## OMPECO



## CONVERTER® NV TREATING WASTE DIRECTLY ON BOARD







## APPLICATIONS

\_PRIVATE YACHTS \_OFFSHORE PLATFORMS \_MERCHANT VESSELS \_CRUISE SHIPS \_TANKERS \_FERRY BOATS



Transform unsorted waste into a dry, stable product.



## **WASTE** CHARACTERISTICS

INFECTED WASTE 100 kg/m <sup>3</sup>	MUNICIPAL WASTE 300 kg/m³ ↓	ORGANIC WASTE 500 kg/m³ ↓		
				DENSITY
100 kg/m³				500 kg/m³
INFECTED WASTE humidity		MUNICIPAL WASTE humidity ↓	ORGANIC WASTE humidity ↓	
				HUMIDITY
20%				70%







Flame free! SAFETY

SAFETY

The system does not work under pressure!



2.

3.

## EVAPORATION Boiling

**HIGH TEMPERATURE MOIST HEAT** 

### THE PROCESS

#### **SEVEN STEPS 30 MINUTES ONLY**





Converter<sup>®</sup> equipment is

of weight.

authorized to treat waste through

physical modification, reduction of

volume, dehydration and reduction

1.

#### WASTE LOADING

The waste is loaded inside the chamber by hand in plastic bags and the lid is closed.



2.

#### CRUSHING

The rotor starts and accelerates gradually, as the material is finely ground and the temperature rises quickly to about 100 °C.

100°C



3.

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100°C.

**EVAPORATION** 

100°C

The heat generated by friction in

of the waste moisture and the

the material causes the evaporation

temperature remains firm at around



#### STERILIZATION OR PASTEURIZATION

The temperature of the material is held firm at 151°C for 3 minutes, under moist heat conditions through controlled water dosage.



6.

#### **COOLING DOWN**

The waste is sprinkled with water in order to lower the temperature of the material to about 100°C. A vacuum pump then lowers the temperature further down to 60°C adiabatically.

#### SUPERHEATING

4.

Once all the moisture has been eliminated, the frictional heat causes the temperature of the material to increase to 151°C.

100>60°C

151°C



7.

#### UNLOADING IN VACUUM BAG

The treated material is unloaded by centrifugal force through the opening of a servo-operated valve positioned at the bottom of the treatment chamber.



## THE RESULT

#### WASTE BIN IS AN IDEAL BACTERIAL CULTURE

Microorganism proliferation and spreading is the common problem connected to the management of the waste because it directly affect the human health.

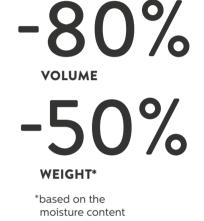
1 bacteria today  $\rightarrow$  5x10<sup>86</sup> in 4 days



At the end of the treatment with the converter NV the final product is a completely unrecognizable, odorless and sterile flock or "fluff". The weight is reduced by 50%, and the volume by 80%. If vacuum packed the volume is reduced further and the brickets can be stored for long periods, with no odour, dust or need to refrigerate.

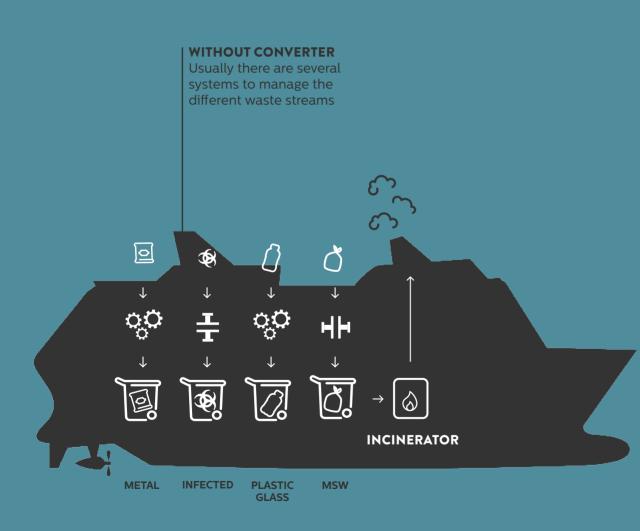
#### WASTE MATERIAL

includes several hazardous substances which can be eliminated only through thermal processes.

