

ANT Power Armor

The Mining Guild’s ANT Power Armor was created by the [Department Of Engineering](#) originally in the form of previous Industrial power armor whose construction plans were later borrowed and remade using the HEPAS-1 system standards for use in mining work. It was meant for use in demilitarized service.

About the Armor

The ANT power armor allows for the integration of both the protection as well as the strength of power armor into a demilitarized monster capable of keeping the wearer safe in a potentially hazardous environment, from cave-ins possibly crushing the poor miner, to undetectable gasses that can kill a miner through suffocation, or even ignited to flood the area full of flames. The ANT Power Armor is an advanced exoskeleton developed by the Mining Guild specifically for mining operations in hazardous environments such as ice, asteroids, and underground tunnels. This power armor is controlled by an Undersuit, which enhances safety, comfort, and mobility for miners in extreme conditions.



Statistics & Performance

The specific statistic information about the power armor is here.

General Statistics for the ANT Power Armor	
Year Introduced	YE 41 / YE 45 for update
Class/Nomenclature	MG-M1A-41
Designers	Mining Guild
Manufacturer	Department Of Engineering, Mining Guild Engineering Corps
Fielded By	Mining Guild , Mining Guild Contingent
Range	24 Hours, ¹⁾ .
Maintenance Cycle	Checked every 24 hours, and worked on then if need be
Lifespan	Lifelong, provided maintenance is done.
Pricing	250.00 KS ²⁾

Appearance

The ANT Power Armor was created based on previous models of industrial power armor, and as such it sports a humanoid shape to better fit the wearers use during operations. The Guild’s ANT Power Armor was modified and changed to suit only one purpose which was mining. One obvious and big change was the [Mole Claws](#) attachment because it is much more noticeable. Due to the possible limited light down in the tunnels. Each power armor has a luminous belt, around the waist as well as shoulder straps. This glow in case of emergency and each helmet has a built-in flashlight attached to it to allow the miners to see if the light in the tunnels goes out.

Mining Guild's ANT

ANT back


3)

HEPAS-1 Classification

The ANT Power Armor is classified under the Hazardous Environment Power Armor System Version 1 (HEPAS-1). This classification certifies that the power armor meets stringent safety regulations and performance standards for operating in hazardous mining environments.

History

Early Development: The [Mining Guild](#) began in [YE 41](#) and in the beginning it didn't have Engineering Facilities quite yet. Thus it relied on facilities used by , [Department of Engineering](#), to handle the manufacturing of the ANT Power Armor. As it, and the Mining Guild recognized the need for advanced mining technology, the department initiated research and development efforts to create a versatile and efficient power armor system specifically tailored for mining operations. **Collaboration with the Mining Guild** In [YE 41.2](#) The Department of Engineering collaborated closely with mining industry experts, including those of the newly formed Mining Guild such as [Astrid](#) and [Aeta Kurosaki](#), gathering valuable insights and feedback to ensure that the power armor design would meet the specific needs and challenges faced in mining environments. This collaboration allowed the development team to refine the initial design and incorporate industry-driven features and specifications into the power armor system.

Government to Corporate Focus Shift

At [YE 42](#), the Department of Engineering shifted its focus from corporate jobs to government-related projects, thus ceasing its involvement in mining technology development. However, the Mining Guild, began poaching some members of the Department who were against this shift. Thus they began to establish the Mining Guild's Engineering Core, a separate entity dedicated to manufacturing, maintaining, and advancing the power armor technology, their equipment, and their ships. With the Department's focus change, the Engineering Core seamlessly took over the responsibility of researching, manufacturing, and advancing the ANT Power Armor technology, ensuring the continued innovation and support for the mining industry.

Expansion of Manufacturing Facilities

[YE 42](#) With the formation of the Engineering Core, significant investments were made in expanding manufacturing facilities to meet the growing demand for the ANT Power Armor. State-of-the-art factories were constructed, equipped with advanced robotics, assembly lines, and quality control systems to

ensure efficient and precise production of the power armor units.

