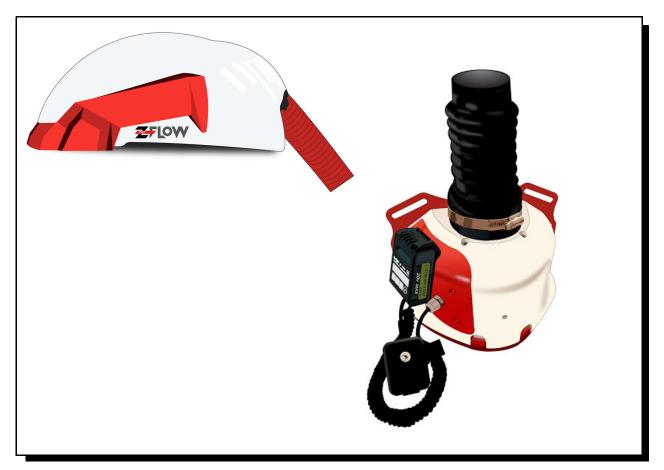
### **User Manual**







47550, Rev 01 January, 2020

### Cautions, Warnings, and Notices

### **ACAUTION**

It is highly recommended that you use appropriate safety eye wear when wearing a Z Flow Pro helmet system to meet ANSI Z87.1-2003 standards. Z Flow Pro air curtain is not intended to replace appropriate safety eye wear. If you have questions, the standard itself should be reviewed and relied on. For a copy of the ANSI Z87.1-2003 standard, go to www.ansi.org.

The Z Flow Pro helmet system provides an added layer of protection; it does not replace the use of a face mask or respirator if specifically required. It is recommended that applicable Occupational Safety and Health Administration (OSHA) requirements are followed.

### **AWARNING**

Z Flow Pro provides limited protection only, and misuse or failure to follow warnings and instructions in this User Manual may result in serious personal injury or death. For proper use, see supervisor, User Manual, or contact Z Flow Pro Technical Assistance at support@zflowpro.com.

#### **AWARNING**

The Z Flow Pro helmet system helps reduce exposure to certain airborne particulates. Before use, the wearer must read and understand the User Manual provided as a part of the product information. A written respiratory protection program must be implemented meeting all the requirements of OSHA 1910.134 including training, fit testing and medical evaluation. In Canada, CSA standards Z94.4 requirements must be met and/or requirements of the applicable jurisdiction, as appropriate. Misuse may result in injury, illness or death. For correct use, consult supervisor and User Manual, or contact support at support@zflowpro.com.

#### **NOTICE**

For Workplace/Occupational Applications Only.



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### Section 1

# **Shipping Contents, Approvals, and Specifications**

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### **CONTENTS**

Each Z Flow Pro kit contains (1) helmet, (1) hose, (1) backpack and controller, (1) set of adjustable harness straps, (20) filters, (1) optional battery and charger.

# APPROVALS AND SPECIFICATIONS

	Approvals
ANSI Ansorous Rational Standards Institute	Meets requirements of ANSI/ISEA Z89.1-2014, Type 1, Class C
CENELEC	CENELEC EN 61000-6-3*CEI Issued: 2007/01/01 Electromagnetic compatibility (EMC) Part 6-3: Generic standards - Emission standard for commercial and light-industrial environments-Includes amendment 1: 2011/03/01, Corrigendum 1: 2012/08/01 CENELEC EN 61000-6-1*BEI Issued:2007/01/01 Electromagnetic Compatibility (EMC) Part 6-1: Generic Standards - Immunity for Commercial and Light- Industrial Environments
(I)L	UL 507:2017 Ed.10+R:15Aug2018
Æ	FCC 47CFR: (Part 15 Subpart B) Title 47 CFR Part 15 Subpart B: Unintentional Radiators
IC/ES	IC ICES-003:2016Ed.6 Information Technology Equipment (Including Digital Apparatus) – Limits and Methods of Measurement



Approvals Specifications			
Helmet Weight	2.293 lbs		
Backpack Weight	3 lbs (does not include battery)		

#### **INTENDED USE**

This protective headwear is designed to absorb some of the energy of a blow through partial destruction of its component parts. Damage may not be readily apparent, so any protective headwear subjected to severe impact should be replaced. This protective headwear must not be painted or cleaned with solvents. Any decals applied to the protective headwear must be compatible with the surface material and known not to affect adversely the characteristics of the materials used in the protective headwear. Any addition or structural modification, or use of a substitute suspension, may reduce the protective properties afforded by this protective headwear.

