DOMESTIC ENVIRONMENT

USAGE AND QUALITY

INDUSTRIAL

100%

SUSTANIABLE

FROM 11 TO 1.000 TONS ANNUAL

CITY-NET

WE TAKE CARE OF THE PLANET

ORGANIC COMPOSTERS KCE

COMMUNITY COMPOSTAGEMEN

CO PROBLEM E CO SOLVING

CERTIFIED COMPANY SOA OS14

EASY TO USE

PROFESSIONALITY

SYSTEMS OF COMPOSTING INTEGRATED

LEADER IN COMPOSTING

SOLVE THE WASTE PROBLEM

INDUSTRY 4.0

GREEN KOMPOST CITY®

Integrated Composting System

ECOLOGY

SUSTAINABILITY

KCE

SMALL AND MEDIUM MUNICIPALITIES

LITTLE ISLANDS

TOURIST ACTIVITIES
RESORTS, HOTELS RESIDENCES ETC..

CANTEENS
HOSPITALS, SCHOOLS COMPANIES, BARRACKS ETC..

COMPANIES FARMS

ENGLISH LANGUAGE

KOMPOST CITY is a registered trademark of our company that builds, sells and maintains our integrated technological systems for community composting with organic waste treatment capacities from 11 to 3,000 tons per year

We combine experience, skills and cutting-edge technologies for the design and construction of solutions in the sector of collection and transformation of organic waste into compost.

KOMPOST CITY is a project that guarantees an economically, technically and technologically competitive product supported by rapid, qualified and specialized assisstance.

THE COMPANY

The company City Net Ecologia & Ambiente Srl is a company certified with SOA 0S14, ISO 9001, ISO 14001, ISO 45001 and is structured into three business sectors:

CONSTRUCTION SECTOR

SOA 0S14 certified company is able to create tailor-made products for every type of need.

COMMERCIAL SECTOR

It offers its customers technical support for the design and construction of systems, machines and equipment in the environmental sector for waste management

MAINTENANCE SECTOR

With its five mobile workshops and its 4000 m2 of factory, it deals with assistancemaintenance and management also through the remote control of the electromechanical composters

> *"The company's mission is to increasingly increase the "**Problem Solving**" capacity in the management of integrated environmental systems, for achieve maximum customer satisfaction."*

BIO COMPOSTER ELECTROMECHANICAL

PATENT

The KCE Bio Composter is a SINGLE ROTATING CYLINDER CHAMBER with the ability to modulate, based on the days required, the management of the continuous flow of the entire composting process from the organic waste loading phase to the automatic COMPOST unloading phase

All KCE SERIES BIO COMPOSTERS are made with a load-bearing structure in hot-dip galvanized FE 430 steel and the remaining parts (cylindrical co-posting chamber, patentliquid-tight heads, external hoods, pipes and biofilter) in AISI 304 stainless steel.

EXCLUSIVE ADVANTAGES

COMPLETE ABSENCE OF INPUT SHREDDING

The choice not to shred the incoming organic matrix arises from the fact that the same produced domestically and elsewhere contains a percentage of foreign fraction, which today is estimated on average in the order of 10-15%.

If this foreign fraction is crushed together with the organic matrix, it actually causes pollution and is difficult to separate from it.

FURTHERMORE, the non-shredding of the organic matrix allows for better oxygenation and therefore better oxidation of the composting material, avoiding the formation of highly compacted areas which can cause the triggering of an anaerobic process and therefore the production of gas inside the chamber. composting

COMPLETE ABSENCE OF MOVING ORGANS IN THE COMPOSTING CHAMBER

The choice to use the technology of the single rotating cylindrical chamber is the result of a project of great technical simplification, since in the absence of moving mechanical parts inside the composting chamber, machine downtime due to blockage of the rotation arms and augers is avoided internal parts, caused by accidental breakages or by bags that wrap around them until they block them, thus having to proceed with emptying the machine to replace the damaged mechanical parts.

MANAGEMENT OF THE COMPOSTING PROCESS

Temperature stabilization through a patented automatic hot air blowing system inside the rotating cylinder of the comG posting chamber.

SIMPLICITY OF USE AND LARGE REDUCTION CAPACITY

The KCE BIO COMPOSTERS are born from a project whose objective is to create a machine capable of transforming the domestic and nondomestic organic matrix into excellent compost, through an absolutely biological aerobic process, in an extremely simple way in use and in the management.

This has meant that all KCE BIO COMPOSTERS models are completely automated, requiring no operator intervention other than loading theorganic fraction and the instrument necessary for the biological process.

Thanks to their highly efficient biological process, KCE BIO COMPOSTERS have an average reduction capacity of 80% of the composed organic fraction.

COMMUNITY COMPOSTING

ELECTROMECHANICAL COMPOSTER KCE MODEL WITH DIRECT CONFERRAL BY THE USER OR OPERATOR

AVAILABLE IN VARIOUS MODELS WITH:

Daily treatment capacity

From 30 to 220 Kg

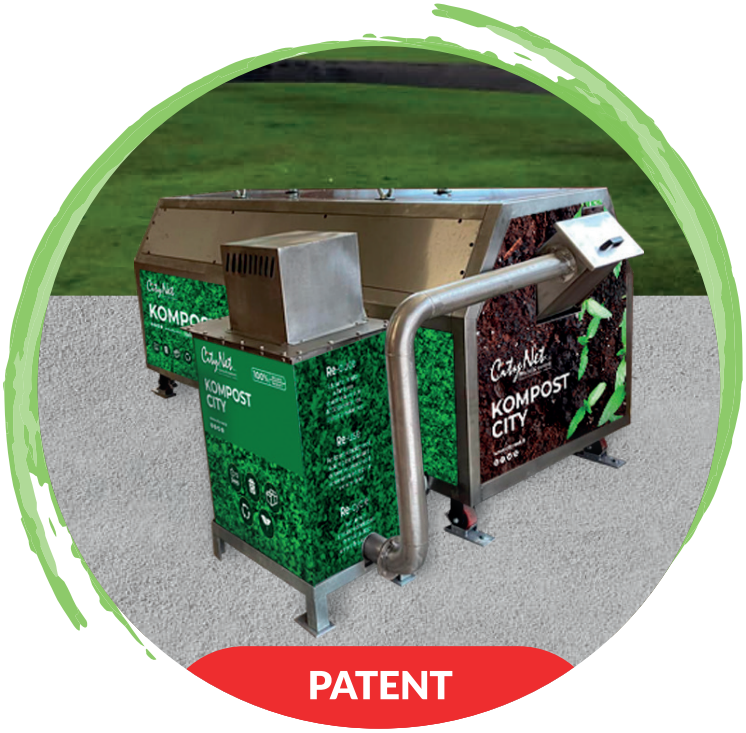
Annual treatment capacity

From 11 to 80 Tons

SMALL AND MEDIUM-SIZED MUNICIPALITIES

CANTEENS
(Hospitals, schools, businesses, prisons, barracks, etc.)

