ICE FOG Compack™

Low Fog Generator

USER GUIDE

No: 120818, Revision B/b

CE

MADE IN CANADA
FABRIQUÉ AU CANADA

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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 Compack**™

This generator produces a very dry and dense low-lying fog using liquid Carbon Dioxide (High Pressure L-CO_2 bottle with dip tube or siphon) as a coolant and propellant as well as the MDG Low Fog Fluid.

A version is available under request for low pressure refrigerated liquid Carbon Dioxide (low pressure cryogenic L-CO_2 Dewar).

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 Compack**™ 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 Compack**™ 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.

Detacheable standard remote control
See next page

Fog Output adjustment:
Pressure regulator & Gauge
Maximum Operating pressure 4.14 bar (60 psi)

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

Main Power switch

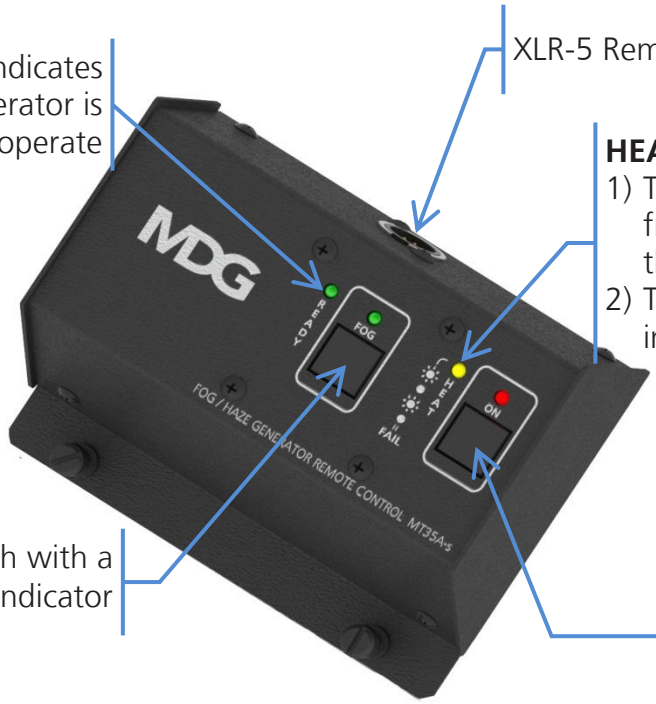
Power Cord
115 or 230 VAC, 50/60 Hz

Operating Pressure:
Low pressure: liquid CO_2 input, at 1500 kPa (225 psi)
High pressure: liquid CO_2 input, at 6000 kPa (875 psi)

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.
- CO_2 VALVE Green LED indicates that the liquid CO_2 solenoid valve is on

Fog Output Delay:
Delay of 3 to 30 seconds. Allowing to cool down the cold chamber of the Generator before producing low fog.



Standard remote control MT35A-n

Standard Accessories

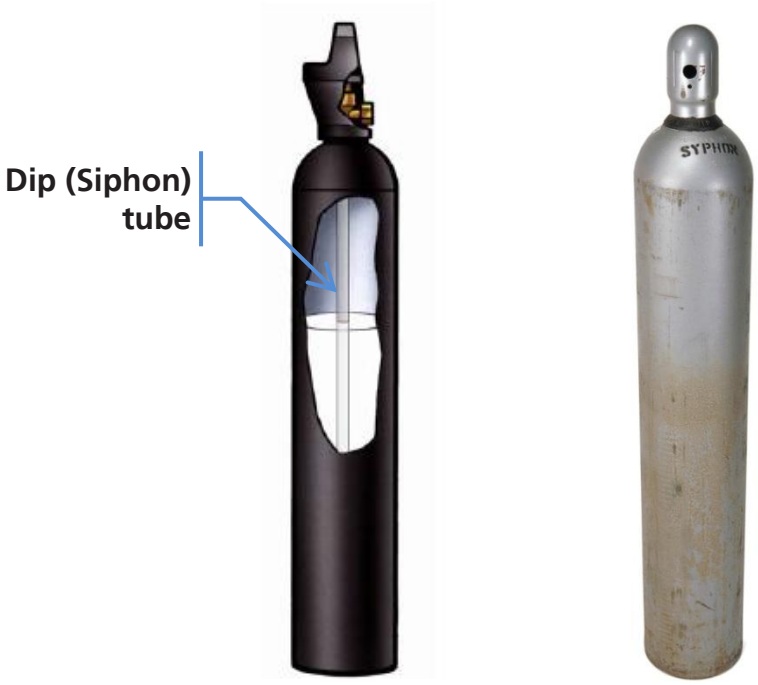
Optional Accessories

DMX-M35AX
Optional 2 Channel DMX Interface

IF35-RCT
Optional Remote Control Timer

High pressure Liquid Carbon Dioxide (L-CO_2) with Dip Tube (or Siphon)

Use **only** carbon dioxide cylinder equipped with a dip (siphon) tube) allowing the discharge of liquid CO_2.



