



**OMPECO**



THE GOAL:  
0%  
WASTE

**CERTIFICATIONS**  
+ ISO 9001-ISO 14001  
NATO AH649  
RINA

# CONVERTER<sup>®</sup> MOB

MOBILE UNIT:  
TREATING WASTE  
DIRECTLY ON SITE

**OMPECO**



OMPECO

# APPLICATIONS

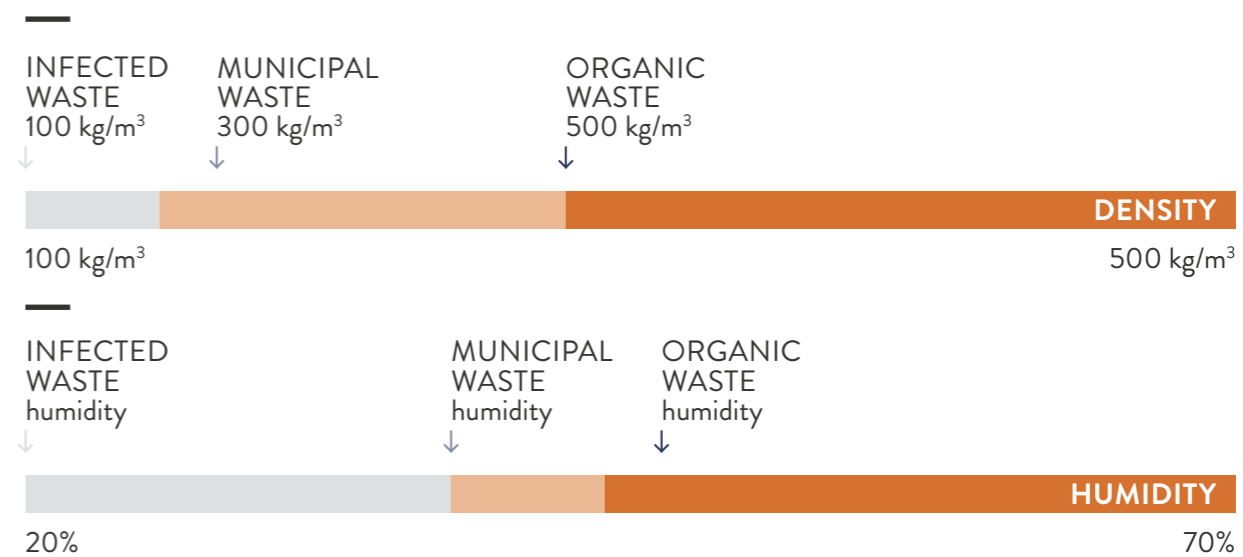
- \_MILITARY BASES
- \_HUMANITARIAN CAMPS
- \_HOSPITAL CAMPS
- \_RESORTS
- \_CONSTRUCTION SITES
- \_OFFSHORE
- \_ONSHORE
- \_MARKETS
- \_PORTS
- \_CUSTOMS



Transform  
unsorted waste  
into a dry,  
stable product.



# WASTE CHARACTERISTICS



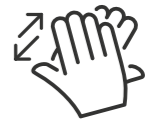
# HOW IT WORKS WORKING PRINCIPLES

+ SAFETY  
Flame free!

+ SAFETY  
The system does  
not work under pressure!

1.

WARM-UP  
FRICTION



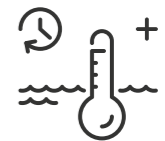
2.

EVAPORATION  
BOILING



3.

HEATING  
HIGH TEMPERATURE MOIST HEAT



# THE PROCESS

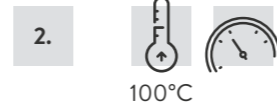
## SEVEN STEPS

Converter® equipment is finalized to treat waste with physical modification, reduction of volume, dehydration and reduction of weight.



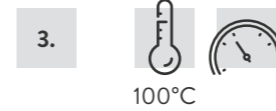
### WASTE LOADING

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



### CRUSHING

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



### EVAPORATION

The heat generated by friction in the material causes the evaporation of the waste moisture and the temperature remains firm at around 100°C.



