Starlyzer – User Guide

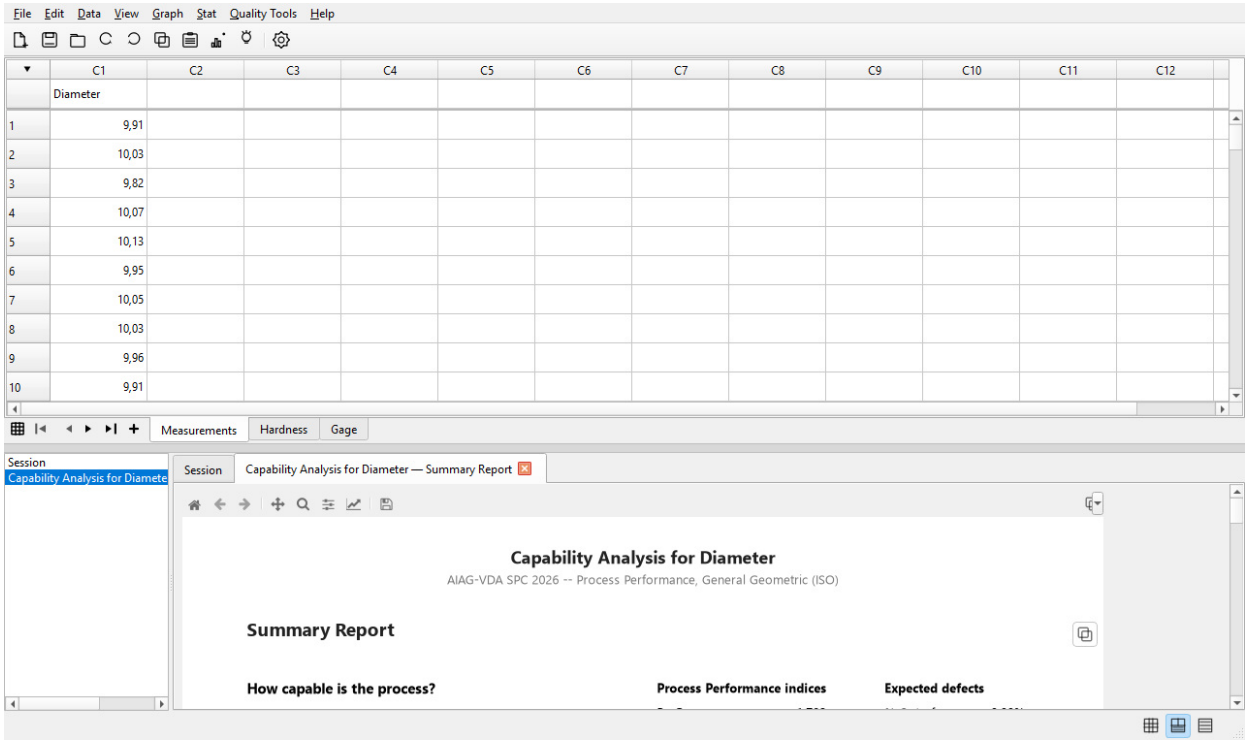
General instructions and overview of the features · version 1.0.0

What it is. Starlyzer is a Windows program for graphical and statistical data analysis, aimed at quality and process improvement: from descriptive statistics, graphs and hypothesis tests to measurement systems analysis (MSA), process capability analysis, control charts, regression and design of experiments. It works **without a permanent internet connection** (the internet is needed only to activate, refresh and release a licence and for the demo versions) and **sends no worksheets, projects or results anywhere**.
Publisher: 3ZEN svetovanje in izobraževanje, Matej Hohnjec s.p., Neubergerjeva ulica 15, 1000 Ljubljana, Slovenija · registration no. 7403950000 · VAT ID SI62383043

