Made in Italy
Technology

i-ONE®

it is **an international patent technology to process waste** which allows, through a molecular disintegration process, to obtain the elementary components of a particular matter.

i-ONE is a technology to do business from waste.

Synthetic oil (diesel)

Gas

Active coal

Metals

The approach of i-ONE to the market

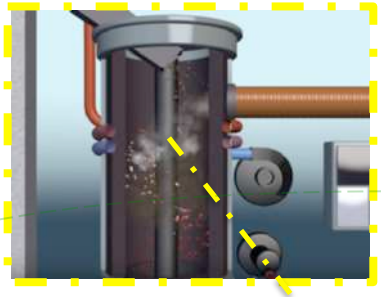
Very few machines guarantee the correct balance between theoretical research and real production data.

The chemical reactions, which take place within the waste transformation processes, require a perfect control of the thermal factors and ionization of the atom that allow our customer a constant industrial profitability.

The long experience in the sector allows us to create efficient machines that guarantee the production of derivatives from waste, constant, profitable and, fundamental objective, in compliance with international anti-pollution regulations.

This is **i-ONE**'s answer to strategic waste management.

In a conventional pyrolysis system

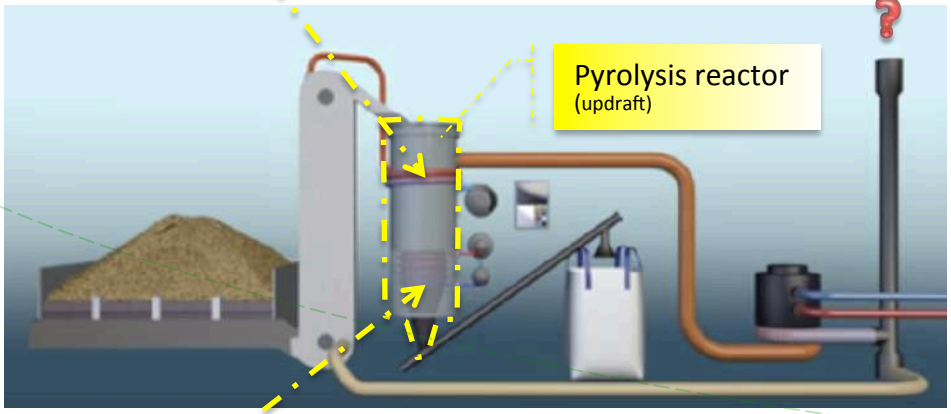


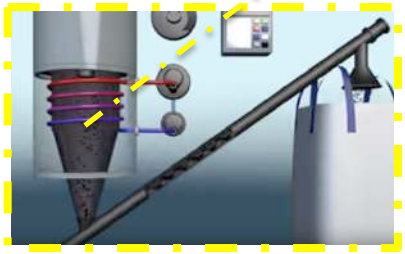
Gas

?

Pollutions

?





Carbon

all reactions take place within a **single reactor**, for this reason **there is not a good control of the reaction temperature** and this causes:

1. Low quality of the output products (gas and coal)
2. Production of dangerous pollutants in the atmosphere
3. Low production yield

