

How many accumulators do you need for solar power?

The optimal ratio for solar power to charge enough accumulators is 21 accumulators for 25 solar panels (supplying 42 kW per solar panel). Produce more than 10 GJ per hour using only solar panels. Win the game without building any solar panels.

What is the best solar panel to accumulator ratio?

Best solar panel to accumulator ratio? : r/factorio Best solar panel to accumulator ratio? 21 accumulators for 25 solar panels $21/25=0.84$ note, having a bit more storage than production is a better idea than the reverse. particularly if you want to develop a steam back-up system. that's because accumulators are cheaper than solar panels.

How many accumulator for 20 solar panel?

Except that the ratio 20:21 is the other way round : an accumulator provides less power during the night (mean 40kW) than a solar panel provides to the factory (mean 42kW) so, you must have more accumulator to balance that. That is 21 accumulator for 20 solar panel. (5%) by DerivePi » Fri Aug 29, 2014 7:32 pm Verified. Well done!

When do solar accumulators start to output power?

The accumulators start to output power when the solar panels output falls below P . Since their output power falls linearly from P' to 0 in time t_3 , the time during which the accumulator output is growing is $t_3 * P/P'$. Thus we have that the energy E_{acc} restored during the night is

Can accumulators be charged up with solar panels at night?

Accumulators can be charged up with solar panels during the day to power the base at night. Accumulators are not the only way to work with solar energy. Sometimes it is more economical to just avoid consuming energy at night.

How much power does a solar panel produce?

In the vanilla case, one solar panel has an average output of 42kW. The night has a length of 0.3 times 416.666. $42kW * 0.3 * 416.666$ is 5250kJ, which is 1.05 times the charge of the accumulator.

ACCUMULATOR TO SOLAR PANEL RATIO



The amount of solar panels and accumulators you need is more. The ratio doesn't matter nearly as much as people seem to think it does. If your batteries can't fully charge during the day, build more solar. If they don't last the night, build more batteries. The perfect ratio is 0.84 accumulators per solar panel. Reply



The ratio 25:21 solar panel to accumulators others have pointed out is accurate and is the optimal ratio. One other important thing to keep in mind is that only 70% of the solar panels power will be available for use by your factory so each can ???

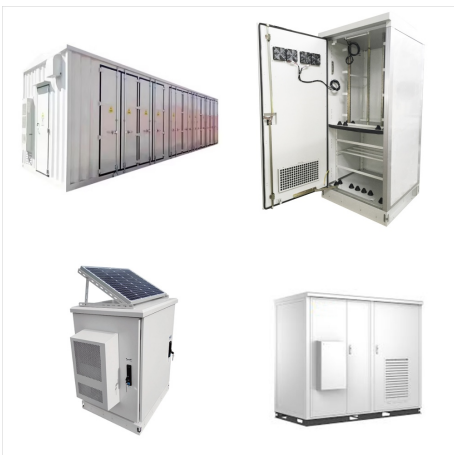


In general this is a technique which works well when you've just researched accumulators and solar panels, but don't have enough resources to build big solar farms and accumulator farms yet. History. 0.13.3: Reduced collision box of big electric pole to allow squeezing between it and an accumulator. 0.13.0: Now connectible to the circuit network.

ACCUMULATOR TO SOLAR PANEL RATIO



= 2,846 accumulators / solar panel. Following the math from this forum thread with the values you gave I found a ratio of exactly 2.8 accumulators per solar panel, pretty close to what you got and yeah, wildly different from vanilla.



So, go the other direction and build more solar panels to preserve the ratio? Following that "ideal" ratio, I would need 13,750 solar panels for my 11k accumulators But, the 9.1k solar panels puts out 547MW while my factory only ???



But that's a ratio of 20:21 panels:accumulators, not ~21:25, and something is wrong, and it has to be something in this paragraph. You'll switch between solar panels and accumulators as your solar panel output crosses the threshold of the power you actually need. Also the amount of power your solar panels can produce is of course

ACCUMULATOR TO SOLAR PANEL RATIO



DaveMcW wrote: $\text{accumulator_ratio} = 70 * \text{solar_panel_power} / \text{accumulator_energy}$ For example, using vanilla values: $70 * 60,000 / 5,000,000 = 0.84$ If you are a nerd who likes units to match, the constant is 70 seconds. Does this ratio mean 1 solar panel to 0,84 accu or 1 accu to 0,84 solar panel. This always confused me.

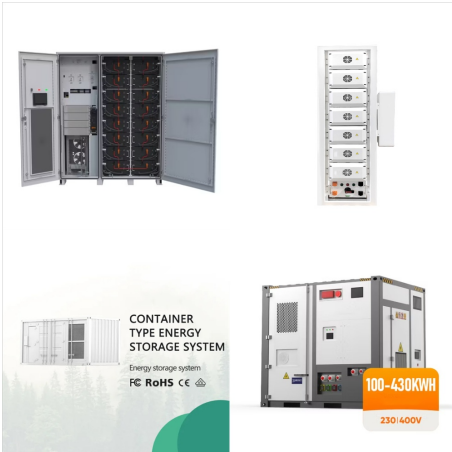


It has a reasonably good accumulator-to-solar-panel ratio, and can be repeated sideways. The ideal vanilla ratio is 0.84. When not repeated at all, the ratio is $70:84 \approx 0.83$. When repeating this blueprint in a long row, the accumulator-to-solar-panel ratio drops a little bit to $68:84 \approx 0.81$, since 2 accumulators become shared among each block.



