



ASHRAE LibHuAirProp Software

Library for the Calculation of Psychrometric, Thermodynamic, and Transport Properties for Real Humid Air, Steam, Water, and Ice

60 Functions in both I-P & SI Units

Accurate

- ◇ Real moist-air properties
- ◇ Wide ranges of temperature, pressure, and humidity ratio
- ◇ Based on ASHRAE RP-1485 and ASHRAE RP-1767
- ◇ Uses NIST reference equations and all latest IAPWS formulations

Powerful and Flexible

Psychrometric Properties

Humidity ratio from total pressure, temperature, and relative humidity	Humidity ratio from total pressure, temperature, and partial pressure of water vapor
Partial pressure of water vapor in humid air	

Thermodynamic Properties

Density	Air-specific volume
Specific isobaric heat capacity	Specific isochoric heat capacity
Air-specific enthalpy	Air-specific internal energy
Air-specific entropy	Isentropic exponent
Speed of sound	Compressibility factor

Transport Properties

Thermal conductivity	Dynamic viscosity
Kinematic viscosity	PRANDTL number
Thermal diffusivity	

Saturation Properties

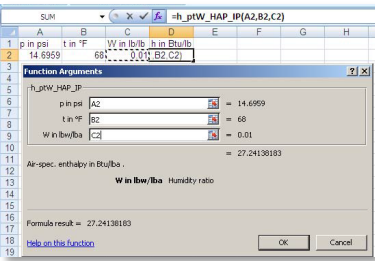
Dew-point temperature	Wet-bulb temperature
Saturation humidity ratio	Humidity ratio from total pressure and dew point temperature
Humidity ratio from total pressure, temperature and wet-bulb temperature	Saturation-pressure enhancement factor of water in moist air
Partial saturation pressure of water vapor	Backward function: temperature from total pressure, wet-bulb temperature and humidity ratio
Backward function: saturation temperature of water vapor from total pressure and partial pressure of water vapor	

Backward Functions

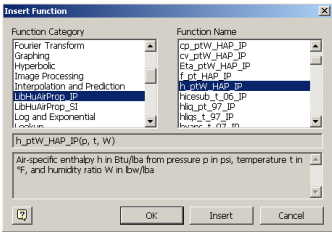
Temperature from total pressure, enthalpy, and relative humidity	Temperature from total pressure, enthalpy, and humidity ratio
Temperature from total pressure, entropy, and humidity ratio	

EASY TO USE IN 6 APPLICATIONS

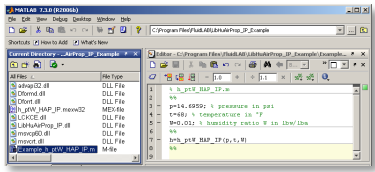
FluidEXL for Excel incl. VBA



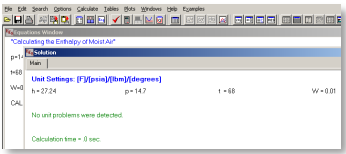
FluidMAT and FluidPRIME for Mathcad/Prime



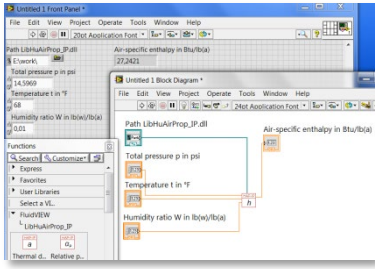
FluidLAB for MATLAB



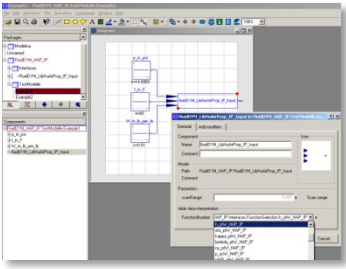
FluidEES for EES



FluidVIEW for LabVIEW



FluidDYM for Dymola



Note: All programs work in Windows up to version 11, 64 and 32 bit

Available in the ASHRAE Bookstore:

Product	Member Price	List Price
FluidEXL for Excel	\$200	\$267
FluidLAB for MATLAB & Simulink	\$200	\$267
FluidMAT/FluidPRIME for Mathcad/Prime	\$200	\$267
FluidEES for Engineering Equation Solver	\$200	\$267
FluidVIEW for LabVIEW	\$300	\$400
FluidDYM for Dymola, Modelica	\$400	\$534

To purchase, visit the ASHRAE Bookstore at www.ashrae.org/bookstore

