

## Part 1 – Datasheets

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

In a short time you will have learned how to use ProvueDB.Net; 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.Net

1. Click **Start > All Programs > PEL > ProvueDB > ProvueDB.Net Desktop Edition**.

The first thing we need to do is select or create a database to store the datasheets. We will create a database called 'TutorialDB'.

2. Under **Another Provue Database**, click **Create New**. Click **Select Folder**, browse to the folder where you want to store the database and click **Select Folder**. Enter the database name, **TutorialDB**, enter and confirm a password for the default user [pja] and click **Create**. The database you created is selected in the top pane. Enter the password you just specified and click **Datasheets**.

We are now in ProvueDB.Net. The left pane will provide a tree-view of the database, showing the names of the projects, plants, equipment, and datasheets in the same way as Microsoft Explorer shows folders on your PC. The right pane has a series of tabs, starting with a status view and including the datasheets as they are opened.

Before we can add any equipment and datasheets, we need to create a project and plant to contain them. We need to activate the administrator facilities to do this.

3. Click the **Admin** tab and click **Grant PJA**. Right-click the top node in the tree view and click **New Plant**. Enter the name **Plant 1** and click **OK**. Right-click the **Plant 1** node and click **New Project**. Enter the name **Project 1** and click **OK**. In the **Admin** tab click **Disable PJA** and click the **Status** tab.

The next thing we want to do is to add a new **pump** called **P01**.

4. Expand the **PLANT 1** and **PROJECT 1** nodes. Right-click **PROJECT 1**, in the context menu point at **New Datasheet** and in the list of equipment types click **PUMP**. In the dialog, type **P01** and click **OK**.

Notice that **PUMP** appears in the tree view below **PROJECT 1** and **Datasheets** with your new pump below that.

Notice also that the design basis sheet opens automatically in the right pane. Let's add some design basis text. You can either type some example text yourself, or if you have the PEL software on your computer, you can upload some sample text from the folder where PEL is installed (typically c:\Program Files).



5. To type the text yourself, click in the large text box and start typing. When you have entered some sample text, click the **Save** button at the top of the Datasheet tab.



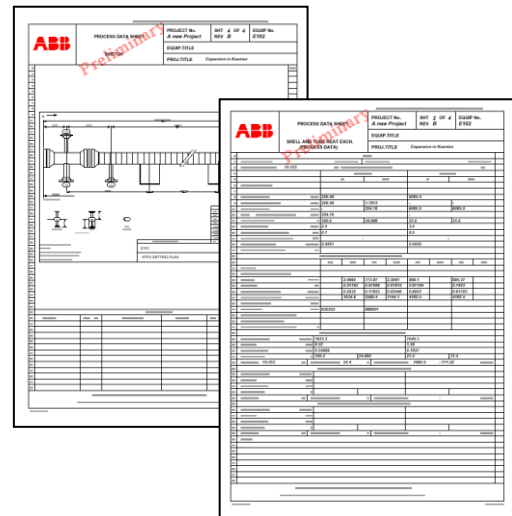
6. Alternatively, to upload the sample text, click the **Word** button. Click **Choose File** and navigate to the install folder and the file PEL\Examples\ProvueDB\Design Basis.doc. Select the file and click **Open**. Back in the dialog, click **Submit**. The text appears in the datasheet, which is saved automatically.

Notice that **Design Basis** appears in the tree view under your pump marked by a green arrow icon telling you this datasheet is still open in the right pane.

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.

7. Right-click your pump in the tree view, in the context menu point at **New datasheet** and in the list of available datasheets for a pump click **Process**.


The Process datasheet opens in the right pane.



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8. Enter a value of **60 F** in the **Temperature** box for Case 1 (line 8). When you press **Enter** or click another box, the value is converted to 15.556°C – the units shown on the datasheet.
  9. Enter the following values for Case 1:
 

24	VAPOUR PRESSURE AT OP. TEMP	0.25 psia	(coverts to 0.0172369 bara)
25	VISCOSITY AT OPERATING TEMP	0.9982	
26	DENSITY AT OPERATING TEMP	999.5	
28	MIN PRESSURE IN VESSEL	1.25	
38	MAX PRESSURE IN VESSEL	2.5	
  10. Right-click in line 34 for Case 1 (Pressure at Pump Flange) and click **Suction + Delivery Case 1**. The following values are calculated:
 

34	PRESSURE AT PUMP FLANGE	1.25	
35	PRESSURE AT PUMP FLANGE	12.7485	
36	N.P.S.H. (AVAILABLE)	12.5727	
44	PRESSURE AT PUMP FLANGE	2.5	
45	PRESSURE AT PUMP FLANGE	25.4969	
46	DIFFERENTIAL HEAD ACROSS PUMP	12.7485	
  11. Click the **Save** button to save the data to the database. (Notice that the data goes **blue** to show it has been saved.)
 



Notice that **Process** also appears in the tree view under your pump marked by a green arrow icon telling you this datasheet is still open in the right pane.

Finally, let's quickly add a sketch datasheet. You can draw the sketch using any graphics tool on your computer. We'll choose Microsoft Visio. For this you'll need to save both the Visio file and an exported image file.
  12. Start Microsoft Visio and select an appropriate Engineering template, such as **Process Flow Diagram**. Drag some suitable shapes on to the drawing to make a sketch before saving the file as Drawing.vsd. Then use the **Save As** command to save the drawing in an image format, such as Portable Network Graphics format (.png).
 

Now let's create the sketch datasheet and upload the files to it.
  13. Right-click your pump in the tree view, in the context menu point at **New datasheet** and click **Sketch**. When the Sketch datasheet appears, click in the box where the sketch is to appear. The **Upload new image/data file** dialog opens.
  14. Click **Browse** to navigate to the image file (.png) and then the data file (.vsd). Then click **Upload file**. The image appears in the datasheet, which is saved automatically.
 

Notice again that **Sketch** appears under your pump marked with an green arrow icon.

To complete the exercise let's print out the datasheets to your default printer.
  15. Right-click your pump in the tree view and click **Print all to PDF**. The system will create a PDF file containing all three datasheets. This opens in a separate browser window. You can save this locally and print the pages on your local printer.
 

And that's it. Now you've learned the basics it's time to read the ProvueDB.Net *User Guide*. 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:

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