Vapor Flame

VF6c Manual

VaporFlame

Designed & Built

20 13

Orlando

Need Help?

Rev. 4.1 3/26

VF6c User Manual

VaporFlame® Safe Flame Effect Unit

1. Getting Started

What's Included

- 1 × VF6c VaporFlame Effect Unit
- 1 × Power Cord (PowerCON True1)
- 1 × VF6c User Manual
- 1 × VaporFlame Hose Adapter

Unpacking and Inspection

Carefully remove the VF6c from its packaging and verify that all components listed above are present.
Inspect the unit for any visible damage that may have occurred during shipping. Although VaporFlame fixtures are built for durability, damage can occur in transit.
Retain all original packaging materials. If the unit must be returned for service, it must be shipped in its original packaging to prevent damage during transport.

Power Requirements

The VF6c must be powered from a switched circuit.
Do **not** connect the unit to a dimmer pack, rheostat, or variable resistor—even if the dimmer channel is used as a non-dim switch.

- Input Voltage: 47 ~ 63Hz; 90~264 Vac
- Power Supply: Internal auto-switching
- Current Draw: 20 watts

Verify that the supply voltage matches the specified range before connecting power. Supplying incorrect voltage may result in irreparable damage.

Contact & Support

For technical support, documentation updates, or service inquiries, visit:
www.vaporflame.net

Disclaimer

Specifications and information contained in this manual are subject to change without notice. VaporFlame Inc. assumes no responsibility for errors or omissions in this document. The latest version of this manual is available at www.vaporflame.net.

2. Safety Instructions

Retain this manual for future reference. If transferring ownership of this unit, include this manual with the product.

Electrical Safety

- Ensure supply voltage does not exceed the rating indicated on the rear panel.
- Never connect the VF6c to a dimmer pack.
- Do not operate the unit if the power cord is damaged or crimped.

Water & Air Safety

- Use clean, potable water only.
- Do not introduce any liquids other than water into the unit.
- Do not allow water to enter the air line.
- Do not allow water to remain in the unit during storage.
- Always bleed residual water from the system before storing.

To reduce odor or biological growth, it is recommended to add:
1-2 oz white vinegar per 5 gallons of water.
If unpleasant odors are detected, clean the internal water system immediately.

Installation Safety

- Install only in locations with adequate ventilation.
- Do not place objects directly in the main plume near the nozzle tip where atomization has not yet occurred.
- Always secure the VF6c and the lighting fixture with independent safety cables.
- Never carry the fixture by the nozzle assembly.

Environmental Limits

- Operating temperature: 20°F to 104°F (–6°C to 40°C)
- Do not allow water to remain in the unit below 40°F (4°C).
- Protect the unit from freezing conditions.

Service

There are no user-serviceable parts inside the unit.
Do not open the housing.
Repairs must be performed by qualified service personnel or VaporFlame Inc.

3. Meet the VF6c

Main Features

- Large-scale VaporFlame effect head
- Safe flame simulation (no heat, no sparks, no flammable fuel)
- Produces flame effects up to **6 ft**
- DMX-compatible control (same control system as VF8c)
- Designed for touring and permanent installations
- Compatible with VaporFlame air/water supply systems
- Mountable at multiple angles

Product Description

The VF6c is a professional entertainment effects device designed to create a tall, dynamic flame-like plume.
Unlike traditional flame effects, the VF8c produces its visual effect using **air and water**, eliminating the need for combustible fuels.
When connected to a VaporFlame utility engine and properly illuminated with stage lighting, the VF8c produces a dramatic and convincing flame appearance suitable for theatrical environments.
The system requires:

- Potable water supply
- Compressed air supply
- Compatible outdoor-rated LED fixture

The VF6c consumes approximately:

- 0.25 gallons of water per hour
- 1.25 CFM of air

The unit uses two DMX channels for independent air and water control.

4. Setup

Positioning the Unit

Place the VF6c on a stable surface or securely mount it within scenic elements.

Ensure the unit has adequate clearance for the flame plume and surrounding lighting.

Connecting Air and Water

The VF8c uses valved connection systems supplying both **compressed air and water** from the VaporFlame engine.
Connections should be made using VaporFlame-approved hoses.
Ensure all connections are securely attached before operation.

