

# ***vKalc* Calculation Editor Quickstart Guide *(v1.0)***

Dark Valley Software

## **Editor Setup**

Open editor.

Select font, font size and pen color.

Right-click on any pen color to set pen to a color of your choice.

Reset all pens to default colors by clicking on the small rectangular button on the end of the pen group.

Choose a page style, and right-click on the page style button to set a page color of your choice.

For any page style the user can select a border ('Bdr'), grid ('Grd') or page edge ('Edg'), and set these to a color of your choice with a right-click.

All colors for a particular page style can be reset to default by clicking on the small rectangular button on the end of the page style group.

Select a paged layout ('Pgd') if desired and set a preferred page size from the drop down list, a right-click will open the Page Settings menu.

Set the page orientation to portrait ('P') or landscape ('L').

Page header ('h') and footer ('f') text can be shown or hidden, and text can be set with a right-click.

Page margin ('m:'), text spacing ('s:'), horizontal position ('p:'), and zoom ('z:') can be set as desired.

Common symbols, greek text, units and functions can be entered into the text directly from their drop down list.

Solve, reset, or clear the full calculation, or a partial calculation when using the controls to the side of the solve/reset/clear group.

Reset the editor to a pre solve/reset/clear state by clicking on the small rectangular button on the end of the solve/reset/clear group.

Statement and answer auto-format controls can be selected directly from the toolbars and will update with each solve/reset/clear call.

Answer auto-format pen colors can also be set and reset following the same procedures described for the main editor pens.

Choose SI or US base units, and switch on/off sci-notation ('Sci'), auto-precision ('Prc'), and/or truncate zeros ('Trc').

## **Calculation Writing and Solving**

**vKalc** will attempt to solve any statement containing an equals sign.

The user can type the preferred units for the result and/or the precision of the result (with auto precision ('Prc') switched off) after the equals sign where a result is expected. For example, type '= 0.000kN', and **vKalc** will provide the result in kN to 3 decimal places.

If the preferred units are not compatible with the result, **vKalc** will automatically revert to base units.

The numbers typed to provide the preferred precision are unimportant, '0.000' will work just the same as '9.789'

Use only parentheses in your calculation, square brackets or curly brackets will cause an error.

Functions (except for random number functions) can be nested without limitations.

Separate equations from general text using semicolon delimiters.

Drag and drop text, files and images into the editor as desired.

Watch the statusbar for information regarding any attempted solve/reset/clear.

**vKalc** will highlight any line which it cannot solve, and provide a statusbar update. The calculation will not be updated.

Use the auto-format controls as much as possible, they are designed to save time.

## Calculation Writing Examples

The following examples demonstrate how to write a calculation quickly and then allow the formatting tools to tidy it up.

Enable statement format controls, auto-space ('\_'), multiply ('×'), and exponent ('<sup>a<sup>b</sup></sup>')

Enable answer format controls, underline ('U') and blue pen ('A')

Enable auto-precision ('Prc')

Example 1 (*Area of a circle of radius 'r'*)

Type;  $r=100\text{mm}; \quad A_c=\pi r^{**2}=\text{cm}^{**2}$

Solving (*with formats*) gives;  $r = 100\text{mm}; \quad A_c = \pi r^2 = \underline{314}\text{cm}^2$

Example 2 (*Area of a polygon with side length 'a' and number of sides 'n<sub>p</sub>'*)

Type;  $a=200\text{mm}; \quad n_p=6; \quad A_p=(a^{**2}*n_p)/(4*\tan(\pi/n_p))=\text{cm}^{**2}$

Solving (*with formats*) gives;  $a = 200\text{mm}; \quad n_p = 6; \quad A_p = (a^2 \times n_p) / (4 \times \tan(\pi / n_p)) = \underline{1039}\text{cm}^2$

Example 3 (*Magnetic constant 'μ<sub>0</sub>'*)

Type;  $\mu_0=4\pi*10^{*-7}\text{H/m}$

Solving (*with formats*) gives;  $\mu_0 = 4\pi \times 10^{(-7)}\text{H/m}$

## **Keyboard Shortcuts**

### *File menu*

|                  |                    |
|------------------|--------------------|
| Open ...         | - Ctrl + O         |
| New              | - Ctrl + N         |
| Close            | - Ctrl + W         |
| Save             | - Ctrl + S         |
| Save As...       | - Ctrl + Shift + S |
| Reload           | - F5               |
| Export to pdf... | - Ctrl + P         |
| Exit             | - Ctrl + Q         |