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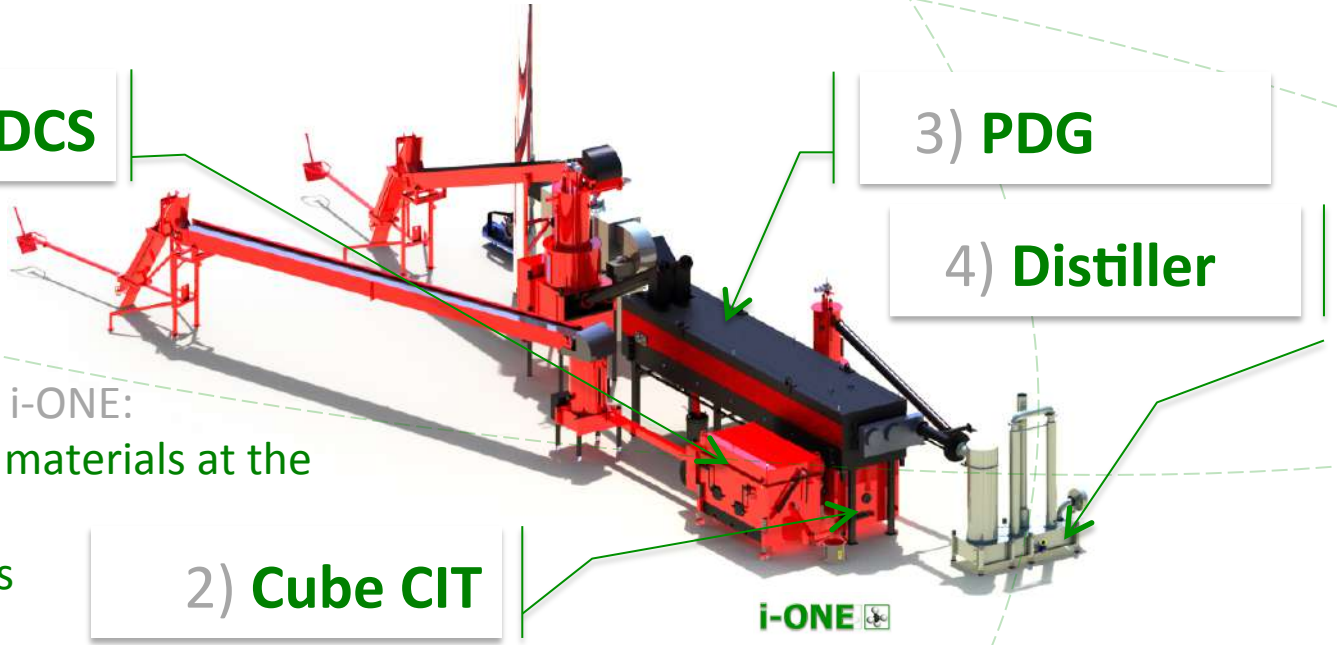
It is the synergistic union of four machines



The great advantages of i-ONE:

