# 4-KW MULTI-PHASE BATTERY POWERED POWER SUPPLY

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A method was developed for building powerful battery power supplies. Based on the method a battery power supply with a 4 kW max power and up to 93% efficiency was developed to supply «Yasen» X-ray apparatus. Two 60 A × h series-connected starter lead-acid batteries were used as a primary power supply. DC output voltage of the source is stable on all the power range and equals to 310 V. The power supply is based on a 5-phase HF-inverter. There is no difficulty in developing such power supplies with different power outputs. It can be done by increasing or decreasing the number of phases (of inverter channels). This approach is not limited with number increase of inverter channels. The maximum output power will be determined by the battery characteristics only.

The power supply is mounted on a mobile trolley to increase the mobility of the entire set of equipment. The unit dimensions are 410 × 320 × 440, the weight is about 40 kg. The unit is forced air-cooled. Power operating mode is short and periodic.

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