

PORTABLE GAS-FUELED THERMOELECTRIC GENERATOR

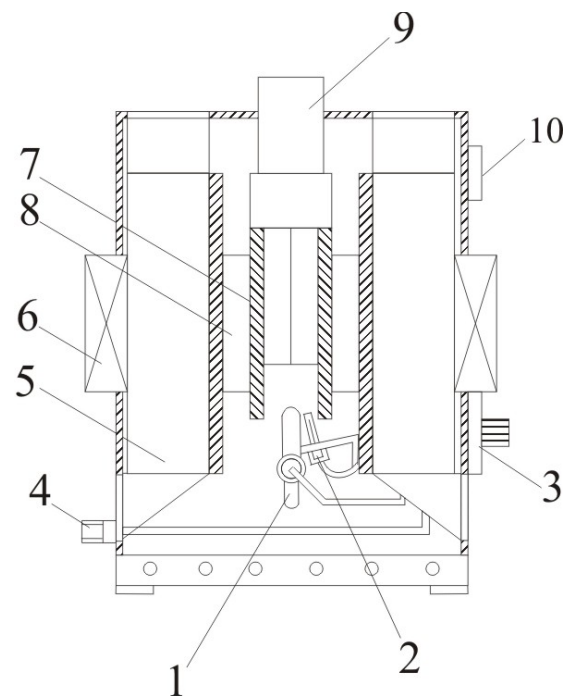
ALTEC - 8040



- The generator is intended for independent DC power supply to various low-power devices and instruments: radio electronic equipment, guard and signaling systems, radio stations, for charging of batteries and lighting. Thermal energy from fuel combustion which is rejected from the generator to the environment can be used for heating small rooms and (or) electronic equipment during cold seasons.

- The operating principle is direct conversion of thermal energy from gaseous fuel combustion to electric power with the use of thermoelectricity.

Appearance and schematic of thermoelectric generator



- The thermal generator comprises several main parts: a source of heat, thermoelectric modules, system of heat delivery and rejection from modules.

- Gas injector burner 1 with starting device 2 and automatic safety device 3 is used as a source of heat. Gas connection to the burner is done by means of connecting pipe 4. Heat rejection system comprises heat sink 5 and electric fans 6 for a forced air delivery to cold heat sink. The fans are powered from the thermal generator. Arranged between the hot 7 and cold 5 heat sinks are thermoelectric modules 8. The upper part of the generator has chimney 9 for rejection of gas combustion products to the environment.

- The generator starting is done by means of piezoigniter and controlled by light emitting diodes. The output voltage is controlled by voltmeter. To provide the consumer with the voltage of 12 V, the thermal generator is equipped with voltage stabilizer.
- Use of liquefied gas fuel provides the consumer with autonomous electric power supply.
- The thermoelectric generator is capable of a long unattended operation (time of continuous work is determined by fuel tank volume).

Thermoelectric generator parameters

№	Parameter name, unit of measurement	Value
1.	Rated electric power, W	20
2.	Electric voltage, V	12
3	Kind of fuel	Propane-butane
4.	Fuel flow rate, l/h	34÷44
5	Overall dimensions, mm	260x300x380
6.	Weight, kg	12

Orders and additional information at the address: General P.O. Box 86, Chernivtsi, 58002, Ukraine; e-mail: ite@inst.cv.ua; tel./fax: (380-3722)-41917; <http://ite.inst.cv.ua>.