1. High quality of raw materials at the output
2. Low operating costs
3. It does not pollute

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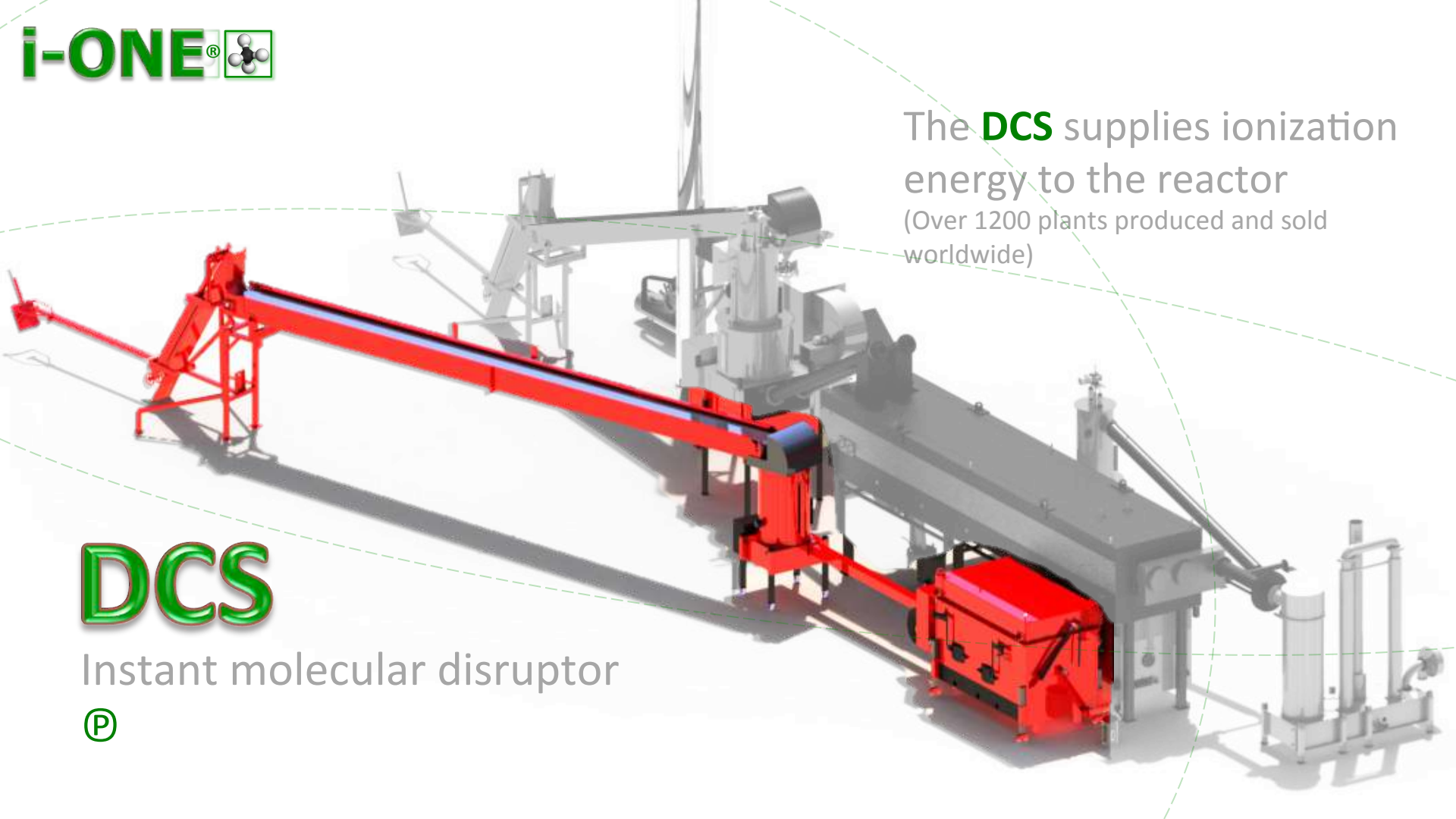
The **DCS** supplies ionization energy to the reactor

(Over 1200 plants produced and sold worldwide)



