1. UI Overview

1.1 Interface

The HydroMan user interface has two views. The main window shows an orthographic projection of the manifold (2D). Another window shows the isometric view (3D). You can move parts in either viewer, and detach the 3D viewer for use on another monitor.

The orthographic view shows the six faces of the manifold block. You can isolate the faces by pressing the numbers 1 to 6 on your keyboard; pressing 0 opens the full overview.

You can switch the 2D viewer's projection method to either first-angle or third-angle projection, based on your preference. Face 6 can be displayed on the bottom or on the right.

Access the Component Library, just as in HydroSym. Here, you'll find plugs, mounting holes, and more. To show or hide the library, press [Ctrl + L] or the  icon in the toolbar on top.

1.2 Cross-sections

HydroMan's interface allows you to create cross-sections. This feature is invaluable for complex manifolds, as it enables you to make connections within the cross-section.

Depending on the face you're making the cross-section on, it can be made on the X-, Y-, or Z-axis. To make the cross-section, press the corresponding letter on your keyboard, or press [C]. Pressing [C] once opens the one available cross-section and pressing it again opens the other possible cross-section.

Making a cross section only works if you have **one** hole selected.

When selecting a hole, you'll see that it is highlighted in both viewers. This way, you can easily see its placement and movement on the block in real-time.

2. Key Design Features

2.1 Resize

You can resize the manifold in the X, Y, or Z direction. In the 2D view, right-click on the manifold and hover over "Dimensions." This opens the "Dimensions" box, where you can change all dimensions.

There are also "Change at X, Y, Z" options based on where you clicked. Selecting one of these options will adjust the size at the cursor position.

For quick one-millimeter changes, simply press [Ctrl] and use the arrow keys to set new dimensions.

2.2 Move and rotate

To move a hole, select it and press [Space] to lock it to your cursor. While moving, press [Space] to rotate 90 degrees. When you're happy with the placement, left-click to lock it in place.

To change absolute coordinates, select the hole and press [Shift] and [Enter].

HydroMan also offers an option to move the hole orthogonally (only parallel to the X-, Y-, or Z-axis). You can find this option in the toolbar at the bottom of the screen, and toggle it on and off. Alternatively, use the shortcut [O].

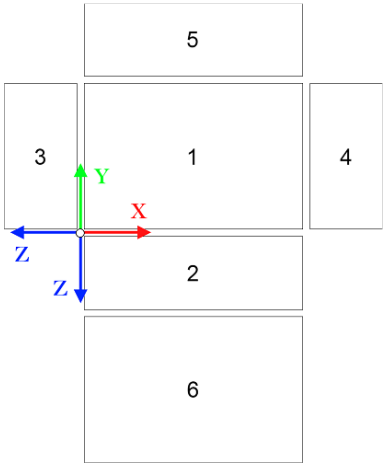
2.3 Align

Align coordinates by selecting at least two holes and pressing the letter [N].

If the holes are on adjacent faces, they will align in the common direction. If they are on opposite faces, they will align in both directions. If they are on the same face, you'll specify the offset.

Alternatively, you can use the [X], [Y], or [Z] keys to align in a single direction.

Remember, the **first hole selected** is always the reference point for alignment.



2.4 Connect

To connect holes, select at least two. You can use three main keys.

[C]: Changes the depth of both holes to connect them fully.

[T]: Trims or extends the depth toward the first hole without moving it.

[M]: Aligns and automatically connects using either [C] or [T].

If it's not possible to connect with straight holes, HydroMan automatically suggests the use of an angled hole.

To connect a hole to a cartridge port at the right diameter, click inside the port, select the hole, and press [Shift] + [M]. The hole will automatically move and connect.

2.5 Modify hole depth

To modify hole depth, select a step in the hole and right-click. Choose the modify depth option or use the keyboard shortcut [D].

In a cross-section view, you can change the depth using the arrow keys.

To create a hole through the block, select the hole and press [Ctrl] + [T].

2.6 Hole texts

Positioning hole texts is simple. Select a hole with text and press [H] to lock it to your cursor. Press [Space] to rotate 90 degrees.

Adjust the text of one hole to your preferred spot and lock it in place by left-clicking. Once it's positioned, select the hole again. Then, choose others and press [Q] to align their text positions.

3. The Checklist

HydroMan automatically generates a checklist highlighting potential warnings and errors in your manifold. If there are items in your to-do list, such as unadded components, the checklist will also alert you of this.

3.1 Warnings

Possible warnings include:

Group error: Two different colors are connected.

Area not max: Two components aren't fully connected, risking a high pressure drop.

Thread hit: Part of the thread is being machined away.

Threads interfere: Two threads intersect, risking internal collision during assembly.

Wall thickness warning: Wall thickness is below a critical value, defaulted to 5 mm.

Partially connected: Parts in the group aren't connected to the rest.

Port error: A connection in a cavity is outside the manufacturer's specified boundaries.

Note, that a warning doesn’t always demand action, just your attention. To override a warning, check it off as reviewed and accepted.