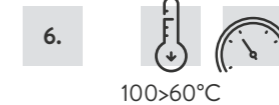
### SUPERHEATING

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



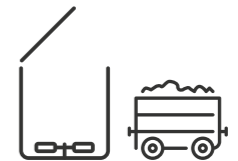
### STERILIZATION OR PASTORIZATION

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



### 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.



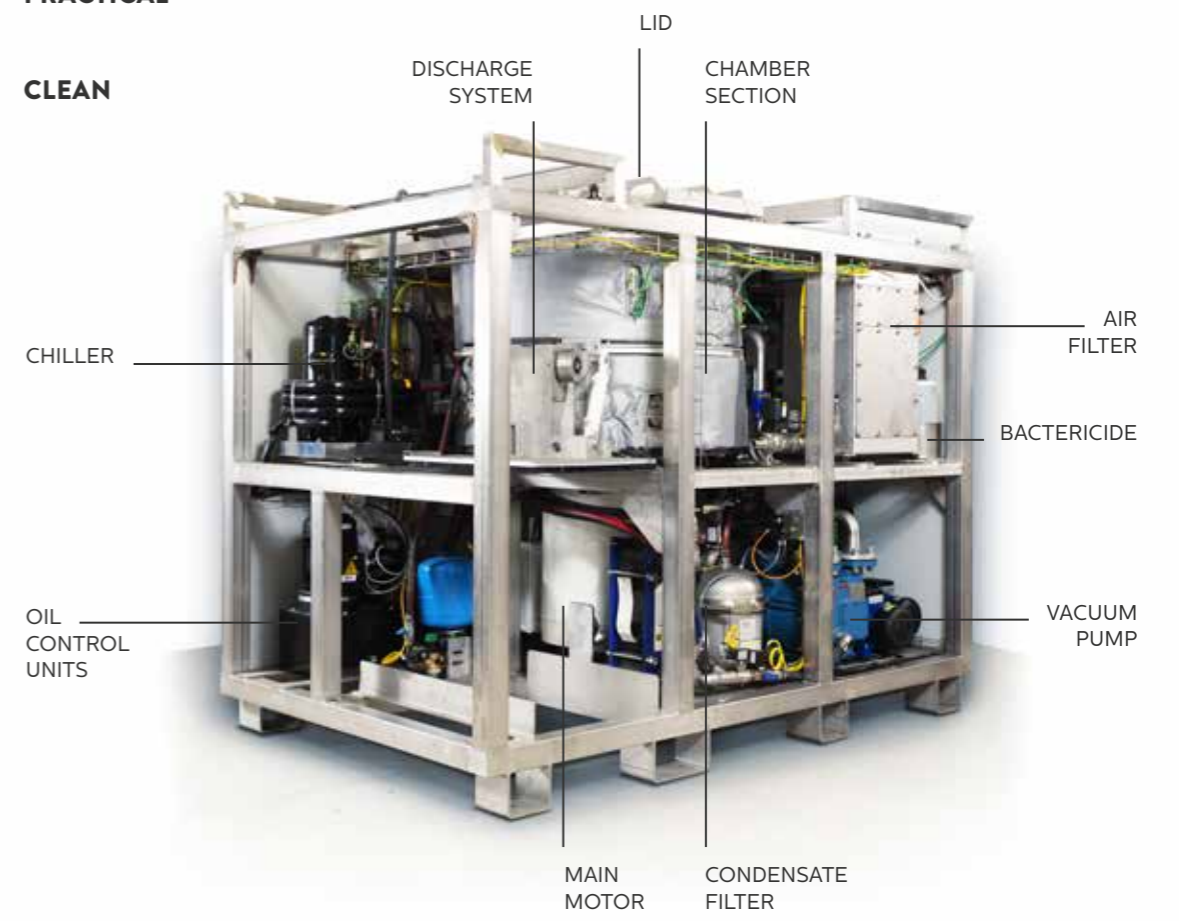
### UNLOADING

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



# TECHNOLOGY

- + COSTS SAVING
- + SAFE
- + PRACTICAL
- + CLEAN





