

D'Mand Controls System Proposed SRP Rebate Program

Building Energy Codes Initiative



Objective:

Obtain support for a permit exemption

or

simplified permit process for

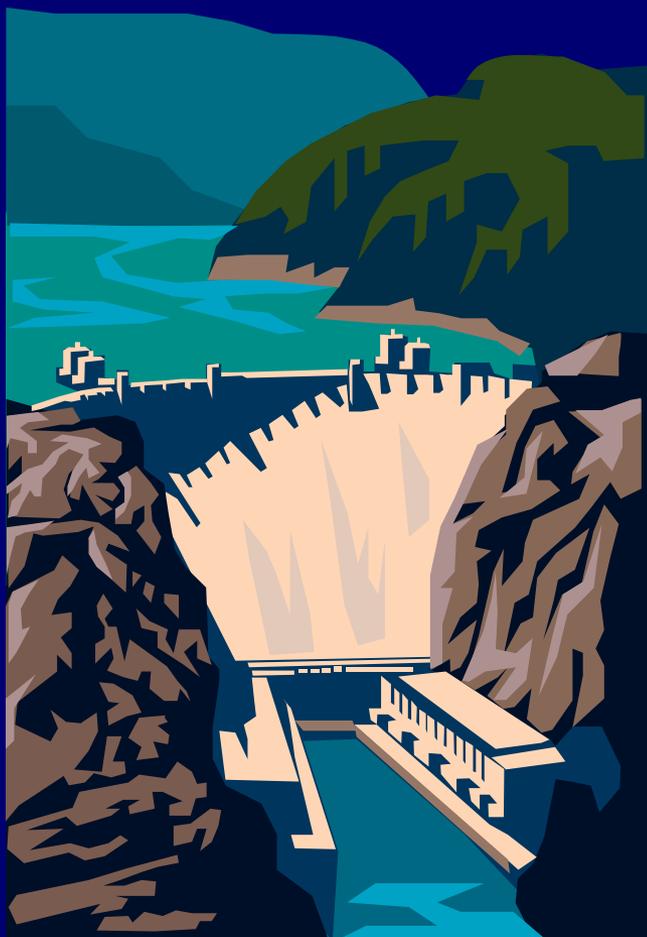
the installation of

an on-demand hot water pumping system.

SRP's Energy Codes Initiative

Providing education and leadership
in efforts that improve energy efficiency
in the existing and new building stock
in SRP territory
and throughout Arizona

More Energy Efficient Buildings



Help us postpone the construction of new generating resources,

And allow for new technology to mature.

Proposing an Evaluation of the Savings in
Energy, Water and Time,
due to the use of a Demand Controlled
Circulation System in Existing Homes

Water is a precious resource.

- We cannot afford to let it run down the drain while waiting for hot water.
- Water wasted uses energy when it is processed at the sewer treatment plant.
- A reduction in water use will save money for the AHJ if they operate their own water treatment facility.

Currently many cities do not require permits for water heater replacements.



Some installations will require a new duplex outlet.....



This will normally occur under a bathroom sink, and would tap into the GFCI required by code.

We would recommend the following;

1. No permit required if installed by a licensed electrician, or
2. Final inspection only if installed by the contractor or DIY homeowner.

This would verify that the integrity of the GFCI is not compromised by the duplex installation.

Proposed three phase program:

Phase I: 30-50 homes,
SRP contractor installed
with data logging and
behavioral measurements.

These homes will be used to characterize
the plumbing in the targeted jurisdictions.

Proposed three phase program:

Phase II: +/-100 homes,
SRP certified Green Plumbers,
data logging and behavioral measurements.

These homes will be used to refine the
rebate program prior to phase 3.

Proposed three phase program:

Phase III: Balance of homes based upon
rebate fund allocation,
SRP certified Plumbers and
DIY homeowners,

Open participation based upon funds
available for rebates.

Water Energy Nexus

"80% of the energy used in water treatment and distribution is used to pump water....."

Water and Energy cannot be separated."

John Tooley

Contact information:

- Sharon Bonesteel, AIA, CBO, CP
SRP – 602-814-7357



- Larry Acker, CEO
ACT D'Mand Controls System
714-668-1200





SRP Phoenix AZ

June, 2014

ACT D'MAND
Kontrols System

Larry Acker CEO

ACT INC.