1. Installation, start and licence

1. The program is installed by an **administrator**: run **Starlyzer-Setup-1.0.0.exe** (right-click → *Run as administrator*) and follow the wizard. It is installed in *Program Files*, optionally with a desktop icon. Start it from the **Start** menu → **Starlyzer**.
2. **Licence** (the internet is needed on the first start): open **Help** > **License**. Without a licence, analyses and graphs are disabled (opening and exporting data always work). There are three ways:
   - **Activation key:** enter the key you received in the *Activation key* field of the *Activate online* group → *Activate*. The window must show a green *Valid* and the licence holder's name. **One licence covers one computer.**
   - **15-day demo without a key:** group *Try Starlyzer → Start 15-day demo*. You enter nothing; the demo runs for 15 days from the first start on this computer.
   - **30-day demo with a key by e-mail:** in the *Try Starlyzer* group enter your e-mail address, tick the consent box and press *E-mail me a 30-day key*. You receive the key by e-mail (check the spam folder as well) and activate it like any other key. It is valid for 30 days from activation on one computer; one address gets one demo. Both kinds of demo contain all the features of the **Professional** edition. We keep the address only to send the key and to contact you about the program, and erase it at the latest 12 months after the key was sent; you can ask for it to be erased earlier at info@starlyzer.com. The privacy notice is published on the website starlyzer.com.
3. **Refreshing the licence:** the licence is refreshed automatically when the computer is connected to the internet (the program refreshes it when 10 days or fewer are left of the last check; manually with the *Refresh now* button in the licence window). Without a connection the program keeps working for as long as the last check allows (normally 30 days); if it cannot reach the licence server within that time, analyses are unavailable until the connection is restored. When you replace a computer, release the licence with the *Deactivate this computer* button or ask us to release it.
4. Files **.slw** (worksheet) and **.slp** (project with graphs) open with a double click.
5. The installer is not digitally signed yet, so Windows may show *Windows protected your PC*: choose *More info → Run anyway*.
6. Some commands belong to an **edition** of the licence (section 5). A command that your licence does not include stays visible in the menu, marked with the name of the edition, and when clicked explains what the higher edition adds; it is not hidden.

2. The program window



1. **Menu bar:** *File, Edit, Data, View, Graph, Stat, Quality Tools, Help*.
2. **Worksheet:** columns are labelled C1, C2, ...; under the label is the **variable name**. The tabs under the table are the worksheets; **+** adds a new one. A column can have a comment (description, unit, tolerances) shown when you hover over it.
3. **Navigator and Session:** bottom left is the list of results and graphs; every graph or report has its own tab. Change the split between the table and the results by dragging the border or in the **View** menu.
4. **Status bar:** bottom right shows the state of the licence or demo with the end date.