Air & Water Connections

- Air: I/M Style industrial connector
- Water: AG 5675 agricultural connector

⚠ Air and water lines must not be reversed. Incorrect connection may cause irreparable damage.

Air Supply Requirements

- Recommended Pressure: 60 PSI
- Adjustable Range: 50–90 PSI
- Maximum: 125 PSI (Do not exceed)
- Air Consumption: 1.25 CFM

Use clean, dry air. Install an air dryer if operating in high humidity environments.
If air pressure is too low, nozzle will not function - water will not flow through nozzle.

Air Adjustment

The VF6c May be adjusted by Altering the air pressure at the compressor. **CAUTION: Adjusting the air pressure may cause the surrounding area to become wet**

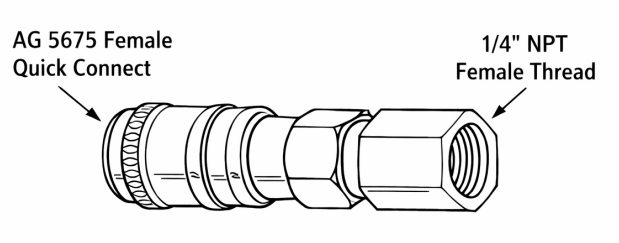
Water Supply Requirements

- Minimum Supply Rate: 3 GPM
- Consumption: 0.5 gallons per hour
- Use clean, potable water only

Prime the water hose prior to connection to remove trapped air.

Water Supply Connection

The supplied quick disconnect fitting allows you to connect the VF6s to an external water source.



The fitting includes an **AG 5675 female quick connect** on one end and a **1/4" NPT female thread** on the other. To complete the connection, you will need a **1/4" NPT male adapter** appropriate for your specific water supply.

Connection Steps

1. Attach the supplied AG 5675 female quick connect fitting to a compatible 1/4" NPT male adapter suited to your water supply.
2. Apply pipe thread tape (PTFE/Teflon tape) to all threaded connections to ensure a tight, leak-free seal.
3. Connect the adapter assembly to your water supply line.
4. Ensure the water source is clean and free of debris to prevent clogging or damage to the system.
5. Verify that the water supply provides a minimum flow rate of **3.3 GPM**. Standard building water pressure is typically sufficient.

⚠ Caution

- Do not connect to a water source containing debris, sediment, or contaminants. Particulate matter may damage internal components or reduce system performance.
- Do not exceed typical building water pressure. Excessive pressure may result in leaks or damage to fittings and internal plumbing.
- Ensure all threaded connections are properly sealed and tightened before pressurizing the system.

- Always verify adequate water flow (**minimum 3.3 GPM**) prior to operation to prevent improper performance or potential damage.

Water Valve Adjustment

The VF6c contains an internal water valve. This valve is set from the factory but may be adjusted to create an effect with more or less water. **CAUTION: Adjusting the Water Valve may cause the surrounding area to become wet**

- Remove the rear panel
- Make SMALL adjustments to the inline water valve to affect the air-to-water ratio
- Replace rear panel Mounting

Contact VaporFlame for more information www.vaporflame.net

Yoke Mount

1. Attach the “C” Series Adapter with the shorter end against the nozzle head.
2. Remove the “T” handle from the LED fixture yoke.
3. Insert the VaporFlame adapter between the fixture yoke and fixture body.
4. Reinstall and tighten the “T” handle securely.

Mounting – Face Mount

1. Attach the “C” Series Adapter with the longer end against the nozzle head.
2. Secure the adapter to the face of the lighting fixture using appropriate hardware.

Power & Data Connection

- Power: PowerCON True1 connector (included)
- Data: 5-pin DMX (In and Through)

Align connector notches, insert fully, and rotate clockwise until locked.

Input Voltage: 90~264 VAC

Setting the DMX Address

1. Press **ANY BUTTON of more than 3 seconds** Digital display flashes to enter address.
2. Use “A” button to set the Hundreds position, use “B” to set Tens position, use “C” to set the Ones Position.
3. Press **ANY BUTTON** for more than 3 seconds to confirm.
4. NOTE: the Hundred position will blink when no DMX is detected.
5. NOTE: Solid lit digits with a dot between the Hundreds and Tens position indicate DMX is present.

