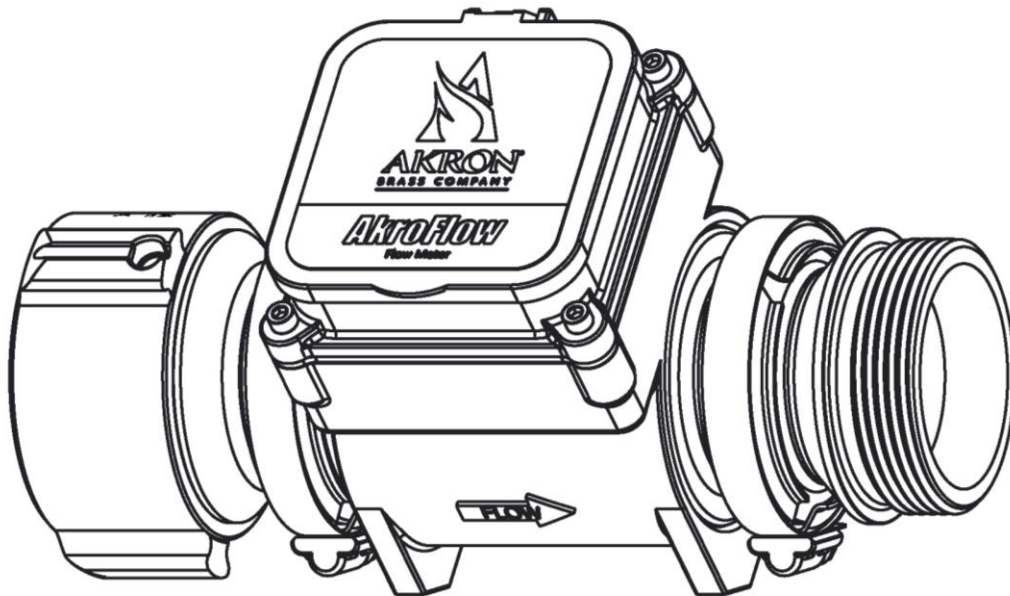




STYLE 9301 AkroFlow™ FLOW METER INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

The following is intended to provide the basic instructions for installation, operation, and maintenance. Read and understand these operating instructions before use.





STYLE 9301 AkroFlow™™ FLOW METER INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS



Read and follow the operating instructions before use.



For firefighting use only.

Product Ratings

Specifications:

Type		Electromagnetic (Mag-Meter)
Weight		5.3# (2.4kg)
Dimensions: L x W x H		10-3/4" (273mm) x 4-3/8" (111mm) x 6" (152mm)
Flow Passage		2" (50.8mm) Full Port
Fittings		2-1/2" female fulltime swivel inlet, 2-1/2" male thread outlet
Thread choices		NH, BSP, NPSH
Maximum operating pressure		200psi (13.8 bar/ 1380 kpa)
Operating temperature range		10° to 130°F (-12° to 54°C)
Accuracy		±1%
Flow range		10gpm to 600gpm (38lpm to 2270lpm)
Pressure drop across the meter		4psi @ 600gpm (0.28 bar @ 2270lpm)
Materials	Body	Glass-filled polypropylene
	Inlet	Hardcoat aluminum
	Outlet	Hardcoat aluminum
	Electrodes	316 stainless steel
	Display Cover	Polyethylene
	Flange Clamps	300 series stainless steel
Display		Flow Rate with totalizer
	Digits	6
	Units	Gallons/Minute or Liters/Minute (Selectable)
Power	Batteries not supplied with Export units	6 AA Lithium cells, replaceable. Life; 1 year with meter in use; 3 years dry. Low battery indicator "Lo Batt".
Empty Pipe Detection		Hardware/software, conductivity-based
NEMA rating		NEMA 4X standard: -40° to 176°F (-40° to 80°C) storage
IP Rating		IP64

