READ AND SAVE THESE INSTRUCTIONS

P/N 35010042-C

JEM™ ZR SERIES

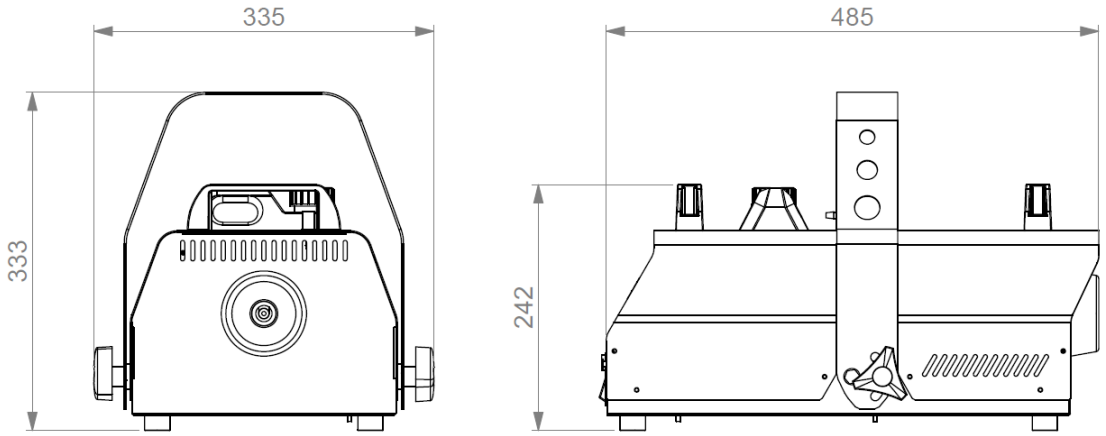
user manual

Martin® by HARMAN

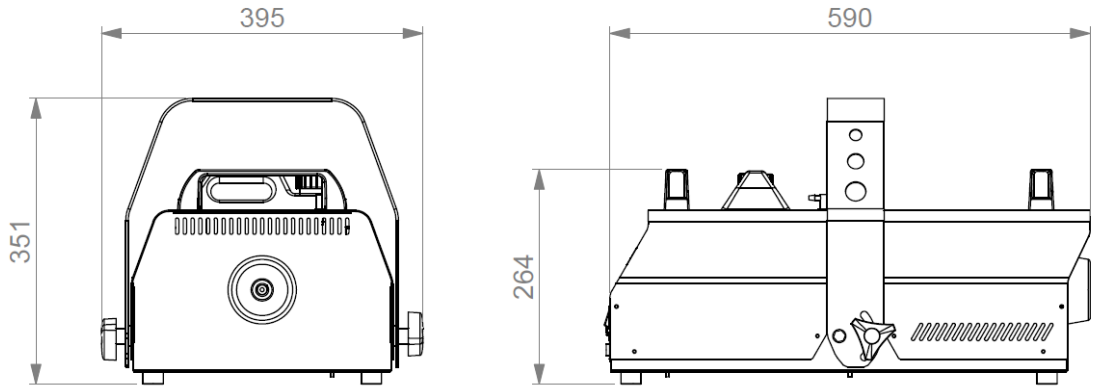
Dimensions

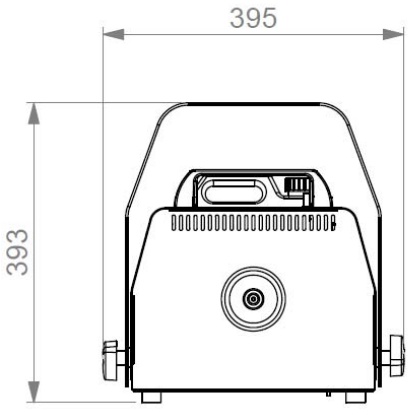
All dimensions are in millimeters

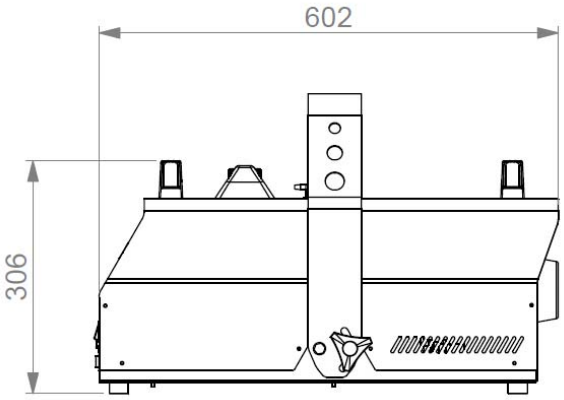
ZR25™



ZR35™







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Safety information

Read the safety precautions in this manual before installing, operating or servicing this product.

The following symbols are used to identify important safety information:

Caution! Safety hazard. Risk of severe injury or death.

Caution! Burn hazard. Hot surface. Do not touch.

Danger! Hazardous voltage. Contact will cause electric shock.

Caution! Fire hazard.

Warning! This product is not for household use. It presents risks of injury due to electric shock, burns, falls and respiratory problems!

Read this manual before operating the machine, follow the safety precautions listed below, and observe all warnings in this manual and printed on the machine. Use the machine only as described in this manual and in accordance with local laws and regulations.

If you have questions about how to operate the machine safely, or if you have followed the instructions in this manual and the machine is malfunctioning, please contact Martin™ Service.

Preventing electric shocks

- Always ground (earth) the machine electrically.
- Use only a source of AC power that complies with local building and electrical codes, and that has both overload and ground-fault protection.
- Before connecting the machine to power, check that the voltage indicated on the machine's serial label matches your local AC power voltage. If your AC power voltage does not match, do not use the machine. Contact Martin™ Service for assistance.
- Before using the machine, check that all power distribution equipment and cables are in perfect condition and rated for the current requirements of all connected devices.
- If the machine or any cables connected to it are in any way damaged, defective, wet, or show signs of overheating, stop using the machine and contact Martin™ Service for assistance. If the supply cord is damaged, it must be replaced by a special cord or assembly available from the manufacturer or its service agent.
- Disconnect the machine from AC power before servicing and when not in use.

- This machine is not waterproof and should not be exposed to wet outdoor conditions. Do not immerse in water or any other liquid. Do not expose to high-pressure water jets.
- Do not spill fluid over or inside the machine. If fluid is spilled, disconnect AC power and clean with a damp cloth. If fluid is spilled onto electronic parts, take the machine out of service and contact Martin™ for advice.
- Do not remove the covers or attempt to repair a faulty machine. Refer any service not described in this manual to Martin™.
- Do not operate the machine if any parts are damaged, defective or missing.
- Moisture and electricity do not mix. Do not aim fog output at electrical connections or devices.

