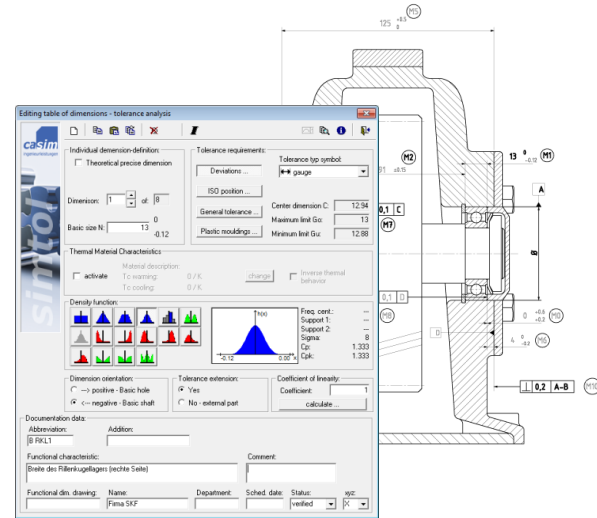


simTOL[®] offers fast and reliable statistical tolerance analyses for 1D, 2D and 3D tolerance stack calculations enabling you to influence the quality of your products at an early stage in the development process and avoid production cost to skyrocket.

Efficient

simTOL enables you to quickly work productively without being adept in tolerance simulations. Required calculation parameters can be easily selected and allocated. All data is centrally stored in the tolerance data manager enabling reuse for any desired tolerance stacks without further input. Within seconds a calculation run of a complete assembly can be performed and clear, concise results are displayed for each critical characteristic. Various reports are available for different requirements.



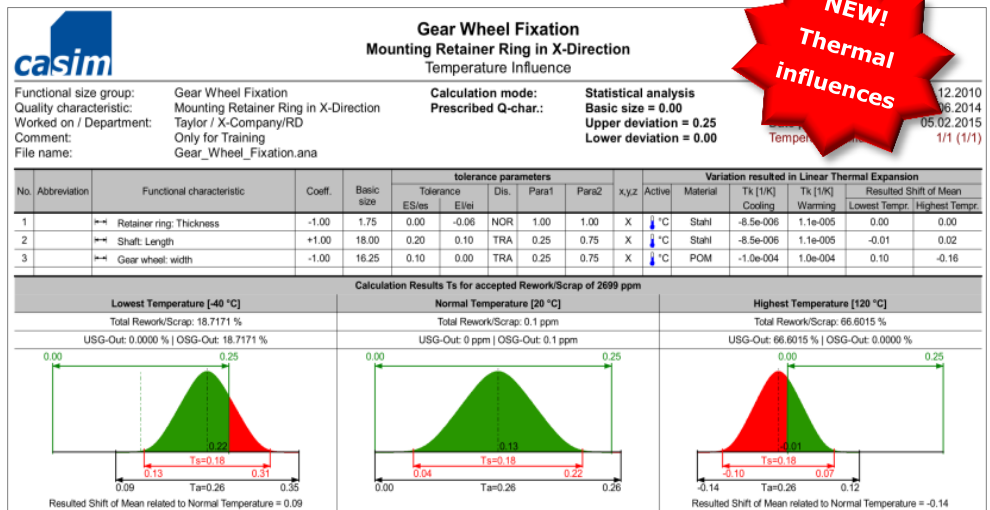
Precise

simTOL operates with very efficient statistical algorithms allowing you to calculate precise, real-world results - regardless of how long a tolerance stack is or whether the tolerances of profile and position take effect. **simTOL** is the result of multiple years of development and has proven itself in years of practical use by our customers in industries like automotive, aerospace, machine design, electronics and many more. In comparison to simple tools based on Excel[™], **simTOL** doesn't use the RSS (Root Square Sum)-method for the calculation of the statistical total tolerance. RSS only produces idealized results which

includes false positives for all-clear and non-achievable potentials for optimization.

