



New circuit board is the control for the high-speed pump and sensor which operates the ACT On D'MAND Hot Water System. Remote controls activate the pump and sensors shut off the flow when hot water temperature is reached.



Larry Acker (pronounced aker) is the CEO and founder of ACT On D'MAND Hot Water Systems. An expert in the subject of water-saving and the ramifications it has for the planet, he recently addressed an international meeting on the subject in Australia.



A new logo for the ACT D'MAND System recently has been created making the point that it's made in the U.S.A. and the system enables users to literally invest in a more environmentally friendly future.

Saving Water Saves Energy And Our Environment

By Larry Acker, CEO
ACT, Inc. D'MAND Hot Water Systems

COSTA MESA, CA—In late September of 2008 there was an International conference in Melbourne Australia called the SB08 (World Sustainable Building Conference 2008). This conference meets every three years in different locations in the World. The object is to bring together delegates from the research, business and government communities to discuss and investigate the Global Green Building Trends from 30 countries around the world. Over 3,000 expert international speakers and delegates attended to discuss the sustainable world challenge facing us today.

Larry Acker, CEO of ACT D'MAND Systems, was a SB08 conference program speaker for two special forums on the relationship between water and energy and the importance of building residential and commercial buildings green.

Australia was a logical meeting ground as it is one of the driest countries in the world and suffers a major lack of water to supply the 26,000,000 people. The main source of drinking water comes from dams and lakes that are running at 30% or less of capacity.

The relation between water and energy is a world wide concern. The experts in the Industry point out that *five to ten gallons of water that is used for heating water represents one kilowatt-hour of energy*. That means that every five to ten gallons of water you let go down the drain waiting for hot water is one kilowatt-hour of lost energy. This includes sewage processing and delivery of water which is an additional major energy cost to our sewage processing plants.

The U.S. Environmental Protection Agency's Green Lights program is based on the assumption that electricity use is inextricably linked to air quality. *On average every kilowatt-hour of electricity saved prevents the emission of 1.5 pounds of carbon dioxide, 5.8 grams of sulfur dioxide and 2.5 grams of nitrogen oxides.*

It is further estimated that the average U.S. house hold loses between 20 to 30 gallons a day waiting for hot water. If only 1,000 homes were to save 7,300 gallons of water a year (7,300,000 gal.) the environmental impact (depending on gas or electric water heater usage) would be as follows;

Water saved.....	7,300,000 gal.
Kilowatt hours.....	1,460,000
Carbon dioxide emissions.....	2,190,000 pounds saved
Nitrogen oxides.....	5,600 pounds saved
Sulfur dioxide.....	11,000 pounds saved

Big Time Water Savings

The main purpose of the ACT Hot Water D'MAND System is to provide instant hot water to any hot water faucet in a home with a touch of a button. The system can be activated by remote control buttons in the home or even by motion sensors at the door near a bathroom. When activated the system starts a high-speed pump at a remote location which pulls water from the hot water tank completely through the structure. Normal wait time, for example, at a shower for water is figured in seconds. So, no wasted water goes down the drain. In the average year a family will save from 7,300 to 12,000 gallons per year. Trade prices are available. Personal offer extended to builders and distributors. Call Larry Acker @ 800.638.5863.

Even in a down year of new home construction there still will be over 400,000 homes built which will include over 100,000 manufactured and modular homes. It easy to see that trillions of gallons of water, carbon dioxide, nitrogen oxide and sulfur dioxide can be prevented.

The effect of carbon emissions (green house gas) is creating global warming gas at an accelerated rate projected by scientists as a worst-case scenario that could change the world temperature between 4% and 11% in the next 80 years. This would change the sea level by up to 80 ft. or more and change the global temperature and weather conditions.

At the Australian SB08 Conference an Energy Efficiency in Buildings (EEB) was established by the World Business Council for Sustainable Development (WBCSD) which will map out the transition to a 2050 world in which buildings use zero net energy. A key part of this program is to reduce the water use to increase the energy savings.

