



ELECTROSTATIC DUSTER

"MC2" / 3P and 3PT
(PATENT No. 1341493)



Definitive model ready for the market after several years of studies and research with the experimental model awarded as **TECHNICAL INNOVATION at E.I.M.A. 2004.**

NEW



ELECTROSTATIC[®]
DUSTING SYSTEM
+ ————— -
...since 1981

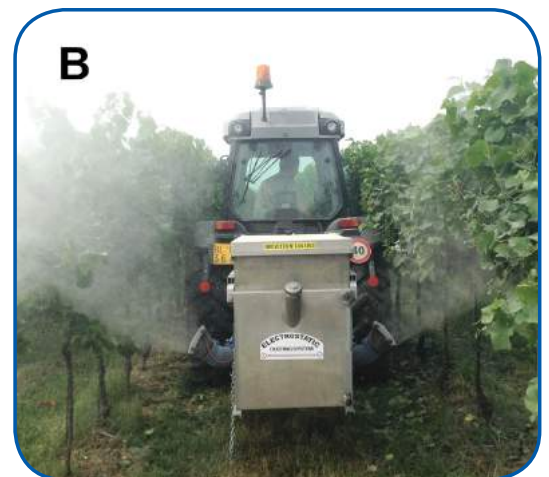
TWO practical experiments, one performed in **2003 by the Experimental Institute for Agricultural Machinery (I.S.M.A.) of Monterotondo (ROME)** and the other in **2007 by the Department for Agri-food Protection and Enhancement (University of BOLOGNA)** have ascertained that the **ELECTROSTATIC effect** leads to a **29-32% increase in SULPHUR deposits** on the vegetation (equivalent to the obtainable useful dose reduction), thereby drastically and visibly **reducing the enormous amount of product** that **conventional powder applications lose in the environment.**

Since **ORGANIC** agriculture, while not using chemical molecules, must respect **DISCIPLINARY rules that are more and more restrictive as far as doses/ha/year also for natural products (such as copper, sulphur, etc.)** are concerned, together with the need to minimise the release of pesticides to the environment, which increasingly hangs over the agricultural world, the importance of the latest innovative contribution of **MARTIGNANI** stands out quite clearly.

The equipment, mounted (or semi-mounted), by the hydraulic lifter, apart from the **260-litre powder tank** (in STAINLESS steel) for **200 kg of product**, also has a **pure water 100-litre tank** for the following reason: at the outlet of the **2 OPENINGS dispensing the powder** carried by the air flow of the high-performance centrifugal fan (4200 m³/h), there are **two micronising NOZZLES** supplied by an electric **micropump** which emit an **ULTRA LOW VOLUME (from 10 to 20 l/ha)** of atomised water. The presence, in the same point, of the high-voltage **electrode** at very low amperage of the **MARTIGNANI** system gives the **ELECTROSTATIC charge** also to the powder cloud dispensed in a controlled way by a **graduated scale metering valve**. The charge generates an **attraction field between the vegetation and the micro particles** incorporated to the **nebulised microdroplets**. Since they have charges of the same sign, they tend to repel and deposit with **extreme uniformity**, without overlapping, thus ensuring **productions free from unwanted residues** (e.g. **COPPER**, proved to be **harmful to health**, can also **delay** and in certain doses **stop the fermentation of must** - see A. Cavazza's study on the sensitivity of yeast to copper in **organic viticulture**).