Since 1993

larryA@gothotwater.com

www.gothotwater.com

MADE IN AMERICA

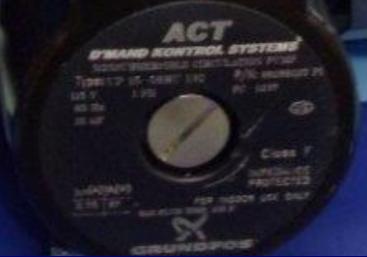


TECHNICAL DATA

HEI	17 feet	MAX. WORKING PRESSURE	145 PSI
MO	Single Phase	CONNECTORS	Max Adaptors for Connectors
MEI	TEMPERATURE 36° F	HP MAX SPEED	115 rpm
NEI	TEMPERATURE 230° F	VOLTAGE (max. rpm)	115v/ 87 watts
		APPROX. SHIP WEIGHT	8 LBS

PERFORMANCE CHART

Dimensions shown do not include connectors.





D'MAND KONTROL[®] ELECTRONICS

ACT CE W ETL GREEN NOM

D'MAND KONTROL[®] MODELS

<input type="checkbox"/> C3-100	<input checked="" type="checkbox"/> C1-100
<input type="checkbox"/> S3-100	<input type="checkbox"/> S1-100
<input type="checkbox"/> BR3-200	<input type="checkbox"/> BR1-200

GRUNDFOS MODELS

<input type="checkbox"/> UP-15-115V-60HZ 10uF .75 A
<input type="checkbox"/> UP-26-115V-60HZ 10uF 2.15 A

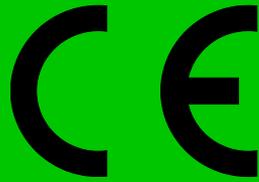
INDUSTRIAL CONTROL EQUIPMENT

Pollution Degree 3. Maximum Ambient Temperature 50°C (122°F) NEMA TYPE 2 Indoor use only
 Degré de pollution 3. Température ambiante maximale de 50°C (122°F) NEMA TYPE 2, USAGE INTERIEUR SEULEMENT
 Input 120V, 2.4VA, 60Hz

www.gothotwater.com
 Costa Mesa, CA
 1-800-200-1956
 U.S. Patent No. 6962162.B2
 U.S. Patent No. 7,779,857
 U.S. Patent No. 5,829,475
 U.S. Patent No. 10,936,173
 3 Patents Pending



Certifications



Features:

- LEED Credits
- CA Title 24 Credits
- Green Building Credits
- HERS Energy Star Credits
- IAPMO-UPC Green Listed
- Watersense Recommended
- ETL CE listed

ACT D'MAND Kontrols® Systems

SRP RESIDENTIAL PROGRAM

Model: C1-100-PF RETRO KIT

- Exclusive to the Utility Market and New home construction
- Qualify with a 500 unit commitment
- High performance pump system
- 18 GPM with 17 ft of head
- Composite body with stainless flex water lines
- Costs \$1 per year to operate
- 5 Year warranty with a 15 – 20 year lifespan

Accessories

- Includes 1 stand and 1 LED lighted button to activate the system

Options

- Wireless buttons and receiver



Certificate of Achievement

for

completing the ACT Inc. D'MAND Controls[®] System

 **Green Plumbers*** training and Installation Program

Awarded to

Nathan Dugan- Jay Indeck Plumbing

Date



Signature

ACT D'MAND Kontrols®

Systems

SRP RESIDENTIAL PROGRAM



C1-100 Retrofit Kit and Installation	
C1-100 Kit	\$385.00
<i>Green Plumbers Installation</i>	\$135.00
<i>Total Cost Installed</i>	\$525.00

Partner with Green Plumbers to educate and train on how to install the system

Provide training materials in English and Spanish for RSP homeowners

D'MAND® Systems installation video

Instructions for the homeowner on how to determine the best location for the system

(800) 200-1956 Customer Service Hot Line

LED Button Option for Activation



D'MAND Kontrol Systems are Approved By:

- The California Energy Commission
- The Department of Energy
- The Environmental Protection Agency
- The Green Home Building Council
- Habitat for Humanity
- Los Angeles Housing Department
- WaterSense
- LEED Credits

**UNITED STATES
DEPARTMENT OF ENERGY**

Office of Building Technology, State and Community Programs

Certificate of Recognition

Presented to

ACT, INC., METLUND[®] SYSTEMS

of Costa Mesa, California

**for successful completion of a Company Business Plan under
the Department's 2001 Commercialization Assistance Program**