Product Warnings

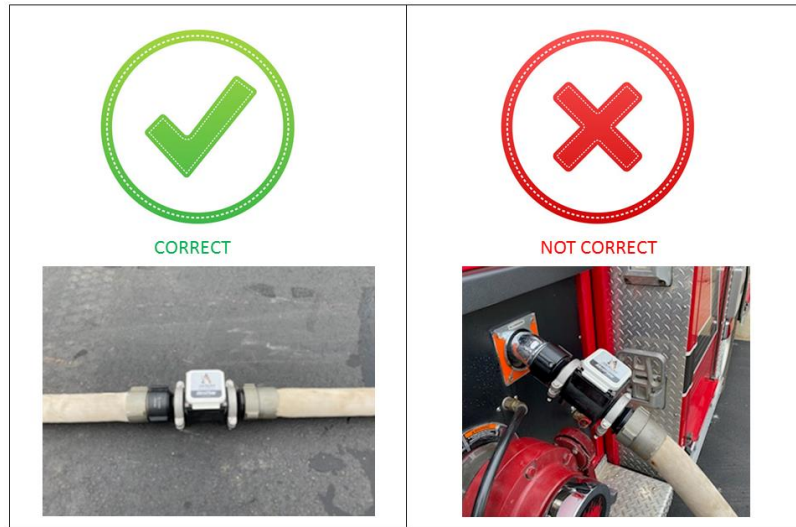
	<ul style="list-style-type: none"> Indicates a hazardous situation which, if not avoided, WILL result in death or serious injury.
	<ul style="list-style-type: none"> Indicates a hazardous situation which, if not avoided, COULD result in death or serious injury.
	<ul style="list-style-type: none"> Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
	<ul style="list-style-type: none"> Addresses practices not related to personal injury.



STYLE 9301 AkroFlow™™ FLOW METER INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

⚠ WARNING

- Do not connect the AkroFlow™ flow meter directly to a rigid discharge or intake. The weight of a hose with water combined with potential rapid movement of the hose while flowing can create extremely high forces on the AkroFlow™ causing housing, outlet and inlet damage to the polymer components. The AkroFlow™ was designed to be placed on the ground with a length of hose attached to the inlet and outlet. Failure to follow these operating instructions may severely damage the AkroFlow™.



⚠ WARNING

⚠ WARNING

⚠ WARNING

⚠ WARNING

⚠ WARNING

⚠ WARNING

⚠ CAUTION

- Not designed for explosive environments.
- The AkroFlow™ is intended for use by trained personnel. Seek appropriate guidance and training to reduce risk of injury.
- The AkroFlow™ must be properly connected. Ensure the thread on the hose ends match the threads on the inlet and outlet of the AkroFlow™. Not doing so may result in leaks or uncoupling under pressure.
- Charge all lines slowly to facilitate a controlled water pressure build-up during start-up.
- Do not exceed the maximum pressure or flow ratings of the AkroFlow™. Exceeding these ratings may lead to an injury or may cause damage to the AkroFlow™.
- Use only for product testing or product demonstrations by trained operators.
- The AkroFlow™ should be inspected prior to and after each use, to ensure it is in good operating condition. Periodically, an unanticipated incident may occur where the AkroFlow™ is used in a manner that is inconsistent with standard operating practices. A partial list of potential misuses follows:
 - Operating above maximum rated pressure and flow.
 - Not draining and allowing water to freeze inside the AkroFlow™.
 - Dropping the AkroFlow™ from a height where damage is incurred.
 - Prolonged exposure to temperatures above +130 degrees F or below 10 degrees F.
 - Operating in a corrosive environment.
 - Other misuse that might be unique to your specific firefighting environment.
- There are many "tell-tale" signs that indicate AkroFlow™ repair is in order, such as:
 - Controls that are inoperable or difficult to operate.
 - Excessive wear on components.
 - Unusual AkroFlow™ readings while flowing.
 - Water leaks.

PHONE: 800.228.1161 | WEBSITE: www.akronbrass.com



STYLE 9301 AkroFlow™™ FLOW METER INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

NOTICE

NOTICE

NOTICE

NOTICE

NOTICE

- If any tags or bands on the nozzle are worn or damaged and cannot be easily read, they should be replaced.
- For use with fresh water. Not recommended for pure foam concentrates, salt water or petroleum products.
- Not for use with CAFS applications.
- Air in the system will affect AkroFlow™ performance. Insure there is enough water flow to fill the AkroFlow™ and all hoses.
- Do not flow opposite of the directional arrow on the side of the AkroFlow™. Doing so will result in the error message [-] indicating no flow reading is being generated.

Introduction

The AkroFlow™ flow meter is a 2" full-bore corrosion resistant plastic bodied electromagnetic (mag meter) flow meter designed for testing firefighting equipment. The AkroFlow™ is provided with a 2-1/2" female fulltime swivel on the inlet and a 2-1/2" male thread on the outlet, both made from hardcoat aluminum.