DCS

Instant molecular disruptor

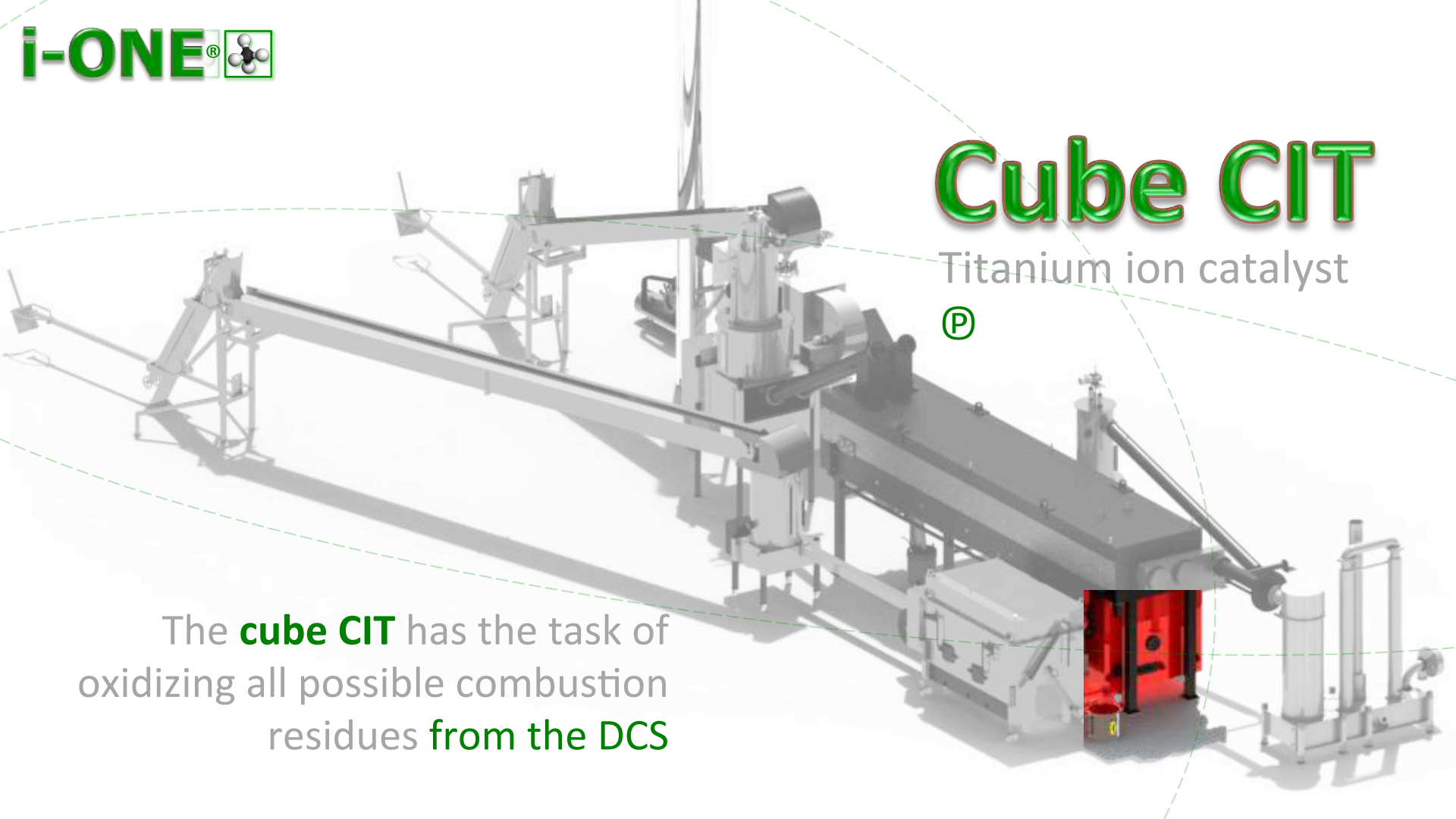
®

i-ONE®

Cube CIT

Titanium ion catalyst

Ⓟ



The **cube CIT** has the task of oxidizing all possible combustion residues from the DCS

