

NEXT ENERGY

INNOVATIVE ENERGY PRODUCTION SYSTEM



About us

- *Next Energy* is a start-up that focuses on the research, studies and the desire to innovate inspired by its founder, the Engineer Eros Bridi
- Hydro-electric and in particular MICRO hydro-electric (up to 20 kW) and PICO hydroelectric (up to 5 kW) is the sector in which we operate
- The concept of hydro-electric pipes is at the basis of our R&D project, which places us as pioneers to new alternative energies
- The technology we have developed is the subject of international patent EP 14000902 and it is destined to revolutionize the field of hydro-electric energy
- We can improve the efficiency of the existing territorial water supply networks and recover the huge amount of LOST energy in the small and medium water pipelines, while offering profitable solutions



Our Mission

With our systems, we are aiming for environmental preservation and awareness, aligning with Kyoto 2020 parameters and allowing the efficiency of water supply networks in turn improving public and private economics.



Our Vision

The principles at the root of our corporate philosophy are the public sovereignty over the water and the enhancement of the existing public water system.

We imagine a world where water is an inexhaustible source of energy and public welfare

Our values

- *Sharing* innovation and its benefits
- *Transparency* of behaviour and goals
- *Respect* towards ourselves and future generations
- *Protection of* the planet's resources
- *Passion, care and determination*

Our technology: Giralog®



- It is an integrated technological system that allows:
 1. **THE RECOVERY OF THE ENERGY** stored but **unutilized** inside any size of pipe (2",4",8"e+)
 2. **THE HYDRAULIC RE-BALANCE**
- Inside the Giralog® system there is an innovative hydroelectric turbine which fits operating loads; this means that it is able to utilize both pressure and flow by continuously adapting to the changes of the water supply system and without interrupting the flow running through it.
- It is equipped with a localized narrowing system that ensures a correct water intake related to the needs, avoiding floating valve blocks and reducing the pressure surges that may damage the water supply system
- Some more efficiencies are provided to the energy of the water supply system by Giralog®. This creates **DOUBLE SAVINGS** by dramatically reducing **MAINTENANCE COSTS** and producing **MORE ENERGY**



Is Giralog[®] an action or reaction turbine?

- Giralog[®] combines the advantages of a traditional action turbine like Pelton and reaction one like Francis or Kaplan by leaving a residual and calculated pressure inside the pipe at the end of the process and by avoiding floating valve blocks.
- Giralog[®] can be used to power any electric device or to sell produced energy to the network.
- **Giralog[®] has been constructed and proven to run for 8600 hours per year!**



> INCREASED PRODUCTIVITY AT LOWER COSTS



Giralog[®] philosophy

✓before



✓after

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Innovative Energy Production System

Sistema di monitoraggio attivo
La dotazione di monitoraggio è stata studiata per permettere la valutazione del potenziale idraulico della condotta in pressione: vengono analizzati i flussi transienti e viene permesso il controllo della pressione nei possibili punti di instabilità.

Giralog
La Giralog è un sistema di regolazione del flusso, installato in condotta in pressione, che si attiva automaticamente in caso di instabilità di pressione. Analizza i flussi nel condotto e produce l'energia elettrica per il funzionamento del sistema. L'energia idroelettrica prodotta viene utilizzata per alimentare il sistema di monitoraggio e il sistema di regolazione.

Valvola autoalimentata regolatrice di portata e pressione

Bypass
Il Bypass automaticamente gestisce il funzionamento del sistema di monitoraggio e il sistema di regolazione, garantendo la continuità del servizio.

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Giralog[®] compared to hydro-electric turbine manufacturers

GIRALOG[®]

- ✓ Hydraulic variator
- ✓ Utilizes Pressure AND flow
- ✓ Non-stop working system
- ✓ Reduces maintenance costs
- ✓ Cavitation occurs in tank
- ✓ Minimal intrusion and convenient housing in pre-existing works

THE OTHERS

- ❖ Hydroelectric turbines
- ❖ Utilizes Only Pressure OR flow
- ❖ Need for closures with floating valves
- ❖ High maintenance costs for valve replacements
- ❖ Cavitation risk along the pipe
- ❖ Large spaces and building work required



Why choose Giralog[®]

1. **MAKING THE EXISTING WATER SUPPLY SYSTEM MORE EFFICIENT** by reducing maintenance costs, removing pressure surges and producing energy where it is currently wasted.
2. **HIGH PRODUCTIVITY.** It continuously produces energy from the uninterrupted water flow due to its capacity to adapt to changeable operating loads (pressure up to a 4" pipe and flow for bigger pipes)
3. **EASY INSTALLATION AND ZERO IMPACT** It can be applied to pipes under pressure of all sizes with 2 flanges DN100 and housed in existing works (i.e. storage and decantation tanks, drain wells, etc.), thus construction authorization and other bureaucratic barriers can be avoided.
4. **SHORT ROI** from 3 to 8 years, as investment is relatively low and productivity - under certain conditions - is high
5. **WIDE APPLICATION FIELDS AND ACCESS TO ENERGY BILL REFUNDS**



