



Minitab[®] 18

Statistical Software



Learn What's New ▶▶

Upgrade now to access new and improved statistical features and other enhancements that make it even easier to analyze your data.

User Interface Improvements

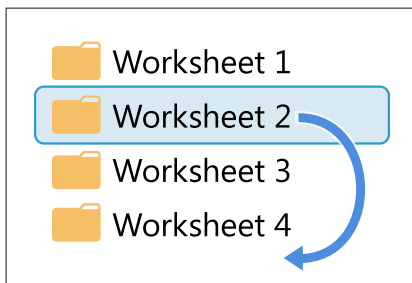
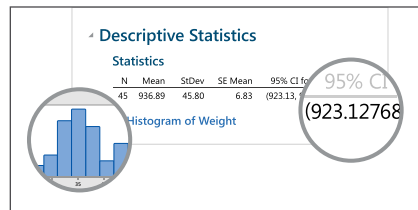
Minitab Statistical Software has all the tools you need to effectively analyze your data. By guiding you to the right analysis and giving you clear results, Minitab helps you solve your toughest business problems.

Minitab 18 includes new features and functionality to make data analysis easier than ever.

Updated Session Window >>

The Session window not only looks better, but it also includes several great enhancements, including the ability to:

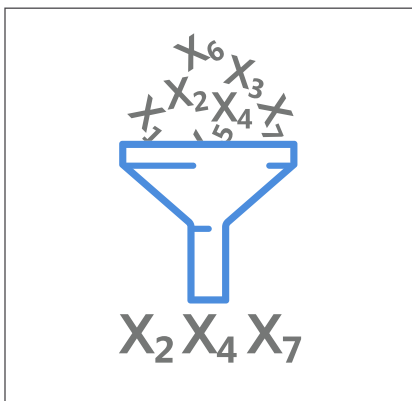
- Specify the number of significant digits
- Easily access graphs via links
- Zoom in and out



<< Sort Worksheets

Easily manage your data within the Project Manager using new options for sorting your worksheets by title or in chronological order.

New Statistical Features

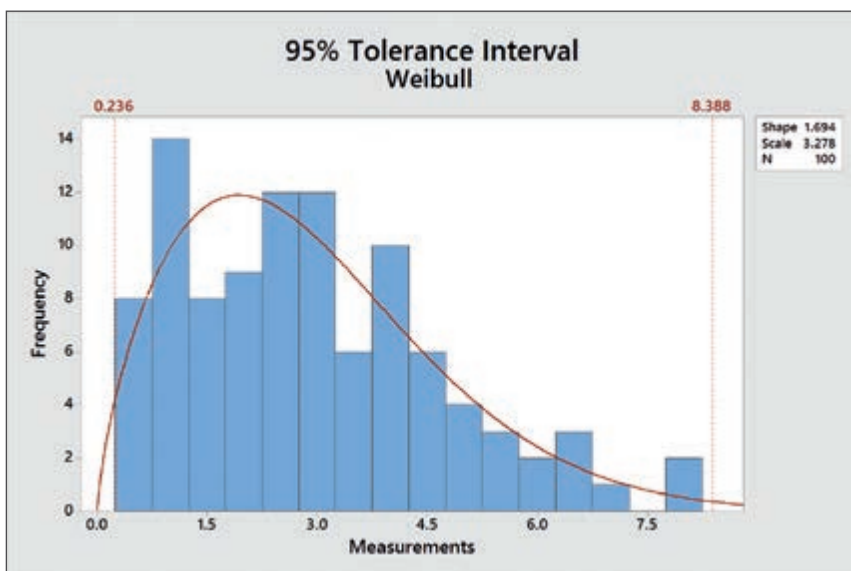


◀ Definitive Screening Designs

Identify which inputs affect your outputs with this new type of DOE screening design. These designs can provide an alternative to standard screening designs where main effects are confounded with two-way interactions.

