Capability Analysis

This page provides information on performing a capability analysis using the Distribution and Control Chart platforms. Capability analysis for multiple process measures can also be performed in the **Process Capability** platform under **Analyze > Quality and Process**.
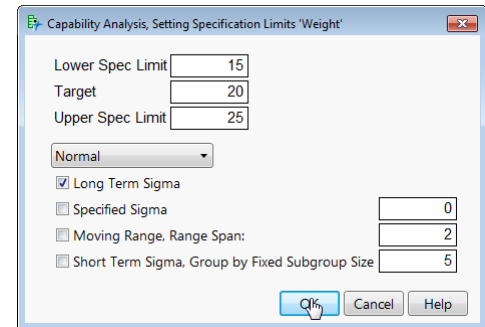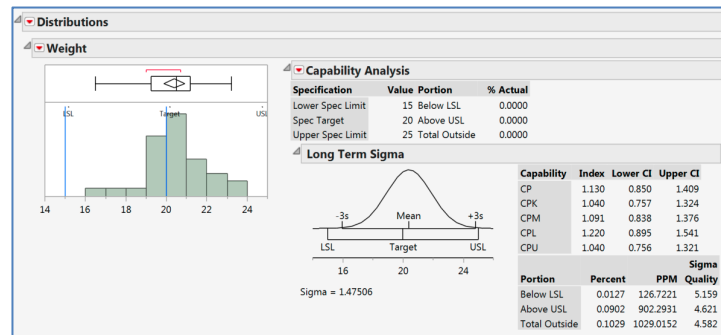
Capability Analysis – Distribution Platform

Coating.jmp (Help > Sample Data Library > Quality Control)

1. From an open JMP® data table, select **Analyze > Distribution**.

2. Select one or more continuous variables from **Select Columns** (continuous variables have blue triangles), click **Y, Columns**, and click **OK** to generate a histogram and summary statistics.

3. From the **red triangle** for the variable, select **Capability Analysis**.

4. Enter the **spec limits** and **target**.

   Specify the distribution (if the underlying distribution is not normal), and select the estimate(s) to use for sigma. Note: If **moving range** and/or **fixed subgroup size** are selected, data must be sorted in time order.

5. Click **OK** to perform a capability analysis for each estimate of sigma selected.


Capability Analysis – From a Control Chart

1. Generate an IR or XBar control chart using **Analyze > Quality and Process > Control Chart.**

2. Select **Capability** from the top red triangle.

3. Enter the **spec limits** and **target** and click **OK**.

   By default, the following will be added to the output:

   - A histogram, with spec limits and a normal quantile plot.
   - The observed (actual) capability.
   - Capability analyses based on short and long term estimates of the standard deviation.
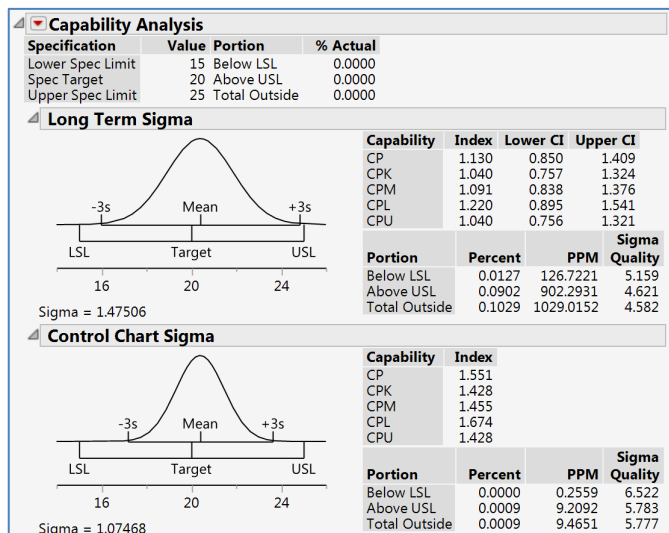
Notes: Long term (P_{pK}) capability labeling can be turned on using the JMP Preferences (under **Preferences > Platforms > Capability**). For information on creating control charts, see the one-page guides for control charts at jmp.com/learn. For additional details, see the book *Quality and Process Methods* (under **Help > Books**) or search for "capability" in the JMP Help.