Thermal influences

An optional feature of **simTOL** allows thermal expansions of components to be considered in the calculation. Within a tolerance stack, thermal expansion coefficients can be selected and defined for any material. Both, the tolerances caused by production and those caused by temperature are calculated in their interaction within the user-defined temperature limits and are displayed in an overall log.

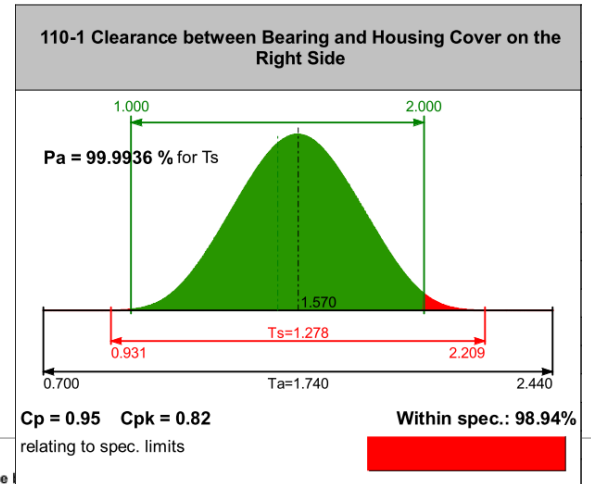


Realistic results

The process deviation of the component manufacturing in the real-world processes is an essential factor for the calculation of realistic results. **simTOL** provides different distribution models for the description of your actual manufacturing processes enabling accurate detection of realistic tolerances taking your production into account. In addition to that, measured data can be imported and integrated into the calculation.

Calculating the accurate statistical total tolerance is just the start. The real objective is to evaluate if the necessary specifications for the assembly can be complied with.

simTOL calculates how many assemblies (in %) are within or outside the user-defined specifications. Furthermore, the attainable Cp- and Cpk-values can also be calculated. **simTOL** also performs a contributor analysis identifying where the system is particularly sensitive (main contributor) and where optimization measures could best be applied.



casim 110-1 Clearance Pareto-Analyse

Funktionsmaßgruppe: Gear shaft bearing
 Qualitätsmerkmal: 110-1 Clearance between bearing and housing...
 Bearbeiter / Abteilung:
 Bemerkung:
 Dateiname: USER 110-1 K BP 150118 X 1-1 Clearance between bearing and housing cover on the right side.ana

Berechnungsmodus: statistische Analyse
 Vorgabe Q-Merkmal:
 Nennmaß = 1.000
 Oberes Abmaß = 1.000
 Unteres Abmaß = 0.000

Erstellung: 18.01.2015
 Letzte Änderung: 06.02.2015
 Druckdatum: 10.02.2015
 Pareto-Analyse 1/1 (3/3)

Nr.	Beitrag [in %] zum Schließmaß		Kurzzzeichen		Funktionsmerkmal							
	arithmetisch	statistisch	Koeff.	Toleranz	ESies	Ellei	VT	Para1	Para2	Name	Abteilung	Status
2	34.5%	50.1%	-1.000	0.600	0.300	-0.300	TV	0.250	0.750	Mustermann	RD	Bestätigt
5	28.7%	34.8%	0.500	0.500	0.500	0.000	TV	0.250	0.750	Mustermann	RD	Bestätigt
4	11.5%	5.6%	-1.000	0.200	0.000	-0.200	TV	0.250	0.750	Mustermann	RD	Bestätigt
6	11.5%	5.6%	-1.000	0.200	0.000	-0.200	TV	0.250	0.750	Mustermann	RD	Bestätigt
1	6.9%	2.0%	-1.000	0.120	0.000	-0.120	TV	0.250	0.750	Mustermann	RD	Bestätigt
3	6.9%	2.0%	-1.000	0.120	0.000	-0.120	TV	0.250	0.750	Mustermann	RD	Bestätigt

simTOL References (Selection)