Preventing burns and fire

- The fog produced by the machine is hot enough to cause burns when it leaves the nozzle, and very hot droplets of fluid escape occasionally. Keep people and objects at least 60cm (24 inches) away from the fog output nozzle.
- Do not touch the fog output nozzle during or after use – it becomes extremely hot and remains hot for several hours after the machine has been shut down.
- Fog output contains glycol, a flammable alcohol that burns with an almost invisible blue flame. Do not point fog output at sources of ignition such as open flames or pyrotechnic effects.
- Do not attempt to bypass thermostatic switches, fluid sensors or fuses.
- Replace fuses only with ones of the type and rating specified in this manual for the machine.
- Provide a minimum free space of 100mm (4 inches) around the machine.
- Provide a minimum free space of 500mm (20 inches) around fans and air vents and ensure free and unobstructed air flow to and around the machine.
- Keep the machine at least 60cm (24 inches) away from combustible and heat-sensitive materials.
- Do not operate the machine if the ambient temperature (Ta) is below 5° C (41° F) or above 40° C (104° F).
- Do not operate the machine if the relative air humidity exceeds 80%.

Preventing injuries

- Fasten the machine securely to a fixed surface or structure when in use. The machine is not portable when installed.
- Ensure that any supporting structure and/or hardware used can hold at least 10 times the weight of all the devices they support.
- If suspending from a rigging structure, fasten the machine to a rigging clamp. Do not use safety cables as the primary means of support.
- If the machine is installed in a location where it may cause injury or damage if it falls, install as directed in this manual a secondary attachment such as a safety cable that will hold the machine if a primary attachment fails. The secondary attachment must be approved by an official body such as TÜV as a safety attachment for the weight that it secures, must comply with EN 60598-2-17 Section 17.6.6 and must be

capable of bearing a static suspended load that is ten times the weight of the machine and all installed accessories.

- Check that all external covers and rigging hardware are securely fastened.
- Block access below the work area and work from a stable platform whenever installing, servicing or moving the machine.
- Do not operate the machine with missing or damaged covers or shields.
- In the event of an operating problem, stop using the machine immediately and disconnect it from power. Do not attempt to use a machine that is obviously damaged.
- Do not modify the machine in any way not described in this manual or install other than genuine JEM™ parts.
- Refer any service operation not described in this manual to a qualified technician.
- Fog output can cause condensation. Do not point the output at smooth floors. Floors and surfaces may become slippery. Check these frequently and wipe dry as necessary to avoid any danger of slipping.
- Ensure at least 2 m visibility in areas where fog is being produced.
- Fog fluid contains food-grade glycols in solution but may present health risks if swallowed. Do not drink it. Store it securely. If eye contact occurs, rinse with water. If fluid is swallowed, give water and obtain medical advice.
- 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.

Preventing breathing problems

- A machine can operate safely only with the fog fluid it is designed for. Use the machine only with fluids specified under “Fog fluid options” on page 20 or you may cause the release of toxic gases, presenting a severe health hazard. You will also probably damage the machine.
- Do not create dense fog in confined or poorly ventilated areas.
- Do not expose people with health problems (including allergic and/or respiratory conditions such as asthma) to fog output.
- Do not point fog output directly at a person’s face or at face height.

For the latest user documentation and other information for this and all Martin™ products, please visit the Martin™ website at http://www.martin.com
If you have any questions about how to install, operate or service the fixture safely, please contact your Martin™ distributor (see www.martin.com/distributors for details) or call the Martin™ 24-hour service hotline on +45 8740 0000, or in the USA on 1-888-tech-180.

Product overview

Product description

The JEM ZR25™, ZR35™ and ZR45™ provide a uniquely flexible and convenient solution to a wide range of fog requirements whether permanently installed or taken on the road. Featuring a high efficiency heating block and accepting multiple weights of fluid, the JEM ZR series™ products can create anything from an ephemeral steam chase to a dense, long-lasting “whiteout”.

An advanced control panel with LCD screen can be operated on the machine or removed and used as a remote controller, or the machines may be operated by DMX with full RDM capability for remote setup and status monitoring.

ZR25
ZR35
ZR45

This manual contains instructions for all machines in the range, but some features are different. These symbols show information which is specific to a particular machine.

Congratulations on your purchase of a JEM ZR series™ product from Martin™. Details of the full range of Martin™ products are available on our website at www.martin.com.

