

MINEARC SYSTEMS

ETS 012



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



Dual Modular Coal
EnviroLAV Toilet
ET-PN-DM-CS



Standard Coal
EnviroLAV Toilet
ET-PN-CS



Standard Pneumatic
EnviroLAV Toilet
ET-PN-S

Emergency refuge chambers and ancillary mining products

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 15 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 six international locations including;

- Perth, Western Australia
- Johannesburg, South Africa
- Dallas, Texas
- Santiago, Chile
- Beijing, China
- Barcelona, Spain
- Guanajuato, Mexico

This allows MineARC to provide 24 hour service and engineering support to our expanding list of clients in over 40 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.

www.minearc.com



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

MineARC's 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 requires emptying just once every 12 months, 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; STANDARD, DUAL and a smaller COMPACT unit for confined spaces. It is now also available in a low seam, intrinsically safe Coal model. The EnviroLAV also comes in Modular design and is available in a coal spec configuration. Dual and standard sized models are also available.

Standard EnviroLAV

MineARC's Standard EnviroLAV is the perfect solution for both above and below ground industrial scenarios.

Featuring an integrated waste tank at close to 900L, the EnviroLAV offers a reasonably compact footprint of less than 3m², allowing for tight mining confines.

With every flush, 10ml of MineARC's unique EnviroZYME solution is deposited into the waste tank, working simultaneously with the system's aerobic technology to quickly break down waste.



The standard EnviroLAV is available in male, female or unisex options, and with either a pneumatic or electric system configuration. It's robust design means transportation and installation is a simple one-man job.



CODE	MODEL	SPECIFICATIONS				
		H	W	L	WEIGHT (WET)	TANK
ET-PN-S	Standard Pneumatic	2.55m / 8'4"	1.7m / 5'7"	1.7m / 5'7"	2200kg / 4850lbs	891L / 235gal
ET-EL-S	Standard Electric	2.55m / 8'4"	1.7m / 5'7"	1.7m / 5'7"	2200kg / 4850lbs	891L / 235gal



