TREATED WITH

ELECTROSTATIC®
AGRO SPRAY SYSTEM

MARTIGNANI®

5 GOOD REASONS

FOR CHOOSING MARTIGNANI MIST BLOWERS WITH THE ELECTROSTATIC DEVICE

(Since 1981, World Leader in electrostatic spraying)

1 **Operating advantages, compared to a conventional sprayer:**
Reduction (about 85%) in spray drift & off target losses in the air
Reduction (about 70%) in spray drift & off target losses on the ground
Perfect and uniform distribution of the agrochemical
Chemicals full exploitation (fewer quantity per hectare)
Faster working
Adaptable to any cultivation form

2 **Savings:**
Time: about 60%
Labour: about 60%
Chemicals: about 60%

3 **Production quality:**
Healthier crops
Fruits without imperfections
Fruits and wine with "zero" or minimum legal chemicals residues

4 **Life quality:**
Environmental impact reduction
Contamination dangers for operators: about -75%
Guarantee of healt for the consumers

5 **Attestations:**
Tested (with published results) worldwide by several eminents Research Institutes (three in Italy)

Award-Winning Sprayers:
SIMA – Paris - France (Golden Medal 1985)
EIMA – Bologna - Italy (Technical Innovation 1988, 2004, 2014)
AGRIBEX- Bruxelles - Belgium (Silver Spike 1992)
FIERAGRICOLA – Verone - Italy (Technical Innovation 1994, 1995, 2004, 2016)
EIMA – Bologna - Italy (Environment Award 2016)

60 MARTIGNANI 1958 - 2018

20/09/2019

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MARTIGNANI®

ENOVITIS AWARD 2014

EIMA AWARD 2014

VOTA IN VIGNETO AWARD 2018

SMART SOLUTIONS *for a* MODERN & ECO-FRIENDLY FARMING

Electrostatic Mist Blower

DUO WING JET

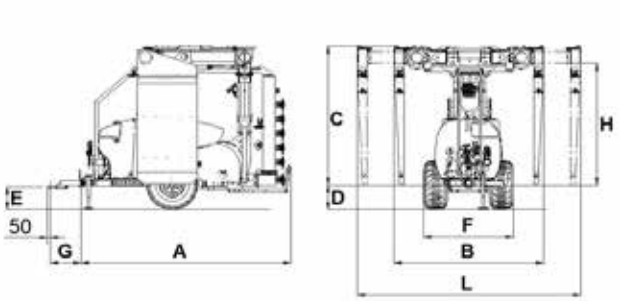
European Patent 2 689662 A1

MARTIGNANI
1958 - 2018

The Duo Wing Jet maximizes the well-known capability of Martignani's low and very low volume electrostatic mist blowers to guarantee effective treatments with savings on water (90%), time-labour (70%) and active agents (45-50%), thereby completely protecting the environment, the health of the operator and the consumer to whom products with zero residues are supplied.

ELECTROSTATIC® AGRO SPRAY SYSTEM

DUO WING JET



DESCRIPTION	Model		
	WW M612 DWJ		
Capacity (liters)			
Tank	1000	1500	2000
Rinsing tank	120	120	120
Hand washing tank	25	25	25
Weight (kg)			
(weight) Empty	1735	2000	2050
(weight) Full	2950	3650	4195
Tyres			
340/55 - 16 (1)	✓		✓
300/80 - 15.3 (2)	✓		
400/60 - 15.5 (3)	✓	✓	✓
Drawbar			
Eye type drawbar (4)	✓	✓	✓
Articulated drawbar homologated (5)	✓	✓	✓
Dimensioni (mm)			
A	3650	3935	4250
B (machine at rest)	2460	2460	2460
C	2515 ÷ 2815	2535 ÷ 2835	2535 ÷ 2835
D (1)	385		-
D (2)	435	-	-
D (3)	440		
E (1)	335 ÷ 485	325 ÷ 475	410 ÷ 560
E (2)	385 ÷ 535	-	-
E (3)	390 ÷ 540	380 ÷ 530	465 ÷ 615
F (1)	1480	1600	1630
F (2)	1450	-	-
F (3)	1550	1670	1700
G (4)	555 ÷ 700		
G (5)	705		
H	2120 ÷ 2420	2140 ÷ 2440	2140 ÷ 2440
L (working machine)	4610 ÷ 5760		
Boom ground clearance	D + H		
Technical Features of the Sprayer			
Absorbed power	52 kW		
Operating pressure	1,5 bar		
Pump flow	250 lt/min		
Nozzles quantity	18		
Fan rotating speed	2925 rpm		
Tractor Speed (PTO)	540 rpm		
Sound power level	112 dB(A)		
Electrostatic device	yes		
Electrostatic power supply	12V		
Booms' folding	Hydraulic by remote control		

The Duo Wing Jet can be considered the first and only mist blower that recovers the product by combining the electrostatic attraction between the vegetation and the electrically charged micro-droplets (+ -) with that of two special protective screens with an air-cushion that extends beyond their edge; without any recycling of the pesticide mixture and not only with 99% anti-drift but also with no chemical residues on fruits, grapes, wine etc.