3. Basic tasks

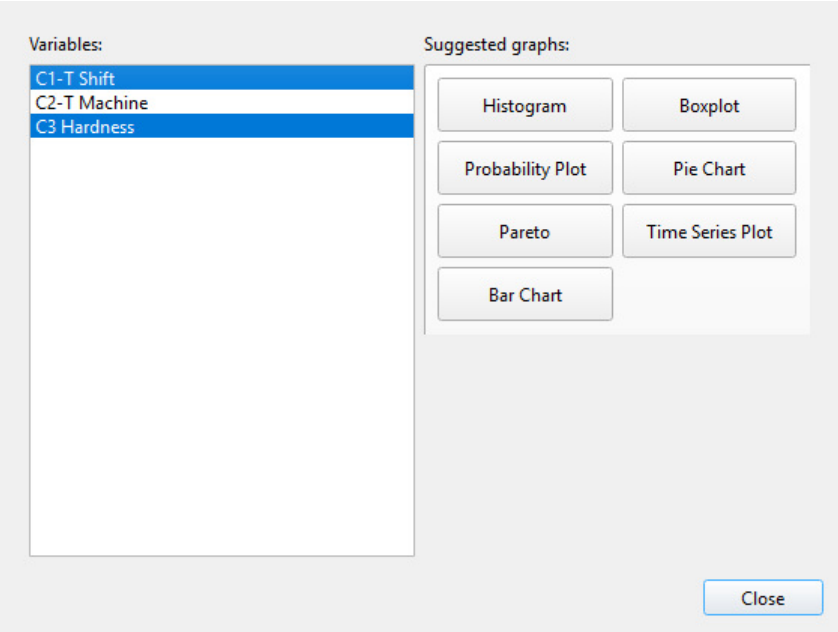
- **Entering data:** type into cells or paste from Excel (**Ctrl+V**). The program shows a decimal comma.
- **Opening and saving:** *.slw* holds worksheets, *.slp* also the graphs of the Session window. Import and export for other programs: *CSV* and *Excel* (**File** > **Open Worksheet (CSV, Excel)...**, **Ctrl+O**). **Ctrl+S** saves under the last name.
- **Undo: Ctrl+Z** (Undo) and **Ctrl+Shift+Z** (Redo).
- **Repeat the last command: Ctrl+E** reopens the last dialog with your previous choices; handy for the same analysis on several worksheets or after correcting data.
- **Updating results:** when the data change, an old graph shows *Results do not use current data* with a button to refresh it.
- **Copying to Word, Excel and PowerPoint:** the *Copy Graph* button above a graph copies a high-resolution picture (**Ctrl+V** into the document). Text results are copied with a right click → *Copy* or *Copy as Picture*.
- **Long reports by section:** a report (e.g. Capability Analysis, Gage R&R, control charts, regression, DOE) is one tall picture that does not fit one slide. So **where each section starts** (e.g. *Summary Report*, *Diagnostic Report*, *Report Card*) there is a small **copy icon** at the right edge: one click copies just that section, with the report's title on top, ready for a single slide. *Copy Graph* in the toolbar copies the **whole** report; the arrow beside it and a right click on the report offer the same sections.
- **The Brush tool:** on graphs with individual points (scatterplot, control charts) select points with the mouse; their values are listed beside the graph and the rows are marked in the worksheet.

4. Overview of the main features

The overview follows the program's menus. For every command a dialog guides you through the choice of data and settings. Reports share one structure: *Summary Report* (the answer to the question and the key numbers), *Diagnostic Report* (checking the assumptions) and *Report Card* (what is fine and what is not).

4.1 Graph Builder – the graph is chosen by your data

Graph > **Graph Builder...** helps you choose a graph. Select one or more variables on the left and the gallery on the right lists the graphs that really make sense for that selection: one numeric variable (Histogram, Boxplot, Probability Plot, Time Series Plot), two numeric (also Scatterplot, Matrix Plot), categorical (Bar Chart, Pie Chart, Pareto), one numeric and one or two categorical (Boxplot by groups, MultiVari Chart). A click on a graph opens the usual dialog, **already filled in with your selection**; an added categorical variable is set as *Group by* automatically. Graph Builder stays open so that you can try several suggestions in a row.



Graph Builder: a numeric variable (Hardness) and a categorical one (Shift) are selected; the program suggests the graphs that fit.

The other graphs in the **Graph** menu: Histogram (with a normal curve), Boxplot, Probability Plot, Scatterplot (with a regression line), Matrix Plot, Pareto Chart, Pie Chart, Time Series Plot, Bar Chart, **Ishikawa Diagram** (a cause-and-effect diagram edited directly on the graph) and MultiVari Chart. Titles and axis labels use the variable names; a graph can be renamed and formatted (the *Customize* button in the toolbar).

