



MSA
Mini Sprayer Aerosol



MSP
Mini Sprayer Pro

Mini-Spray
Instruction mode

MSP 605-000-110

MSA 605-000-010

Foamer

MSA-F605-000-011

MSP-F 605-000-111

Airofog USA 16 oz Mini Spray, model MSA and MSP, are designed for use by qualified and experienced personnel. Please read this instruction thoroughly before usage.

Safety Instruction

- Keep out of reach of children.
- Before usage, check condition and proper function of the sprayer.
- Only pumping up and using sprayer in upright or vertically hanging position.
- Do not leave sprayer filled with pesticide in the sun.
- Note the wind direction, do not spray against wind and prevent droplets from drifting onto areas which must not be treated.
- Never spray into electric outlets or cable boxes.
- When using the metal extension close to electric outlets, pay attention to avoid the shock hazard.
- Do not spray to person or pet.
- Do not operate the sprayer if there are visible symptoms of a problem.
- Wear personal protective equipment when handling dangerous substances.
- Application of insecticides should follow recommendations of manufacturers and be in compliance with local regulations controlling the application of pesticides. We are not liable for consequence of improper applications.
- When unscrewing, never point the lance at others or yourselves.
- Never blow through clogged nozzles or valves with the mouth.
- Before repair and maintenance, drain the sprayer and release all pressure.
- Always replace damaged or malfunctioning parts immediately.

Cautions:

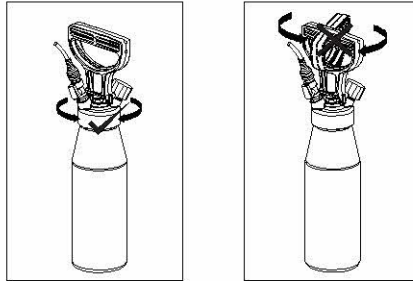
It is the operator's responsibility to ensure the safe use of sprayer and he is fully compliant with national or local regulations governing compression sprayer and application of pesticide.

AIROFOG is not liable for damages or consequences occurred due to improper use/repair/maintenance, the use of non-recommended/unoriginal parts, and acceptance of damaged/broken sprayers by any reason.

Operation

A) Opening/Closing bottle and filling insecticides:

- To open the bottle, holding the bottle cap then turning it counter clockwise.
- Follow insecticide's label instruction and fill the well mixed water or oil based insecticide into bottle. Avoid powder or any particle in the insecticide to prevent nozzle clogged.
- To close the bottle, holding and turning the bottle cap clockwise till tightening. **Never open or close the bottle by turning the handle as this may damage the handle seriously.**



B) Pressurizing the sprayer:

- pressing down then ¼ turning the pump handle to unlock the pump handle
- pump plunger up and down until the required pressure is reached
- lock the pump handle

C) Application rates of multi-nozzle (measured with water at 40 psi

fine fan -----	360ml/min., 12.2 oz/min., 80
coarse fan -----	760ml/min., 25.8 oz/min., 80
Pin stream -----	330ml/min., 11.2 oz/min
crack & crevice extension straw-----	50ml/min., 1.7 oz/min.

Application rates of aerosol nozzle (measured with water, at 60 psi):

fine, white -----	60ml/min., 2 oz/min	15-30µm .
medium, blue-----	90ml/min., 3 oz/min	30-50µm.
coarse, red -----	130ml/min., 4.4 oz	60-80µm
crack & crevice tip -----	115ml/min., 3.9 oz/min	

Repair and Spare Part

- do not modify the sprayer, this may cause a risk of harm and may damage the sprayer
- if any part shows signs of damage or wear, replace it immediately
- always use original spare parts for repair or maintenance

Care and Maintenance

A) After using:

- empty the bottle and drain the hose and wand after each use
- carefully inspect all gaskets and hoses as well as all other fittings of wear and tear, replace and grease when necessary.