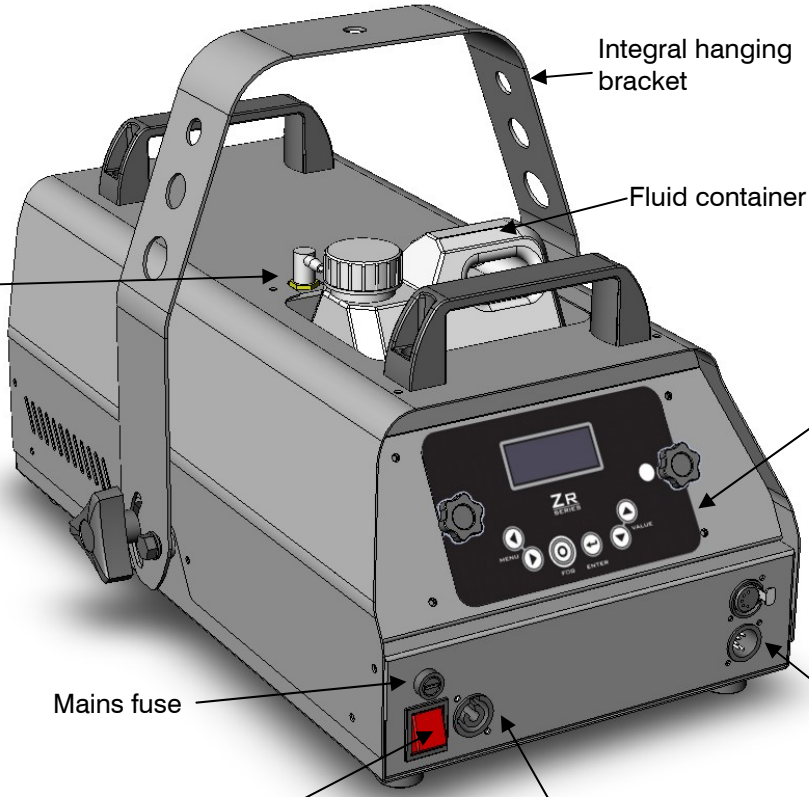
Features at a glance

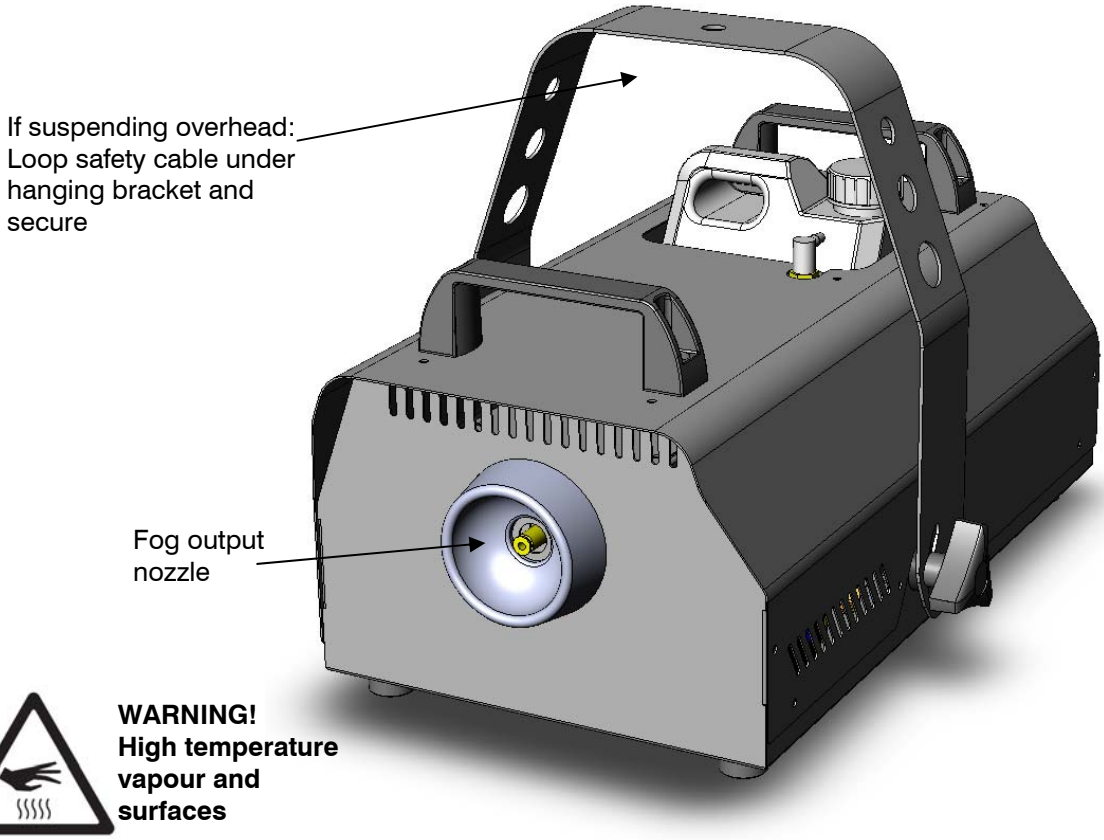
- Flying/hanging bracket as standard
- Continuous output
- Dual pumps (ZR45 only)
- Water-based fluid with long hang time
- Low noise
- Lightweight
- Variable output control using DMX
- “Run Dry” pump protection
- On-board DMX 5-pin
- Advanced on-board control panel with LCD screen
- Control panel removable to act as remote
- DMX RDM capable

Use only an approved JEM™ fluid as shown on page 20. Use of other fluid will void warranty.