The Costa Mesa, CA based company ACT Inc. has developed an Electronic D'MAND Pumping System that has been tested and proven by the U.S. Dept. of Energy to save both water and energy, reduce sewage and green house gases. The system is called the Met-lund D'MAND System and can easily be added to existing homes and commercial buildings and designed into new homes and commercial buildings. The D'MAND System saves water, saves energy, reduces sewage processing, reduces green house gases, increases the life of any water heater and adds convenience to the user (no longer waiting for hot water) at an annual energy cost of less than one dollar a year.

For more information on the ACT D'MAND Hot Water NOW System visit www.gothotwater.com, call 800.638.5863 or circle Reader Service No. 54.



NOW AVAILABLE IN SPAIN.

METLUND® D'MAND® SYSTEMS

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U.S.A. testing about this device.

The Metlund® System operates only on the *demand* of the user by buttons and motion sensors. Because the Metlund® System moves the hot water much faster than your fixture, the hot water gets to the fixture more quickly, and at a much higher temperature due to little or no line loss in the pipe. The sensor on the Metlund® System shuts the system down at a temperature rise of only a few degrees (approximately 8°F or 4.5°C) above the 60°F (15.5°C) already in the line.

This works because by moving the hot water faster, it gets to the fixture by moving the cold water within a few feet of each other.

When you turn on the cold water it is still at 60°F (15.5°C) but the hot water side is close to 120°F. (49°C)

The Metlund® System only works on the *demand* of the user which means it works 24 hours a day for the user and never goes on if there is no *demand* for hot water, or if you are away for the day, weekend or on vacation.

If the hot water is already hot in the pipeline, the Metlund® D'MAND® System will not come back on as the sensor has already seen the rise in temperature and the electronics will not allow the pump to activate.

Metlund® Systems will save on average, US\$300/ year compared to just running water down the drain on both energy and water savings (documented by the US Department of Energy field test studies).

The time-temperature will average a cost of US\$200/year more or about US\$500/year in total vs. the Metlund® D'MAND® Systems.

Over a five-year period, this amounts to savings with the Metlund® System of about US\$2,500 as compared to a cost of US\$4,000 in the time-temperature systems. That is a US\$6,500 difference between the Metlund® D'MAND® System and the other systems over five years.

DEDICATED HOT WATER RE-CIRCULATING SYSTEMS

On many new and existing homes the builder has optioned to add a re-circulation system. This means that there is a third water line

from your furthest fixture returning back to the water heater. There is a pump at the water heater that either is on a time-temperature or is running 24/7.

This again is very costly to the homeowner, as the hot water moving out of the water heater at 120°F (49°C) will drop in temperature several degrees and will cause the water heater to cycle frequently. It is very common to see a re-circulation pump at 1 gallon per minute (4 litres/min) (60 gallons/hour or 240 litres/hr) at a temperature drop of 10°F - 15°F or 5.5°C – 9.5°C. The water heater continues to run even if you are not using hot water, and in fact may not even be at home. The cost of operation of this type of system can easily run up to US\$100/month in energy bills, either gas or electric.

The Metlund® D'MAND® System works on the option of the user, moving the hot water quickly at a higher temperature around the plumbing system. It will not go back on if hot water is already in the line and will never go on if there is no demand for hot water. Yet it is available to be activated 24 hours a day with maximum water and energy savings.

The Metlund® D'MAND® Systems are proven to do the following:

- SAVE WATER
- SAVE ENERGY
- REDUCE SEWAGE PROCESSING
- REDUCE AIR POLLUTION
- INCREASE THE LIFE OF THE WATER HEATER
- ADD CONVENIENCE TO THE USER

The tests have been conducted by the US Department of Energy to save both water and energy. The D'MAND® Systems are the only hot water distribution systems that receive EPA ENERGY STAR CREDITS and National Green Building LEED Credits.

LEED Credits for both residential and commercial application:

- 1 – Credit for Optimize Energy
 - 2 – Credits for Minimum Energy Performance
 - 3 – Credits for Water Use Reduction
- 6 Credits Total.

What would you put into your home?

ACT, Inc. Metlund® Systems

Designed for Today...

Diseñado para Hoy...

Dedicated to the Future®.

Dedicado al Futuro®.