MINEARC SYSTEMS

PAINT

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

EXTERNAL AIR VENT

ETS 012



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

SALES & SERVICE
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CAUTION

WASTE TANK

WASTE TANK
LEVEL

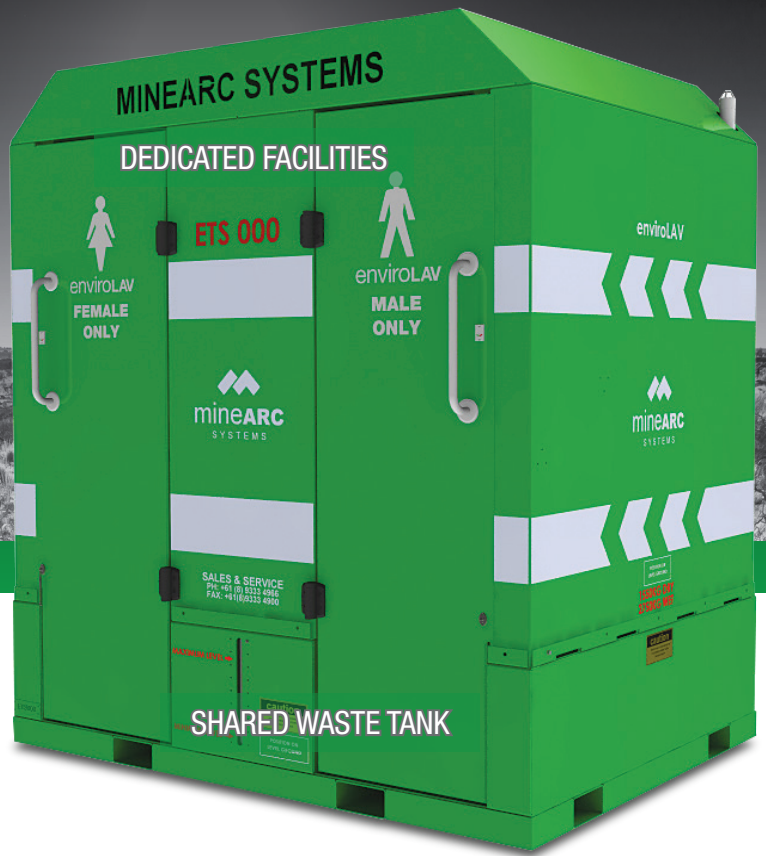
FORK LIFT SLOTS

- 200 x 100mm
- 100mm C Channel

Dual EnviroLAV

Drawing on the industry leading standard EnviroLAV design, MineARC has recognised a requirement in the industry for improved gender-specific toilet options, leading to the release of the dual EnviroLAV System.

A robust, self-contained unit that requires minimal ongoing maintenance, this dual toilet offers a significant economic advantage over the single EnviroLAV. Featuring a shared waste tank, it is just 550mm wider than the standard model, resulting in a reduced footprint and greater cost efficiency in scenarios where more than one toilet is required.

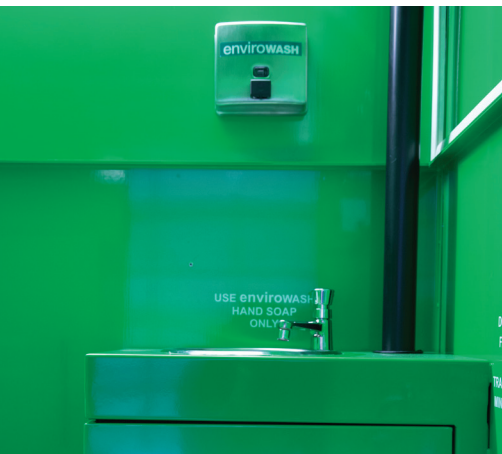


The dual unit operates on an identical system to the standard EnviroLAV; each flush automatically incorporating 10ml of MineARC's EnviroZYME solution to aid in breaking down waste.

Available in male/female, unisex and single-sex configurations, the EnviroLAV Dual System provides the much needed option of a private toilet facility for women in industry. The unit can be customised for any requirement.



CODE	MODEL	SPECIFICATIONS				
		H	W	L	WEIGHT (WET)	TANK
ET-PN-D	Dual Pneumatic	2.55m / 8'4"	2.25m / 7'4"	1.7m / 5'7"	3100kg / 6834lbs	1108L / 292gal
ET-EL-D	Dual Electric	2.55m / 8'4"	2.25m / 7'4"	1.7m / 5'7"	3100kg / 6834lbs	1108L / 292gal



EnviroLAV Interior

INTERNAL FLOURESCENT LIGHTING (ELECTRIC MODELS ONLY)

- Pneumatic models feature a battery powered LED

enviroLAV

ENVIROWASH SOAP DISPENSER



USE envirowash
HAND SOAP
ONLY

TOILET ROLL HOLDER

- Stainless steel
- Compatible with EnviroSOFT Toilet Tissue

HAND BASIN

- Stainless steel



FOOT PEDAL
HALF-WAY
L TOILET
WATER

FOOT PEDAL
N FULLY
SH TOILET

ELECTRIC OR PNEUMATIC COMPRESSED AIR OPERATION

DRAIN FLOW DIVERTER
BALL VALVE

LEFT HANDLE
POSITION DRAINS
TO WASTE TANK

RIGHT HANDLE
POSITION DRA
TO EXTERNA

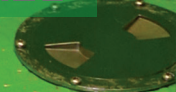


TOILET PEDESTAL

- High durability plastic

WASTE TANK PORTAL

FLUSHING FOOT PEDAL



Modular EnviroLAV

The MineARC® Modular EnviroLAV is a pneumatically operated coal safe toilet that is self-contained, environmentally friendly, non-toxic system that biologically breaks down and neutralizes waste.

