solara.MP

Measuring Process Capability

Statistical Software

solara.MP - Measuring Process Capability

MABICO Solutions

Measuring System Capability

Measurement Uncertainty

Cg, Cgk, %GRR

VDA 5/GUM

MSA

solara.MP

Measuring Process Capability

Introduction

solara.MP provides the complete tool kit to evaluate and qualify the measuring systems and processes that are used in turn for the ongoing statistical analysis of manufacturing processes.

To ensure that the measurements are reliable - reflecting actual and existing conditions - the measurement processes must be verified and qualified as trustworthy.

solara.MP will carry out the necessary capability studies for measurement system and process verification, to eliminate the risk of misinterpretation of the collected data.

Capability Study according to MSA

In the automotive industry, the substantiation and practical implementation of capability studies have been based on company specific guidelines.

The main differences between the generally accepted studies such as the Typle-1 Study (Cg/Cgk), Type-2 and Type-3 (%GRR), or Linearity and Stability studies are found in the calculation methods and in the limit values.

solara.MP encompasses multiple evaluation methods which include multiple guidelines from the automotive industry including those of the MSA guideline, of the AIAG Core Tools (formally QS-9000).

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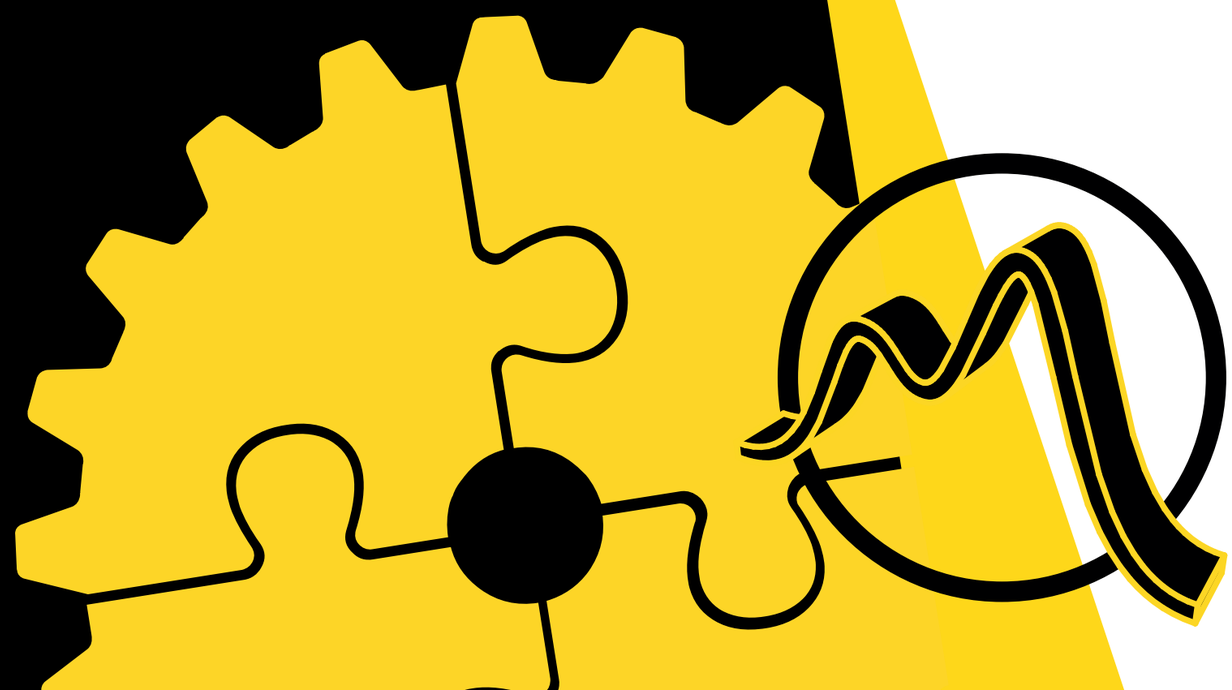
Process Capability after VDA 5

VDA Volume 5, the European equivalent of the MSA guideline, requiresevaluation of measurement processes using Measurement Uncertainty which isdetermined via practical methods similar to the capability study, but is based onspecifications from **GUM** (Guide to the Expression of Uncertainty in Measurement) and the DIN EN V 13005.

