FROZENFIRE DC POWER REMOTE OPERATED FIRE WATER / FOAM MONITOR

Detailed Product Description



The **Frozenfire DC Power Remote Operated Fire Water / Foam Monitor** is a high-performance firefighting device designed for the controlled delivery of large volumes of fire water or foam solution to protect industrial facilities, hazardous installations, storage tank farms, petrochemical plants, refineries, warehouses, terminals and other high-risk areas.

The monitor is designed to provide remote directional control of the discharge, allowing the operator to aim the water or foam stream from a safer location when the installation is configured with compatible DC-powered actuators and a suitable control system. Its robust construction, heavy-duty mounting arrangement and precision movement mechanism support reliable operation in demanding industrial firefighting environments.

The monitor incorporates a red-painted body and mounting assembly, a black discharge barrel, electrical actuator assemblies, manual operating handwheels and a pressure gauge on the visible assembly. The manual handwheels provide a means of mechanical positioning where permitted by the equipment configuration and manufacturer's instructions.

The unit is intended for use with a suitable fire water supply and, where foam application is required, a compatible foam proportioning system and foam concentrate. The actual discharge performance depends on the selected nozzle, inlet pressure, flow rate, water supply capacity, foam proportioning arrangement and installation conditions.

Key Features and Advantages

- DC-powered remote operation: Enables remote directional positioning and Nozzle Jet /Spray Positioning through compatible electrical controls and wireless Remote or Joy stick.
- Water and foam application: Suitable for fire water or correctly proportioned foam solution when fitted with a compatible nozzle and foam system.
- High-volume firefighting capability: Designed for applications requiring effective reach and substantial discharge capacity, subject to the selected model specifications.
- Directional control: Supports controlled horizontal and vertical aiming within the specified mechanical operating limits.
- Manual positioning arrangement: Handwheels are provided on the illustrated assembly for manual adjustment, subject to the approved operating procedure.
- Pressure indication: The visible pressure gauge assists the operator in monitoring pressure at its installed measurement point.
- Heavy-duty construction: The robust body and mounting arrangement are intended for industrial firefighting service.
- Industrial installation suitability: Can be considered for fixed firefighting installations where the monitor, foundation, piping, electrical system and operating environment are properly engineered.

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Construction and Main Components

Monitor Body and Discharge Barrel

The main body directs the fire water or foam solution towards the target area. The discharge barrel guides the stream and supports the intended discharge pattern when fitted with the appropriate nozzle.

DC Electric Actuator Assembly

The electrical actuators provide powered movement for remote aiming. Their operation depends on the specified DC voltage, control panel, wiring, limit switches and actuator configuration.

Pressure Gauge

The gauge indicates pressure at its connection point, helping operators assess system conditions during testing and operation. The indicated pressure should be interpreted according to the approved system design.

Manual Handwheels

The handwheels provide mechanical directional adjustment where the installed design permits. Manual operation must follow the manufacturer's instructions, especially when electrical actuators are engaged.

Mounting Base and Flange

The mounting base secures the monitor to its supporting structure. The foundation, fasteners and connected piping must withstand the applicable operating loads and reaction forces.

Note: These component illustrations are representative references, not verified close-up photographs of the exact supplied model.

Technical Specifications

The following specification format can be used in a product catalogue. Confirm model-specific ratings from the approved Frozenfire datasheet before publication.

Parameter	Description
Product name	Frozenfire DC Power Remote Operated Fire Water / Foam Monitor
Power supply	DC electrical supply, voltage 12V / 24V
Operation	Electrical remote operation with manual handwheels as configured
Media	Fire water or compatible foam solution
Monitor movement	Horizontal and vertical movement,
Discharge nozzle	Compatible fire water / foam nozzle
Pressure gauge	Provided on the illustrated assembly
Mounting	Fixed mounting base / flange
Construction Body material	Stainless Steel / Mild Steel
Geared Swivel Joints	Stainless Steel / Gun Metal
Nozzle	Aluminum / Stainless Steel / Gun Metal
Flow rate	250 – 1000 GPM
Working pressure	7-10 Bar
Electrical protection	IP-57 / IP 65 Weather Proof
Application	Industrial and fixed firefighting systems
Monitor Consist accessories	Monitor Panel / Joystick or Wireless Remote (Range 35 Mtr) -Cables Monitor Panel to Monitor / Actuator (MOV) if required.

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Operating Procedure

The monitor should be operated only by trained firefighting or authorized maintenance personnel in accordance with the approved installation drawings, site emergency plan and manufacturer's instructions.