4.2 Basic statistics, hypothesis tests and transformations

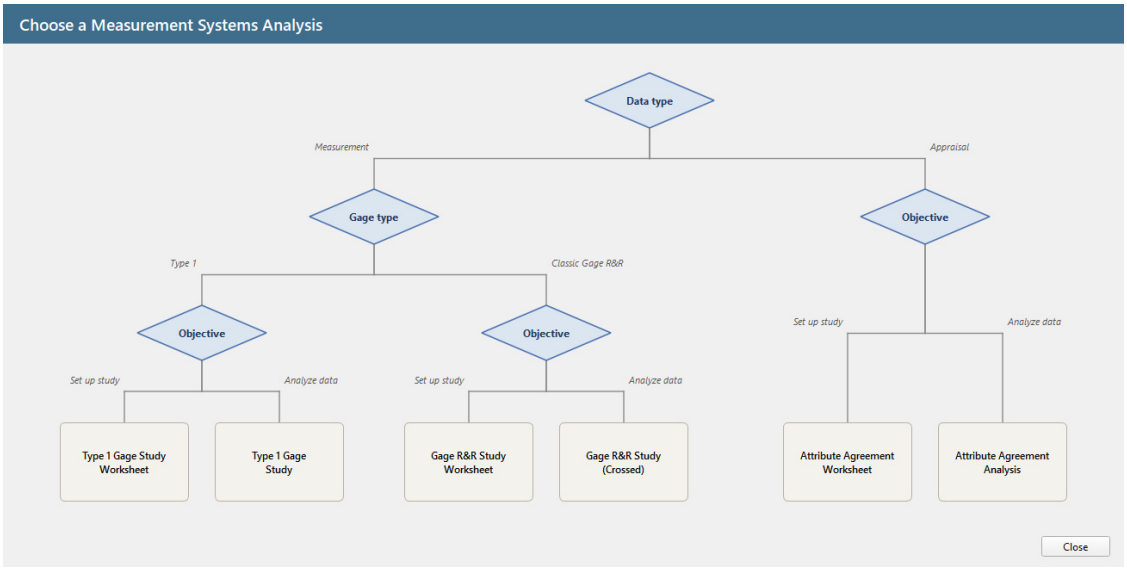
- **Stat > Basic Statistics:** descriptive statistics, *Graphical Summary*, correlation, t-tests (1-sample, 2-sample, paired), tests of standard deviations, tests of proportions and Poisson rates (1 and 2), normality test, probability distribution plot.
- **Hypothesis Tests Assistant** and **Nonparametric Tests Assistant** *(Professional)*: decision diagrams that lead from the kind of data (number of groups, type of variable, paired data) to the right test; the reports include the checks of assumptions and a *Report Card*.
- **ANOVA:** one-way, balanced (Balanced ANOVA, *Professional*), main effects and interaction plots, test of standard deviations for several samples, several proportions and several rates.
- **Power and Sample Size:** power and required sample size for t-tests, ANOVA, variances, proportions and Poisson rates; for factorial designs *(Professional)*.
- **Tables:** chi-square goodness-of-fit and association tests.
- **Distribution Identification, Johnson and Box-Cox transformation:** find the distribution that fits the data best, or a transformation that normalises them (the entry to the capability analysis of nonnormal data).

4.3 Regression

Fitted Line Plot: regression with one predictor (also a quadratic and cubic model) with the graph and the statistics. The **Professional** edition adds the **Regression Assistant** (a decision diagram) and the **Stat > Regression** commands: regression with model selection, *Predict*, *Factorial Plots*, *Response Optimizer* and **binary, ordinal and nominal logistic regression** (with prediction). The reports have sections from a summary to a *Report Card*.

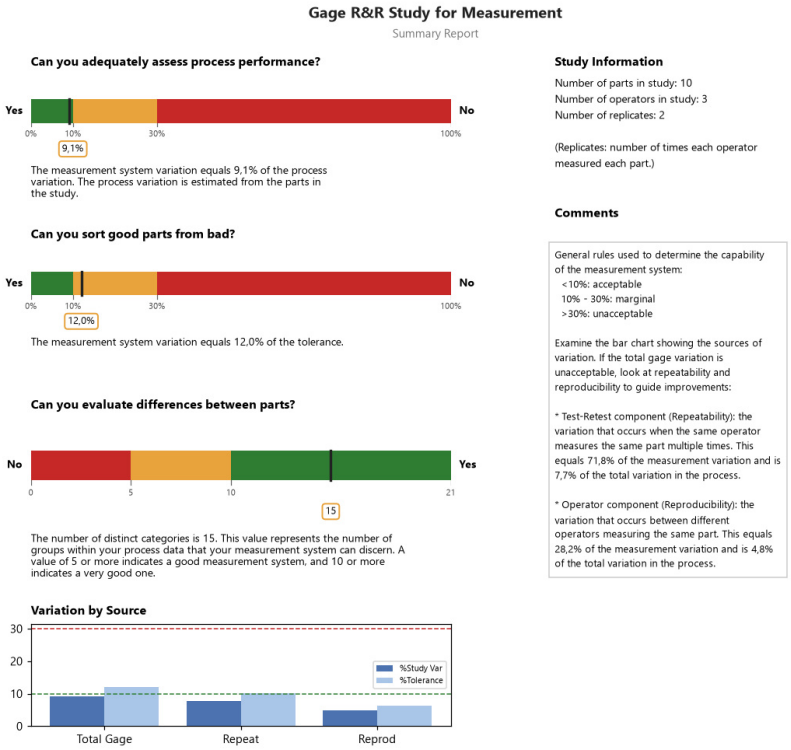
4.4 Measurement Systems Analysis (MSA)