The Z Flow Pro helmet and backpack system helps reduce exposure to certain airborne contaminants, and should be used in accordance with all local regulations, as well as a written respiratory protection program pursuant to 29 CFR 1910.134, and protective eye wear pursuant to 29 CFR 1910.133. It is intended to provide a second layer of protection, and is not intended to replace face respirators, or protective eye wear, in any workplace where respirators and eye wear are necessary to protect the health of the employee or whenever respirators are required by the employer, pursuant to regulations or a respiratory protection program. Misuse may result in injury, sickness or death.

# PERFORMANCE CRITERIA

The performance criteria for head protection is provided in the American National Standards Institute (ANSI) Z89.1 American National Standard for Industrial Head Protection. This Standard is incorporated in 29CFR 1910.135 and by reference in 29CFR 1910.6.

# SERVICE LIFE AND GENERAL INSPECTION

The Z Flow Pro helmet was made with high-quality, wear- resistant materials, but it will need to be replaced periodically. Inspect your helmet before and after each use. Any part(s) should be replaced as required. Always replace your helmet after an impact or penetration. As the manufacturer of your helmet, we recommend that you replace the following (assuming proper care and storage throughout use of product):

- Suspension replace after no more than twelve months of use.
- Helmet Shell replace after no more than five years of use.
- · Backpack replace after no more than five years of use.

To ensure that a helmet shell or suspension has not reached the end of its service life, recommend the following procedure before and after each use:

- The hard hat consists of two components: the shell and the ratchet suspension. Both require inspection during assembly and before each use. During shell inspection, you should look for cracks, nicks, dents, gouges, and any damage caused by impact, penetration, abrasions, or rough treatment. Additionally, inspect the shell for the following: stiffness, brittleness, fading, dullness of color, or a chalky appearance. If the shell exhibits any of these conditions or if it is obviously otherwise damaged, it should be removed from service and replaced immediately.
- The suspension should be checked for loss of flexibility. Check for cracks, breaks, frayed straps, or damaged stitching. If any of these conditions exist, the suspension must be replaced immediately.
- In addition to everyday wear and tear, ultraviolet (UV) radiation can
  pose a problem for hard hats constructed of plastic materials. Damage
  caused by UV radiation is easy to spot: the hat will lose its glossy finish
  and eventually take on a chalky appearance. Further degradation could
  cause the shell to actually start flaking away. A helmet with worn,
  damaged or defective parts should be removed from service.

#### NOTE:

ALWAYS replace the helmet after an impact or penetration to the helmet. The helmet's life should ultimately be determined by routine daily inspection before and after use.

The Z Flow Pro helmet will not be sold without a suspension - the shell and suspension have been tested as an assembled product, and the helmet shell alone does not meet the ANSI standards; the shell and suspension work together in order to provide the necessary protection.

Only use the MSA suspension designated for the helmet model. Do not mix and match any other suspension system.

PROPER USE REQUIRES THE REPLACEMENT OF THE FILTER ON A REGULAR BASIS. FAILURE TO DO WILL REDUCE THE EFFECTIVENESS OF THE Z FLOW PRO AIR CURTAIN, AND MAY RESULT IN INJURY, SICKNESS OR DEATH. ALSO, FAILURE TO REPLACE THE FILTER COULD DAMAGE THE MOTOR, CAUSING IT TO OVERHEAT AND SHUT DOWN. THE FILTER SHOULD BE REPLACED WITH A NEW FILTER WHEN IT HAS BECOME COVERED WITH RESIDUE, OR OTHERWISE APPEARS TO BE CLOGGED. WE RECOMMEND INSPECTING THE FILTER EACH TIME THAT THE BATTERY IS CHANGED.

