



Current sales policy: Item available to all interested parties.

LAZARUS.CONSORTIUM

Lazarus AL100 Universal Constructor/Machine shop

A small factory of tools able to produce equipment either autonomously from a schematic or under the guidance of a user.

- Base Price: 10,000KS
- [Molecular Applicator](#) augmented: +3600KS

About

The Universal machine-shop is exactly as it sounds: a series of components designed to be fitted within a starship for the purpose of manufacture of mechanical components and even fine high-energy electronics.

It also includes equipment for the design and prototyping of new equipment, following the same techniques used by even the more advanced military engineers of our time.

It can be used for anything from the production and fine-tuning of new equipment, repairing powered-armor, fabricating new parts and even producing sub-parts to larger starship critical parts as so a stranded vessel may be able to lick it's wounds and continue on its journey.

Applications are vast and include: *Creation of replacement parts, prototyping, mass-production in the field, problem solving, upgrading, duplication, reverse-engineering and the creation of specialized software for existing systems.*

Some basic requirements

- Two decks which are lined together. The top will be the interface chamber (a bleach pale room with bright lighting a wide glass wall and a single entrance) and the fabrication chamber (effectively an automated factory floor - naturally a deadman switch is included to halt fabrication if someone is in danger). An 8x8 chamber is recommended.
- A link or hole in the decks to connect the two
- The capacity for atmospheric shifting (it is recommended the fabrication chamber is a sealed vacuum at a constant temperature)
- A reasonably decent computer. The benefits of a faster computer speed up the simulation and

design process.

- Energy pathways sufficient to send up to 1.3 gigawatt hours to the chamber during high-demand fabrication.
- Materials and the means to shift them onto the intake platform elevator in the interface room.

How it works

The mechanics are fairly straight forward, consisting of various UOC/Lorath technologies. Modifications may be made by a trained engineer.

Computing:

- Simulation matrix: a post-atomically accurate simulator. Ideal for testing equipment to iron out the more blatant problems. It is however, no substitute for real testing but will streamline the design process considerably, shaving off months of work.
- ARIA Processor architecture: Imagine if you will you were given an apprentice. She learns from everything you show her and everything you do: She is a ghost in the machine which will learn to automate tasks which would otherwise be tedious and even provide feedback and commentary on design. Typically tied to the ship's central computer and AI. Particularly helpful when something has your brain racked and you really need to get some sleep.
- Neural cage: Effectively a universal neural plug with a multitude of adaptors. Engage in the simulation in realtime, testing the effectiveness of equipment. Even get to know how it will feel, smell touch and look before it is completed. Combined with subspace networking, projects and files can be shared and collaborated using an open format.
- Interface layer: A sub-layer of the cage, the interface layer provides all of the common tools for the virtual construction of a given tool. Alternatively, one can operate the manufacturing equipment in realtime within limits you specify.
- Holographic matrix: A simple holographic system for displaying objects. A multitude of cameras and casimir projection systems mean that the three dimensional simulations can be interacted with on a tactile level, ideal for collaboration.

Production systems

The entire system is isolated as a sort of "factory floor" on the deck immediately below the interface chamber.

- High-resolution fabrication: A sphere of mirrors and gravidomagnets heat, seal and shape various alloys and materials into complex shapes. Alternatively, optical circuits can be "baked" in carbon/mercury based crystal lattices, though the options for producing classic circuitry, wiring and even your own flavor of equipment are available through the casting equipment included in the high-res fabrication suite.

- Resistant materials: A vast array of metal and polymer mixing systems are in place. Provided one is able to supply the materials and information, almost any material can be forged.
- Biogenics: Biological materials and systems can be replicated using basic nanotechnology and cultured protein strands based on the structol technology. Though it takes time, it is ideal for the production of cybernetics and replacement organs. The system is so apt that it is able to accurately replicate many foods(!)
- Assembler: Moving back and forth between the interface chamber and the production chamber, the assembler is an array of complex robotic arms mounted with various tools, holders and hands.

Using the Machine Shop

It is a simple process but it requires that either the ARIA is educated or the user has some engineering skill.

1. One instructs and designs the product in a virtual canvas or uploads a schematic to the system.
2. The schematic is checked to ensure it is "valid" (that is to say, it would function within three dimensions). Work is also taken to optimize any moving parts unless an override is stated.
3. The system begins fabricating the various components. It is common for the assembler to rise components out of the floor onto the assembly arms in the interface chamber where the engineer can see the equipment in question being constructed.
4. The device is completed and set onto the ground or suspended with the casimir force, ready to be moved.
5. ????????????
6. PROFIT

Terms, Conditions & limitations

- If the host vessel facilitates it, the machine-shop may move the components down into a loading bay or third chamber (a cargo-bay or launch-bay is recommended) for larger parts to be assembled or interlinked to form the final device or to be fitted to whatever pre-existing hardware they were intended for. This is recommended for vessels with a compliment of powered-armor or a hanger-bay.
- Objects can be of many sizes but the size of a Nepleslian jet-engine or a large van is the limit of what can be held together by the assembler systems before intervention (that is, manual assembly) is required outside of the interface and fabrication chambers.
- Reverse-engineering is limited strictly by the skill of the engineer and their knowledge of the system to be taken apart. More complex systems can take weeks, months or even years to reverse-engineer unless there is a dedicated science team and quite a sizable computer linked to the system for simulation.
- Included schematics include: A rubick's cube, a display unit, power-couplings, some basic electronics, a host of novelty furniture, a chrome egg and a near-perfect replica of a Nepleslian Stormo-Burger. Some terms and conditions apply. No purchase necessary. See back of shipping

container for details.

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