TOURIST ACTIVITIES
Resorts, hotels, residences, etc...



ELECTROMECHANICAL COMPOSTER MODEL KCE WITH HOPPER AND INTEGRATED BIOFILTER COMPUTERIZED SUPPLY SYSTEM AND VOLUMETRIC

AVAILABLE IN VARIOUS MODELS WITH:

Daily treatment capacity

From 50 to 220 kg

Annual treatment capacity

from 18 to 80 tons

SMALL AND MEDIUM-SIZED MUNICIPALITIES

CANTEENS
(Hospitals, schools, businesses, prisons, barracks, etc.)

TOURIST ACTIVITIES
Resorts, hotels, residences, etc...

COMPOSTAGGIO DI COMUNITÀ

ELECTROMECHANICAL COMPOSTER KCE MODEL WITH DIRECT CONFERRAL BY THE USER OR OPERATOR

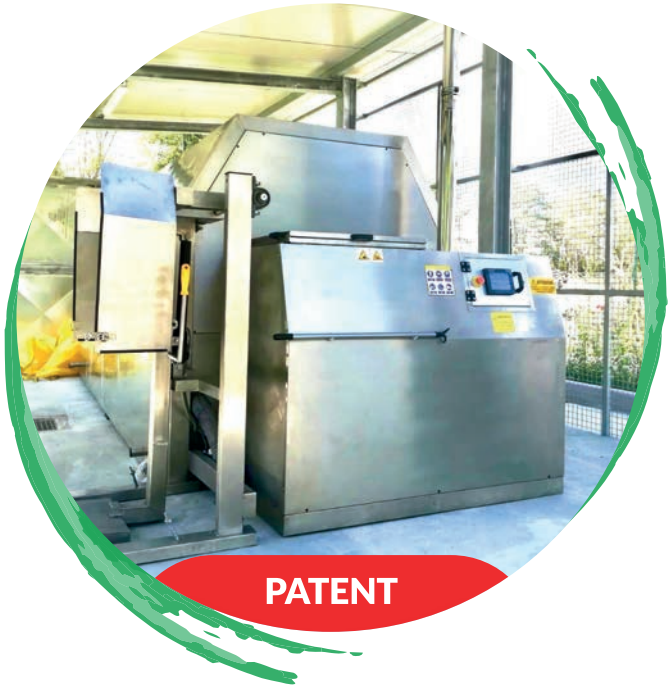
AVAILABLE IN VARIOUS MODELS WITH:
Daily treatment capacity
From 30 to 220 kg
Annual treatment capacity
from 11 to 80 tons

SMALL AND MEDIUM-SIZED MUNICIPALITIES

CANTEENS
(Hospitals, schools, businesses, prisons, barracks, etc.)

TOURIST ACTIVITIES
Resorts, hotels, residences, etc...

PATENT



PATENT

ELECTROMECHANICAL COMPOSTER MODEL KCE WITH HOPPER AND INTEGRATED BIOFILTER COMPUTERIZED SUPPLY SYSTEM AND VOLUMETRIC

AVAILABLE IN VARIOUS MODELS WITH:
Daily treatment capacity
From 50 to 220 kg
Annual treatment capacity
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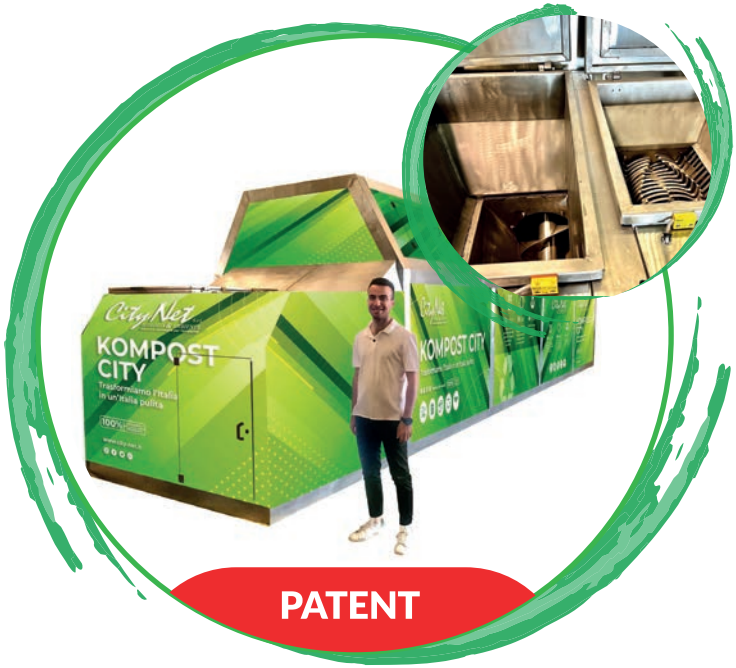
SMALL AND MEDIUM-SIZED MUNICIPALITIES

CANTEENS
(Hospitals, schools, businesses, prisons, barracks, etc.)

TOURIST ACTIVITIES
Resorts, hotels, residences, etc...

