BASIS F·R BETTER BUSINESS

MARES Green Division

Put your business in the best hands

Organic Waste Management System Presentation

Products & solutions

January 2014

The problem

Hotels, shops, tourist sites, hospitals, clinics, food industries, catering companies generate huge amounts of organic waste every day, with the associated problems of:

- Unpleasant odours
- Hygiene
- Space
- Having to set aside a collection area (refrigerated rooms)
- Cost of disposing of food waste

The problem

For local institutions, managing organic waste brings high costs for:

- Distributing rubbish bins and special bags for wet waste.
- Coordinating weekly collection, more frequently in summer months.
- Transporting waste.
- Administration.

The solution:

A home treatment system for organic waste!

Mares presents

An innovative system that uses a unique drying process to transform organic waste into dry residues, in just a few hours*, reducing the size of the original waste by up to 90% (volume) and 80% (weight).

** The cycle duration and quantity of final residues depend from the type of organic waste input into the equipment (vegetables or meat, etc.)*

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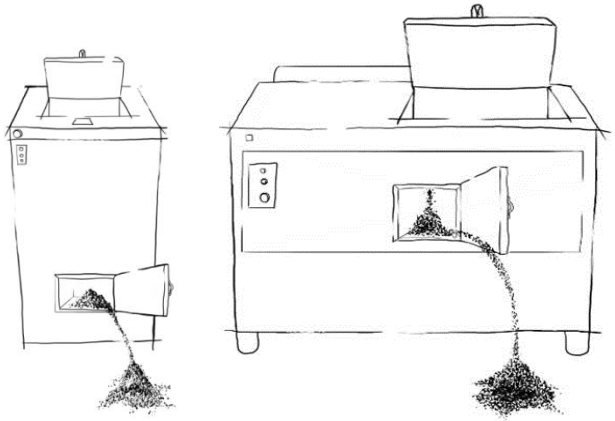
A complete range of products for all needs!

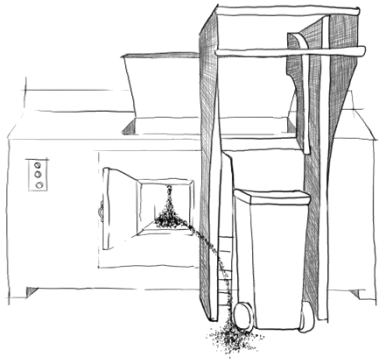
Small users



20 kg./day — 50/100 kg./day

- Restaurants
- Canteens
- Fast-food
- Apartment Buildings
- Local Institutions/Municipalities
- Waste management companies

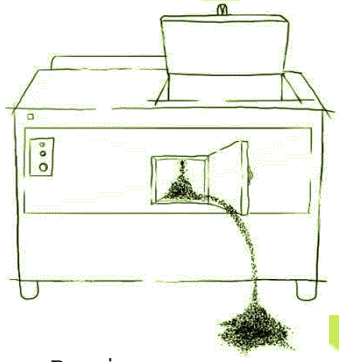
Bulky users



200 kg./day up to 60 tons/day

- Airports
- Hotels and Tourist Resorts
- Restaurants, food chains, canteens and Catering Services companies
- Supermarkets and Commercial Centre
- Exhibition centres (food service area)
- Hospitals and Rest Houses
- Food Industry
- Animal farms and Slaugthery houses
- Local Institutions/Municipalities and Waste management companies

Resources from organic waste



Drying process

Pellets production or Secondary Solid fuel

Soil ammendment

Pet animal feed

Renewal energy

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SMALL USERS

MWS-20/30

For small restaurant

Handles up to 30kg of food waste a day!

10/15 kg. capacity/cycle

MWS-50/100/150

Restaurant/Canteens

Handles up to 150kg of food waste a day!

25/50/75 kg. capacity/cycle

MWS-200

Hotels, catering services

Handles up to 200kg of food waste a day!

100 kg. capacity/cycle

SMALL USERS

Special side-by-side fitting unit for professional kitchens

Process capacity approx. 10 kg/cycle (max. 3 cycles/day)
Compact dimensions: (L x W x H) 65 x 65 x 90 cm

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FOR MEDIUM COMMERCIAL USERS

MWS-300

For medium size activities

Handles up to 300kg of food waste a day!

150 kg. capacity/cycle

MWS-300CD

dead livestock treatment (pigs)

Handles up to 300kg of pigs a day!

150 kg. capacity/cycle

MWS-400

For medium size activities (resorts, hospitals, nursery homes,…)

Handles up to 400kg of food waste a day!

200 kg. capacity/cycle

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FOR BULKY FOOD WASTE MANAGEMENT

MWS-600

For big size activities

Handles up to 600kg of food waste a day!

300 kg. capacity/cycle

MWS-1000

For big size activities

Handles up to 1 ton of Organic waste a day!

500 kg. capacity/cycle

MWS-1200/1200CD

For big size activities

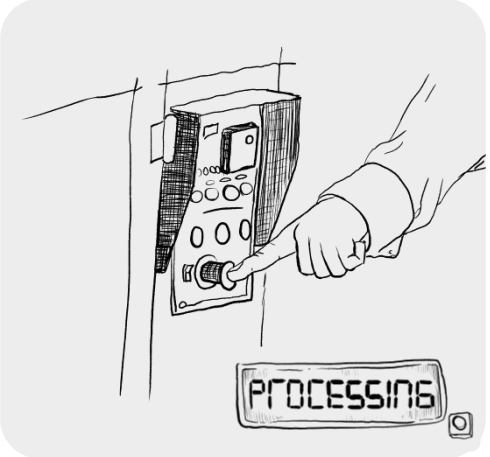
Handles up to 1,2 ton of organic waste a day!

ALSO AVAILABLE FOR DEADLIVESTOCK

600 kg. capacity/cycle

Products presentation

Only few and easy operations!



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10 good reasons to pick a waste management system!

1. **Cuts the volume of food waste by up to 90%**
2. **Clean, hygienic system**
3. No bad odours/No strong smelling
4. Easy to install and use
5. No need to add any kind of enzymes
6. Cut the cost of handling, storing and disposing of food waste
7. **Short period payback**
8. **Proven technology: 18 years in operation and development**
9. Patented technology
10. Tax reductions could be available*

It is an ecological system

* In accordance with specific directives issued by relevant local authorities

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Recyclable waste

- Fruits 
- Vegetables and legumes 
- Pasta, rise and bread 
- Potato and starch in general 
- Fish, meat and proteins 
- Small bones 

Not recyclable waste

- Wood 
- Metals 
- Plastic 
- Glass and ceramics 

  (pottery)
- Big bones 
- Fabric and paper [1] 

The restricted materials can cause problems and damages to the equipment.
Read carefully the instruction Manual to ensure the proper use.
(1) Fabric and paper even if do not damage the equipment, may compromise the quality of the final output for fertilizer production

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Available applications

1. Farms and slaughterers
   Dead livestock treatment

2. Supermarkets
   Pellets production from organic waste

3. Pharmaceutical companies and hospitals
   Eggs treatment sterilization from vaccines production

4. Hotels and restaurant
   Organic fertilizer production from food waste

5. Domestic users/private apartment buildings
   Household food/organic waste

NOTE:
Equipment can be adapted for any possible new application upon request and after a deep analysis of the specific project.

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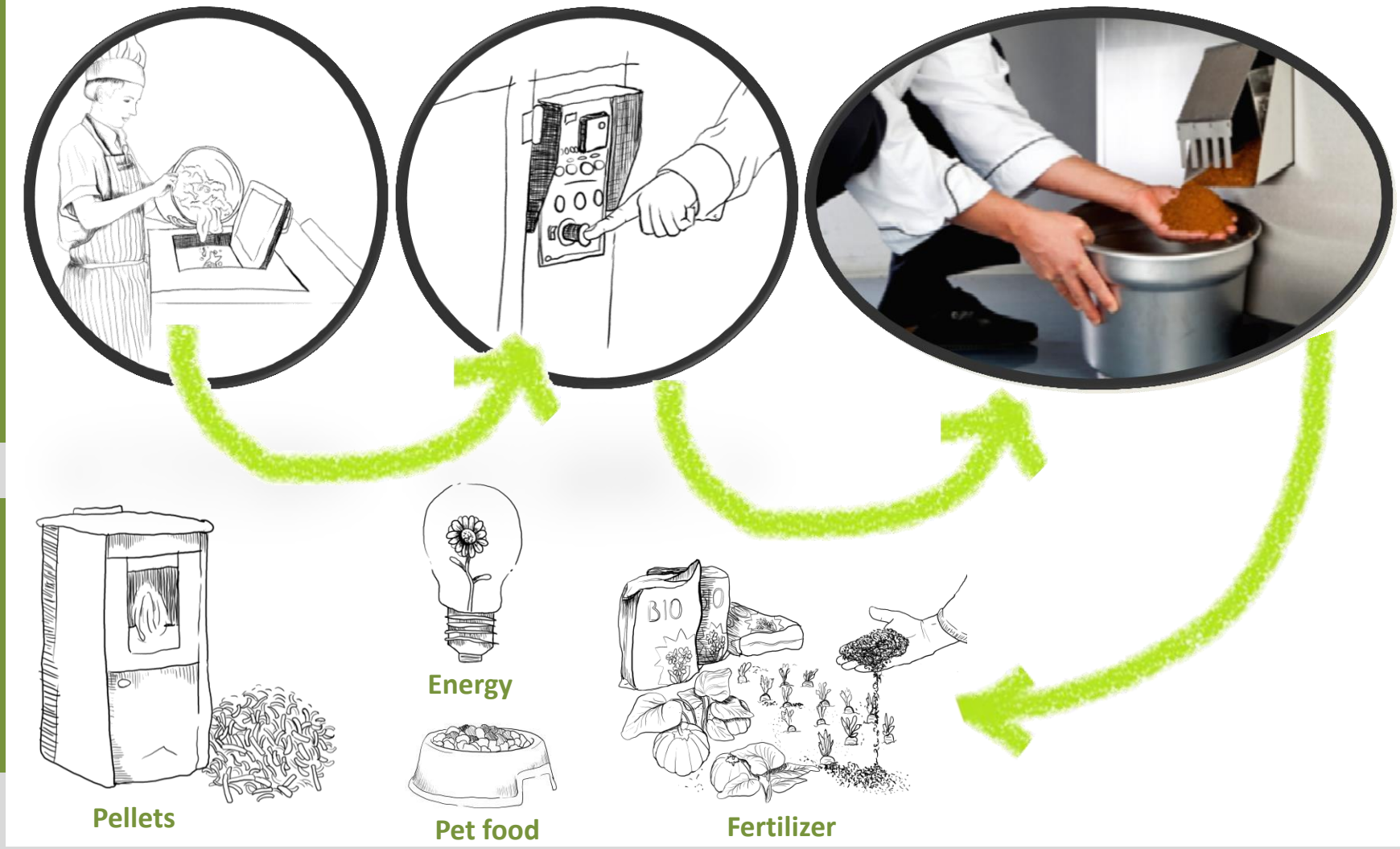
Turn organic waste into resources!



