

BUGFLOW

It gets them where they need to be



Instruction
Manual



BIOBEE®
Inspired by Nature

Warning:

For your personal safety, **read & understand** before using.
Save these instructions for future reference.

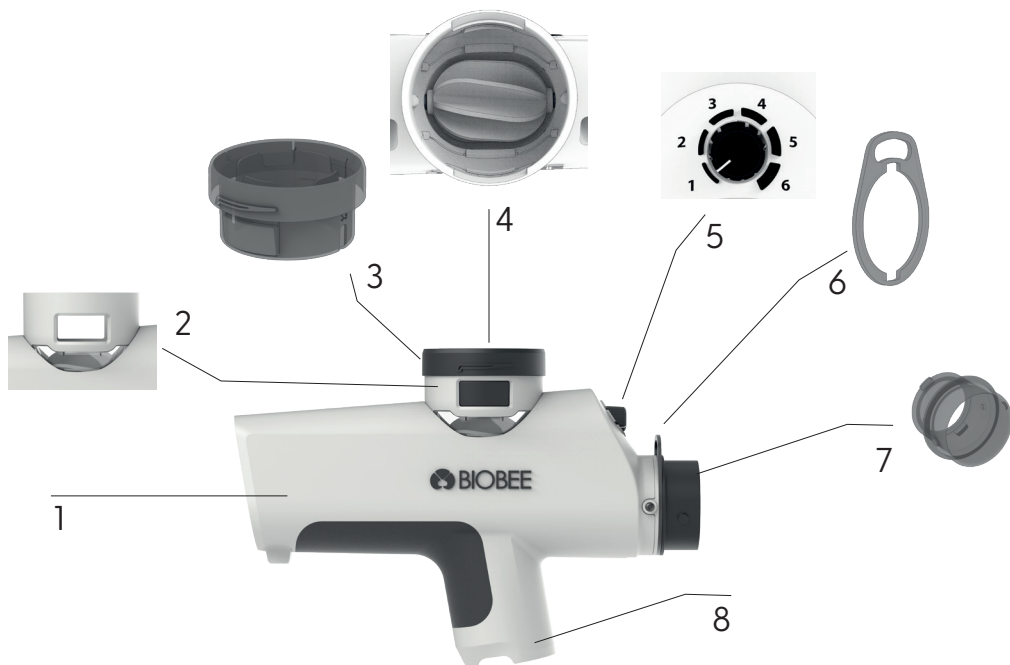
BUGFLOW



Thank you for choosing Bugflow for your biological pest control application needs. This device has been specifically developed and designed by experienced IPM professionals. Bugflow is an innovative blower attachment for the uniform release and application of beneficial insects and mites in both greenhouse and field-grown crops.

COMPONENTS

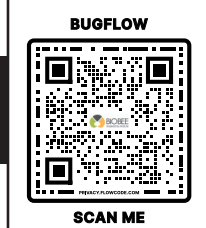
1. BugFlow main body
2. Cylinder joint with viewing window
3. Cylinder adapter
4. Rotor
5. Application rate dial
6. Metal strap loop
7. Blower adapter
8. Battery house



Suitable blower models: Makita, Milwaukee and DeWalt.

Requires a 10.8 volt battery model BL1014

BLOWER & BATTERIES NOT INCLUDED



ADVANTAGES

1. Consistent & uniform application of beneficial insects and mites and their feed on the crop for a distance of up to 4 m (13 feet)
2. Easily adjustable flow rate
3. Good maneuverability in tight spaces
4. High survival rate of beneficial mites during application
5. Saves time and labor in comparison to manual application

AVAILABLE ACCESSORIES

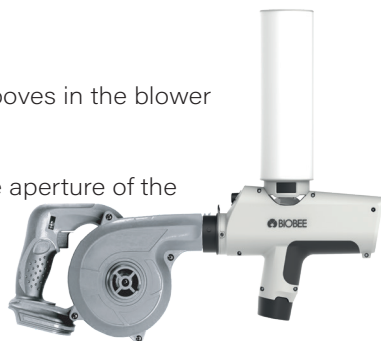
- Funnel + lid
- Blower adapter for Milwaukee M18-BBL
- Blower adapter for DeWalt DCV100

SAFETY AND PROTECTION

1. Always use eye and ear protection.
2. Use a dust mask specially designed to filter out microscopic particles.
3. Work in a well-ventilated area.
4. Hold the device only from the designated areas.
5. Batteries must be disconnected when Bugflow is not attached to the blower or in use.
6. Follow the blower and battery manufacturer's instructions.
7. Use the device only for its intended purpose.


BUGFLOΣ ASSEMBLY

- A. Align the blower adapter (7) with the corresponding grooves in the blower and turn to lock place.
- B. Align the protrusions of the cylinder adapter (6) with the aperture of the cylinder joint (2) and push to click in place.
- C. Slide the battery cartridge (not included) in the battery house (8) until it locks in place with a click.