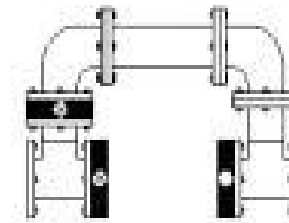
Giralog[®] application fields

- Re-powering of AQUEDUCTS and INDUSTRIAL SYSTEMS
- Powering households of at least 30 housing units
- Reducing the pressure of falling water, thus it represents the top device for skyscrapers and high buildings
- Powering ANTIBACTERIAL AIR DEVICES and WATER TREATMENT LAMPS to make the water drinkable
- Powering heat pumps and groups of pumps for raising the fluids directly connected to electric storage systems
- Charging electric cars, bikes, forklifts and batteries
- Powering any other electrical device
- It is suitable for both plants connected to the national electric system and for stand-alone systems such as shelters, huts and farms

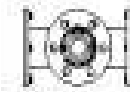


Giralog[®] components

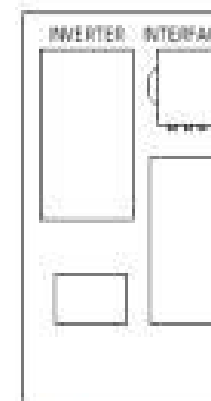
- The **BYPASS System** ensures the energy supply during maintenance and emergency operations
- The **BRUSHLESS GENERATOR** is a electric engine with permanent magnets which do not require any sliding cable. Its benefits are:
 - ✧ Less mechanical resistance
 - ✧ Absence of sparks related to the rotation speed
 - ✧ Less ordinary maintenance
 - ✧ The magnets always work in the best conditions and they are more efficient because they do not need to power the rotary movement
- The **INVERTER** converts kinetic energy into electrical energy that can be used on-site or sold to the network.
- The hydraulic machine can be equipped with redundant **MANAGEMENT SYSTEMS**; this allows the valves remote control and connection to a live monitoring device