✔ More Distributions for Tolerance Intervals

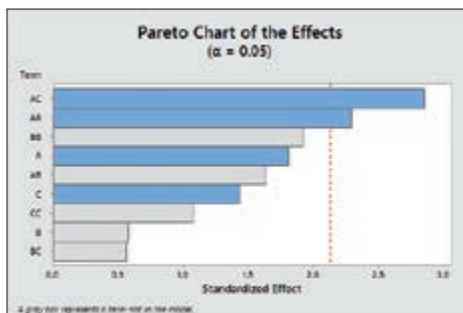
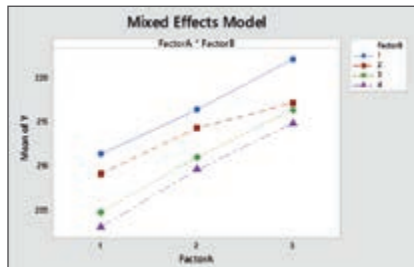
Calculate statistical tolerance intervals for nonnormal data using a wide variety of distributions including Weibull, lognormal, exponential, and more.



New Statistical Features

REML for Random and Fixed X's ▶▶

Explore relationships between variables, run multiple comparisons, and calculate predictions for mixed models.

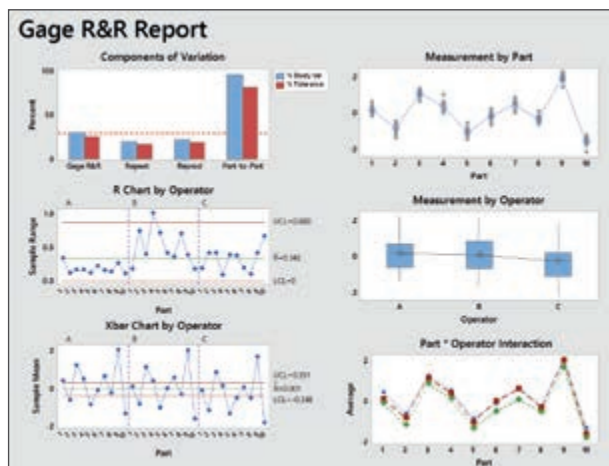


◀◀ DOE Effects Plots

Visually identify significant X's with effects plots for general factorial and response surface designs.

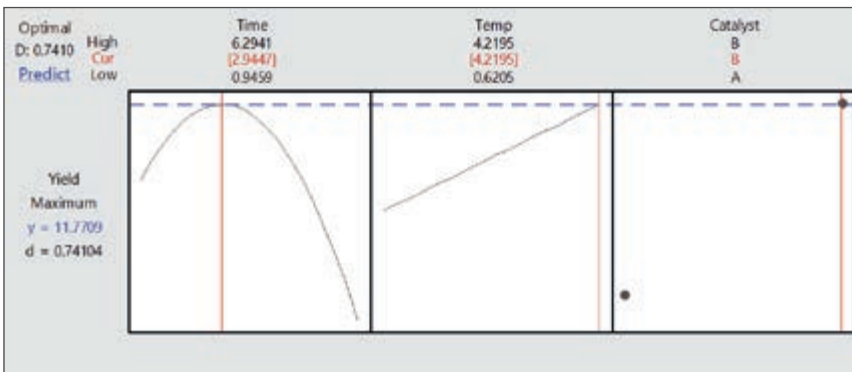
Gage R&R ▶▶

Incorporate a user-specified process (historical) standard deviation in relevant calculations.



GLM Response Optimizer

Include both your factors and covariates when using the response optimizer to find optimal settings.



Additional Enhancements

Command Line Pane

Enter commands to expand Minitab's functionality using a docked pane that keeps commands separate from Session output.

Word and Excel Improvements

Import Session output into Word and Excel in table format to easily manipulate and customize the appearance of your results.

Visit [Minitab.com](https://www.minitab.com) for a free 30-day trial of Minitab 18.

