## CSV tables

1D table with three quantities A, B and C dependent on axis Y:

|  |  |  |  |
| --- | --- | --- | --- |
| Comment |  |  |  |
| Y | A | B | C |
| y1 | a1 | b1 | c1 |
| y2 | a2 | b2 | c2 |
| y3 | a3 | b3 | c3 |

Table can contain empty values:

|  |  |  |  |
| --- | --- | --- | --- |
| Comment |  |  |  |
| Y | A | B | C |
| y1 | a1 |  | c1 |
| y2 |  | b2 | c2 |
| y3 | a3 | b3 |  |

The missing value a2 will be interpolated from a1 and a3 by the loader. However, missing value b1 and c3 will be loaded as NaN because they are at the boundary of the table and extrapolation is disabled.

The table can be also independent on the Y if the table has just one data row and empty Y axis, i.e. missing value y1:

|  |  |  |  |
| --- | --- | --- | --- |
| Comment |  |  |  |
| Y | A | B | C |
|  | a1 | b1 | c1 |

All TWM functions will ignore the axis Y and will take the a1, b1, c3 for any value of Y.

TWM also supports 2D tables dependent on two axes X and Y:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Comment |  |  |  |  |  |  |
|  | A | A | B | B | C | C |
| Y / X | x1 | x2 | x1 | x2 | x1 | x2 |
| y1 | a11 | a12 | b11 | b12 | c11 | c12 |
| y2 | a21 | a22 | b21 | b22 | c21 | c22 |
| y3 | a31 | a32 | b31 | b32 | c31 | c32 |

The table can contain any number of quantities (A, B, C, …). Y axis is identical as in 1D tables. X axis is horizontal and is repeated for each quantity. All quantities must have identical number of X values. The 2D table can be independent on Y axis same as 1D table:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Comment |  |  |  |  |  |  |
|  | A | A | B | B | C | C |
| Y / X | x1 | x2 | x1 | x2 | x1 | x2 |
|  | a11 | a12 | b11 | b12 | c11 | c12 |

The 2D table can be also independent on X axis if all X values are empty:

|  |  |  |  |
| --- | --- | --- | --- |
| Comment |  |  |  |
|  | A | B | C |
| Y / X |  |  |  |
| y1 | a11 | b11 | c11 |
| y2 | a21 | b21 | c21 |
| y3 | a31 | b31 | c31 |

Eventually the 2D table can be independent on both axes X, Y:

|  |  |  |  |
| --- | --- | --- | --- |
| Comment |  |  |  |
|  | A | B | C |
| Y / X |  |  |  |
|  | a11 | b11 | c11 |

## Transducer corrections

TWM recognizes two types of corrections: “divider” and “shunt”.