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App. 1 - Dead livestock drying machine

Farms face daily the problem of **how to dispose dead livestock** according to the strict safety guidelines for health.

Thanks to its process and high temperature (around 160° Celsius*), dead livestock can be dried and sterilized with complete elimination of viruses and bacteria.
The output is safe and stable with no possibility to contaminate humans or the environment.

MWS-300CD

(* The minimum temperature required to completely eliminate viruses and pathogenic bacteria is 80 ° Celsius for at least one hour process)

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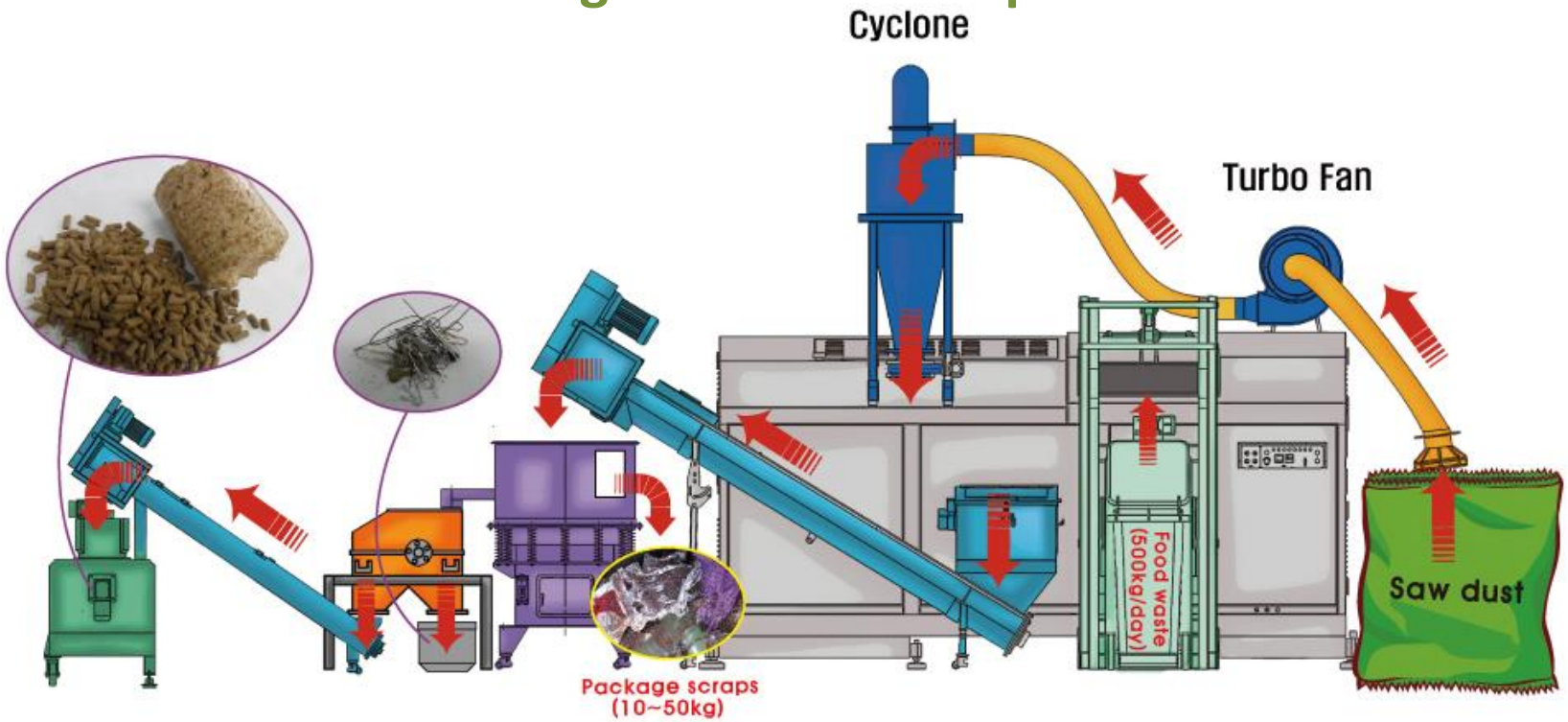
App. 2 - From waste to energy system (Pellets production)

Transforms the organic waste into pellets for stoves



4 Pellets production

3 Separate eventual other residues from organic output for palletisation process

2 Discharge dried output

1 Waste and Sawdust load

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App. 3 – Pay per use system (apartments/buildings)

Huge amount of organic waste is produced by privates and families, in condominium, or by restaurants and bars, in tourist and urban areas, that cannot be stored outside for hygienic and cleaning reasons and the standard collection service operates, usually, only twice a week.

The Organic Waste Dryers can be equipped with a computerized system that allow to manage all this waste automatically, with just few simple operations:

1. The user, identified by an ID code or badge, load its waste bag on the automatic bag scale.
2. The display shows the relevant fee to be paid.
3. The user pay the tariff (by cash, credit/debit card or on open account with end-month invoicing) and get the memo ticket.

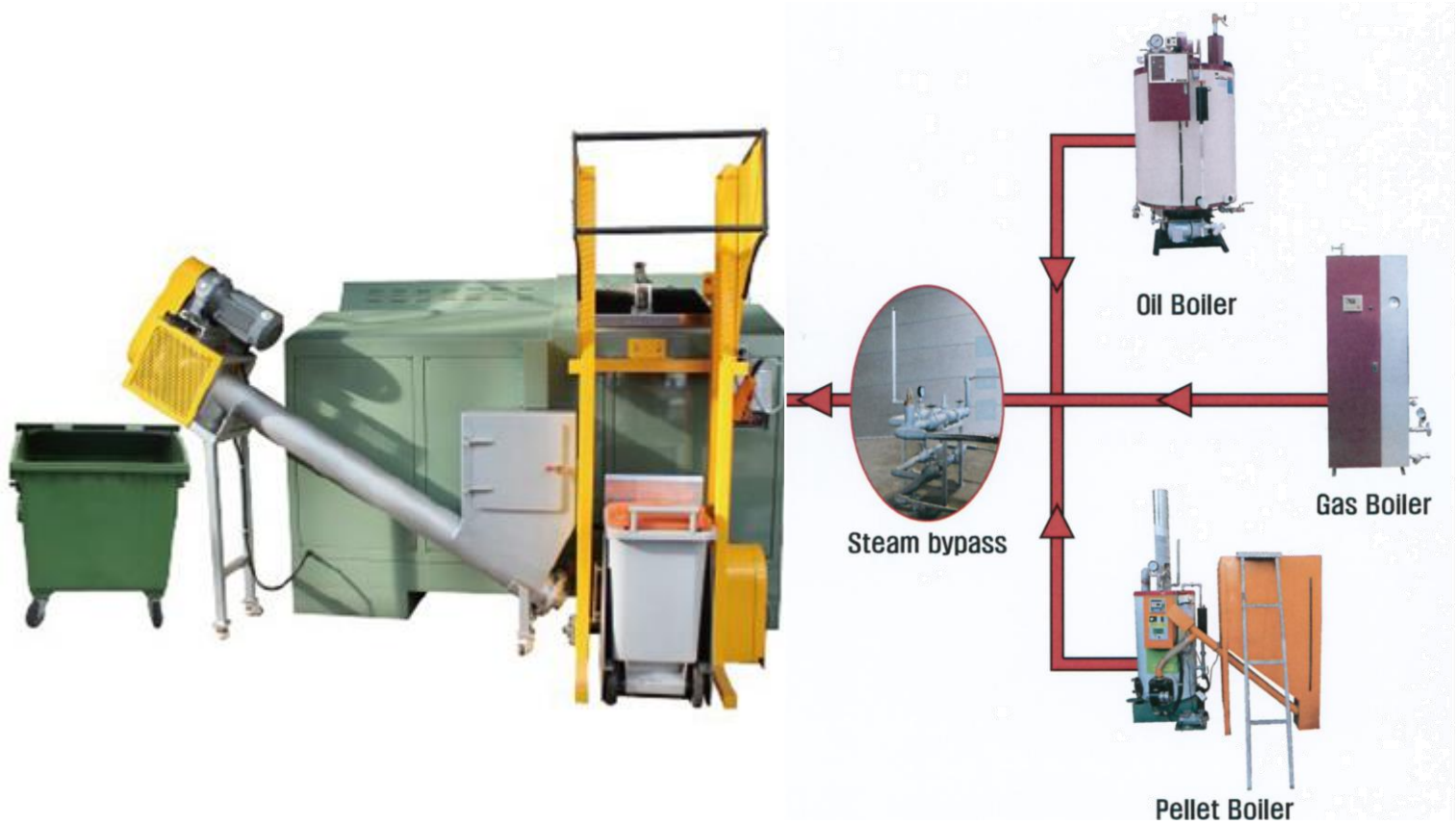
The Organic Waste Dryer is the solution to make people more conscious about their waste and prevent at the origin the useless waste of food.