The uncertainty components are combined into Measurement Uncertainty budgets and the Extended Measurement Uncertainty "U" is determined.
This method enables the evaluator to consider the uncertainty in conformance studies according to EN ISO 14253 for Tolerance.



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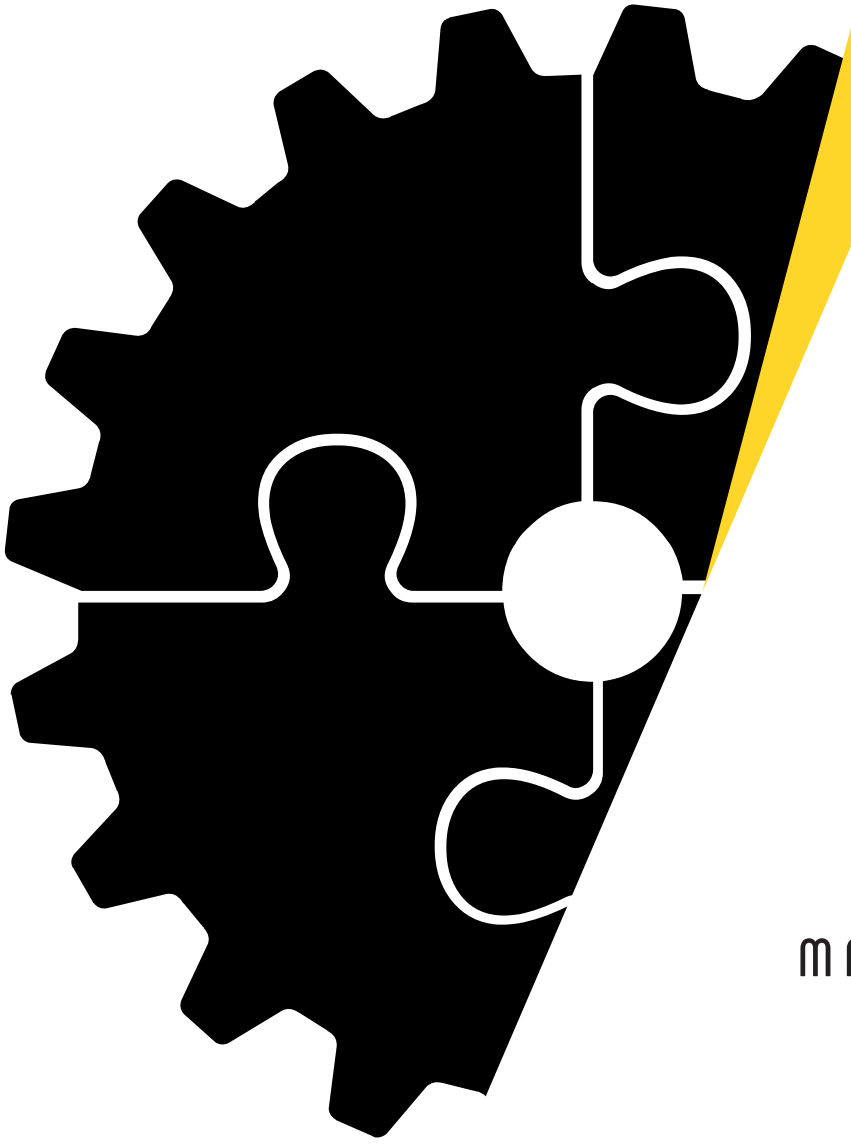
Measurement Uncertainty according to GUM

While the "Guide to the Expression of Uncertainty Measurement (GUM)" explains the calculation of the Extended Measurement Uncertainty in theoretical terms, **solara.MP** will actually create an uncertainty model for every inspection process for immediate visualization.
solara.MP will display the cross-linkage of the uncertainty components in a clear flow chart with each box representing an uncertainty component. These uncertainty components can be edited with one mouse click. The combined standard uncertainty and the extended uncertainty is calculated based on input of the intuitively guided logical operations formula.

Guaranteed Accuracy

Regardless of the methods used and whether the capability studies are conducted at a test station, production line, or in the inspection laboratory, rest assured that **solara.MP** will provide you with the most accurate and trustworthy information that you seek!



QUALITY MANAGEMENT SYSTEM

MABICO SRL
25025 - Manerbio (BS)
Via Cremona 10/12 Europalace
T: +39 030 9382176

mabico@mabico.it

www.mabico.it