Mark Ginsberg

Mark Ginsberg, Deputy Assistant Secretary

December 3, 2001

Date

U.S. DEPARTMENT OF ENERGY TESTED

- # SAVES WATER
- # SAVES ENERGY
- # REDUCES SEWAGE PROCESSING
- # REDUCES GREEN HOUSE GASES
- # INCREASE LIFE OF WATER HEATERS
- # ADDS CONVENIENCE TO THE USER

AT AN ANNUAL COST OF LESS THAN ONE DOLLAR A YEAR



WaterMark

WATERMARK LICENCE

SAI Global hereby grants to:

**Advanced Conservation Technology Inc.
Trading As: ACT Inc. Metlund Systems**

Australian AS/NZ 4020 Compliance

“Five Ticks” Standards Mark



ASOCIACIÓN DE NORMALIZACIÓN
Y CERTIFICACIÓN, A.C.

CERTIFICADO DE CONFORMIDAD DE PRODUCTO

Certificado No.: 201201C07669

Página 2 de 2

De conformidad con la Norma NOM-003-SCFI-2000, publicada en el Diario Oficial de la Federación, el 10 de Enero de 2001, se expide el presente Certificado en México, D.F., el día 16 de Agosto de 2012, con vigencia hasta el día 15 de Agosto de 2013, para los efectos que convenga al interesado, y al amparo de las cláusulas indicadas al reverso.

ATENTAMENTE

FAUSTINO FLORES CHACÓN
GERENTE DE CERTIFICACION

Elaborado por: AFF

Supervisado por: SAE

Con base en el artículo 76 de la Ley Federal sobre Metrología y Normalización y 83 de su reglamento, así como también en lo dispuesto en la norma oficial mexicana NOM-105-SCFI-2000 "Características de diseño y condiciones de uso de la contraseña oficial, los productos amparados por esta certificación deberán, según el caso, ostentar la contraseña que denota el cumplimiento con la Norma Oficial Mexicana vigente y aplicable cuando así proceda.



CLAÚSULAS:

- La contraseña oficial NOM y la marca ANCE deberá ostentarse, mediante etiquetas, estampado y otro procedimiento que la haga ostensible e indeleble en cada unidad de los productos que ampara este certificado.
- El titular de este certificado se compromete a respetar las condiciones de uso, tanto del propio certificado como de la contraseña oficial NOM y/o la marca ANCE.
- El titular del certificado debe garantizar que los productos certificados, que ostentan la contraseña oficial NOM y marca ANCE, cumplen con las especificaciones establecidas en la Norma Oficial Mexicana aplicable.
- Ni este certificado, ni el uso de la contraseña oficial NOM y la marca ANCE, sustituyen en ningún caso la garantía del cumplimiento de producto en los términos de la legislación y las normas aplicables en vigor.
- El certificado será cancelado, cuando:
 - Las especificaciones técnicas en las que se basa el certificado dejan de ser aplicables
 - Se incurra en mal uso del certificado o de la marca ANCE
 - Se incurra en un incumplimiento con la norma aplicable, durante el plazo de vigencia establecido en el certificado.
 - Sea solicitado por escrito, por parte del titular del certificado.
- Todo empleo indebido del certificado, ya sea del titular o de un tercero, dará derecho a una acción legal o judicial por parte de ANCE.
- La fracción arancelaria es responsabilidad total del solicitante o titular del certificado.
- El titular de la certificación debe informar a ANCE de cualquier cambio en su estructura, dirección, propietarios o representantes legales de la empresa.



C E R T I F I C A T E O F A P P R E C I A T I O N

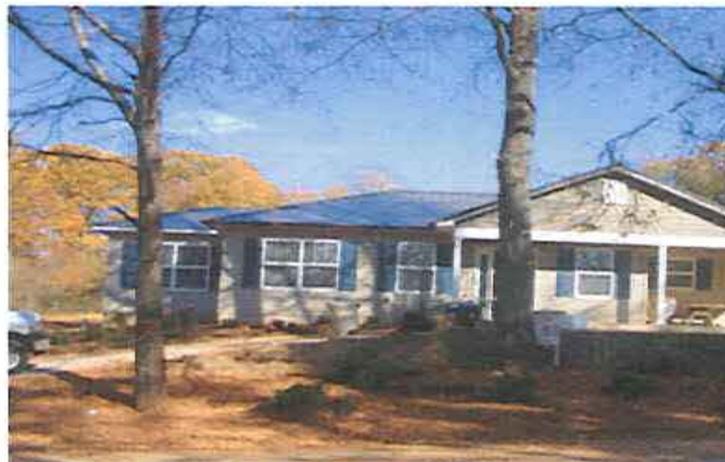
This certificate is awarded to

ced Conservation Technology, Inc.