The software con be customized according to the specific needs…

OPTIONS – Stainless steel outfit

OPTIONS – alternative heat sources

Steam power

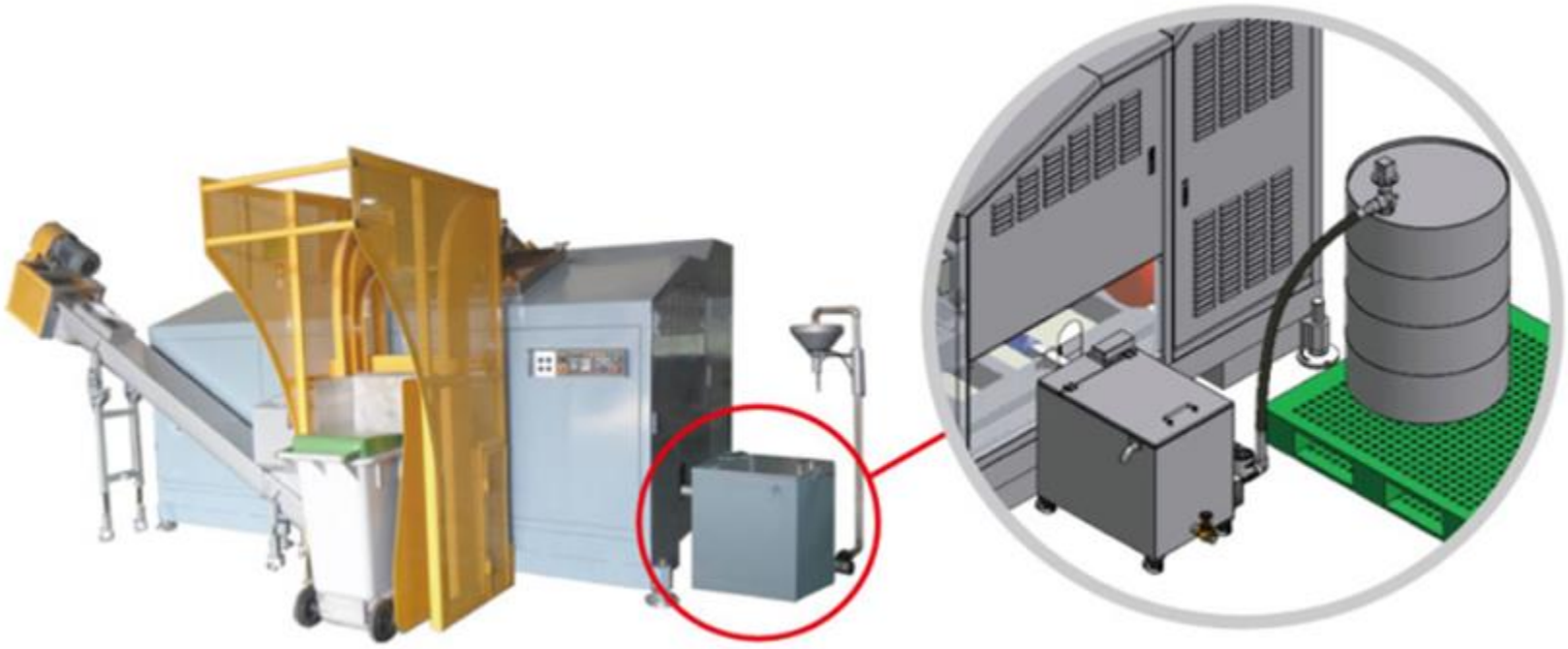


OPTIONS – alternative power sources

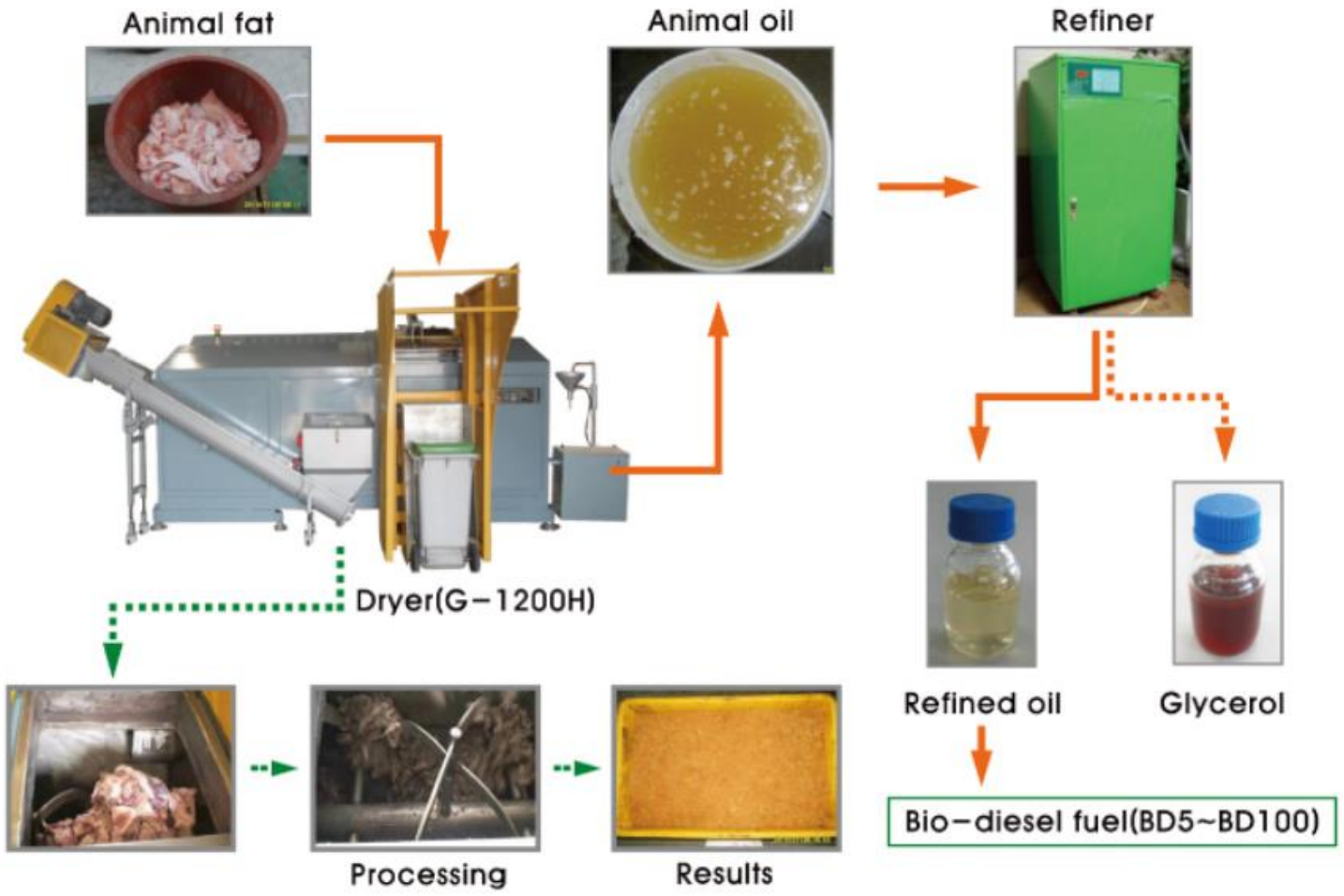
Gas power

Other possibilities can be evaluated and studied case by case (e.g. photovoltaic power)

