



ICE FOG QTM

Low Fog Generator



USER GUIDE

Revision A/d, May 2017, © MDG Fog Generators Ltd



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INTRODUCTION

MDG is a company globally recognized as the leader of the fog production industry. We design and manufacture the most reliable fog/haze generators since 1979 and, we continue to impress the entertainment and industrial market with unmatched innovations. Safe, non-toxic fog can be generated from a discreet haze to a sustained, overwhelming intensity.

Congratulations!
You are now in possession of a MDG Low Fog Generator
The ICE FOG Q™

This Generator produces a very dry and dense low-lying fog using refrigerated liquid Carbon Dioxide (CO₂) as a coolant and propellant as well as the MDG Low Fog Fluid

We hope it will bring you long hours of satisfaction. This product is available in many versions to satisfy the needs of our professional users.

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY AND COMPLETELY
BEFORE FILLING YOUR GENERATOR WITH FOG FLUID AND TURNING IT ON.



CAUTION

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.



CAUTION

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

BASIC DESCRIPTION

The **ICE FOG Q™** was designed with safety and reliability in mind. They are capable of generating pure white low fog for as long as you want (100% duty cycle) at full volume.

The **ICE FOG Q™** is a variable output Low Fog Generator capable of generating large volumes of very dense low fog in a short period of time and also the most silent one on the market.

At the heart of the MDG Generators is an electronic assembly that keeps the heating module(s) at a very stable temperature, which integrates three types of fail-safe systems. Those three types of electronic fail-safe systems are designed to protect against over and under-heating conditions and, against component failure.

The temperature is maintained within a narrow margin (the HEAT yellow LED turns on & off from time to time to indicate the control of temperature) otherwise, an error condition will result and the Low Fog Generator will shut down. When one of the safety systems is activated, the HEAT yellow LED will start blinking indicating the fail mode. Shut down the main power switch, wait 3 to 4 minutes and retry the generator. If the fail mode still appears, unplug your generator and contact a MDG authorized service center for verification.

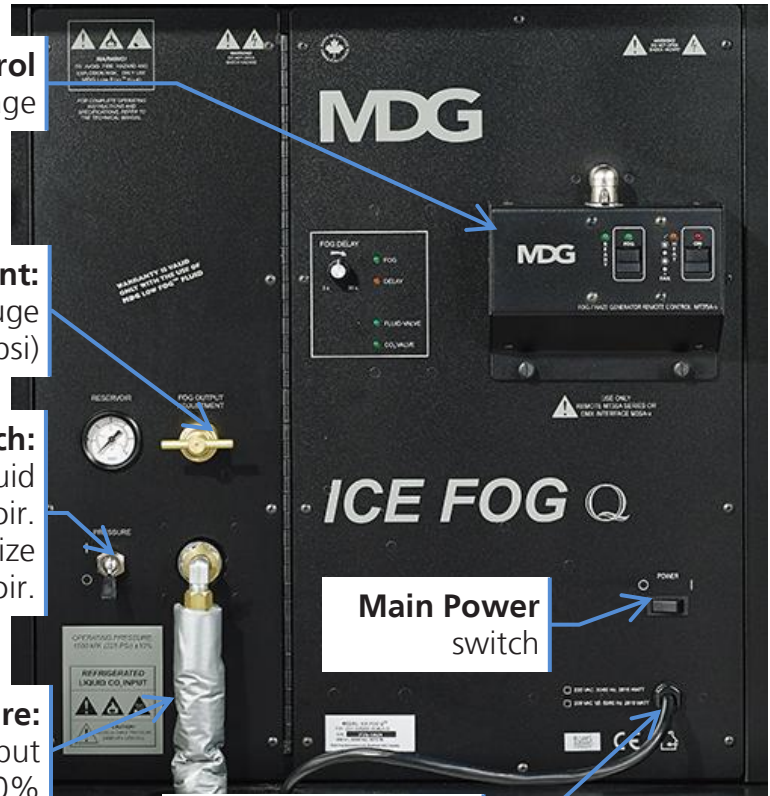
When an under-heating condition occurs, the generator will stop producing fog until the temperature of the heating module is back within parameters.

Detachable standard remote control
See next page

Fog Output adjustment:
Pressure regulator & Gauge
Max. Operating pressure 4.1 bar (60 psi)

Pressure Switch:
Upward position will pressurize the Fluid Reservoir.
Downward position will depressurize allowing to refill the Fluid reservoir.