Pre-Operation Checks

1. Inspect the monitor: Check the body, discharge barrel, mounting base, fasteners, handwheels and visible mechanical parts for damage, corrosion or looseness.
2. Check the water supply: Ensure the supply piping, isolation valves, pumps and associated equipment are in the correct condition and ready for operation.
3. Inspect the electrical system: Verify the DC supply, control panel, cables, connectors and actuator assemblies. Ensure that electrical connections are secure and protected.
4. Check the discharge area: Confirm that personnel, vehicles and obstructions are clear of the intended discharge direction and the monitor's movement envelope.
5. Check the nozzle: Verify that the installed nozzle is compatible with the monitor and intended firefighting medium.
6. Check the pressure gauge: Confirm that the gauge is undamaged and its indication is credible for the current system condition.
7. Verify operating readiness: Ensure that the monitor is correctly mounted, the control system is functional and all required valves are in their approved operating positions.

Starting the Monitor

1. Confirm that the water supply and associated firefighting system are ready for operation.
2. Energize the DC control supply in accordance with the approved electrical operating procedure.
3. Confirm that the remote-control panel indicates normal operation and that no electrical faults or interlocks prevent movement.
4. Establish the required water supply using the site-approved valve and pump sequence. Avoid sudden pressurization or water hammer.
5. Observe the pressure gauge and confirm that pressure remains within the approved operating range.
6. Check for leakage, abnormal vibration, unusual noise or unexpected movement. Stop the operation if any unsafe condition is detected.

Remote Directional Operation

1. Use the designated remote-control station to select the required direction of movement.
2. Operate the horizontal and vertical movement controls as identified on the control panel.
3. Make controlled adjustments to align the discharge barrel with the intended target.
4. Observe the monitor's movement and ensure that it remains within its permitted travel limits.
5. Confirm that the discharge stream is directed away from personnel, protected equipment and unintended areas.
6. Stop the movement when the required direction is achieved.
7. Continue monitoring the pressure indication, actuator response and discharge pattern throughout operation.

The actual control sequence depends on the installed control panel and actuator design. Do not assume particular joystick functions, travel limits or interlocks without the approved operating manual.

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Fire Water Operation

1. Confirm that the system is configured for water application and that the installed nozzle is suitable for the required duty.
2. Establish the required flow and pressure in accordance with the approved firefighting system design.
3. Aim the monitor towards the fire or designated application area from a safe operating position.
4. Adjust the discharge direction to maintain effective coverage while avoiding unsafe exposure to personnel and equipment.
5. Monitor the supply pressure and stream performance during operation.
6. If pressure drops, movement becomes abnormal or leakage occurs, follow the site emergency procedure and investigate only when safe.

Foam Operation

1. Confirm that the foam concentrate, proportioning equipment and nozzle are compatible with the intended fire risk and foam application.
2. Verify the correct foam concentrate type, concentration and proportioning settings from the approved system design.
3. Ensure that the water supply and foam proportioning system are ready before commencing foam application.
4. Establish the required flow and pressure using the approved operating sequence.
5. Direct the foam discharge towards the designated application area using the remote controls.
6. Apply foam using the method specified for the hazard and foam type, such as controlled surface application where appropriate.
7. Monitor foam quality, coverage, supply pressure and proportioning system performance.
8. After use, flush the monitor and associated components with clean water where required by the foam system and manufacturer's instructions.

Foam should not be applied indiscriminately. The correct application technique depends on the fuel involved, foam type and fire protection design.

Shutdown Procedure

1. Move the monitor to the designated safe or parking position, if required and safe to do so.
2. Stop the discharge by following the approved pump and valve shutdown sequence. Avoid sudden pressure changes.
3. Isolate the water and foam supply as required by the system procedure.
4. De-energize the DC supply when specified by the shutdown procedure.
5. Relieve trapped pressure and drain the equipment where required by the installation design.
6. Flush foam-contact components if necessary.
7. Inspect for leakage, damage, overheating or other abnormalities.
8. Record the operation, defects identified and any corrective action required.

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Maintenance Procedure

A planned preventive maintenance programme is essential to maintain readiness, reliability and safe operation.

A. Routine Visual Inspection

Before operation and at the site-defined inspection interval

- Inspect the monitor body, discharge barrel, flange, bolts and visible fittings.
- Check for corrosion, cracks, impact damage, leakage or loose components.
- Inspect cables, conduit entries and electrical connectors for damage.
- Check that the pressure gauge is legible and undamaged.
- Keep the monitor and its operating area free from dirt, debris and obstructions.

B. DC Power and Actuator Maintenance

At the approved electrical inspection interval

- Inspect the DC supply, protective devices, terminals and cable insulation.
- Check for moisture ingress, corrosion, loose connections and damaged cable glands.
- Test remote commands and actuator response using the approved functional test procedure.
- Verify limit switches, travel stops and position indications where fitted.
- Investigate sluggish movement, unusual noise or repeated electrical faults.
- Isolate and secure the electrical supply before opening enclosures or carrying out electrical maintenance.

C. Mechanical Assembly and Handwheels

At the manufacturer-recommended interval

- Check the mounting fasteners, flange connections and support structure.
- Inspect the movement mechanism for excessive play, wear or binding.
- Check handwheels and associated mechanical components for smooth operation where safe to test.
- Lubricate approved points only with the specified lubricant.
- Check seals and joints for signs of leakage.
- Do not force a jammed mechanism or adjust actuator linkages without the approved procedure.