With no moving parts in the flow path, the AkroFlow™ mag meter permits unobstructed flow, minimizing flow disturbances. The hinged, polyethylene cover protects from dust and UV rays, while permitting easy access to the LCD flow rate and totalizer display. Flow rate and total flow is selectable between gallons/minute, liters/minute or liters/second.

The AkroFlow™ is powered by six (6) AA lithium batteries which are easily sourced and replaceable. Batteries should be changed when the "Lo Batt" (low battery) indicator appears. Batteries will not be included with shipments outside the domestic U.S.A.

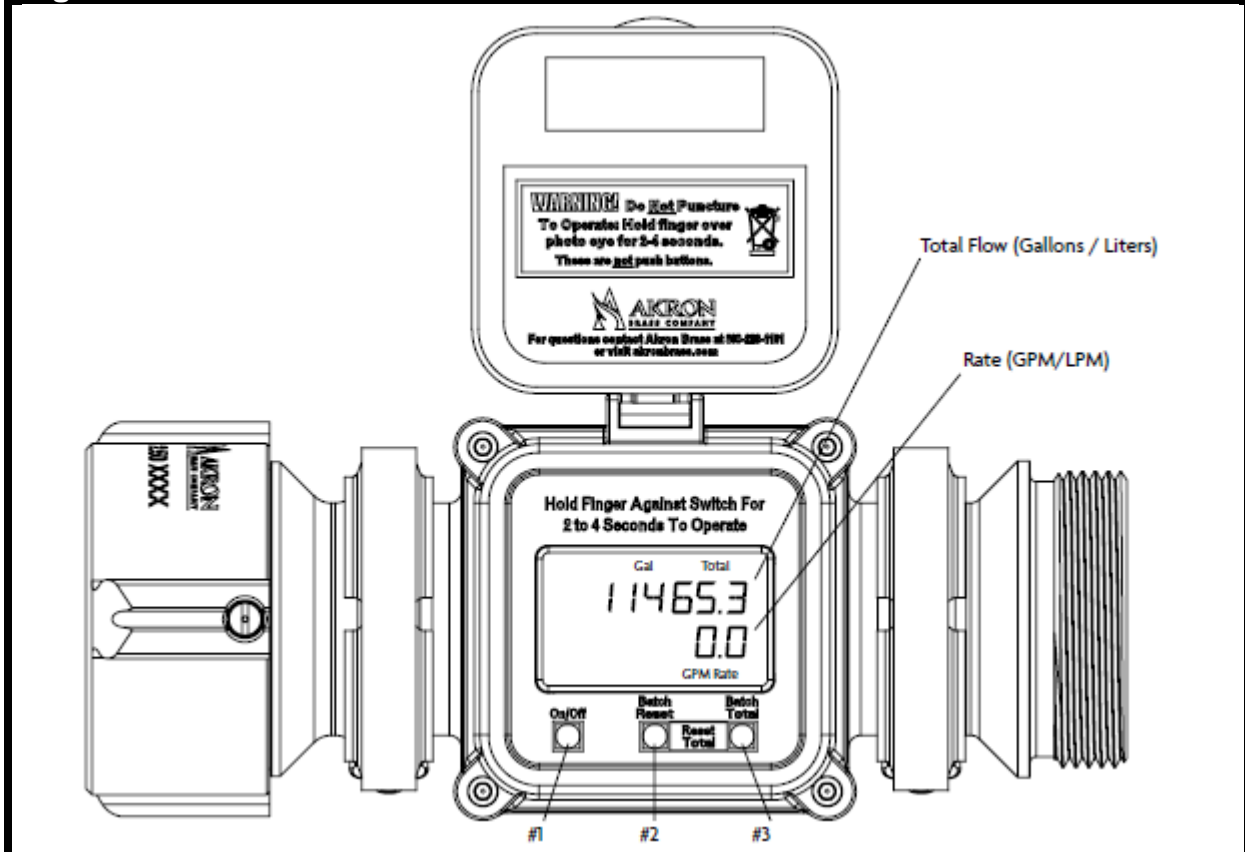
Instructions

1. There are 3 photo eyes located on the face of the AkroFlow™, Fig 1. **Note:** These are not buttons, so you will not push them. Instead to activate you must hold your finger over the photo eye for 2-4 seconds.
 - a. To turn on the AkroFlow™, hold your finger over the "On/Off" photo eye for 2-4 seconds (Photo eye #1). To turn off the AkroFlow™ repeat the "On/Off" procedure. The AkroFlow™ has an automatic shutoff after 15 minutes of inactivity.
 - b. To reset the current session batch total, hold a finger over the "batch reset" photo eye (photo eye #2). This will reset the current session to zero however by holding your finger over the "batch total" photo eye #3, the total volume of water will be displayed. The volume of water will continue to be recorded from session to session unless the "batch/total" is reset according to the procedure below. **Note: There must be no flow through the AkroFlow™ to perform this function.**
 - c. To reset the "batch total" to zero and clear out any past batch information you must simultaneously hold a finger over both the "batch reset" and the "batch/total" photo eyes (photo eye's #2 & #3). **Note: There must be no flow through the AkroFlow™ to perform this function.**