Storage Procedure

1. Drain all remaining water from the unit.
2. Briefly connect air supply to the water inlet to clear internal lines.
3. Reconnect air properly **but do not connect the water line!**.
4. Run the unit with air channel ON and water channel ON until all water is cleared from the plume.

5. Additional Information

DMX Operation

The VF6c uses 2 DMX channels:

- Channel 1: Air (ON/OFF)
- Channel 2: Water (ON/OFF)

Internal valves are non-variable.
Set console channels to **Non-Dim** mode. (Recommended)

Air & Water Best Practices

- Use a well-maintained compressor.
- Install a water-line debris filter.
- Standard tap water pressure is sufficient for operation.
- If using pump and tank system, supply minimum 3 GPM.

To clean internal lines, run a solution of:
2 oz white vinegar per 5 gallons of water for 10–20 minutes.

6. Performance Characteristics

Typical VF6c performance:

Specification	Value
Flame Height	1–6 ft
Air Pressure	50-75PSI
Recommended Pressure	60 PSI
Air Consumption	1.25 CFM
Water Consumption	0.25 gal/hr

Actual effect height may vary depending on lighting, airflow, and environmental conditions.

7. Storage and Maintenance

After operation:

1. Disconnect the VF8c from the air/water supply system.
2. Use the VaporFlame blow-off procedure to remove water from hoses.
3. Store the unit in a dry location.

Regular inspection of connectors and hoses is recommended to ensure reliable operation.

Warranty

VaporFlame Inc. provides a limited 2-year warranty covering parts and labor under normal operating conditions.
The customer is responsible for shipping the unit to VaporFlame for evaluation. If the issue is covered under warranty, repair and return shipping will be covered by VaporFlame.
Lighting fixtures are covered separately under their respective manufacturer warranties.

Compliance & Safety Notes

- No open flame
- No combustible fuel
- No heat or spark generation
- Designed for close proximity use when operated according to guidelines

VF6c Technical Specifications

VaporFlame® Safe Flame Effect Unit

General

Model: VF6c
Effect Type: Water-atomized flame simulation
Maximum Effect Height: Up to 6 ft (dependent on air pressure and lighting fixture)
Control Protocol: DMX512
DMX Channel Count: 2 (Air / Water)
Mounting Orientation: Multi-angle capable
Intended Use: Indoor / Outdoor (when paired with outdoor-rated lighting fixture)

Physical

Mounting Method:
C-Series Adapter (Yoke or Face Mount configurations)

- Weight: 3.2 kg
- Dimensions: BODY 260mm x 152mm x 57mm; HOSE 762mm x 25mm x 25mm; Nozzle Head 94mm x 133 mm x 39mm

Safety:
Requires independent secondary safety attachment when rigged overhead

Electrical

Input Voltage: 100–240 VAC
Frequency: 50/60 Hz
Power Supply: Internal auto-ranging
Connector Type: PowerCON True1

Current Draw: 2.5 A @ 110 VAC
Dimming: Not compatible with dimmer packs (switched power only)

DMX Control

DMX Connectors: 5-pin XLR (In / Through)
Channel 1: Air Valve (ON/OFF)
Channel 2: Water Valve (ON/OFF)
Recommended Console Setting: Non-Dim

Air Requirements

Recommended Operating Pressure: 60 PSI
Operating Range: 50–90 PSI
Maximum Pressure: 125 PSI (Do Not Exceed)
Air Consumption: 1.25 CFM
Air Connection Type: I/M Style Industrial Quick Connect
Air Quality: Clean, dry, oil-free

Water Requirements

Water Type: Clean, potable water only
Minimum Supply Rate: 3 GPM
Water Consumption: Approx. 0.25 gallons per hour
Water Connection Type: AG 5675 Agricultural Quick Connect
Recommended Additive (Maintenance):
1-2 oz white vinegar per 5 gallons of water

Environmental

Operating Temperature:
20°F to 104°F (–6°C to 40°C)
Storage Considerations:
Water must be fully drained prior to storage.
Do not allow water to remain in unit below 40°F (4°C).