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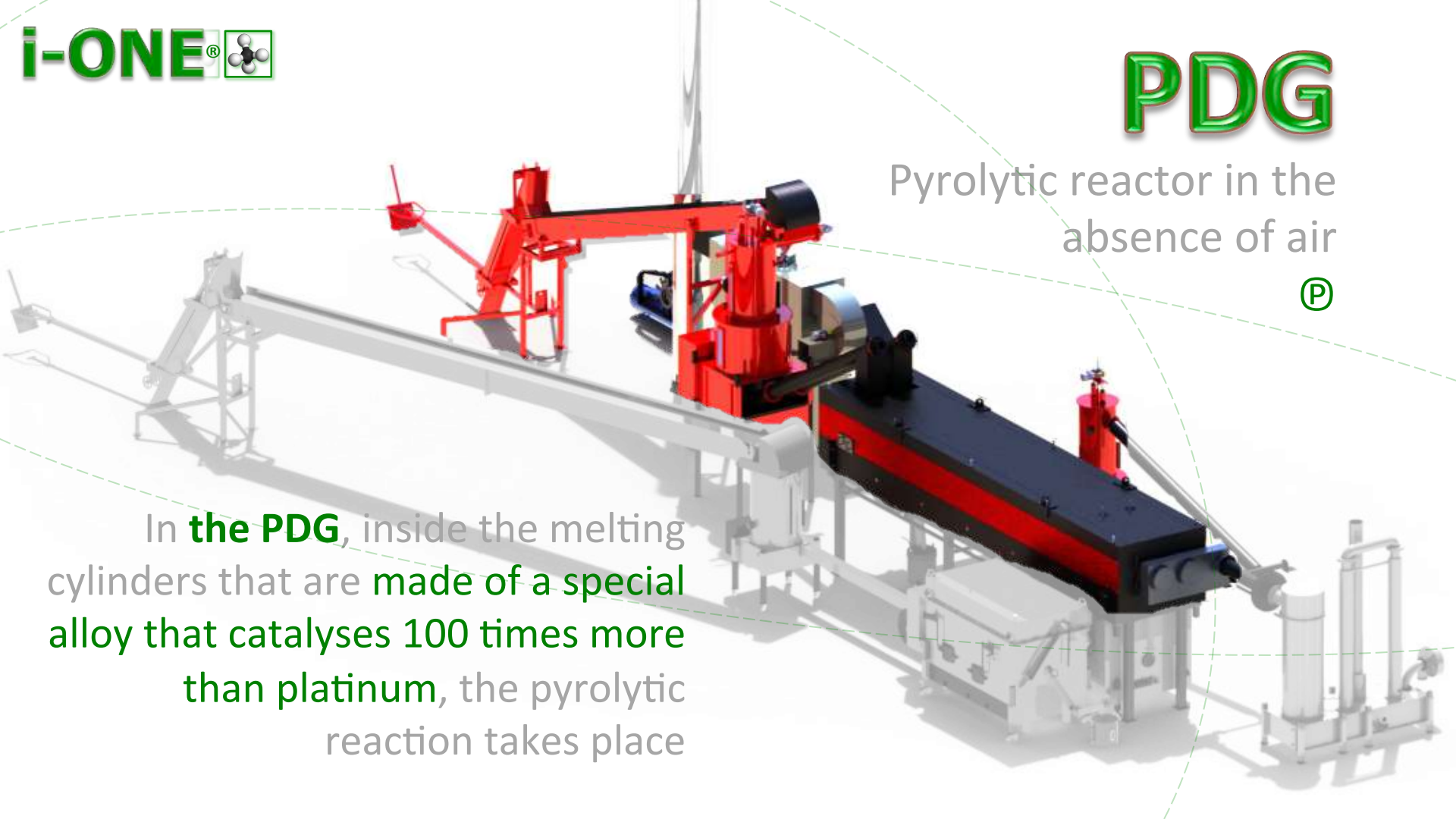
PDG

Pyrolytic reactor in the absence of air ®



In **the PDG**, inside the melting cylinders that are made of a special alloy that catalyses 100 times more than platinum, the pyrolytic reaction takes place

