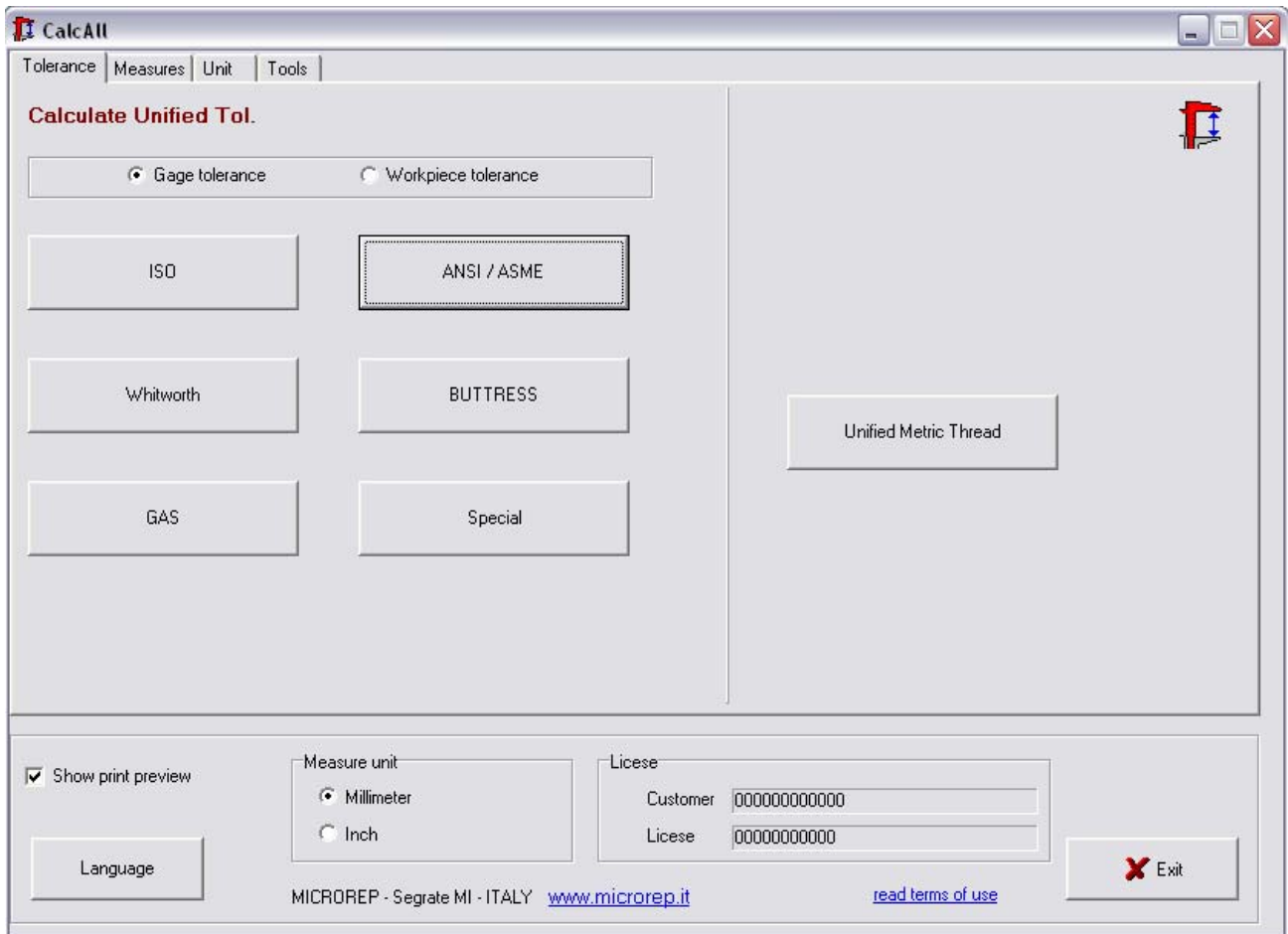


CalcAll - Tolerance Software

Tolerance calculation for Work-piece & Gage » technical libraries for tolerances, measurement and conversions «



