
HOW TO ENTER AN OUTLET INTO THE DATABASE

All water outputting devices exist in IRRICAD as an Outlet body and a nozzle or collection of nozzles, regardless whether the device physically has nozzles or not.

To enter a new outlet into the database:

1. Enter the nozzle data. To do this you require the manufacturers sheet for the nozzle.
2. Open the Database Editor and if the database that automatically opens is not the database you wish to add the new product to, then click the **[Save Changes]** button and select *File/Open* and browse the working database you wish to edit.
3. Use the arrows at the top of the right-hand-side of the open database to scroll along until you see the **Nozzles** tab.
4. Click the **[New Nozzles]** button and start entering the relevant information into each field.
5. When you get to the “**Radius Equation(K)**” and “**Radius Equation(n)**” fields, we will use the manufacturers data in the *Utilites/Curve Fitting/Outlet Radius* to calculate the Constant (K) and Index (n).
6. The table you see requires at least three sets of data. Firstly make sure that the units above each column are set to match the units you are reading off the manufacturers data. Enter the Pressure and the resultant Radius from the data sheet into the table.
7. Click the **[Fit Curve]** button. The Constant and Index will be calculated for you. Make sure that R^2 is above 90% or re-check your data. Copy the Constant in to the “**Radius Equation(K)**” field and the Index into the “**Radius Equation(n)**” field.
8. When you get down to the “**Constant (K)**” and “**Index (n)**” fields below, you need to go to *Utilites/Curve Fitting/Outlet Flow*. Once again read the data off the manufacturers sheet for this nozzle. Firstly make sure that the units above each column are set to match the units you are reading off the manufacturers data. Enter the Pressure and the resultant Flow from the data sheet into the table.
9. Click the **[Fit Curve]** button. The Constant and Index will be calculated for you. Make sure that R^2 is above 90% or re-check your data. Copy the Constant in to the “**Constant (K)**” field and the Index into the “**Index (n)**” field.
10. Finish by selected a plotting symbol, size and colour. Click the **[Save]** button.
11. Repeat this process for as many nozzles as you which to add into the nozzle component group.
12. Now use the arrows at the top of the right-hand-side of the open database to scroll along until you see the **Outlets** tab.
13. Click the **[New Outlet]** button and start entering the relevant information into each field.
14. For Outlets the inlet connect type (how the outlet connects to a riser or on to the pipe) can be NONE but still requires a gender and connect type e.g. NONE F S (or T for threaded, or B for barbed)
15. Leave the “**Default Nozzle**” field at this stage. The inlet diameter is the size of the outlet body e.g. 20mm for a popup body or 4mm for a dripper.
16. The “**Arc Type**” determines how the outlet operates – is it a **Fixed** outlet e.g. the arc cannot be adjusted?, Is it a **Variable** outlet – the arc can be adjusted? Is it a **Matched** outlet – as the arc is adjusted the amount of flow is also adjusted accordingly?
17. “**Flow Tolerance**” is usually 5% above and 5% below as a rule of thumb.
18. Finish filling in the fields and **[Save]** the new outlet
19. Now with your new outlet highlighted, click the **[Add Nozzles]** button. This will take you to the **Nozzles** component group. If you click on the little grey box to the left of the nozzle name, it will automatically be added to your outlet. If you click on the nozzle name, click the **[Select]** button to add it to your outlet. Select the new nozzles you have just created for this outlet. You can see the added nozzles below. Once you have added all the required nozzles, click the **[Finish Adding]** button. Click the **[Save Changes]** button to save the additions to your database and to close the database.