Collaboration with Mining Guild: The Engineering Core forged a strong partnership with the Mining Guild, a leading authority in mining operations. This collaboration allowed for the Engineering Core to have access to extensive mining data, real-world testing environments, and valuable feedback from experienced miners. Such collaboration not only improved the power armor's design and functionality but also ensured that the engineering team understood the unique requirements and challenges faced by the mining industry.

Continued Advancements

YE 45 The Engineering Core continued to refine and improve the ANT Power Armor technology, incorporating the latest advancements in materials science, energy efficiency, and ergonomics. The power armor's design and capabilities evolved over time, offering enhanced protection, increased maneuverability, and improved efficiency for miners in hazardous environments.

In **YE 45**, Astrid decided to incorporate **Recorm** Bots into the ANT power Armor, as a soft non mandatory transition for Miner safety.

Advantages

As armor meant for mining, it keeps the wearer safe from harm and is capable of filtering carbon monoxide so that the wearer can breathe. Similar to the Mindy, with the use of the **Miner Undersuit**, the wearer can relieve themselves without leaving the power armor.

Drawbacks

As an industrial power armor, the ANT is meant for the mining type of work. It is completely demilitarized, and despite its durability, its weapons aren't strong enough to deal with military-based power armor. The mining laser is not strong enough to penetrate shields, and although the claws are capable of killing unarmored opponents, it can't hope to penetrate true armored opponents.

Power Armor Stats

- Ground Speed (Running): 50 MPH
- Max. Atmospheric Speed: 105mph cruise⁴⁾, full burn Mach 1.4⁵⁾
- Ground Speed (Hovering): 0.1c
- Max. Sublight: 0.1c (Advanced slow space flight)
- **Damage Rating (Version 3):** Medium Power Armor
- Hull: 15 SP (Armor scale)
- Strength: 2,000 Lbs due to heavy duty servos

Armor Size

Specific information about the armor size is in the table

Height	1.78 meters tall, or 5 foot ⁶⁾
Width	3 feet or 1 meter, ⁷⁾
Length	1 foot or 1/3 meter
Weight	420 lb

Getting In and Out

When the basket is moved to the side, the user can enter the ANT Power Armor from the back, which was a result of the modification to the power armor. To exit the user has to have the armor stand at its bay, which unlocks the entrance, allowing the user to leave the power armor.

Controlling the Armor

As primarily a means of a safety feature the [Miner Undersuit](#) is used in order to provide control over the power armor, and the comfort. The control specifically is done via an implant that connected to the back of the neck via the undersuit.

Systems

The ANT Power armor is fitted with a geological detection device that can detect when an earthquake is occurring while on a planet, and it can connect with the undersuit systems in order to allow the usage of the power armor, and it is connected with the life support systems. Thanks to the fact that the strength is mainly in the servos, the systems control the use as well as power transfers.

Emergency Systems

The ANT Power Armor can use the [Miner Undersuit](#)'s [Emergency Systems] while connected to it. This includes everything the Undersuit is capable of doing and extends to a Geological Detection System.

Geological Detection Systems

The ANT Power armor is fitted with a geological detection device that can detect when an earthquake is occurring while on a planet. The system can also detect whether the ground beneath is stable enough to travel on.

Undersuit Connectivity

As part of its control systems, the Power Armor, connects with the [systems](#) in order to allow the usage of the power armor, and as a result, it is connected with the [life support systems](#) in the Undersuit. This connection also allows the Power Armor to use the Undersuit's other systems such as.

Environmental Systems

The Power Armor extends the Undersuit [Environment Control Systems](#) as well as additional, [Protection Systems](#) to keep the Miner's inside the Power Armor from harm, in hazardous environments. It also allows for their comfort while at work at their mining sites.




Tool Integration

The Ant Power Armor is outfitted with specialized tools ⁸⁾ designed to effectively break down and extract valuable resources while minimizing manual effort. As they are attached to the power armor, they are powered by the Power Armor's built-in energy source. They enable efficient resource extraction in various geological formations.