Operating Pressure:
Refrigerated low pressure liquid CO input
1500 kPa (225 psi) ± 10%



Power Cord
208 or 230 VAC

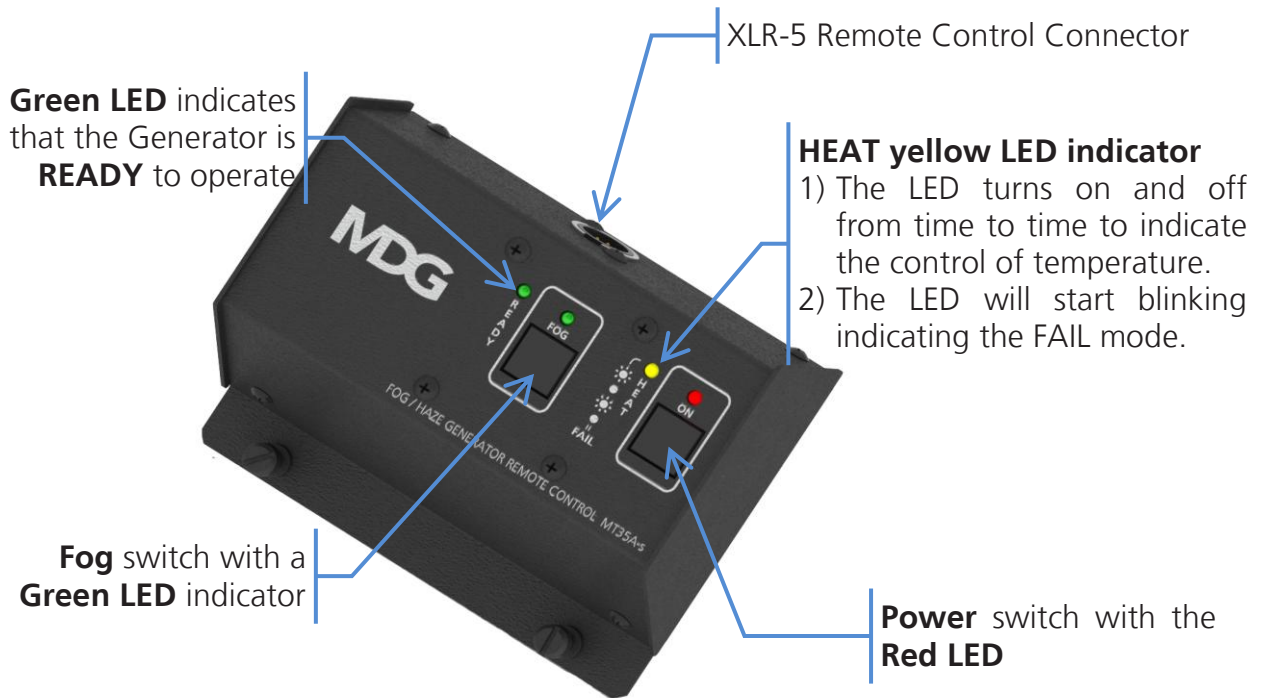


LED Status:

- FOG Green LED indicates that the generator is producing fog.
- DELAY Yellow LED indicates that the delay is activated and won't produce fog until it is turned off.
- FLUID VALVE Green LED indicates that the fluid solenoid valve is on and should turn on and off with the FOG LED.
- CO₂ VALVE Green LED indicates that the liquid CO₂ solenoid valve is on