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.



The MineARC® Modular EnviroLAV is available in a coal spec design. Dual and standard sized models are also available.

MineARC® Modular EnviroLAV is available in male/female, unisex and single-sex configurations with pneumatic system configuration only.

This module is perfect for low seam mines or tunnels. It can be collapsed in height for transportation and re-assembled once its placed in position.

CODE	MODEL	SPECIFICATIONS				
		H	W	L	WEIGHT (WET)	TANK
ET-PN-DM-CS	Dual Pneumatic	2.55 m / 100.6"	2.25m / 88.6"	1.7m / 66.9"	2,400kg DRY / 5,549 lbs.	1,000 litres / 265 gallons
					3,600 WET / 8,959 lbs.	



EnviroLAV Interior

PERFECT FOR LOW
SEAM MINES

COLLAPSABLE FOR EASE
OF TRANSPORTATION

ENVIROWASH
SOAP DISPENSER

HAND BASIN
• Stainless steel

REFLECTIVE DECALS

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



Compact EnviroLAV

MineARC's Compact EnviroLAV offers many of the same benefits as the standard unit, in a more compact design.

With a small footprint of less than 1.5m², the Compact EnviroLAV is particularly useful for tight underground mining confines, as well as above ground exploration and construction sites where space is a limiting factor. Removable steps allow for further maximisation of space.

The unit features a smaller 455L waste tank, however still offers the same efficient waste management process as the standard EnviroLAV system. It is available in male, female or unisex configurations, and can be customised to suit any requirement.



CODE	MODEL	SPECIFICATIONS				
		H	W	L	WEIGHT (WET)	TANK
ET-PN-C	Compact Pneumatic	2.55m / 8'4"	1.2m / 3'11"	1.2m / 3'11"	1200kg / 3654lbs	455L / 117gal
ET-EL-C	Compact Electric	2.55m / 8'4"	1.2m / 3'11"	1.2m / 3'11"	1200kg / 3654lbs	455L / 117gal



Coal Spec EnviroLAV

The latest addition to the EnviroLAV range is MineARC's Coal Spec EnviroLAV; featuring a shorter height for lower seam coal mines.

The unit is designed to be intrinsically safe for coal mining applications; featuring a pneumatic operating system that simply requires connection to compressed air.

LOW SEAM DESIGN

INTRINSICALLY SAFE COMPONENTRY

OPTIONAL: IT HITCH REINFORCEMENTS

The unit features a 600L waste tank and the same efficient waste management process as the standard EnviroLAV system. It is available in male, female or unisex configurations, and can be made to suit customer specifications taking into consideration seam heights or dual facility requirements. Optional features include structural reinforcement for IT Hitch attachment.



CODE	MODEL	SPECIFICATIONS				
		H	W	L	WEIGHT (WET)	TANK
ET-PN-S-CS	Standard Pneumatic	2.28m / 7'4"	2.1m / 9'9"	1.7m / 5'7"	2200kg / 4850lbs	609L / 160gal
ET-PN-S-CS-MP	Standard Pneumatic w/ Mounting Plate	2.28m / 7'4"	2.1m / 9'9"	1.7m / 5'7"	2200kg / 4850lbs	609L / 160gal



Waste Transfer

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.