Helmet

The Helmet of the power Armor allows for the [Undersuit integrated HUB Systems](#). That provides real-time environmental data⁹⁾, vital signs, power status, equipment diagnostics, and communication feeds. Miners can access vital information within their field of view, increasing situational awareness and improving decision-making during mining operations. The HUD allows miners to monitor their surroundings and crucial data without obstructing their vision.

Armor

The ANT's Hide¹⁰⁾ is composed of a  [Titanium Matrix](#) alloy blended with advanced reinforcing material  [Graphene](#) and  [Ceramic Composite](#): which provides high strength-to-weight ratios, and excellent heat resistance, as well as aids in enhanced durability, and to prevent falling rocks, or boulders from crushing the user¹¹⁾. Due to how the power armor is made, it is capable of retaining the shape of the structure under stresses up to the amount of 20kg/cm¹²⁾.

The material also allows for a reinforced exoskeleton which further provides resistance against piercing hazards and extreme temperatures. The exoskeleton's hydraulic systems provide additional support, reducing physical exertion and increasing endurance, enabling workers to accomplish tasks more efficiently.

Augmented Strength

Powered by a miniaturized fusion reactor, The Power armor augments the wearer's strength allowing them to lift heavy loads and perform strenuous tasks with ease. This ability enhances productivity and reduces physical strain on the wearer.

Enhanced Movement

The ANT Power Armor features powerful actuators and hydraulics, allowing for enhanced mobility and agility in a variety of mining environments, including low-gravity asteroids and confined underground tunnels.

Life Support

The ANT's life support systems are extensively integrated with both the Undersuit's and the Power armor's [Life Support Systems](#). In addition, Every 2 seconds there is a scanner, which scans the user, and if the system detects that the user is thirsty or is low on their water needs, then it will extend a straw-like item which allows the user to drink the water. The Power Armor's tank is much more extensive than the Undersuit's and has water from a combination of sources such as filtered and cleaned bodily fluids, and the collection of water from the air¹³⁾ that is breathed in order to keep the user hydrated. This can last up to the limit of 1 week of operation time

Filtration Systems

The [undersuit](#) has medical-grade filtration systems that intercept Hazardous airborne elements noxious fumes, decayed biomass, and bacterial pathogens, and thus are immediately removed from the user's air supply. The power armor also recycles the air within the power armor, keeping the gas, at the maximum accepted levels. The filters to clean air usually last for 2 weeks, if in a situation where the user is stuck and can't get to his or her people.

Radiation Endurance

Thanks to the protection of the armor, as well as the specialized systems, the ANT can endure radiation, in an indefinite amount of time, 16 hours for moderate amounts of radiation, and 12 hours for heavy concentrations of radiation. Thanks to the systems, the ANT won't degrade while in the vacuum of space.

Comfort

The ANT works with the Undersuit in order to keep the body at a comfortable temperature, and no matter if the user is out in space, it will all keep them safe.

Power Systems

The ANT Power Armor is powered by a fusion power core, providing sustained power to the suit and its integrated tools and systems. The Source of its power, is a fusion between plasma, and the star's core¹⁴⁾. Systems prevent it from destroying it and the power armor via an electromagnetic field that captures the energy it releases.

Auxiliary Power Systems

The ANT Power Armor has additional auxiliary power systems, such as the [Power Distribution and Management System](#) that aids in distributing power throughout the armor and suit. Later on, this was added to by a [Tsuyosa Series Matter-Antimatter Reactor](#) has been added for an auxiliary power generator to keep the capacitors filled and power the ship for extended periods without using an easily detected zero-point energy source, or for additional power if more is needed than the primary system has available. This system also includes a [Matter Collection System](#) to increase its useful range. However, this is more so for those miners in the [Mining Guild Contingent](#).