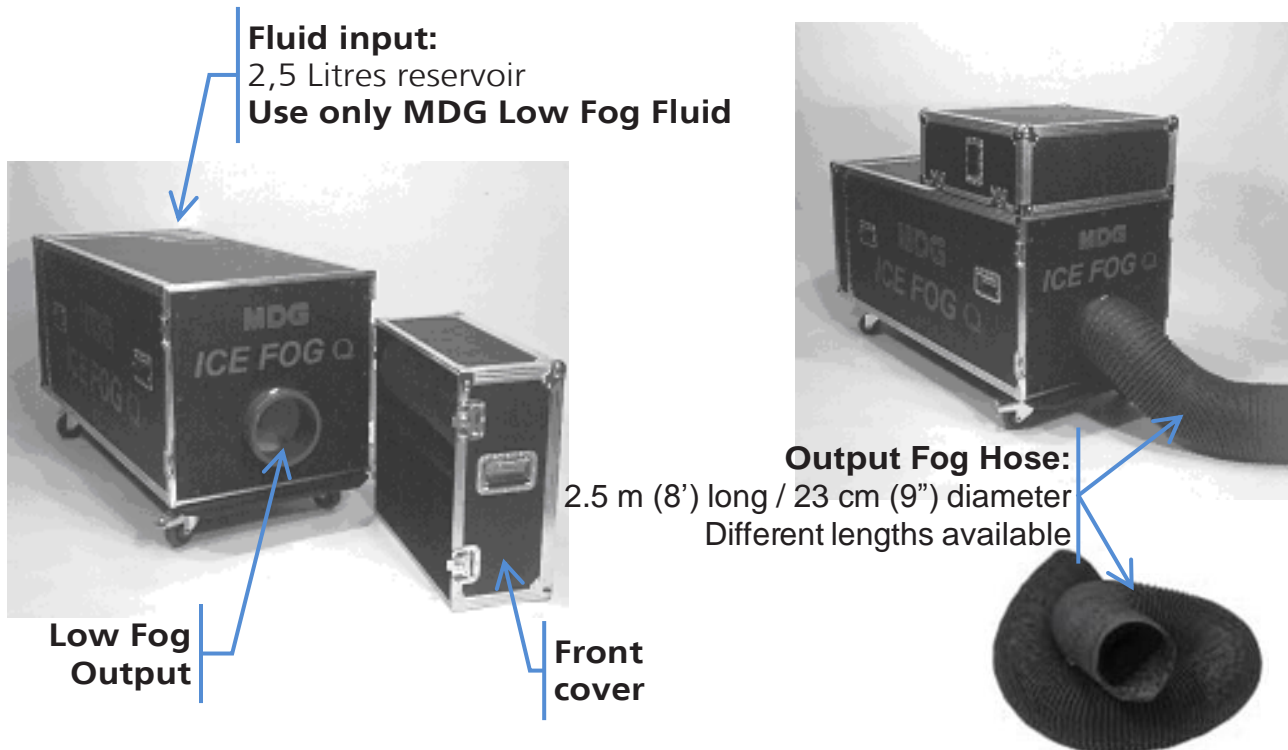
Fog Output Delay:

Delay of 3 to 30 seconds. Allowing to cool down the cold chamber of the Generator.



Standard remote control MT35A-n

Standard Accessories



Optional Accessories

DMX-M35AX

Optional 2 Channel DMX Interface



IF35-RCT

Optional Remote Control Timer



Refrigerated Low pressure Liquid Carbon Dioxide (L-CO₂) Container (Dewar)



SETTING UP

WARNING:

- When not in use ALWAYS switch off the power switch located on the back panel, or unplug the generator.
- Never install above people.
- These Fog Generators must be installed in an upright position on a stable and level surface.
- Do not operate at less than 2 meters (6.5 ft.) from people.
- Use in a well ventilated area.
- Maximum Operating Pressure: 414 kPa / 4.1 bar / 60 psi

LIQUID & GAS REQUIREMENTS



WARNING

In the European Community the gas cylinder and regulator must be compliant with the Pressure Vessel Directive.

In North America the gas cylinder must be manufactured, inspected and tested in accordance with U.S. Department of Transportation (DOT) 3AL and Transport Canada (TC) 3ALM requirements.



WARNING

Only use low pressure refrigerated liquid Carbon Dioxide (CO₂) Dewar container. The recommended pressure should be 1500 kPa (225 psi) ± 10%.



CAUTION

To prevent gas leak and drop of pressure, ALWAYS use a neoprene washer when connecting the regulator to the cylinder

The CO₂ gas is used as a propellant when generating Fog. Output pressure can be adjusted by mean of the CO₂ gas regulator that you will find in the back panel of the generator.

FILLING OF THE FLUID RESERVOIR



WARNING

Use only **MDG LOW Fog Fluid**. Not doing so, will void the warranty and may damage the generator.



CAUTION

DISCONNECT UNIT BEFORE ADDING FOG FLUID.

DEPRESSURIZE THE FLUID RESERVOIR BY TURNING OFF THE PRESSURE SWITCH LOCATED ON THE BACK PANEL OF THE GENERATOR

To fill the fluid reservoir, unscrew the brass closure and pour the MDG Low Fog Fluid until it reaches the inside bottom of the opening.

Avoid overfilling, screw back the closure and make sure it is tightened.

OPERATING INSTRUCTIONS

The MDG Low Fog Generators are quite easy to operate and require no preventive maintenance. They are supplied with a removable remote control. A DMX Interface can be purchased as an option.

When the MAIN POWER 230 or 208 VAC and the MAIN POWER SWITCH are applied, the generator is placed in stand-by mode. When in stand-by mode, most of the electronic controls are off (except for the three types of fail-safe systems), waiting for the ON switch on the remote control to be activated.