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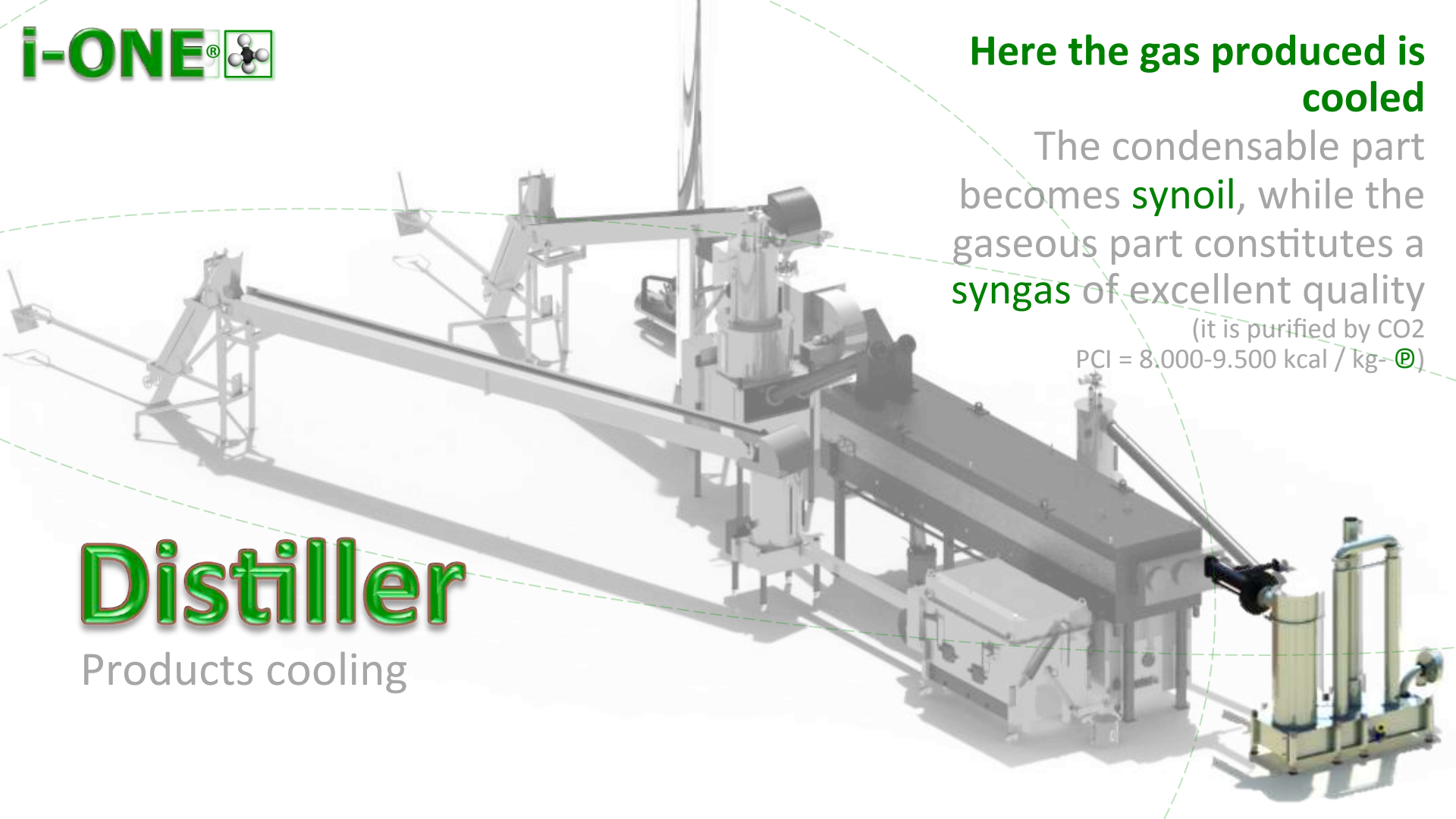
Here the gas produced is cooled

The condensable part becomes synoil, while the gaseous part constitutes a syngas of excellent quality

(it is purified by CO2
PCI = 8.000-9.500 kcal / kg- Ⓟ)