All our machines are INDUSTRIA 4.0 | All our products are on the MEPA platform. MEPA acquistinretepa.it

COMMUNITY COMPOSTING



PATENT

ELECTROMECHANICAL COMPOSTER MODEL KCE WITH DOUBLE HOPPER AND SYSTEM INTEGRATED SHREDDING FOR WASTE OF LARGE STAFF

AVAILABLE IN VARIOUS MODELS WITH:

Daily treatment capacity

From 50 to 800 kg

Annual treatment capacity

from 18 to 80 tons

LITTLE ISLANDS

SMALL AND MEDIUM-SIZED MUNICIPALITIES

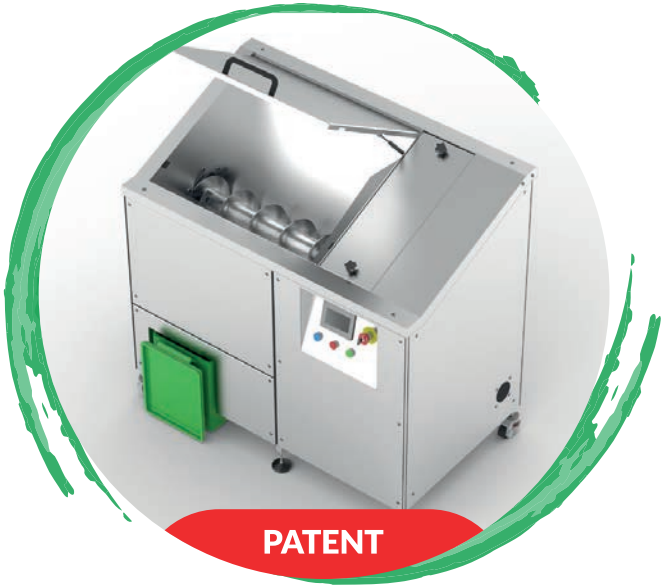
CANTEENS
(Hospitals, schools, businesses, prisons, barracks, etc.)

TOURIST ACTIVITIES
Resorts, hotels, residences, etc...

KCD

KCD canteen food waste dewatering station with volume and weight reduction up to 80%. It increases the treatment capacity of our composters and decreases the amounts of structuring agent to be used. Hopper capacity 100 liters, treatment capacity up to 450 kg/ h.

CANTEENS
(Hospitals, schools, businesses, prisons, barracks, etc.)



PATENT

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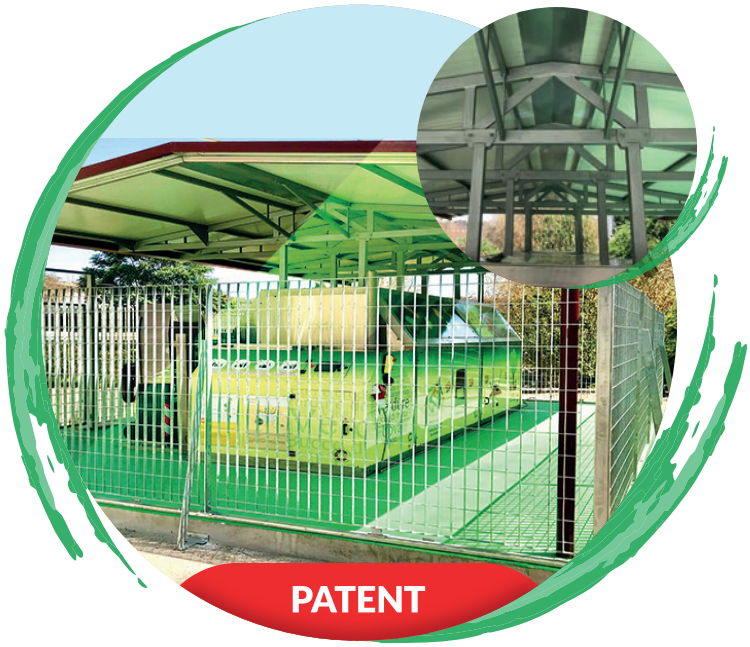
COMMUNITY COMPOSTING



ELECTROMECHANICAL COMPOSTER WITH 130LT HOPPER, BIN TURNER WITH WEIGHING SYSTEM AND INTEGRATED SELF-SUPPORTING CANOPY FOR INSERTING PHOTOVOLTAIC PANELS

AVAILABLE IN VARIOUS MODELS WITH:

Daily treatment capacity

From 100 to 350 kg

Annual treatment capacity

from 37 to 130 tons

- **LITTLE ISLANDS**
- **SMALL AND MEDIUM-SIZED MUNICIPALITIES**
- **CANTEENS** (Hospitals, schools, businesses, prisons, barracks, etc.)
- **TOURIST ACTIVITIES** Resorts, hotels, residences, etc...

ELECTROMECHANICAL COMPOSTER WITH 130LT HOPPER, BIN TURNER WITH WEIGHING SYSTEM AND SELF SUPPORTING RIBBED CANOPY

AVAILABLE IN VARIOUS MODELS WITH:

Daily treatment capacity

From 50 to 800 kg

Annual treatment capacity

from 18 to 300 tons

- **LITTLE ISLANDS**
- **CANTEENS** (Hospitals, schools, businesses, prisons, barracks, etc.)
- **TOURIST ACTIVITIES** Resorts, hotels, residences, etc...

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COMMUNITY COMPOSTING

ELECTROMECHANICAL COMPOSTER KCE MODEL WITH INTEGRATED 3M³ HOPPER WITH WEIGHING SYSTEM FOR UNLOADING VEHICLES WITH TANK, BIN VAULT AND S ELF-PORTING CENTERED ROOF

AVAILABLE IN VARIOUS MODELS WITH:

Daily treatment capacity

From 165 to 220 kg

Annual treatment capacity

from 60 to 80 tons

- **LITTLE ISLANDS**
- **SMALL AND MEDIUM-SIZED MUNICIPALITIES**
- **CANTEENS** (Hospitals, schools, businesses, prisons, barracks, etc.)
- **TOURIST ACTIVITIES** Resorts, hotels, residences, etc...

ELECTROMECHANICAL COMPOSTER KCE MODEL WITH INTEGRATED 3M³ HOPPER WITH WEIGHING SYSTEM FOR THE VEHICLE UNLOADING WITH TANK, VAULT BINS AND SELF-SUPPORTING CENTERED ROOF.

VAILABLE IN VARIOUS MODELS WITH:

Daily treatment capacity

From 165 to 220 kg

Annual treatment capacity

from 60 to 80 tons

- **LITTLE ISLANDS**
- **SMALL AND MEDIUM-SIZED MUNICIPALITIES**
- **CANTEENS** (Hospitals, schools, businesses, prisons, barracks, etc.)
- **TOURIST ACTIVITIES** Resorts, hotels, residences, etc...