IMPLEMENTATION GUIDELINES

1. Once assembled, run the blower before attaching the cylinder, to ensure the rotor is spinning and the air is flowing properly through the barrel.
2. Adjust the settings on the settings dial.
3. Hold the cylinder bottom, firmly press one of the arrow markers and push inward →  firmly until the mesh ring is partly detached.
4. Place the cylinder over the cylinder adapter (3) and tighten in a clockwise circular motion.
5. Point the Bugflow towards the area to be sprayed.
6. Use the shoulder carry strap to reduce fatigue during application.
7. Walk at a constant speed while holding the blower at the right angle to best cover the crop and ensure a uniform spread of the material on the crop.

IMPORTANT

The rotor will start and stop automatically with the air from the blower!
When air flows the rotor rotates, when the air flow stops, the rotor stops.
Ensure no foreign objects enter the rotor. Small contaminants (e.g. pebbles) can block the rotor from spinning.

WARNING
DO NOT PUT FINGERS IN ROTOR IT MAY CAUSE SERIOUS INJURY

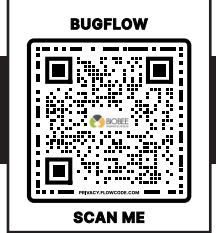
RATE APPLICATION SETTING GUIDELINES

1. Identify product concentration (per 1 liter cylinder or 2 x 500ml bottles) and carrier material.
2. Select BugFlow dial setting based on the # of predatory mites to be applied (sq. m) and desired spacing between each application pass (max 4 m)*.
3. The area treated (sq. m) can be estimated based on the dial setting selected.

*Calculations in table assume a walking speed of 1.3 m/sec (3 mph)

TABLE. Number of predatory mites applied per square meter at 2-meter spacing and Approximate area treated (square meters)

DIAL	25K (50K)/liter			Treated area		
	Sawdust	Vermiculite	Bran	Sawdust	Vermiculite	Bran
1	10 (20)	10 (20)	11 (22)	2531	2460	2308
2	18 (36)	21 (42)	22 (44)	1386	1193	1118
3	34 (68)	32 (64)	32 (64)	477	773	780
4	52 (104)	41 (82)	37 (74)	380	611	683
5	66 (112)	57 (114)	43 (86)	131	440	584
6	70 (140)	65 (130)	49 (98)	360	382	512



DISCLAIMER

Walking speed, row spacing, wind, blower operation and other external factors will influence BugFlow application. The final calibration adjustments should be made based on user experience. If in doubt of the correct BugFlow rate setting for your beneficials, please consult your local BioBee representative.

MAINTENANCE

The tool, rotor and its components must be kept clean, use air pressure to clean them.

TRIMONTHLY MAINTENANCE

BioBee recommends you perform a trimonthly cleaning for best BugFlow maintenance. Clean BugFlow with an air pressure washer and clean off any residue.

1. Remove the blower adapter (#7) by removing the two screws that attach it to the blower body.
2. Hold the blower, vertical to the ground, and shake it lightly.
3. Attach the air pressure gun to the slot of the adapter and apply air pressure.
4. Repeat these steps in the rotor area (#4) and where dirt accumulation is visible.
5. Once BugFlow is clean, re-attach the adapter to the BugFlow by screwing it back into place with the two screws.

STORAGE

Keep the Bugflow disconnected from the battery when not in use.
Store BugFlow and accessories in a dry, dust-free area, protected from direct sunlight.

SERVICE & WARRANTY

The 12 month warranty is valid from the purchase date and will be provided with proof of the original purchase invoice.

The warranty will be null and void in the following cases:

1. Failure to follow the instructions (operation, storage and maintenance).
2. Breakage or penetration of a hard foreign object.
3. If the device was opened or changes were made other than by the BioBee laboratory.

Repair and adjustment services will be performed by the BioBee company from which the product was purchased. The customer will be responsible for transferring the device to the seller.

BioBee is not liable for any direct or indirect damage to the BugFlow caused by the use of biological materials other than those supplied by BioBee.



TROUBLESHOOTING

PROBLEM	PROBABLE MALFUNCTION	SOLUTION
Loose connection between the blower and BugFlow	There is dirt in the connection	Clean the adapter and connection areas thoroughly.
	BugFlow and the blower are not tightly locked	Tighten the blower and BugFlow until completely locked. The longitudinal axis of Bugflow should be aligned with the blower axis.
	There is a dent/fracture in the connection	Contact your BioBee representative.
The battery does not latch on.	The battery is not all the way in.	Insert the battery until you hear a click.
	Wrong model battery.	Check the model, the correct battery model should be BL1013 / BL1014
	Unaligned electrodes.	Align the electrodes, at the base of the battery.
The material does not come out of BugFlow.	The RPM is too low.	Make sure the RPM is set to speed 3-4.
	Material blockage in cylinder/funnel.	Ensure there is no material stuck above the rotor by separating the cylinder/funnel and visually ascertaining the material flows freely to the rotor.
	Blower is not generating sufficient wind	Ensure the blower is working properly.
The rotor is stuck	Battery charge level is low	Charge the battery.
	Battery is not properly installed	Ensure the battery is properly installed
	The RPM is too low	Make sure the RPM is above 3.
	The rotor is stuck	Gently press the winglet (locate behind the blower adapter), ensure it moves back and forth freely.
		Ensure the area above the rotor is clean.

If the problem isn't solved after following the above steps, please contact your BioBee representative.



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