



ISTITUTO ITALIANO  
DI TECNOLOGIA

#### TITLE

Energy harvesting microturbine

#### INVENTORS

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#### DESCRIPTION

Energy harvesting is a focal point for autonomous robots. For this reason the department of Advanced Robotics have developed a revolutionary microturbine, able to harvest energy exploiting airflow to produce electric energy. The innovative design uses a reduced number of parts, coupling the turbine and generator into a single component. The hi-tech design microturbine gives unmatched performance in terms of power vs. airflow, reaching regimes in the order of ten-thousand rpm.



#### APPLICATIONS

This microgenerator can supply electric energy wherever only air/gas flows are available, allowing, for instance, the deployment of sensor networks along gas pipelines or railroad freight cars, where no electric power is provided.

#### KEYWORDS

power supply turbine, electric energy turbine, micro-turbine, airflow turbine

#### BIBLIOGRAPHIC DATA TO2010A000578

Dispositivo per la generazione di energia elettrica da una sorgente di aria compressa

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