B) Cleaning the sprayer

- rinse the bottle thoroughly with water
- add water and detergent into the bottle
- attach pump cap and tighten it
- shake to clean the bottle
- pressurize the bottle
- flush the hose and nozzle
- empty the bottle and refill with clean water
- flush the hose and trigger valve once more
- empty the remaining water
- the sprayer should be cleaned thoroughly at least once a week

C) Cleaning clogged nozzle and crack & crevice tip

- do not insert metal objects into the tip orifices
- clean with a soft bristle brush such as a tooth-brush to free clogs
- cleaning detergents or solvents can be used to soak the tip (do not use ammonia/Bleach – it can corrode brass)
- do not insert metal object into the tip which will be greatly damaged to the point of not functioning at all
- run warm water over and into the crack & crevice tip
- soak the nozzle and extension straw in warm, soapy water
- blow compressed air through back of nozzle and crack & crevice tip

D) Maintenance of pump and trigger valve

- piston o-ring (8) should be greased from time to time
- check valve at the bottom of the pump cylinder prevents liquid from entering the pump, if liquid leaks into the pump, the valve should be inspected or replaced
- if liquid leaks out of the trigger valve or any connection, the valve seal/gasket or the connection should be inspected or replaced

Grease: **Mobilgrease XHP 222 Special**

Specification

	605-000-010	605-000-110
	<i>Mini-Spray Aerosol (MSA)</i>	<i>Mini-Spray Plus (MSP)</i>
Bottle: 16oz mark at Groove	stainless steel AISI 304, 27.2 oz / 800 ml	
Working Capacity	16 oz / 500 ml, at groove in bottle	
Max. Working Pressure	120 psi / 8 bar	
Pump Cylinder	stainless steel AISI 304, with Viton™ check-valve	
Spray Hose	heavy duty coiled with swivel connectors	
Pressure Gauge	0-150 psi / 0-10 bar /	
Pressure Release Valve	supplied as standard releases at 120 psi	
Discharge Valve	brass, wand-like trigger with MS A & Flexi-Pro aerosol delivery system (FADS)	brass, drip-free trigger valve with multi-nozzle and C&C straw
Carry Pouch	supplied as standard	
Total Height (bottle w/ handle)	13.4 inch / 34 cm	
Net Weight	2 pound / 1 kg	2.6 pound / 1.28kg

※: Specifications are subject to change without notice or obligation

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Insecticide Dilution rates for 16 oz.:

-Fipronil Plus C= 0.1ml to 2.83ml to 5.6ml,

Alpine WSG™ = 0.25gm (0.1%) to 2.5gm (0.2%) 3.75gm (0.3%)