Quality Tools > **Measurement Systems Analysis...** opens a diagram that leads you to the right command by the kind of data (measurement or appraisal) and your objective. For every study there is, besides the analysis, a command that **prepares a worksheet for collecting the data** (random run order):



The MSA choice diagram: a click on a box opens the matching command.

- **Type 1 Gage Study:** repeatability and bias of a gage on one reference part (Cg, Cgk).
- **Gage R&R Study (Crossed):** repeatability and reproducibility (%StudyVar, %Tolerance, number of distinct categories), with graphs of the variation by source.
- **Attribute Agreement Analysis:** agreement of appraisers on attribute ratings (agreement with the standard, misclassifications).



Gage R&R: the Summary Report with three questions (can the measurement system assess process performance, sort good parts from bad, and tell parts apart).

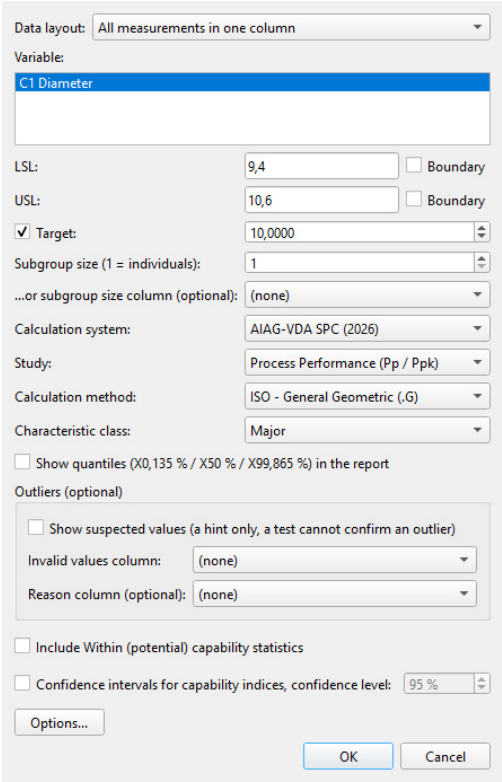
4.5 Capability Analysis and AIAG-VDA SPC (2026)

Quality Tools > **Capability Analysis...** opens a diagram: the data are *Continuous* (**Normal** or **Nonnormal** – a choice of distribution or transformation, also an automatic "best fit") or *Attribute* (**Binomial**: defective items, **Poisson**: defects per unit). In addition:

- **Before/After Capability Comparison** compares the capability before and after an improvement;
- **Capability Simulator** shows with sliders for the mean and the standard deviation how Cp and Cpk change.