# THE RESULT LIGHT AND DRY

## WASTE BIN IS AN IDEAL BACTERIAL CULTURE

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

1 bacteria today →  $5 \times 10^{86}$  in 4 days

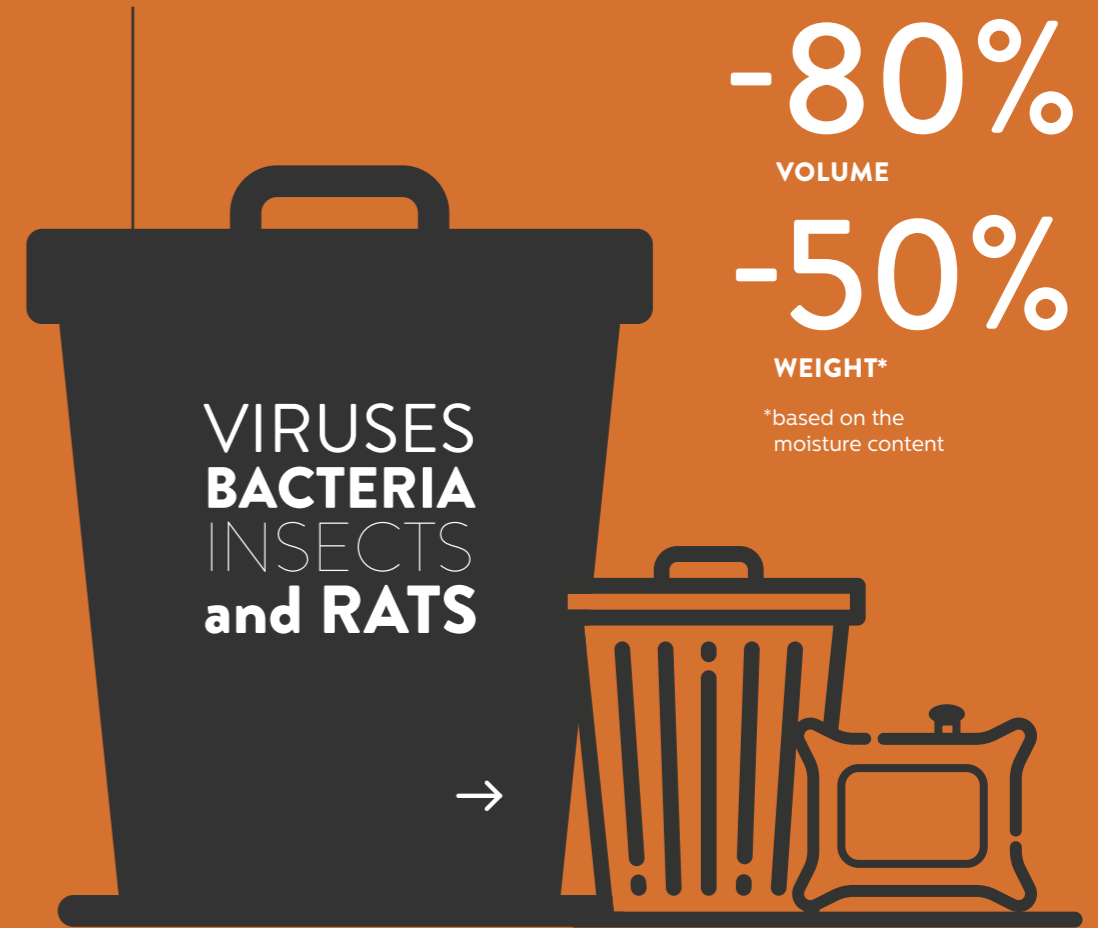


At the end of the treatment with the Converter® NV the final product, generally considered a “fluff”, is completely **unrecognizable, odorless and completely sterile.**

The weight is reduced by 50%, and the volume by 80% by the Vacuum pack. The vacuumed brickets can be stored for long periods, without smell, dust and the need to refrigerate.

