IIS-G1 "Last Resort" Self-Contained Survival Apparatus

The IIS-G1 "Last Resort" Self-Contained Survival Apparatus (SCSA) was created by lemochi Innovations & Sales in YE 43 and made available commercially in the same year. It has a reputation as being a very unpleasant piece of equipment to use, but oftentimes it's better to have one than not. It can handle almost every biological demand to support life indefinitely, when all modules are installed, providing it is protected and stored correctly.

About the IIS-G1 "Last Resort" SCSA

IIS-G1 "Last Resort" SCSA	
YE Production Began	YE 43
Designers	lemochi Innovations & Sales
Manufacturer	lemochi Innovations & Sales
Nomenclature	IIS-G1
Used By	lemochi Innovations & Sales, Independent
Damage Rating	Tier 0, unless cocoon deployed
Availability	Mass Production
Price	500 KS

Key Features

The SCSA is designed to be used as a piece of life-saving equipment. It has the following core features or features from additional modules:

- Central lines for administration of the below functions.
- Dialysis of CO2 from the blood.
- Recovery of O2 from CO2 with low-power laser decomposition.
- Recovery of C from CO2 for ejection or replenishing cocoon skin.
- External catheters with waste purification and circulation.
- Production of glucose from microbe farms via urea recovery.
- Electrodes for preventing muscle atrophy, defibrillation, etc.
- Peltier-based bodyheat recirculation and battery charging.
- Reversal of peltier system to induce cryostasis.
- Application of medicines or stimulants via central lines.
- Recycling of other bodily waste.

History

lemochi Innovations & Sales was browsing the market for niches in YE 43 and found that while many

skinsuits, survival suits, hardsuits and power armor had limited survival capabilities, there was room to take things a step too far.

The SCSA was created through many iterations of going back-to-basics for the most simple and low-tech way to make a apparatus that could allow the user to survive for an indefinite period of time.

It was released later that year in a modular form, with different additional modules being available to the barebones system.

Design

Core Appearance

The SCSA's appearance varies depending on its configuration, modules and how it is implemented into other equipment that may integrate it. However, it is often contained within a backpack or frontpack when not integrated with other systems.

Invariably, two or more carbyne tubes will be present as part of the core apparatus. These terminate in adhesive pads that can only be removed with strong solvent once applied. The pads are embedded with hollow-point needles made of ADNR (Aggregated Diamond Nanorods) that may be one of a variety of gauges.

Alternatively, the pads may be replaced with single wide-bore needles - this is recommended in certain scenarios detailed below.

Usage, Donning & Doffing

When not integrated into an external suit or mecha that handles the application and activation of the SCSA, the method for using the system is still relatively simple. Before starting, optional extras such as the internal/exterior catheter, electrodes, peltier bodysuit and others should be prepared. Remove the indicated patches from those to allow the pads and tubes to be fed through from one side to the other.

The adhesive pads are applied to the skin and should be done so such that they are not in close proximity. These should be on different blood vessels, veins or arteries. For best performance a major artery is preferable, but one must be aware of medical complications from accidental or hasty removal of the system in that case. With any modules designed for this suit that may be layers, the tubes from the pads can be fed through them via certain removable components.

Spring-loaded needles in the pads will activate once the pad is fully sealed by adhesive. These pads cannot be removed easily after this point except by strong chemical solvents. The pads are designed for quick application and minimum compromise in mobility. This cuts down on setup time without affecting performance for standard-sized people. When using a rigid exterior, the pads may be placed inside it and the adhesive potentially removed.

If the user is of larger-than-average size, the pads must be replaced with large single needles. These do

not come with adhesive and therefore aren't effective when outside of a rigid suit or mech to prevent the needles coming out or ripping with strenuous activity.

The pads/needles form the basis of the external circulatory system, which is the core function of the SCSA. The needle lines feed blood to and from a module which scrubs CO2 out of the bloodstream. This is then fed into a laser, which breaks the molecule into its components. O2 is then restored to the bloodstream, with the excess carbon being used in other modules.

Once the pads/needles have been applied, don the rest of the optional equipment and ensure all loose components are held in a backpack, carrier vest etc. Alternatively, build these into a hardsuit or power armour.

If the cocoon skin accessory was purchased, this can be activated by firmly pressing on the activation button but should only be done so as a final step. Carbon from the scrubber can be used to replenish the cocoon automatically.

Power System

The SCSA can be run off a Galactic Horizon Micro Core or any other market-available power source. All modules come with power cables that lock securely into other modules to form a complete circuit. Once this is done, any exposed cable ports may have a power source plugged into them.

With the addition of the peltier module, the temperature delta between the user and the outside environment can be used to generate electricity to power the systems.

Onboard Computer System

The SCSA can be slaved to any external system directly connected to a port. This allows it to be integrated into a huge variety of applications and use-cases, especially as inserts to rigid exosuits.

Each module has onboard microcomputers that are responsible for that module's basic functionality. By networking several modules together, they establish redundancy with each other in case of critical failure of a device's own chip. Each device is individually rated and warrantied at several years of continuous usage.

Some modules, such as the peltier module, have checks for when other modules have been activated. This allows them to synchronise and work together for greater ability and a larger number of scenarios.

Additional Modules

The following section details additional modules and their prices:

- IIS-G1-U1 Peltier Bodysuit, 500KS
- IIS-G1-U2 Medicinal Reservoir Autoinjector, 200KS

- IIS-G1-U3 Electromedical Mesh, 300KS
- IIS-G1-U4 Bodily Waste Recycling Module, 150KS
- IIS-G1-U5 Nanomachine ADNR Cocoon, 400KS

OOC Notes

ethereal created this article on 2021/11/05 12:42.

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Products & Items Database Product Categories military equipment, miscellaneous, safety equipment, survival

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Last update: 2023/12/21 00:57