### **ACAUTION**

The manufacturer of the helmet is responsible for conducting the ANSI, or other tests, and the two primary components (shell and suspension) are tested as a unit to meet the standards. Do not interchange suspensions from different manufacturers because they will not have been tested to ensure compliance with the standards and would likely void certification.

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# Section 2 Assembly and Quick Start Guide

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Assembly Stepspage 2-2	
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Disassemblypage 2-3	

#### **ASSEMBLY**

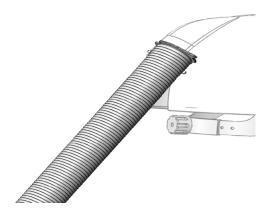
Please follow the steps below to assemble your Z Flow Pro Helmet System, straps, backpack, and insert filters.

### **AWARNING**

DO NOT HAVE POWER TURNED ON WHILE ASSEMBLING.

#### **ASSEMBLY STEPS**

1. Insert the red hose into the base of the helmet and press firmly to lock into place.



- 2. Insert base of red hose into the black hose mount and test to ensure a secure fit.
- 3. Attach adjustable harness straps through backplate slots of backpack:
  - •Slide shoulder straps through top slats and snap tightly to ensure snaps are fully connected.
  - •Slide waist straps through lower slats and snap tightly to ensure snaps are fully connected.

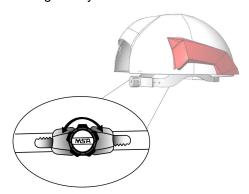


### **AWARNING**

DO NOT HAVE POWER TURNED ON WHILE INSERTING FILTERS.

#### **Inserting Filters**

- Open filter door on bottom of backpack by un-clipping the two fasteners.
- Insert filter with red side facing up by positioning holes on the four pegs and pressing down.
- 2. Snap Filter Cover snuggly into place until you hear a snap to ensure filter cover is securely shut.
- 1. Charge battery check indicator lights to confirm fully charged.
- Attach battery to backpack by sliding battery onto the slats until you hear a click to confirm secure connection.
- 3. Slide on shoulder harness straps and adjust for a comfortable fit and adjust waist strap for comfort.
- 4. Place helmet on head and adjust suspension for a snug, comfortable fit, with helmet sitting evenly on head.



- 5. Attach controller to side harness strap or waist strap in location preference to allow for easy access.
- 6. Turn on controller with On/Off switch and adjust power level using dial on controller.

**IMPORTANT:** Do not run the power with the backpack sitting on a hard surface, which will block the intake of air into the filter basket. Do not otherwise obstruct the filter basket when operating. Keep clothing, plastic, and other materials away from the filter basket area to ensure an unobstructed intake of air flow into the backpack to ensure optimal performance, and minimize potential for the motor failure.

# QUICK START INSTRUCTIONS

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#### DISASSEMBLY

### **AWARNING**

DO NOT HAVE POWER TURNED ON WHILE DISASSEMBLING.

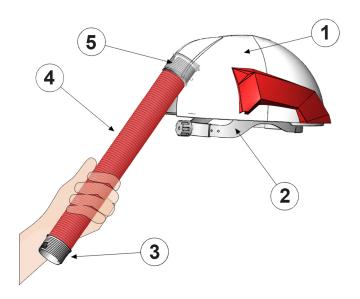
#### **Detach the Hose**

- Detach the hose from the backpack by pulling firmly up on red hose. Black hose mount to remain affixed to the backpack for safety reasons.
- 2. Detach red hose from helmet by pulling down on hose to loosen and then pull off.
- 3. Remove battery before cleaning and storing the backpack.
- 4. DO NOT REMOVE BLACK HOSE MOUNT FROM BACKPACK. NEVER PUT YOUR HAND OR ANY OBJECT INTO THE BACKPACK TO AVOID DAMAGING THE MOTOR OR CAUSING SERIOUS INJURY.