 - d. To change from gallons/minute to liters/minute or liters/second, you must simultaneously hold a finger over the "On/Off" and "batch/total" photo eye (photo eye #1 & #3). **Note: There must be no flow through the AkroFlow™ to perform this function.**
 - e. The top line of the display is total (totalizer-gallons or liters). The bottom line is rate (gpm or lpm).



STYLE 9301 AkroFlow™™ FLOW METER INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

Figure 1



2. To replace the six (6) AA batteries located inside the AkroFlow™, simply remove the four cover bolts and gently remove the top cover. Be careful not to lose the washers. Move the top cover to one side and remove the foam retainer which covers the battery tray. Remove the old batteries and replace with new ones, taking care to follow the polarity indicators in the battery tray. Replace the foam retainer, then put the top cover back in place. Put the four screws with washers back and tighten them firmly. Be careful not to pinch any wires when assembling the cover. **Note:** It is recommended to replace the batteries on a yearly basis.
3. It is advisable to thoroughly clean the AkroFlow™ and the electrodes at least once a year. This can be done by gently rubbing the electrodes in the waterway with a piece of emery cloth.

Setup Instructions

1. Prior to installing the AkroFlow™ in the hose line to be tested, lay out all the hose and fill the hose line to remove all the kinks and twists in the hose. Not doing so may cause the AkroFlow™ to move along the ground or flip while filling and pressurizing the hose lay.
2. For best results and greatest accuracy, the AkroFlow™ should have a 2-1/2" hose line into the AkroFlow™ as well as a 2-1/2" hose out of the AkroFlow™, Fig 2.
3. It is recommended to have at least 20" of straight 2-1/2" hose before and after the AkroFlow™. This creates flow with little to no turbulence which can affect the digital readings of the AkroFlow™.

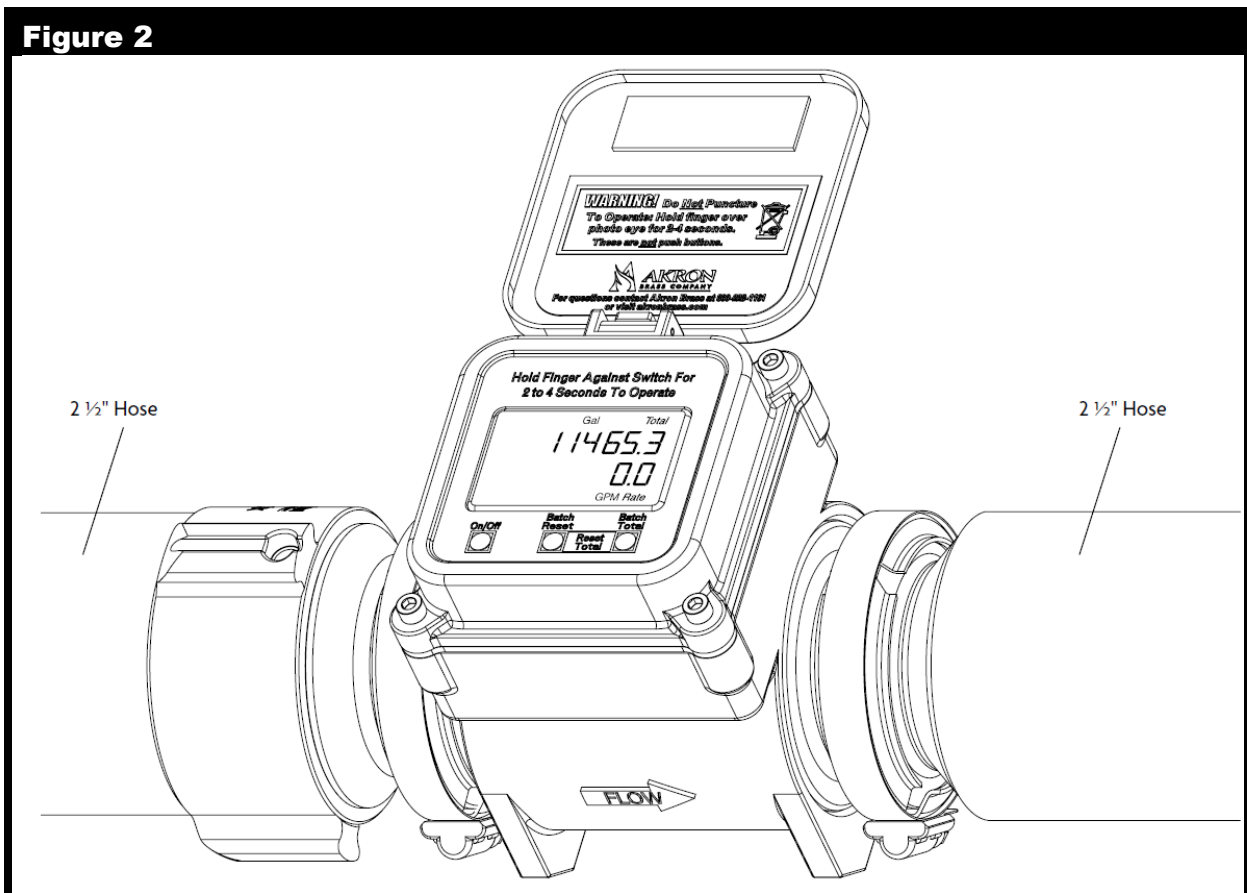
PHONE: 800.228.1161 | WEBSITE: www.akronbrass.com



