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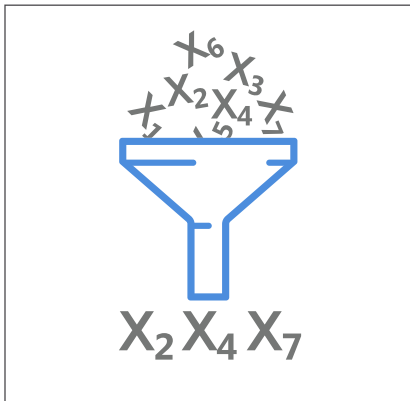
- Specify the number of significant digits
- Easily access graphs via links
- Zoom in and out
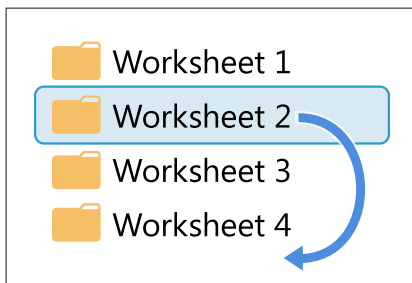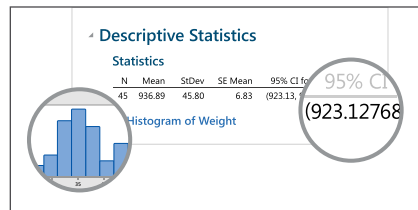
◀◀ Sort Worksheets

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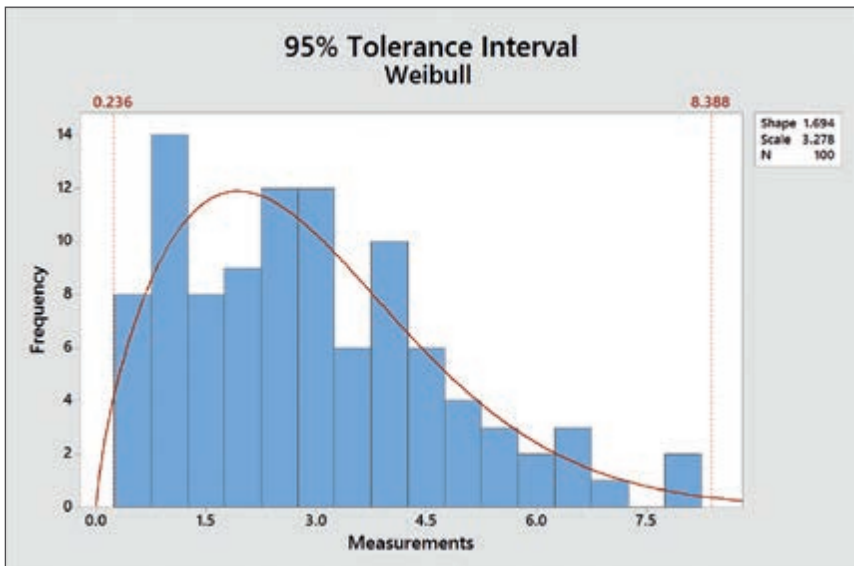
New Statistical Features

◀◀ 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.
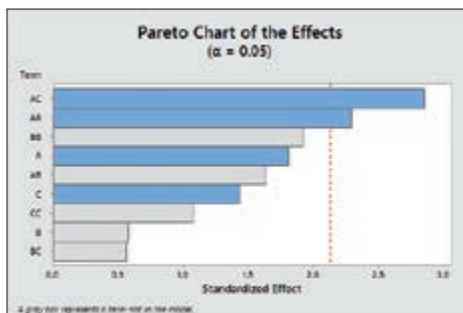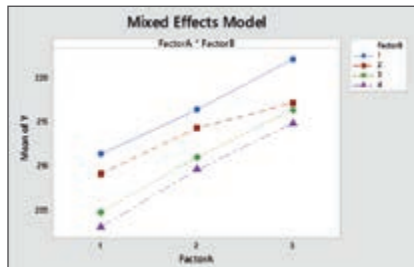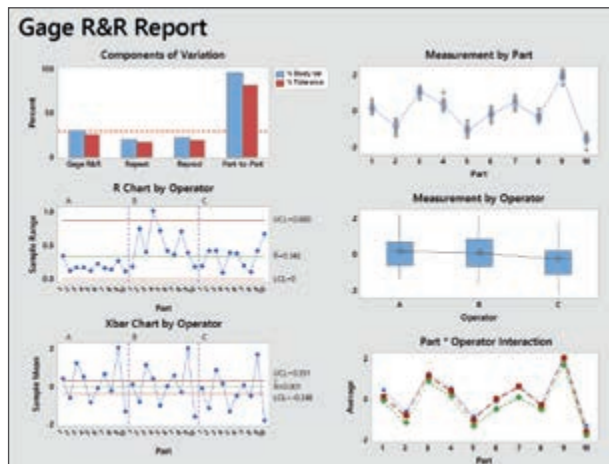

◀◀ DOE Effects Plots
Visually identify significant X's with effects plots for general factorial and response surface designs.

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.
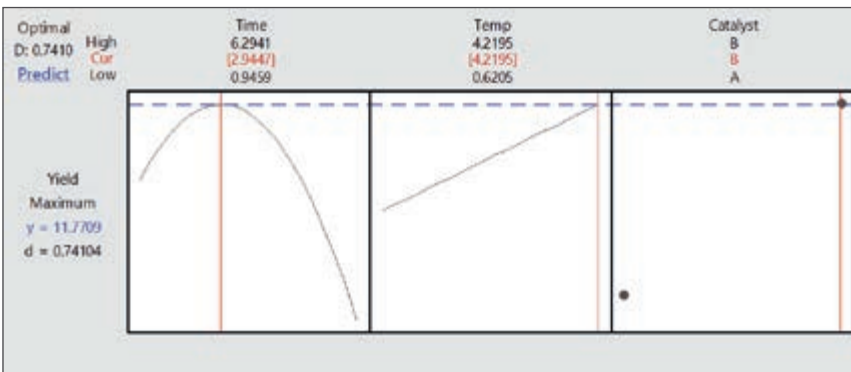
Additional Enhancements

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 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: T^2,
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

■ = New or Improved

Minitab ▶ ®

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