Refrigerated Low pressure Liquid Carbone Dioxide (L-CO_2) Container (Dewar) preset at 1500 kPa (225 psi).

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 115 or 230 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 low fog. Adjusting the fog output adjustment can control the amount of the low 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.

STARTUP PROCEDURE

1. Remove the front cover, if needed use the 5" flexible hose placed in the cover.
2. Open the back door.
3. Screw the L-CO_2 hose (gauge side) to the liquid CO_2 bottle (50 lbs or 75 lbs, equipped with a siphon / dip tube) or to the refrigerated low pressure liquid CO_2 Dewar.

   Do not forget to put the Teflon washer
4. Screw the other side of the L-CO_2 hose in the brass bulkhead inside the generator.
5. Open the L-CO_2 valve.
6. To fill the fluid reservoir, disconnect unit before adding Fog Fluid. If it is pressurized, depressurize the reservoir by turning OFF the pressure switch located on the back panel of the generator.
7. Unscrew the brass cap
8. Pour the MDG Low Fog Fluid until it reaches the inside bottom of the opening.

   Avoid overfilling.
9. Screw back the closure and make sure it is hand tightened.
10. Turn back ON the pressure switch.
11. Plug the AC cord 115 V or 230 V, depending on the voltage of the generator.
12. Plug the remote control in the connector.
13. Place the fog delay potentiometer knob at maximum.
14. Press the Power switch on the remote control, a red LED will turn on. Then a yellow LED will turn ON indicating "HEAT ON".
15. Wait 8 to 10 minutes until the green Ready LED turns on.
16. The generator is now ready to operate.
17. Press the Smoke switch.

During the fog delay (approximately 30 seconds), only the CO_2 will come out. This is to cool down the cooling chamber of the generator. After 25 to 30 seconds, the fog output will start.

- When not in use ALWAYS switch off the power switch located on the back panel, or unplug the generator.
- Never install above people.
- These Low Fog Generators must be installed on a stable and horizontal surface.
- Do not operate at less than 2 meters (6.5 ft.) from people.
- Use in a well-ventilated area.
- Maximum Fog Output 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 High pressure Liquid Carbon Dioxide (L-CO_2) with Dip Tube (or Siphon).

If you have ordered the LP version, only use low pressure refrigerated liquid Carbon Dioxide (L-CO_2) Dewar container. The recommended pressure is 1500 kPa (225 psi) ± 10%.

CAUTION

To prevent gas leak and drop of pressure, ALWAYS use a Teflon washer when connecting the Liquid CO2 hose to the cylinder.

The L-CO_2 gas is used as a propellant when generating Low Fog.

Low fog density can be adjusted by mean of the fog output adjustment that you will find in the main panel of the generator.

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 low fog emission on the remote,
- Switch off the pressure switch on the main panel
- Close the valve of the high pressure Liquid CO_2 bottle or refrigerated low pressure liquid L-CO_2 valve of the Dewar
- Power off the Unit on the remote
- Power off the Low Fog generator by switching off the "MAIN POWER SWITCH"
- If not in use for a long period, always depressurize the line between the generator and the high pressure Liquid CO_2 bottle.

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

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

To fill the fluid reservoir:

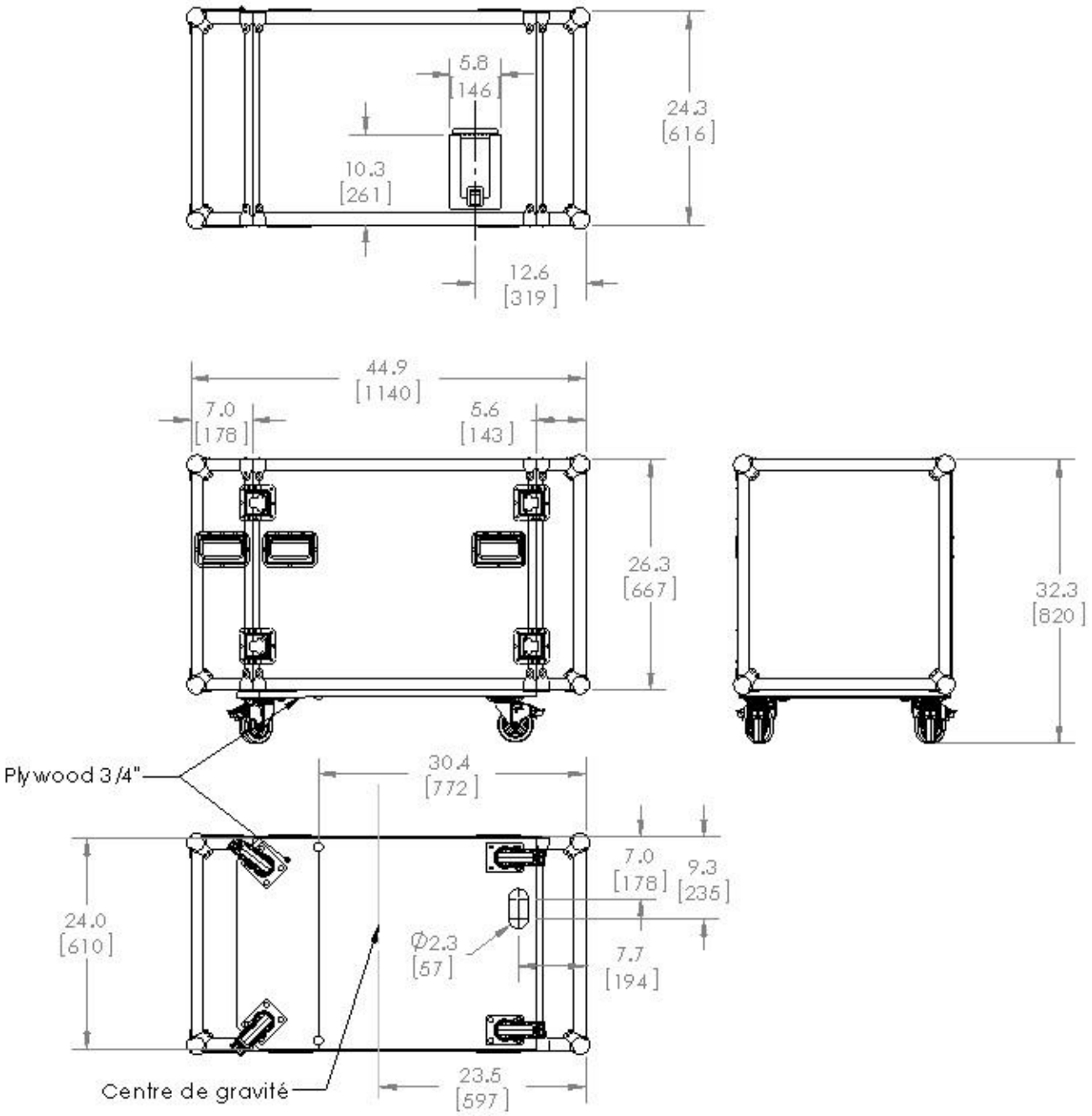
- Always turn off the low fog emission on the remote,
- Switch off the pressure switch on the main panel
- Unscrew the brass cap and pour the MDG Low Fog Fluid until it reaches the inside bottom of the opening.

  Avoid overfilling.
- Screw back the closure and make sure it is hand tightened.
- Turn back ON the pressure switch.

TECHNICAL DATA

Model	ICE FOG Compack
Fluid consumption (per minute at full output)	0.035 L (1.05 oz)
Liquid CO_2 type	High pressure version: Non-refrigerated Low pressure version: Refrigerated
Liquid CO_2 consumption (per minute)	High pressure version: 1.35 kg (3 lb) at 6000 kPa (875 psi) Low pressure version: 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	High pressure version: 23 kg (50 lb), canister = 17 minutes Low pressure version: 180 L (48 US gallon), canister (DEWAR) = 120 minutes
Warm-up time (maximum)	8-10 minutes
Fluid type MDG (M.S.D.S. available on request)	Low Fog Fluid
Operating voltage	115 or 230 VAC, 50/60 Hz
Power consumption	1,450 W
Dimensions	Total length 1.15 m (45 1/8”) Operating length 1.08 m (42 3/8”) Width 63.5 cm (25”) Height 82.5 cm (32 1/2”)
Weight	91 kg (200 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 13 cm (5 in) diameter fog output 3 m (10 ft) insulated 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 is authorized service center, or if it is used under conditions for which it has not been designed, or if a none 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

CE

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 Compack
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

NOTE