



# The ASHRAE Library of Humid Air Psychrometric & Transport Property Functions



*For Real Moist Air, Dry Air, Steam, and Ice*

## Accurate

- ◆ 'Real' Versus 'Ideal' Air
- ◆ Update of the ASHRAE Hyland-Wexler and Nelson-Sauer Models
- ◆ Wide Range of Validity
  - Pressure: 0.01 ≤  $P$  ≤ 10,000 kPa
  - Temperature: -143.15 ≤  $t$  ≤ 350 °C
  - Humidity Ratio: 0 ≤  $W$  ≤ 10 kg<sub>w</sub>/kg<sub>a</sub>

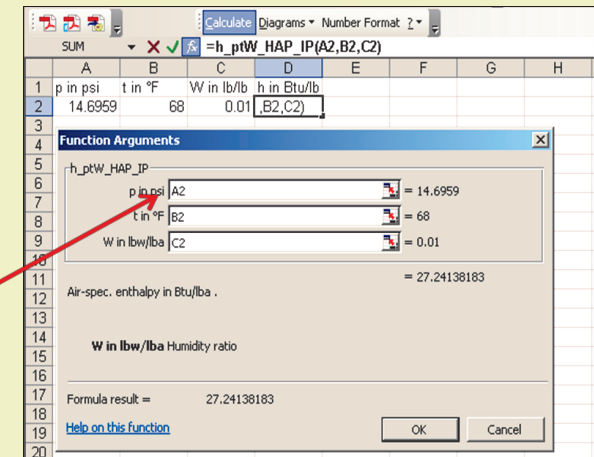
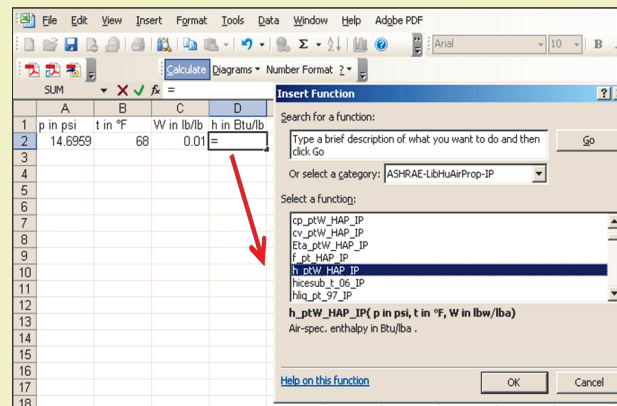
## Powerful and Flexible

- ◆ Thermodynamic Properties
- ◆ Saturation Properties
- ◆ Transport Properties
- ◆ Water Content Functions
- ◆ Backwards Functions
- ◆ Both I-P and SI Units

**60  
Functions  
In Both  
I-P & SI Units!**

## Easy to Use!

Works *within* Microsoft Excel®



**Special Introductory Price: \$179 (ASHRAE Members: \$149)**

To Order This Downloadable Product, Visit: [WWW.ASHRAE.ORG/BOOKSTORE](http://WWW.ASHRAE.ORG/BOOKSTORE)



**Kretschmar  
Consulting Engineers**

[www.kretschmar-engineers.com](http://www.kretschmar-engineers.com)

Hans-Joachim Kretschmar

E-mail: [info@kretschmar-engineers.com](mailto:info@kretschmar-engineers.com)

Phone: +49 -172-7914607