



EnviroLAV Coal-Spec Toilet System

The EnviroLAV Coal-Spec is an intrinsically safe, self-contained and highly portable toilet system, designed specifically for the coal mining industry.



envirolAV



Standard Coal-Spec EnviroLAV
Toilet with Mounting Plate
ET-PN-CS-MP

MineARC Systems - Built for Safety.

www.minearc.com



Company Profile

MineARC Systems is the global leader in the manufacture and supply of emergency safe refuge solutions for the mining, tunnelling, chemical processing and disaster relief industries.

With over 20 years' experience, our dedication to ongoing research and development is driven by our key focus to continually offer the best and most advanced safety solutions on the market.

Our team of qualified engineers, electrical designers and technical experts form a global network across several international locations including;

- Perth, Western Australia
- Johannesburg, South Africa
- Dallas, Texas
- Santiago, Chile
- León, Mexico
- Beijing, China
- Reading, UK

This allows MineARC to provide 24 hour service and engineering support to our expanding list of clients in over 65 countries across the globe.

All MineARC Refuge Chambers and Safe Havens comply with the highest international regulations and recognized 'world's best practice' industry guidelines. Our key focus on quality control and product advancement has meant that MineARC Refuge Chambers have successfully saved lives in multiple real life industrial emergencies around the globe.

www.minearc.com



EnviroLAV Coal-Spec Toilet System



The EnviroLAV Coal-Spec is the latest innovation in self-contained, portable toilet systems – ideal for the use in coal mining due to its intrinsically safe design.

Designed to be simple to operate and maintain, the EnviroLAV is a semi-permanent structure that can be used both above and below ground wherever there is access to compressed air or electricity.

The EnviroLAV's structure consists of latrine facilities mounted on top of a miniature biological treatment plant. Waste matter is deposited directly into the treatment tank and is fully isolated throughout the process. MineARC's biodegradable, non-toxic EnviroZYME solution works to break down the matter with every flush, involving no handling of hazardous chemicals at any stage. The efficiency of the EnviroZYME solution ensures the system emits minimum effluent odor and the waste treatment process causes minimal environmental impact.

The EnviroLAV requires emptying just once every 12 months, based on standard usage. Alternative chemical latrines typically require up to 50 times the standard amount of labor on servicing and maintenance over the course of a year (taking into account the time and man power wasted on accessing the units, emptying them, and cleaning them each week). The EnviroLAV therefore delivers a substantial cost saving over the long term.

With the amount of contact between employees and waste matter vastly reduced (compared to conventional latrines), the EnviroLAV makes for a cleaner, safer, and more productive working environment.

The EnviroLAV Coal-Spec is available in SINGLE and DUAL configurations, as well as a Modular Design for transport through areas with height limitations.



Bureau Veritas ISO 9001:2008 Quality Management Systems



MineARC® HRM Refuge Live Risk Assessment Testing



Australian C-Tick Standards: AS4100-1998, AS3570.1-18, AS2208, AS3000, AS1716-15



Canadian Standards Association (CSA)



United States National Electrical Code (NEC) 2013/14



European CE Certified to Machinery Norms

Standard Features

MineARC's EnviroLAV Coal-Spec features a shorter height for lower seam scenarios. The unit is designed to be intrinsically safe for coal mining applications; featuring a pneumatic operating system that simply requires connection to compressed air.

Featuring an integrated waste tank, MineARC's unique EnviroZYME solution is deposited with every flush; working simultaneously with the system's aerobic technology to quickly break down waste.

Available in male, female and unisex configurations, the EnviroLAV Coal-Spec provides the much needed option of a private toilet facility for all personnel. It's robust design means transportation and installation is a simple one-person job.



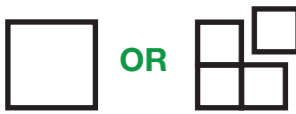
MALE, FEMALE OR UNISEX CONFIGURATIONS

Accommodating the needs of all personnel onsite is essential. A site must consider how they can satisfy these requirements through the supply of single-sex, unisex or dual capacity toilets as well as additional sanitary options. Preferences may also impact the frequency of use during each shift.