for their contributions to help build

**HABITAT "GREEN" HOUSE
DONATED BY LOWE'S COMPANIES, INC.**

2/11/2007





 **Habitat for Humanity**
of Orange County

 Like us on Facebook
www.Facebook.com/HabitatOC
@Habitat for Humanity of Orange County CA

 Follow us on Twitter
www.Twitter.com/HabitatOC
@HabitatOC

www.HabitatOC.org

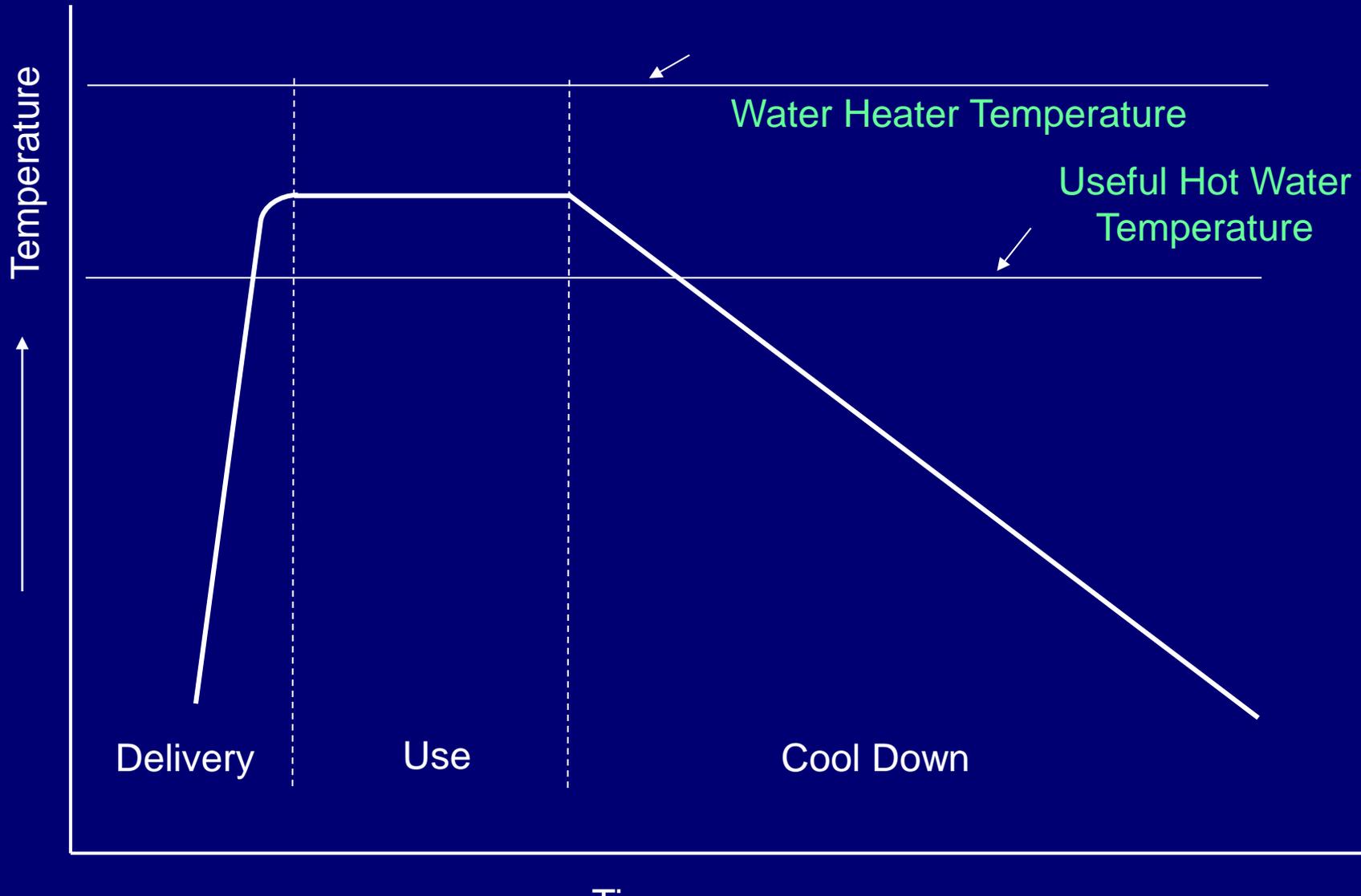
FACTS

- SAVING WATER-----SAVES ENERGY
- 10 GALLONS OF WATER LOST TO GET HOT WATER REPRESENTS
1 KILOWATT-HOUR OF ENERGY

FACTS

- The U.S. Environmental Protection Agency's "**Green Lights**" program says that electricity is linked to air quality or Carbon Footprint.
- On Average, every Kilowatt-hour of electricity saved "prevents the emission of
 - # **1.5 POUNDS OF CARBON DIOXIDE**
 - # **5.8 PGRAMS OF SULFUR DIOXIDE**
 - # **2.5 GRAMSW OF NITROGEN OXIDES**

Typical Hot Water Event





Take Kontrol and get your Hot Water on D'MAND®



ACT D'MAND Kontrols® System

- Saves Water and Energy
- Will deliver your hot water at your demand any time...every time
- Operates Silently and takes up little space
- Is easily installed in any home
- Can be installed with any type of water heater (tank or tankless)
- Uses innovative and precise control technology to provide hot water on demand rather than rely on outdated timers

D'MAND Kontrols® Systems

- Test Proven by D.O.E.
- LEED Credits
- CA Title 24 Credits
- Green Building Credits
- HERS Energy Star Credits
- Watersense Recommended



D'MAND Kontrols® Systems are used by these and other fine builders throughout the entire country.

- Habitat for Humanity
- Williams Homes
- Toll Bros
- Shea Homes
- Brookfield Homes
- Mark Falcone



AC Green Home 2.0
Product Partner



www.gothotwater.com
(800)200-1956







D'MAND pumping systems work with all hot water heating systems

- Tank water heaters (gas, electric, oil)
- Tankless water heaters (gas or electric)
- Residential & Commercial

METLUND® D'MAND™ SYSTEM
Warranty Registration

Name ROBERT SIMANDL

Address 7112 U.S. HWY 12

City, State, Zip SAUK CITY WI 53583

Purchase Date 02/09/04 Date Installed 02/20/04

Model No. S50 PFR

Name of installer? SELF

If it was a plumber/handyman, could you please supply
