

Re: cheap 200A AC to DC power supply?

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*Source:* <http://sci.tech-archive.net/Archive/sci.electronics.design/2006-11/msg03982.html>

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  - *Date:* Sat, 18 Nov 2006 13:30:06 GMT
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On a sunny day (17 Nov 2006 20:48:47 -0800) it happened acannell@xxxxxxxx wrote in <1163825327.923538.233730@xx>:

I want to power 10 thermoelectric heat pumps at once from wall power. (120VAC 60Hz). Ripple is somewhat important for these, but precise voltage and current regulation is not. Each heat pump draws 17A at full power, plus I need some extra current for fans, pumps, etc.. The heat pumps need about 17V at full power. So I need an AC to DC power supply which takes 120VAC 60Hz and outputs 17V at up to 200A. Could someone point me in the right direction here? It needs to cost less than \$200. Ripple hurts these heat pumps but if its very slow I dont think it will matter, even if its a couple volts. Current can vary up to say an amp.

Can you put the pumps in series?

If so rectify 120V AC gives you 169.7 V DC, 10 x 17V pumps in series at 17A total, ripple depends on the cap size.  
4 20A 400V diodes, one huge electrolytic.

If you cannot put the pumps in series you better use separate power supplies.

If you can, modify some PC power supplies, so these give 17V, 10A (170VA). (put 12V in series with the 5V).

That will be a cheap solution, PC power with 12V > 17A can be found for less then 50\$ each, discount for 10 ;-)

But your data is confusing, at one point you sat 17A, then 10A.  
So check again what you have.