## WASTE MATERIAL

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



-80%

VOLUME

-50%

WEIGHT\*

\*based on the moisture content

# FLUFF USE REFUSE DERIVED FUEL

- + **RDF**  
3.5 ÷ 4.5 MWh/t\*
- + **EUROPEAN  
WASTE CODE:**  
19.12.10

\* nominal value



↓  
**FLUFF**



**RDF**

3.5 ÷ 4.5 MWh/t\*

\* nominal value



**OIL**



**INCINIRATOR**



**POWER PLANT**



**CEMENT PLANT**

# ADVANTAGES OF THE MOBILE UNIT



**MOBILE**  
It can be moved  
with a truck



**MODULAR**  
Different options  
for specific needs



**FAST  
POWER ON**



**STAND ALONE USE**  
It can work without water  
or electric connections



**SELF CONTAINED**  
No building works  
required

# STANDARD EQUIPEMENTS



250 kW Diesel generator, stabilized for excellent voltage response, electric starter kit



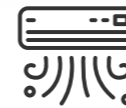
Special independent cooling system including ventilation system



Specially designed Water Recycle System cooling system including heavy duty dry cooler



**OPTIONS:**  
NATO Mimetic pattern painting



Container Air conditioning and Heating System (electric)



Condensate management system with storage tank and discharge pump



Soundproof protection of involved units, auxiliary components and container itself



Pressurized system for process water



Thermal protection of the container to ensure functioning at -10°C of external temperature



Electric control board of Container and auxiliary components with PLC and 5,7' color touch screen

# CONVERTER<sup>®</sup> MOB20



↓  
**TECHNICAL DETAILS**

**200 liters waste**

organic → 30 a 40 kg/h  
municipal → 40 a 80 kg/h

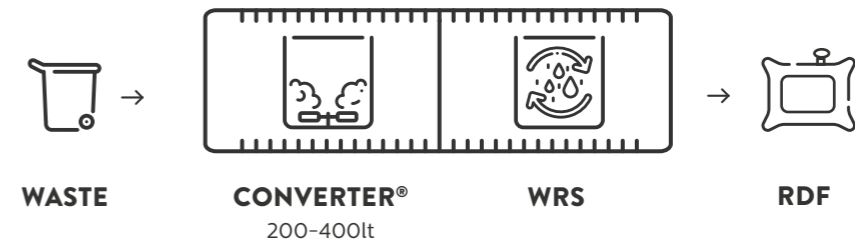
**400 liters waste**

organic → 60 a 80 kg/h  
municipal → 100 a 150 kg/h

NOTE  
treatment capacities calculated  
assuming:  
• a density of 180kg/m<sup>3</sup> and 50%  
of humidity for Urban Waste  
• a density of 100kg/m<sup>3</sup> and 30%  
of humidity for Medical Waste

**Converter<sup>®</sup> 200 or 400 liters in container**  
1 Converter<sup>®</sup> 200 or 400 liters  
1 radiator-type cooling unit  
3 water tank  
1 electric control board  
Internal lighting system

→



# CONVERTER<sup>®</sup> MOB40



↓  
**TECHNICAL DETAILS**

### 400 liters waste

organic → 60 a 80 kg/h  
municipal → 100 a 150 kg/h

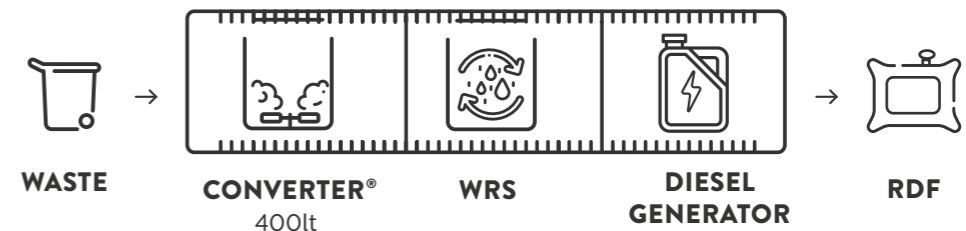
NOTE  
treatment capacities calculated  
assuming:  
• a density of 180kg/m<sup>3</sup> and 50%  
of humidity for Urban Waste  
• a density of 100kg/m<sup>3</sup> and 30%  
of humidity for Medical Waste