# **Section 3** Parts Diagram and Parts List

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age 3-2

### HELMET PARTS DIAGRAM

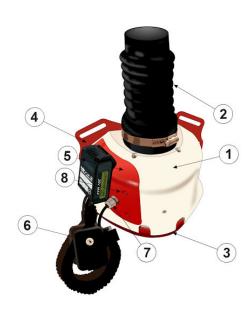


### **HELMET PARTS LIST**

ltem Number	Part Number	Description	QTY
1	47503-03	Helmet Shell Outer	1
2	47505-00	MSA 10148708 Ratchet Suspension	1
3	47506-03	2 to 2 Adapter	2
4	47507-00	Hose Spring 18 inch	1
5	47508-02	Twist Lock Adapter	1



# BACKPACK PARTS DIAGRAM



### **BACKPACK PARTS LIST**

Item Number	Part Number	Description	QTY
1	47301-00	Backpack housing	1
2	47302-00	Backpack hose mount	1
3	47303-00	Backpack filter door	1
4	47304-00	Backpack back plate	1
5	47305-00	Backpack battery cover assembly	1
6	47201/47202	Controller housing base	1
7	7310K31	Chemical Resistant Liquid tight Cord Grip	1
8	96068A153	#6 x 1/2" ss FHTFS	1
9	47203-00	Cable/Cord	1

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### Section 4

# Troubleshooting, Cleaning, and Storage

Troubleshooting/ FAQs	page 4-1
Cleaning Instructions	page 4-2
Storage instructions	page 4-2

### TROUBLESHOOTING/ FAQS

1. What can I do to extend the battery life of a fully charged battery?

Response: If full strength is not needed, turn controller down to 3/4 speed; you will get longer battery life by not running the controller at full speed the entire time.

2. What if I notice paint residue or drywall dust on the side of my face?

Response: The filter needs to be changed regularly, especially when working with drywall dust, so check the filter and if it is clogged, change it to a new filter.

#### **AWARNING**

It is very important to change the filter when it becomes covered. We recommend checking the filter every time you change the battery.

3. The air curtain doesn't seem to cover my full face.

Response: Adjust the angle of the helmet to make sure it is sitting evenly on your head and tighten the ratchet suspension to a comfortably snug fit.

4. What if the backpack overheats or becomes warm to the touch?

Response: Make sure that there is nothing covering the filter basket on the bottom of the backpack, such as clothing, plastic, or similar materials.



### CLEANING

### INSTRUCTIONS

- Clean helmet and backpack regularly with mild soap (no detergents) and water.
- Helmet must be cleaned regularly in order to be adequately inspected.
- Cleaning of the suspension with mild soap and warm water will help reduce skin irritation.
- Do not clean helmet with paint thinners or cleaning agents which can weaken the shell of the helmet.
- Do not allow water to get into the inside of the hose or the backpack; if water gets into the hose, it may short the motor.
- Never drill holes, paint or apply labels to protective headgear as this may reduce the integrity of the protection.
- Never throw, drop or use helmet for support Z Flow Pro is a specialized piece of equipment and should not be misused or abused.
- Store helmet and backpack in a clean, dry environment.
- Do not store in direct sunlight, such as on the rear window shelf of a car, since sunlight and extreme heat can cause damage.

### **STORAGE** INSTRUCTIONS

### **AWARNING**

Failure to follow these warnings can result in serious personal injury or death.

- This helmet provides limited impact and penetration protection to top of head.
- This helmet is not specifically designed to protect against front, side, or rear (that is, "lateral") blows.
- · As an Industrial Protective Type I helmet, this helmet should be effective against small tools, bolts, rivets, and similar hazards. Some conditions can exceed this helmet's capacity to protect against serious injury or death. Avoid areas where chance of severe impact or penetration exists.
- Z Flow Pro helmet is a Class C helmet, which provides no electrical protection.
- This helmet must fit securely on head to provide maximum protection.
- Never store gloves, rags, eyewear, earplugs, etc., between suspension and helmet shell, as objects in this space can transmit large forces to head and neck resulting in serious injury or death.
- · Never use this helmet as a vehicular or sports helmet.
- · Never alter or modify this helmet in any way.
- Never use paint, solvents, or hydrocarbon-type cleaners (M.E.K., thinner, gasoline, kerosene) on this helmet, as these substances may cause unnoticeable damage.

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Poma 22, LLC

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http://zflowpro.com/