PEDESTAL OR SQUAT PAN FACILITIES

It is important to consider cultural factors when sourcing the right facilities. Geography and cultural preference may impact toilet design requirements. MineARC Systems can work closely with site to provide a toilet solution to best suit the needs of their personnel.



FIXED OR MODULAR CONSTRUCTION

The layout of and access to a site can restrict toilet positioning, especially when it comes to height requirements. The EnviroLAV is available in both fixed and modular configurations, allowing sites to easily transport units into place, whilst still enjoying flexibility when it comes to choice.



EnviroLAV Coal-Spec Exterior



EXTERNAL AIR VENT (NOT SHOWN)

REFLECTIVE DECALS

PAINT

- AS/NZS 2312:2002
- Blasted to 2.5 grit
- UV protection (Optional for above ground models)

INTERNALLY LOCKING DOOR

- 1.6mm steel plate
- Outward opening

STEEL PLATE FRAME

- 3mm walls, roof & floor
- 5mm waste tank

WASTE TANK

WASTE TANK LEVEL

FORK LIFT SLOTS

- 200 x 100mm
- 100mm C Channel

EnviroLAV Coal-Spec Fixed Configurations

Single



CODE	MODEL	SPECIFICATIONS				
		H	W	L	WEIGHT (WET)	TANK
ET-PN-S-CS	Standard Pneumatic	2.26m raised	1.7m	1.8m	2800kg	1273L

- MineARC's original EnviroLAV Toilet System configuration
- Offers a reasonably compact footprint of less than 3m²
- Available in male, female and unisex configurations

Dual



CODE	MODEL	SPECIFICATIONS				
		H	W	L	WEIGHT (WET)	TANK
ET-PN-D-CS	Dual Pneumatic	2.26m raised	2.25m	1.8m	3830kg	1450L

- Dual toilet configuration, allowing for gender-specific options
- Offers a significant economic advantage over the standard model in scenarios where more than one toilet is required
- Available in male/female, unisex and single sex configurations

Mounting Plate Models

To cater towards individual site transport requirements, MineARC Systems offers Mounting Plate models to allow for QDS or RAS attachments, as well as IT Hitches.

Attachments themselves can be provided at an additional cost.

For more information visit www.minearc.com



EnviroLAV Coal-Spec Interior



enviroLAV

ENVIROWASH SOAP DISPENSER

TOILET ROLL HOLDER
• Stainless steel
• Compatible with EnviroSOFT Toilet Tissue

USE ENVIROWASH HAND SOAP ONLY

HAND BASIN
• Stainless steel

TOILET PEDESTAL (NOT SHOWN)
• High durability plastic
• Flushing foot pedal

DANGER
COMPRESSED AIR
DO NOT ADJUST REGULATOR

PNEUMATIC COMPRESSED AIR OPERATION

WASTE TANK PORTAL

EnviroLAV Coal-Spec Modular Configurations

Driven by industry demand, the Modular EnviroLAV Coal-Spec range has been engineered specifically for low seam mines or for transport through areas with height limitations. With a unique collapsible top, the toilet can be reduced in height for transportation and re-assembled once it is placed in position.



