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***Question: How can I assemble a stack of sandwiches and keep it dry?***

Answer:

- Make sure the surfaces are flat and that there are no burrs. Do not polish the surface, machining marks are good. The machining marks help stop the O rings from acting as pumps.
- Look for dings on the corners of seal plates that will create gaps.
- Stud rods or cap screws must not bottom out in the sub-plate.
- It is very important to assemble a stack of sandwich valves keeping the o-ring sealing surfaces “dry”. The hydrostatic properties of an oil film under the o-rings, and at the seal plate interface, can create a fluid path leading from the pressurized port interfaces to the outside edge of the stack. (Under this condition, as noted in bullet point 1 above, an o-ring can actually act as a “pump”.) So, if you start with a wet seal interface in your stack, there’s a good chance it will always stay wet!