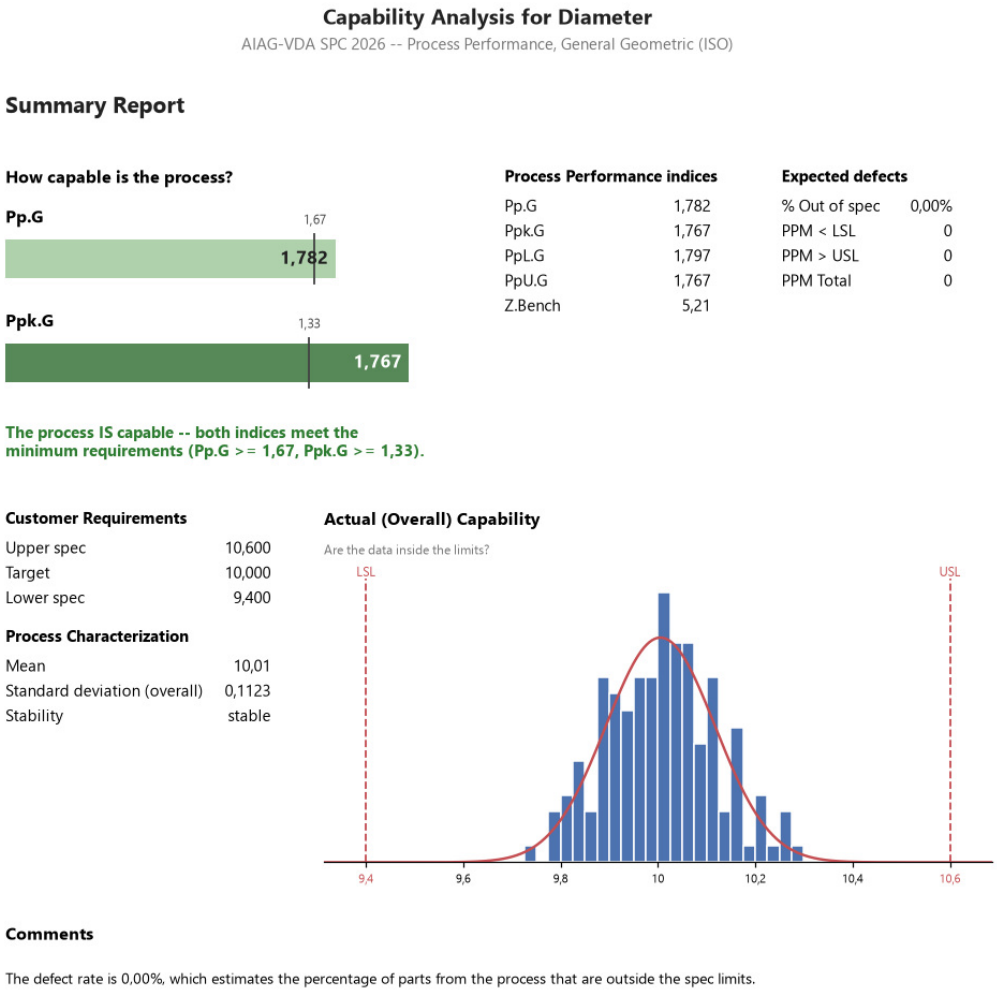
Two calculation systems. In the dialog of the normal and nonnormal analysis you choose the *Calculation system*: **Classic (6-Sigma)** (the established calculation) or **AIAG-VDA SPC (2026)**, following the new AIAG and VDA manual (Yellow Volume, 1st edition, February 2026). With AIAG-VDA you choose:

- **Study:** *Process Performance* (Pp / Ppk), *Process Capability* (Cp / Cpk) or *Machine Performance* (Pm / Pmk);
- **Calculation method:** ISO – General Geometric (*.G*, quantiles) or z-Score (*.Z*); the indices carry the method suffix (e.g. Cpk.G);
- **Characteristic class:** Critical, Major, Minor or Others; the program applies the manual's **recommended minimum values of the indices** (tables 9-3 and 8-1) and raises them automatically when there are fewer measurements than the manual requires (125 for a process, 50 for a machine);
- **Outliers:** values that do not belong to the population studied are marked **invalid, with a reason**; they stay in the worksheet but the calculation ignores them, and the report states what was left out;
- optionally the **quantiles** (X0.135 % / X50 % / X99.865 %) in the report.



The dialog: AIAG-VDA SPC (2026), study, method and characteristic class.

