MARTIGNANI

- Low volume electrostatic sprayers -

WHIRLWIND series

M612 standard
M612 major
M819



martignani.com

Beyond Innovation, a Certainty Over Time.

whirlwind series 26

"Pioneers of Low Volume and Electrostatic Charge".
Since 1958 we have been developing pneumatic spraying technology, heir to the KWH patents, in cooperation with leading international Agricultural Institutes.

ADVANTAGES

- Uniform, constant spraying at any volume
- Perfect distribution of active ingredients
- Exceptional spray range and penetration on every crop and in any weather
- Maximum effectiveness with fungicides and insecticides, especially against leaf miners, moths, mealybugs, mites, aphids and psyllids
- Low liquid pressure: no stress on the plant, no run-off to the ground

SAVINGS

- 90% WATER
- 30% CHEMICALS
- 60% LABOUR
- 40% FUEL

DISTRIBUTION

VOLUME	LT/HA
normal	over 1,000
medium	500-1,000
low	200-500
very low	50-200
ultra-low	less than 50

No nozzle changes, constant pressure of 1.5 bar, micronised droplets of 100–150 microns.

Since 1981 — the first in Europe, and the only one tested in Italy and abroad with published crop protection results

TECHNICAL PRINCIPLE

The electrostatic fields that form between plants — good conductors of sap, mineral salts and moisture — attract the charged droplets delivered by Martignani sprayers, reducing drift even in windy conditions. A principle validated by decades of field trials in Europe, North and South America, Asia and Africa.

ADVANTAGES

- Uniform distribution, even on the underside of leaves and in the upper parts of the plant
- Lower drift losses → less product per hectare
- Working speed up to 12 km/h
- Healthier plants, better crop quality
- 70% less operator contamination
- Fruit and wine free of unwanted chemical residues

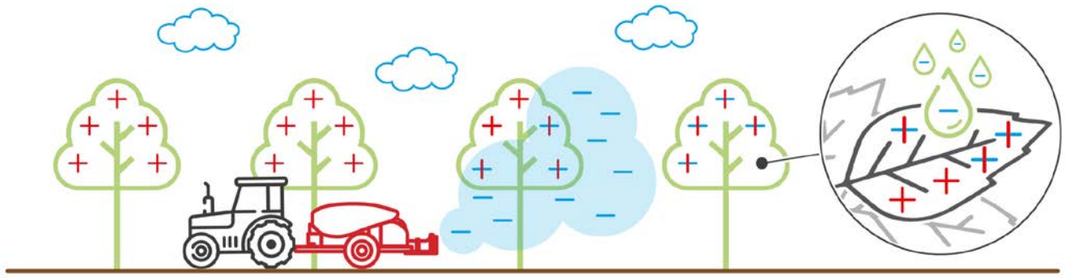
ELECTROSTATIC RECOVERY DEVICE

Already in use on thousands of fruit and wine farms worldwide. Available on request across the whole Martignani range.

+ 67%

SPRAYING EFFICIENCY

ELECTROSTATIC ®
AGRO SPRAY SYSTEM



whirlwind series 26

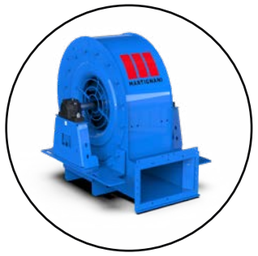


Uniquely even coverage.



CONSTRUCTION FEATURES

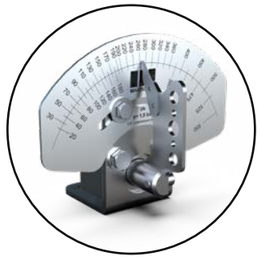




CENTRIFUGAL FANS WITH OUTSTANDING AERODYNAMIC EFFICIENCY



HIGH-FLOW CENTRIFUGAL PUMPS WITH EXCLUSIVE SEALS



PRECISION MECHANICAL METERING VALVES



WIDE-PASSAGE PNEUMATIC MICRONISING NOZZLES



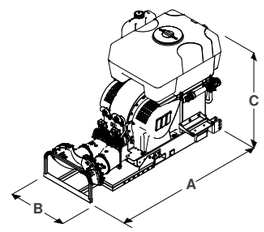
ELECTROSTATIC CHARGE WITH HIGH-VOLTAGE GENERATORS

TECHNICAL DATA

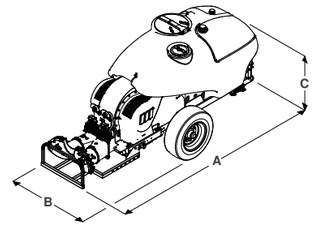
TECHNICAL DATA	FAN M612 standard	FAN M612 major	FAN M819 (independent engine)
TRACTOR REQUIRED	from 55 HP	from 90 HP	from 75 HP
FAN OUTPUT	up to 20,000 m3/h	up to 26,000 m3/h	up to 40,000 m3/h
PUMP FLOW RATE	180 to 500 l/min	180 to 500 l/min	300 l/min
OPERATING PRESSURE	1.5 bar / 22 psi	1.5 bar / 22 psi	1.5 bar / 22 psi
METERING VALVE FLOW RATE	0 to 550/1,300 l/h each	0 to 550/1,300 l/h each	0 to 550/1,300 l/h each
PNEUMATIC NOZZLE	dia. 4 mm	dia. 4 mm	dia. 4 mm
AGITATION	hydraulic	hydraulic	hydraulic