When the ON switch is pressed, the red LED indicating that the unit is working will lit, as well as the yellow LED called HEAT, indicating the start of the heating cycle which will last approximately 10 minutes. When the temperature reaches a pre-adjusted level called the READY level (indicated by a green LED), the HEAT yellow LED will turn off.

The generator is ready to produce fog. Adjusting the working pressure of the CO₂ gas regulator can control the amount of the fog emission.

When an overheating condition is detected, or if the internal temperature reaches 60°C (140°F), a safety circuit is triggered. This circuit removes the power to the heating elements, preventing hazardous conditions

The FOG ON signal (green LED) can be applied to produce low fog for as long as the ready level is reached and all other control parameters are within specifications.

The 100% Duty cycle is continuous with specified line voltage, and will degrade with line voltage loss. If that is the case, reducing maximum operating pressure can compensate it.

SHUT DOWN PROCEDURE

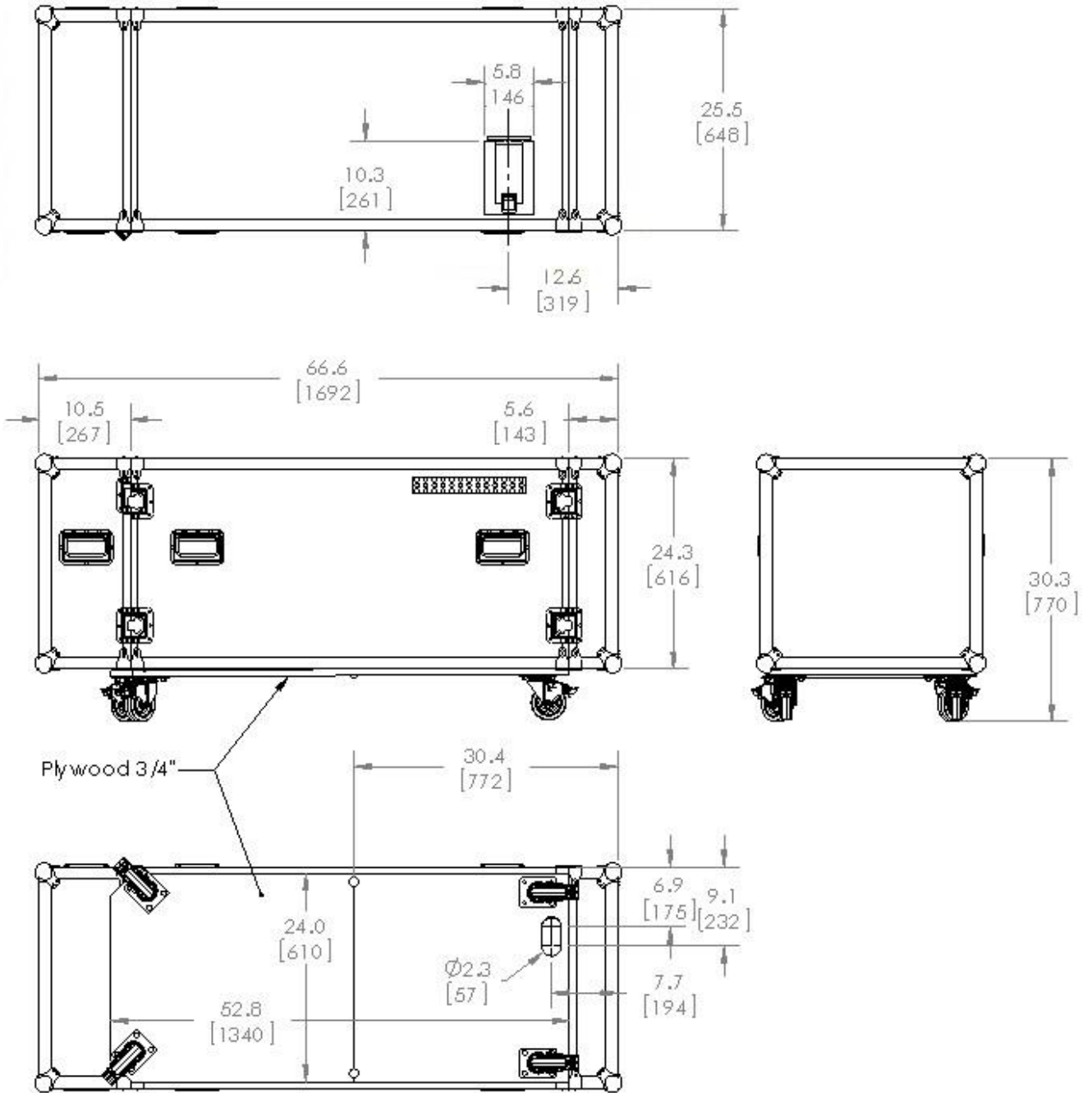
A generator must never be shut down while making Fog. To power off a generator the following sequence must be observed:

- Always turn off the fog emission,
- Wait for the purge cycle to complete.
- Power off the Fog generator (by switching off the “MAIN POWER SWITCH” or by removing the MAIN POWER.
- If not use for a long period:
Always depressurised the fluid reservoir using the pressure switch found at the back of the unit. (See picture on page 5)
- Close the refrigerated low pressure liquid L-CO₂ valve of the Dewar.