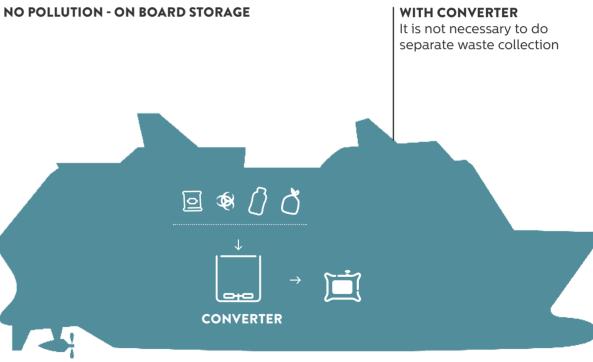


VIRUSES Bacteria INSECTS





## EASY WASTE MANAGEMENT



## **UNRECOGNIZABLE** ODORLESS AND PASTEURIZED





↓ FLUFF

**AUTOMATIC VACUUM** 

RDF 3.5 ÷ 4.5 MWh/t\* \* nominal value









E NO REFRIGERATION

NO ODORS NO LEACHATE

NO WASTE MANAGEMENT

NO WASTE STORAGE EASY FLOCK LESS SPACE REQUIRED

Converter<sup>®</sup> NV 200 Converter<sup>®</sup> NV 100 Converter<sup>®</sup> NV 60 Converter<sup>®</sup> NV 30 Converter<sup>®</sup> NV 10

## CONVERTER® NV200





#### ↓ TECHNICAL DETAILS

#### 400 liters waste

organic

municipal

→ 60 to 80 kg/h
→ 100 to 150 kg/h

#### Specification

op comon como	
treatment chamber volume [lt]	400
machine dry weight [Kg]	2200
machine footprint [mm - h]	2300x1500-1800
electric cabinet weight [Kg]	450
electric cabinet footprint [mm]	1000x660x2000
total installed power [KW]	100
nominal motor power [KW]	85
nominal current [A]	120
peack current [A]	150
electrical consumption [KW/Kg]	0,4-0,6

## CONVERTER® NV100





#### **TECHNICAL DETAILS**

#### 200 liters waste

organic  $\rightarrow$ municipal

30 to 40 kg/h 40 to 80 kg/h  $\rightarrow$ 

#### Specification

treatment chamber volume [lt]	200
machine dry weight [Kg]	1500
machine footprint [mm - h]	1950x1200-1400
electric cabinet weight [Kg]	450
electric cabinet footprint [mm]	1000x660x2000
total installed power [KW]	65
nominal motor power [KW]	60
nominal current [A]	95
peack current [A]	120
electrical consumption [KW/Kg]	0,4 - 0,6

## ONVERTER(R)**NV60**





#### **TECHNICAL DETAILS**

peack current [A]

electrical consumption [KW/Kg]

#### 100 liters waste

organic municipal  $\rightarrow$  20 to 40 kg/h

#### → 15 to 20 kg/h

Specification treatment chamber volume [lt] machine dry weight [Kg] machine footprint [mm - h] electric cabinet weight [Kg] electric cabinet footprint [mm] total installed power [KW] nominal motor power [KW] nominal current [A]

100 1100 1500x1100-1400 450 1000x660x2000 55 50 70 80 0,4 - 0,6

## CONVERTER (R)NV30\_NV10





50

10

#### **TECHNICAL DETAILS**

#### NV30

Specification treatment chamber volume [lt] machine dry weight [Kg] 250 machine footprint [mm - h] 700x700-1100 total installed power [Kw] waste [Kg/h] 8-12

#### **NV10** Specification

[t] 25
110
700x600-900
2,8
4-6



NO POLLUTANT EMISSIONS Liquids present in the waste are separated and condensed



SAFE STOCK No dust No odor No fermentation





NO WASTE SEGREGATION Time saving



NO WATER CONSUMPTION Can be reduced down to zero





**EASY TO USE** No special license is needed to operate



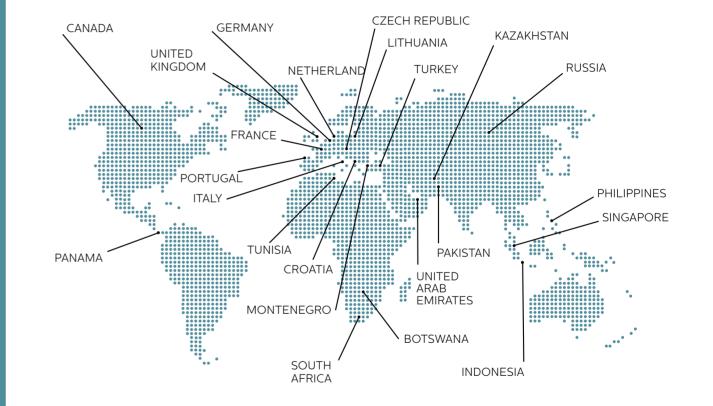
LOW ENERGY CONSUMPTION

# ECOFRIENDLY

## CONVERTER® INTHE WORLD

#### **25 COUNTRIES**

- Our brokers are present worldwide;
- Several local distributors operate
- exclusively in their territories;
- Among our clients there are the 5 most
- important NATO Navies and manufactures
- of large luxury Yachts.





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