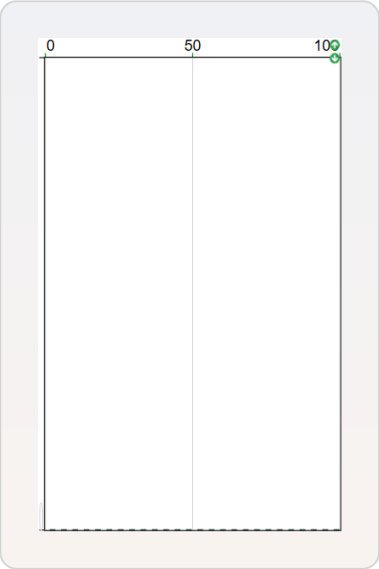
DrillingChart Control Reference

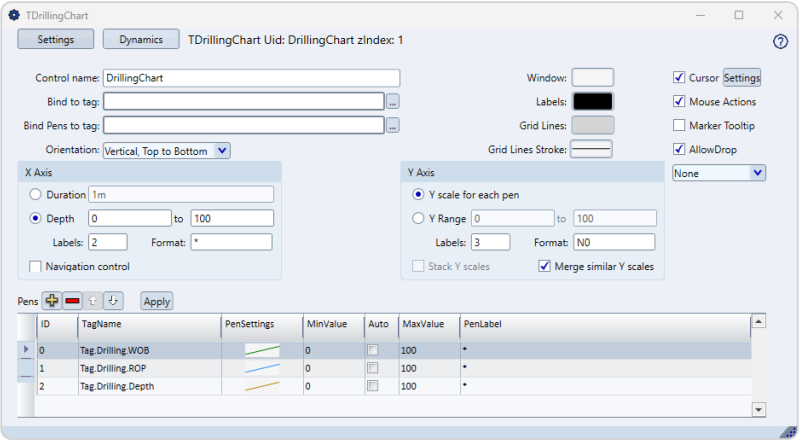
Visualize drilling depth and progress data.

Reference **Controls** **Charts** DrillingChart

DrillingChart is similar to TrendChart, but it is adapted for drilling operations. It also allows axes customization, label and grid line settings, pen configurations, and SPC settings. Users configure it by setting control names, binding tags, and defining pen properties. Usage involves selecting tag objects, setting up axes, and configuring visual elements for data display and interaction in monitoring production metrics and quality control.

Requirements
Configuration
Runtime Execution





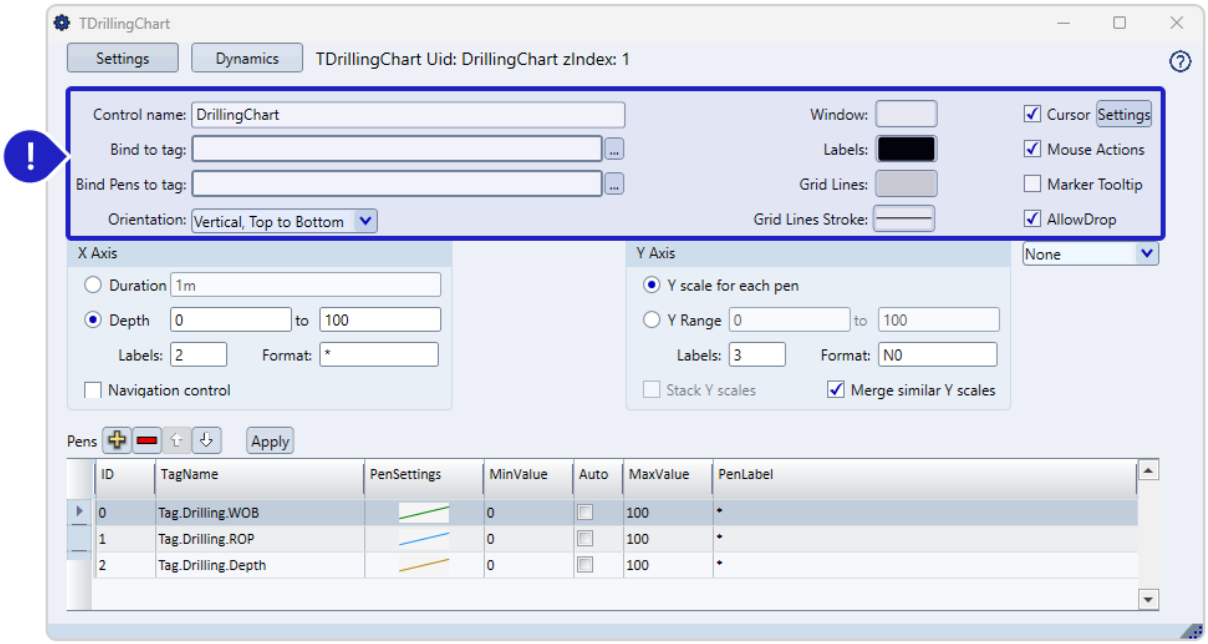
Requirements

This component is Portable. It runs both on Windows (WPF) and on Web Pages hosted on any platform.

