND FORMULATION

LOADING THE DIGESTER

DATA ACQUISITION AND POST PROCESSING



## AgriNIR™

Portable NIR laboratory  
directly in your BIOGAS plant

**NIR analysis on incoming materials and fresh green forages (AgriNIR™)**

**It is fundamental to know the real nutritional value of the ingredients to increase the energy production.**

- The efficiency of a NIR laboratory directly in the biogas plant, available for everybody and on flight!
- Check of the real nutritional value of the ingredients on stock.



Producing 1.280 4.0 1280.3

**Components** [Help](#)

Component	Component's parameters			
	Parameter Name	NIR Parameter	U. m.	%
1	ADF	ADF	%	22.66
2	Ash	Ash	%	3.11
3	Crude Fat	Crude Fat	%	3.66
4	Crude Protein	Crude Protein	%	7.45
5	NDF	NDF	%	37.66
6	Starch	Starch	%	35.15

### NIR Families VS NIR Parameters

			NUTRIENTS						
			Moisture	Starch	Crude Protein	ADF	NDF	Ash	Crude Fat
NIR FAMILIES	FORAGES	Corn Silage	YES	YES	YES	YES	YES	YES	YES
		Hay	YES	NO	YES	YES	YES	YES	YES
		High Moisture Corn	YES	YES	YES	YES	YES	YES	YES
		Alfalfa Hay	YES	NO	YES	YES	YES	YES	YES
		Grass Silage	YES	NO	YES	YES	YES	YES	YES
		Dairy Cows TMR	YES	YES	YES	YES	YES	YES	YES
		Soybean Flour	YES	NO	YES	NO	YES	YES	YES
	GRAIN	Corn Grain	YES	YES	YES	NO	NO	NO	YES
		Wheat Grain	YES	YES	YES	NO	NO	NO	NO
	GREEN FORAGES	Green Maize	YES	NO	NO	NO	NO	NO	NO
		Green Grass	YES	NO	NO	NO	NO	NO	NO

Many **calibration curves** available.

Other **families** or **nutrients** available on request.



# DINA3

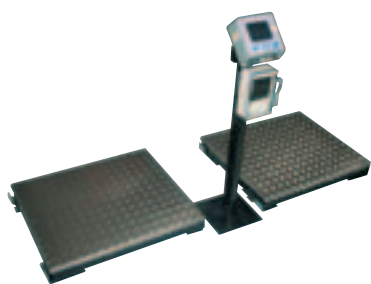
*quick, efficient  
reliable  
vehicles scale*

## THE PRODUCT

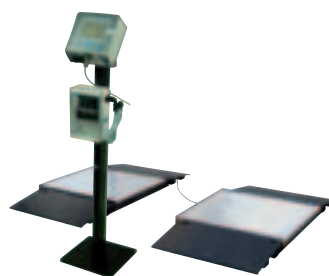
Axle weighing in order to check the weight of the vehicle and consequently of the incoming material of the biogas plant. External version for vehicle with single axles or inground version to weight all kind of vehicles.

## FEATURES AND ADVANTAGES

- Easy to use
- No construction work needed for the external version
- Easy and quick installation for external version
- Warning message if passage on the platforms was not correct
- Availability of preset customer id
- Automatic and manual printout or data storage of every operation on PC
- Available in any language
- Interface for direct communication to PC
- Resistant to dust, mud, water and snow
- Developed for hard environment usage



FOR EVERY KIND OF VEHICLE



FOR NO MORE THAN 2 AXLES

## ACCESSORIES available for ALL configurations:

- Weight repeater (Supplementary display)
- DTM DINA3 software + USB memory to transfer the data in the PC
- Traffic lights + external sound alarm for customer friendly operations
- Remote Control up to 25 meters
- Portable weighing terminal
- Frame Construction KIT



## TECHNICAL DATA

### SYSTEM

**System maximum capacity**

20 ton

**System minimum capacity**

100 kg

**Platform dimension**

920 mm x 770 mm x 110 mm

**Material**

Steel Plate

**System accuracy**

Static +/-0,5% Dynamic +/-1%

\*(NOTE: site construction must strictly follow DG specifications to respect system accuracy)

