Library LibHuAirProp of Humid Air Psychrometric and Transport Property Functions, I-P and SI

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

60 Functions in Both I-P & SI Units

Accurate

◊ '**Real**' versus '**Ideal**' Air
◊ Update of the Hyland-Wexler and Nelson-Sauer Models
◊ Properties of Liquid and Ice Fog Can Be Calculated
◊ All Latest IAPWS Standards and NIST Reference Equations Are Used
◊ Wide Range of Validity

EASY TO USE IN 6 APPLICATIONS

Add-In for Excel®

Add-On for Mathcad®

Add-On for MATLAB®

Add-On for EES

Add-On for LabVIEW™

Add-On for DYMOLA®

Note: All programs work in Windows 7 and 8, 64- and 32-bit
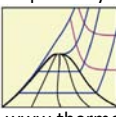
Available here, or at the ASHRAE Online Bookstore:

Product	Member Price	List Price
FluidEXL for Excel®	$119	$149
FluidLAB for MATLAB®	$119	$149
FluidMAT for Mathcad®	$119	$149
FluidEES for Engineering Equation Solver®	$119	$149
FluidVIEW for LabVIEW™	$119	$149
FluidDYM for DYMOLA® and SimulationX®	$119	$149
Combined Library (ALL 6)	**$299**	**$349**

Powerful and Flexible

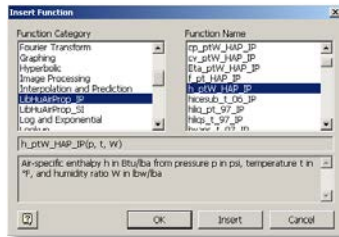### Thermodynamic Properties

Speed of sound	Specific isobaric heat capacity
Specific isochoric heat capacity	Air-specific enthalpy
Isentropic exponent	Density
Partial pressure of water vapor in humid air	Partial saturation pressure of water vapor
Air-specific entropy	Air-specific internal energy
Air-specific volume	Compressibility factor

Transport Properties

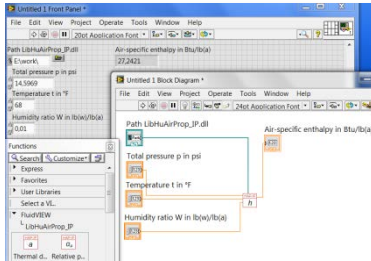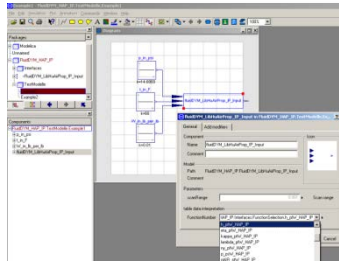|	
Thermal diffusivity	Dynamic viscosity
Thermal conductivity	Kinematic viscosity
PRANDTL number	
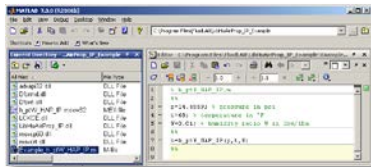
Water Content Properties

Humidity ratio from total pressure, temperature, and partial pressure of water vapor	Humidity ratio from total pressure, temperature, and relative humidity
Relative humidity	

Saturation Properties

Saturation pressure enhancement factor of water	Dew-point temperature
Wet-bulb temperature	Saturation humidity ratio
Humidity ratio from total pressure and dew point temperature	Humidity ratio from total pressure, (dry bulb) temperature and wet-bulb temperature
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	

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Prepared by

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