Distiller

Products cooling

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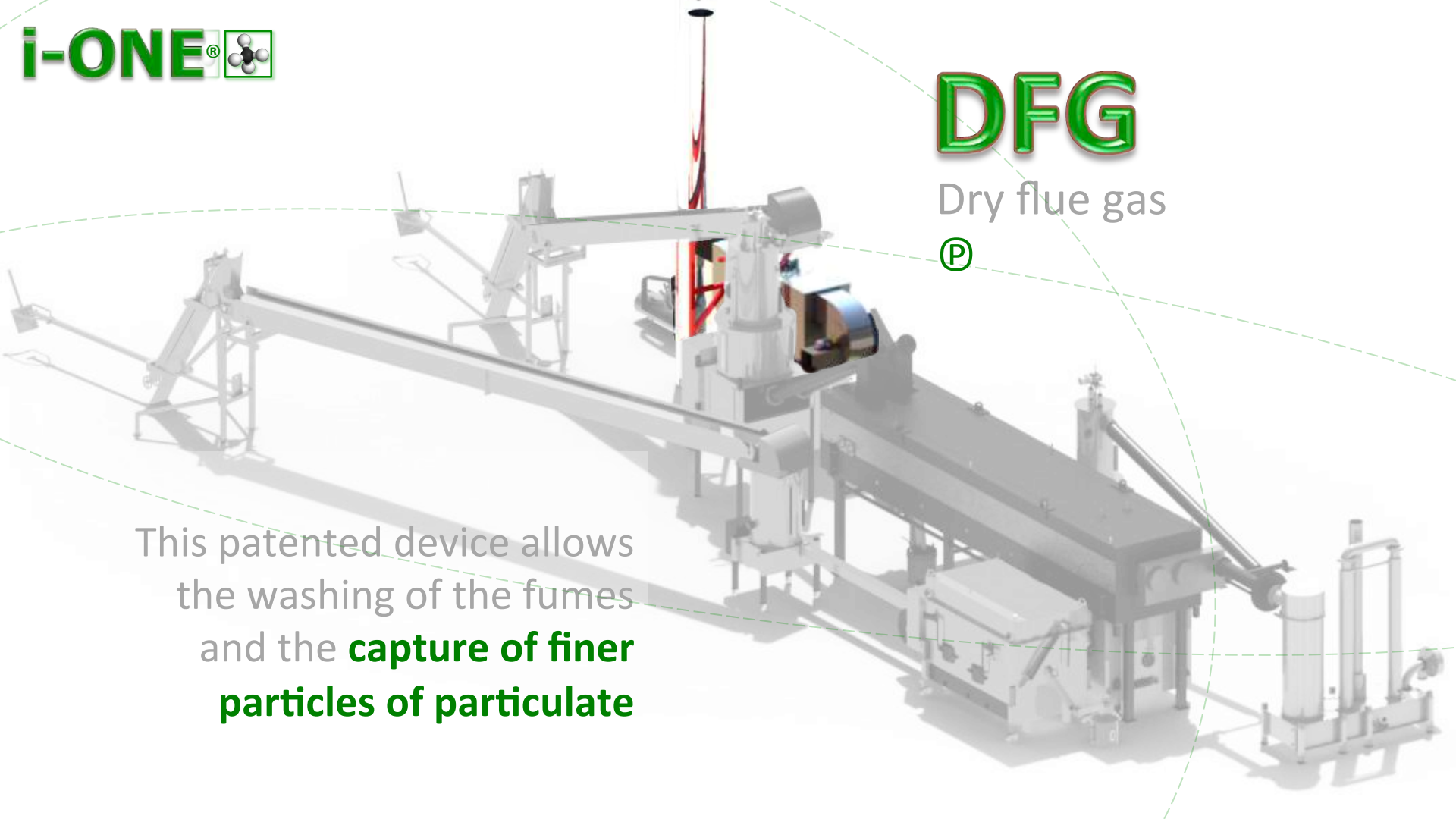
DFG

Dry flue gas

Ⓟ



This patented device allows the washing of the fumes and the **capture of finer particles of particulate**

Comparison technologies

Ionization process **PDG**

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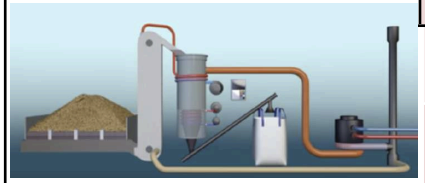
*As calculated for a plant of 5 tons / day in its 20 years of operation, including supply, delivery, installation, management, maintenance, workers, etc.