### Converter<sup>®</sup> 400 liters in container

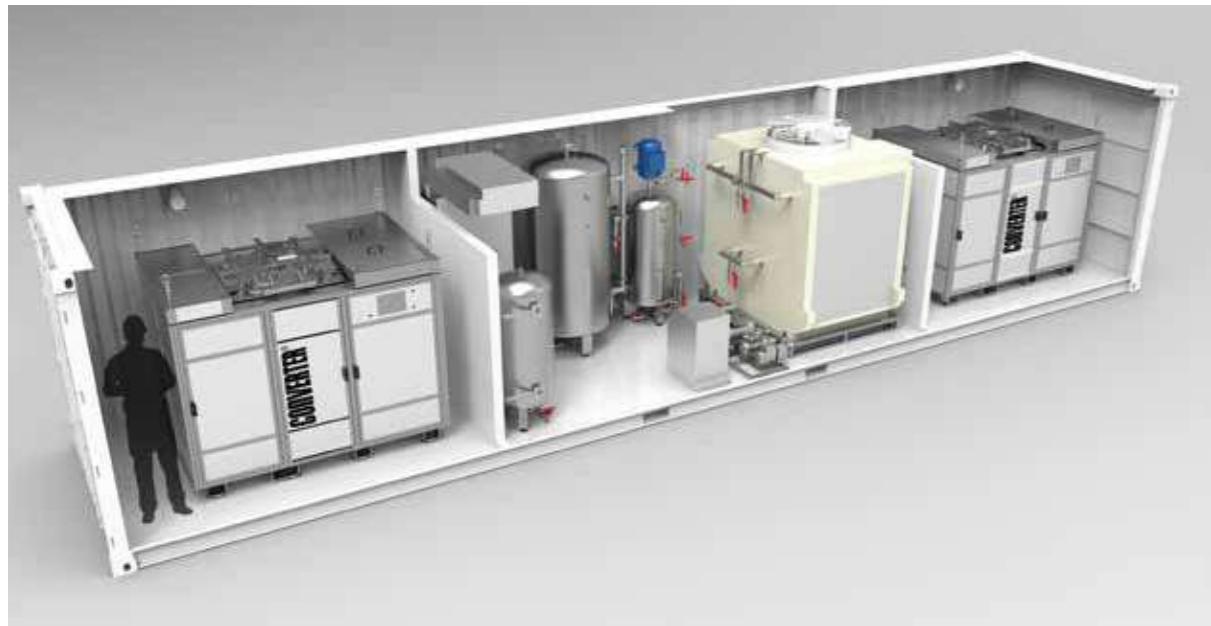
1 Converter<sup>®</sup> 400 liters  
1 radiator-type cooling unit  
3 water tank  
1 diesel generator - autonomy 8h  
1 electric control board  
Internal lighting system



→



# CONVERTER<sup>®</sup> MOB40 PLUS



↓  
**TECHNICAL DETAILS**

**400 liters waste**

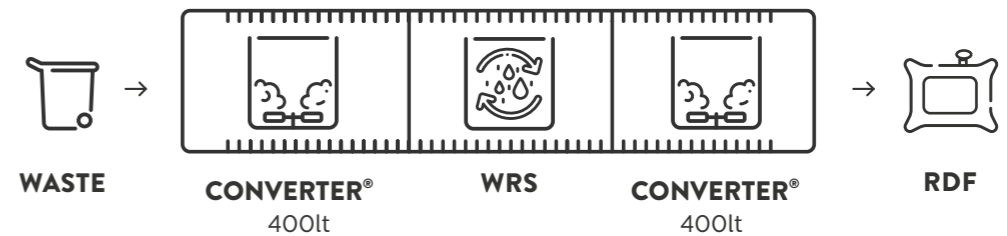
organic → 60 a 80 kg/h  
municipal → 100 a 150 kg/h