OPTIONS - FAT RECYCLING SYSTEM



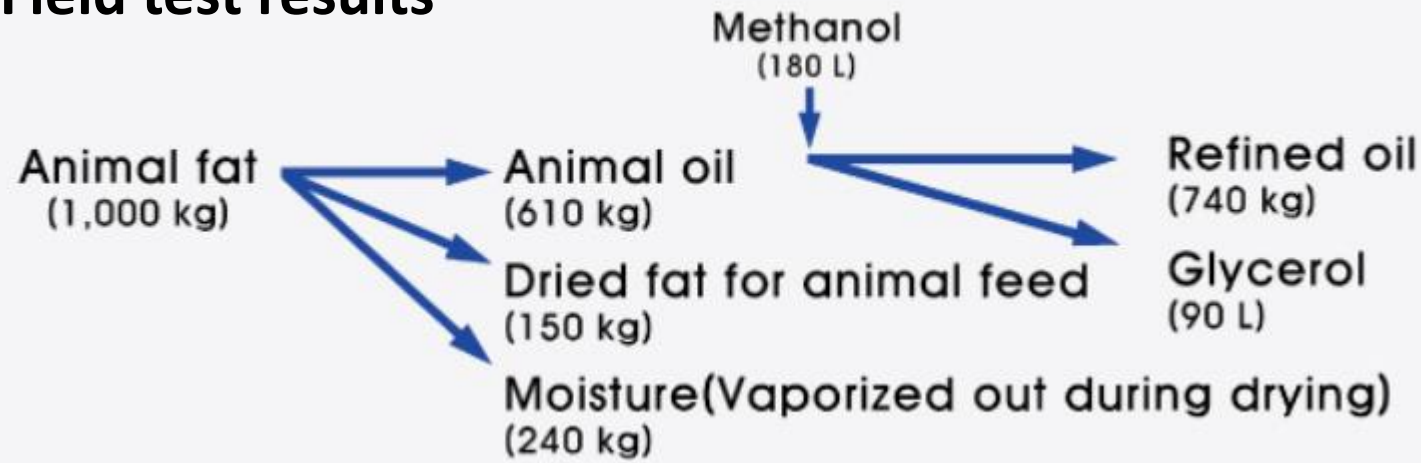
OPTIONS - FAT RECYCLING SYSTEM



OPTIONS - FAT RECYCLING SYSTEM

Bio-diesel burning test

Field test results



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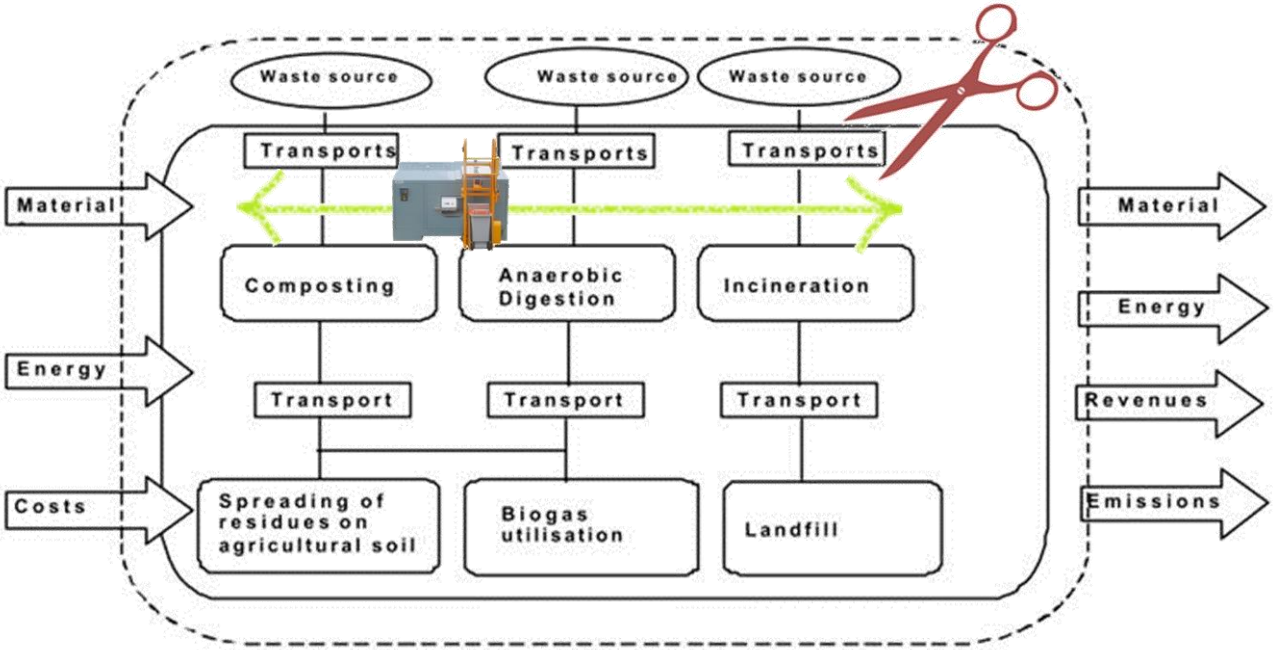
Cut the transportation costs and Co_2 emissions up to 90%

Even in countries where the waste management is already well organized and implemented, the organic waste dryers can perfectly fit the already working system, increasing the sustainability process by cutting costs and CO_2 emissions for the organic waste transport.



Local Municipalities can take great advantage by integrating their waste process with the distribution of the Organic Waste Dryers in key positions.

Technologies comparison

	GAIA	Domestic composting	Public composting plants	Anaerobic Digestion Plant	Incinirators	Biogas plants	Landfill	Organic waste enzime process
Space needed	Small	NOT aplicable in apartments	Large	Large	YES	Large	Large	Variable
Time to end process	Short	Long	Long	Long	Short	Long	long	Medium-long
Sterilization	YES	NO	NO	NO	YES	NO	NO	NO
Management costs	Little	Little	Some	High	High	High	Some	Some
Transport costs	Cut by 80%	NO	YES	YES	YES	YES	YES	NO
Field use	NO	NO	YES	YES	--	YES	YES	NO
Danger/Risk level	NO	Some	Some	Some	High	High	High	Some
Other problems	NO	Bad odours	Bad odours	--	Burning efficiency lowered by organics	Bad odours, pre-treatment process, ...	water, field and air contamination	Organics could not be completely digested

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Solving the problem of wet waste!

The Food Waste System

is not just an ecologically sustainable system, it is also economic!

In Europe
a medium size commercial activity
(a restaurant for example) pay an average of 600 euros per month
for the organic waste collection.

In less then 2 years the purchase of the equipment has been paid back!

For each problem we can develop the better solution!

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Some big brands already tested this system

Le centre Leclerc St Paul à la pointe de l'innovation

Les dirigeants du centre Leclerc de St Paul lès Romans présentaient lundi, dans le cadre de la Semaine de la science, la première machine Lyophival utilisée en France pour retraiter les déchets alimentaires d'une grande surface.

Ils l'on dit lors

E.LECLERC

France

UK

DHL AIRLINE BUSINESS SOLUTIONS

CATEGORY 3: HEAVY MACHINERY

To see some demo video,
access MARES reserved web area
http://maresdata.maresgroup.com:

Login: ecoguest
PSW: mares180

Some big brands already tested this system

Carrefour

France

Some big brands already tested this system

First installation in in a National supermarket chain in Parma, North Italy (March 2013)

R.O.I. CALCULATION / 1 (nursing home for elderly)

This example is referred to a small/medium structure working for 365 days/year:

- 120 guests
- 3 meals a day
- 0,15 kg. average food waste/person/meal
- Annual cost for organic waste collection service around 11.000 euros

Using the waste management system, the nursing home can save up to 7.500 euros/year and recoup the investment of the machine in less than 3 years!

R.O.I. CALCULATION / 2-3 (Supermarket)

This is the case of a supermarket that produces by itself pellets from its food waste and sell them.

- 1.2 ton/day of food waste (vegetables, expired food such as bread, yogurt, milk, cheese, cakes, meat, etc.)

The Supermarket not only saved around 7.000 euros/year from the waste collection service, improved the hygienic conditions, eliminated bad odours and created its own pellet business, earning around 79.000 euros from this new activity.

Benefits for institutions

- Encourages separation of waste.
- Eliminates the need for waste to be taken to landfill.
- When incinerated, does not impair the waste-to-energy process.
- The "final" product is stable, hygienic and odourless.
- The space occupied by organic waste is reduced up to 90% (and this aspect is very important for the collection service frequency)
- Collecting the resultant material does not require any special attention in terms of specific handling procedures.
- It could generate additional "eco-sustainable" business and new jobs to transform it into natural fertilizer, pellets, etc.
- Cutting operating costs for organic waste would free up resources to be returned to citizens.
- Financial incentives available from European Union.

Benefits for the environment

- Waste does not enter the sewage system (e.g. waste disposal units or food waste disposers).
- Organic waste is very quickly transformed into a resource (unlike domestic composting which takes months).
- Both the liquid and dry parts can be used for plants and gardens.
- Less reliance on chemical fertilizers.
- Helps to regenerate the soil.
- Reduces the production of gases causing the greenhouse effect.

Solving the problem of wet waste!

A sample of the dry part and the liquid residue obtained from the procedure has been analysed by specialist laboratories.

The purpose was to certify that the residues are not dangerous for the environment and are suitable for use as:

- a natural fertilizer for plants and flowers,
- to be disposed of in the water system
- to be used to produce fertilizers, soils or pellets,
- to be disposed of using conventional methods without posing a risk to the environment.