STYLE 9301 AkroFlow™™ FLOW METER INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

- The AkroFlow™ has a maximum operating pressure of 200psi (14 bar), therefore when placing the AkroFlow™ in the hose lay, consider the pressure loss of the hose being used so the pressure at the AkroFlow™ does not exceed 200psi (14 bar).
- When testing hand line nozzles, other sizes of hose are acceptable provided the AkroFlow™ maintains the 2-1/2" hose size in and out of the meter. The hose lay can then be adapted down to other sizes of hose to match the equipment being tested at the end of the hose lay.
- When flowing through the AkroFlow™, some error messages that may appear on the screen are as follows:
 - EP-: Empty pipe indicating no flow is passing through the AkroFlow™ and the flow meter is empty.
 - [-]: Indicates the AkroFlow™ is connected into the hose lay opposite the direction of flow according to the flow arrow on the side of the flow meter.

Figure 2



Recommended Storage

- While not in use, a commercially available storage case is recommended.
- An alternate option is to mount the AkroFlow™ using a 2-1/2" nozzle holder. If mounted in a vehicle on the nozzle holder or stored in a vehicle, the AkroFlow™ may be subject to excessive vibration which is not covered under warranty.



STYLE 9301 AkroFlow™™ FLOW METER INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

Maintenance Instructions

1. After use, flush the AkroFlow™ with clean water to clean grit and dirt from around exterior moving parts. Doing so will allow the AkroFlow™ to operate as designed.
2. Over time the O-ring seals may need replaced. This can be accomplished by purchasing the appropriate Akron repair kit shown on the parts list. Use qualified maintenance mechanics or return the AkroFlow™ to Akron Brass for repair.

Warranty Statement

WARRANTY AND DISCLAIMER*: We warrant Akron Brass products for a period of one (1) year after purchase against defects in materials or workmanship. Akron Brass will repair or replace product which fails to satisfy this warranty. Repair or replacement shall be at the discretion of Akron Brass. Products must be promptly returned to Akron Brass for warranty service. We will not be responsible for: wear and tear; any improper installation, use, maintenance or storage; negligence of the owner or user; repair or modification after delivery; failure to follow our instructions or recommendations; or anything else beyond our control. WE MAKE NO WARRANTIES, EXPRESS OR IMPLIED, OTHER THAN THOSE INCLUDED IN THIS WARRANTY STATEMENT, AND WE DISCLAIM ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. Further, we will not be responsible for any consequential, incidental or indirect damages (including, but not limited to, any loss of profits) from any cause whatsoever. No person has authority to change this warranty.



**STYLE 9301 AkroFlow™™ FLOW METER
INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS**

Revision History

Revision	Reason Updated
5/2019	New Instruction
9/2020	Added warning note about not hanging the AkroFlow™ off a discharge or intake.
1/2021	Updated product warnings section.