Standard Modular



CODE	MODEL	SPECIFICATIONS				
		H	W	L	WEIGHT (WET)	TANK
ET-PN-SM-CS	Standard Pneumatic	2.26m raised 1.65 lowered	1.7m	1.7m	2200kg	960L

- MineARC's original EnviroLAV Toilet System, now in a Modular configuration
- Offers a reasonably compact footprint of less than 3m²
- Available in male, female and unisex configurations

Dual Modular



CODE	MODEL	SPECIFICATIONS				
		H	W	L	WEIGHT (WET)	TANK
ET-PN-DM-CS	Dual Pneumatic	2.26m raised 1.65 lowered	2.25m	1.7m	2800kg	1000L

- Dual toilet configuration, allowing for gender-specific options
- Offers a significant economic advantage over the standard model in scenarios where more than one toilet is required
- Available in male/female, unisex and single sex configurations

EnviroLAV Coal-Spec Modular



PERFECT FOR LOW SEAM MINES

COLLAPSIBLE FOR EASE OF TRANSPORTATION

ENVIROWASH SOAP DISPENSER

HAND BASIN
• Stainless steel

REFLECTIVE DECALS

FORK LIFT SLOTS
• 200 x 100mm
• 100mm C Channel

Waste Transfer Options



The **Waste Transfer Tank** is a fully portable unit that allows for efficient waste removal, rendering relocation of the EnviroLAV toilet obsolete. Utilising a gravity feed for the transfer of waste from the EnviroLAV to the waste transfer tank, the unit can hold up to 2000L, equivalent to two full standard EnviroLAVs.

The pneumatic **Waste Transfer Pump** is an additional option, allowing the transfer of waste from the EnviroLAV to the Transfer Tank without the need for lifting.



MODULAR DESIGN

- Stack up to 3 units
- 1.7mW x1.7mL

TANK LEVEL

- 2000L capacity

FORKLIFT SLOTS

OPTIONAL: WASTE TRANSFER PUMP

Feature Summary



Solid Steel, corrosion resistant structure

Easy to transport

Eco-friendly EnviroZYME solution

Minimal emptying - as little as every 12 months

Intrinsically safe for coal mining

Maintenance

A fully self-contained unit, the EnviroLAV Coal-Spec requires less maintenance than any other portable toilet on the market. On commissioning, the EnviroLAV requires MineARC's EnviroZYME solution to be added to the waste treatment tank. With every flush thereafter, the powerful enzyme solution is deposited into the tank.

The EnviroLAV can last up to 12 months before emptying is required (based on standard usage in optimal conditions). Simple routine checks are recommended periodically to ensure the system is

stocked and operating optimally and a full service by a qualified technician is only required annually.

Alternative chemical latrines on the market today feature on average a 350-400L waste tank; and require weekly emptying. Taking into account the time and man power wasted on removing the units from underground every week, these toilets require up to 50 times the amount of servicing and maintenance over the course of one year, compared to the EnviroLAV.



enviroZYME

MineARC's unique EnviroZYME contains bacteria and powerful enzymes that are highly effective at accelerating waste breakdown. The solution has been specially formulated to also act as a powerful odour suppressant. EnviroZYME is non-toxic and safe for the environment.



enviroWASH

MineARC's EnviroWASH hand cleaner has been developed specifically for use in conjunction with MineARC EnviroZYME. Totally eco-safe and biodegradable, the solution's natural enzymes contain no harsh chemicals that may cause damage to the system's waste breakdown process.



enviroCLEAN

MineARC's EnviroCLEAN degreasing spray is suitable for all EnviroLAV hard surfaces. The powerful organic liquid cleaner eliminates odours and kills germs, leaving a refreshing orange fragrance.



enviroSOFT

MineARC's unique EnviroSOFT biodegradable toilet tissue has been specifically developed for use with MineARC EnviroZYME solution. Starch based for quick, natural breakdown, EnviroSOFT's organic composition compliments the EnviroLAV's waste breakdown process.

Transportation

The EnviroLAV's robust design means transportation and installation is easy. Set up (connection to external air and water, if applicable) is a one-man job.

The EnviroLAV features balanced forklift slots to all sides for ease of transportation. The reinforced base of the unit is solidly constructed

to support the unit during transportation and minimise general wear and tear.

Additional steel work can be added to allow the provision for an IT (Integrated Tool Carrier) attachment to be fabricated to the existing structure for added manoeuvrability.



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CAUTION
DANGER ON
GROUND

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