

# Hydro Dynamics, Inc.

Harnessing the Power of Cavitation



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## Hydro Dynamics of Rome, GA Wins 2014 “Breakthrough Product of the Year” Award for Biogas Reactor

[Hydro Dynamics, Inc.](http://www.hydrodynamics.com) (HDI) of Rome, Georgia would like to announce that its ShockWave Power Reactor for biogas technology (BioSPR) received [Processing Magazine’s](#) 2014 Breakthrough Product of the Year award. The *Breakthrough Product of the Year* award recognizes products, technologies and services that made significant contributions in the process industries within the last year, and are expected to impact the industry for years to come.

Biogas is the production of methane through the digestion of mostly waste materials such as agricultural waste, food scraps or manure. Biogas is a widely used form of alternative energy in Europe and growing elsewhere. This biogas reactor makes the fats, sugars, proteins and starches more accessible to the bacteria which increases methane gas yield and can reduce viscosity. Major markets include Germany with approximately 7,500 plants and Italy with 800 plants. These plants are often small and located on farms, but there are some larger facilities often utilizing waste food as a feedstock. The reactor allows for more complete utilization of the feedstock and higher yields of biogas.

Biogas uses essentially waste material to produce economic and clean energy. The BioSPR is a small footprint and easy to install device that can increase gas production by 20% or more. The system makes an important renewable energy significantly more efficient and economical.

The BioSPR equipment uses the physical phenomenon of cavitation, normally known as destructive force, and allows it to be used in a manner that is non-damaging to the equipment for tremendous advantage. It is able to process a highly variable agricultural feedstock that is often abrasive. The design is also innovative in its use of hardened materials, a hydraulic design and conversion from machining to casting, and is the result of an international research and development project.

The technology was developed cooperatively with [Three-Es](#), HDI’s Italian based European partner. Together they have adapted the longstanding ShockWave Power Reactor (SPR) technology specifically for biogas and now have many commercial installations across Italy and Germany.

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## Award Logo



Picture of installed BipSPR unit in Italy



PDF of magazine page with SPR award

<http://hydrodynamics.com/app/download/7117382268/Processing+2014+Breakthrough+Product+of+Year+Award.pdf>

## About Hydro Dynamics

Hydro Dynamics is the developer of a patented process intensification technology enabling customers to solve critical mixing and heating problems. Reactors are operating on four continents in applications ranging from increasing biodiesel production yields to increasing hops extraction for beer. The ShockWave Power Reactor allows customers to significantly decrease operational and capital costs while increasing profits and reducing the environmental impact of many processes. To learn more about our other biofuel efforts see our [biofuel](#) webpage.

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