Alarm markers: with Show Alarms on, the Drilling Chart draws alarm markers only in the Rich Client (WPF). On Web Pages (HTML5) it shows the pen data without alarm markers. To see alarm markers on a Web Page, use a Trend Chart.

Configuration

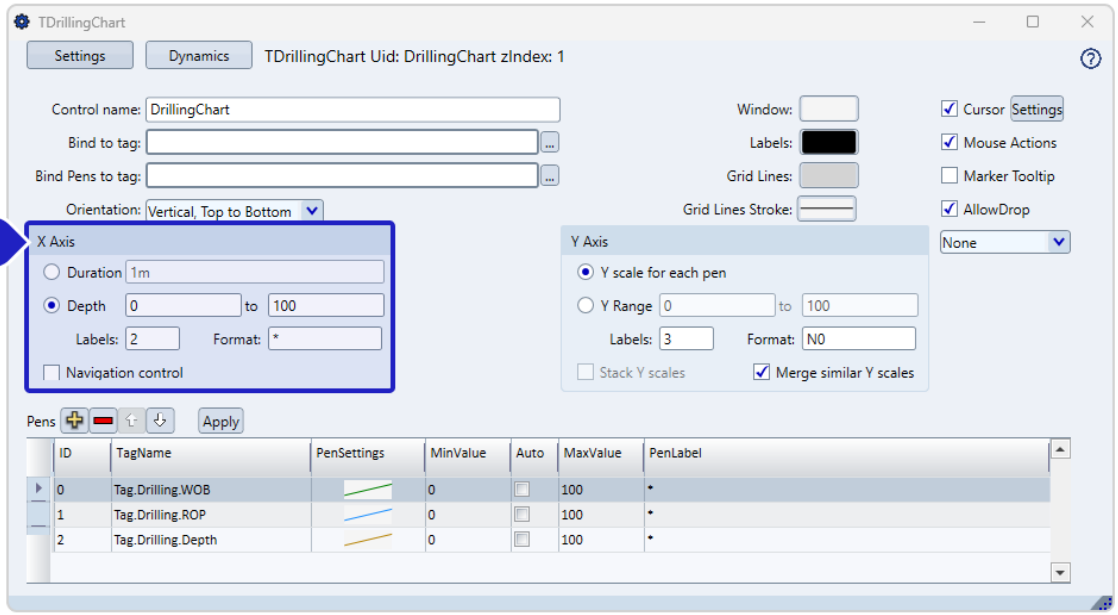
1. Go to **Displays / Draw**.
2. On the Components Panel, select **Charts**, then **DrillingChart**.
3. Click or drag-and-drop it on the Drawing area to use it.
4. Double-click the object to open the configuration window.



DrillingChart Settings	
Control Name	Defines the name for the control, allowing it to be accessed via through the CodeBehind.
Bind to Tag	Specifies the object property where the Drilling configuration will be saved.
Bind Pens to Tag	Specifies the object property where the Pen values will be saved.
Orientation	Sets the orientation of the DrillingChart (Horizontal or Vertical). Options available: 1. **Horizontal**: Sets the DrillingChart to display data horizontally. 2. **Vertical (Top to Bottom)**: Sets the DrillingChart to display data vertically, starting from the top and moving to the bottom. 3. **Vertical (Bottom to Top)**: Sets the DrillingChart to display data vertically, starting from the bottom and moving to the top.
Window	Sets the background color of the Drilling control.
Labels	Defines the color of the Drilling control labels.
Grid Lines	Sets the color of the grid lines in the Drilling control.
Grid Lines Stroke	Defines the settings for the grid line stroke.
Cursor	Enables or disables cursor settings in the Drilling control.
Mouse Actions	Enables or disables mouse actions on the Drilling control.
Marker Tooltip	Enables or disables tooltips for markers on the Drilling control.
AllowDrop	Enables or disables the ability to drop elements into the control area.

