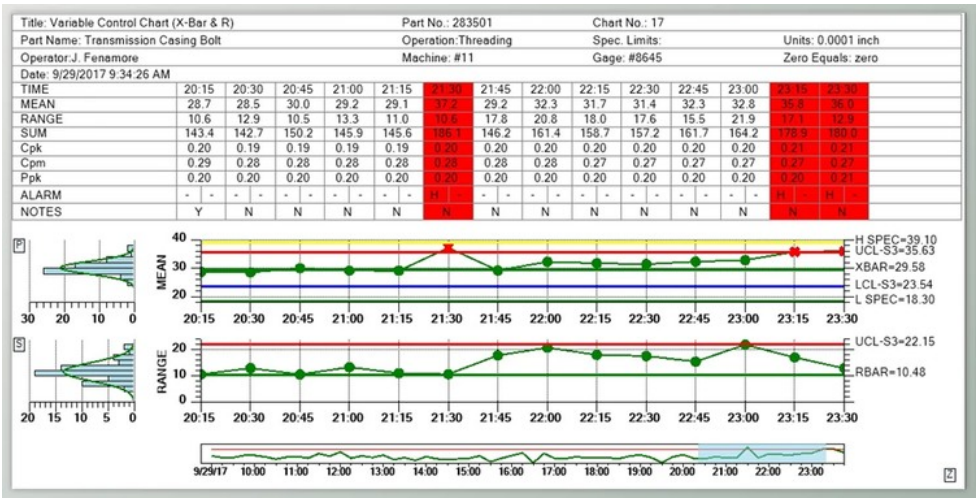
SPC Control Chart Tools for .Net v3.0

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SPC Control Chart Tools for .Net is an object-oriented, .Net established toolkit targeted at developers who wish to include dynamic and static excellent control charts to their C# and Visual Basic for .Net software. Normal users are SPC engineers and other excellent control professionals creating .Net based software used to monitor critical quality factors in manufacturing, process, and support businesses. The feature-rich toolkit includes templates for the most common SPC control chart types variable control charts (X-Bar R, X-Bar Sigma, Individual Range, Median selection, EWMA, MA, MAMR, MAMS, and CUSUM graphs), attribute control charts (p-, np-, c-, un -, and DPMO-charts), frequency histograms, probability charts, and Pareto diagrams. The program will automatically compute SPC control limits using historical data to your supported variable control graph and attribute control chart types. Alerts can be created for regular +3 sigma control limits or regular SPC rule places (WECO, Nelson, Juran, Hughes, Gitlow, AAIG, Westgard, and Duncan). Alerts can be color emphasized from the SPC graphs and table. It will also calculate process capacity ratios (Cp, Cpl, Cpu, Cpk, and Cpm) and process performance indices (Pp, Ppl, Ppu, and Ppk). Users can interact with charts: adding annotations, specifying custom tool-tips, and editing notes. There's not any similar product for .Net accessible at any given cost.

Insert variable control charts (X-Bar R, X-Bar Sigma, Individual Range, Median selection, EWMA, MA, MAMR, MAMS, and CUSUM graphs), attribute control charts (p-, np-, c-, un -, and DPMO graphs), frequency histograms, and Pareto charts to .Net and Asp.Net software utilizing the SPC Control Chart Tools for .Net. X-Bar R Album with integrated table service, frequency histograms, Cpk and Ppk data, scroll bar and personalize plot items.

- **Visual Studio .Net 2015 and greater**: Beginning with Revision 3.0, we've eliminated support for Visual Studio .Net 2005 through 2013. This way we no longer need to configure the libraries to the lowest common denominator of all .Net and may use new .Net attributes not found in first edition. The program works with Visual Studio .Net 2015, and also higher. All example app jobs are in Visual Studio 2015 format and convert into Visual Studio 2017 format when loaded with that compiler. The conventional DLLs are compiled for a goal of .Net Framework 4.5.1. This means it ought to be compatible with apps written with that goal or higher. There aren't any heritage dependencies linked to the .Net 2.0 runtime libraries.
- **Windows 32-bit/64-bit Compatible**: The program will operate as 32-bit on Windows 32-bit operating systems (XP and after 32-bit variants of Windows) and 64-bit on Windows 64-bit operating systems. This is a characteristic of libraries and programs written using .Net (Version 2.0 or higher) generally.
- **Dependent on the .Net Drawing and Drawing2D API**: Compatible with .Net parts and software.
- **100% Managed .Net Code**: The program is completely written in C#, leading to supply far better functionality and scalability. Managed .Net code makes software easier to deploy and maintain.
- **New Features at Revision 1.7**: New variable controls graphs (EWMA, MA and CuSum), added graphs support factor subgroup sample sizes, alert accent modes for the tables and graphs, and elimination permit document, and also the requirement to buy redistributable licenses.
- **New Features at Revision 2.0**: new alternatives for tagging of those tick marks in batch management graphs: time stamp labeling and user-defined series tagging, along with the default numerical batch number tagging. Additionally, x-axis labels may be rotated 360 degrees. Since QCSPCChart is developed on top of this QCChart2D applications, various new attributes are related to Revision 2.0 of the QCChart2D computer software.
- **New Features at Revision 2.2**: Nelson, Juran, Hughes, Gitlow, AAIG, Westgard and Duncan rule places along with this WECO rules. Exisiting rules could be customized, or new rules made using templates. Additional MAMR (Moving Average / Moving Range) and MAMS (Moving Average / Moving Sigma), DPMO (Defects percent) graphs) As an aid to internationalizations, each default (US English language) strings are moved into one static course, where they may be initialized at runtime with state certain values.
- **New Features at Revision 3.0**: added a Levey-Jennings factor control graph. All graphs are converted to use EventCoordinates. A zoom controller can replace the scroll bar, allowing the user to personalize the x-scale of this screen. Toggle buttons may be used to twist on/off the screen of the table rows. Enhanced annotations and outside of

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去预览

标签

Winforms .Net Components

limitation symbols. Lousy sample period marking.