**2 Converters<sup>®</sup> 400 liters in container**

2 Converter<sup>®</sup> 400 liters  
1 radiator-type cooling unit  
3 water tank  
1 electric control board  
Internal lighting system

NOTE  
treatment capacities calculated  
assuming:  
• a density of 180kg/m<sup>3</sup> and 50%  
of humidity for Urban Waste  
• a density of 100kg/m<sup>3</sup> and 30%  
of humidity for Medical Waste

→





**CONVERTER**

[WWW.OMPECO.COM](http://WWW.OMPECO.COM)





# A RANGE SUITABLE FOR



**MUNICIPAL  
WASTE**



**HOSPITAL  
WASTE**



**MALLS  
MARKET PLACES  
INDUSTRIES**



**AIRPORTS  
CUSTOMS  
PORTS**



**LARGE BUILDINGS  
VILLAGES  
ISLANDS**



**HOTELS  
RESORTS  
GOLF COURSES**



**MILITARY BASES  
HUMANITARIAN CAMPS  
HOSPITAL CAMPS**

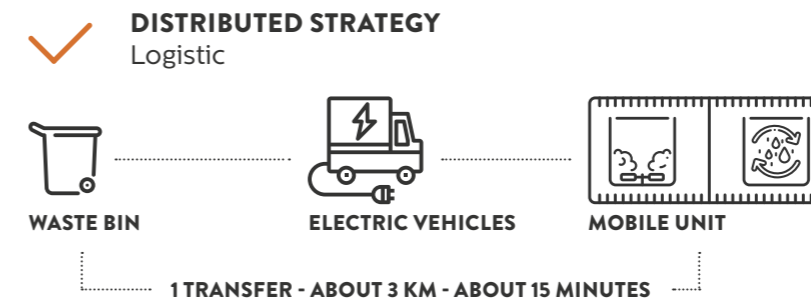
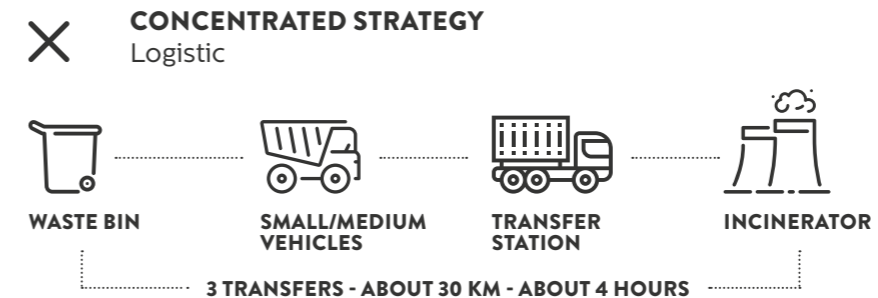


**AIRPORTS  
CUSTOMS  
PORTS**

# A DISTRIBUTED STRATEGY TO AVOID LOGISTIC PROBLEMS

The system philosophy is based on distributed small plant concept in which the refuse is treated close to the production area, to avoid:

- HEALTH HAZARD
- BAD SMELL
- POLLUTION
- TRANSPORTATION COSTS





**NO POLLUTANT EMISSIONS**

Liquids present in the waste are separated and condensed



**NO WATER CONSUMPTION**

Can be reduced down to zero



**NO WASTE SEGREGATION**

Time saving



**SAFE STOCK**

No dust  
No odor  
No fermentation



**EASY TO USE**

No special license is needed to operate



**VOLUME REDUCTION**

Up to 80%



**REFRIGERATION ROOM NOT REQUIRED**



**FAST CYCLE**

Converter® technology cycle lasts less than 30 minutes



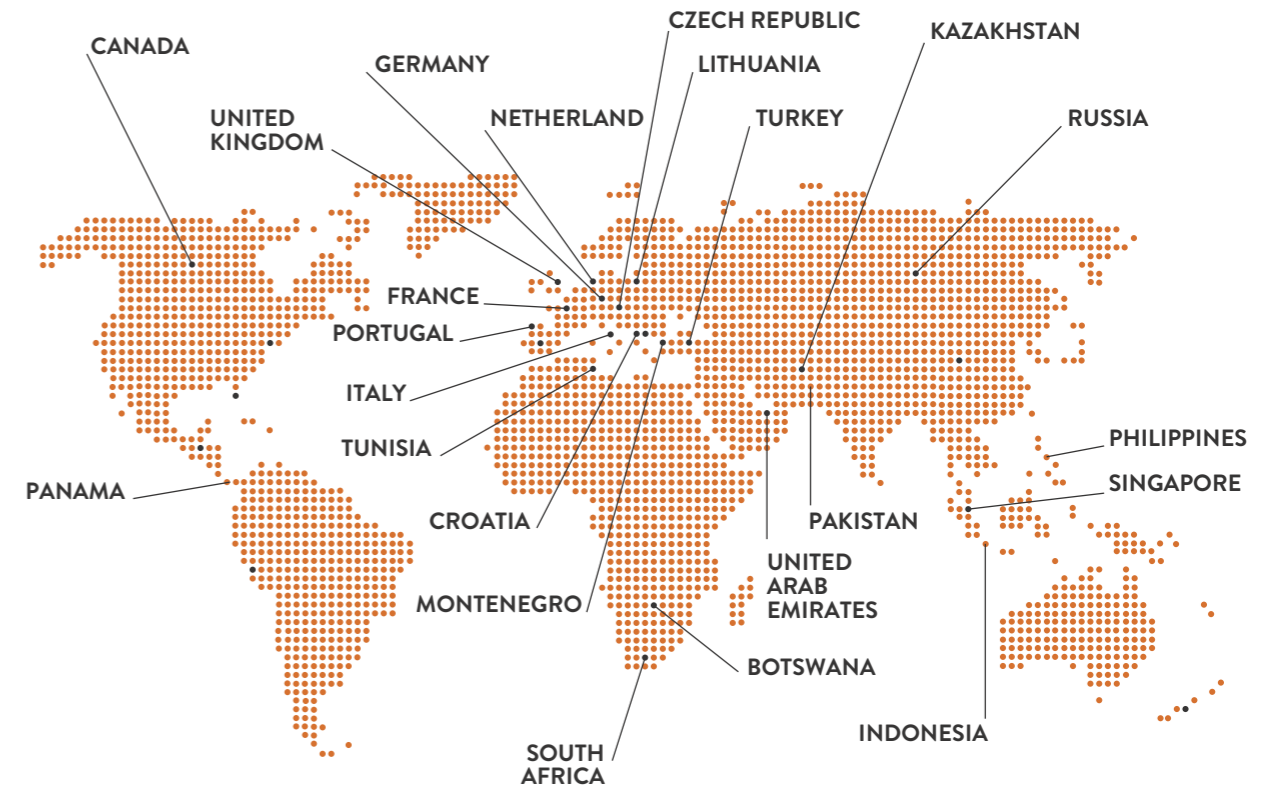
**ENERGY INDEPENDENT**

ECOFRIENDLY  
SUSTAINABLE  
ECONOMIC

# CONVERTER<sup>®</sup> IN THE 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.





**OMPECO** s.r.l.  
Via Cavaliere del Lavoro, 16  
10024 Moncalieri  
Torino, Italy  
T. +39 011 02.40.108  
[www.ompeco.com](http://www.ompeco.com)  
[info@ompeco.com](mailto:info@ompeco.com)

Legal headquarters  
and billing address:  
Corso Laghi 11  
10051 Avigliana - Torino, Italy  
Reg. Imp. RI/PRA/2014/46068/800  
R.E.A. di Torino 1188899  
VAT n° IT11118350013

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