

This short guide will show you how easy it is to use ProvueDB and how quickly you can create professional looking datasheets.

In a short time from now you will have learned how to use ProvueDB. You will have produced and printed out a design basis sheet, a process sheet, and a sketch for specifying a pump.

Okay, the clock starts now...

Starting ProvueDB

1. Click on **Start | Programs | PEL | ProvueDB**. The "Database Access" window appears.

The first thing we need to do is create a new database to store the datasheets. We will create the database a new folder called DATABASE on your C: drive

Click **Create**. The "Select a Directory for the New Database" window appears. Type **C:\Database\provue.mdb** – it must be called **provue.mdb** - in the File name box. Click **Save** to return you to the "Database Access" window. Enter your name in the **Enter Username** box, as you want it to appear on the bottom of your soon-to-be-created Design Basis sheet. ProvueDB will use this name when you sign-off, check, and approve datasheets. Finally, enter a password – one you can easily remember! Click **OK**.

We are now in ProvueDB. The left-hand panel is a tree-view of the database. It displays the database structure using the names of the projects, plants, equipment, and datasheets in the same way as Microsoft Explorer displays folders on your PC. The right-hand panel is where the datasheets appear.

The first thing we want to do is to add a new pump called P101

2. Right-mouse-click on the plant **PLANT 1** in the tree view. A pop-up menu appears with two menu items. Select the **New Equipment** item. A list of all the equipment types available in ProvueDB appears; select **PUMP** from the list. Next the New Equipment window appears; type **P101** in the box and click **OK**.

Notice that PUMP appears in the tree view below PLANT 1 with pump P101 below that.

Notice also that the design basis sheet appears automatically in the right-hand panel. Let's add some design basis text but to save time we'll read in some we've prepared earlier. The text we want is on the drive where PEL is installed in the file PEL\Examples\Provuedb\Design Basis.doc.

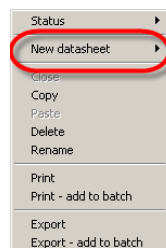
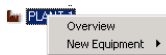
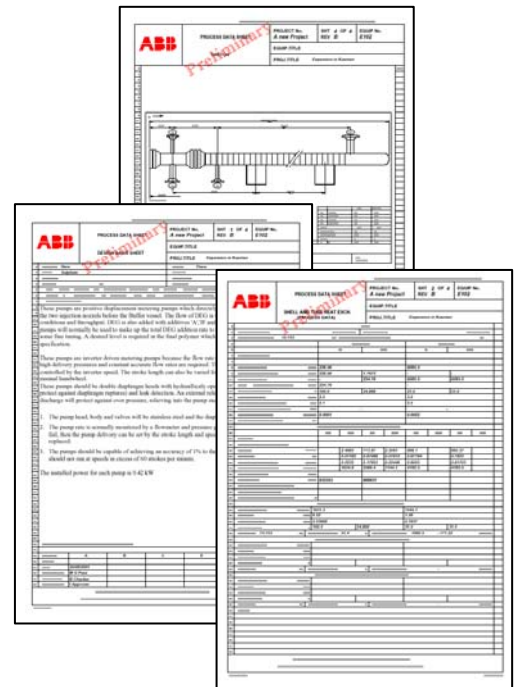
3. Click into the large grey area that is to contain the design basis text. It goes **red** to indicate that this is the current field. A "New Feature" window appears explaining that you can now use Microsoft Word to edit the design basis text. Check the **Do not show this message again** box and then click **Close**. Next, double-click in the red box to launch Microsoft Word. Select **Insert | File...** from the menus (Word2007 Users select **Insert | Object** then use the drop-down to select **Text from File**) and browse to **...PEL\Examples\Provuedb\Design Basis.doc**. The text will appear in the Word document. **Exit** Word and click **Yes** to save your changes when prompted. When you return to ProvueDB, the design basis text is displayed in the red box. Click the **Save** icon on the toolbar to save the data on the database.