Yue-Type Redundant Power Systems

On the off chance for power failure, the Power Armor is fitted with a Yue-Type Redundant Power System in the form of a Hydro-electricity system that uses captured wastewater which is funneled into this system similar but on a much larger scale used by [Extreme class Hover Board](#), and [Daikoku](#).

Sensors and Communications

These are the sensors and Communications used by the ANT Power Armor.

Work Sensors

The ANT power Armor, is fitted with the mining Guild's main [Mineral Scanner](#), which allows the miner to see where they may need to go to tap into rich sources of resources. Whether this is on an Asteroid, or in an underground tunnel¹⁵⁾.

Sensors

The ANT Power Armor uses [Undersuit HUD integration](#) to allow access to a HUD System. That allows for real-time environmental data¹⁶⁾, vital signs, power status, equipment diagnostics, and communication feeds. Miners can access vital information within their field of view, increasing situational awareness¹⁷⁾. The HUD allows miners to monitor their surroundings and crucial data without obstructing their vision.

This, along with the [Work Sensors](#) allows the Power Armor to detect and analyze geological formations, identify valuable resources, and provide real-time feedback to the miner. These sensors assist in optimizing mining operations and maximizing resource yield.

Communications

Using the Undersuit's [Neural Interface](#) via a [Geist neural interface technology](#), Allows for a seamless communication between the miner's brain and the Power Armor. This in turn allows for a secure and reliable communication system. This enables seamless communication between miners and their team members, supervisors, and control centers. This ensures effective coordination and enhances safety during mining operations. The interface via the Undersuit connection also allows intuitive control of the Power Armor's movements and functions through neural signals, reducing response time and enhancing overall operability.

The communication network, allows the miners to hear each other when they speak, or sing but is controlled over non-intentional sounds, such as breathing or coughing. In addition, their [Power Armor AI Companion](#), also allows for announcements for important issues, as well as the time if they don't look at their time detection systems.

AI Designation: M.I.N.E.R

The ANT Power armor is also host to a companion AI. M.I.N.E.R¹⁸⁾ is an advanced sophisticated AI system specifically designed to augment the functionality and efficiency of the Mining Guild's ANT Power Armor. It incorporates powerful machine learning algorithms, advanced sensor integration, and decision-making capabilities to assist miners in their operations.

AI Capability

The implementation of M.I.N.E.R as the AI system for the Mining Guild's ANT Power Armor ensures enhanced safety, efficiency, and productivity in mining operations, ultimately leading to higher resource yields and a more sustainable approach to resource extraction. In addition, to its Safety Feature, it acts as a companion, to allow some social based comfort in an emergency.

Additional Features and Capability

The AI is self-aware, and capable of deep learning, which it continuously uses to analyse mining data, which it, and the other [Synthetic Assistance](#) uses as part of their Data analysis, and identifies optimal extraction points, taking into account factors such as resource quality, accessibility, and environmental impact. It can suggest the most efficient techniques and adjust parameters in real-time for maximum resource yield.

- **Safety and Hazard Management:** M.I.N.E.R prioritizes safety by continuously monitoring

environmental conditions, identifying potential hazards, and providing alerts or warnings to the wearer. It can detect gas leaks, unstable structures, and other threats, enabling miners to take immediate actions.

- **Navigation and Mapping:** M.I.N.E.R incorporates advanced mapping and navigation systems, allowing miners to plot efficient routes, mark mining sites, and maintain an accurate overview of their surroundings. It can create detailed 3D maps of complex mining environments, aiding in navigation and resource management.
- **Maintenance and Diagnostics:** M.I.N.E.R assists technicians in diagnosing and troubleshooting any technical issues that may arise in the power armor. It can run self-diagnostics, suggest repairs or maintenance procedures, and identify potential equipment failures before they occur, minimizing downtime and maximizing operational efficiency.
- **Adaptability:** Through machine learning algorithms, M.I.N.E.R can learn from previous mining operations, optimizing its suggestions and strategies over time. It can adapt to different mining environments, taking into account terrain, geology, and other specific characteristics to continuously improve its performance and decision-making abilities.
- **Communication and Coordination:** M.I.N.E.R acts as a central information hub, facilitating seamless communication between miners within the ANT Power Armor fleet. It can relay real-time updates, coordinate actions, and provide critical information to enhance teamwork and optimize overall mining operations.
- **Companionship**

Taking an idea from friends in the [Yugumo Corporation](#), the AI is self-aware and sentient enough that it is capable of talking to its wearer. In emergency situations, such as a cave in, or getting blown away, this could be critical for the Miner's mental wellbeing.

