

Property Databases for the Calculation of Heat Cycles and Turbines

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The developed software for calculating thermophysical properties and plotting thermodynamic charts of working fluids is meant for the daily work of the engineer who calculates heat cycles, steam and gas turbines, and other thermal processes. Thermodynamic properties, transport properties, thermodynamic differential quotients and backward functions can be calculated.

The following property databases and programs will be presented:

- Dynamic Link Libraries **FluidDLL** for use in Windows programs
- Add-In **FluidEXL Graphics** for Excel® including graphical representation of the calculated properties in thermodynamic charts
(T,s - , h,s - , $\log p,h$ - , $\log p,\log v$ - , $\log p,T$ - , p,T - , T,h - , $T,\log v$ - , $\log p,s$ - , $h,\log v$ - and $s,\log v$ -diagram)
- Library **FluidMAT** for Mathcad®
- Dialog program **FluidDAT Graphics** for use as electronic steam table in Windows including graphical representation of the calculated properties in thermodynamic charts (same diagrams as for **FluidEXL Graphics**)
- Program **FluidDIA** for calculating and plotting large size and camera-ready thermodynamic charts (h,s - T,s - $\log p,h$ - and h,x -diagram)
The range of state of the diagram, isolines , scale and size can be adjusted by the user.
- Software for Pocket Computers:
 - FluidTI for Texas Instruments® TI 89 and TI 92
 - FluidHP for Hewlett Packard® HP 48G
 - FluidCASIO for CASIO® FX 880P .

Versions for students of all programs are available.