GT New Horizons

Planetary Gas Siphon

The **Planetary Gas Siphon** (PGS) is an IV tier multiblock for harvesting an infinite amount of gas from the gas giants Jupiter, Saturn, Uranus, and Neptune. The PGS is similar to a Oil/Gas/Fluid Drilling Rig except it operates from a space station high above the planets' surface. Each gas giant has four different gases, but only one can be extracted at a time. Adjust the programmed circuit in the input bus to change the depth of the PGS and therefore the gas to extract. The PGS can be overclocked with higher tier energy hatches to increase the extraction rate (L/s) of the machine.

Planetary Gas Siphon

Mod	GTNH Intergalactic
Type	Tile Entity
Relevant Quest	Space Pumping
Tier	IV
Size	3x3x7 (LxWxH)

Construction

There is no minimum casing requirement for the PGS, but only one type of each bus/hatch is allowed. Insert mining pipes through the input bus of the machine. The mining pipes are never consumed by the controller or placed in the world so the PGS does not need a direct line of sight to the gas giant below. Multi-amp and laser target hatches are NOT supported. Use the Multiblock Structure Hologram Projector to visualize/build the structure.

Requires:

- 1 Planetary Gas Siphon (controller)
- 15 Tungstensteel Frame Box
- 0-7 Advanced Machine Frame
- 4 Rebolted Rhodium-Plated Palladium Casing
- 1 Maintenance Hatch
- 1 Energy Hatch
- 1 Input Bus
- 1 Output Hatch

Wallsharing

Planetary Gas Siphons can wallshare each of their sides to save on casings, frame boxes, and buses/hatches. This even works for sharing energy hatches for gases that have a 1 or 2 depth because they only consume 0.5 and 1.0 amps, respectively.

Space Stations

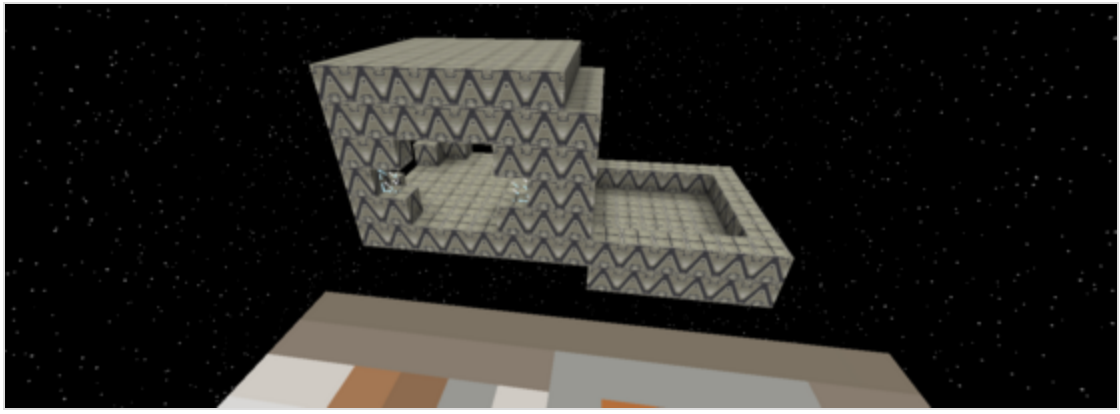
Planetary Gas Siphons must be built on a space station orbiting a gas giant. Space stations are built by launching a rocket into space, clicking on a planet, and pressing the CREATE button on the right side of the screen where it says "A Space Station can be created here!". The cost of the space station for each of the gas giants is listed below. The player must have the required materials in their inventory (not a backpack or compressed chest) to press the button. The space station then appears as a satellite orbiting around the planet in the Galaxy Map, similar to a moon.

Pop-up to create a Space Station.

- *Jupiter:* 1 EV Machine Hull, 4 EV Circuits, 6 Glass Panes, 231 Decorative Nickel Block
- *Saturn:* 1 LuV Machine Hull, 4 LuV Circuits, 6 Glass Panes, 231 Decorative Mithril Block
- *Uranus:* 1 LuV Machine Hull, 4 LuV Circuits, 6 Glass Panes, 231 Decorative Tungsten Block
- *Neptune:* 1 ZPM Machine Hull, 4 ZPM Circuits, 6 Glass Panes, 231 Decorative Adamantite Block

Although not visible in NEI or the Galaxy Map, there is a tier associated with each gas giant. The player is unable to see or navigate to a gas giant's space station if the tier of their rocket is too low, despite their ability to create a space station with any rocket. See the tables in the following section for the specific tier of each gas giant.

Space stations are initially very small and have an extremely awkward gravity effect. However, the player can make them as large as they would like and can build some walls/roofs to keep themselves from flying off into space. There is also no oxygen on space stations so bring a few extra oxygen tanks, or an oxygen collector and oxygen compressor for a more permanent solution. Leave a space station by launching a rocket from a launch pad. A filled rocket has more than enough fuel for a round-trip flight, but it may not be a bad idea to bring along a fuel loader and some extra rocket fuel just in case.



The Jupiter space station.

Usage

Adjust the programmed circuit in the input bus to change the depth of the PGS and therefore which gas to extract from the gas giant. Then multiply the depth by 64 to determine the required number of mining pipes. For example, a depth of 3 requires 192 mining pipes. Depth also affects the power consumption of the machine based on the following equation where T is the tier of the gas giant.

$$EU/t = depth * 4^{T+2}$$

Power the PGS with a portable generator and an ender tank, or with an EU P2P tunnel connected to your main network through an AE2 Quantum Link Chamber. Send gases back through a different ender tank, or the same AE2 Quantum Link Chamber. Note that there is a 5% power penalty when using EU P2P tunnels but it is much more scalable. Use a soldering iron on the controller of the PGS to automatically load the chunk that it is in.

The rate (L/s) at which gas is extracted depends on the gas giant, type of gas, and the available power. More specifically, each gas has a base extraction rate that is doubled with every *imperfect* overclock. See the following tables for all the relevant information for each gas and gas giant.

Jupiter (Tier 3)

Depth	Gas	Base L/s	Base EU/t	Min Voltage Tier
1	Hydrogen	15,000	1,024	EV
2	Helium	500	2,048	EV
3	Nitrogen	300	3,072	IV
4	Oxygen	200	4,096	IV

Saturn (Tier 5)

Depth	Gas	Base L/s	Base EU/t	Min Voltage Tier

1	Hydrogen	18,000	16,384	LuV
2	Helium	800	32,768	LuV
3	Oxygen	500	49,152	ZPM
4	Liquid Oxygen	150	65,536	ZPM

Uranus (Tier 5)

Depth	Gas	Base L/s	Base EU/t	Min Voltage Tier
1	Deuterium	5,000	16,384	LuV
2	Neon	450	32,768	LuV
3	Argon	250	49,152	ZPM
4	Krypton	100	65,536	ZPM

Neptune (Tier 6)

Depth	Gas	Base L/s	Base EU/t	Min Voltage Tier
1	Tritium	3,000	65,536	ZPM
2	Helium-3	500	131,072	ZPM
3	Ammonia	400	196,608	UV
4	Xenon	350	262,144	UV

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