

LINELAZER ECO

ES ROADLINER
E-POWERED SERIES

DRIVING TOWARDS NET ZERO
CARBON HIGHWAYS



Delivering highway performance with high durability

LineLazer ECO ES Roadliner. Industry first all-electric line marking machine to deliver highway performance lines with high durability!! Ground breaking innovation, driving towards net zero carbon highways.

Introducing an industry first all-electric line marking machine to deliver highway performance lines with high durability.

Driving towards Net Zero Carbon Highways using ground breaking innovations. Not only does the ES RoadLiner help reduce carbon emissions, it also hangs onto the essential key elements ensuring Safety and Durability are delivered throughout a project.



ES ROADLINER

Reflective E-Powered Series Ride-on Airless Spray Machine. What's included...

- Pressurised Bead System with simple one-button operation
- Dual AGM batteries
- Flashing Beacon with switch
- 2 additional pressurised air couplings
- Chapter 8 Chevrons on rear
- Safety handle on the rear of the LineDriver
- Multiple tow eyes for winching into the trailer and strapping in



BOX TRAILER

Dual Axle with Fold Down Ramp (3x1.5x1.8m). What's included...

- Internal and external LED lighting & main switchboard.
- 4 x Flashing strobe lights providing 360° coverage
- Winch with synthetic Rope, 900kg capacity with 2 remotes
- 2x double mains power sockets for charging ES RoadLiner and the trailer
- Floor Lashing hooks with set of 1 tonne ratchet straps
- Chapter 8 chevrons and 'Highway Maintenance' markings on rear of trailer



Driving towards Net Zero Carbon Highways using ground breaking innovations

Safety – The machine needed to be safe for the operator, and capable of doing big jobs with a small support unit. It should be able to tackle urban works in tight locations. We wanted to avoid hot works. Which is the single biggest cause of incidents within the line marking industry and potential risk to the general public.

Durability – Building a machine using proven engineering was essential. We chose to use Graco pump systems and drive train because of their proven reliability in the industry for over 30 years. A machine that had the ability to apply a range of marking types was key, from water and solvent based to two pack epoxy and, finally, a high performance MMA system.

Sustainability – From central government contracts through to regional construction companies and local distribution providers, there's a growing demand for carbon reduction. Indeed, electric powered plant and machinery is becoming a common sight. A fully electric unit was our only option, reducing both carbon output and minimising noise, at 82 dcBs.

To help us to take a look at what the machine can actually deliver, we'll break this down into three areas.

Chassis – The unit is built on an engineered sub frame and wheel gear to ensure the operator has the ability to deliver both straight and curved lines to the highest degree of accuracy. Overall the unit weighs 590kg, includes a total of 6 AGM batteries, sufficient charge to outlast a 10 hour shift and a recharge time of only 4 hours. There is capacity to carry up to 55 litres or 100kg (1.2 kilometres by 100mm wide) of paint material, as well as 50kg (500m by 100mm wide) of glass beads. The machine includes a on-board computer system, enabling it to deliver skip markings without the need for pre-marking. The USB port offers the option for operators to download the paint consumption, operator times and travel speeds.

Output – The driver unit has more than adequate power to enable the machine to be used on gradients up to 1:10 safely. The unique benefits of the drive unit are the ability both travel at speeds of up to 16kph and set cruise control to ensure when applying lines a consistent application dosage rate is achieved. Line performance is directly proportional to bead application accuracy; hence we have a pressurised bead system that guarantees a constant dosage applied immediately after spraying the line. Typically applications are made at between 1.5 and 2kph, when supported by the direct drive, pumps can deliver up to 8km of 150mm wide high performance marking in a single shift.

In summary, the machine has the capacity to apply highway spec lines that are:

- 60% more visible at night than conventional markings = safety for the road user.
- 300% more durable = improved whole life costs.
- 90% less carbon output = sustainable and supporting central government goals of net zero

Package – safe transportation of the unit is as important as safe operation. This is why we've developed the customised trailer for the unit. The trailer has a load carrying capacity of 2000kg, fitted out with chapter 8 markings and beacons, work lights and plug-in system for recharging the paint unit.

Simply plug in when you are back to the yard and recharge for the following days work. There is space down the side of the unit, ideal for storing the HammerJet kit, tools and traffic management equipment, meaning operators have everything they need for line marking in one unit, which can be mobilised in minutes.

LINELAZER ECO ES ROADLINER - Reflective e-powered airless spray machine:



DESCRIPTION:

The LineLazer ECO ES RoadLiner - The world's first all-electric ride on linemarking machine able to deliver road performance high grade lines. The industry's first all electric line marking machine capable of applying highway specification line markings which have 300% increased durability and 60% increased retro-reflectivity compared to traditional methods whilst cutting carbon output by 90%. The ES RoadLiner is developed from the Graco LineLazer ES 2000 and LineDriver ES, providing proven reliability. This machine also provides increased safety for the operator, involving no hot works and with a noise level of only 82dB which means nearby traffic or machinery can be heard.

