

# MICROTURBINE

## MODEL MA0



*The Microturbine is an ATEX certified energy harvesting device, which uses the energy of a gas or air pressure drop. This energy is captured by the Microturbine and converted into electricity.*

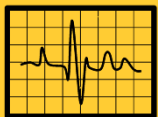
*The Microturbine is composed of a micro-expander integrated into an electric micro-generator and of a battery charging board to be installed in safe area.*



**PORTABLE POWER  
TURBOGEN**



**SMART BATTERY  
CHARGER**



**GAS NETWORK  
MONITORING**



**ATEX  
CERTIFICATION**

## MICROTURBINE MODEL MA0 — TECHNICAL SPECIFICATIONS

### MECHANICAL SPECIFICATIONS

**Fluids:** air, natural gas and other filtered and dry non-corrosive technical gases

**Fixing:** on a support bracket

### ELECTRICAL SPECIFICATIONS

**Voltage:** 12 Vdc or 24 Vdc with smart battery charger

**Protections:** overspeed, overvoltage e overcurrent

**Connectivity:** Modbus RTU - RS485

### CONFORMITY

- ATEX ZONE 1 (II 2G Ex mb c IIC Tx X Gb)
- EMC, FCC, IC

### INSTALLATION REQUIREMENTS

**Temperature:**  $-20^{\circ}\text{C} < T_{\text{amb}} < 60^{\circ}\text{C}$

**Filtration:** filtered gas at 0.1  $\mu\text{m}$  minimum

**Tubing:**  $\varnothing$  inlet 10 mm,  $\varnothing$  discharge 10 mm

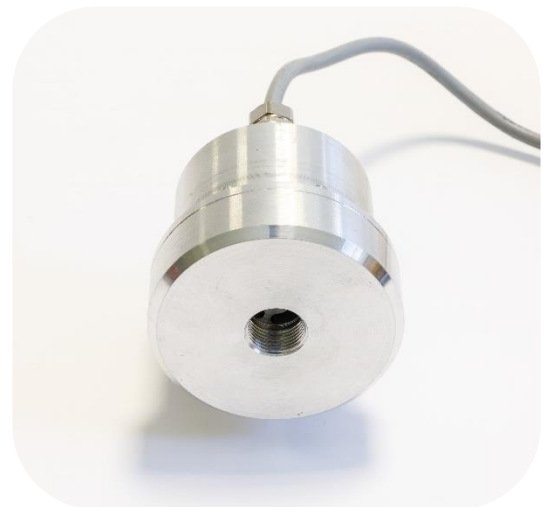
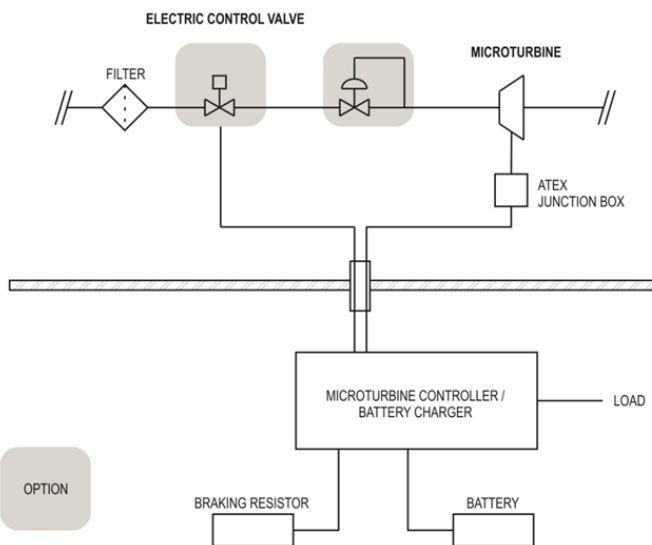
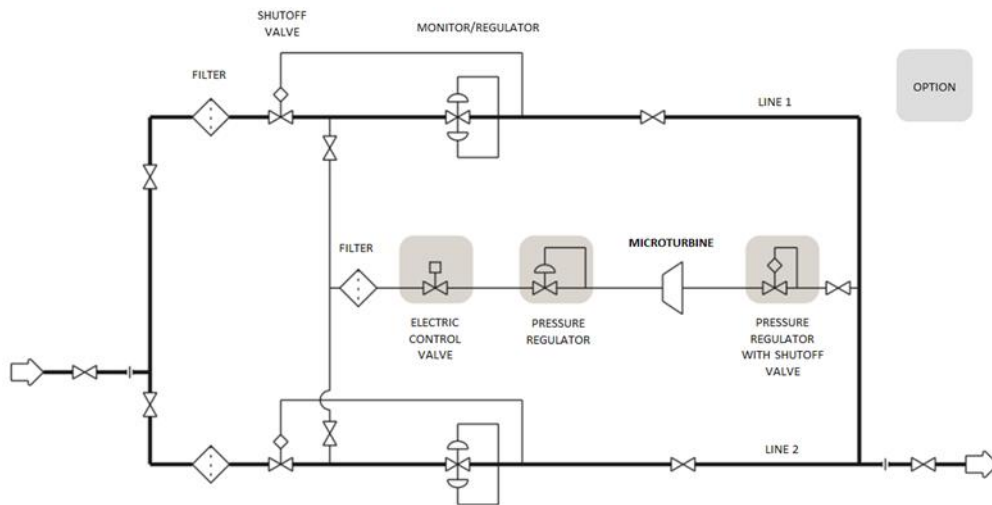
**Fittings:** inlet G1/4", discharge G3/8"

### POWER OUTPUT

Power output depends on load and gas type. Below some typical values, measured with air.

- 3 W @ 0.5 bar
- 10 W @ 1.0 bar
- 20 W @ 1.5 bar
- 30 W @ 1.8 bar
- 35 W @ 2.0 bar

# TYPICAL INSTALLATION — GAS PRESSURE REDUCING STATION



- Off-grid energy source
- IoT enabler
- CO<sub>2</sub> emission reduction
- Zero carbon emissions
- Plug & Play
- Real-time communication



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 732493

Advanced Microturbines Srl - Genova - ITALY  
[www.microturbines.it](http://www.microturbines.it) - [info@microturbines.it](mailto:info@microturbines.it)