

# Scatter Diagram

**What** The Scatter Diagram, also called the Correlation Chart, is used to study and evaluate the relationship between two variables. It helps to test for possible cause and effect relationships.

**When** If you suspect there is a relationship between two or more variables the Scatter Diagram will show if there is and the relative strength.

**How** 1. **Collect data to be compared:** Collect, on a data sheet, up to 100 paired samples of data that you believe are related.

2. **Draw the diagram:** Draw the horizontal and vertical axes representing two types of data. Place the suspected cause variable on the horizontal axis.

3. **Plot the Data:** Each data pair has one position on the plot. If values are repeated circle that data point as often as it is repeated.

4. **Analyze the plot:** In analyzing the plot watch for:

- Positive Correlation: plot increases along both axes creating a distinct pattern.
- Possible Positive Correlation: plot generally increases on both axes but are somewhat dispersed.
- No Correlation: plots all over the chart with no clear pattern.
- Possible Negative Correlation: plot generally decreases on both axes but are somewhat dispersed.
- Negative Correlation: plot decreases on both axes creating a distinct pattern.

5. **Add Correlation Line:** If a positive or negative correlation exists draw a straight line which follows the center of the pattern.