Power Armor Tool Integration Points

The tools used by the ANT Power Armor clad Miners in their mining duties were.

- **Mole Claws**
- **Plasma Cutter/Torch**
- **Tai-Pattern Rocksplitter**
- **Tai-Pattern Rocksucker**
- **Mineral Scanner**

Limb Hard Points

The [Mole Claws](#) hard points are located at the **knuckles** of each hands and they completely replace the **fingers** that finish those hands. The Miner's real fingers end only a quarter percentages of the Claws, for safety and to limit effect of vibration. The [Plasma Cutter/Torch](#) hard points are located at the **forearm** just behind the wrist and behind the Mole Claws. They extend out a little, to allow the use of the Plasma Cutter/Torch beam, without damage to the Power Armor Gauntlet, and the Miner inside.

Back Attach Points

At the back, just above the ****Backpack*** where the Ore is held ¹⁹⁾ is where both the Tai-Pattern drones attach from. [Tai-Pattern Rock-Splitter](#) is on the left side, behind the left side of the Helmet. And [Tai-Pattern Rock-Sucker](#) is on the right side.

Chest Hard Points

The Scanning part of the [Mineral Scanner](#) is imbedded within the chest cavity of the Power Armor's Chest plate. This allows for efficient scans without the use of encumbersom changing of tools.

OOC Notes

[Charaa](#) created this article on 2019/09/05 18:12.

HEPAS-1 was a System thought up by [Madi Harper](#) and while an article wasn't created yet, but it's a standard for specialty power armors to civilian use. Based on specialty and hazardous environment rating code. It's a modular civilian armor for non-combat roles, such as a firefighter, or underwater welding or like the ANT, Mining Armor. Which would all be built differently.

This is based on Madi's words on what HEPAS-1 is.

Approved by [Syaoran](#) on 12/18/2019

[Charaa](#) updated this article on 2023/10/02 14:26 It was approved by [Andrew](#) on 2023/10/10.²⁰⁾

Products & Items Database	
Product Categories	power armor
Product Name	Ant Power Armor
Nomenclature	MG-M1a-41
Manufacturer	Mining Guild
Year Released	YE 41
Price (KS)	250.00 KS

¹⁾

to a Week, but that's pushing it

²⁾

Not for Sale

³⁾

ANT Power armor art was created by [Jack Pine](#)

⁴⁾

Flight time 3 hours at 2.1 G thrust

⁵⁾

Flight time 10 seconds, max thrust 5 G

⁶⁾ ⁷⁾

,
subject to user's form

8)
Mole Claws, Plazma Cutter/Torch, and [Tai-Pattern Rock-Splitter](#), [Tai-Pattern Rock-Sucker](#), hydraulic crushers

9) 16)

,
Such as, atmospheric conditions

10)

Armor teehee

11)

It can also withstand impact up to 650kg moving at 46kph

12)

284psi

13)

more so in ice worlds

14)

hydrogen and helium

15)

even to make new ones

17)

for early detection of potential health issues or environmental hazards, ensuring the safety and well-being of the wearer, and improving decision-making during mining operations

18)

Mining Intelligence and Navigation Enhanced Realm

19)

until dumping into transport to the Magpie-class Industrial Shuttle, and from there the Dragon Class Mobile Refinery

20)

<https://starmy.com/roleplay-forum/threads/mining-guilds-ant-power-armor.65091/page-2#post-441499>

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