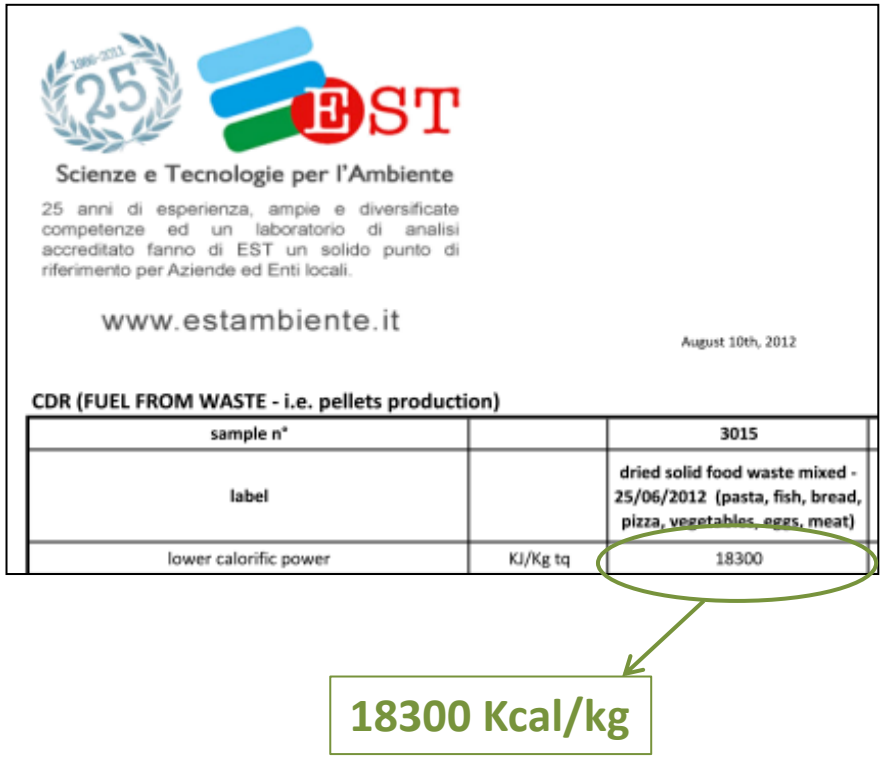
What to do with the residues?

Dry residue:

- It is a natural product so no problems when it comes to disposal
- It can be used to fertilize* grassy areas, plants and flower beds/boxes
- It can be used for subsequent processes (such as producing fertilizer, pellets, food for animals etc.)

** The residue is a soil amendment that should be mixed with peat, as the salt content is too high for its use as it is. A previous analysis of the output in general is highly recommended to determine its best use.*

What to do with the residues?



Scienze e Tecnologie per l'Ambiente

25 anni di esperienza, ampie e diversificate competenze ed un laboratorio di analisi accreditato fanno di EST un solido punto di riferimento per Aziende ed Enti locali.

www.estambiente.it

August 10th, 2012

CDR (FUEL FROM WASTE - i.e. pellets production)

sample n°		3015
label		dried solid food waste mixed - 25/06/2012 (pasta, fish, bread, pizza, vegetables, eggs, meat)
lower calorific power	KJ/Kg tq	18300

18300 Kcal/kg

The dried output has a **high calorific power**

Ideal for pellets production or for incinerator plants for renewal energy production

What to do with the residues?

Liquid residue:

- It can be used as a liquid organic fertilizer * for grassy areas, plants and gardens
- It can be disposed of in the water system

* The residue is a soil conditioner that should be diluted with water, as the salt content is too high for its use as it is.

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What to do with the residues?

Analysing the liquid fraction, the most important parameter to be taken into consideration is the COD Level* of the water if disposed into the drain system.

To understand how this level is low in our liquid output we compared its value with the one of a common washing machine:

4.175 mg versus 11.600 mg!

* (COD = Chemical Oxygen Demand)
The value indicates the need for oxygen needed to oxidize organic and inorganic substances present in a sample of water.

Laboratorio Analisi Ambientali s.r.l.
Società certificata secondo UNI EN ISO 9001:2008 da ACM Ltd.
Accreditamento Ukas n. 245 Certificato n. (
Riconoscimento Ministero della Sanità Prot
Iscrizione Registro Regionale Laboratori n°

Rapporto di prova: N° 10/0537
Data emissione: 18/02/10
Pag. 1/2

Waste system

Dati informativi

Denominazione attribuita dal Richiedente:	Liquid
Campionamento:	a cura d
Trasporto campioni:	a cura d
Data ricevimento campione in laboratorio:	03/02/1
Identificazione campione:	ns. N° i
Data inizio analisi:	03/02/1
Data fine analisi:	16/02/1
Aspetto campione:	liquido

Parametri controllati

Prova	Risultato di prova	Incertezza (•) Limite inferiore	Incertezza (•) Limite superiore
pH	6,8	6,6	7,0
Conducibilità	560	532	588
Solidi sospesi totali	2,0	1,8	2,2
BOD	1808	1627	1989
COD	4175	3757	4593
Cromo totale	<0,07	-	

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Riconoscimento Ministero della Sanità Prot. n° 703.59.110/3697
Iscrizione Registro Regionale Laboratori n° 16 R.R. 14/03

Rapporto di prova: N° 10/4613
Data emissione: 15/12/10
Pag. 1/1

Domestic Washing machine

Dati informativi

Denominazione attribuita dal Richiedente:	**Refluo da lavatrice**
Campionamento:	a cura del Richiedente
Trasporto campioni:	a cura del Richiedente
Data ricevimento campione in laboratorio:	14/12/10
Identificazione campione:	ns. N° interno 10/12358
Data inizio analisi:	14/12/10
Data fine analisi:	15/12/10
Aspetto campione:	liquido grigio-marrone schiumoso

Parametri controllati

Prova	Risultato di prova	Incertezza (•) Limite inferiore	Incertezza (•) Limite superiore	Limiti D.Lvo 152/06 Acque Superfic.	Limiti D.Lvo 152/06 Acque Fognatura	Unita' di misura	Metodo di prova
pH	6,5	6,3	6,7	5,5-9,5	5,5-9,5	unità di pH	APAT CNR IRSA 2060 Man. 29:2003
Colore	dil.1:40		-	dil 1:20	dil 1:40	assenza	APAT CNR IRSA 2020A Man. 29:2003
Solidi sospesi totali	5830	5247	6413	80	200	mg/l	APAT CNR IRSA 2090B Man. 29:2003
COD	11600	10440	12760	160	500	mg O_2/l	ISO/FDIS 15705:2001
Solfati	15,0	14,2	15,8	1000	1000	mg SO_4/l	APAT CNR IRSA 4020 Man. 29:2003
Cloruri	20,0	19,0	21,0	1200	1200	mg Cl/l	APAT CNR IRSA 4020 Man. 29:2003
Fosforo totale	3,5	3,1	3,9	10	10	mg P/l	APAT CNR IRSA 4110A2 Man. 29:2003
Azoto ammoniacale	41,0	34,9	47,1	15	30	mg NH_4/l	APAT CNR IRSA 4030C Man. 29:2003
Fenoli totali	<0,1		-	0,5	1	mg C_6H_5OH/l	APAT CNR IRSA 5070A2 Man. 29:2003
Tensioattivi totali:	-			2	4	mg/l	
anionici (MBAS)	358	322	394	-	-	mg/l come dodecilbenzensolfonato sodico	APAT CNR IRSA 5170 Man. 29:2003
non ionici (TAS)	1320	1162	1478	-	-	mg/l come nonilfenolo etossilato 10E0	UNI 10511-1:1996

Il Responsabile del Laboratorio

Il Responsabile Tecnico

The recycling circle – soil amendment

Fertilizer production with dried residues

Final residues

Drying processing

Food waste

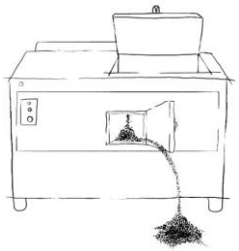
Healthy cultivation lands

Food

Food consumption

The recycling circle – Fuel

Organic waste



Drying process

Final residue

Pellets production

Extra income e no more waste management costs!!!

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Don't waste the energy!

No waste of energy by using the Waste management system.

The electricity used to process the food waste is recovered by the equivalent energy produced by the dried output.

Look at this example:

	IN			OUT		
	Kg.	Kwh	Kcal	Kg.	Kwh	Kcal
Energy consumption of the waste managemwnt system (Kwh/kg.)	1	0,9	774			
Food waste per cycle (MWS-600)	300					
Total enery consumption/cycle	300	270	**232.200**			
Average calorific power of the dried output (Kcal./kg.)				1		3.700
Average quantity of output/cycle (considering a moisture content of 80%)				66		**244.200**

There is a positive balance of additional 12.000 Kcal.
which corresponds to 14 Kwh/kg.
generated by the residues produced!

Potential customers / Channels

Airports
Hotels and Tourist Resorts
Restaurants and food chains
Canteens
Catering Services companies
Supermarkets and Commercial Centre
Exhibition centres (food service area)
Hospitals
Rest Houses
Food Industry
Animal farms
Slaugther houses
Apartment Buildings
Local Institutions/Municipalities
Waste management companies
Etc.

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To make an offer we need to know ...

1	Number of guests/clients served each day		
2	Dimensions of the covered area (square metres)		
3	Working days to be considered (per week/month/year)		
4	Daily production of food waste (average in Kg. or Litres)		
5	May you define an average food composition of your organic waste (fruits and vegetables, meat, fish, flour and starches, coffee grounds, etc.)? Moistre content?		
6	How the food/organic waste is actually managed and stored (eco-bags, special bins, ...) ?		
7	The food waste storage materials (bags, bins) have been purchased or do they have been supplied for free from the waste management company?		
8	The food waste is stored in a refrigerated area/room? If so, specify which kind of equipment has been arranged, its purchasing, maintenance and energy consumption costs, space occupied, cost for eventual cleaning of the room, etc.		
9	What is the collection service frequency for the organic waste (daily, twice a week, etc.) ? Is the collection operated at your domicile or thru municipal collettive points?		
10	How much does it cost the organic waste collection service (or % of impact on the total service cost)		
11	Cost of the electricity (Kwh) or gas (m3)?		
12	Final use of the dried output? Recycling, energy production or disposal?		

Exhibition in Germany – HOGA fair 2013

Last month of January MARES attended as exhibitor at the trade fair specialized in gastronomy and hospitality services in Nuremberg, Germany with good results in terms of contacts reactions and we are now opening the doors also to the German market.