**System operating temperature**

-30°C / +65°C

**System storage temperature**

-40°C / +70°C

**Relative humidity**

85% NON CONDENSING

**Speed**

1-5 km/h

**Indicator resolution**

e=d=1,2,5,10,20,50 kg

**System protection class**

IP67

**Admitted overload**

150% FS

**Cable lenght**

18 m

**Power supply**

9.5 ÷ 32 Vdc or 110÷240 Vac

with power supplier included

**Platform weight**

120 kg

### INDICATOR

**Dimensions:** 220 mm x 200 mm x 100 mm

**Protection class:** IP67

### LOAD CELLS

**Load cell number:** 4 for each platform

**Load cell model:** DG-SD 2500 Kg

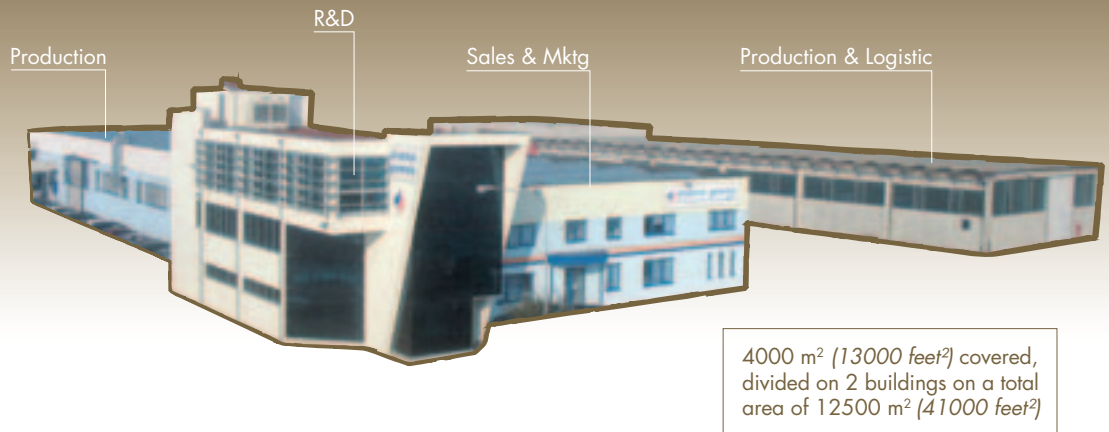
**Protection class:** IP68

### JUNCTION BOX

**Material:** Polyester

**Protection class:** IP68





## WHO IS dinamica generale®?

dinamica generale® has developed and produced weighing system for agriculture for 20 years and today the best world-wide feed mixer producers install dinamica generale weighing system. 10 years ago the company started to invest and develop the NIR technology and today it is considered as one of the leader in NIR analysis applied on fresh forages with predictions directly in field. Design patents are registered world-wide and the products have been presented in congresses and symposiums all over the world.

From the very beginning in the product portfolio was included a feeding management software that during these years has evolved reaching its 5th editions and thousands installations all over the world.

Today, thanks to a structured R&D department (more than 15 engineers), the DTM™ is no more a simple feeding management software but "THE FARM MANAGEMENT" SOFTWARE and has become the best ally for all those farmers who want to lead their farms to the future.

## CONTACTS

GENERAL INFORMATION  
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R&D DEPARTMENT  
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CUSTOMER SERVICE  
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support@dinamicagenerale.com

## TDI ASSISTANCE

Technical assistance 24 hours a day,  
7 days a week, 365 days a year.



## QUALITY & CERTIFICATIONS



dinamica generale® confirms the aptitude to work with the high qualitative standard requested at international levels by offering to its clients the best product and support as defined by the company's mission.

As a demonstration of this, we have successfully passed the recertification inspection for the quality management system as well as for the environment: UNI EN ISO 9001:2008 e UNI EN ISO 14001:2004.

Starting from 2009, in addition to our other certifications, we can add the prestigious UNI EN ISO 13485:2003 that demonstrates all the company's attention to the clients in the medical sector.

*"We reserve the right to modify designs, or implement product improvements, without any obligations with respect to goods purchased."*



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