

## Areas

A MigraDoc chart has a total of seven areas, which consist of one plot area and six text areas which can be used to write text in the chart.

### Chart

The chart is defined with the keyword `\chart`. The layout and text formatting can be controlled from here. The text formatting defined here will be derived to every `TextArea` of the chart.

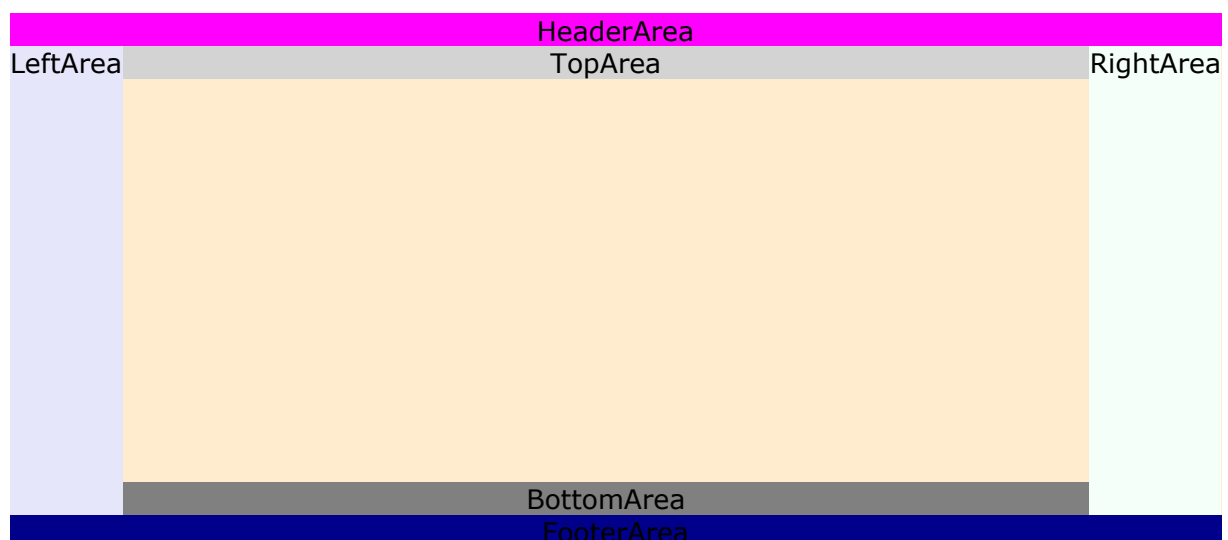
### Plot Area

The `PlotArea` is the area in which the actual chart will be drawn. It is located in the center of the Chart, surrounded by the `TextAreas` if they exist. Otherwise, it will fill the whole Chart.

### Text Area

The six `TextAreas` are defined with the keywords `\headerarea`, `\footerarea`, `\toparea`, `\bottomarea`, `\leftarea`, and `\rightarea`.

```
\chart(Pie2D)
[
  Height = 200
  Width = 454
  FillFormat.Color = BlanchedAlmond
  Format.Alignment = Center
]
{
  \rightarea [FillFormat.Color = MintCream]
  {RightArea}
  \leftarea [FillFormat.Color = Lavender]
  {LeftArea}
  \toparea [FillFormat.Color = LightGray]
  {TopArea}
  \bottomarea [FillFormat.Color = Gray]
  {BottomArea}
  \headerarea [FillFormat.Color = Magenta]
  {HeaderArea}
  \footerarea [FillFormat.Color = DarkBlue]
  {FooterArea}
}
```



## Axes

With the `\xaxis` and `\yaxis` keywords, you can define the formatting of the x-axis and y-axis, respectively.

```
\chart(Line)
[...]
{
  \xaxis
  [
    LineFormat.Width = 0.25
    Title.Caption = "X-Axis"
    Title.Alignment = Center
  ]
  \yaxis
  [
    LineFormat.Width = 0.25
    Title.Caption = "Y-Axis"
    Title.VerticalAlignment = Center
  ]
}
```