So a value of 0.847 means you have to build 0.847 accumulators for 1 solar panel or 847 accumulators for every 1000 solar panels. If one want a single one-to-rule-them-all layout for all planets and qualities, just build one with a 2.117 acc/panel ratio and upgrade however you please. This is very time efficient for the player, but a

ACCUMULATOR TO SOLAR PANEL RATIO



Hi, thank you for your answer Furyofstars. 1.05 is coherent with my logic. I consider the following: The solar accumulator must be able to hold a charge equal to to the average output of the solar panel multiplied by the time of the night.



A couple weeks ago I embarked on a quest to find the lowest number of accumulators and solar panels necessary to keep a given circuit operational continuously. Long story short: R_c = Rate of energy consumption by the circuit in kJ R_p = Rate of energy production by solar panels in kJ = Ceiling($R_c / 42$) * 60



Scenario 1) I build solar and acumulators at a 1:1 ratio. Result 1) Assuming I have enough solar panels to power my base and fully charge my accumulators during the day to last the night, my base runs properly and fires laser defenses using ???

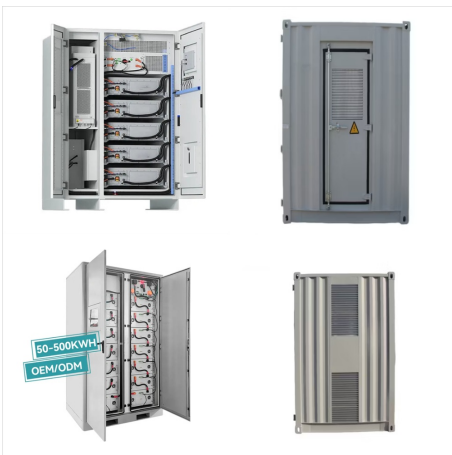
ACCUMULATOR TO SOLAR PANEL RATIO



Plop down a solar panel, accumulator, and some small draw on a separate electric system. #3. 332Balu. Mar 3, 2016 @ 10:23am 100 solar panels to 84 accumulators. That's the ratio most people on the forums use and used for a long time, works pretty well for me as well. #4. Robbyroy. Mar 3, 2016 @ 10:42am Thanks #5



It takes 23.8 solar panels to operate 1 MW of factory and charge 20 accumulators to sustain that 1 MW through the night. The optimal ratio for solar power to charge enough accumulators is 21 accumulators for 25 solar panels (supplying 42kw per solar panel.)

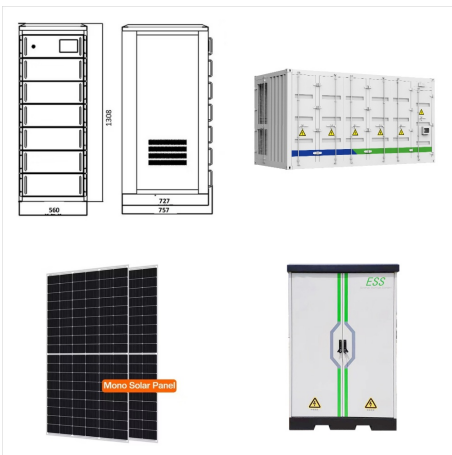


solar panels to 84 accumulators ratio is the best way to go as long as you have relatively constant power consumption and you don't want to build more than you really need. Mods: Shortcuts for 1.1, ick's Sea Block, ick's vanilla tweaks Tools: Atom language pack

ACCUMULATOR TO SOLAR PANEL RATIO



So, go the other direction and build more solar panels to preserve the ratio? Following that "ideal" ratio, I would need 13,750 solar panels for my 11k accumulators. But, the 9.1k solar panels puts out 547MW while my factory only uses 350MW and they can fully charge the accumulators in 3/4 of the daytime. So, that "ideal" ratio is not so ideal.

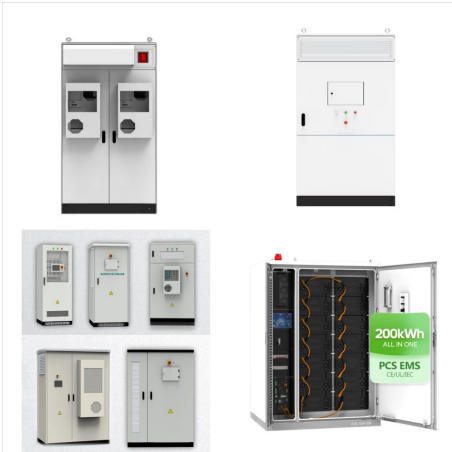


I used to have a plan that 16 solar panels to 12 accumulators. That was pretty close (4:3) to the ratio they recommend. In general, just do a bit more solar than accumulators and you should be fine. Last edited by Warlord; Jun 14, 2017 @ ???