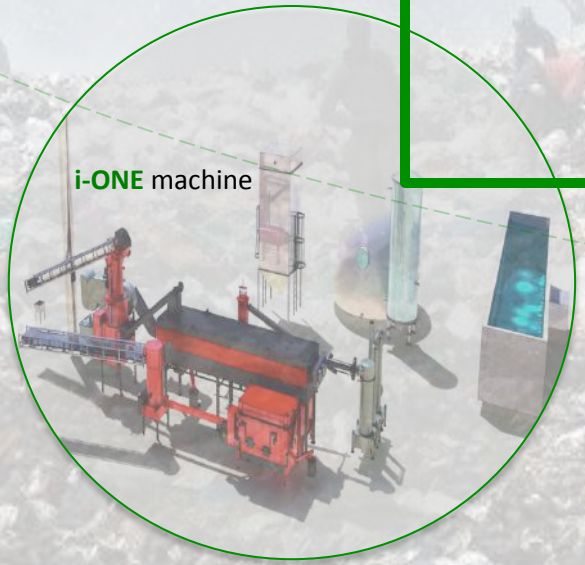
Types of processable waste					Efficiency tested on plants in operation (maintenance included)	Compliance with anti-pollution regulations
✔	✔	✔	✔	✔	✔	✔
SUW	Tires / plastics	MANURA (Biomass)	WOODEN	HOSPITAL WASTE	More than **82%***	**100%** (Compared to American and European standards)
All organic waste, tires, including solid urban waste, all hospital waste, etc.						

Traditional pyrolysis



Types of processable waste					Efficiency tested on plants in operation	Compliance with anti-pollution regulations
		✔	✔		✔	**? %**
		BIOMASS	WOODEN		Range **25-45%**	It depends on the material introduced and the filters downstream of the process
Wood and agricultural biomass previously treated						

Through a patented production process the plant breaks down the raw materials of which the waste was composed.



1. Synthetic oil (diesel)
2. Gas
3. Active coal
4. Metals

Rubbish dump business's scenery

E.g. Rubbish dump

With a **medium plant** you can produce the following Kg.:

Row materials	Day/**kg**.	Month/**kg**.	Year/**kg**.
 **Synthetic oil** (diesel) PCI: 8000-9500 kcal / kg	4.680,00	131.040,00	1.572.480,00
 **Gas** PCI: 8000-10500 kcal / kg	4.920,00	137.760,00	1.653.120,00
 **Active coal** PCI: 6000-8000 kcal / kg	8.400,00	235.200,00	2.822.400,00
 **Metals**	1.200,00	33.600,00	403.200,00
 **Water**	4.800,00	134.400,00	1.612.800,00

Poultry farm business's scenery

E.g. Poultry farm

With a **medium plant** you can produce the following Kg.:

Row materials	Day/**kg**.	Month/**kg**.	Year/**kg**.
Synthetic oil (diesel) PCI: 8000-9500 kcal / kg	3.060,00	85.680,00	1.028.160,00
Gas PCI: 8000-10500 kcal / kg	12.240,00	342.720,00	4.112.640,00
Active coal PCI: 6000-8000 kcal / kg	5.100,00	142.800,00	1.713.600,00
Metals	-	-	-
Water	3.600,00	100.800,00	1.209.600,00

E.g. Rubber treatment

With a **medium plant** you can produce the following Kg.:

Row materials	Day/**kg**.	Month/**kg**.	Year/**kg**.
Synthetic oil (diesel) PCI: 8000-9500 kcal / kg	5.520,00	154.560,00	1.854.720,00
Gas PCI: 8000-10500 kcal / kg	8.160,00	228.480,00	2.741.760,00
Active coal PCI: 6000-8000 kcal / kg	8.640,00	241.920,00	2.903.040,00
Metals	1.680,00	47.040,00	564.480,00
Water	-	-	-