BYPASS



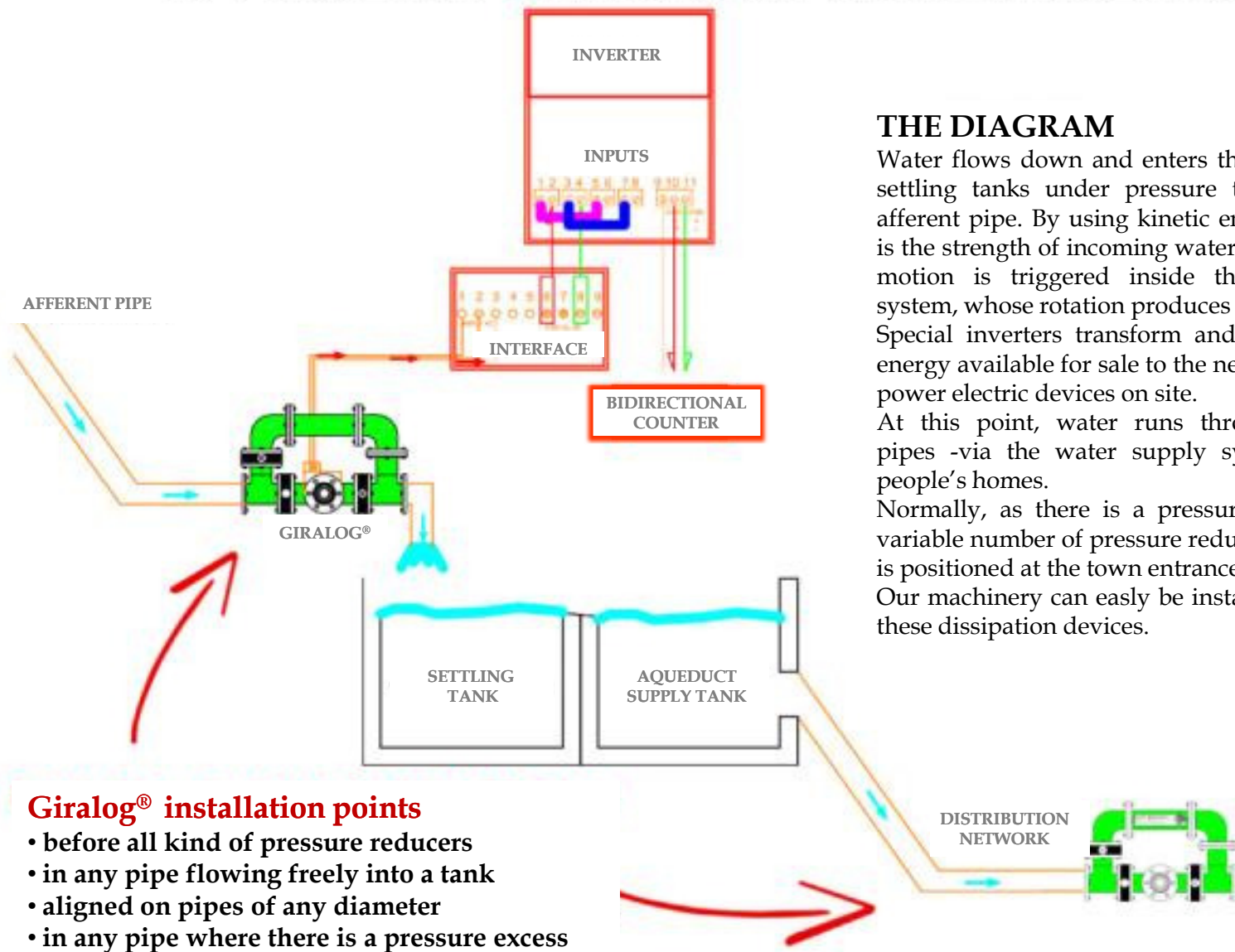
POWER GROUP



ELECTRIC KIT



OPERATING GIRALOG® DIAGRAM



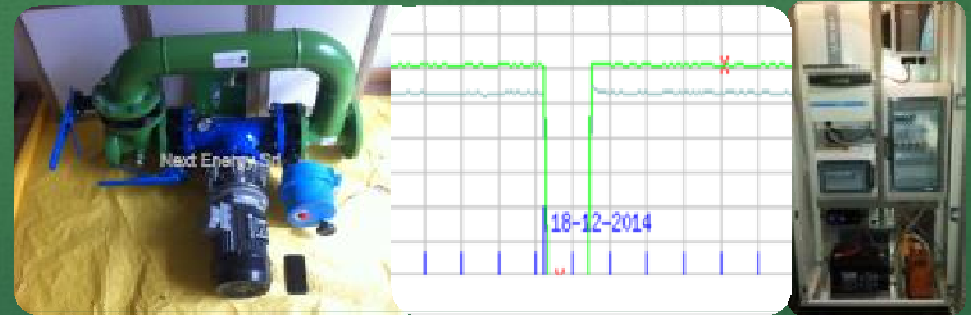
Our Strategic Partners

- *POLITECNICO OF MILANO* > R&D partnership
- *UNIVERSITY OF TRENTO* > Training to engineers in the sector of network maintenance
-  > CU-Q, intelligent *STORAGE* Unit
- Partner of *Standortagentur Tirol* (Austria)
- Credito Valtellinese > Partnership with local banks for funding profitable investments in renewable energy sources



Case histories

- VATTARO Municipality,
December 2013



<http://www.nextenergysrl.it/it/vattaro-il-primo-tubo-elettrico-italia/>

- CANAL SAN BOVO
Municipality, August 2014



Press releases

- <http://www.premioinnovazione.legambiente.org/crea-pdf/scheda.php?id=1630> LEGAMBIENTE award
- <https://plus.google.com/photos/112597127044432904370/albums/6070362742206750417> PANORAMICA GIRALOG®
- http://www.casaclima.com/ar_21712_In-cantiere...-Case-History-impianti-Giralog-Next-Energy-condotte-a-pressione-Recupero-di-energia-su-condotte-a-pressione.html CASA&CLIMA
- <http://trentinocorrierealpi.gelocal.it/trento/cronaca/2014/08/07/news/energia-quasi-gratis-sfruttando-l-acquedotto-1.9728277> CORRIERE DELLE ALPI
- <http://www.lastampa.it/2015/02/01/scienza/ambiente/focus/ledilizia-innovativa-e-sostenibile-gi-una-realt-tJQTVwKBI72AS1gr6FbafI/pagina.html> LA STAMPA - MERIT ARTICLE KLIMAHOUSE RAIR 2015
- http://www.smau.it/milano13/innovation_paths/22542/ SMAU FAIR 2013
- <http://www.nextville.it/news/1562> NEXTVILLE
- <http://www.classmeteo.it/web/portale/news/giralog-la-turbina-che-prende-energia-dalle-tubature/> CLASSMETEO