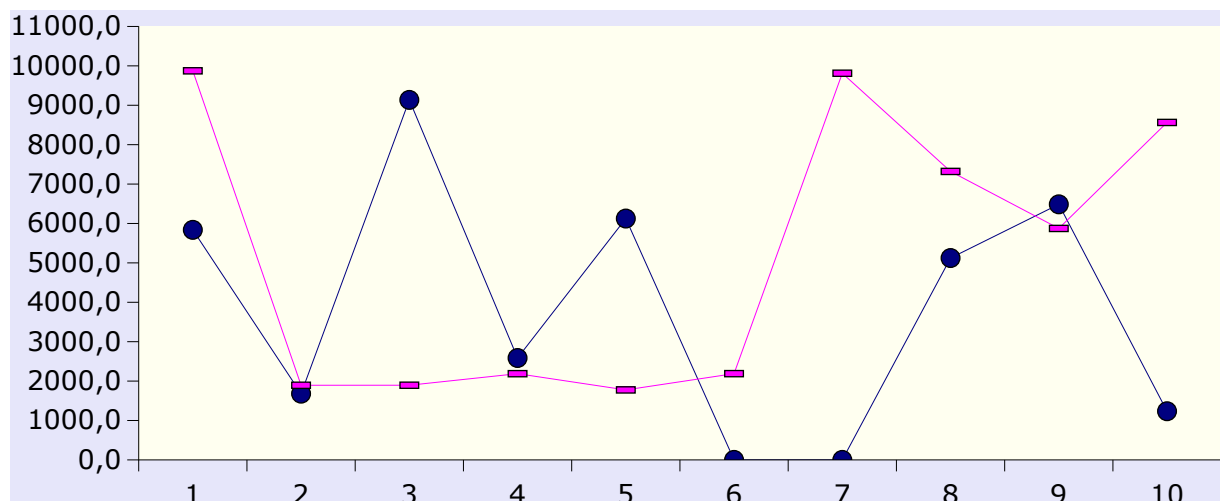


## Data

### Data Series

To draw a chart, you will need at least one series of data which is defined using the keyword `\series`. If any of the data in the data series doesn't exist, 'null' can be inserted, in result, the data will not be displayed.

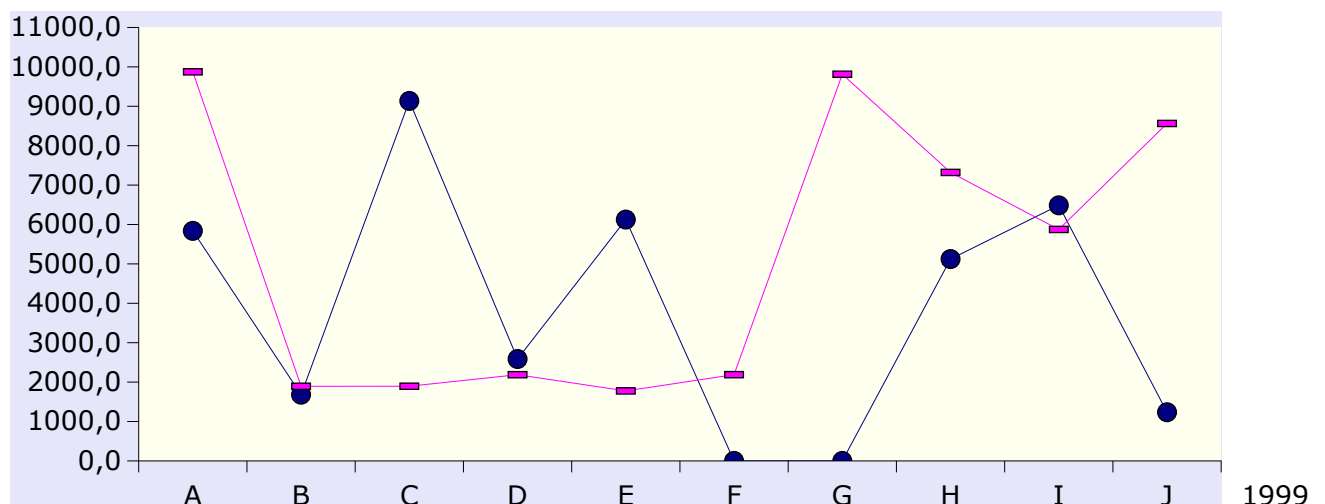
```
\chart(Line)
[...
{
  ...
  \series {5838, 1681, 9136, 2586, 6125, null, null, 5123, 6486, 1235}
  \series {9874, 1894, 1895, 2188, 1776, 2189, 9813, 7321, 5874, 8564}
}
```



### X-Values

While the y-axis can only be filled with values, you can write text on the x-axis. This can be done using the keyword `\xvalues`. MigraDoc allows more than one x-value to be written on the x-axis. An empty string or 'null' can be used if an empty x-value is needed.