Product details

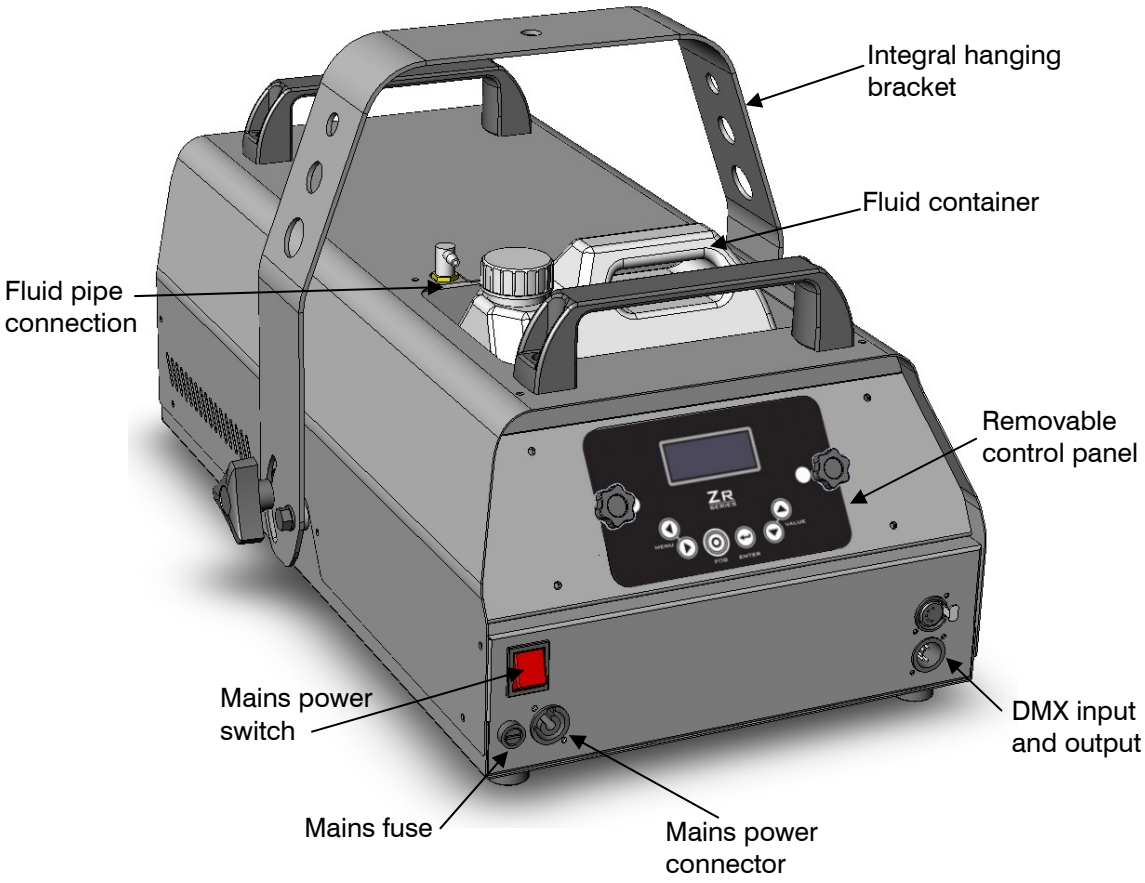
ZR25™

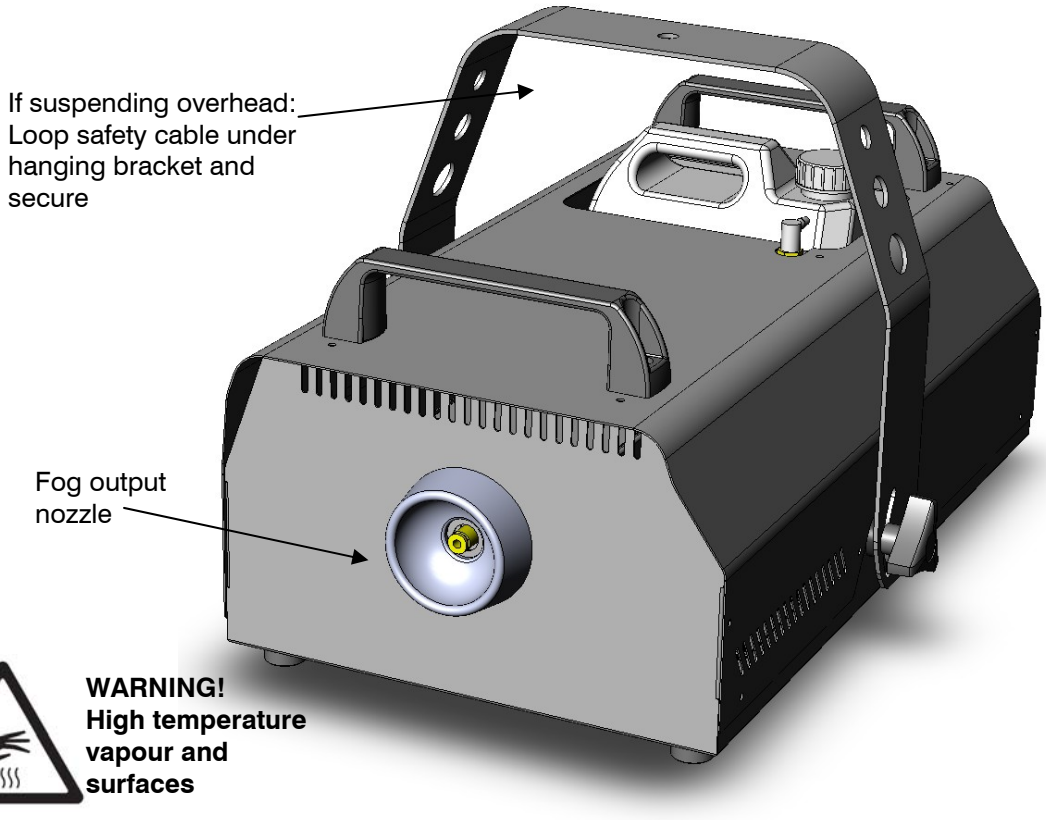




WARNING!
High temperature vapour and surfaces

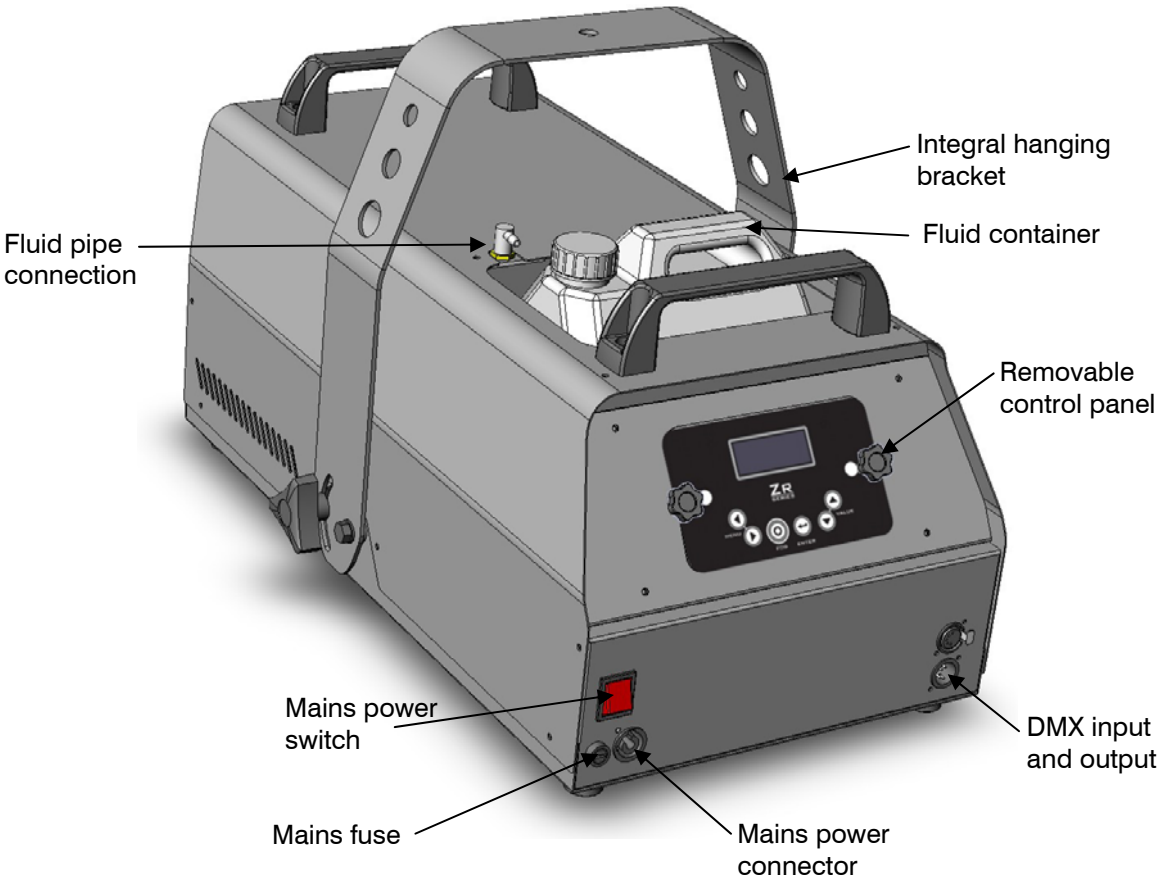
ZR35™

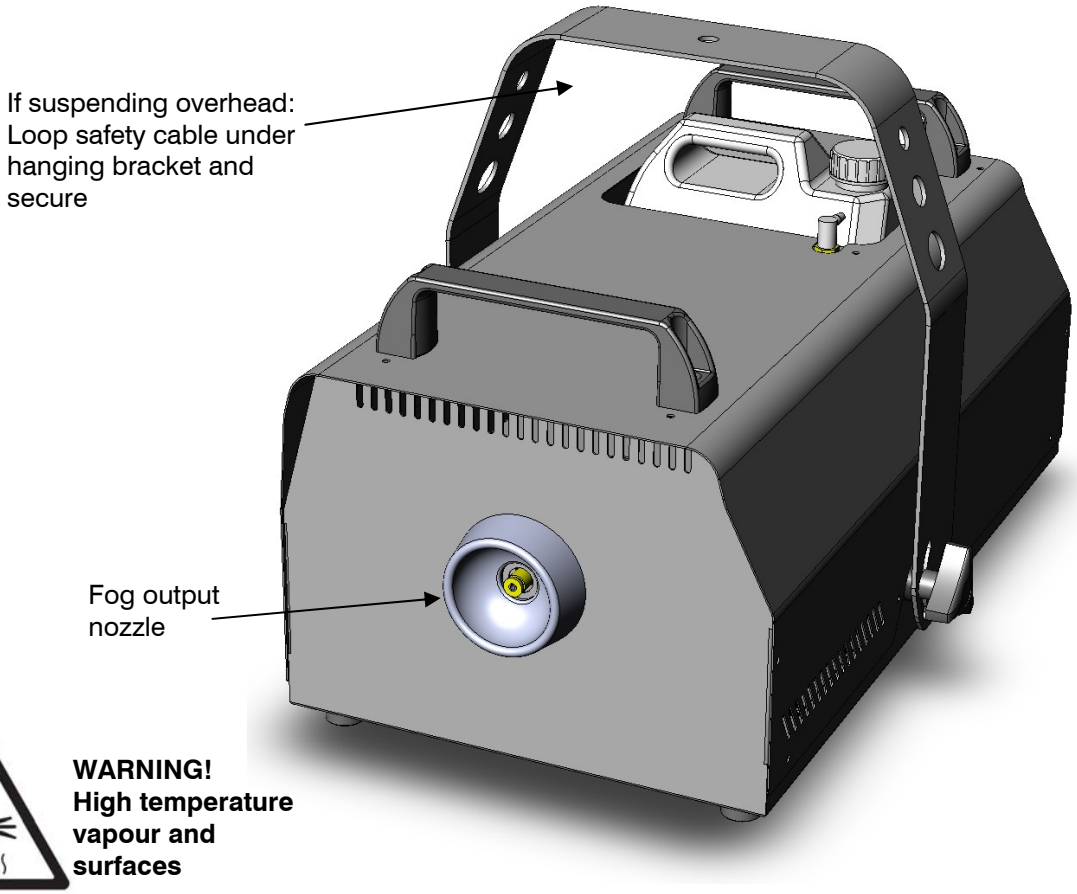




WARNING!
High temperature vapour and surfaces

ZR45™





WARNING!
High temperature vapour and surfaces

Quick Start

You are no doubt eager to switch on the machine and try it out by making a lot of fog. This section tells you how to do that. However, please also make the time to read the safety and servicing instructions in the remainder of this manual.

Setting up

Locate the machine in a suitably large area with nothing in front of the fog output.

Fill the fluid tank with a suitable JEM™ fluid as shown on page 20.

Connect a suitably rated power supply to the machine. The power requirements are:

ZR25 *1200W 240V EU / 1050W 120V US*

ZR35 *1550W 240V EU / 1450W 120V US*

ZR45 *2100W 240V EU / 1800W 120V US*

Now set the mains switch on the rear of the unit, to the 'ON' (**I**) position. The display will show **HEAT**. If the display shows **OFF**, press the **FOG** button on the control panel or set the **RUN MODE** to **CONTINUOUS**. After about 6-8 minutes the display should show **FOG LEVEL** (along with the set output level) and the machine will begin producing fog. If the display shows **READY** press the **FOG** button on the control panel.

Making fog

If you want to adjust the fog density manually, press the Menu < > buttons until the display shows **FOG LEVEL** and use the Value up/down buttons to select a value above 0% then press the Enter button to store this value.

If no fog is produced it may be necessary to prime the machine. Press the Menu <> buttons until the display shows PRIME (located in the SETTINGS submenu), then press the Value Up button so the display shows YES, then press the Enter button.

Installation and setting up

DANGER! DO NOT operate the machine until you have read and observed all the precautions listed under “Safety information” on page 5.

Location

The JEM ZR series™ machines are designed to be located on the floor or may be suspended using the fitted flying bracket. The machine can operate in any orientation from 45 degrees upwards to 45 degrees downwards. Steeper tilting may cause fluid leakage.

If the machine is to be suspended, ensure the mounting surface can support the weight of the machine. Do not suspend the machine over areas where people will be underneath. Use only the fitted flying bracket to suspend the machine.

Ensure that there is at least 100mm clearance all-round the machine and at least 600mm in front of the fog output.

The machine is delivered with white nylon shipping bolts fitted to the hanging bracket in place of the normal handwheel bolts. Before first use, remove the shipping bolts and replace them with the handwheel bolts (outside of bracket) and spacers (inside of bracket) which are supplied separately in the packaging.