Minitab 18 Features List

Assistant

Measurement systems analysis

- Capability analysis
- Graphical analysis
- Hypothesis tests
- Regression
- DOE

Control charts

Basic Statistics

- Descriptive statistics
- One-sample Z-test, one- and two-sample t-tests, paired t-test
- One and two proportions tests
- One- and two-sample Poisson rate tests
- One and two variances tests
- Correlation and covariance
- Normality test
- Outlier test
- Poisson goodness-of-fit test

Graphics

- Scatterplots, matrix plots, boxplots, dotplots, histograms, charts, time series plots, etc.
- Contour and rotating 3D plots
- Probability and probability distribution plots
- Automatically update graphs as data change
- Brush graphs to explore points of interest
- Export: TIF, JPEG, PNG, BMP, GIF, EMF

Regression

- Linear and nonlinear regression
- Binary, ordinal, nominal logistic regression**
- Stability studies
- Partial least squares
- Orthogonal regression**
- Poisson regression
- Plots: residual, factorial, contour, surface, etc.
- Stepwise and best subsets
- Response prediction and optimization

Analysis of Variance

- ANOVA
- General linear models**

Mixed models

- MANOVA
- Multiple comparisons**
- Response prediction and optimization**
- Test for equal variances
- Plots: residual, factorial, contour, surface, etc.
- Analysis of means

Quality Tools

- Run chart
- Pareto chart
- Cause-and-effect diagram
- Variables control charts: XBar, R, S, XBar-R, XBar-S, I, MR, I-MR, I-MR-R/S, zone, Z-MR
- Attributes control charts: P, NP, C, U, Laney P' and U'
- Time-weighted control charts: MA, EWMA, CUSUM
- Multivariate control charts: T², generalized variance, MEWMA
- Rare events charts: G and T
- Historical/shift-in-process charts
- Box-Cox and Johnson transformations
- Individual distribution identification
- Process capability: normal, non-normal, attribute, batch
- Process Capability Sixpack™
- Tolerance intervals**
- Acceptance sampling and OC curves

Measurement Systems Analysis

- Data collection worksheets
- Gage R&R Crossed**
- Gage R&R Nested**
- Gage R&R Expanded**
- Gage run chart
- Gage linearity and bias
- Type 1 Gage Study
- Attribute Gage Study
- Attribute agreement analysis

Design of Experiments

- Definitive screening designs**
- Plackett-Burman designs
- Two-level factorial designs

Split-plot designs

General factorial designs

Response surface designs

Mixture designs

D-optimal and distance-based designs

Taguchi designs

User-specified designs

Analyze variability for factorial designs

Botched runs

Effects plots: normal, half-normal, Pareto

Response prediction and optimization

Plots: residual, main effects, interaction, cube, contour, surface, wireframe

Reliability/Survival

Parametric and nonparametric distribution analysis

Goodness-of-fit measures

Exact failure, right-, left-, and interval-censored data

Accelerated life testing

Regression with life data

Test plans

Threshold parameter distributions

Repairable systems

Multiple failure modes

Probit analysis

Weibayes analysis

Plots: distribution, probability, hazard, survival

Warranty analysis

Power and Sample Size

Sample size for estimation

Sample size for tolerance intervals

One-sample Z, one- and two-sample t
Paired t

One and two proportions

One- and two-sample Poisson rates

One and two variances

Equivalence tests

One-Way ANOVA

Two-level, Plackett-Burman and general full factorial designs

Power curves

Multivariate

Principal components analysis

Factor analysis

Discriminant analysis

Cluster analysis

Correspondence analysis

Item analysis and Cronbach's alpha

Time Series and Forecasting

Time series plots

Trend analysis

Decomposition

Moving average

Exponential smoothing

Winters' method

Auto-, partial auto-, and cross correlation functions

ARIMA

Nonparametrics

Sign test

Wilcoxon test

Mann-Whitney test

Kruskal-Wallis test

Mood's median test

Friedman test

Runs test

Equivalence Tests

One- and two-sample, paired
2x2 crossover design

Tables

Chi-square, Fisher's exact, and other tests

Chi-square goodness-of-fit test

Tally and cross tabulation

Simulations and Distributions

Random number generator

Probability density, cumulative distribution, and inverse cumulative distribution functions

Random sampling

Macros and Customization

Customizable menus and toolbars

Extensive preferences and user profiles

Powerful scripting capabilities



Learn more and find a local Minitab representative at www.minitab.com.