Demand CS™ = 1.5 to 3.0 ml,

-Phantom™ = 8.9 ml,

Talstar™ = 1.2 to 3.7 ml,

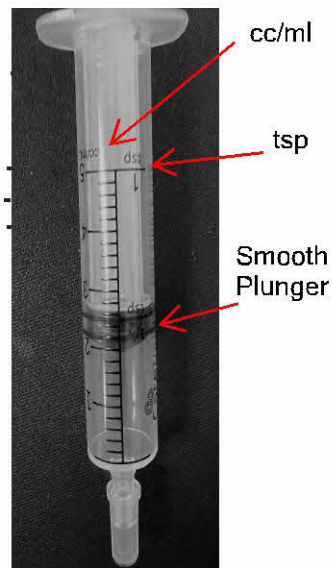
Suspend™ = 2.8 to 5.5 ml,

Lambda-cyhalothrin 9.7= 0.75ml to 1.5ml to 3ml

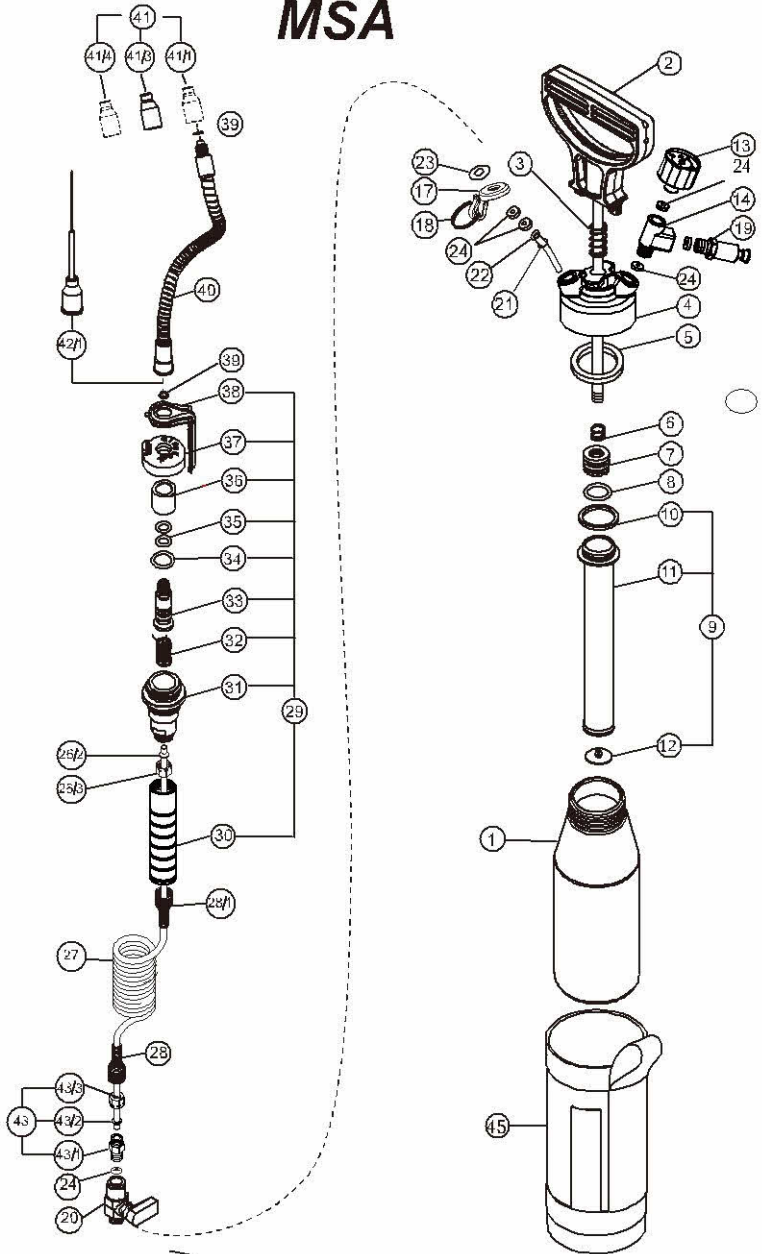
-ExciteR™ = 3.69ml (0.05% py/0.5% pbo) to 7.85ml (0.1% py/1% pbo)15.71ml (0.2%py./2% pbo.)

-Crossfire Bed Bug Concentrate™ = **1.6oz added for a finish pint** 3.2oz added for a finished quart,

Flush Sprayer with hot water after use to avoid clogging.