AC power

Before using the machine, ensure that a grounding-type (earthed) power plug that fits the local power outlets is installed on the power cable provided.

DANGER! Make sure the power plug is correctly rated:
- **For EU (230 V) use fit a plug rated 10 amps minimum**
- **For US (120 V) use fit a plug rated 15 amps minimum**

When installing the plug, follow the plug manufacturer’s instructions and connect pins as follows:
Yellow and green wire to ground (earth), blue wire to neutral and brown wire to live.

The table below shows some common pin identification schemes.

wire	function	marking	screw colour
brown	live	“L”	yellow or brass
blue	neutral	“N”	silver
green/yellow	earth	⏚	green

Before connecting the machine to power, verify that the AC supply is adequately dimensioned for the current draw of the machine.

ZR25 *1200W 240V EU / 1000W 120V US*

ZR35 *1550W 240V EU / 1450W 120V US*

ZR45 *2100W 240V EU / 1800W 120V US*

Check that the local AC voltage is appropriate, as indicated on the machine's serial number label. If your AC voltage is outside the appropriate range, do not use the machine. Contact Martin™ Service for assistance.

Setting up

Fill the fluid tank with a suitable JEM™ fluid as shown on page 20. If DMX control is being used, connect the machine to the DMX line (see page 19).

If you are using several machines from one control panel in master-slave mode, link the machines in a daisychain using the DMX input and output sockets. It does not matter which socket is used as input or output.

Final checks

Before applying power to the machine, verify the following:

- the machine is safely located or installed and meets the location requirements stated on page 13
- the operator is familiar with, and able to comply with, the requirements for safe operation listed on page 5.
- the fluid is one of the genuine JEM™ fluids listed under "Fluid options" on page 20.
- the machine is electrically grounded (earthed)
- the AC power distribution circuits and lines are adequately rated for the current load

Turning on the power

Set the mains switch on the rear of the unit, to the 'ON' (I) position. The display will show **HEAT**. If the display shows **OFF**, press the **FOG** button on the control panel or set the **RUN MODE** to **CONTINUOUS**. After about 6-8 minutes if no DMX is connected the display should show **FOG LEVEL** (along with the set output level) and the machine will begin producing fog. If DMX is connected the display will show **DMX** when the machine is ready.

The machine will remember its state from when it was turned off last time, so it will only power up in OFF mode if you have previously disabled the heaters.