Notice that Design Basis appears in the tree view under P101 and the folder icon is open indicating that you still have this datasheet open in the right-hand panel.

Now let's add some process data and (a) see how in-line units' conversion works, (b) view the standard design procedures to help fill in the datasheet, and (c) calculate some physical properties.

4. Right-mouse-click on the pump **P101** in the tree view. From the pop-up menu, select **New datasheet** to display a list of all the valid datasheets for a pump. Select the second one in the list, **Process**.

The Process datasheet appears in the right-hand panel.



5. Enter a value of **60 F** in the **Temperature** box for Case 1. When you click off the box, the value is converted to 15.556°C - the units displayed on the datasheet.
6. Click on the **Gas Content** box for Case 1 and press **F1**. ProvueDB automatically displays the help text for Gas Content straight from the Standard Design Procedure for a Pump Process Datasheet. To view the complete document, simply click the yellow **Help** icon on the toolbar.
7. Click on the **Specific Heat** box for Case 1. Next, click the **right mouse** button to display a pop-up menu and select **Phys Props | Case 1 Normal**.

The "Physical Properties Calculator" window appears. Now add the temperature, pressure and component.

8. Note that the Temperature has been picked up off the datasheet. Enter **50 psia** for the pressure. If any components are present, click **Clear Worksheet** on the Feed tab, and then select **Add Component**. Select **Water** from the PPDS System Pure Databank and click **Add to Stream** then click **Close**. Click the **VLE** tab and check that the **Allow automatic selection of VLE method** is ticked, and the VLE method chosen is PR/PR. Go back to the Feeds tab and click **Calculate**. Click **Yes** to view the details and note that there are no errors. Close the report by clicking on the **X** in the top right-hand corner, and the physical properties will be pasted into the column for Case 1 on the datasheet. Click the **Save** icon on the toolbar to save the data on the database. (Notice that the data goes **blue** to show it has been saved.)

Notice that Process also appears under P101 in the tree view and that the folder icon is open indicating that this datasheet is also open in the right-hand panel.

Finally, let's quickly add a sketch datasheet. You can draw the sketch using any program on your PC. We'll choose Microsoft Visio.

9. Right-mouse-click on the pump **P101** in the tree view. From pop-up menu, select **New datasheet** followed by **Sketch**.
10. When the Sketch datasheet is displayed, **double-click** in the yellow box where the sketch is to appear. Wait a few moments for the "Insert Object" window to appear. Select **Microsoft Visio Drawing** from the list of Object Types and click **OK**. When Microsoft Visio appears, select the Chemical Engineering template if available otherwise choose an appropriate one. Drag some suitable shapes on to the drawing to make a sketch before selecting **File | Exit** to exit Visio. Finally click the **Save** icon on the ProvueDB toolbar to save the sketch on the database.

Notice again that Sketch appears under P101 with an open-folder icon.

To complete the exercise let's print out the datasheets to your default printer.

11. Right-mouse-click on the pump **P101** in the tree view and select **Print** from pop-up menu. The first of two "Print" windows appears. The first screen gives you two options; one for printing issued data only (disabled for this pump as it has not been issued yet); the other for printing blank datasheets. We'll accept the defaults and ignore both of these options. Click **OK** to proceed to the second Print window. Here you can select a different printer and select specific datasheets using "Selection" but for now we'll simply click **OK** to print all the datasheets.

And that's it. How's the time doing? If you're doing okay, try repeating the physical property calculations for Case 2.

*Now you've learned the basics it's time to read the **ProvueDB User Manual**. This will tell you more about all of the really useful features and options in the program.*

This program is developed, maintained and supported by PEL Support Services, ABB. We run a Hotline telephone and email service to answer any queries about the PEL products. You can contact us:

E-mail: pel.support@gb.abb.com
Telephone: +44 (0)1925 74 1126
Fax: +44 (0)1925 74 1265
Website: www.pelsoftware.com

Post: PEL Support Services
ABB Ltd
Daresbury Park, Daresbury
Warrington, Cheshire, WA4 4BT