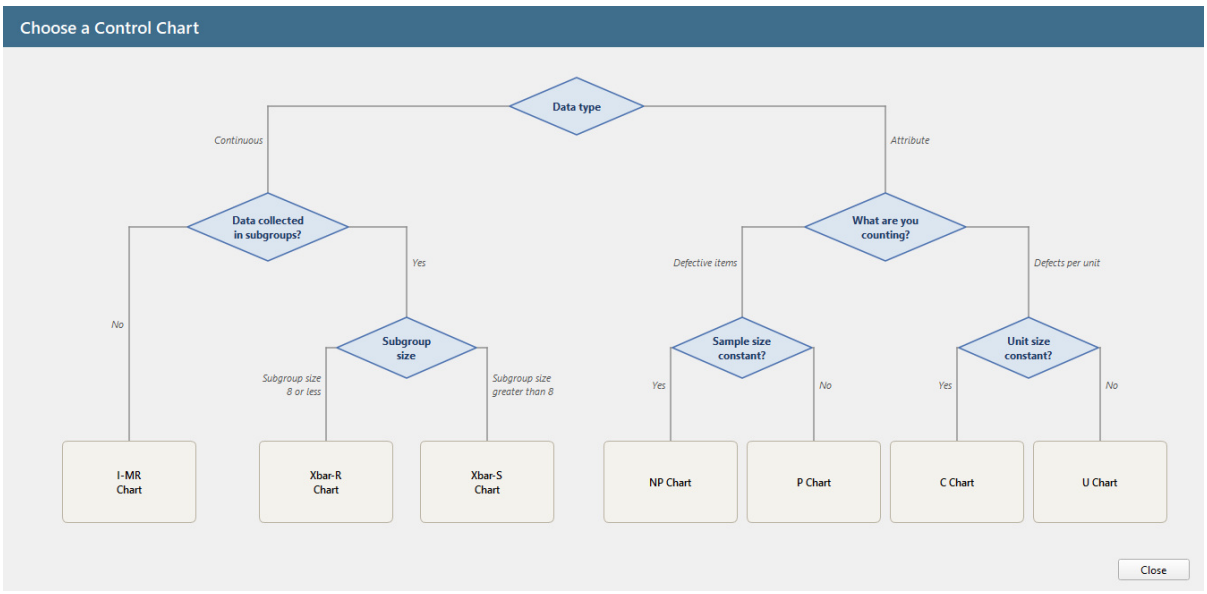
The report checks the **stability** of the process by the manual's criteria, the **amount of data** and whether the chosen index name (Pm, Pp, Cp) fits the data, and its conclusion says whether the process meets the required class.



Summary Report by AIAG-VDA SPC: indices with the method names, the minimum values of the class, stability and the conclusion.

4.6 Control charts

Quality Tools > **Control Charts...** is a decision diagram as well: I-MR, Xbar-R and Xbar-S for **continuous data**, NP, P, C and U charts for **attribute data** (chosen by whether the sample size or the unit size is constant).



The control chart choice diagram.

- **Tests for special causes** (Western Electric / Nelson): points that trigger a test are red, with the test

number; below the graph is the *Out-of-Control Points* table. The *Full report* adds an overview of stability.
- **Before/After Control Chart:** limits and mean before and after an improvement on the same chart (with a test of the change for attribute charts).
- **Acceptance Control Charts** *(Professional)* (by AIAG-VDA SPC): the limits come from the tolerances and the accepted share of nonconforming parts, not from the process variation; suited to processes with accepted shifts of the mean (e.g. tool wear). Available for Xbar-R, Xbar-S, I-MR, Xbar and individual values.
- **Advanced Control Charts** *(Professional)*: I-MR-R/S (between/within), Moving Average, EWMA and CUSUM.
- In the charts you can enter **invalid values (outliers)** as in the capability analysis; the labels beside a chart (UCL, LCL ...) can be moved with the mouse.