MSA



MSA Spare Part List

Pos.	Part No.	Description	Pos.	Part No.	Description
1	603-001-000	Bottle, Mini	28/1	603-004-040	Hose Protective Spring
2	605-002-000	Piston Rod, Includes Handle	29	601-007-000	Aerosol Valve Assembly
3	604-003-000	Spring, handle lock,mini Unique	30	601-007-010	Aerosol Valve Handle
4	605-004-000	Cap, Mini Sprayer	31	601-007-020	Aerosol Valve Body
5	605-005-000	Gasket, Mini sprayer cap	32	605-003-014	Aerosol Valve body Spring
6	605-001-020	Buffer Spring, Mini / Unique	33	601-007-040	Aerosol Valve Seat
7	605-007-000	Piston, Plunger: Mini Sprayer	34	601-007-060	O-Ring, Aerosol seat
8	605-008-000	Gasket, Pump Plunger Mini	35	935-041-000	O-Ring, Aerosol inner sleeve
9	605-009-000	Pump Cylinder, Assembly	36	601-007-070	Seat Sleeve
10	605-010-000	Gasket, mini pump cylinder top	37	601-007-080	Aerosol Valve top
11	605-011-000	Pump Cylinder ,Mini sprayers	38	601-007-090	Aerosol Trigger
12	604-012-000	Check Valve,Mini / Unique	39	601-007-100	O-Ring, Aerosol Tips, Blue wand
13	604-013-000	Pressure Gauge,0-140,16/32oz	40	601-008-010	Wand, Blue Flex, Aerosols
14	510-003-030	T-Connector, mini and Unique	41	601-009-000	Aerosol Nozzle Kit, Set 3pc, Below
17	605-017-000	Hook, for trigger	41/1	601-009-030	Nozzle fine, White (optional)
18	601-018-000	Hook Ring, metal	41/3	601-009-050	Nozzle medium, Blue Included
19	604-019-000	Pressure Release Valve, 0-90	41/4	601-009-070	Nozzle coarse, Red (optional)
20	601-003-000	Ball Valve, shut off	42/1	604-010-112	CC aerosol straw,metal/ plastic
21	604-019-006	O-Ring, syphon tube	43	601-00-100	Swivel Hose Adapter, Assembly
22	605-020-000	Syphon Tube, S.S. Mini	43/1	601-004-105	Swivel Hose Adapter
23	604-023-000	Washer, hook Protector	43/2	601-004-103	Compression Ring
24	605-002-020	Washer, multi purpose D-51P	43/3	601-004-104	Retaining Nut
26	601-004-010	Hose Adapter, Assembly	45	605-020-010	Carrying Pouch, Airofog
26/2	601-004-012	Compression Ring	KITS	601-023-200	Valve Service Kit incl.
26/3	601-004-013	Retaining Nut			34,35x2,39x3
27	601-004-130	Coiled Hose, Blue	KITS	605-035-010	Cap/Pump Service Kit, incl.
28	601-004-040	Hose Protective Spring			5, 8, 10, 12, 21, 24*5