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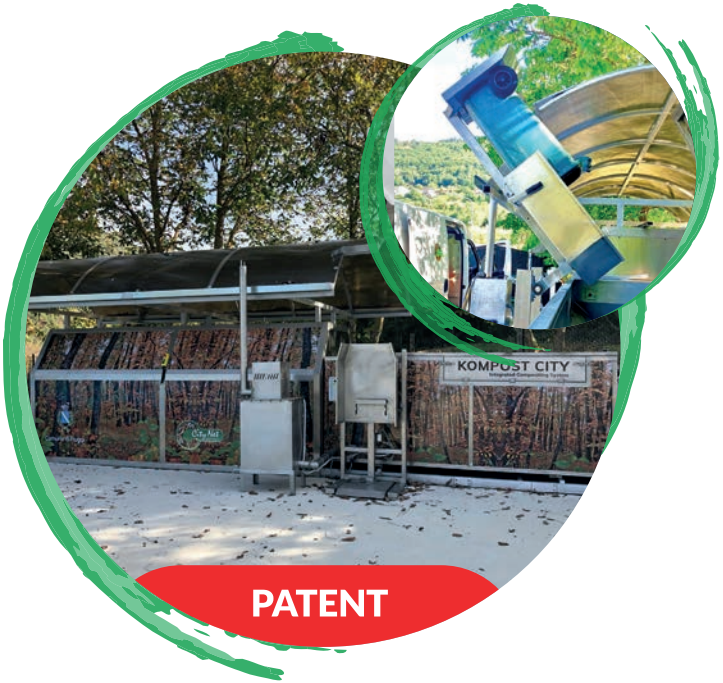
COMPOSTING PLANTS



ELECTROMECHANICAL COMPOSTING PLANT WITH AEROBIC CYCLE MODEL KCE WITH 3/5M³ LOADING HOPPER WITH WEIGHING SYSTEM AND VERTICAL AUGER FOR DELIVERY FROM COLLECTION VEHICLES

AVAILABLE IN VARIOUS MODELS WITH:

Daily treatment capacity

From 350 to 880 kg

Annual treatment capacity

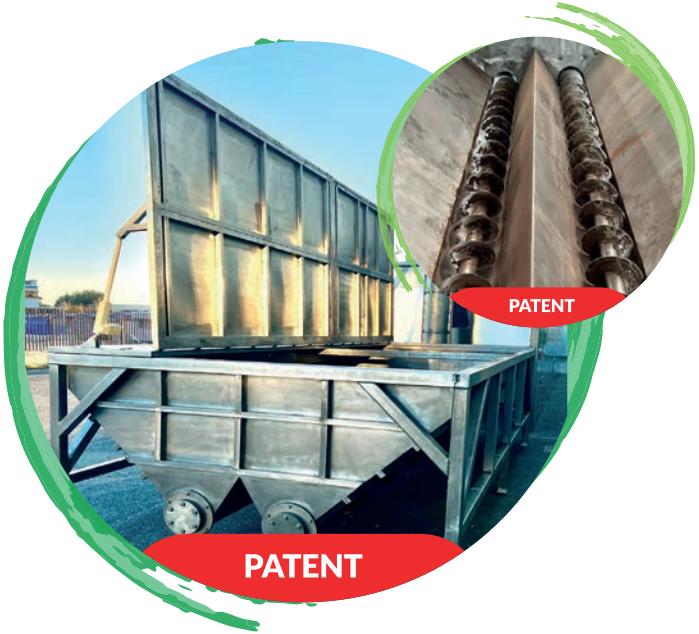
from 130 to 300 tons

SMALL AND MEDIUM-SIZED MUNICIPALITIES

LITTLE ISLANDS

TOURIST ACTIVITIES
Resorts, hotels, residences, etc...

COMPOSTING PLANTS



ELECTROMECHANICAL COMPOSTING PLANT WITH AEROBIC CYCLE MODEL KCE WITH HOPPER 7/10M³ LOADING HOPPER WITH WEIGHING SYSTEM WITH VERTICAL AUGER FOR TRANSFER FROM LARGE COLLECTION VEHICLES

AVAILABLE IN VARIOUS MODELS WITH:

Daily treatment capacity

From 800 to 5400 kg

Annual treatment capacity

from 300 to 2000 tons

SMALL AND MEDIUM-SIZED MUNICIPALITIES

LITTLE ISLANDS

TOURIST ACTIVITIES
Resorts, hotels, residences, etc...

THE STEPS OF THE KCE COMPOSTING PROCESS.

In the composting process, microorganisms break down organic matter and produce carbon dioxide, water, heat and humus (compost).

Under optimal conditions, composting proceeds through three phases:

1) Mesophilic or moderate-temperature phase;
2) Thermophilic or high-temperature phase;
3) Mesophilic, a cooling and maturing phase lasting several days.

A. MESOPHILIC PHASE

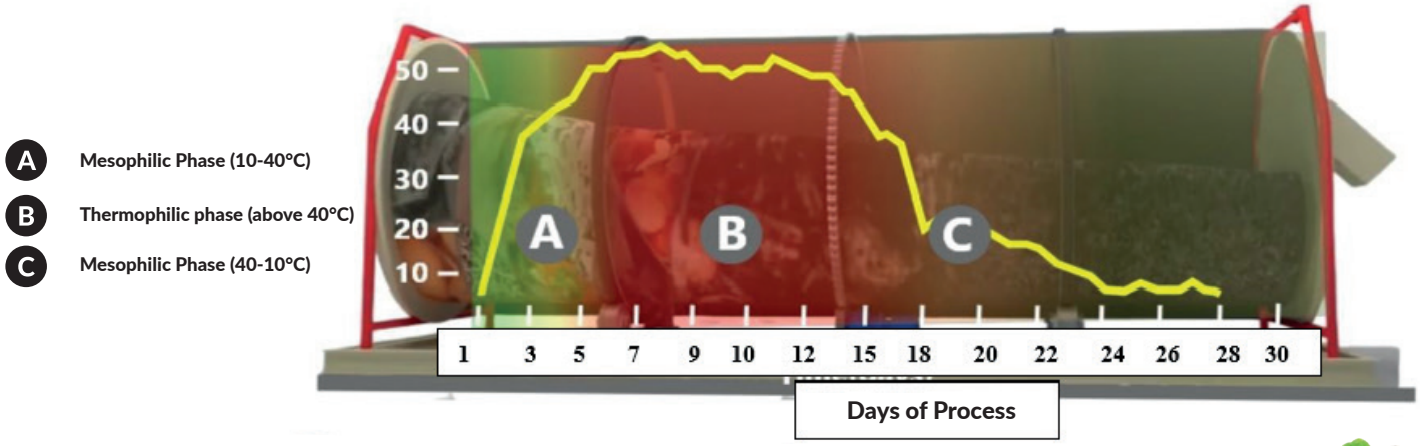
Different communities of microorganisms predominate during the various phases of composting. Initial decomposition is carried out by mesophilic microorganisms, which rapidly break down soluble and easily degradable compounds.
The heat they produce rapidly raises the temperature of the material being processed.