**"MC2"
WORKING**

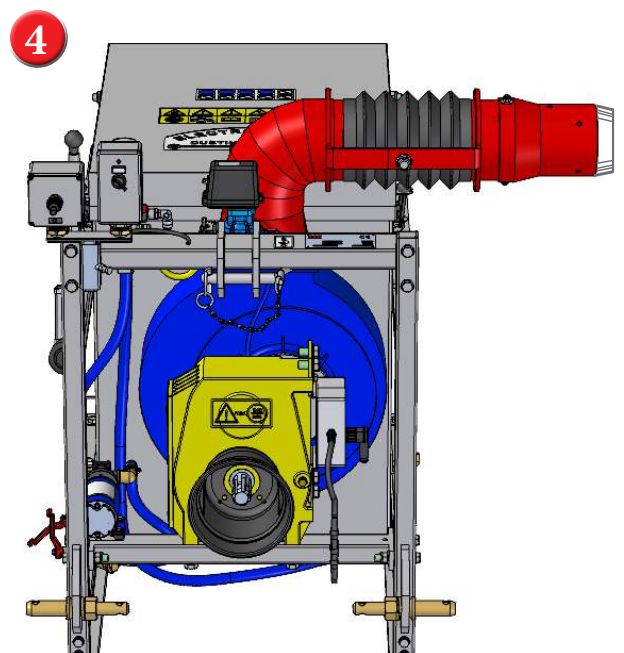
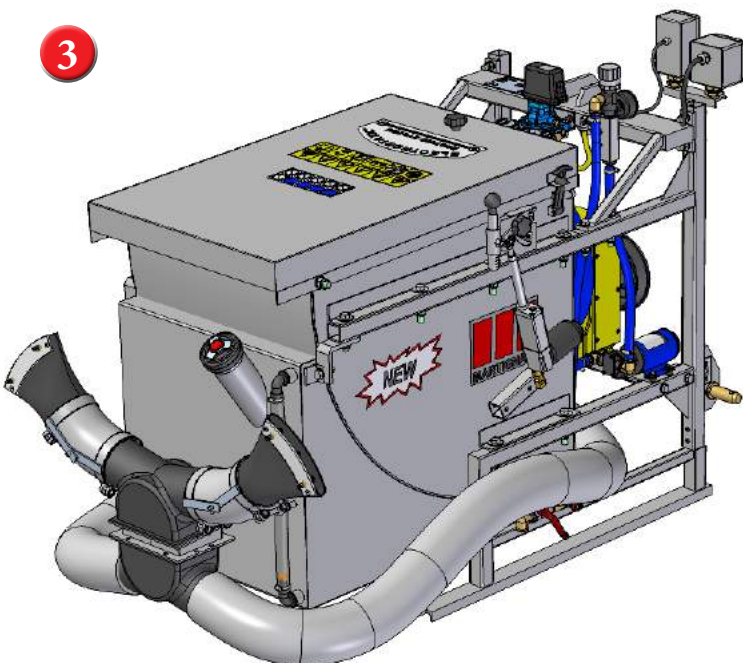
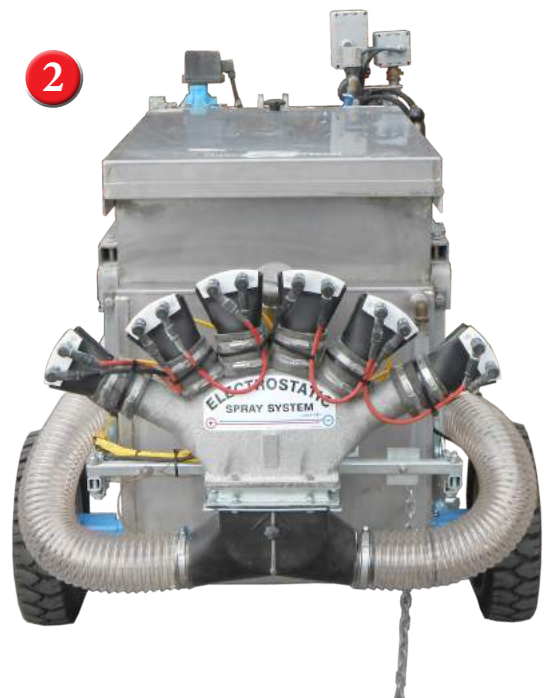


A WITHOUT ELECTROSTATIC

B WITH ELECTROSTATIC

As a consequence, the surrounding **environment** and the **operator** performing the treatment will not be exposed to the action of powders, since these are rapidly attracted by the plants. This means that if, for example, **200 kg of powder** can normally cover **7 to 8 ha** espalier **vineyard**, using the **ELECTROSTATIC CHARGE** it is possible to easily cover **9 to 10 ha**, an increase equivalent to the higher rates of coverage verified in the above mentioned **research tests on the field**.

It is of interest to report the statements concerning **powder treatments** made by one of the greatest luminaries of PHYTOIATRY, the English man **G.A. MATHEW** in his treatise **"PESTICIDE APPLICATION METHODS"** of **1982** (one year after the introduction by **MARTIGNANI** of the **1st ELECTROSTATIC** device in Agriculture in Europe): **MARTIGNANI** built it.



- 1 It can work in the **MOUNTED, SEMI-MOUNTED** and **TRAILED** version
- 2 It can be fitted with the vineyard spray head for **PERGOLA** or **AWNING PLANTS** easily interchangeable with the spray head for **ESPALIERS**
- 3
- 4 It can also use **GUN** type spray heads for wide spraying swath treatments on low plant in **OPEN FIELDS, under TUNNELS, GREENHOUSES, etc.**

2004



technical
innovation