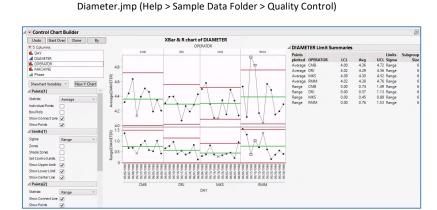


Variables Control Charts – XBar & R/S Charts

This guide provides instructions for creating XBar & R or XBar & S control charts using the Control Chart Builder and the Control Chart platform. XBar & R or XBar & S control charts are used to monitor a continuous variable where the data is sampled with subgroups.

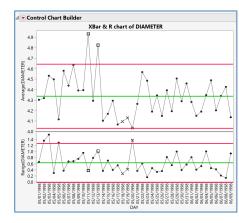
XBar & R Charts – Control Chart Builder

- 1. From an open JMP data table, select Analyze > Quality and Process > Control Chart Builder.
- 2. Drag a continuous variable from **Select Columns** (continuous variables have blue triangles), and drop it in the Y zone. Here we used 'Diameter'.
- 3. Drag and drop a subgroup variable in the **Subgroup** zone (at the bottom). Here we used 'Day'.
 - By default, JMP produces a control limit summaries table and two charts: XBar (subgroup average) and Range (subgroup range).
 - Right-click on the bottom graph and select Points > Statistic to change from a Range chart to an S Chart, and use **Limits > Sigma** to change the method for estimating the standard deviation.
- 4. If available, drag and drop a variable in the Phase zone (top), and click the **Done** button when finished. Here we used 'Operator'.



XBar & R Charts – Control Chart Platform

- 1. From an open JMP data table, select Analyze > Quality and Process > **Control Chart > XBar Control Chart.**
- 2. Select one or more continuous variables from Select Columns, and click Process.
- 3. Enter the variable that defines the subgroup into the **Subgroup** role. Click OK.



Notes:

Additional options, such as tests for special causes, are available from the red triangles in the Control Chart platform. Right-click on the graph in the Control Chart Builder for many of these same options.

Visit Quality and Process Methods > Control Chart Builder and Legacy Control Charts in JMP Help to learn more.