B. THERMOPHILIC PHASE

As the temperature rises above about 40°C, the mesophilic microorganisms become less competitive and are replaced by other thermophiles, or heat lovers. At temperatures of 55°C and above, many microorganisms that are human or plant pathogens are destroyed.Because temperatures above about 65°C deactivate many forms of microbes and limit the rate of decomposition, aerobic composting uses aeration and continuous handling of the material in the process to keep the temperature below this point.

C. MESOPHILIC PHASE

During the thermophilic phase, high temperatures accelerate the breakdown of proteins, fats, and complex carbohydrates such as cellulose and hemicellulose, the main structural molecules in plants. As the supply of these high-energy compounds is depleted, the temperature of the compost gradually decreases and mesophilic microorganisms once again take over for the final "maturation" or ripening phase of the residual organic matter.



KOMPOST CITY - IKCE

AUTOMATED COMPOSTING ISLAND FOR ON-TIME FEE STREET COLLECTION OF ORGANIC FRACTION

PATENT

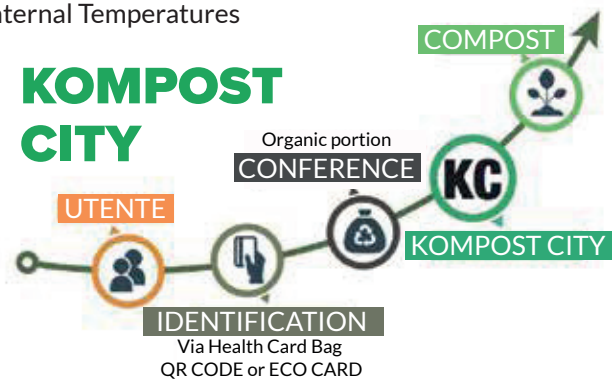
The **KOMPOST CITY** is an island that enables the automatic delivery, tracking and transformation of the organic fraction into compost, guaranteeing:

- To the **USER** is full autonomy to confer organic in all the time slots most convenient to him.
- The **MANAGEMENT OF the PUNCTUAL TARIFFING** of the organic fraction.
- The **TRACKABILITY** of the conferment.
- The **REMOTE MANAGEMENT** of the entire composting process.
- A **PARTICULAR SENSORISTICS** that through a heating system allows the internal Temperatures

100% ORGANIC = 20% COMPOST

PHASE MESOFILA	PHASE THERMOFILA	PHASE MESOFILA
TEMPERATURE 25-40°C	TEMPERATURE 55-65°C	TEMPERATURE 20°C

- A COMPOSTER
- B TAILGATES
- C BIOFILTER
- D IDENTIFICATION AND DELIVERY AREA
- E STRUCTURING
- F DISCHARGE ZONE



SIMPLE MANAGES.

The management system, after identifying the user authorizes the door to open without the user having to touch anything in the facility.

After the user deposits the bag, the door closes and performs weighing and transport to the composting chamber inlet. From the weight contributed, the management system determines the amount of structurant to be fed into the chamber by the automatic loader. The remaining sensors placed in the composting chamber and on the biofilter allow the entire process to be the optimal one.

- Wear-resistant materials with protection treatments at the highest level
- Composting chamber made of AISI 304 stainless steel with thickness from 6 to 8 millimeters
- Self-supporting outer structure made of EC beams in FE 430 with hot-dip galvanizing process
- Composting chamber insulation coating made of special fireproof material
- Chamber rotation with toothed wheel coupling welded on the chamber-pinion with gear motor equipped with gearbox-patent pending-
- Integrated heating system with automatic activation to ensure the temperatures optimal process and those required by law of the material being treated.
- Transfer door and automatic compost outlet made of AISI 304
- External protection paneling made entirely of AISI 304 stainless steel
- Filter sized to create internal vacuum aimed at avoiding odor emissions and made entirely of AISI 304 Stainless Steel with, activated carbon, average life of efficiency 5 years.
- Schneider Electric management system and electromechanical components.

POSSIBLE EXAMPLES OF APPLICATIONS OF ELECTROMECHANICAL COMPOSTERS

SMALL AND MEDIUM-SIZED MUNICIPALITIES

ISLANDS MINOR

CANTEENS
(Social, schools, businesses, prisons, barracks, etc.)

TOURIST ACTIVITIES
Resorts, hotels, residences, etc...