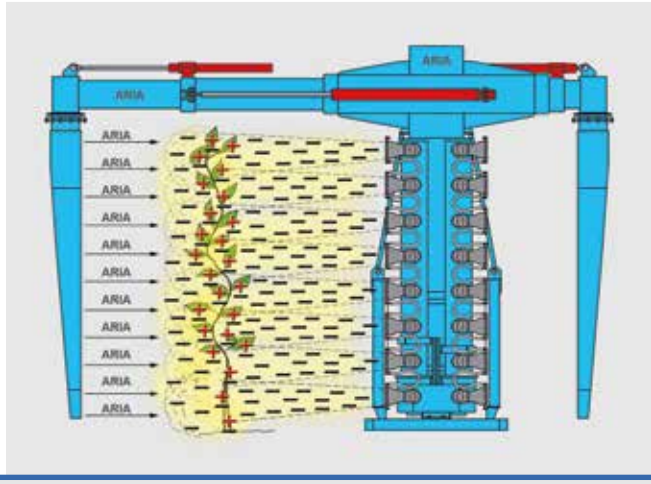
Given that the machine can instantly adjust any volume to be distributed (for example: in vineyards, at the start of the vegetation just 40-50 l/ha of a 10 times concentrated mixture is distributed, up to a maximum of 100 l/ha in full vegetation), this means that there is no liquid fraction to collect and recycle. There is also the advantage of being able to use a mixture that is always the same without any change in concentration, with compact and manageable equipment and free from any risk of possible undesired effects attributable to the continuous recycling of mixtures leaked from the vegetation.

The function of the two pressurized protective screens is simply to eliminate the dispersion of the residual quantity of droplets which may escape the electrostatic field, through the outgoing counter-drift air cushion from the thousands of holes in the two screens, which are made of insulating and water repellent materials.

The Duo wing jet, first introduced in 2013, has undergone three stages of development:

1 — The entire basic structure has been unified with that of the well-known M612 TURBO 3 Model (one of the first Technical Innovations - Eima 1988, the precursor of all multiple-row models on the market), focusing on proven reliability and a consequent reduction in costs.

2 — An additional series of electrostatic dispensing nozzles have been fitted at the centre of the "perforated panels" in the two air-cushion screens, to ensure maximum uniformity and full coverage of the external sides of the two rows that are treated simultaneously.



3 — The overhead telescopic booms, which support the two protective screens, also act as air conduits (eliminating the need for corrugated plastic hoses with the consequent loss of air efficiency). They are also used to regulate the distance between the screens with transversal linear movements (by up to 600 mm and for row spacings from 2.30 m to 3.00 m wide and over). The booms can be folded electro-hydraulically towards the front of the machine with the simultaneous 90° rotation of the screens so that they fall within the footprint of the machine, both for road transfers (Available on demand: Road Homologation under "167/2013 Mother Regulation") and or for some field manoeuvres.

FIELD TEST (2013) OF THE NEW MARTIGNANI "DUO WING JET" ELECTROSTATIC MIST BLOWER FITTED WITH TWO AIR CUSHION ANTI-DRIFT SCREENS WITH RECOVERY, BUT WITHOUT PRODUCT RECYCLING.

Taken from the report prepared by Dr. Oddino Bin of CO.DI.TV. – Consorzio per la Difesa dalle Avversità Atmosferiche di Treviso-Italia (Consortium for the defence from Atmospheric Adversities in the Treviso area - Italy).

Dr. Bin, an Agronomy consultant, has dedicated his efforts towards agricultural production that respects both the environment and consumer health.
In connection with this, in 2013, the new "Duo Wing Jet" mist blower underwent a field test at the farm owned by Costantino Dal Cin in Cordignano (Treviso) Italy.

OBJECTIVE OF THE TEST

The test was carried out at the Dal Cin farm on an area of 14 ha cultivated with many varieties of vine and with Sylvoz pruned rows.
Aim of the test: to demonstrate a 40% successful reduction / hectare of the distributed active agent.

RESULTS

Completely effective treatments in double rows with a constant low volume of 100 l/ha in full vegetation. In fact, despite the seasons becoming increasingly wet, which has forced winegrowers in the area to carry out more frequent plant protection operations after being enable to prevent downy mildew, the machine ensured a production free from parasitic attacks of any kind even when using, on average, 40% less active agent.
It was possible to observe:

- The perfect micronization of the drop with a very even distribution on the vegetation, both on the direct and external side of the row.
- An optimal ant-drift effect was noted with the machine operating at night using a fluorescent product. This means that the machine can also be used in critical areas (buffer zones) located close to watercourses, roads, buildings etc.
- A moderate fuel consumption (3.07 l/ha) considering the location of the plots. The 15 hl tank allows 15 ha to be treated with approximately 100 l/ha. It took on average less than 6 hours (tractor speed 7 km/h) to treat the 14 ha of vineyards.
- Considerable economic advantages, with savings of up to 400 €/ha.

NOTES

After the test, Martignani S.r.l suggested that Mr. Dal Cin take a sample of grapes to the POLOLAB laboratory in Oderzo (Treviso – Italy) for the analysis of chemical residues. The results showed that only three of the 195 active agents tested for were found. These were also found to be present in amounts 10-20 times lower than the legal limits (Analysis certificate No. M13-7596 of 01/10/2013). This confirms that this machine is extremely effective and efficient, reducing losses due to drift in the air and on the ground, thereby protecting the environment, the health of the operator and the consumer, to whom products with zero residues are supplied.