KITS Included

601-023-200 Valve Service Kit incl. 34,35x2,39x3

605-035-010 Cap/Pump Service Kit, incl. 5, 8, 10, 12, 21, 24*5

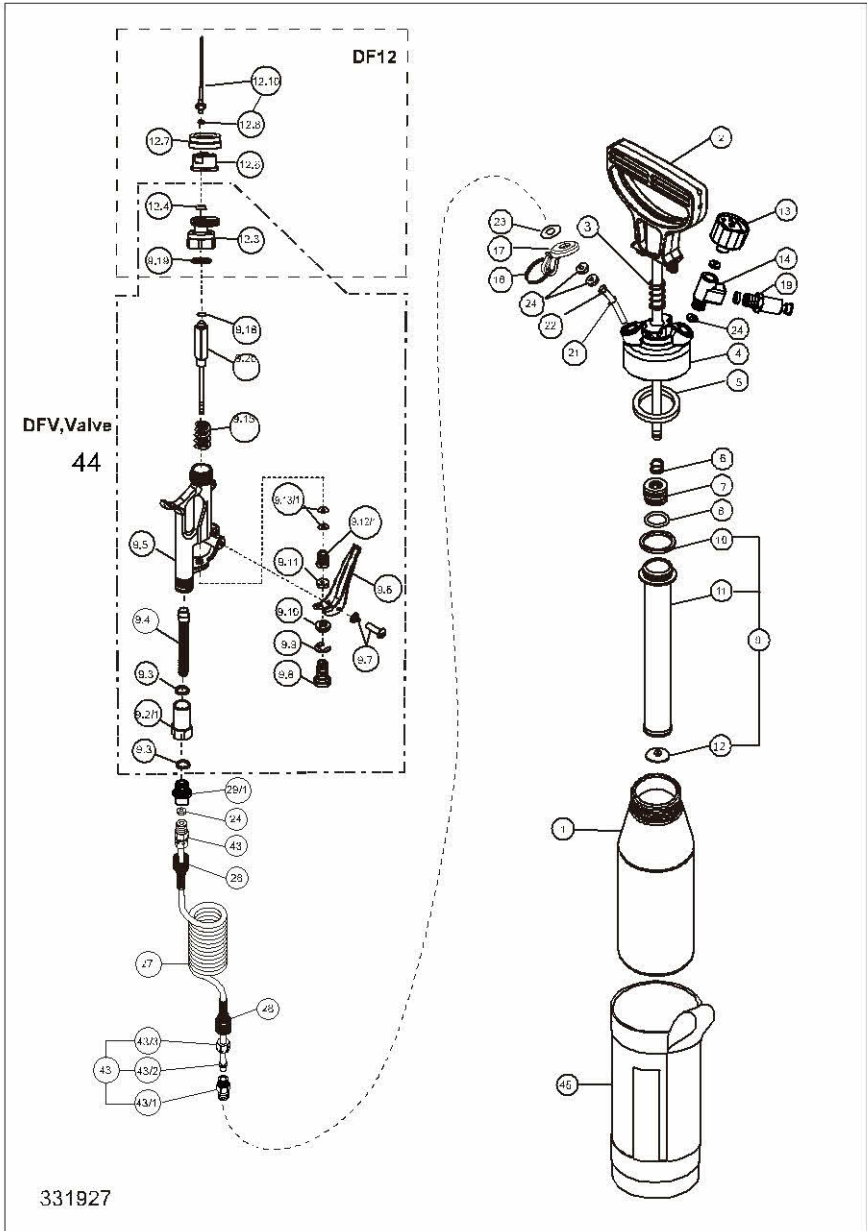
Optional Kit

Coil Hose Kit, Incl 27, 2x43/2, 2x43/3

601-009-000 Aerosol Nozzle Kit, Set 3pc (Red-White-Blue- For Aerosol Units - Fads)

