

## Capacitor Charging Power Supplies

PCA-10, PCA-20, PCP-17, and PCP-35 capacitor charging power supplies are developed for application in pumping systems of flashlamp-pumped solid-state laser equipment.

The PCA-10 and PCA-20 are **medical** capacitor charging power supplies suitable for application in medical laser equipment. All the parameters meet the latest versions of the medical standards requirements: IEC 60601-1 for electrical safety, IEC 61000-3-2 for active power factor correction (PFC) and EN 55011 / CISPR 11 Class A safety requirements for EMI and leakage current. The PCA-10 and PCA-20 can be used in different kinds of medical devices without any additional filtration or protection measures.

The PCA-10 and PCA-20 have identical technical ideology, whereas the PCA-10 with the maximal output power of 1kW is the best solution for laser systems with medium power. The PCA-20 is basically a modern and effective AC/DC converter with the maximal output power of 2kW and wide range of available output voltages. The efficiency of the supply at maximum output voltage is over 85%.

The PCP-17 is intended as extremely compact and functional device for industrial and laboratory applications. It is basically a modern and effective AC/DC converter with the maximal output power of 1.75kW and wide range of available output voltages. However, relatively low power factor correction (PFC) value of 0.9 is insufficient for using the device in medical equipment. The supply is easy for embedding in laser systems. Two and more supplies may operate in parallel mode. The standard PCP-35 consists of two paired PCP-17 modules. The most of their characteristics are the same.



**PCA-10  
medical**



**PCA-20  
medical**



**PCP-17**



**PCP-35**

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		<b>PCA-10 medical</b>	<b>PCA-20 medical</b>	<b>PCP-17</b>	<b>PCP-35</b>
<b>Input</b>	Voltage	90 - 264VAC 50/60Hz	90 - 264VAC 50/60Hz	300VDC or 230VAC rectified	230VAC 50/60Hz
	Current	< 12A			
<b>Output</b>	Maximal output power	<b>1000W</b>	<b>2000W</b>	<b>1750W</b>	<b>3500W</b>
	Maximal output voltage	300/500/700/1000/1500V standard modifications up to 2000V on request			
	Modifications	partial discharge modification, complete discharge modification			
	Voltage stability	< 0.5%			
	Pulse to pulse stability	< 0.5%			
Efficiency	more than 85%				
<b>Safety</b>	PFC coefficient	> 0.98 (active)	> 0.98 (active)	0.90 (partial)	0.90 (partial)
	Leakage current	< 200µA			
	Main safety standard	IEC 60601-1			
	Isolation	4000VAC (2x MOPP)			
	EMC	EN 55011 (Class A)			
	Protections	HV arc ground during operation Turn on with open circuit Turn on with short circuit Shut down on over-temperature over-voltage and open interlock			
<b>Environment</b>	Cooling	forced air (with built-in fan)			
	Operation temperature	+10°C to 40°C			
	Storage temperature	-20°C to +60°C			
	Humidity	90%, non-condensing			
<b>Other</b>	Size (L x W x H)	176x118x122mm	210x150x130mm	155x140x75mm	220x150x135mm
	Weight	1.9kg	2.8kg	1.3kg	2.8kg