Calculating all different factors in the game, we can average the solar panel ratio to be 0.84 accumulators per solar panel. Overall your factory will require 23.8 solar panels per megawatt, so you can quickly calculate how many should you need to set up. For example, if your factory requires 20 MW of power to run, you can easily calculate that

ACCUMULATOR TO SOLAR PANEL RATIO



A single solar panel generates 360 kw during normal full sun operation. An Accumulator has a maximum in/out charge rate of 600 kw at a time. So the most balanced ratio is 3:5, three accumulators for every 5 solar panels. But you can also get away with a simple 1:2, one accumulator for every 2 panels if you don't feel like being that fiddly.



Factorio Solar Panel Ratio Calculator Number of Solar Panels: Number of Accumulators: Calculate Ratio FAQs Factorio is a complex game that requires careful planning and optimization of power generation and distribution systems, making these tools and concepts valuable for players striving to build efficient factories. GEGCalculatorsGEG Calculators is a ???



Adds a solar power calculator that can calculate how much power your solar panels provide on average. Or calculate how many panels and accumulators you need to provide the desired power. Supports modded panels and accumulators, quality and DLC planets (future Space Exploration update to 2.0 most likely won't work)

ACCUMULATOR TO SOLAR PANEL RATIO



I was looking at all the factors affecting the solar panel to accumulator ratio for space exploration, and decided to make a combinator calculator to work it out for me. Inputs are on the left, from top to bottom: - Accumulator used: signal value of one. - Solar Panel used: signal strength of one.



There are 2 periods of time where both panels and accumulators provide power (when solar power drops below P until full night and when day starts until solar power $> P$). During those 2 periods solar panels + accumulators provide P power. Accumulators have to provide a maximum of P power, never Q power.



K2 changed the power output of panels and capacity of accumulators: Solar panel max output: 100kW (from 60) Accumulator capacity: 10 MJ (from 5) As far as I know, the length of the day hasn't changed. I calculated it in two ways: Way 1: Take the current ratio of 0.84, and multiply it by $100/60 * 5/10$, which gets me 0.7

ACCUMULATOR TO SOLAR PANEL RATIO



So far I got 4.6 K solar panels and 8.7K accumulators and I have a capacity for 44GJ. It seems sufficient with the 14 steam engines from start game, but I would like to know the exact ratio, so I can optimise th production. I read somewhere, that the ratio is 25 Solar Panels to 21 Accumulators. Is that the right ratio?

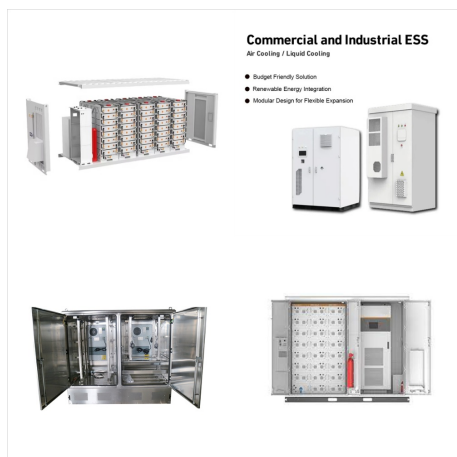


This is a solar power blueprint designed to be built from the map view in a late-game base. Space efficiency and a correct panel-to-accumulator ratio were the top priorities. The blueprint book includes the primary 4-roboport design, which has a ratio of 0.841 (0.84 is exact).

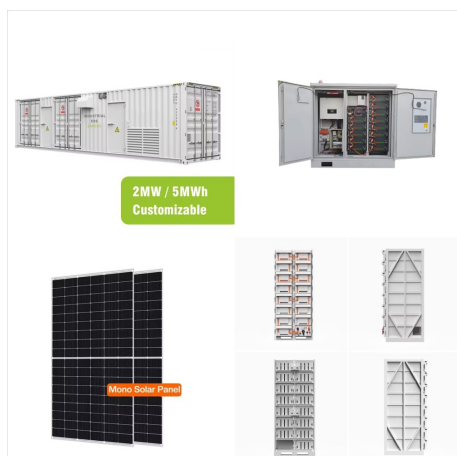


[0.15] OCD-friendly solar array, 0.932 ratio. Power Plants, Energy Storage and Reliable Energy Supply. All about efficient energy production. Turning parts of your factory off. Reliable and self-repairing energy. Extra accumulators for power surges like laser turrets;

ACCUMULATOR TO SOLAR PANEL RATIO



16 Solar Panels, 12 Accumulators with a Substation in the center. Place the Accumulators in a cross with 4 Solar Panels each in the four corners. Personally I prefer a more solar panel leaning ratio for my power clusters. I almost always try to stick a layout similar to the picture sbroadbent posted. I've got two rings of solar panels, 7



If your power draw is constant, then the optimal ratio is 25 Solar panels to 21 Accumulators. If there is variance, than you need to know what the greatest possible drain over the timespan from beginning of dusk to end of dawn is (i.e. entire timespan that Solar panels are not producing 100% energy) will be.