HOGA

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Exhibition in Germany – HOGA fair 2013

Anzeige

Bioabfälle selbst recyceln und verwerten

Das italienische Unternehmen **MARES Marketing Srl** offeriert innovative Klein- und Großanlagen, die organische Abfälle in Recyclingprodukte umwandeln. Die Abfallbehandlung in diesen Anlagen ist nicht nur ökologisch sinnvoll, sondern auch wirtschaftlich, da keine Entsorgungskosten entstehen und das Endprodukt als Düngemittel oder Brennstoff verwertet werden kann.

Nach seiner Beschäftigung bei Philips Electronics gründete der Holländer Frans Jamry 1981 das Unternehmen MARES, um als Sales- und Marketingagent kleinere Unternehmen und Händler beim Vertrieb ihrer Waren zu unterstützen. Diese Unterstützung umfasst beispielsweise die Erstellung individueller Marktrecherchen, die Produktentwicklung sowie Kostenberechnungen, damit Fabrikanten geeignete Produkte für den europäischen Marktraum anbieten können und somit ihren Mehrwert erhöhen. Diese Dienstleistungen, Services und Netzwerkkontakte offeriert MARES im Geschäftsbereich White bzw. Home Appliances, also für sog. Weiße Ware bzw. elektrische Haushaltsgeräte aller Art, u. a. diversen Herstellern von Waschmaschinen, Trocknern, Spülmaschinen, Mikrowellen, Kühlschränken und Backöfen. *„Im Sektor White Appliances fungieren wir als Agenten"*, bestätigt Noris Ciccardi, verantwortlich für Marketing und Verkauf. *„Dafür sind wir auf dem Weltmarkt bekannt."* 2009 wurden Geschäftsaktivitäten von

Frans Jamry, Firmengründer und Geschäftsführer von MARES

MARES um die Green Division deutlich erweitert. Seitdem übernimmt MARES Marketing Srl mit Sitz im italienischen Varese den Vertrieb von Abfallbehandlungsanlagen eines koreanischen Herstellers in Europa. *„Als Green Division treten wir als Distributor auf"*, so Noris Ciccardi.

Die Behandlungsanlagen wurden vor rund zwei Jahrzehnten entwickelt und arbeiten mithilfe eines patentierten Trocknungsverfahrens. Bei dem bewährten Prozess werden die organischen Abfälle durch eine Temperatur von über 150°C so zersetzt, sterilisiert und umgewandelt, dass das Anfangsgewicht innerhalb weniger Stunden um 80 % und das Eintragsvolumen um 90 % reduziert werden. Die Trocknungsanlagen eignen sich für alle organischen Abfälle, wie zum Beispiel Obst, Gemüse, Teigwaren, Brot, Kartoffeln, sowie Fisch, Fleisch und kleinere Knochen, die etwa in Lebensmittel- und Cateringbetrieben, Krankenanstalten, Einkaufszentren etc. anfallen. Nach der Behandlung liegt das Endprodukt in einer sicheren und stabilen Form vor. Dieses kann als Granulat entweder zur Bodenverbesserung bei der Düngemittelproduktion, in Form von Pellets für die Energieerzeugung, als ökologischer und regenerierter Brennstoff in der Zementindustrie oder zur Herstellung von Tiernahrung eingesetzt werden. *„Je nach Feuchtigkeitsgehalt dauert der Trocknungsprozess bis zu acht Stunden"*, erklärt Noris Ciccardi. *„Die Müllkomprimierungsanlagen bieten wir für die verschiedenen Anwendungsbereiche in unterschiedlichen Größenklassen von 30 kilogramm bis 60 Tonnen an."* Für Kleinkunden, wie u. a. Restaurants, Kantinen, Wohnanlagen oder kommunale Einrichtungen, eignen sich die kleineren

Die Trocknungsanlage MWS-1200CD kann ein Volumen von rund 1,2 Tonnen feuchter Abfälle pro Tag deutlich reduzieren

Anzeige

Behandlungsanlagen mit einem Durchsatz von 30 bis 100 Kilogramm pro Tag. Auch organische Abfallmengen von 200 Kilogramm bis zu 60 Tonnen pro Tag, wie sie z. B. in Hotels, bei einem Lebensmittelproduzenten, an Flughäfen oder in Heimen anfallen, können behandelt werden.

„Die eingesetzte Technologie ist schon seit Jahren bewährt und benötigt keine Enzymzusätze. Die Maschinen beanspruchen nur wenig Platz, sind einfach in der Installation und im Gebrauch und jeweils mit zwei Filtern ausgestattet, von denen der eine täglich und der andere nur wöchentlich gewechselt werden muss", berichtet Noris Ciccardi. *„Unsere Anlagen reduzieren nicht nur die Gerüche und das Volumen von Speiseresten sowie anderen organischen Abfällen, sondern auch alle sonst anfallenden Handhabungs-, Lager- und Entsorgungskosten."* Aufgrund dieser Vorteile amortisieren sich die Investitionen für die Kunden in der Regel schon nach weniger als zwei Jahren.

„Interessenten demonstrieren wir die Funktionsweise der Maschinen auf Fachmessen wie der HOGA in Nürnberg", fügt Noris Ciccardi hinzu. MARES Marketing Srl gehört heute genauso wie die Schweizer Niederlassung in Chiasso und die Filiale in Hongkong zur MARES Group Ltd mit Sitz in London, die unter der Leitung von Firmengründer und Geschäftsführer Frans Jamry achtzehn Mitarbeiter beschäftigt.

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Mr. Jamry's Interview with Magazine Wirtshaft Heute (April 2013 Issue)

Exhibition in Switzerland – SUISSE PUBLIC fair 2013

SUISSE PUBLIC
Schweizer Fachmesse für öffentliche Betriebe + Verwaltungen
Exposition suisse pour les collectivités publiques

Bern, 18.–21.6.2013

TECHNICAL INFORMATION, CERTIFICATIONS AND AFTER SALES SERVICE

BASIS F·R BETTER BUSINESS

MARES Green Division

Technical specifications

	MWS-20	MWS-30	MWS-50	MWS-100	MWS-150
	10 kg./cycle	15 kg./cycle	25 kg./cycle	50 kg./cycle	75 kg./cycle
Optional:					
Stainless steel outfit or customer RAL color painting	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST
Monophase power (1)	YES	YES	NO	NO	NO
Gas power (instead of electricity)	NO	NO	NO	UPON REQUEST	UPON REQUEST
Animal Fat collection drain system (oil for bio-diesel) - See box 1	NO	NO	NO	NO	NO
Bins lift - See box 2	NO	NO	NO	NO	NO
Pay-per use organic waste system (condominium) - See box 3	N/A	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL
TECHNICAL SPECIFICATIONS:					
Controls (mechanical - electronic)	electronic	electronic	electronic	electronic	electronic
Finishing	painted steel	painted steel	painted steel	painted steel	painted steel
Max. energy consumption (KWh/cycle) (2)		25	20	40	60
Energy consumption max. KWh/kg. (2)		0,8	0,8	0,8	0,8
Energy consumption max. m^3/kg. (2)		--	--	**0,10**	**0,10**
Cycle duration full load hours	4-5 hours	5-6 hours	6-8 hours	8-10 hours	8-10 hours
Max. capacity of waste per day (2 or more cycles/day) kg.	20	30	50	100	150
Final solid output (day/Kg.) (2)	3	4,5	7,5	15	22,5
Final liquid waste volume (litres)	16	24	40	80	120
output Water discharge to drain system	YES (recommended)	YES (recommended)	YES (recommended)	YES (recommended)	YES (recommended)
Vapour exhaust duct (if placed indoor)	NO - closed loop	NO - closed loop	NO - closed loop	NO - closed loop	NO - closed loop
Delay timer	No	No	No	No	No
Noise level (dBA)	tbc	65 dBa	65 dBa	65 dBA	65 Dba
Safety system	YES	YES	YES	YES	YES
Voltage/frequency (3)	230V/50 Hz	380V/50Hz	380V/50Hz	380V/50Hz	380V/50Hz
Power	2.3 kW	tbc	4.7 kW	6.7 kW	9.0 kW
Net dimensions (H x L x W cm)	90 x 65 x 65	94 x 105 x 75	121,3 x 105 x 75	129,1 x 140 x 95	139,6 x 160 x 100
Total height with opened loading door (cm)	112,7	123	130 (H)	155 (H)	160
Net weight (Kg)	180(e)	370	356	550	800
Type of Packaging	wood box packing	wood box packing	wood box packing	wood box packing	wood box packing
Gross dimensions included packaging (H x L x W cm)	110 x 75 x 75	114 x 115 x 85	141,3 x 115 x 85	150 x 150 x 105	159,6 x 170 x 110
Gross weight kg.	180	430(e)	424	664	950(e)
Loadability on pallet (units)	1	1	1	1	1
Gross dimensions including pallet	tbc	tbc	--	--	--
20 ft. Container loadability (units)	tbc	12 units/20ft	12 units/20ft	5 unis/20ft	5 unis/20ft
40 ft. Container loadability (units)	tbc	26 units/ 40ft	26 units/40ft	11 units/40ft	10 units/40ft
90 m^3 truck loadability (units)	tbc	1	--	--	--
Manufacturer warranty (years)	1	1	1	1	1

CE

The manufacturer reserves the right to modify the technical characteristics of the machines.

No need of a ventilation duct or specific building works as the leftover vapor is totally condensed with the inner closed circuit.

Upon request, machines can be supplied with GAS instead of electric power.

Housing can be supplied also in stainless steel (with extra cost to be quoted separately) or painted in any corporate colour.