Press releases

- <http://www.nextenergysrl.it/it/klimaenergy-2015/> KLIMAENERGY2015
- <http://www.nextenergysrl.it/it/vattaro-messo-in-opera-tubo-elettrico-in-italia/> ARTICLE ON TOWN PUBLIC WORKS- GIRALOG® ON PIPE INSTALLATION
- <http://www.nextville.it/news/1562> PROMETEO INNOVATION SPACE
- <http://www.nextenergysrl.it/it/intervista-allingegner-eros-bridi-a-klimahouse/> KLIMAHOUSE INTERVIEW 2015
- http://www.expoyes.com/index.php?option=com_sobipro&pid=121&sid=867:next-energy-srl&lang=en-GB#azienda SPACE ON EXPOYES
- <http://www.nextenergysrl.it/it/intervista-eros-bridi-nello-stand-allestito-presso-klimahouse-2015/> GRACEFUL INTERVIEW KLIMAENERGY2015
- <https://plus.google.com/105390960824770039639/posts/6HmPnk3qeCD>
- <http://www.nextenergysrl.it/it/next-energy-google/> NEXT ENERGY ON GOOGLE
- <http://www.nextenergysrl.it/it/vattaro-il-primo-tubo-elettrico-italia/VATTARO:> THE FIRST HYDROPOWER PIPE IN ITALY



APPROVED PRIZES

- <http://www.nextenergysrl.it/consegna-premio-energia-trentino-2015-ad-innsbruck-3//>

7° PREMIO AMBIENTE EUREGIO
TIROL-ALTO ADIGE-TRENTINO
2015 ENERGY AWARD



- <http://www.nextenergysrl.it/premio-start-up-innovativa-green-economy-2015/>

CONSEGNA PREMIO START UP
GREEN ECONOMY 2015




Timing

- In Italy the whole process takes about 90 days, including the monitoring period to forecast productivity precisely.
- Delivery time, including "the pressure test report", within 30 days from the posted order
- Delivery of work completion and testing certifications with single-wiring diagrams, use and maintenance manuals, spare parts and interventions lists, within 30 days
- Building authorization and GSE procedure within 30 days from Giralog® system connection to the network or from its activation



Our certifications

Direttive di riferimento:
 Reference Directives:
2006/42/CE


 Italia

Technical Report of Compliance

Document No.
TUV242796_TNU201_Orating_03

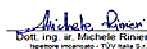
Fabbricante:
 Manufacturer:
Next Energy S.r.l.
 Via della Rozola, 99
 38123 Mattarello - TN
 Italy

Prodotto:
 Product:
Giralog 100


Documenti esaminati:
 Examined Documents:
 • EC Declaration of Conformity
 • Instructions for use
 • CE marking
 • Technical file for machinery

Norme armonizzate di riferimento:
 Reference harmonized standards:
 • EN ISO 12100: 2010

Il prodotto e la relativa documentazione sono stati verificati su base volontaria e risultano essere conformi ai requisiti applicabili nel caso non siano presenti in CE nel presente Technical Report of Compliance (vedi § CONSULTAZIONE FINALE).
 The product and its documentation were tested on a voluntary basis and comply with the requirements applicable in the case there are no NC in this Technical Report of Compliance (see § FINAL CONSULTATION).

Bologna, 15 maggio 2014

 Dott. Ing. M. Michele Rovari
 Ispezioni macchine - TUV Italia S.p.A.

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DICHIARAZIONE CE DI CONFORMITA'

Con la presente si dichiara che il prodotto:
IMPIANTO PICO IDROELETTRICO GIRALOG® 100
IMPIANTO PER LA PRODUZIONE DI ENERGIA ELETTRICA

Numero di serie: 0001
 E' conforme alle disposizioni pertinenti in vigore:
 2006/42/CE (direttiva CE "macchine")
 2004/104/CE (direttiva "compatibilità elettromagnetica")
 EN ISO 12100: 2010

Fabbricante:
NEXT ENERGY S.p.A.
Innovative Energy Production Systems

NEXT ENERGY S.R.L. con UNICO SOCIO
 Codice fiscale 02263370229 - Partita Iva 02263370229
 VIA DELLA ROZOLA 99 MATTARELLO - 38123 TRENTO TN
 Numero R.E.A. 211585
 Registro Imprese di TRENTO n. 02263370229
 Capitale Sociale € 10.000,00 I.V.

Persona autorizzata a redigere il fascicolo tecnico e la dichiarazione di conformità:
LEONARDO CONSULTING
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 p. iva 02233750229




MATTARELLO 13/05/2014
 DICHIARAZIONE IN LINGUA ORIGINALE

Direttive di riferimento:
 Reference Directives:
2006/42/CE


 Italia

Technical Report of Compliance

Document No.
TUV242796_TRUCO_L_04-01_03

Fabbricante:
 Manufacturer:
Next Energy S.r.l.
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What's Next?

**GIRALOG® FOR THE OPERATING LOADS OF ANY
KIND OF BUILDING**



Contact us



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