

Roy T. Otterbein, P.E.
Engineering Consultant
Augsburger Komm Engineering
& BTI Consultants
3315 E. Wier Avenue
Phoenix, AZ 85040
602- 443-1060
602-443-1074 fax
602-618-1304 cell
www.akeinc.com

EDUCATION

M.S., Mechanical Engineering, Arizona State University, May 1980
M.A., Physics, George Washington University, June 1971
B.A., Physics, George Washington University, June 1968

EXPERIENCE

Mr. Otterbein's field of expertise is enormously diversified, however, not limited to the following: HVAC/Plumbing design for residential and small commercial buildings; modeling of direct, indirect and desiccant heat exchangers; designing fan/media test facilities/standards; writing user-friendly computer simulation software for product marketing; generating custom spreadsheets and advanced macros; technical and hands-on support of thermal sciences laboratory testing; and project management.

Mr. Otterbein has four of his own patents and has authored many articles/publications.

PROFESSIONAL REGISTRATION

State of Arizona, Mechanical Engineer #19284

PROFESSIONAL AFFILIATIONS

ASHRAE

Member Handbook Committee - 1996 HVAC Systems and Equipment
Member Standards Committee - SPC 143 Method of Testing for Rating Indirect Evaporative Coolers
Member Standards Committee - SPC 133 Method of Testing for Rating Direct Evaporative Coolers
Member TC 5.7 "Evaporative Cooler Committee" - Numerous Times Over the Last Years

PATENTS

4,461,733 - Capillary Fin Media
4,566,290 - Capillary Fin Media
4,544,513 - Combination Direct and Indirect Evaporative Media
Des. 284,505 - Two-Stage Cooler or Similar Article

PUBLICATIONS

Collaborator with This Old House Magazine staff on article “*Big Chiller*”, July/August 1998

Collaborator with Home Energy staff, “*No-Regrets Remodeling*”, 1997

Roy Otterbein, “*Two-Stage Evaporative Cooling*”, Home Energy, May/June 1997

Roy Otterbein, “*Installing and Maintaining Evaporative Coolers*”, Home Energy, Vol. 13, Number 3, May/June 1996

Roy T. Otterbein, P.E., “*A Theory for Heat Exchangers with Liquid-Desiccant-Wetted Surfaces*”, ASHRAE Transactions, 1995, Volume 101, Part 1

Collaborator with John Watt, “*Evaporative Cooling Handbook 3d Edition*”

Roy Otterbein, “*Evaporative Cooling, Theory and Practice*”, Arizona Energy Engineers Conference, Spring 1989

“*Commercial Energy Audit Workbook*”, State of Arizona Energy Office, 1980

R.T. Otterbein and D.L. Evans, “*Two Modified Single Diode Models for Simulating Solar Cells with Distributed Resistance*”, Transactions 14th IEEE Photovoltaics Specialists Conference, 1980

Roy Otterbein, “*Flashing Your Add-On Solar Greenhouse*”, Solar Living and Solar Greenhouse Digest, Vol. 3 Number 1, Feb/Mar 1980

R.T. Otterbein, D.L. Evans, W.A. Facinelli, “*A Modified Single Diode Model for High Illumination Solar Cells for Simulation Work*”, Transactions 13th IEEE Photovoltaics Specialists Conference, 1979

AWARDS

Co-creator of “Cooler Index” with Meteorologist Ed Phillips

Arizona Consulting Engineers Association – Engineering Excellence Awards Merit Award, 2000
– Plasma Cutting Water Table Design

Mechanical Engineer of the following award-winning projects:

Architectural Record “House of Record - 1997” – Architect, Rick Joy

Architectural Record “House of Record - 1996” – Architect, Wendel Burnette

Phoenix Home and Garden “Arizona Homes of Year-Single Family (Theuer) and Remodeled (unnamed) - 1992” – Architect, Will Bruder

Phoenix Home and Garden “Arizona Homes of Year-Single Family (Murray) - 1991” Architect, Will Bruder

Progressive Architecture “Annual House - Murray Residence – 1990” – Architect, Will Bruder

Sunset “Award of Merit - Halas Residence – 1989” – Architect, Jones Studio