

MPanel FEA change summary ver 11 September 2016

Tool	Change	Benefit	Drawing
Solver	The solver is now integrated into the main program, and the whole program is a fully 64 bit process. The solver is updated to use the latest math's library.	This allows faster solving and better memory usage.	
	The ability to start the solve from a previous load case has been made more robust.	This allows solving some loaded conditions that wouldn't solve directly from the initial state. And it also allows for a change in material properties between load case zero and later load cases. This is sometimes used to simulate the installation tensioning process.	C
Databases	The material and load databases editors have been improved, and the data is now stored in a units neutral format.	You can enter data in, for example Lbf/inches, and if you then change to working in Kgf/meters the data will be correctly factored.	
Loads	Distributed loads such as wind, snow and self weight are now applied to the membrane with a local compensation for modeling artifacts, which produces less localized distortion.	This allows marginal load cases to solve more easily. It also gives better results for inflated structures, which previously showed some modeling artifacts.	A
Constraints	New constraint to allow cable to slip through a restraint.	This allows the analysis of structures similar to a double saddle shape, with the bottom cables able to move through the mid restraint, with snow load on just one saddle.	B
Compatibility	Modifications made to work with AutoCAD 2017		