

How big a capacitor does the solar container welder need

<div class="df_qntext">Can a spot welder use a Nichicon capacitor?

Currently this spot welder uses automotive grade Nichicon capacitors. It would be a good idea to check the feasibility of using cheaper capacitors, and test if it's better to use higher voltage ratings, or higher capacity. I managed to capture oscilloscope image of the pulse with an old analog Philips PM3226 oscilloscope.

<div class="df_qntext">Does a spot welder need a microcontroller?

This spot welder, unlike many available DIY projects, doesn't need a microcontroller to work: the welding pulse is triggered using relay module and a timing capacitor. Welding current is switched with an old recycled industrial thyristor module. Pulse energy can be adjusted with a potentiometer, which changes the voltage of capacitor bank.

<div class="df_qntext">What power source does a spot welder use?

Other spot welders often use car batteries, microwave oven transformers, high-current li-po battery packs or supercapacitors as power source. All of these things seemed to be very powerful and somehow scary to me, so I decided to use an capacitor bank made of regular electrolytic capacitors.

<div class="df_qntext">Can a spot welder be used for a smoothing power supply?

Such a thing has a few practical uses, since the super low measured ESR of 0.6m Ω and large capacitance makes it ideal for smoothing power supplies in many applications, but could it be used to make a spot welder? Well, yes and no.

<div class="df_qntext">How much ESR does a capacitor have?

Each of these capacitors have ESR of 18 milliohms, which drops below 1 milliohm total after parallel connection. That will allow very high welding currents. To release this kind of energy, some kind of extremely high current switch will be required.

<div class="df_qntext">Can a capacitive discharge spot welder be used to weld nickel strips?

In this project I designed and built a prototype of USB-C powered capacitive discharge spot welder. It can be used to weld nickel stripsto battery packs. This allows re-building battery packs for various devices, especially ones that are no longer maintained by the manufacturers.

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I will need a 0.2 or 0.3mm weld capable welder. I am leaning toward a capacitor spot welder. I came across some high voltage capacitors: 550mF μ d @450VDC and 6,000UD @ 400VDC. I ...



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You'll notice that there's a large conveyor port on the back of the welder. It's important that you have this properly connected to another large conveyor port of a cargo container, that way materials can be ...

There's a limit resistor between the charging circuit and the capacitor so the charging circuit doesn't get shorted out during the weld process. The switch between the capacitor and the ...

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Capacitive discharge is what is typically used for battery tab welding, and is what I used when I built my welder. A friend of mine needed something beefier so he got one of those K ...

You need low ESR super capacitors that can provide at least a couple hundred amps for a tab welder. If the super cap has tiny leads like the one in the amazon link, then it's not going to provide the current ...

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