FEATURES & BENEFITS:

- Zero carbon emissions with no need to offset for full compliance
- Will complete min 8hr shift at full usage without recharge
- Absolutely no hot works removing any associated safety considerations
- Able to deliver both paint and cold plastic options, offering maximum flexibility for the user
- Incredibly low noise output that enables residential night time working
- Capability to deliver a fully reflectorised line that exceeds statutory performance both initially and over time, and improving road user safety
- Highly durable lines, extending the life and thereby improving costs as well as reducing disruption to the road user



Technical details

SERIES:

REFLECTIVE SERIES

For large jobs such as highways, airports, and city projects. The reflective system provides:

- EZ Align Front Wheel System
- EasyMark Gun Adjustment System
- LiveLook Display
- DualComfort Handle Bar System
- Rear-gun Mount System
- Multiple spray control options (Manual, Automatic and Semi-Automatic)
- Skip Line System
- On-board compressor with 2 additional air couplings
- Pressurized bead tank
- Bead gun activates automatically with spray gun
- Bead gun with gun-delay ability

OPTIONAL FEATURES:

- 55ltr Paint Hopper
- Second paint and bead gun
- LazerGuide 1700
- Work light

KEY FEATURES:

HIGHWAYS SPECIFICATION LINES

Capable of applying highway spec lines in cold plastic with glass beads. Certificated performance exceeding highway standards.

QUIET, RELIABLE POWER

Sealed AGM batteries offer a maintenance-free design. Proven to outlast a 9 hour shift.

NO ENGINE NOISE, VIBRATION, OR FUMES

Complete any job at any time without disruptions or complaints. Reduce user fatigue while delivering perfect lines on all surfaces.

RIDE ON SYSTEM

Designed for large projects, reducing operator fatigue and providing consistent line application. Cruise control allows consistent applications with a max speed of 10mph.

HIGHWAYS COMPLIANT

Chapter 8 chevrons on rear of machine and a switched flashing beacon provide the necessary visibility on site.

LARGE CAPACITY

55 litre paint hopper and a bead tank which can carry 50kg's of beads provides enough material to apply 1.2km of paint and 500m of beads at 100mm before refilling.

SIMPLE, SECURE TRANSPORT

Tow eyes on the front, rear and sides of machine for strapping down easily and securely.

SIMPLE, PLUG-IN CHARGING

Plug into 240 volt power socket. Fully charges overnight. It is recommended to leave the unit charging whenever possible.

TECHNICAL:

REFLECTIVE SERIES	MAX TIP SIZE:	MAX FLOW:	WEIGHT:	PAINT CAPACITY:	BEAD CAPACITY:	FULL CHARGE:
PBS 1 AUTO PAINT GUN:	0.031"	4.2 L/min	590kg	55 litres	50kg	6hrs 80% 10hrs 100%
PBS 2 AUTO PAINT GUNS:	0.023"	4.2 L/min	590kg	55 litres	50kg	6hrs 80% 10hrs 100%
Dimensions	Height	1430mm				
	Width	950mm				
	Length	2900mm				

Case studies

Lydiard Park, Swindon

Overview - Swindon Borough Council reached out to Meon regarding the solutions we provide for cold applied line marking systems, as part of their strategy to reduce carbon emissions. To demonstrate our solutions, we arranged a trial application at Lydiard Park, a 260-acre country park with a constant flow of visitors attending events, conferences, the Lydiard house museum or for a walk around the park.

Swindon Council were keen to maintain this flow of visitors with the least possible disruption, a perfect scenario for the LineLazer ECO ES RoadLiner.

Solution - The ES RoadLiner was transported to site in a compact Box trailer which was parked out of the way of visitors for the duration of works. The cold spray plastic line markings were applied along both sides of one of the roadways into the park to provide delineation to prevent visitors parking along the side of the roadway. These markings were applied using the ES RoadLiner at a maximum noise level of 82dB, quieter than a human's voice, providing minimal disruption to visitors and nearby wildlife. The roadway was a total of 450 metres with varying gradients, which the ES RoadLiner was able to apply perfectly consistent markings on with the LineDriver ES set on a consistent speed setting.



A30, London Road, Hook

Overview - Hampshire Council were interested in carrying out a Road trial of Meons cold spray plastic line marking solutions and review its performance on a well trafficked road. The location chosen for the trial was London Road in Hook, a busy A-road which has also been resurfaced so the application

was onto new asphalt under a month old.

Solution - The ES RoadLiner was used for this application to apply a single pack primer to prevent bitumen bleed from the new asphalt, and then the UltraStripe L224 cold spray plastic. The section of road was approximately 0.7km with the entire length of centre line applied in cold plastic with the ES RoadLiner.



Rutland County Council

Rutland County Council have a 'Climate Change Action Motion' statement, which includes a commitment to take action to deal with climate change to make sure that the Council's activities achieve net-zero carbon before 2050.

Following an awareness session whereby the Meon team presented on how to improve Safety, increase Durability and reduce Carbon emissions of highway markings and reinstatement systems, Rutland County Council committed to trialling new systems on the scheme.

Rutland County Council have been working very closely with Meon over the last few months to get this project complete. It is key to our environmental agenda to reach zero carbon and we are continually looking at projects like this. Rutland County Council are really keen to know the performance of this system, and Meon will be actively monitoring the site over the next 6-12 months and reporting back.

The surface marking works programme was completed on a new asphalt substrate using cold applied systems, therefore removing the need for

hot works on site. This included nearly 300 linear metres of 150mm centre line.

Meon's commitment to helping the industry reduce carbon went a step further by using an early concept of the new e-powered ES Roadliner ECO on display here today.

The scheme utilised Meon's hard wearing and highly durable ViaLine and UltraStripe L224 MMA products, and supported two of Rutland County Council's key objectives:

To achieve the highest possible safety standards in an accident black spot area.

To make sure that the Council's activities achieve net-zero carbon before 2050.

The lines themselves offer a 60% increase in night-time visibility, with 300% more durability. By using the ES Roadliner ECO line marking machine, carbon output can be reduced by up to 90%.

Rutland County Council believe that this is the future. Rutland County Council need to trial these cold applied systems and see how they go, ensuring that we meet our zero carbon strategy in a safe and sustainable method.