X Axis

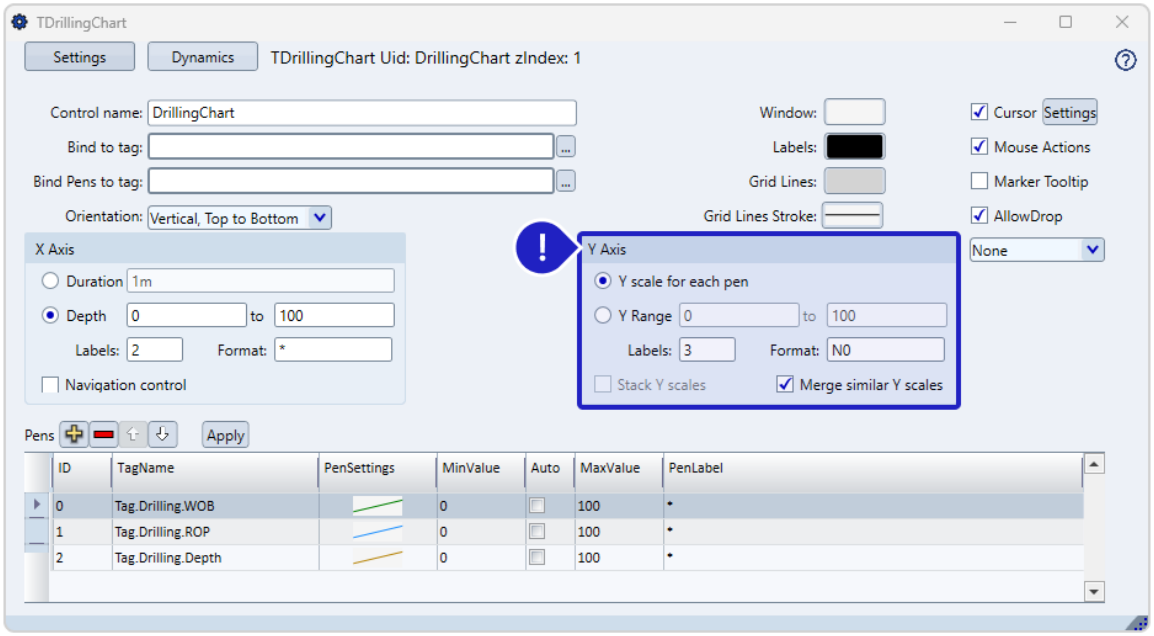
The X-axis represents drilling parameters over time or depth.



Drilling X Axis configuration	
Duration	Sets the time span for the X-axis defining a specific time window for the X-Axis and displays the Drilling over that period. In this mode, the X-Axis are representing time.
Depth	Configures a depth-based range for the X-axis values.
Labels	Specifies the number of labels on the X-axis.
Format	Controls how the time or value format appears defining the format of the X-axis labels.
Navigation Controls	Enables scrolling and zooming along the X-Axis, providing user-friendly data exploration.

Y Axis

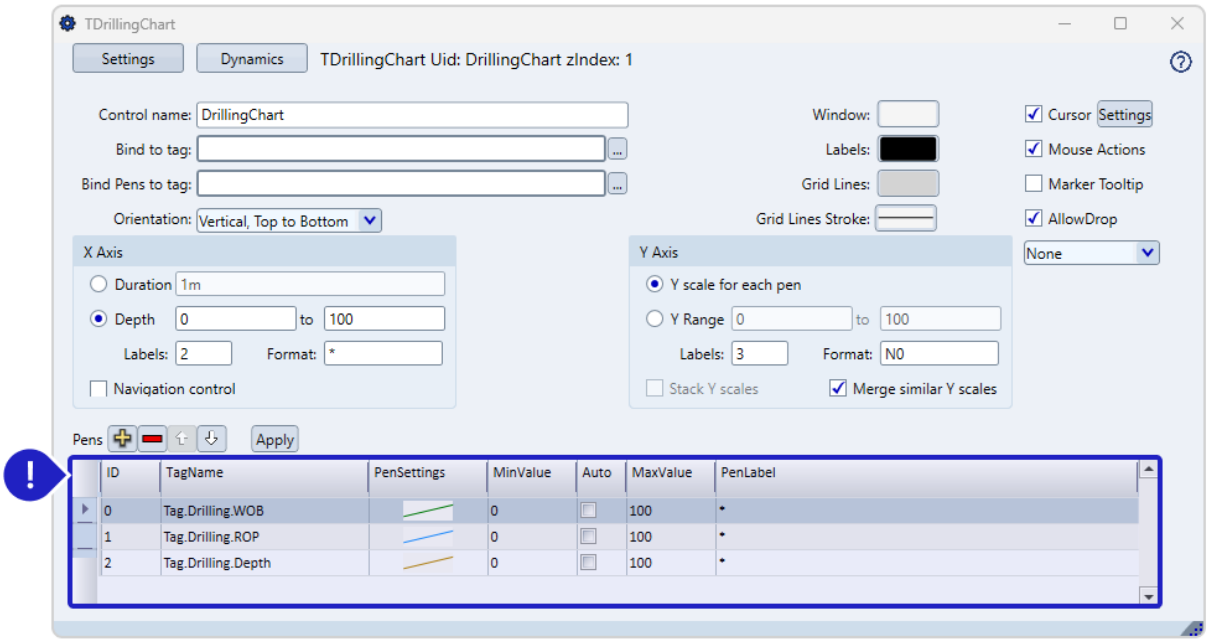
The Y-axis typically assumes values related to physical or operational parameters measured during the drilling process.