COMPANIES FARMS

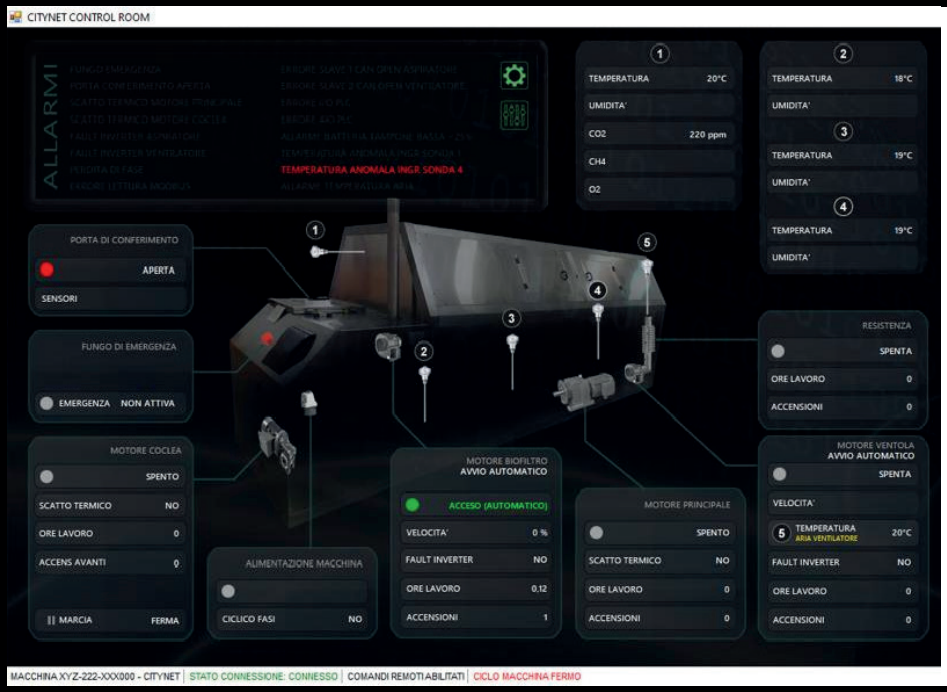
SCADA - SUPERVISORY CONTROL AND DATA AQUISITION

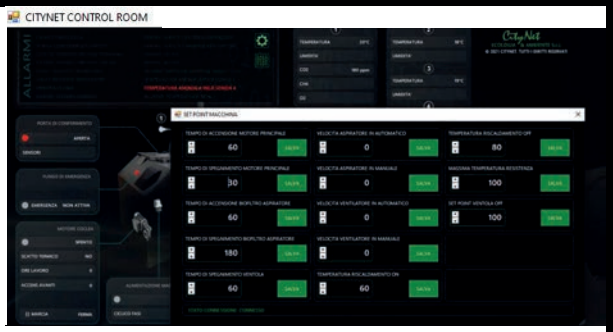
All of our manufactured machines fall under INDUSTRY 4.0/5.0, are equipped with a SCADA system with an advanced IoT capable of remotely monitoring, in real time, the transformation and automation status of the entire process.

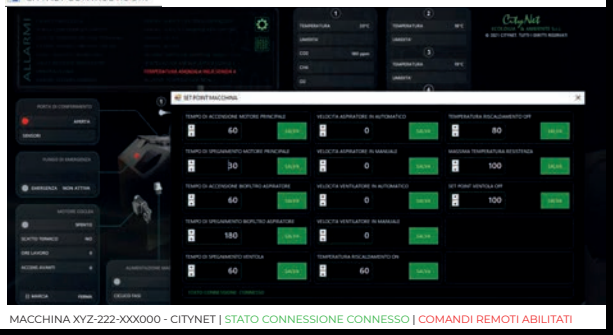
The presence of internal sensors detect temperature, humidity, PH, CO2, CH4, O2 values in real time, enabling process optimization and environmental monitoring.

Thanks to Smart Technology, Kompost City's Business Intelligence system is able to analyze the data coming from the composter, creating a dashboard that allows to follow and possibly intervene in the operation settings aimed at optimizing the progress of the transformation of organic waste inside the composting chamber in all its phases.

The process is then managed in an automated and remote way, with the use of Artificial Intelligence (AI) and machine learning, so as to make it easier and more efficient.







KCA KOMPOST CITY ACCELERATOR

KCA is a composting process accelerator based on a heating system using heating elements that is fully automatic; It decomposes waste into compost at high temperatures. The composting chamber of the machine is constantly maintained at optimal temperature and air flow to accommodate the thermophilic activities of the composting bacteria,the waste is moved at a programmed rate by mechanical arms made of AISI 304 stainless steel with a minimum thickness of 10 mm. In addition to temperature stabilization by heating elements and airflow management, 0.2 % thermophilic microorganisms must be inserted once a week.

AVAILABLE IN VARIOUS MODELS WITH:

Daily treatment capacity
From 25 to 9000 kg

Annual treatment capacity
From 9 to 3000 Tonnellate

CANTEENS
(Social, schools, businesses,prisons, barracks, fruit and vegetable markets and general markets, etc.)

TOURIST ACTIVITIES
Resorts, hotels, residences, etc...