D. Pressure Gauge and Waterway Inspection

At the scheduled inspection and testing interval

- Check the gauge condition and compare its indication with an appropriate calibrated reference when required.
- Inspect the waterway and nozzle for obstruction, deposits or physical damage.
- Check joints and connections for leakage during an approved test.
- Verify that the supply pressure and flow are consistent with the system design.
- Replace defective gauges, seals or components with approved equivalents.

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E. Foam System Cleaning

After foam use and as required by the foam-system instructions

- Flush foam-contact passages with clean water using the approved procedure.
- Check for dried foam residue, deposits or blockages.
- Inspect compatible seals and connections for deterioration.
- Check the proportioning system separately in accordance with its manufacturer's instructions.
- Dispose of flushing water and foam residues according to site environmental requirements.

Recommended Preventive Maintenance Schedule

The intervals below are a suggested starting point for a site maintenance plan, not a verified Frozenfire-specific schedule. Applicable regulations, risk assessment, service conditions and the manufacturer's instructions take precedence.

Frequency	Recommended activity
Before each operation	Visual inspection, check operating area and verify system readiness
Monthly	Inspect mounting, visible wiring, actuator condition, handwheels and gauge
Quarterly	Functional test of remote movement, controls and position limits, where permitted
Half-yearly	Detailed mechanical and electrical inspection, including approved lubrication and connection checks
Annually	Comprehensive functional inspection and performance testing under an approved test plan
After every use	Inspect for damage, leakage and contamination; flush foam-contact parts as required
After repairs or faults	Conduct the relevant post-maintenance functional and safety tests before returning to service

Available Models

The Frozenfire HVLR Monitor is available in various inlet sizes including:

Model Number	Monitor Size (MM)	Flow in GPM	Water Jet in Meters	Horizontal Throw (Foam) in meters
FIL-RO-DC-HVLR 250	50	250	45	40
FIL-RO-DC-HVLR 500	75	500	55	50
FIL-RO-DC-HVLR 750	75	750	60	65
FIL-RO-DC-HVLR 1000	100	1000	65	60

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Troubleshooting Guide

Problem	Possible cause	Recommended action
Monitor does not respond to remote commands	DC supply failure, control fault, wiring issue or interlock	Check fault indications and supply condition; have an authorized technician investigate
Slow or irregular movement	Mechanical binding, actuator fault or supply issue	Stop movement if unsafe; isolate as required and inspect the mechanism
Monitor stops before reaching the required position	Travel limit, obstruction or control configuration issue	Check the permitted movement envelope and inspect for obstructions
Low discharge pressure	Insufficient supply, incorrect valve position, obstruction or pump issue	Follow the system procedure to verify supply and investigate the cause
Leakage from joints	Damaged seal, loose connection or component wear	Safely isolate and depressurize before repair
Incorrect pressure indication	Gauge damage, blockage or calibration issue	Verify using an appropriate calibrated reference and replace or service as required
Poor foam discharge	Incorrect proportioning, incompatible concentrate, blockage or supply issue	Check the foam system and nozzle against approved design requirements

Safety Precautions

- Operate the monitor only through the approved control system and within its rated operating limits.
- Never stand in front of the discharge barrel or enter the discharge stream.
- Keep personnel clear of the monitor's movement envelope and the area exposed to the discharge.
- Do not exceed the rated pressure, flow or electrical supply specifications.
- Do not operate the monitor with loose mounting bolts, damaged cables, defective actuators or leaking components.
- Isolate electrical power and depressurize the system before maintenance, as applicable.
- Do not attempt to operate manual handwheels against an engaged or energized actuator unless the manufacturer specifically permits it.
- Do not dismantle pressurized components or open electrical enclosures while energized.
- Test water and foam discharge only under an authorized test plan with suitable precautions.
- After maintenance, verify correct operation and confirm that the monitor is ready for emergency service.

Conclusion

The Frozenfire DC Power Remote Operated Fire Water / Foam Monitor is designed to provide controlled directional discharge for industrial firefighting applications. Its DC-powered remote positioning arrangement can help operators aim the discharge from a safer location, while the manual adjustment mechanism provides an additional means of positioning where supported by the equipment design.

Regular inspection, functional testing, electrical and mechanical maintenance, and correct flushing after foam operation are important for preserving equipment readiness and service life. The monitor should always be installed, operated and maintained in accordance with the approved technical datasheet, manufacturer’s instructions and site firefighting procedures.

Catalogue preparation note: To finalize this as an accurate Frozenfire product catalogue, confirm the model number, DC voltage, rated flow, working pressure, horizontal and vertical travel angles, material of construction, inlet/outlet size, nozzle type and applicable approvals. These details are not fully verifiable from the supplied image alone.

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