Features

- Tolerance calculation for workpieces:
 - : plain shaft
 - : plain hole
 - : thread shaft
 - : thread hole
 - :
- Tolerance calculation for gages:
 - : plain plug
 - : plain ring
 - : thread plug
 - : thread ring
- Effective diameter tolerance, drilling hole size, external and internal diameter of the gage.
- Various norms available:
 - : ISO metric gages and workpieces - according to ISO/R - 1938, ISO 286, ISO 965/1, ISO/R - 1502.
 - : ANSI/ASME gages and workpieces - according to ANSI/ASME B1.13M (ISO 965/1), ANSI/ASME B1.16M-1984, Plain gage ANSI-inch, ANSI/ASME B89.1.6M-1984, Gagemaker's Tolerance Chart, ANSI/ASME B.1.1-1982, ANSI/ASME B1.2-1983, ANSI/ASME B.1.20.1-1983, ASME B1.20.5-1991.
 - : Whitworth gages and workpieces - according to BS 919, BS 84.
 - : Buttress gages and workpieces - according to ANSI B1.9, BS 1657.
 - : Gas gages - according to ISO 7, ISO 228.
- Measurement formulae for threads:
 - : three wire method
 - : contact arms
 - : T-sphere
- Unit conversion:
 - : length (mm, inch, feet, etc.)
 - : temperature (°C, °F, etc.)
 - : mass (Kg, pounds, etc.)
 - : degree (sexagesimal, radians, etc.)
 - : pressure (atm, bar, etc.)
- Thermal expansion calculation for common materials
- Printout of measurement results and tolerances calculation

Work-piece tolerance

ISO - metric

Nominal diameter: +022.000.0 Measure unit: mm

Pitch: +001.000.0

Angle (degree): 60 N.starts: 1

Gage tolerance: M 22 X 1

Calc. Unif. Tolerance: 7H

Workpiece tolerance Internal thread devial

Max: +021.550.0 Avg value: +021.450.0 tap drill size: +021.026.0

Min: +021.350.0 +/- deviation: +000.100.0 based on: 90 % thread

Printout Measure Piece Close

Gage tolerance

ISO - metric | thread for internal | Limit thread plug gage

Nominal diameter: +032.000.0 Measure unit: mm

Pitch: +002.000.0

Angle (degree): 60 N.starts: 1

Gage tolerance: M 32 X 2

Pitch diameter: External | Internal | Angle/Pitch

Calc. Unif. Tolerance: 6H

	Go	No-go
Max Nom.	+030.724.0	+030.939.0
Min Nom.	+030.710.0	+030.925.0
Worn	+030.696.0	+030.917.0
Avg. diam	+030.717.0	+030.932.0

Workpiece toleranc: Internal thread deviation

Max: +030.925.0

Min: +030.701.0

Printout Measure Gage Measure Piece Close

Thread measurement formulae

Thread measurement

THREAD

diameter: +032.000.0

semi-angle: 30 30

pitch: +002.000.0

n.starts: 1

WIRE

diameter: 1.1

material: Steel

Tolerance

upper limit: +030.925.0

low limit: +030.701.0

3 wires | Arms | T-sphere

Measure force: 1 N

Calculate deformation

Calc Theoretical Wire

+001.154.7

Reading on Wires: 32.456

Result (M) diameter: +030.891.1

PRINTOUT DATA

Code: _____

Note: _____

Printout

Show print preview

Measure unit: Millimeter Inch

License: Customer: 000000000000, License: 000000000000

Language

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Units conversion

Convert Measurement Unit

120 mm convert 4.72440944 inch

22 °C convert 71.6 °F

1.3 Kg convert 2.86600940 pound

22 degree convert 0.38397243 rad

2.5 atm convert 36.7398719 psi

Show print preview

Measure unit: Millimeter Inch

License: Customer: 000000000000, License: 000000000000

Language

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Material thermal expansion

CalcAll
_ □ ×

Tolerance | Measures | Unit | Tools

Material Thermal Expansion

length	+123.000.0	+123.000.0	
Temperature	24 °C	28 °C	
material	Steel	Steel	
Exp. Coeff *	11.5 k-1	11.5 k-1	
	Calculate	Calculate	
length at 20°C 68°F	+122.994.3	+122.988.7	
length deviation	+000.005.7	+000.011.3	

* Avg. value for temperature range near environment conditions

Show print preview

Language

Measure unit

Millimeter
 Inch

Licese

Customer 000000000000

Licese 000000000000

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