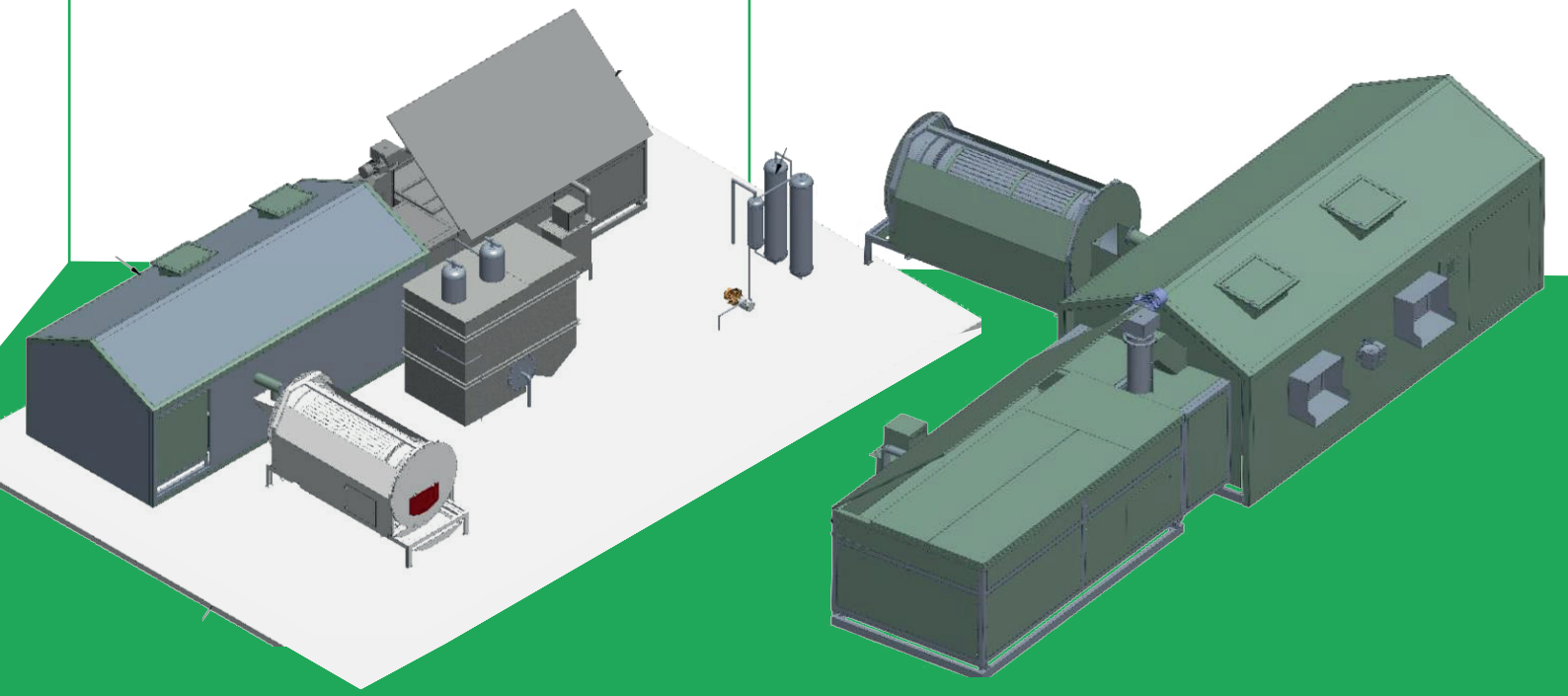
PHOTO OF A KCA 500

All our machines are INDUSTRIA 4.0 | All our products are on the MEPA platform.

The operation of the KCA accelerator is very simple

Preliminary process:

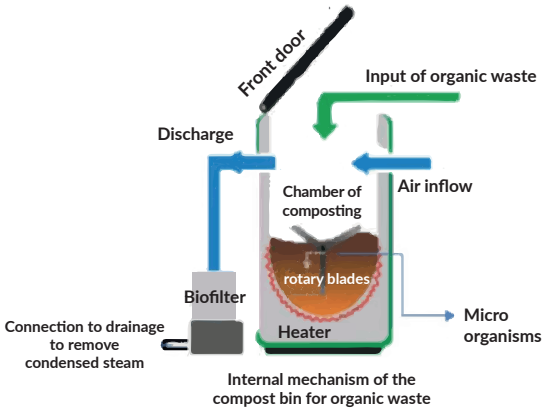
- Add composting culture 0.2 percent (compared to the daily capacity of the KCA system) into the machine.
- Conveyance:
  Deliver the sorted organic fraction into the loading hopper.
- Ensure that no material is loaded into the hopper. extra organic (plastic/glass).
- The turning of the waste will be done automaticallyand with preset frequency inside the machinewith the help of mechanical arms made of AISI 304 stainless steel with a minimum thickness of 10mm.



PLAN EXAMPLE OF A KCA 3000 SYSTEM WITH 5 CU M HOPPER AND FINAL SCREEN

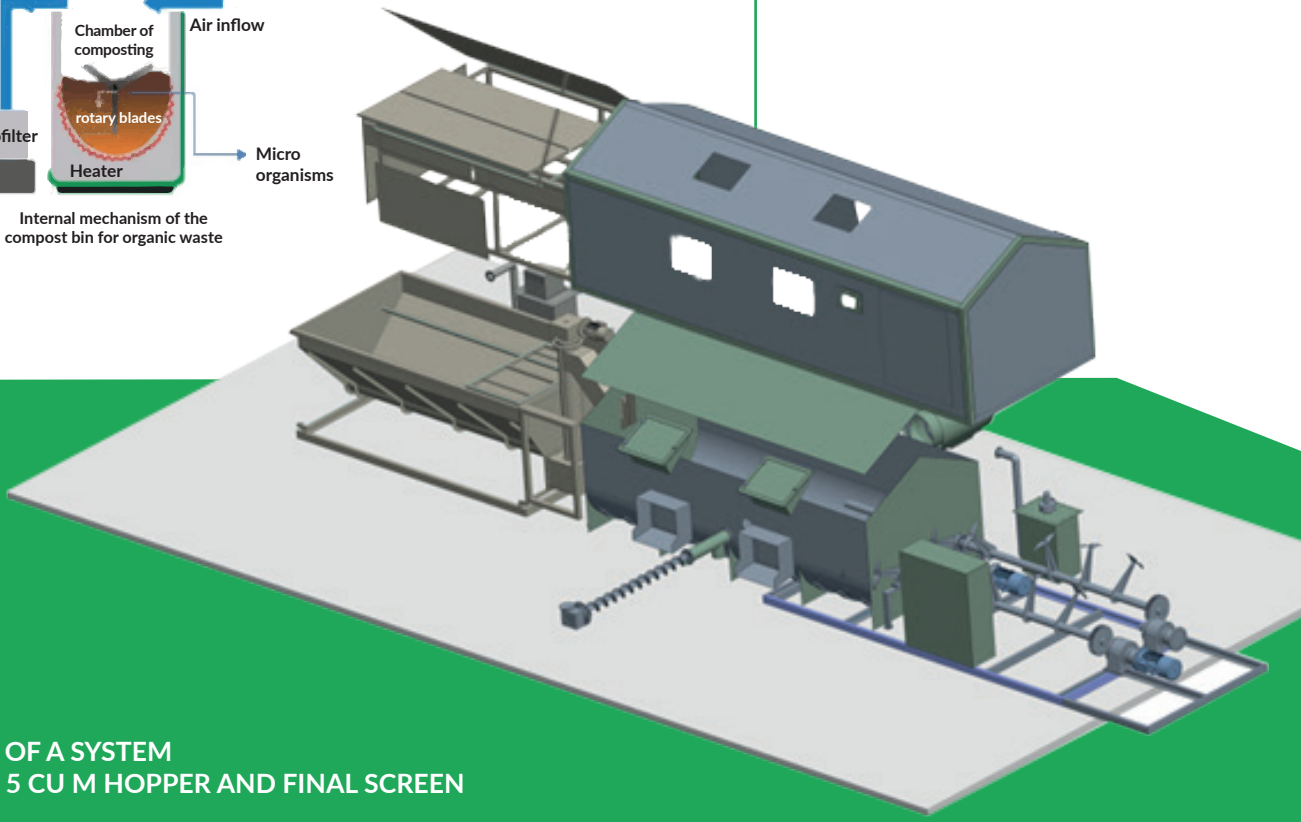
Compost will be collected from the output by process cycle