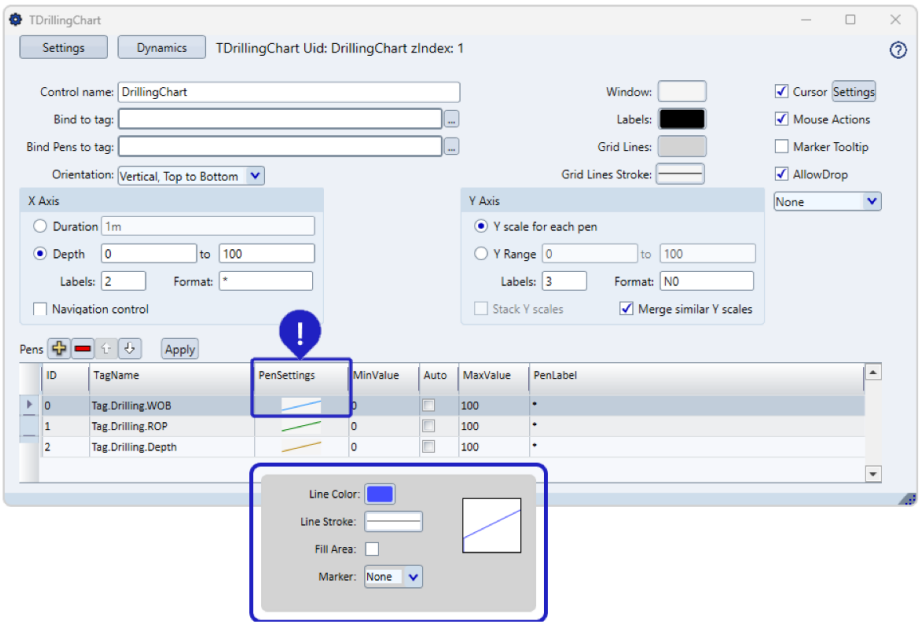


Drilling Y Axis settings	
Y scale for each pen	Uses the min and max values of each pen for the Y-axis scale.
Y Range	Defines a fixed range for the Y-axis.
Labels	Specifies the number of labels on the Y-axis.
Format	Defines the format of the Y-axis labels.
Stack Y scales	Enables stacking of similar Y scales for easier comparison between pens.
Merge similar Y scales	Merges similar Y scales.

Pens

Pens represent individual data series, variables, or metrics that are displayed on the chart. Each pen typically has its own color, style, and scale.



Pens Properties	
ID	Identifier for each pen.
TagName	Sets the tag that provides the value for each pen.
PenSettings	Configures the pen settings, including line color, stroke, and marker type. 
MinValue	Defines the minimum value for the pen according to the Y-axis range.
Auto	Automatically sets the pen value based on the defined range.
MaxValue	Defines the maximum value for the pen according to the Y-axis range.
PenLabel	Sets the name of the pen. By default, the PenLabel is "*", which sets the label text to the value of the TagName field.
LimitMinMaxValue	Removes points less than the tag's Min value and greater than the tag's Max value.

Square	Fills the pen points with a square wave.
FilterLevel	Specifies the filter level to group points on the XY axis, calculating the average.
SPCEnabled	Enables the DrillingChart to display a set of extra pens describing the pen's statistical process control (SPC).
SPCSettings	Defines what SPC pens to display. The following options are available: **Minimum:** The minimum value in the tag's history. **Maximum:** The maximum value in the tag's history. **Mean:** The mean or average of values in the tag's history. **Median:** The middle value that separates the lower and upper halves of values in the tag's history. **Sum:** The sum of values in the tag's history. **DeviationPlus (+ 2 Sigma):** The mean plus twice the standard deviation of the tag's history. **DeviationLess (- 2 Sigma):** The mean minus twice the standard deviation of the tag's history.

Runtime Execution

When the runtime environment is initiated, the DrillingChart displays the configured data. Users can interact with the chart, adjusting axes and visual elements to refine their data analysis. The DrillingChart dynamically updates to reflect real-time data changes, providing a comprehensive view of production metrics and quality control parameters. This tool facilitates detailed process monitoring and supports informed decision-making based on the visualized data.



In this section...