BASIS F-R BETTER BUSINESS

MARES Green Division

Technical specifications

MARES CODE	MWS-200	MWS-300	MWS-300CD (pigs)	MWS-400	MWS-600
	100 kg./cycle	150 kg./cycle	150 kg./cycle	200 kg./cycle	300 kg./cycle
Optional:					
Stainless steel outfit or customer RAL color painting	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST
Gas power (instead of electricity)	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST
Animal Fat collection drain system (oil for bio-diesel) - See fig. 1	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL
Bins lift - See fig. 2	NO	NO	NO	Included within unit price	Included within unit price
Pay-per use organic waste system (condominium) - See fig. 3	OPTIONAL	OPTIONAL	N.A.	OPTIONAL	OPTIONAL
TECHNICAL SPECIFICATIONS:					
Controls (mechanical - electronic)	electronic	electronic	electronic	electronic	electronic
Finishing	painted steel	painted steel	painted steel	painted steel	painted steel
Max. energy consumption (KWh/cycle)	80	120	135	160	225
Energy consumption max. KWh/kg. - based on 85% of moisture content	0,8	0,8	0,9	0,8	0,75
Energy consumption max. m^3/kg. - based on 85% of moisture content	0,1		0,11	0,10	0,095
Cycle duration full load hours	8-10 hours	8-10 hours	8-10 hours	9-10 hours	9-10 hours
Max. capacity of waste per day (2 or more cycles/day) kg.	200	300	300	400	600
Final solid output (day/Kg.) - based on 85 of moisture content	30	45	45	60	90
Final liquid waste volume (litres)	160	240	240	320	480
output Water discharge to drain system	YES (recommended)	YES (recommended)	YES (recommended)	YES (recommended)	YES (recommended)
Vapour exhaust duct (if placed indoor)	NO - closed loop	NO - closed loop	YES	NO - closed loop	NO - closed loop
Delay timer	No	No	No	No	No
Noise level (dBA)	70 dBA	70dBA	70 dBA	70 dBa	70 dBa
Safety system	YES	YES	Yes	YES	YES
Voltage/frequency	380V/50Hz (**)	380V/50Hz (**)	380V/50Hz (**)	380V/50Hz (**)	380V/50Hz (**)
Power	24.7 kW	tbc	33 kW	34.4 kW	54.2 kW
Net dimensions (H x L x W cm)	156 x 170 x 120	166,2 x 182 x 120	169 × 160 × 210	167 x 210 x 150	180 x 260 x 170
Total height with opened loading door (cm)	184 (H)	tbc	211 (H)	245 (H)	288 (H)
Net weight (Kg)	1.250	1.250	2.800	2.500	2.000
Type of Packaging	wood box packing	wood box packing	wood box packing	wood box packing	wood box packing
Gross dimensions included packaging (H x L x W cm)	200 x 145 x 166	tbc	200 × 175 × 225	206 x 225 x 165	226 x 265 x 180
Gross weight	1.335	tbc	2.910	2.700	2.910
Loadability on pallet (units)	1	1	1	1	1
Gross dimensions including pallet	--	--	--	--	--
20 ft. Container loadability (units)	4 units/20ft	4 units/20ft	3 units / 20 ft	3 units/20ft	2 units/20ft
40 ft. Container loadability (units)	8 units/20ft	8 units/20ft	6 units / 40 ft	7 units/40ft	4 units/40ft
90 m^3 truck loadability (units)	--	--	--	--	--
Manufacturer warranty (years)	1	1	1	1	1
Certifications (Europe)	CE/TUV	CE/TUV	CE/TUV	CE/TUV	CE/TUV
Certifications (Worldwide)	upon request	upon request	upon request	upon request	upon request
Service / Installation manual	YES (English)	YES (English)	Yes (English)	YES (English)	YES (English)
Instruction booklet (users)	YES (English)	YES (English)	Yes (English)	YES (English)	YES (English)
Spare parts list	YES *	YES *	YES *	YES *	YES *
Spare parts price list	YES	YES	Yes	YES	YES
Exploded views	under patent	under patent	-	under patent	under patent
Wiring diagrams	YES	YES	Yes	YES	YES

