

## MODEL MA0



PORTABLE  
POWER TURBOGEN



SMART BATTERY  
CHARGER



GAS NETWORK  
MONITORING



ATEX  
CERTIFICATION



### Microturbine Specifications

Fluids	Air, natural gas, technical gases
Temperature	$-20^{\circ}\text{C} < T_{\text{amb}} < 60^{\circ}\text{C}$
Filtration	0.1 $\mu\text{m}$ or less
Expansion ratio:	
$P_{\text{in}}$ [bar-a]	From 0.5 to 2
$P_{\text{out}}$ [bar-a]	
$P_{\text{max}}$	30 bar
Tubing	Inlet $\varnothing 10$ mm; discharge $\varnothing 10$ mm
Fittings	Inlet G1/4"; discharge G3/8"
Dimensions; weight	$\varnothing 70$ mm x L 73 mm; 0.6 kg
Max power	30W (based on load and gas type)

### Certifications

ATEX Directive	ZONE 1 (II 2G Ex mb c IIC Tx X Gb)
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### Smart Battery Charger Specifications

Voltage	12V or 24V (with buffer battery)
Protections	Overspeed, overvoltage, overcurrent
Connectivity	Modbus RTU - RS485
Output	1 Relay N.O. or N.C.
Enclosure	Plastic box - DIN bar mounting
Installation	Safe Area

### Certifications

EMC Directive	EN 61000-6-2; EN 61000-6-4
FCC	Federal Communications Commission
IC	Industry Canada

## MODEL MA1



PORTABLE  
POWER TURBOGEN



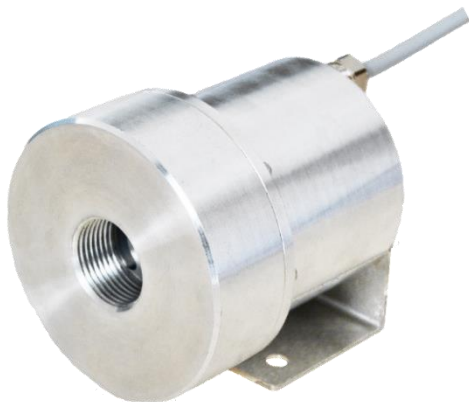
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### Microturbine Specifications

Fluids	Air, natural gas, technical gases
Temperature	$-20^{\circ}\text{C} < T_{\text{amb}} < 60^{\circ}\text{C}$
Filtration	0.1 $\mu\text{m}$ or less
Expansion ratio:	
$P_{\text{in}}$ [bar-a]	From 0.5 to 2
$P_{\text{out}}$ [bar-a]	
$P_{\text{max}}$	40 bar
Tubing	Inlet $\varnothing 15$ mm; discharge $\varnothing 15$ mm
Fittings	Inlet G1/2"; discharge G3/4"
Dimensions; weight	$\varnothing 80$ mm x L 101 mm; 1 kg
Max power	150W (based on load and gas type)

### Certifications

ATEX Directive	ZONE 1 (II 2G Ex mb c IIC Tx X Gb)
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### Control Hub Specifications

Voltage	24V (with buffer battery)
Protections	Overspeed, overvoltage, overcurrent
Connectivity	Modbus RTU - RS485
Output	3 Digital outputs
Enclosure	Stainless steel box - Screw mounting
Installation	Safe Area

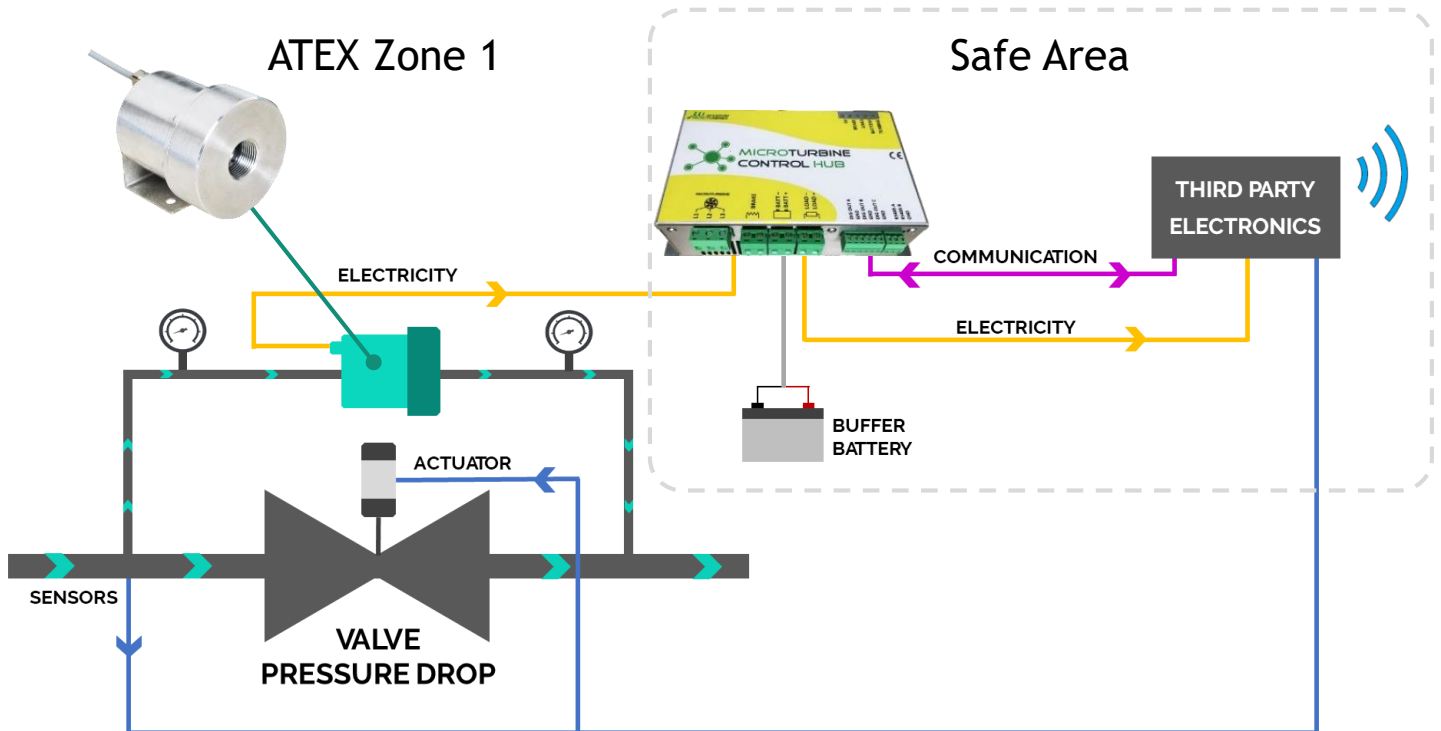
### Certifications

EMC Directive	EN 61000-6-1; EN 61000-6-3
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## TYPICAL INSTALLATION

### Gas Pressure Reducing Station

The Microturbine is an ATEX Zone 1 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 the electronic control unit.



Plug & Play - Compatible with all valves



Weather independent



Minimal risk of theft/vandalism



CO2 emission reduction



IoT enabler - Real-time communication