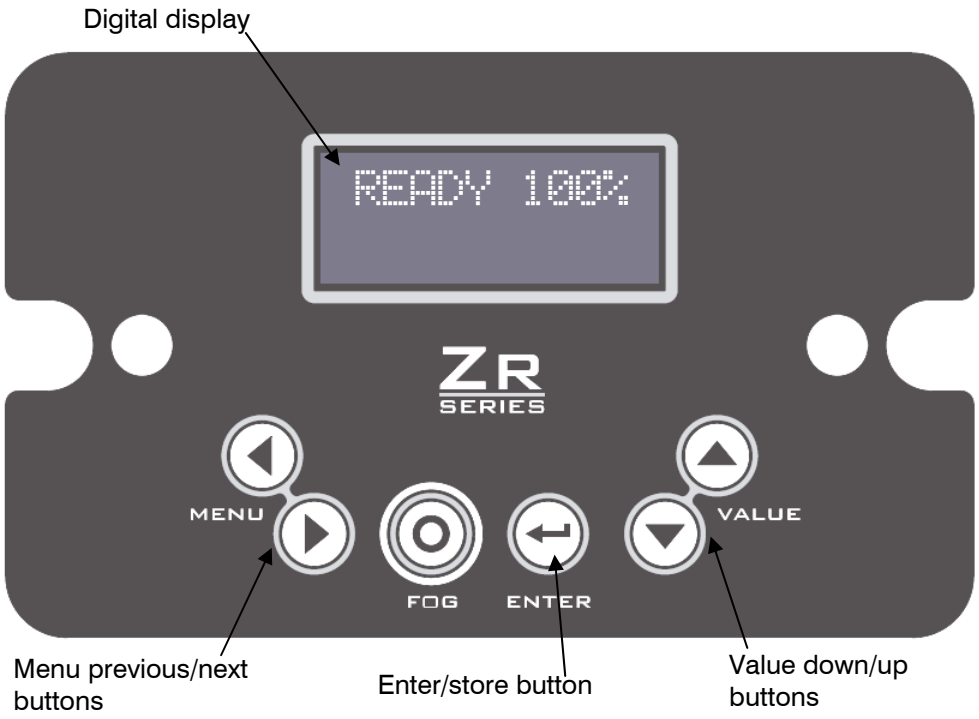
To obtain maximum output, wait another few minutes after the READY indication is shown, as the machine continues to heat to full operating temperature and fog output is reduced while the unit is heating up.

Control settings

Overview

The **digital display panel** on the rear of the machine allows you to configure it using option menus.

The digital display may be removed from the unit and used as a remote control by removing the two handwheel bolts either side of the display. The display cable may be extended up to 25 metres using standard 3-pin XLR cable.



Setting Run modes

The RUN MODE menu sets the operational mode of the machine, and can also be used to shut down the heater. Settings are Off (shutdown, heaters off), Standby (heaters remain on), Timer mode or Continuous mode.

Use the Menu Previous / Next buttons to select the RUN MODE option.
Use the Up/Down buttons to select OFF, STANDBY, TIMER, CONTINUOUS.
Press the Enter button to store the setting. The display shows SET.

Selecting OFF will disable the heaters on the unit.

Setting Fog output density

Use the Menu Previous / Next buttons to select the FOG LEVEL option.
Use the Up/Down buttons to select the density from 0% - 100%
Press the Enter button to store the fog setting. The display shows SET.

If you want to temporarily change the fog density, do not press Enter. The fog setting will go back to its stored value next time the machine is powered up. This applies to all options.

Setting the Timer

Set the RUN TIME and OFF TIME values from the menu.
Then select the TIMER option from the RUN MODE menu.
The timer values are set in seconds and are in the range 0-99. The Fog value is taken from the FOG LEVEL menu. The timer will cycle continuously until the run menu is changed.
Use this mode for maintaining a low level of fog in smaller venues.

Using the Settings menu

Options such as the DMX base address, display brightness, DMX stand-alone linking, priming, factory reset and temperature control (ZR45 only) are found in the SETTINGS menu.

Use the Previous / Next buttons to select the SETTINGS option.
Press the Enter button to go to the SETTINGS menu.
To return to the main menu, use the Previous / Next buttons to select EXIT and press Enter.

Setting the DMX base address

Use the Previous / Next buttons to select the DMX option from the SETTINGS menu.
Use the Up/Down buttons to set the DMX base address from 001 to 511. If you hold down the button the address will count up or down more quickly.
Press the Enter button to store the address setting.
The machine will automatically respond to a DMX controller whenever it is connected.

When using in a DMX system ensure the LINK MODE menu is set to RECEIVE (the default setting) to avoid causing DMX errors to other devices on the system.

Alternatively the DMX base address can be set via RDM.

Display back light setting

You can set the brightness of the display backlight using the BACK LIGHT option.

Use the Previous / Next buttons to select the BACK LIGHT option from the SETTINGS menu.
Use the Up/Down buttons to change the option to LOW, NORM or HIGH.
Press the Enter button to store the setting.

Setting the master-slave link mode

It is possible to control several machines from one digital remote. The machine with the remote plugged into it is set as the Master. The other machines are set as Slaves. The machines are interconnected with DMX cabling.

Use the Previous / Next buttons to select the LINK MODE option from the SETTINGS menu.

Use the Up/Down buttons to select RECEIVE (slave unit) or SEND (master unit).
Press the Enter button to store the link setting.

The machine should be set to SEND only if it is running as a master. If running as a slave, stand-alone or DMX controlled it should be set to RECEIVE. If a machine set to SEND is connected to an active DMX system, the DMX will be corrupted causing flickering of lights and other strange symptoms.

Priming the machine after fluid out

If the machine runs out of fluid it will automatically shut down and show FLUID OUT on the display to prevent damage to the pump(s). To suck the new fluid back into the machine and reset the FLUID OUT error, replace/refill the fluid tank and use the prime function.

Use the Previous / Next buttons to select the PRIME option from the SETTINGS menu.
Use the Up/Down buttons to change the option to YES.
Press the Enter button to start the priming function.

The pump(s) will operate at full power for a short time to purge air from the pipes inside the unit.
To exit this menu if you decide not to activate the Prime function, select NO and press Enter.

Resetting options to factory settings

The factory settings configure a standard mode of operation for the machine.

Use the Previous / Next buttons to select the RESET option from the SETTINGS menu.
Use the Up/Down buttons to change the option to YES.
Press the Enter button to reset all options.

To exit this menu if you decide not to reset the options, select NO and press Enter.

The factory settings are:

option	setting
FOG LEVEL	50%
TIMER ON	10 seconds
TIMER OFF	20 seconds
RUN MODE	STANDBY
DMX	001
BACK LIGHT	NORM
LINK MODE	RECEIVE
PRIME	NO
TEMPERATURE*	NORM

*ZR45 Only

DMX control

Overview

DMX is a digital control system widely used in entertainment and architectural lighting. Any controller meeting the DMX-512 standard may be used to control and program the fog output of the JEM ZR series™ machines.