- Compost will be collected from the outlet through a suitable container
- Day 1
  Insert 0.2% bacterial culture
- **Composting process**



Internal mechanism of the compost bin for organic waste

- **Days 1 to 6**
  Add food waste for 6 days according to the capacity of the machine
- **Day 7**
  Do not deliver organic waste
- **Day 8**
  Remove through the aid of the discharge auger the treated waste to the level of the tree.



PLAN EXAMPLE OF A SYSTEM
KCA 3000 WITH 5 CU M HOPPER AND FINAL SCREEN

DIMENSIONAL DATA SHEET OF THE VARIOUS SIZES OF KCA SYSTEMS WITH THEIR TREATMENT CAPACITIES AND DIMENSIONS

MODELS	TON/YEAR	DIMENSIONS (L) X WIDTH X (H)	ENERGY ABSORPTION
KCA 25	9	1375 X 770 X 921	2 KW
KCA 50	18	1525 X 800 X 1055	2.5 KW
KCA 100	37	1950 X 1020 X 1270	4 KW
KCA 150	54	2000 X 1175 X 1370	7 KW
KCA 250	91	2450 X 1275 X 1650	10 KW
KCA 300	109	2735 X 1370 X 1705	13 KW
KCA 500	182	2920 X 1425 X 1855	21 KW
KCA 600	220	3800 X 1645 X 1990	24 KW
KCA 800	290	4075 X 1910 X 2205	30 KW
KCA 1000	365	4490 X 2045 X 2360	37 KW
KCA 1200	438	4575 X 2265 X 2490	44 KW
KCA 1500	547	4975 X 2375 X 2555	53 KW
KCA 3000	1095	6900 X 2525 X 2190	60 KW
KCA 5000	1.800	8500 x 2525 x 2555	80 KW
KCA 9000	3.000	13000 x 2525 x 2555	100 KW

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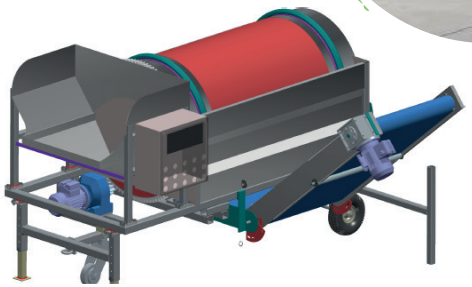
ROTARY SCREENERS FOR COMPOSTING PLANTS



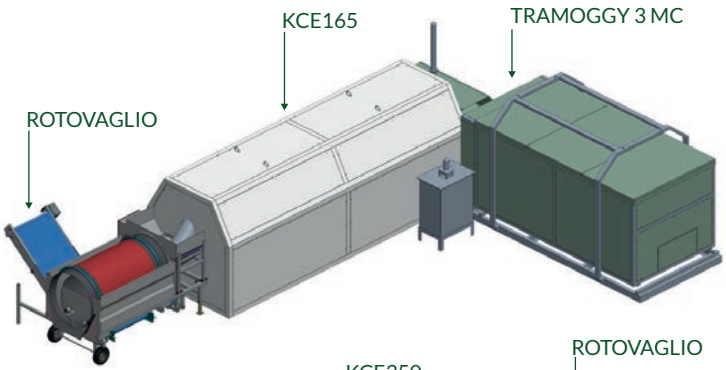
ROTARY SCREEN MADE ENTIRELY OF AISI 304 STAINLESS STEEL

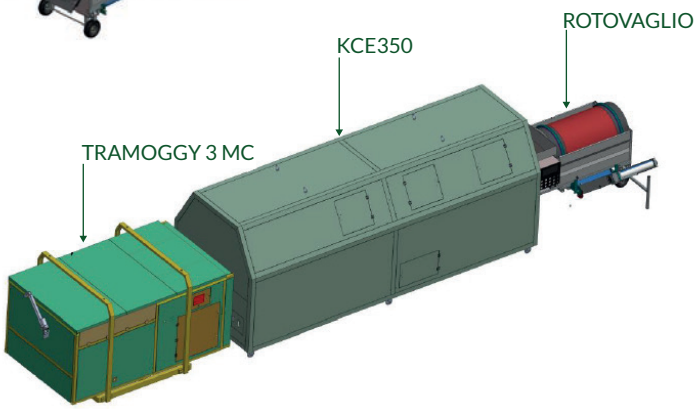
FEATURES

- Cylinder diameter: 800 mm;
- Diameter of holes: 6 mm;
- Discharge height: 1300 mm;
- 1 Kw connected;
- Fully automatic operation and belt for automatic discharge of screened compost

DIMENSIONS

- 2266mm length - 1420mm width - 1830mm height





DOMESTIC USAGE AND INDUSTRIAL

QUALITY

100%

ENVIRONMENT

11 TO 1.000 TONS ANNUE

SUSTAINABLE

SYSTEMS OF COMPOSTING INTEGRATED

CITY-NET

BIO COMPOSTERS KCE

ECO PROBLEM SOLVING

EASY TO USE

CERTIFIED COMPANY SOA OS14

LET'S TAKE CARE OF THE PLANET

COMMUNITY COMPOSTING

KOMPOST CITY

Integrated Composting System

SOLVE THE WASTE PROBLEM

INDUSTRIY LEADER INCOMPOSTING 4.0

BIO

City Net

ECOLOGIA & AMBIENTE S.r.l.

CITY NET ECOLOGIA & AMBIENTE S.r.l.
OFFICES and ESTABILISHMENT

Via Leonardo da Vinci, 120
00015 MONTEROTONDO SCALO (RM)
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ECOLOGY

PROFESSIONALITY

GREEN KOMPOST

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