

MINEARC SYSTEMS

ETS 012



enviroLAV



SALES & SERVICE  
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# EnviroLAV Toilet System

The EnviroLAV is a self-contained, highly portable and environmentally friendly toilet system, that can be used both above and below ground.



enviroLAV



Standard Pneumatic  
EnviroLAV Toilet

ET-PN-S

MineARC Systems - Built for Safety.

[www.minearc.com](http://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 recognised '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.

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# EnviroLAV Toilet System



**The EnviroLAV is the latest innovation in self-contained, portable toilet systems – ideal for the use in mining, industrial and remote locations.**

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 odour and the waste treatment process causes minimal environmental impact.

The EnviroLAV can last up to 12 months before emptying is required, based on standard usage in optimal conditions. Alternative chemical latrines typically require up to 50 times the standard amount of labour 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 is available in three standard configurations; SINGLE, DUAL and a smaller COMPACT unit for confined spaces. It is now also available in 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 is the perfect solution for both above and below ground industrial scenarios.

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 provides the much needed option of a private toilet facility for women in industry. It's robust design means transportation and installation is a simple one-person job.



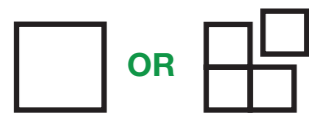
## ELECTRIC OR PNEUMATIC OPERATION

Choose an operating system based on available access to utilities in the area. Depending on the location onsite, access to power or compressed air may not be readily available. MineARC will work closely with clients to determine the best solution based on their existing site set-up.



## 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.



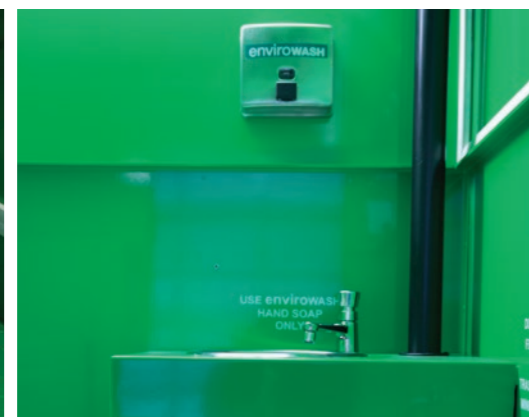
## FIXED OR MODULAR CONSTRUCTION

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.



## 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.



# EnviroLAV Exterior



EXTERNAL AIR VENT

REFLECTIVE DECALS

INTERNALLY LOCKING DOOR  
 • 1.6mm steel plate  
 • Outward opening

COMPRESSED AIR OR ELECTRIC POWERED

STEEL PLATE FRAME  
 • 3mm walls, roof & floor  
 • 5mm waste tank

WASTE TANK LEVEL

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

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



# EnviroLAV Fixed Configurations

## Single



CODE	MODEL	SPECIFICATIONS				
		H	W	L	WEIGHT (WET)	TANK
ET-PN-S	Single Pneumatic	2.5m / 8'2"	1.7m / 5'5"	1.8m / 5'9"	2800kg / 6172lbs	1273L / 336gal
ET-EL-S	Single Electric	2.5m / 8'2"	1.7m / 5'5"	1.8m / 5'9"	2800kg / 6172lbs	1273L / 336gal

- MineARC's original EnviroLAV Toilet System for the mining industry
- Offers a reasonably compact footprint of less than 3m<sup>2</sup>
- Available in male, female and unisex configurations

## Compact



CODE	MODEL	SPECIFICATIONS				
		H	W	L	WEIGHT (WET)	TANK
ET-PN-C	Compact Pneumatic	2.45m / 8'1"	1.26m / 4'1"	1.3m / 4'2"	1700kg / 3747lbs	460L / 121gal
ET-EL-C	Compact Electric	2.45m / 8'1"	1.26m / 4'1"	1.3m / 4'2"	1700kg / 3747lbs	460L / 121gal

- Compact, portable design, useful for tight mining confines or where space is a limiting factor
- Small footprint of less than 1.5m<sup>2</sup>
- Removable steps
- Available in male, female and unisex configurations

## Dual



CODE	MODEL	SPECIFICATIONS				
		H	W	L	WEIGHT (WET)	TANK
ET-PN-D	Dual Pneumatic	2.5m / 8'2"	2.25m / 7'4"	1.8m / 5'9"	3830kg / 8444lbs	1450L / 383gal
ET-EL-D	Dual Electric	2.5m / 8'2"	2.25m / 7'4"	1.8m / 5'9"	3830kg / 8444lbs	1450L / 383gal

- 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 Interior



INTERNAL FLUORESCENT LIGHTING (ELECTRIC MODELS ONLY)

- Pneumatic models feature a battery powered LED

ENVIROWASH SOAP DISPENSER

TOILET ROLL HOLDER

- Stainless steel
- Compatible with EnviroSOFT Toilet Tissue

HAND BASIN

- Stainless steel

ELECTRIC OR PNEUMATIC COMPRESSED AIR OPERATION

TOILET PEDESTAL

- High durability plastic

WASTE TANK PORTAL

FLUSHING FOOT PEDAL

DRAIN FLOW DIVERTER BALL VALVE

LEFT HANDLE POSITION DRAINS TO WASTE TANK

RIGHT HANDLE POSITION DRAINS TO EXTERNAL



# EnviroLAV Modular Configurations

Driven by industry demand, the Modular EnviroLAV range has been engineered specifically for low seam mines or 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.