MODELS	TANK	A*	B*	C*	EMPTY WEIGHT	STANDARD WHEELS
PTO driven	-	cm	cm	cm	kg	-
400 l Mounted	Fibreglass	192	92	150	670	/
600 l Mounted	Fibreglass	192	92	165	690	/
600 l Pull-type	Fibreglass	294	114/124	137/147	820	225/70-15.0
1000 l Pull-type Compact	Fibreglass	352	138/148	132/142	805	260/70-15.3
1000 l Pull-type Shuttle	Polyethylene	352	132/142	150/160	895	260/70-15.3
1500 l Pull-type	Polyethylene	380	135/145	170/180	1160	300/80-15.3
2000 l Pull-type	Polyethylene	410	165/175	185	1250	300/80-15.3
3000 l Pull-type	Polyethylene	520	197/207	200	1520	500/50-17.0
M612 independent engine	-	cm	cm	cm	kg	-
2000 l Pull-type	Stainless steel	520	228	208	2370	400/60-15.5
M819 independent engine	-	cm	cm	cm	kg	-
2500 l Transported	Stainless steel	4800	2000	6620	4350	/
2500 l Pull-type	Stainless steel	6000	2350	7120	4560	13.0-65-18
4000 l Transported	Stainless steel	5800	2000	6620	4710	/

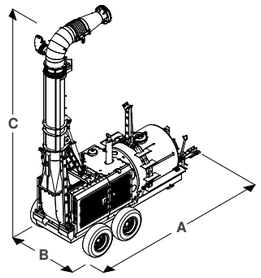
*A = Length with 90° +90° diffuser (30 cm shorter with 180° diffuser).
*B = Width (pull-type models) with standard wheels.
*C = Tank height.
*Weight refers to 90+90 heads (standard configuration).



MOUNTED



PULL-TYPE



INDEPENDENT ENGINE

ADVANTAGES

1. **WORKING VOLUME**

from 50 to 3,200 l/h, same spray range and penetration at any volume

2. **UNIFORM MICRONISATION**

with any formulation — including concentrated mixtures (Bordeaux mixture, copper oxychlorides, oils, polysulphides) and, if liquid, without dilution water

3. **NO RUN OFF**

at any working volume

4. **NOZZLES**

no clogging or wear, individually and instantly adjustable

5. **MAXIMUM VERSATILITY**

wide choice of accessories

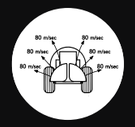
6. **MINIMAL MAINTENANCE**

simple, safe operation

MARTIGNANI



AIR FROM THE TWO-STAGE CENTRIFUGAL FAN: 100% USED



UNIFORM OUTLET SPEED, AIRFLOW DIRECTED AT THE CANOPY



AERODYNAMIC DUCTING, ALMOST NO POWER LOSS



CONTINUOUS FLOW, HIGH SPEED, PENETRATION WITHOUT TURBULENCE



DIFFUSERS ADJUSTABLE THROUGH 90°, MATCHING EVERY PLANT SHAPE



DOUBLE PENETRATION EVEN IN STRONG WIND



100% OF ABSORBED POWER PUT TO USE



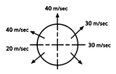
DUAL-EFFECT AIR: MICRONISES AND CARRIES (PNEUMATIC SYSTEM)

whirlwind series 26

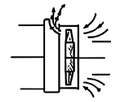
AIR BLAST SPRAYER



AXIAL FAN: ONLY 2/3 PRODUCES USEFUL AIR



AIR SPINNING AROUND THE PROPELLER AXIS → TURBULENCE, UNEVEN FLOW



SHARP 90° DEFLECTION → ~20% POWER LOSS



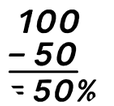
STRONG TURBULENCE → LOSS OF SPEED AND POWER



NO ADAPTATION TO DIFFERENT PLANT SHAPES



ONE-SIDED WORK: HALF THE POWER WASTED, YET STILL ABSORBED



~33% LOSS → LESS THAN 50% OF POWER ACTUALLY USEFUL



SINGLE-EFFECT AIR: TRANSPORT ONLY, UNEVEN SPRAYING (AIR-ASSISTED)

CONFIGURATIONS ON REQUEST

MOUNTED

90+90



TWIN MULTIFLOW



MULTIFLOW ORCHARD



NURSERY CANNON



PULL-TYPE

180



90+90



GIB-DOR



TWIN MULTIFLOW



WALNUTS



PALM OIL



TURBO 2



COGNAC



SPECIAL

TRANSPORTED M819



PULL-TYPE M819



TURBO 4



whirlwind series 26

MOUNTED

WALNUTS



PALM OIL



TURBO 2



ALBATROS



PULL-TYPE

MULTIFLOW ORCHARD



NURSERY CANNON



BANANA CANNON



GIB-DOR TOP



DUO WING JET



TURBO 3



ALBATROS



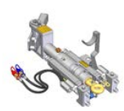
ACCESSORIES



FIXED DRAWBAR, EYE



FIXED DRAWBAR, FORK



STEERING DRAWBAR, HYDR. OR MECH., EYE



STEERING DRAWBAR, 3-PT



4-DIAPHRAGM PUMP



CENTRIFUGAL PUMP

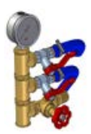


ROAD HOMOLOGATION

CONTROLS



ELECTRIC CONTROL



MANUAL CONTROL



COMPUTER DPA



COMPUTER 4.0



ISOBUS



COMPUTER WITH TREE SENSOR



MARTIGNANI

FOR A GREENER WORLD

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