### *Edit menu*

|            |                    |
|------------|--------------------|
| Undo       | - Ctrl + Z         |
| Redo       | - Ctrl + Shift + Z |
| Cut        | - Ctrl + X         |
| Copy       | - Ctrl + C         |
| Paste      | - Ctrl + V         |
| Select All | - Ctrl + A         |

### *View menu*

|                           |       |
|---------------------------|-------|
| Show/hide scrollbar       | - F7  |
| Show/hide menubar         | - F8  |
| Show/hide toolbars        | - F9  |
| Show/hide statusbar       | - F10 |
| Enable/disable fullscreen | - F11 |

### *Format menu*

|             |                    |                                                                           |
|-------------|--------------------|---------------------------------------------------------------------------|
| Subscript   | - Alt + Down Arrow | <i>(pressing space, semicolon or equals will return cursor to normal)</i> |
| Superscript | - Alt + Up Arrow   | <i>(pressing space, semicolon or equals will return cursor to normal)</i> |

### *Tools menu*

|                                             |           |
|---------------------------------------------|-----------|
| Insert square root ( $\sqrt{\phantom{x}}$ ) | - Alt + Q |
| Insert multiply ( $\times$ )                | - Alt + X |
| Insert dot multiply ( $\cdot$ )             | - Alt + . |
| Insert divide ( $\div$ )                    | - Alt + / |
| Insert degree ( $^{\circ}$ )                | - Alt + 0 |
| Insert infinity ( $\infty$ )                | - Alt + 8 |

**Keyboard Shortcuts** *(cont'd...)**Tools menu (cont'd...)*

|                             |            |
|-----------------------------|------------|
| Open Current Variables info | - Ctrl + 0 |
| Open Constants info         | - Ctrl + 5 |
| Open Units info             | - Ctrl + 6 |
| Open Operators info         | - Ctrl + 7 |
| Open Functions info         | - Ctrl + 8 |
| Open Bar Sizes info         | - Ctrl + 9 |

|                                |            |
|--------------------------------|------------|
| Show Find/Replace toolbar      | - Ctrl + F |
| Show/hide Highlighter toolbar  | - Ctrl + H |
| Show/hide Image Resize toolbar | - Ctrl + I |

*(can also be used to load selected text into the toolbar)**Solve menu*

|       |      |
|-------|------|
| Solve | - F2 |
| Reset | - F3 |

*Help menu*

|                                 |            |
|---------------------------------|------------|
| Open Keyboard Shortcuts         | - Ctrl + K |
| Documentation ( <i>online</i> ) | - F1       |

*Greek alphabet lowercase*

|                               |           |
|-------------------------------|-----------|
| Insert Alpha ( $\alpha$ )     | - Alt + A |
| Insert Beta ( $\beta$ )       | - Alt + B |
| Insert Gamma ( $\gamma$ )     | - Alt + G |
| Insert Delta ( $\delta$ )     | - Alt + D |
| Insert Epsilon ( $\epsilon$ ) | - Alt + E |
| Insert Eta ( $\eta$ )         | - Alt + H |
| Insert Theta ( $\theta$ )     | - Alt + T |
| Insert Lambda ( $\lambda$ )   | - Alt + L |
| Insert Mu ( $\mu$ )           | - Alt + M |
| Insert Pi ( $\pi$ )           | - Alt + P |
| Insert Rho ( $\rho$ )         | - Alt + R |
| Insert Sigma ( $\sigma$ )     | - Alt + S |
| Insert Tau ( $\tau$ )         | - Alt + U |
| Insert Phi ( $\phi$ )         | - Alt + F |
| Insert Psi ( $\psi$ )         | - Alt + I |
| Insert Omega ( $\omega$ )     | - Alt + O |

*Greek alphabet uppercase*

|                           |                   |
|---------------------------|-------------------|
| Insert Delta ( $\Delta$ ) | - Alt + Shift + D |
| Insert Sigma ( $\Sigma$ ) | - Alt + Shift + S |
| Insert Phi ( $\Phi$ )     | - Alt + Shift + F |
| Insert Omega ( $\Omega$ ) | - Alt + Shift + O |

*Constants*

|                          |                   |
|--------------------------|-------------------|
| Insert Euler ( $e_n$ )   | - Alt + Shift + E |
| Insert Gravity ( $g_o$ ) | - Alt + Shift + G |

**Contact Us**

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