Library LibHuAirProp of Humid Air Psychrometric and Transport Property Functions, I-P and SI
For Real Moist Air, Dry Air, Steam, Water, and Ice

Accurate

- ‘Real’ versus ‘Ideal’ Air
- Based on ASHRAE RP-1485 and RP-1767
- Properties of Liquid and Ice Fog Can Be Calculated
- All Latest IAPWS Standards and NIST Reference Equations Are Used
- Wide Range of Validity

Powerful and Flexible

### Psychrometric Properties

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

### 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

### Saturation Properties

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

### Backward Functions

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

### Availability

- 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 up to version 10, 64- and 32-bit

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