Changelog

Further information can be found on the GasTurb website, updates and manuals are available in the Download section.

GasTurb 14

Update 14 - 29.08.2024

- Minor bugfixes and performance improvements.

Update 13 - 21.02.2024

- In the Off-Design window, the saved limiter settings are now automatically applied when loading "Off-Design Point Input Data" files.

- Fix for reading rating schedules from .RTG files in the Power Management window. The "Max Mach No" value is now read correctly from the file.

- Improved warning messages in the Off-Design window when the "Limits" calculation mode is activated while the "No Limits" setting in the Controls menu is selected.

- Added a warning message to prevent loading test data files with too many operating points or quantities (upper limit for each is 50).

- Minor bugfixes and performance improvements.

Update 12 - 11.01.2024

- Fix for AnSyn calculations with unscaled maps of LPC, IPC, HPC and IPT. Previously, the speed at which the maps were evaluated was miscalculated by a factor of $\left(1/\sqrt{\Omega\,R/287.05}\right)_{Ds}$, resulting in slight errors in the AnSyn factors for non-standard conditions.

- For Boosted Turboshaft and 2-Spool Turbojet configurations, the AnSyn input "T45" has been changed to "T44". In previous versions, there was a mismatch between the

required input "T45" and the calculated temperature difference ("T44 measured - T44 calculated"). This is now fixed and inputs and outputs are both for "T44".

- Improved plots of Mission results, especially regarding the handling of non-converged points.

- Minor bugfixes and performance improvements.

Update 11 - 28.11.2023

- For the 1-Spool Turboprop configuration, Gross Thrust (FG) and Residual Thrust (FN_res) are now available as output values.

- For Boosted Turboshaft configurations, a comment in the Input Window now indicates which speed input is used for the boosted spool.

- For configurations with an afterburner, the Turbine Exit Duct Temperature T6 is now available as an output value. Also, far7 is only shown when reheat is activated.

- Improved error messages in More...-Mode that indicate failures of compressor and turbine annulus calculations. Previously, the message "Inlet Area Chokes" was shown in such a case, although not being the root cause of the failed calculation.

- Fix of the Composed Values window, where it was possible to change formulas referencing Tables but this had no effect on the calculation. Now, references to Tables in the Formula Editor can only be modified in the Tables window.

- Fix for an issue where invalid points (calculation results) were shown as valid in configurations with a mixer.

- Fix to show the correct IP spool speed in the "Oper.Point" tab of the Result window for Geared Turbofan configurations. Previously, incorrect values were shown for gear ratios not equal to 1.

- Minor bugfixes and performance improvements.

Update 10 - 01.08.2023

- Fix for loading savefiles in "More..."-mode, where previously the Aero Design calculation was not initialized correctly and resulted in error messages.

- The "Incidence" in the Result Summary window is now hidden when it is not calculated, previously it was shown as 0.0.

- Minor bugfixes and performance improvements.

Update 9 - 07.06.2023

- Improved convergence for Test Analysis calculations with multiple user defined iterations. This change only affects cases which didn't converge in the previous GasTurb versions.

- The transient input variable "Burner Time Constant" can now be set to 0, previously it was limited to 0,001.

- In Batchjob mode the settings from the Iterations window are now used if no [Iterations] keyword is used.

- Fix for the off-design calculation of turboshaft engines when using the exhaust loss calculation with turbine maps.

- Fix for the accounting of the PT NGV Cooling Air in the configurations "Boosted Turboshaft", "Double Boost Turboshaft" and "Interc Recup Turboshaft".

- Fix for the use of Functions or Libraries (DLLs) in composed values that have the name of other GasTurb variables in the function call.

- Minor bugfixes and performance improvements.

Update 8 - 16.01.2023

- Fix for an issue with the Formula Editor for the Transient Calculation. Previously, some composed value definitions containing GasTurb property names (e.g. XN_HPC) resulted in errors.

- The Transient Calculation window now displays the unit (milliseconds) for the timestep input.

- Fix for an issue, where in some cases the "Detailed Output @ t=" option in the Transient Calculation window was off by one timestep.

- The y-Axis of the y=f(x)-Plot in the Transient Calculation window now doesn't reset to the default properties every time the window is closed.

- The More...-Mode engine plot now supports IGVs for radial compressors.

- Fix in the initialization of the Aero Design calculation for radial compressors after loading from a savefile.

- In the window to edit Compressor Maps the "fix" functionality now doesn't reset the values to 0 anymore.

- Minor bugfixes and performance improvements.

Update 7 - 16.09.2022

- Improvements for the evaluation of mission points during a Design parametric study.

- Minor bugfixes and performance improvements.

Update 6 - 05.08.2022

- Scaled turbine and compressor maps now always reproduce the design point without iterations, even if the scaling point is between speed lines or beta lines. Previously, this was rarely not the case because of interpolation errors in sparse maps.

- In the Test Analysis for the Turboshaft, Turboprop and 2-Spool Turbojet configuration the deviation for the inter turbine temperature is now calculated at the measurement position 44 instead of 45.

- Minor bugfixes and performance improvements.

Update 5 - 23.06.2022

- The window to assign properties to sliders is now always shown in the foreground to prevent hidden buttons.

- Minor bugfixes and performance improvements.

Update 4 - 22.03.2022

- Bug-Fix in the calculation of the 2 Spool Mixed Turbofan with an LPC Flow Capacity Modifier. Now the LPC Pressure Ratio is calculated correctly along a constant Beta Line.

- Minor bugfixes and performance improvements.

Update 3 - 18.01.2022

- Several minor bugfixes and performance improvements.

Update 2 - 07.10.2021

- Transfering power via the electric system to the gas turbine now possible during off-design calculations.

- Minor bugfixes and performance improvements.

Update 1 - 24.09.2021

- Support for high-DPI monitors is added with this release.

- Minor bugfixes and performance improvements.

Initial Release - 24.08.2021

- Initial Release of GasTurb 14

- More information about the new features can be found on gasturb.com and in the What's new presentation.