BASIS F-R BETTER BUSINESS

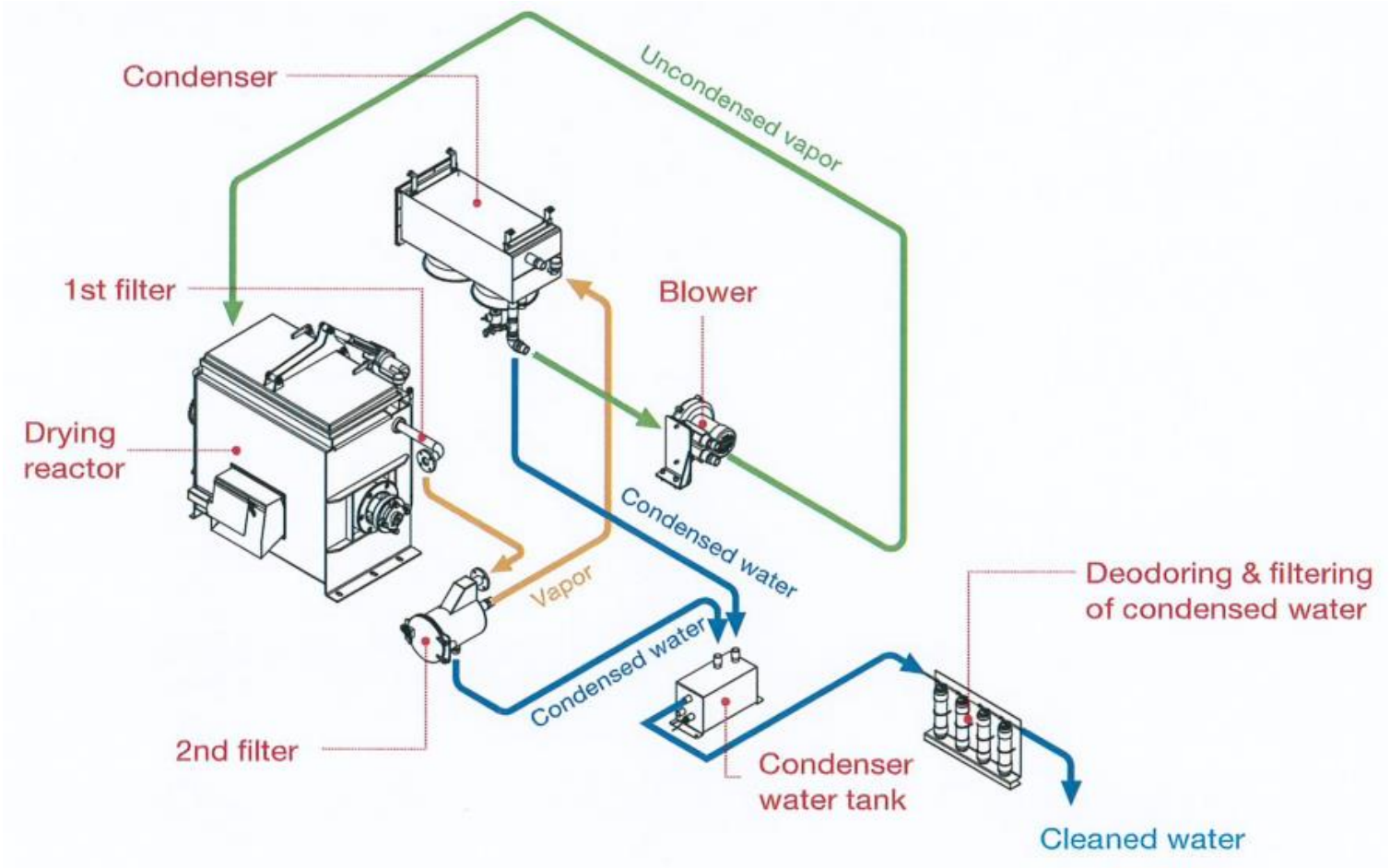
MARES Green Division

Technical specifications

MARES CODE	MWS-1000	MWS-1200	MWS-1200 CD	MWS-2000
	500 kg./cycle	600 kg./cycle	600 kg./cycle	1 ton/cycle
Optional:				
Stainless steel outfit or customer RAL color painting	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST
Gas power (instead of electricity)	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST
Animal Fat collection drain system (oil for bio-diesel) - See fig. 1	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL
Bins lift - See fig. 2	Included within unit price	Included within unit price	NO	Included within unit price
Pay-per use organic waste system (condominium) - See fig. 3	OPTIONAL	--	N.A.	--
TECHNICAL SPECIFICATIONS:				
Controls (mechanical - electronic)	electronic	electronic	electronic	electronic/steam boiler
Finishing	painted steel	painted steel	painted steel	painted steel
Max. energy consumption (KWh/cycle)	375	450	tbc	750
Energy consumption max. KWh/kg. - based on 85% of moisture content	0,75	0,75	tbc	0,75
Energy consumption max. m^3/kg. - based on 85% of moisture content		0,10	tbc	0,095
Cycle duration full load hours	10-12 hours	11-12 hours	tbc	11-12 hours
Max. capacity of waste per day (2 or more cycles/day) kg.	1000	1.200	1.200	2.000
Final solid output (day/Kg.) - based on 85 of moisture content	150	180	180	300
Final liquid waste volume (litres)	800	960	960	1600
output Water discharge to drain system	YES (recommended)	YES (recommended)	YES (recommended)	YES (recommended)
Vapour exhaust duct (if placed indoor)	NO - closed loop	NO - closed loop	YES	NO - closed loop
Delay timer	No	No	No	No
Noise level (dBA)	tbc	67 dBa	67dBA	70 dBa
Safety system	YES	YES	YES	YES
Voltage/frequency	380V/50Hz (**)	380V/50Hz (**)	380V/50Hz (**)	380V/50Hz (**)
Power	tbc	82.5 kW		128.3 kW
Net dimensions (H x L x W cm)	200 x 300 x 175	204 x 330 x 185	tbc	230 x 420 x 210
Total height with opened loading door (cm)	tbc	282 (H)	tbc	318 (H)
Net weight (Kg)	3.200	3.500	tbc	5.500
Type of Packaging	wood box packing	wood box packing	wood box packing	wood box packing
Gross dimensions included packaging (H x L x W cm)	tbc	225 x 344 x 199	tbc	350 x 368 x 258
Gross weight	tbc	3.620	tbc	5.700
Loadability on pallet (units)	1	1	1	1
Gross dimensions including pallet	--	--	--	--
20 ft. Container loadability (units)	0 unit/20ft	1 unit/20ft	Not available	Not available
40 ft. Container loadability (units)	2 units/40ft	3 units/40ft	Not available	Not available
90 m^3 truck loadability (units)	--	--	--	--
Manufacturer warranty (years)	1	1	2	1
Certifications (Europe)	CE/TUV	CE/TUV	CE/TUV	CE/TUV
Certifications (Worldwide)	upon request	upon request	upon request	upon request
Service / Installation manual	YES (English)	YES (English)	YES (English)	YES (English)
Instruction booklet (users)	YES (English)	YES (English)	YES (English)	YES (English)
Spare parts list	YES *	YES *	YES *	YES *
Spare parts price list	YES	YES	YES	YES
Exploded views	under patent	under patent	under patent	under patent
Wiring diagrams	YES	YES	YES	YES

Technical specifications

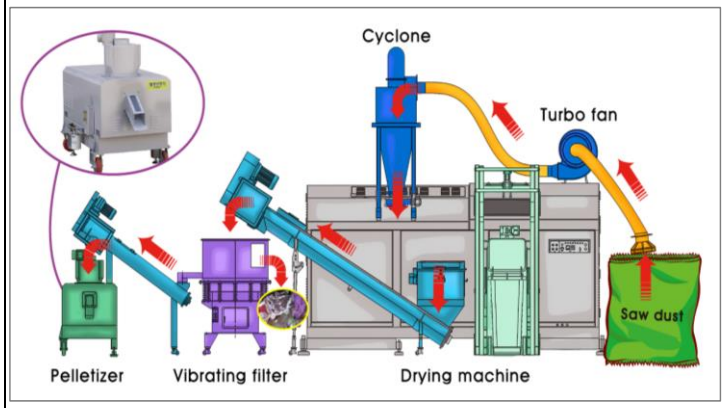
Flow Dryers's Diagram

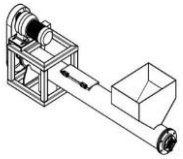


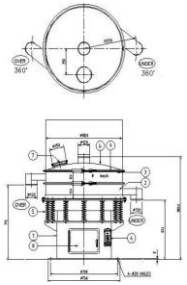
BASIS F-R BETTER BUSINESS

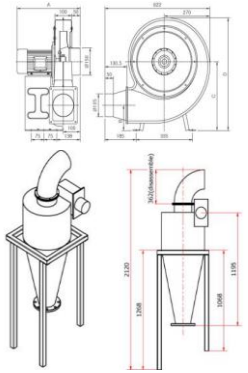
MARES Green Division

Technical specifications



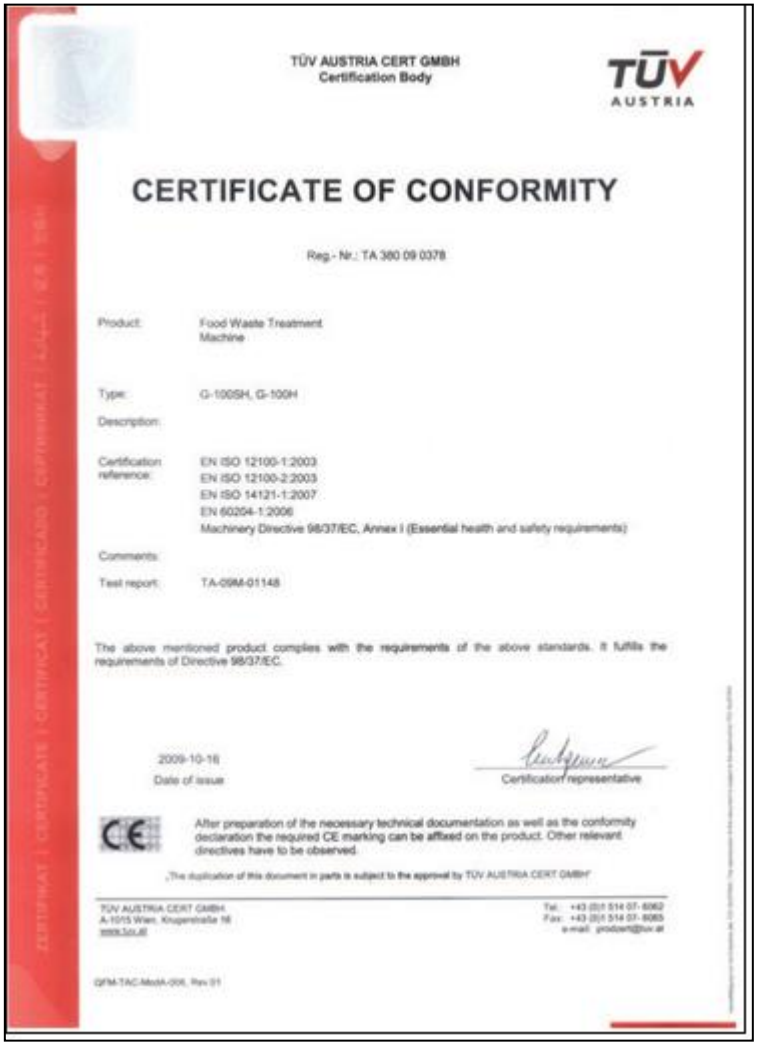






TECHNICAL SPECIFICATIONS:	PELLETIZER	SCREW CONVEYER	VIBRATING FILTER	SAW DUST FEEDING SYSTEM	
				turbo fan	cyclone
Capacity	200/300 kg./hrs.	50 kg./min	--	--	--
Drive Motor power	15kW	0,4 kW	0,75 kW x 4 pole	1 kW	--
Decelerator	1/15	1/20	--	--	--
Voltage/frequency	220/380V - 50Hz		220/380V - 3 ø - 50Hz	220/380V - 50Hz	
Noise level (dBA)					
Screen	--	--	Mesh (open) 4 mm	--	--
Air pressure	--	--	--	160 mm Aq	--
Air volume	--	--	--	28CMM	--
Damper with sensor	--	--	--	--	150A, on/off
Safety system					
Net dimensions (H x D x W cm)	119,3 x 68 x 14,3	58,2 x 40,4 x 170	100 x 80 x 120	62,5 x 62,2 x 39,4	182 x 66 x 60
Net weight (Kg)	300 kg.	110 kg.	250 kg.	31 kg.	160 kg.

Certificated products



TÜV AUSTRIA CERT GMBH
Certification Body

TÜV AUSTRIA

CERTIFICATE OF CONFORMITY

Reg.- Nr.: TA 380 09 0378

Product:	Food Waste Treatment Machine
Type:	G-100SH, G-100H
Description:	
Certification reference:	EN ISO 12100-1:2003 EN ISO 12100-2:2003 EN ISO 14121-1:2007 EN 60204-1:2006 Machinery Directive 98/37/EC, Annex I (Essential health and safety requirements)
Comments:	
Test report:	TA-09M-01148

The above mentioned product complies with the requirements of the above standards. It fulfills the requirements of Directive 98/37/EC.

2009-10-16
Date of issue

Certification representative

CE

After preparation of the necessary technical documentation as well as the conformity declaration the required CE marking can be affixed on the product. Other relevant directives have to be observed.

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QFM-TAC-MedA-006, Rev.01

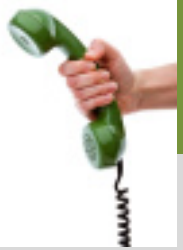
After Sales Service and maintenance

In Europe, installation, training after sales service and maintenance can be guaranteed by an efficient service managed by qualified companies within Mares network, or is managed by the distributor itself:

SWITZERLAND
Sertronics AG
Fegistrasse 5 - Postfach 989
8957 Spreitenbach/AG
Contact prson: Mr. Hug

ITALY
Unior S.r.l.
Via Collodi, 4/g
I – 40012 Calderara di Reno (BO)

GERMANY
Service Point International GmbH
Thunbuschstrasse, 8
DE - 42781 Haan



After Sales Service and maintenance

After sales service can be provided by Mares Partners or, if possible, directly by the local distributor.

- Product's Warranty : 1 year warranty and 5 years on the inner tank.
- On-site installation and personnel's training
- User manual, installation and service manuals available.
- CE Certifications applied
- Dedicated help desk and 24/48h On-site intervention
- Regular maintenance plan during the year (2/3 times)
- Possibility to extend the warranty period from the 2nd to 5th year (cost approx. 10% of purchase price per year)
- Possibility to sign separate insurance contract covering damages deriving by the misuse of the involved personnel

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