the name: _____

Telephone # () _____

Are you very satisfied X not satisfied _____
(with your Metlund® System?)

Please note any comments below. Thank You!

EXCELLENT PRODUCT - SHOULD BE
REQUIRED IN ALL NEW HOMES
AND BUSINESSES

METLUND® D'MAND™ SYSTEM

Warranty Registration

Name MARIE C. DUNCAN

Address 22 HARRINGTON DR

City, State, Zip COLUMBUS, NJ 08022-2369

Purchase Date 6/27/01 Date Installed 7/14/01

Model No. S-01-PF-R

Name of installer? BARRY RASMUSSEN

If it was a plumber/handyman, could you please supply the name: BARRY RASMUSSEN, Plumbing-Heating
117 Mill Lane, Columbus, NJ.

Telephone # (609) 298-3243

Are you very satisfied not satisfied _____
(with your Metlund® System?)

Please note any comments below. Thank You!

In cold weather had to run 5 gal down sink
to get tepid H₂O despite raising temp at H₂O heater
as high as possible. Tho not able to test under those
conditions now. I get hot H₂O almost instantly
without running any down the sink.

800-MET-LUND Fax: (714) 668-1927

METLUND® D'MAND™ SYSTEM

Warranty Registration

Name FRANCIS W. O'DONNELL

Address PO Box 621 9380 KRAMER

City, State, Zip ARIZONA City, AZ 85223

Purchase Date 2/12/00 Date Installed 2/12/00

Model No. S-01R/Remote

Name of installer? myself

If it was a plumber/handyman, could you please supply the name: PURCHASE FROM HOME
DEPOT

Telephone # (520) 466-5820

Are you very satisfied not satisfied _____
(with your Metlund® System?)

Please note any comments below. Thank You!

Realized over 40% water
SAVING in first 3 months
also elect SAVINGS

800-MET-LUND Fax: (714) 668-1927



Invest in the future™

Proposed wording:

Section 105.2 Work exempt from a permit

Add the following:

The installation of on-demand pump systems in Residential Buildings, where the pump operates only upon a signal to turn on from a user shortly prior to the desired hot water draw shall be exempt from permit requirements.

In circumstances where a duplex outlet is required to be added, an on line electrical permit will be issued for a final inspection only at the standard one hour rate. An outlet installed by a licensed electrician will be exempt from this permit requirement.