## Single Modular



CODE	MODEL	SPECIFICATIONS				
		H	W	L	WEIGHT (WET)	TANK
ET-PN-SM	Single Pneumatic	2.26m raised 1.65 lowered	1.7m	1.7m	2496kg	960L

- MineARC's original EnviroLAV Toilet System for the mining industry, now in a Modular configuration
- Offers a reasonably compact footprint of less than 3m<sup>2</sup>
- Available in male, female and unisex configurations

## Dual Modular



CODE	MODEL	SPECIFICATIONS				
		H	W	L	WEIGHT (WET)	TANK
ET-PN-DM	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

# Cold Climate EnviroLAV

The Cold Climate EnviroLAV combines comfort with practical design and benefits from the renowned innovations of the self-contained, portable Dual EnviroLAV toilet. The Cold Climate Toilet also features an added R-28 insulation and multiple heating sources to keep all systems working in even the most extreme conditions.

Like all units within the EnviroLAV range, this toilet has been designed to be simple to operate and maintain.



## Standard Features

The Cold Climate EnviroLAV's robust structure features a steel base frame with forklift slots; providing access on all four sides of the toilet for easy manoeuvrability. Made for durability, these toilets come with a 11 gauge steel corners and roof panels supporting 100mm thick insulated aluminum-clad panels.



CODE	MODEL	SPECIFICATIONS				
		H	W	L	WEIGHT (WET)	TANK
ET-EL-CC-D	Dual Electric	2.91m / 114.50"	2.49m / 98"	1.65m / 65"	2,177kg / 4,800lbs	1,393L / 368gal

- Powder coat paint finish
- Sloped roof for rain run-off and reduced snow load
- Removable entry steps for unobstructed lifting access
- Low maintenance – empty as little as once every 12 months
- Durable 10+ year life cycle
- Insulation & heating systems

## Heating and Insulation

The Cold Climate EnviroLAV comes equipped with R-28 insulation and multiple heating sources to keep all systems working in even the most extreme conditions. The toilet is heated by ceiling-mounted radiant heat panels to quickly warm internal objects and supply continual heat to the floor panel; aiding in evaporation. It also contains a 320L (85 gallon) flushing tank heater that pre-heats the sink and toilet water.

The toilet contains a fully insulated 1,400L (370 gallon) waste tank that features an in-line adjustable heating element that pre-heats the air before it is supplied to assist in the evaporation process.





# 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**

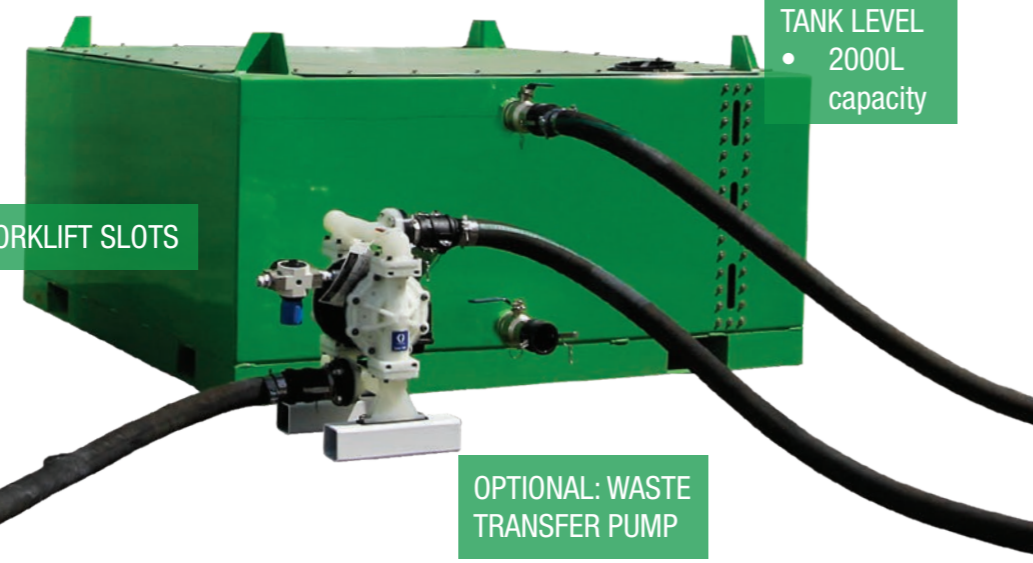
- Stack up to 3 units
- 1.7mW x 1.7mL

**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
- Use above or below ground

## 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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