TECHNICAL DATA

Model	ICE FOG Q
Fluid consumption (per minute at full output)	0.09 L (3 oz)
Liquid CO ₂ type	Low pressure refrigerated
Liquid CO ₂ consumption (per minute)	3 L (6.8 lb) at 1500 kPa (225 psi)
Reservoir capacity	2.5 L (0.66 US gallon)
Fog colour	Pure white
Particle size	0.5-4.5 microns
CO ₂ running time	180 L (48 US gallon) Canister (DEWAR) = 70 minutes
Warm-up time (maximum)	8 minutes
Fluid type MDG (M.S.D.S. available on request)	Low Fog Fluid
Operating voltage	208 VAC 1Ø or 230 VAC, 50/60 Hz
Power consumption	2,850 W
Dimensions	
Total length	1.71 m (67 3/8")
Operating length	1.51 m (59 1/2")
Width	67 cm (26 3/8")
Height	78 cm (30 5/8")
Weight	113 kg (250 lb)
Approval	CE approved, CSA and UL pending
Included	Remote control 8 m (26 ft) 5-pin XLR extension cable 2.5 m (8 ft) long x 23 cm (9 in) diameter fog output 3 m (10 ft) insulated low-pressure liquid CO ₂ input hose with gauge.

TECHNICAL DIMENSIONS



WARRANTY

When installed and operated as recommended, MDG Fog Generators Ltd., guarantees that this product will remain free of defects in parts and labor for a period of two (2) years from the moment it is delivered. This warranty does not apply if the product has been modified without our written authorization, or repaired without a written authorization from MDG or one of its authorized service center, or if it is used under conditions for which it has not been designed, or if a non-MDG Fog Fluid has been used. MDG Fog Generators Ltd is not responsible for any damages resulting from a faulty installation or from abusive use of the product.

If any device is found unsatisfactory under the terms of this warranty, MDG Fog Generators Ltd will repair or replace it free of all charges except transportation costs.

This warranty applies only to the product itself and MDG Fog Generators Ltd declines responsibility for any losses, costs, or damages resulting from its use.

MDG Fog Generators Ltd shall not be liable for consequential damage in case of any failure to meet the conditions of any warranty or shipping schedule, nor will claims for labor, loss of profits, repairs, or other expenses incidental to replacement be allowed.

The repair or replacement of the product, by MDG Fog Generators Ltd shall constitute fulfillment of all obligations to the purchaser.

No other guarantees or warranties, expressed or implied, are made by MDG Fog Generators Ltd in connection with its products. This warranty is non-transferable and applies to the original purchaser only.

To obtain satisfaction under the terms of this warranty, contact your local sales office, and we will be pleased to help you.

DECLARATION OF CONFORMITY



EC DECLARATION OF CONFORMITY

According to IEC/ISO 17050

We, **MDG Fog Generators Ltd**
10301 ave Pelletier
Montreal, QC, Canada, H1H 3R2

declare under our sole responsibility, that the product including options or accessories

Fog Generators models: Me1, Me2, Me4 and Me8,
MAX 3000 APS, MAX 5000 APS and MAX 5000 APS H.O.
ATMe, ATMOSPHERE APS and ATMOSPHERE APS H.O.
ICE FOG Q and ICE FOG Compact
MM, MINI SINGLE, SINGLE and DUAL

to which this declaration relates, is in conformity with the following standards:

IEC 60335-1: 2001 (Fourth Edition) incl. Corr.1:2002 + A1:2004 + A2:2006
Household and similar electrical appliances – Safety/Part 1, September 2006
CISPR 22:2008-09/EN 55022, Class B
IEC 61000-6-1:2005/EN61000-6-1:2007, (EMC)-Part 6-1
FCC PART 15, Subpart B, class B

By conformance with the standards referenced, the product follows the provisions of the directives listed below:

2006/95/EC Low Voltage Directive
2004/108/EC EMC Directive
2011/65/EU RoHS2 Directive

Martin Michaud, President
August 17, 2012
Montreal, Canada