MSP

Mini Sprayer Pro 32oz 605-000-110



MSP Breakdown

605-000-110

Pos.	Part No.	Description	Pos.	Part No.	Description
1	603-001-000	Bottle, Mini	DF9.2/1	501-009-020	Housing, Strainer
2	605-002-000	Piston Rod, Includes Handle	DF9.3	500-009-030	Gasket, Strainer Housing
3	604-003-000	Spring, handle lock,Mini Unique	DF9.4	500-009-040	Strainer:50 Mesh
4	605-004-000	Cap, Mini Sprayer	DF9.5	500-009-050	Valve Body Kit incl:2x9.13/1,9.12:1
5	605-005-000	Gasket, Mini sprayer cap	DF9.6	500-009-060	Valve Trigger SS
6	505-001-020	Buffer Spring, Mini / Unique	DF9.7	500-009-070	Trigger Screw SS(Use locrite)
7	605-007-000	Piston, Plunger: Mini Sprayer	DF9.8	500-009-080	Safety Lock Nut
8	605-008-000	Gasket, Pump Plunger Mini	DF9.9	500-009-090	Snap Ring
9	605-009-000	Pump Cylinder, Assembly	DF9.10	500-009-100	Adjusting Screw
10	605-010-000	Gasket, Mini Pump cylinder top.	DF9.11	500-009-110	Lock Nut, trigger
11	605-011-000	Cylinder Tube, Mini sprayers	DF9.12/1	500-009-121	Packing Nut
12	604-012-000	Check Valve, Mini sprayer	DF9.13/1	500-009-131	Packing, Viton x2
13	604-013-000	Pressure Gauge, 0-140	DF9.15	500-009-150	Spring, Seat
14	510-003-030	T-Connector, mini and Unique	DF9.18	500-009-180	Gasket, Seat Stem
17	605-017-000	Hook, for trigger	DF9.20	500-009-200	Seat Stem, Long
18	601-018-000	Hook Ring, metal	DF12	500-012-000	Multi-Nozzle,Assembly-CC
19	604-019-000	Pressure Release Valve	DF9.19	505-009-150	Gasket, For VE
21	604-019-006	O-Ring, syphon tube	DF12.3	500-012-030	Multi-Nozzle Holder,
22	605-022-010	Syphon Tube, S.S. Mini	DF12.4	500-012-040	Gasket, Tip
23	604-023-000	Washer, hook Protector	DF12.6	500-012-060	CC tip
24	505-002-020	Washer, multi purpose D-51P	DF12.7	500-012-070	Retainer for tip
27	601-004-130	Coiled Hose, Blue	DF12.8	935-018-000	O-Ring, for CC straw
28	601-004-040	Hose Protective Spring	DF12.10	500-012-110	Straw with O-Ring
29/1	604-029-010	Female hose Adapter,MSP,USP/L	45	605-020-010	Carrying Pouch, Airofog
43	601-004-100	Swivel Hose Adapter lower hose.	MSP Kits	501-016-030	DF Service Kit, incl.
43/1	601-004-105	Swivel Hose Adapter,USP/L, MSP			Valve Kit
43/2	601-004-103	Compression Ring, lower hose		605-035-010	Pump Service Kit, incl.
43/3	601-004-104	Retaining Nut, Lower coil hose			5, 8, 10, 12, 21, 5x24
DFV 44	501-009-000	Valve,complete Assembly: Pro			

Kits Included:

501-016-030 Valve Kit, incl. DF (9.1, 9.3*2, 9.13/1*2 9.18, 9.19*2, 12.4, 12.8)

605-035-010 Pump Service Kit, incl. 5, 8, 10, 12, 21, 5x24

Kits not Included:

604-025-100 Coil Hose Kit, Incl 27, 2x43/2, 2x43/3

505-012-100 CC straw all plastic

Conversion Factor:

1 yard	= 36 inches or 3 feet	= 0.91 metre
1 metre	= 39.37 inches	= 1.09 yards
1 metre/sec	= 2.237 miles per hr	= 196.9 ft/min
1 US gal	= 0.83 Imp gal	= 3.78 litres
1 Imp gal	= 1.20 US gals	= 4.54 litres
1 litre	= 0.26 US gal	= 0.22 Imp gal
1 US pint	= 16 US fl ounces	= 0.47 litre
1 Imp pint	= 20 Imp fl ounces	= 0.57 litre
1 pound	= 16 ounces	= 0.45 kilogram
1 kilogram	= 2.20 pounds	= 35.3 ounces
1 ounce	= 28.35 grams	
1 pound/sq inch	= 0.068 atmosphere	= 0.067 bar
1 atmosphere	= 14.70 pounds/sq in	= 1.01 bar
1 bar	= 14.50 pounds/sq in	= 0.98 atmosphere
1 kilopascal	= 0.01 bar	= 0.145 pounds/sq in

ACCESSORIES



Aerosol Nozzles



601-009-030 601-009-050 601-009-070

601-009-030; 15-30 micron aerosol nozzle, White

601-009-050; 30-50 micron aerosol nozzle, Blue

601-009-070; 60-80 micron aerosol nozzle, Red

601-009-000 Three nozzle kit listed above



601-015-240
1" wood injection tip



601-015-240
4" HD wood injection
/ Orange oil tip



605-001-500 Spare
bottle and cap



MSA-F Foamerer w/HD injection tip



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