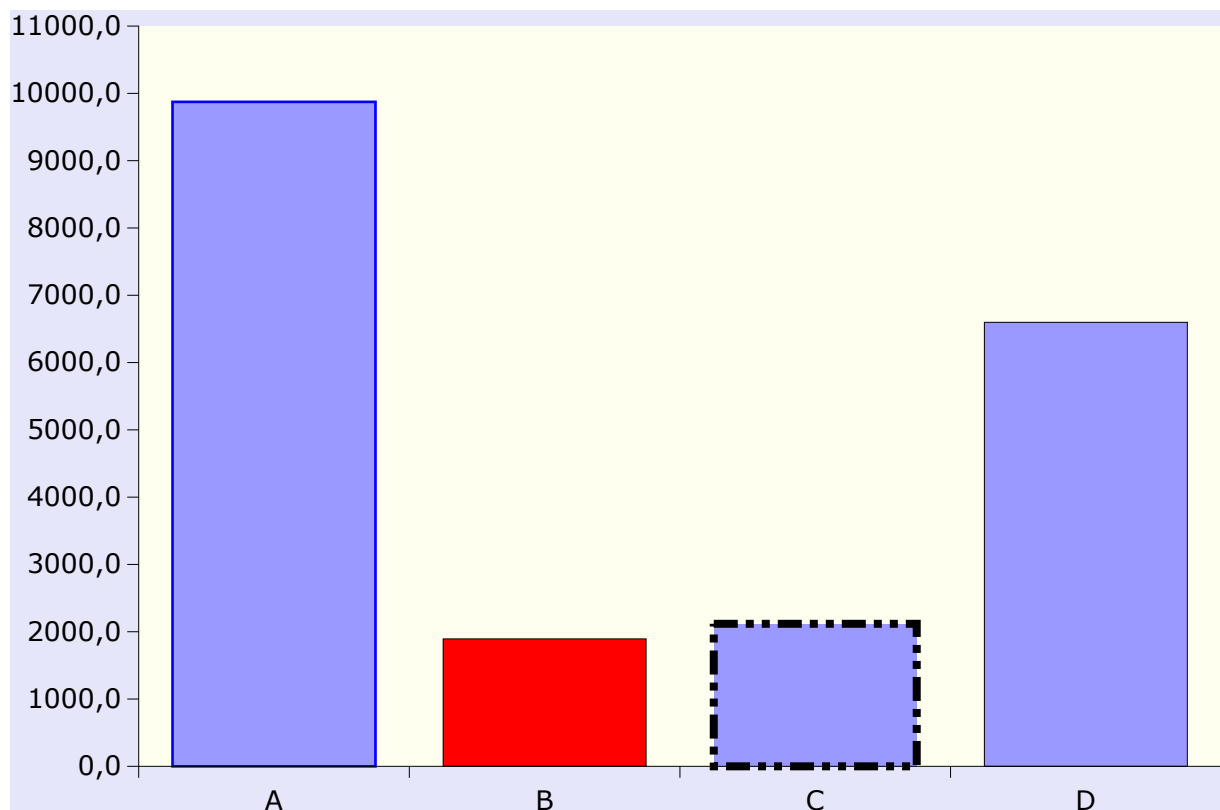
```
\chart(Line)
[...
{
  ...
  \xvalues {"A", "B", "C", "D", "E", "F", "G", "H", "I", "J"}
  \xvalues {"1999", "", "2000", "", "2001", null, "2002", null, "2003"}
}
```



## Point

You can customize each data in a Bar, Column or Pie chart individually using the keyword `\point`.

```
\chart(Bar2D)
[...
{
  ...
  \series
  {
    \point
    [
      LineFormat.Color = Blue
      LineFormat.Width = 1
    ]
    {9874},
    \point
    [
      FillFormat.Color = Red
    ]
    {1894},
    \point
    [
      LineFormat.Width = 3
      LineFormat.DashStyle = DashDotDot
    ]
    {2118},
    6598
  }
  ...
}
```



## Legend

A legend can be placed in any of the text areas with the `\legend` keyword. The entry used in the legend is the name of each of the data series. If no name is given for a data series, then an entry with no text will be made.

```
\chart(Line)
[...
{
  ...
  \rightarea {\legend}
  \series [Name = "Part 1"]
  {...}
  \series
  {...}
}
```