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MODULAR DESIGN

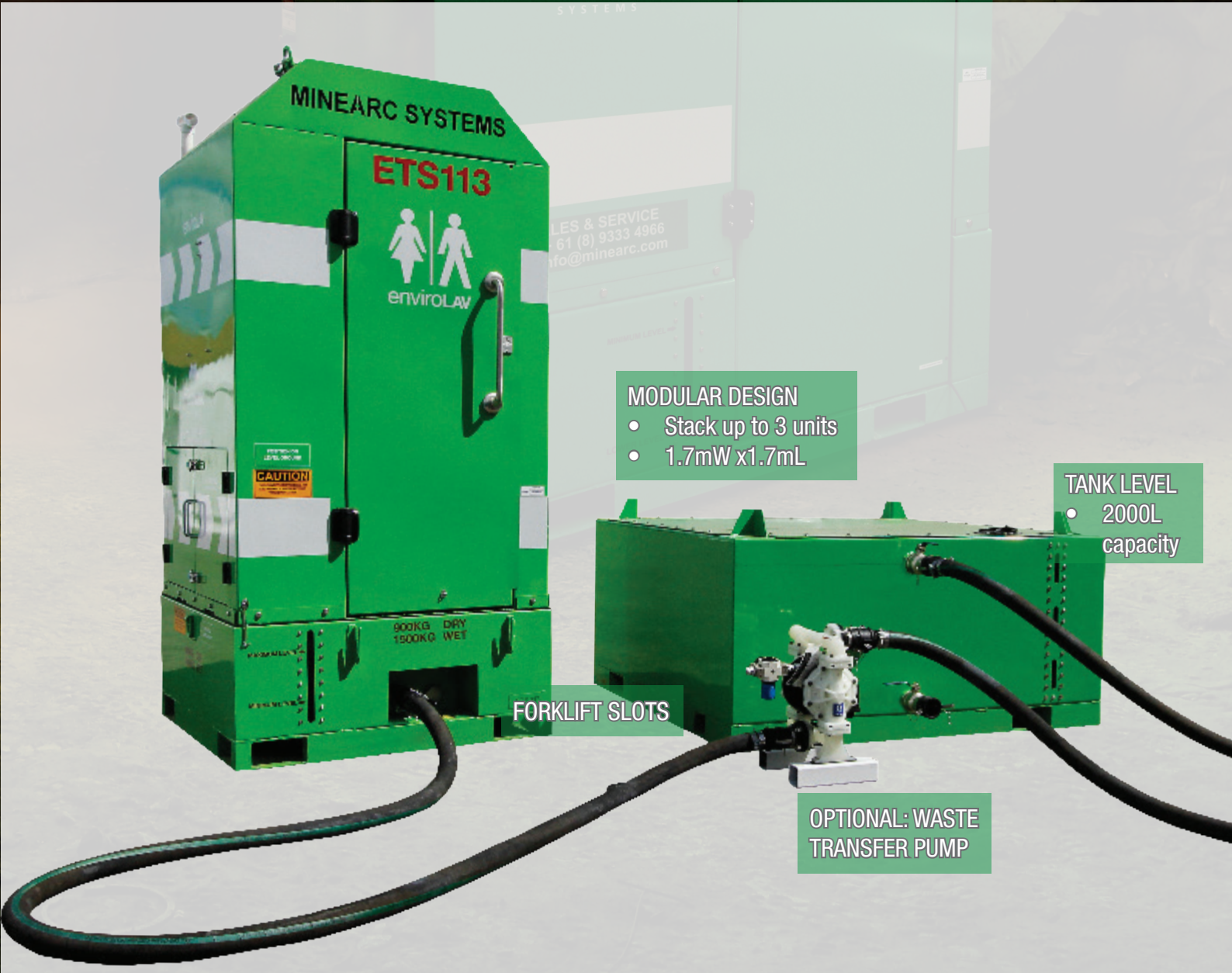
- Stack up to 3 units
- 1.7mW x1.7mL

TANK LEVEL

- 2000L capacity

FORKLIFT SLOTS

OPTIONAL: WASTE TRANSFER PUMP



Feature Summary



Solid Steel, corrosion resistant structure

Easy to transport

Eco-friendly EnviroZYME solution

Low maintenance - empty every 12 months

Use above or below ground

Maintenance

A fully self-contained unit, the EnviroLAV 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 requires emptying just once every 12 months (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, water and electricity, 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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Emergency refuge chambers and ancillary mining products


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