- **Variable Control Chart Templates**: X-Bar R -- (Mean and Range), X-Bar Sigma, (Mean and Sigma), Median and Range, X-R (Personal Range Chart), EWMA (exponentially weighted moving average), Levey-Jennings, MA (moving average), MAMR (moving average / transferring array), MAMS (moving average / transferring sigma) and CuSum. A unique variant of the X-Bar Sigma graph supports varying sample sub-group sizes.
- **Attribute Control Chart Templates**: p-Chart (Fraction or Percent of Defective Components, Fraction or Percent Non-Conforming), np-Chart (Amount of Defective Components (Amount of Non-Conforming), c-Chart (Amount of Defects(Amount of Non-Conformities), u-Chart (Number of Defects per Unit, Amount of Non-Conformities Per Unit), along with DPMO-Chart (Number of Defects per Million). The p-Chart and u-Chart templates are present in variations that support varying subgroup sample sizes.
- **Additional SPC Chart Templates**: Frequency Histograms, Normal Probability Plots with odds scales and axes, and Pareto Diagrams.
- **Integrated Table Service**: Sampled values, calculated data values and alert status values may be a part of this SPC Control graph. Each sample subgroup includes a pop-up notes text where an operator may add observations.
- **Integrated Frequency Histograms**: The variable control charts and attribute control charts may exhibit a frequency histogram, using an optional ordinary curve-fit, of this procedure changeable side by side with the most important SPC chart.
- **Compilation Chart Items**: All the plot items made in the SPC graph templates are available to the developer, allowing tremendous flexibility in the SPC graphs' expression.
- **SPC Control Limit Calculations**: SPC Control limits may be set explicitly, since the consequence of your calculations, or the limitations can be mechanically calculated at 1-, 2- and 3- sigma levels with our own inner patterns
- Multiple SPC Control Limits -- Control limits can be put in 1-sigma, 2-sigma and 3 sigma levels for low and high SPC control limits.
- **Procedure Capability Ratios and Procedure Performance Indices**: Automatic calculation and display of process capacity ratios (Cp, Cpl, Cpu, Cpk and Cpm) and process performance indices (Pp, Ppl, Ppu and Ppk)
- **Variable SPC Control Limits**: Control limitations can be adjusted, and may change with time. Variable control limitations can be defined manually, or calculated automatically as management graphs that use a subgroup varying sample size.
- **Western Electric (WECO), Nelson, Juran, Hughes, Gitlow, AAIG, Westgard and Duncan Rules**: The program will automatically compute and process that the alarm limits to the Western Electric Runtime Rules (WE 1, 2, 3 and 4), and Supplemental (Trending) principles (WE 5, 6, 7, and 8). It will also process Nelson, Juran, Hughes, Gitlow, AAIG, Westgard and Duncan rule places. Rule parameters (N of M transcend +-2 sigma such as) for some of the typical rule sets could be customized. Mix and match guidelines from various rule sets to make you have custom rule set. You can even define custom rules with our standardized principle templates.
- **Data Tooltips**: Integrated information tooltips display graph data values in a popup window.
- **Integrated Scrolling**: A scroll bar option enables the user to window in on 8-20 sample subgroups at one time, by a far bigger set of measurement data, representing hundreds or perhaps thousands of subgroups, and continue through the information, much like paging through a spreadsheet. The scroll bar controls the table and graph scrolling.
- **Integrated Zooming** -The horizontal scrollbar could be substituted (toggled on/off actually) with the UI, using a zoom window, either by clicking the z-button at the lower right corner. The consumer will have the ability to scroll down the graphs by dragging the translucent blue zoom window or right, or enlarge the x-axis scale by simply dragging the left or right border of the zoom window.
- **Dynamic Updates of SPC Charts**: SPC Charts could be upgraded and control limitations re-calculated in real time.
- **Auto-Scaling**: The y-axes of the SPC graphs may be auto-scaled to show all information and control limitations, or the minimum and maximum value of this y-axis could be set.
- **Control Limit Alarm Occasions**: Alarm events could be triggered when a procedure variable exceeds an SPC controller limitation.
- **New Alarm Characteristics**: There's a new status line at the table section that provides an immediate indication of whether the corresponding procedure variable is in, or outside of, alert. The status line includes a tooltip, so if you click an alert, a pop-up box will reveal specifics. Optionally, the whole column connected with a sample period could be highlighted to indicate an alarm condition. Alarm details could be synced into the notes log. The symbol used to plot a procedure variable point from the secondary and primary graphs could be designed to change color in an alarm.
- **Data logging**: SPC data values may be logged to disc in the CSV (comma separated value) format, for import into spreadsheets and other applications.
- **Printing and Image Rendering**: The SPC Charts, such as the incorporated tables, may be integrated to any Windows supported printer also. Web supported image files, such as BMP, JPG; GIF; TIFF and PNG. Pictures can be made on a server and delivered in real time to an internet site.
- **VB and C# Documentation and Demo/Example Programs**: The program contains a comprehensive 300 page user guide with many programming examples, XML aid for every course. Every programming case and illustration application is presented in C# and Visual Basic.

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