When a DMX signal is present, the JEM ZR series™ machine's stand-alone functions do not work. To fire the unit from the control panel or remote control, the DMX controller must be powered off or disconnected.

If the DMX signal is removed (controller turned off or unplugged), the machine will revert to its previously stored RUN MODE settings.

If the machine was set to OFF it will revert to this state.
If the machine was set to STANDBY it will revert to this state.
If the machine was set to TIMER it will revert to this state.
If the machine was set to CONTINUOUS it will revert to this state.

Connection

The JEM ZR series™ machine provides 5-pin XLR connectors on the rear of the machine for DMX connection.

For best results, use cable designed for high speed digital data transmission. Suitable DMX cable is available from your Martin™ dealer.

DMX functions

The JEM ZR series™ address setting must match the DMX address allocated to it on your controller. To set the address, see "Setting the DMX base address" on page 16. The JEM ZR series™ machine requires one DMX channel.

When the machine is at running temperature and is under DMX control it displays DMX (+ the current DMX base address).

The DMX control values are shown in the table below.

Channel 1	DMX value range	Function	Macro description	Default value
Fog output level	0-12	Idle range	None	0
	13- 240	Output 0-100%		
	241 -255	Output 100%		

Fog fluid types

The JEM ZR series™ machines must only be used with the JEM™ fluids listed below. Martin™ supplies high quality fog fluids that are based on ultra-pure deionized water. No other fluid is suitable for use.

Pro Smoke Studio Fluid (DX mix)

In a studio or theatre environment, a lighter, faster dispersing fog is often preferred. Pro-Smoke Studio offers a less dense environment to Pro-Smoke Super and is therefore less likely to interfere with TV camera focusing.

Regular DJ Fluid (DJ mix)

Regular DJ fluid is an economical fluid that gives a good, medium density smoke well-suited for atmospheric effects.

Pro Smoke Super (ZR mix)

Pro Smoke Super fluid is a high-quality, general purpose fluid that produces a dense white airborne fog with medium dispersal time. Its medium to high index of refraction permits both good atmospheric effects and denser “white-outs”.

Pro Smoke High Density (SP mix)

Pro Smoke High Density fluid generates a high density, white, airborne fog with a very high index of refraction and slow evaporation rate. It is well suited for scenic obscuring, dramatic strobe effects, and “white-outs”.

i-fog Fluid

i-fog is not only kind to your lights, but is also more economical to use thanks to its incredible long “hang time” characteristics.
It is well suited for scenic obscuring, dramatic strobe effects, and “white-outs”.

Pro Steam Simulation

ZR45 For ZR45 only - Pro Steam Simulation fluid is a light fluid that produces well-defined cones of vapour that disperse quickly. It is ideal for chase effects and theatrical use. Not suitable for ZR25 and ZR35.

DANGER! The JEM ZR series™ machines can run safely only on the specific fog fluids they are designed for. Use ONLY the JEM™ fog fluids designated in this manual. NEVER use any other type of fluid, or toxic gas may be produced. You will probably also cause damage to the machine that will invalidate the product warranty. Do not dilute fog fluid with water or any other liquid. Discard fog fluid if it becomes contaminated.

To find your local dealer visit **www.martin.com**

ZR45 Temperature Menu

The different fluid types listed require correct selection of the relevant temperature setting in the TEMPERATURE sub-menu of the SETTINGS menu. Select the required temperature and press Enter to store.

The selected temperature setting will remain after power off and is indicated on the display whilst in standby (TEMP=NORM) and also shows during manual operation/DMX control (T=N).

TEMPERATURE Setting	Fluid Type
HIGH	Pro Smoke High Density (SP mix) i-fog
NORM	Pro Smoke Super (ZR mix) Regular DJ Fluid (DJ mix) Pro Smoke Studio (DX mix)
LOW	Pro Steam Simulation

Pro Clean Supreme Fluid

Specially designed for optimum performance while providing longevity of the heat exchanger, Pro Clean Supreme is the ultimate cleaning solution for Martin haze and smoke machines.

This advanced and pure maintenance fluid has been tried and tested by Martin for years and is now available to the market.

Applying Pro Clean Supreme fluid on a regular basis reduces clogging and further extends the life of Martin haze and smoke machines.

By using the highest grade chemicals available while remaining eco-friendly, Martin fluids are both effective and safe.

Using Pro Clean Supreme every 200 hours, or once a month (depending on usage), will prolong the life of the heat exchanger in Martin fog and haze machines.

Connect Pro Clean Supreme fluid to the fogger or hazer, then allow the unit to heat.

When fully ready, activate the machine or remote for approximately 30-45 minutes (use the timer function if available).

When completed, replace cleaning fluid with appropriate fluid.

Note: Cleaning procedure should be used if the unit is to be stored for 30 days or more. Ensure there is no fluid in the fluid tube when placing in storage.

Basic service

Before servicing the JEM ZR series™ machines, read and observe all the precautions listed in "Safety information" on page 5. Any service not described in this section must be carried out by a Martin™ service technician.

To find your local Martin™ service centre visit **www.martin.com/Where-to-buy**

Cleaning

Excessive dust, fog fluid, and dirt build-up will degrade performance and cause overheating and damage to the machine that is not covered by the product warranty. To maintain adequate cooling, dust must be cleaned from the outer casing and air vents of the machine periodically.

Isolate the machine from power and allow to cool completely before cleaning. The fog output nozzles remain hot for a period after use.

- Remove dust from the air vents with a soft brush, cotton swab, vacuum, or compressed air.
- Clean fog fluid residues from the fog output of the machine using a damp cloth.
- Clean the outer casing with a damp cloth only.

Fuse replacement

The main fuse for the machine is located adjacent to the power inlet on the rear panel. There is also a T3.15A fuse located on the electronics board inside the unit which protects the supply to the pump.

DANGER! Disconnect the power supply before removing any covers or changing fuses. Live parts inside!

Rear panel fuse:
ZR25
120 V = 10 AT/125V
230 V = T6.3 AT/250V
ZR35
120 V = 15 AT/125V
230 V = T10 AT/250V
ZR45
120 V = 20 AT/125V
230 V = T12.5 AT/250V

Replace fuse only with one of exactly the same size and rating. Contact Martin™ Service if the fuse blows repeatedly.

To replace the internal fuse, disconnect the power cord from the supply, unscrew the screws holding the top cover of the unit and remove the cover. The electronics board is located in the side compartment.

