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.
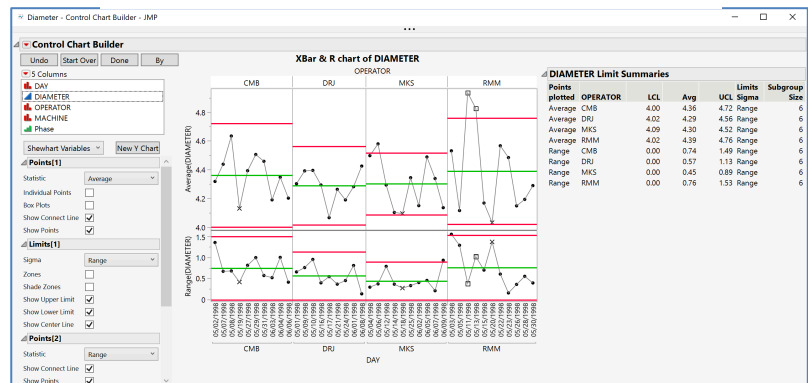
XBar & R Charts – Control Chart Builder

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'*.

Diameter.jmp (Help > Sample Data Folder > Quality Control)

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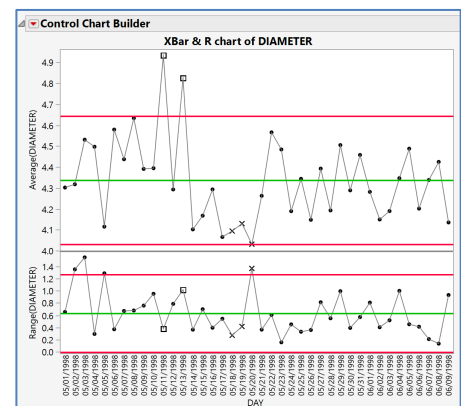
Visit **Quality and Process Methods > Control Chart Builder** and **Legacy Control Charts** in **JMP Help** to learn more.