4.7 Design of experiments (DOE)

Quality Tools > **Create&Analyze DOE...** *(Professional)* is a decision diagram: by the shape of the response (linear or curved) you create a design (**factorial**, **2-level** or general, or **Response Surface**) and, after entering the results, analyse it. The **DOE Tools** submenu holds *Predict*, *Cube Plot*, *Contour Plot*, *Surface Plot*, *Overlaid Contour Plot* and *Response Optimizer* (finding settings that meet several goals at once).

4.8 Working with data

The **Data** menu: *Calculator* (computing new columns), *Random Data* (random data from distributions), *Sort*, *Rank*, *Stack / Unstack Columns*, *Subset / Split / Merge Worksheets*, inserting and deleting rows and columns.

5. Editions and price

Starlyzer comes in two editions, both with an **annual subscription**. **One licence = one computer** (for more computers you need more licences). Prices are per licence, excl. VAT:

	Standard	**Professional**
Regular price (per year)	EUR 240 + VAT	EUR 360 + VAT
Promotional price (orders until 31 December 2026)	**EUR 190 + VAT**	**EUR 290 + VAT**

- Early subscribers keep the promotional price **for renewals of the same edition**, as long as the subscription remains active.
- **Moving to the higher edition** (Standard → Professional) is possible at any time during the licence period: the customer pays **the difference in price in proportion to the remaining period** of the subscription.
- Payment is by bank transfer on the basis of an invoice, for individuals and companies. Place an order with the form on the website or send it to info@starlyzer.com: you receive a pro forma invoice and, after payment, the invoice and the activation key.
- **Refund for natural persons:** a natural person who buys a licence outside their business may get a refund **within 14 days of the purchase**, without giving a reason, even if you have already received the key; with the refund the licence ceases to be valid.
- Before ordering you can try the program free of charge with the 15- or 30-day demo, which contain all the features of the Professional edition (section 1).

Standard contains: the whole Data menu, all graphs (including Graph Builder and Ishikawa), basic statistics with correlation, hypothesis tests with the Hypothesis Tests Assistant, one-way ANOVA, power and sample size (except for factorial designs), tables, Distribution Identification, Johnson and Box-Cox, **Fitted Line Plot** (linear regression), the whole **MSA**, **Capability Analysis with AIAG-VDA SPC (2026)** including the Before/After comparison and the Capability Simulator, and the control charts (I-MR, Xbar-R, Xbar-S, NP, P, C, U) with Before/After.

Professional contains everything in Standard and in addition: **regression** (Regression, Predict, Factorial Plots, Response Optimizer, binary, ordinal and nominal logistic regression, Regression Assistant), **Balanced ANOVA**, the **Nonparametric Tests Assistant**, power for **factorial designs**, **Acceptance Control Charts**, **Advanced Control Charts** and **design of experiments (DOE)**.

6. Limitations and important notes

- The texts in the program (menus, dialogs, reports) are in English; numbers are written with a decimal

comma.

- Without a valid licence or demo (or after a licence has expired), analyses and graphs are not available, while opening and exporting still work. If the computer's date is set back, the program disables analyses until the date is correct again.
- Your worksheets, projects and results stay on your computer; the program does not send them. It connects to the licence server only when a licence is activated, refreshed or released and for the demo versions, and sends the key (for the 30-day demo the e-mail address), the code of the computer (a hash that reveals nothing about the computer) and the date the program was built. Details are in the privacy notice on the website starlyzer.com.
- The AIAG-VDA SPC manual is the property of AIAG and VDA: the program implements its formulas and procedures and does not reproduce the manual's text or tables. For use in a customer's procedures, refer to the original manual.

7. Problems and feedback

For a problem or an unexpected result, send us (to info@starlyzer.com):

1. a short **description**: what you did (the command, the choices in the dialog) and what you expected;
2. a **screenshot** or the graph (*Copy as Picture*) and, if it concerns data, the **file** (*Save Worksheet (.slw)*; without confidential data);
3. the program version from **Help** > **About**;
4. if the window *An unexpected error occurred* appeared: the error log **%APPDATA%\SWApp\logs\swapp.log** (the path is also shown in *About*).

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