Troubleshooting

Problem	Probable cause(s)	Suggested remedy
Machine will not produce fog when control panel set to **CONTINUOUS** or fog button pressed	Machine not at operating temperature	Wait until HEAT message no longer shown
	FOG option set to 0	Increase setting
	Machine in timer mode and TIMER ON set to 0	Increase setting
	DMX signal present	Disconnect or turn off DMX controller
Machine can be fired from control panel, but not by DMX controller	DMX address setting incorrect	Change DMX address (page 16)
	Poor connection in DMX line	Check DMX cables and connections
	LINK menu is set to SEND	Set LINK menu to RECEIVE
Fog output is weak	Machine requires priming	Use PRIME option to prime the machine (page 17)
Wet, greasy, non-uniform fog output, fluid drips or spits from nozzle, or very loud noise when firing machine	Incompatible fog fluid	Use approved fluid!
Machine appears dead	Mains fuse blown	Replace fuse (page 23)
	No power at AC cable inlet	Check power cable and circuit breaker
Machine causes DMX errors to occur on other units when connected to a DMX system	LINK menu is set to SEND	Set LINK menu to RECEIVE
Loss of control from remote	Communication issue between remote and machine	Check cable connection between remote and machine

Status messages

message	reason
OFF	The heaters are Off, the unit is shut down.
HEAT	The unit is heating up to operating temperature.
READY	The heater is at operating temperature, but Fog is not turned on (RUN set to STANDBY).
DMX	The heater is at operating temperature and the unit is under DMX control.
FLUID OUT	Run out of fluid. Refill the fluid tank and operate the prime function in the SETTINGS menu
CALIBRATION ERROR	The machine has detected an error with its calibration settings and will not operate. Call Martin™ Service.
SYSTEM ERROR	The machine has detected an error in the temperature sensor and will not operate. Call Martin™ Service.

Resetting the machine after fluid out

If the machine runs out of fluid simply refill the fluid container and follow the priming instructions on page 17.

Specifications

Physical

ZR25
Length ..... 485 mm
Width ..... 335 mm
Height ..... 242mm (333mm including hanging bracket)
Dry weight ..... 11.2 kg

ZR35
Length ..... 590 mm
Width ..... 395 mm
Height ..... 264mm (351mm including hanging bracket)
Dry weight ..... 15.1 kg

ZR45
Length ..... 602 mm
Width ..... 395 mm
Height ..... 306mm (393mm including hanging bracket)
Dry weight ..... 17.1 kg

Performance

Operating time ..... continuous
Warm up time (approx)
ZR25 ..... 7 minutes
ZR35 ..... 9 minutes
ZR45 ..... 10 minutes
ZR25 maximum operating time at maximum output with 2.5 L fluid ..... 1.2 hours
ZR35 maximum operating time at maximum output with 4 L fluid ..... 1.25 hours
ZR45 maximum operating time at maximum output with 5 L fluid ..... 1.18 hours

Control and programming

Control options ..... onboard control panel, DMX
.....instant or timer-controlled output, 0-100% adjustable output level
DMX channels 1
DMX compliance ..... USITT DMX512-A

Construction

Housing ..... Steel & aluminium

Fluid system

Fluid pump ..... Oscillating piston, high pressure
Onboard fluid capacity..... 2.5 litres (ZR25), 4.0 litres (ZR35), 5.0 litres (ZR45)
Compatible fluids ..... See page 20

Connections

Power connection ..... Neutrik PowerCON TRUE1
DMX data ..... 5-pin XLR sockets
Remote control ..... 3-pin locking XLR

Electrical

AC power (EU models) ..... 220-240 V nominal, 50/60 Hz
AC power (US models) ..... 115-125 V nominal, 50/60 Hz
ZR25
Main fuse (220-240V power) ..... T6.3AT/250 V
Main fuse (115-125V power) ..... 10AT/125 V
ZR35
Main fuse (220-240V power) ..... T10AT/250 V
Main fuse (115-125V power) ..... 15AT/125 V
ZR45
Main fuse (220-240V power) ..... T12.5AT/250 V
Main fuse (115-125V power) ..... 20AT/125 V

Typical Power and Current

ZR25 (EU model) .....1200 W, 5.21 A
ZR25 (US model) .....1050 W, 8.75 A
ZR35 (EU model) .....1550 W, 6.74 A
ZR35 (US model) .....1450 W, 12.08 A
ZR45 (EU model) .....2100 W, 9.13 A
ZR45 (US model) .....1800 W, 15 A
Measurements made at nominal voltage. Allow for a deviation of +/-10%

Thermal

Minimum ambient temperature (Ta min) ..... 5°C (41°F)
Maximum ambient temperature (Ta max)..... 40°C (104°F)
Exterior surface temperature, steady state, at 20°C ambient ..... 30°C (86°F)
Max nozzle temperature..... 290°C (554°F)

Approvals

CE

EU EMC:..... EN 61000-6-3:2007
EU safety: ..... EN 60335-1:2002 + A15:2011
Immunity: ..... EN 61000-6-1:2007
.....EN 62233:2008 Electromagnetic fields
US safety (pending) UL998
Canadian safety (pending) ..... CSA C22.2 No 104

Included items:

User Manual
Fluid container
Digital Remote Control, JEM ZR series™
Mains Lead, EU, PowerCON TRUE1, 3 m (9.8 ft.) ..... P/N 11501043
ZR25 Mains Lead, US, 10A, PowerCON TRUE1, 3 m (9.8 ft.) P/N 11501044
ZR35 Mains Lead, US, 15A, PowerCON TRUE1, 3 m (9.8 ft.) P/N 11501045
ZR45 Mains Lead, US, 20A, PowerCON TRUE1, 2 m (6.6 ft.) P/N 11501046

Accessories

Analogue Remote Control, JEM ZR series™ machines .....P/N 92765044
Ducting System, JEM ZR25™ .....P/N 92625012
Ducting System, JEM ZR35™ .....P/N 92625013
Ducting System, JEM ZR45™ .....P/N 92625014

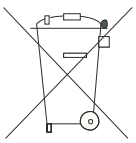
Ordering information

JEM ZR25™ machine US model 120V.....P/N 92215330
JEM ZR25™ machine EU model 230V.....P/N 92215320
JEM ZR35™ machine US model 120V.....P/N 92215350
JEM ZR35™ machine EU model 230V.....P/N 92215340
JEM ZR45™ machine US model 120V.....P/N 92215370
JEM ZR45™ machine EU model 230V.....P/N 92215360

Specifications subject to change without notice. For the latest product specifications, see www.martin.com

Notes

Notes



Disposing of this product

Martin™ products are supplied in compliance with Directive 2002/96/EC of the European Parliament and of the Council of the European Union on WEEE (Waste Electrical and Electronic Equipment), as amended by Directive 2003/108/EC, where applicable.

Help preserve the environment! Ensure that this product is recycled at the end of its life. Your supplier can give details of local arrangements for the disposal of Martin products.

www.martin.com • Olof Palmes Allé 18 • 8200 Aarhus N • Denmark
Tel: +45 8740 0000 • Fax: +45 8740 0010